Planning Commission

Planning Commission Meeting Agenda
Hartland Township Hall
Thursday, June 12, 2025
7:00 PM

1. Call to Order
2. Pledge of Allegiance
3. Roll Call
4. Approval of the Agenda
5. Approval of Meeting Minutes
   a. Planning Commission Regular Meeting Minutes of May 22, 2025
6. Call to Public
7. Public Hearing
   a. Site Plan/PD Application #25-004, Sawyer Ridge, Residential Planned Development (PD) – Preliminary Site Plan
8. Call to Public
9. Planner's Report
10. Committee Reports
11. Adjournment

HARTLAND TOWNSHIP PLANNING COMMISSION DRAFT MEETING MINUTES

MAY 22, 2025– 7:00 PM

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1. **Call to Order: Chair Fox called the meeting to order at 7:00 p.m.**

2. **Pledge of Allegiance:**

3. **Roll Call and Recognition of Visitors:**
   Present – Commissioners Eckman, Fox, Grissim, McMullen, Mitchell, & Murphy
   Absent – Commissioner Mayer

   Director Langer stated that Commissioner Mayer is present but has recused himself from this meeting as he has a conflict of interest with the application being presented.

4. **Approval of the Meeting Agenda:**
   A Motion to approve the May 22, 2025, Planning Commission Meeting Agenda was made by Commissioner Grissim and seconded by Commissioner Mitchell. Motion carried unanimously.

5. **Approval of Meeting Minutes:**
   a. Planning Commission Regular Meeting Minutes of April 24, 2025.
      A Motion to approve the Planning Commission Regular Meeting Minutes of April 24, 2025, was made by Commissioner Mitchell and seconded by Commissioner Eckman. Motion carried unanimously.

6. **Call to the Public:**
   None

7. **Public Hearing**
   a. Site Plan/PD Application #24-005 Square One Planned Development (PD) –Preliminary PD Site Plan.

      Chair Fox explained the process and opened the Public Hearing at 7:03 PM stating all public notice requirements have been met.

      Director Langer stated the following:
      - Gave an overview of the location of the project.
      - Proposed Mixed Use development.
      - Placeholders for future commercial uses are shown along M-59 and Old US 23.
      - In the center is a 168-unit apartment complex in five (5) buildings with an additional building for the clubhouse.
      - Proceeding using the Planned Development process, a three-step approval process that includes a Conceptual Review, a Preliminary Review and a Final Review before both the Planning Commission and the Township Board. The Applicant is at the Preliminary Review phase where

the Planning Commission offers a recommendation, and the Township Board makes the decision. The Final approval constitutes a rezoning to PD Planned Development.

Jack Knowles representing the Applicant, M-59 Property Ventures, the owner and developer of the proposed Mixed Use development, introduced himself. He also introduced the following:

- Joe and Francis Boji, Boji Development, partners in the project.
- Mark Abanatha, Architect and Senior Vice-President of Alexander V. Bogaerts + Associates, P.C.
- Scott Tousignant, Civil Engineer, Boss Engineering.
- Joe Pascual, Landscape Architect, Felino Pascual and Associates.
- Steve Russo, Traffic Engineer, Colliers Engineering & Design.

Mr. Knowles stated the following:

- The Conceptual Review was two years ago where the team was given comments they took to heart.
- Since that time, they have been gathering information; performing studies and reports; met with various Township, County and State authorities; performed many internal reviews; and further refining and improving the project.
- Approximately one year ago, they submitted the Preliminary Planned Development Application which resulted in more reviews from the staff, more refining and improving the plan.
- It has taken some time but that is what it takes to bring a good product to the community.
- Stated the acreage is 30.9 according to their survey, which may lead to some minor adjustments in density and open space.
- Intend to dedicate a small portion in the northwest corner to Michigan Department of Transportation MDOT for some work on M-59.
- Described the topography stating there is a drainage divide in the middle of the property. The site includes a creek or drain and some regulated wetland areas, which are environmentally sensitive areas they intend to leave intact except for one area of parking.
- Gave an overview of the areas of land use indicating the commercial uses would be along the M-59 and Old US 23 road frontages with the apartments located in the interior of the site.
- Main entrance will be on M-59 with the secondary entrance on Old US 23. The M-59 entrance is directly across from the Target entrance to the north by design as suggested by MDOT.
- The internal road with a roundabout will connect with the Charyl Stockwell and LaFontaine properties to the west. This connector is intended as a community benefit to alleviate some of the congestion that occurs during drop off and pick up times at the Charyl Stockwell Academy.
- The number and size of the commercial sites will be driven by those interested in developing there. The north-south drive adds interest by breaking up the line of commercial site along M-59.
- There have been some conversations with MDOT about a traffic signal at M-59 for Square One but there is no commitment from MDOT at this time.
- The traffic circle will be the focal point of the development with enhanced landscaping and three flags in the center.
- The Applicant shared a plan for pedestrian circulation indicating walkability.

Mr. Tousignant stated the following regarding Engineering:

- Shared a graphic indicating the road improvements and site access including:
  - Square One Boulevard to the north
  - Right in, right out access for the northeast commercial site(s).
  - Planned extension of the M-59 right turn lane.
  - Cornerstone Lane will access Old US 23 to the east.
  - Access to Old US 23 is planned for the southernmost commercial lot. The drain and wetland area separate it from the main development as they intend to leave those areas as undisturbed as possible.
  - Also intend to extend the Old US 23 southbound through lane approximately 800 feet as another community benefit.
- Shared a graphic of the stormwater management, regulated and non-regulated wetland areas.
  - Intend to minimize any impacts to the regulated wetland areas using a series of retaining walls planned for the south side of the apartment component of the development.
  - There is a small area impacted by a drive aisle for the southernmost apartment building, and another area near Old US 23 where the existing culvert will be extended to allow for the construction of the sidewalk on the west side of the Old US 23.
  - Two stormwater detention basins are planned; the central basin is in the midst of the apartments, and the other will service the four (4) lots in the east-northeast portion of the site near the intersection of Cornerstone Lane and Old US 23.Apartment detention basin is planned as a water feature with a fountain.
- Shared a graphic of the water and sewer design. Public water and sewer are planned.
  - Another community benefit in the northwest corner of the site is an easement for a Water Pressure Reducing Valve (PRV).

Mr. Pascual stated the following regarding Landscaping and Signage:

- Landscaping Plan went beyond the standard requirements for Perimeter, Greenbelt, Street Trees, Parking Lot, Detention/Retention Pond, and Screening as follows:
  - Plan hinges on the roundabout as a focal point for the development with extra attention to the streetscapes as gateways.
    - Requesting a third flagpole for balance with a 60-foot American flag.
    - Roundabout will feature a low wall to emphasize this focal point.
  - Plantings around the multi-family apartment building foundations.
  - Extensive plantings around the drive entrance of the multi-family apartment buildings.
  - Columnar trees planned to accentuate the roundabout.
- Proposed residential entrance feature includes large stone piers with brick and stone walls, up lit signage, and a wrought iron fence component.
- Development signage is proposed for the northeast corner of the site at the intersection of M-59 and Old US 23 and again in the southeast corner along Old US 23 using similar materials.
- Multi-tenant monument signs are proposed for the retail and commercial components at each entrance.
- Asking for the anticipated fueling station signage at the northeast corner and south entrance size to be 40 feet rather than 20 feet.
- The enhanced landscaping, low wall, piers, brick, and fencing create visual impact tying the development together as a cohesive unit.

Mr. Boji shared a video of a development recently constructed in Auburn Hills, Michigan and stated the following:

- Residential portion will be a gated community, but anyone can proceed through the gate.
- Shared some of the amenities and materials in the apartment complex.
- Each building will have twelve (12) garages, 60 in total.
- EV charging stations public and roughed into the garages if needed for later installation.
- Top of the line apartments, they expect to get top of the market rental rates for them, $1,600.00 to $2,900.00.
- Residential portion is a $30,000,000.00 investment in the community; with all of the commercial components, approximately $50,000,000.00 investment.

Mr. Abanatha stated the following regarding the Architecture of the buildings:

- They were the architects for the previously viewed Auburn Hills development.
- Excited about the project in Hartland Township.
- Each apartment building has a mix of one, two and three-bedroom units, predominantly two-bedroom. Ground level units have a patio; the upper units have a balcony.
- Units accessed via an interior central corridor in each building.
- Took great care in detailing the building to create interest in the façade both horizontally and vertically to break up the mass of the structure, using not only the repeated U pattern but also different earthtone colors and materials. The U feature allows for the patios and balconies to be recessed and covered.
- No rooftop units, just mechanical vents.
- Requesting a waiver for building height to accommodate the slightly higher parapet wall three to four feet above the roofline which not only accentuates the architecture but allows for proper pitch for the roof drainage system.
- Community Building is a focal point and the first building most will see. Some of the same elements are reflected in the architecture of this single-story building as are shown on the three-story apartment buildings but vary slightly to set it apart.
- Described the areas of use and amenities in the clubhouse.

Mr. Knowles also stated the nine-foot ceilings also contribute to needing the height waiver.

Mr. Knowles stated as vacant land, it generates approximately $57,000.00 in tax revenue: upon completion of the project, it will be over $1,000,000.00 in tax revenue.

In closing, Mr. Knowles stated the following:

- Planned a thoughtfully designed, multi-use project that provides better land use than a single-use, dense, commercial alternative, which is permitted under the current zoning ordinance.
- Provided a concept of what a big box retail store with small retail uses on the perimeter would be like at this location and the traffic that could be generated.
- This project is less dense, generates less traffic, is of higher quality, visually pleasing and a better use of the property.
- Residential uses will symbiotically feed the commercial uses.
- Improved traffic circulation for Charyl Stockwell Academy and the LaFontaine property, and potential signalization provide a significant community benefit.
- Greater tax revenue..
- Will generate significantly less traffic particularly during the PM Peak hours.

- Planned road improvements on M-59 and Old US 23 and are dedicating a small portion in the northwest corner to Michigan Department of Transportation MDOT for some work on M-59.
- Preserving natural features.
- Planned Development process offers greater control of development.
- Additional commercial and retail options for residents.
- The opportunity to have an upscale housing development in Hartland for those seeking that type of rental community.

Call to the Public
None

Chair Fox closed the Public Hearing at 8:09 PM.

Chair Fox referred to the staff memorandum dated May 15, 2025.

PLANNED DEVELOPMENT STANDARDS (Section 3.1.18.C.)

Permitted Uses
Director Langer stated for the proposed commercial outlots, the Applicant has used the Permitted Uses in the General Commercial GC Zoning District as a guide for their Permitted Uses.

Commissioner Eckman asked about the process for one of those commercial sites. Director Langer stated it would require a Site Plan Review before the Planning Commission as would any other new commercial construction project.

Residential Density
Director Langer stated the following:

- Must refer to the Comprehensive Plan.
- In this case, the category is Special Planning Area. SPA designation for this site envisions a base density of up to four (4) dwellings per acre for 120 units.
- Requesting the forty percent (40%) density bonus which equals 168 units; the 169th unit will be a model unit for display.
- Density was calculated using the Assessing records; the survey shows the property slightly larger which could permit another unit or two.

Design Details
Chair Fox stated a Pattern Book has been provided and most of slides shown were from the Pattern Book.

Minimum Yard Requirements
Chair Fox stated where pertinent, they are complying with all requirements.

Distances Between Buildings
Chair Fox stated focusing on the side setbacks, they far exceed the required ten-foot separation.

Building Height
Director Langer stated the following:

- Height limit of 35 feet has been part of the Ordinance for a long time and may have been linked to the maximum height reach of the Fire Department equipment at the time.
- Each apartment building is approximately 39'-2" in height to the top of the parapet wall.
- Waivers have been granted for several projects such as the Climate Controlled Self Storage Building, Lockwood Senior Living, Emagine Hartland, and Walmart/Rural King.
- Fire Authority now has different equipment and waivers have been granted in the past.

Parking and Loading
Chair Fox stated 336 parking spaces are required, they are planning 384.

Landscaping
Chair Fox stated this will be discussed later in the meeting.

Open Space
Director Langer stated the following:

- Open space requirement is 25 percent; they are proposing 28.7 percent.
- Usable Open Space requirement is 10 percent or 2.99 acres; they are proposing 6.4 percent.
- Site is 30 acres; the apartment complex is approximately 13.5 acres.

The Applicant clarified they may have misunderstood the definition of Usable Open Space and neglected to count some of the areas, such as the open lawn area around the dog run. Their recalculation is 3.1 acres which exceeds the required 10 percent.

Natural Features
Director Langer stated the following:

- Identified the wetland areas.
- Northern three are not regulated wetland areas; wetland in the southeast corner is a regulated wetland.
- Intend to preserve the woodland area in the southern portion of the site.
- Two areas of fill mentioned earlier that require a permit from the State of Michigan Department of Environment, Great Lakes and Energy (EGLE) are the small portion near the parking drive aisle, and an area of fill with a culvert to accommodate the sidewalk along Old US 23.

Sidewalks and Pedestrian Access
Director Langer referred to the plan shared earlier showing pedestrian sidewalks planned along the external roadways, internal roadways connecting the commercial sites, around the residential buildings, and on both sides of Cornerstone Lane.

Commissioner Murphy expressed concern that there is no sidewalk planned along the west side of Square One Boulevard, and on the east side of Avenue Circle to Cornerstone Lane. He inquired since the plan is so symmetrical, was there consideration given to sidewalks in those areas? The Applicant stated the boulevard takes up a great deal of room and the portion on the east side of Square One is partially in an easement for the outlot, they were trying to avoid the same situation on the west side. Commissioner Murphy commented with the grand drive as you enter the site and

the symmetry, a sidewalk on the west side would be good for the walkers. The Applicant stated they would have to check the Landscape Plan, but they will look at it again.

REQUIREMENTS FOR PRELIMINARY REVIEW (Section 3.1.18.E.ii)

Sewer and Water

Chair Fox stated the Public Works Director has provided a review letter dated January 16, 2025, stating water and sewer are available.

Stormwater and Drainage Systems

Chair Fox stated there are two detention basins on the plan.

Traffic Impacts

Director Langer stated the following**:**

- Applicant submitted a Traffic Study; the Executive Summary was provided in the packet as the study is approximately 700 pages.
- Part of the delay in this project is working with MDOT.
- Two requested access points onto Old US 23 have been approved by the Livingston County Road Commission (LCRC).
- Applicant is requesting access to M-59 on the north side of the property.
- When proposing a development on a site that was previously vacant land, MDOT requires the level of service at intersections such as the M-59 and Old US 23 intersection located at the northeast corner of the property, remain the same, which is either a level D, E or F currently.
- The developer must propose improvements to the roads such as improved signal timing, turn lanes, deceleration lanes, or adding a signal at the entrance. MDOT puts those changes through their model and comes back with a "yes" or "no" but no further insight into what did or did not work or suggestions for meeting the requirement.
- This is the problem for the developer as this development will increase traffic; they must continue to work with MDOT in order to obtain their approval.
- If the north access onto M-59 has to be relocated, the Applicant will have to come back to the Township to amend their approval.

Chair Fox stated this is no different than any of the other approvals that are conditioned upon receiving approvals from all applicable agencies. If they gain all of the other approvals, the site plan is set. If one of those agencies requires a change, they will have to come back. Director Langer confirmed stating even though LCRC accepted the proposed access points the Applicant will still need to obtain a permit to work in the road right-of -way and add the 800 feet of merging lane. LCRC recently made improvements to Old US 23 and the Director's understanding is two left turns lanes are needed to turn onto M-59 at that underperforming intersection; however, LCRC did not make that improvement at that time.

Commissioner Mitchell questioned whether the access to M-59 shown on the plan is guaranteed at this location. Chair Fox stated they will have an access; it is the exact location that is in question. The Applicant added the location of the access onto M-59 was suggested by MDOT as it is directly across from the access to Target. MDOT is concerned about left turn conflicts, so it makes sense to have it where it is. Part of the issue of the new traffic light at that entrance location is the proximity of the Old US 23 intersection; they feel it is too close. The other options moving it east or west are not viable.

The Planning Commission discussed other options and the flaws in the approval process at the State level.

Commissioner Mitchell asked about the right in, right out access proposed near the corner on M-59 and why the entrance lane looks larger than the exit lane? The Applicant stated they are anticipating that there will be a fuel station; the extra space is to allow a fuel truck to make the turn. It is wider but will not be two lanes.

Vehicular Circulation
Chair Fox stated this was covered earlier.

Fiscal Impacts
Chair Fox stated this information was provided earlier and in the packet.

SITE REQUIREMENTS – for Apartment Portion of Planned Development only
Dumpster Enclosure (Sec. 5.7)
Chair Fox stated they will match the buildings, and they will meet the requirement.

Off-Street Parking (Sec. 5.8.4.H)
Chair Fox stated they are the desired 10 by 20 spaces and are providing more than required.

Barrier-Free Parking
Chair Fox stated there are eight required, two an accessible, and they are providing fifteen and three are van accessible.

Landscaping (Sec. 5.11 – Updated Landscape Ordinance version)
Commissioner Grissim highlighted the following:

- This Applicant has gone above and beyond; Hartland is lucky to have this project. The design, walls and fencing really pull it together.
- There are some discrepancies in the count and variety on plantings that could be corrected on the Construction Set of plans.
- Along Old US 23 request to use evergreen trees rather than canopy trees is fine for that location.
- Canopy trees on the side and the narrow trees in the boulevard make sense as the area is narrow.
- Had a question about the three evergreen trees on the west side of the entry that seem to interrupt the flow. The Applicant stated they anticipate a drive-through and were hoping to deflect light from cars using a drive-through. It could be converted to canopy trees consistent with the approach. Commissioner Grissim stated we will have to wait and see how that evolves, she feels it is an interruption in the formal entry landscaping style.
- Perimeter landscaping for parking lots along public roadways requires an evergreen hedge three feet or higher. The Applicant stated they did that along Highland Road, feels they can go either way, proposed a mixture of deciduous trees that seemed more appropriate. They were focusing on height. Along Highland Road there are wall features, behind that is the privet. Where the fence ends, they created a hedgerow of evergreen trees to screen the parked cars. The intent is to deflect light with higher planting and the hedgerow ties it all together. In between are ornamental grasses and flowers to provide some interest. With some of the street trees, it is a

challenge to maintain the spacing due to the utilities, which is why they are requesting to plant those required trees elsewhere on the site.

- Expressed concern about the elevation for the center of the roundabout with the three flagpoles; two are 30 feet and one is 35 feet; they may not be drawn to scale. Requested the Applicant study that element to be sure the proportions are correct.
- Eighteen parking stalls in a row near the Clubhouse, Planning requested another island. The Applicant suggested they could incorporate a walkway into the island.
- Once the size of the generator is known, requested it to be screened accordingly.

Lighting (Sec. 5.13)
Chair Fox stated the lighting standards have not been strictly applied to light fixtures that are mounted on residential buildings or lighting in carports, it is more for an office situation but the items that were reviewed comply.

Sign Program
Director Langer stated the following:

- Proposing decorative wall features along M-59, at the corner and at the entrance on Old US 23 .
- There are some monument signs.
- Normal monument signs are limited to seven feet; they are proposing 10 feet 6 inches.
- Other PDs have proposed taller monument signs of 10 feet and some up to 16 feet.
- A service station sign is proposed but there is no guarantee that space will contain a service station; encouraged the Planning Commission to view it as a sign.

Chair Fox stated there is flexibility for signs within a PD. Commissioner Grissim stated she is aware of the other taller signs previously approved, but it is not her preference. Chair Fox stated this one is for the PD and a multi-tenant sign that needs some size for readability.

Architecture/Building Materials (Sec. 5.24.14)
Chair Fox suggested, since this is PD, the Planning Commission simply look at the buildings and determine whether they like the way they look or not.

The Planning Commission emphatically stated they like the way the buildings look, the design and the proposed materials. Commissioner Eckman stated he likes the extra height and the profile of the buildings.

Other
Chair Fox asked if the Planning Commission likes the design for the roundabout with three flags rather than two, and if they approved of the height for the one flagpole.

The Planning Commission agreed.

Commissioner Mitchell stated one of them is required to be taller. The Applicant confirmed the error on the conceptual drawing of the flags and flagpoles and requested that the center flag be 45 feet tall.

The Planning Commission agreed.

Commissioner Grissim asked they share the details with the staff when it is decided.

Commissioner Murphy asked about the EV charging stations. The Applicant replied in the Auburn Hills property, there are two ports per building, and every garage is prepped so one can be added later. Commissioner Murphy asked if they found that number sufficient. The Applicant stated yes they are underutilized. Director Langer inquired if a non-EV vehicle parked in that spot, does the complex have a process in place for removing that vehicle. The Applicant stated they are signed for EVs only and hope the other residents would respect that as a courtesy, there is plenty of parking. Commissioner Mitchell asked if there was any concern having EV charging ports inside the garages. The Applicant stated no. Chair Fox pointed out they are not installing them, just prepping the wiring for them to be added later if desired.

The Planning Commission briefly discussed EV charging, vehicles and fire risk.

Commissioner Eckman stated it is a beautiful project, he is impressed with it, likes the Mixed Use over a big box store, the high-end rental balances out some of the other projects in the area. Thinks it looks really good.

Commissioner Murphy stated when they looked at the Concept Plan, he was surprised something like this would come to Hartland, but he thinks it is stunning with great curb appeal, the design, the walls, the entrance, the landscaping, it is an amazing project.

Commissioner Grissim stated they really did their due diligence and wow. She hopes MDOT comes around.

Chair Fox stated he was really impressed with the packet. He has been doing this a long time and this packet reflects their effort and was truly appreciated. The presentation was very good and made going through the staff review much quicker because the items had already been covered. He thanked the Applicant for coming and making the presentation.

Commissioner Grissim offered the following Motion:

Move to recommend approval of Site Plan/PD #24-005, the Preliminary Planned Development Site Plan for Square One Planned Development, as outlined in the staff memorandum dated May 15, 2025.

Approval is subject to the following conditions:

1. **The Preliminary Planned Development Site Plan for Square One Planned Development, SP/PD #24-005, is subject to the approval of the Township Board.**

2. **Waiver request on the building height, being greater than 35 feet, is approved.**

3. **The applicant shall adequately address the outstanding items noted in the Planning Department's memorandum, dated May 15, 2025, on the Construction Plan set, subject to an administrative review by Planning staff prior to the issuance of a land use permit.**

4. **As part of the Final Plan Review, the applicant shall provide a Planned Development (PD) Agreement that includes any applicable ingress-egress access easements and agreements. The documents shall be in a recordable format and shall comply with the requirements of the Township Attorney.**

5. **Applicant complies with any requirements of the Township Engineering Consultant, Department of Public Works Director, Hartland Deerfield Fire Authority, Michigan Department of Environment, Great Lakes, and Energy (EGLE), and all other government agencies, as applicable.**

6. **Applicant shall secure all applicable approvals and permits from the Michigan Department of Transportation (MDOT) and Livingston County Road Commission (LCRC). Any changes to the site plans shall be reviewed by the Planning Commission.**

Seconded by Commissioner McMullen. Motion carried unanimously.

8. **Call to the Public:**
None

9. **Planner Report:**
None

10. **Committee Reports:**
Commissioner Eckman asked if there would be further discussion on chickens since the Township received a communication from a resident.

The Planning Commission briefly discussed the process.

Commissioner Eckman offered a Motion to bring the topic of chickens and the keeping of animals to the Ordinance Review Committee. It was not seconded; however, the Planning Commission agreed the Ordinance Review Committee should explore the issue.

11. **Adjournment:**
A Motion to adjourn was made by Commissioner Mitchell and seconded by Commissioner Murphy. Motion carried unanimously. The meeting was adjourned at approximately 9:09 PM.

Hartland Township Planning Commission Meeting Agenda Memorandum

Submitted By: Troy Langer, Planning Director

Subject: Site Plan/PD Application #25-004, Sawyer Ridge, Residential Planned Development (PD) – Preliminary Site Plan

Date: June 5, 2025

Recommended Action

Move to recommend approval of Site Plan/PD #25-004, the Preliminary Planned Development Site Plan for Sawyer Ridge Planned Development as outlined in the staff memorandum dated June 5, 2025.

Approval is subject to the following conditions:

1. The Preliminary Planned Development Site Plan for Sawyer Ridge Planned Development, SP/PD #25-004, is subject to the approval of the Township Board.

2. The applicant shall adequately address the outstanding items noted in the Planning Department's memorandum, dated June 5, 2025, on the Construction Plan set, subject to an administrative review by Planning staff prior to the issuance of a land use permit.

3. As part of the Final Plan Review, the applicant shall provide a Planned Development (PD) Agreement that includes any access and maintenance agreements. The documents shall be in a recordable format and shall comply with the requirements of the Township Attorney.

4. Applicant complies with any requirements of the Township Engineering Consultant, Department of Public Works Director, applicable Fire Code requirements, Michigan Department of Transportation (MDOT), Livingston County Road Commission (LCRC), Livingston County Drain Commission (LCDC), and all other government agencies, as applicable.

5. Applicant shall obtain applicable approvals and permits from Michigan Department of Transportation (MDOT) and the Livingston County Road Commission (LCRC).

6. Applicant shall obtain any necessary approvals and permits from the Michigan Department of Environment, Great Lakes, and Energy (EGLE).

7. (Any other conditions the Planning Commission deems necessary).

Discussion

Applicant: David Straub

Site Description

The subject property is south of Highland Road and west of Pleasant Valley Road in Section 26 of the Township. The subject parcel (Parcel ID #4708-26-200-007) is approximately 71.1 acres in size and zoned

CA (Conservation Agricultural). The 2015 Future Land Use Map (FLUM) designates this parcel as Special Planning Area (SPA) and is within the M-59/Pleasant Valley/Fenton Road SPA. The 2020-2021 Amendment to the FLUM has this same designation.

Currently the property is undeveloped and primarily consists of open fields which have historically been used for agricultural activities. Several wetland areas exist on the property. The applicant submitted a Wetland Delineation Report, dated December 4, 2024. This report identified six (6) wetland areas. A copy of the report is provided as an attachment.

The property directly south is occupied by an agricultural operation and residence and is zoned CA (Conservation Agricultural). Adjacent properties to the west include Hartland Glen Golf Course which is zoned CA (Conservation Agricultural) and a single-family residential Planned Development (Highland Reserve PD) which is zoned PD (Planned Development).

The subject property shares a common boundary with a separate parcel northeast of the site, which is zoned CA (Conservation Agricultural). The approximate 7.407-acre parcel is under separate ownership and is not part of the proposed project.

Per the site plan, there are three (3) vehicular access options to the development: Highland Road/M-59 on the north, a public road, which is under the jurisdiction of the Michigan Department of Transportation (MDOT); Pleasant Valley Road on the east, which is under the jurisdiction of the Livingston County Road Commission (LCRC); and an internal private road/vehicular connection to Highland Reserve Planned Development (PD) on the west, which also has private roads.

Municipal water and sanitary sewer will be required for this project.

Site History

Historically, plans for the Newberry Place Planned Development have included the subject property as part of that planned development, under several applications. Newberry Place PD has not received Final PD approval, and the current request is not related to the Newberry Place PD. The applicant is in the process of purchasing the subject property with the intent to develop the property as a residential planned development, as shown on the submitted Preliminary PD Site Plan for Sawyer Ridge.

SP/PD #24-009 PD Concept Plan (dated 07.16.2024)

At the October 24, 2024, meeting of the Planning Commission, SP/PD Application #24-009 was reviewed for the PD Concept Plan for a planned development at M-59 and Pleasant Valley Road (plan dated July 16, 2024). The Concept Plan showed twenty-eight (28) duplex buildings, equating to fifty-six (56) apartment units and one hundred thirty-four (134) single-family residential detached units, for a total of 190 residential units. Comments were provided but no formal action was taken by the Planning Commission, as is typical for the review of a PD Concept Plan.

SP/PD #24-009 PD Concept Plan (dated 10.28.2024 – Revised Layout)

On October 30, 2024, the applicant submitted a revised Concept Plan (dated 10.28.2024) with 167 single-family residential detached units. The duplex units as shown on the previous Concept Plan dated July 16, 2024, were eliminated. The stated lot size is 60 feet by 120 feet for the single-family lots. Generally, the development layout remained the same with some changes to the road layout in the northern portion of the site where duplexes were proposed on the previous plan. The revised plan was reviewed by the Planning Commission at their regular meeting on November 7, 2024, with no formal action taken. Similarly, the Township Board reviewed the revised plans at their regular meeting on November 19, 2024. No formal action was taken.

Planned Development Procedure

Section 3.1.18 of the Township's Zoning Ordinance provides standards and approval procedures for a PD (Planned Development). Approval of a Planned Development is a three-step process. A Concept Plan, Preliminary Plan, and Final Plan are all reviewed by the Planning Commission and the Township Board, with the Planning Commission making a recommendation and the Board having final approval at each step. The process usually requires a rezoning from the existing zoning district to the Planned Development (PD) zoning district. As part of the rezoning, a public hearing is held before the Planning Commission consistent with the Michigan Zoning Enabling Act; this public hearing is held at the same meeting during which the Planning Commission reviews and makes a recommendation on the Preliminary PD. Approval of the Final Plan by the Township Board usually constitutes a rezoning of the subject property to PD (Planned Development).

Given the requirements for publishing a notice for the planned development, the public hearing has been scheduled for the June 12, 2025, Planning Commission meeting. Approval of the Final Plan by the Township Board usually constitutes a rezoning of the subject property to PD (Planned Development).

For all intents and purposes, the Preliminary Plan step is essentially the same as a preliminary site plan review for a conventional project in the Township. All the information and details required for a preliminary site plan approval must be provided for the Preliminary PD review and approval. Final PD review will involve detailed plans for those phases for which construction is intended to begin immediately, review of the Planned Development Agreement, and other written documents as applicable.

Overview of the Preliminary Plan and Proposed Use

The proposed Planned Development is a single-family residential planned development with 172 residential detached units. The revised Concept Plan (dated 10.28.2024) reviewed under SP/PD #24-009 showed 167 single-family residential detached units.

Currently the subject site (71.1 acres) is zoned CA (Conservation Agricultural). Revisions to the overall layout of the development have occurred since the Concept Plan was reviewed under SP/PD #24-009 (revised plan). The access point from Highland Road has been shifted to the west per the comments from the Michigan Department of Transportation (MDOT). The access point from Pleasant Valley Road has moved northward, when compared to the Concept Plan layout. A roadway connection is still provided to Highland Reserve Planned Development, which is west of the subject site. Internal roadway connections are not provided to the separate 7.407-acre parcel that abuts the subject site at the northeast corner of Sawyer Ridge PD. As noted, the separate parcel is zoned CA (Conservation Agricultural) and is not part of this PD proposal.

The plan shows three (3) development phases for the project, which are summarized below:

Phase #	**# Residential Units**	**Location within development**
Phase 1	78	Northern one-half of development
Phase 2	72	Southern one-half of development
Phase 3	22	North central portion of development
TOTAL UNITS	172	

Several house design options are available. Each style of home has a minimum of three (3) bedrooms with 2 ½ bathrooms, with an attached 2-stall or 3-stall garage. Floor plans and samples of the housing styles are provided as attachments.

The minimum lot size within the development is approximately 7,200 square feet in area, with a minimum lot width of sixty (60) feet.

Sheet C8 of the site plans shows a drawing of a typical 60-foot-wide by 120-foot-deep lot with setbacks that define the building envelope (Typical Lot Data). The setbacks are noted below.

Building Setbacks/Building Envelope:
Front: 25 feet
Side: 5 feet
Rear: 20 feet
(All structures, patios, decks, in-ground pools, and other site elements are to be placed within the building envelope, except driveways and sidewalks).

Lot coverage. Lot coverage is not stated on the plans. All structures and site elements are to be built within the building envelope with the exception of driveways and sidewalks (from house to street). Site elements include hard surfacing (concrete patios, paver patios, sidewalks, pool apron), deck, shed, pools, pavilion, gazebo, and other built structures.

Other Development Features
One (1) vehicular access is provided from Highland Road on the north and another vehicular access is shown on Pleasant Valley Road on the east. Internally, vehicular circulation is provided by a network of paved, private roads and includes two (2) cul-de-sacs, at the southern portion of the development. One (1) street stub is shown (Timber Trail), on the west property line which is intended to allow for a connection to the private road in Highland Reserve PD (west of Sawyer Ridge PD). Access easements for ingress and egress for the proposed road connection will be required as part of the Final PD documents.

The private roads in the proposed development will be required to meet the standards of Section 5.23 of the Zoning Ordinance. For a road serving twenty-five (25) or more units or parcels, private roads are to be constructed consistent with public road requirements of the Livingston County Road Commission (LCRC). The paved roadway portion is shown as thirty (30) feet wide with mountable concrete curb and gutter, and a 66-foot-wide right-of-way. Additional comments on the private roads are found in this memorandum under the section “Requirements for Preliminary Review.”

Internal to the development, five (5) foot wide concrete sidewalks are shown on both sides of each private road. Five (5) foot wide concrete sidewalks are shown along the frontages of Highland Road and the northern portion of Pleasant Valley Road. The sidewalks are placed within the road right-of-way for each of those roads.

Five (5) foot wide natural mowed walking paths are offered within the development, along the landscape berms on the north and east, within the park, and along the borders of some lots. The walking paths connect to the internal sidewalks and sidewalks found along Highland Road and Pleasant Valley Road.

The stormwater management plans indicate stormwater run-off will be collected and conveyed to one (1) detention area, that is shown at the west side of the development. The Township Engineer’s (SDA) review letter dated May 28, 2025, noted that the proposed stormwater detention basin may need to be enlarged to handle the volume of stormwater generated by the proposed development. The plans will be reviewed at a later date by the Livingston County Drain Commission office. If a larger footprint is required for the detention basin, it could potentially have an impact on the layout of the development as well as the number of residential units. Revisions to an approved site plan would be reviewed by the Planning Commission as an amendment to the approved Preliminary PD Site plan.

Municipal water and sanitary sewer will be required for this project. The applicant will need to work with the Township and Livingston County regarding public water and sanitary sewer. They will also need to work with the Hartland Township Department of Public Works (DPW) to acquire the necessary Residential Equivalent Units (REU)'s for this development.

Approximately 26.08 acres of the site is designated as open space, equating to approximately 38.2% of the property, using the parcel size of 68.34 acres (net site area per applicant). The open space areas include wetlands, detention area, uplands, and usable open space. Additional information is provided under the "Open Space" section of this memorandum.

The parcel is approximately 71.1 acres in size, resulting in an estimated density of 2.42 dwelling units per acre (172 units ÷ 71.1 acres). More discussion on density is provided in the next section of this report.

Eligibility Criteria (Section 3.1.18.B.)
To be eligible for PD approval, the applicant must demonstrate that the criteria in Section 3.1.18.B. will be met.

1. **Recognizable Benefits.** *The planned development shall result in a recognizable and substantial benefit to the ultimate uses of the project and to the community and shall result in a higher quality of development than could be achieved under conventional zoning.*

   The applicant has provided an explanation of the recognizable benefits in the Project Summary dated May 21, 2025. Per the applicant, the recognizable benefits include the following:

   - This development will provide low maintenance single-family housing that is in demand in Hartland Township.
   - The site provides easy access to major roads and is located in an under-serviced area.
   - Clustering of homes allows for preservation of existing woodlands and wetlands and provides passive and active open spaces.

2. **Minimum Size.** *Planned Developments must be a minimum of 20 acres of contiguous land.*

   The parcel is approximately 71.1 acres and complies with the minimum size for a planned development.

3. **Use of Public Services.** *The proposed type and density of use shall not result in an unreasonable increase in the use of public services, facilities, and utilities, and shall not place an unreasonable burden upon the subject site, surrounding land, property owners and occupants, or the natural environment.*

   The residential development is accessed from Highland Road, which is under the jurisdiction of the Michigan Department of Transportation (MDOT) and Pleasant Valley Road, which is under the jurisdiction of the Livingston Conty Road Commission (LCRC). Approvals and permits from MDOT and LCRC will be required for the proposed access points.

   A proposed internal private road connection is shown on the west side of the development, to a private road within Highland Reserve Planned Development, which is adjacent to Sawyer Ridge PD. An ingress-egress easement agreement between all parties is required for the connection as part of the Final PD submittal.

Internally, a looped system of private roads is proposed. The intent is that the private roads will be maintained by the Homeowner's Association per the applicant.

Regarding density, the FLUM designation for this property is Special Planning Area (SPA) which allows for a density that is flexible, but with an overall base density of four (4) dwellings per acre. Using this density, a maximum of 284.2 (or 284) dwelling units could be permitted (71.1 acres x 4 dwelling units per acre). In comparison, the proposed residential single-family development has 172 dwelling units and density of 2.42 dwelling units per acre, which could generate less traffic and have less impact on Highland Road and Pleasant Valley Road.

Public water and sanitary sewer services will be required for the project. The Township Director of Public Works has provided comments in the email dated May 22, 2025. The plans show proposed municipal water and sanitary sewer services for the development.

The Hartland Deerfield Fire Authority provided comments in the review letter dated October 8, 2024.

4. **Compatibility with Comprehensive Plan.** *The proposed development shall not have an adverse impact upon the Comprehensive Plan for the Township. Notwithstanding this requirement, the Township may approve a Planned Development proposal that includes uses which are not called for on the Future Land Use Map, provided that the Planning Commission and Township Board determine that such a deviation from the Future Land Use Map is justified in light of the current planning and development objectives of the Township.*

   The subject property is designated as Special Planning Area (SPA) on the 2020-2021 Comprehensive Plan and Future Land Use Map (FLUM) Amendment. The property is part of the M-59/Cundy/Hartland Glen Golf Course Special Planning Area. This category designation envisions a density that is flexible. Overall, the SPA should have an overall density of four (4) dwelling units per acre, with a higher density being more desirable in the northern portion of the SPA and a lower density in the lower portion.

   Using 71.1 acres for property size and allowing a density of four (4) units per acre, a maximum 282.2 (or 282) dwelling units could be permitted (71.1 acres x 4 dwelling units per acre). The Preliminary Plan proposes a density of 2.42 dwelling units per acre (172 dwelling units ÷ 71.1 acres), which is consistent with the maximum allowed density for the Special Planning Area.

   Specific principles were agreed upon for the Special Planning Area in the 2020-2021 Comprehensive Plan Amendment, as listed below.

   1. Development within the Special Planning Area shall provide for a variety of housing forms (for example, single family, townhouses, condominium, apartments, and senior housing), along with retail, office, recreation, and entertainment space. *The applicant proposes a residential development comprised of 172 detached single-family homes. A variety of building styles are proposed. Per the applicant, the Sawyer Ridge PD intends to provide low maintenance single-family housing that is in demand in the Township.*

   2. Development within the Special Planning Area shall provide for public facilities and other neighborhood amenities. *The proposed extension of the public watermain and sanitary sewer to serve this site could potentially serve adjacent sites in the future. This could be considered an asset to the Township. The design of the PD provides open space areas that can be enjoyed by the Sawyer Ridge PD community, and include a park, preserved wetland areas, and internal sidewalks and walking paths.*

3. Special Planning Area shall provide pedestrian and vehicular links between land uses and adjacent property (that may not be directly included within this Special Planning Area development). *The proposed plan shows 5-foot-wide concrete sidewalks on each side of each private road. The internal sidewalks connect to the proposed 5-foot-wide concrete sidewalks along the Highland Road and Pleasant Valley Road frontages. A vehicular access point is provided from the Sawyer Ridge PD to Highland Reserve PD.*

4. Special Planning Area shall also coordinate with the Township's goal of creating walkable pathways to the Township settlements and other public and private facilities. *The PD provides an internal system of sidewalks and mowed walking paths. Additionally, the proposed 5-foot-wide concrete sidewalk along the frontage of Highland Road provides a connection to the adjacent development to the west and has the potential to connect to future developments to the east.*

5. Developments shall be developed in harmonious coexistence with pre-existing historical and natural features within the Township. *The intent of the PD is to retain portions of existing natural features such as the wetland areas and existing trees, as shown on the plans.*

6. Special Planning Area shall include landscape, streetscape, traffic and architectural solutions that are superior in design and visually enhancing the local community with sensitivity to the existing historic features in the Township. *The residential buildings are a mix different styles of two-story detached houses which are in keeping with the surrounding neighborhoods. The proposed landscape plan provides buffering of the homes on the north with a berm and plantings along Highland Road and along the property line of the adjacent vacant parcel at Highland Road and Pleasant Valley Road. Many existing trees along the frontage of Pleasant Valley Road are shown to be preserved, which can provide buffering. Existing wetlands are to be preserved, with a minor exception where constructing an internal road. Proposed street trees are shown for each residential unit.*

5. Unified Control. *The proposed development shall be under single ownership or control such that there is a single person or entity having responsibility for completing the project, or assuring completion of the project, in conformity with the Ordinance.*

The proposed development will be under single ownership with the applicant being M/I Homes. They will be responsible for completing the project and its conformity with the Planned Development Ordinance. The PD will be governed by a Master Deed and Bylaws. A Homeowners Association (HOA) will be established which will oversee the maintenance of open space areas, private roads, stormwater areas, architectural review, enforcement of community restrictions, and financial management. A thorough review of the documents will occur with the Final Plan submittal.

Planned Development Design Standards (Section 3.1.18.C.)

This section outlines the design standards for a planned development. Additional site standards will be discussed from applicable sections of the Zoning Ordinance.

1. Permitted Uses. *The predominant use on the site shall be consistent with the uses specified for the parcel on the Township's Comprehensive Plan for Future Land Uses.*

The subject area for the planned development project is designated as Special Planning Area (SPA) on the adopted 2020-2021 Comprehensive Plan and Future Land Use Map (FLUM) Amendment. This land use category envisions a variety of housing (for example, single-family, townhouses, condominiums, apartments and senior housing), as well as retail, office, recreation, and entertainment

space. The proposed planned development is a single-family residential development with 172 detached homes.

2. **Residential Density.** *Residential density in a planned development shall be consistent with the density designation within the Township's Comprehensive Plan.*

   Section 3.1.18.C. of the Zoning Ordinance states the residential density in a planned development shall be consistent with the density designation within the Township's Comprehensive Plan. The subject property is designated as Special Planning Area (SPA) on the 2020-2021 Comprehensive Plan and Future Land Use Map (FLUM) Amendment. This category designation envisions a flexible density, with an overall density of four (4) dwelling units per acre.

   Using 71.1 acres for property size and allowing a density of four (4) units per acre, a maximum 282.2 (or 282) dwelling units could be permitted (71.1 acres x 4 dwelling units per acre). The Preliminary Plan proposes a density of 2.42 dwelling units per acre (172 dwelling units ÷ 71.1 acres), which is consistent with the maximum allowed density for the Special Planning Area.

   Per Section 3.1.18.C.iv., the Planning Commission may agree to recommend up to a forty (40%) percent increase in units on a site in recognition of outstanding attributes as listed in this section. The Township Board in its sole discretion shall have the ability to approve such density increase up to forty (40%) percent subsequent to an affirmative recommendation from the Planning Commission. In this case if the Planned Development land area could accommodate 282 units (71.1 acres x 4 units per acre), in accordance with the Comprehensive Plan, the Planned Development plan could include up to 395 dwelling units (282 + 113 additional units) if a maximum bonus of 40% were awarded by the Planning Commission and Township Board. A density bonus is not being considered for this PD project.

   The chart below outlines residential density as discussed in this section.

Residential Density	**Residential Units**
Proposed	172
Permitted	282
Bonus – maximum (40%)	395

3. **Design Details.** *The applicant shall prepare a detailed description of design details to be implemented in the proposed planned development, to be presented in a Pattern Book.*

   A Pattern Book was not submitted. The design details are provided within the Project Narrative and the Sample Portfolio of Houses as well as on the submitted site plans.

4. **Minimum Yard Requirements.** The minimum yard requirements are noted in the chart below per Section 3.1.18.C.vi.a. (Residential Use)

Yard Location	Minimum PD Standard	Proposed distance or setback	Complies Yes/No
Along perimeter adjacent to public road (Highland Road)	50 ft.	80 ft. from ROW to closest point to a dwelling unit property line	Yes

Along perimeter adjacent to public road (Pleasant Valley Road)	50 ft.	30 ft. from ROW to closest point to a dwelling unit property line	No
Along perimeter, but not adjacent to a road – for rear yard	40 ft.	20 ft.	No
Along an internal collector or local road – front yard	40 ft.	25 ft.	No

Section 3.1.18.C.vi.b.(2) states that minimum rear yard setback and minimum lot size for detached single-family structures in a planned development shall be based on good planning and design principles taking into account several variables as follows: degree of compatibility between adjoining uses; sensitivity to the characteristics of the site; the need for free access for emergency vehicles; the need for adequate amounts of light and air between buildings; and the need for proper amounts of open space for the exclusive use of residents on the site. The Planning Commission can evaluate the plans using those variables.

5. **Distances Between Buildings.** Spacing requirements for buildings in a planned development for any detached single-family structure are outlined in Section 3.1.18.C.vi.b.(1). *Any detached single-family structure shall be located at least thirty (30) feet from any other detached single-family structure and shall provide a minimum side yard setback of fifteen (15) feet on both sides.*

   The typical lot detail drawing shows the building envelope as defined by the proposed setbacks. Based on the plans, the side yard setback is five (5) feet, which equates to ten (10) feet between two (2) structures, at the closest point. This would not meet the minimum required spacing standards of thirty (30) feet between any other detached single-family structure. Per Section 3.1.18.C.vi.a., modification to yard requirements may be approved by the Township Board upon recommendation from the Planning Commission, upon making the determination other setbacks would be more appropriate.

   The Hartland Deerfield Fire Authority provided a review letter dated October 8, 2024.

6. **Building Height.** *No building in a planned development shall be greater than thirty-five (35) feet in height.*

   The sample portfolio of houses shows a variety of designs for two-story structures however the building height is not stated. Additional details will be required as part of the Construction Plan set.

7. **Parking and Loading.** *Planned Developments shall comply with the parking and loading requirements specified in Section 5.8, Off-Street Parking requirements, and Section 5.9, Loading Space Requirements of the Zoning Ordinance.*

   Parking requirements are listed in Section 5.8.4.H (Table of Minimum Parking Space Requirements). For the category, Residential, Family, two (2) parking spaces are required for each dwelling unit.

   There are options for an attached 2-stall garage or 3-stall garage per the sample house portfolio. This satisfies the parking requirement. The proposed front setback is twenty-five (25) feet which should accommodate a residential driveway to be at least twenty-five (25) feet long. Given this dimension, the driveway could accommodate additional parking of vehicles.

8. **Landscaping.** Landscaping requirements are found in Section 3.1.18.C.vi.e. These are considered minimum design standards, typically for a commercial or office development. A more detailed review of the landscaping is provided in this memorandum using applicable landscape standards as outlined in Section 5.11 (Landscaping and Screening).

9. **Open Space.** *Open space shall be provided to complement and accentuate the high-quality design of the proposed planned development. At minimum, the planned development shall provide open space consistent with the previous zoning designation for the site.*

   Per this section of the Zoning ordinance (Section 3.1.18.C.vi.f,), the planned development shall provide open space consistent with the previous zoning designation for the site, at a minimum. Currently the site is zoned CA-Conservation Agricultural. In CA, the open space requirement is a minimum of 85%, for a single-family detached dwelling. The proposed plan states the overall open space is 38.2% of the site (using net site area of 68.34 acres, per the applicant) and thus would not comply. Historically, however, open space requirements outlined in Section 3.15 of the Zoning Ordinance have been applied for other single-family residential planned developments in the Township such as Walnut Ridge Estates PD, Highland Reserve PD, and Courtyards of Hartland PD.

   Section 3.15 of the Zoning Ordinance states residential condominium developments (in several zoning district classifications) should provide a minimum of 25% open space, with a minimum of 10% of the total open space to be usable open space ("usable open space" is defined as land area suitable for active recreation). For the proposed development consisting of 68.34 acres, this would equate to a minimum of 17.09 acres of open space (25% of 68.34 acres), with a minimum of 1.71 acres of usable open space (10% of 17.09 acres open space).

   Sheet C11 of the Site Plans shows the different categories of open space areas. The open space areas include wetland areas, detention basin, upland areas, and the mowed walking paths. The total open space is approximately 26.08 acres equating to 38.2% of the site (68.34 acres).

   The usable open space areas (shown in green) include the landscaped berms along Highland Road and the eastern border, open land adjacent to the residential lots in several areas, and the park on the east. The percentage of usable open space is stated as 9.10 acres or 13.3% of the site. The park will have picnic tables, benches, and a play structure.

10. **Natural Features**. *Consistent with the stated intentions for the creation of these regulations, the preservation of the natural features of the Township is an important planning consideration. A PD proposal must consider the natural topography and geologic features, scenic vistas, trees and other vegetation and natural drainage patterns that exist on the site and propose a development pattern which preserves and avoids disruption of those natural features as much as possible.*

    A Topographic Survey and Tree Inventory are provided, which show the existing features of the site. A Tree Survey lists the tree species and condition of each tree on the Tree Inventory. Currently the majority of the site consists of open fields which have been farmed in the past. Wooded areas occur on the borders of the property and in the wetland areas. The plans indicate what trees will be preserved or removed.

    Six (6) wetland areas have been identified per the applicant's Wetland Delineation report. Per the applicant's explanation, a small area of an existing wetland will be filled to provide required road access, which may require approvals and permits from the Michigan Department of Environment, Great

Lakes, and Energy (EGLE). Approximately 93% of the onsite regulated wetlands are preserved per the applicant.

11. **Sidewalks and Pedestrian Access.** *The applicant must demonstrate the PD site, and all uses within the site, will be connected to any existing pedestrian and nonmotorized vehicle paths and trails within a public right-of-way or easement open to the public.*

    A proposed 5-foot-wide concrete sidewalk is shown along the frontage of the PD site on Highland Road and along the frontage of Pleasant Valley Road (north of the wetland area). These sidewalks connect to the internal sidewalk system and mowed walking paths within the PD.

Requirements for Preliminary Review (Section 3.1.18.E.ii)

The following section is a summary of items that have not been addressed in the previous review as part of the Design Standards section.

1. **Sewer and Water.**
   The applicant should contact the Township's Department of Public Works regarding the number of REU's required for the proposed development, for municipal water and sanitary sewer.

2. **Stormwater and Drainage Systems.**
   Stormwater will be collected and conveyed to one (1) detention area.

3. **Traffic Impacts.**
   The applicant has provided a Traffic Impact Study, dated March 7, 2025, conducted by Fishbeck. The applicant has been working with the Michigan Department of Transportation (MDOT) to meet their requirements for the proposed access from Highland Road. Per the request of MDOT the entrance drive from Highland Road was moved to the location shown on the plans, thus MDOT is satisfied with the entrance location. The Livingston County Road Commission (LCRC) has reviewed the plans and has no objection to the proposed entrance drive for Pleasant Valley Road.

4. **Vehicular Circulation.**
   The residential development has one (1) entrance from Highland Road and one (1) entrance from Pleasant Valley Road. An internal connection is shown to a private road that is part of Highland Reserve Planned Development on the west.

   Internal circulation is via private roads that include two (2) cul-de-sacs. Section 5.23.5 of the Zoning Ordinance states that when a potential number of units or parcels served is twenty-five (25) or greater, the proposed private roads must be constructed consistent with public road requirements of the Livingston County Road Commission (LCRC). The minimum required roadway surface width shall not be less than thirty (30) feet, with the dimension measured from face of curb to face of curb.

   The plans show a typical cross section of the private road (half-section), and the roadway surface width is stated as thirty (30) feet, as measured from back of curb to back of curb. The curb is a mountable curb. A 66-foot-wide private road right-of-way easement is shown. The roadway surface width in the cross section is not measured from face of curb to face of curb and thus does not comply with the LCRC standards. Using the LCRC standards would add approximately four (4) feet of paved surface area and would reduce the width of the planting area for street trees, between the back of curb and sidewalk. The deviation from the LCRC design standards is considered a waiver. The proposed road design has been approved for private roads in similar residential PD developments such as the Villas of Hartland PD, the Courtyards of Hartland PD, and Highland Reserve PD.

Section 5.23.5.E.vi. of the Zoning Ordinance (Minimum Private Road Standards) states that private roads serving more than twenty-four (24) parcels or dwelling units or combination thereof equaling twenty-four (24) shall have at least two (2) points of access to a public road. In this case there are two (2) access points to public roads, from Highland Road and Pleasant Valley Road.

5. Fiscal Impacts.
The applicant has provided a response to this topic in the Project Summary letter May 21, 2025.

Landscaping (Section 5.11)
Applicable sections of Section 5.11 (Landscaping and Screening) will be applied to the PD, as outlined below.

A. Landscape plan requirements (Sec. 5.11.1.D.)
- Required – Landscape plans are to be prepared by a Registered Landscape Architect (plans with seal and signature).
- Proposed – Landscape plans are prepared by a Registered Landscape Architect
- Meets Requirement? – Yes
- Comment – (none)

B. Divider Medians (Sec. 5.11.2.A.vii.)
- Required – Divider median shall be curbed, minimum 10 ft. wide; 1 canopy or evergreen tree per initial 25 ft. plus 1 additional canopy or evergreen tree for every increment of 25 ft. Trees no further than 60 ft. center to center. Ground surface coverage 80% minimum with live plant material. One (1) divider median at Highland Road entrance. Divider median 10 ft. wide and 46 ft. in length and is curbed.
  EQUATES TO: 2 trees plus 80% ground surface coverage
- Proposed – 10-ft. wide curbed median; 2 canopy trees; approximately 50% ground surface coverage with shrubs and ornamental plants/annual flowers (North 50% length of median). South 50% of median - no ground coverage shown.
- Meets Requirement? – Yes, for number of trees; No for 80% ground surface coverage on the southern half of the divider median.
- Comment – Plan to be revised to provide 80% ground surface coverage on the southern one-half of divider median (on Construction Plan set). South portion of divider median cannot be all mulch. Lawn is suggested by staff.

C. Irrigation (Sec. 5.11.2.A.viii.)
- Required – All landscaped areas (including lawns) shall be provided with an automatic, underground or drip irrigation system.
- Proposed – Irrigation system is to be provided in all landscape areas per Maintenance Notes on Sheet L-6. The "landscape areas" are not defined in the notes. Staff assumes this will be provided in the buffer areas/common areas.
- Meets Requirement? – Yes
- Comment – Irrigation plan required to be provided in the Construction Plan set.

D. Greenbelt Landscaping (Sec. 5.11.C.)
Highland Road (736 lineal feet of frontage)
- Required – Within the first 30 feet of the property, 1 canopy tree for every 30 ft of lineal of frontage; Planning Commission may approve up to 50% substitution of canopy trees with evergreen trees; PLUS 3 small deciduous ornamental trees or large deciduous or evergreen shrubs for the initial 40 ft., and 1 per 20 ft. thereafter. (736 lineal feet of frontage)

EQUATES TO: 25 canopy trees and 38 additional ornamental trees, or large deciduous or evergreen shrubs or combination thereof REQUIRED

- Proposed – 28 canopy trees; 17 ornamental trees; 25 large shrubs; and 15 evergreen trees. Majority of plants are planted on 3-foot-high berm. Plants are located within the first 30 feet of the property. Lawn and mulched areas are not labeled.
- Meets Requirement? – Yes
- Comment – All lawn areas and mulched areas to be labeled on Construction Plan set.

Pleasant Valley Road (Net street frontage (excludes wetlands) = 1,003 lineal feet)

- Required – Within the first 30 feet of the property, 1 canopy tree for every 30 ft of lineal of frontage; Planning Commission may approve up to 50% substitution of canopy trees with evergreen trees; PLUS 3 small deciduous ornamental trees or large deciduous or evergreen shrubs for the initial 40 ft., and 1 per 20 ft. thereafter. (1,003 lineal feet of frontage)
  EQUATES TO: 33 canopy trees and 51 additional ornamental trees or large deciduous or evergreen shrubs or combination thereof REQUIRED
  Proposed – 32 canopy trees; 18 ornamental trees; 11 large shrubs; and 16 evergreen trees (counted if within first 30 feet of property). Plants are located within the first 30 feet of the property. Lawn and mulched areas are not labeled.
- Meets Requirement? – No, for number of required canopy trees. 16 conifer trees are proposed as well.
- Comment – Planning Commission may approve of a substitution of evergreen trees for up to 50% of the canopy trees. All lawn areas and mulched areas to be labeled on Construction Plan set.

E. Buffering or Screening (Sec. 5.11.2.G.i.) – Screening between Land Uses (south property line where abutting single-family CA zoned property)

- Required – Landscape buffer shall be provided to create a year-round visual screen at least eight (8) feet in height along all adjoining boundaries of a non-residential use or a residential use of higher density and abutting a single-family residential zoned property. Evergreen trees to be planted in a staggered or clustered pattern with varying tree heights.
- Proposed – SOUTH: random groupings of existing deciduous trees to be preserved.
- Meets Requirement? – **TBD**
- Comment – **Planning Commission to determine if the proposed plan meets the intent of the screening requirement.**

F. Detention/Retention Area Landscaping (Sec. 5.11.2.H.)

- Required – Landscape materials shall be used to integrate the area with the overall landscape design; 1 canopy or evergreen tree must be planted for every 50 lineal ft. of basin perimeter as measured at the top of the bank elevation. The required trees shall be planted in a random pattern or in groupings. EQUATES TO: 24 canopy or evergreen trees/combination of REQUIRED
- Proposed – 24 canopy trees in random groupings.
- Meets Requirement? – Yes
- Comment – (none)

G. Requirements for Single Family Residential Districts (Sec. 5.11.5.C.–Subdivision Planting Requirements)

- Required – In single family platted subdivisions, residential site condominiums, or non-residential subdivisions, 1 street tree required, for every 35 feet of frontage, with tree located between the sidewalk and curb. Minimum 4-foot-wide area required between the sidewalk and back of curb.
- Proposed – 1-2 street trees per unit (short dimension of lot) and additional street trees on corner lots (long dimension of lot). Spacing varies between 25 ft. to 40 ft. Width of area between sidewalk and back of curb averages approximately 12 feet.
- Meets Requirement? – Yes

- Comments (none)

H. Requirements for Single Family Residential Districts (Sec. 5.11.6.B.)
- Required – Single Family Residential properties are encouraged to plant and maintain landscaping which provides a good street side appearance. All unpaved portions of the front yard are to be planted with suitable live plan material (grass, groundcover, and shrubs) and extending to any abutting street pavement edge.
- Proposed – A typical landscape plan for a residential lot was not provided.
- Meets Requirement? – **TBD**
- Comments – Applicant to provide a typical landscape plan for a residential lot on the Construction Plan set.

Other site details

Landscaped berm along adjacent property (vacant 7.407-acre lot at Highland Rd. and Pleasant Valley Rd.)
The landscape plan shows a 3-foot high landscape berm, along the adjacent property lines of the vacant lot, located at Highland Road and Pleasant Valley Road. The vacant lot is zoned CA (Conservation Agricultural). The berm is planted with lawn and a double row of evergreen trees with tree heights varying from 8 feet to 12 feet at the time of planting. The landscaped berm serves as a buffer for the residential lots located along the eastern and northern boundaries of the planned development (behind lots #60-68 and lots #158-167).

Lighting
Street lighting is proposed and detailed information for the light fixture is found on Sheet C18. Information on the pole height and pole color are not provided. Sheet C18 states ten (10) streetlights are proposed; however, the site plans do not show the streetlight locations. An elevation drawing of the pole and luminaire, with the total height stated (light fixture and pole) should be included in the Construction Plan set, as well as a plan showing the streetlight locations.

Architecture/Building Materials (Sec. 5.24)
Architectural standards for façade materials are not provided in Section 5.24 for single-family buildings. Elevations and floor plans are provided. The elevations only show the front of the house and partial view on one side of the house. The façade materials are not stated on the elevations. The façade materials generally include siding (horizontal orientation and board and batten), shake siding, and brick or stone as accent products. The product colors include shades of taupe/beige, grey, blue, and green. Brick and stone veneer products are offered in earthtone colors. Façade material percentages are not required to be submitted.

Homes constructed with a ten (10) foot separation will include 1-hour fire rated exterior side walls. Per the applicant's letter dated May 9, 2025.

The square footage range of the homes is 1,957 to 2,065 square feet.

Other Requirements-Zoning Ordinance Standards
Nothing additional at this time.

Hartland Township DPW Review
The DPW Director has provided a review letter dated May 22, 2025.

Hartland Township Engineer's Review (Spaulding DeDecker)
The Township Engineer (SDA) has provided a review letter dated May 28, 2025.

Hartland Deerfield Fire Authority Review
The Hartland Deerfield Fire Authority has provided comments in the review letter dated October 8, 2024.

Attachments:
1. Township DPW review letter 05.22.2025 – PDF version
2. Township Engineer (SDA) review letter 05.28.2025 – PDF version
3. Hartland Deerfield Fire Authority review letter 10.08.2024 – PDF version
4. Applicant's Response to Fire Dept comments 05.09.2025
5. Project Summary from Applicant 05.21.2025 – PDF version
6. Wetland Delineation Report 12.04.2024 – PDF version
7. Executive Summary TIS 03.07.2025 – PDF version
8. MDOT comments Sawyer Ridge – PDF version
9. LCRC comments Sawyer Ridge – PDF version
10. LCRC Site Distance Review 04.14.2025 – PDF version
11. Park Bench Cut Sheet – PDF version
12. Play Structure Cut Sheet – PDF version
13. Elevations & Floor Plans 02.25.2025 – PDF version
14. Sawyer Ridge & Highland Reserve Exhibit – PDF version
15. Site Plans dated 05.13.2025

CC:
Spaulding DeDecker, Twp Engineer (via email)
Scott Hable, Twp DPW Director (via email)
A. Carroll, Hartland FD Fire Chief (via email)

T:\PLANNING DEPARTMENT\PLANNING COMMISSION\2025 Planning Commission Activity\Site Plan Applications\SP PD #25-004 Sawyer Ridge PD Preliminary\Staff reports\Planning Commission\SP PD #25-004 staff report PH PC 06.05.2025.docx

DEPARTMENT OF PUBLIC WORKS

Scott Hable, Public Works Director
2655 Clark Road
Hartland MI 48353
Phone: (810) 632-7498

TO:	Planning Department
DATE:	5/22/2025
DEVELOPMENT NAME:	Sawyer Ridge
PIN#:	4708-26-200-007
APPLICATION #:	#25-004
REVIEW TYPE:	Site Plan

Site Plans for the proposed Sawyer Ridge Development Site Plan proposes 172 single family homes in with 1 REU is required in Water and Sewer for each lot. Thus totaling 172 REU's for the proposed project. Currently the parcel has 320 Sewer REU's and 0 Water REU's, and sufficient REU's will need to be purchased prior to development of each unit.

	Sewer REUs	Water REUs(Dist.2)
Owned	320	0
Required	172	172
REU Difference	148	172
Cost Each	$9,439.20	$6,829.67
Total Due	$0	$1,174,703.24
TOTAL REU COST	**$1,174,703.24**	

Hartland Township Public Works approves the Highland Reserve Development site plan subject to inclusion of the following details on the construction plans:

1. Sanitary sewer material and sizes and connection detail sheet
2. Monitoring manhole for sewer connection and location if required
3. Utility easements noted as public or private.
4. All watermain and leads installed to meet Township specifications
5. Approval of the Livingston County Drain Commission.

An appropriate sized water meter, horn, and MXU sending unit will need to be purchased from the township at time of each units construction.

Please feel free to contact me with any further questions or comments regarding this matter.

Scott Hable
Public Works Director

Site Plan Review

May 28, 2025

Troy Langer
Planning Director
Hartland Township, MI

Re: Sawyer Ridge – Site Plan Review #2
SDA Review No. HL22-127

Dear Troy:

We have received the preliminary site plan submittal for the above referenced project prepared by Seiber Keast Lehner dated May 13, 2025, and received by our office on May 21, 2025. The plans were reviewed in accordance with Hartland Township Engineering Standards and the following comments are our observations.

Recommendation
Approval of the Site Plan is recommended with the conditions listed below.

Comments:
The preliminary Site Plan meets the general requirements of the Hartland Township Code of Ordinances and the Engineering Design Manual.

Project Summary

- Construction of a residential site with 172 units south of Highland Road and on the east side of Pleasant Valley Road. Site access would be provided via private streets with access drives from Highland Road (M-59) and Pleasant Valley Road. It is noted that the site is 68.34 acres.
- Water service would be provided by two connection points. A proposed 12-inch extension from the currently under review 12-inch water main on the south side of Highland Road (M-59) and a proposed 12-inch extension from the currently under review 12-inch main along Melsetter St. Domestic leads would be provided to serve the proposed units along with additional hydrants on-site.
- Sanitary sewer service would be provided by a sanitary sewer force main and pump station from the existing 12-inch sanitary sewer along Highland Road (M-59). Service leads would be provided to serve the proposed units.
- Storm water would be collected by multiple storm sewer collection systems and discharged to one on-site detention basin and existing wetlands.

General

1. The Highland Reserve residential development is currently under engineering review, 3 Phases are expected for this project. Phase 1 of the Sawyer Ridge project is proposed to connect to Phase 2 of the Highland Reserve project. Coordination with the Township and the Highland Reserve development regarding the timing of the phases will be required.
2. The developer provided a wetland delineation report done by Barr Engineering. The report indicated six wetlands on site and reported three wetlands, C, D, and E, as regulated wetlands. An EGLE permit will be required for all work within the regulated wetlands. Wetland D is proposed to be filled (0.45 acres). Restoration or creation of wetland mitigation for impact on

wetlands may be required by EGLE. This may impact on the footprint of the proposed park or usable open space.

Water Main

1. The proposed water main is connected to the proposed 12-inch water mains along Highland Road and future Melsetter St, proposed as part of the Highland Reserve development. This project is currently under engineering review, and in the event of a delay in construction or discontinuance, the Sawyer Ridge project will need to extend across the frontage of the property along Highland Rd/ M-59 from the water main located at Hartland Glen Ln and Highland Road (which it approximately 1,400 ft of water main). The Sawyer Ridge development is proposing to extend the water main along Highland Road and Pleasant Valley, which follows the Township code. Water mains in new developments shall be installed from boundary to boundary in abutting road rights-of-way, on roads the fronts, on interior streets, and at other locations as may be deemed necessary by the Township for future extensions.
2. The water main along Timber Trail connected from the future 12-inch main at the Highland Reserve Development to Pleasant Valley shall be a 12-inch main to comply with the Township's Master Plan.

Storm Drainage & Site Grading

1. Calculations and drainage plans were provided. Based on the calculations provided it appears a larger basin will be required to accommodate for the required 100-year storm volume of 448,357 cu ft, as the basin can only provide 236,922 cu ft. During engineering review, the stormwater management systems will need to be evaluated and approved by the Livingston County Drain Commission. If it is determined that a larger pond footprint is required, it could potentially impact the number of units proposed.
2. On-site drainage must be captured within the proposed development. The swale behind lots 160-167 appear to only contain a portion of the onsite run off. Some run off is still designed to run off off-site. During engineering review this must be addressed with revised swale grading or additional storm sewer.

Paving

1. Private roads and driveways shall meet the requirement of Hartland Township's Zoning Ordinance Article 30.00, unless amended herein. The private road ordinance states that LCRC requirements must be met when serving greater than 25 units. The roads at this development were designed 30' wide and a 66-foot wide R.O.W. with sidewalks per County standards.
2. Private roads longer than six-hundred (600) feet shall provide one or more additional easements which shall extend from the primary private road easement to the adjoining parcels, unless the Township determines that it would be impractical or not beneficial to connect to existing or future public or private roads on adjoining parcels. The purpose of this requirement is to facilitate the development of a continuous road network.
3. A circulation plan was provided. It will need to be reviewed by the Hartland Fire Marshall, access appears to be adequate within the site.

Sanitary Sewer

1. All sanitary sewer design requirements are to follow current Livingston County Drain Commissioner's (LCDC) standards and details. LCDC sanitary sewer detail sheets shall be attached to the proposed plans when applicable.

Permits and Agreements Required

Based on those improvements depicted on the plans, the following permits and agreements may be needed to be provided for review and approval:

- A draft copy of the Storm Drain Agreement.
- A draft copy of the 20-foot wide easement for water main construction.
- A draft copy of the 20-foot wide easement for sanitary sewer construction.
- A Land Use Permit will be granted after the pre-construction meeting.
- Livingston County Drain Commissioner approval and permit.
- Soil Erosion and Sedimentation permit from Livingston County Drain Commissioner.
- Livingston County Roads permit for any work within the County ROW.
- Genesee County Drain Commissioner's Office IPP Discharge Permit approval.
- NPDES Notice of Coverage Documentation
- EGLE Permit for all public sanitary sewer installation.
- EGLE Permit for all public water main installation.
- MDOT Permit for any work within the Highland Road (M-59) ROW.

Please be aware that additional comments may arise with the submittal of the requested revisions and/or additional information.

The comments are not to be construed as approvals and are not necessarily conclusive. The final engineering plans for this development are to be prepared in accordance with the Hartland Township Engineering Design Standards and 2021 Hartland Township Standard Details. Sanitary sewer and water benefit fees may be applicable for this project.

If you have any questions regarding this letter, please contact Luisa Amici at (248) 844-5400 with any questions.

Sincerely,

SPALDING DEDECKER

Luisa Amici
Engineer

Mark Collins, PE
Project Manager

cc: Martha Wyatt, Hartland Township Planner – Landscape Architect (via email)

HARTLAND DEERFIELD FIRE AUTHORITY

HARTLAND AREA FIRE DEPT.

3205 Hartland Road
Hartland, MI. 48353-1825

Voice: (810) 632-7676
E-Mail: firemarshal@hartlandareafire.com

October 8, 2024

To: Hartland Township Planning Commission
Attn: Planning Department

Re: Planned Development at Highland Rd. and Pleasant Valley

The Hartland Deerfield Fire Authority has reviewed the Site Plan for the Planned Development at Highland Rd. and Pleasant Valley dated July 16, 2024.

These are the following are recommendations:

1. Ensure turning radius is a minimum of fifty feet.
2. Any homes within twenty feet of another, the sides within twenty feet has Class I material as discussed with the current owner.

Any revised drawings affecting the Fire Department must be submitted for review.

Jon Dehanke
Fire Marshal

M/I HOMES

Welcome to Better

May 9, 2025

Troy Langer
Hartland Township
2655 Clark Rd
Hartland, MI 48353

RE: Sawyer Ridge PD – Separation Distance Between Homes

Troy,

On October 8, 2024, Fire Marshal Dehanke issued a memo stating that any homes within twenty feet of another will require the sides to have Class I fire rated building materials. We respectfully request that the Sawyer Ridge PD be approved with a provision that homes will be spaced with a minimum 10' separation. Homes constructed with a 10' separation, will include 1-hour fire rated exterior side walls.

The proposed side setbacks for the Sawyer Ridge PD are 5' with a minimum 10' separation between buildings. The minimum building envelope that a home can be built in will be 50' wide. While minimum 10' home separations are proposed, it is envisioned that the majority of the homes will be greater than 10' apart. Most of the homes that will be offered will range between 38'-40' wide. Having the extra building envelope width afforded by the 10' separation and 5' side setbacks will allow for a greater variety in home product offerings and allow for the flexibility of adding a 3rd car garage on some homes.

It is my understanding that the Highland Reserve PD was approved for the same fire separation provision that we are requesting.

We appreciate your consideration.

Respectfully,

David Straub
M/I Homes of Michigan LLC
P: (248)- 303-0455
E: dstraub@mihomes.com

SAWYER RIDGE

PLANNED DEVELOPMENT
May 21, 2025

PROJECT SUMMARY
This proposed project contains 71.107 acres and is situated at the southwest corner of M-59 & Pleasant Valley Road (Parcel ID 08-26-200-007). The property is currently zoned SPA (Special Planning Area) and we are proposing a Planned Development zoning as outlined in the zoning ordinance Section 3.1.18. The proposed community will be detached single family residential for sale units.

The project proposes the preservation of natural features and valuable open space areas, while incorporating a sustainable and healthy walkable neighborhood design that includes concrete sidewalks along both sides of the private streets, a playground with benches and natural mowed walking paths throughout the neighborhood.

PREVIOUS CONCEPTUAL PLAN REVIEW
The Hartland Township Planning Commission conducted a Conceptual Review of the proposed PD on November 7, 2024. The Hartland Township Board of Trustees subsequently conducted a Conceptual Review of the proposed PD on November 19, 2024. Comments and direction received during these conceptual reviews have been incorporated in the Preliminary Review Application submittal.

RECONGNIZABLE BENEFITS
Sawyer Ridge will be providing low maintenance single family housing that is in demand within Hartland Township. The Site provides easy access to major roads and is located in an under serviced area. With the use of clustering the homes it allows for preservation of the natural features of existing woodlands & wetlands and providing passive and active open spaces.

UNIFIED CONTROL
This proposed development shall be under single ownership and control with the applicant being M/I Homes. They will be responsible for completing the project and its conformity with the Planned Development Ordinance.

MINIMUM YARD REQUIREMENTS
We are requesting approval by the Township Board with recommendation from the Planning Commission for the following changes to the minimum yard requirements:

- Lot size minimum 7,200 sf
- Lot minimum width 60 feet wide
- Front setback interior streets 25 feet

- Rear setback 20 feet
- Side setback 5 feet*
- Adjacent to public road minimum required is 50 feet and we are proposing 80 feet minimum along M-59 to provide a larger buffer.

*With side setbacks proposed with 5 feet minimum with 10 feet between homes it is anticipated that the building separation will be larger based on the proposed product type being 38 feet wide with a 50-foot buildable area. This allows a greater variety of homes and produces better streetscape. It also allows the for the ability to offer a 3rd car garage option if desired.

NATURAL FEATURES & OPEN SPACE PRESERVATION

Based on the wetland delineation there are 13.08 acres of regulated wetlands on site. The proposed residential development was designed to have minimum impact to the wetlands, but a 0.96-acre wetland fill will be required to provide required road access which will be permitted through EGLE. This plan saves 93% of the onsite regulated wetlands.

The Planned Development requires 25% (17.09 acres) of the Site to be preserved as open space, we are providing 38.2% (26.08 acres) which is well over the requirement. The open space is made up of wetlands, detention basins, uplands, and usable open space. There is also a requirement to provide 10% (6.83 acres) of the Site as usable open space, we are providing 13.3% (9.10 acres). The usable open space is activated by walking paths and a park area.

A detailed inventory of existing trees present across the subject property, along with indications of which trees will be preserved with the project, is included in the Preliminary Site Plan set. Additionally, a Landscape Plan identifying required street trees, detention basing landscaping, buffer plantings and required greenbelt landscaping is provided as well.

TRAFFIC IMPACT / PRIVATE ROADS

A professional Traffic Impact Study (TIS) of the overall PD was completed by Fishbeck and a copy of this report is attached with the application package. We are proposing an entrance to M-59 & Pleasant Valley Road with an internal connection to the proposed Highland Reserve project to the west. Our traffic consultant has been working with MDOT to meet their standards for Geometric Design for our approach to M-59.

All internal streets serving the PD will be private, however, will be constructed in accordance with the Livingston County Road Commission standards with a width of 30 feet from back of curb to back of curb.

RESIDENTIAL COMMUNITY ORGANIZATION AND MAINTENANCE

The PD will be governed by a Master Deed and Bylaws. A Homeowner's Association (HOA) will be established with the scope of authority that includes maintenance of the private roads, open space areas, storm water areas, architectural review, enforcement of community restrictions, and financial management. Each homeowner will pay a modest annual fee for the operation of the HOA.

FISCAL IMPACT

Sawyer Ridge residential community at full build out will consist of 172 homes and add an estimated $75 million dollars in assessed value to Hartland Township. With an estimated $5,000/year per home in property tax generation it is estimated $880,000/year for full build out. With each Sawyer Ridge home having a minimum of 3 bedrooms and 2-1/2 bathrooms, it is estimated the average household size will be 3.0-3.5 individuals per home, or 600 total residents at full build-out. It is anticipated that there will be 1.0-2.0 children per home that would equate to 172-344 children upon full development. These additional children integrated into the public school system is not anticipated to adversely impact the capacity of the Hartland Public School system. With these 172 homes it is estimated that the 600 new residents will help support the local economy and contribute to the vibrancy and growth of Hartland Township.

SUMMARY/CONCLUSIONS

The Sawyer Ridge PD project proposes a development concept that will deliver attainably priced housing that is compatible with the Hartland Township Comprehensive Plan and surrounding land use pattern. There will not be an unreasonable increase in the use of public services, facilities, and utilities, and will not place an unreasonable burden upon the subject site, surrounding land, property owners, or the natural environment. The overall project design incorporates recognizable benefits to the owners of the project and overall community beyond what would be achieved under conventional zoning including substantial open space preservation (26.08 acres or 38.2% of the overall property) and a sustainable and healthy walkable neighborhood design.

December 4, 2024

David Straub
MI Homes of Michigan LLC
40950 Woodward Avenue Suite 203
Bloomfield Hills, MI, 48304

Re: Wetland Delineation Report – M59 & Pleasant Valley SW, Livingston

Dear Mr. Straub,

Pursuant to your request, Barr Engineering Co. ("Barr") conducted a wetland delineation at the above-referenced site on November 12, 2024. The purpose of this report is to summarize the results of that work.

1.0 Area of Investigation Description

The Area of Investigation ("AOI") includes parcel number 08-26-200-007. Surrounding land uses include row-crop agriculture, residential and recreational development, forested area, wetlands, and an active sand and gravel mine. Within the AOI, there is planted soybean, wetlands, and upland forest.

Figure 1. Approximate Area of Investigation

1.1 Desktop Review

Barr conducted a desktop review of the site to evaluate aerial imagery, topography, soil types, and mapped wetlands within the site prior to the wetland delineation. As part of the desktop review, Barr staff reviewed resources such as aerial photography (Figure 1), the Natural Resources Conservation Service ("NRCS") Web Soil Survey ("WSS") Soil Units (Figure 2), and the Michigan Department of Environment, Great Lakes, and Energy ("EGLE") Wetlands Map Viewer (Figure 3).

The soil units present on site include 33.6% well drained Fox sandy loam, 2 to 6 percent (FoB), 27.5% well drained Fox sandy loam, 0 to 2 percent slopes (FoA), 14.8% very poorly drained Carlisle muck, 0 to 2 percent slopes (CarabA), 14.6% somewhat poorly drained Brady loamy sand, 0 to 2 percent slopes (BuA), and 5.0% very poorly drained Rifle muck (Rf), along with smaller amounts of other soil types.

Figure 2. Web Soil Survey Soil Map Units

The EGLE Wetlands Map Viewer showed both wetland soils and wetlands as identified by the National Wetlands Inventory ("NWI") and Michigan Resource Inventory System ("MIRIS") on the site.

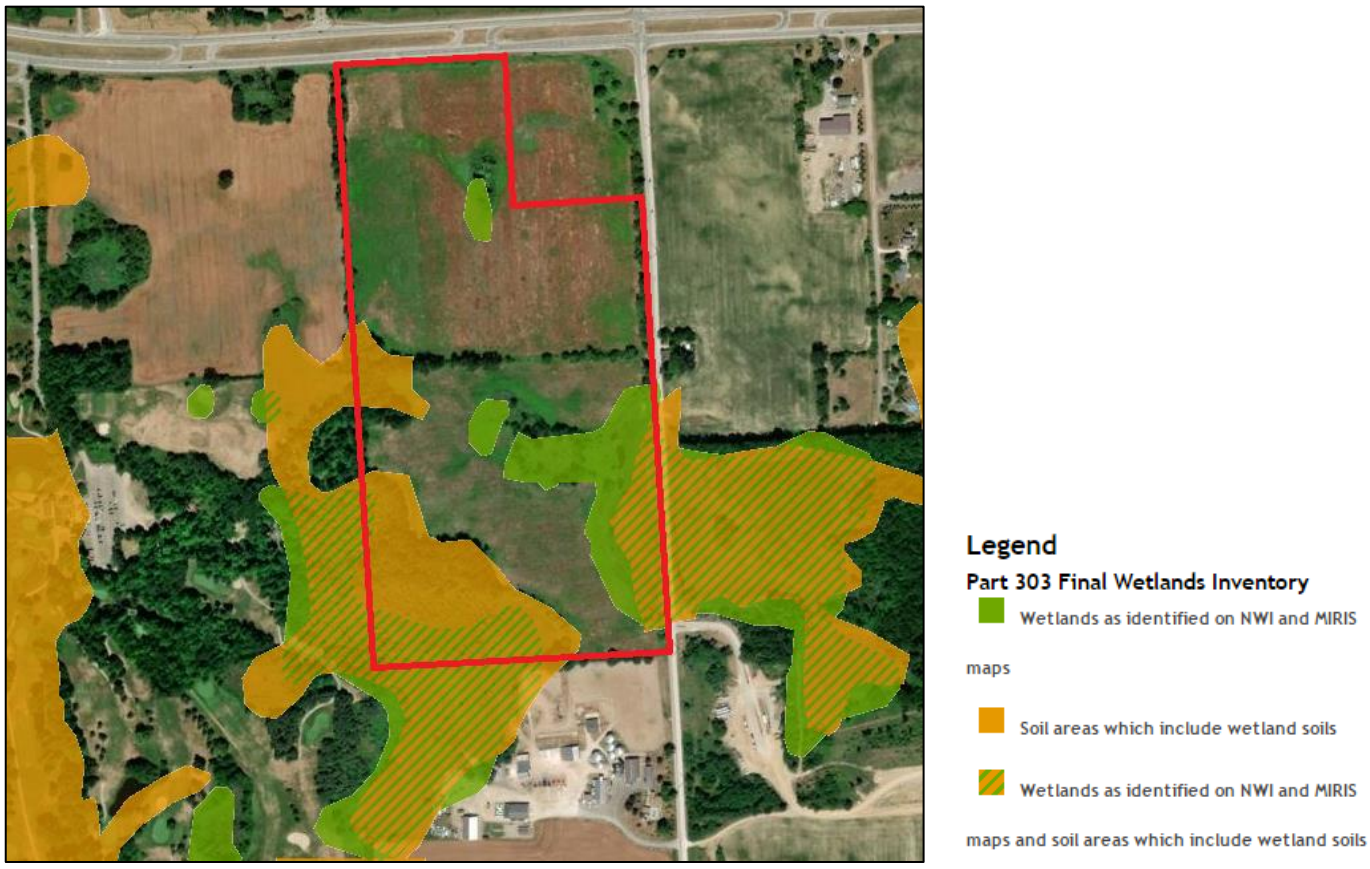


Figure 3. EGLE Wetlands Map Viewer

1.2 Methodology

The wetland delineation was conducted in a manner consistent with the *Corps of Engineers Wetlands Delineation Manual* (USACE 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral Northeast Region (Version 2.0,* USACE 2012*).* Wetland delineation procedures outlined in these manuals require the evaluation of on-site vegetation, soils, and hydrologic characteristics. Site observations are described in the sections below. The wetland boundaries were flagged in the field with alphanumerically labeled pink pin flags and/or pink flagging tape. Flagging was located using a GPS unit capable of sub-meter accuracy.

1.3 Results

This site includes palustrine (freshwater) emergent and scrub-shrub wetland habitats. Figure 4 (below and attached) depicts the locations of the wetland areas encountered on site and the attached U.S. Army Corps of Engineers (USACE) wetland data forms provide additional wetland detail.

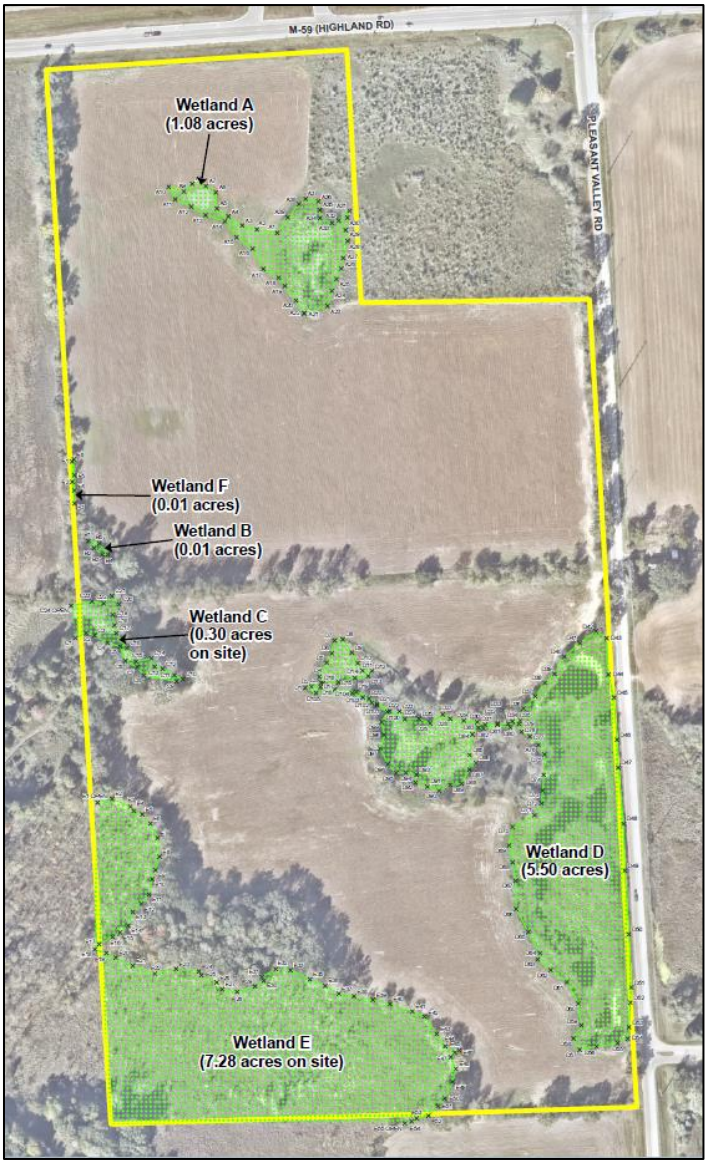


Figure 4. Excerpt from Barr Wetland Delineation Map

Vegetation, Soil, and Hydrology

Wetland A

Wetland A is a palustrine emergent/scrub-shrub wetland located in the northern portion of the site, bounded by flags A1 – A39. Vegetation encountered in this area included black willow (*Salix nigra*), sandbar willow (*Salix interior*), reed canary grass (*Phalaris arundinacea*), duckweed (*Lemna minor*), and water smartweed (*Persicaria amphibia*). In addition to wetland vegetation, indicators of wetland soils and hydrology were encountered at this location.

Wetland B

Wetland B is a palustrine emergent/scrub-shrub wetland located west-centrally in the site, bounded by flags B1 – B5. Vegetation encountered in this area included ash-leaved maple (*Acer negundo*), green ash (*Fraxinus pennsylvanica*), panicled aster (*Symphyotrichum lanceolatum*), sweet wood-reed (*Cinna*

arundinacea), fringed yellow-loosestrife (*Lysimachia ciliata*), glossy false buckthorn (*Frangula alnus*), and bearded sedge (*Carex comosa*). In addition to wetland vegetation, indicators of wetland soils and hydrology were encountered at this location.

Wetland C

Wetland C is a palustrine emergent wetland located west-centrally in the site, bounded by flags C1 – C24. Vegetation encountered in this area included spinulose wood fern (*Dryopteris carthusiana*), American elm (*Ulmus americana*), green ash, sweet wood-reed, bluestem goldenrod (*Solidago caesia*), fowl-manna grass (*Glyceria striata*), and small-spike false nettle (*Boehmeria cylindrica*). In addition to wetland vegetation, indicators of wetland soils and hydrology were encountered at this location.

Wetland D

Wetland D is a palustrine emergent wetland located east-centrally in the site, bounded by flags D1 – D105. Vegetation encountered in this area included black willow, common reed (*Phragmites australis subsp. australis*), reed canary grass, duckweed, bearded sedge, and dock-leaf smartweed (*Persicaria lapathifolia*). In addition to wetland vegetation, indicators of wetland soils and hydrology were encountered at this location.

Wetland E

Wetland E is a palustrine emergent/scrub-shrub wetland located west-centrally in the site, bounded by flags E1 – E55. Vegetation encountered in this area included yellow birch (*Betula alleghaniensis*), black cherry (*Prunus serotina*), American basswood (*Tilia americana*), white-avens (*Geum canadense*), sweet wood-reed, skunk-cabbage (*Symplocarpus foetidus*), black ash (*Fraxinus nigra*), tall-hairy grooveburr (*Agrimonia gryposepela*), and panicled aster. In addition to wetland vegetation, indicators of wetland soils and hydrology were encountered at this location.

Wetland F

Wetland F is a palustrine emergent wetland located east-centrally in the site, bounded by flags F1 – F6. Vegetation encountered at this location included ash-leaved maple, swamp white oak (*Quercus bicolor*), green ash, sweet wood-reed, white avens, pointed broom sedge (*Carex scoparia*), eastern woodland sedge (*Carex blanda*), and reed canary grass. In addition to wetland vegetation, indicators of wetland soils and hydrology were encountered at this location.

Adjacent uplands

In general, two types of upland areas were identified.

Farm field margins contained plants such as field thistle (*Cirsium arvense*), great mullein (*Verbascum thapsus*), switchgrass (*Panicum virgatum*), snake-strawberry (*Potentilla indica*), neckweed (*Veronica peregrina*), greater Canadian St-John's wort (*Hypericum majus*), common St-John's wort (*Hypericum perforatum*), stink grass (*Eragrostis cilianensis*), lamb's-quarters (*Chenopodium album*), and annual bluegrass (*Poa annua*). No evidence of wetland hydrology or soils were identified at these locations.

Forested upland areas included plants such as American basswood, black cherry, northern red oak (*Quercus rubra*), sugar maple (*Acer saccharum*), ash-leaved maple, American elm, white ash (*Fraxinus americana*), smooth brome (*Bromus inermis*), Pennsylvania blackberry (*Rubus pensilvanicus*), eastern prickly gooseberry (*Ribes cynosbati*), ground-ivy (*Glechoma hederacea*), tall goldenrod (*Solidago altissima*), sticky-willy (*Galium aparine*), rambler rose (*Rosa multiflora*), white avens, and eastern woodland sedge. No evidence of wetland hydrology or soils were identified at these locations.

1.4. Conclusions

Based on observations of topography, vegetation, soil, and indicators of hydrology, Barr has determined that wetland habitat is present within the AOI. According to Part 303, Wetlands Protection, of the Michigan Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 303), Wetlands regulated by the State of Michigan include wetlands that are:

1. Located within 500 feet of, or having a direct surface water connection to, an inland lake, pond, river, or stream; or
2. Greater than 5 acres in size; or
3. Located within 1,000 feet of, or having a direct surface water connection to, the Great Lakes or Lake St. Clair; or
4. A water of the United States as that term is used in section 502(7) of the Federal Water Pollution Control Act, 33 USC 1362; or
5. Known to have a documented presence of an endangered or threatened species under Part 365 of State of Michigan 1994 PA 451, as amended or the Federal Endangered Species Act of 1973, Public Law 93-205; or
6. Rare or imperiled.

It is our opinion that wetlands D and E would be regulated under Part 303 as each is greater than 5 acres in size on-site. Wetland C would also be regulated as it extends off-site and appears to be part of a wetland system which is greater than 5 acres in size. Therefore, a Part 303 permit would be required to place fill or structures, excavate soil, drain surface water, or maintain a use of these wetlands.

It is our opinion that wetlands A, B, and F would not be regulated under Part 303 as they do not meet any of the above criteria. Therefore, a Part 303 permit would not be required to place fill or structures, excavate soil, drain surface water, or maintain a use of these wetlands.

Please be advised that EGLE and in some coastal cases USACE have regulatory authority regarding the wetland boundary location(s) and jurisdictional status of wetlands in the State of Michigan. Barr's wetland determination was performed in general accordance with accepted procedures for conducting wetland determinations. Barr provides no warranty, guarantee, or other agreement in respect to the period of time for which this wetland determination will remain valid. Barr's conclusions reflect our professional opinion based on the site conditions within the AOI observed during the site visits. Discrepancies may arise between current and future wetland determinations and delineations due to changes in vegetation and/or hydrology as the result of land use practices or other environmental factors, whether on-site or on adjacent or nearby properties. In addition, wetland delineations performed outside the growing season, typically from late-October until late-April, may differ from those performed at the same site during the growing season due to the presence of snow cover or frozen ground conditions. We recommend our wetland boundary determination and jurisdictional opinion be reviewed by EGLE prior to undertaking any earthmoving activity on the site.

Thank you for the opportunity to provide this wetland delineation. If you have any questions, please contact me at your convenience at 810-241-1229 and fthompson@barr.com.

Sincerely,

BARR ENGINEERING CO.

Fran Thompson
Ecologist

Attachments:

Figure 4 – Wetland Delineation
USACE Wetland Determination Data Forms

References:

U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetlands Delineation Manual.* Washington, DC.

USACE. 2012. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral Northeast (Version 2.0).* Washington, DC.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: M59 & Pleasant Valley SW City/County: Hartland/Livingston Sampling Date: 11/12/2024

Applicant/Owner: MI Homes of Michigan LLC; Hartland North and South Land Investment LLC State: MI Sampling Point: WTL A19

Investigator(s): Macy McPherson and Christian Tibaudo Section, Township, Range: Sec 03, T6N, R26E

Landform (hillside, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope %: 0-1

Subregion (LRR or MLRA): LRR L Lat: 42.6330009905748 Long: -83.7016723496065 Datum: WGS 84

Soil Map Unit Name: Brady loamy sand, 0 to 2 percent slopes NWI classification: PEM/PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- X Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 7
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 5

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: WTL A19

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	25	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
	25	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Salix interior*	30	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Phalaris arundinacea*	45	Yes	FACW
2. *Lemna minor*	5	No	OBL
3. *Persicaria amphibea*	10	No	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60	=Total Cover	
Woody Vine Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	40	x 1 =	40
FACW species	75	x 2 =	150
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	115 (A)		190 (B)
Prevalence Index = B/A =			1.65

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: WTL A19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2/1	100					Mucky Loam/Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- X Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: M59 & Pleasant Valley SW City/County: Hartland/Livingston Sampling Date: 11/12/2024

Applicant/Owner: MI Homes of Michigan LLC; Hartland North and South Land Investment LLC State: MI Sampling Point: UPL A19

Investigator(s): Macy McPherson and Christian Tibaudo Section, Township, Range: Sec 03, T6N, R26E

Landform (hillside, terrace, etc.): shoulder Local relief (concave, convex, none): convex Slope %: 2-3

Subregion (LRR or MLRA): LRR L Lat: 42.6328940515097 Long: -83.7018263460486 Datum: WGS 84

Soil Map Unit Name: Brady loamy sand, 0 to 2 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL A19

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Cirsium arvense*	10	No	FACU
2. *Verbascum thapsus*	10	No	UPL
3. *Panicum virgatum*	10	No	FAC
4. *Cerastium fontanum*	20	Yes	FACU
5. *Potentilla indica*	2	No	FACU
6. *Veronica peregrina*	35	Yes	FAC
7. *Hypericum majus*	5	No	FACW
8.			
9.			
10.			
11.			
12.			
	92 =Total Cover		
Woody Vine Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	45	x 3 =	135
FACU species	32	x 4 =	128
UPL species	10	x 5 =	50
Column Totals:	92 (A)		323 (B)
Prevalence Index = B/A =			3.51

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UPL A19

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 3/3	100					Loamy/Clayey	sandy loam
9-13	10YR 2/2	80	10YR 5/2	10	D	M	Loamy/Clayey	sandy loam
			10YR 5/8	10	C	M		Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: M59 & Pleasant Valley SW City/County: Hartland/Livingston Sampling Date: 11/12/2024

Applicant/Owner: MI Homes of Michigan LLC; Hartland North and South Land Investment LLC State: MI Sampling Point: WTL B2

Investigator(s): Macy McPherson and Christian Tibaudo Section, Township, Range: Sec 03, T6N, R26E

Landform (hillside, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope %: 0-2

Subregion (LRR or MLRA): LRR L Lat: 42.6312800709499 Long: -83.7035734945385 Datum: WGS 84

Soil Map Unit Name: Fox sandy loam, 0 to 2 percent slopes NWI classification: PEM/PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- X Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: WTL B2

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Fraxinus pennsylvanica*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Symphyotrichum lanceolatum*	45	Yes	FACW
2. *Cinna arundinacea*	25	Yes	FACW
3. *Lysimachia ciliata*	10	No	FACW
4. *Frangula alnus*	5	No	FAC
5. *Carex comosa*	5	No	OBL
6. *Fraxinus pennsylvanica*	5	No	FACW
7.			
8.			
9.			
10.			
11.			
12.			
	95	=Total Cover	
Woody Vine Stratum (Plot size: 15')			
1. *Vitis riparia*	5	Yes	FAC
2.			
3.			
4.			
	5	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	5	x 1 =	5
FACW species	95	x 2 =	190
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	125	(A)	270 (B)

Prevalence Index = B/A = 2.16

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: WTL B2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/1	90	10YR 3/4	10			Mucky Loam/Clay	
4-14	10YR 2/1	100					Mucky Loam/Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- X Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: M59 & Pleasant Valley SW City/County: Hartland/Livingston Sampling Date: 11/12/2024

Applicant/Owner: MI Homes of Michigan LLC; Hartland North and South Land Investment LLC State: MI Sampling Point: UPL B/F1

Investigator(s): Macy McPherson and Christian Tibaudo Section, Township, Range: Sec 03, T6N, R26E

Landform (hillside, terrace, etc.): shoulder Local relief (concave, convex, none): convex Slope %: 2-3

Subregion (LRR or MLRA): LRR L Lat: 42.6313941294975 Long: -83.7036149401248 Datum: WGS 84

Soil Map Unit Name: Fox sand loam, 0 to 2 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL B/F1

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	55	Yes	FAC
2. *Prunus serotina*	10	No	FACU
3.			
4.			
5.			
6.			
7.			
	65	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Fraxinus americana*	15	Yes	FACU
2. *Acer negundo*	15	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Rubus pensilvanicus*	40	Yes	FACU
2. *Bromus inermis*	35	Yes	UPL
3. *Urtica dioica*	5	No	FAC
4. *Glechoma hederacea*	10	No	FACU
5. *Galium aparine*	5	No	FACU
6. *Solidago altissima*	5	No	FACU
7.			
8.			
9.			
10.			
11.			
12.			
	100	=Total Cover	
Woody Vine Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 40.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	75	x 3 =	225
FACU species	85	x 4 =	340
UPL species	35	x 5 =	175
Column Totals:	195	(A)	740 (B)

Prevalence Index = B/A = 3.79

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UPL B/F1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 3/4	100					Loamy/Clayey	Sandy loam
11-15	10YR 6/6	70	10YR 3/2	30			Loamy/Clayey	sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: M59 & Pleasant Valley SW City/County: Hartland/Livingston Sampling Date: 11/12/2024

Applicant/Owner: MI Homes of Michigan LLC; Hartland North and South Land Investment LLC State: MI Sampling Point: WTLC18

Investigator(s): Macy McPherson and Christian Tibaudo Section, Township, Range: Sec 03, T6N, R26E

Landform (hillside, terrace, etc.): depression Local relief (concave, convex, none): concave Slope %: 0-1

Subregion (LRR or MLRA): LRR L Lat: 42.630648161027 Long: -83.7035300672004 Datum: WGS 84

Soil Map Unit Name: Fox sandy loam, 0 to 2 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 11
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 8

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: WTLC18

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Ulmus americana*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Fraxinus pennsylvanica*	30	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Dryopteris carthusiana*	5	No	FACW
2. *Cinna arundinacea*	20	Yes	FACW
3. *Solidago caesia*	5	No	FACU
4. *Glyceria striata*	20	Yes	OBL
5. *Boehmeria cylindrica*	10	No	OBL
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60	=Total Cover	
Woody Vine Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	30	x 1 =	30
FACW species	65	x 2 =	130
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	100 (A)		180 (B)

Prevalence Index = B/A = 1.80

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: WTLC18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2/1	100					Mucky Loam/Clay	
4-9	10YR 2/1	95	5YR 3/4	5			Muck	
9-13	10YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- X Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: M59 & Pleasant Valley SW City/County: Hartland/Livingston Sampling Date: 11/12/2024

Applicant/Owner: MI Homes of Michigan LLC; Hartland North and South Land Investment LLC State: MI Sampling Point: UPL C24

Investigator(s): Macy McPherson and Christian Tibaudo Section, Township, Range: Sec 03, T6N, R26E

Landform (hillside, terrace, etc.): shoulder Local relief (concave, convex, none): convex Slope %: 4-5

Subregion (LRR or MLRA): LRR L Lat: 42.6310339625558 Long: -83.7038514360224 Datum: WGS 84

Soil Map Unit Name: Fox sandy loam, 0 to 2 percent NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL C24

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Tilia americana*	15	No	FACU
2. *Acer negundo*	25	Yes	FAC
3. *Prunus serotina*	35	Yes	FACU
4. *Ulmus americana*	5	No	FACW
5.			
6.			
7.			
	80	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Ulmus americana*	15	Yes	FACW
2. *Acer negundo*	10	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	25	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Geum canadense*	10	Yes	FAC
2. *Rosa multiflora*	5	No	FACU
3. *Rubus pensilvanicus*	10	Yes	FACU
4. *Carex blanda*	5	No	FAC
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	30	=Total Cover	
Woody Vine Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	20	x 2 =	40
FAC species	50	x 3 =	150
FACU species	65	x 4 =	260
UPL species	0	x 5 =	0
Column Totals:	135 (A)		450 (B)

Prevalence Index = B/A = 3.33

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

_X_ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UPL C24

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 4/3	95	10YR 6/6	5			Loamy/Clayey	Sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: M59 & Pleasant Valley SW City/County: Hartland/Livingston Sampling Date: 11/12/2024

Applicant/Owner: MI Homes of Michigan LLC; Hartland North and South Land Investment LLC State: MI Sampling Point: WTL D40

Investigator(s): Macy McPherson and Christian Tibaudo Section, Township, Range: Sec 03, T6N, R26E

Landform (hillside, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope %: 2-3

Subregion (LRR or MLRA): LRR L Lat: 42.6304822508989 Long: -83.6994033054918 Datum: WGS 84

Soil Map Unit Name: Rifle muck NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- X Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes X	No ____	Depth (inches): 18
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 7

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: WTL D40

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix nigra*	65	Yes	OBL
2.			
3.			
4.			
5.			
6.			
7.			
	65	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
		=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Phragmites australis*	30	Yes	FACW
2. *Phalaris arundinacea*	55	Yes	FACW
3. *Persicaria lapathifolia*	10	No	FACW
4. *Typha angustifolia*	10	No	OBL
5. *Lemna minor*	5	No	OBL
6. *Carex comosa*	15	No	OBL
7.			
8.			
9.			
10.			
11.			
12.			
	125	=Total Cover	
Woody Vine Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	95	x 1 =	95
FACW species	95	x 2 =	190
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	190 (A)		285 (B)
Prevalence Index = B/A =			1.50

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: WTL D40

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 2/1	100					Mucky Loam/Clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- X Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: M59 & Pleasant Valley SW City/County: Hartland/Livingston Sampling Date: 11/12/2024

Applicant/Owner: MI Homes of Michigan LLC; Hartland North and South Land Investment LLC State: MI Sampling Point: UPL D38

Investigator(s): Macy McPherson and Christian Tibaudo Section, Township, Range: Sec 03, T6N, R26E

Landform (hillside, terrace, etc.): shoulder Local relief (concave, convex, none): concave Slope %: 2-4

Subregion (LRR or MLRA): LRR L Lat: 42.6303583037555 Long: -83.6995751742559 Datum: WGS 84

Soil Map Unit Name: Fox sandy loam, 2 to 6 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL D38

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Verbascum thapsus*	30	Yes	UPL
2. *Eragrostis cilianensis*	15	Yes	FACU
3. *Hypericum perforatum*	5	No	UPL
4. *Chenopodium album*	10	No	FACU
5. *Poa annua*	5	No	FACU
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	65 =Total Cover		
Woody Vine Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	35	x 5 =	175
Column Totals:	65 (A)		295 (B)

Prevalence Index = B/A = 4.54

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UPL D38

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/4	100					Loamy/Clayey	
8-13	10YR 4/4	95	5YR 3/4				Loamy/Clayey	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: M59 & Pleasant Valley SW City/County: Hartland/Livingston Sampling Date: 11/12/2024

Applicant/Owner: MI Homes of Michigan LLC; Hartland North and South Land Investment LLC State: MI Sampling Point: WTL E3

Investigator(s): Macy McPherson and Christian Tibaudo Section, Township, Range: Sec 03, T6N, R26E

Landform (hillside, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope %: 0-2

Subregion (LRR or MLRA): LRR L Lat: 42.6294755060048 Long: -83.7032988552008 Datum: WGS 84

Soil Map Unit Name: Carlisle muck, 0 to 2 percent slopes NWI classification: PEM/PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- X Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- X Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 8

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: WTL E3

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Betula alleghaniensis*	5	Yes	FAC
2. *Prunus serotina*	5	Yes	FACU
3. *Tilia americana*	10	Yes	FACU
4.			
5.			
6.			
7.			
	20	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Fraxinus nigra*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Symplocarpus foetidus*	5	Yes	OBL
2. *Agrimonia gryposepala*	5	Yes	FACU
3. *Leersia oryzoides*	5	Yes	OBL
4. *Geum canadense*	5	Yes	FAC
5. *Symphyotrichum lanceolatum*	5	Yes	FACW
6. *Cinna arundinacea*	5	Yes	FACW
7.			
8.			
9.			
10.			
11.			
12.			
	30	=Total Cover	
Woody Vine Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 10 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 70.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	20	x 2 =	40
FAC species	10	x 3 =	30
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	60	(A)	160 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: WTL E3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-9	10YR 2/1	100					Mucky Loam/Clay	
9-16	10YR 2/1	100					Muck	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- X Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: M59 & Pleasant Valley SW City/County: Hartland/Livingston Sampling Date: 11/12/2024

Applicant/Owner: MI Homes of Michigan LLC; Hartland North and South Land Investment LLC State: MI Sampling Point: UPL E25

Investigator(s): Macy McPherson and Christian Tibaudo Section, Township, Range: Sec 03, T6N, R26E

Landform (hillside, terrace, etc.): shoulder Local relief (concave, convex, none): convex Slope %: 2-3

Subregion (LRR or MLRA): LRR L Lat: 42.6286845747822 Long: -83.7025237501222 Datum: WGS 84

Soil Map Unit Name: Carlisle muck, 0 to 2 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: UPL E25

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus rubra*	25	Yes	FACU
2. *Prunus serotina*	25	Yes	FACU
3. *Acer saccharum*	15	Yes	FACU
4.			
5.			
6.			
7.			
	65	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Ulmus americana*	5	Yes	FACW
2. *Acer saccharum*	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	20	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Ribes cynosbati*	5	Yes	FACU
2. *Fraxinus americana*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	10	=Total Cover	
Woody Vine Stratum (Plot size: 15')			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 14.3% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	5	x 2 =	10
FAC species	0	x 3 =	0
FACU species	90	x 4 =	360
UPL species	0	x 5 =	0
Column Totals:	95	(A)	370 (B)
Prevalence Index = B/A =			3.89

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: UPL E25

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/4	100					Loamy/Clayey	sandy loam
7-14	10Yr 4/4	100					Loamy/Clayey	sandy loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Northcentral and Northeast Region
See ERDC/EL TR-12-1; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: M59 & Pleasant Valley SW City/County: Hartland/Livingston Sampling Date: 11/12/2024

Applicant/Owner: MI Homes of Michigan LLC; Hartland North and South Land Investment LLC State: MI Sampling Point: WTL F5

Investigator(s): Macy McPherson and Christian Tibaudo Section, Township, Range: Sec 03, T6N, R26E

Landform (hillside, terrace, etc.): toeslope Local relief (concave, convex, none): concave Slope %: 0-1

Subregion (LRR or MLRA): LRR L Lat: 42.6316233822149 Long: -83.7037814144361 Datum: WGS 84

Soil Map Unit Name: Fox sandy loam, 0 to 2 percent slopes NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID: ____

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- X Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): ____
Water Table Present?	Yes ____	No X	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): ____

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: WTL F5

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer negundo*	10	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	10	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15')			
1. *Quercus bicolor*	10	Yes	FACW
2. *Fraxinus pennsylvanica*	20	Yes	FACW
3.			
4.			
5.			
6.			
7.			
	30	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Cinna arundinacea*	15	Yes	FACW
2. *Geum canadense*	10	Yes	FAC
3. *Carex scoparia*	10	Yes	FACW
4. *Carex blanda*	10	Yes	FAC
5. *Phalaris arundinacea*	15	Yes	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60	=Total Cover	
Woody Vine Stratum (Plot size: 15')			
1. *Vitis riparia*			FAC
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	70	x 2 =	140
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		230 (B)

Prevalence Index = B/A = 2.30

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: WTL F5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/2	100					Loamy/Clayey	sandy loam
7-13	10YR 6/1	65	10YR 4/6	30	D	M	Loamy/Clayey	sandy loam, course sands
			10YR 2/2	5				

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- X Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Mesic Spodic (A17) **(MLRA 144A, 145, 149B)**
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)
- ___ Red Parent Material (F21) **(MLRA 145)**

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Red Parent Material (F21) **(outside MLRA 145)**
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

M/I Homes Hartland Township
Traffic Impact Study

M/I Homes of Michigan, LLC

Project No. 2500274
March 7, 2025

fishbeck
Engineers | Architects | Scientists | Constructors

fishbeck
Engineers | Architects | Scientists | Constructors

39500 MacKenzie Drive, Suite 100
Novi, Michigan 48377

248.324.2090 | fishbeck.com

M/I Homes Hartland Township
Traffic Impact Study

Prepared For:
M/I Homes of Michigan, LLC
Bloomfield Hills, MI

March 7, 2025
Project No. 2500274

Executive Summary

Fishbeck has completed a traffic impact study (TIS) for a proposed single family detached housing development located in the southwest corner of M-59 (Highland Road) and Pleasant Valley Road in Hartland Township (Township), Livingston County, Michigan. The parcel is currently vacant. Site access will be provided via one proposed driveway on eastbound (EB) M-59 (Highland Road), one proposed driveway on Pleasant Valley Road, and one proposed cross connection to the proposed Highland Reserve development to the west of this proposed development. The development will be completed in one phase, assumed to be open and fully operational in 2031.

This study was conducted according to the methodologies and guidance published by Institute of Transportation Engineers (ITE), American Association of State Highway and Transportation Officials (AASHTO), Michigan Department of Transportation (MDOT), Livingston County Road Commission (LCRC), and the Township. MDOT standards and guidelines were referenced where local standards/guidelines are not defined.

Vehicular turning movement counts (TMCs) were collected at the study intersections on Tuesday, February 4, 2025, during the weekday morning (7 a.m. to 9 a.m.) and afternoon (4 p.m. to 6 p.m.) peak periods for the roadway network. MDOT requested that traffic counts be adjusted for seasonal variations. A seasonal adjustment of 1.12 was applied during the a.m. peak hour and a seasonal adjustment of 1.14 was applied during the p.m. peak hour.

There is one known project in the site vicinity that would add traffic volumes or alter traffic patterns within the study network. The following development was included as a background development:

- Highland Reserve Development
  - Located to the west of the proposed development.

Site-generated traffic was forecast using the information and methodologies specified in the ITE *Trip Generation Manual*. Existing traffic volumes, site layout, and engineering judgement were used to develop a trip distribution model for the a.m. and p.m. peak hours for the new traffic that would be generated by the proposed development. Additionally, directions of origin, surrounding residential densities, and commuting patterns were considered.

Operational analyses were conducted for existing, background, and total future conditions based on the *Highway Capacity Manual* (HCM) 7th Edition and HCM 2000 methodologies using Synchro traffic analysis software. Synchro network models were also simulated using SimTraffic to evaluate network operations including intersection queueing.

Based on the findings of the HCM operational analyses and site traffic generation, Table 1 has the recommended background and future improvements, with and without the development, to the study intersections to mitigate traffic operation impacts.

Table 1 – Recommended Improvements

Intersection	2025 Background (without development)	2031 Future (with development)
M-59 (Highland Road) and Pleasant Valley Road/ Fenton Road	• Construct an actuated-coordinated traffic signal. • Prohibit direct left turns from EB and westbound (WB) M-59 (Highland Road). Redirect left turning traffic to adjacent crossovers.	

Table 1 – Recommended Improvements

Intersection	2025 Background (without development)	2031 Future (with development)
EB M-59 (Highland Road) and Driveway 1		• An EB right turn lane is recommended.

The opinions, findings, and conclusions expressed in this TIS are those of Fishbeck and not necessarily those of the Owner/Applicant, M/I Homes, MDOT, LCRC, or Hartland Township.

Prepared By:

Alyssa Wambold, PE, PTOE – Fishbeck

Kyle Reidsma, PE, PTOE
Project Manager – Fishbeck

1.0 Introduction

1.1 Project Overview

On behalf of M/I Homes of Michigan, LLC, Fishbeck has completed a TIS for a proposed 176 dwelling unit (DU) single family detached housing development located in the southwest corner of M-59 (Highland Road) and Pleasant Valley Road in Hartland Township (Township), Livingston County, Michigan. The parcel is currently vacant. Site access will be provided via one proposed driveway on EB M-59 (Highland Road), one proposed driveway on Pleasant Valley Road, and one proposed cross connection to the proposed Highland Reserve development to the west of this proposed development. The development will be completed in one phase, assumed to be open and fully operational in 2031. The project location and study intersections are displayed in Figure 1.

Figure 1 – Project Location and Study Network

A. M-59 (Highland Road) and Fenton Road/Pleasant Valley Road
B. EB M-59 (Highland Road) and WB to EB Crossover – 1850 feet West of Pleasant Valley Road
C. EB M-59 (Highland Road) and WB to EB Crossover – 625 feet West of Pleasant Valley Road
D. WB M-59 (Highland Road) and EB to WB Crossover – West of Pleasant Valley Road
E. WB M-59 (Highland Road) and EB to WB Crossover – East of Pleasant Valley Road
F. EB M-59 (Highland Road) and Driveway 1
G. Pleasant Valley Road and Driveway 2

Martha Wyatt

To: Martha Wyatt
Subject: FW: Proposed Subdivision

From: Heidelberg, Craig (MDOT) <HeidelbergC@michigan.gov>
Sent: Tuesday, April 15, 2025 8:25 AM
To: Troy Langer <TLanger@hartlandtwp.com>; Kim Hiller <khiller@livingstonroads.org>; Mike Goryl <mgoryl@livingstonroads.org>
Cc: Fournier, Laurent (MDOT) <FournierL@michigan.gov>
Subject: RE: Proposed Subdivision

My apologies. Too many developments in Hartland to keep track of. I was thinking of a different location.

The driveway location pushed further west as MDOT requested is acceptable to MDOT. Just waiting on the TIS for any other possible mitigations.

Sorry about that.
Thanks
Craig

From: Troy Langer <TLanger@hartlandtwp.com>
Sent: Tuesday, April 15, 2025 8:20 AM
To: Heidelberg, Craig (MDOT) <HeidelbergC@michigan.gov>; Kim Hiller <khiller@livingstonroads.org>; Mike Goryl <mgoryl@livingstonroads.org>
Cc: Fournier, Laurent (MDOT) <FournierL@michigan.gov>
Subject: RE: Proposed Subdivision

Craig,

I can certainly understand that, but earlier you indicated that the applicant was required to relocate their access to M-59, at your agencies request and the revised location complies to your request.

Are you now indicating that the location of that access drive is not accurate? I can understand that additional items may be warranted within the Right-of-way, but I'm trying to determine if the access drive location is acceptable.

Thanks.

Troy Langer
Planning Director
810.632.7498
2655 Clark Road
Hartland, MI 48353
www.hartlandtwp.com

From: Heidelberg, Craig (MDOT) <HeidelbergC@michigan.gov>
Sent: Tuesday, April 15, 2025 8:16 AM
To: Troy Langer <TLanger@hartlandtwp.com>; Kim Hiller <khiller@livingstonroads.org>; Mike Goryl <mgoryl@livingstonroads.org>
Cc: Fournier, Laurent (MDOT) <FournierL@michigan.gov>
Subject: RE: Proposed Subdivision

Troy,

To let you know, nothing has changed since the attached email for MDOT. We are still waiting on a TIS.

As you are aware, this is a busy area. So mitigations will likely be needed to the roadways to accommodate additional traffic from this site. We will see what they propose.

Thank you

Craig Heidelberg, P.E.
MDOT Brighton TSC
Operations Engineer
810-623-8341 C

Martha Wyatt

To: Martha Wyatt
Subject: FW: Proposed Subdivision

From: Troy Langer <TLanger@hartlandtwp.com>
Sent: Monday, June 2, 2025 1:47 PM
To: Martha Wyatt <MWyatt@hartlandtwp.com>
Subject: FW: Proposed Subdivision

Troy Langer
Planning Director
810.632.7498
2655 Clark Road
Hartland, MI 48353
www.hartlandtwp.com

From: Mike Goryl <mgoryl@livingstonroads.org>
Sent: Thursday, March 06, 2025 11:24 AM
To: Troy Langer <TLanger@hartlandtwp.com>
Cc: Heidelberg, Craig (MDOT) <HeidelbergC@michigan.gov>; Kim Hiller <khiller@livingstonroads.org>
Subject: RE: Proposed Subdivision

Troy,

I don't think the entrance location on Pleasant Valley will be a problem, but I also don't think we've ever done an official review. The developer or their engineer should submit a sight distance review application to our office for a formal review to lock down the location.

Mike

From: Troy Langer <TLanger@hartlandtwp.com>
Sent: Thursday, March 6, 2025 10:43 AM
To: Heidelberg, Craig (MDOT) <HeidelbergC@michigan.gov>
Cc: Mike Goryl <mgoryl@livingstonroads.org>
Subject: Proposed Subdivision

Craig,

We have a proposed single family residential subdivision proposed at the southwest corner of Highland Road (M-59) and Pleasant Valley Road.

The original concept plan depicted the connection to M-59, which would have also provided access to a 7.4 acre parcel. However, the updated "Sawyer Ridge" development shows that access to M-59 has been moved further to the west. The applicant is claiming that MDOT has requested this.

Anyway, Hartland Township does not have a Traffic Study at this point, but ultimately, we will seeking comments from MDOT (as well as the Road Commission) on the location of the access points.

Please feel free to share your comments.

Thank you.

Troy Langer
Planning Director
810.632.7498
2655 Clark Road
Hartland, MI 48353
www.hartlandtwp.com

LIVINGSTON COUNTY ROAD COMMISSION
LAND SPLIT / SIGHT DISTANCE REVIEW

****NOTE: THIS IS NOT A DRIVEWAY PERMIT****

Review Number **2509-003**

Property Owner and Applicant Information

Owner: **Yaldo Isam**
Street Address: **31000 NW Hwy Suite 110**
City, State, ZIP: **Farmington Hills, MI 48334**
Day Phone: **(248) 521-0978**

Applicant:
Company: **M/I Homes**
Address: **40950 Woodward Ave, Suite 203**
City,State: **Bloomfield Hill MI, 48304**
Applicant Phone: **(248) 221-5011**

Recommended for Approval:
Yes

Date of Review:
4/14/2025

Inspector:
Kim Hiller

Location

Township: **HartIn** Section **16** Roadway On: **Pleasant Valley Road** Side of Street: **West**
Approach Type: **Private Road** Development: **Sawyer Ridge**
Speed Limit (if posted): **55** Speed Factors (if any): **Unposted Paved Road**

Comments:

The clear vision will need to be shown on the private road approach plans and will need to be established during construction of the private road approach.

Inspector: Kim Hiller

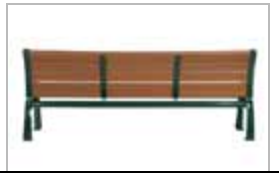
Field Measurements: Location of existing property corners from nearest crossroad: **658 and 2668 feet South of M-59**

Parcel	Prop/Emnt Corners	Access Point(s)	Sight Distance Req. Std	Min	Sight Distance Measured		S.D. Comply	CVA Comply	Neighbor Consent	Approve
Private Road		**905**	**850**	**610**	**850 North**	**850 South**	**Yes**	**No**	**No**	**Yes**

** This review is based on the survey/sketch provided to us at the time of application or during the review process. Any changes to property lines or driveway locations after the date of this review will void the review and may prevent approval or permits for any future driveway approaches.

Model # PB6-HER | Heritage Bench | 6' Length Print | Close Window



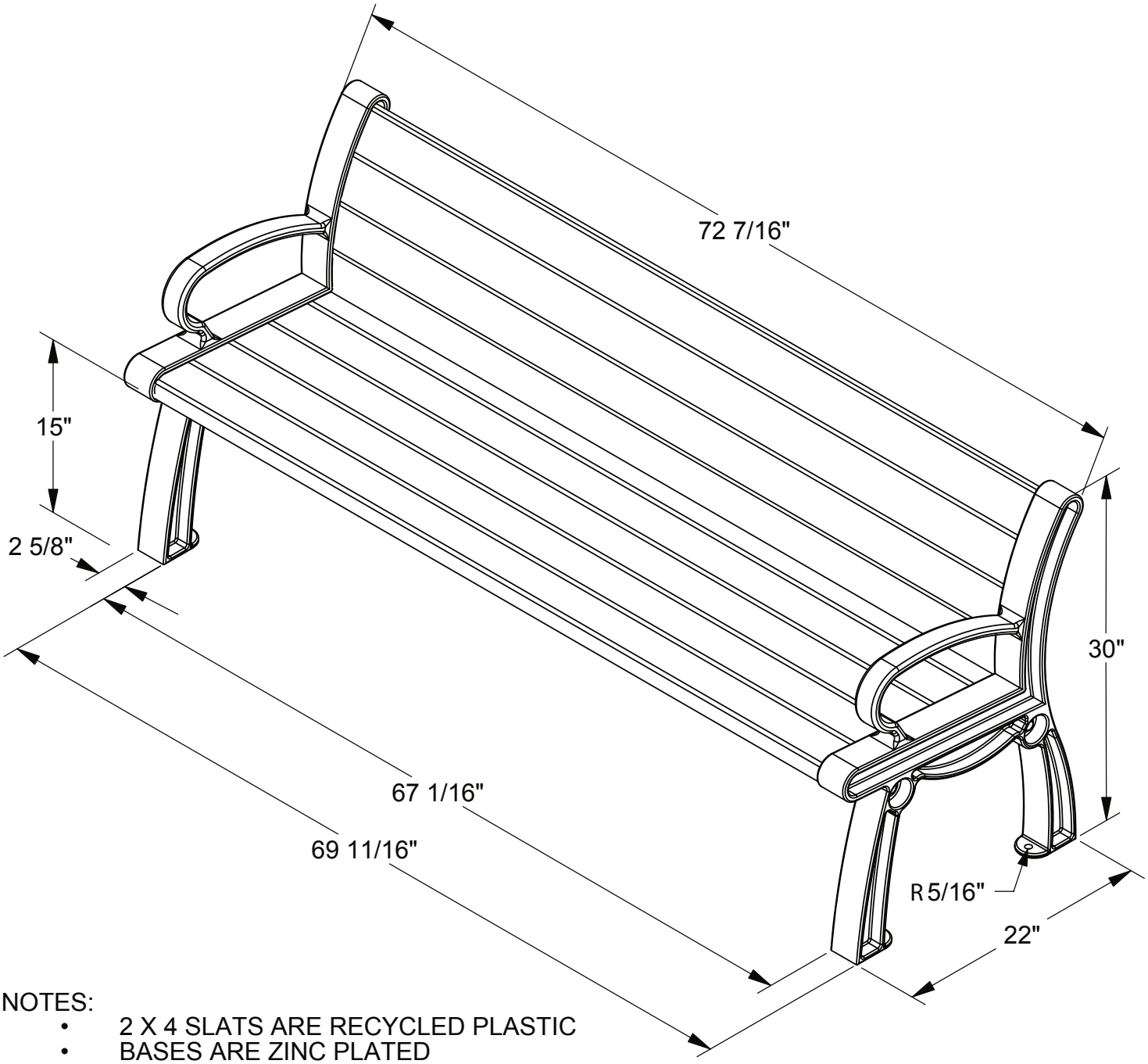


627 Amersale Drive
Naperville, IL 60563
Phone: (800) 323-5664
Fax: (630) 897-0573
sales@belson.com

Model # PB6-HER

Dimension Sheet

6’ HERITAGE BENCH



NOTES:

- 2 X 4 SLATS ARE RECYCLED PLASTIC
- BASES ARE ZINC PLATED
- ALL HOLES PRE-DRILLED AND
- ALL HARDWARE IS ZINK PLATED
- UNIT WEIGHT APPROX. 140 LBS.

Holly M/I Homes

NE VIEW

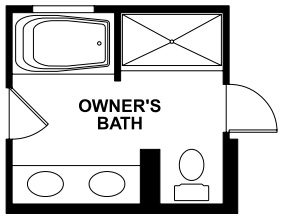
R5

FOR KIDS
AGES
5-12

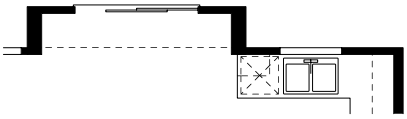
STRUCTURE # R5054682A
PROJECT # R5054682A
DATE 8/27/2024

PLAYCRAFT SYSTEM
A PLAYCORE Company

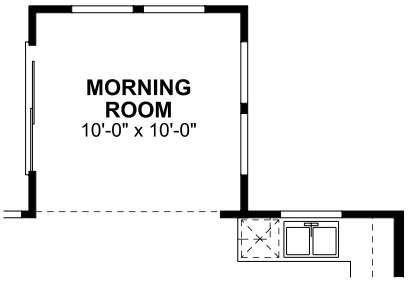
SECOND FLOOR



OPTIONAL DELUXE OWNER'S BATH



OPTIONAL BAY WINDOW



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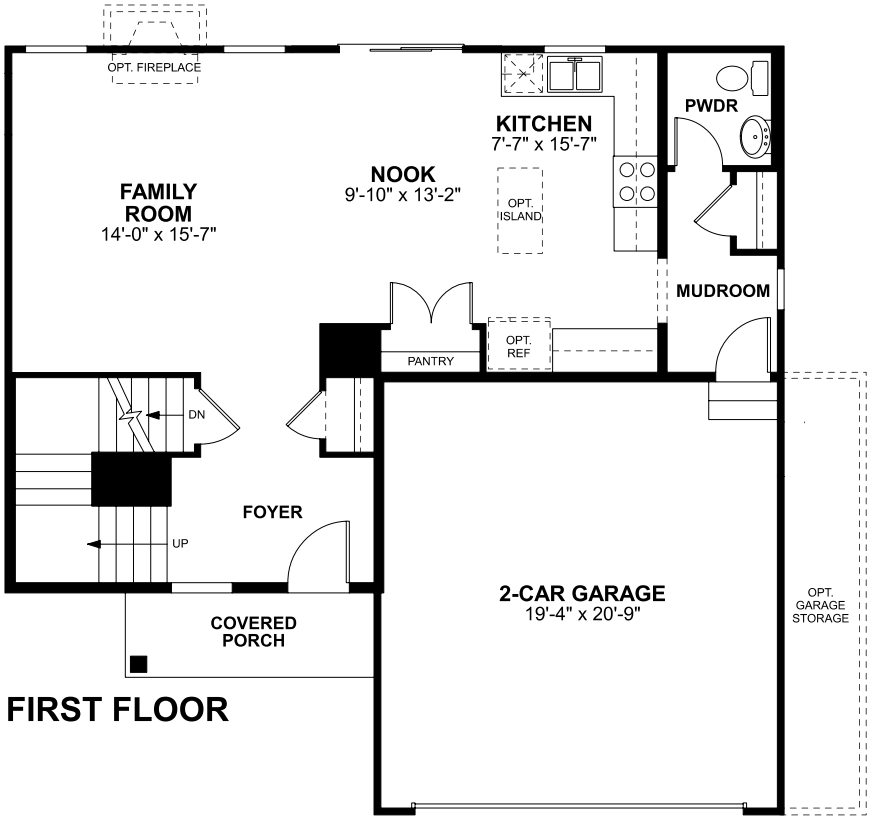

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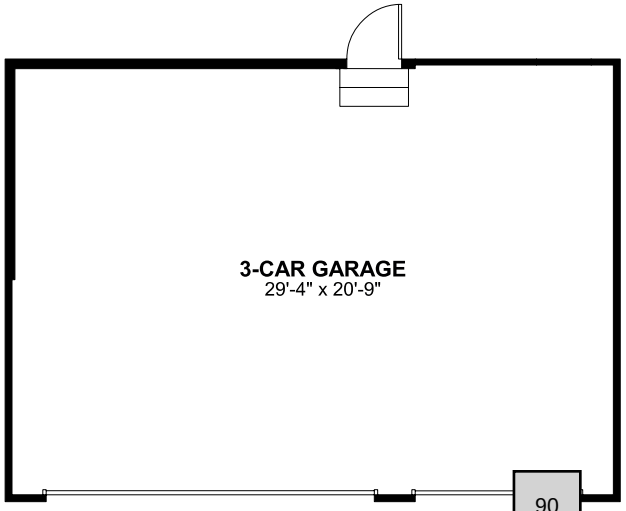

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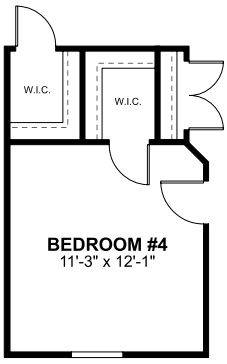

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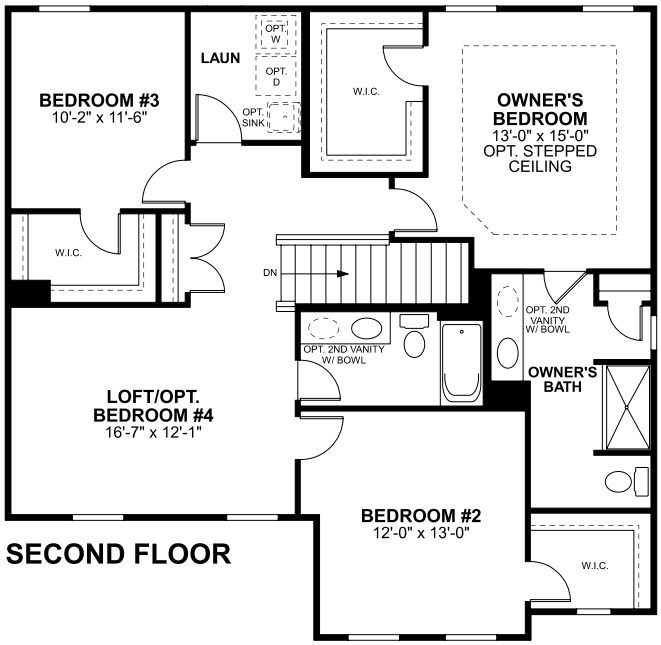

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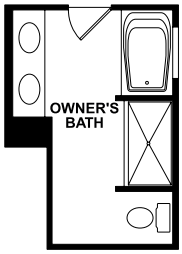

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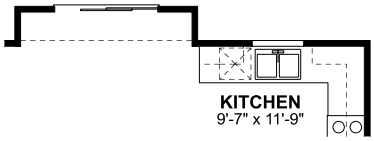

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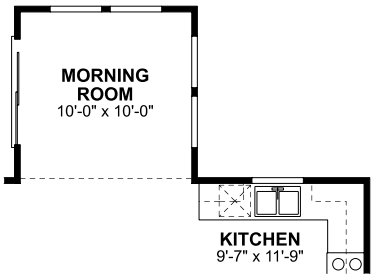

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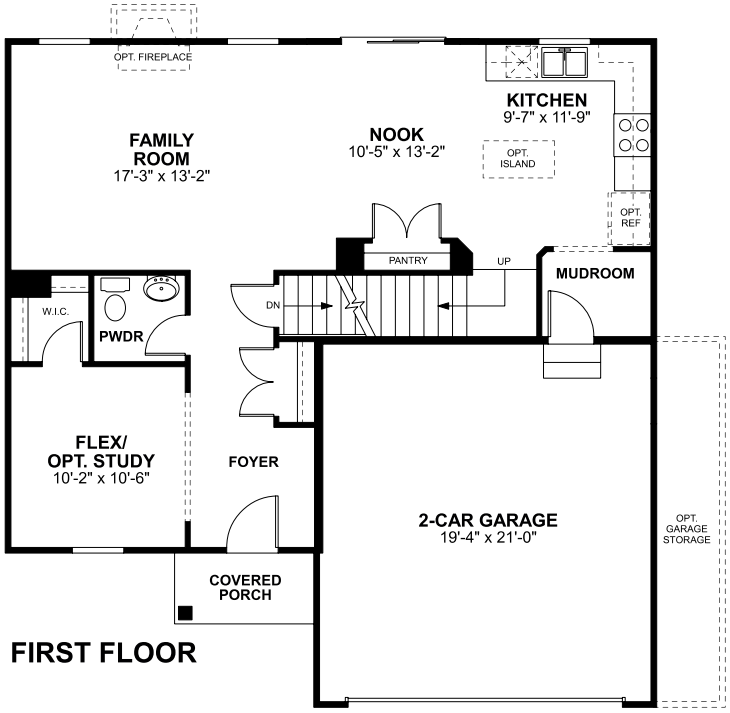

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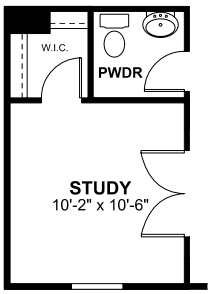

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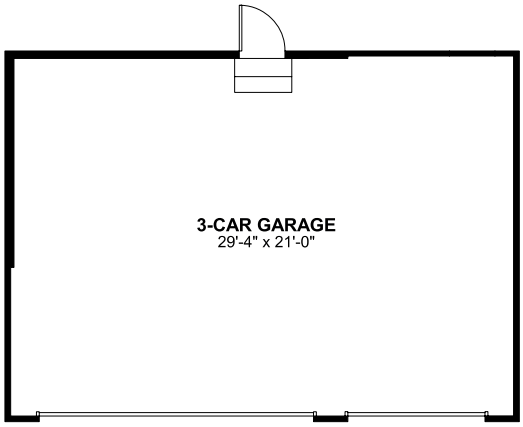

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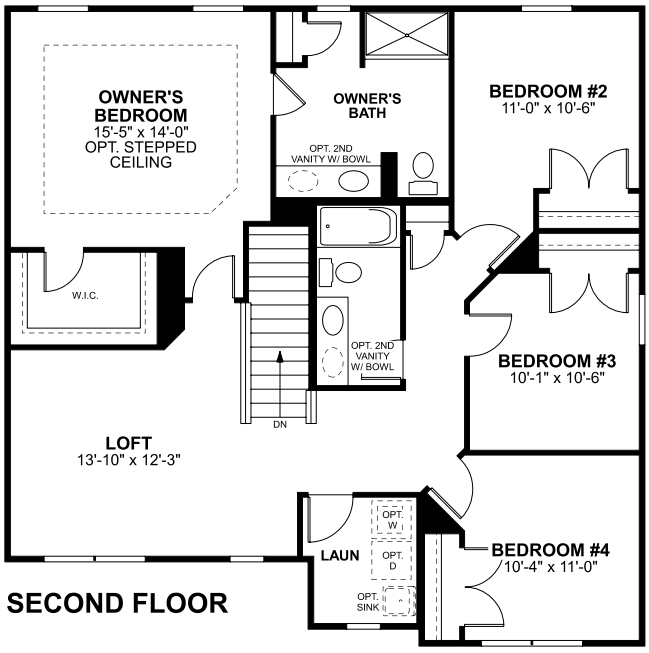

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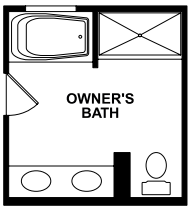

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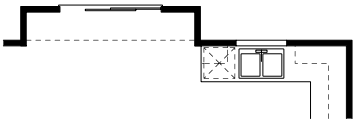

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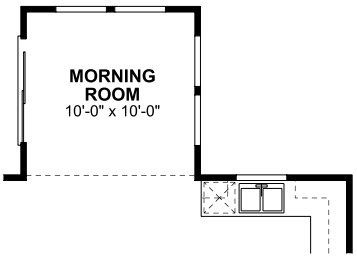

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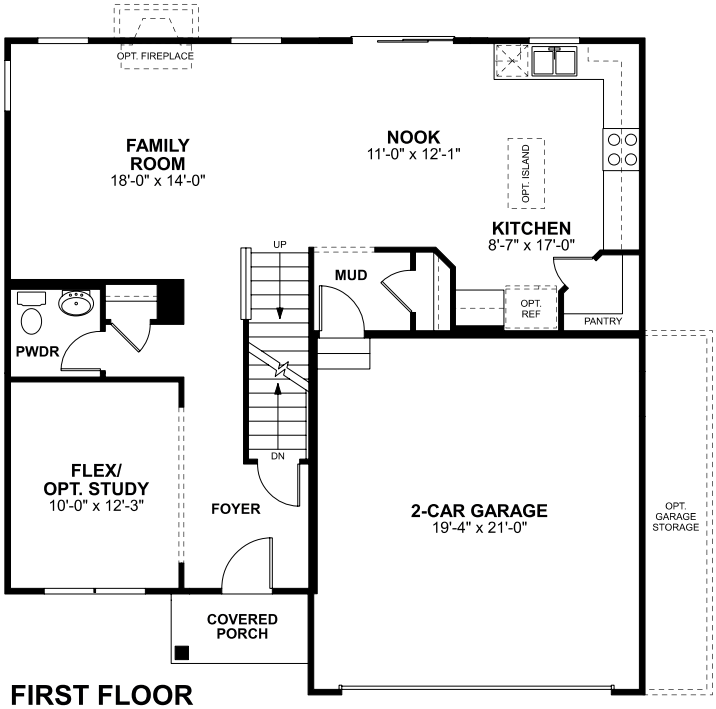

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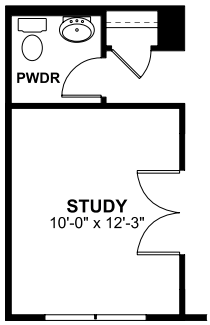

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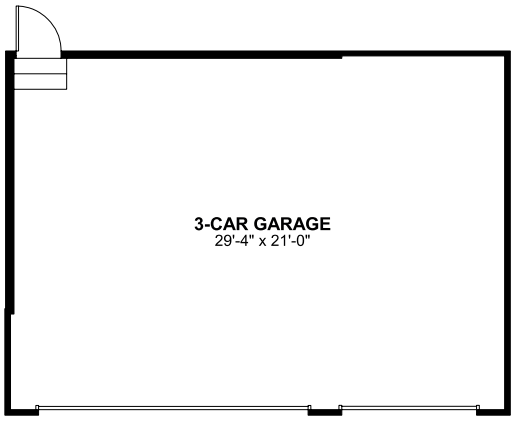

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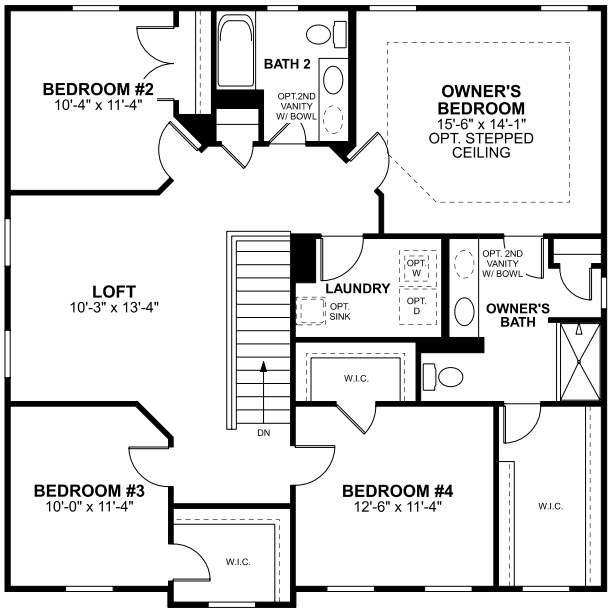

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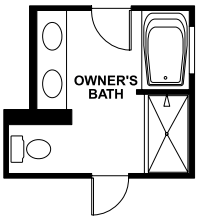
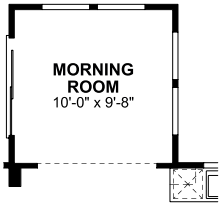


OPTIONAL DELUXE OWNER'S BATH

OPTIONAL BAY WINDOW



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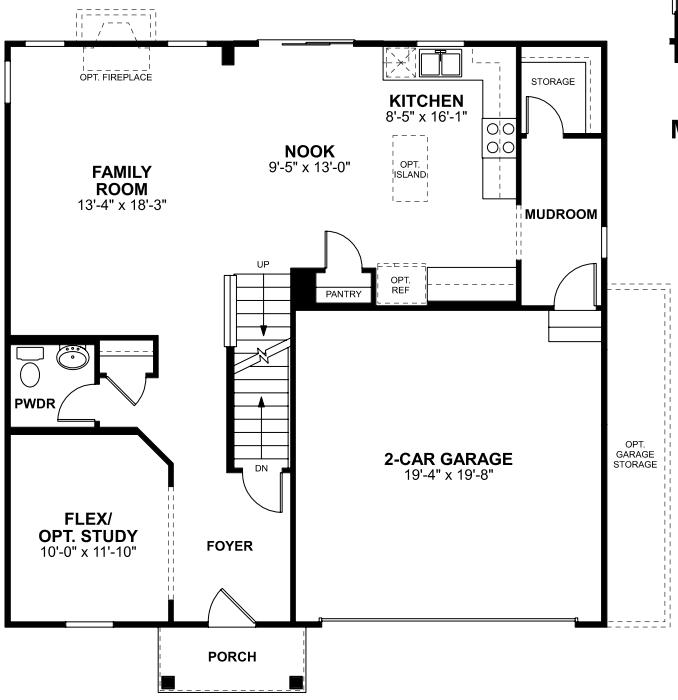

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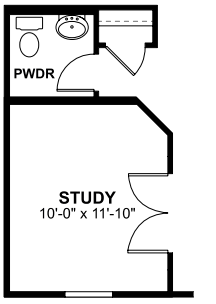

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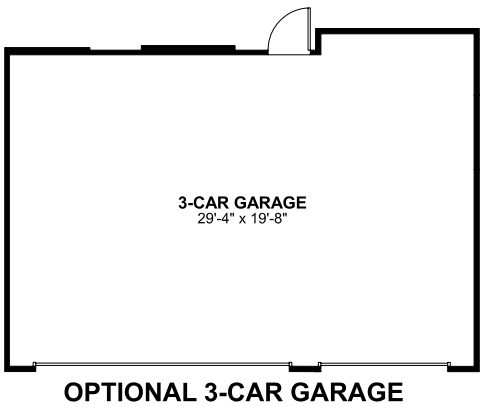

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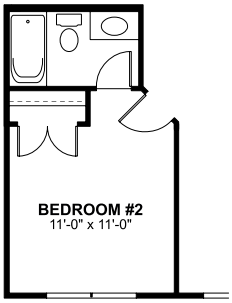
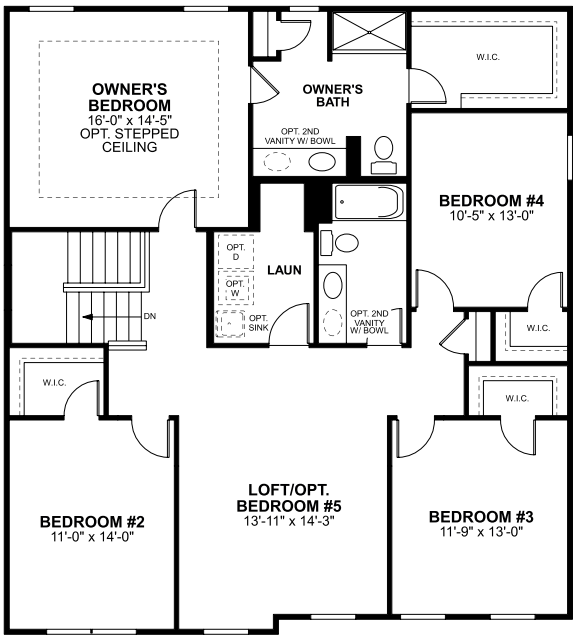


OPTIONAL BATH 3



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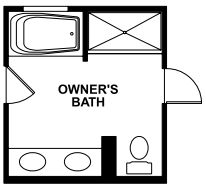
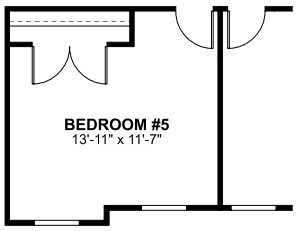
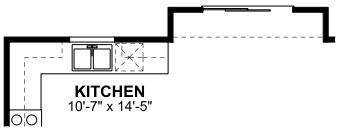


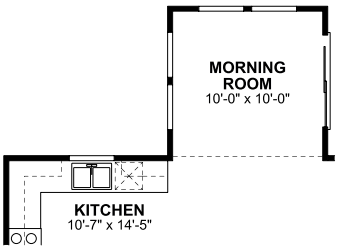
OPTIONAL DELUXE OWNER'S BATH



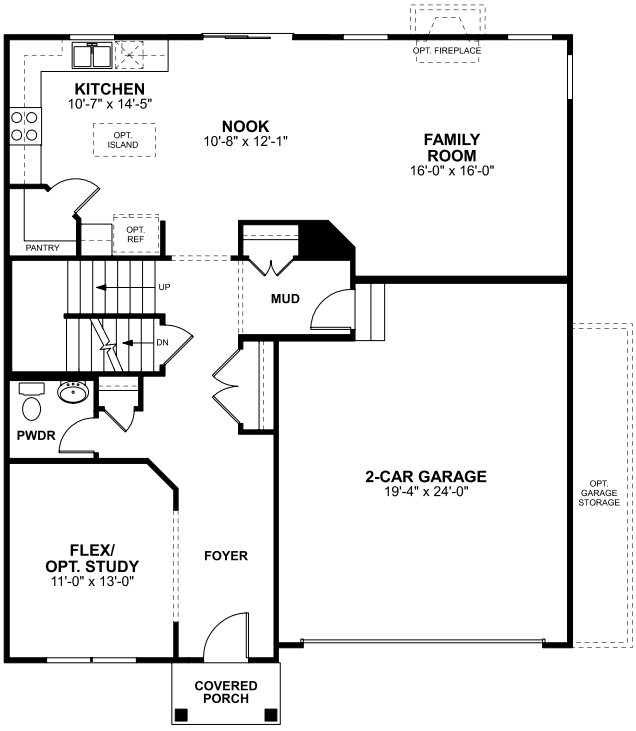
OPTIONAL BEDROOM #5



OPTIONAL BAY WINDOW



OPTIONAL MORNING ROOM



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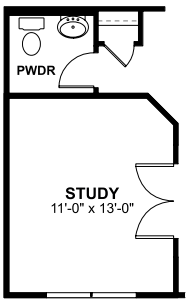
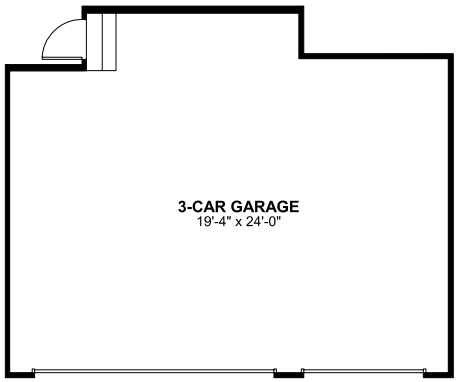


OPTIONAL STUDY



OPTIONAL 3-CAR GARAGE

SEIBER KEAST LEHNER
ENGINEERING | SURVEYING

CLINTON TOWNSHIP OFFICE
17001 NINETEEN MILE ROAD, SUITE 3
CLINTON TOWNSHIP, MI 48038
586.412.7050

FARMINGTON HILLS OFFICE
39205 COUNTRY CLUB DRIVE, SUITE C8
FARMINGTON HILLS, MI 48331
248.308.3331

SUBMITTAL DATE: 03-03-25

NO.	REVISION	DATE

811
3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
TOLL FREE FOR THE LOCATION
OF UNDERGROUND FACILITIES

PROJECT NUMBER: **24-255**
PROJECT MANAGER: J RICKARD
DRAWN BY: N.G.
CHECKED BY: J.R.
OFFICE: FARMINGTON HILLS

CLIENT:
MI HOMES
40950 WOODWARD AVE #203
BLOOMFIELD HILLS, MI 48304
248.836.4522

PROJECT NAME:
SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND
TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE:
SAWYER RIDGE / HIGHLAND RESERVE
EXHIBIT

PAGE No.:
1

SITE PLAN FOR

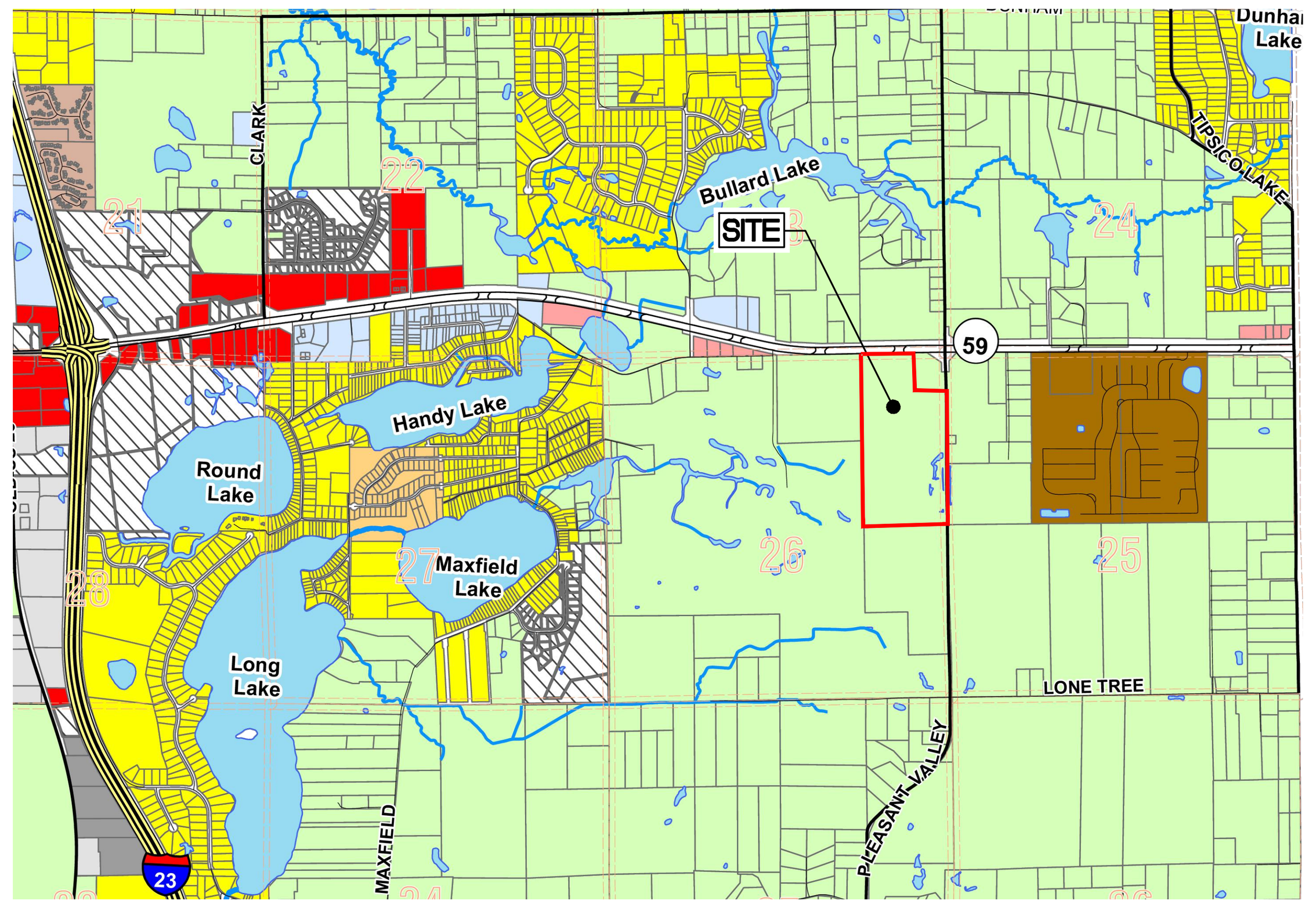
SAWYER RIDGE

PART OF SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

PREPARED FOR:

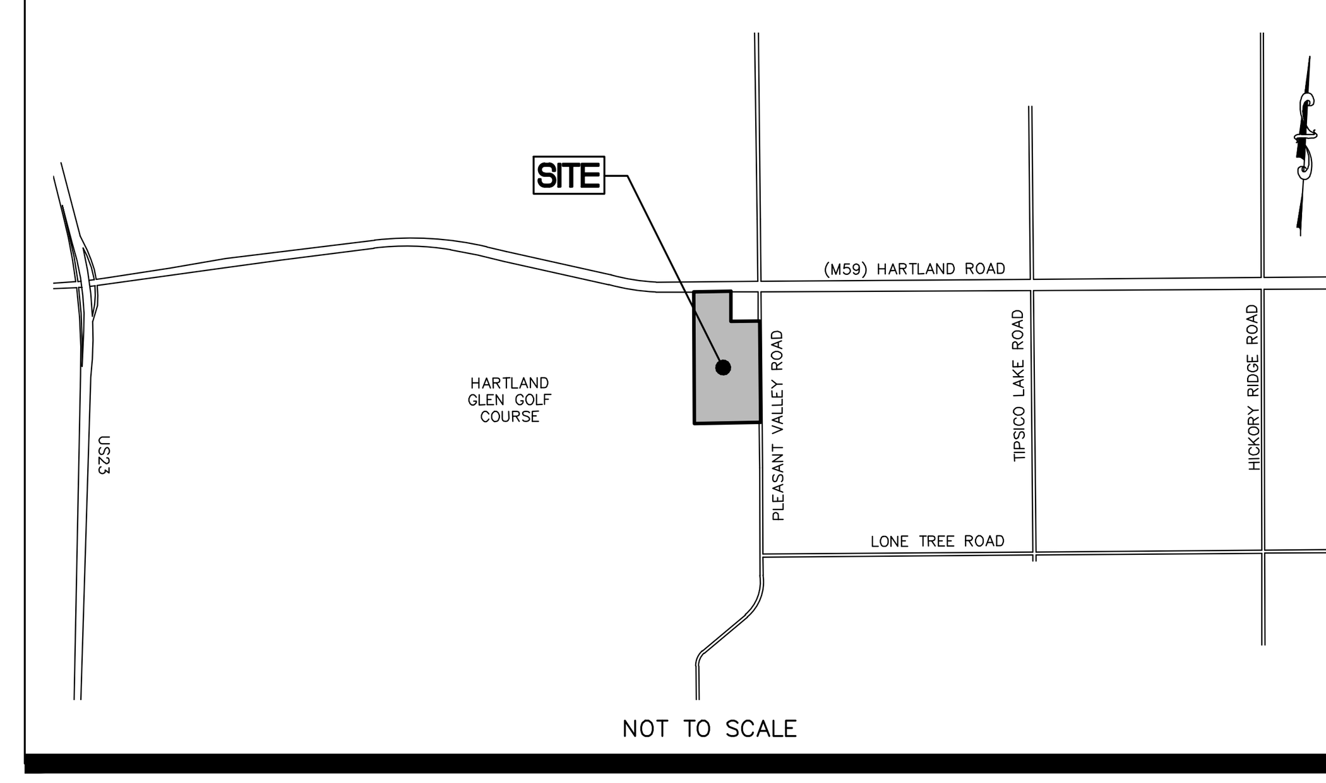
MI HOMES
40950 WOODWARD AVE #203
BLOOMFIELD HILLS, MI 48304
248.836.4522

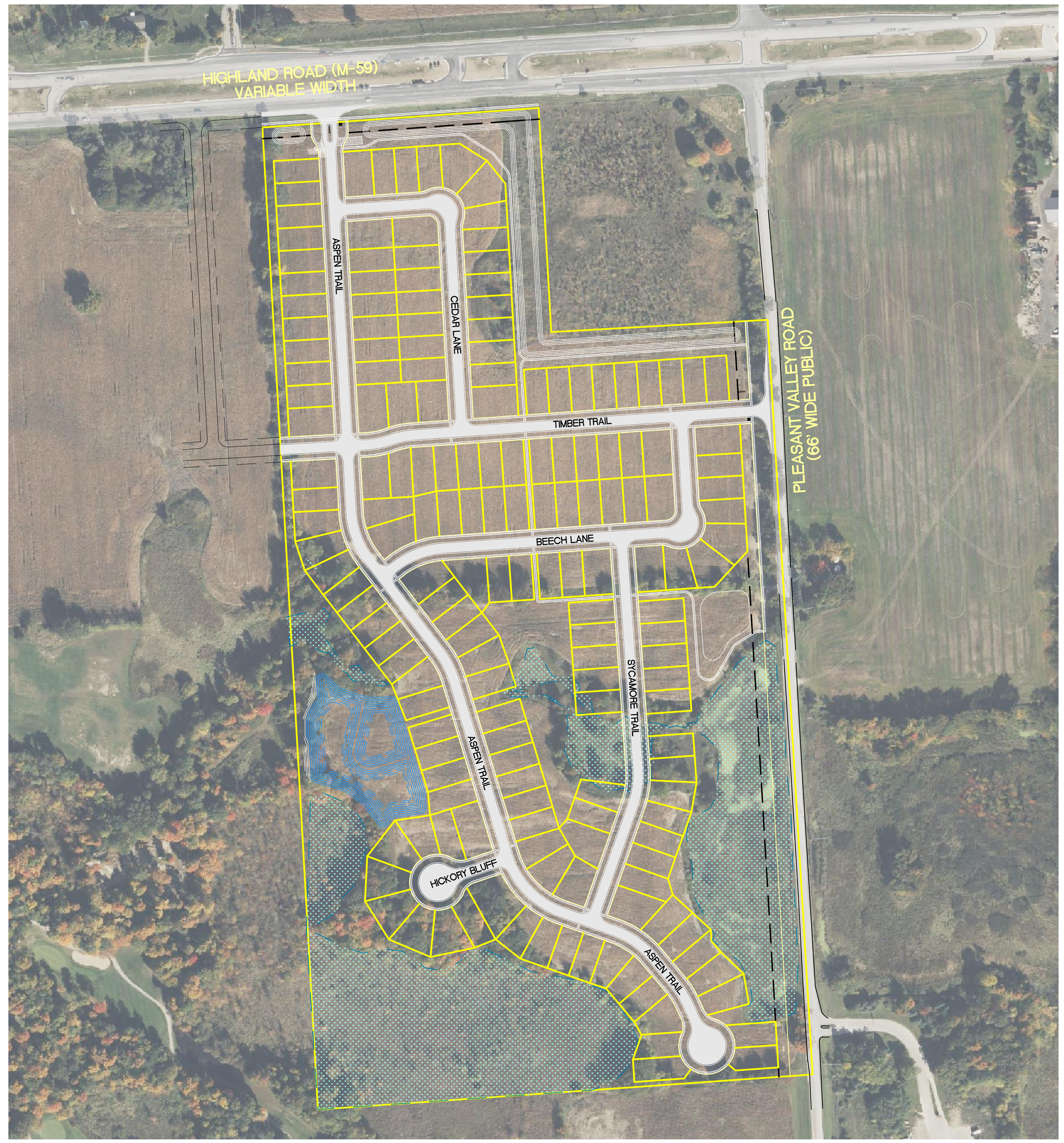
ZONING MAP



- CA - Conservation Agricultural
- RUR - Rural Residential
- RR - Residential Recreational
- STR - Settlement Residential
- RE- Rural Estate District
- SR - Suburban Residential
- MDR - Medium Density Residential
- HDR - High Density Residential
- MR - Multiple Family Residential
- MR-2 - Mobile Home Park
- OS - Office Service
- LC - Limited Commercial
- NSC - Neighborhood Service Commercial
- GC - General Commercial
- RDP - Research and Development Park
- LI - Light Industrial
- I - Industrial
- PD - Planned Development

LOCATION MAP





GRAPHIC SCALE
200 0 100 200 400
(IN FEET)
1" = 200'

LEGAL DESCRIPTION

EXHIBIT "A"

LAND IN THE TOWNSHIP OF HARTLAND, LIVINGSTON COUNTY, MICHIGAN, TO WIT:

SURVEY DESCRIPTION BY TETRA TECH, SURVEY NO.: 2016-1868, DATED 02/08/2016 DESCRIBED AS:

PART OF THE EAST 1/2 OF THE NORTHEAST 1/4 OF SECTION 26, T3N, R6E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, BEING DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 26; THENCE ALONG THE EAST LINE OF SAID SECTION 26 AND THE CENTERLINE OF PLEASANT VALLEY ROAD, SOUTH 00 DEGREES 00 MINUTES 31 SECONDS WEST, A DISTANCE OF 563.02 FEET TO THE POINT OF BEGINNING OF THE PARCEL TO BE DESCRIBED; THENCE CONTINUING ALONG SAID EAST LINE AND THE CENTERLINE OF PLEASANT VALLEY ROAD, SOUTH 00 DEGREES 00 MINUTES 31 SECONDS WEST, A DISTANCE OF 2101.41 FEET; THENCE SOUTH 89 DEGREES 23 MINUTES 07 SECONDS WEST, A DISTANCE OF 1320.05 FEET; THENCE ALONG THE WEST LINE OF THE EAST 1/2 OF THE NORTHEAST 1/4 OF SAID SECTION, NORTH 00 DEGREES 11 MINUTES 51 SECONDS EAST, A DISTANCE OF 2096.54 FEET; THENCE NORTH 90 DEGREES 23 MINUTES 07 SECONDS EAST, A DISTANCE OF 1313.18 FEET TO THE POINT OF BEGINNING.

ALSO:

PART OF THE EAST 1/2 OF THE NORTHEAST 1/4 OF SECTION 26, T3N, R6E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, BEING DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION 26; THENCE ALONG THE EAST LINE OF SAID SECTION 26 AND CENTERLINE OF PLEASANT VALLEY ROAD, SOUTH 00 DEGREES 00 MINUTES 31 SECONDS WEST, A DISTANCE OF 300.00 FEET TO THE POINT OF BEGINNING OF THE PARCEL TO BE DESCRIBED; THENCE CONTINUING ALONG SAID EAST LINE AND CENTERLINE OF PLEASANT VALLEY ROAD; SOUTH 00 DEGREES 00 MINUTES 31 SECONDS WEST, A DISTANCE OF 263.02 FEET; THENCE SOUTH 89 DEGREES 23 MINUTES 07 SECONDS WEST, A DISTANCE OF 1313.18 FEET; THENCE ALONG THE WEST LINE OF THE EAST 1/2 OF THE NORTHEAST 1/4 OF SAID SECTION 26; NORTH 00 DEGREES 11 MINUTES 51 SECONDS EAST, A DISTANCE OF 516.05 FEET TO A POINT ON THE SOUTHERLY RIGHT OF WAY LINE OF M-59; THENCE ALONG THE SOUTHERLY RIGHT OF WAY LINE OF SAID M-59; NORTH 89 DEGREES 23 MINUTES 07 SECONDS EAST, A DISTANCE OF 664.84 FEET; THENCE CONTINUING ALONG SAID SOUTHERLY RIGHT OF WAY LINE, ALONG A CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 38141.06 FEET, AND ARC LENGTH OF 436.31 FEET, DELTA ANGLE OF 00 DEGREES 39 MINUTES 20 SECONDS AND A CHORD BEARING OF NORTH 89 DEGREES 42 MINUTES 47 SECONDS EAST, AND A CHORD LENGTH OF 436.31 FEET; THENCE CONTINUING ALONG SAID RIGHT OF WAY, SOUTH 56 DEGREES 12 MINUTES 24 SECONDS EAST, A DISTANCE OF 180.83 FEET; THENCE CONTINUING ALONG SAID RIGHT OF WAY LINE, SOUTH 00 DEGREES 00 MINUTES 31 SECONDS WEST, A DISTANCE OF 148.21 FEET; THENCE NORTH 89 DEGREES 29 MINUTES 57 SECONDS EAST, A DISTANCE OF 60.00 FEET TO THE POINT OF BEGINNING.

EXCEPTING OUT THE FOLLOWING LEGAL DESCRIPTION:

LAND IN THE TOWNSHIP OF HARTLAND, LIVINGSTON COUNTY, MICHIGAN, TO WIT:

DESCRIPTION BY TETRA TECH, JOB NO. 2016-1868, DATED 09/19/2017 DESCRIBED AS:

PART OF THE EAST 1/2 OF THE NORTHEAST 1/4 OF SECTION 26, T3N, R6E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, BEING DESCRIBED AS-FOLLOWS: COMMENCING AT THE NORTHEAST CORNER OF SECTION 26, T3N, R6E, SAID POINT BEING ON THE CENTERLINE OF PLEASANT VALLEY ROAD; THENCE ALONG SAID CENTERLINE OF ROAD, SOUTH 00 DEGREES 00 MINUTES 31 SECONDS WEST, 300.00 FEET TO THE POINT OF BEGINNING; THENCE CONTINUING ALONG SAID CENTERLINE OF ROAD, SOUTH 00 DEGREES 00 MINUTES 31 SECONDS WEST, 352.56 FEET; THENCE LEAVING SAID CENTERLINE OF ROAD, NORTH 89 DEGREES 48 MINUTES 29 SECONDS WEST, 33.00 FEET TO A SET IRON AND CAP #56048 ON THE WEST RIGHT OF WAY OF PLEASANT VALLEY ROAD; THENCE CONTINUING NORTH 89 DEGREES 48 MINUTES 29 SECONDS WEST, 543.58 FEET TO A SET IRON AND CAP #56048; THENCE NORTH 00 DEGREES 11 MINUTES 31 SECONDS EAST, 597.41 FEET TO A POINT ON THE SOUTH RIGHT OF WAY OF M-59/HARTLAND RD. (VARIABLE WIDTH), A SET IRON AND CAP #56048; THENCE ALONG SAID SOUTH RIGHT OF WAY, ALONG A CURVE TO THE RIGHT, HAVING A RADIUS OF 38141.06 FEET, AN ARC LENGTH OF 364.37 FEET, A CENTRAL ANGLE OF 00 DEGREES 32 MINUTES 50 SECONDS, AND A CHORD BEARING OF NORTH 89 DEGREES 46 MINUTES 01 SECONDS EAST, 364.37 FEET TO A SET IRON & CAP #56048; THENCE CONTINUING ALONG SAID RIGHT OF WAY, SOUTH 56 DEGREES 12 MINUTES 24 SECONDS EAST, 180.83 FEET TO A SET IRON AND CAP #56048; THENCE SOUTH 00 DEGREES 00 MINUTES 31 SECONDS WEST, 148.21 FEET TO A SET IRON AND CAP #56048; THENCE NORTH 89 DEGREES 29 MINUTES 57 SECONDS EAST 27.00 FEET TO A SET IRON AND CAP #56048 ON THE WEST RIGHT OF WAY LINE OF PLEASANT VALLEY RD.; THENCE CONTINUING NORTH 89 DEGREES 29 MINUTES 57 SECONDS EAST. 33.00 FEET TO THE POINT OF BEGINNING.

SHEET INDEX

STANDARD NOTES

1. ALL SIDE SWALES BETWEEN UNITS AND REAR YARD SWALES SHALL HAVE A MINIMUM OF 1.0% MINIMUM GRADE.
2. MAXIMUM ALLOWABLE GRADE SHALL BE 1 VERTICAL TO 4 HORIZONTAL.
3. MAXIMUM ALLOWABLE DRIVEWAY SLOPE SHALL BE 8.0%.
4. ALL WATER MAINS, SANITARY, AND STORM SEWER SHALL BE CONSTRUCTED IN CONFORMANCE WITH TOWNSHIP STANDARD DETAILS AND SPECIFICATIONS INCLUDING TESTING AND INSPECTION REQUIREMENTS. PUBLIC UTILITIES LOCATED WITHIN THE EXISTING AND/OR PROPOSED ROAD RIGHT–OF–WAY SHALL ALSO CONFORM TO THE LIVINGSTON COUNTY ROAD COMMISSION AND/OR M.D.O.T. STANDARD DETAILS AND SPECIFICATIONS.
5. WATER SERVICES SHALL BE 1" 'K' COPPER WITH STOP BOXES PLACED 15' BEHIND BACK OF CURB TYPICAL AT THE OUTSIDE EDGE OF THE WATER AND/OR SANITARY SEWER EASEMENT. ALL SERVICES SHALL BE EXTENDED PAST THE PROPOSED FRANCHISE UTILITY EASEMENT.
6. HORIZONTAL SEPARATION OF 10–FEET AND VERTICAL SEPARATION OF 1.5–FEET SHALL BE MAINTAINED BETWEEN ALL WATER MAINS AND STORM/SANITARY SEWERS, MEASURED FROM OUTSIDE OF THE PIPES.
7. WATER MAINS AND SERVICES SHALL BE INSTALLED AT 5'–0" MIN. COVER.
8. WATER MAINS SHALL BE LEAKAGE AND PRESSURE TESTED IN ACCORDANCE WITH THE MOST CURRENT VERSION OF THE AWWA STANDARD C600 FOR DUCTILE IRON PIPE PRIOR TO BEING PUT INTO SERVICE. THE HYDROSTATIC PRESSURE TEST SHALL BE CONDUCTED FOR A MINIMUM OF TWO HOURS WITH A MINIMUM LOSS THAT MEETS THE LATEST VERSION OF THE C600 STANDARD.
9. WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651, MOST CURRENT VERSION, PRIOR TO BEING PUT INTO SERVICE. BACTERIOLOGICAL SAMPLING SHALL BE IN ACCORDANCE WITH R325.11110 OF THE ADMINISTRATIVE RULES PROMULGATED UNDER THE MICHIGAN SAFE DRINKING DRINKING WATER ACT. 1976 PA 390, AS AMENDED, TWO CONSECUTIVE SAMPLES COLLECTED 24 HOURS APART AT EACH SAMPLING SITE.
10. ALL PUBLIC WATER MAINS SHALL BE LOCATED WITHIN THE ROAD RIGHT–OF–WAY OR A 20' WIDE DEDICATED EASEMENT.
11. ALL PUBLIC SANITARY SEWERS SHALL BE LOCATED WITHIN THE ROAD RIGHT–OF–WAY OR A 20' WIDE DEDICATED EASEMENT.

STATE OF MICHIGAN
JASON A. RICKARD
License No. 6201046145
LICENSED PROFESSIONAL ENGINEER

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586.412.7050

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39205 COUNTRY CLUB DRIVE, SUITE C8
FARMINGTON HILLS, MI 48331
248.308.3331

SUBMITTAL DATE: 03-03-25

NO	REVISION	DATE
1.	REVISED PER TOWNSHIP REVIEW	05-13-25

PROJECT NUMBER: 24-255
PROJECT MANAGER: J RICKARD
DRAWN BY: N.G.
CHECKED BY: J.R.
OFFICE: FARMINGTON HILLS

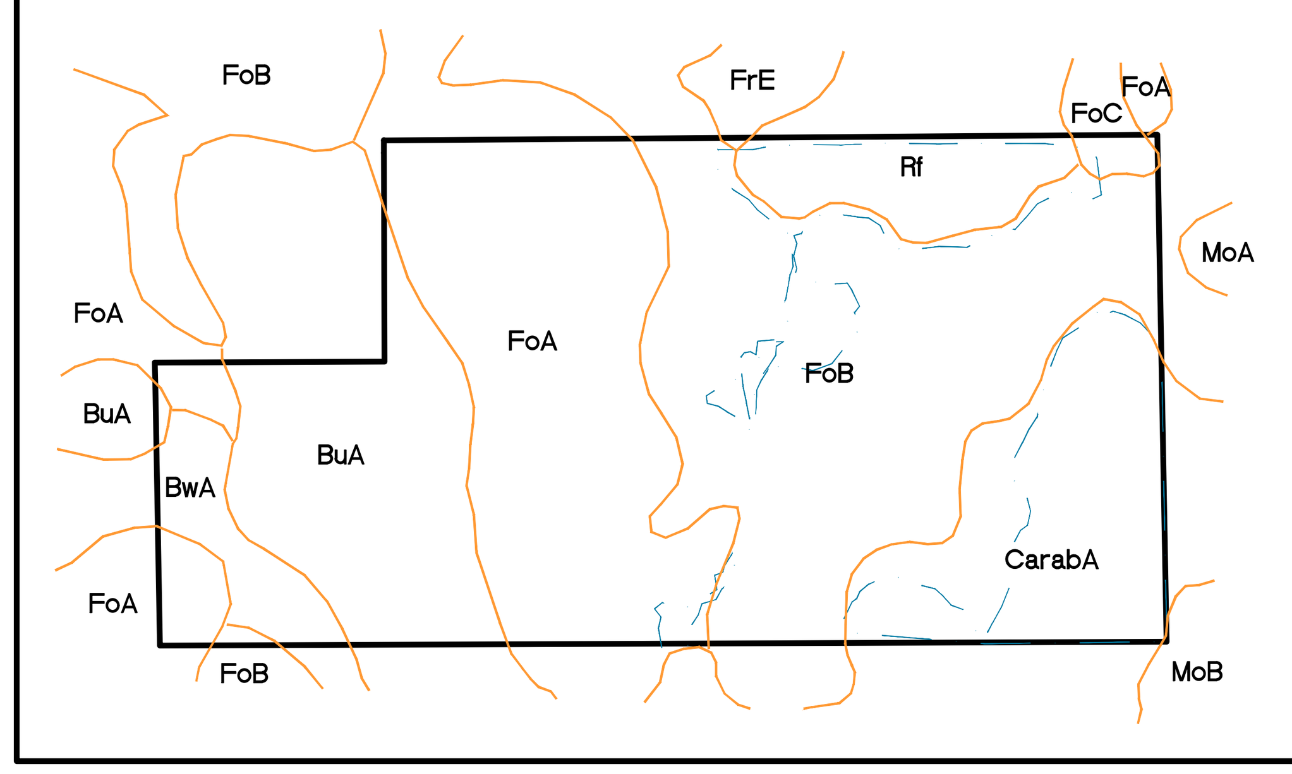
CLIENT:
MI HOMES
40950 WOODWARD AVE #203
BLOOMFIELD HILLS, MI 48304
248.836.4522

PROJECT NAME:
SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE:
COVER SHEET

PAGE No.:
C1

SOIL MAP

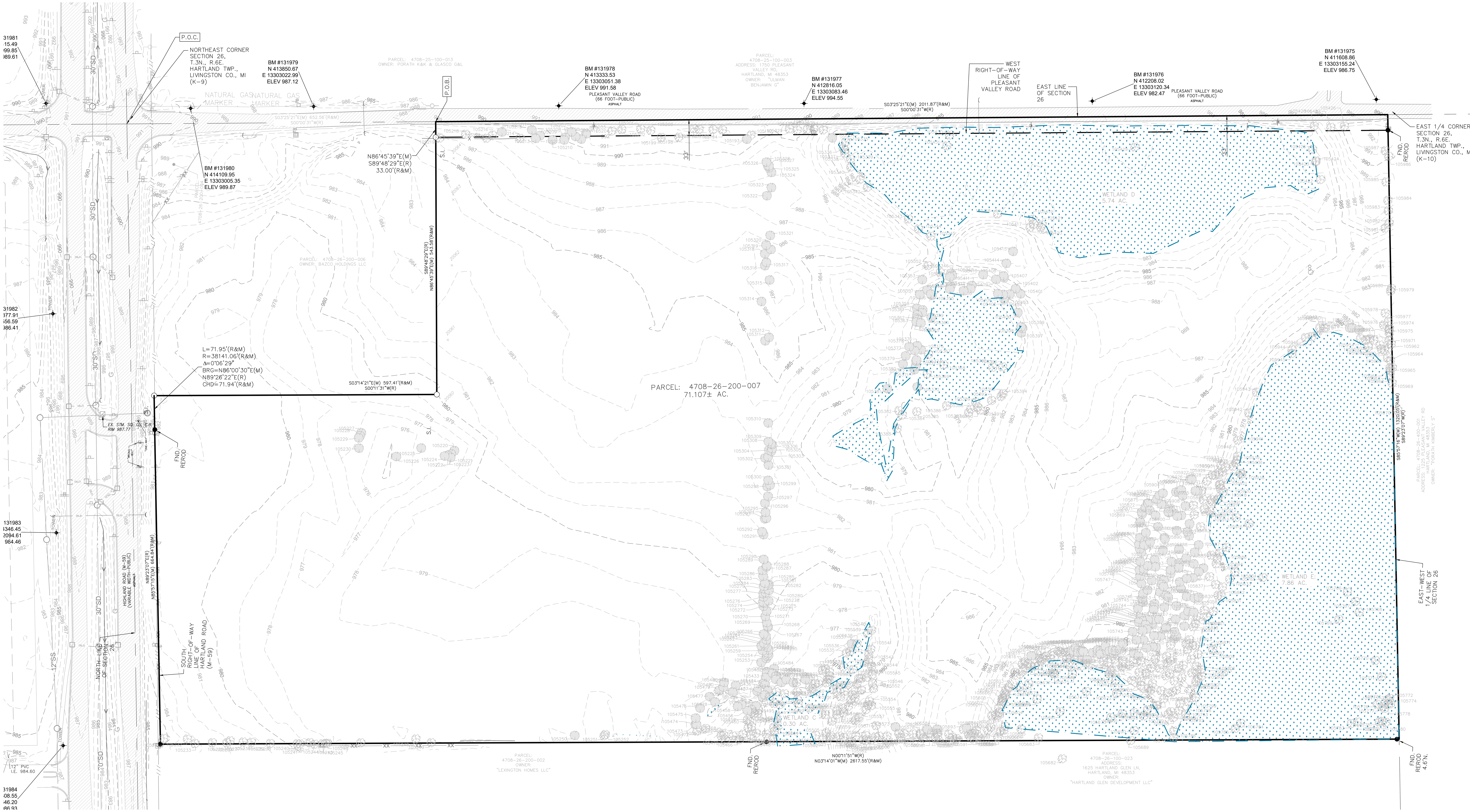


SOIL CLASSIFICATIONS

SOILS CLASSIFICATIONS WERE DETERMINED FROM THE SOIL SURVEY OF OAKLAND COUNTY, MICHIGAN. PUBLISHED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE.

BuA – BRADY LOAMY SAND, 0–2% SLOPES
BwA – BRONSON LOAMY SAND, 0–2% SLOPES
CarabA – CARLISLE MUCK, 0–2% SLOPES
FoA – FOX SANDY LOAM, 0–2% SLOPES
FoB – FOX SANDY LOAM, 2–6% SLOPES
FoC – FOX SANDY LOAM, 6–12% SLOPES
FrE – FOX–BOYER COMPLEX, 18–25% SLOPES
MoA – WAWASEE LOAM, 0–2% SLOPES
MoB – WAWASEE LOAM, 2–6% SLOPES
Rf – RIFLE MUCK

GRAPHIC SCALE
100 0 50 100 200
(IN FEET)
1" = 100'



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SUBMITTAL DATE: 03–03–25

NO.	REVISION	DATE
1.	REVISED PER TOWNSHIP REVIEW	05–13–25

PROJECT NUMBER: 24–255
PROJECT MANAGER: J. RICKARD
DRAWN BY: N.G.
CHECKED BY: J.R.
OFFICE: FARMINGTON HILLS

CLIENT:
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40950 WOODWARD AVE. #203
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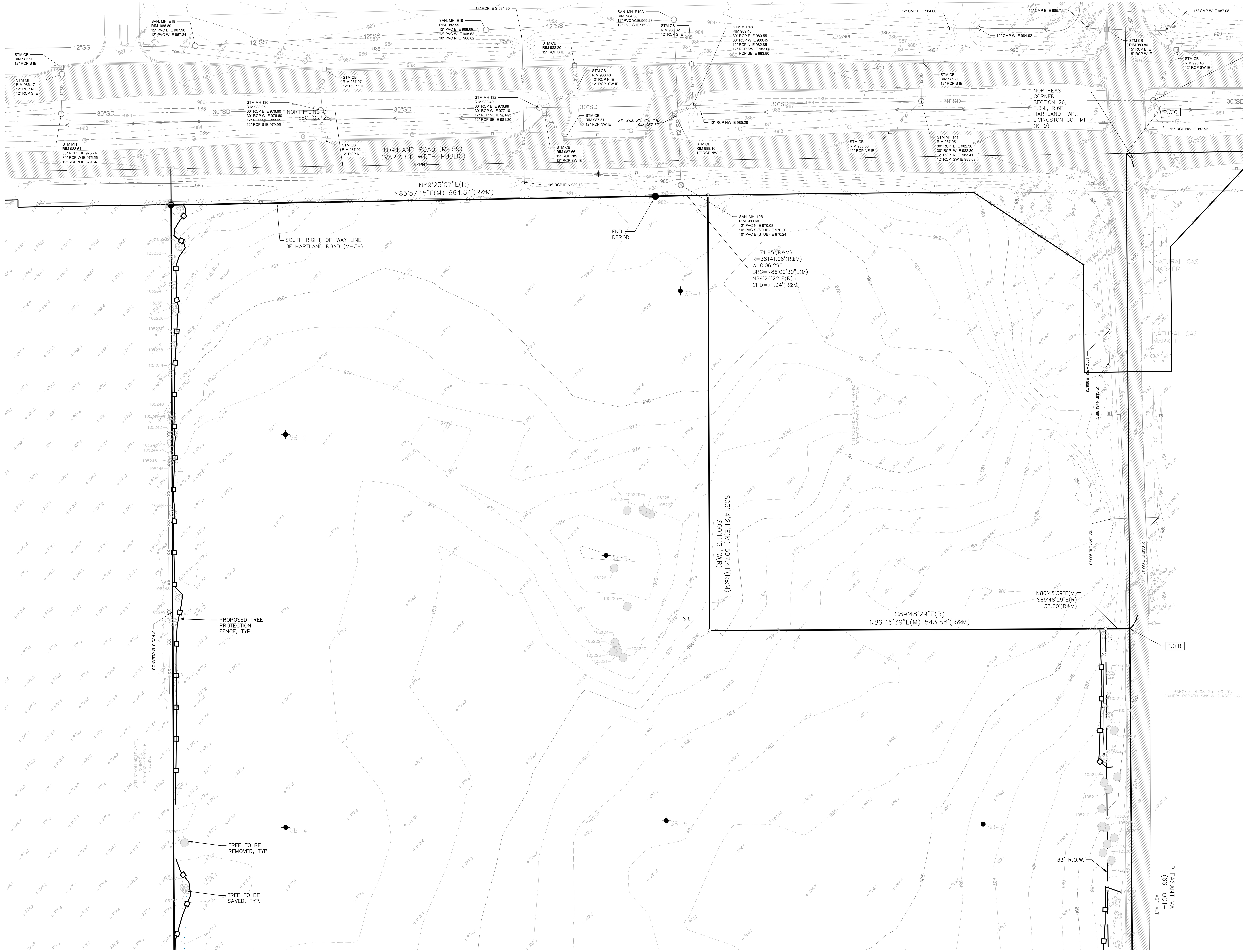
248.836.4522

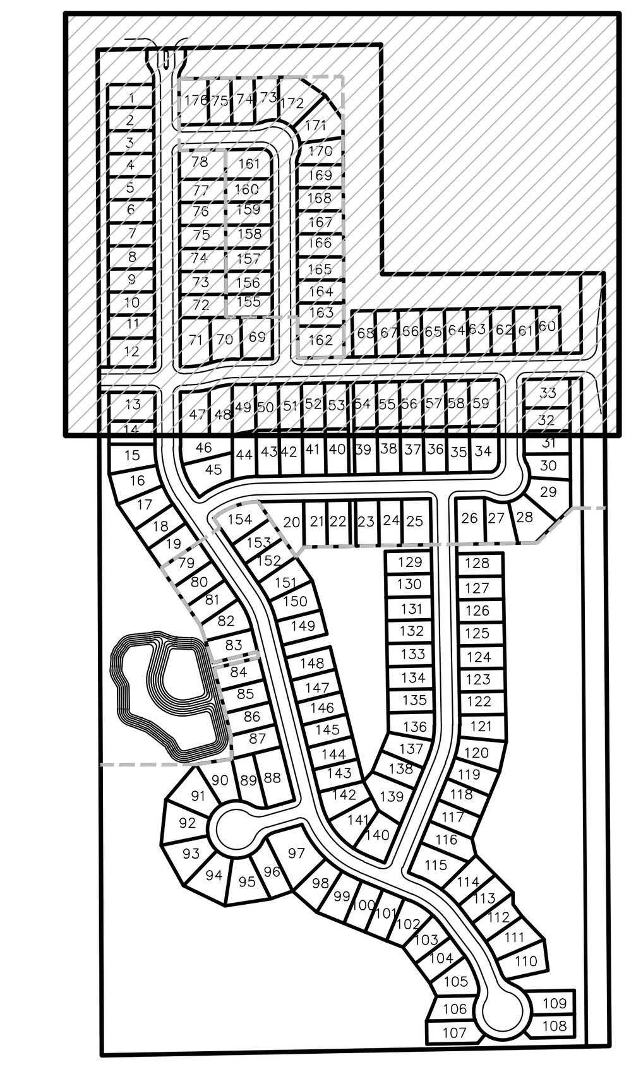
PROJECT NAME:
SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE:
BOUNDARY SURVEY

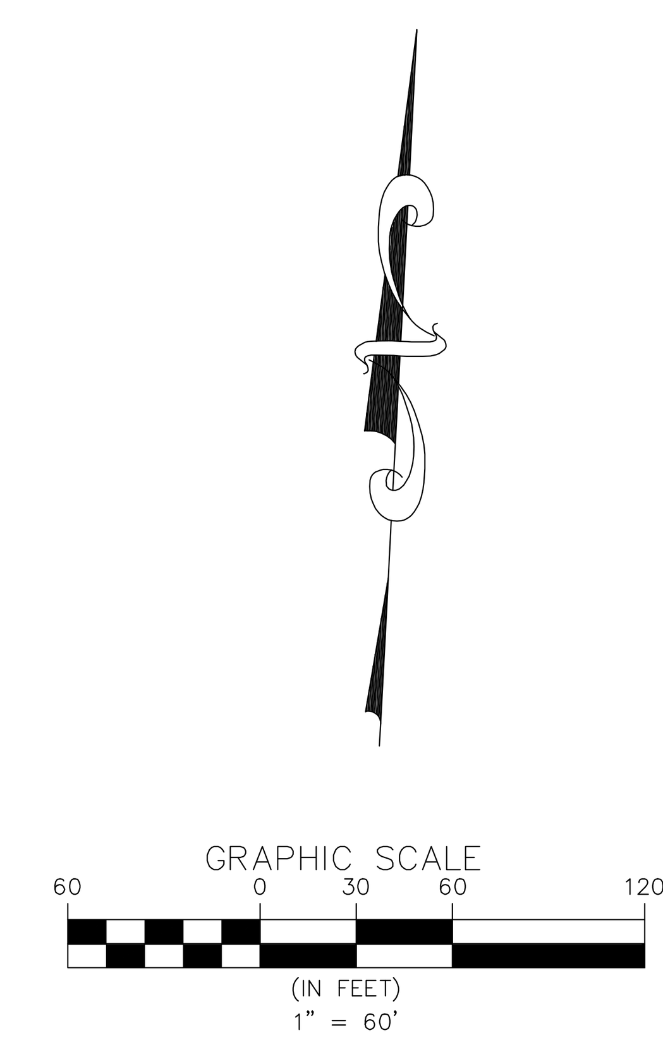
PAGE No.: C2



SEE CONTINUATION SHEET C4



KEY MAP



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CLINTON TOWNSHIP, MI 48038
586.412.7050

FARMINGTON HILLS OFFICE
39205 COUNTRY CLUB DRIVE, SUITE C8
FARMINGTON HILLS, MI 48331
248.308.3331

SUBMITTAL DATE: 03-03-25

NO.	REVISION	DATE
1.	REVISED PER TOWNSHIP REVIEW	05-13-25

811
3 WORKING DAYS BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

PROJECT NUMBER: 24-255
PROJECT MANAGER: J RICKARD
DRAWN BY: N.G.
CHECKED BY: J.R.
OFFICE: FARMINGTON HILLS

CLIENT:
MI HOMES
40950 WOODWARD AVE #203
BLOOMFIELD HILLS, MI 48304
248.836.4522

PROJECT NAME:
SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE:
TOPOGRAPHIC SURVEY - NORTH

PAGE No.: C3

SEE CONTINUATION SHEET C3

PARCEL: 4708-26-200-007
71.107± AC.

TREE TO BE REMOVED, TYP.

TREE TO BE SAVED, TYP.

PROPOSED TREE PROTECTION FENCE, TYP.

N03°14'01"W(M) 2617.55'(R&M)

N00°11'51"W(R)

PLEASANT VALLEY ROAD
(66 FOOT-PUBLIC)
ASPHALT

33' R.O.W.

PARCEL: 4708-25-100-003
ADDRESS: 1750 PLEASANT VALLEY RD.
HARTLAND, MI 48353
OWNER: "ULMAN BENJAMIN G"

S03°25'21"E(M) 2011.87'(R&M)
S00°00'31"W(R)

12" CMP(W. IE 981.67
12" CMP(E. IE 980.38

SEE CONTINUATION SHEET C5

KEY MAP

GRAPHIC SCALE
60 0 30 60 120
(IN FEET)
1" = 60'

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FARMINGTON HILLS OFFICE
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FARMINGTON HILLS, MI 48331
248.308.3331

CLINTON TOWNSHIP OFFICE
1700 NINETEEN MILE ROAD, SUITE 3
CLINTON TOWNSHIP, MI 48038
586.412.7080

SUBMITTAL DATE: 03-03-25

NO	REVISION	DATE
1.	REVISED PER TOWNSHIP REVIEW	05-13-25

811
3 WORKING DAYS
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PROJECT MANAGER: J RICKARD
DRAWN BY: N.G.
CHECKED BY: J.R.
OFFICE: FARMINGTON HILLS

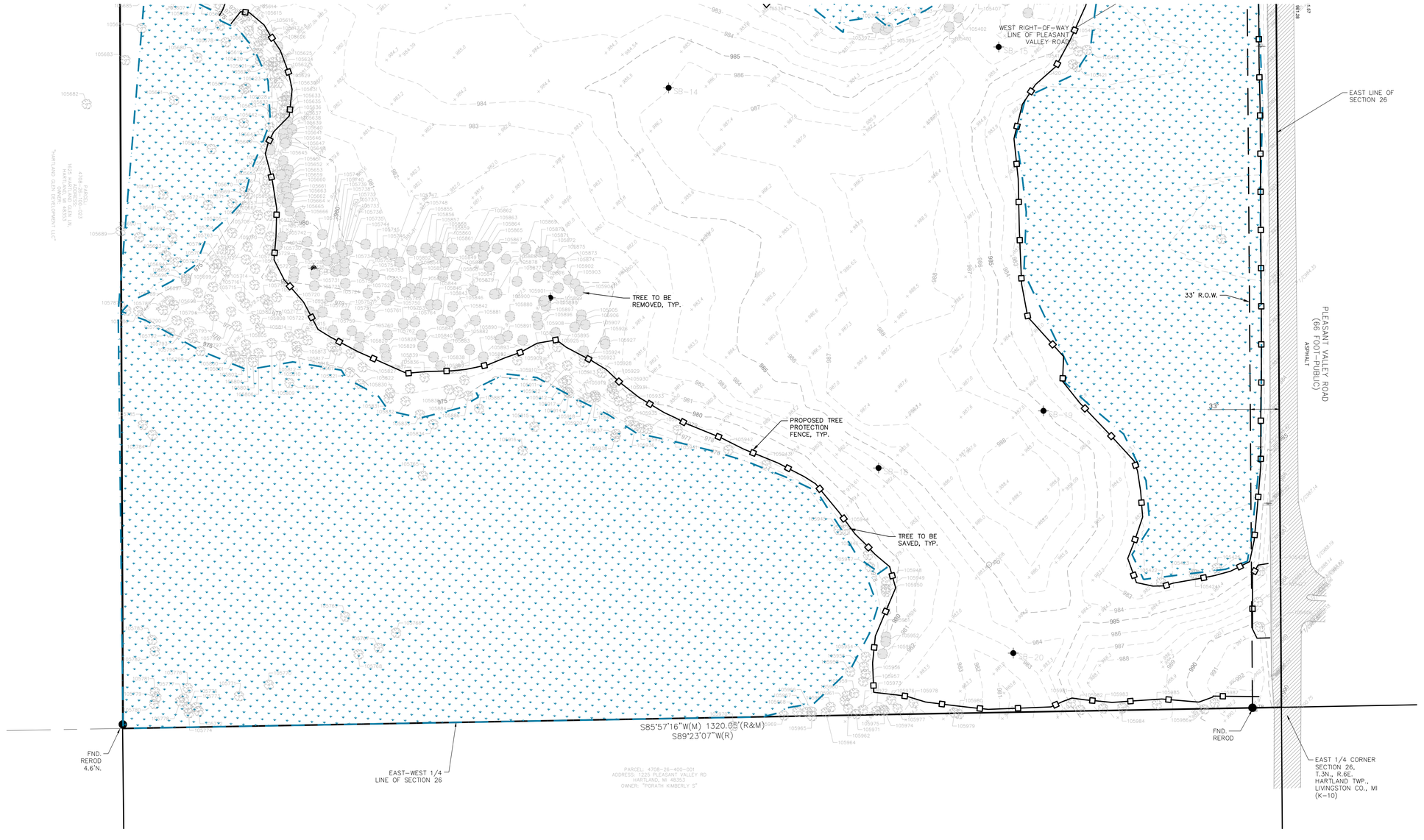
CLIENT:
MI HOMES
40950 WOODWARD AVE #203
BLOOMFIELD HILLS, MI 48304
248.836.4522

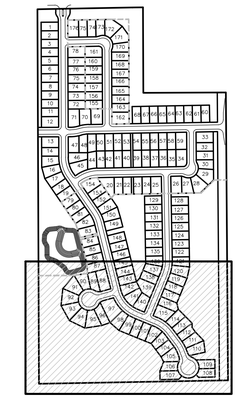
PROJECT NAME:
SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 1OE, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE:
TOPOGRAPHIC SURVEY - CENTER

PAGE No.:
C4

SEE CONTINUATION SHEET C4





KEY MAP

GRAPHIC SCALE

60 0 30 60 120

(IN FEET)
1" = 60'

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586.412.7080

NO	REVISION	DATE
1.	REVISED PER TOWNSHIP REVIEW	05-13-25

SUBMITTAL DATE: 03-03-25

811

3 WORKING DAYS
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1-800-482-7171
TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

PROJECT NUMBER: 24-255

PROJECT MANAGER: J. RICKARD
DRAWN BY: N.G.
CHECKED BY: J.K.S.
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CLIENT:
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BLOOMFIELD HILLS, MI 48304
248.836.4522

PROJECT NAME:
SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 5E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE:
TOPOGRAPHIC SURVEY - SOUTH

PAGE No.:
C5

TREE NO.	ELEV	DESCRIPTION	CONDITION	SCIENTIFIC NAME	REMOVED
105192	991.821'	8" RED OAK 7	GOOD	Quercus rubra	NO
~~105193~~	~~990.528'~~	~~8" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
105194	992.779'	30" WHITE OAK	GOOD	Quercus alba	NO
105195	993.083'	30" WHITE OAK	GOOD	Quercus alba	NO
105196	993.174'	28" WHITE OAK	GOOD	Quercus alba	NO
105197	993.063'	31" WHITE OAK	GOOD	Quercus alba	NO
105198	991.692'	17" WHITE OAK	DEAD	Quercus alba	NO
105199	991.498'	16" WHITE OAK	DEAD	Quercus alba	NO
105200	992.423'	33" WHITE OAK	GOOD	Quercus alba	NO
105201	992.881'	33" WHITE OAK	GOOD	Quercus alba	NO
105202	993.020'	35" WHITE OAK	GOOD	Quercus alba	NO
105203	992.527'	19" WHITE OAK	GOOD	Quercus alba	NO
~~105204~~	~~991.336'~~	~~9" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105205~~	~~990.651'~~	~~9" BOX ELDER 6~~	~~FAIR~~	~~Acer negundo~~	~~YES~~
~~105206~~	~~990.741'~~	~~8" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105207~~	~~991.107'~~	~~7" AMERICAN ELM 7~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105208~~	~~990.770'~~	~~22" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105209~~	~~990.299'~~	~~9" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105210~~	~~989.996'~~	~~12" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105211~~	~~990.350'~~	~~36" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105212~~	~~989.611'~~	~~10" BOX ELDER~~	~~FAIR~~	~~Acer negundo~~	~~YES~~
~~105213~~	~~989.910'~~	~~12" AMERICAN ELM~~	~~DEAD~~	~~Ulmus americana~~	~~YES~~
105214	989.362'	23" AMERICAN ELM	DEAD	Ulmus americana	NO
~~105215~~	~~988.967'~~	~~40" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
105216	987.951'	8" APPLE	FAIR	Malus omestica	NO
105217	987.843'	25" BOX ELDER	DEAD	Acer negundo	NO
105218	988.614'	41" WHITE OAK	FAIR	Quercus alba	NO
105219	987.194'	17" BOX ELDER	FAIR	Acer negundo	NO
~~105220~~	~~977.034'~~	~~14" BOX ELDER~~	~~POOR~~	~~Acer negundo~~	~~YES~~
~~105221~~	~~976.936'~~	~~8" BOX ELDER~~	~~POOR~~	~~Acer negundo~~	~~YES~~
~~105222~~	~~976.633'~~	~~8" BOX ELDER~~	~~POOR~~	~~Acer negundo~~	~~YES~~
~~105223~~	~~976.960'~~	~~8" BOX ELDER~~	~~POOR~~	~~Acer negundo~~	~~YES~~
~~105224~~	~~976.452'~~	~~8" BOX ELDER~~	~~POOR~~	~~Acer negundo~~	~~YES~~
~~105225~~	~~975.394'~~	~~14" BOX ELDER 9~~		~~Acer negundo~~	~~YES~~
~~105226~~	~~975.318'~~	~~12" WILLOW 10~~	~~FAIR~~	~~Salix~~	~~YES~~
~~105227~~	~~976.852'~~	~~11" WILLOW~~	~~GOOD~~	~~Salix~~	~~YES~~
~~105228~~	~~976.686'~~	~~8" WILLOW~~	~~GOOD~~	~~Salix~~	~~YES~~
~~105229~~	~~976.638'~~	~~9" WILLOW~~	~~GOOD~~	~~Salix~~	~~YES~~
~~105230~~	~~976.280'~~	~~11" BOX ELDER~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
105231	985.288'	26" WILLOW 19	POOR	Salix	NO
105232	982.951'	28" UNKNOWN TREE	FAIR		NO
105233	982.977'	15" BLACK CHERRY 20	GOOD	Prunus serotina	NO
105234	982.712'	36" BLACK CHERRY 37	POOR	Prunus serotina	NO
105235	982.449'	28" BOX ELDER	GOOD	Acer negundo	NO
105236	982.454'	24" BOX ELDER	GOOD	Acer negundo	NO
105237	982.508'	28" BOX ELDER 25	FAIR	Acer negundo	NO
105238	981.778'	28" AMERICAN ELM	GOOD	Ulmus americana	NO
105239	981.366'	36" SHAGBARK HICKORY	GOOD	Carya ovata	NO
105240	979.821'	25" BLACK CHERRY	GOOD	Prunus serotina	NO
105241	979.483'	12" BLACK CHERRY	GOOD	Prunus serotina	NO
105242	979.190'	13" BLACK CHERRY	GOOD	Prunus serotina	NO
105243	979.329'	11" SHAGBARK HICKORY	GOOD	Carya ovata	NO
105244	978.376'	11" SHAGBARK HICKORY	GOOD	Carya ovata	NO
105245	978.632'	9" SHAGBARK HICKORY	GOOD	Carya ovata	NO
105246	978.537'	15" BLACK CHERRY	GOOD	Prunus serotina	NO
105247	978.442'	30" SHAGBARK HICKORY	GOOD	Carya ovata	NO
105248	976.445'	10" EASTERN COTTONWOOD	GOOD	Populus eltoides	NO
105249	978.202'	51" BOX ELDER	FAIR	Acer negundo	NO
~~105250~~	~~977.232'~~	~~30" BOX ELDER~~	~~POOR~~	~~Acer negundo~~	~~YES~~
105251	976.377'	10" BOX ELDER	FAIR	Acer negundo	NO
105252	976.668'	10" BOX ELDER 8	POOR	Acer negundo	NO
~~105253~~	~~979.448'~~	~~7" BASSWOOD 12~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105254~~	~~978.919'~~	~~15" BLACK CHERRY 8~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105255~~	~~979.032'~~	~~15" BLACK CHERRY 14~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105256~~	~~979.074'~~	~~8" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105257~~	~~979.136'~~	~~3-12" BLACK CHERRY 16~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105258~~	~~978.863'~~	~~9" AMERICAN ELM~~	~~POOR~~	~~Ulmus americana~~	~~YES~~
~~105259~~	~~979.353'~~	~~10" BASSWOOD 7~~	~~POOR~~	~~Tilia americana~~	~~YES~~
~~105260~~	~~979.213'~~	~~12" BLACK CHERRY 11~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105261~~	~~980.043'~~	~~18" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105262~~	~~979.373'~~	~~8" BASSWOOD~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105263~~	~~979.456'~~	~~16" BASSWOOD~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105264~~	~~979.166'~~	~~12" BLACK CHERRY 18~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105265~~	~~979.495'~~	~~12" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105266~~	~~979.790'~~	~~9" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105267~~	~~979.851'~~	~~17" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105268~~	~~979.776'~~	~~15" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105269~~	~~979.697'~~	~~10" BASSWOOD 12~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105270~~	~~979.128'~~	~~12" BLACK CHERRY 17~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105271~~	~~980.113'~~	~~25" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105272~~	~~980.413'~~	~~9" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105273~~	~~980.398'~~	~~3-12" BLACK CHERRY 13~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105274~~	~~980.552'~~	~~12" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105275~~	~~980.895'~~	~~11" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105276~~	~~980.588'~~	~~5" BASSWOOD 2-8~~	~~POOR~~	~~Tilia americana~~	~~YES~~
~~105277~~	~~980.662'~~	~~8" BLACK CHERRY 12~~	~~DEAD~~	~~Prunus serotina~~	~~YES~~
~~105278~~	~~980.614'~~	~~13" BLACK CHERRY~~	~~DEAD~~	~~Prunus serotina~~	~~YES~~
~~105279~~	~~980.868'~~	~~2-17" BLACK CHERRY 15~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105280~~	~~981.281'~~	~~12" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105281~~	~~981.260'~~	~~16" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105282~~	~~981.140'~~	~~9" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105283~~	~~981.144'~~	~~11" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105284~~	~~980.887'~~	~~10" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105285~~	~~980.741'~~	~~10" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105286~~	~~980.900'~~	~~10" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105287~~	~~980.921'~~	~~11" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105288~~	~~981.097'~~	~~15" BLACK CHERRY~~	~~FAIR~~	~~Prunus serotina~~	~~YES~~
~~105289~~	~~981.270'~~	~~15" BLACK CHERRY~~	~~FAIR~~	~~Prunus serotina~~	~~YES~~
~~105290~~	~~981.311'~~	~~2-12" BASSWOOD~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105291~~	~~982.012'~~	~~16" BLACK CHERRY~~	~~DEAD~~	~~Prunus serotina~~	~~YES~~
~~105292~~	~~981.940'~~	~~19" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105293~~	~~982.664'~~	~~9" BLACK CHERRY~~	~~FAIR~~	~~Prunus serotina~~	~~YES~~
~~105294~~	~~983.149'~~	~~15" BLACK CHERRY EAD~~	~~DEAD~~	~~Prunus serotina~~	~~YES~~
~~105295~~	~~983.047'~~	~~11" BASSWOOD 16~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105296~~	~~982.632'~~	~~27" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105297~~	~~982.936'~~	~~12" BLACK CHERRY 13~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105298~~	~~983.591'~~	~~34" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105299~~	~~983.753'~~	~~12" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105300~~	~~983.127'~~	~~12" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105301~~	~~983.040'~~	~~12" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105302~~	~~983.438'~~	~~2-16" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105303~~	~~983.106'~~	~~18" RED OAK 21~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105304~~	~~983.188'~~	~~10" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105305~~	~~983.396'~~	~~9" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105306~~	~~983.299'~~	~~14" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105307~~	~~982.944'~~	~~13" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105308~~	~~983.363'~~	~~9" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105309~~	~~983.807'~~	~~27" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105310~~	~~983.220'~~	~~18" BOX ELDER~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105311~~	~~986.401'~~	~~15" BOX ELDER~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105312~~	~~986.225'~~	~~15" BOX ELDER 13~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105314~~	~~986.074'~~	~~13" BOX ELDER~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105315~~	~~987.442'~~	~~2-13" BOX ELDER 16~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105316~~	~~987.308'~~	~~10" AMERICAN ELM 12~~	~~FAIR~~	~~Ulmus americana~~	~~YES~~
~~105317~~	~~987.001'~~	~~8" BOX ELDER~~	~~POOR~~	~~Acer negundo~~	~~YES~~
~~105318~~	~~986.731'~~	~~20" BOX ELDER~~	~~DEAD~~	~~Acer negundo~~	~~YES~~
~~105319~~	~~986.340'~~	~~8" BASSWOOD~~	~~FAIR~~	~~Tilia americana~~	~~YES~~
~~105320~~	~~986.401'~~	~~12" EASTERN RED CEDAR~~	~~POOR~~	~~Juniperus virginiana~~	~~YES~~
~~105321~~	~~986.425'~~	~~12" BOX ELDER 14~~	~~POOR~~	~~Acer negundo~~	~~YES~~
~~105322~~	~~988.959'~~	~~24" BOX ELDER~~	~~POOR~~	~~Acer negundo~~	~~YES~~
~~105323~~	~~988.164'~~	~~8" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105324~~	~~987.517'~~	~~9" BOX ELDER~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105325~~	~~987.291'~~	~~23" BOX ELDER~~	~~FAIR~~	~~Acer negundo~~	~~YES~~
~~105326~~	~~987.228'~~	~~12" BOX ELDER~~	~~POOR~~	~~Acer negundo~~	~~YES~~
~~105327~~	~~987.388'~~	~~24" BOX ELDER~~	~~DEAD~~	~~Acer negundo~~	~~YES~~
~~105328~~	~~987.206'~~	~~8" BOX ELDER 12~~	~~POOR~~	~~Acer negundo~~	~~YES~~
105329	991.868'	27" WHITE OAK 32	GOOD	Quercus alba	NO
105330	990.681'	9" EASTERN RED CEDAR	GOOD	Juniperus virginiana	NO
105331	989.438'	12" RED OAK	GOOD	Quercus rubra	NO
105332	988.154'	10" EASTERN RED CEDAR	FAIR	Juniperus virginiana	NO
105333	987.016'	19" WHITE OAK 2-27	GOOD	Quercus alba	NO
~~105334~~	~~983.801'~~	~~8" BOX ELDER~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
105335	982.399'	8" BOX ELDER	GOOD	Acer negundo	NO
105336	982.626'	12" BOX ELDER	POOR	Acer negundo	NO
105337	982.573'	9" BOX ELDER	POOR	Acer negundo	NO
105338	982.496'	8" BOX ELDER	GOOD	Acer negundo	NO
105339	981.865'	10" AMERICAN ELM	GOOD	Ulmus americana	NO
105340	982.649'	13" BOX ELDER	GOOD	Acer negundo	NO
105341	982.450'	11" WILLOW	GOOD	Salix	NO
105342	982.672'	13" WILLOW	GOOD	Salix	NO
105343	982.131'	10" BOX ELDER	GOOD	Acer negundo	NO
105344	981.680'	13" BOX ELDER	FAIR	Acer negundo	NO
105345	982.516'	16" WILLOW	GOOD	Salix	NO
~~105346~~	~~983.206'~~	~~11" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105347~~	~~982.816'~~	~~12" AMERICAN ELM~~	~~DEAD~~	~~Ulmus americana~~	~~YES~~
~~105348~~	~~982.403'~~	~~13" AMERICAN ELM~~	~~DEAD~~	~~Ulmus americana~~	~~YES~~
~~105349~~	~~979.603'~~	~~12" BOX ELDER~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105350~~	~~978.966'~~	~~8" BOX ELDER~~	~~FAIR~~	~~Acer negundo~~	~~YES~~
105351	982.255'	12" BOX ELDER	GOOD	Acer negundo	NO
105352	984.026'	10" WHITE ASH	GOOD	Fraxinus americana	NO
~~105353~~	~~981.682'~~	~~9" BOX ELDER~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105354~~	~~980.388'~~	~~9" AMERICAN ELM~~	~~FAIR~~	~~Ulmus americana~~	~~YES~~
~~105355~~	~~979.448'~~	~~10" AMERICAN ELM~~	~~POOR~~	~~Ulmus americana~~	~~YES~~
~~105356~~	~~979.698'~~	~~13" BOX ELDER~~	~~POOR~~	~~Acer negundo~~	~~YES~~
~~105357~~	~~980.123'~~	~~10" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105358~~	~~979.574'~~	~~15" AMERICAN ELM~~	~~FAIR~~	~~Ulmus americana~~	~~YES~~
~~105359~~	~~979.802'~~	~~15" AMERICAN ELM~~	~~FAIR~~	~~Ulmus americana~~	~~YES~~
~~105360~~	~~979.683'~~	~~10" BLACK CHERRY~~	~~FAIR~~	~~Prunus serotina~~	~~YES~~
~~105361~~	~~979.584'~~	~~10" AMERICAN ELM~~	~~DEAD~~	~~Ulmus americana~~	~~YES~~
~~105362~~	~~979.616'~~	~~12" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105363~~	~~979.574'~~	~~8" AMERICAN ELM~~	~~POOR~~	~~Ulmus americana~~	~~YES~~
~~105364~~	~~979.551'~~	~~13" AMERICAN ELM~~	~~POOR~~	~~Ulmus americana~~	~~YES~~
~~105365~~	~~979.938'~~	~~27" SILVER MAPLE~~	~~GOOD~~	~~Acer saccharinum~~	~~YES~~
~~105366~~	~~978.311'~~	~~11" AMERICAN ELM~~	~~DEAD~~	~~Ulmus americana~~	~~YES~~
105367	978.178'	10" AMERICAN ELM	FAIR	Ulmus americana	NO
105368	977.870'	33" RED MAPLE	GOOD	Acer rubrum	NO
105369	978.565'	22" AMERICAN ELM	GOOD	Ulmus americana	NO
~~105370~~	~~978.267'~~	~~17" AMERICAN ELM~~	~~DEAD~~	~~Ulmus americana~~	~~YES~~
~~105371~~	~~980.206'~~	~~9" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105372~~	~~979.584'~~	~~8" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105373~~	~~979.893'~~	~~8" WHITE ASH~~	~~GOOD~~	~~Fraxinus americana~~	~~YES~~
~~105374~~	~~979.805'~~	~~13" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105375~~	~~979.569'~~	~~13" SILVER MAPLE~~	~~GOOD~~	~~Acer saccharinum~~	~~YES~~
~~105376~~	~~980.821'~~	~~8" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105377~~	~~980.632'~~	~~16" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105378~~	~~980.711'~~	~~11" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105379~~	~~981.596'~~	~~13" BLACK WALNUT~~	~~GOOD~~	~~Juglans nigra~~	~~YES~~
~~105380~~	~~980.126'~~	~~15" SILVER MAPLE~~	~~FAIR~~	~~Acer saccharinum~~	~~YES~~
~~105381~~	~~979.537'~~	~~15" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
105382	980.333'	13" RED OAK	GOOD	Quercus rubra	NO
105383	979.644'	9" WHITE ASH	GOOD	Fraxinus americana	NO
105384	980.692'	10" WHITE ASH	GOOD	Fraxinus americana	NO
105385	980.196'	11" WHITE OAK	GOOD	Quercus alba	NO
105386	980.523'	33" WHITE OAK	GOOD	Quercus alba	NO
105387	979.803'	12" WILLOW	GOOD	Salix	NO
105388	979.617'	16" BASSWOOD 12	GOOD	Tilia americana	NO
105389	978.761'	17" WHITE OAK 6	GOOD	Quercus alba	NO
105390	980.232'	8" WHITE OAK	DEAD	Quercus alba	NO
105391	979.813'	8" AMERICAN ELM	GOOD	Ulmus americana	NO
105392	978.947'	12" BOX ELDER 10	FAIR	Acer negundo	NO
105393	980.183'	17" BIGTOOTH ASPEN	DEAD	Populus randidentata	NO
105394	980.310'	10" BIGTOOTH ASPEN	FAIR	Populus randidentata	NO
105395	978.692'	21" WHITE OAK	GOOD	Quercus alba	NO
105396	978.275'	10" SILVER MAPLE 18	GOOD	Acer saccharinum	NO
~~105397~~	~~979.409'~~	~~11" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105398~~	~~981.039'~~	~~14" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105399~~	~~979.954'~~	~~8" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105400~~	~~980.714'~~	~~25" BLACK CHERRY 18~~	~~FAIR~~	~~Prunus serotina~~	~~YES~~
~~105401~~	~~983.915'~~	~~17" BLACK WALNUT~~	~~GOOD~~	~~Juglans nigra~~	~~YES~~
~~105402~~	~~983.569'~~	~~8" BOX ELDER~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105403~~	~~982.252'~~	~~12" BOX ELDER~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105404~~	~~978.659'~~	~~6" BOX ELDER 8~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105405~~	~~980.246'~~	~~15" BOX ELDER~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105406~~	~~980.304'~~	~~24" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105407~~	~~984.282'~~	~~14" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105408~~	~~984.313'~~	~~12" AMERICAN ELM 8~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105409~~	~~983.485'~~	~~10" BIGTOOTH ASPEN~~	~~GOOD~~	~~Populus randidentata~~	~~YES~~
~~105410~~	~~983.178'~~	~~10" BIGTOOTH ASPEN~~	~~DEAD~~	~~Populus randidentata~~	~~YES~~
~~105411~~	~~980.402'~~	~~12" BLACK CHERRY~~	~~DEAD~~	~~Prunus serotina~~	~~YES~~
~~105412~~	~~978.983'~~	~~10" HOP HORNBEAM~~	~~GOOD~~	~~Ostrya virginiana~~	~~YES~~
~~105413~~	~~978.508'~~	~~8" MULBERRY~~	~~GOOD~~	~~Morus rubra~~	~~YES~~
~~105414~~	~~986.997'~~	~~9" WHITE ASH~~	~~GOOD~~	~~Fraxinus americana~~	~~YES~~
~~105415~~	~~987.654'~~	~~14" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
105416	982.901'	11" BOX ELDER	GOOD	Acer negundo	NO
105417	984.253'	11" BOX ELDER	GOOD	Acer negundo	NO
105418	983.437'	17" RED OAK	GOOD	Quercus rubra	NO
105419	982.939'	10" RED OAK	GOOD	Quercus rubra	NO
105420	983.598'	15" RED OAK	GOOD	Quercus rubra	NO
105421	983.261'	12" BLACK CHERRY	GOOD	Prunus serotina	NO
105422	982.383'	8" CHOCK CHERRY	GOOD	Prunus virginiana	NO
105423	982.175'	10" WILLOW	GOOD	Salix	NO
105424	982.560'	9" WHITE OAK	GOOD	Quercus alba	NO
105425	981.917'	14" BOX ELDER	GOOD	Acer negundo	NO
105426	990.984'	26" WHITE OAK	FAIR	Quercus alba	NO
105427	988.542'	20" SUGAR MAPLE	GOOD	Acer saccharum	NO
105428	986.710'	30" SUGAR MAPLE	FAIR	Acer saccharum	NO
105429	981.741'	10" AMERICAN ELM	GOOD	Ulmus americana	NO
105430	981.731'	9" WILLOW	GOOD	Salix	NO
105431	982.034'	9" TREMBLING ASPEN	GOOD	Populus tremuloides	NO
~~105432~~	~~978.157'~~	~~2-17" BASSWOOD 2-20~~		~~Tilia americana~~	~~YES~~
~~105433~~	~~977.481'~~	~~8" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105434~~	~~976.930'~~	~~8" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105435~~	~~975.991'~~	~~20" BLACK CHERRY~~	~~POOR~~	~~Prunus serotina~~	~~YES~~
~~105436~~	~~974.744'~~	~~6" BASSWOOD 16~~		~~Tilia americana~~	~~YES~~
~~105437~~	~~977.973'~~	~~10" AMERICAN ELM~~		~~Ulmus americana~~	~~YES~~
~~105438~~	~~975.819'~~	~~14" SILVER MAPLE~~		~~Acer saccharinum~~	~~YES~~
~~105440~~	~~975.172'~~	~~20" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
105441	973.944'	9" AMERICAN ELM	GOOD	Ulmus americana	NO
105442	973.319'	9" AMERICAN ELM	GOOD	Ulmus americana	NO
105443	973.013'	2-12" SILVER MAPLE		Acer saccharinum	NO
105444	972.986'	8" AMERICAN ELM	FAIR	Ulmus americana	NO
105445	973.378'	10" AMERICAN ELM	GOOD	Ulmus americana	NO
105446	974.067'	22" SILVER MAPLE	GOOD	Acer saccharinum	NO
105447	973.622'	22" SILVER MAPLE	GOOD	Acer saccharinum	NO
105448	973.443'	12" BASSWOOD	GOOD	Tilia americana	NO
105449	974.239'	14" AMERICAN ELM 7	FAIR	Ulmus americana	NO
105450	977.160'	11" AMERICAN ELM	GOOD	Ulmus americana	NO
105451	976.438'	11" AMERICAN ELM	GOOD	Ulmus americana	NO
~~105452~~	~~977.420'~~	~~14" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105453~~	~~977.122'~~	~~16" BLACK CHERRY~~	~~DEAD~~	~~Prunus serotina~~	~~YES~~
105454	978.163'	13" BLACK CHERRY	DEAD	Prunus serotina	NO
105455	977.879'	15" BLACK CHERRY	GOOD	Prunus serotina	NO
~~105456~~	~~978.260'~~	~~16" SILVER MAPLE~~	~~GOOD~~	~~Acer saccharinum~~	~~YES~~
~~105457~~	~~978.714'~~	~~12" BOX ELDER~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105458~~	~~976.742'~~	~~17" BOX ELDER~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
105459	978.118'	13" APPLE	POOR	Malus omestica	NO
105460	977.983'	15" BASSWOOD	FAIR	Tilia americana	NO
105461	978.102'	13" AMERICAN ELM	GOOD	Ulmus americana	NO
105462	978.978'	14" AMERICAN ELM	GOOD	Ulmus americana	NO
105463	977.624'	12" AMERICAN ELM	FAIR	Ulmus americana	NO
105464	978.502'	15" BLACK CHERRY	GOOD	Prunus serotina	NO
105465	980.382'	9" BLACK CHERRY	FAIR	Prunus serotina	NO
105466	980.799'	10" BLACK CHERRY	GOOD	Prunus serotina	NO
105467	980.387'	12" AMERICAN ELM	GOOD	Ulmus americana	NO
105468	979.371'	17" AMERICAN ELM	GOOD	Ulmus americana	NO
105469	979.318'	14" AMERICAN ELM	FAIR	Ulmus americana	NO
105470	980.082'	12" BLACK CHERRY	FAIR	Prunus serotina	NO
105471	976.248'	16" BOX ELDER	FAIR	Acer negundo	NO
105472	976.439'	16" BOX ELDER	POOR	Acer negundo	NO
~~105473~~	~~976.527'~~	~~11" BOX ELDER~~	~~FAIR~~	~~Acer negundo~~	~~YES~~
~~105474~~	~~976.629'~~	~~9" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105475~~	~~976.844'~~	~~18" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105476~~	~~976.690'~~	~~10" BLACK CHERRY 14~~	~~FAIR~~	~~Prunus serotina~~	~~YES~~
~~105477~~	~~977.931'~~	~~11" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105478~~	~~975.490'~~	~~13" BOX ELDER~~	~~FAIR~~	~~Acer negundo~~	~~YES~~
~~105479~~	~~976.658'~~	~~12" BOX ELDER~~	~~POOR~~	~~Acer negundo~~	~~YES~~
~~105480~~	~~978.245'~~	~~13" SILVER MAPLE~~	~~GOOD~~	~~Acer saccharinum~~	~~YES~~
~~105481~~	~~978.901'~~	~~24" EASTERN COTTONWOOD~~	~~FAIR~~	~~Populus eltoides~~	~~YES~~
~~105482~~	~~978.315'~~	~~25" SILVER MAPLE 24~~	~~GOOD~~	~~Acer saccharinum~~	~~YES~~
~~105483~~	~~976.183'~~	~~5" SILVER MAPLE 8~~	~~GOOD~~	~~Acer saccharinum~~	~~YES~~
~~105484~~	~~977.895'~~	~~12" BASSWOOD~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105485~~	~~977.174'~~	~~8" BASSWOOD~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105486~~	~~977.065'~~	~~13" AMERICAN ELM~~	~~FAIR~~	~~Ulmus americana~~	~~YES~~
~~105487~~	~~976.546'~~	~~15" BLACK CHERRY 12~~	~~FAIR~~	~~Prunus serotina~~	~~YES~~
~~105488~~	~~975.989'~~	~~16" BLACK CHERRY~~	~~FAIR~~	~~Prunus serotina~~	~~YES~~
~~105489~~	~~976.526'~~	~~8" SUGAR MAPLE~~	~~FAIR~~	~~Acer saccharum~~	~~YES~~
~~105490~~	~~975.953'~~	~~8" BLACK CHERRY~~	~~FAIR~~	~~Prunus serotina~~	~~YES~~
105491	976.071'	13" WHITE OAK	GOOD	Quercus alba	NO
105492	974.966'	2-15" BASSWOOD 2-10	GOOD	Tilia americana	NO
105493	974.266'	42" RED MAPLE	GOOD	Acer rubrum	NO
105494	973.510'	16" RED MAPLE	GOOD	Acer rubrum	NO
105495	973.320'	2-12" RED MAPLE 17	GOOD	Acer rubrum	NO
105496	974.127'	43" RED MAPLE	GOOD	Acer rubrum	NO
105497	973.607'	22" RED MAPLE	GOOD	Acer rubrum	NO
105498	981.176'	TREE LINE	FAIR	Casuarina equisetifolia	NO
105499	973.448'	16" RED MAPLE	GOOD	Acer rubrum	NO
105500	973.962'	48" RED MAPLE	DEAD	Acer rubrum	NO
105501	974.054'	20" RED MAPLE 16	GOOD	Acer rubrum	NO
105502	974.442'	8" WHITE OAK	GOOD	Quercus alba	NO
105503	977.206'	17" RED MAPLE 11	GOOD	Acer rubrum	NO
105504	978.048'	10" RED MAPLE	GOOD	Acer rubrum	NO
105505	975.598'	14" RED MAPLE	GOOD	Acer rubrum	NO
105506	976.935'	14" BLACK CHERRY	GOOD	Prunus serotina	NO
105507	978.444'	17" RED OAK	GOOD	Quercus rubra	NO
105508	977.054'	10" RED OAK	GOOD	Quercus rubra	NO
105509	974.062'	17" RED MAPLE	GOOD	Acer rubrum	NO
105510	974.082'	42" RED MAPLE	GOOD	Acer rubrum	NO
105511	978.755'	15" BLACK CHERRY	GOOD	Prunus serotina	NO
105512	980.327'	8" AMERICAN ELM	GOOD	Ulmus americana	NO
105513	980.533'	25" RED OAK	GOOD	Quercus rubra	NO
105514	979.142'	24" BLACK CHERRY	GOOD	Prunus serotina	NO
105515	978.816'	12" BASSWOOD 19	FAIR	Tilia americana	NO
105516	977.066'	21" BASSWOOD 12	GOOD	Tilia americana	NO
105517	976.078'	24" BASSWOOD 14	GOOD	Tilia americana	NO
105518	975.464'	17" BASSWOOD	GOOD	Tilia americana	NO
105519	975.109'	11" BASSWOOD	GOOD	Tilia americana	NO
105520	974.131'	24" RED MAPLE	GOOD	Acer rubrum	NO
105521	975.815'	10" AMERICAN ELM	GOOD	Ulmus americana	NO
105522	976.060'	10" AMERICAN ELM	GOOD	Ulmus americana	NO
105523	975.460'	23" AMERICAN ELM	GOOD	Ulmus americana	NO
105524	975.787'	8" BLACK CHERRY	FAIR	Prunus serotina	NO
105525	975.753'	10" RED OAK	GOOD	Quercus rubra	NO
~~105526~~	~~975.918'~~	~~10" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
105527	976.833'	11" RED OAK	GOOD	Quercus rubra	NO
105528	976.616'	16" RED MAPLE	FAIR	Acer rubrum	NO
105529	975.677'	15" RED MAPLE	GOOD	Acer rubrum	NO
105530	975.806'	19" RED MAPLE	GOOD	Acer rubrum	NO
105531	975.529'	17" RED MAPLE 9	GOOD	Acer rubrum	NO
105532	975.795'	14" RED MAPLE	GOOD	Acer rubrum	NO
105533	975.092'	15" RED MAPLE	GOOD	Acer rubrum	NO
105534	974.909'	9" WHITE OAK	GOOD	Quercus alba	NO
105535	975.522'	4-18" BASSWOOD 13	GOOD	Tilia americana	NO
105536	975.410'	26" SUGAR MAPLE	GOOD	Acer saccharum	NO
~~105537~~	~~976.510'~~	~~20" BASSWOOD 28~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
105538	975.238'	12" WHITE OAK	FAIR	Quercus alba	NO
105539	975.058'	12" WHITE OAK	DEAD	Quercus alba	NO
105540	975.580'	2-9" WHITE OAK 8	FAIR	Quercus alba	NO
105541	977.233'	30" AMERICAN ELM	GOOD	Ulmus americana	NO
105542	977.174'	8" BLACK CHERRY	GOOD	Prunus serotina	NO
105543	976.589'	8" BLACK CHERRY	GOOD	Prunus serotina	NO
105544	978.341'	10" WHITE OAK	FAIR	Quercus alba	NO
105545	978.983'	18" BLACK CHERRY	GOOD	Prunus serotina	NO
105546	978.676'	23" BLACK CHERRY 16	GOOD	Prunus serotina	NO
105547	976.337'	13" SUGAR MAPLE	GOOD	Acer saccharum	NO
105548	975.540'	9" SUGAR MAPLE	GOOD	Acer saccharum	NO
105549	974.797'	15" SUGAR MAPLE	GOOD	Acer saccharum	NO
105550	975.898'	2-13" SUGAR MAPLE	GOOD	Acer saccharum	NO
105551	979.592'	31" RED OAK 12	GOOD	Quercus rubra	NO
105552	979.634'	10" BLACK CHERRY	GOOD	Prunus serotina	NO
105553	980.407'	14" RED OAK	GOOD	Quercus rubra	NO
105554	981.813'	16" RED OAK	GOOD	Quercus rubra	NO
105555	983.553'	8" WHITE OAK	GOOD	Quercus alba	NO
105556	982.666'	11" RED OAK 7	GOOD	Quercus rubra	NO
105557	983.231'	24" BLACK CHERRY	GOOD	Prunus serotina	NO
105558	983.086'	15" SUGAR MAPLE	GOOD	Acer saccharum	NO
105559	983.105'	9" OHIO BUCKEYE	FAIR	Aesculus labra	NO
105560	981.512'	11" SUGAR MAPLE	GOOD	Acer saccharum	NO
105561	983.612'	19" BLACK CHERRY	GOOD	Prunus serotina	NO
105562	986.049'	13" RED OAK	GOOD	Quercus rubra	NO
105563	986.386'	25" BLACK CHERRY	GOOD	Prunus serotina	NO
105564	986.561'	9" SUGAR MAPLE	GOOD	Acer saccharum	NO
105565	987.453'	16" BLACK CHERRY	GOOD	Prunus serotina	NO
105566	987.296'	14" SASSAFRAS	GOOD	Sassafras albidum	NO
105567	987.456'	16" SASSAFRAS	GOOD	Sassafras albidum	NO
105568	987.216'	16" SASSAFRAS	GOOD	Sassafras albidum	NO
105569	986.859'	16" SASSAFRAS	GOOD	Sassafras albidum	NO
105570	986.056'	10" AMERICAN ELM	GOOD	Ulmus americana	NO
105571	985.565'	11" RED OAK	GOOD	Quercus rubra	NO
105572	985.004'	11" SILVER MAPLE	GOOD	Acer saccharinum	NO
~~105573~~	~~982.702'~~	~~13" BLACK WALNUT~~	~~GOOD~~	~~Juglans nigra~~	~~YES~~
105574	982.567'	16" SASSAFRAS	FAIR	Sassafras albidum	NO
105575	981.718'	12" SASSAFRAS	FAIR	Sassafras albidum	NO
105576	982.690'	19" BLACK CHERRY	GOOD	Prunus serotina	NO
105577	980.933'	17" SASSAFRAS	FAIR	Sassafras albidum	NO
105578	980.858'	15" SASSAFRAS	GOOD	Sassafras albidum	NO
105579	981.449'	31" SILVER MAPLE	GOOD	Acer saccharinum	NO
105580	980.919'	13" BASSWOOD 11	GOOD	Tilia americana	NO
105581	982.412'	2-13" BLACK CHERRY 11	FAIR	Prunus serotina	NO
105582	982.695'	15" BLACK CHERRY 16	FAIR	Prunus serotina	NO
~~105583~~	~~981.785'~~	~~8" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105584~~	~~983.223'~~	~~8" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
105585	982.852'	8" WHITE OAK	GOOD	Quercus alba	NO
105586	983.573'	11" BLACK CHERRY	FAIR	Prunus serotina	NO
105587	983.414'	30" HORSE CHESTNUT	GOOD	Aesculus hippocastanum	NO
105588	984.711'	10" WHITE OAK	GOOD	Quercus alba	NO
105589	985.217'	36" BLACK CHERRY 20	GOOD	Prunus serotina	NO
105590	985.748'	25" BLACK CHERRY	FAIR	Prunus serotina	NO
105591	984.914'	10" SASSAFRAS	POOR	Sassafras albidum	NO
105592	984.783'	11" SASSAFRAS	POOR	Sassafras albidum	NO
105593	984.430'	11" RED OAK	GOOD	Quercus rubra	NO
~~105594~~	~~985.005'~~	~~16" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
105595	984.068'	10" SASSAFRAS	POOR	Sassafras albidum	NO
105596	983.894'	14" SASSAFRAS	FAIR	Sassafras albidum	NO
105597	983.319'	11" AMERICAN ELM	GOOD	Ulmus americana	NO
105598	983.400'	9" SUGAR MAPLE 12		Acer saccharum	NO
105599	981.003'	20" BLACK CHERRY 18	GOOD	Prunus serotina	NO
105600	980.522'	15" SUGAR MAPLE	GOOD	Acer saccharum	NO
105601	980.596'	15" WHITE OAK 7	GOOD	Quercus alba	NO
105602	979.879'	8" SUGAR MAPLE	GOOD	Acer saccharum	NO
105603	979.610'	20" BLACK CHERRY	FAIR	Prunus serotina	NO
105604	978.808'	8" WHITE OAK	GOOD	Quercus alba	NO
105605	979.736'	24" RED OAK	GOOD	Quercus rubra	NO
105606	988.848'	7" RED MAPLE 18	GOOD	Acer rubrum	NO
105607	977.887'	2-8" SUGAR MAPLE	GOOD	Acer saccharum	NO
105608	978.472'	8" RED MAPLE	GOOD	Acer rubrum	NO
105609	978.522'	2-9" RED MAPLE	GOOD	Acer rubrum	NO
105610	976.536'	8" BLACK CHERRY	FAIR	Prunus serotina	NO
105611	978.829'	2-12" RED MAPLE 11	GOOD	Acer rubrum	NO
105612	978.303'	10" BLACK CHERRY	GOOD	Prunus serotina	NO
105613	978.502'	11" RED MAPLE 10	GOOD	Acer rubrum	NO
105614	980.097'	9" BLACK CHERRY	FAIR	Prunus serotina	NO
105615	978.776'	5" RED MAPLE 7	GOOD	Acer rubrum	NO
105616	980.402'	20" BLACK CHERRY	FAIR	Prunus serotina	NO
105617	980.246'	11" BLACK CHERRY	FAIR	Prunus serotina	NO
105618	979.065'	20" BLACK CHERRY	GOOD	Prunus serotina	NO
105619	976.441'	11" RED MAPLE	GOOD	Acer rubrum	NO
105620	975.141'	8" RED MAPLE	FAIR	Acer rubrum	NO
105621	975.015'	11" RED MAPLE	DEAD	Acer rubrum	NO
105622	976.656'	14" BASSWOOD	GOOD	Tilia americana	NO
105623	977.923'	13" BLACK CHERRY	FAIR	Prunus serotina	NO
105624	979.351'	8" RED MAPLE	GOOD	Acer rubrum	NO
105625	984.458'	9" BASSWOOD 5	GOOD	Tilia americana	NO
~~105626~~	~~921.634'~~	~~10" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
105627	920.331'	10" SUGAR MAPLE	GOOD	Acer saccharum	NO
105628	917.698'	11" WHITE OAK	GOOD	Quercus alba	NO
105629	920.173'	18" BLACK CHERRY 9	GOOD	Prunus serotina	NO
105630	921.486'	8" RED OAK	GOOD	Quercus rubra	NO
105631	921.013'	20" RED OAK	GOOD	Quercus rubra	NO
105632	920.212'	11" BLACK CHERRY 8	FAIR	Prunus serotina	NO
105633	920.104'	14" BLACK CHERRY	GOOD	Prunus serotina	NO
105634	916.833'	13" IN OAK	GOOD	Quercus alustris	NO
105635	919.529'	12" BLACK CHERRY 11	GOOD	Prunus serotina	NO
105636	920.198'	11" BASSWOOD	GOOD	Tilia americana	NO
~~105637~~	~~921.015'~~	~~14" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105638~~	~~920.559'~~	~~10" BASSWOOD~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105639~~	~~920.973'~~	~~14" BASSWOOD~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105640~~	~~920.519'~~	~~14" BASSWOOD~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105641~~	~~919.950'~~	~~3-6" BLACK CHERRY 9~~	~~POOR~~	~~Prunus serotina~~	~~YES~~
105642	915.735'	8" BASSWOOD	GOOD	Tilia americana	NO
~~105643~~	~~916.100'~~	~~9" BASSWOOD~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
105644	916.390'	8" BASSWOOD	GOOD	Tilia americana	NO
~~105645~~	~~917.092'~~	~~8" BASSWOOD~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105646~~	~~920.677'~~	~~15" BLACK CHERRY 16~~	~~POOR~~	~~Prunus serotina~~	~~YES~~
~~105647~~	~~921.237'~~	~~16" BASSWOOD 8~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105648~~	~~919.939'~~	~~8" BASSWOOD 10~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105649~~	~~920.542'~~	~~2-10" BLACK CHERRY 2-9~~	~~POOR~~	~~Prunus serotina~~	~~YES~~
~~105650~~	~~920.153'~~	~~9" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105651~~	~~920.589'~~	~~12" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105652~~	~~920.343'~~	~~10" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105653~~	~~920.693'~~	~~18" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105654~~	~~979.705'~~	~~18" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
105655	978.993'	18" RED OAK	GOOD	Quercus rubra	NO
105656	978.952'	12" BLACK CHERRY 10	GOOD	Prunus serotina	NO
105657	979.189'	12" BLACK CHERRY 8	POOR	Prunus serotina	NO
~~105658~~	~~979.696'~~	~~9" WHITE OAK~~	~~FAIR~~	~~Quercus alba~~	~~YES~~
~~105659~~	~~979.600'~~	~~11" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105660~~	~~982.488'~~	~~8" BASSWOOD~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105661~~	~~979.604'~~	~~17" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105662~~	~~979.167'~~	~~22" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105663~~	~~979.667'~~	~~12" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105664~~	~~979.139'~~	~~11" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105665~~	~~979.660'~~	~~20" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105666~~	~~980.176'~~	~~8" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
105667	978.763'	11" BLACK CHERRY	GOOD	Prunus serotina	NO
105668	978.058'	22" SILVER MAPLE	GOOD	Acer saccharinum	NO
105669	975.452'	21" RED OAK	GOOD	Quercus rubra	NO
105670	975.003'	8" REDBUD	GOOD	Cercis canadensis	NO
105671	974.404'	8" AMERICAN ELM	GOOD	Ulmus americana	NO
105672	974.794'	10" AMERICAN ELM	FAIR	Ulmus americana	NO
105673	974.739'	11" BASSWOOD	GOOD	Tilia americana	NO
105674	974.966'	9" AMERICAN ELM	GOOD	Ulmus americana	NO
105675	974.710'	16" BOX ELDER	FAIR	Acer negundo	NO
105676	975.089'	11" UNKNOWN TREE	FAIR		NO
105677	975.377'	11" UNKNOWN TREE 6	POOR		NO
105678	975.190'	13" BASSWOOD	DEAD	Tilia americana	NO
105679	974.380'	10" YELLOW BIRCH	GOOD	Betula alleghaniensis	NO
105680	974.351'	9" YELLOW BIRCH	FAIR	Betula alleghaniensis	NO
105681	974.271'	9" YELLOW BIRCH	DEAD	Betula alleghaniensis	NO
105682	976.928'	12" SILVER MAPLE	GOOD	Acer saccharinum	NO
105683	974.887'	10" WHITE OAK	FAIR	Quercus alba	NO
105684	975.284'	11" SILVER MAPLE	POOR	Acer saccharinum	NO
105685	974.320'	24" SUGAR MAPLE	GOOD	Acer saccharum	NO
105686	975.246'	8" SUGAR MAPLE	GOOD	Acer saccharum	NO
105687	975.365'	8" BLACK CHERRY	DEAD	Prunus serotina	NO
105688	975.691'	16" SILVER MAPLE 8		Acer saccharinum	NO
105689	974.302'	7" SILVER MAPLE	GOOD	Acer saccharinum	NO
105690	974.590'	8" YELLOW BIRCH	GOOD	Betula alleghaniensis	NO
105691	975.006'	11" BASSWOOD	GOOD	Tilia americana	NO
105692	975.387'	11" BLACK CHERRY	POOR	Prunus serotina	NO
105693	974.505'	9" AMERICAN ELM	GOOD	Ulmus americana	NO
105694	974.785'	12" AMERICAN ELM	GOOD	Ulmus americana	NO
105695	975.370'	11" BLACK CHERRY	DEAD	Prunus serotina	NO
105696	975.886'	12" WHITE OAK	GOOD	Quercus alba	NO
105697	977.075'	8" RED OAK	GOOD	Quercus rubra	NO
105698	977.302'	13" SILVER MAPLE	DEAD	Acer saccharinum	NO
105699	977.725'	15" SILVER MAPLE	GOOD	Acer saccharinum	NO
105700	977.164'	2-11" TULIP TREE 6	GOOD	Liriodendron tulipifera	NO
105701	977.100'	24" TULIP TREE	GOOD	Liriodendron tulipifera	NO
105702	978.196'	10" SHAGBARK HICKORY	GOOD	Carya ovata	NO
105703	976.849'	24" RED OAK	GOOD	Quercus rubra	NO
105704	977.187'	18" AMERICAN BEECH	GOOD	Fagus randifolia	NO
105705	976.235'	12" SHAGBARK HICKORY	GOOD	Carya ovata	NO
105706	978.039'	26" SUGAR MAPLE	GOOD	Acer saccharum	NO
105707	979.875'	20" SILVER MAPLE	GOOD	Acer saccharinum	NO
~~105708~~	~~980.799'~~	~~9" RED MAPLE~~	~~GOOD~~	~~Acer rubrum~~	~~YES~~
~~105709~~	~~980.122'~~	~~9" RED MAPLE~~	~~GOOD~~	~~Acer rubrum~~	~~YES~~
105710	979.713'	8" BUR OAK	GOOD	Quercus macrocarpa	NO
105711	978.463'	24" WHITE OAK	GOOD	Quercus alba	NO
105712	979.487'	17" YELLOW BIRCH	GOOD	Betula alleghaniensis	NO
105713	979.946'	22" RED OAK 9	GOOD	Quercus rubra	NO
105714	979.714'	10" SWAMP WHITE OAK	GOOD	Quercus alba	NO
105715	978.886'	27" WHITE OAK	GOOD	Quercus alba	NO
105716	978.765'	15" WHITE OAK	GOOD	Quercus alba	NO
105717	979.316'	16" WHITE OAK	GOOD	Quercus alba	NO
105718	979.950'	14" SILVER MAPLE	GOOD	Acer saccharinum	NO
105719	979.899'	11" SILVER MAPLE	GOOD	Acer saccharinum	NO
105720	979.369'	26" SILVER MAPLE	GOOD	Acer saccharinum	NO
~~105721~~	~~978.746'~~	~~12" SILVER MAPLE~~	~~GOOD~~	~~Acer saccharinum~~	~~YES~~
~~105722~~	~~978.091'~~	~~20" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105723~~	~~977.930'~~	~~11" SHAGBARK HICKORY~~	~~GOOD~~	~~Carya ovata~~	~~YES~~
~~105724~~	~~979.454'~~	~~12" SHAGBARK HICKORY~~	~~GOOD~~	~~Carya ovata~~	~~YES~~
~~105725~~	~~980.491'~~	~~12" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105726~~	~~980.484'~~	~~15" BIGTOOTH ASPEN~~	~~GOOD~~	~~Populus randidentata~~	~~YES~~
105727	980.587'	18" WHITE OAK	FAIR	Quercus alba	NO
~~105728~~	~~980.435'~~	~~10" BIGTOOTH ASPEN~~	~~GOOD~~	~~Populus randidentata~~	~~YES~~
~~105729~~	~~980.848'~~	~~20" BIGTOOTH ASPEN~~	~~GOOD~~	~~Populus randidentata~~	~~YES~~
~~105730~~	~~981.498'~~	~~24" BLACK CHERRY~~	~~DEAD~~	~~Prunus serotina~~	~~YES~~
~~105731~~	~~980.779'~~	~~11" SUGAR MAPLE~~	~~FAIR~~	~~Acer saccharum~~	~~YES~~
~~105732~~	~~981.210'~~	~~10" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105733~~	~~980.761'~~	~~10P4" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105734~~	~~980.497'~~	~~11" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105735~~	~~979.961'~~	~~24" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105736~~	~~979.905'~~	~~20" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105737~~	~~979.799'~~	~~8" BASSWOOD~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105738~~	~~979.612'~~	~~9" RED OAK~~	~~POOR~~	~~Quercus rubra~~	~~YES~~
~~105739~~	~~980.152'~~	~~24" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105740~~	~~980.707'~~	~~10" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105741~~	~~980.574'~~	~~23" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105742~~	~~981.411'~~	~~17" RED OAK 15~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105743~~	~~980.200'~~	~~10" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105744~~	~~979.983'~~	~~12" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105745~~	~~980.562'~~	~~33" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105746~~	~~980.171'~~	~~8" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105747~~	~~980.502'~~	~~9" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105748~~	~~980.163'~~	~~8" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105749~~	~~980.372'~~	~~12" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105750~~	~~980.999'~~	~~20" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105751~~	~~980.181'~~	~~8" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105752~~	~~980.900'~~	~~22" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105753~~	~~980.338'~~	~~27" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105754~~	~~980.552'~~	~~16" RED OAK~~	~~FAIR~~	~~Quercus rubra~~	~~YES~~
~~105755~~	~~980.213'~~	~~14" BLACK CHERRY~~	~~FAIR~~	~~Prunus serotina~~	~~YES~~
~~105756~~	~~981.321'~~	~~12" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105757~~	~~976.810'~~	~~12" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105758~~	~~976.365'~~	~~8" SUGAR MAPLE~~	~~FAIR~~	~~Acer saccharum~~	~~YES~~
~~105759~~	~~982.044'~~	~~10" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105760~~	~~977.791'~~	~~24" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105761~~	~~979.201'~~	~~14" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105762~~	~~977.780'~~	~~10" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105763~~	~~978.935'~~	~~10" RED MAPLE 6~~	~~GOOD~~	~~Acer rubrum~~	~~YES~~
~~105764~~	~~979.237'~~	~~21" SUGAR MAPLE 17~~	~~FAIR~~	~~Acer saccharum~~	~~YES~~
105765	974.856'	9" WHITE OAK	GOOD	Quercus alba	NO
105766	974.829'	15" AMERICAN ELM	DEAD	Ulmus americana	NO
105767	974.944'	8" CHOCK CHERRY	FAIR	Prunus serotina	NO
105768	975.600'	27" AMERICAN ELM	DEAD	Ulmus americana	NO
105769	975.497'	11" WHITE OAK	GOOD	Quercus alba	NO
105770	975.364'	8" RED OAK	GOOD	Quercus rubra	NO
105771	975.939'	12" RED OAK	FAIR	Quercus rubra	NO
105772	975.736'	12" BASSWOOD 18	GOOD	Tilia americana	NO
105773	976.051'	2-12" SUGAR MAPLE		Acer saccharum	NO
105774	976.293'	2-12" SUGAR MAPLE		Acer saccharum	NO
105775	976.293'	2-12" SUGAR MAPLE 17		Acer saccharum	NO
105776	975.976'	11" SUGAR MAPLE	GOOD	Acer saccharum	NO
105777	976.212'	22" SUGAR MAPLE	GOOD	Acer saccharum	NO
105778	976.373'	2-14" BASSWOOD 17	GOOD	Tilia americana	NO
105779	976.153'	14" BASSWOOD 16	FAIR	Tilia americana	NO
105780	976.651'	16" BASSWOOD 20	FAIR	Tilia americana	NO
105781	975.553'	8" SUGAR MAPLE	GOOD	Acer saccharum	NO
105782	974.652'	10" AMERICAN ELM	GOOD	Ulmus americana	NO
105783	975.223'	32" WHITE OAK	GOOD	Quercus alba	NO
105784	974.378'	8" WHITE OAK	POOR	Quercus alba	NO
105785	974.424'	20" WHITE OAK	GOOD	Quercus alba	NO
105786	975.421'	24" RED OAK	GOOD	Quercus rubra	NO
105787	975.275'	14" RED OAK	GOOD	Quercus rubra	NO
105788	976.439'	14" AMERICAN BEECH	GOOD	Fagus randifolia	NO
105789	976.627'	19" RED OAK	GOOD	Quercus rubra	NO
105790	976.639'	12" RED OAK	GOOD	Quercus rubra	NO
105791	976.774'	11" BLACK CHERRY	DEAD	Prunus serotina	NO
105792	975.598'	9" RED OAK	GOOD	Quercus rubra	NO
105793	976.333'	12" WHITE OAK	GOOD	Quercus alba	NO
105794	977.309'	24" WHITE OAK	GOOD	Quercus alba	NO
105795	977.318'	18" SHAGBARK HICKORY	GOOD	Carya ovata	NO
105796	977.999'	10" BASSWOOD	GOOD	Tilia americana	NO
105797	977.229'	11" BLACK CHERRY	GOOD	Prunus serotina	NO
105798	976.029'	13" SUGAR MAPLE	GOOD	Acer saccharum	NO
105799	975.163'	32" WHITE OAK	GOOD	Quercus alba	NO
105800	975.796'	12" SUGAR MAPLE	GOOD	Acer saccharum	NO
105801	975.216'	10" RED OAK	GOOD	Quercus rubra	NO
105802	974.847'	11" WHITE OAK	GOOD	Quercus alba	NO
105803	974.681'	10" WHITE OAK	GOOD	Quercus alba	NO
105804	975.430'	9" WHITE OAK	GOOD	Quercus alba	NO
105805	976.512'	18" WHITE OAK	FAIR	Quercus alba	NO
105806	975.776'	11" RED OAK	GOOD	Quercus rubra	NO
105807	978.386'	13" WHITE OAK	POOR	Quercus alba	NO
105808	977.396'	13" WHITE OAK	GOOD	Quercus alba	NO
105809	977.004'	24" WHITE OAK	GOOD	Quercus alba	NO
105810	975.374'	24" WHITE OAK	GOOD	Quercus alba	NO
105811	974.933'	9" RED MAPLE	GOOD	Acer rubrum	NO
105812	976.062'	10" BLACK CHERRY	FAIR	Prunus serotina	NO
105813	976.593'	14" WHITE OAK	GOOD	Quercus alba	NO
105814	977.698'	32" WHITE OAK	GOOD	Quercus alba	NO
105815	977.148'	14" WHITE OAK	GOOD	Quercus alba	NO
105816	976.837'	12" WHITE OAK	GOOD	Quercus alba	NO
105817	976.121'	9" SUGAR MAPLE	GOOD	Acer saccharum	NO
105818	976.352'	21" RED OAK	GOOD	Quercus rubra	NO
105819	977.268'	22" RED OAK 29	GOOD	Quercus rubra	NO
~~105820~~	~~976.727'~~	~~24" SUGAR MAPLE~~	~~FAIR~~	~~Acer saccharum~~	~~YES~~
105821	975.272'	14" BASSWOOD	GOOD	Tilia americana	NO
105822	975.673'	15" AMERICAN ELM	GOOD	Ulmus americana	NO
105827	976.277'	15" AMERICAN ELM	GOOD	Ulmus americana	NO
~~105828~~	~~977.924'~~	~~2-16" BLACK CHERRY 12~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105829~~	~~977.642'~~	~~12" SHAGBARK HICKORY~~	~~GOOD~~	~~Carya ovata~~	~~YES~~
105830	976.431'	14" BASSWOOD 16	GOOD	Tilia americana	NO
105831	975.826'	10" SUGAR MAPLE	GOOD	Acer saccharum	NO
105832	976.311'	8" SUGAR MAPLE	GOOD	Acer saccharum	NO
105833	975.287'	2-14" BLACK WALNUT 12	GOOD	Juglans nigra	NO
105834	975.049'	12" LOMBARDY OPLAR	FAIR	Populus nigra 'Italica'	NO
105835	977.214'	9" SUGAR MAPLE	GOOD	Acer saccharum	NO
105836	978.015'	8" RED OAK	GOOD	Quercus rubra	NO
105837	977.376'	22" SUGAR MAPLE	GOOD	Acer saccharum	NO
~~105838~~	~~978.315'~~	~~10" SHAGBARK HICKORY~~	~~GOOD~~	~~Carya ovata~~	~~YES~~
~~105839~~	~~978.326'~~	~~24" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105840~~	~~978.489'~~	~~26" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105841~~	~~978.385'~~	~~18" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105842~~	~~978.670'~~	~~16" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105843~~	~~978.651'~~	~~16" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105844~~	~~978.131'~~	~~12" WHITE OAK 14~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105845~~	~~978.303'~~	~~22" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105846~~	~~977.909'~~	~~2-18" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105847~~	~~978.699'~~	~~141" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105848~~	~~979.865'~~	~~12" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105849~~	~~979.534'~~	~~8" HOP HORNBEAM~~	~~GOOD~~	~~Ostrya virginiana~~	~~YES~~
~~105850~~	~~979.489'~~	~~26" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105851~~	~~979.639'~~	~~16" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105852~~	~~979.622'~~	~~18" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105853~~	~~980.048'~~	~~8" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105854~~	~~979.932'~~	~~9" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105855~~	~~981.341'~~	~~8" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105856~~	~~981.148'~~	~~19" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105857~~	~~980.337'~~	~~11" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105858~~	~~980.810'~~	~~8" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105859~~	~~980.130'~~	~~11" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105860~~	~~979.651'~~	~~9" HOP HORNBEAM~~	~~GOOD~~	~~Ostrya virginiana~~	~~YES~~
~~105861~~	~~980.221'~~	~~24" RED MAPLE~~	~~GOOD~~	~~Acer rubrum~~	~~YES~~
~~105862~~	~~979.935'~~	~~18" RED MAPLE~~	~~GOOD~~	~~Acer rubrum~~	~~YES~~
~~105863~~	~~979.946'~~	~~9" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105864~~	~~980.149'~~	~~15" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105865~~	~~980.193'~~	~~18" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105866~~	~~979.284'~~	~~14" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105867~~	~~980.120'~~	~~10" AMERICAN ELM~~	~~FAIR~~	~~Ulmus americana~~	~~YES~~
~~105868~~	~~978.288'~~	~~12" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105869~~	~~979.615'~~	~~2-24" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105870~~	~~979.762'~~	~~11" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105871~~	~~979.852'~~	~~12" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105872~~	~~980.023'~~	~~12" AMERICAN ELM~~	~~FAIR~~	~~Ulmus americana~~	~~YES~~
~~105873~~	~~980.708'~~	~~16" AMERICAN ELM~~	~~GOOD~~	~~Ulmus americana~~	~~YES~~
~~105874~~	~~980.660'~~	~~17" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105875~~	~~978.532'~~	~~24" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105876~~	~~977.694'~~	~~26" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105877~~	~~978.037'~~	~~17" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105878~~	~~977.747'~~	~~16" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105879~~	~~978.096'~~	~~16" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105880~~	~~977.412'~~	~~14" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105881~~	~~978.102'~~	~~22" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105882~~	~~978.673'~~	~~10" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
~~105883~~	~~978.391'~~	~~10" SUGAR MAPLE~~	~~GOOD~~	~~Acer saccharum~~	~~YES~~
105884	976.523'	18" WHITE OAK	GOOD	Quercus alba	NO
105885	976.554'	15" WHITE OAK	GOOD	Quercus alba	NO
105886	975.840'	2-12" BASSWOOD 8		Tilia americana	NO
105887	975.078'	2-8" BASSWOOD	DEAD	Tilia americana	NO
~~105888~~	~~976.977'~~	~~18" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105889~~	~~977.444'~~	~~18" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105890~~	~~977.194'~~	~~18" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105891~~	~~977.955'~~	~~14" BASSWOOD~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
105892	976.968'	14" AMERICAN ELM	GOOD	Ulmus americana	NO
~~105893~~	~~977.447'~~	~~9" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
105894	977.768'	19" WHITE OAK	GOOD	Quercus alba	NO
~~105895~~	~~979.025'~~	~~14" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105896~~	~~978.140'~~	~~10" SHAGBARK HICKORY~~	~~GOOD~~	~~Carya ovata~~	~~YES~~
~~105897~~	~~978.336'~~	~~14" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105898~~	~~978.475'~~	~~16" AMERICAN HORNBEAM 16~~		~~Carpinus caroliniana~~	~~YES~~
~~105899~~	~~978.791'~~	~~16" AMERICAN HORNBEAM~~	~~GOOD~~	~~Carpinus caroliniana~~	~~YES~~
~~105900~~	~~978.731'~~	~~8" AMERICAN HORNBEAM~~	~~GOOD~~	~~Carpinus caroliniana~~	~~YES~~
~~105901~~	~~977.814'~~	~~9" WHITE OAK~~	~~FAIR~~	~~Quercus alba~~	~~YES~~
~~105902~~	~~978.581'~~	~~18" BLACK CHERRY~~	~~GOOD~~	~~Prunus serotina~~	~~YES~~
~~105903~~	~~979.134'~~	~~15" BASSWOOD~~	~~GOOD~~	~~Tilia americana~~	~~YES~~
~~105904~~	~~979.701'~~	~~20" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105905~~	~~980.116'~~	~~8" BLACK CHERRY 2-12~~		~~Prunus serotina~~	~~YES~~
~~105906~~	~~979.951'~~	~~12" BLACK CHERRY 16~~		~~Prunus serotina~~	~~YES~~
~~105907~~	~~980.258'~~	~~16" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105908~~	~~980.001'~~	~~15" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
105909	978.844'	18" BLACK CHERRY	GOOD	Prunus serotina	NO
105910	976.883'	15" RED OAK	GOOD	Quercus rubra	NO
105911	976.430'	12" RED OAK	GOOD	Quercus rubra	NO
105912	976.487'	9" BLACK CHERRY		Prunus serotina	NO
105913	976.816'	9" BLACK CHERRY	GOOD	Prunus serotina	NO
105914	975.496'	14" RED OAK	GOOD	Quercus rubra	NO
105915	975.955'	9" CHOCK CHERRY	GOOD	Prunus virginiana	NO
105916	975.465'	13" RED OAK	FAIR	Quercus rubra	NO
105917	976.153'	13" RED OAK	GOOD	Quercus rubra	NO
105918	975.565'	26" WHITE OAK	GOOD	Quercus alba	NO
105919	978.002'	20" WHITE OAK	GOOD	Quercus alba	NO
105920	978.477'	8" BLACK CHERRY	GOOD	Prunus serotina	NO
105921	978.357'	18" RED OAK	GOOD	Quercus rubra	NO
105922	978.856'	8" BASSWOOD 7	FAIR	Tilia americana	NO
105923	978.831'	7" RED OAK 9		Quercus rubra	NO
~~105924~~	~~979.235'~~	~~24" RED OAK~~	~~GOOD~~	~~Quercus rubra~~	~~YES~~
~~105925~~	~~979.726'~~	~~12" BLACK CHERRY 15~~		~~Prunus serotina~~	~~YES~~
~~105926~~	~~980.703'~~	~~11" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
~~105927~~	~~980.965'~~	~~11" WHITE OAK~~	~~GOOD~~	~~Quercus alba~~	~~YES~~
105928	979.964'	12" BLACK CHERRY	POOR	Prunus serotina	NO
105929	980.100'	14" BLACK WALNUT	GOOD	Juglans nigra	NO
105930	979.896'	13" BOX ELDER 17	GOOD	Acer negundo	NO
105931	979.487'	11" WHITE OAK	GOOD	Quercus alba	NO
105932	979.562'	8" WHITE OAK	GOOD	Quercus alba	NO
105933	980.009'	12" WHITE OAK	GOOD	Quercus alba	NO
105934	979.206'	18" AMERICAN ELM	GOOD	Ulmus americana	NO
105935	977.592'	16" SUGAR MAPLE 7		Acer saccharum	NO
105936	977.458'	18" SUGAR MAPLE	GOOD	Acer saccharum	NO
105937	975.325'	8" BASSWOOD	FAIR	Tilia americana	NO
105938	975.975'	9" BASSWOOD 18	FAIR	Tilia americana	NO
105939	976.905'	16" BLACK CHERRY	GOOD	Prunus serotina	NO
105940	977.730'	18" BLACK CHERRY	GOOD	Prunus serotina	NO
105941	978.459'	18" WHITE OAK	FAIR	Quercus alba	NO
105942	977.618'	14" WHITE OAK 8	GOOD	Quercus alba	NO
105943	977.922'	12" BOX ELDER	GOOD	Acer negundo	NO
105944	979.035'	3-12" LOWERING OGWOOD 8	POOR	Acer negundo	NO
105945	977.102'	7" LOWERING OGWOOD 12		Acer negundo	NO
105946	978.697'	24" BOX ELDER	GOOD	Acer negundo	NO
105947	977.594'	9" WILLOW	GOOD	Salix	NO
105948	979.120'	12" BOX ELDER	GOOD	Acer negundo	NO
105949	979.429'	12" BOX ELDER	GOOD	Acer negundo	NO
105950	979.729'	14" BOX ELDER	GOOD	Acer negundo	NO
~~105951~~	~~980.120'~~	~~9" BOX ELDER~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105952~~	~~980.452'~~	~~11" BOX ELDER 9~~	~~GOOD~~	~~Acer negundo~~	~~YES~~
~~105953~~	~~981.006'~~	~~12" BOX ELDER~~	~~FAIR~~	~~Acer negundo~~	~~YES~~
105954	979.491'	10" BOX ELDER	GOOD	Acer negundo	NO
105955	979.987'	32" RED OAK	GOOD	Quercus rubra	NO
105956	980.389'	18" RED OAK	GOOD	Quercus rubra	NO
105957	980.322'	16" AMERICAN ELM	GOOD	Ulmus americana	NO
105958	978.704'	18" BLACK CHERRY	FAIR	Prunus serotina	NO
105959	980.074'	15" RED OAK	GOOD	Quercus rubra	NO
105960	980.058'	20" RED OAK 18	GOOD	Quercus rubra	NO
105961	981.083'	9" RED OAK	GOOD	Quercus rubra	NO
105962	982.745'	24" RED OAK	GOOD	Quercus rubra	NO
105963	981.646'	32" RED OAK 26	GOOD	Quercus rubra	NO
105964	982.090'	12" BLACK CHERRY	GOOD	Prunus serotina	NO
105965	980.424'	12" BLACK CHERRY 13	GOOD	Prunus serotina	NO
105966	979.106'	8" BLACK CHERRY	GOOD	Prunus serotina	NO
105967	977.826'	18" BLACK CHERRY	POOR	Prunus serotina	NO
105968	977.312'	14" AMERICAN ELM	GOOD	Ulmus americana	NO
105969	978.133'	11" BLACK CHERRY 12	GOOD	Prunus serotina	NO
105970	977.349'	12" BOX ELDER 8		Acer negundo	NO
105971	984.847'	15" BLACK CHERRY	GOOD	Prunus serotina	NO
105972	983.674'	16" RED OAK	GOOD	Quercus rubra	NO
105973	983.825'	12" BLACK CHERRY 16	GOOD	Prunus serotina	NO
105974	983.925'	12" RED OAK	GOOD	Quercus rubra	NO
105975	983.866'	12" BITTERNUT HICKORY	GOOD	Carya cordiformis	NO
105976	983.566'	12" BOX ELDER	FAIR	Acer negundo	NO
105977	984.527'	15" BOX ELDER	FAIR	Acer negundo	NO
105978	984.903'	10" BOX ELDER 20	FAIR	Acer negundo	NO
105979	984.939'	24" BLACK CHERRY	FAIR	Prunus serotina	NO
105980	984.776'	20" BLACK CHERRY	FAIR	Prunus serotina	NO
105981	986.682'	3-10" RED OAK 2-16		Quercus rubra	NO
105982	987.648'	12" BLACK CHERRY 16	FAIR	Prunus serotina	NO
105983	989.346'	13" WHITE OAK	GOOD	Quercus alba	NO
105984	989.911'	18" WHITE OAK 12	GOOD	Quercus alba	NO
105985	989.420'	2-15" RED OAK 20	GOOD	Quercus rubra	NO
105986	990.812'	26" RED OAK	GOOD	Quercus rubra	NO
105987	992.059'	9" BOX ELDER	GOOD	Acer negundo	NO

TREE TO BE REMOVED, TYP.

SEIBER KEAST LEHNER
ENGINEERING | SURVEYING

CLINTON TOWNSHIP OFFICE
17001 NINETEEN MILE ROAD, SUITE 3
CLINTON TOWNSHIP, MI 48038
586.412.7050

FARMINGTON HILLS OFFICE
39205 COUNTRY CLUB DRIVE, SUITE C8
FARMINGTON HILLS, MI 48331
248.308.3331

SUBMITTAL DATE: 03-03-25

NO.	REVISION	DATE
1.	REVISED PER TOWNSHIP REVIEW	05-13-25

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
TOLL FREE FOR THE LOCATION
OF UNDERGROUND FACILITIES

PROJECT NUMBER:
24-255

PROJECT MANAGER:
J RICKARD

DRAWN BY:
N.G.

CHECKED BY:
J.R.

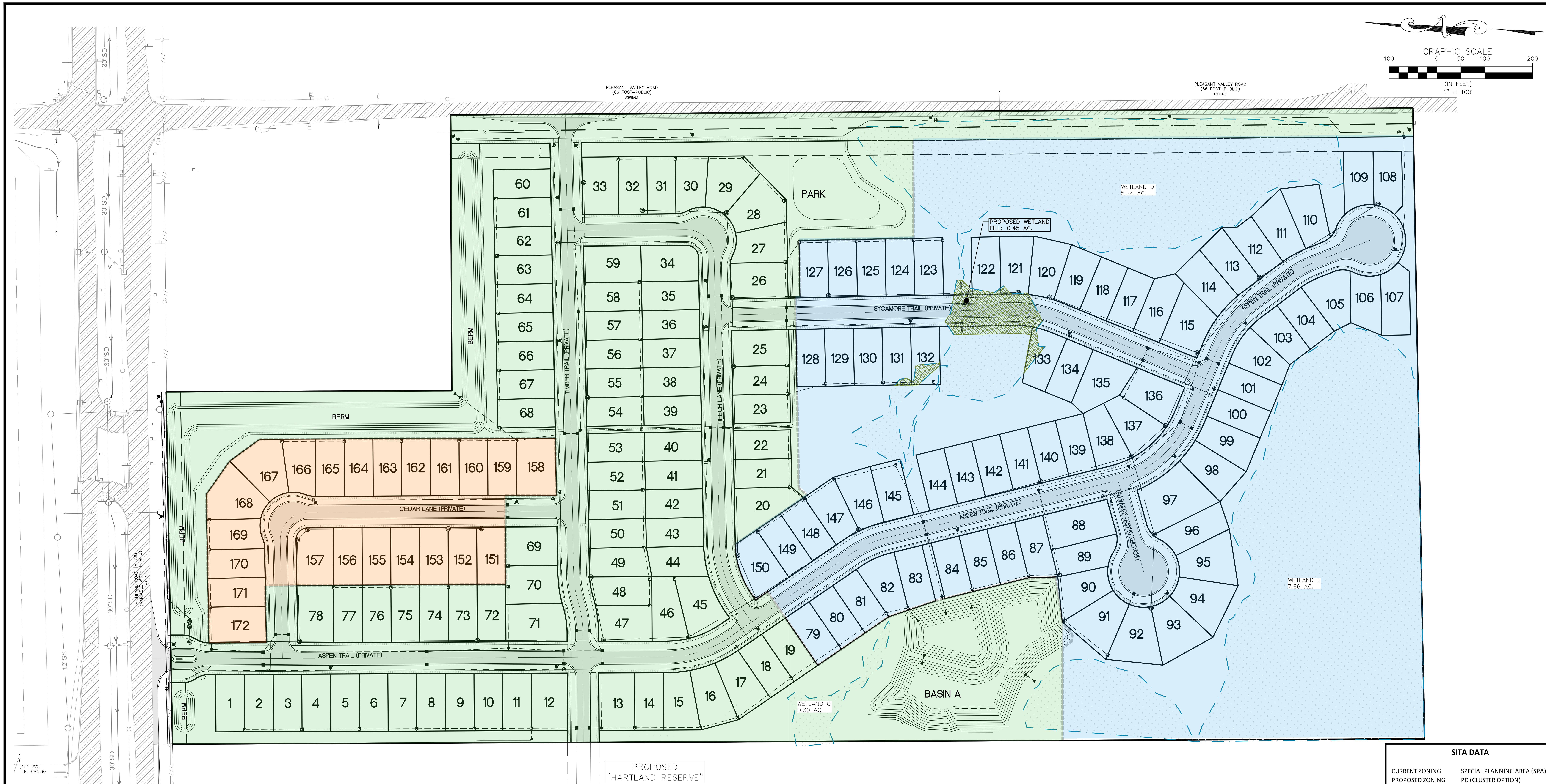
OFFICE:
FARMINGTON HILLS

CLIENT:
MI HOMES
40950 WOODWARD AVE #203
BLOOMFIELD HILLS, MI 48304
248.836.4522

PROJECT NAME:
SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE:
TREE LIST

PAGE No.:
C6



UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
1	7,200	60.00
2	7,200	60.00
3	7,200	60.00
4	7,200	60.00
5	7,200	60.00
6	7,200	60.00
7	7,200	60.00
8	7,200	60.00
9	7,200	60.00
10	7,200	60.00
11	7,200	60.00
12	9,000	75.00
13	9,000	75.00
14	7,200	60.00
15	8,125	60.00
16	8,567	60.00
17	8,295	60.00
18	7,200	60.00
19	7,200	60.00
20	9,875	101.27

UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
21	7,200	60.00
22	7,200	60.00
23	7,200	60.00
24	7,200	60.00
25	9,000	75.00
26	8,999	75.01
27	8,087	68.42
28	9,604	60.00
29	9,557	60.00
30	7,252	64.26
31	7,200	60.00
32	7,200	60.00
33	9,043	74.96
34	8,902	74.92
35	7,200	60.00
36	7,200	60.00
37	7,200	60.00
38	7,200	60.00
39	7,200	60.00
40	7,200	60.00

UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
41	7,200	60.00
42	7,200	60.00
43	7,200	60.00
44	7,399	63.71
45	9,339	85.84
46	8,356	71.87
47	8,495	75.19
48	7,510	61.29
49	7,620	60.37
50	7,200	60.00
51	7,200	60.00
52	7,200	60.00
53	7,200	60.00
54	7,200	60.00
55	7,200	60.00
56	7,200	60.00
57	7,200	60.00
58	7,200	60.00
59	9,192	74.98
60	7,200	60.00

UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
61	7,200	60.00
62	7,200	60.00
63	7,200	60.00
64	7,200	60.00
65	7,200	60.00
66	7,200	60.00
67	7,200	60.00
68	7,200	60.00
69	8,741	80.36
70	8,914	80.32
71	9,930	80.48
72	7,200	60.00
73	7,200	60.00
74	7,200	60.00
75	7,200	60.00
76	7,200	60.00
77	7,200	60.00
78	9,103	75.36
79	7,200	60.00
80	7,200	60.00

UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
81	7,200	60.00
82	8,086	77.77
83	7,350	60.00
84	7,200	60.00
85	7,200	60.00
86	7,200	60.00
87	7,583	60.00
88	10,488	70.54
89	7,618	69.90
90	7,913	60.00
91	9,733	60.00
92	9,733	60.00
93	9,733	60.00
94	9,733	60.00
95	9,733	60.00
96	8,247	60.00
97	13,943	98.40
98	8,311	60.00
99	7,993	60.00
100	7,200	60.00

UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
101	7,200	60.00
102	7,834	77.95
103	7,250	68.71
104	7,245	63.00
105	8,487	91.67
106	7,266	64.40
107	8,339	65.76
108	7,222	66.30
109	7,252	63.56
110	8,516	64.76
111	8,422	60.00
112	7,246	60.00
113	8,000	60.00
114	8,302	63.76
115	10,179	85.00
116	8,169	60.00
117	7,200	60.00
118	7,200	60.00
119	7,559	60.00
120	8,137	60.00

UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
121	7,742	60.00
122	7,200	60.00
123	7,200	60.00
124	7,200	60.00
125	7,200	60.00
126	7,200	60.00
127	7,200	60.00
128	7,200	60.00
129	7,200	60.00
130	7,200	60.00
131	7,200	60.00
132	7,200	60.00
133	7,588	70.42
134	7,203	60.00
135	9,880	94.66
136	9,002	85.20
137	8,365	84.59
138	7,918	72.26
139	7,200	60.00
140	7,200	60.00

UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
141	7,200	60.00
142	7,200	60.00
143	7,200	60.00
144	7,200	60.00
145	7,677	63.97
146	8,142	60.00
147	7,938	60.00
148	7,200	60.00
149	7,200	60.00
150	9,101	84.25
151	7,200	60.00
152	7,200	60.00
153	7,200	60.00
154	7,200	60.00
155	7,200	60.00
156	7,200	60.00
157	9,169	78.05
158	9,871	82.76
159	7,200	60.00
160	7,200	60.00

UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
161	7,200	60.00
162	7,200	60.00
163	7,200	60.00
164	7,200	60.00
165	7,200	60.00
166	7,284	60.00
167	9,875	60.00
168	10,433	60.00
169	7,230	63.44
170	7,200	60.00
171	7,200	60.00
172	9,103	76.35

SITA DATA

CURRENT ZONING	SPECIAL PLANNING AREA (SPA)
PROPOSED ZONING	PD (CLUSTER OPTION)
GROSS AREA	71.11 Ac
ROW	2.77 Ac
NET SITE AREA	68.34 Ac
TOTAL LOTS	172
LOT DENSITY	2.52 LOTS / Ac
MIN LOT AREA	7200 SF
MIN LOT WIDTH	60 FT
FRONT SETBACK	25 FT
REAR SETBACK	20 FT
SIDE SETBACK	5 FT

PHASING LEGEND

- PHASE 1
- PHASE 2
- PHASE 3

PROPOSED LEGEND

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- DITCH/SWALE
- SILT FENCE
- WETLAND
- 1000 CONTOUR
- CURB AND GUTTER
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM MANHOLE
- STORM CATCH BASIN
- END SECTION
- FIRE HYDRANT
- LIGHT POLE
- PAVEMENT (ASPHALT)
- PAVEMENT (CONCRETE)
- SURFACE DRAINAGE ARROWS
- 1000.00 GRADE

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CLINTON TOWNSHIP OFFICE
17001 NINETEEN MILE ROAD, SUITE 3
CLINTON TOWNSHIP, MI 48038
586.412.7050

SUBMITTAL DATE: 03-03-25

NO.	REVISION	DATE
1.	REVISED PER TOWNSHIP REVIEW	05-13-25

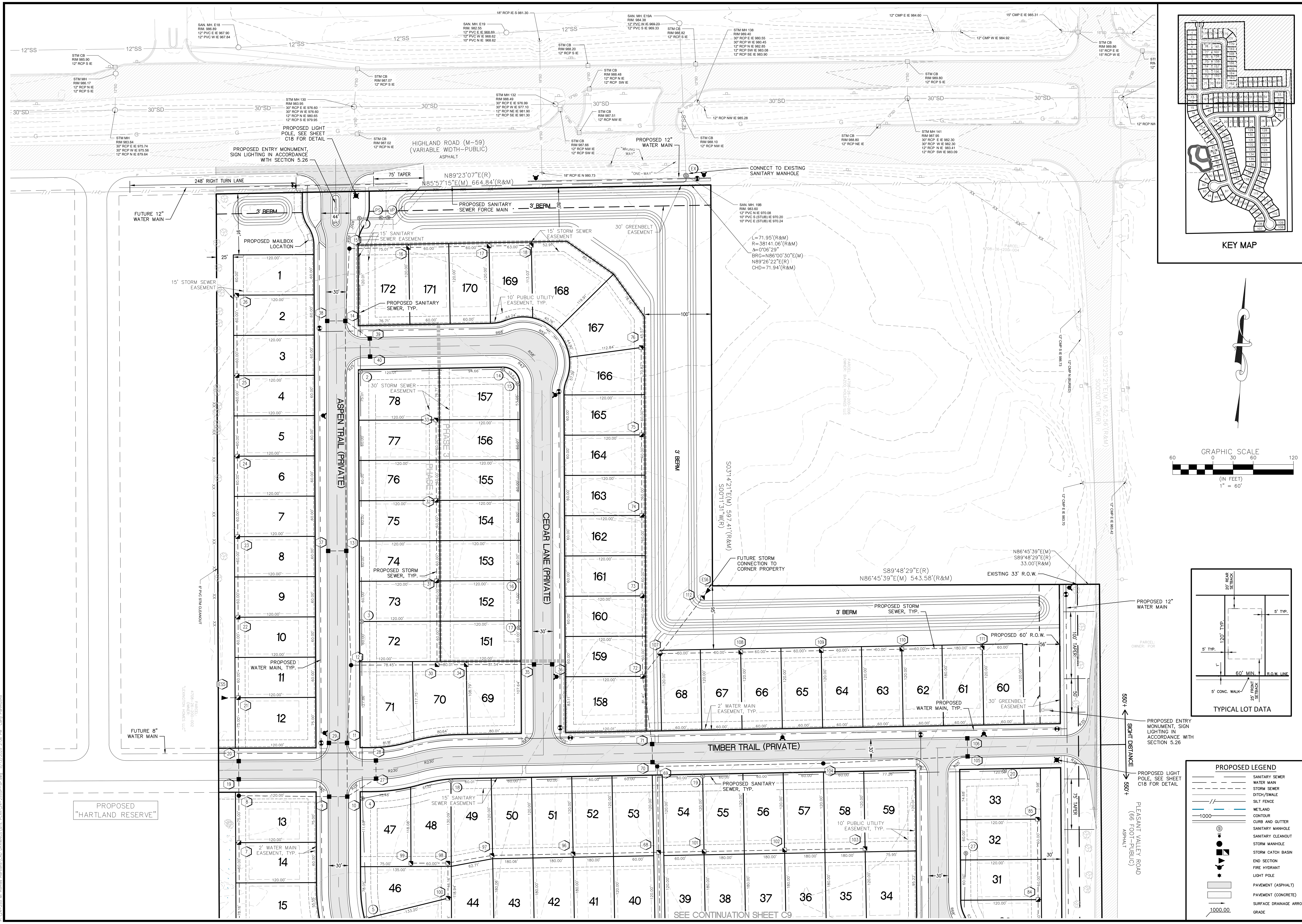
PROJECT NUMBER: 24-255
PROJECT MANAGER: J RICKARD
DRAWN BY: N.G.
CHECKED BY: J.R.
OFFICE: FARMINGTON HILLS

CLIENT: MI HOMES
40950 WOODWARD AVE #203
BLOOMFIELD HILLS, MI 48304
248.836.4522

PROJECT NAME: SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE: OVERALL SITE PLAN

PAGE No.: C7



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ENGINEERING | SURVEYING

Clinton Township Office
17001 Nineteen Mile Road, Suite 3
Clinton Township, MI 48038
586.412.7050

Farmington Hills Office
39205 Country Club Drive, Suite C8
Farmington Hills, MI 48331
248.308.3331

SUBMITTAL DATE: 03-03-25

NO.	REVISION	DATE
1.	REVISED PER TOWNSHIP REVIEW	05-13-25

811
3 WORKING DAYS BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

PROJECT NUMBER: 24-255
PROJECT MANAGER: J RICKARD
DRAWN BY: N.G.
CHECKED BY: J.R.
OFFICE: FARMINGTON HILLS

CLIENT:
MI HOMES
40950 WOODWARD AVE #203
BLOOMFIELD HILLS, MI 48304
248.836.4522

PROJECT NAME:
SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE:
SITE PLAN - NORTH

PAGE No.:
C8

SEE CONTINUATION SHEET C8

BEECH LANE (PRIVATE)

ASPEN TRAIL (PRIVATE)

SYCAMORE TRAIL (PRIVATE)

HICKORY BLUFF (PRIVATE)

PLEASANT VALLEY ROAD (66 FOOT-PUBLIC) ASPHALT

PROPOSED STORM SEWER, TYP.

30' STORM SEWER EASEMENT

PROPOSED SANITARY SEWER, TYP.

10' PUBLIC UTILITY EASEMENT, TYP.

PROPOSED WATER MAIN, TYP.

2' WATER MAIN EASEMENT, TYP.

15' SANITARY SEWER EASEMENT

PROPOSED 12" WATER MAIN

PROPOSED 5' PATH

PARK

PROPOSED WETLAND EQUALIZATION CULVERT

PROPOSED WETLAND FILL: 0.45 AC.

30' GREENBELT EASEMENT

PROPOSED 60' R.O.W.

EXISTING 33' R.O.W.

15' STORM SEWER EASEMENT

WETLAND C 0.30 AC.

WETLAND D 5.74 AC.

DETENTION BASIN A

SEDIMENT FOREBAY

PHASE 1
PHASE 2

PARCEL: 4708-25-100-003
ADDRESS: 1750 PLEASANT VALLEY RD, HARTLAND, MI 48353
OWNER: "ULMAN BENJAMIN G"

N00°11'15"W(F)
N03°14'01"W(M) 2617.55'(R&M)

S03°25'21"E(M) 2011.87'(R&M)
S00°00'31"W(R)

SEE CONTINUATION SHEET C10

KEY MAP

GRAPHIC SCALE
60 0 30 60 120
(IN FEET)
1" = 60'

PROPOSED LEGEND

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- DITCH/SWALE
- SILT FENCE
- WETLAND
- 1000 CONTOUR
- CURB AND GUTTER
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM MANHOLE
- STORM CATCH BASIN
- END SECTION
- FIRE HYDRANT
- LIGHT POLE
- PAVEMENT (ASPHALT)
- PAVEMENT (CONCRETE)
- SURFACE DRAINAGE ARROWS
- 1000.00 GRADE

SEIBER KEAST LEHNER
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FARMINGTON HILLS, MI 48331
248.308.3331
CLINTON TOWNSHIP OFFICE
1700 NINETEEN MILE ROAD, SUITE 3
CLINTON TOWNSHIP, MI 48038
586.412.7080

NO	REVISION	DATE
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SUBMITTAL DATE: 03-03-25

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TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

PROJECT NUMBER: 24-255

PROJECT MANAGER: J. RICKARD
DRAWN BY: N.G.
CHECKED BY: J.R.
OFFICE: FARMINGTON HILLS

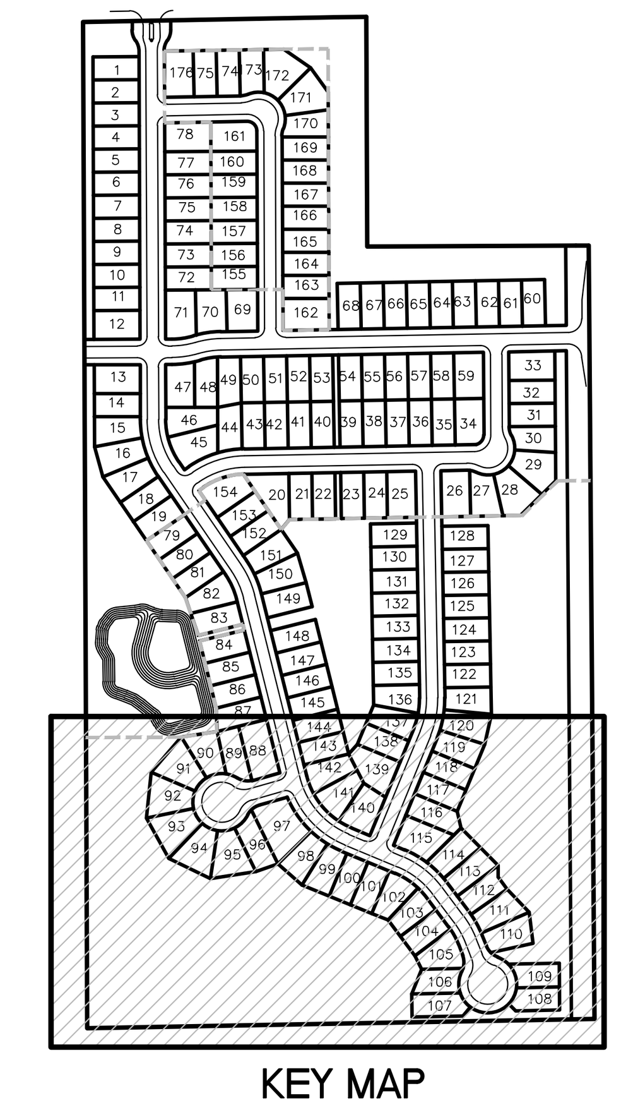
CLIENT:
MI HOMES
40950 WOODWARD AVE. #203
BLOOMFIELD HILLS, MI 48304
248.836.4522

PROJECT NAME:
SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE:
SITE PLAN - CENTER

PAGE No.:
C9

SEE CONTINUATION SHEET C9



GRAPHIC SCALE
60 0 30 60 120
(IN FEET)
1" = 60'

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248.308.3331

CLINTON TOWNSHIP OFFICE
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CLINTON TOWNSHIP, MI 48038
586.412.7050

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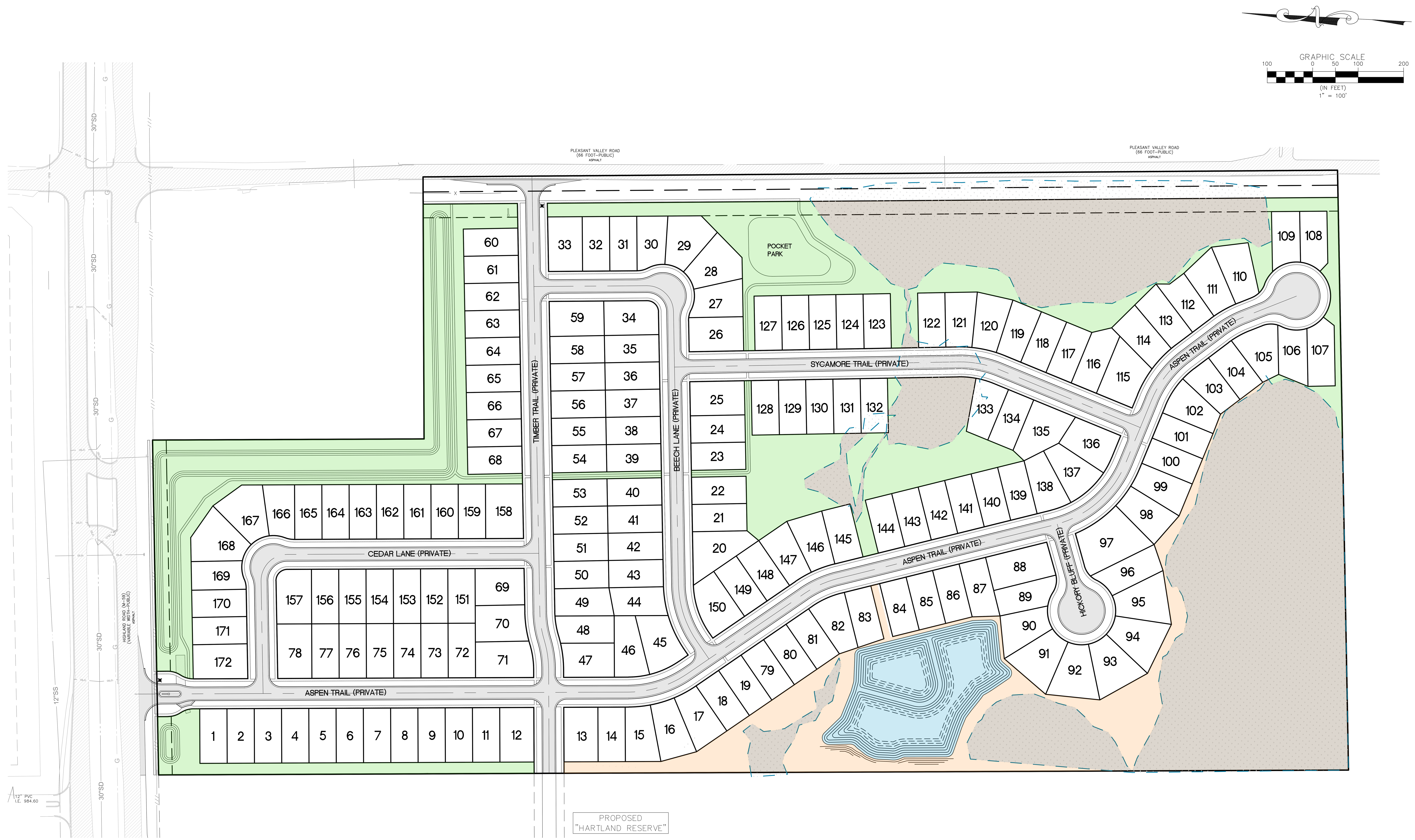
MI HOMES
40950 WOODWARD AVE #203
BLOOMFIELD HILLS, MI 48304
248.836.4522

PROJECT NAME:
SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE:
SITE PLAN - SOUTH

PROPOSED LEGEND
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- DITCH/SWALE
- SILT FENCE
- WETLAND
- CONTOUR
- CURB AND GUTTER
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM MANHOLE
- STORM CATCH BASIN
- END SECTION
- FIRE HYDRANT
- LIGHT POLE
- PAVEMENT (ASPHALT)
- PAVEMENT (CONCRETE)
- SURFACE DRAINAGE ARROWS
- GRADE

PAGE No.:
C10



USABLE OPEN SPACE
OPEN SPACE WETLANDS
OPEN SPACE DETENTION
OPEN SPACE UPLANDS

OPEN SPACE DATA

NET SITE AREA	68.34 Ac
TOTAL OPEN SPACE REQUIRED (25%)	17.09 Ac
USABLE OPEN SPACE REQUIRED (10%)	6.83 Ac
OPEN SPACE WETLANDS	12.63 Ac
OPEN SPACE DETENTION	1.88 Ac
OPEN SPACE UPLANDS	11.57 Ac
TOTAL OPEN SPACE PROVIDED	26.08 Ac
	38.2%
USABLE OPEN SPACE PROVIDED	9.10 Ac
	13.3%

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248.308.3331

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BLOOMFIELD HILLS, MI 48304
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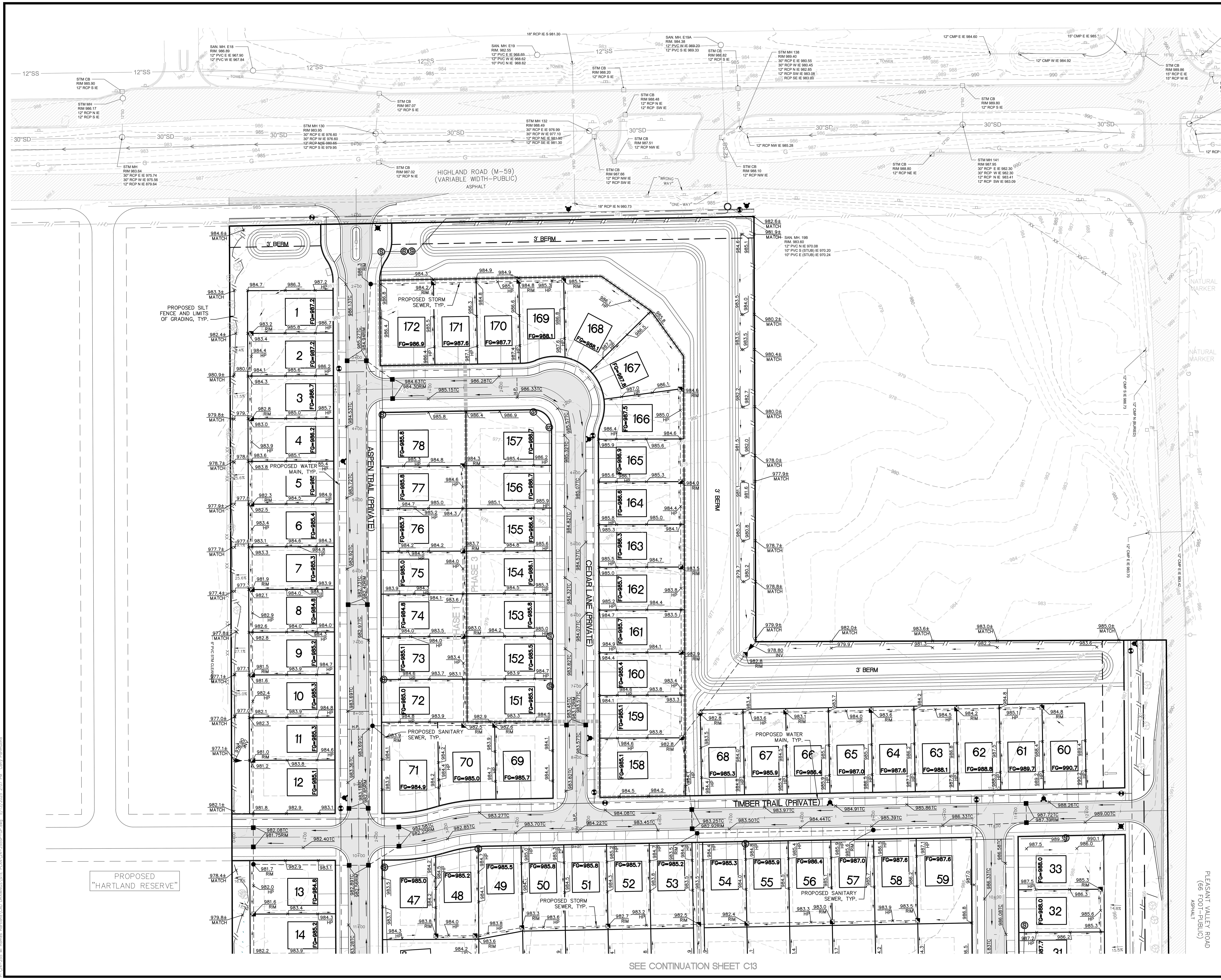
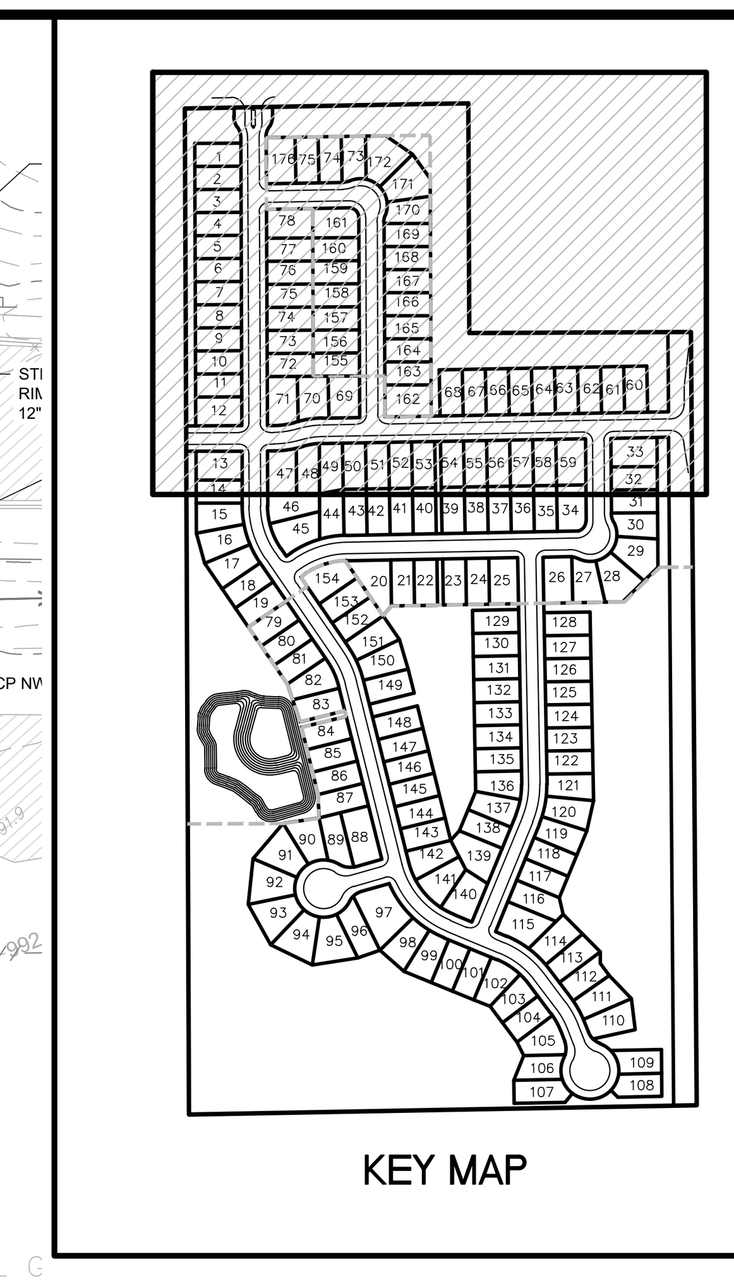
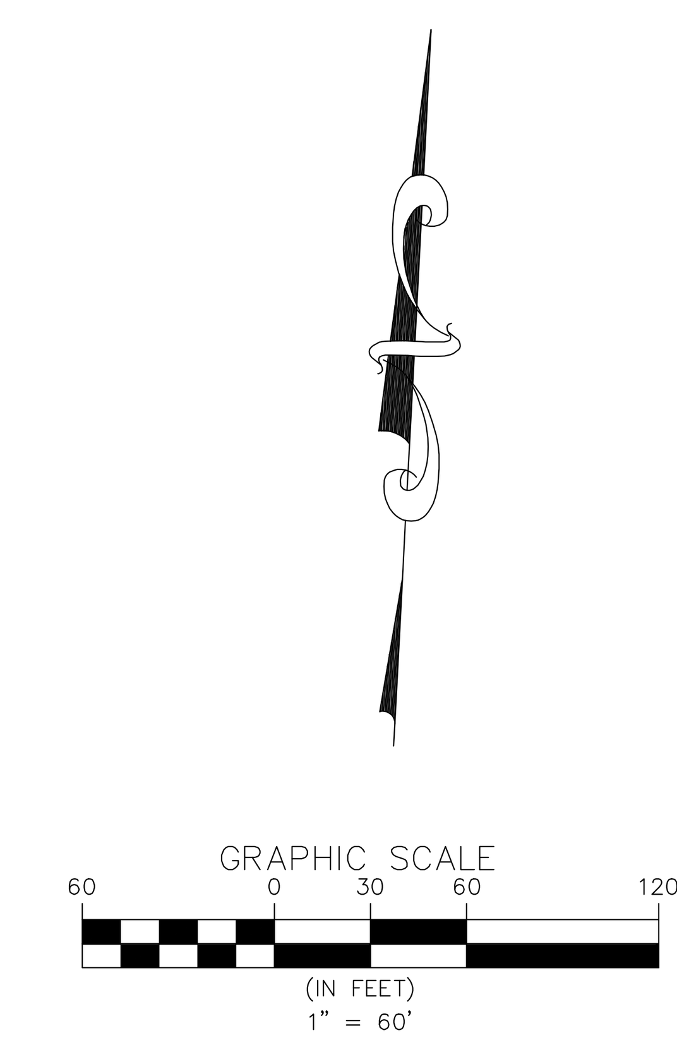
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

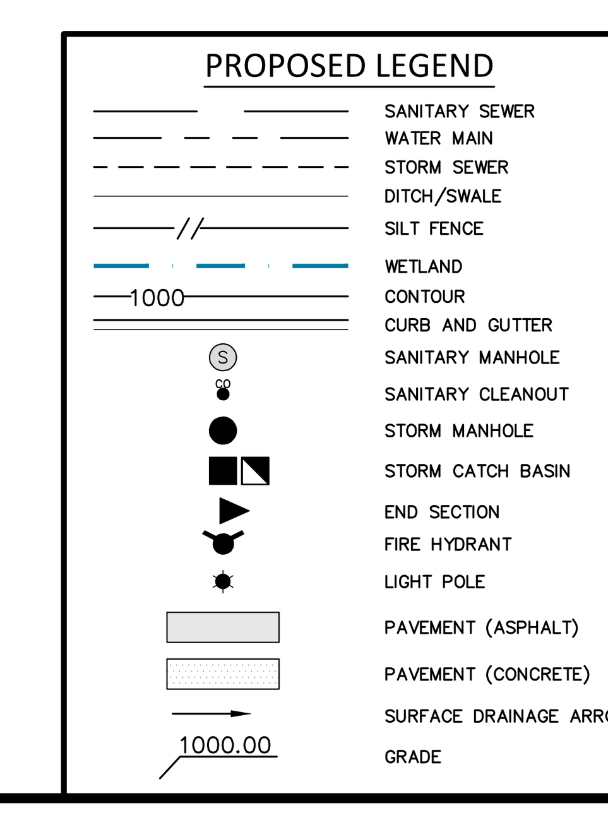
SHEET TITLE:
OPEN SPACE PLAN

PAGE No.: C11









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PROJECT NAME:
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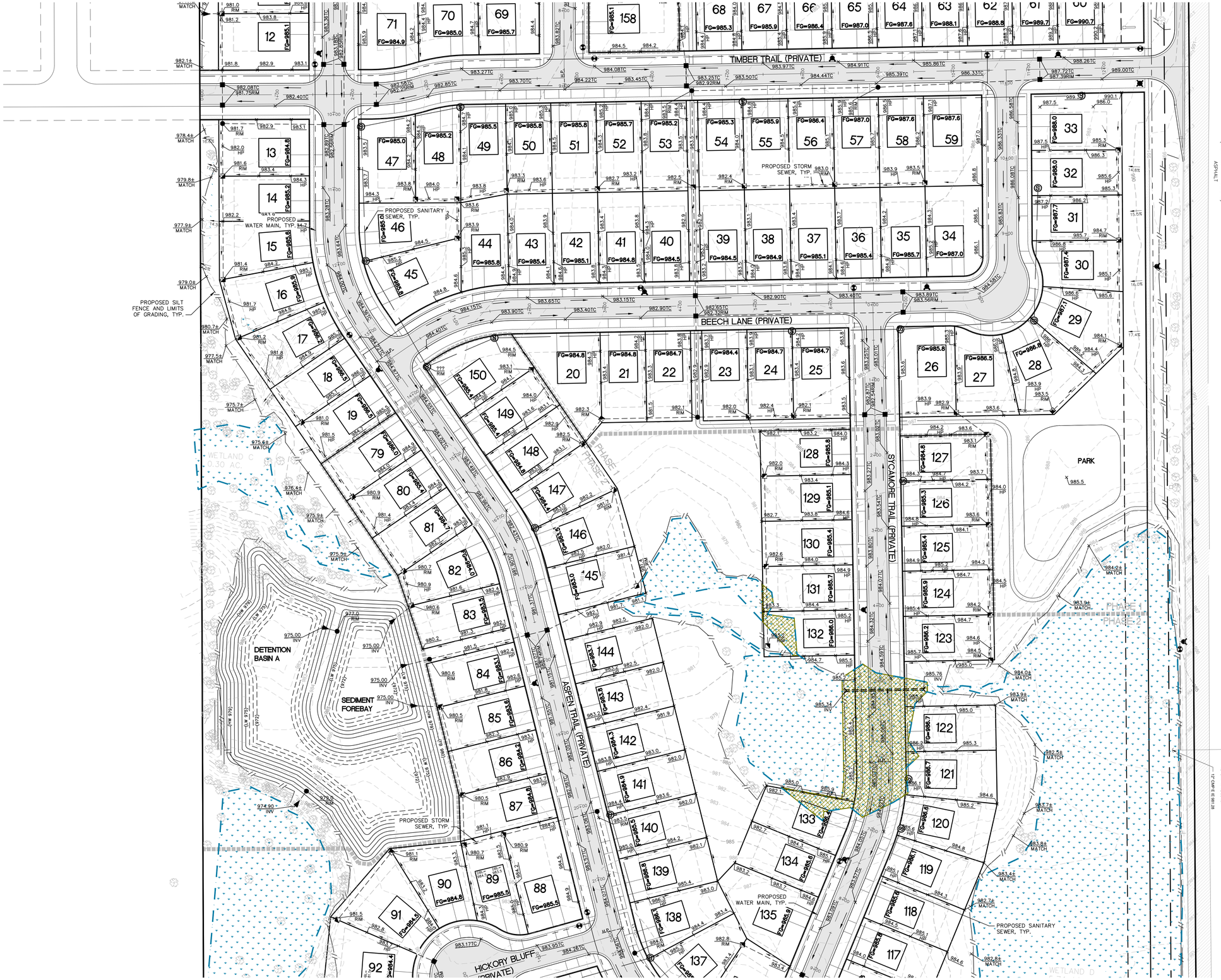
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

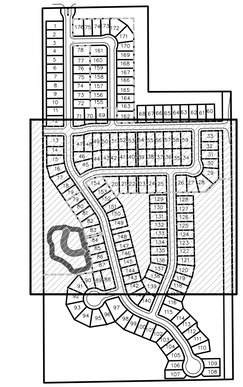
SHEET TITLE:
GRADING PLAN - NORTH

PAGE No.: C12

SEE CONTINUATION SHEET C12



SEE CONTINUATION SHEET C14



KEY MAP

GRAPHIC SCALE
60 0 30 60 120
(IN FEET)
1" = 60'

PROPOSED LEGEND

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- DITCH/SWALE
- SILT FENCE
- WETLAND
- 1000 CONTOUR
- CURB AND GUTTER
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM MANHOLE
- STORM CATCH BASIN
- END SECTION
- FIRE HYDRANT
- LIGHT POLE
- PAVEMENT (ASPHALT)
- PAVEMENT (CONCRETE)
- SURFACE DRAINAGE ARROWS
- 1000.00 GRADE

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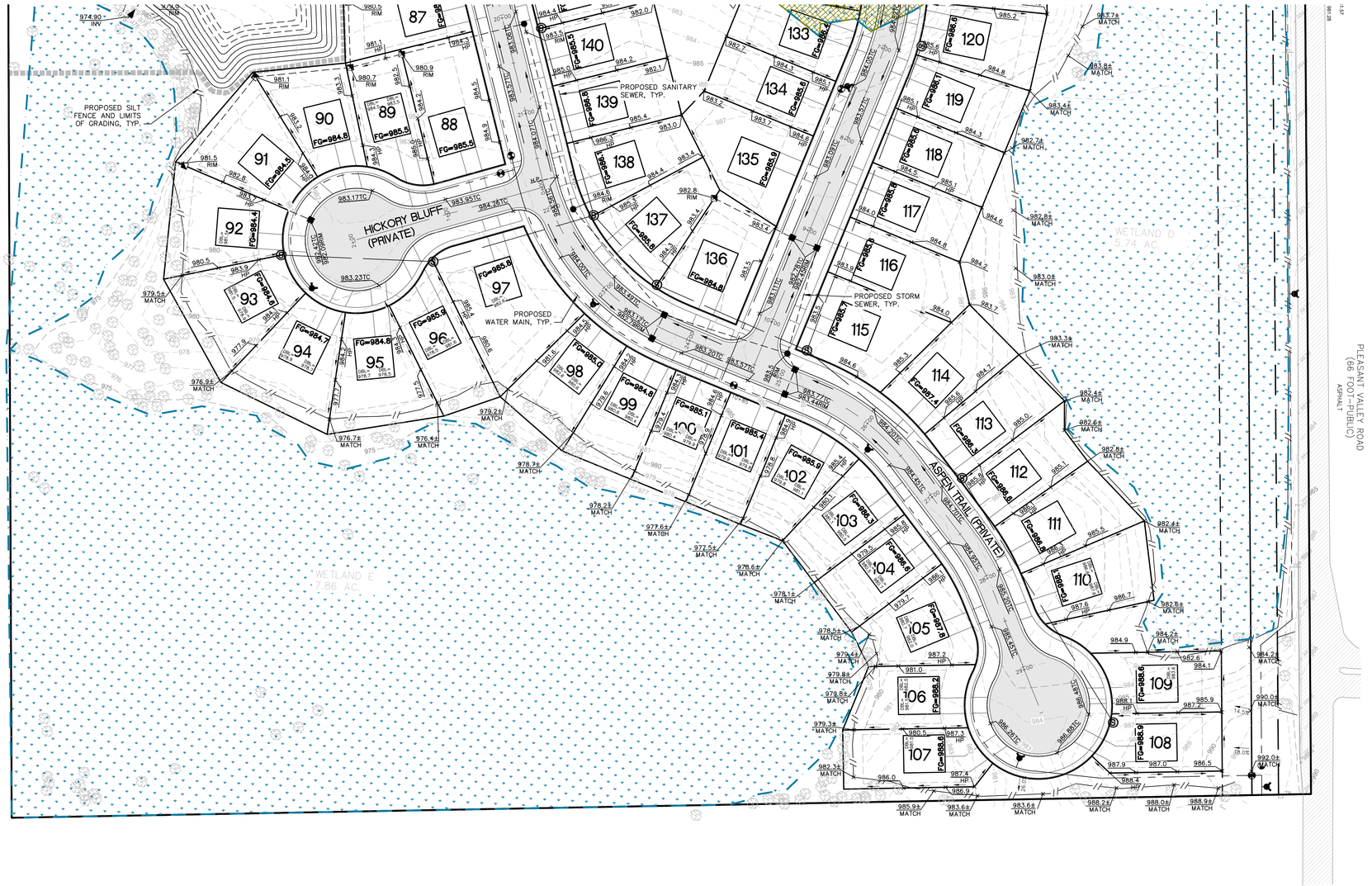
SHEET TITLE:
GRADING PLAN - CENTER

PAGE No.:
C13

SEE CONTINUATION SHEET C13



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60 0 30 60 120
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SEIBER KEAST LEHNER
ENGINEERING | SURVEYING
FARMINGTON HILLS OFFICE
39205 COUNTRY CLUB DRIVE, SUITE C8
FARMINGTON HILLS, MI 48331
248.308.3331
CLINTON TOWNSHIP OFFICE
17001 NINETEEN MILE ROAD, SUITE 3
CLINTON TOWNSHIP, MI 48038
586.412.7080

NO	REVISION	DATE
1.	REVISED PER TOWNSHIP REVIEW	05-13-25

SUBMITTAL DATE: 03-03-25

811
3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG
1-800-482-7171
TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

PROJECT NUMBER: 24-255
PROJECT MANAGER: J. RICKARD
DRAWN BY: N.G.
CHECKED BY: J.R.
OFFICE: FARMINGTON HILLS

CLIENT:
MI HOMES
40950 WOODWARD AVE. #203
BLOOMFIELD HILLS, MI 48304
248.836.4522

PROJECT NAME:
SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE:
GRADING PLAN - SOUTH

PAGE No.:
C14

GRAPHIC SCALE
100 0 50 100 200
(IN FEET)
1" = 100'

PLEASANT VALLEY ROAD
(66 FOOT-PUBLIC)
ASPHALT

HIGHLAND ROAD (M-59)
(VARIABLE WIDTH-PUBLIC)

NATURAL GAS MARKER

12" PVC
I.E. 984.60

6.9 AC.

PROPOSED
"HARTLAND RESERVE"

BASIN A TRIBUTARY
AREA: 44.44 AC.

PROPOSED LEGEND

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- DITCH/SWALE
- SILT FENCE
- WETLAND
- CONTOUR
- CURB AND GUTTER
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM MANHOLE
- STORM CATCH BASIN
- END SECTION
- FIRE HYDRANT
- LIGHT POLE
- PAVEMENT (ASPHALT)
- PAVEMENT (CONCRETE)
- SURFACE DRAINAGE ARROWS
- GRADE

SEIBER KEAST LEHNER
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NO	REVISION	DATE
1.	REVISED PER TOWNSHIP REVIEW	05-13-25

SUBMITTAL DATE: 03-03-25

811
3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

PROJECT NUMBER: 24-255
PROJECT MANAGER: J. RICKARD
DRAWN BY: N.G.
CHECKED BY:
OFFICE: FARMINGTON HILLS

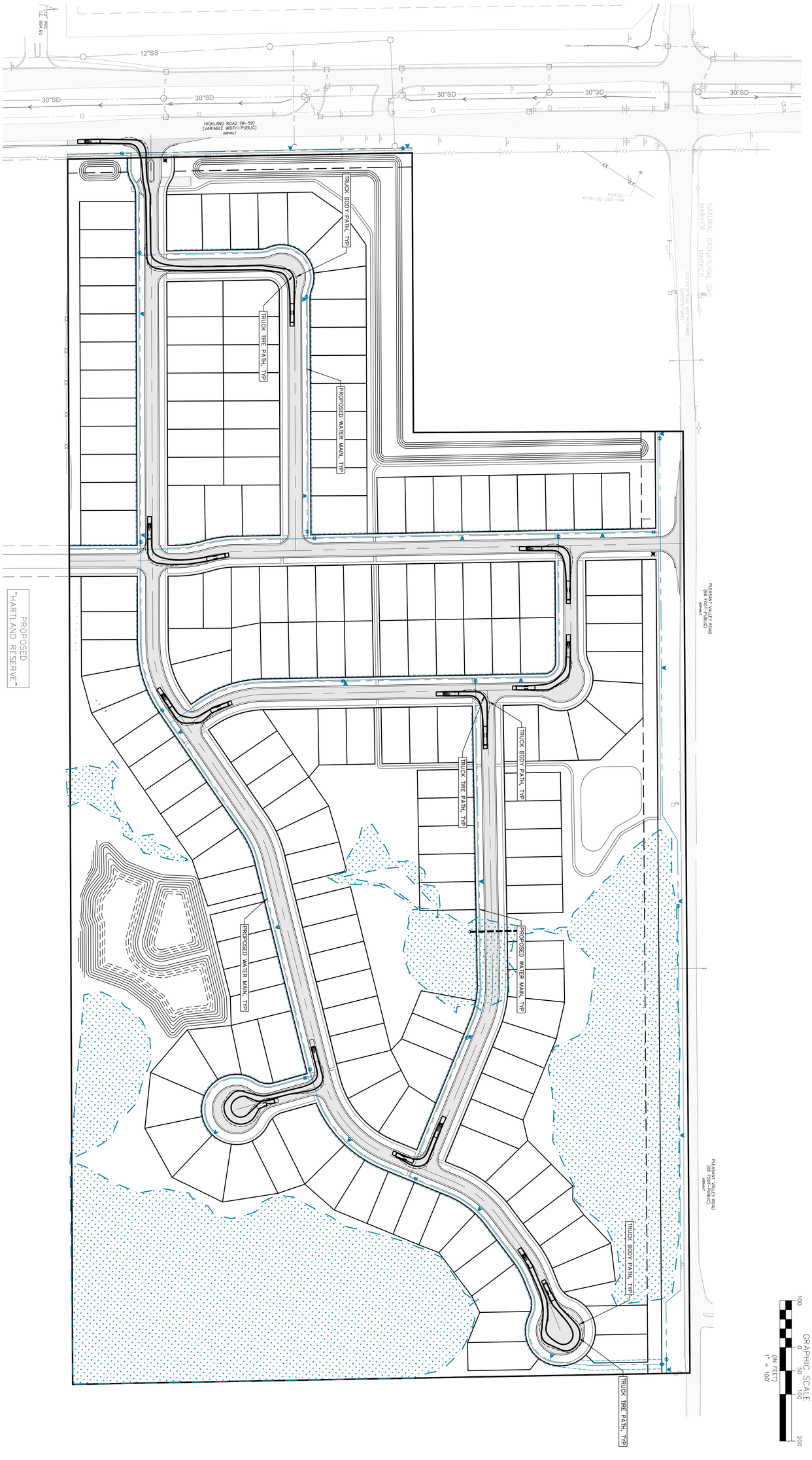
CLIENT:
MI HOMES
40950 WOODWARD AVE #203
BLOOMFIELD HILLS, MI 48304
248.836.4522

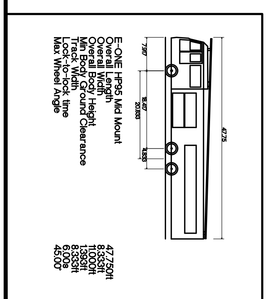
PROJECT NAME:
SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE:
STORM WATER MANAGEMENT

PAGE No.:
C15

P:\24-255\MI Homes Woodward\CAD DRAWINGS\SITE PLAN\24-255SD-SWM.dwg, 5/13/2025 2:28 PM, Colin Rothrock





GRAPHIC SCALE
(IN FEET)
1" = 100'
0 50 100 200

PAGE No. C16	PROJECT NAME: SAWYER RIDGE SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN SHEET TITLE: EMERGENCY VEHICLE ROUTE	CLIENT: MI HOMES 40950 WOODWARD AVE #203 BLOOMFIELD HILLS, MI 48304 248.836.4522

PROJECT NUMBER: 24-255
PROJECT MANAGER: J. RICKARD
DRAWN BY: N.G.
CHECKED BY: J.R.
OFFICE: FARMINGTON HILLS

811 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 (TOLL FREE) NOTIFICATION OF UNDERGROUND FACILITIES

SUBMITTAL DATE: 03-03-25

NO.	REVISION	DATE
1.	REVISED PER TOWNSHIP REVIEW	05-13-25

SEIBER KEAST LEHNER
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SANITARY SEWER CALCULATIONS

SANITARY BASIS OF DESIGN

NUMBER OF UNITS	172	UNITS
POPULATION	2.69	PEOPLE/UNITS
	462.68	PEOPLE
AVERAGE FLOW		
PEOPLE X 100 GAL/CAP/DAY	46268	GAL/DAY
	0.072	CFS
PEAK FLOW		
PEAK FACTOR (< 500 PEOPLE)	4	
PEAK FACTOR X AVERAGE FLOW	0.286	CFS
	128.51	GPM
Q PROVIDED (8" sanitary)	0.764	CFS
	342.88	GPM

SANITARY SEWER DESIGN

MH	MH	Length ft	Pipe slope-%	Invert upst.	Invert dnst.	Rim	Rim - Inv
30	11	330.27	1.00	973.80	970.50	985.3	11.50
29	28	154.57	1.00	971.68	970.13	983.4	11.72
28	9	169.64	0.40	970.13	969.45	984.5	14.37
27	26	176.24	1.00	975.07	973.31	986.8	11.73
26	22	177.98	0.40	973.31	972.60	985.8	12.49
25	24	396.39	1.00	973.47	969.51	985.7	12.23
24	23	201.60	0.40	969.51	968.70	985.4	15.89
23	22	143.96	0.40	968.60	968.02	985.0	16.40
22	21	395.34	0.40	968.02	966.44	983.8	15.78
21	6	97.36	0.40	966.44	966.05	984.5	18.06
20	19	399.97	1.00	976.63	972.63	988.2	11.57
19	18	375.08	0.40	972.63	971.13	984.4	11.77
18	4	134.44	0.40	971.13	970.59	984.1	12.97
17	16	70.33	1.00	972.89	972.19	984.3	11.41
16	15	293.37	0.40	972.19	971.02	984.6	12.41
15	14	31.01	0.40	971.02	970.89	986.0	14.98
14	2	212.09	0.40	970.89	970.05	986.8	15.91
13	12	291.78	1.20	976.35	972.85	987.7	11.35
12	11	204.15	1.20	972.85	970.40	985.4	12.55
11	10	166.34	0.40	970.40	969.73	986.9	16.50
10	9	95.41	0.40	969.73	969.35	983.8	14.07
9	8	197.52	0.40	969.35	968.56	984.9	15.55
8	7	394.04	0.40	968.56	966.98	984.0	15.44
7	6	257.87	0.40	966.98	965.95	982.6	15.62
6	5	162.39	0.40	965.95	965.30	985.0	19.05
5	4	178.59	0.40	965.30	964.59	984.7	19.40
4	3	263.86	0.40	964.59	963.53	983.6	19.01
3	2	372.06	0.40	963.53	962.05	984.1	20.57
2	1	229.08	0.40	962.05	961.13	977.7	15.65
1	PS	32.36	0.40	961.13	961.00	983.4	22.27

BASIN CALCULATIONS

Detention Basin A				
Forebay Volume Provided				
	Elev	Area (sf)	Volume (cf)	Total (cf)
	975.0	12,585		
	976.0	14,907	13,746	13,746
	977.0	17,417	30,002	30,002
Detention Volume Provided				
	Elev	Area (sf)	Volume (cf)	Total (cf)
	975.0	32,794	FF Vol =	30,002
	976.0	38,285	35,540	65,542
	977.0	44,046	41,166	106,707
	978.0	70,222	57,134	163,841
	979.0	75,940	73,081	236,922

CALCULATED C FACTOR

Impervious Area				C
	Roads	5.11	Ac	0.90
	Walks	1.70	Ac	0.90
	Drives	1.26	Ac	0.90
	House	5.73	Ac	0.80
Pervious Area		29.75	Ac	0.20
Low Water		0.89	Ac	1.00

C Avg =	0.42
C ROAD CB =	0.46
C YARD CB =	0.35

DETENTION BASIN A			
Total - Tributary Area (A) =	51.34	Ac	
Calculated C Factor =	0.46		
Offsite - Tributary Area (A) =	6.90	Ac	
Offsite - Calculated C Factor =	0.70		
Onsite - Tributary Area (A) =	44.44	Ac	
Onsite - Calculated C Factor =	0.42		

DETENTION AND FLOOD CONTROL RATE

CALCULATE VARIABLE RELEASE RATE

Qvrr = 1.1055-0.206 ln(A)			Qrr= Allowable release rate in cfs/acre
Qvrr =	0.29	cfs/acre	
Q100p = Qvrr x A	15.10	cfs	Q100p= Allowable 100-year peak flow rate

Water Quality Control (WQC)

V_{WQ}=3630 x C x A = 85728 ft^3

Sediment Forebay (WQC)

V_{WQ}=545 x C x A = 12871 ft^3

Channel Protection Volume Control (CPVC)

V_{CP-R}=4719 x C x A = 111446 ft^3

Channel Protection Rate Control (CPRC)

V_{ED}=6897 x C x A = 162882 ft^3

100-YEAR DETENTION VOLUME (V100D)

V100r=18985 x C x A = 448357 ft^3

100-YEAR PEAK INFLOW RATE (Q100IN)

Q100IN = C x I100 x A

T_c = 20.00 min

I100=83.18/(Tc+9.17)^0.81

I100 = 5.41 in/hr

Q100IN= 127.83 cfs

STORAGE CURVE FACTOR FOR THE 100-YEAR DETENTION VOLUME (R)

R= [0.206-0.15IN (Q100P/Q100IN)]

R = 0.526

100-YEAR REQUIRED DETENTION BASIN VOLUME

V100D= (V100R x R) - VCP-P = 236,003 ft^3 required

236,922 ft^3 provided

STORM SEWER CALCULATIONS

10 year design - I = 175 /T+25 n = 0.013

MH	MH	A acres	C	AxC	Flow From MH	AxC Additional	AxC cumul.	T min	I in/hr	Capacity Q cfs	Dia in	Hyd.Gr. %	Vel. ft/sec	Length ft	Tr Time min	Invert upst.	Invert dnst.	Invert drop	Rim	HGL	Pipe slope-%	RIM - HGL	T/Pipe - RIM
ES6	112	6.90	0.70	4.83			4.83	15.00	4.38	21.13	24	0.87	6.73	16.00	0.04	978.80	978.78	1.10		981.92	0.17		
112	107	1.03	0.35	0.36			5.19	15.04	4.37	22.69	36	0.12	3.89	104.61	0.45	976.88	976.70		982.8	981.78	0.17	1.02	2.92
111	110	0.46	0.35	0.16			0.16	20.00	3.89	0.63	12	0.03	3.14	120.00	0.64	980.46	979.88		984.8	982.17	0.48	2.63	3.34
110	109	0.36	0.35	0.13			0.29	20.64	3.83	1.10	12	0.10	3.14	120.00	0.64	979.88	979.31		984.2	982.13	0.48	2.07	3.32
109	108	0.37	0.35	0.13			0.42	21.27	3.78	1.58	12	0.20	3.14	120.00	0.64	979.31	978.73		983.6	982.02	0.48	1.58	3.29
108	107	0.42	0.35	0.15			0.56	21.91	3.73	2.10	15	0.11	3.16	120.00	0.63	978.53	978.10		983.1	981.78	0.36	1.32	3.32
107	72	0.27	0.35	0.09	112	5.19	5.85	22.54	3.68	21.53	36	0.10	3.65	42.98	0.20	976.70	976.63	0.10	982.8	981.66	0.15	1.14	3.10
106	105	0.26	0.46	0.12			0.12	20.00	3.89	0.47	12	0.48	3.14	27.00	0.14	983.16	983.03		987.39	983.96	0.48	3.43	3.23
105	104	0.11	0.46	0.05			0.17	20.14	3.88	0.66	12	0.03	6.09	215.28	0.59	983.03	979.16		987.39	983.83	1.80	3.56	3.36
104	69						0.17	20.73	3.83	0.65	12	0.03	3.14	247.42	1.31	979.16	977.97		985.6	981.51	0.48	4.09	5.44
103	102	0.32	0.35	0.11			0.11	20.00	3.89	0.44	12	0.01	3.14	120.00	0.64	979.29	978.72		983.5	981.43	0.48	2.07	3.21
102	101	0.42	0.35	0.15			0.26	20.64	3.83	0.99	12	0.08	3.14	120.00	0.64	978.72	978.14		983.0	981.41	0.48	1.59	3.28
101	68	0.36	0.35	0.13			0.39	21.27	3.78	1.46	12	0.17	3.14	67.50	0.36	978.14	977.82		982.4	981.32	0.48	1.08	3.26
100	98	0.18	0.35	0.06			0.06	20.00	3.89	0.25	12	0.00	3.14	52.38	0.28	979.68	979.43	0.10	983.9	981.58	0.48	2.32	3.22
99	65	0.13	0.35	0.05			0.05	20.00	3.89	0.18	12	0.00	3.14	55.00	0.29	979.59	979.33		983.8	981.58	0.48	2.22	3.21
98	97	0.14	0.35	0.05	100	0.06	0.16	20.29	3.86	0.61	12	0.03	3.14	66.74	0.35	979.33	979.01		983.6	981.58	0.48	2.02	3.27
97	96	0.28	0.35	0.10			0.26	20.65	3.83	0.98	12	0.08	3.14	120.82	0.64	979.01	978.43		983.3	981.56	0.48	1.74	3.29
96	68	0.50	0.35	0.18			0.43	21.29	3.78	1.63	12	0.21	3.14	127.50	0.68	978.43	977.82		982.7	981.47	0.48	1.23	3.27
95	94	0.49	0.46	0.23			0.23	20.00	3.89	0.88	12	0.06	3.14	27.00	0.14	979.06	978.93		983.56	982.12	0.48	1.44	3.50
94	66	0.87	0.46	0.40			0.63	20.14	3.88	2.43	12	0.46	3.14	275.50	1.46	978.93	977.61		983.56	982.11	0.48	1.45	3.63
93	63	0.16	0.35	0.06			0.06	20.00	3.89	0.22	12	0.00	3.14	120.00	0.64	977.82	977.24		983.1	979.75	0.48	3.35	4.28
92	91	0.04	0.35	0.01			0.01	20.00	3.89	0.05	12	0.00	3.14	60.00	0.32	980.19	979.90		984.5	981.84	0.48	2.66	3.31
91	90	0.13	0.35	0.05			0.06	20.32	3.86	0.23	12	0.00	3.14	120.00	0.64	979.90	979.32		984.2	981.84	0.48	2.36	3.30
90	89	0.45	0.35	0.16			0.22	20.95	3.81	0.83	12	0.05	3.14	120.00	0.64	979.32	978.75		983.6	981.84	0.48	1.76	3.28
89	81	0.35	0.35	0.12			0.34	21.59	3.76	1.28	12	0.13	3.14	49.85	0.26	978.75	978.51		983.1	981.77	0.48	1.33	3.35
88	87	0.10	0.35	0.04			0.04	20.00	3.89	0.14	12	0.00	3.14	105.48	0.56	979.02	978.51		983.2	980.77	0.48	2.43	3.18
87	86	0.21	0.35	0.07			0.11	20.56	3.84	0.42	12	0.01	3.14	120.00	0.64	978.51	977.93		982.6	980.77	0.48	1.83	3.09
86	77	0.20	0.35	0.07			0.18	21.20	3.79	0.68	15	0.01	3.16	82.46	0.44	977.73	977.44		982.0	980.75	0.36	1.25	3.02
85	84	0.28	0.35	0.10			0.10	20.00	3.89	0.38	12	0.01	3.14	120.00	0.64	980.97	980.39		985.3	982.28	0.48	3.02	3.33
84	83	0.31	0.35	0.11			0.21	20.64	3.83	0.79	12	0.05	3.14	139.76	0.74	980.39	979.72		984.7	982.27	0.48	2.43	3.31
83	82	0.30	0.35	0.11			0.31	21.38	3.77	1.18	12	0.11	3.14	124.48	0.66	979.72	979.12		984.1	982.20	0.48	1.90	3.38
82	81	0.54	0.35	0.19			0.50	22.04	3.72	1.86	12	0.27	3.14	128.09	0.68	979.12	978.51		983.5	982.06	0.48	1.44	3.38
81	80	0.27	0.35	0.09	89	0.34	0.93	22.72	3.67	3.43	15	0.28	3.16	94.50	0.50	978.31	977.97		982.9	981.71	0.36	1.19	3.34
80	79	0.89	0.46	0.41			1.34	23.22	3.63	4.88	15	0.57	3.97	27.00	0.11	977.97	977.87		982.54	981.44	0.36	1.10	3.32
79	78	0.80	0.46	0.37			1.71	23.33	3.62	6.20	18	0.35	3.51	94.50	0.45	977.67	977.41		982.54	981.29	0.28	1.25	3.37
78	77	0.15	0.35	0.05			1.76	23.78	3.59	6.33	18	0.36	3.58	60.00	0.28	977.41	977.24		982.1	980.96	0.28	1.14	3.19
77	65	0.10	0.35	0.04	86	0.18	1.98	24.06	3.57	7.06	18	0.45	3.99	67.50	0.28	977.24	977.05		982.0	980.74	0.28	1.26	3.26
76	75	0.58	0.35	0.20			0.20	20.00	3.89	0.79	12	0.05	3.14	130.17	0.69	980.25	979.62		984.6	982.20	0.48	2.40	3.35
75	74	0.41	0.35	0.14			0.35	20.69	3.83	1.33	12	0.14	3.14	120.00	0.64	979.62	979.05		984.0	982.14	0.48	1.86	3.38
74	73	0.36	0.35	0.13			0.47	21.33	3.78	1.78	12	0.25	3.14	120.00	0.64	979.05	978.47		983.5	981.97	0.48	1.53	3.45
73	72	0.40	0.35	0.14			0.61	21.96	3.73	2.28	18	0.05	3.15	120.00	0.64	978.07	977.73		982.9	981.67	0.28	1.23	3.33
72	71	0.27	0.35	0.09	107	5.85	6.56	22.60	3.68	24.10	36	0.13	3.41	101.75	0.50	976.53	976.41		982.8	981.61	0.12	1.19	3.27
71	70	0.93	0.46	0.43			6.98	23.10	3.64	25.41	36	0.15	3.59	27.00	0.13	976.41	976.38		982.92	981.48	0.12	1.44	3.51
70	69	0.99	0.46	0.46			7.44	23.22	3.63	27.00	36	0.16	3.82	9.50	0.04	976.38	976.37		982.92	981.44	0.12	1.48	3.54
69	68				104	0.17	7.61	23.26	3.63	27.59	36	0.17	3.90	128.00	0.55	976.37	976.22		983.5	981.42	0.12	2.08	4.13
68	67	0.62	0.35	0.22	101 & 96	0.82	8.64	23.81	3.59	30.98	36	0.22	4.38	144.50	0.55	976.22	976.04		982.5	981.21	0.12	1.29	3.28
67	66	0.99	0.46	0.46			9.10	24.36	3.55	32.25	36	0.23	4.56	27.00	0.10	976.04	976.01		982.32	980.89	0.12	1.43	3.28
66	65	0.97	0.46	0.45	94	0.63	10.17	24.46	3.54	35.98	36	0.29	5.09	134.50	0.44	976.01	975.85		982.32	980.83	0.12	1.49	3.31
65	64				77	1.98	12.15	24.90	3.51	42.60	36	0.41	6.03	127.50	0.35	975.85	975.70		982.1	980.44	0.12	1.66	3.25
64	63	0.12	0.35	0.04			12.19	25.25	3.48	42.45	36	0.41	6.01	42.16	0.12	975.70	975.64		982.3	979.92	0.12	2.38	3.60
63	62	0.18	0.35	0.06	93	0.06	12.31	25.37	3.47	42.76	36	0.41	6.05	74.24	0.20	975.64	975.56		982.5	979.75	0.12	2.75	3.86
62	61	0.24	0.35	0.08			12.39	25.57	3.46	42.88	36	0.41	6.07	130.81	0.36	975.56	975.40		981.7	979.44	0.12	2.26	3.14
61	60	0.11	0.35	0.04			12.43	25.93	3.44	42.71	36	0.41	6.04	132.62	0.37	975.40	975.24		981.4	978.90	0.12	2.50	3.00
60	59	1.37	0.46	0.63			13.06	26.30	3.41	44.55	36	0.45	6.30	27.00	0.07	975.24	975.21		980.74	978.36	0.12	2.38	2.50
59	58	1.32	0.46	0.61			13.67	26.37	3.41	46.56	36	0.49	6.59	133.88	0.34	975.21	975.05		980.74	978.24	0.12	2.50	2.53
58	ES2						13.67	26.71	3.38	46.26	36	0.48	6.54	38.62	0.10	975.05	975.00		980.6	977.59	0.12	3.01	2.55
																				977.40			
57	56	0.91	0.46	0.42			0.42	20.00	3.89	1.63	12	3.70	8.73	27.00	0.05	979.35	978.35		983.44	980.15	3.70	3.29	3.09
56	48	0.99	0.46	0.46			0.87	20.05	3.88	3.39	12	0.91	8.73	17.93	0.03	978.35	977.69		983.44	979.15	3.70	4.29	4.09
55	47	0.55	0.46	0.25			0.25	20.00	3.89	0.98	12	0.08	9.94	27.00	0.05	978.62	977.32		982.79	979.42	4.80	3.37	3.17
54	53	1.18	0.46	0.54			0.54	20.00	3.89	2.11	12	0.48	3.14	139.50	0.74	977.64	976.97		982.09	978.44	0.48	3.65	3.45
53	52	0.14	0.35	0.05			0.59	20.74	3.83	2.26	15	0.36	3.16	115.09	0.61	976.77	976.36		981.5	977.77	0.36	3.73	3.48
52	43	0.12	0.35	0.04			0.63	21.35	3.78	2.39	18	0.28	3.15	97.19	0.51	976.16	975.89	0.10	981.1	977.36	0.28	3.74	3.44
51	50	0.22	0.35	0.08			0.08	20.00	3.89	0.30	12	0.48	3.14	88.78	0.47	978.66	978.23		982.8	979.64	0.48	3.16	3.14
50	49	0.57	0.46	0.26			0.34	20.47	3.85	1.31	12	0.13	3.14	27.00	0.14	978.23	978.10		982.45	979.21	0.48	3.24	3.22
49	48	0.75	0.46	0.35			0.68	20.61	3.84	2.62	18	0.28	3.15	111.50	0.59	977.70	977.39	0.10	982.45	979.17	0.28	3.28	3.25
48	47				56	0.87	1.56	21.20	3.79	5.90	18	0.32	3.34	131.13	0.65	977.29	976.92		983.5	978.86	0.28	4.64	4.71
47	46	0.43	0.46	0.20	55	0.25	2.01	21.86	3.73	7.50	18	0.51	4.25	141.63	0.56	976.92	976.53		982.79	978.45	0.28	4.34	4.37
46	45						2.01	22.42	3.69	7.41	24	0.17	2.97	194.78	1.09	976.13	975.79		984.6	977.73	0.17	6.87	6.47
45	44						2.01	23.51	3.61	7.25	24	0.17	2.97	128.00	0.72	975.79	975.58		983.5	977.39	0.17	6.11	5.71
44	43	0.14	0.35	0.05			2.06	24.23	3.55	7.32	24	0.17	2.97	53.85	0.30	975.58	975.49	0.10	980.9	977.18	0.17	3.72	3.32
43	42	0.17	0.35	0.06	52	0.63	2.75	24.53	3.53	9.72	24	0.18	3.09	66.46	0.36	975.39	975.27		980.7	977.03	0.17	3.67	3.31
42	41	0.21	0.35	0.07			2.82	24.89	3.51	9.91	24	0.19	3.15	120.62	0.64	975.27	975.07		980.5	976.91	0.17	3.59	3.23
41	ES7	0.26	0.35	0.09			2.92	25.52	3.46	10.10	24	0.20	3.21	39.50	0.20	975.07	975.00		980.5	976.68	0.17	3.82	3.43
																				976.60			
ES5	21	0.46	0.35	0.16			0.16	20.00	3.89	0.63	12	0.03	3.14	25.00	0.13	977.07	976.95			978.66	0.48		
40	39	0.15	0.46	0.07			0.07	20.00	3.89	0.27	12	0.48	3.14	27.00	0.14	980.18	980.05		984.30	980.98	0.48	3.32	3.12
39	14	0.35	0.46	0.16			0.23	20.14	3.88	0.89	12	2.00	6.42	44.87	0.12	980.05	979.15		984.30	980.85	2.00	3.45	3.25
38	14	0.32	0.46	0.15			0.15	20.00	3.89	0.57	12	0.48	3.14	27.00	0.14	979.28	979.15		984.94	980.08	0.48	4.86	4.66
37	13	0.87	0.46	0.40			0.40	20.00	3.89	1.56	12	0.19	3.14	27.00	0.14	978.32	978.19		982.40	979.39	0.48	3.01	3.08
36	35	1.27	0.46	0.58			0.58	20.00	3.89	2.27	12	0.41	3.14	27.00	0.14	979.01	978.88		983.12	981.05	0.48	2.07	3.11
35	34	0.90	0.46	0.41			1.00	20.14	3.88	3.87	15	0.36	3.16	100.97	0.53	978.68	978.32		983.12	980.94	0.36	2.18	3.19
34	30	0.29	0.35	0.10			1.10	20.68	3.83	4.21	15	0.43	3.43	43.53	0.21	978.32	978.16		982.6	980.57	0.36	2.03	3.03
33	32	0.36	0.35	0.13			0.13	20.00	3.89	0.49	12	0.02	3.14	120.00	0.64	980.21	979.64		984.3	981.01	0.48	3.29	3.09
32	31	0.41	0.35	0.14			0.27	20.64	3.83	1.03	12	0.08	3.14	120.00	0.64	979.64	979.06	0.10	983.7	980.74	0.48	2.96	3.06
31	30	0.43	0.35	0.15			0.42	21.27	3.78	1.59	12	0.20	3.14	125.00	0.66	978.96	978.36		983.0	980.64	0.48	2.36	3.04
30	12	0.40	0.35	0.14	34	1.10	1.66	21.94	3.73	6.19	15	0.92	5.04	128.00	0.42	978.16	977.70		982.5	980.39	0.36	2.11	3.09
29	11	0.22	0.46	0.10			0.10	20.00	3.89	0.39	12	0.01	3.14	27.00	0.14	977.83	977.70		982.85	978.91	0.48	3.94	4.02
28	27	0.45	0.46	0.21			0.21	20.00	3.89	0.81	12	0.48	3.14	27.01	0.14	978.20	978.07		982.25	979.00	0.48	3.25	3.05
27	10	0.49	0.46	0.23			0.43	20.14	3.88	1.68	12	0.22	4.54	50.54	0.19	978.07	977.57		982.25	978.87	1.00	3.38	3.18
26	25	0.34	0.35	0.12			0.12	20.00	3.89	0.46	15	0.36	3.16	120.00	0.63	978.91	978.48		983.2	980.06	0.36	3.14	3.04
25	24	0.21	0.35	0.07			0.19	20.63	3.83	0.74	15	0.36	3.16	120.00	0.63	978.48	978.05		982.8	979.63	0.36	3.17	3.07
24	23	0.21	0.35	0.07			0.27	21.27	3.78	1.01	15	0.36	3.16	120.00	0.63	978.05	977.62		982.3	979.20	0.36	3.10	3.00
23	22	0.20	0.35	0.07			0.34	21.90	3.73	1.25	15	0.04	3.16	120.00	0.63	977.62	977.18		981.9	978.77	0.36	3.13	3.03
22	21	0.22	0.35	0.08			0.41	22.53	3.68	1.52	15	0.06	3.16	120.00	0.63	977.18	976.75		981.5	978.72	0.36	2.78	3.07
21	20	0.26	0.35	0.09	ES5	0.16	0.67	23.17	3.63	2.42	15	0.14	3.16	94.50	0.50	976.75	976.41		981.0	978.65	0.36	2.35	3.00
20	19	0.11	0.46	0.05			0.72	23.66	3.60	2.57	15	0.16	3.16	27.00	0.14	976.41	976.31		981.75	978.52	0.36	3.23	4.09
19	8	0.17	0.46	0.08			0.79	23.81	3.59	2.85	15	0.19	3.16	24.50	0.13	976.31	***976.23***	0.10	981.75	978.48	0.36	3.27	4.19
18	17	0.52	0.35	0.18			0.18	20.00	3.89	0.71	12	0.48	3.14	63.00	0.33	981.07	980.77		985.1	981.87	0.48	3.23	3.03
17	16	0.22	0.35	0.08			0.26	20.33	3.86	1.00	12	0.48	3.14	120.00	0.64	980.77	980.19		984.8	981.57	0.48	3.23	3.03
16	15	0.50	0.35	0.18			0.43	20.97	3.81	1.65	12	0.48	3.14	88.08	0.47	980.19	979.77	0.10	984.2	980.99	0.48	3.21	3.01
15	14						0.43	21.44	3.77	1.64	12	0.48	3.14	107.92	0.57	979.67	979.15		986.3	980.47	0.48	5.83	5.63
14	13	0.17	0.46	0.08	38 & 39	0.38	0.89	22.01	3.72	3.31	18	0.10	3.15	342.74	1.82	978.75	977.79		984.94	979.95	0.28	4.99	4.69
13	12	0.84	0.46	0.39	37	0.40	1.68	23.83	3.58	6.01	24	0.07	2.97	170.50	0.96	977.39	977.10		982.40	979.34	0.17	3.06	3.01
12	11				30	1.66	3.34	24.78	3.52	11.73	24	0.27	3.73	116.04	0.52	977.10	976.90		983.9	979.21	0.17	4.69	4.80
11	10	0.09	0.46	0.04	29	0.10	3.48	25.30	3.48	12.10	24	0.29	3.85	80.00	0.35	976.90	976.77		982.85	978.90	0.17	3.95	3.95
10	9	0.44	0.46	0.20	27	0.43	4.11	25.65	3.46	14.21	30	0.15	3.24	27.00	0.14	976.37	976.33		982.56	978.67	0.15	3.89	3.69
9	8	0.67	0.46	0.31			4.42	25.79	3.45	15.23	30	0.15	3.24	134.52	0.69	976.33	976.13		982.56	978.63	0.15	3.93	3.73
8	7				19	0.79	5.22	26.48	3.40	17.73	30	0.19	3.61	70.00	0.32	976.13	976.02		981.7	978.43	0.15	3.27	3.07
7	6	0.19	0.35	0.07			5.28	26.80	3.38	17.84	30	0.19	3.63	137.50	0.63	976.02	975.81		981.6	978.30	0.15	3.30	3.08
6	5	0.17	0.35	0.06			5.34	27.43	3.34	17.83	30	0.19	3.63	79.84	0.37	975.81	975.69		981.4	978.04	0.15	3.36	3.09
5	4	0.20	0.35	0.07			5.41	27.80	3.31	17.93	30	0.19	3.65	140.06	0.64	975.69	975.48		981.2	977.89	0.15	3.31	3.01
4	3	0.20	0.35	0.07			5.48	28.44	3.27	17.95	30	0.19	3.66	120.00	0.55	975.48	975.30		981.0	977.62	0.15	3.38	3.02
3	2	0.21	0.35	0.07			5.55	28.98	3.24	18.01	30	0.19	3.67	120.00	0.55	975.30	975.12		980.9	977.39	0.15	3.51	3.10
2	1	0.16	0.35	0.06			5.61	29.53	3.21	18.01	30	0.19	3.67	46.66	0.21	975.12	975.05		980.7	977.16	0.15	3.54	3.08
1	ES1	0.19	0.35	0.07			5.68	29.74	3.20	18.15	30	0.20	3.70	36.45	0.16	975.05	975.00		980.6	977.07	0.15	3.53	3.05
																				977.00			

SEIBER KEAST LEHNER
ENGINEERING | SURVEYING

FARMINGTON HILLS OFFICE
39205 COUNTRY CLUB DRIVE, SUITE C8
FARMINGTON HILLS, MI 48331
248.308.3331

CLINTON TOWNSHIP OFFICE
17001 NINETEEN MILE ROAD, SUITE 3
CLINTON TOWNSHIP, MI 48038
586.412.7050

SUBMITTAL DATE: 03-03-25

NO.	REVISION	DATE
1.	REVISED PER TOWNSHIP REVIEW	05-13-25

3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
TOLL FREE FOR THE LOCATION
OF UNDERGROUND FACILITIES

PROJECT NUMBER:
24-255

PROJECT MANAGER:
J. RICKARD
DRAWN BY:
N.L.
CHECKED BY:
J.R.
OFFICE:
FARMINGTON HILLS

CLIENT:
MI HOMES
40950 WOODWARD AVE. #203
BLOOMFIELD HILLS, MI 48304
248.836.4522

PROJECT NAME:
SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE:
CALCULATIONS

PAGE No.:
C17

P:\24-255 MI Homes Hartland\CAD DRAWINGS\SITE PLAN\24-255SP-ND.dwg 5/13/2025 1:26 PM Carly Parimucha

LUMINAIRE SCHEDULE

CALLOUT	SYMBOL	QUANTITY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	MOUNTING HEIGHT	LUMENS / LAMP	LAMP DEPRECIATION
L1		10	Holophane	GVD3 P20 40K XXXX GL5LU RB FC	GranVille Gen3, P20 Performance Package, 4000K CCT, 70CRI, Type 5 lunar optic distribution with Ribs and Bands and Full Cover	10'	4044	0.9

INSPECTION & MAINTENANCE SCHEDULE FOR SOIL EROSION CONTROL

GRADE STABILIZATION STRUCTURES SUCH AS: DROP CONTROL STRUCTURES; SIDE DRAINS (ENCLOSED); DROP INLET SPILLWAYS; DROP PIPES; STRAIGHT PIPES; TOEWALLS; DROP BOXES; CHUTES OR FLUMES (SOD, ROCK CONCRETE); EARTH EMBANKMENT STRUCTURES; DOWNDRAINS; SPILLWAYS SHALL BE MAINTAINED AS FOLLOWS:

BECAUSE GRADE STABILIZATION STRUCTURES ARE SUBJECT TO HIGH FLOW CONDITIONS, PERIODIC INSPECTIONS SHOULD BE PERFORMED TO ENSURE THAT EROSION IN NOT OCCURRING, AND THAT VEGETATION IS ADEQUATELY ESTABLISHED. THESE STRUCTURES SHOULD ALSO BE INSPECTED AFTER STORM EVENTS WHICH EXCEED THE DESIGN STORM. THE DISCHARGE POINT SHOULD BE INVESTIGATED TO ENSURE THAT THE CONCENTRATED FLOWS ARE NOT CAUSING EROSION DOWNSTREAM CHECK THE EMERGENCY BYPASS/ SPILLWAY FOR EROSION. CHECK THE STRUCTURES ITSELF FOR CRACKED CONCRETE, UNEVEN OR EXCESSIVE SETTLING, PIPING AND PROPER DRAIN FUNCTIONING. REPAIR OR REPLACE FAILING STRUCTURES IMMEDIATELY. ADDRESS VEGETATION AND EROSION PROBLEMS AS SOON AS WEATHER PERMITS. OPEN STRUCTURES SHOULD BE SIGNED OR MARKED TO ALERT PEOPLE IN THE VICINITY ABOUT POTENTIAL DANGERS.

CATCH BASIN FILTERS

EFFECTIVE FILTERS WILL COLLECT SEDIMENT, PARTICULARLY WHEN THE SOIL IS SANDY. THESE FILTERS MUST BE CLEANED PERIODICALLY, SO THEY DON'T BECOME CLOGGED AND CAUSE FLOODING CONDITIONS, PIPING, OR OVERTOPPING OF THE CONTROL STRUCTURES. MAINTENANCE OF THESE ITEMS REQUIRES INSPECTION WEEKLY OR AFTER EACH RAIN EVENT. ALSO, THESE ITEM ARE REUSABLE IF MAINTAINED CORRECTLY. THEY CAN BE REMOVED, EMPTIED, CLEANED AND REPLACED WITHOUT PURCHASING NEW ONES.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

1. THE PERMIT IS NOT FOR INDIVIDUAL BUILDING UNITS. IT IS REQUIRED THAT TEMPORARY STABILIZATION OF THE ENTIRE SITE BE COMPLETED AND APPROVAL FROM THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE MUST BE OBTAINED PRIOR TO THE ISSUANCE OF PERMITS FOR INDIVIDUAL BUILDING UNITS.
2. ANY DEWATERING REQUIRED SHALL HAVE A DEWATERING PLAN SUBMITTED PRIOR TO STARTING THE ACTIVITY AND MAY REQUIRE EGLE APPROVAL.
3. ONSITE DITCHES SHALL BE OF THE FLAT BOTTOM TYPE, MINIMUM WIDTH OF 2 FEET WITH A MINIMUM OF 3-FOOT HORIZONTAL TO 1-FOOT VERTICAL SIDE SLOPES (3:1).
4. SIDE SLOPES IN EXCESS OF 3-FOOT HORIZONTAL TO 1-FOOT VERTICAL SHALL NOT BE USED EXCEPT WITH A MECHANICAL DEVICE SUCH AS A RETAINING WALL OR TERRACING.
5. DITCHES / SWALES WITH GRADES 3% AND GREATER WILL NEED STONE FLOW CHECKS TO PREVENT SCOURING OF THE DITCH BOTTOMS. DEPENDING ON DRAINAGE AREA, SOIL TYPES, AND DITCH LENGTH, THEY MAY ALSO BE REQUIRED FOR DITCH SLOPES BETWEEN 1% AND 3%. THEY MAY BE USED AS A TEMPORARY MEASURE AND REMOVED ONCE SUFFICIENT STABILIZATION HAS BEEN ESTABLISHED. THESE SHALL BE DEPICTED ON PLANS BY THE ENGINEER, INCLUDING A CONSTRUCTION DETAIL.
6. PRIOR TO THE COMPLETION OF THE PROJECT THE STONE AROUND THE STANDPIPE STRUCTURE SHALL BE REFRESHED WITH CLEAN STONE.
7. DETENTION / RETENTION AND SEDIMENTATION BASINS SHALL BE EXCAVATED, TOP SOILED, SEEDED, MULCHED, TACKED AND RINGED WITH SILT FENCE PRIOR TO THE START OF MASSIVE EARTH DISRUPTION.
8. ALL STORM DRAINS 15 INCHES IN DIAMETER OR LARGER SHALL HAVE ANIMAL GUARDS INSTALLED TO PREVENT ENTRANCE TO THE SYSTEM.
9. ALL RIP-RAP MUST BE PLACED OVER KEYED IN GEO-FABRIC AND DETAILED AS SUCH ON THE PLANS.
10. SEEDING REQUIREMENTS.
    - A. TOP-SOIL – 3 INCHES IN DEPTH.
    - B. GRASS SEED – 210 LBS. PER ACRE.
    - C. FERTILIZER – 150 LBS. PER ACRE.
    - D. STRAW MULCH – 3" IN DEPTH, 1.5 TO 2 TONS PER ACRE (ALL MULCH MUST HAVE A TIE DOWN, SUCH AS TACKIFIER, NET BINDING, ETC.)
    - E. HYDRO-SEEDING – HYDRO-SEEDING IS NOT ACCEPTABLE FOR SLOPES EXCEEDING 1%. ON SLOPES OVER 1%, STABILIZATION SHALL BE DONE WITH SEED AND STRAW MULCH WITH A TACKIFIER, OR STRAW BLANKETS PEGGED IN PLACE.
11. ALL TOPSOIL OR SOIL STORAGE AREAS ARE REQUIRED TO BE TEMPORARILY STABILIZED AND SHALL BE SEEDED AND MULCHED, OR MATTED WITH STRAW, IMMEDIATELY AFTER THE STRIPPING PROCESS IS COMPLETED, TO PREVENT WIND AND WATER EROSION.

CONSTRUCTION ACCESS ROAD

PROPER MAINTENANCE INCLUDE ADDING ADDITIONAL LAYERS OF STONE WHEN THE ORIGINAL STONE BECOMES COVERED WITH MUD. AFTER EACH STORM EVENT, INSPECT THE ROAD FOR EROSION AND MAKE ANY NECESSARY REPAIRS. IT IS ALSO IMPORTANT TO CHECK AND MAINTAIN ANY BMP'S WHICH ARE USED IN CONJUNCTION WITH THIS BMP, ESPECIALLY THOSE FOR DRAINAGE. ALL SEDIMENT DROPPED OR ERODED ONTO PUBLIC RIGHT-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY SWEEPING.

S.E.S.C. SEQUENCE OF CONSTRUCTION

1. INSTALL ALL SOIL EROSION AND TREE PROTECTION FENCING AS PER APPROVED PLANS. CLEAR ONLY WHAT IS NECESSARY TO INSTALL FENCING. INSTALL TRACKING MAT.
2. STRIP AND STOCKPILE TOPSOIL IN A LOCATION APPROVED BY THE OWNER/ENGINEER. PLACEMENT OF ADDITIONAL CONTROL MEASURES MUST BE INSTALLED ON AND AROUND THE STOCKPILE.
3. INSTALL UTILITIES (WATER MAIN, STORM SEWER, SANITARY SEWER) COMPLETE.
4. INSTALL, AS PER APPROVED PLANS, THE CATCH BASIN INLET FILTERS. INSPECT AND MAINTAIN FILTERS AS DIRECTED TO PREVENT CLOGGING AND UNNECESSARY FLOODING.
5. GRADE ROADWAY LIMITS AND INSTALL PAVEMENT COMPLETE.
6. INSTALL ALL PUBLIC UTILITIES (GAS, ELECTRIC, TELEPHONE, CABLE) COMPLETE.
7. STABILIZE TEMPORARILY OR PERMANENTLY ALL DISTURBED AREAS WITHIN FIVE (5) DAYS OF FINAL GRADE.

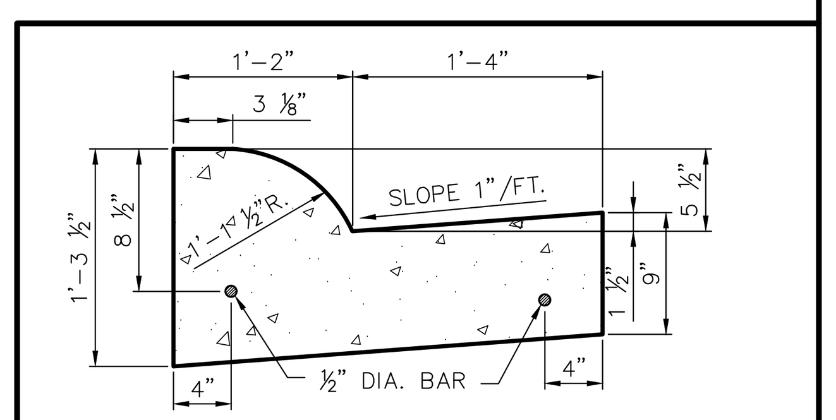
10. INSPECT AND MAINTAIN ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES WEEKLY AND AFTER EVERY STORM EVENT THROUGHOUT THE CONSTRUCTION OF THE PROJECT. REMOVAL OF CONTROL MEASURES MAY ONLY TAKE PLACE ONCE THE ENTIRE SITE IS FULLY STABILIZED. UPON FULL STABILIZATION IS COMPLETE, REMOVE THE STAND PIPE AND GRAVEL FILTER. THE DEVELOPER IS RESPONSIBLE FOR ALL SOIL EROSION CONTROL MEASURES.

SILT FENCE

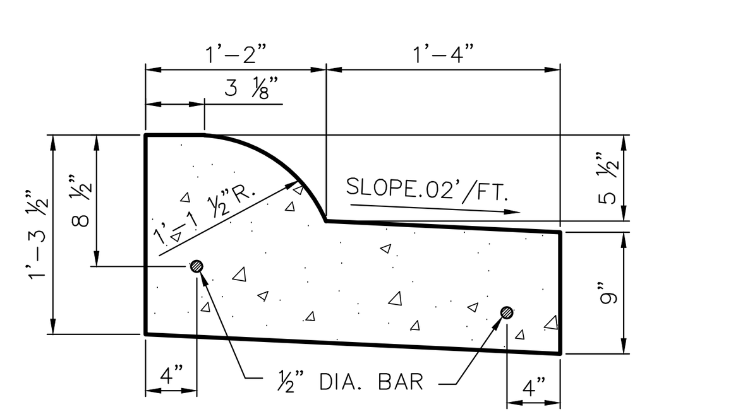
SILT FENCES SHOULD BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND SEVERAL TIMES DURING PROLONGED RAINFALLS. IF THE FENCE IS SAGGING OR THE SOIL HAS REACHED ONE HALF THE HEIGHT OF THE FABRIC, THE SOIL BEHIND THE FABRIC MUST BE REMOVED AND DISPOSED OF IN A STABLE UPLAND SITE. THE SOIL CAN BE ADDED TO THE SPOIL PILE. IF THE FABRIC IS BEING UNDERCUT (i.e. IF THE WATER IS SEEPING UNDER THE FENCE), THE FENCE SHOULD BE REMOVED AND REINSTALLED FOLLOWING THE GIVEN PROCEDURES. FABRIC WHICH DECOMPOSES OR OTHERWISE BECOMES INEFFECTIVE SHOULD BE REMOVED AND REPLACED WITH NEW FILTER FABRIC IMMEDIATELY. FILTER FENCES SHOULD BE REMOVED ONCE VEGETATION IS WELL ESTABLISHED AND THE UP-SLOPE AREA IS FULLY STABILIZED OR UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

SEEDING, SODDING & MULCHING

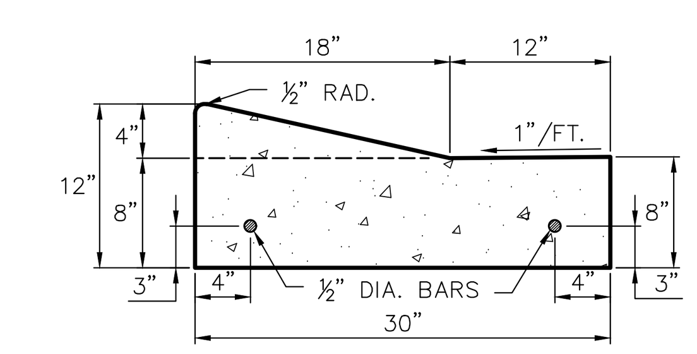
SEEDED, SODDED OR MULCHED AREAS SHOULD BE CHECKED FOLLOWING EACH RAIN TO ENSURE THE MATERIAL IS STAYING IN PLACE. ADDITIONAL TACKING MATERIALS OR NETTING MAY BE NEEDED TO BE APPLIED TO HOLD THE AFOREMENTIONED MATERIALS IN PLACE. MAINTENANCE PROCEDURES SHOULD ALSO BE FOLLOWED FOR THE BMP'S WHICH WERE IMPLEMENTED TO KEEP ERODED SOIL OR CONCENTRATED RUNOFF AWAY FROM THESE TARGET AREAS.



STANDARD M.D.O.T. B-2 ROLL CURB WITH GUTTER

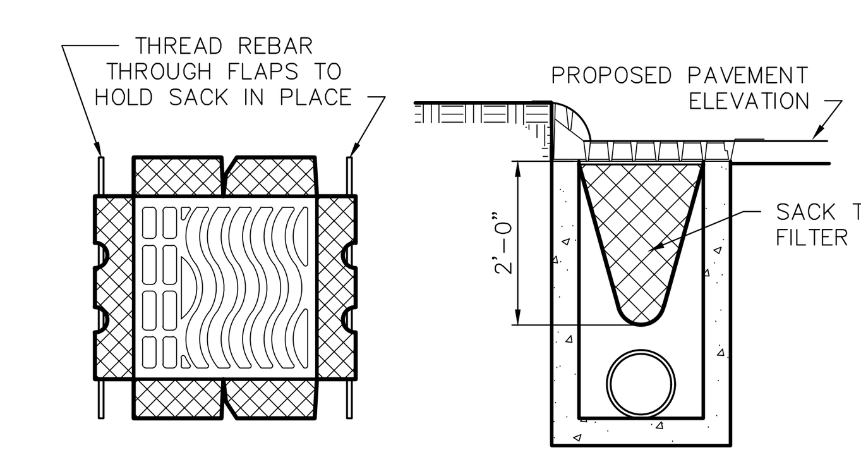


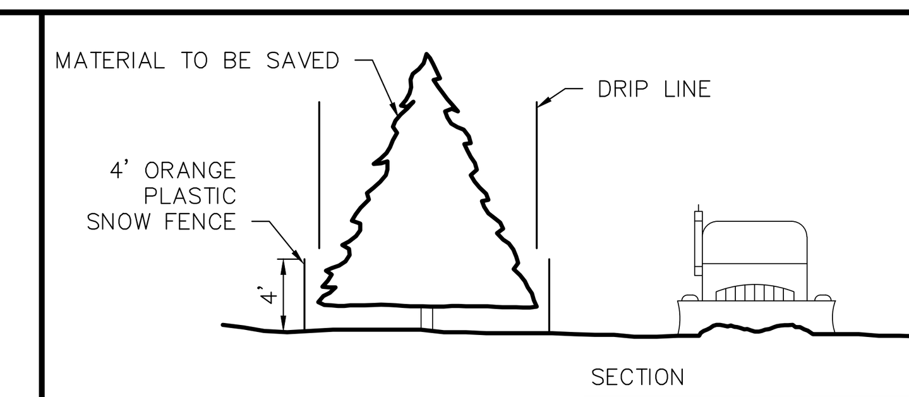
REVERSE M.D.O.T. B-2 ROLL CURB WITH GUTTER



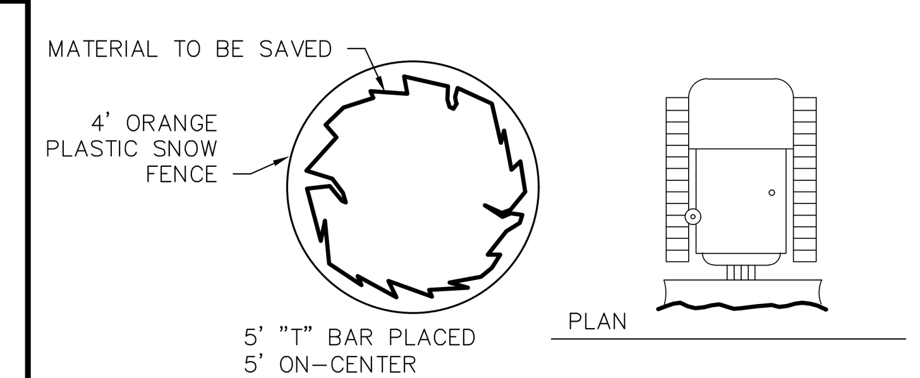
MOUNTABLE CONCRETE STANDARD CURB AND GUTTER DETAIL

SILT SACK INLET FILTER DETAIL



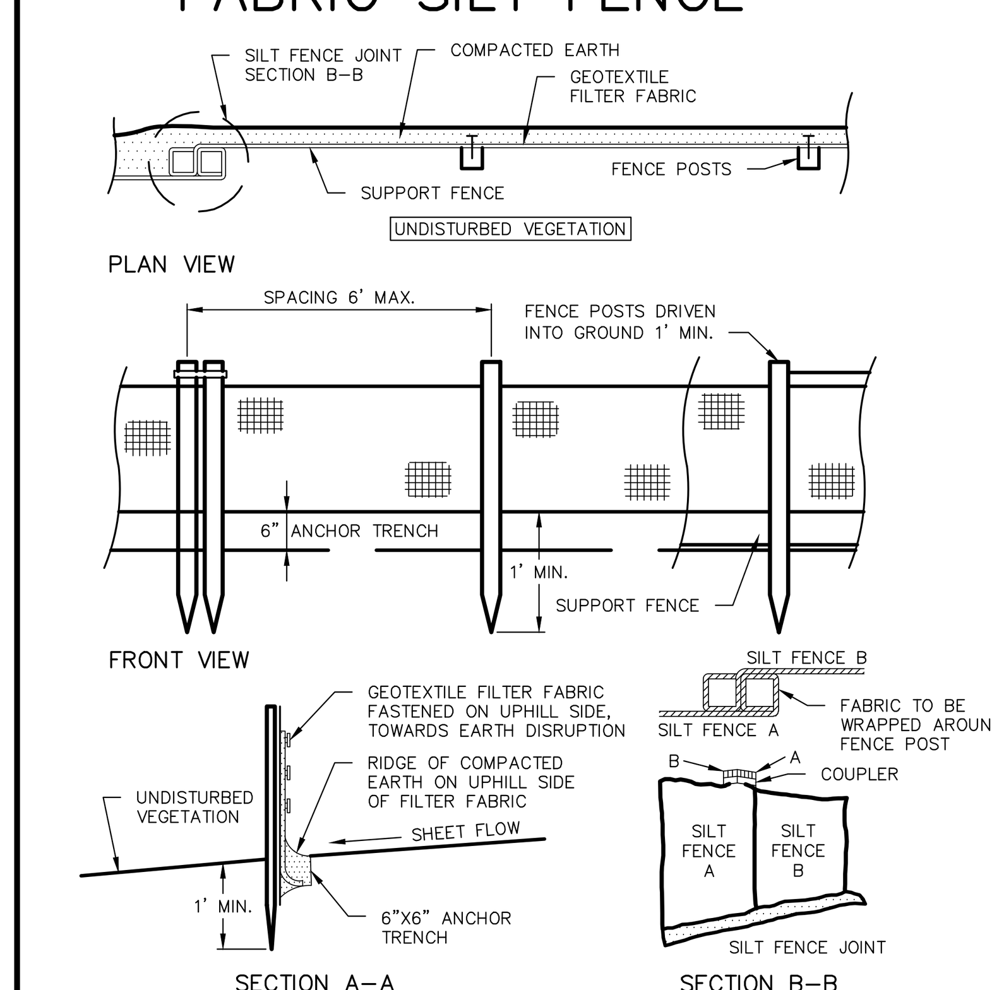


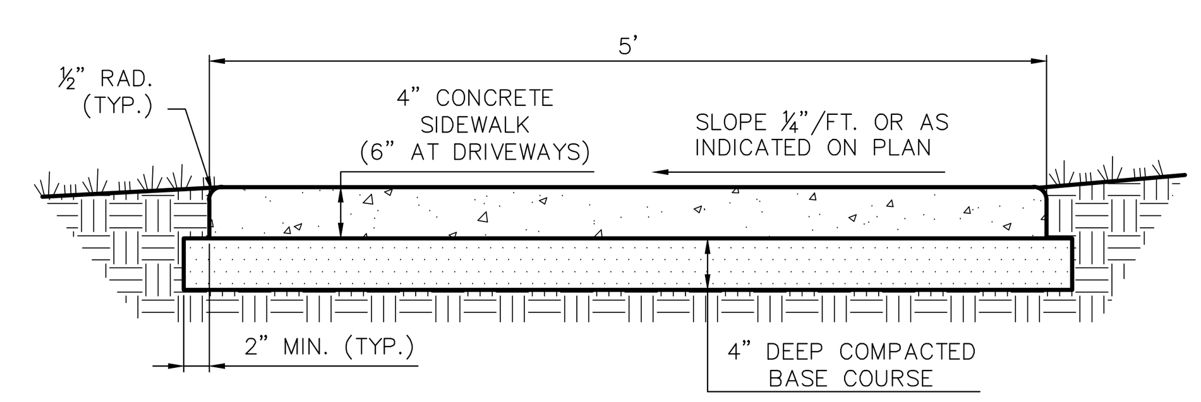
4' HIGH ORANGE PLASTIC SNOW FENCE TO BE INSTALLED AROUND DRIP LINE OF TREES TO BE SAVED PRIOR TO ANY LAND CLEARING OR CONSTRUCTION. NO CUTTING, FILLING OR TRESPASSING SHALL OCCUR INSIDE FENCED AREAS.



SNOW FENCE TREE PROTECTION DETAIL

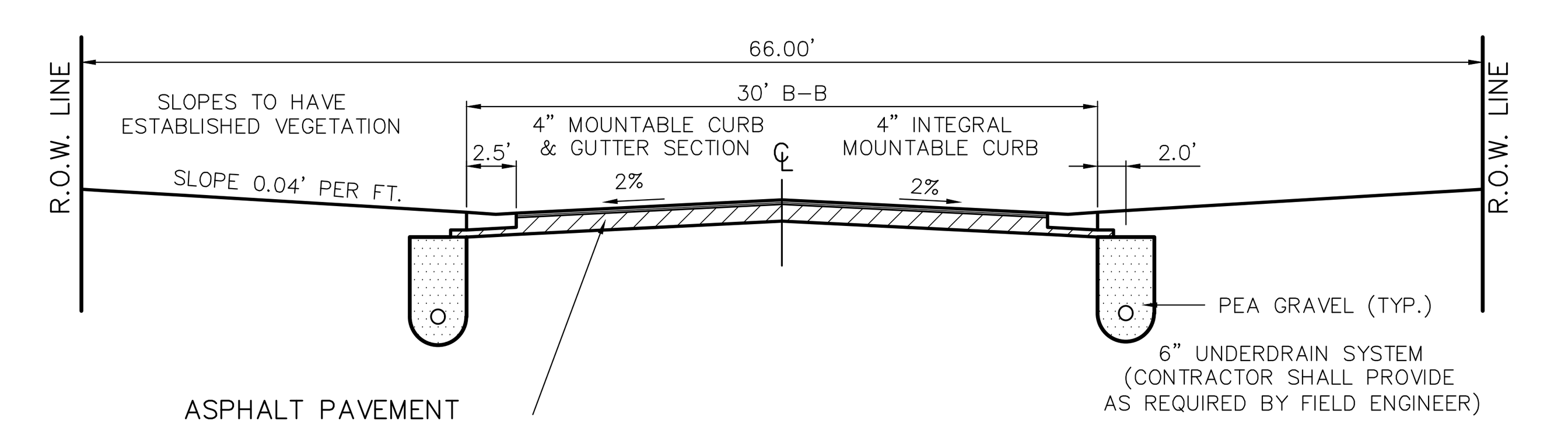
FABRIC SILT FENCE





CONCRETE SIDEWALK DETAIL

ROAD CROSS-SECTION



1 1/2" NO. 1100T-20AA TOP COURSE
2 1/2" NO. 500-20A BASE COURSE
8" AGGREGATE BASE COURSE MDOT 21-AA AGG.
BOND COAT BETWEEN COURSES

SEIBER KEAST LEHNER
ENGINEERING | SURVEYING
CLINTON TOWNSHIP OFFICE
17001 NINETEEN MILE ROAD, SUITE 3
CLINTON TOWNSHIP, MI 48038
586.412.7050
FARMINGTON HILLS OFFICE
39205 COUNTRY CLUB DRIVE, SUITE C8
FARMINGTON HILLS, MI 48331
248.308.3331

SUBMITTAL DATE: 03-03-25

NO.	REVISION	DATE
1.	REVISED PER TOWNSHIP REVIEW	05-13-25

811
3 WORKING DAYS BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

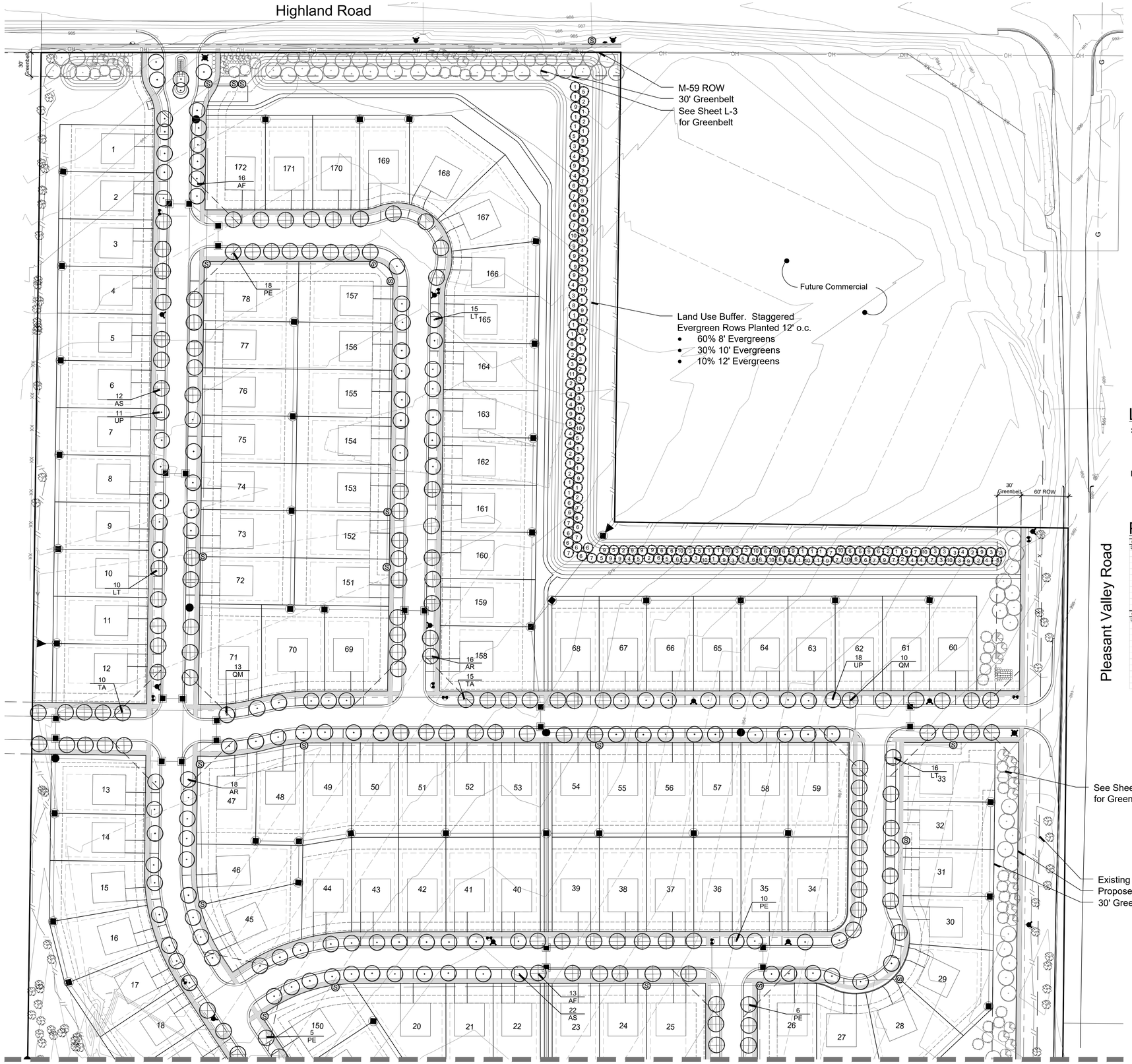
PROJECT NUMBER: 24-255
PROJECT MANAGER: J. RICKARD
DRAWN BY: N.G.
CHECKED BY: J.R.
OFFICE: FARMINGTON HILLS

CLIENT:
MI HOMES
40950 WOODWARD AVE. #203
BLOOMFIELD HILLS, MI 48304
248.836.4522

PROJECT NAME:
SAWYER RIDGE
SECTION 16, TOWN 4S, RANGE 10E, HARTLAND TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SHEET TITLE:
NOTES AND DETAILS

PAGE No.:
C18



Landscape Summary - This Sheet

Street Trees

Street Frontage	8,830 l.f.
Trees Required	252.3 Trees (8,830 / 35)
Trees Provided	252 Trees

Divider Median

Island Length	46'
Trees Required	2 Trees (46 / 25)
Trees Provided	2 Trees

Plant List

sym.	qty.	botanical name	common name	caliper	spacing	root	height
Street Trees							
AF	29	Acer x. freemanii 'Autumn Blaze'	Autumn Blaze Maple	3.0"	as shown	B&B	
AR	34	Acer rubrum 'Redpoint'	Redpoint Maple	3.0"	as shown	B&B	
AS	34	Acer saccharum 'Legacy'	Sugar Maple	3.0"	as shown	B&B	
LT	41	Liriodendron tulipifera	Tulip Tree	3.0"	as shown	B&B	
PE	39	Platanus x acerifolia 'Exclamation'	Exclamation London Planetree	3.0"	as shown	B&B	
QM	23	Quercus macrocarpa	Bur Oak	3.0"	as shown	B&B	
TA	25	Tilia americana 'Redmond'	Redmond Linden	3.0"	as shown	B&B	
UP	29	Ulmus americana 'Princeton'	Princeton Elm	3.0"	as shown	B&B	
	254	Trees Provided					

sym.	qty.	botanical name	common name	caliper	spacing	root	height
Land Use Buffer							
1	28	Abies concolor	Concolor Fir		as shown	B&B	8'
2	14	Abies concolor	Concolor Fir		as shown	B&B	10'
3	28	Picea abies	Norway Spruce		as shown	B&B	8'
4	14	Picea abies	Norway Spruce		as shown	B&B	10'
5	10	Picea abies	Norway Spruce		as shown	B&B	12'
6	28	Picea glauca 'Densata'	Black Hills Spruce		as shown	B&B	8'
7	14	Picea glauca 'Densata'	Black Hills Spruce		as shown	B&B	10'
8	4	Picea glauca 'Densata'	Black Hills Spruce		as shown	B&B	12'
9	27	Pinus strobus	White Pine		as shown	B&B	8'
10	13	Pinus strobus	White Pine		as shown	B&B	10'
11	4	Pinus strobus	White Pine		as shown	B&B	12'

Know what's below. Call before you dig.

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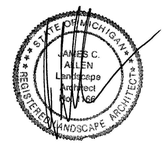
Seal:



Title:

Landscape Plan

Project:

Sawyers Ridge
Hartland Township, Michigan

Prepared for:

M/I Homes of Michigan, LLC
40950 Woodward Avenue, Suite 203
Bloomfield Hills, Michigan 48304

Revision:	Issued:
Review	February 21, 2025
Revised	May 14, 2025

Job Number:

25-013

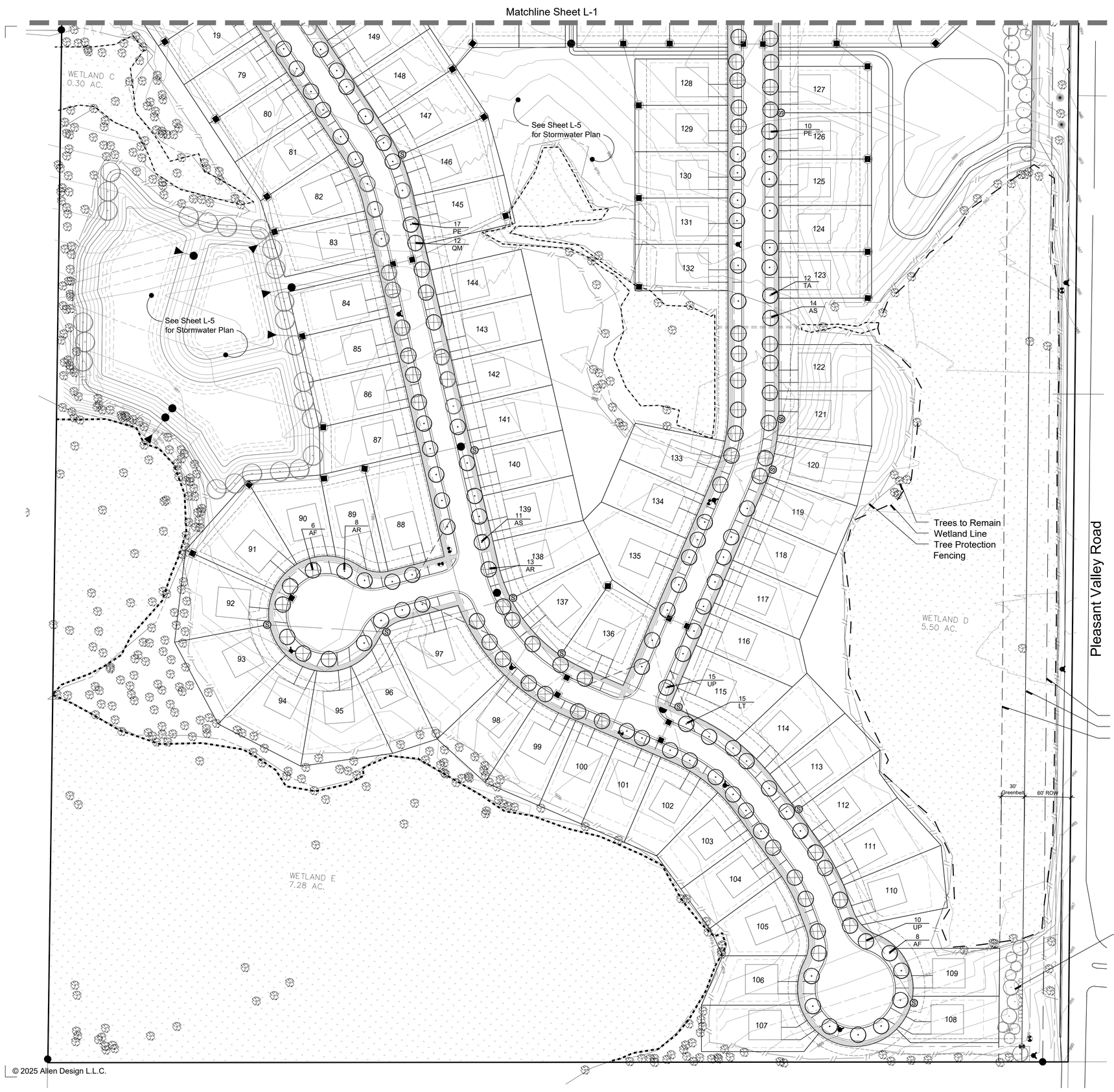
Drawn By:	Checked By:
jca	jca

0' 15' 30' 60'

NORTH
1"=60'

Sheet No.

L-1



Landscape Summary - This Sheet

Street Trees

Street Frontage	5,272 l.f.
Trees Required	150.6 Trees (5,272 / 35)
Trees Provided	151 Trees

Plant List

sym.	qty.	botanical name	common name	caliper	spacing	root	height
Street Trees							
AF	14	Acer x. freemanii 'Autumn Blaze'	Autumn Blaze Maple	3.0"	as shown	B&B	
AR	21	Acer rubrum 'Redpoint'	Redpoint Maple	3.0"	as shown	B&B	
AS	25	Acer saccharum 'Legacy'	Sugar Maple	3.0"	as shown	B&B	
LT	15	Liriodendron tulipifera	Tulip Tree	3.0"	as shown	B&B	
PE	27	Platanus x acerifolia 'Exclamation'	Exclamation London Planetree	3.0"	as shown	B&B	
QM	12	Quercus macrocarpa	Bur Oak	3.0"	as shown	B&B	
TA	12	Tilia americana 'Redmond'	Redmond Linden	3.0"	as shown	B&B	
UP	25	Ulmus americana 'Princeton'	Princeton Elm	3.0"	as shown	B&B	
	151	Trees Provided					

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Seal:

STATE OF MICHIGAN
JAMES C. ALLEN
Landscape Architect
No. 1301
REGISTERED LANDSCAPE ARCHITECT

Title:

Landscape Plan

Project:

Sawyers Ridge
Hartland Township, Michigan

Prepared for:

M/I Homes of Michigan, LLC
40950 Woodward Avenue, Suite 203
Bloomfield Hills, Michigan 48304

Revision:	Issued:
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25-013

Drawn By:	Checked By:
jca	jca

0' 15' 30' 60'

NORTH
1"=60'

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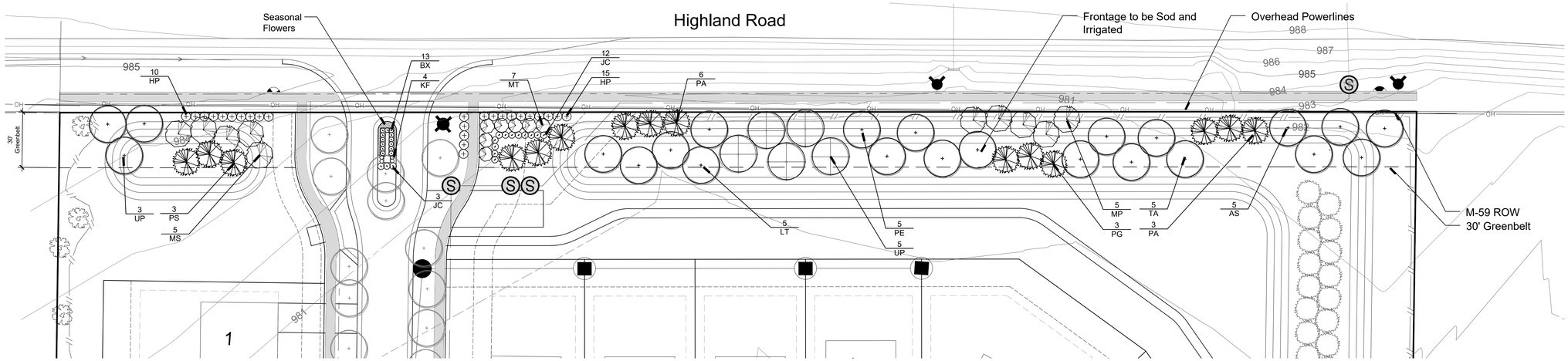
Sheet No.

L-2

Highland Road



Landscape Summary

Greenbelt - Highland Road

Street Frontage	736'
Deciduous Trees Required	24.5 Trees (736 / 30)
Deciduous Trees Provided	27 Trees
Ornamental Trees or Shrubs Required	3 Trees or Shrubs for first 40'
Ornamental Trees or Shrubs Provided	3 Trees or Shrubs
Ornamental Trees or Shrubs Required	34.8 Trees or Shrubs (736 - 40) / 20
Ornamental Trees or Shrubs Provided	67 Trees or Shrubs

Plant List

sym.	qty.	botanical name	common name	caliper	spacing	root	height
AS	5	Acer saccharum 'Legacy'	Sugar Maple	3.0"	as shown	B&B	
BX	13	Buxus x. Green Velvet'	Green Velvet Boxwood		as shown	cont	24"
HP	25	Hydrangea p 'Quickfire'	Quickfire Hydrangea		as shown	cont	30"
JC	15	Juniperus ch. keteleeri	Keteleeri Juniper		as shown	B&B	6', Hedge to 5'
KF	4	Calamagrostis a. 'Karl Foerster'	Karl Foerster Grass		as shown	cont	#2
LT	5	Liriodendron tulipifera	Tulip Tree	3.0"	as shown	B&B	
MS	5	Malus 'Spring Snow'	Spring Snow Crab Apple	2.0"	as shown	B&B	
MP	5	Malus 'Profusion'	Profusion Crab Apple	2.0"	as shown	B&B	
MT	7	Malus sargentii 'Tina'	Tina Crab Apple	2.0"	as shown	B&B	
PA	9	Picea abies	Norway Spruce		as shown	B&B	8'
PE	5	Platanus x acerifolia 'Exclamation'	Exclamation London Planetree	3.0"	as shown	B&B	
PG	3	Picea glauca 'Densata'	Black Hills Spruce		as shown	B&B	8'
PS	3	Pinus strobus	White Pine		as shown	B&B	8'
TA	5	Tilia americana 'Redmond'	Redmond Linden	3.0"	as shown	B&B	
UP	7	Ulmus americana 'Princeton'	Princeton Elm	3.0"	as shown	B&B	
	27	Deciduous Trees Provided					
	70	Ornamental Trees and Shrubs Provided					

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Seal:

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JAMES C. ALLEN
Landscape Architect
No. 1605
REGISTERED LANDSCAPE ARCHITECT

Title:

Greenbelt Plan

Project:

Sawyers Ridge
Hartland Township, Michigan

Prepared for:

M/I Homes of Michigan, LLC
40950 Woodward Avenue, Suite 203
Bloomfield Hills, Michigan 48304

Revision:	Issued:
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Job Number:

25-013

Drawn By:	Checked By:
jca	jca

0' 15' 30'

NORTH
1"=30'

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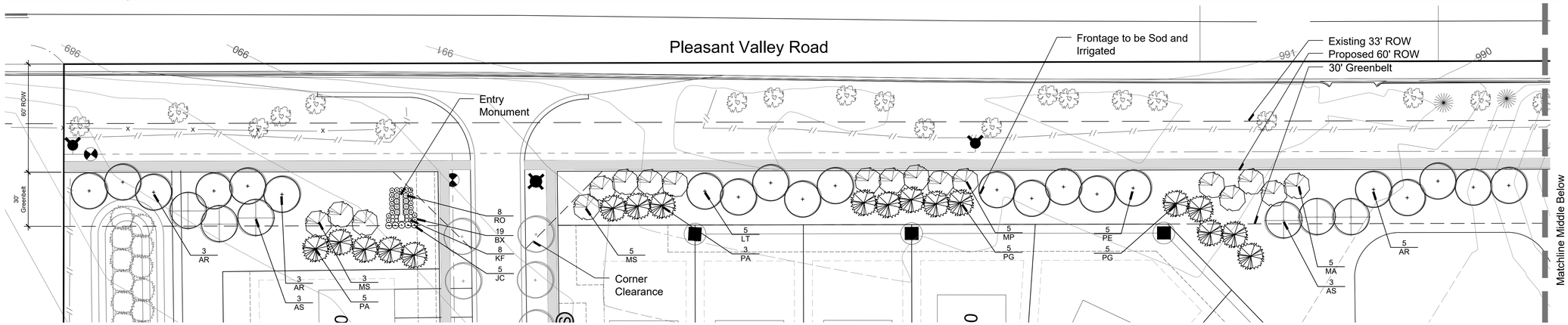
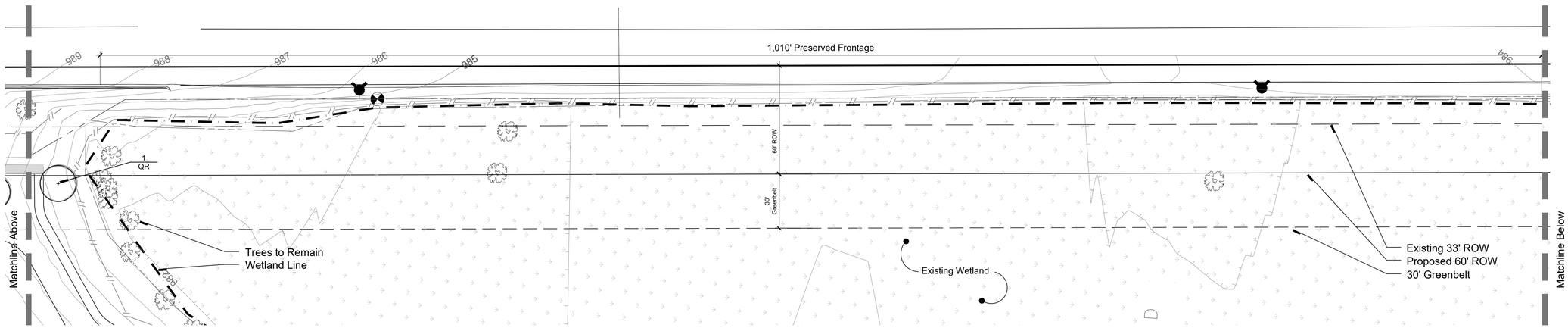
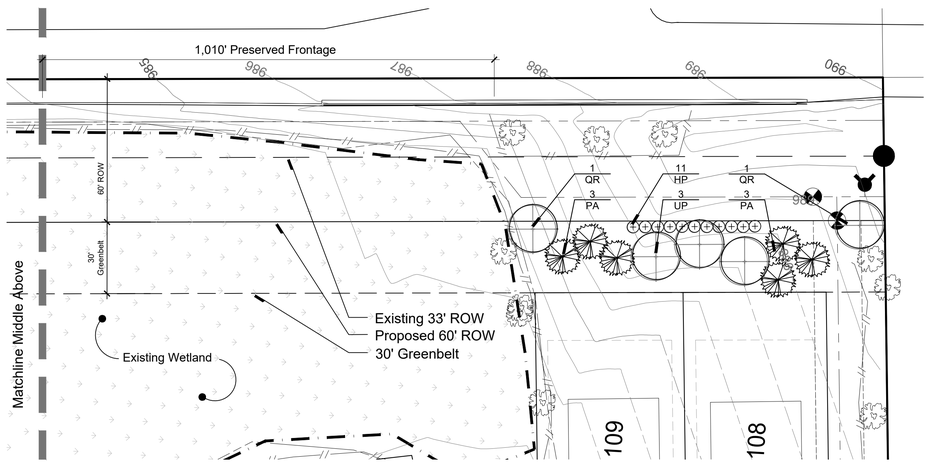
Sheet No.

L-3

Pleasant Valley Road







Landscape Summary

Greenbelt - Pleasant Valley	
Street Frontage	2,013'
Less Preserved Frontage	1,010'
Net Street Frontage	1,003'
Deciduous Trees Required	33.4 Trees (1,003 / 30)
Deciduous Trees Provided	33 Trees
Ornamental Trees or Shrubs Required	3 Trees or Shrubs for first 40'
Ornamental Trees or Shrubs Provided	3 Trees or Shrubs
Ornamental Trees or Shrubs Required	48.2 Trees or Shrubs (1,003 - 40) / 20
Ornamental Trees or Shrubs Provided	58 Trees or Shrubs

Plant List

sym.	qty.	botanical name	common name	caliper	spacing	root	height
AR	11	Acer rubrum 'Redpoint'	Redpoint Maple	3.0"	as shown	B&B	
AS	6	Acer saccharum 'Legacy'	Sugar Maple	3.0"	as shown	B&B	
BX	19	Buxus x. Green Velvet'	Green Velvet Boxwood		as shown	cont	24"
HP	11	Hydrangea p 'Quickfire'	Quickfire Hydrangea		as shown	cont	30"
JC	5	Juniperus ch. keteleeri	Keteleeri Juniper		as shown	B&B	6', Hedge to 5'
KF	8	Calamagrostis a. 'Karl Foerster'	Karl Foerster Grass		as shown	cont	#2
LT	5	Liriodendron tulipifera	Tulip Tree	3.0"	as shown	B&B	
MA	5	Malus 'Adirondack'	Adirondack Crab Apple	2.0"	as shown	B&B	
MS	8	Malus 'Spring Snow'	Spring Snow Crab Apple	2.0"	as shown	B&B	
MP	5	Malus 'Profusion'	Profusion Crab Apple	2.0"	as shown	B&B	
PA	14	Picea abies	Norway Spruce		as shown	B&B	8'
PE	5	Platanus x acerifolia 'Exclamation'	Exclamation London Planetree	3.0"	as shown	B&B	
PG	10	Picea glauca 'Densata'	Black Hills Spruce		as shown	B&B	8'
QR	3	Quercus rubra	Red Oak	3.0"	as shown	B&B	
RO	8	Rosa x. 'Double Red'	Oso Double Red Rose		as shown	cont	#2
UP	3	Ulmus americana 'Princeton'	Princeton Elm	3.0"	as shown	B&B	
	33	Deciduous Trees Provided					
	61	Ornamental Trees and Shrubs Provided					

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STATE OF MICHIGAN
JAMES C. ALLEN
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No. 1301
REGISTERED LANDSCAPE ARCHITECT

Title:

Greenbelt Plan

Project:

Sawyers Ridge
Hartland Township, Michigan

Prepared for:

M/I Homes of Michigan, LLC
40950 Woodward Avenue, Suite 203
Bloomfield Hills, Michigan 48304

Revision:	Issued:
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jca	jca

0' 15' 30'

NORTH
1"=30'

Sheet No.

L-4

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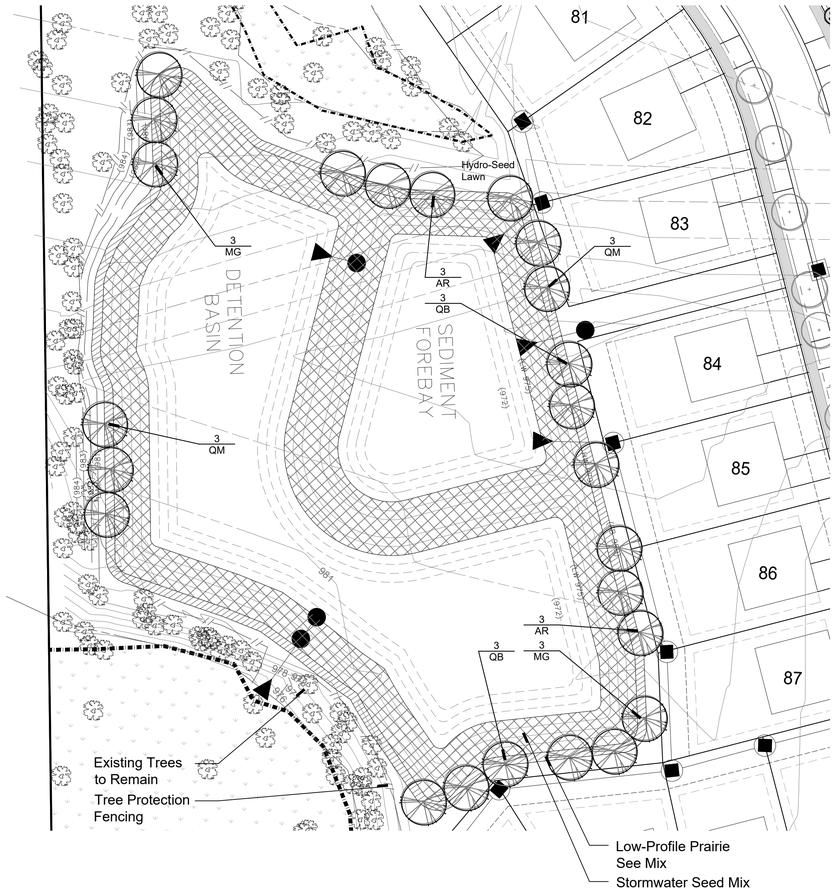
Detention Pond



Landscape Summary

Pond A

Top of Bank Length	1,190'
Trees Required	23.8 Trees (1,190' / 50')
Trees Provided	24 Trees

Plant List

sym.	qty.	botanical name	common name	caliper	spacing	root	height
AR	6	Acer rubrum 'October Glory'	October Glory Red Maple	3.0"	as shown	B&B	
MG	6	Metasequoia glyptostroboides	Dawn Redwood	3.0"	as shown	B&B	
QB	6	Quercus biloba	Swamp White Oak	3.0"	as shown	B&B	
QM	6	Quercus macrocarpa	Burr Oak	3.0"	as shown	B&B	
	24	Trees Provided					

Seeding Procedure

NATIVE SEEDING MAINTENANCE AND PREPARATION AND PROTECTION

The planting zone shall be roto-tilled to a depth of 6" and supplemented with 4" of topsoil or compost prior to seeding. A barrier / wildlife deterrent fence is required for a period of one year to protect the planting and prevent regular mowing. Signs must be posted around the detention basin stating it is a no mow zone.

During the first growing season, native areas should be mowed two to four times to a height of about 4"-6" when the growth reaches 10"-12". Selective herbicide applications or hand pulling may be needed to control unwanted weed populations. If a mower cannot be set high enough, a string trimmer can be used.

During the second growing season, native areas should be mowed a few times to a height of about 8" when the growth reaches 10"-18". Selective herbicide applications or hand pulling may be needed to control unwanted weed populations.

By the second growing season it should be apparent if some areas need reseeding. Reseed or overseed as needed.

Long term management may include prescribed burning, mowing, hand pulling, and selective herbicide applications. If burning is not allowed or feasible, the planting may be mowed to a short height and the clippings removed in the early spring before ground-nesting birds begin nesting.

Detention Pond Seed Mixes

Stormwater Seed Mix

Botanical Name	Common Name	PLS Ounces/Acre	Seeds/Oz	Seeds/SQ FT
Permanent Grasses/Sedges/Rushes:				
Carex crisatella	Crested Oval Sedge	1.00	59000	1.35
Carex lurida	Bottlebrush Sedge	2.00	12000	0.55
Carex vulpinoidea	Brown Fox Sedge	6.00	125000	17.22
Elymus virginicus	Virginia Wild Rye	12.00	4375	1.21
Glyceria striata	Fowl Manna Grass	1.25	125000	3.59
Juncus effusus	Common Rush	1.00	281000	6.45
Juncus torreyi	Torrey's Rush	0.25	1134000	6.51
Leersia oryzoides	Rice Cut Grass	1.00	94500	2.17
Panicum virgatum	Switch Grass	8.00	28356	5.21
Scirpus atrovirens	Dark Green Rush	1.00	187500	4.30
Scirpus cyperinus	Wool Grass	0.50	562500	6.46
Scirpus fluviatilis	River Bulrush	0.25	27500	0.16
Scirpus validus	Great Bulrush	6.00	37813	5.21
	Total	**40.25**		**60.38**
Temporary Cover:				
Avena sativa	Common Oat	360.00	8125	67.15
Lolium multiflorum	Annual Rye	100.00	14188	32.57
	Total	**460.00**		**99.72**
Forbs & Shrubs:				
Alisma spp.	Water Plantain (Vario	4.25	70175	6.85
Asclepias incarnata	Swamp Milkweed	1.50	4540	0.16
Bidens spp.	Bidens (Various Mix)	2.00	14175	0.65
Helenium autumnale	Sneezeweed	2.00	141750	6.51
Lycopus americanus	Common Water Horel	0.25	235000	1.35
Mimulus ringens	Monkey Flower	1.00	283500	6.51
Penthorum sedoides	Ditch Stonecrop	0.50	36063	0.41
Polygonum pensylvanicu	Pinkweed	4.00	4063	0.37
Rudbeckia subtomentos	Sweet Black-Eyed Su	1.00	46000	1.06
Sagittaria latifolia	Common Arrowhead	1.00	56700	1.30
Senna hebacarpa	Wild Senna	1.00	1400	0.03
Thalictrum dasycarpum	Purple Meadow Rue	2.00	13500	0.62
	Total	**20.50**		**25.82**

6,305 s.y. of Seed Area

Seeds Available from Stantec Native Plant Nursery
All Seed Shall be Protected with Bio-degradable Mulch Blanket.

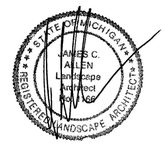
Low-profile Prairie Seed Mix

Botanical Name	Common Name	PLS Ounces/Acre	Seeds/Oz	Seeds/SQ FT
Permanent Grasses:				
Bouteloua curtipendula	Side Oats Grama	10.00	9375	2.15
Carex spp.	Prairie Carex Mix	4.00	33422	3.07
Elymus canadensis	Canada Wild Rye	32.00	4258	3.13
Koeleria cristata	June Grass	1.00	150000	3.44
Panicum virgatum	Switch Grass	1.00	28356	0.65
Schizachyrium scoparium	Little Bluestem	32.00	8800	6.46
	Total	**80.00**		**18.91**
Temporary Cover:				
Avena sativa	Common Oat	360.00	8125	67.15
Lolium multiflorum	Annual Rye	100.00	14188	32.57
	Total	**460.00**		**99.72**

9,427 s.f.

Seeds Available from Stantec Native Plant Nursery
All Seed Shall be Protected with Mulch Blanket.

Seal:



Title:

Stormwater Plan

Project:

Sawyers Ridge
Hartland Township, Michigan

Prepared for:

M/I Homes of Michigan, LLC
40950 Woodward Avenue, Suite 203
Bloomfield Hills, Michigan 48304

Revision:	Issued:
Review	February 21, 2025
Revised	May 14, 2025

Job Number:

25-013

Drawn By:	Checked By:
jca	jca

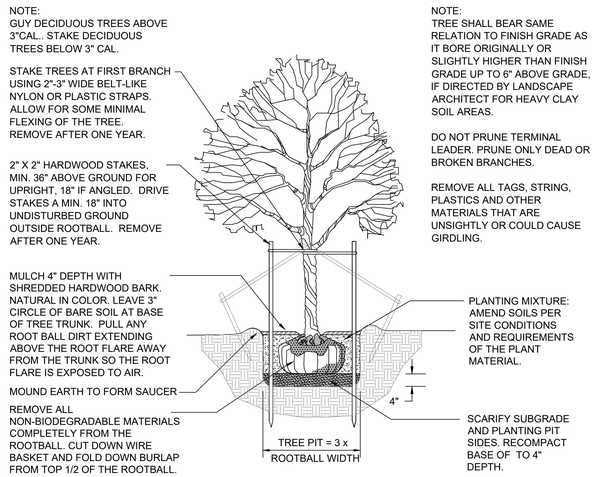
0' 10' 20' 40'

NORTH
1"=40'

Know what's below. Call before you dig.

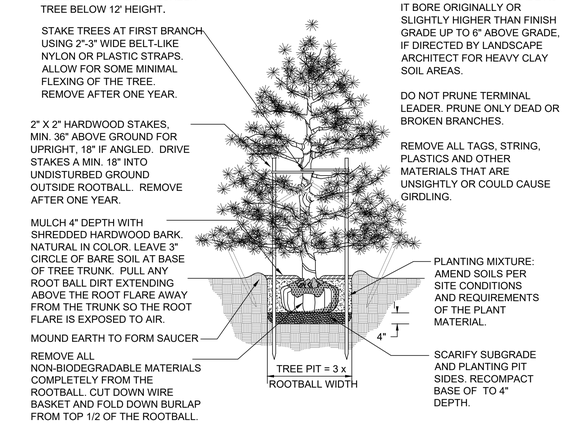
Sheet No.

L-5



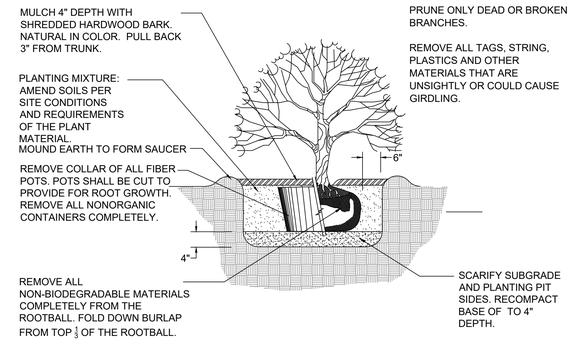
DECIDUOUS TREE PLANTING DETAIL

Not to scale



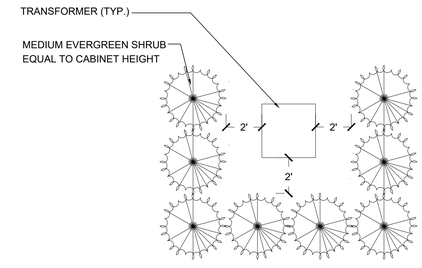
EVERGREEN TREE PLANTING DETAIL

Not to scale



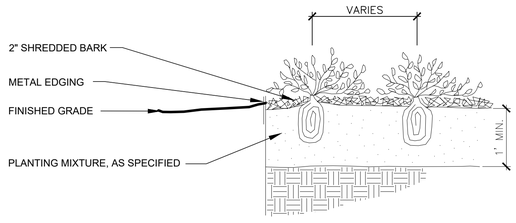
SHRUB PLANTING DETAIL

NOT TO SCALE



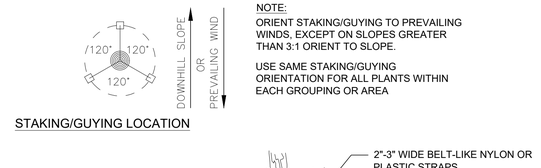
TRANSFORMER SCREENING DETAIL

Not to scale



PERENNIAL PLANTING DETAIL

Not to scale



TREE STAKING DETAIL

Not to scale

LANDSCAPE NOTES

1. All plants shall be north Midwest American region grown, No. 1 grade plant materials, and shall be true to name, free from physical damage and wind burn.
2. Plants shall be full, well-branched, and in healthy vigorous growing condition.
3. Plants shall be watered before and after planting is complete.
4. All trees must be staked, fertilized and mulched and shall be guaranteed to exhibit a normal growth cycle for at least two (2) full years following approval.
5. All material shall conform to the guidelines established in the most recent edition of the American Standard for Nursery Stock.
6. Provide clean backfill soil, using material stockpiled on site. Soil shall be screened and free of any debris, foreign material, and stone.
7. "Agriform" tabs or similar slow-release fertilizer shall be added to the planting pits before being backfilled.
8. Amended planting mix shall consist of 1/3 screened topsoil, 1/3 sand and 1/3 compost, mixed well and spread to the depth as indicated in planting details.
9. All plantings shall be mulched per planting details located on this sheet.
10. The Landscape Contractor shall be responsible for all work shown on the landscape drawings and specifications.
11. No substitutions or changes of location, or plant types shall be made without the approval of the Landscape Architect.
12. The Landscape Architect shall be notified in writing of any discrepancies between the plans and field conditions prior to installation.
13. The Landscape Contractor shall be responsible for maintaining all plant material in a vertical condition throughout the guaranteed period.
14. The Landscape Architect shall have the right, at any stage of the installation, to reject any work or material that does not meet the requirements of the plans and specifications, if requested by owner.
15. Contractor shall be responsible for checking plant quantities to ensure quantities on drawings and plant list are the same. In the event of a discrepancy, the quantities on the plans shall prevail.
16. The Landscape Contractor shall seed and mulch or sod (as indicated on plans) all areas disturbed during construction, throughout the contract limits.
17. A pre-emergent weed control agent, "Preen" or equal, shall be applied uniformly on top of all mulching in all planting beds.
18. Sod shall be two year old "Baron/Cheriadelphi" Kentucky Blue Grass grown in a sod nursery on loam soil.
19. All Disturbed Areas to Receive Seed or Sod to Meet Wayne County Requirements Per Wayne County Rule 6.13.2

MAINTENANCE NOTES

The owner of the property shall be responsible for all maintenance of site landscaping, as follows:

Continuing Care

Landscaping shall be kept in a neat, orderly and healthy growing condition, free from debris and refuse. All landscape materials shall be maintained by a regular program or mowing, watering, weeding, feeding and pruning. Pruning shall be minimal at the time of installation, only to remove dead or diseased branches. Subsequent pruning shall assure proper maturation of plants to achieve their approved purpose.

Replenishment

All dead or diseased plant material shall be removed and replaced within six (6) months after it dies or in the next planting season, whichever occurs first. For purposes of this the planting season for deciduous plants shall be between March 1 and June 1 and from October 1 until the prepared soil becomes frozen.

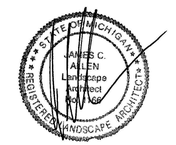
Watering

The developer, at the time of submission of the final site plan shall demonstrate that adequate provisions have been made to supply water to all landscape areas. This shall be accomplished by an automatic underground irrigation system.

Know what's below. Call before you dig.

ALLENDESIGN
LAND PLANNING / LANDSCAPE ARCHITECTURE
557 Carpenter
Northville, Michigan 48167
e. jca@wideopenwest.com
t. 248.467.4668

Seal:



Title:

Landscape Details

Project:

Sawyers Ridge
Hartland Township, Michigan

Prepared for:

M/I Homes of Michigan, LLC
40950 Woodward Avenue, Suite 203
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Drawn By:	Checked By:
jca	jca

Sheet No.

L-6