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OFFICE OF THE COUNCIL

**ELECTRONIC MEETING PACKET FOR
THE PUBLIC HEARING OF
MONDAY, DECEMBER 9, 2024
7:00 P.M.***

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

PUBLIC HEARING AGENDA OF THE LIVONIA CITY COUNCIL

Monday, December 9, 2024

7:00 P.M.

Livonia City Hall Auditorium

33000 Civic Center Drive, Livonia, Michigan

AGENDA ITEM(S)

1. Petition 2024-08-01-04 submitted by Skilken Gold under Section 13.15 of the Livonia Zoning Ordinance, as amended, requesting to rezone the property at 37355 Eight Mile Road, located on the southeast corner of Eight Mile Road and Newburgh Road in the Northwest ¼ of Section 5, from C-1 (Local Business District) to C-2 (General Business District).
2. TO CONSIDER ADOPTION OF A RESOLUTION APPROVING A BROWNFIELD PLAN AND TAX INCREMENT FINANCING FOR THE 7 AND VICTOR PROJECT: Robertson Brothers Homes, re: for a planned general development consisting of 100 residential townhomes on the north side of Seven Mile Road, between Victor Parkway and Newburgh Road in the southeast ¼ of Section 6.

AUDIENCE COMMUNICATION

For the Regular meeting of January 15, 2025

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 disabilities. Please call (734) 466-2236 or email clerk@livonia.gov as soon as possible if you need assistance. **Council agendas are available on the City's website – www.livonia.gov - under Government, City Council, Agendas.**

LORI L. MILLER, CITY CLERK



LETTER TO THE LIVONIA CITY COUNCIL

1.

Planning
October 23, 2024

MEETING DATE

PH120924/R011525

PRESENTED BY

Mark Taormina, Planning and Economic Development Director

AGENDA ITEM

Petition 2024-08-01-04 submitted by Skilken Gold under Section 13.15 of the Livonia Zoning Ordinance, as amended, requesting to rezone the property at 37355 Eight Mile Road, located on the southeast corner of Eight Mile Road and Newburgh Road in the Northwest ¼ of Section 5, from C-1 (Local Business District) to C-2 (General Business District).

BACKGROUND DETAILS

October 23, 2024

Honorable Members of the City Council
City of Livonia, Michigan

Re: Petition 2024-08-01-04 - Sheetz

Dear Council Members:

At the 1,221st Public Hearing and Regular Meeting held by the City Planning Commission on October 22, 2024, the following resolution was adopted:

PREFERRED COUNCIL RECOMMENDATION/RESOLUTION (Please complete this field. Attachments are not to be used in lieu of the recommendation)

#10-55-2024 RESOLVED, That pursuant to a Public Hearing having been held by the City Planning Commission on October 22, 2024, Petition 2024-08-01-04 submitted by Skilken Gold under Section 13.15 of the Livonia Zoning Ordinance, as amended, requesting to rezone the property at 37355 Eight Mile Road, located on the southeast corner of Eight Mile Road and Newburgh Road in the Northwest ¼ of Section 5, from C-1 (Local Business District) to C-2 (General Business District), the Planning Commission does hereby recommend to the City Council that Petition 2024-08-01-04 be approved subject to the following conditions:

1. A zoning change to C-2 would be compatible and in harmony with the area's surrounding land uses and zoning.
2. The proposed C-2 zoning is consistent with the longstanding commercial use of the property.
3. The proposed C-2 zoning will allow the development of the subject property in a manner that is

consistent with its size and location and will bring additional commercial services and retail to this part of the city.

4. The proposed zoning change represents a reasonable and logical plan for the subject property that adheres to sound land use planning principles.

FURTHER RESOLVED, That notice of the above hearing was given in accordance with the provisions of Section 13.15 of Livonia Zoning Ordinance, as amended.

A roll call vote on the foregoing resolution resulted in the following:

AYES: Droze, Dinaro, Caramagno

NAYS: Long, Wilshaw

ABSENT: Bongero, Ventura

ABSTAIN: None

ATTACHMENTS

1. 2024-08-01-04_COUNCIL E-Pkt

APPROVED BY



Mark Taormina, Planning and Economic Development Director

Date: October 24, 2024



Maureen Miller Brosnan, Mayor

Date: October 25, 2024

Petition 2024-08-01-04 submitted by Skilken Gold under Section 13.15 of the Livonia Zoning Ordinance, as amended, requesting to rezone the property at 37355 Eight Mile Road, located on the southeast corner of Eight Mile Road and Newburgh Road in the Northwest ¼ of Section 5, from C-1 (Local Business District) to C-2 (General Business District).

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: 8/1/24 Petition 2024-08-01-04

Site Address: 37355 8 Mile Road Sidwell 46-018-99-001

Requesting To Rezone Property From C1 To C2

For the Following Reason (s) Proposed project includes limited carry out with outdoor seating and a drive thru window

Applicant: Drew Miller Business/Company: Skilken Gold

Applicant's Address: 4270 Morse Road City: Columbus State: OH Zip Code: 43230

Applicant's Phone # (614) 905-6991 Applicant's Email dmiller@skillkengold.com

For fee computation, see attached Fee Schedule Please provide the following information:

- 1) **Legal Description** of the property to be considered. Paper copy must be clearly printed.
- 2) **Fully Dimensional Map (3 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@livonia.gov

Owner of Property: C.I.G. LIVONIA, LLC

Owner's Address: 43775 STONEHILL DR City: NORWELL State: MA Zip Code: 01868

Owner's Phone # (313) 605-9988 Owner's Email john@grand-novi.com

Signature of Owner: John Ellett Print Name: JOHN ELLETT

Subscribed and sworn to before me, a Notary Public in and for the County of WAYNE State of MI

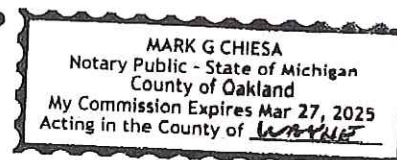
on this 12TH day of JULY 20 24

Signature of Notary [Signature] My commission expires 03/27/2025

APPROVED AS FORM
Department of Law

By: Michael E. Gisher

Date: 8/2/2024



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RECEIVED
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CITY OF LIVONIA
PLANNING COMMISSION

UNAPPROVED MINUTES

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MINUTES OF THE 1,221st PUBLIC HEARINGS AND REGULAR MEETING HELD BY THE CITY PLANNING COMMISSION OF THE CITY OF LIVONIA

On Tuesday, October 22, 2024, the City Planning Commission of the City of Livonia held its 1,221st Public Hearing and Regular Meetings in the Livonia City Hall, 33000 Civic Center Drive, Livonia, Michigan.

Mr. Ian Wilshaw, Chairman, called the meeting to order at 7 p.m.

Members present: Patrick Droze Wafa Dinaro Sam Caramagno
 Glen Long Ian Wilshaw

Members absent: Peter Ventura David Bongero

Mr. Jacob Uhazie, Assistant Planning Director, and Stephanie Reece, Program Supervisor, 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 2024-08-01-04

Sheetz

Mr. Caramagno, Secretary, announced the first item on the agenda, Petition 2024-08-01-04 submitted by Skilken Gold under Section 13.15 of the Livonia Zoning Ordinance, as amended, requesting to rezone the property at 37355 Eight Mile Road, located on the southeast corner of Eight Mile Road and Newburgh Road in the Northwest ¼ of Section 5, from C-1 (Local Business District) to C-2 (General Business District).

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Mr. Wilshaw: Thank you, sir and Mr. Uhazie, would you like to tell us any new information that's come in on this item?

Mr. Uhazie: We just have a few things. I just want to reiterate that the zoning change would facilitate the development of a Sheetz gas station, convenience store and restaurant on the location at the southeast corner of Eight Mile and Newburgh Road. The area to be rezoned is about 79,880 square feet, or 1.83 acres, with 269 feet along Eight Mile Road, and 285 feet along Newburgh. The surrounding neighborhoods, as we saw before, to the north is the City of Farmington Hills and Child Time of Northville. To the west across Newburgh is Greenmead Historical Park, which is zoned PL, and to the south and east is Whispering Willows golf course also zoned PL. The only major update to the plan that we have since the last public hearing would be that the petitioner has re examined the drive through layout that they presented. At the original meeting they took some of the considerations that the Planning Commission mentioned and are reexamining the layout of the drive-thru to move it to the western side of the building to reduce traffic conflicts. And they also explained that they are open to adding a merge lane across Eight Mile Road into Farmington Hills, understanding that it would take a lot more study and work with surrounding communities, but those are the updates that I have since the last public hearing, and then we've also received many residents' responses that you have received in your E packet.

Mr. Wilshaw: Alright, thank you. Mr. Uhazie. This item was tabled at a prior meeting. Is there a commissioner willing to remove this item from the table so we can discuss it?

Mr. Wilshaw: All right, this item has been removed from the table. Is there any questions for the planning staff from any other commissioners based on the presentation? There's no questions. Our petitioner is in the audience tonight. They are free to come forward and speak to this item and let us know if there's anything new that they would like to tell us about this petition before we get too deep into this. Though, again, I want to remind folks in our audience, some of whom may have not been at our prior meeting, that we have met on this item before we did conduct a public hearing where public comments were taken. We are not going to do that again tonight, because this is a pending item. This item has been discussed at length, and we are prepared to vote on this item tonight. That being said, I do at least want to explain the process that, because there may be people who have questions, who

weren't here at the last meeting, and what we're considering tonight is a rezoning petition for this property. It's a rezoning from a C-1 to C-2 zoning and our focus tonight is going to be on that rezoning of this property. There's going to be limited discussion about the actual use of the property in terms of what Sheetz is going to put on the property and how it's going to look, the site plan, those types of things. That comes at a later process after the zoning is dealt with. Again, as I mentioned at the beginning of the meeting, we are going to make a recommendation, either approving or denying recommendation for that zoning, which will then go on to City Council. City Council will then conduct their own public hearing, and they'll make a decision as to what they want to do with the zoning. Once that occurs, if they want to move forward with the zoning, if it goes that direction, then a site plan would be brought back to us at a later time, and that would be discussed. If not, it would stop at that part of the process. So with that, I just wanted to give a little background information. And I'll start with the petitioner. Good evening, sir.

Drew Miller, Skilken Gold, 4270 Morse Road, Columbus, Ohio. So we appreciate coming back, and like I mentioned earlier, you know, there's a few items...concerns that we heard last time, that we felt were appropriate to address tonight. And I just wanted to take a step back too and explain a little bit more about how we got here, you know, for this new location, Mr. Uhazie,, if you could go to the next slide please. So yes, everybody's familiar with this location. There's some things I would like to point out, and sure, it's going to be a little bit too small for you to see on this screen here. But I want to talk a little bit more about this location specifically. So this is at 1.83 commercially developed acreage at this location. It's currently occupied by 17,000 square feet of commercial space. Previous tenants in this location have been most recently the Rite Aid pharmacy. Historically, it's been used as Realty Services, insurance providers and a golf shop, and I think an arcade is what somebody had told me. I really want to talk about this intersection, the topic of the traffic and the traffic study came up a couple times in the last meeting and in the study sessions. So we did do a traffic impact study that's been provided to the city engineer's office, and they have reviewed that traffic study. Their recommendation was that no improvements should be made. We had originally talked about some ideas of involving a deceleration lane at both access points that we had proposed. After discussing that with the city engineer's office, they didn't think that that would be appropriate. I'd also like to talk about the current existing traffic that's located on these thoroughfares here. So Eight Mile Road, according to MDOS SEMCOG website, you

can see there, east of Newburgh, there's 19,900 and that is average daily traffic. Newburgh is a little bit more, there's 24,000 cars. If you look at the other intersections around the city, specifically where the type of use C-2 zoning is located at, these numbers are very consistent with what you would see at those C-2 locations. So that's one reason we feel this location is appropriate. Now there was also a lot of discussion about why this location...I'm going to try and answer that a little bit as we continue through these slides here. The other thing I'd like to point out is the traffic signal at this location is managed and operated by Wayne County, so we are submitting the traffic study to them for their comments and feedback. Based on the city engineers response, we don't feel there's going to be any issues. We did propose some signal timing adjustments to just make traffic flow here a little bit better. So we're looking forward to seeing those comments from Wayne County, but we're not anticipating any major mitigation measures that they would require. Mr. Chair, you did recognize that we had discussed potentially extending the merge lane that would be north of Eight Mile Road. There's access to a daycare there, off of Halstead. And anybody familiar with the intersection knows that there's a merge lane there. We had talked about maybe extending that merge lane, because historically, there has been accidents there, to my knowledge, and from the city engineer's office, they had told us that the right turn lane going north on Newburgh, or, I'm sorry, the right turn lane on Newburgh, if you're heading northbound, used to be a through lane as well. So there was two through lanes. And I don't know exactly when they changed it, but they changed it to a right turn only with one single through lane. City engineer's office had communicated to us that that caused a lot of accidents because there were backups then on Halsted. So that was, I think, part of the reason why, you know, they didn't recommend any other mitigation measures there. So, yeah, so, Mr. Uhazie, if you could go the next slide, please. So, and just to step back here briefly, I did want to just cover some of the where we've been and what we've done so far in the City of Livonia. So we were here, as I'm sure a lot of you recall, in January, with a different location. This was at Newburgh and Five Mile Road, just a few miles south on Newburgh. Some of the reasons stated for that denial involved contradictory land use and inconsistent land use with the master plan, as well as concerns over floodway that existed to the east of that property, as well as a comment that, you know, that intersection was already well served with gas stations. So again, this, just this helps me explain why we settled on this new location at Eight Mile. Obviously, things like traffic count and safety, you know, crime reports, we take all that into consideration when

Sheetz is looking at a location, but the best thing we can do is hear from folks like you. So we heard you. We came with this location that we thought was great, and, you know, we heard you, and that really helped guide us and dictate where we would look for a new opportunity to come into Livonia. So I just want to make sure I covered that, because that had a big factor in the new location that we're proposing. So, you know, keeping with this future or the City of Livonia, future land use map here, I did want to touch on some of the items that were addressed last month in regard to the denial. So we did hear, you know, contradicting, inconsistent land use. That was another item similar to what we heard in January. So, what we're trying to understand here, is that the contradictory land use we don't really feel is appropriate. Along Eight Mile you'll see plenty of commercial uses. There's residential too, but there's also commercial, especially if you factor in how major this thoroughfare is. We feel that this rezone to C-2 is very appropriate. As far as inconsistent land use, I'm not really sure I understand that either. The golf course that's located directly to our south is a commercial use. I know it's zoned parks and recreation, and everybody thinks, you know, I'm a golfer. Golf is a recreational sport, but it's also the high traffic commercial use. Pretty sure they have over 6,000 gallons of underground storage fuel tanks as well on that site. So it's very much a commercial use, even though it's zoned as parks and recreation, and that's the master plan as well. As far as, you know, rezoning to C-2 adversely altering the character of the area, we don't feel that's appropriate either. As mentioned, the site used to be a Rite Aid with a pharmacy. A pharmacy is the type of use that customers will come and make a special trip just to go to that pharmacy. A convenience store and fuel station is not that. We're capturing pass by traffic. The drivers on the road are already there, and they're stopping at a Sheetz store because it's convenient, and again, that's another reason why we've chosen this location. Finally, the last one I wanted to address here was the proposed change is not needed to develop property. We've done a lot of investigation on this property, and there are certainly some engineering challenges, but we feel it is appropriate for Sheetz to come in here at this location, and the change is needed for Sheetz. We know from our studies that the building has some engineering issues, and we do not expect another commercial user to be able to come in here and at this location and put up the capital that's needed to remediate the soils where where most of the engineering issues lie. So, just to kind of recap here, this is the location. This is actually the new site plan. I wasn't going to get too much into the detail, but you can see there we have adjusted the drive through. I think what's really notable about

what we're proposing in our commercial use is yes, the C-2 is more intense, but it's already a commercial use, and we're reducing the amount of access curb cuts that are along Newburgh, so this is going to help in the traffic situation. As I mentioned before, the traffic counts are very consistent with what you would see at C-2 locations. This is a main thoroughfare, and the traffic is there, and there is no other gas stations within close proximity. So as as I mentioned before...

Mr. Wilshaw: Everyone please, be quiet. Let the petitioner speak.

Mr. Miller: As I mentioned before, part of the denial for our previous location was that the area was already well served. This intersection is not well served, and that's what kind of led us here. Finally, as I mentioned, you know, as far as inconsistent land use, we're abutting a commercial use. It's a golf course, even though it's, you know, considered Parks and Rec. Finally, you know what we're proposing here, we do feel is in harmony and is incompatible with the current use. Like I mentioned, it's a Rite Aid. The final thing I'd like to mention here, and you can see it pretty clearly, is the tree buffering that exists around this site. There is no residential immediately adjacent to our site. We've found this location because it was appropriate. It has the traffic volume, it's already commercial, and it's very low impact, and that's why we feel this is appropriate. The topic of the creek came up last time as well, and I do want to just reinforce the fact that we did a wetland delineation. We walked the site with an EGLE representative, and we have made adjustments to our site plan to stay as far away from the wetlands as possible. And we don't anticipate having any major permits with EGLE. We do anticipate having a minor impact permit just for the construction of the store. So, we've really done our homework on this site. We feel it's very appropriate to rezone this to C-2 based on everything I've said here. And you know, we're looking forward to moving on to the next step. So thank you. We're here for questions.

Mr. Wilshaw: Thank you, sir. Do we have any questions from the Commission for Mr. Miller or any of his representatives?

Mr. Long: You touched on something that I'd like you to speak a little further to. Your interactions with EGLE and the ramifications of the development on the creek that runs in front of the seventh green there, storm water runoff, safety on the fuel tanks. Please expound a little more.

Mr. Miller: Sure. EGLE has very stringent standards. A lot of the development work we do is in Ohio, and I would applaud EGLE for what they do. I would also applaud Sheetz for what they do. Before we started looking at any locations, we got together with the entire EGLE team in Lansing, Michigan, and talked about what Sheetz plans were for the future, and we made sure that they were going to meet every standard. In fact, they exceed a lot of those standards. And we have Sheetz representatives here that can get into more detail about, you know, how they how they do that, and how they manage that, but they have state of the art fuel system, everything's monitored with those USTS modern construction practices and take extreme caution when you're next to a creek here and so stormwater runoff and capture is very critical, especially on a fuel site. We acknowledge that. There is potential for an accident here or there, there is a way to mitigate that. We capture that. There are oil / water separators and they monitor it and maintain it throughout the year. Last month Mr. Sawicki mentioned that all of their stores are non-franchised. They are all independently owned and operated by the Sheetz family. They have complete control over maintaining those systems. I am not aware of any issues they have experienced here in Michigan, and like I said, we work very closely with EGLE in every jurisdiction we are in to make sure we are doing it right.

Mr. Wilshaw: Any other questions for the petitioner?

Mr. Droze: Picking up on Mr. Long's questions about stormwater, The current site today, built in 1996, what measure for stormwater...does it have any type detention on site?

Mr. Miller: I do know they have a septic tank underneath part of that parking lot.

Mr. Droze: So, then assuming this is going to be a full reconstruction you would follow the Wayne County ordinance that would include peak flow, stormwater detention, water quality, like you mentioned?

Mr. Miller: Certainly, Mr. Uhazie, I am not sure if any of those plans made it over to you in that capacity yet?

Mr. Uhazie: I don't think so.

Mr. Miller: Yes, that is something that we get in front of early. It is something that we need to make sure we can do before we start spending money and getting too far down the road. That is a very important

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part of our due diligence process to make sure that we are going to be able to have the utilities here at this location. Stormwater is such an important one, especially here in Michigan.

Mr. Wilshaw: Anything else, Mr. Droze? Any other questions for our petitioner?

Mr. Caramagno: Sir, you started talking about capital improvements for this property for this building. What kind of money are we talking about?

Mr. Miller: Excuse me?

Mr. Caramagno: What kind of money are you talking about putting into this property to bring it up to standards?

Mr. Miller: I don't know if I can answer specifically. We do have Sheetz representatives, but if you are just looking for a construction estimate, I would say maybe in the \$8 – 10 million range.

Mr. Caramagno: \$10 million to demolish what is there, refurb it, and build something new?

Mr. Miller: That is correct. This is a bit of more expensive site for us because the soils are very poor. Historically, there used to be a house here, a really long time ago, early 1900's. There was a pool in the backyard at one point. It almost feels like what exists there was built on topsoil. We will be removing that topsoil and putting in some engineered fill to make sure everything is going to be up to standards and last a long time.

Mr. Caramagno: Thank you.

Mr. Wilshaw: Thank you, Mr. Caramagno. Any other questions for the petitioner? If there are no other questions, then we are ready for a motion. Folks, like I stated at the beginning of the meeting, we are not going to have any discussion because this item has been discussed at length at the prior meetings.

(Someone from the audience yelled out)

Mr. Wilshaw: Questions are the same thing as discussion. If I get into a question and answer we will be here for another half hour answering questions, but...

(Someone else yelling from the audience)

Mr. Wilshaw: If you have information you would like to submit, you can hand it to Ms. Reece and she will pass it on to us. We also make sure that all information that is given to us is part of the record for this meeting, which will go on to City Council. We did receive a number of emails. We did receive petitions. We did receive other information from a number of residents, which we appreciate. Those are all in our packet. We have had a chance to read all of those and they will be tied to this petition and continue on as it goes to City Council with either an approving or denying recommendation.

(Someone from audience yelling out)

Mr. Wilshaw: I can't answer that question for you. I can't answer that question for you. I'm not the person who gives the records. What is your question, sir? Please come forward, because we can't hear anybody else. What's your question?

Audience member: As a commission, do you have the right to allow people to make presentations, if you choose, as a group,

Mr. Wilshaw: On pending items, there is an opportunity, if the commission wishes to open the meeting to public comments. They can do that. It requires a unanimous vote by the Commission.

Same audience member: It seems to me that if you allow the petitioner to give additional information, you should also allow citizens to do the same.

Mr. Wilshaw: Sir, again, as I'm as I mentioned we had a public hearing on this item. We gave an opportunity for anyone who wishes to come to that meeting to come and speak on this item. There's been a sign at that location for a number of weeks announcing the dates of these meetings, and we did hear from a number of residents at our previous meeting. We also always accept communication by email or in writing at any time prior to this meeting. We've accepted it at this meeting and will continue to accept it after this meeting, as it moves on to City Council. Remember that we are making a recommendation to the City Council. This is not the final decision on this item. This is a recommendation. City Council will be making the final decision. So that's where you're...regardless of what happens, whether you're for or against it, or whether this gets approved or denied. That's where you want to follow this item onto. And you will have an opportunity at that meeting, at City Council, there will be a public hearing. You'll have an opportunity to speak. You'll have an opportunity to present

additional information. So there'll be many, many opportunities. I'm not going to take any more questions, because...

(Audience member yelling)

Mr. Wilshaw: Ma'am, please, ma'am, please, have a seat. I'm not taking any more questions. I told you that if I, if I take one question, we're going to end up here for a half an hour taking questions. Ma'am, please stop talking. Ma'am, this is not an opportunity for you to speak right now.

(Audience member yelling still)

Mr. Wilshaw: This is not a public hearing. This is not a public hearing.

(Audience member yelling) I spoke to the officer out there, and before I left, you said that October 22 would be a public hearing. This paper says that.

Mr. Wilshaw: You can look at the minutes and see what I said. They're word for word.

(Audience member yelling out) Let me submit what this says. This is what you guys sent to my home. It says, if I want to speak, anybody that wants to speak to the Planning Commission...

Mr. Wilshaw: Feel free to hand it to our clerk.

(Many audience members yelling out) You know, out of courtesy give us 10 minutes. Half these people didn't even know about the meeting the last time.

Mr. Wilshaw: I understand that, I understand that.

Audience member: And for us not to be able to say anything is not right when you send this to my home.

Mr. Wilshaw: We don't need a group coming down to the podium, because, again, I'm not going to be allowing speaking unless there's a majority or majority of people on the commission wishing to have public comments at this meeting. Is there anyone wishing to make that motion?

(Audience member once again yelling questions)

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Mr. Wilshaw: So, what was presented to us was a letter that was sent to one of the residents stating that a public hearing will take place on October 22 by the Planning Commission. That is incorrect, but that's what was...please don't speak over me.

Mr. Long: Hang on a minute.

Mr. Wilshaw: The agenda says pending item but because they sent out a letter stating that this is a public hearing, if the commission is willing to accept that, this is our mistake, and people came here with the intention or the thought that they would be able to speak, we could open up the floor to allowing public comment, but it will be limited to two minutes per person.

Mr. Long: Mr. Chairman, because we have heard these, I would be in favor of opening it up for one minute comments.

Mr. Wilshaw: Okay, is that acceptable to the rest of the commission?

Mr. Caramagno: That's due to the error in this, in this memo that was sent out to the residents, right?

Mr. Wilshaw: Correct, or perceived error, correct.

Mr. Caramagno: I'll support that.

Mr. Wilshaw: I think that'd be the correct thing to do. All right. Everyone okay with that? Alright, if you'd like to speak, please come forward to the podium. We need your name and address so we know who we're speaking to, and please restrict your comments to one minute.

Willard Lindley, Livonia resident. Professionally, I'm an attorney, and when Michigan required it, I was also a professional community planner. It was at that time when Michigan required a licensing exam, and they're pretty much similar. You open your comments this evening regarding zoning, and that was all you are going to be addressing. This is a zoning application from local, community, local retail to C-2 then with a variance for C-3. That's basically highway commercial in a C-2 zone, and that's authorized under the zoning ordinance. My concern here is that this is going directly from a very low-density development, recreation on the south side of Eight Mile and residential on the north side of Eight Mile. And I know you don't like to talk about what's on Eight Mile on the other side, you can't ignore it. It is residential. Livonia has adopted a land use plan and a zoning ordinance, and it's why our property

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values are where they are. They're very good, the zoning ordinance.

Ms. Dinero: That's time, sir.

Mr. Wilshaw: You had a minute.

Mr. Lindley: Are outstanding...

Mr. Wilshaw: Your time is done.

Mr. Lindley: You said I had two minutes.

Mr. Wilshaw: I said one minute.

Mr. Lindley: My introduction is a minute.

Mr. Wilshaw: I know it was

Mr. Lindley: Okay. May I submit something in writing?

Mr. Wilshaw: Yes, you may.

Mr. Lindley: From this point definitely, because this was at a public hearing. How do I do that? Please provide specific instructions, because I don't want that to get lost.

Mr. Wilshaw: You can send it to City Hall. You can send it to the Planning Department.

Mr. Lindley: Planning department, the Director of the Planning Department. Do I reference this as an item?

Mr. Wilshaw: Yes, you can. You just reference to the Eight Mile and Newburgh rezoning of this property.

Mr. Lindley: They'll know? Use the rezoning number in the application.

Mr. Wilshaw: You can, yes.. Thank you, sir.

Mr. Wilshaw: Good evening. Mr. Ralko.

Greg Ralko, 36116 Fairway Drive, Livonia, MI. I took the time since this last meeting; I took the time to go to every resident in Golf Ridge Villa. There are 118, I talked to 110. 95% of them said, no. Okay, if you're going to put something in an area, what's the first thing you

do. You talk to the people that are going to be most affected. We're going to be most affected. Okay? You talk about, you downplay runoff. It could be run off. That's where we get our water from to water our lawns, from those ponds. Let's not forget that. Okay? And the biggest thing here is that this is a quality of life for us. A quality of life issue. The people around our subdivision, and I might add Willow Woods, which is on the south side of Whispering Willows. They too, did a petition as well in their subdivision, and the same percentages came. 95% said no. So, if you ignore the people most affected, you're not doing your job.

Mr. Wilshaw: We are all set. Thank you. Good evening, sir.

Dave Hall, 37300 West Eight Mile. I live directly across this monstrosity that's going to propose to be built. Here. You can say what you want. This is a truck stop. They are all truck stops. I...my bedroom...I have a big, beautiful window in my bedroom. It's at the front of my house. 24/7, 365, I'm going to have light shining in my room. I will not be able to sleep. And this gentleman, as much as I respect him, he calls Whispering Willows a commercial property. No, it's not. It's recreational. This is not commercial. If it was, I'd love to have my property zoned commercial. It's just not going...this cannot happen. I brought reports from Farmington Hills. I went to the Freedom of Information Act. There's over 13 accidents on this corner just in Farmington Hills, at Farmington Hills, probably twice as many with Livonia. And I'm going to have Livonia's records.

Ms. Dinaro: Sir, that's time.

Mr. Hall: All right.

Mr. Wilshaw: Thank you, sir.

Mr. Hall: No thank you guys.

Michael Kenny, 35223 Pembroke, Livonia, MI. We live about a half mile from this site. It's very important that we take into account that Livonia is one of only two communities in the nation that has three golf courses owned by the city, and then we have Greenmead across the street from that. So that's a valuable property. That ought to be thought through by the planning committee in a way that improves that area, you know, as opposed to, as I understand, a 24-hour truck stop being located there. So, I urge the committee not to change the zoning. The zoning is there for very wise reasons, and we have valuable property related to that. If you know this is the kind of property where people would want to build

condominiums to overlook the golf course, as opposed to a 24 hour truck stop. So please take all that into account, and it impacts us dramatically. Thank you.

Mr. Wilshaw: Thank you for your comments.

David Sharp, (no address given). I've distributed to you a statement that I prepared. I understand a new subdivision is going to be built at the end of Lujan in Livonia, where a church exists. Now this is going to be another community that will be negatively affected by this possible decision, although Mr. Wilshaw made the assumption that it was going to pass, I hope he is wrong. But let me say, I thank you for allowing us to speak tonight. And I think in my statement, if you read it carefully, you will see how much I care about Livonia and how much I love the area where I live. And I hope you'll consider that I'm a 78 year old former teacher and master gardener who developed the gardens at the Finish Center, where many Livonia people/members also use our gardens. Thank you very much.

Mr. Wilshaw: Thank you, sir. Good evening. Ma'am.

Linda Allen, 37203 Whitetail Court, Farmington Hills, MI. It's a brand-new subdivision of 17 home sites just north of Eight Mile and Halstead. Key two questions. First of all, I guess this really put some thought with the Sheetz individuals. What's the marketing concept on volume of this place? What marketing studies were done was that presented to any of you on this Planning Commission, that's really food for thought, and we've been around all the communities, talking to people, going to doors, writing emails. I'm on the HOA of my subdivision, and in all honesty, no one's going to be going to Sheetz after 8pm or 9pm. This is a very low key community with a lot of upcoming families and retirees, and so I...that's why it's very important to think about really, what are those projections and who did marketing studies.

Mr. Wilshaw: All right, you're out of time. Ma'am, thank you for coming. Hello. Good evening. Ma'am,

Faye Numer, I'm here representing business members part of the MENA American Chamber of Commerce. Not only does this affect residents in your area, it also affects the businesses in the area. The entire supply chain is affected. This is cannibalizing revenue as well as misallocating the resources away from existing gas station owners who have lived in the area and contributed significantly to the region for many years. We're not opposed to

competition. What we're opposed to is unfair competition. The Sheetz business model, they enter an area, and they are able to sell 88 octane with their underground tanks. And that puts existing business owners at an automatic disadvantage, because they don't have the same capabilities. That is 0.50 to 0.60 cents less per gallon on average, compared to other business owners that are in the area. So automatically, they're put at a disadvantage. The gentleman that mentioned the underground tank leakage. That is an EPA concern. Not only is the EPA scrutinizing Sheetz, there's also scrutiny from the Equal Employment Commission with respect to their unethical hiring practices where...

Mr. Wilshaw: You're running out of time. Thank you for your comments, though I appreciate it.

Ms. Numer: But just take into consideration the impact of the local community as well as the residents.

Mr. Wilshaw: Got it. Thank you for your time. Thank you, ma'am.

Julianne Michaels Levine. I'm a resident in Halstead Hollow in Farmington Hills, just north east of the Eight Mile and Newburgh intersection, I would just like to offer...just driving through the area, and clearly I haven't studied it and but there is other properties out there. There's at Six Mile and 275, which is all commercial, open land space. There's property for sale at the Seven Mile and 275 interchange property for sale that are clearly in more commercial areas than the intersection. So, for Sheetz to consider this particular property versus some of the other areas that are in the commercial areas of those exits off the highway. That's only something that I would at least put forth, that maybe as a Planning Commission should be considered.

Mr. Wilshaw: We appreciate your comments. Thank you

Thomas Perno, 21154, Prestwick, Farmington Hills, MI. An eighth of a mile, just north of this location. I can sit on my deck, and I can hear the traffic on Eight Mile right now. I can hear when they stop, when they take off. I can hear the loud cars. You're going to put this business there that's going to bring transient, people coming off of the expressway with their trucks at night. When those air air brakes go on and off, I'm going to hear those. I won't be able to sleep. I have a beautiful home in Farmington Hills that I worked hard to get and you guys are going to put this kind of business next to my house? I don't think so.

Mr. Wilshaw: Thank you for your comments. Good evening, sir.

Ron Sumner, 20008 Parker, Livonia, MI. Yeah, a couple of things. I can't believe that they don't...they're not going to give them a D cell lane. If you drive down Eight Mile, should be called Eight Mile highway. People drive so fast through there, especially that intersection. So that's, that's one reason why I don't think you should go in there. Another one is that property, I believe is, isn't the...like the north half, like 12 to 15 feet higher than the south half. So, you try to get tanker trucks in there with a lot of traffic, especially in the wintertime. I think there could be some some accidents going on in there. And is the Meijer at Seven Mile and Farmington still going in?

Mr. Wilshaw: Yes.

Mr. Sumner: Are they going to build a gas station there?

Mr. Wilshaw: No.

Mr. Sumner: Okay. Thank you.

Mr. Wilshaw: Thank you, sir, sure. Yeah, certainly. That's perfectly okay. I

Johnny, I own the property, and I'm not selling the property to Sheetz, I am leasing it to them. They have confidence in what they're going to do, but I hear the word truck stop come up. They're not building a truck stop. They have a truck stop at Metro airport. Trucks will not fuel here, cannot fuel here, and cannot pull up and there's no room for them. And the same thing I hear from all the people, I took notes at last meeting. They all complain about traffic on Halsted northbound because it goes to two lanes. How is that a problem of Livonia. I drive down the road every single day on Newburgh Road, sometimes twice a day on Newburgh Road. I never get backed up. I never have a problem driving through. I drive on Eight Mile. Eight Mile is busy. Eight Mile got paved 100 years ago. Eight Mile was put there before it was a City of Livonia and it was a Township, and the people that bought homes there knew there was traffic when they bought those homes on Eight Mile Road. We're not putting in a superhighway. We're putting a gas station in a place where you can get a cup of coffee or a sandwich. Okay? We're not putting a Cedar Point there, bringing bus loads of kids from Indiana.

Mr. Wilshaw: Understood. Thank you, sir. Please have respect for other views. Obviously, the majority of people here, we know, are against it,

but other people are welcome to their opinions as well. Good evening.

Karen Sutherland, 37300 West Eight Mile, right across from the old Rite Aid. I lived there when that house was...it was a house when the doctor owned it with the pool behind it, when it was a two lane road that it's always been a traffic problem. I went out and I videoed a horrible traffic accident last week on the rainy day, at nine o'clock at night, the car was totaled. There's traffic there all the time, when it's not going this way it's coming into my driveway because it's all backed up. So, I constantly have cars in and out of my driveway, because I have a circle driveway. There is no room for more cars there and for them to come in and out of that what would be Sheetz. It would be horrible for my house and anybody else that's going on to Eight Mile and Halstead. He has a million dollar reason to sell that place or to lease that place, and if I wanted to, I would go commercial with mine, but it's not appropriate in the area, so I just want you to take that in consideration with traffic.

Mr. Wilshaw: Thank you for your comments. Okay, hi, good evening. Ma'am.

Patty, Riggio, 37204 Bretton Drive, Livonia, MI. President of the Willow Woods HOA. We submitted our all of our information of the 51 homes that I pounded the pavement to go talk to. Forty-five are adamantly against this. Also, you tabled this at the last meeting. My understanding was you had six people in in attendance, three were in favor, three were against. So, you had six, but now you only have five. How can you make a vote with less people?

Mr. Wilshaw: We have a quorum. We do have enough to make a vote. Thank you. Good evening, sir.

Jim Coterba, resident of Livonia, MI. The only thing I have to say is, as I watch these things happen, normally, by the time the proposal gets to this point, it just seems like the decision has been made, and we've personally, I feel like I'm wasting your time and mine at this point. It just when it gets to this point and people come before you, I don't get a sense that you listen. That's the first thing. My second point is the fact that where in Livonia City Charter does it state that we have to supply goods and services to Farmington or Farmington Hills? We have strip malls, we have gas stations, we have liquor stores. Farmington, Farmington Hills, next to their residential suburbs, you don't find gas stations. You don't find liquor stores, but they run down Newburgh at 50 and 55 miles an hour. They gather their goods, and then they go to where they

live, which they voted against this. I'd like you to think about it. Thank you

Mr. Wilshaw: Thank you. Appreciate your comments. I think there's one more person. Good evening, sir.

Orin. Mazoni, 37531, Dungarran Court, Northville, MI, which is actually Farmington Hills. We are kitty corner, Meadowbrook Hills from the development, other than the fact of all the things that have been brought up so far, the noise, the traffic and so on. This is a very unique corner for Livonia. Okay? If you drive down going east on Eight Mile, you're coming down that hill, you have Greenmead on the right, okay? It gives you a certain feeling, okay, about the area and about the city. You come back, turn right on there you're going back to Greenmead. You've got the golf course on the left. I mean, it's just the whole area is just a very, very nice, comfortable place, and I think it sets the mood for the whole city and why people live there. I've been at my address for 45 years, so we've seen a lot of changes there. I'm also a property owner in Livonia. It's a great city, and I hope you would just take a look at the esthetics that's going to happen if you put a gas station there.

Mr. Wilshaw: We understand. Thank you,

Mr. Long: Mr. Chairman, let's cut off public comment after this last person in line behind this gentleman,

Mr. Wilshaw: Definitely. Okay. Thank you. Good evening, sir.

Kenneth Moore, 20185 Ellen Drive, Livonia, MI. I'm just looking at the zoning change, not the particular person who's asking for it. If you were to change from C-1 to C-2 just going through the the Livonia PDF on this, I could see that if this business failed, you could put in pawn shops, payday lenders, auto paint shops, massage establishments, hotels, radio, TV antennas. I don't think we really want to change the zoning. Thank you.

Mr. Wilshaw: Thank you for your comments.

Colleen Powers. 20938, Deerfield, Farmington Hills, MI. I'd like to echo a lot of what Mr. Mazoni just spoke about. The character of that corner and what is there, and having the green space, if you will, of the golf course, and of the homes and the residential area around there, as well as all the beautiful property and historic nature of Greenmead, to put a gas station on that corner completely

changes the character of that area, and we have two gas stations a mile down the road at Eight and Haggerty, one at Seven and Farmington, and three in the other direction, down Eight Mile. Two at Eight and Farmington and one less than a mile away at Kroger at Gill. We are not lacking for gas stations in our area, and I would hate to see the city destroy the look of that area. I have two daughters in their 20s, married, looking to move in to homes around there. That's where they've been looking, but not if something like this is going to be in their backyard.

Mr. Wilshaw: Thank you, ma'am.

Mr. Wilshaw: We'll let you be the last person, and then we're done.

Claudia Lindley, 20218 Edgewood Avenue, Livonia, MI. We've been there for about 20 years, and I agree with everybody about changing from low density to high density is a really bad decision. We used to live in Dearborn Heights. We moved about 20 years ago, right off of Ford Road. Talk about high density. It's was so nice to move to Livonia to drive down Haggerty. I mean, Newburgh drive up around Eight Mile in front of the golf course, even the cemetery. I mean, it's beautiful, and Sheetz gas station with a big red sign on 275 I think it's really bad choice.

Mr. Wilshaw: Thank you for your comments. Appreciate that. All right, at this point, we close the comments. We do apologize to the residents who misunderstood that this was a pending item, hopefully at least giving another opportunity for some folks to speak on this item helps with that. We did hear all your comments from our previous meeting. We have heard your comments from tonight's meeting. We have numerous emails and petitions. So, we do have a lot of input from the residents, which we appreciate.

Mr. Long: Chair, if I may, the one gentleman spoke that by the time it gets to this point that it's a done deal, and nothing could be further from the truth. This is the first bite at the apple for this. This comes before us for a zoning issue. We're going to make a recommendation to City Council. There will be another public hearing at City Council where you will have the opportunity to speak, if you want. You will be able to speak with the City Council members about it, if you'd like to. From there it goes, if it gets approved, then it goes into a site plan process. It will come back to the Planning Commission for a site plan again. There will be a public hearing, and there will be another opportunity to speak on it. And then from here, it will go back to City Council again, so there are plenty of chances for you to discuss this with your

appointed commissions and your elected officials, all right. So, nothing could be further from the truth than that this is a done deal. Thank you. Thank you, Mr. Chair.

Mr. Wilshaw: Thank you, Mr. Long. Is there any other questions or comments from any of the commissioners? If not a motion would be in order.

On a motion by Droze, seconded by Dinaro, and adopted, it was

#10-55-2024 **RESOLVED**, That pursuant to a Public Hearing having been held by the City Planning Commission on October 22, 2024, Petition 2024-08-01-04 submitted by Skilken Gold under Section 13.15 of the Livonia Zoning Ordinance, as amended, requesting to rezone the property at 37355 Eight Mile Road, located on the southeast corner of Eight Mile Road and Newburgh Road in the Northwest ¼ of Section 5, from C-1 (Local Business District) to C-2 (General Business District), the Planning Commission does hereby recommend to the City Council that Petition 2024-08-01-04 be approved subject to the following conditions:

1. A zoning change to C-2 would be compatible and in harmony with the area's surrounding land uses and zoning.
2. The proposed C-2 zoning is consistent with the longstanding commercial use of the property.
3. The proposed C-2 zoning will allow the development of the subject property in a manner that is consistent with its size and location and will bring additional commercial services and retail to this part of the city.
4. The proposed zoning change represents a reasonable and logical plan for the subject property that adheres to sound land use planning principles.

FURTHER RESOLVED, That notice of the above hearing was given in accordance with the provisions of Section 13.15 of Livonia Zoning Ordinance, as amended.

A roll call vote on the foregoing resolution resulted in the following:

AYES:	Droze, Dinaro, Caramagno
NAYS:	Long, Wilshaw
ABSENT:	Bongero, Ventura
ABSTAIN:	None

Mr. Wilshaw, Chairman, declared the motion is carried and the foregoing resolution adopted.

Mr. Wilshaw: Is there any discussion on the motion? There's no discussion. I'm going to pass the gavel. Mr. Chair?

Mr. Long: Yes.

Mr. Wilshaw: I'd like to speak on this item. This is something I don't do very often in chairing meetings, but as a chairman, I'm not allowed to speak prior to votes, because I don't want to influence any of my fellow commissioners and making their decisions. So, I have passed the gavel, so I'm no longer responsible for this item, but a lot of comments have been made that residents have made, and I want to address a few of them, and also just give my personal view on to why I'm voting the way I am. It's no secret that I voted against this item at our prior meeting, and I intend to vote against it at this meeting. The reason for that is this is a rezoning of property from C-1 to C-2 as many folks in the audience stated, We are raising the intensity use of this property by doing that rezoning. At C-1 it's a local, what's called local zoning. It allows for light commercial uses. I would say it's probably the best way to describe it, similar to the ones that we've seen there previously. There is a light commercial use north of this property, which is the daycare center in Farmington Hills. The remainder of this intersection, when you look at it, is residential and public land. It's parks, it's a golf course and residential properties, including right at the corner, which is highly unusual at most corners throughout our city to have residential right at the corner. When I look at this area, it's a very unique area in the sense of having so much open space. There's hundreds of acres of open land in the vicinity. And I'm also old enough to remember when many areas of the city were like this. But this really exists nowhere else in Livonia at this point, and if I stand at this intersection, I can go one mile in almost any direction to get access to a gas station. I get access to a convenience store. I can get access to fast food restaurants, and many of those operate with extended hours, not necessarily 24 hours, but extended hours. I drive through the intersection of Eight Mile and Newburgh daily. I live right near there, and when I stop at that intersection, I say to myself, do I need gas at this corner? Do I need a convenience store at this corner. Do I need fast food dining at this corner, 24 hours a day? And the answer to that for me is no. So, rezoning the property to C-2 for those intended uses is increasing the intensity use, and I don't think it's it's appropriate at this location. I know Sheetz is very eager to find a location in our city that works for the community, for everyone

involved and for themselves, and I think there are some good locations around the area that could support this type of business that are either currently zoned to the appropriate zoning or are also available on the market at this time. Some maybe not available on the market at this time, but will be in the future. But whatever happens with this vote, I just want to remind the audience that we are making a recommendation to City Council. This is not the final step. As Mr. Long said, there's many more steps for this to go. So, for any residents interested in this, I do suggest that you continue to follow the process as it moves forward. City Council will hold their own public hearing. You'll be able to speak at that and they're ultimately going to make the decision on this. I do want to thank the petitioner for coming and giving his presentation tonight. I also want to thank the audience for being respectful through this meeting. And that's the end of my comment. Thank you. Mr. Chair.

Mr. Long: We have a motion on the table that has been supported. We have passed three to two, so this will go on to City Council with the recommending approval. And we wish you luck with your project. Thank you.

Mr. Wilshaw: Thank you for coming.

Mr. Long: I am going to pass the gavel back to Mr. Wilshaw to come to attend to the next. Thank you.

UNAPPROVED MINUTES

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MINUTES OF THE 1,220th PUBLIC HEARINGS AND REGULAR MEETING HELD BY THE CITY PLANNING COMMISSION OF THE CITY OF LIVONIA

On Tuesday, October 8, 2024, the City Planning Commission of the City of Livonia held its 1,220th Public Hearing and Regular Meetings in the Livonia City Hall, 33000 Civic Center Drive, Livonia, Michigan.

Mr. Ian Wilshaw, Chairman, called the meeting to order at 7 p.m.

Members present: David Bongero Sam Caramagno Glen Long
Peter Ventura Ian Wilshaw

Members absent: Wafa Dinaro Patrick Droze

Mr. Jacob Uhazie, Assistant Planning Director, and Stephanie Reece, Program Supervisor, 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 #5 Petition 2024-08-01-04 Sheetz

Mr. Caramagno, Secretary, announced the next item on the agenda, Petition 2024-08-01-04 submitted by Skilken Gold under Section 13.15 of the Livonia Zoning Ordinance, as amended, requesting to rezone the property at 37355 Eight Mile Road, located on the southeast corner of Eight Mile Road and Newburgh Road in the Northwest ¼ of Section 5, from C-1 (Local Business District) to C-2 (General Business District).

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Mr. Wilshaw: Alright, this item was tabled at our previous meeting. Is there a motion to remove this item from the table?

On a motion by Caramagno, seconded by Bongero, and unanimously adopted, it was

#10-51-2024 **RESOLVED**, that the City Planning commission on October 8, 2024, on Petition 2024-08-01-04 submitted by Skilken Gold under Section 13.15 of the Livonia Zoning Ordinance, as amended, requesting to rezone the property at 37355 Eight Mile Road, located on the southeast corner of Eight Mile Road and Newburgh Road in the Northwest ¼ of Section 5, from C-1 (Local Business District) to C-2 (General Business District), does hereby remove the item from the table

Mr. Wilshaw, Chairman, declared the motion is carried and the foregoing resolution adopted.

Mr. Wilshaw: The petitioner has sent us a letter requesting that this item be postponed or tabled to the October 22, 2024 meeting. Is that correct?

Mr. Uhazie: Correct.

Mr. Wilshaw: All right, so with that, we're going to respect, as we always do, the request of the petitioner to move this item to that date. Is someone willing to make a motion to table this item again?

On a motion by Caramagno, seconded by Bongero, and unanimously adopted, it was

#07-52-2018 **RESOLVED**, that the City Planning Commission does hereby recommend that Petition 2024-08-01-04 submitted by Skilken Gold under Section 13.15 of the Livonia Zoning Ordinance, as amended, requesting to rezone the property at 37355 Eight Mile Road, located on the southeast corner of Eight Mile Road and Newburgh Road in the Northwest ¼ of Section 5, from C-1 (Local Business District) to C-2 (General Business District), be tabled to October 22, 2024, as requested by the Petitioner in an email dated September 30, 2024.

Mr. Wilshaw, Chairman, declared the motion is carried and the foregoing resolution adopted.

UNAPPROVED MINUTES

1

MINUTES OF THE 1,219th PUBLIC HEARINGS AND REGULAR MEETING HELD BY THE CITY PLANNING COMMISSION OF THE CITY OF LIVONIA

On Tuesday, September 10, 2024, the City Planning Commission of the City of Livonia held its 1,219th Public Hearing and Regular Meetings in the Livonia City Hall, 33000 Civic Center Drive, Livonia, Michigan.

Mr. Ian Wilshaw, Chairman, called the meeting to order at 7 p.m.

Members present:	Wafa Dinaro	Sam Caramagno	Glen Long
	Peter Ventura	Ian Wilshaw	Patrick Droze

Members absent: David Bongero

Mr. Scott Miller, Planner IV, and Stephanie Reece, Program Supervisor, 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 2024-08-01-04

Sheetz

Mr. Caramagno, Secretary, announced the first item on the agenda, Petition 2024-08-01-04 submitted by Skilken Gold under Section 13.15 of the Livonia Zoning Ordinance, as amended, requesting to rezone the property at 37355 Eight Mile Road, located on the southeast corner of Eight Mile Road and Newburgh Road in the Northwest ¼ of Section 5, from C-1 (Local Business District) to C-2 (General Business District).

Mr. Miller: This rezoning change would facilitate the development of a Sheetz gas station, convenience store and restaurant. The subject property contains a two-story commercial building that is currently vacant. Due to the slope of the site, the building has a one-story appearance from Eight Mile Road. The site formerly contained a Rite Aid drug store facing Eight Mile Road and a Caddy Shack golf shop that faced Newburgh Road. The area to be rezoned measures approximately 79,880 square feet, which is 1.83 acres. You have 264 feet along Eight Mile Road by 285 feet along Newburgh Road. To the north, you have the City of Farmington Hills, to the west, across Newburgh Road, you have Greenmead Historical Park, which is zoned PL, and to the south and east, you have the Whispering Willows Golf Course, which is also zoned PL. Gas stations and drive through restaurants are treated as a waiver use in C-2 district. Thus, if the zoning change moves forward, the next step would be a review of site plan by the Planning Commission and City Council. The preliminary plan shows a one story, 6,139 square foot building near the middle of the site. Access would be provided by two driveways, one on Eight Mile Road and one on Newburgh Road. Along Eight Mile, the plans show six fuel pumps with the capacity to accommodate 12 vehicles. Parking for up to 55 cars are shown along the building's north, south and west sides. A drive through pickup window is shown on the south side of the building. The exterior of the building would be constructed out of brick and cast stone. Outside patios are shown along the north and east side of the building. That is the extent of this proposal and with that, Mr. Chairman, I can read out the departmental correspondence.

Mr. Wilshaw: Yes, please.

Mr. Miller: The first item is from the Engineering Division, dated August 22, 2024, 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 but would like to note the following items: 1. The subject parcel is assigned the address of #37355 Eight Mile Road. If additional addresses are required, the developer should contact this office after site plans have been approved. 2. The legal description included with the submitted drawings appears to be correct and should be used in conjunction with this project should the rezoning be approved. 3. The existing parcel is currently serviced by public sanitary sewer, water main and storm sewer. The submitted drawings do not include any information regarding proposed services to the buildings, but the*

design Engineers for the project have been in contact with this office and are aware of this Departments' requirements. We will review the proposed services once design drawings are submitted for permitting. 4. As noted, design calculations are not shown on the submitted drawings, but the project will be required to meet the Wayne County Stormwater Ordinance, including storm water detention requirements. 5. A traffic study for the intersection should be completed to determine if either of the access points would need to have restricted turn movements. Existing traffic backs up past the proposed access points during the evening rush hour, so turning movements from the site may need to be restricted. 6. No grading plans are included with the drawings, but we have concerns for the proposed parking lot and drive approach grades. The existing site has a large grade difference between the north and south side. The developer will need to make sure that pavement and walkway slopes do not exceed allowable maximums. 7. Any work within the floodplain will require permits from the Michigan Department of Environment, Great Lakes and Energy (EGLE). 8. Any work within the Eight Mile 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 next letter is from the Finance Department, dated August 28, 2024, which reads as follows: *"I have reviewed the addresses 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 correspondence is from the Treasurer's Department, dated September 6, 2024, which reads as follows: *"All taxes and water payments are current on this property at this time"* The letter is signed by Susie Nash, Treasurer. That is the extent of the correspondence.

Mr. Wilshaw: Okay, thank you, Mr. Miller, and we did receive a copy, I believe, in our packet, of the traffic study that was done for this property. Correct. Yes. Okay, so that satisfies one of those issues that was raised. Are there any questions for our planning staff?

Mr. Long: Scott, I missed the study meeting with the power outage, but so is the intent for them to bring that...they want...they have a drive through on the south side, are they intending to bring that back, end, back up to grade?

Mr. Miller: That question should be directed to the Petitioner.

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Mr. Long: I mean, I can ask them, but I didn't know, because I think it is pretty...

Mr. Miller: Yes, the site's grade looks problematic so, yeah, I'm curious how they're going to address it.

Mr. Long: I didn't know if we were aware of that yet. And, you know, I realized that this is just zoning at this point, but I think that's a significant factor in this. We'll have to ask the petitioner, I guess. Thank you. Thank you. Mr. Chair.

Mr. Wilshaw: Thank you, Mr. Long. Any other questions?

Mr. Droze: Thank you, Mr. Chair. One point of clarification or question. During our study session, we talked about the future land use for this particular parcel, and I don't think it was noted in the packet, but at the meeting, we discussed that the change of this parcel to a parks and community designation likely was an oversight, and it was intended to remain commercial. I just want to maybe...

Mr. Miller: That's correct, it was this classification before the Rite Aid. It was never changed after being rezoned to commercial...and remained Parks and Community.

Mr. Droze: Thank you.

Mr. Wilshaw: Thank you. Mr. Droze. Any other questions or comments to our planning staff? If not, I'll ask if the petitioners in our audience feel free to come forward. And again, I do want to iterate, as has already been mentioned, that the request before us tonight is for a rezoning request. So, the focus of our meeting tonight is going to be on the change of zoning from C-1 to C-2, which is a change in commercial zoning. There will be some discussion about the site plan and how this property is going to be used, but we're not going to be giving detailed review at this point of the building and building materials and so on. So, we're going to try to focus our comments mostly on the zoning. Is this an appropriate change of zoning. So, with that, good evening, sir, we'll ask you to start with your name and address.

Drew Miller, Skilken Gold Real Estate Development, 4270 Morris Road, Columbus, Ohio.

Mr. Wilshaw: Thank you for being here.

Mr. Miller: Thank you and good evening to the members of the commissioners and city staff. Thank you for your view of this project tonight. We were really happy to be back in front of you with this new location for proposed Sheetz. With us tonight is John Cecil from Wade Trim, who is our engineer, so if there is some concerns about the grade or anything revolving that or the traffic, we're happy to answer those questions. Alex Siwicki, with Sheetz, is here as well, and he's going to take over and explain a little bit more about what's proposed.

Mr. Wilshaw: Thank you,

Alex Siwicki, Sheetz, 39300 West 12 Mile Road, Farmington Hills, Michigan. I do have a PowerPoint presentation this evening. Mr. Miller, do you think it's possible to bring it up? Well, I'm going to give you the backstory on Sheetz, and then we'll get into the site specifics here.

Mr. Wilshaw: Mr. Siwicki, right before you start that, Scott, I don't know if you can turn the TV on this behind.

Mr. Miller: Sorry...hopefully I can.

Mr. Wilshaw: If it's not going to play nice, that's fine. But for some reason, I don't know, I tend to like to look over there. Okay, thanks. All right, go ahead. Mr. Siwicki.

Mr. Siwicki: Can you go to the next slide please. Okay, so Sheetz was founded in 1952 by Bob Sheetz in Altoona, Pennsylvania. Over 70 years later, now we are still family owned and operated with over 750 plus locations. We actually just opened one up this morning down in the Toledo area, so I've been traveling across state lines today. We originally started as a restaurant and carry out, and that very much holds true to our values today. As you can see on the next slide here, we are still family owned and operated. There are no franchises in our company. All our stores are 100% corporately owned, and they're run and managed by the Sheetz family. So about 16 people of this tree here that you see come and work in our business every single day. Moving on to the next slide. So, getting to that restaurant and carry out mentality, you can see that we offer a full kitchen. So, we call it MTO. You'll see that logo in some places, but it stands for made to order. You can get all sorts of combinations out of our kitchen. Last time we calculated, you can get 1.8

million different combinations out of our menu. So that means you can get...these are really bland recommendations, but you can get a breakfast sandwich at three in the afternoon, or you can get a salad at three in the morning. We also have Sheetz brothers coffee. You can get, again, you can make it any way you want it, but you can get your specialty coffee drinks. You can get smoothies; you can get milkshakes. You can get more. And then that convenience option. We have an incredible convenience offer in our stores, you can get all the snacks and drinks you can think of, and all the way down to all your grocery items, like bread, eggs and bacon. We have in that restaurant, we have 30 interior seats, and we have up to, or I shouldn't say up to, we have 16 seats outside so you can, you know, sit down after you order your food. You can eat. You can join a conversation with friends, send off an email, whatever it is that you need to do. You order that food on our touchpad menus, which you can see in the middle photo there. So, you literally walk up to the kiosk. Just click on the screen however you want to order, whatever you want to order, and we'll make it up for you. We have that same technology out at our drive throughs. So when you pull up to our drive through which this location is proposed to have, instead of talking to someone, you can actually touch on the screen what you would like to order, pull it around, and we hopefully will have it ready for you. So, getting into a little bit of our building. We do a state-of-the-art building. Our buildings are top notch, and they look incredible. So, we have four-sided architecture. That means our buildings look good from just about every angle you can look at them. We use full section brick and stone. We have great selection of architectural metals, great color palette. The buildings really do look awesome. Again, like I said, we also have that outdoor seating. You are a great PowerPoint clicker, you're on it. So, we take our local investment in benefits to the community seriously. So, this location is going to be around a ten million investment for us, a lot of which is the geotechnical concern, which we'll discuss the grading here in a minute. Much of our construction investment is spent locally, using local contractors, and all of our engineering work, like John over here, is spent on local firms. This location will have 30 to 35 jobs, primarily full-time employment, if an employee's availability allows, we always prefer to have full time. The tax assessments on this property will most certainly increase, which is always a plus. But then we also give back to the community. So, we have a few different charities at Sheetz. One of them is Sheetz for the kids. We also do donations to local food banks. So, this store, every single week is going to make donation to the local food bank. And we

also partner with Special Olympics at every level, so national, state and local. And then we also do plenty of donations to local schools and organizations, you know, drama guild, the T ball club, those type of things. So, getting into those employees, those 30 to 35 jobs, we really believe in being a top-notch employer. So, we offer full medical, dental, vision, paid time off, parental leave, employee assistance programs, retirement, bonuses, tuition reimbursement, and of course, you got to get your MTO while you're there, get your food and drink discount. To prove what a good employer we are, I just want to talk about some of the notable awards that we've won just this year. And one we actually just won this morning. I was able to sneak that in here a little bit. So great place to work. And People Magazine has recognized Sheetz as one of the top 100 companies to work for in the entire country. We actually ranked number nine this year, great place to work. And Fortune Magazine, which you'll recommend or recognize from the Fortune 500 also named Sheetz one of the top 100 companies to work for. And then Newsweek and also great places to work, named Sheetz the second-best retailer in the entire country to work for. We got that one this morning, number two. So, we're really pumped today. So enough about Sheetz culture. Let's talk about this site specifically. So, this is a request for a rezone from C-1 (Local business) to C-2 (General Business). So, 6,139 square foot building, convenience store, restaurant, gas station, located southeast corner of Eight Mile and Newburgh roads. So, there's a little map there. As the planner said earlier, it is 1.3 acres, and it has six fueling pumps with 12 stations and convenience drive thru. Another look at the elevations to see that full section, brick and stone, the colors and metals that we use. It's a really good-looking building. Here's the site plan. I know you've all seen it, and it's kind of small up on this screen, but we do have parking on all the sides the building down towards the south. There canopy kind of central to the north, and the two cuts onto the two public right of ways. I wanted to show you guys the sidewalk plan of the building. This is kind of a specific question that came up during the planning session, but this kind of shows where the seating is going to be, that there's plenty of room to maneuver around that seating. This is the floor plan. It's pretty busy inside our stores. We do offer a lot of things, so you guys will be able to take a look at that. If you guys haven't been to our first location in Michigan, down in Romulus, I would encourage you to do so that location is bigger than this one, but once you go in, you're going to get the same general feel. And finally, I have some photos of some real-life stores in operation. This is one of our canopy and building. This is on the south side of Columbus,

Ohio. Now, another one up close in person of our main entrance. That is our indoor seating area, and you can see the touch order screens a little bit better there. And that one is another view of the canopy and the building. And then finally, to the request, so a reminder, this request is for a rezone from C-1 (Local business) to C-2 (General business), and with that, I am here to answer your questions.

Mr. Wilshaw: All right, thank you. Let's see if we have any questions for you. Any questions from any of our commissioners at this point?

Mr. Droze: Included with our packet was a traffic study. And I guess as we look at rezoning this parcel, I think you've demonstrated that you can make your product work within the site. Is Sheetz in concurrence with the traffic study and prepared to make those recommendation, excuse me, recommended improvements as part of future project?

Mr. Siwicki: So, we're still looking at the traffic study and making sure feasibility of the construction recommendations by in general, yes, we agree with the recommendation.

Mr. Droze: And then my second question was regarding the stormwater management. So, there's, I think, rather significant erosion issues within the Whispering Willows golf course adjacent and I guess I'm just looking for concurrence that full compliance with Wayne County stormwater is intended.

Mr. Siwicki: Absolutely. They wouldn't issue a permit otherwise. Thank you.

Mr. Droze: Nothing further.

Mr. Wilshaw: Thank you. Mr. Droze. Any other questions for our petitioner?

Mr. Long: As I stated earlier, I'd like to understand what you're planning to do on the south side. And as a frequent visitor to Whispering Willows, I'm very concerned about that stormwater runoff as well.

Mr. Siwicki: Sure. So the soils there are quite bad. If you guys are familiar with the site, the building is kind of falling down. If you look at historical images from Google Earth, you can actually see the amount of concrete on the lot has become larger and larger over time. So, we're anticipating spending about one and a half million to remediate the geotechnical concern on site. So that will involve digging out all the bad soils, replacing them, bringing

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it up to a relatively flat grade, and that would include a retaining wall and special foundations for a building.

Mr. Wilshaw: Thank you. Mr. Long any other questions?

Mr. Ventura: I understand and you described, I thought very well at the study session, how you're going to bring big stone in there and build a site up so that it's stable when you put your building on top of it. However, the elevation at the entrance off of Newburgh Road can't change, correct? So, what will the grade difference be between the restaurant at the floor level of the restaurant and the elevation at the entrance?

Mr. Siwicki: John, you happen to have that answer? Our engineer will be able to answer that better.

John Cecil, Wade Trim, 1145 Wade Moon Street, Grosse Point Park, Michigan.
To answer that question, we understand that the entrance elevations are set. We've set the elevation of the building in such a manner that it's not going to be exceeding any sort of steep slopes. We're anticipating somewhere around a three and a half percent slope down through that entrance. Actually, that entrance comes into the site. So we are respecting those slopes. We are going to make that work and meet within tolerance. So we're expecting somewhere around a 3% - 4% slope coming from the Newburgh up into the site.

Mr. Ventura: In terms of feet.,

Mr. Cecil: it's probably about three feet, I don't know offhand, exactly.

Mr. Ventura: Three feet over what distance?

Mr. Cecil: Probably about 100.

Mr. Ventura: Alright. You. Thank you.

Mr. Wilshaw: Any other questions for our petitioners?

Mr. Caramagno: Mr. Siwicki, tell us, you know, we're entertaining rezoning this property, why is this a good location for a Sheetz store?

Mr. Siwicki: I mean, this is a great location. Let's put it that way. We take a lot of pride in our site selection. We look at traffic patterns. We look at consumer spending data. A whole lot of algorithms go

into that, and then also the gut feeling of our real estate personnel. You know, they have an excellent track record over the past 70 years of selecting awesome sites. This is going to serve a great demand in the community. Right in this general area, there's not too much comparable offer. So that's why we believe it's going to be a great spot.

Mr. Caramagno: Do you expect to pull majority of your business off of the local roads, the local neighborhoods, or do you expect to pull business off the highway? Or combination of all.

Mr. Siwicki: I would say a combination.

Mr. Wilshaw: Thank you. Mr. Caramagno. Any other questions? No other questions from any of the commissioners. Then I will go to our audience. I'm going to give our audience members a chance to speak. You just want to sit for a moment Mr. Siwicki. Folks in our audience are welcome to come forward to our podium, and again, we'll ask that you start with your name and address.

Dave Hall, 37300 West Eight Mile, Farmington Hills, Michigan. Thank you, Commissioners for listening to us tonight. I'm disagreeing with my friend from Sheetz. If you look at the traffic in that area, I live right on Eight Mile. This is going to be right across from my house. I have a picture of my house that I'd like to show everybody, and the front room, the front room to the right, that's my bedroom. So, I'm going to be getting lights.

Mr. Wilshaw: You can just pass it to Ms. Reece.

Mr. Hall: From their building all day and all night. This is 24/7, 365 days a year. The traffic is already unbearable there. At five o'clock I cannot get out of my driveway. This is going to cause major accidents. I mean, I've got kids that drive. We own a landscape business also that we run out of our house. We're grandfathered in from Farmington Hills. We've owned this company. We've owned the house for 40 years. I've owned this company for over 40 years. We started this thing when we were kids. So, I'm deathly afraid of my kids pulling out. They've got to go three lanes to make a left-hand turn, and now we got cars coming eastbound. I'm telling you this, there's going to be accidents. You can see the accidents already. There's an accident every other week on that corner. I mean, bad accidents. We hear it all the time. The light, the lighting in this, on these buildings, you can see how lit up they are, I mean, and this is going to be in my yard. I have no privacy. I'm going to have no privacy at all. 24/7,

365, days a year. It just...this cannot happen. We love to open our windows. We got windows, big, beautiful windows. We love opening them at night to get a breeze into our bedroom, and it's beautiful. I'm not going to be able to do that anymore. I'm going to be listening to riff raff and all kind of...they sell beer and wine here. I mean, three o'clock in the morning, the gentleman already said three o'clock in the morning they're going to be able to go in and get a salad. And this is...this is outrageous traffic. And you can call this what you want, but all I know about Sheetz, and I've read on them, this is a truck stop. This is a truck stop. And I-275 is one mile down the street. So, they cannot tell me that they're not going to have semis in this place. And then this eating deck we just found out about on the southeast side, or the east side of the building. That's again, this is what I got to deal with. It's already bad enough that I got to deal with Whispering Willows having a party there, and their band playing till midnight, that I have to deal with, and now I got to deal with this. I just hope you guys turn this down. I don't think we need it in our community. They can go to Five Mile and Haggerty or anywhere that's a big commercial area, they don't need to go here. So, my wife and I, we oppose this. Thank you very much.

Mr. Wilshaw: Thank you for your comments. We appreciate that. Good evening,

Ralph McNabb, 36372 Fairway, Livonia, MI. Thank you for this opportunity to speak. I've got a couple of copies of my presentation here, if you'd like to see. I wasn't able to print out too many. So tonight, I'd like to speak that as a crow fly, my house is 2,500 feet from this property across the golf course. But more importantly, it's downstream to this product, this property, and talk about that in just a second. The bottom line to this is, what's being proposed is taking a bundled business that is clearly permitted in a C-3 zoning classification and rezoning a piece of property that is clearly and appropriately and presently classified as C-1 by reclassifying it as a C-2 with justifying with waivers. Now let that sink in. Basically, allowing a business that belongs next to an expressway off ramp, not in a residential neighborhood. The topography of this property is horrendous. You've noted that here tonight, if you look off Eight Mile to the south, that property drops at least 20 feet. You look off to the east, it drops another 10 to 15, maybe 20 feet, and it's all into the golf course. But more importantly, it drops into a stream back there, and that stream connects up to the Bell branch, which also connects up to the Rouge River. If we get a spill, it's going to be devastating.

It goes through the golf course and runs past our houses, back through the golf course, back to the other golf course on Seven Mile and out through that property, a spill would be devastating. The wildlife that's in those ponds...if you pull up one of his slides up there that shows the property with the ponds...the golf course, you'll see clearly, nope, keep going. Thank you. There's one that is an aerial view that shows ponds. It's not this one, but there's another one that has ponds of the golf course, and they're right there next to it. It's within 20-30, feet to the to the east and the and the where the yellow line is at the bottom there, that's that creek that runs through there. But there's a pond. You can just see it squeaking out in the top left or right corner up there. There's a pond there. The traffic patterns. It's horrific. The egress problems on to Eight Mile and Newburgh is going to be a problem. If you see my slide there, number four, you can see the red arrows. Those are the problem points that you're going to see. You have to go across the different lanes, but it's not conducive at that point. That's why the drugstore didn't make it there, I'm sure. It's very difficult for people to get in and out and now you're talking about trying to get a large 12,000-gallon oil tanker in there. 96,000 pounds on that property. You're going to build it up, and then you're going to expect a 96,000-pound trailer full of fuel to pull in there to load up the fuel tanks. There's no good way to exit the property going west or going south, and it's not just at five o'clock in the afternoon. The undesirable noises and smells from a gas station, regardless of the wind directions, you can look at any one of those directions, north, south, east, west, or points in between. It's all residential. Any type of operation like this is best suited, not in a residential setting. The potential for contamination into the residential water system. There's a 40-inch water main that goes right into that corner from Eight Mile. There's waterworks just down the street there on Eight Mile. The main line for all of those residential properties comes through that corner. If anything happens to that water line, we're all screwed. The potential for crime, according to FBI statistics, in 2022 convenience stores and gas stations were the site of 14% of the robberies and 5% of violent crime. Shoplifting by juveniles, multiple customers in the stores create problems. Who wants this problem in their neighborhood, especially when the higher crime translates into higher insurance rates. There's also a 2020 study by the FBI that talks about the robberies, homicides, convenience stores, number four on the list of those crimes. Do we really need a gas station right there? Do we need that convenience store? The takeaway, there are no less than 18 gas stations within a 2.5-mile radius. I showed you the map

on the paper there. All of them are not in a residential area for good reasons. Let's be honest. You really want this in your neighborhood. Let's talk about the rezoning. Rezoning from C-1 to C-2. The major concern for this form of business at the proposed location are problems of noise, odor, lighting, fumes, dust, danger of fire, an explosion, crime and traffic. C1 is classified as a Local business district. C2 is General business district. C3 is Highway Services District. That's where this belongs. Somewhere that's C-3. The location chosen is definitely a C-1 classification. It's a monumental stretch to try to get it into C-2 and then give them all of these little waivers to allow it to be a C-2 when it really belongs in a C-3 with no waivers. So, find a spot that's a C-3 and forget the C-2. Leave our neighborhoods. One other thing on the zoning. This is considered a limited service and carry out restaurant. It says so on the on the sign out front, it says present zoning, and it says request change to G-2 general proposed limited, carry out limited. The word Limited is key here, correct? In your section, 6.51, of the zoning ordinance, 3160, it says limited service and carry out restaurants with or without outdoor dining areas are subject to several conditions. Number C is drive up window facilities are not allowed. They're prohibited. There is a drive-up window there. Who's kidding who? Is it limited or isn't it limited? Either get rid of the word or abide by it and abide by your own ordinances. My bottom line here, I would like to suggest that they move it somewhere else. There are many locations...Eight Mile and Haggerty. If they want to stay in Livonia, let's find them someplace else is more conducive. I don't know whether or not Seven Mile and Farmington is a good spot. There's a building that's been sitting there for God only whole knows...15 years empty, huge parking lot. Let them build there. Let them get their lights there. There's nobody that lives there. So, in conclusion, I thank you for your time. I thank you for consideration. I'm all for business. Don't misunderstand me, but that business does not belong on that corner. Let's find something that does. Thank you very much. Does anybody have any questions?

Mr. Wilshaw: I think we're good. Thank you, sir. Thank you. Good evening, sir. You're next.

David Sharp, 21462, Beauford Lane, Northville, MI. As a Master Gardener, I work in Greenmead. I'm a major contributor to Greenmead, and we're very close to Greenmead, as you might know. I'm a retired teacher. I taught in Detroit for 34 years. I founded the Finlandia community gardens at the Finnish center. Many of the people who use our gardens are from Livonia, and many of our

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members are from Livonia. And as a matter of fact, my wife and I go to church in Livonia. We've even owned a piece of property in Livonia. So, my heart is close to Livonia.

Mr. Wilshaw: We appreciate that.

Mr. Sharp: What I haven't heard from anybody tonight is the experience that I have with this community area now you perhaps not personally, but certainly the City of Livonia has created a most beautiful area in the southwestern part of your city. You have, as I mentioned, green meat. You have the golf course. It's an Environmental Center because we have, as was mentioned, ponds and many animals that are frequently seen in this area. We even have turkeys. You have an opportunity this evening to make an important decision. Your decision is hopefully going to be in keeping with the decisions that have come before to create this beautiful area. Now I want to address the gentleman from the Sheetz.

Mr. Wilshaw: Please speak to us, sir.

Mr. Sharp: I want you to know that I thought that was an outstanding presentation and a beautiful place. What a lovely place to buy food. But it's not belonging there. This should be placed in an area where there's noise and all of these other things that have been mentioned here, not in that location. You have a beautiful area. I don't know how many of you have ever been there. Maybe you all have been maybe often, but it is an extraordinarily nice area, and we're just going to be very, very sad if it has to change. I hope that you will, in keeping with your previous decisions, not allow these people to put this here. They're fine people, but they're in the wrong place, and I would appreciate that if you would consider it very seriously.

Mr. Wilshaw: Well, thank you for your comments. Mr. Sharp, thank you.

Mr. Wilshaw: Good evening.

Greg Ralko, 36116, Fairway Drive, Livonia, MI. We've been there about 10 years, and we like the area, but we don't like the traffic. That's a very big concern. We live close to Eight mile and traffic is, especially with the freeways, and they've been all diverting up and down Eight Mile because of the freeway work that's been done, I-275, of course. You know the I-696/I- 96 corridor as well. We it doesn't... we don't go a week without having at least one or two police officers parked right on our entrance to our subdivision,

you know, and pulling people over left and right. And I know there's police officer here, so I'm ratting them out, but give you a sense of the speed with which people are going through that area, and just the volatility of that area. That corner, I think you have to remember, when you're going northbound on Newburgh, it's one lane going northbound. The right lane is a turn only lane, and during the I-275 construction, we had so many people at that corner avoiding I-275 that they were proceeding through that intersection in both lanes and then getting over and there was plenty of accidents. I called the police. I said you can have a field day pulling people over, and they did. They were out there almost every day. So, the traffic is a big concern. I used to be in the fast-food industry years ago, and the biggest question that I have is, how many cars or how many customers. I mean...they've done all their research and they've done their projections. How many customers do they expect through there on a daily basis, on a weekend, during rush hour, during breakfast hours? How many people do they have? Because you have to factor that in when you're looking at your traffic assessments, they'll underestimate it, but I'm sure they're projections, and they're great people. I you know, I love that industry, and I think they're a noble family-owned operation. However, that's a very interesting thing to know, and it's a good thing to know, because you don't want to underestimate and then when they open up that day, that they have double the volume that they're representing, or that your traffic patterns and your thinking about traffic can sufficiently accommodate in that corner. That's a bad corner to begin with. Ralph mentioned the number of accidents, or the first individual that spoke tonight about the accidents, and there are plenty of accidents at that corner. It's kind of in the corner of the city, but it's accident prone. The other thing too is proximity to I-275, I think there's unequivocally...their projections in their revenue model has to accommodate or has to count the number of people that are going to come off I-275, to go there, because I don't think there's enough people in that area to support such a huge operation. Certainly, the fuel. But you've got fuel, as we said earlier, you have fuel. That's just at the Kroger on Eight mile, and then, of course, the brand-new Speedway, so there's enough fuel there. We don't need fuel, okay? And if that's part of their business model, then their banking on stealing customers from both of those corners. Then, I don't know if that's a good thing. Maybe they don't need fuel, or they do need to be closer to the proximity of the freeway. I don't know where the Romulus operation is, but I will almost bet that it's probably close to I-94 and it's a bigger operation, as you said, but it's probably close to

I-94 which for that reason, the designation, I believe it's a G-3 or C-3, close to proximity of a freeway is more conducive to what they're offering...meals at all times of day. Who wants those? Not the people that live there, not the families that live there, okay? And this is a family business, not the families living around there. They don't need food. 24/7. The people that need food, 24/7 that are passing through, passing through. And we don't want people passing through, okay? How do you protect your neighborhoods? Okay? You don't have people passing through, okay? And that's a big problem. And I hate to even venture the number of people, and the people where are they coming from? Where are your customers coming from? When you have proximity to neighborhoods, okay, I've requested...I've seen the cop outside our subdivision. I said, come here and park at three in the morning. Okay, that's when I want them there. And he says he doesn't work nights anymore. There was a mention of a couple other locations within the city. I'm not going to do their real estate for them. We know where they're at. We have the Jeffreys freeway coming through. There's probably places there, or this may just not be a good place for them, but it certainly is an encroachment on the people that live there, and the inconvenience of a convenience store is going to be placed on the residents that live near there. That's it's rich in irony, but that's exactly what's going to happen. I won't go west out of my sub. I'll go to Seven Mile. I'll go down Gill to Seven Mile. I'll avoid that corner. And there was a comment there about Rite Aid. I didn't shop at Rite Aid that often because of that reason, getting out of that that corner, and it's a blind left turn, if you're trying to go south, coming out of that corner, it's a blind left turn going south on Newburgh, because you're allowing...people let you cut in right and then there's someone plowing through on the left turn lane. That's the reality. I've seen it, and I've avoided accidents, but I've seen accidents. We don't need that. We don't need that. Not to mention the construction. This is going to be a huge inconvenience for everybody. For Greenmead, for everybody. How long is this thing going to take? How long is it going to take to build? He's got major geography, topography work to do. How long is this going to take? What's the traffic flow going to be for us living there during that period of time? It's not a good location. It's, you remember, over in front of Eight Mile and Haggerty, where they put that pod out in front of the bank, right on that one strip near the corner. And that lot always used to crack, and it was the soil underneath there, it wasn't conducive, or what they did, they didn't do it correctly. And forever that whole lot was...you had waves of cement, and it was unsafe, and it was just...they had to redo it so many times,

if you're trying to put a square peg in a round hole, and I think that's what they're trying to do here. That's just not a good place for it. Ideally, on a flat surface, you don't create a flat surface where there's not one and everything around it is exposed to the to the ramifications that could be created. I think we need to be aware of that. I think we really need to be aware of that. So, I'm adamantly opposed to it. Not opposed to Sheetz, you know, and family businesses and things like that. I applaud them, and it's always nice to have them come in, into our community, but this isn't the right place for it. And the last thing I'll add is, before I moved to where I am now. I used to live in Laurel Park II, and I was the president of the homeowner's association, and years ago, it probably predates most of you that sit on this committee, Schostak wanted to put in a development on that corner. And it was they wanted to put in a drive through, a Del Taco drive through. And I've got a lot of the people in our subdivision that were pretty upset about it because of the hours of operation and the lights and the noise and everything, and they didn't want it. And it was interesting, the committee said one thing. They said that area we don't have a drive thru. It's a nice area. We try to maintain the image, or whatever, of the particular plot of land in that area. This is no different. It's just two miles north and so I think that was pretty revealing when they said no to it, and then you got Qdoba, and then you got, you know, now the Walgreens there. And so that was a nice development. It was something that the people vocally wanted the Walgreens there, because that was the convenience that they liked, and it was for the people around that area. This isn't for us, okay, this isn't for us. It's for the people that are going to come off I-275, that are going to go up and down Eight Mile, and they're going to cause numerous accidents, but they're going to cause the inconvenience of this convenience store, and so I would be grateful that you say no to this, and I think it's in our best interest, and I appreciate you listening to me ramble on.

Mr. Wilshaw: We got it. Thank you. Thank you very much. Mr. Ralco. Good evening, ma'am.

Karen Hall, 37300 West Eight Mile Road, Farmington Hills, MI. My main concern is, I know we talked about the traffic and when they are doing construction, this whole time they were doing construction on Newburgh Road, I literally had people coming around my circle driveway all day long, in the evening, during the night. Of course, when they're coming up, the lights are shining into my bedroom. They're loud. I just think it's going to impact me the most with this being right across. I try to get out in the morning

to go to work at nine o'clock in the morning and come home at five, at nine o'clock in the morning, I wait through three lights to get out to Eight Mile, to take a left to go down to Farmington Road. I have to make sure that there's no cars coming, because I don't...one time, one of my sons got hit, got T-boned coming into my driveway. And I just, it's the traffic's horrible there. And I just want to make you aware that it's horrible and there. Other part I'm concerned about is the crime that when these people are open that late at night, how many people are gonna be coming up to my door? When Rite Aid was there, they came up to my door. When the house that used to be built there, they would come to my door to use my phone. It's for me, it's security, and that's gonna be all gone if this goes in there, because they somehow, they come up to my door. And I don't think anybody else wants people coming up to their wife's door at night, and that's a scary thing. So, I don't that's I really oppose this because of the traffic, the crime. If I go down to Eight Mile and Farmington to the Speedway, I'm walking out and there's people that are on drugs asking me for money, because they say they want to fill up their car instead of they take the money and they leave. Are they going to be coming up to my house asking me for money? That's what I really worry about that. So, I just want to make sure you know how bad the traffic is and the crime.

Mr. Wilshaw: We appreciate your comments. Thank you for bringing those to us. Thank you. Thank you. Be careful. Hi, good evening. Ma'am.

Linda Allen, 37203 Whitetail Court, Farmington Hills, MI. So, I'm about a good block distance down from Eight Mile and Newburgh, Eight Mile and Halstead, whatever you want to call it. I'm a strong supporter of Livonia. My husband and I lived in Livonia just about 30 years, raised our children, and our daughters went to Stevenson High School, so I know Livonia through and through. However, in conjunction with the previous speakers, I can't agree more with them on everything they said. I really don't want to regurgitate the same thing, but all of the items mentioned are so applicable. We've been in our brand-new built house for four and a half years, and I never imagined the traffic. Problem number one is the traffic problem at that intersection of Eight mile and Newburgh or Eight Mile and Halsted, however you want to name it, and like the resident's prior that have spoken, this is a major, major concern. There's always police present, there's always an accident. There are also people always rerouted, and you're taking five lanes off a Newburgh one, of course, is a right turn lane only on to Eight Mile, but

you're basically taking five lanes that includes a center lane, and you are going to two lanes. So already it's a major backup problem, like everyone else has mentioned. So, my that's one point to reiterate. Second point is I did a little bit of homework because there was a proposal by this organization for Five Mile and Newburgh. Read up about it. I don't know why it was denied and turned down, but it was denied for that location. I have very close friends that live in the Five Mile and Newburgh area, off of Hicks or by the Italian American banquet center all along there. And what they determined was, once again, we already have multiple gas stations. We don't need something like this. Well, just going five miles or three miles north isn't going to change the opinion of residents in the local area, whether they're from Northville, whether they're from Farmington Hills, or whether they're from Livonia, we all feel the same way. Now, I don't have any children at home anymore because they've grown up, but I know in my 17 home, small new subdivision, there are many brand-new families with a lot of small children. I don't think it's safe to have this locate, this location. I respect what they want to do, but as the previous people have said, it's just not the new home for Sheetz. They need to find another location, more along the lines of the C-3 zoning. The other thing is that... has anybody considered okay... Right on the corner of Eight Mile and Halstead is a daycare center all those little children, okay? Now I'm not saying accidents are going to happen. There is a fence and all that, but we all know the unexpected does happen. There are children out several times a day on recess playing with all the little Gymboree articles outside. I know if I was a parent dropping off my child, I definitely wouldn't want to see that across the street. So, I'm sure that Child Time and that business are not too thrilled either. I don't know if they've entertained any input to you guys, but I would think that's not a plus for them. We moved from our home in Livonia, which was just two and a half miles away, we were off of Seven Mile by Fox Creek Golf Course to Farmington Hills. And the reason why we stayed there is because we love the area. We love what it's about. We love the...my husband golf's constantly at Whispering Willows. You know, it's just a nice, calm, non-noisy area. We all want it to stay that way. We don't want all this. And I determine if you can get this at 3pm and this at 3am like the other people said, we don't need a 24/7 truck stop service at Eight Mile and Newburgh. I'm sorry. It makes absolutely no sense at all, and I think it's actually going to really bring down the Livonia community and the communities that butt up against Livonia. I just don't think it's going to be a nice look, even though the, like everyone said, the building is gorgeous. I mean, it's

absolutely stunning, but not the right location. So, I am very much opposed to this. I didn't move to that location in Farmington Hills, with all this, these beautiful subdivisions and these monumental homes across the street with the rod iron gates and everything in the beauty to have that thing bring down the entire surrounding area. I want to commend the gentleman that really methodically went through everything. I think his name was Ralph. Yeah, anyway, so he did an outstanding job, and he did it very well, and everything he said was exactly correct. And the neighbors are very, very concerned, because we've all talked in the last week amongst ourselves. So, thank you very much for hearing me, and I hope you deeply consider what all of these residents are saying.

Mr. Wilshaw: We appreciate your comments coming to our meeting. Thank you. Thank you. Good evening, sir.

Jerry Allen, 37203 Whitetail Court, Farmington Hills, MI. I live behind Child Time. I really appreciate what the other speakers in opposition to this have had to say and I fully agree with them. I won't reiterate all of that, but I will point out a few things. I ride my bike practically every day through that Rite Aid parking lot and I can tell you that trying to cross the crosswalk there, even walking my bike across, is taking my life in my own hands. It's dangerous. The other thing to consider that my wife brought up was about Child Time. Our daughters went there years ago. But when the gentleman from Sheetz is talking about doing a traffic study, the traffic flows there vary depending on the seasonality. I know some of you were saying that you golf at Whispering Willows like I do. In the wintertime it isn't too bad, you're not golfing in the snow. Now it's bad, okay? And you've got traffic going in and out of there. You've got that right lane where people decide that they're going to go into Whispering Willows, hitting northbound, then others are going to Eight Mile. You've also got the situation where you've got different events going on at Greenmead at different times of the year. They had a Scottish festival there a couple of weeks ago. You've got in and out traffic going there, primarily during the spring, summer and fall, maybe even in the winter, sometimes. The other issue with Child Time is that the fact that when you're going northbound, those four lanes with the middle turn lane, which is kind of like four and a half five lanes, those whittle down to a two-lane road, because Newburgh becomes Halstead. Well in the mornings and the afternoons, and sometimes even around lunchtime, if you've got kindergarteners, people are stopping to pull in, heading northbound, and so you've got this situation where the

traffic backs up due to that. You've got kids, keep in mind, Child Time has got their own busses, so you got those busses going on. The other thing is, God forbid, going back to what Ralph was saying earlier, if they were to have some sort of a leak or, God forbid, an explosion, I don't think any of you want to be having to explain why numerous injuries and possibly deaths of young children due to something like that, and with a 19,000 gallon tanker that's coming down Eight Mile road off of the hill from the top of Greenmead, just imagine if somebody goes into the rear end of that thing. As other people have said, we have a speeding issue on Eight Mile Road, even on Halstead Road, because it's such a long stretch a straight road, I just think that that's a risk that's not worth taking. I've been in Sheetz before. I used to work out in the Pittsburgh area. I like their stores; I like their food. I like the convenience. But to reiterate with other people who said here, this is, this is the right company for Livonia, but the wrong location. Thank you very much.

Mr. Wilshaw: Thank you for your comments. Mr. Allen, I think there's one more Gallico. Go forward. Anyone else wishing to speak. Please be ready. Good evening.

Kathy McRae. 21126 Center Farm, Northville, MI. I would like to say that, yeah, a bunch of us are from Farmington, but we probably shop in Livonia, more, a lot of us, than Farmington, just because I go down to Six and Newburgh all the time. So, I mean, we support your city anyway. Again, I agree with everything everybody said so succinctly and eloquently. And I would just like to add two things. You know, early on, one of the earlier speakers, either the Sheetz or one of these two gentlemen said, you know, , we'll limit traffic turning out of the station onto the main roads. We'll put a no left turn sign there. And that's a joke. I mean, there's one down at the Speedway at Seven and Newburgh, and people turn left out onto Newburgh all the time out of there. Who's going to police that? I mean, it's literally an accident waiting to happen. I mean, no one pays attention to red lights anymore, let alone a no left turn sign and then the other thing is, another factor that hasn't been mentioned yet, is litter. I mean, those places are going to have a lot of litter floating around the parking lot, and it's all going to blow down into the ponds on the golf course. You know, people can't even put their trash in a trash can. They just have to open the door and plop it down on the pavement. So, it's going to get pretty gross, pretty fast. I know you can tell me, oh, we'll have someone go clean up the, you know, the area, but I just don't see it happening. And just in general, it's, it's a jarring proposition. That's the only word I can

think of, is jarring. You're going from this one story, kind of laid-back drugstore to this building with red and it's got a canopy, and it's just going to be too much for the again, too much for that site. It's going to be, the only way I can think of, is jarring. So that's it for me. But thank you for listening to me.

Mr. Wilshaw: Appreciate your comments. We appreciate that. I There is another gentleman coming forward. Good evening, sir.

Rocky Fowler, 37250 West Eight M, Farmington Hills, MI. I am pretty much right across the street from the proposed location, really. I share the sentiments of all the previous speakers as well. So, to spare you of any of that redundancy, but I would like that those are very important statements and comments. I'm a real estate agent with Keller Williams. My office is at Haggerty between Eight and Nine. I do feel that's something that, I don't know, if that was brought up or not. You know, it's nothing against Sheetz. I think that it looks like a beautiful place. It's just the wrong location. And I think for a lot of reasons, I don't think the proper traffic situation was assessed thoroughly enough the previous people, again, not to be redundant, but they've made up some, you know, or made some very important points on that. The accidents that I see it... firsthand, you know, I'm on almost an acre right there, and I thought that it would be the great location. The only thing, you know, the noise with Eight Mile, I know that we'll have to...that's already there, but this is going to add to that, like so many of the other residents have invested in landscape and different things to adjust to that, but this is something that I don't think we have the capacity for. I will say no one can, you know, predict the future and to certainty say that it's going to bring down our property value. I think the homeowners would concur, though, that would factor in. I think too, I would just implore you all to consider what our parents and grandparents said over the years. Nothing good happens after midnight. And I'm not I'm not saying this, you know, lightly either, you know, I have kids, plan on having grandkids. Have been there for 20 years. And I don't think anything good happens after midnight either. When it comes to, I don't know if there's proposed liquor sale there. I assume there would be, but, you know, 24 hours. And so, you know, as a gentleman from Sheetz mentioned in the very beginning, he prefaced with, you know, the contributions to the, you know, kids and Special Olympics, I believe, or the, you know, that's admirable, but on a very immediate level, that's my main concern, is the kids. And I would implore you to consider that when you make your choice. That's really the main, again, all my sentiments have been

mentioned. That's really the big thing though. You know your traffic, but not just the traffic, but the fact that it's 24 hours, it's the wrong place. It really is. I don't think it's good for the city. It's good for any of the residents around either. So, I appreciate you coming out and speaking. Thank you so much for your consideration.

Mr. Wilshaw: Thank you for your comments. We have a couple people left. Please come forward. Good evening, ma'am,

Julianne Levine, 37284, Rosedale, Farmington Hills, MI. Clearly, so many important points have been made this evening. Clearly, they have a business model that's excellent, and it goes to whether this is really the right location for that. It's a very pastoral feel to that intersection. And I think we all understand, we don't want to lose that feel with you know the investment Greenmead Livonia, the City of Livonia has put into green meat, what they've put into Whispering Willow the Farmington Hills on the north side, the neighborhoods that have been developed. There are beautiful neighborhoods. I would just add a couple additional points. I don't know if you've talked to the City of Northville, but I moved into that area. I lived at nine in Halstead for 10 years prior before moving there. And I moved there in 2011 Halsted hollow neighborhood, and the lot where Linda and Jerry have moved into, and the development there, the residential neighborhood there, when that 10 acre lot went up for sale, an assisted living facility wanted to come in and redevelop it, and it what went to rezoning before Farmington Hills City Council and all the surrounding neighborhoods, because we were all notified. See, we were not notified. This is needs to be understood. Your requirements of notification to the neighborhoods was very limited, given the distance, sure, and there's a lot of neighborhood, we were all notified when the rezoning was going to occur, and all the surrounding neighborhoods, Goldstream, Applebrook, Meadowbrook Hills, Halstead Hollow, all came before the City of Farmington Hills Council and explain how we wanted to keep this area a residential area, and the importance to that and the community that we had built there and invested in. So, I just want to give you that background information, and it needs to be considered because a lot of people in that area haven't been notified. We only found out in the last week or so, and we have been networking with our neighborhood associations to make people aware of that. So there would probably be more people here this evening than what you have if those neighborhoods in the Farmington hillside had received the notification.

Mr. Wilshaw: Well, I appreciate you coming and making your comments.

Ms. Levine: I also want to add that I think it's been brought out a 24-hour site since. I've lived in that corner in that intersection, and I shop at the Haggerty and Eight Mile area. You know, there's the large Meijer store. It is well known and documented that having the 24 hour, which they've cut back since COVID, but having that 24 hour clearly became a crime scene for the City of Northville. So, I would ask you to also speak to them about the issues of having a 24-hour location open in that area and people have spoken to their concerns about crime.

Mr. Wilshaw: I appreciate that. Thank you. Good evening, sir.

John Eliav, owner of Rite-Aid on the proposed site. I've noticed more than a few people have referred to it as a truck stop, and the Sheetz at Metro airport is a gas station and a truck stop. There is truck fueling facility in the back and regular motor vehicles in the front. This location will not have a truck stop. There will be no fueling for trucks. It will be strictly for people who live there. And I had some people mentioned the Rite-Aid failed because of getting in and out. The Rite-Air was there for 25 years, and they had trouble with their opioid lawsuits over a billion dollars nationwide, and they closed all their stores in Michigan, not just this one corner and the Sheetz proposal, if you look at the drawing, they're using the two far driveways from the corner. They're eliminating the driveway closest to the corner, so they wrap the corner, making it a lot safer for traffic coming in and out of the site. Also, one neighbor mentioned he's going to have lights coming at night. I have 40 lights tall, gigantic lights on that property, and I keep them on all night long. Now that Rite-Aid closed, they're off. But for all the years I had the property, those lights are on all night for safety, and they're not proposing any more lights at that site than we have, and probably less. It's a good location but the building is old. It's over 30 years old. It needs something new, and I was impressed with Sheetz when I was out of town and I drove to the new one just the other day with the open and I loved it was beautiful, and they were busy, but they were not nothing like a Chick fil A, where cars line up and Cost traffic their drive through does? I didn't see one car while I was there. Most people got their gas, grabbed a bite to eat, either pre made food, which I did, and left, or they got something made to order. And I liked the fact I went in the restrooms were clean and they were huge. They're not like a typical gas station. And if you're coming out of Greenmead

during the event, I support Greenmead also, and you want to stop in and use the restroom, they're clean and they're large, and they take care of them. You don't let them run down. The gas station by my house is you're afraid to walk into the bathroom. It's awful as far as food goes. My great aunt lives a mile away. My mom just a little further. My mom there's 90 this year. We have 24-hour care for both of them in their home, and one of my caregivers is a vegetarian. I like the fact that I get a salad at three in the morning or two in the morning and bring it over to her while she's taking care of my mom. Not everybody lives a nine to five life. People have different jobs. People have different requirements. I don't see it as a high crime risk. They have cameras, they have security. They're virtually cashless now. They're a well-run company, and I think getting rid of that old building would do the site justice and put a nice new, modern building there, and I don't think it would impact the area. And if they're concerned about traffic, they should contact MDOT and see about getting the light signals changed where you have arrows for turning and give people more time to turn to reduce the traffic backup. That's all I have to say. Thank you.

Mr. Wilshaw: Well, thank you for your comments. Appreciate you coming down. I think that covers all the comments from our audience. We did get extensive comments from our audience, and I do appreciate everyone coming forward and speaking. We do give the petitioner the last word to speak if there's anything that you'd like to say based on anything that you've heard, again, we don't want to create a debate back and forth, but we just want to see if there's anything you want to address.

Mr. Siwicki: Yeah, absolutely. Thank you everyone in the community for coming out. That actually means quite a bit to Sheetz. So, Sheetz, if you've noticed, I've been writing this whole time. We take those comments and we I guess I'm kind of speaking through the chair here to the audience, and we look at our site plan and see if there's things that we can do to help mitigate our neighbor's concerns. So, most of you now have my contact information. If you didn't get it, please find me here before the conclusion of the meeting, and I'd love to speak with you. But some of the things that we can go over here, and we'll just touch on them very lightly, because this is a rezoning request, and we'll talk more specifically during site plan review. So, we do have a traffic study on file with you all, and it involves certain recommendations. We believe that the intersection will actually function better after the modifications to the timing signal, as the traffic study suggests. Lighting, we meet the city's ordinance. All

of our lighting cannot surpass the property boundaries, so all of our lights are down, lighting appropriately shielded, and we meet the foot candle requirements. So, our stations are typically very mellow when it comes to their lighting, compared to maybe our counterparts that are on the on the freeway. Bringing me to the freeway item, this is not a truck stop. So, there are some notable differences between a regular C-store that we're proposing here and a truck stop. Truck stops are much larger in acreage. They can accommodate tractor trailers being able to turn appropriately through the site. Have places to park that sort of thing. They're simply not the room here. If a tractor trailer came on our site, or forbid, more than one, it would clog up our entire operation, and we would have to ask them to leave. They also wouldn't want to come on our site. So, the diesel that we offer at this particular location for smaller trucks and stuff like that, the pumps only pump about six gallons per minute. At a truck stop, it's about 30 gallons per minute. So, at a truck stop, a tractor trailer can fill up in about five minutes. On this proposed location, it would take them a half hour. They simply just do not want to come to this type of location. Pardon me, while I go through my notes here, construction sequencing was brought up by a few members of the community, it depends on the time of year how long construction will take. We are very quick at construction. I actually started at Sheetz in our construction department, and on average, it takes us about five months to build one of these things. It's remarkably fast for the scale of the operation. Alcohol. Alcohol is not permitted for our use within the City of Livonia, so we will not be serving alcohol here. And I think those are some of the main points. Again, I've given my contact info to all the neighbors, and I would love to speak with them and see what we can do to make sure that this is a site that fits in within the character their community. Any questions for me?

Mr. Wilshaw: Thank you, Mr. Siwicki. I appreciate you just addressing some of those larger bullet points that we heard repeatedly from some of the people who spoke. You seem to encapsulate that really well and at least address some of those. Let's see if there's any questions from any of our commissioners for you. Are there any questions for the petitioner based on anything that we've heard so far before we close the public hearing?

Mr. Ventura: Can you tell us whether or not you'd be willing to limit your hours of operation to something less than 24 hours?

Mr. Siwicki: So, all Sheetz locations operate 24/7 365, we have for many, many decades. It's something that's kind of ingrained in our culture. We offer the ultimate convenience for our consumer, and it is for those types of folks that maybe don't live the 9-5 lifestyle, as the previous speaker said. So at this time, we would really like to have 24/7 in Livonia.

Mr. Ventura: So I take that as a no.

Mr. Siwicki: That is accurate, sir.

Mr. Ventura: Great. Thank you.

Mr. Wilshaw: Thank you, Mr. Ventura. Any other questions for our petitioner? If not, I will close the public hearing. And thank you, Mr. Siwicki, for your presentation, and a motion would be in order.

On a motion by Droze, seconded by Dinaro, it was:

RESOLVED, That the City Planning Commission does hereby recommend to the City Council that Petition 2024-08-01-04 submitted by Skilken Gold under Section 13.15 of the Livonia Zoning Ordinance, as amended, requesting to rezone the property at 37355 Eight Mile Road, located on the southeast corner of Eight Mile Road and Newburgh Road in the Northwest ¼ of Section 5, from C-1 (Local Business District) to C-2 (General Business District), be approved subject to the following conditions:

1. A zoning change to C-2 would be compatible and in harmony with the area's surrounding land uses and zoning.
2. The proposed C-2 zoning is consistent with the longstanding commercial use of the property.
3. The proposed C-2 zoning will allow the development of the subject property in a manner that is consistent with its size and location and will bring additional commercial services and retail to this part of the city.
4. The proposed zoning change represents a reasonable and logical plan for the subject property that adheres to sound land use planning principles.

Approving motion made by Droze.
The motion failed due to lack of majority.

A roll call vote on the foregoing resolution resulted in the following:

AYES: Droze, Dinaro, Caramagno
NAYS: Long, Ventura, Wilshaw
ABSENT: Bongero
ABSTAIN: None

Mr. Wilshaw: Would someone like to offer an alternative resolution?

On a motion by Ventura, seconded by Long, it was:

RESOLVED, That the City Planning Commission does hereby recommend to the City Council that Petition 2024-08-01-04 submitted by Skilken Gold under Section 13.15 of the Livonia Zoning Ordinance, as amended, requesting to rezone the property at 37355 Eight Mile Road, located on the southeast corner of Eight Mile Road and Newburgh Road in the Northwest $\frac{1}{4}$ of Section 5, from C-1 (Local Business District) to C-2 (General Business District), be denied for the following reasons:

1. The proposed zoning contradicts the Future Land Use Map, which designates the site as Parks and Community.
2. That the proposed change of zoning is inconsistent with adjacent zoning districts in the area.
3. That the proposed change of zoning is inconsistent with the established pattern of the development and would adversely alter the character of the area.
4. That the proposed change of zoning is not needed to develop the property.

FURTHER RESOLVED, that notice of the above hearing was given in accordance with the provisions of Section 13.13 and 13.15 of the Livonia Zoning Ordinance, as amended.

Denying motion made by Ventura.

The motion failed due to lack of majority.

A roll call vote on the foregoing resolution resulted in the following:

AYES: Long, Ventura, Wilshaw
NAYS: Droze, Dinaro, Caramagno
ABSENT: Bongero

ABSTAIN: None

Mr. Wilshaw: Is there any discussion?

Mr. Droze: The only point would be that I think point one of that resolution. Prior discussion earlier is that the future land use map may have been done in error, that it was to remain a commercial land use so that's my only point to make on that.

Mr. Wilshaw: That's a fair point. Thank you. Any other discussion on the motion?

Mr. Ventura: I respond to Mr. Droze and point out that planning has acknowledged that they would leave it C-1, that does not mean that planning would have mandated a change to C-2.

Mr. Wilshaw: Thank you, Mr. Ventura. Any other comments on this motion?

Mr. Wilshaw: Motion of the vote is split. Gee wish Mr. Bongero was here tonight. All right, we have a stalemate. Is anybody willing to make a motion to table this to a future date.

Mr. Long: Mr. Chair? Is it possible that we could just send this along to city council without a recommendation either way.

Mr. Wilshaw: This is a rezoning request. Mr. Miller.

Mr. Miller: I've never heard of that.

Mr. Wilshaw: I believe we have to have some sort of definitive ruling for the City Council to consider.

Mr. Miller: You have to recommend.

Mr. Wilshaw: So, we may need to wait till Mr. Bongero gets back and vote then. Anybody would be willing to make a tabling resolution? That would be the only other alternative.

Ms. Dinero: I'll make the resolution to table this until our next meeting in October.

Mr. Wilshaw: Is that correct? So, our first meeting in October. That'll be our next regular scheduled meeting. Mr. Long, you had a comment you wanted to make?

Mr. Long: I would like to hear from the people with Sheetz about their timetable and the act of tabling this, since we don't have a scheduled meeting for another month.

Mr. Wilshaw: Ms. Dinaro, typically, there's no discussion on tabling motions. We haven't had support for that yet. Are you willing to...

Ms. Dinaro: I'm willing to pull it.

Ow To hold that for just a moment. Thank you, Mr. Siwicki, if this was to be delayed for upwards of a month, how does that factor into your plans?

Mr. Siwicki: You know, it's not ideal for us. It is something that we can work with. If we may take a moment, I would like to address any concerns that any of the commissioners might have, more succinctly. Is that an opportunity to answer any more questions you all might have?

Mr. Wilshaw: I think we've cut we've had as many opportunities as we can. I do appreciate you offering that, though. We're at the point where we need to make our decision, I think.

Mr. Siwicki: Great. I understand.

Mr. Wilshaw: Thank you for offering that. Ms. Dinaro, are you willing to put that motion back on the table?

Ms. Dinaro: Yep, motion to table.

On a motion by Dinaro, seconded by Long, and unanimously adopted, it was

#09-45-2024 **RESOLVED**, That pursuant to a Public Hearing having been held by the City Planning Commission on September 10, 2024, on Petition 2024-08-01-04 submitted by Skilken Gold under Section 13.15 of the Livonia Zoning Ordinance, as amended, requesting to rezone the property at 37355 Eight Mile Road, located on the southeast corner of Eight Mile Road and Newburgh Road in the Northwest ¼ of Section 5, from C-1 (Local Business District) to C-2 (General Business District), the Planning Commission does hereby table this item to the Public Hearing on October 8, 2024.

FURTHER RESOLVED, that notice of the above hearing was given in accordance with the provisions of Section 13.13 and 13.15 of the Livonia Zoning Ordinance, as amended.

Mr. Wilshaw: This item has been tabled to our next regular meeting where we will consider it again. There will be limited discussion at that meeting.

Mr. Wilshaw, Chairman, declared the motion is carried and the foregoing resolution adopted.

(Member of the audience) Are we going to be able to talk to Mr. Bongero? Is he going to be able to hear our concerns.

Mr. Wilshaw: He will have the full record everything that was said today is fully recorded, word for word in our minutes, and he'll have an opportunity to review those.

(Same member) I get that, but I want him to hear the passion in our voice.

Mr. Wilshaw: This is also videotaped too and broadcast, so he can also watch it as well. But yeah, at our next meeting, it will be a pending item, because it's one that we've already had a public hearing on, so there will not be open discussion, so we're not going to have a full comment period again, but Mr. Bongero will hopefully be there, and we'll be able to make a decision. Thank you. Thank you all for coming this evening.

(Another member of audience): So, how do we know what the result of Mr. Bongero's input is? If we're all not allowed to come to the...

Mr. Wilshaw: Ma'am, you're, you are welcome to come to the meeting. These are all open meetings, and that date will be, October 8. October 8. So that's the date, 7pm downstairs.

Mr. Long: You may want to discuss the whole process, whether, whatever happens with us...

Mr. Wilshaw: That's fair, Mr. Long, I do appreciate you mentioning that, just so anyone who's not familiar with how these petitions go through the city process is kind of a four step, sort of four meeting process, in the sense that the petitioner comes to us with a rezoning request. That's what we're dealing with today, to rezone this property from C-1 to C-2, regardless of what goes on the property. We make a decision on that. This is a recommending decision that then goes on to City Council. The City Council, after holding their own meeting and their own public hearing, will make the final vote on whether the property is rezoned or not. And what they do is they will...they have to do

a first reading, second reading. It's a multi-step process, even for them. They will hold the first reading. If they get this. Let's assume that we recommend approval. It will go to City Council. City Council will consider it if they want to go forward on it as well, they'll hold it into a first reading. Then the petitioner will come back to us and start the process of a site plan. This is the part where we go through looking at the building and the layout and the wall and the entrances and all the little nitty, picky details of the property. That comes to us again. We review it. We work with the petitioner to try to get what we feel is the best petition possible. We will either approve or deny that particular site plan, and then again, that will go to City Council with that recommendation. City Council will then vote on the zoning and on the site plan at some point in the future. So, it's a multi-step process. We are just making recommendations to City Council, so regardless of if we approve or deny this, the petitioner will have an opportunity to appeal or to make that presentation again to the City Council, and the City Council will ultimately be making the final decision. So just so you understand, it's a long process. It's a multi-step process, and City Council is really the one that's going to make the final decisions on this, not us. We're just doing the homework and trying to get the best plan we can for the city. Go ahead with this one question, because you're in the audience, and people can't and Tv can't hear you.

(Another member of audience): So, with what you just went through, how, typically, how long does all that take?

Mr. Wilshaw: It's a couple month process at least, and it depends on scheduling, when meetings occur, and all that type of thing, which is, unfortunately why you're going to have a bit of a delay now, because we don't have a meeting between now and the beginning of October, so that adds a little bit of a delay. So, it's unfortunate, but that's what it is. So, with that, we are done for the public hearing on this item. We are now going to move on to item number two in our agenda. Thank you for those who did come tonight.

From: [Uhazie, Jacob](#)
To: [Reece, Stephanie](#)
Cc: [Taormina, Mark](#)
Subject: FW: Petition 2024-08-01-04 Sheetz Rezoning
Date: Monday, September 30, 2024 4:45:46 PM
Attachments: [image001.png](#)

FYI

Jacob Uhazie

Assistant Planning Director
City of Livonia | Planning Department
(734) 466-2293 | (734) 674-7647
juhazie@livonia.gov

From: Cecil, John <jcecil@wadetrim.com>
Sent: Monday, September 30, 2024 3:23 PM
To: Uhazie, Jacob <juhazie@livonia.gov>
Cc: Alexander Siwicki <asiwicki@sheetz.com>; David Bruckelmeyer <dbruckel@sheetz.com>; Drew Miller <dmiller@skilkengold.com>; Royston, Kevin <kroyston@wadetrim.com>; Steven Lyncha <slyncha@sheetz.com>
Subject: Petition 2024-08-01-04 Sheetz Rezoning

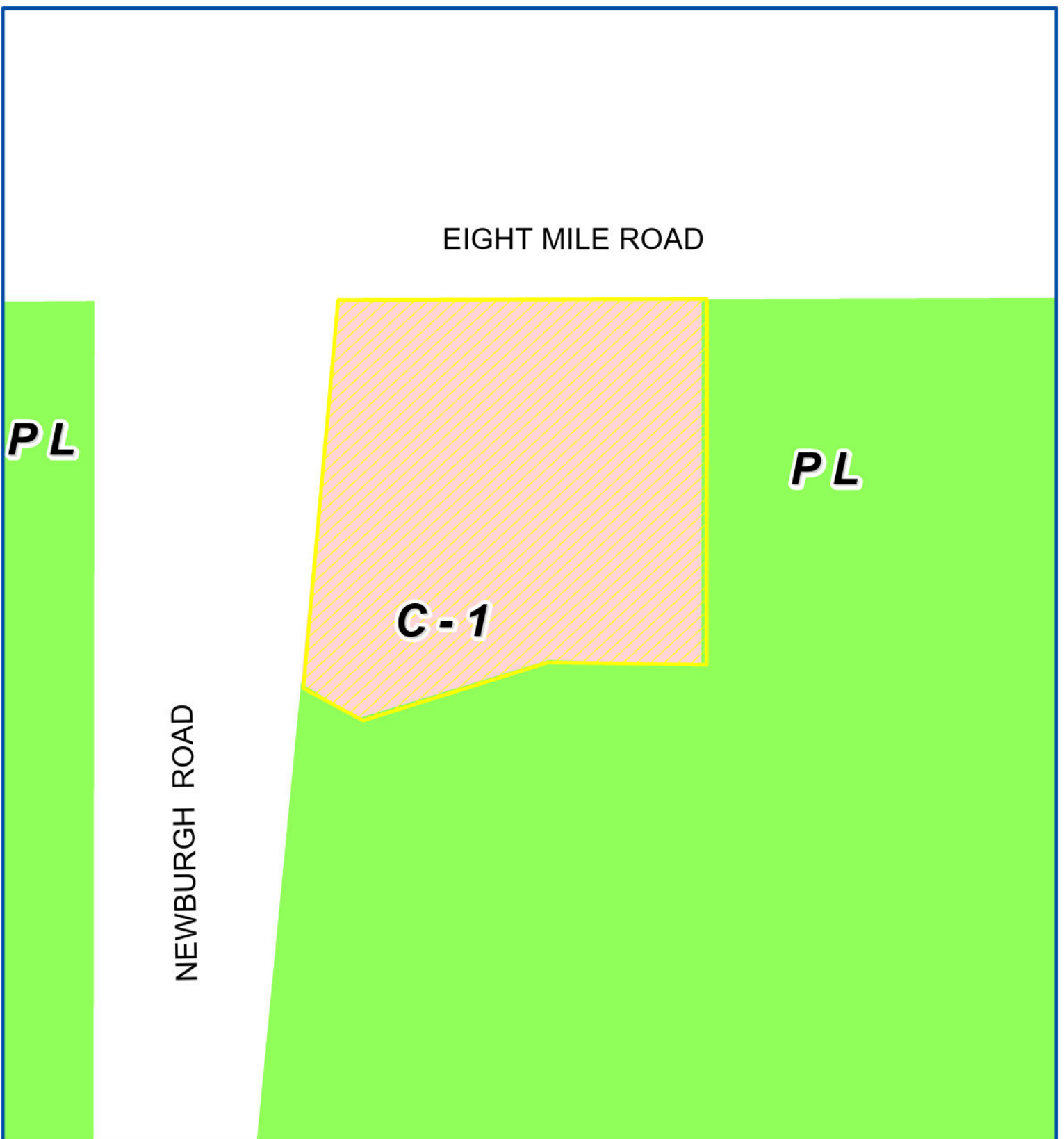
Hi Jacob,

Thanks for clarifying, please consider this email the formal request to have the Petition 2024-08-01-04 Sheetz Rezoning tabled for this weeks Planning Comission. The Development team would like to be scheduled for the October 22, 2024 Planning meeting. Please reply and confirm that this was received and that this petition will be tabled for this weeks meeting.

Regards,



John Cecil, PE
500 Griswold, Suite 2500, Detroit, MI 48226
313.961.3650 office
313.379.6825 direct



Address & Zoning Map

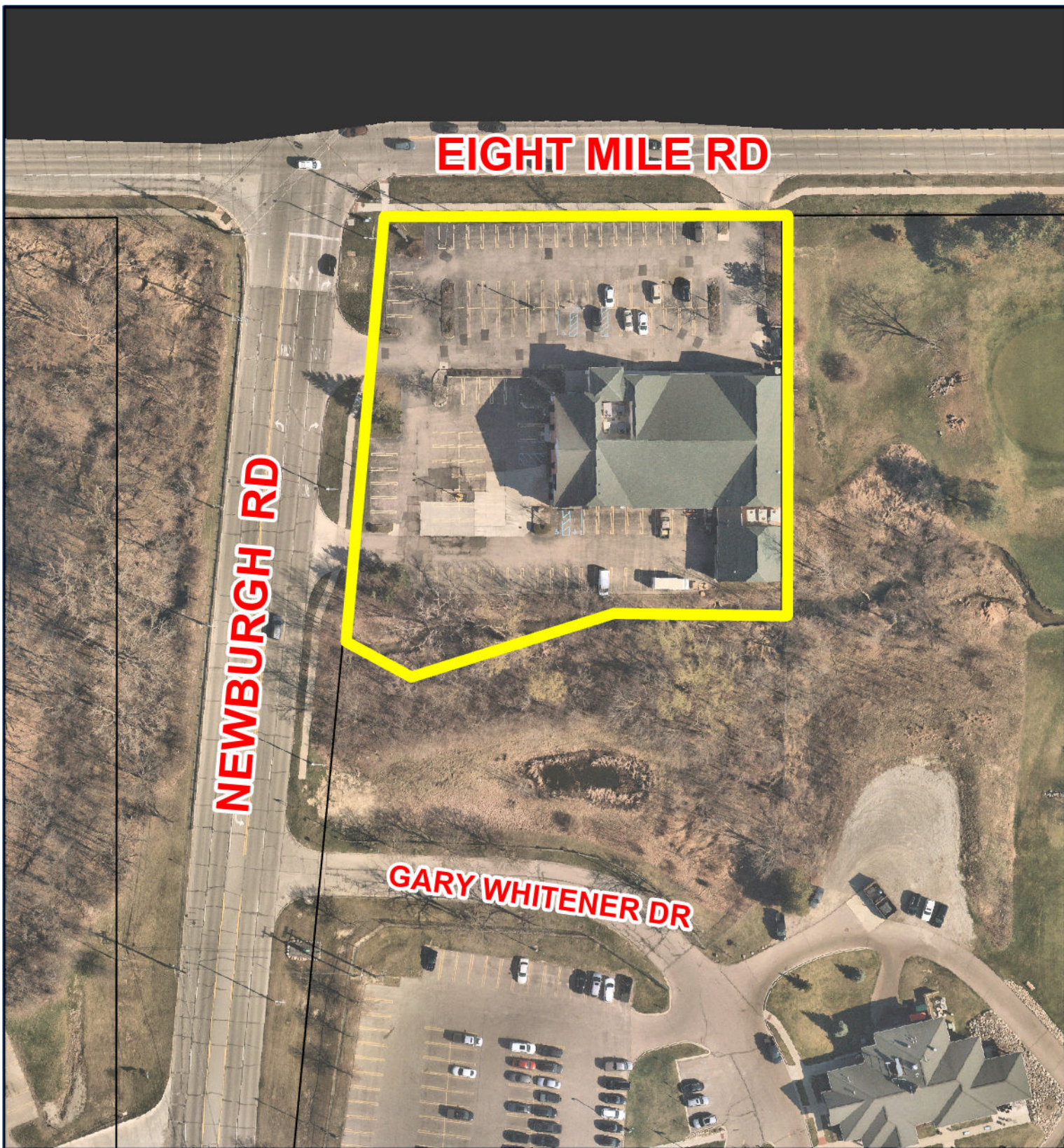
Petition 2024-08-01-04
Sheetz Store
37355 Eight Mile Road



Not to Scale



City of Livonia
Planning Department



Aerial Map

Petition 2024-08-01-04
Sheetz Store
37355 Eight Mile Road



Not to Scale

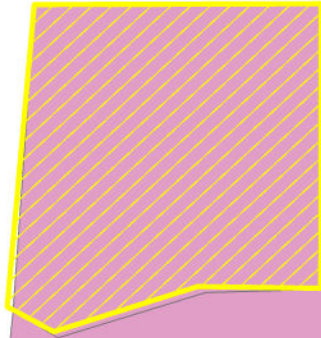


City of Livonia
Planning Department

EIGHT MILE ROAD

NEWBURGH ROAD

***Parks and
Community***



Future Land Use Map

Petition 2024-08-01-04
Sheetz Store
37355 Eight Mile Road



Not to Scale



City of Livonia
Planning Department

PLANNING COMMISSION STAFF NOTES

PENDING

ITEM 1

Petition 2024-08-01-04 submitted by Skilken Gold under Section 13.15 of the Livonia Zoning Ordinance, as amended, requesting to rezone the property at 37355 Eight Mile Road, located on the southeast corner of Eight Mile Road and Newburgh Road in the Northwest ¼ of Section 5, from C-1 (Local Business District) to C-2 (General Business District).

August 27, 2024, Study Meeting:

This petition seeks to rezone the southeast corner of Eight Mile and Newburgh Roads from C-1, Local Business District, to C-2, General Business. The commercial development site plan was approved on November 14, 1995, by City Council. Currently the property contains a two-story unit commercial center, which currently sits vacant. Due to the slope of the land the building has a one-story appearance from Eight Mile Road. The site formerly contained a 10,050 square foot Rite Aid Drug Store that faced Eight Mile Road. The 14,825 square foot lower level was occupied by the former Caddy Shack Golf Shop that faced Newburgh Road.

The parcel affected by the rezoning is at 37355 Eight Mile Road. This parcel comprises approximately 79,880 square feet (1.83 acres), with approximately 269 feet along Eight Mile Road and approximately 285 feet along Newburgh Road.

Sheetz is a convenience store and gas station chain. The private company, based in Altoona, Pennsylvania, was started in 1952 and now operates nearly 700 stores. In addition to its gasoline service, Sheetz is known for the food customers order through self-service kiosks. Sheetz stores typically have both indoor and outdoor seating.

To the west, across Newburgh Road, is Green Mead Historical Park, zoned PL (Public Lands). To the north, across Eight Mile Road, is the city of Farmington Hills. The south and east are surrounded by the Whispering Willows Golf Course and is zoned PL as well.

The Livonia Vision 21 Future Land Use map designates the subject property as *Parks and Community*. Areas identified as *Parks and Community* are intended to encourage the preservation of open spaces, public park facilities, and civic institutions used for active and passive recreation. The designation includes publicly and privately owned facilities providing recreational, educational, governmental, and other services to the community.

The preliminary plans for the Sheetz show a one-story, 6,139-square-foot building near the rear of the site. Access would be provided from two (2) driveways: one (1) off Eight Mile Road and one (1) off Newburgh Road. Between the building and Eight Mile Road, the plans show six (6) fuel islands with two (2) pumps, one (1) on each side, with the capacity to accommodate twelve (12) vehicles at any given time. Over the fuel islands would be a structural canopy measuring approximately 32' x 149' 7" in size. Parking would be provided along the building's north, east, and west sides. A drive-thru pick-up window is shown on the south side of the building, with a separate service lane for stacking and ordering at the property's west end. This 14-foot-wide curbed lane would provide queuing space for cars. After placing an order, the drive-thru customer would proceed across the parking lot and loop around to the south side of the building to the pick-up window.

The preliminary elevation plans indicate that the exterior of the building would be constructed of brick and cast stone. A peaked tower feature is shown in the northwest corner of the building, above the main entrance. The design also incorporates canopies, awnings, and screening for the roof-mounted mechanical equipment. Outside patio seating would be located on the north and east sides of the building.

The required amount of parking is based on separate standards that apply to gas stations and restaurants. Gas stations require one (1) space for each fuel pump, and restaurants with drive-up window facilities require one (1) parking space for every 125 square feet of floor area, plus one (1) space for every three (3) outside patio seats, plus one (1) parking space for each employee. Accordingly, a total of forty-five (45) parking spaces will be required: twelve (12) for the pumps, nineteen (19) for the restaurant ($2,321 \div 125$), four (4) for the outside patio ($12 \div 3$), and ten (10) for the maximum number of employees at any one time. The number of parking spaces provided is fifty-five (55) spaces.

Gasoline service stations (Section 6.26) and drive-thru restaurants (Section 6.51) are treated as waiver uses in a C-2 district, requiring both Planning Commission and City Council review and approval.

October 1, 2024, Study Meeting:

This item was tabled at the September 10th Public Hearing because both, a motion to approve and a motion to deny, failed due to lack of majority.

October 22, 2024, Public Hearing:

At the October 15th study meeting, the Petitioner explained that they are reexamining the drive thru layout to address concerns mentioned by the planning commission. Sheetz is looking at moving the drive thru lane to the western side of the building to reduce traffic conflicts. The Petitioner also explained that they are open to adding the merge lane across Eight Mile Road into Farmington Hills to address traffic concerns.

Approving Resolution: The request to rezone the property at 37355 Eight Mile Road from C-1 (Local Business) to C-2 (General Business District) is hereby approved, subject to City Council approval, for the following reasons:

1. A zoning change to C-2 would be compatible and in harmony with the area's surrounding land uses and zoning.
2. The proposed C-2 zoning is consistent with the longstanding commercial use of the property.
3. The proposed C-2 zoning will allow the development of the subject property in a manner that is consistent with its size and location and will bring additional commercial services and retail to this part of the city.

4. The proposed zoning change represents a reasonable and logical plan for the subject property that adheres to sound land use planning principles.

Denying Reasons: The request to rezone the property at 37355 Eight Mile Road from C-1 (Local Business) to C-2 (General Business District) is hereby denied, for the following reasons:

1. The proposed zoning contradicts the Future Land Use Map, which designates the site as Parks and Community.
2. That the proposed change of zoning is inconsistent with adjacent zoning districts in the area.
3. That the proposed change of zoning is inconsistent with the established pattern of the development and would adversely alter the character of the area.
4. That the proposed change of zoning is not needed to develop the property.

PROJECT MANAGER: FIELD BOYD INFORMATION: C:\PW\WORK\WADE-TRIM\MONDAY\0151579\PLUS-REZONING EXHIBIT\DWG - TORO - PLOTTED 7/10/2024 10:12 AM BY DONATO, MICHAEL



Know what's below.
Call before you dig.

REV#	DATE	REZONING SUBMITTAL DESCRIPTION	JAC BY
	07.31.24		



25251 Northline Rd.
Taylor, MI 48180
734.547.9700
www.wadetrim.com

SKILKEN GOLD
4270 MORSE ROAD
COLUMBUS, OH 43230

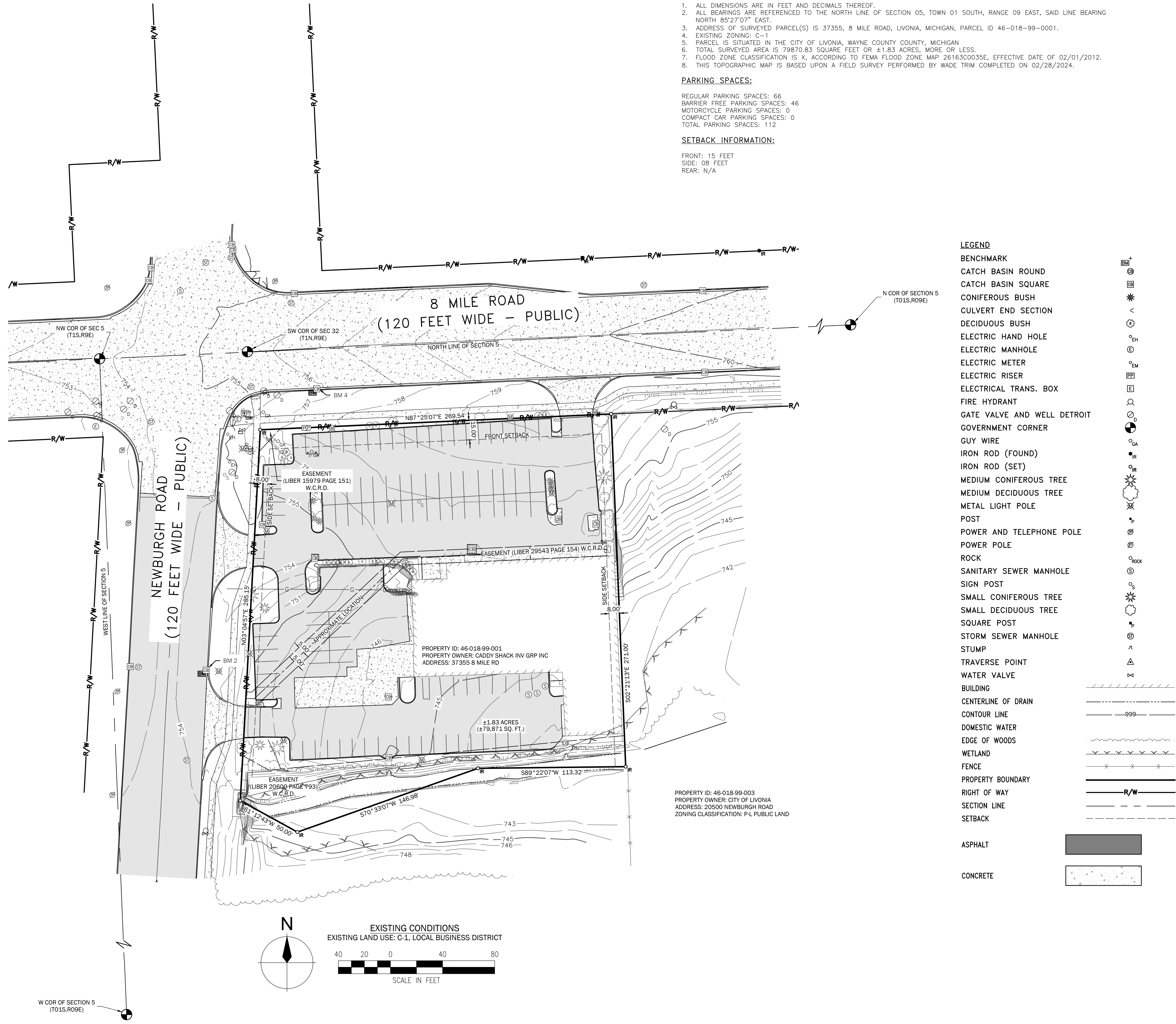
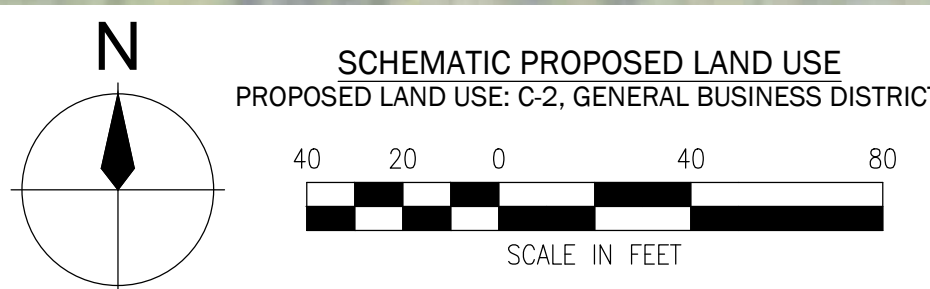
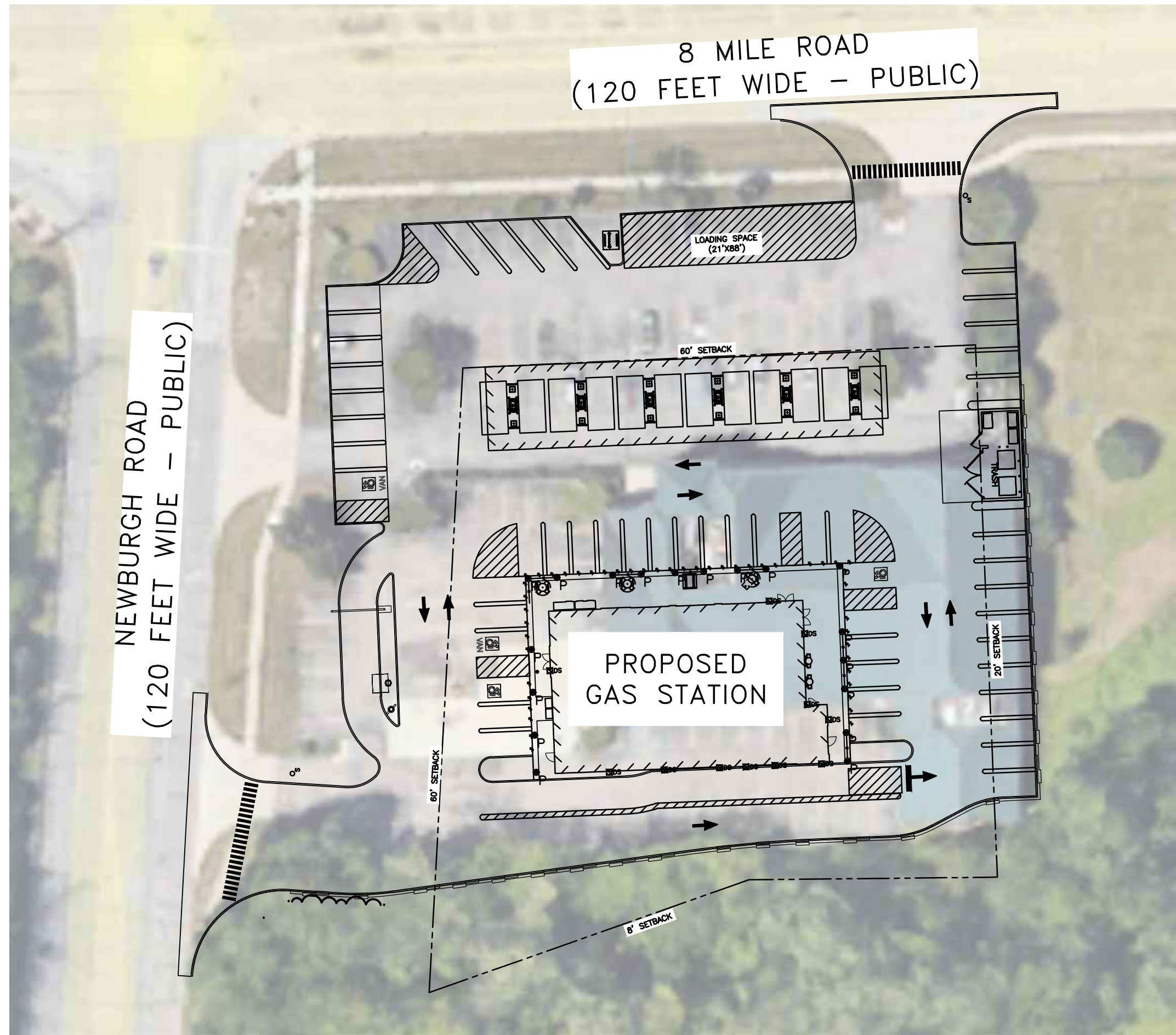
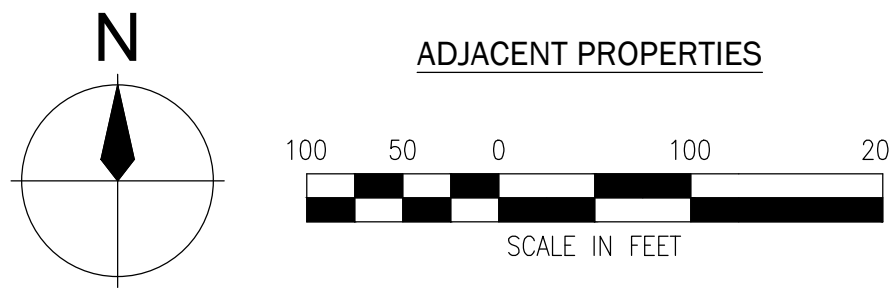
REZONING EXHIBIT
FOR
8 MILE ROAD & NEWBURGH NEW SHEETZ STORE

ISSUED FOR: DATE: BY:

JOB NO: SG02002.01F

SHEET

1



LEGAL DESCRIPTION: PER 2021, TITLE COMMITMENT NO. 821223386NITS, DATED: 02/24/2024.

LAND SITUATED IN THE CITY OF LIVONIA, COUNTY OF WAYNE AND STATE OF MICHIGAN DESCRIBED AS:

PART OF THE NORTHWEST 1/4 OF SECTION 5, TOWN 1 SOUTH, RANGE 9 EAST, BEGINNING SOUTH 0 DEGREES 00 MINUTES 50 SECONDS EAST 80 FEET AND NORTH 89 DEGREES 45 MINUTES 30 SECONDS EAST 120.59 FEET FROM THE NORTHWEST CORNER OF SECTION 5, THENCE NORTH 89 DEGREES 45 MINUTES 30 SECONDS EAST 269.41 FEET, THENCE SOUTH 0 DEGREES 00 MINUTES 50 SECONDS EAST 271 FEET, THENCE NORTH 89 DEGREES 17 MINUTES 30 SECONDS WEST 113.32 FEET, THENCE SOUTH 72 DEGREES 53 MINUTES 30 SECONDS WEST 148.98 FEET, THENCE NORTH 58 DEGREES 52 MINUTES 20 SECONDS WEST 50.0 FEET, THENCE NORTH 05 DEGREES 25 MINUTES 20 SECONDS EAST 285.24 FEET TO THE POINT OF BEGINNING.

GENERAL NOTES:

- ALL DIMENSIONS ARE IN FEET AND DECIMALS THEREOF.
- ALL BEARINGS ARE REFERENCED TO THE NORTH LINE OF SECTION 05, TOWN 01 SOUTH, RANGE 09 EAST, SAID LINE BEARING NORTH 85°27'07\"
- ADDRESS OF SURVEYED PARCEL(S) IS 37355, 8 MILE ROAD, LIVONIA, MICHIGAN, PARCEL ID 46-018-99-0001.
- EXISTING ZONING: C-1
- PARCEL IS SITUATED IN THE CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN
- TOTAL SURVEYED AREA IS 79870.83 SQUARE FEET OR ±1.83 ACRES, MORE OR LESS.
- FLOOD ZONE CLASSIFICATION IS X, ACCORDING TO FEMA FLOOD ZONE MAP 26163C00355E, EFFECTIVE DATE OF 02/01/2012.
- THIS TOPOGRAPHIC MAP IS BASED UPON A FIELD SURVEY PERFORMED BY WADE TRIM COMPLETED ON 02/28/2024.

PARKING SPACES:

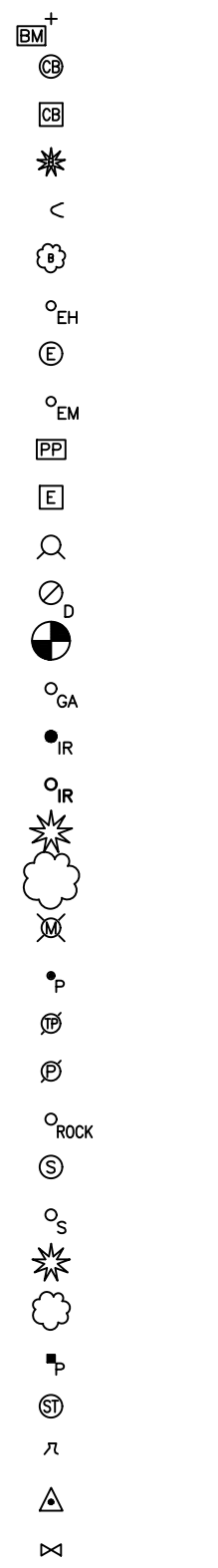
REGULAR PARKING SPACES: 66
BARRIER FREE PARKING SPACES: 46
MOTORCYCLE PARKING SPACES: 0
COMPACT CAR PARKING SPACES: 0
TOTAL PARKING SPACES: 112

SETBACK INFORMATION:

FRONT: 15 FEET
SIDE: 08 FEET
REAR: N/A

LEGEND

- BENCHMARK
- CATCH BASIN ROUND
- CATCH BASIN SQUARE
- CONIFEROUS BUSH
- CULVERT END SECTION
- DECIDUOUS BUSH
- ELECTRIC HAND HOLE
- ELECTRIC MANHOLE
- ELECTRIC METER
- ELECTRIC RISER
- ELECTRICAL TRANS. BOX
- FIRE HYDRANT
- GATE VALVE AND WELL DETROIT
- GOVERNMENT CORNER
- GUY WIRE
- IRON ROD (FOUND)
- IRON ROD (SET)
- MEDIUM CONIFEROUS TREE
- MEDIUM DECIDUOUS TREE
- METAL LIGHT POLE
- POST
- POWER AND TELEPHONE POLE
- POWER POLE
- ROCK
- SANITARY SEWER MANHOLE
- SIGN POST
- SMALL CONIFEROUS TREE
- SMALL DECIDUOUS TREE
- SQUARE POST
- STORM SEWER MANHOLE
- STUMP
- TRAVERSE POINT
- WATER VALVE
- BUILDING
- CENTERLINE OF DRAIN
- CONTOUR LINE
- DOMESTIC WATER
- EDGE OF WOODS
- WETLAND
- FENCE
- PROPERTY BOUNDARY
- RIGHT OF WAY
- SECTION LINE
- SETBACK



REZONING EXHIBIT - NEW SHEETZ STORE



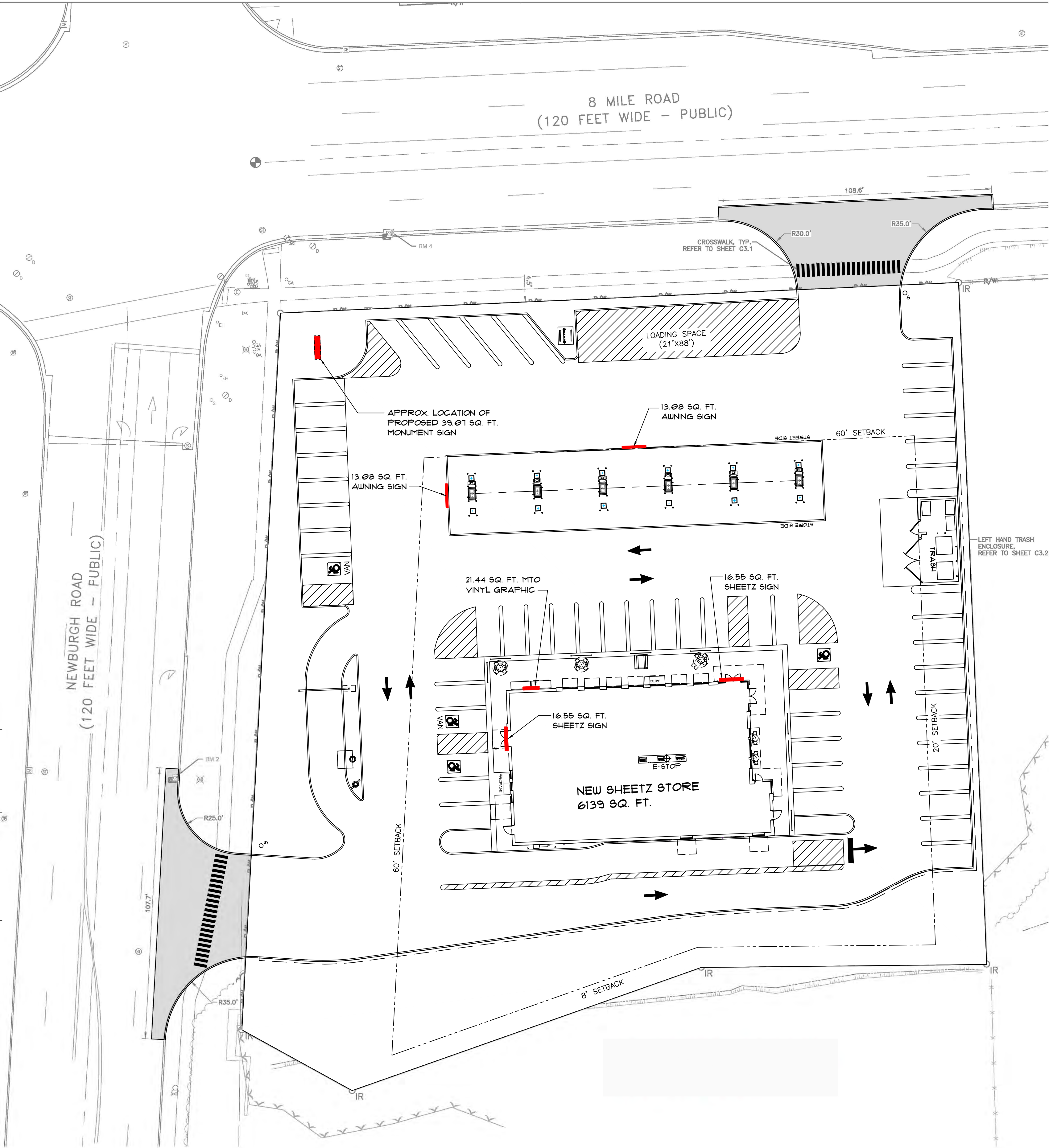
SHEETZ, INCORPORATED
5700 SIXTH AVENUE
ALTOONA, PA 16602
(814) 946-3611

NEW SHEETZ STORE
"LIVONIA"

INT. OF 8 MILE ROAD
AND NEWBURGH ROAD
LIVONIA, MICHIGAN

SIGNAGE SQUARE FOOTAGE BREAKDOWN

BUILDING ELEVATIONS	SHEETZ SIGN = 16.55 SQ. FT. X 2 = 33.10 SQ. FT.	
	MTO VINYL GRAPHIC = 21.44 SQ. FT. X 1 = 21.44 SQ. FT.	
	TOTAL = 54.54 SQ. FT.	54.54 SQ. FT.
GAS PRICE MONUMENT SIGN	SHEETZ SIGN = 12.13 SQ. FT. X 1 = 12.13 SQ. FT.	
	GAS PRICE SIGN = 26.94 SQ. FT. X 1 = 26.94 SQ. FT.	
	TOTAL = 39.07 SQ. FT.	39.07 SQ. FT.
GAS CANOPY AWNING	SHEETZ SIGN AREA = 13.08 SQ. FT. X 2 = 26.16 SQ. FT.	
	FUEL OFFERING FLAG AREA = 2.76 SQ. FT. X 12 = 33.12 SQ. FT.	
	TOTAL = 59.28 SQ. FT.	59.28 SQ. FT.
DRIVE THRU SIGN DETAILS	CLEARANCE BAR = 6.36 SQ. FT. X 1 = 6.36 SQ. FT.	
	ORDER POINT SIGNS = 13.19 SQ. FT. X 1 = 13.19 SQ. FT.	
	MENUBOARD = 24.81 SQ. FT. X 1 = 24.81 SQ. FT.	
	TOTAL = 44.36 SQ. FT.	44.36 SQ. FT.



SIGN LOCATIONS



1 FRONT ELEVATION

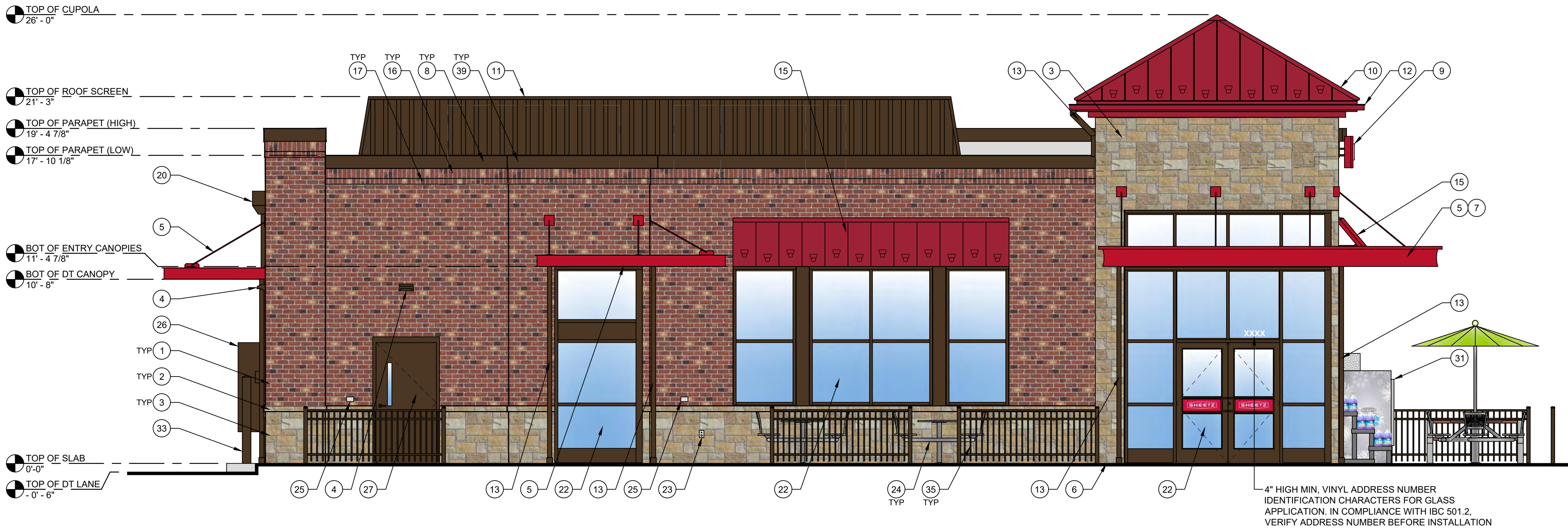
1/4" = 1'-0"

TYPICAL EXTERIOR ELEVATION NOTES:

- ALL LIGHTS SHOWN ABOVE AND/OR BELOW DOORS OR WINDOWS ARE TO BE CENTERED ON THE DOOR OR WINDOW UNLESS NOTED OTHERWISE.
- FIXTURES/EQUIPMENT BETWEEN TWO DOORS OR WINDOWS ARE TO BE CENTERED EQUALLY.
- EXTERIOR SEALANT FOR STONE SHALL COMPLY WITH SECTION 07 9005 JOINT SEALANTS, GENERAL BUILDING FASCIADE WEATHER SEALANT AND SHALL MATCH THE COLOR OF THE STORE.

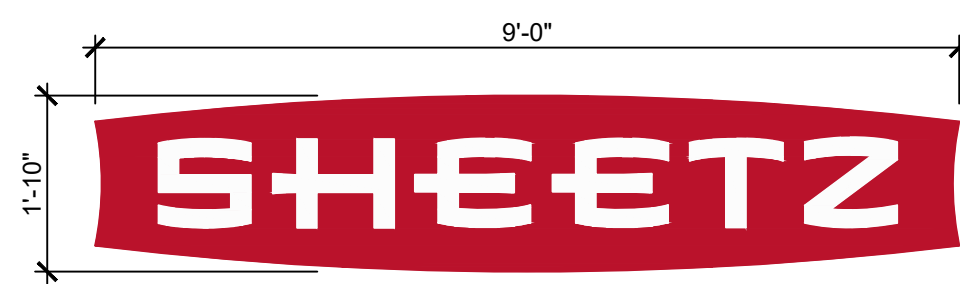
EXTERIOR ELEVATION KEYNOTES:

- BRICK VENEER, COLOR: 680 BY CONTINENTAL BRICK COMPANY. SEE MASONRY SPEC
- CAST STONE SILL, COLOR: CRAB ORCHARD. SEE MASONRY SPEC
- ANCHORED CAST STONE MASONRY VENEER, COLOR: CRAB ORCHARD. SEE MASONRY SPEC
- EXTERIOR LIGHT FIXTURE, REFER TO ELECTRICAL DRAWINGS
- ARCHITECTURAL CANOPY, COLOR: REGAL RED, PREMIUM TWO-COAT KYNAR FINISH
- BRICK PAVER WALKWAY
- LIGHTED CURVED FASCIA CANOPY ATTACHMENT
- METAL COPING, COLOR: DARK BRONZE
- WALL MOUNTED BUILDING SIGN, SEE SHEET A200.
- STANDING SEAM METAL ROOF, COLOR: BRITE RED
- ROOF EQUIPMENT SCREEN, COLOR: DARK BRONZE
- GUTTER, COLOR TO MATCH CUPOLA COLOR
- DOWNSPOUT, COLOR: DARK BRONZE
- DRIVE-THRU WINDOW (IF APPLICABLE)
- METAL STANDING SEAM SHED STYLE AWNING AND FRAME ASSEMBLY, ROOF COLOR: BRITE RED, FRAME COLOR: DARK BRONZE
- BRICK SOLDIER COURSE, COLOR: 680 BY CONTINENTAL BRICK COMPANY. SEE MASONRY SPEC
- BRICK ROWLOCK COURSE, COLOR: 680 BY CONTINENTAL BRICK COMPANY. SEE MASONRY SPEC
- CONTROL JOINT, SEE MASONRY SPEC
- STEEL ROOF LADDER AND CRANKY POST, COLOR: DARK BRONZE
- STANDARD THROUGH WALL SCUPPER WITH CONDUCTOR HEAD & DOWNSPOUT, COLOR: DARK BRONZE
- OVERFLOW SCUPPER
- ALUMINUM STOREFRONT SYSTEM, SEE A600
- EXTERIOR HOSE BIB, REFER TO PLUMBING DRAWINGS
- OUTDOOR FURNITURE
- ELECTRICAL RECEPTACLE, REFER TO ELECTRICAL DRAWINGS
- ELECTRICAL EQUIPMENT, REFER TO ELECTRICAL DRAWINGS
- HM DOOR AND FRAME, COLOR: DARK BRONZE
- EMERGENCY WATER CONNECTION, REFER TO PLUMBING DRAWINGS
- SEAMLESS ALUM PANEL SYSTEM WITH EXPOSED FASTENERS, COLOR: DARK BRONZE
- PROPANE LOCKER
- ICE MERCHANDISER
- RTI FILLPORT
- STEEL BOLLARD, COLOR: DARK BRONZE
- CO2 FILLPORT
- DECORATIVE ALUMINUM FENCE, COLOR DARK BRONZE
- AUTOMATIC DOOR PUSH PLATE AND BOLLARD, BOLLARD COLOR: DARK BRONZE
- GAS METER AND RISER, REFER TO CIVIL UTILITY PLAN, COLOR: DARK BRONZE
- MTO GRAPHIC DECAL, SEE SHEET A200.
- LIGHT CHANNEL AT PARAPET COPING, SEE ARCHITECTURAL AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.



2 LEFT ELEVATION

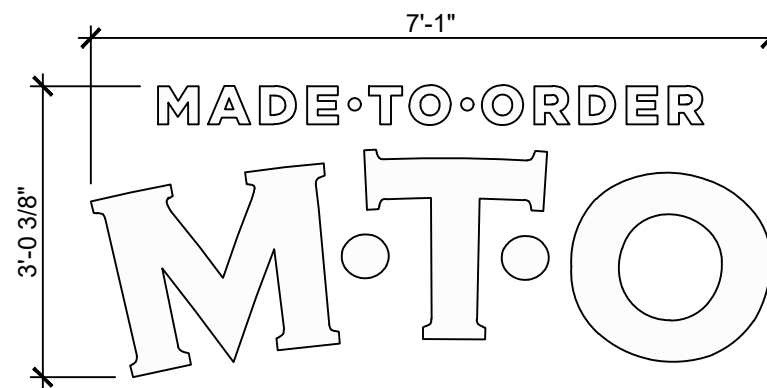
1/4" = 1'-0"



OUTLINE AREA = 14.84 SQ. FT.
BOX AREA = 16.52 SQ. FT.
TYPICAL OF TWO
PROJECTS 0' OFF FACE OF BUILDING

A WALL MOUNTED "SHEETZ" BUILDING SIGN

1/2" = 1'-0"



OUTLINE AREA = 8.38 SQ. FT.
BOX AREA = 21.47 SQ. FT.
TYPICAL OF ONE
PROJECTS 0' OFF FACE OF BUILDING

B WALL MOUNTED "MTO" DECAL

1/2" = 1'-0"

Convenience . rchitecture
and Design P.C.

351 Sheetz Way, Claysburg, PA 16625

phone (814) 239-6013
email tcolumbu@sheetz.com
web site www.sheetz.com

PROJECT NAME:
NEW SHEETZ STORE

LIVONIA
8 MILE

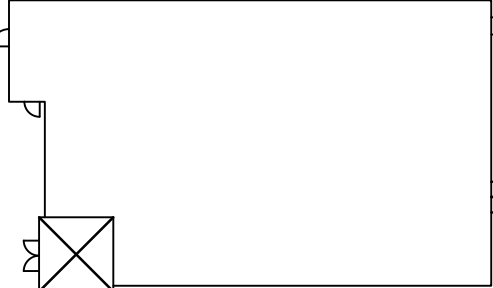
Int. of 8 Mile Road
and Newburgh Road
Livonia, MI 214577

OWNER:
SHEETZ, INC.

5700 SIXTH AVE.
ALTOONA, PA 16602

CONSULTANT

PROFESSIONAL



KEYPLAN

ISSUE: 06.18.2024
SITE ID NO: 214577
AUTHOR BY: RJK
REVIEW BY: RJH
VERSION: 6139_v1.6

EXTERIOR
ELEVATIONS

A200

PRELIMINARY ELEVATIONS

PROJECT NAME:
NEW SHEETZ STORE

LIVONIA 8 MILE

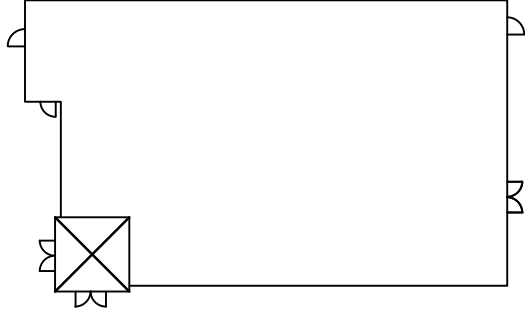
Int. of 8 Mile Road
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EXTERIOR
ELEVATIONS

A201

PRELIMINARY ELEVATIONS



3 REAR ELEVATION
1/4" = 1'-0"

TYPICAL EXTERIOR ELEVATION NOTES:

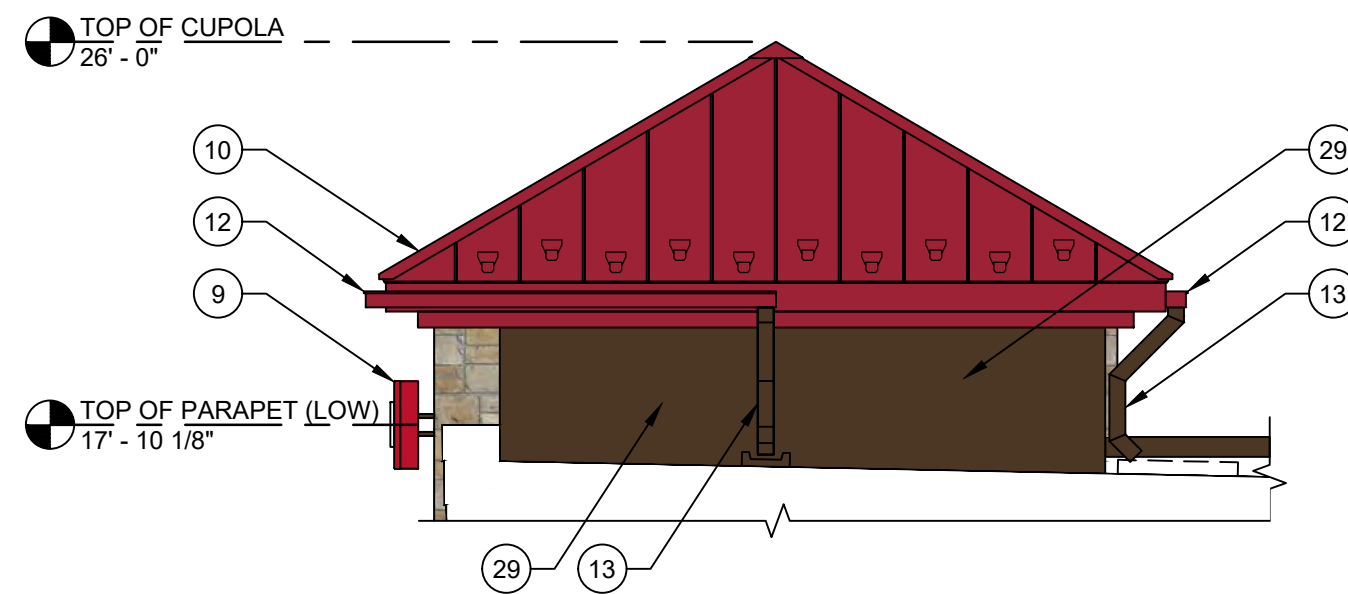
- ALL LIGHTS SHOWN ABOVE AND/OR BELOW DOORS OR WINDOWS ARE TO BE CENTERED ON THE DOOR OR WINDOW UNLESS NOTED OTHERWISE
- FIXTURES/EQUIPMENT BETWEEN TWO DOORS OR WINDOWS ARE TO BE CENTERED EQUALLY.
- EXTERIOR SEALANT FOR STONE SHALL COMPLY WITH SECTION 07 9005 JOINT SEALANTS, GENERAL BUILDING FASCIADE WEATHER SEALANT AND SHALL MATCH THE COLOR OF THE STORE.

EXTERIOR ELEVATION KEYNOTES:

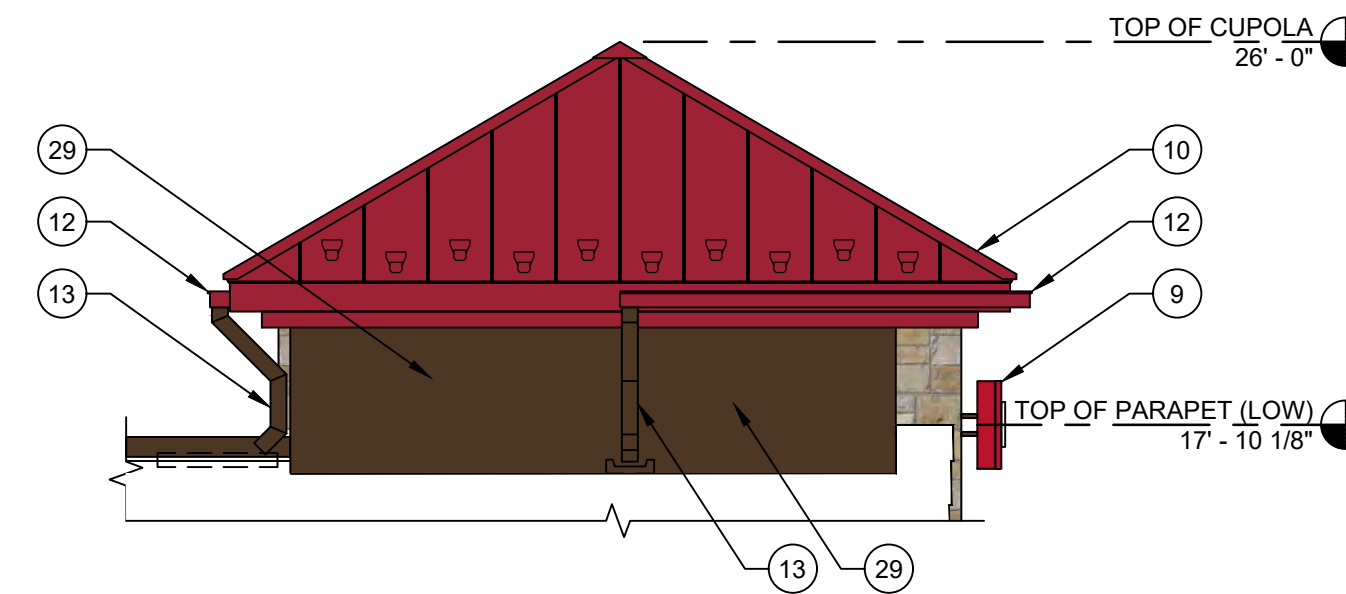
- BRICK VENEER, COLOR: 680 BY CONTINENTAL BRICK COMPANY. SEE MASONRY SPEC
- CAST STONE SILL, COLOR: CRAB ORCHARD. SEE MASONRY SPEC
- ANCHORED CAST STONE MASONRY VENEER, COLOR: CRAB ORCHARD. SEE MASONRY SPEC
- EXTERIOR LIGHT FIXTURE, REFER TO ELECTRICAL DRAWINGS
- ARCHITECTURAL CANOPY, COLOR: REGAL RED, PREMIUM TWO-COAT KYMAR FINISH
- BRICK PAVER WALKWAY
- LIGHTED CURVED FASCIA CANOPY ATTACHMENT
- METAL COPING, COLOR: DARK BRONZE
- WALL MOUNTED BUILDING SIGN, SEE SHEET A200.
- STANDING SEAM METAL ROOF, COLOR: BRITE RED
- ROOF EQUIPMENT SCREEN, COLOR: DARK BRONZE
- GUTTER, COLOR TO MATCH CUPOLA COLOR
- DOWNSPOUT, COLOR: DARK BRONZE
- DRIVE-THRU WINDOW (IF APPLICABLE)
- METAL STANDING SEAM SHED STYLE AWNING AND FRAME ASSEMBLY, ROOF COLOR: BRITE RED, FRAME COLOR: DARK BRONZE
- BRICK SOLDIER COURSE, COLOR: 680 BY CONTINENTAL BRICK COMPANY. SEE MASONRY SPEC
- BRICK ROWLOCK COURSE, COLOR: 680 BY CONTINENTAL BRICK COMPANY. SEE MASONRY SPEC
- CONTROL JOINT, SEE MASONRY SPEC
- STEEL ROOF LADDER AND CRANKY POST, COLOR: DARK BRONZE
- STANDARD THROUGH WALL SCUPPER WITH CONDUCTOR HEAD & DOWNSPOUT, COLOR: DARK BRONZE
- OVERFLOW SCUPPER
- ALUMINUM STOREFRONT SYSTEM, SEE A600
- EXTERIOR HOSE BIB, REFER TO PLUMBING DRAWINGS
- OUTDOOR FURNITURE
- ELECTRICAL RECEPTACLE, REFER TO ELECTRICAL DRAWINGS
- ELECTRICAL EQUIPMENT, REFER TO ELECTRICAL DRAWINGS
- HM DOOR AND FRAME, COLOR: DARK BRONZE
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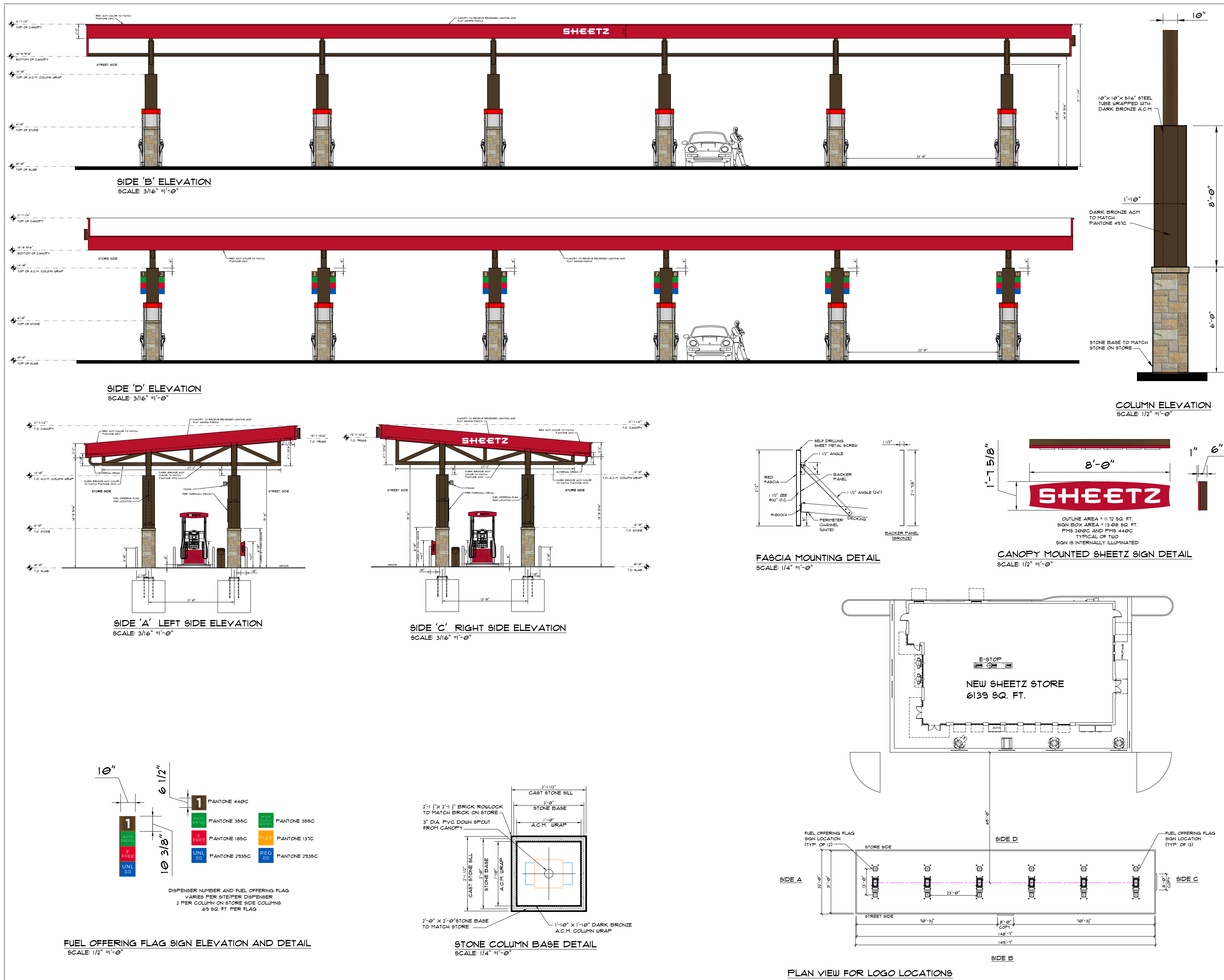
4 RIGHT ELEVATION
1/4" = 1'-0"



5 CUPOLA ELEVATION FROM ROOF
1/4" = 1'-0"



6 CUPOLA ELEVATION FROM ROOF
1/4" = 1'-0"



Convenience . rchitecture
and *Design* P.C.

351 Sheetz Way, Claysburg, PA 16625

phone (814) 239-6013
email tcolumbu@sheetz.com
web site www.sheetz.com

PROJECT NAME:

NEW SHEETZ STORE

LIVONIA
8 MILE

Int. of 8 Mile Road
and Newburgh Road
Livonia
Michigan

OWNER:

SHEETZ, INC.

5700 SIXTH AVE.
ALTOONA, PA 16602

CONSULTANT

PROFESSIONAL

KEYPLAN

MARK	DATE	DESCRIPTION
	07.17.24	FULL SUBMITTAL PACKAGE

ISSUE:

06-27-24

PROJECT NO.:

AUTHOR BY: DNC

REVIEW BY:

SHEET TITLE

GAS AWNING
w/ FLAT FASCIA

AWNING

ASPHALT INSTALLATION

The diagram illustrates the installation of an asphalt pipe. A cross-section shows a hatched rectangular area labeled "10'2' PREFORM LOOP" resting on a surface labeled "SOIL". The soil surface is marked with a series of plus signs. An arrow points to the hatched area with the label "ASPHALT". On the right side, the preform loop is shown curving upwards and then back down to the soil surface, forming a U-shape.

10'2' PREFORM LOOP

ASPHALT

SOIL

ALLOW APPROX 1 IN. OF SOIL OR SAND
BETWEEN ASPHALT AND LOOP

Diagram illustrating the installation of a loop antenna system. The diagram shows a cross-section of the ground and the antenna structure. A 102 PREFORM LOOP is shown, which is 2-3 IN. IN LOOP DEPTH. The loop is supported by a LOOP SUPPORT. The ground surface is labeled CONCRETE PAVEMENT. Below the pavement is a layer of SAND AND GRAVEL BASE. The diagram also shows a connection point for the antenna cable, which is labeled 5. WIRE MESH OR REINFORCEMENT BE CUT AWAY IN MIN. OF 6" FROM. Another label indicates 6. ALL CONNECTIONS AND SPLICES BE SOLDERED.

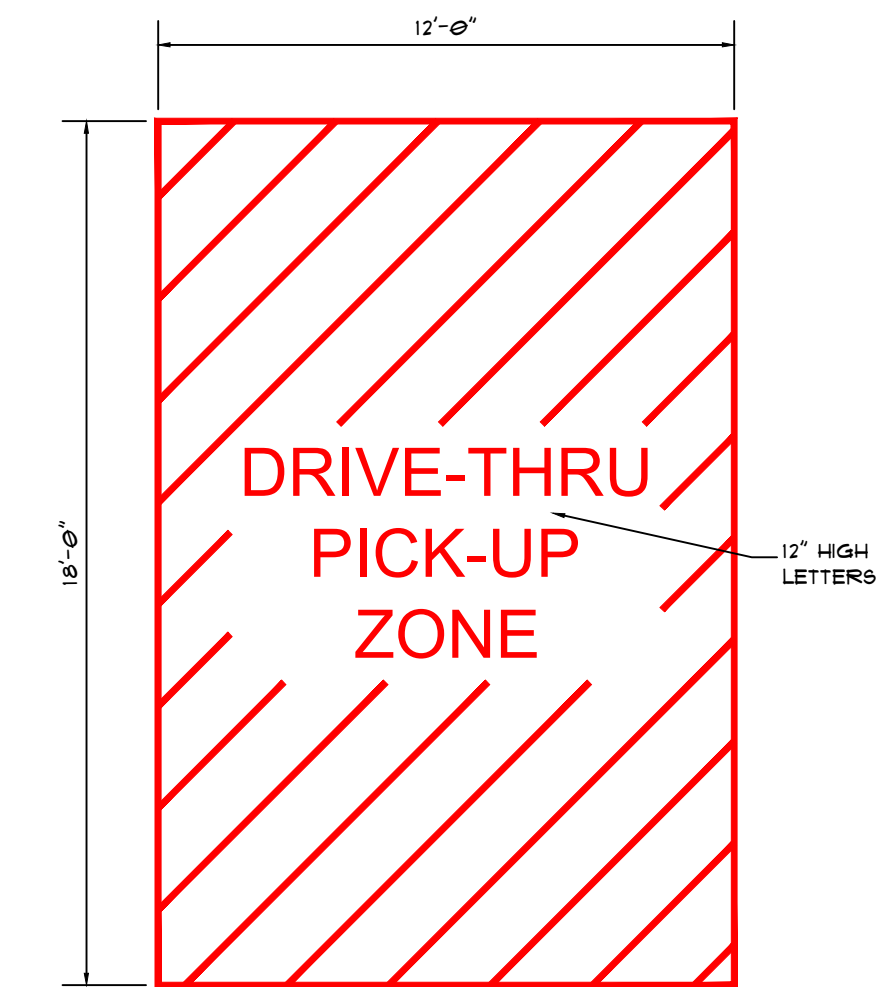
CONCRETE INSTALLATION

NO SCALE

CONCRETE SHOULD BE CENTER OF LOOP.

CONNECT TO STORE DRIVE-THRU SYSTEM

LOOP WIRES MUST



TOP OF MAGNETIC LOOP
2" BELOW TOP OF CONCRETE

8 MILE ROAD
(120 FEET WIDE - PUBLIC)

108.6'

R30.0'

R35.0'

CROSSWALK, TYP.
REFER TO SHEET C3.1

DRIVE THRU CLEARANCE SIGN

EXTEND LOOPS FROM DRIVE THRU TO THIS LOCATION

ORDER FONT CANOPY AND MENUBOARD, SEE DETAILS

DRIVE THRU PICK UP ZONE* PAINT RED STRIPES & LETTERS ON PAVEMENT

EXTEND LOOPS FROM DRIVE THRU TO THIS LOCATION

***DO NOT CUT EXPANSION JOINTS IN DRIVEPAD AT SERVICE WINDOW OR ORDER POINT CANOPY TO PREVENT DAMAGE TO LOOPS.

SHEETZ

NEW SHEETZ STORE
6139 SQ. FT.

SERVICE WINDOW CANOPY, SEE BUILDING ELEVATION SHEETS FOR SIGNAGE

LEFT HAND ENCLOSURE, REFER T

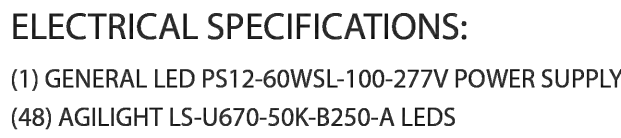
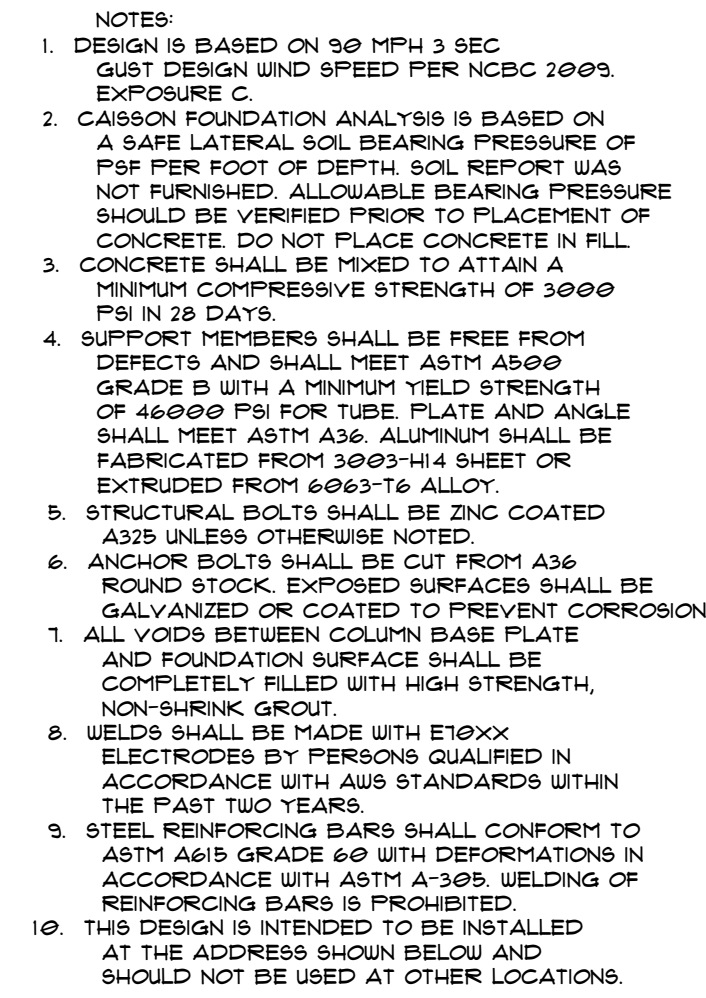
SITE SIGN PLAN
NO SCALE

Technical drawing of two 'INSIDE-OUT DRIVE-THRU' signs. The signs are red with white text. Dimensions are provided: 6'-0" wide and 1'-6" high. A callout indicates 'INTERNALLY ILLUMINATED'.

Technical drawing of a drive-thru sign structure. The drawing includes the following dimensions and labels:

- Dimensions:**
 - Overall height: 18'-0"
 - Top section height: 4'-0"
 - Sign area height: 10'-0"
 - Sign area width: 11'-4"
 - Sign area depth: 1'-3"
 - Clearance height: 11'-0"
 - Bottom section height: 12'-0"
 - Overall width: 11'-0"
- Labels:**
 - PAINTED 8"X8" STEEL TUBE
 - 10'-0" SIGN AREA
 - INTERNALLY ILLUMINATED
 - DRIVE-THRU ENTER HERE
 - STEEL BASE PLATE, REFER TO FOUNDATION DRAWINGS
 - CLEARANCE 11'-0"

DT-1



TOTAL CONNECTION LOAD:
0.95 AMPS @ 120 VOLTS- 60 HZ

FINISH:
ALL EXPOSED SURFACES OF MENU BOARD
CABINET, DOOR FRAMES AND CLADDING
TO BE PAINTED TO MATCH SUBWAY SEMI-GLOSS
BLACK

SEE FOUNDATION STRUCTURAL
DETAILS FROM SIGN VENDOR
FOR FOOTING DESIGN

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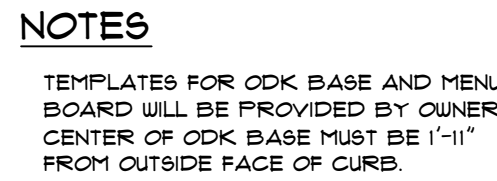
Everbrite LLC
4949 S 110th Street, Greenfield, WI 53220
Phone: 414-529-3500 • Fax: 414-529-7191
Website: www.everbrite.com

Part No:	E005059B
Description:	LED DRIVE BOARD

Project No:	434128-1
Date:	07/13/22
Drawn By:	CH



MENUBOARD DETAILS
NO SCALE AREA = 24.81 SQ. FT.



DRIVE THRU ORDER POINT PAD ELEVATION
SCALE: 3/8"=1'-0"



DRIVE THRU ORDER POINT LAYOUT

LEGEND

- ① 3 PANEL MENU BOARD 58.59" L X 6.28" W.
BA9E 15" W X 20.89" L
- ② ODK'S 50 3/4" L X 11" W
ODK BA9E 12" SQ.
- ③ TOP OF 54" X 18" MAGNETIC LOOP
2" BELOW TOP OF CONCRETE



(814) 239-6013

LIVONIA
8 MILE

Int. of 8 Mile Road
and Newburgh Road
Livonia
Michigan

OWNER:
SHEETZ, INC

5700 SIXTH AVE.
ALTOONA, PA 16602

CONSULTANT

PROFESSIONAL

KEYPLAN

[illegible]

ISSUE:	06-27-24
PROJECT NO:	
AUTHOR BY:	DNC
REVIEW BY:	
SHEET TITLE	

DRIVE THRU SIGN DETAILS

DT-2

LIVONIA
8 MILE

OWNER:
SHEETZ, INC.

5700 SIXTH AVE.
ALTOONA, PA 16602

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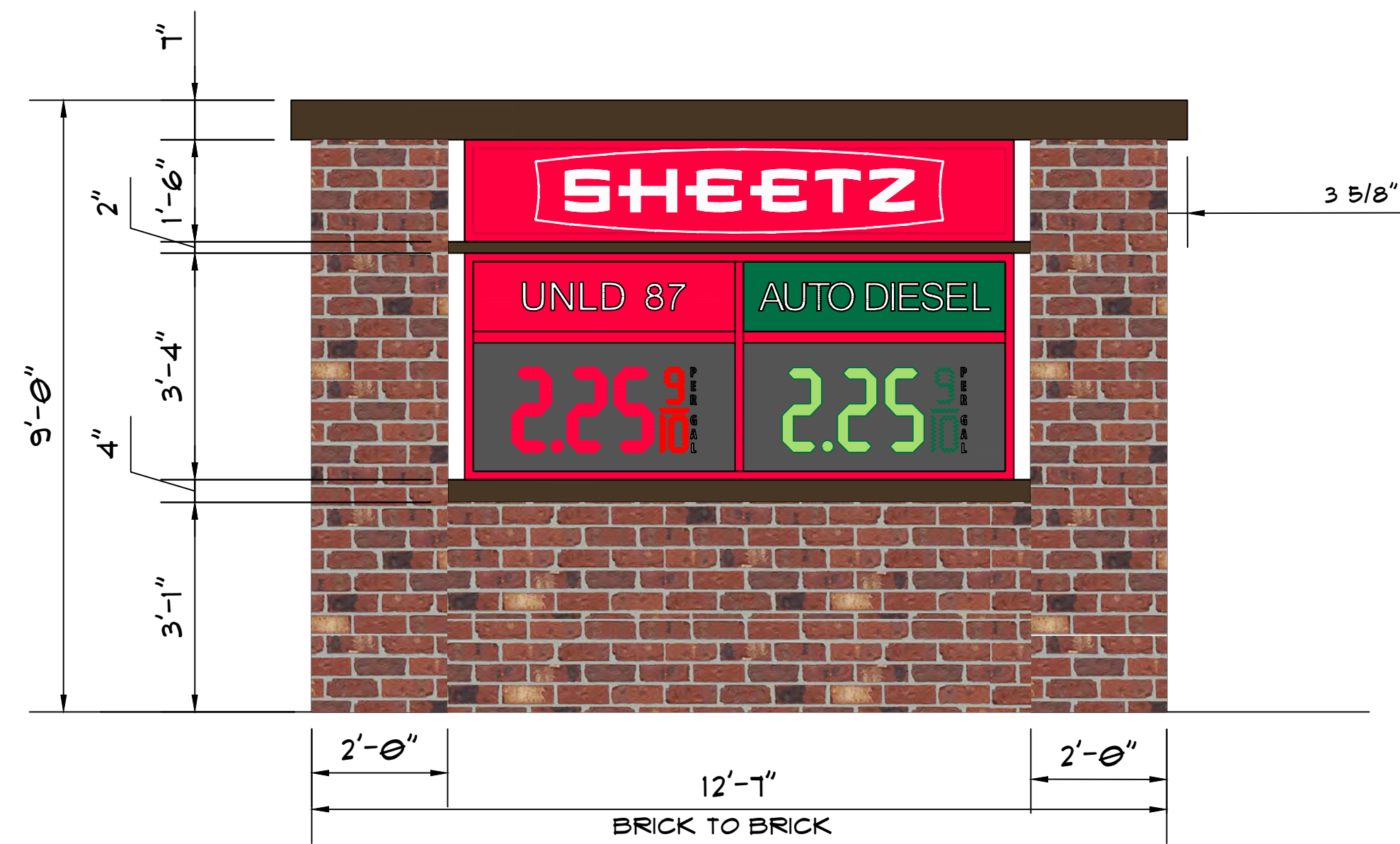
KEYPLAN

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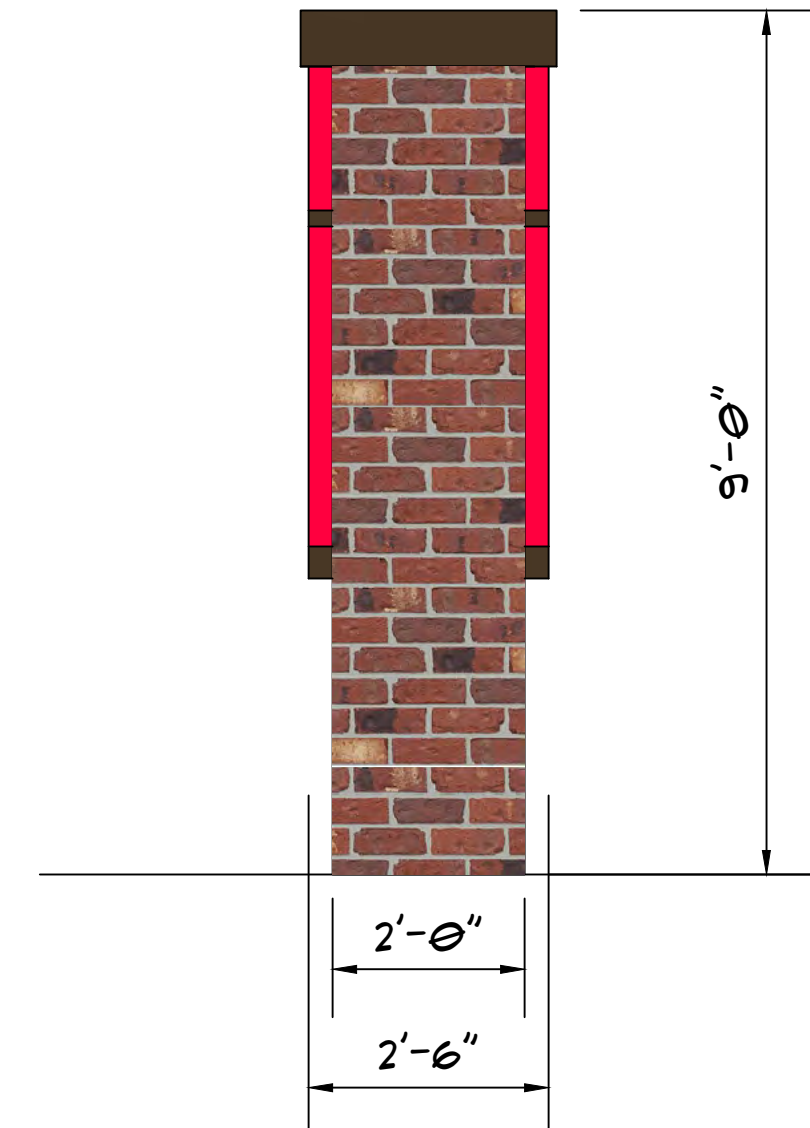
ISSUE:	06-27-24
PROJECT NO:	
AUTHOR BY:	DNC
REVIEW BY:	
SHEET TITLE	

MONUMENT SIGN DETAILS

SIGN

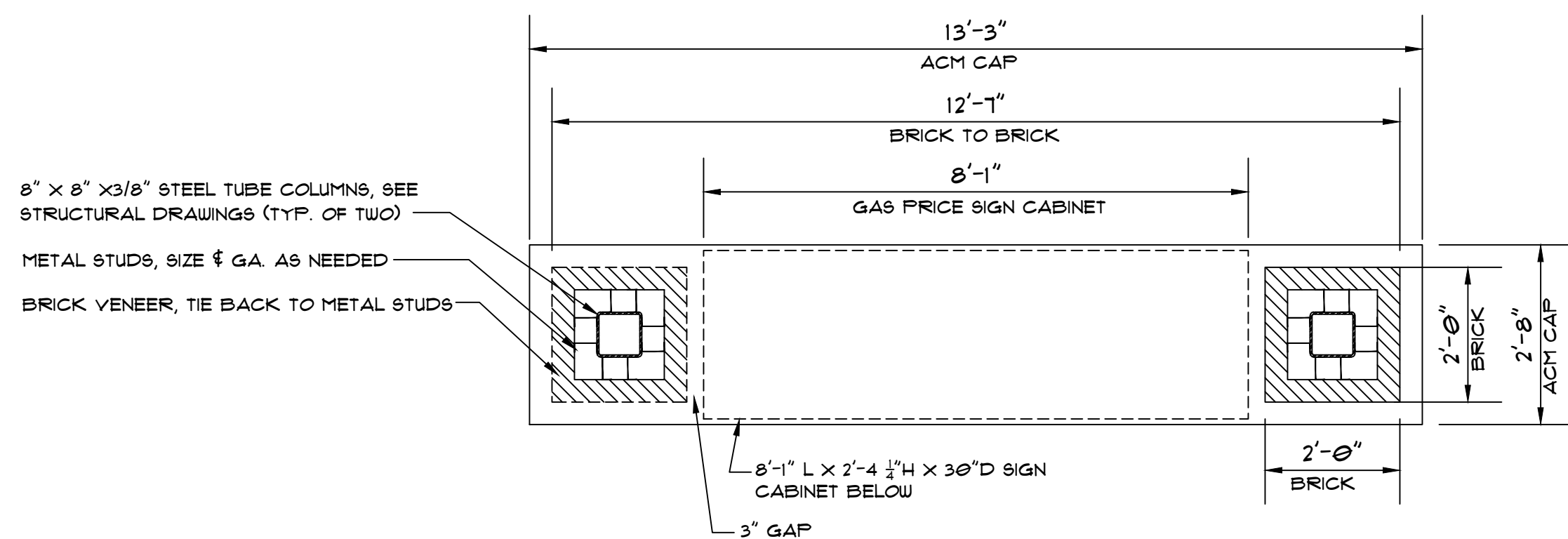
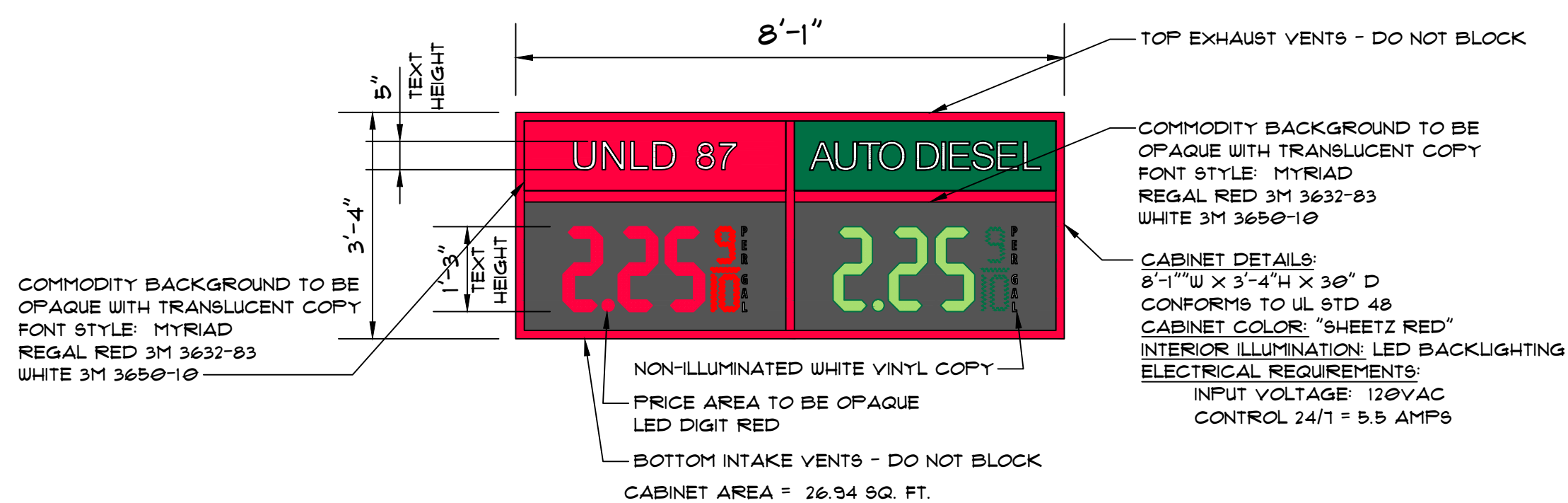
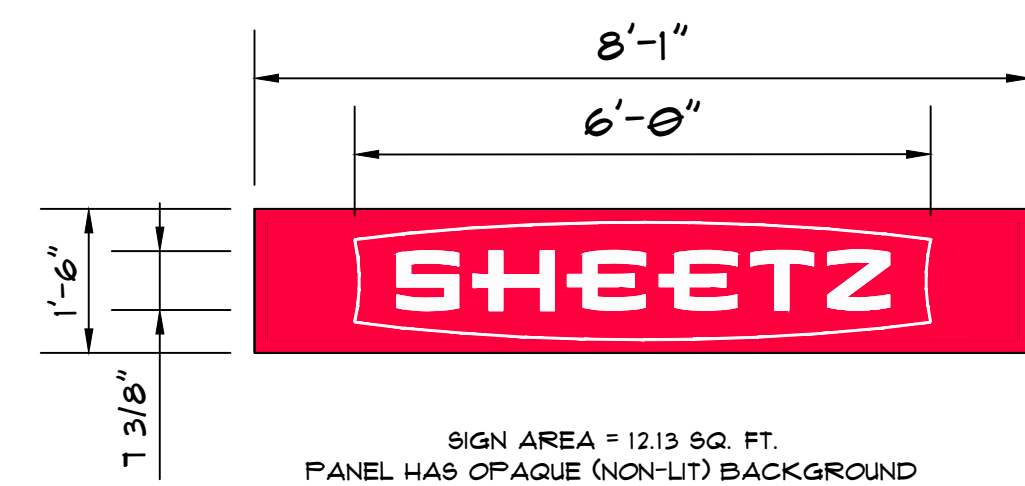


DOUBLE-FACED GAS PRICE SIGN DETAIL - PARTIAL ELEVATION
SCALE: 1/2" = 1'-0" AREA: 39.01 SQ. FT.

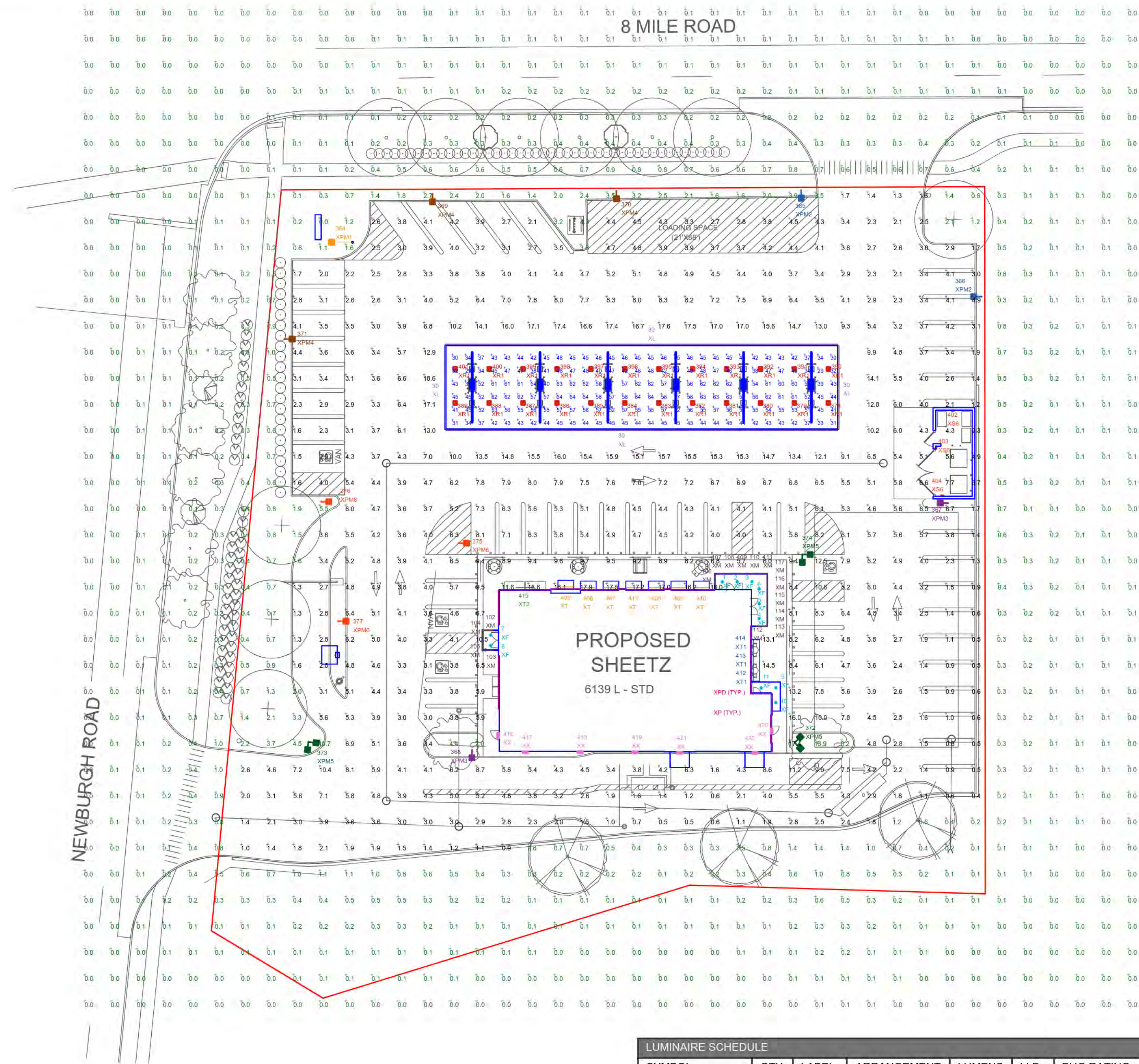


SIDE VIEW
SCALE: 1/2"=1'-0"

SIGN CABINET DETAILS
TOTAL SIGN AREAS: 39.07 SQ. FT.



PLAN VIEW
SCALE: 1/2"=1'-0"



FOOTCANOLE LEVELS CALCULATED AT GRADE USING INITIAL LUMEN VALUES					
LABEL	AVG	MAX	MIN	AVG/MIN	MAX/MIN
SITE PAVED AREA	5.40	18.6	0.4	13.50	46.50
UNDEFINED	0.30	13.9	0.0	N.A.	N.A.
UNDER CANOPY	48.68	64	29	1.68	2.21

THIS SITE IS LOCATED IN A REGION WHERE LIGHTING IS REGULATED BY LOCAL ORDINANCES

LUMINAIRE LOCATION SUMMARY				
LUM NO.	LABEL	MTG. HT.	TILT	ROLL
1 - 11	XF	11.33	0	0
12 - 48	XL	20.875	0	0
49 - 85	XL	18.06	0	0
86	XL	18.25	5	0
87	XL	18.599	5	0
88	XL	18.948	5	0
89	XL	19.297	5	0
90	XL	19.646	5	0
91	XL	19.995	5	0
92	XL	20.344	5	0
93	XL	20.693	5	0
94	XL	18.25	5	0
95	XL	18.599	5	0
96	XL	18.948	5	0
97	XL	19.297	5	0
98	XL	19.646	5	0
99	XL	19.995	5	0
100	XL	20.344	5	0
101	XL	20.693	5	0
102 - 117	XM	12	0	0
118 - 201	XP	18	0	0
202 - 212	XP	19	0	0
213 - 281	XP	18	0	0
282 - 313	XPD	18	0	0
314 - 316	XPD	19	0	0
317 - 363	XPD	18	0	0
364	XPM1	1	166	0
365, 366	XPM2	20	0	0
367	XPM3	20	0	0
368	XPM3	20	0	0
369 - 371	XPM4	20	0	0
372 - 374	XPM5	20	0	0
375 - 377	XPM6	20	0	0
378 - 389	XR1	17.71	0	0
390 - 401	XR1	18.83	0	0
402 - 404	XS6	6.5	90	0
405 - 411	XT	13.5	0	25
412 - 414	XT1	13.5	0	-25
415	XT2	15	0	0
416 - 419	XX	15.42	0	0
420	XX	11.33	0	0
421, 422	XX	9.33	0	0

NOTE:
- ALL AREA LIGHTS ON NEW 17 FT. POLE MOUNTED ON 3 FT. CONCRETE BASE

LUMINAIRE SCHEDULE									
SYMBOL	QTY	LABEL	ARRANGEMENT	LUMENS	LLF	BUG RATING	WATTS/LUMINAIRE	TOTAL WATTS	CATALOG LOGIC
	11	XF	Single	1037	1.000	B1-U0-G0	13	143	LF Illumination LLC (Ledil) BULLET MINI-5911-1AA-T-13C-9240-M-DMU-BLACK COLOR 90CRI
	90	XL	Single	136	1.000	N.A.	4.12	370.8	4 FT. LINEAR STRIP LIGHT (BY OTHERS, SHOWN FOR CONTRIBUTION)
	16	XM	Single	136	0.700	N.A.	4.12	65.92	LB-110-00-XX-025-RD(1)FR4-15
	164	XP	Single	305	1.000	N.A.	3.66	600.24	P-LED STREET WRAP FLEX BACK BEND 4000K
	82	XPD	Single	25	1.000	N.A.	0.305	25.01	P-LED STREET WRAP FLEX BACK BEND 4000K
	1	XPM1	Single	11000	1.020	B4-U0-G1	68	68	OSQ-ML-C-AA-XX w/PGM-1 + OSQM-C-11L-40K7-33-UL-NM-XX
	2	XPM2	Single	7200	1.020	B1-U0-G2	68	136	OSQ-ML-C-DA-XX + OSQM-C-11L-40K7-3B-UL-NM-XX
	2	XPM3	Single	10450	1.020	B2-U0-G2	68	136	OSQ-ML-C-DA-XX + OSQM-C-11L-40K7-3M-UL-NM-XX
	3	XPM4	Single	6600	1.020	B1-U0-G1	68	204	OSQ-ML-C-DA-XX + OSQM-C-11L-40K7-4B-UL-NM-XX
	3	XPM5	2 @ 90 degrees	10450	1.020	B2-U0-G2	68	408	OSQ-ML-C-DA-XX + OSQM-C-11L-40K7-4M-UL-NM-XX
	3	XPM6	Single	10450	1.020	B2-U0-G2	68	204	OSQ-ML-C-DA-XX + OSQM-C-11L-40K7-4M-UL-NM-XX
	24	XR1	Single	15700	1.020	B3-U3-G2	127	3048	CP5-20L-50K9-DF-UL-DM-XX-Q9-HZ
	3	XS6	Single	1858	1.000	B1-U1-G0	20	60	WLRD-C-122-840-BZ-OCC-S2X
	7	XT	Single	1840	1.000	N.A.	20	140	SEW12146 5FT L20W AN08 120-277V 4000K SMA PSE OAP6 MOD=FIXTURE HEAD TO BE LOCKED IN PLACE AIMING AWAY FROM BLDG
	3	XT1	Single	1472	1.000	N.A.	16	48	SEW12146 4FT L16W AN08 120-277V 4000K SMA PSE OAP6 MOD=FIXTURE HEAD TO BE LOCKED IN PLACE AIMING AWAY FROM BLDG.
	1	XT2	Single	2208	1.000	N.A.	24	24	SEW12146 6FT L24W AN08 120-277V 4000K SMA PSE OAP12
	7	XX	Single	1921	1.000	B1-U0-G0	16	112	WVW-H-L17/840-TL-DBZ-CGL-DIM-UNV (BRONZE COLOR 80CRI)

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SHEETZ 2.0

MODEL #: 06029.8 MODEL #: REFER TO LIGHTING FIXTURE SCHEDULE FOR MODEL NUMBER AND DESCRIPTION TYPE: X52

Shimadzu Design Studio LLC, 2905 1st Avenue, North Wing, (B) 07617, Tel: 201.661.3322

SHEETZ 2.0

MODEL #: REFER TO LIGHTING FIXTURE SCHEDULE FOR MODEL NUMBER AND DESCRIPTION TYPE: XS2

DOWNLIGHT



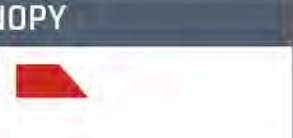
STREET WRAP



AREA



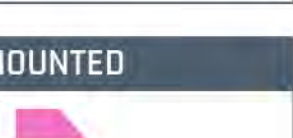
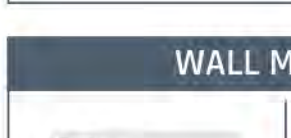
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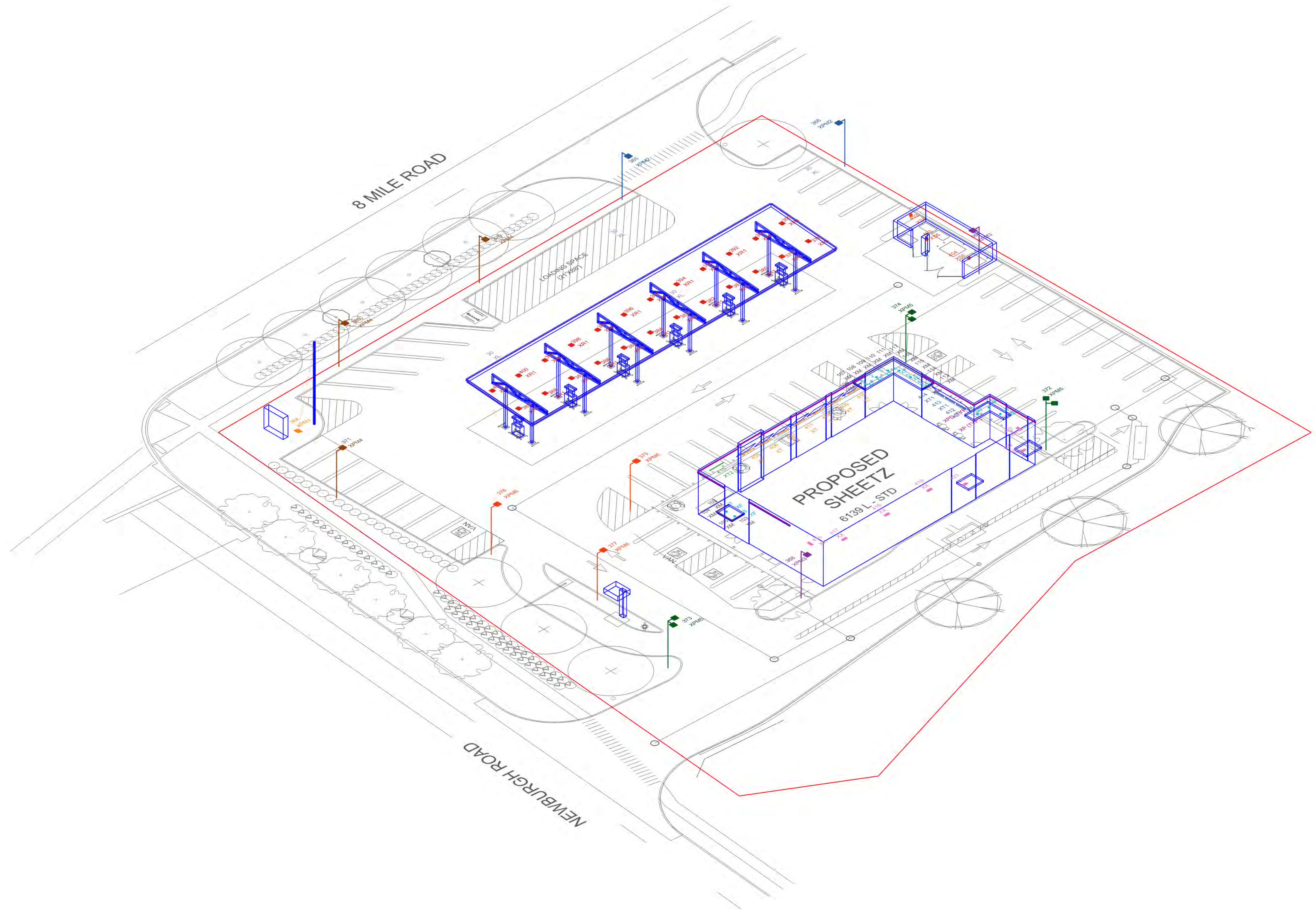


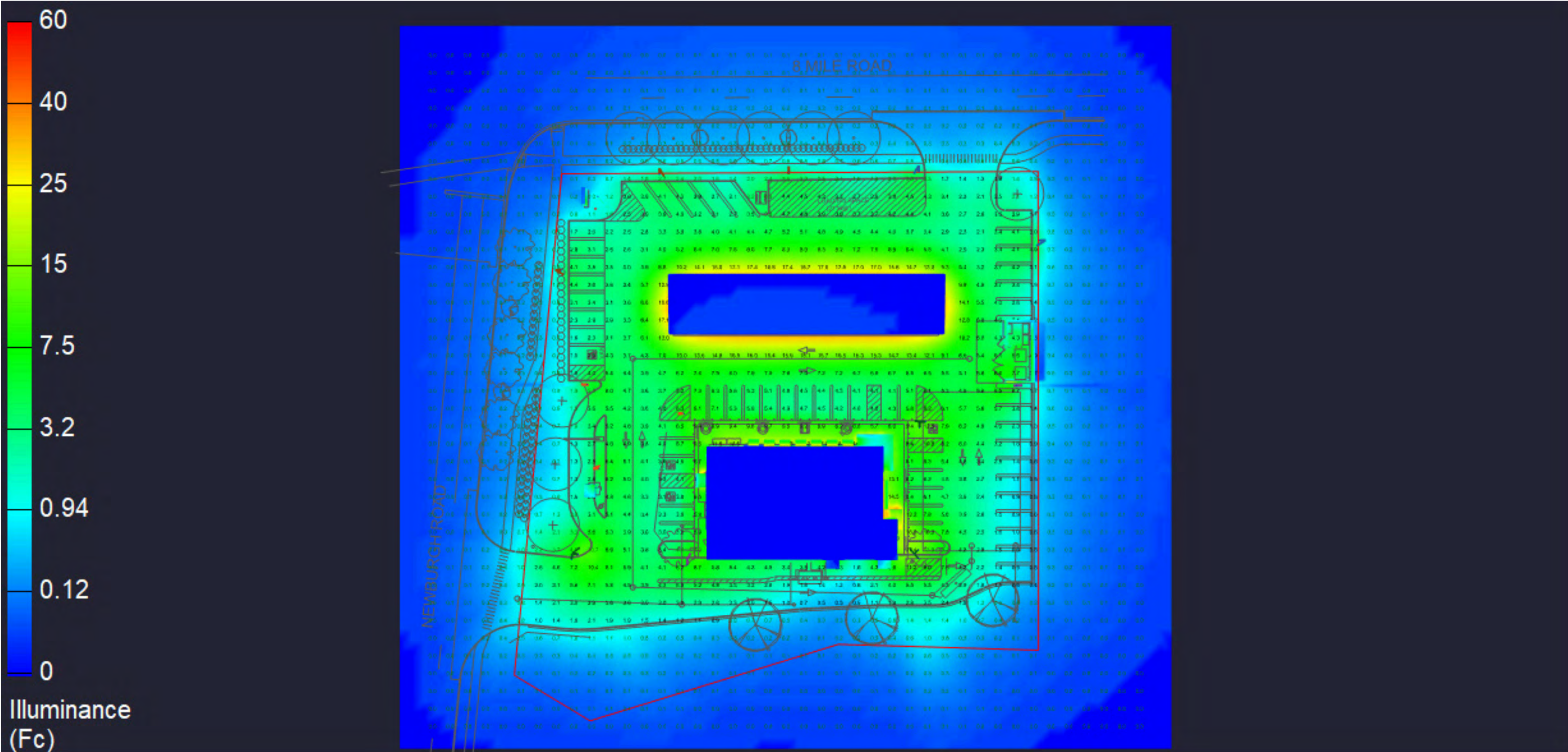
WALL MOUNTED



WALL MOUNTED









PROJECT MANAGER: - C:\PW\WORK\WADE-TRIM\JCECIL.D1463636\PLTS-VSP-EXISTING CONDITIONS PLANDWG - TOPO - PLOTTED 7/16/2024 1:14 PM BY: CECIL JOHN



Know what's below.
Call before you dig.



VICINITY MAP
(NOT TO SCALE)
SECTION 5, TOWNSHIP 03 SOUTH, RANGE 09 EAST,
LIVONIA TOWNSHIP, WAYNE COUNTY, MICHIGAN

LEGEND

- BENCHMARK
- CATCH BASIN ROUND
- CATCH BASIN SQUARE
- CONIFEROUS BUSH
- CULVERT END SECTION
- DECIDUOUS BUSH
- ELECTRIC HAND HOLE
- ELECTRIC MANHOLE
- ELECTRIC METER
- ELECTRIC RISER
- ELECTRICAL TRANS. BOX
- FIRE HYDRANT
- GATE VALVE AND WELL DETROIT
- GOVERNMENT CORNER
- GUY WIRE
- IRON ROD (FOUND)
- IRON ROD (SET)
- MEDIUM CONIFEROUS TREE
- MEDIUM DECIDUOUS TREE
- METAL LIGHT POLE
- POST
- POWER AND TELEPHONE POLE
- POWER POLE
- ROCK
- SANITARY SEWER MANHOLE
- SIGN POST
- SMALL CONIFEROUS TREE
- SMALL DECIDUOUS TREE
- SQUARE POST
- STORM SEWER MANHOLE
- STUMP
- TRAVERSE POINT
- WATER VALVE
- BUILDING
- CENTERLINE OF DRAIN
- CONTOUR LINE
- DOMESTIC WATER
- EDGE OF WOODS
- FENCE
- GAS LINE
- OVERHEAD COMMUNICATION
- OVERHEAD ELECTRIC
- PROPERTY BOUNDARY
- RIGHT OF WAY
- SANITARY LINE
- SECTION LINE
- SETBACK
- STORM SEWER
- UNDERGROUND COMMUNICATION
- UNDERGROUND ELECTRIC
- UNDERGROUND TELEPHONE

ASPHALT

CONCRETE

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Columbus, OH 43230
724.947.9700
www.wadetrिम.com

WADE TRIM

SKILKEN GOLD
4270 MORSE ROAD
COLUMBUS, OHIO 43230
EXISTING CONDITIONS PLAN
FOR
NEW SHEETZ STORE - 8 MILE ROAD
SHEETZ GAS STATION - CITY OF LIVONIA (8-MILE)

ISSUED FOR: - DATE: - BY: -
OWNER REV 04.19.24 KPR
PRELIM SP 07.17.24 JAC

JOB NO.
SGO2002.01F

SHEET

C1.0

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TOPOGRAPHIC SURVEY

LEGAL DESCRIPTION: PER 2021, TITLE COMMITMENT NO. 821223386NTS, DATED: 02/24/2024.

LAND SITUATED IN THE CITY OF LIVONIA, COUNTY OF WAYNE AND STATE OF MICHIGAN DESCRIBED AS:

PART OF THE NORTHWEST 1/4 OF SECTION 5, TOWN 1 SOUTH, RANGE 9 EAST, BEGINNING SOUTH 0 DEGREES 00 MINUTES 50 SECONDS EAST 60 FEET AND NORTH 89 DEGREES 45 MINUTES 30 SECONDS EAST 120.59 FEET FROM THE NORTHWEST CORNER OF SECTION 5, THENCE NORTH 89 DEGREES 45 MINUTES 30 SECONDS EAST 269.41 FEET, THENCE SOUTH 0 DEGREES 00 MINUTES 50 SECONDS EAST 271 FEET, THENCE NORTH 88 DEGREES 17 MINUTES 30 SECONDS WEST 113.32 FEET, THENCE SOUTH 72 DEGREES 53 MINUTES 30 SECONDS WEST 146.98 FEET, THENCE NORTH 58 DEGREES 52 MINUTES 20 SECONDS WEST 50.0 FEET, THENCE NORTH 05 DEGREES 25 MINUTES 20 SECONDS EAST 285.24 FEET TO THE POINT OF BEGINNING.

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN FEET AND DECIMALS THEREOF.
2. ALL BEARINGS ARE REFERENCED TO THE NORTH LINE OF SECTION 05, TOWN 01 SOUTH, RANGE 09 EAST, SAID LINE BEARING NORTH 85°27'07" EAST.
3. ADDRESS OF SURVEYED PARCEL(S) IS 37355, 8 MILE ROAD, LIVONIA, MICHIGAN, PARCEL ID 46-018-99-0001.
4. PARCEL IS SITUATED IN THE CITY OF LIVONIA, WAYNE COUNTY COUNTY, MICHIGAN
5. TOTAL SURVEYED AREA IS ±1.83 ACRES, MORE OR LESS.
6. FLOOD ZONE CLASSIFICATION IS X, ACCORDING TO FEMA FLOOD ZONE MAP 26163C00035E, EFFECTIVE DATE OF 02/01/2012.
7. THIS TOPOGRAPHIC MAP IS BASED UPON A FIELD SURVEY PERFORMED BY WADE TRIM COMPLETED ON 02/28/2024.

PARKING SPACES:

REGULAR PARKING SPACES: 66
BARRIER FREE PARKING SPACES: 46
MOTORCYCLE PARKING SPACES: 0
COMPACT CAR PARKING SPACES: 0
TOTAL PARKING SPACES: 112

SETBACK INFORMATION:

FRONT: 15 FEET
SIDE: 08 FEET
REAR: N/A

UTILITY NOTE:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. MISS DIG E-DESIGN TICKET 2024022603690 WAS SUBMITTED ON 02/26/2024.

HORIZONTAL DATUM:

NORTH AMERICAN DATUM OF 1983 (NAD83), MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE - 2113, INTERNATIONAL FEET, GPS DERIVED.

VERTICAL DATUM:

NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

BENCHMARK INFORMATION:

BENCHMARK 2
ELEVATION = 753.16'
NORTHEAST "X" OF CATCH BASIN RIM, 15 FEET SOUTHEAST TO TRAVERSE POINT 1, 1 FOOT EAST TO BACK OF CURB, 7 FEET
EAST TO LIGHT POLE

BENCHMARK 4
ELEVATION = 755.92'
CHISELED "X" IN THE NORTHEAST CORNER OF CATCH BASIN RIM, 11 FEET SOUTH SOUTHEAST TO TRAVERSE POINT 3, 2 FEET SOUTH TO BACK OF CURB, 20 FEET SOUTH TO SIDEWALK

CONTROL POINT INFORMATION:

CONTROL POINT 1
NORTHING = 343588.19'
EASTING = 13380435.34'
ELEVATION = 753.59'

SET 3" REBAR WITH CAP IN THE WEST ENTRANCE OF THE PRINT HOUSE JUST NORTH, 12 FEET NORTH TO THE LIGHT POLE, 4 FEET EAST TO SIDEWALK, 15 FEET NORTHWEST TO CATCH BASIN

CONTROL POINT 3
NORTHING = 343803.45'
EASTING = 13380512.23'
ELEVATION = 757.53'

SET 1" REBAR WITH CAP IN THE SOUTHEAST QUADRANT OF 8 MILE ROAD AND NEWBURGH, 10 FEET NORTH TO BACK OF CURB, 11 FEET NORTH-NORTHWEST TO CATCH BASIN, 23 FEET SOUTHWEST TO POWER POLE

CONTROL POINT 5
NORTHING = 343821.85'
EASTING = 13380748.27'
ELEVATION = 759.91'

SET 1" REBAR WITH CAP EAST FROM THE NORTH FROM THE PRINT HOUSE IN THE FRONT LAWN, 5 FEET NORTH TO BACK OF CURB,
5 FEET SOUTH TO SIDEWALK, 35 FEET SOUTHWEST TO LIGHT POLE

MISS DIG CONTACTS

123 NET
NAME: NONE
EMAIL: NONE
POSITIVE RESPONSE: 2/28/2024
CLEAR OF UTILITIES

ATT
NAME: MICHAEL BROUGHTON
PHONE#: 248-456-0850
EMAIL: MB3517@ATT.COM
POSITIVE RESPONSE: 3/05/2024
UTILITIES IN AREA

BRIGHT HOUSE NETWORK
NAME: ASHLEY MARCOLETTE
PHONE #: NONE
EMAIL: ASHLEY.MARCOLETTE@CCISYSTEMS.COM
POSTIVE RESPONSE:2/25/2024
UTILITIES IN AREA

CHARTER COMMUNICATIONS
Name: ASHLEY MARCOLETTE
PHONE #: NONE
Email: ASHLEY.MARCOLETTE@CCISYSTEMS.COM
POSTIVE RESPONSE: 02/27/2024
UTILITIES IN AREA

CONSUMERS ENERGY
NAME: CHRIS SCHNEIDER
PHONE: 734-513-6277
EMAIL: CHRISTOPHER.SCHNEIDER@CMSENERGY.COM
POSITIVE RESPONSE: 2/27/2024
UTILITIES IN AREA

DTE ENERGY ELECTRIC
NAME:SARA KIPP
PHONE: NONE
EMAIL: SARA.FORCE@DTEENERGY.COM
POSTIVE RESPONSE: 3/11/2024
UTILITIES IN AREA

CITY OF FARMINGTON HILLS
NAME: CONNIE MOISAN
PHONE: 248-871-2560
EMAIL: CMOISAN@FHGOV.COM
POSITIVE RESPONSE: 03/12/2024
UTILITIES IN AREA

GREAT LAKES WATER AUTHORITY
NAME: DANIEL MILLER
PHONE: 313-378-4908
EMAIL: DANIEL.MILLER@GLWATER.ORG
POSITIVE RESPONSE: 02/27/2024
UTILITIES IN AREA

CITY OF LIVONIA
NAME: DAVID LEAR
PHONE: 734-466-2608
EMAIL: DLEAR@LIVONIA.GOV
POSITIVE RESPONSE: 2/28/2024
UTILITIES IN AREA

MCI/VERIZON
NAME: NONE
PHONE: NONE
EMAIL: NONE
POSITIVE RESPONSE: 2/28/2024
CLEAR OF UTILITIES

WIDE OPEN WEST
NAME: DEAN MCCOMBS
PHONE: NONE
EMAIL: DEAN.MCCOMBS@WOWINC.COM
POSITIVE RESPONSE: 3/1/2024
CLEAR OF UTILITIES

OAKLAND COUNTY DRAIN COMMISSION
NAME: CHRISTOPHER GIANAKOS
PHONE: 248-858-1116
EMAIL: GIANAKOSC@OAKGOV.COM
POSTIVE RESPONSE: 03/13/2024
UTILITIES IN AREA

SIFI NETWORKS FARMINGTON LLC
NAME: NONE
PHONE: 657-217-2970
EMAIL: NOC@SNONETOPS.COM
POSITIVE RESPONSE: 2/26/2024
CLEAR OF UTILITIES

SKILKEN GOLD
4270 MORSE ROAD
COLUMBUS, OHIO 43230
EXISTING CONDITIONS PLAN NOTES
FOR
NEW SHEETZ STORE - 8 MILE ROAD

ISSUED FOR:	DATE:	BY:
OWNER REV	04.19.24	KPR
PRELIM SP	07.17.24	JAC

JOB NO.
SG02002.01F

SHEET

C1.1

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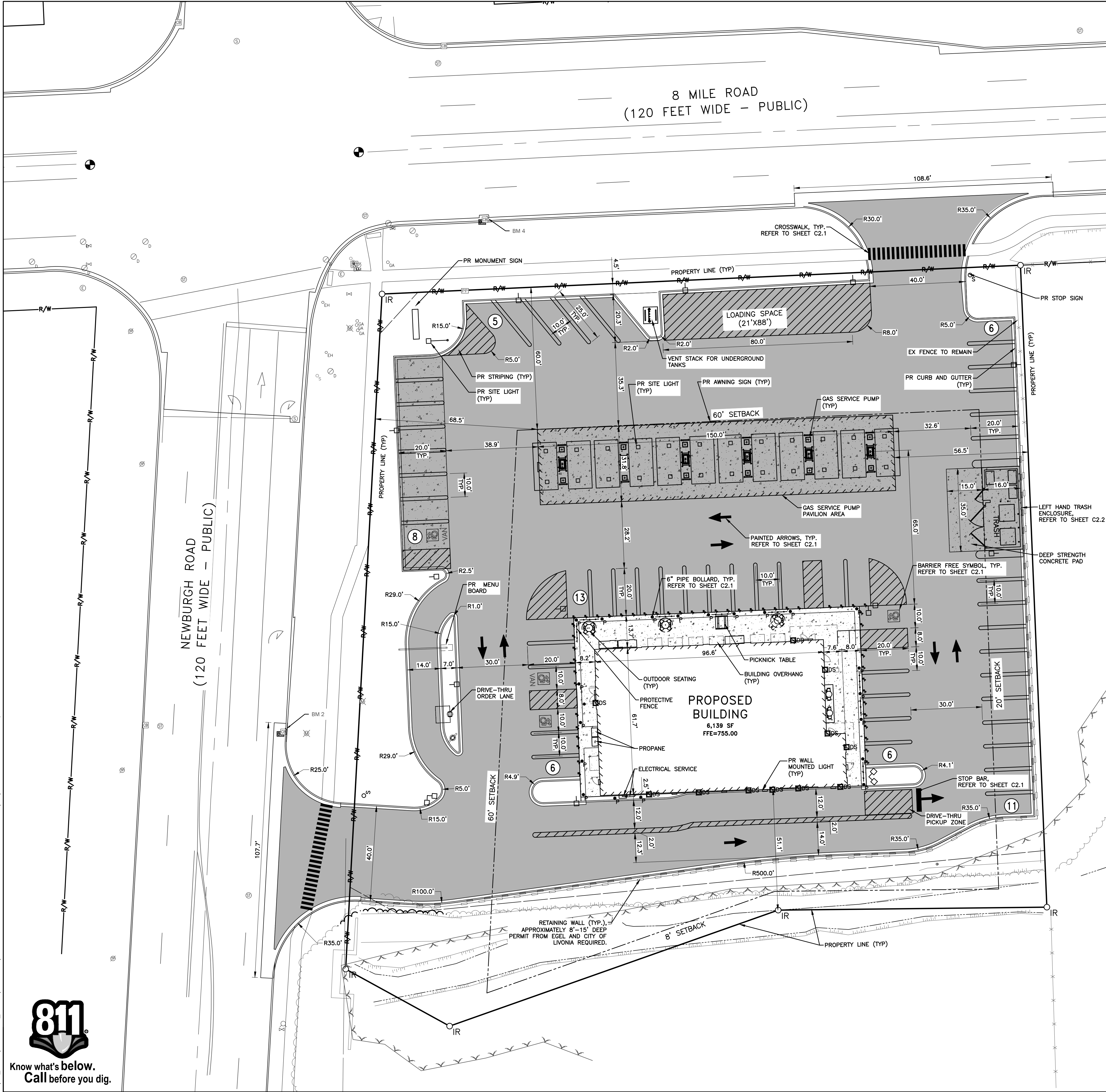
PROJECT MANAGER: -
 :PW_WORK\WADE-TRIM_JCECIL\1463536\PLTS-VSP-EXISTING CONDITIONS PLAN.DWG - PLOTTED 7/16/2024 1:09 PM BY CECIL, JOHN



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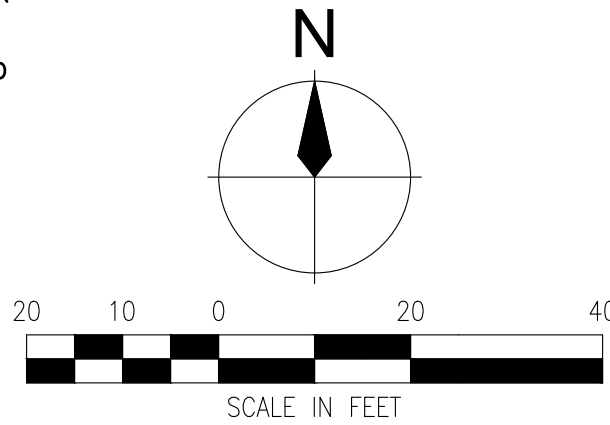


SITE DATA TABLE	
EXISTING ZONING	C-1
NEW PROPOSED ZONING	C-2
TAX PARCEL NO.	018990001000
MINIMUM LOT AREA	22,500 SF
TOTAL LOT AREA	79,880 SF
MINIMUM BUILDING SETBACKS	
ROAD	60 FT
SIDE	20 FT
REAR	8 FT
ACTUAL SETBACKS	
FRONT	60 FT
SIDE	56.5 FT
REAR	51.1 FT
MAXIMUM BUILDING HEIGHT	35 FT
PROPOSED BUILDING HEIGHT	19'-4 7/8"
PROPOSED LOT COVERAGE	0.25 AC
PROP. PARKING SPACE SIZE	10' X 20'
PARKING REQ'S (REFER TO PARKING REQUIREMENTS CALCULATION)	56
PROPOSED PARKING SPACES	56
REGULAR PARKING SPACES	53
PROPOSED A.D.A. SPACES	3
LOADING/UNLOADING SPACES REQ'D	1
LOADING/UNLOADING SPACES PROVIDED (15'X80')	1

PROPOSED LEGEND	
CANOPY LIMITS	---
BUILDING LINE	=====
STRAIGHT CURB	=====
BUILDING SETBACK	-----
RIGHT OF WAY LINE	----- R/W -----
SITE FENCE	X X
RETAINING WALL	=====
FLUSH THICKENED EDGE CONCRETE	=====
STOP BAR	=====
PARKING COUNT	#
TRAFFIC FLOW ARROW	→
SIGN AND SIGN POST	o
BOLLARD	o
ACCESSIBLE SYMBOL	o
DOWNSPOUT	o
7" BITUMINOUS SURFACE	=====
SEE DETAIL ON SHEET ####	
4" CONCRETE SURFACE	=====
SEE DETAIL ON SHEET ####	
8" CONCRETE SURFACE	=====
SEE DETAIL ON SHEET ####	
PAINTED ISLAND	=====
SITE LIGHT/ WALL MOUNTED LIGHT	o
NOTE: FOR EXISTING FEATURES SEE TOPOGRAPHIC SURVEY OR EXISTING CONDITIONS PLAN.	

PARKING REQUIREMENTS	
TYPE	NO. OF SPACES
REQUIRED	
LIMITED SERVICE AND CARRY-OUT RESTAURANTS WITH OR WITHOUT OUTDOOR DINING AREAS	1 SPACE PER 100 SF OF BLDG, PLUS 1 PER 3 OUTSIDE PATIO SEATING SPACES, PLUS 1 PER EMPLOYEE
FLOOR AREA	3,706 SF
PARKING REQUIRED	38 + 2 + 8 = 48
REGULAR SPACES	3
BARRIER FREE SPACES	3
TOTAL PARKING REQUIRED	48
PARKING PROVIDED	55
REGULAR SPACES	52
BARRIER FREE SPACES	3
TOTAL PARKING SPACES	55

- SITE PLAN NOTES**
- ALL WORK AND MATERIALS SHALL COMPLY WITH ALL AGENCIES HAVE JURISDICTIONAL AUTHORITY'S REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
 - ALL DIMENSIONS AND RADII ARE TO THE FACE OF CURB OR FACE OF THICKENED EDGE SIDEWALK UNLESS OTHERWISE NOTED ON THE PLANS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REMOVAL AND DISPOSAL OF DEMOLISHED ITEMS, (UNLESS OTHERWISE NOTED ON PLANS) INCLUDING BUT NOT LIMITED TO, CURBING, PAVEMENT, CONCRETE, STORM DRAINAGE STRUCTURES AND PIPING, LIGHT POLES AND BASES, VEGETATION AND TREES, ETC. AS REQUIRED, ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITY'S REQUIREMENTS AND PROJECT SITE WORK SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN THE BASE BID.
 - PROVIDE ISOLATION JOINTS WHERE CONCRETE ABUTS EXISTING CONCRETE.
 - ALL PARKING LOT STRIPING SHALL BE IN ACCORDANCE WITH THE CITY OF LIVONIA "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES". ALL STRIPING SHALL BE WATERBORNE PER MDOT SPECIFICATIONS AND ALL STRIPING SHALL BE 4" TRAFFIC YELLOW UNLESS OTHERWISE NOTED. ALL DIAGONAL STRIPING SHALL BE WHITE OR BLUE AT 2 FT ON CENTER, ON A 45° ANGLE UNLESS OTHERWISE NOTED. CONTRACTOR SHALL APPLY 2 COATS OF PAVEMENT MARKINGS, 1 MONTH APART.
 - ALL BARRIER FREE PARKING, SIGNAGE & STRIPING SHALL BE IN ACCORDANCE WITH MICHIGAN BARRIER FREE STANDARDS. DETECTABLE WARNING SURFACE SHALL BE INSTALLED AS REQ'D BY MICHIGAN BARRIER FREE STANDARDS AT ALL RAMPS AND OTHER LOCATIONS AS PROVIDED IN MICHIGAN BARRIER FREE STANDARDS. STRIPING SHALL BE WATERBORNE PAVEMENT MARKING PER MDOT SPECIFICATIONS, COLOR BLUE UNLESS OTHERWISE SPECIFIED.
 - THE CONTRACTOR SHALL INSTALL ADA DETECTABLE WARNING SURFACES IN ACCORDANCE WITH ADA STANDARDS AT LOCATIONS SHOWN ON THE SITE PLAN. THE TYPE, MATERIAL AND COLOR SHALL BE APPROVED BY THE OWNER AND/OR ARCHITECT OR AHJ PRIOR TO INSTALLATION.
 - PLACEMENT OF SLEEVES FOR ANY ELECTRIC SYSTEM SHALL BE COORDINATED WITH OWNER/ARCHITECT PRIOR TO BEGINNING CONSTRUCTION.
 - CONTRACTOR IS RESPONSIBLE FOR PROPER TRAFFIC CONTROL DURING CONSTRUCTION IN ACCORDANCE WITH THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".
 - SITE CONTRACTOR SHALL REFER TO LIGHTING PLANS FOR LIGHTING LOCATIONS AND FOUNDATIONS. SITE CONTRACTOR SHALL COORDINATE LOCATIONS OF ALL SITE LIGHTING AND CIRCUITRY PRIOR TO PLACING UTILITIES AND INSTALLING PAVEMENTS.
 - ALL WORK WITHIN THE MDOT RIGHT OF WAY SHALL BE IN ACCORDANCE WITH MDOT DETAILS AND STANDARD SPECIFICATIONS FOR CONSTRUCTION.
 - THERE WILL BE NO HAZARDOUS CHEMICALS BROUGHT ON OR STORED ON-SITE.
 - THERE WILL BE NO SMOKING ON THE PROPERTY AT ANYTIME.



ISSUED FOR: DATE: BY: OWNER REV 04.19.24 KPR PRELIM SP 07.17.24 JAC

JOB NO. SGO2002.01F

SHEET C2.0

SKILKEN GOLD
4270 MORSE ROAD
COLUMBUS, OHIO 43230

SITE PLAN
FOR
NEW SHEETZ STORE - 8 MILE ROAD

SHEETZ GAS STATION - CITY OF LIVONIA (8-MILE)

25501 Northline Rd.
Columbus, OH 43230
724.847.9700
www.wade-trim.com

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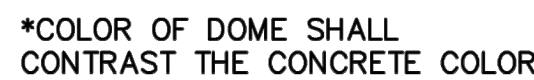
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DATE 07.17.24

REV# 1

BY



DOME TACTILES TO BE
CENTERED ON SIDEWALK

4'

2'

CENTERED

PLAN VIEW



1. SIDEWALKS SHALL BE DIVIDED INTO UNIT AREAS APPROXIMATELY SQUARE, OR NOT MORE THAN 36 NOR LESS THAN 16 SQUARE FEET.
2. THE UNIT AREAS SHALL BE CONSTRUCTED BY FORMS OR BY CUTTING JOINTS IN THE PLASTIC CONCRETE TO A DEPTH OF 3/4". A 1/2" PREFORMED FIBER EXPANSION JOINT SHALL BE PLACED BETWEEN ABUTTING PARALLEL CURBS AND SIDEWALKS OR BUILDINGS AND ELSEWHERE AT APPROXIMATELY 50' INTERVALS. A PREFORMED 1/2" x 6" FIBER EXPANSION JOINT SHALL BE PLACED BETWEEN CURB RETURNS AND SIDEWALKS.
3. SUB-BASE, WHERE SPECIFIED, SHALL CONSIST OF 4" OR 6" BACKFILL, M.D. 2.5 CLASS, UNLESS OTHERWISE SHOWN ON THE PLANS. SUB-BASE WILL BE CONSIDERED AS INCIDENTAL TO CONSTRUCTION OF CONCRETE SIDEWALKS.

2.0" HMA WEARING COURSE, SEE NOTES

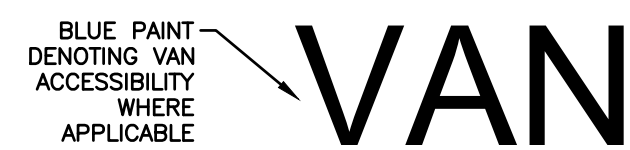
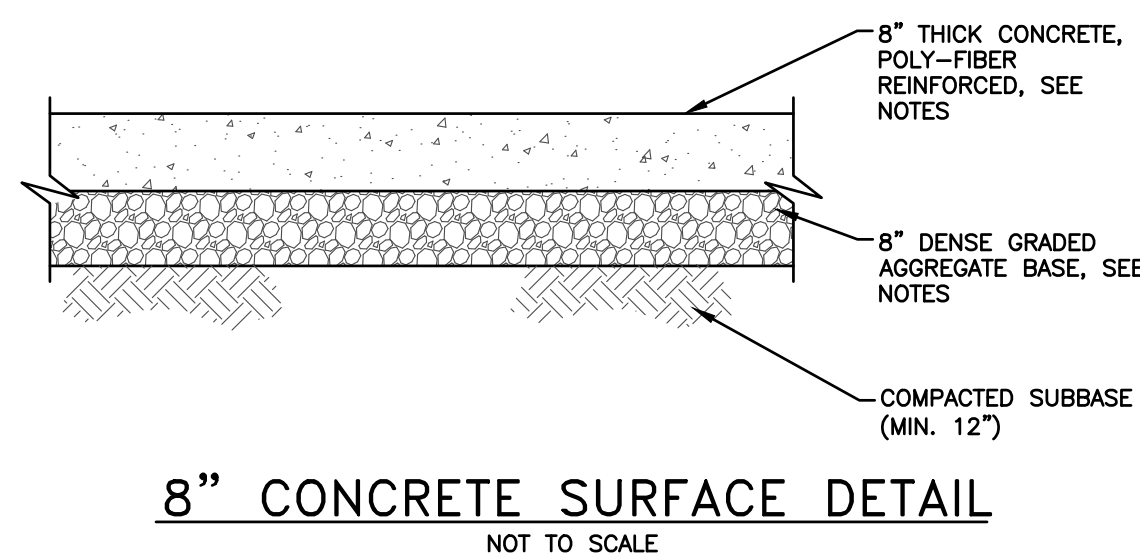
BOND COAT, SEE NOTES

3.0" HMA LEVELING COURSE, SEE NOTES

12" DENSE GRADED AGGREGATE BASE, SEE NOTES

COMPACTED SUBGRADE, SEE NOTES

**STANDARD HMA PAVEMENT
DETAIL**
NOT TO SCALE



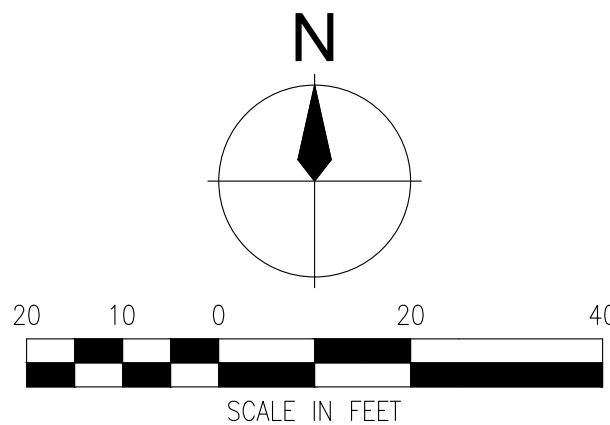
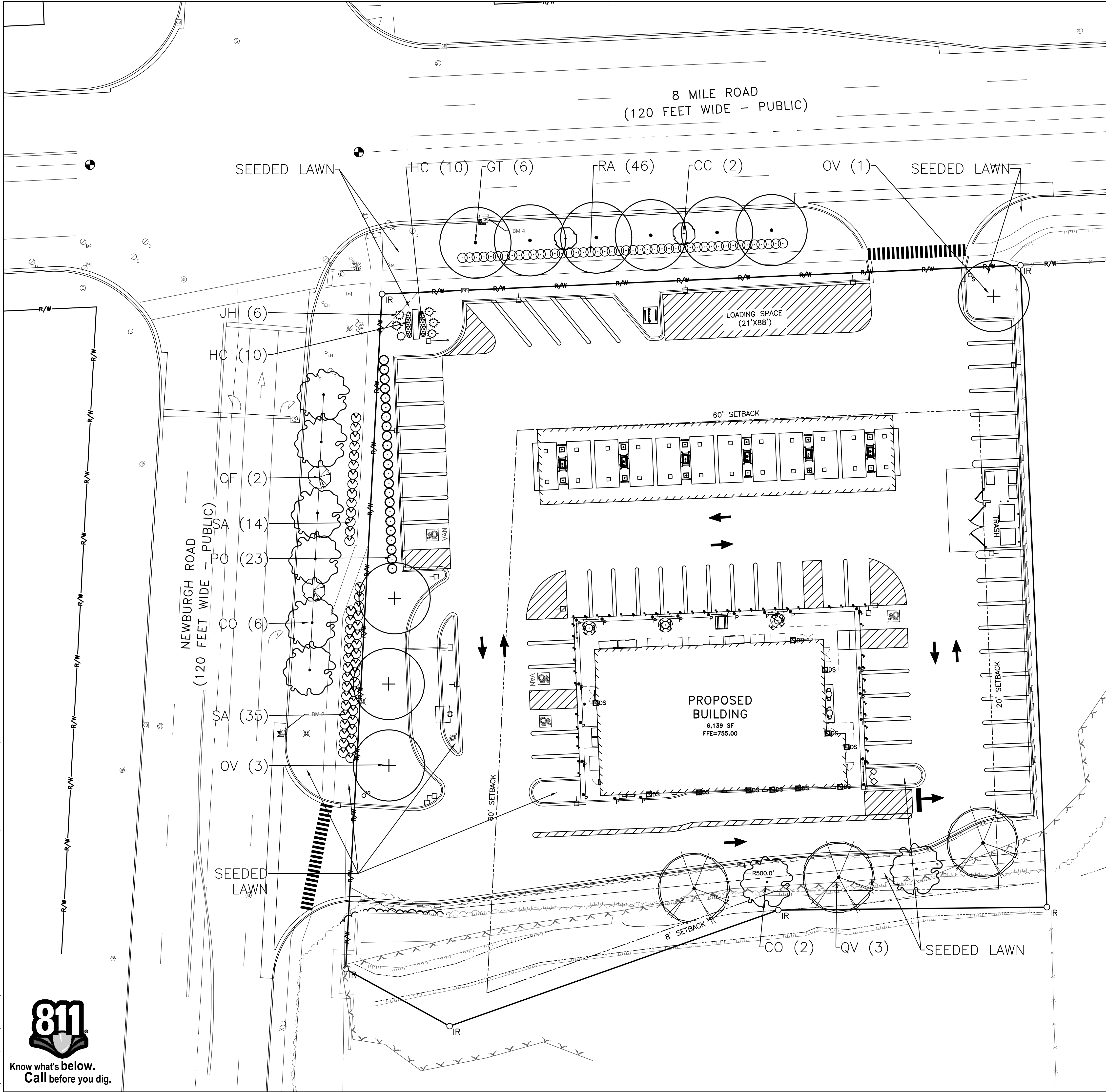
BARRIER FREE SYMBOL DETAIL
NOT TO SCALE

- NOTES:
1. SYMBOL SHALL DEPICT A DYNAMIC CHARACTER LEANING FORWARD WITH A SENSE OF MOVEMENT.
 2. PROVIDE CONTRASTING BACKGROUND WITH EITHER A WHITE SYMBOL ON BLUE BACKGROUND OR A BLUE SYMBOL ON A WHITE BACKGROUND.
 3. SYMBOL SHALL BE SUBSTANTIALLY EQUIVALENT TO THE INTERNATIONAL SYMBOL OF ACCESS.
 4. SYMBOL SHALL BE SIMPLE AND AVOID ANY SECONDARY MEANING.

PROJECT MANAGER - C:\PW_WORK\KERRY\01463536\PLTS-LP-LANDSCAPE PLAN.DWG - L1.0 - PLOTTED 7/16/2024 3:26 PM BY KERR, RACHEL



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REV SP
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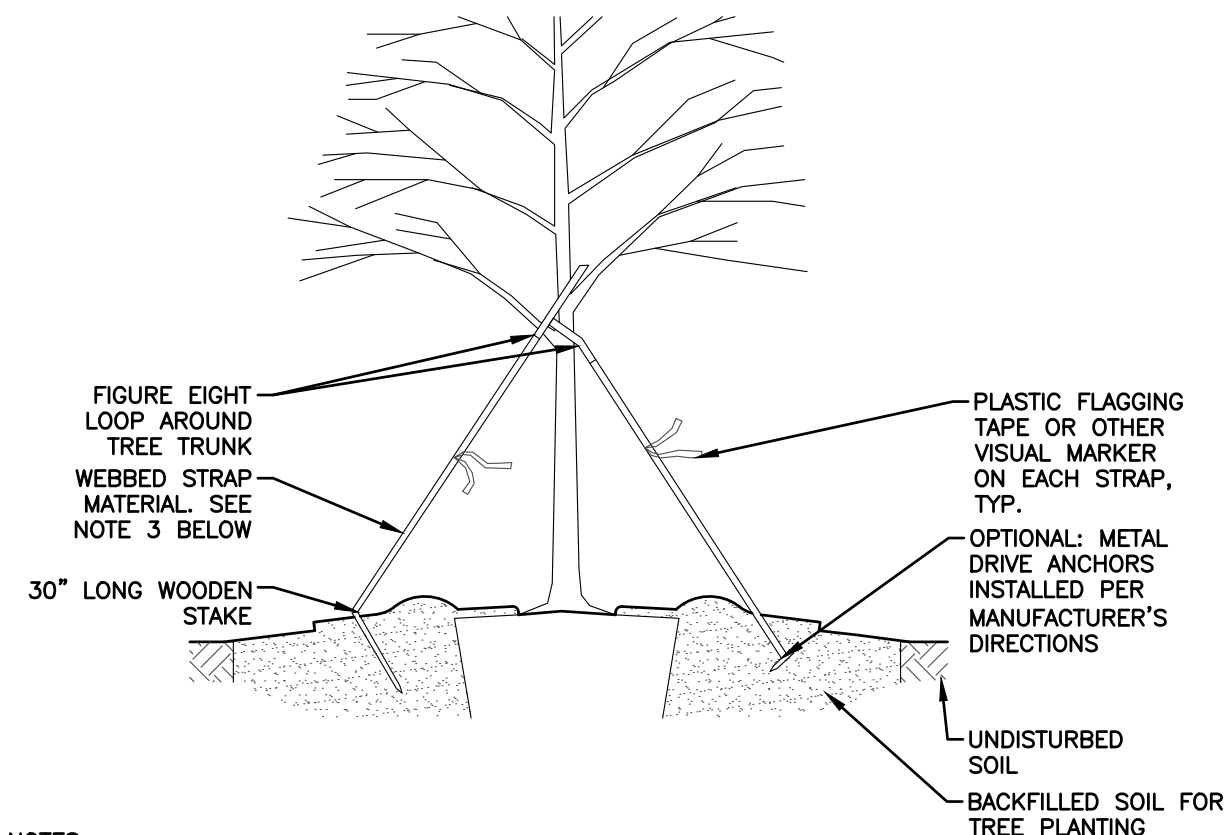
SKILKEN GOLD
4270 MORSE ROAD
COLUMBUS, OHIO 43230
LANDSCAPE PLAN
FOR
NEW SHEETZ STORE - 8 MILE ROAD
(8-MILE)
SHEETZ GAS STATION - CITY OF LIVONIA



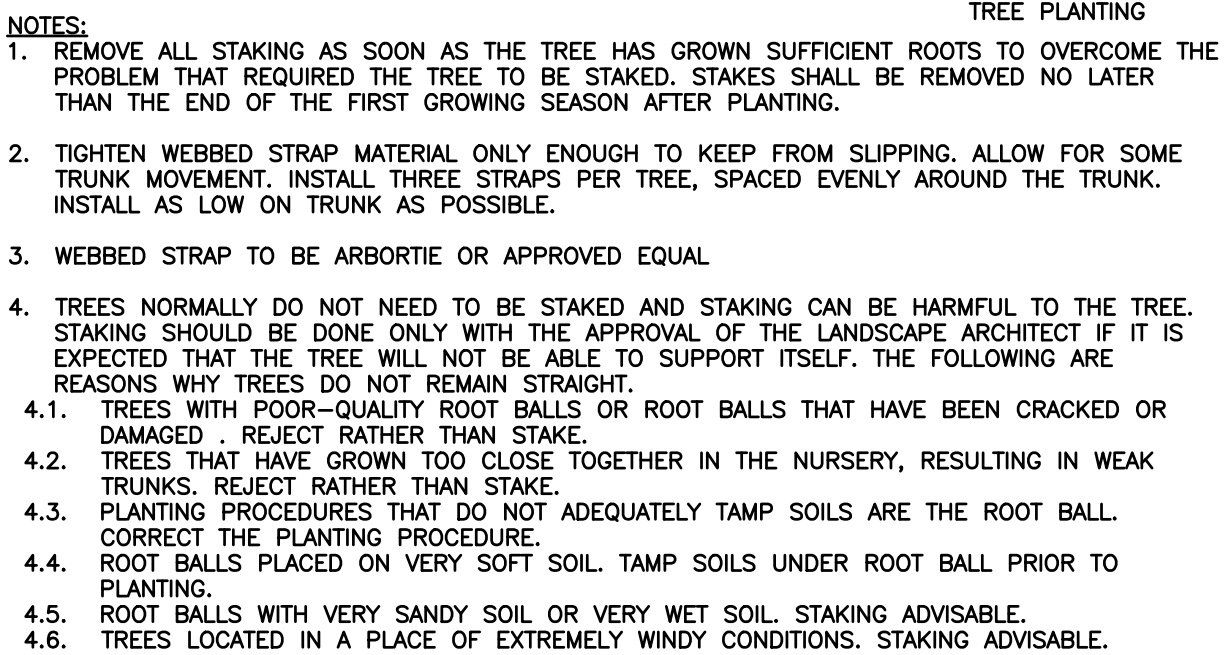
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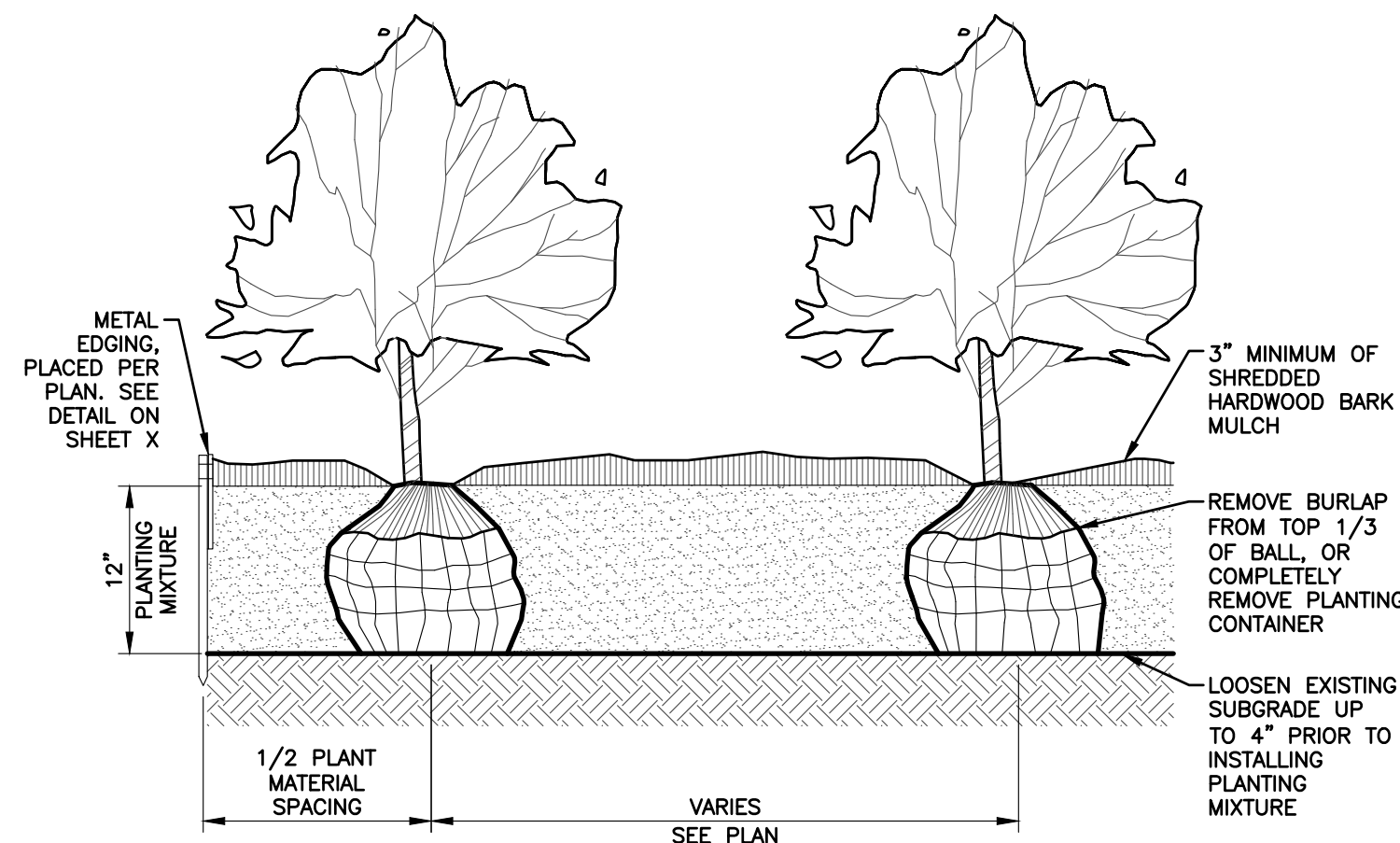
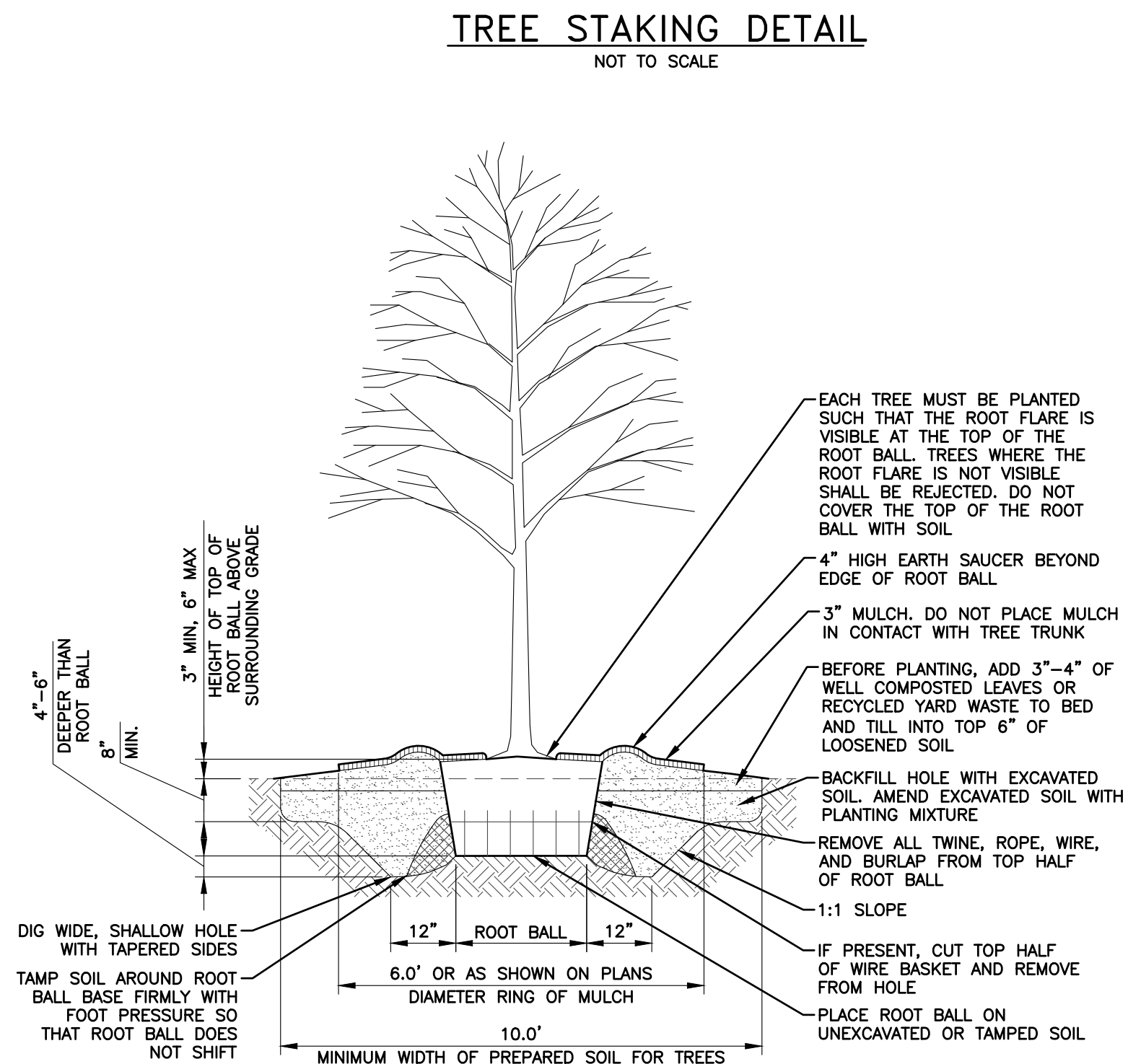
TREES

[illegible]

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	QTY
t h	tKēā2ōtNjāzā 2Jāzēfē2fēdāzā	blySōtN\	1o D t f	nyj	no
w !	wlōSā fēJijyēY	fēJijyS / dzNt-yū	1o D t f	oçj	nc
{ !	{JNt f S t f tōt	a S t R2ōāS āS Ūj	1o D t f	nyj	nφ
w l	WāzyNjāzāzā K2Nt2yū fēā	/NŠS JijyS WāzyNjāzā	1o D t f	cñj	c



<u>SYMBOL</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>SIZE</u>	<u>SPACING</u>	<u>QTY</u>
I /	І СҮСНІЗІТІА ОЛІУМІ-	/ СҮСНІЗІТІА ОЛІУМІ-	m D I-fo	n p d	нл



SHRUB PLANTING DETAIL

NOT TO SCALE

TREE PLANTING DETAIL

LANDSCAPE NOTES

- ALL PLANTS TO BE INSTALLED IN ACCORDANCE WITH AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE STANDARDS.
- CONTRACTOR SHALL PROVIDE A PLANTING MIXTURE MEETING THE FOLLOWING REQUIREMENTS. IF THE ENGINEER HAS ANY CONCERNS WITH THE QUALITY OF THE PLANTING MIXTURE, THE ENGINEER SHALL BE ALLOWED TWO WEEKS TO OBTAIN SOIL TEST TO DETERMINE SPECIFICATION COMPLIANCE. NO PLANT MATERIAL SHALL BE PLANTED PRIOR TO ENGINEER APPROVAL OF PLANTING MIXTURE. ALL PLANT MATERIAL SHALL BE MAINTAINED BY THE CONTRACTOR IN A VIGOROUS GROWING CONDITION DURING THIS TIME AT NO ADDITIONAL COST.
- PLANT MATERIALS SHALL BE AS SHOWN ON DRAWING OR ON PLANT LIST. THE ENGINEER SHALL REVIEW THE PLACEMENT OF PLANT MATERIAL PRIOR TO AND AFTER INSTALLATION, AND RESERVES THE RIGHT TO ADJUST LAYOUT TO ACCOMMODATE SITE CONDITIONS AND DESIGN INTENT.
- ALL PLANT MATERIALS SHALL CONFORM TO PLANT SCHEDULES. SIZES SHALL BE THE MINIMUM STATED ON THE PLANT LIST OR LARGER. ALL MEASUREMENTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "A.A.N. STANDARDS FOR NURSERY STOCK."
- NO PLANT SHALL BE PUT INTO THE GROUND BEFORE ROUGH GRADING HAS BEEN FINISHED AND REVIEWED BY THE ENGINEER.
- PLANTING LOCATIONS SHALL BE MARKED BY CONTRACTOR THREE WORKING DAYS PRIOR TO PLANTING FOR ENGINEER REVIEW.
- ALL PLANTED PLANTS SHALL BEAR THE SAME RELATIONSHIP TO FINISHED GRADE AS THE PLANTS ORIGINAL GRADE BEFORE DIGGING.
- PLANT MATERIAL, ESPECIALLY EVERGREENS, TO BE PLANTED HIGHER THAN NORMAL WHEN HEAVY SOIL CONDITIONS (CLAY, ETC.) PREVAIL.
- IF FOR ANY REASON ANY BALLED AND BURLAPED PLANT MATERIALS NEED TO BE STORED ON SITE LONGER THAN A 24-HOUR PERIOD, THEIR ROOT BALLS SHALL BE PROTECTED. ALL PLANTS SHALL BE THOROUGHLY WATERED EACH DAY THEY ARE STORED ON SITE. PLANTS MAY BE STORED ON SITE FOR A MAXIMUM OF TWO (2) WEEKS, OR 14 DAYS. ANY PLANTS ALLOWED TO DRY OUT WILL BE DESTROYED BY THE ENGINEER AND REPLACED.
- NO CONTAINER GROWN STOCK WILL BE ACCEPTED IF IT IS ROOT BOUND. ALL WRAPPING MATERIALS MADE OF SYNTHETIC OR PLASTICS SHALL BE COMPLETELY REMOVED AT TIME OF PLANTING.
- THE CONTRACTOR SHALL FILL PLANT PIT WITH PREPARED PLANT MIX TO ½ DEPTH OF ROOT BALL OR ROOT MASS, PACK FIRMLY, PUDDLE WITH WATER; THEN FOR BALLED AND BURLAPED MATERIAL, THE BURLAP AND ALL LACING (INCLUDING WIRE BASKET IF NECESSARY) SHALL BE REMOVED FROM THE UPPER 1/3 OF ROOTBALL, THEN FINISH BACKFILLING ADDING SOLID FERTILIZER TO THE PLANT MIX, PACK FIRMLY AND WATER. A SAUCER SHALL BE PLACED AROUND EVERY PLANT AND SHALL BE APPROVED PRIOR TO PLANTING.
- ALL DISTURBED LAWN AREAS SHALL BE RESTORED WITH 4-INCHES OF TOPSOIL, SPREAD, FINE GRADED, AND SEEDED/SODDED AS SPECIFIED. PRIOR TO INSTALLATION OF TOPSOIL, LOOSEN SUBGRADE TO A DEPTH OF 2 INCHES. THIS WORK SHALL BE INCIDENTAL TO THE PROJECT.
- TOPSOIL SHALL CONSIST OF FRIABLE, SHREDDED, AND SCREENED SOIL REASONABLY FREE OF GRASS, ROOTS, WEEDS, STICKS, STONES OR OTHER FOREIGN MATERIALS. THE TOPSOIL MATERIAL SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. SOIL COMPOSITION SHOULD CONTAIN AN ORGANIC CONTENT OF 2 TO 6 PERCENT AND BE CLASSIFIED AS A LOAM OR SANDY LOAM AS SPECIFIED IN THE "GUIDE FOR U.S.D.A. SOIL TEXTURAL CLASSIFICATION".
- ALL TREES AND SHRUBS ARE TO BE FERTILIZED ONCE AFTER PLANTING. A WATERING AND FERTILIZATION SCHEDULE SHALL BE ADAPTED TO THE TABLETS AT RATES RECOMMENDED BY MANUFACTURER.
- ALL PLANTS AND STAKES SHALL BE SET PLUMB UNLESS OTHERWISE SPECIFIED.
- AT PLANTING TIME, ALL DEAD AND BROKEN BRANCHES SHALL BE PRUNED ON ALL DECIDUOUS TREES.
- CONTRACTOR SHALL APPLY ENGINEER APPROVED PRE-EMERGENT HERBICIDE, "PREEN" OR EQUAL, TO SHRUB AND GROUND COVER PLANTING AREAS AT THE TIME OF PLANTING (IF SPRING PLANTED) OR THE FOLLOWING SPRING. CONTRACTOR SHALL ENSURE THE PLANT MATERIALS ARE RESISTANT TO THE HERBICIDES PROPERTIES. HERBICIDE SHALL BE APPLIED ACCORDING TO MANUFACTURERS SPECIFICATIONS AND IN ACCORDANCE WITH THE FOLLOWING HORIZONTAL PRACTICES:
 - ALL TREES AND SHRUBS: AROUND GROUND COVER SHALL RECEIVE A MINIMUM DEPTH OF THREE INCHES DOUBLE SHREDDED HARDWOOD BARK MULCH, WHERE PLANT BEDS NEED PAVEMENTS, LAWN, OR STEEL EDGING CUT THE GRADE TO ALLOW FOR MULCH AND THREE-INCH DROP FROM ADJOINING FINISH GRADE.
- ALL PLANT BEDS SHALL BE EXCAVATED TO A MINIMUM DEPTH OF 8-INCHES AND BACKFILLED WITH SPECIFIED PLANT MIX AS PER PLANTING BED DETAILS. BEDS SHALL BE EDGED WITH METAL EDGING AROUND PERIMETER. ALL EDGING SHALL BE 4" WIDE - 12 GAUGE STEEL, COLOR BLACK. CONTRACTOR SHALL LAYOUT EDGING FOR APPROVAL AND INSTALL PER MANUFACTURERS RECOMMENDATIONS.
- ALL TREES TO BE WATERED BEFORE AND AFTER PLANTING IS COMPLETE. ALL TREES MUST BE STAKED, FERTILIZED AND MULCHED AND SHALL BE GUARANTEED TO EXHIBIT A NORMAL GROWTH CYCLE FOR AT LEAST ONE (1) FULL YEAR FOLLOWING PLANTING. ALL DISEASED, DAMAGED, OR DEAD MATERIAL SHOWN ON THE SITE PLAN SHALL BE REPLACED BY THE END OF THE FOLLOWING GROWING SEASON.
- APPLICATIONS OF FERTILIZER BEYOND THE INITIAL TOPSOIL AND SEEDING SHALL BE A FERTILIZER WITH NO PHOSPHOROUS.

LANDSCAPE NOTES PER SHEETZ:

1. ADD : "PLACE DEWITT 15 YEAR WEED BARRIER WOVEN POLYPROPYLENE OR APPROVED EQUAL IN ALL PLANTED BEDS AND AT EACH TREE RING.
 2. ADD: 3 INCHES THICK DOUBLE SHREDDED HARD WOOD MULCH DYED COLOR BROWN OR BLACK.
- OTHER NOTES TO CONSIDER:
3. LANDSCAPE DESIGN: ONLY SHOW WHAT IS REQUIRED BY ORDINANCE. COORDINATE WITH SHEETZ PERMIT MANAGER ON ANY ADDITIONAL LANDSCAPING
 4. SOD,SEED,MULCH AREAS CLEARLY IDENTIFIED
 5. CONFLICTS BETWEEN PROPOSED LIGHTING, UTILITIES, AND THERE SITE ELEMENTS RESOLVED
 6. TYPICALLY, LOW PROFILE LANDSCAPING AROUND POLE/GROUND SIGN IS TO BE PROPOSED
 7. LANDSCAPING AROUND POLE/GROUND SIGN SHALL BE PROVIDED. FOR GROUND SIGNS, BE CONSCIOUS OF HEIGHT OF GAS PRICE PANEL AND ADJUST PLANT SPECIES ACCORDINGLY. CLUSTER TREES TO AVOID PLACEMENT IN THE SIGN LINE OF A SIGN.

TREE PLANTING REQUIREMENTS

PERCENTAGE OF LANDSCAPING PROVIDED (15% OF TOTAL SITE REQUIRED)
 DECIDUOUS OR EVERGREEN TREE = 1 PER 40 LINEAR FEET OF ROAD FRONTAGE OR FRACTION THEREOF
 ORNAMENTAL (FLOWERING) TREE = 1 PER 100 LINEAR FEET OF ROAD FRONTAGE OR FRACTION THEREOF
 SHRUBS = 8 PER 40 LINEAR FEET OF ROAD FRONTAGE OR FRACTION THEREOF



Know what's below.
Call before you dig.

/hww9{t h b59b/9

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

12973 FARMINGTON ROAD
LIVONIA, MICHIGAN 48150
(734) 466-2571
FAX: (734) 466-2195

August 22, 2024

Mr. Jacob Uhazie
Assistant Planning Director
City of Livonia

Re: Petition 2024-08-01-04 – #37355 Eight Mile Road

Dear Mr. Uhazie:

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, but would like to note the following items:

1. The subject parcel is assigned the address of **#37355 Eight Mile Road**. If additional addresses are required, the developer should contact this office after site plans have been approved.
2. The legal description included with the submitted drawings appears to be correct and should be used in conjunction with this project should the rezoning be approved.
3. The existing parcel is currently serviced by public sanitary sewer, water main and storm sewer. The submitted drawings do not include any information regarding proposed services to the buildings, but the design Engineers for the project have been in contact with this office and are aware of this Departments' requirements. We will review the proposed services once design drawings are submitted for permitting.
4. As noted, design calculations are not shown on the submitted drawings, but the project will be required to meet the Wayne County Stormwater Ordinance, including storm water detention requirements.
5. A traffic study for the intersection should be completed to determine if either of the access points would need to have restricted turn movements. Existing traffic backs up past the proposed access points during the evening rush hour, so turning movements from the site may need to be restricted.

To: Mr. Jacob Uhazie
Re: Petition 2024-08-01-04 – 37355 Eight Mile Road

August 22, 2024
Page 2

6. No grading plans are included with the drawings, but we have concerns for the proposed parking lot and drive approach grades. The existing site has a large grade difference between the north and south side. The developer will need to make sure that pavement and walkway slopes do not exceed allowable maximums.
7. Any work within the floodplain will require permits from the Michigan Department of Environment, Great Lakes and Energy (EGLE).
8. Any work within the Eight Mile 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@livonia.gov or tzilincik@livonia.gov.

Sincerely,



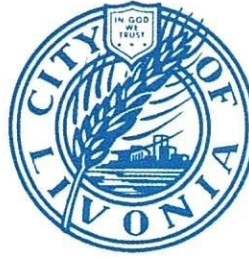
David W. Lear, P.E.
Assistant City Engineer

cc: 2024 Petition File

DEPARTMENT OF FINANCE

Debra Peck Lichtenberg, CPA
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 28, 2024

Mr. Jacob Uhazie
Planning Commission
33000 Civic Center Drive
Livonia, MI 48154

Petition 2024-08-01-04 - 37355 Eight Mile Road

Dear Mr. Uhazie,

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

SUSAN M. NASH
CITY TREASURER



33000 CIVIC CENTER DRIVE
LIVONIA, MICHIGAN 48154-3060
(734) 466-2245
FAX: (734) 421-7230

September 6, 2024

RE: 37355 Eight Mile Rd

Attention Planning Commission

All taxes and water payments are current on this property at this time

Thank you for inquiring

Susan M Nash

Sheetz

From Susan Bischoff <susan.butler02@gmail.com>

Date Tue 10/22/2024 10:54 PM

To Planning <Planning@Livonia.gov>

To Whom it may concern,

I live in a subdivision near 8 Mile and Newburgh in Farmington Hills. There is already so much traffic, due to work, houses, school. Adding a gas station there will increase traffic that is already ridiculous and increase noise. I live on 8 Mile. Traffic already backs up in front of my house. I am very disappointed that they voted to allow the zoning to change. I feel the city should listen to all residents and not just Livonia residents. That is not a place for a gas station. You have housing and historical Greenmeade that will be disrupted due to this if it is allowed to be built.

Thanks for your time.

Susie Bischoff

Proposed development at 8 Mile & Newburgh

From Robin Darnbrook <robin.darnbrook@gmail.com>

Date Mon 10/21/2024 4:01 PM

To Planning <Planning@Livonia.gov>

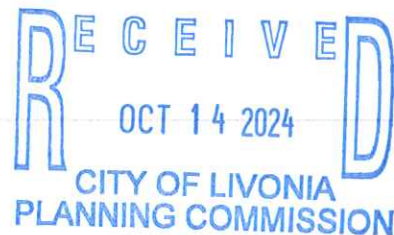
I have lived in the Meadow Brook hills subdivision for 37 years and I am horrified at the prospect of a gas station/convenience store going in at that intersection. Though I am in Farmington Hills and have no say in the matter, our subdivision is the only residents this will affect. Not to say that Greenmead across the street is a historical site and would detract very much from what they stand for. I would strongly encourage voting this down as it would create more traffic than is already hazardous there, obnoxious lighting 24/7 in a neighborhood that has no street lights and is very quiet, pollution (also near a creek). In this case, please don't let money talk. I have heard different stories about planning commission approving it and not approving it and having it go to city council if it is approved by the planning commission but just to be on the safe side I am voicing my very grave concern over this proposal.

Reece, Stephanie

From: Simmons, Jennifer
Sent: Monday, October 14, 2024 9:30 AM
To: Reece, Stephanie
Subject: FW: Online Form Submittal: Planning Inquires

Jennifer Simmons

Constituent Relations Specialist
City of Livonia | Mayor's Office
(734) 466-2204
jsimmons@livonia.gov



From: noreply@civicplus.com <noreply@civicplus.com>
Sent: Saturday, October 12, 2024 4:57 PM
To: support <support@livonia.gov>
Subject: Online Form Submittal: Planning Inquires

Planning Inquires

This form is for any questions, comments, or concerns you may have for the City in regards to planning. If you leave contact information, the City will reply within 2 business days. If this is an emergency, please dial 9-1-1.

First Name	Gerard Christine
Last Name	Depowski
Address	36221 Club Drive Livonia
Email Address	<u>Cdepo220@yahoo.com</u>
Phone Number	[REDACTED]
Describe your issue, concern, or question.	Regarding Petition 2024-08-01-04. Please veto Shilken King proposal to build a Sheetz at 37355 8 mile. I plan on attending the meeting on October 22nd.
Date of Concern	10/12/2024
Attachment (Optional)	Field not completed.

Proposed Sheetz Location at 8 Mile and Newburgh

From Scott Eldridge <eldfun@outlook.com>

Date Mon 10/21/2024 6:21 PM

To Planning <Planning@Livonia.gov>

From your neighbors at 8 Mile and Halsted.

My wife and I have lived here for over 35 years and are totally opposed to the proposed Sheetz location at 8 and Newburgh. We probably spend as much money in Livonia as we do in Farmington Hills and I could list a number of reasons to reject this proposal, but it basically comes down to the congestion, noise, and light pollution that would be created by opening basically a truck stop next to all the neighborhoods and green space (Whispering Willows and Greenmead), at an already busy corner.

With the Rite Aid gone, there's no light retail even in the area and a Sheetz location would permanently change the make up of that corner forever.

We've worked with our Livonia neighbors before in trying to address the noise of I275, let this be an opportunity that both cities can benefit from by voting THUMBS DOWN.

Thank you for your consideration.

Scott & Kathy Eldridge
38076 Tralee Trail
Northville, MI 48167

Please vote NO for SHEETZ rezoning proposal

From Felicia Fisher <felfish@hotmail.com>

Date Mon 10/21/2024 5:38 PM

To Planning <Planning@Livonia.gov>

Hello, I live in a neighborhood at 8 mile and Halsted roads. This area is a beautiful residential area- quite scenic compared to the commercial areas further down 8 mile in either direction. The proposed rezoning to allow a gas station/ truck stop to be built on the corner of 8 mile and Halsted/ Newburg roads would be an unwelcome addition to this residential section, and it would not look appropriate next to lovely family homes and the manicured golf course. Please vote NO to the proposed rezoning. There are other commercial areas that would be more appropriate.

Thank you for considering the locals opinions.

Sincerely,
Felicia Fisher

38615 Silken Glen Dr.

Sent from my Verizon, Samsung Galaxy smartphone
Get [Outlook for Android](#)

Sheetz gas station/zoning change

From Kristie <kjski@yahoo.com>

Date Mon 10/21/2024 9:24 PM

To Planning <Planning@Livonia.gov>

To whom it may concern, I am a resident of the Meadowbrook Hills subdivision off of 8 mile Road and Newburgh/Halsted Road. I've been informed that there is a zoning change proposal to allow a large Sheetz gas station to be built at the corner of 8 mile and Newburgh. I would like to express that I request this be voted down, a no vote. This will greatly impact our beautiful neighborhood, increasing traffic and noise, light pollution, pollution of our green spaces and waterways around this area and add cause undo traffic to a very highly residential neighborhood. This is not the location for a gas station like this. There are many other areas closer to the highway with more commercial buildings where this would be more appropriate. Building this in the midst of a neighborhood is an eyesore. Thank you for hearing my recommendation and I hope you vote NO to this zoning change. Thank you very much.

A sincerely concerned neighbor,

Kristie Jaroszewski

21668 Beauford Lane
Northville, MI 48167
734-787-7860

Sent from my iPhone

SHEETZ on the corner of Newburgh and Eight Mile

From Barbara Hanmah <doctorbobbi@sbcglobal.net>

Date Mon 10/21/2024 3:29 PM

To Planning <Planning@Livonia.gov>

Dear Livonia Council members,

I am an eighteen year resident of the Meadowbrook Hills/Forest subdivision. It is a placid and family friendly area to live in.

My husband and I are very disturbed regarding the proposed plan of the SHEETZ gas and convenience store. It would bring in unnecessary traffic and noise to an otherwise placid and pleasant neighborhood. An establishment such as that would be better placed alongside an interstate highway giving the business more accessibility to late night customers while leaving our neighborhood as is. This is NOT the neighborhood for your SHEETZ to be placed.

Thank you for your consideration.

Barbara & James Kerns

"Be VERY careful who you disrespect, disregard, dismiss or dishonor in the flesh because you have NO idea their rank in the spirit." - author unknown

Concerns Regarding Sheetz Development at 8 Mile and Newburgh

From Britney Mallya <britneymallya@gmail.com>

Date Mon 10/21/2024 3:31 PM

To Planning <Planning@Livonia.gov>

Dear Members of the Livonia Planning Commission,

My name is Britney Mallya, and I reside in Farmington Hills. While I understand that the decision to allow a Sheetz at the corner of 8 Mile and Newburgh ultimately falls to Livonia, all surrounding communities will feel its ramifications acutely, including cherished neighborhoods like mine, Meadowbrook Hills (8 Mile and Halsted/Newburgh).

This proposed development brings a host of risks that cannot be overlooked. The influx of semi-trucks, operational largely late into the night, will disrupt the peace with noise and light pollution and create hazardous driving conditions that threaten the safety of our families. Furthermore, increased traffic congestion poses an imminent risk of accidents and will burden our already crammed roads.

Additionally, significant environmental concerns—from potential fuel spills to increased emissions—can compromise our health and the natural beauty we hold dear. It is worth noting that the area was originally zoned to protect the residential character of our communities, reflecting a vision for a peaceful environment.

This matter extends beyond just a zoning change; it affects the quality of life in our communities that share boundaries with Livonia. To provide some context: Sheetz is already attempting to implement a similar Planned Unit Development (PUD) in Farmington Hills at 12 Mile and Middlebelt. If this is indeed a PUD, it is crucial to acknowledge that it must also go to the Council for approval, providing another layer for public input.

I would also like to bring this matter to the attention of the Livonia Historical Society and the curator of the Greenmead Historical Park, to see if they are aware of the proposal and its potential impact. It's important to note that calling this development a "gas station" is somewhat of a misnomer; in reality, it is a truck stop.

I urge you to consider how this decision impacts us all, as well as the original intent behind the zoning, and to advocate for measures that preserve the tranquility and safety we value so highly.

Thank you for considering the broader implications as you deliberate.

Best regards,

Britney Mallya
Your Neighbors and Friends
Farmington Hills Resident

September 18, 2024



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CHAMBER OF
COMMERCE**

**CHALDEAN COMMUNITY
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PAC

Dear Mayor/Supervisor,

I am writing this letter on behalf of the gas station owners in your community. Sheetz, a gas station/24-hour store chain out of Pennsylvania with more than 740 locations, has big plans to move into southeast Michigan. They recently opened their first store here, in Romulus, and are planning to open another 70-80 stores in our state.

According to a recent article in the Detroit Free Press, a company spokesperson said Sheetz "felt like there was void in the market" for their type of offer, "because it is unique with gas and food and everything else." The many station/convenience store owners already in metro Detroit beg to differ.

The amenities listed in the article – coffee, slushy machines, drinks, grab n' go food, grocery staples, and gas – are already being offered at existing gas stations. The thing that makes Sheetz different is that they are open 24 hours a day, offer liquor sales, and have a drive-through restaurant with seating for up to 35 people. That is a major public safety concern for local police departments, especially in residential neighborhoods where most businesses are closed by 10PM.

In fact, Sheetz stores have experienced dozens of shootings, robberies and even deaths in other places across the country. K-9 police dogs are even being used for one of their locations on the East Coast. Most of these events occurred after midnight; it would be helpful to learn more about criminal activity during these hours from your police chief or your director of public safety. View this link to a video where residents appeal a council decision because of traffic and safety concerns: https://www.youtube.com/watch?v=dPUTRs_GP_4.

In addition, Sheetz has been cited by the US Environmental Protection Agency (EPA) for underground fuel storage violations. They've paid more than \$1 million in fines. They have also been sued by the US Equal Employment Opportunity Commission (EEOC) for violating federal law and denying employment to job applicants due to race.

These facts belie the image of a "family business" that cares about its customers, a case that Sheetz is trying to make (and having some success with local press). We share the same concerns and beliefs of most tri-county residents that there is no value nor is there a need for more gas stations in metro Detroit. We ask that you join them and us in rejecting Sheetz's move to Michigan.

Please consider sharing this letter with your city council members and your planning department and let us know if you have any questions.

Sincerely,

Martin Manna
President

8 mile & Newburgh re-zoning

From Orin Mazzoni <omazzoni@orinjewelers.com>

Date Mon 10/21/2024 11:32 PM

To Planning <Planning@Livonia.gov>

Members of the Livonia Planning Commission

Good Evening,

I understand they are proposing a gas station at 8 mile and Newburgh (the old Rite Aid building). I live in the sub on the northwest corner, Meadowbrook Hills which is actually Farmington hills. I've been there for 45 years and know that it is a unique piece of property important to the City of Livonia and very inappropriate for a gas station. I am also a property owner in Livonia at 6 mile and Newburgh.

The increased amount of traffic at 8 mile and Newburgh, traffic congestion (already a very busy corner during rush hours), noise pollution all times of the day and night (open 24 hours), large trucks filling the gas tanks are just a few of the many problems a gas station will bring to the area.

This property abuts the Golf Course and is across the street from Greenmead, which is a true gem for Livonia and the surrounding communities. The northeast corner is a childcare center. To put a gas station in this location would really be a shame and destroy the uniqueness of the area along with all the problems that come with it.

The current use has always been compatible to the area, very appropriate for small retail or office. I am familiar with the company interested in the property as they wanted to buy my Garden City property. I wouldn't sell it to them as it would have destroyed the cornerstone of the city (Ford and Middlebelt) where I grew up. I'm sure they are a very reputable company but this is not a suitable property for a gas station. Maybe there is another more appropriate location in the city.

I would hope the Planning Commission and City Council would look at the ambience and importance of this corner and would not approve the re-zoning for this project.

Respectfully,
Orin J. Mazzoni Jr.

Cell 734-748-2480

Orin J. Mazzoni Jr.

Certified Gemologist Appraiser, A.G.S.

Graduate Gemologist, GIA

Chairman of the Board

Orin Jewelers

101 East Main Street

Northville, MI 48167

248-349-6940 ext 101

www.orinjewelers.com



Possible Sheets truck stop at Nuburg & 8 mile

From Mark McCubbin <astitchintime2010@gmail.com>

Date Tue 10/22/2024 2:54 AM

To Planning <Planning@Livonia.gov>

Cc Papiya Bagchi <papiya_bagchi@ameritech.net>

Greetings,

I'm writing about a business proposal that is scheduled for review by your organization, on Tuesday I believe, the Sheetz truck stop. Please don't approve this.

We live in Meadowbrook Hills subdivision, a peaceful residential neighborhood on the opposite side of the street. If the Sheetz proposal is approved, the racket from trucks and cars flowing through a 24 hour gas station / drive-through restaurant / store will adversely affect the tranquility of the neighborhood.

This type of business is better suited for close proximity to a highway rather than the proposed site mentioned.

Please reject the Sheetz proposal at the intersection mentioned. Thank you.

Mark McCubbin &
Papiya Bagchi
248-766-7531

Proposed SHEETZ Limited Carry Out, Drive Thru and Outdoor Seating, Fueling Station

Rezoning – C1 Local Business, to C2 General Business-2

Property - 8 Mile and Newburg
Livonia, Mi
10-Sep-24

Ralph McNabb



BOTTOM LINE --

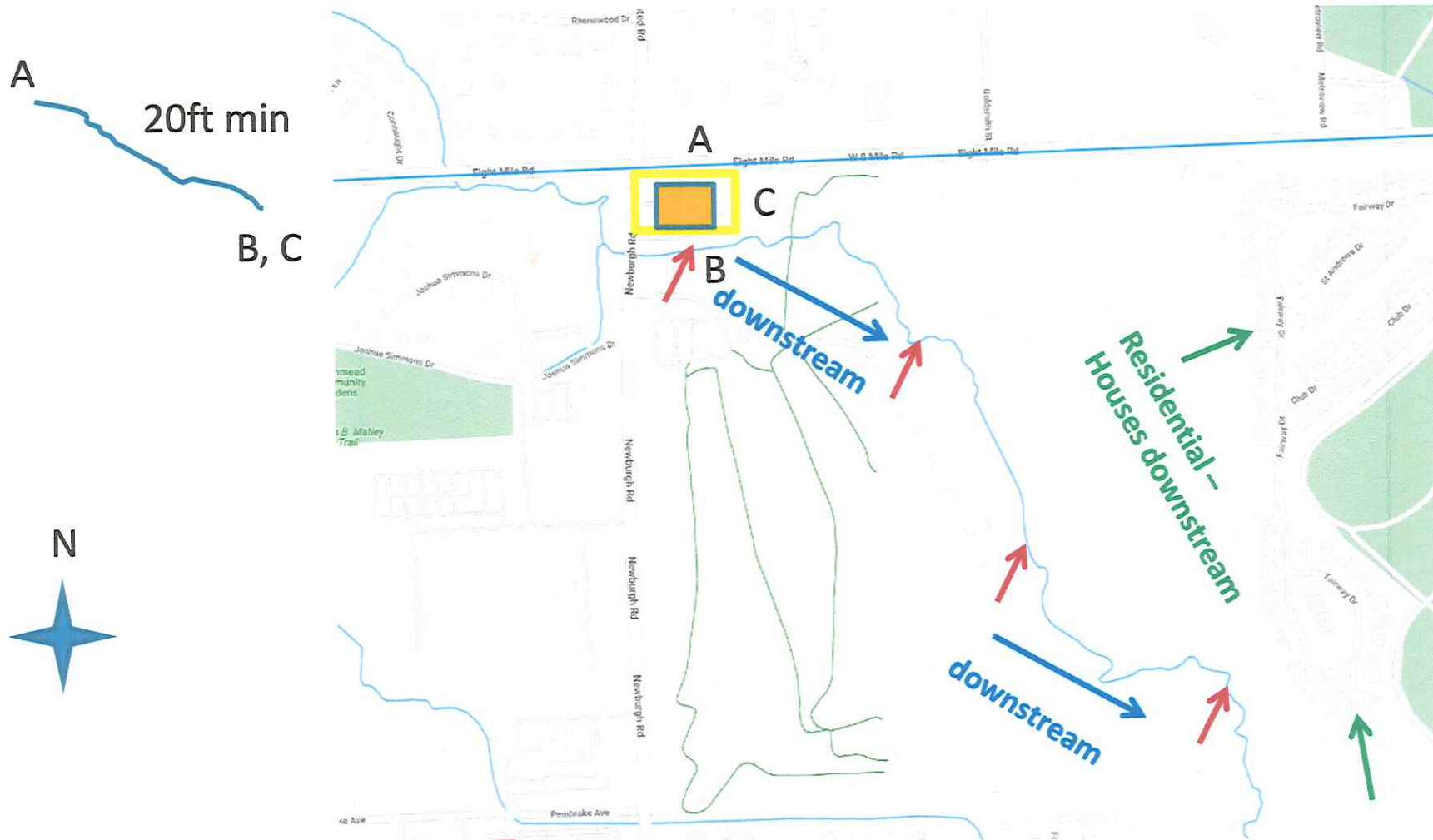
What is being proposed
is taking a bundled business
that is clearly PERMITTED in the
C-3 Zoning Classification, and
by Rezoning a piece of property that is
clearly and appropriately (AND presently) classified as C-1,
by re-Classifying it C-2 and
justifying it with WAIVERS.

Basically,

Allowing a business that belongs next to an Expressway offramp,
NOT in a residential neighborhood.

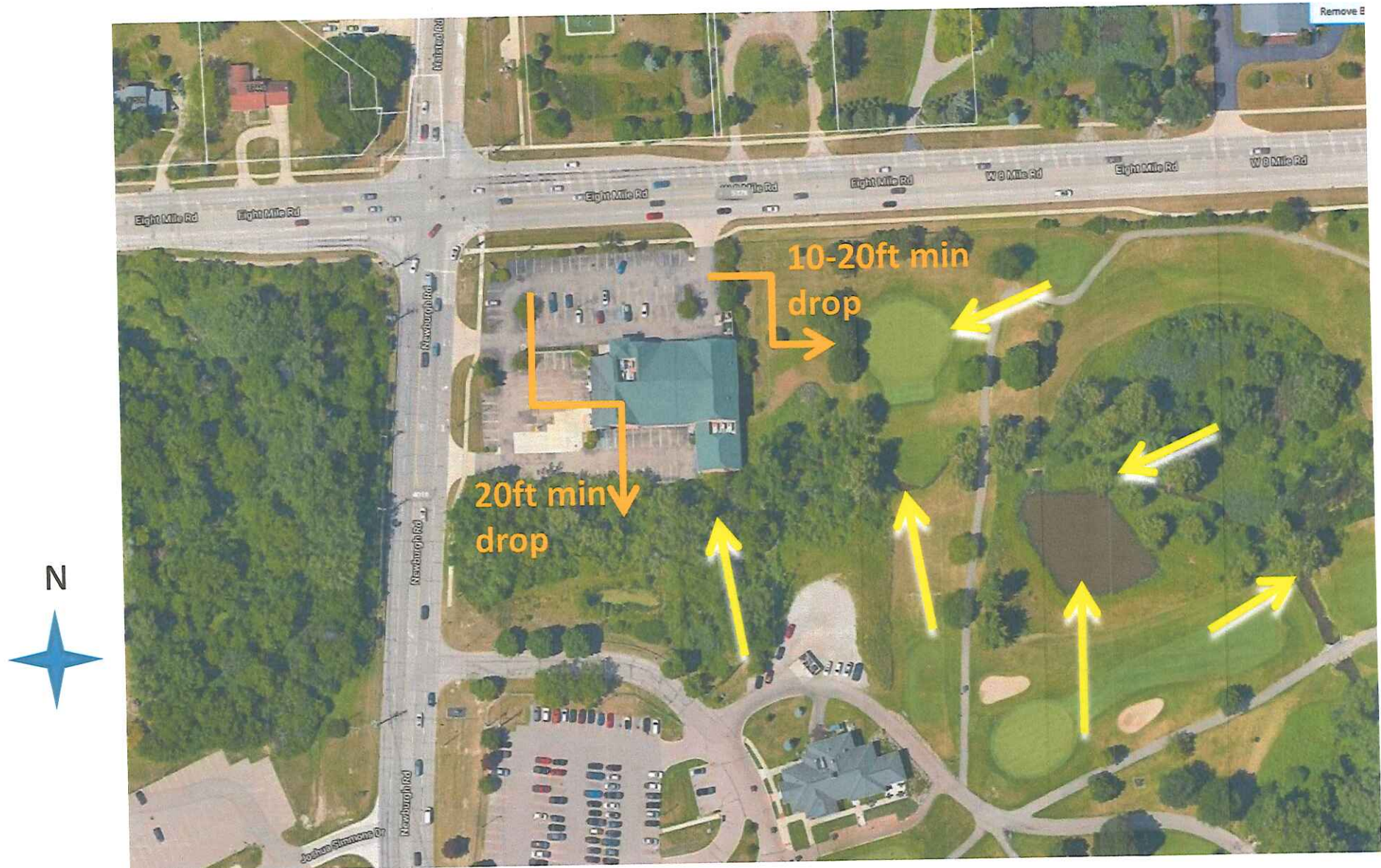
Topography – Potential Environmental Hazard

Fuel Leak into Waterway/Ponds from lot runoff



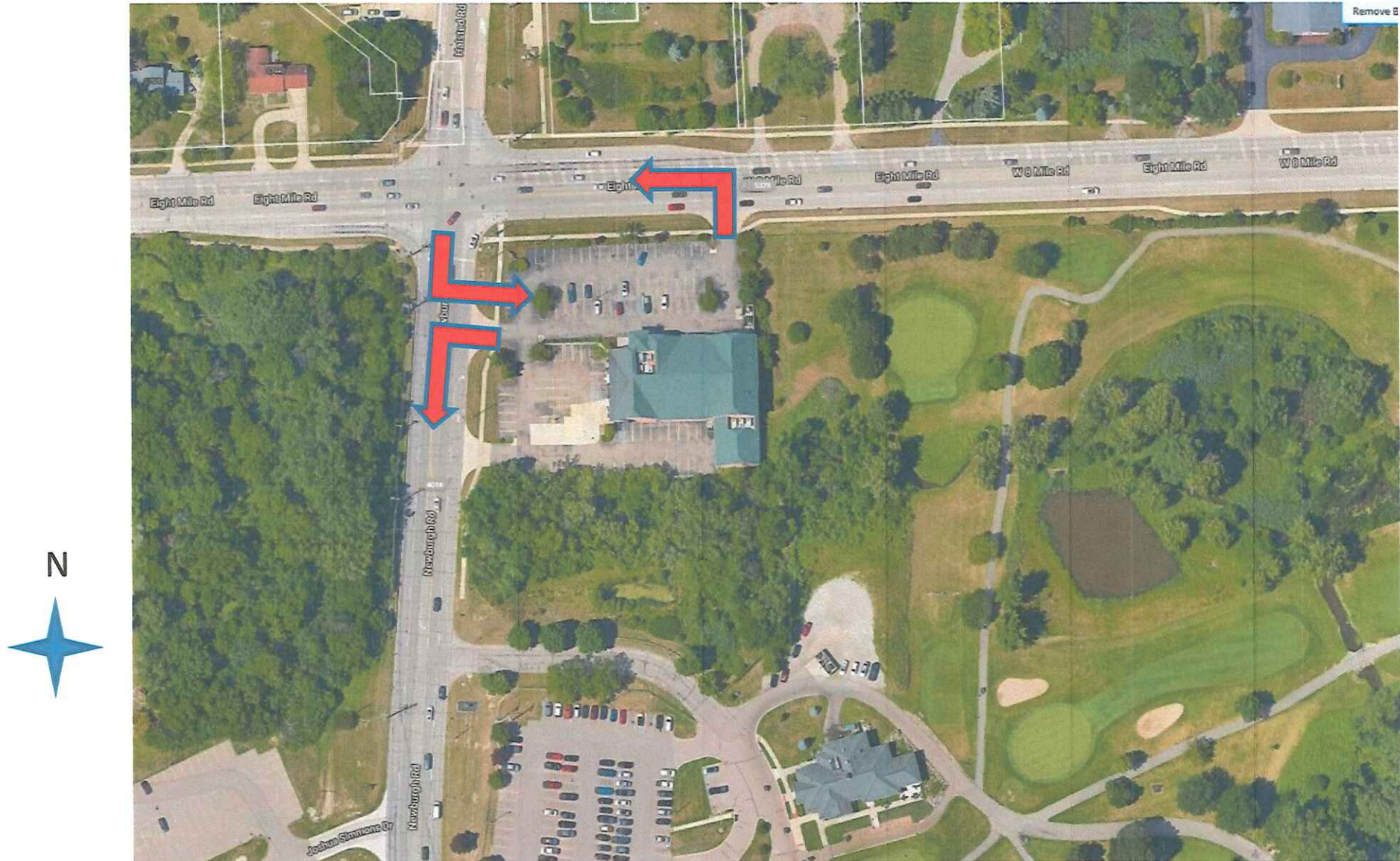
Topography – Potential Environmental Hazard

Fuel Leak into Waterway/Ponds



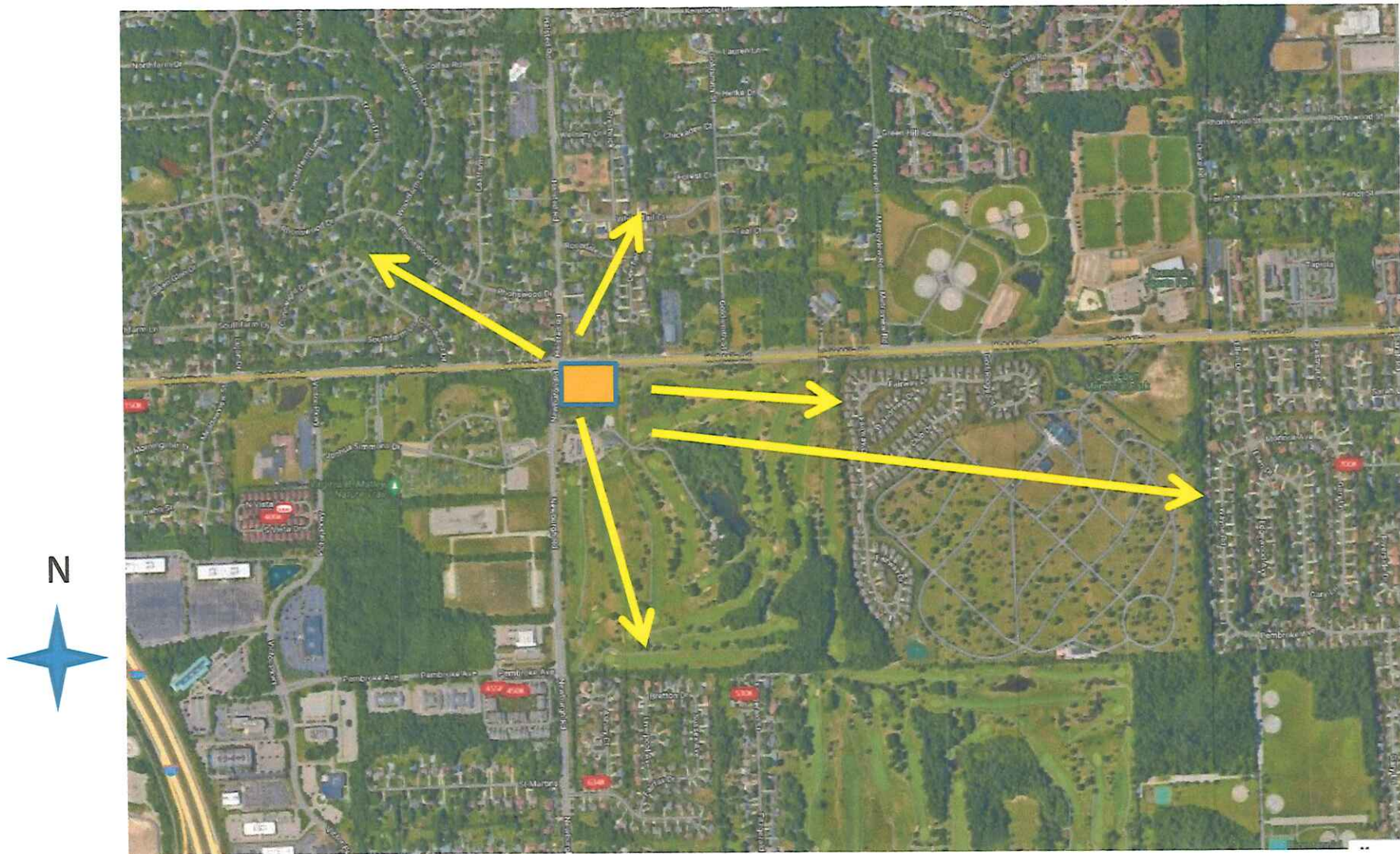
Traffic Patterns – Potential Hazard

Egress problems onto 8Mile and Newburgh
Traffic Volume / Pattern compounded issues



Undesirable Noises and Smells – Gas / Food

Regardless of wind directions – waft into Residential 24 Hours / day



Major Water Lines – 40" / 24"

Potential for contamination – into Residential Water
Proposed Business is at the Critical Juncture



Potential for Crime – FBI Statistics 2022

According to the FBI, convenience stores and gas stations were the site of 13.8% of robberies in 2022, and 4.5% of all violent crime in the country that year. Here are some other statistics about crimes at convenience stores:

Robbery rates: In 2022, robberies increased 1.3% across the country.

Weapons used in robberies: In 2019, strong-arm tactics were used in 44.8% of robberies, firearms in 36.4%, knives or cutting instruments in 8.5%, and other dangerous weapons in 10.3%.

Shoplifting: Shoplifting by juveniles is a common crime at convenience stores.

Multiple customers: When multiple customers are in the store at the same time, it can create opportunities for theft.

Potential for Crime – FBI Statistics, 2020

Of the violent crimes that the FBI covers in the report, 157 or 2% of the 10,440 total crimes at convenience stores were homicides; 119 or 1% of the total crimes at gas stations were homicides.

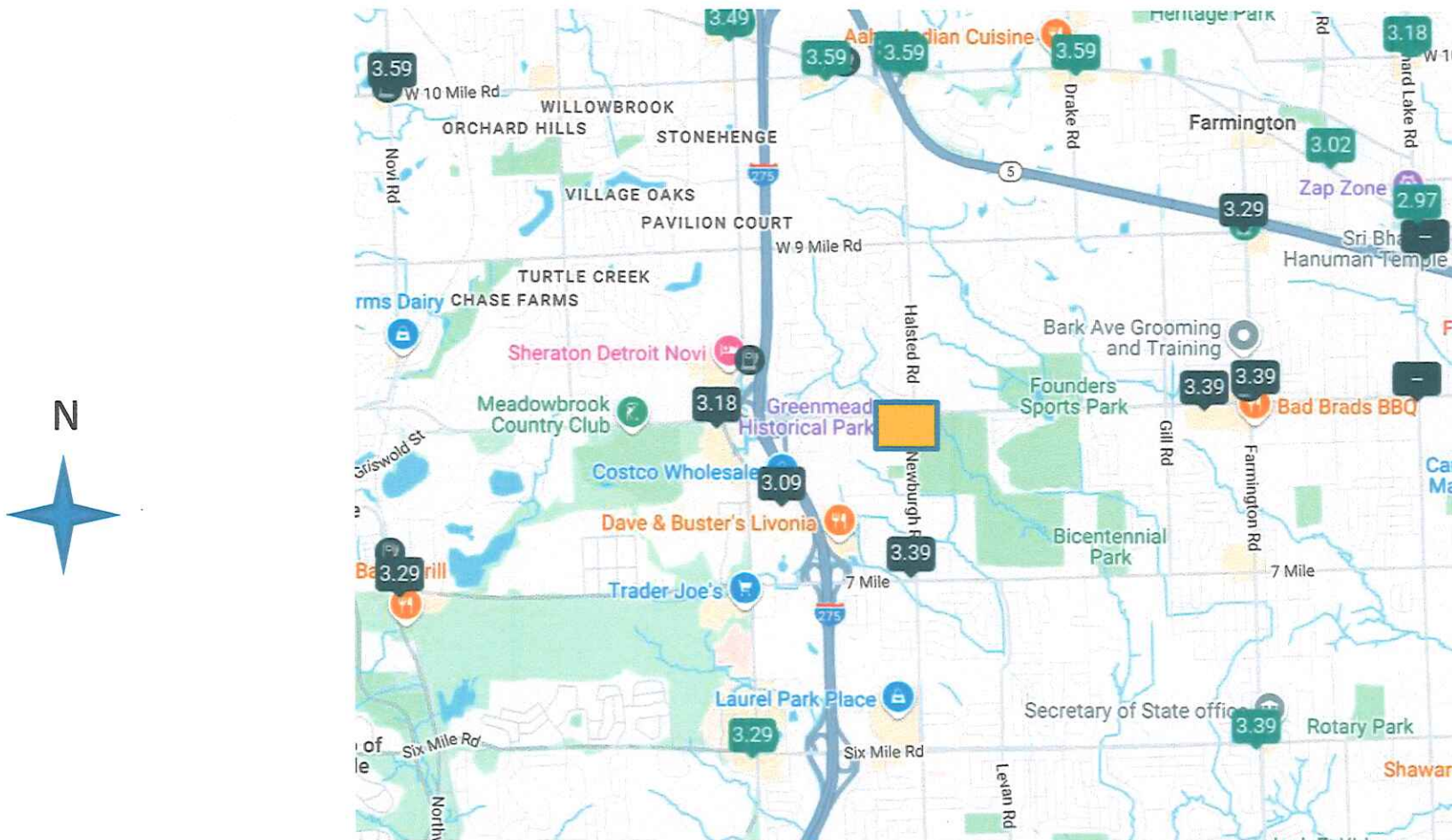
The FBI reported 137,556 total robberies, 13,721 or 10% were at c-stores, while 7,006 or 5% were at gas stations.

Top 10 Number of Location Types by Category

1. Residence home (346,399)
2. Highway/alley/street/sidewalk (130,331)
3. Parking garage/lot (45,107)
4. Convenience store (20,108)

Q - Do we REALLY need a *Gas Station / Convenience Store / Take-Away* at this location ?

There are no less than 18 gas stations within a 2.5mi radius of the proposed location, and ALL of them are NOT in Residential high density areas, contrary to what is being proposed – ***FOR GOOD REASONS – be honest, do You want this in YOUR neighborhood ?***



Rezoning – C-1 to C-2

The major concern for this form of business at the proposed location are the problems of noise, odor, light, fumes, dust, danger of fire and explosion, and traffic congestion

- C-1 – is classified as “Local Business District”
- C-2 – is classified as “General Business District”
- C-3 – is classified as “Highway Services District”

The location chosen is most definitely a C-1 classification “Local” and is a monumental stretch to define as a C-2 “General B. District” considering all other structures and uses classified in the immediate location.

PERMITTED USES BY DISTRICT (Sect 3.03, Livonia Zoning 3160)

- NONE of the activities being planned (Gas Station, Restaurant Carry-Out, Drive-Thru) are “Permitted in either C-1 nor C-2, but are categorically permitted in C-3”
- What IS allowed in C-1 and C-2 are “waivers” for these activities
- **Q - Why not relocate to a location that Permits AND is conducive to these activities, i.e., C-3 ???**

Rezoning – C-1 to C-2

Article VI, Standards Applicable to Specific Uses –

Section 6.51 – Restaurants (Livonia Zoning Ord. 3160, amended)

Limited service and carry-out restaurants with or without outdoor dining areas subject to the following:

A) **Districts Permitted.** The following standards apply in the C-1, C-2, C-3, and C-4 Districts as a permitted use.

B) **Access.** Ingress and egress shall be available from a public street having an existing or planned right-of-way width of at least one hundred twenty (120) feet as shown on the Future Transportation Map.

C) **Drive-Up Window Facilities.** Drive-up window facilities are prohibited.

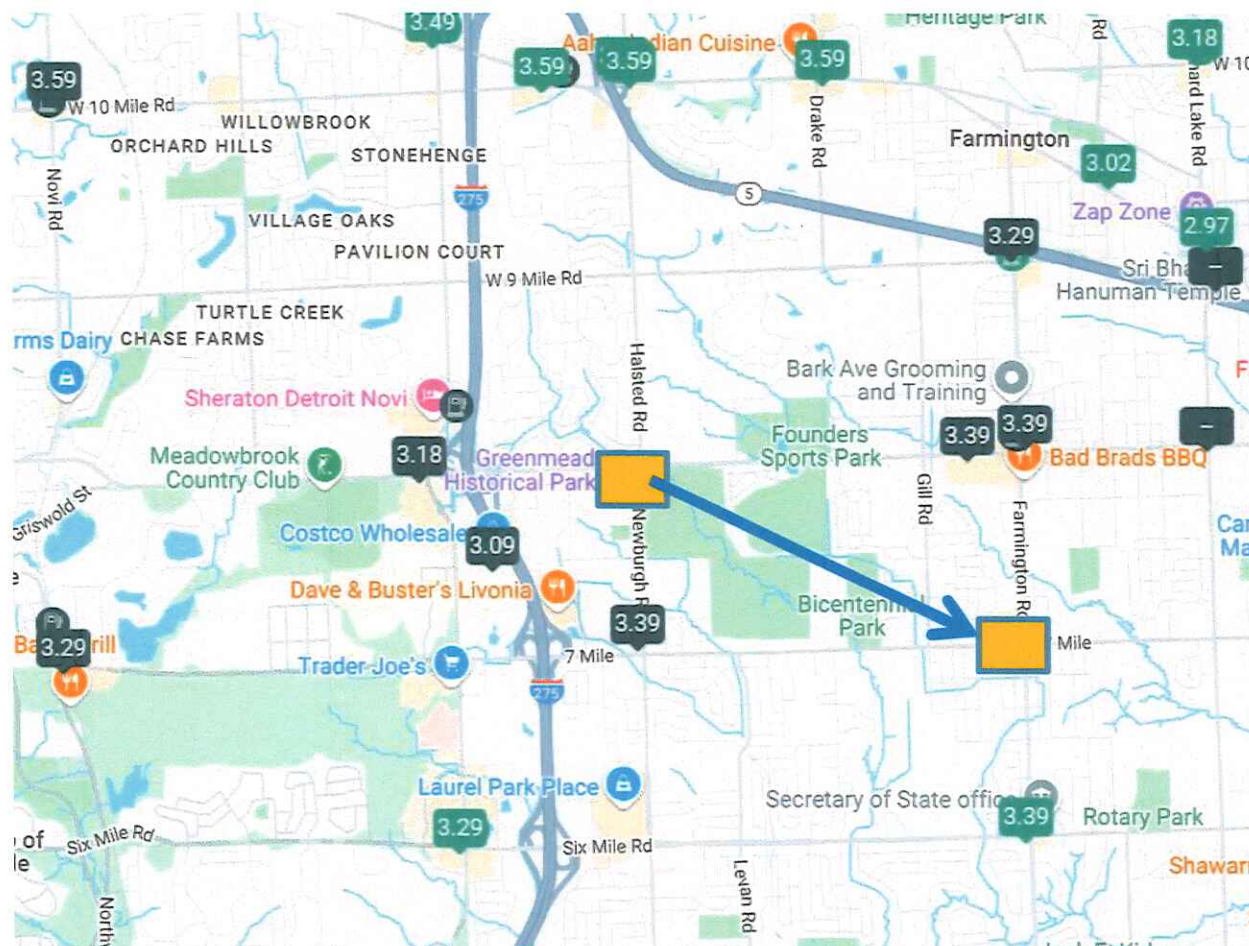
The sign on the property states “Proposed Use: LIMITED Carry-out, DRIVE-THRU and Outdoor Seating, Filling Station”

If this is a “Limited Carry-out” and the Standard for this type of business is “Limited Service” – HOW can a Drive-Thru operation be permitted if clearly prohibited in Section C ?



A – A more perfect location for this *Gas Station / Convenience Store / Take-Away ?*

I would suggest - The Southeast corner, OR Northwest corner, of 7 Mile and Farmington would be a more ideal location for this proposed business
It should “check” all the boxes the owner would desire and require.



8 Mile and Newburgh

From Alisia O'Driscoll <alisiaod@gmail.com>

Date Mon 10/21/2024 3:17 PM

To Planning <Planning@Livonia.gov>

To Whom It May Concern,

Please do not approve the rezoning of 8 Mile and Newburgh. Our sub in Farmington is very close to this corner and the 8 mile noise is enough. Can't imagine how loud a truck stop would be. Is the golf course a fan of this? What about Greenmeade? What about the daycare across the street? This will change the entire corner. What about the creek that runs through and the wildlife that drink from the water in the area? We don't want the pollution and traffic, let alone the road issues the trucks will cause. Perhaps a market like Vintage in Westland or even a small speedway, but not a Sheetz! PLEASE VOTE NO!

Alisia O'Driscoll
Resident of Meadowbrook Hills
734-578-5071

Promised Documents for Tomorrow's Meeting

From Greg Ralko <greg.ralko@gmail.com>

Date Mon 10/21/2024 8:00 PM

To Planning <Planning@Livonia.gov>

Cc Patty Riggio <priggio01@yahoo.com>; nancy philpott <grvhnancy@gmail.com>

 3 attachments (10 MB)

Sheetz_102224 Planning Commission.pdf; Golf Ridge Petitions.pdf; Willow Woods Petitions.pdf;

Hi Ian

As discussed, attached are the three documents I promised to send ahead of tomorrow evening's Planning Commission meeting in hopes that all of the Commission members can read these ahead of their vote on the Sheetz proposal.

The attachments include:

Concerns about Sheetz solicited from the residents of both Golf Ridge Villa and Willow Woods subdivisions. These are the Livonia residents that live closest to the Eight Mile & Newburgh corner and thus, the Livonia residents that would be most affected by this development.

Golf Ridge Villa Petitions & Willow Woods Petitions - we were able to speak to 89% of our combined 179 homeowners in our visits to their homes. Of the neighbors we were able to speak to, a resounding 95% of them are against this development. We feel it is essential that their voices be heard and their message is very clear - NO.

I plan to be at the meeting tomorrow evening and can speak if asked.

Finally I am cc'ing the two Board Presidents of our respective homeowners associations: Nancy Philpott and Patty Riggio.

Greg Ralko

Response to the Proposal to Rezone and Build a Sheetz Location at the Corner of Eight Mile & Newburgh Roads From the Golf Ridge Villa and Willow Woods Residents

Background

- Sheetz is a major operator of Gas Station/Convenience Store/Restaurants with Drive-Thru, Sit-Down, Take-Out & On-Premise Seating combination locations.
- Sheetz has an offer to buy the
- Sheetz stores are open 24 hours a day, 365 days a year. They never close.
- Sheetz owns 750 locations primarily in Pennsylvania, Ohio and neighboring states.
- Sheetz opened its first location in Michigan a few months ago, located in Romulus, on Vining Road right off I-94 near Metro Airport – pictures below.
- Like the Romulus location, the trademark Sheetz location is typically found on interstate freeways, where traffic has easy-on easy-off access and a location would have all night traffic.

Who We Are

- We are residents representing the two Livonia subdivisions that are closest to the Eight Mile & Newburgh corner (Golf Ridge Villa & Willow Woods). We have spoken to our residents and have recapped their **Overall** and **Specific** Concerns about having a Sheetz open at this corner. Further, we have also listed some **General Community** Concerns that need to be acknowledged, as well. But before these concerns are raised, one of our residents is in the Private Fueling Industry and he expressed his **Zoning Concerns**, which follow first below.

Zoning Concerns

- In C-1 (current Zoning) Restaurants are a waiver use (have to meet certain criterion and cannot have a drive-thru). Gasoline Services stations are NOT a permitted use in C-1.
- In C-2 Both restaurants and gasoline service stations are waiver uses, which are subject to the specific criterion (Section 6.51) for restaurant and (Section 6.26) for gasoline service stations. The site appears to comply with the waiver use criterion.
- What is the compelling reason to go from C-1 (Local Business) to a much more intense Zoning of C-2 (General Business) where fuel is NOT a permitted or waiver use?
- Stand-alone restaurants, without a drive-thru, are allowed as a waiver use in C-1.
- There is NO compelling reason to go to the more intense Zoning Use, C-2 (General Business), when there are no surrounding properties that share that more Intense Zoning. This is, and should remain, Zoned C-1 (Local Business).

- Under the criterion on the rezoning application the "Nature and effect of the proposed amendment" is the biggest hurdle the applicant has to jump over.
- How can the City prove that the proposed, more intense Zoning of C-2, would have no effect considering the existing less intense Zoning Use and prohibitions of C-1? The proposed Rezoning WOULD be harmful to the surrounding area and is not warranted-adjacent uses: day care to the north, and Public Lands to the west, east, and south.
- What is the compelling reason to allow a more intense use? NONE
- The closest C-2 is a mile south, which happens to be the Seven Mile & Newburgh Speedway parcel.

We therefore DO NOT support and urge the Planning Commission to not approve the rezoning from a C-1 Zone to a C-2 Zone.

Overall Concerns

The major concern of a “24/7, 365 Gas Station, Convenience Store & Restaurant with Drive-Thru, Sit-Down, Take-Out & On-Premise Seating” business at the proposed location is with the expected problems of major traffic congestion. There are other issues, such as the noise, glaring 24/7 lights, fumes, the danger of fire and explosion, and the inevitable increase in crime that always accompanies these types of establishments. Further, because of the adjacent proximity to Whispering Willows Golf Course and the ponds just east of the location and the many streams that flow through the golf course and Livonia from this area to the Rouge River, any environmental leak or related disaster at this location will have a compounded ripple effect throughout our city and beyond.

The overall consensus is that this proposal simply tries to put a “Square peg into a round hole”.

Specific Concerns

Golf Ridge Villa has 118 homes and Willow Woods has 61 homes. The responses to Rezoning this property from C-1 to C-2 to allow a Sheetz to be built on this site are overwhelmingly NO. We were able to speak to 158 out of 179 our residents. A total of 150 out of 158 agreed to sign the enclosed petitions against this development. One resident abstained since they sit on the Planning Commission. **A resounding 95% of the homeowners we spoke to are against this proposal and this planned development, and against any fuel stations in that corner.** Here’s what they had to say, in no particular order of importance:

We don’t need another gas station in the area.

- Our fueling needs are already being met.
- The City needs to consider what we need in making any major decisions like this. And we don’t need another gas station.

- This operation would not be serving the residents of Livonia since we already have more fueling choices than we need with the Speedway (24/7) at Seven Mile & Newburgh, Kroger on Eight Mile west of Farmington or Costco on Haggerty that most of us already go to.
- This development would not be filling a need for the nearby Livonia residents.
- There are already 18 fueling locations in the 2.5-mile radius from the proposed corner of Eight Mile & Newburgh.

Our area in the corner of the city is basically a bedroom community. This doesn't fit in.

- Sheetz is a 24/7 operation. If we go there at all, it will never be after 8pm at night. So, who's going to be there after dark and throughout the night? People that aren't from around here and other individuals that we would prefer not to be in our neighborhoods. Especially in the middle of the night.
- These places always bring in more crime. We don't want more crime this close to our homes. No one does. Especially when we don't have a need for a nearby need Sheetz location in the first place.
- Don't push this on us. We pay large property tax bills and we need to be heard on this issue.
- What does the Livonia Police Department have to say? 24/7 stores and convenience stores in general always have more crime and we don't want that around here, and certainly in the middle of the night.
- Sheetz locations are well-lit 24/7 and operations of this size will generate more noise, glaring lights all night, fumes, and the danger of fire and explosion.
- The area north of Eight Mile on Halsted Road is a bedroom community as well, where the lanes go down to just two. This would not be fair to these neighborhood communities
- We back up to the golf course and the bright 24/7 lights will be shining in our backyards, especially in the winter when the leaves are down.

This area of the city is supposed to be a green area.

- The proposal is in direct opposition of the City's 2022 Greenmead Historical Park Master Plan to protect the 200-year-old, 95-acre historical park – Greenmead Historical Park – directly across the street. In the Master Plan, there are plans for a natural playground and petting farm. There are already major traffic backups along Newburgh Road & Eight Mile Road during events at Greenmead.
- This makes no sense. The city obviously wants to make this corner of the city a natural area, as shown by the significant investments over the years in developing Greenmead. A huge 24/7 gas station is just the opposite of what is being developed across the street. It's a huge contradiction to what the residents have been supporting.
- Whispering Willows Golf Course helps make this a green area, too. They should give this land to the golf course and let them make hole #8 a par five. That makes more sense.
- We heard a longtime volunteer from Greenmead at the last Planning Commission meeting express his concern and the concern of people he volunteers with. Did they ask the Greenmead people what they think?
- We live in Golf Ridge and our water for our lawns comes out of the ponds adjacent to our properties. If there is an environmental issue with an oil or gas spill at this site, the pond

down from the Rite-Aid site on the golf course will be contaminated as will the streams that go through the golf course to our ponds. Our irrigation system could be impacted and severely damaged. Not to mention our lawns and property.

More traffic at that corner will be an even bigger problem than it is now.

- The City is already aware of the excess traffic along Newburgh Road and plans are currently underway for the Newburgh Road Reconstruction Project (Ann Arbor Trail to Plymouth Road) and Traffic Signal Revitalization by replacing 5 traffic signals along Newburgh Road (at Churchill High School, Ann Arbor Trail, Hines Drive, Plymouth Road, and Seven Mile Road) for more efficient traffic flow.
- More accidents will happen here. Did the Planning Commission get the accident statistics on this corner, and did they ask the Livonia Police Department for their opinion?
- We are so tired of traffic and don't need more right outside our subdivision. It's hard enough to get out of the sub during rush hours. We don't need more traffic.
- Newburgh is the detour of choice at least once a week – during the morning and evening rush hours – whenever there is an accident backup on 275. Having even more traffic drawn to this area is a huge mistake.
- Turning left out of this location onto either Newburgh or Eight Mile will result in multiple accidents – some serious. These left turns are blind.
- Drivers from 275 will not be familiar with this corner, making matters even worse, in their attempt to get back to the freeway. They will need to turn left on Newburgh or left on Eight Mile because this is the only way back to I-275. Left turns from this corner will be disastrous.
- My husband was just involved in an accident on October 12th in this intersection, while turning left on Newburgh from Eight Mile.
- The Childtime day-care center is right across Eight Mile Road. Dropping off and picking up in the morning and evening, respectively, will be much more difficult with traffic and when 275 and/or 696 are closed or have accidents.
- Eight Mile has been an alternative route for the last three years due to the 696 reconstruction. It too becomes an alternative route when 696 is backed up. We are tired of it. There has even been a significant increase in night traffic.

The last thing we want is more construction.

- The Seven Mile & Newburgh redevelopment took well over a year, in fact, it seemed like two years. The Sheetz project will take much longer because they will knock down the existing buildings, need to build up the land on the south side and then put in a retaining wall before they can even begin the construction of their business. The Newburgh and Eight Mile roads will be affected, and the traffic will be a nightmare during this time.
- The Newburgh and Eight Mile roads are FINALLY in good shape. We've gone through the inconvenience of several resurfacing projects over the years and now the road are fine. Major construction equipment and the many trucks that will be going in and out of this site will tear up the roads. We don't need or want this. The weight of the trucks alone that will bring in the amount of soil to build up the south side of this site will be enough to destroy

the roads. Then we will need to go through the long process of getting these roads fixed once again with road closures and construction, while the additional traffic from Sheetz will be coming. This is neither acceptable nor close to reasonable.

General Community Concerns

Is this fair to Speedway?

- As mentioned by one of our residents, the Speedway rebuild at Seven Mile & Newburgh not only took a long time, but it had to come at a significant cost. No question, the investment was well over a million dollars.
- When companies and individuals invest in our community it is our obligation to help them recover their investment. While this is important for the investors it is also important for the city. Livonia wants to be known as a good place to invest, so more will invest.
- Thus, it seems that just after Speedway makes such an investment in our city (albeit very recently) that the city would rezone a property just a mile away to allow a *significant* competitor to open a competing business that close.
- This doesn't seem like a good-faith way to do business. The city has an obligation to its existing businesses and to its reputation to be fair and a good place to invest.
- Of course, some will say that Speedway is a big company, and they can handle it. But the counter argument is that at the time they made their Seven Mile & Newburgh investment decision, the former Rite-Aid site was a C-1 zoned area. *his* themselves.
- We need to be fair.

Who will own the location?

- Who owns the site is a big issue, especially when the development is a 'custom' build, which the Sheetz locations are. In other words, suitable only for a Sheetz-like business.
- The standard Sheetz location is designed to be located (and they typically are located) along major interstate highways. Their business models require interstate-levels of traffic with easy-off easy-on access from/to the freeway. Such traffic volumes are required to support the investment and their full-service convenience store & restaurant operations.
- In all honesty, it's hard to understand why Sheetz is actually considering this site since it is so far from their standard footprint.
- Therefore, if it doesn't work out, how does the City of Livonia mitigate its risk, but more importantly, the risk to the residents of Golf Ridge Villa and Willow Woods, of having an abandoned Sheetz on the corner of Eight Mile & Newburgh? (By the way, this would be a much greater eyesore than the current closed Rite-Aid business.)
- If Sheetz doesn't make it, then we cannot naively assume that another gas station could easily go into the location. The standard fueling center of a Mobil/Exxon, BP, Sunoco etc. station doesn't equate to the elaborate 24/7 Sheetz format. So, if this proposal was approved by the city, all of its eggs would be in the Sheetz basket, with the city (and primarily the nearby residents) monopolizing the risk that this location could be abandoned and left as is. A big eyesore with underground fuel tanks.

- This risk of failure is real once again, because this site is not the ideal standard site that Sheetz would select. It is not located on a service drive off an interstate highway and thus may not get the minimum traffic volumes required to support this significant investment. An investment once again that will be significantly larger than their typical construction investment as this location will require a significant buildup of soil and a retainer wall, since the south side of the plot is upwards of twenty below the Eight Mile side grade.
- Why is this an important question? Because the city would need to mitigate upfront, the risk with this investment. Since Sheetz is a 'custom' build, they really should be willing to guarantee that the site would be restored to its original condition – remove tanks, take out the retaining wall, remove the structures, etc., should the location and business fail. This is critical, since any new developer of that location would need to do this anyway. Otherwise, the closed Sheetz location would be an eyesore for years to come.
- Why does this need to be asked? Well, Sheetz Corporation needs to be on the hook for the guarantee, because repurposing a failed site is likely not to happen. Further, it is not unusual for major corporations, in this case Sheetz, to 'hide' behind an LLC to mitigate any risks to the corporation. On the sign in the Rite-Aid lot, there was no mention of Sheetz, just a developer. Do we know anything about this developer? Would this be a new entity created only to 'own' this site? In other words, legally apart from the parent company and thus judgement-proof if there was ever a lawsuit to enforce a provision to restore the site to the way it was before Sheetz, should Sheetz walk away? Does this developer have any other assets, or just the asset of this location, which once again makes any judgement unenforceable?

What are the numbers – traffic etc.

- We sat outside the Romulus Sheetz location at midday for fifteen minutes – approximately 25 cars entered the premise. All things being equal (and we know they aren't) this would equate to up to 2,400 cars per day. On an annual basis, this would be close to 900,000 in and out of the Eight Mile & Newburgh corner every year. This corner is not on a freeway and therefore the location might very well 1,000 to 1,500 cars & trucks to this corner every day of the year. On an annual basis this would still total over half a million new vehicles to this already congested corner.
- The Eight Mile & Newburgh corner cannot handle this type of increase in traffic, much less have these many vehicles in and out of this corner location lot. Once again, left turns from this location onto either Eight Mile or Newburgh will be very unsafe.
- Absence of knowing the traffic volumes that Sheetz undoubtedly has modeled in their financial projections for this site, there is no answer to how traffic will be directed at this corner and whether, for example, if left turns will be prohibited from the Sheetz locations. If left turns are prohibited, then traffic will be forced to go north on Newburgh across Eight Mile, where the lanes are reduced to two (one in each direction) and traffic will be forced to go east on Eight Mile. In either scenario, the people that want to go the opposite way will be forced to find the nearest subdivision or parking lot to turn around. The residents in Golf Ridge Villa are adamantly opposed to this.

Sheetz may have missed the Livonia boat and vice versa

- We recently read that Sheetz has targeted Michigan as one of its prime development zones and that it intends to open 50 Sheetz locations in the state in the near term.
- We further understand that a Sheetz proposal was denied for the southeast corner of Newburgh & Five Mile Road.
- Locations along the highways of 96 and 275 may no longer be available in the City of Livonia, as they might have been years ago. Atypical Sheetz locations within the city's residential areas don't appear to make any business sense. As such, Sheetz may have missed the boat in its efforts to find suitable business sites for its 'typical' operating units.
- While the city of Livonia may not want to miss out on the business opportunity to have a Sheetz location or two within its city limits, that opportunity doesn't appear to be there now. Thus, Livonia may have missed the Sheetz boat. That's okay.

Respectively submitted,

Greg Ralko, Golf Ridge Villa

Patty Riggio, Willow Woods









NO to SHEETZ

PETITION

(Please Print)

ADDRESS (LIVONIA, MI)	NAME	SIGNATURE
1 36336 FAIRWAY DR.	Robert A. Duminske	Robert A. Duminske
2 36364 FAIRWAY DR	Adam Rowe	Adam Rowe
3 36372 FAIRWAY DR	RALPH MCNABB	Ralph McNabb
4 36388 Fairway Dr.	Loretta M. Humann	Loretta M. Humann
5 36246 Club DR	Robert J. Lagarde	Robert J. Lagarde
6 36221 Club Dr	Christine Depowski	Christine Depowski
7 36221 Club Dr	GERARD J Depowski	Gerard J Depowski
8 36241 Club Drive	Julie A. Yasuhara	Julie A. Yasuhara
9 36312 Fairway Dr	Dawnelle Lane	Dawnelle Lane
10 36325 FAIRWAY	PEGGY MCMAMARA	Peggy McNamara
11 36323 FAIRWAY DR.	KEVIN CARDEN	Kevin Carden
12 36323 Fairway Dr	Patricia Carden	Patricia Carden
13 36356 FAIRWAY DR.	JUAN MALDONADO	Juan Maldonado
14 36360 Fairway Dr	Anne Marie Graves	Anne Marie Graves



NO to SHEETZ

PETITION

(Please Print)

	ADDRESS (LIVONIA, MI)	NAME	SIGNATURE
1	36320 Fairway Dr.	Christina Kus	Christina Kus
2	36320 Fairway Dr	Timothy Kus	Tim Kus
3	36324 Fairway Dr	Antoinette Crimi	Antoinette Crimi
4	36324 Fairway Dr	GARY CRIMI	Gary Crimi
5	36340 Fairway Dr	Stephanie Randolph	Stephanie Randolph
6	36344 Fairway Dr.	Gatty Sadek	Gatty Sadek
7	36344 Fairway Dr	JOHN SADEK	John Sadek
8	36348 Fairway Dr.	John Beeskow	John Beeskow
9	36352 FAIRWAY DR	SUSAN CAHILL	Susan A. Cahill
10	36380 FAIRWAY DR	ION VALLESLEY	ION VALLESLEY
11	36384 Fairway Dr.	Lynne Schroeder	Lynne Schroeder
12	36300 FAIRWAY DR	John Blicharz	John Blicharz
13	36300 Fairway Dr	Mary Blicharz	Mary Blicharz
14	36204 Fairway Dr.	VALERIE V. WEATHERLY	Valerie V. Weatherly



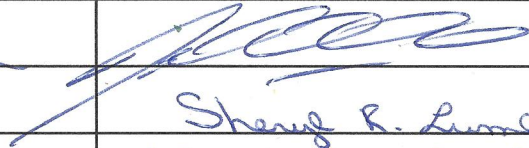
NO to SHEETZ PETITION

(Please Print)

ADDRESS (LIVONIA, MI)

NAME

SIGNATURE

1	36269 CLUB DR.	JOHN SHOEMAKER	
2	36392 Fairway Dr.	Sheryl Lumley	Sheryl R. Lumley
3	36392 FAIRWAY DR.	MARK LUMLEY	Mark A. Lumley
4	36238 CLUB DR	KAREN MILLARD	Karen Millard
5	36232 CLUB DR	MICHAEL KINGSBURY	Michael Kingsbury
6	36301 St Andrews Dr.	Russell Richey	Russell Richey
7	36320 ST ANDREWS DR	CHARLES CALOMENI	Charles Calomeni
8	36320 ST. ANDREWS DR	CARRIE CALOMENI	Carrie Calomeni
9	36321 ST. ANDREWS DR.	William HATLEY	William Hatley
10	36321 ST. ANDREWS DR.	Karen Hatley	Karen Hatley
11	36324 St Andrews DR	Barbara Heil	Barbara Heil
12	36310 ST. ANDREWS DR.	JOHN PERRECA	John Perreca
13	36211 Fairway Dr., Livonia	Jo Ann Hyde	Jo Ann Hyde
14	36328 FAIRWAY DR LIVONIA	Alex Borzyk	



NO to SHEETZ

PETITION

(Please Print)

ADDRESS (LIVONIA, MI)	NAME	SIGNATURE
1 36188 FAIRWAY DRIVE	TOM HENDRICKSON	Tom Hendrickson
2 " " "	WANDA HENDRICKSON	Wanda Hendrickson
3 36160 FAIRWAY DRIVE	DIUAN LUND	Diuan Lund
4 36158 FAIRWAY DR	LESA DUGAN	Lesa Dugan
5 36152 FAIRWAY DR.	DAVID DUGAN	David Dugan
6 36140 FAIRWAY DR	NICOLE BRYANT	Nicole Bryant
7 36112 FAIRWAY DR.	JAYCE FISHER	Jayce Fisher
8 36329 ST. ANDREWS DR	ROBERT BRYEN	Robert Bryen
9 20649 GOLF RIDGE CIRCLE	ALLEN KELLY	Allen Kelly
10 36245 CLUB	RUTH LOPEZ	Ruth Lopez
11 20658 GOLF RIDGE CIRCLE	JUANITA VAUGHN	Juanita Vaughn
12 20645 GOLF RIDGE CIRCLE	DANCEY PHILPOTT	Dancey Philpott
13 20645 GOLF RIDGE CIR	JAMES PHILPOTT	James Philpott
14 20637 GOLF RIDGE CIR	GARY VIBOLLI	Gary Vibolli



NO to SHEETZ PETITION

(Please Print)

ADDRESS (LIVONIA, MI)	NAME	SIGNATURE
1 36273 CLUB DR	WILLIAM RIPPER	William Ripper
2 36273 Club Dr	Carolyn Ripper	Carolyn E. Ripper
3 36277 CLUB DR	KEN KRAWCZYK	Ken Krawczyk
4 36277 CLUB DR	LINDA KRAWCZYK	Linda Krawczyk
5 36237 CLUB DR.	ANDY VERNIER	AR Vernier
6 36237 Club Dr	Patti VERNIER	P Vernier
7 36229 Club Dr	Michaela Roberts	M Roberts
8 36229 CLUB DR	MATT WONG	Matt Wong
9 36226 Club Dr	ZED FESKI	Zed Feski
10 20641 Golf Ridge	Laura Manzo	Laura Manzo
11 20601 Golf Ridge Cir	Marcia Marshall	M Marshall
12 36408 Fairway DR	CHANG S. Kang	CS Kang
13 34156 Fairway DR	MICHAEL McEVILLY	Michael McEvilly
14 36269 CLUB DR.	LAURA HUBER-SHEEMAKER	Laura Huber Sheemaker



NO to SHEETZ PETITION

(Please Print)

ADDRESS (LIVONIA, MI)	NAME	SIGNATURE
1 36104 Fairway Dr.	Jill Howard	Jill Howard
2 36116 FAIRWAY	GREG RALKO	Greg Ralko
3 36116 FAIRWAY	MARY RALKO	Mary Ralko
4 36233 Club Dr.	Sherry Lumley	Sherry Lumley
5 36233 Club Dr.	Timothy Lumley	Timothy Lumley
6 36400 CLUB DR	DALE MARTIN	Dale Martin
7 36120 Fairway Dr.	Alice Minassian	Alice Minassian
8 36124 Fairway Dr	Jory Cook	Jory Cook
9 36128 FAIRWAY DR	Michael Schocker	Michael Schocker
10 36136 Fairway	Yunus Burhan	Yunus Burhan
11 36148 Fairway	STEVEN HUANG	Steven Huang
12 36168 FAIRWAY	Gary Young	Gary R. Young
13 1 FAIRWAY DR	Winom Mahoney	Winom Mahoney
14 36172 " 36172 Fairway	Charlotte Mahoney	Charlotte Mahoney



NO to SHEETZ PETITION

(Please Print)

ADDRESS (LIVONIA, MI)

NAME

SIGNATURE

1	20633 Golf Ridge Circle	Karl DomagalSKI	<i>Karl DomagalSKI</i>
2	20625 Golf Ridge Cir	Laura Dallacqua	<i>Laura Dallacqua</i>
3	20617 GOLF RIDGE CIR	BRUCE R BANN	<i>Bruce R Bann</i>
4	20617 Golf Ridge Cir	Peggy Bann	<i>Peggy Bann</i>
5	20613 Golf Ridge Cir	VASYL Pikhunyk	<i>Vasyal Pikhunyk</i>
6	20605 Golf Ridge Cir	Bo Chan	<i>Bo Chan</i>
7	Livonia, MI 48152		
8	36305 ST ANDREWS	Nancy Grabowski	<i>Nancy Grabowski</i>
9	36313 ST. ANDREWS DR	MAR LU MARTINEZ	<i>Mar Lu Martinez</i>
10	36317 ST ANDREWS DR	CHRISTINE KELLY	<i>Christine Kelly</i>
11	36310 St. Andrews Dr	Judith Perreca	<i>Judith Perreca</i>
12	36144 Fairway Dr.	ANTHONY Billingsley	<i>Anthony Billingsley</i>
13	36330 St. Andrews Dr	Cynthia Gresens	<i>Cynthia G. Gresens</i>
14	36330 ST. ANDREWS DR	RONALD W. GRESENS	<i>Ronald W. Gresens</i>



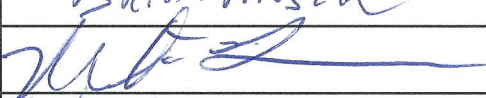
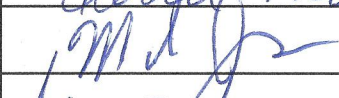
NO to SHEETZ PETITION

(Please Print)

ADDRESS (LIVONIA, MI)

NAME

SIGNATURE

1	36272 Club DR	Dawn muscoe	
2	36272 Club DR	Brian muscoe	Brian muscoe
3	36268 Club Dr	Mitch Lupescu	
4	36268 Club Drive	Linda K. Lupescu	Linda K. Lupescu
5	36264 Club Drive	Deborah Vigliarolo	Deborah A. Vigliarolo
6	36252 Club Dr	Lynne Allen	
7	36242 CLUB DR.	THOMAS MILLION	Thomas W. Million
8	36242 Club Dr	Olga Million	Olga Million
9	36249 Club Dr.	Marcie Moran	Marcie Moran
10	36253 CLUB DR	MARK JOSE	
11	36257 Club DR	Jim Bowe	Jim Bowe
12	36257 Club Dr.	Stella Bowe	Stella Bowe
13	36261 Club Dr.	Rebecca Fitzgerald	Rebecca Fitzgerald
14	36261 Club Dr.	JOSEPH ROZNER	



NO to SHEETZ PETITION

(Please Print)

	ADDRESS (LIVONIA, MI)	NAME	SIGNATURE
1	36176 FAIRWAY	THOMAS M-DONNELL	Tom McDonnell
2	36180 Fairway	SHARON MAURO	Sharon MAURO
3	36180 FAIRWAY	STEVE MAURO	Steve Mauro
4	36184 Fairway	Shobi Francis	Shobi
5	36196 Fairway	MARK HANNIS	Mark Hannis
6	36196 Fairway	Susie Hannis	Susie Hannis
7	36200 FAIRWAY	MIKE TALGA-KX	Mike Talga-KX
8	36208 FAIRWAY DR	VICTOR HESS	Victor Hess
9	36208 FAIRWAY DR	NANCY HESS	Nancy Hess
10	36308 FAIRWAY DR	Rene Chutorach	Rene Chutorach
11	36308 FAIRWAY DR	ROBERT CHUTORASH	Robert Chutorach
12	20621 GOLF RIDGE CIR	BARBARA HOGAN	Barbara Hogan
13	36307 FAIRWAY DR	MARK HELVENSTON	Mark Helvenston
14	36329 St. Andrews Dr.	Marjorie Bryer	Marjorie Bryer



NO to SHEETZ PETITION

(Please Print)

ADDRESS (LIVONIA, MI)

NAME

SIGNATURE

1	36360 FAIRWAY DR	ROBERT GRAVES	Robert Graves
2	36316 Fairway Dr	Bruce E Godfrey	Bruce E Godfrey
3	20626 Golf Ridge Circle	Barbara S. Borow	Barbara S. Borow
4	20626 GOLF RIDGE CIRCLE	Rex Below	Rex Below
5	20626 Golf Ridge Circle	Beth Bats	Beth Bats
6	20609 Golf Ridge Circle	Mildred Dallis	Mildred Dallis
7	36164 FAIRWAY DR	LEO SCANTAMBURLO	Leo Scantamburlo
8	36224 CLUB DRIVE	ANTHONY BRIDGES	Anthony Bridges
9	36325 ST. ANDREWS DR.	ROBERT J. SCHUESSLER	Robert J. Schuessler
10	36325 ST. ANDREWS DR.	KATHERINE SCHUESSLER	Katherine Schuessler
11	20653 Golf Ridge Circle	Phil Young	Phil Young
12	20622 Golf Ridge Circle	REX & LEAH MOUTOS	Rex & Leah Moutos
13	36276 CLUB DRIVE	SCOTT & ANGIE MONTFORT	Scott & Angie Montfort
14			

**Willow Woods
Subdivision**

**NO to SHEETZ
PETITION**

(Please Print)

ADDRESS (LIVONIA, MI)

NAME

SIGNATURE

1	Jim & Kathy Koturba	19710 Liverpool	Kathy Koturba
2	William Romanowski	19726 Liverpool Ave	William Romanowski
3	Colleen Romanowski	19726 Liverpool Ave	Colleen R.
4	Dan & Wendy Curren	19744 LIVERPOOL AVE.	Dan Curren
5	Susan LaPeer	37162 Faufer	Susan LaPeer
6	BILL LAPEER	37162 Faufer	Bill LaPeer
7	Dan & Mardi Cragel	19600 SUSSEX AVE.	Dan Cragel
8	Bill Woodrow	19727 SUSSEX	William T. Woodrow
9	JOE & JUDY COSTA	19701 LIVERPOOL AVE	Joseph Costa
10	Joe & Cindy Rega	19760 SUSSEX AVE	Joe Rega
11	Jim & Betty Ann Piska	37225 ST. MARTIN'S ST	Jim Piska
12	Melanie Fragoso	19745 Liverpool Ave	Melanie Fragoso
13	Zachary Fragoso	19745 Liverpool	Zachary Fragoso
14	MIKE & JUDY CULLINAN	19784 SUSSEX	Mike Cullinan

**Willow Woods
Subdivision**

**NO to SHEETZ
PETITION**

(Please Print)

ADDRESS (LIVONIA, MI)

NAME

SIGNATURE

1	37248 Brethton Dr.	Frank Fane	Frank Fane
2	19767 Liverpool Ave. S. Mother	Skaria Matthew LIVERPOOL Ave	Skaria Matthew
3	37325 ST MARTINS	JAMES AMO	James Amo
4	37303 ST. MARTINS	GREG PAGNUCCO	Greg Pagnucco
5	37161 St. Martins	Kathleen Mulka	Kathleen Mulka
6	37129 St. Martins	Andrea Wojcinski	Andrea Wojcinski
7	37070 St. Martins	Marla Merritt	Marla Merritt
8	37083 ST. MARTINS	Bob Goryca	Bob Goryca
9	37231 Fairfax	Susan Young	Susan Young
10	37206 Fairfax	Janet Hyslop	Janet Hyslop
11	19664 Sussex	Michelle Staher	Michelle Staher
12	19686 SUSSEX	Jim Staher	Jim Staher
13	19718 SUSSEX	JUDY WEISER	Judy Weiser
14	19702 Liverpool Ave	Blair Ackman	Blair Ackman

**Willow Woods
Subdivision**

**NO to SHEETZ
PETITION**

(Please Print)

	ADDRESS (LIVONIA, MI)	NAME	SIGNATURE
1	Marge HUNT	37175 Fairfax Drive	Marge Hunt
2	37219 Fairfax	Kyle Thom	Kyle Thom
3	Ray & Kathy Fortier	19635 Liverpool	Kathy Fortier
4	19772 Sussex Ave.	Karen Gee	Karen Gee
5	37257 St. Martins	Ann Szczepaniak	Ann Szczepaniak
6	3782 Breton Rd. 48152	Ralph Ourlian	Ralph Ourlian
7	19657 LIVERPOOL AVE.	JULIE SULLIVAN	Julie M. Sullivan
8	19860 Sussex Ave	Ann Carlson	Ann Carlson
9	37193 ST MARTINS	MARTIN HERAK	Martin Herak
10	37178 St. Martins	Lori Lee	Lori Lee
11	37092 St. Martins	Kerrin Shonce	Kerrin Shonce
12	37204 Breton	Patty Riggio	Patty Riggio
13	37291 St Martins	Sean O'Brien	Sean O'Brien
14	37107 St Martins	Ali HAMADE	Ali Hamade

Willow Woods
Subdivision

NO to SHEETZ
PETITION

(Please Print)

ADDRESS (LIVONIA, MI)

NAME

SIGNATURE

1	19695 Sussex Ave.	Kathy Wolfe	K. Wolfe
2	37124 St. Martin	Mary Nascimento	Mary Nascimento
3	37174 Fenwick	Kim Casey	Kim Casey
4	77281 St. Martins	Shirley Hay	Shirley Hay
5			
6			
7			
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9			
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12			
13			
14			



Good Evening,

My name is David Sharpe and my wife, Jeannette and I, are 50 year residents of the Meadowbrook Hills, Woods, and Forest subdivision in Farmington Hills. We are located across from Greenmead Historical Park in Livonia. As a Master Gardner I have worked in the Greenmead gardens and am a major contributor to the facility. I am a retired Detroit Public School science teacher and the founder of Finlandia Community Gardens at the Finnish Center on Eight Mile Road across from your city. Many Livonia residents use our gardens and are members of the Finnish Center. We have owned a Livonia residence in the past and we attend St Andrew's Church in Livonia. So, as you can see, Livonia is close to our hearts in many ways.

I am sure you are proud of your community and the beautiful areas you have created and sustained in your city. One of these areas is located at Eight Mile and Newburgh roads.

Greenmead with its collection of historic homes, gardens, and greenery, demonstrates the concern your community has shown by creating places that reflect the past and preserve for the future. Across the street is your city golf course which provides recreation and relaxation in a pleasant setting. A meandering stream is located there as well.

I want to express our appreciation to you and the City of Livonia for the beautiful areas that have been created in this southwestern part of the city. The golf course and Greenmead offer a wildlife habitat, and the ambiance needed in a city that cares for providing green space for its citizens and that reflects well your interest in creating spaces to recreate in pleasant surroundings.

This evening you are presented with an opportunity to continue your responsibility in caring for Livonia citizens and the greater community by supporting or denying a zoning change at the SE corner of Newburgh and Eight Mile roads. I wonder if any of you on this commission have actually visited and spent time in this area. Changing the zoning and allowing the building of a Sheetz gas station at this location would change the character of this area of Livonia forever.

It would bring 24 hours of light, noise, traffic, pollution, and increased numbers of collisions to a section of Livonia known for its beauty. It seems to me that you will wish to maintain the current character of this beautiful area.

And now a word to the developer of Sheetz facilities, I hope you will understand that your businesses are important to our communities in the appropriate locations but should not change the character of a city area just to make profit. Your businesses have been rejected by a number of communities due to their being proposed in inappropriate locations. We ask you to reconsider this attempt to change our neighborhood. I am sure your purchase of the Rite Aide site will turn out to have been a good investment for your firm.

I want to thank you for the opportunity to address this issue and I hope you will seriously consider our concerns.

David and Jeannette Sharpe, 10000 W. 10th Ave., Suite 100, Livonia, MI 48150
734-461-1111

My name is David Sharpe and I am a resident of Livonia, Michigan. I am writing to you regarding the proposed development of a Sheetz convenience store and gas station on the corner of W. 10th Ave. and W. 10th St. in Livonia. I am a member of the Livonia Planning Commission and I am concerned about the impact this development will have on the neighborhood.

The proposed development is located in a residential neighborhood that is known for its quiet streets and beautiful homes. The development will bring 24 hours of light, noise, traffic, and pollution to the area. This is a concern for the residents of the neighborhood who are used to a quiet and peaceful environment.

I am sure that the developer of the Sheetz facilities understands that their businesses are important to our communities in the appropriate locations but should not change the character of a city area just to make profit. Your businesses have been rejected by a number of communities due to their being proposed in inappropriate locations. We ask you to reconsider this attempt to change our neighborhood.

David

Sheetz Truck-stop

From claire14tryon@yahoo.com <claire14tryon@yahoo.com>

Date Mon 10/21/2024 8:42 PM

To Planning <Planning@Livonia.gov>

To Whom it May Concern,

The proposal for the southeast corner of 8 mile and Newburgh to have a 24 hour Sheetz Truck-stop is unsatisfactory for this area.

We have residential neighborhoods, Childcare, and Greenmeade Historical Park adjacent to this site. In addition a new subdivision is being built just west of the corner.

This location should not be treated as a highway for truck and car gas refueling 24 hours a day. Gas stations are already located at Haggerty, Farmington Road and 7mile and Newburgh. Drive through restaurants and convenience stores are also already located at Haggerty Road, Farmington Road, and 7 Mile and Newburgh.

The additional light, noise, traffic, possible crime and pollution are not wanted here.

Thank you,
Claire Tryon

Sent from Yahoo Mail for iPhone

Cc: kdenha@comcast.net; mkoza@group10.net; Aly Bazzi <ABazzi@bazcooil.com>; scott@barbatorganization.com; MICHAEL AWADA <lakportgas@gmail.com>; tarek gayar <tgayar@gmail.com>; 'Michael@yatoomaoil.com' <Michael@yatoomaoil.com>; Martin Manna <mmanna@chaldeanchamber.com>

Subject: Sheetz at 8 & Newburgh Rd

Honorable Livonia Mayor and Council Members,

Yesterday, your planning commission approved **Sheetz 24-Hour Gas Station, convenience Store, and Restaurant** proposal with only 3-2 vote and many neighbors correctly expressed major opposition to it.

The Chaldean American Chamber of Commerce have been opposing Sheetz expansion into Southeast Michigan with the goal of developing 80-100 locations that will have the “Walmart” effect on local small and independent businesses, many of them are members of our chamber.

This national chain will ultimately bankrupt older gas stations that was constructed 40+ years ago prior to any EPA regulations and add more hardships on the already struggling gas stations because of lower gas sales because of EV and other economic factors.

Attached is public information that Sheetz does not want you or Livonia residents to be aware of which includes the following categories:

- Public Safety (Google Crimes at Sheetz)
- Environmental Concerns/Violation
- Discrimination Concerns/Violation
- Noise Pollution
- Light Pollution
- Increase Traffic
- Sheetz was rejected in five (5) communities because their master plan said: **No need for more gas stations** Click link for a brief video:
<https://dayton247now.com/news/local/centerville-city-council-reverses-the-approval-for-a-sheetz-next-to-epiphany-lutheran-church>
- Unfair Competition (Multibillion dollar corporation competing against “mom & pop” operation.

I hope that you will conduct your due diligence about the history of Sheetz and the short- and long-term impact of corporate America coming to our communities and robbing us from our local mom and pop stores that make our neighborhoods unique and desirable.

Thank you and please call me at 248-224-5262 if you have questions.

Sharkey Haddad | Special Projects Manager | **Chaldean American Chamber of Commerce**

30095 Northwestern Hwy #101, Farmington Hills, MI 48334 | **Phone:** 248-851-1200 | **Cell:** 248-224-5262

www.chaldeanchamber.com | www.chaldeanfoundation.org |    



CHALDEAN
AMERICAN
CHAMBER OF
COMMERCE

CHALDEAN COMMUNITY
FOUNDATION



CHALDEAN
CHAMBER
POLITICAL
ACTION
COMMITTEE



[Click HERE for our 2024 Year in Review](#)

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Sheetz, Inc. Settles Underground Fuel Tank Violations in Pa., Va., Md., and W. Va.

Bonnie Smith, 215-814-5543

PHILADELPHIA – Sheetz, Inc., owner of a chain of convenience stores and gas stations in Pennsylvania, Maryland, Virginia, and West Virginia, has settled alleged violations of regulations designed to prevent fuel leaks from underground storage tanks, the U.S. Environmental Protection Agency announced today.

In a settlement agreement with EPA, the Altoona, Pa.-based company will pay a \$26,024 penalty to settle alleged violations of federal and state underground storage tank regulations. The settlement resolves an EPA complaint involving underground storage tank violations at two Sheetz stores in Winchester, Va.

According to EPA's complaint, the company failed to immediately investigate and report suspected leaks in 2000 and 2001 from seven 15,000-gallon gasoline and diesel fuel tanks at stores located at 2311 Valley Avenue and 1683 Berryville Pike in Winchester, Va. EPA also cited the company for failing to conduct required monthly leak detection monitoring of the underground storage tanks at its Valley Avenue store.

After EPA notified Sheetz of these violations in September 2002, the company agreed to perform a self-audit of underground storage tank leak detection monitoring at 275 Sheetz stores in the mid-Atlantic states. Sheetz also agreed to promptly correct any non-compliance and report those violations to EPA.

"Today's settlement resolves both the initial violations found at two Virginia stores and violations found during the self-audits. In addition, the company will undertake supplemental projects where it will make upgrades to underground storage tank systems that go beyond environmental compliance to better protect the local environment," said Donald S. Welsh, EPA mid-Atlantic regional administrator.

The self-audits showed various violations of underground storage tank monitoring, investigation, and leak detection regulations in 111 Sheetz stores. To settle the violations found during the self-audits, Sheetz has agreed to pay an additional penalty of \$57,188. The company will also undertake a supplemental project to remove and upgrade its underground storage tank systems. The project exceeds the requirements of state and federal environmental regulations and will have a value of at least \$875,000 and goes beyond compliance.

The settlement penalties reflect the company's good faith compliance efforts and cooperation with EPA in this matter. As part of the settlement, the company neither admitted nor denied liability for the alleged violations.

With millions of gallons of gasoline, oil, and other petroleum products stored in underground storage tanks throughout the U.S., leaking tanks are a major source of soil and groundwater contamination. EPA and state underground storage tank regulations are designed to reduce the risk of underground leaks, and thus avoid the costs of major cleanups. For more information on EPA's underground storage tank program, visit: <https://www.epa.gov/swerust1/>.

EEOC Sues Sheetz, Inc. For Racially Discriminatory Hiring Practice

Federal Agency Charges That Employer's Criminal History Screening Causes Discriminatory Impact Against Black, Native American and Other Workers

BALTIMORE – Sheetz, a large convenience store chain, violated federal law by denying employment to a class of job applicants because of their race, the U.S. Equal Employment Opportunity Commission (EEOC) charged in a lawsuit filed today.

The EEOC filed suit against Sheetz, Inc.; Sheetz Distribution Services, LLC; and CLI Transport, LP (collectively, Sheetz), which together operate a chain of convenience stores with over 600 locations in six states. According to the lawsuit, Sheetz has maintained a longstanding practice of screening all job applicants for records of criminal conviction and then denying them employment based on those records.

The EEOC charges that Sheetz's hiring practices disproportionately screened out Black, Native American/Alaska Native and multiracial applicants. Sheetz's companywide hiring practices violated provisions of Title VII that prohibit disparate impact discrimination, the EEOC says. The lawsuit does not allege that Sheetz was motivated by race when making hiring decisions.

Such alleged conduct violates Title VII, which prohibits facially neutral employment practices that cause a discriminatory impact because of race when those practices are not job-related and consistent with business necessity or where alternative practices with less discriminatory impact are available. The EEOC filed suit in U.S. District Court for the District of Maryland, Northern Division (U.S. EEOC v. Sheetz, Inc., et al., Civil Action No. 1:24-cv-01123-JKB, after first attempting to reach a pre-litigation settlement through its conciliation process.

"Federal law mandates that employment practices causing a disparate impact because of race or other protected classifications must be shown by the employer to be necessary to ensure the safe and efficient performance of the particular jobs at issue," said EEOC Regional Attorney Debra M. Lawrence. "Even when such necessity is proven, the practice remains unlawful if there is an alternative practice available that is comparably effective in achieving the employer's goals but causes less discriminatory effect."

EEOC Philadelphia District Office Director Jamie R. Williamson said, "This highlights the significance of the observance of April as [Second Chance Month](#), underscoring our nation's commitment to reintegrating individuals with criminal records into society by ensuring they have fair access to employment and other essential services. To that end, the EEOC is dedicated to making sure that individuals with criminal records are not unlawfully excluded from employment opportunities because of race."

The lawsuit was initiated by the EEOC's Baltimore Field Office, one of four component offices of the agency's Philadelphia District Office. The Philadelphia District Office has jurisdiction over Maryland, Pennsylvania, West Virginia, Delaware, and portions of New Jersey and Ohio. Attorneys in the Philadelphia District Office also prosecute discrimination cases in Washington, D.C., and portions of Virginia.

The EEOC prevents and remedies unlawful employment discrimination and advances equal opportunity for all. More information is available at www.eeoc.gov. Stay connected with the latest EEOC news by subscribing to our [email updates](#).

Security/Safety concerns at gas stations are not new, however, operating a 24/7 gas station involves several heightened concerns due to its constant availability and the nature of its services. Below are some key security/safety concerns with building a Sheetz in Farmington Hills

Robbery/Shootings:

- 24/7 operated gas stations are easy targets for robberies, especially during late-night hours when fewer customers and employees are present.
- This shootout occurred at 2:30 am, innocent customer was shot and injured
<https://www.youtube.com/watch?v=G0yEPsUx0Go>

Organized Crime/Vandalism:

- Acts of organized crime/vandalism can damage property and create an unwelcoming environment for customers and residents.
- This group caused inconvenience and annoyance to the employees and customers by blocking the parking lot, roads and fuel pumps with their cars while they looted the location. <https://abc6onyourside.com/news/local/police-searching-for-16-suspects-group-stealing-riot-theft-parking-lot-cars-sheetz-gas-station-johnstown-road-northeast-columbus-store-business>

Employee Safety:

- Employees, especially those working night shifts, may be at higher risk of confrontations or attacks.
- Customer entered the store around 7:30 p.m. and began talking with the staff. Police say he reportedly stayed in or around the store for over two hours, and at approximately 9:30 p.m., he allegedly entered the employee area, behind the registers, and brandished a knife.
<https://wjactv.com/news/local/police-crime-robbery-armed-dangerous-video-surveillance-suspect-blair-sheetz-pennsylvania-investigation>.

Environmental Safety:

- This Sheetz will have 6 underground tanks (60-80k gallons) almost 3-4 times the gallons than a typical gas station.



Picture above is from a Sheetz 6 storage tank installation

- Sheetz cited for underground Fuel Tank violations
https://www.epa.gov/archive/epapages/newsroom_archive/newsreleases/0813acee77a78c2e852570d60070fed1.html

The surrounding gas stations and local businesses in Farmington Hills typically close at 10pm or earlier. While the residents in Farmington Hills are going to bed and getting ready for the next workday, Sheetz will be operating a 24/7 gas station that will serve as a gathering spot for residents outside of Farmington Hills.

Sheetz adds security dogs to some North Carolina stores amid crime concerns

by RAY LEWIS | The National Desk-Fri, April 5th, 2024, at 11:53 AM



[SheetzGreensboroSecurityNorth CarolinaCrimeK-9 unitsPoliceSafety](#)

GREENSBORO, N.C. (TND) — A convenience store chain has employed K-9 units at some North Carolina locations to help deter criminal activity.

Sheetz added the police dogs at Greensboro, N.C. locations more than three months after an off-duty officer died in a shooting at a store near the city.

The safety of our customers and employees at Sheetz is a top priority,” Nick Ruffner, the chain’s public relations manager, told The National Desk. “We continually assess which stores need additional support and have implemented supplemental security measures, including K-9 units, at several Greensboro store locations as an additional safety measure.”

In December, Sgt. Philip Nix died after attempting to intervene in a robbery he witnessed at a Colfax, North Carolina Sheetz, according to [WXLV](#). One of the suspects, Jamere Foster, reportedly shot Nix as the officer approached him.

Roughly three weeks earlier, a thief [stole](#) vehicles from two Greensboro Sheetz stores, according to the outlet. Police purportedly charged Dionysus Thomas with robbery with a dangerous weapon.

In October, a man also reportedly [robbed](#) a Sheetz register in northeast Greensboro.

The city has [reported](#) a slight increase in overall crime so far in 2024. North Carolina is a competitive state in the presidential election, with public safety emerging as a key issue for voters.

Follow Ray Lewis on X for trending national news [@rayjlewis](#) or send a tip to rjlewis@sbgstv.com.

CRIMES AT SHEETZ GAS STATIONS

3 North Carolina Sheetz stations deploy K-9 units as ...



New York Post

<https://nypost.com/2024/04/05/us-news/3-north-c...>

Apr 5, 2024 — Three **Sheetz gas stations** in Greensboro, North Carolina are deploying **crime**-fighting canines at the pumps as an added security measure for ...

2 men shot at Virginia gas station in possible bias crime ...



NBC4 Washington

<https://www.nbcwashington.com/news/local/2-me...>

Mar 1, 2024 — The alleged shooter is in custody. Investigators think he opened fired on the victims because they are Latinos.

Suspect in deadly 2022 shooting at Sheetz gas station ...

10TV

<https://www.10tv.com/video/news/crime/suspect-i...>

Keimariyon Ross will be sentenced on Sept. 5. Author: 10tv.com. Published: 5:22 PM EDT July 30, 2024. Updated: 5:22 PM EDT July 30, 2024. WBNS-TV.

Sheetz to use K-9 units as security



YouTube · WFMY News 2

530+ views · 4 months ago

Following multiple carjackings, robberies, and a deadly **shooting** where an off-duty Greensboro officer was **killed**, **Sheetz** said it would be ...

Crime Roundup: Man charged with peeping at Sheetz gas ...



The Daily Reflector

<https://www.reflector.com/news/crime-roundup-man-...>

May 25, 2024 — Greenville **police** have arrested a man accused of taking a photo of a woman in a convenience store bathroom.

Man found guilty of murder in deadly shooting at Sheetz

10TV

<https://www.10tv.com/article/news/crime/deadly-...>

2 days ago — Keimariyon Ross will be sentenced on Sept. 5. ... COLUMBUS, Ohio — A Columbus man charged in a deadly **shooting** that happened at a **gas station** ...

Gunshot victim found at north Columbus Sheetz parking lot



nbc4i.com

<https://www.nbc4i.com/news/local-news/gunshot-...>

Apr 24, 2024 — According to Columbus **police** one person was shot in or near an Advance Auto Parts parking lot on East Dublin Granville Road, just west of ...

[Suspect in deadly 2022 shooting at Sheetz gas station ...](#)

YouTube · WBNS 10TV

10+ views · 1 day ago

Keimariyon Ross will be sentenced on Sept. 5.

[Officer shot and killed after witnessing a crime at Sheetz ...](#)



WSFA

<https://www.wsfa.com> › 2023/12/31 › officer-shot-kille...

Dec 31, 2023 — The Greensboro **Police** ...

[Man arrested in assault of Hillsborough police officer at ...](#)



ABC11 Raleigh-Durham

<https://abc11.com> › officer-assaulted-sheetz-hillsboroug...

Jan 11, 2024 — **Police** arrested a man who dragged an officer while trying to flee a **Sheetz** convenience store in Hillsborough.

[Sheetz adds security dogs to some North Carolina stores ...](#)

WPMI

<https://mync15.com> › news › nation-world › sheetz-add...

Apr 5, 2024 — **Sheetz** added the **police** dogs at Greensboro, N.C. **locations** more than three months after an off-duty officer died in a **shooting** at a store ...

[Double shooting at Sheetz may be bias crime, Virginia ...](#)

YouTube · NBC4 Washington

520+ views · 5 months ago

The alleged shooter is in custody. Investigators think he opened fired on the victims because they are Latino. News4's Julie Carey reports.

[Greensboro police investigate after two similar carjackings ...](#)



WNCT

<https://www.wnct.com> › news › north-carolina › greens...

Dec 8, 2023 — GREENSBORO, N.C. (WGHP) — **Police** are now investigating after two carjackings in broad daylight were reported within an hour of each other at ...

[Man killed in shooting at Columbus Southeast Side Sheetz ...](#)



The Columbus Dispatch

<https://www.dispatch.com> › news › crime › 2023/03/03

Mar 3, 2023 — A 23-year-old man died in the early hours of Friday morning after Columbus **police** said he was shot at a **gas station** on the city's Southeast ...

[Man wanted, accused of stealing alcohol at Sheetz](#)

PAhomepage.com

<https://www.pahomepage.com> › news › crime-courts › m...

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1922

Real Estate Development

City of Livonia, Wayne County, MI

SHEETZ STORE TRAFFIC IMPACT STUDY

Final Report
August 8, 2024



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DISCLAIMER

The contents of this report reflect the views of Wade Trim, Inc. who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the official views or policies of Sheetz, Skilken Gold, City of Livonia, or Wayne County Roads, Department of Public Services.

EXECUTIVE SUMMARY

Sheetz is proposing a new Sheetz store in the City of Livonia, Wayne County, Michigan. The project site is located at 37355 Eight Mile Road, which is along the south side of 8 Mile Road and east of Newburgh Road. The new Sheetz store will consist of a 6,139 square foot gas station and convenience store with twelve vehicle fueling stations and a fast-food restaurant with one drive-through lane. Access for the proposed development is to be via two full movement accesses: one to Newburgh Road and one to 8 Mile Road. The proposed development is anticipated to be fully constructed and open for business in 2025.

The report analyzes and presents the traffic impacts that the proposed Sheetz store will have on the intersection of 8 Mile Road and Newburgh Road/Halstead Road. This intersection was analyzed for the morning and afternoon peak hours for the following conditions:

- Existing 2024 Conditions
- Future 2025 No-Build Conditions
- Projected 2025 Build Conditions

The elements to be covered in the traffic study were discussed with the City of Livonia and Wayne County Roads, Department of Public Services prior to the study commencing.

Existing 2024 Conditions

The existing weekday counts were collected on Thursday, May 16, 2024 during the weekday morning peak from 7:00 a.m. to 9:00 a.m. and weekday afternoon peak from 4:00 p.m. to 6:00 p.m. at the intersection of 8 Mile Road and Newburgh Road/Halstead Road. Based on the intersection counts, the overall weekday morning system peak hour was found to occur between the hour of 7:30 a.m. and 8:30 a.m. while the afternoon system peak hour was found to occur between the hour of 4:30 p.m. and 5:30 p.m. These hours were selected for analysis of existing and future year conditions.

It should be noted that there was a significant amount of road construction happening in this overall area during the traffic data collection. The collection of traffic counts could not wait until all the construction is completed. We made sure the traffic counts were collected once the I-275 and 8 Mile Road intersection was completed and open to traffic. However, there was construction on all the major freeways surrounding this site. In addition, I-275 still had daily lane closures in the area that most likely affected north/south traffic volumes at the 8 Mile Road and Newburgh Road/Halstead Road intersection. Therefore, the traffic volumes collected are likely higher than typical for this intersection due to the back-ups on I-275 at this same time.

The capacity analyses for existing conditions revealed that all study area intersection approaches and movements operate at an acceptable level of service during the weekday morning peak hour. During the afternoon peak hour, the westbound, northbound, and southbound approaches all have

movements operating poorly. During our observations at the intersection, the northbound through movement experienced lengthy queues. This was also found in the SimTraffic model for the afternoon peak hour.

Mitigation to improve the existing delays for the intersection during the afternoon peak hour were examined. In order to mitigate each of these movements, it was found that changing the cycle length to a 90-second cycle length from the existing 120 seconds and adjusting the splits would provide acceptable levels of service. The morning peak hour currently operates with a 90-second cycle length. All intersection movements and approaches are expected to operate at acceptable levels of service with the proposed traffic signal adjustments.

Future 2025 No-Build Conditions

An evaluation of traffic impacts associated with the proposed Sheetz store relies on an understanding of the future traffic conditions in the study area without the proposed Sheetz store development. Traffic volumes for the future no build 2025 conditions were estimated by applying a traffic growth rate to the existing traffic volumes to develop the future 2025 traffic volumes.

The study area intersection was evaluated with the future 2025 no build traffic volumes to determine the future intersection operations without the proposed Sheetz store project. Mitigation recommended under the existing conditions was not included in the future 2025 no build conditions analysis. The capacity analyses for future 2025 no build conditions revealed that all study area intersection approaches and movements operate at the same levels of service as existing conditions during the weekday morning and afternoon peak hours. All study area intersection approaches and movements operate at an acceptable level of service during the weekday morning peak hour with minimal changes in delay. During the afternoon peak hour, the westbound, northbound, and southbound approaches all continue to have movements operating poorly. During the afternoon peak hour, the SimTraffic model indicates that the northbound through movement will have significant queueing along Newburgh Road.

Mitigation to improve the delays for the intersection during the afternoon peak hour were examined. It was found that changing the cycle length to a 90-second cycle length from the existing 120 seconds and adjusting the splits would not completely mitigate this intersection to acceptable levels of service as it did under existing conditions. The slight increase in traffic volumes between existing conditions and no build conditions are requiring further mitigation for the intersection. In order to mitigate the intersection to obtain acceptable levels of service for all movements and approaches, the northbound right turn lane should be restriped to a shared through/right turn lane. This would allow the through movements to utilize two lanes to get through the intersection. Halstead Road has two receiving lanes on the north side of the intersection to accommodate this lane use change and was used in the same manor in earlier years. In addition to the restriping of this northbound lane, changing the cycle length to a 90-second cycle length from the existing 120 seconds and adjusting

the splits was also needed. All intersection movements and approaches are expected to operate at acceptable levels of service with the proposed mitigation plan.

Projected 2025 Build Conditions

The Sheetz store is estimated to be fully constructed and open for business in 2025. The new Sheetz store will consist of a 6,139 square foot gas station and convenience store with twelve vehicle fueling stations and a fast-food restaurant with one drive-through lane.

Three existing driveways serve the site property currently: two full movement accesses to Newburgh Road and one full movement access to 8 Mile Road. This project plans to close the northernmost site driveway to Newburgh Road and utilize the remaining two driveways for access to the site. One full movement access is proposed to 8 Mile Road and another full movement access to Newburgh Road. Both proposed driveways are located at the edge of the property furthest from the 8 Mile Road and Newburgh Road intersection.

The projected traffic impacts for the proposed new Sheetz store were determined based on the analysis of future year 2025 traffic volumes upon full build out in 2025. The examination of the projected build 2025 conditions began with the projection of turning movement volumes for the weekday morning and weekday afternoon peak hours. This process was accomplished by adding the estimated number of weekday morning and afternoon peak hour site generated trips associated with the Sheetz store to future 2025 no build traffic volumes.

New trips to be generated by the new Sheetz store were estimated based on information and procedures contained in the Institute of Transportation Engineer's (ITE) report *Trip Generation Manual*, Eleventh Edition, September 2021. Two different land use types from the manual were utilized for the proposed site: Land Use Code (LUC) 945 - Convenience Store/Gas Station – GFA (5.5-10k) and LUC 935 – Fast-Food Restaurant with Drive-Through Window and No Indoor Seating. These two land uses were combined to determine the total number of trips for the entire project. After accounting for internal trips and pass-by trips, the proposed Sheetz Store is expected to generate a total of 103 new trips during the morning peak hour and 93 new trips during the afternoon peak hour. The number of weekday morning and weekday afternoon new peak hour trips was distributed to the surrounding roadway network based on traffic volumes from the SEMCOG Travel Demand Forecast Model.

Site generated trips were then added to future 2025 no build traffic volumes to yield the projected 2025 build conditions. The study area intersection as well as the site driveways were evaluated with the projected build traffic volumes to determine the future intersection operations with the proposed Sheetz store project. Right-turn lane warrants were evaluated based on the Michigan Department of Transportation (MDOT) Geometric Design Guidance manual with the site generated traffic to determine if right turn lanes would be needed along 8 Mile Road or Newburgh Road at the proposed

driveways. Based on the volume warrants, a full-width right turn lane is not warranted at either driveway to the Sheetz store. A deceleration taper is recommended as part of the driveway approach at both site driveways. 8 Mile Road and Newburgh Road both have a five-lane cross-section with a center left-turn lane adjacent to the proposed site accesses therefore the left-turn lane warrants were not examined.

None of the mitigation options discussed under existing conditions or future no build conditions were assumed to be in place for the projected 2025 build conditions analyses, therefore the same movements identified under existing and no build conditions at the intersection of 8 Mile Road and Newburgh Road/Halstead Road as operating poorly will continue to operate poorly under the projected 2025 build conditions. The capacity analyses for projected 2025 build conditions revealed that all study area intersection approaches and movements operate at the same levels of service as existing and no build conditions during the weekday morning and afternoon peak hours. All study area intersection approaches and movements operate at an acceptable level of service during the weekday morning peak hour with very minimal changes in delay. During the afternoon peak hour, the westbound, northbound, and southbound approaches all continue to have movements operating poorly. During the afternoon peak hour, the SimTraffic model continues to indicate that the northbound through movement will have significant queueing along Newburgh Road.

The capacity analyses for the proposed Sheetz store driveways to 8 Mile Road and Newburgh Road revealed that all movements at the proposed Sheetz store driveways are expected to operate acceptably at full build out of the store.

Mitigation to improve the delays expected for the intersection during the afternoon peak hour were examined. Improvements were needed under the no build condition to achieve acceptable levels of service for all movements at the intersection. These same improvements were examined to determine if any further mitigation would be needed with the proposed Sheetz store. These improvements include restriping the northbound right turn lane to a shared through/right turn lane and changing the cycle length from a 120-second cycle to a 90-second cycle during the afternoon peak hour. All intersection movements and approaches are expected to operate at acceptable levels of service with the proposed mitigation plan. No further mitigation is needed due to the proposed Sheetz store.

Improvement Summary

Below is a bulleted list of improvements that are needed by study scenario.

Existing 2024 Conditions

Improvements that are needed in order to mitigate the existing 2024 conditions include the following:

- Signal timing adjustments to the cycle length (120 second cycle length to 90 second cycle length) and splits at the intersection of 8 Mile Road and Newburgh Road/Halstead Road.

Future 2025 No Build Conditions

Improvements that are needed to mitigate the future 2025 no build conditions include:

- Restriping the existing northbound right turn lane along Newburgh Road at 8 Mile Road to a shared through/right turn lane.
- Signal timing adjustments to the cycle length (120 second cycle length to 90 second cycle length) and splits at the intersection of 8 Mile Road and Newburgh Road/Halstead Road.

Projected 2025 Build Conditions

No additional improvements beyond the northbound lane repurposing and signal timing adjustments are needed in order to mitigate projected 2025 full build out due to the addition of Sheetz store traffic.

The proposed site driveways were reviewed to determine if intersection improvements would be needed. A center left-turn lane currently exists along 8 Mile Road and Newburgh Road for left-turns into the proposed store. Right-turn lane warrants were examined at both driveways and were found to warrant a deceleration taper only. Full right turn lanes were not found to be needed based on the approaching traffic volumes and projected right turn volumes at each driveway. All movements at the proposed Sheetz store driveways are expected to operate acceptably at full build out.

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1.0 INTRODUCTION

Sheetz is proposing a new Sheetz store in the City of Livonia, Wayne County, Michigan. The project site is located at 37355 Eight Mile Road, which is along the south side of 8 Mile Road and east of Newburgh Road as shown in Figures 1-1 and 1-2. The new Sheetz store will consist of a 6,139 square foot gas station and convenience store with twelve vehicle fueling stations and a fast-food restaurant with one drive-through lane. Access for the proposed development is to be via two full movement accesses: one to Newburgh Road and one to 8 Mile Road. The proposed site plan is provided in Appendix A. The proposed development is anticipated to be fully constructed and open for business in 2025.

This report describes the data collection, analyses, and the traffic impacts due to the proposed new Sheetz store.

Figure 1-1 Location Map

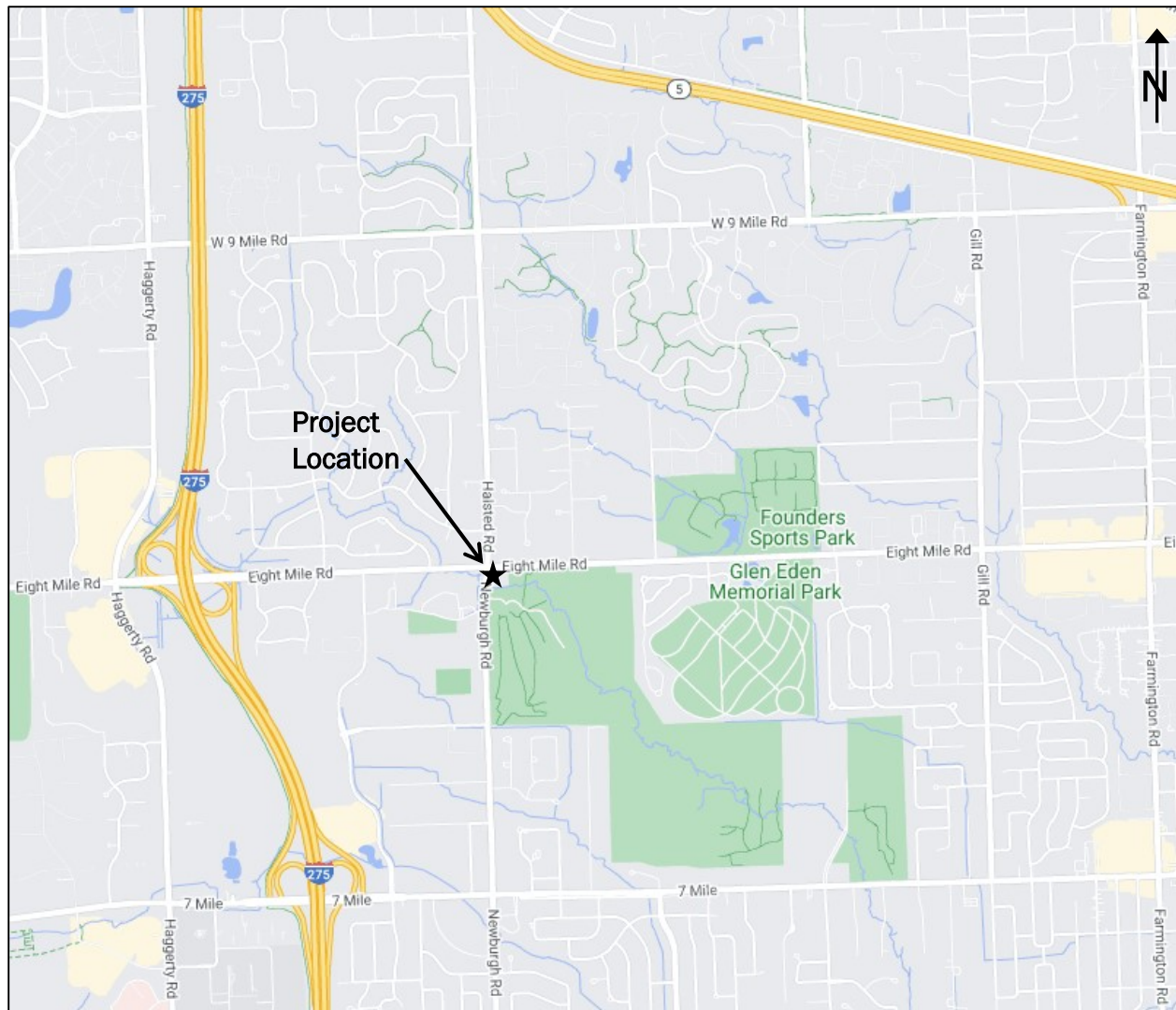


Figure 1-2 Approximate Site Area



1.1 Purpose and Scope

The purpose of this report is to document the assessment of the traffic impacts that the proposed new Sheetz store is expected to have on the adjacent roadways and study area intersection. The traffic impacts and mitigation measures described in this report are based on existing, future no build traffic volumes in 2025, and full build out in the year 2025.

The assessment included a review of existing roadway and intersection geometry, traffic control devices, and traffic volumes. The study also included trip generation, distribution, and traffic assignment. The analysis examined the following conditions:

- Existing Conditions: 2024 traffic volumes and operations.
- Future 2025 No Build Conditions: future traffic conditions that are anticipated in 2025 without the new Sheetz store.
- Projected 2025 Build Conditions: future build traffic conditions that are anticipated in 2025 at full build out of the new Sheetz store.

A comparison of future no build conditions to projected build conditions was used to determine the traffic impacts of the proposed Sheetz store upon the adjacent street system.

2.0 METHODOLOGY

The study involved the collection and review of geometric, traffic control, and traffic volume data for roadways and intersections potentially impacted by the proposed Sheetz store. This data served as input for the highway capacity analyses that were conducted to estimate the traffic impacts of the new Sheetz store. The information collected, and the evaluation procedures used to conduct the analyses, are described in this section.

2.1 Traffic Impact Study Area

Based on a review of the road network adjacent to the proposed site and discussions with the City of Livonia and Wayne County Roads, Department of Public Services, the impact area for this study was identified. It was agreed upon that the analysis study area would include the intersection of 8 Mile Road and Newburgh Road/Halstead Road. In addition, the project site accesses to 8 Mile Road and Newburgh Road would be studied in the projected build conditions.

2.2 Data Collection

Data collection consisted of obtaining roadway and intersection geometry, existing traffic control devices, and traffic volumes.

Traffic volume collection included obtaining directional vehicle turning movement counts for the weekday morning and weekday afternoon peak periods. These data were collected by Quality Counts, LLC for Wade Trim. Directional turning movements were derived from video taken during the weekday morning peak from 7:00 a.m. to 9:00 a.m. and weekday afternoon peak from 4:00 p.m. to 6:00 p.m. at the study area intersections.

The weekday counts were collected on Thursday, May 16, 2024. All possible vehicle turning movements at these intersection approaches were recorded in 15-minute intervals. During collection

of the turning movement data, truck volumes were recorded, and the number of pedestrians and bicyclists were also noted for each 15-minute interval. All existing turning movement data that were collected are summarized in Appendix B.

A field review of the intersections and surrounding area were made by Wade Trim personnel to obtain other data needed for the study. For example, traffic control regulations at the intersections, pedestrian accommodations, speed limits, roadway cross-sections, etc. were verified during the field observations. These data were used in developing the Synchro and SimTraffic models for the study roads and intersections.

The traffic signal timing permit for the signalized intersection of 8 Mile Road and Newburgh Road/Halstead Road was obtained from Wayne County Roads, Department of Public Services, which is the agency that maintains the signal.

2.3 Operational Analysis

The traffic impact analysis includes methodology for trip generation, distribution, and traffic assignment based on the Institute of Transportation Engineers (ITE) standard practices. The guidelines suggested in the document *Evaluating Traffic Impact Studies – A Recommended Practice for Michigan Communities, 1994 Edition* were used in the preparation of the impact study. Applicable technical standards such as the *6th Edition Highway Capacity Manual*, *MDOT Geometric Design Guide*, and the *2011 Michigan Manual on Uniform Traffic Control Devices (MMUTCD)* were also used.

2.3.1 Highway Capacity Analysis

Highway capacity analyses were conducted to determine the existing level of service of the study area intersections, the level of service expected in the year 2025 when only background traffic is added, and the level of service expected in 2025 when the Sheetz store is fully built-out and operational. *Synchro 11.1* was used to conduct the analyses.

Synchro 11.1 is a software package used for modeling and optimizing traffic signal timing at intersections. The program utilizes the methods of the *6th Edition Highway Capacity Manual* to calculate capacity. The capacity worksheets for existing year conditions are provided in Appendix C, while the future no build 2025 conditions are given in Appendix E. The worksheets for the projected build conditions in 2025 are provided in Appendix G.

Capacity analyses were conducted to measure the performance of the intersections in terms of level of service. Level of service ranges from level of service A, which represents the best traffic conditions, to level of service F, which is the worst condition. Operations at level of service A through D are generally considered acceptable for signalized intersections while a level of service E is

generally considered acceptable for side-street movements at unsignalized intersections.

Quantitative measures of level of service are given in the following paragraphs.

The level of service measurement for both signalized and stop controlled intersections is average control delay, which is also quantified in terms of seconds of delay per vehicle. Control delay includes the initial deceleration delay, queue move-up time, stopped delay, and acceleration delay. The level of service criteria for unsignalized and signalized intersections, taken from the **6th Edition Highway Capacity Manual**, is shown in Table 2-1.

Level of Service	Description	Unsignalized Intersections Average Control Delay, Seconds per vehicle	Signalized Intersections Average Control Delay, Seconds per vehicle
A	Little or no delay.	<10.0	<10.0
B	Short traffic delays.	Between 10 and 15	Between 10 and 20
C	Average traffic delays.	Between 15 and 25	Between 20 and 35
D	Long traffic delays.	Between 25 and 35	Between 35 and 55
E	Very long traffic delays.	Between 35 and 50	Between 55 and 80
F	Demand exceeds capacity.	>50	>80

One important factor used in calculating capacity at intersections is the peak-hour factor. The peak hour factor is found by dividing the total hourly volume observed on a road or intersection by four times the highest 15-minute volume. Because manual traffic counts based on 15-minute data were collected for the area intersections, the peak-hour factors used in the existing conditions analyses are based on actual count data. The peak hour factors are applied by intersection approach. The peak hour factors were kept the same for the future no build and projected build analyses. However, as the traffic volumes through this area increase over time and with the proposed development, the peak hour factors may also increase.

3.0 ANALYSIS

The traffic impact study included a review of the study area, an estimation of the amount of peak-period traffic generated by the proposed Sheetz store, distribution of the site traffic onto the local streets, assignment of traffic volumes to the study area intersections, and capacity analyses to determine the impact of the proposed Sheetz store on the level of service and operations. Traffic projections were made to estimate future traffic volumes on the area roads in 2025 without the proposed Sheetz store and in 2025 with the proposed Sheetz store.

3.1 Existing 2024 Conditions

The existing transportation network in the vicinity of the project site is comprised of the road system and pedestrian facilities. No transit or bicycle facilities exist within the study area. A summary of the existing network is described below.

It should be noted that 8 Mile Road is the boundary line between Oakland County to the north and Wayne County to the south. It also separates the City of Farmington Hills to the north and the City of Livonia to the south.

3.1.1 Road System

8 Mile Road is a county principal arterial roadway that runs east/west along the north side of the project site. Although 8 Mile Road is the baseline road between Oakland County and Wayne County, Wayne County maintains this section of 8 Mile Road. The roadway has a five-lane cross-section within the study area including a two-way center left-turn lane. A posted speed limit of 45 mph exists along 8 Mile Road through the study area.

Newburgh Road is minor arterial roadway under City of Livonia jurisdiction. It has a five-lane cross-section with a two-way center left-turn lane and runs north/south along the west side of the project site. The roadway has a posted speed limit of 45 miles per hour.

Halstead Road is minor arterial roadway under the City of Farmington Hills jurisdiction. Halstead Road begins at 8 Mile Road and runs northerly with a five-lane cross-section (two-way center left-turn lane) which tapers down to a three-lane roadway and then narrows to a two-lane roadway. The posted speed limit on Halstead Road is 35 mph within the study area.

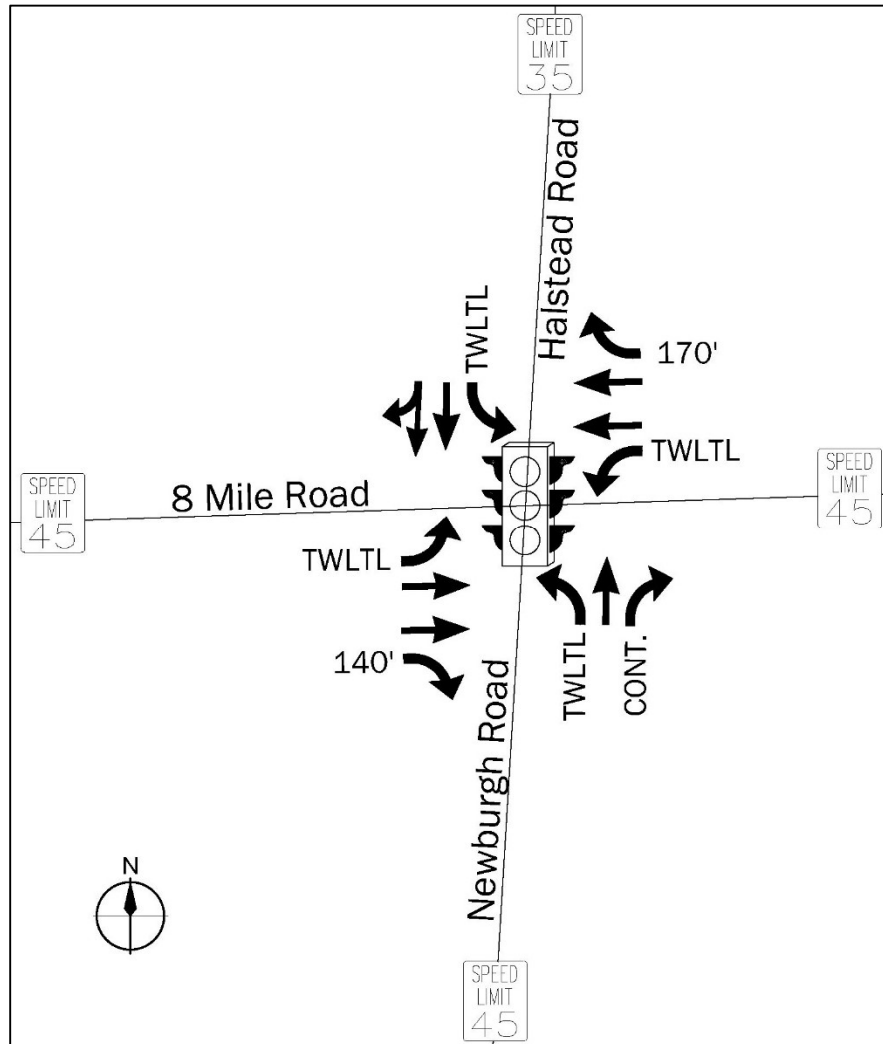
Intersection Geometry and Traffic Control

There is one primary intersection in the study area which is controlled by a traffic signal. Three existing full movement driveways serve the existing vacant property; one to 8 Mile Road and two to Newburgh Road. The existing property is currently vacant and has no traffic in/out. The existing lane configuration for the study area intersection is depicted in Figure 3-1.

The intersection of 8 Mile Road and Newburgh Road/Halstead Road has four approach legs and is controlled by a traffic signal. The eastbound and westbound 8 Mile Road approaches have a left-turn lane, two through lanes and a right turn lane. The northbound Newburgh Road approach has a left turn lane, a through lane, and a right turn lane. The right turn lane is a continuous lane to the south. The southbound Halstead Road approach has a left turn lane, a through lane, and a shared through/right turn lane. The traffic signal is a traditional diagonal span system with four phases. One phase for the northbound/southbound throughs, one phase for the northbound and southbound left-turns, one phase for the eastbound/westbound throughs, and one phase for the eastbound/westbound left-turns. Permissive-protected left turns are allowed on all four approaches.

Right turn green arrow overlaps are present with the eastbound and westbound right turn lanes. The existing traffic signal timing is pretimed with an existing cycle length of 90 seconds during the weekday morning peak hour and 120 seconds during the afternoon peak hour.

Figure 3-1 Existing Lane Configuration



3.1.2 Pedestrian Facilities

Sidewalk is present on all four quadrants of the study area. Along 8 Mile Road, continuous sidewalk is present along the north side of the road. Along the south side of 8 Mile Road, sidewalk begins approximately 300 feet west of Newburgh Road and continues through the intersection and to the east. Along Halstead Road, sidewalk is only present on the east side of the roadway. Along Newburgh Road, sidewalk is only present along the east side of the road from 8 Mile Road to the Whispering Willows Golf Course driveway. No other pedestrian facilities are present along Newburgh Road. Crosswalks with pedestrian signals exist on all four legs of the 8 Mile Road and Newburgh Road/Halstead Road intersection.

3.1.3 Land Use

The proposed development area is currently zoned C-1 Local Business. The site is currently unoccupied. The proposed zoning for the project site is C-2 General Business. Along 8 Mile Road, the land use consists of PL Public Lands with the golf course surrounding the project site and the Greenmead Historical Park along the west side of Newburgh Road. Beyond the public land areas on the south side of 8 Mile Road, residential neighborhoods exist. Along the north side of 8 Mile Road, the entire area is zoned RA-1 One Family Residential. Childtime of Northville is located on the northeast corner of the 8 Mile Road and Halsted Road intersection. Further east along 8 Mile Road are two churches with the remaining area all residential.

3.1.4 Traffic Volumes

The traffic impact analysis began with an examination of the weekday morning and weekday afternoon peak hours. The peak hour consists of the four highest consecutive 15-minute intervals within the peak time periods. Based on the intersection counts, the overall weekday morning system peak hour was found to occur between the hour of 7:30 AM and 8:30 AM while the afternoon system peak hour was found to occur between the hour of 4:30 PM and 5:30 PM. These hours were selected for analysis of existing and future year conditions. Figures 3-2 and 3-3 illustrate the existing weekday morning and afternoon peak hour traffic volumes.

It should be noted that there was a significant amount of road construction happening in this overall area. The collection of traffic counts could not wait until all the construction is completed. We made sure the traffic counts were collected once the I-275 and 8 Mile Road intersection was completed and open to traffic. However, there was construction on all the major freeways surrounding this site. In addition, I-275 still had daily lane closures in the area that most likely affected north/south traffic volumes at the 8 Mile Road and Newburgh Road/Halstead Road intersection. Therefore, the traffic volumes collected are likely higher than typical for this intersection due to the back-ups on I-275 at this same time.

During the collection of the manual intersection turning movement counts, pedestrian data, bicyclist, passenger car and light truck, and large truck data were recorded. The pedestrian, bicyclist, and truck data are also shown in the existing counts in Appendix B. The truck percentages and any pedestrian/bicycle crossings were used in the traffic capacity analyses. Minimal pedestrians and bicyclists were recorded within the study area during the peak hours. No pedestrian crossings were recorded during the peak hours. One bicyclist was recorded during the afternoon peak hour riding eastbound on 8 Mile Road through the intersection.

Figure 3-2 Existing AM Peak Hour Volumes

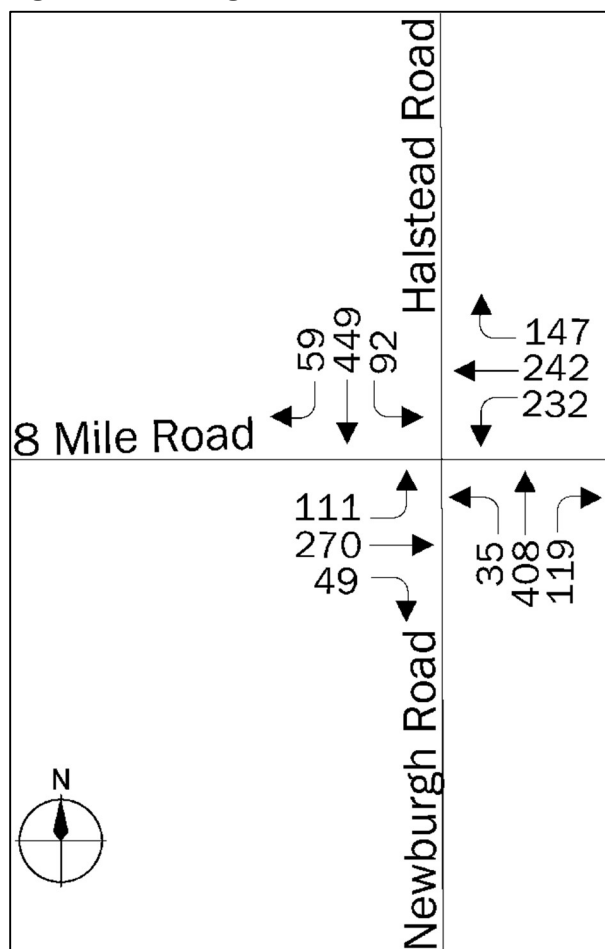
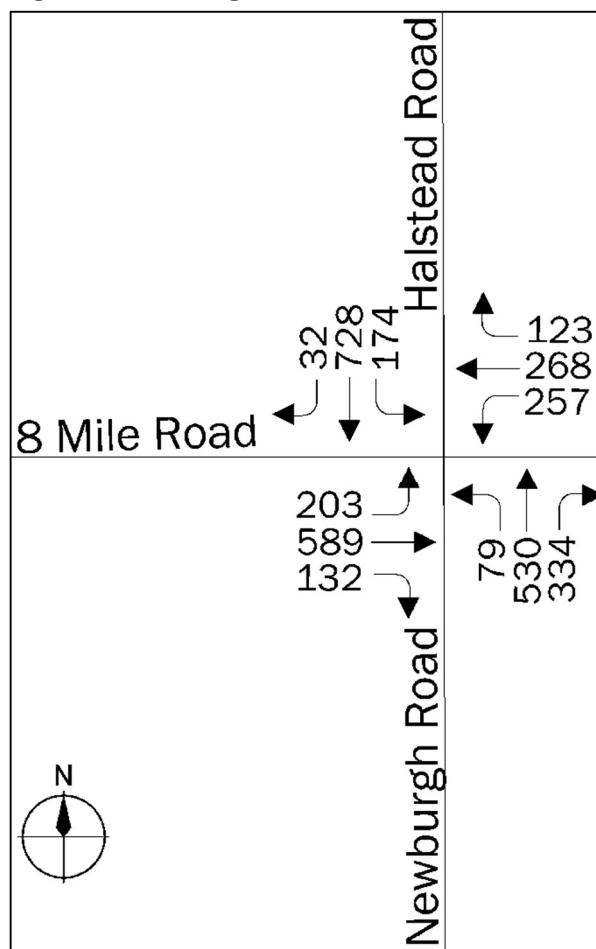


Figure 3-3 Existing PM Peak Hour Volumes



3.1.5 Operational Analysis

The analysis of existing operations was initiated with the preparation of existing condition models using Synchro 11 and the aerial and field obtained geometric data. The existing peak hour traffic volumes were input into the existing conditions model.

Highway capacity analyses were conducted for existing geometric conditions and traffic control. The capacity analysis included an examination of the weekday morning and weekday afternoon peak hours. The results of the capacity analyses for existing year 2024 conditions are summarized in Table 3-1. Table 3-1 provides the level of service, delay values, and volume to capacity (v/c) ratios at each intersection for each movement and approach that currently exist throughout the study area.

Table 3-1 Existing 2024 Synchro Analyses Results

Intersection	Lane Movement/ Approach	AM Peak Hour			PM Peak Hour		
		LOS	Delay (sec)	V/C Ratio	LOS	Delay (sec)	V/C Ratio
8 Mile Road & Newburgh Road/ Halstead Road	EB Left	C	25.4	0.27	C	33.2	0.43
	EB Thru	C	25.7	0.29	C	33.8	0.51
	EB Right	C	20.1	0.10	C	24.1	0.21
	EB Approach	C	25.0	N/A	C	32.3	N/A
	WB Left	C	33.0	0.54	E	55.6	0.73
	WB Thru	C	25.3	0.26	C	29.4	0.23
	WB Right	C	22.5	0.29	C	23.8	0.19
	WB Approach	C	27.5	N/A	D	38.7	N/A
	NB Left	C	29.7	0.11	D	49.7	0.31
	NB Thru	D	43.8	0.82	E	74.7	0.98
	NB Right	C	27.2	0.28	D	47.6	0.73
	NB Approach	D	39.4	N/A	E	63.0	N/A
	SB Left	D	42.3	0.39	F	99.3	0.92
	SB Thru	C	31.4	0.52	D	46.8	0.73
	SB Right	C	31.5	0.53	D	46.5	0.73
	SB Approach	C	33.1	N/A	E	56.5	N/A
	Overall	C	31.5	N/A	D	48.4	N/A

The capacity analyses for existing conditions revealed that all study area intersection approaches and movements operate at an acceptable level of service during the weekday morning peak hour. During the afternoon peak hour, the westbound, northbound, and southbound approaches all have movements operating poorly. The westbound left turn movement operates at a level of service E with a delay of 55.6 seconds. The northbound through movement and overall northbound approach operates at a level of service E with the through movement having a delay of 74.7 seconds. The southbound left turn movement operates at a level of service F with a delay of 99.3 seconds and the overall southbound approach operates at a level of service E.

During our observations at the intersection, the northbound through movement experienced lengthy queues. This was also observed in the SimTraffic model for the afternoon peak hour. As mentioned previously, there was a significant amount of road construction happening in the overall area at the time of the traffic data collection. The traffic counts were collected once the I-275 and 8 Mile Road intersection was completed and open to traffic. However, there was construction on all the major freeways surrounding this site. In addition, I-275 still had daily lane closures in the area that likely affected north/south traffic volumes at the 8 Mile Road and Newburgh Road/Halstead Road intersection. Therefore, the traffic volumes collected are likely higher than typical for this intersection due to the back-ups on I-275 at this same time.

3.1.6 Existing Conditions Mitigation

Mitigation to improve the existing delays for the intersection during the afternoon peak hour were examined. In order to mitigate each of these movements, it was found that changing the cycle length to a 90-second cycle length from the existing 120 seconds and adjusting the splits would provide acceptable levels of service. The morning peak hour currently operates with a 90-second cycle length.

Highway capacity analyses were again conducted for the existing conditions with the traffic signal timing adjustments proposed at the 8 Mile Road and Newburgh Road/Halstead Road intersection. The results of the existing 2024 mitigated conditions analysis for this intersection are presented in Table 3-2. The Synchro capacity worksheets for the existing 2024 mitigated conditions are provided in Appendix C. All intersection movements and approaches are expected to operate at acceptable levels of service with the proposed traffic signal timing adjustments.

Table 3-2 Existing 2024 Mitigated Synchro Analyses Results				
Intersection	Lane Movement/ Approach	PM Peak Hour		
		LOS	Delay (sec)	V/C Ratio
8 Mile Road & Newburgh Road/ Halstead Road	EB Left	C	34.7	0.49
	EB Thru	D	54.4	0.91
	EB Right	C	27.4	0.31
	EB Approach	D	46.2	N/A
	WB Left	D	53.3	0.80
	WB Thru	C	33.9	0.40
	WB Right	C	26.9	0.28
	WB Approach	D	40.3	N/A
	NB Left	C	33.9	0.25
	NB Thru	D	55.0	0.94
	NB Right	D	35.6	0.70
	NB Approach	D	46.3	N/A
	SB Left	D	51.3	0.69
	SB Thru	C	34.9	0.70
	SB Right	C	34.7	0.70
	SB Approach	D	37.9	N/A
	Overall	D	42.9	N/A

3.1.7 SimTraffic Model Calibration and Validation

After completing the Synchro analysis for existing conditions, the SimTraffic models were calibrated and validated to ensure that they reflected actual field operations. This is an essential step in Synchro modeling and was conducted prior to the analysis and simulation of any future conditions.

The SimTraffic results for existing conditions were calibrated and validated for weekday morning and weekday afternoon peak hour conditions. The process involved comparing the actual traffic volumes collected at each intersection with the SimTraffic Volume Exited report. The models were considered validated when the field counts and model results were within the greater of ± 10 percent or ± 20 vehicles.

In order to meet the calibration targets, adjustments can be made to a number of simulation parameters including headway factors, actual link speeds, vehicle and driver options, mandatory lane change distances, and lost time values. When there are differences, changing one or more of these parameters often will bring the model values within the acceptable range of the vehicle counts.

Ten simulations of each peak period were performed and the average of the volumes for each turning movement was reported in a SimTraffic Performance Report. During both peak periods for each turning movement, the differences between the actual field counts and the average values from 10 simulation runs were within the acceptable range. Accordingly, no adjustments to the simulation parameters for these periods were made. The SimTraffic Performance Reports for the peak periods are provided in Appendix D.

3.2 Future No Build 2025 Conditions

An evaluation of traffic impacts associated with the proposed new Sheetz store relies on an understanding of the future traffic conditions in the study area without development of the site. Since traffic volumes in the study area would likely continue to increase with or without the traffic generated by the Sheetz store project, it is necessary to understand the future conditions without the proposed Sheetz store in order to compare the project impacts against a baseline condition. The following sections describe the study area future no build 2025 traffic impacts without the proposed Sheetz store project.

The traffic impact analysis for future no build 2025 conditions began with the projection of turning movement volumes for the weekday morning and weekday afternoon peak hours. This process was accomplished by applying a traffic growth rate to the current traffic volumes to develop the future 2025 traffic volumes and adding any traffic from approved developments in the area.

3.2.1 Background Traffic Growth

Traffic volumes on a roadway change over time depending upon shifts in population density, economic fluctuations, and a host of other factors. These changes occur independently of any proposed development in the area and must be considered in an impact analysis of future conditions. This change is usually known as background traffic growth, which can represent an increase or decrease in existing volumes over time.

The Southeast Michigan Council of Governments (SEMCOG) forecasted traffic volumes from their Travel Demand Forecast Model was utilized to calculate the annual growth rate. Forecasted traffic volumes are provided for every 5 years. An annual growth rate was calculated for the weekday traffic flows, morning peak hour traffic flows, and afternoon peak hour traffic flows for the 8 Mile Road and Newburgh Road segments adjacent to the site. It was found that between 2020 and 2025, 8 Mile Road is expected to have an increase of approximately 0.5% per year while Newburgh Road is expected to have an increase of roughly 0.4% per year. A 0.5% per year growth rate was utilized for the entire intersection to forecast 2025 traffic volumes from the existing 2024 volumes. This 0.5% per year growth rate was applied to the existing traffic volumes at the study area intersection to obtain the future 2025 no build traffic volumes.

3.2.2 Committed Developments

In addition to background traffic growth, it is important to account for traffic associated with specific developments in the vicinity of the study area that have been approved by the local jurisdiction. Committed developments are developments that have received site approval and are under construction, or will be under construction in the near future, and will impact the study area. No committed developments were identified to be included into the background traffic growth volumes.

3.2.3 Future No Build 2025 Traffic Volumes

Future traffic volumes were developed for the future 2025 no build scenario based solely on the background traffic growth. The growth rate was applied to the existing 2024 traffic volumes to project the future 2025 no build volumes during the morning and afternoon peak hours. The future no build 2025 weekday morning and weekday afternoon peak hour traffic volumes, without the proposed Sheetz store project, are shown in Figures 3-4 and 3-5.

Figure 3-4
No Build 2025 AM Peak Hour Traffic Volumes

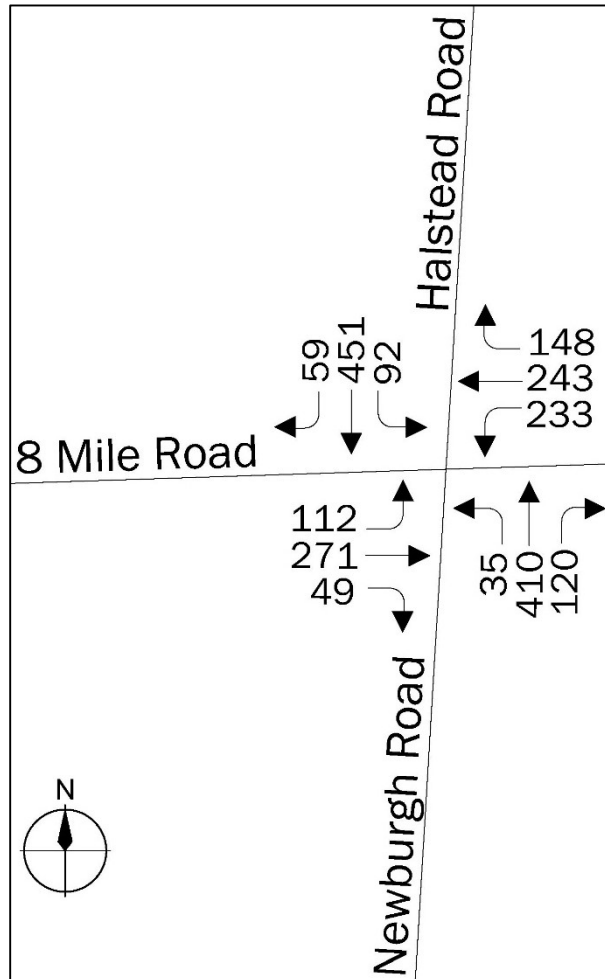
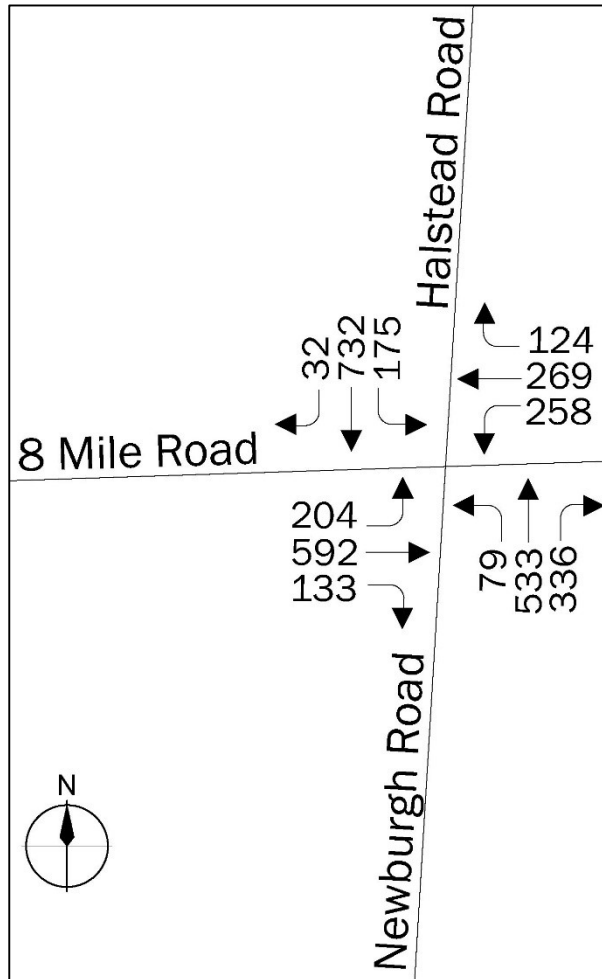


Figure 3-5
No Build 2025 PM Peak Hour Traffic Volumes



3.2.4 Future No Build 2025 Operational Analysis

The study area intersections were evaluated with the future 2025 no build traffic volumes to determine the future intersection operations without the proposed Sheetz store project. Highway capacity analyses were conducted for existing geometric conditions and traffic control, and future 2025 no build traffic volumes (without the proposed Sheetz store) and are summarized in Table 3-3. Any existing mitigation discussed under the existing conditions was not included in the future 2025 no build conditions analysis. This includes the traffic signal timing adjustments.

Table 3-3 Future No Build 2025 Synchro Analyses Results

Intersection	Lane Movement/ Approach	AM Peak Hour			PM Peak Hour		
		LOS	Delay (sec)	V/C Ratio	LOS	Delay (sec)	V/C Ratio
8 Mile Road & Newburgh Road/ Halstead Road	EB Left	C	25.5	0.27	C	33.3	0.43
	EB Thru	C	25.7	0.29	C	33.9	0.52
	EB Right	C	20.1	0.10	C	24.1	0.21
	EB Approach	C	25.0	N/A	C	32.4	N/A
	WB Left	C	33.1	0.55	E	56.0	0.73
	WB Thru	C	25.3	0.26	C	29.4	0.23
	WB Right	C	22.6	0.29	C	23.8	0.19
	WB Approach	C	27.6	N/A	D	38.9	N/A
	NB Left	C	29.7	0.11	D	49.9	0.31
	NB Thru	D	44.1	0.82	E	75.9	0.98
	NB Right	C	27.2	0.29	D	47.8	0.73
	NB Approach	D	39.6	N/A	E	63.8	N/A
	SB Left	D	42.5	0.39	F	101.9	0.93
	SB Thru	C	31.5	0.53	D	47.0	0.73
	SB Right	C	31.5	0.53	D	46.8	0.73
	SB Approach	C	33.2	N/A	E	57.1	N/A
	Overall	C	31.6	N/A	D	48.8	N/A

The capacity analyses for future 2025 no build conditions revealed that all study area intersection approaches and movements operate at the same levels of service as existing conditions during the weekday morning and afternoon peak hours. All study area intersection approaches and movements operate at an acceptable level of service during the weekday morning peak hour with minimal changes in delay. During the afternoon peak hour, the westbound, northbound, and southbound approaches all continue to have movements operating poorly. The westbound left turn movement operates at a level of service E with a delay of 56.0 seconds. The northbound through movement and overall northbound approach operates at a level of service E with the through movement having a delay of 75.9 seconds. The southbound left turn movement operates at a level of service F with a delay of 101.9 seconds and the overall southbound approach operates at a level of service E. During the afternoon peak hour, the SimTraffic model indicates that the northbound through movement will have significant queueing along Newburgh Road.

3.2.5 Future No Build 2025 Mitigation

Mitigation to improve the delays for the intersection during the afternoon peak hour were examined. It was found that changing the cycle length to a 90-second cycle length from the existing 120 seconds and adjusting the splits would not completely mitigate this intersection to acceptable levels of service as it did under existing conditions. The slight increase in traffic volumes between existing conditions and no build conditions are requiring further mitigation for the intersection. In order to

mitigate the intersection to obtain acceptable levels of service for all movements and approaches, the northbound right turn lane should be restriped to a shared through/right turn lane. This would allow the through movements to utilize two lanes to get through the intersection. Halstead Road has two receiving lanes on the north side of the intersection to accommodate this lane use change and was used in the same manor in earlier years. In addition to the restriping of this northbound lane, changing the cycle length to a 90-second cycle length from the existing 120 seconds and adjusting the splits was also needed.

Highway capacity analyses were again conducted for the future no build conditions with the northbound lane repurposing and traffic signal timing adjustments proposed. The northbound lane repurposing would also affect the morning peak hour conditions and was therefore examined with this restriping as well. No signal timing adjustments were made for the morning peak hour, only the afternoon peak hour. The results of the no build 2025 mitigated conditions analysis for this intersection are presented in Table 3-4. The Synchro capacity worksheets for the no build 2025 mitigated conditions are provided in Appendix E. All intersection movements and approaches are expected to operate at acceptable levels of service with the proposed mitigation plan.

Table 3-4 Future No Build 2025 Mitigated Synchro Analyses Results

Intersection	Lane Movement/ Approach	AM Peak Hour			PM Peak Hour		
		LOS	Delay (sec)	V/C Ratio	LOS	Delay (sec)	V/C Ratio
8 Mile Road & Newburgh Road/ Halstead Road	EB Left	C	25.5	0.27	C	33.9	0.48
	EB Thru	C	25.7	0.29	D	48.0	0.87
	EB Right	C	20.1	0.10	C	28.4	0.32
	EB Approach	C	25.0	N/A	D	42.1	N/A
	WB Left	C	33.1	0.55	D	51.3	0.78
	WB Thru	C	25.3	0.26	C	32.8	0.38
	WB Right	C	22.6	0.29	C	27.9	0.29
	WB Approach	C	27.6	N/A	D	39.2	N/A
	NB Left	C	29.7	0.11	D	35.2	0.28
	NB Thru	C	32.5	0.56	D	40.2	0.81
	NB Right	C	32.8	0.57	D	41.2	0.81
	NB Approach	C	32.5	N/A	D	40.2	N/A
	SB Left	C	32.8	0.31	D	53.8	0.71
	SB Thru	C	31.5	0.53	C	33.2	0.68
	SB Right	C	31.5	0.53	C	33.0	0.68
	SB Approach	C	32.0	N/A	D	37.0	N/A
	Overall	C	29.5	N/A	D	39.7	N/A

3.3 Projected 2025 Build Conditions

The new Sheetz store will consist of a 6,139 square foot gas station and convenience store with twelve vehicle fueling stations and a fast-food restaurant with one drive-through lane. The proposed store is anticipated to be fully constructed and open for business in 2025.

The projected traffic impacts for the proposed new Sheetz store were determined based on the analysis of future year 2025 traffic volumes upon full build out in 2025. The examination of the projected build 2025 conditions began with the projection of turning movement volumes for the weekday morning and weekday afternoon peak hours. This process was accomplished by adding the estimated number of weekday morning and afternoon peak hour trips associated with the Sheetz store to future 2025 no build traffic volumes.

3.3.1 Site Access

Three existing driveways serve the site property currently: two full movement accesses to Newburgh Road and one full movement access to 8 Mile Road. This project plans to close the northernmost site driveway to Newburgh Road and utilize the remaining two driveways for access to the site. One full movement access is proposed to 8 Mile Road and another full movement access to Newburgh Road. Both proposed driveways are located at the edge of the property furthest from the 8 Mile Road and Newburgh Road intersection. The proposed site plan is provided in Appendix A.

3.3.2 Trip Generation

The project will consist of a 6,139 square feet Sheetz Gas Station and Convenience Store with twelve vehicle fueling stations, one drive-thru lane, and 55 parking spaces. Trips to be generated by the proposed development were derived based on information and procedures contained in the Institute of Transportation Engineer's (ITE) report *Trip Generation Manual, Eleventh Edition*, September 2021. Two different land use types from the manual were utilized for the proposed site: Land Use Code (LUC) 945 - Convenience Store/Gas Station – GFA (5.5-10k) and LUC 935 – Fast-Food Restaurant with Drive-Through Window and No Indoor Seating. The ITE descriptions of the two land use codes are as follows:

LUC 945 - Convenience Store/Gas Station

A convenience store/gas station is a facility with a co-located convenience store and gas station. The convenience store sells grocery and other everyday items that a person may need or want as a matter of convenience. The gas station sells automotive fuels such as gasoline and diesel.

A convenience store/gas station is typically located along a major thoroughfare to optimize motorist convenience. Extended hours of operation (with many open 24 hours, 7 days a week) are common at these facilities.

The convenience store product mix typically includes pre-packaged grocery items, beverages, dairy products, snack foods, confectionary, tobacco products, over-the-counter drugs, and toiletries. A convenience store may sell alcohol, often limited to beer and wine. Coffee and premade sandwiches are also commonly sold at a convenience store. Made-to-order food orders are sometimes offered. Some stores offer limited seating.

The sites in this land use include both self-pump and attendant-pumped fueling positions and both pre-pay and post-pay operations.

LUC 935 - Fast-Food Restaurant with Drive-Through Window and No Indoor Seating

This land use includes any fast-food restaurant that provides drive-through service only. The restaurant is typically housed in a very small building. It may provide a limited amount of outside seating at which there usually is no table service.

As described above, LUC 945 does include sales of made to order food, but it does not include a drive-through for these sales. LUC 935 includes fast-food restaurants that only have drive-through service. These two land uses were combined to determine the total number of trips for the entire project. Appendix F provides the trip generation worksheets for the project.

A project that contains multiple uses, such as this one, can be expected to have some internal trip sharing. A shared trip is one that visits more than one use on the site and thus lessens the overall impact of a multiple use site on the adjacent street system. The NCHRP 8-51 Internal Trip Capture Estimation Tool was used based on the ITE Trip Generation Manual guidelines to estimate the internal capture trips for this project. The estimation tool automatically calculates overall internal capture and total external vehicle trips in and out and summarizes the results. The internal capture estimation tool worksheets for this project are provided in Appendix F. It was found that an overall 6% internal capture percentage would occur at this site during the morning peak hour and an 11% internal capture percentage would occur during the afternoon peak hour. The inbound and outbound percentages by use are provided in the worksheets in the appendix.

Pass-by trips are associated with retail uses, as well as gas stations and restaurants. Pass-by trips are comprised of vehicles already traveling on the adjacent roads, which divert from their original path of travel to visit one of the uses on the site. The ultimate destination of a pass-by trip is directed elsewhere. Pass-by trips were applied to the convenience store/gas station as well as the fast-food restaurant with drive-through. The pass-by rates were based on ITE's *Trip Generation Manual*, 11th Edition and are provided in Appendix F. Based on the appendix tables of pass-by rates for uses, LUC 945- Convenience Store/Gas Station would have a pass-by rate of 76% during the morning peak hour and 75% during the afternoon peak hour. There were only three study sites for LUC – 935 which were deemed not comparable to the proposed development site, therefore LUC – 934 Fast-

Food Restaurant with Drive-Through Window was utilized to obtain the pass-by rate, which was found to be 50% during the morning peak hour and 55% during the afternoon peak hour.

Tables 3-5 and 3-6 summarize the trip generation for the overall site. The proposed new Sheetz Store is expected to generate a total of 103 new trips during the morning peak hour and 93 new trips during the afternoon peak hour.

3.3.3 Directional Distribution

Trip distribution for the proposed Sheetz store was based on traffic volumes from the SEMCOG Travel Demand Forecast Model. Since it is likely that the existing traffic volumes collected have a higher-than-normal north/south volume along Newburgh Road/Halstead Road due to the I-275 construction, we utilized the SEMCOG model to determine the distribution of traffic. The following distribution pattern for the proposed development was determined:

- To/from the west on 8 Mile Road 32%
- To/from the east on 8 Mile Road 30%
- To/from the south on Newburgh Road 23%
- To/from the north on Halstead Road 15%.

The distribution provided above was used to assign the projected new trips to/from the proposed development onto the adjacent street system.

Pass-by trips were distributed based on the existing direction of travel by movement at the 8 Mile Road and Newburgh Road/Halstead Road intersection.

Table 3-5 AM Peak Hour Trip Generation Summary

Land Use Code	Independent Variable/Size	Total Trips			Internal Trips			Net Trips			Pass-by Trips			New Trips		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
LUC 945 – Convenience Store/Gas Station	GFA (5.5-10k) + 12 Vehicle Fueling Positions	190	189	379	4	10	14	186	179	365	141	136	277	45	43	88
LUC 935 – Fast-Food Restaurant w/Drive-Through Window and No Indoor Seating	1 Drive-Through Lane	20	23	43	10	3	13	10	20	30	5	10	15	5	10	15
Total Trips		210	212	422	14	13	27	196	199	395	146	146	292	50	53	103

Table 3-6 PM Peak Hour Trip Generation Summary

Land Use Code	Independent Variable/Size	Total Trips			Internal Trips			Net Trips			Pass-by Trips			New Trips		
		In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total
LUC 945 – Convenience Store/Gas Station	GFA (5.5-10k) + 12 Vehicle Fueling Positions	161	162	323	11	10	21	150	152	302	112	114	226	38	38	76
LUC 935 – Fast-Food Restaurant w/Drive-Through Window and No Indoor Seating	1 Drive-Through Lane	30	30	60	9	12	21	21	18	39	12	10	22	9	8	17
Total Trips		191	192	383	20	22	42	171	170	341	124	124	248	47	46	93

3.3.4 Projected 2025 Build Traffic Volumes

The estimated number of weekday morning and afternoon peak hour trips was distributed to the surrounding roadway network using the distributions discussed in Section 3.3.3. Figures 3-6 and 3-7 show the corresponding site generated traffic volumes distributed on the study area network for the proposed Sheetz store.

Projected site generated trips were then added to future 2025 no build traffic volumes to yield the projected 2025 build conditions. Future 2025 no build traffic volumes (without the development) were derived from the 0.5% per year growth rate between 2024 and 2025. Figures 3-8 and 3-9 illustrate the weekday morning and weekday afternoon peak hour traffic volumes for the projected 2025 build conditions.

Figure 3-6
AM Peak Hour Site Generated Trips

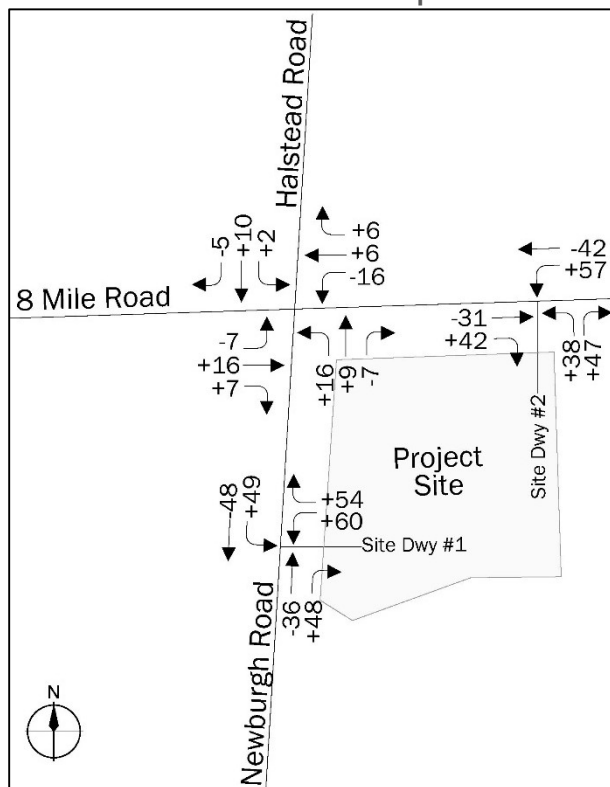


Figure 3-7
PM Peak Hour Site Generated Trips

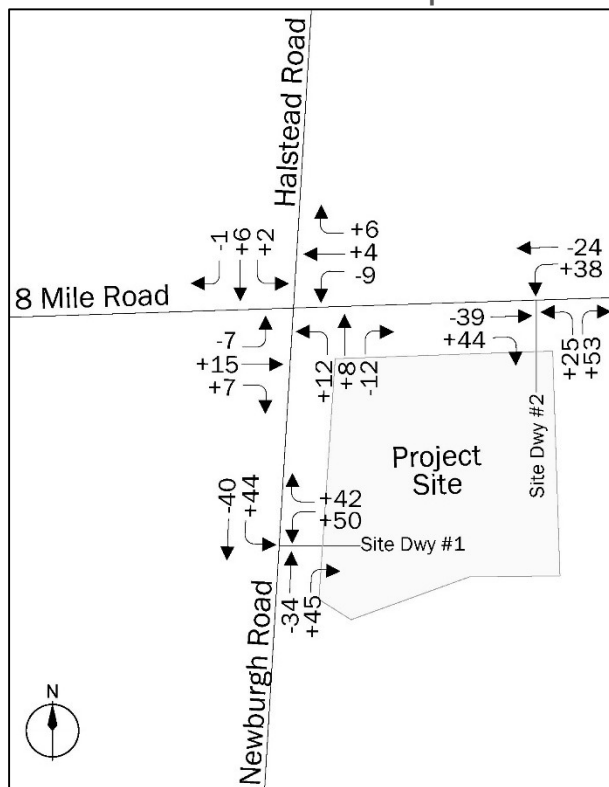


Figure 3-8
2025 Build AM Peak Hour Traffic Volumes

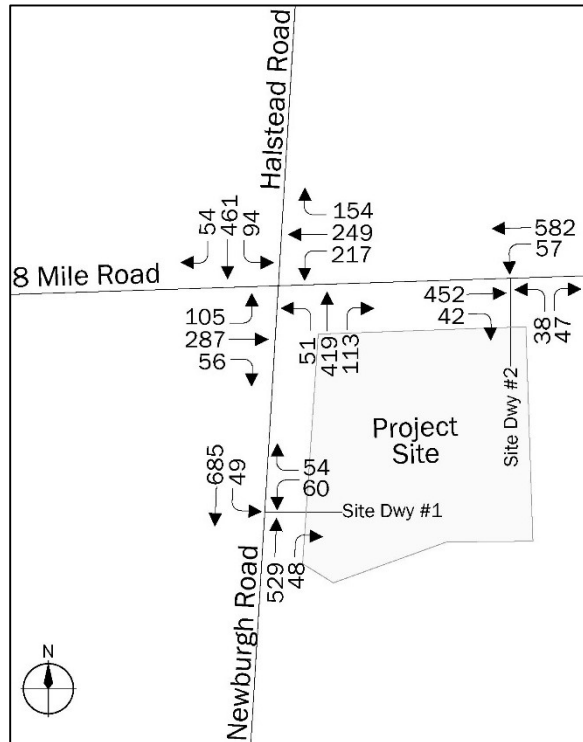
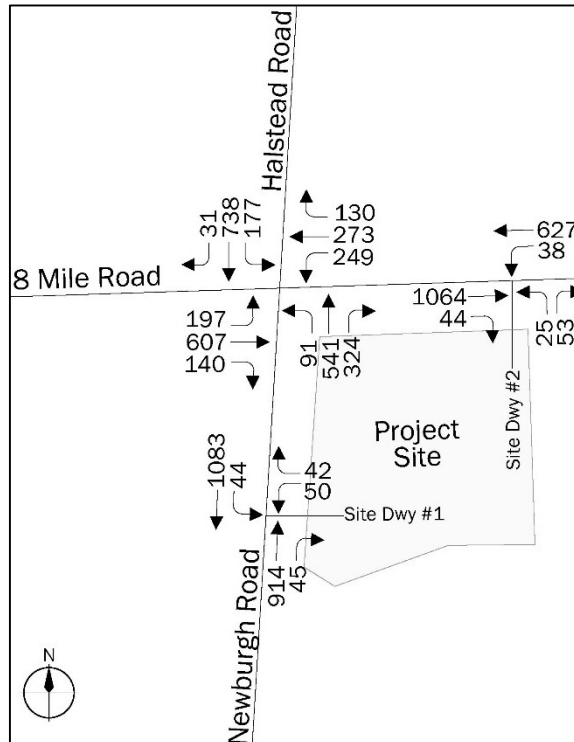


Figure 3-9
2025 Build PM Peak Hour Traffic Volumes

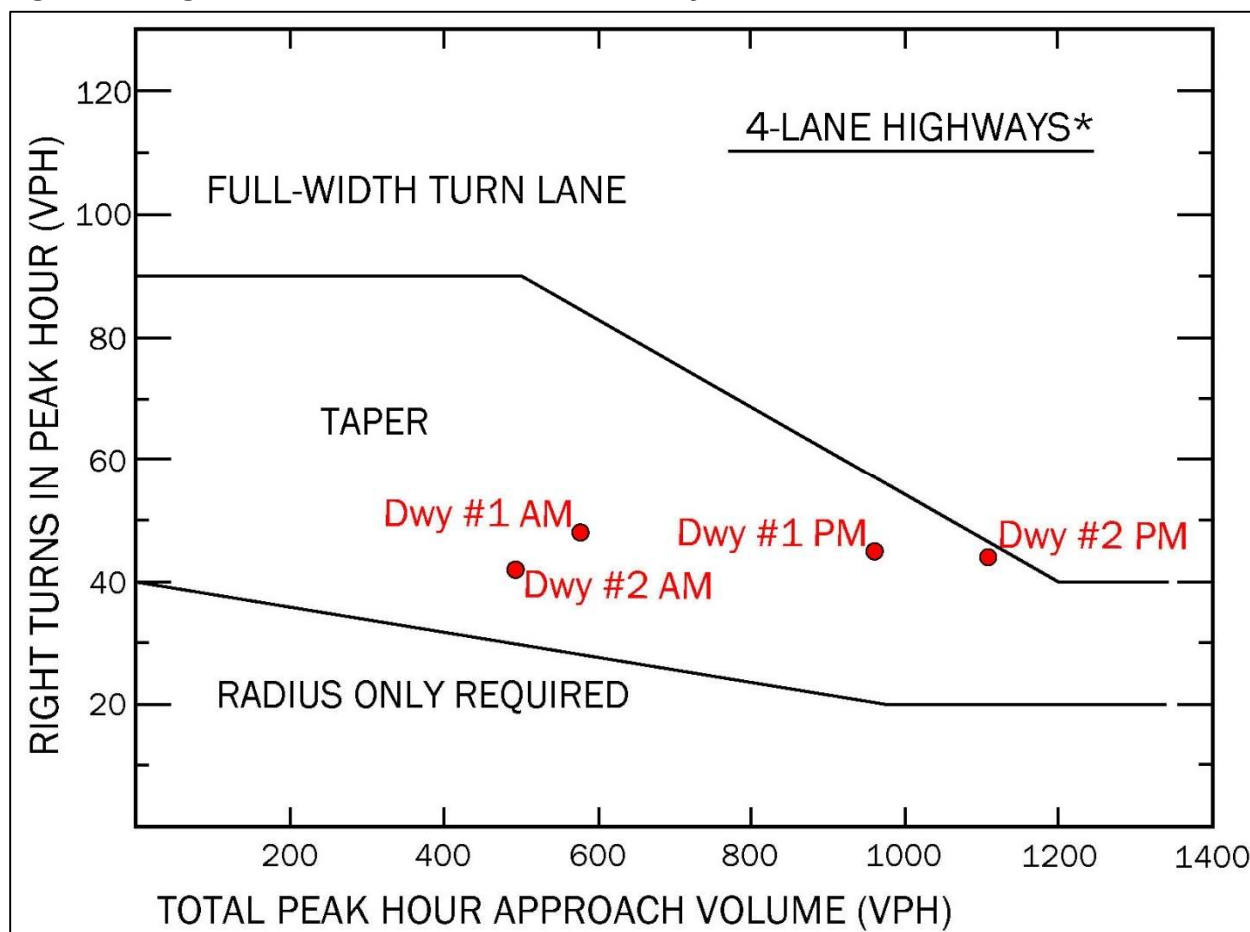


Access Configuration

Access to the site is proposed to be via one full movement access to 8 Mile Road and another full movement access to Newburgh Road. Both proposed driveways are located at the edge of the property furthest from the 8 Mile Road and Newburgh Road intersection.

8 Mile Road and Newburgh Road both have a five-lane cross-section with a center left-turn lane adjacent to the proposed site accesses. Right-turn lane warrants were evaluated based on the Michigan Department of Transportation (MDOT) Geometric Design Guidance manual with the site generated traffic to determine if right turn lanes would be needed along 8 Mile Road or Newburgh Road at the proposed driveways. Based on the volume warrants, a full-width turn lane is not warranted at either driveway to the Sheetz store. Figure 3-10 illustrates the right-turn warrant evaluation for the proposed Sheetz driveways. A deceleration taper is recommended as part of the driveway approach at both site driveways.

Figure 3-10 Right-Turn Lane Evaluation at Site Driveways



3.3.5 Projected 2025 Build Operational Analysis

The study area intersections were evaluated with the projected 2025 build traffic volumes to determine the future intersection operations with the proposed Sheetz store. Highway capacity analyses were conducted for the existing geometric conditions and traffic control, and 2025 projected build traffic volumes, and are summarized in Table 3-7. Unsignalized intersections do not have an overall intersection level of service, delay value, or volume to capacity ratio based on the HCM methodology and are therefore notated with a N/A (Not Applicable) in the table.

None of the mitigation options discussed under existing conditions or future no build conditions were assumed to be in place for the projected 2025 build conditions analyses, therefore the same movements identified under existing and no build conditions at the intersection of 8 Mile Road and Newburgh Road/Halstead Road as operating poorly will continue to operate poorly under the projected 2025 build conditions.

Table 3-7 Projected 2025 Build Synchro Analyses Results

Intersection	Lane Movement/ Approach	AM Peak Hour			PM Peak Hour		
		LOS	Delay (sec)	V/C Ratio	LOS	Delay (sec)	V/C Ratio
8 Mile Road & Newburgh Road/ Halstead Road	EB Left	C	25.4	0.26	C	33.1	0.42
	EB Thru	C	25.9	0.31	C	34.1	0.53
	EB Right	C	20.2	0.11	C	24.3	0.22
	EB Approach	C	25.1	N/A	C	32.5	N/A
	WB Left	C	32.7	0.52	E	55.5	0.72
	WB Thru	C	25.4	0.27	C	29.5	0.23
	WB Right	C	22.7	0.30	C	24.0	0.20
	WB Approach	C	27.3	N/A	D	38.3	N/A
	NB Left	C	30.8	0.17	D	51.5	0.37
	NB Thru	D	45.7	0.84	E	79.4	1.00
	NB Right	C	27.0	0.27	D	46.4	0.70
	NB Approach	D	40.8	N/A	E	65.5	N/A
	SB Left	D	43.2	0.41	F	108.5	0.96
	SB Thru	C	31.5	0.53	D	47.3	0.74
	SB Right	C	31.6	0.53	D	47.0	0.74
	SB Approach	C	33.4	N/A	E	58.6	N/A
	Overall	C	31.9	N/A	D	49.6	N/A
Newburgh Road & Site Dwy #1	SB Left	A	9.1	0.074	B	10.9	0.093
	WB Left	C	20.1	0.265	D	33.1	0.361
	WB Right	B	11.0	0.113	B	13.1	0.119
	WB Approach	C	15.8	N/A	C	24.0	N/A
	Overall	N/A	N/A	N/A	N/A	N/A	N/A
8 Mile Road & Site Dwy #2	WB Left	A	8.9	0.080	B	11.8	0.094
	NB Left	C	17.1	0.154	D	27.6	0.183
	NB Right	B	10.5	0.093	B	14.7	0.170
	NB Approach	B	13.5	N/A	C	18.8	N/A
	Overall	N/A	N/A	N/A	N/A	N/A	N/A

The capacity analyses for the projected 2025 build conditions revealed that all study area intersection approaches and movements operate at the same levels of service as existing and no build conditions during the weekday morning and afternoon peak hours. All study area intersection approaches and movements operate at an acceptable level of service during the weekday morning peak hour with very minimal changes in delay. During the afternoon peak hour, the westbound, northbound, and southbound approaches all continue to have movements operating poorly. These are the same movements that were identified under the existing conditions and future no build conditions as operating poorly and requiring mitigation. The westbound left turn movement operates at a level of service E with a delay of 55.5 seconds. The northbound through movement and overall northbound approach operates at a level of service E with the through movement having a delay of

79.4 seconds. The southbound left turn movement operates at a level of service F with a delay of 108.5 seconds and the overall southbound approach operates at a level of service E. During the afternoon peak hour, the SimTraffic model continues to indicate that the northbound through movement will have significant queueing along Newburgh Road.

The capacity analyses for the proposed Sheetz store driveways to 8 Mile Road and Newburgh Road revealed that all movements at the proposed Sheetz store driveways are expected to operate acceptably at full build out and operation of the store.

3.3.6 Projected 2025 Build Mitigation

Mitigation to improve the delays expected for the intersection during the afternoon peak hour were examined. Per the discussion under the future no build conditions, traffic signal timing adjustments alone would not mitigate this intersection to acceptable levels of service as it did under existing conditions. Improvements were needed under the no build condition to achieve acceptable levels of service for all movements at the intersection. These same improvements were examined to determine if any further mitigation would be needed with the proposed Sheetz store.

Highway capacity analyses were again conducted for the projected build conditions with the northbound lane repurposing and traffic signal timing adjustments that were proposed under the future no build conditions. The northbound lane repurposing would also affect the morning peak hour conditions and therefore was examined with this restriping as well. No signal timing adjustments were made for the morning peak hour, only the afternoon peak hour. The results of the projected build 2025 mitigated conditions analysis for this intersection are presented in Table 3-8. The Synchro capacity worksheets for the projected build 2025 mitigated conditions are provided in Appendix G. All intersection movements and approaches are expected to operate at acceptable levels of service with the proposed mitigation plan. No further mitigation is needed due to the proposed Sheetz store.

Table 3-8 Projected 2025 Build Mitigated Synchro Analyses Results

Intersection	Lane Movement/ Approach	AM Peak Hour			PM Peak Hour		
		LOS	Delay (sec)	V/C Ratio	LOS	Delay (sec)	V/C Ratio
8 Mile Road & Newburgh Road/ Halstead Road	EB Left	C	25.4	0.26	C	33.7	0.46
	EB Thru	C	25.9	0.31	D	50.1	0.89
	EB Right	C	20.2	0.11	C	28.7	0.34
	EB Approach	C	25.1	N/A	D	43.5	N/A
	WB Left	C	32.7	0.52	D	50.1	0.76
	WB Thru	C	25.4	0.27	C	32.9	0.39
	WB Right	C	22.7	0.30	C	28.2	0.31
	WB Approach	C	27.3	N/A	D	38.5	N/A
	NB Left	C	30.8	0.17	D	36.6	0.32
	NB Thru	C	32.5	0.57	D	39.8	0.81
	NB Right	C	32.8	0.57	D	40.7	0.81
	NB Approach	C	32.5	N/A	D	39.9	N/A
	SB Left	C	34.9	0.31	D	53.8	0.72
	SB Thru	C	31.5	0.53	C	33.4	0.68
	SB Right	C	31.6	0.53	C	33.2	0.68
	SB Approach	C	32.1	N/A	D	37.1	N/A
	Overall	C	29.4	N/A	D	39.9	N/A

4.0 CONCLUSIONS

This report assessed the traffic impacts that the proposed Sheetz store is expected to have on the adjacent roadways and study area intersection. The traffic impacts and mitigation described in this report are based on existing and future no build traffic volumes and anticipated project traffic generated at full build out in 2025. A comparison of future no build conditions in 2025 to the projected build conditions in 2025 was used to determine the traffic impacts of the proposed Sheetz store site development.

4.1 Existing 2024 Conditions

The capacity analyses for existing conditions revealed that all study area intersection approaches and movements operate at an acceptable level of service during the weekday morning peak hour. During the afternoon peak hour, the westbound, northbound, and southbound approaches all have movements operating poorly. The westbound left turn movement operates at a level of service E with a delay of 55.6 seconds. The northbound through movement and overall northbound approach operates at a level of service E with the through movement having a delay of 74.7 seconds. The southbound left turn movement operates at a level of service F with a delay of 99.3 seconds and the overall southbound approach operates at a level of service E. During our observations at the

intersection, the northbound through movement experienced lengthy queues. This was also observed in the SimTraffic model for the afternoon peak hour.

Mitigation to improve the existing delays for the intersection during the afternoon peak hour were examined. In order to mitigate each of these movements, it was found that changing the cycle length to a 90-second cycle length from the existing 120 seconds and adjusting the splits would provide acceptable levels of service. The morning peak hour currently operates with a 90-second cycle length.

4.2 Future 2025 No Build Conditions

Traffic volumes for the future no build 2025 conditions were estimated by applying a 0.5% per year traffic growth rate to the existing traffic volumes to develop the future 2025 no build traffic volumes. The capacity analyses for future 2025 no build conditions revealed that all study area intersection approaches and movements operate at the same levels of service as existing conditions during the weekday morning and afternoon peak hours. All study area intersection approaches and movements operate at an acceptable level of service during the weekday morning peak hour with minimal changes in delay. During the afternoon peak hour, the westbound, northbound, and southbound approaches all continue to have movements operating poorly. The westbound left turn movement operates at a level of service E with a delay of 56.0 seconds. The northbound through movement and overall northbound approach operates at a level of service E with the through movement having a delay of 75.9 seconds. The southbound left turn movement operates at a level of service F with a delay of 101.9 seconds and the overall southbound approach operates at a level of service E. During the afternoon peak hour, the SimTraffic model indicates that the northbound through movement will have significant queueing along Newburgh Road.

Mitigation to improve the delays for the intersection during the afternoon peak hour were examined. It was found that changing the cycle length to a 90-second cycle length from the existing 120 seconds and adjusting the splits would not completely mitigate this intersection to acceptable levels of service as it did under existing conditions. The slight increase in traffic volumes between existing conditions and no build conditions will require further mitigation for the intersection. In order to mitigate the intersection to obtain acceptable levels of service for all movements and approaches, the northbound right turn lane should be restriped to a shared through/right turn lane. This would allow the through movements to utilize two lanes to get through the intersection. Halstead Road has two receiving lanes on the north side of the intersection to accommodate this lane use change and was used in the same manor in earlier years. In addition to the restriping of this northbound lane, changing the cycle length to a 90-second cycle length from the existing 120 seconds and adjusting the splits was also needed.

4.3 Projected 2025 Build Conditions

The new Sheetz store is expected to be open for business in 2025. The projected traffic impacts for the proposed new Sheetz store were determined based on the analysis of future year 2025 traffic volumes with a 6,139 square foot gas station and convenience store with twelve vehicle fueling stations and a fast-food restaurant with one drive-through lane. Access for the proposed development is to be via two full movement accesses: one to Newburgh Road and one to 8 Mile Road.

Since none of the mitigation proposed under the future no build conditions were assumed to be in place for the projected 2025 build out conditions analyses, the same movements/approaches identified under existing conditions and future no build conditions as operating poorly will continue to operate poorly under the projected 2025 build conditions.

The capacity analyses for the projected 2025 build conditions revealed that all study area intersection approaches and movements operate at the exact same levels of service as existing and no build conditions during the weekday morning and afternoon peak hours. All study area intersection approaches and movements operate at an acceptable level of service during the weekday morning peak hour with very minimal changes in delay. During the afternoon peak hour, the westbound, northbound, and southbound approaches all continue to have movements operating poorly. The westbound left turn movement operates at a level of service E with a delay of 55.5 seconds. The northbound through movement and overall northbound approach operates at a level of service E with the through movement having a delay of 79.4 seconds. The southbound left turn movement operates at a level of service F with a delay of 108.5 seconds and the overall southbound approach operates at a level of service E. During the afternoon peak hour, the SimTraffic model continues to indicate that the northbound through movement will have significant queueing along Newburgh Road.

The capacity analyses for the proposed Sheetz store driveways to 8 Mile Road and Newburgh Road revealed that all movements at the proposed Sheetz store driveways are expected to operate acceptably at full build out and operation of the store.

Mitigation to improve the delays expected for the 8 Mile Road and Newburgh Road/Halstead Road intersection during the afternoon peak hour were examined. It was found that the same improvements that were needed under the no build condition to achieve acceptable levels of service for all movements at the intersection are expected to provide the mitigation needed with the addition of traffic from the proposed new Sheetz store. No further mitigation is needed due to the site development.

4.4 Improvement Summary

Below is a bulleted list of improvements that are needed by study scenario.

4.4.1 Existing 2024 Conditions

Improvements that are needed in order to mitigate the existing 2024 conditions include the following:

- Signal timing adjustments to the cycle length (120 second cycle length to 90 second cycle length) and splits at the intersection of 8 Mile Road and Newburgh Road/Halstead Road.

4.4.2 Future 2025 No Build Conditions

Improvements that are needed to mitigate the future 2025 no build conditions include:

- Restriping the existing northbound right turn lane along Newburgh Road at 8 Mile Road to a shared through/right turn lane.
- Signal timing adjustments to the cycle length (120 second cycle length to 90 second cycle length) and splits at the intersection of 8 Mile Road and Newburgh Road/Halstead Road.

4.4.3 Projected 2025 Build Conditions

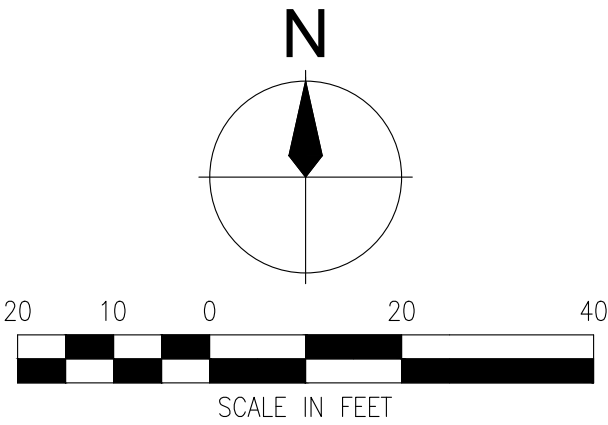
No additional improvements beyond the northbound lane repurposing and signal timing adjustments are needed in order to mitigate projected 2025 full build out due to the addition of Sheetz store traffic.

The proposed site driveways were reviewed to determine if intersection improvements would be needed. A center left-turn lane currently exists along 8 Mile Road and Newburgh Road for left-turns into the proposed store. Right-turn lane warrants were examined at both driveways and were found to warrant a deceleration taper only. Full right turn lanes were not found to be needed based on the approaching traffic volumes and projected right turn volumes at each driveway. All movements at the proposed Sheetz store driveways are expected to operate acceptably at full build out.

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Appendix A. Site Plan



ISSUED	FOR:	DATE:	BY:
OWNER	REV	04.19.24	KPR
PRELIM	SP	07.17.24	JAC

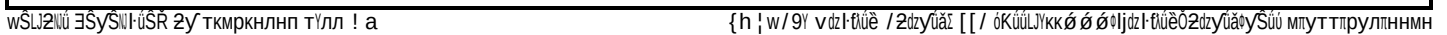
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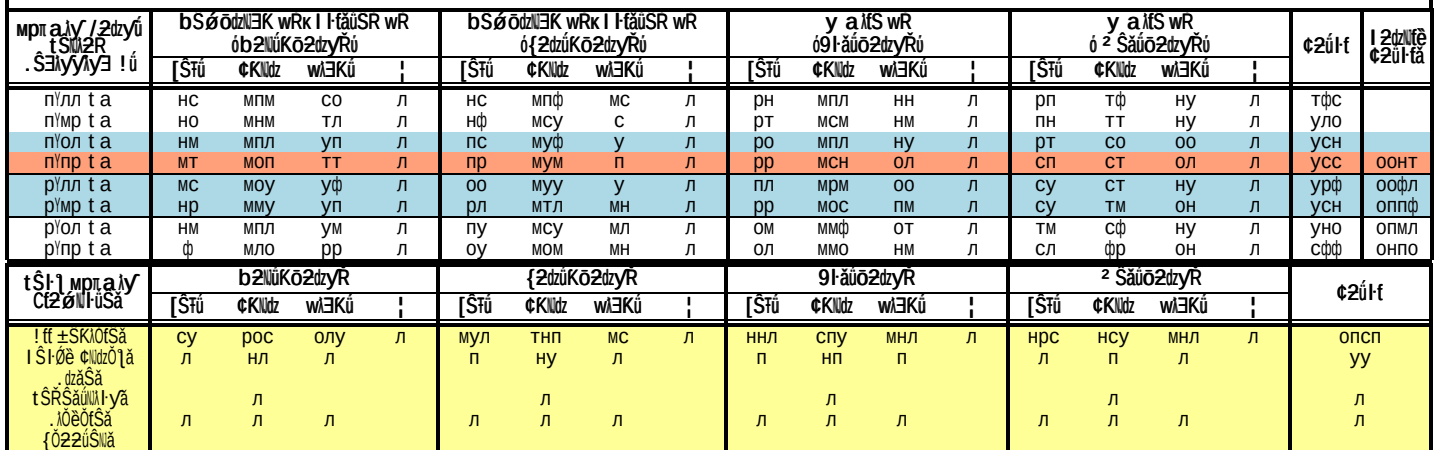


Appendix B. Existing Traffic Data

v/Wh. IY мсрмослм
5!¢9Y ¢KdzΣ a l'è мс нлнп



v / Wh. IY мсрмослн
5!¢9Y ¢KdzΣ a l-è мс нлнп



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Appendix C. Existing 2024 Synchro & SimTraffic Results

HCM 6th Signalized Intersection Summary

3: Newburgh Road/Halstead Road & Eight Mile Road

Existing 2024 Conditions
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	270	49	232	242	147	35	408	119	92	449	59
Future Volume (veh/h)	111	270	49	232	242	147	35	408	119	92	449	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1906	1906	1906	1875	1875	1875	1922	1922	1922	1953	1953	1953
Adj Flow Rate, veh/h	123	300	54	252	263	160	37	434	127	98	478	63
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	8	8	8	5	5	5	3	3	3
Cap, veh/h	463	1038	564	464	1021	554	329	530	449	253	909	119
Arrive On Green	0.09	0.29	0.29	0.09	0.29	0.29	0.06	0.28	0.28	0.06	0.28	0.28
Sat Flow, veh/h	1816	3622	1616	1786	3563	1589	1830	1922	1629	1860	3298	433
Grp Volume(v), veh/h	123	300	54	252	263	160	37	434	127	98	268	273
Grp Sat Flow(s),veh/h/ln	1816	1811	1616	1786	1781	1589	1830	1922	1629	1860	1856	1875
Q Serve(g_s), s	0.0	5.8	0.0	0.0	5.1	1.0	0.0	19.0	5.5	0.0	11.0	11.1
Cycle Q Clear(g_c), s	0.0	5.8	0.0	0.0	5.1	1.0	0.0	19.0	5.5	0.0	11.0	11.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	463	1038	564	464	1021	554	329	530	449	253	511	517
V/C Ratio(X)	0.27	0.29	0.10	0.54	0.26	0.29	0.11	0.82	0.28	0.39	0.52	0.53
Avail Cap(c_a), veh/h	463	1038	564	464	1021	554	329	530	449	253	511	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	25.0	19.7	28.5	24.7	21.2	29.0	30.5	25.6	37.9	27.6	27.6
Incr Delay (d2), s/veh	1.4	0.7	0.3	4.5	0.6	1.3	0.7	13.3	1.6	4.4	3.8	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.4	0.8	5.2	2.1	2.5	0.7	10.1	2.2	2.3	5.2	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	25.7	20.1	33.0	25.3	22.5	29.7	43.8	27.2	42.3	31.4	31.5
LnGrp LOS	C	C	C	C	C	C	C	D	C	D	C	C
Approach Vol, veh/h	477			675			598			639		
Approach Delay, s/veh	25.0			27.5			39.4			33.1		
Approach LOS	C			C			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	31.6	14.0	32.0	12.4	31.6	14.0	32.0				
Change Period (Y+Rc), s	6.8	6.8	* 6.2	* 6.2	6.8	6.8	* 6.2	* 6.2				
Max Green Setting (Gmax), s	5.6	24.8	* 7.8	* 26	5.6	24.8	* 7.8	* 26				
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	31.5											
HCM 6th LOS	C											
Notes												

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	127	124	131	61	230	119	129	86	218	445	111	137
Average Queue (ft)	51	67	66	21	113	58	61	37	32	232	29	58
95th Queue (ft)	101	111	115	51	194	100	110	72	130	395	91	112
Link Distance (ft)		2775	2775			3428	3428			2399	2399	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	500			140	500			170	230			210
Storage Blk Time (%)			0				0		0	13		
Queuing Penalty (veh)			0				0		0	5		

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	SB	SB	B6	B6
Directions Served	T	TR	T	T
Maximum Queue (ft)	189	205	12	21
Average Queue (ft)	106	120	1	1
95th Queue (ft)	165	182	10	22
Link Distance (ft)	309	309	2772	2772
Upstream Blk Time (%)		0		
Queuing Penalty (veh)		0		
Storage Bay Dist (ft)				
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 6: Bend

Movement	NB	NB
Directions Served	T	
Maximum Queue (ft)	29	10
Average Queue (ft)	1	0
95th Queue (ft)	18	10
Link Distance (ft)	309	309
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 5

HCM 6th Signalized Intersection Summary

3: Newburgh Road/Halstead Road & Eight Mile Road

Existing 2024 Conditions
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	589	132	257	268	123	79	530	334	174	728	32
Future Volume (veh/h)	203	589	132	257	268	123	79	530	334	174	728	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1938	1938	1938	1969	1969	1969	1969	1969	1969	1953	1953	1953
Adj Flow Rate, veh/h	216	627	140	271	282	129	83	558	352	183	766	34
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	2	2	2	2	2	2	3	3	3
Cap, veh/h	506	1221	662	372	1241	673	265	571	484	199	1050	47
Arrive On Green	0.09	0.33	0.33	0.09	0.33	0.33	0.07	0.29	0.29	0.07	0.29	0.29
Sat Flow, veh/h	1845	3681	1642	1875	3741	1668	1875	1969	1668	1860	3619	161
Grp Volume(v), veh/h	216	627	140	271	282	129	83	558	352	183	393	407
Grp Sat Flow(s),veh/h/ln	1845	1841	1642	1875	1870	1668	1875	1969	1668	1860	1856	1924
Q Serve(g_s), s	0.0	16.5	0.0	3.2	6.5	0.0	0.0	33.7	22.8	7.4	22.9	22.9
Cycle Q Clear(g_c), s	0.0	16.5	0.0	3.2	6.5	0.0	0.0	33.7	22.8	7.4	22.9	22.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	506	1221	662	372	1241	673	265	571	484	199	538	558
V/C Ratio(X)	0.43	0.51	0.21	0.73	0.23	0.19	0.31	0.98	0.73	0.92	0.73	0.73
Avail Cap(c_a), veh/h	506	1221	662	372	1241	673	265	571	484	199	538	558
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	32.3	23.4	43.8	29.0	23.2	46.6	42.2	38.3	53.8	38.4	38.4
Incr Delay (d2), s/veh	2.6	1.5	0.7	11.8	0.4	0.6	3.1	32.5	9.2	45.5	8.4	8.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	7.3	2.6	8.5	2.9	2.4	2.5	20.8	10.2	7.9	11.5	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.2	33.8	24.1	55.6	29.4	23.8	49.7	74.7	47.6	99.3	46.8	46.5
LnGrp LOS	C	C	C	E	C	C	D	E	D	F	D	D
Approach Vol, veh/h	983		682				993		983			
Approach Delay, s/veh	32.3		38.7				63.0		56.5			
Approach LOS	C		D				E		E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	41.6	17.0	46.0	15.4	41.6	17.0	46.0				
Change Period (Y+Rc), s	6.8	6.8	* 6.2	* 6.2	6.8	6.8	* 6.2	* 6.2				
Max Green Setting (Gmax), s	8.6	34.8	* 11	* 40	8.6	34.8	* 11	* 40				
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			48.4									
HCM 6th LOS			D									
Notes												

Intersection: 3: Newburgh Road/Halstead Raod & Eight Mile Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	228	258	273	218	355	189	193	61	280	1529	1243	234
Average Queue (ft)	102	160	163	58	188	91	81	32	136	922	378	176
95th Queue (ft)	178	231	242	149	367	291	200	57	341	1734	1116	283
Link Distance (ft)		2775	2775			3428	3428			2399	2399	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	500			140	500			170	230			210
Storage Blk Time (%)			13	0	4		0		0	63		16
Queuing Penalty (veh)			17	0	5		0		0	50		58

Intersection: 3: Newburgh Road/Halstead Raod & Eight Mile Road

Movement	SB	SB	B6	B6
Directions Served	T	TR	T	T
Maximum Queue (ft)	371	371	66	58
Average Queue (ft)	245	245	9	4
95th Queue (ft)	368	355	68	37
Link Distance (ft)	309	309	2772	2772
Upstream Blk Time (%)	8	3		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)	10			
Queuing Penalty (veh)	17			

Intersection: 6: Bend

Movement	NB
Directions Served	T
Maximum Queue (ft)	30
Average Queue (ft)	1
95th Queue (ft)	17
Link Distance (ft)	309
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 147

HCM 6th Signalized Intersection Summary

3: Newburgh Road/Halstead Road & Eight Mile Road

Existing 2024 Conditions with Imp
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	589	132	257	268	123	79	530	334	174	728	32
Future Volume (veh/h)	203	589	132	257	268	123	79	530	334	174	728	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1938	1938	1938	1969	1969	1969	1969	1969	1969	1953	1953	1953
Adj Flow Rate, veh/h	216	627	140	271	282	129	83	558	352	183	766	34
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	2	2	2	2	2	2	3	3	3
Cap, veh/h	443	687	456	340	698	463	333	595	504	266	1094	49
Arrive On Green	0.13	0.19	0.19	0.13	0.19	0.19	0.09	0.30	0.30	0.09	0.30	0.30
Sat Flow, veh/h	1845	3681	1642	1875	3741	1668	1875	1969	1668	1860	3619	161
Grp Volume(v), veh/h	216	627	140	271	282	129	83	558	352	183	393	407
Grp Sat Flow(s),veh/h/ln	1845	1841	1642	1875	1870	1668	1875	1969	1668	1860	1856	1924
Q Serve(g_s), s	0.0	15.0	0.0	7.9	6.0	0.0	0.0	24.8	16.8	3.7	16.9	16.9
Cycle Q Clear(g_c), s	0.0	15.0	0.0	7.9	6.0	0.0	0.0	24.8	16.8	3.7	16.9	16.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	443	687	456	340	698	463	333	595	504	266	561	582
V/C Ratio(X)	0.49	0.91	0.31	0.80	0.40	0.28	0.25	0.94	0.70	0.69	0.70	0.70
Avail Cap(c_a), veh/h	443	687	456	340	698	463	333	595	504	266	561	582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.9	35.9	25.7	36.0	32.2	25.4	32.1	30.6	27.8	37.8	27.8	27.8
Incr Delay (d2), s/veh	3.8	18.6	1.7	17.4	1.7	1.5	1.8	24.4	7.8	13.5	7.1	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	8.1	2.4	7.0	2.7	2.2	1.7	14.8	7.3	4.6	8.2	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	54.4	27.4	53.3	33.9	26.9	33.9	55.0	35.6	51.3	34.9	34.7
LnGrp LOS	C	D	C	D	C	C	C	D	D	D	C	C
Approach Vol, veh/h	983				682				993			
Approach Delay, s/veh	46.2				40.3				46.3			
Approach LOS	D				D				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	34.0	18.0	23.0	15.0	34.0	18.0	23.0				
Change Period (Y+Rc), s	6.8	6.8	* 6.2	* 6.2	6.8	6.8	* 6.2	* 6.2				
Max Green Setting (Gmax), s	8.2	27.2	* 12	* 17	8.2	27.2	* 12	* 17				
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	42.9											
HCM 6th LOS	D											
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection: 3: Newburgh Road/Halstead Raod & Eight Mile Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	220	281	304	229	274	131	134	67	280	967	572	225
Average Queue (ft)	105	172	179	75	144	68	76	34	135	548	136	112
95th Queue (ft)	187	260	273	185	239	113	124	59	338	1015	426	199
Link Distance (ft)		2775	2775			3428	3428			2399	2399	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	500			140	500			170	230			210
Storage Blk Time (%)			21	0			0		0	51		1
Queuing Penalty (veh)			28	0			0		0	40		5

Intersection: 3: Newburgh Road/Halstead Raod & Eight Mile Road

Movement	SB	SB	B6	B6
Directions Served	T	TR	T	T
Maximum Queue (ft)	296	290	74	77
Average Queue (ft)	164	176	3	4
95th Queue (ft)	252	257	67	76
Link Distance (ft)	309	309	2772	2772
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)	2			
Queuing Penalty (veh)	4			

Intersection: 6: Bend

Movement	NB
Directions Served	T
Maximum Queue (ft)	11
Average Queue (ft)	0
95th Queue (ft)	8
Link Distance (ft)	309
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 77



Appendix D. SimTraffic Performance Report (Validation Logs)

3: Newburgh Road/Halstead Road & Eight Mile Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicles Exited	106	271	49	233	246	143	31	410	110	92	453	58
Hourly Exit Rate	106	271	49	233	246	143	31	410	110	92	453	58
Input Volume	111	270	49	232	242	147	35	408	119	92	449	59
% of Volume	95	100	101	101	102	97	89	101	93	100	101	98

3: Newburgh Road/Halstead Road & Eight Mile Road Performance by movement

Movement	All
Vehicles Exited	2202
Hourly Exit Rate	2202
Input Volume	2212
% of Volume	100

Total Network Performance

Vehicles Exited	2202
Hourly Exit Rate	2202
Input Volume	5690
% of Volume	39

3: Newburgh Road/Halstead Road & Eight Mile Road Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vehicles Exited	199	587	131	252	261	125	72	508	323	176	736	32
Hourly Exit Rate	199	587	131	252	261	125	72	508	323	176	736	32
Input Volume	203	589	132	257	268	123	79	530	334	174	728	32
% of Volume	98	100	99	98	97	102	91	96	97	101	101	101

3: Newburgh Road/Halstead Road & Eight Mile Road Performance by movement

Movement	All
Vehicles Exited	3402
Hourly Exit Rate	3402
Input Volume	3448
% of Volume	99

Total Network Performance

Vehicles Exited	3403
Hourly Exit Rate	3403
Input Volume	8686
% of Volume	39



Appendix E. Future 2025 No-Build Synchro & SimTraffic Results

HCM 6th Signalized Intersection Summary

3: Newburgh Road/Halstead Road & Eight Mile Road

No Build 2025 Conditions
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	271	49	233	243	148	35	410	120	92	451	59
Future Volume (veh/h)	112	271	49	233	243	148	35	410	120	92	451	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1906	1906	1906	1875	1875	1875	1922	1922	1922	1953	1953	1953
Adj Flow Rate, veh/h	124	301	54	253	264	161	37	436	128	98	480	63
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	8	8	8	5	5	5	3	3	3
Cap, veh/h	463	1038	564	463	1021	554	328	530	449	251	909	119
Arrive On Green	0.09	0.29	0.29	0.09	0.29	0.29	0.06	0.28	0.28	0.06	0.28	0.28
Sat Flow, veh/h	1816	3622	1616	1786	3563	1589	1830	1922	1629	1860	3300	431
Grp Volume(v), veh/h	124	301	54	253	264	161	37	436	128	98	269	274
Grp Sat Flow(s),veh/h/ln	1816	1811	1616	1786	1781	1589	1830	1922	1629	1860	1856	1876
Q Serve(g_s), s	0.0	5.8	0.0	0.0	5.1	1.0	0.0	19.1	5.6	0.0	11.1	11.2
Cycle Q Clear(g_c), s	0.0	5.8	0.0	0.0	5.1	1.0	0.0	19.1	5.6	0.0	11.1	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	463	1038	564	463	1021	554	328	530	449	251	511	517
V/C Ratio(X)	0.27	0.29	0.10	0.55	0.26	0.29	0.11	0.82	0.29	0.39	0.53	0.53
Avail Cap(c_a), veh/h	463	1038	564	463	1021	554	328	530	449	251	511	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	25.0	19.7	28.5	24.7	21.2	29.0	30.5	25.6	38.0	27.6	27.7
Incr Delay (d2), s/veh	1.4	0.7	0.3	4.6	0.6	1.3	0.7	13.5	1.6	4.5	3.8	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.4	0.8	5.2	2.1	2.5	0.7	10.2	2.2	2.3	5.3	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	25.7	20.1	33.1	25.3	22.6	29.7	44.1	27.2	42.5	31.5	31.5
LnGrp LOS	C	C	C	C	C	C	C	D	C	D	C	C
Approach Vol, veh/h		479			678			601			641	
Approach Delay, s/veh		25.0			27.6			39.6			33.2	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	31.6	14.0	32.0	12.4	31.6	14.0	32.0				
Change Period (Y+Rc), s	6.8	6.8	* 6.2	* 6.2	6.8	6.8	* 6.2	* 6.2				
Max Green Setting (Gmax), s	5.6	24.8	* 7.8	* 26	5.6	24.8	* 7.8	* 26				
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			31.6									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	146	129	131	66	228	124	126	85	215	436	126	127
Average Queue (ft)	53	67	64	20	115	59	64	37	30	221	31	55
95th Queue (ft)	110	113	113	53	198	104	112	69	117	380	81	107
Link Distance (ft)		2775	2775			3428	3428			2399	2399	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	500			140	500			170	230			210
Storage Blk Time (%)			0							11		
Queuing Penalty (veh)			0							4		

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	SB	SB	B6	B6
Directions Served	T	TR	T	T
Maximum Queue (ft)	200	219	11	71
Average Queue (ft)	104	120	1	3
95th Queue (ft)	166	187	10	56
Link Distance (ft)	309	309	2772	2772
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)	0			
Queuing Penalty (veh)	0			

Intersection: 6: Bend

Movement	NB
Directions Served	T
Maximum Queue (ft)	35
Average Queue (ft)	1
95th Queue (ft)	19
Link Distance (ft)	309
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Network Summary

Network wide Queuing Penalty: 4

HCM 6th Signalized Intersection Summary

3: Newburgh Road/Halstead Road & Eight Mile Road

No Build 2025 Conditions
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	592	133	258	269	124	79	533	336	175	732	32
Future Volume (veh/h)	204	592	133	258	269	124	79	533	336	175	732	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1938	1938	1938	1969	1969	1969	1969	1969	1969	1953	1953	1953
Adj Flow Rate, veh/h	217	630	141	272	283	131	83	561	354	184	771	34
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	2	2	2	2	2	2	3	3	3
Cap, veh/h	505	1221	662	371	1241	673	264	571	484	198	1050	46
Arrive On Green	0.09	0.33	0.33	0.09	0.33	0.33	0.07	0.29	0.29	0.07	0.29	0.29
Sat Flow, veh/h	1845	3681	1642	1875	3741	1668	1875	1969	1668	1860	3620	160
Grp Volume(v), veh/h	217	630	141	272	283	131	83	561	354	184	395	410
Grp Sat Flow(s),veh/h/ln	1845	1841	1642	1875	1870	1668	1875	1969	1668	1860	1856	1924
Q Serve(g_s), s	0.0	16.6	0.0	3.4	6.6	0.0	0.0	34.0	22.9	7.6	23.0	23.1
Cycle Q Clear(g_c), s	0.0	16.6	0.0	3.4	6.6	0.0	0.0	34.0	22.9	7.6	23.0	23.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	505	1221	662	371	1241	673	264	571	484	198	538	558
V/C Ratio(X)	0.43	0.52	0.21	0.73	0.23	0.19	0.31	0.98	0.73	0.93	0.73	0.73
Avail Cap(c_a), veh/h	505	1221	662	371	1241	673	264	571	484	198	538	558
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	32.3	23.4	43.9	29.0	23.2	46.8	42.3	38.4	53.9	38.4	38.4
Incr Delay (d2), s/veh	2.7	1.6	0.7	12.1	0.4	0.6	3.1	33.6	9.4	48.0	8.6	8.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	7.4	2.7	8.6	2.9	2.4	2.5	21.1	10.3	8.1	11.6	12.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.3	33.9	24.1	56.0	29.4	23.8	49.9	75.9	47.8	101.9	47.0	46.8
LnGrp LOS	C	C	C	E	C	C	D	E	D	F	D	D
Approach Vol, veh/h		988			686			998			989	
Approach Delay, s/veh		32.4			38.9			63.8			57.1	
Approach LOS		C			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	41.6	17.0	46.0	15.4	41.6	17.0	46.0				
Change Period (Y+Rc), s	6.8	6.8	* 6.2	* 6.2	6.8	6.8	* 6.2	* 6.2				
Max Green Setting (Gmax), s	8.6	34.8	* 11	* 40	8.6	34.8	* 11	* 40				
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			48.8									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	202	261	274	228	337	169	150	59	280	1630	1344	234
Average Queue (ft)	98	163	165	55	186	72	76	31	121	1044	545	171
95th Queue (ft)	166	236	245	141	320	161	129	54	326	2030	1607	274
Link Distance (ft)		2775	2775			3428	3428			2399	2399	
Upstream Blk Time (%)										3	2	
Queuing Penalty (veh)										0	0	
Storage Bay Dist (ft)	500			140	500			170	230			210
Storage Blk Time (%)			13	0	1		0			65		15
Queuing Penalty (veh)			18	0	1		0			51		54

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	SB	SB	B6	B6
Directions Served	T	TR	T	T
Maximum Queue (ft)	365	356	48	34
Average Queue (ft)	239	236	5	1
95th Queue (ft)	359	332	43	21
Link Distance (ft)	309	309	2772	2772
Upstream Blk Time (%)	7	2		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)	7			
Queuing Penalty (veh)	13			

Intersection: 6: Bend

Movement	NB	NB
Directions Served	T	
Maximum Queue (ft)	26	5
Average Queue (ft)	1	0
95th Queue (ft)	14	5
Link Distance (ft)	309	309
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 137

HCM 6th Signalized Intersection Summary

3: Newburgh Road/Halstead Road & Eight Mile Road

No Build 2025 Conditions with IMP
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	271	49	233	243	148	35	410	120	92	451	59
Future Volume (veh/h)	112	271	49	233	243	148	35	410	120	92	451	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1906	1906	1906	1875	1875	1875	1922	1922	1922	1953	1953	1953
Adj Flow Rate, veh/h	124	301	54	253	264	161	37	436	128	98	480	63
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	8	8	8	5	5	5	3	3	3
Cap, veh/h	463	1038	564	463	1021	554	328	769	224	319	909	119
Arrive On Green	0.09	0.29	0.29	0.09	0.29	0.29	0.06	0.28	0.28	0.06	0.28	0.28
Sat Flow, veh/h	1816	3622	1616	1786	3563	1589	1830	2790	812	1860	3300	431
Grp Volume(v), veh/h	124	301	54	253	264	161	37	284	280	98	269	274
Grp Sat Flow(s),veh/h/ln	1816	1811	1616	1786	1781	1589	1830	1826	1776	1860	1856	1876
Q Serve(g_s), s	0.0	5.8	0.0	0.0	5.1	1.0	0.0	12.0	12.2	0.0	11.1	11.2
Cycle Q Clear(g_c), s	0.0	5.8	0.0	0.0	5.1	1.0	0.0	12.0	12.2	0.0	11.1	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		0.23
Lane Grp Cap(c), veh/h	463	1038	564	463	1021	554	328	503	489	319	511	517
V/C Ratio(X)	0.27	0.29	0.10	0.55	0.26	0.29	0.11	0.56	0.57	0.31	0.53	0.53
Avail Cap(c_a), veh/h	463	1038	564	463	1021	554	328	503	489	319	511	517
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	25.0	19.7	28.5	24.7	21.2	29.0	28.0	28.0	32.2	27.6	27.7
Incr Delay (d2), s/veh	1.4	0.7	0.3	4.6	0.6	1.3	0.7	4.5	4.8	2.5	3.8	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.4	0.8	5.2	2.1	2.5	0.7	5.5	5.5	2.1	5.3	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.5	25.7	20.1	33.1	25.3	22.6	29.7	32.5	32.8	34.7	31.5	31.5
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h	479			678			601			641		
Approach Delay, s/veh	25.0			27.6			32.5			32.0		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	31.6	14.0	32.0	12.4	31.6	14.0	32.0				
Change Period (Y+Rc), s	6.8	6.8	* 6.2	* 6.2	6.8	6.8	* 6.2	* 6.2				
Max Green Setting (Gmax), s	5.6	24.8	* 7.8	* 26	5.6	24.8	* 7.8	* 26				
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	29.5											
HCM 6th LOS	C											
Notes												

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	TR	L
Maximum Queue (ft)	114	123	133	68	222	112	125	92	76	184	208	139
Average Queue (ft)	49	66	62	20	112	56	60	41	20	105	111	54
95th Queue (ft)	99	110	111	52	190	98	105	73	55	165	184	106
Link Distance (ft)		2775	2775			3428	3428			2399	2399	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	500			140	500			170	230			210
Storage Blk Time (%)			0									
Queuing Penalty (veh)			0									

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	SB	SB	B6
Directions Served	T	TR	T
Maximum Queue (ft)	203	232	3
Average Queue (ft)	105	120	0
95th Queue (ft)	167	187	3
Link Distance (ft)	309	309	2772
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)	0		
Queuing Penalty (veh)	0		

Network Summary

Network wide Queuing Penalty: 0

HCM 6th Signalized Intersection Summary

3: Newburgh Road/Halstead Road & Eight Mile Road

No Build 2025 Conditions with Imp
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	204	592	133	258	269	124	79	533	336	175	732	32
Future Volume (veh/h)	204	592	133	258	269	124	79	533	336	175	732	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1938	1938	1938	1969	1969	1969	1969	1969	1969	1953	1953	1953
Adj Flow Rate, veh/h	217	630	141	272	283	131	83	561	354	184	771	34
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	2	2	2	2	2	2	3	3	3
Cap, veh/h	455	728	438	349	740	445	300	690	435	258	1134	50
Arrive On Green	0.13	0.20	0.20	0.13	0.20	0.20	0.07	0.31	0.31	0.07	0.31	0.31
Sat Flow, veh/h	1845	3681	1642	1875	3741	1668	1875	2201	1388	1860	3620	160
Grp Volume(v), veh/h	217	630	141	272	283	131	83	477	438	184	395	410
Grp Sat Flow(s),veh/h/ln	1845	1841	1642	1875	1870	1668	1875	1870	1719	1860	1856	1924
Q Serve(g_s), s	0.0	14.9	0.0	7.5	5.9	0.0	0.0	21.1	21.2	2.2	16.7	16.7
Cycle Q Clear(g_c), s	0.0	14.9	0.0	7.5	5.9	0.0	0.0	21.1	21.2	2.2	16.7	16.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.81	1.00		0.08
Lane Grp Cap(c), veh/h	455	728	438	349	740	445	300	586	539	258	581	603
V/C Ratio(X)	0.48	0.87	0.32	0.78	0.38	0.29	0.28	0.81	0.81	0.71	0.68	0.68
Avail Cap(c_a), veh/h	455	728	438	349	740	445	300	586	539	258	581	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	34.9	26.5	35.7	31.3	26.3	32.9	28.5	28.5	38.3	27.0	27.0
Incr Delay (d2), s/veh	3.6	13.1	1.9	15.6	1.5	1.7	2.3	11.7	12.7	15.5	6.3	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	7.6	2.5	6.9	2.7	2.3	1.7	10.6	9.9	4.8	8.1	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	48.0	28.4	51.3	32.8	27.9	35.2	40.2	41.2	53.8	33.2	33.0
LnGrp LOS	C	D	C	D	C	C	D	D	D	D	C	C
Approach Vol, veh/h		988			686			998			989	
Approach Delay, s/veh		42.1			39.2			40.2			37.0	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	35.0	18.0	24.0	13.0	35.0	18.0	24.0				
Change Period (Y+Rc), s	6.8	6.8	* 6.2	* 6.2	6.8	6.8	* 6.2	* 6.2				
Max Green Setting (Gmax), s	6.2	28.2	* 12	* 18	6.2	28.2	* 12	* 18				
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			39.7									
HCM 6th LOS			D									
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	TR	L
Maximum Queue (ft)	198	261	275	214	250	116	135	68	280	585	583	227
Average Queue (ft)	100	164	168	61	135	64	72	33	141	355	335	137
95th Queue (ft)	173	237	249	148	227	101	116	58	337	596	593	237
Link Distance (ft)		2775	2775			3428	3428			2399	2399	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	500			140	500			170	230			210
Storage Blk Time (%)			18	0			0		0	45		8
Queuing Penalty (veh)			24	0			0		0	35		29

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	SB	SB	B6	B6
Directions Served	T	TR	T	T
Maximum Queue (ft)	307	297	58	69
Average Queue (ft)	175	180	4	4
95th Queue (ft)	289	273	60	70
Link Distance (ft)	309	309	2772	2772
Upstream Blk Time (%)	3	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)	2			
Queuing Penalty (veh)	3			

Network Summary

Network wide Queuing Penalty: 91



Appendix F. Trip Generation Worksheets

Convenience Store/Gas Station - GFA (5.5-10k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions

On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 29

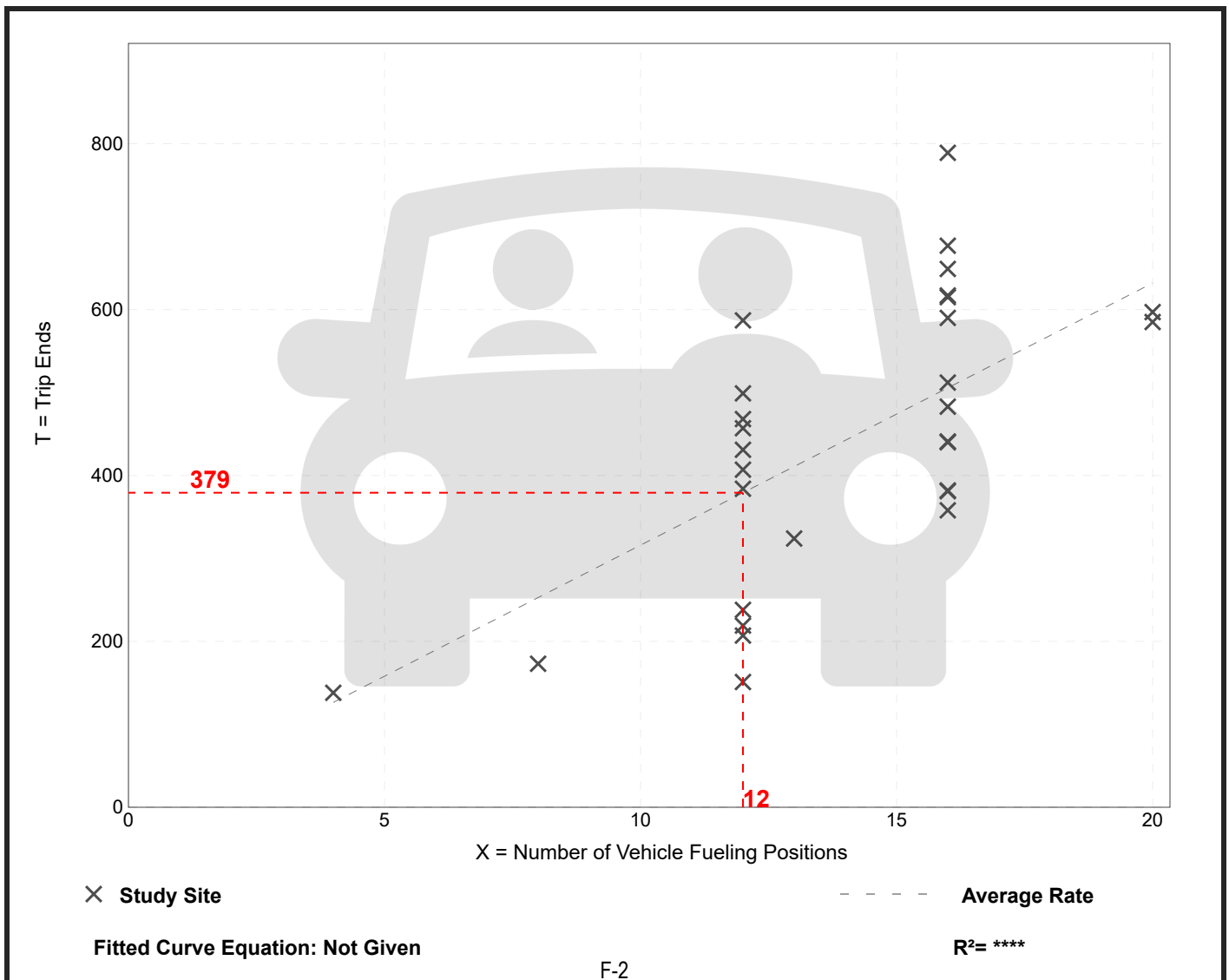
Avg. Num. of Vehicle Fueling Positions: 14

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
31.60	12.58 - 49.31	9.10

Data Plot and Equation



Convenience Store/Gas Station - GFA (5.5-10k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions

On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 29

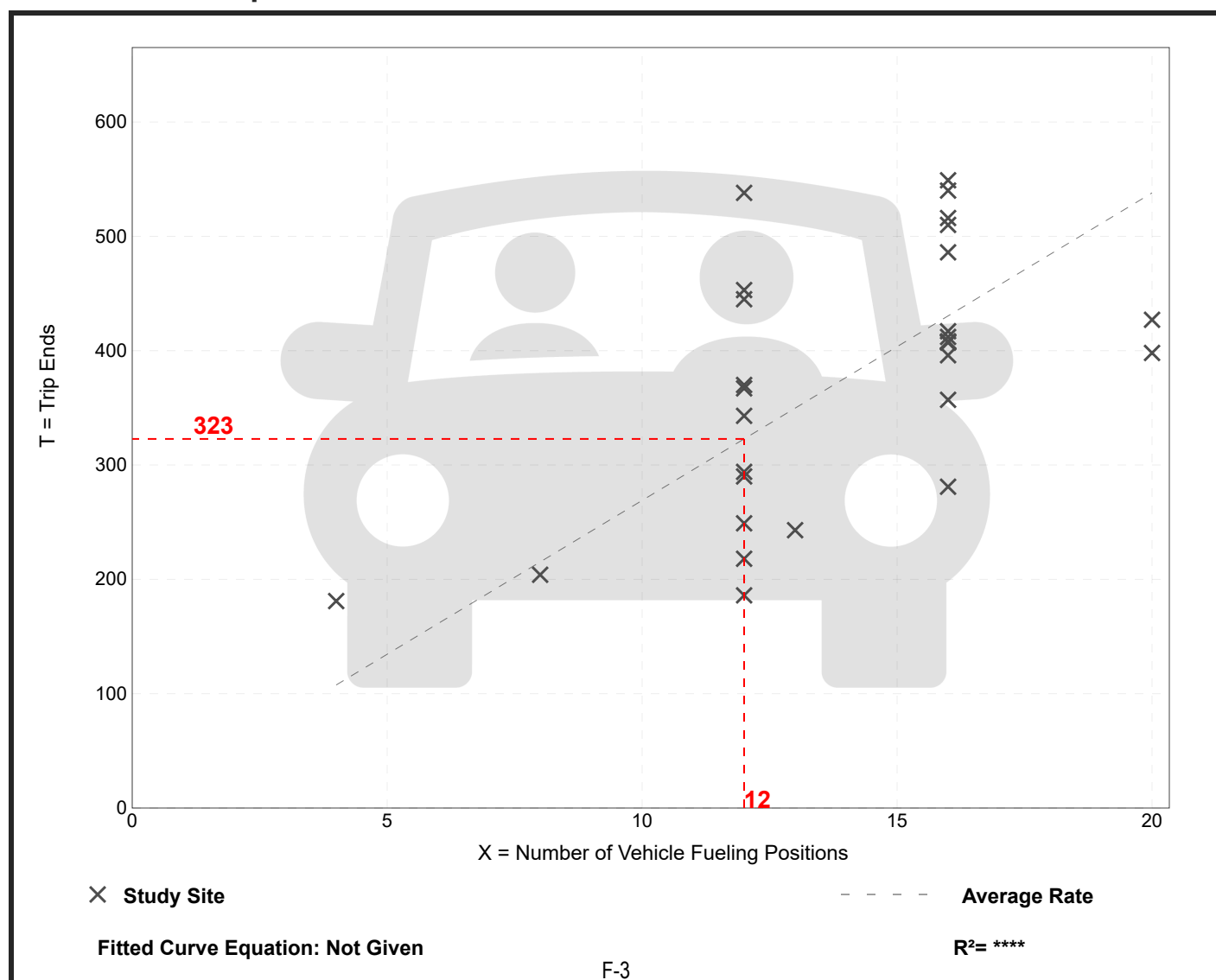
Avg. Num. of Vehicle Fueling Positions: 14

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
26.90	15.50 - 45.25	6.87

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window and No Indoor Seating (935)

Vehicle Trip Ends vs: Drive-Through Lanes

On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. Num. of Drive-Through Lanes: 1

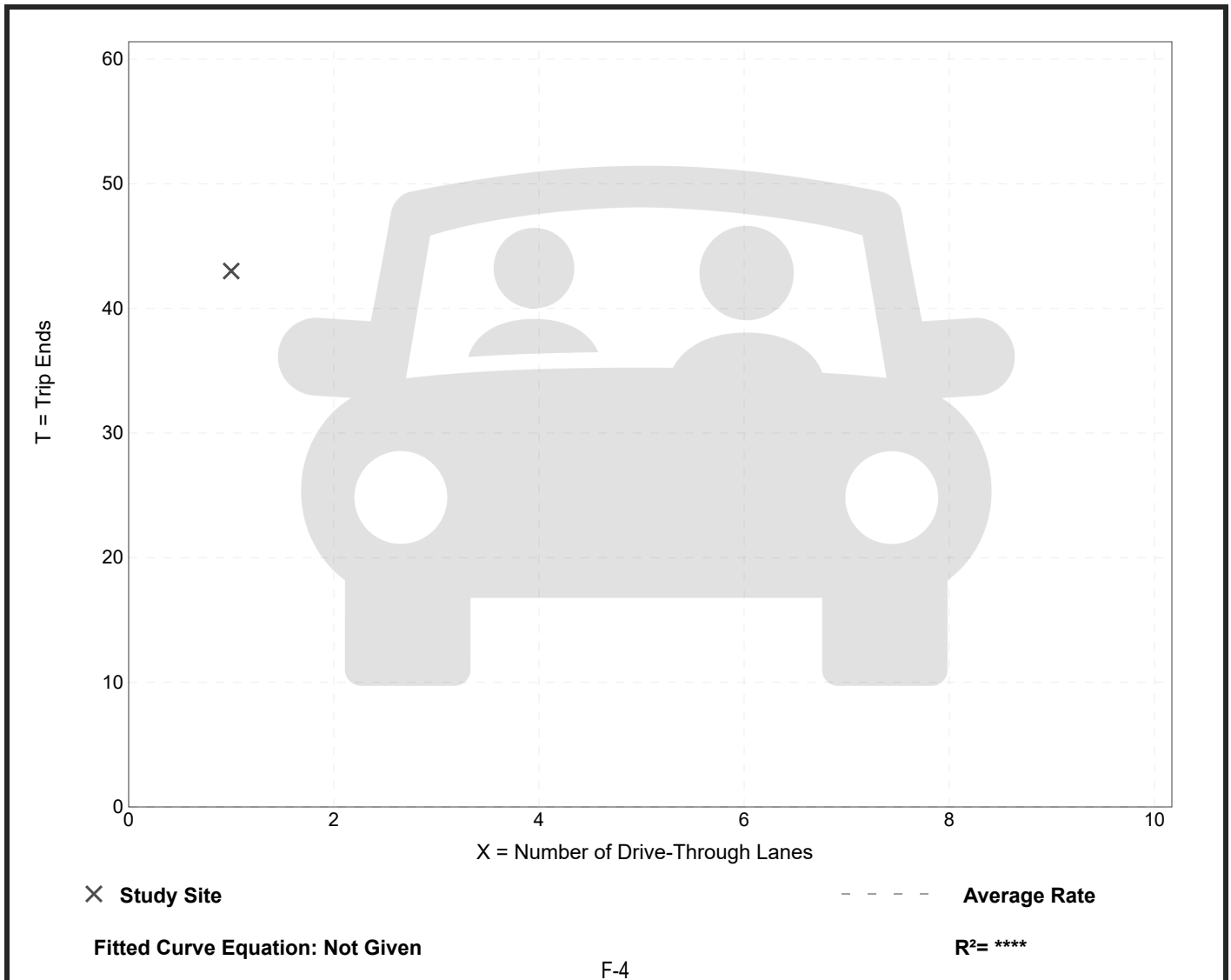
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per Drive-Through Lane

Average Rate	Range of Rates	Standard Deviation
43.00	43.00 - 43.00	*

Data Plot and Equation

Caution – Small Sample Size



Fast-Food Restaurant with Drive-Through Window and No Indoor Seating (935)

Vehicle Trip Ends vs: Drive-Through Lanes

On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 6

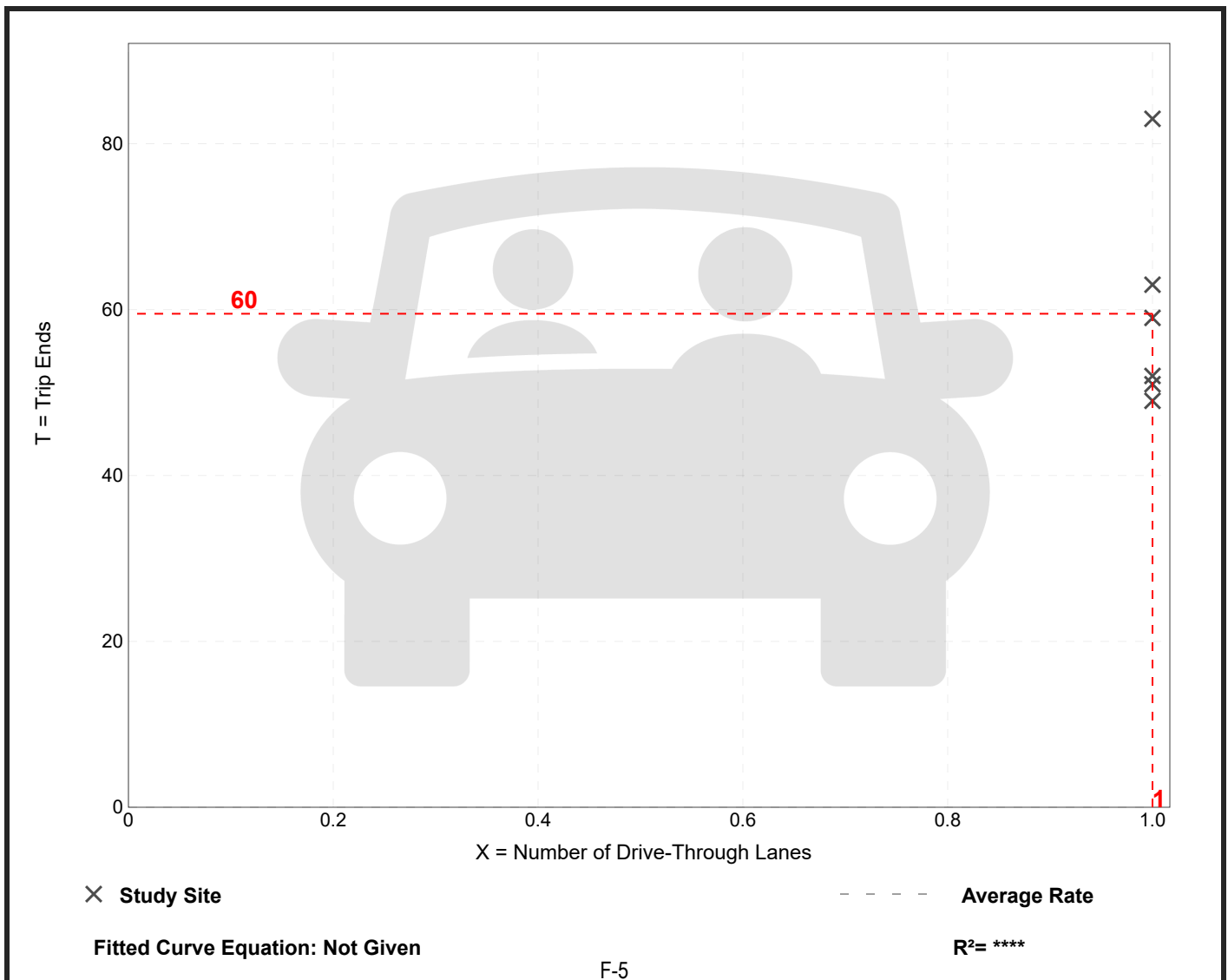
Avg. Num. of Drive-Through Lanes: 1

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Drive-Through Lane

Average Rate	Range of Rates	Standard Deviation
59.50	49.00 - 83.00	12.68

Data Plot and Equation



NCHRP 8-51 Internal Trip Capture Estimation Tool					
Project Name:	Sheetz - Livonia			Organization:	Wade Trim
Project Location:	8 Mle Rd / Newburgh Rd			Performed By:	ALG
Scenario Description:				Date:	
Analysis Year:	2025			Checked By:	
Analysis Period:	AM Street Peak Hour			Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	945			379	190	189
Restaurant	935			43	20	23
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses ²				0		
Total				422	210	212

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		10	0	0	0
Restaurant	0	3		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	422	210	212
Internal Capture Percentage	6%	6%	6%
External Vehicle-Trips ³	396	197	199
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	2%	5%
Restaurant	50%	13%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

NCHRP 8-51 Internal Trip Capture Estimation Tool					
Project Name:	Sheetz - Livonia			Organization:	Wade Trim
Project Location:	8 Mle Rd / Newburgh Rd			Performed By:	ALG
Scenario Description:				Date:	
Analysis Year:	2025			Checked By:	
Analysis Period:	PM Street Peak Hour			Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	945			323	161	162
Restaurant	935			60	30	30
Cinema/Entertainment				0		
Residential				0		
Hotel				0		
All Other Land Uses ²				0		
Total				383	191	192

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		9	0	0	0
Restaurant	0	12		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	0	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	383	191	192
Internal Capture Percentage	11%	11%	11%
External Vehicle-Trips ³	341	170	171
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	7%	6%
Restaurant	30%	40%
Cinema/Entertainment	N/A	N/A
Residential	N/A	N/A
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Vehicle Pass-By Rates by Land Use										
{2dzl0ŠY Lc9 Trip Generation Manual: mm0K 9R0u2y}										
[IyR āŠ /2RŠ	фпр									
[IyR āŠ	/2y0Šy1Šy0Š {ū2uŠkDfā {ūfū2y									
{ŠūūyЭ	DŠyŠu1f u0fYK{dz0dz0fY									
c1YŠ tŠu2R	² ŠŠ1Rfē ! a tŠf1 tŠu2R									
I Šfūf {uŠā	mc {uŠā ōuK ōŠūōŠŠyH fYR y ±Ct					ny {uŠā ōuK ōŠūōŠŠyф fYR Hл ±Ct				
! ōŠu1ЭS t fāā- ē w1ūŠ	c1f: f2u {uŠā ōuK ōŠūōŠŠyH fYR y ±Ct					тс: f2u {uŠā ōuK ōŠūōŠŠyф fYR Hл ±Ct				
t fāā- ē /Kf1u1ōūŠuāūōā f2u fYR1ō1Rdz1f {uŠā										
						b2y-t fāā- ē фuл1fz			! R2 {ūuŠŠū tŠf1	
DC! ōnлlū	±Ct	{ūfūS 2u t1u20y0Š	{dz0u0Šē , Šf1u	I fYūŠu1ōŠōā	t fāā- ē фuл1fz: ō	t1uAY f1uēz: ō	5u0Šu0ŠRz: ō	ф2ūf1fz: ō	I 2dz0 ±2tzyŠ	{2dz0u0Š
H	y	a f1ūēf1yR	мффH	пс	yт	мо	л	мо	ннор	нр
H0M	c	a f1ūēf1yR	мффH	нс	py	но	мф	пн	нлул	нр
H0M	c	a f1ūēf1yR	мффH	нс	py	но	мф	пн	нлул	нр
H0H	y	a f1ūēf1yR	мффH	ом	пт	оп	мф	ро	мтур	нр
H0H	f y	lyR1f1y1	мффо	тф	pc	c	oy	пп	сop	н
H0H	y	a f1ūēf1yR	мффH	op	ty	ф	мо	нн	тлул	нр
H0o	c	a f1ūēf1yR	мффH	от	он	пм	нт	су	нлул	нр
H0o	f y	YŠyūdzō1ē	мффо	py	сп	p	ом	ос	мнрр	н
H0o	c	a f1ūēf1yR	мффH	от	он	пм	нт	су	нлул	нр
H0п	f y	YŠyūdzō1ē	мффо	т	пу	мт	op	рн	мнмл	н
H0с	f y	YŠyūdzō1ē	мффо	т	тн	мр	мо	ну	фпл	н
H0y	f y	YŠyūdzō1ē	мффо	т	рп	мм	op	пс	мнпл	н
o	f y	lyR1f1y1	мффо	сн	тп	мл	мс	нс	тфл	н
o0с	f y	YŠyūdzō1ē	мффо	пф	ст	п	нф	оо	мфур	н
o0т	f y	YŠyūdzō1ē	мффо	пф	сс	мс	му	оп	ффл	н
п0сфп	мн	a f1ūēf1yR	нллл	т	тн	т	т	ну	нппл	ол
п0сфп	мн	a f1ūēf1yR	нллл	т	ty	т	т	нн	мрсм	ол
п0сфп	мн	a f1ūēf1yR	нллл	т	тф	т	т	нм	нтсп	ол
п0упу	мн	±u0ē1y1f	нллл	т	pp	т	т	пр	мофу	ол
р0лс	мн	tŠyγāētō1y1f	нллл	т	yn	т	т	мс	онмф	ол
р0нпн	мн	±u0ē1y1f	нллл	т	тп	т	т	нс	ммсл	ол
р0нпн	мн	±u0ē1y1f	нллл	т	тм	т	т	нф	рпу	ол
р0пуу	мн	5Šf1-ō f1uŠ	нллл	т	ул	т	т	нл	т	ол
р0р	мн	tŠyγāētō1y1f	нллл	т	yp	т	т	мр	нфтр	ол
п0н	f y	YŠyūdzō1ē	мффо	пт	сн	мф	мф	oy	мтлр	н
п0сфп	мс	a f1ūēf1yR	нллл	т	фл	т	т	мл	ннту	ол
п0сфп	мс	5Šf1-ō f1uŠ	нллл	т	тп	т	т	нс	нмур	ол
п0сфп	мс	5Šf1-ō f1uŠ	нллл	т	py	т	т	пн	фсн	ол
п0сфп	мс	5Šf1-ō f1uŠ	нллл	т	yn	т	т	мс	нфрс	ол
п0сфп	мс	bŠō uŠuāSē	нллл	т	тф	т	т	нм	мурф	ол
п0сфп	нл	5Šf1-ō f1uŠ	нллл	т	yn	т	т	мс	оусп	ол
п0упу	мс	±u0ē1y1f	нллл	т	cy	т	т	он	нмлс	ол
п0упу	мс	±u0ē1y1f	нллл	т	yp	т	т	мр	нстс	ол
п0упу	мс	±u0ē1y1f	нллл	т	тp	т	т	нр	онпп	ол
п0упу	мс	±u0ē1y1f	нллл	т	тm	т	т	нф	мссо	ол
п0ффо	мс	tŠyγāētō1y1f	нллл	т	тp	т	т	нр	мффм	ол
р0лфп	мс	bŠō uŠuāSē	нллл	т	yc	т	т	мп	мнсл	ол
р0р	мс	tŠyγāētō1y1f	нллл	т	yh	т	т	му	мртл	ол
р0рпо	мс	tŠyγāētō1y1f	нллл	т	yn	т	т	мс	мфоо	ол
р0рсп	мс	tŠyγāētō1y1f	нллл	т	тт	т	т	но	ннсн	ол
р0рсп	мс	tŠyγāētō1y1f	нллл	т	cy	т	т	он	нурп	ол
р0рсп	мс	bŠō uŠuāSē	нллл	т	py	т	т	пн	мнро	ол
р0рсп	мс	bŠō uŠuāSē	нллл	т	тф	т	т	нм	мфну	ол
р0рсп	мс	bŠō uŠuāSē	нллл	---	yn	---	---	мс	мфро	ол

[illegible]

[illegible]



Appendix G. Projected 2025 Build Synchro & SimTraffic Results

HCM 6th Signalized Intersection Summary

3: Newburgh Road/Halstead Road & Eight Mile Road

Build 2025 Conditions
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	287	56	217	249	154	51	419	113	94	461	54
Future Volume (veh/h)	105	287	56	217	249	154	51	419	113	94	461	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1906	1906	1906	1875	1875	1875	1922	1922	1922	1953	1953	1953
Adj Flow Rate, veh/h	117	319	62	236	271	167	54	446	120	100	490	57
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	8	8	8	5	5	5	3	3	3
Cap, veh/h	458	1038	564	454	1021	554	327	530	449	246	923	107
Arrive On Green	0.09	0.29	0.29	0.09	0.29	0.29	0.06	0.28	0.28	0.06	0.28	0.28
Sat Flow, veh/h	1816	3622	1616	1786	3563	1589	1830	1922	1629	1860	3351	388
Grp Volume(v), veh/h	117	319	62	236	271	167	54	446	120	100	271	276
Grp Sat Flow(s),veh/h/ln	1816	1811	1616	1786	1781	1589	1830	1922	1629	1860	1856	1883
Q Serve(g_s), s	0.0	6.2	0.0	0.0	5.3	1.3	0.0	19.7	5.2	0.0	11.1	11.2
Cycle Q Clear(g_c), s	0.0	6.2	0.0	0.0	5.3	1.3	0.0	19.7	5.2	0.0	11.1	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	458	1038	564	454	1021	554	327	530	449	246	511	519
V/C Ratio(X)	0.26	0.31	0.11	0.52	0.27	0.30	0.17	0.84	0.27	0.41	0.53	0.53
Avail Cap(c_a), veh/h	458	1038	564	454	1021	554	327	530	449	246	511	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	25.1	19.8	28.5	24.8	21.3	29.7	30.8	25.5	38.3	27.6	27.7
Incr Delay (d2), s/veh	1.3	0.8	0.4	4.2	0.6	1.4	1.1	15.0	1.5	4.9	3.9	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.6	0.9	4.8	2.2	2.6	1.0	10.7	2.1	2.4	5.3	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	25.9	20.2	32.7	25.4	22.7	30.8	45.7	27.0	43.2	31.5	31.6
LnGrp LOS	C	C	C	C	C	C	C	D	C	D	C	C
Approach Vol, veh/h		498			674			620			647	
Approach Delay, s/veh		25.1			27.3			40.8			33.4	
Approach LOS		C			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	31.6	14.0	32.0	12.4	31.6	14.0	32.0				
Change Period (Y+Rc), s	6.8	6.8	* 6.2	* 6.2	6.8	6.8	* 6.2	* 6.2				
Max Green Setting (Gmax), s	5.6	24.8	* 7.8	* 26	5.6	24.8	* 7.8	* 26				
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			31.9									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱		↱	↑↑	↱	↱
Traffic Vol, veh/h	452	42	57	582	38	47
Future Vol, veh/h	452	42	57	582	38	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	50	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	70	70	92	70	70
Heavy Vehicles, %	7	2	2	8	2	2
Mvmt Flow	491	60	81	633	54	67
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	551	0	1000	276
Stage 1	-	-	-	-	521	-
Stage 2	-	-	-	-	479	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1015	-	240	721
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	589	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1015	-	221	721
Mov Cap-2 Maneuver	-	-	-	-	352	-
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	542	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1		13.5	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	352	721	-	-	1015	-
HCM Lane V/C Ratio	0.154	0.093	-	-	0.08	-
HCM Control Delay (s)	17.1	10.5	-	-	8.9	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0.3	-	-	0.3	-

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	60	54	529	48	49	685
Future Vol, veh/h	60	54	529	48	49	685
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	94	70	70	93
Heavy Vehicles, %	2	2	5	2	2	5
Mvmt Flow	86	77	563	69	70	737
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1107	316	0	0	632	0
Stage 1	598	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	204	680	-	-	947	-
Stage 1	512	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	189	680	-	-	947	-
Mov Cap-2 Maneuver	323	-	-	-	-	-
Stage 1	512	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	15.8	0	0.8			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 323 680	947	-		
HCM Lane V/C Ratio	-	- 0.265 0.113	0.074	-		
HCM Control Delay (s)	-	- 20.1 11	9.1	-		
HCM Lane LOS	-	- C B	A	-		
HCM 95th %tile Q(veh)	-	- 1 0.4	0.2	-		

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	143	131	143	68	182	172	139	102	180	215	78	130
Average Queue (ft)	56	69	68	23	103	66	66	40	45	183	31	57
95th Queue (ft)	113	113	118	52	166	126	117	76	129	234	60	108
Link Distance (ft)		2778	2778			198	198			197	197	
Upstream Blk Time (%)					0	0	0		0	21		
Queuing Penalty (veh)					0	0	0		0	62		
Storage Bay Dist (ft)	500			140	170			170	130			210
Storage Blk Time (%)			0		1	0	0		0	40		
Queuing Penalty (veh)			0		1	0	0		0	21		

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	192	206
Average Queue (ft)	105	118
95th Queue (ft)	165	180
Link Distance (ft)	308	308
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 6: Bend

Movement	NB
Directions Served	T
Maximum Queue (ft)	73
Average Queue (ft)	3
95th Queue (ft)	37
Link Distance (ft)	308
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Site Dwy #2 & Eight Mile Road

Movement	EB	WB	WB	WB	NB	NB
Directions Served	TR	L	T	T	L	R
Maximum Queue (ft)	6	58	11	46	58	63
Average Queue (ft)	0	16	0	2	26	27
95th Queue (ft)	5	45	8	33	54	54
Link Distance (ft)	198		3161	3161		210
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		250			50	
Storage Blk Time (%)					3	1
Queuing Penalty (veh)					1	0

Intersection: 9: Newburgh Road & Site Dwy #1

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	L
Maximum Queue (ft)	92	202	301	53	61
Average Queue (ft)	38	63	86	2	23
95th Queue (ft)	83	178	246	27	54
Link Distance (ft)		244	2134	2134	
Upstream Blk Time (%)		5			
Queuing Penalty (veh)		0			
Storage Bay Dist (ft)	75				50
Storage Blk Time (%)	2	17			2
Queuing Penalty (veh)	1	10			5

Network Summary

Network wide Queuing Penalty: 103

HCM 6th Signalized Intersection Summary

3: Newburgh Road/Halstead Road & Eight Mile Road

Build 2025 Conditions
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	607	140	249	273	130	91	541	324	177	738	31
Future Volume (veh/h)	197	607	140	249	273	130	91	541	324	177	738	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1938	1938	1938	1969	1969	1969	1969	1969	1969	1953	1953	1953
Adj Flow Rate, veh/h	210	646	149	262	287	137	96	569	341	186	777	33
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	2	2	2	2	2	2	3	3	3
Cap, veh/h	502	1221	662	365	1241	673	263	571	484	194	1052	45
Arrive On Green	0.09	0.33	0.33	0.09	0.33	0.33	0.07	0.29	0.29	0.07	0.29	0.29
Sat Flow, veh/h	1845	3681	1642	1875	3741	1668	1875	1969	1668	1860	3627	154
Grp Volume(v), veh/h	210	646	149	262	287	137	96	569	341	186	397	413
Grp Sat Flow(s),veh/h/ln	1845	1841	1642	1875	1870	1668	1875	1969	1668	1860	1856	1925
Q Serve(g_s), s	0.0	17.1	0.0	3.1	6.7	0.0	0.0	34.6	21.9	8.0	23.2	23.2
Cycle Q Clear(g_c), s	0.0	17.1	0.0	3.1	6.7	0.0	0.0	34.6	21.9	8.0	23.2	23.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	502	1221	662	365	1241	673	263	571	484	194	538	558
V/C Ratio(X)	0.42	0.53	0.22	0.72	0.23	0.20	0.37	1.00	0.70	0.96	0.74	0.74
Avail Cap(c_a), veh/h	502	1221	662	365	1241	673	263	571	484	194	538	558
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	32.5	23.5	44.0	29.0	23.3	47.6	42.5	38.0	54.1	38.5	38.5
Incr Delay (d2), s/veh	2.6	1.6	0.8	11.5	0.4	0.7	3.9	36.8	8.4	54.4	8.8	8.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	7.6	2.8	8.3	3.0	2.6	2.9	21.9	9.7	8.5	11.7	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.1	34.1	24.3	55.5	29.5	24.0	51.5	79.4	46.4	108.5	47.3	47.0
LnGrp LOS	C	C	C	E	C	C	D	E	D	F	D	D
Approach Vol, veh/h		1005			686			1006			996	
Approach Delay, s/veh		32.5			38.3			65.5			58.6	
Approach LOS		C			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	41.6	17.0	46.0	15.4	41.6	17.0	46.0				
Change Period (Y+Rc), s	6.8	6.8	* 6.2	* 6.2	6.8	6.8	* 6.2	* 6.2				
Max Green Setting (Gmax), s	8.6	34.8	* 11	* 40	8.6	34.8	* 11	* 40				
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			49.6									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱		↱	↑↑	↱	↱
Traffic Vol, veh/h	1064	44	38	627	25	53
Future Vol, veh/h	1064	44	38	627	25	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	50	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	70	70	95	70	70
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	1132	63	54	660	36	76
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1195	0	1602	598
Stage 1	-	-	-	-	1164	-
Stage 2	-	-	-	-	438	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	580	-	96	445
Stage 1	-	-	-	-	259	-
Stage 2	-	-	-	-	618	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	580	-	87	445
Mov Cap-2 Maneuver	-	-	-	-	195	-
Stage 1	-	-	-	-	259	-
Stage 2	-	-	-	-	561	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.9		18.8	
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	195	445	-	-	580	-
HCM Lane V/C Ratio	0.183	0.17	-	-	0.094	-
HCM Control Delay (s)	27.6	14.7	-	-	11.8	-
HCM Lane LOS	D	B	-	-	B	-
HCM 95th %tile Q(veh)	0.7	0.6	-	-	0.3	-

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	50	42	914	45	44	1083
Future Vol, veh/h	50	42	914	45	44	1083
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	95	70	70	95
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	71	60	962	64	63	1140
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1690	513	0	0	1026	0
Stage 1	994	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	84	506	-	-	673	-
Stage 1	319	-	-	-	-	-
Stage 2	456	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	76	506	-	-	673	-
Mov Cap-2 Maneuver	198	-	-	-	-	-
Stage 1	319	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	24	0	0.6			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 198 506	673	-		
HCM Lane V/C Ratio	-	- 0.361 0.119	0.093	-		
HCM Control Delay (s)	-	- 33.1 13.1	10.9	-		
HCM Lane LOS	-	- D B	B	-		
HCM 95th %tile Q(veh)	-	- 1.5 0.4	0.3	-		

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	R	L
Maximum Queue (ft)	224	276	290	230	194	282	198	75	180	204	203	234
Average Queue (ft)	119	154	158	52	139	121	100	29	67	200	130	176
95th Queue (ft)	206	220	228	137	205	245	172	58	170	203	219	278
Link Distance (ft)		2778	2778			198	198			197	197	
Upstream Blk Time (%)					5	6	0		0	56	6	
Queuing Penalty (veh)					0	19	0		0	265	28	
Storage Bay Dist (ft)	500			140	170			170	130			210
Storage Blk Time (%)			11		15	1	0			66		22
Queuing Penalty (veh)			16		20	2	0			60		81

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	SB	SB	B6	B6
Directions Served	T	TR	T	T
Maximum Queue (ft)	379	378	98	17
Average Queue (ft)	249	247	6	1
95th Queue (ft)	365	350	45	6
Link Distance (ft)	309	309	2772	2772
Upstream Blk Time (%)	8	2		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)	7			
Queuing Penalty (veh)	12			

Intersection: 7: Site Dwy #2 & Eight Mile Road

Movement	EB	WB	WB	NB	NB
Directions Served	TR	L	T	L	R
Maximum Queue (ft)	22	56	25	72	56
Average Queue (ft)	2	19	2	26	28
95th Queue (ft)	11	43	11	60	56
Link Distance (ft)	198		3161		210
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)		250		50	
Storage Blk Time (%)				12	1
Queuing Penalty (veh)				6	0

Intersection: 9: Newburgh Road & Site Dwy #1

Movement	WB	WB	NB	NB	SB	SB
Directions Served	L	R	T	TR	L	T
Maximum Queue (ft)	100	278	1590	1574	59	80
Average Queue (ft)	23	200	934	768	26	3
95th Queue (ft)	84	342	1605	1648	54	27
Link Distance (ft)		244	2134	2134		197
Upstream Blk Time (%)		75				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)	75				50	
Storage Blk Time (%)	4	80			6	
Queuing Penalty (veh)	2	41			31	

Network Summary

Network wide Queuing Penalty: 584

HCM 6th Signalized Intersection Summary

3: Newburgh Road/Halstead Road & Eight Mile Road

Build 2025 Conditions with Imp
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	287	56	217	249	154	51	419	113	94	461	54
Future Volume (veh/h)	105	287	56	217	249	154	51	419	113	94	461	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1906	1906	1906	1875	1875	1875	1922	1922	1922	1953	1953	1953
Adj Flow Rate, veh/h	117	319	62	236	271	167	54	446	120	100	490	57
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	6	6	6	8	8	8	5	5	5	3	3	3
Cap, veh/h	458	1038	564	454	1021	554	327	785	210	319	923	107
Arrive On Green	0.09	0.29	0.29	0.09	0.29	0.29	0.06	0.28	0.28	0.06	0.28	0.28
Sat Flow, veh/h	1816	3622	1616	1786	3563	1589	1830	2850	761	1860	3351	388
Grp Volume(v), veh/h	117	319	62	236	271	167	54	284	282	100	271	276
Grp Sat Flow(s),veh/h/ln	1816	1811	1616	1786	1781	1589	1830	1826	1785	1860	1856	1883
Q Serve(g_s), s	0.0	6.2	0.0	0.0	5.3	1.3	0.0	12.0	12.2	0.0	11.1	11.2
Cycle Q Clear(g_c), s	0.0	6.2	0.0	0.0	5.3	1.3	0.0	12.0	12.2	0.0	11.1	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.43	1.00		0.21
Lane Grp Cap(c), veh/h	458	1038	564	454	1021	554	327	503	492	319	511	519
V/C Ratio(X)	0.26	0.31	0.11	0.52	0.27	0.30	0.17	0.57	0.57	0.31	0.53	0.53
Avail Cap(c_a), veh/h	458	1038	564	454	1021	554	327	503	492	319	511	519
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	25.1	19.8	28.5	24.8	21.3	29.7	28.0	28.0	32.3	27.6	27.7
Incr Delay (d2), s/veh	1.3	0.8	0.4	4.2	0.6	1.4	1.1	4.5	4.8	2.6	3.9	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.6	0.9	4.8	2.2	2.6	1.0	5.5	5.5	2.1	5.3	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	25.9	20.2	32.7	25.4	22.7	30.8	32.5	32.8	34.9	31.5	31.6
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	C
Approach Vol, veh/h		498			674			620			647	
Approach Delay, s/veh		25.1			27.3			32.5			32.1	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	31.6	14.0	32.0	12.4	31.6	14.0	32.0				
Change Period (Y+Rc), s	6.8	6.8	* 6.2	* 6.2	6.8	6.8	* 6.2	* 6.2				
Max Green Setting (Gmax), s	5.6	24.8	* 7.8	* 26	5.6	24.8	* 7.8	* 26				
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			29.4									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱		↱	↑↑	↱	↱
Traffic Vol, veh/h	452	42	57	582	38	47
Future Vol, veh/h	452	42	57	582	38	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	50	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	70	70	92	70	70
Heavy Vehicles, %	7	2	2	8	2	2
Mvmt Flow	491	60	81	633	54	67
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	551	0	1000	276
Stage 1	-	-	-	-	521	-
Stage 2	-	-	-	-	479	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1015	-	240	721
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	589	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1015	-	221	721
Mov Cap-2 Maneuver	-	-	-	-	352	-
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	542	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1		13.5	
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	352	721	-	-	1015	-
HCM Lane V/C Ratio	0.154	0.093	-	-	0.08	-
HCM Control Delay (s)	17.1	10.5	-	-	8.9	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0.3	-	-	0.3	-

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	60	54	529	48	49	685
Future Vol, veh/h	60	54	529	48	49	685
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	94	70	70	93
Heavy Vehicles, %	2	2	5	2	2	5
Mvmt Flow	86	77	563	69	70	737
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1107	316	0	0	632	0
Stage 1	598	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	204	680	-	-	947	-
Stage 1	512	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	189	680	-	-	947	-
Mov Cap-2 Maneuver	323	-	-	-	-	-
Stage 1	512	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	15.8	0	0.8			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 323 680	947	-		
HCM Lane V/C Ratio	-	- 0.265 0.113	0.074	-		
HCM Control Delay (s)	-	- 20.1 11	9.1	-		
HCM Lane LOS	-	- C B	A	-		
HCM 95th %tile Q(veh)	-	- 1 0.4	0.2	-		

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	TR	L
Maximum Queue (ft)	142	133	139	66	185	175	143	110	125	199	209	128
Average Queue (ft)	52	69	69	22	103	64	65	43	34	112	123	56
95th Queue (ft)	109	114	120	52	168	128	116	82	80	176	198	104
Link Distance (ft)		2778	2778			198	198			197	197	
Upstream Blk Time (%)					0	0			0	0	1	
Queuing Penalty (veh)					0	0			0	1	2	
Storage Bay Dist (ft)	500			140	170			170	130			210
Storage Blk Time (%)			0		1	0	0		0	5		
Queuing Penalty (veh)			0		2	0	0		0	3		

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	199	205
Average Queue (ft)	103	116
95th Queue (ft)	168	183
Link Distance (ft)	308	308
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 7: Site Dwy #2 & Eight Mile Road

Movement	EB	EB	WB	NB	NB
Directions Served	T	TR	L	L	R
Maximum Queue (ft)	5	9	63	53	62
Average Queue (ft)	0	0	16	24	26
95th Queue (ft)	5	6	46	50	54
Link Distance (ft)	198	198			210
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			250	50	
Storage Blk Time (%)				2	0
Queuing Penalty (veh)				1	0

Intersection: 9: Newburgh Road & Site Dwy #1

Movement	WB	WB	NB	NB	SB
Directions Served	L	R	T	TR	L
Maximum Queue (ft)	89	95	25	49	55
Average Queue (ft)	35	32	1	2	20
95th Queue (ft)	71	70	12	20	49
Link Distance (ft)		244	2134	2134	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	75				50
Storage Blk Time (%)	3	0			1
Queuing Penalty (veh)	2	0			3

Network Summary

Network wide Queuing Penalty: 14

HCM 6th Signalized Intersection Summary

3: Newburgh Road/Halstead Road & Eight Mile Road

Build 2025 Conditions with Imp
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	607	140	249	273	130	91	541	324	177	738	31
Future Volume (veh/h)	197	607	140	249	273	130	91	541	324	177	738	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1938	1938	1938	1969	1969	1969	1969	1969	1969	1953	1953	1953
Adj Flow Rate, veh/h	210	646	149	262	287	137	96	569	341	186	777	33
Peak Hour Factor	0.94	0.94	0.94	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	2	2	2	2	2	2	3	3	3
Cap, veh/h	453	728	438	345	740	445	299	705	422	260	1136	48
Arrive On Green	0.13	0.20	0.20	0.13	0.20	0.20	0.07	0.31	0.31	0.07	0.31	0.31
Sat Flow, veh/h	1845	3681	1642	1875	3741	1668	1875	2249	1347	1860	3627	154
Grp Volume(v), veh/h	210	646	149	262	287	137	96	473	437	186	397	413
Grp Sat Flow(s),veh/h/ln	1845	1841	1642	1875	1870	1668	1875	1870	1726	1860	1856	1925
Q Serve(g_s), s	0.0	15.4	0.4	7.2	6.0	0.0	0.0	20.9	20.9	2.2	16.8	16.9
Cycle Q Clear(g_c), s	0.0	15.4	0.4	7.2	6.0	0.0	0.0	20.9	20.9	2.2	16.8	16.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.78	1.00		0.08
Lane Grp Cap(c), veh/h	453	728	438	345	740	445	299	586	541	260	581	603
V/C Ratio(X)	0.46	0.89	0.34	0.76	0.39	0.31	0.32	0.81	0.81	0.72	0.68	0.68
Avail Cap(c_a), veh/h	453	728	438	345	740	445	299	586	541	260	581	603
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	35.1	26.6	35.6	31.4	26.4	33.7	28.4	28.4	38.3	27.0	27.0
Incr Delay (d2), s/veh	3.4	15.0	2.1	14.5	1.5	1.8	2.8	11.4	12.2	15.6	6.4	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	8.0	2.7	6.5	2.7	2.4	2.1	10.4	9.8	4.9	8.1	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	50.1	28.7	50.1	32.9	28.2	36.6	39.8	40.7	53.8	33.4	33.2
LnGrp LOS	C	D	C	D	C	C	D	D	D	D	C	C
Approach Vol, veh/h		1005			686			1006			996	
Approach Delay, s/veh		43.5			38.5			39.9			37.1	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	35.0	18.0	24.0	13.0	35.0	18.0	24.0				
Change Period (Y+Rc), s	6.8	6.8	* 6.2	* 6.2	6.8	6.8	* 6.2	* 6.2				
Max Green Setting (Gmax), s	6.2	28.2	* 12	* 18	6.2	28.2	* 12	* 18				
Max Q Clear Time (g_c+I1), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				39.9								
HCM 6th LOS				D								
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection						
Int Delay, s/veh	1.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱		↱	↑↑	↱	↱
Traffic Vol, veh/h	1064	44	38	627	25	53
Future Vol, veh/h	1064	44	38	627	25	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	50	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	70	70	95	70	70
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	1132	63	54	660	36	76
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1195	0	1602	598
Stage 1	-	-	-	-	1164	-
Stage 2	-	-	-	-	438	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	580	-	96	445
Stage 1	-	-	-	-	259	-
Stage 2	-	-	-	-	618	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	580	-	87	445
Mov Cap-2 Maneuver	-	-	-	-	195	-
Stage 1	-	-	-	-	259	-
Stage 2	-	-	-	-	561	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.9		18.8	
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	195	445	-	-	580	-
HCM Lane V/C Ratio	0.183	0.17	-	-	0.094	-
HCM Control Delay (s)	27.6	14.7	-	-	11.8	-
HCM Lane LOS	D	B	-	-	B	-
HCM 95th %tile Q(veh)	0.7	0.6	-	-	0.3	-

Intersection						
Int Delay, s/veh	1.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	50	42	914	45	44	1083
Future Vol, veh/h	50	42	914	45	44	1083
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	50	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	70	70	95	70	70	95
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	71	60	962	64	63	1140
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1690	513	0	0	1026	0
Stage 1	994	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	84	506	-	-	673	-
Stage 1	319	-	-	-	-	-
Stage 2	456	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	76	506	-	-	673	-
Mov Cap-2 Maneuver	198	-	-	-	-	-
Stage 1	319	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	24	0	0.6			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 198 506	673	-		
HCM Lane V/C Ratio	-	- 0.361 0.119	0.093	-		
HCM Control Delay (s)	-	- 33.1 13.1	10.9	-		
HCM Lane LOS	-	- D B	B	-		
HCM 95th %tile Q(veh)	-	- 1.5 0.4	0.3	-		

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	NB	SB
Directions Served	L	T	T	R	L	T	T	R	L	T	TR	L
Maximum Queue (ft)	213	306	332	230	192	242	175	87	180	242	236	233
Average Queue (ft)	100	178	183	83	128	103	89	36	98	205	190	140
95th Queue (ft)	169	271	282	204	199	211	149	68	213	238	254	235
Link Distance (ft)		2778	2778			198	198			197	197	
Upstream Blk Time (%)					3	3	0	0	0	40	24	
Queuing Penalty (veh)					0	11	0	0	0	191	114	
Storage Bay Dist (ft)	500			140	170			170	130			210
Storage Blk Time (%)			22	0	7	0	0		0	58		4
Queuing Penalty (veh)			31	0	10	1	0		1	53		17

Intersection: 3: Newburgh Road/Halstead Road & Eight Mile Road

Movement	SB	SB	B6	B6
Directions Served	T	TR	T	T
Maximum Queue (ft)	308	303	11	23
Average Queue (ft)	174	180	1	1
95th Queue (ft)	273	270	9	16
Link Distance (ft)	309	309	2772	2772
Upstream Blk Time (%)	0	0		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)	2			
Queuing Penalty (veh)	4			

Intersection: 6: Bend

Movement	NB
Directions Served	T
Maximum Queue (ft)	24
Average Queue (ft)	1
95th Queue (ft)	12
Link Distance (ft)	309
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Site Dwy #2 & Eight Mile Road

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (ft)	8	15	65	26	62	94
Average Queue (ft)	0	1	22	2	22	33
95th Queue (ft)	6	7	54	27	55	74
Link Distance (ft)	198	198		3161		210
Upstream Blk Time (%)						0
Queuing Penalty (veh)						0
Storage Bay Dist (ft)			250		50	
Storage Blk Time (%)					7	2
Queuing Penalty (veh)					5	0

Intersection: 9: Newburgh Road & Site Dwy #1

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	96	227	484	476	64	42	4
Average Queue (ft)	36	83	216	193	26	2	0
95th Queue (ft)	89	220	502	493	59	24	3
Link Distance (ft)		244	2134	2134		197	197
Upstream Blk Time (%)		11					
Queuing Penalty (veh)		0					
Storage Bay Dist (ft)	75				50		
Storage Blk Time (%)	8	27			5		
Queuing Penalty (veh)	4	13			29		

Network Summary

Network wide Queuing Penalty: 484



LETTER TO THE LIVONIA CITY COUNCIL

2.

Planning
November 18, 2024

MEETING DATE

PH120924/R011525

PRESENTED BY

Mark Taormina, Planning and Economic Development Director

AGENDA ITEM

TO CONSIDER ADOPTION OF A RESOLUTION APPROVING A BROWNFIELD PLAN AND TAX INCREMENT FINANCING FOR THE 7 AND VICTOR PROJECT: Robertson Brothers Homes, re: for a planned general development consisting of 100 residential townhomes on the north side of Seven Mile Road, between Victor Parkway and Newburgh Road in the southeast ¼ of Section 6.

BACKGROUND DETAILS

November 18, 2024

Honorable Members of the City Council
City of Livonia, Michigan

Re: Livonia Brownfield Redevelopment Authority – 7 Mile & Victor Parkway

Dear Council Members:

At the 29th Meeting held by the Livonia Brownfield Redevelopment Authority on November 12, 2024, the following resolution was adopted:

PREFERRED COUNCIL RECOMMENDATION/RESOLUTION (Please complete this field. Attachments are not to be used in lieu of the recommendation)

#15-2024 RESOLVED, That the Act 381 Brownfield Plan for the “7 and Victor Project” dated August 1, 2024, together with the proposed Development and Reimbursement Agreement between the City of Livonia Brownfield Redevelopment Authority (LBRA) and Robertson Brothers Company, seeking the use of Tax Increment Revenues for the development of the property at 37640 W. Seven Mile Road, as presented to the LBRA at its meeting of November 12, 2024, are hereby approved, subject to a maximum duration of 10 years of tax capture commencing in the year 2027 for reimbursement to the developer for eligible activities costs not to exceed \$1,985,199, and further subject to final approval by the Livonia City Council.

ATTACHMENTS

1. 2024-11-12_Robertson_E-COUNCIL Pkt

APPROVED BY



Mark Taormina, Planning and Economic Development Director

Date: November 18, 2024



Maureen Miller Brosnan, Mayor

Date: November 21, 2024

ITEM #9: CONSIDERATION OF A REQUEST BY ROBERTSON BROTHERS HOMES FOR APPROVAL OF A BROWNFIELD PLAN AND TAX INCREMENT FINANCING FOR THE “7 AND VICTOR PROJECT,” CONSISTING OF 100 RESIDENTIAL TOWNHOMES ON THE NORTH SIDE OF SEVEN MILE ROAD BETWEEN VICTOR PARKWAY AND NEWBURGH ROAD IN THE SOUTHEAST ¼ OF SECTION 6.

Introduction and History

This brownfield tax increment financing request involves developing a vacant parcel at the northeast corner of Seven Mile Road and Victor Parkway. The proposed project consists of 100 townhomes on 6.38 acres. Multifamily housing on the site is allowed under a consent judgment approved by the City Council on December 13, 2023.

The subject property has a long legal history, commencing in 1997 with the approval of a consent judgment between the City of Livonia and Oakwood Health Systems. The consent judgment divides the original 14-acre site into three (3) distinct parts. **Parcel A** is the site under consideration. It lies south of a drainage course that flows diagonally in a southeasterly direction across the middle of the original site. **Parcel B**, measuring about two (2) acres, is located north of the drainage creek at the west end of the original site. The consent judgment requires that Parcel B remain an open space and is the subject of an Open Space Preservation Agreement. **Parcel C** is mainly on the north side of the creek at the east end of the property. Originally, Parcel C was intended to be developed as multifamily housing; however, in 2006, the City Council amended the consent judgment (2nd Amendment to the Consent Judgment), allowing Talon-Livonia TLE, LLC to develop a child daycare facility. The consent judgment also provides a landscape buffer along the northern 100 feet of Parcel B and the westerly 280 feet of Parcel C.

All three (3) parcels were zoned R-U-F, Rural Urban Farm, and jointly owned in 1997 when the original consent judgment was approved. Oakwood Health Systems sued the city after being denied a request to rezone the property to PO, Professional Office, to develop a medical office and ambulatory care facility. The consent judgment allowed Oakwood to build a three-story, 50,000-square-foot medical office with parking for 320 cars on Parcel A. It also set forth the future use and development of Parcels B and C.

Oakwood never built the medical facility and sold Parcel A to S&N Development Company. In 2003, S&N amended the consent judgment (1st Amendment to the Consent Judgment) and received approval to construct a three-story, 100,000-square-foot general office building. S&N never developed the property and, in 2014, sold it to Etkin Equities (d/b/a Victor East, LLC). Etkin amended the consent judgment for a third time (3rd Amendment to the Consent Judgment) and obtained site plan approval to construct a one-story, 54,000-square-foot office research building. After years of unsuccessfully marketing the property for office use, Etkin partnered with DTN to propose developing Parcel A and portions of Parcels B and C for medium-high-density residential. In 2019, the City Council denied Etkin and DTN's request to rezone the property to R-8, High Rise Multiple Family Residential. More recently, in partnership with Etkin, Robertson Brothers Homes proposed lowering the density and building townhomes using only Parcel A. The 2023 amendment to the consent judgment (4th Amendment to the Consent Judgment) allows Parcel A to be developed as multifamily townhomes consistent with a conceptual site plan made part of the agreement.

LBRA MEETING – Tuesday, November 12, 2024
ITEM #8 7 and Victor Project – Robertson Brothers Homes

Brownfield Plan

The submitted Brownfield Plan describes the project, the brownfield conditions present on the site, and all other required plan elements under the Brownfield Redevelopment Financing Act. According to the Plan, the site is an eligible property as defined by Act 381, Section 2 because (a) the property was previously used for residential purposes and (b) the property is considered a “facility,” as that term is defined in Part 201 of Michigan’s Natural Resources and Environmental Protection Act (PA 451 of 1994).

Historical records show that the site was previously farmed and contained up to three (3) houses. In the mid-1970s, evidence of surface disturbance across a large portion of the site was believed to be from spoils deposition related to constructing the I-275 expressway. The construction spoils were probably used to fill the site’s low-lying areas, including areas of naturally occurring peat.

By the late 1990s, all the structures on the property had been removed, including a 1,000-gallon underground storage tank (UST), which was the subject of two (2) release incidents that were subsequently granted regulatory closure. The closure activities included soil remediation, followed by collecting samples that were analyzed for benzene, toluene, ethylbenzene, xylene (BTEX), and total lead. As part of a 2013 Phase II Environmental Site Assessment (ESA), additional soil and groundwater samples were collected and analyzed for volatile organic compounds (VOCs) and total petroleum hydrocarbons. The results showed that none of the targeted parameters were detected at concentrations exceeding laboratory detection limits.

In 2024, as part of the due diligence for the townhome project, ASTI conducted subsurface testing to determine the location and extent of fill and underlying peat. Testing of the soil and groundwater samples at two (2) locations revealed the presence of arsenic and selenium at levels exceeding the Michigan Department of Environment, Great Lakes, and Energy’s (EGLE) generic residential clean-up criteria for direct contact with fill soils. **The presence of these contaminants provides the basis for eligibility under the Brownfield statute.** Both metals were detected at various depths from soil borings taken in the north-central and northeast parts of the site.

The Brownfield Plan includes a single tax parcel (024-99-0016-007) located at 37640 W. Seven Mile Road (Parcel A in the Consent Judgment). The project involves building 100 rental townhouse-style residential units, associated parking, and landscaping. The concept site plan shows fifteen (15) buildings, each containing between four (4) and eight (8) apartment units. The townhome units will range in size from 1,300 to 1,600 square feet. A single access drive from Victor Parkway would serve the development. The plan also shows two (2) green space courtyards. Stormwater detention will be provided adjacent to Seven Mile Road in the site’s southeast corner. The plan encompasses areas of the site where the fill, naturally occurring peat, and the contaminated soils are located. Tax increment financing over an estimated ten-year period is proposed to reimburse the developer for addressing the construction constraints resulting from these items.

LBRA MEETING – Tuesday, November 12, 2024
ITEM #8 7 and Victor Project – Robertson Brothers Homes

Table 1 of the Brownfield Plan provides the estimated costs of all eligible activities. It shows three (3) main categories of costs: 1) EGLE Eligible Activities, 2) Local Only Activities, and 3) Other Costs. The first category totals **\$75,200** and consists primarily of soft costs related to brownfield-related pre-approved eligible activities, including the Phase I and Phase II Environmental Studies, the Baseline Environmental Assessment, the Due Care Investigation, and the preparation of the Brownfield Plan. The Local Only is categorized as Environmental Response Activities and Non-Environmental Activities. The environmental response activities include removing, transporting, disposing, and backfilling the contaminated fill materials and soil characterization and verification sampling. The Non-Environmental Activities (also referred to as MSF Eligible Activities) are the various site preparation and construction costs, mainly due to the poor soil conditions, and represent the highest costs. They include installing the deep footings and geo-pier foundations, upgrading the road detail, exporting the unusable peat and fill material, importing clean fill, and mass grading/land balancing activities. The subtotal of the Environmental and Non-Environmental Eligible Activities Costs is \$1,655,651. Most of this, approximately \$1,460,300, are construction costs, with the two (2) largest being the geo-piers (\$450,000) and exporting the peat and unusable fill material (\$412,000). Adding the EGLE Eligible Activities Costs, a contingency of 15%, and \$6,000 for Brownfield/Work Plan implementation, the total of the Eligible Activities, which is the amount that would be reimbursed to the developer, is **\$1,985,199**. The final category, Other Costs, includes the Brownfield Authority's administrative costs and contributions to the Local Site Remediation Revolving Fund (LSRRF) State Brownfield Revolving Fund. The total estimated capture would be **\$3,536,976**.

Tax Increment Revenue (TIR) captured on the value of the real property above the established base value will be used to reimburse the Developer for the proposed \$1,985,199 in eligible costs. The Base Taxable Value is established according to the current pre-construction taxable value of the properties and totals **\$536,413**. As the site is developed and the taxable value of the property increases, the taxes paid on the incremental value above the base value are captured by the LBRA and mainly used to pay the project costs. By statute, a portion of the TIR collected (equal to 50% of the State Education Tax) goes to the State of Michigan Brownfield Revolving Fund. Additionally, the City typically negotiates a percentage allocation for administrative costs and deposits to the Local Site Remediation Revolving Fund (LSRRF).

Table 2 provides yearly estimates of the property's taxable value and the captured tax amounts for each taxing authority. The project would be completed by 2027, the first year of capture, with an estimated taxable value of approximately \$7.5 million. Another assumption built into the revenue projections is a 1% annual growth in the project's taxable value. Non-capturable millages include the Zoo Authority, Art Institute, and School Debt.

Table 3 itemizes the annual Brownfield Plan Reimbursements and estimates the total state and local incremental revenues collected yearly and how much goes to the Developer, the LBRA for administrative fees, the State Brownfield Redevelopment Fund, and the LSRRF. Tax incremental revenue allocation estimates are shown for the proposed duration of the Plan, which would be ten (10) years for full reimbursement of the eligible expenses to the developer and five (5) years of capture after that going to the LSRRF. The administrative fee would equal 10% of the annual local tax capture and total

LBRA MEETING – Tuesday, November 12, 2024
ITEM #8 7 and Victor Project – Robertson Brothers Homes

approximately \$350,000 after 15 years. The average yearly disbursement to the Developer would be about \$191,000. The year 2027 is shown as the first year of tax capture. 2036 would be the final year of distributions to the Developer, with an estimated reimbursement of \$1,909,999. Tax capture from the school district is limited to the plan's first year to cover the \$75,200 preapproved eligible activities costs.

Development and Reimbursement Agreement

The Development and Reimbursement Agreement outlines the obligations between the LBRA and the Developer, including the approximate reimbursement amounts, the duration and timing of the payments, and the distribution of funds to the LSRRF. It contains the following key terms and conditions:

- 1) Submission of Costs: The Developer must provide the City with detailed information on all brownfield eligible costs, including copies of invoices and proof of payment of the contractor and various subcontractors, engineers, and others who perform services for which the Developer seeks reimbursement.
- 2) Payments: The LBRA shall reimburse the Developer for eligible costs and brownfield plan costs up to a maximum of \$1,985,199. The payments include 90% of the TIR to the Developer and 10% for administrative fees and deposits to the LSRRF. For the five (5) years following the reimbursement of all eligible costs to the Developer, 100% of the TIR will be deposited to the LSRRF, but not beyond the Winter 2041 taxes. **(Note: Even though the Plan projects 2036 as the end date when the Developer would be fully reimbursed for all Eligible Costs and Brownfield Plan Costs, the proposed Agreement would allow up to five (5) more years of cost recovery to reach the maximum amount of \$1,985,199. As part of any approving resolution, the LBRA should consider the year the maximum reimbursement amount is reached, or 2036, whichever occurs first.**
- 3) Adjustments: The drafted Agreement does not limit the Developer's or any subsequent owners' or tenants' right to appeal tax assessments; however, if, due to an appeal of any tax assessment, the LBRA is required to reimburse any tax increment revenues to any tax levying unit of government, the LBRA may deduct the amount, including interest and penalties, from the amounts due and owing the Developer.
- 4) Term: The reimbursement obligation would commence with the Summer 2027 tax bill and terminate upon payment of all outstanding reimbursement requests, but no later than Winter 2041 (15 years total).

Draft Approving Resolution

RESOLVED that the Brownfield Plan for the "7 and Victor Project" dated August 1, 2024, and the submitted Development and Reimbursement Agreement between the City of Livonia Brownfield Redevelopment Authority and Robertson Brothers Company to use Local Tax Increment Revenues for development of the property at 37640 Seven Mile Road, as presented to the LBRA at its meeting of November 12, 2024, are hereby approved, subject to _____, and further subject to final approval by the Livonia City Council.

LBRA MEETING – Tuesday, November 12, 2024
ITEM #8 7 and Victor Project – Robertson Brothers Homes

KEY FACTS OF THE PROPOSED BROWNFIELD PLAN AND REIMBURSEMENT AGREEMENT

- Location: NE Corner of Seven Mile Road and Victor Parkway
- Developer/Owner: Etkin Equities and Robertson Brothers
- Property size: 6.38 acres.
- Proposed use: 100 Multifamily Residential Townhomes
- Estimated private investment: \$29,500,000
- Total Estimated Eligible Activities Costs for Developer: \$1,985,199
 - Environmental (EGLE) Activity Costs: \$75,200
 - Local Only Activity Costs: \$1,909,999
- Current Taxable Value/Initial Base Value: \$536,413
- Projected First Year Taxable Value after improvements: \$7,505,364
- 1st year increment: \$6,968,951
- City and other taxing authorities pay no interest
- Plan assumes a 1% annual increase in Taxable Value
- Capture applies only to Real Property. Personal Property not included.
- Tax Capture would commence Summer 2027 and end Winter 2041 (15 years total)
- Projected payback period for Developer's Eligible Costs: 10 years (2027-2036)
- Plan includes five (5) years of additional capture for LSRRF: (2037-2041)
- 10% of annual TIR would be used to pay Administrative Costs and go to LSRRF
- Total estimated admin fee and deposits to LSRRF: \$1,507,854

STATE TAX INCREMENTAL REVENUE

<i>State Tax Reimbursement to Developer</i>	<i>\$30,705</i>
State Brownfield Revolving Fund (3 mils of SET)	<u><i>\$43,923</i></u>
Total State TIR Collected	<i>\$74,628</i>

LOCAL TAX INCREMENTAL REVENUE

<i>Local Tax Reimbursement to Developer</i>	<i>\$1,954,494</i>
10% Administrative Fee/LSRRF	<i>\$349,305</i>
LSRRF (Last 5 Years of Plan)	<u><i>\$1,158,549</i></u>
Total Local TIR Collected	<i>\$3,462,348</i>

Total projected State and Local Capture	<i>\$3,536,976</i>
◦ City contribution (~24.6%)	<i>\$870,096</i>

<i>Total Estimated Reimbursement to the Developer</i>	<i>\$1,985,199</i>
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**CITY OF LIVONIA
7 AND VICTOR PROJECT
AUGUST 1, 2024**

Project Summary

Project Name:	7 and Victor Project
Project Location:	37640 W 7 Mile Road, Livonia, Michigan, consisting of one parcel (024-99-0016-007) of 6.38 acres (Figures 1 and 2):
Project Applicant:	Robertson Brothers Homes (the “Developer”)
Project Description:	This project is for new construction of approximately 100 rental townhouse style residential units in approximately fifteen new buildings (Figure 3). The townhouses will range from 1,300 to 1,600 square feet each and will target missing middle housing needs. The Project will also include 3.11 acres of open space (approximately 49% of the property area).
Estimated Total Investment:	\$29.5 million
Environmental Issues:	Between 1972 and 1976, there was a surface disturbance across most of the site that coincided with construction of the I-275 Freeway to the west. The purpose of the disturbance is unknown, but it may have been lowland filling with spoils from nearby freeway construction. A total of 33 test pits have been completed across the site, of which 5 identified fill material, consisting mostly of wood debris. The following was identified. • Impacts above residential direct contact criteria for arsenic and selenium were identified at two locations on the Property associated with fill soils. These impacts will require either removal or engineered controls to provide cover during site use. In addition to the environmental challenges, the biggest challenge is the soil conditions that include fill and natural peat requiring specialized footings or soil replacement to permit any type of construction.

Incentives Requested
Brownfield TIF:

The Developer is requesting capture of incremental local-only taxes, with the exception of pre-approved activities, for full reimbursement of eligible costs under Act 381 in the amount of \$1,985,199 as summarized below. A list of eligible costs is provided in Table 1. Reimbursement will require 10 years.

Local and School Tax Capture	\$	75,200
Local-Only Tax Capture	\$	1,909,999
Total Brownfield Plan Capture	\$	1,985,199

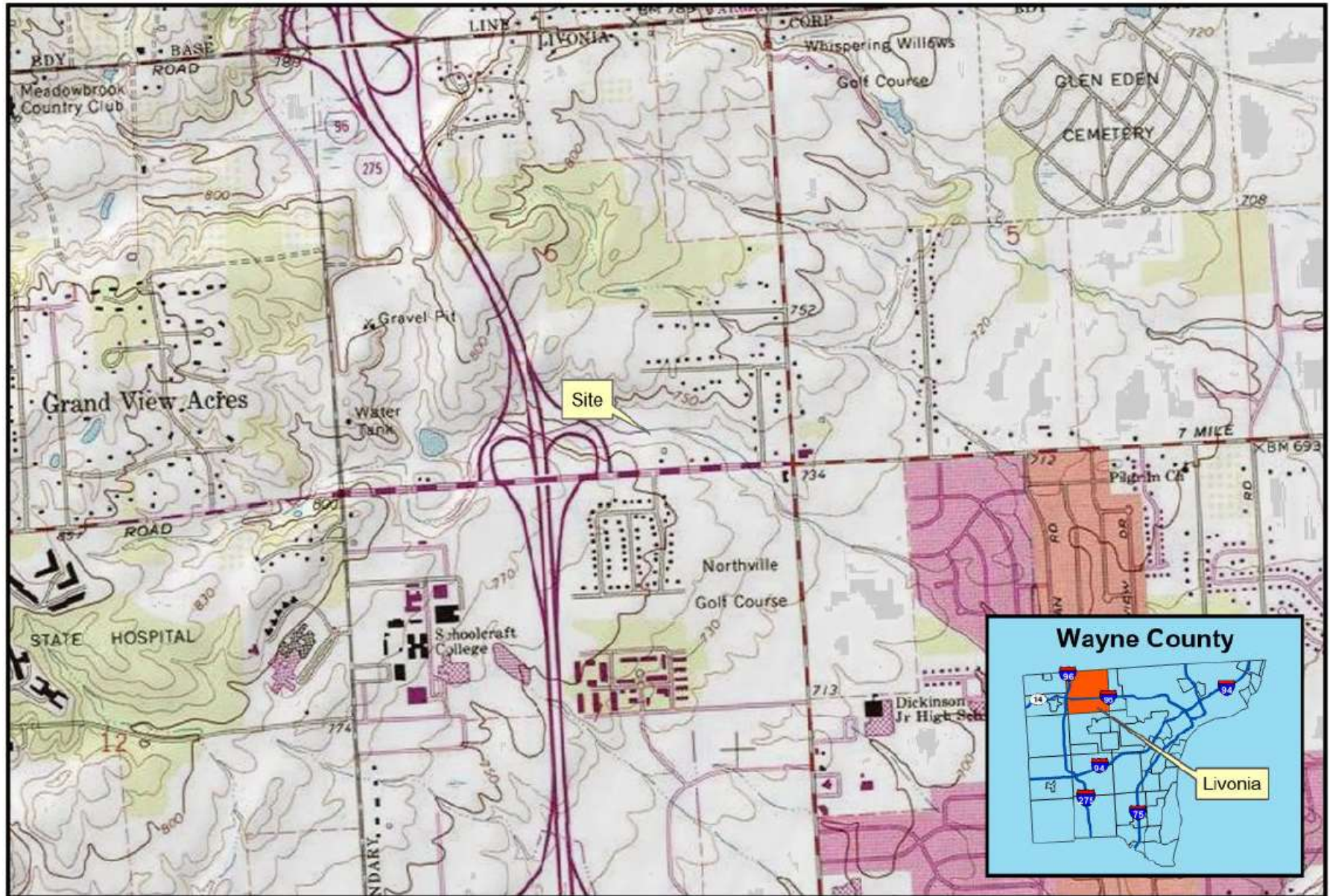
Eligible Activity Cost Estimates

Completion Season/Year
/2YUŋSiŋ
{ɔYŋSiŋ} ɥɥɥɥ
/2YUŋSiŋ

Completion Season/Year

Completion Season/Year
{dzYYŠlkCIf nлнр
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CIf nлнр
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Total Estimated Capture	\$ 3,536,976
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37640 W 7 Mile Road

Livonia, MI



Created for: Robertson Brothers Homes
Created by: TJW (13104) July 1, 2024

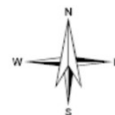


Figure I: Site Location Map



37640 W 7 Mile Road



Livonia, MI



Created for: Robertson Brothers Homes
Created by: TJW (13104) July 1, 2024

Figure 2: Property and Project Boundaries



Site Data:

Gross Site Area: 6.38 Ac.
Proposed Units: 100 Units
1 Car Townhomes: 65 Units
2 Car Townhomes: 35 Units
Proposed Density: 15.67 Du. / Ac.

Building Setbacks:
Front Yard: 19' min.
Side Yard: 15' min.
Building Separation: 15' min.

Parking:
Garage Parking: 135 spaces
Apron Parking: 65 spaces
Guest Parking: 30 spaces
Parking Distribution: 2.30 spaces / Du.

Road Width: 24'
Road Length: 1,841 LF
Road Length per Unit: 18.41 LF / Du.

Site Plan Rendering

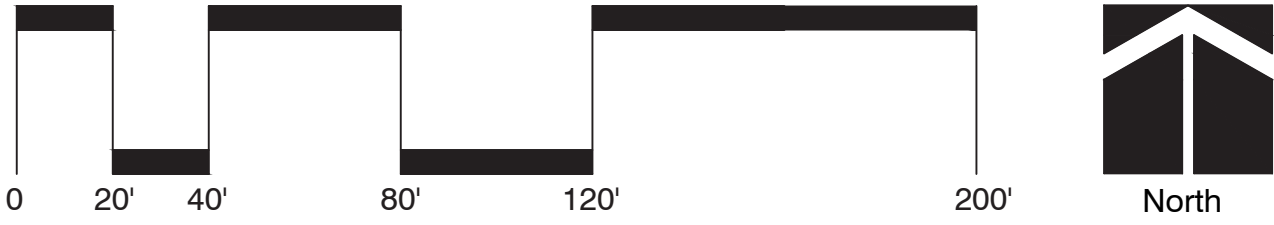
7 Mile & Victor Parkway
Livonia, Michigan
Robertson Brothers Homes

June 2023



Prepared By: Land Design Studio
750 Forest Avenue - Suite 101
Birmingham, MI 48009
(248) 594-3220

Prepared For: Robertson Brothers Homes
6905 Telegraph Road - Suite 200
Hills, MI 48301
(248) 657-4968



PROJECT NO: 133040

PROJECT NAME: VICTOR PARKWAY

LOCATION: LIVONIA, MI

DRAWN BY: KAC

DATE: 4-24-2023

FILL/PEAT DEPTHS

-  5 feet or less
-  Greater than 5 feet and less than or equal to 10 feet
-  Greater than 10 feet
-  None encountered

Note: The intent of Plate No. 1 is to provide a pictorial that delineates the approximate limits of the fill relevant to the surrounding subsurface conditions. The transition between the existing fill and native soils will be more gradual than what is shown

Soil borings B-1 through B-8 performed by Strata Drilling on December 10, 2013

Soil borings TB-1 through TB-6 performed by CTI & Associates, Inc. on May 30 and 31, 2002

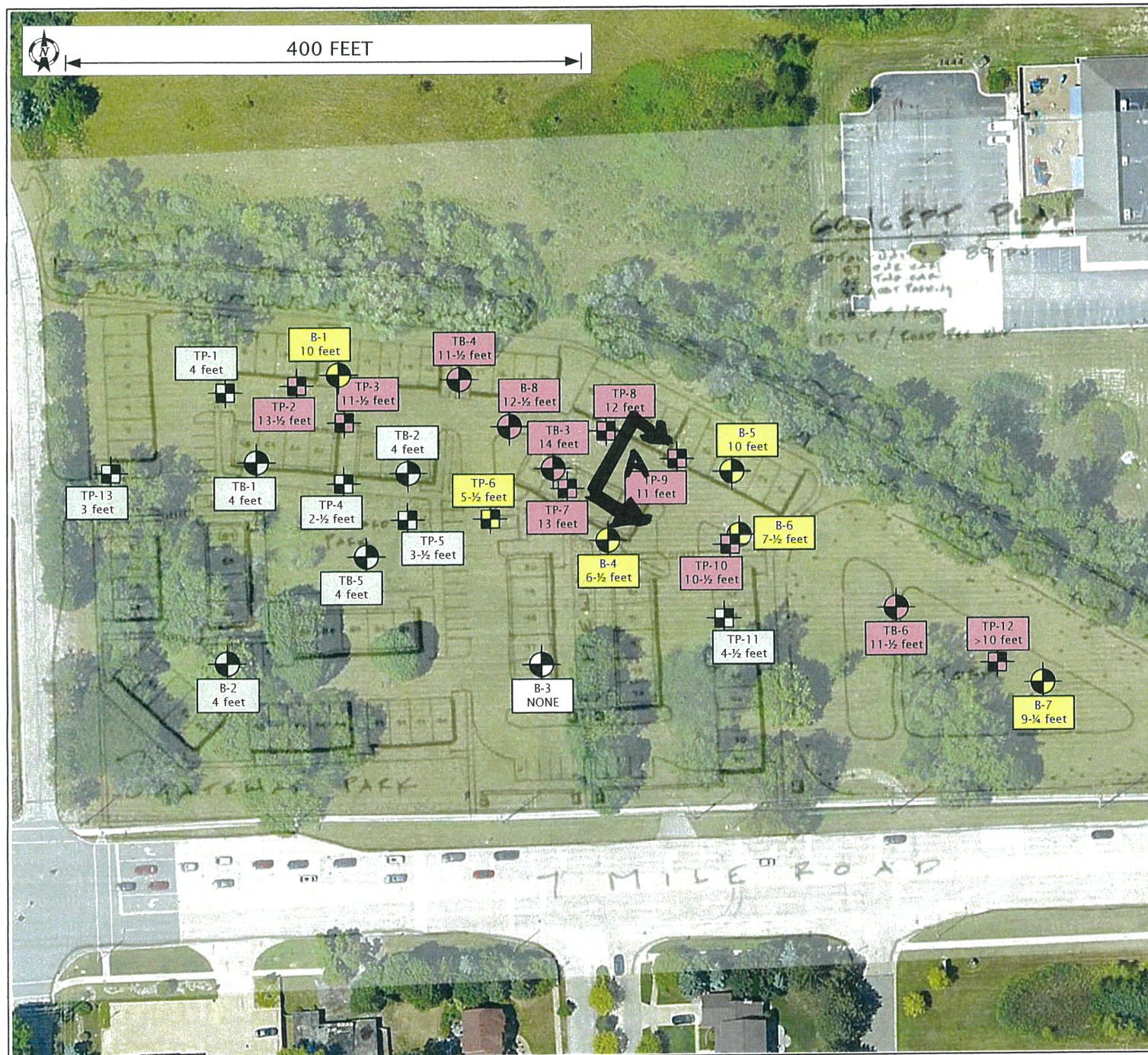
Test Pits TP-1 through TP-13 performed by Carnwath Excavating Co. on September 16, 2020

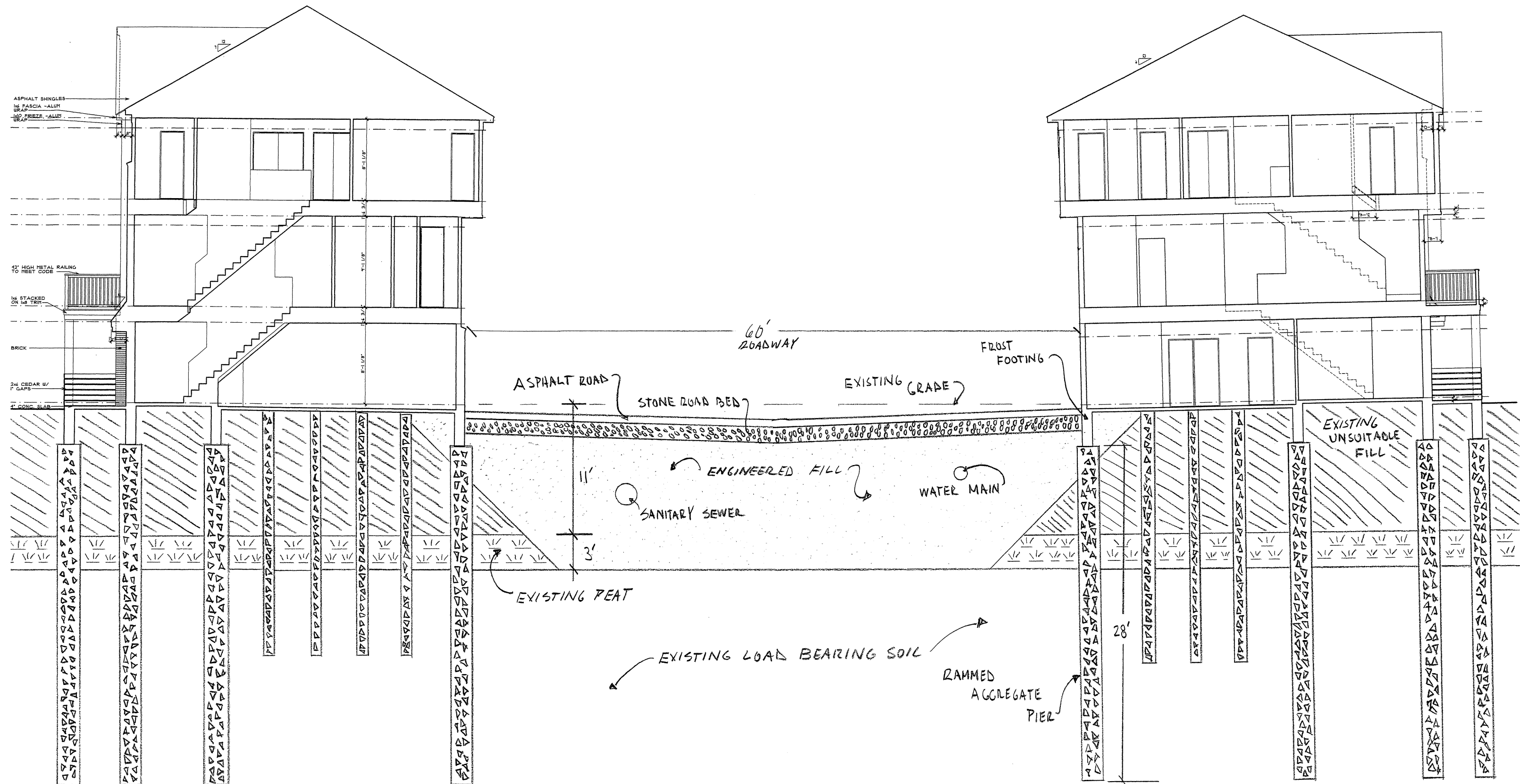
SHEET TITLE

EXISTING FILL/PEAT MAP

SHEET NO.

PLATE NO. 1





7 MILE & VICTOR PARKWAY
SECTION A



ACT 381 BROWNFIELD PLAN
For the
7 and Victor Project
37640 W 7 Mile Road, Livonia, Michigan 48146

City of Livonia
Brownfield Redevelopment Authority

August 1, 2024

Prepared by:
Robertson Brothers Homes
6905 Telegraph Road, Suite 200
Bloomfield Hills, MI 48301-3159

ASTI Environmental
10448 Citation Dr., Suite 100
Brighton, Michigan 48116
Contact: Tom Wackerman
810.599.5463/twacker@asti-env.com
ASTI File 3-11688

Approved by the Brownfield Redevelopment Authority on _____
Approved by the governing body of the local jurisdiction on _____

1.0 INTRODUCTION

ΜΦΜ 5ŠāŌNĀLŪā2y2f 9fĀŁōfŠ tNĪ2LJŠNŪē ō{ŠŌŪā2y mo ōHŪŌKŪŪ
 ΜΦΜΦΜ tNĪ2LJ2āŠŔ wŠŔŠŌŠf2LJYŠyŪ I-yŔ CdzŭdzNŠ ; āŠ f2N 9I-ŌK 9fĀŁōfŠ tNĪ2LJŠNŪē
 ΜΦΜΦΗ 9fĀŁōfŠ tNĪ2LJŠNŪē Lγf2N YI-Ūā2y
 ΜΦΜΦΘ I āŭ2NĀŌI-f ; āŠ I-yŔ tNŠŌĀ2dzā h ōyŠNāKĀLJ
 ΜΦΜΦΠ / dzNŪŠyŪ ; āŠ 2f ŪŠ {dzō2SŌŪ tNĪ2LJŠNŪē
 ΜΦΜΦρ {āŪŠ / 2yŔĪŪā2yā I-yŔ Y2ōY9YŌNĪ2yYŠyŪI-f / 2yŪI-YŪI-Ūā2y

[illegible]

FIGURES

CA3dzNŨS m	{áúŨ [2ǒI-úá2Y a I-LJ
CA3dzNŨS H	tN2LJŨSúúé I-yŨ tN2ǒSúú . 2dzYŨI-NXŠă
CA3dzNŨS o	{áúŨ CŠI-údzNŨŠă a I-LJ
CA3dzNŨS n	{áúŨ tfl-Y

TABLE

𐌸𐌳𐌹𐌱𐌰 $\mathfrak{M}$ 9𐌺𐌳𐌹𐌱𐌰 !𐌴𐌸𐌹𐌸𐌹𐌸 / 2𐌹𐌸 9𐌹𐌸𐌹𐌸𐌹𐌸𐌹𐌸
 𐌸𐌳𐌹𐌱𐌰 $\mathfrak{H}$ 𐌸𐌹𐌸 / 1𐌹𐌸𐌹𐌸𐌹𐌸𐌹𐌸 𐌸𐌳𐌹𐌱𐌰
 𐌸𐌳𐌹𐌱𐌰 $\mathfrak{O}$ w𐌹𐌸𐌹𐌸𐌹𐌸𐌹𐌸𐌹𐌸𐌹𐌸 {𐌴𐌸𐌹𐌸𐌹𐌸𐌹𐌸𐌹𐌸

ATTACHMENTS

!úú!ÖKYŠyú ! .N2øy†iŠtŘ tfl-ywŠă2fdzúă2yöăú
!úú!ÖKYŠyú . wŠ†YödzNăŠYŠyú ! ÆNŠŠYŠyú

! YŜyŔŜŔ . N2øy†λŜfŔ t fl·y

[illegible][illegible]

/zyǎ́ũndzǒũlzyǎ́lǎ ɪyǎ́lǎŌLJɪúŠŔ úz ōŠɛɪyǎ́y {LJNɪyɛ нлнр ølúk tNzɛŠǒũ ǒzYɪtŠúǎzyǎ́yClɪff нлнсФ

w2ōSîNúăzy . N2úKŜNă I 2YŜă Iă úKŜ LjN2zŜôú ŔŜôŜf2LjŜN ôă5ŜôŜf2LjŜNéúφ

MOMOH Eligible Property Information

[illegible]

t l·NŎŠf λyƒ2NŸ l·űλ2y ă 2dzűfλyŠŘ ōŠf2øø

[illegible]

ΜΟΜΦΟ Historical Use and Previous Ownership

ΦΚΣ {dzōεSΟΪ τΝΖLJSΝΪε θI·ā RΣΘStεLJSR θΛΟΚ I·R θStfl·yε 2dzūōdzλτRλyεāS I·yR τI·N·Yτl·yR I·ā S·I·N·ε I·ā μφοτΦ ! ENΛOdzεfūdzuI·f dzaS λyOtdzRΣR I·NStI·ūλθΛΪε āYI·ff āúI·yR 2τ FNUdzλΪ úNUSā I·N2dzyR úKS RθStfl·yε 2yúKS θSāú LJ2NÚλ2yΦ .ε μφctΣ úKS 2dzūōdzλτRλyεā θSNUΣ NUSY2θSΣR I·yR úθ2 I·RRAÚλ2yI·f RθStfl·yεā θSNUΣ ŌzyāúNdzŌúSΣR . SÚθSSy μφTH I·yR μφtcΣ úKSNUΣ θI·ā I·ādzNτI·ŌS RλāúdzNŌI·yŌS I·ŌN2āā Y2āú 2τ úKS āλÚS úKI·ú Ō2lyŌλRΣR θΛΟΚ Ō2yāúNdzŌúλ2y 2τ úKS LπHTP CNUSSθI·ε ú2 úKS θSāúΦ ΦΚΣ LJdzNULJ2āS 2τ úKS RλāúdzNŌI·yŌS λā dzyλy2θyε ōdzú λú YI·ε KI·θS ōSSy f2θI·yR τλftl·yε θΛΟΚ āLJ2λτā FNU2Y ySI·N·Ōε FNUSSθI·ε Ō2yāúNdzŌúλ2yΦ ΦΚΣ úKNUSS RθStfl·yεā θSNUΣ RSY2θλKΣR ōSÚθSSy μφφT I·yR μφφφΣ I·yR úKS āλÚS KI·ā ōSSyθI·ŌI·yú tI·yR āλyŌS úKI·ú úλYΣΦ

ΜΟΜΦΠ Current Use of the Subject Property

ΦΚΣ {dzōεSΟΪ τΝΖLJSΝΪε λā ŌdzNUSyúε θI·ŌI·yú I·yR dzyRΣθStεLJSRΦ

ΜΟΜΦρ Site Conditions and Known Environmental Contamination

ly I·RRAÚλ2yú2 úKS SyθNUSyYSyúI·f ŌKI·ffSyεSā RΣāŌNλōSR ōStεθΣ úKS ōλεεSāú ŌKI·ffSyεS λā úKS ā2λτ Ō2yRλā2yā úKI·ú λyŌtdzRΣ τλft I·yR yI·údzN·I·f LJSI·ú NUSIjdzNλyε āLJSŌλI·tλISR τ22úλyεā 2Nū ā2λτ NUSLεI·ŌSYSyú ú2 LJSN·Yλú I·yε úεLJS 2τ Ō2yāúNdzŌúλ2yΦ

τKI·āS L 9yθNUSyYSyúI·f λÚS !āāSāāYSyú

ΦΚΣ Y2āú NUSŌSyú tKI·āS L 9yθNUSyYSyúI·f λÚS !āāSāāYSyú ō9{ ! ú 2τ úKS {dzōεSΟΪ τΝΖLJSΝΪε λā R·I·úSR a I·NŌK yΣ nлнпΦ ΦΚΣ τ2ftεθlyε NUSŌ2yλI·SR SyθNUSyYSyúI·f Ō2yRλā2yā ōw9 / āú θSNUΣ λRΣyúλτλSR ōI·āSR 2yKλāú2NλŌI·f dzaSā 2τ úKS {dzōεSΟΪ τΝΖLJSΝΪεΦ

- . SÚθSSy μφTH I·yR μφtcΣ úKSNUΣ θI·ā I·ādzNτI·ŌS RλāúdzNŌI·yŌS I·ŌN2āā Y2āú 2τ úKS {dzōεSΟΪ τΝΖLJSΝΪε I·yR λú Ō2lyŌλRΣR θΛΟΚ Ō2yāúNdzŌúλ2y 2τ úKS LπHTP CNUSSθI·ε ú2 úKS θSāúΦ ΦΚΣ LJdzNULJ2āS 2τ úKS RλāúdzNŌI·yŌS λā dzyλy2θyε ōdzú λú YI·ε KI·θS ōSSy f2θI·yR τλftl·yε θΛΟΚ āLJ2λτā FNU2Y ySI·N·Ōε FNUSSθI·ε Ō2yāúNdzŌúλ2yΦ ! NUSI·ā 2τ úKS LπHTP CNUSSθI·ε úKI·ú I·NUS ySI·N·Sāú ú2 úKS {dzōεSΟΪ τΝΖLJSΝΪε I·LJLJSI·N·ú2 KI·θS ōSSyτI·N·Yτl·yRΦ I 2θSŌSNUΣ úKS LπHTP CNUSSθI·ε λā f2yε I·yR úKS SēI·Ōú f2ŌI·úλ2y FNU2Y θKSNUΣ úKS ādzāLJSŌúSR τλft ā2λτ θI·ā εI·úKSNUΣ λā y2ú λy2θyΦ
- ΦΚΣ LJNUSŌλ2dzāε Ō2YλτSúSR tKI·āS LL 9{ ! θI·ā y2ú Ō2YλτSúSR λyI·NUSI·ā θKSNUΣ FNUSSθI·ε τλft ā2λτ λā SēLJSŌúSR ú2 KI·θS ōSSy λτI·ŌSRε ā2 λú R2Sā y2ú LJN2θλRΣ ādzτλŌλSyú λyāλεKú λyú2 úKS IjdzI·tλúε 2τ úKS ādzāLJSŌúSR τλft ā2λτΦ

{2I·f I·yR DN2dzyRθI·úSNU {I·Yλftl·yε

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ly нлмо I· tKI·āS LL 9yθNUSyYSyúI·f λÚS !āāSāāYSyú ō9{ ! ú θI·ā Ō2yRdzŌúSR ú2 I·R·NUSāā I·NUSI·ā 2τ Ō2yŌSNUy λRΣyúλτλSR λyI· LJNUSŌλ2dzā tKI·āS L 9{ ! Φ ΦΚΣ I·NUSI·ā 2τ Ō2yŌSNUy λyŌtdzRΣRY

- ΦΚΣ Kλāú2NλŌI·f LJNUSāSyŌS 2τ I· mλллпεI·ff2y dzyRΣNUSN2dzyR āú2N·I·εS úI·yλ ōI· {Φú I·ú úKS {dzōεSΟΪ τΝΖLJSΝΪε θKλŌK θI·ā NUSY2θSΣR λy μφφΦ ! NUSI·āS λyŌλRΣyú ōI· / мнтыпφоú θI·ā NUSLJ2NUSΣR I·yR λú θI·ā εN·I·yúSR NUSεdzI·ú2N·ε Ōf2ādzNUS λy 5SŌSYŌSNU 2τ μφφΦ

- ФКS LJ2āāl0lflūē 2T fdzSt 2lē l-ā l- KŠl-ūlYā ā2dzN0Š āú2NŠR lY ; {Фā ōl-āŠR zy ūKŠ Rl-ūS 2T Ō2yāúNdzŌúā2y2T ūKŠ LJNŠŌl2dzāfē ŠĒāāūlYā āúNdzŌúdzNŠāΦ

ФКS {dz0S0ú tN2LJŠNūē ōl-ā f2NYSNūē l- āly3fšπf-Ylē NŠāRŠyŌŠ ōlūK l- mΣллллl-ff2y ; {Ф ūKl-ū āú2NŠR 3l-ā2flYŠΦ ФКS ; {Ф ōl-ā lyāúl-ffŠR lY ūKŠ Šl-Nūē mφллā l-yR NŠY2ŌŠR FN2Y ūKŠ 3N2dzyR lY mφφo ! ū ūKŠ ūlYŠ 2T NŠY2Ōl-ē ūKŠ ; {Ф ōl-ā 2dzú 2T dzāŠS flffŠR ōlūK ōl-ūS NŠ l-yR Kl-R y2ú ōŠŠy dzāŠR f2N l-ū fŠl-āū hp ēŠl-NāΦ 5dzNlYā ; {Ф NŠY2Ōl-f lY mφφoZ ūŌ2 NŠfŠl-āŠā ōŠNŠ NŠLJ2NūŠR ō[Šl-] b2āΦ ннoco l-yR / πмнтYπφoú ! ff NŠfŠl-āŠā ōŠNŠ 3Nl-yūŠR NŠ3dzfl-ū2Nē Ōf2ādzNŠ lY ūKŠ āl-YŠ ēŠl-Nū

wŠfŠl-āŠ Ōf2ādzNŠ l-ŌūāŌlūāŠā lyŌfdzRŠR ūKŠ NŠY2Ōl-f 2T mΣллл 3l-ff2yā 2T ōl-ūS Nk3l-ā2flYŠ l-yR нлл ŌdzŌl ēl-Nūā 2T Ō2yūl-Ylyl-ūŠR ā2lē ; LJ2yŌ2YlJfŠūā2y2T Ō2yūl-Ylyl-ūŠR ā2lē NŠYŠRl-ūā2y ; {Ф Ōf2ādzNŠ āl-YlJfŠā ōŠNŠ Ō2ffSŌúŠR FN2Y ūKŠ ŠĒŌl-Ōl-ūā2y ū2 Ō2yflNlY ūKl-ū ūKŠ ālūS Kl-R ōŠŠy LJN2LJŠNūē NŠYŠRl-ūŠR ! ū2ūl-f 2T y ā2lē āl-YlJfŠā ōŠNŠ Ō2ffSŌúŠR l-yR l-yfl-ēlŠR f2N ūKŠ LJNŠāŠyŌŠ 2T ōŠylŠyS ū2fdzSyS SūkēfōŠylŠyS 2N ēēŠyS ō . Ф9- ū l-yR ū2ūl-f fŠl-R ΦКS ālūS Kl-R y2 RlāŌŠNlYŌfS 3N2dzyR ōl-ūS Nt ūKŠ NŠf2NŠS y2 3N2dzyR ōl-ūS N āl-YlJfŠā ōŠNŠ Ō2ffSŌúŠR

! ŌŌ2NūRlyā ū2 fl-ō2Nl-ū2Nē NŠādzfūāS y2 ŠŌlRŠyŌŠ 2T NŠāRdzl-f . Ф9- ōl-ā ŠyŌ2dzyūNŠR lY ā2lē āl-YlJfŠāΦ ФКS NŠ ōl-ā ŠŌlRŠyŌŠ 2T fŠl-R lY l-f āl-YlJfŠāt K2ōŠŌS NŠ ūKŠ fŠŌfā ōŠNŠ ōŠf2ō ūKŠ āl-ūS ōlRŠ RŠfl-dztū ōl-Ōl 3N2dzyR fŠŌf ōl-fdz 2T нмΣллл LJl-Nūā LJŠN ōlffl2y ōLJLŌoú

Ф2 ŠŌl-fdzl-ūS ūKŠ Ō2yŌŠNlY2T l- f2NYSN mΣллллl-ff2y ; {ФS flŌS ā2lē ō2NlYā ōDtπm ūK N2dz3K Dtπp ōŠNŠ l-RŌl-yŌŠR {2lē l-yR 3N2dzyR ōl-ūS N āl-YlJfŠā ōŠNŠ Ō2ffSŌúŠR l-yR l-yfl-ēlŠR f2N ō2fl-ūāfS 2N3l-YlŌ Ō2YlJ2dzyRā ō±h / āū l-yR ū2ūl-f LJŠN2fSdzY KēR N2Ōl-Nūōzyāπ3l-ā2flYŠ Nl-YāS 2N3l-YlŌā ōФt l πDwhūΦ {2lē āl-YlJfŠ RŠLJūK Nl-YāŠR FN2Y nφ ū2 p fŠSū ōŠf2ō 3N2dzyR ādzNfl-ŌS ōŌ3āūΦ DN2dzyR ōl-ūS N ōl-ā ŠyŌ2dzyūNŠR ōSūōŠŠy c l-yR φ fŠSū ō3āΦ ! ŌŌ2NūRlyā ū2 fl-ō2Nl-ū2Nē NŠādzfūāS y2yS 2T ūKŠ ūl-NēS LJl-Nl-YŠūS Nā ōŠNŠ lRŠyūlflŠR l-ū Ō2yŌŠyūNl-ūā2yā ŠĒŌŠRlyā fl-ō2Nl-ū2Nē RŠŌSŌūā2yflYlūāΦ

lyl-RRlūā2y l- 3S2LJkēāŌl-f ādzNŌSē ōl-ā Ō2yRdzŌúŠR ū2 ŠŌl-fdzl-ūS ; {Фā Ō2yŌŠNlYā zy ūKŠ f2NYSN NŠāRŠyūl-f RŌŠflYāā b2 ŠŌlRŠyŌŠ 2T ; {Фā ōl-ā y2ūŠR

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Ф2 l-āāSāā ūKŠ tKl-āS l w9/Σ ! {Фl 9yŌNlYyŠyūl-f 2ōāŠNŌŠR ūKŠ lyāúl-ffl-ūā2y2T l- LJ2Nūā2y2T ūKŠ oo ūSāū LJāūā Ō2YlJfŠūŠR l-ŌN2āā ūKŠ ŠyūNlS {dz0S0ú tN2LJŠNūē ΦКS 2ōSŌūāŌS 2T ūKŠāS ūSāū LJāūā ōŠNŠ ū2 lRŠyūlflē ūKŠ l-NŠl-ā 2T LJ2āāŌfS flff l-yR ū2 RŠūS NlYlYŠ ūKŠ f2Ōl-ūā2y2T yl-ūdzNl-ffē 2ŌŌdzNlYā LJŠl-ū lY2NlRŠN ū2 ŠŌl-fdzl-ūS 2LJūā2yā f2N ōdzlflRlyā f2dzyRl-ūā2yā l-yR lYflNl-āūNdzŌúdzNŠ l-yR LJl-ŌlYā ādzŌ3Nl-RŠ ādzLJLJ2NūΦ {dzōādzNfl-ŌS Ō2yRlūā2yā Kl-R ōŠŠy LJNŠŌl2dzāfē lyŌŠāūā3l-ūŠR ōē 2ūKŠNāΦ

5dzNlYā lyāúl-ffl-ūā2y2T ūKŠ ūSāū LJāūāS flff Yl-ūS Nl-l-ē Ō2yāāūālyā Y2āūfē 2T ō22R RŠŌNlā ōl-ā lRŠyūlflŠR lY zyflē p 2T ūKŠ oo f2Ōl-ūā2yā ! fl 2ūKŠN f2Ōl-ūā2yā lRŠyūlflŠR Ōfl-ē FN2Y ūKŠ ādzNfl-ŌS ū2 ūKŠ yl-ūāŌS dzyRŠNūēlyā LJŠl-ū 2N yl-ūāŌS ā2lēā . l-āŠR zy ūKŠ ŠĒāāūŠyŌŠ 2T ūKŠ flff Yl-ūS Nl-l-ē ūKŠNŠ ō2NlYāā ō{ . πm ū2 { . πoū ōŠNŠ l-RŌl-yŌŠR lyū2 ūKŠ dzyRŠNūēlyā LJŠl-ūS l-yR āl-YlJfŠā ōŠNŠ Ō2ffSŌúŠR l-ū ūKŠ ā2lēKflff lyūS Nfl-ŌS Ly ūŌ2 f2Ōl-ūā2yā ō{ . πh l-yR { . πoū l-NāŠyŌ ūKŠ āŠfŠydzY ōŠNŠ lRŠyūlflŠR l-ō2ŌS ūKŠ 9D[9 ō a lŌKlā3l-Y5LJl-NūYŠyū 2T 9yŌNlYyŠyū

DNUŠI-ú [I-]Šās I-yR 9yŠNúèú ŠSýŠNúā ņŠāIŘŠyúI-f ŐfŠI-yπdzLJ ŐNúúŠNúI- f2Nú ŘNúSÓú Ő2yúI-Őú Iy/faff
 ā2Iāf !ŘŘlúI2yI-f āúŠLJ 2dzú ō2Núy3ā ōŠNúS Ő2yRdzŐúŠR ũ2 ŘŠtlyŠI-úS úKS lŘŠyúIāfŠR lYlJl-Őúāš
 ōKlŐK I-fā2 lŘŠyúIāfŠR I-NāŠyā ŐI-yR āŠfŠyādzY I-ō2ŐŠ ŐNúúŠNúI- . I-āŠR 2yúKSāS NŠādzfúāš úKS
 {dzō2SÓú tN2LJŠNúè lā I- fI-ŐIāúè I-ā ŘŠtlyŠR ōè tI-Nú HLM 2f !Őú πpm

2.0 Information Required by Section 13(2) of the Statute

2.1 Basis for Eligibility (Section 13 (2)(h) and Section 2 (p))

ΦKS {dzō2SÓú tN2LJŠNúè lā Ő2yāIŘŠNúŠR āŠtIāfŠ LJN2LJŠNúè I-ā ŘŠtlyŠR ōè !Őú oym {ŠŐúI2yH
 ōŠŐI-dzāŠ ōI-ú úKS {dzō2SÓú tN2LJŠNúè ōI-ā LJNúŠŐI2dzāfē dzúIāIŠR f2Nú I- NŠāIŘŠyúI-f LjdzN2LJ2āŠ I-yR
 ōŐú úKS {dzō2SÓú tN2LJŠNúè lā I- fI-ŐIāúè I-ā úKI-ú ŐŠNúY lā ŘŠtlyŠR Iy tI-Nú HLM 2f a lŐKlāI-yā
 bI-údzNúI-f wŠā2dzNúŐŠā I-yR 9yŐNú2yYŠyúI-f tN2úŠŐúI2y !Őú ōmφφπ t! πpmúš ōI-āŠR 2y
 IyŐŠāúIāI-úI2yā IyHLM

2.2 Summary of Eligible Activities and Costs (Section 13 (2)(a),(b))

ΦKS āŠtIāfŠ I-ŐúIāúIāŠē úKI-ú I-Nú IyŐŠyRŠR ũ2 ōŠ ŐI-NúIŠR 2dzú I-ú úKS {dzō2SÓú tN2LJŠNúè I-Nú
 Ő2yāIŘŠNúŠR āŠtIāfŠ I-ŐúIāúIāŠē I-ā ŘŠtlyŠR ōè {ŠŐ H 2f !Őú oym ōŠŐI-dzāŠ úKSē IyŐfēdRŠ
 ōI-āŠtlyŠ ŠyŐNú2yYŠyúI-f I-āŠāāYŠyú I-ŐúIāúIāŠē ŘdzŠ ŐI-Nú I-ŐúIāúIāŠē YI-yI-ēŠYŠyú 2f
 dzýāúI-ŐfŠ fāff f2dzýRl-úI2y ō2Nú f2Nú I-ŘŘNúŠāā āLJŠŐI-f ā2Iē Ő2yRlúI2yāT YI-yI-ēŠYŠyú 2f
 Ő2yúI-YlyI-úŠR ā2IāT I-ŘŘlúI2yI-f NŠāLJ2yāŠ I-ŐúIāúIāŠē ālúŠ LJNúŠLJl-NúI-úI2y I-yR LJNúŠLJl-NúI-úI2y I-yR
 lYlJfŠYŠyúI-úI2y 2f I- .N2OyflŠtR tfl-y

! ādzYyI-Núè 2f úKS ŠtIāfŠ I-ŐúIāúIāŠ I-yR úKS ŠāúIYI-úŠR Ő2āú 2f ŠI-ŐK ŠtIāfŠ I-ŐúIāúIāŠ
 IyŐŠyRŠR ũ2 ōŠ LJl-IāŘ f2Nú ōlúK ũI-ē IyŐNúŠYŠyú NŠŐŠydzŠā fN2Y úKS {dzō2SÓú tN2LJŠNúè I-Nú āK2Oy
 Iy/fI-ŐfŠ m ālúfŠR ā9tIāfŠ !ŐúIāúIāŠ /2āú 9āúIYI-úŠāē ΦKS ŠtIāfŠ I-ŐúIāúIāŠ ŘŠāŐNúŐŠR IyúKS
 ũI-ŐfŠ I-Nú y2ú ŠēKI-dzāúIāŐŠ {dzō2SÓú ũ2 úKS I-LJLJN2ŐI-f 2f úKS !dzúK2Núē Iy ōNúāly3 I-ŘŘlúI2yI-f
 ŠtIāfŠ I-ŐúIāúIāŠ YI-ē ōŠ ŐI-NúIŠR 2dzú I-ú úKS {dzō2SÓú tN2LJŠNúè ōI-āK2dzú NŠljdNúy3 I-y
 I-YŠyRŠyú ũ2 úKlā tfl-y ā2 f2y3 I-ā ādzŐK ŠtIāfŠ I-ŐúIāúIāŠ I-Nú LJŠNúYlúúŠR ōè !Őú oym I-yR
 úKS Ő2āú 2f ādzŐK ŠtIāfŠ I-ŐúIāúIāŠ Ř2Šā y2ú ŠēŐŠŠR úKS ũ2úI-f Ő2āúā āúI-úŠR ōŠf2Ő

ΦKS Ő2āúā tIāúŠR IyúKS tfl-y I-Nú ŠāúIYI-úŠR Ő2āúā I-yR YI-ē IyŐNúŠI-āŠ 2Nú ŘŠŐNúI-āŠ ŘŠLJŠyRly3
 2yúKS yI-údzNú I-yR ŠēúŠyú 2f ŠyŐNú2yYŠyúI-f Ő2yúI-YlyI-úI2y I-yR 2úKS Nú dzylY2OyŐ2yRlúI2yā
 ŠyŐ2dzýúŠNúŠR 2yúKS {dzō2SÓú tN2LJŠNúè !ā f2y3 I-ā úKS ũ2úI-f Ő2āúā I-Nú y2ú ŠēŐŠŠRŠR tlyŠ
 lúŠY Ő2āúā 2f ŠtIāfŠ I-ŐúIāúIāŠ YI-ē ōŠ I-ŘdzāúŠR I-fúŠNú úKS ŘI-úS úKlā tfl-yā I-LJLJN2ŐŠR ōè úKS
 32ŐŠNúyly3 ō2Rēz ũ2 úKS ŠēúŠyú úKS I-ŘdzāúYŠyúā Ř2 y2ú ŐI2fI-úS úKS ũŠNúYā 2f úKS tfl-y I-yR
 LJN2ŐIāŠR ũKI-ú úKS ũ2úI-f Ő2āú 2f ŠtIāfŠ I-ŐúIāúIāŠ ādzō2SÓú ũ2 LJl-ēYŠyú 2Nú NŠlYŏdzNúāŠYŠyú
 āKI-ft y2ú ŠēŐŠŠR úKS ŠāúIYI-úŠR Ő2āúā āŠú f2NúK IyúKS tfl-y

ΦKS 5ŠŐŠf2LJŠNú ŘŠāNúŠā ũ2 ōŠ NŠlYŏdzNúāŠR f2Nú úKS Ő2āúā 2f ŠtIāfŠ I-ŐúIāúIāŠā ΦI-ē IyŐNúŠYŠyú
 NŠŐŠydzŠ ŠSýŠNúI-úŠR ōè úKS {dzō2SÓú tN2LJŠNúè ōI-ē ōŠ ŐI-LJlúdzNúŠR ōè úKS !dzúK2Núē I-yR dzāŠR ũ2
 NŠlYŏdzNúāŠ úKS Ő2āú 2f úKS ŠtIāfŠ I-ŐúIāúIāŠ Ő2YlJfŠúŠR 2yúKS {dzō2SÓú tN2LJŠNúè ΦKS I-ŐúdzI-f
 Ő2āú 2f úK2āŠ ŠtIāfŠ I-ŐúIāúIāŠ ŠyŐ2YlJl-āāŠR ōè úKlā tfl-y ũKI-ú ōI-ē IjdzI-f f2Nú
 NŠlYŏdzNúāŠYŠyú fN2Y ũI-ē IyŐNúŠYŠyú NŠŐŠydzŠā fN2Y úKS {dzō2SÓú tN2LJŠNúè āKI-ft ōŠ 32ŐŠNúYŠR
 ōè úKS ũŠNúYā 2f I- wŠlYŏdzNúāŠYŠyú !3NúŠYŠyú I-yR !Őú oym

EGLE Eligible Activities

čKŠ t2ft2ølyß ŠtEłotŠ I-0úłłúłŠā øłft oŠ 02YłJtŠúŠŘ t2wł úKłā tN2eS0ú I-yŘ I-NŠ úKŠ ādzø2Š0ú 2T
 úKłā tfl-yø ! ādzY-YI-Nè 2T ŠtEłotŠ I-0úłłúłŠā ly0tdzŘŠŘ lyúKłā tfl-ył I-yŘ úKŠ I-āā20łl-úŠŘ
 ŠāúłYI-úŠŘ 02āúā t2wł NŠłYōdzNāŠYŠyú dzyŘŠwł úKŠ tfl-ył I-NŠ LjN20łŘŠŘ lyčl-otŠ Mø

Pre-Approved Activities

čKŠ t2ft2ølyß I-0úłłúłŠā øłft oŠ NŠłYōdzNāŠŘ FN2Y t20I-f I-yŘ ā0K22f úI-È 0I-LJúdzNŠø {2YŠ 2T
 úKŠāŠ I-0úłłúłŠā øŠNŠ 02YłJtŠúŠŘ LjN2wł ú2 úKłā tfl-yI-ā LjŠNłYłúúŠŘ oè !0ú oym tfl-yI-yŘ
 úK2āŠ I-0úłłúłŠā Ř2 y2ú ly0tdzŘŠ 02yúlyŠyŠy0èø

Baseline Environmental Assessment Activities

čKłā ly0tdzŘŠā úKŠ 02YłJtŠúł2y 2T Šy0N2yYŠyúI-f ŘdzŠ ŘłtEŠy0Š I-0úłłúłŠā úKl-ú ly0tdzŘŠ
 LjNŠLJl-I-Nł-úł2y 2T tKl-āŠ L I-yŘ LL 9y0N2yYŠyúI-f {łúŠ !āāŠāYŠyúā 09{ !āúT ly0ŠāúłEł-úł2yā ú2
 Ř20dzYŠyú I-yŘ ādzLJL2Nłú úKŠ ŘdzŠ 0I-NŠ I-0úłłúłŠā I-yŘ ŘŠāłEYT LjNŠLJl-I-Nł-úł2y I-yŘ
 lyłJtŠYŠyúI-úł2y 2T I-5dzŠ /I-NŠ tfl-yI I-yŘ Řl-úł lyúŠNłLjNŠúI-úł2y I-yŘ NŠLj2Nłúlyß I-ā NŠljdZłNŠŘ ú2
 ādzLJL2Nłú úKŠ tN2eS0úø

Develop/Prepare Brownfield Plan

čKłā ly0tdzŘŠā úKŠ NŠl-ā2yI-otŠ 02āúā 2T LjNŠLJl-Nłlyß úKŠ .N2øyflŠtŘ tfl-yø čKłā I-0úłłúłē I-fā2
 ly0tdzŘŠā LjN2TŠāāł2yI-f 02āúā NŠtI-úŠŘ ú2 20ŠNāłEKú I-yŘ LjN2eS0ú YI-yI-ŠYŠyú 2T úKŠāŠ
 I-0úłłúłŠā I-ā yŠŠŘŠŘø

Due Care and Response Activities

čKŠ t2ft2ølyß I-0úłłúłŠā øłft oŠ NŠłYōdzNāŠŘ FN2Y t20I-f úI-È 0I-LJúdzNŠ 2yřøø

Additional Response Activities

čKŠāŠ I-0úłłúłŠā I-NŠ ú2 oŠ úI-łŠy ú2 YłúłEł-úŠ ā2dzN0Š YI-úŠNłl-I-fāŠ ly0tdzŘlyßy NŠY20I-fł
 úNłI-yāłJ2NłúI-úł2y ŘāłJ2āI-f I-yŘ 0I-0łfłtlyß 2T 02yúI-YlyI-úŠŘ flft YI-úŠNłl-I-fā úKl-ú ŠE0ŠŠŘ Dw//
 t2wł ŘNŠ0ú 02yúI-0ú ly ādzNłI-0Š ā2łāt I-yŘ 0Kl-I-Nł-0úŠNłłI-úł2y I-yŘ 0ŠNłłT0I-úł2y āl-YłJtlyßø čKŠāŠ
 I-0úłłúłŠā I-fā2 ly0tdzŘŠ LjN2TŠāāł2yI-f 02āúā NŠtI-úŠŘ ú2 ŠyłlyŠŠNłlyß ŘŠāłEYT I-yŘ 20ŠNāłEKú I-yŘ
 LjN2eS0ú YI-yI-ŠYŠyú 2T úKŠāŠ I-0úłłúłŠā I-ā yŠŠŘŠŘø

Other Activities

čKŠ t2ft2ølyß I-0úłłúłŠā øłft oŠ NŠłYōdzNāŠŘ FN2Y t20I-f úI-È 0I-LJúdzNŠ 2yřøø

Implement Brownfield Plan

čKłā ly0tdzŘŠā 02āúā t2wł lyłJtŠYŠyúI-úł2y 2T úKŠ .N2øyflŠtŘ tfl-ył ly0tdzŘlyßē 0dzú y2ú tlyłúŠŘ
 ú2T úKŠ LjNŠLJl-I-Nł-úł2y 2T NŠLj2Nłúā I-yŘ NŠłYōdzNāŠYŠyú NŠljdZŠāúāø čKłā I-0úłłúłē I-fā2 ly0tdzŘŠā
 LjN2TŠāāł2yI-f 02āúā NŠtI-úŠŘ ú2 20ŠNāłEKú I-yŘ LjN2eS0ú YI-yI-ŠYŠyú 2T úKŠāŠ I-0úłłúłŠā I-ā
 yŠŠŘŠŘø

MSF Eligible Activities

čKŠ t2ft2ølyß ŠtEłotŠ I-0úłłúłŠā øłft oŠ 02YłJtŠúŠŘ t2wł úKłā tN2eS0ú I-yŘ I-NŠ úKŠ ādzø2Š0ú 2T
 úKłā tfl-yø ! ādzY-YI-Nè 2T ŠtEłotŠ I-0úłłúłŠā ly0tdzŘŠŘ lyúKłā tfl-ył I-yŘ úKŠ I-āā20łl-úŠŘ

! YŜyŔŜŔ . Nj2øy†λŜŧŔ t fl·y

SăuŭY I-úŠŘ Őžăűă tẏN NŚIY ōdžňăŞY Šyű dzyRŠŃ ũKŚ tflyz I-NŚ LJWZŎRŠŘ ȧy¢I-ōfŜ mŲ

[illegible]

Site Preparation

{áúš tŋšlɔjɪnɪ-úazɣyʌyʊtɔzʀšäy šēðl-ðl-úazɣyɪ-yʀ ŋšlɔjɪ-ðšyšyú ʔt dzyául-otš äzʌä ɪy äštšóúšʀ ɪ-ŋšɪ-ät
 úkš ɪyʊŋšyšyúɪf ʊzäú úz řšäɪɣyɪ-yʀ ɪyául-ft äljšðl-ft ʔtdzyʀl-úazɣä dzyʀšŋ äštšóúšʀ ʊdzʌʀɪyɣä
 ɪ-yʀ ŋzɪɪ-ř ɪ-ŋšɪ-ät fl-yʀ ʊɪɪ-yʌyɪt lɔjɪ-ðšyšyú ʔt ʊɪ-ðlɪɪt ʔš2úšʊkyʌɪɪf ɪyʊšäúɪɪ-úazɣä ɪ-ä
 yšʊšäɪɪ-ŋē ʊz lɔjɪŋšlɔjɪ-ŋš úkš {dzʊšʊú tŋzljšŋūē ʔzŋ ŋšřšʊšʊtɔzɣyšyúɪt ʊŋɪ-yʌljzŋúɪ-úazɣyɪ-yʀ
 řäɪljzäɪɪf ʔt řšðl-úšŋyɣ ʔtɔzʌřä ɪ-yʀ úšyɪljzŋɪ-ŋē šŋzäɪzɣyɪ-yʀ äáúš ʊzyŋŋzɪt ɪ-yʀ řdzäú ʊzyŋŋzɪt ɪ-ä
 yšʊšäɪɪ-ŋē ɕkɪä ɪ-ʊúɪŋūē ɪ-täz ɪyʊtɔzʀšä lɔjɪʔtšäɪzɣyɪf ʊzäúä ŋšfl-úšʀ ʊz šyɣyššŋyɣz řšäɪɣyɪ
 ɪ-yʀ ʔššŋäɪkɪ ɪ-yʀ lɔjɪʔšʊú yɪ-yɪ-šyšyú ʔt úkšäš ɪ-ʊúɪŋúšä ɪ-ä yšššřšʊ

Develop/Prepare Brownfield Plan

ϕKλā l-yŌtūzRŠā ūKŠ NŠl-āzyl-ōtŠ Ōzāūā zT LjNŠLj-l-Nl-yŷ ūKŠ . N2ōyTāŠtR tfl-yϕ ϕKλā l-ŌūlŌlūē l-tāz
l-yŌtūzRŠā LjN2TŠāāilzyl-f Ōzāūā NŠtfl-ūŠR ūz zŌŠNāālEKŪ l-yR LjN2zŠŌŪ Yl-yT-ēŠYŠyū zT ūKŠāŠ
l-ŌūlŌlūlŠā l-ā yŠŠRŠRϕ

Implement Brownfield Plan

ϸΚΛἁ λϣᾠτδζῚῚῚ ᾠῚᾠῚᾠ ῚῚῚ λϣῚῚῚῚῚῚῚῚῚῚῚῚῚῚ ῚῚ ῚῚῚ . ῚῚῚῚῚῚῚῚ ῚῚῚῚῚ λϣᾠτδζῚῚῚ ᾠδῚῚ ῚῚῚ ῚῚῚῚῚῚ
 ᾠῚῚ ῚῚῚ ῚῚῚῚῚῚῚῚῚῚῚῚ ῚῚῚῚῚῚῚῚῚῚ ῚῚῚῚῚῚῚῚῚ ϸΚΛἁ ῚᾠᾠᾠᾠῚῚ ῚῚῚῚ λϣᾠτδζῚῚῚ
 ῚῚῚῚῚῚῚῚῚῚῚ ᾠῚῚῚῚῚῚ ῚῚ ῚᾠῚῚῚῚῚῚῚ ῚῚῚ ῚῚῚῚῚῚῚῚ ῚῚῚῚῚῚῚῚῚ ῚῚ ῚῚῚῚῚῚ ῚᾠᾠᾠᾠῚῚ ῚῚ
 ῚῚῚῚῚῚῚῚ

2.3 Estimate of Captured Taxable Value and Tax Increment Revenues (Section 13(2)(c))

[illegible][illegible]

M0 4K\$ tfl-y l-äadzYŠä WŠYödzNäŠYŠyú T2W l-ft ŠtšltofŠ Ō2äüä ly'úKŠ l-Y2dzyú 2T
pMšdpypšmšpššš šyŌfdzŘlyš Ō2yúlyššyŌëš

Tax Capture for This Plan (15 Year Plan)								
		Total		Brownfield				
School Capture	a lfttEŠ wtŰŠ	Capture	Reimburse	Authority	State BRF	LBRF		
{0K22t hLŠIŰI·y3 cI·È	мyллл	рнĭcot	р нĭomф	п		нĭomф		
{ŰI·ŰŠ 9RḃḃI·ŰI·2Y·cI·È ḃ{9CŰ	сллл	рнĭсфс	р пŰоус	п	р поŰфно	р пŰоус		
School Total	24.0000	\$ 105,333	\$ 30,705	\$ -	\$ 43,923	\$ 30,705		
Local Capture	a lfttEŠ wtŰŠ							
/Lĭ,	мoмттп	мĭпурĭфтп	упĭoот	мрмĭнрт		пууĭоул		
/bĭ, l{5 ht9w	ллфpc	млĭтум	сĭмлп	мĭлфт		oĭрпо		
/bĭ, l{5 {t9/ 95	oŰоппо	оттĭмнс	нмпĭтфн	оуĭоуу		мноĭфпс		
I {whb /[Lbĕhb a !	лнлтл	ноĭопо	моĭнфр	нĭотс		tĭстн		
{/I {LbYlbd C {b5	мфртсс	мттĭтуу	млмĭнрф	муĭлфт		руĭпон		
{/I hh[/w!Cĭ //	ннлтл	нррфум	мпрĭтфп	нĭлрс		упĭмом		
2 ! ,b9 /bĭ, ht9w	рĭслфф	сонĭсмм	ослĭопп	спĭффо		нлтĭфмп		
2 ! ,b9 /h {bĭ,	лфунф	ммлĭуоф	соĭмну	ммĭнун		осĭнну		
2 ! ,b9 /ĭ, t!wY{	лнппп	нтĭроу	мрĭсуп	нĭуло		фĭлрм		
2 ! ,b9 /ĭ, {!C9ĭ,	лфору	млрĭрнт	слĭмло	млĭтпн		опĭсуо		
2 /w9{! 9b I !b/9	мфутс	ннпĭмор	мнтĭсрс	ннĭумр		тоĭссп		
Captured Total	30.4313	\$ 3,431,642	\$ 1,954,494	\$ 349,305	\$ -	\$ 1,127,844		
ĕ2ŰIŰt ! ḃ2ŰŠ	58.8291	oĭрoсĭфтс	мĭфурĭмфф	онфĭолр	поĭфно	мĭмрĭрпф		

! ff NŠYōdzNāSYŠyūā I-dzúK2NāIŠR dzyRŠN ūKlā tfl-yākI-ft oS 320ŠNŷŠR oē ūKŠ wŠYōdzNāSYŠyū
 ! 3NŠSYŠyū wŠYōdzNāSYŠyūā dzyRŠN ūKŠ wŠYōdzNāSYŠyū ! 3NŠSYŠyū āKl-ft y2ú ŠEÖŠŠR
 ūKŠ Ō2āú 2T Št3lōtS I-Ōúλ0úāŠā LJŠNYūúŠR dzyRŠN ūKlā tfl-y

! yfŠāā 2úKŠNūāŠ I-3NŠŠR dzLJ2yōē ūKŠ 5ŠŌŠt2LJŠNŠ ūKŠ ! dzúK2Nāúē I-yR ūKŠ {úI-úS 2T
 a l0Kl3I-yŠ ūKŠ ! dzúK2Nāúē āKl-ft y2ú l-yōdzN I-yē y2úS 2N ōzyRŠR l-yRŠōúŠRyŠāā ú2 Tl-yōŠ ūKŠ
 LdzNlJ2āŠā 2T ūKlā tfl-y

2.10 Local Brownfield Revolving Fund (“LBRF”) (Section 8; Section 13(2)(m))

ϕKŠ ! dzúK2Nāúē Kl-ā ŠāúI-ōtāKŠR I- [20I-ft .N20yTŠtR wŠŌ2t0ly3 CdzYR ó[.wCúϕ ϕKŠ [.wC 0lft
 Ōzyāāú 2T I-ft ūI-ē l-yōNŠYŠyū NŠŌŠydzŠā I-dzúK2NāIŠR ū2 oS ŌI-LJúdzNŠR I-yR RŠLJ2āLŠR l-yūKŠ
 [.wC I-ā āLJŠŌlTŠR l-y {ŠŌú2y moópú 2T ! Ōú oymŠ dzyRŠN ūKlā tfl-y I-yR I-yē 2úKŠN LJtI-y 2T ūKŠ
 ! dzúK2Nāúē Lú YI-ē I-fā2 l-yŌtRŠR TdzyRā I-LJLJN2LJNāI-ūŠR 2N 2úKŠN ōlāŠ YI-RŠ I-ŌI-ltI-ōtS TlJ2Y
 Ldzōtā 2N LJNāŌI-ūS ā2dzNŌŠā

ϕKŠ I-Y2dzyú 2T ūI-ē l-yōNŠYŠyū NŠŌŠydzŠ I-dzúK2NāIŠR T2N ŌI-LJúdzNŠ I-yR RŠLJ2āLŠR l-yūKŠ [.wC lā
 ŠāúYI-ūŠR I-ú BmMpyIpnϕ ! ff TdzyRāš lT I-yēŠ RŠLJ2āLŠR l-yūKŠ [.wC āKl-ft oS dzāŠR l-y
 I-ŌŌNŪI-yōŠ ōlūK {ŠŌú2y 2T ! Ōú oym

2.11 Brownfield Redevelopment Fund (Section 8a; Section 13(2)(m))

ϕKŠ ! dzúK2Nāúē āKl-ft LJI-ē ū2 ūKŠ 5ŠLJI-NŪYŠyú 2T ϕNŠI-ādzNē I-ú tŠI-āú 2yŌŠ I-yŷdzI-ftē I-yI-Y2dzyú
 ŠljdzI-ft ū2 pñ 2T ūKŠ ūI-ēŠā tŠŌlŠR dzyRŠN ūKŠ āúI-ūS ŠRdzŌI-ū2yūI-ēŠ mϕϕo t ! oomŠ a / [
 HMMϕлm ū2 HMMϕлcŠ ūKl-ú I-NŠ ŌI-LJúdzNŠR dzyRŠN ūKlā tfl-yT2N dzLJ ū2 ūKŠ TlNāú ūŌŠyŷēπfŌŠ ōhpú
 ēŠI-Nā 2N ūKŠ RdzNlI-ū2y 2T ŌI-LJúdzNŠ 2T ūI-ē l-yōNŠYŠyū NŠŌŠydzŠā T2N ŠI-ŌK Št3lōtS LJN2LJŠNūē
 l-yŌtRŠR l-yūKlā tfl-y lT ūKŠ ! dzúK2Nāúē LJI-ēā I-Y I-Y2dzyú ŠljdzI-ft ū2 pñ 2T ūKŠ ūI-ēŠā tŠŌlŠR
 dzyRŠN ūKŠ āúI-ūS ŠRdzŌI-ū2yūI-ēŠ mϕϕo t ! oomŠ a / [HMMϕлm ū2 HMMϕлcŠ 2yI- LJI-NŌŠt 2T
 Št3lōtS LJN2LJŠNūē ū2 ūKŠ 5ŠLJI-NŪYŠyú 2T ϕNŠI-ādzNē dzyRŠN {ŠŌú2y moóomn 2T ! Ōú oymŠ ūKŠ
 LJŠNŌŠyŷI-3S 2T t2ŌI-ft ūI-ēŠā tŠŌlŠR 2yūKl-ú LJI-NŌŠt I-yR dzāŠR ū2 NŠYōdzNāS Št3lōtS I-Ōúλ0úāŠā
 T2N ūKŠ tN2S0ú dzyRŠN ūKlā tfl-yākI-ft y2ú ŠEÖŠŠR ūKŠ LJŠNŌŠyŷI-3S 2T t2ŌI-ft ūI-ēŠā tŠŌlŠR 2y
 ūKl-ú LJI-NŌŠt ūKl-ú Ō2dzfR Kl-ŌS oŠŠydzāŠR ū2 NŠYōdzNāS Št3lōtS I-Ōúλ0úāŠā T2N ūKŠ tN2S0ú
 dzyRŠN ūKlā tfl-y lT ūKŠ pñ 2T ūKŠ ūI-ēŠā tŠŌlŠR dzyRŠN ūKŠ āúI-ūS ŠRdzŌI-ū2yūI-ēŠ mϕϕo t !
 oomŠ a / [HMMϕлm ū2 HMMϕлcŠ 2yūKl-ú LJI-NŌŠt ŌŠNŠ y2ú LJI-lR ū2 ūKŠ 5ŠLJI-NŪYŠyú 2T
 ϕNŠI-ādzNē dzyRŠN {ŠŌú2y moóomn 2T ! Ōú oym

2.12 Other Material that the Authority or Governing Body Considers Pertinent

ϕKŠ 5ŠŌŠt2LJŠN I-yR lūā I-TTlāI-ūŠā āKl-ft Ō2Ylftē ōlūK I-ft I-LJLJŌI-ōtS fl-Ōāš 2NŪl-yōŠāš
 ŠEŠŌdzūŌŠ 2NŪRŠNāš 2N 2úKŠN NŠ3dzI-ū2yā l-YLJ2āŠR oē ūKŠ /lūē 2N I-yē 2úKŠN LJN2LJŠNūē
 ŌzyāúāúdzŠR 320ŠNŷŠyŷI-ft I-dzúK2Nāúē ōlūK NŠāLJŠŌú ū2 ūKŠ {dzōS0ú tN2LJŠNūē I-yR āKl-ft dzāŠ
 ūKŠ {dzōS0ú tN2LJŠNūē l-yI-ŌŌNŪI-yōŠ ōlūK ūKlā tfl-y

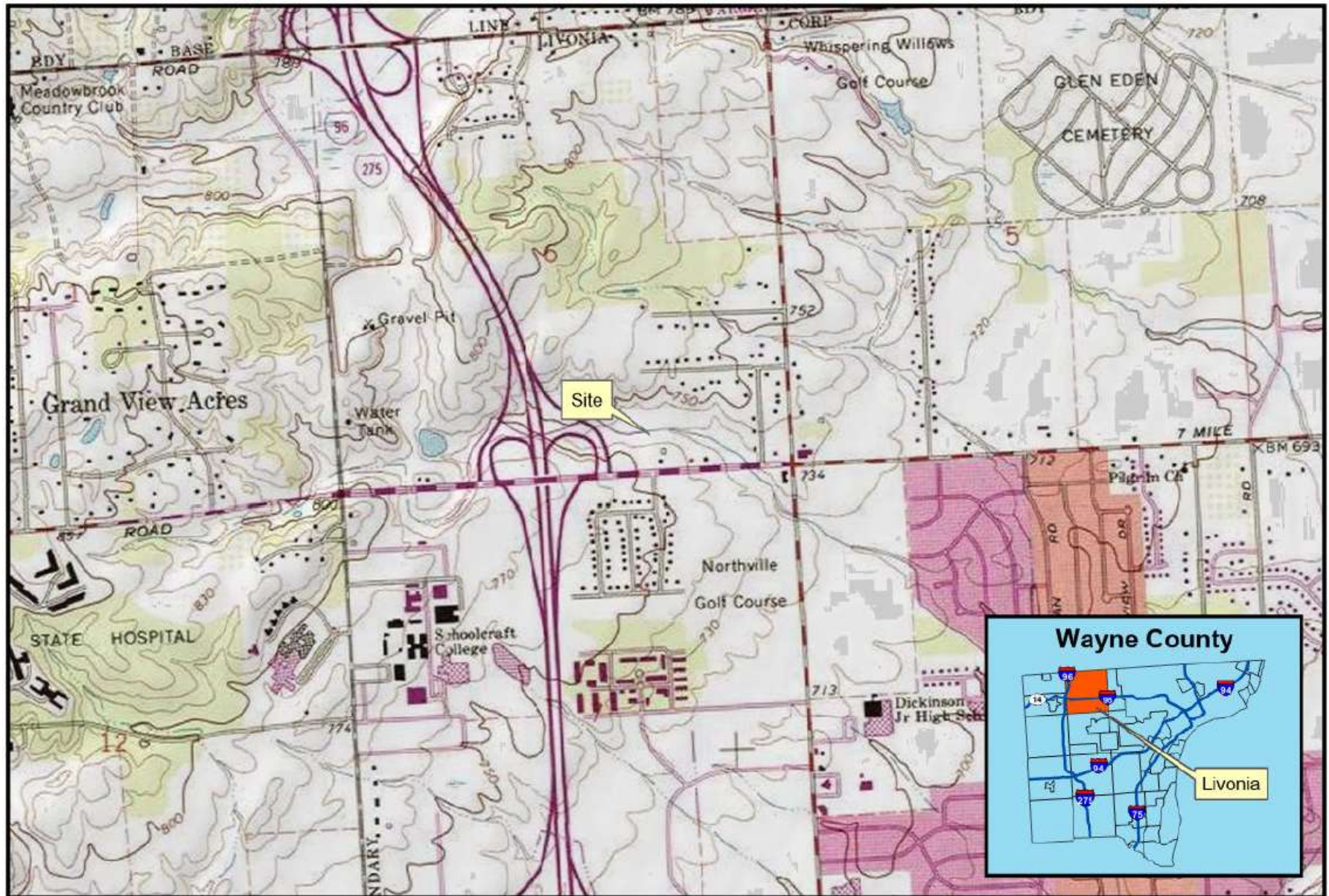
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III. EXHIBITS

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FIGURES

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37640 W 7 Mile Road

Livonia, MI



Created for: Robertson Brothers Homes
Created by: TJW (13104) July 1, 2024

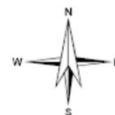


Figure I: Site Location Map



37640 W 7 Mile Road



Livonia, MI



Created for: Robertson Brothers Homes
Created by: TJW (13104) July 1, 2024

Figure 2: Property and Project Boundaries



37640 W 7 Mile Road

Livonia, MI



Created for: Robertson Brothers Homes
Created by: TJW (13104) July 1, 2024

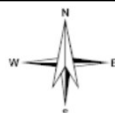


Figure 3: Site Features Map



37640 W 7 Mile Road

Livonia, MI



Created for: Robertson Brothers Homes
Created by: TJW (13104) July 1, 2024

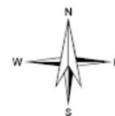


Figure 4: Site Plan

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TABLES

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FINANCIAL ANALYSIS

Table 2 - Total Brownfield Tax Capture

7 & Victor
August 1, 2024

		1.00% Estimated Taxable Value (TV) Increase Rate															
Plan Year		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Calendar Year		2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Base Taxable Value		\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413
Estimated New TV		\$ 7,505,364	\$ 7,580,418	\$ 7,656,222	\$ 7,732,784	\$ 7,810,112	\$ 7,888,213	\$ 7,967,095	\$ 8,046,766	\$ 8,127,234	\$ 8,208,506	\$ 8,290,591	\$ 8,373,497	\$ 8,457,232	\$ 8,541,804	\$ 8,627,223	\$ 8,713,495
Incremental Difference (New TV - Base TV)		\$ 6,968,951	\$ 7,044,005	\$ 7,119,809	\$ 7,196,371	\$ 7,273,699	\$ 7,351,800	\$ 7,430,682	\$ 7,510,353	\$ 7,590,821	\$ 7,672,093	\$ 7,754,178	\$ 7,837,084	\$ 7,920,819	\$ 8,005,391	\$ 8,090,810	\$ 8,177,082

School Capture	Millage Rate																
School Operating Tax	18.0000	\$ 125,441	\$ 126,792	\$ 128,157	\$ 129,535	\$ 130,927	\$ 132,332	\$ 133,752	\$ 135,186	\$ 136,635	\$ 138,098	\$ 139,575	\$ 141,068	\$ 142,575	\$ 144,097	\$ 145,635	\$ 147,187
State Education Tax (SET)	6.0000	\$ 41,814	\$ 42,264	\$ 42,719	\$ 43,178	\$ 43,642	\$ 44,111	\$ 44,584	\$ 45,062	\$ 45,545	\$ 46,033	\$ 46,525	\$ 47,023	\$ 47,525	\$ 48,032	\$ 48,545	\$ 49,062
School Total	24.0000																

Local Capture	Millage Rate																
CITY	13.1774	\$ 91,833	\$ 92,822	\$ 93,821	\$ 94,829	\$ 95,848	\$ 96,878	\$ 97,917	\$ 98,967	\$ 100,027	\$ 101,098	\$ 102,180	\$ 103,272	\$ 104,376	\$ 105,490	\$ 106,616	\$ 107,753
CNTY ISD OPER	0.0956	\$ 666	\$ 673	\$ 681	\$ 688	\$ 695	\$ 703	\$ 710	\$ 718	\$ 726	\$ 733	\$ 741	\$ 749	\$ 757	\$ 765	\$ 773	\$ 782
CNTY ISD SPEC ED	3.3443	\$ 23,306	\$ 23,557	\$ 23,811	\$ 24,067	\$ 24,325	\$ 24,587	\$ 24,850	\$ 25,117	\$ 25,386	\$ 25,658	\$ 25,932	\$ 26,210	\$ 26,490	\$ 26,772	\$ 27,058	\$ 27,347
HURON CLINTON MA	0.2070	\$ 1,443	\$ 1,458	\$ 1,474	\$ 1,490	\$ 1,506	\$ 1,522	\$ 1,538	\$ 1,555	\$ 1,571	\$ 1,588	\$ 1,605	\$ 1,622	\$ 1,640	\$ 1,657	\$ 1,675	\$ 1,693
SCH SINKING FUND	1.5766	\$ 10,987	\$ 11,106	\$ 11,225	\$ 11,346	\$ 11,468	\$ 11,591	\$ 11,715	\$ 11,841	\$ 11,968	\$ 12,096	\$ 12,225	\$ 12,356	\$ 12,488	\$ 12,621	\$ 12,756	\$ 12,892
SCHOOLCRAFT CC	2.2700	\$ 15,820	\$ 15,990	\$ 16,162	\$ 16,336	\$ 16,511	\$ 16,689	\$ 16,868	\$ 17,049	\$ 17,231	\$ 17,416	\$ 17,602	\$ 17,790	\$ 17,980	\$ 18,172	\$ 18,366	\$ 18,562
WAYNE CNTY OPER	5.6099	\$ 39,095	\$ 39,516	\$ 39,941	\$ 40,371	\$ 40,805	\$ 41,243	\$ 41,685	\$ 42,132	\$ 42,584	\$ 43,040	\$ 43,500	\$ 43,965	\$ 44,435	\$ 44,909	\$ 45,389	\$ 45,873
WAYNE COUNTY	0.9829	\$ 6,850	\$ 6,924	\$ 6,998	\$ 7,073	\$ 7,149	\$ 7,226	\$ 7,304	\$ 7,382	\$ 7,461	\$ 7,541	\$ 7,622	\$ 7,703	\$ 7,785	\$ 7,868	\$ 7,952	\$ 8,037
WAYNE CTY PARKS	0.2442	\$ 1,702	\$ 1,720	\$ 1,739	\$ 1,757	\$ 1,776	\$ 1,795	\$ 1,815	\$ 1,834	\$ 1,854	\$ 1,874	\$ 1,894	\$ 1,914	\$ 1,934	\$ 1,955	\$ 1,976	\$ 1,997
WAYNE CTY SAFETY	0.9358	\$ 6,522	\$ 6,592	\$ 6,663	\$ 6,734	\$ 6,807	\$ 6,880	\$ 6,954	\$ 7,028	\$ 7,103	\$ 7,180	\$ 7,256	\$ 7,334	\$ 7,412	\$ 7,491	\$ 7,571	\$ 7,652
WCRESA ENHANCE	1.9876	\$ 13,851	\$ 14,001	\$ 14,151	\$ 14,304	\$ 14,457	\$ 14,612	\$ 14,769	\$ 14,928	\$ 15,088	\$ 15,249	\$ 15,412	\$ 15,577	\$ 15,743	\$ 15,912	\$ 16,081	\$ 16,253
Local Total	30.4313																

Non-Capturable Millages	Millage Rate																
ZOO AUTHORITY	0.0992	\$ 691	\$ 699	\$ 706	\$ 714	\$ 722	\$ 729	\$ 737	\$ 745	\$ 753	\$ 761	\$ 769	\$ 777	\$ 786	\$ 794	\$ 803	\$ 811
ART INSTITUTE	0.1986	\$ 1,384	\$ 1,399	\$ 1,414	\$ 1,429	\$ 1,445	\$ 1,460	\$ 1,476	\$ 1,492	\$ 1,508	\$ 1,524	\$ 1,540	\$ 1,556	\$ 1,573	\$ 1,590	\$ 1,607	\$ 1,624
SCHOOL DEBT	4.1000	\$ 28,573	\$ 28,880	\$ 29,191	\$ 29,505	\$ 29,822	\$ 30,142	\$ 30,466	\$ 30,792	\$ 31,122	\$ 31,456	\$ 31,792	\$ 32,132	\$ 32,475	\$ 32,822	\$ 33,172	\$ 33,526
Total Non-Capturable Taxes	4.3978																

Total Tax Increment Revenue (TIR) Available for Capture	\$ 379,329	\$ 383,414	\$ 387,540	\$ 391,708	\$ 395,917	\$ 400,168	\$ 404,462	\$ 408,798	\$ 413,178	\$ 417,602	\$ 422,070	\$ 426,583	\$ 431,140	\$ 435,744	\$ 440,393	\$ 445,089
Total Tax Increment Revenue (TIR) Not Available	\$ 30,648	\$ 30,978	\$ 31,311	\$ 31,648	\$ 31,988	\$ 32,332	\$ 32,679	\$ 33,029	\$ 33,383	\$ 33,740	\$ 34,101	\$ 34,466	\$ 34,834	\$ 35,206	\$ 35,582	\$ 35,961

Footnotes: Amounts provided are estimates based on the assumptions used as of the date of this table. Actual tax payments and reimbursement amounts will vary based on assessed value, tax rates and other factors. This table is provided for illustration purposes only.

FINANCIAL ANALYSIS

Table 2 - Total Brownfield Tax Capture

7 & Victor
August 1, 2024

	Plan Year	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TOTAL	
	Calendar Year	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056		
	Base Taxable Value	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413	\$ 536,413		
	Estimated New TV	\$ 8,800,630	\$ 8,888,636	\$ 8,977,522	\$ 9,067,298	\$ 9,157,971	\$ 9,249,550	\$ 9,342,046	\$ 9,435,466	\$ 9,529,821	\$ 9,625,119	\$ 9,721,370	\$ 9,818,584	\$ 9,916,770	\$ 10,015,938		
Incremental Difference (New TV - Base TV)	\$	8,264,217	\$ 8,352,223	\$ 8,441,109	\$ 8,530,885	\$ 8,621,558	\$ 8,713,137	\$ 8,805,633	\$ 8,899,053	\$ 8,993,408	\$ 9,088,706	\$ 9,184,957	\$ 9,282,171	\$ 9,380,357	\$ 9,479,525		
School Capture	Millage Rate																
School Operating Tax	18.0000	\$ 148,756	\$ 150,340	\$ 151,940	\$ 153,556	\$ 155,188	\$ 156,836	\$ 158,501	\$ 160,183	\$ 161,881	\$ 163,597	\$ 165,329	\$ 167,079	\$ 168,846	\$ 170,631	\$ 4,409,656	
State Education Tax (SET)	6.0000	\$ 49,585	\$ 50,113	\$ 50,647	\$ 51,185	\$ 51,729	\$ 52,279	\$ 52,834	\$ 53,394	\$ 53,960	\$ 54,532	\$ 55,110	\$ 55,693	\$ 56,282	\$ 56,877	\$ 1,469,885	
School Total	24.0000																\$ 5,879,541
Local Capture	Millage Rate																
CITY	13.1774	\$ 108,901	\$ 110,061	\$ 111,232	\$ 112,415	\$ 113,610	\$ 114,816	\$ 116,035	\$ 117,266	\$ 118,510	\$ 119,766	\$ 121,034	\$ 122,315	\$ 123,609	\$ 124,915	\$ 3,228,211	
CNTY ISD OPER	0.0956	\$ 790	\$ 798	\$ 807	\$ 816	\$ 824	\$ 833	\$ 842	\$ 851	\$ 860	\$ 869	\$ 878	\$ 887	\$ 897	\$ 906	\$ 23,420	
CNTY ISD SPEC ED	3.3443	\$ 27,638	\$ 27,932	\$ 28,230	\$ 28,530	\$ 28,833	\$ 29,139	\$ 29,449	\$ 29,761	\$ 30,077	\$ 30,395	\$ 30,717	\$ 31,042	\$ 31,371	\$ 31,702	\$ 819,290	
HURON CLINTON MA	0.2070	\$ 1,711	\$ 1,729	\$ 1,747	\$ 1,766	\$ 1,785	\$ 1,804	\$ 1,823	\$ 1,842	\$ 1,862	\$ 1,881	\$ 1,901	\$ 1,921	\$ 1,942	\$ 1,962	\$ 50,711	
SCH SINKING FUND	1.5766	\$ 13,029	\$ 13,168	\$ 13,308	\$ 13,450	\$ 13,593	\$ 13,737	\$ 13,883	\$ 14,030	\$ 14,179	\$ 14,329	\$ 14,481	\$ 14,634	\$ 14,789	\$ 14,945	\$ 386,237	
SCHOOLCRAFT CC	2.2700	\$ 18,760	\$ 18,960	\$ 19,161	\$ 19,365	\$ 19,571	\$ 19,779	\$ 19,989	\$ 20,201	\$ 20,415	\$ 20,631	\$ 20,850	\$ 21,071	\$ 21,293	\$ 21,519	\$ 556,107	
WAYNE CNTY OPER	5.6099	\$ 46,361	\$ 46,855	\$ 47,354	\$ 47,857	\$ 48,366	\$ 48,880	\$ 49,399	\$ 49,923	\$ 50,452	\$ 50,987	\$ 51,527	\$ 52,072	\$ 52,623	\$ 53,179	\$ 1,374,318	
WAYNE COUNTY	0.9829	\$ 8,123	\$ 8,209	\$ 8,297	\$ 8,385	\$ 8,474	\$ 8,564	\$ 8,655	\$ 8,747	\$ 8,840	\$ 8,933	\$ 9,028	\$ 9,123	\$ 9,220	\$ 9,317	\$ 240,792	
WAYNE CTY PARKS	0.2442	\$ 2,018	\$ 2,040	\$ 2,061	\$ 2,083	\$ 2,105	\$ 2,128	\$ 2,150	\$ 2,173	\$ 2,196	\$ 2,219	\$ 2,243	\$ 2,267	\$ 2,291	\$ 2,315	\$ 59,824	
WAYNE CTY SAFETY	0.9358	\$ 7,734	\$ 7,816	\$ 7,899	\$ 7,983	\$ 8,068	\$ 8,154	\$ 8,240	\$ 8,328	\$ 8,416	\$ 8,505	\$ 8,595	\$ 8,686	\$ 8,778	\$ 8,871	\$ 229,253	
WCRESA ENHANCE	1.9876	\$ 16,426	\$ 16,601	\$ 16,778	\$ 16,956	\$ 17,136	\$ 17,318	\$ 17,502	\$ 17,688	\$ 17,875	\$ 18,065	\$ 18,256	\$ 18,449	\$ 18,644	\$ 18,842	\$ 486,924	
Local Total	30.4313																\$ 7,455,087
Non-Capturable Millages	Millage Rate																
ZOO AUTHORITY	0.0992	\$ 820	\$ 829	\$ 837	\$ 846	\$ 855	\$ 864	\$ 874	\$ 883	\$ 892	\$ 902	\$ 911	\$ 921	\$ 931	\$ 940	\$ 24,302	
ART INSTITUTE	0.1986	\$ 1,641	\$ 1,659	\$ 1,676	\$ 1,694	\$ 1,712	\$ 1,730	\$ 1,749	\$ 1,767	\$ 1,786	\$ 1,805	\$ 1,824	\$ 1,843	\$ 1,863	\$ 1,883	\$ 48,653	
SCHOOL DEBT	4.1000	\$ 33,883	\$ 34,244	\$ 34,609	\$ 34,977	\$ 35,348	\$ 35,724	\$ 36,103	\$ 36,486	\$ 36,873	\$ 37,264	\$ 37,658	\$ 38,057	\$ 38,459	\$ 38,866	\$ 1,004,422	
Total Non-Capturable Taxes	4.3978																\$ 1,077,377
Total Tax Increment Revenue (TIR) Available for Capture	\$	449,832	\$ 454,622	\$ 459,461	\$ 464,347	\$ 469,283	\$ 474,267	\$ 479,302	\$ 484,387	\$ 489,523	\$ 494,710	\$ 499,949	\$ 505,241	\$ 510,585	\$ 515,983	\$ 13,334,628	
Total Tax Increment Revenue (TIR) Not Available	\$	36,344	\$ 36,731	\$ 37,122	\$ 37,517	\$ 37,916	\$ 38,319	\$ 38,725	\$ 39,136	\$ 39,551	\$ 39,970	\$ 40,394	\$ 40,821	\$ 41,253	\$ 41,689	\$ 1,077,377	

FINANCIAL ANALYSIS
Table 3 - Brownfield Plan Reimbursement

7 & Victor
August 1, 2024

	Developer Maximum Reimburse- ment		Proportionality	Actual School & Local Taxes Capture	Actual Local-Only Taxes	Total Actual Capture																				
	State	41%	\$	30,705		\$	30,705																			
	Local	59%	\$	44,495	\$	1,909,999	\$	1,954,494																		
	TOTAL																									
	EGLE	100%	\$	75,200	\$	1,909,999	\$	1,985,199																		
	MSF	0%	\$	-	\$	-	\$	-																		
																			Estimated Total Years of Plan: 15				Estimated Developer Reimbursement \$ 1,985,199			
																							Administrative Fees \$ 349,305			
																							State Brownfield Redevelopment Fund \$ 43,923			
																							Local Brownfield Revolving Fund \$ 1,158,549			
																							Total Capture \$ 3,536,976			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17									
	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043									
Total State Incremental Revenue	\$ 167,255	\$ 169,056	\$ 170,875	\$ 172,713	\$ 174,569	\$ 176,443	\$ 178,336	\$ 180,248	\$ 182,180	\$ 184,130	\$ 186,100	\$ 188,090	\$ 190,100	\$ 192,129	\$ 194,179	\$ 196,250	\$ 198,341									
State Brownfield Redevelopment Fund (3 mils of SET)	\$ 20,907	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 23,016	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
State TIR Available for Reimbursement	\$ 146,348	\$ 169,056	\$ 170,875	\$ 172,713	\$ 174,569	\$ 176,443	\$ 178,336	\$ 180,248	\$ 182,180	\$ 161,114	\$ 186,100	\$ 188,090	\$ 190,100	\$ 192,129	\$ 194,179	\$ 196,250	\$ 198,341									
Total Local Incremental Revenue	\$ 212,074	\$ 214,358	\$ 216,665	\$ 218,995	\$ 221,348	\$ 223,725	\$ 226,125	\$ 228,550	\$ 230,999	\$ 233,472	\$ 235,970	\$ 238,493	\$ 241,041	\$ 243,614	\$ 246,214	\$ 248,839	\$ 251,491									
BRA Administrative Fee 10.0%	\$ 24,278	\$ 21,436	\$ 21,667	\$ 21,899	\$ 22,135	\$ 22,372	\$ 22,613	\$ 22,855	\$ 23,100	\$ 26,418	\$ 23,597	\$ 23,849	\$ 24,104	\$ 24,361	\$ 24,621	\$ -	\$ -									
Local TIR Available for Reimbursement	\$ 187,796	\$ 192,922	\$ 194,999	\$ 197,095	\$ 199,213	\$ 201,352	\$ 203,513	\$ 205,695	\$ 207,899	\$ 207,054	\$ 212,373	\$ 214,643	\$ 216,937	\$ 219,253	\$ 221,592	\$ 248,839	\$ 251,491									
Total State & Local TIR Available	\$ 334,144	\$ 361,979	\$ 365,874	\$ 369,808	\$ 373,782	\$ 377,796	\$ 381,849	\$ 385,943	\$ 390,078	\$ 368,168	\$ 398,473	\$ 402,733	\$ 407,036	\$ 411,382	\$ 415,772	\$ 445,089	\$ 449,832									
DEVELOPER	Beginning Balance																									
DEVELOPER Reimbursement Balance	\$ 1,985,199	\$ 1,766,697	\$ 1,573,775	\$ 1,378,776	\$ 1,181,681	\$ 982,468	\$ 781,115	\$ 577,602	\$ 371,908	\$ 164,009	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
MSF Non-Environmental Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
State Tax Reimbursement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
Local Tax Reimbursement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
Total MSF Reimbursement Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
EGLE Environmental Costs	\$ 75,200	\$ 75,200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
State Tax Reimbursement	\$ 30,705	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
Local Tax Reimbursement	\$ 44,495	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
Total EGLE Reimbursement Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
Local Only Costs	\$ 1,909,999	\$ 143,301	\$ 192,922	\$ 194,999	\$ 197,095	\$ 199,213	\$ 201,352	\$ 203,513	\$ 205,695	\$ 207,899	\$ 164,009	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
Local Tax Reimbursement	\$ 143,301	\$ 192,922	\$ 194,999	\$ 197,095	\$ 199,213	\$ 201,352	\$ 203,513	\$ 205,695	\$ 207,899	\$ 164,009	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
Total Local Only Reimbursement Balance	\$ 1,766,697	\$ 1,573,775	\$ 1,378,776	\$ 1,181,681	\$ 982,468	\$ 781,115	\$ 577,602	\$ 371,908	\$ 164,009	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
Interest Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
State Tax Reimbursement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
Local Tax Reimbursement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
Total Interest Reimbursement Balance	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
Total Annual Developer Reimbursement	\$ 218,501	\$ 192,922	\$ 194,999	\$ 197,095	\$ 199,213	\$ 201,352	\$ 203,513	\$ 205,695	\$ 207,899	\$ 164,009	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
LOCAL BROWNFIELD REVOLVING FUND																										
LBRF Deposits *	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
State Tax Capture	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,705	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -									
Local Tax Capture	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 43,045	\$ 212,373	\$ 214,643	\$ 216,937	\$ 219,253	\$ 221,592	\$ -	\$ -									
Total LBRF Capture	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 73,750	\$ 212,373	\$ 214,643	\$ 216,937	\$ 219,253	\$ 221,592	\$ -	\$ -									

* Up to five years of capture for LBRF Deposits after eligible activities are reimbursed. May be taken from EGLE & Local TIR only.

Footnotes:

Amounts provided are estimates based on the assumptions used as of the date of this table. Actual tax payments and reimbursement amounts will vary based on assessed value, tax rates and other factors. This table is provided for illustration purposes only.

FINANCIAL ANALYSIS
Table 3 - Brownfield Plan Reimbursement

7 & Victor
August 1, 2024

		18	19	20	21	22	23	24	25	26	27	28	29	30	
		2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	TOTAL
Total State Incremental Revenue		\$ 200,453	\$ 202,587	\$ 204,741	\$ 206,917	\$ 209,115	\$ 211,335	\$ 213,577	\$ 215,842	\$ 218,129	\$ 220,439	\$ 222,772	\$ 225,129	\$ 227,509	\$ 5,879,541
State Brownfield Redevelopment Fund (3 mils of SET)		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 43,923
State TIR Available for Reimbursement		\$ 200,453	\$ 202,587	\$ 204,741	\$ 206,917	\$ 209,115	\$ 211,335	\$ 213,577	\$ 215,842	\$ 218,129	\$ 220,439	\$ 222,772	\$ 225,129	\$ 227,509	\$ 5,835,618
Total Local Incremental Revenue		\$ 254,169	\$ 256,874	\$ 259,606	\$ 262,365	\$ 265,152	\$ 267,967	\$ 270,810	\$ 273,681	\$ 276,581	\$ 279,510	\$ 282,469	\$ 285,456	\$ 288,474	\$ 7,455,087
BRA Administrative Fee	10.0%	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 349,305
Local TIR Available for Reimbursement		\$ 254,169	\$ 256,874	\$ 259,606	\$ 262,365	\$ 265,152	\$ 267,967	\$ 270,810	\$ 273,681	\$ 276,581	\$ 279,510	\$ 282,469	\$ 285,456	\$ 288,474	\$ 7,105,782
Total State & Local TIR Available		\$ 454,622	\$ 459,461	\$ 464,347	\$ 469,283	\$ 474,267	\$ 479,302	\$ 484,387	\$ 489,523	\$ 494,710	\$ 499,949	\$ 505,241	\$ 510,585	\$ 515,983	\$ 12,941,400
DEVELOPER	Beginning Balance														
DEVELOPER Reimbursement Balance	\$ 1,985,199	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
MSF Non-Environmental Costs		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
State Tax Reimbursement		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Local Tax Reimbursement		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total MSF Reimbursement Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
EGLE Environmental Costs	\$ 75,200	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 75,200
State Tax Reimbursement		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,705
Local Tax Reimbursement		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 44,495
Total EGLE Reimbursement Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Local Only Costs	\$ 1,909,999	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,909,999
Local Tax Reimbursement		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,909,999
Total Local Only Reimbursement Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Interest Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
State Tax Reimbursement		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Local Tax Reimbursement		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Interest Reimbursement Balance		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total Annual Developer Reimbursement		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,985,199
LOCAL BROWNFIELD REVOLVING FUND															
LBRF Deposits *															
State Tax Capture		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,705
Local Tax Capture		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,127,844
Total LBRF Capture		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,158,549

DEVELOPMENT AND REIMBURSEMENT AGREEMENT

THIS DEVELOPMENT AND REIMBURSEMENT AGREEMENT (the "Agreement") is made as of _____, 2024, between the **CITY OF LIVONIA BROWNFIELD REDEVELOPMENT AUTHORITY**, a Michigan public body corporate (the "LBRA"), whose address is 33000 Civic Center Drive, Livonia, Michigan 48154, and **Robertson Brothers Co.**, a Michigan corporation, whose address is 6905 Telegraph Road, Suite 200, Bloomfield Hills, MI 48301 (the "Developer").

RECITALS

A. The LBRA was created by the City of Livonia (the "City") pursuant to the Brownfield Redevelopment Financing Act, Act 381 of the Public Acts of Michigan of 1996, as amended ("Act 381"), and, pursuant to Act 381, the LBRA has prepared a Brownfield Plan which was duly approved by the City Council of the City (the "Brownfield Plan").

B. The Developer owns a parcel of property in the City whose street address is 37640 W 7 Mile Road, Livonia, MI 48152 (the "Property"). The Property is legally described in the attached Exhibit A. The Property qualifies as a facility as defined in Part 201 of the Michigan Natural Resources and Environmental Protection Act and is therefore considered "Eligible Property" under Act 381.

C. On the Property the Developer has plans to construct approximately one hundred new rental townhouse style residential units. The site will undergo site improvements and subsequent site preparation to support construction of the 100-townhouse style residential units (the "Project"). The Project includes reimbursement of baseline environmental assessment activities at an estimated cost of \$42,500, an additional investigation and Due Care Plan cost of \$17,200, preparation of a Brownfield Plan at an estimated cost of \$15,500, Response Activities at an estimated cost of \$114,500, site preparation at an estimated cost of \$1,541,151, Brownfield Plan Implementation of \$6,000 and a 15% contingency of \$248,348 (the "Improvements"), all as described in the City of Livonia Brownfield Redevelopment Authority Brownfield Plan titled *Act 381 Brownfield Plan for the 7 and Victor Project, 37640 W 7 Mile Road, Livonia, Michigan 48146*, approved by the LBRA Board on _____ (the "Brownfield Plan"), and attached as Exhibit B. The Project and the Improvements will have the effect of assisting in the redevelopment and reuse of the Property, increasing the tax base within the City and otherwise enhancing the economic vitality and quality of life in the City.

D. Act 381 permits the LBRA to capture and use the property tax revenues generated from the incremental increase in property value of a redeveloped brownfield site constituting an "eligible property" under Act 381 to pay or to reimburse the payment of costs of conducting activities that meet the requirements under Act 381 of "eligible activities" (hereinafter "Eligible Costs").

E. By undertaking the Improvements, the Developer will incur Eligible Costs of up to \$1,985,199 (the "Brownfield Plan Costs"), as defined in the Brownfield Plan.

F. In addition to the reimbursement of Developer's Eligible Costs and Brownfield Plan Costs, tax increment revenues will be deposited into the local site remediation revolving fund during the Term of this Agreement.

G. In accordance with Act 381 and subject to the terms of this Agreement, the parties desire to use the property tax revenues that are generated from an increase in the taxable value of the real property resulting from the redevelopment of the Property which the LBRA is entitled to receive (the "Tax

Increment Revenues") to reimburse the Developer for the Eligible Costs and Brownfield Plan Costs and to fund a local site remediation revolving fund pursuant to Act 381.

H. The parties are entering into this Agreement to establish the requirements and procedures for such reimbursement and funding.

TERMS AND CONDITIONS

Therefore, in exchange for the consideration in, and referred to, by this Agreement, the parties agree as follows:

1. Capture of Taxes. During the term of this Agreement, the LBRA shall capture all Tax Increment Revenues from the Property in accordance with the Brownfield Plan and use those Tax Increment Revenues as provided in this Agreement.

2. Submission of Costs. For those Eligible Costs and Brownfield Plan Costs for which the Developer seeks reimbursement from the LBRA, the Developer shall submit to the LBRA periodically, but no more than once per month, following commencement of development of the Project:

- (1) a written statement detailing the costs;
- (2) a written explanation as to why they are Eligible Costs or Brownfield Plan Costs;
- (3) copies of invoices and proof of payment of contractors, engineers or others who provided such services, or, for the Developer's personnel for whose services reimbursement is being sought, detailed time records showing the work performed by such individuals; and
- (4) any other information which may be reasonably required by the LBRA or their respective auditors.

3. Payments.

(a) Ninety percent (90%) of the Tax Increment Revenues (excluding school or state taxes for Eligible Activities that are not pre-approved – they will be paid in accordance with Act 381) received by the LBRA shall be paid to the Developer to reimburse it for Eligible Costs and Brownfield Plan Costs up to a maximum of \$1,985,199. The LBRA shall retain the remaining ten (10%) of Tax Increment Revenues (excluding school or state taxes) for administrative fees and deposits to the local brownfield revolving fund (LBRF). The LBRA shall retain 100% of the Tax Increment Revenues (excluding school or state taxes) for administrative fees and deposits to the LBRF for five (5) years following completion of reimbursement of Developer's Eligible Costs and Brownfield Plan Costs. The LBRA shall have no obligation to reimburse the Developer for Eligible Costs or Brownfield Plan Costs from Tax Increment Revenues captured and received by the LBRA after the winter 2041 taxes. The amount of taxes levied as school or state taxes that will be used to reimburse the Eligible Costs of implementing eligible activities at the Property and Brownfield Plan Costs will be limited to the baseline environmental assessment activities and Brownfield Plan costs pre-approved by statute that are incurred by Developer and approved by the LBRA.

(b) Unless it disputes whether such costs submitted by Developer pursuant to paragraph 2 of this Agreement are Eligible Costs or Brownfield Plan Costs within thirty days of receipt from Developer or the accuracy of such costs, the LBRA shall, pay to the Developer the amounts for which submissions have been made pursuant to paragraph 2 of this Agreement within 30 days after the LBRA Board has

approved such payment provided Tax Increment Revenues have been received from which the submission may be wholly or partially paid and provided further, an unconditional occupancy permit shall have been issued for the Project before the final payment to the Developer. If a partial payment is made by the LBRA because of insufficient Tax Increment Revenues, the LBRA shall make additional payments toward the remaining amount within 30 days of its receipt of additional Tax Increment Revenues until all of the amounts, for which submissions have been made, have been fully paid to the Developer or to the end of the Term, whichever occurs first

4. Adjustments. If, due to an appeal of any tax assessment or reassessment of any portion of the Property or for any other reason the LBRA is required to reimburse any Tax Increment Revenues to the City or any other tax levying unit of government, the LBRA may deduct the amount of any such reimbursement, including interest and penalties, from any amounts due and owing the Developer. If all amounts due the Developer under this Agreement have been fully paid or the LBRA is no longer obligated to make any further payments to the Developer, the LBRA shall invoice the Developer for the amount of such reimbursement and the Developer shall pay the LBRA such invoiced amount within 30 days of the Developer's receipt of the invoice. Amounts invoiced and paid to the LBRA by the Developer pursuant to this paragraph shall be reinstated as Eligible Costs for which the Developer shall have the opportunity to be reimbursed in accordance with the terms, conditions and limitations of this Agreement. Nothing in this Agreement shall limit the right of the Developer to appeal any tax assessment.

5. Development. The Developer shall commence work on the Project as soon as possible after obtaining all necessary approvals for the Project.

6. Reporting. The Developer shall submit a written report to the LBRA following completion of the Project indicating as of such date the number of new jobs located at the Project, if any, the total private investment, the number of residential units constructed, and such other information as may be required by the LBRA for reporting purposes.

7. Interpretation. The Brownfield Plan and this Agreement constitute the entire agreement between the parties as to its subject. This Agreement shall not be amended or modified except in writing signed by the parties. The Agreement shall not be affected by any course of dealing and the waiver of any breach shall not constitute a waiver of any subsequent breach of the same or any other provision.

8. Assignment; Binding Effect. This Agreement and the rights and obligations under this Agreement shall not be assigned or otherwise transferred by any party without the consent of the other party, which shall not be unreasonably withheld, *provided, however*, the Developer may assign its interest in this Agreement to an affiliate without the prior written consent of the LBRA, *provided*, any such assignee shall acknowledge to the LBRA in writing on or prior to the effective date of such assignment its obligations upon assignment under this Agreement, *provided, further*, that the Developer may make a collateral assignment of the Tax Increment Revenues after review of such assignment and consent by LBRA's legal counsel and approval of the LBRA's Executive Director. As used in this paragraph, "affiliate" means any corporation, company, partnership, limited liability company, trust, sole proprietorship or other individual or entity which (a) is owned or controlled by the Developer, (b) owns or controls the Developer or (c) is under common ownership or control with the Developer. This Agreement shall be binding upon any successors or permitted assigns of the parties.

9. Term. It is understood and agreed that the reimbursement obligation of the LBRA under this Agreement shall commence with taxes collected beginning with the Summer 2027 tax bill (the "Commencement Date") and shall be satisfied with the Tax Increment Revenues collected after the

Commencement Date and otherwise available under the Brownfield Plan. The reimbursement obligation of the LBRA shall terminate upon the payment of all outstanding reimbursement requests up to \$3,536,976 but in no event later than Tax Increment Revenues collected through the Winter 2041.

WHEREFORE, this Agreement has been executed as of the date first written above.

Robertson Brothers Homes

By: _____
Darian Neubecker, President

**CITY OF LIVONIA BROWNFIELD
REDEVELOPMENT AUTHORITY**

By: _____
Jack Engebretson, Chairperson

CITY OF LIVONIA

By: _____
Maureen Miller Brosnan, Mayor

Attest: _____
Lori Miller, City Clerk

STATE OF MICHIGAN)
) ss.
COUNTY OF OAKLAND)

The foregoing instrument was acknowledged before me this ____ day of _____ 2024,
by Darian Neubecker, the President of Robertson Brothers Co.

Notary Public, Oakland County, Michigan
My Commission Expires: _____
Acting in Oakland County

STATE OF MICHIGAN)
) ss.
COUNTY OF WAYNE)

The foregoing instrument was acknowledged before me this ____ day of _____ 2024,
by Jack Engebretson, the Chairperson of the City of Livonia Brownfield Redevelopment Authority.

Notary Public, Wayne County, Michigan
My Commission Expires: _____
Acting in Wayne County

STATE OF MICHIGAN)
) ss.
COUNTY OF WAYNE)

The foregoing instrument was acknowledged before me this ____ day of _____ 2024,
by Dennis K. Wright and Susan Nash, the Mayor and City Clerk, respectively, of the City of Livonia.

Notary Public, Wayne County, Michigan
My Commission Expires: _____
Acting in Wayne County

EXHIBIT A

IDENTIFICATION OF PROPERTY

Address: 37640 W 7 Mile Road

Parcel ID: 024-99-0016-007

Legal Description: PART OF SE 1/4 SEC 6 T1S R9E DESC AS BEG S 89D 38M 20S W 630.00 FT AND N 00D 07M 51S W 60.00 FT AND S 89D 38M 20S W 60.00 FT FROM SE COR SEC 6PROC TH S 89D 38M 20S W 557.29 FT TH N 00D 07M 51S W 20.00 FT TH S 89D 38M 20S W 230.00 FT TH N 83D 38M 39S W 70.45 FT TH N 00D 06M 30S W 410.00 FT TH S 83D 16M 00S E 402.72 FT TH S 69D 46M 41S E 42.66 FT TH S 59D 32M 18S E 484.76 FT TH S 00D 07M 51S E 125.12 FT TO POB 6.376 AC SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD

EXHIBIT B
BROWNFIELD PLAN

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ATTACHMENT A

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ATTACHMENT B

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DEVELOPMENT AND REIMBURSEMENT AGREEMENT

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6. Reporting. The Developer shall submit a written report to the LBRA following completion of the Project indicating as of such date the number of new jobs located at the Project, if any, the total private investment, the number of residential units constructed, and such other information as may be required by the LBRA for reporting purposes.

7. Interpretation. The Brownfield Plan and this Agreement constitute the entire agreement between the parties as to its subject. This Agreement shall not be amended or modified except in writing signed by the parties. The Agreement shall not be affected by any course of dealing and the waiver of any breach shall not constitute a waiver of any subsequent breach of the same or any other provision.

8. Assignment; Binding Effect. This Agreement and the rights and obligations under this Agreement shall not be assigned or otherwise transferred by any party without the consent of the other party, which shall not be unreasonably withheld, *provided, however*, the Developer may assign its interest in this Agreement to an affiliate without the prior written consent of the LBRA, *provided*, any such assignee shall acknowledge to the LBRA in writing on or prior to the effective date of such assignment its obligations upon assignment under this Agreement, *provided, further*, that the Developer may make a collateral assignment of the Tax Increment Revenues after review of such assignment and consent by LBRA's legal counsel and approval of the LBRA's Executive Director. As used in this paragraph, "affiliate" means any corporation, company, partnership, limited liability company, trust, sole proprietorship or other individual or entity which (a) is owned or controlled by the Developer, (b) owns or controls the Developer or (c) is under common ownership or control with the Developer. This Agreement shall be binding upon any successors or permitted assigns of the parties.

9. Term. It is understood and agreed that the reimbursement obligation of the LBRA under this Agreement shall commence with taxes collected beginning with the Summer 2027 tax bill (the "Commencement Date") and shall be satisfied with the Tax Increment Revenues collected after the

Commencement Date and otherwise available under the Brownfield Plan. The reimbursement obligation of the LBRA shall terminate upon the payment of all outstanding reimbursement requests up to \$3,536,976 but in no event later than Tax Increment Revenues collected through the Winter 2041.

WHEREFORE, this Agreement has been executed as of the date first written above.

Robertson Brothers Homes

By: _____
Darian Neubecker, President

**CITY OF LIVONIA BROWNFIELD
REDEVELOPMENT AUTHORITY**

By: _____
Jack Engebretson, Chairperson

CITY OF LIVONIA

By: _____
Maureen Miller Brosnan, Mayor

Attest: _____
Lori Miller, City Clerk

STATE OF MICHIGAN)
) ss.
COUNTY OF OAKLAND)

The foregoing instrument was acknowledged before me this ____ day of _____ 2024,
by Darian Neubecker, the President of Robertson Brothers Co.

Notary Public, Oakland County, Michigan
My Commission Expires: _____
Acting in Oakland County

STATE OF MICHIGAN)
) ss.
COUNTY OF WAYNE)

The foregoing instrument was acknowledged before me this ____ day of _____ 2024,
by Jack Engebretson, the Chairperson of the City of Livonia Brownfield Redevelopment Authority.

Notary Public, Wayne County, Michigan
My Commission Expires: _____
Acting in Wayne County

STATE OF MICHIGAN)
) ss.
COUNTY OF WAYNE)

The foregoing instrument was acknowledged before me this ____ day of _____ 2024,
by Dennis K. Wright and Susan Nash, the Mayor and City Clerk, respectively, of the City of Livonia.

Notary Public, Wayne County, Michigan
My Commission Expires: _____
Acting in Wayne County

EXHIBIT A

IDENTIFICATION OF PROPERTY

Address: 37640 W 7 Mile Road

Parcel ID: 024-99-0016-007

Legal Description: PART OF SE 1/4 SEC 6 T1S R9E DESC AS BEG S 89D 38M 20S W 630.00 FT AND N 00D 07M 51S W 60.00 FT AND S 89D 38M 20S W 60.00 FT FROM SE COR SEC 6PROC TH S 89D 38M 20S W 557.29 FT TH N 00D 07M 51S W 20.00 FT TH S 89D 38M 20S W 230.00 FT TH N 83D 38M 39S W 70.45 FT TH N 00D 06M 30S W 410.00 FT TH S 83D 16M 00S E 402.72 FT TH S 69D 46M 41S E 42.66 FT TH S 59D 32M 18S E 484.76 FT TH S 00D 07M 51S E 125.12 FT TO POB 6.376 AC SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD

EXHIBIT B
BROWNFIELD PLAN

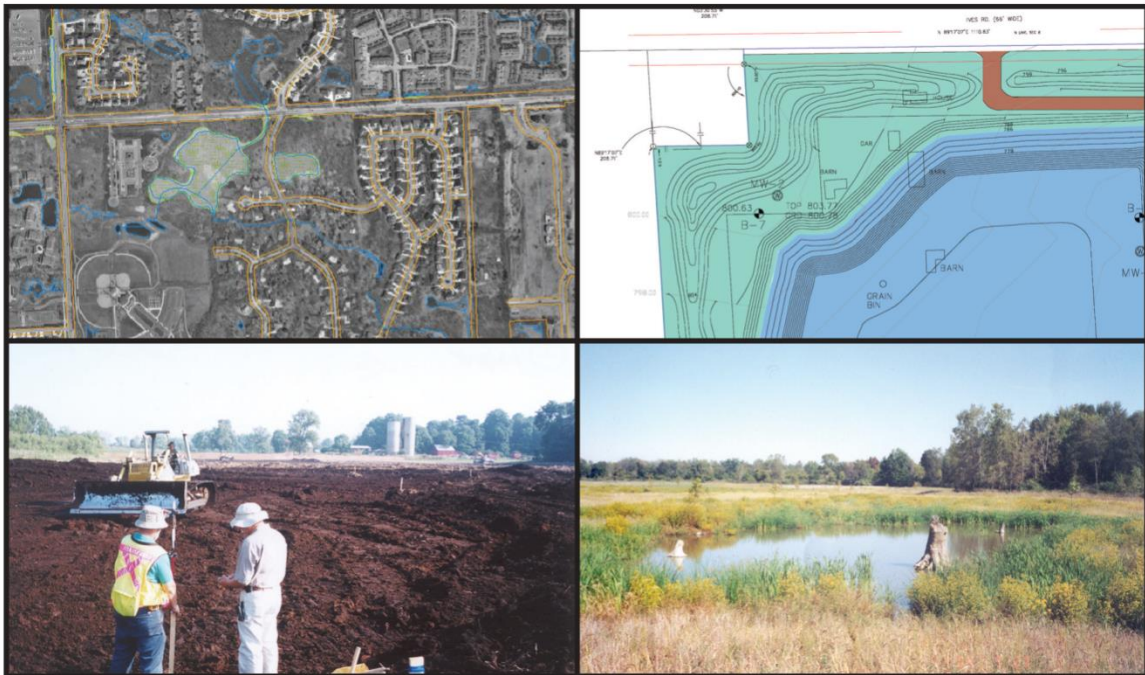
Additional Subsurface Investigation

37640 West 7 Mile Road
Livonia, Michigan

Robertson Brothers Homes

July 12, 2024

ASTI ENVIRONMENTAL



Additional Subsurface Investigation

37640 West 7 Mile Road
Livonia, Michigan

July 12, 2024

Prepared For:

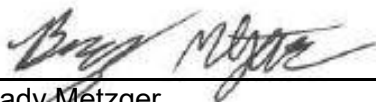
Robertson Brothers Homes
6905 Telegraph Road, Suite 200
Bloomfield Hills, Michigan 48301

Report Prepared By:

ASTI Environmental
10448 Citation Drive, Suite 100
Brighton, Michigan 48116
(810) 225-2800

ASTI Project No. A24-3104.01

Report Prepared by:



Brady Metzger
Environmental Technician

Report Reviewed by:



Jeremy Efros, EP, CPG
Geologist



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- B Laboratory Analytical Reports and Chain-of-Custody Documentation

1.0 INTRODUCTION

ASTI Environmental (ASTI) was retained by Robertson Brothers Homes to conduct an Additional Subsurface Investigation of the property located at 37640 West 7 Mile Road in the City of Livonia, Wayne County, Michigan (Subject Property). The Subject Property is comprised of 6.38 acres of land on one parcel with Parcel ID 024-99-0016-007. The Subject Property is currently undeveloped, and the intended future use is residential. This investigation was prepared for the benefit of Robertson Brothers Homes, and ASTI acknowledges that said party may rely upon the contents and conclusions presented in this report. A Site Location Map is provided as Figure 1.

On March 13, 2024, Robertson Brothers Homes conducted 16 test pits across the Subject Property where fill soils were previously placed to identify the location and thickness of natural peat soils and to assess the composition of the fill soils. These test pits were observed by ASTI staff. In general, the test pits identified fill soils overlying natural peat. The fill soil was generally clay and appeared to be natural soils containing no non-natural materials. However, five of the test pits contained wood and/or inert fill materials, such as concrete, metal, ceramics, and glass, placed between the clay fill soils and the natural peat.

On April 5, 2024, ASTI advanced three soil borings (SB-1 through SB-3) at the Subject Property as part of a Limited Phase II Environmental Site Assessment (ESA). ASTI collected two soil samples from each boring and collected one groundwater sample from a temporary monitoring well installed at boring SB-1. The laboratory analytical results reported selenium in soil and arsenic in groundwater at concentrations exceeding the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Part 201 Generic Residential Cleanup Criteria (GRCC).

The Additional Subsurface Investigation was conducted in accordance with ASTI's proposal dated May 10, 2024.

2.0 PURPOSE AND PROPERTY HISTORY AND INFORMATION

2.1 Purpose

ASTI completed a Phase I ESA of the Subject Property on March 8, 2024. No Recognized Environmental Conditions (RECs) were identified in Phase I ESA; however, the Phase I ESA identified the following Significant Data Gap with respect to the Subject Property:

Data Gap 1. “Between 1972 and 1976, there was a surface disturbance across most of the Subject Property, and it coincided with construction of the I-275 Freeway to the west. The purpose of the disturbance is unknown, but it may have been lowland filling with spoils from nearby freeway construction. Areas of the I-275 Freeway that are nearest to the Subject Property appear to have been farmland. However, the I-275 Freeway is long, and the exact location from where the suspected fill soil was gathered is not known.

The previously completed Phase II ESA was not completed in areas where freeway fill soil is expected to have been placed, so it does not provide sufficient insight into the quality of the suspected fill soil.

An assessment of suspected fill soil can be performed to further reduce environmental risk.”

The Limited Phase II ESA was conducted to assess the Significant Data Gap at the Subject Property. However, the Limited Phase II ESA did not assess the upper four feet of soil, which ASTI observed to contain trace amounts of debris (brick and concrete) in borings SB-2 and SB-3. The objective of this Additional Subsurface Investigation was to delineate metal impacts in soil and to evaluate if shallow soils present a direct contact exposure risk to receptors at the Subject Property.

2.2 Historical Uses of the Subject Property

Based on the information reviewed during the Phase I ESA, the Subject Property was developed with a dwelling, outbuildings, and farmland as early as 1937. Agricultural use included a relatively small area of fruit trees around the dwelling on the west portion of the

Subject Property. By 1967, the outbuildings were removed, and two additional dwellings were constructed. A surface disturbance was observed in aerial photographs taken in 1972 and 1976 spanning across most of the Subject Property that coincided with construction of the I-275 Freeway to the west. The nature of the disturbance is unknown, but it may have been caused by lowland filling with spoils from nearby freeway construction. The three dwellings were demolished between 1997 and 1999, and the Subject Property has been vacant grass-covered or wooded land since that time.

2.3 Current Uses of the Subject Property

The Subject Property is currently undeveloped land with no obvious use.

2.4 Existing Infrastructure Features

No structures are present on the Subject Property. Potable water, sewerage, and storm sewers are available to the Subject Property through the City of Livonia. Electrical and natural gas utilities are also available to the Subject Property through DTE Energy.

3.0 SAMPLING LOCATIONS

On June 12, 2024, ASTI advanced 26 soil borings, SB-2 (1) through SB-2 (13) and SB-3 (1) through SB-3 (4), at the Subject Property. The soil borings were advanced to depths of up to 12 feet below ground surface (bgs) using a direct-push Geoprobe® drill rig. Groundwater was encountered in soil borings SB-2 and SB-3 at various depths ranging from 6.5 to 11 feet bgs. A Sample Location Map is provided as Figure 2. Boring/sample identifications, boring/sample locations, and depths were as follows:

Boring/Sample ID	Boring/Sample Location	Depth of Boring (bgs)
SB-2 (1)	Replicate boring at previous SB-2 location to vertically delineate impacts	8 feet
SB-2 (2)	10 feet north of previous SB-2 location to horizontally delineate impacts	8 feet
SB-2 (3)	10 feet east of previous SB-2 location to horizontally delineate impacts	8 feet
SB-2 (4)	10 feet south of previous SB-2 location to horizontally delineate impacts	8 feet
SB-2 (5)	10 feet west of previous SB-2 location to horizontally delineate impacts	8 feet
SB-2 (6)	20 feet north of previous SB-2 location to horizontally delineate impacts	8 feet
SB-2 (7)	20 feet northeast of previous SB-2 location to horizontally delineate impacts	8 feet
SB-2 (8)	20 feet east of previous SB-2 location to horizontally delineate impacts	8 feet
SB-2 (9)	20 feet southeast of previous SB-2 location to horizontally delineate impacts	8 feet
SB-2 (10)	20 feet south of previous SB-2 location to horizontally delineate impacts	12 feet
SB-2 (11)	20 feet southwest of previous SB-2 location to horizontally delineate impacts	8 feet
SB-2 (12)	20 feet west of previous SB-2 location to horizontally delineate impacts	8 feet
SB-2 (13)	20 feet northwest of previous SB-2 location to horizontally delineate impacts	8 feet
SB-3 (1)	Replicate boring at previous SB-3 location to vertically delineate impacts	12 feet
SB-3 (2)	10 feet north of previous SB-3 location to horizontally delineate impacts	8 feet
SB-3 (3)	10 feet east of previous SB-3 location to horizontally delineate impacts	12 feet
SB-3 (4)	10 feet south of previous SB-3 location to horizontally delineate impacts	8 feet

Boring/Sample ID	Boring/Sample Location	Depth of Boring (bgs)
SB-3 (5)	10 feet west of previous SB-3 location to horizontally delineate impacts	12 feet
SB-3 (6)	20 feet north of previous SB-3 location to horizontally delineate impacts	12 feet
SB-3 (7)	20 feet northeast of previous SB-3 location to horizontally delineate impacts	12 feet
SB-3 (8)	20 feet east of previous SB-3 location to horizontally delineate impacts	12 feet
SB-3 (9)	20 feet southeast of previous SB-3 location to horizontally delineate impacts	12 feet
SB-3 (10)	20 feet south of previous SB-3 location to horizontally delineate impacts	12 feet
SB-3 (11)	20 feet southwest of previous SB-3 location to horizontally delineate impacts	12 feet
SB-3 (12)	20 feet west of previous SB-3 location to horizontally delineate impacts	8 feet
SB-3 (13)	20 feet northwest of previous SB-3 location to horizontally delineate impacts	12 feet

4.0 SAMPLE COLLECTION PROCEDURES

With the drill rig, soil was extracted from the ground in pre-cleaned, 4-foot-long, acetate liners. Soil encountered during field activities was classified by ASTI's field personnel, examined for visual and/or olfactory evidence of impact, and screened using a photoionization detector (PID), with notes recorded in a field logbook. Prior to sampling, the PID was calibrated to manufacturer specifications using 100 parts per million (ppm) isobutylene calibration gas. All down-hole equipment was decontaminated using an Alconox® wash and clean water rinse prior to and between borings to minimize the risk of cross contamination of the samples.

ASTI collected two soil samples from each soil boring: one sample was collected from the upper two feet of soil, and one sample was collected from the base of the fill soils. The soil samples were collected into laboratory-certified clean, unpreserved, 4-ounce glass jars and submitted to Merit Laboratories Inc. (Merit) in East Lansing, Michigan under standard chain-of-custody procedures. Soil samples from the 20-foot offset borings were submitted to the laboratory on hold for analyses, pending the results from the replicate and 10-foot offset borings.

The soil samples were analyzed for the Michigan 10 Metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver, zinc) by US Environmental Protection Agency (EPA) Methods 6020A and 7471B. Soil samples reported with concentrations of lead greater than 75,000 micrograms per kilogram ($\mu\text{g}/\text{kg}$) were additionally analyzed for fine and coarse lead fractions. Soil samples reported with concentrations of total chromium greater than 18,000 $\mu\text{g}/\text{kg}$ were additionally analyzed for hexavalent chromium.

For quality assurance/quality control (QA/QC) purposes, 6 soil duplicate samples were collected: DUP-1S from SB-2 (1) (3-4'), DUP-2S from SB-2 (8) (5-6'), DUP-3S from SB-2 (12) (3-4'), DUP-4S from SB-3 (1) (3-4'), DUP-5S from SB-3 (13) (3-4') and DUP-6S from SB-3 (11) (3-4').

Sample depths, sample location rationale, and analyses are provided in the following table. Only samples that were analyzed are included in this table.

Boring	Sample Matrix	Sample Depth (feet bgs)	Rationale for sample depth	Analysis
SB-2 (1)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		3 - 4'	Shallow sample in fill soils	
SB-2 (2)	Soil	1 - 2'	Shallow sample in fill soils	Michigan 10 Metals
		3 - 4'	Sample at the base of the soil fill containing debris	
SB-2 (3)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		4 – 5'	Sample at the base of the soil fill containing debris	
SB-2 (4)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		7 – 8'	Sample at the base of the soil fill containing debris	
SB-2 (5)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		3 - 4'	Sample at the base of the soil fill containing debris	
SB-2 (6)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		5 – 6'	Sample at the base of the soil fill containing debris	
SB-2 (7)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		3 - 4'	Sample at the base of the soil fill containing debris	
SB-2 (8)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		5 – 6'	Sample at the base of the soil fill containing debris	
SB-2 (9)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		7 – 8'	Sample at the base of the soil fill containing debris	
SB-2 (10)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		3 - 4'	Shallow sample in fill soils	
SB-2 (11)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		3 - 4'	Sample at the base of the soil fill containing debris	
SB-2 (12)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		3 - 4'	Shallow sample in fill soils	
SB-2 (13)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		6 – 7'	Sample at the base of the soil fill containing debris	
SB-3 (1)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		3 – 4'	Shallow sample in fill soils	
SB-3 (2)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		3 - 4'	Shallow sample in fill soils	
SB-3 (3)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		3 – 4'	Shallow sample in fill soils	
SB-3 (4)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		3 - 4'	Shallow sample in fill soils	
SB-3 (5)	Soil	0 – 1'	Shallow sample in fill soils	Michigan 10 Metals
		2 – 3'	Shallow sample in fill soils	
SB-3 (7)	Soil	1 – 2'	Shallow sample in fill soils	Michigan 10 Metals
		3 - 4'	Sample at the base of the soil fill containing debris	

5.0 PATHWAY EVALUATION

The EGLE GRCC under Part 201 of Michigan's Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as Amended (Part 201) were used for comparison to the Subject Property analytical results. The exposure pathway criteria used for comparison to the soil sampling results are the drinking water protection (DWP), groundwater surface water interface protection (GSIP), direct contact (DC), finite source volatile soil inhalation (VSIC), soil volatilization to indoor air inhalation (SVIAI), and particulate soil inhalation (PSI). Additionally, the soil analytical results were compared to EGLE's residential Volatilization to Indoor Air Pathway (VIAP) Screening Levels (SLs) dated February 26, 2024.

6.0 SOIL AND GROUNDWATER CHARACTERISTICS

The following sections describe the encountered soil and groundwater conditions during the April 5, 2024 Limited Phase II ESA and this Additional Subsurface Investigation.

6.1 Soil

During the Limited Phase II ESA, the subsurface lithology soil borings SB-1 through SB-3 was classified as a silty clay that extended as deep as 16 feet bgs, the maximum explored depth of the soil borings. Within the silty clay, intermittent layers of sandy loam, with varying amounts of silt and clay, were observed. Soil fill containing trace amounts (5 percent or less) of brick and concrete was identified in the upper four feet of soil in borings SB-2 and SB-3. Natural peat was observed between 11.25 to 12 feet bgs in borings SB-2 and SB-3. No staining or odors were encountered in the borings. In addition, no VOCs were detected on the PID during screening of the soil cores

During the Additional Subsurface Investigation, the lithology in the soil borings was characterized as a silty clay that extended to at least 12 feet bgs, the maximum explored depth of the soil borings. Within the silty clay, intermittent layers of sandy loam, with varying amounts of silt and clay, were observed. Soil fill containing varying amounts of brick and concrete was identified in the upper 8 feet of soil in boring SB-2 (1) and its surrounding offset borings, as well as in boring SB-3 (7). No staining or odors were encountered in the borings. In addition, no VOCs were detected on the PID during screening of the soil cores.

For more detail on the encountered stratigraphy, refer to the boring logs included as Attachment A.

6.2 Groundwater

Groundwater was encountered in the soil borings at various depths ranging from 6.5 to 12 feet bgs. Groundwater flow direction was not determined as a part of these investigations.

7.0 ANALYTICAL RESULTS

Table 1 presents the laboratory analytical results for the soil samples in comparison to the EGLE Part 201 GRCC and residential VIAP SLs.

The laboratory analytical results reported arsenic in soil samples SB-2 (1) (1-2'), DUP-1S associated with SB-2 (1) (3-4'), SB-2 (2) (1-2'), SB-2 (2) (3-4'), SB-2 (3) (4-5'), SB-2 (4) (1-2'), SB-2 (4) (7-8'), SB-2 (5) (1-2'), SB-2 (5) (3-4'), SB-2 (6) (1-2'), SB-2 (6) (5-6'), SB-2 (7) (1-2'), SB-2 (7) (3-4'), SB-2 (8) (1-2'), SB-2 (9) (1-2'), SB-2 (10) (1-2'), SB-2 (10) (3-4'), SB-2 (11) (1-2'), SB-2 (11) (3-4'), SB-2 (12) (1-2'), SB-2 (12) (3-4'), SB-2 (13) (1-2'), SB-2 (13) (6-7'), SB-3 (7) (1-2'), and SB-3 (7) (3-4') at concentrations exceeding the GRCC for DC and/or GSIP and DWP.

Arsenic was also reported in soil samples SB-3 (1) (1-2'), SB-3 (1) (3-4') and its associated duplicate sample (DUP-4S), SB-3 (2) (1-2'), SB-3 (2) (3-4'), SB-3 (3) (1-2'), SB-3 (3) (3-4'), SB-3 (4) (1-2'), SB-3 (4) (3-4'), and SB-3 (5) (0-1') at concentrations exceeding the GRCC. However, because the soil samples were collected in natural clay soils, the soil analytical results can be compared to the regional background level for arsenic in clay in the Huron-Erie Glacial Lobe from the 2015 Michigan Background Soil Survey, following Part 324.20101(e)(ii) of NREPA Act 451 of 1994 for use of regional background. The regional background concentration of arsenic in clay in the Huron-Erie Glacial Lobe is 22,800 µg/kg. The highest concentration of arsenic reported in these soil samples is 12,600 µg/kg in sample SB-3 (4) (1-2') which is below the regional background. Therefore, the arsenic concentrations in these samples do not represent exceedances of the GRCC or of a release.

Selenium was reported in soil samples SB-2 (4) (1-2'), SB-2 (5) (3-4'), SB-2 (6) (5-6'), SB-2 (9) (7-8'), and SB-2 (13) (6-7') at concentrations exceeding the GRCC for GSIP.

Selenium was also reported in soil samples SB-3 (2) (3-4'), SB-3 (3) (3-4'), and SB-3 (4) (1-2') at concentrations exceeding the GRCC. However, these soil samples were collected in natural clay soils. Again, the soil analytical results can be compared to the 2015 Michigan Background Soil Survey regional background levels. The regional background concentration of selenium in clay in the Huron-Erie Glacial Lobe is 1,200 µg/kg. The highest concentration of selenium reported in these soil samples is 880 µg/kg in sample SB-3 (3) (3-4'), which is

below the regional background concentration. Therefore, the selenium concentrations in these samples do not represent exceedances of the GRCC.

Total chromium was reported in soil samples SB-2 (1) (1-2'), SB-2 (1) (3-4'), DUP-1S, SB-2 (2) (3-4'), SB-2 (3) (4-5'), SB-2 (4) (1-2'), SB-2 (6) (1-2'), SB-2 (6) (5-6'), SB-2 (8) (5-6'), SB-2 (11) (3-4'), SB-2 (12) (1-2'), SB-2 (13) (1-2'), SB-2 (13) 6-7'), SB-3 (1) (3-4'), SB-3 (2) (3-4'), SB-3 (4) (1-2'), SB-3 (4) (3-4'), SB-3 (5) (0-1'), SB-3 (5) (2-3'), and SB-3 (7) (1-2') at concentrations exceeding 18,000 µg/kg, and these samples were further analyzed for hexavalent chromium. No hexavalent chromium was reported in these samples at concentrations at or exceeding the laboratory reporting limits. Therefore, the total chromium results for each of the soil samples collected on the Subject Property were compared to and found to be below the GRCC for trivalent chromium.

Other metals were reported in the soil samples, but at concentrations below the GRCC and VIAP SLs.

Quality Assurance/Quality Control

The laboratory analytical results reported the duplicate soil samples were generally within acceptable ranges of the associated parent samples.

The Laboratory Analytical Reports and chain-of-custody documentation are provided as Attachment B.

8.0 CONCEPTUAL SITE MODEL

The Subject Property was first developed with a dwelling, outbuildings, and farmland as early as 1937. By 1967, the outbuildings were removed, and two additional dwellings were constructed. On aerial photographs taken in 1972 and 1976, a surface disturbance was observed on the Subject Property that coincided with construction of the I-275 Freeway to the west. It is suspected that the surface disturbance on the Subject Property may have been caused by lowland filling with spoils from the nearby freeway construction. The three dwellings were demolished between 1997 and 1999, and the Subject Property has been undeveloped land since that time.

The Phase I ESA dated March 8, 2024, identified a Significant Data Gap, which was that the previously completed February 2013 Phase II ESA was not completed in areas where soil fill from the freeway construction were expected to have been placed.

On March 13, 2024, Robertson Brothers Homes conducted 16 test pits across the Subject Property where fill soils were previously placed to identify the location and thickness of natural peat soils and to assess the fill soils. These test pits were observed by ASTI staff. In general, the test pits identified natural clay fill soils overlying natural peat. Five of the test pits contained wood and/or inert fill materials placed between the clay fill soils and the natural peat.

Based on the soil borings advanced during this investigation, the general subsurface lithology encountered at the Subject Property was characterized as a silty clay with intermittent layers of sandy loam that extended to at least 12 feet bgs. Trace amounts of fill materials, consisting of brick and concrete, were identified in the upper eight feet of soil in borings SB-2 and SB-3 and the surrounding offset borings, which are located on the north and northeast portions of the Subject Property. Natural peat was also observed in borings SB-2 and SB-3, at depths between 11.25 to 12 feet bgs. Groundwater was encountered in the soil borings at various depths ranging from 6.5 and 12 feet bgs.

Arsenic was reported in soil at concentrations exceeding the GRCC for DC and/or DWP and GSIP. Selenium was reported in soil at concentrations exceeding the GRCC for GSIP.

ASTI reviewed the EDR Historical Topo Map Report and compared topography at the Subject Property from the years 1973 and 2019. Refer to Figures 3 and 4 for site features maps with topographic overlays from 1973 and 2019, respectively. Generally, between 1973 and 2019, the surface elevation was raised in the north and northeast portions of the Subject Property. This increase in surface elevation indicates that fill soils were likely placed on the north and northeast areas of the Subject Property. Soil borings SB-2 and SB-3 were also located in the north and northeast areas and fill containing debris (brick and concrete) was observed at and around these borings.

9.0 CONCLUSIONS AND RECOMMENDATIONS

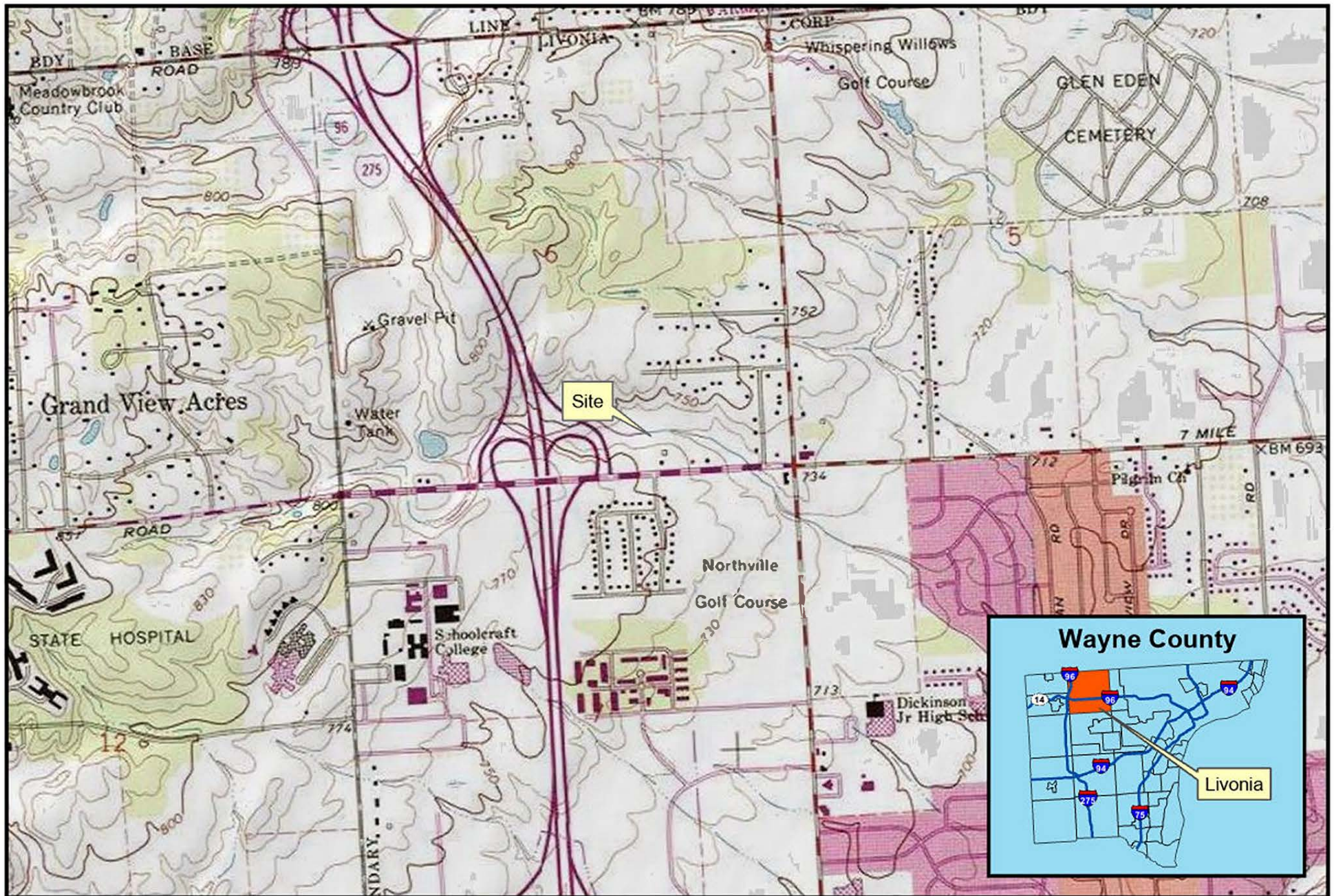
The laboratory analytical results for soil samples collected at the Subject Property reported concentrations of arsenic and selenium in soil exceeding the EGLE Part 201 GRCC. Based on the laboratory analytical results from the Limited Phase II ESA and the Additional Subsurface Investigation, it is ASTI's opinion that the Subject Property is a "facility" as defined by Part 201 of NREPA Act 451.

Purchasers of a "facility" that follow the procedures of Part 201, and have not caused the impact, are not liable for any historical contamination identified. However, in accordance with Part 201, a person who owns a property and has knowledge that it is a facility shall maintain documentation of compliance with section 20107a and shall provide the documentation to the department upon request. Per EGLE requirements, due care obligations start immediately upon purchase or occupancy, but documentation of compliance must be completed no later than 8 months of purchase or occupancy and a copy must be retained at the Subject Property. ASTI intends to prepare a Due Care Plan (DCP) for the contamination identified on the Subject Property for Robertson Brothers Homes.

Because arsenic was reported in soil at concentrations exceeding the GRCC for DC, a direct contact human exposure risk is present for receptors at the Subject Property. ASTI recommends that Robertson Brothers Homes maintain concrete and/or asphalt in proposed paved areas and at least 12 inches of clean soil in proposed greenspace areas as direct contact exposure barriers. These due care response actions in addition to maintenance of the direct contact exposure barriers will be described in more detail in the Due Care Plan.

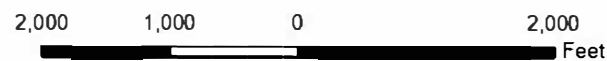
FIGURES

- 1 Site Location Map
- 2 Sample Location Map
- 3 Site Features Map with 1973 Topographic Overlay
- 4 Site Features Map with 2019 Topographic Overlay

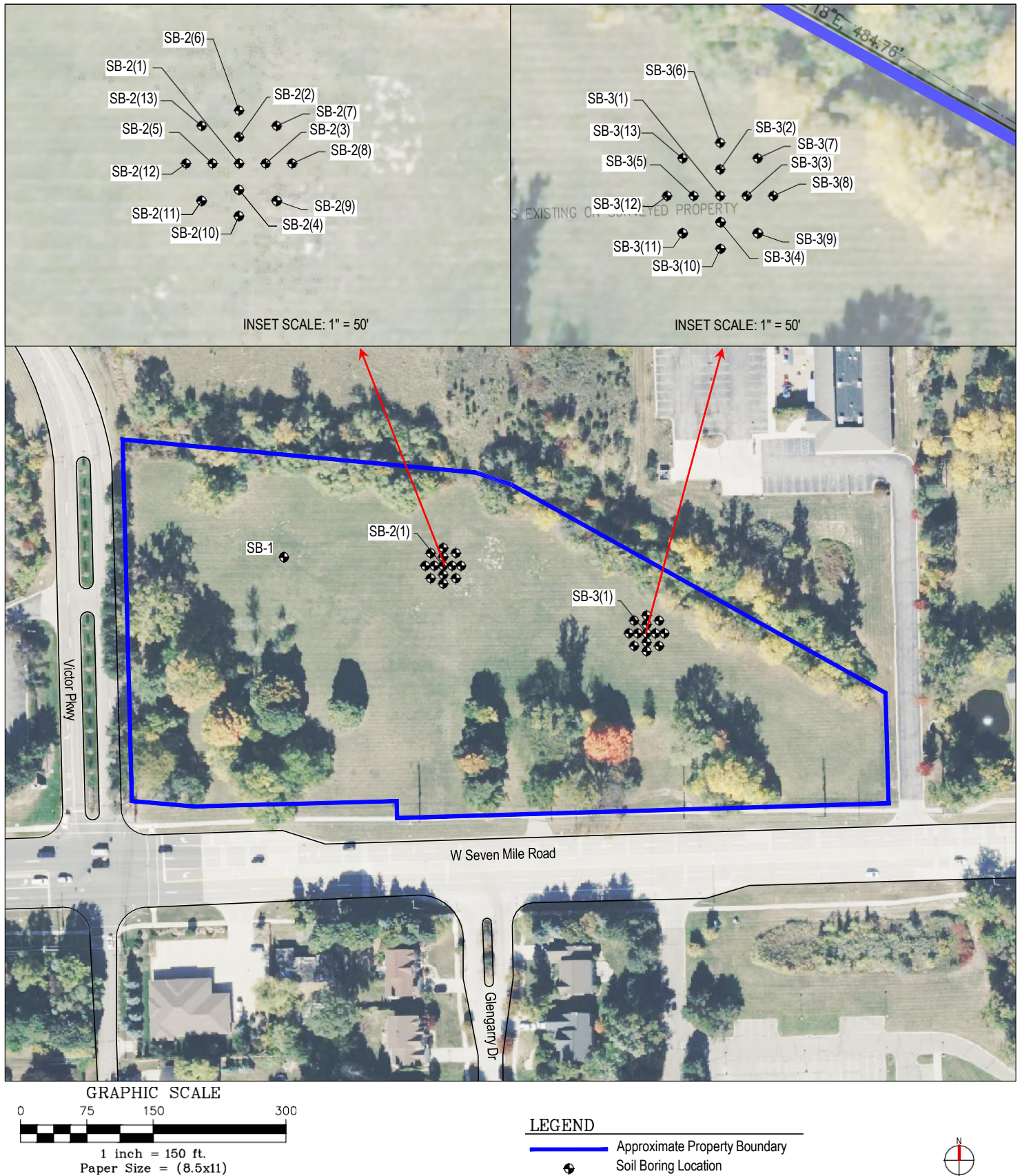


37640 W. 7 Mile Road

Livonia, MI



S:\Project Files\Current and Closed\13000-13999\13100-13199\13104 A24-3104.01 37640 W 7 Mile Livonia\Phase 101 Phase 1- February 2024\CAD\1-13104.dwg 7/2/2024 5:21 PM



37640 W 7 Mile Road

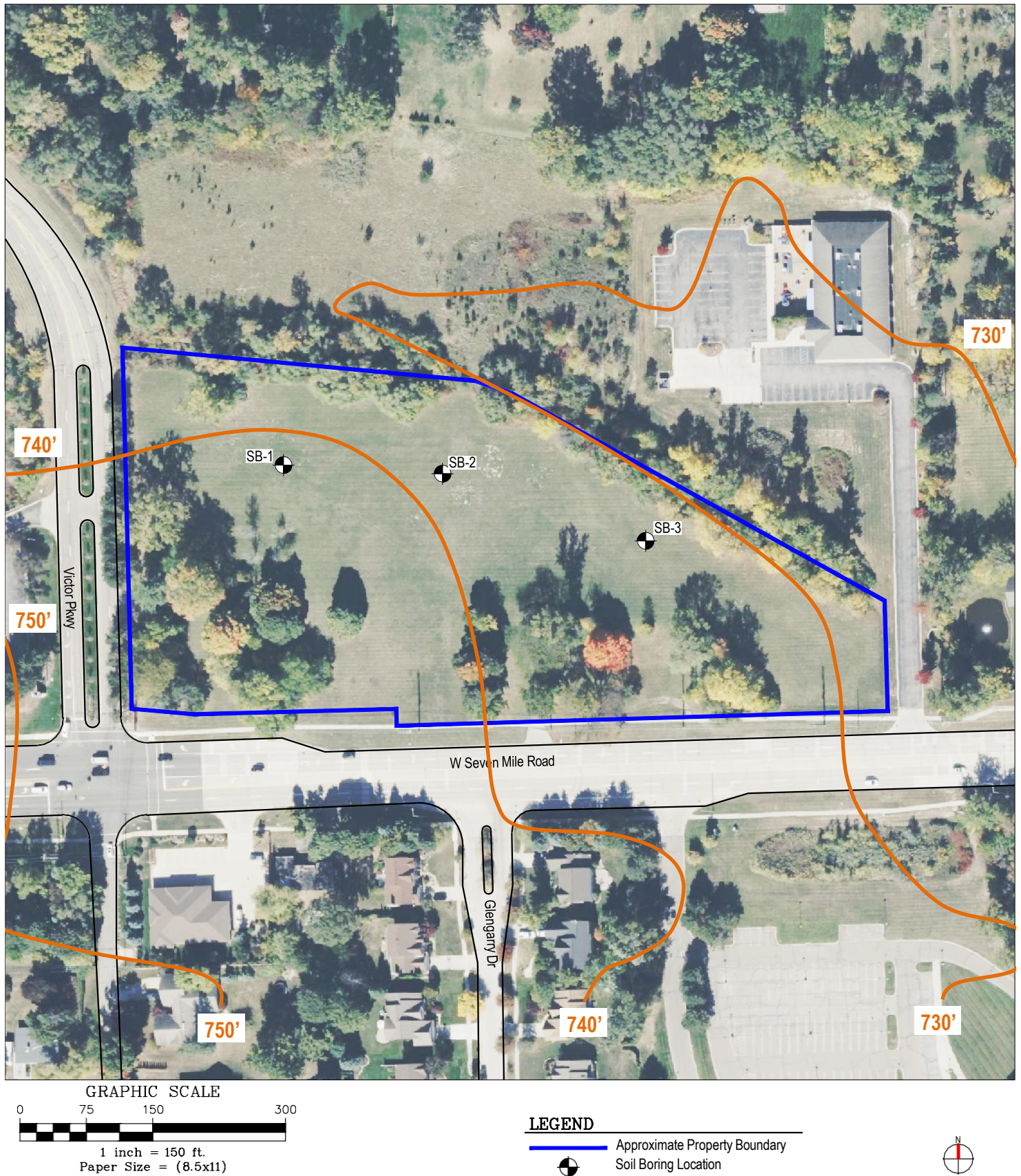
Client: Robertson Brothers Homes

ASTI Project A24-3104.01 / 1-13104, JRN, July 2, 2024

Livonia, MI

Figure 2 - Sample Location Map



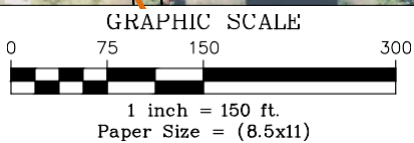
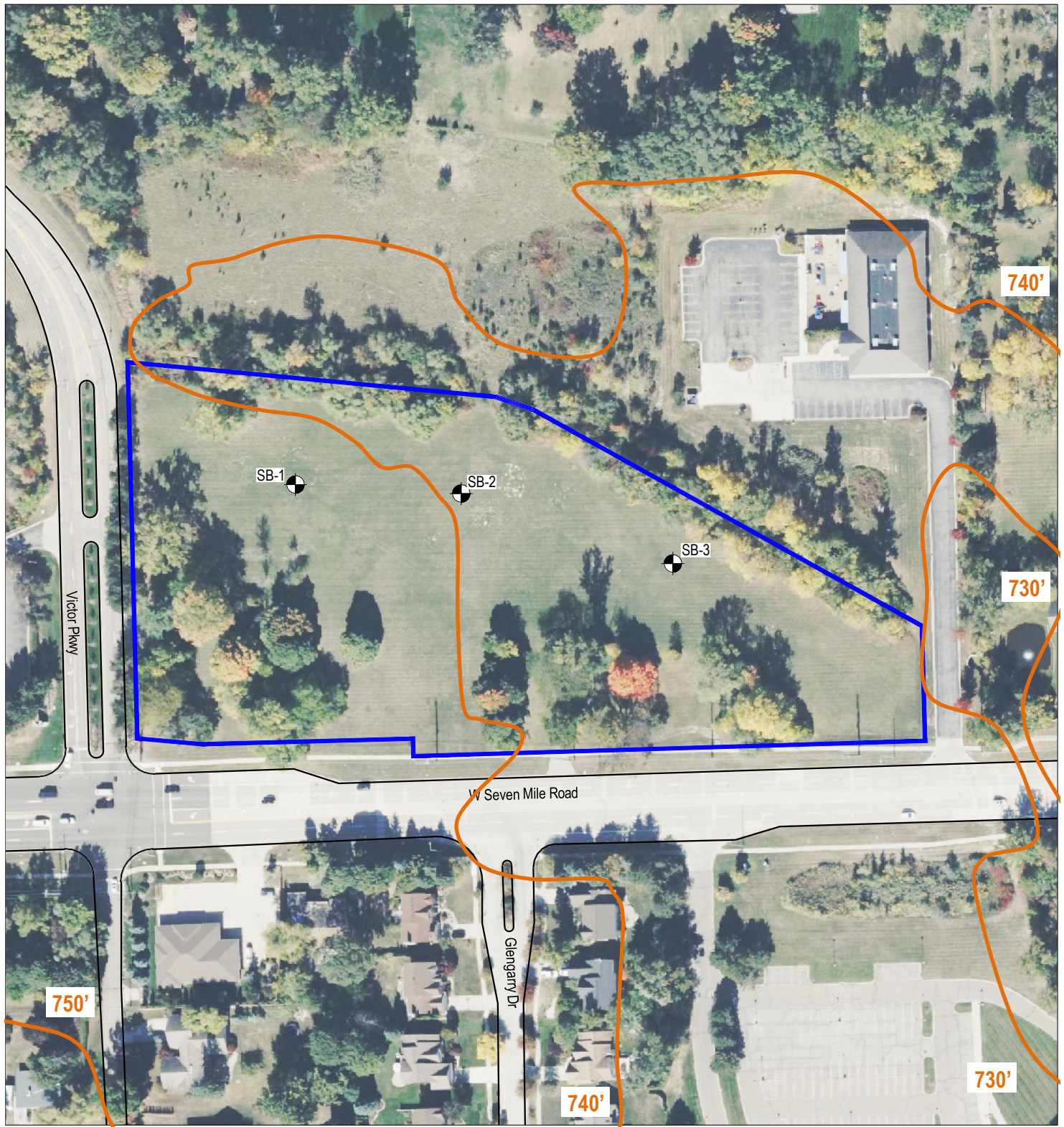


37640 W 7 Mile Road

Client: Robertson Brothers Homes

ASTI Project A24-3104.01 / 1-13104, JRN, April 19, 2024

Figure 3 - Site Features Map with 1973
Topographic Overlay



LEGEND

- Approximate Property Boundary
- Soil Boring Location
- Surface Elevation (feet above sea level)



37640 W 7 Mile Road

Client: Robertson Brothers Homes
ASTI Project A24-3104.01 / 1-13104, JRN, April 19, 2024

Livonia, MI

Figure 4 - Site Features Map with 2019
Topographic Overlay

ASTI
Environmental

TABLES

- 1 Summary of Soil Sample Analytical Results

Table 1 - Summary of Soil Sample Analytical Results
37640 West 7 Mile Road, Livonia, Michigan
ASTI Project No. A24-3104.01

Parameters	Statewide Default Background Levels*	Huron-Erie Glacial Lobe Regional Background Concentrations for Clay Soils	Residential Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Residential Soil Volatilization to Indoor Air Inhalation Criteria*	Residential Finite Source Volatile Soil Inhalation for 5 Meter Source Thickness*	Residential Particulate Soil Inhalation Criteria*	Residential Direct Contact Criteria*	Residential Volatilization to Indoor Air Pathway >g/kg	SB-2 (1) (1-2') 6/12/2024 >g/kg	SB-2 (1) (3-4') 6/12/2024 µg/kg	DUP-1S SB-2 (1) (3-4') 6/12/2024 µg/kg	SB-2 (2) (1-2') 6/12/2024 µg/kg	SB-2 (2) (3-4') 6/12/2024 µg/kg	SB-2 (3) (1-2') 6/12/2024 µg/kg	SB-2 (3) (4-5') 6/12/2024 µg/kg	SB-2 (4) (1-2') 6/12/2024 µg/kg	SB-2 (4) (7-8') 6/12/2024 µg/kg	SB-2 (5) (1-2') 6/12/2024 µg/kg
Metals																			
Arsenic	5,800	22,800	4,600	4,600	NLV	NLV	720,000	7,600	NA	8,610	5,100	6,060	9,830	7,060	5,460	17,500	9,190	6,690	9,640
Barium	75,000	172,000	1,300,000	(G)	NLV	NLV	330,000,000	37,000,000	NA	83,400	92,300	79,800	79,200	92,500	96,900	141,000	77,600	48,400	69,500
Cadmium	1,200	2,000	6,000	(G,X)	NLV	NLV	1,700,000	550,000	NA	<200	<200	<200	270	<200	<200	<200	<200	360	<200
Chromium, Total	18,000 (total)	55,600	1,000,000,000 (D)	(G,X)	NLV	NLV	330,000,000	790,000,000	NA	20,600	24,500	20,200	17,300	19,000	15,700	20,000	20,200	10,300	15,900
Chromium VI	NA	NA	30,000	3,300	NLV	NLV	260,000	2,500,000	NA	<1,100	<1,200	<1,200	~	<1,200	~	<1,200	<1,100	~	~
Copper	32,000	46,900	5,800,000	(G)	NLV	NLV	130,000,000	20,000,000	NA	18,200	19,400	17,700	16,500	15,700	19,100	17,800	17,600	10,500	17,700
Lead	21,000	26,200	700,000	(G,X)	NLV	NLV	100,000,000	400,000	NA	8,580	8,810	10,100	11,000	7,650	6,140	9,680	8,810	21,400	10,500
Mercury, Total	130	500	1,700	50 (M); 1.2	48,000	52,000	20,000,000	160,000	22 (M)	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Selenium	410	1,200	4,000	400	NLV	NLV	130,000,000	2,600,000	NA	<400	<400	<400	<400	<400	<400	<400	420	<400	<400
Silver	1,000	1,400	4,500	100 (M); 27	NLV	NLV	6,700,000	2,500,000	NA	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Zinc	47,000	102,000	2,400,000	(G)	NLV	NLV	ID	170,000,000	NA	50,200	54,800	50,100	55,500	47,600	43,400	55,100	49,200	66,600	47,700

µg/kg - micrograms per kilogram
*Per R299.46, October 12, 2023
**Per VI Guidance Document, updated February 26, 2024
<RL - Not detected. Below the laboratory reporting limit.
ID - Inadequate data to develop criterion.
NA - Not available.
NLV - Hazardous substance is not likely to volatilize under most conditions
D - Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0e+9 ppb.
G - Groundwater Surface Water Interface (GSI) criterion depends on the pH or water hardness, or both,
of the receiving surface water.
M - Calculated criterion is below the analytical target detection limit, therefore, the
criteria defaults to the target detection limit.
X - The Groundwater Surface Water Interface (GSI) criterion shown in the generic cleanup criteria tables is not protective
for surface water that is used as a drinking water source.
PEND - Laboratory results are pending
Bold/highlighted results exceed one or more GRCC
Italicized results exceed one or more criteria, but were collected in natural clay and are below the regional background concentration

Table 1 - Summary of Soil Sample Analytical Results
37640 West 7 Mile Road, Livonia, Michigan
ASTI Project No. A24-3104.01

Parameters	Statewide Default Background Levels*	Huron-Erie Glacial Lobe Regional Background Concentrations for Clay Soils	Residential Drinking Water Protection Criteria*	Groundwater Surface Water Interface Protection Criteria*	Residential Soil Volatilization to Indoor Air Inhalation Criteria*	Residential Finite Source Volatile Soil Inhalation for 5 Meter Source Thickness*	Residential Particulate Soil Inhalation Criteria*	Residential Direct Contact Criteria*	Residential Volatilization to Indoor Air Pathway >g/kg	SB-2 (5) (3-4') 6/12/2024 µg/kg	SB-2 (6) (1-2') 6/12/2024 µg/kg	SB-2 (6) (5-6') 6/12/2024 µg/kg	SB-2 (7) (1-2') 6/12/2024 µg/kg	SB-2 (7) (3-4') 6/12/2024 µg/kg	SB-2 (8) (1-2') 6/12/2024 µg/kg	SB-2 (8) (5-6') 6/12/2024 µg/kg	SB-2 (9) (1-2') 6/12/2024 µg/kg	SB-2 (9) (7-8') 6/12/2024 µg/kg	SB-2 (10) (1-2') 6/12/2024 µg/kg
Metals																			
Arsenic	5,800	22,800	4,600	4,600	NLV	NLV	720,000	7,600	NA	11,100	10,200	7,080	11,700	6,240	6,940	5,730	7,320	4,610	9,220
Barium	75,000	172,000	1,300,000	(G)	NLV	NLV	330,000,000	37,000,000	NA	68,000	94,300	74,200	115,000	82,800	63,700	80,300	56,200	31,700	91,500
Cadmium	1,200	2,000	6,000	(G,X)	NLV	NLV	1,700,000	550,000	NA	390	<200	<200	<200	210	<200	<200	250	<200	240
Chromium, Total	18,000 (total)	55,600	1,000,000,000 (D)	(G,X)	NLV	NLV	330,000,000	790,000,000	NA	17,700	23,700	21,200	16,600	17,600	15,200	34,700	15,200	14,500	17,200
Chromium VI	NA	NA	30,000	3,300	NLV	NLV	260,000	2,500,000	NA	~	<1,100	<1,100	~	~	~	<1,200	~	~	~
Copper	32,000	46,900	5,800,000	(G)	NLV	NLV	130,000,000	20,000,000	NA	19,800	17,300	16,600	18,500	18,900	14,100	12,900	16,400	12,100	15,300
Lead	21,000	26,200	700,000	(G,X)	NLV	NLV	100,000,000	400,000	NA	9,050	9,610	8,820	16,200	8,460	13,800	14,500	24,000	22,000	21,500
Mercury, Total	130	500	1,700	50 (M); 1.2	48,000	52,000	20,000,000	160,000	22 (M)	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Selenium	410	1,200	4,000	400	NLV	NLV	130,000,000	2,600,000	NA	520	<400	580	<400	<400	<400	<400	<400	430	<400
Silver	1,000	1,400	4,500	100 (M); 27	NLV	NLV	6,700,000	2,500,000	NA	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Zinc	47,000	102,000	2,400,000	(G)	NLV	NLV	ID	170,000,000	NA	64,000	52,900	49,200	52,200	49,200	44,000	46,900	49,500	49,300	48,800

µg/kg - micrograms per kilogram

*Per R299.46, October 12, 2023

**Per VI Guidance Document, updated February 26, 2024

<RL - Not detected. Below the laboratory reporting limit.

ID - Inadequate data to develop criterion.

NA - Not available.

NLV - Hazardous substance is not likely to volatilize under most conditions

D - Calculated criterion exceeds 100%, hence it is reduced to 100% or 1.0e+9 ppb.

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37640 West 7 Mile Road, Livonia, Michigan
ASTI Project No. A24-3104.01

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Metals																			
Arsenic	5,800	22,800	4,600	4,600	NLV	NLV	720,000	7,600	NA	8,450	8,830	6,650	8,410	12,700	9,850	10,500	8,950	10,100	7,770
Barium	75,000	172,000	1,300,000	(G)	NLV	NLV	330,000,000	37,000,000	NA	81,700	65,300	116,000	116,000	71,300	88,600	100,000	75,900	106,000	130,000
Cadmium	1,200	2,000	6,000	(G,X)	NLV	NLV	1,700,000	550,000	NA	<200	220	<200	200	230	<200	730	240	<200	<200
Chromium, Total	18,000 (total)	55,600	1,000,000,000 (D)	(G,X)	NLV	NLV	330,000,000	790,000,000	NA	16,200	15,500	18,100	23,800	13,900	19,300	18,500	18,000	19,900	16,000
Chromium VI	NA	NA	30,000	3,300	NLV	NLV	260,000	2,500,000	NA	~	~	<1,100	<1,100	~	<1,100	<1,200	~	<1,200	~
Copper	32,000	46,900	5,800,000	(G)	NLV	NLV	130,000,000	20,000,000	NA	17,400	15,800	19,300	19,500	17,600	18,100	21,800	17,900	17,900	15,000
Lead	21,000	26,200	700,000	(G,X)	NLV	NLV	100,000,000	400,000	NA	12,500	27,000	9,670	9,800	10,400	10,400	10,300	7,990	8,160	9,670
Mercury, Total	130	500	1,700	50 (M); 1.2	48,000	52,000	20,000,000	160,000	22 (M)	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Selenium	410	1,200	4,000	400	NLV	NLV	130,000,000	2,600,000	NA	<400	<400	<400	<400	<400	<400	520	400	<400	<400
Silver	1,000	1,400	4,500	100 (M); 27	NLV	NLV	6,700,000	2,500,000	NA	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Zinc	47,000	102,000	2,400,000	(G)	NLV	NLV	ID	170,000,000	NA	49,200	48,200	54,200	56,200	44,800	54,500	78,700	50,700	47,900	46,800

µg/kg - micrograms per kilogram
*Per R299.46, October 12, 2023
**Per VI Guidance Document, updated February 26, 2024
<RL - Not detected. Below the laboratory reporting limit.
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Metals																			
Arsenic	5,800	22,800	4,600	4,600	NLV	NLV	720,000	7,600	NA	9,650	12,500	11,500	9,270	12,600	6,820	7,630	5,320	6,370	7,740
Barium	75,000	172,000	1,300,000	(G)	NLV	NLV	330,000,000	37,000,000	NA	80,900	98,200	81,400	93,800	89,800	76,400	75,800	79,000	115,000	73,000
Cadmium	1,200	2,000	6,000	(G,X)	NLV	NLV	1,700,000	550,000	NA	270	200	<200	330	250	<200	210	<200	<200	<200
Chromium, Total	18,000 (total)	55,600	1,000,000,000 (D)	(G,X)	NLV	NLV	330,000,000	790,000,000	NA	17,400	19,200	16,100	16,400	18,700	18,700	18,700	20,300	21,400	17,200
Chromium VI	NA	NA	30,000	3,300	NLV	NLV	260,000	2,500,000	NA	~	<1,200	~	~	<1,200	<1,200	<1,100	<1,100	<1,100	~
Copper	32,000	46,900	5,800,000	(G)	NLV	NLV	130,000,000	20,000,000	NA	19,100	22,100	17,200	18,000	19,100	15,200	17,700	16,800	19,600	16,600
Lead	21,000	26,200	700,000	(G,X)	NLV	NLV	100,000,000	400,000	NA	8,940	14,300	8,160	8,600	11,400	11,400	10,800	7,240	9,610	9,930
Mercury, Total	130	500	1,700	50 (M); 1.2	48,000	52,000	20,000,000	160,000	22 (M)	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Selenium	410	1,200	4,000	400	NLV	NLV	130,000,000	2,600,000	NA	<400	560	<400	880	470	<400	<400	<400	<400	<400
Silver	1,000	1,400	4,500	100 (M); 27	NLV	NLV	6,700,000	2,500,000	NA	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Zinc	47,000	102,000	2,400,000	(G)	NLV	NLV	ID	170,000,000	NA	57,700	53,400	45,900	48,900	49,400	46,700	53,500	48,600	52,500	45,600

µg/kg - micrograms per kilogram
*Per R299.46, October 12, 2023
**Per VI Guidance Document, updated February 26, 2024
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ATTACHMENTS

Attachment A
Soil Boring Logs



Boring ID:

SB-1

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: 1-inch

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: PVC

Project Number: A23-3104.01

ASTI Geologist: BTM

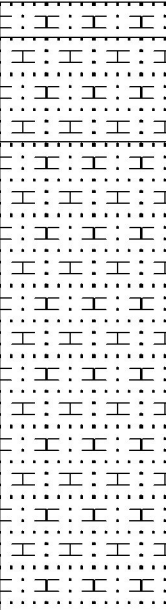
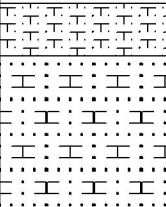
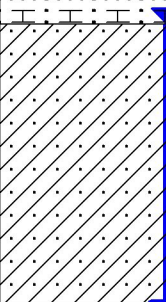
Screen Length: 5 feet

Date Completed: 4/5/24

Total Depth: 16' bgs

Well Depth: 16' bgs

Depth to GW: 12' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery	
0		SILTY CLAY: trace organics, dark brown, medium soft (silty clay)	0	Soil at 4-5'	60	
1		SILTY CLAY: trace organics, dark brown, stiff (silty clay)				
2		SILTY CLAY: brown with orange mottles, stiff (silty clay)	0			
3						
4						
5			0			
6						
7			0			
8		SILTY fine to very coarse SAND: trace fine to coarse grained sand, brown, soft (silty clay)	0	Soil at 8-9'	100	
9						SILTY CLAY: brown with orange mottles, very stiff (silty clay)
10			CLAYEY SAND: brown with orange mottles, wet, loose (sandy clay loam)			0
11						
12			0			
13						
14		0				
15						
16	END OF BORING					

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-2

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 4/5/24

Total Depth: 16' bgs

Well Depth: N/A

Depth to GW: N/A

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SILTY CLAY: trace brick, crushed concrete, stone and wood, dark brown, stiff, fill (silty clay)			60
-1			0		
-2					
-3			0		
-4		SILTY CLAY: trace very fine grained sand and gravel, gray, medium stiff, fill (silty clay)		Soil at 4-5'	60
-5			0		
-6					
-7			0		
-8		SANDY CLAY: trace gravel (clay loam)			100
-9			0		
-10					
-11		PEAT	0	Soil at 11-12'	
-12					
-13		SILTY CLAY: trace very fine to coarse grained sand, gray and brown, soft (silty clay)			100
-14			0		
-15		SILTY very fine to coarse SAND: gray and brown, medium dense (sandy loam)			
-16			0		
		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-3

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 4/5/24

Total Depth: 16' bgs

Well Depth: N/A

Depth to GW: N/A

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SILTY CLAY: trace gravel, organics, and brick, medium stiff, fill (silty clay)			100
-1			0		
-2					
-3			0		
-4		SILTY CLAY: trace very fine grained sand and gravel, brown, medium stiff, fill (silty clay)		Soil at 4-5'	50
-5			0		
-6					
-7			0		
-8					
-9			0		
-10					
-11			0		
-12		PEAT		Soil at 11-12'	50
-13		SILTY CLAY: brown, medium soft (silty clay)	0		
-14		SILTY very fine to very coarse SAND: gray and brown, moist, loose (sandy loam)			60
-15			0		
-16		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-2(1)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 8' bgs

Well Depth: N/A

Depth to GW: 7' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SANDY SILT: topsoil, trace gravel and organics, brown, medium dense, fill (silt loam)	0		100
1		SILTY CLAY: trace very fine to very coarse grained sand, gravel and brick, brown, stiff, fill (silty clay)		Soil at 1-2'	
2			0		50
3		SILTY CLAY: trace very fine to very coarse grained sand and gravel, brown, stiff, fill (silty clay)		Soil at 3-4'	
4			0		50
5					
6			0		50
7		SILTY fine to very coarse SAND: trace clay and gravel, dark brown, wet, loose (sandy loam)			
8		END OF BORING			
Comments:					

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-2(2)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 8' bgs

Well Depth: N/A

Depth to GW: 7.5' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SILTY CLAY: trace very fine to very coarse grained sand, gravel and brick, brown, medium stiff, fill (silty clay)	0		100
1				Soil at 1-2'	
2			0		100
3				Soil at 3-4'	
4		SILTY CLAY: trace gravel, gray, soft, fill (silty clay)	0		100
5					
6			0		100
7					
8		SILTY fine to very coarse SAND: trace clay, dark brown, wet (sandy loam)			
		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-2(3)

Site Address: 37640 West 7 Mile Road

Livonia, MI, 48152

Size: N/A

Client: Robertson Brothers Homes

Driller: ERG

Type: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Screen Length: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Well Depth: N/A

Date Completed: 6/12/24

Total Depth: 8' bgs

Depth to GW: 6.5' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SILTY CLAY: trace very fine to very coarse grained sand, gravel, brick and crushed concrete, brown, stiff, fill (silty clay)	0	Soil at 1-2'	100
1					
2					
3					
4		0	Soil at 4-5'	100	
5					
6		SILTY fine to very coarse SAND: trace organics, dark brown, moist to wet, loose (sandy loam)	0		
7					
8					
END OF BORING					

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture

**Boring ID:****SB-2(4)****Site Address:**

37640 West 7 Mile Road

Livonia, MI, 48152

Size:

N/A

Client: Robertson Brothers Homes**Driller:**

ERG

Type:

N/A

Project Name: Robertson Brothers Homes**Drilling Method:**

Direct Push

Screen Length:

N/A

Project Number: A23-3104.01**ASTI Geologist:**

BTM

Well Depth:

N/A

Date Completed: 6/12/24**Total Depth:**

8' bgs

Depth to GW:

7' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SANDY SILT: topsoil, trace organics, brown, medium dense, fill (silt loam)	0		100
1		SILTY CLAY: trace very fine to very coarse grained sand and gravel, brown, stiff, fill (silty clay)		Soil at 1-2'	
2			0		100
3					
4			0		100
5					
6			0		100
7		SILTY fine to very coarse SAND: trace clay, wood, crushed concrete and brick, brown, wet, loose, fill (sandy loam)		Soil at 7-8'	
8		END OF BORING			
Comments:					

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-2(5)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 8' bgs

Well Depth: N/A

Depth to GW: 6.75' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery		
0		SANDY SILT: topsoil, trace organics, brown, medium dense, fill (silt loam)	0	Soil at 1-2'	100		
1		SILTY CLAY: trace very fine to very coarse grained sand, gravel and brick, brown, stiff, fill (silty clay)					
2			0	Soil at 3-4'			
3							
4		SILTY fine to very coarse SAND: trace very fine to very coarse grained sand and gravel, brown, stiff, fill (silty clay)	0		100		
5							
6		SILTY CLAY: trace gravel, gray, soft, fill (silty clay)	0				
7							
8		SILTY very fine to very coarse SAND: brown, wet, loose (sandy loam)	0				
		END OF BORING					

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-2(6)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 8' bgs

Well Depth: N/A

Depth to GW: 6.5' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SANDY SILT: topsoil, trace organics, brown, medium dense, fill (silt loam)	0	Soil at 1-2'	100
1		SILTY CLAY: trace very fine to very coarse grained sand, gravel and brick, brown, medium stiff, fill (silty clay)			
2			0		
3					
4			0	Soil at 5-6'	100
5					
6		CLAYEY very fine to very coarse SAND: trace gravel and organics, dark brown, wet, loose (sandy clay loam)	0		
7					
8		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-2(7)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 8' bgs

Well Depth: N/A

Depth to GW: 8' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SANDY SILT: topsoil, trace organics, brown, medium dense, fill (silt loam)	0		100
1		SILTY CLAY: trace very fine to very coarse grained sand, gravel and brick, brown, medium stiff, fill (silty clay)		Soil at 1-2'	
2			0		100
3				Soil at 3-4'	
4		SILTY CLAY: trace gravel, brown, medium stiff, fill, wet at 8' (silty clay)	0		100
5					
6			0		100
7					
8		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-2(8)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 8' bgs

Well Depth: N/A

Depth to GW: 8' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SILTY fine to very coarse SAND: trace gravel and brick, brown, loose, fill (sandy loam)	0		100
1		SILTY CLAY: trace very fine to very coarse grained sand, brick and crushed concrete, brown, stiff, fill (silty clay)		Soil at 1-2'	
2			0		100
3					
4			0		100
5				Soil at 5-6'	
6		SILTY CLAY: trace gravel, brown, soft, fill, (silty clay)	0		100
7					
8		SANDY CLAY: trace gravel, gray, soft, wet at 8' (sandy clay)			
		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-2(9)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 8' bgs

Well Depth: N/A

Depth to GW: 8' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SILTY CLAY: trace very fine to very coarse grained sand and gravel, brown, stiff, fill (silty clay)	0		100
1				Soil at 1-2'	
2			0		30
3					
4		NO RECOVERY	0		
5					
6			0		
7					
8		SILTY very fine to very coarse SAND: trace clay, gravel and concrete, brown, moist, loose, fill, wet at 8' (silty clay)		Soil at 7-8'	
		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-2(10)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 12' bgs

Well Depth: N/A

Depth to GW: 7.5' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SANDY SILT: topsoil, trace organics, brown, medium dense, fill (silt loam)			
1		SILTY CLAY: trace very fine to very coarse grained sand and brick, brown, medium stiff, fill (silty clay)	0	Soil at 1-2'	100
2					
3		SILTY CLAY: trace very fine to very coarse grained sand, brown, medium stiff, fill (silty clay)	0	Soil at 3-4'	
4					
5		SILTY CLAY: trace very fine to very coarse grained sand, gray, medium stiff, fill (silty clay)	0		100
6					
7			0		
8		SILTY very fine to coarse SAND: gray, wet, loose (sandy loam)			
9			0		
10					100
11			0		
12		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-2(11)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 8' bgs

Well Depth: N/A

Depth to GW: 7' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SILTY CLAY: trace very fine to coarse grained sand, gravel, brick at 2.75', brown, stiff, fill (silty clay)	0		100
1				Soil at 1-2'	
2			0		100
3				Soil at 3-4'	
4		SILTY CLAY: trace gravel, gray, soft, fill (silty clay)	0		100
5					
6			0		100
7					
8		SILTY fine to very coarse SAND: trace gravel, brown, wet, loose (sandy loam)	0		
END OF BORING					

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-2(12)

Site Address:

37640 West 7 Mile Road

Livonia, MI, 48152

Size:

N/A

Client: Robertson Brothers Homes

Driller:

ERG

Type:

N/A

Project Name: Robertson Brothers Homes

Drilling Method:

Direct Push

Screen Length:

N/A

Project Number: A23-3104.01

ASTI Geologist:

BTM

Well Depth:

N/A

Date Completed: 6/12/24

Total Depth:

8' bgs

Depth to GW:

6.75' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery	
0		SILTY CLAY: trace very fine to coarse grained sand and gravel, brown, stiff, fill (silty clay)	0		100	
1				Soil at 1-2'		
2			0			Soil at 3-4'
3						
4		SILTY CLAY: trace gravel, gray, soft, fill (silty clay)	0		100	
5						
6			0			
7		SILTY fine to very coarse SAND: trace gravel, brown, wet, loose (sandy loam)				
8		0				
END OF BORING						

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-2(13)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 8' bgs

Well Depth: N/A

Depth to GW: 7.25' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SILTY CLAY: trace fine to coarse grained sand, gravel and brick, brown, stiff, fill (silty clay)	0		100
1				Soil at 1-2'	
2			0		80
3					
4		SILTY CLAY: trace gravel, gray, soft, fill (silty clay)	0		80
5					
6			0	Soil at 6-7'	80
7					
8		SILTY fine to very coarse SAND: trace to some brick, dark brown, wet, loose, fill (sandy loam)			
END OF BORING					

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-3(1)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 12' bgs

Well Depth: N/A

Depth to GW: 11' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SANDY SILT: topsoil, trace organics, brown, medium dense, fill (sandy loam)			
1		SILTY CLAY: trace fine to coarse grained sand and gravel, brown, stiff, fill (silty clay)	0	Soil at 1-2'	100
2					
3			0	Soil at 3-4'	
4					
5		SILTY CLAY: trace gravel, gray, soft (silty clay)	0		100
6					
7			0		
8					
9			0		
10					
11		SANDY CLAY: trace silt, brown, wet, loose (sandy clay)	0		75
12		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture

**Boring ID:****SB-3(2)****Site Address:**

37640 West 7 Mile Road

Livonia, MI, 48152

Size:

N/A

Client: Robertson Brothers Homes**Driller:**

ERG

Type:

N/A

Project Name: Robertson Brothers Homes**Drilling Method:**

Direct Push

Screen Length:

N/A

Project Number: A23-3104.01**ASTI Geologist:**

BTM

Well Depth:

N/A

Date Completed: 6/12/24**Total Depth:**

8' bgs

Depth to GW:

8' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SANDY SILT: topsoil, trace gravel and organics, brown, medium dense, fill (sandy loam)	0		100
1		SILTY CLAY: trace fine to coarse grained sand and gravel, brown, stiff, fill (silty clay)		Soil at 1-2'	
2			0		100
3				Soil at 3-4'	
4		SILTY CLAY: trace gravel, gray, soft (silty clay)	0		100
5					
6			0		
7					
8		SILTY very fine to very coarse SAND: trace clay, brown, wet, loose (sandy loam)			
END OF BORING					
Comments:					

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-3(3)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 12' bgs

Well Depth: N/A

Depth to GW: 10' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SANDY SILT: topsoil, trace organics, brown, medium dense, fill (silt loam)	0		100
1		SILTY CLAY: trace fine to coarse grained sand and gravel, brown, stiff, fill (silty clay)		Soil at 1-2'	
2			0		100
3				Soil at 3-4'	
4		SILTY CLAY: trace gravel, gray, soft, (silty clay)	0		100
5			0		
6			0		
7			0		
8		SILTY CLAY: some fine to very coarse grained sand, gray, wet, soft (silty clay)	0		100
9			0		
10			0		
11			0		
12		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-3(4)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 8' bgs

Well Depth: N/A

Depth to GW: 8' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SILTY CLAY: trace fine to coarse grained sand and gravel, brown, very stiff, fill (silty clay)	0		100
1				Soil at 1-2'	
2			0		100
3				Soil at 3-4'	
4		SILTY CLAY: trace gravel, gray, soft, wet at 8' (silty clay)	0		100
5					
6			0		100
7					
8		END OF BORING			
Comments:					

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-3(5)

Site Address: 37640 West 7 Mile Road

Livonia, MI, 48152

Size: N/A

Client: Robertson Brothers Homes

Driller: ERG

Type: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Screen Length: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Well Depth: N/A

Date Completed: 6/12/24

Total Depth: 12' bgs

Depth to GW: 11' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SANDY SILT: topsoil, trace organics, brown, medium dense, fill (silt loam)		Soil at 0-1"	
1		SILTY CLAY: trace fine to coarse grained sand and gravel, brown, stiff, fill (silty clay)	0		60
2					
3			0	Soil at 2-3'	
4					
5		NO RECOVERY	0		
6					0
7			0		
8					
9		SILTY CLAY: trace gravel, gray, soft (silty clay)	0		
10					100
11		SILTY fine to very coarse SAND: trace clay, gray, wet, loose (sandy loam)	0		
12		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-3(6)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 12' bgs

Well Depth: N/A

Depth to GW: 10.5' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SANDY SILT: topsoil, trace organics, brown, medium dense, fill (silt loam)	0		100
1		SILTY fine to very coarse SAND: trace clay and gravel, brown, moist, loose, fill (sandy loam)		Soil at 1-2'	
2		SILTY CLAY: trace fine to coarse grained sand and gravel, brown, medium stiff, fill (silty clay)	0		100
3				Soil at 3-4'	
4			0		100
5					
6			0		100
7					
8		SILTY CLAY: gray, soft (silty clay)	0		100
9					
10		SILTY very fine to coarse SAND: trace clay, brown, wet, loose (sandy loam)	0		100
11					
12		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture



Boring ID:

SB-3(7)

Site Address: 37640 West 7 Mile Road
Livonia, MI, 48152

Client: Robertson Brothers Homes

Driller: ERG

Size: N/A

Project Name: Robertson Brothers Homes

Drilling Method: Direct Push

Type: N/A

Project Number: A23-3104.01

ASTI Geologist: BTM

Screen Length: N/A

Date Completed: 6/12/24

Total Depth: 12' bgs

Well Depth: N/A

Depth to GW: 11' bgs

Depth (ft.)	Graphic Log	Lithologic Description	PID (ppm)	Sample Depth	% Recovery
0		SILTY CLAY: trace fine to coarse grained sand and gravel, brown, very stiff, fill (silty clay)	0		100
1		CRUSHED CONCRETE: fill		Soil at 1-2"	
2		SILTY CLAY: trace fine to coarse grained sand and gravel, brown, very stiff, fill (silty clay)	0		100
3				Soil at 3-4'	
4		SILTY CLAY: brown, soft (silty clay)	0		100
5			0		
6			0		
7			0		
8		SILTY fine to very coarse SAND: trace clay and gravel, brown, wet, loose (sandy loam)	0		75
9			0		
10			0		
11			0		
12		END OF BORING			

Comments:

ppm = parts per million MW = monitoring well bgs = below ground surface () = USDA soil texture

Attachment B

Laboratory Analytical Reports and Chain-of-Custody Documentation



Report ID: S63205.01(03)
Generated on 07/10/2024
Replaces report S63205.01(02) generated on 07/02/2024

Report to

Attention: Tom Wackerman
ASTI Environmental
10448 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-599-5463 FAX:
Email: twacker@asti-env.com

Additional Contacts: Brad Buswell, Brady Metzger

Report produced by

Merit Laboratories, Inc.
2680 East Lansing Drive
East Lansing, MI 48823

Phone: (517) 332-0167 FAX: (517) 332-6333

Contacts for report questions:
John Lavery (johnlavery@meritlabs.com)
Barbara Ball (bball@meritlabs.com)

Report Summary

Lab Sample ID(s): S63205.01-S63205.58
Project: A23-3104.01 / Robertson Brothers Homes
Collected Date(s): 06/12/2024
Submitted Date/Time: 06/14/2024 15:35
Sampled by: Brady Metzger
P.O. #:

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Maya Murshak
Technical Director

General Report Notes

Analytical results relate only to the samples tested, in the condition received by the laboratory.

Methods may be modified for improved performance.

Results reported on a dry weight basis where applicable.

'Not detected' indicates that parameter was not found at a level equal to or greater than the reporting limit (RL).

When MDL results are provided, then 'Not detected' indicates that parameter was not found at a level equal to or greater than the MDL.

40 CFR Part 136 Table II Required Containers, Preservation Techniques and Holding Times for the Clean Water Act specify that samples for acrolein and acrylonitrile, and 2-chloroethylvinyl ether need to be preserved at a pH in the range of 4 to 5 or if not preserved, analyzed within 3 days of sampling.

QA/QC corresponding to this analytical report is a separate document with the same Merit ID reference and is available upon request.

Starred (*) analytes are not NY NELAP accredited.

Samples are held by the lab for 30 days from the final report date unless a written request to hold longer is provided by the client.

Report shall not be reproduced except in full, without the written approval of Merit Laboratories, Inc.

Limits for drinking water samples, are listed as the MCL Limits (Maximum Contaminant Level Concentrations)

PFAS requirement: Section 9.3.8 of U.S. EPA Method 537.1 states "If the method analyte(s) found in the Field Sample is present in the FRB at a concentration greater than 1/3 the MRL, then all samples collected with that FRB are invalid and must be recollected and reanalyzed."

Samples submitted without an accompanying FRB may not be acceptable for compliance purposes.

Wisconsin PFAs analysis: MDL = LOD; RL = LOQ. LOD and LOQ are adjusted for dilution.

All accreditations/certifications held by this laboratory are listed on page 3. Not all accreditations/certifications are applicable to this report.

For a specific list of accredited analytes, please feel free to contact the laboratory or visit <https://www.meritlabs.com/certifications>.

Report Narrative

Chromium VI added to samples .21, .22, .26, .32, .33, .35, .36, & .39 per client request

Laboratory Accreditations (For Reference Only)

Authority	Accreditation ID
Michigan DEQ	#9956
DOD ELAP & ISO/IEC 17025:2017	#69699 PJLA Testing
WBENC	#2005110032
Ohio VAP	#CL0002
Indiana DOH	#C-MI-07
New York NELAC	#11814
North Carolina DENR	#680
North Carolina DOH	#26702
Pennsylvania DEP	#68-05884
Wisconsin DNR	FID# 399147320

Qualifier Descriptions

Qualifier	Description
!	Result is outside of stated limit criteria
B	Compound also found in associated method blank
E	Concentration exceeds calibration range
F	Analysis run outside of holding time
G	Estimated result due to extraction run outside of holding time
H	Sample submitted and run outside of holding time
I	Matrix interference with internal standard
J	Estimated value less than reporting limit, but greater than MDL
L	Elevated reporting limit due to low sample amount
M	Result reported to MDL not RDL
O	Analysis performed by outside laboratory. See attached report.
R	Preliminary result
S	Surrogate recovery outside of control limits
T	No correction for total solids
X	Elevated reporting limit due to matrix interference
Y	Elevated reporting limit due to high target concentration
b	Value detected less than reporting limit, but greater than MDL
e	Reported value estimated due to interference
j	Analyte also found in associated method blank
o	Associated EIS outside of control limits
p	Benzo(b)Fluoranthene and Benzo(k)Fluoranthene integrated as one peak.
q	Qualifier ion ratio outside of control limits
x	Preserved from bulk sample

Glossary of Abbreviations

Abbreviation	Description
RL/RDL	Reporting Limit
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
SW	EPA SW 846 (Soil and Wastewater) Methods
E	EPA Methods
SM	Standard Methods
LN	Linear
BR	Branched



Method Summary

Method	Version
SM2540B	Standard Method 2540 B 2015
SW3050B	SW 846 Method 3050B Revision 2 December 1996
SW6020A	SW 846 Method 6020A Revision 1 February 2007
SW7196A	SW 846 Method 7196A Revision 1 July 1992/SW 846 Method 3060A Revision 1 December 1996
SW7471B	SW 846 Method 7471B Revision 2 February 2007



Sample Summary (58 samples)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S63205.01	SB-2 (1) (1-2')	Soil	06/12/24 08:36
S63205.02	SB-2 (1) (3-4')	Soil	06/12/24 08:38
S63205.03	SB-2 (2) (1-2')	Soil	06/12/24 08:46
S63205.04	SB-2 (2) (3-4')	Soil	06/12/24 08:47
S63205.05	SB-2 (3) (1-2')	Soil	06/12/24 09:24
S63205.06	SB-2 (3) (4-5')	Soil	06/12/24 09:26
S63205.07	SB-2 (4) (1-2')	Soil	06/12/24 08:27
S63205.08	SB-2 (4) (7-8')	Soil	06/12/24 08:26
S63205.09	SB-2 (5) (1-2')	Soil	06/12/24 09:34
S63205.10	SB-2 (5) (3-4')	Soil	06/12/24 09:36
S63205.11	SB-3 (1) (1-2')	Soil	06/12/24 10:51
S63205.12	SB-3 (1) (3-4')	Soil	06/12/24 10:51
S63205.13	SB-3 (2) (1-2')	Soil	06/12/24 10:42
S63205.14	SB-3 (2) (3-4')	Soil	06/12/24 10:42
S63205.15	SB-3 (3) (1-2')	Soil	06/12/24 12:25
S63205.16	SB-3 (3) (3-4')	Soil	06/12/24 12:25
S63205.17	SB-3 (4) (1-2')	Soil	06/12/24 11:04
S63205.18	SB-3 (4) (3-4')	Soil	06/12/24 11:04
S63205.19	SB-3 (5) (0-1')	Soil	06/12/24 12:33
S63205.20	SB-3 (5) (2-3')	Soil	06/12/24 12:33
S63205.21	SB-2 (6) (1-2')	Soil	06/12/24 08:53
S63205.22	SB-2 (6) (5-6')	Soil	06/12/24 08:55
S63205.23	SB-2 (7) (1-2')	Soil	06/12/24 09:02
S63205.24	SB-2 (7) (3-4')	Soil	06/12/24 09:03
S63205.25	SB-2 (8) (1-2')	Soil	06/12/24 09:19
S63205.26	SB-2 (8) (5-6')	Soil	06/12/24 09:21
S63205.27	SB-2 (9) (1-2')	Soil	06/12/24 09:58
S63205.28	SB-2 (9) (7-8')	Soil	06/12/24 10:00
S63205.29	SB-2 (10) (1-2')	Soil	06/12/24 08:18
S63205.30	SB-2 (10) (3-4')	Soil	06/12/24 08:20
S63205.31	SB-2 (11) (1-2')	Soil	06/12/24 09:50
S63205.32	SB-2 (11) (3-4')	Soil	06/12/24 09:52
S63205.33	SB-2 (12) (1-2')	Soil	06/12/24 09:41
S63205.34	SB-2 (12) (3-4')	Soil	06/12/24 09:43
S63205.35	SB-2 (13) (1-2')	Soil	06/12/24 10:10
S63205.36	SB-2 (13) (6-7')	Soil	06/12/24 10:12
S63205.37	SB-3 (6) (1-2')	Soil	06/12/24 10:32
S63205.38	SB-3 (6) (3-4')	Soil	06/12/24 10:32
S63205.39	SB-3 (7) (1-2')	Soil	06/12/24 11:57
S63205.40	SB-3 (7) (3-4')	Soil	06/12/24 11:57
S63205.41	SB-3 (8) (1-2')	Soil	06/12/24 11:38
S63205.42	SB-3 (8) (3-4')	Soil	06/12/24 11:38
S63205.43	SB-3 (9) (1-2')	Soil	06/12/24 11:30
S63205.44	SB-3 (9) (3-4')	Soil	06/12/24 11:30
S63205.45	SB-3 (10) (1-2')	Soil	06/12/24 11:20
S63205.46	SB-3 (10) (3-4')	Soil	06/12/24 11:20
S63205.47	SB-3 (11) (1-2')	Soil	06/12/24 13:06
S63205.48	SB-3 (11) (3-4')	Soil	06/12/24 13:06
S63205.49	SB-3 (12) (1-2')	Soil	06/12/24 12:42
S63205.50	SB-3 (12) (3-4')	Soil	06/12/24 12:42
S63205.51	SB-3 (13) (1-2')	Soil	06/12/24 12:51
S63205.52	SB-3 (13) (3-4')	Soil	06/12/24 12:51
S63205.53	DUP-1S	Soil	06/12/24 00:01



Sample Summary (continued)

Sample ID	Sample Tag	Matrix	Collected Date/Time
S63205.54	DUP-2S	Soil	06/12/24 00:01
S63205.55	DUP-3S	Soil	06/12/24 00:01
S63205.56	DUP-4S	Soil	06/12/24 00:01
S63205.57	DUP-5S	Soil	06/12/24 00:01
S63205.58	DUP-6S	Soil	06/12/24 00:01



Lab Sample ID: S63205.01

Sample Tag: SB-2 (1) (1-2')

Collected Date/Time: 06/12/2024 08:36

Matrix: Soil

COC Reference: 1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:10, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	87	1		%	1		

Method: SW7196A, Run Date: 07/02/24 12:50, Analyst: MDG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.1		mg/kg	107	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/19/24 10:59, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	8.61	0.20		mg/kg	244	7440-38-2	
Barium	83.4	1.0		mg/kg	244	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	244	7440-43-9	
Chromium	20.6	0.50		mg/kg	244	7440-47-3	
Copper	18.2	0.50		mg/kg	244	7440-50-8	
Lead	8.58	0.30		mg/kg	244	7439-92-1	
Selenium	Not detected	0.40		mg/kg	244	7782-49-2	
Silver	Not detected	0.20		mg/kg	244	7440-22-4	
Zinc	50.2	0.50		mg/kg	244	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 15:06, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	61	7439-97-6	



Lab Sample ID: S63205.02

Sample Tag: SB-2 (1) (3-4')

Collected Date/Time: 06/12/2024 08:38

Matrix: Soil

COC Reference: 1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:10, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	83	1		%	1		

Method: SW7196A, Run Date: 07/02/24 12:55, Analyst: MDG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.2		mg/kg	120	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/19/24 11:02, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	5.10	0.20		mg/kg	255	7440-38-2	
Barium	92.3	1.0		mg/kg	255	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	255	7440-43-9	
Chromium	24.5	0.50		mg/kg	255	7440-47-3	
Copper	19.4	0.50		mg/kg	255	7440-50-8	
Lead	8.81	0.30		mg/kg	255	7439-92-1	
Selenium	Not detected	0.40		mg/kg	255	7782-49-2	
Silver	Not detected	0.20		mg/kg	255	7440-22-4	
Zinc	54.8	0.50		mg/kg	255	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 15:16, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	69	7439-97-6	

**Lab Sample ID: S63205.03**

Sample Tag: SB-2 (2) (1-2')

Collected Date/Time: 06/12/2024 08:46

Matrix: Soil

COC Reference: 1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics**Method: SM2540B, Run Date: 06/17/24 14:10, Analyst: MAM**

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	86	1		%	1		

Metals**Method: SW6020A, Run Date: 06/19/24 11:05, Analyst: JRH**

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	9.83	0.20		mg/kg	251	7440-38-2	
Barium	79.2	1.0		mg/kg	251	7440-39-3	
Cadmium	0.27	0.20		mg/kg	251	7440-43-9	
Chromium	17.3	0.50		mg/kg	251	7440-47-3	
Copper	16.5	0.50		mg/kg	251	7440-50-8	
Lead	11.0	0.30		mg/kg	251	7439-92-1	
Selenium	Not detected	0.40		mg/kg	251	7782-49-2	
Silver	Not detected	0.20		mg/kg	251	7440-22-4	
Zinc	55.5	0.50		mg/kg	251	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 15:19, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	61	7439-97-6	



Lab Sample ID: S63205.04

Sample Tag: SB-2 (2) (3-4')

Collected Date/Time: 06/12/2024 08:47

Matrix: Soil

COC Reference: 1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	84	1		%	1		

Method: SW7196A, Run Date: 07/02/24 13:43, Analyst: MDG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.2		mg/kg	117	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/19/24 11:07, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	7.06	0.20		mg/kg	260	7440-38-2	
Barium	92.5	1.0		mg/kg	260	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	260	7440-43-9	
Chromium	19.0	0.50		mg/kg	260	7440-47-3	
Copper	15.7	0.50		mg/kg	260	7440-50-8	
Lead	7.65	0.30		mg/kg	260	7439-92-1	
Selenium	Not detected	0.40		mg/kg	260	7782-49-2	
Silver	Not detected	0.20		mg/kg	260	7440-22-4	
Zinc	47.6	0.50		mg/kg	260	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 15:22, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	69	7439-97-6	



Lab Sample ID: S63205.05

Sample Tag: SB-2 (3) (1-2')

Collected Date/Time: 06/12/2024 09:24

Matrix: Soil

COC Reference: 1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	85	1		%	1		

Metals

Method: SW6020A, Run Date: 06/19/24 11:10, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	5.46	0.20		mg/kg	243	7440-38-2	
Barium	96.9	1.0		mg/kg	243	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	243	7440-43-9	
Chromium	15.7	0.50		mg/kg	243	7440-47-3	
Copper	19.1	0.50		mg/kg	243	7440-50-8	
Lead	6.14	0.30		mg/kg	243	7439-92-1	
Selenium	Not detected	0.40		mg/kg	243	7782-49-2	
Silver	Not detected	0.20		mg/kg	243	7440-22-4	
Zinc	43.4	0.50		mg/kg	243	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 15:26, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	67	7439-97-6	



Lab Sample ID: S63205.06

Sample Tag: SB-2 (3) (4-5')

Collected Date/Time: 06/12/2024 09:26

Matrix: Soil

COC Reference: 1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	83	1		%	1		

Method: SW7196A, Run Date: 07/02/24 13:50, Analyst: MDG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.2		mg/kg	117	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/19/24 11:12, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	17.5	0.20		mg/kg	256	7440-38-2	
Barium	141	1.0		mg/kg	256	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	256	7440-43-9	
Chromium	20.0	0.50		mg/kg	256	7440-47-3	
Copper	17.8	0.50		mg/kg	256	7440-50-8	
Lead	9.68	0.30		mg/kg	256	7439-92-1	
Selenium	Not detected	0.40		mg/kg	256	7782-49-2	
Silver	Not detected	0.20		mg/kg	256	7440-22-4	
Zinc	55.1	0.50		mg/kg	256	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 15:29, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	68	7439-97-6	



Lab Sample ID: S63205.07

Sample Tag: SB-2 (4) (1-2')

Collected Date/Time: 06/12/2024 08:27

Matrix: Soil

COC Reference: 1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	88	1		%	1		

Method: SW7196A, Run Date: 07/02/24 13:56, Analyst: MDG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.1		mg/kg	110	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/19/24 11:15, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	9.19	0.20		mg/kg	240	7440-38-2	
Barium	77.6	1.0		mg/kg	240	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	240	7440-43-9	
Chromium	20.2	0.50		mg/kg	240	7440-47-3	
Copper	17.6	0.50		mg/kg	240	7440-50-8	
Lead	8.81	0.30		mg/kg	240	7439-92-1	
Selenium	0.42	0.40		mg/kg	240	7782-49-2	
Silver	Not detected	0.20		mg/kg	240	7440-22-4	
Zinc	49.2	0.50		mg/kg	240	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 15:32, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	59	7439-97-6	



Lab Sample ID: S63205.08
Sample Tag: SB-2 (4) (7-8')
Collected Date/Time: 06/12/2024 08:26
Matrix: Soil
COC Reference: 1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	87	1		%	1		

Metals

Method: SW6020A, Run Date: 06/19/24 11:18, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	6.69	0.20		mg/kg	247	7440-38-2	
Barium	48.4	1.0		mg/kg	247	7440-39-3	
Cadmium	0.36	0.20		mg/kg	247	7440-43-9	
Chromium	10.3	0.50		mg/kg	247	7440-47-3	
Copper	10.5	0.50		mg/kg	247	7440-50-8	
Lead	21.4	0.30		mg/kg	247	7439-92-1	
Selenium	Not detected	0.40		mg/kg	247	7782-49-2	
Silver	Not detected	0.20		mg/kg	247	7440-22-4	
Zinc	66.6	0.50		mg/kg	247	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 15:35, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	69	7439-97-6	



Lab Sample ID: S63205.09
Sample Tag: SB-2 (5) (1-2')
Collected Date/Time: 06/12/2024 09:34
Matrix: Soil
COC Reference: 1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	88	1		%	1		

Metals

Method: SW6020A, Run Date: 06/19/24 11:20, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	9.64	0.20		mg/kg	252	7440-38-2	
Barium	69.5	1.0		mg/kg	252	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	252	7440-43-9	
Chromium	15.9	0.50		mg/kg	252	7440-47-3	
Copper	17.7	0.50		mg/kg	252	7440-50-8	
Lead	10.5	0.30		mg/kg	252	7439-92-1	
Selenium	Not detected	0.40		mg/kg	252	7782-49-2	
Silver	Not detected	0.20		mg/kg	252	7440-22-4	
Zinc	47.7	0.50		mg/kg	252	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 15:39, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	65	7439-97-6	



Lab Sample ID: S63205.10

Sample Tag: SB-2 (5) (3-4')

Collected Date/Time: 06/12/2024 09:36

Matrix: Soil

COC Reference: 1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	87	1		%	1		

Metals

Method: SW6020A, Run Date: 06/19/24 11:23, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	11.1	0.20		mg/kg	253	7440-38-2	
Barium	68.0	1.0		mg/kg	253	7440-39-3	
Cadmium	0.39	0.20		mg/kg	253	7440-43-9	
Chromium	17.7	0.50		mg/kg	253	7440-47-3	
Copper	19.8	0.50		mg/kg	253	7440-50-8	
Lead	9.05	0.30		mg/kg	253	7439-92-1	
Selenium	0.52	0.40		mg/kg	253	7782-49-2	
Silver	Not detected	0.20		mg/kg	253	7440-22-4	
Zinc	64.0	0.50		mg/kg	253	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 15:42, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	70	7439-97-6	



Lab Sample ID: S63205.11
Sample Tag: SB-3 (1) (1-2')
Collected Date/Time: 06/12/2024 10:51
Matrix: Soil
COC Reference: 1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	90	1		%	1		

Metals

Method: SW6020A, Run Date: 06/19/24 11:52, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	8.95	0.20		mg/kg	231	7440-38-2	
Barium	75.9	1.0		mg/kg	231	7440-39-3	
Cadmium	0.24	0.20		mg/kg	231	7440-43-9	
Chromium	18.0	0.50		mg/kg	231	7440-47-3	
Copper	17.9	0.50		mg/kg	231	7440-50-8	
Lead	7.99	0.30		mg/kg	231	7439-92-1	
Selenium	0.40	0.40		mg/kg	231	7782-49-2	
Silver	Not detected	0.20		mg/kg	231	7440-22-4	
Zinc	50.7	0.50		mg/kg	231	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 15:52, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	66	7439-97-6	



Lab Sample ID: S63205.12

Sample Tag: SB-3 (1) (3-4')

Collected Date/Time: 06/12/2024 10:51

Matrix: Soil

COC Reference: 1

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	80	1		%	1		

Method: SW7196A, Run Date: 07/02/24 14:02, Analyst: MDG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.2		mg/kg	122	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/19/24 11:55, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	10.1	0.20		mg/kg	274	7440-38-2	
Barium	106	1.0		mg/kg	274	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	274	7440-43-9	
Chromium	19.9	0.50		mg/kg	274	7440-47-3	
Copper	17.9	0.50		mg/kg	274	7440-50-8	
Lead	8.16	0.30		mg/kg	274	7439-92-1	
Selenium	Not detected	0.40		mg/kg	274	7782-49-2	
Silver	Not detected	0.20		mg/kg	274	7440-22-4	
Zinc	47.9	0.50		mg/kg	274	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 15:55, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	72	7439-97-6	



Lab Sample ID: S63205.13

Sample Tag: SB-3 (2) (1-2')

Collected Date/Time: 06/12/2024 10:42

Matrix: Soil

COC Reference: 2

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	90	1		%	1		

Metals

Method: SW6020A, Run Date: 06/19/24 11:57, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	9.65	0.20		mg/kg	229	7440-38-2	
Barium	80.9	1.0		mg/kg	229	7440-39-3	
Cadmium	0.27	0.20		mg/kg	229	7440-43-9	
Chromium	17.4	0.50		mg/kg	229	7440-47-3	
Copper	19.1	0.50		mg/kg	229	7440-50-8	
Lead	8.94	0.30		mg/kg	229	7439-92-1	
Selenium	Not detected	0.40		mg/kg	229	7782-49-2	
Silver	Not detected	0.20		mg/kg	229	7440-22-4	
Zinc	57.7	0.50		mg/kg	229	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 15:58, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	56	7439-97-6	



Lab Sample ID: S63205.14

Sample Tag: SB-3 (2) (3-4')

Collected Date/Time: 06/12/2024 10:42

Matrix: Soil

COC Reference: 2

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	84	1		%	1		

Method: SW7196A, Run Date: 07/02/24 14:09, Analyst: MDG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.2		mg/kg	116	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/19/24 12:00, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	12.5	0.20		mg/kg	256	7440-38-2	
Barium	98.2	1.0		mg/kg	256	7440-39-3	
Cadmium	0.20	0.20		mg/kg	256	7440-43-9	
Chromium	19.2	0.50		mg/kg	256	7440-47-3	
Copper	22.1	0.50		mg/kg	256	7440-50-8	
Lead	14.3	0.30		mg/kg	256	7439-92-1	
Selenium	0.56	0.40		mg/kg	256	7782-49-2	
Silver	Not detected	0.20		mg/kg	256	7440-22-4	
Zinc	53.4	0.50		mg/kg	256	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 16:02, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	71	7439-97-6	

**Lab Sample ID: S63205.15**

Sample Tag: SB-3 (3) (1-2')

Collected Date/Time: 06/12/2024 12:25

Matrix: Soil

COC Reference: 2

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics**Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM**

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	90	1		%	1		

Metals**Method: SW6020A, Run Date: 06/19/24 12:02, Analyst: JRH**

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	11.5	0.20		mg/kg	236	7440-38-2	
Barium	81.4	1.0		mg/kg	236	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	236	7440-43-9	
Chromium	16.1	0.50		mg/kg	236	7440-47-3	
Copper	17.2	0.50		mg/kg	236	7440-50-8	
Lead	8.16	0.30		mg/kg	236	7439-92-1	
Selenium	Not detected	0.40		mg/kg	236	7782-49-2	
Silver	Not detected	0.20		mg/kg	236	7440-22-4	
Zinc	45.9	0.50		mg/kg	236	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 16:05, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	60	7439-97-6	

Lab Sample ID: S63205.16

Sample Tag: SB-3 (3) (3-4')

Collected Date/Time: 06/12/2024 12:25

Matrix: Soil

COC Reference: 2

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	88	1		%	1		

Metals

Method: SW6020A, Run Date: 06/19/24 12:05, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	9.27	0.20		mg/kg	250	7440-38-2	
Barium	93.8	1.0		mg/kg	250	7440-39-3	
Cadmium	0.33	0.20		mg/kg	250	7440-43-9	
Chromium	16.4	0.50		mg/kg	250	7440-47-3	
Copper	18.0	0.50		mg/kg	250	7440-50-8	
Lead	8.60	0.30		mg/kg	250	7439-92-1	
Selenium	0.88	0.40		mg/kg	250	7782-49-2	
Silver	Not detected	0.20		mg/kg	250	7440-22-4	
Zinc	48.9	0.50		mg/kg	250	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 16:08, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	60	7439-97-6	



Lab Sample ID: S63205.17

Sample Tag: SB-3 (4) (1-2')

Collected Date/Time: 06/12/2024 11:04

Matrix: Soil

COC Reference: 2

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	86	1		%	1		

Method: SW7196A, Run Date: 07/02/24 14:15, Analyst: MDG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.2		mg/kg	116	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/19/24 12:08, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	12.6	0.20		mg/kg	246	7440-38-2	
Barium	89.8	1.0		mg/kg	246	7440-39-3	
Cadmium	0.25	0.20		mg/kg	246	7440-43-9	
Chromium	18.7	0.50		mg/kg	246	7440-47-3	
Copper	19.1	0.50		mg/kg	246	7440-50-8	
Lead	11.4	0.30		mg/kg	246	7439-92-1	
Selenium	0.47	0.40		mg/kg	246	7782-49-2	
Silver	Not detected	0.20		mg/kg	246	7440-22-4	
Zinc	49.4	0.50		mg/kg	246	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 16:12, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	60	7439-97-6	



Lab Sample ID: S63205.18

Sample Tag: SB-3 (4) (3-4')

Collected Date/Time: 06/12/2024 11:04

Matrix: Soil

COC Reference: 2

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	84	1		%	1		

Method: SW7196A, Run Date: 07/02/24 14:22, Analyst: MDG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.2		mg/kg	119	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/19/24 12:10, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	6.82	0.20		mg/kg	250	7440-38-2	
Barium	76.4	1.0		mg/kg	250	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	250	7440-43-9	
Chromium	18.7	0.50		mg/kg	250	7440-47-3	
Copper	15.2	0.50		mg/kg	250	7440-50-8	
Lead	11.4	0.30		mg/kg	250	7439-92-1	
Selenium	Not detected	0.40		mg/kg	250	7782-49-2	
Silver	Not detected	0.20		mg/kg	250	7440-22-4	
Zinc	46.7	0.50		mg/kg	250	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 16:15, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	72	7439-97-6	



Lab Sample ID: S63205.19

Sample Tag: SB-3 (5) (0-1')

Collected Date/Time: 06/12/2024 12:33

Matrix: Soil

COC Reference: 2

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	89	1		%	1		

Method: SW7196A, Run Date: 07/02/24 14:29, Analyst: MDG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.1		mg/kg	112	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/19/24 12:13, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	7.63	0.20		mg/kg	240	7440-38-2	
Barium	75.8	1.0		mg/kg	240	7440-39-3	
Cadmium	0.21	0.20		mg/kg	240	7440-43-9	
Chromium	18.7	0.50		mg/kg	240	7440-47-3	
Copper	17.7	0.50		mg/kg	240	7440-50-8	
Lead	10.8	0.30		mg/kg	240	7439-92-1	
Selenium	Not detected	0.40		mg/kg	240	7782-49-2	
Silver	Not detected	0.20		mg/kg	240	7440-22-4	
Zinc	53.5	0.50		mg/kg	240	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 16:18, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	64	7439-97-6	



Lab Sample ID: S63205.20

Sample Tag: SB-3 (5) (2-3')

Collected Date/Time: 06/12/2024 12:33

Matrix: Soil

COC Reference: 2

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/17/24 11:48	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	86	1		%	1		

Method: SW7196A, Run Date: 07/02/24 14:43, Analyst: MDG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.1		mg/kg	114	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/19/24 12:15, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	5.32	0.20		mg/kg	262	7440-38-2	
Barium	79.0	1.0		mg/kg	262	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	262	7440-43-9	
Chromium	20.3	0.50		mg/kg	262	7440-47-3	
Copper	16.8	0.50		mg/kg	262	7440-50-8	
Lead	7.24	0.30		mg/kg	262	7439-92-1	
Selenium	Not detected	0.40		mg/kg	262	7782-49-2	
Silver	Not detected	0.20		mg/kg	262	7440-22-4	
Zinc	48.6	0.50		mg/kg	262	7440-66-6	

Method: SW7471B, Run Date: 06/17/24 16:21, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	72	7439-97-6	



Lab Sample ID: S63205.21

Sample Tag: SB-2 (6) (1-2')

Collected Date/Time: 06/12/2024 08:53

Matrix: Soil

COC Reference: 2

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 13:40, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	85	1		%	1		

Method: SW7196A, Run Date: 07/09/24 13:26, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.1		mg/kg	112	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/28/24 09:42, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	248	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 12:56, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	10.2	0.20		mg/kg	248	7440-38-2	
Barium	94.3	1.0		mg/kg	248	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	248	7440-43-9	
Chromium	23.7	0.50		mg/kg	248	7440-47-3	
Copper	17.3	0.50		mg/kg	248	7440-50-8	
Lead	9.61	0.30		mg/kg	248	7439-92-1	
Silver	Not detected	0.20		mg/kg	248	7440-22-4	
Zinc	52.9	0.50		mg/kg	248	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 13:32, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	65	7439-97-6	



Lab Sample ID: S63205.22

Sample Tag: SB-2 (6) (5-6')

Collected Date/Time: 06/12/2024 08:55

Matrix: Soil

COC Reference: 2

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 13:40, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	80	1		%	1		

Method: SW7196A, Run Date: 07/09/24 13:33, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.1		mg/kg	112	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/28/24 09:44, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	0.58	0.40		mg/kg	265	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 13:02, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	7.08	0.20		mg/kg	265	7440-38-2	
Barium	74.2	1.0		mg/kg	265	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	265	7440-43-9	
Chromium	21.2	0.50		mg/kg	265	7440-47-3	
Copper	16.6	0.50		mg/kg	265	7440-50-8	
Lead	8.82	0.30		mg/kg	265	7439-92-1	
Silver	Not detected	0.20		mg/kg	265	7440-22-4	
Zinc	49.2	0.50		mg/kg	265	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 13:35, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	66	7439-97-6	



Lab Sample ID: S63205.23

Sample Tag: SB-2 (7) (1-2')

Collected Date/Time: 06/12/2024 09:02

Matrix: Soil

COC Reference: 2

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 13:40, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	87	1		%	1		

Metals

Method: SW6020A, Run Date: 06/28/24 09:46, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	244	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 13:05, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	11.7	0.20		mg/kg	244	7440-38-2	
Barium	115	1.0		mg/kg	244	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	244	7440-43-9	
Chromium	16.6	0.50		mg/kg	244	7440-47-3	
Copper	18.5	0.50		mg/kg	244	7440-50-8	
Lead	16.2	0.30		mg/kg	244	7439-92-1	
Silver	Not detected	0.20		mg/kg	244	7440-22-4	
Zinc	52.2	0.50		mg/kg	244	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 13:45, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	63	7439-97-6	



Lab Sample ID: S63205.24

Sample Tag: SB-2 (7) (3-4')

Collected Date/Time: 06/12/2024 09:03

Matrix: Soil

COC Reference: 2

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 13:40, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	84	1		%	1		

Metals

Method: SW6020A, Run Date: 06/28/24 09:47, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	252	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 13:07, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	6.24	0.20		mg/kg	252	7440-38-2	
Barium	82.8	1.0		mg/kg	252	7440-39-3	
Cadmium	0.21	0.20		mg/kg	252	7440-43-9	
Chromium	17.6	0.50		mg/kg	252	7440-47-3	
Copper	18.9	0.50		mg/kg	252	7440-50-8	
Lead	8.46	0.30		mg/kg	252	7439-92-1	
Silver	Not detected	0.20		mg/kg	252	7440-22-4	
Zinc	49.2	0.50		mg/kg	252	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 13:49, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	72	7439-97-6	



Lab Sample ID: S63205.25

Sample Tag: SB-2 (8) (1-2')

Collected Date/Time: 06/12/2024 09:19

Matrix: Soil

COC Reference: 3

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 13:40, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	89	1		%	1		

Metals

Method: SW6020A, Run Date: 06/28/24 09:49, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	241	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 13:10, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	6.94	0.20		mg/kg	241	7440-38-2	
Barium	63.7	1.0		mg/kg	241	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	241	7440-43-9	
Chromium	15.2	0.50		mg/kg	241	7440-47-3	
Copper	14.1	0.50		mg/kg	241	7440-50-8	
Lead	13.8	0.30		mg/kg	241	7439-92-1	
Silver	Not detected	0.20		mg/kg	241	7440-22-4	
Zinc	44.0	0.50		mg/kg	241	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 13:52, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	60	7439-97-6	



Lab Sample ID: S63205.26

Sample Tag: SB-2 (8) (5-6')

Collected Date/Time: 06/12/2024 09:21

Matrix: Soil

COC Reference: 3

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 17:28, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	83	1		%	1		

Method: SW7196A, Run Date: 07/09/24 13:39, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.2		mg/kg	118	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/28/24 09:51, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	253	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 13:12, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	5.73	0.20		mg/kg	253	7440-38-2	
Barium	80.3	1.0		mg/kg	253	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	253	7440-43-9	
Chromium	34.7	0.50		mg/kg	253	7440-47-3	
Copper	12.9	0.50		mg/kg	253	7440-50-8	
Lead	14.5	0.30		mg/kg	253	7439-92-1	
Silver	Not detected	0.20		mg/kg	253	7440-22-4	
Zinc	46.9	0.50		mg/kg	253	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 13:55, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	68	7439-97-6	



Lab Sample ID: S63205.27

Sample Tag: SB-2 (9) (1-2')

Collected Date/Time: 06/12/2024 09:58

Matrix: Soil

COC Reference: 3

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 17:28, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	88	1		%	1		

Metals

Method: SW6020A, Run Date: 06/28/24 09:52, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	238	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 13:15, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	7.32	0.20		mg/kg	238	7440-38-2	
Barium	56.2	1.0		mg/kg	238	7440-39-3	
Cadmium	0.25	0.20		mg/kg	238	7440-43-9	
Chromium	15.2	0.50		mg/kg	238	7440-47-3	
Copper	16.4	0.50		mg/kg	238	7440-50-8	
Lead	24.0	0.30		mg/kg	238	7439-92-1	
Silver	Not detected	0.20		mg/kg	238	7440-22-4	
Zinc	49.5	0.50		mg/kg	238	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 13:58, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	71	7439-97-6	



Lab Sample ID: S63205.28

Sample Tag: SB-2 (9) (7-8')

Collected Date/Time: 06/12/2024 10:00

Matrix: Soil

COC Reference: 3

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 17:28, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	85	1		%	1		

Metals

Method: SW6020A, Run Date: 06/28/24 09:54, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	0.43	0.40		mg/kg	248	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 13:18, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	4.61	0.20		mg/kg	248	7440-38-2	
Barium	31.7	1.0		mg/kg	248	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	248	7440-43-9	
Chromium	14.5	0.50		mg/kg	248	7440-47-3	
Copper	12.1	0.50		mg/kg	248	7440-50-8	
Lead	22.0	0.30		mg/kg	248	7439-92-1	
Silver	Not detected	0.20		mg/kg	248	7440-22-4	
Zinc	49.3	0.50		mg/kg	248	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 14:02, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	62	7439-97-6	



Lab Sample ID: S63205.29

Sample Tag: SB-2 (10) (1-2')

Collected Date/Time: 06/12/2024 08:18

Matrix: Soil

COC Reference: 3

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 17:28, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	89	1		%	1		

Metals

Method: SW6020A, Run Date: 06/28/24 09:56, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	238	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 13:20, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	9.22	0.20		mg/kg	238	7440-38-2	
Barium	91.5	1.0		mg/kg	238	7440-39-3	
Cadmium	0.24	0.20		mg/kg	238	7440-43-9	
Chromium	17.2	0.50		mg/kg	238	7440-47-3	
Copper	15.3	0.50		mg/kg	238	7440-50-8	
Lead	21.5	0.30		mg/kg	238	7439-92-1	
Silver	Not detected	0.20		mg/kg	238	7440-22-4	
Zinc	48.8	0.50		mg/kg	238	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 14:05, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	68	7439-97-6	



Lab Sample ID: S63205.30

Sample Tag: SB-2 (10) (3-4')

Collected Date/Time: 06/12/2024 08:20

Matrix: Soil

COC Reference: 3

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 17:28, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	87	1		%	1		

Metals

Method: SW6020A, Run Date: 06/28/24 10:21, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	246	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 13:46, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	8.45	0.20		mg/kg	246	7440-38-2	
Barium	81.7	1.0		mg/kg	246	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	246	7440-43-9	
Chromium	16.2	0.50		mg/kg	246	7440-47-3	
Copper	17.4	0.50		mg/kg	246	7440-50-8	
Lead	12.5	0.30		mg/kg	246	7439-92-1	
Silver	Not detected	0.20		mg/kg	246	7440-22-4	
Zinc	49.2	0.50		mg/kg	246	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 14:08, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	60	7439-97-6	



Lab Sample ID: S63205.31

Sample Tag: SB-2 (11) (1-2')

Collected Date/Time: 06/12/2024 09:50

Matrix: Soil

COC Reference: 3

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 17:28, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	87	1		%	1		

Metals

Method: SW6020A, Run Date: 06/28/24 10:22, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	242	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 13:48, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	8.83	0.20		mg/kg	242	7440-38-2	
Barium	65.3	1.0		mg/kg	242	7440-39-3	
Cadmium	0.22	0.20		mg/kg	242	7440-43-9	
Chromium	15.5	0.50		mg/kg	242	7440-47-3	
Copper	15.8	0.50		mg/kg	242	7440-50-8	
Lead	27.0	0.30		mg/kg	242	7439-92-1	
Silver	Not detected	0.20		mg/kg	242	7440-22-4	
Zinc	48.2	0.50		mg/kg	242	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 14:18, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	66	7439-97-6	



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S63205.32

Sample Tag: SB-2 (11) (3-4')

Collected Date/Time: 06/12/2024 09:52

Matrix: Soil

COC Reference: 3

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 17:28, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	86	1		%	1		

Method: SW7196A, Run Date: 07/09/24 13:46, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.1		mg/kg	113	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/28/24 10:24, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	243	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 13:51, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	6.65	0.20		mg/kg	243	7440-38-2	
Barium	116	1.0		mg/kg	243	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	243	7440-43-9	
Chromium	18.1	0.50		mg/kg	243	7440-47-3	
Copper	19.3	0.50		mg/kg	243	7440-50-8	
Lead	9.67	0.30		mg/kg	243	7439-92-1	
Silver	Not detected	0.20		mg/kg	243	7440-22-4	
Zinc	54.2	0.50		mg/kg	243	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 14:22, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	71	7439-97-6	



Lab Sample ID: S63205.33

Sample Tag: SB-2 (12) (1-2')

Collected Date/Time: 06/12/2024 09:41

Matrix: Soil

COC Reference: 3

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 17:28, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	86	1		%	1		

Method: SW7196A, Run Date: 07/09/24 13:51, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.1		mg/kg	112	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/28/24 10:26, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	251	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 13:53, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	8.41	0.20		mg/kg	251	7440-38-2	
Barium	116	1.0		mg/kg	251	7440-39-3	
Cadmium	0.20	0.20		mg/kg	251	7440-43-9	
Chromium	23.8	0.50		mg/kg	251	7440-47-3	
Copper	19.5	0.50		mg/kg	251	7440-50-8	
Lead	9.80	0.30		mg/kg	251	7439-92-1	
Silver	Not detected	0.20		mg/kg	251	7440-22-4	
Zinc	56.2	0.50		mg/kg	251	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 14:25, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	66	7439-97-6	



Lab Sample ID: S63205.34

Sample Tag: SB-2 (12) (3-4')

Collected Date/Time: 06/12/2024 09:43

Matrix: Soil

COC Reference: 3

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 17:28, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	85	1		%	1		

Metals

Method: SW6020A, Run Date: 06/28/24 10:27, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	251	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 13:56, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	12.7	0.20		mg/kg	251	7440-38-2	
Barium	71.3	1.0		mg/kg	251	7440-39-3	
Cadmium	0.23	0.20		mg/kg	251	7440-43-9	
Chromium	13.9	0.50		mg/kg	251	7440-47-3	
Copper	17.6	0.50		mg/kg	251	7440-50-8	
Lead	10.4	0.30		mg/kg	251	7439-92-1	
Silver	Not detected	0.20		mg/kg	251	7440-22-4	
Zinc	44.8	0.50		mg/kg	251	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 14:28, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	66	7439-97-6	



Lab Sample ID: S63205.35

Sample Tag: SB-2 (13) (1-2')

Collected Date/Time: 06/12/2024 10:10

Matrix: Soil

COC Reference: 3

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 17:28, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	86	1		%	1		

Method: SW7196A, Run Date: 07/09/24 13:57, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.1		mg/kg	115	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/28/24 10:29, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	243	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 13:58, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	9.85	0.20		mg/kg	243	7440-38-2	
Barium	88.6	1.0		mg/kg	243	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	243	7440-43-9	
Chromium	19.3	0.50		mg/kg	243	7440-47-3	
Copper	18.1	0.50		mg/kg	243	7440-50-8	
Lead	10.4	0.30		mg/kg	243	7439-92-1	
Silver	Not detected	0.20		mg/kg	243	7440-22-4	
Zinc	54.5	0.50		mg/kg	243	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 14:32, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	60	7439-97-6	



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S63205.36

Sample Tag: SB-2 (13) (6-7')

Collected Date/Time: 06/12/2024 10:12

Matrix: Soil

COC Reference: 3

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 17:28, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	80	1		%	1		

Method: SW7196A, Run Date: 07/09/24 14:03, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.2		mg/kg	124	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/28/24 10:31, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	0.52	0.40		mg/kg	270	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 14:01, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	10.5	0.20		mg/kg	270	7440-38-2	
Barium	100	1.0		mg/kg	270	7440-39-3	
Cadmium	0.73	0.20		mg/kg	270	7440-43-9	
Chromium	18.5	0.50		mg/kg	270	7440-47-3	
Copper	21.8	0.50		mg/kg	270	7440-50-8	
Lead	10.3	0.30		mg/kg	270	7439-92-1	
Silver	Not detected	0.20		mg/kg	270	7440-22-4	
Zinc	78.7	0.50		mg/kg	270	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 14:35, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	77	7439-97-6	



Lab Sample ID: S63205.37
Sample Tag: SB-3 (6) (1-2')
Collected Date/Time: 06/12/2024 10:32
Matrix: Soil
COC Reference: 4

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.38
Sample Tag: SB-3 (6) (3-4')
Collected Date/Time: 06/12/2024 10:32
Matrix: Soil
COC Reference: 4

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.39

Sample Tag: SB-3 (7) (1-2')

Collected Date/Time: 06/12/2024 11:57

Matrix: Soil

COC Reference: 4

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 17:28, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	87	1		%	1		

Method: SW7196A, Run Date: 07/09/24 14:16, Analyst: SRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.1		mg/kg	112	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/28/24 10:33, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	242	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 14:04, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	6.37	0.20		mg/kg	242	7440-38-2	
Barium	115	1.0		mg/kg	242	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	242	7440-43-9	
Chromium	21.4	0.50		mg/kg	242	7440-47-3	
Copper	19.6	0.50		mg/kg	242	7440-50-8	
Lead	9.61	0.30		mg/kg	242	7439-92-1	
Silver	Not detected	0.20		mg/kg	242	7440-22-4	
Zinc	52.5	0.50		mg/kg	242	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 14:38, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	62	7439-97-6	



Lab Sample ID: S63205.40

Sample Tag: SB-3 (7) (3-4')

Collected Date/Time: 06/12/2024 11:57

Matrix: Soil

COC Reference: 4

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/26/24 12:15	JRH	
Mercury Digestion	Completed	SW7471B	06/25/24 10:46	CTV	

Inorganics

Method: SM2540B, Run Date: 06/26/24 17:28, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	84	1		%	1		

Metals

Method: SW6020A, Run Date: 06/28/24 10:34, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Selenium	Not detected	0.40		mg/kg	249	7782-49-2	

Method: SW6020A, Run Date: 06/26/24 14:06, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	7.74	0.20		mg/kg	249	7440-38-2	
Barium	73.0	1.0		mg/kg	249	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	249	7440-43-9	
Chromium	17.2	0.50		mg/kg	249	7440-47-3	
Copper	16.6	0.50		mg/kg	249	7440-50-8	
Lead	9.93	0.30		mg/kg	249	7439-92-1	
Silver	Not detected	0.20		mg/kg	249	7440-22-4	
Zinc	45.6	0.50		mg/kg	249	7440-66-6	

Method: SW7471B, Run Date: 06/25/24 14:42, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	67	7439-97-6	



Lab Sample ID: S63205.41
Sample Tag: SB-3 (8) (1-2')
Collected Date/Time: 06/12/2024 11:38
Matrix: Soil
COC Reference: 4

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.42
Sample Tag: SB-3 (8) (3-4')
Collected Date/Time: 06/12/2024 11:38
Matrix: Soil
COC Reference: 4

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.43
Sample Tag: SB-3 (9) (1-2')
Collected Date/Time: 06/12/2024 11:30
Matrix: Soil
COC Reference: 4

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.44
Sample Tag: SB-3 (9) (3-4')
Collected Date/Time: 06/12/2024 11:30
Matrix: Soil
COC Reference: 4

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.45
Sample Tag: SB-3 (10) (1-2")
Collected Date/Time: 06/12/2024 11:20
Matrix: Soil
COC Reference: 4

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.46
Sample Tag: SB-3 (10) (3-4')
Collected Date/Time: 06/12/2024 11:20
Matrix: Soil
COC Reference: 4

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.47
Sample Tag: SB-3 (11) (1-2")
Collected Date/Time: 06/12/2024 13:06
Matrix: Soil
COC Reference: 4

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.48
Sample Tag: SB-3 (11) (3-4')
Collected Date/Time: 06/12/2024 13:06
Matrix: Soil
COC Reference: 4

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.49
Sample Tag: SB-3 (12) (1-2")
Collected Date/Time: 06/12/2024 12:42
Matrix: Soil
COC Reference: 5

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.50
Sample Tag: SB-3 (12) (3-4')
Collected Date/Time: 06/12/2024 12:42
Matrix: Soil
COC Reference: 5

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.51
Sample Tag: SB-3 (13) (1-2")
Collected Date/Time: 06/12/2024 12:51
Matrix: Soil
COC Reference: 5

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.52
Sample Tag: SB-3 (13) (3-4')
Collected Date/Time: 06/12/2024 12:51
Matrix: Soil
COC Reference: 5

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.53

Sample Tag: DUP-1S

Collected Date/Time: 06/12/2024 00:01

Matrix: Soil

COC Reference: 5

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/18/24 12:07	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	85	1		%	1		

Method: SW7196A, Run Date: 07/02/24 14:50, Analyst: MDG

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Chromium VI	Not detected	1.2		mg/kg	115	18540-29-9	

Metals

Method: SW6020A, Run Date: 06/19/24 12:37, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	6.06	0.20		mg/kg	254	7440-38-2	
Barium	79.8	1.0		mg/kg	254	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	254	7440-43-9	
Chromium	20.2	0.50		mg/kg	254	7440-47-3	
Copper	17.7	0.50		mg/kg	254	7440-50-8	
Lead	10.1	0.30		mg/kg	254	7439-92-1	
Selenium	Not detected	0.40		mg/kg	254	7782-49-2	
Silver	Not detected	0.20		mg/kg	254	7440-22-4	
Zinc	50.1	0.50		mg/kg	254	7440-66-6	

Method: SW7471B, Run Date: 06/18/24 16:21, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	72	7439-97-6	



Lab Sample ID: S63205.54
Sample Tag: DUP-2S
Collected Date/Time: 06/12/2024 00:01
Matrix: Soil
COC Reference: 5

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.55
Sample Tag: DUP-3S
Collected Date/Time: 06/12/2024 00:01
Matrix: Soil
COC Reference: 5

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Analytical Laboratory Report

Supplemental Report

Lab Sample ID: S63205.56

Sample Tag: DUP-4S

Collected Date/Time: 06/12/2024 00:01

Matrix: Soil

COC Reference: 5

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Extraction / Prep.

Parameter	Result	Method	Run Date	Analyst	Flags
Metal Digestion	Completed	SW3050B	06/19/24 08:30	JRH	
Mercury Digestion	Completed	SW7471B	06/18/24 12:07	CTV	

Inorganics

Method: SM2540B, Run Date: 06/17/24 14:31, Analyst: MAM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Total Solids*	85	1		%	1		

Metals

Method: SW6020A, Run Date: 06/19/24 12:40, Analyst: JRH

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Arsenic	7.77	0.20		mg/kg	256	7440-38-2	
Barium	130	1.0		mg/kg	256	7440-39-3	
Cadmium	Not detected	0.20		mg/kg	256	7440-43-9	
Chromium	16.0	0.50		mg/kg	256	7440-47-3	
Copper	15.0	0.50		mg/kg	256	7440-50-8	
Lead	9.67	0.30		mg/kg	256	7439-92-1	
Selenium	Not detected	0.40		mg/kg	256	7782-49-2	
Silver	Not detected	0.20		mg/kg	256	7440-22-4	
Zinc	46.8	0.50		mg/kg	256	7440-66-6	

Method: SW7471B, Run Date: 06/18/24 16:24, Analyst: CTV

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Mercury	Not detected	0.050		mg/kg	63	7439-97-6	



Lab Sample ID: S63205.57
Sample Tag: DUP-5S
Collected Date/Time: 06/12/2024 00:01
Matrix: Soil
COC Reference: 5

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		



Lab Sample ID: S63205.58
Sample Tag: DUP-6S
Collected Date/Time: 06/12/2024 00:01
Matrix: Soil
COC Reference: 5

Sample Containers

#	Type	Preservative(s)	Refrigerated?	Arrival Temp. (C)	Thermometer #
1	4oz Glass	None	Yes	4.1	IR

Other / Misc.

Method: , Run Date: 06/18/24 15:42, Analyst: JRM

Parameter	Result	RL	MDL	Units	Dilution	CAS#	Flags
Hold until notified*	Completed				1		

Merit Laboratories Login Checklist

Lab Set ID:S63205

Client:ASTI (ASTI Environmental)

Project: A23-3104.01 / Robertson Brothers Homes

Submitted:06/14/2024 15:35 Login User: MMC

Attention: Tom Wackerman

Address: ASTI Environmental
10448 Citation Drive
Suite 100
Brighton, MI 48116

Phone: 810-599-5463

FAX:

Email: twacker@asti-env.com

Selection	Description	Note
Sample Receiving		
01. ☒ Yes ☐ No ☐ N/A	Samples are received at 4C +/- 2C	Thermometer # IR 4.1
02. ☒ Yes ☐ No ☐ N/A	Received on ice/ cooling process begun	
03. ☐ Yes ☒ No ☐ N/A	Samples shipped	
04. ☐ Yes ☒ No ☐ N/A	Samples left in 24 hr. drop box	
05. ☐ Yes ☐ No ☒ N/A	Are there custody seals/tape or is the drop box locked	
Chain of Custody		
06. ☒ Yes ☐ No ☐ N/A	COC adequately filled out	
07. ☒ Yes ☐ No ☐ N/A	COC signed and relinquished to the lab	
08. ☒ Yes ☐ No ☐ N/A	Sample tag on bottles match COC	
09. ☐ Yes ☒ No ☐ N/A	Subcontracting needed? Subcontacted to:	
Preservation		
10. ☒ Yes ☐ No ☐ N/A	Do sample have correct chemical preservation	
11. ☐ Yes ☐ No ☒ N/A	Completed pH checks on preserved samples? (no VOAs)	
12. ☐ Yes ☒ No ☐ N/A	Did any samples need to be preserved in the lab?	
Bottle Conditions		
13. ☒ Yes ☐ No ☐ N/A	All bottles intact	
14. ☒ Yes ☐ No ☐ N/A	Appropriate analytical bottles are used	
15. ☒ Yes ☐ No ☐ N/A	Merit bottles used	
16. ☒ Yes ☐ No ☐ N/A	Sufficient sample volume received	
17. ☐ Yes ☒ No ☐ N/A	Samples require laboratory filtration	
18. ☒ Yes ☐ No ☐ N/A	Samples submitted within holding time	
19. ☐ Yes ☐ No ☒ N/A	Do water VOC, TOX, DO or Alkalinity bottles contain	

Corrective action for all exceptions is to call the client and to notify the project manager.

Client Review By: _____ Date: _____



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www.meritlabs.com

C.O.C. PAGE # 1 OF 5

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME **Tom Wackerman / Brady Metzger**

COMPANY **ASTI Environmental**

ADDRESS **10448 Citation Dr**

CITY **Brighton** STATE **MI** ZIP CODE **48116**

PHONE NO. **810-599-5464** FAX NO. P.O. NO.

E-MAIL ADDRESS **twacker@asti-env.com, bmetzger@asti-env.com, emanetza@asti-env.com** QUOTE NO.

CONTACT NAME ☒ SAME

COMPANY

ADDRESS

CITY STATE ZIP CODE

PHONE NO. E-MAIL ADDRESS

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

PROJECT NO./NAME **A23-3104.01 / Robertson Brothers Homes** SAMPLER(S) - PLEASE PRINT/SIGN NAME **Brady Metzger**

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
CODE: SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIFE A=AIR W=WASTE

Containers & Preservatives

Certifications

☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations

☐ Detroit ☐ New York

☐ Other

Special Instructions

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	MI 10 Metals
63205.01	6/12/24	0836	SB-2(1)(1-2')	S	1	1							X
02		0838	SB-2(1)(3-4')										
03		0846	SB-2(2)(1-2')										
04		0847	SB-2(2)(3-4')										
05		0924	SB-2(3)(1-2')										
06		0926	SB-2(3)(4-5')										
07		0827	SB-2(4)(1-2')										
08		0826	SB-2(4)(7-8')										
09		0934	SB-2(5)(1-2')										
10		0936	SB-2(5)(3-4')										
11		1051	SB-3(1)(1-2')										
12		1051	SB-3(1)(3-4')										

RELINQUISHED BY: **Brady Metzger** ☒ Sampler DATE **6/12/24** TIME **1635**

SIGNATURE/Organization **ASTI Cold Storage** DATE **6/12/24** TIME **1635**

RECEIVED BY: **4** DATE **6/14** TIME **1345**

SIGNATURE/Organization

RELINQUISHED BY: **M. Orlato** DATE **6/14/24** TIME **1535**

SIGNATURE/Organization **6/14/24 1535**

RECEIVED BY: **4.1** DATE **6/14/24** TIME **1535**

SIGNATURE/Organization

SEAL NO. SEAL INTACT INITIALS
YES ☐ NO ☐

SEAL NO. SEAL INTACT INITIALS
YES ☐ NO ☐

NOTES: TEMP. ON ARRIVAL

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Tom Wackerman / Brady Metzger				CONTACT NAME SAME			
COMPANY ASTI Environmental				COMPANY			
ADDRESS 10448 Citation Dr				ADDRESS			
CITY Brighton			STATE MI	ZIP CODE 48116			
PHONE NO. 810-599-5464		FAX NO.		P.O. NO.			
E-MAIL ADDRESS twacker@asti-env.com bmetzger@asti-env.com emanetz@asti-env.com			QUOTE NO.				
ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)							

PROJECT NO./NAME A23-3104.01 / Robertson Brothers Homes					SAMPLER(S) - PLEASE PRINT/SIGN NAME Grady Metzger <i>Grady Metzger</i>	
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER						
DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER						
MATRIX CODE:	GW=GROUNDWATER	WW=WASTEWATER	S=SOIL	L=LIQUID	SD=SOLID	# Containers & Preservatives
	SL=SLUDGE	DW=DRINKING WATER	O=OIL	WP=WPIPE	A=AIR W=WASTE	

ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)

Certifications

☐ OHIO VAP ☐ Drinking Water

☐ DoD ☐ NPDES

Project Locations

☐ Detroit ☐ New York

☐ Other _____

Special Instructions

[illegible]

RELINQUISHED BY:	<i>[Signature]</i>	☒ Sampler	DATE	TIME
SIGNATURE/ORGANIZATION			6/12/24	1635
RECEIVED BY:	<i>ASTI Cold Storage</i>		DATE	TIME
SIGNATURE/ORGANIZATION			6/12/24	1635
RELINQUISHED BY:	<i>CC</i>	<i>9</i>	DATE	TIME
SIGNATURE/ORGANIZATION				
RECEIVED BY:	<i>[Signature]</i>		DATE	TIME
SIGNATURE/ORGANIZATION			6/14/24	1300

RELINQUISHED BY:		DATE		TIME	
SIGNATURE/ORGANIZATION		6/14/24		1531	
RECEIVED BY:		DATE		TIME	
SIGNATURE/ORGANIZATION		6/14/24		1535	
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES:	TEMP. ON ARRIVAL	4.1
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS			

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME **Tom Wackerman / Brady Metzger**

COMPANY **ASTI Environmental**

ADDRESS **10448 Citation Dr**

CITY **Brighton** STATE **MI** ZIP CODE **48116**

PHONE NO. **810-599-5464** FAX NO. P.O. NO.

E-MAIL ADDRESS **twacker@asti-env.com bmetzger@asti-env.com emanetzz@asti-env.com** QUOTE NO.

CONTACT NAME **[X] SAME**

COMPANY

ADDRESS

CITY STATE ZIP CODE

PHONE NO. E-MAIL ADDRESS

PROJECT NO./NAME **A23-3104.01 / Robertson Brothers Homes** SAMPLER(S) - PLEASE PRINT/SIGN NAME **Brady Metzger**

TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER

DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER

MATRIX CODE: GW=GROUNDWATER WW=WASTEWATER S=SOIL L=LIQUID SD=SOLID
SL=SLUDGE DW=DRINKING WATER O=OIL WP=WIFE A=AIR W=WASTE

Containers & Preservatives

MERIT LAB NO. FOR LAB USE ONLY	YEAR DATE	TIME	SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	MI 10 Metals	Certifications ☐ OHIO VAP ☐ Drinking Water ☐ DoD ☐ NPDES Project Locations ☐ Detroit ☐ New York ☐ Other Special Instructions
6320525	6/12/24	0919	SB-2(8)(1-2')	S	1	1							X	HOLD
.26		0921	SB-2(8)(5-6')											
.27		0958	SB-2(9)(1-2')											
.28		1000	SB-2(9)(7-8')											
.29		0818	SB-2(10)(1-2')											
.30		0820	SB-2(10)(3-4')											
.31		0950	SB-2(11)(1-2')											
.32		0952	SB-2(11)(3-4')											
.33		0941	SB-2(12)(1-2')											
.34		0943	SB-2(12)(3-4')											
.35		1010	SB-2(13)(1-2')											
.36	↓	1012	SB-2(13)(6-7')	↓	↓	↓							↓	

RELINQUISHED BY: **Brady Metzger** ☒ Sampler DATE **6/12/24** TIME **1635**

RECEIVED BY: **ASTI Cold Storage** DATE **6/12/24** TIME **1635**

RELINQUISHED BY: **[Signature]** DATE **6/14/24** TIME **1345**

RECEIVED BY: **[Signature]** DATE **6/14/24** TIME **1345**

RELINQUISHED BY: **[Signature]** DATE **6/14/24** TIME **1535**

RECEIVED BY: **M. Orlato** DATE **6/14/24** TIME **1535**

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

SEAL NO. SEAL INTACT YES ☐ NO ☐ INITIALS

NOTES: TEMP. ON ARRIVAL **4.1**



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C.O.C. PAGE # 4 OF 5

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Tom Wackerman / Brady Metzger			
COMPANY ASTI Environmental			
ADDRESS 10448 Citiation Dr			
CITY Brighton		STATE MI	ZIP CODE 48116
PHONE NO. 810-599-5464	FAX NO.	P.O. NO.	
E-MAIL ADDRESS twacker@asti-env.com, bmetzger@asti-env.com		QUOTE NO. emanetz@asti-env.com	

CONTACT NAME ☒ SAME		
COMPANY		
ADDRESS		
CITY	STATE	ZIP CODE
PHONE NO.	E-MAIL ADDRESS	

PROJECT NO./NAME A23-3104.01 / Robertson Brothers Homes	SAMPLER(S) - PLEASE PRINT/SIGN NAME Brady Metzger
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER	
DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER	

MATRIX CODE:	GW=GROUNDWATER	WW=WASTEWATER	S=SOIL	L=LIQUID	SD=SOLID	
	SL=SLUDGE	DW=DRINKING WATER	O=OIL	WP=WIFE	A=AIR	W=WASTE

Containers & Preservatives

MI 10 Metals

Certifications

☐ OHIO VAP ☐ Drinking Water
☐ DoD ☐ NPDES

Project Locations

☐ Detroit ☐ New York
☐ Other

Special Instructions

HOLD

MERIT LAB NO. FOR LAB USE ONLY	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER
	DATE	TIME										
6320537	6/12/24	1032	SB-3 (6) (1-2')	S	1							
.38		1032	SB-3 (6) (3-4')									
.39		1157	SB-3 (7) (1-2')									
.40		1157	SB-3 (7) (3-4')									
.41		1138	SB-3 (8) (1-2')									
.42		1138	SB-3 (8) (3-4')									
.43		1130	SB-3 (9) (1-2')									
.44		1130	SB-3 (9) (3-4')									
.45		1120	SB-3 (10) (1-2')									
.46		1120	SB-3 (10) (3-4')									
.47		1306	SB-3 (11) (1-2')									
.48	✓	1306	SB-3 (11) (3-4')	✓	✓	✓						

RELINQUISHED BY: SIGNATURE/ORGANIZATION <i>Brady Metzger</i>	☒ Sampler	DATE 6/12/24	TIME 1635
RECEIVED BY: SIGNATURE/ORGANIZATION ASTI Cold Storage		DATE 6/12/24	TIME 1635
RELINQUISHED BY: SIGNATURE/ORGANIZATION <i>[Signature]</i>		DATE 6/14/24	TIME 1335
RECEIVED BY: SIGNATURE/ORGANIZATION			

RELINQUISHED BY: SIGNATURE/ORGANIZATION <i>[Signature]</i>	DATE 6/17/24	TIME 1535
RECEIVED BY: SIGNATURE/ORGANIZATION <i>M Chilcote</i>	DATE 6/14/24	TIME 1535
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS

NOTES:	TEMP. ON ARRIVAL 4.1
--------	-------------------------

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

Merit

Laboratories, Inc.

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C.O.C. PAGE # 5 OF 5

REPORT TO

CHAIN OF CUSTODY RECORD

INVOICE TO

CONTACT NAME Tom Wackerman / Brady Metzger			CONTACT NAME ☒ SAME		
COMPANY ASTI Environmental			COMPANY		
ADDRESS 10448 Citation Dr			ADDRESS		
CITY Brighton	STATE MI	ZIP CODE 48116	CITY	STATE	ZIP CODE
PHONE NO. 810-599-5464	FAX NO.	P.O. NO.	PHONE NO.	E-MAIL ADDRESS	
E-MAIL ADDRESS twacker@asti-env.com, bmetzger@asti-env.com		QUOTE NO. emanetz@asti-env.com	ANALYSIS (ATTACH LIST IF MORE SPACE IS REQUIRED)		

PROJECT NO./NAME A23-3104.01 / Robertson Brothers Homes	SAMPLER(S) - PLEASE PRINT/SIGN NAME Brady Metzger
TURNAROUND TIME REQUIRED ☐ 1 DAY ☐ 2 DAYS ☐ 3 DAYS ☒ STANDARD ☐ OTHER	
DELIVERABLES REQUIRED ☐ STD ☐ LEVEL II ☐ LEVEL III ☐ LEVEL IV ☐ EDD ☐ OTHER	

MATRIX CODE:	GW=GROUNDWATER SL=SLUDGE	WW=WASTEWATER DW=DRINKING WATER	S=SOIL O=OIL	L=LIQUID WP=WIPES	SD=SOLID A=AIR	W=WASTE
--------------	-----------------------------	------------------------------------	-----------------	----------------------	-------------------	---------

MERIT LAB NO. FOR LAB USE ONLY	YEAR		SAMPLE TAG IDENTIFICATION-DESCRIPTION	MATRIX	# OF BOTTLES	NONE	HCl	HNO ₃	H ₂ SO ₄	NaOH	MeOH	OTHER	# Containers & Preservatives
	DATE	TIME											
6320549	6/12/24	1242	SB-3(12)(1-2')	S	1	1							
.50		1242	SB-3(12)(3-4')										
.51		1251	SB-3(13)(1-2')										
.52		1251	SB-3(13)(3-4')										
.53		-	Dup-1S										
.54		-	Dup-2S										
.55		-	Dup-3S										
.56		-	Dup-4S										
.57		-	Dup-5S										
.58		-	Dup-6S										

MI 10 Metals

Certifications	
☐ OHIO VAP	☐ Drinking Water
☐ DoD	☐ NPDES
Project Locations	
☐ Detroit	☐ New York
☐ Other	
Special Instructions	

Hold

↓

Hold
Hold

Hold

↓

RELINQUISHED BY: SIGNATURE/Organization	<i>[Signature]</i>	DATE 6/12/24	TIME 1635
RECEIVED BY: SIGNATURE/Organization	ASTI Cold Storage	DATE 6/12/24	TIME 1635
RELINQUISHED BY: SIGNATURE/Organization	<i>[Signature]</i>	DATE 6/14/24	TIME 1345
RECEIVED BY: SIGNATURE/Organization	<i>[Signature]</i>	DATE 6/14/24	TIME 1345

RELINQUISHED BY: SIGNATURE/Organization	<i>[Signature]</i>	DATE 6/14/24	TIME 1535
RECEIVED BY: SIGNATURE/Organization	M Chilcote	DATE 6/14/24	TIME 1535
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	NOTES: TEMP. ON ARRIVAL
SEAL NO.	SEAL INTACT YES ☐ NO ☐	INITIALS	4.1

PLEASE NOTE: SIGNING ACKNOWLEDGES ADHERENCE TO MERIT'S SAMPLE ACCEPTANCE POLICY ON REVERSE SIDE

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



April 19, 2024

Mr. Robert Doil
Chief Operating Office
Robertson Brothers Homes
6905 Telegraph Road, Suite 200
Bloomfield Hills, Michigan 48301

RE: Report of Fill Soils Estimation
Proposed Victor Parkway Development
7 Mile Road and Victor Parkway
City of Livonia, Wayne County, Michigan
G2 Report No. 243274

Dear Mr. Doil:

In accordance with your request, we have completed our work related to estimating the quantities of fill and peat at the proposed Victor Park Development located at the above cross streets in Livonia, Michigan.

We understand the proposed project includes the construction of several residential structures, underground utilities, pavements, and stormwater management structures. The development will be constructed in an area of historically reclaimed land. We do not know when or how the land was reclaimed; however, based on our previous investigations as well as previous investigations completed by others, we surmise the reclamation processes included burying organic soil deposits.

Consideration is being given to developing the site, despite the difficulty that the buried organic soil deposits may introduce during and following construction. As part of the consideration process, we understand the following parameters will be necessary:

- Estimate of the area of the organic soils;
- Estimate of the quantity of the organic soils within structures and roadways;
- Estimate of the quantity of fill soils within the organic soils area that is unsuitable for reuse as engineered fill;
- Estimate of the quantity of fill soils that are suitable for reuse as structural fill.

In this report, we document the processes we used to develop these estimates. We also include recommendations for road sections and structure foundations within the fill and peat areas.

MODELING THE SITE

Ground Surface

We used AutoCAD Civil3D 2022 to develop a working model of the existing ground surface elevations. The drawing provided to us consisted of the conventional elements found in an AutoCAD drawing; however, a three-dimensional representation (surface) of the ground was not included in the drawing file. As such, we generated a point cloud of elevations on the existing ground surface by tracing contour lines presented on the drawing and assigning elevations represented on the contour lines.



Ground Surface Elevations at Test Locations

In our review of the historical geotechnical data at the site, we noted that the historical soil boring data generated by us did not include ground surface elevations. Ground surface elevations were available on the historical data generated by CTI and Associates, Inc.; however, they were presented as approximate elevations. In the absence of accurate ground surface elevation data, we chose to assign ground surface elevations to all of the historical data based on our model of the existing ground surface.

It should be noted, the coordinate system in the drawing provided to us appeared to be inconsistent with the Michigan State Plane Coordinate system. We estimated the northing and easting of the test locations by overlaying historical investigation maps on Google Earth, capturing the latitude and longitude of the test locations, and converting the latitude and longitude to northing and eastings. We determined a fixed reference point at the ground in the drawing provided to us, compared that to the calculated northing and easting of the test locations, and translated the test locations to the site-specific coordinate system using offsets.

Generating Model of the Bottom of the Fill and Organic Soils

We reviewed our historical geotechnical data and geotechnical data generated by CTI and Associates, Inc. We tabulated the depth of the existing fill and organic soil relative to the existing ground surface. In addition, we estimated the depth of soils that we considered usable and unusable as engineered fill. In general, we based our estimate of the depth of soils that are suitable vs. unsuitable using the following criteria:

- If the existing fill lists the presence of organic soils, we considered the soil unusable for reuse;
- If the existing fill lists the presence of debris, we considered the soil unusable for reuse;
- If the existing fill lists a color that alludes to organic soils (e.g. dark brown), we considered the soil unusable for reuse.
- If the soil does not list the presence of organic soils, debris, or questionable color, we considered the soil reusable for reuse.

Using the depth of usable fill and unusable fill, we determined the proportion of the volume of the soil that would be usable vs. unusable. Based on the depths of encountered fill and the criteria for soil reuse, we estimate approximately 48 percent of the fill will be reusable and 52 percent of the fill will be unusable.

We anticipate significant undercuts will be required to remove the existing fill and/or organic soils. We recommend a G2 representative be on-site for the duration of the undercutting operations, so that they may review the quality of the excavated material and provide recommendations as to the usability of the excavated soil. Soils suitable for re-use should be stockpiled and moisture conditions as necessary. Soils unsuitable for reuse should be segregated from the usable soils.

It should be noted that we did not initially approach our historical projects with the intent of distinguishing usable fill vs. unusable. Additional testing may be required on the materials we identify as usable to confirm these materials meet the specifications and requirements for the project.

Our initial model of the bottom of the existing fill and organic soils was based solely on the test locations; however, the test locations do not encompass the entirety of the proposed development area. As such, we needed to infer, or otherwise estimate, the bottom of the existing fill and the bottom of the organic soils in areas absent of test data. In general, we used our engineering judgement in conjunction with historical aerial maps to conservatively estimate the bottom of the layer in question. We include a legend on Sheet No. 1 and Sheet No. 2 in the Appendix which identifies the symbol used to identify where we estimated the bottom of the soil layers.



As an example, we encountered organic soil extending to a depth of 10 feet around TP-12; however, we did not identify the bottom of the organic soil layer. At this location, we estimated that the bottom of the organic is located approximately 2 feet beyond the excavated depth. It should be understood that the actual depth of the fill and peat may differ from our estimated depths in areas away from the test locations.

Developing Volume Estimates

We used features of Civil 3D to constrain our estimates to the area of the proposed buildings and roadways. In essence, we eliminated the area of the proposed stormwater management basin from our estimates; however, we anticipate both fill and organic soils will be encountered beneath the ground surface extending to depths beyond 10 feet.

Our model of the site is based on a limited data set. Additional investigations could be performed to help refine our model. At a minimum, we recommend additional investigations be focused on areas of the site located between available test data and the boundaries of the development areas and also at the boundaries of the site.

To note, our volume estimates are constrained to the vertical space located between each modeled surface. Our volume estimates do not project laterally outward from the influence of proposed structures. Where undercutting operations are used in the influence of foundations, the undercutting operations must extend from the bottom of the proposed foundations projected outward at a 45 degree angle extending to the top of the suitable soil layer. At a minimum, this trapezoid of soil should be considered the influence of the foundations and all of the soil within the influence of foundations should be removed. Considering we do not know the planned foundation type or dimensions, we did not project the zone of influence outward and away from the proposed foundation locations in our volume estimates. Please refer to our report titled "Proposed Victor Parkway – Office Building – G2 Project No.: 133040" for comprehensive recommendations related to the zone of influence beneath foundations.

ESTIMATES OF FILL AND PEAT

Our estimates of the volume of the existing fill, the volume of the existing peat, the volume of the reusable fill, and the volume of the unusable fill are based on the results of our three-dimensional modeling and our engineering judgement. We present our estimates of these quantities in the following table:

Parameter	Estimate	Units
Area of the Organic Soils	116,376	sf
Volume of Organic Soils within the Structures and Roadways	16,552	cyd
Volume of Fill Soils Considered Suitable for Reuse	19,298	cyd
Volume of Fill Soils Considered Unsuitable for Reuse	21,076	cyd

The actual quantity of soil to be removed depends on the depth, width, and location of the foundations and structures at the site. Actual removal quantities may vary from what we present above.

Please note, the volume estimates presented in this report are raw estimated values obtained from comparing the soil surfaces. The individual using this data should understand the basis of the data, where we assumed soil data, where additional data would help to refine our model, and the appropriate overrun factors to properly estimate the costs of removing/replacing these soils.



PREVIOUS INVESTIGATIONS

We have been involved with several geotechnical investigations at the site. Please refer to our previous reports for comprehensive recommendations related to site preparation, foundation construction, utility construction, requirements for engineered fill, and constructions considerations as they relate to the proposed project.

In the following sections of this report, we have pared down our recommendation to foundations, floor slabs, and pavement. We refer you to your previous reports for recommendation related to other portions of the project.

FOUNDATION CONSIDERATIONS

We provided foundation recommendations for the site in our report titled “Proposed Victor Parkway – Office Building – G2 Project No.: 133040”. In this report, we recommended the proposed buildings be supported by conventional shallow foundation systems designed to bear on engineered fill placed following undercutting the existing organic soils. We refer you to this report for comprehensive recommendations related to undercutting the existing site and replacing the soils with engineered fill.

As an alternative to removing and replacing the existing fill and organic soils with engineered fill, consideration could be given to supporting the proposed structures on improved soils consisting of rammed aggregate piers. Rammed-aggregate piers (RAP) typically consist of a 30 inch column of stone extending to depths of up to 30 feet. The shaft is excavated to a target depth after which crushed-rock is lowered to the base of the excavation and subsequently compacted with a beveled ram delivering 1 to 2 million ft-lbs of energy to the ram at approximately 400 blows per minute. The high frequency ramming action embeds each lift of the crushed rock into and compacts the bottom of the drilled shaft. Once the bottom of the drilled shaft is filled, the equipment rams and embeds subsequent lifts of crushed rock into the sides of the drilled shaft radially into the adjacent soil. The net effect of these operations is an increase in strength and stiffness of the soil mass up to one RAP diameter from the edge of the drilled shaft. The resulting improved soil can provide bearing capacities ranging from two to four times the allowable bearing pressure of the unimproved soil.

Shallow foundations constructed within the influence of the fill/organic soils should be constructed on improved ground, consisting of rammed-aggregate piers (RAPs). Specifications for construction as well as the design of RAPs are performed by specialty contractors. Based on our experience with RAP construction, qualified contractors to perform this work in this area include Tensar (Geopiers), Menard USA, and Nicholson.

FLOOR SLAB CONSIDERATIONS

The placement of engineered fill over the existing fill/organic soils will induce settlement. We consider soils having organic matter contents more than 4 percent to be unsuitable for the support of floor slabs. Where the existing soils have organic matter contents less than 4 percent, the existing organic soils may remain in place provided the exposed surface passes the proof-roll or proof-compaction operations. Where the existing soils have organic matter contents of more than 4 percent, the organic soils must be removed and replaced with engineered fill. Where the removal of the existing organic soils will become cost-prohibitive, consideration could be given to structurally supporting the proposed slabs, or supported the proposed slabs on the rammed aggregate pier systems.

If the risk of floor slab settlement can be tolerated, the existing fill soils may remain in place provided they pass proof-rolling or proof-compaction operations. We anticipate the risk of floor slab settlement is moderate considering the thickness of the organic soils in some locations. If the risk of floor slab settlement cannot be tolerated, we recommend that the proposed floor slabs be supported on improved



soil, consisting of replcaed soils or rammed aggregate piers, as described in the Foundation Recommendations section of this report.

Following satisfactory completion of the subgrade preparation recommendations presented in this report, we anticipate the exposed subgrade will consist of existing fill soils, native granular/cohesive soils, stabilized soils, or engineered fill. A subgrade modulus (k) of 85 pounds per cubic inch (pci) may be used in the design of floor slabs supported on the existing fill soils. A subgrade modulus (k) of 150 pounds per cubic inch (pci) may be used in the design of floor slabs supported on improved soils or engineered fill. A subgrade modulus of 120 pci may be used in the design of floor slabs supported on the existing native soils.

We recommend at least 4 inches of clean coarse sand or pea gravel be placed between the subgrade and the bottom of the floor slab for use as a capillary break to reduce moisture transmission through the concrete floors and to reduce the potential for concrete curling. If moisture sensitive floor coverings are planned or if greater protection against vapor transmission is desired, a vapor barrier consisting of 10-mil plastic sheeting, or equivalent, may be placed on the sand or pea gravel layer beneath floor slabs. However, additional floor slab curing techniques will be required especially if floor slab placement occurs in the winter months to prevent floor slab curling. The floor slab should be isolated from the foundation system to allow for independent movement.

PAVEMENT RECOMMENDATIONS

We anticipate the proposed pavements will be support by native soils, engineered fill soils, and existing fill soils underlain by existing organic soils. Where the existing fill/organic soils are not removed, consideration should be given to incorporating triaxial geogrid within the aggregate base layer of the proposed pavements. In addition, consideration should be given to increasing the thickness of the aggregate base layer to accommodate the geogrid. In lieu of using geogrid, consideration could be given to increasing the thickness of the aggregate base. We expect pavements constructed over the existing fill/organic soils will settle over time resulting in a shorter design-life, with or without geogrid.

We performed pavement design analyses in accordance with the “AASHTO Guide for Design of Pavement Structures”. We anticipate pavement subgrade soils will consist of the existing fill soils and or engineered fill consisting of native cohesive soils. Based on the anticipated subgrade soils, we have provided design pavement sections based on an effective subgrade resilient modulus of 6,000 pounds per square inch (psi). For the bituminous concrete pavement analyses, we used a serviceability loss of 2.0, a standard of deviation of 0.49, and a reliability of 0.95.

Our analyses indicate the proposed Standard Duty Bituminous Concrete Pavement section can service a total of 50,000 equivalent single-axle loads (ESALs) over a 20-year design life. If actual traffic volume information becomes available, G2 Consulting Group, LLC, should be notified so we can reevaluate our analyses of the proposed pavement sections.

Based on the results of our analysis we recommend the proposed pavements consist of 2 inches of MDOT 5E1 wearing course, 2 inches of MDOT 4EML leveling course, and 8 inches of MDOT 21AA dense-graded aggregate base.

All pavement materials are specified within the 2020 Standard Specifications for Construction from the Michigan Department of Transportation. The aggregate materials for the subbase and concrete are described in Section 902. The bituminous pavement materials are described in Section 501 and can be assigned a structural coefficient number of 0.42. Imported aggregate base course materials consisting of limestone aggregates can be assigned a structural coefficient number of 0.14.

The pavement and subgrade should be properly sloped to promote effective surface and subsurface

drainage and prevent water from ponding. Periodic maintenance of the pavement will be required to maintain the drainage characteristics of the site. We also recommend pavement subbase materials consist of non-frost-susceptible aggregates where possible.

We recommend regular timely maintenance be performed on the bituminous pavements to reduce the potential deterioration associated with differential settlement and moisture infiltration through surface cracks. The owner should be prepared to seal the cracks with a hot-applied elastic crack filler as soon as possible after cracking develops and as often as necessary to block the passage of water to the subgrade soils.

GENERAL COMMENTS

We have formulated the evaluations and recommendations presented in this report based on data provided to us relating to the location, type, and grade for the proposed site. Any significant change in this data should be brought to our attention for review and evaluation with respect to the prevailing subsurface conditions. Furthermore, if changes occur in the design, location, or concept of the project, the conclusions and recommendations contained in this report are not valid unless G2 Consulting Group, LLC reviews the changes. G2 Consulting Group, LLC will then confirm the recommendations presented herein or make changes in writing.

The scope of the present work was limited to estimating volumes, providing foundation recommendations, and providing pavement recommendations. No chemical, environmental or hydrogeological testing or analyses were included in the scope of or work.

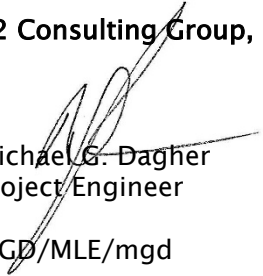
We base the analyses and recommendations submitted in this report upon the data from the historical soil borings and test pits drilled at the site. This report does not reflect variations that may occur away from the actual test locations. The nature and extent of any such variations may not become clear until the time of construction. If significant variations then become evident, it may be necessary for us to re-evaluate our report recommendations.

Accordingly, we recommend G2 Consulting Group, LLC observe all geotechnical related work, including foundation construction, subgrade preparation, and engineered fill placement. G2 Consulting Group, LLC will perform the appropriate testing to confirm the geotechnical conditions given in the report are found during construction.

We appreciate the opportunity to be of service to you on this project and look forward to discussing the results presented. In the meantime, if you have any questions regarding this report or any other matter pertaining to the project, please call us.

Sincerely,

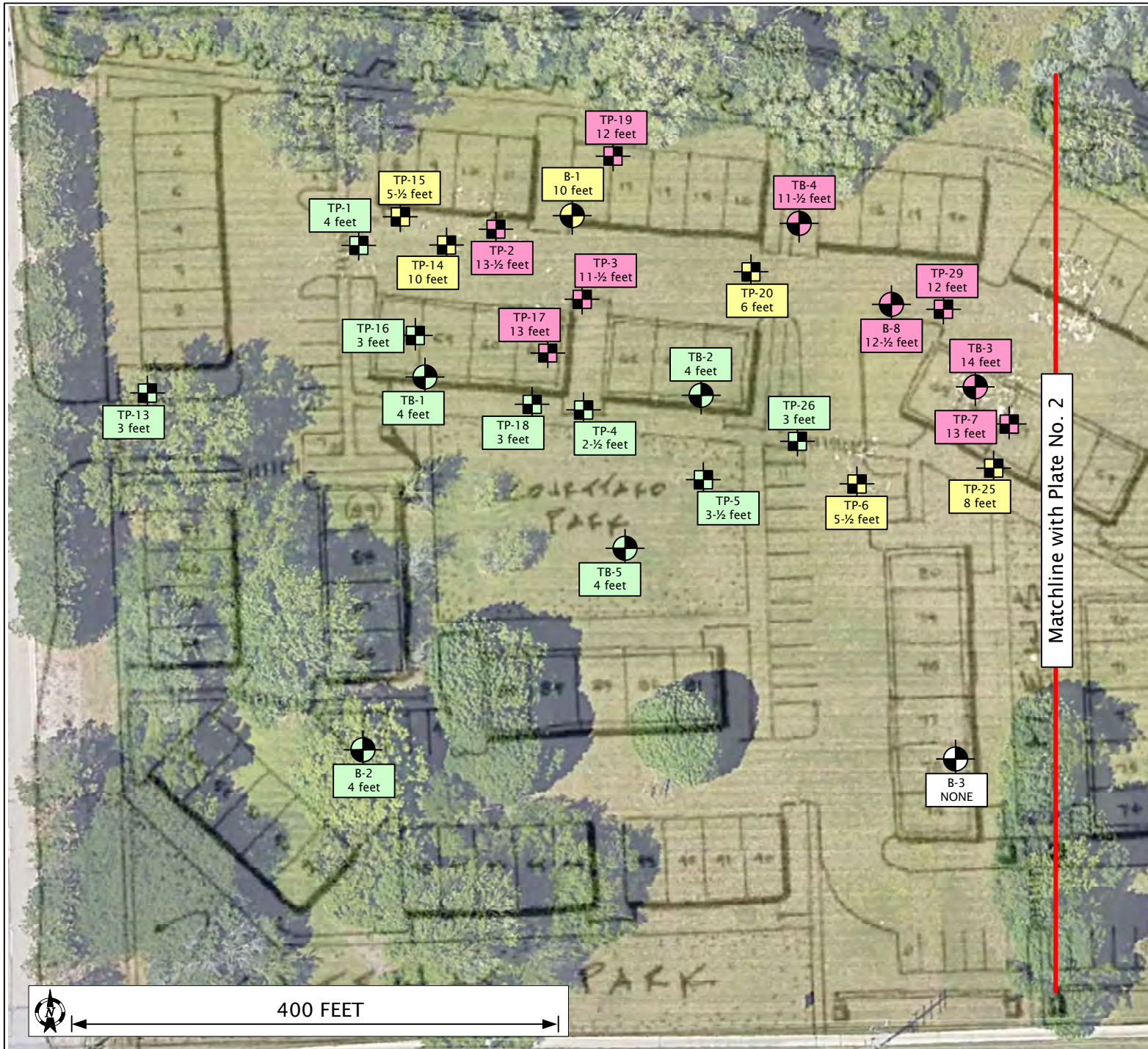
G2 Consulting Group, LLC


Michael G. Dagher
Project Engineer

MGD/MLE/mgd


Jason B. Stoops
Associate / Project Manager

Enclosures: Sheet No. 1 – Ground Surface to Bottom of Fill
Sheet No. 2 – Bottom of Fill to Bottom of Organic Soil
Results of Historical Investigations at the Site



PROJECT NO: 133040

PROJECT NAME: VICTOR PARKWAY

LOCATION: LIVONIA, MI

DRAWN BY: KAC

DATE: 3-18-2024

FILL/PEAT DEPTHS

-  5 feet or less
-  Greater than 5 feet and less than or equal to 10 feet
-  Greater than 10 feet
-  None encountered

Note: The intent of Plate Nos. 1 and 2 are to provide a pictorial that delineates the approximate limits of the fill relevant to the surrounding subsurface conditions. The transition between the existing fill and native soils will be more gradual than what is shown

Soil borings B-1 through B-9 performed by Strata Drilling on December 10, 2013

Soil borings TB-1 through TB-6 performed by CTI & Associates, Inc. on May 30 and 31, 2002

Test Pits TP-1 through TP-13 performed by Carnwath Excavating Co. on September 16, 2020

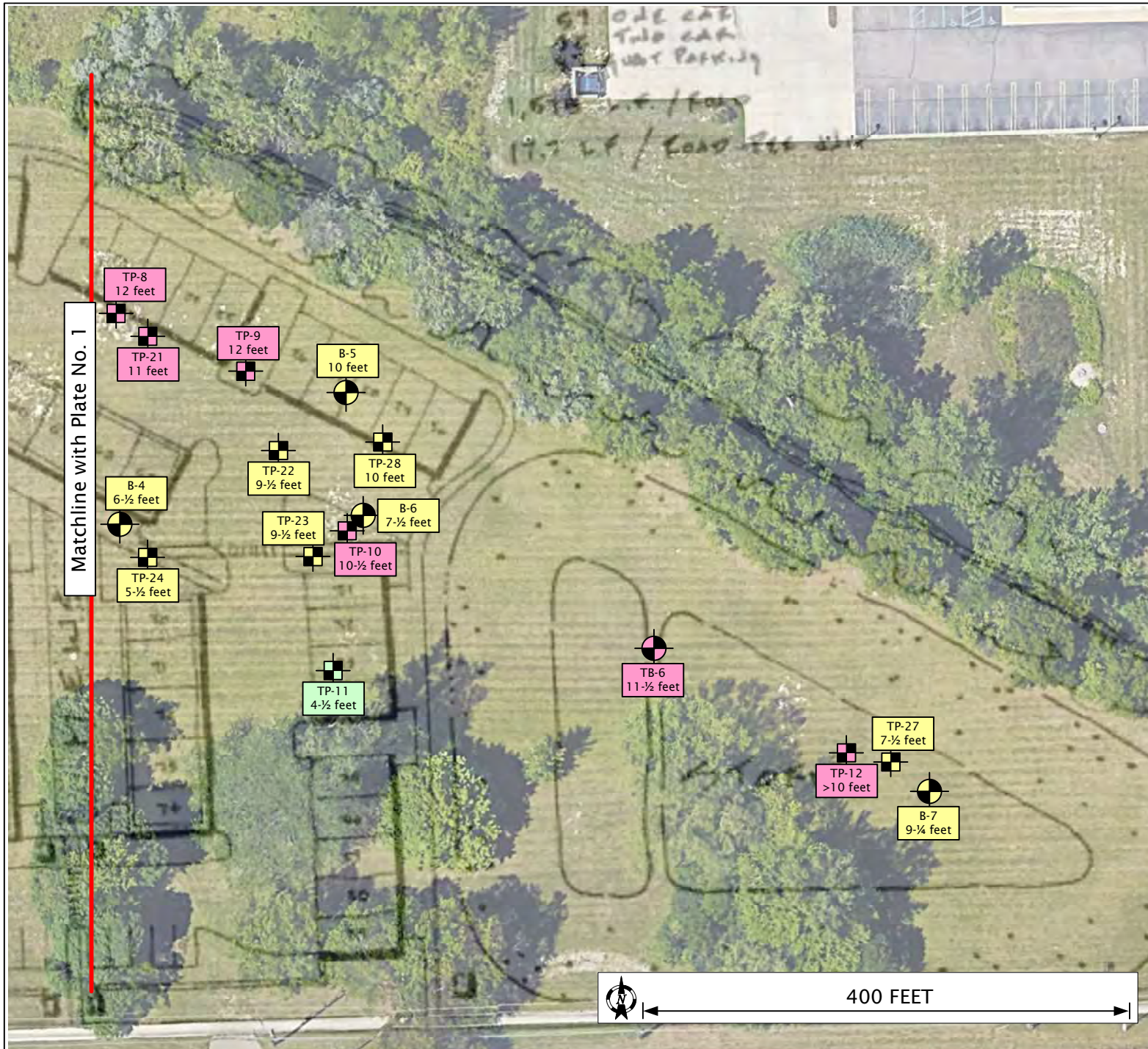
Test Pits TP-14 through TP-29 performed on March 13, 2024

SHEET TITLE

EXISTING FILL/PEAT MAP

SHEET NO.

PLATE NO. 1



PROJECT NO: 133040

PROJECT NAME: VICTOR PARKWAY

LOCATION: LIVONIA, MI

DRAWN BY: KAC

DATE: 3-18-2024

FILL/PEAT DEPTHS

- 5 feet or less
- Greater than 5 feet and less than or equal to 10 feet
- Greater than 10 feet
- None encountered

Note: The intent of Plate Nos. 1 and 2 are to provide a pictorial that delineates the approximate limits of the fill relevant to the surrounding subsurface conditions. The transition between the existing fill and native soils will be more gradual than what is shown

Soil borings B-1 through B-9 performed by Strata Drilling on December 10, 2013

Soil borings TB-1 through TB-6 performed by CTI & Associates, Inc. on May 30 and 31, 2002

Test Pits TP-1 through TP-13 performed by Carnwath Excavating Co. on September 16, 2020

Test Pits TP-14 through TP-29 performed on March 13, 2024

SHEET TITLE

EXISTING FILL/PEAT MAP

SHEET NO.

PLATE NO. 2

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040

Latitude: N/A

Longitude: N/A



Soil Boring No. **B-1**

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		TOPSOIL: Yellowish Brown Clayey Sand (3 inches)	0.3						
		FILL: Stiff Yellowish Brown Clayey Sand with trace roots and gravel	1.4						
		FILL: Stiff Grayish Brown Silty Clay with trace sand and gravel		S-1	3 3 4	7	19.8		3500*
5		Very Stiff Brownish Gray Silty Clay with trace sand and gravel	4.0		2 3 3	6	16.1		5000*
		Medium Brownish Gray Silty Clay with trace sand and gravel	6.0	S-2					
				S-3	1 1 2	3	28.1	104	1570
10		Medium Very Dark Gray Organic Silt	9.7		2 2 3	5	32.2		1500*
			10.0	S-4					
				S-5	3 6 8	14	21.1		
15		Medium Compact Gray Silt with trace sand			6 11 10	21	20.0		
				S-6					
20			20.0	S-7	7 10 11	21	21.2		
		End of Boring @ 20ft							
25			25						
30			30						
35			35						

Total Depth: 20ft
Drilling Date: December 10, 2013
Inspector: M. Dagher
Contractor: B. Sienkiewicz
Driller: Strata Drilling, Inc.

Water Level Observation:
11 feet during drilling operations; wet cave measured at 11-1/2 feet upon removal of augers

Notes:
* Calibrated Hand Penetrometer

Drilling Method:
2-1/4 inch inside diameter hollow stem auger

Excavation Backfilling Procedure:
Backfilled with auger cuttings

Figure No. 1

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040

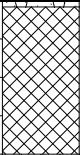
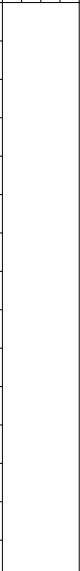
Latitude: N/A

Longitude: N/A



Soil Boring No. **B-2**

Consulting Group, LLC

SUBSURFACE PROFILE					SOIL SAMPLE DATA						
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A			DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		TOPSOIL: Brown Clayey Sand (2 inches)			0.2						
		FILL: Loose Dark Brown Silty Sand with trace gravel				S-1	3 3 3	6			
					4.0		6 7 9				
5		Medium Compact Yellowish Brown Silt with trace sand			5.0	S-2	9	16	21.8		
						S-3	4 6 8	14	19.2		
10					10	S-4	6 8 7	15	19.9		
		Medium Compact to Compact Gray Silt with trace sand									
15					15	S-5	6 11 13	24	21.2		
20					20.0	S-6	8 13 18	31	18.5		
		End of Boring @ 20ft									
25					25						
30					30						
35					35						

Total Depth: 20ft
Drilling Date: December 10, 2013
Inspector: M. Dagher
Contractor: B. Sienkiewicz
Driller: Strata Drilling, Inc.

Water Level Observation:
7-1/2 feet during and upon completion of drilling operations

Excavation Backfilling Procedure:
Backfilled with auger cuttings

Drilling Method:
2-1/4 inch inside diameter hollow stem auger

Figure No. 2

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040

Latitude: N/A

Longitude: N/A



Soil Boring No. **B-3**

Consulting Group, LLC

SUBSURFACE PROFILE					SOIL SAMPLE DATA						
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A			DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
5		TOPSOIL: Brown Clayey Sand (3 inches) CONCRETE (4 inches) Medium Compact Yellowish Brown Silty Sand with trace clay and gravel Loose to Medium Compact Yellowish Brown Silt with trace sand			5	S-1	10 9 6	15	12.4		
						S-2	3 3 3	6	22.7		
10		Medium Compact Grayish Brown Silt with trace sand			10	S-3	4 7 8	15	22.4		
						S-4	8 10 11	21	19.2		
15		Medium Compact Gray Silt with trace sand			15	S-5	6 10 12	22	22.3		
20		Medium Compact Gray Silty Sand			20	S-6	4 8 11	19			
25		End of Boring @ 20ft			25						
30					30						
35					35						

Total Depth: 20ft
 Drilling Date: December 10, 2013
 Inspector: M. Dagher
 Contractor: B. Sienkiewicz
 Driller: Strata Drilling, Inc.

Water Level Observation:
 7-1/2 feet during drilling operations; 10 feet upon completion of drilling operations

Excavation Backfilling Procedure:
 Backfilled with auger cuttings

Drilling Method:
 2-1/4 inch inside diameter hollow stem auger

Figure No. 3

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040

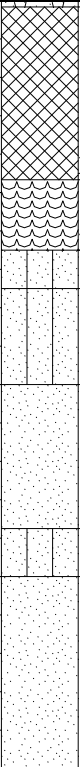
Latitude: N/A

Longitude: N/A



Soil Boring No. **B-4**

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA							
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)		
5		TOPSOIL: Yellowish Brown Silty Clay	0.2	S-1	3 7 8	15	13.6		7000*		
		FILL: Stiff to Very Stiff Dark Brown Silty Clay with trace sand									
						S-2A S-2B	3 5 5	10	19.7	105	2640
				Very Loose Dark Gray Organic Silt (Organic Matter Content = 10.4%)	4.7	S-3A	2 2				
				Very Loose Dark Yellowish Brown Silty Sand	6.5	S-3B	2 2	4			
10		Medium Compact Reddish Yellow Silty Sand	7.5	S-4	4 8 10	18					
			10.0								
15		Medium Compact Gray Silty Sand with trace gravel	13.8	S-5	6 8 9	17	21.3				
		Medium Compact Gray Silt with trace sand	15.0								
20		Loose Gray Silty Sand	20.0	S-6	2 3 6	9					
25		End of Boring @ 20ft	25								
30			30								
35			35								

Total Depth: 20ft
Drilling Date: December 10, 2013
Inspector: M. Dagher
Contractor: B. Sienkiewicz
Driller: Strata Drilling, Inc.

Water Level Observation:
6-1/2 feet during drilling operations; wet cave measured at 4-1/2 feet upon removal of augers

Notes:
* Calibrated Hand Penetrometer

Drilling Method:
2-1/4 inch inside diameter hollow stem auger

Excavation Backfilling Procedure:
Backfilled with auger cuttings

Figure No. 4

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040

Latitude: N/A

Longitude: N/A



Soil Boring No. **B-5**

Consulting Group, LLC

SUBSURFACE PROFILE					SOIL SAMPLE DATA						
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A			DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		TOPSOIL: Dark Yellowish Brown Silty Clay (2 inches)			0.2						
						S-1	4 4 4	8	15.1		4000*
5		FILL: Medium to Stiff Dark Yellowish Brown Silty Clay with trace gravel			5	S-2	3 4 3	7	23.1		3000*
						S-3	1 2 2	4	21.7	105	960
10		Medium Dark Gray Organic Silt (Organic Matter Content = 8.7%)			8.5 10.0	S-4	1 2 2	4	50.3		1000*
		Medium Compact Dark Gray Sand with trace gravel									
15		Medium Compact Gray Silt with trace sand			14.3 15.0	S-5	6 7 8	15			
		Medium Compact Gray Sand with trace gravel									
20		Medium Compact Gray Silt with trace sand			18.8 20.0	S-6	4 7 10	17			
		End of Boring @ 20ft									
25					25						
30					30						
35					35						

Total Depth: 20ft
Drilling Date: December 10, 2013
Inspector: M. Dagher
Contractor: B. Sienkiewicz
Driller: Strata Drilling, Inc.

Water Level Observation:
13 feet during drilling operations; wet cave measured at 7-1/2 feet upon removal of augers

Notes:
* Calibrated Hand Penetrometer

Drilling Method:
2-1/4 inch inside diameter hollow stem auger

Excavation Backfilling Procedure:
Backfilled with auger cuttings

Figure No. 5

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040

Latitude: N/A

Longitude: N/A



Soil Boring No. **B-6**

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA						
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A		DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		TOPSOIL: Yellowish Brown Silty Clay (4 inches)		0.3		2				
					S-1	4	8	20.2		2500*
5		FILL: Stiff to Very Stiff Yellowish Brown Silty Clay with trace sand and gravel		5	S-2	3 3 4	7	15.6		4500*
						1				
		Very Loose Brownish Gray Clayey Sand with trace gravel and organics		6.5	S-3	1 1 3	4	26.6		
				7.5						
10		Loose Yellowish Brown Silt with trace sand		10.0	S-4	4 5 5	10	23.0		
		End of Boring @ 10ft								
15				15						
20				20						
25				25						
30				30						
35				35						

Total Depth: 10ft
Drilling Date: December 10, 2013
Inspector: M. Dagher
Contractor: B. Sienkiewicz
Driller: Strata Drilling, Inc.

Water Level Observation:
6-1/2 feet during and upon completion drilling operations

Notes:
* Calibrated Hand Penetrometer

Drilling Method:
2-1/4 inch inside diameter hollow stem auger

Excavation Backfilling Procedure:
Backfilled with auger cuttings

Figure No. 6

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040

Latitude: N/A

Longitude: N/A



Soil Boring No. **B-7**

Consulting Group, LLC

SUBSURFACE PROFILE					SOIL SAMPLE DATA						
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A			DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		TOPSOIL: Yellowish Brown Silty Clay (2 inches)			0.2		3				
		FILL: Very Stiff Yellowish Brown Silty Clay with trace sand and gravel				S-1	6	12	13.5		6500*
5					5.0	S-2	16 12 5	17	14.9		
		Stiff Dark Gray Silty Clay with trace sand and gravel				S-3	2 3 4	7	18.4		3000*
		Very Loose Very Dark Gray Organic Silt (Organic Matter Content = 8.0%)			8.5		1		58.5		
10					9.2	S-4	1 1 3	4			
		Loose Gray Silty Sand with trace gravel				S-5	5 9 11	20			
		Medium Compact Gray Silt with trace sand			12.2 12.5						
15		End of Boring @ 12.5ft			15						
20					20						
25					25						
30					30						
35					35						

Total Depth: 12.5ft
Drilling Date: December 10, 2013
Inspector: M. Dagher
Contractor: B. Sienkiewicz
Driller: Strata Drilling, Inc.

Water Level Observation:
9 feet during drilling operations; wet cave measured at 8 feet upon removal of augers

Notes:
* Calibrated Hand Penetrometer

Drilling Method:
2-1/4 inch inside diameter hollow stem auger

Excavation Backfilling Procedure:
Backfilled with auger cuttings

Figure No. 7

SOIL / PAVEMENT BORING 133040.GPJ G2 CONS.GDT 12/26/13

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040

Latitude: N/A

Longitude: N/A



Soil Boring No. **B-8**

Consulting Group, LLC

SUBSURFACE PROFILE				SOIL SAMPLE DATA					
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE-NO.	BLOWS/ 6-INCHES	STD. PEN. RESISTANCE (N)	MOISTURE CONTENT (%)	DRY DENSITY (PCF)	UNCONF. COMP. STR. (PSF)
		TOPSOIL: Yellowish Brown Silty Clay (2 inches)	0.2						
		FILL: Very Stiff Yellowish Brown Silty Clay with trace sand and gravel							
5			5.0	S-1	3 4 4	8	17.6		4500*
		FILL: Medium Yellowish Brown Silty Clay with trace sand and gravel							
			6.9	S-2	2 3 4	7	25.3	104	1500*
		Soft Gray Silty Clay with trace sand and gravel							
			8.5						
		Loose Gray Silty Sand with trace gravel	8.8						
10			10	S-3	3 2 2	4	264.3		
		Very Loose Black Peat (Organic Matter Content = 49.2%)					124.0		
			12.0	S-4	2 4 3	7	78.8		
		Loose Very Dark Brown Organic Silt (Organic Matter Content = 11.2%)	12.5						
		Loose Gray Silty Sand with trace gravel							
15			15.0	S-5	5 5 3	8			
		End of Boring @ 15ft							
20			20						
25			25						
30			30						
35			35						

Total Depth: 15ft
Drilling Date: December 10, 2013
Inspector: M. Dagher
Contractor: B. Sienkiewicz
Driller: Strata Drilling, Inc.

Water Level Observation:
9 feet during and upon completion of drilling operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with auger cuttings

Drilling Method:
2-1/4 inch inside diameter hollow stem auger

Figure No. 8



CTI and Associates, Inc.
12482 Emerson Drive
Brighton, MI 48116
(248) 486-5100 phone
(248) 486-5050 fax

LOG OF TEST BORING

NO.:	TB-1	PROJECT NO.:	29190003
DATE:	5/30/02	SURFACE ELEV.:	*742±

*Elevation estimated from a topographic map

PROJECT NAME: Proposed Office Building 37640 Seven Mile Road - Livonia, MI

PAGE: 1 OF: 2

Depth	SOIL DESCRIPTION	Sample Type	Depth Feet	Penetration Blows for 6"	PID	Moisture %	Natural Wt. P.C.F.	Unconfined Comp. Str. P.S.F.	STR %
0' 6"	Brown moist sandy TOPSOIL - (FILL)								
1' 6"	Brown moist CLAY with traces of silt, sand, gravel and organics - (FILL)		1						
4' 0"	Brown moist medium compact fine to medium SAND with traces of silt, clay, gravel and organics - (FILL)	SS-1	2	5					
				6					
			3	5					
			4						
6' 6"	Brown wet medium stiff SILT with trace of clay - Occasional seam of clay	SS-2		2					
			5	2					
				3					
9' 6"	Brown wet medium stiff SILT with trace of organics	SS-3							
			7	2					
				3		24.3			
			8	5					
14' 0"	Gray wet very stiff SILT with trace of sand - Occasional seam of clay	SS-4							
				7					
			10	8					
				9					
			11						
			12						
19' 0"	Gray wet hard SILT with trace of clay - Occasional seam of clay	SS-5							
				12					
			15	15		21.9			
				17					
			16						
			17						
			18						
24' 0"	Gray wet medium compact fine SAND with trace of silt	SS-6		6					
			20	8					
				9					
			21		Hole was bailed dry, 4 hours after bailing, water level was at 6' 0"				
			22						
			23						
	Gray wet compact fine SAND with trace of silt	SS-7		12					
			25	18					
				22					
			26						

TYPE OF SAMPLE:	DRILLING METHOD: 3 1/4" ID Hollow Stem Auger	GROUNDWATER:
SS-Split Spoon	DRILLING FOREMAN: M. Near	ENCOUNTERED AT: 4' 0"
SL-Split Spoon w/liner	BACKFILL MATERIAL: Natural soils	AFTER COMPLETION: 4' 0"
ST-Shelby Tube	* Pocket Penetrometer Value Standard Penetration Test - Driving 2" OD Sampler 18" With 140# Hammer Falling 30"; Count Made at 6" Intervals	AFTER 24 HOURS: 5' 0"

Figure No. 10a



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(248) 486-5100 phone
(248) 486-5050 fax

LOG OF TEST BORING

NO.:	TB-1	PROJECT NO.:	29190003
DATE:	5/30/02	SURFACE ELEV.:	*742±

*Elevation estimated from a topographic map

PROJECT NAME: Proposed Office Building 37640 Seven Mile Road - Livonia, MI

PAGE: 2 OF: 2

Depth	SOIL DESCRIPTION	Sample Type	Depth Feet	Penetration Blows for 6"	PID	Moisture %	Natural Wt. P.C.F.	Unconfined Comp. Str. P.S.F.	STR %
29' 0"	Gray wet compact fine SAND with trace of silt		27						
			28						
			29						
			29						
50' 0"	Gray wet very compact fine SAND with trace of silt			17					
		SS-8	30	28					
				28					
			31						
			32						
			33						
			34						
				20					
		SS-9	35	34					
				37					
			36						
			37						
			38						
			39						
				21					
		SS-10	40	28					
				30					
			41						
			42						
			43						
			44						
				18					
		SS-11	45	26					
				28					
			46						
			47						
			48						
			49						
				22					
50' 0"		SS-12	50	24					
50' 6"	Gray moist hard CLAY with trace of silt and seam of silt and fine sand			19					
			51						
	End of boring		52						
TYPE OF SAMPLE:		DRILLING METHOD: 3 1/4" ID Hollow Stem Auger				GROUNDWATER:			
SS-Split Spoon		DRILLING FOREMAN: M. Near				ENCOUNTERED AT: 4' 0"			
SL-Split Spoon w/liner		BACKFILL MATERIAL: Natural soils				AFTER COMPLETION: 4' 0"			
ST-Shelby Tube		* Pocket Penetrometer Value Standard Penetration Test - Driving 2" OD Sampler 18" With 140# Hammer Falling 30"; Count Made at 6" Intervals				AFTER 24 HOURS: 5' 0"			



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LOG OF TEST BORING

NO.:	TB-2	PROJECT NO.:	29190003
DATE:	5/31/02	SURFACE ELEV.:	*740.5±

*Elevation estimated from a topographic map

PROJECT NAME: Proposed Office Building 37640 Seven Mile Road - Livonia, MI

PAGE: 1 OF: 2

Depth	SOIL DESCRIPTION	Sample Type	Depth Feet	Penetration Blows for 6"	PID	Moisture %	Natural Wt. P.C.F.	Unconfined Comp. Str. P.S.F.	STR %
0' 6"	Brown moist clayey TOPSOIL - (FILL)								
1' 6"	Brown moist CLAY with traces of silt, gravel and organics - (FILL)		1						
4' 0"	Brown moist very stiff CLAY with traces of silt, gravel and organics - (FILL)	SS-1	2	6					
				8					
			3	8					
			4						
6' 6"	Brown wet loose fine to medium SAND with traces of silt and gravel	SS-2		4					
			5	3					
				2					
			6						
10' 0"	Brown wet medium compact fine SAND with trace of silt	SS-3	7	9					
				13		25.3			
			8	15					
		SS-4	9						
				12					
			10	12					
14' 0"	Gray wet medium compact fine SAND with trace of silt			13					
			11						
			12						
			13						
19' 0"	Gray wet very stiff SILT with trace of clay - Occasional seam of clay	SS-5		9					
			15	11					
				14					
			16						
			17						
24' 0"	Gray wet very compact fine SAND with trace silt	SS-6		25					
			20	29					
				52					
			21						
			22						
	Gray wet compact silty fine SAND	SS-7		13					
			25	14					
				18					
			26						

TYPE OF SAMPLE:	DRILLING METHOD: 3 1/4" ID Hollow Stem Auger	GROUNDWATER:
SS-Split Spoon	DRILLING FOREMAN: M. Near	ENCOUNTERED AT: 4' 0"
SL-Split Spoon w/liner	BACKFILL MATERIAL: Natural soils	AFTER COMPLETION: 4' 0"
ST-Shelby Tube	* Pocket Penetrometer Value Standard Penetration Test - Driving 2" OD Sampler 18" With 140# Hammer Falling 30"; Count Made at 6" Intervals	AFTER 24 HOURS: 4' 0"

Figure No. 11a



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LOG OF TEST BORING

NO.:	TB-2	PROJECT NO.:	29190003
DATE:	5/31/02	SURFACE ELEV.:	*740.5±

*Elevation estimated from a topographic map

PROJECT NAME: Proposed Office Building 37640 Seven Mile Road - Livonia, MI

PAGE: 2 OF: 2

Depth	SOIL DESCRIPTION	Sample Type	Depth Feet	Penetration Blows for 6"	PID	Moisture %	Natural Wt. P.C.F.	Unconfined Comp. Str. P.S.F.	STR %
29' 0"	Gray wet compact silty fine SAND with little silt		27						
			28						
			29						
30' 0"	Gray moist CLAY with trace of silt	SS-8	30	5					
				6					
				8					
34' 0"	Gray wet medium compact fine SAND with trace of silt		31						
			32						
			33						
			34						
39' 0"	Gray wet very compact fine SAND with trace of silt - Occasional seam of clay	SS-9	35	19					
				26					
				35					
			36						
			37						
			38						
			39						
40' 6"	Gray wet compact fine SAND with trace of silt	SS-10	40	12					
				15					
				17					
	End of boring		41						
			42						
			43						
	*Hole was bailed dry, 4 hours after bailing water level was at 4' 0"		44						
			45						
			46						
			47						
			48						
			49						
			50						
			51						
			52						

TYPE OF SAMPLE:	DRILLING METHOD: 3 1/4" ID Hollow Stem Auger	GROUNDWATER:
SS-Split Spoon	DRILLING FOREMAN: M. Near	ENCOUNTERED AT: 4' 0"
SL-Split Spoon w/liner	BACKFILL MATERIAL: Natural soils	AFTER COMPLETION: 4' 0"
ST-Shelby Tube	* Pocket Penetrometer Value Standard Penetration Test - Driving 2" OD Sampler 18" With 140# Hammer Falling 30"; Count Made at 6" Intervals	AFTER 24 HOURS: 4' 0"



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LOG OF TEST BORING

NO.:	TB-3	PROJECT NO.:	29190003
DATE:	5/30/02	SURFACE ELEV.:	*739.5±

*Elevation estimated from a topographic map

PROJECT NAME: Proposed Office Building 37640 Seven Mile Road - Livonia, MI

PAGE: 1 OF: 2

Depth	SOIL DESCRIPTION	Sample Type	Depth Feet	Penetration Blows for 6"	PID	Moisture %	Natural Wt. P.C.F.	Unconfined Comp. Str. P.S.F.	STR %
1' 1"	Brown moist clayey TOPSOIL		1						
1' 6"	Brown moist CLAY with traces of silt, sand and organics								
4' 0"	Variegated moist very stiff CLAY with traces of silt, sand, gravel and organics	SS-1	2	5					
				10					
			3	14					
			4						
6' 6"	Variegated moist stiff CLAY with traces of silt, sand, gravel and wood	SS-2		4					
			5	4					
				5					
9' 0"	Brown moist loose fine to medium SAND with traces of silt, gravel and organics - (FILL)	SS-3							
			7	5					
				3					
			8	2					
12' 0"	Black moist PEAT	SS-4							
				2					
			10	2					
				2					
14' 0"	Brown wet loose silty fine SAND with traces of gravel and organics	SS-5							
				2					
			12	3		23.3			
			13	4					
19' 0"	Gray wet loose silty fine to medium SAND with little gravel	SS-6							
				4					
			15	4					
				4					
			16						
			17						
	Gray wet compact to very compact silty fine SAND	SS-7							
				14					
			20	18					
				20					
			21						
			22						
			23						
		SS-8							
				16					
			25	25					
				28					
			26						

TYPE OF SAMPLE:	DRILLING METHOD: 3 1/4" ID Hollow Stem Auger	GROUNDWATER:
SS-Split Spoon	DRILLING FOREMAN: M. Near	ENCOUNTERED AT: 12' 0"
SL-Split Spoon w/liner	BACKFILL MATERIAL: Natural soils	AFTER COMPLETION: 5' 0"
ST-Shelby Tube	* Pocket Penetrometer Value Standard Penetration Test - Driving 2" OD Sampler 18" With 140# Hammer Falling 30"; Count Made at 6" Intervals	

Figure No. 12a



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LOG OF TEST BORING

NO.:	TB-3	PROJECT NO.:	29190003
DATE:	5/30/02	SURFACE ELEV.:	*739.5±

*Elevation estimated from a topographic map

PROJECT NAME: Proposed Office Building 37640 Seven Mile Road - Livonia, MI

PAGE: 2 OF: 2

Depth	SOIL DESCRIPTION	Sample Type	Depth Feet	Penetration Blows for 6"	PID	Moisture %	Natural Wt. P.C.F.	Unconfined Comp. Str. P.S.F.	STR %
	Gray wet compact to very compact silty fine SAND		27						
			28						
			29						
				12					
		SS-9	30	18					
				21					
			31						
			32						
			33						
			34						
				14					
		SS-10	35	21					
				22					
			36						
			37						
			38						
			39						
				13					
		SS-11	40	19					
				21					
			41						
			42						
			43						
			44						
				11					
		SS-12	45	15					
				18					
			46						
			47						
			48						
			49						
				14					
		SS-13	50	25					
				31					
50' 6"									
	End of boring		51						
			52						
TYPE OF SAMPLE:		DRILLING METHOD: 3 1/4" ID Hollow Stem Auger				GROUNDWATER:			
SS-Split Spoon		DRILLING FOREMAN: M. Near				ENCOUNTERED AT: 12' 0"			
SL-Split Spoon w/liner		BACKFILL MATERIAL: Natural soils				AFTER COMPLETION: 5' 0"			
ST-Shelby Tube		* Pocket Penetrometer Value							
		Standard Penetration Test - Driving 2" OD Sampler 18" With 140# Hammer Falling 30"; Count Made at 6" Intervals							

Figure No. 12b



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LOG OF TEST BORING

NO.:	TB-4	PROJECT NO.:	29190003
DATE:	5/31/02	SURFACE ELEV.:	*740±

*Elevation estimated from a topographic map

PROJECT NAME: Proposed Office Building 37640 Seven Mile Road - Livonia, MI

PAGE: 1 OF: 2

Depth	SOIL DESCRIPTION	Sample Type	Depth Feet	Penetration Blows for 6"	PID	Moisture %	Natural Wt. P.C.F.	Unconfined Comp. Str. P.S.F.	STR %
0' 6"	Brown moist clayey TOPSOIL - (FILL)								
			1						
	Variegated moist stiff CLAY with traces of silt, sand, gravel and organics - (FILL)		2	4					
		SS-1	5						
			3	5					
4' 0"			4						
	Variegated moist medium stiff CLAY with traces of silt, gravel and organics - (FILL)			2					
		SS-2	5	2					
				3					
6' 6"			6						
	Brown moist clayey TOPSOIL/PEAT		7	2					
		SS-3		3					
			8	3					
			9						
				1					
		SS-4	10	2					
				3					
11' 6"			11						
	Gray wet hard SILT with some fine sand		12	11					
		SS-5		17					
			13	19					
14' 0"			14						
	Gray wet hard SILT - Occasional seam of clay			16					
		SS-6	15	16		20.7			
				19					
			16						
			17						
			18						
19' 0"			19						
	Gray wet very stiff to hard SILT with trace of clay and occasional seams of clay			11					
		SS-7	20	12					
				16					
			21						
			22						
			23						
			24						
				15					
		SS-8	25	16					
				20					
			26						

TYPE OF SAMPLE:	DRILLING METHOD: 3 1/4" ID Hollow Stem Auger	GROUNDWATER:
SS-Split Spoon	DRILLING FOREMAN: M. Near	ENCOUNTERED AT: 11' 6"
SL-Split Spoon w/liner	BACKFILL MATERIAL: Natural soils	AFTER COMPLETION: 9' 0"
ST-Shelby Tube	* Pocket Penetrometer Value Standard Penetration Test - Driving 2" OD Sampler 18" With 140# Hammer Falling 30"; Count Made at 6" Intervals	

Figure No. 13a



CTI and Associates, Inc.
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(248) 486-5050 fax

LOG OF TEST BORING

NO.:	TB-4	PROJECT NO.:	29190003
DATE:	5/31/02	SURFACE ELEV.:	*740±

*Elevation estimated from a topographic map

PROJECT NAME: Proposed Office Building 37640 Seven Mile Road - Livonia, MI

PAGE: 2 OF: 2

Depth	SOIL DESCRIPTION	Sample Type	Depth Feet	Penetration Blows for 6"	PID	Moisture %	Natural Wt. P.C.F.	Unconfined Comp. Str. P.S.F.	STR %	
30' 6"	Gray wet very stiff to hard SILT and occasional seams of clay		27							
			28							
			29							
				13						
		SS-9	30	16						
				19						
End of boring		31								
		32								
		33								
		34								
		35								
		36								
		37								
		38								
		39								
		40								
		41								
		42								
		43								
		44								
		45								
		46								
		47								
		48								
		49								
		50								
		51								
		52								
	TYPE OF SAMPLE:		DRILLING METHOD: 3 1/4" ID Hollow Stem Auger				GROUNDWATER:			
	SS-Split Spoon SL-Split Spoon w/liner ST-Shelby Tube		DRILLING FOREMAN: M. Near				ENCOUNTERED AT: 11' 6"			
			BACKFILL MATERIAL: Natural soils				AFTER COMPLETION: 9' 0"			
			* Pocket Penetrometer Value Standard Penetration Test - Driving 2" OD Sampler 18" With 140# Hammer Falling 30"; Count Made at 6" Intervals							

Figure No. 13b



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LOG OF TEST BORING

NO.:	TB-5	PROJECT NO.:	29190003
DATE:	5/30/02	SURFACE ELEV.:	*741±

*Elevation estimated from a topographic map

PROJECT NAME: Proposed Office Building 37640 Seven Mile Road - Livonia, MI

PAGE: 1 OF: 2

Depth	SOIL DESCRIPTION	Sample Type	Depth Feet	Penetration Blows for 6"	PID	Moisture %	Natural Wt. P.C.F.	Unconfined Comp. Str. P.S.F.	STR %
0' 8"	Brown moist sandy TOPSOIL - (FILL)		1						
1' 6"	Brown moist CLAY with traces of silt, sand and organics - (FILL)		2	8					
4' 0"	Brown moist fine SAND with traces of silt, clay, gravel and organics - (FILL)	SS-1		8					
			3	8					
			4						
6' 6"	Brown wet loose fine SAND with trace of silt			4					
		SS-2	5	5					
			6	4					
9' 0"	Brown wet very loose fine SAND with trace of silt		7	2					
		SS-3		1					
			8	1					
14' 0"	Brown wet medium compact fine SAND with trace of silt		9						
				5					
		SS-4	10	6		26.5			
				8					
			11						
			12						
			13						
19' 0"	Gray wet very stiff SILT with trace of clay - Occasional seam of clay		14						
				8					
		SS-5	15	9					
				14					
			16						
			17						
			18						
	Gray wet compact fine SAND with trace of silt		19						
				16					
		SS-6	20	20					
				22					
			21						
			22						
			23						
			24						
				17					
		SS-7	25	22					
				25					
			26						

TYPE OF SAMPLE:	DRILLING METHOD: 3 1/4" ID Hollow Stem Auger	GROUNDWATER:
SS-Split Spoon	DRILLING FOREMAN: M. Near	ENCOUNTERED AT: 4' 0"
SL-Split Spoon w/liner	BACKFILL MATERIAL: Natural soils	AFTER COMPLETION: 4' 0"
ST-Shelby Tube	* Pocket Penetrometer Value Standard Penetration Test - Driving 2" OD Sampler 18" With 140# Hammer Falling 30"; Count Made at 6" Intervals	

Figure No. 14a



CTI and Associates, Inc.
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(248) 486-5100 phone
(248) 486-5050 fax

LOG OF TEST BORING

NO.:	TB-5	PROJECT NO.:	29190003
DATE:	5/30/02	SURFACE ELEV.:	*741±

*Elevation estimated from a topographic map

PROJECT NAME: Proposed Office Building 37640 Seven Mile Road - Livonia, MI

PAGE: 2 OF: 2

Depth	SOIL DESCRIPTION	Sample Type	Depth Feet	Penetration Blows for 6"	PID	Moisture %	Natural Wt. P.C.F.	Unconfined Comp. Str. P.S.F.	STR %		
30' 6"	Gray wet compact fine SAND with trace of silt		27								
			28								
			29								
				15							
		SS-8	30	20							
				21							
End of boring			31								
			32								
			33								
			34								
			35								
			36								
			37								
			38								
			39								
			40								
			41								
			42								
			43								
			44								
			45								
			46								
			47								
			48								
			49								
			50								
			51								
			52								
		TYPE OF SAMPLE:		DRILLING METHOD: 3 1/4" ID Hollow Stem Auger				GROUNDWATER:			
		SS-Split Spoon SL-Split Spoon w/liner ST-Shelby Tube		DRILLING FOREMAN: M. Near				ENCOUNTERED AT: 4' 0"			
				BACKFILL MATERIAL: Natural soils				AFTER COMPLETION: 4' 0"			
				* Pocket Penetrometer Value Standard Penetration Test - Driving 2" OD Sampler 18" With 140# Hammer Falling 30". Count Made at 6" Intervals							



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LOG OF TEST BORING

NO.:	TB-6	PROJECT NO.:	29190003
DATE:	5/30/02	SURFACE ELEV.:	*735±

*Elevation estimated from a topographic map

PROJECT NAME: Proposed Office Building 37640 Seven Mile Road - Livonia, MI

PAGE: 1 OF: 1

Depth	SOIL DESCRIPTION	Sample Type	Depth Feet	Penetration Blows for 6"	PID	Moisture %	Natural Wt. P.C.F.	Unconfined Comp. Str. P.S.F.	STR %
0' 6"	Brown moist clayey TOPSOIL - (FILL)								
1' 6"	Brown moist CLAY with traces of silt, sand, gravel and organics - (FILL)		1						
4' 0"	Brown moist stiff CLAY with traces of silt, sand, gravel and organics - (FILL)	SS-1	2	6					
				6					
			3	7					
7' 0"	Variegated moist stiff CLAY with traces of silt, sand and gravel - (FILL)	SS-2		5					
			5	5					
				5					
			6						
9' 0"	Brown moist clayey TOPSOIL/PEAT - (Possible FILL)	SS-3	7	2					
				2					
			8	3					
11' 6"	Brown moist soft CLAY with traces of silt, sand and organics - (Possible FILL)	SS-4		2					
			10	1					
				3					
			11						
12' 0"	Gray wet fine to loose SAND with traces of silt and gravel		12	3					
14' 0"	Gray moist stiff CLAY with trace of silt	SS-5		4					
			13	6					
			14						
19' 0"	Gray wet stiff SILT - Occasional seam of clay	SS-6		4					
			15	5					
				6					
			16						
			17						
			18						
20' 6"	Gray wet very stiff SILT with trace of clay	SS-6		7					
			20	8					
				11					
			21						
	End of boring		22						
			23						
			24						
			25						
			26						

TYPE OF SAMPLE:	DRILLING METHOD: 3 1/4" ID Hollow Stem Auger	GROUNDWATER:
SS-Split Spoon	DRILLING FOREMAN: M. Near	ENCOUNTERED AT: 11' 6"
SL-Split Spoon w/liner	BACKFILL MATERIAL: Natural soils	AFTER COMPLETION: 10' 6"
ST-Shelby Tube	* Pocket Penetrometer Value	
	Standard Penetration Test - Driving 2" OQ Sampler 18" With 140# Hammer Falling 30"; Count Made at 6" Intervals	

Figure No.15

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: N/A Longitude: N/A



Test Pit No. TP-1

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (5 inches)	0.4					
		Fill: Hard Brown and Gray Mottled Silty Clay with trace sand and gravel						
			4.0	BS-1		19.4		9000*
5		Gray Silty Clay with trace sand, gravel and organic material	5.0	BS-2				
		Brown Sandy Silt with trace gravel						
			8.0	BS-3				
		End of Test Pit @ 8 ft						
10			10					
15			15					

Total Depth: 8 ft
Excavation Date: September 16, 2020
Inspector: K. Crow, P.E.
Contractor: Carnwath Excavating Co.
Operator: Cody

Excavation Equipment:
Excavator with 2-ft wide bucket

Water Level Observation:
Dry during and upon completion of excavation
operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 16

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: N/A Longitude: N/A



Test Pit No. TP-2

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (3 inches)	0.3					
5		Fill: Very Stiff Brown and Gray Mottled Silty Clay with trace sand and gravel	5					
			7.5	BS-1		20.4		5000*
10		Fill: Very Stiff Gray Silty Clay with trace sand and gravel	10					
			11.0	BS-2		16.1		6000*
		Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Content = 7.7%)						
			13.5	BS-3		59.8		
		Gray Sandy Silt with trace gravel and clay	14.0	BS-4				
15		End of Test Pit @ 14 ft	15					

Total Depth: 14 ft
Excavation Date: September 16, 2020
Inspector: K. Crow, P.E.
Contractor: Carnwath Excavating Co.
Operator: Cody

Excavation Equipment:
Excavator with 2-ft wide bucket

Water Level Observation:
11-1/2 feet during and upon completion of excavation
operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 17

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: N/A Longitude: N/A



Test Pit No. TP-3

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (3 inches)	0.3					
5		Fill: Hard Brown and Gray Mottled Silty Clay with trace sand and gravel	5					
			8.0	BS-1		21.8		9000*
10		Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Content = 14.7%)	10					
		Gray Sandy Silt with trace gravel and clay	11.5	BS-2		65.8		
			12.0	BS-3				
		End of Test Pit @ 12 ft						
15			15					

Total Depth: 12 ft
Excavation Date: September 16, 2020
Inspector: K. Crow, P.E.
Contractor: Carnwath Excavating Co.
Operator: Cody

Excavation Equipment:
Excavator with 2-ft wide bucket

Water Level Observation:
9 feet during and upon completion of excavation
operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 18

Project Name: Victor Parkway Office Building

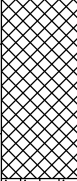
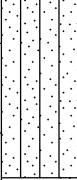
Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: N/A Longitude: N/A



Test Pit No. TP-4
CONSULTING GROUP

SUBSURFACE PROFILE				SOIL SAMPLE DATA				
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (6 inches) 0.5						
		Fill: Hard Brown Silty Clay with trace sand and gravel 2.5		BS-1		19.7		9000*
		Brown and Gray Sandy Silt with trace gravel and clay 4.5		BS-2				
5		End of Test Pit @ 4.5 ft	5					
10			10					
15			15					

Total Depth: 4.5 ft
Excavation Date: September 16, 2020
Inspector: K. Crow, P.E.
Contractor: Carnwath Excavating Co.
Operator: Cody

Excavation Equipment:
Excavator with 2-ft wide bucket

Water Level Observation:
Dry during and upon completion of excavation
operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: N/A Longitude: N/A



Test Pit No. TP-5

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (6 inches)	0.5					
		Fill: Very Stiff Brown and Gray Mottled Silty Clay with trace sand and gravel	3.5	BS-1		14.9		6000*
5		Brown Sand with trace silt and gravel	5					
		End of Test Pit @ 6.5 ft	6.5	BS-2				
10			10					
15			15					

Total Depth: 6.5 ft
Excavation Date: September 16, 2020
Inspector: K. Crow, P.E.
Contractor: Carnwath Excavating Co.
Operator: Cody

Excavation Equipment:
Excavator with 2-ft wide bucket

Water Level Observation:
Dry during and upon completion of excavation
operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: N/A Longitude: N/A



Test Pit No. TP-6

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (6 inches)	0.5					
5		Fill: Hard Brown and Gray Mottled Silty Clay with trace sand and gravel	5					
			5.5	BS-1		24.7		9000*
		Brown and Gray Sandy Silt with trace gravel and clay						
			8.0	BS-2				
10		End of Test Pit @ 8 ft	10					
15			15					

Total Depth: 8 ft
Excavation Date: September 16, 2020
Inspector: K. Crow, P.E.
Contractor: Carnwath Excavating Co.
Operator: Cody

Excavation Equipment:
Excavator with 2-ft wide bucket

Water Level Observation:
7 feet during and upon completion of excavation
operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 21

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: N/A Longitude: N/A



Test Pit No. TP-7

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (4 inches)	0.3					
5		Fill: Hard Brown and Gray Mottled Silty Clay with trace sand and gravel	5.0	BS-1		11.8		9000*
		Fill: Very Stiff Gray Silty Clay with frequent roots	8.0	BS-2		19.0		5000*
10		Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Matter = 45.6%)	10					
		Gray Sand with trace silt and gravel	13.0	BS-3		237.4		
			13.5	BS-4				
15		End of Test Pit @ 13.5 ft	15					

Total Depth: 13.5 ft
Excavation Date: September 16, 2020
Inspector: K. Crow, P.E.
Contractor: Carnwath Excavating Co.
Operator: Cody

Excavation Equipment:
Excavator with 2-ft wide bucket

Water Level Observation:
7-1/2 feet during and upon completion of excavation
operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 22

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: N/A Longitude: N/A



Test Pit No. TP-8

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (3 inches)	0.3					
5		Fill: Hard Brown and Gray Mottled Silty Clay with trace sand and gravel	5					
			7.5	BS-1		14.5		9000*
10		Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Content = 49.0%)	10					
			12.0	BS-2		184.0		
		Gray Sandy Silt with trace gravel, occasional sand seams	12.5	BS-3				
		End of Test Pit @ 12.5 ft						
15			15					

Total Depth: 12.5 ft
Excavation Date: September 16, 2020
Inspector: K. Crow, P.E.
Contractor: Carnwath Excavating Co.
Operator: Cody

Excavation Equipment:
Excavator with 2-ft wide bucket

Water Level Observation:
11 feet during and upon completion of excavation
operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 23

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: N/A Longitude: N/A



Test Pit No. TP-9

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (3 inches)	0.3					
5		Fill: Hard Brown and Gray Mottled Silty Clay with trace sand and gravel	5					
			9.0	BS-1		15.4		9000*
10		Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Content = 19.0%)	10					
		Gray Sandy Silt with trace gravel and clay	11.0	BS-2		91.2		
			11.5	BS-3				
		End of Test Pit @ 11.5 ft						
15			15					

Total Depth: 11.5 ft
Excavation Date: September 16, 2020
Inspector: K. Crow, P.E.
Contractor: Carnwath Excavating Co.
Operator: Cody

Excavation Equipment:
Excavator with 2-ft wide bucket

Water Level Observation:
9 feet during and upon completion of excavation
operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: N/A Longitude: N/A



Test Pit No. TP-10

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (4 inches)	0.3					
5		Fill: Hard Brown and Gray Mottled Silty Clay with trace sand, gravel and roots	5					
			8.0	BS-1		14.7		8000*
10		Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Matter = 18.6%)	10					
		Gray Sandy Silt with trace gravel, occasional clay seams	10.5	BS-2		82.2		
			11.0	BS-3				
15		End of Test Pit @ 11 ft	15					

Total Depth: 11 ft
Excavation Date: September 16, 2020
Inspector: K. Crow, P.E.
Contractor: Carnwath Excavating Co.
Operator: Cody

Excavation Equipment:
Excavator with 2-ft wide bucket

Water Level Observation:
10-1/2 feet during and upon completion of excavation
operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 25

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: N/A Longitude: N/A



Test Pit No. TP-11

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (5 inches)	0.4					
		Fill: Hard Brown and Gray Mottled Silty Clay with trace sand and gravel	4.5	BS-1		19.8		
5		Brown Sandy Silt with trace gravel	5					
			6.5	BS-2				
		End of Test Pit @ 6.5 ft						
10			10					
15			15					

Total Depth: 6.5 ft
Excavation Date: September 16, 2020
Inspector: K. Crow, P.E.
Contractor: Carnwath Excavating Co.
Operator: Cody

Excavation Equipment:
Excavator with 2-ft wide bucket

Water Level Observation:
Dry during and upon completion of excavation
operations

Excavation Backfilling Procedure:
Backfilled with excavated soils

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: N/A Longitude: N/A



Test Pit No. TP-12

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (5 inches)	0.4					
5		Fill: Hard Brown and Gray Mottled Silty Clay with trace sand, gravel and roots	5					
			7.5	BS-1		14.3		9000*
10		Dark Brown to Black Silty Clay with organic material (PEAT)	10	BS-2				
		End of Test Pit @ 10 ft	15					

Total Depth: 10 ft
Excavation Date: September 16, 2020
Inspector: K. Crow, P.E.
Contractor: Carnwath Excavating Co.
Operator: Cody

Excavation Equipment:
Excavator with 2-ft wide bucket

Water Level Observation:
8-1/2 feet during and upon completion of excavation
operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: N/A Longitude: N/A



Test Pit No. TP-13

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (3 inches)	0.3					
		Fill: Hard Brown Sandy Clay with trace gravel	3.0	BS-1		14.4		9000*
		Brown and Gray Silty Sand with trace gravel and clay	4.5	BS-2				
5		End of Test Pit @ 4.5 ft	5					
10			10					
15			15					

Total Depth: 4.5 ft
Excavation Date: September 16, 2020
Inspector: K. Crow, P.E.
Contractor: Carnwath Excavating Co.
Operator: Cody

Excavation Equipment:
Excavator with 2-ft wide bucket

Water Level Observation:
Dry during and upon completion of excavation
operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: 42.42625° Longitude: -83.41923°



Test Pit No. TP-14

SUBSURFACE PROFILE					SOIL SAMPLE DATA					
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A			DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (5 inches)			0.4					
5		Fill: Very Stiff Mottled Brown and Gray Silty Clay with trace sand and gravel			5					
					7.0	BS-1		19.6		6000*
10		Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Content = 9.1%)			10.0	BS-2		57.6		
		Gray Sandy Silt with trace gravel and clay			12.0	BS-3				
15		End of Test Pit @ 12 ft			15					

Total Depth: 12 ft

Excavation Date: March 13, 2024

Inspector: K. Crow, P.E.

Contractor: Client Provided

Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
7 feet during excavation operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 29

TEST PIT 133040S1.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 3/19/24

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: 42.42628° Longitude: -83.41930°



Test Pit No. TP-15

SUBSURFACE PROFILE					SOIL SAMPLE DATA					
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A			DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (5 inches)			0.4					
5		Fill: Hard Mottled Brown and Gray Silty Clay with trace sand and gravel, occasional glass fragments			5					
					5.5	BS-1		12.7		9000*
		Brown Sandy Silt with trace gravel and clay			9.0	BS-2				
10		Gray Sandy Silt with trace gravel and clay			10					
					11.0	BS-3				
		End of Test Pit @ 11 ft								
15					15					

Total Depth: 11 ft

Excavation Date: March 13, 2024

Inspector: K. Crow, P.E.

Contractor: Client Provided

Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
7 feet during excavation operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 30

TEST PIT 133040S1.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 3/19/24

Project Name: Victor Parkway Office Building

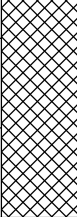
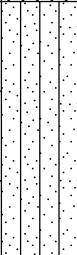
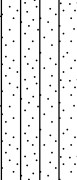
Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: 42.42615° Longitude: -83.41928°



Test Pit No. TP-16

SUBSURFACE PROFILE				SOIL SAMPLE DATA				
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (6 inches)	0.5					
		Fill: Stiff Mottled Brown and Gray Silty Clay with trace sand and gravel	3.0	BS-1		25.3		2500*
5		Brown Sandy Silt with trace gravel and clay	5					
								
		Gray Sandy Silt with trace gravel and clay	8.0	BS-2				
			9.0	BS-3				
10		End of Test Pit @ 9 ft	10					
15			15					

Total Depth: 9 ft

Excavation Date: March 13, 2024

Inspector: K. Crow, P.E.

Contractor: Client Provided

Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
6 feet during excavation operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 31

TEST PIT 133040S1.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 3/19/24

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: 42.42613° Longitude: -83.41908°



Test Pit No. TP-17

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (7 inches)	0.6					
		Fill: Very Stiff Mottled Brown and Gray Silty Clay with trace sand and gravel, occasional brick, glass, metal and ceramic debris	3.5	BS-1		23.8		4500*
5			5					
10		Medium Dark Brown to Black Silty Clay with organic material, frequent wood debris (PEAT) (Organic Content = 20.5%)	10					
		Gray Sandy Silt with trace gravel and clay	13.0	BS-2		97.2		1000*
			13.5	BS-3				
15		End of Test Pit @ 13.5 ft	15					

Total Depth: 13.5 ft
Excavation Date: March 13, 2024
Inspector: K. Crow, P.E.
Contractor: Client Provided
Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
6 feet during excavation operations

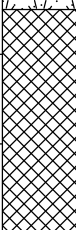
Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Project Name: Victor Parkway Office Building
Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan
G2 Project No. 133040s1
Latitude: 42.42607° Longitude: -83.41910°



Test Pit No. TP-18

SUBSURFACE PROFILE					SOIL SAMPLE DATA					
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A			DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (6 inches) 0.5								
		Fill: Hard Mottled Brown and Gray Silty Clay with trace sand and gravel 3.0				BS-1		16.3		8500*
5		Brown Sandy Silt with trace gravel and clay 5								
		Gray Sandy Silt with trace gravel and clay 8.0				BS-2				
		8.5				BS-3				
		End of Test Pit @ 8.5 ft								
10					10					
15					15					

Total Depth: 8.5 ft
Excavation Date: March 13, 2024
Inspector: K. Crow, P.E.
Contractor: Client Provided
Operator: Christian
Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
5-1/2 feet during excavation operations
Notes:
* Calibrated Hand Penetrometer
Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 33

TEST PIT 133040S1.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 3/19/24

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: 42.42635° Longitude: -83.41898°



Test Pit No. TP-19

SUBSURFACE PROFILE				SOIL SAMPLE DATA				
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (8 inches)	0.7					
5		Fill: Very Stiff Mottled Brown and Gray Silty Clay with trace sand and gravel	5					
			8.0	BS-1		20.0		4500*
10		Stiff Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Content = 15.0%)	10					
			12.0	BS-2		71.5		2500*
		Gray Sandy Silt with trace gravel and clay	12.5	BS-3				
15		End of Test Pit @ 12.5 ft	15					

Total Depth: 12.5 ft

Excavation Date: March 13, 2024

Inspector: K. Crow, P.E.

Contractor: Client Provided

Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
8 feet during excavation operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 34

TEST PIT 133040S1.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 3/19/24

Project Name: Victor Parkway Office Building

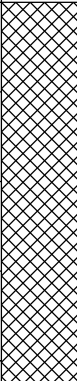
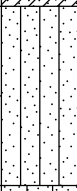
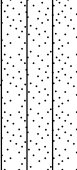
Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: 42.42622° Longitude: -83.41877°



Test Pit No. TP-20

SUBSURFACE PROFILE				SOIL SAMPLE DATA				
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (12 inches)	1.0					
5		Fill: Very Stiff Mottled Brown and Gray Silty Clay with trace sand and gravel	5					
			5.5	BS-1		21.9		5500*
		Dark Brown Clayey Sand with organic material	6.0	BS-2				
		Brown Sandy Silt with trace gravel and clay	8.0	BS-3				
10		Gray Silty Sand with trace gravel	10.0	BS-4				
15		End of Test Pit @ 10 ft	15					

Total Depth: 10 ft

Excavation Date: March 13, 2024

Inspector: K. Crow, P.E.

Contractor: Client Provided

Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
6 feet during excavation operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

TEST PIT 133040S1.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 3/19/24

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: 42.42615° Longitude: -83.41823°



Test Pit No. TP-21

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (9 inches)	0.8					
5		Fill: Very Stiff Mottled Brown and Gray Silty Clay with trace sand and gravel, occasional ceramic debris	5					
			8.0	BS-1		20.4		5000*
10		Medium Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Content = 54.0%)	10					
			11.0	BS-2		345.0		1000*
		Gray Gravelly Sand with trace silt	12.0	BS-3				
15		End of Test Pit @ 12 ft	15					

Total Depth: 12 ft
Excavation Date: March 13, 2024
Inspector: K. Crow, P.E.
Contractor: Client Provided
Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
11 feet during excavation operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: 42.42602° Longitude: -83.41803°



Test Pit No. TP-22

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (6 inches)	0.5					
5		Fill: Very Stiff Mottled Brown and Gray Silty Clay with trace sand and gravel, occasional concrete debris	5					
			7.5	BS-1		15.4		4500*
		Medium Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Content = 19.0%)	9.5	BS-2		104.3		1500*
10		Brown Sandy Gravel with trace clay	10.0	BS-3				
		Gray Sandy Silt with trace gravel and clay	11.0	BS-4				
		End of Test Pit @ 11 ft						
15			15					

Total Depth: 11 ft
Excavation Date: March 13, 2024
Inspector: K. Crow, P.E.
Contractor: Client Provided
Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
9 feet during excavation operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: 42.42590° Longitude: -83.41798°



Test Pit No. TP-23

SUBSURFACE PROFILE				SOIL SAMPLE DATA				
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (8 inches)	0.7					
5		Fill: Stiff Mottled Brown and Gray Silty Clay with trace sand and gravel, occasional roots and tree debris	5					
			6.5	BS-1		18.0		3000*
		Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Content = 8.0%)						
			9.5	BS-2		47.5		
10		Brown and Gray Sandy Silt with trace gravel	10					
			10.5	BS-3				
		End of Test Pit @ 10.5 ft						
15			15					

Total Depth: 10.5 ft

Excavation Date: March 13, 2024

Inspector: K. Crow, P.E.

Contractor: Client Provided

Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
9 feet during excavation operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 38

TEST PIT 133040S1.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 3/19/24

Project Name: Victor Parkway Office Building

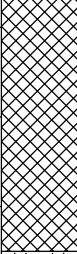
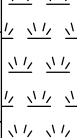
Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: 42.42590° Longitude: -83.41823°



Test Pit No. TP-24

SUBSURFACE PROFILE				SOIL SAMPLE DATA				
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (8 inches)	0.7					
		Fill: Very Stiff Mottled Brown and Gray Silty Clay with trace sand and gravel, occasional tree fragments	3.5	BS-1		33.8		4000*
5		Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Content = 6.5%)	5	BS-2		41.7		
		Brown and Gray Silty Sand with trace gravel	6.5	BS-3				
		End of Test Pit @ 6.5 ft						
10			10					
15			15					

Total Depth: 6.5 ft

Excavation Date: March 13, 2024

Inspector: K. Crow, P.E.

Contractor: Client Provided

Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
4 feet during excavation operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 39

TEST PIT 133040S1.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 3/19/24

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: 42.42600° Longitude: -83.41840°



Test Pit No. TP-25

SUBSURFACE PROFILE				SOIL SAMPLE DATA				
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (10 inches)	0.8					
5		Fill: Very Stiff Mottled Brown and Gray Silty Clay with trace sand and gravel, occasional brick fragments	5					
			6.0	BS-1		15.9		4000*
		Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Content = 5.9%)	8.0	BS-2		39.1		
		Brown Sand with trace silt and gravel	9.0	BS-3				
10		End of Test Pit @ 9 ft	10					
15			15					

Total Depth: 9 ft

Excavation Date: March 13, 2024

Inspector: K. Crow, P.E.

Contractor: Client Provided

Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
8 feet during excavation operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 40

TEST PIT 133040S1.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 3/19/24

Project Name: Victor Parkway Office Building
Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan
G2 Project No. 133040s1
Latitude: 42.42603° Longitude: -83.41870°



Test Pit No. TP-26

SUBSURFACE PROFILE				SOIL SAMPLE DATA				
DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (8 inches)	0.7					
		Fill: Hard Mottled Brown and Gray Silty Clay with trace sand and gravel	3.0	BS-1		15.4		9000*
5		Brown Sand with trace silt and gravel	5					
			6.0	BS-2				
		End of Test Pit @ 6 ft						
10			10					
15			15					

Total Depth: 6 ft
Excavation Date: March 13, 2024
Inspector: K. Crow, P.E.
Contractor: Client Provided
Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
5 feet during excavation operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Figure No. 41

TEST PIT 133040S1.GPJ 20150116 G2 CONSULTING DATA TEMPLATE.GDT 3/19/24

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: 42.42567° Longitude: -83.41710°



Test Pit No. TP-27
CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (10 inches)	0.8					
5		Fill: Hard Mottled Brown and Gray Silty Clay with trace sand and gravel, occasional roots	5					
			6.5	BS-1		18.4		9000*
		Medium Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Content = 13.2%)	7.5	BS-2		73.4		1000*
		Gray Sandy Silt with trace clay, frequent clay seams	9.5	BS-3				
10		Gray Sand with trace silt and gravel	10	BS-4				
		End of Test Pit @ 11 ft	11.0					
15			15					

Total Depth: 11 ft
Excavation Date: March 13, 2024
Inspector: K. Crow, P.E.
Contractor: Client Provided
Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
6 feet during excavation operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: 42.42603° Longitude: -83.41787°



Test Pit No. TP-28

CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (6 inches)	0.5					
5		Fill: Hard Mottled Brown and Gray Silty Clay with trace sand and gravel	5					
			8.0	BS-1		14.6		9000*
10		Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Content = 15.4%)	10.0	BS-2		83.4		1000*
		Gray Gravelly Sand with trace clay	11.0	BS-3				
15		End of Test Pit @ 11 ft	15					

Total Depth: 11 ft
Excavation Date: March 13, 2024
Inspector: K. Crow, P.E.
Contractor: Client Provided
Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
10 feet during excavation operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

Project Name: Victor Parkway Office Building

Project Location: 7 Mile Road and Victor Parkway
Livonia, Michigan

G2 Project No. 133040s1

Latitude: 42.42618° Longitude: -83.41848°



Test Pit No. TP-29
CONSULTING GROUP

SUBSURFACE PROFILE

SOIL SAMPLE DATA

DEPTH (ft)	PRO- FILE	GROUND SURFACE ELEVATION: N/A	DEPTH (ft)	SAMPLE TYPE/NO.	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	PERCENT COMPACTION	UNCOF. COMP. ST. (PSF)
		Topsoil: Dark Brown Silty Sand (8 inches)	0.7					
5		Fill: Stiff Mottled Brown and Gray Silty Clay with trace sand and gravel, occasional brick, concrete and metal debris	5					
			7.0	BS-1		18.1		3000*
10		Fill: Dark Brown to Black Wood, Debris and Landfill Materials	10	BS-2				
		Dark Brown to Black Silty Clay with organic material (PEAT) (Organic Content = 43.8%)	12.0	BS-3		192.1		
		Gray Gravelly Sand with trace silt	13.0	BS-4				
15		End of Test Pit @ 13 ft	15					

Total Depth: 13 ft
Excavation Date: March 13, 2024
Inspector: K. Crow, P.E.
Contractor: Client Provided
Operator: Christian

Excavation Equipment:
CAT excavator with 3-ft bucket

Water Level Observation:
6 feet during excavation operations

Notes:
* Calibrated Hand Penetrometer

Excavation Backfilling Procedure:
Backfilled with excavated soils

GENERAL NOTES TERMINOLOGY

Unless otherwise noted, all terms herein refer to the Standard Definitions presented in ASTM 653.

PARTICLE SIZE

Boulders	- greater than 12 inches
Cobbles	- 3 inches to 12 inches
Gravel - Coarse	- 3/4 inches to 3 inches
- Fine	- No. 4 to 3/4 inches
Sand - Coarse	- No. 10 to No. 4
- Medium	- No. 40 to No. 10
- Fine	- No. 200 to No. 40
Silt	- 0.005mm to 0.074mm
Clay	- Less than 0.005mm

CLASSIFICATION

The major soil constituent is the principal noun, i.e. clay, silt, sand, gravel. The second major soil constituent and other minor constituents are reported as follows:

Second Major Constituent (percent by weight)	Minor Constituent (percent by weight)
Trace - 1 to 12%	Trace - 1 to 12%
Adjective - 12 to 35%	Little - 12 to 23%
And - over 35%	Some - 23 to 33%

COHESIVE SOILS

If clay content is sufficient so that clay dominates soil properties, clay becomes the principal noun with the other major soil constituent as modifier, i.e. sandy clay. Other minor soil constituents may be included in accordance with the classification breakdown for cohesionless soils, i.e. silty clay, trace sand, little gravel.

Consistency	Unconfined Compressive Strength (psf)	Approximate Range of (N)
Very Soft	Below 500	0 - 2
Soft	500 - 1,000	3 - 4
Medium	1,000 - 2,000	5 - 8
Stiff	2,000 - 4,000	9 - 15
Very Stiff	4,000 - 8,000	16 - 30
Hard	8,000 - 16,000	31 - 50
Very Hard	Over 16,000	Over 50

Consistency of cohesive soils is based upon an evaluation of the observed resistance to deformation under load and not upon the Standard Penetration Resistance (N).

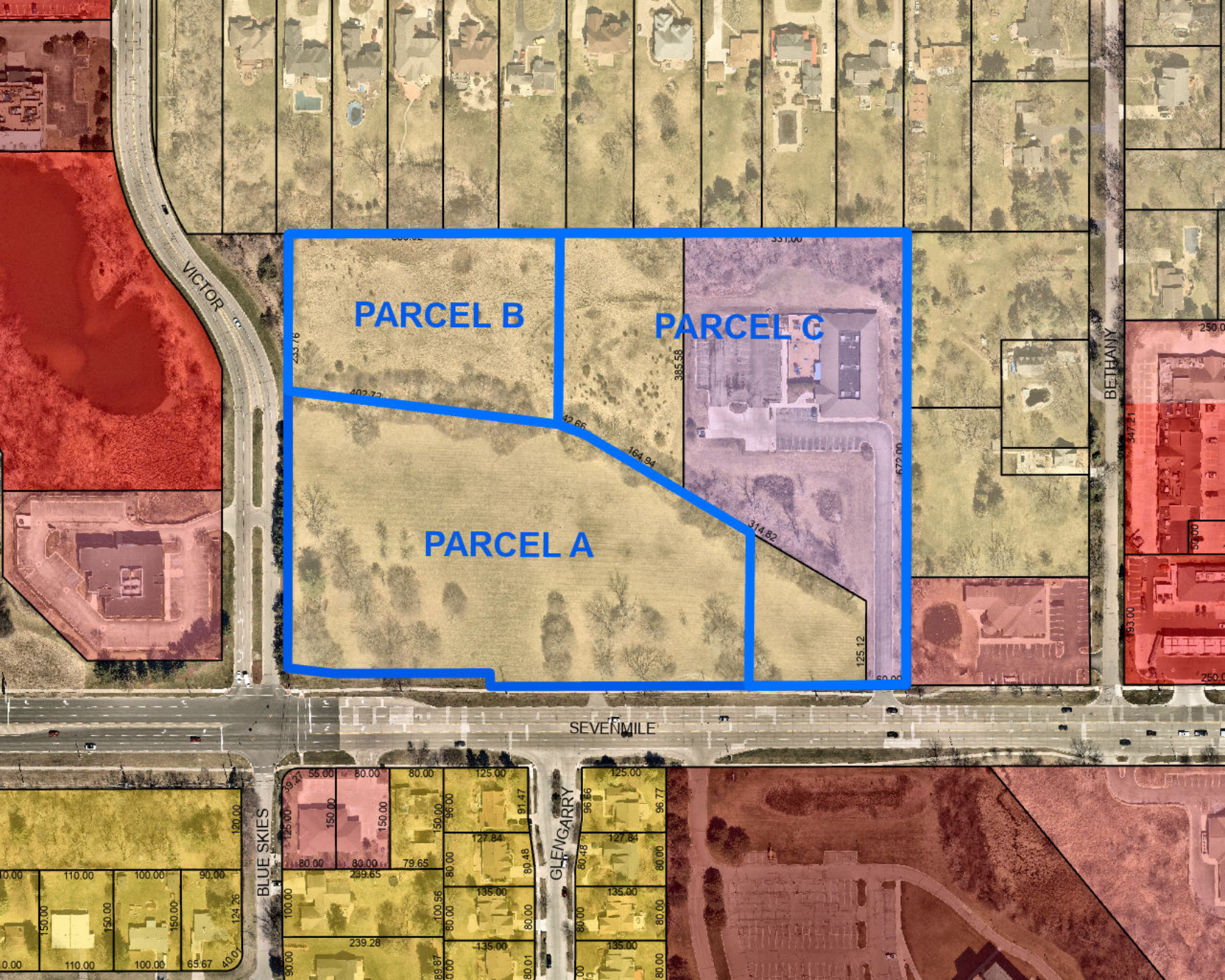
Density Classification	COHESIONLESS SOILS Relative Density %	Approximate Range of (N)
Very Loose	0 - 15	0 - 4
Loose	16 - 35	5 - 10
Medium Compact	36 - 65	11 - 30
Compact	66 - 85	31 - 50
Very Compact	86 - 100	Over 50

Relative Density of cohesionless soils is based upon the evaluation of the Standard Penetration Resistance (N), modified as required for depth effects, sampling effects, etc.

SAMPLE DESIGNATIONS

AS -	Auger Sample - Cuttings directly from auger flight
BS -	Bottle or Bag Samples
S -	Split Spoon Sample - ASTM D 1586
LS -	Liner Sample with liner insert 3 inches in length
ST -	Shelby Tube sample - 3 inch diameter unless otherwise noted
PS -	Piston Sample - 3 inch diameter unless otherwise noted
RC -	Rock Core - NX core unless otherwise noted

STANDARD PENETRATION TEST (ASTM D 1586) - A 2.0 inch outside-diameter, 1-3/8 inch inside-diameter split barrel sampler is driven into undisturbed soil by means of a 140-pound weight falling freely through a vertical distance of 30 inches. The sampler is normally driven three successive 6-inch increments. The total number of blows required for the final 12 inches of penetration is the Standard Penetration Resistance (N).



PARCEL B

PARCEL C

PARCEL A

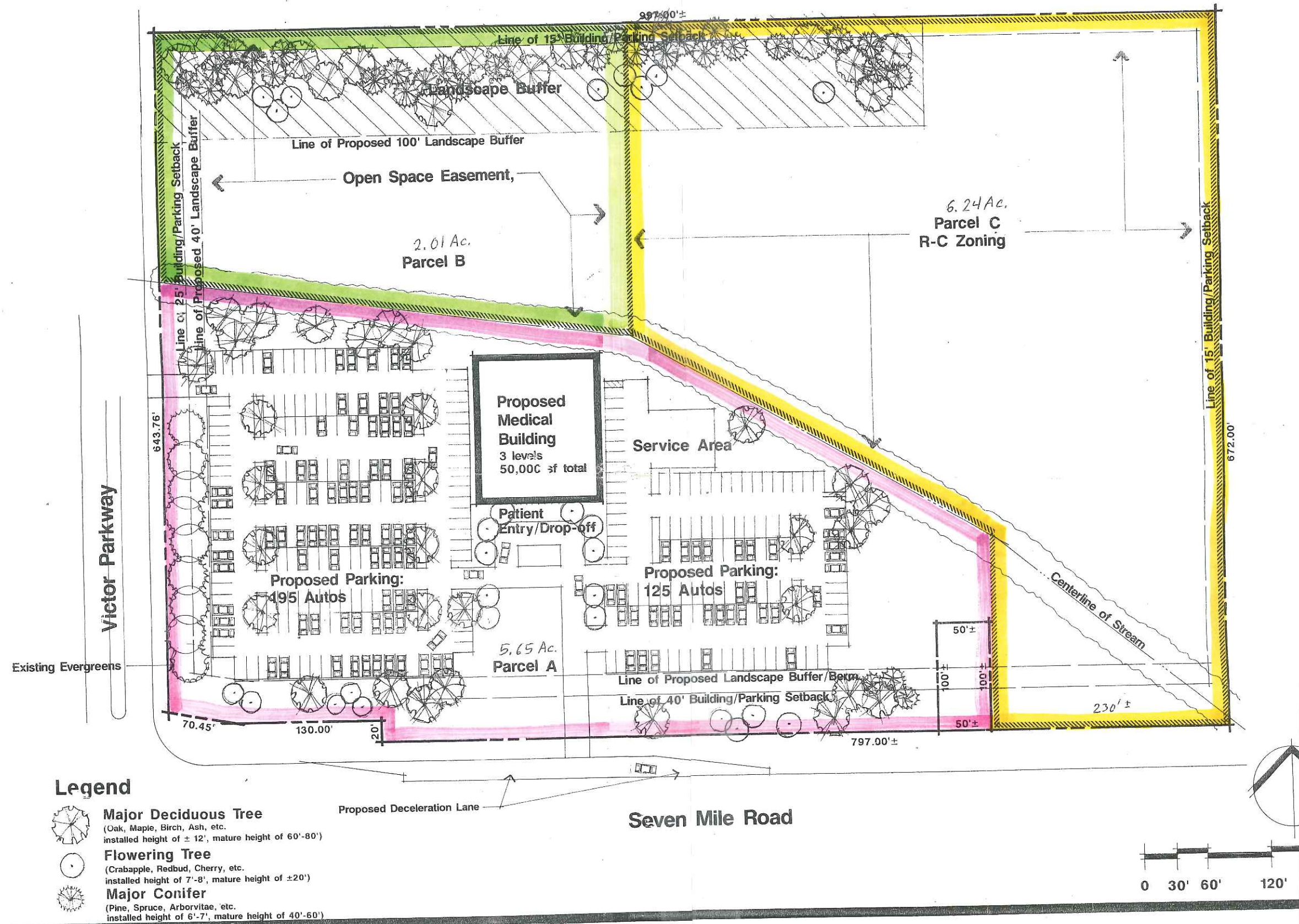
VICTOR

SEVEN MILE

BETHANY

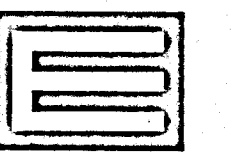
BLUE SKIES

GLEN GARRY



Conceptual Site Plan

Marshall Erdman and Associates



Marshall Erdman
& Associates, Inc.
Architecture • Engineering
Manufacturing • Construction

3100 Northwoods Place
Suite F
Norcross, Georgia 30071
Phone: (770) 416-0772
FAX: (770) 416-7646

PROPOSED MEDICAL OFFICE BUILDING FOR OAKWOOD HEALTH SERVICES

LIVONIA
MICHIGAN

SITE LEGEND

EXISTING

- Contours
- Spot elevations
- Trees to be saved
- Trees to be removed
- Storm sewer main / lateral
- Sanitary sewer main / lateral
- Water main / lateral
- Gas main / lateral
- Overhead electrical service
- Overhead electric service
- Overhead telephone service
- Underground telephone service

PROPOSED

- Storm sewer main / lateral
- Sanitary sewer main / lateral
- Water main / lateral
- Gas main / lateral
- Overhead electrical service
- Overhead electric service
- Overhead telephone service
- Underground telephone service

MISCELLANEOUS

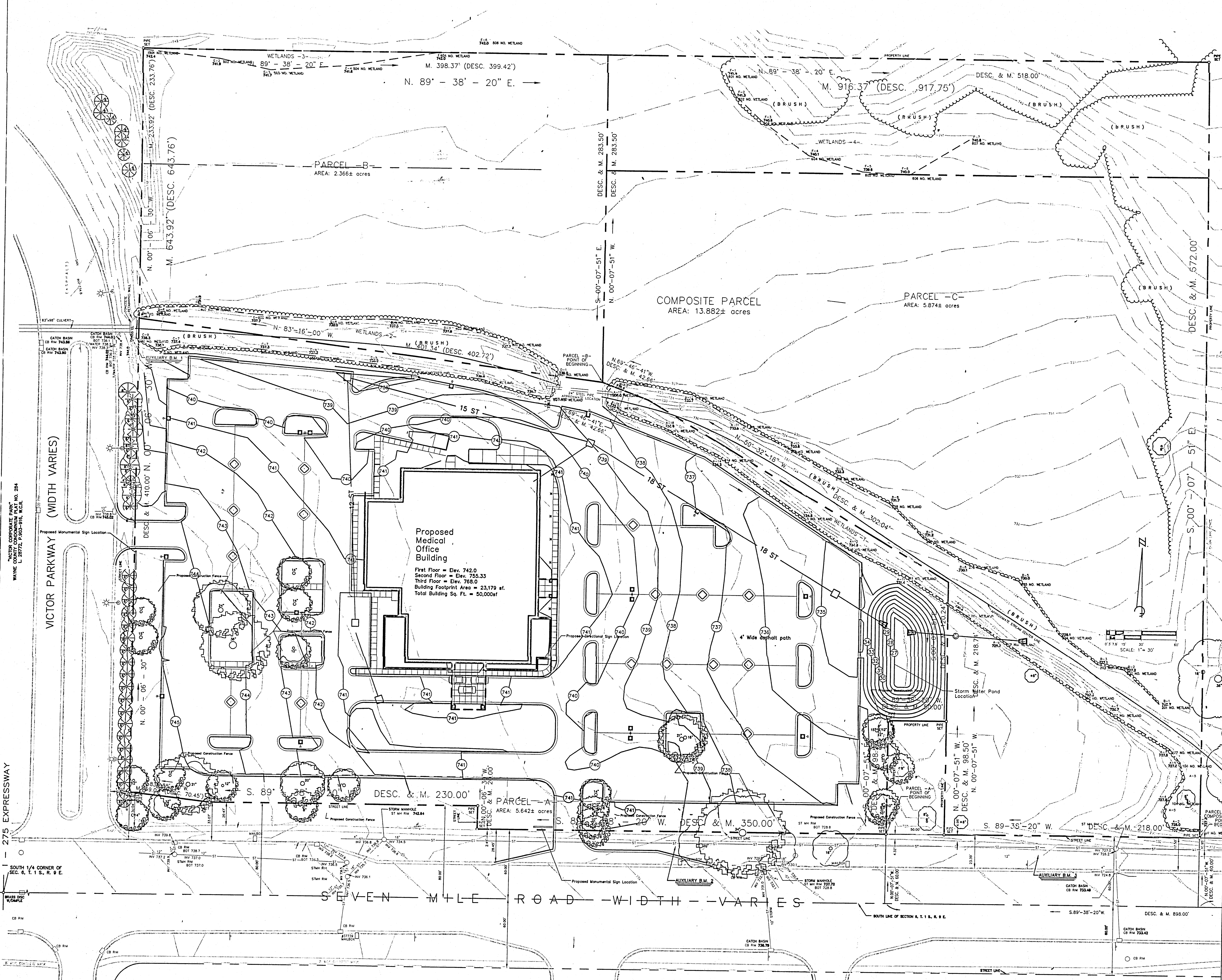
- Property line
- Setback line
- Site fence
- Site paving line
- Water line
- 100 yr. flood line
- Contract limit line
- Landscaping
- Irrigation Area Zone line
- Landscaping Easing line
- Hanging line
- Planting code symbol
- Planting code symbol

SYMBOLS

- Existing Parking lights
- Proposed Parking lights
- Soil boring location & Number
- Precast flared end section
- Concrete manhole
- Storm catchbasins
- Sanitary & Storm Manhole
- Storm gooseneck
- Culvert
- Storm water protection
- Fire Hydrant
- Swamp Connection
- Water Valve
- Water Meter
- Gas Meter
- Power pole
- Handicap sign
- Flag pole
- Concrete Bolard
- Conc. Filled Pipe Bolard
- Light Bolard
- Flood light
- Concrete pavement Slope Arrow

GENERAL NOTES

- Base information is taken from a survey by T. Engineers Inc. City, State - 1/2/94
- A soil report has been prepared for the project. Site preparation and footing construction shall be in accordance with the soil report and project specifications.
- Parking lot dimensions are from face of curb to face of curb unless noted otherwise.
- It shall be the responsibility of the subcontractors to notify all applicable utility companies who may be affected by the proposed work. The subcontractor shall make every effort to protect existing utility lines and shall repair any damage at their own expense. The subcontractors shall also coordinate their activities with other subcontractors to ensure compliance with the project schedule.
- All site concrete shall have a minimum 28 day compressive strength of 4000 psi, a slump of 4", an air content of 6% and a maximum water to cement ratio of 0.45.



Sheet Name

Grading Site Plan

Project Number

M94068

Drawn by: DSZ

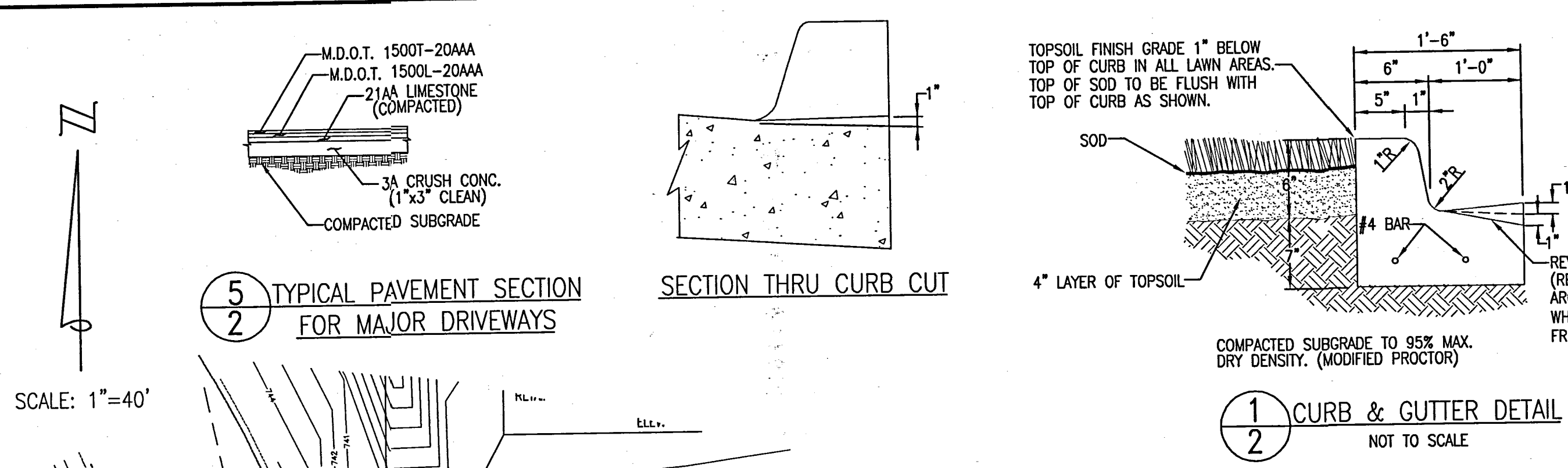
Document Release

3-17-98 Owner review

Sheet Number

C-2

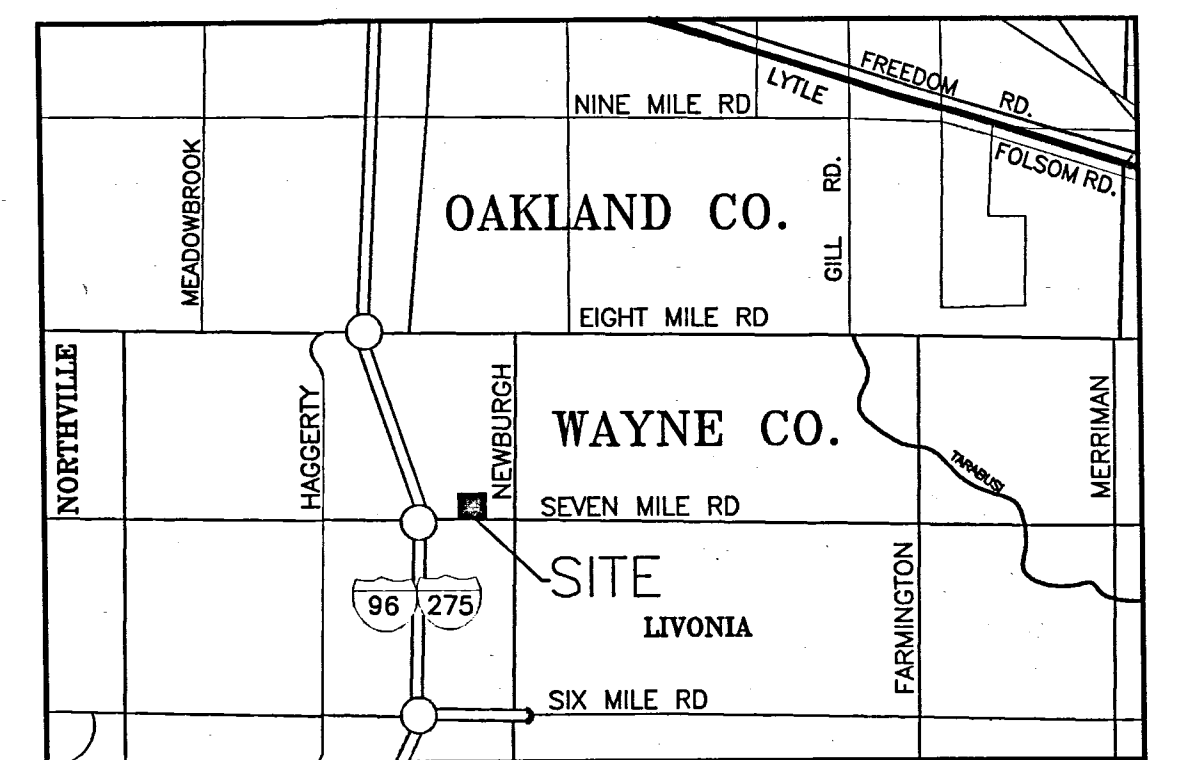
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SCALE: 1"=40'

SYMBOL LEGEND

EXISTING	PROPOSED
INLET	PROPOSED SQUARE CATCH BASIN
STORM MANHOLE	PROPOSED HYDRANT
ROUND CATCH BASIN	PROPOSED GATE VALVE & BOX
SANITARY MANHOLE	PROPOSED GATE VALVE & WELL
UNSPECIFIED MANHOLE	BORE AND JACK
POWER POLE	ASPHALT
GUY WIRE	SILT FENCE
FIRE HYDRANT	REMOVE & REPLACE SIDEWALK
METER PIT	PROP. HYD. LABEL
HAND HOLE	PROP. STORM STRUCTURE LABEL
GATE VALVE & WELL	PROP. GATE VALVE LABEL
UTILITY MANHOLE	INLET FILTER
INDICATOR POST & VALVE	SANITARY CLEAN OUT
FOUND IRON	STORM STRUCTURE BY OTHERS
FOUND MONUMENT	SIGN
OVERHEAD ELECTRIC AND TELEPHONE	
GAS MAIN	
TELEPHONE AND LIGHT POLE	
LAMP POLE	
SH SPRINKLER HEAD	
SIGN	
GAS VALVE	
MAILBOX	
METAL POST	
BILLBOARD	
TELEPHONE RISER	
ELECTRICAL RISER	
UNDERGROUND MARKER	
CULVERT	
GAS RISER	
TRAVERSE POINT	
SECTION CORNER	
SOIL BORING	
WETLANDS	
WETLAND BOUNDARY	
(8) EXISTING STORM STRUCTURE LABEL	
(S) EXISTING SANITARY STRUCTURE LABEL	



LEGAL DESCRIPTION:

PART OF THE SE 1/4 OF SECTION 6, T.1 S., R.9 E., CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN, DESCRIBED AS:

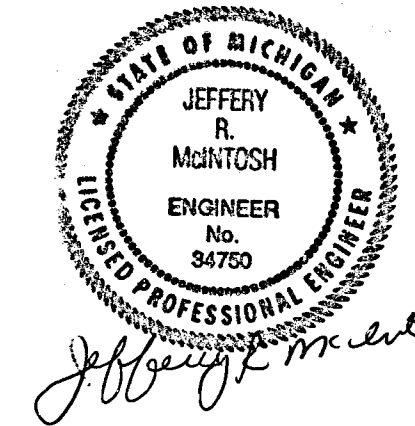
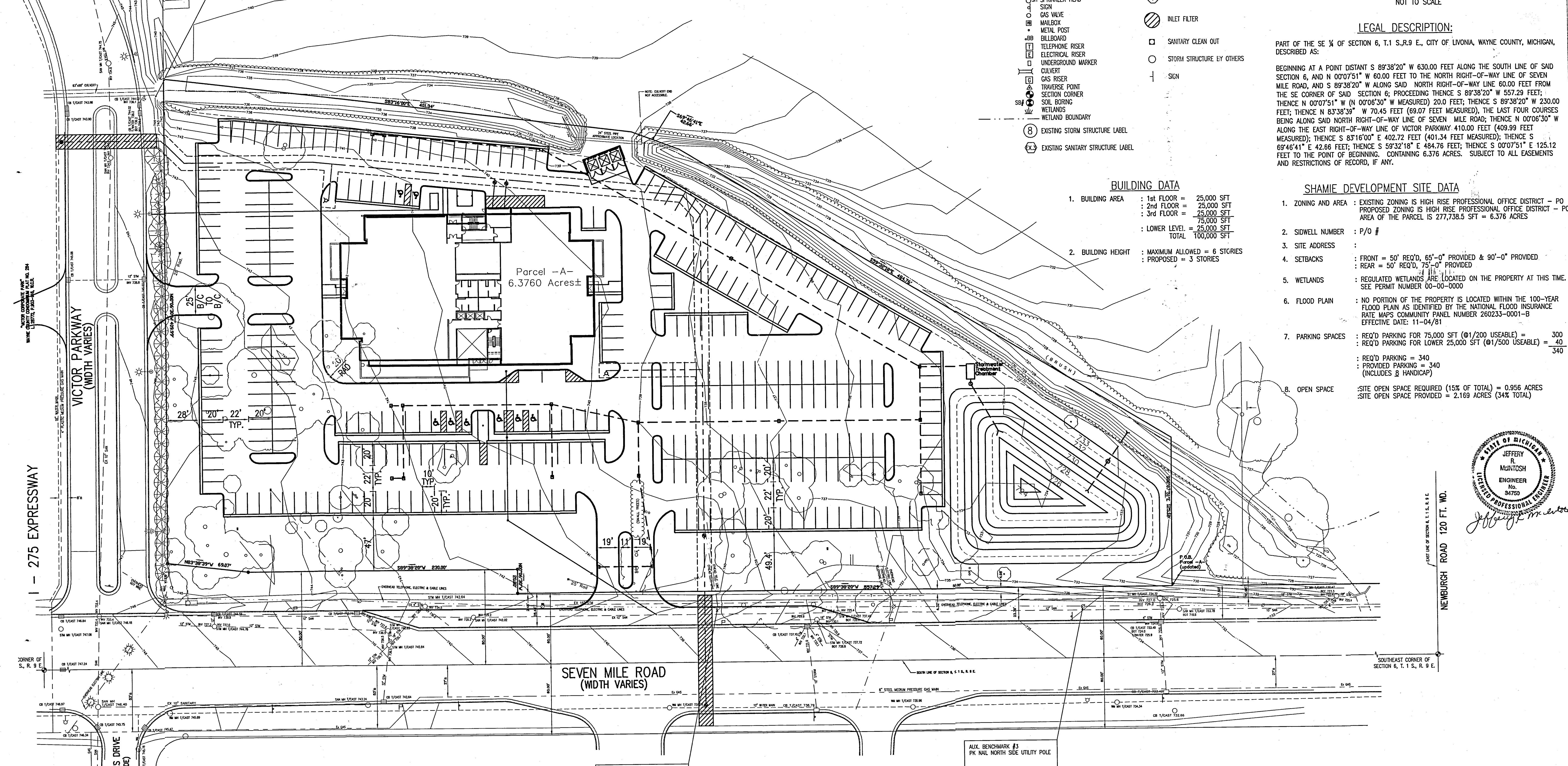
BEGINNING AT A POINT DISTANT S 89°38'20" W 630.00 FEET ALONG THE SOUTH LINE OF SAID SECTION 6, AND N 00°07'51" W 60.00 FEET TO THE NORTH RIGHT-OF-WAY LINE OF SEVEN MILE ROAD, AND S 89°38'20" W ALONG SAID NORTH RIGHT-OF-WAY LINE 60.00 FEET FROM THE SE CORNER OF SAID SECTION 6; PROCEEDING THENCE S 89°38'20" W 557.29 FEET; THENCE N 00°07'51" W (N 00°06'30" W MEASURED) 20.0 FEET; THENCE S 89°38'20" W 230.00 FEET; THENCE N 83°38'39" W 70.45 FEET (68.07 FEET MEASURED), THE LAST FOUR COURSES BEING ALONG SAID NORTH RIGHT-OF-WAY LINE OF SEVEN MILE ROAD; THENCE N 00°06'30" W ALONG THE EAST RIGHT-OF-WAY LINE OF VICTOR PARKWAY 410.00 FEET (409.99 FEET MEASURED); THENCE S 83°16'00" E 402.72 FEET (401.34 FEET MEASURED); THENCE S 69°48'41" E 42.66 FEET; THENCE S 69°32'18" E 484.76 FEET; THENCE S 00°07'51" E 125.12 FEET TO THE POINT OF BEGINNING, CONTAINING 6.376 ACRES. SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD, IF ANY.

BUILDING DATA

- BUILDING AREA : 1st FLOOR = 25,000 SFT
2nd FLOOR = 25,000 SFT
3rd FLOOR = 25,000 SFT
LOWER LEVEL = 25,000 SFT
TOTAL 100,000 SFT
- BUILDING HEIGHT : MAXIMUM ALLOWED = 6 STORIES
PROPOSED = 3 STORIES

SHAMIE DEVELOPMENT SITE DATA

- ZONING AND AREA : EXISTING ZONING IS HIGH RISE PROFESSIONAL OFFICE DISTRICT - PO
PROPOSED ZONING IS HIGH RISE PROFESSIONAL OFFICE DISTRICT - PO
AREA OF THE PARCEL IS 277,738.5 SFT = 6.376 ACRES
- SIDWELL NUMBER : P/O #
- SITE ADDRESS :
- SETBACKS : FRONT = 50' REQ'D, 65'-0" PROVIDED & 90'-0" PROVIDED
REAR = 50' REQ'D, 75'-0" PROVIDED
- WETLANDS : REGULATED WETLANDS ARE LOCATED ON THE PROPERTY AT THIS TIME.
SEE PERMIT NUMBER 00-00-0000
- FLOOD PLAIN : NO PORTION OF THE PROPERTY IS LOCATED WITHIN THE 100-YEAR FLOOD PLAIN AS IDENTIFIED BY THE NATIONAL FLOOD INSURANCE RATE MAPS COMMUNITY PANEL NUMBER 260233-0001-B
EFFECTIVE DATE: 11-04/81
- PARKING SPACES : REQ'D PARKING FOR 75,000 SFT (01/200 USEABLE) = 300
REQ'D PARKING FOR LOWER 25,000 SFT (01/500 USEABLE) = 40
REQ'D PARKING = 340
PROVIDED PARKING = 340
(INCLUDES 8 HANDICAP)
- OPEN SPACE : SITE OPEN SPACE REQUIRED (15% OF TOTAL) = 0.956 ACRES
SITE OPEN SPACE PROVIDED = 2.169 ACRES (34% TOTAL)



REVISIONS:	ISSUE NO.	SID DATE
	S.D. DRN	02/13/03
	NP/KC	
	TOPO DRN	JM
	PROFILE DRN	ENG. DRN
	APPROVED	SCALE
	VI	1"=40'

SHAMIE DEVELOPMENT II
7 MILE ROAD & VICTOR PARKWAY
SITE PLAN

CLIENT: SHAMIE DEVELOPMENT

ORCHARD, HILTZ & McCLEMENT, INC.

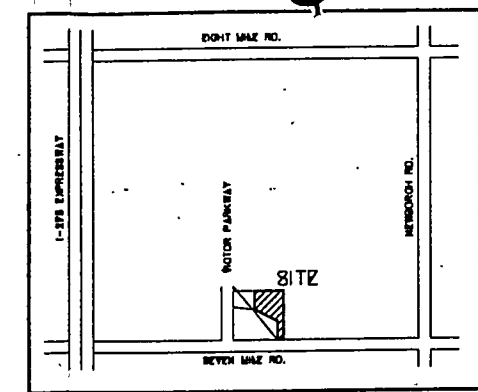
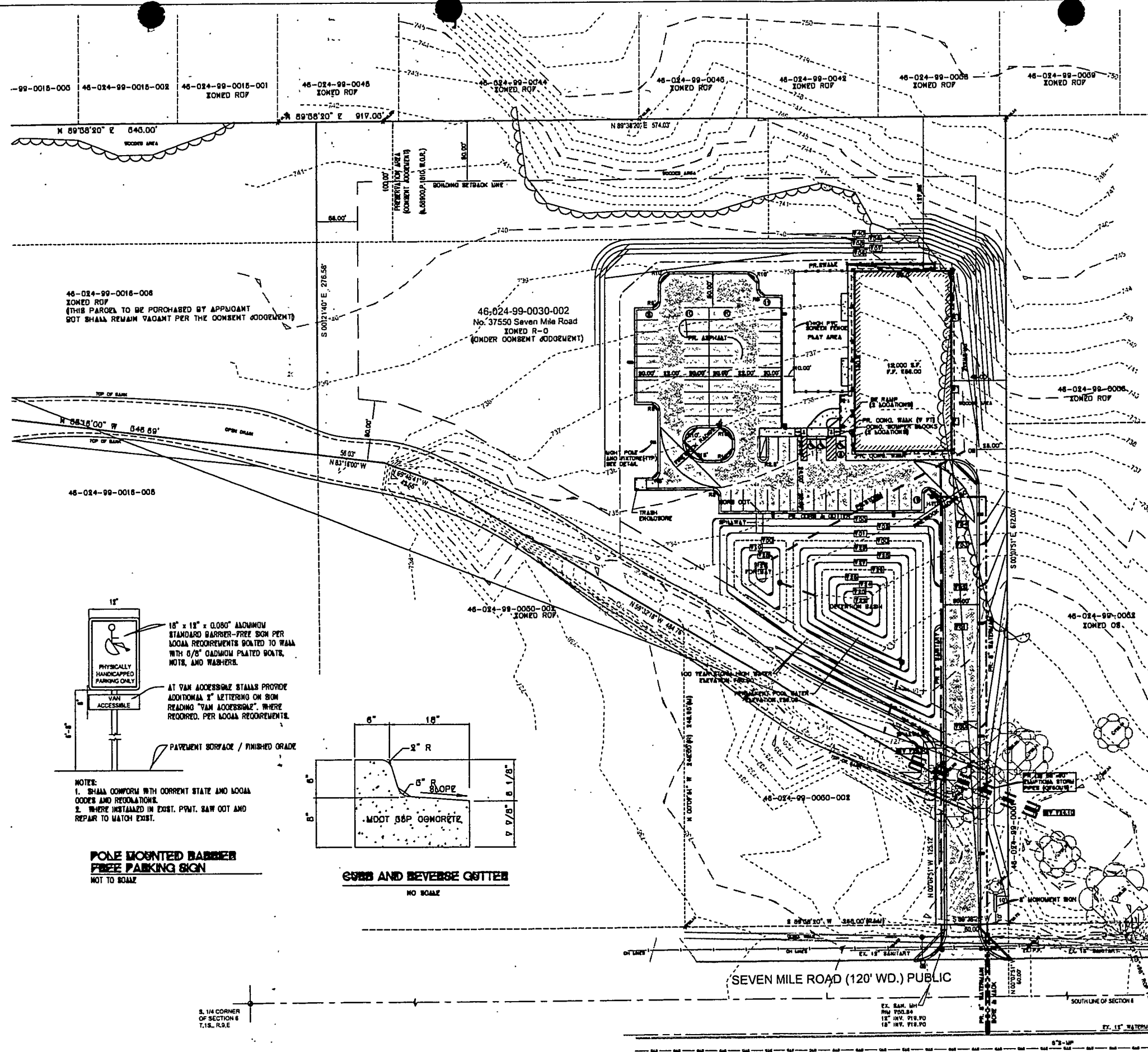
34935 Schoolcraft Road
Livonia, MI 48150
(734) 522-6711
(734) 522-6427 FAX

TPO: CAD
DRAWING: site.dwg
LAYOUT: LAYOUT1

SHEET
2 OF 5

JOB NO.
806-01-0012

Drawing Path: K:\Projects\reson\800-999\0001012\CADD\Plans-Const\site.dwg
CLIENT: SHAMIE DEVELOPMENT
JOB # 806-01-0012
DRAWING NAME: site.dwg



LOCATION MAP

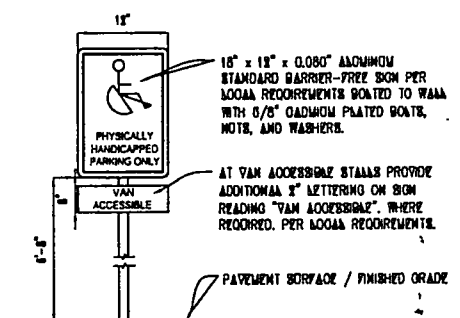
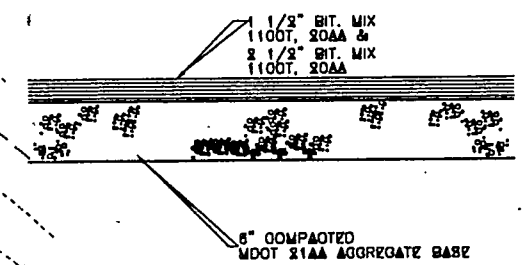
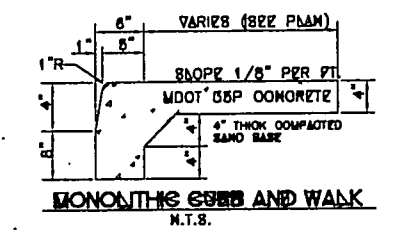
BENCH MARK ELEV. 734.89 (USGS)
RAIL ROAD SPIKE, SOUTH SIDE OF POWER POLE
10' EAST OF PROPERTY LINE AND 42' NORTH OF
SEVEN MILE ROAD.

SITE DATA:

PARCEL NO. 46-024-99-0030-002
SITE AREA 5.80 ACRES
ZONED R-C (CONDOMINIUM RESIDENTIAL DISTRICT)
TOTAL BUILDING AREA = 12,000 SQ. FT.
PARKING CALCULATION (SIMILAR COMMUNITY USE)
PARKING REQUIREMENTS
1 SPACE PER 100 SQ. FT. OF GROSS BUILDING AREA
12,000 SQ. FT. / 100 = 120 SPACES
TOTAL REQUIRED = 120 SPACES
PARKING PROVIDED = 56 SPACES
PLUS 3 BARRIER FREE SPACES
LOADING AREA
NOT REQUIRED

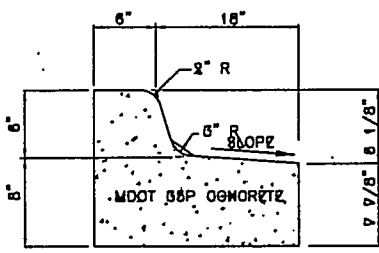
BUILDING SETBACKS
REQUIRED FRONT = 50' PROVIDED FRONT = 230.25'
SIDE = 25' SIDE = 45' EAST
SIDE = 44.18' WEST
REAR = 50' REAR = 127.86'

NOTES: THERE WILL BE NO STORAGE OF HAZARDOUS MATERIAL ON SITE
ALL BUILDING, ROOF AND GROUND MOUNTED MECHANICAL EQUIPMENT WILL BE SCREENED IN ACCORDANCE WITH CITY OF LIVONIA ORDINANCE.
APPLICANT INTENDS TO PURCHASE PARCELS 46-024-99-0030-002 AND 46-024-99-0030-001, HOWEVER, DEVELOPMENT WILL OCCUR ONLY ON THE 5.8 ACRE PARCEL AND THE OTHER PARCEL SHALL BE LEFT VACANT PER TERMS OF CONSENT JUDGMENT.



NOTES:
1. SHALL CONFORM WITH CURRENT STATE AND LOCAL CODES AND REGULATIONS.
2. WHERE INSTALLED IN EXIST. P.W.T. SAW CUT AND REPAIR TO MATCH EXIST.

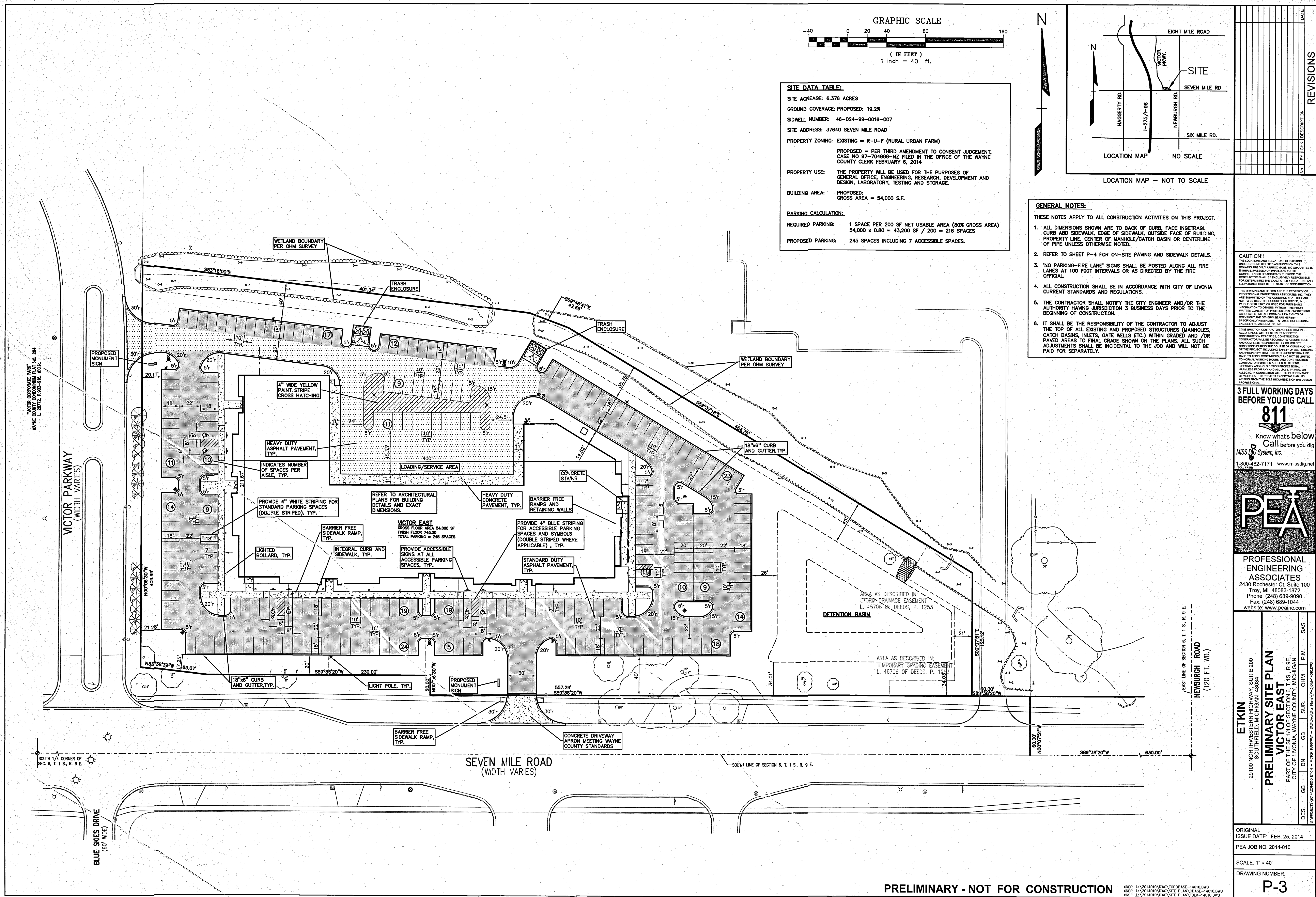
POLE MOUNTED BARRIER FREE PARKING SIGN
NOT TO SCALE



CURB AND REVERSE GUTTER
NO SCALE

SEVEN MILE ROAD (120' WD.) PUBLIC

EXHIBIT D



SITE DATA TABLE:	
SITE ACREAGE:	6.376 ACRES
GROUND COVERAGE: PROPOSED:	19.2%
SIDWELL NUMBER:	46-024-99-0016-007
SITE ADDRESS:	37640 SEVEN MILE ROAD
PROPERTY ZONING:	EXISTING = R-U-F (RURAL URBAN FARM)
PROPOSED =	PER THIRD AMENDMENT TO CONSENT JUDGEMENT, CASE NO 97-704698-NZ FILED IN THE OFFICE OF THE WAYNE COUNTY CLERK FEBRUARY 6, 2014
PROPERTY USE:	THE PROPERTY WILL BE USED FOR THE PURPOSES OF GENERAL OFFICE, ENGINEERING, RESEARCH, DEVELOPMENT AND DESIGN, LABORATORY, TESTING AND STORAGE.
BUILDING AREA:	PROPOSED: GROSS AREA = 54,000 S.F.
PARKING CALCULATION:	
REQUIRED PARKING:	1 SPACE PER 200 SF NET USABLE AREA (80% GROSS AREA) 54,000 x 0.80 = 43,200 SF / 200 = 216 SPACES
PROPOSED PARKING:	245 SPACES INCLUDING 7 ACCESSIBLE SPACES.

- GENERAL NOTES:**
- THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT.
- ALL DIMENSIONS SHOWN ARE TO BACK OF CURB, FACE INLET/GRAB BASIN, EDGE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
 - REFER TO SHEET P-4 FOR ON-SITE PAVING AND SIDEWALK DETAILS.
 - NO PARKING-FIRE LANE! SIGNS SHALL BE POSTED ALONG ALL FIRE LANES AT 100 FOOT INTERVALS OR AS DIRECTED BY THE FIRE OFFICIAL.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF LIVONIA CURRENT STANDARDS AND REGULATIONS.
 - THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
 - IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ADJUST THE TOP OF ALL EXISTING AND PROPOSED STRUCTURES (MANHOLES, CATCH BASINS, INLETS, GATE WELLS ETC.) WITHIN GRADED AND/OR PAVED AREAS TO FINAL GRADE SHOWN ON THE PLANS. ALL SUCH ADJUSTMENTS SHALL BE INCIDENTAL TO THE JOB AND WILL NOT BE PAID FOR SEPARATELY.

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS GIVEN FOR THE ACCURACY OF THE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE EXISTING UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

THIS DRAWING AND DESIGN ARE THE PROPERTY OF PROFESSIONAL ENGINEERING ASSOCIATES, INC. AND ARE NOT TO BE REPRODUCED, COPIED, OR USED IN WHOLE OR IN PART, OR FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF PROFESSIONAL ENGINEERING ASSOCIATES, INC. ALL COMMON WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE SPECIFICALLY RESERVED. © 2014 PROFESSIONAL ENGINEERING ASSOCIATES, INC.

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR SHALL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE SAFETY DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT EXCEPT THE LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE DESIGN PROFESSIONAL.

3 FULL WORKING DAYS BEFORE YOU DIG CALL

811

Know what's below
Call before you dig

MISS DIG System, Inc.
1-800-482-7171 www.missdig.net

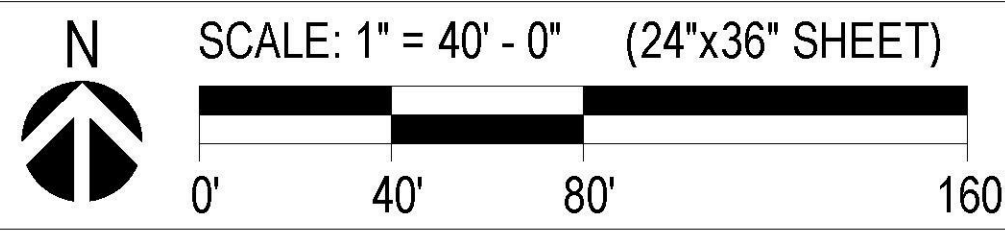
PEA

PROFESSIONAL ENGINEERING ASSOCIATES
2430 Rochester Ct. Suite 100
Troy, MI 48063-1872
Phone: (248) 689-8090
Fax: (248) 689-1044
website: www.peainc.com

ETKIN 29100 NORTHWESTERN HIGHWAY, SUITE 200 SOUTHFIELD, MICHIGAN 48034		PRELIMINARY SITE PLAN VICTOR EAST PART OF THE SE 1/4 OF SECTION 6, T.1S, R.9E, CITY OF LIVONIA, WAYNE COUNTY, MICHIGAN	
DES.	GB	ON	GB
SUR.	CHM	P.M.	SAS
PROJECTS: 2014-01-01 ETKIN - VICTOR PARKWAY - 345,000 S.F. (P&I) - 3000' x 100' (P&I)			
ORIGINAL ISSUE DATE: FEB. 25, 2014			
PEA JOB NO. 2014-010			
SCALE: 1" = 40'			
DRAWING NUMBER: P-3			

PRELIMINARY - NOT FOR CONSTRUCTION

XREF: L:\2014\01\DWG\TOP\BASE-14010.DWG
XREF: L:\2014\01\DWG\SITE PLAN\BASE-14010.DWG
XREF: L:\2014\01\DWG\SITE PLAN\TRUCK-14010.DWG





Site Data:

Gross Site Area: 6.38 Ac.
 Proposed Units: 100 Units
 1 Car Townhomes: 65 Units
 2 Car Townhomes: 35 Units
 Proposed Density: 15.67 Du. / Ac.

Building Setbacks:
 Front Yard: 19' min.
 Side Yard: 15' min.
 Building Separation: 15' min.

Parking:
 Garage Parking: 135 spaces
 Apron Parking: 65 spaces
 Guest Parking: 30 spaces
 Parking Distribution: 2.30 spaces / Du.

Road Width: 24'
 Road Length: 1,841 LF
 Road Length per Unit: 18.41 LF / Du.

Site Plan Rendering

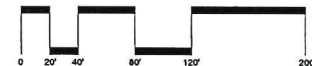
7 Mile & Victor Parkway
 Livonia, Michigan
 Robertson Brothers Homes

June 2023



Prepared By: Land Design Studio
 750 Forest Avenue - Suite 101
 Birmingham, MI 48009
 (248) 584-3220

Prepared For: Robertson Brothers Homes
 6905 Telegraph Road - Suite 200
 Bloomfield Hills, MI 48301
 (248) 657-4968



STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF WAYNE

OAKWOOD HEALTHCARE SYSTEM,
a Michigan non-profit corporation, KENNETH
STONE, ROBERT J. BAZZETT,
NORMA E BAZZETT, CLARENCE ULLSTROM
and PATRICIA ULLSTROM,
Plaintiff

Case No. 97-704696-CZ
Hon. John A Murphy
Reassigned to
Hon. _____

v

CITY OF LIVONIA, a Michigan Municipal
Organization,

Defendant.

Paul A. Bernier (P39119)
Michael E. Fisher (P37037)
Attorneys for Defendant
33000 Civic Center Drive, FL 4
Livonia, MI 48154
734.466.2520
pbernier@livonia.gov
mfisher@livonia.gov

C. Kim Shierk (P37694)
Attorney for Plaintiffs
Williams Williams Rattner & Plunkett, P.C.
380 N Old Woodward Avenue
Suite 300
Birmingham, MI 48009
cks@wwrplaw.com

FOURTH AMENDMENT TO CONSENT JUDGMENT

At a session said Court, held in the
City of Detroit, County of Wayne,
State of Michigan

On: _____

Present: Honorable _____

Circuit Court Judge

UPON STIPULATION AND CONSENT OF THE PARTIES, by and through their respective attorneys, this court finds:

1. Defendant, City of Livonia (hereinafter "City"), is a municipal corporation, organized and existing under Act 279, Public Act 1909, as amended, MCL 117.1, et seq., located in Wayne County, Michigan.

2. Oakwood Healthcare System ("Oakwood") was the owner of certain land ("Property") that comprised approximately fourteen (14) acres located adjacent to Seven Mile Road and Victor Parkway in the City of Livonia. The legal description of the Property is attached as Exhibit A.

3. The portion of the Property which is approximately 6.376 acres located south of the drainage creek, which traverses the Property, shall be referred to as Parcel A. The legal description of Parcel A is attached as Exhibit B.

4. The portion of the Property which is comprised of approximately two (2) acres and is located north of the drainage creek at the western end of the Property shall be referred to as Parcel B. The legal description of Parcel B is attached as Exhibit C.

5. The portion of the Property that is comprised of approximately five and six tenths (5.6) acres located north of the drainage creek on the eastern side of the Property shall be referred to as Parcel C. The legal description of Parcel C is attached as Exhibit D.

6. Kenneth Stone, Robert J. Bazzett, Norma E. Bazzett, Clarence Ullstrom and Patricia Ullstrom, the prior owners of the Property, together with Oakwood, the then purchaser of the Property, filed an application with the City seeking to rezone the Property (along with an approximate 6.76 acres of adjoining property hereafter referred to as Parcel A) from RUFC, Rural Urban Farm District, to PO, High Rise Office, which was denied by the City Council on August 26, 1996. Thereafter, a Petition was filed with the City of Livonia Zoning Board of Appeals requesting a use variance which was denied. Ultimately, the then landowners and Oakwood filed a complaint against the City seeking a proposed use of the Property and seeking other relief. Ultimately, all of

the parties resolved their disputes by virtue of the entry of a Consent Judgment on the 22nd day of September, 1997.

7. Kenneth Stone, Robert J. Bazzett, Norma E. Bazzett, Clarence Ullstrom and Patricia Ullstrom previously conveyed the Property to Oakwood and, accordingly, have no further interest in the subject of the litigation and are therefore not a party to this Fourth Amendment to Consent Judgment.

8. On May 22, 2003, this Court entered an Amended Consent Judgment upon the stipulation of Oakwood, S & N Development Company, LLC ("S & N"), who was then the purchaser of Parcel A of the Property from Oakwood, and the City to permit a proposed development on Parcel A.

9. On April 21, 2006, this Court entered the Second Amended Consent Judgment upon the stipulation of Oakwood, Talon-Livonia TLE, LLC ("Talon"), who was then the purchaser of Parcels B and C of the Property, and the City to permit a proposed childcare facility to be constructed on Parcels B and C.

10. On February 6, 2014, this Court entered the Third Amendment to Consent Judgment upon stipulation of Victor East, LLC ("Victor East") which was the then owner of Parcel A of the Property.

11. In that Parcels B and C have been developed, because Talon is bound by the terms of the Second Amendment to Consent Judgment, and in that Talon and Parcels B and C are not affected by the development of Parcel A, Talon is not a party to this Fourth Amendment to Consent Judgment. Therefore, this Fourth Amendment to Consent Judgment is not intended to supersede the Second Amendment to Consent Judgment; but rather, its purpose is to only address the development of Parcel A.

12. Oakwood sold Parcel A to S & N. Oakwood has no further interest in the subject of the litigation and therefore is not a party to this Fourth Amendment to Consent Judgment.

13. Bank of America (hereinafter "B of A") acquired title to Parcel A by foreclosure of its mortgage on Parcel A. B of A sold Parcel A to Victor East who is the current owner of Parcel A therefore S & N and B of A have no further interest in the subject of the litigation and is therefore are not a party to this Fourth Amendment to Consent Judgment.

NOW THEREFORE, this Fourth Amendment to Consent Judgment being presented to the Court pursuant to stipulation of the parties and the Court having determined that this proposed Fourth Amendment to Consent Judgment is reasonable and just, and being otherwise fully advised in the premises;

IT IS HEREBY ORDERED:

Section 1 – Zoning and Development of the Property

1.1 Zoning of Parcel A
The zoning of Parcel A shall remain as set forth in the Amended Consent Judgment.

1.2 Development of Parcel A

From and after the date of this Fourth Amendment to Consent Judgment, the use and development of the subject property shall be as follows:

Development of Parcel A shall be as follows:

A. Parcel A

Regardless of the RUFC zoning classification, Parcel A may be developed and used for the uses set forth in the Amended Consent Judgment.

In addition to the uses set forth in the Amended Consent Judgment, Parcel A may be developed and used for a for-lease residential townhome development to be comprised of approximately 100 units in approximately 15 buildings and with attached garages (the "For-Lease Residential Townhomes") which has minimum setbacks from Seven Mile and Victor Parkway of fifteen (15) feet; minimum perimeter setback of fifteen (15) feet; minimum separation between buildings of fifteen (15) feet; and a maximum building height of thirty-five (35) feet to the mid-point

and three (3) stories in height. The conceptual rendering is attached as Exhibit E ("Conceptual Plan"), in accordance with the terms of this Fourth Amendment to Consent Judgment and the proposed conceptual elevations attached as Exhibit F (the "Building Elevations").

1. Plan Approval

- (a) The Conceptual Plan, a copy of which appended as Exhibit E, is granted conceptual approval.
- (b) Within one (1) year of the date of this Fourth Amendment to Consent Judgment, Victor East shall submit for review and approval by the Livonia Planning Commission and the Livonia City Council pursuant to Section 13.13(12) of the City of Livonia Zoning Ordinance, plans and specifications for the final site plan, which shall include, without limitation, building elevations, preliminary engineering plans, landscaping plans, sign plans, etc. that are substantially consistent with attached Exhibits E and F. The City, as part of its review and approval of the site plan, shall be permitted to impose restrictions and conditions and require modifications as deemed necessary to comply with the City of Livonia Code of Ordinances, except as permitted herein.
- (c) The For-Lease Residential Townhomes shall be constructed of durable, long-lasting materials, including brick, stone, or other masonry products and siding approved by the City. At a minimum, the first floor of the buildings, exclusive of doors and windows, shall be brick, stone, or other masonry products. The second and third floors may contain fiber cement or high-quality horizontal and board and batten vinyl as may be approved by City staff and the Planning Commission.

- (d) The City shall issue on a timely basis and without unreasonable delay, all such final site plan approval; and thereafter building and other permits as shall be necessary or appropriate for the development and construction of the For-Lease Residential Townhomes and subject to the conditions of this Fourth Amendment to Consent Judgment.
- (d) The design of the For-Lease Residential Townhomes, including the materials used in construction, shall comply with applicable ordinance standards.
- (e) Victor East shall commence construction of the For-Lease Residential Townhomes within one (1) year of receiving final site plan approval.

2. Additional Conditions

- (a) The development of Parcel A shall be subject to the following conditions:
 - (i) The building and development shown in the Conceptual Plan, and the final site plan, shall comply with the development standards of Section 5.02 of the City of Livonia Zoning Ordinance, as amended, and with the NM1, Neighborhood Multifamily District Regulations as a Planned Residential Development, and all other ordinances and regulations of the City, and all building code and engineering requirements, except as permitted herein.
 - (ii) In the event Parcel A is not developed for, or ceases to be actively used for the For-Lease Residential Townhomes for a period in excess of three (3) years, then any other

proposed use of Parcel A for purposes other than expressly permitted under the RUFC zoning classification shall be subject to approval of the Livonia City Council, which approval shall not be unreasonably withheld, so long as the proposed use of Parcel A is For-Lease Residential Townhomes use or similar or lesser intensity, as provided in this Fourth Amendment to Consent Judgment. Any subsequent approval given by the Livonia City Council, under this subparagraph shall be embodied into an amendment to this Fourth Amendment to Consent Judgment and entered with this Court. If the Livonia City Council approved a use under this subparagraph, Victor East or its successor in interest shall be required to obtain site plan approval for any approved use through the procedures in place.

- (iii) The development, construction and use of Parcel A as described above shall not be considered to be non-conforming; however, Livonia's Zoning Ordinance, Section 12.01, shall control the continuation of the uses as though it were non-conforming in the event paragraph (ii) above becomes operative.

(b) Building and Other Permits for Parcel A

Pursuant to the other provisions of this Fourth Amendment to Consent Judgment, the City will issue building permits and all other permits necessary to enable the construction of the For-Lease Residential Townhomes, in accordance with the Conceptual Plan.

Victor East shall be required to pay all necessary fees and otherwise comply with the City's bonding requirements and ordinances.

- (c) The City agrees to approve the installation of a conforming ground sign on Parcel A at the curb cut along Victor Parkway.

Section 2 - Enforcement of Fourth Amendment to Consent Judgment

2.1 Enforcement of Fourth Amendment to Consent Judgment

In the event of a proceeding to enforce this Fourth Amendment to Consent Judgment, any party may seek to recover costs and attorney fees in addition to any other applicable and available relief.

Section 3 – Additional Provisions

3.1 The terms and provisions of this Fourth Amendment to Consent Judgment shall be binding upon and inure to the benefit of the respective successors and assigns of the parties hereto. The parties and their respective successors and assigns treat and cooperate with one another in good faith and shall neither take any action which is contrary to or interferes with the spirit of this Fourth Amendment to Consent Judgment, nor omit any action which is necessary or convenient to or consistent with the spirit and intent of this Fourth Amendment to Consent Judgment.

3.2 The parties shall execute any and all documents and/or enter into such agreements as are necessary or convenient to carry out the intent of this Fourth Amendment to Consent Judgment.

3.3 This Fourth Amendment to Consent Judgment is declared to be in recordable form, and the covenants contained herein are declared to be covenants running with the land and all portions or divisions thereof, and the Wayne County Register of Deeds be, and hereby is, ordered to record a true copy of this Fourth Amendment to Consent Judgment in the land records of Wayne County.

3.4 The terms of this Fourth Amendment to Consent Judgment may be amended to, changed or modified but only by written agreement executed by the parties hereto and approved and ordered by this Court.

3.5 To the extent that this Fourth Amendment to Consent Judgment conflicts with any City Ordinance requirements, the terms of this Fourth Amendment to Consent Judgment shall control. To the extent that this Fourth Amendment to Consent Judgment is silent on issues regulated by City Ordinances, then the City Ordinance shall control, provided that the application of any such Ordinance to this development shall not prevent or impede the construction or furtherance of the development as approved herein.

3.6 Notwithstanding anything herein to the contrary, the terms, conditions, restrictions, and covenants of this Fourth Amendment to Consent Judgment are expressly subject to and shall be superseded by any future change in the zoning classification applicable to Parcel A which is approved by the City and the owner of the Parcel A which is subject to a change in zoning classification (in which case, the requirements of the zoning classification and any other agreement between the affected parties would control).

3.7 This Court retains jurisdiction to assure compliance with the terms of the Fourth Amendment to Consent Judgment.

Circuit Court Judge

CITY OF LIVONIA

VICTOR EAST, LLC,
a Michigan limited liability company

By: _____

Douglas M. Etkin

Its: Manager

By: /s/ Maureen Miller Brosnan

Maureen Miller Brosnan

Its: Mayor

By: /s/ Lori Miller

Lori Miller

Its: City Clerk

/s/ Paul A. Bernier
Paul A. Bernier (P39119)
City Attorney
Attorney for Defendant

Pursuant to Council Resolution # 389-23
Adopted by City Council on Dec. 13, 2023

3.4 The terms of this Fourth Amendment to Consent Judgment may be amended to, changed or modified but only by written agreement executed by the parties hereto and approved and ordered by this Court.

3.5 To the extent that this Fourth Amendment to Consent Judgment conflicts with any City Ordinance requirements, the terms of this Fourth Amendment to Consent Judgment shall control. To the extent that this Fourth Amendment to Consent Judgment is silent on issues regulated by City Ordinances, then the City Ordinance shall control, provided that the application of any such Ordinance to this development shall not prevent or impede the construction or furtherance of the development as approved herein.

3.6 Notwithstanding anything herein to the contrary, the terms, conditions, restrictions, and covenants of this Fourth Amendment to Consent Judgment are expressly subject to and shall be superseded by any future change in the zoning classification applicable to Parcel A which is approved by the City and the owner of the Parcel A which is subject to a change in zoning classification (in which case, the requirements of the zoning classification and any other agreement between the affected parties would control).

3.7 This Court retains jurisdiction to assure compliance with the terms of the Fourth Amendment to Consent Judgment.

VICTOR EAST, LLC,
a Michigan limited liability company

By: 

Douglas M. Etkin

Its: Manager

Circuit Court Judge

CITY OF LIVONIA

By: 

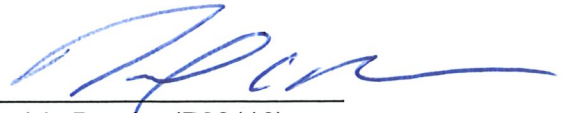
Maureen Miller Brosnan

Its: Mayor

By: 

Lori Miller

Its: City Clerk



Paul A. Bernier (P39119)
City Attorney
Attorney for Defendant

Pursuant to Council Resolution # 389-23
Adopted by City Council on Dec. 13, 2023

PARCEL DESCRIPTION (EXCEPT THE OUTLOT):

Part of the SE 1/4 of Section 6, T.1 S., R.9 E., City of Livonia, Wayne County, Michigan, described as:

Beginning at a point distant S 89°38'20" W 630.00 feet along the South line of said Section 6, and N 00°07'51" W 60.00 feet to the North right-of-way line of Seven Mile Road from the SE corner of said Section 6; proceeding thence S 89°38'20" W 218.00 feet (217.29 feet measured) along the North right-of-way line of Seven Mile Road; thence N 00°07'51" W 98.50 feet; thence S 89°38'20" W 50.00 feet; thence S 00°07'51" E 98.50 feet; thence S 89°38'20" W 350.00 feet; thence N 00°07'51" W (N 00°06'30" W measured) 20.00 feet; thence S 89°38'20" W 230.00 feet; thence N 83°38'39" W 70.49 feet (69.07 feet measured), the last four courses being along said North right-of-way line of Seven Mile Road; thence N 00°06'30" W 643.76 feet along the East right-of-way line of Victor Parkway; thence N 89°38'20" E 917.75 feet; thence S 00°07'51" E 672.00 feet to the Point of Beginning. Containing 13.90 acres. Subject to all easements and restrictions of record.

EXHIBIT A

PART OF THE SE $\frac{1}{4}$ OF SECTION 6, T.1 S., R.9E., CITY OF
LIVONIA, WAYNE COUNTY, MICHIGAN, DESCRIBED AS:

BEGINNING AT A POINT DISTANT S 89 DEGREES 38
MINUTES 20 SECONDS W 630.00 FEET ALONG THE SOUTH
LINE OF SAID SECTION 6, AND N 00 DEGREES 07 MINUTES
51 SECONDS W 60.00 FEET TO THE NORTH RIGHT-OF-WAY
LINE OF SEVEN MILE ROAD, AND S 89 DEGREES 38
MINUTES 20 SECONDS W ALONG SAID NORTH
RIGHT-OF-WAY LINE 60.00 FEET FROM THE SE CORNER OF
SAID SECTION 6; PROCEEDING THENCE S 89 DEGREES
38'20" W 657.29 FEET; THENCE N 00 DEGREES 07 MINUTES
51 SECONDS W (N 00 DEGREES 06 MINUTES 30 SECONDS
W MEASURED) 20.0 FEET; THENCE S 89 DEGREES 38
MINUTES 20 SECONDS W 230.00 FEET; THENCE N 83
DEGREES 38 MINUTES 39 SECONDS W 70.45 FEET (69.07
FEET MEASURED), THE LAST FOUR COURSES BEING
ALONG SAID NORTH RIGHT-OF-WAY LINE OF SEVEN MILE
ROAD; THENCE N 00 DEGREES 06 MINUTES 30 SECONDS W
ALONG THE EAST RIGHT OF WAY LINE OF VICTOR
PARKWAY 410.00 FEET (409.99 FEET MEASURED); THENCE
S 83 DEGREES 18 MINUTES 00 SECONDS E 402.72 FEET
(401.34 FEET MEASURED); THENCE S 69 DEGREES 48
MINUTES 41 SECONDS E 42.66 FEET; THENCE S 69
DEGREES 32 MINUTES 18 SECONDS E 484.76 FEET;
THENCE S 00 DEGREES 07 MINUTES 51 SECONDS E 125.12
FEET TO THE POINT OF BEGINNING. CONTAINING 6.376
ACRES. SUBJECT TO ALL EASEMENTS AND RESTRICTIONS
OF RECORD, IF ANY.

EXHIBIT B

PART OF THE SE $\frac{1}{4}$ OF SECTION 6, T.1 S., R.9 E., CITY OF
LIVONIA, WAYNE COUNTY, MICHIGAN. DESCRIBED AS:

BEGINNING AT A POINT DISTANT S 89 DEGREES 38
MINUTES 20 SECONDS W 630.00 FEET ALONG THE SOUTH
LINE OF SAID SECTION 6 AND N 00 DEGREES 07 MINUTES
51 SECONDS W 60.00 FEET AND S 89 DEGREES 38
MINUTES 20 SECONDS W 288.00 FEET ALONG THE NORTH
RIGHT-OF-WAY LINE OF SEVEN MILE ROAD AND NORTH 00
DEGREES 07 MINUTES 51 SECONDS W 248.60 FEET AND
NORTH 69 DEGREES 32 MINUTES 18 SECONDS W 243.96
FEET AND NORTH 69 DEGREES 46 MINUTES 41 SECONDS
W 42.88 FEET AND N 83 DEGREES 16 MINUTES 00
SECONDS W 68.03 FEET FROM THE SOUTHEAST CORNER
OF SAID SECTION 6, PROCEEDING THENCE N 83 DEGREE
16 MINUTES 00 SECONDS W 346.89 FEET; THENCE N 00
DEGREES 08 MINUTES 30 SECONDS W 233.76 FEET ALONG
THE RIGHT-OF-WAY LINE OF VICTOR PARKWAY; THENCE N
89 DEGREES 38 MINUTES 20 SECONDS E 343.00 FEET;
THENCE S 00 DEGREES 21 MINUTES 40 SECONDS E 276.58
FEET TO THE POINT OF BEGINNING, CONTAINING 2.01
ACRES. SUBJECT TO EASEMENTS OF RECORD.

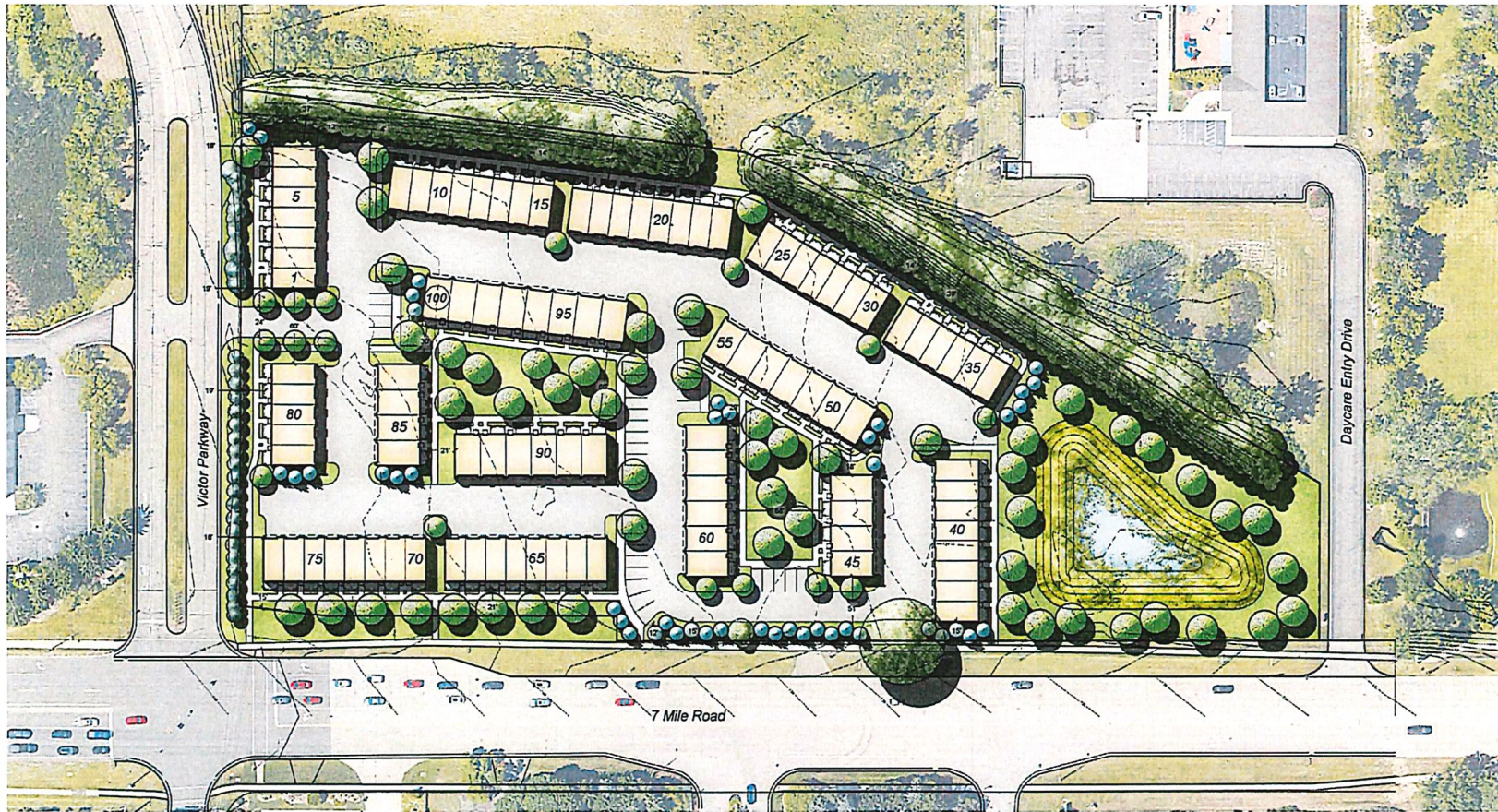
EXHIBIT C

PART OF THE SE $\frac{1}{4}$ OF SECTION 6, T.1 S., R.9E., CITY OF
LIVONIA, WAYNE COUNTY, MICHIGAN, DESCRIBED AS:

BEGINNING AT A POINT DISTANT S 89 DEGREES 38
MINUTES 20 SECONDS W 630.00 FEET ALONG THE SOUTH
LINE OF SAID SECTION 6, AND N 00 DEGREES 07 MINUTES
51 SECONDS W 60.00 FEET TO THE NORTH RIGHT-OF-WAY
LINE OF SEVEN MILE ROAD FROM THE SE CORNER OF
SAID SECTION 6; PROCEEDING THENCE S 89 DEGREES 38
MINUTES 20 SECONDS W ALONG SAID NORTH
RIGHT-OF-WAY LINE 60.00 FEET; THENCE N 00 DEGREES
07 MINUTES 51 SECONDS W 125.12 FEET; THENCE N 69
DEGREES 32 MINUTES 18 SECONDS W 484.76 FEET;
THENCE N 69 DEGREES 46 MINUTES 41 SECONDS W 42.68
FEET; THENCE N 83 DEGREES 16 MINUTES 00 SECONDS W
58.03 FEET; THENCE N 00 DEGREES 21 MINUTES 40
SECONDS W 276.58 FEET; THENCE N 89 DEGREES 38
MINUTES 20 SECONDS E 574.03 FEET; THENCE S 00
DEGREES 07 MINUTES 51 SECONDS E 672.00 FEET TO THE
POINT OF BEGINNING, CONTAINING 5.603 ACRES.
SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF
RECORD, IF ANY.

EXHIBIT D

EXHIBIT E



Site Data:

Gross Site Area: 6.38 Ac.
 Proposed Units: 100 Units
 1 Car Townhomes: 65 Units
 2 Car Townhomes: 35 Units
 Proposed Density: 15.67 Du. / Ac.

Building Setbacks:
 Front Yard: 15' min.
 Side Yard: 15' min.
 Building Separation: 15' min.

Parking:
 Garage Parking: 135 spaces
 Apron Parking: 65 spaces
 Guest Parking: 30 spaces
 Parking Distribution: 2.30 spaces / Du.

Road Width: 24'
 Road Length: 1,841 LF
 Road Length per Unit: 18.41 LF / Du.

Site Plan Rendering

7 Mile & Victor Parkway
 Livonia, Michigan
 Robertson Brothers Homes

June 2023



Prepared By: Land Design Studio
 750 Forest Avenue - Suite 101
 Birmingham, MI 48009
 (248) 594-3220

Prepared For: Robertson Brothers Homes
 6905 Telegraph Road - Suite 200
 Bloomfield Hills, MI 48301
 (248) 657-4968



EXHIBIT F



UNAPPROVED MINUTES

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MINUTES OF THE 29th MEETING OF THE CITY OF LIVONIA BROWNFIELD REDEVELOPMENT AUTHORITY

The 29th Meeting of the Brownfield Redevelopment Authority of Livonia was called to order at 4:00 p.m. on Wednesday, November 12, 2024, by Chairman Scheel at City of Livonia City Hall

MEMBERS PRESENT: Lynda Scheel, Chairman
Ken Harb, Vice Chairman
Dillon Breen, Secretary
Andrew Lendrum, Treasurer
Nicholas Lomako
Steven Vandette
Melissa Karolak (arrived at 4:15pm)

MEMBERS ABSENT: Dan West

OTHERS PRESENT: Mark Taormina, Planning & Economic Dev. Director
Jacob Uhazie, Assistant Planning Director
Stephanie Reece, Program Supervisor
James Clarke, Robertson Homes
Jennifer Theney, Robertson Homes
Tom Wackerman, ASTI Environmental
Darian Neubecker, Robertson Homes

CONSIDERATION OF A REQUEST BY ROBERTSON BROTHERS HOMES FOR APPROVAL OF A BROWNFIELD PLAN AND TAX INCREMENT FINANCING FOR THE "7 AND VICTOR PROJECT," CONSISTING OF 100 RESIDENTIAL TOWNHOMES ON THE NORTH SIDE OF SEVEN MILE ROAD BETWEEN VICTOR PARKWAY AND NEWBURGH ROAD IN THE SOUTHEAST ¼ OF SECTION 6.

Ms. Scheel: Thank you. And next we are on to item number nine. So, this is for the consideration of a request by Robertson Brothers Homes for approval of a brownfield plan and tax increment financing for the Seven and Victor project, consisting of 100 residential town homes on the north side of Seven Mile Road between Victor Parkway and Newburgh Road in the southeast quarter of section six.

Mr. Taormina: Thank you, Madam Chair. And just before I begin, I want to thank Julie Alexander in the Treasurer's Office for her work in compiling and putting together the tax capture tables. She took over for Sharon Dolmetsch, who did this work for several years. This was Julie's first time doing it, and we

greatly appreciate her efforts. The subject property is at the northeast corner of Seven Mile and Victor Parkway. The project would consist of 100 townhomes on 6.38 acres. Multi-family housing is allowed under a consent judgment approved by the City Council last December. This property has a long legal history, commencing in 1997 when the city approved a consent judgment with Oakwood Health Systems. Oakwood had sued the city after being denied a request to rezone the property from RUF to PO, Professional Office, to build a medical office and ambulatory care facility. The consent judgment divided the roughly 14-acre site into three parcels, which I will briefly describe. Parcel A is the site that is under consideration. It lies south of a drainage course that flows southeasterly across the middle of the site. The original consent judgment allowed Oakwood to build a three-story, 50,000-square-foot medical office on Parcel A with parking for approximately 320 cars. It also set forth the future use and development of Parcels B and C. Parcel B, which lies on the north side of the creek at the west end of the property, is about two acres in size. The consent judgment treats parcel B as open space and is subject to an open space preservation agreement. Parcel C is mainly on the north side of the creek at the east end of the property. Parcel C was approved under the original consent judgment to be developed as multi-family housing. However, in 2006, the City Council amended the consent judgment, allowing for the development of a child daycare facility on Parcel C. The consent judgment also stipulates a requirement for a landscape buffer 100 feet in width along the north end of Parcel B and a portion of Parcel C.

Oakwood never built the medical facility. Parcel A was then sold to S&N Development Company. Next, I'll briefly show the iteration of the various site plans that were approved for this site. First is the plan that was approved as part of the original consent judgment showing how Parcel A was to be developed by Oakwood for the medical office building. Next is the actual site plan for the medical building that was never built. The next plan was approved under the First Amendment to the consent judgment by S & N Development. It shows a three-story, 100,000-square-foot general office building that was also never constructed. In 2014, Etkin Equities purchased Parcel A from S&N and amended the consent judgment for a third time. Etkin's plan was for a one-story, 54,000-square-foot research office building. Etkin later partnered with a company called DTN to

propose developing Parcel A and portions of Parcels B and C for medium to high-density residential. A plan was presented to the City Council in 2019 to rezone the property to R-8, High-Density Residential, but was rejected. In the latest iteration, Etkin has partnered with Robertson Brother Homes with a plan that would lower the density and construct townhomes only on Parcel A. The current plan represents the fourth amendment to the consent judgment.

The submitted Act 381 Brownfield Plan describes the project, the brownfield conditions that are present on the site, and all of the other required plan elements under the statute. The site is eligible as a brownfield because it was previously used for residential, and it is considered a “facility” as that term is defined in Part 201 of the Michigan Department of Natural Resources and Environmental Protection Act. Historical records show that the property was previously farmed and contained three houses. In the mid-70s, evidence suggests that portions of the site underwent considerable disturbance, which coincided with the construction of the I-275 Expressway. It is believed that a significant amount of construction spoils was deposited over the site’s low-lying areas, which contained peat. By the late 1990s, all the structures on the property had been removed, including a 1,000-gallon underground storage tank, which was the subject of two release incidents that were subsequently granted regulatory closure. Then, in 2024, as part of the due diligence for this townhome project, ASTI conducted some additional subsurface investigations and testing. Testing at two of the locations revealed the presence of arsenic and selenium at levels that exceed the State’s residential criteria. The presence of these heavy metals provides the basis for eligibility under the Brownfield statute. Both were detected at depths from soil borings taken in the north-central and northeast parts of the site. There is a plan that shows where that was done, and I’m sure the petitioner will show us in greater detail. The Brownfield Plan includes a single tax parcel at 37640 West Seven Mile Road.

The project involves constructing 100 rental townhouse-style residential units and the associated parking and landscaping. The concept plan shows 15 buildings, each containing four to eight apartment units per building. These townhomes would range in size from about 1,300 to 1,600 square feet. As you can see, the plan is for one access drive off Victor Parkway. The plan also shows additional green

spaces in the form of courtyards and a stormwater detention basin in the site's southeast corner, adjacent to Seven Mile Road. The proposed development would encompass areas of the site where the fill and the naturally occurring peat are located, including where the contaminated soils were discovered. Tax Increment Financing over an estimated 10-year period is proposed to reimburse the Developer for addressing the construction constraints resulting from these conditions.

Table 1 in the Brownfield Plan summarizes the costs of all the eligible activities, broken into three basic categories. The first is the "EGLE"-eligible activities. The second is the "Local Only" activities, and the third is categorized as "Other" costs. The EGLE-eligible costs total \$75,200 and include mostly soft costs related to Brownfield pre-approved eligible activities. These are the Phase 1 and Phase 2 Environmental Studies, the Baseline Environmental Assessment, the Due Care Investigation, and the preparation of the Brownfield Plan. The statute treats these as pre-approved eligible activities and allows for the capture of state school taxes to pay for the costs associated with them. Next is the Local Only category, divided into two sections: Environmental Response Activities and Non-Environmental Activities. The Environmental Response Activities include removing, transporting, disposing, and backfilling the contaminated fill materials and some soil characterization and verification sampling. Thus, the Environmental Response Activities are related primarily to the contamination issues on the site. The Non-Environmental Activities also called the MSF-eligible activities, are really the various site preparation and construction costs due primarily to the poor soil conditions. These constitute the highest costs of the project, including installing the deep footings and the geo pier foundations, upgrading the road detail, exporting the unstable peat material, and then backfilling and importing with clean fill, as well as mass balancing and grading activities. Added together, the Environmental and Non-Environmental costs total about \$1.65 million. Of this, roughly \$1.4 million are construction costs with the two largest being the geo piers, \$450,000, and exporting the peat and the unstable fill material, just over \$400,000. Including the EGLE-eligible activity costs, a contingency, and Brownfield Plan implementation, the total is about \$1.985 million, all of which is reimbursable back to the developer. The final category,

Other Costs, includes the City's Administrative Costs and contributions to the LSRRF and the State Brownfield Revolving Fund. That brings the total costs to \$3.536 million.

Tax increment revenues captured on the value of the Real Property above the established base value would be used to reimburse the developer for the proposed \$1.985 million in eligible costs. This is the same process used for all the projects that have come before the Authority. In this case, the base taxable value of the property, which is established according to the current preconstruction taxable value, is \$536,413. Table 2 in the Brownfield Plan provides the yearly estimates of the property's taxable value and the capture amounts for each taxing authority. Construction would be completed by 2027, which would be the first year of tax capture based on an estimated taxable value of approximately \$7.5 million. We checked this number with the City Assessment Department which they feel is accurate. One of the assumptions built into the revenue projections is a 1% annual growth in the project's taxable value. Non-capturable millages include the Zoo, the Art Institute, and School Debt. Table 3 itemizes the reimbursements, including estimates of the total state and local incremental revenues collected yearly and how much goes to the developer, the LBRA for administrative fees, the State Brownfield Revolving Fund, and the LSRRF. The proposed duration of the plan would be 10 years for full reimbursement of the eligible expenses to the developer. The ensuing five years of capture would go to the LSRRF. The administrative fee would equal 10% of the annual local tax capture, which would total about \$350,000 after 15 years. The average yearly disbursement to the Developer would be about \$191,000. As previously mentioned, 2027 would be the first year of tax capture. 2036 would be the final year of distributions to the Developer. The tax capture from the school district is limited to the plan's first year to cover the \$75,200 pre-approved eligible activity costs. The final thing to review quickly is the Development and Reimbursement Agreement. This basically outlines the obligations between the LBRA and the Developer, including the approximate reimbursement amounts, the duration and timing of the payments, and the distribution of the funds to the LSRRF. It includes a requirement for submission of costs by the Developer, and payments, which the LBRA would reimburse the Developer for eligible costs up to a maximum of \$1.985 million. The payments would include 90% of the tax

increment revenue to the Developer, 10% for administrative fees, and deposits to the LSRRF for the five years following the reimbursement of all the costs of the Developer. For the last five (5) years of the plan, 100% of the tax increment revenues would be deposited to the LSRRF, but not beyond the Winter 2041 taxes. I will note that even though the plan projects 2036 as the end date when the Developer would be fully reimbursed for all eligible costs and Brownfield Plan costs, the proposed agreement would allow up to five (5) more years of cost recovered to reach the maximum amount of \$1.985 million. As part of any approving resolution, the LBRA should consider the year the maximum reimbursement amount is reached, or 2036, whichever occurs first. This is consistent with all the TIF plans the Authority has previously approved. The Development and Reimbursement Agreement also contains provisions for adjustments and the term going out to the winter 2041 tax year. With that, Madam Chair, I will answer any questions that the Board may have at this time.

Ms. Scheel: Okay, so we'll go with questions from our board to you before we bring up the folks from Robertson Homes. So, does anybody have any questions for Mark first before we hear from Robertson Homes?

Mr. Harb: How do we decide whether it's 10 or 20 years for reimbursement?

Mr. Taormina: You look at the projections provided in the Brownfield Plan. The estimate is that it would take 10 years to fully reimburse all eligible costs. And then you set that limit. If they get fully reimbursed, then fine. If not, the payments stop at the end of the established period you set. That's been the city's policy since the inception of the LBRA.

Ms. Scheel: Anybody else have any other questions for Mark? Mark, I have a couple. So, this is real property only, right, not personal?

Mr. Taormina: Correct.

Ms. Scheel: Okay, will this have to go back before Planning and Council for site approval?

Mr. Taormina: Yes, but remember that the conceptual plan approved as part of the consent judgment sets the framework for how the

UNAPPROVED MINUTES

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site will be developed. So, we have a general layout. There are a lot of details that the Planning Commission and the City Council must review, such as landscaping, site lighting, building, building architecture, and parking. The items they typically review as part of the site planning process. However, the general layout and the zoning effectively are in place for the approval of the townhome development.

Ms. Scheel: So, it would go through the normal planning and then on the council, just like the normal. Okay, and then my question, from looking at this is, where's going to be enough parking?

Mr. Taormina: Yes. Each apartment will have a garage space. Unfortunately, I don't know if the renderings show this, but there are garages. One or two for each unit.

Ms. Scheel: Okay, and then the parking that showing is for visitors or people?

Mr. Taormina: Correct.

Ms. Scheel: Okay, those are my questions so far.

Mr. Lomako: I have a follow-up on the Planning Commission involvement. So, this general development plan in terms of setbacks and number of units per building is set as presented.

Mr. Taormina: That's correct.

Mr. Lomako: Okay. My only challenge, just for the record, is that the eastern most building closest Seven Mile, that setback for it, the number of units in that building seems insufficient to me. But that gave me pause, notwithstanding the Planning Commission involvement and council involvement there, I think there's something the agreement that says material changes will be brought back here, is that true? I just want to make sure I understand what that means. Material changes to the plan have to be approved here at the Brownfield authority. I think I read that in the agreement.

Mr. Taormina: I don't know what section that is.

Mr. Lomako: So, maybe the applicant can address that. Thank you. That's all I have.

UNAPPROVED MINUTES

Ms. Scheel: You're welcome. Any other questions before we bring... Okay? Seeing none. We have people from the Robertson Brothers Homes here. If you could introduce yourselves to us. Welcome.

Tom Wackerman, ASTI Environmental, and we've got a whole slew of people here from Robertson brothers. They will introduce themselves in just a second. Thank you for that thorough introduction. I would make one comment on it, however, none of these are construction costs, it says that in your staff report, these are all site preparation costs, which makes them eligible under Act 381, for reimbursement. We're going to present the project in just a second. We'll go through a couple of details. The issue here is primarily site stability, soil stability. That's the problem. That's why this site has been such a challenge, and that's what all of this is designed to take care of. Yes, it's a facility. Yes, they're going to be challenges in terms of the environmental, we'll talk about those as well, but the big issue here is it needs to be buildable before anybody can put anything on it. So with that, Darian.

Darian Neubecker, Robertson Homes. I want to thank Mark. He did a phenomenal job, kind of bringing you guys up to speed on this site. We're the fourth or fifth, fourth consent judgment, and court modification, so hopefully the fourth time on this site with this plan. So about two years ago, Doug Etkin called us and said, hey, I got a site in Livonia. I'd love you to take a look at it, see if there's something you can do. I tried to try to work the office angle and the office markets, obviously a challenge and I've also tried to do all that. I think residential is an appropriate use, but I went down a path with DTN and the apartment community, and that was not well received, I don't think by the neighborhood ultimately. Now, what Doug did try to approve before was a four-story building. I think it was very intense. I think there was 200 plus units in it. So, he said, I know you guys do a lot of townhouses or three-story structures. Is there something you can do with the site. We thought it was an appropriate use from a townhome standpoint. It's the northeast corner, obviously, at Victor Parkway and Seven Mile, so it's got a sense of place. It gets a good transitional use from a residential standpoint, for the site. The challenge that we came up with early on, which is what we'll talk about today, is just the geotechnical issues on the site. There is some environmental as Tom said, but mostly it's geo technical.

Essentially it was farmed for 50 years. There were low lying areas, and whether it was when they were expanding I-275 or another road project, at some point in time, they filled in the site with uncompacted fill which you really can't put buildings on. They can shift and crack and move around so as well as put road patterns on, so the challenge on this site is a geotechnical issue. The one point I think I'll make, which I think you're probably aware, but the costs that we're asking for, these are extraordinary costs. These are not costs...if this site were, you know, a cornfield and they didn't have any soil issues, we would scrape the site, put the roads in, put the buildings up, and we wouldn't have any incremental cost. These costs here are the front-end costs are the testing to identify the phase one, phase two, all the geotechnical reports we've already done, and we've been on the site two or three times. We've done test bits. We've done enough to feel comfortable that we have our arms wrapped around roughly what the issue is. The other costs are, how are we going to deal with this, which I'm going to do in a second. But you know what we're going to deal with in terms of how we place buildings on 11 feet of fill that is underlying, generally, by two to three feet of peat, as well as, what are we going to do for the roads and utilities that we're going to place on the site, so that when we put those things in place, the buildings don't drop or shift, and the road doesn't drop, or the utilities don't drop, none of which is a good scenario. So, the only other thing I'll add, this is tangential. This is really not...It doesn't have anything to do with the Brownfield. But one of the things that I think was a concern in the past was what's going to happen to the open space, I know, Mark, conservation even over most of this, I think the whole lot was ever going to happen, but we were in conversations, and it was, you know, identified as if we could give certainty to that entire corner, I think that'd be a positive benefit to the city and the project. So, we were able to secure the entirety of the balance of the site. So, when we go, you know, if we're successful tonight, and go back for a final site plan, we are going to go with the site plan that's going to show exactly that to be a lower left-hand corner, and all of that is going to be added in this permanent open space as part of the condominium. So, it'll never be developed. It'll be open space whether we program it as a, you know, as a passive recreation area with benches, seating, whether we do a little bit of berm and screening work, I think there may be some chances to reduce some of the costs in this plan if we can build some screening or some berming on that site to the

north. But I think it's a benefit to the site. I think it might be a benefit, ultimately, the Brownfield, depending on how we're able to utilize that location. In terms of elevations, these are sample elevations we build. We probably build about 100 townhouses a year across the metro Detroit. We're very familiar with the project type. Oftentimes, we go to a community they want one elevation for a particular site, and we go to a different community, and they are looking for different elevation. So, we've indicated to the staff we're completely open and willing to work on whatever type of elevation everybody thinks is appropriate. So that's just an entire pallet of things we've done in the past. It doesn't even necessarily represent what we can do on this site. These are floor plans. So, there's two different product types we'll build. One is a 16-foot-wide unit. It does have a one car attached garage underneath on the first floor. And then the second unit is a 20-foot wide with a two-car attached garage on the first level. It has an apron on the back of it, which we'll get to on the site plan, but there's...all the units have either one or two car closed parking for the residents and there's always...the one car have an apron right behind the garage, so that if you had a second car. So, two folks are living there, one can park in, one could park out, and they get into who could park in and who can park out, but then the others, all the other parking you see on the site plan is intended for guest parking. So, everybody that lives here, short of three people living in a unit, is going to have the ability to privately park the car. 1,300 square foot units are two bedrooms and then the bigger units are 1,600-foot three-bedroom units. In terms of the project highlights. I'll blow through this briefly. I think that the product type is well received. I think the neighborhood, the folks that are aware of the site, when they realize it's three story versus four story, I think it will be well received. I think the reduction from 200 to 100 units in density, was well received. I think it helps with the concerns about traffic. It's parked sufficiently, in our opinion. I think it's an appropriate use, transitional to other areas. And I think there may even be some other multi-family opportunities coming in that quarter soon as well. The development area is six acres. We (inaudible) in the three acres that we bought to the north. It's a total of 10 acres, 100 units. It's like 10 units to the acre, which, depending how you look at transitional use, you think that that's high density, or think that it's not high density. We build as high as 18 units to the acre, and we've obviously built suburbs that are detached, single family at two units to the acre. But I think for this

location, at a hard intersection, it's appropriate density. The zoning is a consent judgment. We talked about the 100 units. You know, the open space, it was originally three acres, 48% open space, but the addition of the land of the north, if we move forward with site, is going to be six and a half acres, or almost 60 some percent open space. So, there's going to be a lot of open space. There's density, but it's condensed on the site plan because it's three-story products. Tom, do you want to talk about this?

Mr. Wackerman: Yeah, let me talk about this. So, a couple of other points before I talk about this very briefly. First one is Robertson Brothers is not new to this game. They've done a lot of Brownfield conversions or retrofits, so they understand this process, just as you understand it, but the second thing I wanted to bring up is, Nicholas, you asked about substantive changes. The function, if I may, the function of the Brownfield plan is to determine costs and payback period. That payback period uses a bunch of assumptions. In this case, future taxable value increase, annual increases, things like millage rates, things like that. When people talk about a substantive change in the Brownfield plan. They're really talking about that equation, that math equation. What you're approving today is a dollar amount for reimbursement and an estimated reimbursement period. The intent is not to go into the planning or subvert or second guess the planning process. So as long as we keep to that, I think that's a good process. So very quickly, this is the number of test pits that were done on the property, and then in gray behind it, you can see some of the other borings. So, you can see there was a lot of work done. And just quickly to understand how it lays out. it's the Ronald Reagan School of Economics. Green is good, red is bad, right? And so here is where all the fill material is, and that's overlaying natural peat, as Darien had said, go to the next slide. And the interesting thing about that is that absolutely follows the 1973 contours prior to dumping there. It makes perfect sense. The site had a swale in it or a lower area in it. Through here it was sloping to this side, and it was built up all along here. And that's exactly where we found the fill material. The fill material is a combination of stuff, given the age, it's probably from I-275 when they were moving soils around. And so we went out to some of the areas that had the greatest fill and we took three extra borings. Next slide, please. To determine if there were any issues associated with those borings. These are the three borings. In these two borings, we identified heavy

metals. We then did what's called adaptive cluster sampling to determine the footprint of that. And as you can see here, in this area, we didn't completely define the footprint. Over here, we didn't either. So, there's still some more sampling work that needs to be done, and that's in the costs that are in your Brownfield plan. There may also be ways to manage this, other than dig and dump. That'll be determined when we talk about soil balance on the property, but in essence, it is a facility because of exceedance of GSI for selenium and state like fall for arsenic, fill, which therefore exceeds direct contact criteria. Next slide.

Mr. Neubecker: I'm happy to do this one.

Mr. Wackerman: Yeah, this, this is the fun one. So, this is the cross section showing the issue and the solution to it.

Mr. Neubecker: Yeah, so, and I think Mark actually asked me to put this together, and I think it helps, hopefully, is there a copy in everybody's packet or is this the first time? So, the issue you run into with peat...peat is very wet. Right now, if you walk down on the site, the ground is stable, but peat can be very easily compressed. It doesn't have a whole lot of compressive strength, so if you put weight on peat, even if it's eight feet down, 10 feet down, it can compress. And then the whole surface elevation drops. We recently are...you know, if you've ever been to the intersection of Grand River and downtown Novi, we have a site going on there that had a lot of issues. In fact, peat is very hard to predict, and we had it all planned on how we were going to handle that peat. And at the end of the day, when we got out there, it was something we didn't expect it to do, and it actually literally squirt out the side of a pond that we were preserving. And so then we had 50,000 truck yards of peat that we had to haul for the water part in two months to get it out of the site. So it's a very challenging substance to deal with. It can be dealt with, but it does act unpredictable. So, I'm going to start with two approaches, one of which is, how do you deal with it when you got a building, and how do you deal with it when you have the road pattern in between the buildings that we're talking about. The southern section of the site, as Tom mentioned, is basically at grade and doesn't have peat, you know, or at least it has peat at the surface, which is much easier to deal with. The northern section of the site they filled in the site, and so they filled in over they filled in fill it doesn't support structures over top of peat that doesn't support

structure. So how do we support the buildings that are along that northern section of the site plan? Well, you can do a couple things. One, you can dig off the entire site, like we could just scrape, you know, I think it's about 11 feet of fill in its worst areas with two feet of peat underneath. So, we can scrape the entire northern section of the site and then fill it back in 13 feet. From an economic standpoint, that's not going to make any sense. You're in the millions of dollars. You're in the multiple, or multiple millions of dollars to do something like that. The approach that you typically would see on a site like this, and the one that we're going to take is you can either do the helical piers, which helical piers, which are little, you know, they're literally like pilings, but they're metal, and they get screwed and drilled into the ground until they get all the way below the fill. All the way below the peat, and then they hit an area where they can actually get resistance and support a structure. And you do them about 10 feet on center, and then you put beams over top of them, and then you can set up a house on top of that. The structure that, or the system that we're actually using, is very similar. It's actually called geo piers. In this case, it's rammed aggregate piers. You basically you drill holes and you pound one by three aggregate into the ground. And by pounding it into the ground, it pushes out and it improves the ground around it. Keep pounding until it hits a point where you're through the peak, and it creates enough resistance that you can set a building on top. It's a solution that's used nationwide. It's actually ATS tested solution, so it's validated, it's vetted. It's what we used up at Novi, and I know it'll work. So what you're seeing here is this whole section right here. This is the...basically all the way down to this layer is 11 feet of fill. And then below that is two to three feet of peat. So, you see a standard three story building here, your foundations here, normally you would just go 42 inches down. Here, you're having to drill and ram just aggregate piles all the way down. And usually they go out about 20-25 feet. They go down ultimately, until they hit a certain amount of resistance. But in general, in this case, it's probably 25 feet. And then you set the buildings on top of that. And then, in terms of the garage slabs, This is a garage or the car parts on the first level. It's much smaller solution, because you're carrying less weight. So the buildings themselves, it's \$8,000 to \$10,000 a unit. They come in, the contractor comes in, out of state, they put them all in over a two-week period of time and it's done. I want to say it's not risky. It's risky, but we've done it. We know what the numbers. There's

a certain amount of certainty to that. The challenge you run into is in between these units, where the garages are, that's where those drive sections come in. And you not going to just completely improve where the drive sits or where the road is going to sit, and that's where your water lines run, and that's where your sewer lines are. So, what we're proposing here, because, you know, (inaudible) solution, is not going to be a solution for that. This situation is we're going to have to dig out on that whole northern section. That entire road is going to be dug down to the bottom, at least. That's our assessment right now, and that's what our costs are planning for. Because we're going to dig all that fill out, we're going to take the peat out and we're going to build that whole road base back up about 60 feet wide, and that's the \$447,000. You got to take the soil out, and then you got to bring clean fill back in, and then build up the lifts. So that's how we're proposing to handle it. There's, I think, \$100,000 and Tom will go over the cost. There's another \$100,000 to deal with any...some of the environmental we found to get rid of it. But the general situation is the better part of a half million, \$550,000 for the buildings, and the better part of \$500,000 to \$600,000 for the roads themselves. Then you add in the testing we've already done. You added a contingency on top of it, and then you added general masquerading, because when we start moving this dirt around on site, it's hard to separate. You don't come out and do one activity, stop and then do the next activity. It's kind of happening all at the same time, but that's in a nutshell, what the situation we're facing. Any questions?

Ms. Scheel: Does anybody have any questions on this slide? On this slide? Go ahead. Mr. Harb.

Mr. Harb: So where are you going to have to put the peat? Where are you going to deliver it to?

Mr. Neubecker: So, that's a great question. There's a number of answers. So, depending on the time of year when we take the peat out, if we have enough time, we can mix it with soil on site, topsoil and regular soil. If you can mix it, we can dramatically reduce some of the costs we have in there, because you can actually sell peat. If you have it in the spring and in the summer, and the landscapers are looking for peat and it's on the road, you can actually sell it. So, the good news is, some of these costs we have depending on the approach we can

take in the field, and what I say up here, and what we do in the field, it may change and the area, may grow or shrink. We're going to find out when we get there. But if we're able to do certain things, like to sell peat because the time of the year works, then we, you know, we're only going to submit the cost we actually spend. So hopefully we're able to save some money. Ultimately, if we don't have a seller for it, and we can't mix it, or time doesn't allow, it'll either go to a landscaper and they'll set it in their yard to reuse, or worst case, it'll go to a landfill. We're assuming it's going to go off, not to a landfill. It can go to a landscaper or somewhere to be reused. We're not assuming... I think we assumed \$30 a truck yard to load it and haul it off. The other option is the open land. If we can build like a four-foot berm on that open land to the north, we can save a fortune to haul it up there, spread it and then re-topsoil and reseed on top.

Mr. Wackerman: I would add that the Brownfield plan includes the costs because of facility, right? You have to handle the soil in a very specific way, includes the cost to support testing to allow that to happen.

Mr. Neubecker: Yeah. Tom's right. We have to test it first to make sure that that section of dirt is cleaned correctly.

Mr. Harb Another precedence may sound silly, but you have a garage and a two story condo, right? First floors, living room, second floor, probably the bedrooms, yeah, that type of thing. Why wouldn't that be considered three story?

Mr. Newbecker: This is three stories.

Mr. Harb: But you were saying earlier that it's a two story.

Mr. Neubecker: Oh, if I did, my mistake. It's a three-story, three-story product.

Ms. Scheel: Any other questions?

Mr. Wackerman: Okay, real quick closing slides. Thank you. So, as Mark said, the Brownfield plan is divided into two categories, one of the pre-approved activities, these are allowed to be captured from both local and school taxes without state approval. That's \$75,200. Next slide, please. And then the bulk of it, as we've just discussed, is this site preparation work. This site can't be built on without this site preparation work. This is the

biggest impediment to making this work. This is about 1.9 million, some of that includes environmental work up here. The thought right now is dig and dump the hot sections, do verification sampling, and then do site characterization on other soils that may be used elsewhere. And then final slide. The third category are the other expenses the LBRA, local and state, 10 year capture, five year additional years for the LBRA. I'd mentioned one thing about the caption, we go into Brownfield plan, obviously, if you have any questions. But that is, that is based, as you know, on a number of assumptions, assumptions of future taxable value, assumptions of annual increase, assumptions of future millage rates, assumptions of costs. So, if there's any way we could take that number, and I think it's 2032 what you said, I don't have the table in front of me. Whatever the last payment dated to 2036 and add at least a year to that. For those, for the various pluses and minuses on those assumptions, that would be a great thing, rather than just using the table. But right now, you got the tables in front of you. Any questions on the three tables that Mark brought up, the eligible activity tables, which I just showed you here, the tax capture assumption tables or the reimbursement assumption tables.

Ms. Scheel: Does anybody have any other questions for Tom, right now? I have a question. So, because of all the things that you found on this site that it needs to be remediated, are we going to have to monitor this site forever or once you remediate it and take everything out, that we don't have to monitor the soils for gases or anything?

Mr. Wackerman: There are no gas issues here. There are no vapor issues at all. So that takes away a big issue that's been plaguing properties in the State of Michigan for the last couple of years. The only issue is heavy metals. So, the only issue would be, if those heavy metals are within the top 12 inches, then you'd have to have a due care plan, but the assumption here is that part of the soil balance on the site is going to take those two hot spots and remove them. So, the objective and the data will tell us whether we meet that objective is, is to make it so there are no additional conditions on the property going forward, but assuming if there are, the additional conditions, would be maintaining 12 inches of clean fill over the entire site.

Ms. Scheel: There'll be no monitoring that is needed.

Mr. Wackerman: No monitoring. There's no operation and maintenance issues long term.

Ms. Scheel: Okay, thank you.

Mr. Harb: So where you did your drilling, is that where the road is, generally?

Mr. Wackerman: if you could go back, Mark, one more forward, is this primarily, but I don't even know...

Mr. Neubecker: I didn't do an overlay, but it might be a little south, but yes, there's a...

Mr. Taormina: There's an overlay right here.

Mr. Wackerman: Oh yeah, there we go. I don't have my bees on here, so I'm deficient.

Mr. Harb: So, you're planning on removing ten feet or so anyway, right?

Mr. Harb: So, it's going to take care of a lot of the...

Mr. Wackerman: if that coincides yes, and that when I... so, when I said, if the soil balance works correctly, we'll be taking out those hot spots. What I mean by that is, you've got to take out certain amount of soil for roads or for other problems on the site. Too much soil, for example, maybe the retention basin generates too much soil. That's the soil balance. And so our philosophy has always been, for example, if you've got to take out soil from your retention basin, and that has to go off site, because it's too much soil, we'd rather have you take it from the contamination area, take that soil off site and then keep this on site because it's clean soil. That's what I meant by soil balance. So, there will be a bit of a dance as to where the excavations are going to be, how they're going to be done, when they're going to be done, but when we're done, we're still going to have to do the verification sampling, we're still going to have to dispose of the contaminated soils in a type two landfill. We're still going to have to prove that the remaining soils can be used for other things, right?

Mr. Harb: Thank you.

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Ms. Scheel: Okay, open for questions. Anybody have any questions for Mark at this point, or from anybody that spoke from the Robertson? I have a question, Mark. I'm going to direct it to you, and if it needs to go...so just for talking purposes, are these...these are meant to be town homes. Are these meant to be owned or rented?

Mr. Taormina: Rented.

Ms. Scheel: These are going to be rental units. Is there a projected timeline as to when they're looking...I know they've got to get through Planning and Council, but is there a projected timeline as to when they would like to start construction that you know of?

Mr. Taormina: I'm going to defer that too.

Mr. Neubecker: So, I mean, I'm hopeful that coming out of today, we will be moving forward. We're gonna have to move forward the full size plan. Nick, I'm not convinced that those buildings are gonna exactly stay where they're at. That was a concept that was for the consent judgment. So, I'm not convinced...that issue may come up down the road, but the idea is to go forward with the final site plan approval through the normal approval process. In 2025 and I'd love to be in a position to be moving dirt late summer, fall of 2025. Ideally, we'd be paid by this time next year, and then we'd start vertical construction. It'll take us about a year. It'll take us six months to develop well, probably five months to develop it. In terms of getting all the roads in, and then about 10 to 12 months to build it vertically. We can build 10 to 12 units a month pretty easily. So ideally, we're paved this time next year and we're fully complete and finishing leases up at this time in 2026.

Ms. Scheel: So, your goal is to keep it moving right along. You're not waiting for a couple of years to get started.

Mr. Neubecker: We want to move.

Ms. Scheel: Okay, great. Anybody else have any other questions? So if there's no other questions, there is a draft resolution on page four of item nine, if you want to look at what that is, and if somebody would like to make a motion. Anybody comfortable with making the motion?

Mr. Lomako: I have a question. The blank in that resolution? What are we attempting to do there in that?

Ms. Scheel: Mark you want to speak to that, if there's anything that we want to put in there.

Mr. Taormina: That was left blank on purpose for any conditions that the Board wanted to include as part of the resolution, such as limiting the Developer's reimbursement period to a maximum of 10 years, and also establishing the maximum amount of reimbursement to \$1.985 million.

On a motion by Harb, seconded by Lendrum, and unanimously adopted, it was:

#15-2024 **RESOLVED**, That the Act 381 Brownfield Plan for the "7 and Victor Project" dated August 1, 2024, together with the proposed Development and Reimbursement Agreement between the City of Livonia Brownfield Redevelopment Authority (LBRA) and Robertson Brothers Company, seeking the use of Tax Increment Revenues for the development of the property at 37640 W. Seven Mile Road, as presented to the LBRA at its meeting of November 12, 2024, are hereby approved, subject to a maximum duration of 10 years of tax capture commencing in the year 2027 for reimbursement to the developer for eligible activities costs not to exceed \$1,985,199, and further subject to final approval by the Livonia City Council.

Chairman Scheel declared the motion is carried and the foregoing resolution adopted.