OFFICE OF THE COUNCIL

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VICE PRESIDENT

ROB GJONAJ DONOVIC
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OFFICE OF THE COUNCIL

ELECTRONIC AGENDA PACKET FOR THE REGULAR MEETING OF WEDNESDAY, DECEMBER 2, 2020 7:00 P.M.

The electronic agenda is compiled, produced and distributed by the City Council Staff.
(734) 466-2250

The official documents are on file in the City Clerk's office.

AGENDA

1910th Regular Meeting of the Council of the City of Livonia
Wednesday, December 2, 2020

7:00 PM

* Due to COVID-19, Livonia City Council meetings will not be held in the City Hall Auditorium
Live broadcast: AT&T Uverse Channel 99 / Spectrum Channel 203 /
WOW Channel 10 / YouTube.com/LivoniaTV
Connect on Zoom: https://us02web.zoom.us/j/822419226 or phone at (312) 626-6799, ID: 822 419 226
To participate, use the 'Raise Hand' button on Zoom or press *9 on your phone to be called on

CALL TO ORDER

INVOCATION/PLEDGE OF ALLEGIANCE

ROLL CALL

PRESENTATION OF MINUTES

Minutes of the Regular Meeting of 11/16/2020

AUDIENCE COMMUNICATION

REPORTS FROM THE MAYOR AND OTHER CITY OFFICIALS

a. Communication from the Department of Finance, dated November 9, 2020, re: various financial statements of the City of Livonia for the month ending September 30, 2020.

CONSENT AGENDA

1) REQUEST ADOPTION OF A RESOLUTION THAT APPROVES THE WAYNE COUNTY HAZARD MITIGATION PLAN DATED SEPTEMBER 14, 2020: Sgt. Brian Kahn, Director of Emergency Preparedness, re: for a period of five (5) years in order to receive funds made available through certain mitigation grant programs, pursuant to the Code of Federal Regulations, Title 44, Chapter 1, Subchapter D, Part 201, Section 201.6.c.5 which has been approved for implementation from the Federal Emergency Management Agency (FEMA).

2) REQUEST FOR COUNCIL APPROVAL ON A PROPOSED LOT SPLIT: Department of Assessment, re: for the property located on the east side Merriman Road, between West Chicago and Plymouth Roads in the Northwest 1/4 of Section 35 (11316 Merriman) and to waive the property depth-to-width ratio. (Tax Item 138-99-0058-000) (Petition 2020-09-LS-04)

3) REQUEST TO AUTHORIZE BUILDING PLANS SCANNED INTO ELECTRONIC MEDIA AND AUTHORIZE EXPENDITURE: Department of Inspection, re: under State of Michigan Scanning and Microfilm Services extended purchasing program, to avoid losing the paper history files due to unfortunate events.

4) REQUEST TO APPROVE PURCHASE OF ONE (1) 2020 LIFE LINE TYPE-1 SUPERLINER AMBULANCE ON A 2020 FORD F-450 XLT CHASSIS THROUGH THE HOUSTON GALVESTON AREA COUNCIL (HGAC-BUY) COOPERATIVE PURCHASING CONSORTIUM: Livonia Fire and Rescue, re: to replace a current frontline ambulance, from trade-in of 2006 Freightliner Ambulance and budgeted funds. (CR 61-17)

5) REQUEST TO RENEW A FIVE-YEAR SERVICE AGREEMENT: Public Service Division, re: with Sensus USA, with an automatic five-year extension, to provide software and equipment to obtain remote water meter reads.

6) REQUEST TO ACCEPT STORM WATER FACILITIES MAINTENANCE AGREEMENT: Engineering Division, re: from MCM 12001 Farmington, LLC, in conjunction with the construction of a storm drainage system that provides adequate drainage for property developed at 11999 and 12001 Farmington Road, in the Southeast 1/4 of Section 28.

7) REQUEST TO APPROVE 2021 ROAD REPAIR PROGRAM: Engineering Division, re: as reviewed by the Citizen Advisory Committee on roads for the ninth year of the ten-year paving millage approved by Livonia residents.

8) REQUEST FOR ADDITIONS TO THE LOCAL STREET SYSTEM FOR THE 2021 ACT 51 COMPUTATIONS: Engineering Division, re: for streets or portions thereof, newly opened in 2020.

9) REQUEST TO AMEND THE ENGINEERING CONTRACT THROUGH THE QUALIFICATION BASED SELECTION (QBS) PROCESS WITH ANDERSON, ECKSTEIN AND WESTRICK, INC. FOR DESIGN ENGINEERING SERVICES FOR THE 2021 CONCRETE ROAD PROGRAM (CONTRACT 21-C): Engineering Division, re: same (CR 365-16)

10) REQUEST TO AMEND THE ENGINEERING CONTRACT THROUGH THE QUALIFICATION BASED SELECTION (QBS) PROCESS WITH ANDERSON, ECKSTEIN AND WESTRICK, INC. FOR DESIGN ENGINEERING SERVICES FOR THE 2021 CONCRETE ROAD MAINTENANCE/SELECTIVE SLAB PROGRAM (CONTRACT 21-J): Engineering Division, re: same (CR 365-16)

UNFINISHED BUSINESS

11) PROPOSED AMENDMENT TO THE LIVONIA CODE OF ORDINANCES, AS AMENDED: Department of Law, re: to amend Section 070 of Chapter 2.36 (Commission on Aging), Section 040 of Chapter 2.40 (Arts Commission), Section 040 of Chapter 2.44 (Commission on Children and Youth), Section 020 of Chapter 2.52 (Historical Commission), and Section 080 of Chapter 2.56 (Historic Preservation Commission), to reflect departmental changes.

12) PROPOSED AMENDMENT TO ZONING ORDINANCE NO. 543, AS AMENDED: Department of Law, re: Petition 2020-07-01-04, submitted by Adams Park Development, L.L.C., to rezone the properties located on the south side of Lyndon Avenue between Inkster and Middlebelt Roads (14416 Harrison Avenue and 28201 Lyndon Avenue), former Adams Elementary School site, in the Southeast ¼ of Section 24 from PL (Public Lands) to R-1 (One Family Residential).

13) REZONING PETITION: Planning Commission, re: Petition 2020-08-01-05, submitted by Infinity Homes and Company, requesting to rezone the property at 28400 West Chicago Avenue (former Wilson Elementary School site) located on the north side of West Chicago Avenue between Harrison and Middlebelt Roads in the Northwest ¼ of Section 36 from PL (Public Lands) to R-1 (One Family Residential).
Public Hearing held on November 9, 2020

New Data Item 13 - Proposed ordinance amendments prepared by Law Department

14) REQUEST TO EXTEND WAIVER USE APPROVAL TO NEW OWNER: Yangkai Yuan; re: to operate a massage establishment (Omorfia Esthetics) within the Burton Hollow Shopping Center located on the east side of Farmington Road between Six Mile Road and Curtis Avenue (17142 Farmington Road), Section 10. (CR 305-16)

15) REQUEST TO APPROVE THE BUILDING OF AN ICE RINK WITHIN DOVER PARK: Louis Csizmadia; re: to construct a 50ft x 80ft ice rink with lights for use by the public.

NEW BUSINESS

16) ACCEPTANCE OF GRANT OF EASEMENT: Department of Law, re: secured without monetary consideration from Beta Properties, L.L.C, for a 20-foot wide public utility easement in connection with the storm sewer constructed at 32969 Capitol Ave., in the Southwest 1/4 of Section 27. Parcel ID #46-107-99-0018-000.

17) ACCEPTANCE OF GRANT OF EASEMENT: Department of Law, re: secured without monetary consideration from Haggerty Square, LLC for a public utility easement in connection with the sanitary sewer constructed at 19750 Haggerty Road in the West 1/2 of Section 6. Parcel ID #46-23-99-0005-004.

18) ACCEPTANCE OF GRANT OF EASEMENT: Department of Law, re: secured without monetary consideration from Haggerty Square LLC for a public utility easement in connection with the sanitary sewer constructed at 19700 Haggerty Road in the West 1/2 of Section 6. Parcel ID #46-23-99-0005-003.

19) ACCEPTANCE OF GRANT OF EASEMENT: Department of Law, re: secured without monetary consideration from Haggerty Square LLC, for a public utility easement in connection with the water main constructed at 19700 Haggerty Road in the West 1/2 of Section 6. Parcel ID #46-23-99-0005-003.

AUDIENCE COMMUNICATION

SUSAN M. NASH, CITY CLERK

In accordance with Title II of the American with Disabilities Act as it pertains to access to Public Meetings, the City Clerk's Office of the City of Livonia, upon adequate notice, will make reasonable accommodations for persons with special needs. Please call (734) 466-2236 or email xd if you need assistance. **Council agendas are available on the City's website – www.ci.livonia.gov - under Government, City Council, Agendas.**

REPORT TO THE LIVONIA CITY COUNCIL

Finance
November 6, 2020

MEETING DATE	PREPARED BY
December 2, 2020	DeAnne Bates, Program Supervisor, Finance

AGENDA ITEM

a. Communication from the Department of Finance, dated November 9, 2020, re: various financial statements of the City of Livonia for the month ending September 30, 2020

BACKGROUND

Attached hereto are the various financial statements of the City of Livonia for the month ending September 30, 2020. These statements are summarized so that you may make a quick financial overview of the various funds. Detailed statements, in support of the summarized statements, have been forwarded electronically to the Council Office.

RECOMMENDATION

Receive and file

FISCAL CONSIDERATION

ATTACHMENTS

1. BUDGET TO ACTUAL - COUNCIL SUMMARY - September 30, 2020

APPROVED BY

Michael T. Slater

Michael T. Slater, Finance Director — Date: November 09, 2020

Maureen Miller Brosnan

Maureen Miller Brosnan, Mayor — Date: November 12, 2020

BUDGET TO ACTUAL - COUNCIL SUMMARY - 09/30/2020

Through 09/30/20

Prior Fiscal Year Activity Included

Organization	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **101 - GENERAL FUND**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	62,448,701.00	25,000.00	62,473,701.00	4,114,085.41	.00	57,842,967.19	4,630,733.81	93	54,519,625.22
REVENUE TOTALS	$62,448,701.00	$25,000.00	$62,473,701.00	$4,114,085.41	$0.00	$57,842,967.19	$4,630,733.81	93%	$54,519,625.22
EXPENSE									
Department **101 - CITY COUNCIL**	385,428.00	.00	385,428.00	19,606.74	.00	286,794.68	98,633.32	74	285,805.43
Department **111 - CITY CLERK**	597,941.00	.00	597,941.00	47,051.10	.00	438,220.04	159,720.96	73	447,797.02
Department **141 - 16TH DISTRICT COURT**	3,156,993.00	.00	3,156,993.00	226,378.10	2,732.80	2,055,174.24	1,099,085.96	65	2,482,277.91
Department **173 - MAYOR'S OFFICE**	573,831.00	25,000.00	598,831.00	40,381.43	.00	458,078.75	140,752.25	76	438,193.36
Department **193 - ELECTION COMMISSION**	349,819.00	.00	349,819.00	27,341.72	.00	170,579.34	179,239.66	49	131,913.49
Department **201 - ACCOUNTING**	238,058.00	.00	238,058.00	4,587.61	12,750.00	128,003.17	97,304.83	59	166,245.08
Department **202 - ASSESSING**	549,531.00	.00	549,531.00	36,295.43	.00	368,809.33	180,721.67	67	379,819.28
Department **220 - CIVIL SERVICE**	799,291.00	.00	799,291.00	31,446.24	.00	480,907.12	318,383.88	60	581,104.18
Department **222 - LAW DEPARTMENT**	767,303.00	.00	767,303.00	61,878.29	.00	627,776.19	139,526.81	82	545,693.19
Department **230 - FINANCE DEPARTMENT**	377,403.00	.00	377,403.00	30,621.45	.00	308,447.82	68,955.18	82	295,594.15
Department **232 - INDEPENDENT AUDIT**	32,707.00	.00	32,707.00	(1,251.00)	.00	33,026.99	(319.99)	101	31,222.42
Department **234 - LABOR RELATIONS**	96,500.00	.00	96,500.00	6,738.60	.00	52,781.76	43,718.24	55	69,964.40
Department **247 - BOARD OF REVIEW**	3,545.00	.00	3,545.00	.00	.00	2,432.89	1,112.11	69	2,836.84
Department **253 - TREASURER**	571,837.00	.00	571,837.00	42,889.21	1,943.88	401,018.60	168,874.52	70	432,037.01
Department **263 - UTILITIES AND SUPPLIES**	612,943.00	.00	612,943.00	23,472.72	.00	263,909.04	349,033.96	43	289,905.45
Department **279 - DUES AND SUBSCRIPTIONS**	51,000.00	.00	51,000.00	.00	.00	39,642.00	11,358.00	78	43,469.00
Department **302 - TRAFFIC BUREAU**	1,279,360.00	.00	1,279,360.00	65,582.92	.00	723,775.63	555,584.37	57	951,903.67
Department **304 - POLICE ADMINISTRATION**	2,729,713.00	117,750.00	2,847,463.00	171,148.34	57,136.91	1,580,090.55	1,210,235.54	57	1,745,435.66
Department **306 - POLICE DATA PROCESSING**	960,841.00	.00	960,841.00	43,126.43	7,583.43	602,756.08	350,501.49	64	464,895.46
Department **307 - DETECTIVE BUREAU**	3,091,443.00	.00	3,091,443.00	220,325.61	962.50	2,340,110.78	750,369.72	76	2,412,090.24
Department **309 - AUTOMOTIVE SERVICE**	556,150.00	.00	556,150.00	21,946.46	1,500.00	258,717.07	295,932.93	47	428,276.59
Department **310 - POLICE COMMUNICATIONS**	834,794.00	.00	834,794.00	65,130.49	.00	615,739.98	219,054.02	74	600,322.02
Department **313 - CROSSING GUARDS**	70,723.00	.00	70,723.00	706.02	.00	21,538.44	49,184.56	30	46,040.57
Department **316 - SCHOOL LIAISON**	417,455.00	.00	417,455.00	31,103.81	.00	303,809.61	113,645.39	73	278,083.44
Department **318 - OFFICE OF EMERG PREP**	122,616.00	.00	122,616.00	8,141.48	.00	85,109.42	37,506.58	69	105,618.91
Department **319 - RESERVE POL/SPECIAL EVENT**	352,217.00	.00	352,217.00	20,534.17	.00	186,242.07	165,974.93	53	325,138.65
Department **325 - POLICE PATROL BUREAU**	12,576,226.00	(117,750.00)	12,458,476.00	858,697.81	47,284.00	8,123,042.65	4,288,149.35	66	8,205,021.44
Department **329 - INTELLIGENCE BUREAU**	2,549,019.00	.00	2,549,019.00	113,525.83	75,806.00	1,295,361.07	1,177,851.93	54	1,570,751.89
Department **336 - FIRE ADMINISTRATION**	1,183,585.00	787.00	1,184,372.00	102,464.86	.00	907,937.57	276,434.43	77	832,790.55
Department **338 - FIRE FIGHTING**	13,373,275.00	11,780.00	13,385,055.00	889,137.71	267,526.67	8,526,271.69	4,591,256.64	66	9,238,441.32
Department **341 - FIRE PREVENTION**	775,640.00	(12,097.00)	763,543.00	60,055.10	.00	543,804.21	219,738.79	71	427,936.79
Department **371 - INSPECTION**	1,515,216.00	(470.00)	1,514,746.00	110,314.26	.00	986,429.64	528,316.36	65	1,023,688.87
Department **381 - BLDG CODE BD OF APPEALS**	1,431.00	.00	1,431.00	.00	.00	.00	1,431.00	0	91.50
Department **435 - TRAFFIC COMMISSION**	2,353.00	.00	2,353.00	.00	.00	608.22	1,744.78	26	1,792.53
Department **441 - ENGINEER/BUILDING**	20,556.00	.00	20,556.00	(18,691.47)	.00	(148,833.00)	169,389.00	-724	(56,750.87)
Department **444 - PUBLIC SERV ADMINISTATION**	1,882.00	2,000.00	3,882.00	(18,466.90)	.00	(165,895.97)	169,777.97	-4273	(112,357.26)

BUDGET TO ACTUAL - COUNCIL SUMMARY - 09/30/2020

Through 09/30/20

Prior Fiscal Year Activity Included

Organization	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **101 - GENERAL FUND**									
EXPENSE									
Department **446 - PUBLIC SERV-EQUIP MAINT**	157,088.00	.00	157,088.00	(14,089.22)	22,077.26	(270,184.96)	405,195.70	-158	(130,705.49)
Department **447 - PUBLIC SERV-BLDG MAINT**	1,426,602.00	1,854,058.00	3,280,660.00	107,204.51	58,714.05	2,810,056.94	411,889.01	87	1,022,093.30
Department **450 - STREET LIGHTING**	205,699.00	.00	205,699.00	22,154.22	.00	215,119.98	(9,420.98)	105	125,308.53
Department **463 - MAINTENANCE-STREET**	343,639.00	.00	343,639.00	(10,399.52)	15,608.67	(118,931.61)	446,961.94	-30	40,540.97
Department **704 - PARKS**	1,369,095.00	(2,000.00)	1,367,095.00	105,084.58	13,006.42	678,992.98	675,095.60	51	869,493.15
Department **707 - RECREATION ADMINISTRATION**	394,209.00	2,900.00	397,109.00	28,678.46	.00	285,816.70	111,292.30	72	287,653.09
Department **709 - RECREATION FACILITIES**	810,081.00	40,000.00	850,081.00	4,249.99	102,088.74	379,234.20	368,758.06	57	395,404.91
Department **711 - RECREATION ATHLETICS**	109,382.00	(2,900.00)	106,482.00	7,006.16	1,360.50	34,883.46	70,238.04	34	63,872.21
Department **805 - PLANNING**	708,047.00	.00	708,047.00	60,709.57	14,111.33	479,973.08	213,962.59	70	519,983.97
Department **815 - ZONING BOARD OF APPEALS**	64,505.00	.00	64,505.00	3,819.86	.00	35,191.89	29,313.11	55	44,580.99
Department **892 - COM RES - SENIOR SERVICES**	472,914.00	(700.00)	472,214.00	28,488.95	.00	346,137.88	126,076.12	73	387,623.03
Department **893 - COM RES - GREENMEAD AND CULTURAL**	1,004,100.00	700.00	1,004,800.00	76,762.37	17,330.26	655,951.58	331,518.16	67	651,010.79
Department **902 - NON-DEPT CAPITAL PROJECTS**	1,031,000.00	.00	1,031,000.00	.00	.00	1,027,373.20	3,626.80	100	510,000.00
Department **906 - DAMAGE CLAIMS**	1,302,000.00	.00	1,302,000.00	71,676.77	.00	632,408.61	669,591.39	49	1,233,050.28
Department **907 - NON DEPARTMENTAL**	4,000.00	.00	4,000.00	.00	.00	.00	4,000.00	0	.00
Department **910 - ETHICS BOARD**	400.00	.00	400.00	.00	.00	27.52	372.48	7	112.20
Department **915 - INFORMATION SYSTEMS**	984,882.00	.00	984,882.00	57,324.92	19,956.50	754,535.87	210,389.63	79	761,318.30
Department **920 - EMPLOYEE BENEFITS CONTROL**	62,000.00	.00	62,000.00	168,727.15	.00	(624,655.04)	686,655.04	-1008	(471,185.66)
Department **925 - INSURANCE-GENERAL**	86,199.00	.00	86,199.00	(3,260.66)	.00	81,739.10	4,459.90	95	77,745.99
Department **950 - INSURANCE-WORKERS COMP**	330,806.00	.00	330,806.00	5,405.53	.00	217,965.59	112,840.41	66	302,592.17
EXPENSE TOTALS	$62,445,273.00	$1,919,058.00	$64,364,331.00	$4,061,764.21	$739,479.92	$40,523,854.64	$23,100,996.44	64%	$41,803,582.91
Fund **101 - GENERAL FUND** Totals									
REVENUE TOTALS	62,448,701.00	25,000.00	62,473,701.00	4,114,085.41	.00	57,842,967.19	4,630,733.81	93%	54,519,625.22
EXPENSE TOTALS	62,445,273.00	1,919,058.00	64,364,331.00	4,061,764.21	739,479.92	40,523,854.64	23,100,996.44	64%	41,803,582.91
Fund **101 - GENERAL FUND** Totals	$3,428.00	($1,894,058.00)	($1,890,630.00)	$52,321.20	($739,479.92)	$17,319,112.55	($18,470,262.63)		$12,716,042.31

BUDGET TO ACTUAL - COUNCIL SUMMARY - 09/30/2020

Through 09/30/20

Prior Fiscal Year Activity Included

Organization	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **202 - MAJOR STREET FUND**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	8,364,261.00	.00	8,364,261.00	1,106,605.04	.00	5,497,809.66	2,866,451.34	66	5,961,547.58
REVENUE TOTALS	$8,364,261.00	$0.00	$8,364,261.00	$1,106,605.04	$0.00	$5,497,809.66	$2,866,451.34	66%	$5,961,547.58
EXPENSE									
Department **450 - STREET LIGHTING**	537,737.00	.00	537,737.00	35,000.00	.00	467,737.00	70,000.00	87	503,567.00
Department **451 - CONST-STREET AND BRIDGES**	75,000.00	.00	75,000.00	.00	.00	.00	75,000.00	0	.00
Department **463 - MAINTENANCE-STREET**	1,570,594.00	517,047.00	2,087,641.00	79,948.39	.00	839,793.23	1,247,847.77	40	1,037,242.39
Department **478 - MAINT-FREEWAY LIGHTING**	25,000.00	.00	25,000.00	1,310.72	.00	13,068.25	11,931.75	52	12,324.61
Department **479 - SNOW AND ICE REMOVAL**	315,246.00	100,000.00	415,246.00	26,271.00	.00	262,710.00	152,536.00	63	274,940.00
Department **483 - ADMIN, ENGIN RECORD KEEPI**	342,508.00	.00	342,508.00	28,541.50	.00	285,415.00	57,093.00	83	358,760.00
Department **484 - FUND TRANSFERS**	6,600,000.00	.00	6,600,000.00	550,000.00	.00	5,500,000.00	1,100,000.00	83	5,083,330.00
EXPENSE TOTALS	$9,466,085.00	$617,047.00	$10,083,132.00	$721,071.61	$0.00	$7,368,723.48	$2,714,408.52	73%	$7,270,164.00
Fund **202 - MAJOR STREET FUND** Totals									
REVENUE TOTALS	8,364,261.00	.00	8,364,261.00	1,106,605.04	.00	5,497,809.66	2,866,451.34	66%	5,961,547.58
EXPENSE TOTALS	9,466,085.00	617,047.00	10,083,132.00	721,071.61	.00	7,368,723.48	2,714,408.52	73%	7,270,164.00
Fund **202 - MAJOR STREET FUND** Totals	($1,101,824.00)	($617,047.00)	($1,718,871.00)	$385,533.43	$0.00	($1,870,913.82)	$152,042.82		($1,308,616.42)

BUDGET TO ACTUAL - COUNCIL SUMMARY - 09/30/2020

Through 09/30/20

Prior Fiscal Year Activity Included

Organization	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **203 - LOCAL STREET FUND**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	9,783,303.00	.00	9,783,303.00	1,605,091.12	.00	8,220,794.18	1,562,508.82	84	7,348,434.00
REVENUE TOTALS	$9,783,303.00	$0.00	$9,783,303.00	$1,605,091.12	$0.00	$8,220,794.18	$1,562,508.82	84%	$7,348,434.00
EXPENSE									
Department **450 - STREET LIGHTING**	102,000.00	4,100.00	106,100.00	8,500.00	.00	85,000.00	21,100.00	80	95,000.00
Department **451 - CONST-STREET AND BRIDGES**	125,000.00	(4,100.00)	120,900.00	.00	.00	.00	120,900.00	0	.00
Department **463 - MAINTENANCE-STREET**	1,246,138.00	138,842.00	1,384,980.00	155,721.01	.00	1,102,687.28	282,292.72	80	660,260.00
Department **479 - SNOW AND ICE REMOVAL**	415,526.00	.00	415,526.00	34,627.00	.00	346,270.00	69,256.00	83	271,860.00
Department **483 - ADMIN, ENGIN RECORD KEEPI**	455,892.00	.00	455,892.00	37,991.00	.00	379,910.00	75,982.00	83	310,520.00
Department **484 - FUND TRANSFERS**	7,900,000.00	.00	7,900,000.00	658,333.00	.00	6,583,330.00	1,316,670.00	83	6,166,670.00
EXPENSE TOTALS	$10,244,556.00	$138,842.00	$10,383,398.00	$895,172.01	$0.00	$8,497,197.28	$1,886,200.72	82%	$7,504,310.00
Fund **203 - LOCAL STREET FUND** Totals									
REVENUE TOTALS	9,783,303.00	.00	9,783,303.00	1,605,091.12	.00	8,220,794.18	1,562,508.82	84%	7,348,434.00
EXPENSE TOTALS	10,244,556.00	138,842.00	10,383,398.00	895,172.01	.00	8,497,197.28	1,886,200.72	82%	7,504,310.00
Fund **203 - LOCAL STREET FUND** Totals	($461,253.00)	($138,842.00)	($600,095.00)	$709,919.11	$0.00	($276,403.10)	($323,691.90)		($155,876.00)

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Fund **204 - ROAD - SIDEWALK & TREE**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	12,081,004.00	.00	12,081,004.00	658,617.74	.00	10,806,987.01	1,274,016.99	89	10,352,427.73
REVENUE TOTALS	$12,081,004.00	$0.00	$12,081,004.00	$658,617.74	$0.00	$10,806,987.01	$1,274,016.99	89%	$10,352,427.73
EXPENSE									
Department **441 - ENGINEER/BUILDING**	2,183,738.00	118,842.00	2,302,580.00	131,523.00	.00	968,360.61	1,334,219.39	42	1,177,465.39
Department **444 - PUBLIC SERV ADMINISTATION**	27,666.00	.00	27,666.00	2,305.00	.00	23,050.00	4,616.00	83	22,920.00
Department **463 - MAINTENANCE-STREET**	9,635,000.00	567,887.00	10,202,887.00	721,515.42	.00	6,599,597.15	3,603,289.85	65	6,901,720.38
Department **781 - FORESTRY**	155,000.00	6,500.00	161,500.00	.00	.00	101,160.00	60,340.00	63	133,680.00
EXPENSE TOTALS	$12,001,404.00	$693,229.00	$12,694,633.00	$855,343.42	$0.00	$7,692,167.76	$5,002,465.24	61%	$8,235,785.77
Fund **204 - ROAD - SIDEWALK & TREE** Totals									
REVENUE TOTALS	12,081,004.00	.00	12,081,004.00	658,617.74	.00	10,806,987.01	1,274,016.99	89%	10,352,427.73
EXPENSE TOTALS	12,001,404.00	693,229.00	12,694,633.00	855,343.42	.00	7,692,167.76	5,002,465.24	61%	8,235,785.77
Fund **204 - ROAD - SIDEWALK & TREE** Totals	$79,600.00	($693,229.00)	($613,629.00)	($196,725.68)	$0.00	$3,114,819.25	($3,728,448.25)		$2,116,641.96

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Fund **205 - MUNICIPAL REFUSE FUND**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	11,712,613.00	.00	11,712,613.00	18,084.25	.00	11,807,506.19	(94,893.19)	101	13,510,287.65
REVENUE TOTALS	$11,712,613.00	$0.00	$11,712,613.00	$18,084.25	$0.00	$11,807,506.19	($94,893.19)	101%	$13,510,287.65
EXPENSE									
Department **525 - SANITATION**	1,085,891.00	.00	1,085,891.00	75,574.25	23,566.50	778,304.54	284,019.96	74	784,696.54
Department **526 - ANIMAL CONTROL**	314,924.00	115,300.00	430,224.00	12,686.24	2,600.00	325,992.96	101,631.04	76	200,534.63
Department **527 - PUBLIC SERVICE**	10,422,202.00	124,306.00	10,546,508.00	946,810.37	4,152.00	7,873,470.95	2,668,885.05	75	7,603,523.95
EXPENSE TOTALS	$11,823,017.00	$239,606.00	$12,062,623.00	$1,035,070.86	$30,318.50	$8,977,768.45	$3,054,536.05	75%	$8,588,755.12
Fund **205 - MUNICIPAL REFUSE FUND** Totals									
REVENUE TOTALS	11,712,613.00	.00	11,712,613.00	18,084.25	.00	11,807,506.19	(94,893.19)	101%	13,510,287.65
EXPENSE TOTALS	11,823,017.00	239,606.00	12,062,623.00	1,035,070.86	30,318.50	8,977,768.45	3,054,536.05	75%	8,588,755.12
Fund **205 - MUNICIPAL REFUSE FUND** Totals	($110,404.00)	($239,606.00)	($350,010.00)	($1,016,986.61)	($30,318.50)	$2,829,737.74	($3,149,429.24)		$4,921,532.53

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Fund **208 - COMMUNITY RECREATION**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	7,663,427.00	.00	7,663,427.00	66,556.58	.00	5,594,482.92	2,068,944.08	73	7,078,047.54
REVENUE TOTALS	$7,663,427.00	$0.00	$7,663,427.00	$66,556.58	$0.00	$5,594,482.92	$2,068,944.08	73%	$7,078,047.54
EXPENSE									
Department **715 - ICE RINK**	391,881.00	.00	391,881.00	500.00	.00	347,739.30	44,141.70	89	342,495.63
Department **717 - SPECIAL EVENTS**	89,114.00	.00	89,114.00	2,605.64	.00	51,905.97	37,208.03	58	58,450.39
Department **720 - SWIMMING POOL - BOTSFORD**	109,781.00	24,455.00	134,236.00	11,836.19	940.80	100,261.89	33,033.31	75	87,130.22
Department **721 - SWIMMING POOL - CLEMENT C**	100,032.00	6,500.00	106,532.00	24,028.73	313.70	92,280.95	13,937.35	87	82,631.52
Department **722 - SWIMMING POOL - SHELDON**	62,972.00	(15,400.00)	47,572.00	115.26	312.00	1,179.84	46,080.16	3	54,859.38
Department **755 - RECREATION CENTER**	7,172,275.00	93,485.00	7,265,760.00	216,941.53	47,475.00	4,171,802.17	3,046,482.83	58	5,228,425.97
Department **756 - OTHER RECREATION**	22,100.00	20,000.00	42,100.00	.00	.00	25,432.75	16,667.25	60	22,745.05
EXPENSE TOTALS	$7,948,155.00	$129,040.00	$8,077,195.00	$256,027.35	$49,041.50	$4,790,602.87	$3,237,550.63	60%	$5,876,738.16
Fund **208 - COMMUNITY RECREATION** Totals									
REVENUE TOTALS	7,663,427.00	.00	7,663,427.00	66,556.58	.00	5,594,482.92	2,068,944.08	73%	7,078,047.54
EXPENSE TOTALS	7,948,155.00	129,040.00	8,077,195.00	256,027.35	49,041.50	4,790,602.87	3,237,550.63	60%	5,876,738.16
Fund **208 - COMMUNITY RECREATION** Totals	($284,728.00)	($129,040.00)	($413,768.00)	($189,470.77)	($49,041.50)	$803,880.05	($1,168,606.55)		$1,201,309.38

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Fund **211 - DESIGNATED PURPOSE**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	.00	155,000.00	155,000.00	4,812.50	.00	39,230.75	115,769.25	25	.00
REVENUE TOTALS	$0.00	$155,000.00	$155,000.00	$4,812.50	$0.00	$39,230.75	$115,769.25	25%	$0.00
EXPENSE									
Department **000 - ACCOUNT BALANCES**	.00	145,000.00	145,000.00	307.60	.00	33,306.98	111,693.02	23	.00
EXPENSE TOTALS	$0.00	$145,000.00	$145,000.00	$307.60	$0.00	$33,306.98	$111,693.02	23%	$0.00
Fund **211 - DESIGNATED PURPOSE** Totals									
REVENUE TOTALS	.00	155,000.00	155,000.00	4,812.50	.00	39,230.75	115,769.25	25%	.00
EXPENSE TOTALS	.00	145,000.00	145,000.00	307.60	.00	33,306.98	111,693.02	23%	.00
Fund **211 - DESIGNATED PURPOSE** Totals	$0.00	$10,000.00	$10,000.00	$4,504.90	$0.00	$5,923.77	$4,076.23		$0.00

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Fund **216 - TRANSIT & CAPITAL IMPR**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	2,308,717.00	.00	2,308,717.00	1.80	.00	2,340,337.78	(31,620.78)	101	2,246,685.16
REVENUE TOTALS	$2,308,717.00	$0.00	$2,308,717.00	$1.80	$0.00	$2,340,337.78	($31,620.78)	101%	$2,246,685.16
EXPENSE									
Department **000 - ACCOUNT BALANCES**	2,308,717.00	.00	2,308,717.00	.00	.00	2,308,717.00	.00	100	2,186,454.00
EXPENSE TOTALS	$2,308,717.00	$0.00	$2,308,717.00	$0.00	$0.00	$2,308,717.00	$0.00	100%	$2,186,454.00
Fund **216 - TRANSIT & CAPITAL IMPR** Totals									
REVENUE TOTALS	2,308,717.00	.00	2,308,717.00	1.80	.00	2,340,337.78	(31,620.78)	101%	2,246,685.16
EXPENSE TOTALS	2,308,717.00	.00	2,308,717.00	.00	.00	2,308,717.00	.00	100%	2,186,454.00
Fund **216 - TRANSIT & CAPITAL IMPR** Totals	$0.00	$0.00	$0.00	$1.80	$0.00	$31,620.78	($31,620.78)		$60,231.16

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Fund **218 - COMMUNITY TRANSIT PROGRAM**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	995,828.00	.00	995,828.00	2,284.80	.00	948,548.42	47,279.58	95	846,627.15
REVENUE TOTALS	$995,828.00	$0.00	$995,828.00	$2,284.80	$0.00	$948,548.42	$47,279.58	95%	$846,627.15
EXPENSE									
Department **885 - COMM TRANSIT DISPATCHERS**	100,893.00	.00	100,893.00	6,568.85	.00	64,716.02	36,176.98	64	65,260.45
Department **887 - COMMUNITY TRANSIT ADMIN**	158,930.00	.00	158,930.00	12,448.15	.00	128,105.55	30,824.45	81	127,819.24
Department **889 - COMMUNITY TRANSIT**	867,362.00	.00	867,362.00	19,926.76	3,754.00	333,650.20	529,957.80	39	601,938.13
EXPENSE TOTALS	$1,127,185.00	$0.00	$1,127,185.00	$38,943.76	$3,754.00	$526,471.77	$596,959.23	47%	$795,017.82
Fund **218 - COMMUNITY TRANSIT PROGRAM** Totals									
REVENUE TOTALS	995,828.00	.00	995,828.00	2,284.80	.00	948,548.42	47,279.58	95%	846,627.15
EXPENSE TOTALS	1,127,185.00	.00	1,127,185.00	38,943.76	3,754.00	526,471.77	596,959.23	47%	795,017.82
Fund **218 - COMMUNITY TRANSIT PROGRAM** Totals	($131,357.00)	$0.00	($131,357.00)	($36,658.96)	($3,754.00)	$422,076.65	($549,679.65)		$51,609.33

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Fund **260 - MIDC GRANT**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	504,623.00	.00	504,623.00	.00	.00	411,027.35	93,595.65	81	395,679.96
REVENUE TOTALS	$504,623.00	$0.00	$504,623.00	$0.00	$0.00	$411,027.35	$93,595.65	81%	$395,679.96
EXPENSE									
Department **000 - ACCOUNT BALANCES**	504,623.00	.00	504,623.00	68,401.89	.00	322,404.70	182,218.30	64	299,699.41
EXPENSE TOTALS	$504,623.00	$0.00	$504,623.00	$68,401.89	$0.00	$322,404.70	$182,218.30	64%	$299,699.41
Fund **260 - MIDC GRANT** Totals									
REVENUE TOTALS	504,623.00	.00	504,623.00	.00	.00	411,027.35	93,595.65	81%	395,679.96
EXPENSE TOTALS	504,623.00	.00	504,623.00	68,401.89	.00	322,404.70	182,218.30	64%	299,699.41
Fund **260 - MIDC GRANT** Totals	$0.00	$0.00	$0.00	($68,401.89)	$0.00	$88,622.65	($88,622.65)		$95,980.55

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Fund **261 - PUB. SAFETY COMMUNICATION**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	625,000.00	.00	625,000.00	130,703.51	.00	416,796.85	208,203.15	67	475,439.25
REVENUE TOTALS	$625,000.00	$0.00	$625,000.00	$130,703.51	$0.00	$416,796.85	$208,203.15	67%	$475,439.25
EXPENSE									
Department **000 - ACCOUNT BALANCES**	1,416,500.00	.00	1,416,500.00	30,818.50	166,000.61	158,389.97	1,092,109.42	23	118,272.31
EXPENSE TOTALS	$1,416,500.00	$0.00	$1,416,500.00	$30,818.50	$166,000.61	$158,389.97	$1,092,109.42	23%	$118,272.31
Fund **261 - PUB. SAFETY COMMUNICATION** Totals									
REVENUE TOTALS	625,000.00	.00	625,000.00	130,703.51	.00	416,796.85	208,203.15	67%	475,439.25
EXPENSE TOTALS	1,416,500.00	.00	1,416,500.00	30,818.50	166,000.61	158,389.97	1,092,109.42	23%	118,272.31
Fund **261 - PUB. SAFETY COMMUNICATION** Totals	($791,500.00)	$0.00	($791,500.00)	$99,885.01	($166,000.61)	$258,406.88	($883,906.27)		$357,166.94

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Fund **262 - PLYMOUTH RD DEV AUTHORITY**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	696,550.00	.00	696,550.00	35.79	.00	731,977.99	(35,427.99)	105	668,597.96
REVENUE TOTALS	$696,550.00	$0.00	$696,550.00	$35.79	$0.00	$731,977.99	($35,427.99)	105%	$668,597.96
EXPENSE									
Department **000 - ACCOUNT BALANCES**	663,263.00	.00	663,263.00	78,256.73	.00	73,731.14	589,531.86	11	70,176.81
EXPENSE TOTALS	$663,263.00	$0.00	$663,263.00	$78,256.73	$0.00	$73,731.14	$589,531.86	11%	$70,176.81
Fund **262 - PLYMOUTH RD DEV AUTHORITY** Totals									
REVENUE TOTALS	696,550.00	.00	696,550.00	35.79	.00	731,977.99	(35,427.99)	105%	668,597.96
EXPENSE TOTALS	663,263.00	.00	663,263.00	78,256.73	.00	73,731.14	589,531.86	11%	70,176.81
Fund **262 - PLYMOUTH RD DEV AUTHORITY** Totals	$33,287.00	$0.00	$33,287.00	($78,220.94)	$0.00	$658,246.85	($624,959.85)		$598,421.15

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Fund **265 - ADJUDICATED FORFEITURES**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	325,000.00	.00	325,000.00	53,116.84	.00	222,309.79	102,690.21	68	268,078.94
REVENUE TOTALS	$325,000.00	$0.00	$325,000.00	$53,116.84	$0.00	$222,309.79	$102,690.21	68%	$268,078.94
EXPENSE									
Department **333 - STATE/LOCAL FORFEITURE EX**	560,300.00	500,000.00	1,060,300.00	658.85	22,900.75	35,779.83	1,001,619.42	6	228,321.07
Department **334 - FEDERAL FORFEITURE EXP**	226,865.00	.00	226,865.00	18,153.90	1,140.20	79,590.12	146,134.68	36	58,498.07
Department **335 - CONTINUING CRIMINAL ENTERPRISE**	145,000.00	.00	145,000.00	833.97	.00	9,227.08	135,772.92	6	8,145.08
EXPENSE TOTALS	$932,165.00	$500,000.00	$1,432,165.00	$19,646.72	$24,040.95	$124,597.03	$1,283,527.02	10%	$294,964.22
Fund **265 - ADJUDICATED FORFEITURES** Totals									
REVENUE TOTALS	325,000.00	.00	325,000.00	53,116.84	.00	222,309.79	102,690.21	68%	268,078.94
EXPENSE TOTALS	932,165.00	500,000.00	1,432,165.00	19,646.72	24,040.95	124,597.03	1,283,527.02	10%	294,964.22
Fund **265 - ADJUDICATED FORFEITURES** Totals	($607,165.00)	($500,000.00)	($1,107,165.00)	$33,470.12	($24,040.95)	$97,712.76	($1,180,836.81)		($26,885.28)

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Fund **270 - HISTORICAL COMMISSION**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	.00	115,800.00	115,800.00	1,112.80	.00	17,206.91	98,593.09	15	.00
REVENUE TOTALS	$0.00	$115,800.00	$115,800.00	$1,112.80	$0.00	$17,206.91	$98,593.09	15%	$0.00
EXPENSE									
Department **000 - ACCOUNT BALANCES**	.00	84,000.00	84,000.00	440.00	.00	19,712.66	64,287.34	23	.00
EXPENSE TOTALS	$0.00	$84,000.00	$84,000.00	$440.00	$0.00	$19,712.66	$64,287.34	23%	$0.00
Fund **270 - HISTORICAL COMMISSION** Totals									
REVENUE TOTALS	.00	115,800.00	115,800.00	1,112.80	.00	17,206.91	98,593.09	15%	.00
EXPENSE TOTALS	.00	84,000.00	84,000.00	440.00	.00	19,712.66	64,287.34	23%	.00
Fund **270 - HISTORICAL COMMISSION** Totals	$0.00	$31,800.00	$31,800.00	$672.80	$0.00	($2,505.75)	$34,305.75		$0.00

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Fund **271 - LIBRARY FUND**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	4,019,171.00	.00	4,019,171.00	220,604.91	.00	4,950,137.33	(930,966.33)	123	4,044,801.07
REVENUE TOTALS	$4,019,171.00	$0.00	$4,019,171.00	$220,604.91	$0.00	$4,950,137.33	($930,966.33)	123%	$4,044,801.07
EXPENSE									
Department **738 - CIVIC CENTER LIBRARY**	3,051,810.00	76,060.00	3,127,870.00	199,383.72	747.30	1,882,336.74	1,244,785.96	60	2,071,346.36
Department **739 - NOBLE LIBRARY**	350,306.00	(104,609.00)	245,697.00	5,884.22	.00	90,730.95	154,966.05	37	269,008.55
Department **740 - SANDBURG LIBRARY**	497,539.00	28,549.00	526,088.00	41,546.92	6,341.86	418,211.62	101,534.52	81	366,672.35
EXPENSE TOTALS	$3,899,655.00	$0.00	$3,899,655.00	$246,814.86	$7,089.16	$2,391,279.31	$1,501,286.53	62%	$2,707,027.26
Fund **271 - LIBRARY FUND** Totals									
REVENUE TOTALS	4,019,171.00	.00	4,019,171.00	220,604.91	.00	4,950,137.33	(930,966.33)	123%	4,044,801.07
EXPENSE TOTALS	3,899,655.00	.00	3,899,655.00	246,814.86	7,089.16	2,391,279.31	1,501,286.53	62%	2,707,027.26
Fund **271 - LIBRARY FUND** Totals	$119,516.00	$0.00	$119,516.00	($26,209.95)	($7,089.16)	$2,558,858.02	($2,432,252.86)		$1,337,773.81

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Fund **272 - ARTS COMMISSION FUND**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	.00	12,400.00	12,400.00	4.50	.00	1,388.87	11,011.13	11	.00
REVENUE TOTALS	$0.00	$12,400.00	$12,400.00	$4.50	$0.00	$1,388.87	$11,011.13	11%	$0.00
EXPENSE									
Department **000 - ACCOUNT BALANCES**	.00	13,000.00	13,000.00	.00	.00	212.50	12,787.50	2	.00
EXPENSE TOTALS	$0.00	$13,000.00	$13,000.00	$0.00	$0.00	$212.50	$12,787.50	2%	$0.00
Fund **272 - ARTS COMMISSION FUND** Totals									
REVENUE TOTALS	.00	12,400.00	12,400.00	4.50	.00	1,388.87	11,011.13	11%	.00
EXPENSE TOTALS	.00	13,000.00	13,000.00	.00	.00	212.50	12,787.50	2%	.00
Fund **272 - ARTS COMMISSION FUND** Totals	$0.00	($600.00)	($600.00)	$4.50	$0.00	$1,176.37	($1,776.37)		$0.00

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Fund **273 - LIVONIA BROWNFIELD REDEV AUTH**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	390,000.00	.00	390,000.00	.00	.00	129,879.99	260,120.01	33	107,220.77
REVENUE TOTALS	$390,000.00	$0.00	$390,000.00	$0.00	$0.00	$129,879.99	$260,120.01	33%	$107,220.77
EXPENSE									
Department **000 - ACCOUNT BALANCES**	390,000.00	.00	390,000.00	.00	.00	129,879.99	260,120.01	33	107,220.77
EXPENSE TOTALS	$390,000.00	$0.00	$390,000.00	$0.00	$0.00	$129,879.99	$260,120.01	33%	$107,220.77
Fund **273 - LIVONIA BROWNFIELD REDEV AUTH** Totals									
REVENUE TOTALS	390,000.00	.00	390,000.00	.00	.00	129,879.99	260,120.01	33%	107,220.77
EXPENSE TOTALS	390,000.00	.00	390,000.00	.00	.00	129,879.99	260,120.01	33%	107,220.77
Fund **273 - LIVONIA BROWNFIELD REDEV AUTH** Totals	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		$0.00

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Fund **274 - LIVONIA BROWNFIELD - LSRRF**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	73,000.00	.00	73,000.00	12.90	.00	28,144.84	44,855.16	39	22,505.07
REVENUE TOTALS	$73,000.00	$0.00	$73,000.00	$12.90	$0.00	$28,144.84	$44,855.16	39%	$22,505.07
EXPENSE									
Department **000 - ACCOUNT BALANCES**	10,000.00	.00	10,000.00	.00	.00	.00	10,000.00	0	.00
EXPENSE TOTALS	$10,000.00	$0.00	$10,000.00	$0.00	$0.00	$0.00	$10,000.00	0%	$0.00
Fund **274 - LIVONIA BROWNFIELD - LSRRF** Totals									
REVENUE TOTALS	73,000.00	.00	73,000.00	12.90	.00	28,144.84	44,855.16	39%	22,505.07
EXPENSE TOTALS	10,000.00	.00	10,000.00	.00	.00	.00	10,000.00	0%	.00
Fund **274 - LIVONIA BROWNFIELD - LSRRF** Totals	$63,000.00	$0.00	$63,000.00	$12.90	$0.00	$28,144.84	$34,855.16		$22,505.07

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Fund **294 - NEWBURGH VILLAGE**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	827,600.00	.00	827,600.00	70,340.36	.00	680,733.45	146,866.55	82	677,584.42
REVENUE TOTALS	$827,600.00	$0.00	$827,600.00	$70,340.36	$0.00	$680,733.45	$146,866.55	82%	$677,584.42
EXPENSE									
Department **834 - NEWBURGH VILLAGE**	1,394,873.00	.00	1,394,873.00	38,001.15	11,740.78	426,580.60	956,551.62	31	418,500.18
EXPENSE TOTALS	$1,394,873.00	$0.00	$1,394,873.00	$38,001.15	$11,740.78	$426,580.60	$956,551.62	31%	$418,500.18
Fund **294 - NEWBURGH VILLAGE** Totals									
REVENUE TOTALS	827,600.00	.00	827,600.00	70,340.36	.00	680,733.45	146,866.55	82%	677,584.42
EXPENSE TOTALS	1,394,873.00	.00	1,394,873.00	38,001.15	11,740.78	426,580.60	956,551.62	31%	418,500.18
Fund **294 - NEWBURGH VILLAGE** Totals	($567,273.00)	$0.00	($567,273.00)	$32,339.21	($11,740.78)	$254,152.85	($809,685.07)		$259,084.24

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Organization	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **296 - SILVER VILLAGE FUND**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	663,440.00	.00	663,440.00	53,961.36	.00	557,661.12	105,778.88	84	568,477.37
REVENUE TOTALS	$663,440.00	$0.00	$663,440.00	$53,961.36	$0.00	$557,661.12	$105,778.88	84%	$568,477.37
EXPENSE									
Department **831 - SILVER VILLAGE**	1,283,728.00	.00	1,283,728.00	28,624.48	23,993.77	359,818.48	899,915.75	30	367,206.62
EXPENSE TOTALS	$1,283,728.00	$0.00	$1,283,728.00	$28,624.48	$23,993.77	$359,818.48	$899,915.75	30%	$367,206.62
Fund **296 - SILVER VILLAGE FUND** Totals									
REVENUE TOTALS	663,440.00	.00	663,440.00	53,961.36	.00	557,661.12	105,778.88	84%	568,477.37
EXPENSE TOTALS	1,283,728.00	.00	1,283,728.00	28,624.48	23,993.77	359,818.48	899,915.75	30%	367,206.62
Fund **296 - SILVER VILLAGE FUND** Totals	($620,288.00)	$0.00	($620,288.00)	$25,336.88	($23,993.77)	$197,842.64	($794,136.87)		$201,270.75

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Organization	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **297 - CABLE TELEVISION FUND**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	410,400.00	.00	410,400.00	52.20	.00	312,191.36	98,208.64	76	327,638.99
REVENUE TOTALS	$410,400.00	$0.00	$410,400.00	$52.20	$0.00	$312,191.36	$98,208.64	76%	$327,638.99
EXPENSE									
Department **751 - CABLE TELEVISION**	504,540.00	340,000.00	844,540.00	44,887.45	10,510.75	305,439.53	528,589.72	37	345,831.41
EXPENSE TOTALS	$504,540.00	$340,000.00	$844,540.00	$44,887.45	$10,510.75	$305,439.53	$528,589.72	37%	$345,831.41
Fund **297 - CABLE TELEVISION FUND** Totals									
REVENUE TOTALS	410,400.00	.00	410,400.00	52.20	.00	312,191.36	98,208.64	76%	327,638.99
EXPENSE TOTALS	504,540.00	340,000.00	844,540.00	44,887.45	10,510.75	305,439.53	528,589.72	37%	345,831.41
Fund **297 - CABLE TELEVISION FUND** Totals	($94,140.00)	($340,000.00)	($434,140.00)	($44,835.25)	($10,510.75)	$6,751.83	($430,381.08)		($18,192.42)

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Fund **327 - D/S 2015 MBA Refunding**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	183,471.00	.00	183,471.00	500.00	.00	172,973.50	10,497.50	94	169,887.75
REVENUE TOTALS	$183,471.00	$0.00	$183,471.00	$500.00	$0.00	$172,973.50	$10,497.50	94%	$169,887.75
EXPENSE									
Department **000 - ACCOUNT BALANCES**	183,471.00	.00	183,471.00	500.00	.00	172,973.50	10,497.50	94	169,887.75
EXPENSE TOTALS	$183,471.00	$0.00	$183,471.00	$500.00	$0.00	$172,973.50	$10,497.50	94%	$169,887.75
Fund **327 - D/S 2015 MBA Refunding** Totals									
REVENUE TOTALS	183,471.00	.00	183,471.00	500.00	.00	172,973.50	10,497.50	94%	169,887.75
EXPENSE TOTALS	183,471.00	.00	183,471.00	500.00	.00	172,973.50	10,497.50	94%	169,887.75
Fund **327 - D/S 2015 MBA Refunding** Totals	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		$0.00

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Organization	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **328 - D/S 2016 MBA REFUNDING**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	549,100.00	.00	549,100.00	.00	.00	438,000.00	111,100.00	80	429,100.00
REVENUE TOTALS	$549,100.00	$0.00	$549,100.00	$0.00	$0.00	$438,000.00	$111,100.00	80%	$429,100.00
EXPENSE									
Department **000 - ACCOUNT BALANCES**	549,100.00	.00	549,100.00	.00	.00	438,000.00	111,100.00	80	429,100.00
EXPENSE TOTALS	$549,100.00	$0.00	$549,100.00	$0.00	$0.00	$438,000.00	$111,100.00	80%	$429,100.00
Fund **328 - D/S 2016 MBA REFUNDING** Totals									
REVENUE TOTALS	549,100.00	.00	549,100.00	.00	.00	438,000.00	111,100.00	80%	429,100.00
EXPENSE TOTALS	549,100.00	.00	549,100.00	.00	.00	438,000.00	111,100.00	80%	429,100.00
Fund **328 - D/S 2016 MBA REFUNDING** Totals	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		$0.00

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Fund **329 - D/S 2017 MBA REFUNDING**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	1,994,350.00	.00	1,994,350.00	.00	.00	1,672,400.00	321,950.00	84	1,651,750.00
REVENUE TOTALS	$1,994,350.00	$0.00	$1,994,350.00	$0.00	$0.00	$1,672,400.00	$321,950.00	84%	$1,651,750.00
EXPENSE									
Department **000 - ACCOUNT BALANCES**	1,994,350.00	.00	1,994,350.00	.00	.00	1,672,400.00	321,950.00	84	1,651,750.00
EXPENSE TOTALS	$1,994,350.00	$0.00	$1,994,350.00	$0.00	$0.00	$1,672,400.00	$321,950.00	84%	$1,651,750.00
Fund **329 - D/S 2017 MBA REFUNDING** Totals									
REVENUE TOTALS	1,994,350.00	.00	1,994,350.00	.00	.00	1,672,400.00	321,950.00	84%	1,651,750.00
EXPENSE TOTALS	1,994,350.00	.00	1,994,350.00	.00	.00	1,672,400.00	321,950.00	84%	1,651,750.00
Fund **329 - D/S 2017 MBA REFUNDING** Totals	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00		$0.00

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Fund **401 - CAPITAL PROJECTS**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	2,653,717.00	.00	2,653,717.00	371.05	.00	2,626,216.03	27,500.97	99	2,208,910.14
REVENUE TOTALS	$2,653,717.00	$0.00	$2,653,717.00	$371.05	$0.00	$2,626,216.03	$27,500.97	99%	$2,208,910.14
EXPENSE									
Department **000 - ACCOUNT BALANCES**	3,676,000.00	3,894,943.00	7,570,943.00	5,275.00	106,710.82	2,167,602.74	5,296,629.44	30	1,658,171.92
EXPENSE TOTALS	$3,676,000.00	$3,894,943.00	$7,570,943.00	$5,275.00	$106,710.82	$2,167,602.74	$5,296,629.44	30%	$1,658,171.92
Fund **401 - CAPITAL PROJECTS** Totals									
REVENUE TOTALS	2,653,717.00	.00	2,653,717.00	371.05	.00	2,626,216.03	27,500.97	99%	2,208,910.14
EXPENSE TOTALS	3,676,000.00	3,894,943.00	7,570,943.00	5,275.00	106,710.82	2,167,602.74	5,296,629.44	30%	1,658,171.92
Fund **401 - CAPITAL PROJECTS** Totals	($1,022,283.00)	($3,894,943.00)	($4,917,226.00)	($4,903.95)	($106,710.82)	$458,613.29	($5,269,128.47)		$550,738.22

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Fund **418 - BUILDING IMPROVEMENT FUND**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	7,500.00	.00	7,500.00	70.20	.00	14,281.52	(6,781.52)	190	9,053.13
REVENUE TOTALS	$7,500.00	$0.00	$7,500.00	$70.20	$0.00	$14,281.52	($6,781.52)	190%	$9,053.13
EXPENSE									
Department **000 - ACCOUNT BALANCES**	100,000.00	.00	100,000.00	.00	.00	.00	100,000.00	0	.00
EXPENSE TOTALS	$100,000.00	$0.00	$100,000.00	$0.00	$0.00	$0.00	$100,000.00	0%	$0.00
Fund **418 - BUILDING IMPROVEMENT FUND** Totals									
REVENUE TOTALS	7,500.00	.00	7,500.00	70.20	.00	14,281.52	(6,781.52)	190%	9,053.13
EXPENSE TOTALS	100,000.00	.00	100,000.00	.00	.00	.00	100,000.00	0%	.00
Fund **418 - BUILDING IMPROVEMENT FUND** Totals	($92,500.00)	$0.00	($92,500.00)	$70.20	$0.00	$14,281.52	($106,781.52)		$9,053.13

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Organization	Adopted Budget	Budget Amendments	Amended Budget	Current Month Transactions	YTD Encumbrances	YTD Transactions	Budget - YTD Transactions	% Used/ Rec'd	Prior Year YTD
Fund **508 - GOLF COURSE FUND**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	2,015,742.00	.00	2,015,742.00	305,884.80	.00	1,766,694.18	249,047.82	88	1,609,471.68
REVENUE TOTALS	$2,015,742.00	$0.00	$2,015,742.00	$305,884.80	$0.00	$1,766,694.18	$249,047.82	88%	$1,609,471.68
EXPENSE									
Department **000 - ACCOUNT BALANCES**	.00	.00	.00	.00	.00	.00	.00	+++	.00
Department **686 - WHISPERING WILLOWS**	707,421.00	.00	707,421.00	55,625.23	.00	512,051.04	195,369.96	72	505,442.16
Department **687 - IDYL WYLD**	529,106.00	.00	529,106.00	53,520.21	.00	368,959.09	160,146.91	70	374,369.67
Department **688 - FOX CREEK**	763,296.00	.00	763,296.00	64,154.58	.00	465,701.81	297,594.19	61	487,614.31
EXPENSE TOTALS	$1,999,823.00	$0.00	$1,999,823.00	$173,300.02	$0.00	$1,346,711.94	$653,111.06	67%	$1,367,426.14
Fund **508 - GOLF COURSE FUND** Totals									
REVENUE TOTALS	2,015,742.00	.00	2,015,742.00	305,884.80	.00	1,766,694.18	249,047.82	88%	1,609,471.68
EXPENSE TOTALS	1,999,823.00	.00	1,999,823.00	173,300.02	.00	1,346,711.94	653,111.06	67%	1,367,426.14
Fund **508 - GOLF COURSE FUND** Totals	$15,919.00	$0.00	$15,919.00	$132,584.78	$0.00	$419,982.24	($404,063.24)		$242,045.54

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Fund **566 - ECONOMIC DEVEL CORP**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	300.00	.00	300.00	1.50	.00	280.68	19.32	94	516.74
REVENUE TOTALS	$300.00	$0.00	$300.00	$1.50	$0.00	$280.68	$19.32	94%	$516.74
EXPENSE									
Department **000 - ACCOUNT BALANCES**	.00	.00	.00	.00	.00	107.65	(107.65)	+++	.00
EXPENSE TOTALS	$0.00	$0.00	$0.00	$0.00	$0.00	$107.65	($107.65)	+++	$0.00
Fund **566 - ECONOMIC DEVEL CORP** Totals									
REVENUE TOTALS	300.00	.00	300.00	1.50	.00	280.68	19.32	94%	516.74
EXPENSE TOTALS	.00	.00	.00	.00	.00	107.65	(107.65)	+++	.00
Fund **566 - ECONOMIC DEVEL CORP** Totals	$300.00	$0.00	$300.00	$1.50	$0.00	$173.03	$126.97		$516.74

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Fund **592 - WATER AND SEWER FUND**									
REVENUE									
Department **000 - ACCOUNT BALANCES**	43,196,228.00	1,854,058.00	45,050,286.00	3,660,427.75	.00	35,370,447.40	9,679,838.60	79	34,732,756.21
REVENUE TOTALS	$43,196,228.00	$1,854,058.00	$45,050,286.00	$3,660,427.75	$0.00	$35,370,447.40	$9,679,838.60	79%	$34,732,756.21
EXPENSE									
Department **558 - W & S FINANCIAL ADMIN**	33,849,906.00	68,218.00	33,918,124.00	2,925,227.09	.00	28,101,994.87	5,816,129.13	83	27,619,931.02
Department **559 - W & S FIELD OPERATIONS**	6,955,676.00	32,000.00	6,987,676.00	533,673.22	116,496.83	4,556,134.01	2,315,045.16	67	4,212,189.84
EXPENSE TOTALS	$40,805,582.00	$100,218.00	$40,905,800.00	$3,458,900.31	$116,496.83	$32,658,128.88	$8,131,174.29	80%	$31,832,120.86
Fund **592 - WATER AND SEWER FUND** Totals									
REVENUE TOTALS	43,196,228.00	1,854,058.00	45,050,286.00	3,660,427.75	.00	35,370,447.40	9,679,838.60	79%	34,732,756.21
EXPENSE TOTALS	40,805,582.00	100,218.00	40,905,800.00	3,458,900.31	116,496.83	32,658,128.88	8,131,174.29	80%	31,832,120.86
Fund **592 - WATER AND SEWER FUND** Totals	$2,390,646.00	$1,753,840.00	$4,144,486.00	$201,527.44	($116,496.83)	$2,712,318.52	$1,548,664.31		$2,900,635.35
Grand Totals									
REVENUE TOTALS	174,493,046.00	2,162,258.00	176,655,304.00	12,073,339.71	.00	153,619,413.26	23,035,890.74	87%	150,231,151.48
EXPENSE TOTALS	177,672,065.00	8,813,983.00	186,486,048.00	12,057,567.93	1,289,177.59	123,486,780.85	61,710,089.56	67%	124,098,163.44
Grand Totals	($3,179,019.00)	($6,651,725.00)	($9,830,744.00)	$15,771.78	($1,289,177.59)	$30,132,632.41	($38,674,198.82)		$26,132,988.04

CITY OF LIVONIA – CITY COUNCIL
MINUTES OF STUDY MEETING HELD NOVEMBER 16, 2020

Meeting was called to order via Zoom remote technology at 8:21 p.m. by President Kathleen McIntyre. Present: Rob Donovic (Deployed), Jim Jolly (Livonia, Michigan), Laura Toy (Livonia, Michigan), Scott Bahr (Livonia, Michigan), Cathy White (Florida), and Kathleen McIntyre (Livonia, Michigan). Absent: None

Councilmember Donovic led the meeting in the Pledge of Allegiance.

Elected and appointed officials present: Mark Taormina, Director of Planning and Economic Development; Todd Zilincik, City Engineer; Paul Bernier, City Attorney; Susan Nash, City Clerk; Curtis Caid, Chief of Police; Dave Heavener, Fire Chief; Jerome Hanna, Director of Inspection; Casey O'Neil, Director of Information Systems; and Jacob Rushlow, Superintendent of Public Service.

3) REQUEST ADOPTION OF A RESOLUTION THAT APPROVES THE WAYNE COUNTY HAZARD MITIGATION PLAN DATED SEPTEMBER 14, 2020: Sgt. Brian Kahn, Director of Emergency Preparedness, re: for a period of five (5) years in order to receive funds made available through certain mitigation grant programs, pursuant to the Code of Federal Regulations, Title 44, Chapter 1, Subchapter D, Part 201, Section 201.6.c.5 which has been approved for implementation from the Federal Emergency Management Agency (FEMA).

Curtis Caid, Chief of Police, presented this request to Council. He stated that Director Kahn and his office, look for opportunities to find funding from grants and the like. (The meeting encountered technical difficulties.)

Vice President Bahr stated that Council has had this is the past and he did look through a little bit of the paperwork provided and this is pretty standard stuff here, it's approving a report that we have to provide every so often for Federal reporting purposes. This is something that's already been submitted to FEMA and already been approved. This is Council approving something that's really baked and ready to go and I'm willing to offer an approving resolution for the Consent Agenda.

DIRECTION: APPROVING CONSENT

REPORT TO THE LIVONIA CITY COUNCIL

Police
October 28, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Laurie Anderson, Program Supervisor, Police

AGENDA ITEM

REQUEST ADOPTION OF A RESOLUTION THAT APPROVES THE WAYNE COUNTY HAZARD MITIGATION PLAN DATED SEPTEMBER 14, 2020: Sgt. Brian Kahn, Director of Emergency Preparedness, re: for a period of five (5) years in order to receive funds made available through certain mitigation grant programs, pursuant to the Code of Federal Regulations, Title 44, Chapter 1, Subchapter D, Part 201, Section 201.6.c.5 which has been approved for implementation from the Federal Emergency Management Agency (FEMA).

BACKGROUND

The Disaster Mitigation Act of 2000 requires communities to have a five-year Hazard Mitigation Plan approved by the Federal Emergency Management Agency (FEMA) in order to receive funds made available through certain mitigation grant programs.

The City of Livonia, in cooperation with Wayne County and other Wayne County communities, prepared the Wayne County Hazard Mitigation Plan. This plan identified the hazard threats to the county, as well as the City of Livonia, and feasible mitigation projects to minimize hazard impacts. Throughout 2019, this plan was reviewed by, and received input from, residents and local officials representing Livonia and other local units of government within Wayne County.

This plan has since been forwarded to FEMA and has subsequently been approved for implementation.

RECOMMENDATION

The City of Livonia's Emergency Preparedness Division requests your approval to adopt the Wayne County Hazard Mitigation Plan, dated September 14, 2020, pursuant to the Code of Federal Regulations, Title 44, Chapter 1, Subchapter D, Part 201, Section 201 6.c.5.

FISCAL CONSIDERATION

ATTACHMENTS

1. Wayne Co Hazard Mitigation Plan

APPROVED BY

Date: October 30, 2020

Brian Kahn, Director of Homeland Security & Emergency Preparedness

Date: October 30, 2020

Paul Bernier, City Attorney

Date: November 05, 2020

Maureen Miller Brosnan, Mayor

City of Livonia
Hazard Analysis and Mitigation Plan

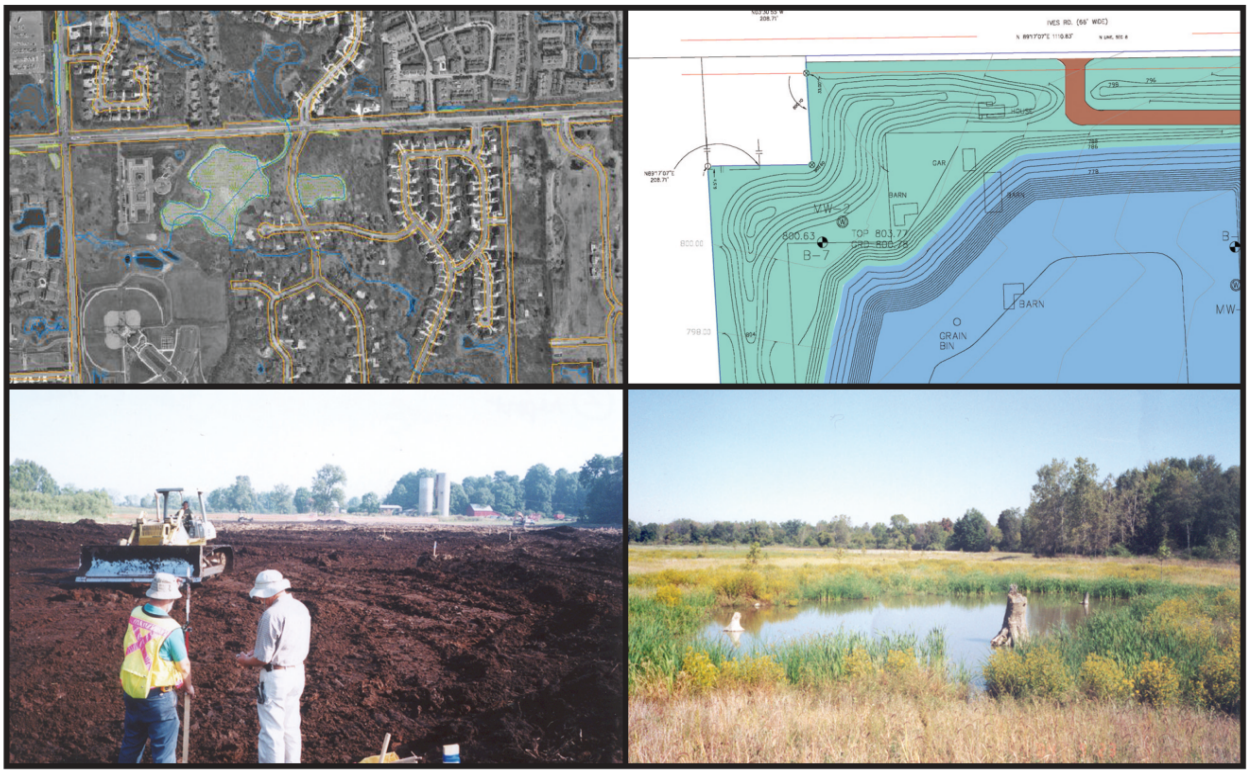
Developed in Cooperation with the County of Wayne
Federal Emergency Management Administration Approved September 14th, 2020
(September 14th, 2020 through September 14th, 2025)

Wayne County
Hazard Mitigation Plan

Department of Homeland Security
& Emergency Management
Wayne County, Michigan

September 14, 2020

ASTI ENVIRONMENTAL



ASTI
ENVIRONMENTAL

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Executive Summary

Wayne County Hazard Mitigation Plan

As with all communities in Michigan, Wayne County is subject to natural, technological, and human hazards that can threaten life and health, and can impact the quality of life, property, the environment, and infrastructure. Because of its location and land use, some hazard events in Wayne County have historically been more significant than others, and some hazard events may be more significant in the future. Providing strategies that minimize the impact of these hazards requires a commitment to a multiple-step program, including defining the problem, identifying preventive measures, implementing mitigation strategies, and incorporating hazard mitigation in County-wide planning efforts. As a first step, Wayne County has prepared this multi-jurisdictional *Hazard Mitigation Plan* (the Plan) to better understand significant Wayne County hazards and their impacts, and to identify ways to mitigate those hazards. The Plan is an update of the 2013 Hazard Mitigation Plan for Wayne County, which was in in-turn an update of the 2006 Wayne County HMP. The Wayne County communities listed below participated in this process and are included in the Plan. Those communities listed with an asterisk (*) were not included in the original 2006 Plan; all communities listed participated in the 2013 update. These are communities that have been approved under Public Act 390 of 1976 to have their own emergency management departments. In 2005-2006, they chose to not participate during development of the original county-side plan but elected to be part of the County's multijurisdictional planning effort during the 2013 and 2019 updates.

Forty-two (42) communities, all of the municipalities in Wayne County except the City of Detroit, were considered in the preparation of the Plan. The City of Detroit has its own, separate Department of Homeland Security and Emergency Preparedness and Local Emergency Preparedness Committee and separate hazard mitigation planning process.

Allen Park, City of
Belleville, City of
Brownstown Township
Canton Township*
Dearborn, City of
Dearborn Heights, City of*
Ecorse, City of
Flat Rock, City of
Garden City, City of
Gibraltar, City of
Grosse Ile Township
Grosse Pointe, City of
Grosse Pointe Farms, City of
Grosse Pointe Park, City of
Grosse Pointe Shores, Village of
Grosse Pointe Woods, City of
Hamtramck, City of
Harper Woods, City of
Highland Park, City of
Huron Charter Township
Inkster, City of
Lincoln Park, City of*
Livonia, City of*
Melvindale, City of
Northville, City of
Northville, Charter Township of
Plymouth, City of
Plymouth, Charter Township of*
Redford Township
River Rouge, City of
Riverview, City of
Rockwood, City of
Romulus, City of*
Southgate, City of
Sumpter Township
Taylor, City of
Trenton, City of
Van Buren Township
Wayne, City of*
Westland, City of
Woodhaven, City of
Wyandotte, City of

The Plan Process

This Plan was completed with the assistance of the Wayne County Department of Homeland Security & Emergency Management; representatives and leaders from Wayne County communities; the Michigan State Police Emergency Management Division, Mitigation/Recovery Section; and numerous other stakeholders. Over 60 individuals were involved in the preparation, evaluation, and community outreach components of this Plan, facilitated by ASTI Environmental. The Plan was prepared by an Advisory Committee of local emergency response personnel, public works department staff, school representatives, elected officials, interested business owners, and regional agency leaders who provided evaluation and assessment and assisted with community outreach and Plan adoption.

The goal of hazard mitigation is to reduce loss of life and property from hazards that occur in the County by protecting the health, safety and economic interests of its residents. Additional goals of this Plan are:

- To retain access to Federal Emergency Management Agency (FEMA) funding for the County and its communities by complying with Section 104 of the Disaster Mitigation Act of 2000 (42 USC 5165)

- To provide a basis for identifying and mitigating hazards that affect the County and its communities

- To develop a method to incorporate hazard identification and mitigation into the planning process of the County and its communities

Specific tasks for this Plan included the following:

- Identifying Hazards and Risks
- Developing a Hazard History
- Developing a Community Profile
- Assessing Vulnerabilities
- Defining Community Goals and Objectives
- Identifying and Prioritizing Hazard Mitigation Strategies
- Developing Action Plans for a Select List of Mitigation Strategies
- Preparing a Draft Report for County, Municipal, and Public Review
- Soliciting County, Municipal, and Public Feedback
- Preparing a Final Report
- Providing Community Outreach and Communication
- Documenting the Planning Process
- Adopting the Final Plan

Hazard Assessment

A total of 40 hazards were evaluated during the planning process using a combination of historical research, surveys, workshops, and community and public meetings. Based on that evaluation, the following fourteen hazards were initially identified as deserving additional consideration for mitigation and planning.

- Extreme Temperatures - Hot or Cold

- Flooding - Riverine & Shoreline
- Flooding - Urban (Storm water)
- Thunderstorms - Hail, Lightning, Severe Wind
- Tornadoes
- Winter Hazards - Snow, Ice, & Sleet
- Hazmat Incidents - Transportation
- Infrastructure Failure - Water & Sewer Systems
- Catastrophic Events/National Emergencies
- Civil Disturbance
- Criminal Acts - Mass Shootings/Active Assailant(s)
- Criminal Acts - Vandalism & Arson
- Public Health Emergencies - Pandemics, Epidemics, Food/Water, Opioid Crisis
- Transportation Accidents - Surface Roads/Highways

Following additional discussion, this list was further prioritized and reduced to the following six hazards, in order of priority, that are the focus of this Plan.

1. Criminal Acts - Mass Shootings/Active Assailant(s)
2. Infrastructure Failure - Water & Sewer Systems
3. Public Health Emergencies - Pandemics, Epidemics, Food/Water, Opioid Crisis
4. Extreme Temperatures - Hold or Cold
5. Hazmat Incidents - Transportation
6. Flooding - Riverine & Shoreline

These hazards were selected to represent both County-wide and local community concerns about hazards. Prioritization of these six hazards does not reduce the significance of any of the hazards evaluated but provides a method for the County to focus mitigation activities and resources.

Hazard Mitigation

The Advisory Committee reviewed the mitigation strategies from the 2013 Plan and identified new strategies for consideration, based on input from the mitigation survey, community meetings, and workshop discussions. These strategies were evaluated by the Advisory Committee, and the nine listed below were selected to develop into final county-wide Action Items. This Plan contains Action Items developed by Committee members.

<u>Criminal Acts: Mass Shooting(s)/Active Assailant(s)</u>

1. Continue training in most current protocols and develop a process for requesting assistance from local and state law enforcement.

<u>Infrastructure Failure</u>

2. Identify, prioritize, and replace or renovate aging structures and equipment. Establish procedures to protect IT systems.

<u>Public Health Emergencies</u>

3. Stockpile vaccines and antidotes; train & equip volunteers to staff open/closed points of dispensing (PODs)

4. Develop and use mass media notification systems for public health emergencies (establish Wayne County geo-targeting/geo-fencing methods for notifications using Facebook, Nixle, Twitter, etc.)

Extreme Temperatures

5. Establish and build awareness of accessible heating/cooling centers in the community. Utilize all means available, including webs sites, social media, smart phone apps, mailers, etc. to inform public of impending weather threats and resources available, including heating & cooling shelters.

6. Educate the public regarding safe use of office and home space heaters, generators, smoke detectors & carbon monoxide detectors.

7. Catalog & map areas of vulnerable and other residents (unlicensed facilities, empty/vacant buildings, etc.). Provide outreach and transportation to vulnerable and normally hard-to-reach populations during extreme temperature events.

Hazardous Materials (HazMat) Incidents – Transportation

8. Utilize public warning systems and networks for public awareness and instructions in the event of hazardous materials incidents.

Flooding – River/Shoreline

9. Identify and map, or update existing maps of, floodplains and flood prone areas. Leverage new ArcGIS online application with MI CIMS sponsored by Michigan State Police and FEMA Risk MAP incorporating the Great Lakes Coastal Flood Study. Provide training for local jurisdiction use and access.

1. Introduction

Wayne County is subject to natural, technological, and human hazards that can threaten life, health, property, and the environment. The Federal Disaster Mitigation Act of 2000 requires local governments to develop a Hazard Mitigation Plan (HMP), which identifies strategies to minimize the impact of these hazards, in order to be eligible for *pre*- or *post*-disaster mitigation funding. In response, Wayne County has prepared this multi-jurisdictional *Hazard Mitigation Plan* (the Plan) to better understand significant Wayne County hazards and their impacts, and to identify ways to mitigate those hazards.

This Plan was completed with the guidance of the Wayne County Department of Homeland Security & Emergency Management; members of the community; representatives and leaders from communities in the County; the Michigan State Police Emergency Management Division, Mitigation/Recovery Section; and numerous other stakeholders. Over 90 individuals were involved in the preparation, evaluation, and community outreach components of this Plan.

1.1 Acknowledgements

Development of this Hazard Mitigation Plan required the time, talents, effort, and ideas of numerous individuals. Over 60 stakeholders, community leaders, residents, and County staff participated in the development of this Plan. Sixty-two people attended meetings to provide input on Plan development, including staff from the Department of Homeland Security & Emergency Management and representatives and leaders from communities and non-profit organizations in the County.

Wayne County would like to acknowledge and thank the following people for their cooperation and assistance in developing this report:

Wayne County Department of Homeland Security & Emergency Management

Tadarial Sturdivant, Director
Samer Jaafer, Deputy Director
Danielle Elzayat, Chief of Staff
G. Voncil Parker

Michigan State Police Emergency Management Division, Mitigation/Recovery Section

Mike Sobocinski, Hazard Mitigation Specialist
Mitch Graham, Hazard Mitigation Specialist

Table 1. Wayne County Hazard Mitigation Plan Advisory Committee Meeting Attendees

Name	Community or Organization	Title/Department
Douglas Lafond	City of Allen Park	Fire Chief
Robert Matthews	Brownstown Township	Police Chief
William Hayes	Canton Township	Emergency Management Coordinator
Bradley Smith	City of Dearborn	Captain, Fire
Mickey Wiewiura	City of Dearborn Heights	Battalion Chief, Fire
Lee Gavin	City of Dearborn Heights	Emergency Manager
Troy Cruzen	Ethos Corporation	Operations Manager
Scott Cruzen	Ethos Corporation	President
Jaylee Lynch	Garden City	Director of Compliance
Don Barton	Garden City	Lieutenant, Police
Catherine Harman	Garden City	Fire Chief
Derek LaPerriere	Garden City	Captain, Fire
Derek Fisher	Garden City	Superintendent, Public Schools
Matthew Lawyer	City of Gibraltar	Police Chief
Duncan Murdock	Grosse Ile Township	Fire Chief
Brian Loftus	Grosse Ile Township	Supervisor
Stephen Paloni	Cities of Grosse Pointe/Grosse Pointe Park	Director, Public Safety
Holly Krizmanich	City of Grosse Pointe Farms	Lieutenant, Public Safety
John Kosanke	City of Grosse Pointe Woods	Director, Public Safety
Anne Moise	City of Hamtramck	Police Chief
James Tolbert	City of Highland Park	Deputy Chief, Police
Chuck Hubbard	City of Inkster	Fire Chief
Bud Avery	City of Inkster	Superintendent, Public Safety
William Riley	City of Inkster	Police Chief
Lashaw Smithon	City of Inkster	Sergeant, Police
Michael Heyward	City of Inkster	Police Officer
Steve Martin	City of Lincoln Park	Fire Chief
Don Rohraff	City of Lincoln Park	Superintendent, Public Works
Jacob Rushlow	City of Livonia	Director, Public Works
Brian Kahn	City of Livonia	Emergency Manager
John Raymond	City of Livonia	Director of Security, Public Schools
Gary Mann	Madonna University	Director, Public Safety
Steve Densmore	City of Melvindale	Fire Chief
Dustin Krueger	City of Northville	Captain, Police
Mike Burrough	Northville Township	Lieutenant, Police
John Walker	Plymouth-Canton	Director, Public Schools
Dan Phillips	Plymouth Township	Fire Chief
Danny Dotson	City of River Rouge	Inspector, Police
Leonel Lopez	City of River Rouge	Police Chief

Clifford Rosebohm	City of Riverview	Police Chief
Jill Martin	City of Romulus	Administrative Assistant, Fire
Mike Sypula	City of Southgate	Fire Chief
Jeff Smith	City of Southgate	Police Chief
Anthony Chicko	City of Taylor	Lieutenant, Police
Paul Haley	City of Trenton	Emergency Manager
Amy Brow	Charter Township of Van Buren	Fire Chief
Ed Queen	City of Wayne	Assistant Director, Public Works
Finley Carter	City of Wayne	Detective Lieutenant, Police
William Bantom	Wayne County, Public Services	Director, Roads Division
Aaron Vincent	Wayne County, Homeland Security & Emergency Mgt	Logistic Chief
Samer Jaafar	Wayne County, Homeland Security & Emergency Mgt	Deputy Director
Lisa Dirado	Wayne County, Homeland Security & Emergency Mgt	Planner
Tadarial Sturdivant	Wayne County, Homeland Security & Emergency Mgt	Director
Danielle Elzayat	Wayne County, Homeland Security & Emergency Mgt	Chief of Staff
Brian Herman	Wayne County, Homeland Security & Emergency Mgt	Finance Director
Voncil Parker	Wayne County, Homeland Security & Emergency Mgt	Office Assistant
Shanon Herron	Wayne County, Homeland Security & Emergency Mgt	Planner
Hector Roman	Wayne County, Homeland Security & Emergency Mgt	Director, IT
Matthew Connolly	Wayne-Westland Community Schools	Field Supervisor Maintenance Operations
Geno Montayne	Wayne-Westland Community Schools	Engineer Management Supervisor
Tony Spisak	Wayne-Westland Community Schools	Executive Director Maintenance Operations
Mike Stradtner	Cities of Wayne-Westland	Fire Chief
Michael Clark	City of Woodhaven	Fire Chief

Table 2. presents the names and affiliations of individuals that commented on the draft HMP and/or provided additional information specific to FEMA-requested detail. Asterisks identify those individuals that had not otherwise participated in the Hazard Mitigation Plan Advisory Committee workshops. The names of four residents from Brownstown Township (1) and the City of Taylor (3) that attended and participated in the Public meeting are provide separately in Appendix A.

Table 2. Municipal/Agency Representatives Commenting on the Draft HMP

Name	Community or Organization	Title/Department
Douglas Lafond	City of Allen Park	Fire Chief
Tracey Schultz Kobylarz*	City of Belleville	Interim City Manager
Brian Loranger*	City of Belleville	Fire Chief
David Robinson*	City of Belleville	Chief of Police
Rick Rutherford*	City of Belleville	DPW Director
Sherri Scharf*	City of Belleville	Clerk
Robert M. Matthews	Brownstown Township	Police Chief
William Hayes	Charter Township of Canton	Emergency Management Coordinator
Bradley Smith	City of Dearborn	Captain, Fire
Steven Densmore*	City of Dearborn	Fire Chief
Lee Gavin	City of Dearborn Heights	Emergency Manager
Megan Irving*	DTE Energy Company	Regulatory Attorney
Barbara Rykwalder*	DTE Energy Company	Regional Manager
Cristy Rankin*	DTE Energy Company	Emergency Management Specialist
Kyle Seidel, PE*	Senior Project Engineer	Anderson, Eckstein & Westrick, Inc. (for City of Ecorse)
Terri Capra*	Assessor	City of Ecorse
Lamar Tidwell*	Mayor	City of Ecorse
Richard Marsh*	City Administrator	City of Ecorse
Timothy Sadowski*	Finance Controller	City of Ecorse
Kevin Lawrence*	Director of Public Works	City of Ecorse
Scott Cruzen	Ethos Corporation	President
James Katona*	City of Flat Rock	Fire Chief
Jaylee Lynch	Garden City	Director of Compliance
Don Barton	Garden City	Lieutenant, Police
Catherine Harman*	Garden City	Fire Chief
Derek LaPerriere	Garden City	Captain, Fire
Derek Fisher	Garden City	Superintendent, Public Schools
Brian Finneran*	Garden City	Fire Marshall
Matthew Lawyer	Gibraltar	Police Chief
Duncan Murdock	Grosse Ile Township	Fire Chief
Brian Loftus	Grosse Ile Township	Supervisor
Stephen Paloni	Grosse Pointe City/ Grosse Pointe Park	Director, Public Safety
Holly Krizmanich	Grosse Pointe Farms	Lieutenant, Public Safety
John Schulte*	Village of Grosse Pointe Shores	Police Chief/Director, Public Safety
John Kosanke	Grosse Pointe Woods	Director, Public Safety
Anne Moise	City of Hamtramck	Police Chief
Danny Hagen*	City of Hamtramck	Fire Chief

Vince Smith*	City of Harper Woods	Public Safety Director
James Tolbert	City of Highland Park	Deputy Chief, Police
Chuck Hubbard	City of Inkster	Fire Chief
Bud Avery	City of Inkster	Superintendent, Public Safety
William Riley	City of Inkster	Police Chief
Lashaw Smithon	City of Inkster	Sergeant, Police
Michael Heyward	City of Inkster	Police Officer
Mary Pitts*	City of Inkster	Fire Department Executive Secretary
Steve Martin	Lincoln Park	Fire Chief
Don Rohraff	Lincoln Park	Superintendent, Public Works
Jacob Rushlow	Livonia	Director, Public Works
Brian Kahn	Livonia	Emergency Manager
John Raymond	Livonia	Director of Security, Public Schools
Gary Mann	Madonna University	Director, Public Safety
Steve Densmore	Melvindale	Fire Chief
Allan Maciag*	City of Northville	Chief of Police
Dustin Krueger	City of Northville	Captain, Police
Mike Burrough	Northville Township	Lieutenant, Police
Paul Sincock*	City of Plymouth	City Manager/Emergency Manager
Al Cox*	City of Plymouth	Director of Public Safety/Police Chief
John Walker	Plymouth-Canton Public Schools	Director, Public Schools
Dan Phillips	Plymouth Township	Fire Chief
Mike Dennis*	Charter Township of Redford	Director, Public Services & Community Development Dept.
Danny Dotson	River Rouge	Inspector, Police
Leonel Lopez	River Rouge	Police Chief
Cliff Rosebohm	Riverview	Police Chief
Cindy Trombley*	City of Rockwood	City Administrator
Jill Martin	Romulus	Grants Administrator, Emergency Preparedness Coordinator
Mike Sypula	City of Southgate	Fire Chief
Jeff Smith	City of Southgate	Director of Public Safety
Joseph Marsh*	City of Southgate	Chief of Police
Anthony Chicko	City of Taylor	Lieutenant, Police
Paul Haley	City of Trenton	Emergency Manager
Amy Brow	Charter Township of Van Buren	Fire Chief
David McInally*	Charter Township of Van Buren	Fire Marshall
Ed Queen	City of Wayne	Assistant Director, Public Works
Finley Carter	City of Wayne	Detective Lieutenant, Police
Ryan Strong*	City of Wayne	Police Chief
Patrick Cullen*	Wayne County, Dept, Public Services	Division Director

Elmeka Steele*	Wayne County, Dept, Public Services	Drain Commissioner
Beverley Watts*	Wayne County, Dept, Public Services	Director
William Bantom	Wayne County, Dept, Public Services	Director, Roads Division
Aaron Vincent	Wayne County, Homeland Security & Emergency Mgt	Logistic Chief
Samer Jaafar	Wayne County, Homeland Security & Emergency Mgt	Deputy Director
Lisa Dirado	Wayne County, Homeland Security & Emergency Mgt	Planner
Tadarial Sturdivant	Wayne County, Homeland Security & Emergency Mgt	Director
Danielle Elzayat	Wayne County, Homeland Security & Emergency Mgt	Chief of Staff
Timothy Mautz*	Wayne County, Homeland Security & Emergency Mgt	Deputy Emergency Management Coordinator
Brian Herman	Wayne County, Homeland Security & Emergency Mgt	Finance Director
Voncil Parker	Wayne County, Homeland Security & Emergency Mgt	Office Assistant
Shanon Herron	Wayne County, Homeland Security & Emergency Mgt	Planner
Hector Roman	Wayne County, Homeland Security & Emergency Mgt	Director, IT
Matthew Connolly	Wayne-Westland	Field Supervisor Maintenance Operations, Community Schools
Geno Montayne	Wayne-Westland	Engineer Management Supervisor, Community Schools
Tony Spisak	Wayne-Westland	Executive Director Maintenance Operations, Community Schools
Michael Stradtner	Wayne-Westland	Fire Chief
Michael Clark	Woodhaven	Fire Chief
Brian Zalewski*	City of Wyandotte	Chief of Police

This multi-jurisdictional Hazard Mitigation Plan was created for Wayne County, and the participating communities within Wayne County, to better understand natural, technological, and human hazards and their impacts, and to identify ways to mitigate those hazards to protect the health, safety and economic interests of its residents. The Wayne County communities listed below participated in this process and are included in this Plan. Forty-two (42) communities in Wayne County, all county communities except the City of Detroit, were considered in the preparation of this Plan. These same 42 communities participated in the 2013 HMP update as well.

Allen Park, City of
Belleville, City of
Brownstown Township
Canton Township
Dearborn, City of
Dearborn Heights, City of
Ecorse, City of
Flat Rock, City of
Garden City
Gibraltar, City of
Grosse Ile Township
Grosse Pointe, City of
Grosse Pointe Farms, City of
Grosse Pointe Park, City of
Grosse Pointe Shores, Village of
Grosse Pointe Woods, City of
Hamtramck, City of
Harper Woods, City of
Highland Park, City of
Huron Charter Township
Inkster, City of
Lincoln Park, City of
Livonia, City of
Melvindale, City of
Northville, City of
Northville, Charter Township of
Plymouth, City of
Plymouth, Charter Township of
Redford Township
River Rouge, City of
Riverview, City of
Rockwood, City of
Romulus, City of
Southgate, City of
Sumpter Township
Taylor, City of
Trenton, City of
Van Buren Township
Wayne, City of
Westland, City of
Woodhaven, City of
Wyandotte, City of

2. Hazard Mitigation Plan Process

This Plan is designed to comply with requirements of the Disaster Mitigation Act of 2000, which states that local governments must have an approved Hazard Mitigation Plan in place to be eligible for pre-disaster mitigation funds after November 1, 2003, and post-disaster mitigation funds after November 1, 2004.[1] This Plan is also designed to comply with the Federal Emergency Management Act; guidance documents developed by the Federal Emergency Management Agency (FEMA) and the Michigan State Police Emergency Management Division (EMD); and other applicable federal, state, and local regulations. This was accomplished by evaluating the impacts of known natural, technological, and human hazards, prioritizing mitigation alternatives, and coordinating hazard mitigation with other County programs and policies.

A total of 40 hazards, in the three categories described below, were evaluated during the planning process. Hazard definitions are included in Section 4. These hazards were selected based on the guidelines presented in the *Local Hazard Mitigation Planning Guidebook,* Michigan Department of State Police Emergency Management Division[2].

Natural Hazards

- Celestial Impact
- Drought
- Earthquakes
- Extreme Temperatures
  - Including extreme heat and extreme cold
- Fires (Wildfires)
- Flooding (Non-Dam)
  - Including riverine and shoreline flooding and erosion
- Fog
- Invasive Species
- Subsidence (Natural)
- Thunderstorms
  - Including hail, lightning, and severe winds
- Tornadoes
- Winter Hazards
  - Including ice, sleet, and snowstorms

Technological Hazards

- Fires (Non-Natural)
  - Including structural and scrap tire fires
- Flooding
  - Including dam failure and other urban (stormwater) flooding

[1] Section 104 of the Disaster Mitigation Act of 2000 (42 USC 5165), 44 CFR (Code of Federal Regulations) Part 201
[2] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012.

- Hazmat Incidents
  - Including fixed site and transportation
- Infrastructure Failure
  - Including water, electrical, communication, storm water and sanitary sewer systems
- Nuclear Power Plant Accidents
- Oil and Gas Wells Accidents
- Pipeline Accidents
  - Including petroleum and natural gas
- Subsidence (Mining and Technical)

Human Hazards

- Catastrophic Events/National Disasters
- Civil Disturbance
- Criminal Acts
  - Including vandalism, arson and mass shootings
- Information Technology Intrusion
- Gas and Oil Shortages or Supply Disruptions
- Public Health Emergencies
  - Including pandemics, epidemics, and contaminated food and water
- Terrorism and Sabotage
- Transportation Accidents
  - Including air, highway, surface roads, rail, and marine
- Weapons of Mass Destruction

Although included in the hazard analysis section, this Plan does not include mitigation strategies for terrorism, the use of weapons of mass destruction, or nuclear power plant accidents. These hazards are addressed in the Wayne County Emergency Operations Plan, which is a homeland security and law enforcement sensitive document and, therefore, not available to the public. For security purposes, operational information regarding these hazards is not included in this Plan.

2.1 Plan Goals and Objectives

The general goals of any Hazard Mitigation Plan include saving lives and protecting property, preserving and protecting an area's environment and economy, and preserving and maintaining an area's essential services and quality of life. This Plan includes these general goals. In addition, specific goals of this Plan are:

- To retain access to FEMA funding for the County and its communities by complying with Section 104 of the Disaster Mitigation Act of 2000 (42 USC 5165)

- To provide a basis for identifying hazards that affect the County and its communities

- To develop a method to incorporate hazard identification and mitigation into the planning process of the County and its communities

Through the hazard mitigation planning process presented in this Plan, Advisory Committee members also identified specific goals and objectives, consistent with the overall planning process and supported by specific mitigation strategies, to do the following:

- Protect and preserve human health and well being

- Maintain and fortify critical assets, structures and infrastructure to preserve the quality of life.

- Ensure interagency cooperation and coordination for preparedness

- Enhance emergency response capabilities (including and especially communications

- Review and improve county-wide contingency plans for maintaining quality of life

2.2 Planning Process

This Plan was prepared to provide a basis for identifying and managing natural, technological, and human hazards, and to meet federal, state and local requirements for hazard mitigation and FEMA grant funding. Plan preparation involved completion of the following tasks:

- Identifying Hazards and Risks
- Developing a Hazard History
- Developing a Community Profile
- Assessing Vulnerabilities
- Defining Community Goals and Objectives
- Identifying and Prioritizing Hazard Mitigation Strategies
- Developing Action Plans for a Select List of Mitigation Strategies
- Preparing a Draft Report for County, Municipal, and Public Review
- Soliciting County, Municipal, and Public Feedback
- Preparing a Final Report
- Providing Community Outreach and Communication
- Documenting the Planning Process
- Adopting the Final Plan

Wayne County contracted ASTI Environmental, Inc. (ASTI) of Brighton, Michigan to facilitate the hazard mitigation planning process and prepare the final Hazard Mitigation Plan. Members of the Advisory Committee are listed in Table 2. As described below, development of this Plan involved identifying and evaluating hazards and mitigation options conducted by an Advisory Committee made up of community representatives from municipalities in the County, emergency management leaders and other stakeholders from these same municipalities, and review and input from members of the general the public. Each of these is described further in Section 2.3, Plan Participation.

Table 2. Advisory Committee

Name	Community or Organization	Title/Department
Doug Laford	Allen Park	Fire Chief
Robert Matthews	Brownstown Township	Police Chief
William Hayes	Canton Township	Emergency Manager
Bradley Smith	Dearborn	Captain, Fire
Mickey Wiewiura	Dearborn Heights	Battalion Chief, Fire
Lee Gavin	Dearborn Heights	Emergency Manager
Troy Cruzen	Ethos Corporation	Operations Manager
Scott Cruzen	Ethos Corporation	President
Jaylee Lynch	Garden City	Director of Compliance
Don Barton	Garden City	Lieutenant, Police
Catherine Harman	Garden City	Fire Chief
Derek LaPerriere	Garden City	Captain, Fire
Derek Fisher	Garden City	Superintendent, Public Schools
Matthew Lawyer	Gibraltar	Police Chief
Duncan Murdock	Grosse Ile Township	Fire Chief
Brian Loftus	Grosse Ile Township	Supervisor
Stephen Paloni	Grosse Pointe City/ Grosse Pointe Park	Director, Public Safety
Holly Krizmanich	Grosse Pointe Farms	Lieutenant, Public Safety
John Kosanke	Grosse Pointe Woods	Director, Public Safety
Anne Moise	Hamtramck	Police Chief
James Tolbert	Highland Park	Deputy Chief, Police
Chuck Hubbard	Inkster	Fire Chief
Bud Avery	Inkster	Superintendent, Public Safety
William Riley	Inkster	Police Chief
Lashaw Smithon	Inkster	Sergeant, Police
Michael Heyward	Inkster	Police Officer
Steve Martin	Lincoln Park	Fire Chief
Don Rohraff	Lincoln Park	Superintendent, Public Works
Jacob Rushlow	Livonia	Director, Public Works
Brian Kahn	Livonia	Emergency Manager
John Raymond	Livonia	Director of Security, Public Schools
Gary Mann	Madonna University	Director, Public Safety
Steve Densmore	Melvindale	Fire Chief
Dustin Krueger	Northville	Captain, Police
Mike Burrough	Northville Township	Lieutenant, Police
John Walker	Plymouth-Canton	Director, Public Schools
Dan Phillips	Plymouth Township	Fire Chief
Danny Dotson	River Rouge	Inspector, Police

Leonel Lopez	River Rouge	Police Chief
Cliff Rosebohm	Riverview	Police Chief
Jill Martin	Romulus	Administrative Assistant, Fire
Mike Sypula	Southgate	Fire Chief
Jeff Smith	Southgate	Police Chief
Anthony Chicko	Taylor	Lieutenant, Police
Paul Haley	Trenton	Emergency Manager
Amy Brow	VanBuren Township	Fire Chief
Ed Queen	Wayne	Assistant Director, Public Works
Finley Carter	Wayne	Detective Lieutenant, Police
Aaron Vincent	Wayne County	Logistic Chief, Homeland Security & Emergency Mgt
William Bantom	Wayne County	Director, Roads Division
Samer Jaafar	Wayne County	Deputy Director, Homeland Security & Emergency Mgt
Lisa Dirado	Wayne County	Planner, Homeland Security & Emergency Mgt
Tadarial Sturdivant	Wayne County	Director , Homeland Security & Emergency Mgt
Danielle Elzayat	Wayne County	Chief of Staff, Homeland Security & Emergency Mgt
Brian Herman	Wayne County	Finance Director, Homeland Security & Emergency Mgt
Voncil Parker	Wayne County	Office Assistant , Homeland Security & Emergency Mgt
Shanon Herron	Wayne County	Planner, Homeland Security & Emergency Mgt
Hector Roman	Wayne County	Director, IT
Matthew Connolly	Wayne-Westland	Field Supervisor Maintenance Operations, Community Schools
Geno Montayne	Wayne-Westland	Engineer Management Supervisor, Community Schools
Tony Spisak	Wayne-Westland	Executive Director Maintenance Operations, Community Schools
Mike Stradtner	Wayne-Westland	Fire Chief
Michael Clark	Woodhaven	Fire Chief

Planning Approach

Plan preparation was based on the contract titled *Professional Services Contract Between Wayne County and Applied Science and Technology, Inc. D/B/A ASTI Environmental*. The planning process involved updating background information on the

County and hazards affecting the County from available published and internet sources, updating information on local hazard issues from individual communities, obtaining input on hazard priorities, identifying specific vulnerabilities and desired mitigation strategies, facilitating the activities of the Advisory Committee, and conducting a series of workshops and a public meeting with County officials, local stakeholders, and the general public as described below.

Information on hazards in the County, and applicable mitigation strategies to address those hazards, was also obtained from two workshops and three surveys. The first survey was provided to Advisory Committee members and resulted in a numerical ranking of 37 hazards. Information from this survey was used in the first workshop described below. The second survey was provided to the Advisory Committee to rank 228 mitigation strategies and provided opportunities to add new mitigation strategy ideas. Information from this survey was used in the second workshop described below. Additional information regarding the surveys is included in Sections 2.4.1, 5.1 and 6.2.

The workshops included individual assignments, small group assignments, and group-wide discussion and evaluation. Through a combination of pair-wise ranking exercises, worksheets, and discussion groups, workshop participants evaluated survey input, created and used evaluation criteria, identified goals and objectives, and selected options for mitigating specific hazards.

2.2.1 Existing Plans and Programs

Because a Hazard Mitigation Plan is only a part of the emergency planning, mitigation, preparedness, response, and recovery process, a second objective of this planning process was to coordinate plan preparation with existing emergency plans, programs, procedures, and organizations established by Wayne County. Future coordination of this Plan with other activities in the County will be conducted by the Hazard Mitigation Plan Advisory Committee (HMPAC) as described in Section 2.6 below. Individual members of the HMPAC are to identify opportunities, within their respective departments or organizations, to incorporate this Plan into other County plans and programs. Any such opportunities that are identified will be referred back to the HMPAC as a whole, for consideration. Incorporating this Plan into other plans and programs will ultimately be at the discretion of the County department or organization which administers these plans or programs.

In developing this Plan, existing hazard mitigation goals and objectives within the County were reviewed and are described below. It should be noted that this Plan does not replace any existing plans or programs but is intended to serve as a reference for hazard mitigation to be used in planning and program development.

Several existing documents published by county, regional, state, and federal institutions were utilized in developing this Plan, as shown in the footnotes throughout the Plan. These documents included:

- Michigan Department of State Police Emergency Management Division, *Michigan Hazard Analysis*, December 2001, July 2012, and April 2019.
- Michigan State Police, Uniform Crime Reports, Crime Statistics, Wayne County, 1997-2010.
- Michigan State Police Property Index Crime Trends, 1997-2000.

- SEMCOG, *Land Use in Southeast Michigan, 1990-2000*, Specific to Wayne County, April 2004.
- SEMCOG, *2045 Regional Development Forecast (RDF) Forecasted Population Change*, May 2019.
- SEMCOG and Wayne County Geographic Information Systems (GIS) digital land use data. 2008 and 2012.
- U.S. Census Bureau, *Profile of General Demographic Characteristics*: 2000, 2010, Wayne County, Michigan.
- U.S. Census Bureau, Decennial Census, 2015 American Community Survey 5-Year Estimates.
- FEMA NFIRS 5.0 National Reporting, Tally by Incident Type, January 1, 1998 through December 31, 2004.
- FEMA National Flood Insurance Program Community Status Book, updated September 24, 2019.

2.2.2 County Goals and Objectives

Successful implementation of this Plan requires that it fit within, and be consistent with, other goals, objectives, and programs of Wayne County government. As such, identified goals and objectives, mission statements, and other guiding principles of relevant County agencies were reviewed as part of the planning process. The County's hazard mitigation planning process is not intended to replace any other County planning effort but should be considered in future County-wide planning. Specific goals and objectives developed as part of this hazard mitigation planning process fit within the context of the existing roles of the Wayne County Department of Homeland Security & Emergency Management listed below.

The Wayne County Department of Homeland Security & Emergency Management serves as the lead department for both development and implementation of the County's Hazard Mitigation Plan. This Plan is consistent with the mission of the Wayne County Emergency Management Division which is:[3]

> "To take the lead role in coordinating the County's responsibility to plan, analyze, conduct and maintain programs to preserve and protect lives and property from major emergencies and disasters of all types. In this capacity, it maintains a current adequate emergency management program for the County of Wayne and all participating local municipalities."

Furthermore, the Plan is consistent with the goals and objectives of the Wayne County Department of Homeland Security & Emergency Management which include the following:[4]

[3] Source: Wayne County Emergency Management Division website, http://www.co.wayne.mi.us/hsem.htm
[4] Source: Wayne County Emergency Management Division website, http://www.co.wayne.mi.us/hsem.htm.

Update and maintain the Emergency Operations Plan and all related support documents.

Maintain emergency response facilities, equipment and supplies in immediately operational status.

Conduct public awareness activities designed to increase basic emergency preparedness skills and develop public confidence in the County's Emergency Management Program.

Conduct disaster response training drills and exercises designed to highlight and correct emergency planning and resource deficiencies and to otherwise maintain and improve the overall emergency response readiness level of the County and participating local communities.

Enhance Technical Support Team and Metropolitan Medical Strike Team (both counter-terrorism specialty teams) capabilities.

2.3 Plan Participation

The focus of the County hazard mitigation planning process was a series of structured discussions with, and opportunities for feedback from, county officials, Wayne County and neighboring community municipal officials, affected stakeholders including local and regional agencies involved in hazard mitigation activities and/or land use/regional planning, and the general public. In particular, these included the mechanisms for outreach and input listed below. Copies of public outreach materials describing the planning process and soliciting participation in development of the Plan are provided in Appendix A.

- A project web site that presented a summary of the planning process, relevant background materials, and a web-based comment form.
- Flyers describing the planning process available to the Advisory Committee, municipal officials, and the general public.
- On-line surveys provided to the Advisory Committee and strategic partner organizations.
- Two workshops for identifying and prioritizing hazards, hazard mitigation strategies, and action plans, with meeting minutes emailed to the Advisory Committee and community representatives.
- One public meeting.
- Copies of the draft plan distributed to all Advisory Committee members and community representatives and available for public review on the project web site.

2.3.1 County Participation

The Wayne County Department of Homeland Security & Emergency Management provided contract administration, participation on the Advisory Committee, local matching funds for the development of this Plan (in the form of staff salaries and direct expenses), and Geographic Information Systems (GIS) data.

2.3.2 Advisory Committee

An Advisory Committee was invited to participate in the planning process. Participants included emergency management and public safety directors and staff, planners, fire and police officers, public works and road agency personnel, regional infrastructure group representatives, and school district representatives. Representatives of Ethos Corporation, a firm that assists health care facilities manage risk emergency preparedness provided insight regarding the needs of hospitals and assisted care facilities. This served as the primary group providing input on the hazards and mitigation options applicable to the County, and to oversee development of the Plan.

The committee consisted of the 62 individuals listed in Tables 1 and 2. The Advisory Committee participated in hazard identification and risk assessment, evaluation of mitigation alternatives, and preparation of the final action plans through a series of workshops and surveys.

2.3.3 Community Representatives

One or more representatives from each of the 42 communities coordinated community input and discussed hazard identification, mitigation options, and community-specific vulnerabilities with Wayne County staff. Community representatives consisted of one or more key stakeholders such as the Police Chief; Fire Chief; Public Safety Directors; Mayors, Village Presidents, Township Supervisors; and Emergency Management Coordinators, school district representatives or other representatives appointed by each community. Community representatives were kept informed of planning progress through the project web site, Advisory Committee meetings, requests for participation in project meeting and three on-line surveys and invited to comment on the Draft Plan posted on the web site.

2.3.4 Public Outreach

One public meeting was held at the Heinz C. Prechter Educational & Performing Arts Center (EPAC) at the Wayne County Community College, Downriver Campus, in Taylor. The public meeting was announced via email to members of the Advisory Committee, on the project website, via press release to 84 individuals representing 31 media outlets, and a legal notice in the Detroit Free Press newspaper.

The public meeting was held at 5:30 p.m., April 23, 2019. The purpose of the meeting was to introduce project team members, provide an overview of the project, discuss the processes and purposes of the planning effort and resulting Hazard Mitigation Plan, provide the project contacts and web links individuals could use to receive further information regarding the Plan and planning process, to update the public on developments in the project, and solicit feedback on the draft plan.

As noted above, the public meeting was publicized the Sunday prior to the meeting with a legal notice in the Detroit Free Press. Copies of public meeting materials and a summary of public comments received are provided in Appendices A and B, respectively.

Members of the public at the public meeting did not provide comment on the specifics of the HMP other than to note that flooding and erosion concerns along the Lake Erie shoreline were a high priority. The comments/questions received emphasized the importance of flooding and mechanisms to inform the public of impending high water levels as high priorities. The public comments received were incorporated into county-wide Action Plan #6. Specific comments were provided by County representatives and representatives of several local municipalities under separate reviews. These comments centered on clarification of municipal priorities and hazard mitigation actions. These are discussed further in Sections 5.2, Community Input.

2.3.5 Other Stakeholders

The Hazard Mitigation Plan Advisory Committee provided comment and information through the Plan development workshops as described previously. Additionally, the following stakeholders with land use planning and hazard mitigation/response authority were contacted to offer opportunities to comment and provide input on the draft Plan:

- American Red Cross – Southeastern Michigan Chapter
- DTE Energy
- Michigan State University Cooperative Extension Service
- Wayne County Road Commission
- Wayne County Sheriff
- Friends of the Rouge
- Clinton River Watershed Council
- Huron River Watershed Council
- Genesee County LEPC
- Lapeer County LEPC
- Livingston County LEPC
- Macomb County LEPC
- Southeast Michigan Council of Governments
- St. Clair County LEPC
- Washtenaw County LEPC
- Wayne County LEPC
- Wayne County Departments of Public and Environmental Services
- U.S. Geological Survey
- U.S. Army Corps of Engineers
- National Weather Service

2.4 Plan Activities

2.4.1 Surveys

Planning participants were asked to participate in three online surveys. Each survey was designed to provide input for one or more of the planning workshops, and to provide a basis for discussing hazard evaluation or mitigation options. The first survey provided an opportunity for participants to rank the hazards affecting the County. The second survey assisted in narrowing mitigation options acceptable to the County, and the third

survey helped to further prioritize mitigation strategies to develop into county-wide Action Plans.

First Survey

The survey asked participants to identify the most significant hazard in each of three major categories (natural, technological, and human) and included open-ended questions that allowed other hazards to be included in the final list. Participants were also asked to select the top five hazards on a scale of 1 (Most Significant) to 5 (Least Significant). Importance was evaluated based upon the negative consequences of the hazard on the population, economy and environment of the County. These comparisons and responses were used to rank the relative importance of each hazard in order to consider its likelihood and consequence, and to identify the need for action plans to address each hazard during the workshops.

Participants were also asked to indicate the top five assets that are the most vulnerable to hazard events, in terms of the impact to population, the environment, and economic activity. Assets evaluated were commercial sites hospitals; industrial sites; open spaces; public facilities; residential areas; roads, bridges and railroads; utility facilities; schools and churches; sports and entertainment arenas; and central business district. Ranking of vulnerability was on a scale of 1 (most important overall) to 5 (least important of the top five). The responses were used during the workshops to rank the criticality of assets and assess the likelihood that each identified hazard would impact each asset.

The survey was provided to 62 individuals in the Advisory Committee in electronic form and included 40 hazards arranged in order of the three categories (Natural, Technological, & Human Related). A total of 57 participants (92%) participated in the survey. The results of the survey were presented to the Advisory Committee for review and evaluation at the first workshop.

Second Survey

Advisory Committee members were asked to evaluate possible hazard mitigation strategies in a written survey prior to the second workshop. Mitigation strategies presented in this survey were developed from the first Advisory Committee meeting, the 2013 Plan, as well as from lists of potential mitigation strategies developed by other communities undertaking hazard mitigation planning in Michigan and elsewhere. The survey listed eight or more mitigation strategies for each hazard, for a total of 228 strategies. Of the 62 committee members, 31 (50%) participated in the survey prior to the second workshop.

For this survey, Advisory Committee members were asked to rate each mitigation strategy for appropriateness in Wayne County. Participants could decline scoring items with which they were not familiar. Additional space was provided for each hazard, so that participants could suggest mitigation strategies. The survey requested open-ended input on the best mitigation strategies to address each of the 14 highest priority hazards identified by the Advisory Committee during the first workshop.

Community representatives and Advisory Committee members were asked to identify and rank those mitigation strategies they considered either Important or Very Important, with strategies rating lower rankings to be left blank. The results of this survey were presented to the Advisory Committee members during the second workshop. The top

responses were compiled into an initial list for consideration, and the committee was asked to review all applicable responses to identify other strategies that should be considered.

Third Survey

Following FEMA review and comments on the May 1 draft plan, community representatives were again surveyed to provide input specific to FEMA's request for additional information. That information (e.g., additional information regarding specific problem areas and/or locations of vulnerability for FEMA-focus hazards) was provided by Wayne County, municipal, and DTE representatives and is incorporated throughout this revised document. Much of the additional detail provided can be found summarized in Table 6 and 7, Section 5.4.2.

2.4.2 Workshops

The Advisory Committee met at the Wayne County Community College Downriver Campus, in two workshops. The following describes each workshop and the procedures used to focus this Plan on the hazards and mitigation strategies specific to Wayne County. More information on the process used and the results of the workshop activities are provided in Sections 5 and 6. Agenda, handouts, and worksheets from the workshops are provided in Appendix C.

First Workshop – Risk Analysis Workshop

The first workshop was conducted March 14, 2019. This meeting included an orientation to familiarize committee members to the hazard mitigation planning process. A risk and vulnerability assessment was also conducted to identify and rank priority hazards in Wayne County, to assess the risk from the top ranked hazards, and to determine the County's unique critical assets and specific vulnerabilities. The objective of the workshop was to use a rational approach to focus the Plan on the most critical hazards and vulnerable assets in the County.

The first task of the meeting was to identify the goals and objectives for the mitigation process. Advisory Committee members reviewed the goals set forth in the 2013 HMP and suggested additional goals based upon other County programs.

The Advisory Committee then reviewed the hazard history of the County, the hazard ranking in the 2013 Plan, and the results of the first survey. An updated hazard history for Wayne County was reviewed, and workshop participants discussed the frequency and impacts in three categories: health and safety, area affected, and economic effects. Survey results were presented and the Committee discussed the importance of each hazard and its impacts to population, environment, and the economy in each of 11 asset classes, such as residential areas, business districts, industrial sites etc., that exist in the county.

Based on historical information, the results of the survey, and discussion, 14 hazards were determined to be significant for the County and selected for further analysis. The committee was then asked to select and weight criteria for individually evaluating the top hazards. Participants were asked to create a list of evaluation criteria specifically applicable to Wayne County. Questions provided to stimulate thought included: "What are the top priorities for the community when considering hazard mitigation?," "What do

community leaders represent as important?," "What are the top priorities for emergency response agencies when considering hazard impacts?," and "What are the top challenges facing the County when a hazard occurs?" Four criteria were developed and weighted relative to one another: Injury and Loss of Life, Geographic Area of Interest, Resulting Infrastructure Failure, and the Ability to Recover Following an Incident. These criteria were used to evaluate the top 14 hazards for consequence and frequency. Through this process the list of priority hazards was further reduced to six.

During the same interactive workshop, the committee also evaluated 11 general asset categories. These assets were evaluated to determine how critical they may be if impacted by a hazard. They were then evaluated in the context of consequence and likelihood of individual hazard impacts.

Second Workshop – Mitigation Strategies Workshop

The second workshop was conducted on March 28, 2019. This workshop focused on (1) identifying, evaluating, and prioritizing hazard mitigation alternatives for the key hazards and critical assets, (2) developing evaluation criteria to select mitigation strategies, and (3) identifying mitigation strategies to develop further as specific Action Items for the final Plan.

The committee was asked to select and weight criteria for evaluating mitigation strategies. Criteria were selected based on a review of evaluation criteria used in development of the 2013 Plan and group discussion. Four criteria were selected to evaluate and compare individual mitigation strategies: Ability to Accomplish, Technical Feasibility, Cost Effectiveness, and Effectiveness of Strategy (including downside risk).

Individual and small group work was discussed amongst the entire group to identify the final evaluation criteria for selection of mitigation strategies. The rankings of mitigation strategies from the survey plus an additional 3 community identified strategies were highlighted for consideration, for a total of 251 potential strategies. Of these, 15 were identified as the top-ranked strategies based on numerical scoring.

Survey results identifying the top mitigation strategies for each of the priority hazards were presented and the committee was divided into self-selected groups representing the six priority hazards. Each group and discussed each of the applicable top-ranked strategies and any others that were considered applicable to the County. During the discussion, strategies were revised to combine redundant strategies, and to identify additional mitigation strategies for the top hazards, if applicable.

The committee used the evaluation criteria to rank the strategies presented by the groups. After revising the top 14 strategies that were identified through the survey process, the committee considered whether any of the strategies generated through the open-ended questions in the on-line survey should be included, based on a discussion of the goals and objectives of the Plan, the needs of the County, and the critical hazards and vulnerable assets. The committee selected two additional strategies as a result of this discussion, and then removed one from the final list because it was inapplicable to some of the communities within the County. The resulting list of 15 strategies became the basis for the revision of Action Items from the 2006 Plan and the development of new Action Items.

The final task of the committee was to evaluate each of the seven Action Items from the 2006 Plan, based on the survey results, the mitigation strategies selected during the workshop, the needs of the County, and the critical hazards and vulnerable assets. The committee made recommendations to revise Action Items to eliminate redundancy and address changes in the County. In addition, two new Action Items were recommended. Each Action Item was assigned to a committee member for further development after distribution of the meeting notes.

2.4.3 Community Input

Representatives from each Wayne County community were asked to complete three online surveys with other key stakeholders in their community. Surveys were intended to identify the most significant hazards and their impacts in the community, to review individual community goals and action plans from the 2013 HMP, and to specify any hazard mitigation programs currently being conducted or planned. Representatives were also asked to provide suggestions for desired hazard mitigation programs in their community and County-wide.

Community representatives were asked to evaluate hazards based on the history of hazard occurrence, the potential for future hazard occurrence, consequence(s) of the hazard, or hazards that are highlighted in community mitigation goals and objectives. Finally, community representatives, and other regional agencies, were asked to review and comment upon the draft Plan.

2.5 Plan Adoption

Formal adoption of a Hazard Mitigation Plan is required for FEMA approval. The Draft Plan was provided initially to the Wayne County Department of Homeland Security & Emergency Management for review for issues of security. Following incorporation of security related comments, a public review version of the draft document was provided to members of the project Advisory Committee, including the project representative from the Michigan State Police, for review and comment. Copies of the Draft Plan were also provided to each community in the County and were made available to other stakeholders and the public via the project website.

Following incorporation of review comments from all sources involved in the planning process, the Plan was presented to the County Board of Commissioners for approval and adoption. The Wayne County Hazard Mitigation Plan was formally adopted by the Board of Commissioners on [Insert Date of Adoption]. A copy of the County resolution is included in Appendix D.

FEMA and the Michigan State Police also require that all multi-jurisdictional Plans be adopted, in whole or in part, by individual municipalities within the planning area. Municipal officials were informed of this requirement and a sample resolution of adoption was provided to each community with the announcement of the final Plan. Information regarding local hazard priorities and local hazard mitigation strategies is included in separate subsections of the Plan so that each community may readily reference and adopt sections specific to their municipality. Tables 1 and 2 list those people that participated in the planning process. Participation included responding to surveys, attending meetings, and/or providing input on the draft Plan. The communities listed in

Table 3 have adopted this Plan, either in whole or in part, as indicated. Copies of the final resolutions for each community are included in Appendix D.

2.6 Plan Maintenance

The Wayne County Hazard Mitigation Plan Advisory Committee (HMPAC) will monitor this Plan on a regular basis. The HMPAC will consist of members of the Wayne County Department of Homeland Security & Emergency Management as well as representatives of the Wayne County communities and stakeholders. Plan evaluation and maintenance is the responsibility of the County Emergency Management Coordinator.

The Plan will be reviewed annually by the HMPAC to assess progress on each Action Item, changes in hazard history, and any known changes in vulnerability. Every two (2) years, following review by the HMPAC, a description of Plan progress and any changes in circumstances or trends that may require revision to the Plan will be presented to the Wayne County Board of Commissioners.

The Plan will be reviewed, updated, and revised, as necessary every five (5) years to maintain consistency with the changing community and hazard history, as well as the goals and objectives of the County.

Each time the Plan is revised a new Revision Number and Revision Date will be inserted in the document header. Changes constituting a substantive revision to the Plan will require that the new plan be provided to the County Board of Commissioners, and the individual communities participating in the Plan, for approval and re-adoption. Review and approval will provide opportunity for public review and comment at a normally scheduled meeting(s) of the Wayne County Board of Commissioners.

Table 3: Community Plan Adoption

Community	Items Adopted [Insert "Full Plan" or Section #s]:	Date Adopted
Allen Park		
Belleville		
Brownstown		
Canton Township		
Dearborn		
Dearborn Heights		
Ecorse		
Flat Rock		
Garden City		
Gibraltar		
Grosse Ile Township		
Grosse Pointe		
Grosse Pointe Farms		
Grosse Pointe Park		
Grosse Pointe Shores		
Grosse Pointe Woods		
Hamtramck		
Harper Woods		
Highland Park		
Huron Township		
Inkster		
Lincoln Park		
Livonia		
Melvindale		
Northville		
Northville Township		
Plymouth		
Plymouth Township		
Redford Township		
River Rouge		
Riverview		
Rockwood		
Romulus		
Southgate		
Sumpter Township		
Taylor		
Trenton		
VanBuren Township		
Wayne		
Westland		
Woodhaven		
Wyandotte		

3. Community Profile

3.1 Historical Overview

Wayne County was established in 1796 with the founding of the Northwest Territories. It was named for Major Anthony "Mad Anthony" Wayne (1745-1796), a Revolutionary War hero whose military service led to a lasting peace in the region. As a result, his name has found a place of honor in cities and towns throughout Michigan, Ohio, Indiana, and Illinois. At the time of its creation, Wayne County covered almost all of the Lower Peninsula of Michigan, as well as parts of Ohio, Indiana, Illinois, and even Wisconsin.

The area was settled by French explorers in the 1600's in an expanding effort to settle strategic areas on the continent and contain the British colonies in New England. It's location along the Detroit River made it a settlement of high commercial value as well as military importance. While the French made the first lasting impact in the region, many Jesuit groups had previously moved into the area doing missionary work. Several Native American settlements were reported in the area in the 1600's, and prior to their settlement, the area (along with much of the Midwest) was home to a people known as the Mound Builders, from the elaborate burial mounds they left behind. Mound Road in Wayne County is so named for the burial mound found in that area. Post-European settlement, the area was chiefly used for farming and lumber, but grew to encompass small industrial operations which capitalized on the iron and copper resources in the area and its easy access to shipping lanes through the Great Lakes. In the second half of the 19th century, Wayne County became a leading producer of stoves, ships, and railroad cars, as well as a leading producer of bicycles and carriages which opened the door for the explosive growth of the area with the coming of the automotive industry in the 20th century.

While the automobile was invented in the late 1800's, it was the innovations brought about by Henry Ford in the early 1900's that made the automobile popular and affordable. Ford's first assembly plant was located in Highland Park and offered jobs to employees that not only had higher than average wages, but also a cohesive set of rights which led to the first Union. The population of Detroit doubled between 1910 and 1920.

Because Wayne County was the birthplace of the automotive industry, it also became the leader in roadway technologies. In 1909, the Wayne County Road Commission was the first in the world to pave a road (a small stretch of Woodward Avenue) with concrete. These technologies allowed Wayne County a number of other distinguishable 'firsts', including the first roadway line-painting vehicle in 1911, the first snow plow in 1912, the first roadway testing laboratory in 1910, and the first superhighway (the Davison) in 1942.

Detroit and Wayne County continued to be at the forefront of technology and industry, converting auto plants to produce aircraft and tanks during World War II, and re-converting them for auto production as the war ended. But Wayne County's innovation and production weren't limited to industry. The 1950's and 1960's saw Detroit become a producer of new music sensations in rhythm and blues that changed the nation. The Motor City became Motown.

Industry in the county remains strong, the County is home of award-winning sports teams, and its diversity and culture make it not only resilient, but also an interesting and lively place to live and work today.

3.2 Geography and Climate

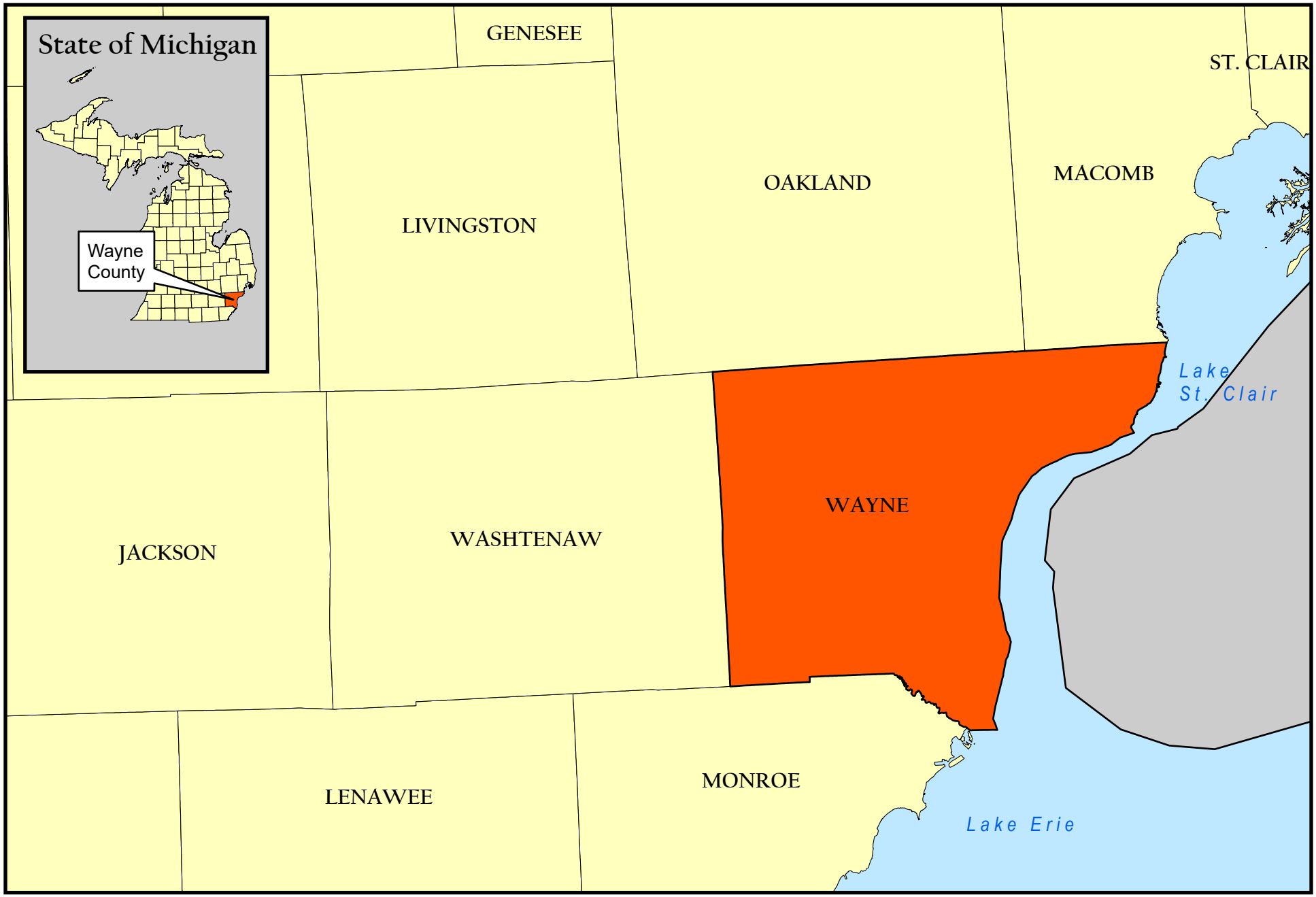
Wayne County is located in southeast Michigan, north of Monroe County east of Washtenaw County, and south of Oakland and Macomb Counties. (Figure 1) Wayne County encompasses 672 square miles. Topography in the county is generally flat, which is consistent with most of southeastern Michigan.

Weather in Wayne County is consistent with non-coastal, southeastern areas of Michigan. The following table provides average monthly weather conditions for Wayne County.

Wayne County Temperature and Precipitation Averages

Month	Average Daily Temperature (F°)	Average Precipitation (inches)	Average Snowfall (inches)
January	23	1.76	8.5
February	25.5	1.74	8.5
March	35.5	2.55	6.4
April	47.5	2.95	1.2
May	58.5	2.92	0
June	67.5	3.61	0
July	72	3.18	0
August	70.5	3.43	0
September	63.5	2.89	0
October	51.5	2.10	0
November	40	2.67	2.2
December	28	2.82	9.9
Annual Total	-	32.62	36.7

Source: www.CRH.NOAA.gov*, Updated May, 2019.*



Wayne County

19176 Northrop Street
Detroit, MI

9.5 4.75 0 9.5 Miles

N

ASTI Environmental

Created for: Wayne County
Created by: RMH, April 21, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013))

Site Location Map

3.3 Land Use Patterns

Wayne County does not exercise land use or zoning control. Instead, each of the individual cities, townships, and villages in the County is zoned and exercises their own control regarding land use planning and permitting.

The table below presents a breakdown of land use/land cover, by acreage, for Wayne County. Although reported land use definitions/categories changed between 2000 and 2008 single-family residential remains the dominant land use/land cover in Wayne County, followed by Transportation and utility corridors. From 1990 to 2000, single-family residential lands exhibited the greatest increase in acreage and active agriculture exhibited the greatest decrease in acreage.

Land Use Patterns & Trends

Land Use Type*	1990 Acres	2000 Acres	2015 Acres
Single-Family Residential	143,038	149,807	98,501
Multiple-Family Residential	9,622	10,160	6,814
Commercial and Office	21,736	23,547	13,414
Governmental / Institutional	16,255	17,100	14,798
Industrial	23,440	26,168	17,330
Transportation, Communication, and Utility	22,421	24,004	58,333
Park, Recreation, and Open Space	17,550	19,054	29,320
Agriculture	46,183	25,844	23,999
Water	3,813	4,152	5,481
Grassland and Shrub**	31,655	27,499	
Woodland and Wetland**	48,375	49,701	
Extractive and Barren** (Extractive 2015)	1,720	2,208	1,028
Under Development** (Vacant 2015)	1,564	5,338	36,321
Total Acres	387,372	384,582	303,861

* Land Use Type definitions have changed since 2000, so direct comparison of 2010 data set and previous years is imprecise. 2010 data derived from 2010 leaf-off aerial imagery.

** These categories not in use in 2015

Source: Southeast Michigan Council of Governments, www.semcog.org*, Community Profile for Wayne County, excluding Detroit.*

The above table demonstrates the increasing development in Wayne County from 1990-2000. The greatest increase in land use 1990-2000 was single-family residential, followed by land actively under development (primarily residential lots under construction) and industrial use. This increase in development is also reflected by the sharp decline in active agriculture and grassland and shrub land uses. Between 1990 and 2000 there was a 14% decrease in the undeveloped lands in Wayne County.

Reported declines in some land use acreages between 2000 and 2015 are due to changes in land use classification and mapping methods. A separate assessment summarized in SEMCOG's Land Cover in Southeast Michigan; 2013 report indicates that 36% of Wayne County consists of impervious surfaces. This likely has significant

implications in the problems noted elsewhere in this report regarding problems with flooding and insufficient storm water infrastructure.

According to the 2015 U.S. Census Bureau American Community Survey 5-year estimates, 73% of Wayne County's housing consists of single-family detached homes. Multiple family housing accounts for 17% of housing types and mobile homes account for 3%. The median home value in Wayne County (excluding Detroit) is $107,944 and the median gross rent is $840 per rental unit per month. According to ATTOM Data Solutions, approximately 5.6% of all Wayne County housing units were vacant in in the 3rd quarter of 2018, giving the County the second highest vacancy rate in Michigan behind Genesee County and the fifth highest vacancy rate in the country.

3.4 Transportation Network

There are approximately 460 miles of interstate freeways and highways and 175 miles of county roads within the County. County roads are maintained by the Wayne County Department of Public Services Division of Roads.

Wayne County is served by two different bus systems: the Detroit Department of Transportation (D-DOT), which primarily serves the City of Detroit, Hamtramck, and Highland Park, averages 31.2 million rides per year and the Suburban Mobility Authority for Regional Transportation (SMART) system which provides transport for over 10.1 million passengers per year. These bus systems provide routes and/or connections to destinations throughout Oakland, Wayne, and Macomb Counties. SMART also provides specialized services to the elderly and handicapped.

Commercial and passenger air transportation are provided through the Detroit Wayne County Metropolitan International Airport and Coleman A. Young International Airport.

There are four major railroads in Wayne County: CSX Transportation, Norfolk Southern Railway, Conrail, and Amtrak provide passenger and shipping services to locations throughout the U.S. and Canada.

3.5 Population Characteristics

Wayne County is Michigan's most populous county and the 19th-most populous county in the United States. It is home to over 18% of Michigan's total population. With a total population (including Detroit) of just under 2 million people (2010), Wayne County is the eleventh most populous county in the United States. Census values show that Wayne County has been losing population, but that trend is projected to flatten out in the coming decades. The 2045 Wayne County population is expected to increase approximately 1% over 2010 values. The following tables contain demographic information regarding the County, as provided by the Southeast Michigan Council of Governments (SEMCOG) and the U.S. Census Bureau.

Wayne County Population Projection

Year	Population Count/Projection
1990	2,111,687
2000	2,061,162
2010	1,106,788
2045	1,149,249

Source: U.S. Census Bureau & Southeast Michigan Council of Governments, Community Profile for Wayne County, excluding Detroit.

Wayne County (excluding Detroit) Age, Sex, and Race Breakdown (2010 Census Data)

Subject	Number	Percent
Total Population	1,088,895	100
Age		
Under 5 years	66,528	6
5 to 17 years	183,648	17
18 to 24 years	99,151	9
25-54 years	436,821	40
55 to 64 years	153,821	14
65-84 years	138,427	13
85 and over	24,436	13
Race		
White	823,359	76
Black/ African American	147,278	14
Asian	42,843	4
Other Race	6,052	1
Multi-racial	23,667	2

Source: U.S. Census Bureau & Southeast Michigan Council of Governments, Community Profile for Wayne County, excluding Detroit.

Household Characteristics

Subject	Number	Percent
Total households	411,535	100.0
2+ Person Households with children	131,828	32.0
2+ Person Households without children	159,887	39.0
Average household size	2.49	-

Source: U.S. Census Bureau & Southeast Michigan Council of Governments, Community Profile for Wayne County, excluding Detroit.

3.6 Economic Characteristics

Nearly 80% of the Wayne County population is over 16 years of age with 61% of that population in the workforce. Manufacturing and health care services employ the most Wayne County residents at 12% each. The following tables provide detailed information regarding the employed population of Wayne County.

Occupation & Industry Characteristics

Subject	Number	Percent
Employment Status		
Daytime Population	1,196,372	100
Employed Residents	591,006	49
Age 15 & Under	228,714	19
Not in Labor Force	325,682	27
Unemployed	50,970	4
Industry		
Natural Resources, Mining, & Construction	27,362	5
Manufacturing	69,627	12
Wholesale Trade	23,705	4
Retail Trade	64,510	11
Transportation and Warehousing, and Utilities	42,357	7
Information & Financial Activities	48,640	8
Professional and Technical Services & Corporate HQ	62,227	6
Administrative, Support, & Waste Services	42,610	7
Education Services	33,115	6
Healthcare Services	71,169	12
Leisure & Hospitality	56,046	9
Other Services	36,822	6
Public Administration	12,816	2

Source: U.S. Census Bureau & SEMCOG, Community Profile for Wayne County, excluding Detroit.

Income & Poverty Status Characteristics

Subject	Number	Percent
Median Family Income (dollars)	$53,307	-
Population with Social Security Income	211,545	30
Population with Supplemental Security Income	45,989	7
Population with public assistance income	36,478	5
Population with retirement income	156,146	22
Per capita income (dollars)	$27,877	-
Poverty Status in 2015		
Number of individuals below poverty level	166,729	15.4

Source: U.S. Census Bureau & SEMCOG, Community Profile for Wayne County, excluding Detroit

3.7 Community Services/Organizations

Natural gas and electrical services are provided to Wayne County customers by Consumers Energy and DTE Energy. Telephone service in the county is provided by a number of different companies, but is primarily provided by AT&T and Verizon. Sewer service for most of the county is provided by the City of Detroit Water and Sewerage Department, but Canton, Northville and Plymouth Townships also receive service from the Western Townships Utilities Authority (WTUA) and the Ypsilanti Community Utilities Authority (YCUA). The City of Detroit provides water service to most of the county.

Wayne County provides a number of services to residents through various boards and agencies, including the Wayne County Board of Commissioners, the Department of Homeland Security & Emergency Management, and the Departments of Community Services, Economic Development, Environment, Family Services, Health Services, Parks and Recreation, and Public Services, and the Wayne County Sheriff's Office.

The county is served by 34 public school districts. Also, within the county are several community colleges, private colleges, private and public universities. Additional learning resources are provided through the county public library services.

Wayne County has an extensive Parks & Recreation Department which maintains 12 county parks. Also, the county is home to numerous arts and entertainment venues including shopping complexes such as Fairlane Town Center and Laurel Park. The City of Detroit is home to historic theatres such as the Fox and Fisher Theatres, and sports venues such as Comerica Park, Little Caesar's Arena, and Ford Field.

3.8 Critical Assets

The following list of critical assets was developed based on current and future land use in Wayne County, the nature of hazards which may affect the county, and the results of

community input. The following facilities and infrastructures were identified as critical to providing essential products and services to the general public, preserving the welfare and quality of life of the community, and assuring public safety, emergency response, and disaster recovery.

- Central Business Districts
- Commercial Sites
- Hospitals
- Industrial Sites
- Natural Areas
- Open Spaces
- Public Facilities
- Residential Areas
- Roads, Railroads and Bridges
- Schools and Churches
- Sports and Entertainment Venues
- Utility Facilities

4. Hazard History

The following discussions of individual natural, technological, and human-caused hazards and disasters include information regarding historic occurrences of each hazard, damage to life and/or property where known and, based upon the County's hazard history and trends in land use climate change, etc., attempt to predict whether hazard frequencies will continue as they have been or if some change in frequency is expected.

The definitions of high, moderate, low and other hazard frequency categories used in developing a hazard history for the County are defined in the footnotes for Table 4. Terms used in the section of the Plan (e.g., High, Probable, Likely) are more general, but indicate anticipated future patterns relative to those historic averages. If trends in land use, weather or climate patterns, etc. indicate that the hazard will continue to occur, as it has on average historically or may even increase in frequency, the text here will indicate that that trend for that hazard to continue to be important is "likely" or "probable." If, however, it is anticipated that a given hazard will decrease in frequency the text will indicate that it is "unlikely" or has a lower likelihood to result in a great deal of damage.

Additional discussion of future trends that may influence the frequency and/or severity of different hazards is provided in Section 5.4.3.

4.1 Civil Disturbance

Definition

A public gathering or inmate uprising that disrupts essential functions and results in unlawful behavior such as rioting or arson. This event involves a large number of people and requires a significant response effort by law enforcement and/or emergency responders.

Historical Events

Large civil disturbances are not common in Michigan and typically are a result of the following causes:

- labor disputes,
- controversial court judgments or government actions,
- resource shortages following a catastrophe,
- demonstrations by special interest groups,
- unfair death or injury, or
- celebration following a high-profile victory or defeat by a sports team.

A total of 29 incidents of civil unrest are recorded in a listing of United States dating back to 1783, the most recent of these being in response to riots in Los Angeles in the wake of the Rodney King trial in 1992.

Historically, most of the civil disturbances in Wayne County have occurred in the City of Detroit. These include the race riots of 1943 which resulted in 34 deaths and more than 700 injuries and the 1967 civil rights riots which resulted in 43 deaths and over 1,000 injuries. Additional looting and arson damages were estimated at over $50 million, with 5,000 or more individuals left homeless in their wake. More recently in 1995, Detroit witnessed minor skirmishes and injuries when newspaper employees went on strike over contract disagreements.

Other civil disturbances of note in Wayne County include the "Hunger March" in Dearborn in 1932, in which 10,000 demonstrators fought with police leaving four dead and many injured.

Frequency & Probability

A civil disturbance occurs in Wayne County approximately once every 8-10 years.[5] The most likely causes for a civil disturbance in the county would be a result of a labor dispute, a sporting event or demonstration at a college, or government or military facility within the county. There are six detention/correctional facilities located within the county which are potential sites for an inmate uprising.

The potential for this hazard to occur in Wayne County is somewhat elevated due to the number of sport/entertainment venues, educational facilities, detention facilities, large scale industrial facilities, and government facilities within the county. Racial diversity in some communities was also cited as a factor in civil disturbance, due to the potential for an influx of out-of-state protesters during community events.

Health & Safety

There have been at least 81 deaths and over 1,700 injuries from major civil disturbances in Wayne County since 1932.[6]

Area Impacted

Civil disturbance events often involve acts of arson, looting, and/or vandalism which can result in devastating levels of property damage. The 1967 riots in Detroit included looting and over 150 fires burned properties over 15 blocks. Forty-three people were killed and over 1,000 were injured during the riots. Property damage was estimated at $50 million and over 5,000 people were left homeless; it was the largest and most destructive of any such incident in the country for that decade.[7] Places of public gathering such as festivals, sporting and entertainment venues, colleges and universities, detention facilities, and government facilities are the most likely places for a civil disturbance to occur however, as noted, most of these venues are located within the City of Detroit, which is not included in this Plan.

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[5] Listing of US Civil Unrest Incidents, Armstrong Economics: www.armstrongeconomics.com/statistics/listing-of-us-civil-unrest-incidents.
[6] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis*, December 2001, page 7.
[7] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis*, December 2012, page 340.

Economic Impact

The economic impact of a civil disturbance reaches far beyond emergency response costs and property damage. Economic recovery from civil disturbances is very slow and often requires government assistance to revive the local economy. This hazard can tarnish an area's image and deter potential investors and residents.

Critical Facilities/Services

The nature of civil disturbance is such that local emergency response services are often overwhelmed. As a result, aid is often required from other local or state units.

The high degree of property damage which can occur from this hazard can greatly impact the ability to operate or provide services at the hazard location (particularly sporting and entertainment venues, colleges and universities, detention facilities, and government facilities).

4.2 Criminal Acts

4.2.1 Vandalism

Definition

Vandalism is the willful or malicious destruction, injury, disfigurement, or defacement of any public or private property, real or personal, without consent of the owner or person having control. A vandalism offense is an act of vandalism which is reported to a law enforcement agency.

Historical Events

Examples of acts of vandalism include graffiti, tampering with traffic signs and damage to vacant buildings. In more extreme cases, vandalism to public facilities or infrastructure has the potential to result in significant impact to the community.

In February 2018, vandals smashed windows on every car (60) in an auto dealer's lot in Highland Park causing thousands of dollars damage.[8]

Frequency & Probability

Crime statistics do not report "vandalism" directly, but instead reference property crimes or damage to property. The 2017 Michigan State Police Michigan Incident Crime Reporting (MICR) online database indicates that there were a total of 68,184 "damage against property" incidents reported in Wayne County from 2013 through 2017, resulting in an average of 13,637 incidents per year.[9]

Given the well-established frequency of this hazard in recent years, it is anticipated that this hazard will continue to occur in the future.

[8] WXYZ Detroit, https://www.wxyz.com/news/region/wayne-county/metro-detroit-car-dealership-cleaning-up-after-vandals-bust-hundreds-of-windows, February 22, 2018.
[9] Michigan State Police, Michigan Incident Crime Reporting, Crime Statistics, Wayne County, 2013, 2014, 2015, 2016, and 2017. http://www.micrstats.state.mi.us/MICR/Reports/Report02.aspx

Health & Safety

There are no data available for death or injury rates due to acts of vandalism. It is anticipated that the majority of these acts do not pose a threat to human health or safety. This however, may not be the case in instances of vandalism involving public infrastructure.

Area Impacted

Due to the nature of vandalism, property damage can be expected with each occurrence. Data regarding property damage due to vandalism is not available for Wayne County; however, the amount of property damage is directly related to the severity of the event.

All areas of Wayne County are potential targets for vandalism. Higher rates of occurrence can be anticipated in areas of urban blight or vacant buildings.

Economic Impact

No information is available regarding the overall economic impact of vandalism in Wayne County. However, considering the effects of this crime, high rates of vandalism can decrease the attractiveness of neighborhoods or business districts. This can result in economic loss due to loss of residents or businesses, in addition to any property damages incurred.

Critical Facilities/Services

Critical facilities and services are not often directly impacted by vandalism. However, in 1984 vandals in nearby Lake Orion (Oakland County) damaged the entire school bus fleet. This is an example of the potentially far-reaching effects of vandalism. Also, the indirect impacts of vandalism, most notably the time required of police and court systems in dealing with acts of vandalism, should not be overlooked.

4.2.2 Arson

Definition

Arson is the willful or malicious burning or attempt to burn, with or without intent to defraud, a dwelling, public building, motor vehicle, or personal property of another. An arson offense is an act of arson which is reported to a law enforcement agency.

Historical Events

According to the U.S. Fire Administration, arson is the leading cause of fires and third-leading cause of fire-related injuries and deaths in the United States[10].

In recent years, Wayne County has experienced numerous arson fires at both private and public properties. The night before Halloween in the city of Detroit had been known

[10] U.S. Fire Administration Topical Fire Research Series, Volume 1, Issue 8, January 2001.

as "Devils Night" which brought widespread arson. After the peak of 810 fires in 1984, that number declined to only 21 in 2017.[11]

Frequency & Probability

Arson (intentional fires) accounts for 4.2% of the residential fires and 9.3% of the non-residential building fires in the U.S.,[12] but only 225 of intentional fires occur indoors.[13] In 2003, arson or a suspicious fire occurred every 1 hour 2 minutes in Michigan.[14] From 2013 to 2017, Wayne County experienced 4,081 arson fires, an average of 816 per year.[15] This is notably less than the 6,565 total and average of 1,094 arson fires per year reported in Wayne County's 2013 Hazard Mitigation Plan.

Health & Safety

The U.S. Fire Administration reported in 2009, for the period of 1994 through 1998, that the state of Michigan averaged 16.4 civilian deaths per million population and 9.6 civilian injuries per 1,000 arson fires.[16]

Area Impacted

In the United States, one-fifth of all property loss is due to arson and arson is the leading cause of fire-related economic loss.[17] The U.S. Fire Administration reported for the period of 2002 to 2006, that the state of Michigan averaged $7,070 in property damage per arson fire.[18] Wayne County experiences more arson fires than any other county in Michigan, accounting for more than half the arson incidents in the state annually, with 1,001 reported cases in 2017.[19]

Any property is a potential target for arson. Given that arson is a property crime, it is anticipated that arson will occur in areas with high property crime rates.

Economic Impact

In 2015, nearly 3,000 arson and suspicious fires in Wayne County cost County residents over $100 million.

Critical Facilities/Services

Although not common, critical facilities and services can be directly impacted by arson. An arson fire involving any of the county's assets could temporarily impede the county's ability to provide that service.

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[11] Trip Savvy, *History of Devils' Night in Detroit,* https://www.tripsavvy.com/history-of-devils-night-in-detroit-1085250
[12] U.S. Fire Administration, 2017, U.S. fire statistics, www.usfa.gov/data/statistics/
[13] U.S. Fire Administration Topical Fire Report Series Volume 9, Issue 5 / November 2009
[14] Michigan State Police, Fire Marshall Division, *2003 Michigan Fire Clock*
[15] Michigan State Police, Michigan Incident Crime Reporting, Crime Statistics, Wayne County, 2013, 2014, 2015, 2016, and 2017. http://www.micrstats.state.mi.us/MICR/Reports/Report02.aspx
[16] U.S. Fire Administration, Fire Data, Arson Fires, Civilian Injuries and Civilian Deaths, 1994, 1995, 1996, 1997, 1998
[17] U.S. Fire Administration, www.usfa.fema.gov
[18] U.S. Fire Administration, Fire Data, Arson Fires, Property Loss, 1994, 1995, 1996, 1997, 1998
[19] Michigan State Police, Incident Crime Reporting, Wayne County, 2017

4.3 Drought

Definition

Drought is an extended period with significantly low precipitation levels that usually occurs during planting and growing seasons.

Historical Events

The U.S. Department of Agriculture (USDA) designated 21 Michigan Counties, including Wayne County, as primary disaster areas due to drought-caused losses and damage in 2016. [20] In 2007 and 2012, drought disaster declarations were declared by the U.S. Department of Agriculture for all 83 counties in Michigan due to drought-related crop losses. [21,22]

Elsewhere in the state, extreme drought conditions in 1976-1977 contributed heavily to the large wildfire that struck the Seney area in Michigan's Upper Peninsula in July 1976.[23]

During the drought in 1988, Michigan took several steps to combat the impacts of the drought on businesses, natural resources, and individual citizens. A statewide burning ban was enacted, and water use restrictions were put into place in many communities.

During a drought that struck Michigan from 1998-2001, one-third of the state's fruit, vegetable, and field crops were destroyed. This drought resulted in a U.S. Department of Agriculture Disaster Declaration for 82 of the State's counties, including Wayne County.[24]

Frequency and Probability

There is one major drought event every 20-25 years, on average, that affects the entire State.[25] As described above, at least four drought events have been recorded for Wayne County since 2000 and climate patterns continue to trend to drier, hotter summers even though average annual precipitation is likely to generally increase.[26] The southeast Michigan climatic region (Region 10), which includes Wayne County, exhibits

[20] Michigan Farm News, January 12, 2017. https://www.michfb.com/MI/Farm_News/Content/People/Michigan_counties_declared_natural_disaster_areas/
[21] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* July 2012, page 132.
[22] Governor Rick Snyder announcement, http://www.michigan.gov/mdard/0,4610,7-125-1572_28248-285246--,00.html
[23] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* July 2012, page 139.
[24] Ibid.
[25] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001, page 7.
[26] NOAA National Centers for Environmental Information Storm Events database query https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=26%2CMICHIGAN, May 14, 2019

one of the lowest probabilities in the state for drought, yet Wayne County experiences some level of drought 46% of the time, on average.[27]

Health & Safety

The risk to human life from a drought event is low.[28] Possible loss of human life from a drought event is due to secondary effects such as extreme heat (refer to Section 4.5.1), fire (refer to Section 4.6), and other health-related problems such as increased pollutant concentrations in surface water due to drought-induced low water levels.

Area Impacted

Impacts of drought primarily affect those employed in agriculture. Drought affects widespread areas; however, the greatest impact is generally to agricultural lands. Natural resources such as lakes, streams, and other bodies of water could be affected by decreased water levels. Also, fires resulting from drought can result in the destruction of trees and other natural habitats, as well as homes and businesses.

The July 2001, drought affected 12 southeast Michigan counties, including Wayne County. The drought in September 2002 affected 12 counties, including Wayne County.[29] Drought in 2012 caused all 83 counties in Michigan to be declared primary natural disaster areas for drought and excessive heat by USDA on August 29, 2012[30]. Wayne County contains approximately 13,060 acres of agricultural land (Figure 2).[31]

Even with over 13,00 acres in agriculture, Wayne County is primarily an urban county. Agricultural lands are primarily concentrated in the County's southwest corner in Canton, Huron, Sumpter, and Van Buren Townships. Lesser concentrations of agricultural lands are found in the southern part of the County in Brownstown Township, Flat Rock, Romulus, and Woodhaven. These eight communities are likely the most at-risk from drought.

Economic Impact

The impacts of drought on a community include water shortages; a decrease in the quantity and quality of agricultural crops; a decline of water levels in lakes, streams, and other bodies of water; poor nourishment for wildlife and livestock; increases in wildfires; and increases in insect infestations, plant disease and wind erosion.

The 1988 drought/heat wave in the central and eastern U.S. (an event that greatly impacted Michigan) caused an estimated $40 billion in damages from agricultural losses,

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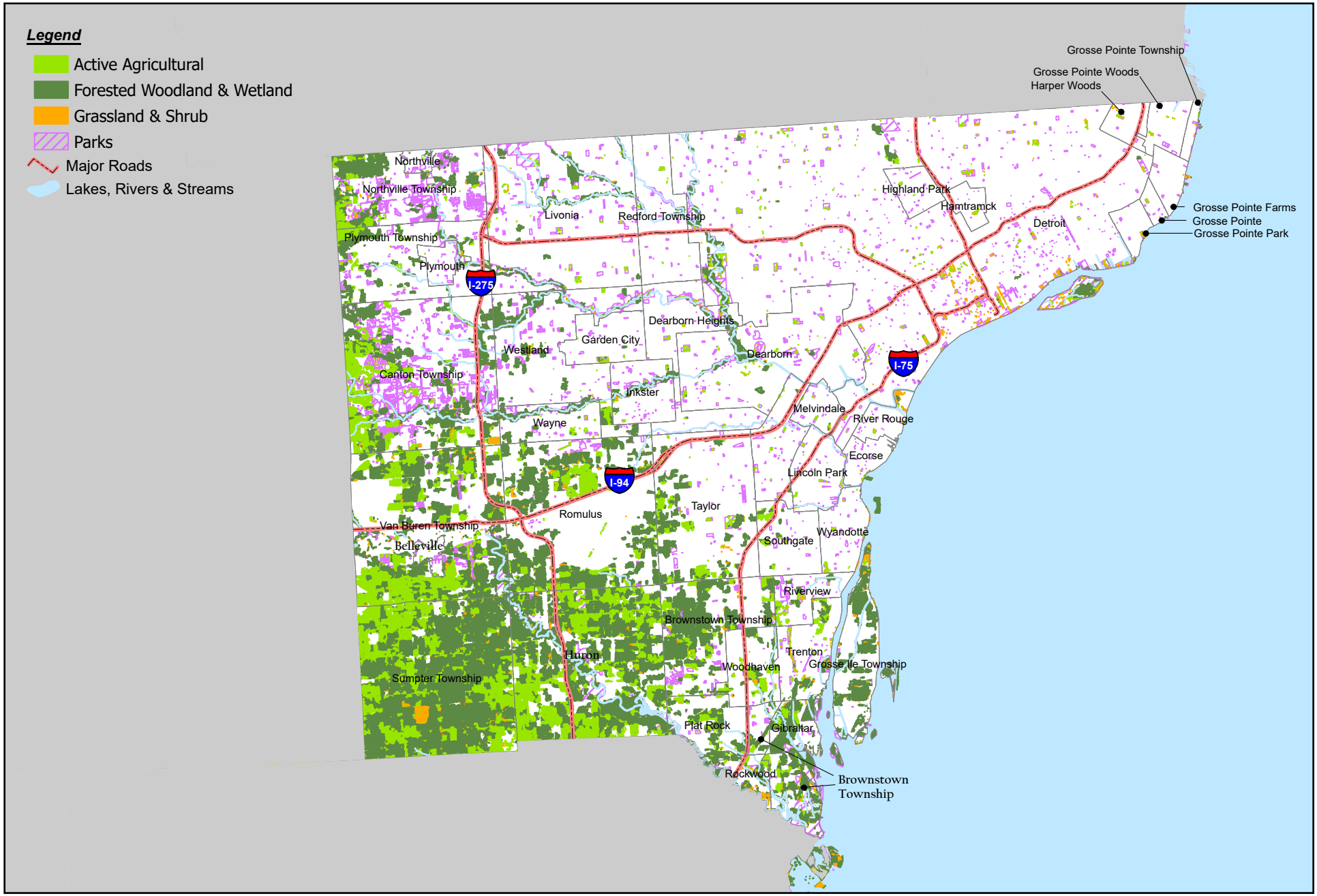
[27] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* April 2019, page 223.
[28] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001, page 7.
[29] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6, 2005
[30] Governor Rick Snyder announcement, http://www.michigan.gov/mdard/0,4610,7-125-1572_28248-285246--,00.html.
[31] SEMCOG, 2008 *Land Use and 2010 Land Cover*, Specific to Wayne County, not including Detroit, May 2019.



Wayne County

ASTI Environmental

Created for: Wayne County
Created by: RMH, April 21, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013)
NLCD (2016), SEMCOG Land Use (2015)

Figure 2 - Hazard History:
Fire - Forest/Field

disruption of river transportation, water supply shortages, wildfires, and related economic impacts.[35]

The July 2001 drought resulted in $150 million in crop damage over an area of 12 southeast Michigan counties, reducing yields of corn, dry beans, and soybeans to 1/3 of normal.[36] The drought that occurred in September 2002 resulted in agriculture yields of less than 50 percent of normal and many counties across eastern Michigan were declared agricultural disaster areas.[37]

Critical Facilities/Services

Most facilities impacted from drought would be related to agriculture. Farms, large grain facilities, fruit and vegetable vendors/markets could potentially see a significant decrease in production/sales.

Local and regional governmental services may be required to respond to drought. However, if the severity of the drought is significant, State and Federal assistance could be required.

Agricultural services and departments such as the Farm Bureau and the U.S. Department of Agriculture may also be required to provide assistance.

4.4 Earthquakes

Definition

An earthquake is a sudden movement or motion in the earth caused by an abrupt release of slowly accumulating strain, which results in ground shaking, surface faulting, or ground failures.

Historical Events

Most earthquakes that occur in Michigan are minor tremors resulting in little damage. No severely destructive earthquake has ever been documented in Michigan. However, several mildly damaging earthquakes have occurred since the late 1700s.[38] Michigan has fault lines in the bedrock geology that are considered stable; however, data is poorly documented. Michigan is most likely to be affected by earthquakes which occur in the New Madrid Seismic Zone (centered near the Arkansas/Tennessee state line) and upstate New York.

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[35] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 139.
[36] NOAA National Centers for Environmental Information Storm Events database query https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=26%2CMICHIGAN, May 14, 2019
[37] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* May 14, 2019.
[38] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 168.

There is no record of an earthquake originating within Wayne County. However, there have been several low-magnitude earthquakes centered outside of the county which have been felt in the county.[39]

Frequency and Probability

Since 1793, there have been eight earthquakes in Michigan, one centered in the Lansing area and the other centered near Kalamazoo. Since 1793, there have been approximately 43 earthquake related disturbances in Michigan.[40] An earthquake of significant magnitude is unlikely due to Wayne County's distance from the fault and the type of fault in Michigan. The frequency is assumed to be once every 50 or more years. Although a small disturbance from an earthquake is possible, the probability for a significant earthquake to occur in Wayne County is very low.

Health & Safety

There have been no recorded deaths or injuries related to earthquakes in Michigan. The risk rating for human life related to earthquake events is low, with less than one event annually.[41]

Area Impacted

The number of people affected is dependent upon the earthquake magnitude and distance from the epicenter. Typically, an earthquake affects a large region, not a specific location. Because earthquakes typically have regional affects, the entire Wayne County population could be affected. However, given the historic severity, only a fraction of the population would be affected by a typical event. The impact of an earthquake would be primarily on water, sewer, and gas pipelines, which are located throughout Wayne County.

Economic Impact

Damage occurs primarily to any type of structure or improvement. The amount of damage is directly proportional to the earthquake magnitude and a large amount of property damage could be anticipated due to the high development density in southern Wayne County. Given the historical severity, economic impacts are expected to be minimal. Since 1793, only a few earthquakes (most of which were minor tremors) resulted in minimal structural damage such a cracked plaster and damaged chimneys. In Wayne County, the impact of an earthquake would be primarily on water, sewer, and gas pipelines. The United States averages approximately $550,000 per accident to natural gas and liquid pipelines due to earth movement.

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[39] United Stated Geological Survey, *Earthquake History of Michigan*, wwwneic.cr.usgs.gov/neis/states/Michigan/hichigan_history.html
[40] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* July 2012, page 170.
[41] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* April 2019, page 41.

Critical Facilities/Services

Due to the low probability of a severely destructive earthquake, response would most likely be limited to primary utility services and pipeline owners. Due to the lack of earthquake events in Michigan, additional investigation of the impact to critical facilities/services is not recommended at this time.

4.5 Extreme Temperatures

4.5.1 Extreme Heat

Definition

A prolonged period of extreme heat, often accompanied by conditions such as high humidity, high winds and lack of rain. Although no standardized temperature is used to define extreme heat, the Centers for Disease Control and Prevention define extreme heat as temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks.[42] In Michigan, heat advisories refer to times when the heat index, a combination of relative humidity and temperature, is calculated to exceed 100 degrees for at least three hours in duration. An excessive heat warning occurs if the calculated heat index is at least 105 degrees for three or more hours.[43] Prolonged periods of temperatures greater than 90° Fahrenheit are of concern. The minimum mortality temperature threshold is lower in northern latitudes (from 65° to 70° F) than in the southern United States (from 76° to 90° F). Human health effects of heat are also dependent upon the age, health, and physical activity of an individual, as well as humidity and access to air conditioning.

Historical Events

The highest temperature ever recorded in Michigan was 112 degrees Fahrenheit on July 13, 1936 in Mio. During that week, 570 people died statewide and 5,000 deaths were attributed to the heat wave nationwide.[44]

During a heat wave in the summer of 1988, thirty-nine days had temperatures of 90 degrees or more. The temperature in southeast Michigan topped the 100-degree mark on 5 occasions.[45]

In July 1999, a heat wave that struck the Midwest and East Coast resulted in an estimated 256 heat-related deaths in 20 states, including one death in Michigan. A

[42]U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, http://www.bt.cdc.gov/disasters/extremeheat/heat_guide.asp

[43] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* April 2019, pages 91-92.

[44] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103. July 2012, page 85.

[45] Ibid.

number of people were treated at area hospitals, including in Detroit, for heat-related problems ranging from dehydration to heat stroke.[46]

Between January 2013 and April 2018, four extreme temperature events were reported in Wayne County.[47] Of the four events, one resulted in 80 injuries.

Frequency and Probability

Extreme temperature periods occur every year in the state. Wayne County experienced 14 extreme heat events between 1996 through 2016, resulting in 541 injuries and three deaths.[48] The probability of an extreme heat event occurring in Wayne County is likely, but is based on seasonal weather patterns.

Health & Safety

The major threats associated with extreme heat are heatstroke and heat exhaustion. Nationwide, approximately 135 deaths per year are attributable to extreme heat (a total of 3,311 over the 24 year period from 1986 to 2009.[49] Extreme heat primarily affects the most vulnerable segments of society such as the elderly, children, impoverished individuals and people in poor health. Within Wayne County, approximately 6% of the population is aged 0-5 years and 14% is aged 65 years or more.[50] In summary, 20% of the Wayne County population is at higher risk for impact from extreme heat based solely on age. Two deaths related to excessive heat have been recorded in Wayne County since 2000.[51]

Area Impacted

Extreme heat typically affects entire counties or regions of Michigan. Although the entire county would be affected, open spaces (at-risk for wildfires), elderly housing centers, and the homeless would be most impacted. The Michigan Department of Health and Human Services lists 45 nursing homes in Wayne County in their Medicaid Long Term Care Provider List.[52]

Economic Impact

Extreme heat is usually accompanied by drought and can have hazardous effects on livestock, agricultural crops, and energy demands and is associated with forest or field

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[46] Ibid.
[47] NOAA National Centers for Environmental Information Storm Events database query https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=26%2CMICHIGAN, April 22, 2019

[48] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103. April 2019, page 93.
[49] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103. July 2012, page 77.
[50] Southeast Michigan Council of Governments (SEMCOG), Community Profiles, Wayne County, excluding Detroit. https://semcog.org/Community-Profiles
[51] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather, April 19, 2013*
[52] Michigan Department of Health and Human Services, Medicaid Long Term Care Provider List, https://www.michigan.gov/mdhhs/0,5885,7-339-71551_2945_42542_42543_42546_42551-20397--,00.html

fires. Drought is discussed in Section 4.3. Medical costs and increased emergency response costs would be anticipated.

Critical Facilities/Services

Primarily, local and regional governmental services would be requested to provide assistance. Hospitals and clinics would expect an increase in heat exhaustion and other heat-related illness cases.

Utility companies (Consumers Energy, DTE Energy, etc.) would be essential in providing enough resources to supply an increased demand for power (increased use for air conditioning).

If the severity of the extreme heat is significant enough to cause a drought hazard, state and federal assistance could be available. Agricultural services and departments such as the Farm Bureau and the U.S. Department of Agriculture will be the most likely type of agency to provide assistance and aid.

4.5.2 Extreme Cold

Definition

Prolonged period of extreme cold; temperatures around or below zero degrees Fahrenheit, usually occurring in Wayne County from late November to early April.[53] Also similarly to extreme heat, human mortality temperature thresholds vary with latitude. Areas of the southern United States are susceptible to human health impacts from cold at higher temperatures than people in northern regions. Human health effects vary with wind chill and an individual's age, physical condition, physical activity, and access to heated buildings.

Historical Events

The lowest temperature ever recorded in Michigan was -51 degrees Fahrenheit on February 9, 1934 in Vanderbilt.[54]

The National Storm Events Database lists 14 extreme temperature events reported for Wayne County between January 1, 1950 and 2019.[55] These events resulted in a total of 8 deaths and 34 injuries. This includes the "polar vortex" that affected Michigan and 21 other states January 29 through 31, 2019, shortly before the writing of this Plan. During that period temperatures across the state hovered at or below zero; On January 30th, Harbor Springs, Michigan reported the warmest temperature in the state at 5 degrees Fahrenheit, Ironwood in the Upper Peninsula recorded the coldest temperature at -26

[53] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103. April 2019, page 88.
[54] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103. July 2012, page 86.
[55] NOAA National Centers for Environmental Information Storm Events Database query https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=26%2CMICHIGAN, April 22, 2019

degrees. Two Wayne County residents died during the event, in the City of Detroit and in Ecorse.[56] Other injuries involved frostbite and slip and fall accidents.

Following an explosion at a natural gas compressor station in Macomb County, during the same cold weather event, Consumers Energy and Michigan's Governor Whitmer asked residents to reduce their use of natural gas. The US Postal Service even suspended mail delivery in parts or all of several Midwest states including Michigan.

Another extreme cold event occurred on January 11, 1999 and resulted in more than 120 water main breaks in the City of Detroit. In Adrian, in Lenawee County, a water main break caused a water shortage for that City's 22,000 residents. Together, the infrastructure damage in Detroit and Adrian caused an estimated $250,000 and $1,000,000 in property damage, respectively.[57]

On December 22, 2000, several freighters got stuck in ice on both the Detroit River and Lake St. Clair and blocked the shipping channel, bringing dozens of ships to a halt.[58]

Frequency and Probability

Michigan has 90 to180+ days per year below freezing but Wayne County is categorized as an area of relatively low risk with zero to 9.9 days per year with temperatures at or below zero degrees Fahrenheit.[59] The probability for an extreme cold event in Wayne County to occur is likely, is based on seasonal weather patterns and, since 2000, occurs once every 1.4 years on average. Global climate change patterns indicate that this rate may increase in the future.

Health & Safety

Extreme cold poses a significant health risk to the same segments of the population as extreme heat. Although extreme cold would affect the entire population, the population most at-risk for health hazards from extreme cold includes children, the elderly, disabled and impoverished persons. Nationally, extreme cold is responsible for approximately 700 deaths per year.[60] Hypothermia and frostbite are the most common conditions associated with extreme cold. Over half of the approximate 700 deaths are persons 60 years of age or older. The Michigan Department of Health and Human Services lists 45 nursing homes in Wayne County in their Medicaid Long Term Care Provider List.[61]

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[56] Detroit News. 2019. https://www.detroitnews.com/story/weather/2019/01/30/arctic-cold-lingers-over-metro-area-wednesday/2719279002/

[57] NOAA National Centers for Environmental Information Storm Events Database query https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=26%2CMICHIGAN, April 22, 2019

[58] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103. April 2019, page 109.

[59] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103. April 2019, page 104.

[60] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103. July 2012

[61] Michigan Department of Health and Human Services, Medicaid Long Term Care Provider List, https://www.michigan.gov/mdhhs/0,5885,7-339-71551_2945_42542_42543_42546_42551-20397--,00.html

Statistics indicate that death due to cold is more frequent among males than females in most age groups.

Within Wayne County, approximately 20% is aged 60 years or more and therefore at higher risk from extreme heat based solely on age. [62]Seventeen extreme cold or wind chill events, resulting in 11 deaths and 10 injuries, were reported in Wayne County between 2000 and 2019.[63]

Area Impacted

Extreme cold can affect water supply lines and secondary effects, such as winter storms, can greatly impair transportation. Although the entire county would be affected, the impacts of extreme cold, other than those impacts to human health, would primarily occur to infrastructure (gas and water lines) and to shipping channels.

Economic Impact

Damage to infrastructure (gas and water lines) could result in repair costs. Medical costs and increased emergency response costs would be anticipated. Shipping delays could cause a short-term increase cost in consumer products.

Critical Facilities/Services

Primarily, local and regional governmental services would be needed to provide assistance in times of extreme cold. Local churches, community centers, and other nonprofits and governmental groups opened warming centers during the 2019 polar vortex event and the Wayne County Sherriff's Office assisted by transporting individuals to area shelters. Similarly, the Michigan Humane Society responded to calls of animals exposed to the cold.

Hospitals and clinics would see an increase in hypothermia, frostbite, and other cold-related illness cases. Coast Guard icebreaker assistance has been used to free shipping lanes from ice.

Utility companies (Consumers Energy, DTE Energy, etc.) would be essential in repairing lines and providing enough resources to meet increased demands for heat.

4.6 Fire Hazards

4.6.1 Forest/Field Fire

Definition

An uncontrolled fire within an open space, forested area, brush or grassed area, or wildland.

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[62] Southeast Michigan Council of Governments (SEMCOG), Community Profiles, Wayne County, excluding Detroit. https://semcog.org/Community-Profiles

[63] NOAA National Centers for Environmental Information Storm Events Database query https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=26%2CMICHIGAN, April 22, 2019

Historical Events

A total of 1,669 occurrences from forest/field fires occurred between January 1, 1998 and December 2004 in Wayne County.[64] Between 1998 and 2003, Wayne County averaged 278 forest/field related fires per year. Updated county-specific data is not available for the period since 2003.

In October 1871, Michigan's first recorded catastrophic fire occurred after a prolonged drought over much of the Great Lakes region. The wildfire killed 200 people and burned 1.2 million acres in Michigan's Lower Peninsula.[65]

Forest/Field Related Fire Incidents in Wayne County 1/1/98-12/31/04

Type	Number	Deaths/ Injuries	Property Loss
Natural Vegetation	514	1/2	$11,054
Forest, woods, or wild land fire	81	0/0	$154
Brush, or brush and grass mixture	553	0/1	$223,215
Grass fire	521	0/0	$9,719
Cultivated vegetation, grain or crop, orchard, vineyard, trees, or nursery stock	147	1/4	$24

Source: NFIRS 5.0 National Reporting, Tally by Incident Type, January 1, 1998 through December 31, 2004, filtered for Wayne County Reporting only.
Note: deaths & injuries are civilian and fire fighters combined.

Frequency and Probability

On average, one major event requiring MDNR involvement occurs per decade in Michigan. Michigan reported 431 wildfires in 2018 totaling 3,786 acres.[66] Wayne County had two wildfires reported between 1981 and 2018 (MDNR jurisdiction only).[67] The probability for a major forest/field fire to occur in the county is low, but smaller scale occurrences such as localized grass or brush fires are likely to occur.

Health & Safety

Between January 1, 1998 and December 31, 2003, one death was reported from natural fires. A total of 3 injuries (civilian and fire fighter) resulted.[68]

Generally, heat exhaustion and smoke inhalation would represent the greatest risk to firefighters and/or civilians. The risk to human life is low to moderate for wildfires.[69]

Area Impacted

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[64] Federal Emergency Management Association Website, www.nfirs.fema.gov, *NFIRS 5.0 National Reporting*, October 3, 2005, Filtered for Wayne County Reporting Only
[65] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103. July 2012
[66] Insurance Information Institute: https://www.iii.org/fact-statistic/facts-statistics-wildfires
[67] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* April 2019, page 247.
[68] Federal Emergency Management Association Website, www.nfirs.fema.gov, *NFIRS 5.0 National Reporting*, October 3, 2005.
[69] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001, page 7.

In Michigan, 4% of all forest/field fires are caused by lightning strikes and the rest are caused by human activity.[70] Forests cover approximately 55% (20.4 million acres) of Michigan's total land base.[71] The amount of area potentially affected by wildfire in Wayne County varies depending upon how land use/land cover data is classified: only 9.2% of Wayne County's is categorized as park, recreation or open space land uses.[72] Agricultural lands make up an additional 7.9% of Wayne County. However, 60% of the County is covered by trees or open space.[73] Wayne County contained approximately 77,000 acres of scrub, grassland, and forest land in 2000.[74] (Figure 2)

Populations adjacent to open space or vacant land will be directly affected. The extent of the affected area depends greatly on response time and fire control. Open spaces and vacant land are most at-risk for forest/field fires. In 2000, there was approximately 114,209 acres of undeveloped land in Wayne County.[75] However, this number is expected to be less due to growth in the county over the past four years. Over 60% of Wayne County's land is developed.

Economic Impacts

The risk rate for property damage resulting from a wildfire is moderate to high (very high for timber loss).[76]

Total property loss for vegetation, forest, woods, wildland, brush, and grass fires between January 1, 1998 and December 31, 2004 was $24,414. Total property loss for fires on cultivated agricultural lands was $242,976.[77] Secondary effects of forest/field fires include infrastructure damage, timber loss, property loss, wildlife loss and loss of life or injury to persons.

Critical Facilities/Services

There are 45 fire departments which respond to fires within Wayne County. Emergency response assistance is provided to fire departments through mutual aid arrangements. Between January 1, 1998 and December 31, 2004, no firefighter deaths were reported and 2 firefighter injuries were reported from related forest and field fires.[78]

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[70] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* April 2019, page 234.
[71] Ibid
[72] Southeast Michigan Council of Governments (SEMCOG), Community Profiles, Wayne County, excluding Detroit. https://semcog.org/Community-Profiles
[73] Southeast Michigan Council of Governments (SEMCOG), Quick Facts: Land Cover in Southeast Michigan, 2013. https://www.semcog.org/publications
[74] SEMCOG, *Land Use in Southeast Michigan 1990-2000*, Specific to Wayne County, April 2004.
[75] SEMCOG, *Land Use in Southeast Michigan 1990-2000*, Specific to Wayne County, April 2004.
[76] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001, page 7.
[77] Federal Emergency Management Association Website, www.nfirs.fema.gov, *NFIRS 5.0 National Reporting*, October 3, 2005.
[78] Federal Emergency Management Association Website, www.nfirs.fema.gov, *NFIRS 5.0 National Reporting*, October 3, 2005.

4.6.2 Scrap Tire Fire

Definition

Scrap tire fires are large fires which occur at a location where scrap tires are being stored for processing, recycling, or re-use.

Historical Events

Michigan generates 7.5 to 9 million scrap tires annually and Wayne County has an extensive history of scrap tire fires. Over the last decade, there has been a decrease in both the frequency and severity of fires at scrap tire disposal sites due to the cleanup of existing stockpiles and an increase in compliance at collection sites. The Michigan State Police list 16 significant fires at tire storage locations from 1987 to 2010. One of these was in southwest Detroit in 2005; that fire injured three firefighters and destroyed buildings on-site.[79]

The Michigan Department of Environmental Quality requires a scrap tire collection site to be registered if it exceeds established tire storage thresholds. Scrap tire collection sites can include businesses such as scrap tire processors, new tire retailers, junkyards, farms, and go-kart tracks. It is estimated that there are over 650,000 scrap tires stored in Wayne County at registered and unregistered scrap tire collection sites.

Frequency & Probability

In Michigan there were sixteen major scrap tire fires from 1987 to 2010.[80] However, since the MDEQ Michigan Scrap Tire Program began in 1991, Michigan's scrap tire stockpile has been reduced from 31 million to about 3,400,000 (2012).[81]

Health & Safety

Scrap tire facilities present significant environmental and fire hazards. In addition, scrap tires are known for providing breeding grounds for mosquitoes, thus contributing hazards to public health. Scrap tire fires are also capable of producing acrid smoke and an oily residue which can leach into the soil.

Area Impacted

Scrap tire fires can be difficult to contain and, aside from the fire hazard presented by scrap tire fires, inhaling the smoke produced from the fire can be hazardous to human health. As a result, scrap tire fires often require people in surrounding areas to evacuate or seek shelter-in-place.

The oily material produced by scrap tire fires can also negatively impact the soil, and possibly groundwater and surface water, in the area of the fire. If groundwater or

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[79] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 216.
[80] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 216.
[81] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 214.

surface water is impacted, the affects can potentially extend well beyond the boundaries of the fire.

Economic Impact

A scrap tire fire will inevitably result in property damage and inventory loss to the collection site. In addition, environmental clean-up costs after the fire is extinguished can be significant.

Due to the amount of response required, extinguishing a scrap tire fire can be financially draining for local emergency response departments. For example, the largest scrap tire fire in recent Michigan history occurred in Osceola County in 1997. That fire burned over 1.5 million tires and cost approximately $300,000 to extinguish. The State of Michigan paid $100,000 to Osceola County as reimbursement for fighting that fire.

Critical Facilities/Services

Scrap tire fires can be very difficult to extinguish, often lasting for extended periods, and can require a substantial amount of resources from local emergency response departments. The response effort typically requires assistance from neighboring fire departments.

4.6.3 Structural Fire

Definition

A structural fire is a fire of any origin that ignites one or more structures and causes loss of life and/or property.

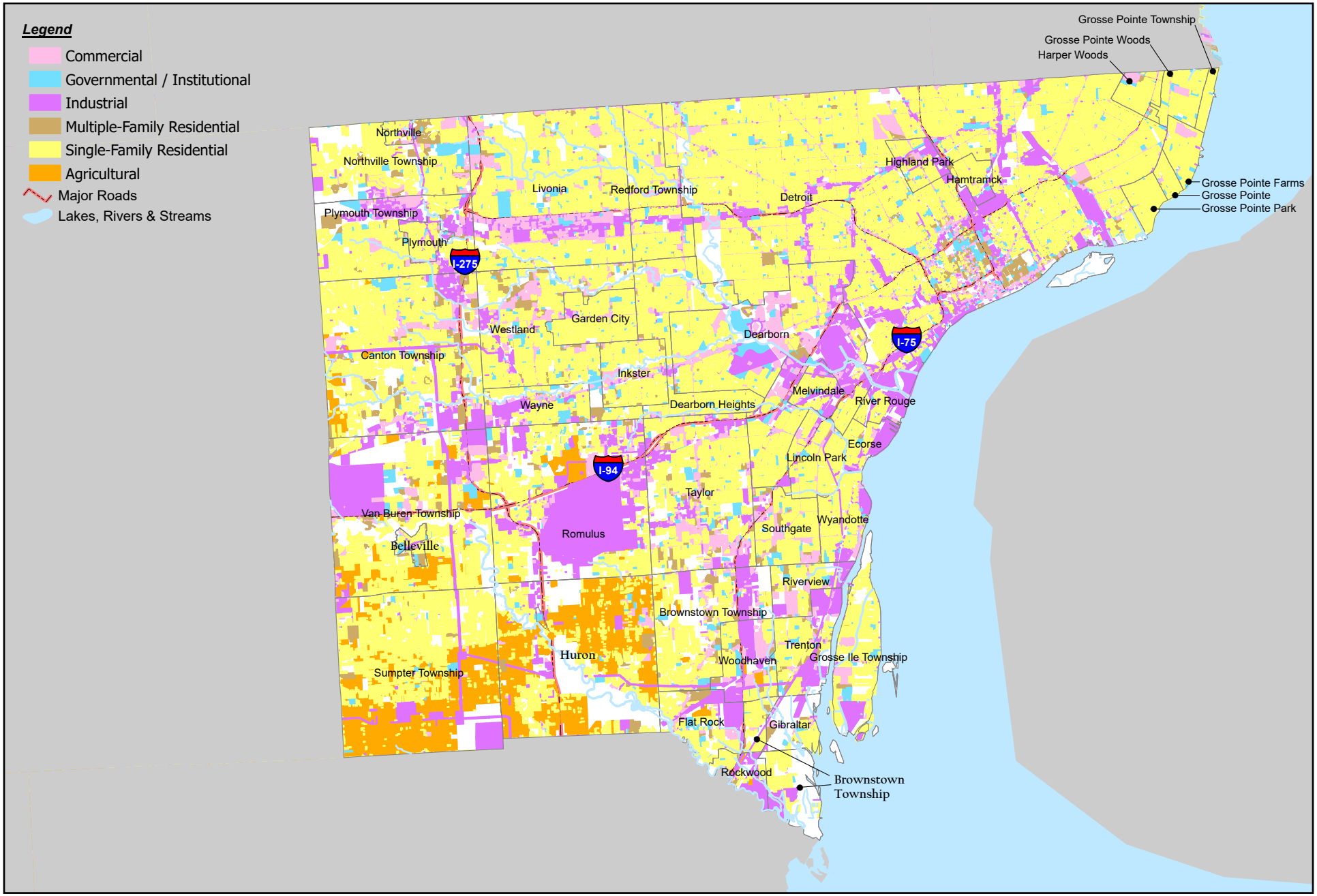
Historical Events

Structural fires are commonly known as the “universal hazard” because they can occur anywhere. The Michigan State Police, Fire Marshal Division estimated that, in 2003, a structural fire occurred in Michigan every 28 minutes and 6 seconds.[82] Wayne County has experienced numerous structural fires throughout its history.

Frequency & Probability

From 1998 through 2004, 8,674 structural fires in Wayne County were reported to the Federal Emergency Management Agency, National Fire Incident Reporting (NFIR) System.[83] Updated, Wayne County-specific information was not available for the writing of this report but national data from the U.S. Fire Administration notes and estimated 1,319,500 fires in 2017, with 29.1% of those impacting residential structures and another 8.3% involving nonresidential structures.[84] The Detroit Fire Report indicates there were 2,981 structural fires in the City of Detroit in 2015 and that 91% of those impacted

[82] Michigan State Police, Fire Marshal Division, 2003 Fire Clock. https://www.michigan.gov/documents/dleg_bccfs_03fireclock_94774_7.pdf
[83] NFIRS 5.0 National Reporting, Tally by Incident Type, January 1, 1998 through December 31, 2004, report generated on October 3, 2005, filtered for Wayne County reporting only.
[84] U.S. Fire Administration. U.S. Fire Statistics: https://www.usfa.fema.gov/data/statistics/



Wayne County

Created for: Wayne County
Created by: RMH, April 22, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), SEMCOG Land Use (2015)

Figure 3 - Hazard History: Fire - Structural

residential buildings.[85] Although the number of structural fires nationally is declining, fires within Wayne County have a well-established history and this hazard will continue to occur in the future (Figure 3).

Health & Safety

Structural fires occur in Michigan roughly 22,000 times per year and cause approximately 210 deaths and 670 injuries per year. Residential fires account for 74% of structure fires and 80% of fire deaths. Residential and other county land uses are shown in Figure 4. From 1998 through 2004, there were a total of 56 deaths and 330 injuries due to structural fires in Wayne County. This equates to an average of 8 deaths and over 47 injuries per year.[86]

Area Impacted

Structural fires can occur on any parcel within which a structure is present.

Economic Impact

Property loss and contents loss can be very high as a result of structural fires. From 1998 through 2004, Wayne County experienced a total of $230,531,796 in property and content loss from structural fires, an average of $32,933,114 per year, or $26,577 per structural fire.

Critical Facilities/Services

35 fire departments, acting from 57 fire stations had responded to structural fires within the Wayne County communities covered in the 2019 Plan.[87] There are a total of 44 fire departments and 80 stations in the county, including those that respond to private, transportation, or port industries.[88]

4.7 Flooding

4.7.1 Dam Failure

Definition

The failure of an impoundment located in a river, stream, lake or other waterway resulting in downstream flooding.

Historical Events

[85] Loveland Technologies. 2015. The Detroit Fire Report: an in-depth look at a year of fires in the City of Detroit, January 1 - December 31, 2015. http://detroitfires.squarespace.com/#cover

[86] NFIRS 5.0 National Reporting, Tally by Incident Type, January 1, 1998 through December 31, 2004, report generated on October 3, 2005, filtered for Wayne County reporting only.

[87] Ibid.

[88] National Fire Department Census Database, report generated July 1, 2013, http://apps.usfa.fema.gov/census/.

Dam failure can result in loss of life, property, and natural resources for miles downstream of a dam. Dam failures are not only caused by flood events, but can also be caused by poor operation, lack of maintenance, and vandalism.

Examples of dam failures in Michigan include: 1) in Marquette (2003) an earthen dam failed causing over $10 million in property damages, 2) in September 1986, an intensive rainfall caused 11 dams to fail in the Lower Peninsula of Michigan, and 3) in August 2018, the Blackwater Dam near Coldwater was reported to be in a "state of failure," as water began undermining and flowing through portions of the earthen berm adjacent to the dam gates.

There are 2,400 dams identified statewide and there have been 287 documented dam failures in Michigan since 1888.[89]

Frequency and Probability

Over 300 dams and critical culverts exist in Wayne County.[90] Wayne County has eight high or significant Class I dam hazards. [91] Wayne County has had two documented dam failures.[92] However, dams upstream of Wayne County also increase the frequency and probability of dam hazards that would affect Wayne County. It is probable that a dam failure or a hazard resulting in an upstream dam failure will occur in the future within the county.

High and Significant Hazard Dams in Wayne County

Name	Hazard	Height
Nankin Mill Dam	High	17
Newburgh Dam	High	29
Phoenix Dam	High	24
Wilcox Dam	High	27
Waterford Dam	High	22
Flat Rock Dam	High	16.5
French Landing Dam	High	35
Maybury Fish Pond Dam	Significant	18.5

Source: State of Michigan Department of Environmental Land and Water Management Division.

Health & Safety

No deaths or major injuries have been reported as a result of dam failure in the State.[93] Still, the risk to human life as a result of dam hazards is moderate to high.[94]

[89] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 124.
[90] Wayne County Michigan Pre-Disaster Mitigation Plan, Wayne County Department of Homeland Security & Emergency Management, March 2005
[91] Michigan Department of Environmental Quality, Land and Water Management Division, List of Dams in Oakland County and Dams Upstream of Wayne County, September 7, 2005
[92] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 76.
[93] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 126.
[94] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 8.

Area Impacted

Floodplain areas downstream of dams are at greatest risk for impact from a dam break. There are 3,820 enrollees in the National Flood Insurance Program within 100-year floodplains in Wayne County[95] and there were approximately 9,500 structures[96] located within FEMA-mapped 100-year floodplains within Wayne County in 2004.

Economic Impact

The risk of property damage as a result of dam hazards is moderate to high.[97] Property loss and content loss can be very high as a result of a dam failure. Variable costs to repair a damaged dam are anticipated.

Critical Facilities/Services

Flooding events can require a substantial amount of resources and assistance from multiple agencies and departments including local emergency response departments, as well as state and federal departments such as the MDEQ Land and Water Management Division, Dam Safety Program staff and FEMA. If flooding from a dam resulted in significant damage to homes, The American Red Cross may also assist.

4.7.2 Riverine Flooding

Definition

The periodic occurrence of over-bank flows of rivers and streams resulting in partial or complete inundation of the adjacent floodplain.

Historical Events

Wayne County experienced significant riverine flooding during the writing of this report. Over a seven-hour period from April 30 to May 1, 2019, 3.6 inches of rain (approximately a100-year storm) resulted in widespread flooding in Dearborn Heights, Detroit, and other communities, impacting approximately 3,000 homes in the county, forcing closure of the Southfield Freeway, and affecting residents within a six county area in southeast Michigan. Wayne County Executive, Warren Evans, declared a county state of emergency and Governor Gretchen Whitmer followed by declaring a State of Emergency for Wayne County.

On August 11, 2014, southeast Michigan experienced record rainfall of more than six inches in some areas. Metro Detroit and surrounding communities, as well as the Flint and Saginaw areas farther north were the hardest hit. Wayne, southern Oakland and Macomb Counties experienced the worst flooding with four to six inches of rain over a four hour period. Approximately 75,000 homes and businesses were impacted with damages in Detroit Metro area estimated at 1.8 billion dollars. The severe and

[95] FEMA (Federal Emergency Management Agency), National Flood Insurance Program, NFIP Insurance Report by State, County, Community, January 23, 2006.
[96] ASTI Environmental, unpublished analysis of FEMA 100-year floodplain overlays and AeroData, Inc. 2004 aerial photography, Wayne County.
[97] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 126.

widespread flooding prompted President Obama to declare a major disaster for Macomb, Oakland and Wayne Counties.

On July 16, 1995, heavy rainfall of around two inches in two hours caused the Middle Rouge River near Garden City to crest near flood stage.[98] A similar occurrence occurred again on August 3 and October 5, 1995. On June 30, 2004, a Presidential Disaster Declaration was issued for Wayne County, and 22 other counties in Michigan, to provide individual assistance to households and individuals affected by flooding.[99] In September of 1986 and 1987, a county/state disaster declaration was issued for downriver floods (Gibraltar and Brownstown) and (Gibraltar, Brownstown, and Riverview), respectively.[100] In May 2004, overflows from the Ecorse Creek caused the flooding of an estimated 1,500 homes in the downriver communities Ecorse Creek passes through.[101]

Frequency and Probability

Although the Michigan Hazard Analysis indicates that Michigan averages one major riverine flood every two years,[102] NOAA's extreme weather database includes reports of six flood and flash flood events since 2013, which does not include the 2019 event described above. Wayne County includes portions of the Detroit River, the Huron River, the Rouge River, Ecorse Creek, and the Combined Downriver Watersheds (Blakely Drain, Frank & Poet Drain, and Detroit River South sub watersheds). Riverine flooding generally occurs every year in Wayne County and areas like Hines Drive may flood frequently each year.

Further, climate change is likely to increase the frequency of floods in Michigan. Over the last half century, average annual precipitation in most of the Midwest has increased by 5 to 10 percent. But rainfall during the four wettest days of the year has increased about 35 percent. During the next century, spring rainfall and annual precipitation are likely to increase, and severe rainstorms are likely to intensify. Each of these factors will tend to further increase the risk of flooding.[103]

The Wayne County Parks Department has developed a system for quick response, road closings, and public notification for flooding of Hines Drive. It is highly probable that riverine flooding will continue to be a hazard in Wayne County.

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[98] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6, 2005
[99] Federal Emergency Management Agency Website, Disaster Declarations, www.fema.gov/news/event.fema?id=3147, September 24, 2004.
[100] Wayne County Michigan Pre-Disaster Mitigation Plan, Wayne County Department of Homeland Security & Emergency Management, March 2005
[101] Press & Guide Newspapers, www.pressandguide.com/cgi-bin/printme.pl
[102] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 97.
[103] US Environmental Protection Agency, 2015. What Climate Change Means for Michigan. EPA 430-F-16-024. August 2016.

Health & Safety

Although frequent and widespread, less than 10 deaths from riverine flooding were recorded in Michigan in the 25 years prior to 2001 and 140 nationally per year.[104] The risk to human life is generally considered low.[105] However, at least one more death was attributed to riverine flooding in 2018 when a12-year old boy in Houghton was trapped in the collapse of his basement.

Area Impacted

A riverine flood in Wayne County would primarily affect streets and infrastructure located near floodplains and in areas with inadequate drainage. The Combined Downriver watershed includes 11 communities and encompasses approximately 85.9 square miles and in 2000, had 244,259 people living within its boundaries (2,844 people per square mile).[106] The Ecorse Creek Watershed includes 11 communities and encompasses 27,791 acres or 43.4 square miles.[107] The Rouge River basin has four tributary branches totaling 126 miles located in mostly urban areas of Wayne County.[108] The Rouge watershed extends over 438 square miles within three counties, including Wayne County.

The Detroit Free Press reports that the First Street Foundation, a nonprofit group, utilizing different models than FEMA to identify parcels at risk of flooding, has identified as many as 46,609 Wayne County parcels in flood zones (6%).[109] The City of River Rouge is reported as having the highest percentage of its total parcels at flood risk (81%), with Grosse Pointe Woods the next highest (60%).

Economic Impact

Flooding is the most costly and common natural disaster in the United States. Property and content loss can be very high. Property damage as a result of flooding in Michigan averages more than $100 million each year.[110] Michigan had 20,378 flood insurance policies in place as of June 30, 2018. The number of flood insurance policies has been declining in recent years, despite the fact that homes in a high-risk areas have at least a 26% chance of being damaged by a flood over the course of a 30-year mortgage, compared to a 9% chance of being impacted by fire. Additionally,

During the period, January 1, 1996 to April 30, 2017, Wayne County communities (including Detroit) experienced a total of 65 flood events, beginning on 54 separate days,

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[104] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 8.
[105] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001, page 8.
[106] Draft Combined Downriver Watershed Management Plan, CDWIC, August 5, 2005
[107] Draft Ecorse Creek Watershed Management Plan, August 1, 2005
[108] www.waynccd.org/index/files/Page 703.htm,
[109] Detroit Free Press, June 29, 2020. *First Street Foundation's flood assessment method finds 70% more parcels at flood risk nationwide than are noted by FEMA*.
https://www.freep.com/in-depth/news/local/michigan/2020/06/29/flood-risk-michigan-homes-map-first-street-foundation/3258043001/
[110] Michigan Department of State Police, Emergency Management and Homeland Security Division, April 2019. *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 145.

and amassing over a billion dollars in property damage ($1,123,800,000).[112] One hundred thirty seven properties, in the portions of Wayne County covered in this plan, have experienced repeated flooding and have filed flood insurance claims for repetitive losses. Costs for damages due to repetitive flooding loss in Wayne County, per the September 30, 2018 list, average $18,326 per property.[113]

Critical Facilities/Services

Flooding events can require a substantial amount of resources and assistance from multiple agencies and departments including local emergency response departments, state and federal departments (e.g., FEMA), and non-profit organizations such as the American Red Cross. If loss to significant yields of crops results from a flood event, agricultural service agencies such as the Michigan or U.S. Departments of Agriculture may be called upon to offer assistance. The National Weather Service and local media issue flood watches and warnings to give advanced notice of potential flooding to areas. Watershed management programs and community/government programs, such as Friends of the Rouge River, the Rouge River Wet Weather Demonstrating Project, the Rouge River Watershed Alliance, and the Huron River Watershed Council also provide data and information.

National Flood Insurance Program (NFIP) Participation

Part 31, Water Resources Protection, Michigan Act 451 of 1994, as amended, regulates activities that result in occupation, fill, or grading of land within floodplains along watercourses with a drainage area in excess of two square miles. Such activities require an application, review, and permit issuance from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) prior to floodplain disturbance. Of the 42 communities in Wayne County, 36 participate in the National Flood Insurance Program[114] and DFIRM data is available for all. Those communities not listed as participating are the cities of Belleville, Hamtramck, Harper Woods, Highland Park, Melvindale, and Van Buren Township. There are 4,050 flood insurance policy holders enrolled in the National Flood Insurance Program in Wayne County.[115] Analysis of aerial photographs indicates that approximately 9,500 structures were located within the FEMA-mapped 100-year floodplains in 2004.[116]

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[112] Michigan Department of State Police, Emergency Management and Homeland Security Division, April 2019. *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 147.
[113] FEMA (Federal Emergency Management Agency), National Flood Insurance Program, Repetitive Loss Summary for Wayne County, Michigan. provided by the Michigan State Police, Emergency Management Division, September 30, 2018.
[114] FEMA National Flood Insurance Program Community Status Book, http://www.fema.gov/national-flood-insurance-program/national-flood-insurance-program-community-status-book, updated 6/15/2012
[115] from NFIP Policy Information by county for current month, http://www.fema.gov/policy-claim-statistics-flood-insurance/policy-claim-statistics-flood-insurance/policy-claim-13, updated 1/ 7/2013
[116] ASTI Environmental, unpublished analysis of FEMA 100-year floodplain overlays and AeroData, Inc. 2004 aerial photography, Wayne County.

Repetitive Loss

FEMA identifies 169 repetitive loss properties in Wayne County, with 32 of those within the City of Detroit.[117] The 137 repetitive loss properties within the remainder of the county covered by this plan represent a 12 percent increase from the 122 noted in the 2013 Wayne County Hazard Mitigation Plan update.

Severe repetitive loss properties are defined as residential properties covered under an NFIP flood insurance policy, and: (a) that have at least four NFIP claim payments (including building and contents) over $5,000 each, with the cumulative amount of such claims payments exceeding $20,000; or (b) for which at least two separate claims payments (building payments only) have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building. For both (a) and (b), at least two of the referenced claims must have occurred within any 10-year period and must be greater than 10 days apart.

Repetitive loss properties comprise approximately one percent of currently insured properties but account for 25-30% of flood claims.[118] They constitute a significant expense of the NFIP. Flood mitigation activities for reducing the potential of further damages to these properties are a priority. By addressing these high-priority at-risk properties, not only would all of the normal benefits of hazard mitigation be enjoyed, but the reduction in insurance claims would be expected to help keep flood insurance costs lower for everyone else in these NFIP-participating communities.

The following table summarizes the number and types of repetitive-loss properties by community in Wayne County.

[117] FEMA (Federal Emergency Management Agency), National Flood Insurance Program, Repetitive Loss Summary for Wayne County, Michigan. provided by the Michigan State Police, Emergency Management Division, September 30, 2018.

[118] The Pew Charitable Trusts. 2016. Repeatedly Flooded Properties Cost Billions (infographic). https://www.pewtrusts.org/~/media/assets/2016/10/repeatedly_flooded_properties_cost_billions.pdf?la=en

Jurisdiction	Total Number of Properties	Number classified as "mitigated"	Property type(s)	Total damages
Allen Park	6	0	Single-family Residential	$66,142
Brownstown Twp.	8	4	Single-family Residential	$216,402
Dearborn	1	1	Other residential	$91,425
Dearborn Heights	16	1	Single-family Residential	$390,770
Ecorse	2	0	Single-family Residential	$13,076
Gibraltar	85	83	(see below)	$1,427,272
Grosse Ile Twp.	4	0	Single-family Residential	$57,326
Grosse Pointe	1	1	Single-family Residential	$5,683
Grosse Pointe Park	1	0	Single-family Residential	$22,517
Lincoln Park	2	0	Single-family Residential	$42,933
Northville Twp.	1	0	Single-family Residential	$41,174
Plymouth Twp.	1	0	Single-family Residential	$20,296
Redford Twp.	3	0	Single-family Residential	$21,040
Rockwood	1	1	Single-family Residential	$3,816
Trenton	3	0	(see below)	$17,317
Wyandotte	2	1	(see below)	$73,432
TOTAL	137	92		$2,510,621

In the City of Gibraltar, 83 of the 85 repetitive loss properties are classified as "mitigated." These include 82 single-family residential properties plus one non-residential property. The two Gibraltar unmitigated properties are single-family residential properties. Trenton's three properties involve two single-family residential and one "other residential" property. Wyandotte's mitigated property is multi-family residential and the unmitigated property noted above is listed as "other non-residential."

4.7.3 Urban Flooding

Definition

Urban flooding involves the overflow of storm sewer systems and is usually caused by inadequate drainage following heavy rainfall or rapid snowmelt. Urban flooding is typically the result of intense rainfall, snowmelt, ice jams, dam failures (considered separately above), or a combination of these factors. Secondary hazards associated with urban flooding include infrastructure damage, dam failure, riverine flooding, and shoreline flooding and erosion.

Historical Events

Since the National Centers for Environmental Information Storm Events Database began recording this category in 1996, a total of 51 individual flood or flash flood events have

been recorded in Wayne County, not including the most recent events here in early May 2019.[119]

In April 1947, a combination of snow and rainfall that began in late March affected areas surrounding the Rouge River.[120]

On May 9, 1996, a flash flood caused flooding on I-94 in Wayne County.[121]

On February 7, 1997, the Lower Rouge River at Inkster went above its 10.0-foot flood stage and crested at 10.1 feet.[122]

Presidential and Gubernatorial Disaster Declarations were issued for flooding that occurred in July 1997, which caused flood-related damage to the public water and sewer systems in Wayne and Macomb Counties totaling nearly $300,000.

In February 1998 a rain event caused a State of Emergency Declaration to be issued in Wayne County. Taylor, Dearborn Heights, Westland, and Gross Ile were among the hardest hit communities. Urban flooding was a significant problem. Hundreds of basements and many streets were flooded in the cities west and southwest of Detroit. Rainfall totals during the three-day event were commonly over 2 inches.[123]

On September 11, 2000 widespread, severe, urban flooding resulted in a Presidential Disaster Declaration for Wayne County.[124] Over 15,000 residences and other structures in the county suffered flood damage. In Allen Park, an estimated 40% of all streets flooded at some point during the event. Underpasses flooded in Dearborn. The Southfield Freeway was covered with two to three feet of water. A home in Riverview had its basement collapse and three feet of water covered Fort Street in Wyandotte. Wayne County suffered an estimated $19 million in property damage as a result of the event.

In May 2004, the combination of heavy rain and power failure at the Wyandotte pumping station resulted in basement flooding in Dearborn Heights, Romulus, and Allen Park.

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[119] NOAA National Centers for Environmental Information, Storm Events Database, https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=26%2CMICHIGAN, *Query for Wayne County Michigan Flood and Flash Flood Events, May 1, 2019*.
[120] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 81.
[121] NOAA National Centers for Environmental Information, Storm Events Database, https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=26%2CMICHIGAN, *Query for Wayne County Michigan Flood and Flash Flood Events, May 1, 2019*.
[122] Ibid.
[123] NOAA National Centers for Environmental Information, Storm Events Database, https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=26%2CMICHIGAN, *Query for Wayne County Michigan Flood and Flash Flood Events, May 1, 2019*.
[124] Ibid.

The intersection of Telegraph and I-94 was closed due to flooding. Approximately 350 homes in Allen Park were damaged by flooding.[125]

Edward Hines Drive has been closed numerous times between at least 1994 and May 2005 in Garden City due to cresting of the Middle Rouge River. The road is located within a floodplain of the Rouge River.

Finally, as noted above in the Riverine Flooding section of this report. severe rainfall that overwhelmed stormwater drainage systems caused widespread flooding in both August 2014 and May 2019, resulting in federal and state declarations, respectively, and millions to billions of dollars in damage. The most recent flood events closed portions of the Southfield Freeway and streets in Taylor, Dearborn Heights, and Allen Park.[126]

Frequency and Probability

The frequency of urban flooding is dependent on seasonal weather patterns. Urban flooding is usually caused by inadequate drainage following heavy rainfall or rapid snowmelt. Urban flooding is more likely to occur during the spring, when thunderstorms and snow melt are more prevalent or during mid-summer thunderstorms. Many areas of Wayne County are heavily urbanized and are located along river corridors. Most of these areas are connected to aging municipal storm sewer systems that can exacerbate flooding. It is highly probable that urban flooding will continue to occur in the county. As development continues, and as stormwater infrastructure continues to age, an increase in urban flooding may occur. Additionally, scientists predict that climate change will increase the number of extreme rainfall and storm events, leading to more flooding throughout the Midwest and costing taxpayers as much as $480 million annually just to adapt stormwater systems to handle the increased runoff.[127]

Health & Safety

Possible loss of life would be primarily from drowning incidents. Other potential health-related problems could be from sewer back-ups and increased pollutant concentrations.

One man drowned in West Bloomfield Township, in neighboring Oakland County, on June 18, 1996, when he drove his car across a flooded parking lot into a pond, which was obscured by flood waters.[128]

During July 2000, a stranded family was rescued by a boat in Novi after their car stalled in flood waters.[129]

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[125] NOAA National Centers for Environmental Information, Storm Events Database, https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=26%2CMICHIGAN, *Query for Wayne County Michigan Flood and Flash Flood Events, May 1, 2019*.

[126] Detroit Free Press. https://www.freep.com/story/weather/2019/05/02/detroit-area-rain-total-shatters-record/3649336002/, May 2, 2019.

[127] USGCRP, 2018: Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 1515 pp. doi: 10.7930/NCA4.2018

[128] NOAA National Centers for Environmental Information, Storm Events Database, https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=26%2CMICHIGAN, *Query for Wayne County Michigan Flood and Flash Flood Events, May 1, 2019*.

Area Impacted

An urban flood in Wayne County would primarily affect streets and infrastructure located in or near floodplains and in areas with inadequate drainage. Approximately 9,509 structures are located within the FEMA 100-year floodplain within 42 of the communities covered by this Plan. Figure 5 shows the location of all floodplains and flood-prone areas within the county.

Economic Impact

It is estimated that flood damages in Michigan are between $60 and $100 million per year.[130]

The 51 individual flood or flash flood events recorded in Wayne County since 1996, not including the most recent events here in early May 2019, have resulted in property damage totaling an estimated $1,123,600,000 dollars, an average of more than $51 million dollars per year.[131]

From 2000 to 2008, Michigan experienced eight flood disasters that resulted in either a Presidential Major Disaster Declaration or a Governor's Disaster Declaration. These flood disasters have damaged homes, businesses, personal property and agriculture, resulting in hundreds of millions of dollars' worth of damage.[132]

Critical Facilities/Services

Flooding events can require a substantial amount of resources and assistance from multiple agencies and departments including local emergency response departments, as well as state and federal departments including FEMA and the American Red Cross. Thirty-six communities in Wayne County participate in FEMA's National Flood Program

The National Flood Insurance Program (NFIP) was instituted in 1968 to make flood insurance available in those communities agreeing to regulate future floodplain development. In February 2013 there were 26,247 flood insurance policies in force in Michigan, which amounts to approximately $4.5 billion worth of coverage.[133] There are 4,050 flood insurance policy holders enrolled in the National Flood Insurance Program in Wayne County.[134]

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[129] Ibid.
[130] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 97.
[131] NOAA National Centers for Environmental Information, Storm Events Database, https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=26%2CMICHIGAN, *Query for Wayne County Michigan Flood and Flash Flood Events, May 1, 2019*.
[132] FEMA, Disaster Declarations by State/Tribal Government. https://www.fema.gov/disasters/state-tribal-government/0/MI
[133] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 84.
[134]from NFIP Policy Information by county for current month, http://www.fema.gov/policy-claim-statistics-flood-insurance/policy-claim-statistics-flood-insurance/policy-claim-13, updated 1/ 7/2013

In 2002, Wayne County set up a subscription, online, emergency alert service that sends notices via e-mail, text message, or pager, of flooding along Edward Hines Drive and other emergencies.

4.7.4 Shoreline Flooding & Erosion

Definition

Shoreline erosion hazards typically involve the loss of property as shoreline soil is removed by water action and is carried away over time.

Historical Events

Shoreline flooding and erosion typically occurs along the Great Lakes shoreline and connecting waters (i.e., Lake St. Clair and the Detroit and St. Clair Rivers) and is caused by high water levels, frequently exacerbated by high winds from the east. During the writing of this plan, the U.S. Army Corps of Engineers (USACE) reported that all of the Great Lakes hit record high water levels as heavy winter snowpack across the north added to rain swollen rivers. The high lake levels have caused both flooding and shoreline erosion in coastal areas across Wayne County. In September 2020, Lake Erie is currently at its record high monthly mean value set previously in 2019; Lake St. Clair is three inches above the previous high monthly mean for September, again set in 2019. These lake levels are 27 and 30 inches higher than the long-term averages for September in Lakes Erie and St. Clair, respectively.

No discernible pattern of high and low lake levels has been derived from U.S. Army Corps of Engineers data recorded since 1918-2011. However, analysis of Lake Michigan beach ridges and radiocarbon dating of soil cores Yield a 4,700-year record of Lake Michigan-Huron water levels. From these data, scientists have identified a general rise and fall cycle lasting approximately 120-200 years. They have also identified a shorter-term fluctuation, ranging from 2 to 38 years (average = 32 years) within the longer cycle.

In general, the Great Lakes system experienced extremely low levels in the late 1920s, mid-1930s, and the mid-1960s. From 1999 to 2014, the lakes experienced an unprecedented period when water levels for Lake Michigan-Huron and Superior fell below their long-term average for 15 years. Record high water levels have been recorded in the late 1980s and currently.

Great Lakes water levels have been trending upward since 2013. That was the low point of the above-referenced 15-year period that resulted in the stranding of recreational boats and forced commercial vessels to lighten their loads.

Prior to the current high levels, the most recent high-water period in Michigan was in 1997-98. During this period, the Great Lakes were at or near record levels set in the mid-1980s. In 1985-86, record high lake levels resulted in a Governor's disaster

declaration for 17 shoreline counties. During 1972-73, high water levels caused flooding in 30 counties in Michigan.[135]

Frequency and Probability

Long-term and seasonal variations in precipitation and evaporation rates contribute to the fluctuation of water levels. Several manmade factors can also affect water levels such as diversion of water for resource use, dam regulations, and dredging. Shoreline flooding and erosion that occurs along the Great Lakes is caused primarily by natural factors. Although Wayne County coastal areas do not exhibit the dramatic bluffs and dunes found on Lake Michigan, it does contain flood prone coastal areas.[136] The NOAA Storm Event Database records 16 lakeshore flood events in Wayne County during the last 32 year cycle, all of which were recorded in 2019 and 2020.[137] Shoreline erosion and flooding are likely to continue in Wayne County in communities along Lake St. Clair, the Detroit River, and Lake Erie and are likely to increase in frequency and severity due to project climate changes.

Health & Safety

No deaths or casualties were recorded for the shoreline erosion and flooding events along Lake St. Clair, the Detroit River, and Lake Erie noted above, but seiche events do periodically result in drownings. Deaths and casualties from this hazard are of low probability, but property damage potential is moderate to high. Low-lying areas prone to flooding and erosion should have restrictions limiting or preventing access.

Area Impacted

Communities in Wayne County along the shoreline of Lake St. Clair, the Detroit River, and Lake Erie are Grosse Pointe Shores, Grosse Pointe Farms, Grosse Pointe, Grosse Pointe Park, Detroit, River Rouge, Ecorse, Wyandotte, Riverview, Trenton, Gibraltar, and Brownstown Township. Grosse Ile, being an island, has shoreline on all sides. Low-lying areas along coastal areas are prone to shoreline flooding during both high and low lake water periods (Figure 5).

Economic Impact

No values for economic impact were provided for the 2019-2020 lakeshore flooding events. During 1972-73, high water levels caused flooding in over 30 counties, resulting in excess of $50 million in public and private damage. Thousands of people were forced to evacuate their homes. Shoreline flooding would have similar economic impacts from damage to or loss of property as urban flooding.

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[135] Flesher, John, Associated Press. May 6, 2019.
https://www.apnews.com/2af073fe3a634f68b80bdfb419e53a33
[136] Michigan Department of Environmental Quality Land and Water Management Division
[137] [137] NOAA National Centers for Environmental Information, Storm Events Database,
https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=26%2CMICHIGAN, *Query for Wayne County Michigan Lakeshore Flooding, September 12, 2020.*

Critical Facilities/Services

The United States Army Corps of Engineers (USACE) implemented its Advance Measures Program, and the State of Michigan implemented three unique shoreline flooding and erosion programs aimed at reducing future flood impacts to shoreline communities and homeowners.[138] The Detroit District USACE has been involved in thousands of projects related to shoreline erosion and flooding. Other critical facilities/services may be found in Sections 4.7.2 and 4.7.3 regarding riverine and urban flooding.

The US Army Corps of Engineers have identified the following areas in need of shoreline stabilization:

- Brownstown Township, especially in vicinity of Maple Beach
- City of Gibraltar
- Grosse Ile Township
- City of Trenton
- City of Ecorse (Ecorse Creek)
- Belle Isle, Detroit
- Detroit, vicinity of Detroit Towers condominiums
- Jefferson Chalmers
- Grosse Pointe
- Milk River

4.8 Hazmat Incidents

4.8.1 Fixed Site

Definition

A Hazardous Material (Hazmat) Incident – Fixed Site is defined as an uncontrolled release of a hazardous material originating from a building, structure, or fixed equipment which is capable of posing a risk to life, health, safety, property or the environment.

Historical Events

There are around 500 facilities that store hazardous substances within the county.[139] Although most hazmat incidents occur at industrial facilities, this is not always the case.

[138] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 109.
[139] Wayne County LEPC Facility List, supplied by Wayne County Emergency Management Division, November 4, 2005.

For example, one of the most common hazmat occurrences reported in Wayne County are gasoline and oil related incidents at gas stations and auto shops.[140]

Frequency & Probability

From 1998 to October 2005, there were a total of 610 fixed site hazmat incidents in Wayne County, an average of 76 incidents per year.[141] As the county continues to develop and attract new business and industry, it is anticipated that the probability of occurrence for this hazard will increase.

Health & Safety

Given the frequency of hazmat incidents in Wayne County, the number of deaths and injuries from this event is extremely low. From January 2000 to October 2005, there was one fixed site hazmat related death and a total of 11 injuries, an average of just over two injuries per year.[142]

Area Impacted

In Wayne County, fixed site hazmat incidents have rarely required evacuation. For the period of 1999 to October 2005, only six incidents required evacuation and both evacuations were limited to the site of the release.[143]

The majority of hazmat material releases in Wayne County are releases to water, followed by land and air.[144] Environmental contamination which results from this hazard can extend to offsite locations. A high profile example of this was an oil spill on the Rouge and Detroit Rivers discovered April 8, 2002. Originating from a fixed site draining to the Rouge River, it resulted in oil slicks on the Rouge and Detroit Rivers and Lake Erie, from Zug Island to Pointe Mouillee. In all, more than 45,000 gallons were recovered from the rivers, at a cost of $3 million. [145]

Economic Impact

The economic impact due to this hazard can be highly variable, especially when including the costs of environmental remediation. According to the U.S. EPA HazMat Response Team, costs for responding to a hazmat incident can range from $1,000 to over $100,000. Some property damage from this type of event can be expected, especially if the release results in a fire or explosion. Additional impact, in the form of lost business revenue, can result if the incident causes a business to close.

Critical Facilities/Services

Although major fixed site hazmat incidents are not common in Wayne County, the potential for such an incident is high. A significant incident would likely involve response efforts from multiple agencies and departments. Additional impact could result from

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[140] U.S. Coast Guard, National Response Center website, www.nrc.uscg.mil/foia.html, Standard Query Report for Wayne County, Fixed Incidents, October 21, 2005.
[141] Ibid.
[142] Ibid.
[143] Ibid.
[144] Ibid.
[145] Patterson, Delores. 2002. *Officials narrow search for suspects in oil spill*. Detroit News, May 11, 2002.

environmental remediation and restoring public confidence in the environmental health of the county.

4.8.2 Transportation Incidents

Definition

Hazardous Material (Hazmat) Incident – Transportation is defined as an uncontrolled release of a hazardous material during transport which is capable of posing a risk to life, health, safety, property or the environment.

Historical Events

One of the most significant responses required for a hazmat transportation incident in Wayne County occurred on May 27, 2000. The incident involved a fuel tanker roll-over. As a result of the accident, fuel released from the damaged tanker ignited as it spilled down storm drains, damaging the roadway, blowing nearby manhole covers off, mortally injuring the driver, and causing smoke and vapors that disrupted the surrounding communities and events. A similar event occurred on October 3, 2003 when a gasoline tanker overturned and partially fell off the ramp from I-75 north to I-94 east. The accident and fire killed the driver, damaged the ramp causing it to be closed for several months, and required Hazmat teams to clean the area.

Frequency & Probability

Almost a million shipments of hazardous materials traverse the United States each day by highway, rail, air, water, and pipelines. Approximately 95% of those shipments, and more than half of the hazmat tonnage transported, move via trucks on highways and roads.[146]

From 1999 to December 2005, there were a total of 159 transportation related hazmat incidents in Wayne County, 119 occurring on roadways and 40 on railroads. This equals an average of almost 23 incidents each year.[147] From 2000 to 2006, there were 67 reported hazmat motor carrier accidents in Wayne County that resulted in hazardous materials releases or spills. The majority (50.7%) of those involved the release of flammable liquids and just over 25% occurred on divided and limited access highways - thoroughfares that meet interstate specifications. This appears to be a significant drop from the previous seven-year period, but it appears that the probability of occurrence for this hazard will continue to be high.

Health & Safety

Compared to fixed site hazmat incidents in Wayne County, transportation related incidents are more likely to result in death or injury. From 1999 to December 2005, there

[146] Michigan Department of Transportation. 2012. Hazardous Materials Routing Synopsis Report, Wayne County: Proposed Recommendations. December 2012. 18 pp.
[147] U.S. Coast Guard, National Response Center website, www.nrc.uscg.mil/foia.html, Standard Query Report for Wayne County, Rail Incidents and Mobile Incidents, December 13, 2005.

have been 11 fatalities and 13 injuries from transportation related hazmat incidents, an average of almost 2 deaths and almost two injuries per year.[148] Deaths and injuries are typically limited to the operators of the vehicle.

Area Impacted

There are 134 miles of freight railroads, approximately 460 miles of interstate and major state highways, and 175 miles of county roads in Wayne County. Although large-scale offsite impacts are not common with hazmat transportation incidents, they are certainly possible within Wayne County. Offsite impacts can include evacuation, closure of roadways, and environmental contamination. From 1999 to June 2004, the most commonly affected environmental media was surface water, closely followed by land.

Economic Impact

The economic impact due to this hazard can be highly variable, especially when including the costs of environmental remediation. According to the U.S. EPA HazMat Response Team, costs for responding to a hazmat incident can range from $1,000 to over $100,000. Damage to transportation equipment is expected with this event, however, these costs are the responsibility of the transporter. Costs to the public can include response efforts, commuter delays, and damage to transportation infrastructure.

Critical Facilities/Services

Transportation related hazmat incidents occur somewhat frequently in Wayne County; the potential is high. As demonstrated by the October 3, 2003 incident, a significant incident may involve response from multiple agencies and departments. Additional impact include environmental remediation and restoring public confidence.

4.9 Infrastructure Failure

Definition

An infrastructure failure is the failure of a critical public or private utility infrastructure which results in a short-term loss of service.

4.9.1 Water Systems

Historical Events

Wayne County has not had significant loss of water due to failures in the water distribution system. However, Wayne County's 3,700-mile water distribution network, is aged and degraded. As a result, the county's distribution system lost an average of 35 billion gallons (17% of the total water pumped) to leaks in the system between 1995 and 2001.[149] While not directly related to Wayne County's water distribution network, the county and those surrounding it lost water service for several days, and 4.3 million customers were on a boil advisory for six days, following the 2003 blackout.

[148] U.S. Coast Guard, National Response Center website, www.nrc.uscg.mil/foia.html, Standard Query Report for Wayne County, Rail Incidents and Mobile Incidents, December 13, 2005.
[149] The Detroit News, *Aging Water Pipes Leak $23 Million a Year*, July 22, 2002.

Supply system components, including transmission and distribution pipelines, make up most of the state's water infrastructure and significant portions of these systems exceed 50 years of age and their design lives. Approximately 80% of the Detroit community water system transmission and distribution network was constructed prior to 1940.[150]

Frequency & Probability

Water system failures can be attributed to causes such as construction/excavation activities, underground freezing, power outages, and system blockages.

Every year, there are numerous water line breaks, most of which are related to poor insulation and sub-freezing temperatures. The majority of water line breaks do not create a water crisis situation. It is estimated that this hazard will be somewhat more likely to occur in the future as water system structures age, and county-wide development continues. A water main break caused by a construction contractor in the City of Northville in May 2019 led to a drinking advisory.[151] A water main break in May 2012 led to closure of the Lodge Freeway.[152]

Health & Safety

The availability of clean drinking water is crucial to the health and safety of the public. Water service interruptions can cause untreated or poorly treated drinking water to enter the water supply, resulting in boil water advisories and public health concerns. Public Sector Consultants report that, statewide, drinking water system owners (municipalities, et al.) underfund system improvements by an estimated $284 to $563 million annually.

Area Impacted

The water system for Wayne County is operated and/or maintained by the Detroit Water and Sewerage Department (DWSD) and/or local municipalities (Figure 4). The impact of line breaks is highly variable.

Economic Impact

Water is vital to the operation of schools, hospitals, and businesses, and in maintaining public health. Information regarding the economic impact of water system failures is not available. Service interruption may be extremely costly, depending of the number of affected customers and duration of the event.

Critical Facilities/Services

Maintaining a functional water system is a critical service. Loss of water service can make it difficult to operate other critical facilities such as schools, hospitals, businesses, and sports/entertainment venues. A water main break in the Detroit Police headquarters knocked their 911 call center offline for a short time in 2004.

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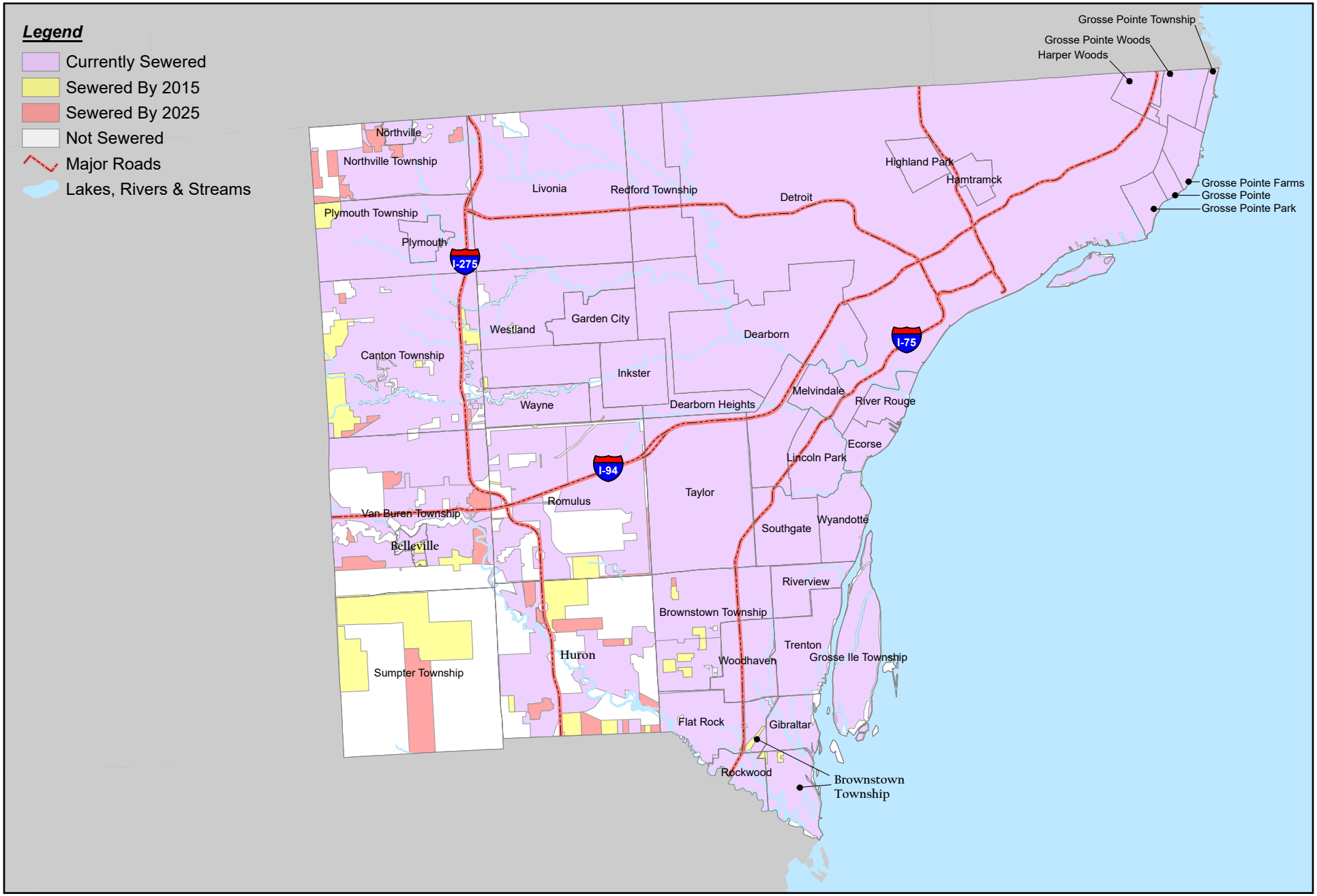
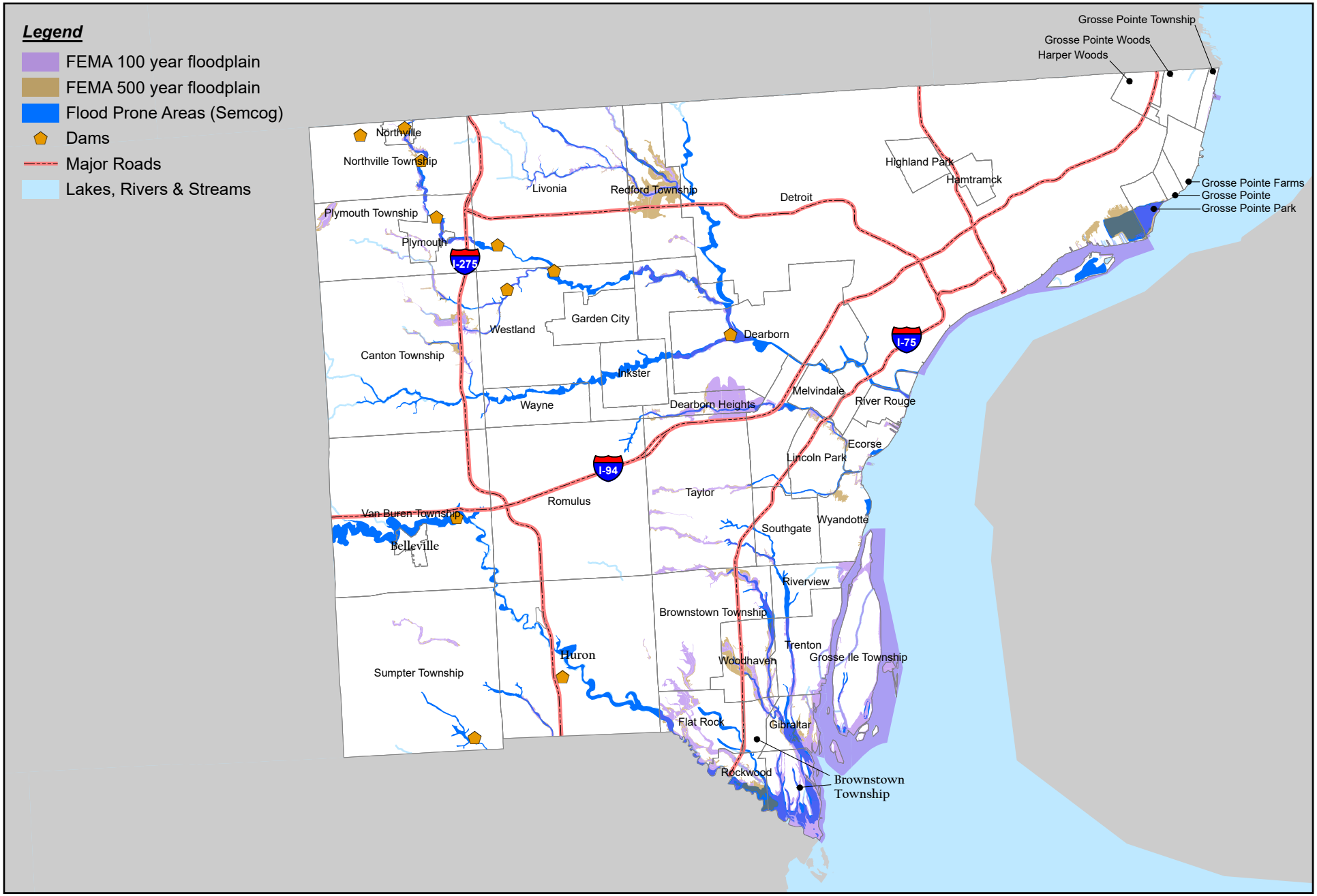
[150] American Society of Civil Engineers (ASCE), Michigan Section. 2018 Report Card for Michigan's Infrastructure. infrastructurereportcard.org/michigan.
[151] The Detroit Free Press, *Northville boil water alert to remain in effect through weekend*, May 17, 2019
[152] The Detroit Free Press*, Lodge reopens after flooding halts traffic near water main break,* June 1, 2012.



Wayne County

Created for: Wayne County
Created by: RMH, April 23, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013))

Figure 4 - Hazard History: Infrastructure Failure



Wayne County

Created for: Wayne County
Created by: RMH, April 23, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), USDA (2010), SEMCOG (2008 & 2012), National Inventory of Dams (2013)

ASTI Environmental

Figure 5 - Hazard History: Flooding

4.9.2 Electrical Systems

Historical Events

The largest, and arguably most infamous, electrical system failure in the United States occurred on August 14, 2003. This system failure started at 4:10 p.m. in southern Ohio and within seconds, 50 million people in North America were left without electricity. The blackout affected millions of customers in southeast Michigan, including Wayne County. In many ways, this event was a worst-case scenario electrical failure.

Frequency & Probability

Electrical service for the majority of Wayne County is provided by DTE Energy. Electrical failures, like the August 2003 blackout, although rare, can occur due to problems within the electrical system and from secondary causes such as weather and human/animal interference. Ice storms have an established history of causing electrical service interruptions. Electrical outages are often related to severe weather events, which occur 30-40 days annually within Wayne County. DTE states that the risks posing the greatest threat to the electrical system are storm-related downed wires and outages, and substation-related forced outages.

DTE continuously evaluates its system and has developed programs to mitigate risk. In response to review comments on the draft Plan from FEMA Wayne County solicited information about hazard mitigation to gas and electrical lines. DTE representatives provided a summary of their protocols for reinstating power following outages. Because DTE states that they will implement these strategies using their own corporate resources. As such it is not provided as an action plan with the HMP, but the document provided by DTE is included in Appendix B.

As the county continues to grow and demand for electrical service increases, it is possible that this hazard will occur more frequently and with greater consequence. Additionally, at least one new gas-fired high efficiency plant is required to offset the coal plants expected to go offline and to stabilize the grid in southeast Michigan.[153]

Health & Safety

Electrical service is incredibly important in maintaining the health and safety of the public. Electricity is required to heat and cool homes, operate traffic signals and operate hospitals and emergency services. Power outages can be particularly dangerous during times of extreme heat or cold. In addition, power outages can have a negative impact on the infirm. The number of people impacted by a power outage is highly variable with each event.

Economic Impact

Electricity is a vital component to operating businesses and county services. Information regarding the economic impact of electrical outages is not available. It is anticipated that

[153] American Society of Civil Engineers (ASCE), Michigan Section. 2018 Report Card for Michigan's Infrastructure. infrastructurereportcard.org/michigan.

an outage can be extremely costly, depending of the number of affected customers and duration of the event.

Critical Facilities/Services

As demonstrated by the August 2003 blackout, electricity is an integral part of every service the county provides to it residents. The blackout caused traffic backups, loss of water service, and gasoline shortages - making it difficult to provide even the most common services. Fortunately, large-scale electrical failures are not common. However, the blackout was a good "test" for the county's systems to determine effectiveness under disaster conditions.

4.9.3 Communications Systems

Historical Events

Wayne County operates internal communications systems such as the 911 Call Center and an emergency public radio system.

Telephone service for Wayne County residents is available from numerous service providers. The most widely used telephone service provider was formerly SBC and is now AT&T. In April 2003, a significant ice storm affected Wayne County. Ice downed phone lines, cutting service to numerous customers throughout the county. In 2003, SBC experienced four major communications failures throughout the state of Michigan.[154] Each failure was a result of severe weather or flooding.

The continuing transition from land to cellular communications has resulted in more citizens having only a cellular phone. This can result in better communications during storm events that would otherwise occur during power outages, but also leave citizens more vulnerable to problems experienced by cellular providers.

Frequency & Probability

Communications failures most frequency result from severe weather events or other interferences which affect phone lines, such as animals or auto accidents involving utility poles. Very rarely does a communications failure result from a problem within the communications system.

Communications failures of both public and private systems are possible with any major storm event, such as ice storms, lightning, or severe winds, which occur an average of 30-40 days each year. Power outages can also interrupt operation of the 911 call center.

As the county continues to grow and demand for communications services increases, it is anticipated that this hazard will occur more frequently and with greater consequence.

[154] SBC News Release, *SBC Michigan Provides Excellent Service Quality in 2003*, February 3, 2004.

Health & Safety

Communications systems are a vital link between the public and emergency response services. As a result, a failure of the system can have secondary impacts to the health and safety of the affected public. The number of people that experience a loss of service due to a communications failure is directly related to the severity of the event. However, people requiring emergency services during a failure are at greater risk for impact.

Area Impacted

A failure of private telephone communications is limited to the service area network. However, a failure of the emergency communications system can impact the entire county.

Economic Impact

The majority of economic impact from this hazard would result to loss of productivity for affected businesses.

Critical Facilities/Services

The 911 Call Center and emergency dispatch systems are vital services provided to Wayne County residents. Power outages and downed lines can greatly impact the county's ability to operate these systems. Backup generators are utilized to maintain emergency communications during power outages. If phone lines to the 911 Call Center are downed, the calls are automatically re-routed to an alternate call center to maintain 911 phone services.

4.9.4 Storm Water Systems

Historical Events

In September 2000, August 2014, and May 2019 extensive rains in southeast Michigan flooded municipal storm sewers causing sewer backups in thousands of Wayne County homes and businesses. The major cause of the sewer backups was a temporary loss of power at pumping stations and insufficient capacity of the storm sewer system due to the heavy rains. Sewage backups caused extensive damage to affected homes and businesses and created a public health hazard due to potential human exposure to untreated sewage. Following both the 2000 and 2014 events, Wayne County was granted Presidential Major Disaster Declarations to provide disaster assistance to affected businesses and individuals.[155] Combined sewer overflows, which dump sewage into storm sewer systems during high flow events, have repeatedly been for a concern within the Rouge River watershed. Between January 3rd and 5th, 2005, the Detroit Water

[155] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001, page 122.

and Sewage Department discharged 2.7 billion gallons of combined sewage due to the higher than normal rain amounts received.[156]

Frequency & Probability

There are two primary types of storm water sewers in Wayne County – open drains and enclosed, underground systems. The primary problems associated with open drains are log jams, plugged drains, and siltation. The major dilemma with the storm water sewers, both open drains and enclosed systems, is that system capacity is too low for the county's current needs. An increased amount of developed land has resulted in less pervious ground cover; therefore, more storm water must drain to the storm sewer system.

Problems with the storm water sewer system are evident during periods of high rain or snowmelt. Some storm sewer flooding can be expected with any major rain or snowmelt event. Small, frequent events occur with regularity and are planned for. It is anticipated that this hazard will become more frequent and more severe as the system ages and new development requires greater system flow capacity.

Health & Safety

The storm water sewer system is of great importance to protecting human health and safety. Flooding that results during system failures can create safety problems and sewer backups in combined storm and sanitary systems and present a major health concern. Backups and overflows that result in the combination of sanitary and stormwater increase the risk of disease and environmental impacts downstream.

Area Impacted

County drains are found throughout Wayne County. The Wayne County Department of Environment, Facilities Management Division and the Detroit Water and Sewerage Department (DWSD) are charged with the responsibility of maintaining the county drain and sewer systems and implementing and maintaining ordinances or permits that pertain to them. The area impacted is dependent upon the drainage area for the failed storm sewer. Areas with combined sewers (storm water sewer system combined with the sanitary sewer system) can be at increased risk for sewer backups and basement flooding.

Economic Impact

As demonstrated by the September 2000 system failure, flooding can result in major property damage costs. Storm sewer system upgrades also be very costly to implement. Funding is available for maintaining county drains, however, maintenance funding is limited for approximately 200 county drains which were established under the 1956 Drain Code.

[156] The News-Herald, *Combined Sewers Still Create Waterway Woes*, January 19, 2005

Critical Facilities/Services

Maintaining a functional water system is a critical service provided by Wayne County. The storm sewer system is important to protect property, both public and private, and to maintain public health. Additionally, scientist predict that climate change will increase the number of extreme rainfall and storm events, leading to more flooding throughout the Midwest and costing taxpayers as much as $480 million annually just to adapt stormwater systems to handle the increased runoff

4.9.5 Sewer Systems

Historical Events

Failures of the sanitary sewer system can result in significant risks to public health and safety. A system failure can result in sewer backups in homes or businesses and discharges of untreated sewage to rivers and lakes.

In May of 2004, high volumes and equipment failure left many downriver residents with water and sewage in their basements. Also, combined sewer overflows (CSOs) found throughout the county regularly allow untreated, partially treated, or diluted sewage to enter local waterways when input volumes exceed treatment capacity.

Frequency & Probability

A major system failure occurs within the county approximately once every 20 to 25 years on average. Smaller problems are more frequent. During major storm events, it is highly possible for a loss of power to occur at certain pump stations. Outages and higher than normal rain volumes create the potential for an overflow discharge to local rivers or lakes or, possibly worse, into residents' homes.

It is expected that problems will become more frequent as the system ages.

Health & Safety

Human exposure to untreated sewage presents a health and safety threat. Discharges of untreated sewage to lakes or rivers can also significantly impact the environmental health of local waterways. Area beaches are routinely closed during portions of the summer due to unsafe concentrations of sewage-related contaminants.

Area Impacted

Sanitary sewer systems are found throughout the county and operated and/or maintained by the DWSD and/or the local municipality.

There are 151 CSO's or Sanitary Sewer Overflows (SSO's) within the county.[157] CSOs discharge to local county drains or watercourses and may affect a sizable area within, and downstream of, Wayne County.

The number of sewer users impacted by each failure is dependent upon the severity of the event. Lakes or rivers could also be impacted due to sewer overflow discharges, making them temporarily unsafe for recreational activity.

Economic Impact

Information regarding the economic impact of sanitary sewer system failures is not available. The sanitary sewer system is a vital part of the operations system for a wide range of businesses. It is anticipated that a failure could be extremely costly, depending on the number of affected customers and duration of the event.

Critical Facilities/Services

Maintaining a functional sanitary sewer system is a critical service provided by the DWSD. The USEPA estimates that $690 million is needed to repairs and improvements for Michigan's secondary treatment needs and an additional $702 million for wastewater conveyance systems.[158]

Loss of sanitary sewer service can make it difficult to operate other critical facilities such as schools, hospitals, businesses, recreational areas, and sports/entertainment venues.

4.10 Nuclear Power Plant Accidents

Definition

A nuclear power plant accident would involve an actual or potential release of radioactive material at a nuclear facility in a quantity sufficient to constitute a threat to the health and safety of offsite populations.

Historic Events

There are three nuclear power plants operating in Michigan. The operation of these facilities is regulated by the federal Nuclear Regulatory Commission. There has never been an off-site release of radioactive material from a nuclear power plant in Michigan. However, an on-site release did occur on October 5, 1966 at the Enrico Fermi-1 Atomic Power Plant in Monroe County, Michigan. The release was a result of fuel melt-down; however, the radioactive material was contained within the reactor containment building. The Enrico Fermi-1 was shut down in 1972. In 1988, the Enrico Fermi-2 was opened next to the site of the Enrico Fermi-1.

[157] Michigan Department of Environmental Quality – Combined Sewer and Sanitary Sewer Overflow Information System – Queried for Wayne County http://www.deq.state.mi.us/csosso/find_cso_facilities.asp
[158] American Society of Civil Engineers (ASCE), Michigan Section. 2018 Report Card for Michigan's Infrastructure. infrastructurereportcard.org/michigan.

Frequency & Probability

Four protection action order areas have been established in the vicinity of the Enrico Fermi-2 Nuclear Power Plant and the Wayne County communities of Brownstown Township, south of Vreeland Road, and the Cities of Flat Rock, Gibraltar, and Rockwood are within Zone 4 (Figure 6). Although there has never been an off-site release from the plant, a release from the plant has the potential to impact Wayne County and its communities.

Health & Safety

An accident at a nuclear power plant could result in radioactive materials becoming airborne or in direct impacts to areas adjacent to the plant. The severity of radiological contamination from such an event is directly proportional to the type and amount of radioactive material released, weather conditions at the time of the release, and the wind direction following the release.

Wayne County communities within the protection action order areas of the Enrico Fermi-2 Atomic Power Plant are largely upwind of the facility, given prevailing wind patterns. For areas within these zones, the primary concern is radiological contamination of food sources. Procedures have been developed by the plant and emergency response agencies to prevent radiation from contaminating food supplies and to prevent contaminated foods from being consumed. The risk to human health is considered low.

Area Impacted

As noted above and shown in Figure 6, all or portions of Brownstown Township, and the Cities of Flat Rock, Gibraltar, and Rockwood are within Protection Action Order Area 4 of the Enrico Fermi-2 Atomic Power Plant. However, the actual area impacted by a release would depend greatly on the type and amount of radioactive material released, weather conditions at the time of the release, and the location relative to wind direction following the release.

Economic Impact

Due to the low frequency of this event in the United States, it is difficult to establish the economic impacts. It is anticipated that the impact could be very high, depending on the severity of the event.

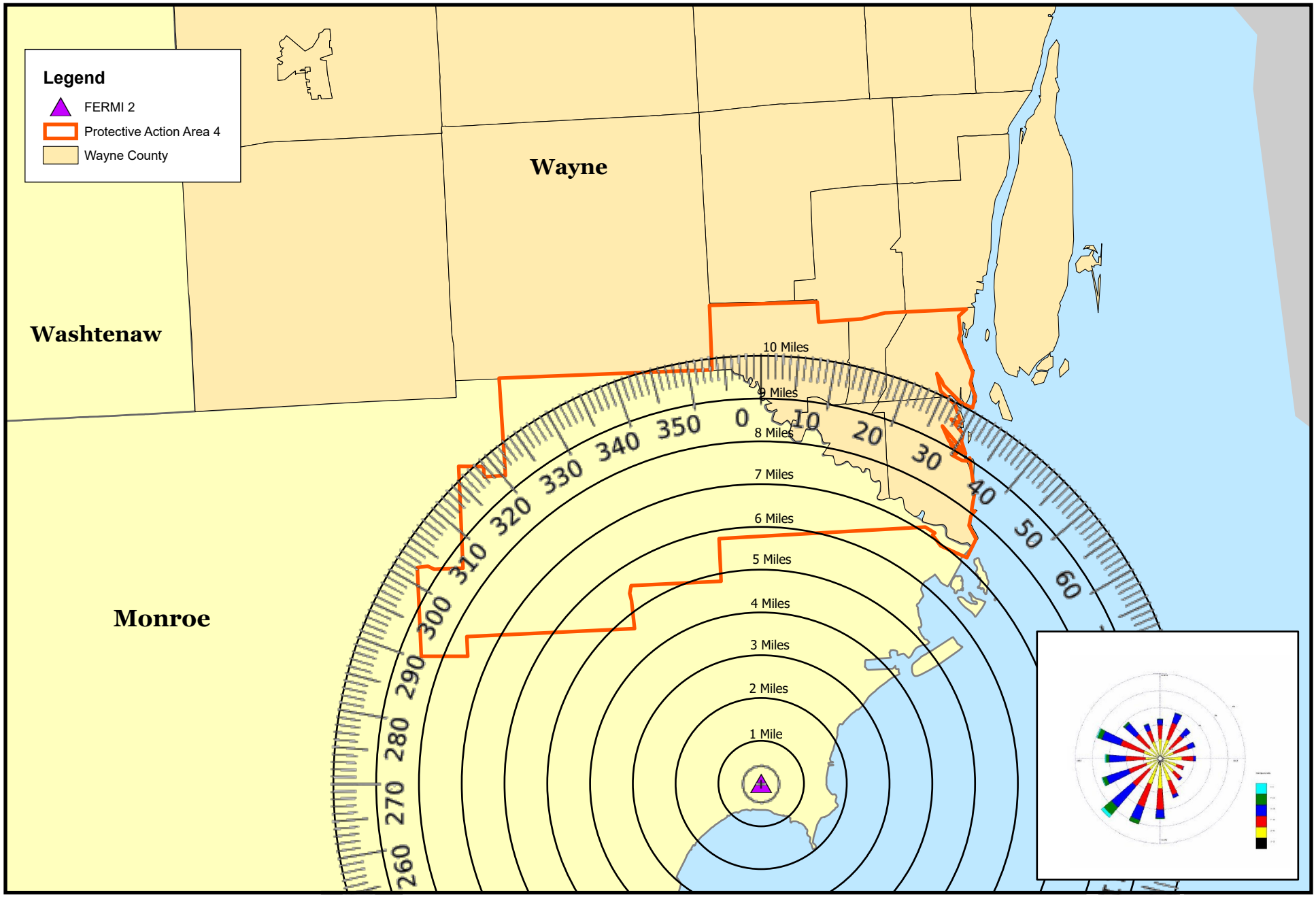
Critical Facilities/Services

Nuclear power plant owners/operators work closely with emergency planners to develop response plans in the event of a release of radioactive materials. In Michigan, the responsibility to respond to such events is shared by the plant owner/operator and all levels of government. Response to an off-site release would likely involved multiple agencies and departments from all levels of government.

4.11 Oil and Gas Well Accidents

Definition

An oil or gas well incident could involve an uncontrolled release of oil or natural gas, or a release of hydrogen sulfide gas, a by-product of production wells.



Wayne County

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ASTI Environmental

Created for: Wayne County
Created by: RMH, April 23, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013))

Figure 6- Hazard Summary: Nuclear Power Plant

Frequency & Probability

Although there have been no significant incidents in Wayne County in recent history, the presence of active and producing wells and pipelines within the county makes it possible for this hazard to occur. Since 1973, there has been an oil or gas well incident in Michigan every 3-4 years, between 1989 and 2008, there were seven reported oil or gas pipeline accidents resulting in one death and three injuries, and average of one event every 2.85 years.[161]

Health & Safety

There are several hazards related to oil and gas wells. Producing wells can generate hydrogen sulfide gas as a by-product. Hydrogen sulfide gas is extremely poisonous and presents a number of chemical safety hazards to responders and adjacent populations. Accidental releases, fire and explosion can also result from such an event.

In Michigan, death and injury rates with oil and gas well accidents are very low. From 1973 to 2001, there was one reported death and two injuries from accidents. In those cases, death and injury resulted to those employees servicing the wells.[162]

Area Impacted

Lands with oil and gas wells and surrounding areas are most at risk for impact from well accidents. As shown on Figure 7, the location of wells is concentrated in the northwestern portion of the county.

Oil and gas well accidents often result in release or potential release of hazardous gases. As a result, areas adjacent to the site of the incident may be evacuated as a precaution. In Michigan, there have been no oil or gas well accidents which have resulted in offsite property damage. However, areas of evacuation have been large enough to include residents within a one-half mile radius.

Economic Impact

Accidents of this nature are not common within Michigan, and have not resulted in significant property damage or other loss. Therefore, information regarding the economic impact of oil and gas wells is limited and further investigation is not warranted at this time.

Critical Facilities/Services

Oil and gas wells within Wayne County are owned and operated by private companies; however, response to an accident would involve public agencies. The level of public response would depend upon the severity of the accident. Due to the possibility of evacuation with this accident, involvement from multiple emergency response agencies would likely be required.

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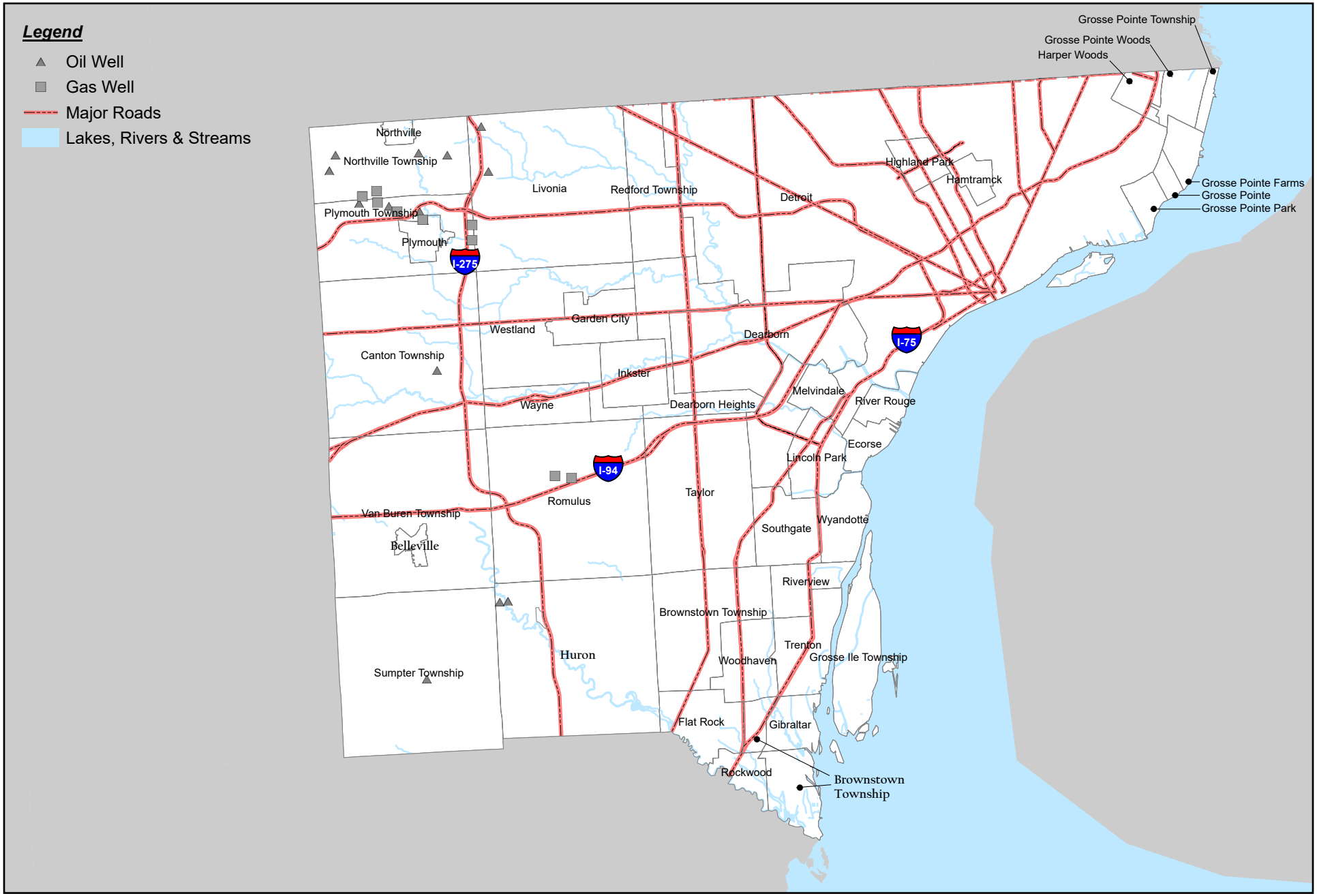
[161] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 255.
[162] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis*, December 2001, page 9, 142-143.



Wayne County

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Data Source: City of Dearborn (2013), Michigan CGI (2013))

Figure 7 - Hazard History: Oil and Gas Wells

4.12 Petroleum and Natural Gas Pipeline Accidents

Definition

A petroleum or natural gas pipeline incident would involve an uncontrolled release of petroleum, natural gas or hydrogen sulfide gas from a pipeline.

Historical Events

Michigan is a major producer and consumer of petroleum and natural gas products. Therefore, transmission and distribution pipelines are common throughout the state. According to the Michigan Public Service Commission, Michigan ranks 11th in the United States for natural gas production and 6th for natural gas consumption.

The U.S. Department of Transportation's Office of Pipeline Safety reports that Michigan gas companies had to repair 9,300 leaking underground gas lines required repair in 1998; more than twice as many as the 4,400 reported in 1991. More than 75% of these gas line breaks are caused by construction/excavation. Michigan ranks second only to Texas in the number of required repairs to damaged or leaking natural gas pipelines.

Since 1996, the Michigan Public Service Commission has investigated over 100 incidents involving pipelines, and at least half of those incidents involved injury, loss of life, or significant property damage. The pipeline accidents described in this section include the worst in recent Michigan history, which required a combined emergency response effort by pipeline companies and state and local officials. In 2003 the U.S. Department of Transportation, Research and Special Programs Administration, Office of Pipeline Safety conducted a survey of natural gas distribution pipeline accidents and ranked Michigan's 11 recent accidents third behind California and Pennsylvania for the highest in the nation.[163]

Statewide there are 14,539 oil and natural gas wells in the State of Michigan but only seven of these are located in Wayne County. Despite the low number of wells, Wayne County is crisscrossed with pipelines.

Recent examples of accidents in Wayne County include a natural gas leak in Taylor (2004) that resulted in a house explosion, sending debris approximately 100 feet and shaking houses as far as one mile away; a natural gas leak that blew up a house in Canton Township (2007), injuring a women; and a natural gas pipeline explosion in Wayne (2010) that destroyed a furniture store, killing two people and injuring another. The explosion also shattered windows at nearby businesses and resulted in one person, who had been driving by at the time of the explosion, requiring hospitalization.

Frequency & Probability

The Michigan Hazard Analysis lists seven reported oil or gas pipeline accidents between 1989 and 2008, resulting in one death and three injuries, and average of one event every 2.85 years. However, USCG records indicate that there were 45 pipeline incidents

[163] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 255.

in Wayne County, from 1990 through October 2012, an average of over three events each year.[164]

It is anticipated that this hazard will be more likely to occur in the future as the pipeline structures age.

Health & Safety

Pipeline accidents can pose a significant threat to the public due to the potential for fires, explosions, and ruptures. From 1990 to 2005, there were no deaths and 25 injuries from the 47 accidents which have occurred in Wayne County.[165]

Area Impacted

As shown in Figure 8, the major natural gas and petroleum products lines are concentrated in the western half of the county. Smaller natural gas distribution lines can be found throughout the county with Consumers Energy providing natural gas services to the majority of the county. Michigan Consolidated Gas Company provides service to a smaller number of customers.

Natural gas or petroleum pipelines can be found throughout the county, which means that pipeline accidents can occur anywhere. Typically, pipeline accidents only impact the immediate area. However, evacuations of adjacent buildings can be required as a precaution.

Economic Impact

In the United States for 2003, the average property damage caused by a transmission pipeline accident was $412,249. These costs are largely due to damage to the pipeline structures. Other impacts include the loss of life and property and decreases in product availability.

Critical Facilities/Services

Local fire and police departments would respond to pipeline accidents. This type of hazard may also require response from HazMat Teams. Gas leaks are a frequent call for service for Wayne County fire departments. From January 1998 through the end of 2004, there was a total of 1,371 calls for service due to suspected or actual gas leaks, an average of 196 calls each year.[166]

Following review of the draft HMP, DTE Energy provided the following summary of actions they are taking to mitigate gas pipeline hazards:

"DTE diligently monitors thousands of miles of natural gas pipelines and inspect gas delivery systems, both by air and land, to look for evidence of a pipeline leak or damage.

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[164] U.S. Coast Guard, National Response Center, www.nrc.uscg.mil/foia.html, Standard Query Report, Pipelines, Wayne County Michigan, report generated on October 15, 2005.
[165] U.S. Coast Guard, National Response Center, www.nrc.uscg.mil/foia.html, Standard Query Report, Pipelines, Wayne County Michigan, report generated on October 15, 2005.
[166] NFIRS 5.0 National Reporting, Tally by Incident Type, January 1, 1998 through December 31, 2004, report generated on October 3, 2005, filtered for Wayne County reporting only.

DTE has established a Pipeline Integrity Management program in conjunction with federal and state regulations. Inspection and maintenance work is performed regularly, such as leak surveys and corrosion control. Pipeline segments are replaced if necessary. This program enhances preventive and mitigative measures DTE Energy already has in place to maintain the continued safe and reliable operation of our pipeline system. Across the State of Michigan, these measures include:

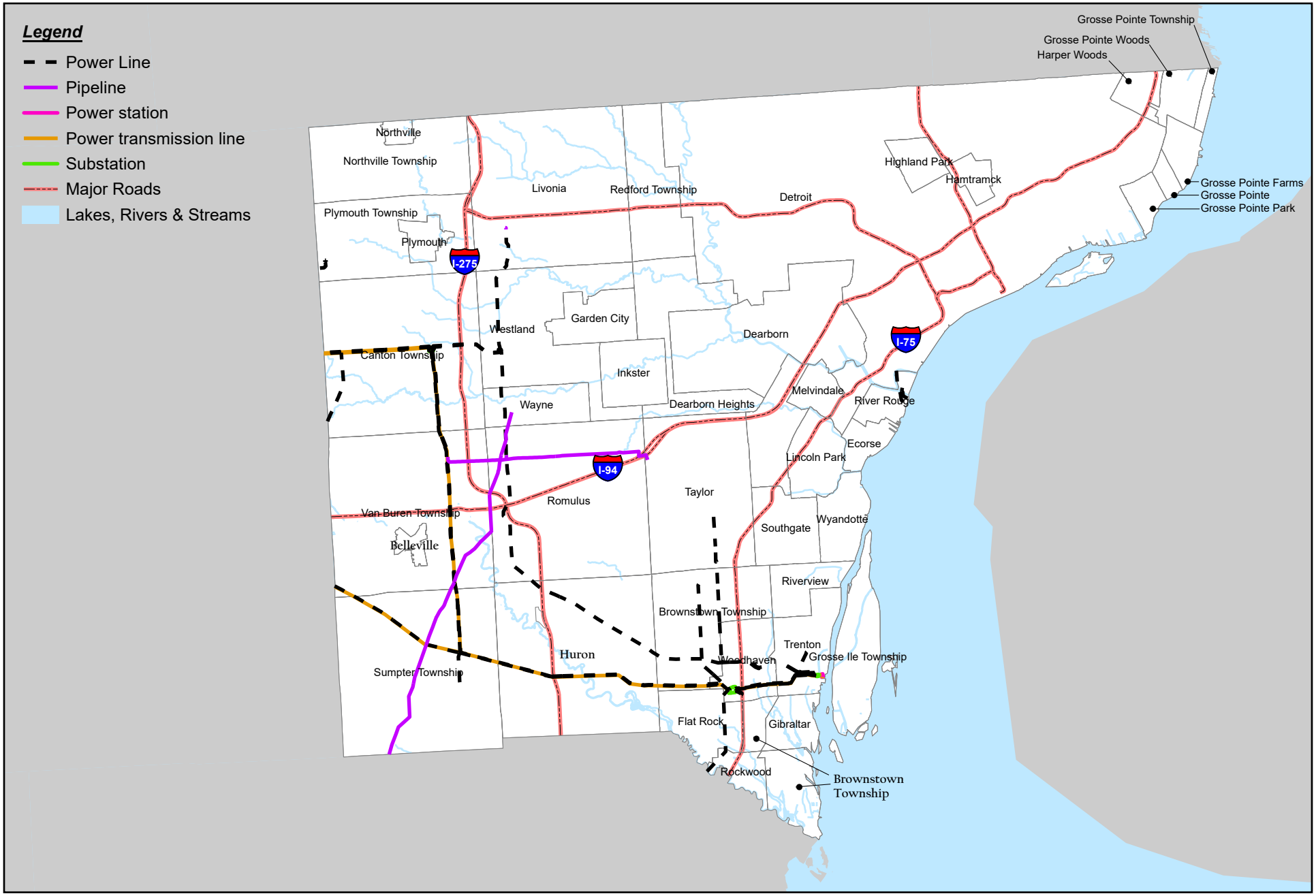
- *Upgrading more than 500 miles of pipeline for our customers this year*
- *Conducting more than 300,000 gas meter safety inspections annually*
- *Performing routine inspections inside some pipeline sections, using a sophisticated electronic device sent through pipelines to identify internal problems*
- *Continuously monitoring our natural gas system using sensors, computers and remote telemetry equipment that detect changes in pressure that might indicate a concern*
- *Surveying nearly 10,000 miles of pipeline each year*

Additionally, DTE's Energy Gas Renewal Program's focus is to modernize natural gas infrastructure by renewing gas mains, service lines and upgrading natural gas meters to further improve the safety and reliability of our natural gas system. Cast iron and steel gas main service lines are being replaced with new and improved materials, reducing the risk of gas leaks."

4.13 Public Health Emergencies

Definition

A public health emergency is a widespread and/or severe epidemic, incident of contamination, or other situation that presents a danger to, or otherwise negatively impacts, the general health and wellbeing of the public.



Wayne County

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Data Source: City of Dearborn (2013), Michigan CGI (2013))

Figure 8 - Hazard History: Pipelines & Electrical Utilities

The Flint water crisis, which exposed more than 100,000 residents to elevated lead levels, began in 2014 after the city changed the source of its drinking water from Lake Huron and the Detroit River to the Flint River. The change in water and insufficient treatment resulted in lead being leached from pipes into the drinking supply,

President Obama declared in a federal emergency in January 2016, and Flint residents were instructed to use only bottled or filtered water for drinking, cooking, cleaning, and bathing. Replacing the lead pipes is expected to be completed in 2019, but as this Plan is being developed in May 2019, an estimated 2,500 lead service lines are still in place and there is still disagreement whether the water in Flint is safe to drink.[168] In addition to elevated lead levels, insufficient chlorination in the Flint water supply was also linked to one of the largest outbreaks of Legionnaires ' disease in the past decade.[169]

In 2008, Michigan residents were affected by a nationwide *Salmonella* outbreak involving more than 700 cases in 46 states and Canada. In Michigan, 38 cases were confirmed, including 12 hospitalizations, across the Lower Peninsula. Institutional settings such as schools, colleges, long term care facilities, and correctional centers were focal points for the outbreak.[170]

At the time of this writing the County, and most of the world, is grappling with a pandemic form the COVID-19 virus; nearly 200,000 lives have been lost the U.S. to-date. Quarantine and/or [preventative isolation measures of various types have now been in place for approximately six months. The Wayne County Health Department has conducted an analysis of the County's initial efforts in anticipation of an increased outbreak or second wave as flu season approaches. Lessons learned from their efforts are include in Appendix E as a supplement to County Actions previously actions previously developed for this Plan.

Frequency & Probability

Public health emergencies can arise from a wide range of causes and exhibit varying levels of severity, thus making it difficult to establish a frequency of occurrence. The Michigan Hazard Analysis lists seven major public health emergencies in Michigan between 1973 and 2010, approximately one every five years.[171]

It is important to note that some of the same causes of a public health emergency (i.e. food borne illness, etc.) do occur with regularity within Wayne County. However, these cases are isolated to a few individuals with limited impact to the general public.

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[168] The Detroit News. Flint: Water line replacement won't be done till 2019. https://www.detroitnews.com/story/news/michigan/flint-water-crisis/2018/12/04/state-shrugs-flint-pipe-replacement-work-ahead/2204132002/, December 4, 2018

[169] Zahran, Sammy, McElmurray, Shawn P., Kilgore, Paul E., Mushinsko, David; Press, Jack: Love, Nancy G.: Sadler, Richard; Swanson, Michele S. (February 1, 2018), "Assessment of the Legionnaires' disease outbreak in Flint, Michigan." *Proceedings of the National Academy of Sciences. 115(8): E1730-E1739*.

[170] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 360.

[171] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, page 354-355.

The safety of the municipal drinking water supplies is an increasingly important public health concern. Michigan communities are finding it difficult to adequately treat groundwater and/or surface water supplies. The Cities of Flint and Ann Arbor, Oscoda Township, and 12 Michigan counties are currently faced with either changing their drinking water source(s) or improving treatment efficacy to address a host of water quality parameters including, hexavalent chromium; VOCs; trihalomethanes; 1,4 dioxane; PFAS/PFOS; arsenic, naturally occurring radioactive materials, and others.[172]

It is anticipated that public health hazards will become more likely to occur in the future as the population ages and as the county population increases.

Health & Safety

Public health emergencies are an obvious threat to human health and safety. A public health emergency can take many forms and spread by various means. As a result, it is not feasible to determine a death or injury rate for this hazard. No deaths were reported in Michigan associated with the seven public health emergencies noted above, but over 400 people were injured.

Public health emergencies are of concern for populations with weakened or undeveloped immune systems.

Area Impacted

Due to the nature of public health emergencies, impacts from this event tend to be widespread rather than confined to a specific location. It is important to note that a public health emergency can originate outside of Wayne County, yet impact communities within the county.

Economic Impact

Economic impacts from this hazard can be severe if the source is infrastructure related, for example, if improvements are needed to the public water supply system. However, it is more likely that economic impacts will result through lost wages and medical expenses for impacted persons. Additional impact may result if a business is determined as the source of the emergency, (i.e. a restaurant must close). Due to the low frequency of this hazard, additional investigation of the economic impact is not recommended at this time.

Critical Facilities/Services

A major public health emergency would likely involve varying degrees of response from local, state, and possibly federal public health agencies.

[172] American Society of Civil Engineers (ASCE), Michigan Section. 2018 Report Card for Michigan's Infrastructure. infrastructurereportcard.org/michigan.

4.14 Subsidence

4.14.1 Natural

Definition

A lowering or collapse of the land surface due to loss of subsurface support.

Historical Events

There have been no known natural subsidence events in Wayne County. There are no natural subsidence hazards in Wayne County according to the Geological and Survey Division of the EGLE.[173]

Frequency and Probability

No known events have been recorded in Wayne County. Therefore, the frequency of events cannot be adequately determined. It can be expected to be an extremely low probability, as it is most often linked to groundwater movement through porous limestone. Cases of natural subsidence are more common in areas of Florida where the geologic conditions are favorable.

Health & Safety

In the event of a sinkhole, potential health and safety issues are dependent on the location and size of the sink hole. A sink hole occurring near or within a street or public access area could potentially cause injury. Injury could also occur if subsidence occurred beneath a building causing structural damage or collapse. Following the event, the sinkhole could pose a risk to the health and safety of people within the area if it is not probably marked and barricaded. Workers are at risk for cave-ins or confined space issues if entrance within the sinkhole is required to correct the problem.

Area Impacted

The area of impact would be the land immediately surrounding the subsidence or sinkhole and any transportation and utility networks disrupted by it.

Economic Impact

Economic impacts incurred from the occurrence of a sinkhole could include a disturbance in transportation, communication, and utilities as well as costs incurred to fill the sinkhole and repair roadways and utilities. If a sinkhole were to occur beneath a building foundation, costs to stabilize, repair, or rebuild could be substantial, dependent on the area and depth of the subsidence.

[173] Michigan Department of State Police, Emergency Management Division, Michigan Hazard Analysis, December 2001, page 183.

Critical Facilities/Services

Response agencies would primarily include localized police and fire departments, utility services, and road service agencies such as the Wayne County Road Commission or MDOT.

4.14.2 Mining

Definition

A lowering or collapse of the land surface due to loss of subsurface support in mining areas.

Historical Events

Wayne County lies over a regional salt bed. These salt deposits, laid down between 600 and 230 million years ago, are closer to the surface in the Detroit area, and have been very important to the local economy. The salt was removed in two ways. Solid mining of the salt involved sinking a shaft 1100 to 1200 feet below the surface, then carving out rooms of salt. The solid salt mine in Detroit closed in 1983, and reopened in 1998. Hundreds of miles of tunnels and excavation areas exist beneath the city. Liquid or brine extraction methods are now used for salt production and Southeastern Michigan is still a leading producer of salt. During their operation the mines in Michigan had neither a fatality nor a collapse.

Frequency and Probability

While there have been no cases of collapse or subsidence due to mining in Wayne County, it is important to realize that this doesn't preclude any future subsidence. The Retsof Salt Mine near Rochester, NY suffered a collapse due to the infiltration of groundwater into the mine. This water wore away the salt pillar supports resulting in the systematic collapse of the mine shafts and the closing of the mine. These collapses also resulted in a series of sinkholes 200- to 600-feet wide that damaged roadways and nearby structures and filled with water[174]. The possibility of mine-related subsidence remains of concern in Wayne County.

Area Impacted

The area impacted would be the area immediately surrounding the sinkhole.

Economic Impact

Economic impacts incurred from the occurrence of subsidence could include a disturbance in transportation and costs incurred to fill the sink hole. If subsidence were to occur beneath a building foundation, potential cost to stabilize, repair, or rebuild could be substantial, dependent on the size of the sink hole.

[174] The Center for Land Use Institute, www.ludb.clui.org/ex/i/ny3129, Retsof Salt Mine

Critical Facilities/Services

Response agencies would primarily include localized police and fire departments, utility services, and road service agencies such as the Wayne County Road Commission or MDOT.

4.14.3 Water / Sewer

Definition

A lowering or collapse of the land surface due to loss of subsurface support over water and sewer lines.

Historical Events

Sinkholes or subsidence events appear to be fairly infrequent in Wayne County: one known sewer or waterline related subsidence event occurred in February 2000, when a leaking underground pipe formed a 15-foot wide sinkhole in Detroit that enveloped an automobile.[175] Sinkholes are more frequently experienced in neighboring Macomb County. A sinkhole in Fraser requiring evacuation of three homes; it occurred in the same vicinity as a 160-foot by 60-foot by 30-foot deep sinkhole in 2004 and a 19878 sinkhole caused by a break in a local sewer interceptor. [176,177]

Frequency and Probability

The infrequency of this type of subsidence in Wayne County makes it difficult to predict the probability of future occurrences. However, it is notable that multiple subsidence events have occurred in neighboring counties. Based on the amount of underground utilities (specifically water mains) within in the county, there is a good probability that a sink hole event can occur from this non-natural source. The probably of this occurrence increases with the age of these water systems.

Health & Safety

In the event of subsidence, potential health and safety issues are dependent on the location and size of the sinkhole. A sinkhole occurring near or within a street or public access area could potentially cause injury. Injury could also occur if subsidence occurred beneath a building causing structural damage or collapse. Following the event, the sinkhole could pose a risk to the health and safety of people within the area if it is not probably marked and barricaded.

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[175] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 180.

[176] WXYZ, Channel 7 ABC Detroit. April 8, 2019. Officials urge drivers to be cautious of sinkhole in Mount Clemens,https://www.wxyz.com/getting-around-metro-detroit/officials-urge-drivers-to-be-cautious-of-sinkhole-in-mount-clemens

[177] Detroit Free Press. December 24, 2016.
https://www.freep.com/story/news/local/michigan/macomb/2016/12/24/sinkholes-macomb-county/95829674/

Area Impacted

The areas of impact would be the land immediately surrounding the subsidence or sinkhole and any transportation and utility networks disrupted by it.

Economic Impact

Economic impacts incurred from the occurrence of a sinkhole could include disturbance in transportation, communication, and utilities as well as costs incurred to fill the sinkhole and repair roadways and utilities. If a sinkhole were to occur beneath a building foundation, costs to stabilize, repair, or rebuild could be substantial, dependent on the area and depth of the subsidence.

Critical Facilities/Services

Response agencies would primarily include localized police and fire departments, utility services, and potentially road services such as the local road commission or MDOT.

4.15 Thunderstorm Hazards

Wayne County receives an average of 32 thunderstorm days per year.[178] Between July 2004 and June 2005, six severe thunderstorm warnings were issued in Wayne County.[179]

4.15.1 Hail

Definition

Conditions where atmospheric water particles from thunderstorms form into rounded or irregular lumps of ice that fall to the earth.

Historical Events

In Wayne County, 12 hailstorms were recorded between 2013 and April 2019.[180]

On November 15, 1955 4-inch hail was reported in Wayne County.[181]

On March 7, 1991, severe thunderstorms and accompanying high winds and hail caused considerable damage across a large portion of central and southern Michigan, damaging homes, businesses, farms, and some public facilities.

On June 24, 1998, two tracts of severe thunderstorms crossed the State moving east to west – one tract stretched across central Michigan, while the other moved in the

[178] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, April 2019, page 33.
[179] National Weather Service FOIA Office, Email dated September 28, 2005.
[180] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather*, May 1, 2019.
[181] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather*, September 6, 2005

southern portion of the State. The more northerly thunderstorms produced large amounts of hail in several counties, ranging from dime-size up to baseball-size hail.[182]

Frequency and Probability

Wayne County experiences a hail storm approximately twice per year: the Michigan Hazard Analysis notes 155 hail storms in 67 years for Wayne County.[183] Most storms in Michigan result in hailstones approximately ¼-inch in diameter to golf ball sized hailstones (1¾ inches), but baseball sized hailstones have been recorded in most Michigan counties. .[184] Hail events are highly likely to occur in the county.

Health & Safety

The human health and safety risk associated with hail is low. However, hail is often associated with tornado activity. Tornadoes are discussed in Section 4.16.

Area Impacted

Hailstorms are typically localized as they move through Michigan. The entire county could be affected; however, impacts will more likely be localized to residents directly under the center of the storm.

Economic Impact

Nationally, hail damages each year exceed $3.1 million. Hailstorms can impact infrastructure, power lines, roads and businesses. Property damage, loss of business revenue, and response costs can result from hail events. Hail is especially damaging to crops, property, and automobiles.

Critical Facilities/Services

Response to a hail related emergency would be localized. Utilities may require repair and maintenance resulting from hail.

The National Weather Service, NOAA, and local media, through radar, weather data, and spotters, can alert the public of severe storms capable of producing large hail, severe winds, and lightning. Warning sirens can alert those not near a radio or television of approaching storms. Warning sirens are located throughout the county; those located within the 42 communities participating in this Plan are shown in Figure 9.

[182] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 31.
[183] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, April 2019, page 39
[184] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, April 2019, page 33.

4.15.2 Lightning

Definition

The discharge of electricity from within a thunderstorm.

Historical Events

On June 28, 1995, a man suffered first and second degree burns when lightning struck him in his kitchen in Plymouth while he was washing dishes.[185]

On July 21, 1998, southeast Michigan was hit particularly hard by a string of thunderstorms. The storms produced over 4,300 lightning strikes, some of which caused fires that destroyed a house and an apartment building in Sterling Heights, Macomb County. Sixteen people were left homeless and the storms resulted in damages totaling $275,000. Governor John Engler and President Clinton issued state and federal disaster declarations for Wayne and Macomb County.[186]

On July 31, 1999, a woman in Lincoln Park was knocked unconscious by a lightning strike just outside her home.[187]

In May 2000, lightning struck the steel superstructure of a new terminal under construction at the Detroit Metropolitan Wayne County Airport. Nine workers were injured as a result with two requiring hospitalization.[188]

On August 8, 2003, lightning struck Trojan Cleaners on Main Street in Belleville and the building caught fire and burned to the ground.[189]

On May 20, 2004, lightning was blamed for a blackout which left most of the City of Gibraltar and parts of Brownstown Township and the City of Flat Rock without power.[190]

Lightning Statistics

Location of Lightning Strikes

- 40% are at unspecified locations
- 27% occur in open fields and recreation areas (not golf courses)
- 14% occur to someone under a tree (not on golf course)
- 8% are water-related (boating, fishing, swimming, etc.)
- 5% are golf-related (on golf course or under tree at golf course)
- 3% are related to heavy equipment and machinery
- 2.4% are radio, transmitter, and antenna-related

Months of Most Strikes

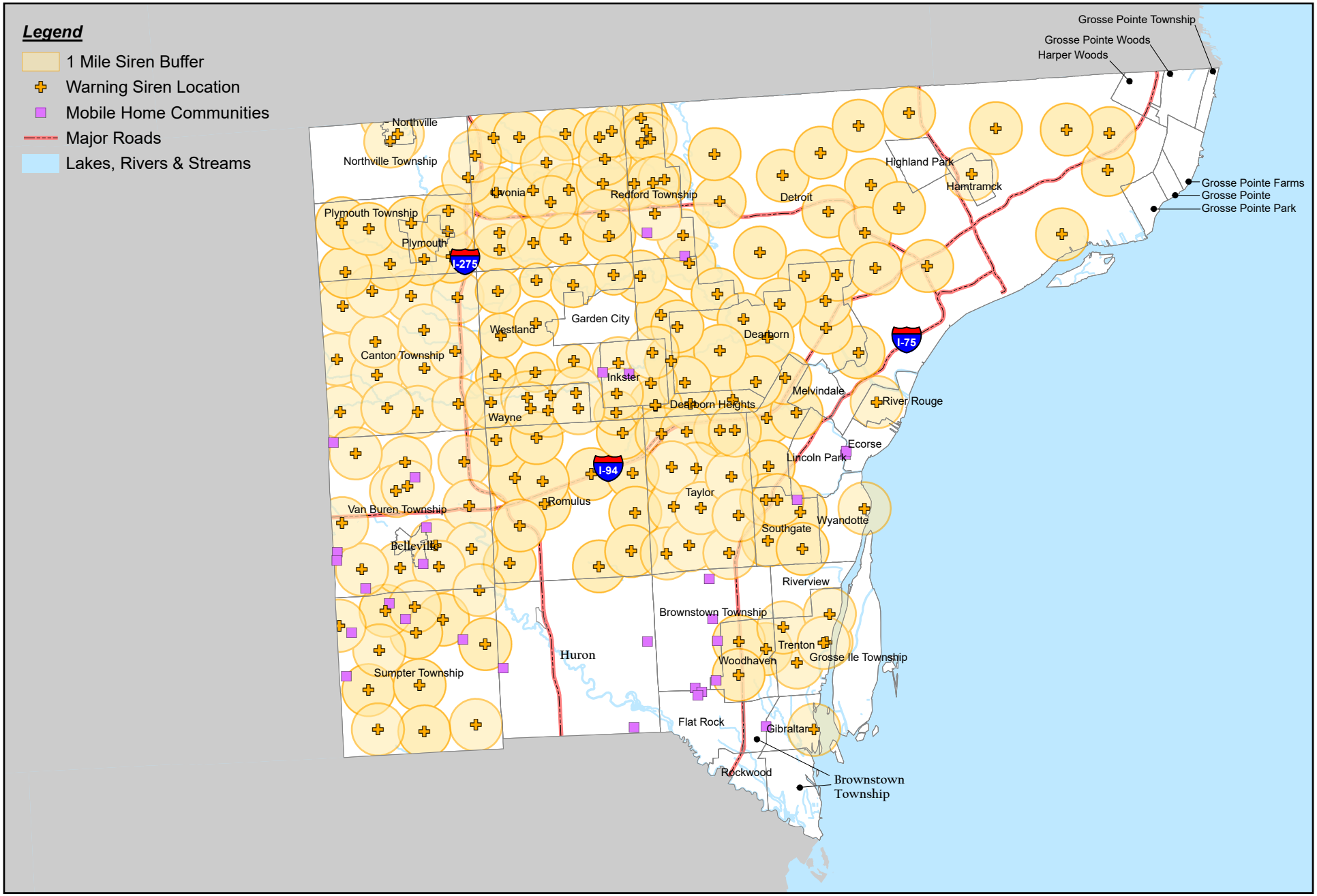
July - 30%
August - 22%
June - 21%

Time of Most Strikes

2:00p.m. - 6:00 p.m.

Source: National Oceanic and Atmospheric Administration (NOAA) and the National Lightning Safety Institute (NLSI) for the periods 1959-1994.

[185] Wayne County Executive, Special Projects Staff, September 15, 2004.
[186] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, April 2019, page 51.
[187] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001, page 191.
[188] Ibid.
[189] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6, 2005.
[190] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6, 2005.



Wayne County

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Created by: RMH, May 20, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013))

Figure 9 - Hazard History: Warning Siren Locations

Frequency

Only one lightning strike (resulting in fire, injury, death, etc.) was recorded for Wayne County in NOAA's severe weather database between 2013 and April 2019; it resulted in a house fire in Canton Township causing $300,000 in damage.[191] However, the Michigan Hazard Analysis listed a total of 21 lightning strikes on 17 days between 1996 and 2017 resulting in $857,000 in damages. Over 50% of lightning casualties occur in the months of June and July, and another 28% of deaths occur in May and August.[192] Lightning occurrences happen every year; therefore lightning events will occur in the future within the county.

Health & Safety

Michigan averages 1.5 deaths and 10.7 injuries per year from lightning strikes.[193] Lightning deaths are usually caused by the electrical force shocking the heart into cardiac arrest or throwing the heartbeat out of rhythm. Lightning can also cause severe skin burns that can lead to death if complications from infection ensue. Ninety-one percent (91%) of lightning strikes impact a single person, and only 9% of strikes impact two or more victims.[194] Approximately 20% of lightning strike victims die, and 70% of survivors suffer serious long-term effects such as memory and attention deficits, sleep disturbance, fatigue, dizziness, and numbness.[195]

Between 1959 and 2005, the National Weather Service recorded 101 lightning deaths and 711 lightning-related injuries, consistently ranking Michigan near the top in the nation in these categories. During the period 1959-1995, Michigan was ranked 2nd nationally in lightning injuries and 12th nationally in lightning deaths.[196]

Area Impacted

The effects of lightning are very localized; however, thunderstorms can cover a large area.

Economic Impact

Property damage estimates from lightning strikes in Wayne County between January 1, 1996 and April 30, 2017 equaled $ 857,000, an average of $40,809 per year.[197]

On September 19, 1997, lightning damaged an apartment building in Westland with property damage of $5,000.[198]

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[191] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* May 1, 2019.
[192] Oakland County Michigan Emergency Management, *Hazard Study,* August 1998, page 17.
[193] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 34.
[194] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 34.
[195] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 34.
[196] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, April 2019, page 47.
[197] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6, 2005.

Nationally, property damage from lightning is estimated at several billion dollars. In Michigan, property damage was estimated at $20.0 million since 1990.[199] Cost estimates for property damage vary greatly, but a conservative estimate is $2 million per year in Michigan. Property damage from lightning is often a result of fires or electrical systems damage. Lightning strikes cause 2% of Michigan's wildfires.[200]

Because lightning-related damage information is compiled by a number of different sources, it is difficult to accurately determine collective damage figures resulting from lightning strikes.

Critical Facilities/Services

Initial response to a lightning strike would be provided by local emergency responders (fire, police, emergency medical care, etc.). Power outages as a result of a lightning strike can impede emergency response. Electric utility companies across the county estimate as much as $1 billion per year in damaged equipment and lost revenue from lightning.[201]

Communication services can be damaged and destroyed (cell and communication towers, computer systems, phone services, etc). Utility companies (DTE Energy, Consumers Energy, SBC, AT&T, cable companies, etc.) and the services they offer are often affected by lightning strikes.

Lightning is directly associated with severe thunderstorms. The National Weather Service and local media can alert the public of the severe storms capable of producing large hail and lightning. Warning sirens can alert those not near a radio or television of an approaching storm. Warning sirens are located throughout the county. Figure 9 displays community siren locations applicable to this Plan.

4.15.3 Severe Wind

Definition

Winds greater than 58 miles per hour, not including tornadoes, are classified as windstorms, severe, or straight-line winds. Often Occurring during thunderstorms severe winds may be very damaging. Severe winds have the potential to cause injury or loss of life from breaking and falling trees, property damage, and flying debris. Although Tornadoes tend to result in more deaths than severe winds, property damage from straight line winds is often more widespread than from tornadoes, usually affecting multiple counties at a time.

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[198] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6, 2005.
[199] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 34.
[200] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001, page iv.
[201] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 34.

Historical Events

On April 30, 1984 a windstorm struck the entire Lower Peninsula, resulting in widely scattered damage, 1 death, and several injuries.[202] Wind gusts up to 90 miles per hour (mph) were measured in some areas. Damage was extensive with 6,500 buildings, 300 mobile homes, and 5,000 vehicles being damaged. Over 500,000 electrical customers lost power.

On January 18, 1996, a strong storm tracked from the central plains northeast to northern Michigan downing power lines in Wayne County.[203]

On April 20, 1996, downed power lines resulted in power outages for 30,000 DTE Energy customers within Macomb, Oakland, St. Clair, Washtenaw, and Wayne counties.

On July 22, 1998, a family of four attempted to leave a video store in Woodhaven and a severe gust struck an awning located above the exit. Falling bricks hit a young boy in the head, killing him. Two fatalities occurred in Woodhaven as a result of the same storm. Storm damage also occurred in Flat Rock, Gibraltar, and Trenton. On Grosse Ile, one hundred homes and two businesses suffered damages. Five people were killed in Grosse Pointe Farms.[204] Wayne County and parts of Macomb County received both state and federal disaster declarations following this event.[205]

High winds were experienced across southeast Michigan on the afternoon of November 24, 2014. Peak winds of 68 mph were recorded a Detroit Metropolitan Wayne County Airport. Numerous downed power lines and trees were reported across the region and approximately 200,000 people were without power. The resulting damages were estimated at $25 million.

Frequency and Probability

NOAA's Storm Events Database reports nine high wind and 37 thunderstorm wind events in Wayne County Since 2103.[206] The Michigan Hazard Analysis reports that Wayne County experienced 351 severe wind events between 1996 and 2017, an average of approximately 17 per year.[207] Severe winds are a high probability event for the county.

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[202] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001, page 196.
[203] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6, 2005.
[204] Southeast Michigan Tornado Outbreak, National Weather Service in White Lake, Michigan, July 2, 1997.
[205] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6, 2005.
[206] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* May 1, 2019.
[207] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 25.

Health & Safety

Since 1990, Michigan averaged approximately 2.0 deaths and 20.0 injuries per year as a result of severe winds.[208] The public is most at risk from such things as falling trees and electrical lines, blowing debris, and collapsed buildings or roofs. Severe winds can be a direct effect of tornadoes, which are discussed in Section 4.16.

Area Impacted

Severe winds would affect entire populations, but greatest risk would be to populations housed in mobile homes. There are approximately 2,240 acres of manufactured home parks in Wayne County, excluding Detroit.[209]

Economic Impact

Between 1996 and 2017, Wayne experienced an estimated $99,770,000 in property damage from severe wind events.[210] Property damage costs in Michigan average $12,380,952 per year. Property damage would be greatest contributor to economic loss. Power outages resulting from high winds can also have an economic impact with costs associated to restore and repair power lines and loss of revenues from prolonged outages to businesses.

Critical Facilities/Services

The National Weather Service, NOAA, and local media, through radar, weather data, and spotters, can alert the public of severe storms capable of producing large hail, severe winds, and lightning. Warning sirens can alert those not near a radio or television of an approaching storm. Warning sirens are located throughout the county. Initial response activities due to emergencies from high winds would primarily be associated with local response from police, fire, and medical emergency services.

Utility companies are responsible for repairing lines and shutting down power or gas services that represent a threat to safety. Also, private or governmental tree removal services (urban forestry services) are essential in providing preventive measures and are often involved following severe wind incidents in clearing downed trees from power lines, roadways, and buildings. Following the initial response, regional, state, and local agencies may assist in cleanup and aid.

4.16 Tornadoes

Definition

A violently rotating column of air extending downward to the ground from a cumulonimbus cloud.

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[208] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 52.
[209] SEMCOG, *Land Use in Southeast Michigan 1990-2000*, Specific to Wayne County, Excluding Detroit, April 2004.
[210] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, April 2019, page 77.

Historical Events

Between 1950 and 2001, approximately 4% of tornadoes in Michigan were classified as violent tornadoes (F4 or F5 intensity).[211] However, these few violent tornadoes have been responsible for 88% of Michigan's tornado-related deaths.[212] One F4 tornado was recorded in Wayne County between 1950 and July 2001.[213]

On July 2, 1997, a series of thunderstorms went through south-central and southeast Michigan spawning 16 tornadoes, thirteen of which occurred in southeastern Michigan counties.[214] An F2 tornado was reported west of Highland Park to Hamtramck in Wayne County.

Frequency and Probability

Between 1950 and 2012, there were 28 tornadoes, ranging from F0 to F4, recorded in Wayne County, resulting in 136 injuries.[215] Four of those tornadoes were recorded between 1996 and 2017 resulting in 90 injuries and damages totaling $91,250,000. Tornadoes in Michigan are most frequent in the spring and early summer when warm, moist air from the Gulf of Mexico collides with cold air from the Polar Regions to generate severe thunderstorms.[216] Most tornadoes in Michigan occur in the southern Lower Peninsula, which averages 17 tornadoes per year.[217]

Tornadoes will continue to represent a hazard to the county and are most probable during the months of April through June.

Health & Safety

Michigan's tornadoes have resulted in more deaths than in many other tornado-prone states. Michigan ranks in the top 10 in single killer tornadoes, deaths per 10,000 square miles, and killer tornadoes as a percent of all tornadoes. Between 1950 and July 2009, 242 tornado-related deaths were reported in Michigan.[218]

There are approximately 4 tornado-related deaths per year in Michigan.[219] A tornado that occurred on July 2, 1997 in Highland Park accounted for 90 injuries. [220]

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[211] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, pages 61.
[212] Ibid.
[213] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001.
[214] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 65.
[215] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, April 2019, page 71.
[216] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001.
[217] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 62.
[218] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 60.
[219] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 60.

Area Impacted

A tornado would affect the entire population in the tornado path. The most vulnerable population would be mobile home residents. According to 2000 land use data, there are approximately 2,240 acres of manufactured home park development in the county, excluding Detroit.[221] Van Buren and Canton Township have the highest number of manufactured home establishments, with approximately 300 acres each.

The average tornado track is 16 miles long. The longest tracks have been reported at 200 miles long.[222] The tornado path width is typically less than one-quarter mile, but can be over one mile.

Economic Impact

Property damage is the greatest contributor to economic loss. The amount of damage varies greatly with the severity of the tornado. Also, damage or destruction to utility lines (primarily overhead lines) can result in the loss of power and other utilities anywhere from a few moments to several days. Tornadoes can also destroy or damage agricultural fields, disrupt transportation services due to debris and/or downed power lines, and destroy trees and other flora.

Property damage in Michigan averages more than $15 million per year. .[223] Between January 1, 1950 and June 30, 2005, property damage by tornadoes totaled over $123 million in Wayne County.[224]

A tornado that touched down in the Highland Park area on July 2, 1997, resulted in $90 million in property damage.[225] This was one of a series of 13 tornadoes that swept through southeast Michigan that same day. These resulted in an additional 2,900 damaged or destroyed homes, 200 damaged or destroyed businesses, over $25 million in public damage, and nearly $30 million in private damage elsewhere. Two deaths were caused directly by tornadoes and 120 injuries were reported. Power was lost for 350,000 electrical customers.[226]

Critical Facilities/Services

Tornado warnings systems and agencies play a major role in limiting the amount of deaths and injuries related to tornadoes. Warning sirens are located throughout the county. (Figure 9 displays community siren locations applicable to this Plan) The

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[220] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6, 2005.
[221] SEMCOG, *Land Use in Southeast Michigan 1990-2000*, Specific to Wayne County, Excluding Detroit April 2004.
[222] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 59.
[223] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 62.
[224] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6, 2005.
[225] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6, 2005
[226] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 65.

National Weather Service and local media (television and radio) provide advanced warnings to communities. Community warning sirens can be heard for several miles.

Initial response activities due to tornadoes would primarily be associated with local response from fire, police, and emergency medical care.

Utility companies (Consumers Energy, DTE Energy, SBC, etc.) would be essential for repairing lines and shutting down power or gas services that represent a threat to safety. Following the initial response regional, state, and local agencies may also assist in cleanup and aid.

4.17 Transportation Accidents

Definition

A transportation accident is a crash or other accident involving an air, land or water-based passenger carrier. (Note: Transportation accidents involving hazardous materials are addressed separately in Section 4.8.2, HazMat Incidents – Transportation.)

4.17.1 Air

Historical Events

Air transportation accidents result from four major causes:

- collision between two aircraft in-air,
- crash during in-air cruising due to mechanical failure, sabotage, etc.,
- crash during takeoff or landing, or
- collision between two aircraft during taxi or staging.

The majority of air transportation accidents occur during takeoff or landing, and therefore, impacted areas are typically located near airports or runways. Response to air transportation accidents may involve fire control, survivor rescue/first aid, site security and crowd/traffic control.

The most fatal airplane accident in Wayne County history, and one of the top 10 air accidents in US history, occurred on August 16, 1987 near Detroit Metropolitan Wayne County Airport in Romulus. Flight 255 crashed just after takeoff, killing 154 of 155 people on board as well as two people on the ground.[227]

A plane carrying the University of Michigan men's basketball team skidded off a runway at Willow Run Airport in March 2017 when a jammed part prevented the pilots from

[227] National Transportation Safety Board, www.ntsb.gov, Aviation Database Query, Wayne County, Michigan, report generated September 19, 2005.

bringing the aircraft nose up during takeoff. Of the 110 passengers and six staff on board only one was injured in the crash.[228]

Frequency

As shown on Figure 10, there are five airports within Wayne County. The airports provide for commercial flights, industrial shipping, corporate jets and charter planes. Two of the airports are owned by Wayne County; the other three airports are privately owned and operated. The Detroit Metropolitan Wayne County Airport handles approximately 24.4 million air passengers annually; accounting for roughly 87% of the air traffic of all Michigan airports.[229] Between 1990 and 2005, there were 28 air transportation incidents in Wayne County, nearly 2 incidents per year.[230]

Commercial passenger air transportation is available through two airports in Wayne County. Air transportation incidents in Wayne County will continue to occur and it is anticipated that the probability for this hazard will fluctuate with air traffic volume.

Health & Safety

Death and injury is limited in most aircraft accidents. Between 1990 and 2005, there have been 3 deaths from air transportation incidents in Wayne County, an average of one death every five years.[231] However, although rare, major crashes can be very deadly, as in the 1987 crash noted above.

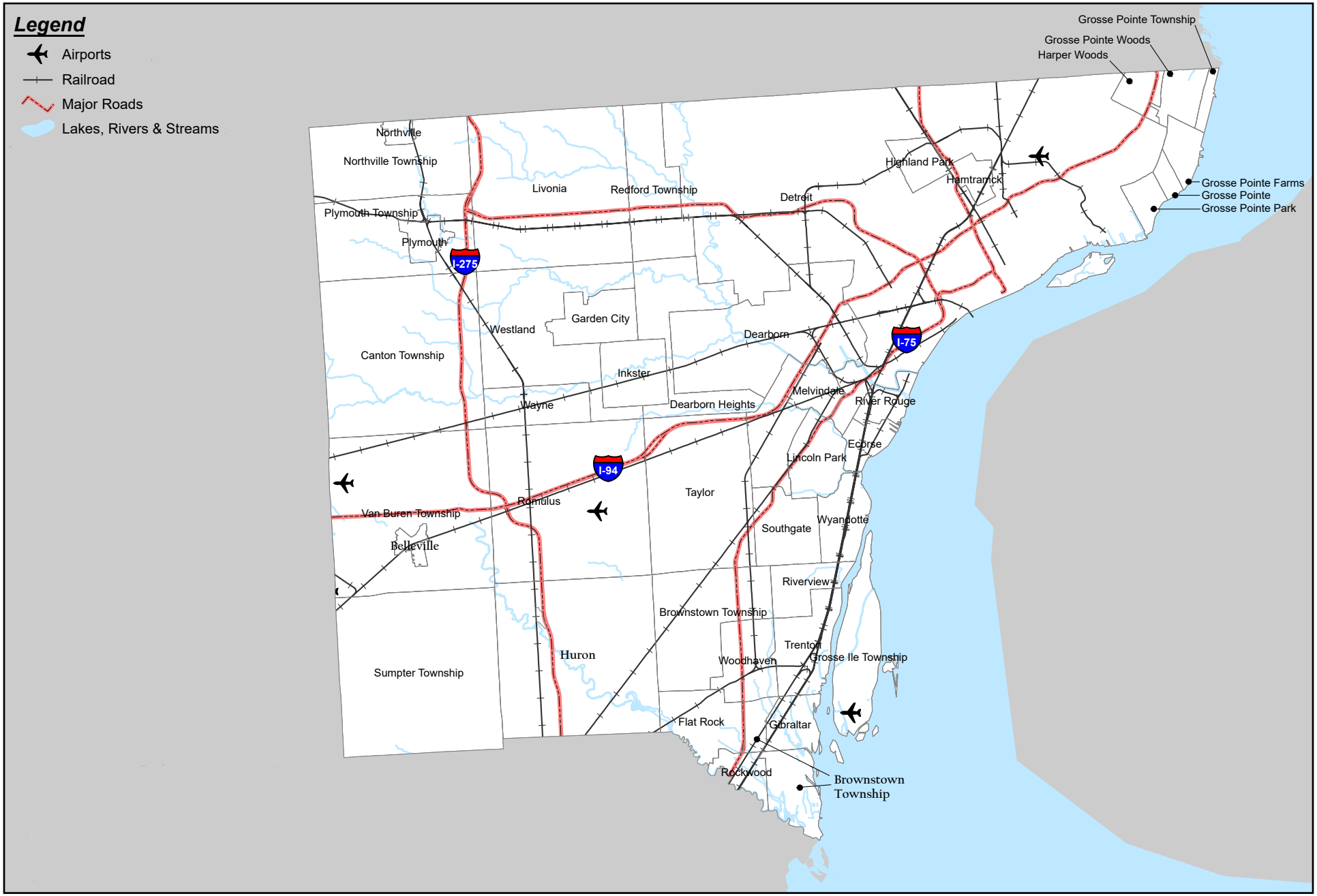
Area Impacted

Due to the fact that the majority of aircraft accidents occur during landing or takeoff, the area most at risk for impact is the airport (or heliport) and immediately adjacent areas.

Economic Impact

Economic impact would result from damage to the aircraft and damage to any structures or improvements on the ground at the site of the accident. Damages to aircraft would typically be the responsibility of the private owner. Because two airports are owned by Wayne County, damages to airport infrastructure at these facilities could be the

[228] Detroit Free Press. May 7, 2019. https://www.freep.com/story/sports/college/university-michigan/wolverines/2019/03/07/michigan-basketball-plane-crash/3095406002/
[229] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, July 2012, page 305.
[230] National Transportation Safety Board, www.ntsb.gov, Aviation Database Query, Wayne County, Michigan, report generated September 19, 2005.
[231] National Transportation Safety Board, www.ntsb.gov, Aviation Database Query, Wayne County, Michigan, report generated September 19, 2005.



Wayne County

Created for: Wayne County
Created by: RMH, April 23, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013))

Figure 10 - Hazard History: Transportation

responsibility of the county. Additional economic impact to the county may result if an accident causes disruption of services at the airport.

Critical Facilities/Services

Response to air transportation accidents is provided by local fire and police departments. Emergency response assistance is available through mutual aid arrangements.

Airports within Wayne County are an important service provided to area businesses. A significant accident at an airport could temporarily impede the county's ability to provide this service.

4.17.2 Highway

Historical Events

Vehicle accidents are common to all communities and can happen along any roadway. Most accidents are due to driver error or inclement weather conditions. Accidents involving modes of mass public transportation are of particular concern due to the high number of passengers which could be impacted.

Frequency & Probability

Michigan vehicle travel increased more than 20 percent between 1990 and 2015 and over 10 percent from 2013 to 2016.[232] Automobile accidents occur several times daily in Wayne County. In 2016, there were 312,172 traffic accidents on Michigan roads, resulting in 1,064 fatalities; a 22 percent increase since 2009. The number of fatalities per vehicle mile traveled increased from 0.91 to 1.07 from 2009 to 2016; slightly lower than the national average.[233] In 2003, over 18% of all traffic crashes reported in Michigan occurred in Wayne County.[234]

Health & Safety

The 71,227 traffic accidents in Wayne County in 2003 resulted in 222 fatalities and 22,093 injuries.

Economic Impact

The National Highway Traffic Safety Administration estimated the total economic cost of traffic crashes in Michigan at $8,069,000,000 for the year 2000.[235] This total includes all types of accidents and accounts for costs associated with lost productivity, medical

[232] American Society of Civil Engineers (ASCE), Michigan Section. 2018 Report Card for Michigan's Infrastructure. infrastructurereportcard.org/michigan.
[233] American Society of Civil Engineers (ASCE), Michigan Section. 2018 Report Card for Michigan's Infrastructure. infrastructurereportcard.org/michigan.
[234] State of Michigan, Office of Highway Safety Planning, 2003 Michigan Traffic Crash Facts, Reported Statewide Traffic Crashed By County In Michigan.
[235] U.S. Department of Transportation, National Highway Traffic Safety Administration, www.nhtsa.dot.gov, *The Economic Impact of Motor Vehicle Crashes 2000*, State Costs.

costs, legal costs, emergency services costs, insurance costs, travel delays, property damage, workplace losses, and human capital losses. Assuming that 18% of these accidents were in Wayne County, and assuming 2000 costs are representative of most years, the economic cost to the county would be over $1.45 billion per year.

Based upon the number of all traffic crashes in Michigan, the average cost of a traffic crash is $20,391 per accident. It is anticipated that this rate of economic loss would be higher for public passenger transportation given that more passengers are present and the higher cost of a bus versus a private automobile.

Critical Facilities/Service

The highway transportation system in Wayne County plays a vital part in the county's ability to provide services to the public. Traffic crashes are notorious for causing temporary traffic delays that complicate the county's ability to maintain a well operating transportation network.

4.17.3 Rail

Historical Events

Passenger rail accidents are typically associated with derailments or collision with motor vehicles attempting to cross railroad tracks. On January 23, 2003 in Romulus, the driver of a passenger vehicle ignored the warning signals at a level grade crossing and attempted to cross the railroad tracks. An approaching freight train struck the vehicle, killing the driver, injuring the passenger, and causing the derailment of 7 tank cars. While infrequent, accidents involving cars and trains at crossings are the leading source of rail fatalities.

Frequency & Probability

As shown in Figure 10, there are 134 miles of freight rail lines and 62 miles of passenger rail lines in Wayne County. Passenger rail service is provided by Amtrak with service between Pontiac, Detroit, Dearborn, and other southeast Michigan destinations.

From 1990 through 2009, there were 1970 railroad transportation accidents in Michigan, an average of almost 13 accidents each year.[236] However, rail-automobile accidents have been decreasing notably through this period; the 44 vehicle-train crashes recorded in 2009 is a 64.8% decrease over the preceding 10 year period.[237] The most common reported accidents (64%) are derailments. None of the derailments reported between 1999 and 2005 resulted in injury.

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[236] Federal Railroad Administration, http://safetydata.fra.dot.gov, all reports for all railroads in Wayne County, 1999 through December 2005, reports generated on December 13, 2005.

[237] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, July 2012, page 310.

Approximately half of the public rail-road crossings in Michigan have active warning devices but accidents still occur. It is anticipated that the likelihood of occurrence for this hazard will fluctuate with the rate of rail traffic within the county.

Health & Safety

Death and injury to passengers involved in railroad accidents is rare in Wayne County. From 1999 through mid-December 2005, there have been three deaths and six injuries as a result of this hazard.[238]

Area Impacted

Areas adjacent to a railroad are most at risk for impact from this hazard due to the potential for derailment. As previously stated, 58 of the 90 accidents reported in Wayne County from 1999 to 2005 involved derailment of cars or locomotives. Secondary impacts may result from accidents of this type if railroad crossings are blocked resulting in traffic delays.

Economic Impact

The greatest economic loss is property damage to the train equipment and railroad tracks. This loss is the responsibility of the owner/operator of the equipment and railroad.

Critical Facilities/Services

Given the frequency of this event, it is not anticipated that county services or facilities will be greatly impacted. Impact to county services may result if an accident blocks a railroad crossing, thus causing traffic problems.

4.17.4 Marine

Historical Events

Most shipwrecks in Michigan occur in waters exhibiting treacherous weather and currents particularly areas of Lakes Superior and Huron. However, the C.K. Collins did sink in the Detroit River (Wayne County) in 1854, killing 23 people.

The number of shipwrecks occurring in the Great Lakes decreased dramatically between the 1800s and the 1930s. Marine travel has significantly changed and most boat traffic now is recreational. Additionally, weather prediction, communications, technology, ship design and construction, and emergency response have all improved over time. The

[238] Federal Railroad Administration, http://safetydata.fra.dot.gov, all reports for all railroads in Wayne County, 1999 through December 2005, reports generated on December 13, 2005.

most recent significant accident occurred with the sinking of the Edmund Fitzgerald in 1975.[239]

Nineteen commercial marine passenger ferries operate from Michigan shorelines. Public marine passenger ferries are regulated and inspected by the U.S. Coast Guard to ensure public safety. To date, there has not been a significant accident involving public marine transportation in Michigan. Response to marine accidents differ significantly from air and land transportation accidents in that they can require underwater search and rescue. Typically, marine accidents involve recreational boating incidents and are often linked to individuals operating vehicles under the influence of alcohol. Like rail-automobile accidents, Michigan boating accidents are declining over time. The 131 boating accidents recorded in 2009 is a 40% decrease over the preceding 10 year period.[240]

4.18 Winter Hazards

4.18.1 Ice and Sleet Storms

Definition

Freezing rain is rain that freezes on contact with surfaces causing a coating of ice on exposed surfaces.

Historical Events

Between January 1, 1950 and June 30, 2005, seven ice storm/freezing rain events have been recorded in Wayne County.[241]

On January 7, 1994, much of lower Michigan experienced a mix of freezing rain, rain, and snow.[242] Ice accumulations during the event were approximately 1/4- inch over the southern third of Lower Michigan. Detroit Edison reported 50,000 people affected by power outages.

Freezing rain developed across southern lower Michigan late on February 26, 1995 and continued through the morning of the 27th.[243] Numerous traffic accidents were reported and most schools were closed.

On March 13, 1997, freezing rain caused 425,000 homes and businesses in the Metropolitan Detroit area to lose power.[244] Several thousand residents were without

[239] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, July 2012, page 311.
[240] Michigan Department of State Police, Emergency Management and Homeland Security Division, *Michigan Hazard Analysis,* MSP/EMHSD Publication 103, July 2012, page 314.
[241] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 21, 2005.
[242] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6, 2005.
[243] Ibid.

power for as long as four days. In addition to power lines, falling trees damaged dozens of cars, houses and most schools were closed, and numerous auto accidents occurred.

On January 39, 2002, a mix of freezing rain and snow led to the collapse of the roof at Checker's Savemore Drugs in Westland. Falling branches and the weight of the ice downed hundreds of power lines and left an estimated 290 thousand residents and businesses without power, mostly in the Metro Detroit area. Several communities in the Metro Detroit area declared snow emergencies and almost all school districts in the region were closed.[245]

In April 2018, a three-day storm with heavy rain, snow, sleet, and freezing rain hit southeast Michigan, including Wayne County.. Damage to trees and power outages were experienced across the region with nearly 500,000 DTE and Consumers Power customers losing service during the storm. Strong northeast winds also caused flooding along the Lake Erie shoreline.[246]

Frequency and Probability

NOAA's Storm Events Database reports three ice storms, one winter storm, and four winter weather events including sleet and freezing rain for Wayne County since 2000. In Michigan, there were 40 major events recorded from 1970 through July 2001.[247] Michigan averages one major event per year. The probability for ice and sleet storms to occur in Wayne County is high and is most likely to occur from December to March.

Health & Safety

Deaths and injury caused directly by ice or sleet storms are difficult to determine. Deaths and injury are usually caused by secondary effects such as auto accidents, downed power lines and heart attacks from overexertion. The majority of deaths related to ice storms are traffic related.

Area Impacted

Due to the widespread nature of ice/sleet storms the entire population could be impacted either directly or secondarily (i.e., power outages, etc.). According to 2000 Land Use Data, Wayne County, excluding Detroit, has approximately 6,816 acres of roadway, 917 acres of utility, and 1,036 acres containing electrical transmission lines.[248]

Economic Impact

Economic loss would include property damage and costs of response (clearing roadways, downed power lines or trees, etc.).

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[244] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6, 2005.
[245] Ibid.
[246] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* May 1, 2019.
[247] Ibid.
[248] SEMCOG, *Land Use in Southeast Michigan 1990-2000*, Specific to Wayne County, Excluding Detroit, April 2004.

From 1970 to June 2005 ice/sleet storms caused nearly $30 million in property damage (nearly $550,000 each year). Michigan has suffered $100 million in property damage from major storms between 1976 and 2005.

Critical Facilities/Services

Response to an ice/sleet related emergency would primarily be localized. Initial response activities due to emergencies from sleet and freezing rain would primarily be associated with local response from police and medical emergency services.

Utilities may require repair and maintenance resulting from sleet and freezing rain. As in the event that occurred on April 3, 2003, regional or out-of-state services may be required to assist in cleanup and repair activities. Also, private or governmental tree removal services are often involved following severe wind incidents in order to remove trees from roadways, yards, and away from power lines.

The National Weather Service, NOAA, and local media can alert the public of severe storms capable of producing sleet and freezing rain.

4.18.2 Snow Storms

Definition

A period of rapid accumulation of snow accompanied by high winds and cold temperatures.

Historical Events

Between January 1, 1950 and June 30, 2005, 16 heavy snow events, 5 snow events, and 6 winter storms were reported in Wayne County.[249]

On January 26, 1977 a Presidential Emergency Declaration was issued for 15 counties in the southern part of the State. Many residents were isolated in rural residences or stranded in public shelters.[250]

On March 12-14, 1993 a snowstorm now called “The Storm of the Century” struck the eastern U.S. dumping 56 inches of snow in some areas and causing $2 billion in property damage. The storm impacted 26 states and approximately 50% of the nation’s population. A total of 270 deaths and over 600 injuries were attributed to the storm.[251]

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[249] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* May 2019.
[250] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 46.
[251] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2012, page 48-49.

On March 19, 1996, snow accumulations of 5.8 inches combined with high winds resulted in power outages to 173,000 homes and businesses in southeast Michigan.[252]

On December 11, 2000 a powerful snow storm dumped heavy snow across southeast Michigan.[253] Seven inches were reported in Grosse Pointe Farms, 8-10 inches were reported in Hamtramck, 12 inches were reported in Belleville, 8-11 inches were reported in Wayne, and 5 inches were reported in Grosse Ile with power outages in Trenton.

Frequency and Probability

NOAA's Storm Events Database reports three ice storms, one winter storm, and four winter weather events including sleet and freezing rain for Wayne County since 2000.[254] The Michigan Hazard Analysis records 46 snow storms or blizzards impacting Wayne County between 1996 and 2017 and resulting in an estimated $960,000 in damage and economic loss.[255] Wayne County averages more than two major events per year. The probability for winter snowstorms to occur in Wayne County is high and is most likely to occur from December to March.

Average annual snowfall in Michigan ranges from 30 to 200 inches. Wayne County had an average season snowfall of approximately 30 inches between the 1950-51 and 1978-80 seasons.[256] It is probable that snowstorms will occur in the future in Wayne County.

Health & Safety

Deaths caused directly from the event are difficult to determine. Deaths related to snowstorms are usually caused by secondary effects such as delays in emergency vehicle response, auto accidents, downed power lines and heart attacks from overexertion. The direct risk to human life from snowstorms is low.[257]

Area Impacted

Blizzards are the most dramatic of all snowstorms, bearing strong winds and an enormous amount of snowfall. Snowstorms can impact a large area of a community, especially if they result in heavy accumulations of snow. Due to the widespread nature of snowstorms the entire population could be impacted either directly or secondarily (i.e. power outages, etc.). Wayne County has approximately 6,816 acres of roadway.[258]

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[252] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6, 2005.
[253] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* September 6,2005.
[254] National Climatic Data Sponsored Website, www.ncdc.noaa.gov/cgi-win/wwcgi.dll?wwEvent~Storm, *Standard Query for Severe Weather,* May 1, 2019.
[255] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* April 2019, page 124.
[256] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001, page 235.
[257] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001, page 11.
[258] SEMCOG, *Land Use in Southeast Michigan 1990-2000*, Specific to Wayne County, Excluding Detroit, April 2004.

Economic Impact

Primary costs would include property damage and snow removal. Economic losses are dependent upon the degree of storm severity. Schools and businesses may be closed if snowfall is severe enough or if a State of Emergency is declared that prohibits traffic on roadways.

Critical Facilities/Services

Response to a snow related emergency would primarily be localized. Initial response activities due to emergencies from snowstorms would primarily be associated with local response from medical emergency services, public works departments, and agencies such as the Wayne County Road Commission and MDOT. Municipalities would have increased costs in snow removal activities.

Transportation would be affected as roads and airports could see heavy delays or short-term to long-term closures. Schools and businesses may be closed for a day to several days.

The National Weather Service, NOAA, and local media are critical in alerting the public of severe storms capable of producing snowstorms and blizzard conditions.

4.19 Terrorism/Active Assailant Incidents

Definition

An intentional, unlawful use of force, violence or subversion against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political, social, or religious objectives. An Active Assailant may or may not be affiliated with a terrorist organization and may not otherwise be considered a terrorist. In the US many active assailant events have been lone shooter driven. For the purposes of this Plan they are described together despite ideological objective.

Historical Events

The most recognized forms of terrorism include assassination, bombings, and extortion. These acts are often identified with particular groups or organizations. The Middle East and portions of Europe, South America and Asia have been greatly impacted for many years by acts of terrorism and sabotage. In more recent years, the United States has been victim to acts of terrorism.

Wayne County has experienced instances of terrorism in the past several decades. In 2001, a homemade bomb left outside the St. Paschal Babylon Catholic Elementary School in Taylor, MI was inadvertently carried inside where it detonated injuring 10 people. In July of 2000, an individual pulled wiring from around 100 streetlights throughout Detroit and, in one case, attached them to a nearby fence, electrifying it. The

city was forced to cut power to more than 600 streetlights for repairs that were estimated to cost $26,000.[259]

Terrorism events may simply involve the threat of action or thwarted attempts. In 2018, a Detroit man pleaded guilty for threats, made in 2016, against the police. The case was declined for lack of evidence by the Wayne County Prosecutor but taken up by Michigan's Attorney General.[260] Similarly, a local high school student was arraigned on two counts of terrorism and two counts of making bomb threats for writing the threats on the bathroom walls at Salem and Plymouth High Schools.[261] The threats came less than a month following the shooting at Marjorie Stoneman Douglas High School in Parkland, Florida.

During the writing of this plan the University of Michigan campus in Ann Arbor was placed on lockdown as local, state, and federal officials searched for a possible gunman. What students suspected were gunshots, triggering the incident, was later determined to be balloons popping. Social media was an important tool in notifying the student body and surrounding community to seek cover.

Cases such as these have occurred throughout Michigan. In 1927, a man detonated 1000 pounds of explosives underneath a local school in Bath, Michigan. The explosion killed 41 people and injured nearly 60 more and stands as the worst school related attack in U.S. history.[262]

Frequency & Probability

It is difficult to establish a frequency for terrorist activity in Wayne County based on historical events and how you interpret trends depends upon the data sources used and the time frame of comparison. James Alan Fox, a professor of criminology at Northeastern University, notes that there have been 16 multiple-victim school shootings in schools since 1996. Eight of these incidents have resulted in four or more deaths and, thus, have been termed mass shootings.

Mass shootings are relatively rare. Fox found that, on average, they occur 20 to 30 times per year with approximately one of those located at a school. He and his associate found that shootings involving students have been declining, with four times fewer students being killed as a result now than in the early 1990s. He points out that more kids die each year from drowning in pools or from bicycle accidents.

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[259] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis*, December 2001, Page 162-163.
[260] Michigan Radio. February 7, 2018. https://www.michiganradio.org/post/detroit-man-pleads-guilty-terrorism-charge-facebook-rant-against-police
[261] Detroit Free Press, March 8, 2018. https://www.freep.com/story/news/local/michigan/wayne/2018/03/08/plymouth-canton-school-bomb-threat/406759002/
[262] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis*, December 2001, Page 166.

This contrasts with a study reported in the *Journal of Child and Family Studies*[263] that found that more people have died or been injured in mass school shootings in the United States in the past 18 years than in the entire 20th century. Despite a lack of an established frequency for this hazard, it is likely to occur in the future.

Health & Safety

Due to the nature of terrorist of attacks, it is difficult to establish a death or injury rate from historical events. Not all acts of terrorism are intended to cause death or injury, as demonstrated in the 1971 bus bombings in Pontiac, MI, nor do all of those intended for harm do so, as seen with the several homemade bombs found and safely detonated throughout Wayne County. However, all of these occurrences result in a general feeling of insecurity and fear that hurts social and economic systems in the areas affected.

Area Impacted

Terrorism can take many forms and the aim of terrorist attacks can vary from destruction of property to harming people to disrupting quality of life. Depending on the type of terrorist attack, property damage can be extensive.

Further information on this matter is law enforcement sensitive and homeland security sensitive and, therefore, is not available to the general public.

Economic Impact

It is difficult to determine the economic impact of terrorist acts. Given that terrorism can take many forms and have widely different consequences, there is the potential for terrorist acts to cause great economic damage.

Critical Facilities/Services

Terrorist acts carried out on public infrastructure can directly impact the county's ability to operate essential facilities and provide services. Significant terrorist acts would require large-scale response from all levels of government.

Special Consideration

Homeland security is addressed under a County-wide threats and needs assessment. Terrorist acts, outside of active assailant events, are not considered in this Plan.

4.20 Weapons of Mass Destruction

Definition

Weapons intended to cause widespread damage and high number of casualties.

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[263] Antonis Katsiyannis, Denise K. Whitford, Robin Parks Ennis**.** Historical Examination of United States Intentional Mass School Shootings in the 20th and 21st Centuries: Implications for Students, Schools, and Society**.** *Journal of Child and Family Studies*, 2018; DOI: 10.1007/s10826-018-1096-2

Historical Events

Weapons of mass destruction typically fall into four categories: 1) missiles, 2) biological weapons, 3) nuclear weapons, or 4) chemical weapons. Currently, there are 33 countries known to have one or more types of weapons of mass destruction.[264] A number of nations and organizations may also be capable of obtaining weapons of mass destruction.

Frequency & Probability

Weapons of mass destruction have never been used to carry out an attack in Wayne County. Globally, there have been 18 attacks since 1985. [265] Although Wayne County does not have a history of attacks using weapons of mass destruction, the possibility of such an event does exist.

Health & Safety

Given the nature of weapons of mass destruction, a successful use of these weapons would cause great loss of life and injury. Death and injury rates are highly variable with each attack and the form of weapon used. The atomic bombs dropped on Hiroshima and Nagasaki during World War II killed an estimated 210,000 people initially[266], with radiation related deaths stretching to the present. As a reference, these bombs each carried 20 kiloton yields, while conventional nuclear weapons today carry 20 megaton yields. Chemical and biological weapons are often feared as they are easier to produce and are lethal in smaller amounts. These weapons, while they have historically killed fewer people and are harder to deliver successfully can result in the death of thousands as well as the disruption of agriculture and water infrastructures.

Depending on the type of weapon used, the effects on human health can linger for years, continuing to present a hazard.

Area Impacted

Further information on this matter is law enforcement sensitive and homeland security sensitive and, therefore, is not available to the general public.

Economic Impact

It is difficult to estimate the economic impact of a successful attack using weapons of mass destruction. It is anticipated that such an event would be incredibly damaging to life, property and infrastructure, as well as the local, state, and possibly federal economy.

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[264] Federation of American Scientists, www.fas.org, Intelligence Resource Program, Countries With Weapons of Mass Destruction, January 29, 2004.
[265] Nuclear Threat Initiative, www.nti.org, Weapons of Mass Destruction Chronology 1985 through 2003, January 30, 2004.
[266] The Detroit Free Press, www.freep.com, *Bombings at Hiroshima, Nagasaki: 60 Years Later, Many Wonder – Were Atomic Blasts Necessary?*, August 5, 2005.

Critical Facilities/Services

An attack using weapons of mass destruction against public infrastructure can directly impact the county's ability to operate essential facilities and provide services. Successful attacks would require large-scale response from all levels of government. As stated above, the county has identified and evaluated locations within the county which are potential targets for weapons of mass destruction.

Special Consideration

Homeland security is addressed under a separate threat and needs assessment. Therefore, weapons of mass destruction are not considered in this Plan.

Table 4. Wayne County Hazard History Summary

Hazard	Annual Frequency	Frequency Rank	Hazard Impact					Data Source
			Probability****	Health & Safety	Area	Economic	Consequence	
Transportation Accidents - Highway*	55,001	1	Very High	Medium	Local	High	Medium	MSP, NHTSA, MTCF, Detroit News
Criminal Acts - Vandalism**	13,637	2	Very High	Low	Local	Low	Low	MSP
Fire Hazards - Structural Fires	4,207	3	Very High	Medium	Local	High	Medium	NFIRS
Fire Hazards - Wildfires	1,640	4	Very High	Low	Local	Low	Low	NIFC
Criminal Acts - Arson***	917	5	Very High	Medium	Local	Low	Medium	NFIRS, MSP
Transportation Accidents - Marine	10	6	High	Low	Local	Low	Low	USCG and NSC
Thunderstorm Hazards- Severe Wind	7	7	High	Medium	County	High	Medium	NOAA
Infrastructure Failure - Water System	5	8	High	Low	Local	Medium	Medium	Wayne County
Transportation Accidents - Rail	3	9	High	Low	Local	Low	Low	USDOTFRA
Petroleum and Natural Gas Pipeline Accidents	2	10	High	Medium	Local	Medium	Medium	MSP, NRC
Thunderstorm Hazards - Hail	2	10	High	Low	County	Medium	Medium	NOAA
Winter Hazards-Snowstorms	2	10	High	Medium	County	High	Medium	NOAA
Flooding-Riverine	1.3	13	High	Low	Local	High	Medium	NOAA
Flooding-Urban	1.3	13	High	Low	Local	High	Medium	NOAA
Civil Disturbance*	1	15	High	High	Local	High	Medium	Armstrong Economics
Flooding - Dam Failure	1	15	High	Low	Local	High	Medium	State of Michigan
Infrastructure Failure - Electrical System	1	15	High	Medium	Local	High	High	Wayne County, MSP
Transportation Accidents - Air	1	15	High	Medium	Local	Low	Low	FAA
Winter Hazards- Ice and Sleet	1	15	High	Medium	County	Medium	Medium	NOAA
Flood-Great Lakes Shoreline and Erosion	0.95	20	Moderate	Low	Local	Medium	Medium	NOAA
Extreme Temperatures-Extreme Cold	0.83	21	Moderate	Medium	County	Low	Medium	NOAA
Extreme Temperatures-Extreme Heat	0.67	22	Moderate	Medium	County	Low	Medium	NOAA
HazMat Incidents - Fixed Sites	0.60	23	Moderate	Medium	Local	Very High	High	NRC
Infrastructure Failure - Storm Sewer System	0.50	24	Moderate	Low	Local	Low	Low	Wayne County
Infrastructure Failure - Communications	0.50	24	Moderate	Medium	Local	Low	Medium	Wayne County
Infrastructure Failure - Bridges, Roads, and Overpasses	0.50	24	Moderate	High	Local	High	Medium	MDOT and FHA
Thunderstorm Hazards - Lightning	0.50	24	Moderate	Medium	County	Medium	Medium	NOAA
Tornadoes	0.50	24	Moderate	High	County	High	High	Wayne County and NOAA
HazMat Incidents - Transportation	0.40	29	Low	Medium	Local	Medium	Medium	NRC
Subsidence	0.40	29	Low	Low	Local	Low	Low	State of Michigan
Criminal Acts - Mass Shooting	0.35	31	Low	High	Local	Medium	Medium	MSP
Invasive Species	0.35	31	Low	Low	County	High	Medium	State of Michigan
Public Health Emergencies - Pandemics and Epidemics	0.33	33	Low	High	County	High	High	MSP
Public Health Emergencies - Contaminated Food Supply and/or Water Supply	0.33	33	Low	High	County	High	High	MSP
Gas/Oil Shortages or Supply Disruption	0.23	35	Low	Low	County	Very High	High	State of Michigan
Terrorism and Sabotage	0.21	36	Low	High	Local to County	High	High	State of Michigan
Drought	0.21	36	Low	Low	County	Medium	Medium	Wayne Co., NOAA, & NDMC
Earthquake	0.20	38	Low	Low	County	Low	Low	USGS
Fog	0.20	38	Low	Medium	County	Medium	Medium	State of Michigan, NOAA
Oil and Gas Well Incidents	0.20	38	Low	Low	Local	Medium	Low	MSP
Catastrophic Events/National Emergencies	0.12	41	Low	Medium	County	Medium	Medium	No established frequency
Infrastructure Failure - Sanitary Sewer System	0.05	42	Low	High	Local	Medium	High	Wayne County
Fire Hazards - Scrap Tire Fires	0.04	43	Low	Low	Local	Low	Low	MSP and MDEQ
Celestial Impact	0	44	Very Low	High	County	High	High	No established frequency
Nuclear Power Plant Accidents	0	44	Very Low	Medium	County	High	Medium	No established frequency
Weapons of Mass Destruction	0	44	Very Low	Very High	County	Very High	Very High	No established frequency

* Value shown is the total number of vehicle crashes recorded in Wayne County for 2017. The five-year average for 213 through 2017 equals 50,750. Number of fatal crashes in Wayne County for 2017 equals 157.

** Vandalism = Propery Crime

*** Arson firgures do not include City of Detroit

**** Probability categories: Very High > 10 events per year (average), High $\geq$ 1 to 10 events annually, Moderate $\geq$ 0.5 to 0.99 events per year, Low $\geq$ 0 to 0.49 annual events, and Very Low = 0 events recorded.

5. Hazard Assessment

5.1 Hazard Assessment

Hazards (Table 5) were ranked according to historical risk (frequency and impact), according to committee and community survey responses, and by comments on open ended questions in the survey. These rankings formed the basis for individual evaluations and group discussions during committee meetings that resulted in a final list of hazards of particular significance to the county. Final selection of the top hazards was based on a combination of risk and impact rankings as described below.

5.1.1 Survey

The first survey was provided to 62 individuals in the Advisory Committee in electronic form, and included 40 hazards categorized as natural, technological, or human -related hazards. A total of 57 participants (92%) participated in survey number one. The results of the survey were presented to the Advisory Committee for review and evaluation at the first workshop.

This first survey asked respondents to rank the importance of 40 hazards on a scale of 1 (Not Important) to 5 (Extremely Important). Importance was defined as an evaluation of the negative consequences of the hazard on the population, economy and environment of the county. In addition, the survey included open ended questions asking respondents to list the most significant hazards in each of three major categories: natural, technological, and human. Respondents were asked to determine significance based upon the severity of the impact, probability of occurrence, and preparedness of the county to respond. These comparisons and responses were used to initially rank the relative significance of each hazard in order to consider frequency and consequence during the first workshop. Hazard rankings in the top five are highlighted in Table 5.

5.1.2 Risk Analysis Workshop

Survey results noting highly ranked hazards was then used during the Advisory Committee workshop to identify the top hazards for further evaluation. Although the top five hazards, in various rankings, are highlighted in Table 5 below, this list was not intended to be a final ranking, but was used to start discussion on the selection of hazards significant to the county. Of particular importance were those hazards ranked highly across more than one column.

Discussion by the committee removed those hazards that were historically significant because of their large frequency but were not of concern for future mitigation programs: specifically, most criminal acts, structural fires, and transportation accidents. Secondly, hazards that were beyond the scope of this program were removed: specifically, nuclear power plant accidents.

Table 5. First 2019 Survey Hazard Ranking Results, With 2013 Workshop Ranking

	Historic Frequency Ranking	Survey Open Ended	Survey Prompted Rank	Weighted Rank (1 high, 5 low)	2013 Plan Workshop Rank
Natural Hazards					
Celestial Impact	43		38	39	
Drought	40		27	30	
Earthquake	35		37	37	
Extreme Temperatures - Extreme Hot or Cold	21, 20	5	7	9	1, 5
Fire - Wildfires	4		36	36	
Flooding - Riverine or Shoreline	13	3	21	6	
Fog	13		33	31	
Invasive Species	30		34	34	
Subsidence - Natural	28		39	32	
Thunderstorms - Hail, Lightning, Severe Wind	10, 23, 7	1	1	3	
Tornadoes	23	4	6	7	
Winter Hazards - Snow, Ice & Sleet	10, 15	2	2	12	
Technological Hazards					
Fire - Scrap Tire	42		35	35	
Fire - Structural	3		23	20	
Flooding - Dam Failure	15	9	28	33	
Flooding - Urban	13	4	12	16	6
Hazmat Incidents - Fixed Site	22		18	11	3
Hazmat Incidents - Transportation	28	2	9	15	
Infrastructure Failure - Bridges, Roads, Overpasses	23	1	3	8	
Infrastructure Failure - Communications	23	5	15	5	4
Infrastructure Failure - Electrical Systems	15	3	8	1	4
Infrastructure Failure - Sanitary/Storm Sewers	41, 23	6	13	2	
Infrastructure Failure - Water System	8		11	13	4
Nuclear Power Plant Accidents	43	7	14	21	
Oil and Gas Well or Pipeline Accidents	37, 10	8	25	14	
Subsidence - Mining or Infrastructure	28		29	38	
Human Hazards					
Catastrophic Events/National Emergencies	40	3	16	24	
Civil Disturbance	15	5	19	22	
Criminal Acts - Mass Shootings/Active Assailant(s)	30	4	5	19	
Criminal Acts - Vandalism and Arson	5, 2	5	20	27	
Criminal Acts - Homicide/Robbery/Carjacking	—				
Gas/Oil Shortages or Supply Disruptions	34	7	30	18	
Information Technology Intrusion	—	6	17	29	
Public Health Emergencies - Pandemics, Epidemics,Food/Water	32	1	4	23	2
Terrorism/Sabotage	35		26	17	
Transportation Accidents - Air	15	7	22	10	
Transportation Accidents - Marine	6		32	28	
Transportation Accidents - Rail	9	7	31	26	
Transportation Accidents - Surface Roads/Highways	1	2	10	4	
Weapons of Mass Destruction	43		24	25	

The Advisory Committee reviewed the hazard history of the County, the hazard ranking in the 2013 Plan, and the results of the first survey. Workshop participants discussed and both the frequency and impacts of various hazards in three categories: health and safety, area affected, and economic effects. The Committee also discussed the importance of each hazard and its impacts to population, environment, and the economy in each of 11 asset classes that exist in the county, such as residential areas, business districts, industrial sites etc.

Following discussion, the following 17 hazards were initially selected for further review and analysis:

- Catastrophic Events/National Emergencies
- Civil Disturbance

- Criminal Acts - Mass Shootings/Active Assailant(s)
- Criminal Acts - Vandalism & Arson
- Extreme Temperatures - Extreme Hot or Cold
- Flooding - Riverine or Shoreline
- Flooding - Urban
- Hazmat Incidents - Transportation
- Infrastructure Failure – Bridges & Roads
- Infrastructure Failure – Communications
- Infrastructure Failure – Electrical Systems
- Infrastructure Failure – Water & Sewer Systems
- Public Health Emergencies - Pandemics/Epidemics, Food/Water Contamination
- Severe Weather Summer
- Severe Weather Winter
- Thunderstorms - Hail, Lightning, Severe Wind
- Tornadoes
- Transportation Accidents - Surface Roads/Highways
- Winter Hazards - Snow, Ice & Sleet

Further discussion noted that electrical and communication systems failure was often related to the underlying weather event/hazard and that the historic frequency of bridge failure was somewhat low. As a result, the list of 17 hazards was reduced to 14 deemed significant for the County and selected for further analysis. This selection was intended to focus discussion and evaluation and was not intended to eliminate any hazard from consideration.

The committee was then asked to select and weight criteria for individually evaluating the top hazards. Using a paired comparison methodology, workshop participants determined the most important criteria for evaluating hazards, and weights for each individual criterion. Participants were asked to brainstorm (individually, and then in small groups) to create a list of criteria specifically applicable to Wayne County. A total of seven criteria were originally identified. The selected four most important criteria, and their relative weights during the ranking process, are provided below.

- Ability to Recover from Disaster/Incident (weighted 7)
- Associated Infrastructure Failure (weighted 8)
- Loss of Life and Injury (weighted 15)
- Geographic Area of Impact (weighted 7)

Ranking Criteria For Hazards - Goal Setting

2019 Plan Update Meeting Results

	Ability to Recover from Disaster/Incident	Infrastructure Failure	Loss of Life and Injury	Geographic Area of Impact	Sum
Ability to Recover from Disaster/Incident		3	1	3	7
Infrastructure Failure	3		2	3	8
Loss of Life and Injury	5	5		5	15
Geographic Area of Impact	3	3	1		7

With respect to the criterion, the importance of one item to the other is;
5 = much greater
4 = greater than
3 = the same as
2 = lower than
1 = much lower

The impact of each hazard on each of the four criteria was then evaluated by the group. This was used to rank each hazard according to its impact and risk.

The final hazard rank from the workshop and risk rank for each hazard were then factored together to identify the most critical hazards for the county. The committee considered the most crucial hazards to be: public health emergencies, active assailant incidents, and water and sewer system infrastructure failure.

Hazard and Risk Assessment as Ranked by Advisory Committee:

Hazard Event	Workshop Rank	Hazard Risk Rank	Action Plan Needed
Extreme Temperatures - Extreme Hot or Cold	5	6	3
Flooding - Riverine or Shoreline	4	10	3
Thunderstorms - Hail, Lightning, Severe Wind	14	12	4
Tornadoes	8	13	4
Winter Hazards - Snow, Ice & Sleet	8	2	2
Flooding - Urban	8	9	4
Hazmat Incidents - Transportation	5	8	3
Infrastructure Failure - Water & Sewer Systems	1	5	1
Catastrophic Events/National Emergencies	11	13	4
Civil Disturbance	13	11	4
Criminal Acts - Mass Shootings/Active Assailant(s)	3	2	1
Criminal Acts - Vandalism and Arson	12	1	2
Public Health Emergencies - Pandemics, Epidemics, Food/Water, Opioid Crisis	2	4	1
Transportation Accidents - Surface Roads/Highways	7	6	4

The need for a county-wide action plan to address each of the most important hazards was evaluated based on a table that compared the workshop rank (in columns) to hazard risk rank (in rows), such as the one shown here.

Action Plan Assessment		
	Rank	
Risk	1-5	6-10
1-5	1	2
6-10	3	4

The first workshop prioritized and evaluated the top 14 hazards described above, and 11 critical assets. The assets considered include the following (in order of ranked critically):

- Residential Areas.
- Hospitals/Response Facilities
- Utility Facilities
- Roads, Railroads, Bridges
- Industrial Sites
- Open Space
- Central Business District
- Sports/Entertainment Arenas
- Public Facilities
- Schools, Churches
- Commercial Sites

Individual assets were evaluated to determine their vulnerability to each hazard. The effect of a hazard on each asset, and for each of the three criteria, was evaluated in an interactive process. This was used to rank the most critical assets. The most important hazards identified in the first part of the workshop were then evaluated for the likelihood of impacting a specific asset, and the consequence of such an impact on that asset.

The risk to each asset was then ranked, and the criticality of the asset and asset risk rank were then factored together to identify the most vulnerable assets in the county. As indicated below, assets with a criticality and risk rank in the top half were considered most vulnerable (as indicated by an assessment ranking of 1). The committee considered the most vulnerable assets to be:

- Hospitals/Skilled Care Facilities
- Residential Areas.
- Schools/Churches
- Roads, Railroads, & Bridges
- Central Business Districts

Vulnerability Assessment of Critical Assets as Ranked by Advisory Committee:

Critical Asset	Criticality Rank	Asset Risk Rank	Vulnerability
Commercial Sites	10	6	4
Hospitals/Skilled Care Facilities	1	5	1
Industrial Sites	5	8	3
Open Space	11	11	4
Public Facilities	9	10	4
Residential Areas	2	3	1
Roads, Railroads, Bridges	6	4	2
Utility Facilities	2	7	3
Schools, Churches	4	2	1
Sports/Entertainment Arenas	6	9	4
Central Business Dist.	6	1	2

The Vulnerability Assessment was based on this table, which compares the criticality rank (in columns) to asset risk rank (in rows):

Vulnerability Assessment		
	Criticality	
Risk	1-5	6-11
1-5	1	2
6-11	3	4

5.2 Community Input

The overall goals of a community with respect to hazard mitigation are to protect the local population from natural, technological, and human health hazards that may occur, and to reduce the potential impact of these disasters on vulnerable areas or populations within the community. Representatives from each community in Wayne County were contacted to identify hazards of particular concern to that community and specific hazard vulnerabilities within the community.

A ranking of community hazards identified in the responses is provided in the table below. A value of 1 represents the highest ranking. Communities discussed on average 6 of their highest ranked hazards.

Representatives of the 42 Wayne County communities discussed in this Plan were asked to review their section(s) of the 2013 HMP and revise their individual hazard priorities and mitigation strategies as appropriate. If comments were not received from individual communities during through the survey instruments used or during one of the workshops, community emergency managers were interviewed by phone to update community specific hazard and mitigation strategy priorities, The following sections summarize the contents of each of the community responses regarding potential hazards and the critical assets that could be affected. Descriptions of the communities' land use and population are taken from Southeast Michigan Council of Governments (SEMCOG) community profiles, Descriptions of each communities' policies and programs are taken from a review of their Codes of Ordinances, Zoning Ordinances, etc.

5.2.1 City of Allen Park

Hazard Priorities

During and after heavy thunderstorms, increased volumes of storm water in the north branch of Ecorse Creek has caused significant flooding in the City of Allen Park. In particular, the area bordered by M-39, I-94 and Outer Drive is most vulnerable. This area has a history of sewer failures resulting in basement flooding. City representatives have also voiced concern over the potential health risk to residents as a result of sewers backing up into their homes.

Tornadoes were also mentioned as a significant risk to the population of the city. Of greatest concern was the impact on residents living in the senior citizen communities located within Allen Park.

I-94 and M-39 are heavily traveled routes located in Allen Park. Both highways have a history of numerous vehicular accidents. There is a particular risk due to the large volume of trucks that carry hazardous material through the community.

Of additional concern is the potential of a hazardous material accident at one of the industrial complexes located in the city. Also mentioned was the risk of a high-pressure gas main rupture as well as the risk of an incident involving trains that transport hazardous materials through the community.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Allen Park is primarily a residential community of approximately 28,634 people (SEMCOG 2019 estimate). The City is largely built-out with only 6% vacant land and 3.6% of its land area in recreation/open space (0% agriculture). The City's largest land uses are single family residential and transportation, communication, and utility (TCU) at 34.6% and 34.2%, respectively. The City is in the frequently-flooding Ecorse Creek Watershed and 55% of the community is categorized as impervious surface.

Allen Park participates in the National Flood Insurance Program and amended their Code of Ordinances in 2012 to adopt the FEMA Firm Maps and administer Appendix G of the Michigan Construction Code, to minimize losses due to flood conditions in specific flood hazard areas.

Allen Park is a member of the Alliance for Downstream Watersheds and works in partnership with other communities to manage stormwater under a Phase II Municipal

Separate Stormwater System (MS4) permit. In addition to including tools to regulate floodplain development, their Code of Ordinances includes protections to reduce the potential for structural or wildfires and regulate hazardous waste.

Areas for possible improvement could include regulatory mechanisms to reduce the impact of existing impervious surfaces as land is redeveloped or to protect smaller remaining areas of open space (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, etc.).

5.2.2 City of Belleville

Hazard Priorities

Tornadoes, ice storms and thunderstorms accompanied by high winds, create a threat to the City of Belleville and to its residents. Resulting power outages and extreme temperatures could have a significant effect on the population, especially on the elderly. The citizens considered most at risk for weather-related emergencies are the residents of the city's two senior citizen facilities and those living in mobile home communities located in the northeast and southeast areas of Belleville.

According to city officials, trains and trucks transporting hazardous materials, industrial facilities, as well as a natural gas pipeline that traverses the city, create the potential of a hazmat emergency. To better respond to these and all potential emergencies in Belleville, officials suggested that there is a need for more reliable communication equipment for the police and fire departments. City officials also identified a need for a program to respond to active shooters, particularly in schools.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Belleville is primarily a residential community of approximately 4,094 people (SEMCOG 2019 estimate) on the shores of Belleville Lake, an impoundment on the Huron River. The City's largest land use is single-family residential (37.1%) and 43.2% of the community is categorized as impervious surface. The City's population appears to be aging with 200-2018 growth in most age categories over 55 and losses in age groups younger than 55; the City is projected to lose population between now and 2045.

Belleville is a member of the Huron River Watershed Council and the Alliance of Downriver Watersheds. The City lies within the Ann Arbor Urbanized Area and, as such, falls under the Phase II municipal (MS4) stormwater permit program. and works in partnership with other communities to manage stormwater under a Phase II Municipal Separate Stormwater System (MS4) permit. In addition to including tools to regulate floodplain development, their Code of Ordinances includes protections to reduce the potential for structural or wildfires and regulate hazardous waste.

Possible areas for improving regulatory mechanisms to reduce the impact of existing impervious surfaces and protect the City's remaining open lands could include incentives to install green infrastructure or regulations to protect natural features (e.g., wetland/woodland ordinances), etc.).

5.2.3 Brownstown Township

Hazard Priorities

Tornadoes, thunderstorms, and severe winter weather are considered significant threats to the residents of Brownstown Township. At greatest tornado and high-wind risk are the residents of mobile home communities and senior citizen facilities located within the township. Representatives of the township have identified a need for early warning sirens that would alert all citizens in the likelihood of an approaching tornado.

Telegraph Road and I-75 experience heavy vehicular traffic traveling through Brownstown Township. Many of these vehicles transport hazardous materials through the community. In addition, natural gas pipelines, trains carrying hazardous material, and the potential for structural fires or an accident at the Wayne County Waste Treatment Facility all present a hazmat risk to the residents of the community. The presence of a nuclear power plant in the vicinity was also noted as a potential source of risk.

Representatives of the community also mentioned concern about the potential for civil disturbance, health emergencies and criminal acts.

Existing Authorities, Policies, & Programs and Ability to Expand These

Brownstown Township is primarily a residential community of approximately 31,567 people (SEMCOG 2019 estimate). Single family residential and vacant land are comparably the largest land use/cover classifications in the Township at 29.5% and 24.4%, respectively. Unlike the two communities described previously, Brownstown Township retains a significant area of open space (41%) with 31% tree cover. The Township is at the downstream end of the Huron River Watershed and portions of the Township abut Lake Erie.

Brownstown Township participates in the National Flood Insurance Program and regulates fill within floodplain and flood hazard under Part 228 of their Code of Ordinances.

Brownstown is a member of the Alliance of Downriver Watersheds and works in partnership with other communities to manage stormwater under a Phase II Municipal Separate Stormwater System (MS4) permit. Recognizing that the Township includes unique wetlands and wildlife due to its proximity to Lake Erie and the Huron River while also wishing to protect private land rights, the Township eschews variety of environmental regulations but has created an Environmental Commission to review development proposals.

Areas for possible improvement could include commitment to recommended actions in the Lower Huron Watershed Management Plan. Many of the projects described therein, although aimed at improving water quality, do so by reducing stormwater runoff and in-stream erosion. It's recommended that the Township also continue to work with the US Army Corps of Engineers to control Lake Erie shoreline flooding and erosion.

5.2.4 Canton Township,

Hazard Priorities

Community representatives from Canton Charter Township identified convective weather, including tornados, severe winds, and lightning; as their hazards of greatest concern. Examples of flooding damage to roads, businesses, residences, and public and private open spaces includes areas along Ford Road from Canton Center to Sheldon, in Cherry Hill Village, and in areas adjacent to retention ponds. High winds have damaged areas near Sheldon and Lilley Roads between Palmer and Michigan Avenue. Concerns related to severe weather include loss of power, lack of overnight warming/cooling centers for residents, and the adequacy of evacuation and response capacity for planned sporting events, including an annual soccer tournament with over 100,000 in attendance. Power loss was noted as having negative impact on traffic circulation, communications, and business revenue.

The highest priority technological hazards in Canton Township relate primarily to infrastructure failure, including electrical systems, roads and water and electrical systems. In the 2013 HMP Canton officials noted their concern regarding structural fires, particularly fires that could affect one of the senior assisted living facilities. Residential areas that do not have hydrants require additional assistance in the event of fire.

Canton officials also identified concerns regarding active shooter(s)/active assailant(s) as a key concern for the 2019 HMP update. Previously hazards relating to health emergencies, civil disturbance, criminal acts, and traffic accidents were listed as a source of concern in the Township. Public schools in the region have experienced closures due to H1N1 virus, and public conflicts relating to cultural and religious diversity were also reported. Roadways throughout the Township have high posted speeds, and accidents on roads with posted speeds of 45 mph are usually very serious and sometimes fatal. A bike trail through the Township has experienced at least one car-related fatality.

Existing Authorities, Policies, & Programs and Ability to Expand These

Canton Township is a residential community of approximately 98,340 people (SEMCOG, 2019) that has grown exponentially since the 1950s and 60s. Its largest land uses are single family residential and TCU at 33.7% and 16.1%, respectively and 31% of the Township is impervious surfaces, but it retains significant areas of open space (43%).

Canton Township participates in the National Flood Insurance Program and conducted extensive analysis to determine the number of parcels within flood hazard areas in past HMP development. Chapter 8 of their Code of Ordinances regulates construction activities in flood prone areas.

Canton Township's Code also includes their own stormwater ordinance, which in turn has protections for wetlands and steep slopes; they even have an ordinance regulating logging and logging road construction.

Canton Township, like many Wayne County communities, still exhibits lower than ideal tree canopy and higher imperviousness than recommended. Increased tree canopy coverage has benefits for both reducing stormwater runoff and reducing extreme

temperatures. Increasing tree cover has the potential to exacerbate electrical infrastructure failure in storms if lines are above-ground and tree aren't trimmed.

Additional authorities, programs, or policies could be developed to plant trees, and install green infrastructure, reduce the potential for structural or wildfire, and regulate hazardous waste. Implementing recommendations from Wayne County Public Health from their analysis of COVID-19 preparedness is also recommended, especially in light of the Township's aging population.

5.2.5 City of Dearborn

Hazard Priorities

The most important natural hazards for the City of Dearborn include flooding and severe weather in both summer and winter, accompanied with power outages. Dearborn City buildings have been designated as cooling shelters during business hours in event of extreme summer heat, and the City has supplied dry ice to residents during power outages longer than 24 hours.

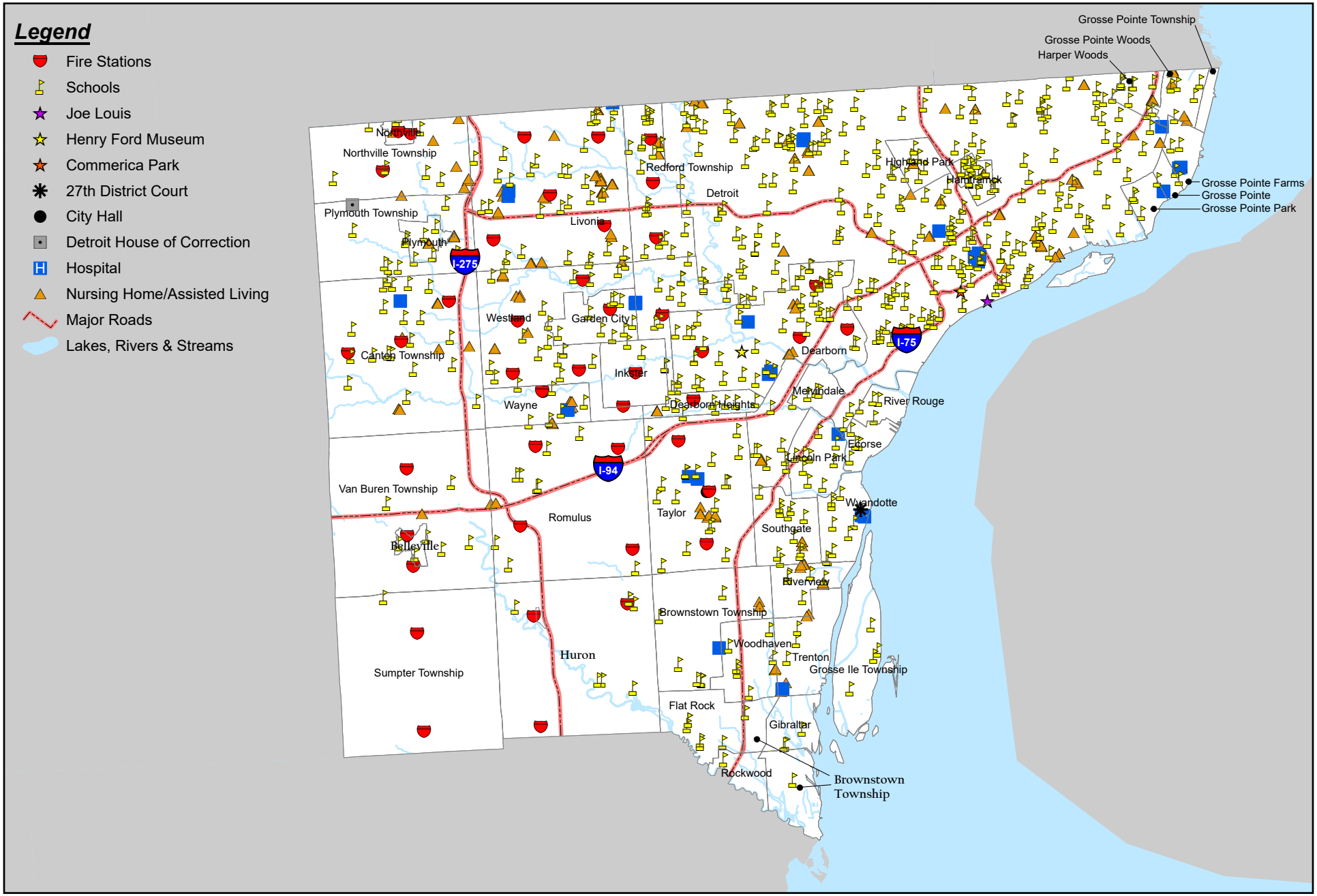
The potential for a hazmat emergency exists in the City of Dearborn. According to City representatives, there are locations within the city where hazardous chemicals are either stored or used in production. M-39 and I-94 are major highways that serve as routes for trucks, many carrying hazardous materials through the City. Trains carrying hazardous materials, especially in the eastern portion of the City, are also a concern.

City officials identified high-rise buildings including offices, apartments, senior citizen facilities and a hospital as a source of concern for structural fires, particularly in cases that may require evacuation of the elderly. Dearborn has many older factories, particularly in the eastern section of the City, and at least one instance of a factory explosion. There has also been concern about the potential for arson fires in these areas. Because a fire in some of these locations could present particular challenges to fire fighters, Dearborn officials feel that there is a need for additional personnel as well as additional fire department and EMS training. Buildings of concern for structural fires identified by individual communities are presented in Figure 11.

Approximately 35% of the population of Dearborn is of Middle Eastern descent. The threat of hostilities directed against this segment of the population is a concern for officials of the city. An example was provided of an annual event that has attracted out-of-state instigators of civil unrest. City officials feel that there is a need to provide the public with a better awareness of issues regarding ethnic diversity within the community.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Dearborn is primarily a residential community of approximately 101,636 people (SEMCOG, 2019), but it also contains significant acreage used for industry. The City's largest land uses are TCU, single-family residential, and industrial at 24.8%, 24.7%, and 14.1%, respectively. The City is both within the Rouge River Basin and the frequently-flooding Ecorse Creek Watershed. Fifty-seven percent of the community consist of impervious surfaces, while less than half of that (25%) remains in open space.



Wayne County

Created for: Wayne County
Created by: RMH, April 23, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), ArcGIS Online

ASTI Environmental

Figure 11 - Hazard History: Community Structural Fires

Dearborn participates in the National Flood Insurance Program and their website contains extensive information regarding new floodplain maps and flood insurance requirements for residents of the Ecorse Creek Watershed. Their Code of Ordinances regulates construction in floodplains, solids waste, storm and sanitary sewer systems.

The City of Dearborn does not appear to be a member of the Alliance for Downstream Watersheds or the Alliance of Rouge Communities. Participating with these groups may offer resources shared among the participants that could assist the City if further reducing flooding.

Again mechanisms to reduce the impact of existing impervious surfaces as land is redeveloped or to protect remaining areas of open space (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, etc.) may be possible ways to expand existing authorities, programs, and policies.

5.2.6 City of Dearborn Heights

Hazard Priorities

Thunderstorms, high winds and associated power outages, and flooding, particularly along Ecorse Creek, have had impacts on the City of Dearborn Heights. When they occur, the outages are typically widespread with varying size and duration. The need for a more comprehensive public warning and information distribution system was noted by public officials.

Human hazards in the community relate primarily to criminal acts that result in personal injury and property loss.

Existing Authorities, Policies, & Programs and Ability to Expand These

Nearly half of the City of Dearborn Heights is dedicated to single-family residential land use (46.5%) and the City is home to 59,073 people. Another 24.2% of the City is dedicated to TCU. Like neighboring Dearborn, the City is both within the Rouge River and Ecorse Creek Watersheds.

Dearborn Heights participates in the National Flood Insurance Program and administers Chapter 15 of their Code of Ordinances to minimize losses due to flood conditions in flood hazard areas. Chapter 11 of their Code establishes the role and powers of the City Emergency Management Coordinator.

Dearborn Heights is a member of the Alliance for Downstream Watersheds and the Alliance of Rouge Communities, working in partnership with other communities to manage stormwater under a Phase II Municipal Separate Stormwater System (MS4) permit.

In addition to including tools to regulate floodplain development and emergency management, their Code of Ordinances includes protections to reduce the potential for structural or wildfires, regulate food waste, stormwater management, and water, sewer, electrical, and gas infrastructure.

Although the City has a number of hazard mitigation related polices already adopted and participates with regional partners to address water quality and quantity concerns, 52%

of the community is impervious surfaces at the same time that they struggle with flooding and work with area partners to remove existing structures from the floodplain of the North Branch of Ecorse Creek.

As elsewhere, areas for possible improvement could include regulatory mechanisms to reduce the impact of existing impervious surfaces or to protect remaining areas of open space (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, etc.).

5.2.7 City of Ecorse

Hazard Priorities

Thunderstorms, winter hazards, tornados, and associated flooding and wide-spread power outages, are concerns to the representatives of the City of Ecorse. The lack of tornado sirens in this community increases their concern. Although the entire population could be affected by a tornado, residents at the two mobile home communities located in the city are at greatest risk.

Due to the large amount of industry in Ecorse, city representatives expressed concern regarding their potential for hazmat emergencies within the community. Accidents on streets, at their train tracks and rail yards, at manufacturing sites and other businesses, or involving gas pipelines, were included as being vulnerable locations for these potential emergencies. The community is also within the zone that could potentially be affected by a nuclear power plant incident.

Existing Authorities, Policies, & Programs and Ability to Expand These

Approximately 8.407 people live in the City of Ecorse: 1,100 less than at the time of the 2010 census. Industry and transportation (TCU) dominate the City's land use types, 26% and 25.2%, respectively, followed by single-family residential (21.7%). The City is in the Ecorse Creek Watershed and 51% of the community is categorized as impervious surface (25% open space).

Ecorse participates in the National Flood Insurance Program and administers Chapter 11 of their Code of Ordinances to minimize losses due to flood conditions in flood hazard areas.

Ecorse is a member of the Alliance for Downstream Watersheds and works in partnership with other communities to manage stormwater under a Phase II Municipal Separate Stormwater System (MS4) permit.

In addition to including tools to regulate floodplain development, their Code of Ordinances includes protections to reduce the potential for structural or wildfires, regulates food service and waste, and infrastructure.

Areas for possible improvement could include regulatory mechanisms to reduce the impact of existing impervious surfaces or to protect remaining areas of open space (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, etc.).

5.2.8 City of Flat Rock

Hazard Priorities

I-75 and Telegraph Road are two heavily traveled roads where numerous vehicular accidents occur. Of particular risk to the community are accidents that involve vehicles carrying hazardous materials. The rupture of a gas pipeline, a hazmat emergency at one of the community's manufacturing facilities, or the derailment of a railcar carrying hazardous materials were all mentioned as potential hazards to the city.

Flooding of the Huron River is a concern to the City of Flat Rock. The area most susceptible to this hazard was identified as the area along Huron River Drive between Evergreen and Garden Roads.

Weather related emergencies, particularly the threat of a tornado or a severe winter storm, were also mentioned. Representatives discussed the need to re-activate the Fermi sirens already located in city. These sirens then could be used in conjunction with existing tornado sirens to provide additional protection to the citizens of Flat Rock.

Existing Authorities, Policies, & Programs and Ability to Expand These

Approximately half of the City's area is either vacant land (23.9%) or single-family residential housing (28.1%). 41% of the City remains in open space with 24.3% tree canopy cover. The City is on the banks of the Huron River and the impoundment behind the Flat Rock Dam. Thirty-one percent of the community is categorized as impervious surface.

Flat Rock participates in the National Flood Insurance Program and Chapter 46 of their Code of Ordinances regulates construction in flood areas.

The City is a member of the Alliance for Downstream Watersheds and the Huron River Watershed Council, working in partnership with other communities to manage stormwater under a Phase II Municipal Separate Stormwater System (MS4) permit. In addition to including tools to regulate floodplain development, their Code of Ordinances includes mechanisms for fire protection, limiting invasive species, and stormwater management.

Areas for possible improvement could include regulatory mechanisms to reduce the impact of existing impervious surfaces or to protect remaining areas of open space (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, etc.). Given the City's hazard priorities tools to mitigate potential hazardous materials spills are also advisable.

5.2.9 Garden City

Hazard Priorities

Extreme weather, including extreme hot and cold temperatures, tornadoes, severe winds, and storm resulting in flooding and electrical power loss were all identified as key natural hazards concerns and resulting technological hazards. Winter hazards and the threat of tornadoes were concerns mentioned by the officials of Garden City in 2013

along with the need for a backup electrical system for the community's shelter building and for City Hall.

Existing Authorities, Policies, & Programs and Ability to Expand These

More than ¾ of the area of Garden City is utilized for single-family housing and TCU; 57.7% and 23.4%, respectively. Very little open space or vacant acreage is left and the City is 54% impervious surface.

Garden City also participates in the National Flood Insurance Program and amended their Code of Ordinances in 2012 to adopt the FEMA Firm Maps and administer Appendix G of the Michigan Construction Code, to minimize losses due to flood conditions in specific flood hazard areas.

Garden City is a member of the Middle 3 and Lower 2 Subwatershed Advisory Groups within the Rouge River system and works in partnership with other communities to manage stormwater under a Phase II Municipal Separate Stormwater System (MS4) permit. Additionally, since the 1970s the City has been working to remove combined sewer systems and sanitary sewer overflows. These cause both public health and flooding concerns for the City.

Areas for possible improvement could include regulatory mechanisms to reduce the impact of existing impervious surfaces as land is redeveloped or to protect smaller remaining areas of open space (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, etc.).

5.2.10 City of Gibraltar

Hazard Priorities

The City of Gibraltar has a history of flooding. The southeast section of the city is particularly vulnerable to this hazard. Of particular concern are homes that have not been elevated above potential flood levels. Berms installed along the Gibraltar waterfront combined with low Great Lakes water levels in recent years have somewhat mitigated this hazard but current near-record high lake levels make this a greater priority. City officials identified shoreline flooding, severe weather, and a possible accident at the Fermi II Nuclear Power Plant as their chief concerns. The City of Gibraltar is also within the potential zone of effect of a nuclear power plant incident.

Previously (2013) the City had identified the presence of industrial sites, an old landfill, active railroad tracks and a tanker cleaning facility as creating hazardous materials risks to the City. Hazards include not only the potential for spill accidents and surface and ground water contamination from leachate, both on-site and during transportation, but also the potential for industrial fires. The level of railroad traffic exposes the community to the risk of unknown substances and their associated hazards, and the risk is heightened by the inaccessibility of the tracks due to woodlands and wetlands.

Uncertain funding for the collection and treatment of landfill leachate increases the level of risk to surface and ground water, including the Detroit River and Great Lakes. This risk poses a public health hazard because of the inter-connectedness of waterways throughout this area.

Existing Authorities, Policies, & Programs and Ability to Expand These

Unlike communities discussed to this point, the City of Gibraltar is dominated by vacant land and open space; 42.2% and 18.6%, respectively. Single-family residential housing is the third largest land use at 13.8%.

Gibraltar participates in the National Flood Insurance Program Chapter 18 of their Code of Ordinances regulates land uses in flood hazard areas. In addition to floodplain management, their Code also includes regulatory authority and policies regarding stormwater management, emergency services & emergency management, soil erosion, marine safety, and plumbing and electrical infrastructure.

The City of Gibraltar is a member of the Lower Huron Watershed Advisory Group and the City also borders a portion of Lake Erie and the Detroit River.

Areas for possible improvement could include regulatory mechanisms to limit the amount of impervious surface to the existing 21% and protecting open space to stay ahead of a changing climate (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, etc.).

5.2.11 Grosse Ile Township

Hazard Priorities

There are a number of industrial facilities located a short distance from Grosse Ile Township. The likelihood of a hazmat incident at one of these locations and the direction of prevailing winds create the potential for a hazmat emergency on Grosse Ile. The evacuation of residents is a concern to township officials. The adequacy of the evacuation route via the bridges between the Island and mainland is a concern to township officials.

Because there is a small airport located at the southern tip of the township, accidents involving aircraft are also of concern to officials. The Township is also within the range of possible effects from a nuclear incident and high Great Lake levels have caused flooding and shoreline erosion.

Existing Authorities, Policies, & Programs and Ability to Expand These

Grosse Ile Township is an island in the Detroit River that is home to approximately 10,404 people. Population in the Township has stayed relatively flat since 2010 and is projected to do the same between 2020 and 2045. The largest land use categories are single-family residential (40.9%) and vacant land (24.4%). Even with the large percentage of developed housing, only 20% of the Township is covered by impervious surfaces.

Grosse Ile Township participates in the National Flood Insurance Program and regulates construction with flood prone areas under Chapter 116 of their Code of Ordinances. Other regulatory authorities include regulation and cleanup of hazardous materials, outdoor burning, motor vehicle safety, stormwater management, and natural features protection. Grosse Ile Township is the only community in Wayne County with a wetland protection ordinance recorded with EGLE. They also have a local woodland protection ordinance. As noted previously, these are useful tools for local flood protection and for

minimizing extreme temperatures and increased potential for power loss in times of heavy heating or cooling demand. Their Wetland and Waterways Protection regulations also control shoreline stabilization.

Areas for possible improvement could include regulatory mechanisms to reduce the impact of existing impervious surfaces as land is redeveloped or to protect smaller remaining areas of open space (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, etc.).

5.2.12 City of Grosse Pointe

Hazard Priorities

Power outages, as a result of high winds or ice storms, have adversely affected the residents of Grosse Pointe for years. The City has made progress on the development of an emergency power back-up system, particularly for the Department of Public Safety, but additional power back-up is needed for sewage pumps in the event of large storms and associated flooding.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Grosse Pointe is primarily a residential community of approximately 5,203 people. The City is largely built-out with only 5.3% vacant land or recreation/open space (0% agriculture). The City's largest land uses are single-family residential and TCU at 60.8% and 23.8%, respectively; 44% of the community is categorized as impervious surface.

Grosse Pointe participates in the National Flood Insurance Program and administers oversight of proposed construction in flood hazard areas under Article XIII of the City's Code of Ordinances. In addition to including tools to regulate floodplain development, their Code of Ordinances includes health and sanitation, civil emergencies, infrastructure, fire prevention, stormwater management, and shoreline protection.

Areas for possible improvement could include regulatory mechanisms to reduce the impact of existing impervious surfaces and protect remaining areas of open space (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, etc.).

5.2.13 Grosse Pointe Farms

Hazard Priorities

Thunderstorms and the associated flooding and power outages have had negative effects in Grosse Pointe Farms. In the event of power outages, storm water pumps have failed, contributing to flooding problems.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Grosse Pointe Farms is primarily a residential community of approximately 9,546 people (SEMCOG 2019 estimate). The City's largest land uses are single-family residential and transportation, communication, and utility (TCU) at 55.8% and 18.7%,

respectively. Open space and recreation is the third largest category at 14.3%. The amounts of impervious and open space land cover are approximately equal; 37% and 33%, respectively.

Grosse Pointe Farms participates in the National Flood Insurance Program and regulates proposed construction within floodplain areas under Section 12-06 of the Code of Ordinances. In addition to including tools to regulate floodplain development, their Code of Ordinances includes fire code regulations, infrastructure requirements, and soil erosion controls.

Areas for possible improvement could include regulatory mechanisms to maintain imperviousness at its current levels or reduce the amount of existing impervious surfaces (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, etc.).

5.2.14 Grosse Pointe Park

Hazard Priorities

Tornadoes, ice storms, and thunderstorms accompanied by high winds, create a threat to the City of Grosse Pointe Park and its residents. Resulting damage and power outages have a significant effect on the population. The capacity of emergency power back-up systems at the Department of Public Safety and the adequacy of the tornado warning system are concerns, along with the availability of necessary equipment needed to remove fallen trees and clear roads is a concern.

Due to the community's close proximity to the City of Detroit, the issue of civil disturbances and criminal activity affecting Grosse Pointe Park is a concern. The associated drain on Public Safety resources has been an issue for the community. The City is also a coastal community at the confluence of Lake St. Clair and the Detroit River, prone to shoreline flooding.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Grosse Pointe Park is primarily a residential community of approximately 12,335 people. The City's largest land uses are single-family residential housing and transportation, communication, and utility (TCU) at 67% and 25.2%, respectively. Thirty-nine percent of the community is categorized as impervious surface.

Chapter 11 of the City's Code governs floodplain management and administration of Appendix G of the Michigan Building Code, as well as monitoring Lake St. Clair water levels and responding to imminent flooding with the construction of temporary barriers if necessary. Grosse Pointe Park participates in the National Flood Insurance Program.

In addition to including tools to regulate floodplain development, the Grosse Pointe Park Code of Ordinances includes protections against fire.

Additional policies and programs could include partnerships for addressing more of the City's hazard priorities, e.g., building safe rooms for tornado safety, providing adequate power backup, and exploring ways to reduce or reimburse costs associated with cross-border emergency response in the City of Detroit.

5.2.15 Grosse Pointe Shores

Hazard Priorities

Weather-related hazards have the potential to impact the community. The potential exists for structural fire at the Grosse Pointe Yacht Club or Ford House, which could be a drain on the resources of the community.

Existing Authorities, Policies, & Programs and Ability to Expand These

Grosse Ponte Shores is a community of 2,497 people almost entirely developed for single-family housing and transportation related uses, 71.8% and 19.1%, respectively. Although 34% of the City is impervious surfaces, existing housing must provide a good deal of greenery; SEMCOG describes the City land cover as 36% open space with 28% tree canopy cover. Approximately half of the City's population is 55 years or older (median 53.4).

Grosse Pointe Shores participates in the National Flood Insurance Program and impacts to flood areas under Article V of the City Code of Ordinances. In addition to including floodplain development regulatory policies, the City's Code of Ordinances includes provisions for law enforcement, fire protection, telecommunications and other utilities.

Areas for possible improvement could include implementing repairs of protective mitigation to protect key structures from fire or planning for the elderly residents of the community in the event of power loss or other hazards.

5.2.16 Grosse Pointe Woods

Hazard Priorities

Tornadoes, ice storms, and thunderstorms accompanied by high winds, create a threat to the City of Grosse Pointe Woods and its residents. Resulting damage and power outages have a significant effect on the population, including congestion due to traffic lights not working, and medical problems in senior housing due to food spoilage and other hazards. Officials discussed the capacity of the emergency power back-up system at the city's municipal building and at the Department of Public Works' pump station, along with the readiness of a mobile generator.

Located within the city is a Wayne County pumping station. Since chlorine is stored at this location, the possibility of a hazmat emergency affecting the safety of the citizens of Grosse Pointe Woods is a concern. In recent years, structural fires have been the main community concern, sometimes relating to downed power lines. The replacement of outdated fire gear and equipment was noted as a community need.

The close proximity to the City of Detroit and that city's potential for civil disturbance, terrorist acts, active shooter and criminal activity that could adversely affect the citizens of Grosse Pointe Woods, is a concern to City officials. The need to provide additional training to properly respond to these types of emergencies was discussed.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Grosse Pointe Woods is home to 15,682 people and the dominant land uses are single-family housing (57.8%) and transportation and utilities (TCU) (20.6%); 43% of

the community is categorized as impervious surface. Grosse Pointe is the only one of the "Pointes" that is not on the coast.

Although the FEMA Status Book Report for the National Flood Insurance Program lists Grosse Pointe Woods as participating in the National Flood Insurance Program, we were unable to find regulatory language within the City Code or Zoning Ordinance describing the program. The City Code does include regulatory mechanisms regarding fire protection, utilities and infrastructure, waterways, and emergency services and preparedness.

Areas for policy and/or program improvements could include ensuring that Flood Insurance Program requirements ae being met and programs that ensure improved preparedness for the weather related natural hazards noted above as priorities.

5.2.17 City of Hamtramck

Hazard Priorities

Tornadoes, thunderstorms accompanied by high winds, and winter snow and ice storms, are all concerns of the City of Hamtramck officials. Of particular concern to the Public Safety Department is heavy snow or ice storms that block the streets and increase traffic accidents. Adequacy of snow removal equipment and timeliness of snow removal in relation to emergency response remain a concern in this community.

Within the City of Hamtramck there are sites that stock hazardous materials. Several sites stock hazardous materials in amounts that by law mandate notification of the Hamtramck Fire Department. According to officials, the potential for a hazmat emergency at one of these locations presents a danger to the citizens and visitors to the city. In addition, hazardous material is carried by trucks on I-75 and by trains traveling through the eastern portion of the City; a gas pipeline also runs through the community. These present additional risks to the population if hazardous materials were to escape as a result of an accident.

Criminal acts including street robberies, and the associated need for sharing of information between road patrols, investigators and the public, have placed a demand on public resources.

Existing Authorities, Policies, & Programs and Ability to Expand These

The population of Hamtramck is approximately 23,228; less than half of its highest in the 1930s. Land use in the City is dominated by single-family housing and transportation (TCU), 30.6% and 28.1%, respectively, but a notable portion of the City also supports industrial uses (16.9%). Seventy percent of the community is categorized as impervious surface.

Hamtramck does not participate in the National Flood Insurance Program, but their Code of Ordinances includes regulations affecting hazard related topics such as fire protection, the fore an police departments, weapons, and sewers and other public utilities. Possible improvements could include regulatory mechanisms to reduce the impact of existing impervious surfaces or to address that storage and reporting of hazardous materials.

5.2.18 City of Harper Woods

Hazard Priorities

Thunderstorms and severe winter weather have resulted in power outages and down trees that have negatively affected the City of Harper Woods. Of particular concern is power outage to City Hall, and associated effects on public safety. The need for improvements to reduce the likelihood and limit the effects of power failure was identified by local officials.

The heavily traveled I-94 highway that runs through Harper Woods has a history of vehicular accidents. Of particular concern to City representatives are accidents involving vehicles carrying hazardous materials through the community. Based on the current level of hazmat training, hazmat equipment, and the number of public safety personnel currently employed, the ability to properly respond to an emergency of this type is a concern.

Criminal acts including auto thefts, robbery, and breaking and entering of residences in the community are of concern to officials. Public notification about threats and the hiring of additional law enforcement personnel has placed demands on the community. Limitations on Harper Woods public safety personnel's radio interoperability with their counterparts in Detroit continue to present a danger to the citizens of both communities.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City's population of 15,034 has stayed fairly flat since 2000. Harper Woods is primarily residential (52.3%) with TCU making up another 25.2%. Forty-one percent of the City is covered with impervious surfaces, whereas the City only has 19% tree canopy cover.

Harper Woods does not participate in the National Flood Insurance Program, but their Code of Ordinances includes regulations governing health and sanitation, the police department, water and sewers, fire prevention, and civil defense and emergencies.

Areas for possible improvement could include regulatory mechanisms focused on the stated local concern of hazardous materials transport and safety.

5.2.19 City of Highland Park

Hazard Priorities

City officials noted transportation related hazmat accidents, public health emergencies, and severe summer weather, including thunderstorms, high winds, hail, etc., as their priority hazard concerns for the 2019 HMP update.

In the 2013 HMP, Highland Park officials had noted that there are a large number of vacant homes and a high incidence of arson in the City of Highland Park, and that building fires were a significant hazard to the community. They also expressed the concern for potential hazmat material emergencies at any one of the many industrial facilities located within the city. According to officials, not having a sufficient number of public safety personnel to adequately respond to these emergencies increases the

danger to the residents of the City. Representatives also discussed the need for additional fire and hazmat training for new and existing public safety personnel.

Ice and snowstorms and their effect on the streets of Highland Park were previously noted as a concern to officials. Not having sufficient resources to clear streets during and after storms restricts the ability of public safety personnel to properly respond to emergencies.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Highland Park, similarly to Hamtramck, has lost population since its height in the 30s. The current population of 11, 201 is approximately one-fifth what it was at that time. The major land uses of TCU, single-family residential, vacant, and industrial are fairly similar in overall coverage: 27.6%, 20.9%, 19.8%, and 16.3%, respectively.

HIghland Park does not participate in the National Flood Insurance Program, but their Code of Ordinances includes tools to regulate building and housing, fire prevention, and sewers and utilities. Additional programs or policies could address some of the hazard concerns noted above.

5.2.20 Huron Township

Hazard Priorities

Tornadoes, ice storms, and thunderstorms accompanied by high winds, create a threat to the citizens of Huron Township. Resulting power outages have a significant effect on the population, especially on the elderly. Officials mentioned that the residents of the township's three mobile home communities were at an increased risk in the likelihood of a tornado touching down in the area. Both tornado and hail damage have been reported since development of the 2006 Plan. Tornado warning sirens have been installed near the Township's northern boundary, but Figure 9 still shows a clar gap in coverage for most of the Township.

I-275, railroads, pipelines, and industrial facilities, all located within Huron Township, present the potential for hazardous material emergencies that could affect Township residents. Because the Township lies along a flight path for Detroit Metropolitan Airport, the potential for a plane crash exists within the community. The adequacy of police and fire personnel to properly respond to these multiple hazards may be a concern.

The issue of flooding of the Huron River, particularly in the southeast section of the Township was mentioned by representatives in 2006. Dry conditions the time of the last update made this less of a concern, only to have high water conditions return recently.

Existing Authorities, Policies, & Programs and Ability to Expand These

The current population of 16,329 has been steadily increasing each deacde sonce the 1920s. Huron Township is the first community described herein with a significant agricultural land use component. Agriculture makes up 36.9% of the Township with a notable 17.4% recreation and open space. Single-family housing is the second highest land use percentage in the Township (23.3%). Land cover is only 10% impervious and the Township exhibits a tree canopy coverage of 38%.

Huron Township participates in the National Flood Insurance Program and administers floodplain protections under Chapter 288 of their Code of Ordinances. Other regulatory mechanisms related to hazard mitigation include dangerous buildings, open burning, water, sewer, streets, and other utilities, and fire protection.

Areas for possible improvement could include regulatory mechanisms to protect open space and/or mechanisms to protect area agricultural resources from drought, fire, or invasive species.

5.2.21 City of Inkster

Hazard Priorities

Tornadoes, structural fires, and hazmat accidents were all mentioned as potential hazards that could adversely affect the citizens of Inkster. Not having sufficient staffing in the police and fire departments increases the danger presented by these hazards.

Officials also mentioned that the inability to communicate between all city departments at times of emergencies restricts each department's ability to respond properly.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Inkster consists of approximately 1/3 single-family-residential (36.1%) but the City also includes a significant amount of open space/recreational lands, primarily along the Lower Rouge River. Forty-two percent of the City consists of impervious land cover, which likely contributes, along with stormwater from communities upstream, to the flashy nature of the Lower Rouge.

The City participates in the National Flood Insurance Program and administers their reviews of proposed floodplain development under Chapter 155: Zoning Code. In addition to floodplain management, their Code of Ordinances includes regulatory mechanisms concerning stormwater management, convalescent homes and other care establishments, and water and sewers.

Areas for possible improvement could include regulatory mechanisms to reduce the impervious surfaces, protect low lying areas from flooding, and/or addressing concerns regarding hazardous material storage and reporting, and/or communications as described above.

5.2.22 City of Lincoln Park

Hazard Priorities

Extreme temperatures have the potential to impact the residents of the City of Lincoln Park, particularly the elderly. Limitations on air conditioning and water systems during severe summer weather were noted as concerns by City officials.

The potential for a hazardous material emergency exists in relation to pipelines and transport along both railroads and I-75. The highly technical requirements for preparedness to respond to a hazardous material incident has placed demands on

responders to stay up to date. Preparation for emergency response is complicated by the proximity of transportation corridors to residential areas.

The potential for criminal acts and civil disturbances exist in the City. A policy for responding to active killers has been developed and training for police and schools is being implemented.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Lincoln Park is home to 37,261 people and SEMCOG predicts that all age classes in the City under 65 years of age will decline from 2015 to 2045; whereas the 65-84 and the 85+ age classes will increase by 56% and 93%, respectively. As such, the concerns for elder care in extreme temperatures or other hazard conditions seem well warranted. will is primarily a residential community of approximately 28,634 people (SEMCOG 2019 estimate). Even with these increases, the overall population of Inkster is expected to decline over time. City land uses are dominated by single-family residential and transportation, communication, and utility (TCU) at 43.6% and 33.4%, respectively.

Lincoln Park participates in the National Flood Insurance Program; their flood plain protection programs are administered using a flood hazard area overlay zone under Section 1294.36 of their Code of Ordinances. Additionally, their Code include regulations regarding railroads, sanitation and health, building and housing, and fire protection.

Lincoln Park is a member of the Alliance for Downstream Watersheds and works in partnership with other communities to manage stormwater under a Phase II Municipal Separate Stormwater System (MS4) permit.

Areas for possible improvement could include policies or programs for hazardous materials safety and /or improving care for seniors in extreme weather events or under COVID-19 or other pandemics.

5.2.23 City of Livonia

Hazard Priorities

The potential for a hazardous material emergency exists in relation to transport along I-275, I-96 and railroad lines. As such, Livonia officials noted hazardous materials incidents as a chief concern.

In the 2013 HMP update, Livonia officials had noted their concern regarding winter storms due to their frequency, their effects on traffic accidents and congestion, business slow-downs, and draining of government resources. Livonia officials had also noted flooding and other infrastructure problems as a secondary effect of winter storms.

For the 2019 HMP update, Livonia officials noted similar priorities, noting electrical infrastructure failure, flooding, and hazard materials incidents as their chief hazards.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Livonia saw rapid population growth until the 1970s and has declined slightly since then. The population is currently approximately 93,856. The City is largely built-

out and single-family housing is the dominant land use (42%), 47% of the City is characterized as impervious surfaces.

Livonia participates in the National Flood Insurance Program and administers flood protection reviews under Article XXVIII of Ordinance 543 the City's Zoning Ordinance. Other regulations are concerned with health ad safety and public services.

Areas for possible improvement could include policies, programs, and partnerships revolving around hazardous materials storage and transport and preparation for winter weather.

5.2.24 City of Melvindale

Hazard Priorities

The potential for hazmat accidents involving either trucks or trains, or at local industry and businesses, exists in Melvindale. I-75 on the eastern boarder of Melvindale is the route for many large trucks carrying hazardous materials through the city. A train derailment with the potential of a chemical spill is a risk to the neighborhoods along the tracks in the central and eastern portions of the City. A chemical accident at one of the industrial facilities within the city is a risk to all citizens of Melvindale. Officials stressed the need for additional personnel in the fire and police departments as well as additional training for hazmat emergencies.

Flooding as a result of storm sewer failures is a concern for the City of Melvindale. Officials identified the locations of the greatest frequency of flooding in the vicinities of Allen Road and Outer Drive, and Dix Road and Wabash near the railroad yard.

Existing Authorities, Policies, & Programs and Ability to Expand These

Land use in the City of Melvindale is dominated by transportation, communication, and utility (TCU) (40.2%); single-family housing is somewhat distant second at 25%. With that much transportation-related land use, the land over in the City is characterized as 58% imperviousness.

Melvindale does not participate in the National Flood Insurance Program but is a member of the Alliance for Downstream Watersheds. Their Code of Ordinances includes protections to reduce the potential for structural or wildfires, health and sanitation, fire protection, and environmental protections including toxic releases and incendiary fires.

Areas for possible improvement could include regulatory mechanisms to reduce existing impervious surfaces and protecting remaining areas of open space (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, etc.).

5.2.25 City of Northville

Hazard Priorities

Storms and associated power outages and flooding are a threat to the citizens of the City of Northville, particularly the elderly in assisted living facilities. Power outages are

of particular concern at City Hall, which needs to operate as a command center in the event of an emergency. The need for additional flood mitigation was noted by City officials, and a study is currently underway to improve flood mitigation capacity. Emergency radio interoperability was also highlighted as a problem that has not been fully resolved despite past efforts.

According to City officials, trains carrying hazardous materials through the eastern section of the City present the risk of a hazmat emergency in the community. Providing adequate training to all responders has placed demands on City resources.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Northville is a small community of 2,691 people. Single-family housing constitutes 33.6% of the land use; 21.4% TCU coverage is the second-most prevalent land use in the City. 45% of the community is categorized as impervious surface.

Northville participates in the National Flood Insurance Program and administers flood prone area protections under Article 23, Flood Hazard Zones, of the City's Zoning Ordinance. At present, the City also hosts a page on their website with information about floodplains and how one may read the FEMA FIRM maps. This information also describes a current study to and public comment period regarding a letter of map revision for a portion of the Walled Lake Branch of the Middle Rouge River.

The City is a member of the Alliance of Rouge Communities to manage stormwater under a Phase II Municipal Separate Stormwater System (MS4) permit. In addition to tools regulating floodplain development, their Code of Ordinances and Zoning Ordinance also include protections for trees and woodlands, emergency services provisions, and fire prevention regulations.

Additional tools could include an inventory of locations needing flood mitigation, coordination with the railroads to receive notification of train contents, and regulatory mechanisms to reduce existing impervious surfaces and protect remaining areas of open space (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, tree canopy targets, etc.).

5.2.26 Northville Township

Hazard Priorities

Severe winds, thunderstorms and tornadoes and associated power loss in Northville Township is considered a significant threat to all citizens. At particular risks are the residents of the senior citizen communities located in the Township. Areas of the Rouge River along Northville Road have a history of flooding. According to officials, the areas most susceptible to this hazard are in the vicinities of Jamestown Circle and just west of Franklin Road.

A Consumers Power station, battery plant, high pressure gas pipelines, and railroad tracks carrying trains with hazardous material cargo, all exist within Northville Township. A hazmat emergency at any of these locations presents a significant risk to the citizens of this community.

The community has recently been focused on training to mitigate the hazard of active shooters in schools and other locations.

Existing Authorities, Policies, & Programs and Ability to Expand These

Northville Township is home to 32,164 people and its population is aging. Single-family housing constitutes 33.5% of the land use but the Township also contains significant open space/recreational lands (29.9%). Twenty-seven percent of the community is categorized as impervious surface.

Northville Township participates in the National Flood Insurance Program and administers flood prone area protections under Chapter 82 of the Township's Code of Ordinances. In addition to tools regulating floodplain development, their Code of Ordinances also includes regulations for hazardous waste cleanup, oil and gas operations, and Sewer and water infrastructure.

Additional programs and policies could be directed at the community concerns noted regarding hazardous materials and development of safe rooms for tornados and high winds.

5.2.27 City of Plymouth

Hazard Priorities

Histories of flooding problems exist in the City of Plymouth. Large storms and the associated flooding of Tonquish Creek, particularly in the vicinity of Ann Arbor Trail and Harvey Streets, and the areas immediately surrounding this location, are of greatest concern to city officials.

There are two railroad lines that run through the City of Plymouth. According to City representatives, there is the potential for a hazmat emergency that could have a devastating effect on the citizens of Plymouth. Trains have the potential to block intersections in the city, interfering with timely emergency response, particularly in the event of a derailment at a road crossing.

The presence of the 35th District Court in the City of Plymouth creates the potential for civil disturbances to affect citizens.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Plymouth is home to 9,038 people. Single-family housing constitutes 35.8% and TCU makes up 21.7% of the Township's land use. Fifty-six percent of the community is categorized as impervious surface.

Plymouth participates in the National Flood Insurance Program and administers flood prone area protections under Article XV of the City's Code of Ordinances. In addition to tools regulating floodplain development, Plymouth's Code of Ordinances also includes regulations for soil erosion control, stormwater management, fire prevention and emergency services, law enforcement, and communications and infrastructure.

Additional programs and policies could be directed at reducing the impacts of impervious surfaces and resulting flooding concerns, the community concerns regarding railroad crossings.

5.2.28 Plymouth Township

Hazard Priorities

Large storms and associated power outages and flooding present the most significant hazard to the citizens of Plymouth Township, due to their frequency. The effects include road flooding and down trees that interfere with emergency response, structural fire when energized power lines come in contact with buildings, and risks to the elderly. Evacuation from large senior complexes is a source of concern. Tornadoes have also affected the Township, causing property damage and the public burden of cleaning up many down trees. Winter storms place additional demands on emergency response due to increased traffic accidents and personal injuries from slipping on ice and snow-shoveling.

The potential for incidents relating to hazardous materials exists along the I-275 and M-14 highways and the CSX railroad, and limited resources to effectively manage a major incident has required assistance from other governmental units in the past. The at-grade railroad crossings in the Township can result in car-train accidents that require hazmat response. The high railroad traffic volume transporting hazardous substances causes this to be a significant hazard in the Township.

Existing Authorities, Policies, & Programs and Ability to Expand These

Plymouth Township is a growing community of 28,282 people. Single-family housing constitutes 37.1% and TCU makes up another 18.3% of the Township's land use;. Thirty-six percent of the community is categorized as impervious surface and 37% as open space.

The Township participates in the National Flood Insurance Program and administers flood prone area protections under Chapter XII of the City's Zoning Ordinance regulating land development.

The Township also participates as a member the Alliance of Rouge Communities. In addition to tools regulating floodplain development, their Code of Ordinances also includes protections for trees, water and sewer regulations.

Additional tools could include protections for remaining areas of open space (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, tree canopy targets, etc.) and/or means to better prepare fro winter weather and power outages.

5.2.29 Redford Township

Hazard Priorities

The potential for hazmat accidents involving trucks, trains, gas pipelines, or industrial facilities, exists within Redford Township. According to township officials, not having a

sufficient number of public safety personnel, especially those trained in responding to hazmat emergencies, presents a significant risk to citizens.

A tornado touching down in the township would be a significant threat to all citizens. In particular, the residents of the two mobile home and two senior citizen communities located in the township are the most vulnerable.

Existing Authorities, Policies, & Programs and Ability to Expand These

Redford Township is primarily a residential community of approximately 47,064 people (SEMCOG 2019 estimate). The Township's largest land uses are single-family residential and TCU at 45.5% and 26.9%, respectively. Fifty-two percent of the community is categorized as impervious surface.

Redford Township participates in the National Flood Insurance Program administers flood protection under Chapter 46 of their Code of Ordinances.

Allen Park is a member of the Alliance of Rouge Communities and works in partnership with other communities to manage stormwater under a Phase II Municipal Separate Stormwater System (MS4) permit. In addition to including tools to regulate floodplain development, their Code of Ordinances includes protections for civil emergencies, telecommunications and other infrastructure, fire protection, and health and sanitation.

Areas for possible improvement could include programs to establish safe locations in the event of tornadoes, improved flood control, reduction of impervious surfaces, etc.

5.2.30 City of River Rouge

Hazard Priorities

Tornadoes and thunderstorms accompanied by high winds create a threat to the City of River Rouge and its residents. Resulting damage and power outages create a significant risk to all citizens, especially the senior population. Most vulnerable to these storms are the residents of the high-rise senior citizen facility located on Vigger Road. Officials expressed the need for additional training and equipment to better prepare for and respond to these hazards.

Due to the large amount of industry in River Rouge, there exists the potential for a hazmat incident where hazardous materials are either transported or stored within the community. Officials discussed the need to provide additional security to protect vulnerable locations from the possibility of a terrorist incident. They also expressed a need for additional training for public safety departments concerning homeland security. City representatives suggested that all departments of the city be required to receive emergency management training.

Existing Authorities, Policies, & Programs and Ability to Expand These

The population of River Rouge is declining and stands at an estimated 6,873. The City's dominant land uses include industrial and TCU uses at 26.1.6% and 24.3%, respectively. Forty-two percent of the community is categorized as impervious surface.

River Rouge participates in the National Flood Insurance Program. Areas for possible improvement could include programs to ensure adequate power supply in the event of emergencies and to reduce the potential impact of hazardous materials incidents.

5.2.31 City of Riverview

Hazard Priorities

The City of Riverview has a history of flooding after large storms and snow melt. According to officials, the areas of greatest concern are the Huntington Creek Drain between Fort Street and Civic Park, King Road near Westfield, and in particular, the Frank and Poet Drain along Valley View between Williamsburg and Sibley. This drain originates at Detroit Metro Airport and has experienced significant flooding due to storm water runoff and releases upstream. The elderly population of the City is particularly vulnerable during times of flooding due to increases in emergency response times.

Due to the large amount of industry in the City of Riverview, there exists the potential for a hazardous material emergency. Railcars, tanker trucks, gas pipelines and manufacturing facilities in the eastern section of the city were mentioned as potential areas of concern for this hazard. In addition, officials discussed the need to continue the effort of protecting these vulnerable locations from terrorist activities. In the event of a major emergency, a need for a mass evacuation plan as well as improved communications within the department and with Wayne County was discussed. The importance of establishing a unified command to properly respond to these major disasters was mentioned.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Riverview has a population of 12,056. The City's largest land uses are single family residential and open space/recreation at 22.6% and 22.2%, respectively. The City is along the Detroit River and 36% of the community is categorized as impervious surface.

Riverview participates in the National Flood Insurance Program and administers flood protections under Article 10of their Code of Ordinances.

The City of Riverview is a member of the Alliance for Downstream Watersheds and works in partnership with other communities to manage stormwater under a Phase II Municipal Separate Stormwater System (MS4) permit. In addition to including tools to regulate floodplain development, their Code of Ordinances includes standard regulations concerning new development, but has little other related to hazard mitigation.

Areas for possible improvement could include other regulatory mechanisms tor programs to reduce flooding or improve preparedness for hazardous materials spills/accidents.

5.2.32 City of Rockwood

Hazard Priorities

The potential for major storms and tornadoes and associated power outages and flooding in the City of Rockwood was identified as a primary hazard to this community. Insufficient warning of a tornado was a concern to City representatives. Flooding along the Huron River, shoreline erosion, and the potential effects of a Belleville Dam failure were also mentioned as a source of concern to city officials.

Due to the proximity of the Fermi Nuclear Plant within 10 miles and the potential effect on Rockwood if there was an emergency at the plant, officials feel that there is a need for an evacuation plan for the City.

I-75 is a heavily traveled highway that runs north and south through the City of Rockwood. This highway has a history of many vehicular accidents. Of particular concern to city officials are accidents involving trucks carrying hazardous materials. The additional demands on manpower that this type of emergency response requires is a source of concern to the City. In addition, there exists the threat of hazmat emergencies involving railways, at the sewage treatment plant, or at industrial locations located within the city. The need to better notify citizens if these disasters strike, was discussed.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Rockwood is home to approximately 2,951 people (SEMCOG 2019 estimate). Single-family residential, extractive (mining), TCU, and vacant lands are the largest land uses; 22.1%, 18.8%, 17.5%, and 14.4%, respectively. The City is located along the lower Huron River; 22% of the community is categorized as impervious surface compared to 36% open space.

The City participates in the National Flood Insurance Program and administers their program under Chapter 90 of their Code of Ordinances. In addition to including tools to regulate floodplain development, their Code of Ordinances includes policies regulating emergency response expenses, hazardous materials spills, soil erosion, fire prevention, stormwater management, and water and sewer.

Rockwood is a member of the Alliance for Downstream. Areas for possible improvement could include programs to reduce the risk of hazardous materials incidents and/or traffic-related emergencies.

5.2.33 City of Romulus

Hazard Priorities

Community representatives specified severe storms and tornados and associated flooding and power outages, along with extreme temperatures in both summer and winter as the natural hazards of greatest concern. Damage could result to roads, businesses, and residences, and in areas adjacent to retention ponds. Concerns related to severe weather include loss of power, damage to water-related infrastructure, and lack of overnight warming/cooling centers for residents. Power loss was noted as having negative impact on traffic circulation, communications, and business revenue.

Hazards relating to Detroit Metro Airport being located entirely within the City perimeter include health emergencies and terrorism. The presence of tank storage facilities near the airport, railroads, highways, pipelines and other industry create the potential for a hazardous materials emergency. The hazard extends to the local water supply in the event of a release. The community has a need for more comprehensive mutual aid agreements between communities and better accessibility to information about potential hazmat sites and their associated contingency plans.

The City has several municipal buildings, schools, and the 34th district court building that could all be the target of intrusion or civil disturbance. The need for a vulnerability assessment of these institutions was discussed by officials.

Existing Authorities, Policies, & Programs and Ability to Expand These

The population of Romulus is 23,916 people, and the City's principal land are TCU with the airport, vacant, and single-family residential at 35.6%, 22.3%, and 17.9%, respectively. 27% of the community is categorized as impervious surface.

Romulus participates in the National Flood Insurance Program and administers their floodplain protections under Article X of their Code. In addition to including tools to regulate floodplain development, their Code of Ordinances includes regulations concerning emergency preparedness, and a woodland protection ordinance that likely assists with flood reduction.

Romulus is a member of the Alliance for Downstream Watersheds and works in partnership with other communities to manage stormwater under a Phase II Municipal Separate Stormwater System (MS4) permit.

Areas for possible improvement could include regulatory mechanisms to and other programs to facilitate cooperative management of concerns stemming from the airport use and emergency response.

5.2.34 City of Southgate

Hazard Priorities

Tornadoes, thunderstorms accompanied by high winds, and snow and ice storms, create a threat to the City of Southgate and its residents. Resulting power outages have a significant effect on the population, especially senior citizens. Those who are at greatest risk from these hazards are the residents of the senior citizens facilities located within the city. People living at the mobile home community located on Dix Toledo Highway in the northern section of the city are most vulnerable to the danger of tornadoes.

I-75 is a heavily traveled highway that runs through the City of Southgate. This highway has a history of many vehicular accidents. Of particular concern to city officials are accidents involving trucks carrying hazardous materials. The potential of train accidents and gas pipeline ruptures are additional hazardous material vulnerabilities. The ability to adequately respond to these potential disasters, as well as other emergencies, is a concern to the officials of Southgate.

The close proximity of Detroit Metro Airport and the City's location along a flight path to the airport is a concern to City officials. Not having the manpower and resources to properly respond to a plane crash was discussed.

Existing Authorities, Policies, & Programs and Ability to Expand These

Southgate's population is 29,778 and land uses are primarily single-family residential and TCU: 35.5% and 22.8%, respectively. Fifty-three percent of the community is categorized as impervious surface.

Southgate participates in the National Flood Insurance Program under Chapter 1464 of their Code of Ordinances.

Southgate is a member of the Alliance for Downstream Watersheds and works in partnership with other communities to manage stormwater under a Phase II Municipal Separate Stormwater System (MS4) permit. In addition to including tools to regulate floodplain development, their Code of Ordinances includes provisions regulating soil erosion and sedimentation, vacant properties, fire prevention, and utilities.

Areas for possible improvement could include regulatory mechanisms and programs to reduce the impact of possible gas line or hazardous materials accidents, or weather related emergencies/

5.2.35 Sumpter Township

Hazard Priorities

The occurrence of a tornado could be devastating to the people and property of Sumpter Township. At greatest risk are residents of the five mobile home communities located within the township. Thunderstorms with accompanying high winds and ice storms have caused trees and limbs to fall across electric lines resulting in power outages, some lasting several days. Officials discussed the need to remove trees and limbs from the area of power lines. Also discussed were back-up generators and funds for a structure to be used to store cots and other supplies needed by the public in certain mass emergencies.

The need for additional manpower for the public safety departments was also mentioned. Emergency response to air and tanker accidents is a potential need, due to the location of the township.

Existing Authorities, Policies, & Programs and Ability to Expand These

The population of Sumpter Township is 8,531 and agriculture (40.3%) and single-family residential housing (35.6%) are the dominant land uses. Only 5% of the community is categorized as impervious surface.

Sumpter Township participates in the National Flood Insurance Program and administers their flood reduction program under Chapter 12 of their Code of Ordinances. In addition to including tools to regulate floodplain development, their Code of Ordinances includes regulations governing emergency preparedness, soil erosion control, and infrastructure.

Sumpter Township is a member of the Alliance for Downstream Watersheds but is outside of the urbanized area so is not part of the Phase II Municipal Separate Stormwater System (MS4) permit program.

Possible additional authorities and programs could include regulatory mechanisms to maintain the low amount impervious surfaces and to protect smaller remaining areas of open space (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, etc.) in addition to addressing th weather-related emergencies noted as community priorities.

5.2.36 City of Taylor

Hazard Priorities

Tornadoes, thunderstorms accompanied by high winds, and other severe weather including extreme temperatures in summer and winter, continue to be a chief concern to officials in the City of Taylor. Many of these storms result in trees or branches falling on power lines or blocking city roads. Resulting power failures adversely affect the community. At greatest risk from these power outages is the senior population including the residents of the senior communities located in Taylor.

Similarly, city officials noted that the potential of accidents resulting in hazardous material spills remain a high priority for the 2019 HMP update. I-75, I-94, and Telegraph Road are heavily traveled routes with a high frequency of traffic accidents. The potential for a hazardous material emergency also exists on one of the railways, at fuel storage facilities and pipelines, and at the many industrial facilities that are located in Taylor.

Because of the close proximity to Detroit Metropolitan Wayne County Airport, there exists the threat of an airplane crash in the community. The ability to properly respond to these emergencies, especially in conjunction with neighboring communities, is of concern to city officials.

Existing Authorities, Policies, & Programs and Ability to Expand These

The population of Taylor is 61,015. The City's principal land uses are single-family residential, TCU, and vacant at 30.5%, 18.9%, and 18.5%, respectively. Thirty-nine percent of the community is categorized as impervious surface.

Taylor participates in the National Flood Insurance Program, minimizing losses due to floods using an overlay zone under Article 10 of their Code of Ordinances. In addition to tools regulating floodplain development, their Code of Ordinances includes provisions regulating utilities and traffic. Other programs could address concerns with neighboring Metro Airport

5.2.37 City of Trenton

Hazard Priorities

Tornadoes and winter weather hazards, especially those resulting in prolonged power outages and flooding, were mentioned as a concern of the City of Trenton. There is a

history of flooding in Trenton, particularly along the Frank and Poet Drain in the area surrounding Fort Street (M-85) south of Van Horn. A particular concern expressed by a representative of the City of Trenton is the potential failure of the Trenton Wastewater Treatment Facility and resulting basement flooding. This hazard also presents a significant health threat to the citizens.

Also discussed was the potential for a hazardous material emergency as a result of a train derailment within the City. The most vulnerable area is along West Jefferson and Van Horn.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Trenton is home to 26,010 people living along the Detroit River. TCU and single-family housing area the primary land uses at 32.4% and 25.6%, respectively.

Trenton participates in the National Flood Insurance Program under Chapter 46 of their Code off Ordinances, which also includes regulations concerning emergency services and emergency management, health and sanitation, law enforcement, utilities, and marine safety.

Areas for additional programs and policies could include mechanisms to develop tornado safety rooms or address shoreline erosion.

5.2.38 Van Buren Township

Hazard Priorities

Tornados, winter weather hazards, thunderstorms and accompanying high winds and ice storms that result in power outages and property loss are of the greatest concern to Township officials. The presence of dead trees around electrical lines was cited as a potential contributor to this hazard. The capacity to support displaced residents was also listed as a concern.

The presence of I-94 and associated service drives in Van Buren Township create the potential for a major highway accident to interfere with local emergency response and regular traffic circulation. Under these circumstances, the need for public safety officers to direct traffic instead of addressing other safety needs is a burden for the local community. I-275, two railroads, and a cargo-based airport additionally contribute to the risk of hazardous materials incidents.

Existing Authorities, Policies, & Programs and Ability to Expand These

The Township population 30,706. Major land uses in the Township include single-family residential, TCU, vacant, and agriculture, at 26.6%, 20.8%, 14.5% and 13.9%, respectively. Sixteen percent of the community is impervious surface.

Van Buren Township does not participate in the National Flood Insurance Program. Itis a member of the Alliance for Downstream Watersheds and portions of the Township are regulated under the Phase II Municipal Separate Stormwater System (MS4) permit program.

Their Code of Ordinances includes provisions for civil emergences, emergency services, Boat safety, utilities, and telecommunications. Potential areas for improvement could include programs to prepare for large weather events and resulting power loss.

5.2.39 City of Wayne

Hazard Priorities

Severe weather in both summer and winter, and associated power outages, have been the major natural hazard concern in the City of Wayne. The contribution of dead tree branches around power lines, and aging infrastructure, were noted as sources of this problem.

The age of urban infrastructure and associated hazards from gas mains and structural fires were cited as the greatest technological hazards. The presence of two railroads in the City were also mentioned as having the potential for derailments, at-grade automobile crossing accidents, and hazardous materials emergencies.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Wayne has a population of approximately 16,797. Dominant land uses include single-family residential (25.2%), TCU (19.3%), and recreation/open space (13.1%). Impervious surfaces constitute 49% of the community.

Wayne participates in the National Flood Insurance Program, administering their program under Chapter 1478 of the City's Code of Ordinances. In addition to including tools to regulate floodplain development, their Code of Ordinances includes regulations governing blight, construction of fallout shelters, and fire protection.

Areas for possible improvement could include working with DTE regarding tree trimming and their programs for gas line safety. Stormwater management provisions limiting impervious surface could also help avoid exacerbation of flooding issues the community may have.

5.2.40 City of Westland

Hazard Priorities

Ice storm effects on city roads, along with any other storm generating high winds and resulting power outages were discussed by officials of the City of Westland. Ford Road in the area of I-275 is an area of numerous vehicular accidents as a result of ice on the road.

Because of the potential of hazardous material accidents in Westland and in surrounding communities along highways and railroad corridors, there exists a need to improve emergency communication between the public safety departments of those communities. It was also mentioned that there is a need for additional hazmat equipment to be distributed to all municipal employees of the City of Westland.

Existing Authorities, Policies, & Programs and Ability to Expand These

Westland's population is 84,218 and its dominant land uses is single-family residential (37.5%). Forty-five percent of the community is categorized as impervious surface.

Westland participates in the National Flood Insurance Program and administers its program under Section 22-39 of their Code of Ordinances. Their ordinances also include provisions regulating emergency preparedness, energy conservation, fire protection, and utilities.

Potential additions to the City's policies and programs could include regulatory mechanisms to reduce the impact of existing impervious surfaces, to protect remaining areas of open space (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, etc.).

5.2.41 City of Woodhaven

Hazard Priorities

Severe storms pose a significant threat to the city. According to officials, the residents of the mobile home community located south of Van Horn and east of Peters are at greatest risk from a tornado. Snow and ice storms resulting in traffic accidents, especially on I-75, were also discussed.

Due to the large amount of industry in the City of Woodhaven, city representatives expressed concern regarding the potential for hazmat emergencies within the community. Accidents on streets and highways, at the train tracks or rail yards, at manufacturing or other industrial facilities, or involving gas tank farms and pipelines, were included as being vulnerable locations for these emergencies. The need was discussed for a well-organized evacuation plan to be implemented if a hazmat or other emergency requires the relocation of citizens.

The likelihood of a pandemic resulting from the avian influenza (bird flu) and particularly, the avian Influenza A (H5N1) virus was of concern to representatives of the City of Woodhaven. Not having the necessary vaccine to immunize the population was discussed. The senior citizen population was determined to be at the greatest risk for this health hazard.

Existing Authorities, Policies, & Programs and Ability to Expand These

The population of Woodhaven is 84,218 and single-family housing is the principal land use in the community (37.5%); 45% of the community is impervious surface.

Woodhaven participates in the National Flood Insurance Program and administers their program under Chapter 50 of their Code of Ordinances. Other regulatory tools in the City's Code of Ordinances include emergency management, emergency services, fire protection, health and sanitation, law enforcement, utilities, transportation, and sewer infrastructure.

Potential additions could include regulatory mechanisms to reduce the impact of existing impervious surfaces and protect open space (e.g., incentives to install green infrastructure, remove structures from the floodplain, create a stormwater utility, etc.).

Additionally, after-action lessons from the County's preparedness and response to COVID-19 should be implemented to better care for the City's senior population and others.

5.2.42 City of Wyandotte

Hazard Priorities

Severe storms and associated power outages and flooding are a source of concern in the City of Wyandotte. In addition, the City has a history of flooding due to sewer failures. As a result of exceeding capacity at the Wayne County Wastewater Treatment Facility, sewers have backed up and flooded numerous homes in Wyandotte. The area of highest frequency of flooding occurs in the southern portion of the city in the area between Pennsylvania and Eureka Roads, west of Biddle. Officials discussed the potential health risk to citizens as a result of sewage backing up into their homes.

Due to the large amount of industry in the City of Wyandotte, the potential for a hazmat emergency exists. Representatives discussed vulnerable locations including: railroads, chemical and other manufacturing plants, the Municipal Water and Power Plant, the Wayne County Wastewater Treatment Facility, and at high pressure pipelines. Officials expressed the need for additional public safety personnel, hazmat training and hazmat emergency equipment, to better prepare for these potential disasters.

Criminal activity has become an increasing concern due to changes in the economy and police staffing levels. School security has also become a concern.

Existing Authorities, Policies, & Programs and Ability to Expand These

The City of Wyandotte population is 23,874. Single-family residential housing is the dominant land use and 56% of the community is categorized as impervious surface.

Wyandotte is a coastal community and participates in the National Flood Insurance Program, administering their local program under Article VIII, Division 5, Subdivision III of their Code of Ordinances. Other regulatory tools in the City's Code address sewers and traffic.

Additional policies or programs could focus on the sewer backups and potential for hazardous material releases noted above.

5.3 Hazard Evaluation

Based on survey results, community input, and the results of the workshop evaluations, the top hazards to evaluate during mitigation planning were identified. In selecting the top hazards, special consideration was given to those hazards that are being evaluated and mitigated by other programs.

Specifically, terrorism and weapons of mass destruction are being evaluated under the Homeland Security Program. Due to security considerations, information from that program was not available for consideration in this Plan. Therefore these two hazards were not considered when selecting and prioritizing hazard mitigation alternatives.

Hazards from nuclear power plant accidents have also been evaluated under other county planning initiatives, and due to security considerations, are not considered in this Plan.

5.3.1 Hazard Selection

The hazards selected for developing mitigation strategies combined the top hazards identified in the survey, the top hazards identified by the communities, and the hazard ranking conducted during the workshop. Hazard selection evaluated both potential impact and risk. The process was described previously in the discussion of the Risk Analysis Workshop.

The impact rank and risk rank for each hazard were used to identify the most critical hazards for the county. Hazards with an assessment ranking of 1 were of the greatest concern, followed by others in the top seven hazards listed below.

Hazard Event	Workshop Rank	Hazard Risk Rank	Action Plan Needed
Extreme Temperatures - Extreme Hot or Cold	5	6	3
Flooding - Riverine or Shoreline	4	10	3
Winter Hazards - Snow, Ice & Sleet	8	2	2
Hazmat Incidents - Transportation	5	8	3
Infrastructure Failure - Water & Sewer Systems	1	5	1
Criminal Acts - Mass Shootings/Active Assailant(s)	3	2	1
Criminal Acts - Vandalism and Arson	12	1	2
Public Health Emergencies - Pandemics, Epidemics, Food/Water, Opioid Crisis	2	4	1

5.4 Vulnerability Assessment

5.4.1 Current Assessment

Civil Disturbance

A civil disturbance in Michigan occurs once every 8 to 10 years.[267] The most likely causes for a civil disturbance in the county are a labor dispute, sporting event, or demonstration at a college, government facility, detention facility, or military facility.

Wayne County features numerous places of public gathering including major entertainment venues, festivals, national events, major league athletic facilities, places of potential political protest, and governmental facilities but most of these are located within the City of Detroit, which is not part of this Plan. The most vulnerable locations/events include the following:

- Court Houses and Federal Buildings
- Detention Facilities
- Little Caesar's Arena
- Ford Field

[267] Listing of US Civil Unrest Incidents, Armstrong Economics: www.armstrongeconomics.com/statistics/listing-of-us-civil-unrest-incidents

- Comerica Park
- Hart Plaza
- Wayne State University

Police stations are critical assets in the event of a civil disturbance event. Figure 12 displays the locations/events listed, those locations specifically listed as concerns by communities, and the locations of police stations in the county.

Criminal Acts - Vandalism

The 2017 Michigan State Police Michigan Incident Crime Reporting (MICR) online database indicates that there were a total of 68,184 "damage against property" incidents reported in Wayne County from 2013 through 2017, resulting in an average of 13,637 vandalism offenses per year.[268] The entire county area is susceptible to vandalism. Facilities that have the highest vulnerability to an act of vandalism are government facilities, educational institutions, and registered historic sites. Police stations are critical assets for responding to acts of vandalism.

Criminal Acts – Arson

In 2003, an arson or suspicious fire occurred every 62 minutes in Michigan.[269] Since 2013, Wayne County has experienced 4,081 arson fires, an average of 816 per year.[270] This is notably less than the 6,565 total and 1,094 average arson fires per year reported in Wayne County's 2013 Hazard Mitigation Plan.

Any property is a potential target for arson. However, residential areas and historic sites are most vulnerable to acts of arson. Fire departments are critical assets for responding to acts of arson. Thirty-five fire departments respond to structural fires within the Wayne County communities covered in this plan. Residential land use, indicating the highest concentrations of structures, is shown on Figure 17.

[268] Michigan State Police, Michigan Incident Crime Reporting, Crime Statistics, Wayne County, 2013, 2014, 2015, 2016, and 2017. http://www.micrstats.state.mi.us/MICR/Reports/Report02.aspx
[269] Michigan State Police, Fire Marshall Division, *2003 Michigan Fire Clock*
[270] Michigan State Police, Michigan Incident Crime Reporting, Crime Statistics, Wayne County, 2013, 2014, 2015, 2016, and 2017. http://www.micrstats.state.mi.us/MICR/Reports/Report02.aspx

Drought

At least four drought events have been recorded for Wayne County since 2000 and climate patterns continue to trend to drier, hotter summers.[271] All of the county's active agricultural lands are vulnerable to drought. Wayne County contains approximately 13,060 acres of agricultural land.

Figure 13, shows the location of active agricultural lands in Wayne County. The most vulnerable agricultural resource is cropland. Sumpter Township, Huron Township, and Van Buren Township are the top three communities for total active agriculture and cropland acreage.[272]

Natural resources such as lakes, rivers, streams, and other bodies of water could be affected by decreases in water levels. Water features are also shown on Figure 13. Van Buren Township, Canton Township, and Northville Township contain the most water (by surface acreage) in the county.[273]

Top 5 Community Land Use in Wayne County- Drought Vulnerabilities
Active Agriculture and Cropland

Community	Agriculture (acres)	Agriculture (%)
Sumpter Township	4,051	16.8
Huron Township	3,251	14.2
Van Buren Twp.	2,977	12.9
Canton Township	1,069	4.6
Romulus	955	4.2

Source: SEMCOG, 2008 *Land Use and 2010 Leaf-off Land Cover*: Wayne County, Excluding Detroit, May 2019

Top 5 Community Land Use in Wayne County – Forest/Field Fire Vulnerabilities
Forest Land

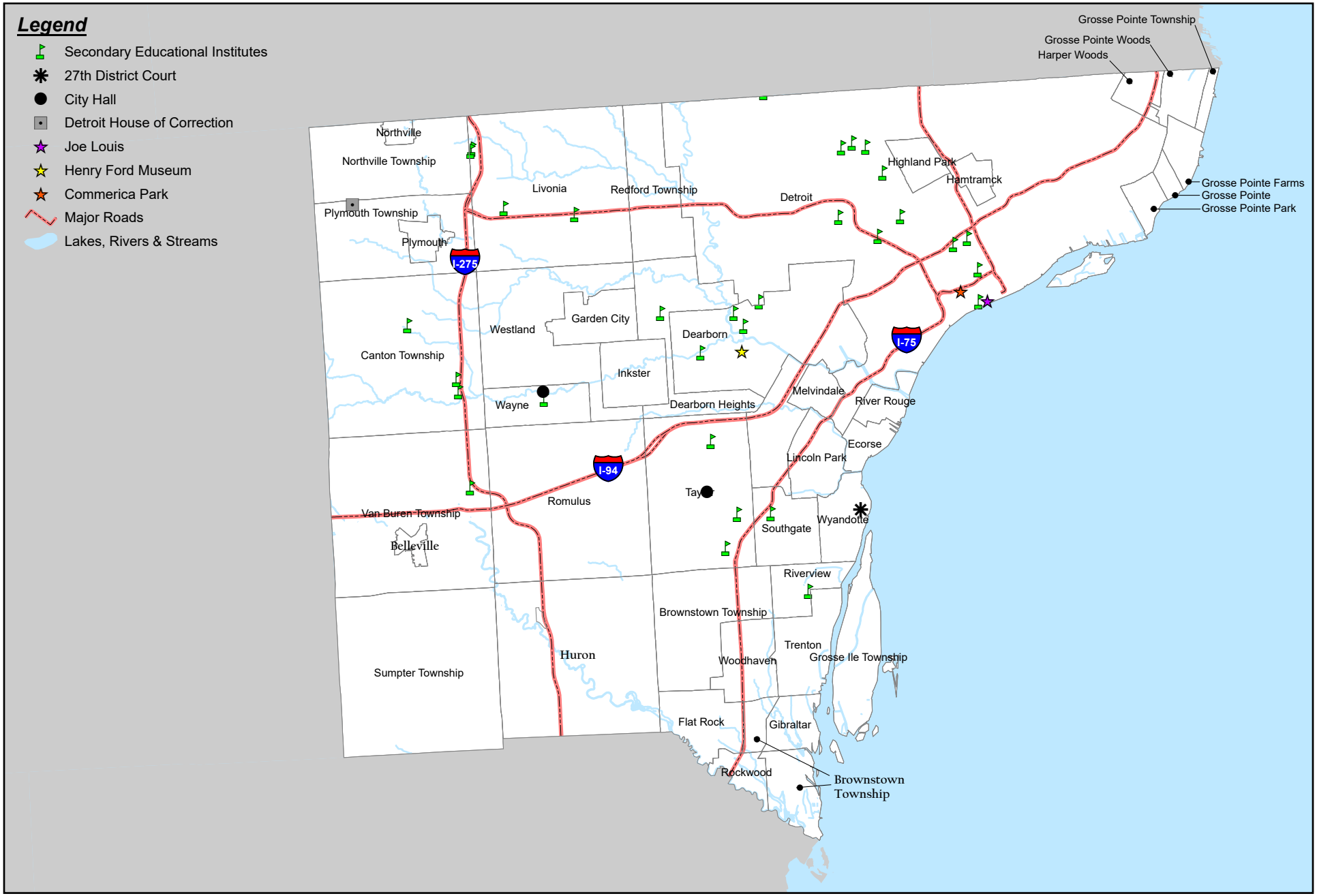
Community	Acres
Grosse Ile Township	1,272
Northville Township	1,130
Livonia	866
Plymouth Township	806
Van Buren Twp.	719

Grassland/Shrubland

Community	Acres
Sumpter Township	3,288
Huron Township	2,901
Canton Township	2,789
Romulus	2,744
Van Buren Township	2,466

Source: SEMCOG, 2008 *Land Use and 2010 Leaf-off Land Cover*: Wayne County, Excluding Detroit. May 2019.

[271] NOAA National Centers for Environmental Information Storm Events database query https://www.ncdc.noaa.gov/stormevents/choosedates.jsp?statefips=26%2CMICHIGAN, May 14, 2019
[272] SEMCOG, 2008 *Land Use and 2010 Leaf-off Land Cover*: Wayne County, Excluding Detroit, May 2019.
[273] SEMCOG, *Land Use in Southeast Michigan, 1990-2000*, Specific to Wayne County, Excluding Detroit, April 2004.



Wayne County

Created for: Wayne County
Created by: RMH, April 23, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), HIFLD (2019)

Figure 12 - Vulnerability: Civil Disturbance

Earthquakes

Most earthquakes in Michigan are minor tremors that result in little damage. Several mildly damaging earthquakes have been felt since the early 1800s. The most vulnerable assets to earthquakes are the county's water, sewer, and natural gas services, and natural gas/petroleum pipelines. The entire county has gas service available either through Consumers Energy or DTE Energy. Municipal and county operated water, storm water, and sanitary sewers are also vulnerable. Existing and planned sewers within Wayne County and pipeline locations are shown in Figures 20 and 22, respectively.

Extreme Temperatures

Extreme temperature periods occur every year in the state and impact the entire county. Underground utilities, primarily water and gas service areas, are vulnerable to extreme cold. These vulnerable areas are shown in Figure 14. The entire county has natural gas services available through Consumers Energy or DTE Energy. Trenton, River Rouge, and Romulus have the highest utility land use acreage in the county, excluding Detroit.[274]

Top 5 Community Land Use in Wayne County, Excluding Detroit – Extreme Temperature Vulnerabilities
Utilities

Community	Acres
Trenton	150
River Rouge	110
Romulus	66
Dearborn Heights	63
Westland	57

Source: SEMCOG, Land Use in Southeast Michigan, 1990-2000, Specific to Wayne County, Excluding Detroit, April 2004.

Also vulnerable to extreme temperatures are the elderly, young, disabled, and impoverished persons. Hospitals are vulnerable due to increased cases of heat stroke, heat exhaustion, frost bite, hypothermia, and other temperature-related illnesses. Almost 21% of the Wayne County population is vulnerable to extreme temperature based on age alone.[275] There are 44 nursing homes in Wayne County. Figure 20 displays the locations of sewer service areas and hospitals in the county.

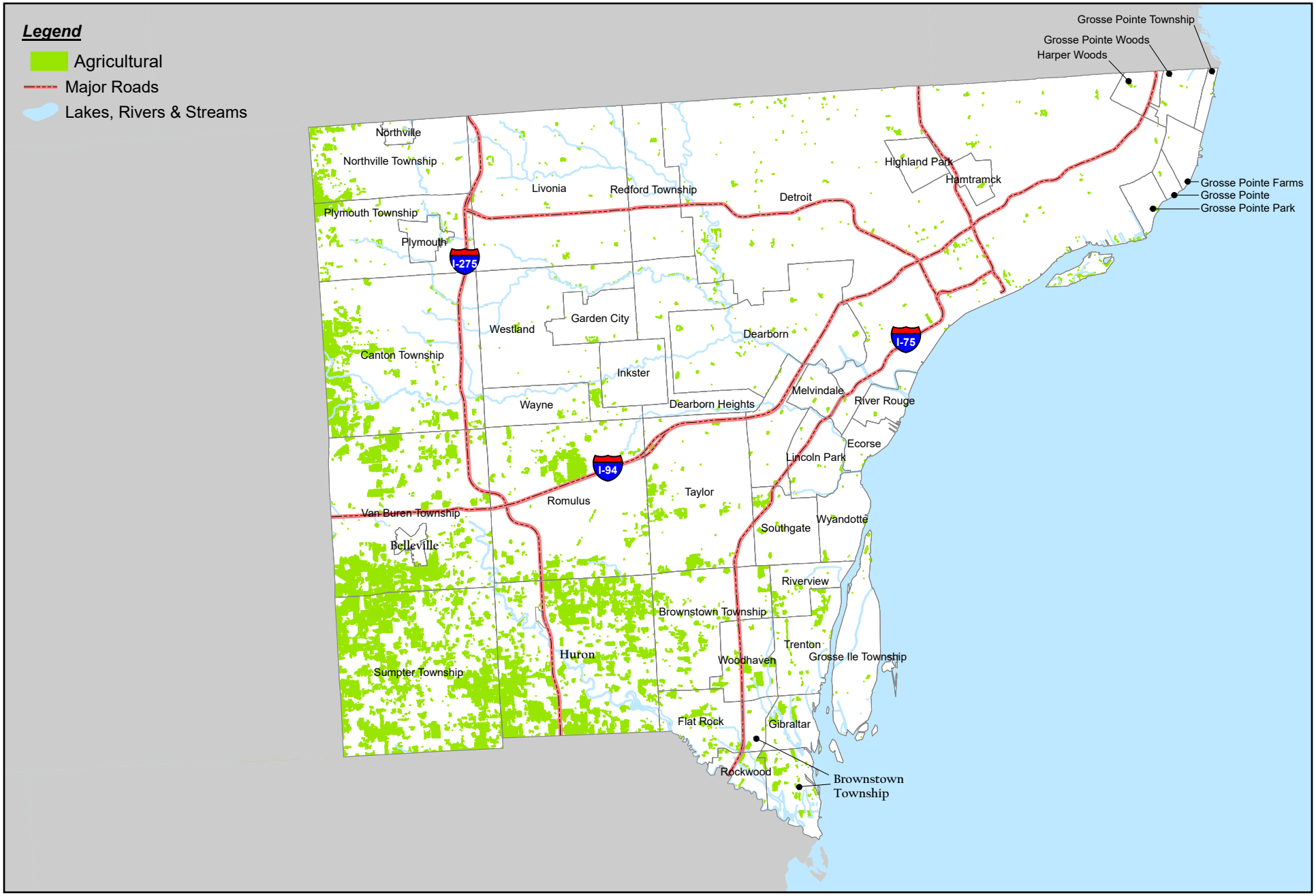
Forest/Field Fire

A total of 1,669 forest/field fires occurred between 1998 and 2004 in Wayne County.[276] Woodlands, wetlands, grassland, shrub land, and areas near railroad right-of-ways are vulnerable to forest/field fires. Wayne County contains approximately 6,904 acres of forest land.[277] Grosse Ile Township, Northville Township, and Livonia have the highest acreage of forest in the county. Wayne County contains approximately 27,336 acres of

[274] SEMCOG, *Land Use in Southeast Michigan, 1990-2000*, Specific to Wayne County, Excluding Detroit, April 2004.
[275] U.S. Census Bureau, *Profile of General Demographic Characteristics*: 2000, Wayne County, Michigan
[276] Federal Emergency Management Association Website, www.nfirs.fema.gov, NFIRS 5.0 National Reporting, October 3, 2005, Filtered for Wayne County Reporting Only.
[277] SEMCOG, *Land Use in Southeast Michigan, 1990-2000*, Specific to Wayne County, Excluding Detroit April 2004.

grassland and shrub land.[278] Sumpter Township, Huron Township, and Canton Township have the highest total acreage in the county of grassland and shrub land.

[278] SEMCOG, *Land Use in Southeast Michigan, 1990-2000*, Specific to Wayne County, Excluding Detroit April 2004.



Wayne County

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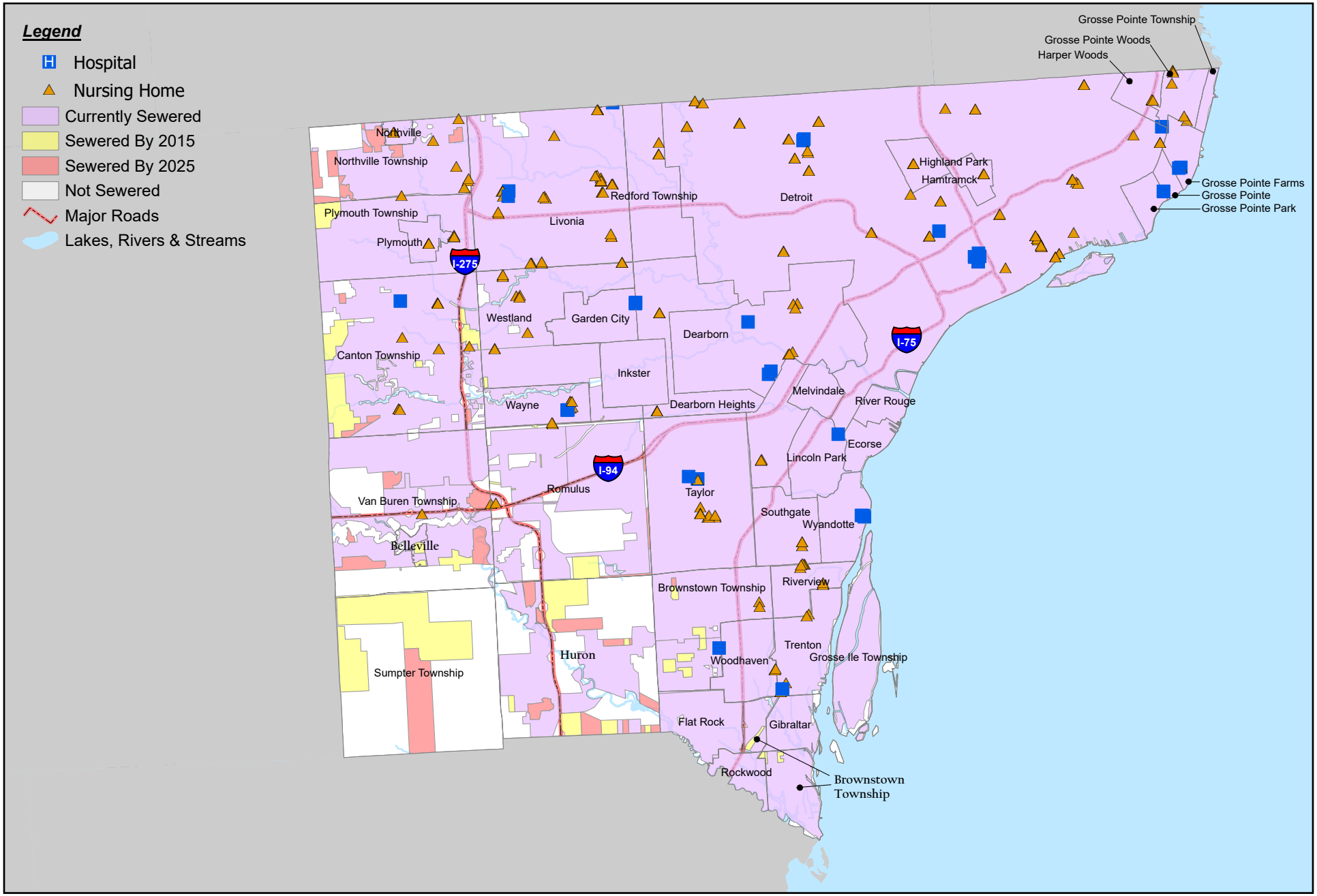
Created by: RMH, April 23, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013)
NLCD (2016), SEMCOG Land Use (2015)

ASTI Environmental

Figure 13 - Vulnerability: Drought



Wayne County

Created for: Wayne County
Created by: RMH, April 24, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), ArcGIS Online

ASTI Environmental

Figure 14 - Vulnerability Assessment: Extreme Temperature

The 35 fire departments in the participating Wayne County communities are critical assets for responding to forest/field fires. Figure 15 presents the coverage of forest woodland, grassland, and shrub land, railroads (along which fires often occur), and the location of fire department headquarters in the county.

Scrap Tire Fire

Within Wayne County, there are 13 registered scrap tire facilities and approximately 107 unregistered facilities.[279] The Michigan Department of Environmental Quality's Scrap Tire Program has identified many unregistered scrap tire facilities which are in need of remediation. A third of the unregistered sites are very small, typically storing fewer than 500 tires, the majority listed store between 500 and 2,000 tires on site, and the largest site held over 53,000 when last surveyed.[280]

Due to the toxic smoke produced by tire fires and potential environmental impact, residents living near these facilities are considered vulnerable. Figure 16 shows the location of the registered scrap tire facilities with a 1-mile radius of census block groups. Unregistered scrap tire locations store fewer tires than registered facilities. Therefore, areas adjacent to unregistered sites are considered less vulnerable than areas near registered facilities. There are approximately 11,548 people within a one-mile radius of registered tire facilities in Wayne County. Also shown on Figure 16 are the locations of fire stations and air transportation facilities in the county. Air transportation facilities are considered vulnerable as the smoke produced by a fire may interrupt flight patterns.

Structural Fire

Structural hazards are commonly known as the "universal hazard" because they can occur anywhere. From 1998 through 2004, 8,674 structural fires in Wayne County were reported to the Federal Emergency Management Agency, National Fire Incident Reporting System.[281] This equals an average of roughly 1,240 structural fires per year in Wayne County.

The 35 participating community fire departments are critical assets for responding to structural fires. Figure 17 shows the areas of multiple-family residential, industrial, and commercial development that may be susceptible to structural fires.

Flooding

Wayne County has had 2 documented dam failures.[282] Urban flooding and riverine flooding are dependent on seasonal weather patterns and seven flood and flash flood events have been recorded since 2013.

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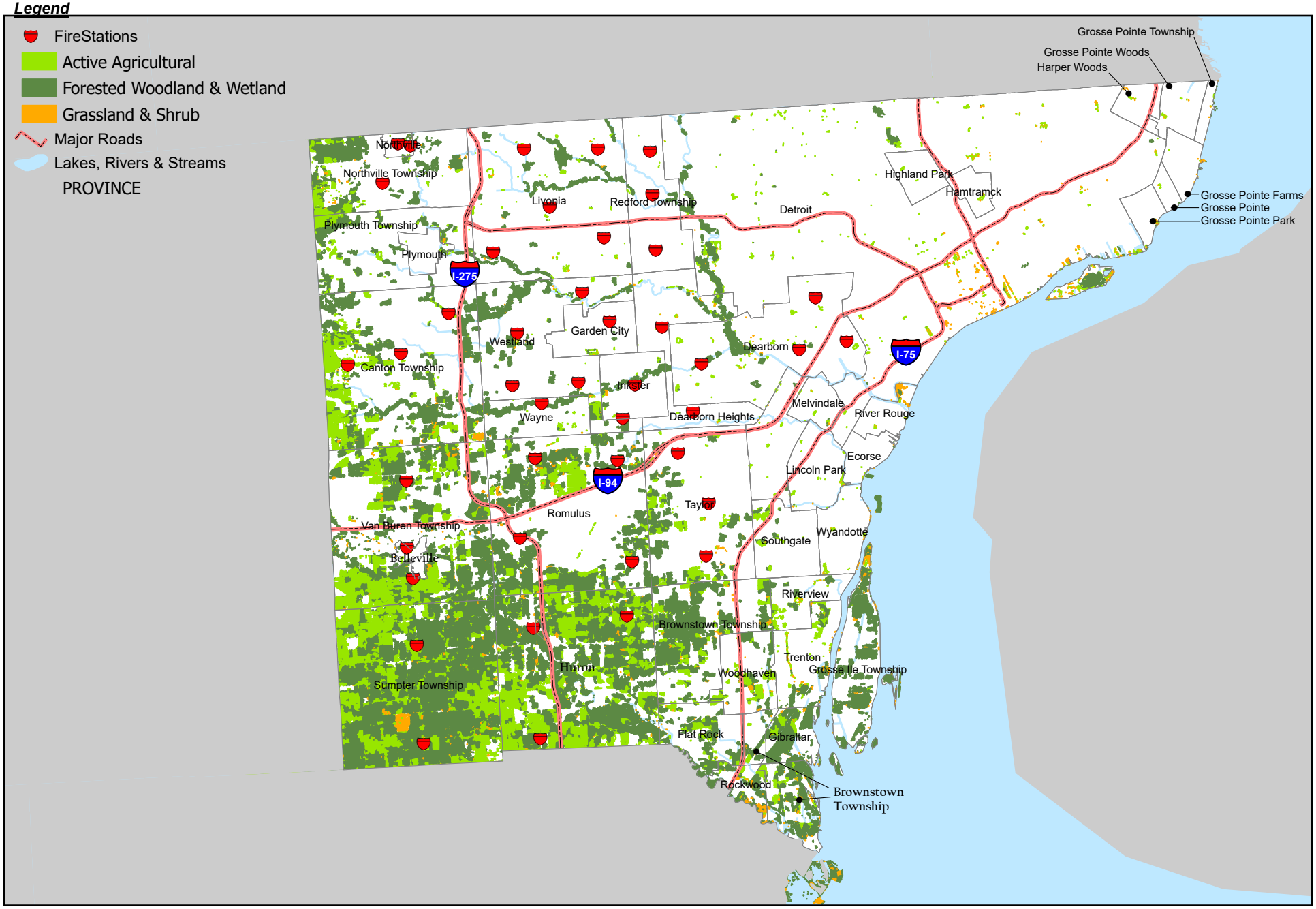
[279] Michigan Department of Environmental Quality, Southeast Michigan District, Scrap Tire Program, Tire Site Database.
[280] Ibid.
[281] NFIRS 5.0 National Reporting, Tally by Incident Type, January 1, 1998 through December 31, 2004, report generated on October 3, 2005, filtered for Wayne County reporting only.
[282] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001, page 76.



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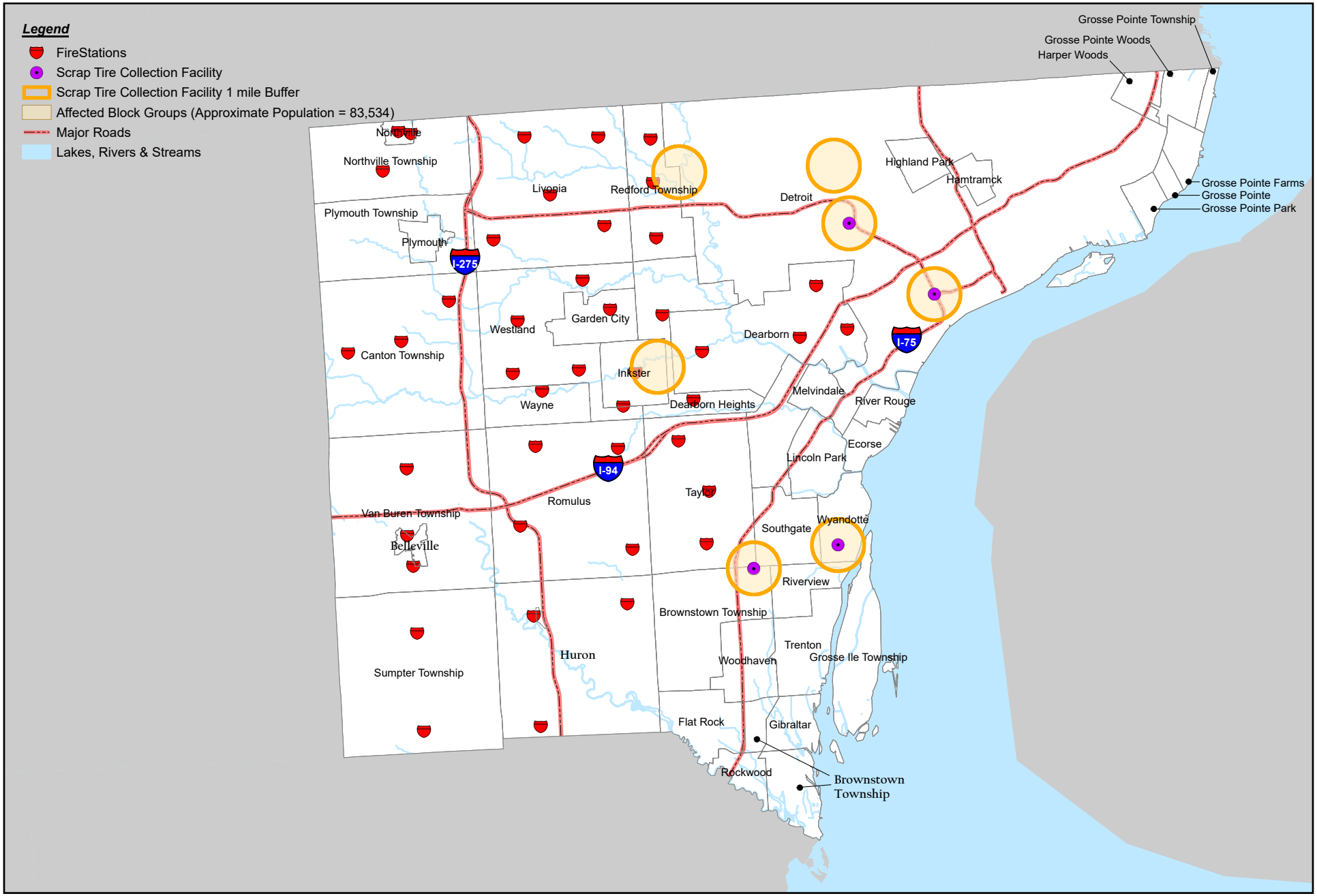
Created for: Wayne County
Created by: RMH, April 24, 2020 ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), SEMCOG (2015), NLCD (2016)

Figure 15 - Vulnerability Assessment: Forest/Field Fire



Wayne County

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ASTI Environmental

Created for: Wayne County
Created by: RMH, April 24, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), U.S. Census Bureau (2010)

Figure 16 - Vulnerability Assessment: Scrap Tire Fire

Areas vulnerable to flooding are those locations and populations within floodplains and flood prone areas. Vulnerabilities include Infrastructure (bridges and structures) and populated areas. Approximately 9,509 structures are located within the FEMA 100-year floodplain in Wayne County. Figure 5 shows the location of dams in the county and floodplains. Figure 18 also shows floodplains and specific areas in the county which have a high occurrence of flooding.

Hazmat Incidents – Fixed Site

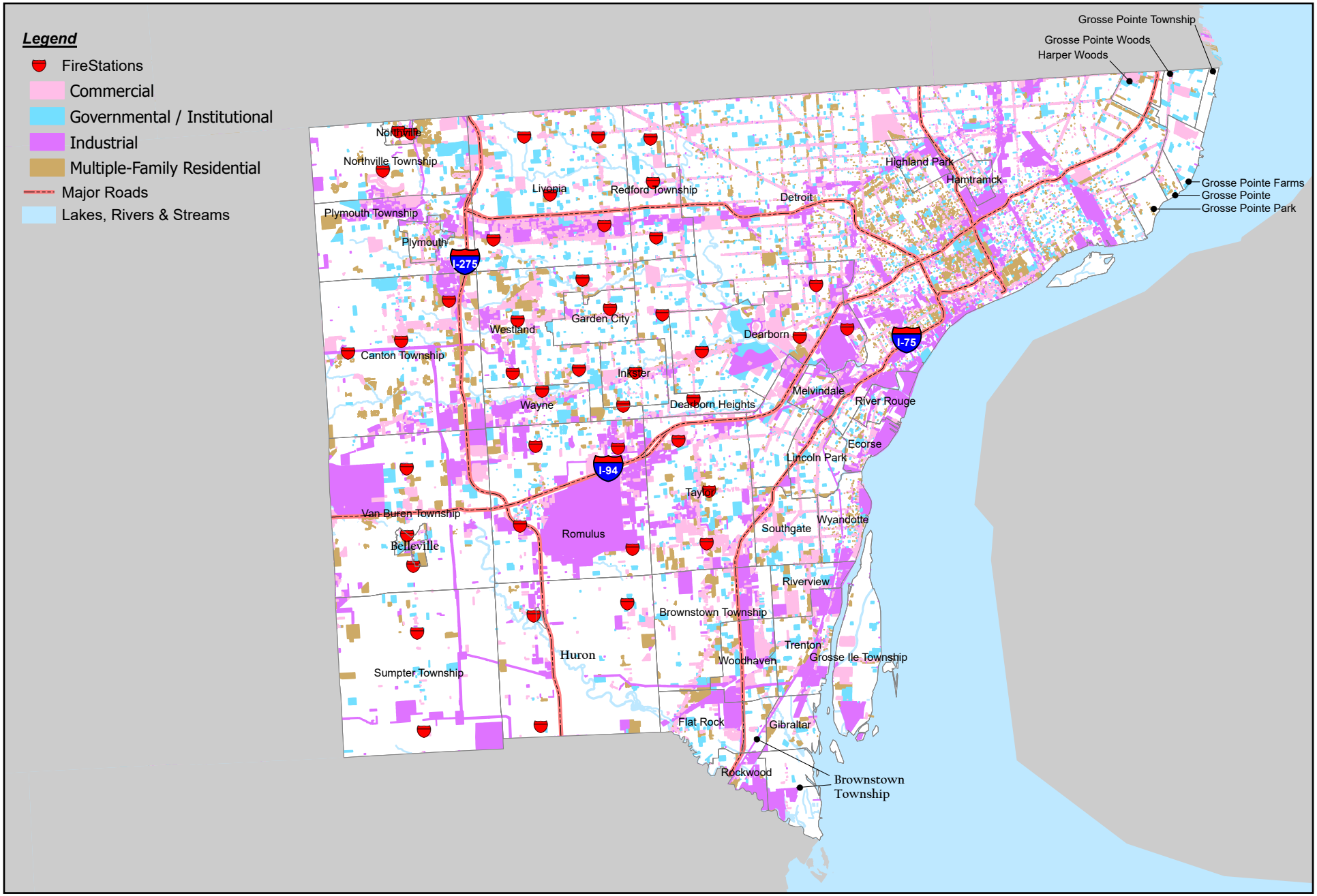
The majority of hazmat material releases in Wayne County are releases to water, followed by those to land and air.[283] Vulnerable locations are Sara Title III sites (sites that store hazardous substances) in the county and those areas within a one-mile radius of these sites. There are 153 Sara Title III sites in Wayne County, with 113 of those within the City of Detroit.[284]

Between 1990 and October 2005, Ecorse, Detroit, River Rouge, Taylor and Trenton had the highest number of releases from fixed site hazmat locations.[285] Police and fire stations are critical assets for responding to hazmat fixed site releases. Areas with greater population are more at risk for secondary health-related incidents resulting from a fixed site hazmat release.

Hazmat Incidents – Transportation Incident

From 1990 to April 1, 2013, there were a total of 664 transportation related hazmat incidents, 420 occurring on highways and 244 in Wayne County railroads.[286] This equals an average of approximately 29 incidents each year in the county. Between 1999 and October 2005, the highest number of releases from transportation related hazmat incidents involved the release of oil.[287] Vulnerable locations to a transportation hazmat incident are the areas within a one-mile radius of the railroads and major roadways, particularly I-75, I-696, I-96, I-94 and I-275. Areas of greater population are more vulnerable to these incidents. Police and fire stations are critical assets for responding to hazmat fixed site releases, providing evacuation and cleanup assistance. The locations of the railroads, major highways, and police and fire station locations are included on Figure 19.

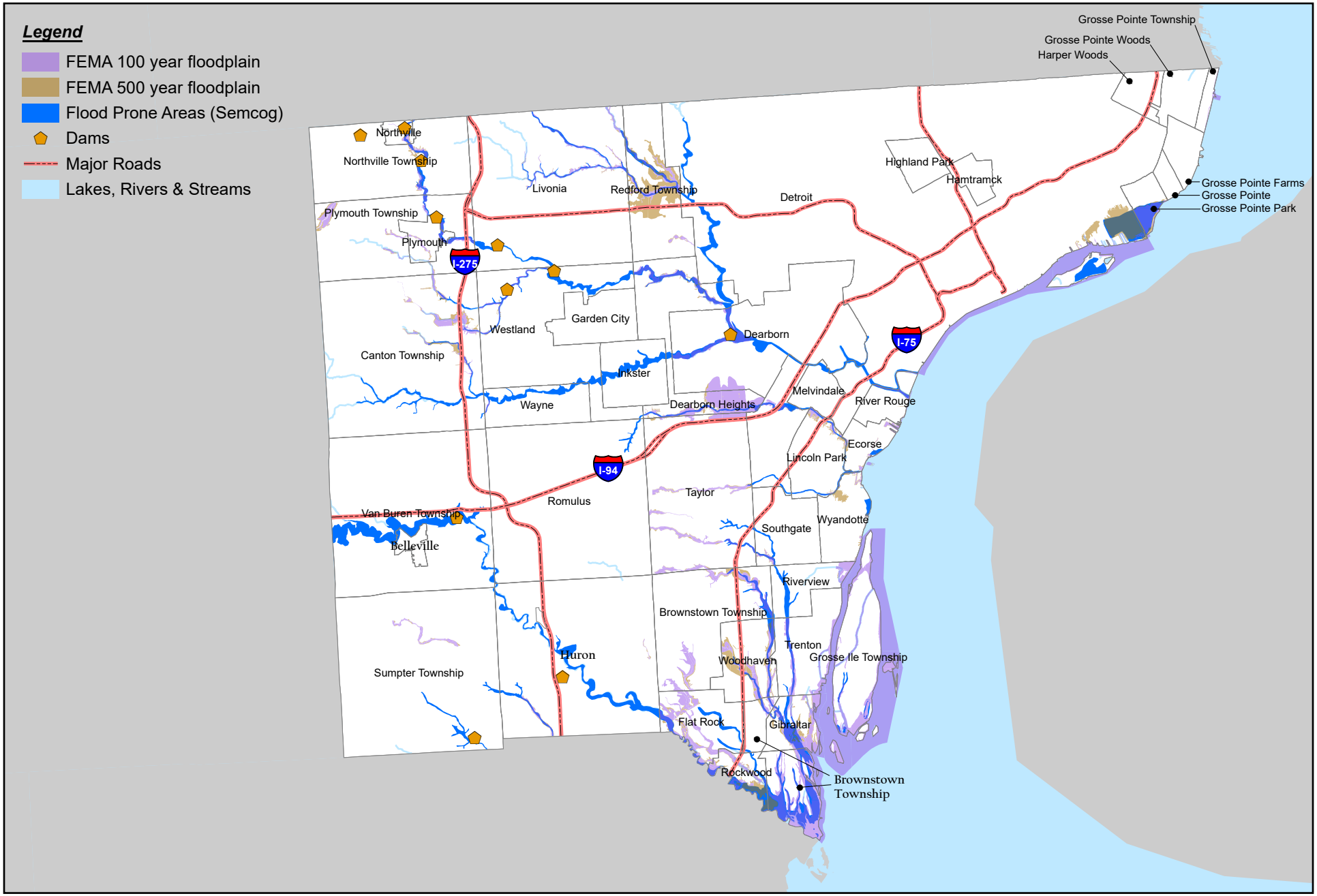
[283] U.S. Coast Guard National Response Center Website, www.nrc.uscg.mil/foia.html, Standard Query Report for Wayne County, Fixed Incidents, October 2005.
[284] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* April 2012, page 234.
[285] U.S. Coast Guard National Response Center Website, www.nrc.uscg.mil/foia.html, Standard Query Report for Wayne County, Fixed Incidents, October 2005.
[286] U.S. Coast Guard National Response Center Website, www.nrc.uscg.mil/foia.html, Standard Query Report for Wayne County, Transportation, April 2013.
[287] Ibid



Wayne County

Created for: Wayne County
Created by: RMH, April 24, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), SEMCOG Land Use (2015)

Figure 17 - Vulnerability Assessment: Structural Fire



Wayne County

Created for: Wayne County
Created by: RMH, April 24, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), USDA (2010), SEMCOG (2008 & 2012), National Inventory of Dams (2013)

Figure 18 - Vulnerability Assessment: Flooding

Infrastructure Failures – Water System, Sanitary & Storm Sewers, Electrical, Communications

The Wayne County Department of Public Works along with the Detroit Water and Sewer Department operate and maintain county storm drains throughout the county (Figure 20) as well as other water, wastewater, and storm sewer infrastructure. Minor problems with the sanitary and storm sewers are common with major rain or snowmelt events. Interruptions in the water system are localized and intermittent, and typically only follow power outages and extreme temperatures. The primary consequence of this hazard is potential public health impacts. As a result, schools, hospitals and elderly care facilities have been identified as the most vulnerable. The downriver communities have been identified as having the greatest occurrence of problems with infrastructure failures involving the sanitary sewer system. Therefore, schools, hospitals, and elderly care facilities in these communities are at increased vulnerability.

Electrical service is provided to Wayne County residents by Consumers Energy and DTE Energy (Figure 21). Private communication services are provided by a number of companies with AT&T serving the most customers. Wayne County also operates a 911 Call Center and public safety radios. Failures of the electrical and communications systems are more likely to occur during severe storms. Populations in schools, hospitals and elderly care facilities have been identified as being at increased vulnerability to this hazard.

Wayne County and its local units of government participate in the State 800 MHz emergency communication system that provides communication services between various response facilities and groups during an emergency situation, and which can also aid in the distribution of information to the public.

Nuclear Power Plant Accidents

There are three nuclear power plants in Michigan. The closest active plant, Enrico Fermi-2 was opened in Monroe County in 1998. A portion of Brownstown Township, and the Cities of Flat Rock, Gibraltar, and Rockwood are within Protection Action Order Areas 4 of the Enrico Fermi-2 Nuclear Power Plant (Figure 6). The primary vulnerability to a nuclear power plant incident is radiological contamination of food sources. Agricultural lands, restaurants, and grocery stores are most vulnerable.

Oil and Gas Well Accidents / Petroleum and Natural Gas Pipeline Accidents

There have been no oil or gas well related incidents in Wayne County in the past 5 years.[288] Although there have never been any significant incidents in Wayne County, the presence of active and producing wells within the county makes it possible for this hazard to occur. Between 1973 and 2001, there was an oil or gas well incident in Michigan every 3-4 years.[289]

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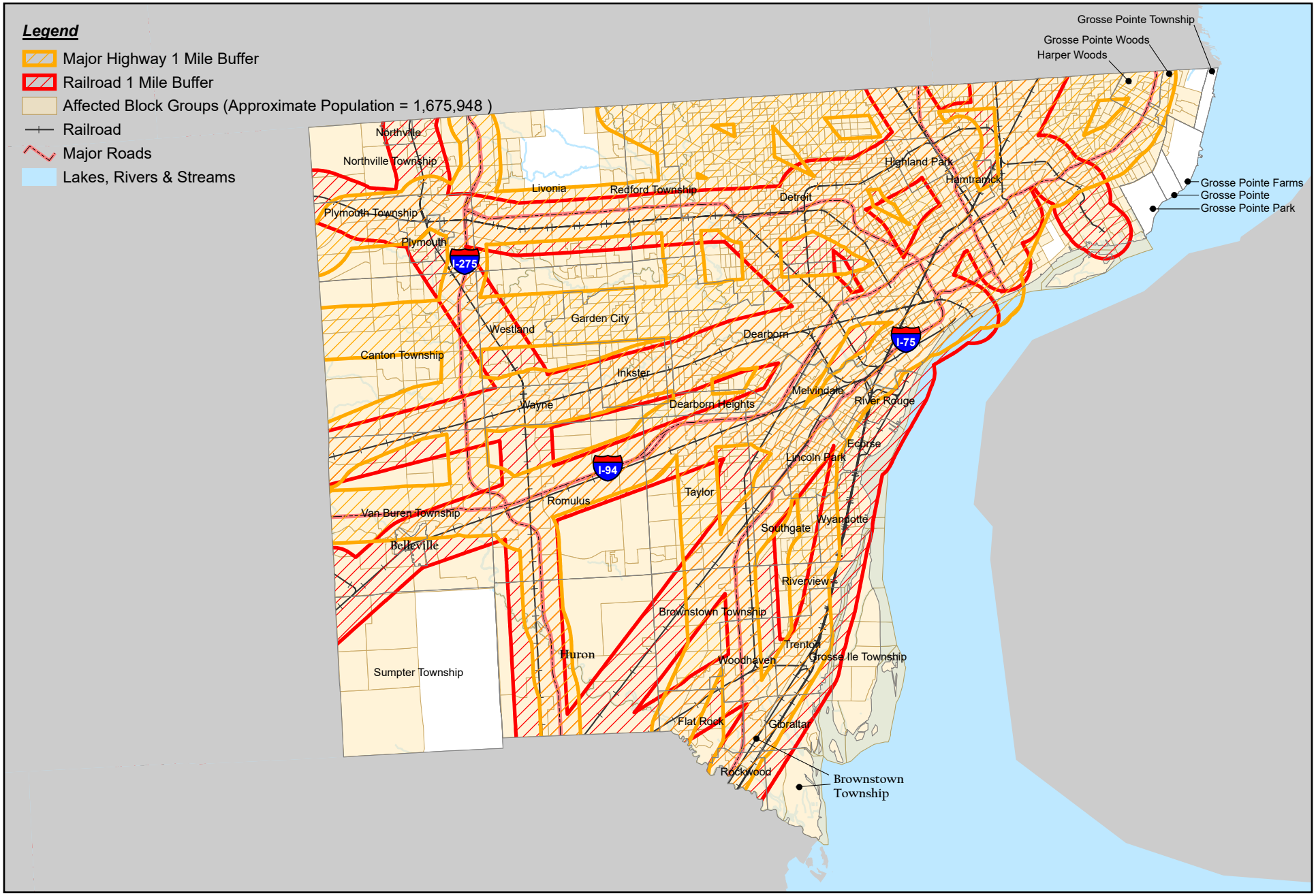
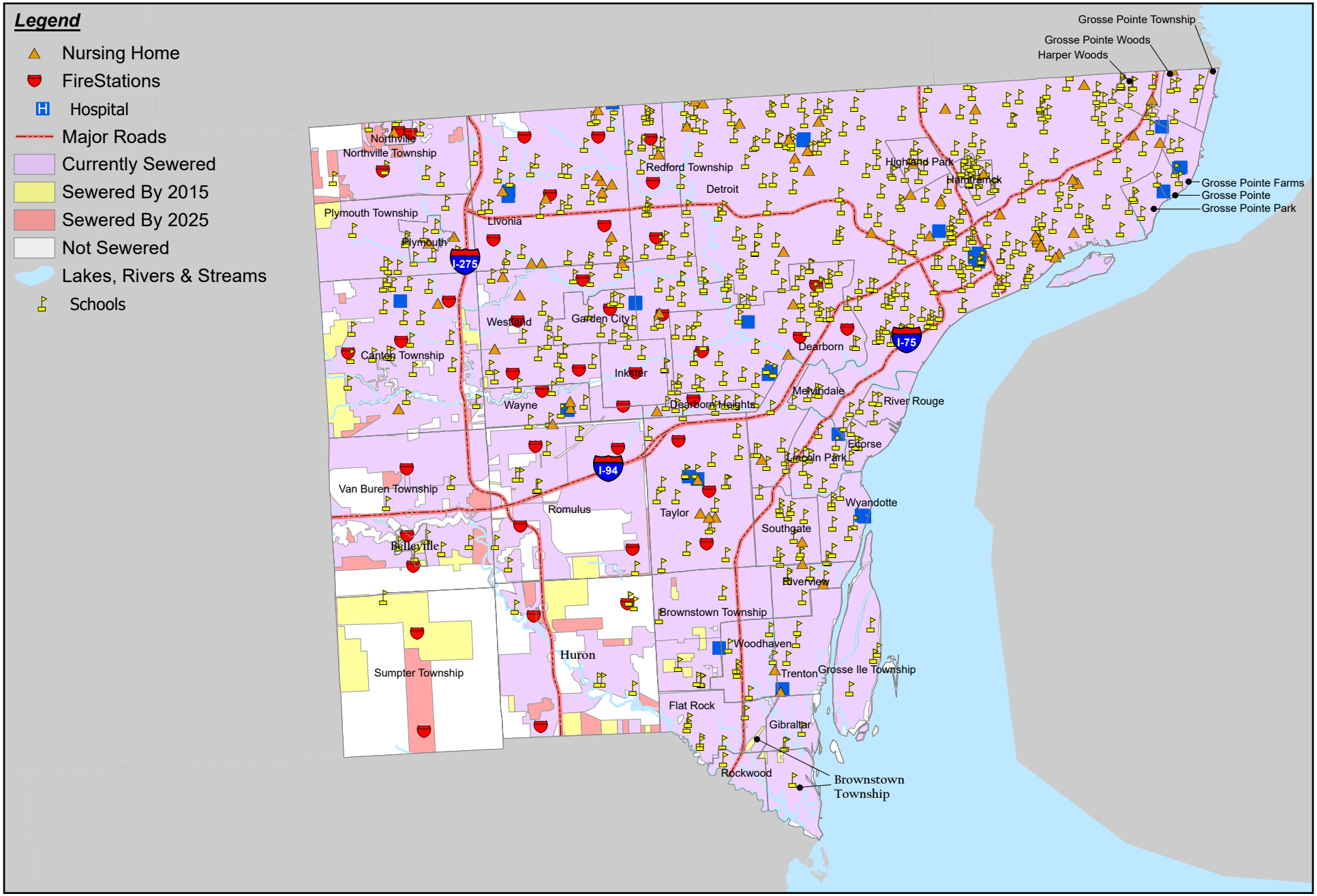
[288] Michigan Department of Environmental Quality, Southeast Michigan District, Geological and Land Management Division, staff telephone interview July 7, 2004.
[289] Source: Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis*, December 2001, page 9.



Wayne County

Created for: Wayne County
Created by: RMH, April 24, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), SEMCOG (2015)

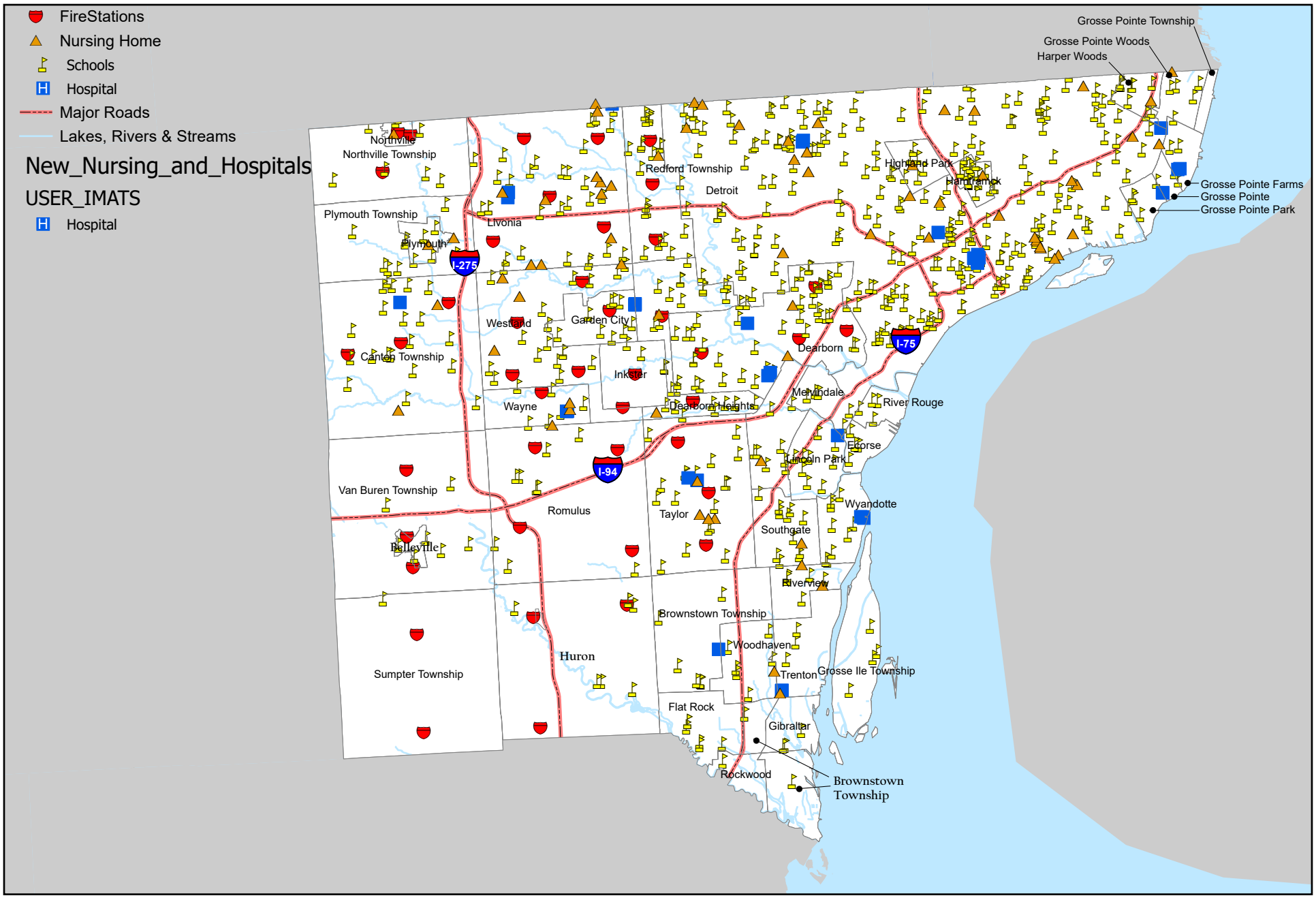
Figure 19 - Vulnerability Assessment: Hazmat Incidents - Transportation



Wayne County

Created for: Wayne County
Created by: RMH, April 23, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), ArcGIS Online

Figure 20 - Vulnerability Assessment: Infrastructure Water/Sanitary Sewer System



Wayne County

Created for: Wayne County
Created by: RMH, April 24, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), ArcGIS Online

Figure 21 - Vulnerability Assessment: Infrastructure Water/Sanitary Sewer System

Pipelines can pose a significant threat to the public due to the threat of fires, explosions, and ruptures. Most vulnerable are heavily populated residential areas, schools, churches, and hospitals. Local fire and police departments would respond to a pipeline incident. Gas leaks are a frequent call for service for Emergency Response Teams. Populations located within a 1-mile radius of a well or pipeline are most vulnerable and urbanized areas are more vulnerable than rural areas, based solely on population densities. The locations of natural gas distribution pipelines, natural gas transmission lines, petroleum gas pipelines, oil/gas bottom wells, and oil/gas surface wells are shown in Figure 22. There are approximately 120 miles of natural gas distribution pipelines, 363 miles of natural gas transmission lines, and 107 miles of petroleum gas pipelines in Wayne County. Census block groups within a 1-mile radius of the pipelines and wells are included on Figure 22. Approximately 1,028,514 people are located within the census blocks identified. Figure 22 also presents the locations of schools, hospitals, police stations, and fire stations in the county.

Public Health Emergencies

Public Health Emergencies can arise from a wide range of causes and can result in varying levels of severity. Persons most susceptible are those with weakened or undeveloped immune systems. Therefore, adult care and day care facilities and schools are the most vulnerable. The locations of public safety facilities, adult care facilities, day care facilities, and schools are shown in Figure 23.

Vulnerable assets involved with public health emergencies are medical service facilities and include the county's health departments, clinics, and hospitals. The Wayne County Division of Health operates two locations within the county. The county's health departments and hospitals are also shown in Figure 23.

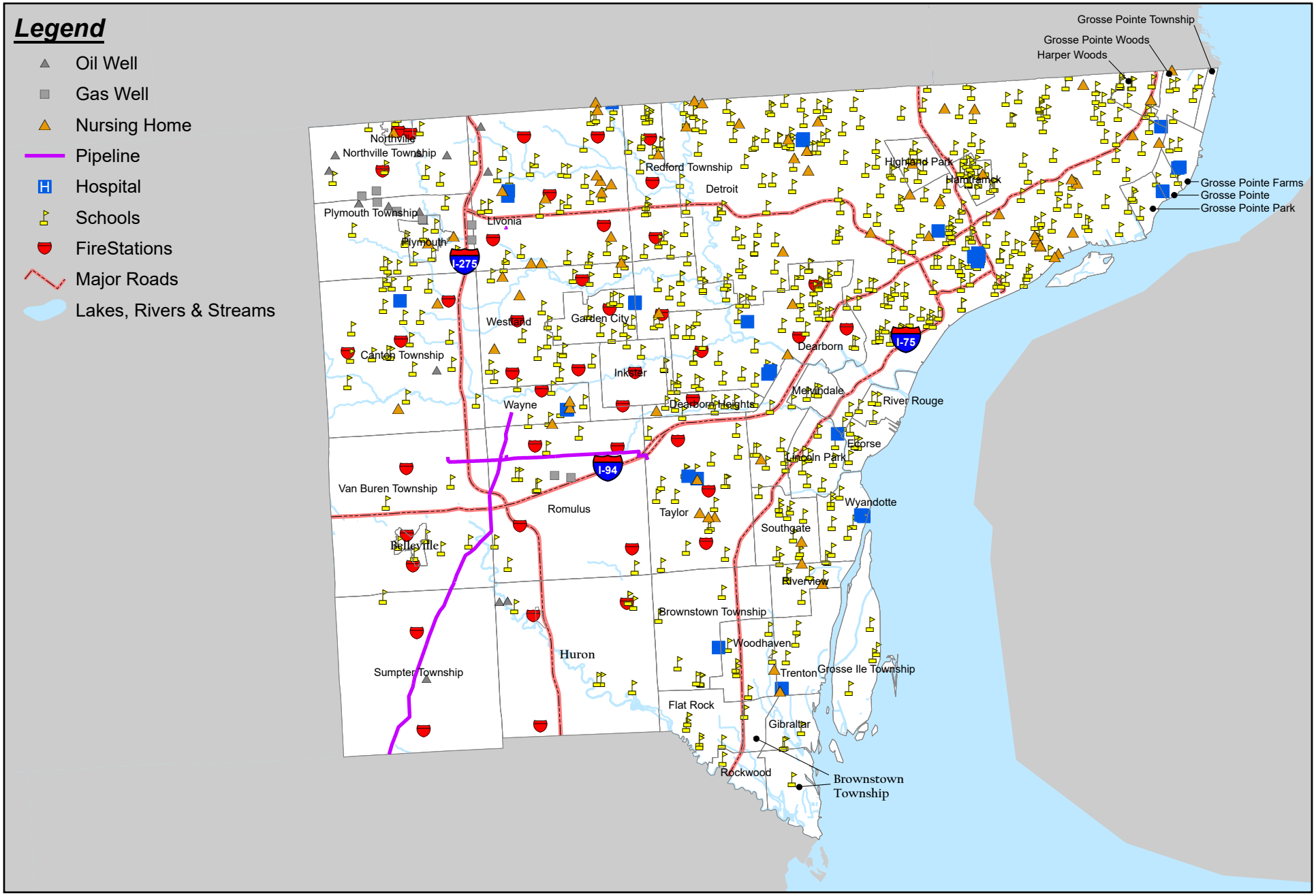
Subsidence

The most likely occurrence of subsidence in the county would be due to sink holes caused by water main and storm water utility breaks. The probability of this occurrence increases as infrastructure ages. Figure 20presents Wayne County sewer services areas.

Thunderstorm Hazards and Tornadoes

Wayne County receives 40-60 thunderstorm days per year.[290] Vulnerable and critical assets associated with thunderstorms (hail, lightning, and severe wind) and tornadoes are the warning siren systems, communications/ electrical infrastructure, police and fire facilities, and manufactured home sites. Private urban tree removal services and municipal forestry departments are also critical to responding to wind hazards.

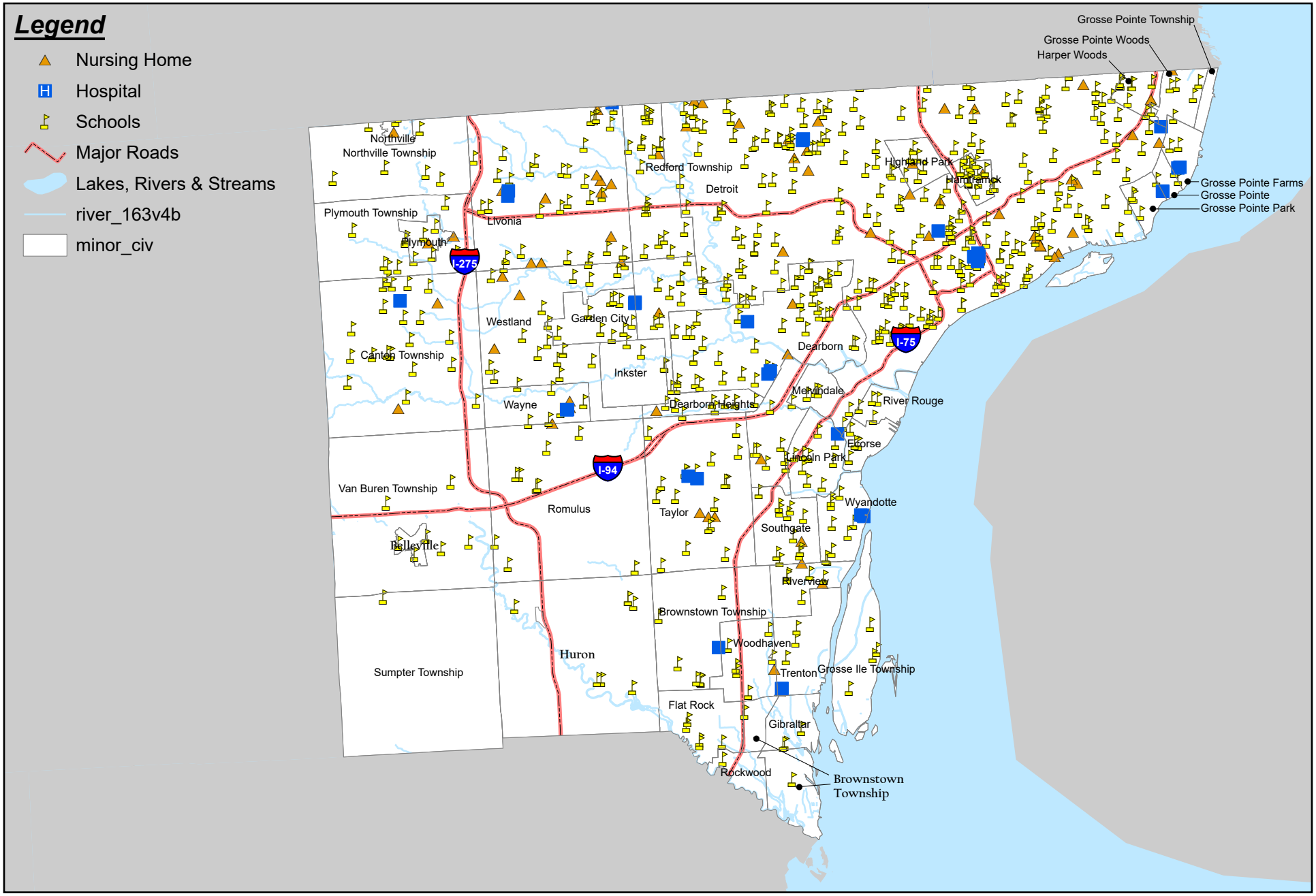
[290] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis,* December 2001, page 184.



Wayne County

Created for: Wayne County
Created by: RMH, April 24, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), ArcGIS Online

Figure 22 - Vulnerability Assessment: Accidents- Wells & Pipelines

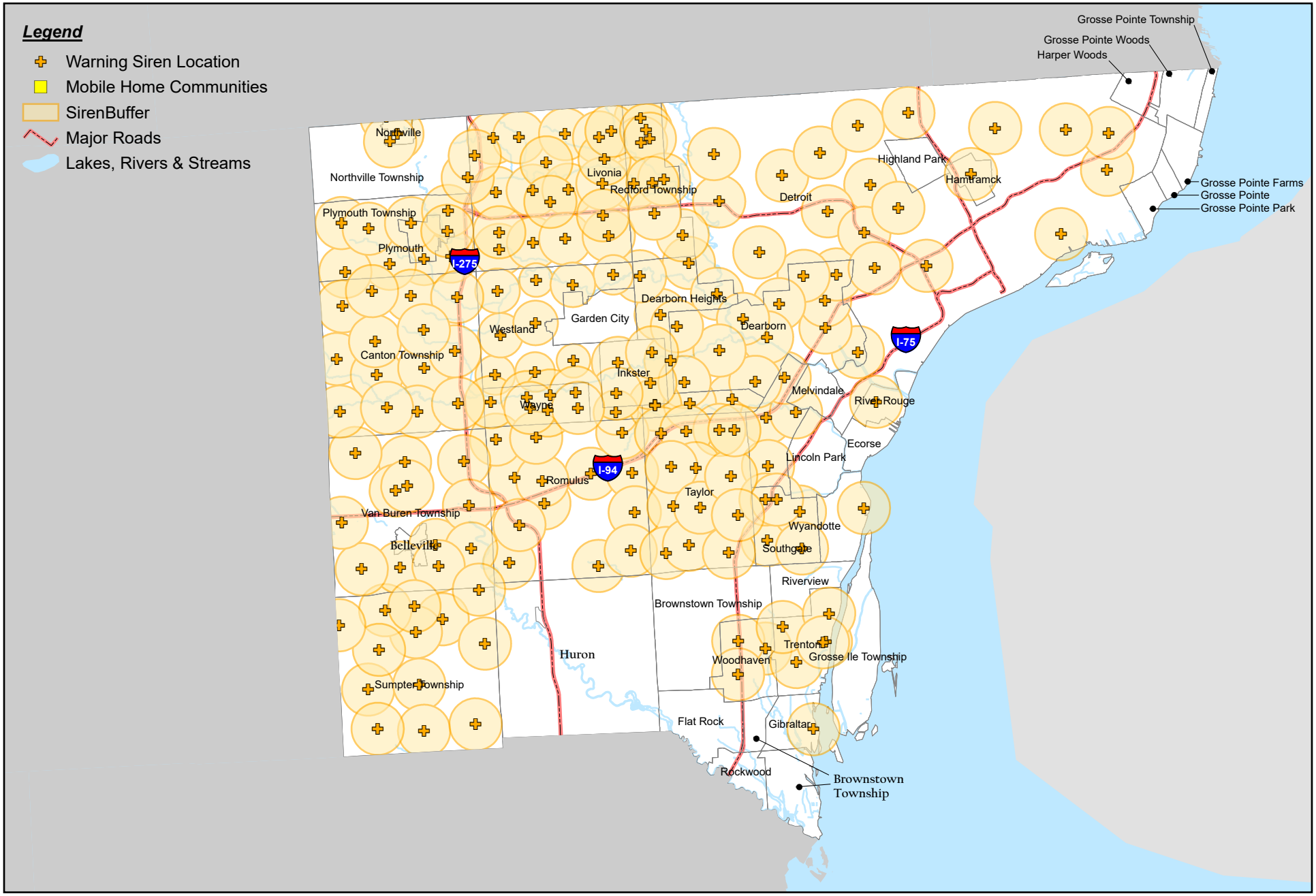


Wayne County

ASTI Environmental

Created for: Wayne County
Created by: RMH, April 24, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), ArcGIS Online

Figure 23 - Vulnerability Assessment: Public Health Emergencies



Wayne County

Created for: Wayne County
Created by: RMH, May 20, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013))

Figure 24 - Vulnerability Assessment: Warning Siren Locations

Wayne County, excluding Detroit, has approximately 188 acres and 916 acres devoted to land uses associated with communication and utilities, respectively. There are also over 2,240 acres of manufactured home parks in the county. Canton Township, Van Buren Township, and Sumpter Township are most vulnerable to communication, utility, and electrical transmission line failure based on total acreage, respectively. Van Buren Township has the highest acreage for manufactured home park land use. Mobile home communities (for applicable communities only) are shown on Figure 24, which also includes the locations of the county's warning sirens and fire department headquarters (within participating communities).

Communication and electrical companies within the county include DTE Energy, Consumers Energy, Verizon, AT&T, Charter Communications, Comcast, local television networks, local radio networks, communication towers, local emergency services, and cell phone service providers.

Top 5 Community Land Use In Tornado Vulnerabilities

Communications

Community	Acres
Riverview	40
Romulus	31.5
Taylor	29
Gibraltar	29
Lincoln Park	21

Electrical Transmission Lines

Community	Acres
Canton Township	243
Sumpter Township	210
Van Buren Township	191
Huron Township	95
Trenton	85

Manufactured Home Park

Community	Acres
Van Buren Township	297
Canton Township	293
Huron Township	253
Sumpter Township	251
Romulus	159

Source: SEMCOG, Land Use in Southeast Michigan, 1990-2000, Specific to Wayne County, Excluding Detroit, April 2004

Transportation Accidents – Air, Highway, and Rail

There are five airports within Wayne County. Between 1990 and 2005, there were 28 air transportation incidents in Wayne County, nearly two incidents per year.[291] From 1987 to present (2019) five accidents occurred at or in the vicinity of the Detroit Metropolitan Wayne County Airport. The majority of transportation accidents occur during takeoff or landing, and therefore, impacted areas are typically those area located near the airports or runways. The locations of the airports within the county are provided on Figure 25, along with census blocks within a five-mile radius of the airports. There are over 300,000 people located within five miles of at least one airport in the county.

[291] National Transportation Safety Board, www.ntsb.gov, Aviation Database Query, Wayne County, Michigan, report generated September 19, 2005.

Automobile accidents occur several times daily in the county and can occur anywhere in the county. Wayne County averaged 54,042 traffic accidents in 2016-2017; of these an average of 164 each year involved fatalities.[292] The impact to the public from private automobile accidents is primarily limited to the individuals and families of those involved in the accident. However, the secondary impacts, whether permanent or transient, to traffic systems and roadway structures can affect a much greater number of people.

On average there are 13 recorded railroad accidents each year in Wayne County.[293] The majority of these recorded incidents involve minor derailments, most often on private property, and resulting in only mechanical damage to the train or its cars. Two accidents involved collisions between trains and passenger vehicles at level grade crossings. Areas adjacent to railroads are most vulnerable to a railroad accident. The locations of railroads, police stations, fire stations, and critical vulnerable assets in the county are included in Figure 25.

Top 5 Community Land Use In Wayne County, Excluding Detroit – Winter Hazard Vulnerabilities

Communications

Community	Acres
Riverview	40
Romulus	31.5
Taylor	29
Gibraltar	29
Lincoln Park	21

Electrical Transmission Lines

Community	Acres
Canton Township	243
Sumpter Township	210
Van Buren Township	191
Huron Township	95
Trenton	85

Utilities

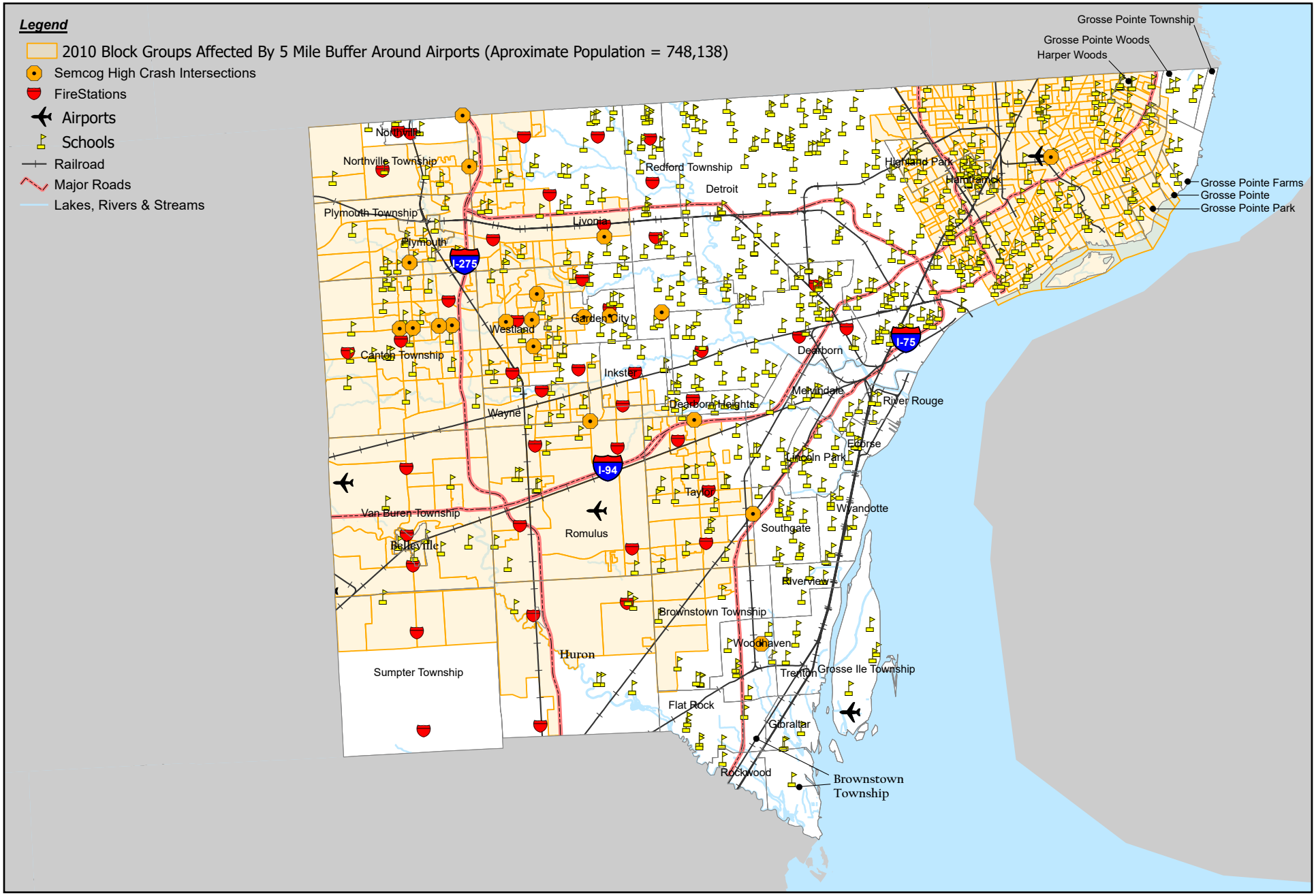
Community	Acres
Trenton	150
River Rouge	110
Romulus	66
Dearborn Heights	63
Westland	57

Source: SEMCOG, Land Use in Southeast Michigan, 1990-2000, Specific to Wayne County, Excluding Detroit, April 2004

Winter Hazards

Michigan averages one major snow or winter storms every other year and one major ice and sleet storm event annually.[294] Communications and utilities are vulnerable to winter hazard events and would include such companies as DTE Energy, Consumers Energy, AT&T, Charter Communications, Comcast, local television networks, local radio networks, and communication towers – local emergency services and cell phone service providers.) Bridges and major roadways are vulnerable in that most incidents related to winter hazards are secondary effects such as auto accidents. Public facilities such as road yards (road commission and MDOT) are vulnerable assets in snow removal and road salt services.

[292] MLive Public Records Search, May 1, 2019.
[293] Federal Railroad Administration, http://safetydata.fra.dot.gov, all reports for all railroads in Wayne County, 1999 through December 2005, reports generated on December 13, 2005.
[294] Michigan Department of State Police, Emergency Management Division, *Michigan Hazard Analysis*, April 2012.



Wayne County

Created for: Wayne County
Created by: RMH, April 24, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), ArcGIS Online

ASTI Environmental

Figure 25- Vulnerabilities: Transportation Arteries

During major events, schools are likely to close and hospitals are likely to see an increase in patients with ailments such as heart attacks from overexertion and auto accident injuries. Police and fire stations are vulnerable to emergency response activities related to winter hazard incidents. Private or governmental tree removal services are also vulnerable to winter hazards. The locations of major highways, schools, hospitals, and fire department headquarters are included on Figure 26, along with utility land use locations.

5.4.2 Specific Local Vulnerabilities

A draft version of this Plan was submitted to FEMA for review in early 2020. FEMA responded that additional information was required for the following hazards: Urban Flooding, Erosion, Subsidence, Dam Failure Extreme Cold / Heat, and Drought.

To improve the presentation of information concerning these specific hazards and the vulnerability of each community to these and other hazards, a third survey was provided to community representatives. The results of that survey, identifying community assets or locations specifically vulnerable to these hazards and the reasons for their vulnerability are presented in Table 6.

For the most part, all Wayne County communities are vulnerable to the same natural, technological, and human-caused hazards. There are some differences however based upon infrastructure, land cover, proximity to the Great Lakes and Detroit River and hazard history. Specifically, hazards for which particular communities are at greater risk include, drought, wildfire, lakeshore flooding and erosion, flooding due to dam failure, and subsidence/sinkholes. Additional information regarding which communities are at-risk from each of the individual hazards reviewed is provided in Table 7.

5.4.3 Future Assessment

The majority of this Hazard Mitigation Plan focuses upon current hazards, and the locations and populations within Wayne County vulnerable to those hazards. Anticipated changes in population and land use within the county, however, allow some prediction of how these hazards and vulnerabilities may also change over time. Review of growth trends and predictions for Wayne County and southeast Michigan identify the following four hazard categories as particular concerns to be considered by Wayne County officials. These are discussed in order of the hazard and risk rankings determined by the Advisory Committee.

Extreme Temperatures

The population of Wayne County and much of southeast Michigan is aging. Between 2015 and 2045, the percentage change in people 65 to 84 years of age and those older than 84 are estimated at 37.9 and 65.4 percent, respectively, whereas most younger cohorts are expected to shrink. Over 231,245 people, will be of retirement age; an

Table 6. Community Identified Problem Areas and Assets at Risk of Urban Flooding, Erosion, Subsidence, Extreme Temperatures, and Pandemic

Urban Flooding

Municipality	Name of Facility/Location	Address	Reason(s) for Vulnerability to this Hazard
City of Allen Park	Northwest Allen Park	Area of Southfield Freeway (M39) and Outer Drive	Ecorse Creek reguarly overflows its banks, flooding homes and businesses
Canton Township	Haggerty Road	Haggerty Road North and South of Cherry Hill Road	Past occurrences, undersized/blocked drains
	Sheldon Road	Sheldon Road North of Ford Road	Past occurrences, Storm infrastructure requires maintenance
	Wayside Drive	41569 Wayside Drive and surrounding properties	Past occurrences, Storm infrastructure requires maintenance
	Lotz Road	Lotz Road at Finley	Past occurrences, overgrown drain requires maintenance
City of Dearborn Heights	Dept of Public Works Building	24600 Van Born Road	The building location is in a close proximity to the Ecorse Creek that floods ofter with large amounts of rainfall.
	Richard A Young Recreation Building	5400 McKinley	The building location is in a close proximity to the Ecorse Creek that floods ofter with large amounts of rainfall.
	Eton Senior Citizen Building	4900 Pardee	The building location is in a close proximity to the Ecorse Creek that floods ofter with large amounts of rainfall.
	Rouge Valley Sewage Disposal System, Lift Station 1A	21100 Ford Road (Hines Drive)	Flood Plain - Aging Infrastructure
	Dearborn Heights CSO Retention Treatment Basin	23800 Edward Hines Drive	Flood Plain - Aging Infrastructure
	LeBlanc Pumping Station (#1 Sanitary Arm)	5600 Jackson Street	Aging Infrastructure
	Banner Ave. Pumping Station (Lateral #94)	24312 Amherst	Aging Infrastructure
City of Ecorse	Jefferson Corridor	W Jefferson from the south city limit to Outer Drive	High Detroit River levels are threatening this commercial/recreation area. Areas are at ris due to location and elevation.
	Residential Areas	Along Ecorse Creek from Detroit River confluence through the City	High Detroit River levels impact flooding of Ecorse Creek. Large residential areas in Cit within the 100-year floodplain. At risk due to location and elevatior
City of Flat Rock	Huroc Park & Huroc Park Dam	Atwater and Huron River Drive, 1 block west of Telegraph Road	Seasonal runoff can raise water levels up to 10 fee
City of Grosse Pointe	Norbert Neff Memorial Park	17350 Jefferson Avenue	Shoreline of Lake. St. Clair
City of Grosse Pointe Park	Edgemont Park Road	This street has catch basins draining to Lake St. Clair	With the high lake levels this street will flood. We are in the process of getting Duckbill valv and pump back to lake
City of Inkster	Inkster CSO Retention Treatment Basir	2001 Inkster Road	Flood Plain - Aging Infrastructure
City of Livonia	42-inch Diam. Elevated Sanitary Sewe	Section #13: 16575 Harrison Road	Tarabusi Creek Crossover - Locatior
	10-inch Diam. Elevated Sanitary Sewe	Section #16: 15990 Alpine	Bell Creek Crossover - Locatior
	Idyl Wyld Golf Course	35780 5 Mile Road	Adjacent to Bell Creek (sections may flood due to heavy rainfall) - past occuranc
	Rouge Valley Sewage Disposal System, Livonia Retention Basin	14577 Inkster Road	Aging Infrastructure
	One Under Bar & Grill	35550 5 Mile Road	Adjacent to Bell Creek (portion of lower parking lot floods on heavy rainfall) - past occurance
City of Plymouth	Tonquish Creek Nature Walk	354 S. Harvey	Past occurance
	Lions Club Park	575 Burroughs	Past occurance
	Sheldon Road Rail Road Underpass	Sheldon Road, between Goldsmith and Plymouth Oaks	Past occurance
Redford Township	Redford CSO Retention Treatment Basin	16100 Lola Drive	Flood Plain - Aging Infrastructure
City of River Rouge	River Rouge CSO Retention Treatment Basin	10120 W Jefferson	Aging Infrastructure
City of Southgate	Southgate Wyandotte Drain District	Over 8,000 adresses in Southgate (see Wayne County records)	Aging infrastructure and location relative to the Downriver Plan
City of Taylor	Monroe Street Storm Lateral	6875 Monroe Boulevard	Aging Infrastructure
	E.C.P.A.D. #3 Storm Pond	6691 Cherokee	Aging Infrastructure
	E.C. Storm Relief Basin (Goddard Basin)	20590 Goddard Road	Aging Infrastructure
	E.C. Sanitary Retention Basin (Taylor Basin	20195 Trolley Industrial Road	Aging Infrastructure
City of Trenton	Beaumont Hospital - Trenton	5450 Fort Street	Near low point of Frank and Poet Drain in Trenton
City of Wyandotte	Southgate-Wyandotte Relief Drains Drainage District, CSO Retention Treatment Facility	767 Central	Aging Infrastructure; Detroit River high water levels
	Southgate-Wyandotte Relief Drains Drainage District, Pump Station No. 5	767 Central	Aging infrasructure; Detroir River high water levels
	Southgate-Wyandotte Relief Drains Drainage District, Pine St. Pump Station	61 Pine	Aging infrasructure; Detroir River high water levels

Erosion

Municipality	Name of Facility	Address	Reason(s) for Vulnerability to this Hazard
Canton Charter Township	River Rouge (Canton Township)	Rouge River, Denton Road to Hannan Road	Multiple locations of eroded banks and bridges
City of Ecorse	City of Ecorse Row Club	4603 W Jefferson Ave.	Aging/failing seawall structure. This property is along the Detroit Rive
	City of Ecorse Boat Launch	W Jefferson Avenue (parcel 34-013-99-0019-000)	Aging/failing riprap revetment. This property is along the Detroit Rive
	City of Ecorse Dingell Park	4459 W Jefferson Avenue	Aging/failing seawall structure near pavilion. This property is along the Detroit Rive
	Ecorse Creek	Throughout City	Streambank failures throughout the city
City of Grosse Pointe Park	Windmill Pointe Park (GP Park)	14920 Windmill Pointe Drive	Catch basins are attached to a 12" line that goes out to the Cana
	Patterson Park	16002 Essex Avenue	This property runs along Lake St. Clair. Erosion is quite extensive to the Board Walk. Exposed Electrical Conduit is showing where the water is eroding. All concrete is eroding to a point that 10" lumber supports and the lights' concrete footings are exposed.
City of Livonia	Sanitary Sewer Main Infrastructure (Livonia)	North of Intersection at Sunnydale / Inkster Road	Bell Creek floods and make have trees fall, creating issue with existing sanitary sewer mai and infrastructure
City of Plymouth	Tonquish Creek Nature Walk	354 S Harvey	Past occurance
	Lions Club Park	575 Burroughs	Past occurance
City of River Rouge	Zug Island (River Rouge)	1300 Zug Island Road	Located on Detroit River. Great Lakes steel is closing. Island remains idle for nov
	Belanger Park	1 Belanger Drive	Located on the Detroit River. Possible with high water in future

Subsidence/Sinkholes

Municipality	Name of Facility	Address	Reason(s) for Vulnerability to this Hazard
Canton Charter Township	Fellows Creek	2936 S Lotz Road	Sink hole east of Lotz Road due to failure of storm drain from the parking lo

Dam Failure

Municipality	Name of Facility	Address	Reason(s) for Vulnerability to this Hazard
City of Flat Rock	Huroc Park & Huroc Park Dam	Corner of Atwater & Huron River Drive, 1 block west of Telegraph Roac	Old structure & seasonal congregations of people
	French Landing Dam & Powerhouse	Van Buren	Loss of power at the dam could result in flooding of southern 1/3 of the city of Flat Rock
City of Livonia	Newburgh Road over Rouge River Bridge (Livonia	Newburgh Road, South of Plymouth of Road	Structure ID: 823994, 3100100B01: Concern with erosion exposing riprap at wingwalls
City of Plymouth	Sanitary Sewer Interceptor	Parallel to Hines Drive	Location in Rouge Valley downstream of Wilcox Lake Dam
	Sanitary Sewer Conn. At Plymouth Rd	Hines Drive and Plymouth Road	Location in Rouge Valley downstream of Wilcox Lake Dam
	Sanitary Sewer Conn. At Park Dr	Hines Drive and Park Drive	Location in Rouge Valley downstream of Wilcox Lake Dam
	Sanitary Sewer Conn. At Riverside D	Hines Drive and Riverside Drive	Location in Rouge Valley downstream of Wilcox Lake Dam
	Sanitary Sewer Conn. At Industrial Dr	Hines Drive and Industrial Drive	Location in Rouge Valley downstream of Wilcox Lake Dam

Extreme Temperatures

Municipality	Name of Facility	Address	Reason(s) for Vulnerability to this Hazard
Brownstown Township	Elmcroft of Downriver	19697 Allen	Past occurrence of power outage and lack of air conditioning/heal
	Brownstown Forest View Assisted Living	19341 Allen	Past occurrence of power outage and lack of air conditioning/heal
Canton Charter Township	Canton Club 55+	46000 Summit Parkway	Senior Center
	Canton Place	44505 Ford Road	Senior Housing
	Waltonwood	42500 and 42600 Cherry Hill Road	Senior Housing/Memory Care/Assisted Living
	Walton Wood Carriage Park	2000 Canton Center	Assisted Living
	Walton Wood Carriage Park	2250 Canton Center	Senior Housing
	Canton Crossings Assisted Living	1474 N Sheldon Road	Assisted Living
	Glen Abbey Assisted Living	445 N Lotz Road	Assisted Living
	Crystal Creek Assisted Living	8121 N Lilly Road	Assisted Living
	Embrace Group home	6934 N Canton Center Road	Assisted Living
	Serenity Manor of Canton	48410 Gyde Road	Assisted Living
	Regency Nursing	45900 Geddes	Nursing facility
	Heartland Healthcare	7025 N Lilley	Nursing facility
	Beaumont Canton	7300 Canton Center	Urgent Care/Emergency Department
	St. Joseph Canton	1600 Canton Center	Urgent Care/Emergency Department
City of Dearborn Heights	Heartland Healthcare Facility	26001 Ford Road	Nursing Care Facility
	Imperial Healh Care Center	26505 Powers	Nursing Care Facility
	Amwerican House-Dearborn Heights	26600 Ann Arbor Trail	Assisted Living Facility
City of Ecorse	The Ecorse Manor	4560 9th Street	Aged
	Miles Senior High Rise	307 Salliotte	Aged
	Senior Center	4072 W. Jefferson Avenue	Aged
City of Flat Rock	Flat Rock Towers	28794 Telegraph Road	96 units (6 stories) for elderly w/ limited additional apts for younger physically disable persons
City of Garden City	Garden Towers	6120 Middlebelt	Senior high-rise building, aged residents
City of Gibraltar	Gibraltar Manor	14486 Middle Gibraltar Road	Senior Apartments, Elderly vulnerable populatior
	Group Home	30443 W. Jefferson Avenue	Mentally & Physically Handicapped Residents
	Group Home	14466 Middle Gibraltar Road	Mentally & Physically Handicapped Residents
City of Grosse Pointe Woods	Sunrise	21260 Mack Avenue	Elderly population-Assisted Living
	Sunrise	1850 Vernier Road	Elderly population-Assisted Living
	The Rivers	900 Cook Road	Elderly population-Assisted Living
	Van Elslander Cancer Center	19229 Mack Avenue	Cancer patients undergoing treatments
City of Harper Woods	Advantage Living Center	19840 Harper Avenue	Age of population/Compromised health status
	Park Place Towers of Harper Woods		Age of population/Compromised health status
City of Livonia	McNamara Towers	19300 Purlingbrook	Aged population
	William W. Brashear Towers	17841 N. Laurel Drive	Aged population
	Zieglar Place	30001 St. Martins Street	Aged population
City of Plymouth	Tonquish Creek Manor	1160 Sheridan Street	Aged population
	Medilodge of Plymouth	395 W Ann Arbor Trail	Nursing Home/Aged population
	Plymouth Inn	205 Haggerty Road	Nursing Home/Aged population
	SKLD Plymouth	105 Haggerty Road	Nursing Home/Aged population
Plymouth Township	Independence Village	14707 Northville Road	Large population of the elderly

	Bradbury Park Homes	40185 Newport Road	Large population of the elderly
Redford Township	Minock Meadows	26600 Schoolcraft Road	Senior citizen residential community
	Coventry Place	24200 Cathedral Street	Senior citizen residential community
	Village of Redford (PVM)	25330 Six Mile Road	Senior citizen residential community/rehab cente
	Redford Community Center	12121 Hemingway Street	Senior Center programs/activities
City of River Rouge	RENO Building	10593 W. Jefferson	Aged population
	Sumby Senior Center	240 Visger	Aged population
City of Riverview	Belle Fountain Nursing Home	18591 Quarry Road	Aged and Vulnerable Population & Rehabilitation Facility
	Arias Health Care	13840 King Road	Aged and Vulnerable Population
	Rivergate Convolescent	14041 Pennsylvania	Aged and Vulnerable Population
	Rivergate Terrace	14141 Pennsylvania	Past occurance and aged, and vulnerable population
	American House	20300 Fort Street	Rehabilitation facility/Aged/Vulnerable Population
	King Haven Manor	14800 King Road	Aged and Vulnerable Population
	Carolyns Corner	17890 Parkridge	Aged and Vulnerable Population
	Forest Estate Senior Residence	20487 Coachwood	Aged and Vulnerable Population
	Michigan House Senior Living	18533 Quarry	Aged and Vulnerable Population
	Mulberry Senior Residence	17928 Mulberry	Aged and Vulnerable Population
	Rosetta Bella Casa	18213 Yorkshire	Aged and Vulnerable Population
	Samaritan Group Homes	17090 Ray	Aged and Vulnerable Population
	Coachwood Group Home	20287 Coachwood	Aged and Vulnerable Population
	AHS Community SCS	19333 Coventry	Aged and Vulnerable Population
	Bellair/Generations HC	12621 Hale	Aged and Vulnerable Population
	Ray Street Group Home	18787 Ray	Aged and Vulnerable Population
	Stratford Street Group Home	13944 Stratford	Aged and Vulnerable Population
City of Taylor	Regency	12575 Telegraph Road	Nursing Home
	Lodges of Taylor	22950 Northline Road	Nursing Home
	Medilodge	23600 Northline Road	Nursing Home
	American House	25250 Eureka Road	Elderly Assisted Living
	The Commons	26121 Eureka Road	Elderly Assisted Living
	Numerous groups homes in the city		Physically and Mentally Challenged and/or Elderly Populatio
City of Trenton	Trenton Towers Co-op Apartments	2645 Riverside Drive	205 units with senior living apartments
City of Wayne	Wayne Towers	35200 Sims Road	Aged population
	Newberry Square	35340 W. Michigan Avenue	Aged population / past occurrences of HVAC failure
	Advantage Living	4427 Venoy	Nursing Home
	Beaumont Wayne	33155 Annapolis	Hospital
	Maple Manor	3999 Venoy	Nursing Home
	Pine Creek Manor	34330 Van Born Road	Nursing Home
	Westchester Towers	35700 & 35800 W. Michigan Avenue	Large Apartment Complex
City of Wyandotte	Wyandotte Co-op	2455 Biddle Avenue	Elderly population. 10 story building
	Bishop Co-op	2651 Biddle Avenue	Elderly population. 8 story building
	Downriver Waste Water Treatment Facility	797 Central	Water treatment facility serving Detroit Downriver communities
	City of Wyandotte Water/Power Plant	2555 Van Alstyne	Central Power Plant
	Wyandotte Early Childhood Development	2609 10th Street	Development Center for early child care, ages 6mos.-6 year
	Jo Brighton Skills Center	4460 18th Street	Special needs students, juvenile to adult age
	Lincoln Center	891 Goddard Road	Special needs students, juvenile to adult age

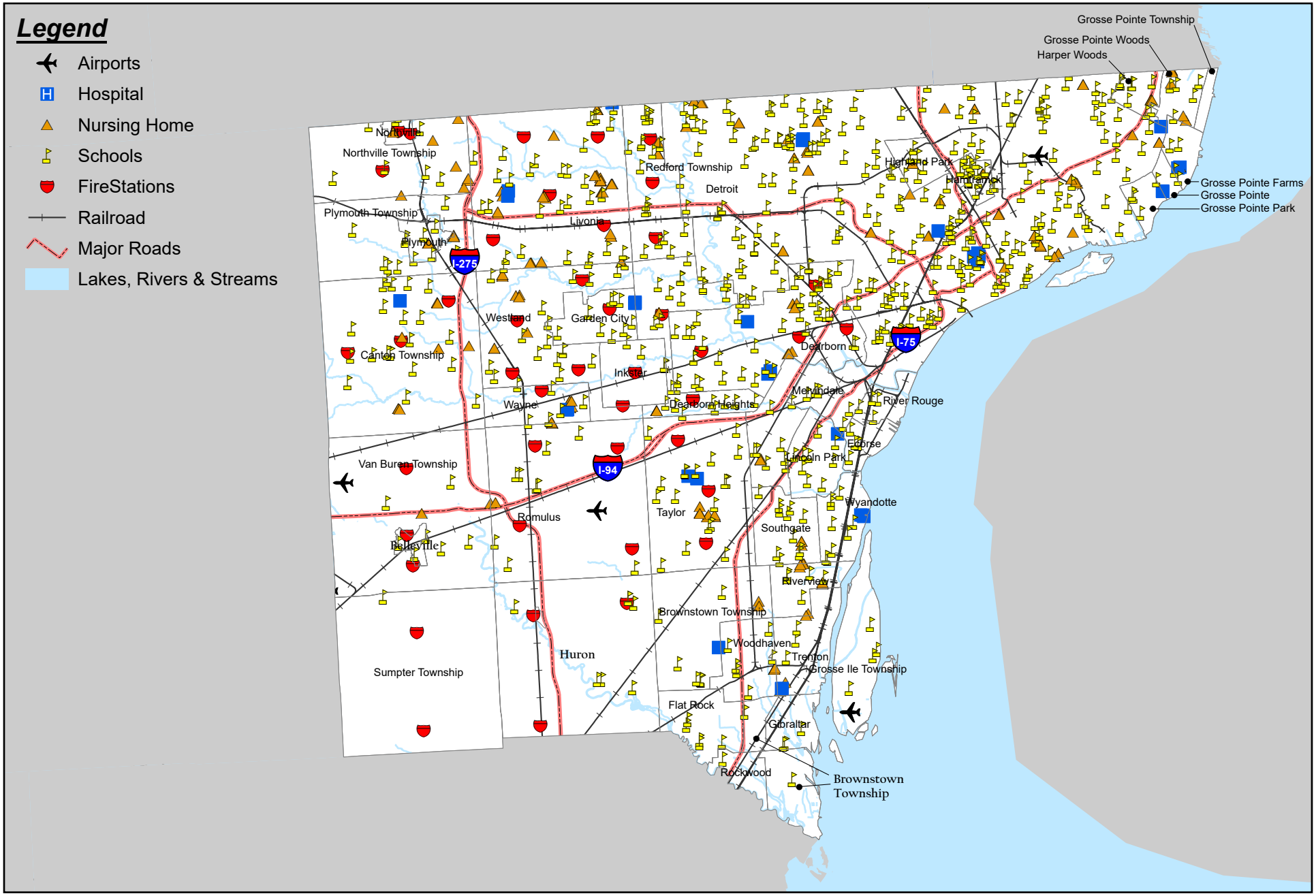
Pandemic

Municipality	**Name of Facility**	**Address**	**Reason(s) for Vulnerability to this Hazard**
City of Allen Park	Heartland Healthcare	9150 Allen Road	Nursing Home, patients in poor health housed in close quarters
	Maple Heights	4600 Allen Road	Assisted Living, residents in poor health housed in close quarters
	Palush Senior Housing	17000 Champaign	Senior Housing, residents in poor health housed in close quarters
Browntown Township	Henry Ford Hospital Brownstown	23050 West Road	Insufficient PPE equipment and other resources such as testing kits needed to treat vulnerable population
	Elmcroft of Downriver	19697 Allen	Insufficient PPE for vulnerable population and protection of first responders
	Brownstown Forest View Assisted Living	19341 Allen Road	Insufficient PPE for vulnerable population and protection of first responders
	Brownstown Fire Department	24150 Sibley	Insufficient PPE for vulnerable population and protection of first responders
	Brownstown Police Department	23125 King Road	Insufficient PPE for vulnerable population and protection of first responders
	Kroger	23849 West Road	Critical facility providing necessary goods to sustain public, subject to contamination and civ disorder from lack of stock
	Kroger	20645 Gibraltar	Critical facility providing necessary goods to sustain public, subject to contamination and civ disorder from lack of stock
Canton Charter Township	Canton Club 55+	46000 Summit Parkway	Senior Center
	Canton Place	44505 Ford Road	Senior Housing
	Waltonwood	42500 and 42600 Cherry Hill Road	Senior Housing/Memory Care/Assisted Living
	Walton Wood Carriage Park	2000 Canton Center	Assisted Living
	Walton Wood Carriage Park	2250 Canton Center	Senior Housing
	Canton Crossings Assisted Living	1474 N Sheldon Road	Assisted Living
	Glen Abbey Assisted Living	445 N Lotz Road	Assisted Living
	Crystal Creek Assisted Living	8121 N Lilly Road	Assisted Living
	Embrace Group home	6934 N Canton Center Road	Assisted Living
	Serenity Manor of Canton	48410 Gyde Road	Assisted Living
	Regency Nursing	45900 Geddes Road	Nursing facility
	Heartland Healthcare	7025 N Lilley Road	Nursing facility
	Beaumont Canton	7300 Canton Center Road	Urgent Care/Emergency Department
	St. Joseph Canton	1600 Canton Center Road	Urgent Care/Emergency Department
City of Ecorse	The Ecorse Manor	4560 9th Street	Aged, vulnerable populations
	Miles Senior High Rise	307 Salliotte	Aged, vulnerable populations
	Senior Center	4072 W. Jefferson Avenue	Aged, vulnerable populations
City of Flat Rock	Flat Rock Towers	28794 Telegraph Road in Flat Rock	96 units (6 stories) for elderly w/ limited additional apts for younger physically disable persons
City of Garden City	Garden Towers	6120 Middlebelt	Senior high-rise building, aged residents
City of Gibraltar	Gibraltar Manor	14486 Middle Gibraltar Road	Senior Apartments, Elderly vulnerable population
	Group Home	30443 W. Jefferson Avenue	Mentally & Physically Handicapped Residents
	Group Home	14466 Middle Gibraltar Road	Mentally & Physically Handicapped Residents
	Carlson High School	30550 West Jefferson Avenue	High Density Population
	Shumate Middle School	30551 West Jefferson Avenue	High Density Population
	Parsons Elementary	14473 Middle Gibraltar Road	High Density Population
City of Grosse Pointe	Beaumont Hospital	Cadieux Road	High Density Population
City of Grosse Pointe Park	Beaumont Health Center (GP Park)	15200 Kercheval Avenue	Not open at this time
City of Grosse Pointe Woods	Sunrise	Mack Avenue	Elderly-assisted living
	Sunrise	Vernier Road	Elderly-assisted living
	The Rivers	900 Cook Road	Elderly-assisted living
	Van Elslander Cancer Center	19229 Mack Avenue	Cancer patients undergoing treatments
City of Harper Woods	Advantage Living Center	19840 Harper Avenue	Age/Compromised Health
	Park Place Towers of Harper Woods	19460 Park Drive	Age/Compromised Health
City of Livonia	St. Mary Mercy Livonia	36475 Five Mile Road	Treating patients with the COVID 19
	Marycrest Manor	15475 Middlebelt Road	Elderly Population
	Marcrest Heights Apartments	15495 Middlebelt Road	Elderly Population
	Marywood	36975 Five Mile Road	Elderly Population
	Angel Gardens	38910 Six Mile Road	Elderly Population
	Angela Hospice	14100 Newburgh Road,	Elderly Population
	Arden Courts of Livonia	32500 Seven Mile Road	Elderly Population
	Aspen Assisted Living	32406 Seven Mile Road	Elderly Population
	Fountain Bleu	28910 Plymouth Road	Elderly Population
	Felician Sisters	36800 Schoolcraft Road	Elderly Population
	Heartland Health Care Center	28550 Five Mile Road	Elderly Population
	Manoogian Manor	15775 Middlebelt Road	Elderly Population
	Oakmont Livonia	14265 Middlebelt Road	Elderly Population
	SKLD Livonia	29270 Morlock	Elderly Population
	St. Jude	34350 Ann Arbor Trail	Elderly Population
	Tranquil Place	34150 Hathaway	Elderly Population
	Villa Marie	15131 Newburgh Road	Elderly Population
	American House Livonia	11525 Farmington Road	Elderly Population
	Woodhaven Retirement Community	29667 Wentworth Street	Elderly Population
	Woodpointe Independent Senior Apts.	29667 Wentworth Street	Elderly Population
	Livonia Woods Nursing & Rehab	33600 Luther Lane, Livonia	Elderly Population
	Wellspring Lutheran Services	28910 Plymouth Road	Elderly Population
	Aspen Assisted Living	32406 W. Seven Mile Road	Elderly Population
	Michigan Assisted Living Association	15441 Middlebelt Road	Elderly Population
	Regancy Assisted Living	14900 Middlebelt Road	Elderly Population
	Parkside of Livonia Indep. Senior Apts	28815 Jamison Street	Elderly Population
	Trinity Park Senior Apartments	14866 Middlbelt Road	Elderly Population
	Aletha B. Phipps Senior Apartments	14931 Farmignton Road	Elderly Population
	McNamara Towers	19300 Purlingbrook	Elderly Population
	William W. Brashear Towers	17841 N. Laurel Drive	Elderly Population
	Zieglar Place	30001 St. Martins Street	Elderly Population
	Newburgh Village	11999 Newburgh Road	Elderly Population
	Silver Village	33780 Lyndon, Livonia	Elderly Population
	DaVita Dialysis	37240 Five Mile Road	Dialysis Center
	Fresenius Kidney Care Livonia	32424 Schoolcraft	Dialysis Center

	Saint Mary Dialysis	14555 Levan Road	Dialysis Center
	Fresenius Kidney Center Botsford Park	28425 Eight Mile Road	Dialysis Center
City of Northville	Allen Terrace (City of Northville	401 High Street	Aging/Vulnerable Population
	Star Manor	520 W. Main Street	Aging/Vulnerable Population
City of Plymouth	Tonquish Creek Manor (City of Plymouth)	1160 Sheridan Street	Aged population
	Medilodge of Plymouth	395 W Ann Arbor Trail	Nursing Home/Aged population
	Plymouth Inn	205 Haggerty Road	Nursing Home/Aged population
	SKLD Plymouth	105 Haggerty Road	Nursing Home/Aged population
	St. Joseph Mercy Arbor Health	990 W Ann Arbor Trail	Lab patient service center and multiple medical offices/clinic
Plymouth Township	Independence Village (Plymouth Twp)	14707 Northville Road	Large population of the elderly
	Bradbury Park Homes	40185 Newport Road	Large population of the elderly
Redford Township	Redford Town Hall (Redford Twp)	15145 Beech Daly Road	Government/Municipal facility
	Redford 17th District Court	15111 Beech Daly Road	Government/Municipal facility
	Redford Police Department	25833 Elsinore Street	Government/Municipal facility
	Redford Public Service Building	12200 Beech Daly Road	Government/Municipal facility
	Redford Ice Arena	12400 Beech Daly Road	Government/Municipal facility
	Redford District Library	25320 Six Mile Road	Government/Municipal facility
	Redford Community Center	12121 Hemingway Street	Government/Municipal facility
	Redford Fire Department	24251 Acacia Street	North Station & South Station facilities
	Detroit Diesel Corporation	13400 W. Outer Drive	Manufacturing facility
	Redford Union School District	17715 Brady Street	Educational facilities (mulitple locations - 7 buildings
	South Redford School District	26141 Schoolcraft	Educational facilities (mulitple locations - 7 buildings
	Minock Meadows Senior Housing	26600 Schoolcraft Road	Senior citizen residential community
	Coventry Place Apartments	24200 Cathedral Street	Senior citizen residential community
	Village of Redford (PVM)	25330 Six Mile Road	Senior citizen residential community/rehab cente
City of Riverview	Belle Fountain Nursing Home (Riverview	18591 Quarry Road	Aged and Vulnerable Population & Rehabilitation Facility
	Arias Health Care	13840 King Road	Aged and Vulnerable Population
	Rivergate Convolescent	14041 Pennsylvania	Aged and Vulnerable Population
	Rivergate Terrace	14141 Pennsylvania	Past occurance and aged, and vulnerable population
	American House	20300 Fort	Rehabilitation facility/Aged/Vulnerable Population
	King Haven Manor	14800 King	Aged and Vulnerable Population
	Carolyns Corner	17890 Parkridge	Aged and Vulnerable Population
	Forest Estate Senior Residence	20487 Coachwood	Aged and Vulnerable Population
	Michigan House Senior Living	18533 Quarry	Aged and Vulnerable Population
	Mulberry Senior Residence	17928 Mulberry	Aged and Vulnerable Population
	Rosetta Bella Casa	18213 Yorkshire	Aged and Vulnerable Population
	Samaritan Group Homes	17090 Ray	Aged and Vulnerable Population
	Coachwood Group Home	20287 Coachwood	Aged and Vulnerable Population
	AHS Community SCS	19333 Coventry	Aged and Vulnerable Population
	Bellair/Generations HC	12621 Hale	Aged and Vulnerable Population
	Ray Street Group Home	18787 Ray	Aged and Vulnerable Population
	Stratford Street Group Home	13944 Stratford	Aged and Vulnerable Population
City of Rockwood	Ervin Brewer Apartments	22065 Huron River Drive	Aged - Senior Citizens Apartments
City of Southgate	Advantage Living Center	15400 Trenton	Aged or otherwise velnerable populations
	American House	16333 Allen Road	Aged or otherwise velnerable populations
	Meadows of Southgate	16201 Allen Road	Aged or otherwise velnerable populations
	Southgate Co-Op	11255 Allen Road	Aged or otherwise velnerable populations
	Deaconess Tower	16400 Dix-Toledo	Aged or otherwise velnerable populations
City of Taylor	Regency	12575 Telegraph	Nursing Home
	Lodges of Taylor	22950 Northline	Nursing Home
	Medilodge	23600 Northline	Nursing Home
	American House	25250 Eureka	elderly assisted living
	The Commons	26121 Eureka	elderly assisted living
	Numerous groups homes in the city		physically and mentally challenged and numerous elderl
City of Trenton	Beaumont Hospital - Trenton	5450 Fort Street	Hospital
	Trenton Towers Co-op Apartments	2645 Riverside Drive	205 units with senior living apartments
	Westfield Activities Center	2700 Westfield	Key Parks & Recreation Center capacity over 600
	Kennedy Recreation Center	3101 West Road	3 Ice Rinks capacity 4,000, outdoor Pool capacity over 800
	Trenton Public Schools: 1 High School 1 Middle School 2 Elementary Schools	various	At least 600 persons each on a school day
City of Wayne	Wayne Towers	35200 Sims	Aged population
	Advantage Living	4427 Venoy	Nursing Home
	Beaumont Wayne	33155 Annapolis	Hospital
	Maple Manor	3999 Venoy	Nursing Home
	Pine Creek Manor	34330 Vanborn	Nursing Home
	Westchester Towers	35700 & 35800 W. Michigan Avenue	Large Apartment Complex
	Newberry Square	35240 W. Michigan Avenue	Aged population
	Wayne Police Department	33701 E. Michigan Avenue	Police department / daily contact with public
	Wayne Fire Department	3300 S. Wayne Road	Fire department / daily contact with public, including sick people
City of Westland	American House	1660 S. Venoy	Vulnerable population
	American House	39201 Joy Rd	Vulnerable population
	American House	35700 Hunter	Vulnerable population
	Ashford Court	37501 Joy	Vulnerable population
	Our Savior's Manor	39495 Annapolis	Vulnerable population
	Villages of Westland	32001 Cherry Hill Rd.	Vulnerable population
	Thomas Taylor Tower	36500 Marquette	Vulnerable population
	Westgate Tower	34567 Elmwood	Vulnerable population
	Westhaven Manor	34601 Elmwood	Vulnerable population
	Four Chaplins Nursing	28349 Joy	Vulnerable population
	Four Seasons Nursing	8365 N. Newburgh	Vulnerable population
	Hope Convalescent	38410 Cherry Hill	Vulnerable population
	Westland Convalescent	36137 Warren	Vulnerable population
	Regency at Westland	2209 N. Newburgh	Vulnerable population
	Marquette House	36000 Campus Drive	Vulnerable population
	Villages of Westland-Rose Cottage	32111 Cherry Hill	Vulnerable population
	Villages of Westland-Ivy Cottage	32151 Cherry Hill	Vulnerable population
City of Wyandotte	Henry Ford Hospital-Wyandotte	2333 Biddle Avenue	Level 2 Trauma Hospital of the Henry Ford Health System
	Wyandotte Co-op	2455 Biddle Avenue	Elderly population. 10 story building
	Bishop Co-op	2651 Biddle Avenue	Elderly population. 8 story building
	Wyandotte Early Childhood Development	2609 10th Street	Development Center for early child care, ages 6mos.-6 year
	Theodore Roosevelt High School	540 Eureka Road	Public High School
	Woodrow Wilson Middle School	1275 15th Street	Public Junior High School
	Jefferson Elementary School	1515 15th Street	Kindergarten/Elementary children, age 5-11
	Washington Elementary School	1440 Superior Boulevard	Kindergarten/Elementary children, age 5-12
	Garfield Elementary Schoo	340 Superior Boulevard	Kindergarten/Elementary children, age 5-13
	Monroe Elementary School	1501 Grove	Kindergarten/Elementary children, age 5-14
	Wyandotte Early Childhood Development	2609 10th Street	Development Center for early child care, ages 6mos.-6 year
	Jo Brighton Skills Center	4460 18th Street	Special needs students, juvenile to adult age
	Lincoln Center	891 Goddard Road	Special needs students, juvenile to adult age
	ChristNet Homeless Shelter	3051 4th Street	Temporary 24-hour shelter for homeless, serving 30 to 90 individuals

Table 7. Communities At Risk from Specific Hazards

Community	Transportation Accidents - Highway*	Criminal Acts - Vandalism**	Fire Hazards - Structural Fires	Fire Hazards - Wildfires	Criminal Acts - Arson***	Transportation Accidents - Marine	Thunderstorm Hazards- Severe Wind	Infrastructure Failure - Water System	Transportation Accidents - Rail	Petroleum and Natural Gas Pipeline Accidents	Thunderstorm Hazards - Hail	Winter Hazards-Snowstorms	Flooding-Riverine/Urban	Flooding-Urban	Civil Disturbance*	Flooding - Dam Failure	Infrastructure Failure - Electrical System	Transportation Accidents - Air	Winter Hazards- Ice and Sleet	Flood-Great Lakes Shoreline and Erosion	Extreme Temperatures-Extreme Cold	Extreme Temperatures-Extreme Heat	HazMat Incidents - Fixed Sites	Infrastructure Failure - Storm Sewer System	Infrastructure Failure - Communications	Infrastructure Failure - Bridges, Roads, and Overpasses	Thunderstorm Hazards - Lightning	Tornadoes	HazMat Incidents - Transportation	Subsidence/Sinkholes	Criminal Acts - Mass Shooting	Invasive Species	Public Health Emergencies - Pandemics and Epidemics	Public Health Emergencies - Contaminated Food Supply and/or Water Supply	Gas/Oil Shortages or Supply Disruption	Terrorism and Sabotage	Drought	Earthquake	Fog	Oil and Gas Well Incidents	Catastrophic Events/National Emergencies	Infrastructure Failure - Sanitary Sewer System	Fire Hazards - Scrap Tire Fires	Celestial Impact	Nuclear Power Plant Accidents	Weapons of Mass Destruction
Allen Park	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Belleville	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Brownstown Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X	X	X
Canton Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X		X
Dearborn	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Dearborn Heights	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Ecorse	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Flat Rock	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X	X	X
Garden City	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Gibralter	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X	X	X
Grosse Ile Township	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X		X
Grosse Pointe	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X		X
Grosse Pointe Farms	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X		X
Grosse Pointe Park	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Grosse Pointe Shores	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X		X
Grosse Pointe Woods	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Hamtramck	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Harper Woods	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Highland Park	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Huron Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X		X
Inkster	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Lincoln Park	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Livonia	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Melvindale	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Northville, City	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Northville Township	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Plymouth, City	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Plymouth Township	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Redford Township	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Riverview	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
River Rouge	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Rockwood	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X	X	X
Romulus	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X		X
Southgate	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Sumpter Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X		X
Taylor	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Trenton	X	X	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Van Buren Twp	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X		X
Westland	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X
Woodhaven	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X		X
Wyandotte	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X		X



Wayne County

Created for: Wayne County
Created by: RMH, April 24, 2020, ASTI Project 10943
Data Source: City of Dearborn (2013), Michigan CGI (2013), ArcGIS Online

ASTI Environmental

Figure 26 - Vulnerability Assessment: Winter Hazards

increase of 55% since the 2010 census.[296] Wayne County will need to prepare for the needs of a substantially older population.

Among the hazards considered in this planning process, extreme temperatures may be those with the greatest implications for the elderly. Specific vulnerabilities include heating and cooling shelters where older individuals without access to air conditioning or sufficient heating may be brought for care. The County's aging population may have additional planning implications for emergency response agencies in cases of structural fires and other hazards requiring evacuation.

Flooding

Non-tropical, billion-dollar, inland flood events have increased in the United States, including four separate billion-dollar inland flood events in 2016. This doubled the previous annual record, as no more than two of these events had occurred in a year since 1980. In 2019, the U.S. has again been impacted by two large-scale, inland flood events across several Midwestern and Southern Plains states. The scale of the damage is still being assessed but may be comparable to the historic 1993 Midwestern flood.

Also in 2017, Hurricane Harvey caused unprecedented amounts of rainfall (up to 60 inches) over Houston - one of America's largest cities. More than 30 inches of rainfall fell on 6.9 million people, while 1.25 million experienced over 45 inches and 11,000 had over 50 inches, based on 7-day rainfall totals ending August 31.

This perhaps should be expected, as heavy rainfall events and their ensuing flood risks are increasing because warmer temperatures are "loading" the atmosphere with more water vapor. Over time, this increases the potential for extreme rainfall events. And, where we build and how we build determines our resilience to the increasing risk of flood events.

Analysis conducted by the First Street Foundation to identify land parcels at risk of flooding was described in Section 4.7.2. Whether their models are better or worse than FEMA analysis is not the subject of this report; however, they have developed a tool that may be of use for Wayne County municipalities. It is an interactive map noting the numbers of at-risk parcels in 2020 vs projected numbers in 2050. Data are provided by zip code.[297] Changes over time for different communities/zip codes differ due to the amount of area left in various communities that have not yet been built-out.

Infrastructure Failure

Although the Michigan legislature authorized new investment in our roads and bridges in 2015, the funds allocated are insufficient to fully address the needs within the system. Approximately 1,234 (11%) of the state's 11,156 bridges are deemed structurally

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[296] SEMCOG, *2045 Regional Development Forecast (RDF) Forecasted Population Change*, May 2019, https://semcog.org/community-profiles#People

[297] Detroit Free Press, June 29, 2020. *First Street Foundation's flood assessment method finds 70% more parcels at flood risk nationwide than are noted by FEMA*. https://www.freep.com/in-depth/news/local/michigan/2020/06/29/flood-risk-michigan-homes-map-first-street-foundation/3258043001/

deficient and the number of state-maintained bridges in poor condition is expected to increase by 50% between 2016 and 2033.[298] A 2016 assessment of our roads indicates that 39% of Michigan's 120,000 miles of paved roadways are in poor condition. Transportation funds for road and bridge maintenance and improvements, and for maintaining existing transit services, are expected to fall $17 billion short of projected needs over the next 30 years.[299] Monies available for maintaining and improving sewers are, likewise, expected to fall $14 to $26 billion short of infrastructure needs.[300] Wayne County communities may be especially hard hit by this lack of public funding as decreasing population and the loss of jobs within portions of Wayne County will result in few tax dollars with which to fund improvements.[301] Many of the same communities exhibiting these demographic trends of decreasing population and a loss of local jobs are the same as those that have some of the oldest existing infrastructure.

Transportation Accidents and Transportation Related Hazmat Incidents

Road congestion and traffic accidents are, and will continue to be, a particular concern in Wayne County. Within southeast Michigan, Wayne County is second only to Oakland County in the number and percentage of congested road miles. The Southeast Michigan Council of Governments (SEMCOG) has determined that 184.8 miles of road in Wayne County are congested. That equals 9% of the County's roadways, but over ¼ (26%) of the congested roads in the region.[302] There are more commuters driving Wayne County roads than in any of the other counties in southeast Michigan, with over 1 million people commuting within, into, or out of the County to get to work each day. Additionally, the Detroit-Windsor border crossing is the busiest truck crossing of either the Canadian or Mexican-U.S. borders.

As a result of the number of congested road miles and the number of vehicles, Wayne County has more traffic accidents than any other in southeast Michigan. Over forty-one percent (41%) of the crashes in southeast Michigan, and forty-four percent (44%) of the fatal crashes, occur in Wayne County.[303] These statistics have implications for both the number of transportation accidents and the number of transportation related hazmat incidents in the County. Likewise, future trends (e.g., an aging population, population shifts to outlying communities/areas, continued growth in truck traffic across the Detroit-Windsor border, etc.) for the County may have implications for the potential future increased risk for these hazards.

As mentioned previously, by the year 2030 more than twenty percent (20%) of the population in the cities of Northville, Plymouth, Livonia, Redford, Westland, Garden City,

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[298] American Society of Civil Engineers (ASCE(, Michigan Section. 2018 Report Card for Michigan's Infrastructure. infrastructurereportcard.org/michigan.
[299] SEMCOG, *Land use Change in Southeast Michigan: Causes and Consequences,* March 2003, http://www.semcog.org/products/pdfs/LandUseChange.pdf
[300] Ibid
[301] SEMCOG, 2020 Regional Development Forecast: Population, Households and Employment for Cities, Villages, Townships and Detroit Subcommunities, April 1996, http://www.semcog.org/products/pdfs/rdf2020.pdf
[302] SEMCOG, *Commuting in Southeast Michigan, 2000*, June 2003, http://www.semcog.org/products/pdfs/CommutingSEMI.pdf
[303] SEMOCOG, Traffic Crash Profiles for Southeast Michigan and Wayne County, 2004. http//www.semcog.org/website/transdata/reports/crash_profile.cfm

Dearborn, Wayne, Taylor, Allen Park, Melvindale, Lincoln Park, Ecorse, Southgate, Riverview, Trenton, Flat Rock, Rockwood, Highland Park, Harper Woods, Grosse Pointe Woods, Grosse Pointe Shores, Grosse Pointe Shores, Grosse Pointe, and Gross Pointe Park, and Plymouth Township will be over the age of 65.[304] Elderly drivers have the lowest crash rate per licensed driver. However, when comparing rates per mile driven, elderly drivers are approximately twice as likely to be involved in a crash and, due to increased fatality, about three times as likely to experience a fatal crash as non-elderly drivers.[305]

The amount of traffic experiencing congested conditions in southeast Michigan is expected to increase from twenty-three (23) percent, in 2000, to thirty-three (33) percent by the year 2025. Over the same time period truck traffic across the Detroit-Windsor border is estimated to increase by 158%.

The confluence of increasing road congestion, an aging population, and increased truck traffic presumably exacerbates the potential for transportation accidents, including accidents involving the transport of hazardous materials. As County officials review and plan improvements for those areas currently identified as problem intersections and roads, hazard mitigation should be included in the planning process.

Flooding – Urban/Riverine

Although many communities in Wayne County are older and more densely developed than other areas of southeast Michigan, and despite the fact that Detroit and inner core communities are experiencing reductions in population, households, and jobs, Wayne County saw a net increase of 13,400 acres of developed land between 1990 and the year 2000.[306] During the same period, Wayne County lost forty-three percent (43%) of its remaining farm land.

Housing development trends for most of the region show a shift toward less dense development patterns. New subdivisions in St. Clair County, for example, use more than two acres of land, on average, for a single new housing unit. SEMCOG reports that the region as a whole grew by five (5) percent from 1990 to 2000. During the same period, developed land in southeast Michigan increased by seventeen (17) percent. SEMCOG's data shows that land in much of the region is being developed at a rate greater than three times that of population growth.[307]

New housing in Wayne County, by contrast, continues to maintain higher densities of three housing units to the acre on average. Continued higher density development within Wayne County, more sprawling development and higher population growth in neighboring, upstream communities, and the loss of agricultural land and other open space have the potential to increase and exacerbate flooding within Wayne County.

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[304] SEMCOG, *2030 Regional Development Forecast (RDF) Population by Age by Community*, September 2002, http://www.semcog.org/products/pdfs/2030RDFAgeByCommunity.pdf
[305] ACTS Older Driver Toolkit. http://townsafety.com/ACTSweb/ODT/Overview.htm
[306] SEMCOG, *Land use Change in Southeast Michigan: Causes and Consequences,* March 2003, http://www.semcog.org/products/pdfs/LandUseChange.pdf
[307] Ibid

SEMCOG predicts that the area covered by impervious surfaces (i.e. roads, parking lots, driveways, and rooftops) in the region will increase from fourteen (14) percent (2000) to twenty-four (24) percent in the future as communities build-out according to existing master plans. Exacerbating this increase in imperviousness is the corresponding loss of the existing "natural infrastructure" of woodlands and wetlands, farmland, and other open space, which serve to intercept, store, and return storm water to the atmosphere. Studies compiled from across the country demonstrate that increased imperviousness results in imbalances in hydrology and degradation of water quality and stream integrity.[308]

In an undeveloped landscape, most of the water falling as rain or snow is intercepted by the forest canopy, or other vegetation. This water is returned to the atmosphere through the processes of evaporation and transpiration without ever reaching the ground surface. Water that does reach the ground is able to percolate through the soil surface. Some of this water is utilized by plants and some continues to flow downward through the soil until it reaches the water table and recharges local groundwater supplies.

As the landscape is developed, the protective layer of trees, shrubs, and grasses are stripped away and replaced by hardened surfaces. When it rains, much more water reaches the ground surface than previously and this water is then unable to infiltrate through the soil surface. Instead it runs off of roofs and roads, often carried more quickly through piped drainage systems, to local stream, rivers, and lakes. The result is an expected increase in both the frequency and the magnitude of area flooding.

Studies show that the magnitude of peak-stream flow increases by a factor of two (2) to three (3) with low-level suburban development (10-20% impervious area). In highly urbanized areas, not only are the major peak flows amplified, but smaller storms, which previously produced no runoff under pre-development conditions, also generate substantial stream flows. Under these conditions, moderate to large storms result in storm discharge lasting 30 to 100 times longer than under pre-development conditions.[309] Hydrologic modeling of these changes also shows that the frequency of flood producing storms increases, with the five-year (20% probability of occurring in any one year) flood peak increasing in frequency from nine- (9) to twenty-nine (29)- fold, so that the "five-year" storm becomes much more commonplace, occurring from 2 to 6 times per year.[310] The loss of forest cover in a watershed exacerbates these changes so that even low-density development, with minor increases in impervious cover, result in altered stream hydrology. [311]

Continued climate change will further exacerbate flooding. Scientists predict an increase in the number of extreme rainfall and storm events, leading to more flooding throughout

[308] Schueler, T.R.., 1994. The Importance of Imperviousness. Watershed Protection Techniques 1(3):100-111.
[309] Booth, D.B. 1990. Stream-Channel Incision Following Drainage-Basin Urbanization. Water Resources Bulletin 26(3): 407-417.
[310] Ibid
[311] Booth, D.B., Hartley, D., and R. Jackson. 2002. Forest Cover, Impervious Surface Area, and the Mitigation of Stormwater Impacts. J. Am. Water Res. Assoc. 38(3): 835-845.

the Midwest and costing taxpayers as much as $480 million annually just to adapt stormwater systems to handle the increased runoff.[312]

Approximately forty-nine percent (49%) of Wayne County's population lives within the Rouge River Watershed. The Ecorse Creek and Combined Downriver Watersheds and areas draining directly to Lake St. Clair are home to an additional thirty-four percent (34%) of Wayne County residents. These areas, particularly portions of the Rouge and the North Branch of Ecorse Creek, already experience severe flooding. Studies and storm water management initiatives to reduce flooding for these areas are underway; however, existing land use patterns and future land development make these efforts and uphill battle. Additional flooding will likely occur not only in areas currently identified as problem flood zones but, because population growth is expected to be concentrated in outlying headwater areas, it may also be expected to occur in areas that currently exhibit no problem flooding. [313,314]

[312] USGCRP, 2018: Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment, Volume II [Reidmiller, D.R., C.W. Avery, D.R. Easterling, K.E. Kunkel, K.L.M. Lewis, T.K. Maycock, and B.C. Stewart (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, 1515 pp. doi: 10.7930/NCA4.2018
[313] SEMCOG, *Comparing 2000 Census and 2030 Regional Development Forecast by Watershed,* July 2002, http://www.semcog.org/products/pdfs/watershedreport.pdf
[314] SEMCOG, *Land use Change in Southeast Michigan: Causes and Consequences,* March 2003, http://www.semcog.org/products/pdfs/LandUseChange.pdf

6. Hazard Mitigation

6.1 Goals and Objectives

The following five goals were selected by the Advisory Committee in 2013 and were confirmed as goals to focus mitigation activities under this (2019) Plan:

1. Protect and preserve human health and well being

2. Maintain and fortify critical assets, structures and infrastructure to preserve the quality of life.

3. Insure Interagency cooperation and coordination for preparedness

4. Enhance emergency response capabilities (including and especially communications)

5. Review and improve county-wide contingency plans for maintaining quality of life

6.1.1 Mitigation Selection Criteria

The Advisory Committee developed the evaluation criteria used for the selection of mitigation strategies. The 2013 evaluation criteria were reviewed and additional potential evaluation criteria were identified and discussed during the second workshop in 2019. The Advisory Committee voted selected the top five criteria listed below; weighting them using the method of paired alternatives to provide the weighting factor listed below.

Criteria (Weighting in parentheses):

- Ability to accomplish (22)
- Technical Feasibility (20)
- Cost Effectiveness (19)
- Availability of Funding (18)
- Effectiveness of strategy (including downside of risk) (14)

6.2 Survey Results

The second survey presented 201 mitigation alternatives organized by the hazard addressed by each strategy, as discussed in Section 2. Responses to open-ended survey questions generated an additional 50 strategies for a total of 251 mitigation strategies for discussion by the Advisory Committee during the Second Workshop. The results of the survey were ranked based on the number of respondents that indicated a strategy was important or very important. The ranking was used by participants to prioritize the strategies during the workshop.

The top-ranked strategies for consideration received an average rating of 3.8 (16 strategies). All strategies were presented with their associated ranking for consideration by the Advisory Committee. Discussion during the workshop resulted in sixteen survey strategies for Action Plan consideration. These strategies are listed in Section 6.4.

6.3 Community Input

Each community identified potential mitigation strategies to address hazards within the community. Mitigation strategies outlined by each community are summarized in the discussion that follows.

6.3.1 Community Identified Mitigation Strategies

Each community discussed mitigation in different terms to address specific local needs.

The following describes the individual mitigation strategies identified by each community, along with the hazard addressed with that strategy. Strategies are listed in the order they were presented in the survey materials. These priorities and suggested mitigation strategies reflect local municipal concerns. Their inclusion within this County Plan does not necessarily imply County funding will be provided for these activities.

6.3.1.1 City of Allen Park

2013 Mitigation Strategies:

1) Provide additional funding for the replacement or relining of older sewer lines that back up and cause flooding within the city. Remove diseased or dead ash trees to prevent them from falling into Ecorse Creek and exacerbating flooding and sewer backups (Hazard Addressed: Urban Flooding, Riverine Flooding).

Progress since last update: Ongoing: Sewer lines being replaced or relined in priority order by contractor.

2) Provide funding for additional training of public safety personnel in responding to hazardous material emergencies (Hazard Addressed: Hazmat Incidents – Fixed Site and Transportation).

Progress since last update: Ongoing: All fire personnel trained in hazmat response and two staff persons have specialty training and are part of the regional HazMat Response Team.

3) Allocate funds to equip the city's community center so the facility can serve as an emergency shelter in case of a disaster that requires evacuation or relocation of citizens. Specifically, the need for back-up generator was mentioned (Hazard Addressed: Tornadoes/Severe Weather, Hazmat Incidents).

Progress since last update: Ongoing: New roof installed on community center, which serves as both morgue and shelter in event of disaster/emergency.

2019 Mitigation Strategies: 1, 2, & 3 above) Allen Park Fire Department personnel indicate that progress has been made on all three of these actions but that they remain priorities until completed.

Person/Agency Responsible: Allen Park Fire Department

Known/Potential Funding: Engineering/Fire Dept general funds

Anticipated Completion Timeline: 2025

How action will be prioritized: Council budget process: Dept. budget process

6.3.1.2 City of Belleville

2013 Mitigation Strategies: 1) Provide back-up generators to be used during power failures especially at senior citizen facilities and the emergency shelter (Hazard Addressed: Severe Weather/Tornadoes).

Progress since last update: The City has succeeded in funding some backup generators but the need for more remains.

2) Upgrade or replace the current communication equipment; used by the public safety departments (Hazard Addressed: All). Progress since last update: Implementation of 800 MHz communication systems throughout the County has improved communications between communities.

2019 Mitigation Strategies: 1) Continue to provide back-up generator power in where lacking at senior citizen facilities (Hazard Addressed: Severe Weather/Tornadoes).

2) Continue improvements in communication systems and agreements between communities (Hazard Addressed: All).

Person/Agency Responsible: Belleville Police/Fire

Known/Potential Funding: General fund/grants

Anticipated Completion Timeline: 2023

How action will be prioritized: Council budget process

6.3.1.3 Brownstown Township

2013 Mitigation Strategies: 1) Provide funding for installation of new warning sirens and the repair and activation of existing sirens in the township (Hazard Addressed: Tornadoes/Severe Weather). Progress since last

update: Completed. The Township now has 13 tornado sirens and also utilizes local radio stations and Nixle for emergency notifications.

2) Provide resources for continuous hazmat training (Hazard Addressed: Hazmat Incidents). Progress since last update: Staff have received ONGOING training, but this remains a goal moving forward.

3) Allocate funds to hire and/or train additional public safety personnel, especially for addressing mass emergencies such as tornadoes and hazmat accidents (Hazard Addressed: Tornadoes/Severe Weather). Progress: ONGOING

4) Activate Wayne County's resources at lower level of emergency in the township; responding to emergencies that require outside assistance (Hazards Addressed: All). Progress: ONGOING

2019 Mitigation Strategies:

Mitigation strategies 2, 3, and 4 above remain ongoing concerns The Township will continue these strategies as listed above.

5) Additionally, Brownstown Township will work with Wayne County, FEMA, the U.S. Army Corps of Engineers and others to address coastal flooding and erosion.

Person/Agency Responsible: Township & Wayne County

Known/Potential Funding: Grants

Anticipated Completion Timeline: 2025

How action will be prioritized: Council/County budget processes

6.3.1.4 Canton Township

2013 Mitigation Strategies:

1) Use comprehensive land use and transportation plans to establish policies regarding the placement and design of critical facilities and infrastructure. Assure that future development does not impede existing hazard mitigation and response activities (Hazards Addressed: All).

Progress since last update: The Township has constructed a third fire station since the 2013 HMP update and is considering adding a fourth. Additionally, The Township is redeveloping the Ford Road corridor to make sure that this heavily traveled roadway remains open and accessible for emergency vehicles.

2) Plan for access to a back-up water supply to be used for public health and extended fire-fighting needs in the case of a drought or water system failure (Hazards Addressed: Fires, Severe weather – summer and winter, Health Emergencies, Infrastructure Failure).

Progress since last update: The Township has constructed a secondary supply tank for additional water storage. This task is considered completed.

3) Arrange for a method of "rolling blackouts" in electrical systems that are at risk of overloading (Hazards Addressed: Infrastructure Failure, Criminal Acts).

Progress since last update: The Township has been meeting with DTE to develop a Local Energy Assurance Plan (LEAP). It has not yet been adopted, but this is anticipated in 2020.

4) Review the feasibility of constructing concrete "safe rooms" in shelter areas in mobile home parks, fairgrounds, parks, shopping malls and other vulnerable areas (Hazards Addressed: Tornadoes/Severe Weather).

Progress since last update: The Township reports that there has been no progress on this initiative due to lack of funding and changes in priorities. It is not likely to remain a priority in the 2019 HMP update.

5) Pre-plan for debris removal after a hazard response event, including staging, storage and disposal (Hazards Addressed: All).

Progress since last update: The Canton Township Fire and Public Works Departments have been working together to conduct a damage assessment based upon past experiences and are beginning to develop the plan for debris removal and disposal.

6) Establish maintenance and improvement standards requiring that roads, bridges and driveways are sufficient for and are accessible to emergency vehicles and fire equipment (Hazards Addressed: All).

Progress since last update: This mitigation strategy was focused on a few narrower, private roads in the Township. A combination of tree trimming and use of smaller tankers, rather than hook and ladder trucks, have provided a solution to the problem. This strategy is considered completed.

7) Create and revise public information materials on each hazard and warning system as it applies to the Township (Hazards Addressed: All).

Progress since last update: The Township continually works to improve their outdoor warning systems and communications. They now contract with Nixle and Everbridge to provide public and internal emergency notifications.

8) Facilitate and encourage the creation of escape plans and disaster supply kits for residents and businesses (Hazards Addressed: All).

Progress since last update: The Township's Emergency Manager and Fire Inspector work together to visit businesses throughout the Township, working with them to create and implement emergency preparedness plans. They have conducted these exercises with assisted living, other nursing/health care facilities, and churches, and now are reaching out to other businesses.

2019 Mitigation Strategies:

1) Township officials indicated that the hazard priorities and mitigated strategies listed above, with the exception of Numbers 2 and 6 which are considered complete, remain priorities for the 2019 HMP update. The other mitigation strategies are considered ONGOING. Additionally, Canton Township is working toward National Weather Service StormReady designation.

Person/Agency Responsible: Emergency Mgt/Fire Dept.

Known/Potential Funding: General fund & grants

Anticipated Completion Timeline: 2024

How action will be prioritized: Council budget process/grantavailability

6.3.1.5 City of Dearborn

2013 Mitigation Strategies:

1) Provide public officials and citizens with better awareness regarding issues facing ethnic diversity within the community (Hazard Addressed: All).

Progress since last update: City officials, particularly Police Department personnel work with the Arab Community Center for Economic and Social Services (ACCESS) and local imams to conduct outreach and training concerning local emergency planning

2) Hire additional fire fighters and EMS personnel and provide funds for training those individuals as well as

current public safety (Hazard Addressed: Fire/ Hazmat Incidents).

Progress since last update: The City has hired additional emergency preparedness and response personnel and further increased capacity by merging with the City of Melvindale Fire Department. Additionally, the City runs its own training academy. Additional staffing and training have been possible with the help of FEMA's Assistance to Fire Fighters Grants Program. This task is considered completed.

3) Provide funds to address the flooding issues in Dearborn (Hazard Addressed: Infrastructure Failure/Riverine and Urban Flooding).

Progress since last update: The City applied for and received FEMA Hazard Mitigation Grant funding in 2014, including installation of two shut-off gates in the West Dearborn Sewage District and construction of an overflow structure. This allowed the City to address combined sewer overflow problems that previously caused flooding of Oakwood Hospital and other key locations. Although flooding can still be a problem, the City largely avoided flooding earlier in 2019 that impacted other communities in the region. This is now considered a lower priority.

4) Address the issue of public safety personnel's inability to establish radio contact with their counterparts in the City of Detroit likelihood of an emergency involving both communities (Hazard Addressed: Hazmat Incidents).

Progress since last update: Dearborn was one of the last communities in the County to implement 800 MHz cellular communications systems. They are now in the process of identifying local blank spots and developing MOUs with neighboring municipalities for shared channel use.

2019 Mitigation Strategies:

1) Continue to address impediments to establishing and maintaining radio communications with surrounding communities, including the City of Detroit (Hazard Addressed: ALL).

2) The City describes their Community Emergency Response Team (CERT) program as one of the most active in the State of Michigan. They wish to continue educating volunteers regarding disaster preparedness and basic response skills; to develop a city-wide collaborative emergency management team of public and private stakeholders (e.g., local government officials, public safety personnel, hospital officials, schools, and major industry

representatives. They will continue to offer tabletop exercises regarding preparedness for and response to armed person and/or active shooter scenarios, severe weather, and other hazards (Hazards Addressed: All).

Person/Agency Responsible: Emergency Management

Known/Potential Funding: General fund & grants

Anticipated Completion Timeline: Ongoing

How action will be prioritized: Budget process, grant availability

6.3.1.6 City of Dearborn Heights

2013 Mitigation Strategies:

1) Continue to coordinate with Wayne County, the State of Michigan and U.S. Army Corps of Engineers to find solutions to Ecorse Creek flooding issues (Hazards Addressed: Flooding).

Progress since last update: The city was awarded FEMA Hazard Mitigation Grants in 2016 and 2018 to purchase and remove a total of 27 homes from the Ecorse Creek floodplain; returning these areas to green space. Although flooding remains an issue along the creek this has significantly reduced the potential loss of life and property due to riverine flooding.

City officials are also evaluating construction of a retention basin near Annapolis Street that would alleviate flooding.

2) Develop a more comprehensive public warning and information systems (Hazards Addressed: All).

Progress since last update: Nixle now provides alerts throughout Dearborn Heights for a variety of hazards and events, improving the emergency notification capabilities of the community.

Although progress has been made, the City of Dearborn Heights will continue to implement these same strategies under the 2019 HMP update.

Person/Agency Responsible: City Emergency Mgt/County Homeland Security

Known/Potential Funding: General fund & grants

Anticipated Completion Timeline: 2024

How action will be prioritized: Department budget processes

6.3.1.7 City of Ecorse

2013 Mitigation Strategies:

1) Provide funding for hazmat training, so there is sufficient level of preparedness to respond to hazmat emergencies (Hazard Addressed: Hazmat Incidents). Progress since last update: Funding continues to be an issue for priority programs in the City of Ecorse.

2) Install tornado siren (Hazard Addressed: Tornadoes/Severe Weather). Progress since last update: Additional emergency alerts sirens are still needed for coverage within the City.

3) Provide funding to hire additional manpower for the public safety departments; to be able to properly respond to transportation accidents and criminal activities, as well as conducting necessary fire inspections and investigation. (Hazard Addressed: Criminal Acts, Transportation Accidents, Fire). Progress since last update: Additional staff have been hired and trained since the last HMP update, but means of providing ongoing training and equipment are still needed.

2019 Mitigation Strategies:

1, 2 and 3) The same mitigation strategies listed above remain priorities fo the 2019 HMP update.

4) The City of Ecorse will also work with Wayne County, FEMA, the U.S. Army Corps of Engineers and others to address coastal flooding and erosion.

Person/Agency Responsible: City Manager/County Coordinator

Known/Potential Funding: Grants

Anticipated Completion Timeline: 2022

How action will be prioritized: City budgeting, grant availability

6.3.1.8 City of Flat Rock

2013 Mitigation Strategies:

1) Address flooding (Hazards Addressed: Flooding).

2019 Mitigation Strategies:

1) In July 2019 the City of Flat Rock experienced some of its worst flooding since the late 1970s due to heavy rain. This continues to be a priority for local officials and will remain in the 2019 HMP update.

Person/Agency Responsible: City Manager/County Coordinator

Known/Potential Funding: General fund/grants

Anticipated Completion Timeline: Ongoing

How action will be prioritized: City budget process

6.3.1.9 Garden City

202013 Mitigation Strategies: 1) Provide funds to purchase generators; to be used in case of power outages at community shelters and City Hall (Hazard Addressed: Infrastructure Failure – Electrical, Severe Weather). Progress since last update: The City issued a Request for Bids in July 2019 for installation of a new generator.

2019 Mitigation Strategies: 1) Funding for other backup generators and locations remains a priority.

Person/Agency Responsible: City Manager/Emergency Mgr

Known/Potential Funding: General fund, grants

Anticipated Completion Timeline: 2023

How action will be prioritized: Department budget process

6.3.1.10 City of Gibraltar

2013 Mitigation Strategies: 1) Provide funding to be used to elevate homes located in flood areas of the city (Hazard Addressed: Riverine and Urban Flooding). Progress since last update: Riverine flooding remains a priority for the City of Gibraltar, which was hit by heavy flooding earlier in 2019. High water levels in the Detroit River and Lake Erie have also created flooding in coastal areas.

2019 Mitigation Strategies: 1) Develop a railway incident hazardous material response plan that is specific to Gibraltar and surrounding downriver communities (Hazards Addressed: Hazmat Incidents)

2) Address problems of contaminated landfill leachate (Hazards Addressed: Public Health Emergencies, Hazmat Incidents)

3) Update and maintain consistency in evacuation and emergency response plans, particularly related to Fermi II and hazardous materials (Hazards Addressed: Hazmat Incidents, Public Health Emergencies).

4) Continue to develop strategies for reducing stormwater related- and coastal flooding and erosion.

Person/Agency Responsible: City Manager/Engineering

Known/Potential Funding: General Funds & grants

Anticipated Completion Timeline: Ongoing

How action will be prioritized: City budget process

6.3.1.11 Grosse Ile Township

2013 Mitigation Strategies: 1) Provide funding to improve or replace the county bridge linking Grosse Ile with the mainland. (Hazard Addressed: Hazmat Incidents).

Progress since last update: The County ("Free") bridge has been studied and found to require repair. It has had a few temporary closures in 2019 and will likely be closed for longer periods in 2020 for more extensive construction.

2019 Mitigation Strategies: 1) As noted above, work on the county bridge is ONGOING and will continue in 2020.

2) Grosse Isle Township will also work with Wayne County, FEMA, the U.S. Army Corps of Engineers and others to address coastal flooding and erosion.

Person/Agency Responsible: Township Board/Manager

Known/Potential Funding: General funds & grants

Anticipated Completion Timeline: Ongoing

How action will be prioritized: Township budgeting

6.3.1.12 Grosse Pointe

2006 Mitigation Strategies: 1) Provide a solution to the problem of not being able to establish radio contact with the City of Detroit when faced with public safety emergencies (Hazard Addressed: All). Progress: COMPLETE

2) Provide funding for emergency power back-up systems in the event of outages (Hazard Addressed: Tornadoes/Severe Weather). Progress: COMPLETE

2019 Mitigation Strategies: 1) A recent structural fire within the City of Grosse Pointe resulted in the deaths of two boys. As a result, preventing death and injury and property loss and damage from structural fires has been identified as a key hazard priority for Grosse Pointe and surrounding cities. The strategy proposed to address this is described under Grosse Pointe Woods, below:

2) The City of Grosse Pointe will also work with Wayne

County, FEMA, the U.S. Army Corps of Engineers and others to address coastal flooding and erosion.

Person/Agency Responsible: City Manager/County Coordinator

Known/Potential Funding: Grants

Anticipated Completion Timeline: Ongoing

How action will be prioritized: Council budget, grant availability

6.3.1.13 Grosse Pointe Farms

2006 Mitigation Strategies:

1) Provide funding to replace the water filtration system with a system that utilizes hydro liquid chloride (Hazard Addressed: Hazmat Incidents – Fixed Site). Progress since 2006: COMPLETE

2) Provide a solution to the problem of not being able to establish radio contact with the City of Detroit when faced with public safety emergencies (Hazard Addressed: All). Progress: COMPLETE

2019 Mitigation Strategies:

1) Structural Fire is a key priority for collective action all of the "Pointes". The strategy to address this is described under Grosse Pointe Woods, below:

2) Grosse Pointe Farms will work with Wayne County, FEMA, the U.S. Army Corps of Engineers and others to address coastal flooding and erosion.

Person/Agency Responsible: Fire Chief

Known/Potential Funding: Dept budget & grants

Anticipated Completion Timeline: Ongoing

How action will be prioritized: Dept. budgeting & grant availabiliy

6.3.1.14 Grosse Pointe Park

2013 Mitigation Strategies:

1) Provide a solution to the problem of not being able to establish radio contact with the City of Detroit (Hazard Addressed: All).

Progress since last update: Implementation of broader 800 MHz communications systems has improved communications between neighboring communities and Grosse Pointe Park will cioontinue to improve inter-governmental emergency communications.

2) Provide funding for generators to be used in cases of power outages. Determine the availability of necessary equipment to be used to clear streets that are blocked as a result of storms. Install a tornado siren within the community. Enhance the community's ability to properly prepare and respond to the needs of the community in the event of weather related emergencies (Hazard Addressed: Tornadoes/Severe Weather).

Progress since last update: This remains a priority issues for inclusion in the 2019 HMP update.

2019 Mitigation Strategies:

1) Preventing deaths, injuries, and property damage from structural fires has been identified as a key regional hazard priority. The strategy proposed to address this is described under Grosse Pointe Woods, below:

2) Continue to seek funding for installation of backup power generation and emergency notification systems.

3) Grosse Pointe Park will work with Wayne County, FEMA, the U.S. Army Corps of Engineers and others to address coastal flooding and erosion.

Person/Agency Responsible: Fire Chief

Known/Potential Funding: Fire Department budget & grants

Anticipated Completion Timeline: Ongoing to complete by 2025

How action will be prioritized: Department budgeting/grant availability

6.3.1.15 Grosse Pointe Shores

2013 Mitigation Strategies:

1) The officials of Grosse Point Shores indicated in 2013 that they were sufficiently prepared to deal with emergencies within their community.

2019 Mitigation Strategies:

1) Recent events have identified structural fire as a key hazard priority for collective action in all of the "Pointes". The strategy to address this is described under Grosse Pointe Woods, below:

2) Grosse Pointe Shores will work with Wayne County, FEMA, the U.S. Army Corps of Engineers and others to address coastal flooding and erosion.

The coastal erosion of the area between Woodland Shore Road and the 788 Lake Shore Road (Grosse Pointe Yacht Club) is our greatest threat at this time. We are in danger of the lake levels and high winds washing out our sanitary

sewers and storm sewer outfall. In addition, the erosion has in many areas washed out the greenbelt between the lake and the northbound lanes of the Wayne County Road (Lake Shore Road). This erosion over time will create a collapse and a sink hole in the road endangering vehicle and pedestrian traffic. Elected officials in Grosse Pointe Shores have been in discussion with Wayne County and a study of the deteriorated seawall has been authorized.

Person/Agency Responsible: Fire Chief

Known/Potential Funding: Fire Department budget & grants

Anticipated Completion Timeline: Ongoing to complete by 2025

How action will be prioritized: Department budgeting/grant availability

6.3.1.16 Grosse Pointe Woods

2013 Mitigation Strategies:

1) Provide necessary funds to be used to increase the capacities of the back-up power system located at the Municipal Building and at the Department of Public Works Pump Station. Provide a mobile generator that can be transported to emergencies at various locations within the community. (Hazard Addressed: Tornadoes/Severe Weather, Infrastructure Failure).

Progress since last update: The Public Safety Building does have a generator that allows continued dispatch service during power outages. However, the generator is approximately 30 years old and is in need of replacement. The City has identified a need of approximately $148,000 to replace the generator. This continues to be a priority.

2) Provide funding for additional training for the Department of Public Safety. Provide funding to be used for coordinated regional training (Hazard Addressed: All).

Progress since last update: The City anticipates shared Fire Department personnel training programs with the City of Detroit using Grosse Pointe Woods' share of fireworks funds. This may still require additional funding for overtime and/or equipment, so funding remains an ONGOING need.

Additionally, the City Fire Department has implemented a plan to replace five set of gear each year and has one set left to replace (Hazards Addressed: All).

2019 Mitigation Strategies:

1) Emergency management directors in the Grosse Pointe communities met recently to discuss creating joint, mandatory, K-4th grade education programs related to fire safety. They seek to update or replace their existing fire prevention mobile smokehouse for open houses and elementary school programs beginning in fall of 2020.

Person/Agency Responsible: Fire Chief

Known/Potential Funding: Fire Department budget & grants

Anticipated Completion Timeline: Ongoing to complete by 2025

How action will be prioritized: Department budgeting/grant availability

6.3.1.17 City of Hamtramck

2013 Mitigation Strategies:

1) Coordinate and plan for snow removal to increase street accessibility to emergency crews and residents (Hazard Addressed: Severe Weather – Winter)

2) Collect and maintain information about Hazmat sites, including on-site inspections and computerized record-keeping (Hazard Addressed: Hazmat Incidents)

2019 Mitigation Strategies:

1) The City will continue the ONGOING strategies it has listed above.

Person/Agency Responsible: Emergency Manager

Known/Potential Funding: General fund

Anticipated Completion Timeline: Ongoing

How action will be prioritized: City budget review

6.3.1.18 City of Harper Woods

2013 Mitigation Strategies:

1) Provide funds to hire additional personnel for the city's public safety departments. Provide additional hazmat equipment and training for these departments (Hazard Addressed: Hazmat Incidents – Transportation). Progress: ONGOING

2) Hire additional police officers to assist in combating civil disturbances and criminal activities within the community (Hazard Addressed: Criminal Acts). Progress: ONGOING

3) Provide a solution to the problem of not being able to establish radio contact with the City of Detroit when faced with public safety emergencies (Hazard Addressed: All).

Progress since last update: Use of Nixle as an alert system has improved communications with both residents and neighboring communities. This remains an ONGOING priority. Harper Woods seeks to enter into MOUs with other communities for shared communications and response.

4) Monitor and remove trees that could be a hazard to power lines and improve problem areas in the power grid to reduce the number of power failure incidents (Hazard Addressed: All).

Progress since last update: Some tree trimming has been conducted but this will remain an ongoing project.

2019 Mitigation Strategies:

1) The City will continue with the ONGOING strategies it has listed above.

Person/Agency Responsible: City Police/Fire

Known/Potential Funding: Department budget/Millage if needed

Anticipated Completion Timeline: Ongoing

How action will be prioritized: City budget process

6.3.1.19 City of Highland Park

2013 Mitigation Strategies:

1) Hire additional manpower so that there is a sufficient level of preparedness to respond to major emergencies. Provide funding for training in hazmat response and arson investigations (Hazard Addressed: Hazmat Incidents/Arson). Progress: ONGOING need.

2) Provide resources needed to clear streets during and after winter storms (Hazard Addressed: Severe Weather/Winter Hazards). Progress: BEING EVALUATED

2019 Mitigation Strategies:

1) The mitigation strategies identified in 2013 will continue as priorities the 2019 update.

Person/Agency Responsible: City Police/Fire

Known/Potential Funding: Department budget/Millage if needed

Anticipated Completion Timeline: Ongoing

How action will be prioritized: City budget process

6.3.1.20 Huron Township

2013 Mitigation Strategies:

1) Install additional tornado sirens (Hazard Addressed: Tornadoes/Severe Weather). Progress since last update: Seven emergency alert sirens were installed and activated in 2016. Township officials will utilize the sirens to notify residents of severe weather, including high winds, hail, and tornadoes, but also for hazardous material spills, wildfires, or other similar incidents. This task is considered completed

2) Require electrical companies to clear limbs and dead trees away from power lines (Hazard Addressed: Severe Weather/Severe Wind/Winter Hazards).

Progress since last update: Maintenance to trim trees in priority areas has been conducted but this remains an ongoing priority.

2019 Mitigation Strategies:

2 above) The Township will continue with the ONGOING strategy for clearing power lines to reduce the frequency and severity of electrical power outages as described above.

Person/Agency Responsible: City Police/Fire, City Manager

Known/Potential Funding: General fund, grants, private companies

Anticipated Completion Timeline: 2025

How action will be prioritized: City budget process

6.3.1.21 The City of Inkster

2013 Mitigation Strategies:

1) Hire additional manpower so that there is a sufficient level of preparedness to respond to all major emergencies. (Hazard Addressed: Severe Weather/Tornadoes, Structural Fire, Hazmat Incidents, All).

Progress since last update: Inkster received a SAFER (Staffing for Adequate Fire & Emergency Response) grant award of $1,682,760 for the 2016 award year, which allowed improved staffing.

The City has also installed four sirens able to send variable-tone signals to address multiple hazards

2019 Mitigation Strategies:

1) The City will continue to prioritize adequate emergency preparedness and response personnel in their police and fir departments.
2) Inkster will explore projects and policies that reduce riverine and stormwater runoff-related flooding along the

Lower Rouge River and elsewhere in the City.
Person/Agency Responsible: City Police/Fire
Known/Potential Funding: General fund, grants
Anticipated Completion Timeline: 2025
How action will be prioritized: City budget review, grant availability

6.3.1.22 City of Lincoln Park

2013 & 2019 Mitigation Strategies:

1) Update emergency response plan for traffic and railroad accidents, particularly for hazardous material incidents adjacent to residential areas (Hazard Addressed: Hazmat Incident).

2) Development and implementation of training for police and schools on emergency response to an active killer incident (Hazard Addressed: Criminal Acts).

Person/Agency Responsible: Emergency Manager

Known/Potential Funding: General fund, grants

Anticipated Completion Timeline: Annually

How action will be prioritized: Department budget process

6.3.1.23 City of Livonia

2013 Mitigation Strategies:

1) Establish easements for stream access to clear log jams (Hazards Addressed: Flooding, Public Health). Progress: ONGOING

2) Create detention basins as proposed in the Storm Water Management Plan (Hazards Addressed: Flooding, Infrastructure failure). Progress: ONGOING

3) Educate vulnerable populations about how to care for themselves or obtain help during emergencies (Hazards Addressed: All). Progress: ONGOING

4) Distribute printed materials about preparing a family disaster preparedness kit (Hazards Addressed: All). Progress: ONGOING

5) Provide portable pumps, dump tanks, and suction hoses to supply a secondary water supply for firefighting during times of drought and power outages (Hazards Addressed: Fire, Infrastructure Failure, Severe Weather, Drought). Progress: ONGOING

2019 Mitigation Strategies:

1 through 5) The City will continue with the ONGOING strategies it has listed above.

Person/Agency Responsible: Emergency Manager

Known/Potential Funding: General fund, grants

Anticipated Completion Timeline: 2025

How action will be prioritized: Annual budget process

6.3.1.24 City of Melvindale

2013 Mitigation Strategies:

1) Hire and train additional police and fire personnel to help in protecting the population and natural resources from adverse effects of hazardous material incidents and other emergencies (Hazard Addressed: Hazmat Incidents – Fixed Site and Transportation).

Progress since last update: Melvindale and Dearborn have merged their Fire Departments, which has helped both cities level out their staffing and training needs.

2) Lessen the impact that flooding has on the people, property and environment of the City of Melvindale (Hazard Addressed: Infrastructure Failure, Riverine and Urban Flooding).

Progress since last update: In 2017, the U.S. ACOE completed the North Branch Ecorse Creek Flood Risk Management General Reevaluation Report; an analysis of alternatives to reduce flooding of Ecorse Creek. Alternative number 6, construction of a 250-acre feet detention basin at the intersection of Powers Avenue and Inkster Road in Dearborn Heights, improvements to multiple road crossings, and a greenway was found to maximize the cost-benefit ratio.

2019 Mitigation Strategies:

2 above) The City will continue to work with eth Army Corps of Engineers, FEMA, and neighboring communities to develop agreements and contracts and provide funding for implementation of flooding solutions for the North Branch of Ecorse Creek.

Person/Agency Responsible: Emergency Manager/Agencies

Known/Potential Funding: General fund, grants

Anticipated Completion Timeline: Ongoing

How action will be prioritized: Budget review, grant availability

6.3.1.25 City of Northville

2013 Mitigation Strategies:

1) Replace emergency generator at City Hall and Fire Station to provide a reliable command center in the

event of an emergency (Hazard Addressed: All).

Progress since last update: Remains a priority

2) Improve interoperability of 800 Mhz communication system between municipalities (Hazard Addressed: All).

Progress since last update: The 800 MHz communications systems have improved across the county with more communities now participating. Northville is now using the Nixle service for community bulletins and emergency alerts as well.

3) Evaluate and implement measures to mitigate flooding (Hazard Addressed: Flooding).

Progress since last update: Flooded roadways were still a problem following intense rainfall in May 2019

4) Establish a policy and place for evacuation of elderly residents from senior housing and rehabilitation centers (Hazard Addressed: Severe Weather – Summer and Winter, Tornadoes).

Progress since last update: The City and local nonprofit organizations maintain lists of shelters and food resources for homeless populations, but the identification of particular locations for emergency /hazard situations remains and ongoing need.

2019 Mitigation Strategies: 1 through 4) Continue to implement the mitigation measures noted above.

Person/Agency Responsible: Fire Chief

Known/Potential Funding: General fund, grants

Anticipated Completion Timeline: 2022

How action will be prioritized: Budget review, grant availability

6.3.1.26 Northville Township

2013 Mitigation Strategies: 1) Install tornado sirens in the community (Hazard Addressed: Tornadoes). Progress: BEING EVALUATED

2) Provide an engineering study to lessen the impact that floods have on people, property, and the environment (Hazard Addressed: Flooding, Severe Weather). Progress: BEING EVALUATED

3) Provide necessary training and equipment to first responders (Hazard Addressed: All). Progress: ONGOING

4) Development and implementation of training for police and schools on emergency response to an active shooter incident (Hazard Addressed: Criminal Acts). Progress: ONGOING

2019 Mitigation Strategies: 1 through 4 above) The Township will continue to pursue implementation of the ONGOING strategies listed above.

Person/Agency Responsible: Emergency Manager

Known/Potential Funding: General fund, grants

Anticipated Completion Timeline: Ongoing

How action will be prioritized: Budget review, grant availability

6.3.1.27 City of Plymouth

2013 Mitigation Strategies: 1) Request financial assistance from the railroad companies for the purchase of hazmat equipment. In addition, provide for advanced technology which will route emergency vehicles around congested railroad crossing when responding to emergencies (Hazard Addressed: Hazmat Incidents – Transportation). Progress: ONGOING

2) Provide an engineering study to lessen the impact that floods have on people, property, and the environment (Hazard Addressed: Flooding). Progress: The City posted information regarding pre-disaster hazard mitigation grant funding on their website following the federal disaster declaration from 2014 flooding throughout southeast Michigan. This remains a priority hazard for the City.

3) Train emergency responders regarding hazardous material response (Hazard Addressed: Hazmat Incidents - Transportation) Progress: ONGOING

4) Train police in civil disturbance response together with Western Wayne Mobile Field Force (Hazard Addressed: Civil Disturbance). Progress: ONGOING

2019 Mitigation Strategies: 1) The City will continue with the ONGOING strategies it has listed above.

Person/Agency Responsible: Emergency Mgr/City Manager

Known/Potential Funding: General fund, grants, railroad funds

Anticipated Completion Timeline: Ongoing

How action will be prioritized: Budget review, grant & investment availability

6.3.1.28 Plymouth Township

2019 Mitigation Strategies:

1) Mitigation strategies are currently being reviewed for appropriateness.

Person/Agency Responsible: Emergency Manager

Known/Potential Funding: TBD

Anticipated Completion Timeline: TBD

How action will be prioritized: Township budget process

6.3.1.29 Redford Township

2013 Mitigation Strategies:

1) Install additional tornado sirens (Hazard Addressed: Tornadoes/Severe Weather). Progress: BEING EVALUATED

2) Provide funding needed to establish a technical response unit to deal with all types of hazardous material accidents (Hazard Addressed: Hazmat Incidents – Fixed Site and Transportation). Progress: BEING EVALUATED

3) Township officials have also suggested that their ice arena could serve as a cooling center for elderly residents within the Township (Hazard Addressed: Severe Weather/Extreme Heat). Progress: The City maintains lists of shelters and food resources for homeless populations and domestic abuse victims, but the identification of particular locations for emergency /hazard shelters remains and ongoing need.

2019 Mitigation Strategies:

1 through 3 above) The Township will continue to pursue implementation of the ONGOING strategies listed above

Person/Agency Responsible: Emergency Mgr/City Manager

Known/Potential Funding: General fund, grants

Anticipated Completion Timeline: Ongoing

How action will be prioritized: Budget review, grant availability

6.3.1.30 City of River Rouge

2013 Mitigation Strategies:

1) Provide necessary training and equipment for public safety departments to better prepare their personnel in responding to weather related emergencies (Hazard Addressed: Severe Weather/Winter Hazards/Tornadoes). Progress: ONGOING

2) Provide funding to be used for training all departments in the area of homeland security. Provide additional protection against potential terrorist activities targeted at one of the community's vulnerable locations (Hazard Addressed: Terrorist). Progress: ONGOING

2019 Mitigation Strategies:

1 and 2) The mitigation strategies listed above remain priorities for the City.

2) The City of River Rouge will work with Wayne County, FEMA, the U.S. Army Corps of Engineers and others to address coastal flooding and erosion.

Person/Agency Responsible: Emergency Mgr/County Coordinator

Known/Potential Funding: General fund, grants

Anticipated Completion Timeline: 2025

How action will be prioritized: Budget review, grant availability

6.3.1.31 City of Riverview

2013 Mitigation Strategies:

1) Lessen the impact that floods have on people, property, and the environment. Insist that the community is notified when the floodgates are to be opened at Detroit Metro Airport. Reduce flooding in the City of Riverview, especially flooding of the Frank and Poet Drain (Hazard Addressed: Riverine and Urban Flooding).

Progress since last update: The City experienced flooding along the Frank and Poet Drain again in 2019 and it remains a priority concern.

2) In cases of major emergencies, provide additional personnel to assist with evacuations. Address the need for better communication with the county for responding to the needs of the city during an emergency. Provide stockpiles of fuel, food and water to be used in cases of emergency (Hazard Addressed: Hazmat Incidents – Fixed Site and Transportation, Terrorism).

Progress since last update: Some chemical manufacturers and/or companies using and storing significant quantities of hazardous materials have closed or moved since the HMP was updated in 2013; however, spills and/or fires at remaining facilities along railroad lines in the City remains a concern.

2019 Mitigation Strategies: 1) & 2) The City finds that the two mitigation strategies listed above are still significant issues and should be carried forward in the updated plan.

Person/Agency Responsible: Emergency Manager/City Manager/Federal Agencies

Known/Potential Funding: General fund, grants

Anticipated Completion Timeline: Ongoing

How action will be prioritized: Budget review, grant availability

6.3.1.32 City of Rockwood

2013 Mitigation Strategies: 1) Install tornado sirens in the City of Rockwood (Hazard Addressed: Tornadoes). Progress: BEING EVALUATED

2) Provide resources to develop an efficient system of evacuation during emergencies within the city or in neighboring communities. Allocate funds to be used to purchase 911 warring system to alert citizens or potential emergencies (Hazard Addressed: Severe weather, Hazmat Incidents – Fixed Site and Transportation). Progress: BEING EVALUATED

3) Install shoreline restoration along the Huron River (Hazard Addressed: Shoreline Erosion). Progress: BEING EVALUATED

4) Establish oversight of Belleville Dam operations (Hazard Addressed: Flooding). Progress: BEING EVALUATED

2019 Mitigation Strategies: 1) Continue to evaluate and implement 20103 mitigation strategies.

Person/Agency Responsible: Emergency Manager

Known/Potential Funding: General fund, grants

Anticipated Completion Timeline: 2025

How action will be prioritized: Budget review, grant availability

6.3.1.33 City of Romulus

2013 Mitigation Strategies:

1) Encourage family disaster planning (Hazard Addressed: All). Progress: ONGOING

2) Update GIS Database for infrastructure analysis (Hazard Addressed: Infrastructure Failure). Progress: ONGOING

3) Establish regional retention/detention ponds and upgrade sewer mains (Hazard Addressed: Flooding, Infrastructure Failure). Progress: ONGOING

4) Enforce requirement to loop water mains as per building codes (Hazard Addressed: Infrastructure Failure, Public Health). Progress: ONGOING

5) Expand early warning system and perform testing and monitoring (Hazard Addressed: Tornadoes). Progress: ONGOING

6) Inspect and maintain record of hazardous material facilities (Hazard Addressed: Hazmat Incidents). Progress: ONGOING

7) Coordinate with railway owners/operators for at-grade crossing separation, and to improve transportation planning (Hazard Addressed: Hazmat Incidents, Transportation Accidents). Progress: ONGOING

8) Develop traffic control options during power outage or signal damage (Hazard Addressed: Transportation Accidents). Progress: ONGOING

9) Establish and update shelter agreements within City and school buildings (Hazard Addressed: All). Progress: ONGOING

Person/Agency Responsible: Emergency Manager

Known/Potential Funding: General fund, grants

Anticipated Completion Timeline: Ongoing/2025

How action will be prioritized: Budget review, grant availability

6.3.1.34 City of Southgate

2013 Mitigation Strategies:

1) Provide additional back-up generators to be used during power outages. Establish emergency shelters to be used

in instances of power outage and other emergencies requiring the relocation of the population, especially the elderly. Provide training in snow plowing and the removal of downed trees and branches (Hazard Addressed: Tornadoes/Severe Weather/Winter Hazards, Infrastructure Failure).

Progress since last update: The City still needs additional back-up power generators, but has utilized their senior center as a emergency shelter during a recent fire that impacted a high rise senior-living center.

2) Hire and train additional manpower so the city will be better prepared to respond to hazmat and all other types of emergencies. Provide funds for improved communication equipment so the public safety personnel can properly communicate between their departments and neighboring communities. (Hazard Addressed: Hazmat Incidents – Transportation, Multiple).

Progress since last update: Although the hiring of replacement staff is an ongoing activity, the City has increased staffing levels in the Fire Department to the point where they have returned to desired levels.

2019 Mitigation Strategies: 1 and 2) The City will continue to pursue the mitigation strategies listed above.

3) Additionally, Southgate is developing solutions to relieve overflows from sewers that cause residential basement flooding on the City's east side.

Person/Agency Responsible: Police/Fire

Known/Potential Funding: General fund, grants, millage

Anticipated Completion Timeline: 2025

How action will be prioritized: Budget review, grant availability

6.3.1.35 Sumpter Township

2013 Mitigation Strategies: 1) Require the utility companies to remove trees and limbs that could fall on power lines. Provide funds to construct a storage building for emergency supplies (Hazard Addressed: Infrastructure Failure, Severe Weather). Progress: BEING EVALUATED

2019 Mitigation Strategies: 1) Mitigation strategies are currently being reviewed for appropriateness.

Person/Agency Responsible: Township Manager

Known/Potential Funding: TBD

Anticipated Completion Timeline: TBD

How action will be prioritized: TBD

6.3.1.36 City of Taylor

2013 Mitigation Strategies:

1) Develop a procedure between the City of Taylor, the surrounding communities, and Wayne County, for responding to hazmat and other emergencies within the various communities. Install a communication system that can be accessed by all communities without regard to the community they represent. Determine a better system of authority and control regarding who should respond to these emergencies (Hazard Addressed: Hazmat Incidents – Fixed Site and Transportation, Transportation Accidents). Progress: BEING EVALUATED

2) Provide funding to hire additional personnel and to purchase generators and heavy equipment to be used to clear streets of storm debris (Hazard Addressed: Severe Weather/Tornadoes). Progress: BEING EVALUATED

3) Provide a solution to the flooding that occurs at I-75 and Pelham Road (Hazard Addressed: Flooding). Progress: ONGOING

4) Continue outreach to schools and other members of the public about school and home safety and adopt the program “do1thing.com” to promote emergency preparedness (Hazard Addressed: All).

5) Monthly testing of emergency alert system (Hazard Addressed: Tornadoes).

6) Coordinate with Public Safety and Health Departments to ensure that facilities that host special events and international visitors are meeting communicable disease prevention standards (Hazard Addressed: Public Health).

2013 Mitigation Strategies:

1) The City will continue with the ONGOING strategies it has listed above.

Person/Agency Responsible: Police Department

Known/Potential Funding: Department budget, grants

Anticipated Completion Timeline: Ongoing/2025

How action will be prioritized: Budget review, grant availability

6.3.1.37 City of Trenton

2013 Mitigation Strategies:

1) Provide closer cooperation between health officials and health organizations, school district management, and the City of Trenton Emergency Management Department, to reduce contagious diseases (Hazard Addressed: Public Health Emergencies). Progress since last update: The City continues to work with area schools and hospitals to develop and implement emergency preparedness and response drills. This is an ONGOING priority.

2019 Mitigation Strategies:

1) The City will continue with the ONGOING emergency preparedness education noted above.

2) Additionally, Trenton has identified riverine flooding as an important priority along the 2 miles of residential Detroit River frontage in the City and the additional 2 miles of commercial properties abutting the river. The City has been in planning discussions with the U.S. Coast Guard, FEMA, and the Michigan State Police regarding how this shoreline may be protected from flood waters with sandbags. The City realizes that this a cyclical problem in times of high Great Lakes water levels3) Trenton will also work with Wayne County, FEMA, the U.S. Army Corps of Engineers and others to address coastal flooding and erosion.

Person/Agency Responsible: Paul L. Haley, Emergency Mgr.

Known/Potential Funding: None

Anticipated Completion Timeline: Ongoing

How action will be prioritized: Council budget process

6.3.1.38 Van Buren Township

2013 Mitigation Strategies:

1) Install tornado sirens and implement an education program that increases the public's awareness of the vulnerability to tornadoes (Hazard Addressed: Tornadoes). Progress since the last update: ONGOING

2019 Mitigation Strategies:

1) The City will continue with the ONGOING strategy it has listed above.

Person/Agency Responsible: City Manager

Known/Potential Funding: Department budget, grants

Anticipated Completion Timeline: Ongoing/2025

How action will be prioritized: Budget review, grant availability

6.3.1.39 City of Wayne

2019 Mitigation Strategies:

1) Mitigation strategies are currently being reviewed for appropriateness.

Person/Agency Responsible: City Manager

Known/Potential Funding: TBD

Anticipated Completion Timeline: TBD

How action will be prioritized: TBD

6.3.1.40 City of Westland

2013 Mitigation Strategies:

1) Provide funding for the installation of an electronic sign that can be activated to warn drivers of icy conditions on Ford Road at I-275. Purchase generators to provide electrical back-up during power outages. (Hazard Addressed: Severe Weather/Winter Hazards). Progress: BEING EVALUATED

2) Provide protective equipment to all municipal employees so they can be of assistance in hazmat emergencies. Upgrade radio equipment so it can be utilized to communicate with other communities (Hazard Addressed: Hazmat Incidents). Progress: BEING EVALUATED

2019 Mitigation Strategies:

1) Mitigation strategies are currently being reviewed for appropriateness.

Person/Agency Responsible: City Manager

Known/Potential Funding: TBD

Anticipated Completion Timeline: TBD

How action will be prioritized: TBD

6.3.1.41 City of Woodhaven

2013 Mitigation Strategies:

1) Increases the city's preparedness for the Avian Flu Virus. Distribute information and initiate surveillance to detect human cases (Hazard Addressed: Public Health Emergencies). Progress: NOT STARTED

2) Provide funding for additional hazmat equipment. Develop a well-organized evacuation plan to be used in the likelihood of a hazmat or other emergency that requires the transfer or citizens (Hazard Addressed:

Hazmat Incidents, Multiple). Progress: NOT STARTED

2019 Mitigation Strategies:

1) Mitigation strategies are currently being reviewed for appropriateness.

Person/Agency Responsible: City Emergency Manager

Known/Potential Funding: TBD

Anticipated Completion Timeline: TBD

How action will be prioritized: TBD

6.3.1.42 City of Wyandotte

2013 Mitigation Strategies:

1) Provide funding to hire additional manpower, purchase additional hazmat emergency equipment, and make available additional training for responding to hazmat emergencies (Hazard Addressed: Hazmat Incidents – Fixed Site). Progress: NOT STARTED

2) Provide a solution to sewer back-ups and basement flooding stemming from failures at the Wayne County Wastewater Treatment Facility (Hazard Addressed: Urban Flooding/ Infrastructure Failure). Progress: NOT STARTED

3) Develop a security plan and hazard mitigation procedures for all the schools in the City (Hazard Addressed: Criminal Acts).

2019 Mitigation Strategies:

1) Wyandotte will also work with Wayne County, FEMA, the U.S. Army Corps of Engineers and others to address coastal flooding and erosion.

2) Other mitigation strategies are currently being reviewed for appropriateness.

Person/Agency Responsible: Emergency Manager/County Coordinator

Known/Potential Funding: General fund, grants

Anticipated Completion Timeline: 2025

How action will be prioritized: City budget process, grant availability

6.4 Alternatives Selected

The Advisory Committee reviewed over 240 mitigation strategies and identified 18 high-priority mitigation strategies for further consideration, based on input from the mitigation survey and workshop discussions. These strategies addressed the six highest priority hazards, and the top-ranked survey strategies, as well as additional strategies from the survey that were highlighted by committee members during the workshop.

Each of these mitigation strategies were rated according to the five evaluation criteria described in Sections 2 and 6 above. The results of the evaluation are provided in Table 8, along with the hazards that each strategy addresses. From this evaluation, the following nine strategies were selected for development of Action Plans.

Criminal Acts: Mass Shooting(s)/Active Assailant(s)

1. Continue training in most current protocols and develop a process for requesting assistance from local and state law enforcement.

Infrastructure Failure

2. Identify, prioritize, and replace or renovate aging structures and equipment. Establish procedures to protect IT systems.

Public Health Emergencies

3. Stockpile vaccines and antidotes; train & equip volunteers to staff open/closed points of dispensing (PODs)
4. Develop and use mass media notification systems for public health emergencies (establish Wayne County geo-targeting/geo-fencing methods for notifications using Facebook, Nixle, Twitter, etc.)

Extreme Temperatures

5. Establish and build awareness of accessible heating/cooling centers in the community. Utilize all means available, including webs sites, social media, smart phone apps, mailers, etc. to inform public of impending weather threats and resources available, including heating & cooling shelters.

6. Educate the public regarding safe use of office and home space heaters, generators, smoke detectors & carbon monoxide detectors.

7. Catalog & map areas of vulnerable and other residents (unlicensed facilities, empty/vacant buildings, etc.). Provide outreach and transportation to vulnerable and normally hard-to-reach populations during extreme temperature events.

HazMat Incidents – Transportation

8. Utilize public warning systems and networks for public awareness and instructions in the event of hazardous materials incidents.

Flooding – River/Shoreline

9. Identify and map, or update existing maps of, floodplains and flood prone areas. Leverage new ArcGIS online application with MI CIMS sponsored by Michigan State Police. Provide training for local jurisdiction use and access.

Table 8. Selected Mitigation Strategies and Associated Hazards

			Top Hazards Addressed					
#	Mitigation Strategy	Rank	Infrastructure Failure - Water, Stormwater, Communications	Public Health Emergencies	Criminal Acts - Mass Shootings/Active Assailant(s)	Extreme Temperatures	Flooding - Urban/Riverine/Shoreline	Hazmat Incidents -Transportation
33	Replace or renovate aging structures and equipment. Establish procedures to protect IT systems.	6	√				√	
52	Increase public awareness of the causes, symptoms, and protective actions for disease outbreaks and other potential public health emergencies	7		√				
57	Stockpile vaccines and antidotes in case of epidemic, chemical ermergency, or biological or chemical weapons attack	7		√				
61	Use mass notification, emerging alerting systems, and social media, for public health emergencies	1	√	√	√	√	√	√
71	Develop a process for requesting assistance from local and state lav enforcement in the event of Active Assailant	1			√			
73	Continue training in most current protocol(s) [Active Assailant]	15			√			
77	Identify and map, or update existing maps of, floodplains and flooc prone areas using County's ArcGIS system. Provide training for local jurisdictions in use of and access to system.	11					√	
79	Work with USACE, or other appropriate authorities todevelop engineering plans to address flood prone areas	11	√				√	
161	Establish and build awareness of accessible heating/cooling centers i the community Utilize all means available, incl webs sites, social media, smart phone apps, mailers to educate of impending weather threats, resources available, including heating & cooling shelters	1				√		
167	Provide outreach to vulnerable populations during extreme temperature events Catalog & map areas of vulnerable residents (unlicensed facilities, empty/vacant buildings, etc.)	11				√		
169	Educate the public regarding safe use of office and home space heaters, generators, smoke detectors & carbon monoxide detectors	1		√		√		
176	Provide transportation to shelters for elderly, disabled, otherwis unreachable	11	√	√		√	√	
184	Assure training, planning, and preparedness for hazardous materia incidents along vulnerable, high risk roads and railways	16						√
185	Utilize public warning systems and networks for awareness anc instructions	1	√	√	√	√	√	√
Added in Workshop	Train & equip volunteers to staff open and closed PODs (Points of Dispensing) within the County	1		√				

7. County Action Items

7.1 Recommended Mitigation Actions

Wayne County's 2006 Hazard Mitigation Plan (HMP) included the following seven Action Items:

1. Establish an adequate number of warming and cooling centers throughout the county and develop minimum criteria for their operation. Provide relief and support to individuals and reduce risk of temperature-related illness during times of extreme temperatures.

2. Improve floodplain management and minimize potential effects of flooding. Encourage and promote regional watershed cooperation.

3. Distribute family emergency preparedness information.

4. Create evacuation plans and community awareness of them.

5. Improve emergency communication(s) between all county communities, including City of Detroit (not otherwise included in this Hazard Mitigation Plan).

6. Train and equip public health, hospital and responder personnel (Police/Fire/EMS, citizen corps, etc.) for readiness.

7. Review and evaluate Hazard Mitigation Plan (HMP) priorities and progress on an annual basis.

8. Develop an inspection plan and strategy to identify and abate all vacant, abandoned, and blighted structures near sensitive populations throughout the county, including SARA Title III sites.

Significant progress has been made on most of these action items between 2013 and 2019, including the following.

1. Wayne County has compiled a database of warming and cooling centers throughout the County and developed mechanisms for informing county residents regarding the dangers and likelihood of extreme temperatures, and regarding where to go for shelter during severe weather.

2. Wayne County mobilized a variety of resources in response to severe urban and riverine flooding in August 2014, and the resulting failure of stormwater and other infrastructure, which resulted in both state and federal major disaster declarations. During the writing of this report, Wayne County again faced incidents of urban, riverine, and coastal flooding. The County has also recently (2019) requested assistance from the US Army Corps of Engineers for Lake Erie coastal communities in response to high water levels in the Great Lakes.

3. Family emergency preparedness information is now routinely distributed to county residents in all seasons and, as such, this Action Item is being removed for the 2019 HMP Update.

4. Wayne County continues to assist municipalities by directing evacuation and practice evacuation testing from its Emergency Operations Center (EOC), based on individual municipality evacuation plans.

5. Wayne County works with all Wayne County municipalities to ensure open lines of communications with first responders. Wayne County HS & EM has sent correspondence to all county communities and actively programs municipality radios so that all entities are able to communicate on an updated 800 Mega M.P.S.C.S. Radio system during emergencies. The County began a radio project in 2014/2015 and now provides radios to municipal first response agencies annually. As such, this Action Item is being removed for the 2019 HMP update.

6. Wayne County DHSEM polled fire chiefs in Wayne County concerning Action Item 8 from the 2013 HMP and we found that local communities are currently identifying and inspecting vacant, abandoned and blighted structures near sensitive populations and SARA Title III sites. The inspections are being done by fire marshals and building/ordinance personnel. This action item has been addressed by local communities as part of their everyday operations and, hence, is being removed from the 2019 HMP update.

The Wayne County Department of Homeland Security and Emergency Management continues to address weather related hazard threats (flooding, extreme temperatures, etc.) while also focusing attention and programs on new and emerging concerns such as cyber security and preparedness for active assailant incidents. Completed Action Plans from the 2013 Hazard Mitigation Plan have been replaced with new Actions and programs from 2013 addressing ongoing concerns have been incorporated into Action Plans developed in 2019.

The final Action Items developed to guide implementation of the selected mitigation strategies are presented below. Each Action Item includes a short description of the relevant hazard(s) and the strategy aimed to mitigate its impact. The agencies responsible for implementation, the general form of costs associated with each strategy, and the benefits are also listed for each Action Item.

The Action Items below have been selected and developed based upon the prioritization exercises and Advisory Committee discussions described previously. Implementation of each will be guided by an analysis of the benefits expected relative to program costs. Implementation will be determined, in part, based upon the availability of grant or shared funding; how well each Action Item fits within established programs, goals, and initiatives of the responsible agencies; and program needs identified through ongoing feedback from Wayne County municipal officials, emergency response staff and the Wayne County LEPC. Completion of all Actions Items, unless otherwise noted, is anticipated within the first four years of the 5-year cycle for reviewing and updating the HMP. The order presented for the Action Items does not denote importance or priority.

County Action Items

Action Item 1. Continue training in most current protocols for preventing and responding to Active Assailant incidents; develop a process for requesting assistance from local and state law enforcement.

Specific Hazard(s) Addressed: Criminal Acts - Mass Shootings/Active Assailant(s)

Specific Vulnerability(ies): Sites of concentrated, vulnerable populations; and emergency responders

Communities Affected/Benefited: All

Primary Responsibility: Wayne County Department of Homeland Security & Emergency Management, local emergency managers

Initiatives Needed: County and local emergency managers must develop a plan to proactively engage first responders (police/fire/EMS/emergency managers, etc.) and actively participate in ongoing tabletop, drills and live scenarios. Further, local officials must identify current mutual aid agreements and ensure interoperability between all units. Communities must also develop a protocol within those respective mutual aid groups should resources be depleted and additional assistance be needed. Assistance through Wayne County Department of Homeland Security & Emergency Management will be provided to activate additional resources.

Implementation Tasks: The County will survey agencies to determine training needs and find funding to acquire instruction to fill the training gaps. This may best be accomplished by assembling an advisory training committee to identify best practices to plan, review and reach out to communities to address training gaps. The committee should then analyze current mutual aid agreements and identify additional resources or agencies that can provide assistance. The committee may also meet with mutual aid managers to establish a protocol to request assistance that falls within the scope of existing plans.

Cost(s): Staff time to assemble and analyze mutual aid agreements, and to attend meetings, training, distribution of printing, mailing and electronic media.

Benefits: Greater involvement by the Wayne County Department of Homeland Security & Emergency Management and those agencies that are covered by the Emergency Operations Plan, resulting in improved familiarization with preparedness procedures and, ultimately, if called upon for such a hazard, to reduce injuries and loss of life.

Anticipated Funding Sources: Most initiatives could be absorbed by the individual municipalities based on their training needs through general budgets, Homeland Security Grants (UASI) and private industry.

Action Item 2. Identify, prioritize, and replace or renovate aging infrastructure and equipment including water,

stormwater, and communications systems. Establish procedures to protect IT systems.

Specific Hazard(s) Addressed: Infrastructure Failure - Water & Sewer Systems, Communications, Cyber Security.

Specific Vulnerability(ies): Important interceptors, lift stations, and key nodes in the systems

Communities Affected/Benefited: All

Primary Responsibility: Wayne County Department of Homeland Security & Emergency Management, Wayne County Department of Public Works, local emergency managers & public works departments

Initiatives Needed: County and local public works officials will review locations of recent systems failures, systems exceeding their design lives, and those serving vulnerable populations. Using this information, key agencies will develop a list of priority systems and locations to be repaired, upgraded, or repaired. Associated budgets and schedules should be developed to facilitate systematic progress. Identify where the use of green infrastructure or conservation practices may yield storm water source reductions or otherwise reduce the overall strain on existing systems.

Implementation Tasks: The County will survey their own systems and local public works agencies to determine needs and priorities. Review of third party (e.g., SEMCOG, et al.) studies will aid in establishing sufficient budgets for immediate and long term needs.

Cost(s): Staff time to develop the necessary priority lists and to meet with other agencies to coordinate implementation.

Benefits: Reduced costs by addressing infrastructure needs before emergency situations arise. Long term gains in system efficiencies and reduced damages

Anticipated Funding Sources: Planning and prioritization may be absorbed within existing budgets of departmental managers and planners. Implementation costs may be provided through bonds, Michigan Drain Code (Chapters 8 & 20), Federal Homeland Security Hazard Mitigation funds, Army Corps of Engineers, Clean Michigan Initiative Grants, Clean Water State Revolving Loan Funds (may require state intervention), Community Development Block Grants, Strategic Water Quality Initiative, Great Lakes Program, Non-point Source Implementation Grants (319 program), Other MDEQ/EPA grants if available, Voter-approved millage, Court-ordered judgment levies, federal Flood Mitigation Assistance Program, Pre-Disaster Mitigation Program grants.

Action Item 3. Stockpile vaccines and antidotes for possible public health emergencies; Train and equip volunteers to staff open/closed points of dispensing (POD).

Specific Hazard(s) Addressed: Public Health Emergencies - Mass inoculation of communicable diseases and/or biological agents.

Specific Vulnerability(ies): Areas where vulnerable populations (particularly children and the elderly) may congregate.

Communities Affected/Benefited: All

Primary Responsibility: Wayne County Public health Division

Initiatives Needed: Partner with service organizations (e.g., American Red Cross, American Heart Association, etc.) to design and provide mass training exercises. Conduct a single Point of Dispensing (POD) drill followed by one or more county-wide drills. Develop and use mass media notification systems for public health emergencies (establish Wayne County geo-targeting/geo-fencing methods for notifications using Facebook, Nixle, Twitter, etc.).

Implementation Tasks: Provide training for POD volunteers (by August 2020). Conduct an all-county drill to determine effectiveness and points of failure (by May 2021)

Cost(s): Training materials and up-to-date printed materials with each POD updated at least annually. Staff and other costs to provide training and drills.

Benefits: Trained and ready core of volunteers for emergencies. Evaluate program and ability to dispense timely and effectively.

Anticipated Funding Sources: Grant monies from FEMA and/or the Department of Homeland Security.

Action Item 4. Continue to build awareness of available/accessible warming and cooling centers in the community. Provide relief and support to individuals and reduce risk of temperature-related illness during times of extreme temperatures.

Specific Hazard(s) Addressed: Extreme temperatures (summer and winter)
Also valuable for infrastructure failure (communications, electric, water), flooding, and associated human health and safety incidents.

Specific Vulnerability(ies): Vulnerable, transient, and otherwise hard-to-reach populations that may not have access to normal means of communications.

Communities Affected/Benefited: All

Primary Responsibility: Wayne County Health and Human Services and Department of Homeland Security & Emergency Management, in coordination with local Police, Fire, EMS, Housing, Public Health, and Human Services.

The governing body of each municipality will assign an Office of Primary Responsibility to reduce the threats and/or impacts of extreme temperatures on public health, safety and infrastructure. Depending upon conditions, suggested OPRs could include Police Chiefs, Fire Chiefs, or Public Service/Works Directors.

Initiatives Needed: Establish or improve communication capabilities, including websites, social media, in house apps (e.g. Nixle, others). Mail with utility bills, etc. Identify vulnerable populations: group homes, unlicensed facilities, 'squatters' in vacant buildings, others. Establish and build awareness of accessible heating/cooling centers in the community. Require a vacant building registration.

Implementation Tasks: Train responders to locate (and transport?) vulnerable populations. Utilize all means available, including webs sites, social media, smart phone apps, mailers, etc. to inform public of impending weather threats and resources available, including heating & cooling shelters. Other Tasks: educate the public regarding safe use of office and home space heaters, generators, smoke detectors & carbon monoxide detectors; catalog & map areas of vulnerable and other residents (unlicensed facilities, empty/vacant buildings, etc.). Provide outreach and transportation to vulnerable and normally hard-to-reach populations during extreme temperature events.

Cost(s): Websites already funded. Warming/cooling shelters and provisions. Staff time and materials to train responders.

Benefits: Simple, accepted, flexible. Programmatic cost savings as rescues are less costly than recoveries and more valuable to the community. Volunteers are force multipliers.

Anticipated Funding Sources: Most infrastructure concerns are basic housekeeping, an anticipated expense. Websites, as a communication medium, are expected and should be a general fund item. Basic Nixle is free, more advanced options have a modest fee. Community (in-house) smart phone apps slightly more expensive but very useful.

Action Item 5. Utilize public warning systems and networks for public awareness and instructions in the event of hazardous materials incidents. Provide additional Hazmat and other emergency training and equipment to first responders (including, but not limited to, fire, police & civilian responders).

Specific Hazard(s) Addressed: Haz Mat Incidents - Transportation

Specific Vulnerability(ies) High accident intersections and highways and others identified in Plan

Primary Responsibility: City, Township, and Village first responders, and Wayne County Homeland Security

Initiatives Needed: Develop strategy to utilize public warning systems and/or other communication channels including websites, social media, in house apps (e.g. Nixle, others) to notify the public of hazardous material incidents. Additionally, Wayne County Homeland Security and Emergency Management should continue facilitating hazmat and hazard/emergency response training programs for uniformed personnel. Training will include Incident Command System (ICS) procedures, hazmat response, and other emergency procedures/information required in disaster events. Wayne County HS & EM will continue to assess current training programs, identify additional training needs, establish a steering committee(s) to oversee implementation, and develop a charter (giving approval and support, announcement, definition of work, project activities).

Implementation Tasks: Specific tasks include: conducting a survey to assess current training programs and identify training needs, developing a plan of action and providing for training (either internal or through other venues), and informing local leaders and interested parties publicizing available training programs. Additional tasks include: identifying emergency messages needed and the method(s) required to deliver them to the public, and identifying National Incident Management System (NIMS) and ICS requirements, and providing these as needed.

Cost(s): Staff time; printing and postage costs; mileage for meetings; cost for contractors/instructors; overtime for students/backfill; and purchase of training materials and supplies.

Benefit(s): Protection of lives and the environment through enhanced response capabilities. All responders will have the same basic knowledge of the Incident Command System and how to work within this system to assure a smooth operation.

Anticipated Funding Source(s): County general fund, state and federal grants, and municipal assistance.

Action Item 6. **9.** Identify and map, or update existing maps of, floodplains and flood prone areas. Leverage new ArcGIS online application with MI CIMS sponsored by Michigan State Police and FEMA Risk MAP incorporating the Great Lakes Coastal Flood Study. Provide training for local jurisdiction use and access. Improve floodplain management and minimize potential effects of flooding and encourage and promote regional watershed cooperation.

Specific Hazard(s) Addressed: Flooding – Riverine/Shoreline (Great Lakes)/Urban

Specific Vulnerability(ies):	All communities with floodplain areas, such as Ecorse Creek (e.g., the Cities of Allen Park, Dearborn Heights, Ecorse, Inkster, Lincoln Park, Melvindale, Romulus, Southgate, Taylor, Westland, and Wyandotte). Coastal communities (i.e., Grosse Pointe Shores, Grosse Pointe Farms, Grosse Pointe, Grosse Pointe Park, Grosse Ile, Riverview, River Rouge, Ecorse, Wyandotte, Trenton, Gibraltar & Brownstown Township). Residential areas, roads and other infrastructure in repetitive loss flood zones.
Communities Affected/Benefited:	All
Primary Responsibility:	Wayne County Homeland Security and Emergency Management, coastal and riparian communities, US Army Corps of Engineers, Wayne County Department of Public Services

Initiatives Needed: Direct each community to identify, train and prepare to use the new MI CIMS ArcGIS online application for damage assessment. Manage a database of community point(s) of contact that have completed training on ArcGIS to lead damage assessment in their community or as part of county task force.

Implementation Tasks: Identify Wayne County HSEMD a county-wide point of contact or point of contact to within each community to be trained in MI CIMS and ArcGIS. Wayne County in partnership with MSP – EMHSD will provide annual training on ArcGIS and MI CIMS; points of contact will lead damage assessment in their community or as part of county task force. Work with FEMA and the U.S. Army Corps of Engineers to develop flood control solutions for Detroit River, Lake St. Clair, and Lake Erie coastal communities.

Cost(s): Community costs include staff time for training (estimated 1/2-day for initial training and 2 additional hours annually). County costs include staff time for an initial 24 hours to build database and schedule initial class, manage a database of community point(s) of contact that have completed training on ArcGIS to lead damage assessment in their community or as part of county task force (estimated at 8 hrs per 6 months). Consultant costs for plan updates and green infrastructure design. Land may need to be purchased for infrastructure and road retrofitting, potentially requiring resident and business relocation. Purchase of emergency generators and emergency flood relief pumps.

Benefits: Conduct Damage Assessment in MI CIMS. Support emergency requests for assistance. Better information about community assets along creeks, streams, rivers, lakes, and flood plains in county. More effective use of MI CIMS by all communities, not just Act 390 communities.

Anticipated Funding Sources: Existing staffing budgets, Michigan Drain Code (Chapters 8 & 20), Federal Homeland Security Hazard Mitigation funds, Army Corps of Engineers, Clean Michigan Initiative Grants, Clean Water State Revolving Loan Funds (may require

state intervention), Community Development Block Grants, Strategic Water Quality Initiative, Great Lakes Program, Non-point Source Implementation Grants (319 program), Other MDEQ/EPA grants if available, Voter-approved millage, Court-ordered judgment levies, federal Flood Mitigation Assistance Program, Pre-Disaster Mitigation Program grants.

7.2 Plan Monitoring and Revision

As noted previously, the Wayne County Hazard Mitigation Plan Advisory Committee (HMPAC) includes representatives the Wayne County Department of Homeland Security & Emergency Management, representatives from all 42 of the Wayne County municipalities covered by the Plan, and other regional stakeholders. This group meets regularly with Wayne County Homeland Security. The overall responsibility for ongoing evaluation and maintenance of the Plan is the responsibility of the County Emergency Management Coordinator but will be done in conjunction with municipal and regional organization representatives on the HMPAC.

The Plan will be reviewed by the HMPAC annually for progress on Action Items, changes in hazard history, and any known changes in vulnerability. Every two years, following review by the HMPAC, a description of Plan progress and any changes in circumstances or trends that may require revision to the Plan will be presented to the Wayne County Board of Commissioners. Meetings of the County Board of Commissioners to review and revise the HMP will be advertised to the public following Wayne County's normal public notice practices.

The Plan will be reviewed, updated, and revised, as necessary every five (5) years to maintain consistency with the changing community and hazard histories, as well as the goals and objectives of the County. As in past updates, review and updating of the HMP will be conducted in a series of dedicated workshops involving the HMPAC and other neighboring and regional stakeholders. In that process, each municipality is tasked with reviewing their individual hazard priorities, any changes in community vulnerability, and selected mitigation strategies, noting progress or lack of progress since the last update. Each community is also asked to adopt their particular sections of the HMP, or the HMP as a whole, every five years following these updates.

The public is also invited to participate in this process through the HMP update website, a link on the County's website, and through one or more publicly advertised public meetings presenting the draft revisions. Residents/members of the public may also participate in the process in public meetings as each community reviews their sections or the whole Plan for local adoption.

7.2.1 Coordination with Other Plans and Programs

A Hazard Mitigation Plan is only a part of the emergency planning, mitigation, preparedness, response, and recovery process. Future coordination of this Plan with other activities in the County will be conducted by the Hazard Mitigation Plan Advisory Committee (HMPAC). Individual members of the HMPAC are to identify opportunities, within their respective departments or organizations, to incorporate this Plan into other County plans, programs, and in the County's annual budgeting process. Any

opportunities that are identified will be referred back to the HMPAC as a whole, for consideration. By including representatives from many jurisdictions and inter-jurisdictional agencies who are each well-connected throughout the County, opportunities for coordination with other plans will be enhanced. Incorporating this Plan into other plans and programs will ultimately be at the discretion of the County department or organization which administers these plans or programs.

The Action Items listed above do not directly limit future development in hazard prone areas. Wayne County has limited powers related to land use and land use planning. Action Item #2, which focuses on reducing flood related damages, will likely need to include the purchase of repetitive loss structures within floodplains and subsequent land use controls for those properties. The Wayne County Department of Homeland Security & Emergency Management will work with the County Drain Commissioner and the Department of Environment to plan and implement floodplain management actions consistent with this Plan and to incorporate the findings and recommendations of specific on-going flood mitigation planning into future revisions of this HMP.

Enabling legislation in Michigan has established a system of “Home Rule,” wherein land use planning and zoning power is given to local cities, villages, and townships. These municipalities will be encouraged to incorporate the findings and recommendations in this HMP into their individual land use master plans and zoning practices. Regional planning initiatives such as flood mitigation plans for Ecorse Creek and the Combined Downriver Watersheds, and the periodic review and revision of watershed plans for the Rouge River, Ecorse Creek, the Combined Downriver Watersheds, and the Lower Huron River also offer opportunities for incorporating the mitigation strategies and Action Items included here. By promoting the benefits of a coordinated planning process, and utilizing digital resources to foster connections whenever possible, the HMPAC will continue to play a vital role in creating opportunities for plan coordination.

Appendix A. Public Meeting and Outreach Materials

Public Meeting
Wayne County Hazard Mitigation Plan Update

Hazard Mitigation Plan Update

Public Meeting
April 23, 2019

Overview

Introduction
The Function of a Hazard Mitigation Plan
The 2013 Wayne County Plan
2019 Wayne County Plan Update
First workshop
- Survey Results

Second workshop
- Survey Results

Introduction

Team

Project Team
- Wayne County Homeland Security
- ASTI Environmental

Advisory Committee
Public

The Wayne County Plan
www.waynecountyhmp.com

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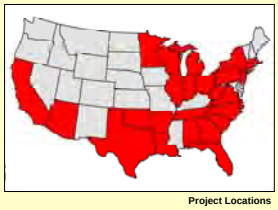
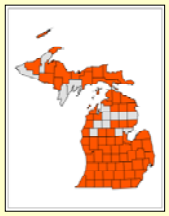


Project Locations



Environmental

Advisory Committee

Local Communities
County LEPC
Schools
Industry/Businesses
Adjacent Communities

Community Reps/Stakeholders

42 Communities
- Emergency Management Coordinators
- Local Leaders

Adjacent Communities
Industry and Business
Non-Government Organizations
Interested Individuals

Hazard Mitigation Plans

What is a HMP?

A Hazard Mitigation Plan (HMP) will...
- identify hazards in the community,
- evaluate and highlight those hazards,
- provide mitigation alternatives

What is a HMP?

The objectives of a Plan are to;
- reduce risks from natural, human, and technological hazards by focusing on those hazards,
- provide guidance when committing resources that will reduce the effects of hazards, and
- **provide a basis for technical assistance and funding**

What is a HMP?

The Plan must comply with:
- the Disaster Mitigation Act of 2000,
- the Emergency Management Act,
- FEMA and Michigan Department of State Police guidance documents,
- and all applicable federal, state, and local regulations.

What is a HMP?

The Plan is only a part of the emergency planning, mitigation, preparedness, response, and recovery process. Must coordinate with:

- All existing plans and programs
- **Existing Plans can be included in the Final HMP by reference**

Hazard Mitigation Plans

Why Prepare A Plan?

To save lives and protect property

To preserve and protect an area's environment and economy

To preserve and maintain an area's essential services and quality of life

Hazard Mitigation Plans

Why Prepare A Plan?

To provide information to citizens, businesses, and officials (including future emergency managers), for

- Planning
- Economic development
- Project development decisions
- Emergency Management

Hazard Mitigation Plans

Why Prepare A Plan?

To support hazard mitigation project implementation and **funding.**

- Identifies specific hazards
- Identifies specific vulnerabilities
- Documents mitigation options
- Demonstrates community involvement and support
- Part of an effective overall plan

Hazard Mitigation Plans

Considerations - Hazards

2006 Emphasis	**2013 Emphasis**	**2019 Emphasis??**
Terrorism	Flooding	Flooding
Weapons of Mass	Earthquakes	Infrastruct./Subsidence
Destruction	Pipeline Ruptures	Changing Climate
	Nuclear Accidents	Cyber Attacks
		Catastrophic Events
		Active Assailant(s)

Considerations - Hazards

Natural – 12 Total

Technological – 14 Total

Human Related – 14 Total

Considerations – Natural Hazards

Celestial Impact
Drought
Earthquakes
Erosion
Extreme Temperature
Fog
Flooding
Fire Hazards
Invasive Species
Subsidence
Thunderstorms – Hail, Lightning, Severe Winds
Tornadoes
Winter Hazards – Ice, Sleet, Snowstorms

Hazard Mitigation Plans

Considerations – Technological Hazards

Fires – Structural or Tires
Flooding – Dam Failure/Urban
Hazmat Incidents – Transportation or Fixed
Infrastructure Failure – Water/Sewer/Electric/Communications/Roads
Nuclear Power Plants
Oil, Petroleum & Natural Gas Accidents
Subsidence – Mining or Infrastructure

Hazard Mitigation Plans

Considerations – Human Hazards

Catastrophic Events/National Emergencies
Civil Disturbance
Criminal Acts – Active Assailant(s)
Criminal Acts – Arson & Vandalism
Gas/Oil Shortages or Supply Disruptions
Information Technology Intrusion
Public Health Emergencies
Terrorism & Sabotage
Transportation Accidents – Air/Road/Marine/Rail
Weapons of Mass Destruction

Hazard Mitigation Plans

Considerations - Critical Assets

Commercial Sites
Hospitals/Response Facilities
Industrial Sites
Open Space
Public Facilities
Residential Areas
Roads, Railroads, Bridges
Utility Facilities
Schools, Churches
Sports/Entertainment Arenas
Central Business Districts

Hazard Mitigation Plans

The Current Wayne County Plan

Circa 2013

Workshop Hazard Impact Ranking

Hazard Event	Workshop Rank	Hazard Risk Rank	Action Plan
Thunderstorms - Severe Wind	4	1	1
Infrastructure Failure	1	2	1
Extreme Temperatures: Hot and Cold	3	3	1
Tornadoes	2	4	1
Hazmat Incidents - Transportation and Fixed	7	5	2
Winter Hazards - Ice and Sleet	4	7	3
Public Health Emergencies	6	6	4
Flooding - Urban	9	8	4
Flooding - Riverine	9	9	4
Transportation Acc. - Highway	8	10	4

Action Plan Assessment		
	Rank	
Risk	1-5	6-10
1-5	1	2
6-10	3	4

- Flooding (Non Dam)
- Hazmat Incidences—Transportation
- Infrastructure Failure
- Public Health Emergencies
- Tornadoes

Hazard Identification
Advisory Committee Meeting of October 12, 2005

Action Plans

Establish an adequate number of warming and cooling centers throughout the county and develop minimum criteria for their operation (capacity, oxygen, generators)

Improve floodplain management by planning acceptable uses, involving drain commissioners, performing hydrologic studies, and including analyses in decisions

Action Plans

Distribute family emergency preparedness information

Create evacuation plans and community awareness of those plans Improve emergency communication between communities, including the City of Detroit

Action Plans

Train and equip public health, hospital, and responder personnel (police/fire and citizen corps) for readiness

Annual review and evaluation of HMP

Develop an investigation program for all high hazard structures in the county (Large industrial and SARA Title III sites), particularly near sensitive populations

Communication and Outreach

The Wayne County Plan Update

The Process

- Prepare hazard history and community profile
- Identify significant hazards and risks
- Identify specific vulnerabilities

The Process

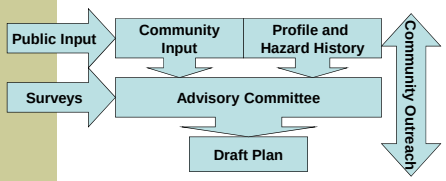
- Identify hazard mitigation goals and objectives
- Suggest strategies to achieve mitigation goals and objectives
- Evaluate strategies using locally chosen criteria
- Select feasible strategies based on evaluation criteria

The Process

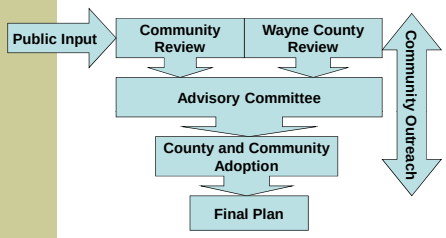
Propose specific action steps that will achieve desired objectives
Prepare the plan
Adopt the plan
Implement the plan
Monitor and update the plan

Hazard Mitigation Plans

Process - Draft Plan



Process - Final Plan



Process - Outreach

Public
- Public meeting
- Community announcements
- Web page
  - Comment Form
  - General Information
  - Plan updates and Draft Plan
- Phone and email contact information

Process - Outreach

Stakeholders
- Web page
  - Meeting agendas and summaries
- Draft Plan Available

Process - Outreach

Advisory Committee
- Two Workshops
- Three Surveys
- Web page
  - Draft Plan
- Action Plan Review
- Draft Plan Review

Hazard Ranking Criteria

Criteria	Weighting
Loss of life and Injury	15
Infrastructure Failure	8
Geographic Area of impact	7
Ability to Recover	7

Hazard Identification
Advisory Committee Meeting of March 14, 2019

Assets at Risk From Hazards

2019 Plan Update Survey Results (Average Value)

Asset Criticality
Based on Asset Class Characteristics
estimate the effects of a hazard event to the listed criteria

Asset to Consider	Ability to Recover from Disaster/Incident	Infrastructure Failure	Loss of Life and Injury	Geographic Area of Impact	Criticality	Rank
Commercial Sites	1.00	1.00	2.50	1.00	54	10
Hospitals/Skilled Care Facilities	5.00	5.00	5.00	5.00	125	1
Industrial Sites	2.50	2.50	2.50	2.50	93	5
Open Space	1.00	1.00	1.00	1.00	30	11
Public Facilities	2.50	2.50	2.50	2.50	75	9
Residential Areas	5.00	5.00	5.00	5.00	150	2
Roads, Railroads, Bridges	5.00	5.00	1.00	5.00	90	6
Utility Facilities	5.00	5.00	5.00	5.00	150	2
Schools, Churches	2.50	2.50	5.00	2.50	113	4
Sports/Entertainment Arenas	1.00	1.00	5.00	1.00	90	6
Central Business Dist.	1.00	1.00	5.00	1.00	90	6

For Ranking 1-5

Highly Critical	>99
Med. Criticality	Between 55-99
Low Criticality	<55

Hazard Identification
Advisory Committee Meeting of March 14, 2019

Hazard History – Top 12

Hazard	Annual Frequency	Frequency Rank
Transportation Accidents - Highway*	55,001	1
Criminal Acts - Vandalism*	52,500	2
Fire Hazards - Structural Fires	4,207	3
Fire Hazards - Wildfires	1,640	4
Criminal Acts - Arson*	917	5
Transportation Accidents - Marine	10	6
Thunderstorm Hazards- Severe Wind	7	7
Infrastructure Failure - Water System	5	8
Transportation Accidents - Rail	3	9
Petroleum and Natural Gas Pipeline Accidents	2	10
Thunderstorm Hazards - Hail	2	10
Winter Hazards-Snowstorms	2	10

Hazard Identification

Survey Results - Top 14

2019 Plan Update Meeting Results
Concern About Impacts of Hazardous Events

Hazard Events to Consider	Avg. Rank (Survey)	Ability to Recover from Disaster/Incident	Infrastructure Failure	Loss of Life and Injury	Geographic Area of Impact	Hazard Sum	Workshop Rank
Extreme Temperatures - Extreme Hot or Cold	21	1	2	2	3	74	5
Flooding - Riverine or Shoreline	30	2	3	1.5	2	74.5	4
Thunderstorms - Hail, Lightning, Severe Wind	5	1	1	1	1	97	14
Tornadoes	64	2	1	2	1	80	8
Winter Hazards - Snow, Ice & Sleet	68	1	2	1	3	89	8
Flooding - Urban	71	3	2	1	1	90	8
Hazmat Incidents - Transportation	5	2	2	2	2	74	5
Infrastructure Failure - Water & Sewer Systems	17	3	3	2	3	96	1
Catastrophic Events/National Emergencies	16	2	1	1	3	86	11
Civil Disturbance	0	2	1	1	1	44	13
Criminal Acts - Mass Shootings/Active Assailant(s)	76	3	1	3	1	94	3
Criminal Acts - Vandalism and Arson	43	1	1	2	1	82	12
Public Health Emergencies - Pandemics, Epidemics, Food/Water, Opioid Crisis	76	3	1	3	3	94	2
Transportation Accidents - Surface Roads/Highways	32	1	2	2	1	80	7

Notes - additions and removals
Opioid Crisis explicitly part of Public Health Emergencies
Combined water, storm, and sanitary sewer infrastructure
Priority levels determined using Jenk's optimization method

	Enter the Cell Value
High	3
Medium	2
Low	1

Highly Impact	>74.6
Med. Impact	Between 52.1-74.5
Low Impact	<52

Hazard Identification
Advisory Committee Meeting of March 14, 2019

Workshop Hazard Impact Ranking

Hazard Event	Workshop Rank	Hazard Risk Rank	Action Plan Needed
Infrastructure Failure - Water & Sewer Systems	1	5	1
Criminal Acts - Mass Shootings/Active Assailant(s)	3	2	1
Public Health Emergencies - Pandemics, Epidemics, Food/Water, Opioid Crisis	2	4	1
Winter Hazards - Snow, Ice & Sleet	8	2	2
Criminal Acts - Vandalism and Arson	12	1	2
Extreme Temperatures - Extreme Hot or Cold	5	6	3
Flooding - Riverine or Shoreline	4	10	3
Hazmat Incidents - Transportation	5	8	3
Thunderstorms - Hail, Lightning, Severe Wind	14	12	4
Tornadoes	8	13	4
Flooding - Urban	8	9	4
Catastrophic Events/National Emergencies	11	13	4
Civil Disturbance	13	11	4
Transportation Accidents - Surface Roads/Highways	7	6	4

Action Plan Assessment	Rank	
Risk	1-5	6-14
1-5	1	2
6-14	3	4

Active Assailant(s)
Infrastructure Failure
Public Health Emergencies
Extreme Temperatures
HazMat Incidents - Transportation
Flooding

Hazard Identification
Advisory Committee Meeting of March 28, 2019

Workshop Hazard Impact Ranking

Critical Asset	Criticality Rank	Asset Risk Rank	Vulnerability
Hospitals/Skilled Care Facilities	1	5	1
Residential Areas	2	3	1
Schools, Churches	4	2	1
Roads, Railroads, Bridges	6	4	2
Central Business Dist.	6	1	2
Industrial Sites	5	8	3
Utility Facilities	2	7	3
Commercial Sites	10	6	4
Open Space	11	11	4
Public Facilities	9	10	4
Sports/Entertainment Arenas	6	9	4

Vulnerability Assessment	Criticality	
Risk	1-5	6-11
1-5	1	2
6-11	3	4

Hazard Identification
Advisory Committee Meeting of March 28, 2019

Mitigation Goals

Protect and preserve human health and well being

Maintain and fortify critical assets, structures and infrastructure to preserve the quality of life.

Ensure Interagency cooperation and coordination for preparedness

Enhance emergency response capabilities (including and especially communications)

Review and improve county-wide contingency plans for maintaining quality of life

Hazard Identification
Advisory Committee Meeting of March 14, 2019

Action Plans

Criminal Acts: Mass Shooting(s)/Active Assailant(s)
Continue training in most current protocols and develop a process for requesting assistance from local and state law enforcement.

Infrastructure Failure
Identify, prioritize, and replace or renovate aging structures and equipment. Establish procedures to protect IT systems.

Public Health Emergencies
Stockpile vaccines and antidotes; train & equip volunteers to staff open/closed points of dispensing (PODs)

Develop and use mass media notification systems for public health emergencies (establish Wayne County geo-targeting/geo-fencing methods for notifications using Facebook, Nixle, Twitter, etc.)

Hazard Identification
Advisory Committee Meeting of March 28, 2019

Action Plans

Flooding – River/Shoreline
Identify and map, or update existing maps of, floodplains and flood prone areas. Leverage new ArcGIS online application with MI CIMS sponsored by Michigan State Police. Provide training for local jurisdiction use and access.

HazMat Incidents – Transportation
Utilize public warning systems and networks for public awareness and instructions in the event of hazardous materials incidents.

Hazard Identification
Advisory Committee Meeting of March 28, 2019

Action Plans

Extreme Temperatures
Establish and build awareness of accessible heating/cooling centers in the community. Utilize all means available, including webs sites, social media, smart phone apps, mailers, etc. to inform public of impending weather threats and resources available, including heating & cooling shelters.

Educate the public regarding safe use of office and home space heaters, generators, smoke detectors & carbon monoxide detectors.
Catalog & map areas of vulnerable and other residents (unlicensed facilities, empty/vacant buildings, etc.). Provide outreach and transportation to vulnerable and normally hard-to-reach populations during extreme temperature events.

Hazard Identification
Advisory Committee Meeting of March 28, 2019

Public Input

Contact Information

Paul Rentschler
prentschler@asti-env.com
www.waynecountyhmp.com
1.800.395.ASTI

ASTI ENVIRONMENTAL

Investigation • Remediation
Compliance • Restoration

10448 Citation Drive, Suite 100
Brighton, MI 48116

Mailing Address:
P.O. Box 2160
Brighton, MI 48116-2160

800 395-ASTI
Fax: 810.225.3800

www.asti-env.com

For more information contact: Paul Rentschler (810) 225-2800

FOR IMMEDIATE RELEASE

WAYNE COUNTY HAZARD MITIGATION PLAN PUBLIC MEETING

BRIGHTON, MI, (April 4, 2019) — A public meeting to present an overview of the Hazard Mitigation Plan being updated for Wayne County, and for residents to provide input, will be held April 23, 2019 at 5:30 p.m. in Rooms 1 & 2 of the Heinz C. Prechter Educational & Performing Arts Center (EPAC), at the Wayne County Community College Downriver Campus, 21000 Northline Road, Taylor, Michigan. Additional information about the Plan is available at: https://waynecountyhmp.com/ or by contacting Paul Rentschler, Project Manager, 800.395.ASTI or prentschler@asti-env.com.

This plan will provide a basis for identifying and managing hazards among the communities in the county, while complying with the requirements of the Disaster Mitigation Act of 2000, the Emergency Management Act, the Federal Emergency Management Agency (FEMA) and applicable federal, state, and local regulations.

###

About ASTI ENVIRONMENTAL
Since 1985, ASTI ENVIRONMENTAL has been an expert in Michigan's regulatory and physical environment. ASTI provides investigation, remediation, compliance and restoration services. As one of Michigan's most respected environmental consulting firms, ASTI delivers practical solutions to environmental challenges.

Healthcare-Dental

Assertive Community Treatment Specialist, RN Only, 2 Positions - Assertive Community Treatment Program. Salary Range: $49,806 - $67,416 annually, plus benefits. **Application Deadline: until filled.** General Statement of Duties: under the direction of the ACTP Supervisor; performs responsible tasks in providing comprehensive, intensive, off-site clinical services to Genesee Health System clients, assigned to the ACT Program; responsible for significant liaison and consultation work with ancillary agencies, courts, hospitals, the police and families, as well as direct intervention to clients assigned to the program; will not be assigned individual clients, as clients will be assigned to the team as a whole, thus, a good deal of sharing of information, feedback and teamwork is required; this is a 7-day-a-week, 24-hour coverage program and as such, persons will be required to have "on-call" time, where they may have to perform emergency interventions in person or otherwise, at odd hours; most client contacts will be off-site, either in clients' homes or mutually agreed upon sites; persons must be able to work effectively with minimal supervision; persons will need to facilitate the exchange of information between various programs, hospitals and interested parties; performs related work as required. For additional details on job duties and requirements, please log on to www.genhs.org. You can apply directly online or fax resume and transcripts to (810) 257-3755.

Emergency Department Director

Live and work where others vacation!! In Gaylord our emphasis is on outdoor recreation and quality of life. We enjoy a healthful climate, which is ideal for year-round sporting activities including golf, camping, boating, tennis, cross-country and downhill skiing, hunting fishing, and more. Gaylord boasts a strong business community and award-winning schools.

Munson Healthcare Otsego Memorial Hospital is seeking candidates for an Emergency Department Director to join our dynamic team! This position is accountable for clinical and operational functions of the Emergency Department, including management of the trauma program and regional Medical Control Authority. The ideal candidate will be a Master's prepared Michigan licensed RN with 2-3 year's experience in an ED setting, enjoy working in a team-oriented environment, have strong interpersonal and communication skills and deliver exceptional customer service. MHC OMH offers an excellent benefit package including health, dental, vision, life and disability insurance; continuing education/tuition assistance; retirement and generous paid time off.

Applications, position details and additional career opportunities can be found on our website at: www.munsonhealthcare.org/omh
Phone: 989-731-2493 Fax: 989-731-7792

MUNSON HEALTHCARE
Otsego Memorial Hospital

Pharmacy Manager (Bronson, MI) - Maintain the pharmacy department according to professional standards & state/federal regs Supervise prescription dispensing process, including maintaining & taking inventory & keeping accurate records. Review drug utilization of patients. Ensure high quality patient care &customer satisfaction & address any customer complaints or concerns. Interview, hire, & train pharmacy personnel. Oversee payroll, expense control & revenues from prescription sales. Send resume to: Bimal Patel, Bronson City Pharmacy LLC, 625 E. Chicago Street, Bronson, MI 49028.

Senior Manager, Heart Lung Platform; Terumo Cardiovascular Systems Corporation, Ann Arbor, MI. Plan, direct and coordinate engineering activities for development of new Class 2 heart-lung machine products within identified schedule, personnel, and budget constraints. Lead and manage cross-functional Product Development teams in design and development of new products and changes to existing heart-lung machine products. Create and manage overall budget for heart-lung platform engineering activities. Mail CV to R. Lockerman (ATTN: Sr. Mgr. HLP), Terumo Cardiovascular Systems Corporation, 6200 Jackson Rd., Ann Arbor, MI 48103.

Professional

Metalsa Structural Products, Inc. has an opening for a Business Development Specialist Asia - Body & Chassis SBU at its Novi, MI office responsible for planning, quoting, developing & writing business winning proposals of new & profitable business for Metalsa in order to position company within the panel of providers for Metalsa Asia automotive clients. Requires Bachelor's degree & exp. Must be able to read, write & speak Mandarin Chinese fluently. Send resume to Metalsa Structural Products, ATTN: HR Specialist #1, 29575 Hudson Dr., Novi, MI 48377. No phone calls please.

Product Director (Labgoo US, Inc., Bloomfield Hills, MI) Guide Product Line Contribution Team as a business unit; responsible for increase of profitability of existing products. Reqs: Master's deg or foreign equiv in Business Admin, Mktg, or Mgmt + 2 yrs exp. Exp to incl analyzing & solving cyber security technology product issues. Mail resumes to 333 W San Carlos St, Ste 600, San Jose, CA 95110.

Senior Business Intelligence Analyst in Ann Arbor, MI: Responsible for designing and building analytics-based tools which are technically sophisticated yet easy to understand and use by business teams, in support of strategic initiatives and ongoing business processes for the company. Requires: (1) Masters + 3 yrs exp. OR (2) Bachelors + 5 yrs. exp. Please mail resume with cover letter to: XPO Enterprise Services, Inc., 13777 Ballantyne Corporate Pl., 4th Floor, Charlotte, NC 28277, Attn: Recruiting, Refer to job code 10449.

Strategic Staffing Solutions, L.C. seeks a **Product Manager** in Detroit, MI to manage relationships with customers, vendors, and other third parties as necessary. Reqs BS+5yrs exp.; Reports to company headquarters in Detroit, MI. Roving employee that will work at various unknown client sites throughout the US for up to 100% of the time. Must be willing to travel anywhere in the US and may be assigned to work at client sites across the US. For complete reqs. & to apply, visit: http://www.strategicstaff.com/get-a-job/ Job ID: 147226.

Sales-Marketing

Sales & Program Manager w/ ITT Motion Technologies America, LLC in Novi, Michigan. Responsible for dvlpng the brake pads bus w/ our customers. Spearhead product dvlpmnt projects from start to finish, incl the hot press process, thermal treatment oven, grinding of the pads, painting, & finishing & the rel commercial activities & negotiations. Reqs: Bach deg (U.S. or foreign equiv) in Engg, Industrial Engg, Production Engg or a rel field. 8 yrs of exp in Automotive Original Equipment Mfg or Car Mfg. Prior work exp must incl 4 yrs: Utilizing understanding of brake pads & relevant production techniques; Commercial & tech negotiation w/ car manufacturers; Utilizing understanding of tech reqs pertaining to friction material & rel price positioning in the mkt; & exp w/ the mgmt of OEM & Car mfg sales accounts. Travel reqd to mng customer relationships for major & strategic accounts. QUALIFIED APPLICANTS: Please email resume to ITT.IP.Jobs@itt.com & ref requisition # 9223BR

Trades

Mold Shop Manager
Must be experienced with all aspects of machining, benching and assembly of foam molds, dunnage molds and blow molds. Benefits: Medical, Dental, Life Insurance, 401K and Paid Vacation. Please forward resume to: **smclaren@forgeprecision.com** or fax to: **248-477-0128**

Assorted
Items
all kinds of things...

Appliances

Commercial washer & dryer (equip only) Maytag washers/ 6 of 50lbs, 6 of 35lbs, 7 of 25lbs, 12 top loaders. Dryers/ 14, 2 stackers (28 total), 3 stack 50 lb (6 total) call Rocky for more details 586-604-9597 from 9am-7p

Sporting Goods

NFT bamboo fly rod, 3 piece with case, mint condition $200, call 313-492-8217

Wanted to Buy

BUYING — Coin, sport cards & Stamp Collections. Call 248-471-4451 TOP $$$

General Auctions

THE FOLLOWING STORAGE LOTS have been placed under a warehouseman's lien and will be sold at a public auction. The auction will be held at Grosse Pointe Storage Co., 11850 E. Jefferson, Detroit, MI on May 4, 2019 at 10:00 am. 313-822-4400. Preview at 9:00am.
HOUSEHOLD GOODS, OFFICE AND ESTATE ITEMS.
2851 Latasia Banks
3005 Howard Blood
1540 Paul Creasey
2505 Deborah Cutler
1150 Hansen Hunter
3010 Rose Marchese
2838 Linda Marino
2795 Marino Gage
2878 Latosha Marshall
2789 Brian Masck
2993 Ronnie Mitchell
2868 Jacqueline Richards
2895 Tony Squirewell
2980 David Stefani
3120 Daniel Tappert
2567 Rodney Watts
2566 Sally/Requelle Wynn

Services
Personals
dating, entertainment...

Adult Dating

American Beauties
313-496-2000 Adult Entertainment Specials

Adult Entertainment

FIND YOUR SOUL MATE!
Call FREE! 313.668.3000

Voice Personals

WHERE REAL SINGLES MEET TO CHAT AND HAVE FUN! BROWSE AND REPLY FOR FREE 18+ GAY: 313-481-9303
STRAIGHT: 313-481-9304

Your Source
Legals
for the latest...

Legal Notices

NOTICE OF PUBLIC HEARING

Notice is hereby given that the Suburban Mobility Authority for Regional Transportation (SMART) has prepared the FY 2020 Annual Operating and Capital Budgets. The total estimated budgets include the following programs: 5307 Formula ($27,232,949), 5307 LETC Governor's Apportionment ($1,269,009), 5339 Formula ($3,560,270), 5339 LETC Governor's Apportionment ($107,996), CMAQ ($877,890), 5310 SMART ($4,509,095), 5310 Monroe and NOTA ($277,925), 5311 Nonurban JARC ($381,254), SDNT ($325,000), Act 51 Operating ($38,201,000), 5311 LETC Operating ($220,300), and Other State Subsidized Services (Operating) ($804,219).

SMART ensures that the level and quality of transportation service is provided without regard to race, color, or national origin in accordance with the Title VI of the Civil Rights Act of 1964. For more information regarding our Title VI obligations or to file a complaint, please contact us at the below address.

The proposed Capital and Operating budgets are on file at SMART, Buhl Building, 6th floor Receptionist, 535 Griswold Street, Detroit, MI 48226 and may be reviewed from Monday, April 22, 2019, through Wednesday, May 22, 2019, between the hours of 9:00 a.m. and 4:00 p.m.

Written comments or written requests for a public hearing regarding the budgets must be received by Wednesday, May 22, 2019. If a hearing is requested, notice of the scheduled date, time and location will be provided at least 10 days in advance. Submittals should be mailed to the attention of Manager of Capital and Grant Programs, SMART, at the above address. Barring any changes made in response to the written comments, this document will become final.
DET3512494 04/21/2019

Public Meeting on the Wayne County Hazard Mitigation Plan

When: 5:30 pm, April 23, 2019
Where: Rooms 1 & 2, Educational and Performing Arts Center, WCC Downriver Campus, 21000 Northline Road, Taylor, MI
Additional information: waynecountyhmp.com or 800.395.ASTI
Public Comment accepted through May 7, 2019
DET3513193 04/21/2019

State of Michigan
County of Livingston } ss

Affidavit of Publication

IN

Michigan.com

The Detroit News & Free Press

ASTI Environmental
10448 Citation Dr., Suite 100
Brighton, MI 48116

RE: Public Meeting on the Wayne County Hazard Mitigation Plan
When: 5:30 pm, April 23, 2019

See attached.

Public Meeting on the Wayne County Hazard Mitigation Plan

When: 5:30 pm, April 23, 2019
Where: Rooms 1 & 2, Educational and Performing Arts Center, WCC Downriver Campus, 21000 Northline Road, Taylor, MI
Additional information: waynecountyhmp.com or 800.395.ASTI
Public Comment accepted through May 7, 2019
DET3513193 04/21/2019

(Amy Schmidt), being duly sworn, deposes and says that the above advertisement(s) appeared in Michigan.com - The Detroit News and Free Press on April 21, 2019. Invoice 3513193 and as an authorized employee of Michigan.com, he/she knows well the facts stated herein.

Dated: April 24, 2019

Notarized By:

Gina Anne Huff

Acting in the County of Livingston

GINA ANNE HUFF
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF LIVINGSTON
My Commission Expires March 9, 2023

School of Continuing Education

Presents

Wayne County Homeland Security Emergency Management Hazmat Mitigation Meeting

APRIL 23, 2019

EPAC: 1&2

5:30 PM to 8:30 PM

Downriver Campus – 21000 Northline Road, Taylor, MI 48180

Please Print: Name: Mike Cleaver Student ID: NO Address: 21000 N Line City: TAYLOR State: MI Zip: 48180 Email Address: N/A **WCCCD Alumni: Yes☐ No☒** Phone Number: _____ Wayne County Resident? Yes☒ No__	***Please Print:*** Name: PAUL RENTSCHLER Student ID: _____ Address: ASTI ENVIRONMENTAL 10448 CITATION DR. City: BRIGHTON State: MI Zip: 48116 Email Address: prentschler@asti-env.com **WCCCD Alumni: Yes☐ No☐** Phone Number: _____ Wayne County Resident? Yes__ No✓
Please Print: Name: Daniella Elzayat Student ID: _____ Address: 32030 Van Born City: Wayne State: MI Zip: 48184 Email Address: _____ **WCCCD Alumni: Yes☐ No☐** Phone Number: _____ Wayne County Resident? Yes__ No__	***Please Print:*** Name: Anthony Chicko Student ID: _____ Address: 23515 Goddard City: Taylor State: MI Zip: 48180 Email Address: achicko@ci.taylor.mi.us **WCCCD Alumni: Yes☐ No☒** Phone Number: _____ Wayne County Resident? Yes__ No__
Please Print: Name: PAUL L HALEY Student ID: _____ Address: 2800 THIRD ST City: TRENTON State: MI Zip: 48183 Email Address: phaley@trenton-mi.com **WCCCD Alumni: Yes☐ No** Phone Number: _____ Wayne County Resident? Yes__ No__	***Please Print:*** Name: Vencil Parks Student ID: _____ Address: 33030 Van Born Road City: Wayne State: MI Zip: 48184 Email Address: gparks@wayne.edu **WCCCD Alumni: Yes☐ No☐** Phone Number: _____ Wayne County Resident? Yes__ No_

School of Continuing Education

Presents

Wayne County Homeland Security Emergency Management Hazmat Mitigation Meeting

APRIL 23, 2019

EPAC: 1&2

5:30 PM to 8:30 PM

Downriver Campus – 21000 Northline Road, Taylor, MI 48180

Please Print: Name: DEREK LAFERRIERE Student ID: Address: 6000 Middlebelt City: Garden City State: MI Zip: 48135 Email Address: **WCCCD Alumni: Yes☐ No☐** Phone Number: Wayne County Resident? Yes__ No__	***Please Print:*** Name: TATARIA STURDIVANT Student ID: Address: 33030 Van Born Rd City: Wayne State: MI Zip: 48184 Email Address: tsturdivant@waynecounty.com **WCCCD Alumni: Yes☐ No☐** Phone Number: Wayne County Resident? Yes__ No__
Please Print: Name: Karen Siedlik Student ID: Address: 7602 Trafalgar City: Taylor State: mi Zip: 48180 Email Address: N/A **WCCCD Alumni: Yes☐ No☒** Phone Number: 313-291-8047 Wayne County Resident? Yes X No__	***Please Print:*** Name: LEE GAVIN Student ID: Address: 6045 FENTON City: DbN Hgts State: MI Zip: 48127 Email Address: **WCCCD Alumni: Yes☐ No☐** Phone Number: Wayne County Resident? Yes__ No__
Please Print: Name: James Williams Student ID: Address: 6839 Troy City: Taylor, State: mi Zip: 48180 Email Address: N/A **WCCCD Alumni: Yes☐ No X** Phone Number: 313 522-9062 Wayne County Resident? Yes X No__	***Please Print:*** Name: Student ID: Address: City: State: Zip: Email Address: **WCCCD Alumni: Yes☐ No☐** Phone Number: Wayne County Resident? Yes__ No_

School of Cont uing Education

Presents

Wayne County Homeland Security Emergency Management Hazmat Mitigation Meeting

APRIL 23, 2019

EPAC: 1&2

5:30 PM to 8:30 PM

Downriver Campus – 21000 Northline Road, Taylor, MI 48180

Please Print:

Name: Thaddeus G. Zmuda Student ID:

Address: 35367 Tilford RD.

City: Brownstown State: MI Zip: 48173

Email Address: **WCCCD Alumni: Yes☐ No☐**

Phone Number: 1-734-379-0576 Wayne County Resident? Yes✓ No__

Please Print:

Name: Danny Dotson Student ID:

Address: 10600 W. Jefferson Ave

City: River Rouge State: MI Zip: 48229

Email Address: **WCCCD Alumni: Yes☐ No☐**

Phone Number: Wayne County Resident? Yes__ No__

Please Print:

Name: SHANON HERRON Student ID:

Address: 33030 Vanborn Rd

City: ~~GARDEN CITY~~ Wayne State: MI Zip: 48184

Email Address: SHERRON@WAYNECOUNTY.com **WCCCD Alumni: Yes☐ No☐**

Phone Number: Wayne County Resident? Yes✓ No__

Please Print:

Name: Student ID:

Address:

City: State: Zip:

Email Address: **WCCCD Alumni: Yes☐ No☐**

Phone Number: Wayne County Resident? Yes__ No__

Please Print:

Name: SAMER JAAFAR Student ID:

Address: 33030 Vanborn Rd

City: Wayne State: MI Zip: 48184

Email Address: SJaafar@waynecountycom **WCCCD Alumni: Yes☐ No**

Phone Number: 734-728-3711 Wayne County Resident? Yes__ No__

Please Print:

Name: Student ID:

Address:

City: State: Zip:

Email Address: **WCCCD Alumni: Yes☐ No☐**

Phone Number: Wayne County Resident? Yes__ No_

School of Continuing Education

Presents

Wayne County Homeland Security Emergency Management Hazmat Mitigation Meeting

APRIL 23, 2019

EPAC: 1&2

5:30 PM to 8:30 PM

Downriver Campus – 21000 Northline Road, Taylor, MI 48180

Please Print: Name: BRIAN LOFTUS Student ID: Address: 9601 GROH City: GROSSE ILE State: Zip: 48138 Email Address: **WCCCD Alumni: Yes☐ No☐** Phone Number: Wayne County Resident? Yes__ No__	***Please Print:*** Name: Student ID: Address: City: State: Zip: Email Address: **WCCCD Alumni: Yes☐ No☐** Phone Number: Wayne County Resident? Yes__ No__
Please Print: Name: Don Banton Student ID: Address: 6006 Middlebelt City: Garden city State: MI Zip: 48135 Email Address: Ø **WCCCD Alumni: Yes☐ No☐** Phone Number: Wayne County Resident? Yes__ No__	***Please Print:*** Name: Student ID: Address: City: State: Zip: Email Address: **WCCCD Alumni: Yes☐ No☐** Phone Number: Wayne County Resident? Yes__ No__
Please Print: Name: Student ID: Address: City: State: Zip: Email Address: **WCCCD Alumni: Yes☐ No** Phone Number: Wayne County Resident? Yes__ No__	***Please Print:*** Name: Student ID: Address: City: State: Zip: Email Address: **WCCCD Alumni: Yes☐ No☐** Phone Number: Wayne County Resident? Yes__ No_

Appendix B. Public Comment and Input

Wayne County Hazard Mitigation Plan Update Survey #1

*1. Email Address

Wayne County Hazard Mitigation Plan Update Survey #1

*2. What is the most significant natural hazard facing Wayne County?

- ◯ Drought
- ◯ Earthquake
- ◯ Extreme Temperatures - Extreme Hot or Cold
- ◯ Fire - Wildfires
- ◯ Flooding - Riverline or Shoreline
- ◯ Fog
- ◯ Invasive Species
- ◯ Subsidence - Natural
- ◯ Thunderstorms - Hail, Lightning, Severe Wind
- ◯ Tornadoes
- ◯ Winter Hazards - Snow, Ice & Sleet

Other (please specify)

Wayne County Hazard Mitigation Plan Update Survey #1

*3. What is the most significant technological hazard facing Wayne County?

- ◯ Fire - Scrap Tire
- ◯ Fire - Structural
- ◯ Flooding - Dam Failure
- ◯ Flooding - Urban
- ◯ Hazmat Incidents - Fixed Site
- ◯ Hazmat Incidents - Transportation
- ◯ Infrastructure Failure - Bridges, Roads, Overpasses, Structures
- ◯ Infrastructure Failure - Communications
- ◯ Infrastructure Failure - Electrical Systems
- ◯ Infrastructure Failure - Sanitary/Storm Sewers
- ◯ Infrastructure Failure - Water System
- ◯ Nuclear Power Plant Accidents
- ◯ Oil and Gas Well or Pipeline Accidents
- ◯ Subsidence - Mining

Other (please specify)

Wayne County Hazard Mitigation Plan Update Survey #1

*4. What is the most significant human hazard facing Wayne County?

- ◯ Civil Disturbance
- ◯ Criminal Acts - Vandalism and Arson
- ◯ Criminal Acts - Mass Shootings
- ◯ Information Technology Intrusion
- ◯ Gas/Oil Shortages or Supply Disruptions
- ◯ Public Health Emergencies - Pandemics, Epidemics, Contaminated Food/Water
- ◯ Terrorism/Sabotage
- ◯ Transportation Accidents - Air
- ◯ Transportation Accidents - Surface Roads/Highways
- ◯ Transportation Accidents - Marine
- ◯ Transportation Accidents - Rail
- ◯ Weapons of Mass Destruction

Other (please specify)

Wayne County Hazard Mitigation Plan Update Survey #1

***5. Please select the top 5 hazards from the list below (1 being most significant, 5 being least significant):**

	1	2	3	4	5
Drought	◯	◯	◯	◯	◯
Earthquake	◯	◯	◯	◯	◯
Extreme Temperatures - Extreme Hot or Cold	◯	◯	◯	◯	◯
Fire - Wildfires	◯	◯	◯	◯	◯
Flooding - Riverline or Shoreline	◯	◯	◯	◯	◯
Fog	◯	◯	◯	◯	◯
Invasive Species	◯	◯	◯	◯	◯
Subsidence - Natural	◯	◯	◯	◯	◯
Thunderstorms - Hail, Lightning, Severe Wind	◯	◯	◯	◯	◯
Tornadoes	◯	◯	◯	◯	◯
Winter Hazards - Snow, Ice & Sleet	◯	◯	◯	◯	◯
Fire - Scrap Tire	◯	◯	◯	◯	◯
Fire - Structural	◯	◯	◯	◯	◯
Flooding - Dam Failure	◯	◯	◯	◯	◯
Flooding - Urban	◯	◯	◯	◯	◯
Hazmat Incidents - Fixed Site	◯	◯	◯	◯	◯
Hazmat Incidents - Transportation	◯	◯	◯	◯	◯
Infrastructure Failure - Bridges, Roads, Overpasses, Structures	◯	◯	◯	◯	◯
Infrastructure Failure - Communications	◯	◯	◯	◯	◯
Infrastructure Failure - Electrical Systems	◯	◯	◯	◯	◯
Infrastructure Failure - Sanitary/Storm Sewers	◯	◯	◯	◯	◯
Infrastructure Failure - Water System	◯	◯	◯	◯	◯
Nuclear Power Plant Accidents	◯	◯	◯	◯	◯
Oil and Gas Well or Pipeline Accidents	◯	◯	◯	◯	◯
Subsidence – Mining	◯	◯	◯	◯	◯
	◯	◯	◯	◯	◯

Wayne County Hazard Mitigation Plan Update Survey #1

Civil Disturbance	◯	◯	◯	◯	◯
Criminal Acts - Vandalism and Arson	◯	◯	◯	◯	◯
Criminal Acts - Mass Shootings	◯	◯	◯	◯	◯
Information Technology Intrusion	◯	◯	◯	◯	◯
Gas/Oil Shortages or Supply Disruptions	◯	◯	◯	◯	◯
Public Health Emergencies - Pandemics, Epidemics, Contaminated Food/Water	◯	◯	◯	◯	◯
Terrorism/Sabotage	◯	◯	◯	◯	◯
Transportation Accidents - Air	◯	◯	◯	◯	◯
Transportation Accidents - Surface Roads/Highways	◯	◯	◯	◯	◯
Transportation Accidents - Marine	◯	◯	◯	◯	◯
Transportation Accidents - Rail	◯	◯	◯	◯	◯
Weapons of Mass Destruction	◯	◯	◯	◯	◯

Wayne County Hazard Mitigation Plan Update Survey #1

***6. Based on the size of the population impacted by a hazard event, indicate the top five assets that are most vulnerable by placing the numbers 1 (most important overall) to 5 (least important of the top five).**

	1	2	3	4	5
Commercial Sites	◯	◯	◯	◯	◯
Hospitals	◯	◯	◯	◯	◯
Industrial Sites	◯	◯	◯	◯	◯
Open Spaces	◯	◯	◯	◯	◯
Public Facilities	◯	◯	◯	◯	◯
Residential Areas	◯	◯	◯	◯	◯
Roads, Bridges, Railroads	◯	◯	◯	◯	◯
Utility Facilities	◯	◯	◯	◯	◯
Schools and Churches	◯	◯	◯	◯	◯
Sports/Entertainment Arenas	◯	◯	◯	◯	◯
Central Business District	◯	◯	◯	◯	◯

Wayne County Hazard Mitigation Plan Update Survey #1

***7. Based on the impact to the environment caused by a hazard event, indicate the top five assets that are most vulnerable by placing the numbers 1 (most important overall) to 5 (least important of the top five).**

	1	2	3	4	5
Commercial Sites	◯	◯	◯	◯	◯
Hospitals	◯	◯	◯	◯	◯
Industrial Sites	◯	◯	◯	◯	◯
Open Spaces	◯	◯	◯	◯	◯
Public Facilities	◯	◯	◯	◯	◯
Residential Areas	◯	◯	◯	◯	◯
Roads, Bridges, Railroads	◯	◯	◯	◯	◯
Utility Facilities	◯	◯	◯	◯	◯
Schools and Churches	◯	◯	◯	◯	◯
Sports/Entertainment Arenas	◯	◯	◯	◯	◯
Central Business District	◯	◯	◯	◯	◯

Wayne County Hazard Mitigation Plan Update Survey #1

***8. Based on the impact to economic activity caused by a hazard event, indicate the top five assets that are most vulnerable by placing the numbers 1 (most important overall) to 5 (least important of the top five).**

	1	2	3	4	5
Commercial Sites	◯	◯	◯	◯	◯
Hospitals	◯	◯	◯	◯	◯
Industrial Sites	◯	◯	◯	◯	◯
Open Spaces	◯	◯	◯	◯	◯
Public Facilities	◯	◯	◯	◯	◯
Residential Areas	◯	◯	◯	◯	◯
Roads, Bridges, Railroads	◯	◯	◯	◯	◯
Utility Facilities	◯	◯	◯	◯	◯
Schools and Churches	◯	◯	◯	◯	◯
Sports/Entertainment Arenas	◯	◯	◯	◯	◯
Central Business District	◯	◯	◯	◯	◯

WCHMP 2nd Survey: County-Wide Hazard Mitigation Strategies

1. Name

2. Email Address

3. Hazard mitigation is defined as “any action taken to reduce or eliminate the long-term risk to human life and property from natural, technological, or human-related hazards.” Hazard events will occur, and at their worst result in injuries, death and/or destruction of property and infrastructure. The work done to minimize the impact of hazard events to life and property is called Hazard Mitigation. Often, these events occur in the same locations over time (i.e. flooding along rivers), and cause repeated damage. Because of this, Hazard Mitigation is often focused on reducing repetitive loss, thereby breaking the disaster cycle.

The following list of hazards was taken from priorities identified by Wayne community representatives in the March 14 workshop. Please note any specific mitigation strategies you feel County agencies should implement for any of these hazards, please use the text boxes below each hazard to describe those strategies.

Extreme Temperatures (Extreme Hot or Cold)

Flooding - Urban (stormwater

Flooding - Riverine or Shoreline

HazMat Incidents - Transportation

Infrastructure Failure - Water & Sewer Systems

Public Health Emergencies - Pandemics, Epidemics, Food/Water Contamination

Catastrophic Events/National Emergencies

Civil Disturbance

Thunderstorms- Hail, Lightning, Severe Win

Criminal Acts - Mass Shootings/Active Assailant(s)

Criminal Acts - Vandalism, Arson

Transportation Accidents - Roads/Highway

Tornadoes

Winter Hazards - Snow, Ice, Sleet

OTHER

4. *The following Hazard Mitigation Strategies were selected as County Action Plans in the 2013 Wayne County HMP.*

Please rate each of the following mitigation strategies for **county-wide** adoption: (Rating scale = Cannot Assess, No Longer Relevant/Not Important, Neutral, Important, Very Important)

	Cannot Assess	No Longer Relevant/ Not Important	Netural	Important	Very Important
Develop a list of facilities in each jurisdiction that are available to serve as warming or cooling centers	○	○	○	○	○
Improve floodplain management and minimize potential effects of flooding; encourage and promote regional watershed cooperation	○	○	○	○	○
Distribute family emergency preparedness information	○	○	○	○	○
Create evacuation plans and community awareness of those plans	○	○	○	○	○
Improve emergency communication between all County communities, including the City of Detroit	○	○	○	○	○
Train and equip public health, hospital, and responder personnel (police/fire/EMS, etc.) for readiness	○	○	○	○	○
Review and evaluate Hazard Mitigation Plan (HMP) priorities and progress on an annual basis	○	○	○	○	○
Develop an inspection plan and strategy to identify and abate all vacant, abandoned, and blighted structures near sensitive populations throughout the county, including Sara Title III sites	○	○	○	○	○

5. The following mitigation strategies have been taken from the Michigan Hazard Mitigation Plan, have been used by other Michigan communities, or have been suggested by Wayne County community representatives. Possible mitigation strategies are identified as general strategies, applicable to multiple hazards, or are listed under a specific hazard. Please note that some strategies may be applicable to multiple hazards, but we have attempted to avoid duplication to reduce the time it takes for the survey.

GENERAL MITIGATION STRATEGIES:

Please indicate all of the following mitigation strategies that you would rate as high or very high priority. *Please leave blank those you cannot assess or those that you feel are less important or unimportant:*

- [ ] Obtain communication boosters for deficient areas in county-wide communication network
- [ ] Improve communications between municipalities, state, and regional agencies in case of mass event
- [ ] Identify transportation bottlenecks to ensure emergency vehicle access and access to region's hospitals
- [ ] Coordinate mutual aid assistance for failures in utility and communications systems (including 911)
- [ ] Encourage communities to acquire generators for backup power at critical facilities
- [ ] Encourage residents to develop family escape plan and disaster plans and supply kits
- [ ] Ensure readiness at critical facilities (e.g., warming/cooling centers, water and wastewater treatment facilities, etc.) by obtaining adequate emergency power generators and requiring facilities to perform regular maintenance and equipment checks, pre-plan for fuel needs of existing and backup power sources
- [ ] Develop mutual aid agreements for incident response
- [ ] Improve agency coordination in response and planning activities
- [ ] Disseminate public education materials (newsletters, pamphlets, articles, programs, web links, contact information) to explain key hazards, self and property protection measures warning and response systems currently in place
- [ ] Keep roads and driveways accessible to vehicles and fire equipment - bridges should be able to support emergency vehicles, roads should be adequate for vehicles to turn and cross both ways
- [ ] Establish emergency routing procedures for emergency vehicles to avoid road or bridge closures due to construction or emergency
- [ ] Include safety strategies for severe weather events in driver education classes and materials
- [ ] Create public/private cooperation plans for emergency response
- [ ] Erect signage for the AM station along roadways (complete with a flashing notification light set on a remote transmitter – when light is flashing tune to the radio station) directing the traveling public to tune into the station
- [ ] Implement the Emergency Alert System (EAS) in Wayne County
- [ ] Purchase and install a reverse 911 system for the county after researching the type of systems offered
- [ ] Facilitate full NIMS compliance throughout Wayne County
- [ ] Develop site emergency plans for schools, factories, office buildings, shopping malls, hospitals, correctional facilities, stadiums and recreation areas, and other appropriate sites
- [ ] Pre-plan for storm debris removal and management and implement system to provide heavy equipment for storm debris cleanup

Other (please include your suggestions)

6. **INFRASTRUCTURE FAILURE**

Please indicate all of the following mitigation strategies that you would rate as high or very high priority. *Please leave blank those you cannot assess or those that you feel are less important or unimportant:*

- [ ] Coordinate mutual aid agreements with water hauling companies to have emergency supplies hauled into Wayne County
- [ ] Utilize alternative 911 access through radio operators whose homes are specially marked for identification
- [ ] Develop programs/networks for contacting elderly or homebound persons during periods of infrastructure failure
- [ ] Separate and/or expand sewer systems to handle anticipated stormwater volumes
- [ ] Create "rolling blackouts" in electrical systems that would otherwise fail due to overloads
- [ ] Replace or renovate aging infrastructure and equipment
- [ ] Establish tree trimming program(s) to minimize power loss due to falling branches
- [ ] Establish procedures to protect cable/broadband internet systems
- [ ] Create and/or identify relief and response centers for impacted residents
- [ ] Obtain equipment to detect hydrogen sulfide
- [ ] Obtain adequate supply of backup generators for emergency temporary power
- [ ] Utilize buried/protected power and utility lines
- [ ] Install surge protectors on critical electronic equipment
- [ ] Detect and prevent/discourage illegal discharges into storm sewers from home footing drains, downspouts, and sump pumps
- [ ] Properly locate, design, and maintain water and sewer systems to insulate critical components from freezing
- [ ] Use surge protectors on critical electrical equipment
- [ ] Develop redundancy in utility and communication systems, especially "lifeline" systems
- [ ] Increase public awareness and use of "MISS DIG"

Other (please include your suggestions)

7. **PUBLIC HEALTH EMERGENCIES**

Please indicate all of the following mitigation strategies that you would rate as high or very high priority. *Please leave blank those you cannot assess or those that you feel are less important or unimportant:*

- ☐ Encourage residents to receive immunizations against communicable diseases
- ☐ Improve ventilation in areas/facilities prone to crowding or that may involve exposure to contagions or noxious atmospheres
- ☐ Increase public awareness of radon dangers and what can be done to reduce radon concentrations in homes and buildings
- ☐ Develop stricter health codes regulating food storage in local restaurants
- ☐ Demolish and clear vacant/condemned structures to prevent rodent infestations
- ☐ Maintain community public health system with sufficient disease monitoring and surveillance capabilities to adequately protect the population from large-scale outbreaks
- ☐ Undertake brownfield and urban blight cleanup
- ☐ Increase public awareness of the causes, symptoms, and protective actions for disease outbreaks and other potential public health emergencies
- ☐ Encourage community support of free and reduced-expense clinics and school health services
- ☐ Prevent public contact with contaminated sites or waters (including floodwaters)
- ☐ Require pollution control, enforcement, and cleanup; proper disposal of chemicals & scrap materials
- ☐ Educate residents regarding, and enforce, proper location, installation, cleaning, monitoring, and maintenance of septic tanks
- ☐ Stockpile vaccines and antidotes in case of epidemic, chemical emergency, or biological or chemical weapons attack
- ☐ Utilize quarantines where applicable
- ☐ Create inter-hospital mutual aid pacts to assure communication and service delivery in the event of quarantine or outbreak
- ☐ Continue to fund adequate food and sanitation inspections
- ☐ Use public warning systems for public health communications
- ☐ Establish a program to identify and properly close abandoned water wells

Other (please include your suggestions)

8. **CRIMINAL ACTS-- MASS SHOOTINGS/ ACTIVE ASSAILANT(S)**

Please indicate all of the following mitigation strategies that you would rate as high or very high priority. *Please leave blank those you cannot assess or those that you feel are less important or unimportant:*

- [ ] Work with public and private location managers to post signage for emergency entry and exist points, first aid stations, and shelter locations
- [ ] Define perimeters and areas that require access control, identify particularly sensitive or critical areas that require special access controls
- [ ] Conduct periodic background checks on all staff assigned to critical or sensitive areas
- [ ] Review terminated employees' personnel files to determine if they pose a security risk; ensure they are removed from access systems
- [ ] Devise credential systems indicating areas of access and purpose of activity on premises
- [ ] Develop response plans for key locations and conduct training exercises
- [ ] Develop/employ text or Amber-Alert-like communication systems to notify public when an incident occurs or is suspected
- [ ] Develop and disseminate education programs so that public learns warning signs, knows how to report suspicious behavior, and knows how to respond in the event of an active assailant incident

Other (please include your suggestions)

9. **FLOODING**

Please indicate all of the following mitigation strategies that you would rate as high or very high priority. *Please leave blank those you cannot assess or those that you feel are less important or unimportant:*

- [ ] Identify and map, or update existing maps of, floodplains and flood prone areas
- [ ] Develop a layer to the county's mapping showing the areas downstream of dams to complement any structural inventory mapping that has been done. As such, county mappers can easily sum the potential losses in a single dam's susceptibility area
- [ ] Develop engineering plans to address flood prone areas
- [ ] Develop county-wide maps/lists of undersized culverts and pipe systems
- [ ] Remove woody debris from flood prone areas
- [ ] Stockpile sandbags at strategic locations throughout the county
- [ ] Establish mutual aid agreements or contracts with sand suppliers to facilitate rapid filling of sandbags during flooding events.
- [ ] Dry flood-proof structures within known flood areas (strengthen walls, seal openings, use waterproof compounds/plastic sheeting on walls)
- [ ] Require anchoring manufactured homes to a permanent foundation (but with an option to move structures if necessary)
- [ ] Increase public awareness of the need for permits for building in floodplains
- [ ] Require detention/retention in new development
- [ ] Establish plan to eliminate repetitive loss properties
- [ ] Assure new building sites are above base flood elevation
- [ ] Maintain all roadways no more than 1 foot below the base flood elevation
- [ ] Establish standards to prevent erosion, including the use of native vegetation
- [ ] Zone flood prone areas for open space and recreation
- [ ] Implement road improvements to prevent washouts
- [ ] Disseminate public education materials explaining wetland protection measures and benefits
- [ ] Enforce stream and wetland dumping/fill regulations

- [ ] Wet flood-proof structures within know flood areas (controlled flooding of structures to balance water forces and reduce structural collapse during floods)
- [ ] Provide supplies (e.g. ATVs, medical supplies, etc.) to local officials/residents to provide access to isolated areas in the county to supplement first responder capabilities.
- [ ] Provide assistance to the Federal Emergency Management Agency (FEMA), as requested, for the ongoing flood map modernization project
- [ ] Purchase the necessary software to run new digital FEMA flood maps once the flood map modernization project is complete
- [ ] Provide training to local officials on the software purchased to run maps developed by the flood map modernization project
- [ ] Elevate flood prone structures above the 100-year base flood elevation
- [ ] Maintain and/or strengthen dam structures.
- [ ] Construct, or elevate existing, roads or plan alternative roads that are unaffected by flooding. Make roads more flood resistant through better drainage and/or stabilization/armoring of vulnerable shoulders and embankments
- [ ] Include discussion of safety strategies for flood areas in driver education classes and materials
- [ ] Stabilize eroding shorelines to minimize losses of infrastructure, danger to citizens
- [ ] Dredge and clear sediment and debris from drainage channels or harbors and from support bracing under bridges
- [ ] Raise low-lying bridges
- [ ] Enforce basic building code requirements related to flood mitigation
- [ ] Strengthen existing watershed councils
- [ ] Participate in structural projects to channel water away from people and property
- [ ] Establish higher engineering standards for drain and sewer capacity
- [ ] Install/re-route /increase storm drain system capacity, including the separation of storm and sanitary systems
- [ ] Preserve farmland and open space
- [ ] Elevate mechanical and utility devices above expected flood levels
- [ ] Identify community roads that area susceptible to flooding during times of heavy rainfall
- [ ] Encourage acceptable land use densities, coverage, and planning for particular soil types and capacities based upon runoff and absorption capabilities
- [ ] Acquire, relocate, or condemn structures within floodplain or floodway areas
- [ ] Require/encourage communities to join the National Flood Insurance Program (NFIP)
- [ ] Require/encourage communities to participate in the Community Rating System (CRS)
- [ ] Develop drainage easements for planned and regulated public use of private land for temporary water detention and drainage
- [ ] Provide backup generators and other measures (e.g., alarms, meters, etc.) for pump and lift stations in sanitary sewer systems, to ensure that drainage infrastructure is not impeded
- [ ] Establish a "green infrastructure" plan/program to link, manage, and expand existing parks, preserves, greenways, etc.
- [ ] Develop an open space acquisition and/or land bank program for preserving flood hazard areas
- [ ] Establish watershed-based planning initiatives to address flood hazards with neighboring communities
- [ ] Limited allowable impervious surface within new development
- [ ] Develop a stream buffer ordinance to protect water resources and limit flood hazards
- [ ] Link flood hazard mitigation objectives with U.S. EPA/MDEQ MS4 stormwater Initiatives
- [ ] Encourage the use of Low Impact Development (LID) techniques
- [ ] Encourage the use of porous/permeable paving materials to reduce stormwater runoff and increase groundwater recharge
- [ ] Conduct cumulative impact analyses for multiple development projects within the same watershed/subwatershed
- [ ] Verify FEMA's repetitive loss inventory and develop a tracking database
- [ ] Develop a dam failure study and emergency action plan
- [ ] Inspect and repair dams on a regular basis
- [ ] Develop real estate disclosure laws that identify homes located within the hydraulic shadows of dams

- [ ] Develop emergency plans for schools, factories, office buildings, shopping malls, hospitals, correctional facilities, stadiums and recreation areas, and other appropriate sites
- [ ] Protect, and/or restore, wetlands and natural water retention areas
- [ ] Provide public education and flood warning systems
- [ ] Monitor water levels with stream gauges and trained monitors
- [ ] Train local officials in flood control, flood plan management, flood proofing, etc.
- [ ] Provide for traffic control and road closures in flooded areas
- [ ] Maintain trained, equipped, and well-prepared search and rescue teams
- [ ] Control and secure loose materials, yard items, and stored objects in floodplains that otherwise be swept away, damaged or pose a hazard when flooding occurs
- [ ] Require standard tie-downs for propane tanks
- [ ] Purchase or transfer development rights to discourage development in floodplains
- [ ] Use check valves, sump pumps, and backflow prevention in homes and buildings
- [ ] Participate in regional/watershed cooperation
- [ ] Other (please include your suggestions)

- [ ] Regulate development within the hydraulic shadows of dams
- [ ] Automate/install pumps and floodgates at dam sites
- [ ] Conduct NFIP community workshops to provide information and incentives for property owners to purchase flood insurance
- [ ] Establish impact fees to help fund public projects mitigating impacts of land development
- [ ] Install, reroute, or increase the capacity of storm drainage and/or flood storage systems
- [ ] Build earthen dikes around flood threatened critical facilities
- [ ] Ask residents to keep storm drains free of debris during storms (to reduce burden on Public Works crews)

10. **EXTREME TEMPERATURES**

Please indicate all of the following mitigation strategies that you would rate as high or very high priority. *Please leave blank those you cannot assess or those that you feel are less important or unimportant:*

- ☐ Establish and build awareness of accessible heating/cooling centers in the community
- ☐ Ensure adequate backup power generators for warming can cooling centers
- ☐ Provide public information before extreme temperatures occur (i.e., spring & fall)
- ☐ Increase coverage and use of NOAA weather radios (public notification)
- ☐ Enforce heating and cooling requirements for landlords, especially those serving vulnerable populations
- ☐ Work with utility companies to allow special arrangements for those unable to pay heating bills
- ☐ Provide outreach to vulnerable populations during extreme temperature events
- ☐ Create insulation standards to protect from extreme temperatures and increase efficiency (especially in buildings housing vulnerable populations)
- ☐ Educate the public regarding safe use of office and home space heaters
- ☐ Utilize state and federal programs that assist low income families in home improvements that protect from extreme temperatures and increase efficiency
- ☐ Minimize temperature impacts on utilities and infrastructure (including substations)
- ☐ Evaluate existing pipes for brittleness and replace as necessary and prudent
- ☐ Perform study to ensure redundancies in water systems
- ☐ Plan for excess capacity at area shelters
- ☐ Establish a program to address pavement buckling due to extreme temperatures
- ☐ Provide transportation to shelters for elderly or disabled
- ☐ Reduce urban heat island effects by planting trees around buildings, to shade parking lots, and along public rights-of-way

Other (please include your suggestions)

11. **HAZMAT INCIDENTS**

Please indicate all of the following mitigation strategies that you would rate as high or very high priority. *Please leave blank those you cannot assess or those that you feel are less important or unimportant:*

- [ ] Improve driver education, traffic law enforcement, and transportation planning to balance the needs of hazardous material transporters with public safety
- [ ] Improve design, routing, and traffic control on problem roadways/areas
- [ ] Inspect and improve design at problem railway/roadway intersections
- [ ] Enforce truck traffic weight and travel restrictions
- [ ] Conduct a commodity flow study on the major roadways and railways of the county to determine what materials are flowing through the county
- [ ] Assure training, planning, and preparedness for hazardous material incidents along roads and railways
- [ ] Utilize public warning systems and networks
- [ ] Use ITS/IHS (Intelligent Highway Systems) technology
- [ ] Comply with and enforce USDOT/MDOT regulations regarding hazardous materials transport
- [ ] Ensure road closures and traffic control in accident areas
- [ ] Locate schools, nursing homes, and other special facilities away from major hazardous material transportation routes
- [ ] Create emergency response system to provide bus transportation away from sites of hazmat incidents
- [ ] Other (please include your suggestions)

12. The following strategies for **TRANSPORTATION ACCIDENTS** have been taken from the Michigan Hazard Mitigation Plan, have been used by other Michigan communities, or have been suggested by Wayne County community representatives. Possible mitigation strategies are identified as general strategies, applicable to multiple hazards, or are listed under a specific hazard. Please note that some strategies may be applicable to multiple hazards, but we have attempted to avoid duplication to reduce the time it takes for the survey.

Please indicate all of the following mitigation strategies that you would rate as high or very high priority. *Please leave blank those you cannot assess or those that you feel are less important or unimportant:*

- [ ] Address locations where trains block emergency routes for extend
- [ ] Evaluate purchase of mass casualty trailer to assist in multiple vehicle accidents
- [ ] Provide funding for additional traffic barricades
- [ ] Provide additional training and equipment for responding to plane crashes
- [ ] Provide funding and training for water rescue
- [ ] Perform railroad inspections and improve designs at problem railway/roadway intersections
- [ ] Conduct long-term planning that provides more connector roads for reduced congestion of arterial roads
- [ ] Enforce weight and travel restrictions
- [ ] Use ITS/IHS (intelligent highway systems) technology
- [ ] Establish airport maintenance, security, and safety programs
- [ ] Provide commercial operator training and skill enhancement programs
- [ ] Train, plan, and prepare for mass-casualty incidents involving all modes of transportation
- [ ] Maintain trained, equipped, and prepared search and rescue teams

Other (please include your suggestions)

13. **SEVERE WIND/ TORNADOES**

Please indicate all of the following mitigation strategies that you would rate as high or very high priority. *Please leave blank those you cannot assess or those that you feel are less important or unimportant:*

- [ ] Provide public education regarding the dangers of thunderstorms
- [ ] Increase training and use of weather spotters
- [ ] Utilize public early warning systems and networks
- [ ] Perform tree trimming and maintenance to prevent limb breakage and to safeguard utility lines
- [ ] Utilize buried/protected power and utility lines
- [ ] Provide weather monitors (not just NOAA weather radios) to schools and nursing homes and mobile home parks for severe wind warnings
- [ ] Conduct a shelter assessment for the purpose of identifying shelter facilities that could be used during or after severe wind events and/or severe winter storm conditions
- [ ] Use structural bracing, window shutters, laminated glass in window panes, and hail-resistant shingles to minimize damage to private and public structures
- [ ] Identify facilities in need of tornado shelters

Other (please include your suggestions)

14. **SEVERE WEATHER -- WINTER**

Please indicate all of the following mitigation strategies that you would rate as high or very high priority. *Please leave blank those you cannot assess or those that you feel are less important or unimportant:*

- [ ] Evaluate existing pipes for "brittleness" and replace as necessary and prudent
- [ ] Provide public education regarding severe winter weather hazards
- [ ] Require proper building/site design and code enforcement relating to snow loads, roof slope, snow removal and storage, etc.
- [ ] Facilitate farmer preparedness to address livestock needs/problems
- [ ] Pre-arrange shelters for stranded motorists/travelers, and others
- [ ] Maintain adequate road and debris clearing capabilities
- [ ] Use snow fences or "living snow fences" to limit blowing and drifting snow over critical road segments
- [ ] Conduct public building maintenance and educate homeowners regarding prevention of ice dam damage
- [ ] Conduct a shelter assessment for the purpose of identifying shelter facilities that could be used during or after severe wind events and/or severe winter storm conditions
- [ ] Educate residents on dangers of alternative heat sources (space heaters) when power is lost - to reduce risk of fire and carbon monoxide
- [ ] Educate homeowners and builders on how to protect their pipes, including letting faucets drip during extreme cold weather and locating water pipes on the inside of building insulation or keeping them out of attics, crawl spaces, and vulnerable outside walls

Other (please include your suggestions)

15. **SEVERE WEATHER -- SUMMER**

Please indicate all of the following mitigation strategies that you would rate as high or very high priority. *Please leave blank those you cannot assess or those that you feel are less important or unimportant:*

- [ ] Increase coverage and use of NOAA Weather radio (detection and public notification)
- [ ] Train, and increase the use of, weather spotters
- [ ] Utilize public early warning systems and networks
- [ ] Include safety strategies for severe weather events in driver education classes and materials
- [ ] Use structural bracing, window shutters, laminated window glass, and hail resistant roof shingles to minimize damage to public and private structures
- [ ] Develop public education materials to explain property protection measures and insurance options
- [ ] Require proper anchoring of manufactured homes and exterior structures such as carports and porches
- [ ] Secure loose materials, yard and patio items so that they cannot be blown about in high winds
- [ ] Encourage or require construction of concrete safe rooms for new construction of single and multi-family homes and shelter areas in mobile home parks, fairgrounds, shopping malls, and other vulnerable public areas
- [ ] Enlist MSU Extension to recommend protective vegetation
- [ ] Install additional tornado sirens in community
- [ ] Provide additional manpower to assist during and following storms
- [ ] Provide additional medical and confined space entry equipment
- [ ] Implement rapid damage assessment
- [ ] Install lightning protection devices in communities' communication infrastructure
- [ ] Create a database to track those individuals at high risk of death, such as the elderly, homeless, etc.

Other (please include your suggestions)

16. Please use the space below to ***suggest any other hazard mitigation strategies and/or to suggest specific locations in your community or Wayne County where mitigation is needed.***

In each case, please identify the hazard applicable to the mitigation strategy or location. A list of hazards is provided for your reference:

Natural Hazards:

Drought, Earthquake, Extreme Temperatures - Extreme Cold, Extreme Temperatures - Extreme Heat, Fire - Wildfires, Flooding - Riverine, Flooding - Shoreline & Erosion, Fog, Invasive Species, Subsidence - Natural, Thunderstorms - Hail, Thunderstorms - Lightning, Thunderstorms - Severe Wind, Tornadoes, Winter Hazards - Ice and Sleet, Winter Hazards - Snowstorms, Unpredictable Weather

Technological Hazards

Fire - Scrap Tire, Fire - Structural, Flooding - Dam Failure, Flooding - Urban, Hazmat Incidents - Fixed Site, Hazmat Incidents - Transportation, Infrastructure Failure - Bridges, Roads, Overpasses, Infrastructure Failure - Communications, Infrastructure Failure - Electrical Systems, Infrastructure Failure - Sanitary Sewer System, Infrastructure Failure - Storm Sewer System, Infrastructure Failure - Structural Collapse, Infrastructure Failure - Water System, Nuclear Power Plant Accidents, Oil and Gas Well Accidents, Petroleum and Natural Gas Pipeline Accidents, Subsidence - Mining

Human Hazards:

Civil Disturbance, Criminal Acts - Vandalism and Arson, Criminal Acts - Due to Economic Collapse, Criminal Acts - Mass Shootings, Centralized Planning in Lansing & Washington, DC, Unemployment and Underemployment, Information Technology Intrusion, Gas/Oil Shortages or Supply Disruptions, Public Health Emergencies - Pandemics and Epidemics, Public Health Emergencies - Contaminated Food/Water, Electromagnetic Pulse, Transportation Accidents - Air, Transportation Accidents - Highway, Transportation Accidents - Marine, Transportation Accidents - Rail, Transportation Accidents - Rail/Highway Crossings, Transportation Accidents - Surface Roads, Weapons of Mass Destruction

Survey #3 - Prioritizing Final Action Plans

1. Please rate the following italicized strategy for mitigating **Public Health Emergencies** according to how well it satisfies the five criteria listed below:

"***Stockpile vaccines and antidotes in case of epidemic, chemical emergency, or biological or chemical weapons attack***"

	High	Medium	Low		
Technical Feasibility	☐	☐	☐	☐	☐
Cost Effectiveness	☐	☐	☐	☐	☐
Ability to Accomplish	☐	☐	☐	☐	☐
Effectiveness of Strategy (including downside risk)	☐	☐	☐	☐	☐
Availability of Funding	☐	☐	☐	☐	☐

2. Please rate the following italicized strategy for mitigating **Public Health Emergencies** according to how well it satisfies the five criteria listed below:

"Train & equip volunteers to staff open and closed PODs (Points of Dispensing) within the county"

	High	Medium	Low		
Technical Feasibility	◯	◯	◯	◯	◯
Cost Effectiveness	◯	◯	◯	◯	◯
Ability to Accomplish	◯	◯	◯	◯	◯
Effectiveness of Strategy (including downside risk)	◯	◯	◯	◯	◯
Availability of Funding	◯	◯	◯	◯	◯

3. Please rate the following italicized strategy for mitigating**Public Health Emergencies** according to how well it satisfies the five criteria listed below:

"***Increase public awareness of the causes, symptoms, and protective actions for disease outbreaks and other potential public health emergencies***"

	High	Medium	Low		
Technical Feasibility	◯	◯	◯	◯	◯
Cost Effectiveness	◯	◯	◯	◯	◯
Ability to Accomplish	◯	◯	◯	◯	◯
Effectiveness of Strategy (including downside risk)	◯	◯	◯	◯	◯
Availability of Funding	◯	◯	◯	◯	◯

4. Please rate the following italicized strategy for mitigating**Public Health Emergencies** according to how well it satisfies the five criteria listed below:

"***Use mass notification, emergency alerting systems, and social media, for public health emergencies***"

	High	Medium	Low		
Technical Feasibility	◯	◯	◯	◯	◯
Cost Effectiveness	◯	◯	◯	◯	◯
Ability to Accomplish	◯	◯	◯	◯	◯
Effectiveness of Strategy (including downside risk)	◯	◯	◯	◯	◯
Availability of Funding	◯	◯	◯	◯	◯

5. Please rate the following italicized strategy for mitigating **Public Health Emergencies** according to how well it satisfies the five criteria listed below:

"***Improve communication & cooperation between county and municipalities and area hospitals/health facilities***"

	High	Medium	Low		
Technical Feasibility					
Cost Effectiveness					
Ability to Accomplish					
Effectiveness of Strategy (including downside risk)					
Availability of Funding					

6. Please rate the following italicized strategy for mitigating **Public Health Emergencies** according to how well it satisfies the five criteria listed below:

"***Equip, train, & re-institute amateur radios/radio operators in hospitals***"

	High	Medium	Low		
Technical Feasibility					
Cost Effectiveness					
Ability to Accomplish					
Effectiveness of Strategy (including downside risk)					
Availability of Funding					

7. Please rate the following italicized strategy for mitigating the impact of **Infrastructure Failure** according to how well it satisfies the five criteria listed below:

"***Replace or renovate aging structures and equipment. Establish procedures to protect IT systems.***"

	High	Medium	Low		
Technical Feasibility					
Cost Effectiveness					
Ability to Accomplish					
Effectiveness of Strategy (including downside risk)					
Availability of Funding					

8. Please rate the following italicized strategy for mitigating the impact of **Mass Shootings/Active Assailants** according to how well it satisfies the five criteria listed below:

"***Continue training in most current protocol(s)***"

	High	Medium	Low		
Technical Feasibility					
Cost Effectiveness					
Ability to Accomplish					
Effectiveness of Strategy (including downside risk)					
Availability of Funding					

9. Please rate the following italicized strategy for mitigating the impact of **Mass Shootings/Active Assailants** according to how well it satisfies the five criteria listed below:

"***Develop a process for requesting assistance from local and state law enforcement***"

	High	Medium	Low		
Technical Feasibility					
Cost Effectiveness					
Ability to Accomplish					
Effectiveness of Strategy (including downside risk)					
Availability of Funding					

10. Please rate the following italicized strategy for mitigating the impact of **Riverine/Shoreline Flooding** according to how well it satisfies the five criteria listed below:

"***Identify and map, or update existing maps of, floodplains and flood prone areas using the County's ArcGIS system. Provide training for local jurisdictions in use of and access to system.***"

	High	Medium	Low		
Technical Feasibility					
Cost Effectiveness					
Ability to Accomplish					
Effectiveness of Strategy (including downside risk)					
Availability of Funding					

11. Please rate the following italicized strategy for mitigating the impact of **Riverine/Shoreline Flooding** according to how well it satisfies the five criteria listed below:

"***Work with US Army Corps of Engineers or other appropriate authorities to develop engineering plans addressing flood prone areas***"

	High	Medium	Low		
Technical Feasibility	○	○	○	○	○
Cost Effectiveness	○	○	○	○	○
Ability to Accomplish	○	○	○	○	○
Effectiveness of Strategy	○	○	○	○	○
Availability of Funding	○	○	○	○	○

12. Please rate the following italicized strategy for mitigating the impact of **Extreme Hot or Cold Temperatures** according to how well it satisfies the five criteria listed below:

"***Establish and build awareness of accessible heating/cooling centers in the community. Utilize all means available, including websites, social media, smart phone apps, mailers, etc. to educate of impending weather threats and available resources, including heating & cooling shelters.***"

	High	Medium	Low		
Technical Feasibility	○	○	○	○	○
Cost Effectiveness	○	○	○	○	○
Ability to Accomplish	○	○	○	○	○
Effectiveness of Strategy (including downside risk)	○	○	○	○	○
Availability of Funding	○	○	○	○	○

13. Please rate the following italicized strategy for mitigating the impact of Extreme Hot or Cold Temperatures according to how well it satisfies the five criteria listed below:

"***Provide outreach to vulnerable populations during extreme temperature events. Catalog & map areas of vulnerable and otherwise difficult to locate residents (unlicensed facilities, empty/vacant buildings, etc.)***"

	High	Medium	Low		
Technical Feasibility	○	○	○	○	○
Cost Effectiveness	○	○	○	○	○
Ability to Accomplish	○	○	○	○	○
Effectiveness of Strategy (including downside risk)	○	○	○	○	○
Availability of Funding	○	○	○	○	○

14. Please rate the following italicized strategy for mitigating the impact of **Extreme Hot or Cold Temperatures** according to how well it satisfies the five criteria listed below:

"***Educate the public regarding safe use of office and home space heaters, generators, smoke & carbon monoxide detectors***"

	High	Medium	Low		
Technical Feasibility	○	○	○	○	○
Cost Effectiveness	○	○	○	○	○
Ability to Accomplish	○	○	○	○	○
Effectiveness of Strategy (including downside risk)	○	○	○	○	○
Availability of Funding	○	○	○	○	○

15. Please rate the following italicized strategy for mitigating the impact of **Extreme Hot or Cold Temperatures** according to how well it satisfies the five criteria listed below:

"***Provide transportation to shelters for the elderly, disabled, and otherwise hard to reach populations***"

	High	Medium	Low		
Technical Feasibility	○	○	○	○	○
Cost Effectiveness	○	○	○	○	○
Ability to Accomplish	○	○	○	○	○
Effectiveness of Strategy (including downside risk)	○	○	○	○	○
Availability of Funding	○	○	○	○	○

16. Please rate the following italicized strategy for mitigating the impacts of **Transportation Related HazMat Incidents** according to how well it satisfies the five criteria listed below:

"***Assure training, planning, and preparedness for hazardous material incidents along vulnerable, high risk roads and railways***"

	High	Medium	Low		
Technical Feasibility	○	○	○	○	○
Cost Effectiveness	○	○	○	○	○
Ability to Accomplish	○	○	○	○	○
Effectiveness of Strategy (including downside risk)	○	○	○	○	○
Availability of Funding	○	○	○	○	○

17. Please rate the following italicized strategy for mitigating the impacts of **Transportation Related HazMat Incidents** according to how well it satisfies the five criteria listed below:

"***Utilize public warning systems and networks for awareness and instructions***"

	High	Medium	Low		
Technical Feasibility	○	○	○	○	○
Cost Effectiveness	○	○	○	○	○
Ability to Accomplish	○	○	○	○	○
Effectiveness of Strategy (including downside risk)	○	○	○	○	○
Availability of Funding	○	○	○	○	○

April 30, 2020

Wayne County Leadership,

Risks posing the greatest threat to DTE's electrical system are storm-related downed wires and outages, and substation-related forced outages. DTE continuously evaluates its system and has developed programs to mitigate said risks. The following helps to highlight some of those programs in place today.

Storm-Related Downed Wires and Customer Outages

When widespread storm-related downed wires and customer outages occur, DTE follows a disciplined restoration plan:

1. DTE prepares ahead of the incoming weather. This includes engaging and readying resources to support their storm assignments.

2. For everyone's safety, DTE prioritizes potentially hazardous situations first (e.g. downed power lines).

3. DTE also prioritizes the repair of power lines and equipment serving critical health and safety facilities like hospitals, police stations and pumping stations.

4. As part of our storm restoration process, our goal is to get the most customers restored as quickly as possible. We begin by repairing substation equipment, which delivers power to entire communities.

5. We then move on to distribution lines that serve large subdivisions and businesses.

6. Finally, we repair DTE equipment that powers individual homes.

DTE's goal is to reduce wire down response times. To that end, we've implemented certain actions to help improve our wire down response time which include, but are not limited to, the following:

- Increased number of employees and contractors to respond to downed wires
- Leveraged technology to proactively stage and deploy resources
- Developed wire down audit process to maximize field workmanship
- Tracking causes and locations of wire downs to help guide the preventive maintenance program

Customer outage response has also improved over time:

- Accelerated tree trimming program to improve system integrity and reliability
- Leveraged technology to better identify potential fault locations
- Developed an Incident Command System (ICS) organizational structure to optimize strategies and communications

Additionally, DTE has greatly increased communications with local Firefighters and county level Emergency Managers. Monthly collaborative sessions with leaders of local fire departments help drive process improvements. The State Fire Marshal participates in these monthly sessions. One key example of continuous improvement is the development of an emergency process allowing fire departments to escalate immediate concerns directly to DTE Electric dispatch. This improvement provides transparency and clarity during emergency conditions.

Substation-Related Outages

A Substation Event Operation Plan (EOP) was developed to provide a consistent framework for responding to a large substation event requiring the response of DTE personnel.

The purpose of the Significant Event Operation Plan is to ensure public safety, minimize impact, and ensure timely resolution and recovery from a large substation event.

The Substation EOP is used to respond to extended customer outages. The EOP is applicable to DTE personnel, departments, and facilities that have a response role during a substation event or play a support role during such a response. The objective for each significant event is to remedy any potential defects while minimizing customer interruptions.

Rotational teams have been developed to respond to these events. Furthermore, a Mobile Command Center was purchased in order to help facilitate strategic decision making and tactical planning at the point of activity.

Path Forward / Recommendations

It is DTE's recommendation to continue to work collaboratively with the Wayne County Emergency Managers (EMs). DTE will seek feedback from the EMs around how communications can be improved. DTE is also looking to establish a regular cadence of meetings with the EMs across the DTE Service Area to further their relationships with DTE's Regional Relations team.

Appendix C. Workshop Materials

ASTI Environmental

Agenda

Date: March 14, 2019

RE: **Public Meeting**
Wayne County Hazard Mitigation Plan Update (ASTI File No. 10943)

Meeting Objectives: Review HMP Purpose and Process, Hazard Identification & Prioritization

1. **Introductions**
2. **The Function of a Hazard Mitigation Plan**
3. **Overview of the Planning Process**
4. **Overview of 2013-2014 Plan**
5. **Confirm Goals**
6. **Update the Plan - Review & Ranks Hazardous Events**
7. **Review & Rank Critical Assets** (time allowing)
8. **Next Survey - Due End of Day Monday, March 25**
9. **Next Workshop - March 28**

Summary of Current Plan – Hazard Ranking Comparison 2013 Plan
Wayne County Hazard Mitigation Plan Update
Workshop of March 14, 2019

			2013 Survey			
	Hazard	2006 Historic Rank	Open Ended Question Rank	Ranking No. Times Listed	Ranking Aveage Score	In 2006
Natural Hazards	Drought			25	28	
	Earthquakes			30	30	
	Erosion - Shoreline					
	Extreme Temperatures: Extreme Cold	12	23	4	12	
	Extreme Temperatures: Extreme Heat		23	4	12	
	Fires - Wildfires	14		30	30	
	Flooding - Riverine		10	9	7	
	Flooding - Shoreline	14	10	9	7	
	Fog			30	30	
	Invasive Species			30	30	
	Subsidence - Natural			30	30	
	Thunderstorms - Hail	2	1	1	6	
	Thunderstorms - Lightning	2	1	1	6	
	Thunderstorms - Severe Wind	2	1	1	6	
	Tornadoes	19	3	2	8	
	Winter Hazards - Ice and Sleet	19	2	3	9	
	Winter Hazards -Snowstorms		2	3	9	
Technological Hazards	Fires -Scrap Tire	25		30	30	
	Fires -Structural	1	20	23	2	
	Flooding - Dam Failure	25		30	30	
	Flooding - Urban	14		6	19	
	Hazmat Incidents - Transportation	7	4	9	10	
	Hazmat Incidents -Fixed	19	9	12	5	
	Infrastructure Failure - Bridges, Roads, Overpass		13	8	11	
	Infrastructure Failure - All					
	Infrastructure Failure - Communications		16	25	1	
	Infrastructure Failure - Electrical System	11	6	12	23	
	Infrastructure Failure - Sanitary Sewer System	7	13	12	15	
	Infrastructure Failure - Storm Sewer System	7	13	12	15	
	Infrastructure Failure - Water System	3	16	12	12	
	Nuclear Power Plants	28	13	18	16	
	Oil and Gas Well Accidents	28	23	19	18	
	Petroleum and Natural Gas Pipeline Accidents	14		30	18	
	Subsidence - Mining	28		30	30	
	Subsidence - Technical					
Human Related Hazards	Civil Disturbance	13	3	23	2	
	Criminal Acts (Vandalism and Arson)	3	6	9	22	
	Criminal Acts (Mass Shootings)		10	16	20	
	Information Technology Intrusion		16	25	28	
	Gas/Oil Shortages or Supply Disruptions			25	23	
	Public Health Emergencies	28	6	6	17	
	Pandemics and Epidemics					
	Contaminated Food/Water					
	Terrorism and Sabotage		20	19	12	
	Transportation Acc. - Highway	5	4	4	21	
	Transportation Acc. - Rail	19	20	16	21	
	Transportation Acc.-Air	7	10	19	23	
	Transportation - Surface Roads			4	21	
	Transportation - Marine			25	23	
	Transportation Accidents - Rail/Highway Crossing					
	Weapons of Mass Destruction			19	27	

Summary of Hazard Evaluation – First Survey Results for 2019 Update
Wayne County Hazard Mitigation Plan Update
Workshop of March 14, 2019

First Survey Results Open Question (N=57)

Natural Hazards

Response	Count	%
Thunderstorms - Hail, Lightning, Severe Winds	21	36.8
Winter Hazards - Snow, Ice, Sleet	14	24.6
Flooding - Riverine or Shoreline	11	19.3
Tornadoes	7	12.3
Extreme Temperatures - Hot or Cold	3	5.3
Other - Severe Weather	1	1.8
	57	100.0

Technological Hazards

Response	Count	%
Infrastructure Failure - Bridges/Roads	19	33.3
HazMat Incidents - Transportation	11	19.3
Infrastructure Failure - Electrical	9	15.8
Flooding - Urban (stormwater)	5	8.8
Infrastructure Failure - Communications	4	7.0
Infrastructure Failure - Sanitary/Storm Sewers	3	5.3
Nuclear Power Plant Accidents	2	3.5
Oil, Petroleum, Natural Gas Well or Pipeline Accidents	2	3.5
Flooding - Dam Failure	1	1.8
HazMat Incidents - Fixed Sites	1	1.8
	57	100.0

Human Hazards

Response	Count	%
Public Health Emergencies - Pandemics/Epidemics/Contaminated Food/Water	14	24.6
Transportation Accidents - Roads	11	19.3
Catastrophic Events/National Emergencies	10	17.5
Criminal Acts - Mass Shooting/Active Assailant(s)	10	17.5
Civil Distrurbance	3	5.3
Criminal Acts - Arson & Vandalism	3	5.3
Information Technology Intrusion	2	3.5
Gas/Oil Shortages or Supply Disruptions	1	1.8
Transportation Accidents - Air	1	1.8
Transportation Accidents - Rail	1	1.75
Other: Criminal Acts - Homicide/Robbery/Carjacking	1	1.75
	57	100.0

Summary of Hazard Evaluation – First Survey Results for Update
Wayne County Hazard Mitigation Plan Update
Workshop of March 14, 2019

First Survey Results Hazards Ranked (N=57)

	2019 Survey			
Hazard	Open Ended Question Rank	Ranking No. Times Listed	Ranking Average Score	2013
Celestial Impact		38	39	
Drought		27	30	
Earthquake		37	37	
Extreme Temperatures - Extreme Hot or Cold	5	7	9	1, 5
Fire - Wildfires		36	36	
Flooding - Riverine or Shoreline	3	21	6	
Fog		33	31	
Invasive Species		34	34	
Subsidence - Natural		39	32	
Thunderstorms - Hail, Lightning, Severe Wind	1	1	3	
Tornadoes	4	6	7	
Winter Hazards - Snow, Ice & Sleet	2	2	12	
Fire - Scrap Tire		35	35	
Fire - Structural		23	20	
Flooding - Dam Failure	9	28	33	
Flooding - Urban	4	12	16	6
Hazmat Incidents - Fixed Site		18	11	3
Hazmat Incidents - Transportation	2	9	15	
Infrastructure Failure - Bridges, Roads	1	3	8	
Infrastructure Failure - Communications	5	15	5	4
Infrastructure Failure - Electrical Systems	3	8	1	4
Infrastructure Failure - Sanitary/Storm Sewers	6	13	2	
Infrastructure Failure - Water System		11	13	4
Nuclear Power Plant Accidents	7	14	21	
Oil and Gas Well or Pipeline Accidents	8	25	14	
Subsidence - Mining or Infrastructure		29	38	
Catastrophic Events/National Emergencies	3	16	24	
Civil Disturbance	5	19	22	
Criminal Acts - Mass Shootings/Active Assailant(s)	4	5	19	
Criminal Acts - Vandalism and Arson	5	20	27	
Criminal Acts - Homicide/Robbery/Carjacking				
Gas/Oil Shortages or Supply Disruptions	7	30	18	
Information Technology Intrusion	6	17	29	
Public Health Emergencies - Pandemics, Epidemics,Food/Water	1	4	23	2
Terrorism/Sabotage		26	17	
Transportation Accidents - Air	7	22	10	
Transportation Accidents - Marine		32	28	
Transportation Accidents - Rail	7	31	26	
Transportation Accidents - Surface Roads/Highways	2	10	4	
Weapons of Mass Destruction		24	25	

Summary of Hazard Evaluation – First Survey Results for Update
Wayne County Hazard Mitigation Plan Update
Workshop of March 14, 2019

First Survey Results Hazards Ranked (N=44)

Poplulation Impact	Count	Rank	Average	Rank
Central Business District	22	8	3.6	10
Commercial Sites	18	9	3.4	9
Hospitals	48	1	2.6	2
Industrial Sites	11	10	3.3	7
Open Spaces	8	11	4.4	11
Public Facilities	30	3	3.4	8
Residential Areas	26	5	2.4	1
Roads, Bridges, Railroads	25	6	2.9	5
Schools and Churches	41	2	2.9	4
Sports/Entertainment Arenas	24	7	2.7	3
Utility Facilities	28	4	3.0	6

Environmental Impact	Count	Rank	Average	Rank
Central Business District	13	10	4.08	10
Commercial Sites	19	8	3.95	9
Hospitals	39	1	2.49	2
Industrial Sites	25	7	2.12	1
Open Spaces	17	9	3.35	8
Public Facilities	35	2	3.17	6
Residential Areas	33	4	2.73	3
Roads, Bridges, Railroads	28	6	2.75	4
Schools and Churches	31	5	3.35	7
Sports/Entertainment Arenas	10	11	4.1	11
Utility Facilities	35	3	2.77	5

Economic Impact	Count	Rank	Average	Rank
Central Business District	38	2	2.66	2
Commercial Sites	43	1	2.72	3
Hospitals	23	8	2.96	5
Industrial Sites	37	3	3.03	6
Open Spaces	2	11	4.5	11
Public Facilities	24	7	3.46	8
Residential Areas	15	10	3.2	7
Roads, Bridges, Railroads	29	4	2.38	1
Schools and Churches	16	9	3.5	9
Sports/Entertainment Arenas	25	6	3.68	10
Utility Facilities	27	5	2.96	4

Hazard Impact Goals Worksheet Number 1
Wayne County Hazard Mitigation Plan Update
Workshop of March 14, 2019

Objective: To identify the top three criteria for evaluating hazard event impacts in Wayne County.

Thought Questions: What are the top priorities for the community when considering hazard impacts? What do the community leaders represent as important? What are the top priorities for emergency response agencies when considering hazard impacts? What are the top challenges facing the County when a hazard occurs?

Individual Worksheet

1	
2	
3	
4	
5	

Group Worksheet

1	
2	
3	

<u>Example Criteria</u>

Population Impacted
Area Impacted
Economic Cost for Recovery
Loss of Life
Loss of Property
Damage to Infrastructure
Time to Recover to Pre-Incident Levels
Ecological Impact
Impact to Critical Response Facilities
Business Interruption
Infrastructure Failure
Transportation Disruption
Ability to Provide Health Care
Economic Impact

Hazard Impact Goals Worksheet Number 2
Wayne County Hazard Mitigation Plan Update
Workshop of March 14, 2019

Objective: To identify concerns about the impact of the top ten hazards to the selected criteria.

Thought Questions: For purposes of hazard prevention and response, how concerned should the County be about each of the following impacts?

Ranking
3 = High
2 = Medium
1 = Low

	2013 Plan Update Meeting Results		
	Concern About Impacts of Hazardous Events		
Hazard Events to Consider			

Hazard Impact Goals Worksheet Number 3
Wayne County Hazard Mitigation Plan Update
Workshop of March 14, 2019

Objective: To evaluate if the survey ranking makes sense.

Thought Questions: Look not only at the individual ranking, but also look across rows and down columns. Do the absolute values reflect reality? Do the relative values reflect reality?

Ranking
3 = High
2 = Medium
1 = Low

	Asset Criticality		
	Based on Asset Class Characteristics estimate the effects of a hazard event to the listed criteria		
Asset to Consider			
Commercial Sites			
Hospitals/Response Facilities			
Industrial Sites			
Open Space			
Public Facilities			
Residential Areas			
Roads, Railroads, Bridges			
Utility Facilities			
Schools, Churches			
Sports/Entertainment Arenas			
Central Business Dist.			

Hazard Impact Goals Worksheet Number 4
Wayne County Hazard Mitigation Plan Update
Workshop of March 14, 2019

Objective: To determine the overall likelihood of a hazard event for each asset.

Ranking
3 = High
2 = Medium
1 = Low
0 if not possible

	Likelihood of Hazardous Event Impacting the Asset				
Hazard	Comm. Sites	Hospitals/Response Facilities	Indust. Sites	Open Space	Public Fac.

	Likelihood of Hazardous Event Impacting the Asset					
Hazard	Resid. Sites	Roads, RR, Bridges	Utility Fac.	Schools, Churches	Sports/Ent. Arenas	Central Bus. Dist.

Hazard Impact Goals Worksheet Number 5
Wayne County Hazard Mitigation Plan Update
Workshop of March 14, 2019

Objective: To determine the overall consequence of a hazard event for each asset.

Ranking
3 = High
2 = Medium
1 = Low

	Consequences of Hazardous Event at the Asset				
Hazard	Comm. Sites	Hospitals/Response Facilities	Indust. Sites	Open Space	Public Fac.

	Consequences of Hazardous Event at the Asset					
Hazard	Resid. Sites	Roads, RR, Bridges	Utility Fac.	Schools, Churches	Sports/Ent. Arenas	Central Bus. Dist.

Hazard Definitions

Civil Disturbance
A public gathering or prison uprising which disrupts essential functions and results in unlawful behavior such as rioting or arson. This event involves a large number of people and requires a significant response effort by law enforcement and/or emergency responders.

Criminal Acts - Arson
The willful or malicious burning or attempt to burn, with or without intent to defraud, a dwelling, public building, motor vehicle, or personal property of another.

Criminal Acts - Vandalism
The willful or malicious destruction, injury, disfigurement, or defacement of any public or private property, real or personal, without consent of the owner or person having control.

Drought
An extended period of time with significantly low precipitation levels that usually occurs during planting and growing seasons.

Earthquake
The sudden movement or motion in the earth caused by an abrupt release of slowly accumulating strain, which results in ground shaking, surface faulting, or ground failures.

Extreme Cold
A prolonged period of extreme low temperatures, usually accompanied by snowstorms, sleet and ice storms or hail.

Extreme Heat
A prolonged period of extreme high temperatures, often accompanied by conditions such as high humidity, high winds and lack of rain.

Fire Hazards - Forest/Field Fire
A fire within an open space, forested area, brush or grassed area, or wild land. Does not include prescribed fires.

Fire Hazards - Scrap Tire Fires
Fires which occur at a location where scrap tires are being stored for processing, recycling, or re-use.

Fire Hazards - Structural Fires

A fire of any origin which ignites one or more structures, often results in loss of life and/or property.

Flooding – Dam Failure
The failure of an impoundment located in a river, stream, lake or other waterway resulting in downstream flooding.

Flooding - Riverine
The periodic occurrence of overbank flows of rivers and streams resulting in partial or complete inundation of the adjacent floodplain.

Flooding - Shoreline
Shoreline erosion hazards typically involve the loss of property as sand or soil is removed by water action and is carried away over time.

Flooding – Urban
The overflow of storm sewer systems, usually caused by inadequate drainage following heavy rainfall or rapid snowmelt.

HazMat Incidents – Fixed Site
An uncontrolled release of a hazardous material originating from a building, structure, or fixed equipment which is capable of posing a risk to life, health, safety, property or the environment.

HazMat Incidents - Transportation
An uncontrolled release of a hazardous material during transport which is capable of posing a risk to life, health, safety, property or the environment.

Infrastructure Failure
(Includes Water, Sanitary Sewer, Storm Sewer, Electrical and Emergency Communications)
The failure of a critical public or private utility infrastructure which results in a short-term loss of service.

Nuclear Power Plant Accidents
An actual or potential release of radioactive material at a nuclear facility in a quantity sufficient to constitute a threat to the health and safety of offsite populations.

Oil and Gas Well Incidents
An oil or gas well incident could involve an uncontrolled release of oil or natural gas, or a release of hydrogen sulfide gas, a by-product of production wells.

Petroleum and Natural Gas Pipeline Accidents
An uncontrolled release of petroleum or natural gas from transmission or distribution pipelines.

Public Health Emergencies
A widespread and/or severe epidemic, incident of contamination, or other situation that presents a danger to or otherwise negatively impacts the general health and well being of the public.

Subsidence - Mining
Lowering or collapse of the land surface due to loss of subsurface support in mining areas.

Subsidence - Natural
The lowering or collapse of the land surface due to loss of subsurface support. Generally caused by drainage of organic soils, underground fluid withdrawal, underground mining, natural compaction, sinkholes and hydrocompaction (collapsible soils).

Terrorism/Sabotage
An intentional, unlawful use of force, violence or subversion against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political, social, or religious objectives.

Thunderstorm Hazards - Hail
Conditions where atmospheric water particles from thunderstorms form into rounded or irregular lumps of ice that fall to the earth.

Thunderstorm Hazards - Lightning
The discharge of electricity from within a thunderstorm.

Thunderstorm Hazards - Severe Wind
Winds greater than 58 miles per hour, not including tornadoes, are classified as windstorms.

Tornadoes
A violently rotating column of air extending downward to the ground from a cumulonimbus cloud.

Transportation Accident – Air
A crash or other accident involving passenger transportation aircraft, does not include recreational aircraft.

Transportation Accidents - Highway
A crash or other accident involving public passenger transportation, does not include private auto transportation.

Transportation Accident – Highway/Rail Crossings
A crash or other accident involving which occurs at public, at-grade railroad crossings and involves the collision of an automobile and railcar.

Transportation Accident – Marine
A crash or other marine accident involving passenger transportation, does not include public or private recreational accidents.

Transportation Accident – Rail
A crash or other accident involving passenger or freight rail systems, does not include accidents which result in a HazMat response.

Winter Hazards - Ice and Sleet Storms
Freezing rain is rain that freezes on contact with surfaces causing a coating of ice on exposed surfaces.

Winter Hazards - Snowstorms
A period of rapid accumulation of snow accompanied by high winds and cold temperatures.

Weapons of Mass Destruction
Weapons intended to cause widespread damage and high number of casualties. Typically fall into four categories: 1) missiles, 2) biological weapons, 3) nuclear weapons, or 4) chemical weapons.

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Critical Asset Definition
Wayne County Hazard Mitigation Plan Update

FOR PLANNING PURPOSES, WHAT SHOULD BE CONSIDERED A CRITICAL FACILITY?

The list of assets that are most important to protect, as well as the criticality of any given facility, can vary widely from community to community. Thus, there is no universal definition of a critical facility. For planning purposes, a jurisdiction should determine criticality based on the relative importance of its various assets for the delivery of vital services, the protection of special populations, and other important functions.

FEMA's Public Assistance Guide (FEMA 322) states that "A critical facility is a structure that, if flooded, would present an immediate threat to life, public health, and safety. Critical facilities include the following examples:

- Emergency service facilities and equipment (fire stations; police stations; emergency operations centers, shelters, and schools; custodial facilities, such as jails and juvenile detention centers; hospitals, nursing homes, and other health care facilities; rescue squads; public works facilities, etc.).
- Communications networks (telephones, emergency service radio systems, repeater sites and base stations, television and radio stations, etc.).
- Water supply system/facilities, to include waste water treatment.
- Utilities (power plants, substations, power lines, oil, natural gas, electric power, and communication systems; etc.)
- Transportation networks (roads, bridges, airports, rail terminals, maritime ports).
- Hazardous material facilities.

FEMA Funding
Wayne County Hazard Mitigation Plan Update

Items Funded By FEMA - Hazard Mitigation Grant Program (HMGP) Project Eligibility

Projects may be of any nature that will result in protection to public or private property. Eligible projects under the HMGP include, but are not limited to:

1. **Property Acquisition** and **Structure Demolition/Relocation** for floodplain protection;
2. **Structure Elevation** in compliance with federal, state, and local ordinances;
3. **Mitigation Reconstruction** of damaged buildings, outside of the floodway or high-risk erosion areas, to minimize future damage;
4. **Dry Floodproofing** of residential and non-residential buildings;
5. **Minor Flood Control** projects to reduce the frequency or severity of flooding (e.g., modification of culverts or creation of storm water detention/retention;
6. **Localized Flood Control** projects to protect specific critical facilities;;
7. **Structural and Nonstructural Retrofitting** of facilities to eliminate the risk of future damage and to protect inhabitants;
8. **Safe Room Construction** for protection from tornadoes, hurricanes, or other high wind events;
9. **Infrastructure Retrofits** to reduce risks to utilities, roads and bridges;
10. **Vegetative Management** and programs such as:
    Defensible space for wildlife;
    Ignition-resistant construction;
    Hazardous fuels reduction;
11. **Post-Disaster Code Enforcement** that supports reconstruction efforts;
12. **State discretionary projects** (5% set aside funding), that fund mitigation actions consistent state goals and objectives and local mitigation plans, but that otherwise may be difficult to prove cost effectiveness using standard benefit cost analysis.

Table 4: Eligible Activities by Program

Eligible Activities					
1. Mitigation Projects	√	√	√	√	√
Property Acquisition and Structure Demolition	√	√	√	√	√
Property Acquisition and Structure Relocation	√	√	√	√	√
Structure Elevation	√	√	√	√	√
Mitigation Reconstruction					√
Dry Floodproofing of Historic Residential Structures	√	√	√	√	√
Dry Floodproofing of Non-residential Structures	√	√	√	√	
Minor Localized Flood Reduction Projects	√	√	√	√	√
Structural Retrofitting of Existing Buildings	√	√			
Non-structural Retrofitting of Existing Buildings and Facilities	√	√			
Safe Room Construction	√	√			
Infrastructure Retrofit	√	√			
Soil Stabilization	√	√			
Wildfire Mitigation	√	√			
Post-Disaster Code Enforcement	√				
5% Initiative Projects	√				
2. Hazard Mitigation Planning	√	√	√		
3. Management Costs	√	√	√	√	√

Advisory Committee Workshop
Wayne County Hazard Mitigation Plan Update

Hazard Mitigation Plan Update

Workshop 1: March 14, 2019

Overview

- Introduction
- The Function of a Hazard Mitigation Plan
- The 2013 Wayne County Plan
- The Wayne County Plan Update
- First workshop
  - Survey Results

Introduction

Confidentiality

- Contact Information Confidential
  - But You Will Be Listed in the Plan
- Workshop Sources Confidential
- Secure Version of Final Document
  - Critical Assets
  - Critical Infrastructure

Teams

- Project Team
  - Wayne County Homeland Security
  - ASTI Environmental
- Advisory Committee
- Local Communities
- Stakeholders
- Public

The Wayne County Plan
www.wchmp.com

ASTI Environmental

Established in 1985
Over 90% Repeat/Referral
Over 11,000 projects in the United States
Projects in Canada, Mexico and the Czech Republic

1.800.395.2784 • www.asti-env.com

Investigations • Compliance
Remediation • Restoration

Project Locations

Michigan Offices: Detroit, Grand Rapids, Brighton

ASTI Environmental

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Advisory Committee

Local Communities
County LEPC
Schools
Industry/Businesses
Adjacent Communities

The Wayne County Plan
www.wchmp.com

Community Reps

42 Communities
- Emergency Management Coordinators
- Local Leaders

The Wayne County Plan
www.wchmp.com

Stakeholders

42 Communities
- Mayors, Managers

Adjacent Communities
Industry and Business
Non-Government Organizations
Interested Individuals

The Wayne County Plan
www.wchmp.com

Hazard Mitigation Plans

What is a HMP?

A Hazard Mitigation Plan (HMP) will...

- identify hazards in the community,
- evaluate and highlight those hazards,
- provide mitigation alternatives

Hazard Mitigation Plans

What is a HMP?

The objectives of a Plan are to;

- reduce risks from natural, human, and technological hazards by focusing on those hazards,
- provide guidance when committing resources that will reduce the effects of hazards, and
- **provide a basis for technical assistance and funding**

Hazard Mitigation Plans

What is a HMP?

The Plan must comply with:

- the Disaster Mitigation Act of 2000,
- the Emergency Management Act,
- FEMA and Michigan Department of State Police guidance documents,
- and all applicable federal, state, and local regulations.

Hazard Mitigation Plans

What is a HMP?

The Plan is only a part of the emergency planning, mitigation, preparedness, response, and recovery process. Must coordinate with:

- All existing plans and programs
- **Existing Plans can be included in the Final HMP by reference**

Hazard Mitigation Plans

Why Prepare A Plan?

To save lives and protect property

To preserve and protect an area's environment and economy

To preserve and maintain an area's essential services and quality of life

Hazard Mitigation Plans

Why Prepare A Plan?

To provide information to citizens, businesses, and officials (including future emergency managers), for

- Planning
- Economic development
- Project development decisions
- Emergency management

Hazard Mitigation Plans

Why Prepare A Plan?

To support hazard mitigation project implementation and **funding.**

- Identifies specific hazards
- Identifies specific vulnerabilities
- Documents mitigation options
- Demonstrates community involvement and support
- Part of an effective overall plan

Hazard Mitigation Plans

The Process

Prepare hazard history and community profile

Identify significant hazards and risks

Identify specific vulnerabilities

Hazard Mitigation Plans

The Process

Identify hazard mitigation goals and objectives

Suggest strategies to achieve mitigation goals and objectives

Evaluate strategies using locally chosen criteria

Select feasible strategies based on evaluation criteria

Hazard Mitigation Plans

The Process

Propose specific action steps that will achieve desired objectives

Prepare the plan

Adopt the plan

Implement the plan

Monitor and update the plan

Hazard Mitigation Plans

The Current Wayne County Plan

Circa 2013-14

Hazard Ranking Criteria

Criteria	Weighting
Health, Safety and Welfare of the Public	6
Loss of life and Injury	8
Population Impacted	4

Hazard Identification
Advisory Committee Meeting of January 30, 2013

Hazard History – Top 15

Hazard Event	Ranking
Transportation Accidents - Highway	1
Criminal Acts - Vandalism	2
Fire Hazards - Structural Fires	3
Criminal Acts - Arson	4
Fire Hazards - Wildfire	5
Thunderstorm Hazards - Severe Wind	6
Thunderstorm Hazards - Hail	7
Transportation Accidents - Rail	8
Transportation Accidents - Marine	9
Infrastructure Failure - Water Systems	10
Winter Hazards - Snowstorms	11
Infrastructure Failure - Electrical Systems	12
Extreme Temperatures - Extreme Cold	13
Extreme Temperatures - Extreme Heat	14
Flooding - Dam Failure	15
Flooding - Riverine	15
Flooding - Urban	15
Winter Hazards - Ice & Sleet	15

Hazard Identification
Advisory Committee Meeting of January 30, 2013

Workshop Hazard Impact Ranking

Hazard Event	Workshop Rank	Hazard Risk Rank	Action Plan Needed
Flooding - Urban	7	2	2
Hazmat Incidents - Fixed	3	6	3
Public Health Emergency	2	5	1
Infrastructure Failure - Communication and Ele	4	7	3
Infrastructure Failure - Water Systems	4	1	1
Severe Weather Summer	1	4	1
Severe Weather Winter	6	2	2

Action Plan Assessment	Rank	
Risk	1-4	5-7
1-5	1	2
6-7	3	4

- Flooding (Non Dam)
- Hazmat Incidences—Transportation
- Infrastructure Failure
- Public Health Emergencies
- Tornadoes

Hazard Identification
Advisory Committee Meeting of January 30, 2013

Assets at Risk From Hazards

Critical Asset	Criticality Rank	Asset Risk Rank	Vulnerability
Commercial Sites	11	5	2
Hospitals/Response Facilities	2	1	1
Industrial Sites	5	8	3
Open Space	6	11	4
Public Facilities	9	4	2
Residential Areas	1	2	1
Roads, Railroads, Bridges	4	10	3
Utility Facilities	3	3	1
Schools, Churches	10	7	4
Sports/Entertainment Arenas	8	9	4
Central Business Dist.	7	5	2

Vulnerability Assessment	Criticality	
Risk	1-5	6-11
1-5	1	2
6-11	3	4

Hazard Identification
Advisory Committee Meeting of January 30, 2013

Considerations - Hazards

2006 Emphasis	2013 Emphasis	2019 Emphasis??
Terrorism	Flooding	Flooding
Weapons of Mass Destruction	Earthquakes	Infrastruct./Subsidence
	Pipeline Ruptures	Changing Climate
	Nuclear Accidents	Cyber Attacks
		Catastrophic Events
		Active Assailant(s)

Considerations - Hazards

Natural – 17 Total
Technological – 17 Total
Human Related – 15 Total

List of Hazards (attached)

Hazard Definitions (attached)

The Wayne County Plan Update

Process - Outreach

Public
- One public meeting- Draft Plan
- Community announcements
- Web page
  - Comment Form
  - General Information
  - Plan updates and Draft Plan

Process - Outreach

Stakeholders
- Newsletters
- Web page
  - Meeting agendas and minutes
- Draft Plan Available

Process - Outreach

Advisory Committee
- Two Workshops
- Two Surveys
- Web page
  - Draft Plan
- Telephone/Email Input
- Draft Plan Review

First Workshop

Meeting Agenda

Identify and rank hazard events
Rank critical assets
Analyze threats
Identify specific vulnerabilities
Begin discussing mitigation alternatives

First Meeting
March 14, 2019

Keep in Mind

Analyze threats
- R = VxPxC
  - vulnerability, probability, consequence

Importance:
- Fear ≠ Risk

Consequence:
- Typical not Worst Case

Specific Hazard Definitions

The End Game: Mitigation ≠ Response

First Meeting
March 14, 2019

Keep in Mind

Decision Assisting Tool
Not A
Decision Making Tool

First Meeting
March 14, 2019

Review Goals

- Saving lives & protecting property
- Preserving & protecting the area's environment & economy
- Preserving & maintaining the area's essential services & quality of life

From 2013 Workshops

Review Goals

To retain access to Federal Emergency Management Agency (FEMA) funding for the County and its communities by complying with Section 104 of the Disaster Mitigation Act of 2000 (42 USC 5165)

From 2013 Workshops

Review Goals

To provide a basis for identifying and mitigating hazards that affect the County and its communities

From 2013 Workshops

Review Goals

To develop a method to incorporate hazard identification and mitigation into the planning process of the County and its communities

From 2013 Workshops

Review Goals

- Protect & preserve human health & well-being
- Maintain & fortify critical assets, structures, & infrastructure to preserve quality of life
- Ensure interagency cooperation & coordination for preparedness
- Enhance emergency response capabilities (incl. & especially communications)
- Review & improve county-wide contingency plans for maintaining quality of life

From 2013 Workshops

The Heavy Lifting - Worksheets

- Hazard Ranking
- Critical Assets
- Hazard Likelihood and Consequences

First Meeting
March 14, 2019

Assessment

Survey Results – Open Question

57 Respondents
35 Communities/ Agencies

Natural Hazards

Response	Count	%
Thunderstorms - Hail, Lightning, Severe Winds	21	36.8
Winter Hazards - Snow, Ice, Sleet	14	24.6
Flooding - Riverine or Shoreline	11	19.3
Tornadoes	7	12.3
Extreme Temperatures - Hot or Cold	3	5.3
Other - Severe Weather	1	1.8
	57	100.0

Survey Results – Open Question

Technological Hazards

Response	Count	%
Infrastructure Failure - Bridges/Roads	19	33.3
HazMat Incidents - Transportation	11	19.3
Infrastructure Failure - Electrical	9	15.8
Flooding - Urban (stormwater)	5	8.8
Infrastructure Failure - Communications	4	7.0
Infrastructure Failure - Sanitary/Storm Sewers	3	5.3
Nuclear Power Plant Accidents	2	3.5
Oil, Petroleum, Natural Gas Well or Pipeline Accident	2	3.5
Flooding - Dam Failure	1	1.8
HazMat Incidents - Fixed Sites	1	1.8
	57	100.0

Survey Results – Open Question

Human Hazards

Response	Count	%
Public Health Emergencies - Pandemics/Epidemics/Contaiinated Food/Water	14	24.6
Transportation Accidents - Roads	11	19.3
Catastrophic Events/National Emergencies	10	17.5
Criminal Acts - Mass Shooting/Active Assailant(s)	10	17.5
Civil Distrurbance	3	5.3
Criminal Acts - Arson & Vandalism	3	5.3
Information Technology Intrusion	2	3.5
Gas/Oil Shortages or Supply Disruptions	1	1.8
Transportation Accidents - Air	1	1.8
Transportation Accidents - Rail	1	1.75
Other: Criminal Acts - Homicide/Robbery/Carjacking	1	1.75
	57	100.0

SIGN-IN LOG

2019 HAZARD MITIGATION WORKSHOP

PLEASE PRINT

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Date MARCH 14, 2019

SIGN-IN LOG

2019 HAZARD MITIGATION WORKSHOP

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Date MARCH 14, 2019

SIGN-IN LOG

2019 HAZARD MITIGATION WORKSHOP

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Lee Gavin	Dearborn Hgts		

Date MARCH 14, 2019

SIGN-IN LOG

2019 HAZARD MITIGATION WORKSHOP

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Date MARCH 14, 2019

Hazard Mitigation Planning Workshop#2

WAYNE COUNTY HAZARD MITIGATION PLAN

The 2nd workshop to update Wayne County's Hazard Mitigation Plan will be held

March 28, 2019
10 a.m. to 2 p.m.

in the Ray Mix Room, Wayne County Community College Downriver Campus, 21000 Northline Road, Taylor, Michigan. Additional information about the Plan and planning process is also available at:

www.waynecountyhmp.com

Or by contacting:
Paul Rentschler, Project Manager
800.395.ASTI
or prentschler@asti-env.com

The workshop will be facilitated by Paul Rentschler, an ecologist and planner with ASTI Environmental. Mr. Rentschler has been assisting communities develop Hazard Mitigation Plans and seek federal funding for mitigating natural, technological, and human-created disasters since 2003. He has developed or updated FEMA-approved Hazard Mitigation Plans for Canton Township, the Cities of Allegan and Kentwood, and Allegan, Oakland, and Wayne Counties.

Phone: 800.395.ASTI
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ASTI Environmental

Agenda

Date: March 28, 2019

RE: **Second Advisory Committee Meeting**
Wayne County Hazard Mitigation Plan Update (ASTI File No. 10943)

Agenda

Item #	Subject

1. **Overview** - 10:00 A.M.

2. **Review of Hazard Identification Process** (see summary sheets)
   - Hazards Ranking
     - Top Hazards for Consideration

3. **Critical Assets**

4. **Mitigation Goals and Objectives**
   - Workgroups (see worksheets)
   - Overall Selection

5. **Evaluation Criteria**
   - Workgroups (see worksheet)

6. **Mitigation Survey Results**
   - Results of Surveys
     Top Mitigation Strategies (see summary sheets and Attachments)
   - Discussion of Additional Mitigation Strategies

7. **Mitigation Selection**
   - Combining Mitigation Strategies with Goals and Objectives and Evaluation Criteria

8. **Action Plan Selection**
   - Specific Strategies to Address
   - Development of Action Plan (see example worksheet)
   - Roles and Responsibilities

9. **Homework**
   - **Action Plans due April 11, 2019**

10. **Homework**
    - **Comments on DRAFT HMP due April 26, 2019**

Summary of Hazard Evaluation – Initial Advisory Committee Meeting
Wayne County
Hazard Mitigation Plan Update
From Workshop of March 14, 2019

Criteria for Hazards

- Loss of Life and Injury (weighted at 15)
- Infrastructure Failure (weighted at 8)
- Population Impacted (weighted at 7)
- Ability to Recover from Incident (weighted at 7)

Hazard Ranking

Hazard Selection at the Advisory Committee Meeting

2019 Hazards to Consider	Open Ended Question Rank	Listing Rank	Average	Notes
Thunderstorms - Hail, Lightning, Severe Wind	1	1	3	
Winter Hazards - Snow, Ice & Sleet	2	2	12	
Infrastructure Failure - Bridges, Roads	1	3	8	
Infrastructure Failure - Electrical Systems	3	8	1	
Criminal Acts - Mass Shootings/Active Assailant(	4	5	19	
Public Health Emergencies - Pandemics, Epider	1	4	23	
Transportation Accidents - Surface Roads/Highwa	2	10	4	
Infrastructure Failure - Sanitary/Storm Sewers	6	13	2	
Infrastructure Failure - Communications	5	15	5	
Extreme Temperatures - Extreme Hot or Cold	5	7	9	
Civil Disturbance	5	19	22	
Criminal Acts - Vandalism and Arson	5	20	27	

	Hazard	2019 Survey: Open Ended Question Rank	2019 Survey: Ranking No. Times Listed	2019 Survey: Ranking Average Score	2013
Natural Hazards	Celestial Impact		38	39	
	Drought		27	30	
	Earthquake		37	37	
	Extreme Temperatures - Extreme Hot or Cold	5	7	9	1, 5
	Fire - Wildfires		36	36	
	Flooding - Riverine or Shoreline	3	21	6	
	Fog		33	31	
	Invasive Species		34	34	
	Subsidence - Natural		39	32	
	Thunderstorms - Hail, Lightning, Severe Wind	1	1	3	
	Tornadoes	4	6	7	
	Winter Hazards - Snow, Ice & Sleet	2	2	12	
Technological Hazards	Fire - Scrap Tire		35	35	
	Fire - Structural		23	20	
	Flooding - Dam Failure	9	28	33	
	Flooding - Urban	4	12	16	6
	Hazmat Incidents - Fixed Site		18	11	3
	Hazmat Incidents - Transportation	2	9	15	
	Infrastructure Failure - Bridges, Roads	1	3	8	
	Infrastructure Failure - Communications	5	15	5	4
	Infrastructure Failure - Electrical Systems	3	8	1	4
	Infrastructure Failure - Sanitary/Storm Sewers/Water	6	13	2	
	~~Infrastructure Failure - Water System~~		11	13	4
	Nuclear Power Plant Accidents	7	14	21	
	Oil and Gas Well or Pipeline Accidents	8	25	14	
	Subsidence - Mining or Infrastructure		29	38	
Human Related Hazards	Catastrophic Events/National Emergencies	3	16	24	
	Civil Disturbance	5	19	22	
	Criminal Acts - Mass Shootings/Active Assailant(s)	4	5	19	
	Criminal Acts - Vandalism and Arson	5	20	27	
	Criminal Acts - Homicide/Robbery/Carjacking				
	Gas/Oil Shortages or Supply Disruptions	7	30	18	
	Information Technology Intrusion	6	17	29	
	Public Health Emergencies - Pandemics, Epidemics,Food/Water	1	4	23	2
	Terrorism/Sabotage		26	17	
	Transportation Accidents - Air	7	22	10	
	Transportation Accidents - Marine		32	28	
	Transportation Accidents - Rail	7	31	26	
	Transportation Accidents - Surface Roads/Highways	2	10	4	
	Weapons of Mass Destruction		24	25	
Additional Hazards to Conside	Opioid Crisis - MI 8th in the Nation in Deaths				

Summary of Hazard Evaluation – Initial Advisory Committee Meeting
Wayne County
Hazard Mitigation Plan Update
From Workshop of March 14, 2019

2019 Plan Update Meeting Results

Hazard Events to Consider	Avg Rank	Concern About Impacts of Hazardous Events: Ability to Recover from Disaster/Incident	Infrastructure Failure	Loss of Life and Injury	Geographic Area of Impact	Hazard Sum	Workshop Rank
Extreme Temperatures - Extreme Hot or Cold		1	2	2	3	74	5
Flooding - Riverine or Shoreline		2	3	1.5	2	74.5	4
Thunderstorms - Hail, Lightning, Severe Wind		1	1	1	1	37	14
Tornadoes		2	1	2	1	59	8
Winter Hazards - Snow, Ice & Sleet		1	2	1	3	59	8
Flooding - Urban		3	2	1	1	59	8
Hazmat Incidents - Transportation		2	2	2	2	74	5
Infrastructure Failure - Water & Sewer Systems		3	3	2	3	96	1
Catastrophic Events/National Emergencies		2	1	1	3	58	11
Civil Disturbance		2	1	1	1	44	13
Criminal Acts - Mass Shootings/Active Assailant(s)		3	1	3	1	81	3
Criminal Acts - Vandalism and Arson		1	1	2	1	52	12
Public Health Emergencies - Pandemics, Epidemics,Food/Water, Opiod Crisis		3	1	3	3	95	2
Transportation Accidents - Surface Roads/Highways		1	2	2	1	60	7

	Enter the Cell Value
High	3
Medium	2
Low	1

Notes - additions and removals
Opicid Crisis explicitly part of Public Health Emergencies
Combined water, storm, and sanitary sewer infrastructure
Priority levels determined using Jenk's optimization method

Highly Impact		≥74.6
Med. Impact		Between 52.1-74.5
Low Impact		≤52

2019 Plan Update Survey Results

Asset to Consider	Asset Criticality Ranking: Size of Population Impacted	Impact to the Environment	Impact to Economic Activity	Sum
Commercial Sites	3.44	3.95	2.72	10.11
Hospitals/Response Facilities	2.60	2.49	2.96	8.05
Industrial Sites	3.27	2.12	3.03	8.42
Open Space	4.38	3.35	4.50	12.23
Public Facilities	3.37	3.17	3.46	10.00
Residential Areas	2.42	2.73	3.20	8.35
Roads, Railroads, Bridges	2.88	2.75	2.38	8.01
Utility Facilities	3.04	2.77	2.96	8.77
Schools, Churches	2.85	3.35	3.50	9.70
Sports/Entertainment Arenas	2.67	4.10	3.68	10.45
Central Business Dist.	3.55	4.08	2.66	10.29

Notes
Yellow indicates top five

Notes
Answers are based on the 2019 survey results, average value.
Lower values indicate greater importance (Descending Scale 1-5).

Summary of Hazard Evaluation – Initial Advisory Committee Meeting
Wayne County
Hazard Mitigation Plan Update
From Workshop of March 14, 2019

Workshop Hazard Impact Ranking

2013 Workshop Results

Hazard Event	Workshop Rank	Hazard Risk Rank	Action Plan Needed
Flooding - Urban	7	2	2
Hazmat Incidents - Fixed	3	6	3
Public Health Emergency	2	5	1
Infrastructure Failure - Communication and Ele	4	7	3
Infrastructure Failure - Water Systems	4	1	1
Severe Weather Summer	1	4	1
Severe Weather Winter	6	2	2

2005 Workshop Results

Hazard Event	Hazard Impact Rank	Hazard Risk Rank	Hazard Assessment
Flooding - Urban	9	8	4
Flooding - Riverine	9	9	4
Hazmat Incidents - Transportation and Fixed	7	5	2
Infrastructure Failure	1	2	1
Thunderstorms - Severe Wind	4	1	1
Public Health Emergencies	6	6	4
Extreme Temperatures: Hot and Cold	3	3	1
Tornadoes	2	4	1
Transportation Acc. - Highway	8	10	4
Winter Hazards - Ice and Sleet	4	7	3

Action Plan Assessment		
	Rank	
Risk	1-5	6-10
1-5	1	2
6-10	3	4

Summary of Hazard Evaluation – Initial Advisory Committee Meeting
Wayne County
Hazard Mitigation Plan Update
From Workshop of January 30, 2013

Assets at Risk from Hazards

2013 Workshop Results

Critical Asset	Criticality Rank	Asset Risk Rank	Vulnerability
Commercial Sites	11	5	2
Hospitals/Response Facilities	2	1	1
Industrial Sites	5	8	3
Open Space	6	11	4
Public Facilities	9	4	2
Residential Areas	1	2	1
Roads, Railroads, Bridges	4	10	3
Utility Facilities	3	3	1
Schools, Churches	10	7	4
Sports/Entertainment Arenas	8	9	4
Central Business Dist.	7	5	2

2005 Workshop Results

Critical Asset	Asset Criticality	Asset Risk Rank	Vulnerability
Commercial Sites	7	6	4
Hospitals/Response Facilities	2	2	1
Industrial Sites	10	7	4
Open Space	11	11	4
Public Facilities	7	8	4
Residential Areas	3	1	1
Roads, Railroads, Bridges	5	5	1
Utility Facilities	1	3	1
Schools, Churches	4	4	1
Sports/Entertainment Arenas	7	10	4
Central Business Dist.	6	9	4

Vulnerability Assessment		
	Criticality	
Risk	1-5	6-11
1-5	1	2
6-11	3	4

Goals Worksheet
Wayne County
Hazard Mitigation Plan Update
From Workshop of March 14, 2019

Objective: To identify the top goals for hazard mitigation in Wayne County.

Thought Questions: What are the top five priorities for the community when considering hazard mitigation? What do the community leaders represent as important? Consider the types of hazards that are most important, and the assets and locations that are most vulnerable. Your answer should reflect your best estimate of the administration or your organization's constituency.

Individual Worksheet

1	
2	
3	
4	
5	

Group Worksheet

1	
2	
3	
4	
5	

<u>Example Goals</u>

Improve, Encourage, Enhance, Maintain, Protect, or Preserve…

Identify, Create…

Goals Worksheet
Wayne County
Hazard Mitigation Plan Update
From Workshop of March 14, 2019

Goals from 2013 Plan

2.1 Plan Goals and Objectives

The general goals of any Hazard Mitigation Plan include: saving lives and protecting property, preserving and protecting an area's environment and economy, and preserving and maintaining an area's essential services and quality of life. This Plan includes these general goals. In addition, specific goals of this Plan are:

- To retain access to FEMA funding for the County and its communities by complying with Section 104 of the Disaster Mitigation Act of 2000 (42 USC 5165)
- To provide a basis for identifying hazards that affect the County and its communities
- To develop a method to incorporate hazard identification and mitigation into the planning process of the County and its communities

Through the hazard mitigation planning process presented in this Plan, Advisory Committee members also identified specific goals and objectives, consistent with the overall planning process and supported by specific mitigation strategies, to do the following:

- Protect and preserve human health and well being
- Maintain and fortify critical assets, structures and infrastructure to preserve the quality of life.
- Ensure interagency cooperation and coordination for preparedness
- Enhance emergency response capabilities (including and especially communications)
- Review and improve county-wide contingency plans for maintaining quality of life
- Coordinate response to disasters occurring in Wayne County that overwhelms the resources of local communities
- Communication goal from Wayne County USE goals & objectives

Evaluation Criteria Worksheet
Wayne County
Hazard Mitigation Plan Update
From Workshop of March 14, 2019

Objective: To identify five criteria, consistent with County Goals, to be used to evaluate mitigation strategies.

Thought Questions: Based on the Goals and Objectives, how will mitigation strategies be evaluated? What are the key considerations in choosing a strategy for Wayne County?

Individual Worksheet

1	
2	
3	
4	
5	

Group Worksheet

1	
2	
3	
4	
5	

<u>Example Criteria</u>

Ability to accomplish
Availability of outside funding
Community acceptance
Consistency with existing plans and programs
Consistency with mitigation goals
Cost effectiveness (FEMA Requirement)
Downside risk
Equitable distribution of services
Economically Justifiable
Environmentally Sound
Leadership effort required
Non-discriminatory (EO12898 compliant)
Protection of Critical Response Facilities
Socially Equitable
Specific mitigation goals
Technical feasibility (FEMA Requirement)

Definitions for Mitigation Evaluation Criteria
Wayne County
Hazard Mitigation Plan Update
From Workshop of March 14, 2019

Be technically feasible. (The project must use design and construction methods and materials that are approved, codified, recognized, fall under standard or accepted level of practice, or otherwise are determined to be generally accepted by the design and construction industry.)
Be cost-effective and substantially reduce the risk of future damage, hardship, loss, or suffering resulting from a major disaster. This must be demonstrated by documenting that the project:

1. Addresses a problem that has been repetitive, or a problem that poses a significant risk if left unsolved;
2. Will not cost more than the anticipated value of the reduction in both direct damages and subsequent negative impacts to the area if future disasters were to occur;
3. Has been determined to be the most practical, effective, and environmentally sound alternative after consideration of a range of options;
4. Contributes, to the extent practicable, to a long-term solution to the problem it is intended to address; and
5. Considers long-term changes to the areas and entities it protects, and has manageable future maintenance and modification requirements.

Mitigation Strategies - Vulnerabilities/FEMA Funded
Wayne County
Hazard Mitigation Plan Update
From Workshop of March 14, 2019

Objective: To finalize the list of mitigation strategies to include in the Plan. To preserve access to funding, this list should be as complete as possible. (Refer to Table at end of handout)

Thought Questions: Have the most significant hazards been addressed? Have specific vulnerable areas been adequately considered? Have mitigation strategies that are eligible for FEMA funding been considered? Are there general strategies that are part of the County's overall plans that are not included? Are there some categories (see list below) that have not been adequately applied?

Individual Worksheet -Specific Vulnerabilities

1	
2	
3	
4	
5	

Group Worksheet - Specific Vulnerabilities

1	
2	
3	
4	
5	

Individual Worksheet -FEMA Funded

1	
2	
3	
4	
5	

Group Worksheet - FEMA Funded

1	
2	
3	
4	
5	

FEMA Funding
Wayne County Hazard Mitigation Plan Update

Items Funded By FEMA - Hazard Mitigation Grant Program (HMGP) Project Eligibility

Projects may be of any nature that will result in protection to public or private property. Eligible projects under the HMGP include, but are not limited to:

1. **Property Acquisition** and **Structure Demolition/Relocation** for floodplain protection;
2. **Structure Elevation** in compliance with federal, state, and local ordinances;
3. **Mitigation Reconstruction** of damaged buildings, outside of the floodway or high-risk erosion areas, to minimize future damage;
4. **Dry Floodproofing** of residential and non-residential buildings;
5. **Minor Flood Control** projects to reduce the frequency or severity of flooding (e.g., modification of culverts or creation of storm water detention/retention;
6. **Localized Flood Control** projects to protect specific critical facilities;;
7. **Structural and Nonstructural Retrofitting** of facilities to eliminate the risk of future damage and to protect inhabitants;
8. **Safe Room Construction** for protection from tornadoes, hurricanes, or other high wind events;
9. **Infrastructure Retrofits** to reduce risks to utilities, roads and bridges;
10. **Vegetative Management** and programs such as:
    Defensible space for wildlife;
    Ignition-resistant construction;
    Hazardous fuels reduction;
11. **Post-Disaster Code Enforcement** that supports reconstruction efforts;
12. **State discretionary projects** (5% set aside funding), that fund mitigation actions consistent state goals and objectives and local mitigation plans, but that otherwise may be difficult to prove cost effectiveness using standard benefit cost analysis.

Table 4: Eligible Activities by Program

Eligible Activities					
1. Mitigation Projects	√	√	√	√	√
Property Acquisition and Structure Demolition	√	√	√	√	√
Property Acquisition and Structure Relocation	√	√	√	√	√
Structure Elevation	√	√	√	√	√
Mitigation Reconstruction					√
Dry Floodproofing of Historic Residential Structures	√	√	√	√	√
Dry Floodproofing of Non-residential Structures	√	√	√	√	
Minor Localized Flood Reduction Projects	√	√	√	√	√
Structural Retrofitting of Existing Buildings	√	√			
Non-structural Retrofitting of Existing Buildings and Facilities	√	√			
Safe Room Construction	√	√			
Infrastructure Retrofit	√	√			
Soil Stabilization	√	√			
Wildfire Mitigation	√	√			
Post-Disaster Code Enforcement	√				
5% Initiative Projects	√				
2. Hazard Mitigation Planning	√	√	√		
3. Management Costs	√	√	√	√	√

Action Plan Worksheet
Wayne County
Hazard Mitigation Plan Update
From Workshop of March 14, 2019- **Due April 11, 2019**

Mitigation Strategy Description (What do you want to accomplish?):

-

Specific Hazards Addressed:

Primary Responsibility (Person and Department)**:**

Initiatives Needed (What changes must be made, or new programs started, to make this work?):

Item	By Date
•	
•	

Implementation (What milestone tasks will you need to accomplish to get it done?):

Task	Date
•	
•	

Assessment (Provide a general description of the economic costs and benefits.):

Costs (List categories: example – staff time, printing, etc.)	Benefits
•	•
•	•

Anticipated Funding Sources (How will you cover the costs?):

-

SIGN-IN LOG

2019 HAZARD MITIGATION WORKSHOP

PLEASE PRINT

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Date MARCH 28, 2019

SIGN-IN LOG

2019 HAZARD MITIGATION WORKSHOP

PLEASE PRINT

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Date MARCH 28, 2019

SIGN-IN LOG

2019 HAZARD MITIGATION WORKSHOP

PLEASE PRINT

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Date MARCH 28, 2019

Appendix D. Example Community Resolution for Plan Adoption

SAMPLE Resolution No. _____

ADOPTION OF THE WAYNE COUNTY HAZARD MITIGATION PLAN

WHEREAS, the mission of (**insert community name here**) includes the charge to protect the health, safety, and general welfare of the people of (**insert name of community here**); and

WHEREAS, (**insert community name**), Michigan is subject to flooding, tornadoes, winter storms, and other natural, technological, and human hazards; and

WHEREAS, and the Wayne County Department of Homeland Security and Emergency Management and the Wayne County Local Emergency Planning Committee, comprised of representatives from the County, municipalities, and stakeholder organizations, have prepared a recommended Hazard Mitigation Plan that reviews the options to protect people and reduce damage from these hazards; and

WHEREAS, (**insert community name**) has participated in the planning process for development of this Plan, providing information specific to local hazard priorities, encouraging public participation, identifying desired hazard mitigation strategies, and reviewing the draft Plan; and

WHEREAS, the Wayne County Department of Homeland Security and Emergency Management, with the Wayne County Local Emergency Planning Committee (LEPC), has developed the WAYNE COUNTY HAZARD MITIGATION PLAN (the "Plan") as an official document of the County and establishing a County Hazard Mitigation Coordinating Committee, pursuant to the Disaster Mitigation Act of 2000 (PL-106-390) and associated regulations (44 CFR 210.6); and

WHEREAS, the Plan has been widely circulated for review by the County's residents, municipal officials, and state, federal, and local review agencies and has been revised to reflect their concerns; and

NOW THEREFORE BE IT RESOLVED by the (**insert community name and governing body here**) that:

1. The Wayne County Hazard Mitigation Plan (or section(s) of the Plan specific to the affected community) is/are hereby adopted as an official plan of (**insert Community name here**).
2. The (**insert name of position**) is charged with supervising the implementation of the Plan's recommendations, as they pertain to (**insert community name here**) and within the funding limitations as provided by the (**insert community governing body**) or other sources.
3. The (**insert name of position**) shall give priority attention to the following action items recommended in portions of the Plan specific to (**insert community name**):

    a. _____ (Recommendation _____, Section _____, page _____)
    b. _____ (Recommendation _____, Section _____, page _____)
    c. _____ (Recommendation _____, Section _____, page _____)

Passed by the (**insert community name and governing body here**) on (**insert date**).

_____ _____

Signature Signature

Vote:

Yes_____
No _____

COVID-19 Second Wave Considerations
Updated July 16, 2020

CARES Act Projects

- **Cloth Masks for Indigent Population**
  - Purchasing masks that can be distributed to the residents of low-income communities in out-Wayne County who are not able to afford masks.

- **Neoprene Masks for First Responders**
  - Purchasing specialized masks that wrap around the back of the head instead of looping on ears to provide a more secure fit while performing high-activity duties. Respirator filters are replaceable and can utilize both N-95 and N-99 inserts. Masks to be provided to all First Responders (police/fire/ems) in out-Wayne County.

- **Memorial Hospital as a Reference Lab**
  - Testing machines were purchased for Memorial Hospital's lab to expand their testing capacity to support processing of specimens from Out-Wayne County facilities.

- **Garden City Hospital Testing Site**
  - Testing machines were purchased for Garden City Hospital to support the opening of a long-term drive-thru testing site at their facility. This site is the primary testing site for employees of Wayne County, and is also open to the general public with no out-of-pocket charges.

- **Pandemic Response Support Staffing**
  - Twenty-four (24) positions to support pandemic response operations. Positions include: (2) Emergency Preparedness Specialists, (1) Finance Specialist, (2) Research Analysts, (1) Volunteer Coordinator, (4) POD Coordinators, and (14) Contact Tracer/Case Investigators.

Testing

- **Inmate Testing**
  - Conducting testing for each inmate upon intake. The jails are utilizing Pinnacle Senior Care (company subcontracted by lab) for specimen collection and Memorial Hospital as a reference lab.

- **First Responder Testing**

- Referring first responders to Garden City Hospital provides free diagnostic and antibody testing for the general public. Multiple vendors within Out-Wayne County have been identified to have to ability to conduct mobile testing as an additional option. A further consideration is to provide guidance for first responders and their agencies including protocols for self-monitoring, quarantine, isolation, and returning to work after testing positive.

- **Vulnerable Populations**
  - Multiple vendors within Out-Wayne County have been identified to have to ability to conduct mobile testing in long term care facilities and homeless shelters, as these congregate settings have been identified to house vulnerable populations. Other facilities may include low-income or senior housing complexes, and substance abuse rehabilitation centers. A further consideration is to provide guidance for residents and their agencies including protocols for self-monitoring, quarantine, and isolation.

Data Reporting

- **7-Day Positivity Rate Summary**
  - This weekly report states the average percentage of tests in Out-Wayne County and the State of Michigan that were positive over the previous 7 days. The rate of positivity will be used to determine if the County is conducting enough testing to find cases.

- **Case Completion Report**
  - This weekly report details the current number of cases that are active (assigned and in the investigation process), New (not yet investigated), and completed and organized by month. Associated percentages are also included.

- **Out-Wayne County Community Cases and Deaths**
  - This daily details confirmed cases and deaths in each Out-Wayne County municipality.

- **Long-Term Care (LTC) Report for Mass Distribution**
  - This daily report details confirmed cases and deaths in LTCs by municipality.

- **Out-Wayne County COVID-19 Race Data**
  - This bi-weekly report examines the current trends for the spread of COVID-19 observed in Out-Wayne County, Michigan, in both the general population and among the African-American community.

- **Out-Wayne County 14- and 28-Day Look Back Period Report**
    - This report describes "Confirmed" case trend data for the previous 14 and 28 days. Deaths are not included in this report.

- **Local Schools Report**
    - The MI Safe Schools Return to School Roadmap has a requirement for the Local Health Department to provide a weekly report to the school districts, the weekly report needs include:
        - Number of positive COVID-19 cases
        - Percent positivity rate
        - Capacity information (i.e. hospital, testing, etc.)
        - Updates on outbreak events/ clusters

- **Mass Distribution Site Reporting**
    - Once a vaccine is available, there will be a daily, weekly, and monthly report detailing distribution information (e.g., throughput, doses administered, demographic information, etc.).

- **Tracking of staff and volunteer hours**
    - In the event a vaccine is delivered and PODS (Points of Distribution Sites) are activated the tracking of staff and volunteer hours will allow for record-keeping in the event FEMA offers reimbursement. This will also be the case if the vaccine is distributed through clinics, outreach events, schools, etc.

Mass Vaccination

- Open PODs
    - Need to determine which POD sites should be activated based on the community needs. Factors to consider include: community impact (number of cases/deaths, vulnerable population census), and access to vaccine through other sources. It is unclear at this time how the federal government intends to handle distribution of the vaccine, but will most likely be sourced through existing vaccine programs and not via SNS channels.
    - Currently, all Wayne County PODs are walk-thru. Based on the resent success of the COVID-19 Drive-Thru Testing outreaches, we need to explore the feasibility of running drive-thru vaccination clinics. Factors to consider include: vaccine storage, staffing, site resources (tents, cones, lavatories, etc.), internet access for MCIR data entry, and inclement weather plans.
    - The registration & screening questions will need to be developed before we can begin POD operations. Because there is no vaccine yet, we are not able to create a

screening algorithm. We also need to make a determination if online registration will be an option and, if so, creating that process as well.
    - Staff
        - POD Managers are being hired with CARES Act funding. In the months prior to opening the PODs, they will work on planning and logistics of the PODs and related processes.
        - General staff roles will be filled through community volunteers. A Volunteer Manager is being hired with CARES Act funding and will coordinate with local volunteer groups and the Michigan Volunteer Registry to recruit, train, and ultimately schedule staff for PODs.
    - Once a vaccine has been developed and we know what the storage and handling requirements will be, POD Managers will need to work with the Communicable Disease and Immunization staff to ensure that necessary infrastructure and resources are in place at POD locations to properly store vaccine.
    - A process will need to be created to ensure that vaccines administered at Open PODs are correctly entered into the MCIR system in a timely fashion.

- Closed PODs
    - Inventory allocation and tracking will be coordinated by the IMATS coordinator in the PHOC. It is unclear at this time how the federal government intends to handle vaccine distribution.
    - Once a vaccine is developed, health department will need to coordinate with closed POD partners to ensure that the necessary infrastructure and resources are in place to properly store vaccine.
    - A process will need to be created to ensure that vaccines administered at Closed PODs are correctly entered into the MCIR system in a timely fashion.

Training

- **Training courses include:**
    - POD (Point of Dispensing) Essentials
    - Just-in-Time Training for POD staff
    - MCIR (Michigan Care Improvement Registry (MCIR)
    - Patient Registration Software/App/Database Reporting
    - Contact Tracing/MDSS (Michigan Disease Surveillance System)
    - Vaccination Administration

COVID-19 Second Wave Considerations
Updated July 16, 2020

Personal Protective Equipment (PPE)

- Coordinate with DHSEM as they maintain the primary role of acquisition and management of PPE. Continued PPE requests for HHVS operational needs, PHD programs, and jail staff may be made through DHSEM. An inventory needs list should be developed for any additional drive-thru testing campaigns, as well as for staff providing COVID-19 vaccinations once available.

Public Information

- Educational Materials
    - Development of "No Shirt, No Shoes, No Mask, and No Service" signs to be posted on the Wayne County webpage for businesses to print and post. Coordinating with Economic Development to reach out to businesses to provide them with the COVID-19 educational material catalog for material to be self-printed and posted within their facilities.
- Prepared Announcements
    - Preparing scripts and statements regarding any large increases in COVID-19 cases and reiteration of preventative measures. Prepared announcements for vaccination availability and locations can also be considered.
- The Information Center and 2-1-1
    - Provide information including updated testing sites, Save-A-Life program, State requirements for businesses and the public, large increases in cases, and any useful information that may be assistive with contact tracing.

ASTI ENVIRONMENTAL

ENVIRONMENTAL INVESTIGATION, REMEDIATION, COMPLIANCE AND RESTORATION PROJECTS THROUGHOUT THE GREAT LAKES SINCE 1985.

OUR SERVICES INCLUDE:

- **ASBESTOS, LEAD, MOLD, AND RADON ASSESSMENTS**
- **BROWNFIELD/GREYFIELD REDEVELOPMENT ASSISTANCE**
- **DEVELOPMENT INCENTIVES AND GRANT MANAGEMENT**
- **ECOLOGICAL ASSESSMENTS AND RESTORATION**
- **ENVIRONMENTAL ASSESSMENTS AND IMPACT STATEMENTS**
- **ENVIRONMENTAL OPPORTUNITIES ASSESSMENT**
- **GIS MAPPING**
- **HAZARD MITIGATION PLANNING**
- **MINING AND RECLAMATION ASSISTANCE**
- **REMEDIATION IMPLEMENTATION, OPERATION AND MAINTENANCE**
- **PHASE I ESA AND ENVIRONMENTAL DUE DILIGENCE ASSESSMENTS**
- **REGULATORY COMPLIANCE AND PERMITTING**
- **SOIL AND GROUNDWATER ASSESSMENTS**
- **SOIL AND GROUNDWATER REMEDIATION**
- **STORAGE TANK COMPLIANCE AND CLOSURE**
- **THREATENED AND ENDANGERED SPECIES SURVEYS**
- **WATERSHED AND STORMWATER MANAGEMENT PROGRAMS**
- **WETLAND DELINEATION, PERMITTING, MITIGATION AND BANKING**

ASTI ENVIRONMENTAL
Detroit/Grand Rapids/Brighton

Phone: 1-800-395-2784
www.asti-env.com
Email: environmental@asti-env.com

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CITY OF LIVONIA – CITY COUNCIL
MINUTES OF STUDY MEETING HELD NOVEMBER 16, 2020

Meeting was called to order via Zoom remote technology at 8:21 p.m. by President Kathleen McIntyre. Present: Rob Donovic (Deployed), Jim Jolly (Livonia, Michigan), Laura Toy (Livonia, Michigan), Scott Bahr (Livonia, Michigan), Cathy White (Florida), and Kathleen McIntyre (Livonia, Michigan). Absent: None

Councilmember Donovic led the meeting in the Pledge of Allegiance.

Elected and appointed officials present: Mark Taormina, Director of Planning and Economic Development; Todd Zilincik, City Engineer; Paul Bernier, City Attorney; Susan Nash, City Clerk; Curtis Caid, Chief of Police; Dave Heavener, Fire Chief; Jerome Hanna, Director of Inspection; Casey O'Neil, Director of Information Systems; and Jacob Rushlow, Superintendent of Public Service.

4) REQUEST FOR COUNCIL APPROVAL ON A PROPOSED LOT SPLIT: Department of Assessment, re: for the property located on the east side Merriman Road, between West Chicago and Plymouth Roads in the Northwest 1/4 of Section 35 (11316 Merriman) and to waive the property depth-to-width ratio. (Tax Item 138-99-0058-000) (Petition 2020-09-LS-04)

Mark Taormina, Director of Planning and Economic Development, presented this request to Council. He stated this is a lot split on Merriman Road, it's a single acreage parcel that currently measures 180 feet in width by 226 feet. It does contain a single family residence. The intent is to split the property into two equal halves that would measure 90 feet by 226 feet each. That turns out to be just less than ½ acre minimum requirement which is zone R-U-F. So both parcels would be about 1,440 square feet shy of the ½ acre requirement. There's no issue with the lot width it's really just an area deficiency that would require Council's approval. Other than the need to remove the garage on the lot that's being created since that would create an accessory building on a parcel that does not have a principal structure, but that's probably secondary to the lot area waiver. And if you'll note, this is very consistent with the pattern of development in the area. This is the largest lot on this side of the road, just about every other parcel has been split to the 90 foot dimension at their request.

Councilmember McCullough asked Taormina if the additional items needed to be addressed by Council and he replied that the garage is something that would have to be addressed by the Zoning Board of Appeals if they wanted to keep that structure on the property after the split. The issue of the stormwater is one that would be reviewed administratively through the Engineering Division, and he's assuming that there are options available and what exactly those are, he doesn't know, but Todd could address that.

Councilmember McCullough offered an approving resolution for the Consent Agenda.

DIRECTION: APPROVING CONSENT

REPORT TO THE LIVONIA CITY COUNCIL

Assessing
October 28, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Kathie Siterlet, Property Appraiser, Assessing

AGENDA ITEM

REQUEST FOR COUNCIL APPROVAL ON A PROPOSED LOT SPLIT: Department of Assessment, re: for the property located on the east side Merriman Road, between West Chicago and Plymouth Roads in the Northwest 1/4 of Section 35 (11316 Merriman) and to waive the property depth-to-width ratio. (Tax Item 138-99-0058-000) (Petition 2020-09-LS-04)

BACKGROUND

Honorable Members City Council
Subject- Proposed Lot Split (Petition 2020-09-LS-04)
TAX ITEM NUMBER: 138-99-0058-000
ADDRESS: 11316 MERRIMAN RD.

This office has been requested by Jeffrey Joyce owner of 11316 Merriman Rd. to split the subject property according to the attached survey and legal descriptions.

Attached are the responses from the Law, Planning, Engineering, and Inspection Departments with their comments and recommendations.

This approval is being submitted to Council inasmuch as all two (2) parcels would not meet the minimum lot width and lot area for the R-U-F Rural Urban Farm zoning.

RECOMMENDATION

FISCAL CONSIDERATION

ATTACHMENTS

1. IOT SPLIT -11316 MERRIMAN

APPROVED BY

Date: October 29, 2020

Maureen Miller Brosnan, Mayor

Date: November 06, 2020

Mark Taormina, Planning and Economic Development Director

Date: November 06, 2020

Todd Zilincik, City Engineer

DEPARTMENTAL CORRESPONDENCE
DEPARTMENT OF LAW

October 23, 2020

RECEIVED
OCT 27 2020
CITY OF LIVONIA, MICH.
DEPARTMENT OF ASSESSMENT

TO: **Kathie Siterlet, Property Appraiser II**

FROM: **Michael E. Fisher, Chief Assistant City Attorney** MFisher

SUBJECT: **Proposed Lot Split 138-99-0058-000 – 11316 Merriman**

Thank you for this interesting question.

As you have correctly noted, the proposed lot split must go before City Council, where the applicable lot area requirement can be waived. Such a waiver can only occur if a resolution describing the waiver is approved by no less than five Councilmembers.

The only other requirement City Council can waive is the lot width requirement of Livonia Zoning Ordinance Section 5.04. There, the minimum width of RUF lots is specified: one-fourth the average depth. In this case, the average depth is ± 226 feet, one-quarter of which is 56'6". This proposed split produces 90' wide lots, so lot width is not an issue.

Other items worthy of note: 1) the Assistant City Engineer advises that the subject property does not have access to the public stormwater system, so flooding is likely to be an issue unless an adequate alternative stormwater solution is found, and 2) the garage on proposed Parcel B will need to be demolished if no principal structure is built on that parcel. Accessory buildings may not be the principal structure on a parcel unless the property owner obtains a variance suspending this requirement as to the proposed lots.

Thank you for your interesting question.

MEF/cd

cc: Jerome Hanna, Scott Miller, Mark Taormina, Dave Lear, Paul Bernier, Dave Varga

P:\Brenda\Correspondence\Other Dept\Assessor\2020\11316 Merriman.doc

PLANNING COMMISSION

IAN WILSHAW, Chairman
GLEN W. LONG, JR., Vice Chairman
SAM CARAMAGNO, Secretary
DAVID BONGERO
ELIZABETH McCUE
CAROL A. SMILEY
PETER H. VENTURA

MAUREEN MILLER BROSNAN
MAYOR

MARK TAORMINA
PLANNING & ECONOMIC
DEVELOPMENT DIRECTOR

SCOTT O. MILLER
PLANNER IV

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2290 FAX (734) 466-2108

DATE: **September 16, 2020**

TO: **Kathie Siterlet, Assessment**

FROM: **Scott Miller, Planner IV**

SUBJECT: **Proposed Lot Split (Petition 2020-09-LS-04)**
Tax Items 138-99-0058-000 (11316 Merriman Road)

Per to your request, the Planning Department has reviewed the above-referenced lot split request submitted by Jeffrey Joyce for compliance with the City of Livonia Zoning Ordinance #543, as amended. The property involved in this request is located on the east side of Merriman Road between West Chicago and Plymouth Roads in the Northwest ¼ of Section 35. The zoning is R-U-F, Rural Urban Farm, which requires a minimum lot size of one-half acre (21,780 square feet) and a lot width of at least ¼ of the lot depth, provided that a lot shall not be required to have a width greater than 100 feet..

Existing parcel 11316 Merriman Road (Tax I.D. #138-99-0058-000) measures 180.00 feet in frontage along Merriman Road by a depth of 226.00 feet, for a total lot area of 0.93 acre. This site is currently developed with a single-family home.

The submitted survey shows that the parcel would be split in half, forming a north and south parcel. The northern parcel, identified on the submitted survey as *Parcel "A"*, would measure 90.00 feet in frontage along Merriman Road by a depth of 226.00 feet, for a total lot area of 0.47 acre. The existing house would remain and be located on this newly formed parcel. The southern parcel, identified on the survey as *Parcel "B"*, would mirror Parcel "A" with similar measurements of 90.00 feet in frontage along Merriman Road by a depth of 226.00 feet, for a total lot area of 0.47 acre. This would be a new buildable lot.

As proposed, both parcels fail to comply with the minimum lot width and lot area requirements as established in Section 5.04 of the Zoning Ordinance. However, such requirements, pursuant to Sections 16.32.030a) and 16.32.110 of the Livonia Code of Ordinances, may be waived or modified by a resolution of City Council, delineating the requirement(s) waived, in which no less than five (5) of the members concur. The proposed parcel division is consistent with the pattern of development in the surrounding area.

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TODD J. ZILINCIK, P.E.
City Engineer

DAVID W. LEAR
Assistant City Engineer

MAUREEN MILLER BROSNAN
MAYOR

DONALD R. ROHRAFF
Director of Public Works

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2571
FAX: (734) 466-2195

September 14, 2020

Mrs. Kathie Siterlet
Assessor's Department
City of Livonia

Re: Lot Split Request

138-99-0058-000 #11316 Merriman Road

Dear Mrs. Siterlet;

The Engineering Division of Public Works has reviewed the legal descriptions and drawings provided to this office on September 14, 2020 to split the above referenced parcel. We have no objections to the proposed Split, although we would like to note the following items:

1. The address of **#11316 Merriman Road** shall continue to be used for the north parcel "Parcel A", and the new address of **#11308 Merriman Road** should be used for the newly created south parcel "Parcel B", if the split is approved.
2. The parcels have access to public sanitary sewer and water main, but there is no access to public storm sewer. If the owner plans to develop either of the parcels, alternate drainage facilities will need to be provided for sump pump outlets and surface drainage.
3. As required for any new lot split, the owner will need to contact DTE Energy and provide a land split application for service planning. (see attached application)

If you have any questions, or need any additional information, please feel free to contact me at (734) 466-2608.

Sincerely,

David W. Lear, P.E.
Assistant City Engineer

cc: File

INSPECTION DEPARTMENT

BUILDING
HEATING
PLUMBING
ELECTRICAL
ZONING
SANITATION
ENVIRONMENTAL PROTECTION
ORDINANCE ENFORCEMENT

MAUREEN MILLER BROSNAN
MAYOR

JEROME A. HANNA
DIRECTOR

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2580
FAX: (734) 466-2095

DATE: September 30, 2020

TO: Kathie Siterlet

FROM: Jerome Hanna

SUBJECT: Lot Split
138-99-0058-000 – 11316 Merriman

Pursuant to your request, the Inspection Department has reviewed the proposed lot split made by Jeffrey Joyce to divide the properties referenced above. The property is located on the East Side of Merriman between Plymouth and Orangelawn in the NW ¼ of Section 35. The property is zoned RUF (Rural Urban Farm) requiring a lot area of 0.50 acres (21,780 sq. ft.) and a lot width of ¼ the lot depth, not to exceed 100 feet.

The current parcel is 180 feet wide and 226 feet deep for a lot area of 40,680 sq. ft. (0.93 acres). There is an existing dwelling and detached garage/storage building.

The proposal is to divide the current parcel in half creating two identical parcels, 'A' and 'B', each 90 feet wide and 226 feet deep for a lot area of 20,340 sq. ft. (0.47 acres).

The individual parcel analysis is as follows:

PARCEL 'A' is the most northerly parcel, will contain the existing dwelling and gravel driveway. All setbacks and lot coverage of the existing dwelling on this parcel are conforming to Zoning Ordinance 543.

PARCEL 'B' will only contain the garage/accessory building. The setbacks of this building are conforming to Zoning Ordinance 543.

Parcel 'A' and 'B' are deficient in lot area by 1,440 sq. ft. (0.03 acres) and require a 2/3 majority approving vote of City Council for the proposed property division. Also Parcel 'B' contains only a garage/accessory building without a primary dwelling on this parcel and would require an approval from the Zoning Board of Appeals for maintaining this building or it may be removed to create a vacant parcel.

I trust this provides the information requested.

Jerome Hanna
Director of Inspection

/kdt

DEPARTMENT OF FINANCE

Michael T. Slater
DIRECTOR OF FINANCE

Connie Kumpula
CHIEF ACCOUNTANT

MAUREEN MILLER BROSNAN
MAYOR

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2260
FAX: (734) 421-1807

DATE: September 23, 2020

FROM: Jennifer Schilk DEPT: Water Billing

TO: Kathie Siterlet DEPT: Assessment

Lot Split

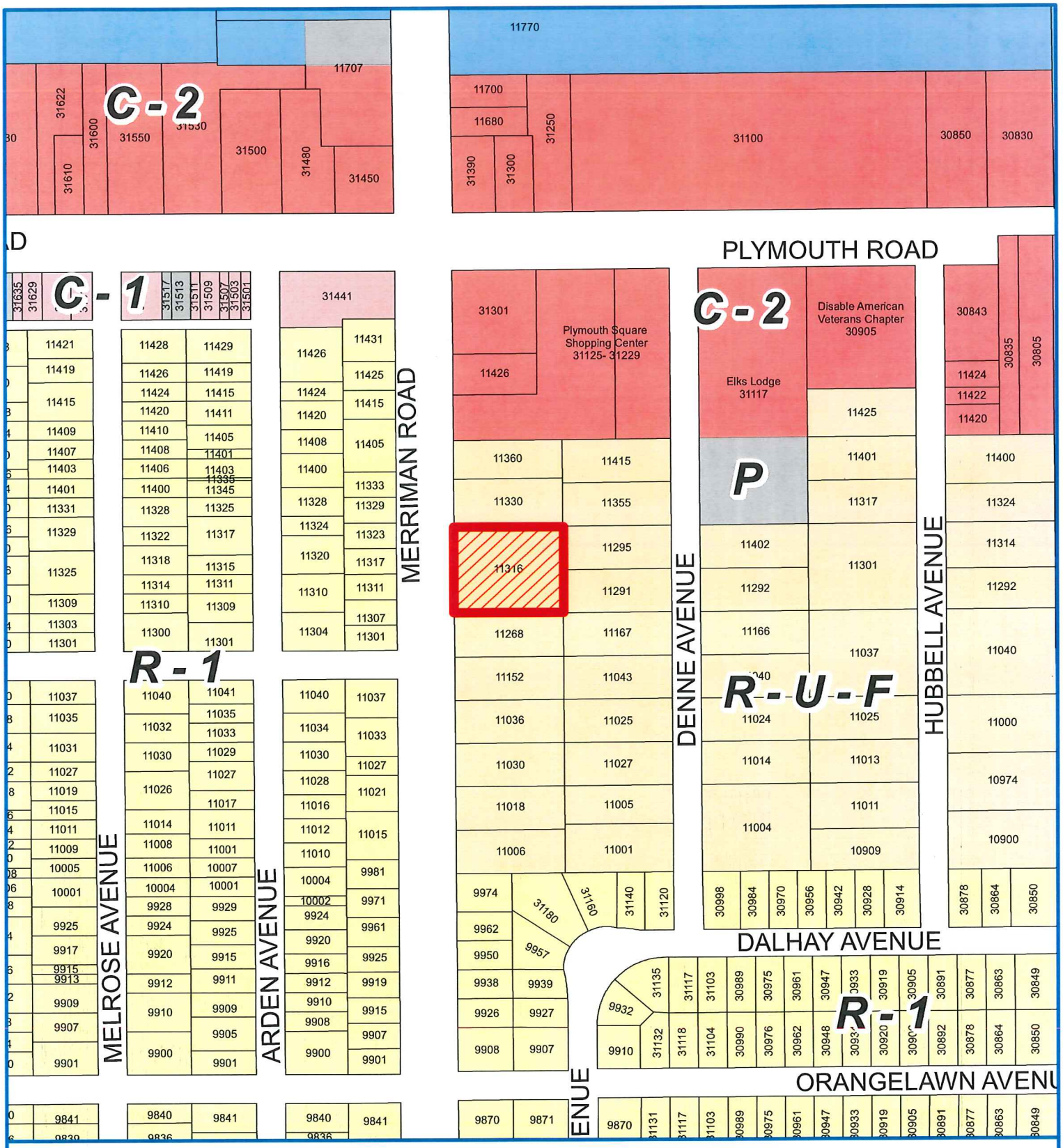
Parent Parcel: 138-99-0058-000

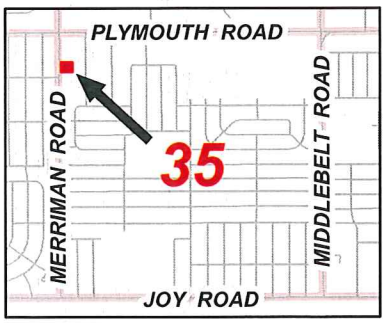
Dear Mrs. Siterlet,

The water account associated with 11316 Merriman Rd has a current balance of $0. Please feel free to contact me with additional questions.

Sincerely,

Jennifer Schilk
Accountant I



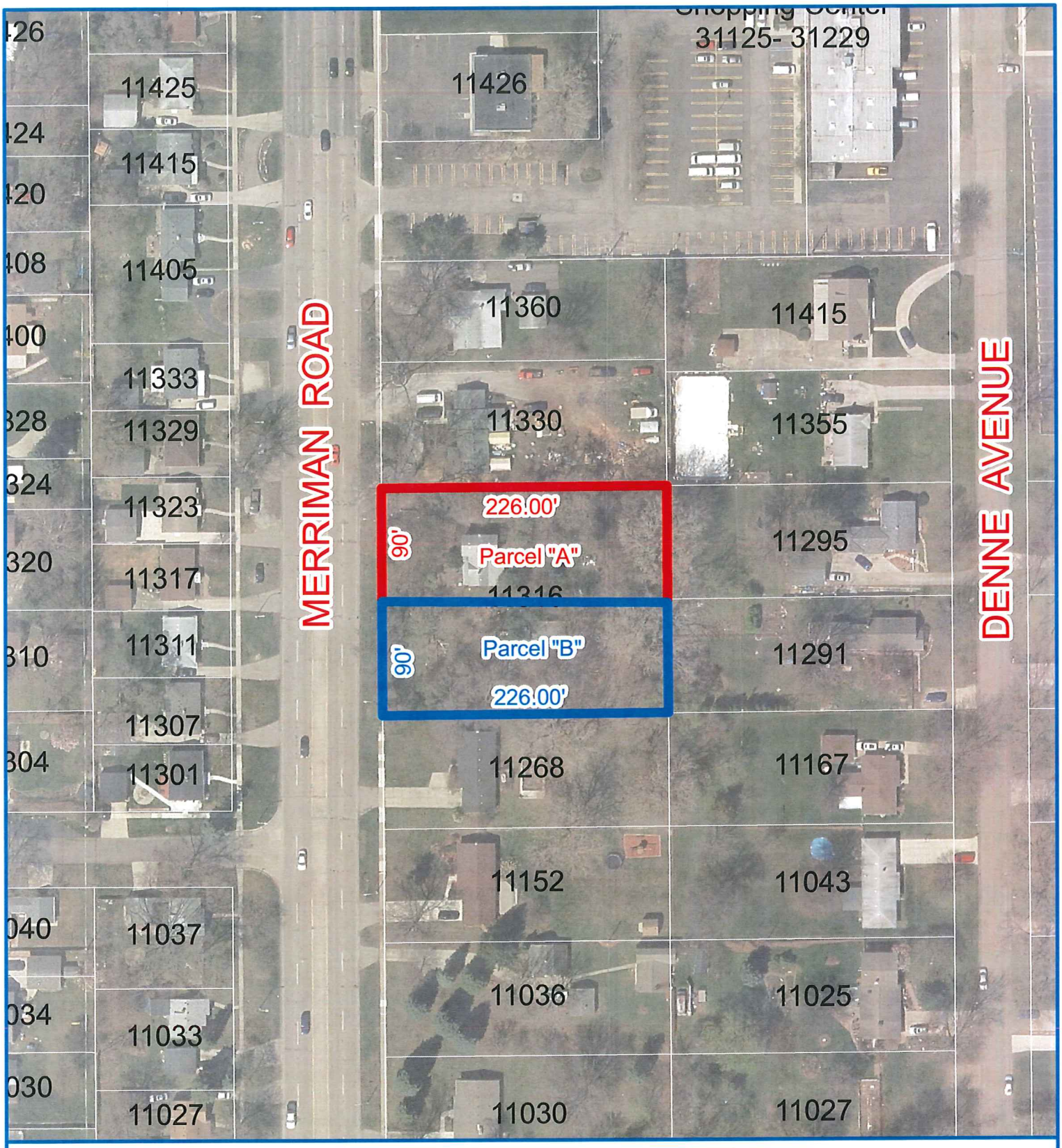


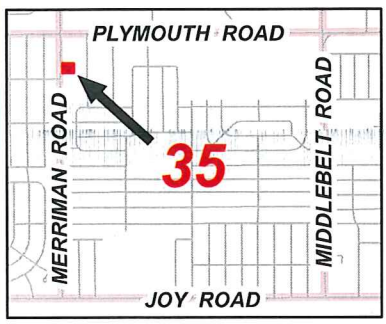
Zoning & Address Map

Petition 2020-09-LS-04
Jeffrey Joyce
11316 Merriman Road (Tax I.D. #138-99-0058-000)
Lot Split

N
Not to Scale

City of Livonia
Planning Department





Aerial Map

Petition 2020-09-LS-04
Jeffrey Joyce
11316 Merriman Road (Tax I.D. #138-99-0058-000)
Lot Split

N

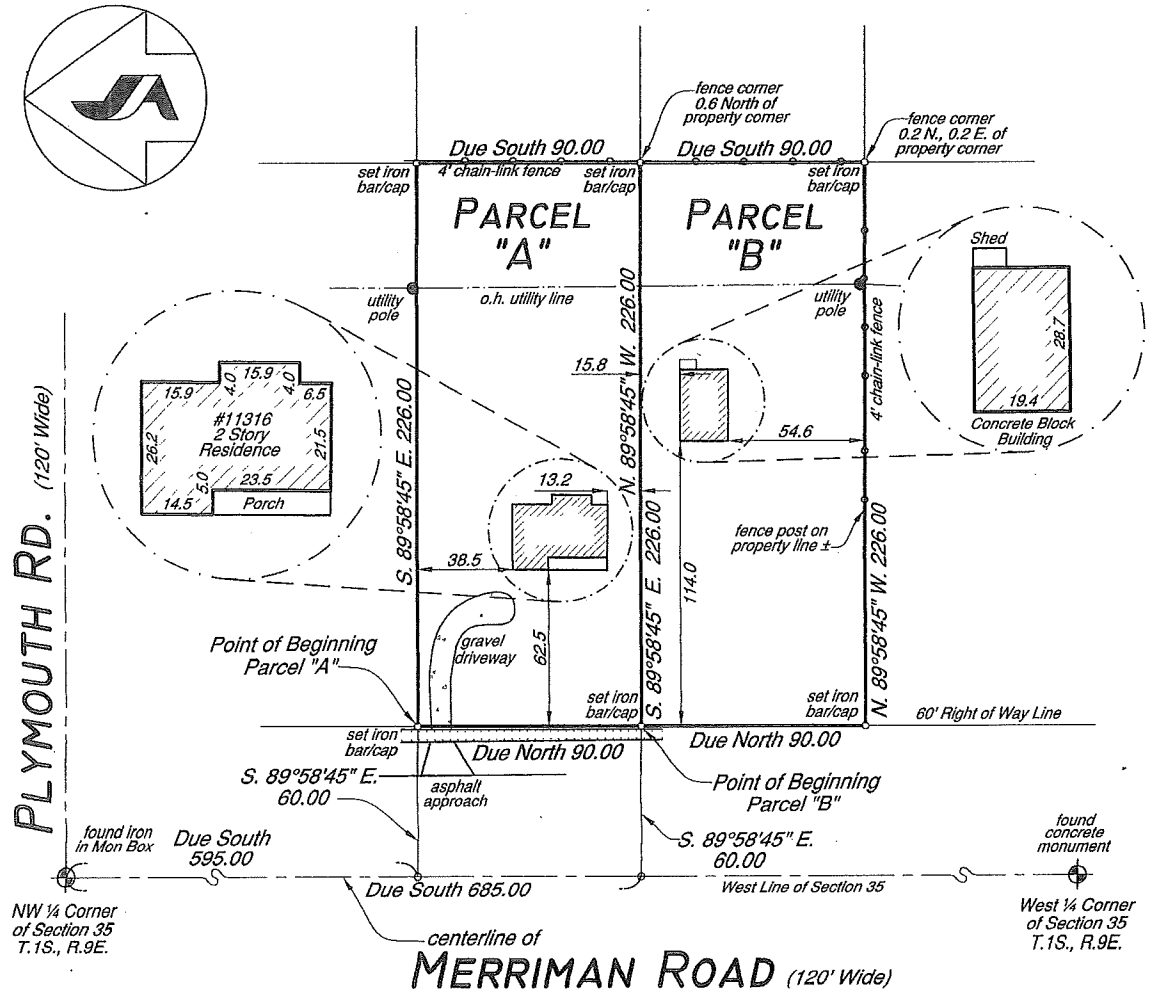
Not to Scale

City of Livonia
Planning Department

See Sheet 2 For Legal Descriptions

Northwest Corner of Section 35 Found Iron Bar in Mon Box	
Set Nail/Tag in N.W. Side Utility Pole	N41°E 79.48
Set Nail/Tag in S.S. Side Utility Pole	S43°E 74.52
Found "X" in N. Bolt Steel Light Pole	S41°W 75.92
Top Nut of Hydrant	N34°W 84.77

West ¼ Corner of Section 35 Found Concrete Monument	
Found "X" in N.W. Corner of Light Pole Base	N55°E 61.54
Top Nut of Hydrant	S65°E 78.68
Found "X" in N.E. Corner of Light Pole Base	S55°W 62.97
Set Nail/Tag in N.N.E Side of Utility Pole	N57°W 60.15



SURVEYOR'S CERTIFICATE: I HEREBY CERTIFY THAT THIS SURVEY WAS PREPARED BY ME, OR UNDER MY DIRECT SUPERVISION, THAT I AM A DULY LICENSED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF MICHIGAN, THAT THIS SURVEY COMPLIES WITH THE REQUIREMENTS OF SECTION 3, P.A. 132 OF 1970, AS AMENDED, AND THAT THE ERROR OF CLOSURE OF THE UNADJUSTED FIELD OBSERVATIONS WAS 1 TO 76,000.

I, JOHN JEKABSON P.S. #19836

STATE OF MICHIGAN
I. JOHN JEKABSON
PROFESSIONAL SURVEYOR
No. 19836
LICENSED PROFESSIONAL SURVEYOR

CERTIFIED SURVEY

Jeff Joyce
18428 Laurel Dr.
Livonia, MI 48152
(248) 877-5653

Jekabson & Associates, P.C.
Professional Land Surveyors
1320 Goldsmith, Plymouth, MI 48170
(734) 414-7200 (734) 414-7272 fax

Date:	22 July 2020
Job No.	20-07-010
Scale	1" = 60'
Drawn	AAH
Checked	JGE
Sheet	1 OF 2

See Sheet 2 For Legal Descriptions

ORIGINAL LEGAL DESCRIPTIONS:

TAX ID #138990058000

PART OF THE NORTHWEST QUARTER OF THE NORTHWEST QUARTER OF SECTION 35, DESCRIBED AS: BEGINNING AT A POINT ON THE WEST LINE OF SAID SECTION 35 DISTANT DUE SOUTH 595.00 FEET FROM THE NORTHWEST CORNER OF SECTION 35 AND PROCEEDING THENCE SOUTH 89°58'45" EAST 286.00 FEET, THENCE DUE SOUTH 180.00 FEET, THENCE NORTH 89°58'45" WEST 286.00 FEET TO THE WEST LINE OF SECTION 35, THENCE DUE NORTH ALONG SAID WEST LINE 180.00 FEET TO THE POINT OF BEGINNING, EXCLUDING THE WEST 60.00 FEET THEREOF. PARCEL CONTAINS 0.93 ACRES.

DESCRIPTION AFTER SURVEY:

PARCEL A

PART OF THE NORTHWEST QUARTER OF SECTION 35, TOWN 1 SOUTH, RANGE 9 EAST, CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTHWEST QUARTER CORNER OF SECTION 35; THENCE ALONG THE WEST LINE OF SECTION 35 AND THE CENTERLINE OF MERRIMAN ROAD DUE SOUTH 595.00 FEET; THENCE SOUTH 89°58'45" EAST 60.00 FEET TO THE **POINT OF BEGINNING**; THENCE CONTINUING SOUTH 89°58'45" EAST 226.00 FEET; THENCE DUE SOUTH 90.00 FEET; THENCE NORTH 89° 58' 45" WEST; THENCE DUE NORTH 90.00 FEET TO THE **POINT OF BEGINNING**. LOT CONTAINS 20,340 SQUARE FEET OR 0.467 ACRES. SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

PARCEL B

PART OF THE NORTHWEST QUARTER OF SECTION 35, TOWN 1 SOUTH, RANGE 9 EAST, CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE NORTHWEST QUARTER CORNER OF SECTION 35; THENCE ALONG THE WEST LINE OF SECTION 35 AND THE CENTERLINE OF MERRIMAN ROAD DUE SOUTH 685.00 FEET; THENCE SOUTH 89°58'45" EAST 60.00 FEET TO THE **POINT OF BEGINNING**; THENCE CONTINUING SOUTH 89°58'45" EAST 226.00 FEET; THENCE DUE SOUTH 90.00 FEET; THENCE NORTH 89° 58' 45" WEST; THENCE DUE NORTH 90.00 FEET TO THE **POINT OF BEGINNING**. LOT CONTAINS 20,340 SQUARE FEET OR 0.467 ACRES. SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

CERTIFIED SURVEY

Jeff Joyce
18428 Laurel Dr.
Livonia, MI 48152
(248) 877-5653

Jekabson & Associates, P.C.
Professional Land Surveyors
1320 Goldsmith, Plymouth, MI 48170
(734) 414-7200 (734) 414-7272 fax

Date:	22 July 2020
Job No.	20-07-010
Scale	1" = 60'
Drawn	AAH
Checked	JGE
Sheet	2 OF 2

CITY OF LIVONIA – CITY COUNCIL
MINUTES OF STUDY MEETING HELD NOVEMBER 16, 2020

Meeting was called to order via Zoom remote technology at 8:21 p.m. by President Kathleen McIntyre. Present: Rob Donovic (Deployed), Jim Jolly (Livonia, Michigan), Laura Toy (Livonia, Michigan), Scott Bahr (Livonia, Michigan), Cathy White (Florida), and Kathleen McIntyre (Livonia, Michigan). Absent: None

Councilmember Donovic led the meeting in the Pledge of Allegiance.

Elected and appointed officials present: Mark Taormina, Director of Planning and Economic Development; Todd Zilincik, City Engineer; Paul Bernier, City Attorney; Susan Nash, City Clerk; Curtis Caid, Chief of Police; Dave Heavener, Fire Chief; Jerome Hanna, Director of Inspection; Casey O'Neil, Director of Information Systems; and Jacob Rushlow, Superintendent of Public Service.

5) REQUEST TO AUTHORIZE BUILDING PLANS SCANNED INTO ELECRONIC MEDIA AND AUTHORIZE EXPENDITURE: Department of Inspection, re: under State of Michigan Scanning and Microfilm Services extended purchasing program, to avoid losing the paper history files due to unfortunate events.

Jerome Hanna, Director of Inspection, presented this request to Council. He stated in the last couple of years they've had most of their history files of all of their properties scanned, over a million documents were scanned and this is the last part of that which is all of our commercial industrial plans and they are required to be maintained through the life of the structure. And some of them are becoming deteriorated already and this is an opportunity for us not only to save those documents but to make them more readily accessible to staff members and other departments and to FOIAs. He stated they are asking Council to authorize this already budgeted expenditure.

Councilmember Toy offered an approving resolution for the Consent Agenda.

DIRECTION: APPROVING CONSENT

REPORT TO THE LIVONIA CITY COUNCIL

Inspection
November 3, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Karen Thompson, Program Supervisor, Inspection

AGENDA ITEM

REQUEST TO AUTHORIZE BUILDING PLANS SCANNED INTO ELECRONIC MEDIA AND AUTHORIZE EXPENDITURE: Department of Inspection, re: under State of Michigan Scanning and Microfilm Services extended purchasing program, to avoid losing the paper history files due to unfortunate events.

BACKGROUND

RECOMMENDATION

FISCAL CONSIDERATION

State of Michigan Scanning and Microfilm Services Contract Number 071-180000000749

ATTACHMENTS

1. SCANNING OF BUILDING PLANS

APPROVED BY

INSPECTION DEPARTMENT

BUILDING
HEATING
PLUMBING
ELECTRICAL
ZONING
SANITATION
ENVIRONMENTAL PROTECTION
ORDINANCE ENFORCEMENT

MAUREEN MILLER BROSNAN
MAYOR

JEROME A. HANNA
DIRECTOR

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2580
FAX: (734) 466-2095

October 20, 2020

Honorable Members of the Council
City of Livonia

RE: Recommendation to have building plans scanned to electronic media under State of Michigan Scanning and Microfilm Services Contract Number 071-180000000749

Dear Council Members:

The 2019-2020 approved Capital Projects Fund includes funds that allows us to scan building plans for the Inspection Department. Arrangements were made to incorporate the scanning of documents through the State bid process (Contract No. 071-180000000749), an extended purchasing program made available to local governments through the State of Michigan. The State bid was awarded to, and accepted by Graphic Sciences, Madison Heights, MI.

1. Document preparation
   Cost $14,568.14

2. Scanning of 114,100 pages.
   Cost: $63,752.33

3. Naming of 45,000 scanned files.
   Cost: $ 960.00

4. The completed cost for the conversion activity is $79,280.47.

It is the recommendation of the Inspection Department that City Council:

1. Authorize the scanning of building plans under the State of Michigan extended purchasing program (Contract No. 071-180000000749) Graphic Services, 1551 East Lincoln St., Madison Heights, MI 48071 in the amount of $79,280.47.

2. Authorize expenditure from budgeted funds in the Capital Outlay – Minor account 401-000-971-000 in the amount of $79,280.47.

3. Authorize the Director of Inspection to make any minor adjustments as needed.

This scanning of building plans is proposed for several reasons as follows:

1. The plans that we are requesting to have scanned are required by Michigan Law (MCL 399.5 and 750.491) to be retained according to the Building Department Retention and Disposal Schedule. The IS Director has recommended that this process take place.
2. We want to avoid losing the paper history files due to any unfortunate events such as water or fire damage. Also, the paper files are deteriorating each time they are handled and will eventually be unreadable.
3. These files are accessed by departments throughout City Hall and having them electronically available will prevent lost or misplaced building plans.
4. Having access to these files electronically will save time in responding to FOIA requests, Zoning letter requests, and other daily searches. They will also be available to other departments who will have Laser Fiche access.

Therefore, in summation, we would respectfully ask the Council to authorize the scanning of building plans as noted from Graphic Sciences, 1551 East Lincoln St. Madison Height, MI 48071.

Funds Available:

Michael T. Slater
Director of Finance

Respectfully submitted,

Jerome Hanna
Director of Inspection

Approved for Submission

Maureen Miller Brosnan, Mayor

c: Mayor
City Clerk
City Attorney
Director of Finance
Director of Information System

JH/kdt

GRAPHIC SCIENCES

Your Partner in document and information management

1551 East Lincoln • Madison Heights, MI 48071 • 248.549.6600 • fax 248.549.2760

E-Mail me at Terryb@gsiinc.com

City of Livonia
Building Department
Drawing Scanning Project
Price Estimate

Prepared By:
Graphic Sciences, Inc
1551 East Lincoln Ave
Madison Heights, Mi. 48071
Terry Buchanan
800-397-6620
October 8, 2020

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Payment Terms 4
Product Acceptance 4
General 5
Change Management 5

Conversion Activities

Listed below is estimate of your Collection

Estimated Drawings	Estimated Documents	Estimated Files	File Naming
63,150	50,950	9,600	Address & Permit #

Conversion Pricing

We are pleased to provide the following prices for the conversion as outlined. The image count below is based on an estimate:

Building Drawings				
Item	**Volume**	**Unit**	**Unit Price**	**Total Price**
Document Prep	127	Per Page	$19.73	$2,513.11
Scan Pages	50,950	Per Page	$0.0614	$3,128.33
Drawing Prep	611	Per Page	$19.73	$12,055.03
Drawing Scanning	63,150	Per Page	$0.96	$60,624.00
File Naming	9,600	Per File	$0.10	$960.00
USB Media	1	Each	No Charge	
Pickup & Delivery	2	Trips	No Charge	
			Totals:	**$79,280.47**

Above images counts are estimates only, the total units processed will be charged the unit pricing listed above. Converted images and indexes delivered on USB media. There is no pickup & delivery charge per trip. Pricing is base on Graphic Sciences CONTRACT NO. 171 180000000749 With the State of Michigan for Scanning & Microfilm services.
Expires 5-30-2023

Quality Control

Each production step will be carefully monitored and evaluated to ensure the highest quality product humanly possible.

Attributes are as follows:

• Scanning	Ensure legibility Ensure skew-angle Ensure orientation Ensure sequence
• Data Entry	Ensure data entry accuracy
• Media Creation	Ensure image transfer accuracy & completeness

Each group of material will be batched into groups. Batches will be managed throughout the conversion process as they pass from function to function.

Payment Terms

- Terms: Net 30 days
- Delivery: To be determined.
- Tax: If applicable

Product Acceptance

A. Upon receipt of the images, the client will have 60 days to review and inspect the delivered images to determine any quality concerns.. The delivered product will be deemed acceptable, unless client otherwise notifies Graphic Sciences.

B. Graphic Sciences will correct problems identified as the vendors responsibility within a schedule agreeable to both parties.
If quality concerns are communicated, the 30-day holding period will restart after the issues are resolved and the work is delivered back to the client

General

Client will issue to *Graphic Sciences, Inc.*, a valid purchase order to cover the costs associated with this project. The purchase order should detail the unit costs presented in Pricing. Billing will be performed as work is delivered. Payment terms shall be net 30 days from invoice date.

It shall be presumed that all images and data are acceptable 60 days after delivery unless Client gives notification to Graphic Sciences.

Documents required by *Client* personnel that are in our possession during the conversion process will be available to authorized Client personnel same business day. A listing is required of all employees and a password to allow delivery of any Client content.

Client and Graphic Sciences will appoint project managers. These managers will communicate throughout the conversion project and have sufficient progress communication.

Change Management

In the event that system design changes become necessary to accommodate as yet unforeseen requirements, *Client* will express the need for the change and the desired outcome in writing. The request for change document should be sent to *Graphic Sciences, Inc. Graphic Sciences, Inc.* will review the change request to determine the feasibility of the change and any potential costs related to the change request. Graphic Sciences, Inc. will return, in writing, the results of the feasibility review and a price quotation to *Client. Client* may then accept or reject the change request.

CITY OF LIVONIA – CITY COUNCIL
MINUTES OF STUDY MEETING HELD NOVEMBER 16, 2020

Meeting was called to order via Zoom remote technology at 8:21 p.m. by President Kathleen McIntyre. Present: Rob Donovic (Deployed), Jim Jolly (Livonia, Michigan), Laura Toy (Livonia, Michigan), Scott Bahr (Livonia, Michigan), Cathy White (Florida), and Kathleen McIntyre (Livonia, Michigan). Absent: None

Councilmember Donovic led the meeting in the Pledge of Allegiance.

Elected and appointed officials present: Mark Taormina, Director of Planning and Economic Development; Todd Zilincik, City Engineer; Paul Bernier, City Attorney; Susan Nash, City Clerk; Curtis Caid, Chief of Police; Dave Heavener, Fire Chief; Jerome Hanna, Director of Inspection; Casey O'Neil, Director of Information Systems; and Jacob Rushlow, Superintendent of Public Service.

6) REQUEST TO APPROVE PURCHASE OF ONE (1) 2020 LIFE LINE TYPE-1 SUPERLINER AMBULANCE ON A 2020 FORD F-450 XLT CHASSIS THROUGH THE HOUSTON GALVESTON AREA COUNCIL (HGAC-BUY) COOPERATIVE PURCHASING CONSORTIUM: Livonia Fire and Rescue, re: to replace a current frontline ambulance, from trade-in of 2006 Freightliner Ambulance and budgeted funds. (CR 61-17)

Dave Heavener, Fire Chief, presented this request to Council. He stated they are respectfully requesting Council's approval of the purchase of the 2020 Life Line Ambulance for a vehicle that is being purchased through the Houston Galveston Consortium which gives us a discount, we've purchased from them in the past. Tis ambulance is going to be used to replace one of our frontline ambulances which is a 2011 model with 104,000 miles on it. This is purchased as part of our regular vehicle replacement program and it is purchased through the 2020/2021 budgeted funds. The 2011 model will be downgraded to a reserve status and we will be either auctioning off or trading in a 2006 ambulance in its place. They are also requesting to waive the formal bid process because it's purchased through the Consortium.

Councilmember White offered an approving resolution for the Consent Agenda.

DIRECTION: APPROVING CONSENT

REPORT TO THE LIVONIA CITY COUNCIL

Fire
November 4, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Lori Arquette, Program Supervisor, Fire

AGENDA ITEM

REQUEST TO APPROVE PURCHASE OF ONE (1) 2020 LIFE LINE TYPE-1 SUPERLINER AMBULANCE ON A 2020 FORD F-450 XLT CHASSIS THROUGH THE HOUSTON GALVESTON AREA COUNCIL (HGAC-BUY) COOPERATIVE PURCHASING CONSORTIUM: Livonia Fire and Rescue, re: to replace a current frontline ambulance, from trade-in of 2006 Freightliner Ambulance and budgeted funds. (CR 61-17)

BACKGROUND

It is respectfully requested that City Council approve the purchase of one (1) 2020 Life Line Type-1 Superliner Ambulance on a 2020 Ford F-450 XLT Chassis from R & R Fire Truck, 751 Doheny Drive, Northville, MI (Representative of Life Line Emergency Vehicles, 1 Lifeline Drive, P.O. Box 299, Sumner, IA 50674) for a net cost of $226,902.00 as follows:

Vehicle Cost	$231,102
Less: Ford GPC Rebate	(4,200)
Net Vehicle Cost	$226,902

This vehicle would be provided through the Houston Galveston Area Council (HGAC-Buy) cooperative purchasing consortium previously approved by City Council (#61-17) at its Regular Meeting on 2/27/17.

This new ambulance will replace a current frontline Ambulance which is a 2011 model year with 104,340 miles and is part of our vehicle replacement program through budgeted 2021 capital outlay funds. That vehicle will be downgraded to a Reserve Squad status. As part of this purchase we will trade-in or auction a 2006 Freightliner ambulance that is no longer in proper working order for emergency response.

RECOMMENDATION

The Fire Department requests Council take the following action:

Waive the formal bidding process in accordance with Section 3.04.140.D.3-4 of the Livonia Code of Ordinances, as amended, since no advantage to the city would result from competitive bidding in this specialized type of equipment.

Authorize purchase from R & R Fire Truck (Life Line Emergency Vehicles) in the amount of $226,902.00 from funds already budgeted in account 101.338.985.000 (Capital Outlay-Vehicles).

FISCAL CONSIDERATION

Funding available in approved budget in the amount of $226,902.00 in account 101.338.985.000 (Capital Outlay-Vehicles).

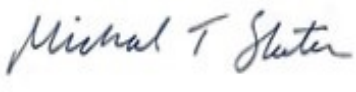
ATTACHMENTS

1. HGAC CONTRACT WORK SHEET AM10-18 City of Livonia MI #2
2. HGAC Published Options AM10-18 Livonia #2

APPROVED BY

Date: November 04, 2020

David Heavener, Fire Chief



Date: November 04, 2020

Michael T. Slater, Finance Director

Date: November 05, 2020

Maureen Miller Brosnan, Mayor

HGACBuy	CONTRACT PRICING WORKSHEET For MOTOR VEHICLES Only	Contract No.:	AM10-18	Date Prepared:	9/29/2020

This Worksheet is prepared by Contractor and given to End User. If a PO is issued, both documents MUST be faxed to H-GAC @ 713-993-4548. Therefore please type or print legibly.

Buying Agency:	City of Livonia, Michigan	**Contractor:**	LIFE LINE EMERGENCY VEHICLES
Contact Person:	Dave Heavener, Fire Chief	**Prepared By:**	Dave Seitsinger
Phone:	734-466-2444	**Phone:**	563-578-3317
Fax:	734-466-2188	**Fax:**	563-578-3305
Email:	dheavener@lfdmail.com	**Email:**	dseitsinger@lifelineambulance.com

Product Code:	**NA02**	**Description:**	**Type I Superliner 171" Body Ford F450**

A. Product Item Base Unit Price Per Contractor's H-GAC Contract: $183,330.00

B. Published Options - Itemize below - Attach additional sheet(s) if necessary - Include Option Code in description if applicable.
(Note: Published Options are options which were submitted and priced in Contractor's bid.)

Description	Cost	Description	Cost
SEE ATTACHED SHEET.			41584
			41584

HGACBuy
THE SMART PURCHASING SOLUTION

C. Unpublished Options - Itemize below / attach additional sheet(s) if necessary.
(Note: Unpublished options are items which were not submitted and priced in Contractor's bid.)

Description	Cost	Description	Cost
SEE ATTACHED SHEET			1643
		Subtotal From Additional Sheet(s):	
		Subtotal C:	1643

Check: Total cost of Unpublished Options (C) cannot exceed 25% of the total of the Base Unit Price plus Published Options (A+B).	**For this transaction the percentage is:**	1%

D. Total Cost Before Any Applicable Trade-In / Other Allowances / Discounts (A+B+C)

Quantity Ordered:	1	X **Subtotal of A + B + C:**	226557	=	**Subtotal D:**	226557

E. H-GAC Order Processing Charge (Amount Per Current Policy)	**Subtotal E:**	1000

F. Trade-Ins / Other Allowances / Special Discounts / Freight / Installation

Description	Cost	Description	Cost
Final Inspection and Delivery	**1000**	**Custom Graphics Pkg. Dealer installed**	995
Ford GPC	**-4200**	**Dealer Installed Equipment**	1550
		Subtotal F:	-655

Delivery Date:	**Oct-19**	**G. Total Purchase Price (D+E+F):**	226902

LIFE LINE EMERGENCY VEHICLES

HGACBuy THE SMART PURCHASING SOLUTION

QTY	PART NO	DESCRIPTION	EXTENDED
		AM10-18	
	10-00-5310	Order Ford Chassis with OEM Aluminum Wheels ILOS Steel Wheels	1,008.00
	10-00-5405	OrderFord F-Series Chassis With Sync-3 Navigation System	940.00
	10/1/7501	Real WheelsSS Hub Covers With Valve Extensions	235.00
	10-01-8000	Delete Standard Wheel Covers	(200.00)
	10-02-9901	Large Floor Console 6 Map Slots w/Cup Holders	600.00
	10-04-0000	F-Series & Dodge Four Battery System	200.00
	15-01-1650	KKK Package Includes Vinyl Upgrade	575.00
	15-01-5200	74" Finished Headroom	1,000.00
	20-01-3000	Sliding Side Entry Door Window w/Dark Tint	125.00
	20-01-5500	Fixed Rear Entry Doors w/ Dark Tint	100.00
3	20-01-9000	Delete Exterior Assist Handle On Side Or Rear Entry Doors (Ea)	(75.00)
	25-01-3224	31.5" TecNiq Model E410 LED Strip Lighting IATS For Exterior Compartment (Ea)	56.00
	25-01-3225	54" TecNiq Model E410 LED Strip Lighting IATS For Exterior Compartment (Ea)	86.00
2	25-01-3226	72" TecNiq Model E410 LED Strip Lighting IATS For Exterior Compartment (Ea)	220.00
	25-04-3000	Delete Superliner Curbside Front Backboard Compartment	(300.00)
	25-05-3000	Superliner Curbside Rear Backboard Compartment	300.00
	25-05-6500	Streetside Wheel Well Slide Out Drawer Compartment	575.00
5	25-11-8000	Diamond Plate Adjustable Shelf W/ Ribbed Rubber Matting (Ea)	1,000.00
	25-12-1200	S.V.I. Adjustable Long Board Slots (Ea)	100.00
4	25-12-6000	Sweep Out Level Compartment Floor (Ea)	200.00
	25-13-5600	Add 2" Seat Belt Style Equipment Strap D-1 Stair Chair	75.00
	25-13-6500	Split Level Compartment Depth Design (Ea)	300.00
	25-CS-0510	Custom Compartment Notch ea. [1]	150.00
3	25-CS-0720	Vortex Angled Bracket for SCBA Tanks (ea)	450.00
	30-01-0500	STD Rear Bumper With Rubber Dock Option (LOW)	50.00
	30-01-2010	Add Red/White Tape On The Center Section of Bumper	75.00
	35-01-3000	Diamond Plate Running Boards With Grip Strut	150.00
	35-01-7000	Whelen T0CACCCR Surface Mounted Running Board Lights (Pr)	272.00
9	35-02-0000	Drip Rail Over Door (Ea.)	225.00
	35-02-4500	Rear Corner Stone Guards (Kick Plate Height)	50.00
	35-02-5500	Polished Stainless Steel Plate Under Fuel Fill Area	100.00
	35-02-6015	Polished Stainless Steel Plate Under DEF Fill Area	100.00
	40-01-0310	Add Second Rear Touch Screen [Elite System]	2,000.00
	40-01-5000	Super Auto Eject Shoreline - 20 Amp (HGAC Included)	0.00
	40-01-7500	Shoreline On Indicator Light (Exterior)	75.00
	40-02-3500	Vanner 20-1050 CUL 1000W Inverter With Display Includes 55 Amp Battery Charger	1,300.00
	40-03-6500	Delete Action Area 125 Volt Outlet	(60.00)
	40-03-8500	Add 125 Volt Duplex (Ea)	60.00
	40-03-8611	Add 12volt - USB Cab Console	110.00
	40-03-9500	Add 125 Volt 4-Plex (Ea)	120.00
	40-04-4500	Additional Power Door Lock (Ea)	125.00
	40-04-5500	Hidden Switch In Grille For Power Door Locks (Unlock Only)	125.00
2	40-04-7000	Interior Body Switch For Power Door Locks (Ea)	390.00
	40-05-0501	2 Kenwood Speakers Mounted In The Ceiling (Ducted AC)	130.00
3	40-05-1600	12 Volt power and Ground Circuit for flashlight	150.00
3	40-05-2710	Streamlight Fire Vulcan LED Vehicle Mount System Flashlight (Ea)	630.00
	45-01-5510	6 - 3" Round Super-LED Surface Mounted Lights Down Center Strip	300.00
	50-02-7000	Whelen M6T Series "LED" Amber ArrowTurn Light IATS (Pr)	288.00
	50-02-9501	Whelen M6T Series "LED" Back-up Lights (Pr)	222.00
	50-03-4901	Two Reverse Activated Whelen M9LZC Rear Load Lights	840.00

	50-03-8401	Whelen M9LZC Side Scene Lights (Two Each Side)	1,680.00	
	50-04-2000	Rear Side Scene Lights On In Reverse IATS	50.00	
	50-04-5000	Wire Rear Emergency Light Flashers To Brake Circuit IATS	50.00	
8	50-04-5700	Recessed Truck-Lite 60 "LED" Door Light (Red) $100(Ea)	800.00	
	50-05-4545	Whelen ARGES 12 Volt LED Spot Light - Roof Mounted	950.00	
	55-01-6000	Add Secondary Air Tank To Air Horn System	200.00	
2	55-02-1500	KE-794 Module Roof Antenna Base/Coax (Ea)	150.00	
4	55-02-5500	Radio Pre-Wire Power And Ground 20 AMP Or Less Circuit $150 (Ea)	600.00	
2	55-02-6500	Install Customer Supplied Radio Cables (Ea)	200.00	
	60-01-1200	Whelen 295HFSA7 Dual Amp Siren System ILOS	435.00	
	60-01-2500	Federal EQ2B Electronic Siren System IATS	1,450.00	
2	60-01-7020	Federal BP200Thru Bumper Siren Speakers [2]	840.00	
	60-01-7500	Delete The 2 Standard Siren Speakers	(300.00)	
	60-01-9001	4 Whelen M9 Series "LED" Side Module Warning Lights	424.00	
	60-02-5000	Delete The 2 Standard Front Module Warning Lights (Credit)	(228.00)	
	60-02-8100	Delete The Standard Center Front Module Warning Light (Credit)	(114.00)	
	60-02-9501	2 Whelen M9 Series "LED" Rear Module Warning Lights	212.00	
	60-03-3001	1 Whelen M9 Series "LED" Center Rear Module Warning Light	106.00	
	60-05-0494	2 Whelen M7 Series "LED" Intersection Lights (Type I)	190.00	
	60-06-3502	2 Whelen M6 Series "LED" Rear Wheel Well Lights	417.00	
	60-07-1530	7 Whelen M9 Series "LED" Front Module Warning Lights Clear Lens	1,558.00	
2	60-09-4453	Whelen ION "LED" Grille Light Clear Lens with Black Flange	400.00	
2	60-10-0160	Rear Window Level Whelen M9 Red Or Amber Or Blue Or Clear "LED" Lights	662.00	
	60-11-4400	Whelen ULF44 LED Flasher 4-Outlet 60 Watts ea.	87.00	
	65-02-8000	L.R.O. Cabinet With Speed Load Door	100.00	
	65-03-3500	Center Overhead Cabinet With Speed Load Door [in Lieu Of CPR Seat]	200.00	
	65-03-7500	L.F.O. Cabinet With Speed Load Door	100.00	
	65-04-6600	Delete Standard Telemetry Area Cabinet	(100.00)	
	65-05-8500	EVS 1880S Child Rear Facing Seat On Pedestal/Swivel Base	929.00	
	65-07-1000	Right Front Upper ALS Cabinet With Heavy Polycarbonate Doors	75.00	
	65-07-4510	Right Front Lower ALS Cabinet With "ROM" Series 3 Door	550.00	
	65-07-5300	Top R.F.S. Cabinet W/Top Hinged Solid Door ILOS Heat/AC	50.00	
	65-07-5410	Top R.F.S. Cabinet (Ducted Heat/AC In Ceiling Pkg Discount)	(50.00)	
	65-07-9000	Add Cabinet In The Lower Walk-Thru Area	500.00	
	65-08-5000	Formed Stainless Removable Sharps & Waste "A" Bar	275.00	
	65-08-5100	Recessed Open Storage Area At Head End Of Squad Bench- Vortex Lined	350.00	
	65-08-5700	Docking Hardware For Removable "A" Bar	75.00	
	65-09-2510	Two Section Bandage Cabinet W/Top Hinged Heavy Polycarbonate Doors	400.00	
	65-09-6100	Recessed Glove (Three) Box Storage In Side Door Cushion Area	225.00	
	65-00-7001	Cabinet Glove Box Holder	25.00	225 QW
	65-12-2500	Timex Digital Clock Recessed In Rear Head Cushion (12 Volt)	175.00	
	65-12-4100	Locking Cabinet Door With Simplex Push Button Lock (Ea)	50.00	
	65-12-9800	Tip Out Sharps & Waste Container	300.00	
	65-13-6500	6" High Polished Scuff Protector On Left Wall	200.00	
	65-14-0000	6" High Polished Scuff Protector On Right Wall	200.00	
	65-CS-1000	Add Angled Cabinet For The 2nd Rear Switch Panel	150.00	
	70-01-0100	Delete Standard Module Fresh Air Intake Vent	(25.00)	
	70-01-2301	Ducted Hoseline Center Mounted Heat/AC Location ILOS	1,550.00	
	70-01-4510	Hoseline Front Wall Mounted Aux 12 Volt A/C Condenser (Type I Modular Body)	150.00	
	70-01-6520	Ultimate Additional Insulation Pkg with Yellow Certifoam Body/Floor/Doors (R-6)	750.00	
	70-02-2710	Anti-Microbial Film in Patient Area	500.00	
	75-01-3500	Delete Ceiling Mounted Oxygen Outlet	(125.00)	
	75-01-6500	Add Ohio Style Oxygen Outlet(s) (Ea)	125.00	
	75-02-3500	ZICO "OTS System" Electric Oxygen Lift Bracket	2,774.00	
2	75-03-3010	Zico Model QR D-2 Quick Release Strapless Portable Oxygen Brackets	568.00	
	80-01-1000	Delete Onboard Suction System	(250.00)	

**	85-01-1500	Paint Module Body Other Color ILOS O.E.M. White	1,300.00
	85-01-4500	Delete Standard Beltline Stripe	(250.00)
	85-02-9585	Paint AC Condenser Cover	450.00
	85-03-3500	1" Scotchlite Striping (Per Foot) 112'	224.00
	85-03-5000	6" Scotchlite Striping (Per Foot)	448.00
	85-04-0100	6" Wide Rear Wall Chevron (Two Color-Full Wall & Doors)	1,800.00
	85-04-1200	Diamond Grade Chevron Upgrade	500.00
	90-01-0500	Install Roof "SOL" Decal Only (Delete All Other Decals)	(100.00)
	90-01-2000	Two 18" Shadowed Star Of Life Decals	50.00
		Total Published Options	**41,584.00**

LIFE LINE EMERGENCY VEHICLES

HGACBuy THE SMART PURCHASING SOLUTION

QTY	PART NO	DESCRIPTION	EXTENDED
		AM10-18	
10-DL-0100		**Velvac Mirrors ILOS Ford Mirrors # 719748**	750.00
40-DL-0100		**1800 Watt Vanner Inverter (HGAC Included) Credit**	(2,565.00)
10-DL-200		**Powder-Coated Access Panel**	75.00
50-DL-0200		**Arges Mounting Bracket**	250.00
55-DL-0100		**Horn/Siren Selector Switch - Steering Wheel Activation**	150.00
55-DL-0200		**[2] 21.5" Grover Air Horns Thru Bumper Valance**	2,250.00
65-DL-0100		**Add Locking Feature To ROM Door Lower RFS**	125.00
85-DL-0100		**Order Chassis Ford Vermillion Red**	608.00
	Total Unpublished Options		**1,643.00**

CITY OF LIVONIA – CITY COUNCIL
MINUTES OF STUDY MEETING HELD NOVEMBER 16, 2020

Meeting was called to order via Zoom remote technology at 8:21 p.m. by President Kathleen McIntyre. Present: Rob Donovic (Deployed), Jim Jolly (Livonia, Michigan), Laura Toy (Livonia, Michigan), Scott Bahr (Livonia, Michigan), Cathy White (Florida), and Kathleen McIntyre (Livonia, Michigan). Absent: None

Councilmember Donovic led the meeting in the Pledge of Allegiance.

Elected and appointed officials present: Mark Taormina, Director of Planning and Economic Development; Todd Zilincik, City Engineer; Paul Bernier, City Attorney; Susan Nash, City Clerk; Curtis Caid, Chief of Police; Dave Heavener, Fire Chief; Jerome Hanna, Director of Inspection; Casey O'Neil, Director of Information Systems; and Jacob Rushlow, Superintendent of Public Service.

7) REQUEST TO RENEW A FIVE-YEAR SERVICE AGREEMENT: Public Service Division, re: with Sensus USA, with an automatic five-year extension, to provide software and equipment to obtain remote water meter reads.

Jacob Rushlow, Superintendent of Public Service, presented this request to Council. He stated as you're aware, Sensus manufacturers are water meters and the software used by the meter reading system. Renewing our agreement here with Sensus will ensure the City will receive the latest updates to the software program which helps us maintain minimal water loss and improve the efficiency in meter reading and billing. This renewal also upgrades our software from the standard program that we currently have to the enhanced program at no charge to the City. This is an important upgrade to note because it will allow for over the air updates to program and correct which we're currently experiencing a warranty issue affecting about 216 electronic meter registers and without this upgrade those would need to be done manually one meter at a time from one property to the next. So, with that it's our recommendation from the Public Service Division of DPW that Council proceed to authorize approval of this service agreement and authorize signatures to execute the agreement.

Councilmember McCullough stated he is comfortable with Sensus, they're pretty much the name of the game when it comes to these remote water meters and he'd be happy to offer an approving on Consent if there's no objection.

DIRECTION: APPROVING CONSENT

REPORT TO THE LIVONIA CITY COUNCIL

DPW
November 3, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Jill Russell, Secretary III, DPW

AGENDA ITEM

REQUEST TO RENEW A FIVE-YEAR SERVICE AGREEMENT: Public Service Division, re: with Sensus USA, with an automatic five-year extension, to provide software and equipment to obtain remote water meter reads.

BACKGROUND

Recommendation to approve a five-year renewal, with an automatic five-year extension, of our "Software as a Service Agreement" with Sensus USA, who manufactures and maintains the Flexnet Outside Reading device software and equipment used by the Water & Sewer department to obtain remote water meter reads. Renewing our agreement with Sensus will ensure the City of Livonia receives the latest updates to the software program, which helps us maintain minimal water loss and improve efficiency in meter reading and billing.

RECOMMENDATION

It is the recommendation that Council approve the renewal of said service agreement.

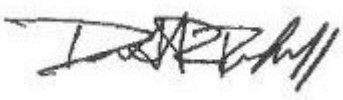
FISCAL CONSIDERATION

No funds are being requested. Funding for this software, monitoring and training is provided through our agreement with our meter supplier, ETNA.

ATTACHMENTS

1. Sensus Serv Agreement 2020-2025

APPROVED BY



Donald Rohraff, Director of Public Works

Date: November 04, 2020

Date: November 04, 2020

Paul Bernier, City Attorney

Date: November 05, 2020

Maureen Miller Brosnan, Mayor

Software as a Service Agreement

between

City of Livonia
("Customer")

and
Sensus USA Inc.
("Sensus")

IN WITNESS WHEREOF, the parties have caused this Software as a Service ("Agreement") to be executed by their duly authorized representatives as of the day and year written below. The date of the last party to sign is the "Effective Date."

This Agreement shall commence on the Effective Date and continue for/until: 5 Years ("Initial Term"). At the end of the Initial Term, this Agreement shall automatically renew for an additional term of 5 years ("Renewal Term"). The "Term" shall refer to both the Initial Term and the Renewal Term.

Sensus USA Inc.	**Customer: City of Livonia**
By:	By:
Name:	Name: **Donald R. Rohraff**
Title:	Title: **Director, Department of Public Works**
Date:	Date:
	By:
	Name: **Paul Bernier**
	Title: **Department of Law**
	Date:
	By:
	Name: **Susan M. Nash**
	Title: **City Clerk**
	Date:
	By:
	Name: **Maureen Miller Brosnan**
	Title: **Mayor**
	Date:

Contents of this Agreement:

Agreement
- Exhibit A Software
- Exhibit B Technical Support
- Exhibit C Satisfaction Warranty Letter

Agreement

1. **General**
   A. **Agreement Generally.** The scope of this Agreement includes usage terms for Sensus' hosted Software solution, technical support, and supporting terms and conditions for an advanced metering infrastructure solution that Customer will purchase from Sensus' authorized distributor. Customer is not paying Sensus directly for the services provided by Sensus under the Agreement; rather, Customer shall pay Sensus' authorized distributor pursuant to a separate agreement between Customer and such authorized distributor.
   B. Notwithstanding anything else in this agreement to the contrary, Sensus agrees to provide Customer with the products, services, and warranties as further described in Exhibit C.
2. **Software.**
   A. **Software as a Service (SaaS).** Sensus shall provide Customer with Software as a Service, as defined in Exhibit A, only so long as Customer is current in its payments for such services.
   B. **UCITA.** To the maximum extent permitted by law, the Parties agree that the Uniform Computer Information Transaction Act as enacted by any state shall not apply, in whole or in part, to this Agreement.
3. **Spectrum**
   A. **Spectrum Lease.** The parties previously entered into a spectrum manager lease on 2/4/2014 (the "Spectrum Lease"), which is hereby specifically incorporated by reference.
4. **Equipment.**
   A. **Purchase of Equipment.** Customer shall purchase all Field Devices, RF Field Equipment, and other goods (collectively, "Equipment") from Sensus' authorized distributor pursuant to the terms and conditions (including any warranties on such Equipment) agreed by Customer and Sensus' authorized distributor. This Agreement shall not affect any terms and conditions, including any warranty terms, agreed by Customer and Sensus' authorized distributor. If Customer elects to purchase any equipment or services directly from Sensus, or if Customer pays any fees or other costs to Sensus, then Sensus' Terms of Sale shall apply. The "Terms of Sale" are available at: https://www.sensus.com/tc, or 1-800-METER-IT
   B. **THERE ARE NO WARRANTIES IN THIS AGREEMENT, EXPRESS OR IMPLIED. SENSUS EXPRESSLY DISCLAIMS ANY AND ALL REPRESENTATIONS, WARRANTIES AND/OR CONDITIONS, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE, REGARDING ANY MATTER IN CONNECTION WITH THIS AGREEMENT, INCLUDING WITHOUT LIMITATION, WARRANTIES AS TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, NON-INFRINGEMENT AND TITLE**.
5. **Services.**
   A. **Installation of Equipment.** Installation services for Field Devices, other goods, and RF Field Equipment will be as agreed between the Customer and Sensus' authorized distributor. Sensus will not provide installation services pursuant to this Agreement
   B. **Technical Support**. Sensus shall provide Customer the technical support set forth in Exhibit B.
   C. **Project Management.** Sensus' authorized distributor will provide project management services to Customer. Any project management of the FlexNet System provided by Sensus shall be subject to a separate agreement which describes the scope and pricing for such work.
   D. **Training.** Sensus' authorized distributor will provide Customer with training on the use of the FlexNet System. Any training provided by Sensus shall be subject to a separate agreement which describes the scope and pricing for such work.
   E. **IT Systems Integration Services.** Except as may otherwise be provided herein, integration of the Software into Customer's new or existing internal IT systems is not included in this Agreement. Any integration work shall be subject to a separate agreement which describes the scope and pricing for such work.
6. **General Terms and Conditions.**
   A. **Infringement Indemnity.** Sensus shall indemnify and hold harmless Customer from and against any judgment by a court of competent jurisdiction or settlement reached from any litigation instituted against Customer in the United States by a third party which alleges that the FlexNet System provided hereunder infringes upon the patents or copyrights of such third party, provided that Sensus shall have the right to select counsel in such proceedings and control such proceedings. Notwithstanding the foregoing, Sensus shall have no liability under this indemnity unless Customer cooperates with and assists Sensus in any such proceedings and gives Sensus written notice of any claim hereunder within fourteen (14) days of receiving it. Further, Sensus shall have no liability hereunder if such claim is related to; (i) any change, modification or alteration made to the FlexNet System by Customer or a third party, (ii) use of the FlexNet System in combination with any goods or services not provided by Sensus hereunder, (iii) Customer's failure to use the most recent version of the Software or to otherwise take any corrective action as reasonably directed by Sensus, (iv) compliance by Sensus with any designs, specifications or instructions provided by Customer or compliance by Sensus with an industry standard, or (v) any use of the FlexNet System other than for the Permitted Use. In the event the FlexNet System is adjudicated to infringe a patent or copyright of a third party and its use is enjoined, or, if in the reasonable opinion of Sensus, the FlexNet System is likely to become the subject of an infringement claim, Sensus, at its sole discretion and expense, may; (i) procure for Customer the right to continue using the FlexNet System or (ii) modify or replace the FlexNet System so that it becomes non-infringing. THIS SECTION STATES CUSTOMER'S SOLE AND EXCLUSIVE REMEDY AND SENSUS' ENTIRE LIABILITY FOR ANY CLAIM OF INFRINGEMENT.
   B. **Limitation of Liability.** Sensus' aggregate liability in any and all causes of action arising under, out of or in relation to this Agreement, its negotiation, performance, breach or termination (collectively "Causes of Action") shall not exceed the greater of; (a) the total amount paid by Customer directly to Sensus under this Agreement; or (b) ten thousand US dollars (USD 10,000.00). This is so whether the Causes of Action are in tort, including, without limitation, negligence or strict liability, in contract, under statute or otherwise. As separate and independent limitations on liability, Sensus' liability shall be limited to direct damages. Sensus shall not be liable for; (i) any indirect, incidental, special or consequential damages; nor (ii) any revenue or profits lost by Customer or its Affiliates from any End User(s), irrespective whether such lost revenue or profits is categorized as direct damages or otherwise; nor (iii) any In/Out Costs; nor (v) damages arising from maincase or bottom plate breakage caused by freezing temperatures, water hammer conditions, or excessive water pressure. The limitations on liability set forth in this Agreement are fundamental inducements

to Sensus entering into this Agreement. They apply unconditionally and in all respects. They are to be interpreted broadly so as to give Sensus the maximum protection permitted under law.

C. **Termination.** Either party may terminate this Agreement earlier if the other party commits a material breach of this Agreement and such material breach is not cured within forty-five (45) days of written notice by the other party. Upon any expiration or termination of this Agreement, Sensus' and Customer's obligations hereunder shall cease and the software as a service and Spectrum Lease shall immediately cease.

D. **Force Majeure.** If either party becomes unable, either wholly or in part, by an event of Force Majeure, to fulfill its obligations under this Agreement, the obligations affected by the event of Force Majeure will be suspended during the continuance of that inability. The party affected by the force majeure will take reasonable steps to mitigate the Force Majeure.

E. **Intellectual Property Rights.**

i. Software and Materials. No Intellectual Property is assigned to Customer hereunder. Excluding Customer Data, Sensus shall own or continue to own all right, title, and interest in and to the Intellectual Property associated with the Software and related documentation, including any derivations and/or derivative works (the "Sensus IP"). To the extent, if any, that any ownership interest in and to such Sensus IP does not automatically vest in Sensus by virtue of this Agreement or otherwise, and instead vests in Customer, Customer agrees to grant and assign and hereby does grant and assign to Sensus all right, title, and interest that Customer may have in and to such Sensus IP. Customer agrees not to reverse engineer any Sensus Products purchased or provided hereunder.

ii. Customer Data. Notwithstanding the prior paragraph, as between Customer and Sensus, Customer remains the owner of all right, title or interest in or to any Customer Data. "Customer Data" means solely usage data collected by the Field Devices. To avoid doubt, Customer Data does not include non-End User usage data collected by the Field Devices, Software, or FlexNet System, such as network and equipment status information or the like.

iii. Consent to Use of Customer Data. Customer hereby irrevocably grants to Sensus a royalty-free, non-exclusive, irrevocable right and license to access, store, and use such Customer Data and any other data or information provided to Sensus, to (1) provide the Service; (2) analyze and improve the Service; (3) analyze and improve any Sensus equipment or software; or (4) for any other internal use. As used herein, "Service" means Sensus' obligations under this Agreement.

iv. Access to Customer Data. Within 45 days of Customer's written request, Sensus will provide Customer a copy of the previous 24 months CMEP interval file and deliver the file to a drop location specified by Customer.

F. **Data Privacy.** Customer acknowledges that Sensus and its Affiliates (collectively, "Xylem") will collect and process personal data for the purposes outlined in this Agreement. Xylem's data privacy policy is available at https://www.xylem.com/en-us/support/privacy/. Customer acknowledges that it has read and understood Xylem's privacy policy and agrees to the use of personal data outlined therein. The collection and use of personal data by Customer is Customer's responsibility.

G. **Confidentiality.** Except as may be required under applicable law, court order, or regulation, or to the extent required to perform and enforce this Agreement, both parties shall (and shall cause their employees and contractors to) keep all Confidential Information strictly confidential and shall not disclose it to any third party. The Confidential Information may be transmitted orally, in writing, electronically or otherwise observed by either party. Notwithstanding the foregoing, "Confidential Information" shall not include; (i) any information that is in the public domain other than due to Recipient's breach of this Agreement; (ii) any information in the possession of the Recipient without restriction prior to disclosure by the Discloser; or (iii) any information independently developed by the Recipient without reliance on the information disclosed hereunder by the Discloser. "Discloser" means either party that discloses Confidential Information, and "Recipient" means either party that receives it.

H. **Compliance with Laws.** Customer shall comply with all applicable country, federal, state, and local laws and regulations, as set forth at the time of acceptance and as may be amended, changed, or supplemented. Customer shall not take any action, or permit the taking of any action by a third party, which may render Sensus liable for a violation of applicable laws.

i. **Export Control Laws**. Customer shall; (i) comply with all applicable U.S. and local laws and regulations governing the use, export, import, re-export, and transfer of products, technology, and services; and (ii) obtain all required authorizations, permits, and licenses. Customer shall immediately notify Sensus, and immediately cease all activities with regards to the applicable transaction, if the Customer knows or has a reasonable suspicion that the equipment, software, or services provided hereunder may be directed to countries in violation of any export control laws. By ordering equipment, software or services, Customer certifies that it is not on any U.S. government export exclusion list.

ii. **Anti-Corruption Laws**. Customer shall comply with the United States Foreign Corrupt Practices Act (FCPA), 15 U.S.C. §§ 78dd-1, et seq.; laws and regulations implementing the OECD's Convention on Combating Bribery of Foreign Public Officials in International Business Transactions; the U.N. Convention Against Corruption; the Inter-American Convention Against Corruption; and any other applicable laws and regulations relating to anti-corruption in the Customer's county or any country where performance of this Agreement, or delivery or use of equipment, software or services will occur.

I. **Non-Waiver of Rights.** A waiver by either party of any breach of this Agreement or the failure or delay of either party to enforce any of the articles or other provisions of this Agreement will not in any way affect, limit or waive that party's right to enforce and compel strict compliance with the same or other articles or provisions.

J. **Assignment and Sub-contracting.** Either party may assign, transfer or delegate this Agreement without requiring the other party's consent; (i) to an Affiliate; (ii) as part of a merger; or (iii) to a purchaser of all or substantially all of its assets. Apart from the foregoing, neither party may assign, transfer or delegate this Agreement without the prior written consent of the other, which consent shall not be unreasonably withheld. Furthermore, Customer acknowledges Sensus may use subcontractors to perform RF Field Equipment installation, the systems integration work (if applicable), or project management (if applicable), without requiring Customer's consent.

K. **Amendments.** No alteration, amendment, or other modification shall be binding unless in writing and signed by both Customer and by a vice president (or higher) of Sensus.

L. **Governing Law and Dispute Resolution.** This Agreement shall be governed by, construed and enforced in accordance with the laws of the State of Michigan. Any and all disputes arising under, out of, or in relation to this Agreement, its negotiation, performance or termination ("Disputes") shall first be resolved by mediation between the Parties. TO THE MAXIMUM EXTENT PERMITTED BY LAW, THE PARTIES AGREE TO A BENCH TRIAL AND THAT THERE SHALL BE NO JURY IN ANY DISPUTES.

M. **Acknowledgement of Events**. The Parties acknowledge and agree that the global COVID-19 pandemic ("COVID-19") is ongoing, dynamic, unpredictable, and as such may impact the ability of Sensus to meet its obligations under this Agreement. The Parties agree that, for so long as there is an impact of COVID-19 on Sensus' performance, all performance efforts by Sensus will be on a reasonable efforts basis only and Sensus shall not be responsible for failure to meet its obligations, to the extent that it is precluded from doing so as a result of COVID-19. The Parties shall work, in good faith, to make any reasonable adjustments that may be required as a result of COVID-19.

N. **Survival.** The provisions of this Agreement that are applicable to circumstances arising after its termination or expiration shall survive such termination or expiration.

O. **Severability.** In the event any provision of this Agreement is held to be void, unlawful or otherwise unenforceable, that provision will be severed from the remainder of the Agreement and replaced automatically by a provision containing terms as nearly like the void, unlawful, or unenforceable provision as possible; and the Agreement, as so modified, will continue to be in full force and effect.

P. **Four Corners.** This written Agreement, including all of its exhibits and the Spectrum Lease, represents the entire understanding between and obligations of the parties and supersedes all prior understandings, agreements, negotiations, and proposals, whether written or oral, formal or informal between the parties. Any additional writings shall not modify any limitations or remedies provided in the Agreement. There are no other terms or conditions, oral, written, electronic or otherwise. There are no implied obligations. All obligations are specifically set forth in this Agreement. Further, there are no representations that induced this Agreement that are not included in it. The ONLY operative provisions are set forth in writing in this Agreement. Without limiting the generality of the foregoing, no purchase order placed by or on behalf of Customer shall alter any of the terms of this Agreement. The parties agree that such documents are for administrative purposes only, even if they have terms and conditions printed on them and even if and when they are accepted and/or processed by Sensus. Any goods, software or services delivered or provided in anticipation of this Agreement (for e.g., as part of a pilot or because this Agreement has not yet been signed but the parties have begun the deployment) under purchase orders placed prior to the execution of this Agreement are governed by this Agreement upon its execution and it replaces and supersedes any such purchase orders.

Q. **Counterparts.** This Agreement may be executed in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Additionally, this Agreement may be executed by facsimile or electronic copies, all of which shall be considered an original for all purposes.

7. **Definitions. As used in this Agreement, the following terms shall have the following meanings:**

A. **"*Affiliate*"** of a party means any other entity controlling, controlled by, or under common control with such party, where "control" of an entity means the ownership, directly or indirectly, of 50% or more of either; (i) the shares or other equity in such entity; or (ii) the voting rights in such entity.

B. "***Confidential Information***" means any and all non-public information of either party, including all technical information about either party's products or services, pricing information, marketing and marketing plans, Customer's End Users' data, FlexNet System performance, FlexNet System architecture and design, FlexNet System software, other business and financial information of either party, and all trade secrets of either party.

C. **"*End User*"** means any end user of electricity, water, and/or gas (as applicable) that pays Customer for the consumption of electricity, water, and/or gas, as applicable.

D. "***Field Devices***" means the SmartPoint Modules .

E. "***FlexNet Base Station***" identifies the Sensus manufactured device consisting of one transceiver, to be located on a tower that receives readings from the SmartPoint Modules (either directly or via an R100 unit) by radio frequency and passes those readings to the RNI by TCP/IP backhaul communication. For clarity, FlexNet Base Stations include Metro Base Stations.

F. **"*FlexNet System*"** is comprised of the SmartPoint Modules, RF Field Equipment, Server Hardware, software licenses, Spectrum Lease, and other equipment provided to Customer hereunder. The FlexNet System only includes the foregoing, as provided by Sensus. The FlexNet System does not include goods, equipment, software, licenses or rights provided by a third party or parties to this Agreement.

G. "***Force Majeure***" means an event beyond a party's reasonable control, including, without limitation, acts of God, hurricane, flood, volcano, tsunami, tornado, storm, tempest, mudslide, vandalism, illegal or unauthorized radio frequency interference, strikes, lockouts, or other industrial disturbances, unavailability of component parts of any goods provided hereunder, acts of public enemies, wars, blockades, insurrections, riots, epidemics, earthquakes, fires, restraints or prohibitions by any court, board, department, commission or agency of the United States or any States, any arrests and restraints, civil disturbances and explosion.

H. ***"Hosted Software"*** means those items listed as an Application in Exhibit A.

I. "***In/Out Costs***" means any costs and expenses incurred by Customer in transporting goods between its warehouse and its End User's premises and any costs and expenses incurred by Customer in installing, uninstalling and removing goods.

J. "***Intellectual Property***" means patents and patent applications, inventions (whether patentable or not), trademarks, service marks, trade dress, copyrights, trade secrets, know-how, data rights, specifications, drawings, designs, maskwork rights, moral rights, author's rights, and other intellectual property rights, including any derivations and/or derivative works, as may exist now or hereafter come into existence, and all renewals and extensions thereof, regardless of whether any of such rights arise under the laws of the United States or of any other state, country or jurisdiction, any registrations or applications thereof, and all goodwill pertinent thereto.

K. "***LCM***" identifies the load control modules.

L. **"*Ongoing Fee*"** means the annual or monthly fees, as applicable, to be paid by Customer to Sensus' authorized distributor during the Term of this Agreement.

M. "***Patches***" means patches or other maintenance releases of the Software that correct processing errors and other faults and defects found previous versions of the Software. For clarity, Patches are not Updates or Upgrades.

N. ***"Permitted Use"*** means only for reading and analyzing data from Customer's Field Devices in the Service Territory. The Permitted Use does not include reading third devices not provided by Sensus or reading Field Devices outside the Service Territory.

O. ***"R100 Unit"*** identifies the Sensus standalone, mounted transceiver that takes the radio frequency readings from the SmartPoint Modules and relays them by radio frequency to the relevant FlexNet Base Station or directly to the RNI by TCP/IP backhaul communication, as the case may be.

P. **"*Release*"** means both Updates and Upgrades.

Q. **"*Remote Transceiver*"** identifies the Sensus standalone, mounted relay device that takes the radio frequency readings from the SmartPoint Modules and relays them directly to the RNI by TCP/IP backhaul communication.

R. **"*RF Field Equipment*"** means, collectively, FlexNet Base Stations, R100 units (if any) and Remote Transceivers (if any).

S. **"*RNI*"** identifies the regional network interfaces consisting of hardware and software used to gather, store, and report data collected by the

FlexNet Base Stations from the SmartPoint Modules. The RNI hardware specifications will be provided by Sensus upon written request from Customer.

T. **"*RNI Software*"** identifies the Sensus proprietary software used in the RNI and any Patches, Updates, and Upgrades that are provided to Customer pursuant to the terms of this Agreement.

U. ***"Service Territory"*** identifies the geographic area where Customer utilizes Sensus equipment to provide services to End Users as of the Effective Date. This area will be described on the propagation study in the parties' Spectrum Lease filing with the FCC.

V. **"*Server Hardware*"** means the RNI hardware.

W. ***"SmartPoint™ Modules"*** identifies the Sensus transmission devices installed on devices such as meters, distribution automation equipment and demand/response devices located at Customer's End Users' premises that communicate with the relevant devices and transmit those communications by radio frequency to the relevant piece of RF Field Equipment.

X. **"*Software*"** means all the Sensus proprietary software provided pursuant to this Agreement, and any Patches, Updates, and Upgrades that are provided to Customer pursuant to the terms of this Agreement. The Software does not include any third party software.

Y. **"*Updates*"** means releases of the Software that constitute a minor improvement in functionality.

Z. **"*Upgrades*"** means releases of the Software which constitute a significant improvement in functionality or architecture of the Software.

AA. **"*WAN Backhaul*"** means the communication link between FlexNet Base Stations and Remote Transceivers and RNI.

Exhibit A
Software

Software as a Service

1. **Description of Services.**
   This exhibit contains the details of the Software as a Service that Sensus shall provide to Customer if both; (i) pricing for the application of Software as a Service has been provided to the Customer; and (ii) the Customer is current in its payments to Sensus' authorized distributor for such application of Software as a Service.

   A. **Software as a Service Generally.**
   Software as a Service is a managed service in which Sensus will be responsible for the day-to-day monitoring, maintenance, management, and supporting of Customer's software applications. In a Software as a Service solution, Sensus owns all components of the solution (server hardware, storage, data center, network equipment, Sensus software, and all third-party software) required to run and operate the application. These software applications consist of the following (each an "Application"):

   - Regional Network Interface (RNI) Software
   - Sensus Analytics
     - Enhanced Package

   The managed application systems consist of the hardware, Sensus Software, and other third-party software that is required to operate the software applications. Each Application will have a production, and Disaster Recovery (as described below) environment Test environments are not provided unless otherwise specifically agreed by Sensus in writing. Sensus will manage the Applications by providing 24 x 7 x 365 monitoring of the availability and performance of the Applications.

   B. **Use of Software as a Service.** Subject to the terms of this Agreement, Sensus shall make Software as a Service available to Customer to access and use solely for the Permitted Use and solely for so long as Customer is current in its payments to Sensus or its authorized distributor for Software as a Service. The Software as a Service term commences on the date that Sensus first makes Software as a Service available to Customer for use, and ends upon the earlier of: (i) the expiration or termination of the Agreement; (ii) breach by Customer of this exhibit or the Agreement; or (iii) Customer's termination of Software as a Service as set forth in paragraph (C) below.

   C. **Termination of an Application.** Customer shall have the option at any time before the end of the Term to terminate any Application by giving Sensus one hundred twenty (120) days prior written notice. Such notice, once delivered to Sensus, is irrevocable. Should Customer elect to terminate any Application, Customer acknowledges that; (a) Customer shall pay all applicable fees, including any unpaid Software as a Service fees due in the current calendar year plus a ten percent (10%) early termination fee, where such fee is calculated based on the annual Software as a Service fee due in the current calendar year; and (b) Software as a Service for such Application shall immediately cease. If Customer elects to terminate the RNI Application in the Software as a Service environment but does not terminate the Agreement generally, then upon delivery of the notice to Sensus, Customer shall purchase the necessary (a) RNI hardware from a third party and (b) RNI software license at Sensus' then-current pricing. No portion of the Software as a Service fees shall be applied to the purchase of the RNI hardware or software license.

   D. **Software as a Service means only the following services:**
      i. Sensus will provide the use of required hardware, located at Sensus' or a third-party's data center facility (as determined by Sensus), that is necessary to operate the Application.
      ii. Sensus will provide production and disaster recovery environments for Application.
      iii. Sensus will provide patches, updates, and upgrades to latest Sensus Hosted Software release.
      iv. Sensus will configure and manage the equipment (server hardware, routers, switches, firewalls, etc.) in the data centers:
         (a) Network addresses and virtual private networks (VPN)
         (b) Standard time source (NTP or GPS)
         (c) Security access points
         (d) Respond to relevant alarms and notifications
      v. Capacity and performance management. Sensus will:
         (a) Monitor capacity and performance of the Application server and software applications 24x7x365 using KPI metrics, thresholds, and alerts to proactively identify any potential issues related to system capacity and/or performance (i.e. database, backspool, logs, message broker storage, etc.)
         (b) If an issue is identified to have a potential impact to the system, Sensus will open an incident ticket and manage the ticket through resolution per Exhibit B, Technical Support.
         (c) Manage and maintain the performance of the server and perform any change or configuration to the server, in accordance to standard configuration and change management policies and procedures.
         (d) Manage and maintain the server storage capacity and performance of the Storage Area Network (SAN), in accordance to standard configuration and change management policies and procedures.
         (e) Exceptions may occur to the system that require Sensus to take immediate action to maintain the system capacity and performance levels, and Sensus has authority to make changes without Customer approval as needed, in accordance to standard configuration and change management policies and procedures.
      vi. Database management. Sensus will:
         (a) Implement the data retention plan and policy, and will provide the policy upon request.
         (b) Monitor space and capacity requirements.
         (c) Respond to database alarms and notifications.
         (d) Install database software upgrades and patches.
         (e) Perform routine database maintenance and cleanup of database to improve capacity and performance, such as rebuilding indexes, updating indexes, consistency checks, run SQL query/agent jobs, etc.
      vii. Incident and Problem Management. Sensus will:
         (a) Proactively monitor managed systems (24x7x365) for key events and thresholds to proactively detect and identify

incidents.
(b) Respond to incidents and problems that may occur to the Application(s).
(c) Maintain policies and procedures for responding to incidents and performing root cause analysis for ongoing problems.
(d) Correlate incidents and problems where applicable.
(e) Sensus personnel will use the self-service portal to document and track incidents.
(f) In the event that Sensus personnel is unable to resolve an issue, the issue will be escalated to the appropriate Subject Matter Expert (SME).
(g) Maintain responsibility for managing incident and problems through resolution and will coordinate with Customer's personnel and/or any required third-party vendor to resolve the issue.
(h) Provide telephone support consistent with Exhibit B, Technical Support in the case of undetected events.

viii. Security Management. Sensus will:
(a) Monitor the physical and cyber security of the server and Application(s) 24x7x365 to ensure system is highly secure in accordance with NIST Security Standards.
(b) Perform active intrusion prevention and detection of the data center network and firewalls, and monitor logs and alerts.
(c) Conduct period penetration testing of the network and data center facilities.
(d) Conduct monthly vulnerability scanning by both internal staff and external vendors.
(e) Perform anti-virus and Malware patch management on all systems.
(f) Install updates to virus protection software and related files (including virus signature files and similar files) on all servers from the update being generally available from the anti-virus software provider.
(g) Respond to any potential threat found on the system and work to eliminate any virus or malware found.
(h) Adhere to and submit certification to NERC/CIP Cyber Security standards.
(i) Monitors industry regulation/standards regarding security – NERC, FERC, NIST, OpenSG, etc. through the dedicated Sensus security team.
(j) Provide secure web portal access (SSL) to the Application(s).

ix. Backup and Disaster Recovery Management. Sensus will:
(a) Perform daily backups of data providing one (1) year of history for auditing and restoration purposes.
(b) Back-up and store data (on tapes or other storage media as appropriate) off-site to provide protection against disasters and to meet file recovery needs.
(c) Conduct incremental and full back-ups to capture data, and changes to data, on the Application(s).
(d) Replicate the Application(s) environments to a geographically separated data center location to provide a full disaster recovery environment for the Application production system.
(e) Provide disaster recovery environment and perform fail-over to Disaster Recovery environment within forty-eight (48) hours of declared event.
(f) Generate a report following each and any disaster measuring performance against the disaster recovery plan and identification of problem areas and plans for resolution.
(g) Maintain a disaster recovery plan. In the event of a disaster, Sensus shall provide the services in accordance with the disaster recovery plan.
(h) In the case of a disaster and loss of access to or use of the Application, Sensus would use commercially reasonable efforts per the Recovery Time Objectives (RTO) and Recovery Point Objectives (RPO) specified herein to restore operations at the same location or at a backup location within forty-eight (48) hours.
(i) The Application shall have a RTO of forty-eight (48) hours.
(j) The RPO shall be a full recovery of the Application(s), with an RPO of one (1) hours, using no more than a twenty-four (24) hour old backup. All meter-related data shall be pushed from each Base Station/TGB restoring the database to real-time minus external interfaced systems from the day prior.
(k) Data from external interfaced systems shall be recreated within a forty-eight (48) hour period with the assistance of Customer personnel and staff, as needed.

E. **Customer Responsibilities:**
i. Coordinate and schedule any changes submitted by Sensus to the system in accordance with standard configuration and change management procedures.
ii. Participate in all required configuration and change management procedures.
iii. Customer will log incidents related to the managed Application with Sensus personnel via email, web portal ticket entry, or phone call.
iv. Responsible for periodic processing of accounts or readings (i.e., billing files) for Customer's billing system for billing or other analysis purposes.
v. Responsible for any field labor to troubleshoot any SmartPoint modules or smart meters in the field in populations that have been previously deployed and accepted.
vi. First response labor to troubleshoot FlexNet Base Station, R100s, Remote Transceivers or other field network equipment.
vii. Responsible for local area network configuration, management, and support.
viii. Identify and research problems with meter reads and meter read performance.
ix. Create and manage user accounts.
x. Customize application configurations.
xi. Support application users.
xii. Investigate application operational issues (e.g., meter reads, reports, alarms, etc.).
xiii. Respond to alarms and notifications.
xiv. Perform firmware upgrades over-the-air, or delegate and monitor field personnel for on-site upgrades.

F. **Software as a Service** does not include any of the following services:
i. Parts or labor required to repair damage to any field network equipment that is the result of a Force Majeure event.
ii. Any integration between applications, such as Harris MeterSense, would require a Professional Services contract agreement

to be scoped, submitted, and agreed in a signed writing between Sensus and all the applicable parties.

If an item is not listed in subparagraphs in item (D) above, such item is excluded from the Software as a Service and is subject to additional pricing.

2. **Further Agreements**

A. System Uptime Rate.

i. Sensus (or its contractor) shall manage and maintain the Application(s) on computers owned or controlled by Sensus (or its contractors) and shall provide Customer access to the managed Application(s) via internet or point to point connection (i.e., Managed-Access use), according to the terms below. Sensus endeavors to maintain an average System Uptime Rate equal to ninety-nine (99.0) per Month (as defined below). The System Uptime Rate, cumulative across all Applications, shall be calculated as follows:

$$\text{System Uptime Rate} = 100 \times \frac{(\text{TMO} - \text{Total Non-Scheduled Downtime minutes in the Month})}{\text{TMO}}$$

ii. **Calculations**

a. ***Targeted Minutes of Operation*** or ***TMO*** means total minutes cumulative across all Applications in the applicable month minus the Scheduled Downtime in the Month.

b. ***Scheduled Downtime*** means the number of minutes during the Month, as measured by Sensus, in which access to any Application is scheduled to be unavailable for use by Customer due to planned system maintenance. Sensus shall provide Customer notice (via email or otherwise) at least seven (7) days in advance of commencement of the Scheduled Downtime.

c. ***Non-Scheduled Downtime*** means the number of minutes during the Month, as measured by Sensus, in which access to any Application is unavailable for use by Customer due to reasons other than Scheduled Downtime or the Exceptions, as defined below (e.g., due to a need for unplanned maintenance or repair).

iii. **Exceptions**. Exceptions mean the following events:

- Force Majeure
- Emergency Work, as defined below; and
- Lack of Internet Availability, as described below.

a. **Emergency Work**. In the event that Force Majeure, emergencies, dangerous conditions or other exceptional circumstances arise or continue during TMO, Sensus shall be entitled to take any actions that Sensus, in good faith, determines is necessary or advisable to prevent, remedy, mitigate, or otherwise address actual or potential harm, interruption, loss, threat, security or like concern to any of the Application(s) ("Emergency Work"). Such Emergency Work may include, but is not limited to: analysis, testing, repair, maintenance, re-setting and other servicing of the hardware, cabling, networks, software and other devices, materials and systems through which access to and/or use of the Application(s) by the Customer is made available (the "Managed Systems"). Sensus shall endeavor to provide advance notice of such Emergency Work to Customer when practicable and possible.

b. **Lack of Internet Availability.** Sensus shall not be responsible for any deterioration of performance attributable to latencies in the public internet or point-to-point network connection operated by a third party. Customer expressly acknowledges and agrees that Sensus does not and cannot control the flow of data to or from Sensus' networks and other portions of the Internet, and that such flow depends in part on the performance of Internet services provided or controlled by third parties, and that at times, actions or inactions of such third parties can impair or disrupt data transmitted through, and/or Customer's connections to, the Internet or point-to-point data connection (or portions thereof). Although Sensus will use commercially reasonable efforts to take actions Sensus may deem appropriate to mitigate the effects of any such events, Sensus cannot guarantee that such events will not occur. Accordingly, Sensus disclaims any and all liability resulting from or relating to such events.

iv. **System Availability.** For each month that the System Uptime Rates for the production RNI falls below 99.0%, Sensus will issue Customer the following Service Level Credits:

System Uptime Rate per calendar month	Service Level Credit
Less than 99.0% but at least 97.5%	5% of the monthly RNI SaaS Fees in which the service level default occurred (Note: SaaS fees are pre-paid annually and for purposes of SLA Credits are computed on a monthly basis.)
Less than 97.5% but at least 95.0%	10% of the monthly RNI SaaS Fees in which the service level default occurred
Less than 95.0%	20% of the monthly RNI SaaS Fees in which the service level default occurred

Service Level Credits for any single month shall not exceed 20% of the RNI SaaS Fee associated with the month in which the service level default occurred. Sensus records and data will be the sole basis for all Service Level Credit calculations and determinations, provided that such records and data must be made available to Customer for review and agreement by Customer. To receive a Service Level Credit, Customer must issue a written request no later than ten (10) days after the Service Level Credit has accrued. Sensus will apply each valid Service Level Credit to the Customer's invoice within 2 billing cycles after Sensus' receipt of Customer's request and confirmation of the failure to meet the applicable Service Level Credit. Service Level Credits will not be payable for failures to meet the System Uptime Rate caused by any Exceptions. No Service Level Credit will apply if Customer is not current in its undisputed payment obligations under the Agreement. Service Level Credits are exclusive of any applicable taxes charged to Customer or collected by Sensus. Sensus shall not refund an unused Service Level Credits or pay cash to Customer for any unused Service Level Credits. Any unused Service Level Credits at the time the Agreement terminates will be forever forfeited. THE SERVICE LEVEL CREDITS DESCRIBED IN THIS SECTION ARE THE SOLE AND EXCLUSIVE REMEDY FOR SENSUS' FAILURE TO MEET THE SYSTEM UPTIME REQUIREMENT OR ANY DEFECTIVE SAAS PERFORMANCE. IN NO EVENT SHALL THE AGGREGATE AMOUNT OF SERVICE LEVEL

CREDITS IN ANY ANNUAL PERIOD EXCEED 20% OF THE ANNUAL RNI SAAS FEE.

B. Data Center Site-Security. Although Sensus may modify such security arrangements without consent or notice to Customer, Customer acknowledges the following are the current arrangements regarding physical access to and support of the primary hardware components of the Managed Systems:

i. The computer room(s) in which the hardware is installed is accessible only to authorized individuals.
ii. Power infrastructure includes one or more uninterruptible power supply (UPS) devices and diesel generators or other alternative power for back-up electrical power.
iii. Air-conditioning facilities (for humidity and temperature controls) are provided in or for such computer room(s) and can be monitored and adjusted for humidity and temperature settings and control. Such air systems are supported by redundant, back-up and/or switch-over environmental units.
iv. Such electrical and A/C systems are monitored on an ongoing basis and personnel are available to respond to system emergencies (if any) in real time.
v. Dry pipe pre-action fire detection and suppression systems are provided.
vi. Data circuits are available via multiple providers and diverse paths, giving access redundancy.

C. Responsibilities of Customer.

i. Customer shall promptly pay all Software as a Service fees.
ii. Customer may not (i) carelessly, knowingly, intentionally or maliciously threaten, disrupt, harm, abuse or interfere with the Application(s), Managed Systems or any of their functionality, performance, security or integrity, nor attempt to do so; (ii) impersonate any person or entity, including, but not limited to, Sensus, a Sensus employee or another user; or (iii) forge, falsify, disguise or otherwise manipulate any identification information associated with Customer's access to or use of the Application(s).
iii. The provisioning, compatibility, operation, security, support, and maintenance of Customer's hardware and software ("Customer's Systems") is exclusively the responsibility of Customer. Customer is also responsible, in particular, for correctly configuring and maintaining (i) the desktop environment used by Customer to access the Application(s) managed by Sensus; and (ii) Customer's network router and firewall, if applicable, to allow data to flow between the Customer's Systems and Sensus' Managed Systems in a secure manner via the public Internet.
iv. Upon receiving the system administrator account from Sensus, Customer shall create username and passwords for each of Customer's authorized users and complete the applicable Sensus registration process (Authorized Users). Such usernames and passwords will allow Authorized Users to access the Application(s). Customer shall be solely responsible for maintaining the security and confidentiality of each user ID and password pair associated with Customer's account, and Sensus will not be liable for any loss, damage or liability arising from Customer's account or any user ID and password pairs associated with Customer. Customer is fully responsible for all acts and omissions that occur through the use of Customer's account and any user ID and password pairs. Customer agrees (i) not to allow anyone other than the Authorized Users to have any access to, or use of Customer's account or any user ID and password pairs at any time; (ii) to notify Sensus immediately of any actual or suspected unauthorized use of Customer's account or any of such user ID and password pairs, or any other breach or suspected breach of security, restricted use or confidentiality; and (iii) to take the Sensus-recommended steps to log out from and otherwise exit the Application(s) and Managed Systems at the end of each session. Customer agrees that Sensus shall be entitled to rely, without inquiry, on the validity of the user accessing the Application(s) application through Customer's account, account ID, usernames or passwords.
v. Customer shall be responsible for the day-to-day operations of the Application(s) and FlexNet System. This includes, without limitation, (i) researching problems with meter reads and system performance, (ii) creating and managing user accounts, (iii) customizing application configurations, (iv) supporting application users, (v) investigating application operational issues, (vi) responding to alarms and notifications, and (vii) performing over-the-air commands (such as firmware updates or configuration changes).

D. Software Solution Components.

i. **Description of Software Solutions**. Sensus software consists of a core communication module and a set of applications. Some applications are required to perform basic solution capabilities, other applications are optional and add additional capabilities and function to the overall solution. As Customer's business process expands and/or new Sensus offerings are made available, additional applications and functionality can dynamically be added to the solution, provided Customer purchases such additional applications.
ii. **Regional Network Interface.** The Regional Network Interface (RNI) or Sensus head-end is the centralized intelligence of the FlexNet network; the RNI's primary objective is to transfer endpoint (such as meters) data to the Customer and the advanced feature applications. The RNI is adaptable to Customer configurations by simultaneously supporting a wide range of FlexNet enabled endpoints; including but not limited to meters (electric, water, gas), street lighting, and Home Area Network devices.
    a. Core Package
        (i) Communication
            1. Manages all inbound and outbound traffic to and from endpoints
            2. Outbound routing optimization
            3. Route analyzer
            4. AES256 bit encryption of radio messages
            5. Reports and metric details of network performance and troubleshooting aids
            6. Management of RF equipment (base stations and endpoint radios)
        (ii) Data Collection
            1. Missing read management
            2. Management of duplicate reads
            3. 60 day temporary storage
        (iii) Application integration
            1. To Sensus Analytics applications
            2. Enable 3rd party application integration
            3. Batch CMEP file export

4. Real-time access through MultiSpeak

(iv) Endpoint Management
1. Gas, water, electric, lighting concurrent support
2. Remote configuration
3. Remote firmware updates
4. Reports, metrics and Troubleshooting

(v) User Management
1. Secure access
2. Password management
3. Definable user roles
4. User permissions to manage access to capabilities

b. Integration of RNI. Sensus shall provide RNI integration support services to Customer only to the extent specifically provided below:

(i) Sensus shall meet with the representative from the Customer's system(s) targeted for integration to determine which integration method is appropriate (e.g., Multispeak, CMEP, etc.).
1. In scope and included integration efforts: Provide the gateway URLs to the integrating system as needed, provide Customer with standard integration API documentation, validate and test that the correct Customer information is flowing into and/or out of the RNI.
2. Out of scope and subject to additional charges: Modifications or extensions to the standard API provided by Sensus and any integration efforts not outlined above as in scope and included.

(ii) Customer Responsibilities:
1. Provide Sensus with information about the relevant information Customer wishes to transfer and integrate with the RNI.
2. Establish the network and security required for the two systems to reasonably communicate.
3. Verify integration to third party system functionality is working as intended.

(iii) If an item is not listed in subparagraph (i) above, such item is excluded from the integration of Sensus RNI Support and is subject to additional pricing.

3. **Sensus Analytics**

Sensus Analytics is a cloud-based solution and data platform that allows storage and retrieval of raw reads and data from other sources for analysis, exportation, and inquiry or reporting. The platform provides applications and reporting capabilities.

A. Essential Package. The Essential Package of the Sensus Analytics Application shall consist of the following modules:

i. Device Access
a. Allows search for meter details by using data imported from the billing system or the Sensus Device ID or AMI ID.
b. Allows a view of the meter interval or register reads.
c. Meter data is available to be copied, printed, or saved to certain user programs or file formats, specifically CSV, PDF, and Spreadsheet.
d. Allows the current and historical data to be viewed.
e. Allows the current usage to be compared to historical distribution averages.
f. Allows the user to see the meter location on a map view.
g. Allows notifications for an event on a single meter to be forwarded to a Customer employee.
h. Allows details to be viewed about a meter – (dependent on the data integrated from other systems).

ii. Meter Insight (provides the following)
a. # of active meters.
b. # of orphaned meters with drill down to the list of meters.
c. # of inactive meters with usage drill down to the list of meters.
d. # of stale meters with drill down to the list of meters.
e. # of almost stale meters with drill down to the list of meters.
f. # of meters where no read is available with drill down to the list of meters.
g. # of meters with maximum threshold exceptions with drill down to the list of meters.
h. # of meters with minimum threshold exceptions with drill down to the list of meters.
i. # of unknown radios with drill down to the list of meters.

iii. Report Access
a. Allows the user to see meter alarms and choose a report from a list of standard reports.
b. Master Route Register Reads: Shows the latest reads for all meters within specified time window.
c. Meter Route Intervals Reads: Allows users to inspect intervals of a single meter over a period of time.
d. Master Route No Readings: List all meters that are active in the system, but have not been sending reads within the specified time window.
e. Consumption Report: List meters' consumption based on meter readings within the specified time window.
f. Zero Consumption for Period: List meters whose readings do not change over a period of time.
g. Negative Consumption: Shows the number of occurrences and readings of negative consumption for the last 24hr, 48hr and 72hr from the entered roll up date.
h. High Low Exception Report: Displays meters whose reads exceed minimum or/and maximum threshold, within a time range.
i. Consumption vs Previous Reported Read: Compares latest reading (from RNI) with last known read received from CIS.
j. Consumption Exception 24 hour Report: This report shows meters that satisfy these two conditions: (1) The daily average consumptions exceed entered daily consumption threshold; (2) The number of days when daily thresholds are exceeded

are greater than the entered exception per day threshold.

k. Endpoint Details: Shows the current state of meters that are created within the specified time range.
l. Orphaned Meters: List meters that are marked as 'orphaned', which are created as of entered Created as of parameter.
m. Billing Request Mismatch: Displays meters in a billing request that have different AMR id with the ones sent by RNI. It also shows AMR id in billing request that have different meter Id in the RNI. Users must enter which billing request file prior to running the report.
n. All Alarms Report: List all alarms occurred during a time window. Users can select which alarm to show.

iv. Billing Access
   a. Initiate the creation of billing export files formatted to the import needs of the billing system.
   b. Receive billing request files from the billing system to identify what meters to include in the billing export file in the case where billing request file option is used.
   c. Provides a repository of past billing files that were either used for billing preparation or actually sent to the billing system.
   d. Will store created billing files for a period of three years unless otherwise denoted.
   e. The system will allow creation of test files before export to the billing system.
v. Billing Adaptor
   a. The underlying configurator and tools mapping the extraction of billing data to enable integration to the utility's billing system.
vi. Data Store
   a. Allows storage of meter reading data including Intervals, Registers, and Alarms to be stored.
   b. Stored data is available online for reports and analysis.
   c. Data will be retained for 3 years. Additional duration can be purchased.

B. Enhanced Package. The Enhanced Package shall consist of the modules listed above in the Essential Package, as well as the following additional modules:

i. Alarm Insight
   a. Allows the user to summarize and filter alarms by a date range.
   b. Allows the user to review all alarm types on a single screen.
   c. The user can filter out the alarms not wanted on the screen.
   d. Alarm totals can be visualized.
   e. Adds a view of trending alarms over time.
   f. Click to drill down on an alarm to gain more information on specific events.
   g. Click to analyze a specific event on a particular device.
ii. Alert Manager
   a. Allows creation of alert groups who will be notified when an alarm occurs.
   b. Users can manage alert groups by adding and removing group members.
   c. Allows selection of notification method for how end users in the group will be notified; email or SMS (text message).
   d. Allows creation of an alert from the available system events from smart points and assign to a group.
   e. Monitors the systems meters for events. When an event is triggered, all users in the group will be notified.

C. Integration of Sensus Analytics. Sensus shall provide integration support services to Customer only to the extent specifically provided below:

i. Sensus shall provide Customer with a simple flat file specification known as VFlex for the integration of the Customer's back office system to the Sensus Analytics modules. The VFlex shall contain the following types of information: Device ids, end users in the system, end user status, end user account information, end user name, and other end user details. This flat file may be delimited or fixed width. Customer shall produce this file and transmit it to the FTP location designated by Sensus. When sent to the Sensus FTP servers, this file exchange will enable the system to become operational with the Customer's systems. Customer shall produce this file and transmit it to the FTP location designated by Sensus. Sensus will provide reasonable support to explain to Customer the required vs. optional fields that are in the specification, testing and validation of the file format and content.
ii. In scope and included integration efforts: kick-off meeting to engage all required parties, mapping the Customer's fields to the VFlex specification, validation of expected output, and a two (2) hour system review of Sensus Analytics application and integration with the Customer's system (conducted remotely).
iii. Out of scope and subject to additional charges will be the transformation of data where business logic including code must be written to modify the field content or format of the data to meet the VFlex specification.
iv. Sensus' integration services consist of four (4) hours of assistance (remote or on-site, as determined by Sensus). If additional time is needed to complete the integration efforts, Sensus shall invoice Customer for additional fees on an actual time and materials basis.
v. **If an item is not listed in subparagraphs (i) or (ii) above, such item is excluded from the integration of Sensus Analytics Support and is subject to additional pricing.**
vi. **Data Import.** The Sensus Analytics Application contains adapters for the import of data from; (a) Customer's FlexNet System; and/or (b) AutoRead application for handheld and drive by systems, as applicable.
vii. **Customer Acknowledgements.**
   a. Customer acknowledges that the Sensus Analytics Application provides up to fifty (50) user logins for Customer's use.
   b. Customer acknowledges and agrees the Sensus Analytics Application is based upon the actual number of End Users within Customer's Service Territory. Pricing may increase if Customer's Service Territory or actual number of End Users expands.
   c. Customer acknowledges that all data related to the Sensus Analytics Applications is geographically hosted within the United States of America. Customer accepts the geographic location of such hosting, and indemnifies Sensus for any

claims resulting therefrom.

d. Customer acknowledges and agrees that the Intellectual Property provisions of this Agreement apply in all respects to Customer's access to and use of the Sensus Analytics Applications.

e. Customer is responsible for validating the data analyzed by the Sensus Analytics Applications. Sensus makes no promises of improving Customer's operations or saving Customer money, nor is Sensus liable for any damages resulting from decisions made by Customer related to Customer's use of Sensus Analytics.

4. **Third Party Software.**

A. RedHat Linux. If Sensus is providing Customer with a license to use RedHat Linux Software, Customer agrees to the following: By entering into this Agreement, Customer agrees to abide by and to be legally bound by the terms and conditions of the Red Hat End User License Agreements identified below, each of which are incorporated into this Agreement by reference and are available at the websites identified below. Please read the Red Hat End User License Agreements and incorporated references carefully.

Subscription:	End User License Agreement:
Red Hat Enterprise Linux	http://www.redhat.com/licenses/rhel_rha_eula.html
JBoss Enterprise Middleware	http://www.redhat.com/licenses/jboss_eula.html

Exhibit B
Technical Support

1. **Introduction**

Sensus Technical Services provides utility customers with a single point of contact for Tier 1 support of technical issues as well as any coordination of additional resources required to resolve the issue. Requests that require specialized skills are to be forwarded to a senior support engineer or Technical Advisor within the team for further analysis. If Technical Services has exhausted all troubleshooting efforts for the product type, the issue will escalate to the Engineering Support Team. Occasionally, on-site troubleshooting/analysis may be required. The preferred order of on-site support is:

a) The Customer (for assistance with the easiest and lowest time-consuming activities such as power on/power off).

b) The local distributor.

c) Sensus employees or contracted personnel, if required to fulfill a contract commitment.

2. **Support Categories**

2.1. General questions regarding functionality, use of product, how-to, and requests for assistance on Sensus AMR, AMI, RF Network Equipment, Metering Products, Sensus Lighting Control, and Demand Response Management System (FlexNet Home).

2.2. Proactive reporting and resolution of problems.

2.3. Reactive reporting to isolate, document, and solve reported hardware/software defects.

2.4. Responding to service requests and product changes.

2.5. Addressing customer inquiries with printed or electronic documentation, examples, or additional explanation/clarification.

3. **Support Hours**

3.1. Standard Support Hours: Toll-free telephone support (1-800-638-3748 option #2) is available Monday thru Friday from 8:00 a.m. EST to 8:00 p.m. EST. After-hours, holiday and weekend support for Severity 1 and Severity 2 issues is available by calling 1-800-638-3748, option #8.

4. **Support Procedures**

4.1. Customer identifies an issue or potential problem and calls Technical Services at 1-800-638-3748 Option #2. The Customer Service Associate or Technical Support Engineer will submit a SalesForce ticket.

4.2. The Customer Service Associate or Technical Support Engineer will identify the caller name and utility by the assigned software serial number, city, and state based on where the call originated. The Customer Service Associate or Technical Support Engineer will require a brief description of the problem symptoms, or error messages depending on nature of the incident. The nature of the problem and severity levels will be mutually agreed upon by both parties (either at the time the issue is entered or prior to upgrading or downgrading an existing issue) using the severity definitions below as a guideline. The severity level is then captured into SalesForce for ticket creation and resolution processing. Any time during the processing of this ticket, if the severity level is changed by Sensus, the customer will be updated.

A. Severity Levels Description:

Sev1 Customer's production system is down. The system is unusable resulting in total disruption of work. No workaround is available and requires immediate attention.

Example: Network mass outage, all reading collection devices inoperable, inoperable head end software (e.g., FlexWare, Sensus MDM). Not able to generate billing files.

Sev2 Major system feature/function failure. Operations are severely restricted; there is a major disruption of work, no acceptable work-around is available, and failure requires immediate attention.

Examples: Examples: Network equipment failure (e.g., FlexNet Echo, FlexNet Remote, Base Station transceiver, or VGB); inoperable reading devices (e.g., AR5500, VXU, VGB, or CommandLink); head end software application has important functionality not working and cannot create export file for billing system operations.

Sev3 The system is usable and the issue doesn't affect critical overall operation.

Example: Minor network equipment failure (e.g., Echo/Remote false alarms or Base Station transceiver false alarms); head end software application operable but reports are not running properly, modification of view or some non-critical function of the software is not running.

4.3. The Customer Service Associate or Technical Support Engineer identifies whether or not the customer is on support. If the customer is not on support, the customer is advised of the service options as well as any applicable charges that may be billed.

4.4. Calls are placed in a queue from which they are accessible to Technical Support Engineers on a first-come-first-served basis. A 1st level Customer Service Associate may assist the customer, depending on the difficulty of the call and the representative's technical knowledge. Technical Support Engineers (Tier 1 support) typically respond/resolve the majority of calls based on their product knowledge and experience. A call history for the particular account is researched to note any existing pattern or if the call is a new report. This research provides the representative a basis and understanding of the account as well as any associated problems and/or resolutions that have been communicated.

a. Technical Services confirms that there is an issue or problem that needs further analysis to determine its cause. The following information must be collected: a detailed description of the issue's symptoms, details on the software/hardware product and version, a description of the environment in which the issue arises, and a list of any corrective action already taken.

b. Technical Services will check the internal database and product defect tracking system, to see if reports of a similar problem exist, and if any working solutions were provided. If an existing resolution is found that will address the reported issue, it shall be communicated to the customer. Once it is confirmed that the issue has been resolved, the ticket is closed.

c. If there is no known defect or support that defines the behavior, Technical Services will work with the customer to reproduce the issue. If the issue can be reproduced, either at the customer site or within support center test lab, Technical Services will escalate the ticket for further investigation / resolution.

If the issue involves units that are considered to be defective with no known reason, the representative will open a Special Investigation RMA through the SalesForce system. If it is determined that a sample is required for further analysis, the customer will be provided with instructions that detail where to send the product sample(s) for a root cause analysis. Once it is determined that the issue cannot be resolved by Tier 1 resources, the ticket will be escalated to Tier 2 support for confirmation/workarounds to resolve immediate issue. Technical Services will immediately contact the customer to advise of the escalation. The response and escalation times are listed in Section 5. At this time, screen shots, log files, configuration files, and database backups will be created and attached to the ticket.

5. **Response and Resolution Targets.**

Sensus Technical Support will make every reasonable effort to meet the following response and resolution targets:

Severity	Standard Target Response	Standard Target Resolution	Resolution (one or more of the following)
1	30 Minutes	Immediately assign trained and qualified Services Staff to correct the error on an expedited basis. Provide ongoing communication on the status of a correction (24 hours).	• Satisfactory workaround is provided. • Program patch is provided. • Fix incorporated into future release. • Fix or workaround incorporated into SalesForce Knowledge Base.
2	4 hours	Assign trained and qualified Services Staff to correct the error. Provide communication as updates occur (48 hours).	• Satisfactory workaround is provided. • Program patch is provided. • Fix incorporated into future release. • Fix or workaround incorporated into SalesForce Knowledge Base.
3	1 Business Day	30 business days	• Answer to question is provided. • Satisfactory workaround is provided. • Fix or workaround incorporated into SalesForce Knowledge Base. • Fix incorporated into future release.

6. **Problem Escalation Process**.

6.1. If the normal support process does not produce the desired results, or if the severity has changed, the issue may be escalated as follows to a higher level of authority.

6.1.1.1. Severity 1 issues are escalated by Sales or Technical Services to a Supervisor if not resolved within 2 hours; to the Manager level if not resolved within 4 hours; to the Director level if not resolved within the same business day; and to the VP level if not resolved within 24 hours.

6.1.1.2. A customer may escalate an issue by calling 1-800-638-3748, Option 2. Please specify the SalesForce ticket number and the reason why the issue is being escalated.

6.1.1.3. In the event that a customer is not satisfied with the level of support or continual problem with their products, they may escalate a given SalesForce ticket to Manager of Technical Services (1-800-638-3748, Option 2).

7. **General Support Provisions and Exclusions**.

7.1. Sensus provides online documentation for Sensus products, and all Sensus customers are provided access to this online database, which includes operation, configuration and technical manuals. The customer shall provide names and email accounts to Sensus so Sensus may provide access to the product documentation.

7.2. Specialized support from Sensus is available on a fee basis to address support issues outside the scope of this support plan or if not covered under another specific contract or statement of work. For example: specialized systems integration services or out of warranty network equipment repair.

Exhibit C
Warranty Satisfaction Letter

637 Davis Drive
Suite 400
Morrisville, NC 27560 USA

sensus
a xylem brand

9/9/2020

City of Livonia, MI
12973 Farmington Rd
Livonia, MI 48154
Attn: Tom Wilson

Dear Mr. Wilson,

To follow up on our discussion, here is the written confirmation of our approach to resolve the warranty issue identified in some of the Electronic Registers operating in your system within your service territory.

As your trusted partner, it's important to share that we are aware that some of the installed registers have a programmed value that is causing their batteries to indicate they are nearing end of battery life. We plan to take immediate corrective action to reprogram these units and they will return to full functionality for the remainder of their service lives. The associated costs will be covered by us.

Specifically, to fully satisfy the Electronic Registers reprogramming, we will:

- 216 Electronic Registers have been affected by the False Battery Alarm
- Sensus will upgrade your current Hosted RNI Platform from 3.X to 4.X along with providing the MDM Sensus Analytics Enhanced to replace Logic at No Charge
  - These upgrade will allow Sensus to provide Over the Air updates to both the Smartpoints (Radios) and affected Electronic Registers
- Both the 4.X RNI and Sensus Analytic Enhanced Remote Training sessions will be included at No Charge

Our plan is to deliver this service as soon as we can. Once we receive the amended AMI Agreement which outlines the upgrades to the software we can get started. We continue to value you as a customer and appreciate your support as we work to resolve this issue.

Sincerely,

Tim Harriger

Tim Harriger
Vice President, North America Water

CITY OF LIVONIA – CITY COUNCIL
MINUTES OF STUDY MEETING HELD NOVEMBER 16, 2020

Meeting was called to order via Zoom remote technology at 8:21 p.m. by President Kathleen McIntyre. Present: Rob Donovic (Deployed), Jim Jolly (Livonia, Michigan), Laura Toy (Livonia, Michigan), Scott Bahr (Livonia, Michigan), Cathy White (Florida), and Kathleen McIntyre (Livonia, Michigan). Absent: None

Councilmember Donovic led the meeting in the Pledge of Allegiance.

Elected and appointed officials present: Mark Taormina, Director of Planning and Economic Development; Todd Zilincik, City Engineer; Paul Bernier, City Attorney; Susan Nash, City Clerk; Curtis Caid, Chief of Police; Dave Heavener, Fire Chief; Jerome Hanna, Director of Inspection; Casey O'Neil, Director of Information Systems; and Jacob Rushlow, Superintendent of Public Service.

8) REQUEST TO ACCEPT STORM WATER FACILITIES MAINTENANCE AGREEMENT: Engineering Division, re: from MCM 12001 Farmington, LLC, in conjunction with the construction of a storm drainage system that provides adequate drainage for property developed at 11999 and 12001 Farmington Road, in the Southeast 1/4 of Section 28.

Todd Zilincik, City Engineer, presented this request to Council. He stated as you're aware this is the exciting part of the meeting that we get to, after the first seven I know they're exciting as they were, this is even better. This is a bit of a housekeeping issue with this particular item. As you know Quality Metalcraft built next to Consumer's Energy there on Farmington Road and now it's just a matter of housekeeping to ensure that their storm water system is maintained by themselves, if not, then obviously we would come in and assist, hopefully we won't have to in the future, but looking for City Council's approval to get the Maintenance Agreement signed and then onto Wayne County for recording.

Councilmember Toy offered an approving resolution for the Consent Agenda.

DIRECTION: APPROVING CONSENT

REPORT TO THE LIVONIA CITY COUNCIL

Engineering
October 28, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Karen Worley, Secretary IV, Engineering

AGENDA ITEM

REQUEST TO ACCEPT STORM WATER FACILITIES MAINTENANCE AGREEMENT: Engineering Division, re: from MCM 12001 Farmington, LLC, in conjunction with the construction of a storm drainage system that provides adequate drainage for property developed at 11999 and 12001 Farmington Road, in the Southeast 1/4 of Section 28.

BACKGROUND

In conjunction with the development of the property located north of Plymouth Road, west of Farmington Road, the City of Livonia required the proprietor to construct a storm drainage system to provide adequate drainage for the site at their own expense. In reference to this storm sewer system, the office has received the attached storm water maintenance agreement from the owner, MCM 12001 Farmington, LLC, 301 Yamato Road, Suite 4160, Boca Raton, Florida 33431 requiring them to reimburse the City for any such maintenance that may become necessary.

RECOMMENDATION

The Engineering Division has approved the storm sewer plans and respectfully recommends that the City Council take the actions:

- Accept the Storm Water Management System (SWMS) for Quality Metalcraft, located north of Plymouth Road, west of Farmington Road in the S.E. ¼ of Section 28.

- Authorize the Mayor and the City Clerk to execute the Storm Water Facilities Maintenance Agreement on behalf of the City.

FISCAL CONSIDERATION

ATTACHMENTS

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STORM WATER FACILITIES MAINTENANCE AGREEMENT

THIS AGREEMENT is made this _____day of _____, 20____, by and between the City of Livonia, a municipal corporation, with principal offices located at 33000 Civic Center Drive, Livonia, Michigan 48154, hereafter "City" and

MCM 12001 Farmington, LLC

a Delaware limited liability company, with principal office located at 301 Yamato Road, Suite 4160, Boca Raton, Florida 33431, hereafter "Proprietor".

RECITALS

1. The Proprietor owns certain property located in the City of Livonia, Wayne County, Michigan, as MCM 12001 Farmington, LLC, as more particularly described in Exhibit "A" attached hereto (the "Property") which accommodates storm water from property developed by others that includes 11999 and 12001 Farmington Road, Livonia, Michigan 48150 ("Development").

2. The Proprietor constructed a storm drainage system that provides adequate drainage to the Development.

3. Such storm drainage system encompasses or impacts storm runoff from the Development.

4. The City has issued a permit ("Permit") in the County of Wayne, Michigan, a public body corporate ("City") authorizing the construction, operations and maintenance of the storm drainage system which is located within the Development and/or the City of Livonia's, the Wayne County Office of Public Services' and/or the Michigan State Highway Department's right-of-way and/or drain, on the Property, as long as the Proprietor assumes jurisdiction for the operation and maintenance of the storm drainage system referred to in the Permit.

5. The Permit signed by the City benefits the Proprietor and the Development.

6. The City and Proprietor desire to transfer certain responsibilities of the City to the Proprietor and its successors and confirm the terms and conditions of such transfer of responsibility by this agreement between the City and Proprietor.

NOW, THEREFORE, for and in consideration of the mutual covenants and benefits to be derived hereunder, the receipt, adequacy and sufficiency of which is hereby acknowledged, the City and the Proprietor agree as follows:

1. The Proprietor shall assume the obligations of the City under the Permit, as follows:

    a. The Proprietors agree they will maintain, at their own expense, the storm drainage system that exclusively serves the Property which is

located on the Property and/or the City of Livonia's, Wayne County Office of Public Services' and/or the Michigan State Highway Department's right-of-way and/or drain, and on the Development described in the Permit. The City may enter upon the Property for the purposes of maintaining said storm drainage system, if the Proprietor fails to do so. Notwithstanding an emergency event to prevent flooding or anything to the contrary contained herein; (i) the City shall give the Proprietor written notice of any failure to maintain the storm drainage system as specified herein; (ii) Owner shall have thirty (30) days after said notice to cure the failure; and (iii) only after Owner's failure to cure the failure within said thirty (30) days or its failure to commence and prosecute said cure diligently to completion if such failure is of a type that cannot be cured within said 30-day period, shall the City have the right, but not obligation, to maintain the storm drainage system in which event the Proprietor agree to pay the City all charges and expenses incurred thereon.

b. In the event of any failure or settlement in the private road or parking lot, resulting from the said storm drainage system, the Proprietor shall take immediate steps to correct the situation so that the public health, safety and welfare shall not be endangered nor the private road or parking lot improvement damaged.

2. Notwithstanding the Proprietor's assumption of the liabilities of Paragraph 1 hereof, the Proprietor shall retain jurisdiction over the storm drainage system and its rights and remedies under the Permit and any applicable stature, ordinance, rule or regulation are hereby preserved. Without limitation of the foregoing, Proprietor, its successors and assigns, at its sole cost and expense shall perform maintenance of the storm water facilities described in the City of Livonia's Storm Water Management and Long Term Maintenance Plan as Exhibit "B" attached hereto and incorporated herein by reference.

3. The Proprietor, its agents, representatives, successors and assigns shall defend, indemnify and hold the City harmless from and against any claims, demands, actions, damages, injuries, costs or expenses of any nature whatsoever, hereinafter "Claims", fixed or contingent, known or unknown, arising out of or in any way connected with Proprietor's design, construction, use, maintenance, repair or operation (or omission in such regard) of the storm drainage system referred to in the permit hereto, appurtenances, connections and attachments thereto which are the subject of this Agreement, unless such Claims occur due to the negligence, actions or inactions of the other party. This indemnity and hold harmless shall include any costs, expenses and attorney fees incurred by the City in connection with such Claims or the enforcement of this Agreement.

4. In accordance with 1976 PA 453, the parties hereto covenant: (1) not to discriminate against any employee or applicant for employment with respect to hire, tenure, terms, conditions or privileges of employment, or a matter directly or indirectly related to employment, or a matter directly or indirectly related to employment because of race, color, religion, national origin, sex, age, height, weight or marital status.

5. That this Agreement shall be recorded at the Proprietor's expense with the Wayne County Register of Deeds.

IN WITNESS WHEREOF, the Proprietor and City have executed this Agreement on the day and year first above written.

MCM 12001 Farmington, LLC,
a Delaware limited liability company

By: _____
Mukang Cho
Its: Authorized Signatory

STATE OF MARYLAND)
) ss.
COUNTY OF PRINCE GEORGE'S)

On this 21 day of October, 2020, before me personally appeared Mukang Cho to me personally known, who being by me sworn, did for himself say that he is the Authorized Signatory of MCM 12001 Farmington, LLC which executed the within instrument, and the said instrument was signed and sealed in behalf of said limited company by authority of its board of directors and acknowledged said instrument to be the free act and deed of said limited company.

_____
Notary Public

SHEMAY COLEY NOTARY PUBLIC PRINCE GEORGE'S CO., MD

State of Maryland, County of
Prince George's
My Commission Expires On:

CITY OF LIVONIA
a municipal corporation

By:_____
Maureen Miller Brosnan

Its: Mayor

By:_____
Susan M. Nash

Its: City Clerk

STATE OF MICHIGAN)
) ss.
COUNTY OF WAYNE)

On this _____day of _____, 20_____, before me, a Notary Public in and for said County, appeared Maureen Miller Brosnan and Susan M. Nash to me personally known, who, being sworn, did for themselves say that they are respectively the Mayor and the City Clerk of the City of Livonia, the municipal corporation named in and which executed the within instrument and acknowledged said instrument the free act and deed of said municipal corporation.

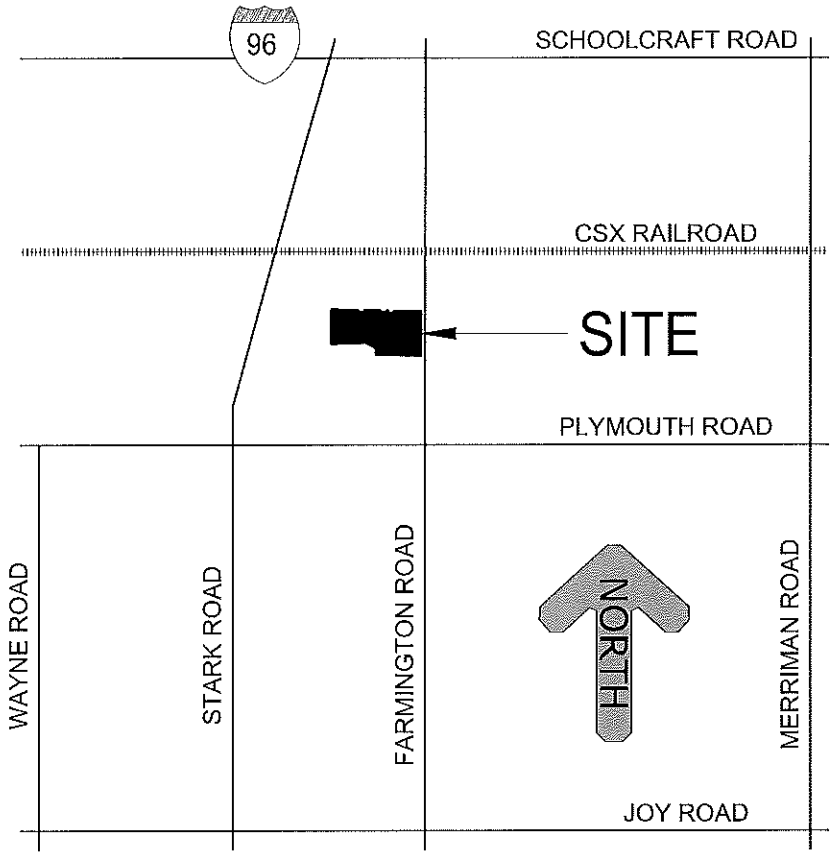
.

_____
Notary Public

_____ County, Michigan
My Commission Expires On:

INSTRUMENT DRAFTED BY:
Todd J. Zilincik, P.E.
City Engineer
City of Livonia
33000 Civic Center Drive
Livonia, MI 48154

WHEN RECORDED RETURN TO:
City of Livonia
33000 Civic Center Drive
Livonia, MI 48154
Attn: Engineering Division



LOCATION MAP

LEGAL DESCRIPTIONS

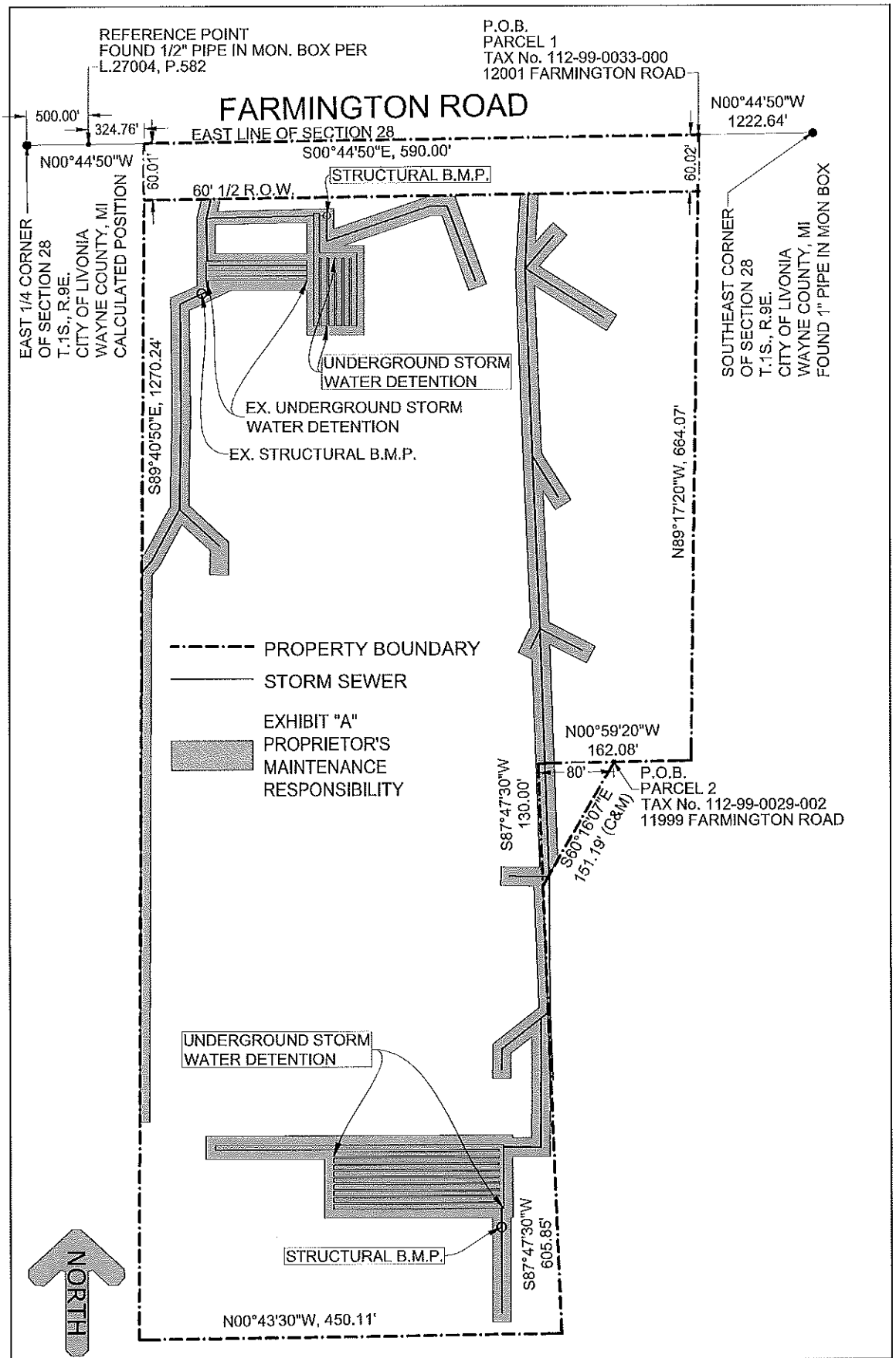
FURNISHED AND AS-SURVEYED BY SPALDING DeDECKER, AUGUST, 2018
SOURCE: WARRANTY DEED CONVEYING TO FARMCRAFT, LLC,
RECORDED IN LIBER 50429, PAGE 214, WAYNE COUNTY RECORDS, JANUARY 23, 2013

LAND SITUATED IN THE CITY OF LIVONIA IN THE COUNTY OF WAYNE IN THE STATE OF MI

PARCEL 1, TAX ID NUMBER 112-99-0033-000, 12001 FARMINGTON RD, LIVONIA, MI 48150-1725
PART OF THE SOUTHEAST 1/4 OF SECTION 28, TOWN 1 SOUTH, RANGE 9 EAST, DESCRIBED AS: LYING WEST OF AND ADJOINING THE CENTERLINE OF FARMINGTON ROAD, SOUTH OF THE CHESAPEAKE AND OHIO RAILWAY COMPANY'S RIGHT OF WAY (99.00 FEET WIDE) AND NORTH OF PLYMOUTH ROAD BEING MORE PARTICULARLY DESCRIBED AS:BEGINNING AT A POINT ON THE EAST LINE OF SAID SECTION 28, SAID POINT BEING NORTH 00 DEGREES 44 MINUTES 50 SECONDS WEST 1222.64 FEET FROM THE SOUTHEAST CORNER OF SAID SECTION 28; THENCE NORTH 89 DEGREES 17 MINUTES 20 SECONDS WEST 664.07 FEET TO A POINT; THENCE NORTH 00 DEGREES 59 MINUTES 20 SECONDS WEST 162.08 FEET TO A POINT; THENCE SOUTH 87 DEGREES 47 MINUTES 30 SECONDS WEST 605.85 FEET TO A POINT; THENCE NORTH 00 DEGREES 43 MINUTES 30 SECONDS WEST 450.11 FEET TO A POINT; THENCE SOUTH 89 DEGREES 40 MINUTES 50 SECONDS EAST PARALLEL TO THE EAST AND WEST 1/4 SECTION LINE OF SAID SECTION 28, 1270.24 FEET TO A POINT ON THE EAST LINE OF SAID SECTION 28; SAID POINT BEING SOUTH 00 DEGREES 44 MINUTES 50 SECONDS EAST 823.73 FEET FROM THE EAST 1/4 CORNER OF SAID SECTION 28; THENCE SOUTH 00 DEGREES 44 MINUTES 50 SECONDS EAST, ALONG THE EAST LINE OF SAID SECTION 28, 590.00 FEET TO THE POINT OF BEGINNING. EXCEPTION THEREFROM THAT PORTION OF SUBJECT PROPERTY CONVEYED TO FARMINGTON ROAD STORM RELIEF DRAINAGE DISTRICT IN QUIT CLAIM DEED RECORDED IN LIBER 16551, PAGE 558, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE NORTH LINE OF SAID PARCEL DISTANT NORTH 89 DEGREES 40 MINUTES 50 SECONDS WEST 60.00 FEET FROM THE NORTHEAST CORNER OF SAID PARCEL AND PROCEEDING THENCE SOUTH 00 DEGREES 44 MINUTES 50 SECONDS EAST 403.50 FEET; THENCE NORTH 02 DEGREES 56 MINUTES 17 SECONDS WEST 404.08 FEET TO A POINT ON SAID NORTH LINE OF SAID PARCEL; THENCE ALONG SAID NORTH LINE SOUTH 89 DEGREES 40 MINUTES 50 SECONDS EAST 15.42 FEET TO THE POINT OF BEGINNING, AND EXCEPTING THEREFROM THE EAST 60.00 FEET OF THE SUBJECT PROPERTY DEED FOR ROAD PURPOSES IN DEED RECORDED IN LIBER 16326, PAGE 295.

PARCEL 2, TAX ID NUMBER 112-99-0029-002, 11999 FARMINGTON RD, LIVONIA, MI 48150-1725
PART OF THE SOUTHEAST 1/4 OF SECTION 28, TOWN 1 SOUTH, RANGE 9 EAST, A TRIANGULAR PARCEL OF LAND DESCRIBED AS: TO FIND THE PLACE OF BEGINNING OF SAID LAND COMMENCE AT THE SOUTHEAST CORNER OF SAID SECTION, RUN THENCE NORTH 89 DEGREES 17 MINUTES 20 SECONDS WEST ALONG THE SOUTH LINE OF SAID SECTION 658.91 FEET; THENCE NORTH 00 DEGREES 59 MINUTES 20 SECONDS WEST 1304.86 FEET TO THE PLACE OF BEGINNING OF SAID TRIANGULAR PARCEL OF LAND; THENCE CONTINUING NORTH 00 DEGREES 59 MINUTES 20 SECONDS WEST 80.00 FEET; THENCE SOUTH 87 DEGREES 47 MINUTES 30 SECONDS WEST 130.00 FEET; THENCE SOUTHEASTERLY TO THE PLACE OF BEGINNING.

NO SCALE	**STORM WATER MAINTENANCE EXHIBITS**	WEI PROJECT No. 18.275
	OWNER: MCM 12001 FARMINGTON, LLC	DATE 09/25/2020
		DRAWN BY GWD
	301 YAMATO ROAD, SUITE 4160, BOCA RATON, FLORIDA 33431	CHECKED BY JNW
WEBB ENGINEERING, INC		**Exhibit A**
314 Pauline Boulevard, Ann Arbor, Michigan 48103 office 248.783.1105 fax 248.783.1109 info@webbeng.com	11999 & 12001 FARMINGTON ROAD, LIVONIA, WAYNE COUNTY, MICHIGAN 48150-1725	SHEET 1 of 2



1 INCH ≈ 120 FEET

WEBB ENGINEERING, INC

314 Pauline Boulevard, Ann Arbor, Michigan 48103
office 248.783.1105 fax 248.783.1109 info@webbeng.com

STORM WATER MAINTENANCE EXHIBITS

OWNER: MCM 12001 FARMINGTON, LLC

301 YAMATO ROAD, SUITE 4160, BOCA RATON, FLORIDA 33431

11999 & 12001 FARMINGTON ROAD, LIVONIA, WAYNE COUNTY, MICHIGAN 48150-1725

WEI PROJECT No.	18.275
DATE	09/25/2020
DRAWN BY	GWD
CHECKED BY	JNW

Exhibit A

SHEET 2 of 2

CITY OF LIVONIA STORM WATER MAINTENANCE AGREEMENT "EXHIBIT B"
Long-Term Maintenance Schedule
11999 & 12001 FARMINGTON ROAD

	System Component									
Maintenance Activities	Catch Basins, Inlets & Storm Sewers	Channels & Vegetated Swales	Inlets to Pretreatment Systems & Detention/Retention Systems	Flow Restrictors, Overflow Structures & Outlet Pipes	Emergency Spillways	Riprap	Buffer Strip	Manufactured Treatment System	Underground Detention Systems	**Frequency**
Monitoring/Inspection										
• Inspect for sediment accumulation**/clogging of stone filter	X	X	X					X	X	Annually
• Inspect for floatables, dead vegetation and debris	X	X	X	X				X	X	Annually and after major events
• Inspect for erosion and integrity of banks and berms		X	X			X				Annually and after major events
• Inspect all components during wet weather and compare to as-built plans	X	X	X	X		X		X	X	Annually
• Monitor plantings/vegetation		X								2 times per year
• Ensure means of access for maintenance remain clear/open	X	X	X	X		X		X	X	Annually
Preventative Maintenance										
• Mowing		X								only*
• Remove accumulated sediment	X	X						X	X	As needed**
• Remove floatables, dead vegetation and debris	X	X	X	X						As needed
• Replace or wash/reuse stone riser filters						X				as needed***
• Remove invasive plant species • Per Manufacturer's maintenance recommendations		X		X				X	X	Annually
Remedial Actions										
• Repair/stabilize areas of erosion		X	X			X				As needed
• Replaced dead plantings, bushes, trees		X								As needed
• Reseed bare areas		X								As needed
• Structural repairs	X		X	X		X		X	X	As needed
• Make adjustments/repairs to ensure proper functioning	X	X	X	X		X		X	X	As-needed

1 INCH ≈ 50 FEET

WEBB ENGINEERING, INC
314 Pauline Boulevard, Ann Arbor, Michigan 48103
office 248.783.1105 fax 248.783.1109 info@webbeng.com

STORM WATER MAINTENANCE EXHIBITS

OWNER: MCM 12001 FARMINGTON, LLC

301 YAMATO ROAD, SUITE 4160, BOCA RATON, FLORIDA 33431

11999 & 12001 FARMINGTON ROAD, LIVONIA, WAYNE COUNTY, MICHIGAN 48150-1725

WEI PROJECT No.	18.275
DATE	09/25/2020
DRAWN BY	GWD
CHECKED BY	JNW

Exhibit B

SHEET 1 of 1

CITY OF LIVONIA – CITY COUNCIL
MINUTES OF STUDY MEETING HELD NOVEMBER 16, 2020

Meeting was called to order via Zoom remote technology at 8:21 p.m. by President Kathleen McIntyre. Present: Rob Donovic (Deployed), Jim Jolly (Livonia, Michigan), Laura Toy (Livonia, Michigan), Scott Bahr (Livonia, Michigan), Cathy White (Florida), and Kathleen McIntyre (Livonia, Michigan). Absent: None

Councilmember Donovic led the meeting in the Pledge of Allegiance.

Elected and appointed officials present: Mark Taormina, Director of Planning and Economic Development; Todd Zilincik, City Engineer; Paul Bernier, City Attorney; Susan Nash, City Clerk; Curtis Caid, Chief of Police; Dave Heavener, Fire Chief; Jerome Hanna, Director of Inspection; Casey O'Neil, Director of Information Systems; and Jacob Rushlow, Superintendent of Public Service.

9) REQUEST TO APPROVE 2021 ROAD REPAIR PROGRAM: Engineering Division, re: as reviewed by the Citizen Advisory Committee on roads for the ninth year of the ten year paving millage approved by Livonia residents.

Todd Zilincik, City Engineer, presented this request to Council. He stated it's hard to believe it's November and we're already thinking about next year's program to get out there and reconstruct. So, leaves are falling, now it's time to get those roads studied and get fixed next year so we can start out in April/May. Looking for Council's approval as we had a Citizens Road Advisory Committee Meeting on October 15th, with a supplemental meeting on October 28th at City Hall for residents to bring their concerns to us. We're looking for Council's approval based on their recommendation of approximately 63 segments of roadway of which we're going to use 4.9 million dollars for concrete repairs, 4 million dollars for asphalt, and $800,000 for selective slab. So, again, looking for approximately 9.9 million dollars in road repairs in our ninth year for the 2021 Road Repair Program. With that, I'll be happy to answer any questions if you have them, and, again, I appreciate all of your assistance and support in the past over the past eight years to again continue on with improving our infrastructures throughout the City.

Councilmember McCullough thanked the Citizens Advisory Committee for all of their hard work they put into this. Obviously improving our infrastructure is a huge deal and he then offered an approving resolution for the Consent Agenda.

DIRECTION: APPROVING CONSENT

REPORT TO THE LIVONIA CITY COUNCIL

Engineering
October 29, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Karen Worley, Secretary IV, Engineering

AGENDA ITEM

REQUEST TO APPROVE 2021 ROAD REPAIR PROGRAM: Engineering Division, re: as reviewed by the Citizen Advisory Committee on roads for the ninth year of the ten-year paving millage approved by Livonia residents.

BACKGROUND

Included in this report is the suggested 2021 Road Repair Program as prepared by the Department of Public Works and reviewed by the Citizens Advisory Committee on Roads. For 2020, this will be the nineth year of the ten-year road paving renewal millage approved by Livonia residents for pavement repairs on the entire road system in 2012.

2021 Road Repair Program Development

The Department of Public Works, using the PASER system, established a rating for each road segment throughout the City to use in the evaluation of the current road condition. The PASER Ratings were performed by City staff using ROADSOFT Software by driving 372.38 miles of roads and were completed in late-September 2020. There are 60.52 miles classified as Major and 311.86 miles classified as local. The breakdown by streets by type is as follows: 58.5% or 218.04 miles of concrete; 39.4% or 146.56 miles of asphalt; 1.7% or 6.31 miles of composite; 0.004% or 1.47 miles of unpaved (gravel). The PASER Rating information is on the City Website for the public to review and reference. The PASER Ratings are to be completed every 2 years and will be scheduled again in 2022. By performing this task in-house, City staff gain first-hand knowledge on the condition of our streets. The average PASER Rating based on the 2020 data for our network was 6.15 or in “Good Condition”. This rating increased from 6.05 in 2018. Below is the breakdown showing the miles of streets by PASER Rating:

RATING

8 to10 - Very Good to Excellent (74.96 Miles) - Blue
6 to 7 - Good (147.17 Miles) - Yellow
4 to 5 - Fair (143.87 Miles) - Green
1 to 3 - Poor (4.91 Miles) – Red
Note: There are 1.47 Miles of Unpaved Road (Gravel)

The Department assigns the funding available for the year in each of the road repair categories;

reconstruction, rehabilitation, and planned preventative maintenance.Our staff has analyzed the data and generated a list of streets and scheduled the type of repair along with a cost estimate of those repairs. The list has been reviewed by the Engineering and Road Maintenance staffs to verify the road conditions, recommend the repair treatments, and better arrange the work to efficient contract groupings. The list was then reviewed by the Citizens Advisory Committee on Roads at two (2) separate meetings. The first meeting held October 15, 2020, had discussions on the proposed locations for concrete, asphalt, and selective slabs and at the second meeting held on October 28, 2020, the Committee heard public commentary on the roads. There was one resident that showed up for this public meeting. The Department staff considered these recommendations for the Road Repair Program and the list is contained herein for the Council's approval.

The list of repair locations including the repair method is shown on Attachment 1. There are a total of 63 street segments. The estimated cost of street repairs are approximately $9.9 million shown on the proposed list for 2021. However, we will maintain a budget of $9.7 million (anticipate $4.9 million for concrete and $4.0 million for asphalt repairs and $800,000 for selective slab repairs based upon bids and final approval by City Council on the 2021 Budget) to perform the street repairs. The anticipated mix of fixes for our road network will consist of the following: 47% Reconstruction, 40% Rehabilitation and 13% Maintenance.

The Citizens Advisory Committee on Roads has concurred with this list based on available funding.

In addition to these programmed locations, the following Wayne County and MDOT major road construction projects are scheduled to begin in 2021.

Wayne County

Rehabilitation of Merriman Road from Plymouth Road to Joy Road

MDOT

Reconstruction of I-275 from Six Mile Road to Ford Road, Rehabilitation from Ford Road to Northline Road along with the rehabilitation of the bridges (MDOT anticipates that this will be a 3-year project)

All of these road projects represent our proposed list for construction in 2021. It is subject to change based on the consulting engineer's evaluation and final design, the bid prices received, and the project programming by the Wayne County Department of Public Services and the Michigan Department of Transportation (MDOT).

RECOMMENDATION

In order to proceed with the 2021 Road Repair Program, it is recommended that the Council approve the 2021 Road Repair Program as proposed by the Department of Public Works and shown on the attached Proposed 2021 Road Repair Program list and recommended by the Citizens Advisory Committee on the

Roads in the attached resolution.

FISCAL CONSIDERATION

ATTACHMENTS

1. AGENDA October 15, 2020
2. AGENDA October 28, 2020
3. October 28, 2020 Public Meeting Sign In Sheet
4. Advisory Committee Resolution - Approval of 2021 Road Program, 10.28.20
5. Proposed List for the 2021 Road Program 10-6-20
6. 2021 Proposed Paving Program Map - 10-07-2020

APPROVED BY

Date: October 29, 2020

Todd Zilincik, City Engineer

Date: October 30, 2020

Donald Rohraff, Director of Public Works

Date: October 30, 2020

Michael T. Slater, Finance Director

Date: October 30, 2020

Paul Bernier, City Attorney

Date: October 30, 2020

Maureen Miller Brosnan, Mayor

AGENDA

Citizen Roads Advisory Committee Meeting

Date: Thursday, October 15, 2020

Time: 6:30 pm

Location: 12973 Farmington Road, Livonia, MI 48150-4202 (West Conf. Room)

6:30 pm to 8:00 – Working Meeting for Discussion on 2021 Road Program

1. Karl Kevra, Chairperson of the Citizen Roads Advisory Committee
2. Update Committee Members on 2020 Road Repair Program ($4.4 Million for Concrete, $3.7 Million for Asphalt), and Contract 20-J, Selective Slab Replacement in amount of $825k for approximately 24 locations, including Houghton (5 Mile to Jamison), Meadowlark (Middlebelt to Garden), Schoolcraft Service Drive (Golfview to 1,000 feet west), Summers (500 feet east of Westmore to Mayfield), additional locations on Nola, Stonehouse, Blue Skies and Susanna in Section 19

3. Summarize 2021 Road Repair Program, Budget of $9.7 Million Dollars
    - Concrete repairs to be broken into 2 contracts ($4.9 million in reconstruction; $800k in maintenance)
      Note: Recommend to extend Concrete Reconstruction Contract 21-C to Hard Rock Concrete
    - Asphalt Road Program $4.0 million.
      Note: Recommend to extend Asphalt Road Repair Contract 21-A to Nagle Paving
    - Recommend to bid out Concrete Maintenance Contract 20-J to complete. Fit program to budget as some segments will be deferred to 2021.
    - Need to confirm actual costs and potential road segment cuts from list after design information is provided by Consultants
    - City Council to approve budget 2021 Budget by November 1, 2020

4. Discuss 2020 Concerns from the Residential Complaints (Including any Letters Received by Engineering Department) for 2021 potential repairs by Road Program or DPW.

5. Upcoming Projects in 2021 (Wayne County): Merriman Road (Plymouth Road to Joy Road). Wayne County to try and fix Farmington Road (Plymouth Road to Orangelawn) in 2022.

6. Review overall 2020 PASER Ratings for 372.94 miles (60.52 Major and 312.86 Local) based on ACT 51 from the State of Michigan thru June 30, 2020. Overall ratings: Good 20.4 % (74.774 miles) - Rating 8 thru 10; Fair 66.6% (244.741 miles) – Rating 5 thru 7; Poor 12.6% (46.142 miles) – Rating 1-4; Unrated or Gravel (0.4) (1.613 miles) Note that Roadsoft shows different overall miles of road for Livonia. Average overall PASER Rating 6.110 on road network. See attached pie chart and PASER Rating Mileage Summary.

7. Set date and time to meet with residents regarding concerns with road repairs (Recommend Late October 28th, Thursday, November 5h or Tuesday, November 10th). Meeting to invite Mayor Brosnan, include the DPW Director and / or Assistant Director, Roads & Park Supervisor, Consultants involved with Program from AEW and OHM Advisors, and Assistant City Engineer.

8. Adjourn

AGENDA

Citizen Roads Advisory Committee Meeting

Date: Wednesday, October 28, 2020

Time: 6:00 pm

Location: City Hall, 33000 Civic Center Drive, Livonia, MI 4154 (City Hall Auditorium)

Introductions – Karl Kevra: Chairperson of the Citizen Roads Advisory Committee to introduce members, Todd Zilincik to introduce City Staff and Consultants

1. Road Rating System Utilized Road Repair Program (Paser Ratings – 1 through 10) completed in 2020 (done every 2 years). Note: Visit City of Livonia Website at www.ci.livonia.mi.us, then "Departments", then "Engineering", click on "Street Repairs" for information.

2. Status of 2020 Road Repair Program ($4.4 Million for Concrete, $3.75 Million for Asphalt), Contract 20-J, Selective Slab Replacement in amount of $900k

3. Upcoming Projects in 2021 (Wayne County): Merriman Road (Plymouth Road to Joy Road); MDOT I-275 from Ford Road to 6 Mile Road, patching to the south to Northline (2021 to 2023): Note: 36.3 mile of State Trunkline (MDOT); Wayne County 68.0 Miles

4. Summarize 2021 Road Repair Program, Budget of $8.9 Million Dollars ($4.9 Million for Concrete Roads and $4.0 Million for Asphalt and $800k for Selective Slab)

5. DPW Road Repairs: Selective Slab Program, Catch Basin, and Cold Patch

6. Listen to Concerns Brought Forth From the Residential / Business Owner's on Livonia Jurisdiction Roads, (Including any Letter Received by Engineering Department, Bob Bakun on Perrin).

7. Recommended 2021 Road Program (motion), including streets discussed this evening. Signature for Thank you letter to Warren Evans for Merriman Road (Schoolcraft Road to Plymouth Road), Seven Mile Road (Newburgh to I-275).

8. Adjourn

Citizens Roads Advisory Committee Meeting
2021 Road Repair Program Sign-In Sheet

October 28, 2020

	NAME	ADDRESS	PHONE	E-MAIL (Optional)
1.	TOM FORGIE	14466 RIVERSIDE	313 617 7362	
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				

Motion by Brett Gierak, seconded by John Grzebik

RESOLVED, that the Citizens Advisory Committee on the Roads, having reviewed the proposed 2021 Road Repair Program presented by the Department of Public Works on October 15, 2020 and comments from concerned residents / business owners on October 28, 2020, does hereby recommend that the 2021 Road Repair Program Road based be available funding to the Livonia City Council for its approval with a budget of $9,700,000 ($4.9 Million for Concrete, $4.0 Million for Asphalt and $800,000 for Selective Slab Maintenance). If there are additional funds or street segments changes in the 2021 Road Repair Program, Bainbridge (7 Mile to End) shall be considered as 1st Priority and Perrin (Olson to Joy) considered as 2nd Priority.

Approved unanimously. 10/28/20 (Kevra - Chairman, Boadway, Carey, Gierak, Grzebik, Green, Absent: Kolhoff, Hoen, Gostias)

Projected Road Segments for 2021 Road Repair Program
(Proposed List)

10/29/2020

****SUBJECT TO CHANGE BASED ON FUNDING****

Street Name	From	To	Section	Pavement Type	PASER Rating	Type of Treatment
Antago Ave.	Seven Mile Road	Vassar Avenue	1	Asphalt	5	Maintenance
Antago Ave.	Vassar Avenue	Garand River Avenue	1	Asphalt	4,5	Rehabilitation
Bridge Ave.	St. Francis	Inkster Rd.	1	Asphalt	4,5	Rehabilitation
Vassar Ave.	Angling Rd.	Rensellor Avenue	1	Asphalt	5	Maintenance
Vassar Ave.	Rensellor Avenue	Inkster Rd.	1	Asphalt	5	Rehabilitation
Victor Parkway	Pembroke Ave.	Eight Mile Rd.	6	Asphalt	4,5	Rehabilitation
Gardner Avenue	125' North of Bennett Ave.	600' West of Levan Road	8	Concrete	4	Reconstruction
Vargo Avenue	200' East of Fitzgerald Ave.	Levan Road	8	Concrete	4	Reconstruction
Vargo Avenue	100' West of Bennett	Fitzgerald Avenue	8	Concrete	4	Reconstruction
Vargo Avenue	Fitzgerald Avenue	200' East of Fitzgerald Ave.	8	Concrete	5	Maintenance
Bobrich Avenue	Rougeway Drive	Dolores Drive	12	Concrete	4	Reconstruction
Dolores Drive	Vargo Avenue	Bobrich Avenue	12	Concrete	4,5	Reconstruction
Dolores Drive	Bobrich Avenue	Bennett Avenue	12	Concrete	5	Reconstruction
Vargo Avenue	Dolores Drive	Inkster Road	12	Concrete	4,5	Reconstruction
Doris Avenue	Munger Avenue	North End	14	Asphalt	3	Rehabilitation
Bell Creek Lane	Farmington Road	Six Mile Road	15	Asphalt	4	Rehabilitation
Bloomfield Drive	Farmington Road	Bell Creek Lane	15	Asphalt	4	Rehabilitation
Camborne Lane	West End	Hubbard Road	15	Asphalt	4	Rehabilitation
Greenland Court	North End	Hubbard Road	15	Asphalt	4	Rehabilitation
Hubbard Road	Five Mile Road	Buchanan Road	15	Asphalt	4	Rehabilitation
Myrna Avenue	Loveland Avenue	Hubbard Road	15	Asphalt	4	Rehabilitation
Bristol Drive	Wayne Road	150' West of Edgewood Dr.	16	Concrete	3	Reconstruction
Bristol Drive	150' West of Edgewood	Edgewood Drive	16	Concrete	4	Maintenance
Country Club	Southampton	Wood Drive	17	Concrete	3,4,5	Reconstruction
Wood Drive	Ronnie Lane	Wayne Road	17	Concrete	3	Reconstruction
Loveland Avenue	Perth Avenue	Grennada Avenue	22	Concrete	5	Maintenance
Martin Avenue	Westmore Avenue	Loveland Avenue	22	Concrete	5	Maintenance
Middleboro Avenue	Westmore Avenue	Mayfield Avenue	22	Concrete	6	Maintenance
Scone Avenue	400' West of Mayfield	Mayfield Avenue	22	Concrete	4	Maintenance
Scone Avenue	Westmore Avenue	400' West of Mayfield	22	Concrete	4	Reconstruction
Westmore Avenue	Scone Avenue	Summers Avenue	22	Concrete	5	Maintenance
Hillcrest Avenue	Schoolcraft Road	Lyndon Avenue	23	Asphalt	2,3	Rehabilitation
Cavell Avenue	Oakley Avenue	Five Mile Road	24	Asphalt	3,4	Rehabilitation
Oakley Avenue	Cavell Avenue	Inkster Road	24	Asphalt	3	Rehabilitation
Capitol Avenue	Mayfield Avenue	Brookfield Avenue	27	Concrete	4	Reconstruction
Graytona Avenue	Surrey Avenue	Farmington Road	28	Concrete	4	Reconstruction
Surrey Avenue	200' South of Graytona	200' North of Graytona	28	Concrete	4	Reconstruction
Loveland Avenue	700' North of Orangelawn	Plymouth Road	34	Concrete	4	Reconstruction
Loveland Avenue	West Chicago Road	700' North of Orangelawn	34	Concrete	5	Maintenance
Beatrice Avenue	Dover Avenue	130' South of Grandon Ave.	35	Asphalt	4	Rehabilitation
Danzig Avenue	Dover Avenue	130' South of Grandon Ave.	35	Asphalt	5	Rehabilitation
Fremont Avenue	Joy Road	130' South of Grandon Ave.	35	Asphalt	3,4	Rehabilitation
Hugh Avenue	Joy Road	130' South of Grandon Ave.	35	Asphalt	4,5	Rehabilitation
Louise Avenue	Dover Avenue	130' South of Grandon Ave.	35	Asphalt	5	Rehabilitation
Melvin Avenue	Joy Road	Dover Avenue	35	Asphalt	5	Maintenance
Melvin Avenue	Dover Avenue	130' South of Grandon Ave.	35	Asphalt	5	Rehabilitation
Orangelawn Avenue	Denne Avenue	Sunset Avenue	35	Concrete	4	Reconstruction
Orangelawn Avenue	Merriman Road	Denne Avenue	35	Concrete	5	Maintenance
Sunset Avenue	Hathaway Avenue	West Chicago Road	35	Concrete	4	Reconstruction
Clements Circle South	Harrison Road	Seltzer Avenue	36	Concrete	4	Reconstruction
Deering Avenue	60' North of West Chicago Rd.	Orangelawn Avenue	36	Concrete	4	Reconstruction
Garvett Avenue	Clements Circle South	200' N. Clements Circle S.	36	Concrete	4	Reconstruction
Garvett Avenue	200' N. Clements Circle S.	Elmira Avenue	36	Concrete	5	Maintenance
Hartel Avenue	Joy Road	130' North of Olson Avenue	36	Asphalt	4	Rehabilitation
Karen Avenue	Orangelawn Avenue	Elmira Avenue	36	Concrete	5	Maintenance
Olson Avenue	Oxbow Avenue	Hartel Avenue	36	Asphalt	4	Rehabilitation
North Side Orangelawn	Middlebelt Road	Karen Avenue	36	Concrete	4	Reconstruction
South Side Orangelawn	Middlebelt Road	Karen Avenue	36	Concrete	4	Maintenance

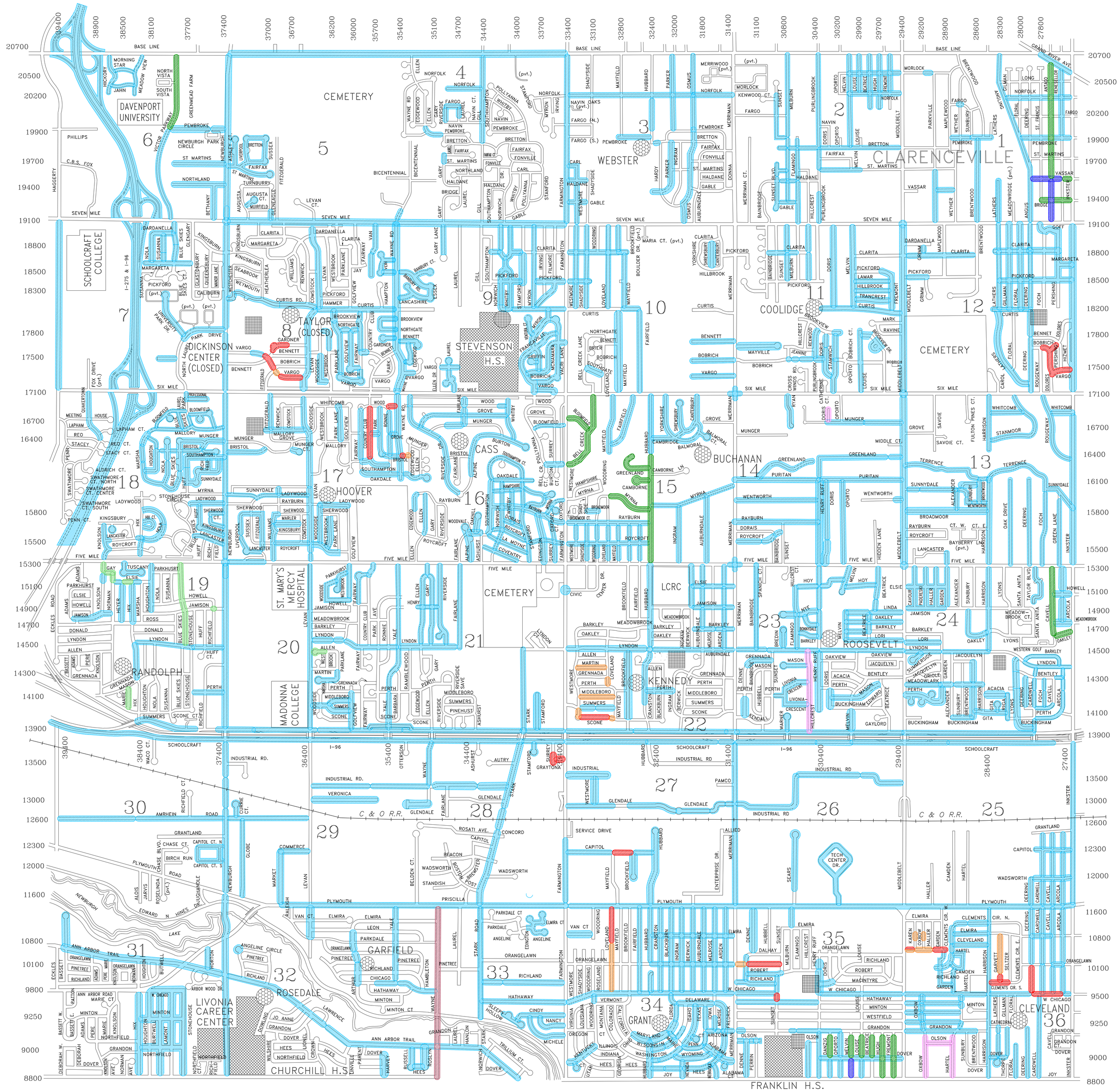
Projected Road Segments for 2021 Road Repair Program
(Proposed List)

10/29/2020

Orangelawn Avenue	Karen Avenue	Haller Avenue	36	Concrete	5,6	Maintenance
Orangelawn Avenue	Haller Avenue	East End	36	Concrete	3,4	Reconstruction
Oxbow Avenue	Orangelawn Avenue	Elmira Avenue	36	Concrete	5	Maintenance
Oxbow Avenue	Joy Road	130' North of Olson Avenue	36	Asphalt	4	Rehabilitation
West Chicago Blvd.	Deering Avenue	Arcola Avenue	36	Concrete	4	Reconstruction

TOTAL = 63 Segments (37 Concrete and 26 Asphalt)

23 Reconstruction Segments
23 Rehabilitation Segments
17 Maintenance Segments


CEMETERY
DAVENPORT UNIVERSITY
SCHOOLCRAFT COLLEGE
DICKINSON CENTER (CLOSED)
TAYLOR (CLOSED)
STEVENSON H.S.
WEBSTER
CLARENCEVILLE
COOLIDGE
CASS
HOOVER
BUCHANAN
ROOSEVELT
KENNEDY
RANDOLPH
ST. MARY'S MERCY HOSPITAL
MADONNA COLLEGE
LCRC
CHURCHILL H.S.
LIVONIA CAREER CENTER
ROSEDALE
GARFIELD
GRANT
CLEVELAND
FRANKLIN H.S.
BASE LINE
SEVEN MILE
FIVE MILE
SIX MILE
SCHOOLCRAFT
I-96
I-275 & I-96
C & O R.R.
GRAND RIVER AVE.
NORFOLK
PEMBROKE
BRETTON
FAIRFAX
FONVILLE
ST. MARTINS
NORTHLAND
HALDANE
GABLE
CARL
BRIDGE
VASSAR
CLARITA
DARDANELLA
MARGARETA
PICKFORD
CURTIS
HAMMER
BROOKVIEW
NORTHGATE
BENNETT
BOBRICH
VARGO
GARDNER
MUNGER
GROVE
WHITCOMB
WOOD
BRISTOL
SOUTHAMPTON
OAKDALE
SUNNYDALE
LADYWOOD
SHERWOOD
RAYBURN
ROYCROFT
KINGSBURY
LANCASTER
MYRNA
HAMPSHIRE
BROADMOOR
CAMBORNE
GREENLAND
PURITAN
WENTWORTH
MORLOCK
MERRIWOOD (pvt.)
NAVIN OAKS (pvt.)
FARGO (N.)
FARGO (S.)
MARIA CT. (pvt.)
BOULDER DR. (pvt.)
MEADOWRIDGE (pvt.)
NAVIN
FARGO
MARK
RAVINE
BROOKVIEW DR.
MEADOWBROOK
BARKLEY
LYNDON
ALLEN
MARTIN
GRENNADA
PERTH
MIDDLEBORO
SUMMERS
SCONE
OAKVIEW
JACQUELYN
BENTLEY
LORI
OAKLEY
MASON
BUCKINGHAM
GITA
ELSIE
JAMISON
HOWELL
PARKHURST
ROSS
DONALD
HUFF CT.
ANN ARBOR TRAIL
ANN ARBOR ROAD
MINTON
NORTHFIELD
GRANDON
DOVER
HEES
LIONEL
CROWN
WILSHIRE
ARBOR WOOD DR.
ANGELINE CIRCLE
PINETREE
ORANGELAWN
LEON
YALE
ELMIRA
VAN CT.
PARKDALE
ANGELINE
EDINGTON
CHICAGO
HATHAWAY
MINTON CT.
CINDY
NANCY
MICHELE
SLEEPY HOLLOW
LAWRENCE
DOWLING
JO ANNE
ARIZONA
OREGON
KENTUCKY
ILLINOIS
INDIANA
WISCONSIN
MICHIGAN
OHIO
WASHINGTON
WYOMING
NEBRASKA
ALABAMA
UTAH
GEORGIA
VERMONT
DELAWARE
FLORIDA
IDAHO
TEXAS
IOWA
COLORADO
MONTANA
VIRGINIA
LOUISIANA
MARYLAND
MAINE
CONNECTICUT
NEW JERSEY
PENNSYLVANIA
ROBERT
MACINTYRE
CLEMENTS CIR. N.
CLEMENTS CIR. E.
CLEMENTS CIR. S.
CLEMENTS CIR. W.
CAMDEN
HARTEL
CLEVELAND
CATHEDRAL
THORPE
CAPITOL
CAPITOL CT. N.
CAPITOL CT. S.
CHASE BLVD.
BIRCH RUN
PLYMOUTH ROAD
ROSATI AVE.
CONCORD
SERVICE DRIVE
TECH CENTER DR.
INDUSTRIAL RD.
INDUSTRIAL
VERONICA
GLENDALE
AMRHEIN
GRANTLAND
WADSWORTH
BEACON
STANDISH
PRISCILLA
BOSTON
BREWSTER
POST
AUTRY
GRAYTONA
WACO CT.
OTTERSON
ASHURST
COMMERCE
MARKET
GLOBE
BELDEN CT.
EDWARD N. HINES DR.
NEWBURGH
LAKE
ALOIS
JARVIS
ROSELINDA
DAUGHANDALE
TRILLIUM CT.
HANLON
PAMCO
ENTERPRISE DR.
SEARS
ALLIED
DENNE
PERRIN
HUBBELL
DALHAY
ROBERT
MACINTYRE
ORANGELAWN
RICHLAND
W. CHICAGO
OLSON
DANZIG
BAYBERRY LN. (pvt.)
LANCASTER
CT. W.
CT. E.
HARRISON
LYONS
GARVETT
SELTZER
CAVOUR
PAGERSH
HALLER
GARDEN
ALEXANDER
SUNBURY
BRENTWOOD
SANTA ANITA
TAYLOR BLVD
CAVELL
ARCOLA
INKSTER
GREEN LANE
OAK DRIVE
DEERING
FOCH
PERSHING
HIZMET
ROUGEWAY
CAROL
CARDWELL
ROSELYN
HARVEY
UNIVILLE
PARENT
STARK
RIVERSIDE SAVE
PINEHURST
ASHURST
BARBARA
RAMBLEWOOD
SUMMERSIDE
MEADOWLARK
ORIOLE
GARDEN
BUCKINGHAM
GAYLORD
WARNER
AENDALL
HUBBELL
CRANSTON
BLACKBURN
INGRAM
BERWICK
AUBURNDALE
MELROSE
ARDEN
FREDRICK
MERRIMAN
BAINBRIDGE
SUNSET
MILBURN
FLAMINGO
HILLCREST
HENRY RUFF
DORIS
LOUISE
OPORTO
MELVIN
BEATRICE
LINDA
FREMONT
MIDDLEBELT
GRIMM
MAPLEWOOD
PARKVILLE
WEYHER
BRENTWOOD
LATHERS
MEADOWBROOK CT.
GILLMAN
FLORAL
DEERING
ANGUS
LONG
ANTARO
FELICE LN.
ST. FRANCIS
NKSTE
GOFF
BRIDGE
MORLOCK
KENWOOD CT.
SUNSET BLVD
FLAMINGO
HILLBROOK
TRANCREST
YORKSHIRE
SHREWSBURY
CANTERBURY
WOODRING
SHADYSIDE
WESTMORE
FARMINGTON
STANFORD
MYRON
IRVING
FILMORE
LOVELAND
GILL
SOUTHAMPTON
NORWICH
WHITBY
POLLYANNA
NAVIN CT.
OAKHILL
FAIRLANE
ALPINE
BELL CREEK
BELL CR. CT.
BURTON CT.
SURREY
HAMPSHIRE
BROADMOOR CT.
SHADY SIDE
COVENTRY
ROYCROFT
LA MOYNE
DORAIS
MARLER
COMSTOCK
WOODSIDE
WESTBROOK
PARK LANE
GOLFVIEW
FAIRWAY
COUNTRY CLUB
PARK
RONNIE
LEVAN
WAYNE RD.
GARY LANE
BANBURY CT.
LANCASHIRE
ESSEX
WHITTIER
JAY
VAN
WILLIAMS
RENWICK
WESTBROOK
PARKLANE
GOLFVIEW
FAIRWAY
HAMPTON
COUNTRY CLUB
GARDNER
BENNETT
BOBRICH
VARGO
NORTHGATE
BROOKVIEW
FITZGERALD
WOODSIDE
WESTBROOK
PARK LANE
GOLFVIEW
FAIRWAY
COUNTRY CLUB
PARK
RONNIE
YALE
LEVAN
WAYNE RD.
GARY
RIVERSIDE
FAIRLANE
ALPINE
ASHURST
ROYCROFT
LA MOYNE
DORAIS
MARLER
COMSTOCK

CITY OF LIVONIA – CITY COUNCIL
MINUTES OF STUDY MEETING HELD NOVEMBER 16, 2020

Meeting was called to order via Zoom remote technology at 8:21 p.m. by President Kathleen McIntyre. Present: Rob Donovic (Deployed), Jim Jolly (Livonia, Michigan), Laura Toy (Livonia, Michigan), Scott Bahr (Livonia, Michigan), Cathy White (Florida), and Kathleen McIntyre (Livonia, Michigan). Absent: None

Councilmember Donovic led the meeting in the Pledge of Allegiance.

Elected and appointed officials present: Mark Taormina, Director of Planning and Economic Development; Todd Zilincik, City Engineer; Paul Bernier, City Attorney; Susan Nash, City Clerk; Curtis Caid, Chief of Police; Dave Heavener, Fire Chief; Jerome Hanna, Director of Inspection; Casey O'Neil, Director of Information Systems; and Jacob Rushlow, Superintendent of Public Service.

10) REQUEST FOR ADDITIONS TO THE LOCAL STREET SYSTEM FOR THE 2021 ACT 51 COMPUTATIONS: Engineering Division, re: for streets or portions thereof, newly opened in 2020.

Todd Zilincik, City Engineer, presented this request to Council. He stated it's hard to believe that we just paved Capri a year ago in November and we're looking to add Capri and Dover to the system of our Act 51 Map, one is 600 feet long, the other one is just over 500 feet. Again, this helps us in assistance with the State for Act 51 funds to allow for future funding for the State. This will also allow that the DPW will recognize each street to maintain them and plow them in the wintertime and looking for City Council's approval to accept these as public roads and looking forward to both these subdivisions getting streetlights in the near future, over the next couple of weeks, and again make it a safe public road to add to our system and get the benefits of the Act 51 funds.

Councilmember White offered an approving resolution for the Consent Agenda.

DIRECTION: APPROVING CONSENT

REPORT TO THE LIVONIA CITY COUNCIL

Engineering
October 29, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Karen Worley, Secretary IV, Engineering

AGENDA ITEM

REQUEST FOR ADDITIONS TO THE LOCAL STREET SYSTEM FOR THE 2021 ACT 51 COMPUTATIONS: Engineering Division, re: for streets or portions thereof, newly opened in 2020.

BACKGROUND

In accordance with the Michigan Department of Transportation's (MDOT) procedure for adding streets to the City's local street system, the Department of Public Works has requested that the Law Department prepare a resolution with regard to streets (or portion of streets) newly opened during 2020.

RECOMMENDATION

To that end, the following resolution is offered for your consideration and possible adoption:

RESOLVED, that having considered a communication from the Department of Public Works, dated October 29, 2020, approved for submission by the Mayor, and which bears the signature of the Director of Finance and the City Attorney, concerning the inclusion in the local street system, for Act 51 revenue computation purposes, of the following streets:

Capri Court (Addition)

Length: 600 l.f.

Termini: Farmington Road to End

Legal Description:

Part of the Northeast ¼ of Section 4, T. 1 S., R. 9 E., City of Livonia, Wayne County, Michigan described as follows:

Commencing at the Northeast corner of said Section 4; thence S 00°03'10" W (recorded as N 00°27'50" W), 825.00 feet along the East line of Section 4; thence S 89°41'39" W, 60.00 feet to the Southeast corner of Medical Plaza Condominium,

W.C.C.S.P. No. 943 as recorded in Liber 46206, Page 621 Wayne County Records; thence S 00°03'10" W, 153.76 feet to the Point of Beginning; thence N 89°56'50" W, 600.00 feet to the Point of Ending.

Location: N.E. 1/4 of Section 4

Dover Court (Addition)

Length: 562.24 l.f.

Termini: Dover Avenue to End

Legal Description:

Part of the Southwest ¼ of Section 33, T. 1 S., R. 9 E., City of Livonia, Wayne County, Michigan described as follows:

Commencing at the South corner of said Section 33; thence North 00°10'47" (East Recorded as due North), 165.14 Feet along the West line of Rouge Trail View Subdivision as recorded in Liber 78, Page 90, Wayne County Records, to the Point of Beginning; thence North 89°53'37" West, 107.99 Feet; thence along a curve to the right, a radius of 39.44 feet, an arc distance of 61.92 Feet, a central angle of 90°00'00", whose chord bears North 44°53'37" West, 55.77 Feet; thence North 00°06'23" East, 392.33 Feet to the Point of Ending.

Location: S.W. 1/4 of Section 33

The Council does hereby authorize the City Engineer acting as the Street Administrator to apply to the Michigan Department of Transportation for the inclusion of said streets in the City's local street system for the purpose of computing the City's share of Act 51 revenues

AND BE IT FURTHER RESOLVED THAT the street is an approved public street and is open for public purposes; and FURTHER, that said streets are accepted into the City's local street system and are located within a right-of-way under the control of the City of Livonia and that said streets were open to the public as of December 31, 2020.

FISCAL CONSIDERATION

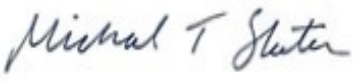
ATTACHMENTS

None

APPROVED BY

Todd Zilincik, City Engineer — Date: October 29, 2020

Donald Rohraff, Director of Public Works — Date: October 30, 2020



Michael T. Slater, Finance Director — Date: October 30, 2020

Paul Bernier, City Attorney — Date: October 30, 2020

Maureen Miller Brosnan, Mayor — Date: November 05, 2020

CITY OF LIVONIA – CITY COUNCIL
MINUTES OF STUDY MEETING HELD NOVEMBER 16, 2020

Meeting was called to order via Zoom remote technology at 8:21 p.m. by President Kathleen McIntyre. Present: Rob Donovic (Deployed), Jim Jolly (Livonia, Michigan), Laura Toy (Livonia, Michigan), Scott Bahr (Livonia, Michigan), Cathy White (Florida), and Kathleen McIntyre (Livonia, Michigan). Absent: None

Councilmember Donovic led the meeting in the Pledge of Allegiance.

Elected and appointed officials present: Mark Taormina, Director of Planning and Economic Development; Todd Zilincik, City Engineer; Paul Bernier, City Attorney; Susan Nash, City Clerk; Curtis Caid, Chief of Police; Dave Heavener, Fire Chief; Jerome Hanna, Director of Inspection; Casey O'Neil, Director of Information Systems; and Jacob Rushlow, Superintendent of Public Service.

11) REQUEST TO AMEND THE ENGINEERING CONTRACT THROUGH THE QUALIFICATION BASED SELECTION (QBS) PROCESS WITH ANDERSON, ECKSTEIN AND WESTRICK, INC. FOR DESIGN ENGINEERING SERVICES FOR THE 2021 CONCRETE ROAD PROGRAM (CONTRACT 21-C): Engineering Division, re: same (CR 365-16)

Todd Zilincik, City Engineer, presented this request to Council. He stated he is looking for City Council's approval with AEW who has done this program since 2008 to help assist us in design of the Road Repair Program based on 4.9 million. We are requesting City Council's approval for that design cost of $210,700 to assist us in that endeavor and looking for these improvements in 2021. As you know, Scott Lockwood is a vital part of this program and his team and happy to have him on board as they do a fabulous job for us as inspectors to ensure quality control and our streets are being put and meet the specification standards.

President McIntyre recognized that Scott Lockwood was in attendance in the Zoom meeting.

Councilmember Toy offered an approving resolution for the Consent Agenda.

DIRECTION: APPROVING CONSENT

REPORT TO THE LIVONIA CITY COUNCIL

Engineering
October 29, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Karen Worley, Secretary IV, Engineering

AGENDA ITEM

REQUEST TO AMEND THE ENGINEERING CONTRACT THROUGH THE QUALIFICATION BASED SELECTION (QBS) PROCESS WITH ANDERSON, ECKSTEIN AND WESTRICK, INC. FOR DESIGN ENGINEERING SERVICES FOR THE 2021 CONCRETE ROAD PROGRAM (CONTRACT 21-C): Engineering Division, re: same (CR 365-16)

BACKGROUND

The City Council approved the Qualification Based Selection (QBS) firms pursuant to Council Resolution No. 365-16, adopted September 19, 2016 to perform all professional engineering services on various federal, state and locally funded projects through fiscal year 2021. AEW has agreed to utilize the revised Attachment A dated October 29, 2020 for the 2021 Concrete Road Program. Under this procedure, we are recommending that Anderson, Eckstein and Westrick, Inc. (AEW) continue as our consultant for the 2021 Concrete Road Program. See attached letter dated October 29, 2020 from AEW for design engineering services.

The estimated construction costs for the concrete program, which forms the basis for the Engineering contract, are shown on the attached sheet.

RECOMMENDATION

In order to proceed with these projects, it is respectfully recommended that the Council take the following actions:

- Authorize the Mayor and the City Clerk to execute an amendment to the Engineering contract with Anderson, Eckstein and Westrick, Inc., 51301 Schoenherr Road, Shelby Township, Michigan 48315 in the amount of $210,700 for the design engineering for the 2021 Concrete Program, Contract 21-C.These amounts are based on the preliminary construction cost estimates and may be adjusted based on the actual bids.

- Authorize an expenditure in the amount of $210,700 from budgeted funds in the Road, Sidewalk and Tree Fund, Account Number 204-441-818-102.

- Authorize the City Engineer to approve minor adjustments in the work, as required.

FISCAL CONSIDERATION

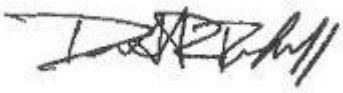
See Above

ATTACHMENTS

1. Proposed List for the 2021 Road Program 10-6-20
2. Advisory Committee Resolution - Approval of 2021 Road Program, 10.28.20
3. Exhibit A for QBS AEW DE for Contract 21-C

APPROVED BY

Todd Zilincik, City Engineer — Date: October 30, 2020



Donald Rohraff, Director of Public Works — Date: November 02, 2020

Michael T. Slater, Finance Director — Date: November 02, 2020

Paul Bernier, City Attorney — Date: November 02, 2020

Maureen Miller Brosnan, Mayor — Date: November 05, 2020

Projected Road Segments for 2021 Road Repair Program
(Proposed List)

10/29/2020

****SUBJECT TO CHANGE BASED ON FUNDING****

Street Name	From	To	Section	Pavement Type	PASER Rating	Type of Treatment
Antago Ave.	Seven Mile Road	Vassar Avenue	1	Asphalt	5	Maintenance
Antago Ave.	Vassar Avenue	Garand River Avenue	1	Asphalt	4,5	Rehabilitation
Bridge Ave.	St. Francis	Inkster Rd.	1	Asphalt	4,5	Rehabilitation
Vassar Ave.	Angling Rd.	Rensellor Avenue	1	Asphalt	5	Maintenance
Vassar Ave.	Rensellor Avenue	Inkster Rd.	1	Asphalt	5	Rehabilitation
Victor Parkway	Pembroke Ave.	Eight Mile Rd.	6	Asphalt	4,5	Rehabilitation
Gardner Avenue	125' North of Bennett Ave.	600' West of Levan Road	8	Concrete	4	Reconstruction
Vargo Avenue	200' East of Fitzgerald Ave.	Levan Road	8	Concrete	4	Reconstruction
Vargo Avenue	100' West of Bennett	Fitzgerald Avenue	8	Concrete	4	Reconstruction
Vargo Avenue	Fitzgerald Avenue	200' East of Fitzgerald Ave.	8	Concrete	5	Maintenance
Bobrich Avenue	Rougeway Drive	Dolores Drive	12	Concrete	4	Reconstruction
Dolores Drive	Vargo Avenue	Bobrich Avenue	12	Concrete	4,5	Reconstruction
Dolores Drive	Bobrich Avenue	Bennett Avenue	12	Concrete	5	Reconstruction
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Greenland Court	North End	Hubbard Road	15	Asphalt	4	Rehabilitation
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Myrna Avenue	Loveland Avenue	Hubbard Road	15	Asphalt	4	Rehabilitation
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Loveland Avenue	Perth Avenue	Grennada Avenue	22	Concrete	5	Maintenance
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Capitol Avenue	Mayfield Avenue	Brookfield Avenue	27	Concrete	4	Reconstruction
Graytona Avenue	Surrey Avenue	Farmington Road	28	Concrete	4	Reconstruction
Surrey Avenue	200' South of Graytona	200' North of Graytona	28	Concrete	4	Reconstruction
Loveland Avenue	700' North of Orangelawn	Plymouth Road	34	Concrete	4	Reconstruction
Loveland Avenue	West Chicago Road	700' North of Orangelawn	34	Concrete	5	Maintenance
Beatrice Avenue	Dover Avenue	130' South of Grandon Ave.	35	Asphalt	4	Rehabilitation
Danzig Avenue	Dover Avenue	130' South of Grandon Ave.	35	Asphalt	5	Rehabilitation
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Melvin Avenue	Dover Avenue	130' South of Grandon Ave.	35	Asphalt	5	Rehabilitation
Orangelawn Avenue	Denne Avenue	Sunset Avenue	35	Concrete	4	Reconstruction
Orangelawn Avenue	Merriman Road	Denne Avenue	35	Concrete	5	Maintenance
Sunset Avenue	Hathaway Avenue	West Chicago Road	35	Concrete	4	Reconstruction
Clements Circle South	Harrison Road	Seltzer Avenue	36	Concrete	4	Reconstruction
Deering Avenue	60' North of West Chicago Rd.	Orangelawn Avenue	36	Concrete	4	Reconstruction
Garvett Avenue	Clements Circle South	200' N. Clements Circle S.	36	Concrete	4	Reconstruction
Garvett Avenue	200' N. Clements Circle S.	Elmira Avenue	36	Concrete	5	Maintenance
Hartel Avenue	Joy Road	130' North of Olson Avenue	36	Asphalt	4	Rehabilitation
Karen Avenue	Orangelawn Avenue	Elmira Avenue	36	Concrete	5	Maintenance
Olson Avenue	Oxbow Avenue	Hartel Avenue	36	Asphalt	4	Rehabilitation
North Side Orangelawn	Middlebelt Road	Karen Avenue	36	Concrete	4	Reconstruction
South Side Orangelawn	Middlebelt Road	Karen Avenue	36	Concrete	4	Maintenance

Projected Road Segments for 2021 Road Repair Program
(Proposed List)

10/29/2020

Orangelawn Avenue	Karen Avenue	Haller Avenue	36	Concrete	5,6	Maintenance
Orangelawn Avenue	Haller Avenue	East End	36	Concrete	3,4	Reconstruction
Oxbow Avenue	Orangelawn Avenue	Elmira Avenue	36	Concrete	5	Maintenance
Oxbow Avenue	Joy Road	130' North of Olson Avenue	36	Asphalt	4	Rehabilitation
West Chicago Blvd.	Deering Avenue	Arcola Avenue	36	Concrete	4	Reconstruction

TOTAL = 63 Segments (37 Concrete and 26 Asphalt)

23 Reconstruction Segments
23 Rehabilitation Segments
17 Maintenance Segments

Motion by Brett Gierak, seconded by John Grzebik

RESOLVED, that the Citizens Advisory Committee on the Roads, having reviewed the proposed 2021 Road Repair Program presented by the Department of Public Works on October 15, 2020 and comments from concerned residents / business owners on October 28, 2020, does hereby recommend that the 2021 Road Repair Program Road based be available funding to the Livonia City Council for its approval with a budget of $9,700,000 ($4.9 Million for Concrete, $4.0 Million for Asphalt and $800,000 for Selective Slab Maintenance). If there are additional funds or street segments changes in the 2021 Road Repair Program, Bainbridge (7 Mile to End) shall be considered as 1st Priority and Perrin (Olson to Joy) considered as 2nd Priority.

Approved unanimously. 10/28/20 (Kevra - Chairman, Boadway, Carey, Gierak, Grzebik, Green, Absent: Kolhoff, Hoen, Gostias)

ANDERSON, ECKSTEIN & WESTRICK, INC.
CIVIL ENGINEERS - SURVEYORS - ARCHITECTS
51301 Schoenherr Road, Shelby Township, MI 48315
586.726.1234 | www.aewinc.com

October 29, 2020

Todd Zilincik, P.E.
City Engineer
City of Livonia
33000 Civic Center Drive
Livonia, Michigan 48154

Reference: **Proposal for Professional Services- Design Engineering**
2021 Concrete Road Program: 21-C Reconstruction
City of Livonia

Dear Mr. Zilincik:

Thank you for considering our firm to provide engineering services on the project referenced above. The enclosed Exhibit A, "Project Specific Scope of Services, Project Schedule, Payments to Consultant," has been prepared for this project in accordance with the Professional Services Contract between the City of Livonia and Anderson, Eckstein and Westrick, Inc. Please let us know if you have any questions regarding the enclosed exhibit.

The City's Road Program is exemplary in the region and we take great pride in participating with the City in this endeavor. Thank you once again for the opportunity to work with the City of Livonia.

Sincerely,

Anderson, Eckstein and Westrick, Inc.

Scott Lockwood, Exec. Vice President

Enclosure: Exhibit A

M:\0263\0263-0000\Contracts\Livonia 2021 Concrete Program\Livonia 2021 Concrete Program 21-C Reconstruction Design Engineering CvrLtr.docx

EXHIBIT A

OCTOBER 29, 2020
PROJECT SPECIFIC SCOPE OF SERVICES, PROJECT SCHEDULE, PAYMENTS TO CONSULTANT

The information contained in this Exhibit applies only to the following project:

Project Title: **2021 Concrete Road Repair Program, Design Engineering Services for Contract 21-C**

This is an exhibit to the contract dated December 1, 2016 and extended for 5 years per Council Resolution No. 365-16, September 19, 2016 between the City of Livonia, and Anderson, Eckstein, and Westrick, Inc. (AEW), whose address is 51301 Schoenherr, Shelby Twp., Michigan 48135.

This Exhibit acts as a duly executed written instrument that amends, supplements, modifies, or cancels certain portions of the contract, as provided in Article 8.01 of the contract.

A. SCOPE OF SERVICES

The CONSULTANT is requested to provide survey and design engineering services for the 2021 Concrete Road Program on reconstruction road segments with some minor maintenance work on streets in close proximity of the reconstruction segments. The roads to be included in the program are as follows:

Reconstruction:

Street	From	To
Gardner Avenue	125' North of Bennett Ave	600' West of Levan Road
Vargo Avenue	200' East of Fitzgerald Ave	Levan Road
Vargo Avenue	100' West of Bennett Ave	Fitzgerald Ave
Bobrich Avenue	Rougeway Drive	Dolores Drive
Dolores Drive	Vargo Avenue	Bobrich Avenue
Dolores Drive	Bobrich Avenue	Bennett Avenue
Vargo Avenue	Dolores Drive	Inkster Road
Bristol Drive	Wayne Road	150' West of Edgewood Dr
Country Club	Southampton	Wood Drive
Wood Drive	Ronnie Lane	Wayne Road
Scone Avenue	Westmore Avenue	400' West of Mayfield Ave
Graytona Avenue	Surrey Avenue	Farmington Road
Surrey Avenue	200' South of Graytona	200' North of Graytona
Loveland Avenue	700' North of Orangelawn	Plymouth Road
Orangelawn Avenue	Denne Avenue	Sunset Avenue
Sunset Avenue	Hathaway Avenue	West Chicago Road
Clements Circle South	Harrison Road	Seltzer Avenue
Deering Avenue	60' North of West Chicago	Orangelawn Ave
Garvett Avenue	Clements Circle South	200' N. of Clements Circle South
Orangelawn Avenue	Middlebelt Road	Karen Avenue
Orangelawn Avenue	Haller Avenue	East End
West Chicago Boulevard	Deering Avenue	Arcola Avenue
Capitol Avenue (Industrial Rd)	Mayfield Avenue	Brookfield Avenue

Planned Preventative Maintenance:

Street	From	To
Vargo Avenue	Fitzgerald Avenue	200' East of Fitzgerald Ave
Bristol Drive	150' West of Edgewood Drive	Edgewood Drive
Loveland Avenue	Perth Avenue	Grennada Avenue
Martin Avenue	Westmore Avenue	Loveland Avenue
Middleboro Avenue	Westmore Avenue	Mayfield Avenue
Scone Avenue	400' West of Mayfield	Mayfield Avenue
Westmore Avenue	Scone Avenue	Summers Avenue
Loveland Avenue	West Chicago Road	700' North of Orangelawn
Orangelawn Avenue	Merriman Road	Denne Avenue
Garvett Avenue	200' N. of Clement Circle South	Elmira Avenue
Karen Avenue	Orangelawn Avenue	Elmira Avenue
Orangelawn Avenue	Middlebelt Road	Karen Avenue
Orangelawn Avenue	Karen Avenue	Haller Avenue
Oxbow Avenue	Orangelawn Avenue	Elmira Avenue

DESIGN PARAMETERS:

All design will be in accordance with the AASHTO and MDOT standards, guidelines and policies. All signing and pavement markings will be in accordance with the Michigan Manual of Uniform Traffic Control Devices. Specifications will be in accordance with MDOT 2012 Standard Specifications for Construction. Any unique special provisions will be prepared and submitted for the CITY's review and approval.

Horizontal and Vertical Alignment:

For maintenance projects, no modifications to horizontal or vertical alignment will be made. Minor improvements may be identified to improve drainage, however, the intent is to maintain the existing alignments and drainage patterns for maintenance projects. Any minor improvements will be done within existing right-of-way.

For reconstruction projects, horizontal or vertical alignment will be evaluated if modifications are necessary to meet current standards. All effort will be made to match existing horizontal and vertical alignments, minimizing impact beyond the roadbed.

Pavement Cross Sections:

Existing pavement cross sections will be matched for maintenance and rehabilitation projects. New pavement cross sections will be considered for reconstruction projects.

Drainage:

Existing storm sewer and drainage ditches will be maintained. Minor drainage improvements identified during field investigation or any problem areas identified by the CITY's personnel may be incorporated in the design.

Format:

All maintenance projects will be developed in an 8.5" x 11" log book format. A log of pavement repairs will be provided with aerial maps showing pavement sections requiring

replacement and estimated quantities for each segment. Reconstruction projects that do not require alignment changes will also be developed in log book format.

Reconstruction projects requiring modified alignments will be developed in 24" x 36" plan sheet format, providing horizontal and vertical control data, at a scale of 1"=40'.

Permits:
Applications for Wayne County and MDOT permits will be prepared and coordinated for any right-of-way encroachments during construction.

SCOPE OF DESIGN SERVICES:

The Design Services to be provided by the CONSULTANT shall include, but are not limited to the following:

1. Attend pre-design kick-off meeting with CITY representatives to discuss project approach and limits of improvements, confirm the format for each project, finalize schedule, review budget, establish communication plan and requirements of applications for standards and details (order of governance for City, County and MDOT standards and details).

2. Complete aerial or planimetric mapping as necessary; establish stationing for reference in both log and plan sheet design formats.

3. Coordinate subconsultant to perform geotechnical investigation at each rehabilitation and reconstruction project location.

4. Conduct site and pavement condition survey to log areas and quantities for repair, including curb and gutter and structure adjustments.

5. Notify utility agencies of proposed work and investigate potential conflicts; coordinate and resolve conflicts via utility relocations or modifications in proposed work.

6. Prepare construction bid documents, in English units, in log book format, showing proposed work with typical sections, as necessary, construction details, pay items and quantities, with all required specifications, special provisions and notices to bidders.

7. Prepare maintenance of traffic special provision and details; address large traffic generators, such as schools or large businesses, immediately affected by the work and incorporate restrictions or requirements in the special provisions.

8. Prepare construction staging details and special provisions as necessary.

9. Prepare permanent pavement marking details and quantities, including special markings; it is anticipated that current pavement marking patterns will be maintained.

10. Prepare permanent signing details and quantities for signs directly impacted by construction activities.

11. Work involving traffic control devices such as traffic signals or large overhead signs is not included in this scope of services, but may be added at the CITY's request.

12. Prepare preliminary and final engineer's opinion of probable construction cost.

13. Attend project coordination meetings, as well as preliminary and final plan review meetings.

14. Submit final bid documents including:
    - Reproducible set of log book construction documents, including special provisions and notices to bidders
    - Electronic copy of above documents
    - Engineer's Opinion of Probable Construction cost
    - Field notes and copies of quantity calculations

15. Respond to questions during the bidding process as requested by the Owner.

16. Prepare bid documents in .pdf format for City of Livonia to place on MITN and provide ten hard copies for City use, review bids and prepare a recommendation for the construction contract award.

17. Attend public information, Citizen Advisory Committee on Roads or City Council meetings, as necessary.

B. PROJECT SCHEDULE:

Task No.	Task Name	Nov '20	Dec '20	Jan '21	Feb '21	Mar '21	Apr '21
1	City Council Program Review and Authorize to Proceed						
2	Initial Inspection						
3	Provide treatment recommendations and feasible cost estimate						
4	Field Evaluation						
5	Field Survey						
6	Geotechnical Investigation						
7	Prepare Preliminary Contract Documents						
8	City Review Preliminary Contract Documents						
9	Prepare Final Contract Documents						
10	Review Final Contract Documents						

Task No.	Task Name	Nov '20	Dec '20	Jan '21	Feb '21	Mar '21	Apr '21
11	Advertise Project						
12	Plan Pickup and Contractor Review						
13	Bid Opening						
14	Letter of Recommendation to Council						
15	Anticipated Council Review and Award						

C. PAYMENTS TO CONSULTANTS

The CONSULTANT will be paid at the attached hourly rates with a not to exceed amount based on Attachment A (reduced by .7% due to repeat service on this contract), Engineering Fees by Construction Value and Type of Project. Not to exceed fees by service classification are:

Design Engineering Fee $210,700

Fees shall not exceed $210,700 without prior approval from City Council. Fees shown above are based on an estimated construction cost of $4,900,000.

In Witness Whereof, the City and Consultant, by and through their duly authorized officers and representatives, have executed this Contract.

In the Presence of:

CITY OF LIVONIA, a Michigan Municipal Corporation

_____

By:_____
Maureen Miller Brosnan, Mayor

_____

_____

By:_____
Susan M. Nash, City Clerk

_____

In the Presence of:

Anderson, Eckstein and Westrick

_____
Ross T. Wilberding, PE

By:_____
Scott Lockwood, P.E.

Its: Executive Vice President

Approved:

_____
Donald R. Rohraff
Director of Public Works

Approved:

_____
Todd J. Zilincik, P.E.
City Engineer

Pursuant to Council Resolution:

Approved:

No.:_____

_____
Michael Slater
Director of Finance

Adopted on:_____

Approved as to form:

_____
Paul A. Bernier
Department of Law

CITY OF LIVONIA 2021 CONCRETE PROGRAM

HOURLY CHARGE RATES

EMPLOYEE CLASSIFICATION	HOURLY CHARGE RATE
PRINCIPAL ENGINEER / SURVEYOR / ARCHITECT	$ 158.80
SENIOR PROJECT ENGINEER / SURVEYOR / ARCHITECT	145.90
LICENSED ENGINEER / SURVEYOR / ARCHITECT	132.10
GRADUATE ENGINEER / SURVEYOR / ARCHITECT	109.10
TEAM LEADER	109.10
ENGINEERING AIDE III	90.40
ENGINEERING AIDE II	84.90
ENGINEERING AIDE I	79.10
ENGINEERING AIDE TRAINEE	67.80
SECRETARIAL (Special Projects)	42.90
SURVEY FIELD (3 PERSON CREW)	220.40
SURVEY FIELD (2 PERSON CREW)	192.10
SURVEY FIELD (1 PERSON CREW)	147.00
CONFINED SPACE ENTRY CREW (2 PERSON)	237.30
DATA COLLECTOR (SURVEY CREW)	29.40
GPS SURVEY EQUIPMENT	72.30

CITY OF LIVONIA – CITY COUNCIL
MINUTES OF STUDY MEETING HELD NOVEMBER 16, 2020

Meeting was called to order via Zoom remote technology at 8:21 p.m. by President Kathleen McIntyre. Present: Rob Donovic (Deployed), Jim Jolly (Livonia, Michigan), Laura Toy (Livonia, Michigan), Scott Bahr (Livonia, Michigan), Cathy White (Florida), and Kathleen McIntyre (Livonia, Michigan). Absent: None

Councilmember Donovic led the meeting in the Pledge of Allegiance.

Elected and appointed officials present: Mark Taormina, Director of Planning and Economic Development; Todd Zilincik, City Engineer; Paul Bernier, City Attorney; Susan Nash, City Clerk; Curtis Caid, Chief of Police; Dave Heavener, Fire Chief; Jerome Hanna, Director of Inspection; Casey O'Neil, Director of Information Systems; and Jacob Rushlow, Superintendent of Public Service.

12) REQUEST TO AMEND THE ENGINEERING CONTRACT THROUGH THE QUALIFICATION BASED SELECTION (QBS) PROCESS WITH ANDERSON, ECKSTEIN AND WESTRICK, INC. FOR DESIGN ENGINEERING SERVICES FOR THE 2021 CONCRETE ROAD MAINTENANCE/SELECTIVE SLAB PROGRAM (CONTRACT 21-J): Engineering Division, re: same (CR 365-16)

Todd Zilincik, City Engineer, presented this request to Council. He stated this is the Selective Slab Program in which DPW and Engineering have a cooperative list of locations that we try to address where the tree upped the pavement or we have a drainage concern or something that can obviously make a big difference to the homeowners in front of these areas that need to be fixed on the concrete program. We're looking for approximately $800,000 to be spent throughout the City and requesting Council's approval for AEW to assist us in this matter in the amount of $42,400. Again, Scott Lockwood with AEW is on tap here for any questions.

Councilmember Jolly offered an approving resolution for the Consent Agenda.

DIRECTION: APPROVING CONSENT

REPORT TO THE LIVONIA CITY COUNCIL

Engineering
October 29, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Karen Worley, Secretary IV, Engineering

AGENDA ITEM

REQUEST TO AMEND THE ENGINEERING CONTRACT THROUGH THE QUALIFICATION BASED SELECTION (QBS) PROCESS WITH ANDERSON, ECKSTEIN AND WESTRICK, INC. FOR DESIGN ENGINEERING SERVICES FOR THE 2021 CONCRETE ROAD MAINTENANCE/SELECTIVE SLAB PROGRAM (CONTRACT 21-J): Engineering Division, re: same (CR 365-16)

BACKGROUND

The City Council approved the Qualification Based Selection (QBS) firms pursuant to Council Resolution No. 365-16, adopted September 19, 2016 to perform all professional engineering services on various federal, state and locally funded projects through fiscal year 2021. AEW has agreed to utilize the revised Attachment A dated October 29, 2020 for the 2021 Concrete Road Maintenance/Selective Slab Program. Under this procedure, we are recommending that Anderson, Eckstein and Westrick, Inc. (AEW) continue as our consultant for the 2021 Concrete Road Maintenance/Selective Slab Program. See attached letter dated October 29, 2020 from AEW for design engineering services.

Concentrated selective slab repairs will take place in Section 19 on Blue Skies (5 Mile Road to Lyndon Road), Elsie Avenue (Heyer Avenue to Hix Avenue), Gay Avenue (Knolson Avenue to Norman Avenue), Knolson Avenue (Gay Avenue to 5 Mile Road), Marie Avenue (Summers Avenue to Mason Avenue), Norman Avenue (Elsie Avenue to Gay Avenue), and Jamison / Richfield Intersection. Selective slab repairs to occur in Section 20 on street segment Allen Avenue (West End to Westbrook Drive) along with 26 locations throughout the City in Sections 3, 7, 8, 11, 14, 21, 22, 24, 31, 32, 35 and 36.

The estimated construction costs for the concrete program, which forms the basis for the Engineering contract, are shown on the attached sheet.

RECOMMENDATION

In order to proceed with these projects, it is respectfully recommended that the Council take the following actions:

- Authorize the Mayor and the City Clerk to execute an amendment to the Engineering contract

with Anderson, Eckstein and Westrick, Inc., 51301 Schoenherr Road, Shelby Township, Michigan 48315 in the amount of $42,400 for the design engineering for the Concrete Road Maintenance/Selective Slab Program. These amounts are based on the preliminary construction cost estimates and may be adjusted based on the actual bids.

- Authorize an expenditure in the amount of $42,400 from budgeted funds in the Road, Sidewalk and Tree Fund, Account Number 204-441-818-102.

- Authorize the City Engineer to approve minor adjustments in the work, as needed.

FISCAL CONSIDERATION

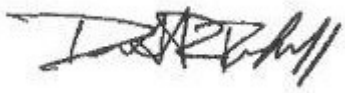
See above

ATTACHMENTS

1. 21-J Conc Slab Replacement Program Locations, 10.15.20
2. Exhibit A for QBS AEW DE for Contract 21-J

APPROVED BY

Todd Zilincik, City Engineer — Date: October 30, 2020



Donald Rohraff, Director of Public Works — Date: November 02, 2020

Michael T. Slater, Finance Director — Date: November 02, 2020

Paul Bernier, City Attorney — Date: November 02, 2020

Date: November 05, 2020

Maureen Miller Brosnan, Mayor

2021 Selective Slab List (Contract 21-J) Throughout the City of Livonia
15-Oct-20

	Address	Street Name	Section
1	31510	Haldane Avenue	3
2	31532	Haldane Avenue	3
3	18153	Glengarry Drive	7
4	18678	Manor Lane	7
5	35456	Curtis Road	8
6	18593	Fairway Avenue	8
7	18636	Fairway Avenue	8
8	18669	Fairway Avenue	8
9	30429	Brookview Avenue	11
10	30562	Brookview Avenue	11
11	15624	Sunset Street	14
12	14042	Edgewood Avenue	21
13	32577	Oakley Avenue	22
14	32926	Oakley Avenue	22
15	32968	Oakley Avenue	22
16	33080	Oakley Avenue	22
17	33120 & 33140	Oakley Avenue	22
18	44815	Perth Avenue	24
19	29205 & 29217	Oriole Avenue	24
20	9244	Marie Avenue	31
21	9915	Pere Avenue	31
22	36026	Dover Avenue	32
23	8841	Harvey Avenue	32
24	8977	Parent Avenue	32
25	9932	Denne Street	35
26	28732	Minton Court	36

ANDERSON, ECKSTEIN & WESTRICK, INC.
CIVIL ENGINEERS - SURVEYORS - ARCHITECTS
51301 Schoenherr Road, Shelby Township, MI 48315
586.726.1234 | www.aewinc.com

October 29, 2020

Todd Zilincik, P.E.
City Engineer
City of Livonia
33000 Civic Center Drive
Livonia, Michigan 48154

Reference: **Proposal for Professional Services- Design Engineering**
2021 Concrete Road Program: 21-J Maintenance
City of Livonia

Dear Mr. Zilincik:

Thank you for considering our firm to provide engineering services on the project referenced above. The enclosed Exhibit A, "Project Specific Scope of Services, Project Schedule, Payments to Consultant," has been prepared for this project in accordance with the Professional Services Contract between the City of Livonia and Anderson, Eckstein and Westrick, Inc. Please let us know if you have any questions regarding the enclosed exhibit.

The City's Road Program is exemplary in the region and we take great pride in participating with the City in this endeavor. Thank you once again for the opportunity to work with the City of Livonia.

Sincerely,

Anderson, Eckstein and Westrick, Inc.

Scott Lockwood, Exec. Vice President

Enclosure: Exhibit A

M:\0263\0263-0000\Contracts\Livonia 2021 Concrete Program\Livonia 2021 Concrete Program 21-J Maintenance Design Engineering CvrLtr.docx

EXHIBIT A

OCTOBER 30, 2020
PROJECT SPECIFIC SCOPE OF SERVICES, PROJECT SCHEDULE, PAYMENTS TO CONSULTANT

The information contained in this Exhibit applies only to the following project:

Project Title: **2021 Concrete Road Repair Program, Design Engineering Services for Contract 21-J**

This is an exhibit to the contract dated December 1, 2016 and extended for 5 years per Council Resolution No. 365-16, September 19, 2016 between the City of Livonia, and Anderson, Eckstein, and Westrick, Inc. (AEW), whose address is 51301 Schoenherr, Shelby Twp., Michigan 48135.

This Exhibit acts as a duly executed written instrument that amends, supplements, modifies, or cancels certain portions of the contract, as provided in Article 8.01 of the contract.

A. SCOPE OF SERVICES

The CONSULTANT is requested to provide survey and design engineering services for the 2021 Concrete Road Program for maintenance and selective slab work. The roads to be included in the program are as follows:

Planned Preventative Maintenance:

Street	From	To
Blue Skies	Lyndon Avenue	Five Mile Road
Elsie Avenue	Heyer Avenue	Hix Avenue
Gay Avenue	Knolson Avenue	Norman Avenue
Knolson Avenue	Gay Avenue	Five Mile Road
Marie Avenue	Summers Avenue	Mason Avenue
Norman Avenue	Elsie Avenue	Gay Avenue
Allen Avenue	West End	Westbrook Drive
Jamison/Richfield Intersection	West of Newburgh Road	
DPW- 26 Miscellaneous Locations	Sect 3,7,8,11,19, 21,22,24,31,32	,35 & 36

DESIGN PARAMETERS:

All design will be in accordance with the AASHTO and MDOT standards, guidelines and policies. All signing and pavement markings will be in accordance with the Michigan Manual of Uniform Traffic Control Devices. Specifications will be in accordance with MDOT 2012 Standard Specifications for Construction. Any unique special provisions will be prepared and submitted for the CITY's review and approval.

Horizontal and Vertical Alignment:
For maintenance projects, no modifications to horizontal or vertical alignment will be made. Minor improvements may be identified to improve drainage, however, the intent is to

maintain the existing alignments and drainage patterns for maintenance projects. Any minor improvements will be done within existing right-of-way.

For reconstruction projects, horizontal or vertical alignment will be evaluated if modifications are necessary to meet current standards. All effort will be made to match existing horizontal and vertical alignments, minimizing impact beyond the roadbed.

Pavement Cross Sections:
Existing pavement cross sections will be matched for maintenance and rehabilitation projects. New pavement cross sections will be considered for reconstruction projects.

Drainage:
Existing storm sewer and drainage ditches will be maintained. Minor drainage improvements identified during field investigation or any problem areas identified by the CITY's personnel may be incorporated in the design.

Format:
All maintenance projects will be developed in an 8.5" x 11" log book format. A log of pavement repairs will be provided with aerial maps showing pavement sections requiring replacement and estimated quantities for each segment. Reconstruction projects that do not require alignment changes will also be developed in log book format.

Reconstruction projects requiring modified alignments will be developed in 24" x 36" plan sheet format, providing horizontal and vertical control data, at a scale of 1"=40'.

Permits:
Applications for Wayne County and MDOT permits will be prepared and coordinated for any right-of-way encroachments during construction.

SCOPE OF DESIGN SERVICES:

The Design Services to be provided by the CONSULTANT shall include, but are not limited to the following:

1. Attend pre-design kick-off meeting with CITY representatives to discuss project approach and limits of improvements, confirm the format for each project, finalize schedule, review budget, establish communication plan and requirements of applications for standards and details (order of governance for City, County and MDOT standards and details).

2. Complete aerial or planimetric mapping as necessary; establish stationing for reference in both log and plan sheet design formats.

3. Coordinate subconsultant to perform geotechnical investigation at each rehabilitation and reconstruction project location.

4. Conduct site and pavement condition survey to log areas and quantities for repair, including curb and gutter and structure adjustments.

5. Notify utility agencies of proposed work and investigate potential conflicts; coordinate and resolve conflicts via utility relocations or modifications in proposed work.

6. Prepare construction bid documents, in English units, in log book format, showing proposed work with typical sections, as necessary, construction details, pay items and quantities, with all required specifications, special provisions and notices to bidders.

7. Prepare maintenance of traffic special provision and details; address large traffic generators, such as schools or large businesses, immediately affected by the work and incorporate restrictions or requirements in the special provisions.

8. Prepare construction staging details and special provisions as necessary.

9. Prepare permanent pavement marking details and quantities, including special markings; it is anticipated that current pavement marking patterns will be maintained.

10. Prepare permanent signing details and quantities for signs directly impacted by construction activities.

11. Work involving traffic control devices such as traffic signals or large overhead signs is not included in this scope of services, but may be added at the CITY's request.

12. Prepare preliminary and final engineer's opinion of probable construction cost.

13. Attend project coordination meetings, as well as preliminary and final plan review meetings.

14. Submit final bid documents including:
    - Reproducible set of log book construction documents, including special provisions and notices to bidders
    - Electronic copy of above documents
    - Engineer's Opinion of Probable Construction cost
    - Field notes and copies of quantity calculations

15. Respond to questions during the bidding process as requested by the Owner.

16. Prepare bid documents in .pdf format for City of Livonia to place on MITN and provide ten hard copies for City use, review bids and prepare a recommendation for the construction contract award.

17. Attend public information, Citizen Advisory Committee on Roads or City Council meetings, as necessary.

B. PROJECT SCHEDULE:

Task No.	Task Name	Nov '20	Dec '20	Jan '21	Feb '21	Mar '21	Apr '21
1	City Council Program Review and Authorize to Proceed						
2	Initial Inspection						
3	Provide treatment recommendations and feasible cost estimate						
4	Field Evaluation						
5	Field Survey						
6	Geotechnical Investigation						
7	Prepare Preliminary Contract Documents						
8	City Review Preliminary Contract Documents						
9	Prepare Final Contract Documents						
10	Review Final Contract Documents						
11	Advertise Project						
12	Plan Pickup and Contractor Review						
13	Bid Opening						
14	Letter of Recommendation to Council						
15	Anticipated Council Review and Award						

C. PAYMENTS TO CONSULTANTS

The CONSULTANT will be paid at the attached hourly rates with a not to exceed amount based on Attachment A (reduced by .7% due to repeat service on this contract), Engineering Fees by Construction Value and Type of Project. Not to exceed fees by service classification are:

Design Engineering Fee $42,400

Fees shall not exceed $42,400 without prior approval from City Council. Fees shown above are based on estimated construction costs of $800,000. This total amount includes approximately $150,000 of anticipated repairs at approximately 26 locations throughout the City of Livonia. Locations to be provided by City of Livonia DPW/Engineering Staff to AEW so that they are included in the contract documents.

In Witness Whereof, the City and Consultant, by and through their duly authorized officers and representatives, have executed this Contract.

In the Presence of:

CITY OF LIVONIA, a Michigan Municipal Corporation

_____

By:_____
Maureen Miller Brosnan, Mayor

_____

_____

By:_____
Susan M. Nash, City Clerk

_____

In the Presence of:

Anderson, Eckstein and Westrick

_____
Ross T. Wilberding, P.E.

By:_____
Scott Lockwood, P.E.

Its: Executive Vice President

Approved:

_____
Donald R. Rohraff
Director of Public Works

Approved:

_____
Todd J. Zilincik, P.E.
City Engineer

Pursuant to Council Resolution:

Approved:

No.:_____

_____
Michael Slater
Director of Finance

Adopted on:_____

Approved as to form:

_____
Paul A. Bernier
Department of Law

CITY OF LIVONIA 2021 CONCRETE PROGRAM

HOURLY CHARGE RATES

EMPLOYEE CLASSIFICATION	HOURLY CHARGE RATE
PRINCIPAL ENGINEER / SURVEYOR / ARCHITECT	$ 158.80
SENIOR PROJECT ENGINEER / SURVEYOR / ARCHITECT	145.90
LICENSED ENGINEER / SURVEYOR / ARCHITECT	132.10
GRADUATE ENGINEER / SURVEYOR / ARCHITECT	109.10
TEAM LEADER	109.10
ENGINEERING AIDE III	90.40
ENGINEERING AIDE II	84.90
ENGINEERING AIDE I	79.10
ENGINEERING AIDE TRAINEE	67.80
SECRETARIAL (Special Projects)	42.90
SURVEY FIELD (3 PERSON CREW)	220.40
SURVEY FIELD (2 PERSON CREW)	192.10
SURVEY FIELD (1 PERSON CREW)	147.00
CONFINED SPACE ENTRY CREW (2 PERSON)	237.30
DATA COLLECTOR (SURVEY CREW)	29.40
GPS SURVEY EQUIPMENT	72.30

CITY OF LIVONIA – CITY COUNCIL
MINUTES OF STUDY MEETING HELD NOVEMBER 16, 2020

Meeting was called to order via Zoom remote technology at 8:21 p.m. by President Kathleen McIntyre. Present: Rob Donovic (Deployed), Jim Jolly (Livonia, Michigan), Laura Toy (Livonia, Michigan), Scott Bahr (Livonia, Michigan), Cathy White (Florida), and Kathleen McIntyre (Livonia, Michigan). Absent: None

Councilmember Donovic led the meeting in the Pledge of Allegiance.

Elected and appointed officials present: Mark Taormina, Director of Planning and Economic Development; Todd Zilincik, City Engineer; Paul Bernier, City Attorney; Susan Nash, City Clerk; Curtis Caid, Chief of Police; Dave Heavener, Fire Chief; Jerome Hanna, Director of Inspection; Casey O'Neil, Director of Information Systems; and Jacob Rushlow, Superintendent of Public Service.

13) PROPOSED AMENDMENT TO THE LIVONIA CODE OF ORDINANCES, AS AMENDED: Department of Law, re: to amend Section 070 of Chapter 2.36 (Commission on Aging), Section 040 of Chapter 2.40 (Arts Commission), Section 040 of Chapter 2.44 (Commission on Children and Youth), Section 020 of Chapter 2.52 (Historical Commission), and Section 080 of Chapter 2.56 (Historic Preservation Commission), to reflect departmental changes.

Paul Bernier, City Attorney, presented this request to Council. He stated this is simply a clean-up of the ordinances to reflect the changes that were made in the Department of Community Resources, putting of these things under Ted Davis in the Parks and Recreation, it's just to clean up the ordinances.

Councilmember Jolly asked Bernier if because Ted Davis is overseeing the Parks and Recreation and all of these things are reporting through him at this point, does that essentially mean that all of these separate commissions that we're referencing here tonight retain their original jurisdiction as to Ted, is that correct? Or are they in someway now overlapping in certain ways?

Bernier replied the reality of most of these departments or these commissions are that they should have been under the Parks and Recreation Commission and the Director in the first place. As Council knows the history of the department was that it became a – I don't want to call it a dumping ground, but it became a department that were taking things that were part of its original charter. So the Mayor tried to get that department back to where it was supposed to be and then the placement of these where it more logically fell into place. So that was the reason for it. So it does more logically fall under Ted Davis and Parks and Recreation and under Mr. Davis' directorship.

Jolly then asked because Parks & Rec is overseeing the Senior Center now, would the Parks & Rec Commission ever consider anything to do with the Senior Center programming or events or would they still be funneled through the old structure?

Bernier replied that is something that will probably be brought to Council in the near future on consideration on those issues. As of now it's just under the directorship of Ted Davis, under his directorship. But the issue of fees and costs, that will come to Council in a relatively short period of time for Council's consideration. Because if you look at our charter right now there are arguments that could be made both ways so it will be brought to Council so Council can have an intelligent discussion of the issue.

Councilmember Toy stated she respects the wishes and the thought that's going into a lot of this through the Administration, but what concerns her is as we look at these, and we're saying there's more to come, then why wouldn't this go into the Committee of the Whole right now so that we study it all at once so that we do make a very intelligent, long range kind of decisions on this rather than scrap it together if you will and perhaps that's not the right word. It concerns me that we're putting this under Mr. Davis, that under Mr. Davis, and he's a very capable individual, don't get me wrong, but I'm just concerned of that workload and what that all means because I'm not real clear on it. I'm thinking of the old way, perhaps I need to get my mind out of that, but if you can hit the pause button for a minute, I might feel a little bit clearer on this and maybe I'm reading into it too much, but I'd be willing to offer a Committee of the Whole on this, Madam President.

Ted Davis, Superintendent of Parks and Recreation, stated to answer Councilmember Toy's question, it is a lot but just as there was in Community Resources, there is support staff that does assist as liaisons for these commissions. It's certainly not me attending every single commission meeting, although I have attended most since we have transitioned. I think this is simply a matter of housekeeping in the sense that these ordinances when they were written they specifically named Community Resources as the City department they were working with. And really all we're doing here is changing it to request the current Administration's structure which puts Parks and Recreation as a liaison for these commissions. That's really all that's taking place right now and Paul, please correct me if I'm wrong on this.

Bernier said what he wanted to say is that it's kind of odd that the ordinances any way list a particular department that a commission should fall under. Considerably speaking that's a management prerogative, who gets to control that, so it's kind of an unusual situation that this lists that particularly that this is under the Department of Community Resources. And the reality of it is, it is not anymore, it's being directed by Ted Davis. And usually those are, like I say, management prerogatives, who gets to manage those various departments. And we're just doing it this way to recognize the reality of the situation right now and to make sure currently that our ordinance reflects what's happening. Now, could Council consider the entire scenario in a Community of the Whole? Absolutely. But what we're trying to do right now is to have the ordinances reflect reality.

Councilmember Toy stated in all due respect the reality is when any new administration comes in they're going to look at the overall health of the City and what they think will be the best course of action, I get that. But with some of the comments that were made, that we're going to bring other things in, I think it is best

if you do it all at once because everybody has different opinions on what should happen with different commissions and different roles and all that and I respect the Administration for their insightfulness and their forward thinking, but I also want to understand it in a deeper way of understanding it. And I'm very concerned that one individual that is highly capable has a lot of workload, those are huge. And you can have staff all you want but you've also got to manage staff and know what they're doing. So I want to be clear on that so that's why I'm offering Committee of the Whole on the topic.

Councilmember Jolly offered an approving resolution for Consent as well for consideration. I understand what Councilwoman toy is saying and she's right, that if we're going to bite the apple, we should eat the whole apple. What I think in this circumstance, let's think about it for two weeks and then figure out what you want to do.

DIRECTION: 1) REFER TO COMMITTEE OF THE WHOLE
2) APPROVING CONSENT

REPORT TO THE LIVONIA CITY COUNCIL

Law
October 30, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Brenda Smyser, Program Supervisor, Law

AGENDA ITEM

PROPOSED AMENDMENT TO THE LIVONIA CODE OF ORDINANCES, AS AMENDED: Department of Law, re: to amend Section 070 of Chapter 2.36 (Commission on Aging), to amend Section 040 of Chapter 2.40 (Arts Commission), Section 040 of Chapter 2.44 (Commission on Children and Youth), Section 020 of Chapter 2.52 (Historical Commission), Section 080 of Chapter 2.56 (Historic Preservation Commission), to reflect departmental changes.

BACKGROUND

With the recent reorganization of the Department of Community Recourses, it is necessary to amend certain ordinances to reflect the departmental changes.

RECOMMENDATION

Approve for first read.

FISCAL CONSIDERATION

ATTACHMENTS

1. Ordinance Amendments re Commissions
2. 2.36.070 - Commission on Aging
3. 2.40.040 - Arts Commission
4. 2.44.040 - Commission on Children and Youth
5. 2.52.020 - Historical Commission
6. 2.56.080 - Historic Preservation Committee

APPROVED BY

Date: October 30, 2020

Paul Bernier, City Attorney

Date: November 05, 2020

Maureen Miller Brosnan, Mayor

DEPARTMENT OF LAW

PAUL A. BERNIER
City Attorney

MICHAEL E. FISHER
Chief Assistant City Attorney

ERIC S. GOLDSTEIN
Assistant City Attorney

LEO D. NEVILLE
Assistant City Attorney

MAUREEN MILLER BROSNAN
MAYOR

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2520
FAX: (734) 466-2072

October 30, 2020

TO: HONORABLE MEMBERS OF THE CITY COUNCIL

FROM: DEPARTMENT OF LAW

SUBJECT: PROPOSED AMENDMENT TO SECTION 070 of CHAPTER 2.36 (COMMISSION ON AGING), SECTION 040 OF CHAPTER 2.40 (ART COMMISSION), SECTION 040 OF CHAPTER 2.44 (COMMISSION ON CHILDREN AND YOUTH), SECTION 020 OF CHAPTER 2.52 (HISTORICAL COMMISSION), AND SECTION 080 OF CHAPTER 2.56 (HISTORIC PRESERVATION COMMISSION) OF THE LIVONIA CODE OF ORDINANCES, AS AMENDED

Dear Council Members:

With the recent reorganization of the Department of Community Resources, it is necessary to amend the above ordinances to reflect the departmental changes

The proposed ordinance is designed to place the Commission on Aging, Art Commission, Commission on Children and Youth, and Historical Commission under the leadership and direction of the Supervisor of Parks and Recreation. The Historic Preservation Commission will be under the leadership and direction of the Director of Planning and Economic Development. The purpose for this reorganization is to provide better service to the residents of the City of Livonia by placing the various commissions under a department that better corresponds to the purpose of the commissions.

Provided that you concur with these changes, the proposed Ordinance amendments are ready to be offered for first reading. If you have any questions, comments, or changes, please do not hesitate to contact the Law Department.

Approved for submission: Very truly yours,

_____ _____

Maureen Miller Brosnan, Mayor Paul A. Bernier, City Attorney

Attachments
cc: Mayor, Clerk, Council, Finance
P:\Council - Adobe\2020\Ordinances\Ordinance Amendments re Commissions.docx

AN ORDINANCE AMENDING SECTION 070 OF TITLE 2 CHAPTER 36 (COMMISSION ON AGING) OF THE LIVONIA CODE OF ORDINANCES, AS AMENDED

THE CITY OF LIVONIA ORDAINS:

Section 1. Section 070 of Title 2, Chapter 36 of the Livonia Code of Ordinances, as amended, is hereby amended to read as follows:

2.36.070 Organization, meetings and election of officers. The commission shall, at its first regular meeting following the effective date of the ordinance codified in this chapter, and annually thereafter, elect from its membership a chair, a vice-chair, a second vice-chair, a secretary, a treasurer, and such other officers as the commission shall deem necessary, each to serve for a term of one (1) year. The commission shall meet once every three (3) months for the transaction of its business. The chair may call a special meeting of the commission with the approval of the ~~director of the department of community resources ("director") or the director's designee.~~ Superintendent of Parks and Recreation ("superintendent") or the superindendent's designee. The commission shall adopt such bylaws or rules governing its operation as deemed necessary, provided they do not conflict with this chapter or other ordinances of the city. A majority of the members appointed to the commission shall constitute a quorum for the transaction of business.

Section 2. All ordinances or parts of ordinances in conflict herewith are hereby repealed only to the extent necessary to give this ordinance full force and effect.

Section 3. Should any portion of this ordinance be held invalid for any reason, such holding shall not be construed as affecting the validity of any of the remaining portions of this ordinance.

AN ORDINANCE AMENDING SECTION 040 OF TITLE 2, CHAPTER 40 (ART COMMISSION) OF THE LIVONIA CODE OF ORDINANCES, AS AMENDED.

THE CITY OF LIVONIA ORDAINS:

Section 1. Section 040 of Title 2, Chapter 40 of the Livonia Code of Ordinances, as amended, is hereby amended to read as follows:

> **2.40.040 Organization and meetings.** The commission members shall, immediately after their appointment, meet and organize by election of one (1) or their members as chair and one (1) as secretary, and by the election of such other officers as they may deem necessary. The commission may meet once each month for the transaction of its business. The chair may call a special meeting of the arts commission with the approval of the ~~director of the department of community resources ("director") or the director's designee.~~ Superintendent of Parks and Recreation ("superintendent") or the superintendent's designee. A majority of the members appointed to the commission shall constitute a quorum for the transaction of business.

Section 2. All ordinances or parts of ordinances in conflict herewith are hereby repealed only to the extent necessary to give this ordinance full force and effect.

Section 3. Should any portion of this ordinance be held invalid for any reason, such holding shall not be construed as affecting the validity of any of the remaining portions of this ordinance.

_____

AN ORDINANCE AMENDING SECTION 040 OF TITLE 2, CHAPTER 44 (COMMISSION ON CHILDREN AND YOUTH) OF THE LIVONIA CODE OF ORDINANCES, AS AMENDED.

THE CITY OF LIVONIA ORDAINS:

Section 1. Section 040 of Title 2, Chapter 44 of the Livonia Code of Ordinances, as amended, is hereby amended to read as follows:

2.44.040 Meetings–Rules of procedure–Accounts. The commission may hold meetings once every three (3) months, and shall designate the time and place thereof, and shall adopt its own rules of procedure and shall keep a record of its proceedings. The chair of the commission may call a special meeting with the approval of the ~~director of the department of community resources ("director") or the director's designee.~~ Superintendent of Parks and Recreation ("superintendent") or the superintendent's designee. A majority of the members appointed to the commission shall constitute a quorum for the transaction of official business. Proper record of accounts shall be kept of the receipts and expenditures of all money in accordance with established city procedure.

Section 2. All ordinances or parts of ordinances in conflict herewith are hereby repealed only to the extent necessary to give this ordinance full force and effect.

Section 3. Should any portion of this ordinance be held invalid for any reason, such holding shall not be construed as affecting the validity of any of the remaining portions of this ordinance.

_____

AN ORDINANCE AMENDING SECTION 020 OF TITLE 2, CHAPTER 52 (HISTORICAL COMMISSION) OF THE LIVONIA CODE OF ORDINANCES, AS AMENDED.

THE CITY OF LIVONIA ORDAINS:

Section 1. Section 020 of Title 2, Chapter 52 of the Livonia Code of Ordinances, as amended, is hereby amended to read as follows:

2.52.020 Organization–Meetings–Rules for procedure–Acceptance and use of funds. The commission shall, immediately after their appointment, meet and organize by election of one (1) of their number as president and one (1) as secretary, and by the election of such other officers as they may deem necessary. The commission may meet once every three (3) months for the transaction of business. The president may call a special meeting of the commission with the prior written approval of the ~~director of the department of community resources ("director") or the director's designee.~~ Superintendent of Parks and Recreation ("superintendent") or the superintendent's designee. The commission shall make and adopt such bylaws, rules and regulations governing their procedure and for their own guidance as may be expedient. The commission shall recommend to the city council the expenditure of all moneys appropriated or collected to the credit of the historical fund and of the construction of any historical museum building erected and used for the purposes of the commission, and of the supervision, care and custody of the grounds, rooms or buildings erected, leased or set apart for such purposes. All contributions and donations to the commission shall be deposited in the city treasury to the credit of the historical fund, and shall be kept separate and apart from other moneys of the city. The city council may provide in the city budget for the administration and operating expenses of the commission.

Section 2. All ordinances or parts of ordinances in conflict herewith are hereby repealed only to the extent necessary to give this ordinance full force and effect.

Section 3. Should any portion of this ordinance be held invalid for any reason, such holding shall not be construed as affecting the validity of any of the remaining portions of this ordinance.

_____

AN ORDINANCE AMENDING SECTION 080 OF TITLE 2, CHAPTER 56 (HISTORIC PRESERVATION COMMISSION) OF THE LIVONIA CODE OF ORDINANCES, AS AMENDED.

THE CITY OF LIVONIA ORDAINS:

Section 1. Section 080 of Title 2, Chapter 56 of the Livonia Code of Ordinances, as amended, is hereby amended to read as follows:

2.56.080 Organization, membership, voting and recordkeeping of the Commission. A. The Commission shall elect from its membership a chair, vice-chair, and secretary at the first meeting of the Commission and thereafter at the last meeting of each fiscal year. The chair shall preside over the Commission and have the right to vote. The vice-chair shall perform the duties of the chair in his/her absence. The secretary shall keep an accurate record of the proceedings of the Commission.

B. The Commission may meet once every three months. The chair of the Commission may call a special meeting with the approval of the ~~Director of the Department of Community Resources ("Director") or the Director's designee.~~ Director of Planning and Economic Development or the director's designee.

C. A majority of the members appointed to the Commission shall constitute a quorum for the transaction of its business. The concurring affirmative vote of a quorum of the members shall constitute approval of plans before it for review, or for the adoption of any resolution, motion or other action of the Commission. The Commission shall annually draft goals and objectives it seeks to accomplish which shall be submitted to the Mayor by March 31 of each year. The Commission shall submit an annual written report of its activities to the Mayor and City Council by December 31 of each year.

D. The business that the Commission may perform shall be conducted at a public meeting of the Commission held in compliance with the Open Meetings Act, 1976 PA 267 (MCL 15.261 to 15.275). Public notice of the time, date, and place of the meeting shall be given in the manner required by the Open Meetings Act, 1976 PA 267 (MCL 15.261 to 15.275). A meeting agenda shall be part of the notice and shall include a listing of each permit application to be reviewed or considered by the Commission. Any person or his/her duly constituted representative shall be entitled to appear and be heard on any matter before the Commission before it reaches its decision.

E. The Commission shall keep a record of its resolutions, proceedings, and actions. A writing prepared, owned, used, in the possession of, or retained by the Commission in the performance of an official function shall be made available to the public in compliance with the Freedom of Information Act, 1976 PA 442 (MCL 15.231 to 15.246).

F. The Commission shall adopt its own rules of procedure and shall adopt design review standards and guidelines for resource treatment to carry out its duties under this ordinance.

Section 2. All ordinances or parts of ordinances in conflict herewith are hereby repealed only to the extent necessary to give this ordinance full force and effect.

Section 3. Should any portion of this ordinance be held invalid for any reason, such holding shall not be construed as affecting the validity of any of the remaining portions of this ordinance.

DEPARTMENT OF LAW

PAUL A. BERNIER
City Attorney

MICHAEL E. FISHER
Chief Assistant City Attorney

ERIC S. GOLDSTEIN
Assistant City Attorney

LEO D. NEVILLE
Assistant City Attorney

MAUREEN MILLER BROSNAN
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33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2520
FAX: (734) 466-2072

November 5, 2020

TO: HONORABLE MEMBERS OF THE CITY COUNCIL

FROM: DEPARTMENT OF LAW

SUBJECT: Proposed Amendment to Zoning Ordinance - Petition 2020-07-01-04

RE: Request to Rezone Properties at 14416 Harrison Avenue and 28201 Lyndon Avenue (former Adams Elementary School site) located on the south side of Lyndon Avenue between Inkster and Middlebelt Roads in the Southeast ¼ of Section 24 from PL (Public Lands) to R-1 (One Family Residential)

Dear Council Members:

At your Regular Meeting held on November 4, 2020, you responded to Petition 2020-07-01-04, submitted by Adams Park Development LLC, for a change of zoning at 14416 Harrison Avenue and 28201 Lyndon Avenue (former Adams Elementary School site) located on the south side of Lyndon Avenue between Inkster and Middlebelt Roads in the Southeast ¼ of Section 24 from PL (Public Lands) to R-1 (One Family Residential)

Accordingly, herewith submitted for your consideration are the proposed ordinance amendments prepared by the Department of Law.

Approved for submission: Very truly yours,

_____ _____

Maureen Miller Brosnan, Mayor Paul A. Bernier, City Attorney

PAB/bks
Attachment
cc: Mayor, City Clerk, Council, Finance, DPW, Engineering, Planning, Assessor
P:\Council\2020\Ordinances\Pet. 2020-07-01-04 - Adams Park Development.docx

NEW DATA FOR REGULAR MEETING
OF 11/04/2020 - ITEM 13

Adams Park Development LLC
31333 W. Thirteen Mile Road, Suite 200
Farmington Hills, Michigan 48334

October 27, 2020

Dear Council Member:

We listened carefully to your comments at the public hearing and made several important revisions to our preliminary site plan.

We feel that the changes made not only improve the layout of our community but allows it to fit in better with the neighboring homes.

- We created a large park called Adams Park abutting John F. Dooley Park.
- The pond will be enhanced with a water fountain and landscaping with benches.
- The front entrance will be nicely landscaped with signage.
- We included nineteen 70 foot lots which will break up the streetscape look and allow 3 car front entry garages.
- The R-1 zoning as we have shown on site plan allows for deeper lots abutting the homes along Lyons Street.

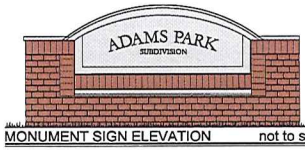
It should also be noted that when we develop the site the internal storm sewer system will alleviate any rear yard drainage issues that the residents on Lyons abutting our property are now experiencing.

Thank you,

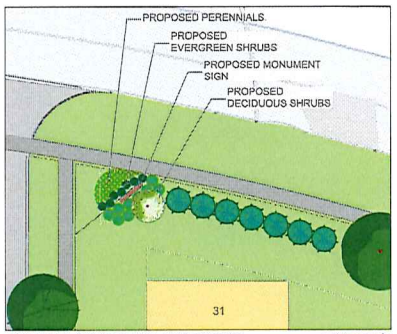
ADAMS PARK DEVELOPMENT LLC

Stuart Michaelson

LANDSCAPE PLANTING PLAN scale: 1" = 40'



MONUMENT SIGN ELEVATION not to scale



ENTRY PLANTING ENLARGEMENT not to scale

LEGEND

- PROPOSED DECIDUOUS TREE
- PROPOSED EVERGREEN TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED UPRIGHT EVERGREEN TREE
- PROPOSED DECIDUOUS SHRUB
- PROPOSED EVERGREEN SHRUB
- PROPOSED PERENNIALS
- PROPOSED WETLAND SEED MIX
- PROPOSED WILDLIFE HABITAT SEED MIX
- *EXISTING DECIDUOUS TREES*

40' 0' 40' 80' 120' north
scale: 1" = 40'

date: October 27, 2020
revised:
10-28-2020 Review by Client.
10-29-2020 Add adjacent lot dimensions.

811 Know what's below. Call before you dig.

LANDSCAPE PLAN FOR:
Michael L. Priest & Associates, Inc.
40655 Koppernick
Canton, Michigan 48187
(734) 459-8560

PROJECT LOCATION:
Adams Park Subdivision
Southeast Corner of
Harrison Avenue &
Lyndon Avenue
Livonia, Michigan

LANDSCAPE PLAN BY:
Nagy Devlin Land Design
31736 West Chicago Ave.
Livonia, Michigan 48150
(734) 634 9208

STATE OF MICHIGAN J. BRIAN DEVLIN NO.1260 REGISTERED LANDSCAPE ARCHITECT
J. Brian Devlin
ORIGINAL IN BLUE

CL-1: CONCEPTUAL LANDSCAPE PLAN

* Base data provided by Michael L. Priest & Associates, Inc.

Kasprowicz, Sara

From: Deborah Larocque <DLarocque936@msn.com>
Sent: Thursday, October 8, 2020 4:29 PM
To: CityCouncil
Subject: To all council members-Adams Park Development
Attachments: thumbnail_IMG_0193.jpg

Hello,

My name is Debbie LaRocque. I live at 14301 Harrison St. My house is located on the west side of Harrison across
from the new proposed 'Adams Park Development' site. Last evening I was listening to the meeting from my house phone.
The instructions i received from the letter that was sent stated that for all calling in without zoom you could press *9 to
speak. For some reason that feature didn't work for me so I am writing to all of you today to address my concerns
about this proposal.

Re: Traffic.

As we all heard in the meeting there are many concerns about traffic, not only the addition of it with 39 new homes but there
is a real problem with speeding on Lyndon since all of the stop signs on Lyndon have been removed. The subs surrounding this
area have a lot of mature residents but as new families move in, there are more and more children. I think that a few strategic
stop signs need to be returned to Lyndon near the proposed development to address these very important traffic/speeding concerns
we residents have. The one gentleman said they are 'drag racing' on Lyndon. I am far enough away that I don't hear that but the
speeding is almost as bad on Harrison as well.

Re: Correct property ownership info.

Originally a letter was sent out just before this past Christmas stating that Livonia Schools were planning on selling the property
and the property was slated to be demolished soon. The letter stated Livonia Schools were going to be accepting bids or proposals
from developers or how this parcel of land was to be developed. I spoke with a few of my neighbors and out of concern I called Stacey Jenkins who sent the letter out to find out more details about the sale. I learned that Adams was going to be developed but Dooley
Park is actually owned by the city and would not be developed. There is also a narrow 2-acre
strip that runs up Harrison that is also owned by the city and I was told that would not be included in the sale/development? Not sure I missed something but the next letter/any info I received was about

a hearing to re-zone the property. I actually missed that zoning meeting but called and spoke with Stephanie Reece from the City Planning Department. I requested and reviewed the actual minutes from that meeting though. I questioned Stephanie about the 2-acre parcel and she states that it was actually owned by Livonia Schools. I was told it was owned by the city.

Can someone please look into this and verify when that 2-acre sale was sold from the city to the school district and when? I point this out because according to the developer the site plan I received shows 10 homes on Harrison with driveways on that 2-acre strip of property that was not to be included in the sale? It was suggested when I read the minutes from the zoning meeting that entry into the new community was basically the same 2 that exist where Adams originally was.

Re: Additional Parking/Dooley Park

Please...If you are going to cram in all of these homes into this small space, we need to create additional off-street parking in Dooley Park or incorporate it into the edge of this development to reduce the additional parking issues of Dooley Park which is a very popular play/walking area. Compton park on Lyndon has 2 baseball diamonds and a newly renovated pickleball court. They have off-site parking for 50 cars and we have just as much foot traffic as they do and possibly more now. Many more families use Dooley Park Play area than Compton Park hands down. The addition of these 10 new homes with each home having their own driveway will create more parking issues because many people park along Harrison now to go to the ball diamond and play area of the park. They use to park behind the Teachers parking lot that is now gone. It was right in front of the ball diamond. With the addition of even more homes...this entire area will become even more congested...we implore our city council to aide us and demand the best possible partnership with the Adams Park Developers into designing an area that will make everyone one happy! Think...WIN WIN:-) Let this development be a model for future success please:-)

Re: Water Retention Basin/flooding/power overloading concerns

I agree that this area is an older development with older infrastructure and there are concerns about overload/flooding/power overloading too. I have recently purchased a generator because in the past few years we have experienced more power loss than even before. Reading
up on this subject matter I discovered that power loss is apx 65% from storms, trees falling on lines etc. but 35% of it is from overloading
the grid. In my opinion, I feel that this way over saturation of the commercial/retail building near us has not helped. I hope that after the builders have made their money and gone on to make more money in another community...our community will not be left holding the bag after they are gone. Most of us don't really understand the Water Basin Retention Ponds but i wouldn't want to be the one who borders it.
The surrounding area that runs along Harrison is a marshy/muddy area. My house has 2 storm drains in front of it and when it rains hard it
backs up all the way to my driveway and often, over my curb and up to my sidewalk. Again, please be sure that this infrastructure in our surrounding areas will be improved and not decimated.

In general, listening to the calls from homeowners who abutt or are near the Adams site, I heard and share the same valid concerns
of my neighbors on the call. A few concerned residents pointed out traffic as well as infrastructure concerns. We are not opposed to building new homes. We need to ensure that ALL parties are considered in this development. Honestly, one of the developers seemed a bit out of touch with the resident concerns in my opinion. His claim that this was not going to have much impact on the traffic was in-correct! This development along with all the additional retail that has been way over built on the middlebelt-schoolcraft-plymouth road corridor has brought so much traffic already! I avoid this area as much as possible. We seem to have a lot of people cutting through our neighborhoods to avoid a lot of the bottle neck traffic from it. This development just adds even more headache.

I have lived in Livonia all my life and in this house for 34 years. Our son attended Adams. He enjoyed playing hockey along with many other children every winter on the outdoor ice pond across the street. The biggest reason that we purchased our home 34 years ago was because of the park like setting of Dooley Park and of course the fact that our son could walk to school. Our lot is 70 ft wide. We could have bought somewhere else but we preferred a wider lot so we were not right on top of our neighbors. Please consider R-2 lots for this community.

This is a long read and I apologize but this is an extremely important subject for all of your loyal tax paying residents here. Please have our backs. We have supported all of you and we need all of you to support us now:-) I am willing to have continued dialogue with any of you or Adams Park Development to make this development a real success. You know that ole' saying...'The bitterness of poor quality remains long after the sweet taste of low price is forgotten'. These residents deserve a good solid, creative plan that all can and will be satisfied with.

Thank you,

Debbie LaRocque

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CITY OF LIVONIA
PUBLIC HEARING

Minutes of Meeting Held on Wednesday, October 7, 2020

A Public Hearing of the Council of the City of Livonia was held virtually via ZOOM on Wednesday October 7, 2020.

MEMBERS PRESENT: Kathleen McIntyre, President
Vice President Scott Bahr
Rob Donovic
Jim Jolly
Brandon McCullough
Laura M. Toy
Cathy K. White

MEMBERS ABSENT: None

OTHERS PRESENT: Mark Taormina, Director of Economic Development
Todd Zilincik, City Engineer
Paul Bernier, City Attorney
Sara Kasprowicz, Recording Secretary

The Public Hearing was called to order at 7:25 p.m. with President Kathleen McIntyre presiding. This item is regarding **Petition 2020-07-01-04** submitted by Adams Park Development, L.L.C. pursuant to Section 23.01 of the City of Livonia Zoning Ordinance #543, as amended, requesting to rezone the properties at 14416 Harrison Avenue and 28201 Lyndon Avenue (former Adams Elementary School site) located on the south side of Lyndon Avenue between Inkster and Middlebelt Roads in the Southeast ¼ of Section 24 from PL (Public Lands) to R-1 (One Family Residential).

This item will move to the Regular Meeting of **November 4, 2020.**

The Public Hearing is now open. There were 25 people in the audience.

McIntyre: We have a hand raised, and I don't see that Council from anyone from the City, from Atul Kishore, I hope I've pronounced that correctly.

Kishore: Yes, thank you very much, can you hear me?

McIntyre: Yes, I believe we have also received an email from you.

Kishore: Yes, thank you very much for giving me the time. Just a little background on myself, I used to live in Livonia and I had moved out to California and

then to Bloomfield and now I'm back in Livonia. I love the City and thank you for giving me the chance to talk to you today. Before we discuss about the elementary school, I want to discuss about the current situation we are facing today in our building, this is regarding the home owner's association for Bishop Condominiums, that is a new condominiums right across from this site. This is built by Soave Homes and I must say that in general, they have been good but I have had a real problem with Mike Soave, the builder, because they are using my sprinkler and my water connection to water the entire subdivision. The Water Department is working with them and they are not getting cooperation because Mike keeps promising that he'll add another line and its not working, so I would love to have City Council and the Mayor getting involved with Mike Soave to get that resolved and have a successful new line put in. Then we are moving to this area of Adams LLC that is going in. I look forward, I think, on behalf of the Homeowners Association, we all look forward, we are not objecting to having the single-family homes in there as long as they are done right. Right now, Lyndon has a major problem. The road itself is sinking towards Lyndon and water is collecting. Now, thank God, the geese are gone, because the geese were using that a pond in the middle of Lyndon and then everybody driving there is honking. So, as you can imagine, as this subdivision goes into play, we're going to have some major problems. There is water already coming out from the Soave construction from the expansion joints in the sidewalks. Nobody from Inspection has looked at it or given the ok. So, someone from Inspection needs to come out and make sure this is done. The other thing is, right now with, as I mentioned in my email, this new subdivision has to look at the four items that I mentioned on there. Rather than going into it, I know this is strictly about a rezoning process, but we need to make sure that the rezoning and the builder completely takes control of this project, especially if there is going to be a Homeowner's Association or not, that they are held liable to the very end.

McIntyre: Thank you, Mr. Kishore. Your comments are appreciated and as you know, we require bonds from developers, and we hold onto the bonds until everything is complete and signed off on by the City. I do appreciate your comments and as you know, this is the public hearing and this will move on to the Regular agenda of October 19th, so I would encourage you to also participate in that meeting. That meeting will also be via Zoom, so that will be the Regular meeting at 7pm.

Kishore: Yep, I plan to, thank you very much.

McIntyre: Thank you for your comments and again, thank you for engagement in the City and your Homeowner's Association in taking an interest in what is going on in the City and in your neighborhood, so thank you again. Alright,

any other to comment? We have Mr. McCabe. Thank you for bearing with us and waiting until we got to the second public hearing.

McCabe: Thank you again and I'm a little bit new to Civics so I appreciate your guidance and my interruption on the other meeting. I was on the Planning Commission meeting, I live, again, this is Jim McCabe, I live at 14236 Lyons Street. Lyons is the street directly east of the planned development so we will certainly be affected in many ways. I was on the Planning Commission and I noted my vote against the new building, however, I learned something during that meeting, and that was that this is basically a foregone conclusion. The property has been sold, a developer owns it, he's not going to leave it as green space, which I know everyone in my neighborhood here would like. So, he's got a certain investment in it, so shame on me for not being Civically active when the school board sold it to the developer, so shame on me on that. It does seem like it was quite an easy sale, it seemed to happen very quickly. That aside, I'm not in favor of it, you know, there is going to be certain impacts. You going to put forty new houses inside a sixty-four year old infrastructure, there's infrastructure and traffic problems on Lyndon. There's many different drawbacks to it, so I don't know why it was so easily rubber stamped. Again, these guys put a lot of money in to buy that property, so maybe my comments are a day late and a dollar short, but I have to make it known, I'm not in favor of it. You're going to build forty new homes inside a sixty-four year old infrastructure and there was a civil engineer on the Planning Commission call that said there will be no impact, I just can't believe that. So, anyway, I just wanted to express my disenchantment with the whole thing and be on record. I appreciate the date of the next Council meeting, I guess I will attend that for no other reason but to make myself feel good.

McIntyre: Thank you for your comments and just received notification that the information I was reading is not correct, and that these will actually be on the Meeting of November 4. Mr. McCabe, if you would like to call the Council office tomorrow to get the correct date, but Mr. McCabe, I would like to address your comments, and first of all, I want to thank you again and I mean this sincerely, for taking the time to call in and express your concerns and I'd like to address what you said about the process. You recognized a very important fact and that is that these are properties that belonged to Livonia Public School District, which is a completely separate legal entity which you understand. Sales aren't generally quick with these and I don't know with this particular property, how long this was on the market, but these are put on the market and are made available, they are usually working with a broker and these are made available very widely to any developer, to anyone whose interested in purchasing these and the sale is generally contingent upon the rezoning and I think we have Mr. Taormina with us, I know we do because we are sharing his screen and

I'm going to ask Mr. Taormina, our Planning Director if he can confirm that. Mark, is the sale contingent upon the rezoning?

Taormina: I'll have to allow the petitioner speak on the specifics of his purchase agreement with LPS, but its my understanding, but yes, this is all a contingent based agreement and at what point they choose to close on the property, I'm not certain on that. Just to speak a little bit on the length of the process, I believe it was around the first of the year that the consultant that was hired by Livonia Public School sent out the proposals, the RFPs, they went out and then following that, there was a process that the school board used to select the buyers of not only this site but also Webster and Wilson. So, it has been a several month process all together.

McIntyre: Thank you and I wanted Mr. Taormina to speak to this issue. It is not a quick process, and as far as it being a rubber stamp, its not a rubber stamp. That's why we go through these processes, its really not for show, these are important, we are legally bound to have public hearings but they are very important to us and the comments we hear are very important to us. Generally, I shouldn't say generally, but the comments drive us to come into our consideration often do drive us to additional conversations with the perspective developer. Going back through the Planning Commission notes, so your comments are not at all in vain and the other thing that I would like to mention, in the process on rezoning and you may know this Mr. McCabe and I apologize if I am telling you something you already know, but the process for rezoning is that it gets a first reading at a City Council meeting and again, I believe this is November 4, I think I have just received confirmation that this will be November 4th for this item. There is a first read given by a member of City Council generally and someone can decide not to offer a first read, but generally there is a first read, but before we have the second read, and the second read is where a roll call vote is taken and the rezoning is finalized and it doesn't take affect until it is published in the paper, but prior to that happening, is when we receive and review the site plan and so we have a number of significant steps to go through here before the rezoning is finalized, so I hope that helps put your mind at ease a little bit and be more comfortable that this is not a rubber stamp, that this is not simply a formality on a done deal.

McCabe: I thank you for that. Again, I have never been very involved with local politics and shame on me for that, I'll say that twice, shame on me for that. I appreciate the education and the opportunity to voice my concern and my vote against the building of 49 new homes, but again, I understand the situation and I appreciate it. Perhaps I'll run for office someday, I don't know, I'm fascinated by this whole process. I thank you again.

McIntyre: Thank you and again, the thing that we appreciate it, and I don't usually speak for Council, but in this case, I think I can speak for all of us. We're

always happy when people call us and they like what we're doing, and they agree with everything, but what we like best if for people to be engaged, even if they are not happy about something or they disagree with something that's going on, we really appreciate hearing that. It does inform our thinking and our decision-making, so your strong Civic engagement is appreciated, and your voice is heard an its not a voice in vain.

McCabe: Thank you so much.

McIntyre: Next we will move along to Sean Kelly. I'm hitting unmute, there we go, good evening.

Kelly: Ok, first of all, I want to agree with Mr. McCabe in that, I'm not as knowledgeable as you guys are about zoning and all that. I did participate in the Zoning Board Commission and I thought the rezoning had already been approved for Residential 1. Are you saying it's still not approved, that has to go to the City Council?

McIntyre: That is correct. This is the City Council, so you participated at what I think you are referring to is the Planning Commission?

Kelly: Maybe it was the Planning Commission, yes. They just voted it to go through to you guys?

McIntyre: They are a recommending body.

Kelly: Ok, then they recommended the thirty-nine houses?

McIntyre: They recommended the rezoning.

Kelly: Not the plan that the developer is proposing?

McIntyre: We are not to the review of the site plan yet. They process is, I don't know if you heard what I had explained to Mr. McCabe?

Kelly: Yeah, I was watching. So, I don't know if you guys participated in the Planning Commission's Zoom broadcast, but there was a person there, Laura, and she was asking why was Residential 1 and not Residential 2. I understand that you want to, this is land and the developer bought it, but it just seems like thirty-nine houses in that small of a space is too much. Especially if the ingress egress is going to be on Lyndon. I'm giving up having the green space, but I think it should be Residential 2, I think it allows for larger lots and they would be less houses. Am I correct in that?

McIntyre: You are correct. So, this is a request to rezone from Public Lands to R-1, one family residential. You are correct, R-1 and R-2 specify the lot sizes.

Kelly: R-2 would allow for larger lot sizes, correct?

McIntyre: R-2 requires larger lot sizes, that is correct.

Kelly: Ok, by the way, I'm at 14453 Lyons, I butt up right to it. Our entire strip along just by where the school was, we're flooded every Spring. I lost one huge, fifty-year-old maple. My neighbor South of me, he floods up into his backyard and I'm really concerned with having thirty-nine houses. At the Planning Commission meeting, the was a drainage expert, I can't remember his name, he said on Lyndon there's a huge tunnel on Lydon that you could drive a pickup through. He said we had all this drainage running along our fence line, west of my lot that would handle any subsequent run off. Well, it didn't handle anything. Then I'm concerned, we're going to have a retention pond at the bottom of this proposed development and all that run off from thirty nine houses into a retention pond, what's that going to do to my neighbors south of me? So, I'm not, like Mr. McCabe said, I would love a green space, but I think R-1 is way too much for that small of a property. I would hope you guys would take that into consideration.

McIntyre: Alright, thank you. I would like to just address a high-level issue of the retention pond and I'm going to ask Mr. Taormina to jump in here if I say anything that is not correct. Generally, what we find, is with these former school sites, when they are school sites and when they were built, the storm water management requirements were very different and not nearly as robust as they are now. So, when these are purchased and redeveloped, this County's requirements, requires aggressive storm water management on lots, on parcels of this size. What you generally end up with is an improved situation for the streets and the residents surrounding these schools, when there is development now, the retention ponds are required, and I guess I would term them stringent storm water management capabilities are required.

Kelly: Alright, but I didn't hear about any improvement to the infrastructure underground. I've got sewers, I don't know if they are sewers, but I've got sewer caps right at the back of my fence and right at the front of my yard. They came and looked at them while they were doing all this. I don't understand, are they going to take those drainpipes out and make them bigger or are they just going to do trench drains to run down to this retention pond. How are they going to handle a heavy rain?

McIntyre: Answering your question's specificity is beyond is beyond my Civil Engineering skills, which are very limited.

Kelly: I am also very limited on Civil Engineering, so thank you. It just sounds like thirty-nine houses with the pavement and everything that is going to be involved with that, it's going to cause a lot more runoff than greenspace that this park now provides.

McIntyre: I'm not sure that premise is correct, but what I'd like to do, I do know my colleague Mr. McCullough would like to weigh in here, he does have a background in facilities management and development. I'm going to ask him if he'd like to speak and the other thing that I'd like to do, Mr. Kelly, it get in touch with me through the Council office and we will refer this to the Administration and get some information for you from the City Engineer prior to the meeting on November 4th.

Kelly: Ms. McIntyre, can you give me that number that I can get to you on?

McIntyre: Sure, 734-466-2250.

Kelly: 734-466-2250? Alright, thank you.

McIntyre: You can also go on the City Council homepage and find an email form that you can get in touch with us. Also, I believe that number is listed there.

Kelly: Alright, thank you.

McIntyre: With that, I'm going to go to Councilmember McCullough.

McCullough: Thank you, Madam President.

McIntyre: From the Chair to Mr. Kelly, just in general, so with this Public Hearing this is just for rezoning, I know in the packet, there is a site plan, just a rendering of a high-level, first draft of a site plan so we can get our eyes on it. With the site plan approval process, everything kind of restarts and having managed large, capital projects, there is a lot of engineering calculations that go into developments like this. Everything basically starts over, so the next thing, if this goes through, then the applicant and the petitioner would go through the formal site plan approval process that kind of starts Planning all over. Then, we get another look at it and if it gets approved by Planning, then to comes to Council, so I can assure you that and everybody out that, any infrastructure, there is massive Engineers and Architects that look at these numbers and make sure that everything conforms to our current system, so, I know the whole package gets looked at after this round. I hope that kind of clears up stuff, but just to reiterate, this is just for the rezoning. Thank you, Madam President.

McIntyre: I'd like to clarify one thing that Mr. McCullough said, he is correct, and I think I had explained that previously. Nothing happens on the rezoning

until the site plan goes back to the Planning Commission and goes through. Things don't start over in the sense of, this is part of the process to rezone this. This is a public hearing to rezone this to R-1, so there's no resetting of the rezoning, we simply don't finish the process until the site plan goes through the Planning Commission and then it comes back through us, so thank you and at that time, that's when the deep dive is done, no pun intended, into the calculations for the sewer, for the storm water but prior to that, I am happy to talk to our City Engineer and refer this to the Administration to get information for you, Mr. Kelly.

Kelly: Ok, great thanks. That's good to hear, so the R-1 has not been approved yet, right?

McIntyre: That's correct, this is simply the public hearing where the public, and it is exactly what it says it is, the public has an opportunity to participate and share their thoughts and concerns and views about this, then this will come on the Regular Council meeting of November 4th, the Regular meeting is at 7:00pm and this would generally get what is called a first reading. Ok, so first reading is offered, there is no voting on it, its simply a first reading and then after the first reading, before we go on to take the roll call vote on the rezoning to R-1, that's when we go through the site plan process. The site plan goes to the Planning Commission, just as the initial rezoning did and the Planning Commission studies it, they have their Study and Regular meeting with the Petitioner and the public and then they will make a recommendation to Council on the site plan. The site plan has to be done before we go to the second reading. The second reading is where we take a roll call vote and either vote yes or no on the rezoning.

Kelly: Ok, so, I guess, I just want to voice my opinion at the very least, I think it should be R-2 and I base that kind of on the condos that are opposite Lyndon there. It doesn't concern me, but walk my dogs there every night and I go by there and all the people along Harrison that butt up to that condo site, they are flooded all the time because it elevated and it runs down into their yard. It just seemed like a bad decision to elect those condos.

McIntyre: Alright, thank you very much, Mr. Kelly.

Kelly: I hope you take my recommendation seriously. Thank you, guys.

McIntyre: Thank you. Alright, I will now go back to Councilmember Toy.

Toy: I'm sorry, I didn't hear you, Mr. Kelly? Do we have his address? Did we get his address?

McIntyre: I have Mr. Kelly's address and this is recorded so we do have it.

Toy: Could I get that, what is it?

Kelly: 1143 Lyons.

Toy: I would like to go out and see it. I remember you know, I've been passed Adam's school and the site, but I hear what you are saying about flooding, Madam President, when I was out last year, in some of the neighborhoods, there was a considerable amount of concern about flooding as was pointed out on those new condos over there. So, that's not to say it should happen on this property or already happening or whatever, but just to get a visionary of this, we have a lot of great people in this Administration that can address that, as you explained, Madam President, I'd just like to eyeball it, if you may, before the 4th. Also, are we going to hear from the Petitioner as well, tonight, who is proposing this?

McIntyre: I don't know, let me see.

Kelly: If you can still hear me, Miss Toy, I'd love you come out and look at not only my yard, but my neighbor's yard.

Toy: Ok.

McIntyre: Alright, thank you, Mr. Kelly. Mark, correct me if I'm wrong, I don't see the Petitioner, I do see a number of other people that would like to speak.

Taormina: The Petitioner is present.

McIntyre: Ok, thank you.

Toy: Who is it?

Taormina: Stuart Michaleson.

Toy: He's representing the Soave's?

Taormina: No, he is representing the Windmill Development, the purchaser of the property.

Toy: Ok, can we hear from him soon or no?

McIntyre: I'm going through the people here. Next, we will go to Loraine.

Compo: This is Loraine Compo, my address is 14449 Harrison and I would first like to start by saying that many residents in this area are opposed to this project for a variety of reasons. I think at this point, it is safe to assume

that this project will be moving forward in some capacity since the property has been sold. I was under the impression as some of the other callers that the zoning had already been changed, but I'm glad to know that is not the case. What I would like to say is that I believe that, as many of the other callers have, that thirty-nine homes is a ridiculous amount of homes to cram into that amount of space. I also think it's a lot to ask the residents in this area to put up with this. This is a project that is obviously going to cause a huge disruption to our neighborhood for years, because to build that man homes, is going to take some time. Based on that, I guess, I would just like to ask, what's in it for us? My hope is that we can come to some kind of a reasonable compromise, perhaps a smaller number of homes. Based on some of the comments from some of the people on Lyons, how about some greenspace perimeter around the whole area, around Lyons, around Harrison, so it will lessen the overall impact to our neighborhood and the neighbors and the environment. I realize that the developer doesn't really care about the impact to the existing neighborhood or to the neighbors or to the environment, their goal is simply profit and cram as many homes in as you can. I feel like this is going to reek havoc on our neighborhood, disrupt our lives, for a period of time, while they make their millions and move on to the next project. If I have learned one thing from living in Livonia for thirty-five years and attempting to have our voices heard. For example, the reconfiguring of our school system, we have these meetings because its to let the citizens be heard because you are required to do so by law. I was encouraged to hear that there's a lot going into this process, a lot that I didn't know. In my experience, making changes based on what the citizens in the neighborhood want, generally doesn't happen. I'm here again, trying to be heard and hoping to make a difference and I respectfully request that you, as our elected officials tasked with the responsibility of representing this community will do just that and ask yourselves how you would feel if this was going to happen in the middle of your neighborhood. I ask that you please work with the citizens of this neighborhood, represent us and don't merely accept a proposal of the developer. We're counting on you guys not to and it sounds like you're really interested in helping us out here. I appreciated your time and attention and the opportunity to speak and I appreciate anything you can do to lessen the impact of this project on our neighborhood.

McIntyre: Alright, thank you for your comments. Before we go on to the next member of the public that would like to speak, I would like to recognize that we do have Mr. Jolly with us. Hello Mr. Jolly, I know you were able to listen in, thank you for now joining us as the panelist attendee, so thank you. Alright, we will go to Atul Kishore. There we go, Mr. Kishore?

Kishore: Thank you again, you said you were going to come out, I would love to have you come and see me also as part of the six homeowners here. Half

of Lyndon gets flooded today on a rainy day and in the winter, it's going to be ice, its going to be cars that are slipping and sliding into our mailboxes and into our yards. This is why a subdivision having that many homes exiting out of Lyndon should not be acceptable to anybody because it's a curb on the road and its, right now, its terrible. Todd Zilincik from the Engineering Department came and had the road surfaced, a little bit skimmed off which made it even worse because it was already sunk down so it needs to come up and it needs to come up before any construction starts because Lyndon, half flooded as an emergency route is not acceptable. I would love to have you come and talk to me.

McIntyre: Thank you, Mr. Kishore.

Kishore: Thank you.

McIntyre: Alright, Vice President Bahr.

Bahr: Thanks, Madam President, just two quick responses at some of what we've heard and certainly appreciated the input of some of the residents. I'll just reiterate what's already been said, we do take these public hearings seriously and your input does matter. Anybody that paid attention to the Clay school development a couple of years ago is very aware of the hours and long nights that we went through to make some significant changes to that plan in response to the input from the neighbors. I think our track record on that speaks for itself. That's not to totally graph what's going to happen here, neighbor input is one input. Its an important input, but its one input and we definitely hear what you're saying. The second thing is, I'll try not to belabor it, because it's been talked about, with the drainage thing, the drainage retention ponds that are required by Wayne County, which is, historically a relative new thing. Not the requirement of retention ponds, but just the size that they now require is actually, in the minds of many, excessive. More than what is necessary. Without being a Civil Engineer myself, I think it's safe to say that this development, with the requirements that will be put on it that were not put on your current, existing neighborhood when it was built, will probably, if anything, improve the drainage situation. That's all I will say about that because that all gets into site plan, the question that is under consideration now is one of zoning, that is just that Livonia Public Schools selling this land to a private developer, is coming before us for the first time with the question of would this make sense to be redeveloped as residential. That's the question, of course now, all the other stuff will definitely be put through the ringer when we get to the site plan, assuming that happens. Thanks.

McIntyre: Thank you, Vice President Bahr. It looks like Mr. Kelly would like to speak again. I'm sorry, Councilmember Jolly, did you have your hand up?

Jolly: Yeah, thank you, Madam President. I apologize for earlier, I was on a device that was allowing me to listen but not participate, so I did listen to this and the previous hearing. I have a question real quick. Obviously, this request is asking to rezone this as R-1. This goes to Mr. Taormina and to Mr. Bernier. At this point, are we limited to only considering R-1? Obviously, that's what is asked for, but if we move this on from this public hearing, are we free after to discussion with the developer to discuss a possible R-2 or R-3 scenario? I remember when we have had those discussions and time to talk about things with other developments, but I'd like to know, at this point, are we limited to R-1 only in this consideration or can we consider maybe and R-2? Then my second comment real quick while I'm on the line, I would like to hear from the developer asking whether or not they have mocked up the site as an R-2 and if so, what would be the difference in the amount of houses. To be quite frank with you, building new houses is very important to the city of Livonia, keeping our housing stock somewhat fresh, or having some availability of fresh housing is important, but I'm getting a little leery, a little questionable when I think about the fact that every single new development that we've had in the city is being asked to be R-1. I would like those answers from the developer. We have plenty of R-2, R-3 sites in the city that have been great neighborhoods for fifty, sixty years. I want to know why we are not considering R-2, R-3, thank you very much.

McIntyre: Thank you, Councilmember Jolly. We'll go back to Mr. Kelly.

Jolly: Madam President, if I may, I did ask a question to Mr. Taormina and Mr. Bernier.

Taormina: Two-part question, the first part was the question of whether or not the Council of the City could take action in any way to change the zoning recommendation from R-1 to R-2, because that would involve a change to a less intensive zoning classification that is generally recognized and accepted. That authority does rest to the City at this point. If it were the other way around, then there would be an issue with the public hearing process and we'd have to go back to the Planning Commission, but I don't believe that would be the case in this instance if it were up zoned, if you will.

Bernier: I agree, that's my analysis of it too. If we were going from R-1 to R-3, there's not a problem, but of you go, to say, R-3 to R-1, you would probably have to start this process all over again.

McIntyre: Alright, Mr. Jolly, does that satisfy your question?

Jolly: The first part, Madam President, I'd like to hear from the developer on that second part.

McIntyre: Alright, I do not see that the developer has asked to be recognized. I do see a second hand up, alright, Mr. Michaelson, good evening.

Major: This is George Major from Windmill; can you hear me? I think you unmuted me instead of unmuting my partner, Mr. Michaelson.

McIntyre: Who wishes to speak?

Major: Mr. Michaelson can speak, or I can if you can't unmute him.

McIntyre: That's who I'm trying to unmute. I'm going to ask our Information Systems Director to help me, I'm having a hard time doing the unmuting. Casey, are you able to help here? I will tell you, occasionally, we've had a problem where we've done the unmuting on our end. There we go, it looks like we have Mr. Michaelson unmuted.

Michaelson: Yeah, hi. My name is Stuart Michaelson, I'm with the Adams Park Development company. I just want to start off by saying, the R-1 was chosen because we're in the middle of all R-1 zoned homes. All the houses surrounding us are R-1 zoned except for the condos on Lyndon that are across the street, which are attached condos. What we're proposing to do is 60x120 size lots which we have found to be very successful in previous developments which we were involved in. I've been doing this for thirty-seven years, going to Planning Commission meetings and Council meetings and there's always, you're always going to get the people that don't want anything built on the empty land next to them. They want to enjoy it. But, at the same token, they want to live in nice houses. We find that, we've done this in Farmington Hills, we specialized, if you want to say that, the last couple of years, the last probably ten years in buying school sites, because they are closing down the schools. The old school sites that are available today, are in the middle of neighborhoods. Nowadays, if you build a new school, its on a main street. The older schools are in the middle of older neighborhoods. What we have found is, the people, when you raise the values of people's homes, we find that many of the people that want new houses, they don't want to live in forty, fifty year old houses, but don't want to leave the neighborhood, are happy to have new housing so that they can move into the new house, have all the new amenities, the energy conservation that we put into all the houses that we build and we also are very careful that we have, and your Engineering Department is very careful about putting in all new infrastructure. Fifty-year-old infrastructure that was built with the school all gone, its going to be torn out. Any remnants of it will be gone, we'll start over from scratch, we'll put in new storm sewers, sanitary sewers, water mains. Everything is new and carefully engineered so as not to flood any neighborhoods. The hundred year detention that we'll put in will have an

outlet, so what it does, it takes all the rainwater from all the houses and collects it into a detention so that it doesn't flood the existing storm drains and then it's out-letting in a slow manner into a storm drain which will take care of all the storm issues. The people there are having problems because it was a school for fifty or so years that didn't have it graded properly. The people that surround us, they're going to find all the issues that are caused by our piece of land will go away. We can't deal with other City storm sewers, whatever is happening outside of our development, but we certainly will be very careful making sure that our homes will all drain properly, they're going to have sump in every basement that are out-letting to underground storm sewers. Its very carefully designed. We have to work within the marketplace that drives the prices of the homes, so we find that in this area, to compete with the pricing of the existing homes, we need thirty-nine home. They are 60x120, I'd be glad to take the Council members and have them visit sites that we have recently completed in Farmington, the City of Farmington, Farmington Hills where we did 60x120 and it worked out very well. The other thing as far as traffic, you're not going to have that much traffic. People come and go at different times, nowadays they're at home most of the time working, not even going to offices, but that's besides the point, but even if they were, its not an overflow of traffic. There's going to be ten homes fronting on Harrison, twenty-nine homes within our development. Believe me, the people that live in these homes and create these nice communities, they are so happy to have the homes, new homes. It saves people from having to leave Livonia to go to Northville or Novi or any other place to find new homes. That's what the people want. We're not in this, believe me, I've been doing this for thirty-seven years, if I made millions and millions of dollars in every development, I'd be on an island someplace, I wouldn't be her working. We enjoy what we do, we do a good job, we've done it in many communities around, like I said, we're in Farmington Hills now, doing two communities. We did one in the City of Farmington on an old school site. I've built in Troy, Northville, all over, we have a good reputation, we do what we say we're gonna do and probably 99% of our customers are very happy. So, I know, it a load, you have a piece of land and now it's vacant, before you had the school, there was nothing pretty about the school, but that's the way of the world and that's how you make the city grow. You'd bring property taxes, the school boards get money from the State, you'd have kids living there, they're nice communities, I'd be glad to take you and show you where we are. Also, our Engineer, I believe is on, Mike Priest or Evan Priest, they can explain a little more about the Engineering issues, but we've been doing this for a long time and very successful.

McIntyre: Alright, thank you, Mr. Michaelson, I appreciate your comments. Councilmember Jolly?

Jolly: Thank you, Madam President. So, just real quick, Mr. Michaelson, I believe what you're telling us, I understand the truth of the need for new housing that people are really craving this type of thing and to be quite frank with you, like I said before, we hear that we need to refresh our housing stock and this is one way to do it. For everybody who's listening, this zoning will not have a final vote until we also have a site plan that will receive a final vote. I think you've explained that before, obviously, yes, but, the reason I'm bring that up now, is, Mr. Michaelson, I want to see a site plan that makes sense, I want to see a site plan that actually fits houses into he property as they should be fit. We have had developments here, even though we've gone through the process and limited the houses from what was originally desired, you drive through the finished product and it looks like houses are squeezed in there. I'm going to start to be more skeptical and scrutinize these situations a little bit more to make sure that it makes sense on paper and it makes sense in practice for what we're looking at. So, I'm just telling you right now, listen, I'm not going to hold up the zoning at this point, it's R-1 surrounding for the most part, you can proceed at R-1, but I want to see a site plan that makes sense for the property and the surrounding homeowners as well, thank you.

Michaelson: Yeah, Mr. Jolly, if I just may add one more, I would like to show you examples of recent housing communities that we have developed and built, because we develop and build, and show you how nice the houses look on a 60x120 lot. Here's the other thing, I gotta tell ya, people today, they don't want big lots, because they don't want to sit and spend their whole weekends mowing lawns. The 60x120 is the perfect size for our customers.

Jolly: Sir, if you would provide addresses and locations of those new developments, I'd love to see them, thank you.

McIntyre: Alright, I'll go to Councilmember McCullough and then Councilmember Toy.

McCullough: Thank you Madam President, through the Chair to the developer, just kind of looking over the site, I'm kind of reiterating a little bit, tying on to Mr. Jolly's words, Councilman Jolly. Looking at the site plan that was provided and we'll obviously dive deeper into it, you have the ability, and I'm not discounting the lot sizes, the retention basins, I think the stormwater management plan, I'm not too concerned, obviously, because when you jump into this, I know how the engineering goes into this, but you have both Dooley Park and Buckingham Park that borders to the South and looking at the original site plan and I know its early, but I think you have a great opportunity to tie in great sustainability features and walkways and pathways from this new development, potentially, to those parks. That's kind of just, one of my wish list, obviously, we'll wait and see what comes

from the formal site plan process, but I'm looking for some innovation, that would be my request to tie in. Both Dooley and Buckingham are great parks, they get a lot of use, they get a lot of people that float it. I think you have a great opportunity to take it to the next level, so I just wanted to go on record stating that, thank you.

McIntyre: Alright, thank you. Councilmember Toy. Please unmute.

Toy: Sorry, thank you Mr. Michaelson and Madam President and George, I didn't catch your last name. I just want to thank you for bringing this forward. The sensitivity to these large lots, I grew up in Livonia, I've been at it in this city for sixty-some years. We get out and hear residents, we're sensitive to our residents as all of us are. When we start seeing various developments go in, we're considering about three of these right now. I see you're involved in the Adams school one, I don't know if you are involved in any of the rest of them, but we're getting a lot of pushback from neighborhoods on these. While we can always have open space, we understand that, we understand that you are bringing us value-added in many respects, but we also want, as I think a couple of my colleagues said, we want to incorporate some uniqueness into this. I don't mean to be rude to you, but if you were to buy the property and not be able to do thirty-nine places, you'd need to consider that when you purchase it. I realize that you're contingent, but by the same token, we have to also measure your needs and the people that live there and pay taxes already in those areas. While its R-1, most of these larger lots that we're considering with these closed schools, there are R-1s around them, but that doesn't mean we always have to go with R-1s, just because those are R-1s. Yeah, I get it, that in most of those areas are R-1s, but some people would like a little bit bigger lot, because quite frankly, when they move into the condo or the site condominiums or any of the rest, they'd like to have a little animal, maybe a dog. Maybe a dog that's bigger thank twelve pounds. So, I'm sensitive to those kind of needs as people age out or people move in with young children. So, it's a different style of living, I get it, but I don't want to see it crammed either. I want to see some good creativity in this, and I want to see us address those flooding problems that these people are talking about, thank you so much.

Michaelson: Councilwoman Toy if I may just add?

McIntyre: Mr. Michaelson, I know this is a little bit difficult because of the Zoom format, but I will ask you if you want to address a comment by Council, if you do use the raise your hand function so I can recognize you. I'm trying to give everyone their due turn here. So, I will this time allow you to proceed in addressing Councilwoman Toy, but I would ask that you do use the raise you hand feature just because that's how I keep order in the meeting.

Michaelson: I'm very sorry I forgot to do that. So, I just wanted to mention that if Mark Taormina can put on the site plan, you'll see at the South end, we have an egress to the park and a small park area ourselves. So, we try to be creative by creating a park attached to your park and we have an egress so that people can walk through, either coming through Lyndon or our residents can walk through and go to the park. Also, I just want to mention, George just reminded me, the detention pond that we do, we have it with water in it so it doesn't get overgrown with weeds and its an enhancement, we always put a fountain in it and it sprays nicely, so for people that are looking back at us from the park, you're gonna see a nice pond and from the residents, especially the ones backing up to the pond, even the residents that live on Lyons will see it, its gonna be a nice feature. We always make sure we do, we take a lot of pride in our developments.

Toy: Thank you, thank you Madam Chair.

McIntyre: I'm going to go to Vice President Bahr.

Bahr: Just wanted to point out in light of the discussion that while it is R-1 here to the north, we have R-U-F and R-2 and I think whatever direction this goes, there is justification to both of them, thanks.

McIntyre: Thank you, Councilmember McCullough.

McCullough: Thank you, Madam President, I just want to clarify, I looked at the detention basin and I know the fountain is great for keeping circulation of the water in there. The easement that you show on here, me personally, I think it could be a lot better. You tie in two parks, not to discount this, I've seen the easement, I appreciate that its there, I just think that when you tie in two greenspace, especially two city parks, I think there's opportunity to be a little bit better than what's shown in this. That's just my two cents on that, thank you.

McIntyre: Thank you, Councilmember McCullough. Councilmember White?

White: Quick question for Mr. Taormina. Councilman Jolly did ask if any analysis was done as to how many homes would be, with this site support if it was R-2. Has there been any analysis of that?

Taormina: No we have not done an alternate plan. I could speculate as to what the impact would be under this same design if you were to increase each of the lots by roughly ten feet in width, you would lose a few lots. What that number impacts in terms of feasibility of the project, I don't know. There would be an impact, probably at least three, maybe four lots at the most.

White: Ok, thank you.

McIntyre: Alright, thank you, Councilmember White. I will go back to the attendees, again, my apologies for the difficulties tonight getting everything up on my screen. We'll go back to Mr. Kelly. Mr. Kelly?

Kelly: Hi guys. I guess that I'm not watching the Vice President's debates, I think they started. That tells you about my concern. I want to say Councilman Jolly and McCullough, I'm glad you are raising the questions that I raised. Mr. Bahr, I'd like to know where the Clay school was, was it designated R-1 and I'd like to go by and see where it is, do you know where that is?

Bahr: Madam President, do you mind if I answer that?

McIntyre: No, please, go ahead, Vice President Bahr.

Bahr: So, it's a neighborhood just South of Six Mile and on the East side of Newburgh, so Six and Newburgh on the Southeast corner, facing Newburgh, basically. Just at a high-level, it's a mixture if R-1 and R-2, it was proposed as R-1, similar to this. Without going into detail of many, many meetings and many, many hours that ended up being a mixture of R-1 and R-2, but by all means, go check it out.

Kelly: I will. So, South of Six Mile?

Bahr: South of Six, East of Newburgh, entrance is off of Newburgh.

Kelly: I was part of the Planning Commission and I don't know if Mr. Michaelson is still here, but at that hearing, he said you could drive a pickup through the drain that runs along Lyndon and then I thought he said today, all of the underground infrastructure was going to be replaced. I don't believe that, but does he still say you can drive a pickup through the sewer drain on Lyndon?

McIntyre: You've made your comments, Mr. Kelly, I think we're getting into some level of detail here and some he-said, he-said. If Mr. Michaelson would like to address it, I will certainly allow him to, but I think we're getting a little bit off the track here of the rezoning of the Adams school site. I do so appreciate all of your comments.

Kelly: Alright, well I'm done, but that is what he said, and I hope you guys all take that into consideration. Thank you all for your consideration.

McIntyre: We do have complete minutes from the Planning Commission and your comments relative to Mr. Michaelson's statements have been noted, so thank you.

McCabe: Yeah, thank you, sorry, for a second opportunity here to speak and I thank you. Again, Jim McCabe, 14236 Lyons Street, the street directly East of the proposed new development. I guess, I'm not a Civil Engineer, and with all due respect to Mr. Michaelson's thirty-seven years of success, and I'll keep this in the macro, I promise. I know he's probably been in front of many City Councils and heard every objection from every resident like me, so I know he knows how to tell us what we want to hear, it just doesn't, again, not getting into the details of matters, and water is only one of ten problems with this that we, the residents see and feel. I just don't see it, but my objection, I guess I discount most of what Mr. Michaelson said and I know he's a successful man, I am not a Civil Engineer, again, I have to get that out there. My hats off to Loraine and Mr. Kelly, they've done a great job and I agree with them 100%. Mr. Jolly, I appreciate your very astute and candid thought process here, its helpful, it makes me feel better. I guess I'll cut it short, thank you guys for hearing me tonight.

McIntyre: Thank you again, Mr. McCabe. Again, I just want to stress to your comments and your engagement are very much appreciated. Alright, with that, we will go on to a member of the audience who appears as D0103100 and I will ask for your name and address please.

Ellison: Hello and thank you, yes, my name is Belinda Ellison. My address 28154 Lyndon, I'm the property directly across from Adams and directly next door to the new condo units, thank you for affording me the time to express my concerns, I appreciate that. I concur with the other guests that you've had from the audience in our neighborhood. I've had great concern as this development, particularly with the traffic. If you are proposing, I believe it was thirty-nine homes, the average homeowner has two vehicles per home, so you do the math, that's approximately eighty cars, maybe more. That's going to be considerable traffic on Lydon. That is something to consider. Then also, Mr. Kelly was expressing his concerns along the property line on Lyons there, that butts up to the easement. I walk over there all the time and whenever there is rain, it is flooded a lot. There is a pond every time it rains, so there's no exaggeration there. Then also, when the Engineer was saying that with the new development, there will be sump pumps in all of the basements. Ok, you're proposing putting new homes in a very established neighborhoods and I'm willing to bet that most of the homes in this neighborhood do not have sump pumps, so I'm a little concerned as to what happens with the homes that do have sump pumps, Where is all this going? Is it going into the new drainage that was being proposed that will hopefully do the job? Just expressing concerns that I have. I appreciate the Councilmembers that spoke on our behalf expressing their concerns as well, they do see that there is merit in what we have to say. So, I appreciate that, thank you so much.

McIntyre: Ms. Ellison? Thank you and I want to say there is merit in what every citizen has to say. I don't know if you were on earlier, but we would love it if everyone who called us all the time thought we were doing a great job and agreed with whatever is before us, but this is how progress is made and this is how you reach, and you never, and I will say this, there has never been a development that I have been part of, and I've been on the Zoning Board, the Planning Commission and Council, where everyone was happy. I've never seen us get there, where every resident was 100% happy, where the developers were 100% happy, but I do think, I every case that I can think of and there have been a lot, that we do go through a process of negotiation and give and take and listening to the developers who are, at the end of the day, invested in our community and be listening to the residents who are the residents of our community. So, your comments are really appreciated, so thank you.

Ellison: I appreciate that, thank you as well.

McIntyre: Alright, it looks like Mr. Kishore is back with us, Mr. Kishore?

Kishore: Thank you, I heard all the comments, especially from Mr. Jolly, I really appreciate you giving your thoughts on there, as well as my fellow residents and looking at the six homes that I'm speaking for twelve people in this community here as the new condos. We are R-2 and we would at least, and somebody mentioned this earlier, even though there were prior R-1's, since there is an R-2, the direction is more towards R-2, so we should really look at why this cannot be an R-2, but before the zoning happens or any of the construction starts, please make sure the Council looks at what's going on with Lyndon. That's a very important factor. Lyndon is a mess right now, I have cars flying down at 50-60mph at nighttime now that Harrison has been paved. There is drag racing going on with no police out there in the middle of the night. What's going to happen with Lyndon with the extra cars coming in, the street being flooded already, those things need to be resolved, not when the construction is done, but before the project even starts. There needs to be a band-aid and I'm glad that Miss Toy has agreed to come and see it because I want to take her to the problems that we are facing on our new condos today.

McIntyre: Thank you I would encourage you, Mr. Kishore, if there are traffic problems, I would encourage you to call the police department, maybe you already have.

Kishore: I haven't done that, but its pretty clear that there is drag racing going on, on the newly paved Harrison.

McIntyre: Ok, thank you for mentioning that and we have a very attentive and responsive police department, and would be happy to follow up on that.

Again, the best thing is to do, anytime you are aware of that, is to pick up the phone and call the police and its not a bother to do so, it helps to establish a record of problem areas.

Kishore: Thank you very much.

McIntyre: Thank you. I'll get back to Councilmember Jolly.

Jolly: Thank you Madam President, I'll keep this very short. It just dawned on me, normally when we look at these new proposals, the school property itself that's being considered is surrounded on three sides typically. That's not the case in this circumstance, so I'm wondering, is there a mock up of the site plan that could be presented to us at a later date that would allow for a secondary entrance into the neighborhood as well? I think sometimes that is something that strikes the neighborhood as something different, because if these neighborhoods were built in the same way they were typically, you wouldn't just have just one entrance into a neighborhood of thirty-nine houses, or a section of a neighborhood of thirty-nine houses, there would be a secondary egress into the neighborhood as well. That is possible in this circumstance with the West side there on Harrison. So, I would maybe like to see if we could have an access there on Harrison as well. Is that something that you can mock-up for us or kind of put together a little bit here? To be quite honest with you, we're looking at it as we're looking at this, we're looking at it as thirty-nine houses here, I want to go the route that we did when we were talking about the Six Mile and Newburgh site here. I'd like to see some R-2, I'd like to see some R-1 as a mixture in here and make a neighborhood that actually makes sense. More house is not necessarily better for the city. If we're talking about losing 3-5 houses with having some R-2 in there, I want to see it. Thirty-nine houses, I'm not just going to take thirty-nine as being the most economical option for the developer. Thank you.

McIntyre: Thank you. Would the petitioner like to respond, I see that Mr. Kelly has his hand up again, yes, Mr. Kelly.

Kelly: I just want to say, thank you, Councilman Jolly.

McIntyre: Alright, Mr. Michaelson, I don't know if you wish to respond to any of Mr. Jolly or to any of the comments that were made.

Michaelson: Yeah, I'd be glad to take another look at the site plan.

McIntyre: Thank you. Alright, anything else? I do not see anyone else from Council or the City's side or anyone else from the audience who wish to address the council so I will call this public hearing to a close and I will remind everyone that this item will be on the agenda of the November 4th meeting.

Bernier: A resolution?

Jolly: Madam President? I'll offer an approving for R-1 and also an approving resolution for R-2.

McIntyre: Thank you. Thank you, Mr. Jolly, thank you Mr. Bernier. This is the first time I've done this, thanks everybody, good night.

As there were no further questions or comments, the Public Hearing was declared closed at 8:39 p.m.

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President

Scott Bahr
Vice President

Rob Gjonaj Donovic
Jim Jolly
Brandon McCullough
Laura M. Toy
Cathy K. White

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(734) 466-2251
FAX: (734) 421-4388

September 3, 2020

To be announced at the City Council Regular Meeting of Wednesday, September 21, 2020

A Public Hearing for the following item will be held
Wednesday, October 7, 2020
7:00 P.M.
* Due to COVID-19, Public Hearings will not be held in the City Hall Auditorium
Connect on Zoom: https://us02web.zoom.us/j/87333432528
or phone at (312) 626-6799, ID: 873 3343 2528
To participate, use the 'Raise Hand' button on Zoom or press *9 on your phone to be called on

Petition 2020-07-01-04 submitted by Adams Park Development, L.L.C. pursuant to Section 23.01 of the City of Livonia Zoning Ordinance #543, as amended, requesting to rezone the properties at 14416 Harrison Avenue and 28201 Lyndon Avenue (former Adams Elementary School site) located on the south side of Lyndon Avenue between Inkster and Middlebelt Roads in the Southeast ¼ of Section 24 from PL (Public Lands) to R-1 (One Family Residential).

cc: Mayor, City Clerk (suggested publication 9/20/20), City Treasurer, City Attorney, Director of Planning & Economic Dev., City Assessor, City Engineer, Director of Public Works, Director of Finance and Director of Inspection

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September 2, 2020

Honorable Members of the City Council
City of Livonia, Michigan

Re: Petition 2020-07-01-04 – Adams Park Development

Dear Council Members:

At the 1,159th Public Hearings and Regular Meeting held by the City Planning Commission on September 1, 2020, in the Livonia City Hall, the following resolution was unanimously adopted:

#09-42-2020 **RESOLVED**, that pursuant to a Public Hearing having been held by the City Planning Commission on September 1, 2020, on Petition 2020-07-01-04 submitted by Adams Park Development, L.L.C. pursuant to Section 23.01 of the City of Livonia Zoning Ordinance #543, as amended, requesting to rezone the properties at 14416 Harrison Avenue and 28201 Lyndon Avenue (former Adams Elementary School site) located on the south side of Lyndon Avenue between Inkster and Middlebelt Roads in the Southeast ¼ of Section 24 from PL (Public Lands) to R-1 (One Family Residential) the Planning Commission does hereby recommend to the City Council that Petition 2020-07-01-04 be approved for the following reasons:

1. That the proposed change of zoning is compatible to and in harmony with the surrounding residential uses and zoning districts in the area.

2. That the proposed change of zoning will provide for a single-family residential development similar in density to what exists in the neighboring area.

3. That the proposed change of zoning is consistent with the existing character of the area.

4. That the proposed zoning change does not obstruct the goals, policies, and objectives of the Future Land Use Plan, and

5. That the proposed change of zoning of the subject property represents a reasonable and logical zoning transformation which adheres to the principles of sound land use planning.

FURTHER RESOLVED, that notice of the above hearing was given in accordance with the provisions of Section 23.05 of Zoning Ordinance #543, as amended.

Very truly yours,

APPROVED FOR SUBMISSION

Maureen Miller Brosnan, Mayor

CITY PLANNING COMMISSION

Sam Caramagno, Secretary

cc: Mayor, Clerk, Law
Stuart Michaelson, Adams Park Development, 31333 W 13 Mile Road, Ste 200, Farmington Hills, MI 48334

REZONING APPLICATION
CITY OF LIVONIA, MICHIGAN

All applications must be presented in quadruplicate to the City Clerk, 33000 Civic Center Drive, Livonia, MI 48154-3097. Applications **must** include property owner's name, address and notarized signature.

[illegible] to review your proposal with the Planning Department staff.

Date Filed: _____ Petition 2020-07-01-04

Site Address: 28201 LYNDON & 14416 HARRISON Sidwell 46-096-99-0004-000 & 46-095-99-0011-000

Requesting To Rezone Property From PL To R-1

For the Following Reason (s) DEVELOPMENT OF A SINGLE FAMILY RESIDENTIAL NEIGHBORHOOD

Applicant: STUART MICHAELSON Business/Company: ADAMS PARK DEVELOPMENT, LLC

Applicant's Address: 31333 W. 13 MILE RD, SUITE 200 City: FARMINGTON HILLS State: MI Zip Code: 48334

Applicant's Phone # (248) 538-7000 Applicant's Email stuart@windmillhomes.com
ssherr@sherrdev.com
evanpriest@mlpassoc.com

[illegible] following information:

1) **Legal Description** of the property to be considered. Paper copy must be clearly printed.

2) **Fully Dimensional Map (13 copies)** drawn at an appropriate scale, with a north arrow, dated & legend key to symbols and showing:
   - The land that would be affected by the proposed amendment.
   - The dimensions, square footage & acreage of the land.
   - The existing conditions of the site, including all structures & parking layout.
   - A legal description of the land to be rezoned.
   - All public and private right-of-ways & easements bounding & intersecting the site.
   - A preliminary plan showing the proposed land use(s) of the land under consideration.
   - The zoning classification of all abutting zoning districts.
   - The structures and existing land uses on all property adjacent to the subject parcel and on other such property as may, in the City Planner's determination, be necessary to properly reflect the existing character of the surrounding neighborhood.

3) A copy of the Fully Dimensional Map submitted in a pdf. format either on a CD or it can be emailed to Planning@ci.livonia.mi.us

RECEIVED
OFFICE OF THE CITY CLERK
2020 JUL 31 PM 2:15

Owner of Property: LIVONIA PUBLIC SCHOOLS

Owner's Address: 28201 LYNDON City: LIVONIA State: MI Zip Code: 48154

Owner's Phone # (734) 744 2554 Owner's Email pfrancis@livoniapublicschools.org

Signature of Owner: _____ Print Name: PHILIP FRANCIS

Subscribed and sworn to before me, a Notary Public in and for the County of Wayne State of MI

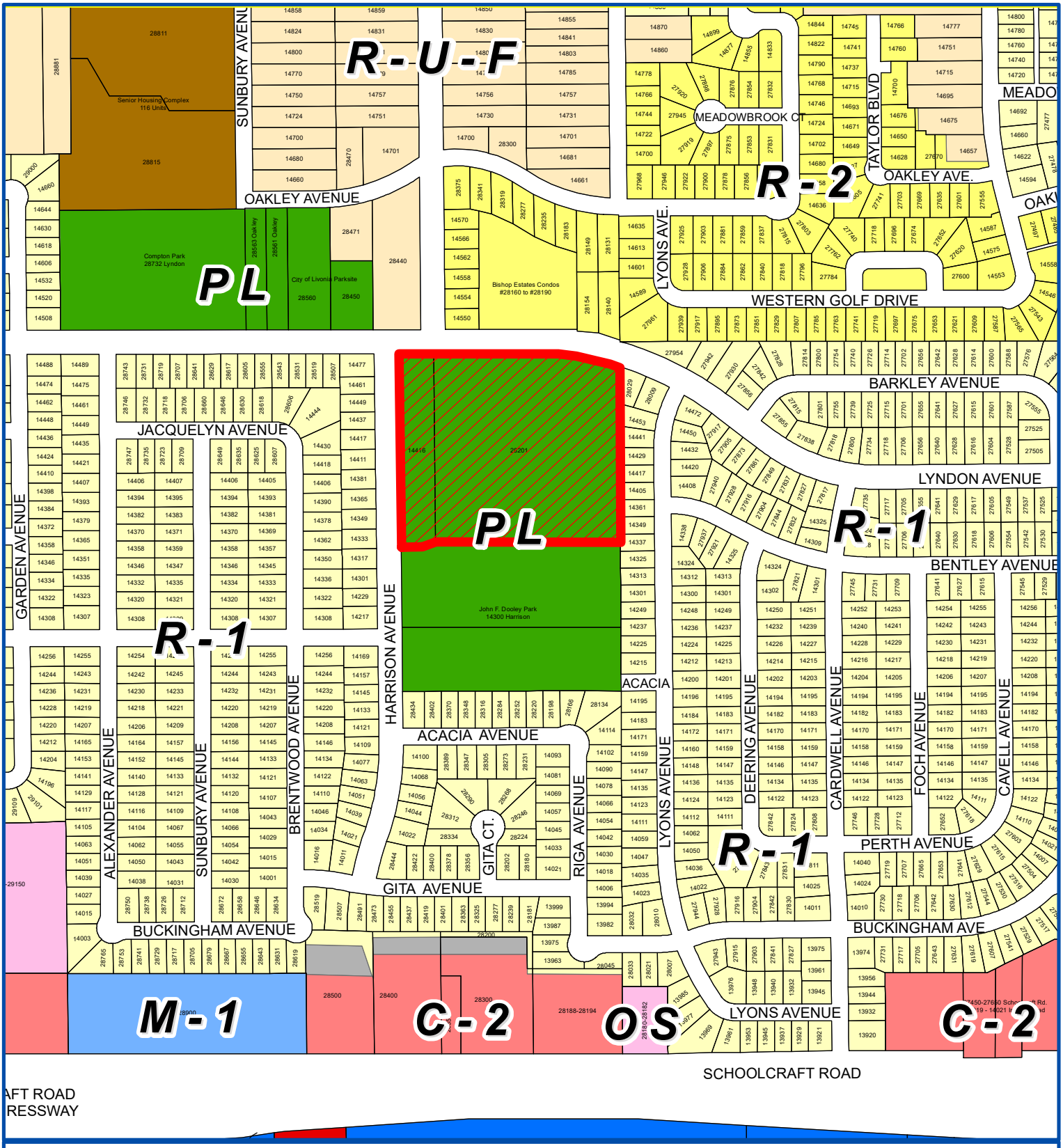
on this 31 day of July 20 20.

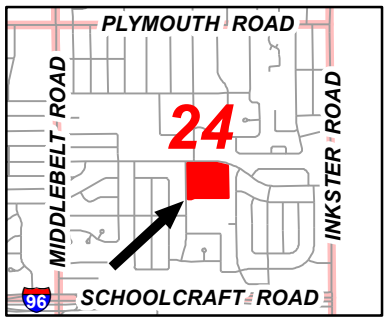
Signature of Notary _____ My commission expires 8/10/25.

N. LANTTO
NOTARY PUBLIC, STATE OF MI
COUNTY OF WAYNE
MY COMMISSION EXPIRES Aug 10, 2025
ACTING IN COUNTY OF Wayne

RECEIVED
AUG 05 2020
CITY OF LIVONIA
PLANNING COMMISSION

APPROVED AS FORM
Department of Law
By: Michael E. Cox
Date: 8/4/2020





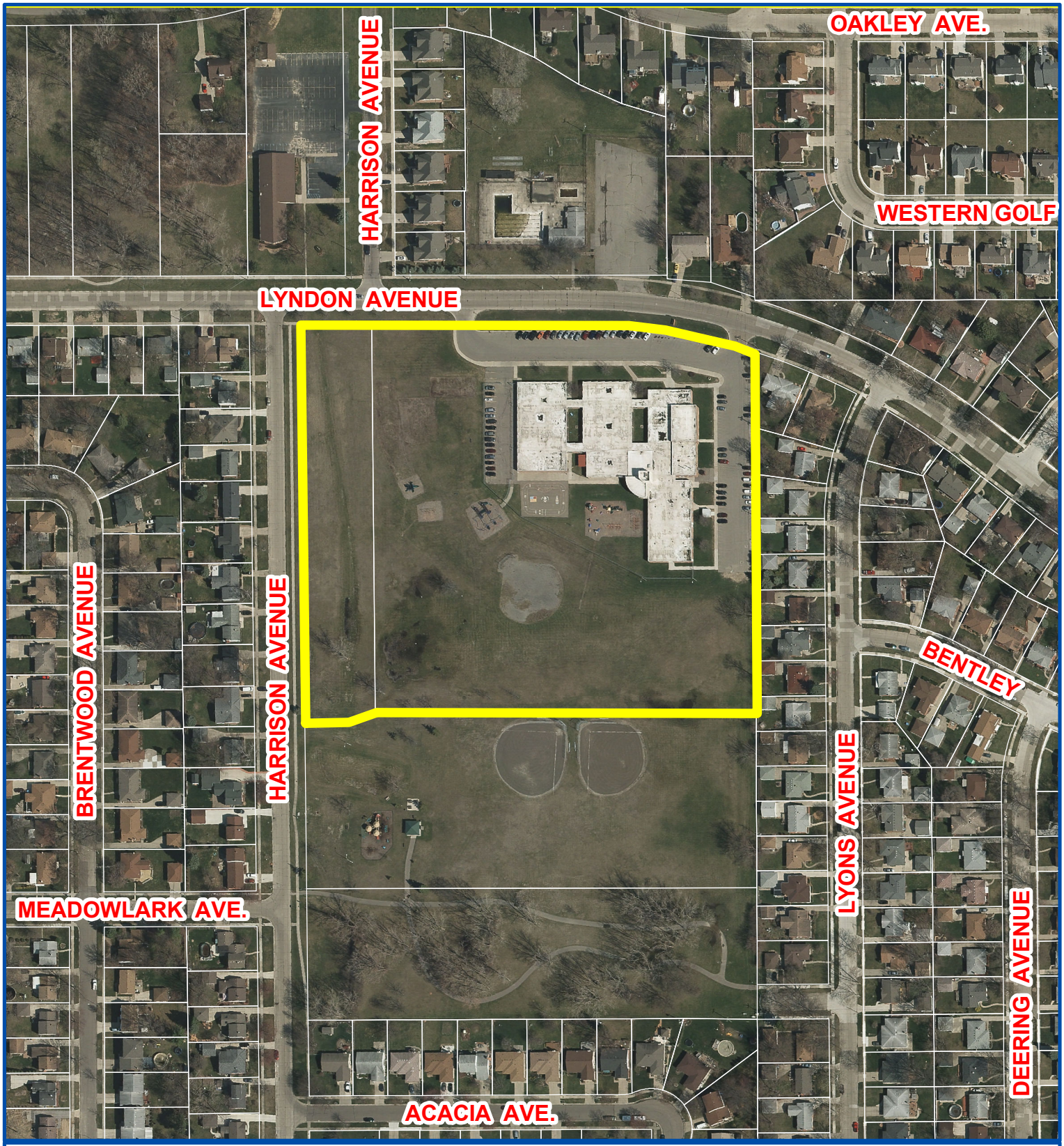
Address & Zoning Map

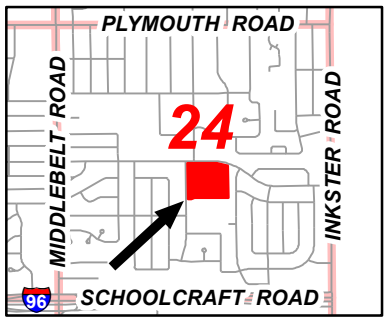
Petition 2020-07-01-04
Adams Park Development, L.L.C.
14416 Harrison Avenue & 28201 Lyndon Avenue
PL to R-1

N

Not to Scale

City of Livonia
Planning Department





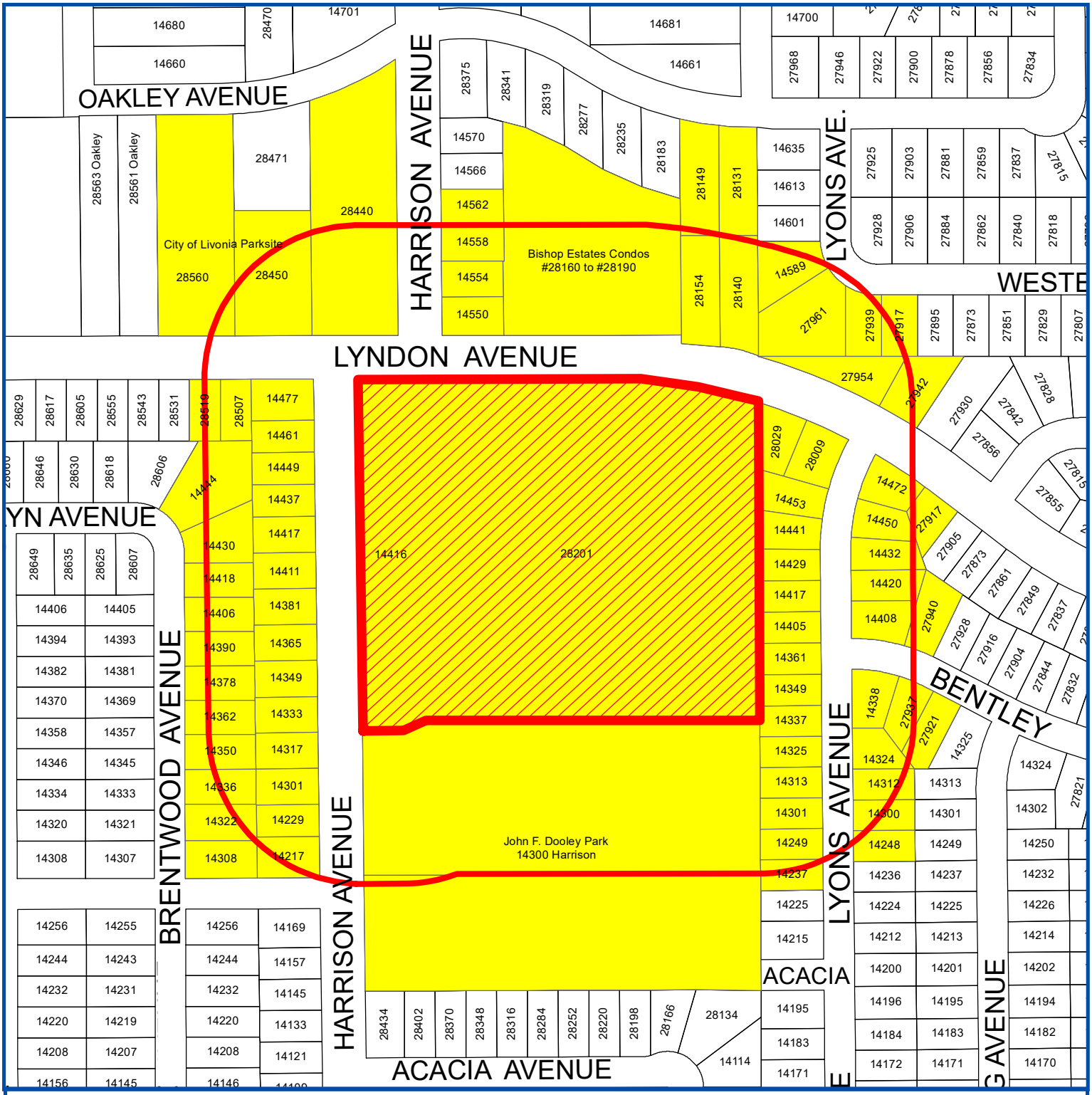
Aerial Map

Petition 2020-07-01-04
Adams Park Development, L.L.C.
14416 Harrison Avenue & 28201 Lyndon Avenue
PL to R-1

N

Not to Scale

City of Livonia
Planning Department



Notification Map

Petition 2020-07-01-04
Adams Park Development, L.L.C.
14416 Harrison Avenue & 28201 Lyndon Avenue
PL to R-1

Site Under Petition
300 Feet Radius
Properties within 300 feet

N
Not to Scale

City of Livonia
Planning Department

Date of Public Hearing: September 1, 2020

NOTICE OF PUBLIC HEARING

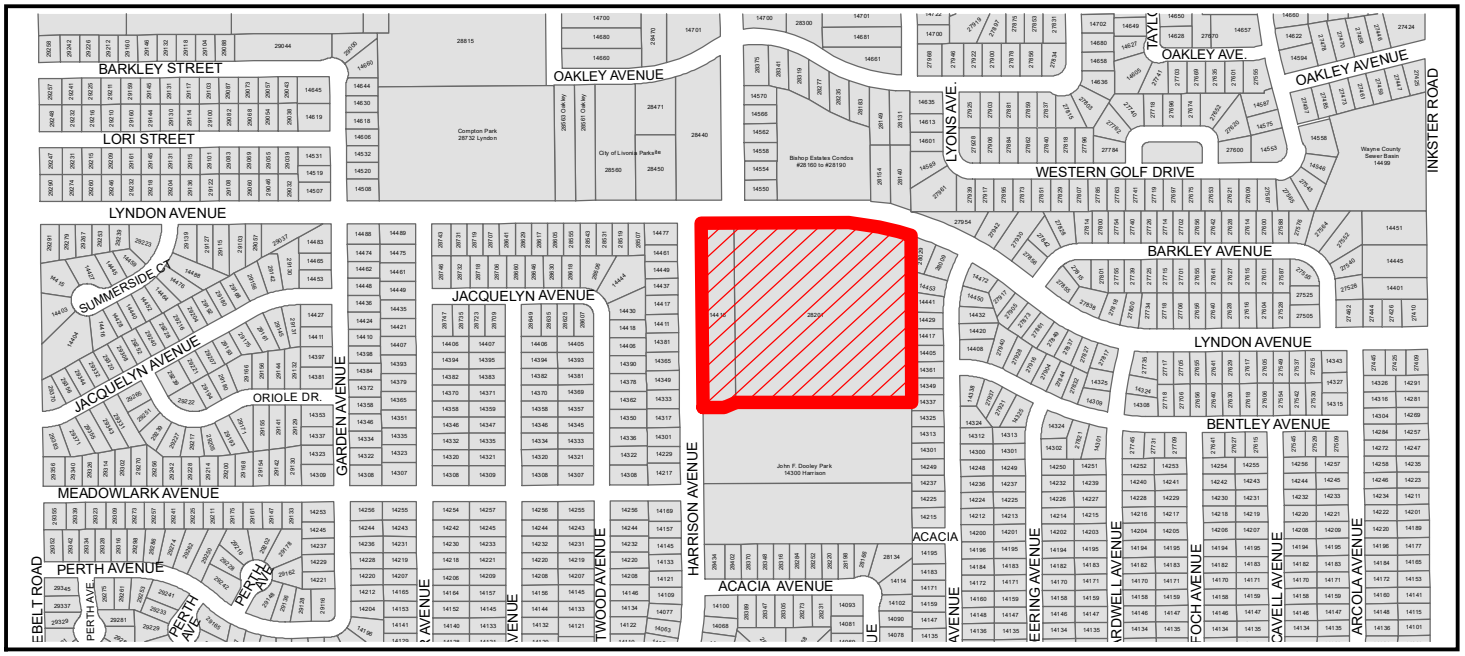
CITY OF LIVONIA PLANNING COMMISSION

A PUBLIC HEARING WILL TAKE PLACE BEFORE
THE CITY PLANNING COMMISSION OF THE CITY OF LIVONIA
ON TUESDAY SEPTEMBER 1, 2020, AT 7:00 P.M., OR AS SOON THEREAFTER
AS THE AGENDA WILL PERMIT ON THE FOLLOWING ITEM.

Due to COVID-19, the Planning Commission meeting will not be held in the City Hall Auditorium
Live broadcast: AT&T Uverse Channel 99 / Spectrum Channel 203/
WOW Channel 10 / YouTube.com/LivoniaTV

Connect online: https://us02web.zoom.us/j/182188326
Phone participation: (312) 626-6799
Meeting ID: 182 188 326

Petition 2020-07-01-04 submitted by Adams Park Development, L.L.C. pursuant to Section 23.01 of the City of Livonia Zoning Ordinance #543, as amended, requesting to rezone the properties at 14416 Harrison Avenue and 28201 Lyndon Avenue (former Adams Elementary School site) located on the south side of Lyndon Avenue between Inkster and Middlebelt Roads in the Southeast ¼ of Section 24 from PL (Public Lands) to R-1 (One Family Residential).



YOU ARE ENCOURAGED TO ATTEND THE PUBLIC HEARING AND PRESENT YOUR VIEWS ON THIS MATTER TO THE CITY PLANNING COMMISSION. IN LIEU OF ATTENDING THE MEETING, YOU MAY PRESENT YOUR VIEWS IN WRITING ADDRESSED TO: CITY OF LIVONIA PLANNING COMMISSION, 33000 CIVIC CENTER DR., LIVONIA, MI 48154, OR BY EMAIL TO: PLANNING@CI.LIVONIA.MI.US

In accordance with Title II of the American with Disabilities Act as it pertains to access to Public Meetings, the Planning Department of the City of Livonia, upon adequate notice, will make reasonable accommodations for persons with special needs. Please call 734-466-2290 if you need assistance.

PLANNING COMMISSION STAFF NOTES

PUBLIC HEARING

ITEM 1

Petition 2020-07-01-04 submitted by Adams Park Development, L.L.C. pursuant to Section 23.01 of the City of Livonia Zoning Ordinance #543, as amended, requesting to rezone the properties at 14416 Harrison Avenue and 28201 Lyndon Avenue (former Adams Elementary School site) located on the south side of Lyndon Avenue between Inkster and Middlebelt Roads in the Southeast ¼ of Section 24 from PL (Public Lands) to R-1 (One Family Residential).

August 25, 2020 Study Meeting:

This petition seeks to rezone the former Adams Elementary School site from PL (Public Lands) to R-1 (One Family Residential). The subject site is made up of two (2) parcels: 14416 Harrison Avenue and 28201 Lyndon Avenue. Combined, the parcels measure 12.74 acres in total area and the site has frontage on Lyndon Avenue to the north and Harrison Avenue to the west. Existing developed single-family lots, which are part of the Buckingham Village Subdivision, border the property to the east. Abutting the subject site to the south is a City park known as Dooley Park. The proposed rezoning and subsequent residential development would involve both properties, which are currently owned by Livonia Public Schools (LPS) and in the process of being sold to the Petitioner.

The subject site is surrounded by residential subdivisions. To the east, south and west, the subdivisions are zoned R-1 and consist of single-family lots that measure a minimum of 60 feet in width by 120 feet in depth. To the north, across Lyndon Avenue, is the Western Golf Estates Subdivision, which is zoned R-2 and developed with lots that measure a minimum of 70 feet in width by 120 feet in depth.

Submitted with the application to rezone the property is a conceptual site plan showing a total of thirty-nine (39) conventional-sized R-1 lots. Most of the homesites would front on a new internal street system that includes a “U”-shaped pattern and a short cul-de-sac. Access to the new streets would come from Lyndon Avenue. The looped roads would extend approximately 300 feet in a north/south direction, turn towards each other, and continue in an east/west direction until they connect. The cul-de-sac would extend south from the road along the west side of the development. Access to Lots 11 through 39 would be from this new interior road system. Lots 1 through 10 would have direct access from Harrison Avenue. Other features of the plan include a stormwater detention basin in the southeast corner of the site and an open space park located in the southwest corner.

The Future Land Use Map shows the site as Parks and Community, reflecting the current ownership and former use of the property as a school site.

September 1, 2020 Public Hearing:

Approving Resolution: That the request to rezone the properties at 14416 Harrison Avenue and 28201 Lyndon Avenue (former Adams Elementary School site) from PL to R-1 is hereby approved, subject to City Council approval, for the following reasons:

1. That the proposed change of zoning is compatible to and in harmony with the surrounding residential uses and zoning districts in the area.

2. That the proposed change of zoning will provide for a single-family residential development similar in density to what exists in the neighboring area.

3. That the proposed change of zoning is consistent with the existing character of the area.

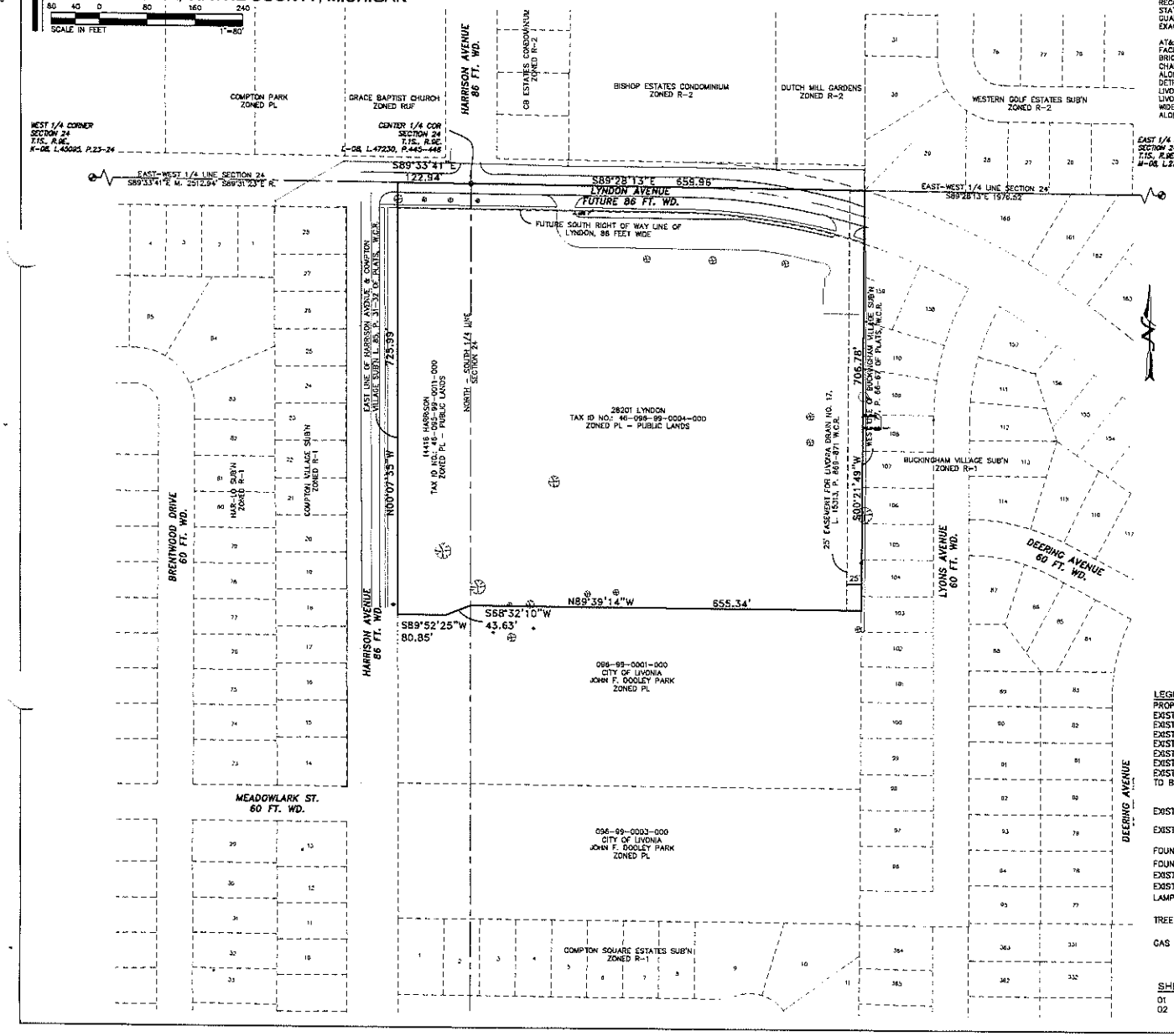
4. That the proposed zoning change does not obstruct the goals, policies, and objectives of the Future Land Use Plan, and

5. That the proposed change of zoning of the subject property represents a reasonable and logical zoning transformation which adheres to the principles of sound land use planning.

ADAMS PARK

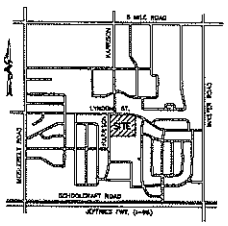
PART OF THE SOUTH 1/2 OF SECTION 24
TOWN 1 SOUTH, RANGE 9 EAST
CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN

SCALE IN FEET 80 40 0 80 160 240 1"=80'



NOTE REGARDING EXISTING UTILITIES:
THE FOLLOWING UTILITY COMPANIES WERE CONTACTED VIA THE MISS DIG DESIGN TICKET SYSTEM TO REQUEST RECORD MAPS OF THEIR UTILITIES IN THE AREA. THE STATUS OF THEIR RESPONSES ARE NOTED. NO GUARANTEE CAN BE MADE TO THE COMPLETENESS OF EXACTNESS OF THEIR LOCATION.

AT&T FACILITIES ONSITE	RECEIVED, NO
BRIGHT HOUSE NETWORKS	PENDING
CHARTER COMMUNICATIONS ALONG EAST PL	RECEIVED, AERIAL
DETROIT EDISON	PENDING
LIVONIA CITY	RECEIVED, SEE PLAN
LIVONIA PUBLIC SCHOOLS WIDE OPEN WEST ALONG EAST PL	PENDING RECEIVED, AERIAL



VICINITY MAP

LEGAL DESCRIPTION:

PARCEL 1 PER WARRANTY DEED L. 13296, P. 178 W.C.R.:
A PARCEL OF LAND OF PART OF THE SOUTH ½ OF SECTION 24, TOWN 1 SOUTH, RANGE 9 EAST, CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE CENTER OF SAID SECTION 24, THENCE S89°56'E, A DISTANCE OF 660.26 FEET ALONG THE EAST AND WEST ¼ LINE, THENCE S00°08'10"E, ALONG THE WEST LINE OF BUCKINGHAM GARDENS SUB, A DISTANCE OF 706.97 FEET TO A POINT; THENCE S89°51'46"W, A DISTANCE OF 656.48 FEET TO A POINT; THENCE N00°25'30"W 708.91 FEET, TO THE POINT OF BEGINNING.
TAX ID: 46-099-99-0011-000

PARCEL 2 PER WARRANTY DEED L. 17072 P. 152 W.C.R.:
A PARCEL OF LAND OF PART OF THE SOUTH ½ OF SECTION 24, TOWN 1 SOUTH, RANGE 9 EAST, CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN, BEING DESCRIBED AS FOLLOWS:
BEGINNING AT THE CENTER ¼ CORNER OF SECTION 24, TOWN 1 SOUTH, RANGE 9 EAST, AND PROCEEDING THENCE ALONG THE NORTH AND SOUTH ¼ LINE OF SAID SECTION 24, S00°00'35"E 708.91 FEET, THENCE S68°34'03"W 43.63 FEET; THENCE S89°52'05"W 80.85 FEET, THENCE ALONG THE EAST LINE OF HARRISON AVENUE, 86 FEET WIDE, COINCIDENT WITH THE EAST LINE OF COMPTON VILLAGE SUBDIVISION, AS RECORDED IN LIBER 85 OF PLATS, PAGE 31, WAYNE COUNTY RECORDS, N00°07'35"W 726.05 FEET, THENCE ALONG THE EAST AND WEST ¼ LINE OF SAID SECTION 24, S89°31'28"E 122.94 FEET TO THE POINT OF BEGINNING.
TAX ID: 46-099-99-0004-000

AS SURVEYED DESCRIPTION:
PART OF THE SOUTH 1/2 OF SECTION 24, TOWN 1 SOUTH, RANGE 9 EAST, CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN, DESCRIBED AS FOLLOWS;

COMMENCING AT THE CENTER 1/4 CORNER OF SAID SECTION 24 AS RECORDED IN L.C.R.C. L. 47230, P. 445-446 W.C.R.; THENCE ALONG THE EAST-WEST 1/4 LINE OF SECTION 24, S89°28'13"E 659.96 FEET TO THE WEST LINE OF BUCKINGHAM VILLAGE SUBDIVISION AS RECORDED IN L. 77, P. 66-67 OF PLATS, W.C.R.; THENCE ALONG SAID LINE S00°21'49"W 706.78 FEET; THENCE N89°39'14"W 655.34 FEET; THENCE S68°32'10"W 43.63 FEET; THENCE S89°52'25"W 80.85 FEET TO THE EAST LINE OF HARRISON AVENUE, 86 FEET WIDE, ALSO THE EAST LINE OF COMPTON VILLAGE SUB'N AS RECORDED IN L. 85, P. 31-32 OF PLATS, W.C.R.; THENCE ALONG SAID LINE N00°07'35"W 725.99 FEET TO THE EAST-WEST 1/4 LINE OF SECTION 24; THENCE ALONG SAID LINE S89°33'41"E 122.94 FEET TO THE POINT OF BEGINNING. CONTAINING 12.7141 ACRES.

LEGEND:

- PROPERTY BOUNDARY
- EXISTING SANITARY SEWER
- EXISTING WATER MAIN
- EXISTING STORM SEWER
- EXISTING OVERHEAD WIRES
- EXISTING U.G. ELECTRIC (UGE)
- EXISTING GAS (GAS)
- EXISTING FENCE TO BE REMOVED
- EXISTING CONCRETE
- EXISTING GRAVEL
- FOUND CAPPED IRON ROD (F.C.I.R.)
- FOUND IRON PIPE (F.I.P.)
- EXISTING GUY POLE
- EXISTING UTILITY POLE
- LAMP POST
- TREE
- GAS SHUT-OFF

BENCHMARKS

B.M. #1: NORTH EAST BOLT ON POLE BASE WEST SIDE OF HARRISON, NORTH PL OF #14365:
NAVD88 632.37

B.M. #2: HYDRANT ARROW, SOUTH SIDE OF LYNDON, ACROSS STREET FROM #28190:
NAVD88 633.68

SHEET INDEX:

01 EXISTING CONDITIONS
02 PRELIMINARY PLAN

STATE OF MICHIGAN EVAN M. PRIEST ENGINEER NO. 48330 Professional Engineer

EXISTING CONDITIONS

ADAMS PARK
REZONING MAP
PART OF THE SOUTH 1/2 OF SECTION 24, T.1S., R.9E.
CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN

SHEET 01

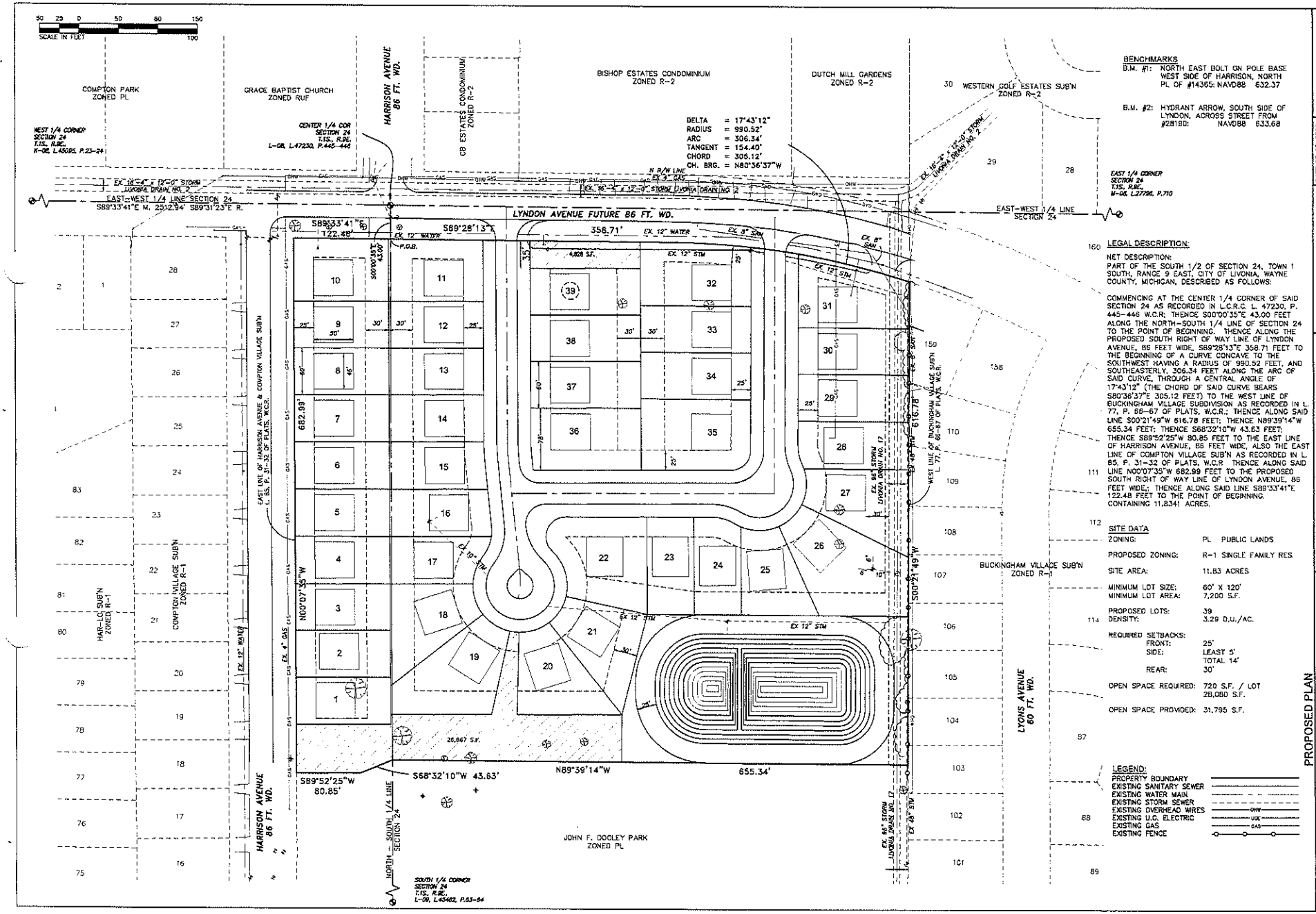
PROPRIETOR
ADAMS PARK DEVELOPMENT, LLC
31333 W. 13 MILE ROAD, SUITE 200
FARMINGTON HILLS, MI 48331
(248) 538-7300
ATTN: STUART MCFARLEN

DATE: 07-15-2020
REVISIONS:
DRW: DJP
CHK: MJP
APP: MJP
DSGN: ASB
DRAWING NO.: 20008
SCALE: 1"= 80'

STATUS: REVISION
LOG NO. 2020.14

ENGINEERS - SURVEYORS
MLP
AND ASSOCIATES, INC.

Michael L. Priest & Associates, Inc.
40855 Koppernick Road, Canton, MI 48187
phone: (734) 459-8560
fax: (734) 459-2593



LEGAL DESCRIPTION:

NET DESCRIPTION:
PART OF THE SOUTH 1/2 OF SECTION 24, TOWN 1 SOUTH, RANGE 9 EAST, CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE CENTER 1/4 CORNER OF SAID SECTION 24 AS RECORDED IN L.C.R.C. L. 47230, P. 445-446 W.C.R; THENCE S00°00'35"E 43.00 FEET ALONG THE NORTH-SOUTH 1/4 LINE OF SECTION 24 TO THE POINT OF BEGINNING. THENCE ALONG THE PROPOSED SOUTH RIGHT OF WAY LINE OF LYNDON AVENUE, 86 FEET WIDE, S89°28'13"E 358.71 FEET TO THE BEGINNING OF A CURVE CONCAVE TO THE SOUTHWEST HAVING A RADIUS OF 990.52 FEET, AND SOUTHEASTERLY, 306.34 FEET ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 17°43'12" (THE CHORD OF SAID CURVE BEARS S80°36'37"E 305.12 FEET) TO THE WEST LINE OF BUCKINGHAM VILLAGE SUBDIVISION AS RECORDED IN L. 77, P. 66-67 OF PLATS, W.C.R.; THENCE ALONG SAID LINE S00°21'49"W 616.78 FEET; THENCE N89°39'14"W 655.34 FEET; THENCE S68°32'10"W 43.63 FEET; THENCE S89°52'25"W 80.85 FEET TO THE EAST LINE OF HARRISON AVENUE, 86 FEET WIDE, ALSO THE EAST LINE OF COMPTON VILLAGE SUB'N AS RECORDED IN L. 65, P. 31-32 OF PLATS, W.C.R. THENCE ALONG SAID LINE N00°07'35"W 682.99 FEET TO THE PROPOSED SOUTH RIGHT OF WAY LINE OF LYNDON AVENUE, 86 FEET WIDE,; THENCE ALONG SAID LINE S89°33'41"E 122.48 FEET TO THE POINT OF BEGINNING.
CONTAINING 11.8341 ACRES.

SITE DATA

ZONING:	PL PUBLIC LANDS
PROPOSED ZONING:	R-1 SINGLE FAMILY RES.
SITE AREA:	11.83 ACRES
MINIMUM LOT SIZE:	60' X 120'
MINIMUM LOT AREA:	7,200 S.F.
PROPOSED LOTS:	39
DENSITY:	3.29 D.U./AC.
REQUIRED SETBACKS:	
FRONT:	25'
SIDE:	LEAST 5' TOTAL 14'
REAR:	30'
OPEN SPACE REQUIRED:	720 S.F. / LOT 28,080 S.F.
OPEN SPACE PROVIDED:	31,795 S.F.

LEGEND:
PROPERTY BOUNDARY
EXISTING SANITARY SEWER
EXISTING WATER MAIN
EXISTING STORM SEWER
EXISTING OVERHEAD WIRES OHW
EXISTING U.G. ELECTRIC UGE
EXISTING GAS GAS
EXISTING FENCE

PROPOSED PLAN

ADAMS PARK
REZONING MAP
PART OF THE SOUTH 1/2 OF SECTION 24, T.1S., R.9E. CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN

PROPRIETOR
ADAMS PARK DEVELOPMENT, LLC
ATTN: STUART MCMANUS
31333 W. 13 MILE ROAD, SUITE 200
FARMINGTON HILLS, MI 48334
(248) 539-7000

DATE: 07-12-2020
REVISIONS
DATE
DRW
CAD
SCALE: 1" = 50'
JOB NO. 2020.145
STATUS: BIDDING

ENGINEERS, SURVEYORS AND ASSOCIATES, INC.
MLP
Michael L. Priest & Associates, Inc.
40987 Ryan Road, Suite 400
Canton, MI 48187
(734) 459-2380
fax (734) 459-2385

SHEET 02

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TODD J. ZILINCIK, P.E.
CITY ENGINEER

DAVID W. LEAR, P.E.
ASST. CITY ENGINEER

MAUREEN MILLER BROSNAN
MAYOR

DONALD R ROHRAFF
DIRECTOR OF PUBLIC WORKS

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2571
FAX: (734) 466-2195

August 10, 2020

Mr. Scott Miller
Planner IV
City of Livonia

Re: Petition 2020-07-01-04 – #28201 Lyndon Avenue and #14416 Harrison Avenue

Dear Mr. Miller:

In accordance with your request, the Engineering Division has reviewed the above referenced petition. We have no objections to the proposed rezoning at this time. The parcels are assigned the addresses of **#28201 Lyndon Avenue and #14416 Harrison Avenue**. The legal description submitted by the owner on the "proposed plan" appears to be correct, and should be used to describe the proposed rezoned property.

The proposed development is currently serviced by public water main, sanitary and storm sewers, which will need to be extended to service any new residences. The submitted drawing does not indicate any utility connections, so we do not have any knowledge of impacts to the existing systems at this time. The owner has been in contact with this office regarding the project, and is aware of the Engineering Department requirements.

It should be noted that should the project move forward the proposed construction will be required to meet the Wayne County Stormwater Ordinance, including detention requirements. A full review of the proposed development will be completed when plans are submitted for permitting.

Should you have any additional questions on this matter, please feel free to contact myself at (734) 466-2608 or the City Engineer, Mr. Todd Zilincik at (734) 466-2561. If you would prefer, you can e-mail either of us at dlear@ci.livonia.mi.us or tzilincik@ci.livonia.mi.us.

Sincerely,

David W. Lear, P.E.
Assistant City Engineer

cc: 2020 Petition File

M:\ALL OTHER MATTERS\Planning Petition Responses\2020\2020-07-01-04 - #28201 Lyndon Avenue and #14416 Harrison Avenue (Adams Elementary Site).doc

DEPARTMENT OF FINANCE

Michael T. Slater
DIRECTOR OF FINANCE

Connie Kumpula
CHIEF ACCOUNTANT

MAUREEN MILLER BROSNAN
MAYOR

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2260
FAX: (734) 421-1807

August 10, 2020

Mr. Scott O. Miller
Planning Commission
33000 Civic Center Drive
Livonia, MI 48154

Petition 2020-07-01-04 – 14416 Harrison Ave. and 28201 Lyndon Ave. (formerly Adams Elementary School Site) – Adams Park Development LLC

Dear Mr. Miller,

I have reviewed the address connected with the above noted petition. As there are no outstanding amounts receivable (general or water and sewer), I have no objections to the proposal.

Please contact me if you have any further questions.

Very truly yours,

Connie Kumpula
Chief Accountant

CK: jw

OFFICE OF THE TREASURER

LYNDA L. SCHEEL
CITY TREASURER

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3060
(734) 466-2245
FAX: (734) 421-7230

August 7, 2020

Mr. Scott Miller – Planner IV
Planning Commission
City of Livonia

Re: Petition 2020-07-01-04

14416 Harrison Ave & 28201 Lyndon Ave
Adams Park Dev - former Adams site

Dear Mr. Miller,

In accordance with your request, the Treasurer's Office has reviewed the name and addresses connected with the above noted petition. At this time there are no taxes due, therefore I have no objections to the proposal.

Sincerely,

Lynda L. Scheel
Treasurer, City of Livonia

From:	Bishop Condominiums HOA
To:	Planning
Subject:	Response to Petition 2020-07-01-04, the rezoning of the former Adams Elementary school site
Date:	Saturday, August 15, 2020 2:16:47 PM

On behalf of the new Bishop Condominiums home owners association, I would like to share our views on the matter of Petition 2020-07-01-04, the rezoning of the former Adams Elementary school site.

For family residential zoning, the city needs to include the following in their plan approval process:

1. The electric and utility wires along the north side of Lyndon Street should be transitioned from above ground to below ground (buried) for safety and reliability. As additional loads will feed off these lines, it is critical that these wires east of Harrison are buried for safety and curb appeal.
2. Lyndon road east of Harrison needs to be completely reconstructed to handle the additional traffic load. There is already too much traffic travelling at higher than posted speeds.
3. Lyndon Street in front of Bishop Condominiums has a low elevation, resulting in constant flooding. Todd Zilincik, City of Livonia Engineering Department is aware of this issue and looking at short-term and long-term alternatives. Drainage is required for safety and proper maintenance and a solution needs to be addressed as soon as possible.
4. Lyndon Street is already a high traffic road and the entrance for the new residential homes should be along Harrison to avoid increased risk of accidents in the area.

I would like to be kept informed of any developments in this project as it impacts our homes and their surroundings.

Atul Kishore

248-444-5614

UNAPPROVED MINUTES

MINUTES OF THE 1,159th PUBLIC HEARINGS AND REGULAR MEETING HELD BY THE CITY PLANNING COMMISSION OF THE CITY OF LIVONIA

On Tuesday, September 1, 2020, the City Planning Commission of the City of Livonia held its 1,159th Public Hearings and Regular Meeting via Zoom Platform

Mr. Ian Wilshaw, Chairman, called the meeting to order at 7:00 p.m.

Members present:	Sam Caramagno	Glen Long	Betsy McCue
	Carol Smiley	Pete Ventura	Ian Wilshaw

Members absent: David Bongero

Mr. Mark Taormina, Planning Director, Scott Miller, Planner IV, Stephanie Reece, Program Supervisor, and Debra Walter, Clerk-Typist II were also present.

Chairman Wilshaw informed the audience that if a petition on tonight's agenda involves a rezoning request, this Commission makes a recommendation to the City Council who, in turn, will hold its own public hearing and make the final determination as to whether a petition is approved or denied. The Planning Commission holds the only public hearing on a request for preliminary plat and/or vacating petition. The Commission's recommendation is forwarded to the City Council for the final determination as to whether a plat is accepted or rejected. If a petition requesting a waiver of use or site plan approval is denied tonight, the petitioner has ten days in which to appeal the decision, in writing, to the City Council. Resolutions adopted by the City Planning Commission become effective seven (7) days after the date of adoption. The Planning Commission and the professional staff have reviewed each of these petitions upon their filing. The staff has furnished the Commission with both approving and denying resolutions, which the Commission may, or may not, use depending on the outcome of the proceedings tonight.

ITEM #1 PETITION 2020-07-01-04 Adam's Park

Mr. Caramagno, Secretary, announced the first item on the agenda, Petition 2020-07-01-04 submitted by Adams Park Development, L.L.C**.** pursuant to Section 23.01 of the City of Livonia Zoning Ordinance #543, as amended, requesting to rezone the properties at 14416 Harrison Avenue and 28201 Lyndon Avenue (former Adams Elementary School site) located on the south side of Lyndon Avenue between Inkster and Middlebelt Roads in the Southeast ¼ of Section 24 from PL (Public Lands) to R-1 (One Family Residential).

Mr. Taormina: This is a rezoning petition involving the former Adam's Elementary School site. The rezoning would change the classification from PL (Public Land) to R-1 (One-family residential). The 12 ¾ acre site is located on the south side of Lyndon Street between Inkster and Middlebelt Roads. Immediately to the east and west of the property is R-1 zoning. These are developed residential subdivisions, including Buckingham Village, Compton Village, and Compton Square Estates. Immediately to the south of the subject property is City owned property, Dooley Park. To the north across Lyndon are residential homes zoned R-2, including the recently completed Bishop Estates Cluster Development. This is an aerial photograph showing what the site looked like when the school was located on the property. The school has since been razed and the site is being cleared. This is a concept plan that was submitted with the rezoning application. It shows a total of 39 lots. The R-1 zoning would allow for the development of single-family homes on conventional lots that would have a minimum lot width of 60' by a minimum lot depth of 120', for a total area of no less than 7,200 square feet. This design shows a U-shaped road pattern with both streets having access from Lyndon. Most of the lots would front on the new internal road system that includes a cul-de-sac in the southwest corner of the subdivision. Lots 11 through 39 would have access to the new roads. Lots 1 through 10 would front directly on Harrison Ave. The plan includes a storm water detention basin, which is in the southeast corner of the site, as well as an open space area that is located along the south side of the property adjacent to Dooley Park. With that, Mr. Chairman, I can read out the departmental correspondence.

Mr. Wilshaw: Yes, please.

Mr. Taormina: The first item is from the Engineering Division, dated August 10, 2020, which reads as follows: *"In accordance with your request, the Engineering Division has reviewed the above referenced petition. We have no objections to the proposed rezoning at this time. The parcels are assigned the addresses of #28201 Lyndon Avenue and #14416 Harrison Avenue. The legal description submitted by the owner on the "proposed plan" appears to be correct, and should be used to describe the proposed rezoned property. The proposed development is currently serviced by public water main, sanitary and storm sewers, which will need to be extended to service any new residences. The submitted drawing does not indicate any utility connections, so we do not have any knowledge of impacts to*

the existing systems at this time. The owner has been in contact with this office regarding the project, and is aware of the Engineering Department requirements. It should be noted that should the project move forward the proposed construction will be required to meet the Wayne County Stormwater Ordinance, including detention requirements. A full review of the proposed development will be completed when plans are submitted for permitting." The letter is signed by David W. Lear, P.E., Assistant City Engineer. The next letter is from the Finance Department, dated August 10, 2020, which reads as follows: *" I have reviewed the address connected with the above noted petition. As there are no outstanding amounts receivable (general or water and sewer), I have no objections to the proposal."* The letter is signed by Connie Kumpula, Chief Accountant. The next letter is from the Treasurer's Department, dated August 7, 2020, which reads as follows: *"In accordance with your request, the Treasurer's Office has reviewed the address connected with the above noted petition. At this time, there are no outstanding amounts receivable for taxes. Therefore, I have no objections to the proposal."* The letter is signed by Lynda Scheel, Treasurer. Next, we have an email from Atul Kishore, dated August 15, 2020, which reads as follows: *"On behalf of the new Bishop Condominiums home owners association, I would like to share our views on the matter of Petition 2020-07-01-04, the rezoning of the former Adams Elementary school site. For family residential zoning, the city needs to include the following in their plan approval process: 1. The electric and utility wires along the north side of Lyndon Street should be transitioned from above ground to below ground (buried) for safety and reliability. As additional loads will feed off these lines, it is critical that these wires east of Harrison are buried for safety and curb appeal. 2. Lyndon road east of Harrison needs to be completely reconstructed to handle the additional traffic load. There is already too much traffic travelling at higher than posted speeds. 3. Lyndon Street in front of Bishop Condominiums has a low elevation, resulting in constant flooding. Todd Zilincik, City of Livonia Engineering Department is aware of this issue and looking at short-term and long-term alternatives. Drainage is required for safety and proper maintenance and a solution needs to be addressed as soon as possible. 4. Lyndon Street is already a high traffic road and the entrance for the new residential homes should be along Harrison to avoid increased risk of accidents in the area. I would like to be kept informed of any developments in this project as it impacts our homes and their surroundings."* That is the extent of the correspondence.

Mr. Wilshaw: Are there any questions of the Planning Director? If not, our petitioners are in the audience. If you could please click raise hand, I can recognize you and we can speak with you. I believe we have Stuart Michaelson. Mr. Michaelson, good evening.

Stuart Michaelson, 31333 W 13 Mile Road, Farmington Hills, MI, I am one of the partners at Windmill Homes. We have come up with a site plan that we feel works within the R-1 zoning. We have done some very preliminary engineering at this point to get the re-zoning. We have the 39 lots. We are looking forward to building 39 homes to the community. We have purchased in other community's school sites for in-fill similar to this and have been very successful. We did one in the City of Farmington. We have done a couple in Farmington Hills. We did one in West Bloomfield. We find that these in-fill school sites are very good for the communities. Many times, we find that people are living in the older homes surrounding us and don't want to leave the neighborhood and are very happy to live in that area but want a new house. This is something we provide them. If you have any questions, we would be glad to try and answer them.

Mr. Wilshaw: Thank you, Mr. Michaelson. Do you have other folks with you this evening that are on our call that we can also introduce?

Mr. Michaelson: There are other people.

Mr. Wilshaw: Do you know what names I should be looking for?

Mr. Michaelson: Stuart Sherr, Roger Sherr, and George Major.

Mr. Wilshaw: Okay. Great.

Stuart Sherr, good evening and thank you for the opportunity to make this presentation. This is a public hearing for rezoning. That is the way we have approached this. This is not a site plan hearing. The current zoning is PL and we are looking to rezone to R-1, which is consistent with the Master Plan. As you can also see from the aerial photo, most of the acreage surrounding our site is already zoned R-1. So, we harmonize and are consistent with much of the neighboring property. We are a 12.71 acre site as Mark Taormina had earlier described. This is also a former school site. The Adams school building has been razed so the land is now completely vacant. By the way, the development company that we formed is called Adams Park Development. Stuart Michaelson and George Major, his partner, are partners

with ourselves, Stuart and Roger Share. Both companies have a long track record of excellent experience of development within the greater Metropolitan Detroit area. In fact, I think we described that a little bit a week ago during the study session. The product for this rezoned property is something we have successfully constructed in many of the communities surrounding Detroit, mostly on the western side of metropolitan Detroit. As I mentioned earlier, it is consistent with the Master Plan, and consistent with the surrounding properties. We are happy to answer any questions that you may have. I don't know if anyone else in our group is interested in saying a few words, but we have focused on the rezoning aspect of tonight's meeting. We are not fully prepared to get into the technical engineering issues. We certainly have listened to and understood all of the comments that you have made about the site plan that we are currently working with as shown on the screen. I am going to let anyone else speak that would like to so that I don't monopolize this conversation. I would like to thank Mark Taormina for an excellent presentation.

Mr. Wilshaw: Thank you, Stuart. It is a good point to raise, not only for the tune of this discussion, but also for our audience members as well that this is a rezoning request that we are looking at tonight., We are looking at the request to rezone this from Public Land to R-1 at this point and if this is the appropriate zoning and the restrictions that come along with that zoning for this property. The site plan that we see before us on the screen and any discussion around the site plan is purely conceptual at this point. That will come back to us at a later date to be discussed in detail and in-depth. We are really focused on zoning. There may be some reference to this site plan but really it is zoning that we are concerned with tonight. I believe we also have George with us, your partner. I did see him raise his hand. He can unmute himself and introduce himself as well. Good evening.

George Major, good evening. I wanted to say hello and I would also like to thank Mark for a very good presentation. There really isn't anything else that I can add at this point. Stuart and Stuart did a great job. I think they spoke well on our behalf.

Mr. Wilshaw: Great. Thank you. We have all three with us tonight. We appreciate that. I will ask you gentlemen to just stand by for one second and I will go to the commission first and see if there are any questions for our petitioners this evening.

Ms. Smiley: I was wondering…you mentioned a couple of subdivisions that are nearby. Do you have any that are modeling this new Adams Park after? Can you give me an address of a subdivision that you built that would be similar to what you are building at Adam's Park?

Mr. Michaelson: One that we just completed about two years ago is called Riverwalk of Farmington. It is in the City of Farmington. It is an old school site. Flanders school. It is on Flanders which is between Eight and Nine. It runs east and west. It is just east of Farmington Road. I don't have an address handy but there are 33 houses on the property. You can't miss it.

Ms. Smiley: Okay. No problem. I will be able to find it.

Mr. Michaelson: That butts up to a city park also. Very similar to this. We have another one that we are just completing or building in Farmington Hills with the old Wood Dale school. It is located in the middle of a couple of subdivisions called…all of the sudden I can't think of the names of the subs, but it is between 12 and 13 Mile and between Drake and Farmington Road. Right in the middle. We just are finishing up 18 homes in there. We have people living in there. Those are the two closest.

Ms. Smiley: That's fine. They would look similar? I am assuming ranch's and colonial type houses?

Mr. Michaelson: Yes, exactly.

Ms. Smiley: They are going to be at about the price range that you are expecting to build here?

Mr. Michaelson: Yeah, right now because of price increases, especially in lumber, it will be a little bit higher priced. It will be very similar.

Ms. Smiley: Okay, thank you. I know we are just talking about zoning but should this go through it will give me an idea of what your product looks like.

Mr. Wilshaw: Great question, Ms. Smiley. Any other questions for our petitioners? From the commission?

Mr. Michaelson: Ms. Smiley, by the way the name of the subdivision I couldn't think of is Colony Park in Farmington Hills.

Mr. Wilshaw: Colony Park. Great. Thank you. Any other questions for our petitioners? If not, I don't' see anyone. I will go to the audience and give the audience an opportunity to address this issue as well. Then, of course, we can go back to the petitioner and ask any additional questions and follow up on anything that we hear from the audience. We do have Atul Kishore that wrote a letter to us and we put that in the record. Glad to have them with us tonight. We will give them an opportunity to speak as well. Good evening.

Atul Kishore, 28178 Lyndon, Livonia, MI, thank you for giving me the chance to talk about this development on behalf of Bishop Condominiums. As you mentioned earlier, those are the new condominiums right across from Lyndon and right across from this new subdivision. I take…personally, I feel it is a good opportunity to use that land. My only concerns are, as I mentioned on the email, the biggest one that comes right away is the entrance on Lyndon. The curvature of Lyndon, that is bound to have a lot of accidents because people are just flying by on that corner and having two entrances on Lyndon, which will cause an incremental risk assessment, I would recommend that the entrance to this new sub come off of Harrison. That is probably, for this committee, at this time and the zoning, that would be my main request other than the three that I mentioned about the electric wires, Lyndon totally needing to be redone…we have water flooding issues already there. The resolution is moving very slowly with Engineering and I am willing to escalate that further because we can't even go by this winter without that being resolved.

Mr. Wilshaw: Thank you, Mr. Kishore. We heard from Mr. Kishore, and we also have Mrs. Shockling. Let me give her an opportunity to speak. If she can just unmute herself.

Jennifer Shockling, 27954 Lyndon, Livonia, MI, hello. I am directly across the street from the proposed site. Just a little east of the Bishop Estate condos. My concerns…some of them (inaudible)…my neighbor. We have extremely high traffic on this street moving at a high rate of speed. The entrance should be placed on Harrison, should this move forward. We also have quite a bit of flooding and additional impervious surface cover is not going to help that issue. From the site map there is no plan to deal with that. My main concern is the pollution that will be caused once it's developed. Particularly the noise and the air pollution from the diesel trucks. As I am directly across from it and I am currently working from home and educating a child from home,

we are using the residence for everything at this point. My employer has actually informed me that I should prepare to be working remotely for up to three years. I don't want to have diesel truck emissions just exposing us all day long. The neighbors that are around this site to be developed are all of a vulnerable population. We have elderly. We have small developing children. I, myself, am an asthmatic. I am opposed to the rezoning simply because I do not want this site developed for the pollution it will cause. Also, during the development of the Bishop Estate condos, the entirety of that development I had trash that blew into my yard every single day that I was having to clean up. There was construction equipment that used my lawn. Not just the right-of-way, but my lawn proper because they didn't recognize that it was private property and we were constantly having to shew them off the property and they would make promises and leave business cards and said they would come back and repair the lawn. We have massive divots and ruts and it is extremely hard to mow it. I am opposed for that reason as well, the construction equipment that will be on site. I oppose the development of this land because as it was noted it is Public Land. It is our land and people are currently using it. There is a public land designation further up Lyndon, but that is more developed and there are certain activities that people can't do at both sites. So, currently the land is being used by numerous people every day to do activities such as flying kites, run RC cars, hit golf balls. The land is being currently used by the public as public land. That concludes my comments. Thank you for my time.

Mr. Wilshaw: Thank you, Ms. Shockling. We will talk to the petitioner about some of those issues that you raised and see what we can do to assist in those moving forward. Appreciate your comments. Anyone else in the audience wishing to speak for or against this item? If so, please click raise hand so we can recognize you.

Jim McCabe, 14236 Lyons, Livonia, MI, can you hear me okay? I am east of Dooley Park. I have been here about 20 years and I am not in favor of the rezoning. It is for many reasons. It is strain on infrastructure, which people have talked about already. The strain on the water, the sewer, the electrical, the cable, police, fire and then you add the traffic that 39 homes would bring. R-1, I guess, although I am not in favor of the rezoning, is better than the alternatives which I think would be attached condos or apartments and things of that nature. R1 is the lesser of evils in my opinion. Again, I would like it to stay as green space. I am not an expert in zoning by any stretch, but there has to be a

better way then to just shove houses everywhere. It doesn't make a lot of sense to me. The neighborhood is 64 years old. It has been fine without those houses up until now. I am hoping that it can continue. I know the developers have mentioned success in various other endeavors, but success for whom. The developers come in they build a bunch of houses. There is a windfall of money for the city and they make their money. But, here, the residents are stuck with whatever there is. I am not in favor of it because of that. I guess my question is, to what gain? I don't see a lot of gain for my personal house with this rezoning. I am hoping that it doesn't pass. I am opposed to it and I will be watching the developments. Not the development, let me be clear, I want to see how this rolls out.

Mr. Wilshaw: Okay, thank you, sir. We appreciate your comments. We are making notes of your concerns. We will again try to circle back once we have heard from all of the audience members to address any of these concerns that have been raised. I appreciate your comments tonight. We have one other person with their hand raised. I don't have a name for them. I am going to recognize them. Their entry says B103100. They can unmute themselves and introduce themselves with their name and address please.

Belinda Ellison, 28154 Lyndon, Livonia, MI, thank you for affording me the time to speak on my behalf. I live exactly directly across from the Adams property, which used to be the swim club. It is the current condominiums right now. Thank you again for giving me the opportunity to speak. A lot of people have raised a lot of very valid issues. I am kind of on the fence. I know that development is good but sometimes if we get too much development that can also bring a lot of issues as well. I am concerned mainly about the traffic. I am really surprised with the condominiums that were built, which are very nice by the way, I am surprised that by having six condominiums how much more traffic has come through on our street. Lyndon is like a main residential street so everybody uses it to access…to get to Inkster, to get to Middlebelt…especially where there is a lot of construction going on. I am concerned about the entrances…getting in and out of the subdivision. Someone mentioned about the flooding on Lyndon. That would be in front of the condominiums there. As you recall, that used to be the swim club. Ever since the condominiums were built…if it rains heavily there is usually a lot of flooding because of that. I can see that as an engineering issue, I guess. Anyway, I am mostly concerned about the traffic. When Adams school was still in

operation, there used to be a stop sign there where the school's kid crossing and whatnot and then they decided to remove the stop sign. Even when the stop sign was there, the traffic was…I was amazed at how fast people were going up and down on a main residential street. Once they took the stop sign out it is just…it is a free for all. People do 40 with not even batting an eye. That is really something I feel needs to be addressed. We do have little children in the neighborhood. I am concerned for their safety as well. I think that is all I have to say for now. Again, thank you for allowing me the time to speak. I appreciate your time.

Mr. Wilshaw: Excellent points. We will be talking about those additionally here tonight. Thank you for raising them. Is there anyone else in the audience wishing to speak on this item? We do have another person in the audience. We will give them an opportunity to speak. Their name is Loraine. They can unmute themselves and introduce themselves. Loraine, we need you to unmute yourself. I don't see Loraine unmuting herself, so we won't be able to hear her. Is there anyone else in the audience wishing to speak for or against this item? If so, please click raise hand. We have Mr. Priest who is welcome to unmute himself and address his concerns. Mr. Priest, you can unmute yourself. He seems to be having difficulty unmuting himself. It's not going to well on these unmutes here. Anyone else in the audience wishing to speak for or against this item? I don't have anyone else clicking raise hand. I have a request to both Loraine and Mr. Priest to unmute themselves if they wish. They are not unmuting themselves, so we will move one. Is there anyone else in the audience wishing to speak for or against this item? If not, are there any questions or comments from the commission for our petitioner based on the items that we have heard from…Oh, Mr. Priest is…he started to unmute himself. The mute button, by the way, is either in the lower left corner if you are on a computer or if you are on a tablet type device, it is…

Jim Priest, can you hear me?

Mr. Wilshaw: Yes, we hear you.

Mr. Priest: Good evening, I am the Civil Engineer on this project. I was…when I got out of school, which was quite a while ago, I worked for the City of Livonia for about eight years back in the 70's. As far as the infrastructure is concerned and the drainage, there is two huge drains adjacent to this property. One of them

is along Lyndon. It is a 21' wide by 12' high arch. You can drive a truck through that thing. It flows easterly into the Red Run golf course. Along the east property line is Livonia drain 17, which is an eight-foot diameter pipe. As far as flooding, the only way there would be flooding would be if the grading wasn't properly done, because there is plenty of capacity in those pipes which allow or no flooding. Even though there is. Also, we are going to retain the water so that the runoff is (inaudible) to what it is today in an undeveloped state. That will reduce the amount runoff. There is also adequate sanitary sewer mains adjacent to the site too. I don't think there is any engineering problems with stressing any of the facilities adjacent to the site.

Mr. Wilshaw: Thank you, Mr. Priest. We really appreciate your insight and comments on this item. I am not sure we got your address. Can we get that for our record?

Mr. Priest: My address?

Mr. Wilshaw: Yes, please.

Mr. Priest: I live in Livonia. I have for quite a while. I live on Riverside Street. Down from the turkey farm. My office is in Canton over on Kapernick, which is a half-mile road between Joy and Warren, just east of Haggerty.

Mr. Wilshaw: Okay.

Mr. Priest: I have done many subdivisions in Livonia over the years.

Mr. Wilshaw: Thank you. We really appreciate your comments this evening.

Loraine Campau, 14449 Harrison, Livonia, MI, directly across from the proposed rezoning. I definitely oppose this. We have been Livonia residents and in this home for 35 years. I guess, probably one of the biggest reasons as to why I oppose this, first of all in the main changes that have gone on through the school systems and everything, and having Adams there for so many years, which was a wonderful place for our children to go while they were able to go there until the school zones were restructured, however, one of the biggest problems I have with this is that I fear that the school board actually (inaudible) us in selling this property. I think they were not within their level of…I don't know, whatever you want to call it, level of jurisdiction or whatever in my opinion. Because this does directly affect our neighborhoods. We had that as a school. We counted on that

as a school, as park space, as green space, as a couple of the other people commented on. We feel that it is important to maintain in our neighborhood. I am not looking forward to having any neighbors there. I haven't had any in 35 years and certainly don't want any now. Mainly it is because it is a nice peaceful area and we really don't want that developed. When you look at the other areas in Livonia that are just house on house and to be honest, the new areas that I have looked at, they are not all that impressive. It is going to be…I am not actually sure how that will look and affect our neighborhood. Obviously, those home are going to look much different than what we currently have now. I missed part of the beginning. What are the lot sizes on the proposed building development?

Mr. Wilshaw: Mr. Taormina, what are the lot size requirements for R-1?

Mr. Taormina: 60' x 120' – it is very similar to the lot sizes that exist to east and the west within the subdivision adjacent to this.

Ms. Campau: I guess the other concern I have is initially, and this was way back in the day, there was a river that actually ran through the property. The part that goes closer down Harrison. We do have a lot of migrating birds and stuff that still come through there and I wonder what will happen to that if this proposed rezoning occurs, and how that will be accounted for.

Mr. Wilshaw: We can check on that for you as we get back to our petitioner. That is a good question. Are there any other comments you would like to make on this item?

Ms. Campau: No, I think that is it for me for now. Thank you for listening.

Mr. Wilshaw: Thank you. We really appreciate your comments. We are all listening, and we are going to take those into consideration as we move forward with this. I just want to see if there is anyone else in the audience that wishes to speak on this item so we can make sure everyone is heard. We have Sean Kelly who has their hand raised.

Sean Kelly, 14453 Lyons, Livonia, MI, I will abut up to this development on the east side. Mr. Priest, a couple of speakers ago, said that the drain system should be able to handle any flooding. I can tell you just what the school parking lot…several houses along Lyons on my side of the street had flooding every Spring and every heavy rain where our neighbor lost all of their trees in their back yard. We lost one big maple and that was just with the

school. I am extremely concerned about what the flooding will be once we have 39 houses built behind us. For that reason, and the pollution and the Lyndon traffic, I am extremely opposed to this development.

Mr. Wilshaw: Thank you, Mr. Kelly. We are going to talk with the petitioner about flooding and water management, but suffice it to say one of the things that usually happens with these types of developments is that you can see, even on the conceptual plan, that there is a large retention basin. The county has very strict guidelines as to how water is to be managed on the property when it is redeveloped. These are new guidelines. They have come around in the last dozen or two years. Couple dozen years. Also, how quickly that water is discharged from the properties. It has to be retained for a certain amount of time and discharged at a certain rate to try to minimize the strain on the sewer system and so on. We will talk more about that this evening, but just to give you a little idea that there is consideration that does get put into water management when properties are developed in the last 10 to 20 years. Something that wasn't done many moons ago.

Mr. Kelly: Thank you for listening.

Mr. Wilshaw: Your welcome and thank you for your comments. We do have some other folks in the audience that do wish to speak, so we are going to give them a chance. We have Ms. Franklin I believe who has her hand up, so…we will give her a chance to speak. Ms. Franklin, if you can unmute yourself by clicking mute somewhere on your…there you go. We hear you.

Laura Franklin, 28029 Lyndon, Livonia, MI, I am right next to the proposed property. I have two questions. My first question is if the committee approves for rezoning for R-1, in the future will the developers have an opportunity to request to be rezoned to R-2?

Mr. Wilshaw: So, your question is, if we approve rezoning to R-1, can they come back and change it to an R-2? Is that your question?

Ms. Franklin: Yes, it is.

Mr. Wilshaw: Mr. Taormina, do you want to explain how zoning levels work?

Mr. Taormina: The R-1 zone establishes minimum lot sizes that are smaller than R-2. If the developer wanted to construct homes on larger

lots, they could do that. If they came back with a plan with lots that were larger than the minimum sizes established in the R-1 district, they could do that without rezoning to R-2. Of course, it is always something they could do. I don't know what the purpose would be. If the R-1 zoning is created, there is nothing that prohibits them from building on larger lots without having to go through the rezoning process.

Mr. Wilshaw: The basic idea is that this is the minimum sizes that are being set. If they choose to build larger lots, they can do that, but they can't go to smaller lots.

Mr. Taormina: Just for clarification, the R-2 district requires lot sizes of 70' x 120'. They are 10 feet wider than what the R-1 requires.

Mr. Wilshaw: I hope that makes it clear for you, Ms. Franklin.

Ms. Franklin: Thank you, that answers my first question. My second question is dealing with sewage. I am the property that has the entryway, both to my driveway as well as the side of my house in which the access for water and everything you do to actually connect…years before there was a repair that was done in that area and I haven't received any flooding of that nature. My question is, there was only a school there. With 39 more houses and more usage for sewage and water and things of that nature, has there been a study done in terms of it's okay to put 39 houses there without stressing the system?

Mr. Wilshaw: That is a question that we can pass along to the developers and they can talk a little bit about what infrastructure is in place and what changes if any would need to be made when we get a chance to go back to the developer and speak with them in a few moments. Okay?

Ms. Franklin: Okay.

Mr. Wilshaw: Is there any other questions or comments that you would like to pass on to them while you have a chance?

Ms. Franklin: No, just thank you. Those were my two questions.

Mr. Wilshaw: Thank you, Ms. Franklin. We will try to get those…we got one of them answered and we will try to get the other one answered for you as well. Thank you for attending this evening and you can continue to listen. We will go to our next person that wishes to speak, which is Carolyn Johnston. There we go.

Carolyn Johnston, 14225 Lyons, Livonia, MI, and my backyard is directly by Dooley Park. I guess my concern…I am not looking forward to having hundreds of new cars driving down my street. A hundred new cars driving down my street. I am not looking forward to not hearing baseball, but that detention pond is the thing that bothers me, because behind my house is where a lake forms every time it rains. My house is not far from that detention pond. I also think that this Dooley Park is going to have way too many people in it once all of those houses are built. I have been here 30 years and I loved having the school there, but the thought of having all of those houses and if I am an R-1 and I have small lots, there really isn't anything preventing the developer from thinking about putting in attached condos or apartments, which is definitely not what I would like in my neighborhood.

Mr. Wilshaw: The attached condos or apartments would not be permitted in this zoning, so you don't have to worry about that happening.

Ms. Johnston: I just don't know where all of those people…I don't know…it just seems like a lot of people that I don't know. I'm going to look out my backyard and see two-story houses and I am not sure how that is going to affect my property value since I live in a house that is 64 years old.

Mr. Wilshaw: That is a very valid question and we will talk to the developer about that. I hope they will have some information about how that affects property values in the neighboring area. Thank you, Ms. Johnston for your comments. We appreciate you attending this evening. We ask that you continue to listen in and we will go to the next person that wishes to speak. I do have Ms. Franklin is asking to speak again and Mr. Priest. I am going to go to Mr. Priest. He already spoke once, but we are going to give him another chance to speak and then we will wrap up the comments here. Good evening, Mr. Priest, again.

Mr. Priest: When we design a subdivision and then subdivision is built, we are required to come up with the drainage pattern for the entire subdivision. All the rainwater that comes on to the site will be diverted into the pond and typically when there is a school site there, they really didn't have any requirements to the school to grade their property. For example, all of these lots that back up to us on Lyons Avenue, I made the lots deeper on our subdivision so we could provide a swale running north and south and we will put catch basins in at various points to pick up

any water so that none of the water will go into the backyards that are there. The swale will be lower than the grade at the fence. Most of that has a fence. Schools didn't really provide much drainage other than to drain their parking lots and the area immediately around the school. The requirements are much different for a subdivision. We will not be causing any drainage to go easterly into the back of those people. That's it in a nutshell.

Mr. Wilshaw: That is a good point, Mr. Priest. That is something that we have seen over the years that…it takes a little bit of thought to understand this from an engineering perspective. Typically, when a property is developed, people think that it will often cause more water issues when the reality is the roofs and gutter systems and swales and catch basins and so on, actually tend to provide a better water management solution than just open land or certainly a large parking lot where the water just sheds right into other peoples yards. Those are all good points. Thank you for your comments again. I am going to go to Ms. Franklin who also wants to make an additional comment. We do want to get back to our developer and our petitioner and get answers to some of these questions, so we do ask that we don't have too many repeat questions, but Ms. Franklin, you had some additional information that you wanted to provide? Let me let you unmute yourself then.

Ms. Franklin: Thank you for allowing me to speak one more time. I had an opportunity to go to some of the meetings for the development that is across the street. The new one. They did ask for the R-1 first and then after much planning, things had changed that it became an R-2. I noticed that you had said for this development that it would stay an R-1. Is that something that will actually, when it is approved, that will be stated that it has to be an R-1?

Mr. Wilshaw: What the petitioner has requested, Ms. Franklin, is R-1 zoning. We do not have to approve that. We can deny this request. We can approve or recommend that it be R-2 or some other form of zoning. Mind you, at the Planning Commission our recommendation is simply that. It is a recommendation that goes on to City Council and City Council will ultimately approve or deny the request. Again, there are opportunities for it to change from R-1 to R-2 if that is what the City Council wishes to do. Your example is actually a very good one of the development to the north where the petitioner asked for R-1, but it was felt that it was not appropriate and R-2 would be a better

zoning for those lot sizes. That is what was approved. No decision has been made at this point, but you will be hearing a decision made, as far as a recommendation from us, which will go on to City Council this evening.

Ms. Franklin: Thank you.

Mr. Wilshaw: Your welcome. Ms. Shockling would like to make an additional comment, so I will let her do that.

Ms. Shockling: Thank you, I appreciate the extra time. I just have a quick question for the developer about the bio-swale and retention basin. Is it going to be open or is there something that is going to go around the perimeter to prevent children from going into it since the park is right there? I was just wondering if they could explain a little bit more of what that bio-swale is going to look like. Thank you.

Mr. Wilshaw: That is an excellent question. We will pass that along to the petitioner. We may not have all the details about that at this point, because again, we are talking zoning, but they may have some information about that, so we will see what they can provide. If not, it will certainly be a part of the site plan.

Mr. Taormina: Before we have the petitioner comment on this, I just want to caution that, whatever their intentions are, is not necessarily the way it is going to be approved. Our Engineering Department has not had a chance to review this. They could determine, for example, that the swale is not appropriate or that it needs to be a different type of storm sewer or design. He can tell us what his intentions are at this stage, conceptually, but in fact that could very well change. I just want to make that clear to everybody including the petitioner.

Mr. Wilshaw: That is a good point, Mr. Taormina. I appreciate that. Everything is very conceptual at this point in terms of anything you see on the screen of the site plan. We are strictly talking zoning as far as decisions this evening. Just want to reiterate that. I don't see anyone else wishing to speak on this item, so we are going to go back to…Mr. McCabe has an additional question or comment so we will give him a chance and he will be our last one this evening. We will then go back to our petitioner. Mr. McCabe, you can unmute yourself. Good evening.

Mr. McCabe: Thanks for the extra chance. We were talking about zoning tonight, but there are a lot of technical questions that I had. I skipped because we were talking zoning. Will there be another chance to talk the technical aspects, because I do have a lot of questions.

Mr. Wilshaw: Yes, definitely. There will be. What we are going to decide tonight is our recommendation on zoning and then that will go on to City Council where they will make a decision as well. Typically, what happens is that the City Council will make a motion and they basically hold the process until a site plan is developed. That site plan process starts back with us again. It will come to the Planning Commission and that is where we are really going to noodle out the details of this layout that you see, and the retention basin, the appearance of the homes, and all of those types of things will be discussed in detail. It will certainly be a chance for all of our audience members to participate again in that. Then, when we make our recommendation based on the site plan we see, that will also then go on to City Council for approval. There is going to be basically four shots at this. Two at the Planning Commission and two at City Council. The first set of decisions are for zoning and then second set of decisions are for site plans. I hope that makes it perfectly clear.

Mr. McCabe: It does, thank you.

Mr. Wilshaw: Appreciate your question. Thank you for asking. With that, I am going to go back to Mr. Michaelson or any of the other petitioners that are with us this evening. You have heard a number of questions that have been asked and comments from the audience regarding traffic in the area, the capacity of the infrastructure, some flooding concerns, and if you would like to address any of those this evening you can. Again, we are trying to not get too deep into the site plans because that is not what is before us, but obviously we have some folks that live in the area and have some valid concerns and points to make. We want to make sure that they are included in this process. Is there anything you would like to add to this?

Mr. Michaelson: Let me first say that I understand all of the concerns. We have been doing this…I have been doing this for close to 40 years. We go through this with all of the developments that we propose for rezoning or for site plan approval. I am well aware of the concerns of all of the residents surrounding this…just a couple in general comments is when we develop a community like Mike Priest was just saying, we actually improve the drainage so the

neighbors that have had problems with…when the school was there, those problems are going to go away because we are going to have underground storm sewers and we are going to have catch basins. We are going to have…each house will have a sump and it will be outlet into underground storm sewer not on the property. It actually improves any of the issues that they may have had. That is something that our engineer will work with the City Engineer and they will come up with a great plan. Plus, it has been mentioned that we retain all of the water in the retention and then it out lets at a slower pace underground into the storm sewer system. I can put their mind at east that it is really going to improve any problems that any of these homeowners have had nearby. The other thing we find is nobody wants to see the land behind them that is vacant improved. It was that way when their subdivision got developed. People who lived next to their subdivision felt the same way, but it really works out very well in the long run. What happens is, we put in the nice housing and the property values surrounding in the surrounding areas actually improve. They go up. We do a lot for the community. I know that they are reticent about this but that is the way it has always worked. It fills in nicely. As far as Lyndon goes…we have 10 lots that are going to be on Harrison so there is 29 that will be entering on Lyndon. It really isn't a lot of traffic. I know it is hard to explain, but people come and go at different times. People are home during the day. They are working at home now, so you don't get the traffic that you think you are going to get. I know it is hard to convince you of that, but it is really true that you don't get a lot of traffic. People are going and coming at different times. I just feel that understanding the concerns of something new coming your way, it is…if you research it further, you will see that it is actually a big improvement. Mike Priest has already spoken on the drainage issues, but he can verify data. He was the City Engineer at one time many years ago and he does our engineering…he is going to do our engineering on this site, and it has worked out very well. So, I don't know if anybody from our group has anything to add to that.

Mr. Wilshaw: Thank you, Mr. Michaelson. We appreciate those additional comments. Are there any questions this point from the commissioners for our petitioners? I don't see any questions for our petitioner. Is there anyone else…actually, I did want to make one comment. In regard to some of the questions from the audience, some of the residents that live in that area who addressed the use of the property and the school sale of it. I just wanted to point out that the city had no involvement in the

sale of this property or the choice of the school district to sell this property and to not use it as a school any longer. That was a choice made by the School Board and once that property has been sold to a private party, whoever that party is, they now own that property and they have property rights to use that property as they feel best for them. If they chose to buy it and keep it park land, they could do that and pay the taxes on it and leave it open. if they chose to develop it for residential use, that is what they did in this case and they certainly did that to gain profit and make money, just like any of the other properties throughout the city that is improved and developed over the course of time, including the subdivisions that you live in. That is private property rights in a nutshell and as much as it would be nice to keep all of these open areas open that was a decision made by the school district and we had no involvement in it. All we can do at this point is say what type of zoning is appropriate for this property. We can't keep it Public Land because it is not publicly owned anymore. It needs to be rezoned to something appropriate. What we have before us is a request for R-1 residential and that is what we are going to decide. I just wanted to make that point and help educate anyone in the audience who had asked about the school district's decision to sell the property. If there is anyone else on the commission with any questions or comments for our petitioner, and if not, I will close the public hearing and a motion would be in order.

On a motion by Smiley, seconded by McCue, and unanimously adopted, it was

#09-42-2020 **RESOLVED**, that pursuant to a Public Hearing having been held by the City Planning Commission on September 1, 2020, on Petition 2020-07-01-04 submitted by Adams Park Development, L.L.C. pursuant to Section 23.01 of the City of Livonia Zoning Ordinance #543, as amended, requesting to rezone the properties at 14416 Harrison Avenue and 28201 Lyndon Avenue (former Adams Elementary School site) located on the south side of Lyndon Avenue between Inkster and Middlebelt Roads in the Southeast ¼ of Section 24 from PL (Public Lands) to R-1 (One Family Residential) the Planning Commission does hereby recommend to the City Council that Petition 2020-07-01-04 be approved for the following reasons:

1. That the proposed change of zoning is compatible to and in harmony with the surrounding residential uses and zoning districts in the area.

2. That the proposed change of zoning will provide for a single-family residential development similar in density to what exists in the neighboring area.

3. That the proposed change of zoning is consistent with the existing character of the area.

4. That the proposed zoning change does not obstruct the goals, policies, and objectives of the Future Land Use Plan, and

5. That the proposed change of zoning of the subject property represents a reasonable and logical zoning transformation which adheres to the principles of sound land use planning.

FURTHER RESOLVED, that notice of the above hearing was given in accordance with the provisions of Section 23.05 of Zoning Ordinance #543, as amended.

Mr. Wilshaw: Is there any discussion?

Mr. Wilshaw, Chairman, declared the motion is carried and the foregoing resolution adopted. It will go on to City Council with an approving resolution.

NEW DATA FOR REGULAR MEETING OF 12/02/2020 - ITEM 13

DEPARTMENT OF LAW

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November 13, 2020

TO: HONORABLE MEMBERS OF THE CITY COUNCIL

FROM: DEPARTMENT OF LAW

SUBJECT: Proposed Amendment to Zoning Ordinance - Petition 2020-08-01-05

RE: Request to Rezone Property at 28400 West Chicago Avenue (former Wilson Elementary School site) located on the north side of West Chicago Avenue between Harrison and Middlebelt Roads in the Northwest 1/4 of Section 36 from PL (Public Lands) to R-1 (One Family Residential)

Dear Council Members:

At your Public Hearing held on November 9, 2020, you responded to Petition 2020-08-01-05, submitted by Infinity Homes and Company, for a change of zoning at 28400 West Chicago Avenue (former Wilson Elementary School site) located on the north side of West Chicago Avenue between Harrison and Middlebelt Roads in the Northwest ¼ of Section 36 from PL (Public Lands) to R-1 (One Family Residential)

Accordingly, herewith submitted for your consideration are the proposed ordinance amendments prepared by the Department of Law.

Approved for submission: Very truly yours,

_____ _____

Maureen Miller Brosnan, Mayor Paul A. Bernier, City Attorney

PAB/bks
Attachment
cc: Mayor, City Clerk, Council, Finance, DPW, Engineering, Planning, Assessor
P:\Council\2020\Ordinances\Pet. 2020-08-01-05 - 28400 West Chicago Avenue.docx

CITY OF LIVONIA
PUBLIC HEARING

Minutes of Meeting Held on Monday, November 9, 2020

A Public Hearing of the Council of the City of Livonia was held virtually via ZOOM on **Monday November 9, 2020**.

MEMBERS PRESENT: Kathleen McIntyre, President
Vice President Scott Bahr
Rob Donovic
Jim Jolly
Brandon McCullough
Laura M. Toy
Cathy K. White

MEMBERS ABSENT: None

OTHERS PRESENT: Mark Taormina, Director of Economic Development
Paul Bernier, City Attorney
Sara Kasprowicz, Recording Secretary

The Public Hearing was called to order at 7:01 p.m. with President Kathleen McIntyre presiding. This item is regarding **Petition 2020-08-01-05** submitted by Infinity Homes and Company, pursuant to Section 23.01 of the City of Livonia Zoning Ordinance #543, as amended, requesting to rezone the property at 28400 West Chicago Avenue (former Wilson Elementary School site) located on the north side of West Chicago Avenue between Harrison and Middlebelt Roads in the Northwest ¼ of Section 36 from PL (Public Lands) to R-1 (One Family Residential).

This item will move to the Regular Meeting of **December 2, 2020.**

The Public Hearing is now open. There were 11 people in the audience.

McIntyre: Before we open the public hearing for comments, we are going to ask the elected officials if you would please state your name to let people know you are present on the call and your City, County and State, I'll begin, Kathleen McIntyre, City of Livonia, Wayne County, Michigan.

Bahr: Scott Bahr, Livonia, Michigan.

McIntyre: Cathy White?

White: Cathy White, Lehigh Acres, Lee County Florida.

McIntyre: Rob?

Donovic: Rob Donovic, I'm currently away on Military duty.

McIntyre: Jim?

Jolly: Jim Jolly, Livonia, Michigan

McIntyre: Laura:

Toy: Laura Toy, Livonia, Michigan

McIntyre: Mr. McCullough?

McCullough: Brandon McCullough, Livonia, Michigan.

McIntyre: Alright, thank you, everyone. I don't if the City would make any comments? Seeing none, we'll go to the attendees and now the public hearing is now open for comments.

Taormina: Madam President, would you like me to make some opening comments?

McIntyre: Please.

Taormina: Thank you, again, this is a request to rezone the former Wilson School site, which is located at the northwest corner of West Chicago and Harrison. The change would be from PL, Public Land, to R-1, One Family Residential. A single parcel is involved in this petition, it measures roughly 8 ¾ acre. Bordering the site to the north is Clements Circle Park, which is also zoned PL. As you can see from the aerial photograph, the pool and the parking lot are immediately adjacent to the property. To the West, is property owned by the Great Lakes Water Authority. That too, is zoned PL. This approximate 4.7-acre site previously contained a water storage tank. Across Harrison on the east side are single-family homes that are part of the Thomas Elliot subdivision. This subdivision was platted in the early 1950's before the current R-1 standards came into effect, so many of the lots have widths that measure fifty feet instead of the required sixty feet. Then lying to the south on the opposite side of West Chicago are single-family homes that are located on non-platted parcels zoned R-U-F, Rural Urban Farm. The property is owned by Livonia Public Schools which is in the process of selling the land to the applicant, Infinity Homes. If the rezoning advances to first reading, the petitioner intends to submit a site plan for the development of a single-family condominium subdivision. Two conceptual plans have been developed and the first is one that was

prepared by Livonia Public Schools as part of the RFP process. That's the one that's on the screen currently. This plan shows thirty conventional R-1 lots, you can see the road configuration is T-shaped. Stormwater detention in in the southwest corner of the property and there is an open-space park that runs along the north side of the property, adjacent to Clements Circle Park. The other plan was prepared by the applicant. This plan shows thirty-five lots with an L-shaped road patter and storm water on the east side of the property, adjacent to Harrison. The five extra lots are made possible by reducing the lot widths under the single-family cluster option. The future land-use map does designate this site as Parks and Community, reflecting the current ownership and former use of the property as school.

McIntyre: Mark I'm sorry, as what?

Taormina: As Parks and Community. Again, reflecting the ownership by LPS and the former use of the property as a school site. The Planning Commission conducted a public hearing on September 22nd and is recommending the approval of the R-1 zoning, thank you.

McIntyre: Thank you very much. Does anyone have any questions for Mark before we go to the audience?

McIntyre: Councilmember Jolly?

Jolly: Thank you, Madam President. Mark, just real quick, can you indicate to me how narrow is the smallest lot that's been proposed by Infinity and if off hand, how many of those lots of that size are there?

Taormina: The smallest of the group probably is fifty-two feet, and I would say there's probably a dozen or so lots that measure, that have that dimension, maybe a few more. They range in size from about fifty-six to fifty-two feet, that seems to be the average throughout the proposed layout.

Jolly: So, the largest is fifty-six feet wide.

Taormina: Generally speaking, yes, that's accurate.

Jolly: Then my only other question is, do we have any conceptual drawings of what these houses might look like or is it way too early for that?

Taormina: It's a little early for that, maybe the applicant can give us a better idea of the type of homes, given the fact that he's done a number of these projects in the area and he can probably describe what to expect, as far as home designs and sizes.

Jolly: Thank you, sir.

McIntyre: Alright, Council Vice President Bahr, then Rob next, I'll go to you.

Bahr: To the Chair to Mark. Mark, the surrounding homes around there, those other R-1 lots, are those generally forty-foot wide lots, do you know?

Taormina: No, let me see the plan that I was showing, unfortunately, it doesn't show the lot size. Many of the lots that are on the opposite side of Harrison, again, that's an older subdivision, so many of those lots are around fifty-feet wide and then the subdivision to the North and to the West, the R-1 zoning there, those are newer subdivisions, so many of the lots there are sixty-feet in width. It's really just the lots across the street that are fifty feet, across Harrison, that is.

Bahr: That are fifty, ok, thank you.

McIntyre: Councilmember Donovic?

Donovic: Thank you, Madam President, to the Chair for Mark. I've received a few questions. I live in a neighborhood right next door to the East and a few of the questions, on both sides of the proposal are about additional stress on the plumbing infrastructure. What are some of the things that the developer, and I think I've asked you this question in the past about other proposals. What are some of the things that the developer does or we, as a City do, to make sure that there isn't increased flooding? Whether that be outside or even in this storm sewer system for people's actual homes.

Taormina: Of course, the City Engineering department will review all of the plans as it relates to the infrastructure improvements to make sure that both water and sanitary has the capacity to accommodate the additional development and homes. In terms of the storm water management, again, that too, undergoes a significant engineering process. Generally speaking, the outflow, what exits the sites and enters into the storm system should be no more than what is currently entering that system. So, the construction of the basin is designed, the design of the basin is such that the outflow is restricted to a rate of runoff that is commiserate with the agricultural rate, so those basins are designed to capture that water. They have the capacity for the water level to rise and slowly release it back into the system at a very controlled rate of run off. That's the storm water system so all the drainage that is generated from the site and any that flows onto the site from off site currently is picked up and part of that contributing area that goes to the design of the storm water detention basin. Again, it has to go through a strict review by the City Engineering department before it can be approved and possibly even Wayne County. I'm not sure who has jurisdiction in this case.

Donovic: Thank you, Mark.

McIntyre: Thank you. Councilmember McCullough and then Councilmember White.

McCullough: Thank you Madam President. To the Chair to Mr. Taormina. I think this position in point of clarification, the neighboring plots, Chicago Heights looked like an average of 55 to 63 foot lots, Pearl Wilson, and these are all surrounding opposite of Thomas Elliott portion that goes from the Southeast of this property. Pearl Wilson averages anywhere from 57.5 to 60. Livonia Estates is averaging somewhere around 60 feet and then obviously the newer homes that are across that you touched base on even had some with a frontage of 70 feet. Am I correct on some of these assumptions?

Taormina: Yeah, I'm going to share the screen once again and help everyone understand the information that you just supplied, and I apologize if I'm a little slower here. If I zoom into some of the lots and I think if I take away the aerial photograph, maybe it will be easier to see. The site is located here to the, let me just point it out and the screen has to refresh. This is the site and these were the 50 foot lots that I mentioned as part of the Thomas Elliott subdivision and then I think you had mentioned the subdivision bordering to the West and you indicated some of the lot sizes being 70 feet and middle 60's. That's many of the lots here. Directly across the street, you can see these lot widths vary anywhere from 130 feet down to about 62 ½ feet and that's where the R-U-F zoning is located. Then, I'm not sure, I know you recited the names of the subdivision, but the ones to the North here along Cleveland Street which are actually North of Clements Circle Park, those are all 50 feet in width, many of those lots as you can see. Hopefully, you can read these dimensions that I'm highlighting over. There's some variation in the lot widths. Reflecting, I think that many of these bordering subdivisions were platted before the adoption of the current zoning regulations, and that's the reason why they're non-conforming. For decades, the zoning ordinance allowed for 50 foot lots as a standard.

McCullough: Thanks, Mark. I think the other one I was talking about was over by Cleveland Elementary, and then even a little bit to the South and that would be West of Harrison, a little deeper in. The Hartel/Westfield area. I think those showed a little bit closer to the 60 if I did my research correctly.

Taormina: Yeah and I'm not sure, so Cleveland Elementary and maybe you can help me.

McCullough: Cleveland is going to be East of, North of West Chicago, East of Harrison.

Taormina: Oh, I went in the wrong direction, that's why.

McCullough: I guess I just know Thomas Elliott, I'm very familiar with it, I grew up on Clements Circle. I know those are 50. I just wanted to take in consideration at least all of the surrounding area.

Taormina: Yeah and the further East you go, and I don't know where the subdivision line is, in fact, I can show where that line is. This magenta colored line here, that is the boundary between the Thomas Elliott subdivision here and the subdivision to the East and you can see many of these lots are, in fact, 60 feet. Again, indicating that this was developed a few years after Thomas Elliott. I don't know the exact name of this subdivision, I'll find out right now though, maybe that's helpful.

McCullough: No, Mark, I think this is good, this shows the rest of it outside of the Thomas Elliott.

Taormina: Correct, yeah.

McIntyre: Thank you. Anything else, Mr. McCullough?

McCullough: No, Madam President, I am good right now, thank you though.

McIntyre: Alright, then I think we're still looking at Mark's screen, but I believe Cathy, Councilmember White?

White: Thank you, yes, this question is for Mark. Mark, the applicant is not on this call, is that correct?

Taormina: The applicant is available, yes, I see his name under the attendee list.

White: Ok, then this might be a better question for the applicant then, if we get a chance to listen to anything that he has to say. I've heard from at least one of the residents directly across from the subject property, East of Harrison, asking about the detention basin and wondering if that could be moved to the West boundary of the property, more in line with the original plan that you presented from the school district. I don't now if there was any discussion or if that's a possibility, but the resident is not happy about the fact that the detention pond is directly across from their property. I don't know Mark, if you could answer that or if we need to put the applicant on.

Taormina: You know, I don't have enough information, at this time, to fully understand the hydraulics and how that works with drainage. You are correct, the concept plan that was prepared by LPS did show a basin in the Southwest corner and that was somewhat pre-engineered. Whether or not there's an

outlet available near that portion of the site that could be used, I don't know the answer to that. I believe the applicant's engineer is showing it on this side for reasons that really I can't fully describe. But maybe the applicant, Mr. Soave, can provide more information on that.

White: Ok, to the Chair, if we can go at some point, before we go to the audience, to the applicant, I would appreciate it.

McIntyre: Councilmember White, do you mind if I see if Councilmember Toy has any questions for Mr. Taormina? I did see the Petitioner on.

White: No that's fine.

McIntyre: Just a moment, I just wanted to make sure that Mr. Soave, the Petitioner who is on the phone, heard Councilmember White's comment, with that, we go to Councilmember Toy.

Toy: Thank you very much. A couple of comments. Maybe the retention basin is in that direction because isn't the water tower over that way near that site? Would we be safe to say, Mark and others, as we look at this development, all around those areas as Councilman McCullough pointed out, if I heard correctly, all those were developed at different stages of time. I'm going to guess down just South of West Chicago, the other side, East of Harrison, that was probably done in the 50's somewhere. I don't know when Cleveland School was built, nor do I know when Emmerson was built over there. There are some older homes over there, nice homes but you know, they're older on various lots, some lot splits were done over in those directions sometime back as well. Would we be safe to say there's a conglomeration of different lot sizes in that area, both North, South, East and West? Would that be fair, Mark?

Taormina: Yeah, I think that's fair, the predominant zoning is R-1, but because the area developed anytime from late 40's to the late 60's, the majority of those lots were established, but there is variation in size within that R-1 zoning. As I indicated, there was a time early on, when 50 foot lots were the standard, and then in the mid-60's, that changed over to 60 feet. So, I think that's the reason why you see the 60 in some of those subdivision that were platted in the mid to late 60's.

Toy: Yes, ok, great. Thank you, thank you Madam President.

McIntyre: Thank you Councilmember Toy, I do not see any other hands up from the Council so with that, we will go to the attendees, but before we open it up to the attendees I would like to ask Mr. Soave if he would like to comment on Councilmember White. Rico, Mr. Soave?

Soave: Hello? I keep on being heard and unheard. I hope I continue to be heard.

McIntyre: You are heard and if you could give us your name and address please?

Soave: Sure, Enrico Soave for the petition this evening. 37771 Seven Mile Road, Livonia.

McIntyre: Thank you, good evening, Mr. Soave.

Soave: Good evening. Directly in regards to Councilmember White's comment and question. After digging in this more, engineering-wise, we found that there is a 36-inch water main that runs along West Chicago, which would make sense, since Great Lakes Water Authority tower is there. So, that created immediate concerns, because the actual storm water inlet is across the street on the South side of West Chicago. So, we'd have either open cut the road and bore underneath that 36-inch water main, which is not an easy task and I think we could get a permit to do so. That's why we have to change to the East side of the property somewhere where that pond must go, because we would pick up storm water drain alongside Harrison. So, that is that and a few updates if I may, since the last hearing in front of the Planning Commission in September. We've been exploring the option of purchasing a couple of acres from the Great Lakes Water Authority, which would be probably the southern 2 ½ acres of that property. We're still in negotiations, nothing is under contract yet, but there is a possibility of that. That's why the site plan hasn't changed much. What Mark showed tonight is very preliminary. Secondly, we've been in discussions with the Administration and Parks and Rec about potentially giving them some property to enhance their parking issues for the Clements Circle Swim Club. So, hopefully, when that comes to fruition, then we can provide some relief for the Swim Club and the surrounding neighborhood. I believe someone questioned style of homes that would be on that site. They would be compatible with a lot of subdivisions we've done there in the past five years. Probably, mostly resembling Washington Park subdivision at Hix and Ann Arbor Road. That was a 45-60 lot subdivision, which the home style would be very similar to those. Drainage. I think Mr. Taormina addressed that. When new subdivisions come in, they usually alleviate any water and drainage problems. We've done soil borings on the property and based upon the results, we haven't seen anything showing that there's a high saturation point of water there. So, we don't anticipate any problems with that. Anything else, I would love to answer any questions or anything else that Council would have this evening.

McIntyre: Again, before we go to the audience, Council member Donovic, did you have a question for Mr. Soave?

Donovic: Yes, I did, thank you, Madam President. Thank you to the Petitioner for being here tonight, a couple of questions. What would change if you did purchase land, 2 acres, you said, roughly from the Great Lakes Water Authority. What are you trying to accomplish there?

Soave: Well, we first got this property under contract. We did make a few phone calls, because as Mark Taormina can probably chime in on, there was some dubious nature owning the property. We thought that Wayne County owned it, and then Great Lakes Water Authority says they were given the property after they took over the water for the City of Detroit, I believe.

McIntyre: Mr. Soave, just to clarify, the property that you are talking about is not the school district property, right?

Soave: No, no, this one belongs to Great Lakes Water Authority. This is not even under contract and is still 50/50 if it's even going to happen. That's part of the reason we haven't had a better site plan, is because we were waiting for this to happen or not happen, which we should know in probably 30 days or less, but if Mark showed the aerial view, you show it's the back path of the adjacent property to the West. One of the reasons why, it's a land-locked piece of property and I think one of the members at the Planning Commission mentioned, once this subdivision is built, nobody likes land-locked property. We agreed with that and said ok, let's explore this further. So, we did, and they seem like they want to sell, but with real estate, sometimes, the devil is in the details, so we're waiting to flush that out. I think the yield would probably be 9 or 10 more home sites in the back there, which were probably going to be in a cul-de-sac, so, greater flexibility, probably going to provide better ingress and egress, but that's the purpose why we pursued this piece of property.

Donovic: Hypothetically speaking, in terms of the basin that Councilwoman White had mentioned earlier, I like it on the corner because I think its aesthetically pleasing, however, I can understand concerns from residents. Maybe you can add some sort of landscaping that breaks that up, but if you were to be able to purchase some of that land to the Northern portion of the Great Lakes Water Authority, could you, hypothetically speaking, add catch water basin in that corner with additional homes or you're not sure if that could work over there?

Soave: Not having a professional Civil Engineering degree, I don't think it's possible, you have to go with the grading of the existing land and the biggest thing is, from storm water pond, you're going to have to have an available inlet or outlet where you discharge into and I don't see anything over there that would allow for that. We don't have main roads and number two, it could be a private system. The only ones we found were on the South side of West Chicago or on Harrison, I think close to Clements

Circle, that's available. Don't forget, this all works out for the whole entire development so it has to flow throughout the whole development, then discharge based upon the grade, so putting in all the way in the corner there, I don't think is a likelihood, if this piece were actually purchased.

Donovic: Ok, those were my questions, I appreciate your answers. Just one more point, I guess from my personal point, is, I do like the catchwater basin in the corner, it is a nice entrance. I live next door and I drive down West Chicago and Harrison often and there is a lot of traffic there and I think it adds to the environment, to the community, I think it is a nice touch. I don't like the homes along West Chicago, in front of it, blocking the potential pond, I guess you would call it, but I do think it would be a nice addition to that whole area. As you enter the park, I think it is nice to have that sort of welcoming atmosphere. So, thank you for being here tonight, sir.

Soave: You're welcome, thank you.

McIntyre: Thank you Councilmember Donovic, Councilmember McCullough?

McCullough: Thank you, Madam President. Just looking at this, I know the site plan is very preliminary but something that I took from it, I don't like the storm water detention basin and the overflow where it is, at least where you have it located. I do think that on a corner of the property would be a better look for the sub and then the other opportunity I see, is, with Clements Circle Park, you've got the pathways that run around the site of Clements Circle Park itself. I know, especially the ones that are blocks 10 and 11, you have an opportunity to integrate this development into Clements Circle Park, which, at least from my angle, would be a great amenity. At least from a sustainability and that kind of perspective, so 9 and 10 right there in the corner, there's a, in my opinion, an ability to connect to the proposed development into the trails. Then the last thing I have, one of the reasons I went with the surrounding area, I know Thomas Elliott sub is more of the 50 foot, I'd like to see the 60 foot minimum, I think that especially now in 2020 it's a great piece of property. I think it would pair well, its not that much more, I think from the original layout from Livonia Public Schools to this layout, there is an extra 5 homes. I know it's early, I definitely like this development, those are my wish list items, if you may take those into consideration, it would be appreciated. That's all I have.

McIntyre: Thank you, Councilmember Toy, did you have a question?

Toy: I'm all set, it got answered, thank you.

McIntyre: Ok, thank you. At this time, we will go to the audience. I would ask you to please raise your hand if you are joining us by phone, you use #9 to be recognized. Is there anyone who would like to ask any questions about

this proposed rezoning? Alright, it looks like we have Ostofinski's. Good evening.

Ostofinski: Hello, my name is Dave Ostofinski and I live on North Clements Circle. I've got a couple of questions. One is the timetable to build these homes. Something like this, would the developer build everything all at once or will this be over a course of years and not until they're sold or something like that?

McIntyre: Me. Soave, feel free, if you like, to answer any of these questions. So just go ahead and put your hand up.

Soave: Am I audible? This will be developed all at once and homes will start construction immediately thereafter. The average time for a subdivision of this size to be completed would be a year and a half, two years maximum based upon past performance, and the past five years and I use five years as a benchmark because of the economic factors playing into that. Additionally, this development would probably start being developed probably the tail end of summer, based upon the meeting here tonight, we're still going through site plan approval and all additional municipal approval. In order to start and put a shovel in the ground would probably be late summer of 2021.

McIntyre: Thank you, Mr. Soave. Mr. Ostofinski, did that answer your question?

Ostofiniski: Yes, it did, and I've got one more minor question. There's a few good-sized in that lot, would they be taken down, just out of curiosity?

McIntyre: Rico, did you hear that question?

Soave: Yes, I'm here, I just don't want to speak out of turn, Madam President.

McIntyre: Please, go ahead.

Soave: We always try to save as many mature trees as possible, but right now, its still too early to tell where those trees are at and what kind of infrastructure is going in there. Usually, the perimeter trees would stay, and the interior trees would never survive a development going through, especially where the trees are located. If they are perimeter trees, we try to keep them, but interior, even if they stayed, they would die anyway from the roots being disturbed and the changes in the grating.

Ostofinski: Thank you very much.

McIntyre: Thank you, Mr. Ostofinski. Is there someone would like to speak. It looks like Vice President Bahr.

Bahr: Not seeing anyone else come forward, since this is a zoning question, I have, as was talked about earlier, I think its what people are getting at, I'm a little bit uncomfortable with these narrow lots as being show on this preliminary plan, I think especially with some of the lot that's around there, pushing towards a 60 would make a lot more sense to me. From a zoning perspective, its hard to argue against R-1 here, based on what we see around there. I'd offer to move forward with an R-1 rezoning here. Madam President, I should just say and Council, we say this all the time, but I don't want to take for granted that the attendees are aware of this, but anyone from the neighborhood watching, its our practice, when doing a rezoning like this, that there's a first reading and then a second reading before it's approved, but we typically hold up the second reading until there's a site plan approval. So, there's a way to go on this and plenty of opportunity to continue to discuss the site plan, so thanks.

McIntyre: Thank you, Mr. Bahr. Councilmember Toy and then I'll go to Ryan in the audience.

Toy: If I may, Madam President, to Mr. Soave. Mr. Soave, what kind of price range of are we speaking of for these proposed homes?

Soave: Yes, if I may. We've reached a very peculiar time in home construction right now. Yes, the market is good, but if anyone has been paying attention, prices, especially with lumber, interior doors, etcetera, have gone through the roof. If we were to get back to a normal market in the Fall of next year, prices would be in the latter, higher, 200's. $275K is probably a fair estimate. That's all considering a normal market. If we're still paying double for lumber six months from now, that might be a different story.

Toy: I didn't mean to put you on the spot, but if we talk about an enhancement for the area that can be construed as that in regard to the price of the homes. I'm not sure what the price of a normal home is, down in those areas, depending on lot size, brick, etcetera, up to date. Do we have any idea of that, Mr. Soave, or no?

Soave: I can give you some empirical data that every sub we've built in the past five years, we've increased the home value in the surrounding there probably by 10-15% easy.

Toy: That's fair enough, I just wondered, thank you, Madam President.

McIntyre: Thank you, again, I'll go to Ryan, but Mr. Soave, just for clarification, there would be some relationship too, between the pricing and the lot size, is

that correct? I know the house is the majority of the cost, but there would be some correlation, correct?

Soave: There is a definitive correlation with density and the prices. Initially, we were looking to do attached condominiums in this area or some mixed blend, but speaking to the Administration and some of the Council members, mainly Mr. Donovic, we decided to go single-family and maybe work out maybe a higher density. Also, if we're going to take into consideration exacting some of the land we are purchasing and donate to Parks and Rec, that should also factor into density as well, Madam President.

McIntyre: Thank you, now I'd like to go to Ryan. Good evening Ryan, if you could unmute and share with us your name and address, please? Good evening, Ryan? I don't know, Casey, if we're having some kind of technical, for those of you on the line, Casey is our Information Services Director who is the Zoommaster and there are occasional technical problems beyond our control with Zoom and I didn't know if we were perhaps, experiencing those things. Ryan, are you there?

Ennis: Yes, can you hear me? Ok, cool.

McIntyre: Can you please share with us, your name and address?

Ennis: Yes, its 9860 Garvett Street.

McIntyre: Your last name, please?

Ennis: E-N-N-I-S.

McIntyre: Thank you, good evening, go ahead please.

Ennis: I just had some concerns, especially looking at, I've been a long time resident here for quite a few years and I just had some concerns when I saw the planning, as far as trying to build so many homes into that area. The area is not that big for homes to be built on top of each other. I know that was the design of this sub, but times have changed a lot since 1952 when my property was built. Just so you know, the overall congestion and traffic it's going to create if it's not done properly. Also, too, how its going to look with being adjacent or abutting the park that's there, I just have concerns about that as well. A lot of people that live on Harrison, they appreciate the greenspace that's been there for so many years.

McIntyre: Understood, thank you, anything else?

Ennis: No, that's it.

McIntyre: Thank you for joining us tonight. Anyone else who would like to speak? It looks like we have a number of callers on and I want to make sure that people have an opportunity to ask questions. I'm not seeing any hands being raised, I know that people have been able to raise their hands, so I assume there hasn't been any problems with Zoom functioning tonight to allow people to raise hands so I'm going to say, going once, going twice, last opportunity, if anyone else from the audience that would like to ask any questions or make any comments. Dana?

Sevilla: Hi. My name is Dana Sevilla, I live at 28537 Elmira Street. I guess my question is, is this set in stone, I missed the beginning part and someone threw me in this at the last second. Is this set in stone, like this is going into place no matter what?

McIntyre: No. I am happy to explain to you where we are in the process. This is a public hearing, this has been through the planning process. The Planning Commission has made a recommendation to approve the rezoning. So, all we're talking about is rezoning right now, which would allow, without any waivers, Mark, please correct me if I'm wrong, R-1 would allow 60x120 foot lots, correct?

Taormina: That is correct.

McIntyre: So, Dana, that is all we are talking about right now. So, R-1 zoning allows 60x120 foot lots that's the minimum conforming size for R01. The original site plan that the Planning Commission has suggested approval had lots that were smaller than 60 feet. That's allowed with a waiver.

Taormina: Yes, so, what's reflected on the conceptual plan would require a special waiver approval as a single-family cluster. The Planning Commission really did not take a position with respect to the plan, but they did, however, agree that R-1 zoning was appropriate, assuming that it would be a conventional design. They haven't gone over the justification yet for a single-family cluster.

McIntyre: Ok, got it. So that's what we're talking about tonight. The Planning Commission has gone to Council to pass on their decision to the City Council, recommending approval of the rezoning of the public land to R-1, one family residential. The next step is, this will go onto a City Council agenda, which will get what we call a first read. That simply means that on issues where we change ordinances and several other things that have a big effect on the City and major issues, we do a first read. Someone just offers it. There's no voting. Before we do a second reading, and second reading is where there's a vote taken, we require that there be a site plan. We go through the site plan approval process and this is where we get into the discussion of exactly how, if the lots are going to conform to the

minimum R-1 size or if they're going to be waivers requested, where retention, detention ponds are located, where the entrances to the subdivision would be, all those things. So, that all gets discussed and reviewed by the Planning Commission and Council before the rezoning comes back to City Council for a final vote on just the rezoning. The site plan, that voting is taken up separately. So, we're early in the process.

Sevilla: Ok, gotcha. I guess my only questions would be then, what would be butting up to the park. Would that be the back of people's homes? Would that be a road? What kind of ideas do you guys have for that?

McIntyre: Again, what we're really talking about tonight is just the rezoning, but Mark could bring up, and remember, as the Petitioner, Mr. Soave, has explained, he's trying to acquire some additional property that now belongs to the Great Lakes Water Authority, that's to the West to where Wilson school was. I don't think we're clear onto what extent it would change the layout, but Mark, could you please bring up the current site plan? Mark, you can point on this and I can't.

Taormina: If I understand the question, its how would this subdivision be developed adjacent to the park, these are showing the rear yards of these homes bordering the South side of Clements Circle Park. I just caution and say that the Petitioner has indicated that they're rethinking the plan, so this arrangement could very well change.

McIntyre: Part of the discussion again, we're not into the site plan, but part of the discussion is if the developer or the Petitioner would be able to make that land available to the City for greenspace. We're very preliminary in the discussions on the site plan, we're really focused on the zoning, but we do have a very preliminary, conceptual site plan. Anything else?

Sevilla: No thank you.

McIntyre: Did you give us your name, Dana, your first and last name and your address please for the record.

Sevilla: Yeah, I shared that, but I'll give it again, just in case.

McIntyre: If you did, that's fine, thank you. Is there anyone else who would like to make any comments, ask any questions? Alright, I'll make my calls again, going once, going twice, alright, three times. Seeing no one, we will adjourn this public hearing at 7:52 p.m. Good night everyone and thank you.

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President

Scott Bahr
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Rob Gjonaj Donovic
Jim Jolly
Brandon McCullough
Laura M. Toy
Cathy K. White

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2251
FAX: (734) 421-4388

October 8, 2020

To be announced at the City Council Regular Meeting of Monday, October 19, 2020

A Public Hearing for the following item will be held
Monday, November 9, 2020
7:00 P.M.
* Due to COVID-19, Public Hearings will not be held in the City Hall Auditorium
You may connect on Zoom: https://us02web.zoom.us/j/87333432528
or by phone at (312) 626-6799, ID: 873 3343 2528
To participate, use the 'Raise Hand' button on Zoom or press *9 on your phone to be called on

Petition 2020-08-01-05 submitted by Infinity Homes and Company, pursuant to Section 23.01 of the City of Livonia Zoning Ordinance #543, as amended, requesting to rezone the property at 28400 West Chicago Avenue (former Wilson Elementary School site) located on the north side of West Chicago Avenue between Harrison and Middlebelt Roads in the Northwest ¼ of Section 36 from PL (Public Lands) to R-1 (One Family Residential).

cc: Mayor, City Clerk (suggested publication 10/18/20), City Treasurer, City Attorney, Director of Planning & Economic Dev., City Assessor, City Engineer, Director of Public Works, Director of Finance and Director of Inspection

PLANNING COMMISSION

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PLANNER IV

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LIVONIA, MICHIGAN 48154-3097
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September 23, 2020

Honorable Members of the City Council
City of Livonia, Michigan

Re: Petition 2020-08-01-05 – Infinity Homes and Company

Dear Council Members:

At the 1,160th Public Hearings and Regular Meeting held by the City Planning Commission on September 22, 2020, in the Livonia City Hall, the following resolution was unanimously adopted:

#09-46-2020 **RESOLVED**, that pursuant to a Public Hearing having been held by the City Planning Commission on September 22, 2020, on Petition 2020-08-01-05 submitted by Infinity Homes and Company pursuant to Section 23.01 of the City of Livonia Zoning Ordinance #543, as amended, requesting to rezone the property at 28400 West Chicago Avenue (former Wilson Elementary School site) located on the north side of West Chicago Avenue between Harrison and Middlebelt Roads in the Northwest ¼ of Section 36 from PL (Public Lands) to R-1 (One Family Residential), the Planning Commission does hereby recommend to the City Council that Petition 2020-08-01-05 be approved for the following reasons:

1. That the proposed change of zoning is compatible to and in harmony with the surrounding uses and zoning districts in the area.

2. That the proposed change of zoning will provide for single residential development similar in density to what exists in the neighboring area.

3. That the proposed change of zoning is consistent with the Future Land Use Plan designation of low-density residential land use in the general area; and

4. That the proposed change of zoning constitutes a reasonable and compatible transition between the existing neighborhood and adjoining nonresidential land uses in the area.

FURTHER RESOLVED, that notice of the above hearing was given in accordance with the provisions of Section 23.05 of Zoning Ordinance #543, as amended.

Very truly yours,

APPROVED FOR SUBMISSION

Maureen Miller Brosnan, Mayor

CITY PLANNING COMMISSION

Sam Caramagno, Secretary

cc: Mayor, Clerk, Law
Rino Soave, Infinity Homes & Co., 42400 Grand River, Ste 112, Novi, MI 48375

REZONING APPLICATION
CITY OF LIVONIA, MICHIGAN

All applications must be presented in quadruplicate to the City Clerk, 33000 Civic Center Drive, Livonia, MI 48154-3097. Applications **must** include property owner's name, address and notarized signature. You are invited and encouraged to review your proposal with the Planning Department staff.

Date Filed: August 20, 2020 Petition 2020-08-01-GS

Site Address: 28400 W. Chicago (Former Wilson School Site) Sidwell 46-142-99-0016-003

Requesting To Rezone Property From PL To R1

For the Following Reason (s) to develop & construct single family housing

Applicant: Rino Soave Business/Company: Infinity Homes + Co.

Applicant's Address: 42400 Grand River Ave. Suite 112 City: Novi State: MI Zip Code: 48375

Applicant's Phone # (248) 449-8084 Applicant's Email RSoave@infinityhomescorp.com

Please provide the following information:

1) **Legal Description** of the property to be considered. Paper copy must be clearly printed.
2) **Fully Dimensional Map (13 copies)** drawn at an appropriate scale, with a north arrow, dated & legend key to symbols and showing:
   - The land that would be affected by the proposed amendment.
   - The dimensions, square footage & acreage of the land.
   - The existing conditions of the site, including all structures & parking layout.
   - A legal description of the land to be rezoned.
   - All public and private right-of-ways & easements bounding & intersecting the site.
   - A preliminary plan showing the proposed land use(s) of the land under consideration.
   - The zoning classification of all abutting zoning districts.
   - The structures and existing land uses on all property adjacent to the subject parcel and on other such property as may, in the City Planner's determination, be necessary to properly reflect the existing character of the surrounding neighborhood.
3) A copy of the Fully Dimensional Map submitted in a pdf. format either on a CD or it can be emailed to Planning@ci.livonia.mi.us

Owner of Property: Infinity Homes + Co

Owner's Address: 42400 Grand River Ave Ste 112 City: Novi State: MI Zip Code: 48375

Owner's Phone # (248) 449-8084 Owner's Email rsoave@infinityhomescorp.com

Signature of Owner: _____ Print Name: Rino Soave

Subscribed and sworn to before me, a Notary Public in and for the County of Oakland State of Michigan

on this 20TH day of August 20 20.

Signature of Notary Elizabeth Marie Thomas My commission expires 4/17/2024

APPROVED AS FORM
Department of Law

By: Michael E. Cristini

Date: 8/20/2020

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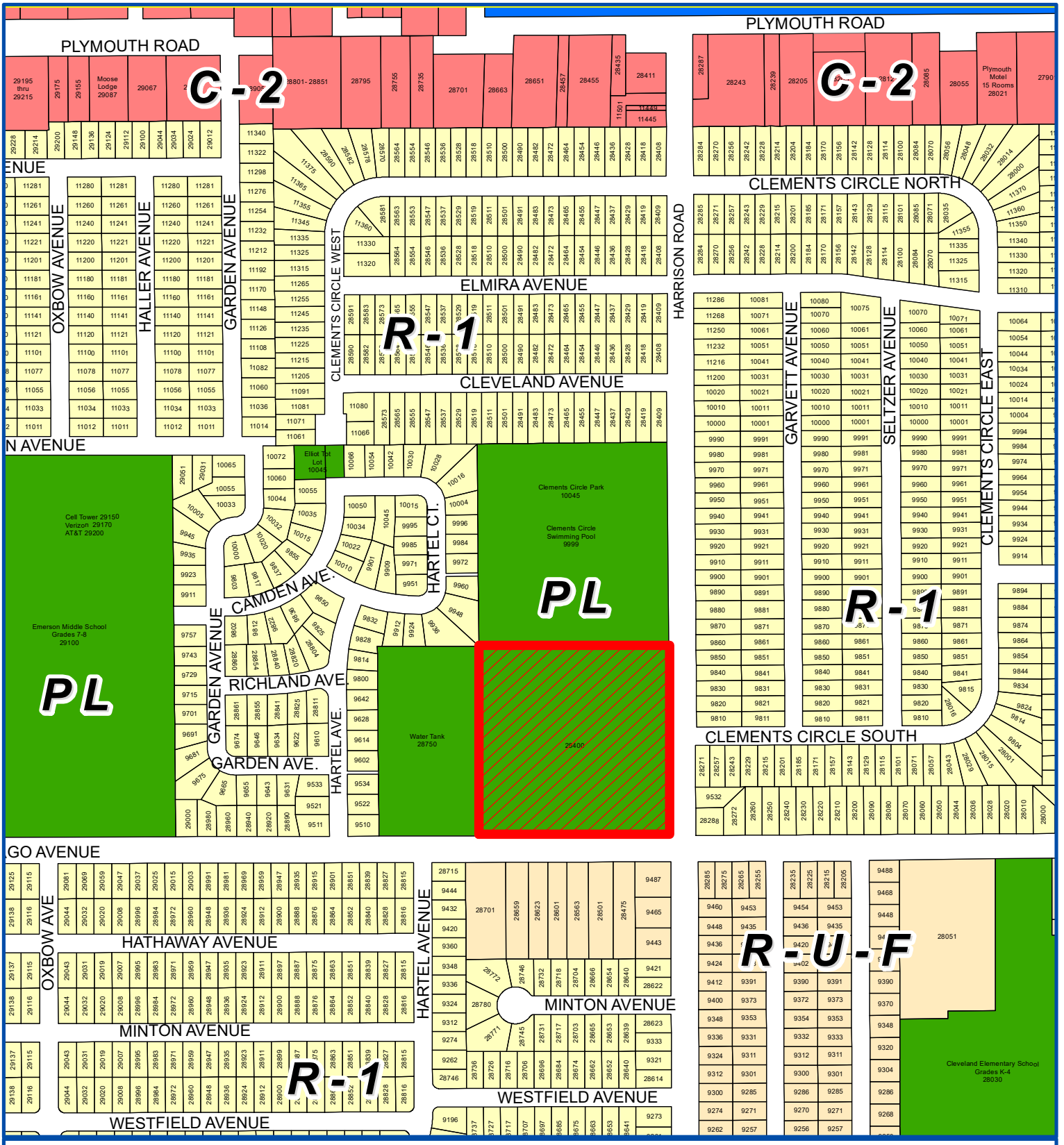
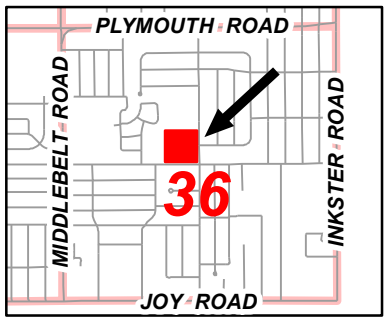




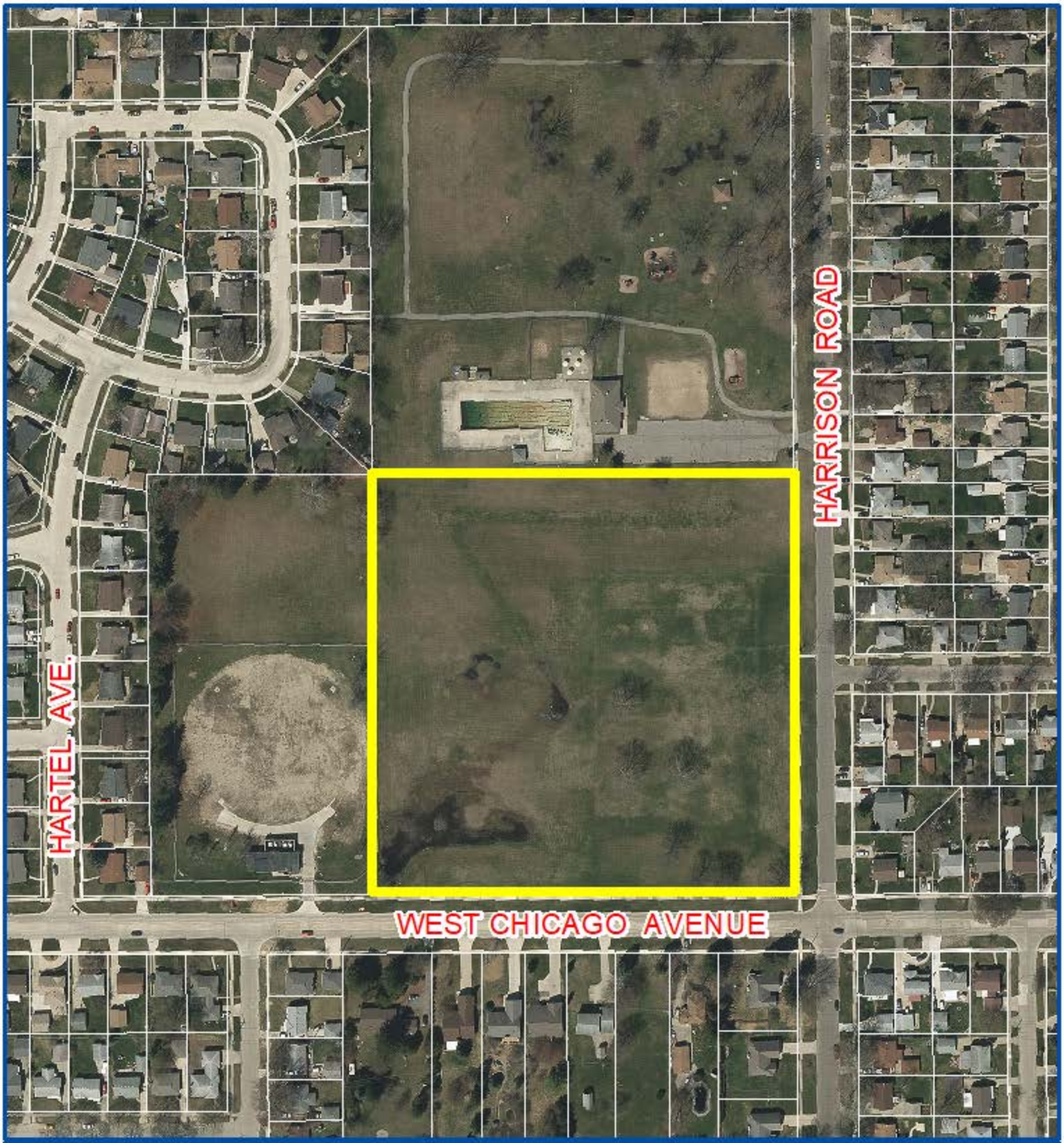
Address & Zoning Map

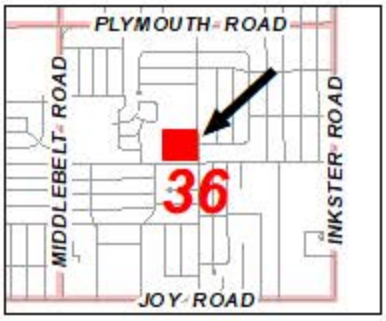
Petition 2020-08-01-05
Infinity Homes and Company
28400 West Chicago Avenue
PL to R-1

N

Not to Scale

City of Livonia
Planning Department





Aerial Map

Petition 2020-08-01-05
Infinity Homes and Company
28400 West Chicago Avenue
PL to R-1

N

Not to Scale

City of Livonia
Planning Department

PLANNING COMMISSION STAFF NOTES

PUBLIC HEARING

ITEM 1

Petition 2020-08-01-05 submitted by Infinity Homes and Company pursuant to Section 23.01 of the City of Livonia Zoning Ordinance #543, as amended, requesting to rezone the property at 28400 West Chicago Avenue (former Wilson Elementary School site) located on the north side of West Chicago Avenue between Harrison and Middlebelt Roads in the Northwest ¼ of Section 36 from PL (Public Lands) to R-1 (One Family Residential).

September 15, 2020 Study Meeting:

This petition seeks to rezone the former Wilson Elementary School site from PL (Public Lands) to R-1 (One Family Residential). The subject site is located at the northwest corner of West Chicago Avenue and Harrison Road. The square-shaped parcel measures 617' x 617' and is 8.74 acres in total area. It is bordered to the south by West Chicago Avenue and to the east by Harrison Road. Abutting the property to the north is the Clements Circle swimming pool and park, zoned PL, and to the west is property owned by Wayne County that previously contained a water storage tank, also zoned PL. The proposed rezoning and subsequent residential development would involve the entire property, which is currently owned by Livonia Public Schools (LPS) and is in the process of being sold to the applicant.

Except for the adjoining PL-zoned properties, the site is surrounded by single family homes. To the east, north and west are platted subdivisions, including the Thomas Elliot and Chicago Heights Subdivisions, zoned R-1. Notwithstanding the R-1 zoning, most of the lots in the Thomas Elliot Subdivision located east and north of the site were platted in the early 1950's and contain nonconforming lot widths that measure fifty feet (50') instead of the required minimum sixty feet (60'). Directly to the south, across West Chicago Avenue, are R-U-F (Rural Urban Farm) zoned parcels that are unplatted.

At this time, the Petitioner has not submitted any preliminary plans to show how the site might be developed.

The Future Land Use Map shows the site as Parks and Community, reflecting the current ownership and former use of the property.

September 22, 2020 Public Hearing:

Review at the Study Meeting focused mainly on the characteristics of the site and the surrounding area, including Clements Circle Park to the north and the mostly undeveloped land to the west, either owned or leased by Great Lakes Water Authority (GLWA). The Petitioner explained the several factors that will influence the ultimate design of the site, including the presence of a large watermain under West Chicago Avenue, security fencing along the west side of the property where GLWA maintains equipment, the proximity of the City splash pool and parking lot to the north, and the most practical location for the stormwater

detention on the east side adjacent to Harrison Avenue for access to an outlet structure.

The consensus is that R-1, One Family Residential represents a logical zoning change given the surrounding pattern of development.

Approving Resolution: That the request to rezone the property at 28400 West Chicago Avenue (former Wilson Elementary School site) from PL to R-1 is hereby approved, subject to City Council approval, for the following reasons:

1. That the proposed change of zoning is compatible to and in harmony with the surrounding uses and zoning districts in the area.

2. That the proposed change of zoning will provide for single residential development similar in density to what exists in the neighboring area.

3. That the proposed change of zoning is consistent with the Future Land Use Plan designation of low-density residential land use in the general area; and

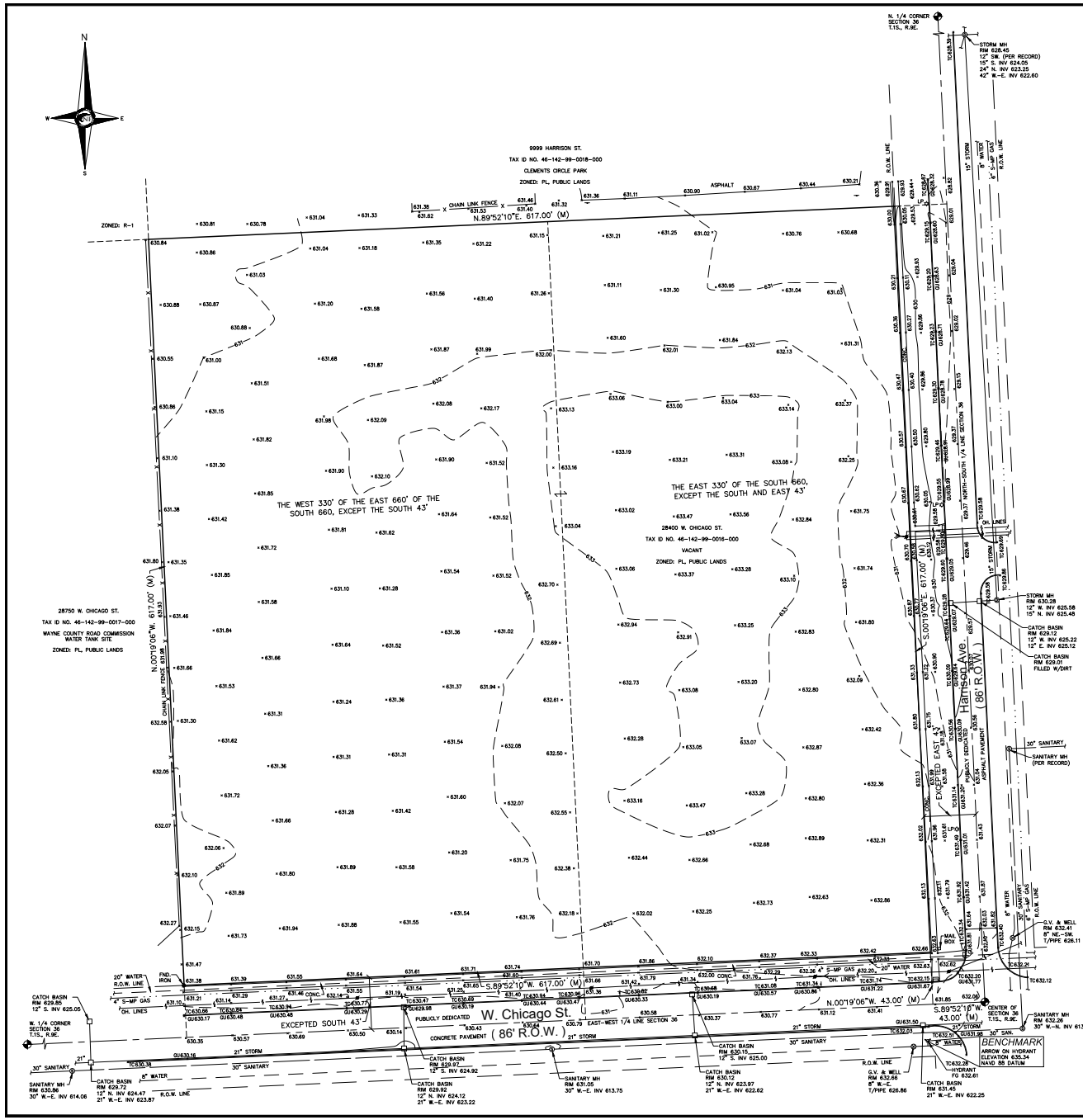
4. That the proposed change of zoning constitutes a reasonable and compatible transition between the existing neighborhood and adjoining nonresidential land uses in the area.

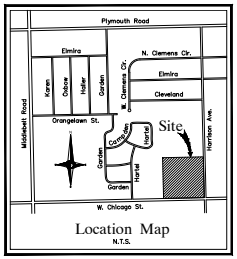
Denying Resolution: That the request to rezone the property at 28400 West Chicago Avenue (former Wilson Elementary School site) from PL to R-1 is hereby denied for the following reasons:

1. That the proposed zoning district will not provide for development of the subject property in a manner consistent with its size and location.

2. That the proposed change of zoning will provide for an unacceptable increase in the population density in the subject area; and

3. That the proposed change of zoning will not provide for the development of the subject property in a manner that will be compatible with other properties in the surrounding area.





CERTIFICATE OF SURVEY

WE HEREBY CERTIFY THAT WE HAVE SURVEYED THE PROPERTY HEREIN DESCRIBED.

KEVIN NAVAROLI, P.S. NO. 53503 — 10-28-2019 DATE

SURVEY DATA

SITE AREA:
380,687 SQUARE FEET OR 8.74 ACRES OF LAND

ZONED:
PL, PUBLIC LANDS

PARKING SPACES:
NO PARKING SPACES (VACANT)

A SURVEYOR CANNOT MAKE A CERTIFICATION ON THE BASIS OF AN INTERPRETATION OR OPINION OF ANOTHER PARTY. A ZONING ENDORSEMENT LETTER SHOULD BE OBTAINED FROM THE CITY OF LIVONIA TO INSURE CONFORMITY AS WELL AS MAKE A FINAL DETERMINATION OF THE REQUIRED BUILDING SETBACK REQUIREMENTS.

LEGAL DESCRIPTION - PER TITLE COMMITMENT

LAND IN THE CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN, DESCRIBED AS FOLLOWS:

THE WEST 330 FEET OF THE EAST 660 FEET OF THE SOUTH 660 FEET OF THE NORTHWEST 1/4 OF SECTION 36, TOWN 1 SOUTH, RANGE 9 EAST, CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN, EXCEPTING THE SOUTH 43 FEET THEREOF.

AND THE EAST 330 FEET OF THE SOUTH 660 FEET OF THE NORTHWEST 1/4 OF SECTION 36, TOWN 1 SOUTH, RANGE 9 EAST, CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN, EXCEPTING THE SOUTH 43 FEET THEREOF. ALSO EXCEPT THE EAST 43 FEET OF THE SOUTH 660 FEET OF THE NORTHWEST 1/4 OF SECTION 36, TOWN 1 SOUTH, RANGE 9 EAST, CITY OF LIVONIA, WAYNE COUNTY.

TAX ID NO. 46-142-99-0016-000

ADDRESS: 28400 W. CHICAGO, LIVONIA, MI 48150

THE ABOVE LEGAL DESCRIPTION IS FROM FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NO. NCS-963716-MICH, COMMITMENT DATE: SEPTEMBER 10, 2019.

TITLE REPORT NOTES

REFERENCE FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NUMBER: NCS-963716-MICH, EFFECTIVE DATE: SEPTEMBER 10, 2019.

SCHEDULE B – PART II, EXCEPTIONS:

EXCEPTIONS 1, 4, 5, 6, 7 AND 10 REFER TO THE OWNERSHIP OF THE PROPERTY AND/OR ARE NOT PLOTTABLE.

2. ANY FACTS, RIGHTS, INTERESTS, OR CLAIMS THAT ARE NOT SHOWN BY THE PUBLIC RECORDS BUT THAT COULD BE ASCERTAINED BY MAKING INQUIRY OF PERSONS IN POSSESSION OF THE LAND.

3. EASEMENTS, ENCUMBRANCES, OR CLAIMS THEREOF, NOT SHOWN BY THE PUBLIC RECORDS.

8. INTEREST IF ANY, OF THE UNITED STATES, STATE OF MICHIGAN, OR ANY POLITICAL SUBDIVISION THEREOF, IN THE OIL, GAS AND MINERALS IN AND UNDER AND THAT MAY BE PRODUCED FROM THE CAPTIONED LAND.

9. ANY RIGHTS, TITLE, INTEREST OR CLAIM THEREOF TO THAT PORTION OF THE LAND TAKEN, USED OR GRANTED FOR STREETS, ROADS OR HIGHWAYS.

BASIS OF BEARING NOTE

ALL BEARINGS ARE IN RELATION TO THE PREVIOUSLY ESTABLISHED EAST AND WEST 1/4 LINE OF SECTION 36 OF CHICAGO HEIGHTS SUBDIVISION, WAYNE COUNTY RECORDS. (S.89°52'10"W.)

FLOOD HAZARD NOTE

THE PROPERTY DESCRIBED ON THIS SURVEY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY; THE PROPERTY LIES WITHIN ZONE X OF THE FLOOD INSURANCE RATE MAP IDENTIFIED AS MAP NO. 26163C0227E BEARING AN EFFECTIVE DATE OF 2-2-2012.

TOPOGRAPHIC SURVEY NOTES

ALL ELEVATIONS ARE EXISTING ELEVATIONS, UNLESS OTHERWISE NOTED.

UTILITY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND RECORDS OF UTILITY COMPANIES, AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, OR EXACTNESS OF LOCATION.

DTE DISCLAIMER NOTE

PLEASE NOTE THAT DTE HAS NEW REGULATIONS THAT MAY IMPACT DEVELOPMENT OUTSIDE THEIR EASEMENT OR THE PUBLIC RIGHT OF WAY. CLIENT SHALL CONTACT DTE TO DETERMINE THE "NEW STRUCTURES AND POWER LINE" REQUIREMENTS AS THEY MAY APPLY TO ANY FUTURE BUILDING OR RENOVATION OF A STRUCTURE. DTE ENERGY CAN BE CONTACTED AT 800-477-4747

MISS DIG / UTILITY DISCLAIMER NOTE

A MISS DIG TICKET NUMBER A092870361, PURSUANT TO MICHIGAN PUBLIC ACT 174 WAS ENTERED FOR THE SURVEYED PROPERTY. DUE TO THE EXTENDED REPORTING PERIOD FOR UNDERGROUND FACILITY OWNERS TO PROVIDE THEIR RECORDS, THE SURVEY MAY NOT REFLECT ALL THE UTILITIES AT THE TIME THE SURVEY WAS ISSUED ON OCTOBER 28, 2019. THE SURVEY ONLY REFLECTS THOSE UTILITIES WHICH COULD BE OBSERVED BY THE SURVEYOR IN THE FIELD OR AS DEPICTED BY THE UTILITY COMPANY RECORDS FURNISH PRIOR TO THE DATE THIS SURVEY WAS ISSUED. THE CLIENT AND/OR THEIR AUTHORIZED AGENT SHALL VERIFY WITH THE FACILITY OWNERS AND/OR THEIR AUTHORIZED AGENTS, THE COMPLETENESS AND EXACTNESS OF THE UTILITIES LOCATION.

LEGEND

MANHOLE(MH) / CO	EXISTING SANITARY SEWER / EXISTING SAN. CLEAN OUT
HYDRANT(HYD) / GATE VALVE(GV)	EXISTING WATER MAIN
MANHOLE(MH) / CATCH BASIN(CB)	EXISTING STORM SEWER
CBB	EX. BEEHIVE CATCH BASIN
UTILITY POLE / GUY POLE / GUY WIRE	EX. UNDERGROUND (UG.) CABLE / OVERHEAD (OH.) LINES
UP / LP	LIGHT POLE
S	SIGN
	EXISTING GAS MAIN
ASPH.	ASPHALT
CONC.	CONCRETE
FD. / FND.	FOUND
RET. WALL	RETAINING WALL
R.O.W.	RIGHT-OF-WAY
SPK	SET PK NAIL
(TYP)	TYPICAL
(R)	RECORD
(M)	MEASURED
C/L	CENTERLINE
P/L	PROPERTY LINE
GM	GAS METER
EM	ELECTRIC METER
L/S	LANDSCAPE
DS	DOWNSPOUT
PM	PARKING METER

NOWAK & FRAUS ENGINEERS
CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NOWAKFRAUS.COM

SEAL

STATE OF MICHIGAN — KEVIN NAVAROLI — PROFESSIONAL SURVEYOR NO. 53503 — LICENSED PROFESSIONAL SURVEYOR

PROJECT
Livonia Public Schools - Wilson Site
28400 W. Chicago St.
Livonia, MI 48150

CLIENT
Livonia Public Schools
15125 Farmington Road
Livonia, MI 48154

Contact: Phillip Francis
Phone: 734.744.2554
Email:
pfrancis@livoniapublicschools.org

PROJECT LOCATION
Part of the NW 1/4 of Section 36 T.1S., R.9E., City of Livonia, Wayne County, Michigan

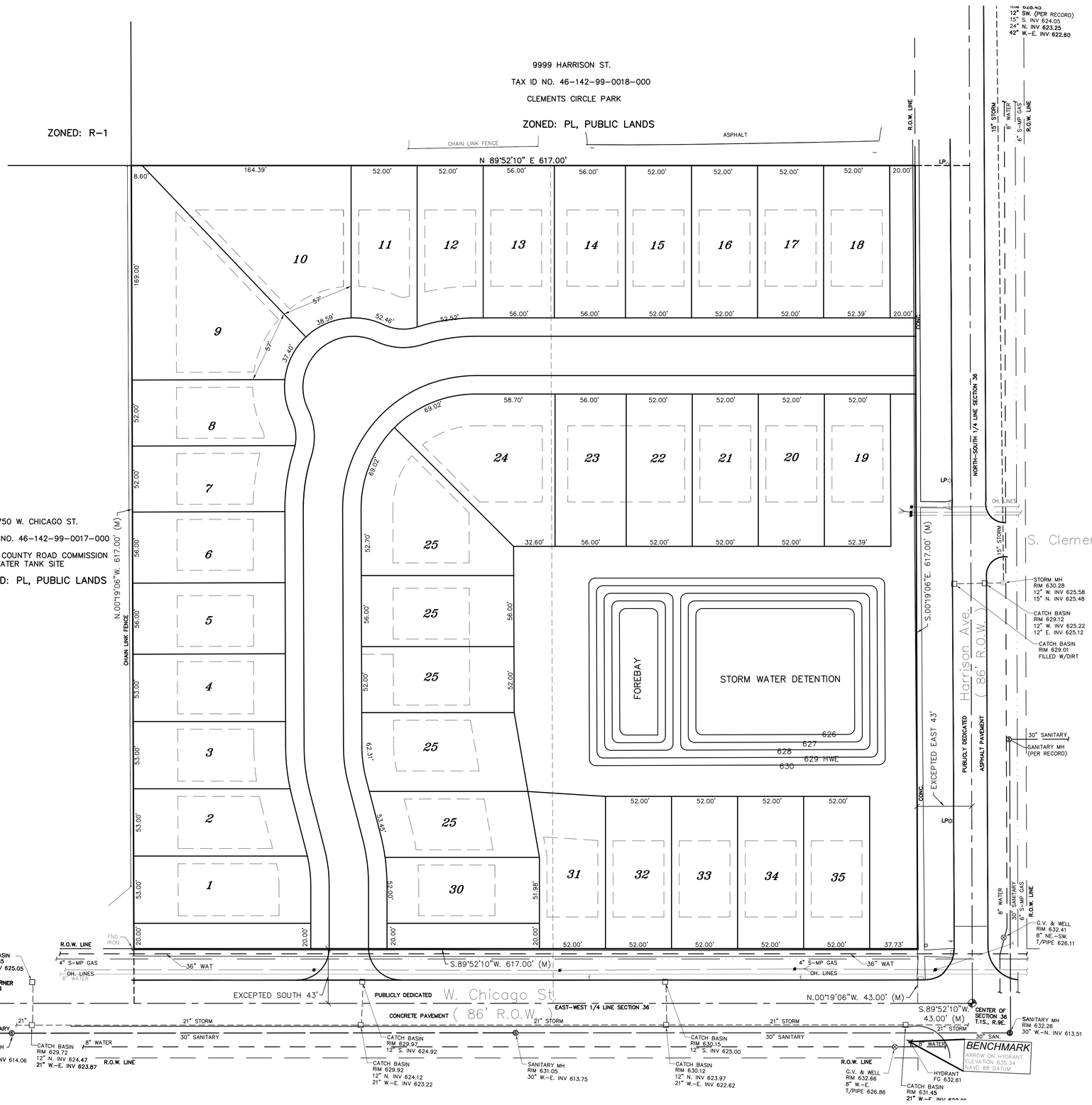
SHEET
Boundary / Topographic Survey

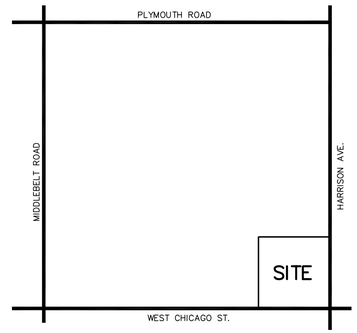
Know what's below Call before you dig.

DATE	ISSUED/REVISED
10-28-19	SURVEY ISSUED

DRAWN BY: M. Carnaghi
DESIGNED BY:
APPROVED BY: K. Navaroli
DATE: October 28, 2019
SCALE: 1" = 40'

NFE JOB NO. L286
SHEET NO. 1 of 1





EXISTING REZONING: PL, PUBLIC LANDS
PROPOSED REZONING: R-1, SINGLE FAMILY RESIDENTIAL

EXISTING USE: VACANT LAND
PROPOSED USE: PLANNED RESIDENTIAL DEVELOPMENT.
R-1, SINGLE FAMILY CLUSTER
4.0 UNITS PER ACRE ALLOWED
8.74 ACRES X 4.0 UNITS = 35 UNITS ALLOWED
35 DETACHED UNITS PROPOSED

PROPERTY DESCRIPTION

PARCEL NO. 46-142-99-0016-000
LAND IN THE CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN, DESCRIBED AS FOLLOWS:

THE WEST 330.00 FEET OF THE EAST 660.00 FEET OF THE SOUTH 660.00 FEET OF THE NORTHWEST 1/4 OF OF SECTION 36, T. 1 S. R. 9 E., EXCEPT THE SOUTH 43.00 FEET THEREOF.
AND THE EAST 330.00 FEET OF THE SOUTH 660.00 FEET OF THE NORTHWEST 1/4 OF OF SECTION 36, T. 1 S. R. 9 E. EXCEPT THE SOUTH 43.00 FEET THEREOF, ALSO EXCEPT THE EAST 43.00 FEET OF THE SOUTH 660.00 FEET THEREOF.
CONTAINING 8.74 ACRES.

NOTES:

ALL LOTS WILL BE PROVIDED WITH PUBLIC WATER AND SANITARY SEWER SERVICES.

ALL LOTS WILL BE PROVIDED WITH STORM SEWER AND SUMP DISCHARGE CONNECTIONS.

THE ENTIRE PROJECT SHALL BE LANDSCAPED IN ACCORDANCE WITH THE CITY OF LIVONIA LANDSCAPING ORDINANCE.

PREPARED FOR
INFINITY HOMES
42400 GRAND RIVER AVE.
NOVI, MICHIGAN 48375
(248) 449-8074

ARPEE/DONNAN, INC.
LAND SURVEYING · ENGINEERING · MAPPING
32233 SCHOOLCRAFT ROAD, SUITE 103
LIVONIA, MICHIGAN 48150
PHONE (734) 953-3335 FAX (734) 953-3324

PRELIMINARY SITE PLAN

PLANNED RESIDENTIAL DEVELOPMENT

PART OF THE NORTHWEST 1/4 OF SECTION 36, T. 1 S., R. 9 E., CITY OF LIVONIA WAYNE COUNTY, MICHIGAN

DATE	08/13/20
DRAFTED BY	WRD
CHECKED BY	WGD
F.B.	
FILE:	
JOB #	20022

SH. 1

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TODD J. ZILINCIK, P.E.
CITY ENGINEER

DAVID W. LEAR, P.E.
ASST. CITY ENGINEER

MAUREEN MILLER BROSNAN
MAYOR

DONALD R ROHRAFF
DIRECTOR OF PUBLIC WORKS

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2571
FAX: (734) 466-2195

August 21, 2020

Mr. Scott Miller
Planner IV
City of Livonia

Re: Petition 2020-08-01-05 – #28400 West Chicago Avenue

Dear Mr. Miller:

In accordance with your request, the Engineering Division has reviewed the above referenced petition. We have no objections to the proposed rezoning at this time. The parcel is assigned the address of **#28400 West Chicago Avenue**. The legal description submitted by the owner appears to be correct, and should be used to describe the proposed rezoned property.

The proposed development is currently serviced by public water main, sanitary and storm sewers, which will need to be extended to service any new residences. The submitted drawing does not indicate any utility connections, so we do not have any knowledge of impacts to the existing systems at this time. The owner has been in contact with this office regarding the project, and is aware of the Engineering Department requirements.

It should be noted that should the project move forward the proposed construction will be required to meet the Wayne County Stormwater Ordinance, including detention requirements. A full review of the proposed development will be completed when plans are submitted for permitting.

Should you have any additional questions on this matter, please feel free to contact myself at (734) 466-2608 or the City Engineer, Mr. Todd Zilincik at (734) 466-2561. If you would prefer, you can e-mail either of us at dlear@ci.livonia.mi.us or tzilincik@ci.livonia.mi.us.

Sincerely,

David W. Lear, P.E.
Assistant City Engineer

cc: 2020 Petition File

M:\ALL OTHER MATTERS\Planning Petition Responses\2020\2020-08-01-05 - #28400 West Chicago Avenue (Wilson Elementary Site).doc

DEPARTMENT OF FINANCE

Michael T. Slater
DIRECTOR OF FINANCE

Connie Kumpula
CHIEF ACCOUNTANT

MAUREEN MILLER BROSNAN
MAYOR

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2260
FAX: (734) 421-1807

August 24, 2020

Mr. Scott O. Miller
Planning Commission
33000 Civic Center Drive
Livonia, MI 48154

Petition 2020-08-01-05 – 28400 West Chicago Ave. (formerly Wilson Elementary School Site) – Infinity Homes and Company

Dear Mr. Miller,

I have reviewed the address connected with the above noted petition. As there are no outstanding amounts receivable (general or water and sewer), I have no objections to the proposal.

Please contact me if you have any further questions.

Very truly yours,

Connie Kumpula
Chief Accountant

CK: jw

OFFICE OF THE TREASURER

LYNDA L. SCHEEL
CITY TREASURER

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3060
(734) 466-2245
FAX: (734) 421-7230

August 25, 2020

Mr. Scott Miller – Planner IV
Planning Commission
City of Livonia

Re: Petition 2020-08-01-05

28400 West Chicago Ave
Infinity Homes (former Wilson School – LPS)

Dear Mr. Miller,

In accordance with your request, the Treasurer's Office has reviewed the name and addresses connected with the above noted petition. At this time there are no taxes due as the property is showing as exempt, therefore I have no objections to the proposal.

Sincerely,

Lynda L. Scheel
Treasurer, City of Livonia

[TO BE PLACED ON LIVONIA PUBLIC SCHOOLS LETTERHEAD]

August 27, 2020

City of Livonia
3300 Civic Center Drive
Livonia, Michigan 48154

Re: Permission for Infinity Homes, Inc., doing business as Infinity Homes & Co., on behalf of an entity to be formed, to submit an application for rezoning of the property formerly known as Wilson Elementary School located at 28400 West Chicago (the "Property")

To Whom It May Concern:

As you may be aware, Livonia Public Schools (the "School District") and Infinity Homes, Inc., doing business as Infinity Homes & Co., on behalf of an entity to be formed ("Purchaser"), entered into a Purchase Agreement dated May 19, 2020 (the "Agreement"), for sale of the above-referenced Property to Purchaser.

Enclosed for your records is a copy of the Board of Education Resolution which authorizes the sale of the subject Property to Purchaser and further authorizes and designates the Superintendent or her designee as the individual on behalf of the School District that has the authority to execute any and all documents necessary and incidental to the sale.

The purpose of this correspondence is to confirm that Purchaser has the School District's permission to proceed with rezoning of the subject Property to allow for a single family residential development on the Property. Should you have any questions regarding this correspondence, please do not hesitate to contact me.

Sincerely,

Andrea Oquest
Superintendent

Attachments

LIVONIA PUBLIC SCHOOLS
BOARD OF EDUCATION MEETING
May 18, 2020

ITEM: VI.E.

TOPIC: Approval of Purchase Agreements for Vacant District Properties

RECOMMENDATION:

Move that the Board of Education of the Livonia Public Schools School District approve delegating to the Superintendent or her designee the authority to enter into an Offer to Purchase Real Estate, and execute said Offer and any documents necessary and incidental to the sale, with Infinity Homes, Inc , on behalf of an entity to be formed, whereby Infinity Homes, Inc., on behalf of an entity to be formed, has offered to purchase 9.34 +/- acres of land located at 37855 Lyndon Street, Livonia, Michigan, also known as Old Webster, for a total of $1,110,000 00 and 8.74 +/- acres of land located at 28400 West Chicago, Livonia, Michigan, also known as Wilson, for a total of $600,000.00.

RATIONALE:

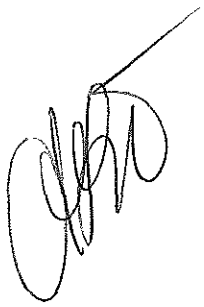
The properties are deemed to be surplus and unneeded by the district, and the sale would generate additional revenue for the district.

BUDGETARY INFORMATION:

This sale of property will provide a total amount of $1,710,000 to Livonia Public Schools to be deposited in the Capital Projects Fund

RESOURCE PERSONNEL:

Phillip Francis, Director of Operations



EXHIBITS:

Attached

PF

Request For Proposals To Purchase

Real Property

8.74 +/- Acres

28400 West Chicago

Livonia, Michigan

Livonia Public Schools

GREAT NORTHERN CONSULTING GROUP
REAL ESTATE SERVICES AND CONSULTING

1785 West Stadium, Suite 202
Ann Arbor, MI 48103

Phone (734) 996-9979
Mobile (586) 703-9882
greatcgroup@aol.com

Table of Contents

I. Introduction – Proposal Process Description
II. Fact Sheet/Community Information
III. Location/Site Maps
IV. Zoning
V. Survey /Utility Survey/Concept Plan/Demolition Plan
VI. Legal Documents

"The information contained in this Request For Proposal To Purchase Real Property is provided as an accommodation to the prospective purchasers. It is believed to be correct, but no representations or warranties as to its accuracy should be inferred or are made. Each party responding to this Request For Proposals should independently confirm the accuracy of the information contained herein."

I. Introduction – Proposal Process Description

"The information contained in this Request For Proposal To Purchase Real Property is provided as an accommodation to the prospective purchasers. It is believed to be correct, but no representations or warranties as to its accuracy should be inferred or are made. Each party responding to this Request For Proposals should independently confirm the accuracy of the information contained herein."

GREAT NORTHERN CONSULTING GROUP
REAL ESTATE SERVICES AND CONSULTING

1785 West Stadium, Suite 202
Ann Arbor, MI 48103

Phone (734) 996-9979
Mobile (586) 703-9882

November 19, 2019

To: Prospective Purchasers
From: Great Northern Consulting Group

Re: **Request For Proposals To Purchase 28400 West Chicago, Livonia, Michigan, containing 8.74 +/- Acres**

Thank you for your interest in submitting a Proposal to purchase the above-referenced vacant real property owned by Livonia Public Schools (the "School District"). The 8.74 +/-acre site is approximately 617 feet by 617 feet. The Site has 617 feet of frontage on West Chicago and 617 feet of frontage on Harrison Street (See Survey **Section V** for further details). The subject property is located 28400 West Chicago, Livonia, Michigan (the "Property" or the "Site"). The Site is located on the North side of West Chicago between Middlebelt Road and Inkster Road. The Wilson School Building has been demolished and the Site is vacant. Demolition information is included in the Survey Section of the RFP.

The Property is currently zoned for public purposes, but the City has indicated a logical rezoning to R-1 one-family residential district zoning. The R-1 one family zoning allows single family residential lots with a minimum of 60 feet of frontage and a minimum depth 120 feet and a minimum of 7,200 square feet of lot area. All necessary public utilities are available to the Site for development. Pursuant to discussions with the City Planner, the Property will accommodate approximately 30 to 36 single family lots using a traditional site plan. The attached Concept Plan contained in this Request For Proposals ("RFP") shows 30 lots. A Cluster Option could be pursued which will allow for smaller lots in exchange for additional open space and community benefit on the Property, however the developer will have to show significant public benefit to receive consideration of this development option. **As the Site abuts a City Park and City Pool, developers should discuss with the City how this new project and the City Park (Pool) can benefit each other through mutual planning.** The School District desires the development to be family friendly and requires all Proposals to include a description of the project proposed for the Property, a concept plan proposed for the Site and elevations of the homes planned for the project.

Great Northern Consulting Group is marketing this Property for Livonia Public Schools on a fee basis as consultants. The School District's goal is to select one (1) developer to purchase the entire Property. However, the School District reserves the right to select one (1) or more purchasers to purchase the Property. The School District is seeking Proposals to purchase the Property that must be submitted to **Phillip Francis, Director of Operations for Livonia Public Schools, 15125 Farmington Road, Livonia, Michigan 48154 on or before 3:00 P.M. local time on January 21, 2020. No phone, fax or electronic transmission Proposals will be accepted. If mailed, no responsibility is assumed for postal delays. NOTWITHSTANDING THE FOREGOING, THE SCHOOL DISTRICT RESERVES THE RIGHT TO ACCEPT OR REJECT ANY AND ALL PROPOSALS, IN WHOLE OR IN PART. THE SCHOOL DISTRICT ALSO RESERVES THE RIGHT TO WAIVE ANY IRREGULARITIES CONTAINED IN ANY PROPOSAL OR REQUIREMENTS OF THIS REQUEST FOR PROPOSALS.**

The attached package includes the following information: (I) Introduction – Proposal Process Description; (II) Fact Sheet/Community Information; (III) Location/Site Maps; (IV) Zoning; (V) Survey/Utility Survey/Concept Plan / Demolition Information; and (VI) Legal Documents.

The School District requires that all Proposals include a signed Proposal Form as set forth in **Section VI** of this RFP, along with a detailed description of the proposed concept plan/home elevations for Site. Please note that the legal documents represent the form of agreement acceptable to the School District. The Proposal Form must be completed prior to submittal to Livonia Public Schools. Proposals that include modified terms more favorable to the purchaser (and, hence, less favorable to the School District) may be rejected on that basis. Of course, modifications that are favorable to the School District would be preferred and may enhance a potential purchaser's position in the selection process. **An earnest money deposit of $25,000 will be required within three (3) business days of acceptance of the Offer by the School District.**

While Livonia Public Schools reserves the right to accept or reject any and all Proposals, in whole or in part, a number of finalists may be selected and asked to provide additional information, including financial qualifications and more detailed concepts plans for the development of the Property. The additional information will facilitate the final selection of the successful purchaser(s). Further, the additional information will allow the School District to select a purchaser financially able to perform on the contract and proceed with a development perceived to be positive for the School District as well as the community at large. It is important to note that the highest price may not necessarily represent the Proposal that the School District determines in its sole discretion to be, in its totality, in the best interest of the School District.

The finalists will be notified shortly after the deadline for submission of its Proposal. Livonia Public Schools may request the finalists to make revisions to their Proposals that the School District deems necessary to select a successful purchaser(s). This is a Request For Proposals only. Proposals will be treated as offers to enter into the Offer To Purchase Real Estate included in **Section VI** of this RFP. Once a Proposal is accepted by the School District it shall be known hereinafter as the "Offer."

Upon final acceptance of the Offer(s), there will be a 90-day period for physical due diligence ("Inspection Period"). There will then be an additional 90 days for government approvals, however the $25,000 earnest money deposit shall become nonrefundable after the initial 90-day Inspection Period. Many standard contingencies are included so that the purchaser may satisfy itself as to the Property's suitability for development during the 90-day Inspection Period and Governmental Approval Period. Closing is anticipated to occur within 10 days after the expiration of the Inspection Period, or if extended, the Extension Period.

Please note that we are making no representations regarding the suitability of this Property for any particular purpose. It is the purchaser's sole responsibility to determine suitability during the Inspection Period. Within the

constraints of this limitation, please address all questions regarding this Property to Great Northern Consulting Group.

Great Northern Consulting Group is representing Livonia Public Schools as a fee based consultant in this matter. As a result, there is no real estate commission to be paid. Brokers must look to their purchaser for compensation.

Please note again that all Proposals, including a signed Proposal Form on the form provided and an Affidavit of Compliance - Iran Economic Sanctions Act, must be submitted to Phillip Francis, Director of Operations for Livonia Public Schools, 15125 Farmington Road, Livonia, Michigan 48154 on or before 3:00 P.M. local time on January 21, 2020. Any proposed changes/modifications to the form of Offer To Purchase provided in this package under Section VI MUST be specifically enumerated and be submitted as part of its Proposal, together with an explanation as to the reason such terms and conditions of the RFP or form of Offer To Purchase cannot be met. No phone, fax or electronic transmission Proposals will be accepted. If mailed, no responsibility is assumed for postal delays.

Thank you again for your interest in this Property. We are looking forward to receiving your Proposal.

Respectfully,
Great Northern Consulting Group

William W. Bowman, IV
President

II. Fact Sheet/Community Information

"The information contained in this Request For Proposal To Purchase Real Property is provided as an accommodation to the prospective purchasers. It is believed to be correct, but no representations or warranties as to its accuracy should be inferred or are made. Each party responding to this Request For Proposals should independently confirm the accuracy of the information contained herein."

Livonia Public Schools

RFP Fact Sheet

PROPERTY ID:	46-142-99-0016-000
LOCATION:	28400 WEST CHICAGO
MUNICIPALITY:	LIVONIA, MICHIGAN
SIZE:	8.74 +/- ACRES
UTILITIES:	ALL UTILITIES AVAILABLE. PLEASE SEE SURVEY FOR DETAILS
ZONING:	PUBLIC PURPOSE/REZONE R-1 ONE FAMILY RESIDENTIAL DISTRICT
PRICE:	NO MINIMUM PRICE HAS BEEN SET
TERMS:	CASH
RIGHTS OF OWNER:	**LIVONIA PUBLIC SCHOOLS RESERVES THE RIGHT TO ACCEPT OR REJECT ANY AND ALL PROPOSALS, IN WHOLE OR IN PART. THE SCHOOL DISTRICT ALSO RESERVES THE RIGHT TO WAIVE ANY IRREGULARITIES CONTAINED IN ANY PROPOSAL OR REQUIREMENTS OF THIS REQUEST FOR PROPOSALS.** **ALL PROPOSALS, INCLUDING A SIGNED PROPOSAL FORM ON THE FORM PROVIDED AND AN AFFIDAVIT OF COMPLIANCE - IRAN ECONOMIC SANCTIONS ACT, MUST BE SUBMITTED TO MR. PHILLIP FRANCIS, DIRECTOR OF OPERATIONS FOR LIVONIA PUBLIC SCHOOLS, 15125 FARMINGTON ROAD, LIVONIA, MICHIGAN 48154 ON OR BEFORE 3:00 PM LOCAL TIME ON JANUARY21,2020. NO PHONE, FAX OR ELECTRONIC TRANSMISSION OFFERS WILL BE ACCEPTED. IF MAILED, NO RESPONSIBILITY IS ASSUMED FOR POSTAL DELAYS.**
COMMISSION:	NO REAL ESTATE COMMISSION TO BE PAID BY LIVONIA PUBLIC SCHOOLS. GREAT NORTHERN CONSULTING GROUP IS A FEE-BASED ADVISOR TO THE SCHOOL BOARD. BROKERS MUST LOOK TO PURCHASER FOR COMPENSATION.

City of Livonia

Elected Officials Contact Information

Incoming Mayor (2020)
Maureen Miller Brosnan
E-mail:mayor@ci.livonia.mi.us
Clerk:
Susan M. Nash
E-mail:snash@ci.livonia.mi.us
Phone:734-466-2230

Treasurer:
Lynda L. Scheel
E-mail:Treasurer@ci.livonia.mi.us
Phone:734-466-2245

City Council
President:
Kathleen E. McIntyre
E-mail:kmcinryre@ci.livonia.mi.us
Phone:734-466-2255

Vice President:
Scott Bahr
E-mail:sbahr@ci.livonia.mi.us
Phone: 734-466-2258

Council Member:
Laura Toy
E-mail: ltoy@ci.livonia.mi.us
Phone:734-466-2258

Council Member:
Jim Jolly
E-mail:jjolly@ci.livonia.mi.us
Phone:734-466-2257

Council Member:
Cathy White
E-mail:lcwhite@ci.livonia.mi.us
Phone:734-466-2253

New Council Members January 2020
Brandon McCullough
Rob Donovic

Department Phone Directory

Assessor Linda Gosselin, Assessor	734-466-2220
Civil Services Denise Maier	734-466-2530
Community Recourses Linda McCann	734-466-2540
Economic Development Mark S. Taormina	734-466-2293
Engineering Todd Zilincik	734-466-2570
Finance Michael Slater	734-466-2260
Fire Department David Heavener	734-466-2444
Inspection Jerome Hanna	734-466-2580
Law Paul Bernier	734-466-2520
Parks and Recreation Ted Davis	734-466-2410
Planning Mark S. Taormina	734-466-2290
Police Department Curtis Caid, Chief	734-466-2470
Water Department	734-466-2278

City of Livonia
MILLAGE RATES FOR CITY RESIDENTS
LIVONIA PUBLIC SCHOOLS SCHOOL DISTRICT
HOMESTEAD

Taxing Entity	2015	2016	2017	2018	2019
Tax Rate shown in Mills					
State Education Tax	6.0000	6.0000	6.0000	6.0000	6.0000
Livonia Public Schools Operating	1.1200	1.1200	1.1157	1.1157	1.1101
Livonia Public School Debt	4.6000	4.5400	4.5400	4.5400	4.6000
Wayne Intermediate School District(RESA)	3.4643	3.4643	5.4643	5.4643	5.4643
Schoolcraft Community College	1.7967	1.7967	1.7766	1.7766	2.2516
Livonia City Government	13.9378	13.9380	13.8993	13.8993	13.8927
Wayne County Government	7.6141	6.6380	6.6380	6.6380	6.6380
Wayne County Jail	0.9381	0.9381	0.9381	0.9381	0.9381
Wayne County Parks	0.2459	0.2459	0.2459	0.2459	0.2459
Zoo Authority	0.1000	0.1000	0.1000	0.1000	0.1000
Art Institute	0.2000	0.2000	0.2000	0.2000	0.2000
Huron Clinton Metro Authority	0.2146	0.2146	0.2140	0.2140	0.2129
Total Millage Rates	40.2315	39.1956	41.1319	41.1319	41.6536
Average Residential Taxable Value	$69,550	$71,090	$73,580	$76,375	$79,638
AverageTax Rates Shown in Dollars					
State Education Tax	$417	$427	$441	$458	$478
Livonia Public Schools Operating	$78	$80	$82	$85	$88
Livonia Public School Debt	320	323	334	347	366
Wayne Intermediate School District(RESA)	241	246	402	417	435
Schoolcraft Community College	125	128	131	136	179
Livonia City Government	969	991	1,023	1,062	1,106
Wayne County Government	530	472	488	507	529
Wayne County Jail	65	67	69	72	75
Wayne County Parks	17	17	18	19	20
Zoo Authority	7	7	7	8	8
Art Institute	14	14	15	15	16
Huron Clinton Metro Authority	15	15	16	16	17
Total Dollars	$2,798	$2,786	$3,026	$3,141	$3,317

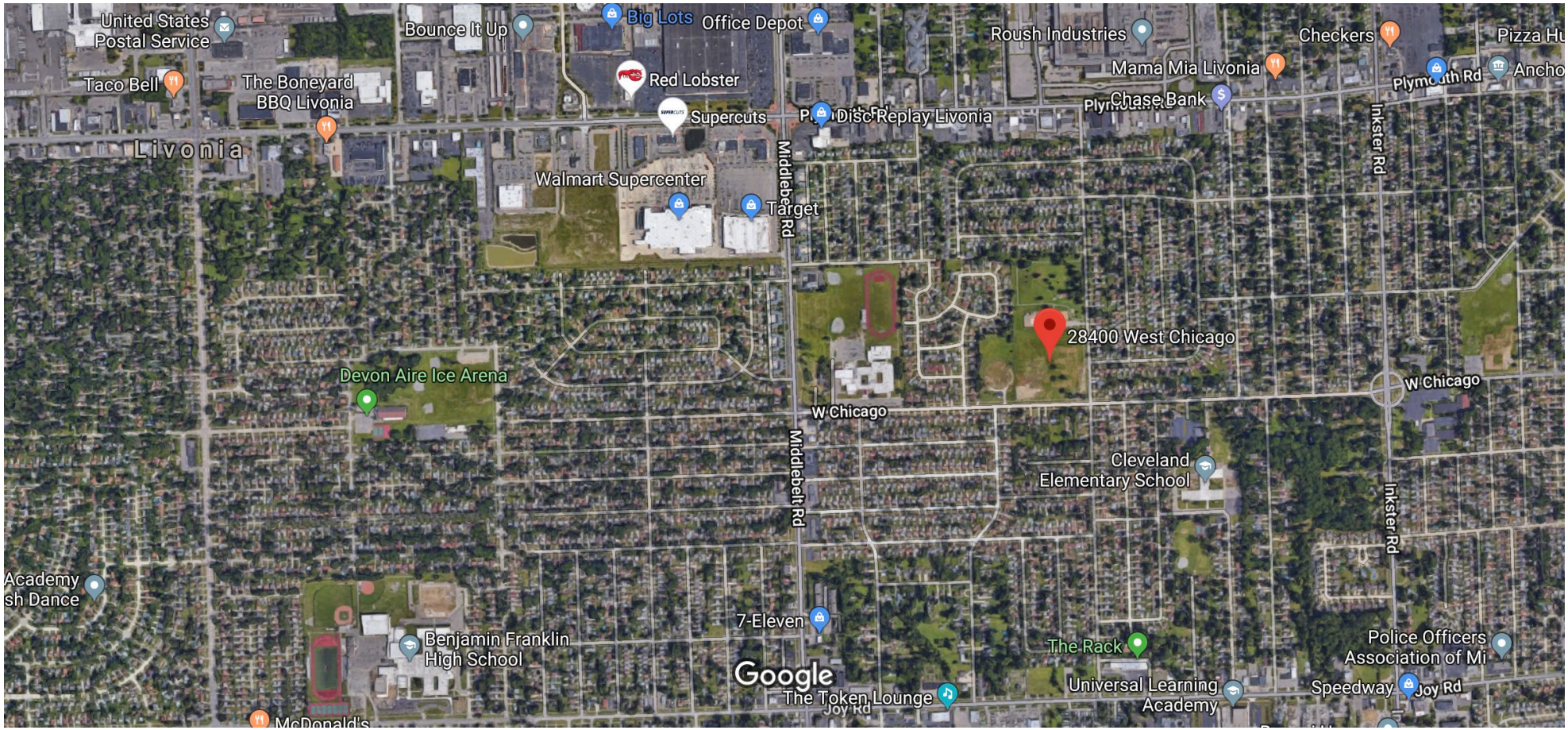
MILLAGE RATES FOR CITY RESIDENTS
LIVONIA PUBLIC SCHOOLS SCHOOL DISTRICT
NON-HOMESTEAD

Taxing Entity	2015	2016	2017	2018	2019
Tax Rate shown in Mills					
State Education Tax	6.0000	6.0000	6.0000	6.0000	6.0000
Livonia Public Schools Operating	19.1200	19.1200	19.1157	19.1157	19.1101
Livonia Public School Debt	4.6000	4.5400	4.5400	4.5400	4.6000
Wayne Intermediate School District(RESA)	3.4643	3.4643	5.4643	5.4643	5.4643
Schoolcraft Community College	1.7967	1.7967	1.7766	1.7766	1.7766
Livonia City Government	13.9378	13.9380	13.8993	13.8993	13.8927
Wayne County Government	7.6141	6.6380	6.6380	6.6380	6.6380
Wayne County Jail	0.9381	0.9381	0.9381	0.9381	0.9381
Wayne County Parks	0.2459	0.2459	0.2459	0.2459	0.2459
Zoo Authority	0.1000	0.1000	0.1000	0.1000	0.1000
Art Institute	0.2000	0.2000	0.2000	0.2000	0.2000
Huron Clinton Metro Authority	0.2146	0.2146	0.2140	0.2140	0.2129
Total Millage Rates	58.2315	57.1956	59.1319	59.1319	59.1786
Average Residential Taxable Value	$69,550	$71,090	$73,580	$76,375	$79,638
AverageTax Rates Shown in Dollars					
State Education Tax	$417	$427	$441	$458	$478
Livonia Public Schools Operating	$1,330	$1,359	$1,407	$1,460	$1,522
Livonia Public School Debt	320	323	334	347	366
Wayne Intermediate School District(RESA)	241	246	402	417	435
Schoolcraft Community College	125	128	131	136	141
Livonia City Government	969	991	1,023	1,062	1,106
Wayne County Government	530	472	488	507	529
Wayne County Jail	65	67	69	72	75
Wayne County Parks	17	17	18	19	20
Zoo Authority	7	7	7	8	8
Art Institute	14	14	15	15	16
Huron Clinton Metro Authority	15	15	16	16	17
Total Dollars	$4,050	$4,066	$4,351	$4,516	$4,713

III. Location/Site Maps

"The information contained in this Request For Proposal To Purchase Real Property is provided as an accommodation to the prospective purchasers. It is believed to be correct, but no representations or warranties as to its accuracy should be inferred or are made. Each party responding to this Request For Proposals should independently confirm the accuracy of the information contained herein."

28400 W Chicago



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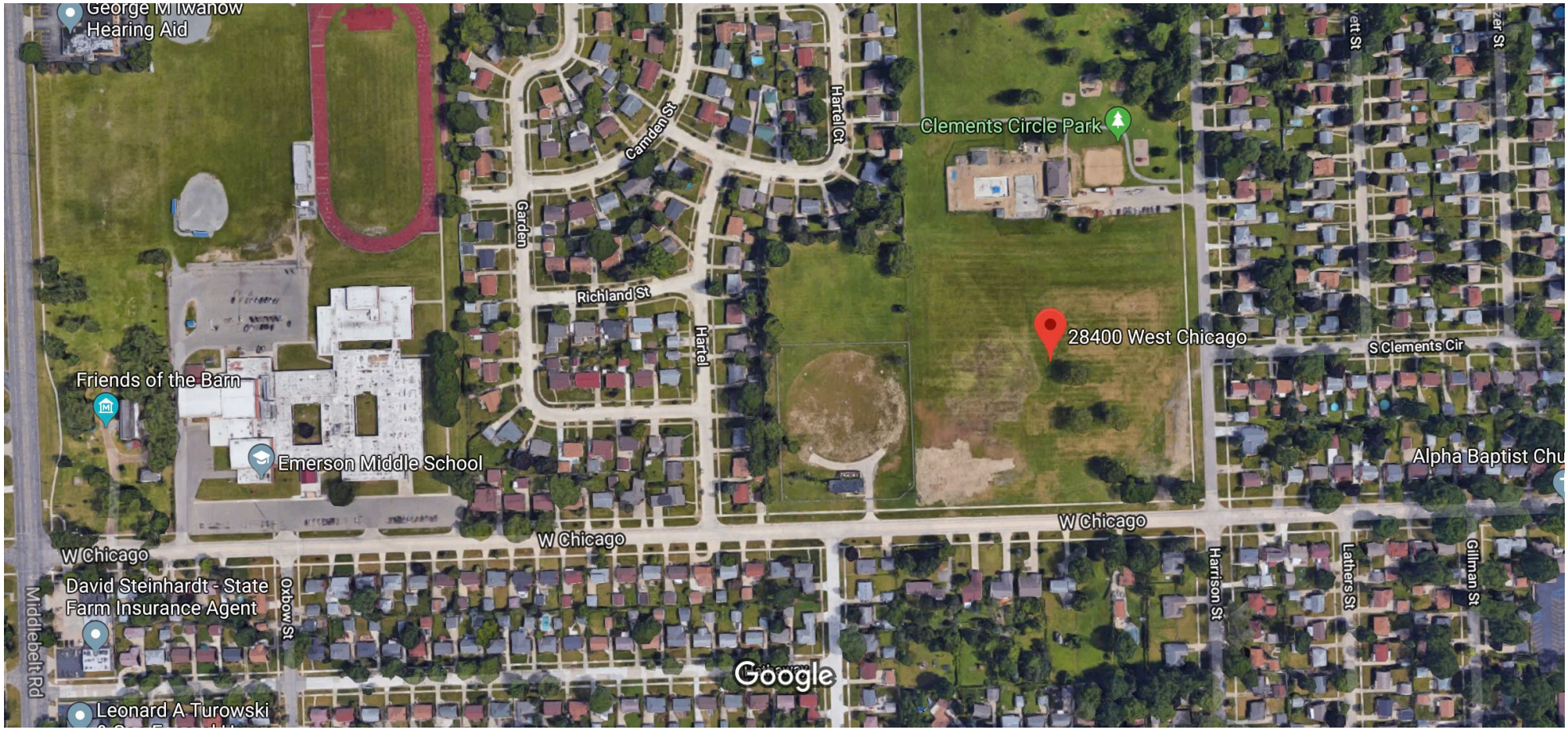

Imagery ©2019 Google, Imagery ©2019 Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2019 200 ft

28400 West Chicago

October 16, 2019

1:2,257

0 0.02 0.04 0.08 mi

0 0.03 0.07 0.13 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

IV. Zoning

“The information contained in this Request For Proposal To Purchase Real Property is provided as an accommodation to the prospective purchasers. It is believed to be correct, but no representations or warranties as to its accuracy should be inferred or are made. Each party responding to this Request For Proposals should independently confirm the accuracy of the information contained herein.”

ARTICLE IV. - R-1 THROUGH R-5 DISTRICT REGULATIONS

Section 4.01 Application of Article. The regulations set forth in this article shall apply to all R-1, R-2, R-3, R-4 and R-5 Districts.

Section 4.02 Permitted Uses. (Section 4.02, as amended by the following: Ordinance No. 737, adopted 4-23-69; Ordinance No. 845, adopted 11-12-70; Ordinance No. 1113, adopted 11-28-73; Ordinance No. 2324, adopted 4-15-96; Ordinance No. 2467, adopted 10-27-99; Ordinance No. 2549, adopted 11-7-01, Ordinance No. 2681, adopted 11-22-04; Ordinance No. 2759, adopted 10-25-06; Ordinance No 2896, adopted 4-4-12; Ordinance No. 2911, adopted 7-18-12.) In all R-1 through R-5 Districts, no building or land, except as otherwise provided in this ordinance, shall be erected or used except for one or more of the following specified uses:

(a) One family dwellings.

(b) Public schools and public libraries; fire stations and police stations.

(c) Municipally owned and operated parks, playgrounds and recreational areas when open and available for use by the residents of the City of Livonia.

(d) Temporary buildings or structures for uses incidental to the construction of residential dwellings and improvements, which buildings shall be removed immediately upon completion or abandonment of the construction work.

(e) Golf courses, public and private, including club house facilities, but not including miniature golf courses or golf driving ranges operated for either commercial or non-commercial purposes.

(f) Gardening and the growing of vegetables, fruits, flowers, shrubs and trees, provided such items are not offered for sale on the property.

(g) Accessory buildings, uses, and vehicles incidental to any of the above permitted uses, when located on the same or adjoining lot are permitted in accordance with the following subparagraphs:

    (1) Private garages and detached accessory structures are permitted in accordance with Sections 2.10 and 18.24 of this ordinance.

    (2) No more than three vehicles shall be housed in a private garage, and all inoperable or unlicensed vehicles or vehicles bearing visible commercial advertising, equipment, or accessories shall be housed in a garage when not in use. One (1) unit of unoccupied Recreational Equipment may be housed in the garage or stored in the rear yard, except that no such unit may be stored within the corner side yard, as that term is defined in Section 15.44.030 of the Livonia Code of Ordinances, as amended. The temporary parking of one (1) unit of Recreational Equipment on the Recreational Equipment owner's or user's front or side driveway shall be permitted for a period not to exceed seventy-two (72) hours cumulatively in any five (5) day period for the purpose of repairing and maintaining the Recreational Equipment unit for suitable vacation use.

    (3) Home occupations, except where specifically prohibited, shall be permitted where incidental to residential use and meeting all of the following criteria:

        a. The activity is conducted entirely within a completely enclosed dwelling unit and entails neither the use of more than 20% of the usable floor area of that dwelling unit nor any garage (detached or attached) or other building or structure accessory to the principal building;

        b. The activity does not generate any noise, vibrations, smoke, dust, heat, glare or interference with radio or television reception in the area that would exceed that normally produced by a dwelling unit in a residential district;

c. The activity does not entail any advertising, display or other indications of a home occupation, business, professional, trade or occupational use of the property, except as permitted by Section 18.50E of this ordinance;

d. There is no outdoor display or storage of materials, goods, supplies or equipment;

e. There are no deliveries from commercial suppliers by any vehicle that exceeds Class 5 in the Federal Highway Administration classification system, and all deliveries are made between 9:00 a.m. and 5:00 p.m. on weekdays, provided further that such deliveries shall not restrict traffic circulation or occur so frequently as to interfere with the quiet character of the residential neighborhood;

f. No clients, patrons, salespersons, or other commercial invitees visit the premises except between the hours of 8:00 a.m. and 9:00 p.m., and no more than ten (10) vehicles visit the premises during that period, with no more than two (2) vehicles visiting at one time; provided further, that massage establishments, as defined in Section 2.08 of this ordinance, shall be strictly prohibited in all R-1, R-2, R-3, R-4 and R-5 districts, as permitted or waiver uses;

g. The activity does not entail large-scale manufacturing or assembly, warehousing, or distribution, or sales or rentals of any article or service except such as is produced by such occupation;

h. The activity does not require any internal or external alteration, construction feature, equipment or machinery which is not customary in residential areas;

i. The activity does not entail employment of more than one person other than members of the resident family;

j. In the event that chemical and/or toxic-based materials will be utilized in connection with said home occupation, the owner or occupant of the property shall register same with the Building Official, the Fire Department and the Livonia Emergency Planning Committee prior to use of the residence for said home occupation in order to insure compliance with all local, state and federal environmental regulations.

(h) A "family child care home," as defined by Public Act 1973, No. 116 of the State of Michigan, MCL 722.111, et seq, as amended, as a private home in which one (1) but fewer than seven (7) minor children are received for care and supervision for periods of less than twenty-four (24) hours a day, unattended by a parent or legal guardian, for more than four (4) weeks during a calendar year, except children related to an adult member of the family by blood, marriage, or adoption; provided, however, that

(1) The owner or occupant of said residence is a licensee in good standing with the State of Michigan pursuant to PA 1973, No. 116, MCL 722.111, et seq, as amended;

(2) The owner or occupant of said residence has registered with the City Clerk;

(3) The facility is the principal residence of the provider;

(4) The use shall not result in traffic congestion or hazardous traffic conditions;

(5) A drop-off/pickup area shall be provided where the residence is located on a major thoroughfare as defined in this ordinance in order to prevent vehicles from backing onto the roadway;

(6) All health and safety requirements established by the State of Michigan shall be met;

(7) There shall be no dropping off or picking up of children between the hours of 10:00 p.m. and 6:00 a.m.;

(8) No structural changes or exterior alterations shall be made which would alter the residential character of the dwelling except for those necessary to comply with the State of Michigan licensing rules applicable to family day care homes;

(9) Such use shall provide and maintain an outdoor play space as required by the State of Michigan;

(10) The use will comply with all noise standards and other provisions contained in Chapter 8.24 (Nuisances) and Chapter 8.32 (Noise Control) of the Livonia Code of Ordinances, as amended;

(11) No sign shall be used on the premises;

(12) All family day care homes shall be registered with the 911 dispatch center and the City of Livonia Public Safety Department;

(13) No new family day care home shall operate within a distance of one thousand (1,000) feet from any existing registered family day care home or group day care home, as measured from the nearest property line of the proposed use to the nearest property line of the existing registered use.

Section 4.03 Waiver Uses. (Section 4.03, as amended by Ordinance No. 968, adopted 5-10-72; Ordinance No. 1613, adopted 11-30-81; Ordinance No. 2412, adopted 12-14-97.) The following uses are permitted upon review and submission of findings by the City Planning Commission and approved by the City Council. Such use shall be approved only if the proposal for such use complies with the special requirements and regulations provided therefor and with the standards set forth in Section 19.06 of this ordinance.

(a) Churches, if situated on a parcel of land at least two (2) acres in area, including parish houses, convents, rectories and parochial schools, and private educational institutions, and accessory uses such as, but not limited to, fund raising events (which may include commercial entertainment).

(b) Privately owned and operated parks, picnic groves or similar facilities using open land only for outdoor exercises and recreation, which are not operated for profit; provided that the written consent of at least sixty (60) percent of the owners of residential property located within a three hundred and sixty-foot radius of site perimeter is first filed with the Inspection Department.

(c) Community buildings, not expressly permitted in Section 4.01, country clubs or similar civic club buildings (but not a residential club operated as a commercial enterprise) provided that the written consent of at least sixty (60) percent of the owners or residential property located within a three hundred and sixty-foot radius of the site perimeter is first filed with the Inspection Department and provided further that the building shall be situated on a parcel of land at least two (2) acres in area.

(d) Privately owned and operated neighborhood, community, or club swimming pools when the owner or owners are all bona fide residents of the City of Livonia and such use can comply with the following special requirements:

(1) The use shall be erected and located on a satisfactory site that is at least four (4) acres in area;

(2) Front, side and rear yards shall each be at least twenty (20) feet wide;

(3) The pool shall not be constructed within fifty (50) feet of any existing public street right-of-way as measured from the edge of the water;

(4) The pool shall not be constructed within three hundred (300) feet of any existing residence as measured from the edge of the water;

(5) Off-street parking facilities shall be provided on the premises to accommodate one third (1/3) of the total member families and/or individual members of the organization constructing the pool;

(6) A parking and traffic plan showing the planned provision for parking and ingress and egress for pedestrian and motor vehicle traffic approved by the Police and Fire Departments shall be filed with the Inspection Department as a condition precedent to the issuance of the permit;

(7) All front, side and rear yards of the premises shall be landscaped with trees, shrubs and grass;

(8) A landscaping plan and time schedule approved by the Parks and Recreation Department shall be filed with the Inspection Department as a condition precedent to the issuance of the permit;

(9) Buildings erected on the premises in connection with such use shall in no case exceed one (1) story in height except where, as a result of the peculiar topography of the premises, a lower level can be constructed entirely below the grade of the public street abutting or adjacent to such premises, in which case the same shall be permitted, and lighting facilities erected on the premises shall not exceed twenty (20) feet in height;

(10) A storm water plan, approved by the Engineering Division of the Department of Public Works, shall be filed with the Inspection Department as a condition precedent to the issuance of a per-

mit in those cases where storm sewers are not available, or if available the capacity is not ample to service the pool facilities;

(11) As a condition precedent to the issuance of a building permit for such pool, there shall be on file in the office of the Inspection Department the written consent of sixty (60) percent of all residential property owners within a radius of three hundred sixty (360) feet of the perimeter of the premises whereon the proposed pool facilities are to be constructed and operated;

and provided further, that such use complies with all other applicable rules, regulations and ordinances of the City of Livonia. In order that the City Planning Commission might properly determine whether or not the requirements provided herein have and can be complied with, there shall be filed with the City Planning Commission a certified copy of the Articles of Incorporation and By-Laws of the private swimming pool club or organization; a plot plan drawn to scale showing the location of the premises on which the private swimming pool and related recreational facilities are to be situated and showing also the dimensions and area of such proposed area, and the location of all residences and other buildings, structures and public streets within one thousand (1,000) feet of such premises as measured from each of the property lines of the property site; and a separate development plan of the proposed site showing the size and location of all facilities to be situated thereon, and the size and location of all front, rear and side yards and the length, width and location of all driveways and parking facilities to be located on the proposed site. For the purpose of this ordinance, the term "neighborhood," "community," or "club" pool shall mean that the pool is owned and operated by a private swimming club or similar organization for the sole and exclusive use of its members of such club, their families and guests.

(e) Public utility buildings, telephone exchanges, transformer stations and substations.

(f) Open Space Planned Residential Developments in R-4 and R-5 Districts subject to the requirements and provisions of Article XX of this ordinance.

(g) Bed and breakfast establishments provided that:

(1) Such use shall be located on a lot or parcel of no less than one-half (½) acre in area or in a residential structure containing no less than two thousand (2,000) square feet of living space.

(2) Off-street parking shall be provided in the rear or side yard, behind the front building setback line, in an amount equal to one (1) parking space per bedroom. For parcels abutting an exterior side street, parking shall not be closer to the street than the principal structure. Such parking lot shall be improved with a minimum of four (4) inches of concrete or plant mixed asphalt. Natural screening by use of plant material or other screening by use of fencing shall be utilized to screen parking areas from adjoining residential properties.

(3) Such use shall have direct access to a public street having an existing or planned width of at least eighty-six (86) feet or more as designated on the Master Thoroughfare Plan.

(4) Such establishments shall be run by persons who own and occupy the premises for residential purposes.

(5) Not more than six (6) bedrooms in the bed and breakfast establishment shall be used for bed and breakfast sleeping rooms.

(6) No garage shall be used for bed and breakfast sleeping rooms.

(7) The dwelling to be used as a bed and breakfast establishment shall have at least two (2) usable exits.

(8) No accessory buildings shall be used for bed and breakfast sleeping rooms unless they were originally constructed to accommodate housing use.

(9) One (1) sign identifying the bed and breakfast establishment shall be permitted if such sign complies with all the requirements of Section 18.50E of this ordinance.

(10) Such establishments shall comply with all applicable local, county, state and federal ordinances, laws, rules, regulations and codes.

(11) Guest occupancy shall be no longer than fourteen (14) consecutive days.

(12) No more than four (4) occupants per room shall be allowed.

(13) There shall be no cooking facilities for use by the occupants of the bed and breakfast sleeping rooms.

(14) Lavatory and bathing facilities shall be available for all persons utilizing the bed and breakfast establishment.

(15) A fire escape plan shall be developed and graphically displayed in each guest room. A smoke detector in proper working order shall be placed in every sleeping room and a fire extinguisher in proper working order shall be placed on every floor. The site shall be reviewed by the Fire Marshall pursuant to the standards contained in the Fire Prevention Code as to the necessity for fire lanes.

(16) All bed and breakfast establishments shall be required to obtain a business license under Chapter 5.42 of the Livonia Code of Ordinances and shall not conduct operations until such license has been obtained pursuant to that chapter. All bed and breakfast operations shall submit to annual inspections by the Building and Fire Departments. Renewal of a business license shall be contingent upon compliance with applicable codes, as verified by such inspectors.

Section 4.04 Schedule of Minimum Lot Sizes in R-1 through R-5 Districts. (Section 4.04, as amended, by Ordinance No. 714, adopted 10-16-68; Ordinance No. 1469, adopted 5-28-79; Ordinance No. 2932, adopted 5-8-13.) The minimum lot sizes required for the sizes of all dwellings, and other permitted uses, together with accessory buildings, hereafter erected in any R-1 through R-5 Districts, are hereby established as follows:

Use District	Lot Area	Lot Width	Lot Depth
R-1	7,200 Square feet	60 feet	120 feet
R-2	8,400 Square feet	70 feet	120 feet
R-3	9,600 Square feet	80 feet	120 feet
R-4	11,700 Square feet	90 feet	130 feet
R-5	15,000 Square feet	100 feet	150 feet

provided, however, that:

(a) When lots are hereafter platted with a side or rear lot line abutting a major thoroughfare with an existing or proposed right-of-way width of one hundred twenty (120) feet or more as designated on the Master Thoroughfare Plan of the City of Livonia, the lot depth and/or lot width shall be increased by at least thirty (30) feet to provide additional buffering from such thoroughfare;

(b) Lot depth requirements as stated above need not be adhered to where immovable physical boundary limitations exist which prohibit meeting lot depth requirements, provided that all minimum area and width requirements are met; and

(c) Land in R-5 Districts may be developed, at the option of the landowner, with the same number of dwelling units on eighty (80) percent of the land as could otherwise be developed on the entire land area if the remaining twenty (20) percent of the land will remain perpetually in an undeveloped state by means of a conservation easement in favor of the City. This development option may only be exercised once with respect to any parcel of land. For the purpose of determining the total number of dwelling units that could be developed under this subsection, the proprietor shall submit, at the time a request is made to develop the parcel, a fully dimensioned plan drawn to scale showing how the site could be developed in full conformity with existing ordinances, laws and rules as applied to the R-5 District, including wetlands, floodplains, minimum lot sizes and yard requirements. The plan must also conform to the design, layout and improvement standards for storm water drainage and streets and roads as provided in the City of Livonia Subdivision Control Ordinance. Regardless of how much of the parcel is devoted to open space, reductions in lot sizes and yard requirements permitted by this paragraph shall in no event exceed twenty (20) percent.

Section 4.05 Schedule of Minimum Front and Rear Yard Requirements in R-1 through R-5 Districts. (Section 4.05., as amended, by Ordinance No. 726, adopted 1-29-69.) The minimum front and rear yards required for each lot in R-1 through R-5 Districts are hereby established as follows:

Use District	Front Yard	Rear Yard
R-1	25 feet	30 feet
R-2	30 feet	30 feet
R-3	35 feet	30 feet
R-4	40 feet	35 feet
R-5	50 feet	45 feet

Section 4.06 Minimum Side Yard Requirements in R-1 through R-5 Districts. (Section 4.06, as amended, by Ordinance No. 726, adopted 1-29-69.) The minimum side yards required for each lot in R-1 through R-5 Districts are hereby established as follows:

	R-1	**R-2**	**R-3**	**R-4**	**R-5**
Two side yards, each not less than and a	5 ft.	6 ft.	8 ft.	10 ft.	12 ft.
Combined width of both not less than	14 ft.	16 ft.	18 ft.	22 ft.	24 ft.
In all cases, however, a side yard abut-					
ting on a street shall not be less than	15 ft.	17 ft.	19 ft.	21 ft.	23 ft.
Rear yard abutting side yard, the side					
yard abutting upon a street not less					

than	25 ft.	25 ft.	25 ft.	30 ft.	40 ft.

The City Planning Commission, regardless of the foregoing, may in approving plats require proposed houses to be shown on corner lots where one lot faces a street and the lot on the opposite side of the street sides to the same street, the side yard on the first shall be the same as the front setback on the lot facing the street.

Section 4.07 Building Height. No building hereafter erected or altered in any R-1 through R-5 District shall be more than two (2) stories in height nor exceed thirty-five (35) feet in height, except as provided in Sections 18.41 to 18.44, inclusive of this ordinance.

Section 4.08 Lot Coverage Limitations. (Section 4.08, as amended by Ordinance No. 2897, adopted 4-4-12.) One family dwellings together with accessory buildings hereafter erected on any lot in any R-1 through R-5 District shall not cover more than thirty (30) percent of the area of such lot.

Section 4.09 Off-street Parking Requirements. Off-street parking facilities shall be provided as hereinafter specified in Sections 18.37 to 18.40, inclusive, of this ordinance.

Section 4.10 Frontage of Residential Lots. (Section 4.10 Other Uses, repeated by Ordinance No. 821, adopted 7-20-70; Section 4.10 Frontage of Residential Lots added by Ordinance No. 2206, adopted 12-16-93.) No lot shall be used for a dwelling unless it abuts for its full frontage upon a street (as defined in Section 2.03 of this ordinance.)

Section 4.11 Uses Requiring a Conditional Use Permit From the Zoning Board of Appeals. (Section 4.11 added by Ordinance No. 2467, adopted 11-14-99; Ordinance No. 2759, § 2, adopted 10-25-06.) A "group day care home," as defined by 1973 PA 116, of the State of Michigan, as amended, as a private home in which more than six (6) but not more than twelve (12) minor children are given care and supervision for periods of less than twenty-four (24) hours a day unattended by a parent or legal guardian, for more than four (4) weeks during a calendar year, except children related to an adult member of the family by blood, marriage or adoption, provided that the group day care home shall be issued a permit hereunder if it either meets the criterion of subsection (a) of this section, or the Zoning Board of Appeals finds that it meets the criteria of subsection (b) of this section, following a hearing for which notice is provided as required by law for public hearings concerning zoning matters.

(a) The owner or occupant of said residence currently operating as a group day care home is a licensee and has continuously remained a licensee in good standing with the State of Michigan pursuant to 1973 PA 116, as amended, since prior to November 14, 1999;

(b) Group day care homes not licensed and operating prior to November 14, 1999 in residential zones shall meet all of the following:

1. The owner or occupant of said residence shall be a licensee and continuously remain a licensee in good standing with the State of Michigan pursuant to 1973 PA 116, as amended;

2. The group day care home shall not operate within a distance of one thousand (1,000) feet from any existing registered family day care home or group day care home, as measured from the

nearest property line of the proposed use to the nearest property line of the existing registered use;

3. The owner or operator has registered with the City Clerk;
4. The facility is the principal residence of the provider;
5. The use shall not result in traffic congestion or hazardous traffic conditions;
6. A drop-off/pickup area shall be provided if the residence is located on a major thoroughfare as defined in this ordinance in order to prevent vehicles from backing onto the roadway;
7. The use shall not involve an increase in on-street parking by more than two (2) additional vehicles at a time;
8. All health and safety requirements of the State of Michigan shall be met;
9. There shall be no dropping off or picking up of children between the hours of 10:00 p.m. and 6:00 a.m.;
10. No structural changes or exterior alterations shall be made which would alter the residential character of the dwelling except as required by the State of Michigan licensing rules;
11. Such use shall provide and maintain an outdoor play space meeting the minimum requirements of the State of Michigan;
12. The residence shall have appropriate fencing which shall encompass the entire outdoor play space, unless same is prohibited by recorded private homeowner's restrictions/bylaws, or, in the alternative, relief from this requirement may be sought upon appeal to the Zoning Board of Appeals;
13. The use shall comply with all noise standards and other provisions contained in Chapter 8.24 (Nuisances) and Chapter 8.32 (Noise Control) of the Livonia Code of Ordinances, as amended;
14. No sign shall be used on the premises;
15. All group day care homes shall be registered with the 911 dispatch center and the City of Livonia Public Safety Department.

V. Survey /Utility Plan/Concept Plan / Demolition Plan

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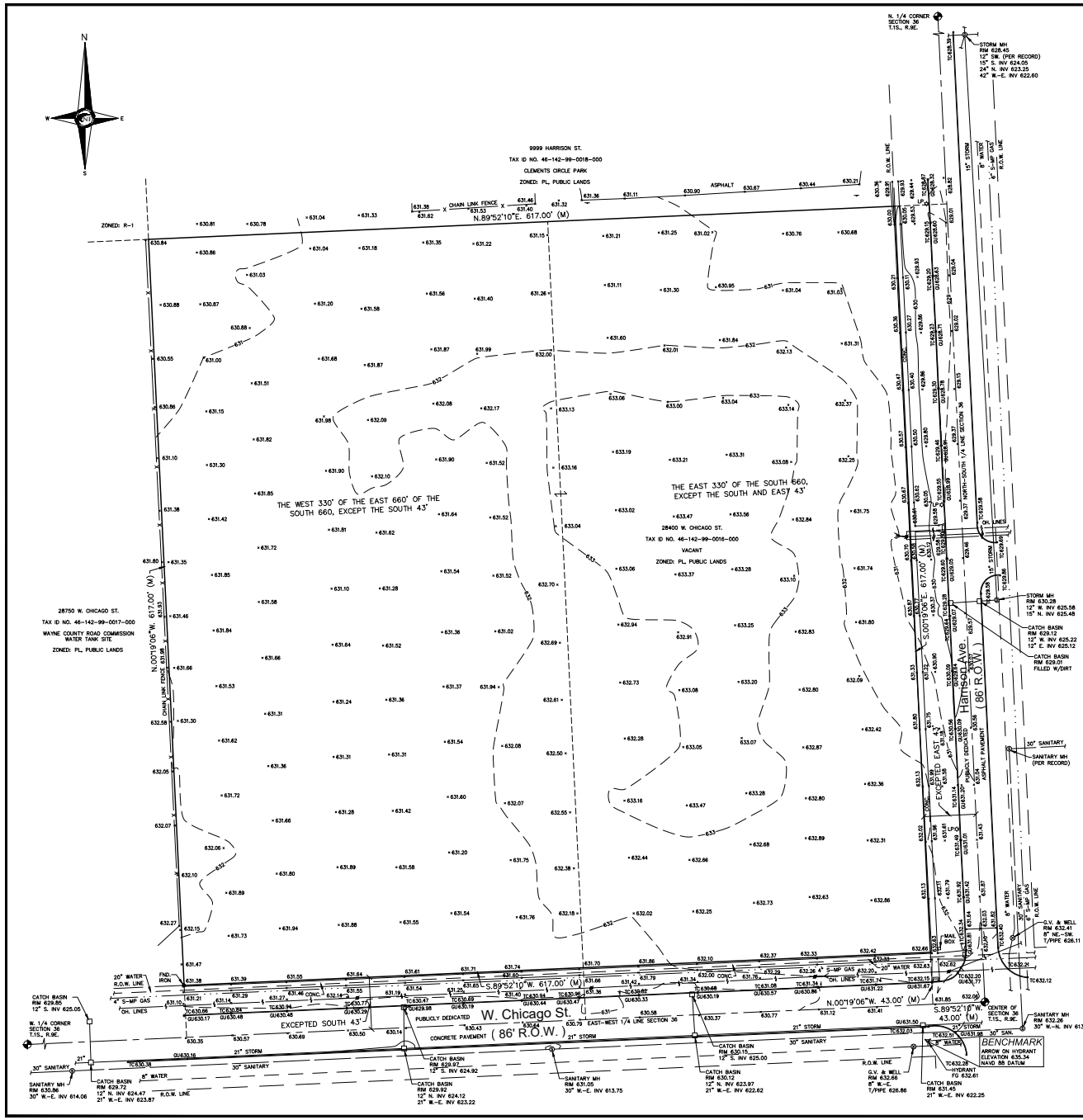
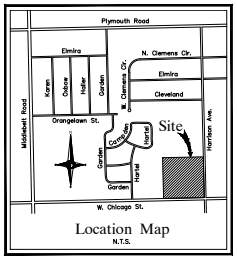




CERTIFICATE OF SURVEY

WE HEREBY CERTIFY THAT WE HAVE SURVEYED THE PROPERTY HEREIN DESCRIBED.

KEVIN NAVAROLI, P.S. NO. 53503 — 10-28-2019 DATE

SURVEY DATA

SITE AREA:
380,687 SQUARE FEET OR 8.74 ACRES OF LAND

ZONED:
PL, PUBLIC LANDS

PARKING SPACES:
NO PARKING SPACES (VACANT)

A SURVEYOR CANNOT MAKE A CERTIFICATION ON THE BASIS OF AN INTERPRETATION OR OPINION OF ANOTHER PARTY. A ZONING ENDORSEMENT LETTER SHOULD BE OBTAINED FROM THE CITY OF LIVONIA TO INSURE CONFORMITY AS WELL AS MAKE A FINAL DETERMINATION OF THE REQUIRED BUILDING SETBACK REQUIREMENTS.

LEGAL DESCRIPTION - PER TITLE COMMITMENT

LAND IN THE CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN, DESCRIBED AS FOLLOWS:

THE WEST 330 FEET OF THE EAST 660 FEET OF THE SOUTH 660 FEET OF THE NORTHWEST 1/4 OF SECTION 36, TOWN 1 SOUTH, RANGE 9 EAST, CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN, EXCEPTING THE SOUTH 43 FEET THEREOF.

AND THE EAST 330 FEET OF THE SOUTH 660 FEET OF THE NORTHWEST 1/4 OF SECTION 36, TOWN 1 SOUTH, RANGE 9 EAST, CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN, EXCEPTING THE SOUTH 43 FEET THEREOF. ALSO EXCEPT THE EAST 43 FEET OF THE SOUTH 660 FEET OF THE NORTHWEST 1/4 OF SECTION 36, TOWN 1 SOUTH, RANGE 9 EAST, CITY OF LIVONIA, WAYNE COUNTY.

TAX ID NO. 46-142-99-0016-000

ADDRESS: 28400 W. CHICAGO, LIVONIA, MI 48150

THE ABOVE LEGAL DESCRIPTION IS FROM FIRST AMERICAN TITLE INSURANCE COMPANY, COMMITMENT NO. NCS-963716-MICH, COMMITMENT DATE: SEPTEMBER 10, 2019.

TITLE REPORT NOTES

REFERENCE FIRST AMERICAN TITLE INSURANCE COMPANY COMMITMENT NUMBER: NCS-963716-MICH, EFFECTIVE DATE: SEPTEMBER 10, 2019.

SCHEDULE B – PART II, EXCEPTIONS:

EXCEPTIONS 1, 4, 5, 6, 7 AND 10 REFER TO THE OWNERSHIP OF THE PROPERTY AND/OR ARE NOT PLOTTABLE.

2. ANY FACTS, RIGHTS, INTERESTS, OR CLAIMS THAT ARE NOT SHOWN BY THE PUBLIC RECORDS BUT THAT COULD BE ASCERTAINED BY MAKING INQUIRY OF PERSONS IN POSSESSION OF THE LAND.

3. EASEMENTS, ENCUMBRANCES, OR CLAIMS THEREOF, NOT SHOWN BY THE PUBLIC RECORDS.

8. INTEREST IF ANY, OF THE UNITED STATES, STATE OF MICHIGAN, OR ANY POLITICAL SUBDIVISION THEREOF, IN THE OIL, GAS AND MINERALS IN AND UNDER AND THAT MAY BE PRODUCED FROM THE CAPTIONED LAND.

9. ANY RIGHTS, TITLE, INTEREST OR CLAIM THEREOF TO THAT PORTION OF THE LAND TAKEN, USED OR GRANTED FOR STREETS, ROADS OR HIGHWAYS.

BASIS OF BEARING NOTE

ALL BEARINGS ARE IN RELATION TO THE PREVIOUSLY ESTABLISHED EAST AND WEST 1/4 LINE OF SECTION 36 OF CHICAGO HEIGHTS SUBDIVISION, WAYNE COUNTY RECORDS. (S.89°52'10"W.)

FLOOD HAZARD NOTE

THE PROPERTY DESCRIBED ON THIS SURVEY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD AREA AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY; THE PROPERTY LIES WITHIN ZONE X OF THE FLOOD INSURANCE RATE MAP IDENTIFIED AS MAP NO. 26163C0227E BEARING AN EFFECTIVE DATE OF 2-2-2012.

TOPOGRAPHIC SURVEY NOTES

ALL ELEVATIONS ARE EXISTING ELEVATIONS, UNLESS OTHERWISE NOTED.

UTILITY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND RECORDS OF UTILITY COMPANIES, AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, OR EXACTNESS OF LOCATION.

DTE DISCLAIMER NOTE

PLEASE NOTE THAT DTE HAS NEW REGULATIONS THAT MAY IMPACT DEVELOPMENT OUTSIDE THEIR EASEMENT OR THE PUBLIC RIGHT OF WAY. CLIENT SHALL CONTACT DTE TO DETERMINE THE "NEW STRUCTURES AND POWER LINE" REQUIREMENTS AS THEY MAY APPLY TO ANY FUTURE BUILDING OR RENOVATION OF A STRUCTURE. DTE ENERGY CAN BE CONTACTED AT 800-477-4747

MISS DIG / UTILITY DISCLAIMER NOTE

A MISS DIG TICKET NUMBER A092870361, PURSUANT TO MICHIGAN PUBLIC ACT 174 WAS ENTERED FOR THE SURVEYED PROPERTY. DUE TO THE EXTENDED REPORTING PERIOD FOR UNDERGROUND FACILITY OWNERS TO PROVIDE THEIR RECORDS, THE SURVEY MAY NOT REFLECT ALL THE UTILITIES AT THE TIME THE SURVEY WAS ISSUED ON OCTOBER 28, 2019. THE SURVEY ONLY REFLECTS THOSE UTILITIES WHICH COULD BE OBSERVED BY THE SURVEYOR IN THE FIELD OR AS DEPICTED BY THE UTILITY COMPANY RECORDS FURNISH PRIOR TO THE DATE THIS SURVEY WAS ISSUED. THE CLIENT AND/OR THEIR AUTHORIZED AGENT SHALL VERIFY WITH THE FACILITY OWNERS AND/OR THEIR AUTHORIZED AGENTS, THE COMPLETENESS AND EXACTNESS OF THE UTILITIES LOCATION.

LEGEND

MANHOLE(MH) / CO	EXISTING SANITARY SEWER / EXISTING SAN. CLEAN OUT
HYDRANT(HYD) / GATE VALVE(GV)	EXISTING WATER MAIN
MANHOLE(MH) / CATCH BASIN(CB)	EXISTING STORM SEWER
CBB	EX. BEEHIVE CATCH BASIN
UTILITY POLE / GUY POLE / GUY WIRE	EX. UNDERGROUND (UG.) CABLE / OVERHEAD (OH.) LINES
UP / LP	LIGHT POLE
S	SIGN
	EXISTING GAS MAIN
ASPH.	ASPHALT
CONC.	CONCRETE
FD. / FND.	FOUND
RET. WALL	RETAINING WALL
R.O.W.	RIGHT-OF-WAY
SPK	SET PK NAIL
(TYP)	TYPICAL
(R)	RECORD
(M)	MEASURED
C/L	CENTERLINE
P/L	PROPERTY LINE
GM	GAS METER
EM	ELECTRIC METER
L/S	LANDSCAPE
DS	DOWNSPOUT
PM	PARKING METER

NOWAK & FRAUS ENGINEERS
CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NOWAKFRAUS.COM

SEAL

STATE OF MICHIGAN — KEVIN NAVAROLI — PROFESSIONAL SURVEYOR NO. 53503 — LICENSED PROFESSIONAL SURVEYOR

PROJECT
Livonia Public Schools - Wilson Site
28400 W. Chicago St.
Livonia, MI 48150

CLIENT
Livonia Public Schools
15125 Farmington Road
Livonia, MI 48154

Contact: Phillip Francis
Phone: 734.744.2554
Email:
pfrancis@livoniapublicschools.org

PROJECT LOCATION
Part of the NW 1/4 of Section 36 T.1S., R.9E., City of Livonia, Wayne County, Michigan

SHEET
Boundary / Topographic Survey

Know what's below Call before you dig.

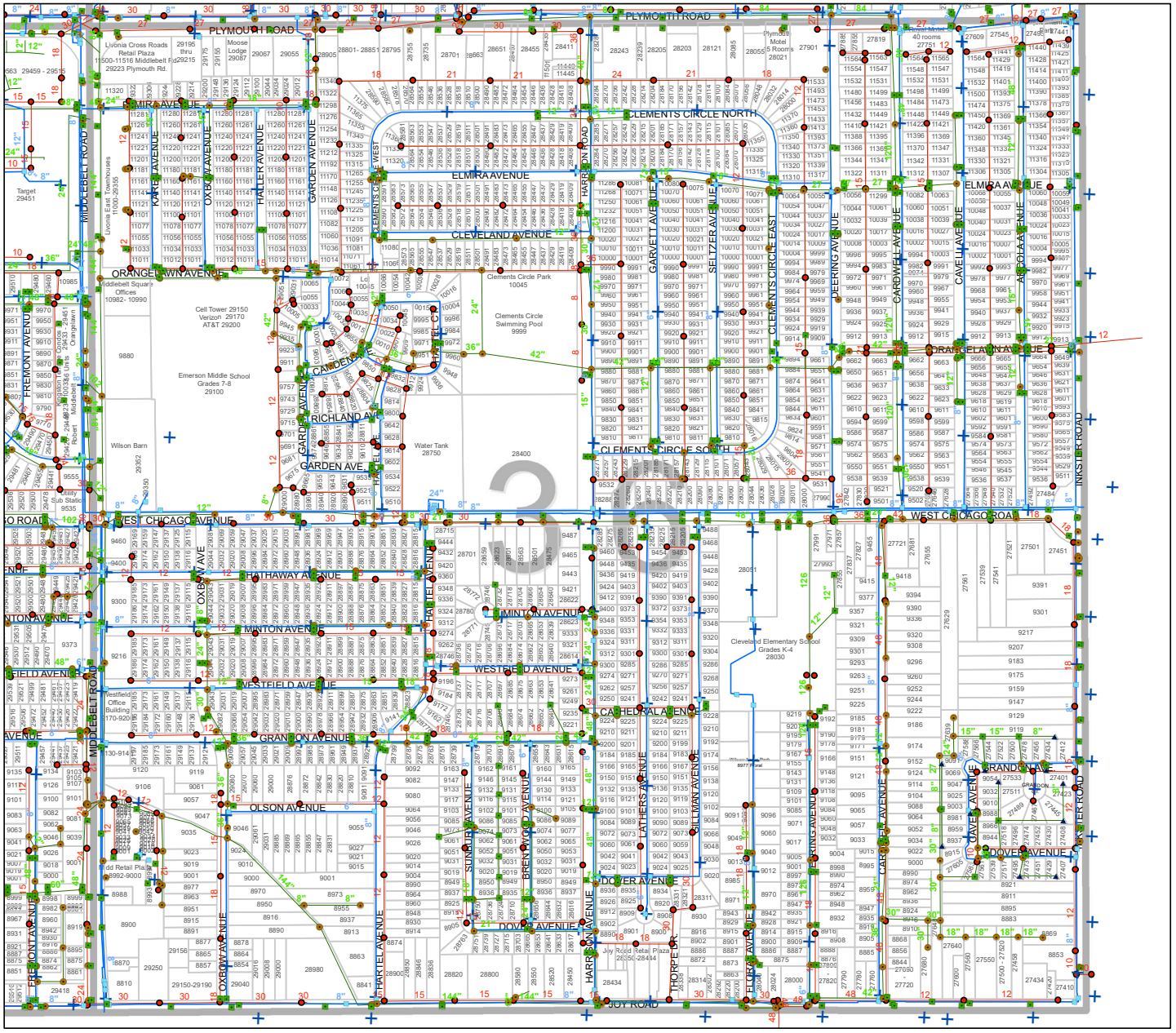
DATE	ISSUED/REVISED
10-28-19	SURVEY ISSUED

DRAWN BY: M. Carnaghi
DESIGNED BY:
APPROVED BY: K. Navaroli
DATE: October 28, 2019
SCALE: 1" = 40'

NFE JOB NO. L286
SHEET NO. 1 of 1

SECTION 36

City of Livonia
UTILITIES MAPBOOK



Legend

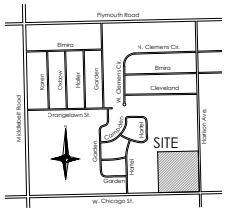
- Storm Catch Basin
- Storm Inlet
- Storm Manhole
- Water Valve
- Water Hydrant
- Sanitary Manhole
- Water Main
- Storm Sewer
- Sanitary Sewer

N

0 125 250 500 750 1,000 Feet

Information contained herein deemed reliable but not guaranteed.

Map Updated February 2015



LOCATION MAP
N.T.S.

SITE SUMMARY

EXISTING SITE ZONING: PL, PUBLIC LAND
PROPOSED SITE ZONING: R-1, SINGLE FAMILY DISTRICT
EXISTING SITE AREA: 380,687 S.F. OR 8.74 ACRES

MINIMUM LOT SIZE: 60' X 120'
MINIMUM LOT AREA: 7,200 S.F.
PROPOSED LOTS: 30
PROPOSED DENSITY: 3.43 UNITS PER ACRE
PROPOSED BLDG HT: TWO STORIES, 35 FEET
BLDG LOT COVERAGE: 30% OF EACH LOT

REQUIRED YARDS
FRONT: 25'
SIDE: 5', 9'
REAR: 30'

OPEN SPACE REQUIREMENTS
REQUIRED: 720 S.F. PER LOT REQUIRED
30 LOTS X 720 = 21,600 S.F. REQUIRED

PROPOSED: 27,758.61 S.F.

LOT SCHEDULE

LOT NO.	LOT AREA (S.F.)
LOT 1	8,996.33
LOT 2	7,200.00
LOT 3	7,200.00
LOT 4	7,200.00
LOT 5	7,200.00
LOT 6	9,243.02
LOT 7	9,249.89
LOT 8	7,200.00
LOT 9	7,200.00
LOT 10	7,200.00
LOT 11	7,200.00
LOT 12	8,989.82
LOT 13	9,017.72
LOT 14	7,236.36
LOT 15	7,241.50
LOT 16	7,246.63
LOT 17	7,214.55
LOT 18	9,309.83
LOT 19	10,201.37
LOT 20	10,697.36
LOT 21	7,200.00
LOT 22	10,629.79
LOT 23	7,752.93
LOT 24	7,908.53
LOT 25	7,200.00
LOT 26	7,200.00
LOT 27	7,200.00
LOT 28	7,200.00
LOT 29	7,200.00
LOT 30	8,994.15

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SEAL

PROJECT
Livonia Public Schools -
Wilson Site
28400 W. Chicago St.
Livonia, MI 48150

CLIENT
Livonia Public Schools
15125 Farmington Road
Livonia, MI 48154

Contact: Phillip Francis
Phone: 734.744.2554
Email:
pfrancis@livoniapublicschools.org

PROJECT LOCATION
Part of the NW 1/4
of Section 36
T.1S., R.9E.,
City of Livonia,
Wayne County, Michigan

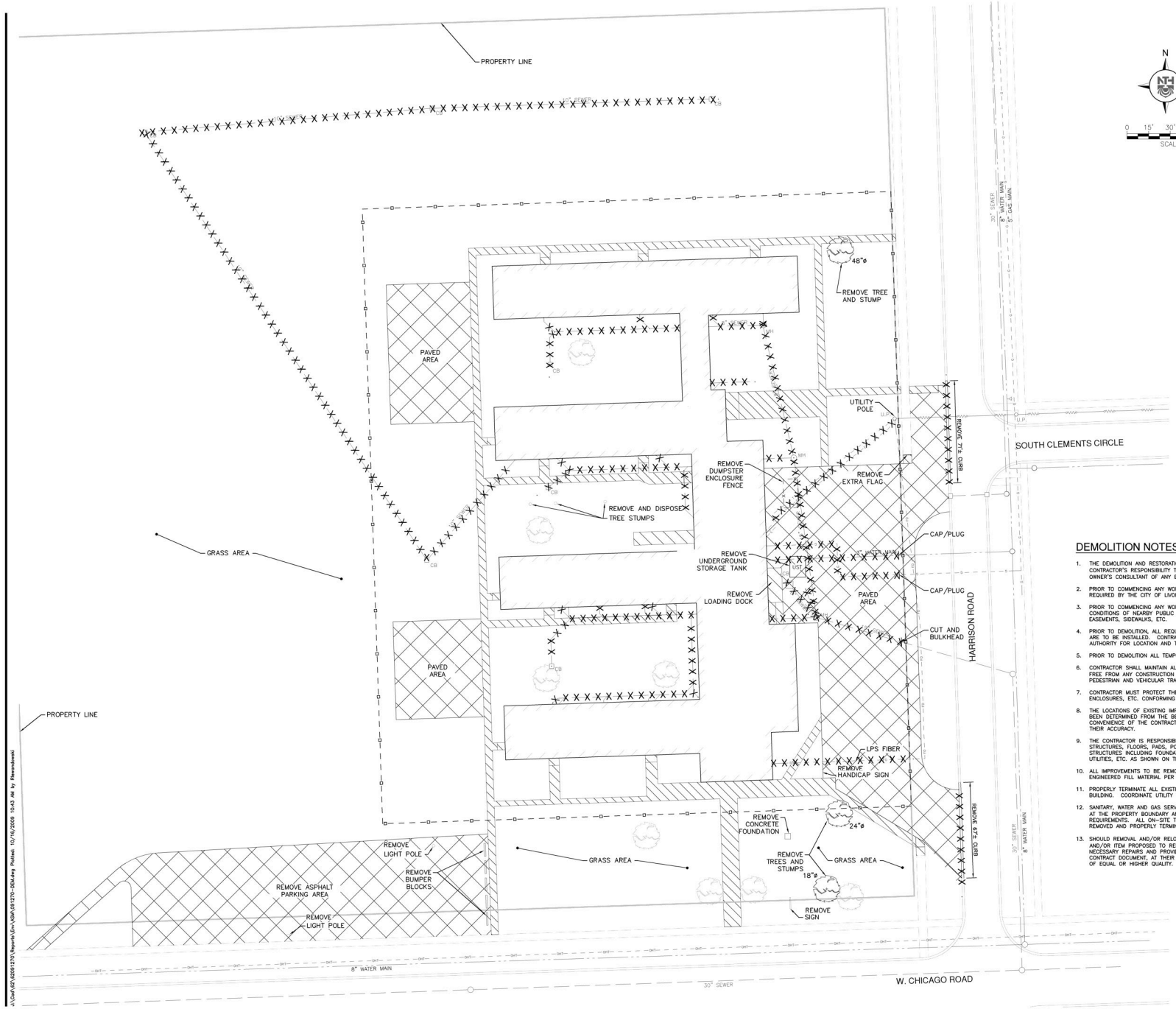
SHEET
Conceptual Site Plan

Know what's below Call before you dig. 811

DATE	ISSUED/REVISED
10-28-19	SURVEY ISSUED

DRAWN BY:
G. Ostrowski
DESIGNED BY:
G. Ostrowski
APPROVED BY:
G. Ostrowski
DATE:
October 28, 2019
SCALE: 1" = 40'
60 20 0 20 40 60

NFE JOB NO. L286
SHEET NO. 1 of 1



3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG ®
1-800-482-7171
For free location of public utility lines.
ALTERNATE NUMBER (810) MISS-DIG
COLOR CODES FOR UTILITY LOCATING:

Yellow	Oil, & GAS	Blue	WATER
Orange	PHONE & CATV	Green	STORM DRAIN
Red	ELECTRIC	Brown	SEWER
		Pink	SURVEYING

IF YOU ARE GOING TO WORK NEAR OVERHEAD WIRES ... CALL MISS DIG

LEGEND

- EXISTING STORM SEWER
- EXISTING WATER MAIN
- EXISTING TELE. POLE
- EXISTING GAS MAIN
- EXISTING OVERHEAD ELEC.
- EXISTING UNDERGROUND ELEC.
- EXISTING UNDERGROUND TELEPHONE
- EXISTING UNDERGROUND LPS FIBEROPTICS
- UST — UNDERGROUND STORAGE TANK TO BE REMOVED
- CB — EXISTING CATCH BASIN
- MH — EXISTING MANHOLE
- EXISTING STRUCTURE TO BE DEMOLISHED
- CONCRETE SIDEWALK TO BE REMOVED
- ASPHALT PAVED AREA TO BE REMOVED
- REMOVE AND BACKFILL UTILITY
- TEMPORARY CONSTRUCTION FENCE

DEMOLITION NOTES

1. THE DEMOLITION AND RESTORATION AS SHOWN MAY NOT BE ALL INCLUSIVE. IT IS CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS AND DIMENSIONS, AND NOTIFY OWNER'S CONSULTANT OF ANY ERRORS OR OMISSIONS PRIOR TO CONSTRUCTION.
2. PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED BY THE CITY OF LIVONIA.
3. PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR SHALL VIDEOTAPE ALL EXISTING CONDITIONS OF NEARBY PUBLIC AND PRIVATE PROPERTY, INCLUDING STRUCTURES, ROADS, EASEMENTS, SIDEWALKS, ETC.
4. PRIOR TO DEMOLITION, ALL REQUIRED SOIL EROSION AND SEDIMENT CONTROL DEVICES ARE TO BE INSTALLED. CONTRACTOR SHALL CONTACT THE SOIL EROSION CONTROL AUTHORITY FOR LOCATION AND TYPE OF S.E.C.E. MEASURES.
5. PRIOR TO DEMOLITION ALL TEMPORARY CONSTRUCTION FENCING SHALL BE INSTALLED.
6. CONTRACTOR SHALL MAINTAIN ALL EXISTING ROADS, SIDEWALKS, DRIVES, ETC. CLEAR AND FREE FROM ANY CONSTRUCTION ACTIVITY AND/OR MATERIAL TO ENSURE EASY AND SAFE PEDESTRIAN AND VEHICULAR TRAFFIC AT ALL TIMES.
7. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC. CONFORMING TO BEST PRACTICES.
8. THE LOCATIONS OF EXISTING IMPROVEMENTS AND UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL AND DISPOSAL OF ALL STRUCTURES, FLOORS, PADS, PORCHES, WALLS, SIDEWALKS, PAVEMENTS AND SUBSURFACE STRUCTURES INCLUDING FOUNDATIONS, CONCRETE FILLED UNDERGROUND STORAGE TANK, UTILITIES, ETC. AS SHOWN ON THE PLANS.
10. ALL IMPROVEMENTS TO BE REMOVED SHALL BE BROUGHT TO GRADE WITH SUITABLE ENGINEERED FILL MATERIAL PER SPECIFICATIONS.
11. PROPERLY TERMINATE ALL EXISTING UTILITY CONNECTIONS PRIOR TO DEMOLISHING THE BUILDING. COORDINATE UTILITY TERMINATION AND DEMOLITION WITH UTILITY COMPANIES.
12. SANITARY, WATER AND GAS SERVICE CONNECTIONS SHALL BE TERMINATED AND PLUGGED AT THE PROPERTY BOUNDARY AND/OR IN ACCORDANCE WITH THE CITY OF LIVONIA REQUIREMENTS. ALL ON-SITE TELEPHONE, ELECTRICAL, CABLE, ETC. SERVICES SHALL BE REMOVED AND PROPERLY TERMINATED.
13. SHOULD REMOVAL AND/OR RELOCATION ACTIVITIES DAMAGE ANY EXISTING STRUCTURE AND/OR ITEM PROPOSED TO REMAIN, THEN THE CONTRACTOR SHALL MAKE ALL NECESSARY REPAIRS AND PROVIDE LABOR AND MATERIALS IN ACCORDANCE WITH THE CONTRACT DOCUMENT, AT THEIR OWN EXPENSE. ALL CONSTRUCTION MATERIALS SHALL BE OF EQUAL OR HIGHER QUALITY.

NTH Consultants, Ltd.
Infrastructure Engineering and Environmental Services

Northville, MI	248.553.6300
Detroit, MI	313.237.3900
Lansing, MI	517.484.6900
Grand Rapids, MI	616.957.3690
Exton, PA	610.524.2300
Lehigh Valley, PA	484.893.1440
Cleveland, OH	216.334.4040
Indianapolis, IN	317.735.7649

SUBMITTAL

REV	DESCRIPTION	DATE	BY

PROJECT NAME:
WILSON FOOD CENTER

PROJECT LOCATION:
28400 W. CHICAGO ROAD
LIVONIA, MICHIGAN

NTH PROJECT NO.: 62-091270	CAD FILE NAME: 091270-DEM
DESIGNED BY: CJA	INCEP DATE: 8/28/2009
DRAWN BY: CWS	DRAWING SCALE: 1" = 30'
CHECKED BY: CJA	SUBMITTED DATE: 10/16/2009

SHEET TITLE:
DEMOLITION PLAN

SHEET REFERENCE NUMBER:
2

J:\Civil\62\62091270\Reports\Env\ASM\091270-ASM.dwg Plotted: 10/16/2009 10:43 AM by Rkowalewski

VI.Legal Documents

- Proposal Form
- Offer To Purchase
- Affidavit Of Compliance-Iran Economic Sanctions Act

“The information contained in this Request For Proposal To Purchase Real Property is provided as an accommodation to the prospective purchasers. It is believed to be correct, but no representations or warranties as to its accuracy should be inferred or are made. Each party responding to this Request For Proposals should independently confirm the accuracy of the information contained herein.”

LIVONIA PUBLIC SCHOOLS
Request For Proposals To
Purchase Real Property
PROPOSAL FORM

Name of Prospective Purchaser:_____Contact Person:_____

Address:_____ Phone:_____

E-Mail:_____

1. ***Earnest Money***: Twenty-Five Thousand ($25,000.00) Dollars to be submitted within three (3) days of the final execution of the Offer To Purchase Real Estate via certified check.

2. ***Purchase Price***: $_____

3. ***Demolition Plan***: The prospective purchaser acknowledges it has reviewed the School District's Demolition Plan for the Property for the demolition of the former school building and has no exceptions or questions with respect to said plan, unless otherwise provided below. If the prospective purchaser closes on the subject Property, it takes the Property As-Is.

4. ***Exceptions or Special Conditions***: The prospective purchaser acknowledges and agrees that it is submitting this Proposal with the understanding that unless the prospective purchaser sets forth specific exceptions to the terms and conditions of this RFP or the Offer To Purchase Real Estate, that the prospective purchaser will execute the Offer To Purchase Real Estate attached to the RFP with all of the terms and conditions as contained therein. Please set forth any exceptions or special considerations below.

_____
_____
_____
_____
_____
_____
_____

(Attach Additional Sheets or mark-up copy of the Offer To Purchase with changes, if desired)

The undersigned represents and warrants to Livonia Public Schools that he/she/it has been duly authorized to execute this Proposal on behalf of the prospective purchaser and that if this Proposal is accepted by Livonia Public Schools that the same shall be binding upon and fully enforceable against the prospective purchaser. The prospective purchaser acknowledges that the School District may accept or reject any Proposal in whole or in part in its sole and absolute discretion.

_____
Print Name of Prospective Purchaser

_____
Print Name and Title of Authorized Agent

_____
Signature of Authorized Agent

Dated: _____, 2020

OFFER TO PURCHASE REAL ESTATE

1. THE UNDERSIGNED, Purchaser hereby offers and agrees to purchase the following vacant real property situated in the City of Livonia, Wayne County, Michigan, described as follows:

> 8.74 +/- acres of vacant land formerly known as Wilson Elementary School, commonly known as 28400 West Chicago, Livonia, Michigan, Sidwell Number 46-142-99-0016-000, more particularly described on **Exhibit A** attached hereto (the "Premises"),

together with all improvements and appurtenances, if any, now on the Premises, subject to existing building and use restrictions, easements, if any, and zoning ordinances upon the following conditions:

THE SALE TO BE CONSUMMATED BY CASH SALE: Delivery of the Warranty Deed attached hereto and marked as **Exhibit B** conveying marketable title at Closing to the Premises. The purchase price for the Premises shall be the sum of _____ and 00/100 ($_____) Dollars (the "Purchase Price") payable by Purchaser at Closing in cash, certified check, or direct wire transfer at the option of Seller.

2. As evidence of title, Seller agrees to furnish Purchaser as soon as possible with a Commitment for Title Insurance with the standard exceptions (the "Commitment"), issued by First American Title Insurance Company (the "Title Company") in an amount not less than the Purchase Price bearing date later than the acceptance hereof with policy pursuant thereto to be issued insuring Purchaser. If Purchaser desires Seller to furnish Purchaser with a Commitment "without the standard survey exceptions," Purchaser shall be responsible to obtain a survey within ninety (90) days of the Date of this Offer and verify that said survey is sufficient to allow the Title Company to issue such a Commitment. At Closing, Seller shall pay for and order a title insurance policy consistent with the Commitment which Seller shall have updated to the date of Closing.

3. In the event of default of the terms and conditions of this Offer by the Purchaser hereunder, the Seller may, at its option, elect to enforce the terms hereof by specific performance or declare a breach hereunder, terminate this Offer and retain the Earnest Money Deposit as liquidated damages.

4. In the event of default of the terms and conditions of this Offer by the Seller hereunder, the Purchaser may, at its option, elect to enforce the terms hereof by specific performance or demand, and be entitled to, an immediate refund of its entire Earnest Money Deposit in full termination of this Offer.

5. If written objection to the title is made within five (5) days of delivery of the Commitment, that the title is not in the condition required for performance hereunder, the Seller shall have thirty (30) days from the date it receives notice in writing of the particular defects claimed either to: (1) remedy the title defects set forth in said written notice, although Seller shall have no obligation to cure or to obtain insurance over such defects, or (2) refund the Earnest Money Deposit in full termination of this Offer. Notwithstanding the above, Purchaser may, at any time during the thirty (30) day cure period, waive the conditions of this Paragraph 5 and accept the title in its "As Is" condition. If the Seller is able to remedy such defects within the time specified as evidenced by written notification, a revised Commitment or endorsement to the Commitment, the Purchaser agrees to complete the sale in accordance with the Closing date set forth in Paragraph 13.

6. All special assessments which have been levied and due and payable upon the Premises as of the Date of this Offer shall be paid by the Seller. All special assessments which are levied and due and payable after the Date of this Offer shall be paid by the Purchaser. All real property taxes on the Premises shall be prorated and adjusted as of the date of Closing in accordance with DUE DATE basis of the municipality or taxing unit in which the Premises is located, under the assumptions that taxes are paid in advance and that summer and winter taxes are due and payable July 1 and December 1 respectively. Water and other utility bills shall be prorated and adjusted as of the date of Closing. The Seller shall be responsible for the payment of any applicable transfer taxes associated with this transaction and the Purchaser shall be responsible for all applicable recording fees, including, but not limited to, the fees required for recording the Warranty Deed. Other Closing costs will be split equally between Purchaser and Seller and reflected on the final Closing Statement.

7. It is understood that this Offer is irrevocable for forty five (45) days from the date hereof. If this Offer is accepted by the Seller, the Purchaser agrees to complete the purchase of the Premises within the time indicated in Paragraph 13.

8. Within three (3) business days of the Date of this Offer, Purchaser shall deposit the sum of Twenty Five Thousand and 00/100 ($25,000.00) Dollars (the "Earnest Money Deposit") to be held by the Seller and applied to the Purchase Price if the sale is consummated. The Seller shall not be responsible to the Purchaser for any interest associated with the subject Earnest Money Deposit.

9. The covenants herein shall bind and inure to the benefit of the executors, administrators, successors and assigns of the respective parties.

10. This Offer and all of Purchaser's obligations hereunder are contingent upon all of the following:

A. Purchaser's satisfaction with the Premises following Purchaser's testing, analysis, inspection and evaluation of the Premises ("Purchaser's Evaluations").

Purchaser shall have ninety (90) days after the Date of this Offer ("Inspection Period") in which to conduct such investigations, evaluations and testing of the Premises (both above ground and below ground) as Purchaser deems appropriate in order to determine if the Premises are satisfactory and suitable for Purchaser's intended use and enjoyment. Purchaser's Evaluations may include, but shall not be limited to: (i) a physical inspection of all aspects of the Premises; (ii) an environmental analysis and investigation of the Premises; (iii) an analysis of the availability of any federal, state or local tax abatements or property tax reductions for the Premises; (iv) a verification that there are no existing special assessments affecting the Premises; (v) investigating the availability and condition of utility and sewage services and systems including, but not limited to, gas, water, electricity, sanitary sewer, storm sewer and telephone services and systems; (vi) making soil tests, borings and other engineering, environmental and architectural tests and evaluations; (vii) reviewing and analyzing all applicable building and use restrictions, zoning ordinances, building codes and all other federal, state and local statutes, codes, ordinances, rules and regulations relating to the ownership, development or use of the Premises; and (viii) analyzing the results of any survey. Upon completion of Purchaser's Evaluations, Purchaser shall, at its sole cost and expense, restore the Premises to a condition as good as its condition prior to such Evaluations. During the term of the Inspection Period and at all times prior to Closing, Purchaser, its employees, agents, representatives, engineers, inspectors and surveyors (collectively "Representatives"), shall have the right of access to the Premises at all times for the purposes of performing Purchaser's Evaluations provided Purchaser has executed the attached Release and marked as **Exhibit C** and obtained such a Release from its Representatives. Purchaser shall indemnify, defend and hold Seller free and harmless from and against any liability arising therefrom except as caused by the acts or omissions of Seller or Seller's agents and employees.

B. In the event that Purchaser is dissatisfied with the results of Purchaser's Evaluations and Purchaser has notified Seller in writing prior to the expiration of said Inspection Period, Purchaser shall have the option to rescind and terminate this Offer and Seller shall return all of Purchaser's Earnest Money Deposit paid as of that time, provided that Purchaser delivers to the Seller, free of charge, a copy of, in both electronic and hard copy formats, any and all documents, engineering plans, construction drawings, reports, assessments, surveys or site plans and any other work product prepared by, or on behalf of, Purchaser in accordance with this Paragraph 10 or for the development of the Premises (the "Documents") and shall represent and warrant to the Seller that upon delivery of the Documents that the Documents are assigned to Seller and/or the Seller has permission from any and all other preparers of the Documents, to use the same in connection with the Premises. All of Purchaser's Evaluations shall be performed at the Purchaser's sole cost and

expense. At any time during the Inspection Period, Purchaser may elect to purchase the Premises for the Purchase Price, less the Earnest Money Deposit, by notifying the Seller in writing, and the Closing shall take place in accordance with Paragraph 13.

C. PURCHASER ACKNOWLEDGES THAT ONCE THE INSPECTION PERIOD EXPIRES PURCHASER HAS ACCEPTED THE PREMISES PURSUANT TO THIS PARAGRAPH AND PURCHASER TAKES THE PREMISES "AS IS". EXCEPT AS PROVIDED IN PARAGRAPHS 11 AND 12 BELOW, SELLER HAS NOT MADE ANY REPRESENTATIONS OR WARRANTIES AS TO ANY MATTER, INCLUDING BUT NOT LIMITED TO, EXTERIOR (E.G., SOIL, SURFACE WATER AND GROUNDWATER) CONDITIONS OF THE PREMISES, EASEMENTS, BUILDING AND USE RESTRICTIONS, AVAILABILITY OF UTILITIES, OR ANY OTHER MATTER CONTEMPLATED IN THIS PARAGRAPH 10, AND THAT PURCHASER ASSUMES ALL RESPONSIBILITY FOR ANY INJURIES, CONDITIONS OR DAMAGES CAUSED BY ANY SUCH MATTERS UPON TRANSFER OF TITLE. EXCEPT AS SPECIFICALLY PROVIDED IN THIS OFFER, UPON CLOSING, PURCHASER WAIVES AND RELEASES SELLER FROM ALL CLAIMS OR CAUSES OF ACTION THAT PURCHASER MAY NOW OR HEREAFTER HAVE, KNOWN OR UNKNOWN, AGAINST SELLER RELATING TO THE PREMISES, THIS OFFER OR ARISING UNDER ANY FEDERAL, STATE, OR LOCAL LAW, REGULATION, ORDINANCE, OR CODE THAT RELATES TO THE PHYSICAL OR ENVIRONMENTAL CONDITION OF THE PREMISES.

D. At the expiration of the Inspection Period, there will be one (1) ninety (90) day extension period available to Purchaser ("Extension Period"). At the commencement of the Extension Period, the Earnest Money Deposit shall become non-refundable to Purchaser, but shall be applied toward the Purchase Price in the event of Closing. This Extension Period shall be deemed automatically exercised by Purchaser unless Purchaser shall give written notice to Seller prior to the expiration of the Inspection Period, that Purchaser is electing its right to terminate this Offer. If Purchaser elects to exercise the Extension Period, Purchaser agrees to waive all contingencies enumerated in Paragraphs 10(A), (B) and (C) above, except that Purchaser may solely use the Extension Period in which to continue to pursue all necessary governmental approvals from the City of Livonia or other governmental entities having jurisdiction over the Premises (hereinafter collectively referred to as the "Governmental Approvals"). Purchaser shall use its best efforts to obtain all necessary Governmental Approvals and agrees to commence the Governmental Approvals process and apply for all necessary

Governmental Approvals within thirty (30) days of the Date of this Offer. As part of these Governmental Approvals, Purchaser agrees that it shall secure, at its sole cost and expense, all necessary site plans and other engineering drawings and documentation necessary for the Purchaser to submit to the City of Livonia or other governmental agencies having jurisdiction over the Premises to obtain the Governmental Approvals. In the event all Governmental Approvals have not been secured prior to the expiration of the Extension Period, Seller and Purchaser agree that if the Purchaser does not obtain the Governmental Approvals within the Extension Period, Purchaser may terminate this Offer and if terminated, Seller shall be entitled to retain the Earnest Money Deposit and Purchaser shall provide to Seller, free of charge, the Documents in the form required in Paragraph 10(B) above.

11. Seller represents and warrants, and this representation shall survive the Closing for a period of six (6) months only, that, to the best of its present knowledge, without any independent inquiry, investigation or testing for Hazardous Materials or any other matter:

A. The Premises are free of Hazardous Materials to the extent that any such presence of Hazardous Materials would have a material adverse effect on the Premises, Purchaser understands and acknowledges that Seller has not conducted, nor shall Seller be obligated to conduct, Phase I or Phase II investigations of the Premises. "Hazardous Materials" shall mean (i) any hazardous or regulated substance as defined by Environmental Laws (ii) any other pollutant, contaminant, hazardous substance, solid waste, hazardous material, radioactive substance, toxic substance, noxious substance, hazardous waste, particulate matter, airborne or otherwise, chemical waste, medical waste, crude oil or any fraction thereof, radioactive waste, petroleum or petroleum-derived substance or waste, asbestos, PCBs, radon gas, all forms of natural gas, or any hazardous or toxic constituent of any of the foregoing, whether such substance is in liquid, solid or gaseous form, or (iii) any such substance the release, discharge or spill of which requires activity to achieve compliance with applicable law. "Environmental Laws" shall mean all federal, state and local environmental laws, including, but not limited to, The Hazardous Materials Transportation Act, (47 USC §§ 1801 et seq.), Federal Water Pollution Control Act (33 U.S.C. §§ 1251 et seq.) ("Clean Water Act"), the Resource Conservation & Recovery Act (42 U.S.C. §§ 6901 et seq.) ("RCRA"), Safe Drinking Water Act (42 U.S.C. §§ 300f-j-26), Toxic Substances Control Act (15 U.S.C. §§ 2601 et seq.), Clean Air Act (42 U.S.C. §§ 7401 et seq.), the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. §§ 9601 et seq.) ("CERCLA"), the Emergency Planning and Community Right to Know Act, 42 U.S.C. §§ 11001 et seq. ("EPCRA"), the administrative rules and regulations

promulgated under such statutes, or any other similar federal, state or local law or administrative rule or regulation of similar effect, each as amended; and

B. Seller has not used the Premises for the purpose of using, generating, manufacturing, transporting, treating, storing, processing, disposing, discharging, emitting or releasing Hazardous Materials, except for Hazardous Materials which are used in the ordinary course of the Seller's business in a manner which is in material compliance with Environmental Laws.

12. Seller represents and warrants that to the best of its present knowledge there are no judicial or administrative proceedings pending or threatened against the Premises and Seller is not aware of any facts which might result in any action, suit or other proceedings

13. If this Offer is accepted by Seller and if Title can be conveyed in the condition required within this Offer, Purchaser agrees to complete the sale and close within ten (10) days of the later of the satisfaction of the conditions listed in Paragraph 10 of this Offer or delivery of the Commitment to Purchaser (the "Closing"). By the execution of this instrument the Purchaser acknowledges the receipt of a copy of this Offer. The Closing of this sale shall take place at the office of Clark Hill PLC, or as otherwise agreed to by the parties.

14. Purchaser shall indemnify, defend and hold Seller including its Board of Education (in their official and individual capacities), administrators, employees and agents, harmless from any claims, suits, damages, costs, injuries, losses and any expenses resulting and arising from and out of Purchaser's or its officers, directors, agents and/or employees' occupancy, possession, use, evaluations and ownership of the Premises herein during the time this Offer is in existence except for such matters arising from the acts or negligence of Seller or Seller's agents and employees.

15. Seller acknowledges that it has retained the services of Great Northern Consulting Group in negotiating the sale of the Premises and Seller acknowledges its responsibility to pay Great Northern Consulting Group any fees associated with Great Northern Consulting Group's participation in this transaction. Seller further represents and warrants that no other broker or real estate agency is involved in the negotiation or consummation of this transaction. Purchaser warrants and represents to Seller that it is not obligated to pay any fee or commission to any broker or real estate agency in the negotiation or consummation of this transaction. To the extent permitted by law, each party agrees to indemnify and defend the other and hold the other harmless from any expense, claim or cause of action arising out of the breach of the foregoing warranty.

16. From and after the Date of this Offer, Purchaser shall not initiate a zoning change or other proceeding affecting the Premises or do anything else which may tend to jeopardize or lessen Seller's interest in or the condition of the Premises without first obtaining prior written consent from Seller. If Seller approves of any such zoning change or proceeding affecting the Premises,

Purchaser shall keep Seller informed of the progress of any such zoning change or proceeding and supply Seller with copies of any and all relevant approvals and documents applicable to such zoning change and/or proceeding.

17. For the purposes of the transaction contemplated by this Offer, the "Date of this Offer" is the date of acknowledgment of the signature of the last party to sign this Offer. Once the Seller accepts Purchaser's Offer, this Offer To Purchase Real Estate shall hereinafter be referred to as the "Offer."

18. Whenever in this Offer it is provided that notice must be given or an act performed or payment made on a certain date, and if such date falls on a Saturday, Sunday or holiday, the date of the notice of performance or payment shall be the next following business day.

19. No waiver of any of the provisions of this Offer shall be deemed or shall constitute a waiver of any other provisions, whether or not similar, nor shall any waiver be a continuing waiver. No waiver shall be binding unless executed in writing by the party making the waiver.

20. This Offer shall be governed by and construed in accordance with the laws of the State of Michigan regardless of whether any party may or hereafter become domiciled in another state. Venue shall be Wayne County, Michigan.

21. This Offer may be executed in one or more counterparts, all of which together will for all purposes constitute one agreement binding upon the parties.

22. This Offer along with all attachments constitutes the entire agreement of the parties regarding the subject matter herein and supersedes and terminates any and all prior or contemporaneous agreements, representations, understandings or dealings between the parties, either oral or written. This Offer may be amended only by a writing signed by the parties.

23. Notwithstanding anything contained herein to the contrary, Purchaser, at its sole cost and expense, shall be obligated to develop and use the Premises in accordance with the planned use and concept attached hereto and made a part hereof as **Exhibit D** (the "Concept Plan"). The Concept Plan, subject to municipal approval, is an indication of what Purchaser intends to develop and may be only altered based on municipal feedback and requirements as well as reasonable value engineering. To ensure Purchaser's development of the Premises in accordance with the Concept Plan, Purchaser shall provide Seller with copies of any and all documents that it plans to submit to the City of Livonia or any other governmental agency having jurisdiction over the Premises at least ten (10) days prior to such submission to allow Seller the opportunity to review such documents for compliance with this Paragraph and this Offer. These obligations of Purchaser shall survive the Closing. If the Concept Plan is modified substantially by the Purchaser, the Seller shall have a right to approve the modified concept plan or terminate this Offer and retain the Earnest Money Deposit.

24. The Seller's Request For Proposals For Purchase of Real Property dated November _____, 2019 and the Purchaser's Proposal dated _____, 2020, are incorporated herein by this reference. The parties agree that where there is a conflict between the terms of this Offer and the Purchaser's Proposal, this Agreement shall take precedence.

25. Seller acknowledges receipt from the Purchaser of the Earnest Money Deposit above mentioned which will be returned forthwith if the foregoing Offer is not accepted within the time above set forth.

PURCHASER:

By: _____

Its: _____

Date: _____

SELLER:
LIVONIA PUBLIC SCHOOLS

By: _____

Its: Superintendent

Date: ___ _____

EXHIBIT A

LEGAL DESCRIPTION

Land situated in the City of Livonia, Wayne County, Michigan, described as follows:

The West 330 feet of the East 660 feet of the South 660 feet of the Northwest ¼ of Section 36, Town 1 South, Range 9 East, City of Livonia, Wayne County, Michigan, excepting the South 43 feet thereof.

and the East 330 feet of the South 660 feet of the Northwest ¼ of Section 36, Town 1 South, Range 9 East, City of Livonia, Wayne County, Michigan, excepting the South 43 feet thereof. Also except the East 43 feet of the South 660 feet of the Northwest ¼ of Section 36, Town 1 South, Range 9 East, City of Livonia, Wayne County.

Sidwell No: 46-142-99-0016-000

EXHIBIT B

WARRANTY DEED

This Indenture, made the ____ day of _____, 20___ between LIVONIA PUBLIC SCHOOLS (hereinafter called the "Grantor"), whose address is 15125 Farmington Road, Livonia, Michigan 48154, and _____, (hereinafter called Grantee"), whose address is _____. The Grantor hereby conveys and warrants to the Grantee the following described premises situated in the City of Livonia, Wayne County, Michigan, described as:

> The West 330 feet of the East 660 feet of the South 660 feet of the Northwest ¼ of Section 36, Town 1 South, Range 9 East, City of Livonia, Wayne County, Michigan, excepting the South 43 feet thereof.
>
> and the East 330 feet of the South 660 feet of the Northwest ¼ of Section 36, Town 1 South, Range 9 East, City of Livonia, Wayne County, Michigan, excepting the South 43 feet thereof. Also except the East 43 feet of the South 660 feet of the Northwest ¼ of Section 36, Town 1 South, Range 9 East, City of Livonia, Wayne County.

Together with all tenements, hereditaments, appurtenances and improvements thereunto belonging or in any way appertaining for the sum of _____ and 00/100 ($_____) Dollars paid to the Grantor.

Subject to:

1. Easements and building and use restrictions, if any;

2. Rights of the public, and any governmental authority in any part of the land taken, deeded, or used as a street, road or highway; and

3. Restrictions imposed by zoning ordinances or as part of a general plan.

Grantor grants to Grantee the right to make all applicable divisions under Section 108 of the Michigan Land Division Act, being Act No. 288 of the Public Acts of 1967, as amended.

This property may be located within the vicinity of farmland or a farm operation. Generally accepted agricultural and management practices which may generate noise, dust, odors and other associated conditions may be used and are protected by the Michigan Right to Farm Act.

IN WITNESS WHEREOF, the Grantor has hereunto set his hand the day and year first above written.

GRANTOR:

LIVONIA PUBLIC SCHOOLS

By:_____

Its:_____

STATE OF MICHIGAN)
)SS
COUNTY OF WAYNE)

On ____ day of _____, 20__, before me, the undersigned notary public in and for said County, personally appeared_____, _____of Livonia Public Schools, to me known to be the same person who executed the within instrument on behalf of Livonia Public Schools, and who acknowledges the same to be the free act and deed of Livonia Public Schools.

_____
, Notary Public
County, Michigan
Acting in _____ County
My commission expires:

This Instrument Drafted By:

Dana L. Abrahams, Esq.
CLARK HILL PLC
151 S. Old Woodward Ave., Suite 200
Birmingham, MI 48009

When Recorded Return to:

Grantee

Recording Fee: _____

Transfer Tax: ***Exempt pursuant to MCLA 207.505(h)(i) and 207.526(h)(i)***

Sidwell Nos: 46-142-99-0016-000

EXHIBIT C

RELEASE AND HOLD HARMLESS

The undersigned, in consideration of the permission of LIVONIA PUBLIC SCHOOLS ("Owner") to enter upon the Premises owned by the Owner for purposes of inspecting the subject Premises in the furtherance of the undersigned's relationship with any prospective purchaser of real property of the Owner, does hereby release and hold the Owner harmless from any and all damages, losses, liabilities, expenses, costs (including attorney fees) and claims incurred by the undersigned resulting in any way from the undersigned's entering upon and inspecting any real property owned by the Owner except as may arise from the acts or omissions of Owner or Owner's agents or employees.

WITNESSES:

_____ _____

_____

EXHIBIT D

PURCHASER'S CONCEPT PLAN

AFFIDAVIT OF COMPLIANCE – IRAN ECONOMIC SANCTIONS ACT

Michigan Public Act No. 517 of 2012

The undersigned, the owner or authorized officer of the below-named prospective purchaser (the "Purchaser"), pursuant to the compliance certification requirement provided in the Livonia Public Schools' (the "School District") Request For Proposals To Purchase Real Property (the "RFP"), hereby certifies, represents and warrants that the Purchaser (including its officers, directors and employees) is not an "Iran linked business" within the meaning of the Iran Economic Sanctions Act, Michigan Public Act No. 517 of 2012 (the "Act"), and that in the event Purchaser is awarded a contract as a result of the aforementioned RFP, the Purchaser will not become an "Iran linked business" at any time during the course of performing any services under the contract.

The Purchaser further acknowledges that any person who is found to have submitted a false certification is responsible for a civil penalty of not more than $250,000.00 or 2 times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of the School District's investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on a request for proposal for three (3) years from the date the it is determined that the person has submitted the false certification.

PURCHASER:

_____
Name of Purchaser

By: _____

Its: _____

Date: _____

STATE OF _____)
)ss.
COUNTY OF _____)

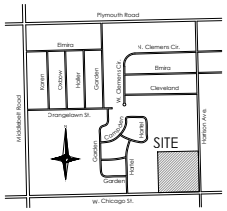
This instrument was acknowledged before me on the _____ day of _____, 2020, by _____.

_____
, Notary Public

_____ County, _____

My Commission Expires:_____

Acting in the County of :_____



LOCATION MAP
N.T.S.

SITE SUMMARY

EXISTING SITE ZONING: PL, PUBLIC LAND
PROPOSED SITE ZONING: R-1, SINGLE FAMILY DISTRICT
EXISTING SITE AREA: 380,687 S.F. OR 8.74 ACRES

MINIMUM LOT SIZE: 60' X 120'
MINIMUM LOT AREA: 7,200 S.F.
PROPOSED LOTS: 30
PROPOSED DENSITY: 3.43 UNITS PER ACRE
PROPOSED BLDG HT: TWO STORIES, 35 FEET
BLDG LOT COVERAGE: 30% OF EACH LOT

REQUIRED YARDS
FRONT: 25'
SIDE: 5', 9'
REAR: 30'

OPEN SPACE REQUIREMENTS
REQUIRED: 720 S.F. PER LOT REQUIRED
30 LOTS X 720 = 21,600 S.F. REQUIRED

PROPOSED: 27,758.61 S.F.

LOT SCHEDULE

LOT NO.	LOT AREA (S.F.)
LOT 1	8,996.33
LOT 2	7,200.00
LOT 3	7,200.00
LOT 4	7,200.00
LOT 5	7,200.00
LOT 6	9,243.02
LOT 7	9,249.89
LOT 8	7,200.00
LOT 9	7,200.00
LOT 10	7,200.00
LOT 11	7,200.00
LOT 12	8,989.82
LOT 13	9,017.72
LOT 14	7,236.36
LOT 15	7,241.50
LOT 16	7,246.63
LOT 17	7,214.55
LOT 18	9,309.83
LOT 19	10,201.37
LOT 20	10,697.36
LOT 21	7,200.00
LOT 22	10,629.79
LOT 23	7,752.93
LOT 24	7,908.53
LOT 25	7,200.00
LOT 26	7,200.00
LOT 27	7,200.00
LOT 28	7,200.00
LOT 29	7,200.00
LOT 30	8,994.15

NOWAK & FRAUS ENGINEERS
CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257
WWW.NOWAKFRAUS.COM

SEAL

PROJECT
Livonia Public Schools -
Wilson Site
28400 W. Chicago St.
Livonia, MI 48150

CLIENT
Livonia Public Schools
15125 Farmington Road
Livonia, MI 48154

Contact: Phillip Francis
Phone: 734.744.2554
Email:
pfrancis@livoniapublicschools.org

PROJECT LOCATION
Part of the NW 1/4
of Section 36
T.1S., R.9E.,
City of Livonia,
Wayne County, Michigan

SHEET
Conceptual Site Plan

Know what's below Call before you dig. 811

DATE	ISSUED/REVISED
10-28-19	SURVEY ISSUED

DRAWN BY:
G. Ostrowski
DESIGNED BY:
G. Ostrowski
APPROVED BY:
G. Ostrowski
DATE:
October 28, 2019
SCALE: 1" = 40'
60 20 0 20 40 60

NFE JOB NO. L286
SHEET NO. 1 of 1

From: Chelsea Ellis
To: Planning
Subject: Regarding petition 2020-08-01-05
Date: Friday, September 25, 2020 6:35:19 AM

To whom it may concern,

I am writing to express my opposition to the proposed rezoning of 28400 West Chicago Avenue from PL to R-1. As an open green space, the area is used for a variety of recreational purposes for the health and wellbeing of the community and is within walking distance for many families. The parcel is used for running the dogs, flying kites, giving kids a place to run around, pick-up ice hockey in winter, and as an extension of Clements Circle Park for gathering of friends and family. I think it would be a loss to the community for the land to be developed into one family residential homes.

Sincerely,
Chelsea Ellis
28659 W. Chicago
Livonia, MI 48150

UNAPPROVED MINUTES

MINUTES OF THE 1,160th PUBLIC HEARINGS AND REGULAR MEETING HELD BY THE CITY PLANNING COMMISSION OF THE CITY OF LIVONIA

On Tuesday, September 22, 2020, the City Planning Commission of the City of Livonia held its 1,160th Public Hearings and Regular Meeting via Zoom Platform

Mr. Ian Wilshaw, Chairman, called the meeting to order at 7:00 p.m.

Members present:	David Bongero	Sam Caramagno	Glen Long
	Betsy McCue	Carol Smiley	Ian Wilshaw
	Pete Ventura		

Members absent: None

Mr. Mark Taormina, Planning Director, Scott Miller, Planner IV, Stephanie Reece, Program Supervisor, and Debra Walter, Clerk-Typist II were also present.

Chairman Wilshaw informed the audience that if a petition on tonight's agenda involves a rezoning request, this Commission makes a recommendation to the City Council who, in turn, will hold its own public hearing and make the final determination as to whether a petition is approved or denied. The Planning Commission holds the only public hearing on a request for preliminary plat and/or vacating petition. The Commission's recommendation is forwarded to the City Council for the final determination as to whether a plat is accepted or rejected. If a petition requesting a waiver of use or site plan approval is denied tonight, the petitioner has ten days in which to appeal the decision, in writing, to the City Council. Resolutions adopted by the City Planning Commission become effective seven (7) days after the date of adoption. The Planning Commission and the professional staff have reviewed each of these petitions upon their filing. The staff has furnished the Commission with both approving and denying resolutions, which the Commission may, or may not, use depending on the outcome of the proceedings tonight.

ITEM #1 PETITION 2020-08-01-05 Infinity Homes

Mr. Caramagno, Secretary, announced the first item on the agenda, Petition 2020-08-01-05 submitted by Infinity Homes and Company pursuant to Section 23.01 of the City of Livonia Zoning Ordinance #543, as amended, requesting to rezone the property at 28400 West Chicago Avenue (former Wilson Elementary School site) located on the north side of West Chicago Avenue between Harrison and Middlebelt Roads in the Northwest ¼ of Section 36 from PL (Public Lands) to R-1 (One Family Residential).

Mr. Taormina: This is a request to rezone the former Wilson School site, which is at the northwest corner of West Chicago and Harrison Roads, from the current zoning of PL (Public Land) to R-1 (One Family Residential). The property is roughly 8.75 acres in total area. It measures 617 feet of frontage along West Chicago by roughly the same distance along Harrison Road, 617 feet. The land immediately to the north of this site consists of the Clements Circle Pool and Park. That too is zoned PL (Public Land). To the west, is the site that is managed by Great Lakes Water Authority that previously contained a water storage tank. As indicated on the zoning map, that is also zoned PL (Public land). To the east, across Harrison are single-family homes. These are within the Thomas Elliott subdivision. This subdivision was platted in the early 1950's before the current R-1 standards came into effect, and even though the area is zone R-1, many of the lots have widths that measure 50 feet instead of the required 60 feet. As you can see, most of that area has been developed as R-1. South, across West Chicago are single-family homes located on unplatted parcels zoned RUF (Rural Urban Farm). The rezoning is the first step in the process of obtaining entitlement for developing the site for residential purposes. The current owner is Livonia Public Schools, which is in the process of selling the land to the applicant, Infinity Homes. The future land use map indicates the site as Parks and Community, which reflects the current ownership and former use of the property for school purposes. With that, Mr. Chairman, I can get the departmental correspondence.

Mr. Wilshaw: Is there anybody on the commission with any questions at this time? If not, we will give Mark a moment and then he can read out the correspondence from the departments.

Mr. Taormina: The first item is from the Engineering Division, dated August 21, 2020, which reads as follows: *"In accordance with your request, the Engineering Division has reviewed the above referenced petition. We have no objections to the proposed rezoning at this time. The parcel is assigned the address of #**28400 West Chicago Avenue**. The legal description submitted by the owner appears to be correct, and should be used to describe the proposed rezoned property. The proposed development is currently serviced by public water main, sanitary and storm sewers, which will need to be extended to service any new residences. The submitted drawing does not indicate any utility connections, so we do not have any knowledge of impacts to the existing systems at this time. The owner has been in contact*

with this office regarding the project, and is aware of the Engineering Department requirements. It should be noted that should the project move forward the proposed construction will be required to meet the Wayne County Stormwater Ordinance, including detention requirements. A full review of the proposed development will be completed when plans are submitted for permitting." The letter is signed by David W. Lear, P.E., Assistant City Engineer. The next letter is from the Finance Department, dated August 24, 2020, which reads as follows: *" I have reviewed the address connected with the above noted petition. As there are no outstanding amounts receivable (general or water and sewer), I have no objections to the proposal."* The letter is signed by Connie Kumpula, Chief Accountant. The next letter is from the Treasurer's Department, dated August 26, 2020, which reads as follows: "*In accordance with your request, the Treasurer's Office has reviewed the name and addresses connected with the above noted petition. (On our records this is listed at 17800 Middlebelt Road / Midwest Memorial Group LLC). At this time there are no taxes due as the property is showing as exempt, therefore I have no objections to the proposal."* The letter is signed by Lynda Scheel, Treasurer. That is the extent of the correspondence.

Mr. Wilshaw: Are there any questions of the Planning Director? There are no questions. I will look for the petitioner. Is there a petitioner in the audience tonight? If they could please click raise hand so we can recognize you. Good evening, Mr. Soave.

Rico Soave, 37771 Seven Mile Road, Ste C, Livonia, MI, Good evening. Mr. Taormina gave a very detailed description of the proposed rezoning brought forward tonight. I really don't have anything more to add to his description, but would be happy to answer any questions that the commission may have this evening.

Mr. Wilshaw: Thank you, Mr. Soave. As always, we like to remind everyone, the commission and the audience members that this is a rezoning that we have before us tonight. We are going to be focusing our discussion on the rezoning from PL to R-1 and is that the appropriate zoning to go to. There is no site plan discussion that is going to occur at this meeting tonight. That would be a second process that would happen after rezoning. We will get into the details of the site plan and what the homes are going to look like and the layout of the lots and all of those details. Do we have any questions from any of the commissioners for our petitioner?

Mr. Ventura: Mr. Soave, at the study meeting we inquired as to whether you had approached the Great Lakes Water Authority who owns the land immediately west and contiguous with this site as to the availability to purchase that and you told us that you had called them but had not received any calls. Has anyone gotten back to you at this point?

Mr. Soave: Not at this time, but if anyone is watching and knows how to communicate with the Great Lakes Water Authority, we would be most happy to discuss the potential purchase of the property keeping in mind that it would have to make good business sense in the even that they are willing to sell the property. Hopefully they are the true owners, not Wayne County.

Mr. Ventura: Thank you, Mr. Soave.

Mr. Wilshaw: Thank you, Mr. Ventura. Any other questions from the commission for our petitioner? I don't' see any questions from the commission. Is there anybody in the audience that wishes to speak for or against this item?

Steven Alexander, 9919 Deering, Livonia, MI. Good evening. Thank you for having us. Two quick questions. One I think you already answered about maintaining the water shed. As you know, a lot of water is collected there. Especially after the winter. Is there going to be a retaining pond or do you have plans for that? I know you talked about that, but my other question is about traffic. How will that be handled? There is a lot of traffic there with the school already and the pool.

Mr. Wilshaw: Mr. Alexander, so I am hearing that your concern is over water drainage, the water situation in the area, and if there is going to be a retention pond. The answer to that is yes there will be. That is required by all developments that are done in the city now by Wayne County. There is a storm water management program that requires them to retain and slowing release water into the sewer system. Your other question I believe was about traffic.

Mr. Alexander: Yes, sir.

Mr. Wilshaw: The concern is just the added traffic there in the area?

Mr. Alexander: Correct.

Mr. Wilshaw: Okay, we can talk to the petitioner about that when we go back to him. Is there any other comments or questions that you would like to ask?

Mr. Alexander: Yeah. Just adding on to traffic, sometime ago talking to Parks and Rec…where you had the top of the box butting up against the parking lot of the pool, one of the things that we had asked is if during the time of the sale if that parking space of the pool and parking lot could be increased. Perhaps, to come into what you have is found in the yellow box that would probably help manage the traffic situation at least on Harrison Road. It gets pretty clogged up going into the pool or (inaudible).

Mr. Wilshaw: We hear your comments and mind you that all these will go into our minutes and go on to City Council, so we will try to get back to the petitioner once we have heard from anyone else in the audience and hopefully get some of those questions answered for you, okay?

Mr. Alexander: Thank you very much.

Mr. Wilshaw: Thank you for attending this evening and we will have you stand by and we will go to our next audience member. One moment. That is going to be Beth Graham. Good evening. You can unmute yourself and introduce yourself. Name and address please.

Beth Graham, 28815 West Chicago, Livonia, Mi. I am right across the street from it. I also have concern about the amount of water (inaudible). I have some pictures. I don't know if I can show it, but it is pretty much like a swamp at certain times of the year.

Mr. Wilshaw: I don't think you can share your pictures on the Zoom platform.

Ms. Graham: Okay. Fair enough. Like I said, the plan had a picture of the little pond in the corner and I have been to one of the other Infinity Homes areas that had one and it is just kind of a little gravel pit thing. So, I am just concerned about all of the water.

Mr. Wilshaw: Okay, we will try to have our petitioner discuss how he is going to or what he can conceptually do about retaining water. There are a couple different options that we have seen. There is a dry pit, like a dry pond area like you are describing which only gets water in it when there is a rain event. There are other ones that have water typically in them with the fountain and all that kind of

stuff. We will talk about that with the petitioner when we get back to him, okay?

Ms. Graham: Okay.

Mr. Wilshaw: Any other comments that you wanted to make?

Ms. Graham: I was wondering if the trees are going to stay? There are some really nice big trees there.

Mr. Wilshaw: We can ask about that. That is a good question.

Ms. Graham: Thank you.

Mr. Wilshaw: Thank you, Ms. Graham. We appreciate you coming this evening. Anyone else in the audience wishing to speak for or against this item? We have Ryan. Let me hit the right button here. Ryan, good evening. We ask for your name and address.

Ryan Ennis, 9860 Garvett, Livonia, MI. I also have some concerns about the traffic and the aesthetics of the homes.

Mr. Wilshaw: Okay. I am not sure if we can answer your questions tonight, but what are your questions?

Mr. Ennis: Because I don't' know…I mean um I am just concerned about the amount of traffic as well because West Chicago gets very clogged up, especially during rush hour, and then there is going to be additional homes added and then also, if we look around the neighborhoods surrounding it the homes are all ranches, 1950's style. What are these homes going to look like? Is it going to be like Royal Oak where you have like, you know, lofts that stick out like a sore thumb amongst historical properties? That is my concern.

Mr. Wilshaw: Okay. We can address that with the petitioner a little bit tonight, but we are really focused on the zoning at this point. The types or homes and the appearance of the homes would be more at the site plan process. That happens after zoning. But certainly the density of homes and how it relates to traffic is very appropriate to discuss.

Mr. Ennis: Also, to, looking at the box it juts right up to the park. Are they going to be building homes almost into the park or how much space or leeway is there going to be between this subdivision and the park?

Mr. Wilshaw: That's a good question. We will see what we can find out for you tonight okay?

Mr. Ennis: Is this a meeting to say yay or nay? Or I guess I am little confused about what exactly is the purpose of this meeting? Is this to really take in public account of their views of this matter or is it already a done deal? We are just trying to get some questions answered.

Mr. Wilshaw: It is definitely not a done deal. Let me explain the process a little bit so that you understand. The Planning Commission is a recommending body. We make a recommendation to the City Council. The City Council is the one that actually makes the approval or denial ultimately of this change. This change that we are considering tonight is a rezoning of this land from PL (Public Lands), which PL is for schools, cities, and other governmental entities, to R-1 (Single-family residential). Similar to all the homes in the surrounding area. We are looking to see if that is the appropriate rezoning for this property. We will decide tonight…we will take a vote to either recommend that the rezoning happen or not happen. Then it will go on to City Council. The City Council will have an additional public hearing. It is an opportunity for you to attend and give your opinion and your comments, or questions. Then they will go through a process of approving it as well. Their approval is the actual approval. Ours is a recommendation to them. Once that takes place, and typically with a rezoning they will hold…once they have decided they want to move forward with this rezoning, that then starts the stie plan process. The site plan is where we look at the actual details of what is going to be in that yellow box. Where the lots are going to be laid out, what type of homes are going to be in there, where the road is, where is retention ponds is, and all those details. That then again starts with us. We look it. We make changes. We make suggestions. We approve or deny a recommendation to City Council and then the City Council will vote on that as well. So, it is kind of a four-step process. A recommendation on zoning from us, an approval for zoning from City Council and a recommendation for a site plan from us and then an approval or denial on the site plan from City Council. I hope that makes some sense for you.

Mr. Ennis: Somewhat.

Mr. Wilshaw: I understand. It is a little complicated, but we will…we do take into account everyone's comments and opinions. The seven of

us will make a decision to either approve or deny based on what we feel is best. Your opinion does matter so thank you for attending and giving us your thoughts and opinions tonight. There are some additional folks wishing to speak. There is a phone in caller. Let me make sure that they are able to talk. This is a phone number ending in 6663. You need to dial *6 to unmute yourself. Good evening.

Shane Foley, 9870 Harrison, Livonia, MI. I am directly across from the entrance to the park.

Mr. Wilshaw: Okay. Very good. You are free to give us your thoughts for or against this.

Mr. Foley: Thanks for explaining for the gentleman just prior, that was good for me to hear. Really, just a comment really. Living across the street from this area, one of the reasons that I like this neighborhood and it is kind of rare that you find a really nice open space like this in very well developed areas like this. I love looking across the street and seeing an open field and trees. It is quite relaxing and quite calming. For me I am generically against this rezoning. I like the space. A question to you or to the team would be is it better consideration to expand the park and include this as part of the park permanently.

Mr. Wilshaw: One comment that I can tell you about, that is, this is property that was owned by the school district which is a separate entity from the City. They have chosen to sell this property to a private party and in this case, Soave Homes, to build a subdivision. They went through a process of deciding to sell this property and deciding who to sell it to. We did not have any involvement in it. At this point, we are just faced with the request of this private landowner now.

Mr. Foley: Understood. In that case, I have some similar comments of the prior people. The trees are beautiful. It would be awesome to keep them. Concerns about traffic. The pool fills up quickly in the summer. The road gets clogged up. Things of that nature. Nothing different than the prior residents.

Mr. Wilshaw: Thank you very much for coming tonight and providing your comments. We appreciate your thoughts and opinions on that.

Mr. Foley: Thank you.

Mr. Wilshaw: Okay, we will let you continue to watch and see what goes on here. Let me go on to the next person in the audience, which is going to be Tabby. You can unmute yourself and introduce yourself with a name and address. Good evening. We are not hearing anything from you Tabby. We hear you now. We did hear you. Tabby?

Tabby Ortan, 28257 S Clements Circle, Livonia, MI. We are across from the park. I just had a question. Was this just for one property owner or more? Like families?

Mr. Wilshaw: I am not sure I follow your question. Are you asking if these are going to be single-family homes or…

Ms. Ortan: Yes.

Mr. Wilshaw: Yes. The intention is that these would be single-family homes. Not condominiums or anything along those lines.

Ms. Ortan: Oh okay. We actually love the area, but we would like to have more land so…I would be down for it.

Mr. Wilshaw: Thank you so much. Appreciate the comments. Is there anyone else in the audience wishing to speak on this item?

Ms. Ortan: No. That was my son.

Mr. Wilshaw: Oh. He is going to give his comments too, right?

Ms. Ortan: Yup. He wants to. Thank you so much.

Mr. Wilshaw: Thank you. Anyone else in our audience? We have one more person with their hand up. We have a couple more actually. We are going to go to Jonathan. Good evening. Again, we ask that you start with your name and address.

Jonathon Fitzgerald, 28408 Cleveland, Livonia, MI. I do have concerns about this rezoning. Echoing some of the sentiments that have already been said. At least during the summer, I have definitely seen traffic increasing with the water park being open and if residential places get added in there, I can see that definitely being a problem. Additionally, with everything going on with COVID-19 I find solace in being able to take walks and enjoy a nice open area which is pretty rare in such a heavy residential area such as this. It is my wish that it stays the way that it is if possible.

Mr. Wilshaw: Very good. Thank you for coming and giving your comments. We will talk to our petitioner when we have heard everyone's comments and try to get to the issues you addressed, alright?

Mr. Fitzgerald: Thank you.

Mr. Wilshaw: We will go to Dave O next. Give him a chance to speak. You can unmute yourself. I am not hearing anything from Dave O. Is there anyone else in the audience wishing to speak? If so, please click raise hand.

Dave/Mary Ostrowski, 9532 Harrison, Livonia, MI. As some of the other guests have mentioned, traffic really is an issue. I know you don't have a site plan. Harrison is a feeder street. I know it is a main street. It feeds all the community to the east of us. There is quite a bit of traffic. That is a big concern. In addition, we have lived here for 35 years and when the school was there and we had issues with…to make a long story short, the school is a separate entity. It seems like they don't have to behave like the community does. In other words, they have less restrictions. My concern is if they decide to sell this property, does it truly have to be approved by the city or are they an entity of their own and they can sell it to anyone?

Mr. Wilshaw: Well, to answer your question, they can sell it. That is their choice and it is their property. What we are dealing with this evening is the rezoning of the property at this stage of the game. It is not for us to decide if they are allowed to sell it or not. That deal has been (inaudible) with the school.

Mr. Ostrowski: Just the zoning situation. Yeah, when the school was removed it was essentially designated as a green space. That is truly what it has been used for. To rezone it and try to pack in another 30 or 40 homes, the congestion is going to be pretty significant. I would encourage the city to keep it as a green space as the other caller mentioned. It is really nice to have that in this community. I know that is the way it is up on Seven Mile. I know that is the way it is on Plymouth and Farmington. So, these green spaces, even though the community is a little bit older, it certainly is used and appreciated.

Ms. Ostrowski: I would like to ask…I know you don't have any knowledge of any offers to the school or any negotiations they had, but is there any possibility that the city could make an offer on the property and even use this as public land, whether it is park or

as some have said adding to the water park. Is that something the city has even entertained?

Mr. Wilshaw: I can't speak for the city in terms of what they have or haven't done, but what I can tell you is that the school district…typically, if property changes hands between the school district and the city, that is done at no cost. The city doesn't typically buy property from the school district, as far as I know. The school district has been selling property, as far as I know, in an effort to get revenue by selling these properties for their budget. They are looking to not give away property. They are looking to do it for as a way to generate revenue for the school district. That is why they put this out for proposal for people to offer to purchase and however that process works, Infinity Homes was the one secured the offer that he school district was willing to accept.

Mr. & Mrs. Ostrowski: Okay. Thank you for your time.

Mr. Wilshaw: Thank you to both of you and continue to listen on and we will make our decision this evening. Thank you for coming. Is there anyone else wishing to speak on this item? I don't see anyone else with their hands up. I am going to go back to you Mr. Soave. As our petitioner, you have heard a number of comments offered by the audience in regard to traffic and water management on the property. Mr. Toarmina, I am going to go to you first.

Mr. Taormina: Mr. Chairman. We did receive a few questions through the Zoom chat feature. I will read them just so that they are part of the record this evening. The first is from Eieen McBane and that message is: "Are these all going to be single-family residences?" That question was asked earlier. Next is a question that comes from Kelly. She asks, "Will the homes be the same style as the surrounding neighborhood?". Next is a question from Katherine: "Do we have any idea how big these homes are going to be? What about the traffic issues? Especially with the middle school being just down the road." Lastly, I don't know who this is from but they ask: "Is the petitioner using a fake name?".

Mr. Wilshaw: Okay, great. Thank you, Mr. Taormina. We will let the petitioner address those and others that have been made. Mr. Soave, we have heard a number of comments, specifically regarding the traffic, water management on the site, the existence of several large trees on the site and if those are gong to be retained possibly. Again, we don't want to get into all of

the details of the site plan, but these are good questions as they relate to traffic because the R-1 zoning has a certain amount of density associated with it in terms of homes. If you could address some of those comments that you heard and anything else you would like to say this evening, I would appreciate it.

Mr. Soave: I would be happy to address some of those comments to all the information we have at hand. Regarding the storm water, I am sure Mr. Taormina can comment on this as well, but any new development has to meet storm water management principles form Wayne County which is the governing body in this particular area. Any development you go into standing water becomes alleviated. The situation improves itself by putting in catch basins in and actually catching all of that standing water. As some of the neighbors correctly identified, there probably is standing water on that property because once the school was removed the Livonia Public Schools didn't put in infrastructure to collect the water and by walk the site, I know it is not graded out as well. So, when it rains it finds the lowest spot and sits there. Once new development goes in there, those water issues will be mitigated. Trees…there are some mature trees on the property which you can't build a development around the trees, however, there will be more trees, new trees, being planted there than currently exist on the property. We will be adding a lot to the (inaudible) greenspace and trees as part of the new forthcoming site plan. I think some of the neighbors questioned about the park and the asphalt parking lot. The main reason why we don't have a conceptual site plan is we are in preliminary talks with Parks and Rec to see how the development may compliment these issues that they are having with the overcrowding of that small parking lot now. We started those talks and in the next month or two we should have something to bring forward as a conceptual that hopefully addresses some of those problems. In regard to traffic, keep in mind this is abutting West Chicago and Harrison. Two ½ mile roads that already have a lot of traffic because of the nature of the ½ mile roads. They are collector streets. They dump into mile roads. This is Middlebelt in this particular development. However, the impact the new development will have will probably be negligible based upon the R-1 zoning. I think the max amount of units that we are allowed will be 35. There will be no more than 35 single-family homes going on this almost 9-acre site. Anything else that I missed, or that you want further inquiry on Mr. Chairman?

Mr. Wilshaw: I think that covers most of the questions I have seen so far. One of the questions that came in through chat was how many

homes are planned for this site. You don't have a solid number on that yet because we don't have a site plan, but you are saying…

Mr. Soave: We are looking at about 35.

Mr. Wilshaw: 35 is what the R-1 would allow.

Mr. Soave; Correct. So, based upon rough sketches, we are at 34 or 35 units.

Mr. Wilshaw: Okay. Is there any other questions from the commissioners in regard to what we have heard so far this evening?

Mr. Taormina: Mr. Chairman, I believe one of the other questions that I noted was home styles. I know this is early, but if Mr. Soave can speak to the type of homes that probably make up the majority of the development. If you can give the audience an indication of the types of homes.

Mr. Wilshaw: That is a fair question at this point. Rico, go ahead and let us know what type of homes you are planning.

Mr. Soave: These homes would be very similar to other developments in the City of Livonia and adjacent communities. I believe probably ranches will be around 1200 to 1300 square feet up to maybe 2500 square feet colonials. It will probably be a good mix over there if the other developments give a good indication. It will be a good mix between ranches and colonials.

Mr. Wilshaw: Any other questions from any of the other commissioners? I don't see any questions from any commissioners. I am going to close…anything else Mr. Soave that you would like to say before we close the public hearing?

Mr. Soave: Nothing further. I appreciate the commission's time tonight.

Mr. Wilshaw: Okay. One quick question, Mr. Soave. Is this property that you have already into a purchase with the school district on or is this contingent upon the rezoning and site plan approval?

Mr. Soave: Yeah, I think there were some comments regarding acquisition of the property. As you correctly stated, Mr. Chairman, Livonia Public Schools does have property that it has been sitting on for a period of years and periodically they do put these properties up for sale. They call them RFP's (Request for Proposal), which

is essentially a public bid. Anyone can bid on them and then the school board goes through and analyzes those for qualifications of the bidder and of course the price they are offering. We were the winning bidder on this property, so we are under purchase agreement and it is conditioned upon the successful site plan approval process by the Livonia City Council.

Mr. Wilshaw: Great, thank you for describing that. It helps, hopefully, some of the folks in our audience as to how we got to this point. If there are no other questions or comments, I will close the public hearing and a motion is in order.

On a motion by McCue, seconded by Ventura, and unanimously adopted, it was

#09-46-2020 **RESOLVED**, that pursuant to a Public Hearing having been held by the City Planning Commission on September 22, 2020, on Petition 2020-08-01-05 submitted by Infinity Homes and Company pursuant to Section 23.01 of the City of Livonia Zoning Ordinance #543, as amended, requesting to rezone the property at 28400 West Chicago Avenue (former Wilson Elementary School site) located on the north side of West Chicago Avenue between Harrison and Middlebelt Roads in the Northwest ¼ of Section 36 from PL (Public Lands) to R-1 (One Family Residential), the Planning Commission does hereby recommend to the City Council that Petition 2020-08-01-05 be approved for the following reasons or subject to the following conditions:

1. That the proposed change of zoning is compatible to and in harmony with the surrounding uses and zoning districts in the area.

2. That the proposed change of zoning will provide for single residential development similar in density to what exists in the neighboring area.

3. That the proposed change of zoning is consistent with the Future Land Use Plan designation of low-density residential land use in the general area; and

4. That the proposed change of zoning constitutes a reasonable and compatible transition between the existing neighborhood and adjoining nonresidential land uses in the area.

FURTHER RESOLVED, that notice of the above hearing was given in accordance with the provisions of Section 23.05 of Zoning Ordinance #543, as amended.

Mr. Wilshaw: Is there any discussion?

Mr. Wilshaw, Chairman, declared the motion is carried and the foregoing resolution adopted. It will go on to City Council with an approving resolution.

AN ORDINANCE AMENDING SECTION 24 OF THE ZONING MAP OF THE CITY OF LIVONIA AND AMENDING ARTICLE III OF ORDINANCE NO. 543, AS AMENDED, KNOWN AND CITED AS "THE CITY OF LIVONIA ZONING ORDINANCE" BY ADDING SECTION 3.____ THERETO.

THE CITY OF LIVONIA ORDAINS:

Section 1. Pursuant to the report of the City Planning Commission, dated September 23, 2020, setting forth its resolution 09-46-2020 recommending approval of Petition 2020-08-01-05, having been considered by the Council, and the Council having conducted a public hearing on November 9, 2020, on said petition, and having concurred in the recommendation of the City Planning Commission, the Council hereby adopts said Petition 2020-08-01-05 to amend the Zoning Ordinance and Zoning Map of the City of Livonia and all proceedings heretofore conducted on said petition are hereby approved.

Section 2. Article III of the City of Livonia Zoning Ordinance, Ordinance No. 543, as amended, is hereby amended by adding thereto the following section:

Section 3. ___. Petition 2020-08-01-05 submitted by Infinity Homes and Company is hereby approved, and the zoning classification of the premises hereinafter described is hereby changed from PL (Public Lands) to R-1 (One Family Residential):

> Land situated in the City of Livonia, Wayne County, Michigan, described as follows:
>
> The West 330 feet of the East 660 feet of the South 660 feet of the Northwest ¼ of Section 36, Town 1 South, Range 9 East, City of Livonia, Wayne County, Michigan, excepting the South 43 feet thereof.
>
> And the East 330 feet of the South 660 feet of the Northwest ¼ of Section 36, Town 1 South, Range 9 East, City of Livonia, Wayne County, Michigan, excepting the South 43 feet thereof. Also except the East 43 feet of the South 660 feet of the Northwest ¼ of Section 36, Town 1 South, Range 9 East, City of Livonia, Wayne County.
>
> and the Northwest 1/4 of Section 36 of the Zoning Map is hereby amended to conform to the changes made in this section.

Section 4. The attached map designated “Amendment No. ___ to the Zoning Map of the City of Livonia” showing all of the amendments and changes made in the foregoing Section 2 of this ordinance is hereby approved, established and made a part hereof.

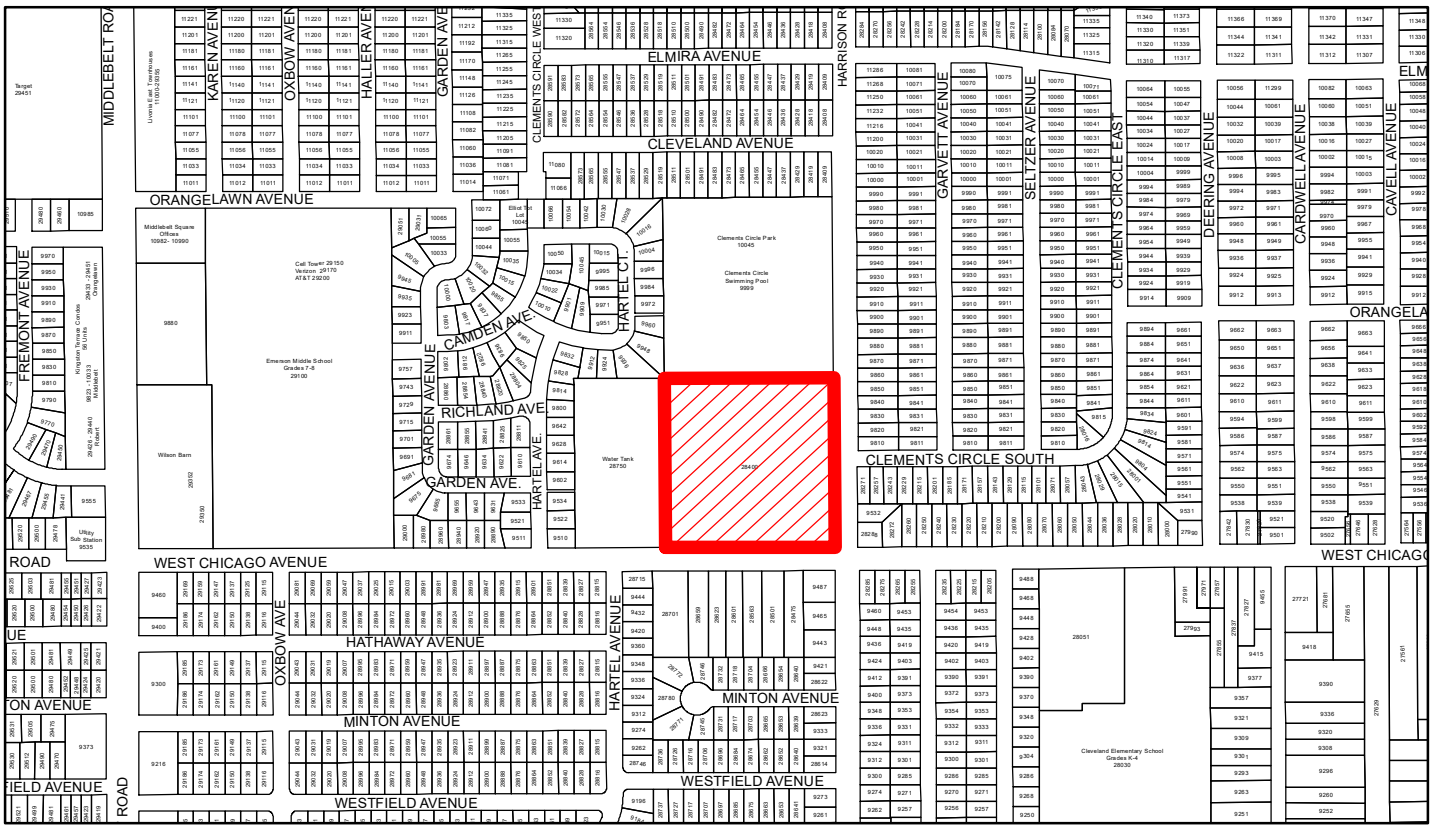
Section 5. All ordinances or parts of ordinances in conflict herewith are hereby repealed only to the extent necessary to give this ordinance full force and effect.

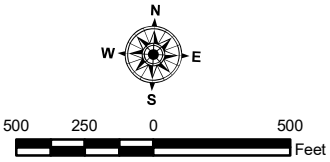
Section 6. Should any portion of this ordinance be held invalid for any reason, such holding shall not be construed as affecting the validity of any of the remaining portions of this ordinance.

_____

P:\Brenda\Ordinances\ZONING\ORDMAP\2020\Pet 2020-08-01-05 - Infinity Homes - 28400 West Chicago.doc

BOUNDARY OF DISTRICT AS AMENDED
FROM PL, PUBLIC LANDS
TO R-1, ONE FAMILY RESIDENTAL

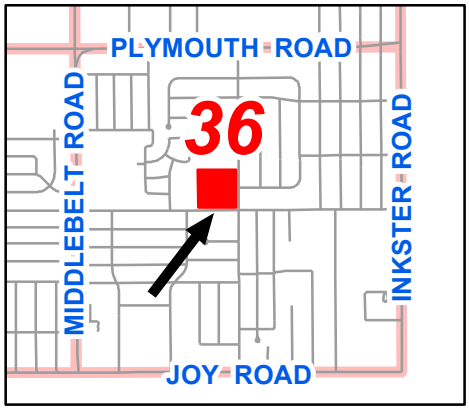




PETITION NO. 2020-08-01-05
A PART OF THE N.W. 1/4 OF SECTION 36

AMENDMENT NO. TO THE
ZONING MAP OF THE
CITY OF LIVONIA, MICHIGAN
ORDINANCE NO.

Adopted by the City Council on



_____ MAYOR

_____ CLERK

CITY OF LIVONIA – CITY COUNCIL
MINUTES OF STUDY MEETING HELD NOVEMBER 16, 2020

Meeting was called to order via Zoom remote technology at 8:21 p.m. by President Kathleen McIntyre. Present: Rob Donovic (Deployed), Jim Jolly (Livonia, Michigan), Laura Toy (Livonia, Michigan), Scott Bahr (Livonia, Michigan), Cathy White (Florida), and Kathleen McIntyre (Livonia, Michigan). Absent: None

Councilmember Donovic led the meeting in the Pledge of Allegiance.

Elected and appointed officials present: Mark Taormina, Director of Planning and Economic Development; Todd Zilincik, City Engineer; Paul Bernier, City Attorney; Susan Nash, City Clerk; Curtis Caid, Chief of Police; Dave Heavener, Fire Chief; Jerome Hanna, Director of Inspection; Casey O'Neil, Director of Information Systems; and Jacob Rushlow, Superintendent of Public Service.

1) REQUEST TO EXTEND WAIVER USE APPROVAL TO NEW OWNER: Yangkai Yuan; re: to operate a massage establishment (Omorfia Esthetics) within the Burton Hollow Shopping Center located on the east side of Farmington Road between Six Mile Road and Curtis Avenue (17142 Farmington Road), Section 10. (CR 70-20)

Mark Taormina, Director of Planning and Economic Development, stated that he had not received any information on this but explain the history that goes along with the original waiver use. He stated this goes back to a petition that was filed and approved in 2016 involving Omorfia Esthetics. And one of the conditions of approval for that waiver use to operate a massage establishment was that the Petitioner would have to enter into a conditional agreement limiting the waiver use to that user only and it could not be extended to any other or any new user without first obtaining approval of City Council. So that's why this item is before you. I do not have information about the new business owner in this case.

Councilmember McCullough stated that the packet information for this item was fairly light. The only thing it listed was a license number through the State of which I did look up and it does show in good standing since 2014. It doesn't show any kind of a plan on any changes that may take place or the options for the massage parlor, if he's going to offer any kind of new services. It seems to be lacking in my opinion and for that reason at least for right now, I'd be willing to offer a denying resolution until we can at least see some more information.

DIRECTION: DENYING REGULAR

REPORT TO THE LIVONIA CITY COUNCIL

City Clerk
October 26, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Sara Kasprowicz, Office Administrator, Council Office

AGENDA ITEM

REQUEST TO EXTEND WAIVER USE APPROVAL TO NEW OWNER: Yangkai Yuan; re: to operate a massage establishment (Omorfia Esthetics) within the Burton Hollow Shopping Center located on the east side of Farmington Road between Six Mile Road and Curtis Avenue (17142 Farmington Road), Section 10. (CR 70-20)

BACKGROUND

RECOMMENDATION

FISCAL CONSIDERATION

ATTACHMENTS

1. S071116 Pet 2016-05-02-09 (Omorfia Esthetics) 17142 Farmington Road (WAIVERS)

APPROVED BY

From:	Savannah Chuong
To:	Kasprowicz, Sara
Subject:	Extension of Waiver use to New Owner
Date:	Monday, October 26, 2020 2:41:42 PM

Yangkai Yuan
17142 Farmington Rd,
Livonia, MI 48152
(734) 518-3808
huiqingyang1968@gmail.com

October 23, 2020

Dear Council Members,

My name is Yangkai Yuan, my employee is a Michigan licensed massage therapist, license #7501002748. I have purchased Omorfia Esthetics located at: 17142 Farmington Rd, Livonia, MI 48152. Omorfia Esthetics has a very long and good relation with the city of Livonia, and it would be an honor to take over and continue maintaining the good relations by providing comfort and good services for the city. Thank you for your time and consideration.

Sincerely,

Yangkai Yuan

On a motion by Brosnan, supported by Jolly, it was:

WAIVERS
Pet 2016-05-02-09 (Omorfia Esthetics) Approval of request to operate a massage establishment within the Burton Hollow Shopping Center located on the east side of Farmington Road between Six Mile Road and Curtis Avenue (17142 Farmington Road), Section 10

#305-16 RESOLVED, that having considered a communication from the City Planning Commission, dated June 10, 2016, approved for submission by the Mayor, which transmits its resolution #06-47-2016, adopted on June 7, 2016, with regard to Petition 2016-05-02-09, submitted by Omorfia Esthetics, requesting waiver use approval to operate a massage establishment within the Burton Hollow Shopping Center located on the east side of Farmington Road between Six Mile Road and Curtis Avenue (17142 Farmington Road) in the Southwest 1/4 of Section 10, which property is zoned C-1, the Council does hereby concur in the recommendation made by the City Planning Commission and Petition 2016-05-02-09 is hereby approved and granted, subject to the following conditions:

JUL 25 2016

1. That this facility shall comply with all of the other special waiver use standards and requirements pertaining to massage establishments as set forth in Section 10.03(m) of the Zoning Ordinance #543;

2. That this facility shall conform to the provisions set forth in Chapter 5.49 of the Livonia Code of Ordinances pertaining to massage establishments;

3. That the issues as outlined in the correspondence dated June 6, 2016, from the Inspection Department shall be resolved to the satisfaction of that department;

4. That the daily hours of operation of the massage establishment shall be limited to 8:00 a.m. to 10:00 p.m., Monday through Saturday;

5. That the Petitioner shall not engage in any form of solicitation for business within the public rights-of-way of Farmington or Six Mile Roads; and

6. That the petitioner shall enter into a conditional agreement limiting this waiver use to this user only, with the provision to extend this waiver use to a new user only upon the approval of the new user by the City Council.

Brosnan asked for confirmation that the operators of the business were licensed by the State of Michigan and was provided the paperwork from the Petitioner.

The Petitioners were present to answer any questions of Council and also thanked them for their consideration of this item.

A roll call vote was taken with the following result:

AYES: White, Meakin, Kritzman, Brosnan, Jolly and McIntyre

NAYS: None

The President declared the resolution adopted.

JUL 25 2016

***UNFINISHED BUSINESS AGENDA ITEMS** (Regular Meeting of July 25, 2016)*

Motion by: ***Brosnan***
Seconded by: ***Jolly***

ROLL CALL:
Ayes: ***White, Meakin, Kritzman, Brosnan, Jolly, and McIntyre***
Nays: ***None***
Absent: ***Bahr***

CITY OF LIVONIA – CITY COUNCIL
MINUTES OF STUDY MEETING HELD JULY 11, 2016

Meeting was called to order at 10:00 p.m. by President McIntyre. Present: Cathy White, Scott Bahr, Brian Meakin, Brandon Kritzman. Maureen Miller Brosnan, Jim Jolly, and Kathleen McIntyre. Absent: None.

Elected and appointed officials present: Mark Taormina, Director of Economic Development and Planning; Todd Zilincik, City Engineer; Don Knapp, City Attorney; Curtis Caid, Police Chief; Denise Maier, Director of Human Resources; and Susan Nash, City Clerk.

27. WAIVER PETITION: Planning Commission, re: Petition 2016-05-02-09 submitted by Omorfia Esthetics, to operate a massage establishment within the Burton Hollow Shopping Center located on the east side of Farmington Road between Six Mile Road and Curtis Avenue (17142 Farmington Road) in the Southwest 1/4 of Section 10, which property is zoned C-1.

Mark Taormina, Director of Planning and Economic Development, presented the request to Council. This request is for a waiver use for the operation of a massage establishment at the Burton Hollow shopping center which is on the east side of Farmington Road just north of Six Mile Road. Omorfia Esthetics would occupy a unit in the courtyard area which is on the Farmington Road side of the center. This space, is roughly 1,600 square feet in size. The floor plan for the business shows that there would be a reception area and waiting, as well as a restroom, office and three massage rooms. The main business, as we understand it, would involve facials and skin care services. There are no exterior modifications planned for the building other than maybe the installation of a sign on the exterior size of the building. The proposal would have no detrimental impacts on parking. There are a couple of special requirements that apply to massage establishments. The first is that a new massage establishment cannot be located within 400 feet of any existing licensed massage establishment. The other requirement is that a new massage establishment cannot be located within 400 feet of a school, place of worship, state-licensed day care facility, public library, playground, or public park. The location of Omorfia Esthetics at Burton Hollow Plaza would comply with all of these special requirements. There is also a restriction on the hours of operation. It is our understanding that the petitioner has agreed to operate this business between the specified hours. The Planning Commission is recommending approval.

Mary Lou Lynch-Jones, 32811 Winona Street, Westland, MI, was present this evening for moral support of her friends who are the owners of the business and also to offer any translation that may be needed, she said that they do speak English. She said they have the walls up and are waiting on the electrician. She

said they are hoping to open soon. She said their dream is to give facials, however, massages help bring in revenue to pay the bills if needed.

Brosnan asked through the Chair to Taormina if a license was provided with their application. Taormina said that used to be required but the City is now preempted from that due to State law. He said perhaps the Law Department or petitioner would like to share some information.

Knapp, City Attorney, said years ago the City adopted a Massage Therapy License ordinance; however, as Mr. Taormina indicated, that was preempted by State Law. He said the City no longer issues massage therapy license it is done by the State.

Brosnan asked if he reviewed the paperwork to make sure they have attained their State of Michigan license Knapp said he did not.

Brosnan asked which City Department is responsible for that review. Taormina replied stating it required prior to the issuance of a Zoning Compliance Certificate and it is more than likely the responsibility of the Inspection Department but said he would verify that before the voting meeting. Brosnan said she would appreciate that.

Brosnan asked the petitioner to introduce herself and tell us about her experience with this type of business.

Man Yun (Mary) Lens, 23452 Oakridge Drive, Dearborn Heights, Michigan 48127, said she worked at Chaunfang Tang's husband's Acupuncture office at Merriman and Warren Roads. She said she did acupressure (massage) there.

Brosnan asked them why they chose this location. Mary Lens replied that her friend said Livonia was a very nice city and the available space was small enough for what they were looking for.

Chaunfang Tang, 6592 Fox Hills Road, Canton, Michigan 48187. Said she has been a housewife for many years. Her four (4) children are all in school and now she is wanting to start this business with her best friend. President McIntyre asked if they both had massage therapist license. Mrs. Tang said she did not have a massage license. She said she has a facial beauty license. Mary Lens said she has a massage therapist license.

Brosnan asked what the hours of operation will be. They replied 10 a.m. to 7 p.m.

Brosnan noted that one of the stipulations by the Planning Commission restricts the hours of operation from 8 a.m. to 10 p.m.

Taormina responded indicating those are the hours of operation limited in the ordinance. The Planning Commission just reiterated those as one of the stipulations in their approving resolution.

Brosnan asked if that is what was done with all the other massage establishments. Taormina said he didn't recall any situations where the hours were limited to less than what the ordinance allows. He said he would have to research that and report back to Council. Brosnan asked Taormina to check on the hours of operation for all other massage establishments in Livonia and provide that information to Council prior to the voting meeting.

Brosnan offered the approving resolution for the Regular Agenda.

DIRECTION: APPROVING REGULAR

PLANNING COMMISSION

IAN WILSHAW, Chairman Pro Tem
CAROL A. SMILEY, Secretary
SAM CARAMAGNO
BETSY McCUE
GLEN W. LONG, JR.
PETER H. VENTURA

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2290 Fax (734) 466-2108

DENNIS K. WRIGHT
MAYOR

MARK TAORMINA
PLANNING & ECONOMIC DEVELOPMENT DIRECTOR

BARBARA C. GAMBER
ECONOMIC DEVELOPMENT COORDINATOR

SCOTT O. MILLER
PLANNER IV

June 10, 2016

Honorable Members of the City Council
City of Livonia, Michigan

Re: Petition 2016-05-02-09 – Omorfia Esthetics

Dear Council Members:

At the 1,089th Public Hearings and Regular Meeting held by the City Planning Commission on June 7, 2016, in the Livonia City Hall, the following resolution was unanimously adopted:

#06-47-2016 **RESOLVED**, that pursuant to a Public Hearing having been held by the City Planning Commission on June 7, 2016, on Petition 2016-05-02-09 submitted by Omorfia Esthetics requesting waiver use approval pursuant to Section 10.03(m) of the City of Livonia Zoning Ordinance #543, as amended, to operate a massage establishment at 17142 Farmington Road within the Burton Hollow Shopping Center, located on the east side of Farmington Road between Six Mile Road and Curtis Avenue in the Southwest 1/4 of Section 10, which property is zoned C-1, the Planning Commission does hereby recommend to the City Council that Petition 2016-05-02-09 be approved for the following reasons or subject to the following conditions:

1. That this facility shall comply with all of the other special waiver use standards and requirements pertaining to massage establishments as set forth in Section 10.03(m) of the Zoning Ordinance #543;

2. That this facility shall conform to the provisions set forth in Chapter 5.49 of the Livonia Code of Ordinances pertaining to massage establishments;

3. That the issues as outlined in the correspondence dated June 6, 2016, from the Inspection Department shall be resolved to the satisfaction of that department;

4. That the daily hours of operation of the massage establishment shall be limited to 8:00 a.m. to 10:00 p.m., Monday through Saturday;

5. That the Petitioner shall not engage in any form of solicitation for business within the public rights-of-way of Farmington or Six Mile Roads; and

6. That the petitioner shall enter into a conditional agreement limiting this waiver use to this user only, with the provision to extend this waiver use to a new user only upon the approval of the new user by the City Council.

Subject to the preceding conditions, this petition is approved for the following reasons:

1. That the proposed use complies with all of the general waiver use standards and requirements as set forth in Section 19.06 of the Zoning Ordinance #543;

2. That the subject site has the capacity to accommodate the proposed use; and

3. That the proposed use is compatible to and in harmony with the surrounding uses in the area.

FURTHER RESOLVED, that notice of the above hearing was given in accordance with the provisions of Section 19.05 of Zoning Ordinance #543, as amended.

Very truly yours,

APPROVED FOR SUBMISSION

Dennis K. Wright, Mayor

CITY PLANNING COMMISSION

Carol A. Smiley, Secretary

cc: Mayor, Clerk, Law, Inspection, Zoning Board of Appeals
Chaunfang Tang, 6592 Fox Hills Road, Canton, MI 48187
Shangxiao Xu, Shang's Acupuncture, 7139 Merriman Road, Garden City, MI 48135
Manyun Lews, 23452 Oakridge Drive, Dearborn Heights, MI 48127
Farmington Six, L.L.C., 33300 Six Mile Road, Livonia, MI 48152
Mary Lou Lynch Jones, 32811 Winona Street, Westland, MI 48185

CITY OF LIVONIA, MICHIGAN
APPLICATION FOR WAIVER USE APPROVAL

All applications must be presented in triplicate to the City Clerk, 33000 Civic Center Drive, Livonia, MI 48154-3097. Applications **must** include property owner's name, address and notarized signature.
Filing fee = $600.00 plus $20.00 for each 1,000 sq. ft. of gross floor area of new construction.

Date Filed: May 10, 2016 Petition 2016 05 02 09

Site Address: 17142 Farmington Rd Sidwell _____ Zoning of Property C1

Requesting Approval To Facial & massage

Applicant: Manyun Lens Chunfang Tang Business/Company: Omorfia Esthetics

Applicant's Address: 23452 Oakridge Dr City: Dearborn Heights State: MI Zip Code: 48127

Applicant's Phone # (734) 612-3662 Applicant's Email manyun.lens@yahoo.com

Contact Person: Shangxiao xu Business/Company: Shang's Acupuncture 中

Contact's Address: 7139 merriman Rd City: Garden city State: MI Zip Code: 48135

Contact's Phone # (734) 838-0757 Contact's Email Shangxiaoxu@.comcast.net

Please provide the following information:

1) **Site Plan** showing:
   - property dimensions, including road right-of-way & building setback lines
   - foot print of building(s), including dimensions & square footage
   - all easements, protective walls, sidewalks & existing trees
   - any significant topographic features (existing or proposed)
   - parking layout, including type of surface material, sizes of spaces & aisles
   - method used in calculating parking requirement
   - location of light standards servicing parking lot & cutout showing type & height
   - location of trash receptacle, including description of screening
   - location of signs (if proposed must submit separate sign application)
2) **Detailed Landscape Plan** including:
   - listing or labeling of all planted materials as to type and size
   - areas to be fully irrigated
   - percentage of landscaping provided (15% of total site required)
3) **Building Elevation Plan** depicting:
   - architectural quality
   - wall section & detail plan - exterior building materials must be labeled (i.e. brick, thin brick, dryvit)
   - all visible rooftop mechanical equipment and how they will be screened
4) **General Floor Plan** showing:
   - floor layout
   - entrances & exits
   - restaurants are required to illustrate seating arrangement & capacity
5) **One (1) set of reduced plans** (i.e. site, landscape, elevation, floor), **a maximum 11" x 17" in size, or digital file in a .pdf format either on CD or emailed to** smiller@ci.livonia.mi.us
6) **Legal Description** of the property to be considered (Clearly Printed)
7) Three (3) completed application forms & **twenty three (23)** sets of full size drawings

RECEIVED
OFFICE OF THE CITY CLERK
2016 MAY 10 PM 2:32

You are invited and encouraged to review your proposal with the Planning Department staff. Only one set of preliminary drawings will be necessary for this analysis.

FEE COMPUTATION **$600.00**

_____ sq. ft. of new construction x $20.00 per 1,000 sq. ft.
(**NOTE**: Round off to nearest 1,000) + _____
Total Amount Due $ _____

Owner of Property: Farmington Six, LLC

Owner's Address: 33300 Six Mile Rd City: Livonia State: MI Zip Code: 48152

Owner's Phone # (561) 445-1774 Owner's Email scohen@biltmoorgroup.com

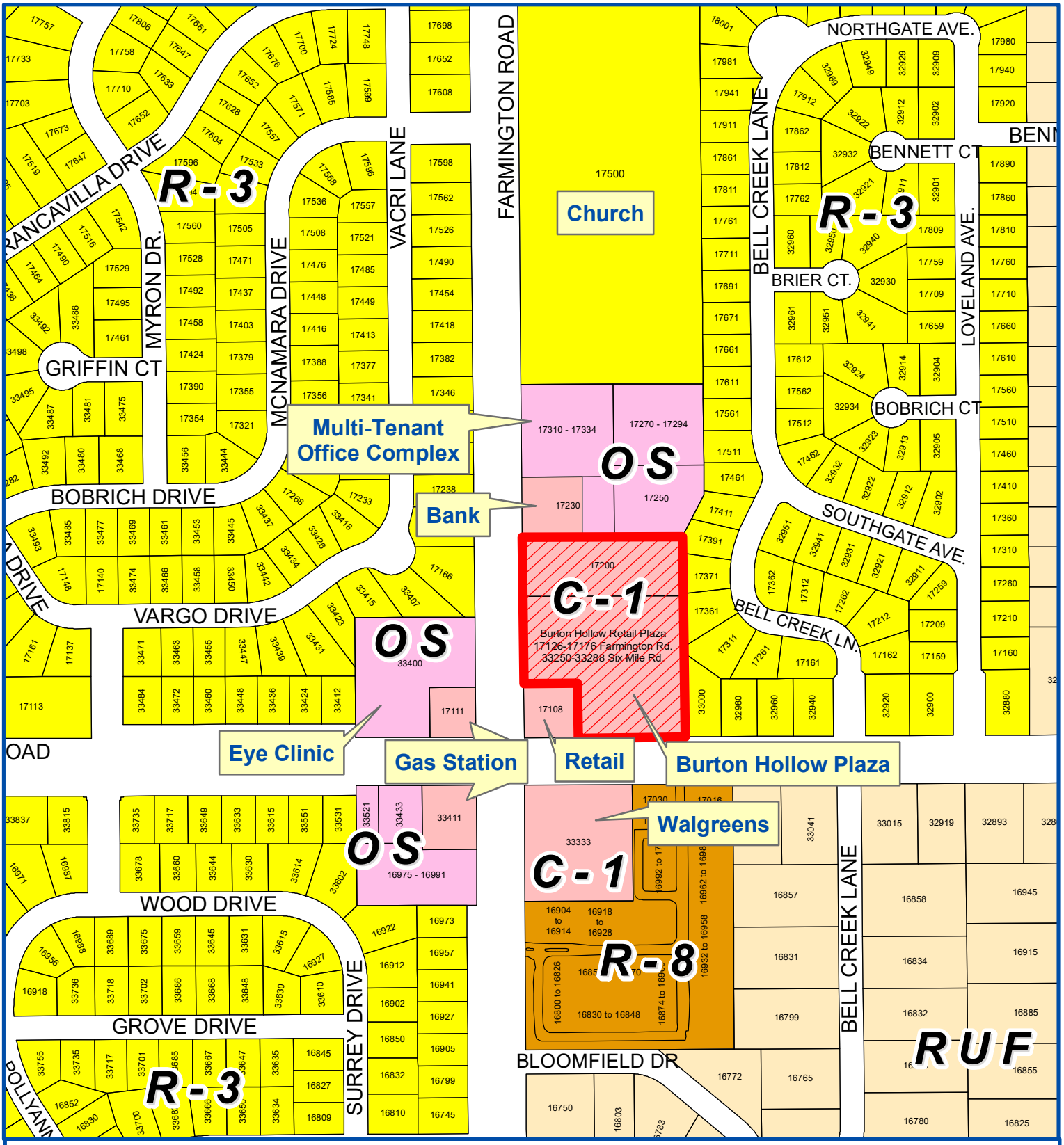
Signature of Owner: Steven Cohen Print Name: Steven Cohen

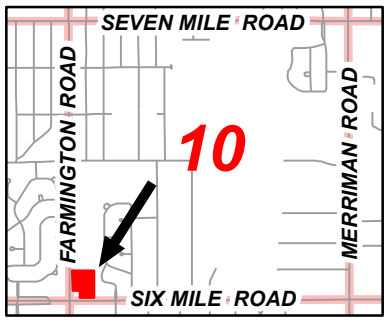
Subscribed and sworn to before me, a Notary Public in and for the County of _____ State of _____

on this _____ day of _____ 20 _____.

Signature of Notary _____ My commission expires _____

Acting in the County of _____. See attached





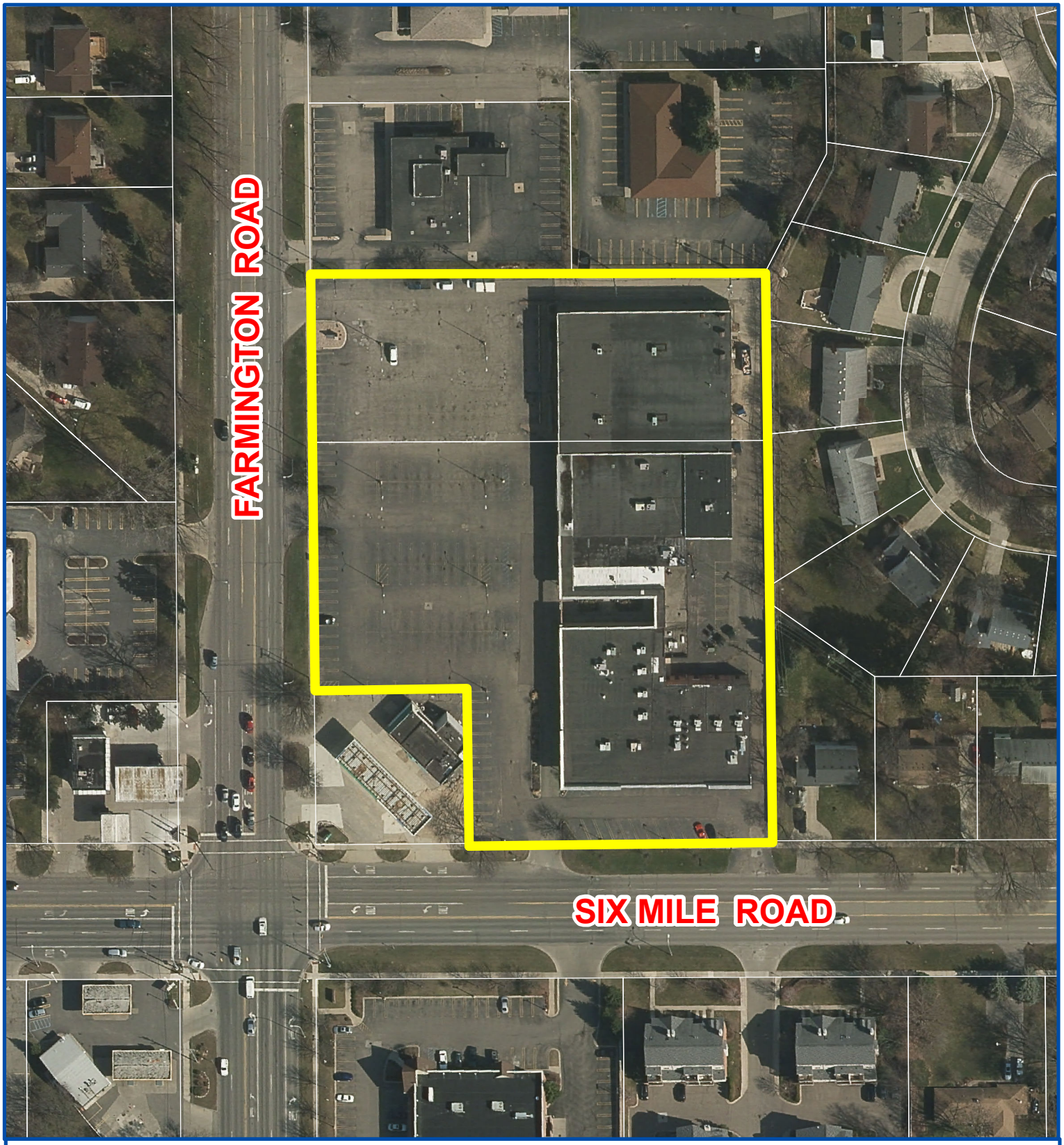
Address & Zoning Map

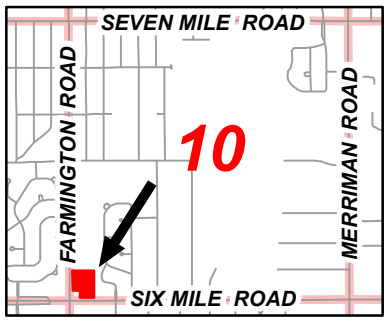
Petition 2016-05-02-09
Omorfia Esthetics
Burton Hollow Plaza/17142 Farmington Road
Operate Massage Establishment

N

Not to Scale

City of Livonia
Planning Department





Aerial Map

Petition 2016-05-02-09
Omorfia Esthetics
Burton Hollow Plaza/17142 Farmington Road
Operate Massage Establishment

N

Not to Scale

City of Livonia
Planning Department

PLANNING COMMISSION STAFF NOTES

PUBLIC HEARING

ITEM 1

Petition 2016-05-02-09 submitted by Omorfia Esthetics requesting waiver use approval pursuant to Section 10.03(m) of the City of Livonia Zoning Ordinance #543, as amended, to operate a massage establishment at 17142 Farmington Road within the Burton Hollow Shopping Center, located on the east side of Farmington Road between Six Mile Road and Curtis Avenue in the Southwest ¼ of Section 10.

May 31, 2016 Study Meeting:

This item seeks waiver use approval to operate a massage establishment (Omorfia Esthetics) within the Burton Hollow Shopping Center. The site of the shopping center is 4.18 acres and is located on the east side of Farmington Road between Six Mile Road and Curtis Avenue. The shopping center has a total of 49,740 square feet of gross floor area, and can be divided into approximately seventeen (17) tenant spaces. One of the major tenants of the shopping center is Secretary of State, which operates one of its seven statewide SUPER!Centers at this location. The property is zoned C-1 (Local Business), which allows for massage establishments only with waiver use approval as set forth in Section 10.03(m) of the Zoning Ordinance.

Burton Hollow Plaza has an “L”-shape configuration, with one end facing Six Mile Road and the other side facing Farmington Road. Customer parking is located in front of the units. The proposed massage establishment would occupy one of the interior units of a courtyard area on the Farmington Road side of the center. The subject space measures approximately 1,600 square feet (20’ x 80’) in area. This business would consist of two (2) massage therapists and three (3) massage tables. The petitioner has stated that their main business would evolve facials and skin care services.

No modifications to the building exterior are planned in connection with the proposed restaurant. This restaurant would be allowed one wall sign having a maximum area of 20 square feet (based on one square foot of area for each one lineal foot of the width of the unit).

Burton Hollow Plaza provides parking in accordance with the 1/150 ratio for group commercial centers where 15% or less of the gross floor area is devoted to places of assembly. The total net floor area of the shopping center (80% of the gross area) at the 1/150 ratio yields a parking requirement of 265 parking spaces. The site plan provides 268 parking spaces and thus parking for the proposed massage establishment will be adequate.

The special requirements that apply to massage establishments include Section 10.03(m)(2), which specifies that no massage establishment shall be located within 400 feet of any other property which is either occupied or approved for a massage

establishment. The proposed massage establishment is in compliance with this special waiver use requirement in that no other massage establishment is located within 400 feet of the proposed location.

Another special requirement, Section 10.03(m)(3), specifies that no massage establishment be located within 400 feet of a school, place of worship, state-licensed day care facility, public library, playground, or public park, as measured from any point of the subject property to any point of the properties listed above. The proposed massage establishment is in compliance with this special waiver use requirement in that there are no such uses located within 400 feet of the proposed location.

The Zoning Ordinance restricts the daily hours of operation of any massage establishment to the period of time from 8:00 a.m. to 10:00 p.m. The petitioner has agreed to operate this business between the specified hours.

June 7, 2016 Public Hearing:

Approving Resolution: That this request to operate a massage establishment at 17142 Farmington Road within the Burton Hollow Shopping Center shall be approved subject to the following condition:

1. That this facility shall comply with all of the other special waiver use standards and requirements pertaining to massage establishments as set forth in Section 10.03(m) of the Zoning Ordinance #543;

2. That this facility shall conform to the provisions set forth in Chapter 5.49 of the Livonia Code of Ordinances pertaining to massage establishments;

3. That the daily hours of operation of the massage establishment shall be limited to 7:00 a.m. to 7:00 p.m., Monday through Saturday;

4. The Petitioner shall not engage in any form of solicitation for business within the public right-of-ways of Farmington or Six Mile Roads; and

5. That the petitioner shall enter into a conditional agreement limiting this waiver use to this user only, with the provision to extend this waiver use to a new user only upon the approval of the new user by the City Council.

Subject to the preceding conditions, this petition is approved for the following reasons:

1. That the proposed use complies with all of the general waiver use standards and requirements as set forth in Section 19.06 of the Zoning Ordinance #543;

2. That the subject site has the capacity to accommodate the proposed use; and

3. That the proposed use is compatible to and in harmony with the surrounding uses in the area.

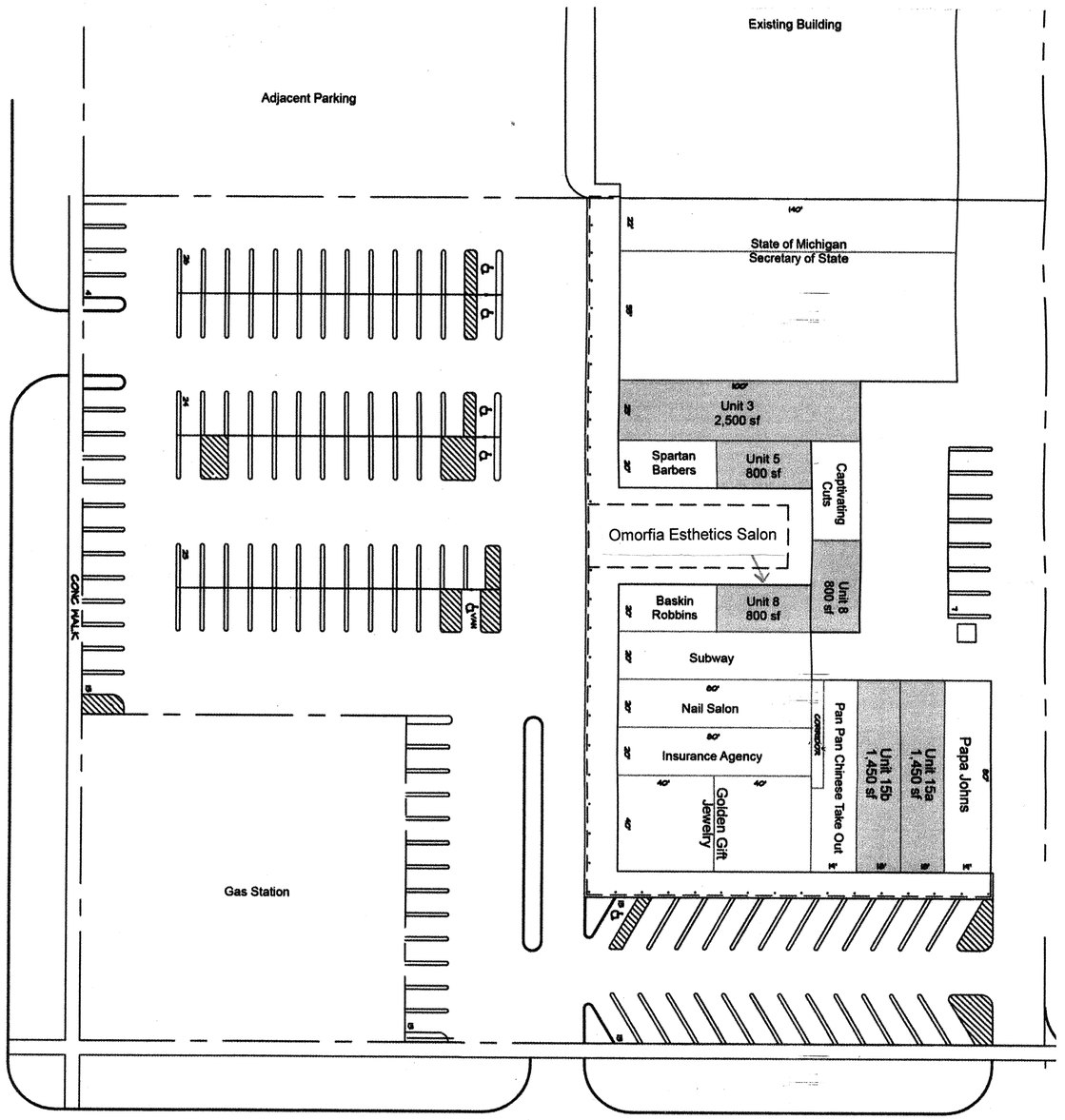
Denying Resolution: That this request to operate a massage establishment at 17142 Farmington Road within the Burton Hollow Shopping Center is denied for the following reasons

1. That the petitioner has failed to affirmatively show that the proposed use is in compliance with all of the special and general waiver use standards and requirements as set forth in Sections 10.03 and 19.06 of the Zoning Ordinance #543;

2. That the petitioner has not adequately established that there is a need for the proposed use in this section of the City;

3. That the petitioner has not sufficiently demonstrated that the proposed use would be compatible to and in harmony with the surrounding uses in the area; and

4. That the proposed use is contrary to the goals and objectives of the Zoning Ordinance which, among other things, are intended to insure suitability and appropriateness of uses.



LOCATION PLAN NO SCALE

BUILDING DATA

Building Type:	2-B
Use Group:	B
Area:	757 sq. ft. from inside face to inside face
Total Bldg. Area	31,243 sq. ft.
Max. Travel Distance:	44 Feet Note: Suite qualifies as one exit space.
Sprinkled	No
Occupant Load:	757/100 = 7.57, 8 occupants
One Story:	Yes

Garnet R. Cousins & Associates
registered architect

Garnet R. Cousins, Principal • 468 Wellesley. Birmingham, MI 48009 • ph 248.220.1916 • garcous@wowway.com

Omorfia Esthetics Salon For:
Manyun Lens & Chungang Tang
17142 Farmington Rd.
Livonia, MI

Issue and Date
CITY REVIEW 5.25.16

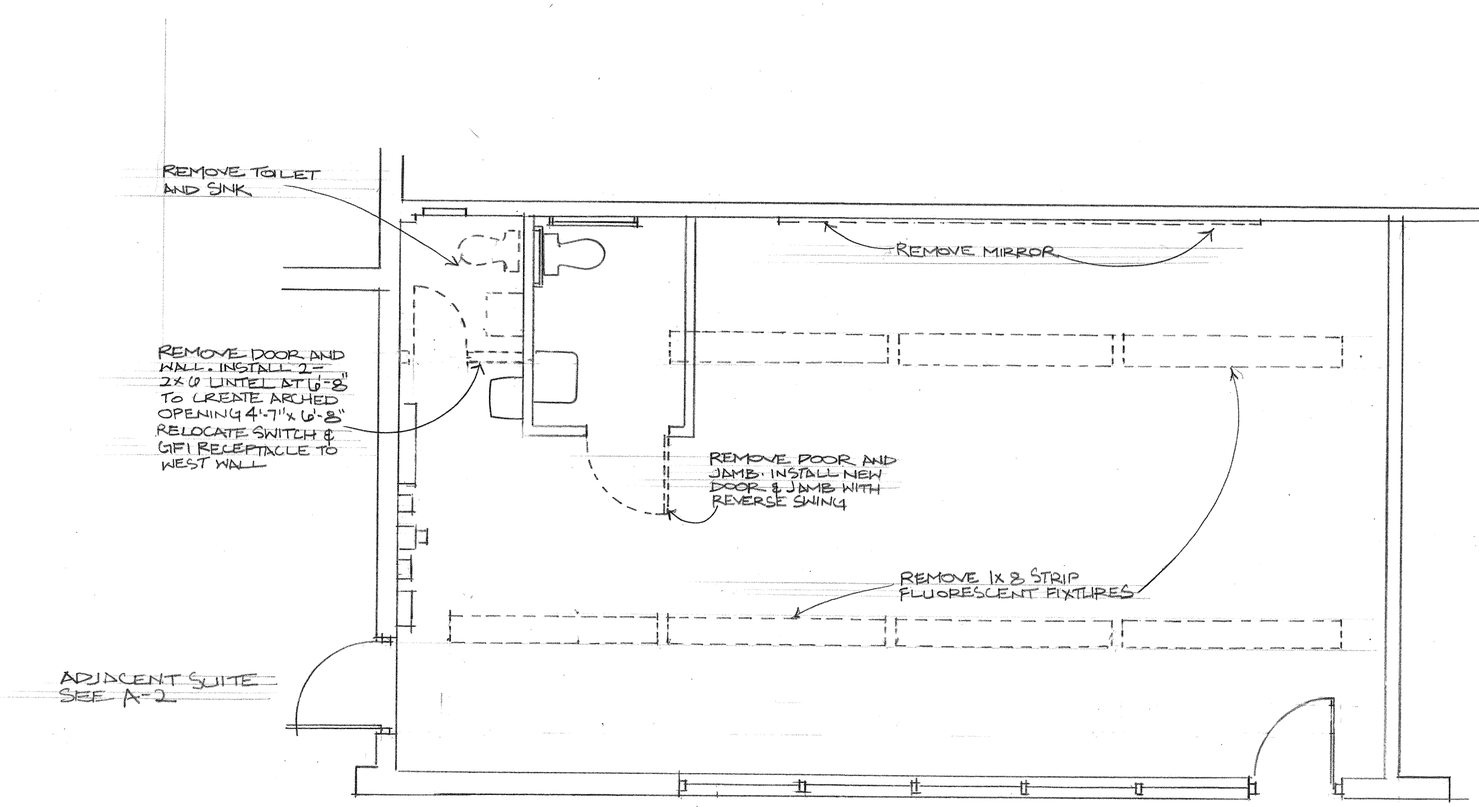
Revisons

Drawn By

Description

Job No. 0160043

Sheet No. A-1



DEMOLITION PLAN SCALE 1/4"=1'-0"

Omorfia Esthetics Salon For:
Manyun Lens & Chungang Tang
17142 Farmington Rd.
Livonia, MI

Garnet R. Cousins&Associates
registered architect

Garnet R. Cousins, Principal • 468 Wellesley. Birmingham, MI 48009 • ph 248.220.1916 • garcous@wowway.com

Issue and Date
CITY REVIEW 5.25.10

Revisons

Drawn By

Description

Job No.
0160043

Sheet No.
A-2

Finishes

Floor:

All areas to be carpet as selected by Tenants *with the exception* of Laundry Area and Barrier Free Bathroom which shall remain existing tile.

Install carpet as per manufacturer's specifications for installation over existing vinyl tile surface.

Walls:

Paint all walls color and gloss level as selected by Tenants. Apply paint as per Specification Notes.

Ceiling:

New ceiling in Facial Rooms only. Grid to be 2' x 2' with white T's. Texture, Style, Pattern and color as per Tenants. Existing lay-in ceiling to remain as shown. Paint existing T's and lay-in panels white, semi-gloss. Ceiling in Laundry Area and Barrier Free Bathroom to remain. Repaint as required to match existing.

Base:

Continuous vinyl cove base (4"). Color as per Tenants.

Doors and Hardware

At existing Barrier Free Bathroom, reverse door swing as shown. Provide pre-hung hollow core, smooth panel door. Paint with semi-gloss paint, color per Tenants. Hardware to be Lever type Privacy Lock with dark bronze finish, Schlage or equal. Style as approved by Tenants. Hinges to have dark bronze finish.

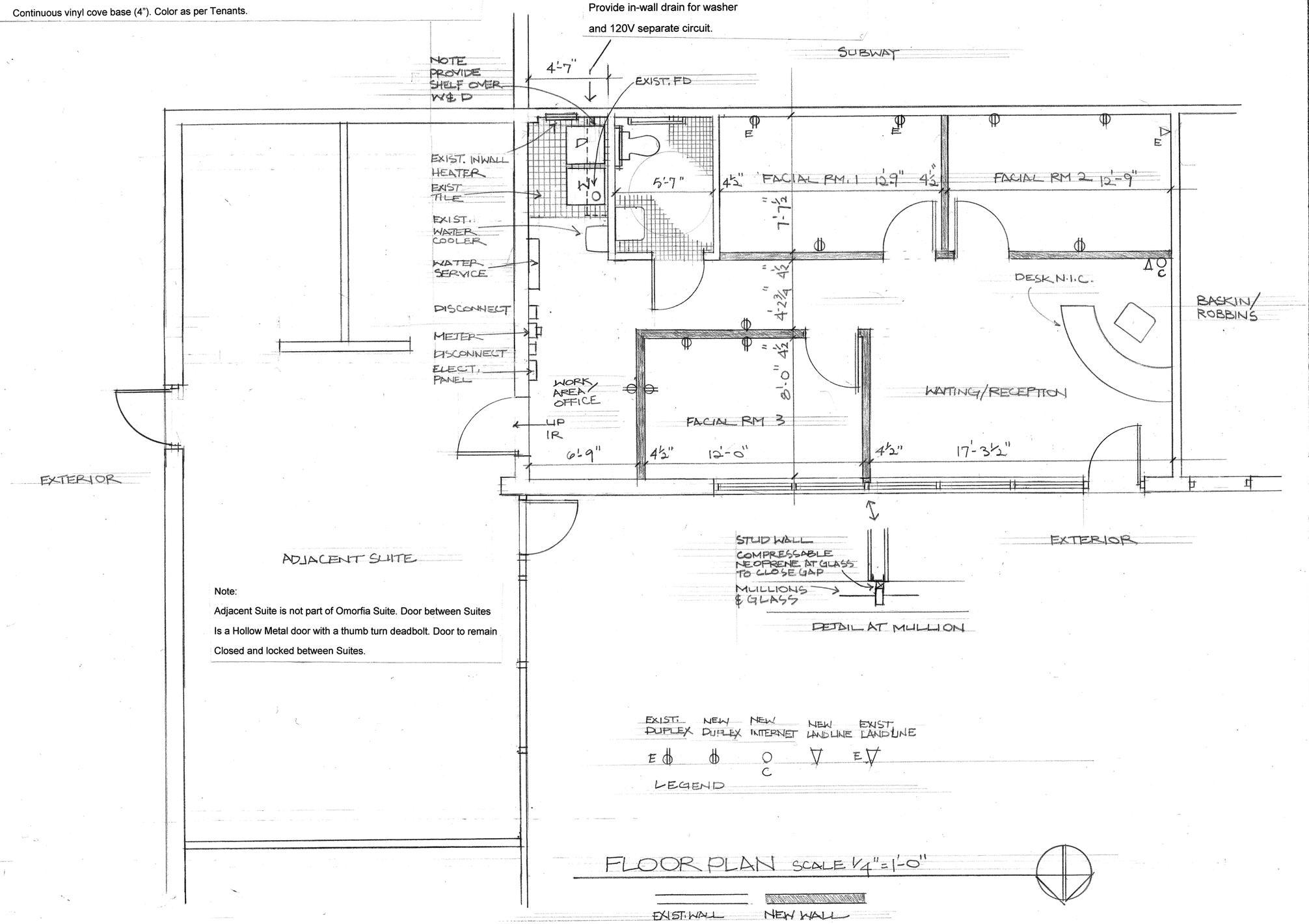
Doors at Facial Rooms to be pre-hung, hollow core, smooth panel doors. Paint with semi-gloss paint, color per Tenants. Hardware to be Lever type Passage Latch with dark bronze finish, Schlage or equal. Style as approved by Tenants.

Undercut doors sufficiently to allow return air flow.

Provide 240V separate circuit for dryer.

Vent dryer to roof. Provide vent to height above average snow depth. Provide in-line booster fan interlocked with dryer.

Provide in-wall drain for washer and 120V separate circuit.



Note:

Adjacent Suite is not part of Omorfia Suite. Door between Suites Is a Hollow Metal door with a thumb turn deadbolt. Door to remain Closed and locked between Suites.

FLOOR PLAN SCALE ¼"=1'-0"

Garnet R. Cousins&Associates
registered architect

Garnet R. Cousins, Principal • 468 Wellesley, Birmingham, MI 48009 • ph 248.220.1916 • garcous@wowway.com

Omorfia Esthetics Salon For:
Manyun Lens & Chungang Tang
17142 Farmington Rd.
Livonia, MI

Issue and Date
CITY REVIEW 5.25.16

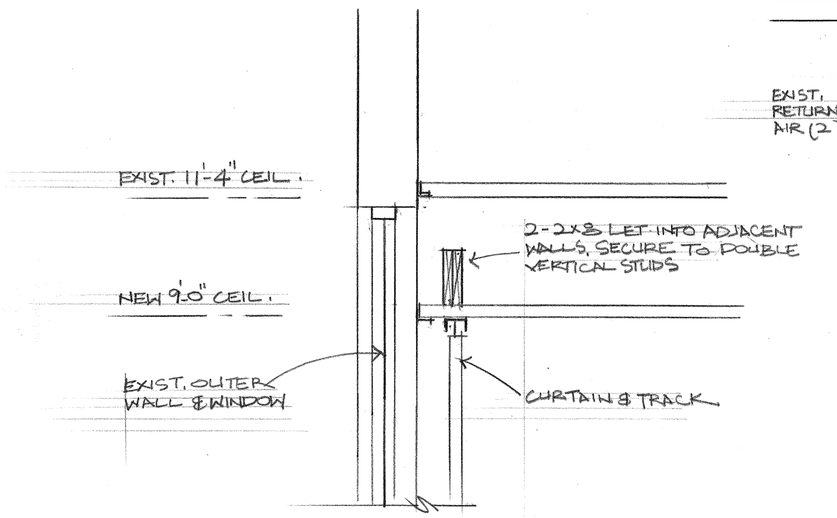
Revisons

Drawn By

Description

Job No. 0160-43

Sheet No. A-3



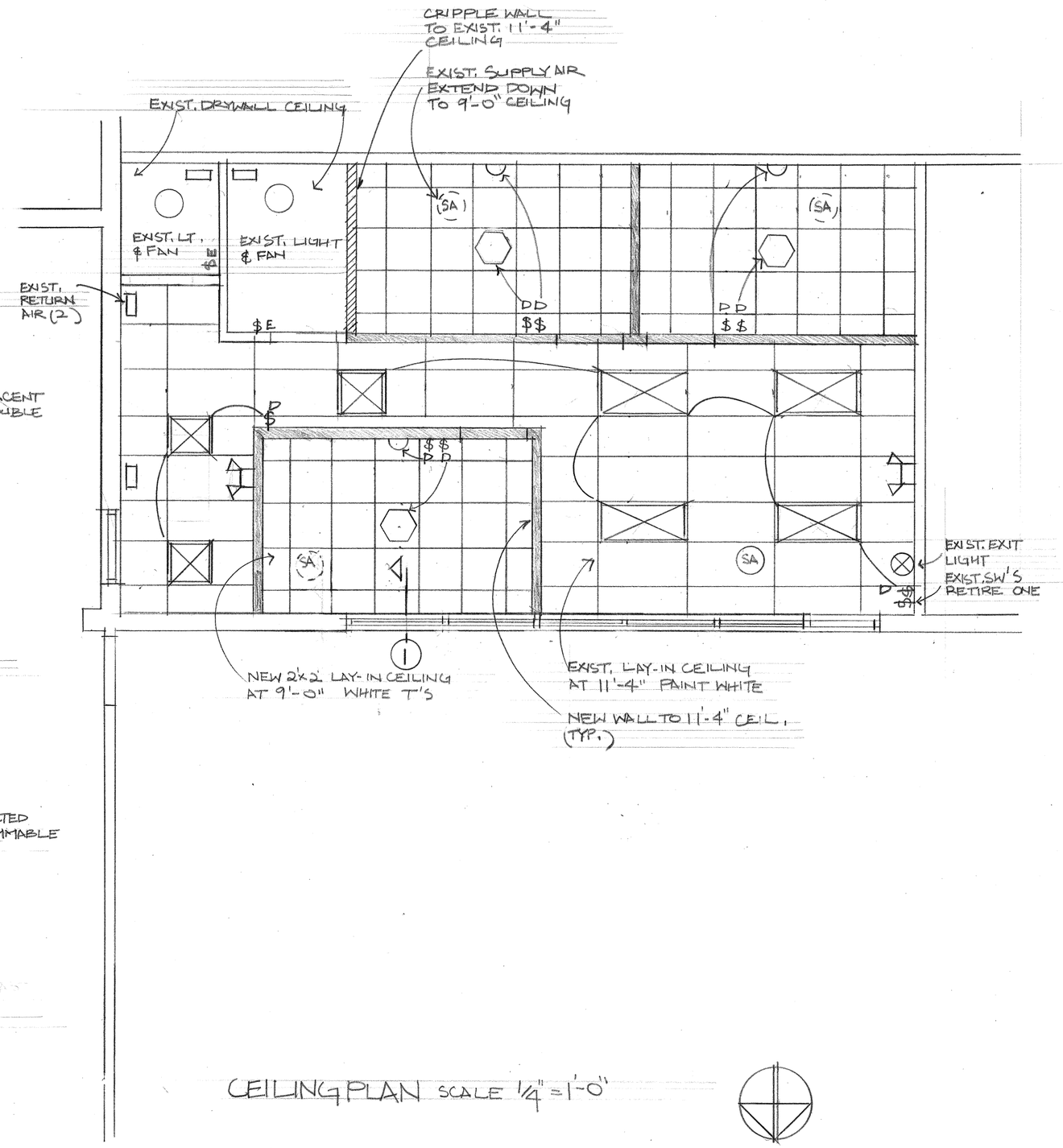
CURTAIN TRACK DETAIL
SCALE 1/2" = 1'-0"

LED SURFACE MTD, DECORATIVE FIXT, DIMMABLE

LED SCONE SELECTED BY TENANTS, DIMMABLE

BATTERY EMERGENCY LIGHT

LED 2x4 FIXT. DIMMABLE



CEILING PLAN SCALE 1/4" = 1'-0"

Garnet R. Cousins & Associates
registered architect

Garnet R. Cousins, Principal • 468 Wellesley, Birmingham, MI 48009 • ph 248.220.1916 • garcous@wowway.com

Omorfia Esthetics Salon For:
Manyun Lens & Chungang Tang
17142 Farmington Rd.
Livonia, MI

Issue and Date
CITY REVIEW 5.25.16

Revisons

Drawn By

Description

Job No. 0160043

Sheet No. A-4

DIVISION 1 - GENERAL CONDITIONS

1. All work shall be performed in accordance with all applicable national, state, and local codes, regulations.

2. Contractor shall verify all conditions and dimensions at site before beginning construction. Any discrepancies shall be reported to Garnet R. Cousins, Architect, for justification and/or correction before proceeding with work. Contractor shall assume responsibility for errors that are not reported.

3. All dimensions shall be read or calculated and never scaled.

7. Contractor to obtain and pay for all permits.

10. Remove all rubbish from the site.

11. Contractor to provide one year written guarantee from date of final acceptance for materials and workmanship.

12. Existing conditions were not directly observable are assumed to follow conventional methods of construction. If serious discrepancies exist when work is uncovered, report conditions to Architect.

13. All variations and additions to original contract to be by change order only.

14. Garnet R. Cousins, Architect assumes no liability for any changes or modifications made to these plans by others.

DEMOLITION NOTES:

Demolish interior partitions, systems and building components designated to be removed.

Remove abandoned utilities.

Remove and legally dispose of demolished materials off site.

Notify owner prior to shut-off of existing utilities. Cap off utilities to be discontinued.

Restore all existing adjacent areas affected by removal work.
Asbestos and hazardous materials encountered in demolition or removal of same are not part of this contract.

DIVISION 5 – METALS

Light gage Framing

Materials:

System Components: With each type of metal framing required, provide manufacturer's standard steel runner, blocking, lintels, clip angles, shoes, reinforcements, fasteners and accessories as recommended by manufacturer for application indicated, as needed to provide a complete metal framing system.

Materials and Finishes:

For 16 gage and heavier units, fabricate metal framing components of structural quality steel sheet with a minimum yield point of 40, 0000 psi. , ASTM A446, A570, or A 611.

For 18 gage and lighter units, fabricate metal framing components of commercial quality steel sheet with a minimum yield point of 33,000 psi. ASTM A66, A570, or A611.

Provide galvanized finish to metal framing components complying with ASTM A525 for minimum G 60 coating.

Attach components by welding, bolting or screw fasteners as standard with manufacturer. Wire tying of components is not permitted.

Installation

Studs:

Install metal framing systems in accordance with manufacturer's printed or written instruction and recommendations, unless otherwise indicated.

Install continuous tracks sized to match studs. Secure tracks as recommended by stud manufacturer for type of construction involved.

Set studs plumb, except as needed for diagonal bracing or required for non-plumb walls or warped surfaces and similar requirements.

Install supplementary framing, blocking and bracing in metal framing system wherever walls or partitions are indicated to support fixtures, equipment, services, casework, heavy trim and furnishing and similar work.

Secure studs to top and bottom runner tracks by either welding or screw fastening at both inside and outside flanges.

Install horizontal stiffeners in stud system, spaces (vertical distance) at no more than 4'-6" o.c. Weld at each intersection.

DIVISION 9 - FINISHES

Gypsum Wall Board: USG or equal, install by gluing and screwing, tape, spackle and sand all joints.

Walls: 1 layer 1/2"

Ceilings: 1 layer 1/2" @ framing occurring @ 16" o.c.
1 layer 5/8" @ framing occurring @ > 16" o.c.

Finishes per owner, coordinate. Install per manufacturer.

Paint products: Sherwin WIlliams or approved equal.

Paint: prime all drywall, doors, and trim. Provide two coats of paint. Color per owner.

Flooring:

Division 10: SPECIALTIES

Fire Extinguishers and Cabinets

Furnish and install Fire Extinguishers and cabinets to conform to NFPA 10 requirements for portable fire extinguishers.

Submit manufacturer's operation and maintenance data. Include test, refill or recharge schedules, procedures, and re-certification requirements.

Fire Extinguishers to be J.L. Industries "Cosmic 5E", multi-purpose chemical with a 2A-10BC rating, or approved equal. Extinguisher Cabinets to be J.L. Industries "Ambassador Series" no. 8117F17 steel frame, semi-recessed cabinet with standard white powder coat finish and trim, standard galv. Door pull, full lite clear tempered glass and vertical red FE-letters or approved equal.

Division 15: MECHANICAL

Plumbing fixtures to be as selected by Owner. Coordinate with fixture supplier /manufacturer for all rough location requirements.

Water piping to be type "L" copper

Waste piping to be schedule 40, PVC plastic

Vents to be PVC plastic or galv. steel

Gas piping to be schedule 40, black steel.

Underground PVC, schedule 80 or s.w.c.i.

Verify all utility locations with cabinets and fixtures.

Provide cleanouts as required and at the base of all stacks.

Provide a fixture stop in all water supplies to plumbing fixtures.

Insulate all hot and cold water lines above grade with ¾" glass fiber pipe insulation with vapor barrier.

Heating/Cooling Unit: Inspect and repair existing HVAC rooftop unit and add duct runs as may be requied to maintain an inside temperature of 72 degrees F when the outside temperature is -10 degrees F. and inside temperature of 75 degrees inside when exterior temperature is 95 degrees F. Controls to be accessible

DIVISION 16 - ELECTRICAL

Examine existing electrical service for conformity to current NEC and upgrade if required.

All wiring shall conform to the latest N.E.C. and local code requirements.

Branch circuit breakers shall be minimum 20 A. circuit.

Fuse all motors and motor assemblies in accordance with the latest N.E.C.

Maintain a maximum voltage drop of 5% throughout the entire system.

Verify all lighting and plug locations per drawings.

Color and type of switches, duplex and switch plates per owner, coordinate.

Provide all telephone, alarm, intercom, cable tv, and sound system wiring as required, coordinate with owner.

Garnet R. Cousins&Associates
registered architect
468 Wellesley, Birmingham, MI 48009 • ph 248.220.1916 • garcous@wowway.com
Garnet R. Cousins, Principal

Omorfia Esthetics Salon For:
Manyun Lens & Chungang Tang
17142 Farmington Rd.
Livonia, MI

Issue and Date
CITY REVIEW 5.25.16

Revisons

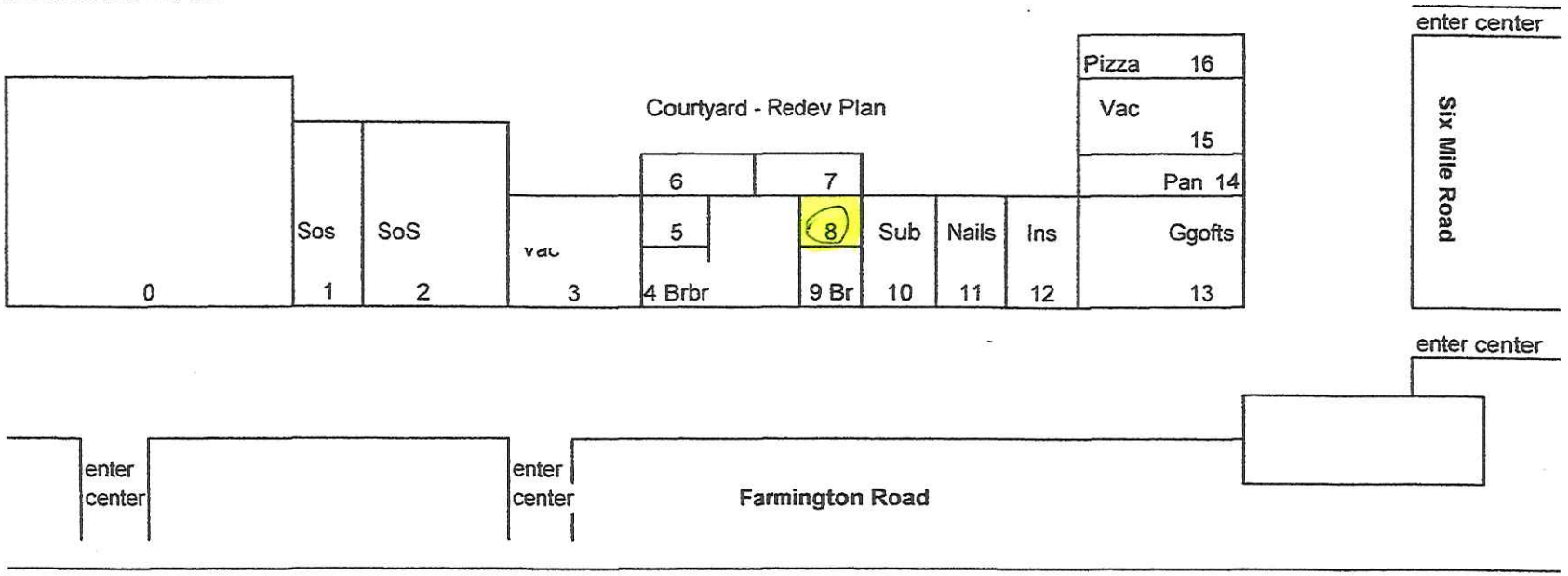
Drawn By

Description

Job No.
010042

Sheet No.
A-5

BURTON HOLLOW PLAZA



#8 17142 Farmington Road

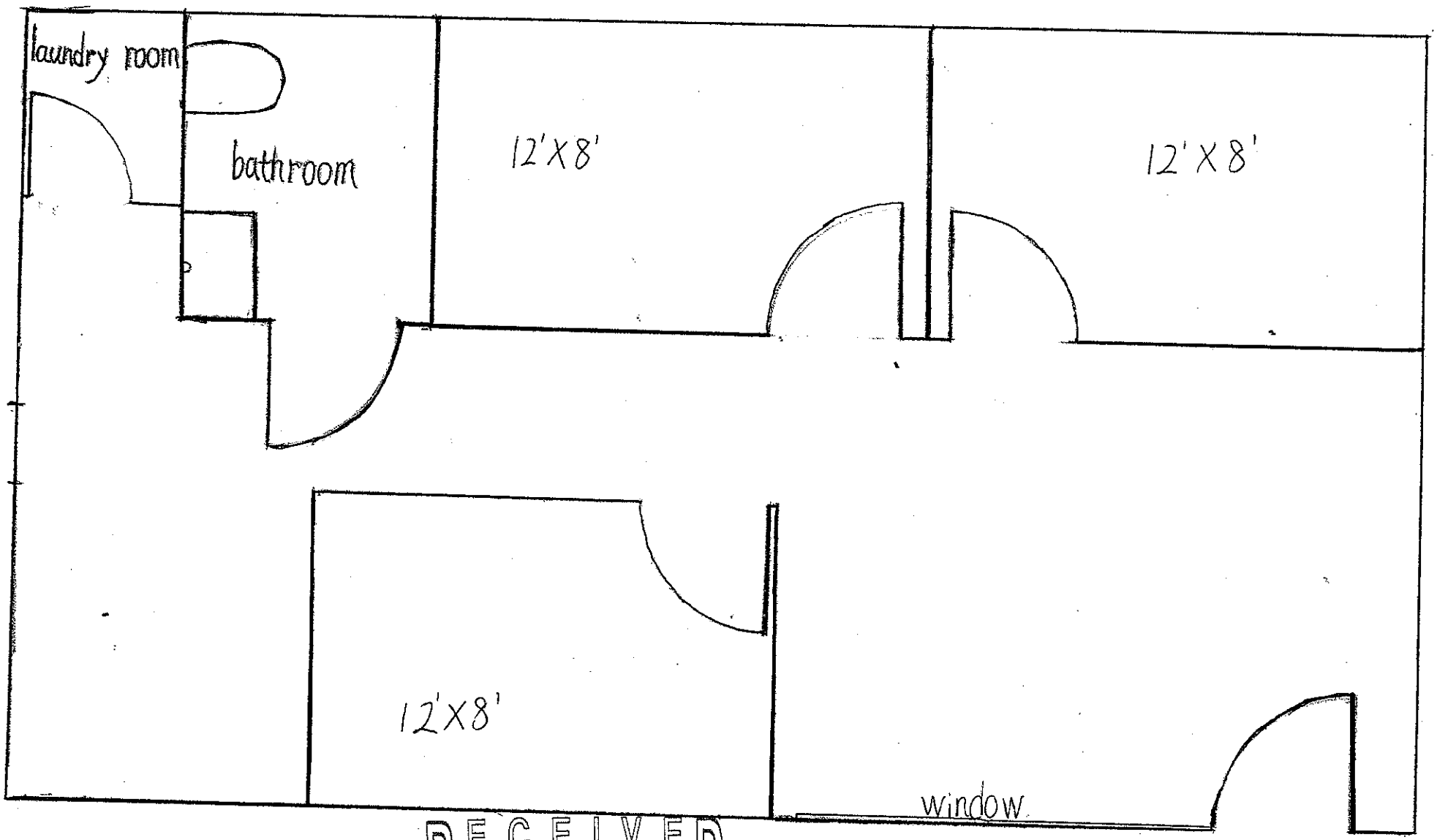
Size: 800 sq. ft

20' x 80'

RECEIVED
MAY 11 2016
CITY OF LIVONIA
PLANNING COMMISSION

2016-05-02-09

17142 Farmington Rd Livonia, Mi 48152



RECEIVED
MAY 11 2016
CITY OF LIVONIA
PLANNING COMMISSION

2016-05-02-09

DEPARTMENT OF PUBLIC WORKS
ENGINEERING DIVISION

TODD J. ZILINCIK, P.E.
CITY ENGINEER

DAVID W. LEAR, P.E.
ASST. CITY ENGINEER

DENNIS K. WRIGHT
MAYOR

DONALD R. ROHRAFF
DIRECTOR OF PUBLIC WORKS

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2571
FAX: (734) 466-2195

May 12, 2016

Mr. Scott Miller
Planner IV
City of Livonia

Re: Petition 2016-05-02-09 – Omorfia Esthetics

Dear Mr. Miller:

In accordance with your request, the Engineering Division has reviewed the above referenced petition. We have no objections to the proposed waiver use at this time. The included legal description that was included with the petition appears to be correct and should be used in conjunction with this petition. The existing property is assigned an address of **#17176 Farmington Road** for the overall parcel, with the range of addresses including 17126 thru 17176 Farmington Road and 33250 thru 33288 Six Mile Road for the individual suites within the plaza.

The plaza is currently serviced with public storm and sanitary sewer, and water main, and the included drawings indicate that the project will consist of building renovations only. Based on the provided information, there should be no impact to existing utilities. If utility renovations are required, the owner shall provide drawings to this department to determine if permits will be required.

Please note that any work within the Farmington Road right-of-way will require permits from the Wayne County Department of Public Service.

Should you have any additional questions on this matter, please feel free to contact myself at (734) 466-2608 or the City Engineer, Mr. Todd Zilincik at (734) 466-2561. If you would prefer, you can e-mail either of us at dlear@ci.livonia.mi.us or tzilincik@ci.livonia.mi.us.

Sincerely,

_____
David W. Lear, P.E.
Assistant City Engineer

cc: 2016 Petition File

DEPARTMENT OF PUBLIC SAFETY
LIVONIA FIRE & RESCUE

SHADD A. WHITEHEAD
FIRE CHIEF

DENNIS K. WRIGHT
MAYOR

14910 FARMINGTON ROAD
LIVONIA, MICHIGAN 48154-5419
734-466-2444
734-466-2082 fax

May 16, 2016

Scott O. Miller, Planner IV
Planning Commission
City of Livonia

RE: Petition 2016-05-02-09, Omorfia Esthetics, 17142 Farmington Road

This office has reviewed the site plan submitted in connection with a request to operate a massage establishment on property located at the above referenced address.

We have no objections to this proposal.

Sincerely,

Daniel Lee

Daniel Lee
Fire Marshal

DEPARTMENT OF PUBLIC SAFETY
DIVISION OF POLICE

CURTIS CAID
CHIEF OF POLICE

DENNIS WRIGHT
MAYOR

15050 Farmington Road
Livonia, Michigan 48154-5499
(734) 466-2470
FAX: (734) 261-2265

May 18, 2016

Mr. Scott O. Miller
Planning Commission
33000 Civic Center Drive
Livonia, MI 48154

Re: Petition 2016-05-02-09 – Omorfia Esthetics

Dear Mr. Miller,

I have reviewed the plans in connection with the petitions. I have no objections to the proposals.

Please feel free to contact me should you have any questions.

Sincerely,

FOR THE CHIEF OF POLICE

Brian Leigh, Sergeant
Traffic Bureau
(734) 466-2107

INSPECTION DEPARTMENT

BUILDING
HEATING
PLUMBING
ELECTRICAL
ZONING
SANITATION
ENVIRONMENTAL PROTECTION
ORDINANCE ENFORCEMENT

DENNIS K. WRIGHT
MAYOR

A. ALEXANDER BISHOP, CBO
DIRECTOR

JEROME A. HANNA
ASSISTANT DIRECTOR

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2580
FAX: (734) 466-2095

Date: June 6, 2016

To: Scott O. Miller

From: Jerome Hanna

RE: Petition 2016-05-02-09 – 17142 Farmington Road – Omorfia Esthetics

Pursuant to your request, the above referenced Petition has been reviewed.

1. Repair, seal and restripe parking lot as needed.
2. Repair/replace the damaged portions of the demising wall located on the East Side of the property.
3. Repair curb around landscaping at the South entrance off Farmington Road.

This Department has no further objections to this Petition. I trust this provides the requested information.

Jerome Hanna
Assistant Director of Inspection

JH/kdt

UNAPPROVED MINUTES

MINUTES OF THE 1,089th PUBLIC HEARINGS AND REGULAR MEETING HELD BY THE CITY PLANNING COMMISSION OF THE CITY OF LIVONIA

On Tuesday, June 7, 2016, the City Planning Commission of the City of Livonia held its 1,089th Public Hearings and Regular Meeting in the Livonia City Hall, 33000 Civic Center Drive, Livonia, Michigan.

Mr. Ian Wilshaw, Acting Chairman, called the meeting to order at 7:00 p.m.

Members present: Glen Long, Betsy McCue, Carol A. Smiley, Peter Ventura, Ian Wilshaw

Members absent: Sam Caramagno

Mr. Mark Taormina, Planning Director, and Ms. Margie Watson, Program Supervisor, were also present.

Acting Chairman Ventura informed the audience that if a petition on tonight's agenda involves a rezoning request, this Commission makes a recommendation to the City Council who, in turn, will hold its own public hearing and make the final determination as to whether a petition is approved or denied. The Planning Commission holds the only public hearing on a request for preliminary plat and/or vacating petition. The Commission's recommendation is forwarded to the City Council for the final determination as to whether a plat is accepted or rejected. If a petition requesting a waiver of use or site plan approval is denied tonight, the petitioner has ten days in which to appeal the decision, in writing, to the City Council. Resolutions adopted by the City Planning Commission become effective seven (7) days after the date of adoption. The Planning Commission and the professional staff have reviewed each of these petitions upon their filing. The staff has furnished the Commission with both approving and denying resolutions, which the Commission may, or may not, use depending on the outcome of the proceedings tonight.

ITEM #1 PETITION 2016-05-02-09 OMORFIA ESTHETICS

Ms. Smiley, Secretary, announced the first item on the agenda, Petition 2016-05-02-09 submitted by Omorfia Esthetics requesting waiver use approval pursuant to Section 10.03(m) of the City of Livonia Zoning Ordinance #543, as amended, to operate a massage establishment at 17142 Farmington Road within the Burton Hollow Shopping Center, located on the east side of Farmington Road between Six Mile Road and Curtis Avenue in the Southwest 1/4 of Section 10.

Mr. Taormina: This advertised public hearing is for the operation of a massage establishment at the Burton Hollow shopping center which is on the east side of Farmington Road just north of Six Mile Road. This shopping center sits on about 4.18 acres of property. The zoning is C-1, Local Business, where massage establishments are treated as a waiver use within that zoning classification. It is an L-shaped shopping center that contains approximately 50,000 square feet of gross floor area. It is divided into several tenant spaces. Some of those tenants include the Secretary of State, Golden Gifts Jewelry, Baskin Robins, Spartan Barbers, Subway, and several others. As I stated, massage establishments are treated as a waiver use as set forth in Section 10.03(m) of the Zoning Ordinance. Omorfia Esthetics would occupy a unit in the courtyard area which is on the Farmington Road side of the center. This space, which is identified on the plan as Unit 8, is roughly 800 square feet in size. The floor plan for the business shows that there would be a reception area and waiting, as well as a restroom, office and three massage rooms. The main business, as we understand it, would involve facials and skin care services. There are no exterior modifications planned for the building other than maybe the installation of a sign on the exterior size of the building. The proposal would have no detrimental impacts on parking. There are a couple of special requirements that apply to massage establishments. The first is that a new massage establishment cannot be located within 400 feet of any existing licensed massage establishment. The other requirement is that a new massage establishment cannot be located within 400 feet of a school, place of worship, state-licensed day care facility, public library, playground, or public park. The location of Omorfia Esthetics at Burton Hollow Plaza would comply with all of these special requirements. There is also a restriction on the hours of operation from 8:00 a.m. to 10:00 p.m. It is our understanding that the petitioner has agreed to operate this business between the specified hours. With that, Mr. Chairman, I can read out the departmental correspondence.

Mr. Wilshaw: Go ahead.

Mr. Taormina: There are four items of correspondence. The first item is from the Engineering Division, dated May 12, 2016, which reads as follows: *"In accordance with your request, the Engineering Division has reviewed the above referenced petition. We have no objections to the proposed waiver use at this time. The*

included legal description that was included with the petition appears to be correct and should be used in conjunction with this petition. The existing property is assigned an address of 17176 Farmington Road for the overall parcel, with the range of addresses including 17126 thru 17176 Farmington Road and 33250 thru 33288 Six Mile Road for the individual suites within the plaza. The plaza is currently serviced with public storm and sanitary sewer, and water main, and the included drawings indicate that the project will consist of building renovations only. Based on the provided information, there should be no impact to existing utilities. If utility renovations are required, the owner shall provide drawings to this department to determine if permits will be required. Please note that any work within the Farmington Road right-of-way will require permits from the Wayne County Department of Public Service." The letter is signed by David W. Lear, P.E., Assistant City Engineer. The second letter is from the Livonia Fire & Rescue Division, dated May 16, 2016, which reads as follows: *"This office has reviewed the site plan submitted in connection with a request to operate a massage establishment on property located at the above referenced address. We have no objections to this proposal."* The letter is signed by Daniel Lee, Fire Marshal. The third letter is from the Division of Police, dated May 18, 2016, which reads as follows: *"I have reviewed the plans in connection with the petition. I have no objections to the proposal."* The letter is signed by Brian Leigh, Sergeant, Traffic Bureau. The fourth letter is from the Inspection Department, dated June 6, 2016, which reads as follows: *"Pursuant to your request, the above-referenced petition has been reviewed. (1) Repair, seal and restripe parking lot as needed. (2) Repair/replace the damaged portions of the demising wall located on the east side of the property. (3) Repair curb around landscaping at the south entrance off Farmington Road. This Department has no further objections to this Petition."* The letter is signed by Jerome Hanna, Assistant Director of Inspection. Thank you.

Mr. Wilshaw: Are there any questions of the Planning Director? Seeing none, if the petitioner is here and would like to come forward to either podium. Please state your name and address for the record.

Mary Lou Lynch Jones, 32811 Winona Street, Westland, Michigan 48185. I'm a friend of Mary and Cathy. I know Mary better than I know Cathy. They speak English very well. They don't think they do. So I'm here as a friend. I'm not part of the business. I've helped her find the location and come to the meetings and anything else she needed as a friend.

Mr. Wilshaw: I appreciate that Ms. Jones. As sort of the de facto representative of the petitioner, is there anything that you would like to add from what you've heard so far?

Ms. Jones: They are very reputable people. I think you'll enjoy having them there. They won't do anything they shouldn't do. They'll follow all the rules and I think you'll be satisfied.

Mr. Wilshaw: Okay. Thank you. Are there any questions from the Commission?

Ms. Smiley What kind of massage are you going to offer and if you've had any experience in this area or running a business? This question is really for the petitioner.

Ms. Jones: I know your husband has had experience running a business. Do you want to speak to that? They haven't had a business on their own. Her husband is a doctor. He has a business doing acupuncture. So he has a business but these two ladies have not opened up their own. Women like to have their own business too.

Ms. Smiley: Could you please give us your name and address for the record, and then tell me is it going to be acupuncture that you're going to do?

Ms. Jones: They want to do mostly facials. They hope they get enough clients that they can do facials totally and nothing else, but they're not sure getting started if they would need to do any massages. They probably would need to do some massages. Usually they do acupressure. It's a massage that they do. The facial is, according to the State of Michigan, not a . . . when you read the definition of the State of Michigan, they do not call them massages. They don't mention the word facial, but that's what they would like to do. When they get going, they hope to do no massages at all, just facials. They just hope that there's enough clients that will find them and come back.

Ms. Smiley: Okay. While they're building up their client base, acupressure is just applying pressure to points in your body. Are you completely clothed for this?

Ms. Jones: It's a little more health oriented than maybe the typical massages, as I understand it. I'm not licensed. I taught school

for 30 years. I don't know, but they hope that it adds to the health of the person when they do that type of massage.

Ms. Smiley: What is it? Can you help?

Ms. Jones: It's a massage where they . . .

Chaunfang Tang, 6592 Fox Hills Road, Canton, Michigan 48187. Shoulder pain, back pain, muscles tight and do many stuff like if your body has any problem, we can help you. Sometimes you go to hospital maybe and doctor cannot help you, but massage, acupressure can help your muscles, help your back pain and shoulder pain, neck and lower back. All body muscles.

Ms. Smiley: And you do that through your clothing?

Ms. Jones: Yes. All clothes are on. Oh. Wait.

Ms. Tang: Keep underwear, and then we have towel on.

Ms. Smiley: Okay. So you're on a table?

Ms. Tang: On a table, yeah.

Ms. Smiley: Okay.

Mr. Wilshaw: And ma'am, your name is what?

Man Yun Lews, 23452 Oakridge Drive, Dearborn Heights, Michigan 48127.

Ms. Jones: She goes by Mary.

Ms. Lews: Yes, my English name is Mary.

Mr. Ventura: Are the petitioners licensed by the State? This is just something I don't know.

Ms. Jones: You have your license here right now.

Ms. Lews: Yes.

Mr. Ventura: Is that for the establishment or for the individual masseurs? Does each person that gives a massage, are they licensed by the State?

Ms. Jones: I think your question is yes. I mean, I know I've seen hers. I haven't seen hers, but I've seen Mary's. She has it here if you want to see it.

Mr. Ventura: No. Just a point of information.

Ms. Tang: I have two licenses. One is for facial; one is for massage therapy.

Mr. Long: I understand there is a tie-in with your husband's doctor's office. You're hoping to establish some link there, to get some referrals and things like that. Is that correct?

Ms. Tang: My husband?

Mr. Long: From your husband's . . .

Ms. Tang: Acupuncture. Needles. It's different. Doctors use needles. Massage, it's acupressure, use fingers.

Mr. Long: If somebody doesn't need that but needs acupressure, will then he refer them to your business? I'm trying to figure out how you're going to get clients there. How do you plan to draw in patients? How do you plan to get clients?

Ms. Jones: How are you going to advertise and is your husband going to send you any people that are interested in a massage or a facial?

Ms. Tang: Okay. I do acupressure for many years. I'm here work in a mall for two and a half years and acupressure office for two and a half years. So I have some clients for the massage, but for facial, we just start. That why we want to do a little bit of massage for the rent. If we can build up the facial, if we have enough client for the rent for everything, we don't want to do that much massage because I work many years. My arms cannot take it anymore.

Mr. Long: So the idea is to emphasize the facial not to put a big sign out that says massages here.

Ms. Tang: Yeah. We are going to advertise facial. So massage maybe her husband will help us to a little bit advertising on the web site. I have some clients.

Ms. Smiley Then I just want to understand for sure. You two are going to be the only two working in this massage establishment?

Ms. Tang: Massage only me. She only do facial. I do facial too.

Ms. Smiley: So you will be the only two in there?

Ms. Tang: Yeah, for maybe half a year. If we have good business, maybe we'll hire somebody.

Ms. Smiley: I hope so. Through the Chair to Mark, I assume they didn't buy the mall so the parking lot and all those other infractions are the responsibility of the mall owner?

Mr. Taormina: Yes. Most of those items are actually in the works. It is our understanding that there is going to be work done in the parking lot to correct some of those deficiencies. The wall is something that we will have to bring separately to the owner's attention as a condition of approval. That is something he will have to commit to at some point as part of the Occupancy Permit for this business. There are some wall sections that need some repair along the back. I know it's referred to as a demising wall in the letter, but he's actually referring to the screening wall along the property adjacent to the residential.

Ms. Smiley: Okay. So we've probably addressed everything from Inspection?

Mr. Taormina: Yes.

Ms. Smiley: Okay. Thank you.

Mr. Wilshaw: Is there anybody in the audience that wishes to speak for or against this petition? Seeing no one coming forward, I will close the public hearing and ask for a motion.

On a motion by Smiley, seconded by Ventura, and unanimously adopted, it was

#06-47-2016 **RESOLVED**, that pursuant to a Public Hearing having been held by the City Planning Commission on June 7, 2016, on Petition 2016-05-02-09 submitted by Omorfia Esthetics requesting waiver use approval pursuant to Section 10.03(m) of the City of Livonia Zoning Ordinance #543, as amended, to operate a massage establishment at 17142 Farmington Road within the Burton Hollow Shopping Center, located on the east side of Farmington Road between Six Mile Road and Curtis

Avenue in the Southwest 1/4 of Section 10, which property is zoned C-1, the Planning Commission does hereby recommend to the City Council that Petition 2016-05-02-09 be approved for the following reasons or subject to the following conditions:

1. That this facility shall comply with all of the other special waiver use standards and requirements pertaining to massage establishments as set forth in Section 10.03(m) of the Zoning Ordinance #543;

2. That this facility shall conform to the provisions set forth in Chapter 5.49 of the Livonia Code of Ordinances pertaining to massage establishments;

3. That the issues as outlined in the correspondence dated June 6, 2016, from the Inspection Department shall be resolved to the satisfaction of that department;

4. That the daily hours of operation of the massage establishment shall be limited to 8:00 a.m. to 10:00 p.m., Monday through Saturday;

5. That the Petitioner shall not engage in any form of solicitation for business within the public rights-of-way of Farmington or Six Mile Roads; and

6. That the petitioner shall enter into a conditional agreement limiting this waiver use to this user only, with the provision to extend this waiver use to a new user only upon the approval of the new user by the City Council.

Subject to the preceding conditions, this petition is approved for the following reasons:

1. That the proposed use complies with all of the general waiver use standards and requirements as set forth in Section 19.06 of the Zoning Ordinance #543;

2. That the subject site has the capacity to accommodate the proposed use; and

3. That the proposed use is compatible to and in harmony with the surrounding uses in the area.

FURTHER RESOLVED, that notice of the above hearing was given in accordance with the provisions of Section 19.05 of Zoning Ordinance #543, as amended.

Mr. Wilshaw: Is there any discussion?

Ms. Smiley: Mark, I'd like to add something to that regarding the letter from Inspection.

Mr. Taormina: We'll reference the Inspection Letter. And Mr. Chair, another item. I think we have a conflict on the hours. The resolution said 7:00 a.m. but I believe the ordinance is 8:00 a.m. If we could just note that in the record and we'll make sure that it's consistent with the hours of operation.

Ms. Smiley: That's not a problem.

Ms. Jones: I thought you said 8:00 a.m. to 10:00 p.m. only and how you're saying 7:00 a.m. to 7:00 p.m. We have to know what you want.

Mr. Taormina: Could you ask the petitioner how late they intend to be open?

Ms. Smiley: What are your hours of operation?

Ms. Tang: We wanted to do maybe in the winter 10:00 a.m. to 7:00 p.m. In the summer maybe 10:00 a.m. to 8:00 p.m.

Mr. Taormina: Then that's not a problem.

Mr. Wilshaw: So 10:00 a.m. to 8:00 p.m. would the latest.

Ms. Smiley: Summer hours?

Mr. Taormina: We'll make sure that the resolution matches the ordinance.

Ms. Smiley: Okay. Do you understand that?

Mr. Wilshaw: We will make sure that you have the hours that are appropriate for what you're asking for and what would also conform to our ordinance because we do have some limitations in our massage ordinance. We'll make sure those are both covered.

Mr. Wilshaw, Acting Chairman, declared the motion is carried and the foregoing resolution adopted. It will go on to City Council with an approving resolution. Good luck. Thank you for coming tonight.

CITY OF LIVONIA – CITY COUNCIL
MINUTES OF STUDY MEETING HELD NOVEMBER 16, 2020

Meeting was called to order via Zoom remote technology at 8:21 p.m. by President Kathleen McIntyre. Present: Rob Donovic (Deployed), Jim Jolly (Livonia, Michigan), Laura Toy (Livonia, Michigan), Scott Bahr (Livonia, Michigan), Cathy White (Florida), and Kathleen McIntyre (Livonia, Michigan). Absent: None

Councilmember Donovic led the meeting in the Pledge of Allegiance.

Elected and appointed officials present: Mark Taormina, Director of Planning and Economic Development; Todd Zilincik, City Engineer; Paul Bernier, City Attorney; Susan Nash, City Clerk; Curtis Caid, Chief of Police; Dave Heavener, Fire Chief; Jerome Hanna, Director of Inspection; Casey O'Neil, Director of Information Systems; and Jacob Rushlow, Superintendent of Public Service.

2) REQUEST TO APPROVE THE BUILDING OF AN ICE RINK WITHIN DOVER PARK: Louis Csizmadia; re: to construct a 50ft x 80ft ice rink with lights for use by the public.

Louis Csizmadia, 8884 Gabber Court, presented this request to Council. He stated he provided all of the information in a letter to the Council.

Councilmember Jolly stated he thinks this is a great idea to bring before Council and it's a very engaging thing to add to the City here and thanked the Petitioner for doing so. He indicated he has some questions, not of the Petitioner but of the Law Department and the Superintendent of Parks and Recreation if he is still on the line and that is: as this would be an ice arena set up on City property, my only concern here really is the staffing of it to ensure safety and any potential legal liability as to that safety and maintenance of the ice rink and asked Bernier to give some information in regards to what his initial thoughts are on that and would there be some sort of additional insurance rider or something that we have through the City through our current insurance policies or is that something that can be discussed to make this accomplished.

Bernier said as an old hockey player, this sounds like a great idea on the surface but as a City Attorney, I cringe at the whole prospect of this to be honest with you. From a liability standpoint we are allowing somebody to put something that is inherently dangerous on City property, and who knows who's going to patrol it, who knows what condition it's going to be in. I just see from a liability standpoint a great deal of problems for the City. I also think we have a great deal of problems when it comes to enforcement on who gets to use the property because although it will be made by a private individual, it will be on City property open to everybody. From a liability standpoint I see a great deal of problems with it. As much as I find the whole prospect intriguing because it's what we used to do in our backyards all the time as kids, to allow it on City property I have a problem with it. If it's going to be an ice rink it should be owned, operated and maintained by the City of Livonia.

Ted Davis, Superintendent of Parks and Recreation, stated as an idea I think it's interesting, but my concern is as the City Attorney stated was

liability. I'm also am not crazy, if you look at a site map, it's right behind several people's backyards, right up against fence line, a good distance away from the public access points in that park. Those are things that all raise concerns for me on top of – aside from liability, there's still going to be restoration to the park which hasn't been addressed, again, who maintains it, who's staffing it. There was lighting in the proposal, I'm concerned about that. A lot of concerns I have with the project.

Councilmember Jolly asked Davis wasn't there talk about putting up a temporary outdoor ice rink at the Greenmead property as part of the Winterfest and Davis replied yes, they are talking about putting up a seasonal ice rink at Greenmead, yes.

Jolly then stated maybe the Petitioner doesn't know about that and maybe that will suffice is desire to have something like that outside.

Vice President Bahr asked for clarification of exactly where this is being proposed and Davis replied it's basically Joy and Newburgh, it's in Section 31 of the City, it's a landlocked park, actually there's only three public access points to it.

Bahr stated it sounds like, as much as I hate to say this because I couldn't help but smile as I read the proposal, the notion of the neighbors getting together and the ingenuity they've already shown and the initiative to think through all the details of this and just the letter that was included in our packet of essentially neighbors rallying them all to the cause. There's so much about this that I love but just from a liability standpoint, a financial standpoint, it's problematic. I want to suggest that the neighbors, though, and we're not going to be able to solve this here, but something else you might explore. The neighborhood where I lived for more than a decade up until a few years ago was Compton Village and in Compton Village, at least at the time, and Ted Davis can tell me if this is not happening anymore. But at least at the time they were still flooding an area of Dooley Park every year with an outdoor ice rink. And I was familiar with that because it was in our neighborhood but as I recall that was one of two or three such areas of the City that they did that and maybe somebody else knows where those other areas are. My point is this: There is precedent for the City having outdoor ice rinks in our parks and when we have a motivated base of neighbors like this, I would really recommend to the Petitioner that you take those neighbors probably to the Parks and Rec Commission and propose this for your park. As cool as that was that it was in our neighborhood, the usage in recent years was a lot lighter than it had been in past years. It looks to me like we potentially had a neighborhood here where that usage would be pretty heavy and I think that would be an interesting thing for our Parks and Rec Commission to consider, just adding within our park system. So I can't support this here as proposed now as much as my heart wants to for the reasons stated earlier, but I think there's another avenue for you to have this considered and I would really encourage you to pursue that..

Councilmember McCullough asked Bernier if there are any ordinances to having ice rinks on your own property and Bernier replied I think our zoning ordinances are silent as it pertains to ice rinks. The typical ice rink that I think about when I was a kid, when we built up the snow walls and flooded it with water and let it freeze. I can't imagine our zoning ordinances contemplated that being an issue. So I doubt that there is anything that talks about that.

McCullough stated that for the past few years I have had a 20 x 40 ice rink

made in the backyard. And looking over the past ice rinks there's usually three companies that provide these kits, and they can go from a 10 to 20 square foot rink all the way up to obviously the 50 x 80 which is like a regulation ice rink in an NHL arena. So obviously hockey is near and dear to me and this is a great idea but the liability does come into play. I would recommend to the Petitioner in looking at a satellite view of the backyard, you've got quite a bit of space back there and a 50 x 80 might not be feasible within your lot, but your neighbor, if it's something that you would be interested in to maybe shrinking it down a little bit. I know a lot of work goes into it, especially in flooding the rink, building it, and there's a lot of passion that goes into it, I think it's a wonderful idea but you can see liability is an issue but you can look at the lot and see how big of a rink you can fit on it, I don't think you should let this go, but I would suggest you keep it in your lot if possible.

Councilmember Toy said unfortunately Council has to consider those kind of liability issues as we look at our great City and all the nice activities we might be able to do. But I strongly believe in citizen driven efforts. If you just have to go up to Greenmead to ice skate, I love Greenmead but it's not appealing to me. If some of these folks want to do something in our parks perhaps like was suggested, there should be somewhere which is the Parks and Rec Commission, would help with open minds, that administering some of these winter outdoor activities, I always thought we should have an ice rink on our campus at City Hall. It made a lot of sense. To have some food trucks around it or hot chocolate trucks and do it in the winter months and get on it early enough so that we can build up that rink and things like that. And I know that we all have our favorite area but to say the only one to have perhaps at Greenmead, really? Let's look at some of our south end neighbors, our middle end neighbors, and I don't want to divide the City, but let's make it convenient for the kids. They're home now and it's healthy for them evidently to be outside, so it behooves us to think about extracurricular activities perhaps out there. And Mr. Davis does a superb job for our City and I know he doesn't need one more thing added to his plate, he's got a lot already, but perhaps we can think through a little bit clearer and again, I applaud, as many of you have, the residents that have suggested this. But most of all I'd like to see a few some of those outdoor activities were at all possible, especially if our residents are willing to help. So I want to thank the folks for coming in tonight but I can't support it with the liability and our attorneys and our Parks Director suggesting that we do have some very serious responsibility when it's on City property. So let's try and work it out another but let's not give up on it.

Councilmember Jolly said this did come before the Parks & Rec Commission but it was sent to us because the nature of the request here and I think a lot of the points have been valid. I think we have an open minded Superintendent of Parks & Rec and an open minded Parks & Rec Commission; one is better than none. So let's get one going and then if it works then throughout the City if possible. And I don't necessarily care where it's at but I think we need something like this outside.

Vice President Bahr offered a denying resolution for the Consent Agenda.

Patty Nowak, a neighbor of the Petitioner, stated they did discuss this with Parks & Rec two or three weeks ago when they went to the meeting, and they had already contacted the insurance company and there was an umbrella policy they were going to write. This is not going to be a hockey rink; this is a skating rink. It's for the kids in the neighborhood. Louis is

retired, he is a very nice man, he just wants this ice rink. And it's not gigantic. They didn't like the fact that the lighting would possibly be going into somebody's house with an extension cord. We talked about batteries and things now. One gentleman next door works for Penske. He said that wasn't a problem. Also we could put flood lights on our telephone poles and we could pay for the electricity ourselves. We don't want the City to pay for anything. There's no parking lot. If anybody looks at our park, it's in the middle of our subdivision. You can't drive to it. You have to walk either through somebody's yard or up a little sidewalk off of Pere there or Deborah Court. I mean it's really like a private park. Nobody comes there.

President McIntyre stated these are the kind of things that are very difficult for Councilmembers to take a stand and say that they're going to deny it because everything about this is how we want our citizens to be citizens in our City and all of the things that we encourage. And that's looking to make the City a better place, looking to do things for others, using our own talents and resources and financial resources to do things to help other people. And on its face it seems ludicrous that we couldn't support this. Unfortunately we live in a world of laws and litigation and we can't control who has access to this park and we can't, as much as we know it would be great for the neighborhood, there's no way that we can stop someone from going in there and engaging in mischief making that could potentially cause a lot of danger and harm to other people. And you have an umbrella policy and again, we so appreciate this proposal and all of the due diligence that's been done, unfortunately your umbrella policy that would protect you from litigation, doesn't protect the City. And the City could end up in a very, very bad situation being exposed to various liability and expensive litigation. And I'm so sorry to have to underscore what you heard from Council tonight and kick the air out of what just seemed like on its face and is on its face is wonderful, generous suggestion. And if there's a way that it can be done on private property, then the City has no liability and we would think that was great and in fact I think you heard and I don't know if you heard the conversation, it wouldn't require an approval from City Council to have it on private property.

Nowak said there's no lot big enough in this small subdivision. But my question is a couple of years ago the City did put a Jumping Gym set in the park here, what's the difference between if somebody fell off the Jumping Gym or fell down in skating and wants to sue the City.

The Petitioner stated he would put up the rink on his own private property but it's not possible because of the grading.

President McIntyre stated we understand that. Everything the City puts up in their parks, we look at from a risk and a liability perspective. There are certain liabilities and risks that the City is willing to take and we bear those risks and there's always the risk that we're going to get sued because somebody falls on a Jungle Gym, the difference is we put it up, we inspect it, we ensure that it's maintained properly. We simply don't have the resources if people want to put up recreation facilities on their own on public property, we do not have the manpower and the resources to ensure that they are safe. And we understand that logically it may seem that they would be safe, but if we can't ensure that they're safe and control over it, then that's a level of risk and liability the City simply can't accept.

Vice President Bahr stated he is familiar with that park and he remembers approving the Jungle Gym project not too long ago. What I'm suggesting

you do is to go to the Parks & Rec Commission with a proposal that would be in the same category as that Jungle Gym, an added improvement to the park. The difference is – and this isn't sending you on a runaround, the difference is right now you're asking to put a private rink on public land. What I'm suggesting is that you suggest to Parks & Rec putting a public rink on public land. I can't guarantee you what their answer to that will be once they look at all the factors involved but I would encourage you to pursue that because I think that's a good idea.

Councilmember McCullough stated this is a tough thing that we want to approve but there is liability that goes along with it. Again, these are ideas that we will keep note of and again, as Vice President Bahr said this would be a great idea for a permanent solution that could be used by the City.

Councilmember Jolly offered a resolution to refer the matter of outdoor ice skating rinks and where they may be viable in the City and where they may not be viable in the City directly from the City Council to the Parks & Rec Commission for them to consider so as to not request or create any additional work for the Petitioners in this case. And then that way, I don't want to send them back and forth, back and forth, and I know that's not the intention here but if we can do this directly ourselves by asking the Parks and Rec Commission to consider this. And also as well, our Superintendent Ted Davis is on the line, he's listening, and I'm sure he's taking notes because that's what he does.

President McIntyre apologized for the technology not working quite as well as it should, and that the Petitioner does not have to go back to the Parks & Recreation Commission. What Councilmember Jolly just directed the Council to do, was for the Council to refer this directly to the Park & Rec Commission for them to take the issue up. And so you should look forward to this on a future agenda of the Parks & Rec Commission. She then stated to the Petitioner and Ms. Nowak that Council wished Livonia had 92,000 residents just like them and they pride themselves on being a City of great people and their willingness to come forward and want to do something with your own time and resources is simply amazing and we're glad you understand why despite our hearts wanting us to approve it, we can't, but we want to make something good come of this and all of the work that you've done.

DIRECTION: 1) DENYING CONSENT
2) REFER TO PARKS & REC COMMISSION CONSENT

REPORT TO THE LIVONIA CITY COUNCIL

Council Office
November 5, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Sara Kasprowicz, Office Administrator, Council Office

AGENDA ITEM

REQUEST TO APPROVE THE BUILDING OF AN ICE RINK WITHIN DOVER PARK: Louis Csizmadia; re: to construct a 50ft x 80ft ice rink with lights for use by the public.

BACKGROUND

RECOMMENDATION

FISCAL CONSIDERATION

ATTACHMENTS

1. S111620 Request to build ice rink in Dover Park (PARKS AND REC)

APPROVED BY

From:	Louis Csizmadia
To:	Kasprowicz, Sara
Subject:	Re: Dover Park Ice Rink
Date:	Thursday, November 5, 2020 6:38:16 PM
Attachments:	CitySeal100x100_8f7d9122-2022-4a3b-86d9-f05a096c6a3c.png SocialLink_Twitter_32x32_a844deab-cb87-48f2-9175-647012b70cfe.png SocialLink_Youtube_32x32_9b8afb50-3b86-4678-b53d-7e423a9d8771.png LivoniaLogo_0b9d3455-b747-4f33-97a8-48e9a90dc823.png SocialLink_Facebook_32x32_15fe2196-de42-486f-ac8c-bd89c9da8fd7.png

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Thank you Sara Kaspowicz for getting back to me, please consider this my letter to council.
Livonia city council
Proposed 3.5 month ice rink for Dover Arbor park.

In Dover Arbor estates the park we have is never utilized in the winter months by anyone at all. To leverage this non use, I and a group of neighbors would love to install a basic "Sleek" Canadian manufactured ice kit frame with liner. The neighborhood has picked up many new residents in the past couple of years along with numerous children who have been home quite often due to school closures. The parents and quite a few others would love to give these children an opportunity to do winter activity ice skating like we used to be able to do many years ago when I was a kid. I have volunteers for financial support and work to install and uninstall the ice rink as follows: We would like to be able to install the frame only between Thanksgiving and Christmas, and when the weather is cold enough, install the liner (possibly early January) and fill with water for approximately 4"-5" of ice inside of the 50x80 rink we are proposing. The rink consists of brackets staked into the dirt and 2x12x10ft boards screwed to these brackets to construct a rectangular ground frame, after which a heavy duty plastic liner is rolled in place and stapled to the boards, then filled with water. If the weather never gets cold enough, we will remove the frame and liner. If it does get cold enough where we get about 3 cold 20 degree days for ice to form, then we would use the rink from that point on up until late February or early March, at which point the ice would probably begin melting. Once that starts, we would remove framing to allow water to bleed off as mother nature will do her work melting the ice. Once the ice is sufficiently gone, we would disassemble the rink and it would be stored on current subdivision residents property, not in the park.

We will not be harming any trees, shrubs or animals, and we would also be following the park guidelines posted on signs for open and close of the park, which I believe is open 8am and close either 10 or 11pm. We will be posting signs to use the rink at your own risk, but the rink is for everyone in the subdivision to use for the months it is available as long as no one tries to do anything detrimental to the rink. Neighbors directly affected, where the rink would be right out back of their back yards, have been notified and have no issues, as well as others on the same side/corner of the park where the proposed area photo shows.

We would like to include Christmas lights around the rink for aesthetics as well as night skating convenience, but an extension cord for lights was noted as not code by parks and rec meeting so we will look at solar lights or the neighbors house who is directly behind the rink will put lights on her fence with a few spotlights possibly.

This is a community project within the Dover Arbor subdivision to help alleviate some of the stresses being created by the current virus environment including cabin fever that parents will definitely experience this winter if schools close. It is noted to be safer to be in the outdoors during activities, and that is the only alternative when indoor skating, gyms, gymnastics, etc are being shut due to virus concerns.

We are only hoping to create a nice winter experience for the kids in this subdivision using a resource that we see as being under utilized. Hopefully good memories also. Our intentions

are not to harm the park or any neighbors privacy rights for the duration that we are proposing for this from November until early March. Let me be clear, this is NOT a permanent structure. This is understood by all neighbors involved that I included in my communication to them and to others who use nextdoor.com, also park and rec was told this at their meeting.

Please give this a little thought as to the kids, the holiday and the parents who will appreciate a place to go to for the winter months to allow the kids to cut lose and have fun. Otherwise, the park will be as before, just something people know is there and looked at. The playground jungle gym in the park is a nice addition and is used by the younger kids/families during the warmer months, but that also is abandoned once the weather turns colder.

I will try attending the zoom meeting, hopefully there is closed captioning because I am DEAF. At the parks and rec meeting they were unable to get the closed captioning working for me, but thankfully, I had 7 other neighbors who attended that conference room zoom meeting who fill me in afterwards. I will let my group of neighbors know about the zoom meet so they can chose to attend if they want. I hope Ive covered what is important, any details in need of clarification I am more than happy to provide as required.

Thank you for your consideration and optimism
Be well, Regards
Louis Csizmadia
Lcsizmad@yahoo.com
734.620.5769 text msg only DEAF.

Sent from Yahoo Mail on Android

On Thu, Nov 5, 2020 at 3:26 PM, Kasprowicz, Sara <skasprowicz@ci.livonia.mi.us> wrote:

> Dear Mr. Csizmadia,
>
> In order to go before Council, it is suggested that you provide a detailed letter regarding your request to build the proposed ice rink. This can be addressed to Council and sent via email to citycouncil@ci.livonia.mi.us.
>
> I have already received your letter to the neighbors, the hand-written plans and the screenshot of the park. Once I receive your letter to Council, I will include those documents with your request.
>
> If you are able to email a letter by the end of the day tomorrow, I will put your request on the November 16th Study agenda, which will be emailed to you as soon as it is finalized.
>
> Since you will need to attend this meeting, you may attend by either going directly into the web meeting or calling the phone number associated to the meeting. Both options will be on the agenda that I will email to you.
>
> If you have any questions, please feel free to call me.
>
> Have a great afternoon,

Sara

Sara Kasprowicz
City of Livonia | City Council Office
(734) 466-2250
skasprowicz@ci.livonia.mi.us

Sara Kasprowicz
Secretary II
City of Livonia | City Council Office
(734) 466-2250
skasprowicz@ci.livonia.mi.us
www.livonia.gov

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From: Davis, Ted <edavis@ci.livonia.mi.us>
Sent: Wednesday, November 4, 2020 7:35 PM
To: Kasprowicz, Sara <skasprowicz@ci.livonia.mi.us>
Cc: Hanna, Jerome <JHanna@ci.livonia.mi.us>; Simmons, Jennifer <jsimmons@ci.livonia.mi.us>
Subject: FW: Dover Park Ice Rink

FYI – they are going to request to come before City Council.

12.20.080 - Erection of structures prohibited.

SHARE LINK TO SECTIONPRINT SECTIONDOWNLOAD (DOCX) OF SECTIONSEMAIL SECTIONCOMPARE VERSIONS

No person shall construct or erect any building, structure, fence, dog run or corral, of whatever kind,

whether permanent or temporary in character, any tent or fly or windbreak; nor run or string any rope, cord, or wire into, upon or across any public land, except by permission of the city council. (Ord. 1604 § 1 (part), 1981: prior code § 5-1708)

Ted Davis, CPRP
Superintendent of Parks and Recreation
City of Livonia | Parks and Recreation Department
(734) 466-2298
edavis@ci.livonia.mi.us

From: Hanna, Jerome <JHanna@ci.livonia.mi.us>
Sent: Friday, September 18, 2020 10:26 AM
To: Davis, Ted <edavis@ci.livonia.mi.us>
Subject: FW: Dover Park Ice Rink

Jerome Hanna
Director of Inspection
City of Livonia | Inspection Department
(734) 466-2582
JHanna@ci.livonia.mi.us

From: Simmons, Jennifer <jsimmons@ci.livonia.mi.us>
Sent: Wednesday, September 16, 2020 9:30 AM
To: Hanna, Jerome <JHanna@ci.livonia.mi.us>
Cc: Miller, Lori <lmiller@ci.livonia.mi.us>; Nash, Susan M. <snash@ci.livonia.mi.us>; Mayor Staff <MayorStaff@ci.livonia.mi.us>
Subject: Dover Park Ice Rink

Good morning,

Mr. Louis Csizmadia (734-620-5769 or icsizmad@yahoo.com) sent us the attached interest letter, plans and a screenshot of the location in which he and his neighbors would like to build an ice rink. I have replied to Mr. Csizmadia letting him know that his documents were forwarded to both the Inspection Department, as well as the City Clerk's Office (in the event it needs Council approval), and that I would highly encourage him not to move forward with any plans before hearing back from the city with specific instructions. I felt it was necessary to say this based on how the letter of interest reads.

Thank you,

Jennifer Simmons
Clerk Typist
City of Livonia | Mayor's Office
(734) 466-2204
jsimmons@ci.livonia.mi.us

Hello neighbors, friends.

The Dover park ice rink is now official! Looking forward to creating our own Norman Rockwell memories. I think we have enough interest to pursue currently. The following list of neighbors (below) have expressed interest, and I will be soliciting donations from whoever can afford however much. I do not want to pressure anyone into paying in more than they can afford due to current economic situations with everyone's jobs/households. My idea is to just have each of you email me back with whatever you can comfortably contribute, or just give to me when you see me. If money is too tight, then your time helping install or take down in March, if possible. Looking at about 3-6 hours to put up the rink, possibly more time or less depending on how many volunteers, light posts and lights, and back filling the rink perimeter will take time. The ground for the rink area has to be raked or canvassed to collect and prevent puncturing from debris. I am thinking we could construct the rink sometime after Thanksgiving, but before Christmas. Cold work! I'll bring some rum or schnapps, lol.

I have the required tools, but anyone wanting to help, feel free to bring a wheelbarrow, shovel, rake, heavy hammer, cordless drill driver with phillips and flat bits, regular hammer, or if anyone has a 50 ft tape measure or longer, that would really help also.

This will be a great get outside for fun for all the kids and even the whole family especially if schools end up closed. I hope this goes well (weather permitting). Be aware others in the sub, who may not have contributed anything, may use it after its up. So please do not try to police who uses it unless they are doing something destructive. This is so we can create the least amount of animosity and enjoy as neighbors.

THE RINK: Our rink will be Sleek kit 50ft x 80ft, which uses 2" x 12" x 10ft pressure treated boards that will comprise the perimeter and frame for the liner. I have a good idea, plan that I am open to discussing with anyone, for ideas or better solutions, just come visit. I'm pretty sure everyone knows Boomers house. Lol. Sometime between thanksgiving and Christmas we will build just the frame, back fill it, and if we have enough money, I will get 1x4x8' PT boards to strap onto the frame and use to attach however many LED Xmas light sets that can be afforded. Or if you have a set of these lying around that you can spare, feel free to bring! Just put a piece of tape with your name on it to reclaim in the spring. We could use donation of old fire pits and firewood also. The liner we will install when it looks like the weather will be cold enough to create the ice (late Dec early Jan). It will only take about 1 hour for 2 guys to install the liner, ½ hour for 4 guys. It's all voluntary folks, so no worries. I will be there to do the work regardless but will also post an email to all at the time for volunteer's, because I'm really looking forward to skating with Boomer. Ha ha ha. **The cost I have is just for the rink kit (approx $800 + shipping), 26 pressure treated boards required (Lowes, best deal about $750). Total=$1,550. I have not included the cost of boards to string Christmas lights and the lights themselves. I figure if some folks pitch in more, that can be used, or I will put in to cover this cost myself, approx cost $150 boards and lights.** It's Gotta look festive!

NOTE: I do need a volunteer with a pickup truck willing to take me, and possibly one other person to pick out 26 straight, 2x12x10ft boards at Lowe's and possibly boards for the lighting. Drop them at Vikki's house. Probably 1 to 1.5 hours to pick out, load and unload. Please text my cell 734-620-5769 and let me know if anyone out there has the truck and time for this one required excursion.

Also NOTE: One of our newest additions to the neighborhood, Vikki, has kindly offered access to water and electric from her home for this, making it very possible – Thank you! This is why we will be setting the rink up about 10-15' outside of Her back yard. As far as I'm concerned, she's done her part, but I'm sure she'll want to be in on the construction of the rink, lol.

SKATING: When we know the ice is ready, myself or someone else will send out to everyone on the list below, at that point, spread the word!. The ice must be walked to make sure it's completely froze first, otherwise a skater can drop through and damage the liner, which would be impossible to fix installed with water in it. So please wait until notified. Hopefully a fun filled winter and happy skating will be had by all. There's already talk of a fire pit by the rink and some of my mulled wine and butterscotch spiked Apple cider to grease your legs at the opening ;-). If anyone has a spare wood bench or old chairs, bring'em on down! Folks need places to sit to lace up skates or just to watch and enjoy the laughs when others fall. If no one has one, maybe I'll build one or extra $ will buy some?... The lights will be attached to a timer, so when the lights are out (10pm as park closes based on signage rules) it will be skate at your own risk. We will probably have the lights kick on at dusk (5ish, 6ish) as day light bleeds away faster. Then off around 10pm. Possibly off later if there is a gathering going on around a weekend.

I need a volunteer sign maker, preferably 1/4" or thicker plywood, using marker or paint. To read: Dover Park Ice Rink (next line)Everyone Welcome!, (next line) Lights out at 10pm, no skating, (last line) Skate at your own risk. Say 1'-6" x 2' or larger. Background could be painted white but not necessary. Prefer bold black lettering for first two lines and bold red lettering for the rest. Anyone interested in taking this project on, please let me know. My email is first one on the list.

Any money in excess of the cost will go toward either improving the rink usability and safety, benches, fire wood to burn in Vikki's yard pit or other nice additions we can agree on, I will provide notice of any excess funds. I encourage folks to bring anything they have that might be useful, voluntary of course

Thanks for being a part of this neighborhood project!

Regards, God bless & be well-always!

I hope I have covered the majority of any concerns or questions anyone may have had.

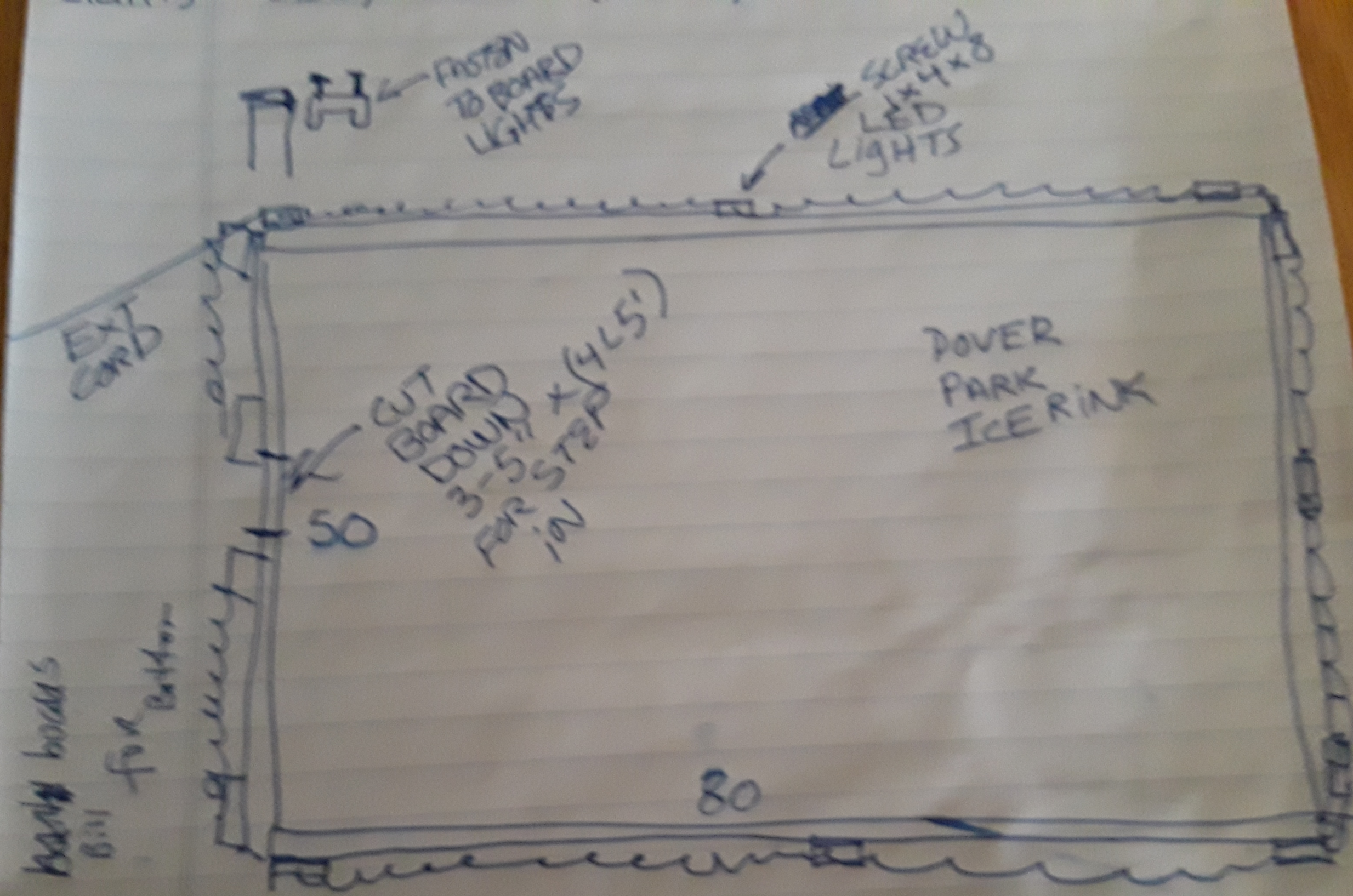
Louie and Boomer

DOVER PARK ICE RINK

(If anyone is added to the following list while this is in process, I will update it and resend this whole notice with updated information to all, feel free to let anyone in the subdivision know.)

- Louie Csizmadia, (Boomer) lcsizmad@yahoo.com
- Mike & Diane Davis mdavis9060@gmail.com
- Rick & Colleen Troia colleentroia@yahoo.com
- Wes & Barb Price bprice@mi.rr.com

- Vikki Widmayer victoriawidmayer@gmail.com
- Brian & Megan White bwhite21@att.net
- Scott Caillouette scottcaillouette@gmail.com
- Jeremy and Jen jer2233@yahoo.com
- Gordie & Christine VanPutten cvanputten18@gmail.com
- Tim & Karen Andrews karenpeacenjoy@gmail.com
- Brent .com
- Chad Clenney & family cclenney85@yahoo.com
- Brad & Sarah Vordenberg sarahvordenberg@gmail.com
- Chris & Lindsey Buddington labuddington@gmail.com
- Doug & Lena MacKinnon douglas.mackinnon@transwestern.com
- John & Mickie Devlin mickiedevilin@outlook.com
- Chris Paciocco cpaciocco@outlook.com
- Cory & Cassie Bergman coryandcassiebergman@gmail.com
- Arjan, Fiona Ametlli fjona.ametlli7@gmail.com
- Kim Carter kimlet677@yahoo.com
- Shane Demarias shane.demarias@yahoo.com
- Mick & Kathleen Bowles micker@twmi.rr.com
- Pat Nowak pattynowakp@gmail.com
- Ronda Kibler rmk1220@yahoo.com
- Kylie Kibler kkibler2504@icloud.com
- Maureen & Jerry Chandler cudacountry71@yahoo.com
- Roger Bielski rogerironhead3@aol.com
- Amanda Bellinger aglessne@emich.edu
-


FASTEN TO BOARD LIGHTS
SCREW 1"x4"x8' LED LIGHTS
EXT CORD
CUT BOARD DOWN 3-5" x (4'5") FOR STEP IN
DOVER PARK ICE RINK
50
80
Old boards will be for bottom

100% 7:50 PM

RE: Staked area for rink and attachment info.

Delete
Archive
Move
Reply all
More

REPORT TO THE LIVONIA CITY COUNCIL

Law
November 5, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Brenda Smyser, Program Supervisor, Law

AGENDA ITEM

ACCEPTANCE OF GRANT OF EASEMENT: Department of Law, re: secured without monetary consideration from Beta Properties, L.L.C, for a 20-foot wide public utility easement in connection with the storm sewer constructed at 32969 Capitol Ave., in the Southwest 1/4 of Section 27. Parcel ID #46-107-99-0018-000.

BACKGROUND

Grant of Easement for Storm Sewer received from Beta Properties, L.L.C. for a 20-foot wide public utility easement in the SW 1/4 of Section 27, in connection with the storm sewer constructed on the subject property.

RECOMMENDATION

FISCAL CONSIDERATION

ATTACHMENTS

1. 32969 Capitol Ave

APPROVED BY

Paul Bernier, City Attorney — Date: November 05, 2020

Maureen Miller Brosnan, Mayor — Date: November 12, 2020

DEPARTMENT OF LAW

PAUL A. BERNIER
City Attorney

MICHAEL E. FISHER
Chief Assistant City Attorney

ERIC S. GOLDSTEIN
Assistant City Attorney

LEO D. NEVILLE
Assistant City Attorney

MAUREEN MILLER BROSNAN
MAYOR

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2520
FAX: (734) 466-2072

November 5, 2020

TO: HONORABLE MEMBERS OF THE CITY COUNCIL

FROM: DEPARTMENT OF LAW

SUBJECT: Acceptance of Grant of Easement
Public Utility Easement for Storm Sewer

REF: Delta Research – 32969 Capitol Ave.
Southwest 1/4 of Section 27 (Parcel ID #46-107-99-0018-000)

Dear Council Members:

We are transmitting for Council acceptance of a Grant of Easement, secured without monetary consideration, from Beta Properties, L.L.C., a Michigan limited liability company, for public utility easement in the Southwest 1/4 of Section 27, in connection with the storm sewer constructed at 32969 Capitol Ave.

This document, recently received from the Engineering Division, has been approved as to form by the Department of Law and the legal description approved by the Engineering Division. A map prepared by the Engineering Division is attached indicating the location of the proposed subject conveyance.

Should the Council determine to accept the aforesaid Grant of Easement, the following proposed resolution is submitted for the Council's consideration:

RESOLVED, that having considered a communication from the Department of Law, dated November 5, 2020, approved for submission by the Mayor, transmitting for Council acceptance of a Grant of Easement executed by Robert Sakuta, Its Member, of Beta Properties, L.L.C., a Michigan limited liability company, for a public utility easement in connection with the construction of a storm sewer at the subject location in the Southwest 1/4 of Section 27, more particularly described as:

Twenty-Foot Wide Storm Sewer Easement

A 20-foot wide storm sewer easement in the Southwest ¼ of Section 27, Town 1 South, Range 9 East, City of Livonia, Wayne County, Michigan, more particularly described as follows:

Commencing at the Southwest corner of said Section 27; thence along the West line of said Section 27 and centerline of Farmington Road (120 Foot Wide – Public – Right-of-Way), N 03°06'48" W, 1619.14 feet; thence along the South Right-of-Way line of Capitol Avenue (60 Foot Wide – Public – Right-of-way), N 87°38'23" E, 1000.49 feet; thence S 03°05'28" E, 524.29 feet, to the Point of Beginning of the centerline for a 20 Foot Wide Public Easement to be described; thence N 83°08'34" E, 50.66 feet; thence S 02°14'13" E, 116.17 feet; thence N 87°39'24" E, 107.19 feet; thence N 02°17'21" W, 76.21 feet; thence N 40°20'14" E, 12.42 feet; thence S 42°39'07" E, 47.36 feet, to a point on the West line of Lot 14 of Livonia Industrial Park Subdivision No. 1 of part of the Southwest ¼ of Section 27, Town 1 South, Range 9 East, City of Livonia, Wayne County, Michigan, as recorded in Liber 91 of Plats, pages 20 and 21, Wayne County Records, said point also being the Point of Ending of said centerline for a 20 Foot Wide Public Easement.

See Attached Water Main Easement Sketch

The Council does hereby, for and in behalf of the City of Livonia, accept the aforesaid Grant of Easement and the City Clerk is hereby requested to have the same recorded in the Office of the Register of Deeds and to do all other things necessary or incidental to fulfill the purpose of this resolution.

Approved for submission: Very truly yours,

_____ _____

Maureen Miller Brosnan, Mayor Paul A. Bernier, City Attorney

Attachment

cc: Mayor, Clerk, Council, Assessor, DPW, Engineering, Finance, Planning

P:\Council\2020\Easements\32969 Capitol Ave.docx

REPORT TO THE LIVONIA CITY COUNCIL

Law
November 12, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Brenda Smyser, Program Supervisor, Law

AGENDA ITEM

ACCEPTANCE OF GRANT OF EASEMENT: Department of Law, re: secured without monetary consideration from Haggerty Square, LLC for a public utility easement in connection with the sanitary sewer constructed at 19750 Haggerty Road in the West 1/2 of Section 6. Parcel ID #46-23-99-0005-004.

BACKGROUND

RECOMMENDATION

FISCAL CONSIDERATION

ATTACHMENTS

1. 19750 Haggerty Road - Sanitary Sewer
2. 19750 Haggerty Road - Sanitary Sewer

APPROVED BY

Date: November 12, 2020

Paul Bernier, City Attorney

Date: November 12, 2020

Maureen Miller Brosnan, Mayor

GRANT OF EASEMENT
Tax I.D. No. 46-023-99-0005-004
19750 Haggerty Road
Livonia, Michigan 48152

GRANT OF EASEMENT

THIS INDENTURE, made this 3 day of November, 2020, between Haggerty Residential, LLC, a Michigan limited liability company, (Grantor), whose street number and address is 4036 Telegraph Road, Suite 201, Bloomfield Hills, MI 48302 and the CITY OF LIVONIA, a Michigan municipal corporation (Grantee), whose street number and post office address is 33000 Civic Center Drive, Livonia, Michigan, 48154.

WITNESSETH:

That the Grantor, for and in consideration of the sum of One Dollar ($1.00) paid by the Grantee, the receipt of which is hereby confessed and acknowledged, does by these presents grant unto Grantee, its successors and assigns an easement for the purpose of installing and maintaining a sanitary sewer, in, unto and upon that certain piece of land situated in the City of Livonia, County of Wayne and State of Michigan, described as follows:

PARCEL ID: **46-023-99-0005-004**

PROPERTY ADDRESS: **19750 Haggerty Road**

LEGAL DESCRIPTION APPROVED
Todd J. Zelinski
11-10-20

EASEMENT DESCRIPTION:

Twelve-Foot Wide Sanitary Sewer Easement

A twelve-foot (12') wide sanitary sewer easement located in the West ½ of Section 6, Town 1 South, Range 9 East, City of Livonia, Wayne County, Michigan. Being more particularly described as:

Beginning at a point distant N 89°21'58" E, 60.00 feet from the West ¼ Corner of Section 6, Town 1 South, Range 9 East; thence continuing N 89°21'58" E, 291.02 feet; thence S 00°00'25" W, 66.07 feet; thence N 89°59'18" W, 10.05 feet; thence S 00°00'42" W, 401.00 feet; thence S 89°59'18" E, 6.41 feet; thence S 00°21'49" E, 54.63 feet to the point of beginning of centerline of 12-foot wide sanitary sewer easement; thence N 89°46'48" E, 462.47 feet; thence N 87°50'08" E, 121.87 feet to the Point of Ending.

See Attached Sanitary Sewer Easement Sketch

Including the right of access for the Grantee to go over and upon that part of said piece of land of the Grantor, for the purpose of installing, repairing and maintaining said sanitary sewer of the Grantee providing that the granting of the above easement does not vest in the Grantee authority to use any portion of said property for any purpose other than herein designated; provided also, that this easement shall continue only for such period of time as the Grantee, its successors and assigns, shall maintain said public utility. Any restoration of property by the Grantee necessitated by sanitary sewer installation, repair and maintenance shall be limited to backfilling the excavation and establishment of grass. It shall exclude all other improvements such as paved surfaces, corresponding sub-base materials, plants, trees, flower beds, electrical lines and lights, boulders and any other miscellaneous items located within the sanitary sewer easement.

IT IS UNDERSTOOD AND AGREED, as a part of the consideration for the granting of the above easement, that the Grantee will use every effort possible to leave the premises in as good condition as at present.

IT WITNESS WHEREOF, the said Grantors have executed this Easement and Dedication the day and year above written.

GRANTOR:

HAGGERTY RESIDENTIAL, LLC
a Michigan limited liability company

By: _____
Jordan Jonna
Its: Manager

GRANT OF EASEMENT

STATE OF MICHIGAN)
COUNTY OF Michigan) SS

On this 3 day of Nov 2020 before me personally appeared Jordan Jonna to me personally known, who being by me sworn, did for himself say that he is the Manager of Haggerty Residential, LLC which executed the within instrument, and the said instrument was signed and sealed in behalf of said limited liability company and acknowledged said instrument to be the free act and deed of said limited company.

CHRISTINE S. BROWN
Notary Public, State of Michigan
County of Macomb
My Commission Expires Feb. 18, 2026
Acting in the County of Oakland

Christine S. Brown

Notary Public,_____
My Commission expires:_____

Prepared by: Todd J. Zilincik, P.E.
City Engineer
Engineering Division
33000 Civic Center Drive
Livonia, Michigan 48154

Approved as to form:
DEPARTMENT OF LAW

_____

Dated: _____

When recorded, return to: OFFICE OF THE CITY CLERK, 33000 Civic Center Drive,
Livonia, Michigan 48154

EXHIBIT

PROPERTY DESCRIPTION:
SHEET 2 OF 2

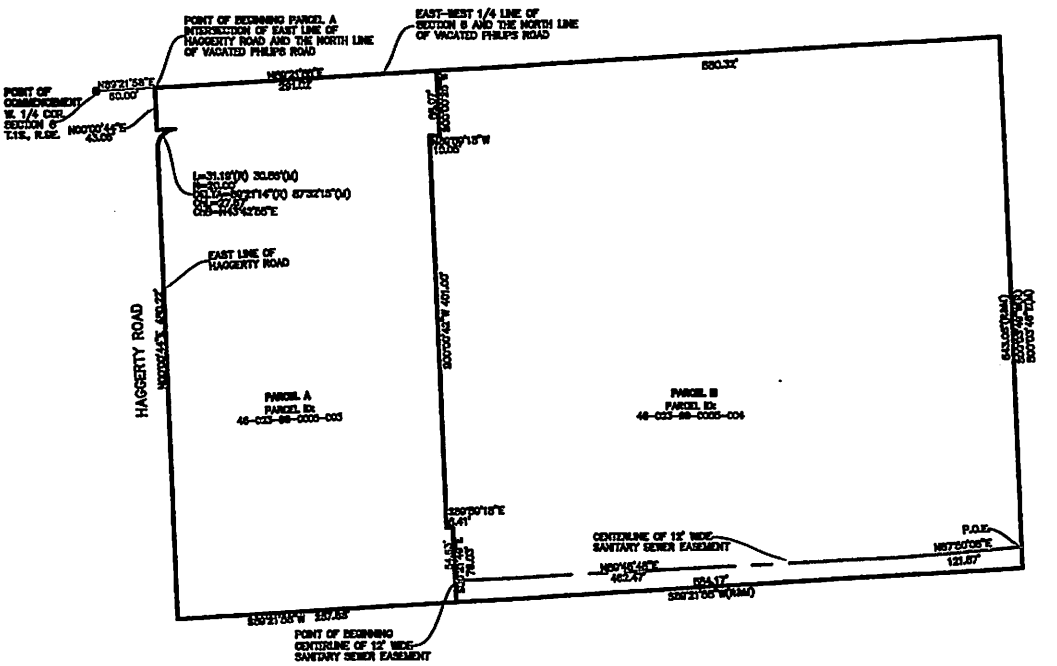
EASEMENT DESCRIPTION:
SHEET 2 OF 2

NORTH

SCALE: 1"=150'

30' 90' 150'

0' 60' 120' 300'



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A GROUP OF COMPANIES

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FAX: (586) 772.4048	FAX: (586) 772.4048	FAX: (734) 994.0667	FAX: (810) 694.9955

www.kemtecagroupofcompanies.com

PREPARED FOR: STONEFIELD ENGINEERING & DESIGN	
FIELD SURVEY: N/A	DATE: OCTOBER 20, 2020
DRAWN BY: RCE	SHEET: 1 OF 2
SCALE: 1" = 80'	JOB NO.: 19-00036

EXHIBIT

PROPERTY DESCRIPTION:

PARCEL B:
LAND SITUATED IN THE CITY OF LIVONIA, COUNTY OF WAYNE, MICHIGAN, DESCRIBED AS:

BEGINNING AT A POINT DISTANT NORTH 89 DEGREES 21 MINUTES 58 SECONDS EAST 351.02 FEET FROM THE WEST 1/4 CORNER OF SECTION 6, TOWN 1 SOUTH, RANGE 9 EAST; THENCE CONTINUING NORTH 89 DEGREES 21 MINUTES 58 SECONDS EAST 580.32 FEET; THENCE SOUTH 00 DEGREES 03 SECONDS 46 MINUTES EAST (RECORDED AS SOUTH 00 DEGREES 03 MINUTES 49 SECONDS WEST) 543.08 FEET; THENCE SOUTH 89 DEGREES 21 MINUTES 58 SECONDS WEST 584.17 FEET; THENCE NORTH 00 DEGREES 21 MINUTES 49 SECONDS WEST 76.03 FEET; THENCE NORTH 89 DEGREES 59 MINUTES 18 SECONDS WEST 6.41 FEET; THENCE NORTH 00 DEGREES 00 MINUTES 42 SECONDS EAST 401.00 FEET; THENCE SOUTH 89 DEGREES 59 MINUTES 18 SECONDS EAST 10.05 FEET; THENCE NORTH 00 DEGREES 00 MINUTES 25 SECONDS EAST 66.07 FEET TO THE POINT OF BEGINNING.

EASEMENT DESCRIPTION:

LAND SITUATED IN THE CITY OF LIVONIA, COUNTY OF WAYNE, MICHIGAN, DESCRIBED AS:

BEGINNING AT A POINT DISTANT NORTH 89 DEGREES 21 MINUTES 58 SECONDS EAST 60.00 FEET FROM THE WEST 1/4 CORNER OF SECTION 6, TOWN 1 SOUTH, RANGE 9 EAST; THENCE CONTINUING NORTH 89 DEGREES 21 MINUTES 58 SECONDS EAST 291.02 FEET; THENCE SOUTH 00 DEGREES 00 MINUTES 25 SECONDS WEST 66.07 FEET; THENCE NORTH 89 DEGREES 59 MINUTES 18 SECONDS WEST 10.05 FEET; THENCE SOUTH 00 DEGREES 00 MINUTES 42 SECONDS WEST 401.00 FEET; THENCE SOUTH 89 DEGREES 59 MINUTES 18 SECONDS EAST 6.41 FEET; THENCE SOUTH 00 DEGREES 21 MINUTES 49 SECONDS EAST 54.63 FEET TO THE POINT OF BEGINNING OF CENTERLINE OF 12 FOOT WIDE SANITARY SEWER EASEMENT; THENCE NORTH 89 DEGREES 46 MINUTES 48 SECONDS EAST 462.47 FEET; THENCE NORTH 87 DEGREES 50 MINUTES 08 SECONDS EAST 121.87 FEET TO THE POINT OF ENDING.

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FAX: (586) 772.4048	FAX: (586) 772.4048	FAX: (734) 994.0667	FAX: (810) 694.9955

www.kemtecagroupofcompanies.com

PREPARED FOR: STONEFIELD ENGINEERING & DESIGN	
FIELD SURVEY: N/A	DATE: OCTOBER 20, 2020
DRAWN BY: RCE	SHEET: 2 OF 2
SCALE: N/A	JOB NO.: 19-00036

DEPARTMENT OF LAW

PAUL A. BERNIER
City Attorney

MICHAEL E. FISHER
Chief Assistant City Attorney

ERIC S. GOLDSTEIN
Assistant City Attorney

LEO D. NEVILLE
Assistant City Attorney

MAUREEN MILLER BROSNAN
MAYOR

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2520
FAX: (734) 466-2072

November 12, 2020

TO: HONORABLE MEMBERS OF THE CITY COUNCIL

FROM: DEPARTMENT OF LAW

SUBJECT: Acceptance of Grant of Easement
Public Utility Easement for Sanitary Sewer

REF: Haggerty Square Retail – 19750 Haggerty Road
West 1/2 of Section 6 (Parcel ID #46-23-99-0005-004)

Dear Council Members:

We are transmitting for Council acceptance of a Grant of Easement, secured without monetary consideration, from Haggerty Square, LLC, a Michigan limited liability company, for public utility easement in the West 1/2 of Section 6, in connection with the sanitary sewer constructed at 19750 Haggerty Road.

This document, recently received from the Engineering Division, has been approved as to form by the Department of Law and the legal description approved by the Engineering Division. A map prepared by the Engineering Division is attached indicating the location of the proposed subject conveyance.

Should the Council determine to accept the aforesaid Grant of Easement, the following proposed resolution is submitted for the Council's consideration:

RESOLVED, that having considered a communication from the Department of Law, dated November 12, 2020, approved for submission by the Mayor, transmitting for Council acceptance of a Grant of Easement executed by Jordan Jonna, Manager, Haggerty Square, LLC, a Michigan limited liability company, for a public utility easement in connection with the construction of a sanitary sewer at the subject location in the West 1/2 of Section 6, more particularly described as:

Twelve-Foot Wide Sanitary Sewer Easement

A twelve-foot (12') wide sanitary sewer easement located in the West ½ of Section 6, Town 1 South, Range 9 East, City of Livonia, Wayne County, Michigan. Being more particularly described as:

Beginning at a point distant N 89°21'58" E, 60.00 feet from the West ¼ Corner of Section 6, Town 1 South, Range 9 East; thence continuing N 89°21'58" E, 291.02 feet; thence S 00°00'25" W, 66.07 feet; thence N 89°59'18" W, 10.05 feet; thence S 00°00'42" W, 401.00 feet; thence S 89°59'18" E, 6.41 feet; thence S 00°21'49" E, 54.63 feet to the point of beginning of centerline of 12-foot wide sanitary sewer easement; thence N 89°46'48" E, 462.47 feet; thence N 87°50'08" E, 121.87 feet to the Point of Ending.

See Attached Sanitary Sewer Easement Sketch

The Council does hereby, for and in behalf of the City of Livonia, accept the aforesaid Grant of Easement and the City Clerk is hereby requested to have the same recorded in the Office of the Register of Deeds and to do all other things necessary or incidental to fulfill the purpose of this resolution.

Approved for submission: Very truly yours,

_____ _____

Maureen Miller Brosnan, Mayor Paul A. Bernier, City Attorney

Attachment

cc: Mayor, Clerk, Council, Assessor, DPW, Engineering, Finance, Planning

P:\Council\2020\Easements\19750 Haggerty Road - Sanitary Sewer.docx

REPORT TO THE LIVONIA CITY COUNCIL

Law
November 12, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Brenda Smyser, Program Supervisor, Law

AGENDA ITEM

ACCEPTANCE OF GRANT OF EASEMENT: Department of Law, re: secured without monetary consideration from Haggerty Square LLC for a public utility easement in connection with the sanitary sewer constructed at 19700 Haggerty Road in the West 1/2 of Section 6. Parcel ID #46-23-99-0005-003.

BACKGROUND

RECOMMENDATION

FISCAL CONSIDERATION

ATTACHMENTS

1. 19700 Haggerty Road - Sanitary Sewer
2. 19700 Haggerty Road - Sanitary Sewer

APPROVED BY

Date: November 12, 2020

Paul Bernier, City Attorney

Date: November 12, 2020

Maureen Miller Brosnan, Mayor

GRANT OF EASEMENT
Tax I.D. No. 46-023-99-0005-003
19700 Haggerty Road
Livonia, Michigan 48152

GRANT OF EASEMENT

THIS INDENTURE, made this 3 day of November 2020 between Haggerty Square, LLC, a Michigan limited liability company, (Grantor), whose street number and address is 4036 Telegraph Road, Suite 201, Bloomfield Hills, MI 48302 and the CITY OF LIVONIA, a Michigan municipal corporation (Grantee), whose street number and post office address is 33000 Civic Center Drive, Livonia, Michigan, 48154.

WITNESSETH:

That the Grantor, for and in consideration of the sum of One Dollar ($1.00) paid by the Grantee, the receipt of which is hereby confessed and acknowledged, does by these presents grant unto Grantee, its successors and assigns an easement for the purpose of installing and maintaining a sanitary sewer, in, unto and upon that certain piece of land situated in the City of Livonia, County of Wayne and State of Michigan, described as follows:

PARCEL ID: **46-023-99-0005-003**

PROPERTY ADDRESS: **19700 Haggerty Road**

LEGAL DESCRIPTION APPROVED
Todd S. Zielinski
11-10-20

EASEMENT DESCRIPTION:

Twelve-Foot Wide Sanitary Sewer Easement

A twelve-foot (12') wide sanitary sewer easement located in the West ½ of Section 6, Town 1 South, Range 9 East, City of Livonia, Wayne County, Michigan. Being more particularly described as:

Beginning at a point distant N 89°21'58" E, 60.00 feet from the West ¼ Corner of Section 6, Town 1 South, Range 9 East; thence continuing N 89°21'58" E, 291.02 feet; thence S 00°00'25" W, 66.07 feet; thence N 89°59'18" W, 10.05 feet; thence S 00°00'42" W, 401.00 feet; thence S 89°59'18" E, 6.41 feet; thence S 00°21'49" E, 54.63 feet to the point of beginning of centerline of 12-foot wide sanitary sewer easement; thence S 89°46'48" W, 40.06 feet to the Point of Ending.

See Attached Sanitary Sewer Easement Sketch

Including the right of access for the Grantee to go over and upon that part of said piece of land of the Grantor, for the purpose of installing, repairing and maintaining said sanitary sewer of the Grantee providing that the granting of the above easement does not vest in the Grantee authority to use any portion of said property for any purpose other than herein designated; provided also, that this easement shall continue only for such period of time as the Grantee, its successors and assigns, shall maintain said public utility. Any restoration of property by the Grantee necessitated by sanitary sewer installation, repair and maintenance shall be limited to backfilling the excavation and establishment of grass. It shall exclude all other improvements such as paved surfaces, corresponding sub-base materials, plants, trees, flower beds, electrical lines and lights, boulders and any other miscellaneous items located within the sanitary sewer easement.

IT IS UNDERSTOOD AND AGREED, as a part of the consideration for the granting of the above easement, that the Grantee will use every effort possible to leave the premises in as good condition as at present.

IT WITNESS WHEREOF, the said Grantors have executed this Easement and Dedication the day and year above written.

GRANTOR:

HAGGERTY SQUARE, LLC
a Michigan limited liability company

By: _____
Jordan Jonna
Its: Manager

GRANT OF EASEMENT

STATE OF MICHIGAN)
COUNTY OF Michigan) SS

On this 3 day of NOV, 2024 before me personally appeared Jordan Jonna to me personally known, who being by me sworn, did for himself say that he is the Manager of Haggerty Square, LLC which executed the within instrument, and the said instrument was signed and sealed in behalf of said limited liability company and acknowledged said instrument to be the free act and deed of said limited company.

CHRISTINE S. BROWN
Notary Public, State of Michigan
County of Macomb
My Commission Expires Feb. 18, 2026
Acting in the County of Oakland

Christine S. Brown

Notary Public, _____
My Commission expires: _____

Prepared by: Todd J. Zilincik, P.E.
City Engineer
Engineering Division
33000 Civic Center Drive
Livonia, Michigan 48154

Approved as to form:
DEPARTMENT OF LAW

_____

Dated: _____

When recorded, return to: OFFICE OF THE CITY CLERK, 33000 Civic Center Drive, Livonia, Michigan 48154

EXHIBIT

PROPERTY DESCRIPTION:
SHEET 2 OF 2

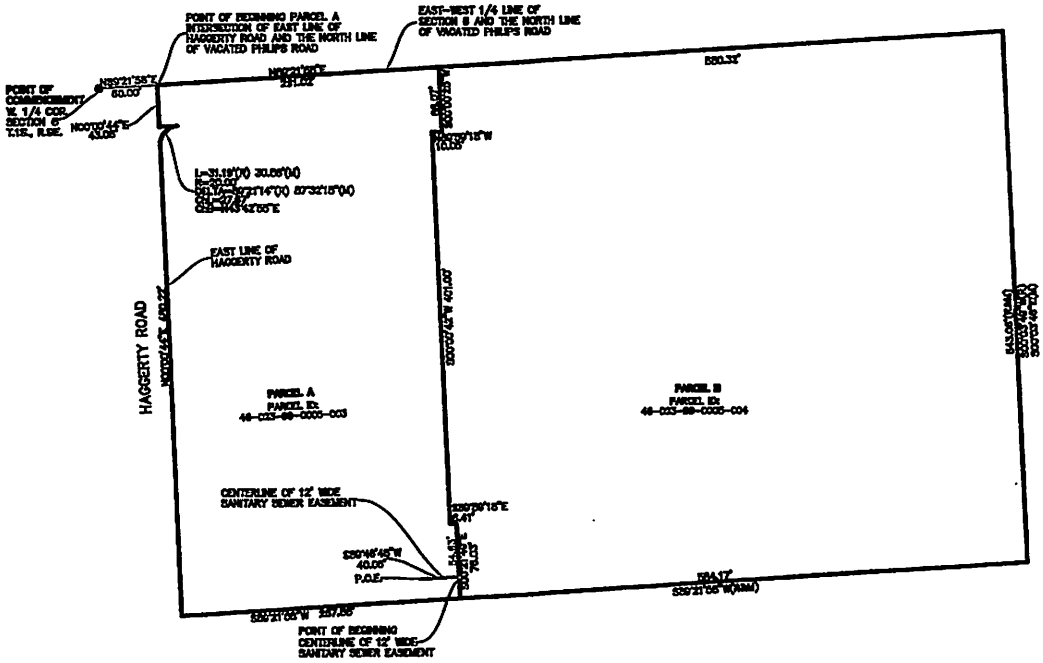
EASEMENT DESCRIPTION:
SHEET 2 OF 2

NORTH

SCALE: 1"=150'

30' 90' 150'

0' 60' 120' 300'



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www.kemtecagroupofcompanies.com

PREPARED FOR: STONEFIELD ENGINEERING & DESIGN	
FIELD SURVEY: N/A	DATE: OCTOBER 20, 2020
DRAWN BY: RCE	SHEET: 1 OF 2
SCALE: 1" = 80'	JOB NO.: 19-00036

EXHIBIT

PROPERTY DESCRIPTION:

PARCEL A:
LAND SITUATED IN THE CITY OF LIVONIA, COUNTY OF WAYNE, MICHIGAN, DESCRIBED AS:

BEGINNING AT A POINT DISTANT NORTH 89 DEGREES 21 MINUTES 58 SECONDS EAST 60.00 FEET FROM THE WEST 1/4 CORNER OF SECTION 6, TOWN 1 SOUTH, RANGE 9 EAST; THENCE CONTINUING NORTH 89 DEGREES 21 MINUTES 58 SECONDS EAST 291.02 FEET; THENCE SOUTH 00 DEGREES 00 MINUTES 25 SECONDS WEST 66.07 FEET; THENCE NORTH 89 DEGREES 59 MINUTES 18 SECONDS WEST 10.05 FEET; THENCE SOUTH 00 DEGREES 00 MINUTES 42 SECONDS WEST 401.00 FEET; THENCE SOUTH 89 DEGREES 59 MINUTES 18 SECONDS EAST 6.41 FEET; THENCE SOUTH 00 DEGREES 21 MINUTES 49 SECONDS EAST 76.03 FEET; THENCE SOUTH 89 DEGREES 21 MINUTES 58 SECONDS WEST 287.88 FEET; THENCE NORTH 00 DEGREES 00 MINUTES 44 SECONDS EAST 480.22 FEET; THENCE 31.19 FEET ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 20.00 FEET AND CENTRAL ANGLE OF 89 DEGREES 21 MINUTES 14 SECONDS EAST, CHORD BEARING AND DISTANCE NORTH 43 DEGREES 42 MINUTES 55 SECONDS EAST 27.67 FEET; THENCE SOUTH 89 DEGREES 21 MINUTES 58 SECONDS WEST 19.12 FEET; THENCE NORTH 00 DEGREES 00 MINUTES 44 SECONDS EAST 43.06 FEET TO THE POINT OF BEGINNING.

EASEMENT DESCRIPTION:

LAND SITUATED IN THE CITY OF LIVONIA, COUNTY OF WAYNE, MICHIGAN, DESCRIBED AS:

BEGINNING AT A POINT DISTANT NORTH 89 DEGREES 21 MINUTES 58 SECONDS EAST 60.00 FEET FROM THE WEST 1/4 CORNER OF SECTION 6, TOWN 1 SOUTH, RANGE 9 EAST; THENCE CONTINUING NORTH 89 DEGREES 21 MINUTES 58 SECONDS EAST 291.02 FEET; THENCE SOUTH 00 DEGREES 00 MINUTES 25 SECONDS WEST 66.07 FEET; THENCE NORTH 89 DEGREES 59 MINUTES 18 SECONDS WEST 10.05 FEET; THENCE SOUTH 00 DEGREES 00 MINUTES 42 SECONDS WEST 401.00 FEET; THENCE SOUTH 89 DEGREES 59 MINUTES 18 SECONDS EAST 6.41 FEET; THENCE SOUTH 00 DEGREES 21 MINUTES 49 SECONDS EAST 54.63 FEET TO THE POINT OF BEGINNING OF CENTERLINE OF 12 FOOT WIDE SANITARY SEWER EASEMENT; THENCE SOUTH 89 DEGREES 46 MINUTES 48 SECONDS WEST 40.06 FEET TO THE POINT OF ENDING.

KEM-TEC
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FAX: (586) 772.4048	FAX: (586) 772.4048	FAX: (734) 994.0667	FAX: (810) 694.9955

www.kemtecagroupofcompanies.com

PREPARED FOR: STONEFIELD ENGINEERING & DESIGN	
FIELD SURVEY: N/A	DATE: OCTOBER 20, 2020
DRAWN BY: RCE	SHEET: 2 OF 2
SCALE: N/A	JOB NO.: 19-00036

DEPARTMENT OF LAW

PAUL A. BERNIER
City Attorney

MICHAEL E. FISHER
Chief Assistant City Attorney

ERIC S. GOLDSTEIN
Assistant City Attorney

LEO D. NEVILLE
Assistant City Attorney

MAUREEN MILLER BROSNAN
MAYOR

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2520
FAX: (734) 466-2072

November 12, 2020

TO: HONORABLE MEMBERS OF THE CITY COUNCIL

FROM: DEPARTMENT OF LAW

SUBJECT: Acceptance of Grant of Easement
Public Utility Easement for Sanitary Sewer

REF: Haggerty Square Retail – 19700 Haggerty Road
West 1/2 of Section 6 (Parcel ID #46-23-99-0005-003)

Dear Council Members:

We are transmitting for Council acceptance of a Grant of Easement, secured without monetary consideration, from Haggerty Square, LLC, a Michigan limited liability company, for public utility easement in the West 1/2 of Section 6, in connection with the sanitary sewer constructed at 19700 Haggerty Road.

This document, recently received from the Engineering Division, has been approved as to form by the Department of Law and the legal description approved by the Engineering Division. A map prepared by the Engineering Division is attached indicating the location of the proposed subject conveyance.

Should the Council determine to accept the aforesaid Grant of Easement, the following proposed resolution is submitted for the Council's consideration:

RESOLVED, that having considered a communication from the Department of Law, dated November 12, 2020, approved for submission by the Mayor, transmitting for Council acceptance of a Grant of Easement executed by Jordan Jonna, Manager, Haggerty Square, LLC, a Michigan limited liability company, for a public utility easement in connection with the construction of a sanitary sewer at the subject location in the West 1/2 of Section 6, more particularly described as:

Twelve-Foot Wide Sanitary Sewer Easement

A twelve-foot (12') wide sanitary sewer easement located in the West ½ of Section 6, Town 1 South, Range 9 East, City of Livonia, Wayne County, Michigan. Being more particularly described as:

Beginning at a point distant N 89°21'58" E, 60.00 feet from the West ¼ Corner of Section 6, Town 1 South, Range 9 East; thence continuing N 89°21'58" E, 291.02 feet; thence S 00°00'25" W, 66.07 feet; thence N 89°59'18" W, 10.05 feet; thence S 00°00'42" W, 401.00 feet; thence S 89°59'18" E, 6.41 feet; thence S 00°21'49" E, 54.63 feet to the point of beginning of centerline of 12-foot wide sanitary sewer easement; thence S 89°46'48" W, 40.06 feet to the Point of Ending.

See Attached Sanitary Sewer Easement Sketch

The Council does hereby, for and in behalf of the City of Livonia, accept the aforesaid Grant of Easement and the City Clerk is hereby requested to have the same recorded in the Office of the Register of Deeds and to do all other things necessary or incidental to fulfill the purpose of this resolution.

Approved for submission: Very truly yours,

_____ _____
Maureen Miller Brosnan, Mayor Paul A. Bernier, City Attorney

Attachment

cc: Mayor, Clerk, Council, Assessor, DPW, Engineering, Finance, Planning

P:\Council\2020\Easements\19700 Haggerty Road - Sanitary Sewer.docx

REPORT TO THE LIVONIA CITY COUNCIL

Law
November 12, 2020

MEETING DATE	PREPARED BY
December 2, 2020	Brenda Smyser, Program Supervisor, Law

AGENDA ITEM

ACCEPTANCE OF GRANT OF EASEMENT: Department of Law, re: secured without monetary consideration from Haggerty Square LLC, for a public utility easement in connection with the water main constructed at 19700 Haggerty Road in the West 1/2 of Section 6. Parcel ID #46-23-99-0005-003.

BACKGROUND

RECOMMENDATION

FISCAL CONSIDERATION

ATTACHMENTS

1. 19700 Haggerty Road - Water Main
2. 19700 Haggerty Road - Water Main

APPROVED BY

Date: November 12, 2020

Paul Bernier, City Attorney

Date: November 12, 2020

Maureen Miller Brosnan, Mayor

GRANT OF EASEMENT
Tax I.D. No. 46-023-99-0005-003
19700 Haggerty Road
Livonia, Michigan 48152

GRANT OF EASEMENT

THIS INDENTURE, made this 3 day of NOV, 2020, between Haggerty Square, LLC, a Michigan limited liability company, (Grantor), whose street number and address is 4036 Telegraph Road, Suite 201, Bloomfield Hills, MI 48302 and the CITY OF LIVONIA, a Michigan municipal corporation (Grantee), whose street number and post office address is 33000 Civic Center Drive, Livonia, Michigan, 48154.

WITNESSETH:

That the Grantor, for and in consideration of the sum of One Dollar ($1.00) paid by the Grantee, the receipt of which is hereby confessed and acknowledged, does by these presents grant unto Grantee, its successors and assigns an easement for the purpose of installing and maintaining a water main, in, unto and upon that certain piece of land situated in the City of Livonia, County of Wayne and State of Michigan, described as follows:

PARCEL ID: **46-023-99-0005-003**

PROPERTY ADDRESS: **19700 Haggerty Road**

LEGAL DESCRIPTION APPROVED
Todd. Zilinski
11-10-20

EASEMENT DESCRIPTION:

Twelve-Foot Wide Water Main Easement

A twelve-foot (12') wide water main easement located in the West ½ of Section 6, Town 1 South, Range 9 East, City of Livonia, Wayne County, Michigan. Being more particularly described as:

Beginning at a point distant N 89°21'58" E, 60.00 feet from the West ¼ Corner of Section 6, Town 1 South, Range 9 East; thence S 00°00'44" W, 33.44 feet to the point of beginning of centerline of 12 foot wide water main easement; thence N 44°50'49" E, 10.57 feet; thence N 89°50'49" E, 249.64 feet to Point "A"; thence S 00°03'25" E, 271.11 feet to Point "B"; thence S 00°35'09" W, 235.55 feet to Point "C"; thence S 89°34'57" W, 197.32 feet; thence N 68°08'02" W, 18.00 feet; thence S 89°21'58" W, 20.00 feet; thence N 45°38'02" W, 9.00 feet; thence S 89°21'58" W, 14.61 feet to the Point of Ending; thence from said Point "A" N 89°58'54" E, 23.06 feet; thence S 49°44'24" E, 14.22 feet to the Point of Ending; thence from said Point "B" N 89°26'27" W, 34.61 feet to the Point of Ending; thence from said Point "C" N 89°34'57" E, 32.75 feet to the Point of Ending.

See Attached Water Main Easement Sketch

Including the right of access for the Grantee to go over and upon that part of said piece of land of the Grantor, for the purpose of installing, repairing and maintaining said water main of the Grantee providing that the granting of the above easement does not vest in the Grantee authority to use any portion of said property for any purpose other than herein designated; provided also, that this easement shall continue only for such period of time as the Grantee, its successors and assigns, shall maintain said public utility. Any restoration of property by the Grantee necessitated by water main installation, repair and maintenance shall be limited to backfilling the excavation and establishment of grass. It shall exclude all other improvements such as paved surfaces, corresponding sub-base materials, plants, trees, flower beds, electrical lines and lights, boulders and any other miscellaneous items located within the water main easement.

IT IS UNDERSTOOD AND AGREED, as a part of the consideration for the granting of the above easement, that the Grantee will use every effort possible to leave the premises in as good condition as at present.

IT WITNESS WHEREOF, the said Grantors have executed this Easement and Dedication the day and year above written.

GRANTOR:

HAGGERTY SQUARE, LLC
a Michigan limited liability company

By: _____
Jordan Jonna
Its: Manager

GRANT OF EASEMENT

STATE OF MICHIGAN)
COUNTY OF Michigan) SS

On this 3 day of Nov, 202? before me personally appeared Jordan Jonna to me personally known, who being by me sworn, did for himself say that he is the Manager of Haggerty Square, LLC which executed the within instrument, and the said instrument was signed and sealed in behalf of said limited liability company and acknowledged said instrument to be the free act and deed of said limited company.

CHRISTINE S. BROWN
Notary Public, State of Michigan
County of Macomb
My Commission Expires Feb. 18, 2028
Acting in the County of Oakland

Christine S. Brown

Notary Public, _____
My Commission expires: _____

Prepared by: Todd J. Zilincik, P.E.
City Engineer
Engineering Division
33000 Civic Center Drive
Livonia, Michigan 48154

Approved as to form:
DEPARTMENT OF LAW

_____

Dated: _____

When recorded, return to: OFFICE OF THE CITY CLERK, 33000 Civic Center Drive, Livonia, Michigan 48154

EXHIBIT

PROPERTY DESCRIPTION:
SHEET 2 OF 2

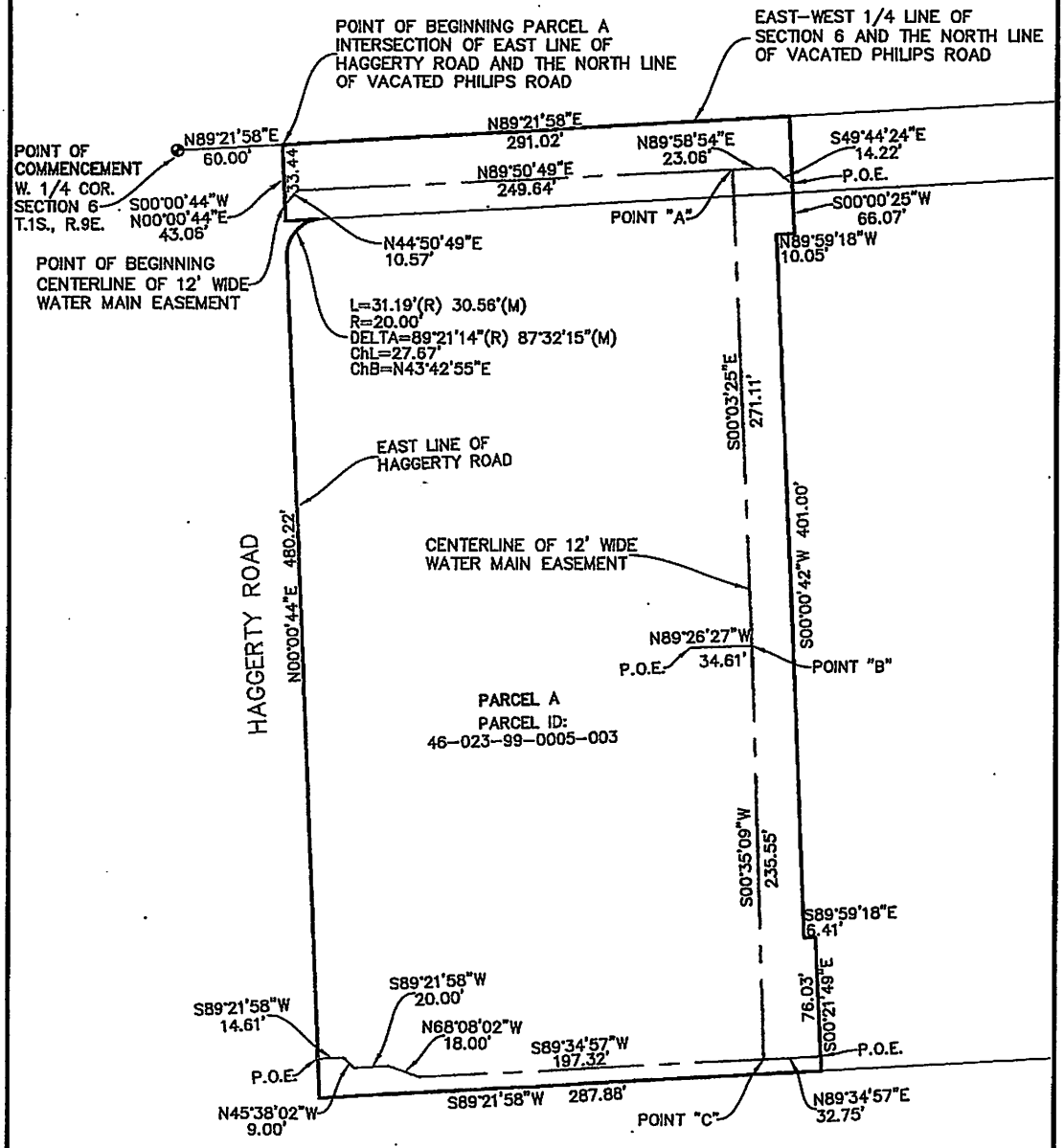
EASEMENT DESCRIPTION:
SHEET 2 OF 2

NORTH

SCALE 1"=80'

0' 40' 80'

20' 60'



KEM-TEC PROFESSIONAL ENGINEERING, SURVEYING & ENVIRONMENTAL SERVICES

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PREPARED FOR: STONEFIELD ENGINEERING & DESIGN	
FIELD SURVEY: N/A	DATE: OCTOBER 14, 2020
DRAWN BY: RCE	SHEET: 1 OF 2
SCALE: 1" = 80'	JOB NO.: 19–00036

EXHIBIT

PROPERTY DESCRIPTION:

LAND SITUATED IN THE CITY OF LIVONIA, COUNTY OF WAYNE, MICHIGAN, DESCRIBED AS:

BEGINNING AT A POINT DISTANT NORTH 89 DEGREES 21 MINUTES 58 SECONDS EAST 60.00 FEET FROM THE WEST 1/4 CORNER OF SECTION 6, TOWN 1 SOUTH, RANGE 9 EAST; THENCE CONTINUING NORTH 89 DEGREES 21 MINUTES 58 SECONDS EAST 291.02 FEET; THENCE SOUTH 00 DEGREES 00 MINUTES 25 SECONDS WEST 66.07 FEET; THENCE NORTH 89 DEGREES 59 MINUTES 18 SECONDS WEST 10.05 FEET; THENCE SOUTH 00 DEGREES 00 MINUTES 42 SECONDS WEST 401.00 FEET; THENCE SOUTH 89 DEGREES 59 MINUTES 18 SECONDS EAST 6.41 FEET; THENCE SOUTH 00 DEGREES 21 MINUTES 49 SECONDS EAST 76.03 FEET; THENCE SOUTH 89 DEGREES 21 MINUTES 58 SECONDS WEST 287.88 FEET; THENCE NORTH 00 DEGREES 00 MINUTES 44 SECONDS EAST 480.22 FEET; THENCE 31.19 FEET ALONG THE ARC OF A CURVE TO THE RIGHT HAVING A RADIUS OF 20.00 FEET AND CENTRAL ANGLE OF 89 DEGREES 21 MINUTES 14 SECONDS EAST, CHORD BEARING AND DISTANCE NORTH 43 DEGREES 42 MINUTES 55 SECONDS EAST 27.67 FEET; THENCE SOUTH 89 DEGREES 21 MINUTES 58 SECONDS WEST 19.12 FEET; THENCE NORTH 00 DEGREES 00 MINUTES 44 SECONDS EAST 43.06 FEET TO THE POINT OF BEGINNING.

EASEMENT DESCRIPTION:

LAND SITUATED IN THE CITY OF LIVONIA, COUNTY OF WAYNE, MICHIGAN, DESCRIBED AS:

BEGINNING AT A POINT DISTANT NORTH 89 DEGREES 21 MINUTES 58 SECONDS EAST 60.00 FEET FROM THE WEST 1/4 CORNER OF SECTION 6, TOWN 1 SOUTH, RANGE 9 EAST; THENCE SOUTH 00 DEGREES 00 MINUTES 44 SECONDS WEST 33.44 FEET TO THE POINT OF BEGINNING OF CENTERLINE OF 12 FOOT WIDE WATER MAIN EASEMENT; THENCE NORTH 44 DEGREES 50 MINUTES 49 SECONDS EAST 10.57 FEET; THENCE NORTH 89 DEGREES 50 MINUTES 49 SECONDS EAST 249.64 FEET TO POINT "A"; THENCE SOUTH 00 DEGREES 03 MINUTES 25 SECONDS EAST 271.11 FEET TO POINT "B"; THENCE SOUTH 00 DEGREES 35 MINUTES 09 SECONDS WEST 235.55 FEET TO POINT "C"; THENCE SOUTH 89 DEGREES 34 MINUTES 57 SECONDS WEST 197.32 FEET; THENCE NORTH 68 DEGREES 08 MINUTES 02 SECONDS WEST 18.00 FEET; THENCE SOUTH 89 DEGREES 21 MINUTES 58 SECONDS WEST 20.00 FEET; THENCE NORTH 45 DEGREES 38 MINUTES 02 SECONDS WEST 9.00 FEET; THENCE SOUTH 89 DEGREES 21 MINUTES 58 SECONDS WEST 14.61 FEET TO THE POINT OF ENDING; THENCE FROM SAID POINT "A" NORTH 89 DEGREES 58 MINUTES 54 SECONDS EAST 23.06 FEET; THENCE SOUTH 49 DEGREES 44 MINUTES 24 SECONDS EAST 14.22 FEET TO THE POINT OF ENDING; THENCE FROM SAID POINT "B" NORTH 89 DEGREES 26 MINUTES 27 SECONDS WEST 34.61 FEET TO THE POINT OF ENDING; THENCE FROM SAID POINT "C" NORTH 89 DEGREES 34 MINUTES 57 SECONDS EAST 32.75 FEET TO THE POINT OF ENDING.

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PREPARED FOR: STONEFIELD ENGINEERING & DESIGN	
FIELD SURVEY: N/A	DATE: OCTOBER 14, 2020
DRAWN BY: RCE	SHEET: 2 OF 2
SCALE: N/A	JOB NO.: 19-00036

DEPARTMENT OF LAW

PAUL A. BERNIER
City Attorney

MICHAEL E. FISHER
Chief Assistant City Attorney

ERIC S. GOLDSTEIN
Assistant City Attorney

LEO D. NEVILLE
Assistant City Attorney

MAUREEN MILLER BROSNAN
MAYOR

33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3097
(734) 466-2520
FAX: (734) 466-2072

November 12, 2020

TO: HONORABLE MEMBERS OF THE CITY COUNCIL

FROM: DEPARTMENT OF LAW

SUBJECT: Acceptance of Grant of Easement
Public Utility Easement for Water Main

REF: Haggerty Square Retail – 19700 Haggerty Road
West 1/2 of Section 6 (Parcel ID #46-23-99-0005-003)

Dear Council Members:

We are transmitting for Council acceptance of a Grant of Easement, secured without monetary consideration, from Haggerty Square, LLC, a Michigan limited liability company, for public utility easement in the West 1/2 of Section 6, in connection with the water main constructed at 19700 Haggerty Road.

This document, recently received from the Engineering Division, has been approved as to form by the Department of Law and the legal description approved by the Engineering Division. A map prepared by the Engineering Division is attached indicating the location of the proposed subject conveyance.

Should the Council determine to accept the aforesaid Grant of Easement, the following proposed resolution is submitted for the Council's consideration:

RESOLVED, that having considered a communication from the Department of Law, dated November 12, 2020, approved for submission by the Mayor, transmitting for Council acceptance of a Grant of Easement executed by Jordan Jonna, Manager, Haggerty Square, LLC, a Michigan limited liability company, for a public utility easement in connection with the construction of a water main at the subject location in the West 1/2 of Section 6, more particularly described as:

Twelve-Foot Wide Water Main Easement

A twelve-foot (12') wide water main easement located in the West ½ of Section 6, Town 1 South, Range 9 East, City of Livonia, Wayne County, Michigan. Being more particularly described as:

Beginning at a point distant N 89°21'58" E, 60.00 feet from the West ¼ Corner of Section 6, Town 1 South, Range 9 East; thence S 00°00'44" W, 33.44 feet to the point of beginning of centerline of 12 foot wide water main easement; thence N 44°50'49" E, 10.57 feet; thence N 89°50'49" E, 249.64 feet to Point "A"; thence S 00°03'25" E, 271.11 feet to Point "B"; thence S 00°35'09" W, 235.55 feet to Point "C"; thence S 89°34'57" W, 197.32 feet; thence N 68°08'02" W, 18.00 feet; thence S 89°21'58" W, 20.00 feet; thence N 45°38'02" W, 9.00 feet; thence S 89°21'58" W, 14.61 feet to the Point of Ending; thence from said Point "A" N 89°58'54" E, 23.06 feet; thence S 49°44'24" E, 14.22 feet to the Point of Ending; thence from said Point "B" N 89°26'27" W, 34.61 feet to the Point of Ending; thence from said Point "C" N 89°34'57" E, 32.75 feet to the Point of Ending.

See Attached Water Main Easement Sketch

The Council does hereby, for and in behalf of the City of Livonia, accept the aforesaid Grant of Easement and the City Clerk is hereby requested to have the same recorded in the Office of the Register of Deeds and to do all other things necessary or incidental to fulfill the purpose of this resolution.

Approved for submission: Very truly yours,

_____ _____
Maureen Miller Brosnan, Mayor Paul A. Bernier, City Attorney

Attachment

cc: Mayor, Clerk, Council, Assessor, DPW, Engineering, Finance, Planning

P:\Council\2020\Easements\34020 Plymouth Road.docx