SUPERIOR CHARTER TOWNSHIP PLANNING COMMISSION
SUPERIOR TOWNSHIP HALL
3040 N. PROSPECT, SUPERIOR TOWNSHIP, MI 48198
AGENDA
December 17, 2025 - 7:00 PM

1. CALL TO ORDER

2. ROLL CALL

3. DETERMINATION OF QUORUM

4. ADOPTION OF AGENDA

5. APPROVAL OF MINUTES

   A. Approval of the November 17, 2025, Regular Meeting Minutes
   B. Approval of the December 8, 2025, Special Meeting Minutes

6. CITIZEN PARTICIPATION

7. CORRESPONDENCE

8. PUBLIC HEARINGS, DELIBERATIONS AND ACTIONS

9. REPORTS

   A. Planning & Zoning November Report to Board

10. OLD BUSINESS

    A. STPC #25-02 Conditional Use Permit/Preliminary Site Plan – DTE Grenada Substation Expansion

    B. STPC #25-05 Area Plan Petition and Rezoning – Prospect Pointe South (PC and R4 Districts)

11. NEW BUSINESS

    A. STPC #25-08 Final Site Plan – Prospect Pointe West Phase 4

    B. Timber Creek Concept Plan

12. POLIY DISCUSSION

13. ADJOURNMENT

Thomas Brennan III, Commission Secretary
Michelle Marin, Planning & Zoning Administrator
3040 N. Prospect, Ypsilanti, MI 48198 734-482-6099

SUPERIOR CHARTER TOWNSHIP

Planning Commission
Regular Meeting Minutes - DRAFT
November 19, 2025, 7:00 PM
Township Hall - 3040 North Prospect
Superior Township, MI 48198

1. CALL TO ORDER

Chair Gardner called the regular meeting to order at 7:00 p.m.

2. ROLL CALL

Present: Jay Gardner, Chair
Dr. Robert Steele, Vice Chair
Patrick McGill
Nahid Sanii-Yahyai
Curt Wolf

Absent: Thomas Brennan, Secretary
Brenda McKinney, Board Representative

Also Present: Planning Consultant – Michelle Marin, Carlisle Wortman
Engineering Consultant – Claire Martin, OHM

3. DETERMINATION OF QUORUM

A quorum was present.

4. ADOPTION OF AGENDA

MOTION by Sanii-Yahyai, supported by Wolf, to adopt the November 19, 2025, agenda as presented.

Motion passed unanimously by voice vote.

5. APPROVAL OF MEETING MINUTES

Approval of the October 29, 2025 - Regular Meeting Minutes

MOTION by Sanii-Yahyai, supported by Steele, to adopt the October 29, 2025, meeting minutes as presented.

Motion passed unanimously by voice vote.

6. CITIZEN PARTICIPATION

None.

7. CORRESPONDANCE

None.

8. PUBLIC HEARINGS, DELIBERATIONS AND ACTIONS

Motion by McGill to open the public hearing. Seconded by Sanii-Yahyai.

Motion passed unanimously by voice vote.

Applicant, Aubrey Mehrab, spoke about the Area Plan Petition. They had a pre-application meeting with the Supervisor and planning consultant regarding the project earlier this year. She clarified that it will all be under 1 HOA. They were advised to go through the area plan process by Ben Carlisle.

Marin gave an overview of the planners' report.

Discussion on the project (Lombardo) being dependent on the development of the Meadows at Hawthorne Mill (Pulte Owned). Chair Gardner asked about the natural features, including the wetlands and woodlands.

Chair Gardner asked about the approval of the adjacent Meadows at Hawthorne Mill, which was approved prior to the current 2024 Master Plan. The goals of the Master Plan are somewhat in conflict with both the proposed project and the adjacent Meadows at Hawthorne Mill project.

Steele commented on the context of the plan, including the existing conditions of the property, including the home and the natural features as well as the connectivity to the Meadows at Hawthorne Mill.

Martin gave a summary of the engineers' report. She pointed out the narrow than normal width of the Hyacinth Drive (55 feet); the engineers' see no issue with this given the proposed layout and use. Martin mentioned the expansion of the detention basin that spans the subject property on the west side and the adjacent Meadows at Hawthorne Mill property to the west. Steele asked clarifying questions about the detention basin and the road widening on Geddes Road as part of the adjacent Meadows at Hawthorne Mill.

Chair Gardner asked about the landscaped buffer along Geddes Road. The applicant mentioned that it will be a good area for any required replacement trees.

Sanii-Yahyai mentioned the conflict with the Master Plan goals to which Chair Gardner responded regarding the lens through which the adjacent Meadows at Hawthorne Mill was approved, the size of the project, and the context of the project. The Planning Commission asked the applicant about the 5-acre parcel to the east that is shown with potential future development.

Motion by Steele to close the public hearing. Seconded by Sanii-Yahyai.

Commissioners discussed the project, including the timeline of construction and the need for a landscaped buffer along Geddes Road.

Motion by Wolf to adopt a resolution recommending approval to the Township Board of the proposed rezoning from A2 to PC and the proposed area plan for the Meadows 2 at Hawthorne Mill at 7330 Geddes Road. Seconded by McGill.

Roll call vote. All Ayes. Motion passed unanimously.

9. REPORTS

Marin summarized the Planning & Zoning report for October that was shared at the November Board of Trustees meeting, as well as other developments during the month of October.

10. OLD BUSINESS

None.

11. NEW BUSINESS

None.

12. POLICY DISCUSSION

Marin provided an update on the timeline and progress of draft Zoning Ordinance articles. Marin proposed the option for a special meeting in December to discuss the remaining draft ZO articles, since the regular meeting is slated to be a full agenda. Chair Gardner expressed support for this option, as well as other Commissioners. Several dates were discussed, with December 8th being the best option for the most Planning Commissioners.

13. ADJOURNMENT – *next regularly scheduled meeting on December 17, 2025. Special Meeting planned for December 8th.*

MOTION by Wolf, supported by Sanii-Yahyai to adjourn the meeting.

Motion passed unanimously by voice vote.

The meeting was adjourned at 7:58 p.m.

Meeting Minutes Respectfully submitted,

Thomas Brennan III, Planning Commission Secretary
Michelle Marin, Recording Secretary
3040 N. Prospect, Ypsilanti, MI 48198, 734-482-6099

SUPERIOR CHARTER TOWNSHIP

Planning Commission
SPECIAL Meeting Minutes - DRAFT
December 8, 2025, 7:00 PM
Township Hall - 3040 North Prospect
Superior Township, MI 48198

1. CALL TO ORDER

Chair Gardner called the regular meeting to order at 7:00 p.m.

2. ROLL CALL

Present: Jay Gardner, Chair
Thomas Brennan, Secretary
Patrick McGill
Nahid Sanii-Yahyai
Curt Wolf
Brenda McKinney, Board Representative

Absent: Dr. Robert Steele, Vice Chair

Also Present: Planning Consultants – Ben Carlisle and Michelle Marin, Carlisle Wortman

3. DETERMINATION OF QUORUM

A quorum was present.

4. ADOPTION OF AGENDA

MOTION by McKinney, supported by Brennan, to adopt the December 8, 2025, agenda as presented.

Motion passed unanimously by voice vote.

5. APPROVAL OF MEETING MINUTES

None.

6. CITIZEN PARTICIPATION

None.

7. CORRESPONDANCE

None.

8. PUBLIC HEARINGS, DELIBERATIONS AND ACTIONS

None.

9. REPORTS

None.

10. OLD BUSINESS

None.

11. NEW BUSINESS

None.

12. POLICY DISCUSSION

Carlisle presented memo summarizing changes to draft article 5 with the special district regulations. A full rewrite is being proposed for these regulations to remove the multiple special district options, consistent with the changes discussed for Article 4 at the previous Planning Commission meetings. The changes will apply to any new development. Carlisle expressed how the new process will be easier to administer. Marin mentioned that the name will remain "Planned Community" for the special districts.

Commissioner Wolf asked why the new process is an improvement. Marin discussed the new process requiring input from the Planning Commission and neighbors earlier on in the process and the new community benefits being more reflective of the new Master Plan goals. Carlisle mentioned that the new streamlined process allows for more negotiation with the Township and the developer.

Chair Gardner asked if the new process has a higher standard of approval. Carlisle responded yes, that the community benefits required are stronger. Level of zoning relief should reflect the level of community benefit provided.

The Planning Commission and planners discussed where these new standards would apply.

Chair Garnder expressed that he likes the new "Abandonment" language.

Marin reviewed the substantive changes for Article 12. Chair Gardner asked about the lit sign atop the Trinity Health Building. Carlisle mentioned that that would be covered under the sign article. Sanii-Yahyai asked about what qualifies as decorative lighting. Carlisle mentioned that this is to prevent decorative lighting from being floodlights by requiring shielding.

Chair Gardner asked about the change in the noise standards. Wolf asked about commercial trucks driving in the middle of the night.

Sanii-Yahyai asked about including or excluding standards that the Township cannot enforce. Sanii-Yahyai mentioned a farming meeting 2 days ago.

Wolf asked about data centers and other potential high energy consuming commercial uses.

Carlisle and Marin discussed the next steps.

13. <u>ADJOURNMENT</u> – *next regularly scheduled meeting on December 17, 2025*

MOTION by Wolf, supported by Brennan to adjourn the meeting.

Motion passed unanimously by voice vote.
The meeting was adjourned at 7:58 p.m.

Meeting Minutes Respectfully submitted,

Thomas Brennan III, Planning Commission Secretary
Michelle Marin, Recording Secretary
3040 N. Prospect, Ypsilanti, MI 48198, 734-482-6099

MEMO

TO: Superior Charter Township Board of Trustees

FROM: Michelle Marin, Planning & Zoning Administrator

RE: Planning & Zoning Department Report

DATE: December 3, 2025

Below is a summary of the planning and zoning activities for the month of November 2025.

MEADOWS 2 AT HAWTHORNE MILL AREA PLAN

Lombardo and Atwell have submitted an application for an area plan for 12 single family detached homes at 7330 Geddes Road, directly adjacent to the Meadows at Hawthorne Mill development. The Meadows 2 (STPC #25-10) includes interior connections to the original Meadows at Hawthorne Mill and proposes no new entrances from Geddes Road. The planning review of the proposed area plan questions how the 12 homes will be connected to the original Meadows at Hawthorne Mill homes, particularly with respect to a single HOA. The public hearing for the proposed area plan occurred at the November 19th Planning Commission meeting, where the Planning Commission had a lengthy discussion regarding the ways in which the proposed project is supported by some of the Master Plan goals but conflicts with others. Ultimately, the Planning Commission determined that the area plan was warranted and approved a resolution recommending approval to the Township Board of the proposed area plan and rezoning.

TRINITY HEALTH – ER ADDITION/RENOVATION

On October 29th, the Planning Commission approved a site plan (STPC #25-07) for a renovation/addition project to the Trinity Health Emergency Department. The site plan includes alterations to the parking and drop off area as well as a building addition to allow additional ER rooms. The approval was conditioned upon the applicant addressing minor outstanding planning and engineering items. As of November 12, the conditions of approval have not yet been met.

PROSPECT POINTE SOUTH

In July, M/I Homes submitted a rezoning and area plan application for a three-phase single-family residential development project, on two adjacent parcels with a total area of ~48 acres. One parcel is zoned R-4 and one parcel is zoned PC – Planned Community. The development (STPC #25-05) is located on the east side of North Prospect Road, between Berkshire Drive, Sheffield Drive, and the Autumn Woods condos. The applicant is proposing to develop Prospect Pointe South as a 119- unit single family residential development. The existing site is vacant and heavily wooded on roughly ¾ of the property.

A public hearing was held at the August 27th Planning Commission meeting, at which time the Commission postponed action on the area plan application and directed the applicant to address the following items:

a. Traffic study, including coordination with the Washtenaw County Road Commission
b. Road connections, including private roads
c. Stormwater management
d. Landscape buffer
e. Power grid capacity
f. Density concerns

The applicant submitted revised plans, following a meeting with the development review team. Carlisle Wortman provided a review of the revised plans, and many of the items of postponement remain unaddressed. We anticipate the project coming back to the Planning Commission for review at the December meeting.

PROSPECT POINTE WEST

Prospect Pointe West is a four-phase single-family residential development project, on a ~67-acre parcel of land zoned R-4 an Urban Residential District. The development is located on the southwest corner of Geddes Road and Prospect Road, west of Hunters Creek Drive in the northeast quarter of Section 33. The applicant is proposing to develop Prospect Pointe West as a 157-unit site condominium.

The four (4) phases consist of the following number of units:

- Phase 1 – 39 units
- Phase 2 – 45 units
- Phase 3 – 26 units
- Phase 4 – 47 units

The proposed lot dimensions are 66' x 130' with a minimum lot size of 8,580 sf. The homes will range in size from 2,000 to 3,200 sf with sales prices starting in the $400,000s. The development has private roads with sidewalks on both sides and will be serviced by public sanitary sewer which will be designed as an extension of the existing Prospect Pointe development. Public water will also be extended from the existing subdivision. Each phase of the development is required to go through the Final Site Plan process.

The Final Site Plan for Prospect Pointe West Phase 1 (STPC #22-03) was approved by action of the Superior Township Planning Commission on April 26, 2023, and includes 39 single family lots. Building permits for individual homes are being issued and construction has commenced.

The Final Site Plan for Prospect Pointe West Phase 2 (STPC #24-01) was approved by action of the Superior Township Planning Commission on May 22, 2024, and includes 45 single family lots. The Development Agreement for Phase 2 has been recorded and a preconstruction meeting was held on September 10, 2024.

The Final Site Plan for Prospect Pointe West Phase 3 (STPC #25-01) was approved by the Planning Commission at the May 28th meeting. This phase includes 25 single family lots. The development agreement was approved by the Township Board of Trustees at the September 15th meeting.

The applicant submitted a final site plan application for Prospect Pointe West Phase 4 (STPC #25-08) in September. The final site plan is anticipated to be reviewed at the December Planning Commission meeting.

TRINITY HEALTH - EMERGENCY FAMILY SHELTER

Following a public hearing on August 27th, the Planning Commission approved the conditional use permit to establish an emergency family shelter in the Towsley Health Building of the Trinity Health Campus, in the MS Medical Services District. The proposed project (STPC #25-04) provides 30 apartment-style temporary housing units for families in need, in collaboration with the Interfaith Hospitality Network at Alpha House. The application does not include a site plan, as the existing building is already outfitted with dwelling units, and the project includes interior renovations only. This project will mark the second temporary housing facility in Washtenaw County managed by Alpha House.

HYUNDAI FUEL LOADING SYSTEM

On August 27th, the Planning Commission approved a combined preliminary and final site plan for a fueling facility at the Hyundai America Technical Center in the PM Planned Manufacturing District. The project (STPC #25-06) includes the construction of a two-pump accessory fueling facility and underground storage tanks. The facility is intended for vehicles being used on site and does not include a retail sales component. The planning and engineering reviews have been completed, with several outstanding items identified in both reviews. Construction began on the project in September.

BROOKWOOD

Brookwood is a Master Planned Community on an ~84 acre parcel of land zoned Planned Community (PC) a Special District. The development is located on the east side of Leforge Road approximately 700 feet north of Clark Road in the southwest corner of Section 33. The applicant is proposing to develop Brookwood with 318 dwelling units divided into three (3) residential dwelling product types (i.e., stacked flats, duplex units, four-plex units, and attached townhomes).

The development is designed for renters and owners plus a section dedicated for people over 55 years of age. Stacked flats and duplexes are anticipated to rent from $1.50 - $2.50 per square foot. The townhomes will be for sale and priced per unit according to the market. The development will also include a clubhouse, amenity areas, paved parking areas, landscape improvement, and a continuous sidewalk network along

private drives throughout the development and walking paths that connect amenities with various areas of the development. Existing public water and sanitary sewer mains will be extended to serve the development.

The Brookwood Superior Area Plan Amendment was approved at second reading by the Township Board on May 20, 2024.
The Brookwood Superior Preliminary Site Plan (STPC #23-05) was approved by action of the Superior Township Planning Commission on May 22, 2024, with the following conditions:

1) Address all items in the Township Engineers May 9, 2024, review.
2) Provide additional details on Natural Feature Plan including how the 25% slopes will be protected, and their integrity remain intact.
3) Provide a more detailed landscape plan that meets all landscape, screening, and woodland preservation requirements.
4) Provide lighting and photometric plan.
5) Provide a detailed narrative of the architectural concept for the site including materials details.

The Final Site Plan for Brookwood Estates (STPC #23-05) was approved by the Planning Commission at the May 28th meeting. The applicant is currently working on addressing the approval conditions that were identified in the Planners' and Engineers' reports.

GARRETT'S SPACE

Garrett's Space is proposed to be a residential center where young adults suffering from depression and anxiety are treated. The facility will include both in-patient and daily services, with a non-medical and non-institutional focus. Garrett's Space is proposed on seven (7) parcels that will be combined into one lot totaling approximately 76.0 acres. The property has historically been used as a single-family residence with an address of 3900 Dixboro Road and is in Section 7 of the Township. The site includes significant natural resources including woodlands, steep slopes, a creek, floodplain, and wetlands.

The applicant proposes the following improvements:

1) Convert the existing home on the site to administrative offices
2) Construct a 10,100 square foot building to house 15 to 20 residents
3) Construct a 2,100 square foot building for recreational and therapy activities
4) Construction of a parking lot
5) Landscaping improvements
6) Create walking paths and lookouts through the site's natural features.
7) Expanding the sites well and sceptic system
8) Construct two (2) stormwater detention ponds

The applicant proposes a phased development:

- Phase 1: Use of the existing house for administrative offices and day programming. This phase does not include any overnight guests.

- Phase 2: Construction of the residential structure and creativity studio with parking areas, and utility and landscaping improvements. This phase includes expanded day programming and overnight residents.
- Phase 3: Additional ancillary elements, including the barn for gardening and therapeutic animals, and outdoor recreation and gathering spaces, will be constructed as funding allows.

Previous Township approvals are as follows:

- Property was rezoned from A-2 to Planned Community (PC) Special District via an Area Plan petition approved by the Township Board on July 17, 2023.

- The applicant recorded a Zoning and Land Use Agreement dated October 16, 2023, that limits uses, the number of residents and the number of employees.

- A Preliminary Site Plan (STPC 23-03) was approved by the Planning Commission with conditions on January 24, 2024.

- A Final Site Plan (STPC 23-03) was approved by the Planning Commission on September 25, 2024, with the following conditions:
  1) Obtain all outside agency approvals permits outlined in Township Engineer's memo dated 9/19/24.
  2) Combine existing seven (7) parcels into one parcel prior to receiving certificate of occupancy.
  3) Record conservation protection prior to certificate of occupancy.

- A Development Agreement was approved by the Township Board on October 21, 2024.

To date, the applicant has completed Final Site Plan conditions #1, #2, and #3:

1) OHM reviewed the Engineering Plans submittal (dated 12/20/24) and had no exceptions to the proposed development moving forward as shown on the plans as submitted.

2) The seven (7) parcels have been combined into one and a new parcel assigned (J -10-07-200-021). Furthermore, the Township Assessor has changed the zoning of this new parcel to PC.

3) Resolution No. 2025-13 to approve Garrett's Space Conservation Deed Restriction Agreement between Garrett's Space and the Township was approved by the Board of Trustees on March 17, 2025.

Building permits have been submitted and a preconstruction meeting was held on March 18, 2025. Preliminary site work has commenced. The approved Development Agreement requires the conservation area protection to be recorded prior to Certificate of Occupancy (CO) for the main residential structure to be newly constructed (Phase 2). A C of O may be issued for the Phase 1 portion of the project if all building and fire codes and requirements are met for the change of use.

THE MEADOWS AT HAWTHORNE MILLS

The Meadows at Hawthorne Mills is a 215 unit single-family residential site condominium located on 71 acres of land located south of Geddes Road and east of Leforge Rd. The site includes private roads that provide two (2) access points to Geddes Road and has two (2) connection points with the adjacent Prospect Pointe West Development. In addition, there is a road stub for future development to the south. The proposed development will be served with public utilities. A sewer will connect from Leforge Road, and the Prospect Pointe Development and water will be looped throughout the development from Geddes Road. Stormwater management will be handled with four (4) proposed detention ponds located throughout the development.

The entire development received preliminary site plan approval on October 28, 2020. There are five (5) phases of development, and each phase required final site plan approval. The final site plan for Phase 1 was approved by the Planning Commission with conditions on November 15, 2023. Phase 1 includes a total of 40 lots/units as well as construction of the roads and infrastructure items to directly serve those units, extension of a sanitary sewer from LeForge Road across the neighboring property to the west needed to service Phase 1, and mass grading of the entire site.

The final site plan for Phase 1 of the Meadows at Hawthorne Mill was set to expire and the applicant petitioned the Planning Commission to grant a one-year extension. On January 22, 2025, the Planning Commission granted an extension of the approved final site plan with the following conditions:

1. Provide a cost estimate for required woodland mitigation to be paid into Superior tree fund. Once a fund number is agreed upon with the Township, the applicant shall pay the amount to the Township.
2. All future homebuilders will be required to submit floor plans and elevations for review and approval by the Planning Commission.
3. Secure all required Washtenaw County Road Commission (WCRC) permits and right-of-way dedications to facilitate improvements at the intersection of Prospect and Geddes Rd as well as turn lane improvements for the private connection on Geddes Road.
4. Complete a Development Agreement and present to the Board of Trustees for approval prior to Phase 1 moving to the pre-construction phase of the development.

The applicant for the Meadows at Hawthorn Mills (Louis J. Eyde Family, LLC) is selling the property, possibly in two parts, to Lombardo and/or Pulte. Jared Kime of Atwell is working with Pulte to prepare necessary submissions including an amendment to the Phase 1 Final Site Plan. An application to amend the final site plan was received on March 13, 2025, and is under review. A summary of the changes proposed are as follows:

1. Phase 1 FSP revision
    a. Minor revisions to lot grading for Pulte standards
    b. Landscape revision and phasing of the tree impacts/mitigation calculations
    c. Reduction of mass grading to only phase 1 and the sanitary corridor going through future phases

   d. Would also include the necessary building elevations for PC review
2. Overall Engineering Plan update
   a. Raised road grades on south half of site to improve earthwork balance
   b. Associated lot grading revisions throughout site
   c. Some storm sewer modifications due to the lot changes in future phase areas
   d. Updated water main profiles due to new road elevations in future phase areas
   e. Overall landscape plan update with tree impacts/mitigation calculations

The Planning Commission has authority to determine whether a requested change is major or minor, in accordance with this Section 10.12. Changes to the ownership may impact changes to the site layout, and as such the review of the project is currently on hold until ownership changes are verified.
Other outstanding items to be addressed by the applicant(s) prior to any final site plan approval:
1. Development Agreement – BOT approval
2. Intersection ROW dedication – BOT approval

The Development Agreement was approved by the Board of Trustees at the August meeting, conditioned upon finalizing the Right-of-Way Dedication. The applicant is aiming to beginning construction in Spring 2026.

CLAY HILL COMMUNITY FARM AND GARDEN

The Board of Trustees issued a 1-year extension of the special district area plan approval for the Clay Hill community farm and garden at request of the applicant. The applicant indicated progress as well as the need to extend the approval to update wetland mapping and finalize permits with the County Road, Water, and Drain Commissions.

The applicant submitted a site plan application, omitting the fees. This item is scheduled for the October meeting for the Board of Trustees to discuss and determine if a site plan fee waiver is appropriate.

DTE GRENADA SUBSTATION

Conditional Use Permit/Preliminary Site Plan - DTE Grenada Substation Expansion (STPC #25-02). The applicant hosted a virtual meeting with Ben Carlisle and Emily Dabish Yahind on August 15th, but no substantive site plan changes were shown. Revised documents were provided to the Planning & Zoning department on November 9th but have not yet been reviewed.

ZONING BOARD OF APPEALS

The ZBA did not have a meeting in November due to a lack of agenda items. The ZBA will have a meeting on January 14th (previously scheduled for December 10th) for the continuation of the administrative appeal of the decision of the Township Zoning Administrator regarding the property at 5766 Geddes Road, zoned R-1.

Per bylaws, the ZBA consists of seven (7) regular and two (2) alternates members appointed by the Township Board. One (1) of the members must be a member of the Township Planning Commission and one member may be a member of the Township Board. The remaining members must reside in the unincorporated areas of the Township and represent the population distribution and various interests present. Current ZBA members include:

- Thomas Brennan, (Chair & PC Member)
- Rachel Smith
- Dana Greene (BOT)
- Tanya Markos-Vanno
- Meghan Winslow
- Jack Gilbreath
- William Schoefield
- Austin Anderson (alternate)

The Township now has regular scheduled ZBA meetings the 2nd Wednesday of the month; if there are no agenda items, the meeting is cancelled.

PLANNING COMMISSION

At the November 19th Planning Commission meeting, the Planning Commission did not review any draft Zoning Ordinance articles. The remaining 3 articles will be reviewed by the Planning Commission at a special meeting on December 8th, in addition to the regularly scheduled December 17th meeting. These articles are indicated below.

- Article 5: Special Development Regulations
- Article 12: Site Design Standards
- Article 13: Environmental Standards

To date, the Planning Commission and CWA staff have convened to review the following articles, as part of the Zoning Ordinance Rewrite Steering Committee:

ARTICLE 1: TITLE, PURPOSE AND LEGAL CLAUSES
ARTICLE 2: DEFINITIONS
ARTICLE 3: ADMINISTRATION AND ENFORCEMENT
ARTICLE 4: ZONING DISTRICT REGULATIONS
ARTICLE 6: DEVELOPMENT OPTIONS
ARTICLE 7: GENERAL PROVISIONS
ARTICLE 8: SITE PLAN REVIEW

ARTICLE 9: CONDITIONAL USE REVIEW
ARTICLE 10: USE STANDARDS
ARTICLE 11: OFF-STREET PARKING AND LOADING REGULATIONS
ARTICLE 14: SIGN REGULATIONS
ARTICLE 15: NONCONFORMITIES
ARTICLE 16: ZONING BOARD OF APPEALS
ARTICLE 17: AMENDMENT PROCEDURE

Per bylaws, the Planning Commission shall consist of seven (7) members serving three (3) year terms with eligibility for re-appointment. One member of the Township Board shall be appointed to the Planning Commission as an ex officio member and Township Board Representative, with full voting rights. The current Planning Commission is comprised of the following members:

- Jay Gardner, Chair (Term expires 2/28/2026)
- Robert Steele, Vice Chair (Term expires 2/28/2028)
- Thomas Brennan, Secretary (Term expires 2/28/2027)
- Patrick McGill (Term expires 2/28/2027)
- Brenda McKinney– Board Rep. (Term expires 11/7/2028)
- Nahid Sanii-Yahyai (Term expires 2/28/2026)
- Curt Wolf (Term expires 1/01/2028)

OTHER BUSINESS/NEWS

1) Michelle Marin of Carlisle Wortman Associates (CWA) began to serve as the Township Planning and Zoning Administrator in April. In October, Michelle reviewed and approved 13 Certificates of Zoning Compliance.

   Michelle responded to many general phone and email inquiries from the public both during and outside of office hours and met in person with numerous folks at the Township Hall during office hours. Michelle continued ordinance enforcement in November and worked on corrective actions with previously notified code violators. She prepared the packet and staffed the November Planning Commission meeting.

2) Carlisle Wortman Associates staff also serve in the role as the Township Planner and review and manage projects that are paid from escrows including applicant inquiries and project coordination.

Carlisle | Wortman
ASSOCIATES, INC.
117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: February 14, 2025
December 8, 2025

Conditional Use and Preliminary Site Plan Review
For
Superior Township, Michigan

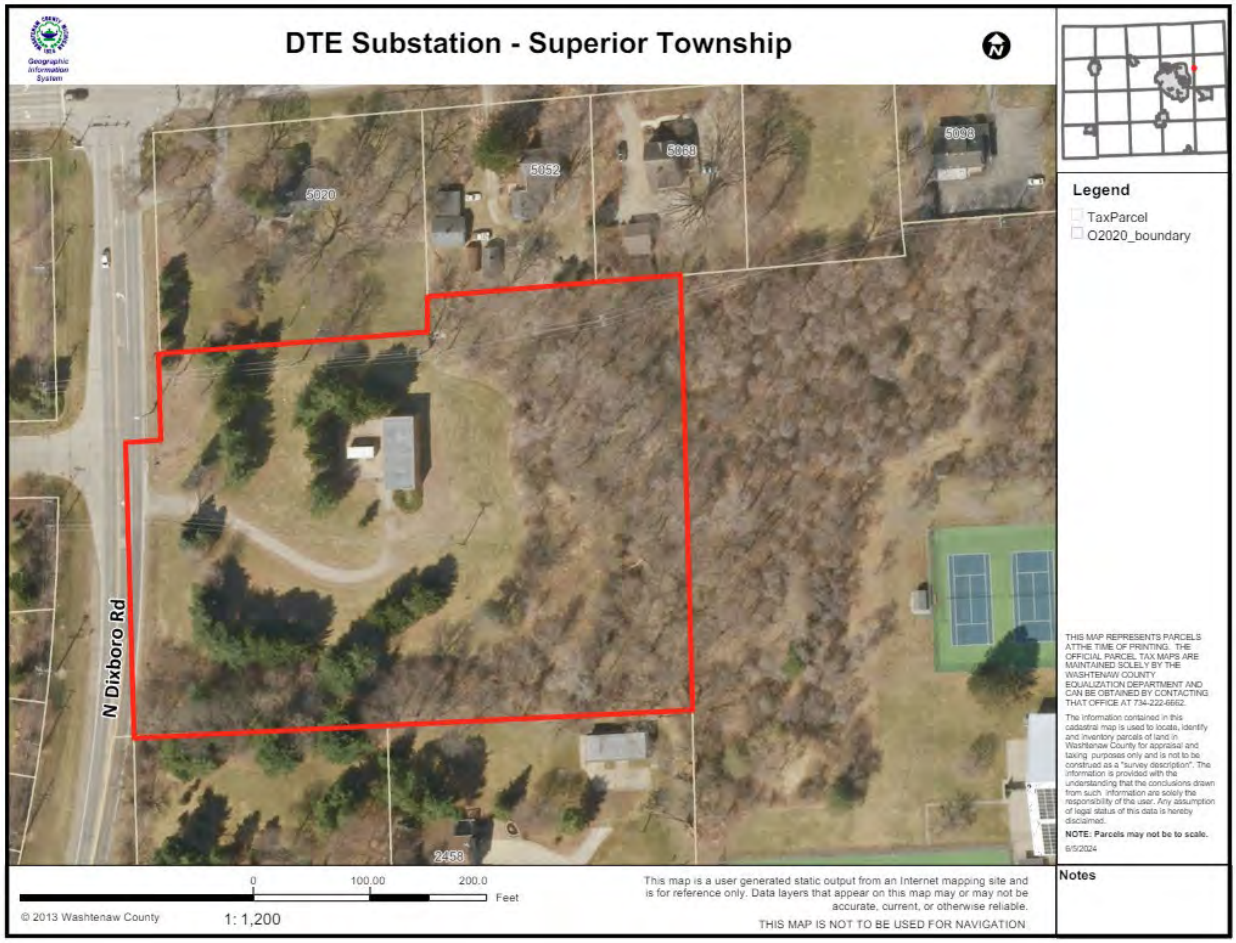
Applicant:	DTE Electric Company (John Erb, DTE Real Estate and Terry Spryszak, DTE Corp Permits)
Project Name:	STPC 25-02 - DTE Grenada Substation Expansion
Plan Date:	Revised date of November 17, 2025
Location:	East side of N. Dixboro Road, south of Plymouth Road J -10-18-261-012
Zoning:	R-4 (Single-Family Residential) Urban Residential District
Action Requested:	Conditional Use Permit / Preliminary Site Plan Approval
Required Information:	As noted in review.

PROJECT DESCRIPTION

DTE Electric Company is seeking approval for a combined Conditional Use Permit and Preliminary Site Plan to expand an existing electrical substation on a 3.76 acres parcel (J -10-18-261-012) located on the east side of Dixboro Road, south of Plymouth Road (see Figure 1). The property is in an Urban Residential District zoned R-4 (Single-Family Residential). The proposed new Grenada Substation would be classified as a "Utility Transmission and Distribution Lines and Pipelines not in Existing Easements or Rights-of-Way" and requires a Conditional Use Permit approval in an R-4 (Urban Residential District).

Benjamin R. Carlisle, *President* John L. Enos, *Vice President* Douglas J. Lewan, *Principal*
David Scurto, *Principal* Sally M. Elmiger, *Principal* R. Donald Wortman, *Principal* Craig Strong, *Principal*
Paul Montagno, *Principal* Megan Masson-Minock, *Principal* Laura Kreps, *Principal* Brent Strong, *Principal*
Richard K. Carlisle, *Past President/Senior Principal*

Figure 1 - Aerial Image of Subject Site



The applicant has provided the following use description:

> *THIS PROJECT IS TO CONSTRUCT AN ELECTRICAL SUBSTATION WHICH WILL IMPROVE POWER RELIABILITY IN THE SURROUNDING AREAS. WORK INCLUDES OVERHEAD SUPPORT STRUCTURES, LIGHTNING MASTS, TRANSFORMERS, CIRCUIT BREAKERS, POWER DISTRIBUTION CONTROL EQUIPMENT, ITC CONTROL HOUSE, ACCESS DRIVES WITH SECURITY FENCE AND LIGHTING. GRENADA SUBSTATION IS AN UN-OCCUPIED ELECTRIC SWITCHING/DISTRIBUTION SUBSTATION, AFTER CONSTRUCTION IS COMPLETE, AN OPERATOR WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH TO PERFORM ROUTINE MAINTENANCE AND DATA COLLECTION.*

There is an existing substation facility on this property that was constructed around 1990 and the applicant is proposing to improve and expand the facility to improve power reliability in the surrounding areas.

PROPOSAL

DTE proposes the following items at the site:

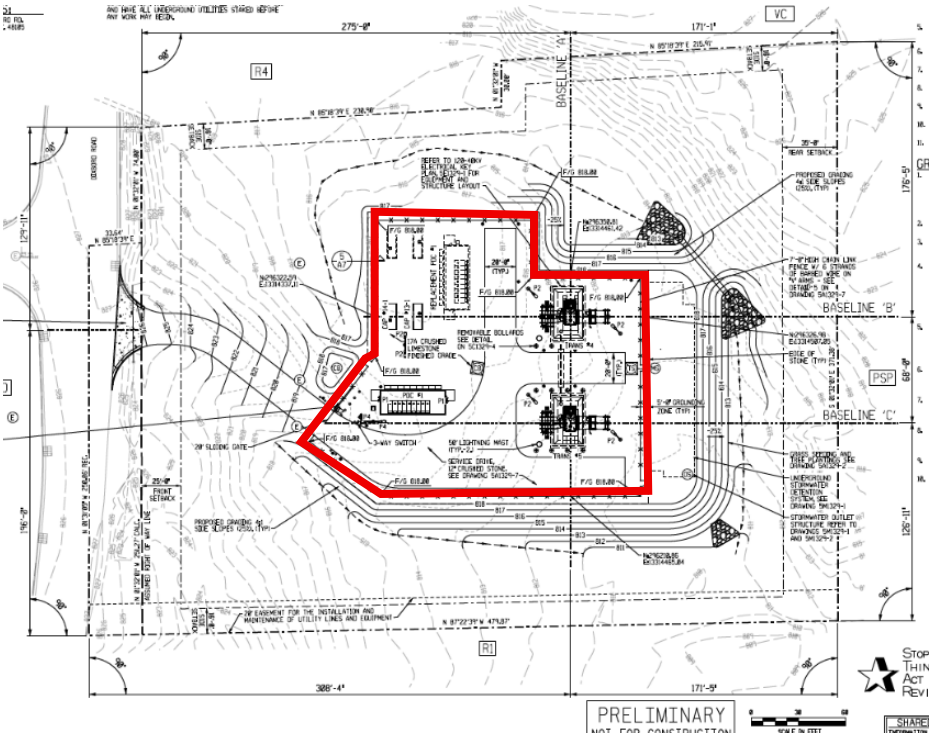
- New fenced substation yard with:
  - Transformers #4 and #5.
  - PDC #1 control enclosure.
  - Capacitor banks, breakers, support structures.
  - 50-foot-tall lighting mast
  - Equipment functions as utility infrastructure, not occupied buildings.
- New landscaping
  - Tree preservation where possible
  - Additional trees to provide screening
- New lighting
  - Exterior lighting:
  - LED wall packs and limited pole-mounted fixtures.
- New fencing
  - 7-foot chain-link fence with barbed wire.
  - Locked gates and controlled access.
- Gated drive off Dixboro Road
- Onsite stormwater management
- Site grading

EXISTING VS. PROPOSED

The existing pad is approximately 4,100 sq/ft



The proposed pad is 40,510 square feet.



PROCESS

The proposed Grenada Substation facility is considered to be a "Utility Transmission and Distribution Lines and Pipelines not in Existing Easements or Rights-of-Way" and is permitted on parcels zoned R-4 (Urban Residential District) with a Conditional Use Permit approval.

Article 11 (Conditional Uses) specifies the procedures and standards to be followed in granting such permits. A site plan meeting all the requirements of a Preliminary Site Plan as outlined under Article 10.0 (Site Plan Review) must accompany the Conditional Use Permit application. A public hearing shall be held on the petition and notice shall be given in accordance with Section 1.14 (Public Hearing Procedures).

PREVIOUS PLANNING COMMISSION REVIEW

The item was last reviewed by the Planning Commission on February 26, 2025. At the meeting, there were a number of public and Planning Commission comments:

- Landscape buffers and durable landscaping installed with a diversity of tree species and mixture of understory, shrubs, grasses, and canopy trees.
- Stormwater run-off due to increased impervious surface.
- Whether the expansion would actually increase capacity and directly benefit Superior Township residents by reducing outages.

- Proximity of substation to sensitive natural areas (i.e., Botanical Garden and Flemming Creek).
- Visual impact of industrial scale substation to residential areas and the Village of Dixboro.
- Potential health effects of electromagnetic radiation from transformers and other equipment.
- Transmission structures constructed outside of the fenced areas.
- Changes to local aesthetics and viewsheds.
- Noise constant humming or buzzing noise may be audible several hundred feet from the substation.
- Potential light pollution.
- Reduction in property values for adjacent owners.
- Tree maintenance and vegetation management now and in the future.
- A curved entrance drive needed to help with screening.
- Concern that the Dixboro Design Review Board would not be provided with a formal opportunity to comment on the expansion project.

The item was postponed to allow the applicant to address the following items:

1. Confirm/justify the need for expansion of the substation facility (e.g., elaborate on how much additional electrical capacity and/or stability will be brought to Superior Township and the region as a whole).
2. Explore alternative restroom options including elimination of septic field. Staff will reach out to County Health to coordinate conversation.
3. Preserve and reduce the number of existing trees removed.
4. Increase the size, height (at least 12 ft), and diameter of mitigation/landscaping trees required to be planted on site. Staff can work with DTE to relieve mitigation tree numbers in exchange for larger trees planted on site.
5. Ensure planting provides year-round screening and is comprised of diverse Michigan native species that are fast growing but durable to storm damage and that provide immediate screening to the fullest extent possible. The object of the screening should be that the surrounding fence and the 16 ft high equipment inside the fence are not visible from any of the four sides of the property at the completion of the project. Further, the object is that growth of the plantings will shield the 16 ft high equipment inside the fence within a relatively short period of time.
6. Provide a maintenance plan that describes the specific practices and products that will be used to implement the landscape management plan, along with a schedule of annual maintenance practices.
7. Provide a visual 3-D model of the facility from all four cardinal directions with landscape screening in place.
8. Photometric plan and description of when and how light sources will be used.
9. Provide an environmental impact statement (EIS) that outlines the environmental and potential health and safety risks of the proposed substation expansion.

CHANGES SINCE LAST PLANNING COMMISSION REVIEW

Based on public and Planning Commission comments, the applicant has made the following updates to their application:

- Overall project
  - Substation pad area has been reduced from 1.6 acres (≈44% lot coverage) to 0.93 acres (≈25% lot coverage) on 3.76-acre parcel
  - Construction disturbance reduced from about 3.6 acres to 2.5 acres (with related grading/landscaping area reduced from ~2.0 to ~1.57 acres).
- Land-use description / project concept
  - Revised plans describe the project as an "electrical substation expansion" to the existing Grenada facility, with explicit three-phase construction and decommissioning of the existing substation.
- Buildings and structures
  - Earlier plans included four permanent buildings/structures: a restroom building, ITC control house, DTE PDC enclosure, and three future PDC equipment enclosures (structure area about 4,558 sq ft).
  - Revised plans eliminate the restroom, ITC control house, and future PDC enclosures and retain only compact control/equipment enclosures associated with the transformers and capacitor banks (equipment area noted at 440 sq ft, with no "buildings" for zoning coverage purposes).
- Utilities – water and sanitary
  - Earlier plans showed a well, septic system, sanitary service piping, and water service to the restroom (including 4" PVC sanitary, septic tank/pump, and engineered drain field).
  - Revised plans remove the restroom, well, and septic field and no longer show proposed sanitary or water service lines; the general notes emphasize that the site will not connect to public sewer or water.
- Electrical equipment layout
  - Earlier layout provided for existing plus future equipment, including "TRANS #3 – FUTURE" and multiple future PDC locations.
  - Revised layout is more compact, focusing on two transformers (TRANS #4 and #5), a single replacement PDC, and capacitor banks within a smaller, reconfigured pad.
- Grading and slopes
  - Earlier site plan generally used 3:1 side slopes (≈33%) around the pad and drives.
  - Revised plan flattens slopes to 4:1 side slopes (≈25%), softening the earthwork and transitions at the substation edges.
- Lightning masts / vertical elements
  - Earlier plans show 70-foot lightning mast.
  - Revised plans indicate 50-foot lightning masts, reducing maximum structure height.
- Lighting plan

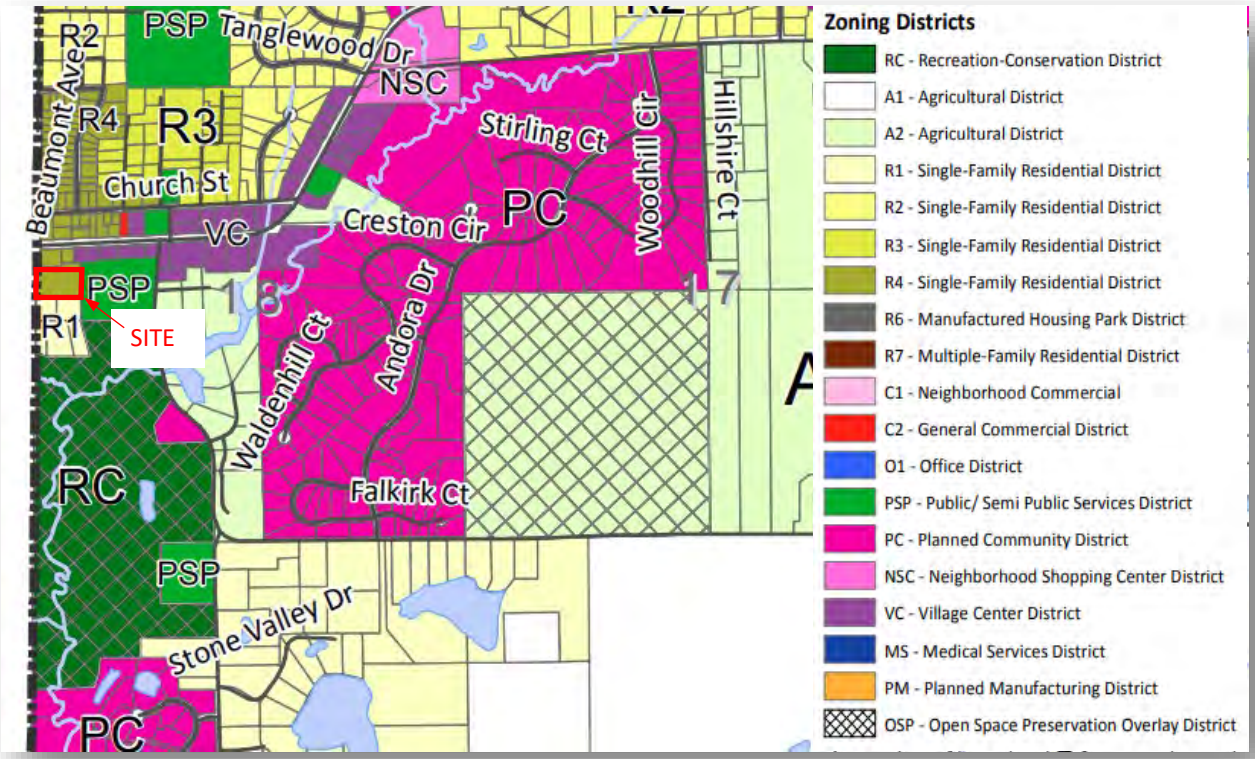
  - Fixture table and types have been revised: the earlier plan uses one set of Lithonia DSX1/WSR fixtures, while the revised plan adjusts the fixture mix (P1/P2/P4 designations) and appears to keeps lights normally off except for emergency switching/maintenance.
- Sheet set / plan content
  - Earlier set included additional sheets for substation elevation section views, restroom layout/elevations, and restroom septic design (5A1329-10, 11, 12).
  - Revised preliminary set drops those restroom and septic-related sheets and instead references a "preliminary landscape plan" and tree protection/removal plans coordinated with PEA.
- EMF and Noise
  - Provided EMF and Noise PDF
- Environmental Impact Statement
  - Provided Environmental Impact Statement (EIS)
  - Reviews potential environmental impacts of woodlands and trees, threated species, air quality, water quality, social impacts, historic and cultural resources, and economic impacts.
- Rare Species Review
  - Provided Rare Species Review from Michigan State Extension noting that several at-risk species and/or natural communities have been documented within 1.5 miles of the project location and it is possible that adverse impacts will occur.
  - Provides management recommendations

ZONING AND LAND USE

Zoning and existing land uses for the subject site and surrounding parcels are identified in the following table and shown on Figure 2.

DIRECTION	ZONING	LAND USE
North	R4 (Single-Family Residential) VC (Village Center)	Single Family Dwelling and Commercial Office
South	R1 (Single-Family Residential)	Single Family Vacant and Rural Residential
East	PSP (Public/ Semi Public Services)	Huron Valley Tennis Club
West	PUD (Ann Arbor Township)	Dixboro Road and Flemming Creek Residential Subdivision

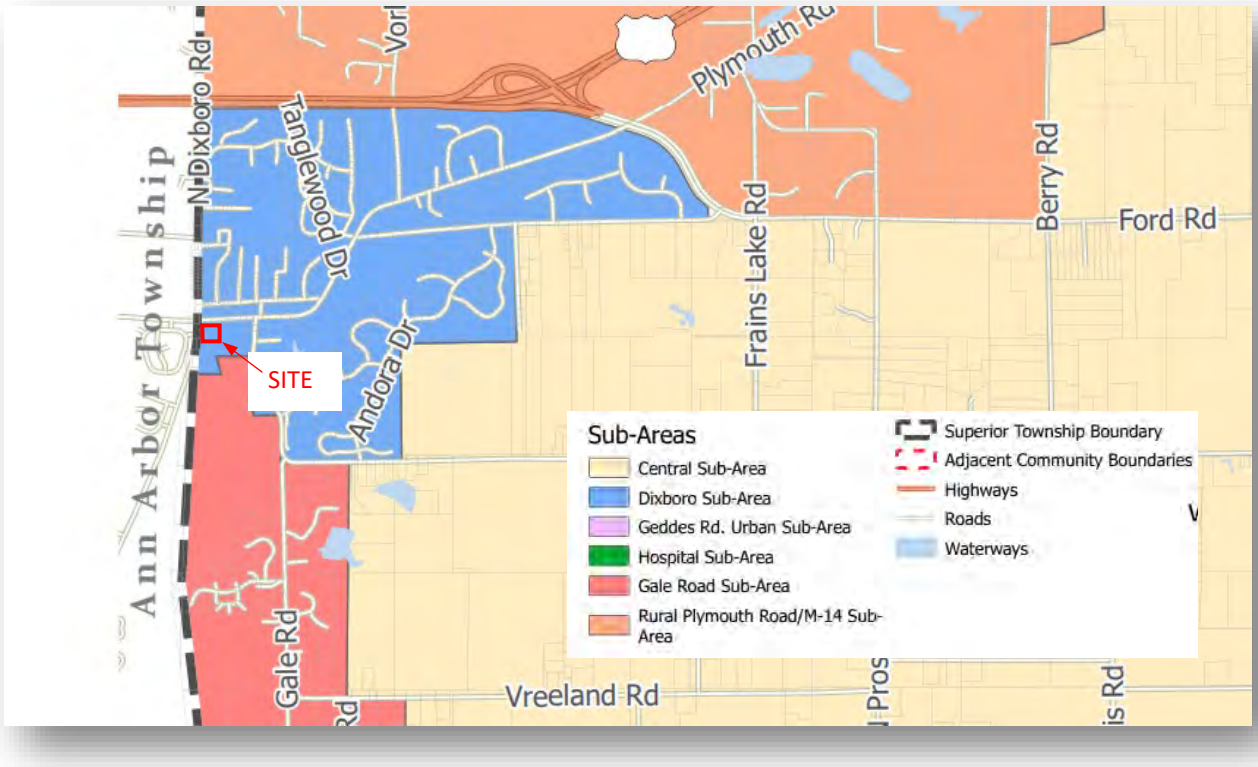
***F*igure 2 – Superior Township Zoning Map**



MASTER PLAN

The Future Land Use Map designates the subject site and the properties to the north, south, and east in the Dixboro Sub-Area (Figure 3). Properties west of the site and N Dixboro Road are in Ann Arbor Township and these parcels are designated as Residential 0.2-0.5 DU/acre (2 to 5-ac. lots) on the Township's Future Land Use Map.

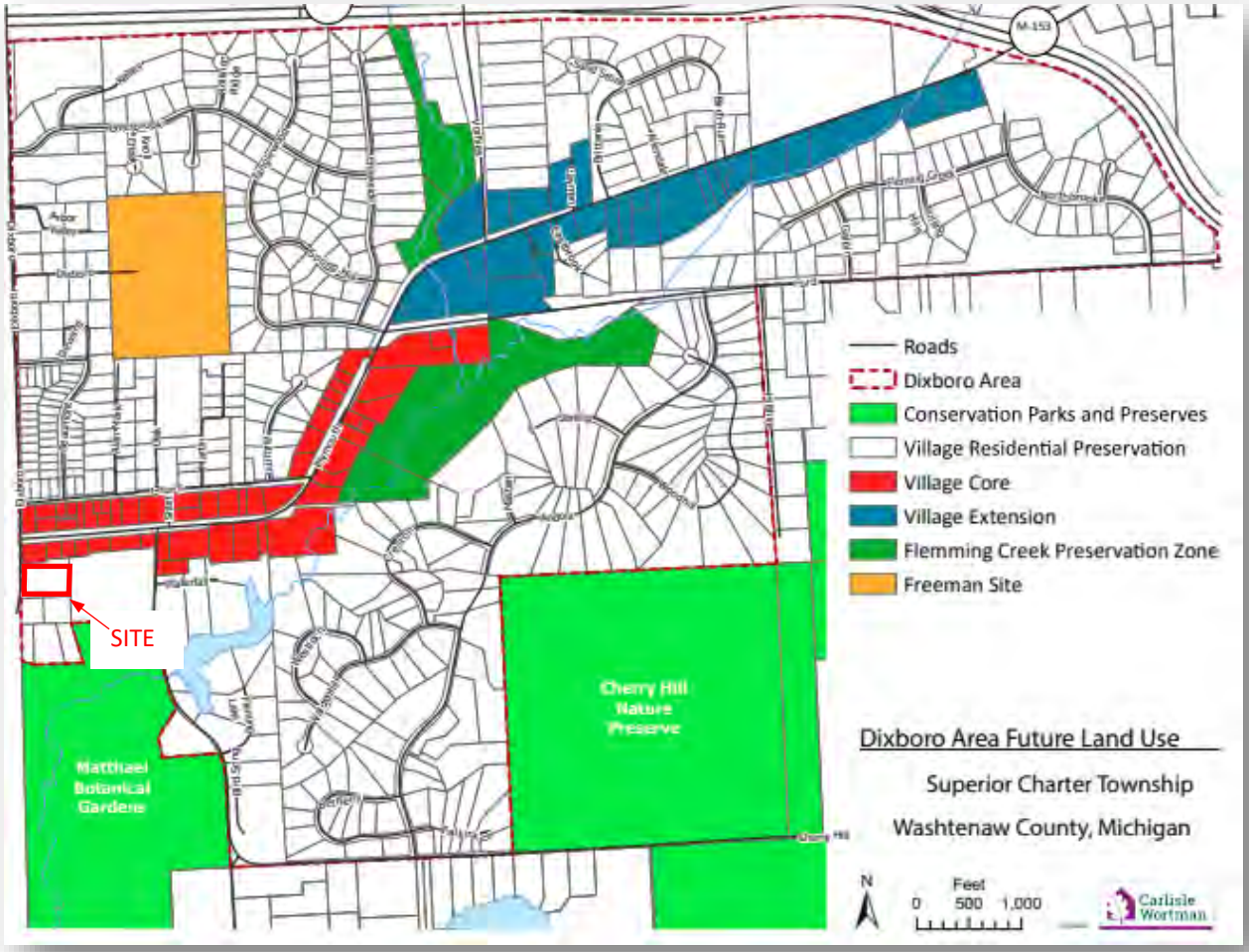
Figure 3 – Superior Township Future Land Use Map



The Dixboro Sub-Area has a more detailed Future Land Use Map (Figure 4). Areas within the Dixboro Sub-Area have been divided into five (5) place types based upon the context of existing build form, physical conditions, environmental conditions, land uses, development patterns, and community input, goals, and strategies. The subject site is included in the "Village Residential Preservation" place type which is intended for large- and small-lot single-family homes, open spaces and parks. It is the Township's desire to maintain and seek continuing reinvestment in the existing housing stock in the Village Residential Preservation area and new development must fit the character of the area. This being said, the intent of the Future Land Use Map is not to predetermine land uses or zoning on a specific parcel or at specific locations. Rather, individual properties or projects can be considered within the context of the location and surrounding properties, and not by a strict set of land use categories.

The existing DTE electrical substation facility on this parcel was constructed in the early-1990s and while the conditional use request to expand this facility does not specifically meet the intent of the Village Residential Preservation place type, expansion of the substation and associated improvements are intended to increase power reliability in the surrounding areas including the Dixboro Sub-Area. The property is located outside the area requiring Dixboro Design Review Board's review under Section 14.04 (Design Review).

Figure 4 – Dixboro Sub-Area Future Land Use Map



NATURAL RESOURCES

The property is currently partially developed and there are no "significant" natural resources including woodlands, steep slopes, and wetlands on site. The property is located outside the 100-year floodplain.

Watercourses and Wetlands: Sheet 5A1329-1 (Site Plan) states there are no regulated or unregulated wetlands within the subject parcel boundary. Sheet 5A1329-4 (Existing Conditions Plan) supports this claim and a note on sheet 5A1329-8 (Soil Erosion and Sediment Control Plan) states that based on the EGLE wetland inventory the nearest water body is associated with Flemming Creek approximately 300 ft south of the site boundaries.

Slopes: No development shall be permitted in areas where the soil is highly erodible, or in any area with existing steep slopes of twenty five percent (25%) or greater. The natural drainage

path is from the northwest corner to the southeast corner of the property. Existing topography has fairly steep areas now, with slopes on the site ranging from about 1.25% up to 33.25% as the land falls from the northwest toward the southeast low area. The grading plan will re-grade a 0.93-acre pad and associated drives to create a relatively level substation yard surfaced with stone. The remainder of the 2.5-acre disturbance area is reshaped to tie back into existing grades. New embankments and swales are required to be no steeper than 4:1 (25%) per Superior Township standards, so the constructed slopes around the pad and drainage features are flatter and more controlled than the steepest existing slopes. Drainage is still directed from the northwest toward the southeast, but runoff will now be captured in swales and an underground detention system before discharging at the southeast corner, with riprap at the outlet to limit erosion of the downslope area

Floodplain: As noted on sheet 5A1329-4 (Existing Conditions Plan), the site is within Zone "X" determined to be outside the 0.2% annual chance flood plain per Flood Insurance Map No 26161C0266E (effective April 3, 2012).

Woodlands and Tree Preservation: Sheet 5A1329-4 (Existing Conditions Plan) including limits of wooded areas on the subject parcel and sheet 5A1329-5 (Site Preparation and Demolition Plan) includes an inventory of existing trees on site as well as those proposed to be removed and preserved with details on tree protection measures. The applicant has identified 137 trees on site. Of those 137 tress the applicant proposes to remove 26 of them, of which 15 of those removed are regulated by the Township Tree Ordinance. The applicant is required to provide 97 trees as replacement. They are proposing to provide 63 trees. The applicant shall confirm how the other replacement trees are being addressed.

SITE ARRANGEMENT

As described on the cover sheet under "General Notes", during construction, approximately 2.5 acres of land will be disturbed and, after expansion, the substation structures and buildings will be constructed on a gravel pad that totals 0.93 acres. A fence will be installed around the pad and areas outside the pad will largely remain pervious open space and enhanced with new landscape, including a berm along the south, east, and portions of the northern fence line. As shown in the table below, the plan is compliant with the dimensional standards in Section 3.101.

STANDARD	REQUIRED/PERMITTED	PROVIDED	COMPLIANCE
Minimum Lot Size	7,200 Sq Ft (0.16 Acres)	3.76 Acres	Compliant
Minimum Lot Width	60 Feet	324 Feet	Compliant
Max. Building Height	35 feet / 2.5 Stories	12 feet	Compliant
Front Setback	25 Feet	~25 Feet	Compliant
Side Setback	6 Feet (16 Feet Total)	~16 Feet	Compliant
Rear Setback	35 Feet	~35 Feet	Compliant
Max. Ground Floor Coverage	25%	25%	Compliant
Max Floor Area Ratio (FAR)	0.40	<0.40	Complaint

ENVIRONMENTAL IMPACT STATEMENT (EIS)

An Environmental Impact Statement (EIS) provides a general overview of the potential environmental effects of upgrading and operating Grenada Substation.

Alternative Site Analysis:

The EIS included an alternative site analysis:

- Upgrade Prospect Substation: Rejected due to lack of space and circuit capacity constraints, including issues with spans over Frain Lake.
- Construct New Substation Elsewhere: Sites along Plymouth-Ann Arbor Road rejected due to distance from 40kV lines and inability to pull enough circuits.
- Upgrade Wolverine Substation: No room for additional equipment and would not adequately relieve load at Grenada or Prospect.
- Conclusion: Rebuilding and upgrading the existing Grenada site is the only feasible option.

Site Plan Changes & Footprint Reduction

- Original site plan had a substantially larger footprint and would have impacted over 100 existing trees across most of the parcel.
- In response to Township feedback, DTE:
    - Removed restroom, drain field, and well.
    - Removed provisions for future circuits.
    - Reduced the substation footprint by approximately 47%.
    - Reduced tree impacts so that 74 existing trees are preserved and only 26 impacted.
      DTE Grenada Substation EIS
      Landscape plan revised to add mature 12’ trees and shrubs along property lines to maintain visual screening.

Woodlands & Trees

- Tree survey identified 138 trees: 64 Protected and 30 Landmark trees under Article 14.
- Final design requires removal of 24 trees, including 10 Protected and 4 Landmark trees, with protective fencing around remaining trees during construction.
- Replacement landscaping around the perimeter is intended to maintain woodland character and screening.

Threatened & Endangered Species

- MNFI review identified potential for Goldenseal, Eastern Massasauga Rattlesnake, and listed bat species; site-specific review found:
    - No preferred habitat for Goldenseal.
    - No potential bat roost trees on site.
- Additional review for rare reptiles and amphibians found:

    - Eastern Massasauga: no suitable habitat on site; unlikely to be impacted if mitigation is followed.
    - Eastern Box Turtle and Butler's Garter Snake: suitable habitat exists in nearby forest and grassland areas; may use the site seasonally.
- Mitigation/Best Management Practices include wildlife barrier fencing, pre-construction surveys and relocation, wildlife-friendly erosion controls, educational signage, and timing tree removal within the USFWS bat window (Oct 15, 2025–Mar 31, 2026).

Air Quality

- Daily substation operations are not expected to affect air quality.
- Construction dust will be controlled through standard practices such as watering and temporary coverings.

Water Quality & Stormwater

- EGLE confirmed no regulated wetlands or streams on the parcel that would be impacted.
- Design includes underground stormwater detention and infiltration to Washtenaw County standards; plans will be reviewed by the County.
- Soil erosion and sedimentation controls (silt fence, stabilized construction entrance, sequencing, vegetation protection) will be employed during construction.

Historic & Cultural Resources

- Cultural resources desktop review of SHPO database found no anticipated adverse impacts to historic or cultural resources.

Social, Noise, and EMF Impacts

- Site currently operates as a substation; operations and use will remain essentially the same.
- Noise studies of comparable Class "A" substations show:
    - 65 dBA near transformers (5 feet).
    - Approximately 30 dBA at the substation boundary—comparable to a whisper; not expected to disturb nearby neighborhoods.
- EMF measurements at the site boundary are similar to typical household background levels (~10 mG), well below the public exposure guideline of 2,000 mG from ACGIH/ICNIRP.

Economic & Reliability Impacts

- Expansion improves the ability to transfer load between adjacent substations, reducing outages and improving reliability for customers.

EIS Overall Conclusion

- The project provides significant reliability benefits to the local electrical system.

- Some environmental impacts (tree removal, construction disturbance) are anticipated, but are reduced from the original plan and further minimized through specific mitigation measures and BMPs.
- With these measures, the EIS concludes impacts can be managed while achieving infrastructure improvements, and ongoing stakeholder engagement is recommended.

Please note that this report has not been verified by the Township.

EMF AND NOISE

The applicant provided a PDF of EMF and noise. The PDF concludes that EMF readings taken at the substation site boundaries are approximately 10 milligauss (mG), comparable to typical household background levels and well below the most conservative guideline for public exposure (2,000 mG) from ACGIH/ICNIRP.

Noise measurements from comparable, recently constructed substations indicate that transformer sound levels diminish to roughly 30 dBA at the property boundaries—about the level of a whisper—indicating minimal noise impact on adjacent properties.

Please note that this report has not been verified by the Township.

PARKING AND LOADING

The facility is largely unmanned and there are no parking or loading requirements.

Items to be Addressed: *None*

SITE ACCESS AND CIRCULATION

The Grenada Substation will be accessed from the existing driveway curb cut off of N Dixboro Road. A new concrete drive approach will be constructed, and the facility improvements will be accessed by a 20-foot wide crushed stone service driveway that circles the substation pad. The proposed layout is shown on sheet 5A1329-6. The concrete driveway opening details are included on both sheets 5A1329-6 and 5A1329-7 and the access drive details are included on sheet 5A1329-7.

FENCING

The applicant proposes to fence in the entire facility with a 7-foot-tall barb wire fence. The Planning Commission may approve use of razor or barbed wire, electrified fences, spikes, and similar security materials on any fence subject to approval per Article 10.0 (Site Plan Review), where deemed necessary for security purposes or public safety.

There is motorized slide gate and a pedestrian gate with details provided on sheet 5A1329-7. The slide gate will be installed at the bottom of the driveway approximately 150 feet from N Dixboro Road.

LANDSCAPING

The applicant has provided a landscape plan that complies with township requirements. We note that the applicant is proposing to install sixty-three (63) 12-foot tall evergreens to better screen the facility. The 12-foot tall evergreens are distributed around the site.

The screening plan was reviewed by our Landscape Architect who makes the following notes:

- Per guidelines from the International Society of Arboriculturists (ISA), the critical root zone (CRZ) of a tree equates to a 1 foot radius from the trunk per caliper inch of tree, e.g. a 10-inch DBH tree would have a 10-radius CRZ. The ISA further recommends that no more than 25% of the tree's CRZ be disrupted. Of the existing trees slated to be saved, eleven (11) trees will be impacted by grading, with three (3) of those trees (Tag numbers 241, 252, and 1522) potentially losing more than 25% of their CRZ. The protective fencing alignment should be adjusted to provide greater protection for those trees. If the alignment cannot be changed, the developer should anticipate planting additional trees to offset the likely loss of these trees.
- The proposed layout uses a strategic mix of new and existing trees to screen the site from neighboring properties. While heights are not provided for all of the trees, their DBH can be used to develop a conservative estimate. We are confident that the combination vegetation and topography should adequately screen the site. Light pollution does remain a concern, however, and it will be critical that the developers adhere to the photometric plan provided.
- 12-foot conifers are common; however, we've never seen availability of 12-foot tall arborvitae available for planting.
- The proposed screening will be thin for the first could of years, especially along the west and northern property lines.
- The plant palette consists of mostly Michigan native species, with most commonly available in the nursery trade. There is some concern regarding the proposed sizes. While it is possible to find larger trees, most nurseries in southeast Michigan stock trees in the 6- to 8-foot range, less commonly 10-foot, and rarely 12-foot. For the deciduous trees, Eastern redbud is rarely sold above 2.5-inch DBH. Paw paws are relatively uncommon, and are rarely if ever sold as 3-inch specimens. The developer should anticipate challenges in obtaining trees of this caliper and plan accordingly.

It's worth noting that the proposed facility is approximately 5 to 10 feet lower than Dixboro Road and the rear property line. However, 1 to 2 feet taller than the property to the northeast and southeast.

The screening method should be suited to the existing conditions and are subject to Planning Commission approval. The Planning Commission may require additional plantings to achieve the screening objectives of Section 14.10D.

The applicant has not provided a rendering or 3-D model to show how the site is screened based on the new design and additional screening.

LIGHTING

The applicant has provided a lighting and photometric plan. Site lighting is entirely LED, using a combination of building-mounted wall sconces and pole-mounted area lights. Fixtures are high-efficiency, long-life luminaires with neutral white color temperature (3,000–5,000K range) and photometric distributions selected for parking/drive aisles and building perimeter illumination.

Overall

The Grenada Substation lighting is focused entirely inside the fenced yard, with light levels concentrated around the equipment and control building. The maximum footcandle reading is 14.5 internal to the fenced in area and tapers to 0.5–0.2 fc approaching the fenceline. Illumination drops to zero at the property line.

Pole Lighting

Pole lighting is provided by two (2) two headed LED pole light and four (4) single headed LED light pole. The fixtures are full-cutoff, zero-up light fixtures with high efficacy. The pole heights are 15-feet. The combination of the berm and the trees should screen the lights from all adjacent property lines.

Building lighting

Building lighting is provided by two (2) Lithonia MRW LED architectural wall sconces. These are fully shielded LED wall packs with no up light (Nighttime Friendly). The applicant should confirm if the site will be lit fulltime or only during emergencies.

FLOOR PLAN AND ELEVATIONS

Elevations and dimensions have been provided.

SUPPLEMENTAL REGULATIONS

Section 5.604 sets forth additional requirements for Utility Transmission and Distribution Lines. Electricity transmission and distribution lines, gas and oil pipelines, and other utility structures, lines, and pipelines shall be subject to the following:

1) *Storage of materials, equipment, vehicles, or supplies shall be prohibited on the*

premises, except as required during periods of maintenance and servicing.
2) *No personnel shall be quartered or employed on the premises.*
3) *Structures or buildings shall be located, designed, constructed, and landscaped in conformance to the character of the surrounding area and zoning district.*

CONDITIONAL USE STANDARDS

The Planning Commission has the authority to approve a Conditional Use Permit if the proposed use complies with Section 11.05.C (Standards for Conditional Use Permit Approval) as follows:

a) *The proposed use will be harmonious, and in accordance with the objectives, intent, and purposes of this Ordinance;*

b) *The proposed use will be compatible with the natural environment and existing and future land uses in the vicinity;*

c) *The proposed use will be compatible with the Growth Management Plan;*

d) *The proposed use will be served adequately by essential public facilities and services, such as highways, streets, police and fire protection, drainage ways and structures, refuse disposal, or that the persons or agencies responsible for the establishment of the proposed use shall be able to provide adequately for any such services;*

e) *The proposed use will not be detrimental, hazardous, or disturbing to existing or future neighboring uses, persons, property, or the public welfare; and*

f) *The proposed use will not create additional requirements at public cost for public facilities and services that will be detrimental to the economic welfare of the community.*

g) *The proposed use complies with all applicable standards of this Ordinance, including Article 5.0 (Use Standards).*

h) *The proposed use complies with all applicable regulations of federal, state, regional, and county agencies with jurisdiction.*

Planning Commission to consider if conditional use standards have been met.

CONDITIONS

In granting a Conditional Use Permit, the Planning Commission may impose conditions that it deems necessary to ensure that:

a) *Public services and facilities affected by a proposed conditional use will be capable of accommodating increased service and facility loads caused by the proposed conditional use;*
b) *The natural environment will be protected and natural resources and energy conserved;*
c) *The proposed use is compatible with adjacent land uses; and*
d) *The proposed use promotes the use of land in a socially and economically desirable manner.*

Conditions imposed shall meet the following requirements:

a) *The conditions shall be designed to protect natural resources, the health, safety, and welfare and the social and economic well being of those who will use the proposed land use or activity, residents and landowners immediately adjacent to the proposed conditional use, and the community as a whole.*
b) *The conditions shall be related to the valid exercise of the police power of the Township, and purposes that are affected by the proposed conditional use.*
c) *The conditions imposed shall be necessary to meet the intent and purpose of the Ordinance, shall be related to the standards established in the Ordinance for conditional uses, and shall be necessary to ensure compliance with those standards.*

RECOMMENDATION

The revised DTE Grenada Substation expansion reduces the project's footprint, construction disturbance, and tree impacts compared to the original plans, while adding stronger landscape screening, flattening slopes, and providing additional technical documentation (EIS, EMF and noise analysis). Ultimately, the Planning Commission must determine whether, with appropriate conditions, the project satisfies the Conditional Use standards regarding compatibility, environmental protection, and neighborhood character.

We recommend that the Planning Commission:

1. **Confirm response to prior PC direction**
    - Review how the revised plan addresses the February 26, 2025 Planning Commission comments regarding footprint reduction, tree preservation, stormwater, landscaping, visual screening, EMF/noise, and public benefit.

2. **Evaluate Conditional Use standards**
    - Deliberate explicitly on whether the project, as revised, meets the Conditional Use standards for harmony with the Ordinance, compatibility with existing/future land uses and the Growth Management Plan, and protection of public health and welfare.

3. **Tree preservation and replacement**
    - Require clarification on the tree replacement shortfall (97 required vs. 63 proposed) and how remaining replacement obligations will be satisfied (additional on-site trees, off-site planting, or other Township-acceptable mitigation).
    - Require a more detailed tree preservation analysis to confirm viability of "to remain" trees whose critical root zones may be disturbed.

4. **Landscape screening and visual impact**
    - Require confirmation that proposed 12-foot evergreen species are actually available at the specified sizes and will provide effective screening, especially along the west and north sides.
    - Consider requiring supplemental plantings and/or layout adjustments to ensure that the fence and 16-foot equipment are not visible from surrounding properties and N. Dixboro Road at installation and within a short establishment period.
    - Require a formal landscape maintenance plan (practices, products, schedule, and replacement of dead/diseased plant material).

5. **Lighting operation and spill**
    - Confirm whether site lighting will be used only for emergencies and maintenance (normal condition: lights off) and ensure any operating schedule is clearly documented.
    - Maintain the requirement that illumination drop to zero at property lines and that all fixtures remain full-cutoff with no up-light.

6. **Noise, EMF, and EIS**
    - Confirm acceptance of EMF and noise reports and the EIS.
    - If approving, consider conditioning approval on adherence to the mitigation and best-management practices identified in the EIS and rare species/ wildlife recommendations (e.g., timing of tree removal, wildlife fencing, pre-construction surveys).

7. **Fencing and security**
    - Deliberate on the necessity and appropriateness of barbed wire at this location in light of surrounding residential and Dixboro Village character.
    - If allowed, consider requiring additional screening or design treatments so that fencing and security elements are visually softened from public viewpoints.

8. **Outside approvals and technical compliance**
    - Condition any approval on:
        - Final stormwater and soil erosion approval by the Washtenaw County Water Resources Commissioner.
        - Compliance with Township grading and slope standards (4:1 maximum slopes).
        - Compliance with supplemental utility regulations (no storage of materials/equipment outside maintenance periods, no personnel quartered on site).
        - Any other conditions as required by Planning Commission

After discussion with the applicant, direct staff to:

- Draft a **Conditional Use and Preliminary Site Plan Resolution of Approval with conditions**, **or**
- Draft a **Resolution of Denial** if standards are not found to be met, **or**
- **Postpone** to allow the applicant to address any remaining concerns identified by the Planning Commission.

Sincerely,

Benjamin R. Carlisle

CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, AICP, LEED AP
Principal

December 10, 2025

CHARTER TOWNSHIP OF SUPERIOR
3040 N. Prospect Road
Ypsilanti, MI 48198

Attention: **Emily Dabish Yahkind, Township Supervisor**

Regarding: **DTE Grenada Substation**
Preliminary Site Plan Review – Review No. 2
OHM Job No. 0140-24-1010

Dear Ms. Dabish Yahkind,

On behalf of the Township, we have reviewed the revised Preliminary Site Plan submittal for the above referenced project, as provided to the Township by the Applicant on November 17, 2025. In our opinion, this plan is ready for consideration by the Planning Commission at their regular meeting on December 17, 2025 regarding Preliminary Site Plan action. We do not have any comments related to the site/civil engineering aspects of this Preliminary Site Plan submittal. We offer the following items for the Applicant for preparing the Final Site Plan at a future stage of this project.

1. A more detailed technical review of the site engineering will take place during a potential future preliminary/final site plan stage. Grading details would be reviewed at future stages of the project if a site plan were to move forward.

2. Work proposed in the Dixboro Road Right-of-way (ROW) must meet the requirements of the Washtenaw County Road Commission (WCRC) as they have jurisdiction within the public ROW of Dixboro Rd. The Applicant should coordinate with WCRC to meet their requirements and obtain any necessary permits. A copy of their approval letter will be required or must be reasonably assured prior to presentation of a Final Site Plan to the Planning Commission for this project.

3. The stormwater management design must meet Washtenaw County Water Resources Commissioner (WCWRC) Standards. The Applicant should coordinate with WCWRC to facilitate review and obtain necessary approvals. A copy of their approval letter will be required prior to presentation of a Final Site Plan to the Planning Commission for this project.

4. Soil erosion and sedimentation control (SESC) measures for the project must meet the requirements of WCWRC and the Applicant should coordinate with WCWRC regarding the review process. A copy of their approval letter will be required or must be reasonably assured prior to presentation of a Final Site Plan to the Planning Commission for this project.

OHM Advisors
34000 PLYMOUTH ROAD
LIVONIA, MICHIGAN 48150
T 734.522.6711
F 734.522.6427
OHM-Advisors.com

If you have any questions regarding our review, please do not hesitate to contact me at (734) 466-4585, or George Tsakoff at (734) 466-4439.

Sincerely,
OHM Advisors

Cresson Slotten, P.E. Digitally signed by Cresson Slotten, P.E.
DN: C=US, E=cresson.slotten@ohm-advisors.com, O=OHM Advisors, CN="Cresson Slotten, P.E."
Date: 2025.12.10 10:12:56-05'00'

_____

Cresson Slotten, PE
Senior Project Manager

cc: Angela Robinson, Township Clerk (via email)
Bill Balmes, CBO, Building Department (via email)
Ben Carlisle, CWA, Twp Planner (via email)
Michelle Marin, CWA, Township Planner (via email)
George Tsakoff, OHM
Claire Martin, OHM
Mariah Cummings, OHM
Terry Spryszakl, DTE
file

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MICHIGAN STATE UNIVERSITY | Extension

Pamela Rice
Metro Consulting Associates, LLC
45345 Five Mile Road
Plymouth, MI 48170

March 6, 2024

Re: Rare Species Review #4894 – DTE Grenada Substation, Washtenaw County, MI

Hello:

The location for the proposed project was checked against known localities for rare species and unique natural features, which are recorded in the Michigan Natural Features Inventory (MNFI) natural heritage database. This continuously updated database is a comprehensive source of existing data on Michigan's endangered, threatened, or otherwise significant plant and animal species, natural plant communities, and other natural features. Records in the database indicate that a qualified observer has documented the presence of special natural features. The absence of records in the database for a particular site may mean that the site has not been surveyed. The only way to obtain a definitive statement on the status of natural features is to have a competent biologist perform a complete field survey.

Under Act 451 of 1994, the Natural Resources and Environmental Protection Act, Part 365, Endangered Species Protection, "a person shall not take, possess, transport, …fish, plants, and wildlife indigenous to the state and determined to be endangered or threatened," unless first receiving an Endangered Species Permit from the Michigan Department of Natural Resources (MDNR), Wildlife Division. Responsibility to protect endangered and threatened species is not limited to the lists below. Other species may be present that have not been recorded in the database.

Several at-risk species and/or natural communities have been documented within 1.5 miles of the project location and it is possible that adverse impacts will occur. This response reflects a desktop review of the database and MNFI cannot fully evaluate this project without visiting the area. MNFI offers several levels of Rare Species Reviews, including field surveys which I would be happy to discuss with you.

Sincerely,

Michael Sanders

Michael Sanders
Environmental Review Specialist/Zoologist
Michigan Natural Features Inventory

MSU EXTENSION

Michigan Natural Features Inventory

PO Box 13036
Lansing MI 48901

(517) 284-6200
Fax (517) 373-9566

mnfi.anr.msu.edu

MSU is an affirmative-action, equal-opportunity employer.

Comments for Rare Species Review #4894

It is important to note that it is the applicant's responsibility to comply with both state and federal threatened and endangered species legislation. Therefore, if a state listed species occurs at a project site, and you think you need an endangered species permit please contact: DNR-Wildlife Division, DNR-StateTEPermit@michigan.gov. If a federally listed species is involved and, you think a permit is needed, please contact Jessica Pruden, U.S. Fish and Wildlife Service, East Lansing office, 517-351-8316, or Jessica_Pruden@fws.gov.

NOTE: Special concern species and natural communities are not protected under endangered species legislation, but efforts should be taken to minimize any or all impacts. Please consult MNFI's Rare Species Explorer for additional information on Michigan's rare plants and animals.

Table 1: Occurrences of Threatened & Endangered Species within 1.5 miles of Project Site

Element Category	Scientific Name	Common Name	Federal Status	State Status	G Rank	S Rank	EO Rank	First Observed Date	Last Observed Date
Animal	*Acris blanchardi*	Blanchard's cricket frog		T	G5	S2S3	H	1950	1950-05-20
Animal	*Alasmidonta viridis*	Slippershell		T	G4G5	S2S3	H	1928-10-02	1959-10-11
Animal	*Bombus affinis*	Rusty-patched bumble bee	LE	E	G2	SH	H	1983-05-29	1983-05-29
Animal	*Chrosomus erythrogaster*	Southern redbelly dace		E	G5	S1	H	1942-04-23	1942-04-23
Animal	*Clinostomus elongatus*	Redside dace		E	G3G4	S2	H		1989-10-10
Animal	*Euphyes dukesi*	Dukes' skipper		T	G3G4	S2	E	2002-07-17	2005-08-02
Animal	*Myotis lucifugus*	Little brown bat		T	G3G4	S1	E	1948-08-16	1992-08-23
Animal	*Myotis septentrionalis*	Northern long-eared bat	LE	T	G2G3	S1	E	1902-03-01	2003-07-09
Animal	*Myotis sodalis*	Indiana bat	LE	E	G2	S1	H	1946	1965-05-11
Animal	*Nicrophorus americanus*	American burying beetle	LE	X	G3	SH	H		1916-08-07
Animal	*Rallus elegans*	King rail		E	G4	S2	H	1938	1948-05-19
Animal	*Sistrurus catenatus*	Eastern massasauga	LT	T	G3	S3	BC	1904	2021
Animal	*Terrapene carolina carolina*	Eastern box turtle		T	G5T5	S2S3	H	1900	1900
Plant	*Asclepias sullivantii*	Sullivant's milkweed		T	G5	S2	D	2001-07-18	2013-06-07
Plant	*Galearis spectabilis*	Showy orchis		T	G5	S2	H	1869	1894-05-23
Plant	*Gentianella quinquefolia*	Stiff gentian		T	G5	S2	C	1997-09-22	2012-10-02
Plant	*Hydrastis canadensis*	Goldenseal		T	G3G4	S2	C	1994	1994-05-14
Plant	*Hydrastis canadensis*	Goldenseal		T	G3G4	S2	E	1898	2018-08-06

Plant	*Hydrastis canadensis*	Goldenseal		T	G3G4	S2	C	2012-04-24	2012-04-24
Plant	*Morus rubra*	Red mulberry		T	G5	S2	H	1880	1880-05-18
Plant	*Panax quinquefolius*	Ginseng		T	G3G4	S2S3	H	1867	1867
Plant	*Panax quinquefolius*	Ginseng		T	G3G4	S2S3	C	1990	2012-07-15
Plant	*Polemonium reptans*	Jacob's ladder		T	G5	S2	B	1982	1982-05-20
Plant	*Sanguisorba canadensis*	Canadian burnet		E	G5	S1	A	1981	2011-09-19
Plant	*Silphium laciniatum*	Compass plant		E	G5	S1S2	H	1924	1928-06-27
Plant	*Valeriana edulis var. ciliata*	Edible valerian		T	G5T3	S2	C	1971	2012-06-15

Comments for Table 1

Goldenseal (*Hydrastis canadensis*)

Habitat

Known to occur in the area. Goldenseal is found in southern hardwood forests, as well as moist ravines and portions of riparian forests.

Management Recommendations

Likely requires maintenance of the overstory and moist, loamy soils and is susceptible to excessive canopy removal. Maintain healthy intact, mature forests and minimize forest fragmentation due to development. When possible, leave large tracts of unharvested forests and allow natural processes to operate unhindered. For more information, see the *Hydrastis canadensis* species page on the MNFI website.

Eastern massasauga (*Sistrurus catenatus*)

Habitat

Known to occur in the area. Eastern Massasaugas have been found in a variety of wetland habitats. Populations in southern Michigan are typically associated with open wetlands, particularly prairie fens, while those in northern Michigan are known from open wetlands and lowland coniferous forests, such as cedar swamps. Some populations of Eastern Massasaugas also utilize open uplands and/or forest openings for foraging, basking, gestation and parturition (i.e., giving birth to young). Massasaugas usually hibernate below the frost line in crayfish or small mammal burrows, tree root networks or rock crevices in or along the edge of wetlands or in upland areas with presumably high water tables. Massasauga habitats generally appear to be characterized by the following: (1) open, sunny areas intermixed with shaded areas, presumably for thermoregulation; (2) presence of the water table near the surface for hibernation; and (3) variable elevations between adjoining lowland and upland habitats.

Management Recommendations (see Section 7 Comments)

Protection of extant populations and suitable wetland and adjacent upland habitats is crucial for successful conservation of the Eastern Massasauga. Maintaining or restoring open habitat conditions is critical for this species. Fragmentation of suitable wetland-upland habitat complexes by roads or other barriers should be avoided or minimized. Land management practices such as timber harvesting, mowing,

disking or prescribed burning should be conducted in such a manner so as to minimize the potential for adverse impacts to massasaugas (e.g., conducting management activities during the snakes' inactive season (November through early March) or on days when snakes are less likely to be active on the surface during the active season). Protecting suitable hibernation sites also is critical. Hydrological alterations such as drawdowns should be conducted prior to or after hibernation to reduce the potential for causing winter mortality due to desiccation or freezing. Sudden and/or permanent increases or decreases in water levels during the active season also can cause adverse impacts. Education and outreach efforts to raise public awareness and understanding of the Eastern Massasauga also are critical for conserving this species. Any suspected illegal collection of Eastern Massasaugas should be reported to local authorities. Massasaugas that need to be moved or translocated should be relocated to suitable habitat as close to where snakes were found and ideally within the snake's home range and within the same wetland complex.

For more information, see the *Sistrurus catenatus* species page on the MNFI website.

Northern long-eared bat (*Myotis septentrionalis*)

Habitat

Northern long-eared bats live in areas dominated by deciduous or mixed hardwood-coniferous forest. Forests with low understory cover appear to be preferred by this species. In Michigan, northern long-eared bats are associated with karst topography where they utilize small caves and crevices in limestone cliffs as hibernacula. After emerging from hibernation, northern long-eared bats will readily roost in trees, tree hollows, or bark crevices. During the summer, northern long-eared bats are not tied to a specific natural community type and will inhabit any forest with large trees that offer bark that is loose or has deep enough crevices to roost in. Northern long-eared bats do not appear to show preference for dead trees (as some bat species do) and readily roost in living trees. This species rarely roosts in human-made structures.

Management Recommendations (See Section 7 Comments)

A primary limiting factor in their summer range has been the deforestation of mature forested habitats and the elimination of roost trees, which can be attributed to the cutting of large, dead trees for firewood. Forested habitat can be maintained by protecting mature, wooded areas, leaving large, dead trees standing, and maintaining wide vegetation buffer strips. Cutting of snags, canopy removal, and general land clearing activities for development, agriculture, and utility corridors should be avoided. All stone quarry activity around limestone cliffs pose a threat to this species and should be avoided.

White-nose syndrome has had a staggering impact on northern long-eared bat populations. As a result, this species was listed as threatened under the Endangered Species Act in April, 2015.

For more information, see the *Myotis septentrionalis* species page on the MNFI website.

Little brown bat (*Myotis lucifugus*)

Habitat

Before white-nosed syndrome devastated bat populations, little brown bats were the most common bat species in the northern half of the Lower Peninsula in Michigan accounting for roughly 60 percent of all mist net captures. They occur in a variety of habitats and their abundance is linked closely to availability mines and caves suitable for hibernation. Upon emergence from hibernation they travel throughout the state and will set up maternity roosts in man-made structures, utilizing barns, houses, large buildings, and

the underside of bridges. They also roost in tree hollows and under loose bark. Little brown bats often forage over streams and ponds.

Management Recommendations

Little brown bat are generalists. Maintaining forest for roosting in and around open water for foraging would benefit this species. Protecting hibernacula from vandalism during winter is critical.
For more information, see the *Myotis lucifugus* species page on the MNFI website.

Table 2: Occurrences of Special Concern Species and Natural Communities within 1.5 miles of Project Site

Element Category	Scientific Name	Common Name	Federal Status	State Status	G Rank	S Rank	EO Rank	First Observed Date	Last Observed Date
Animal	*Bombus auricomus*	Black and gold bumble bee		SC	G5	S2	E	2010-06-25	2010-06-25
Animal	*Bombus fervidus*	Yellow bumble bee		SC	G3G4	S3	E	2021-07-17	2021-07-17
Animal	*Cygnus buccinator*	Trumpeter swan		SC	G4	S3	E	2016-03-29	2018-05-28
Animal	*Emydoidea blandingii*	Blanding's turtle		SC	G4	S2S3	E	2019-07-12	2019-07-12
Animal	*Lasmigona compressa*	Creek heelsplitter		SC	G5	S3	H	1923	1978-11-17
Animal	*Mesomphix cupreus*	Copper button		SC	G5	S1	H	1925-06-28	1925-06-28
Animal	*Mesomphix cupreus*	Copper button		SC	G5	S1	H	1943-09-05	1943-09-05
Animal	*Microtus pinetorum*	Woodland vole		SC	G5	S3S4	H	1929	1929-03-21
Animal	*Necturus maculosus*	Mudpuppy		SC	G5	S3S4	E	2012-06-02	2012-06-02
Animal	*Setophaga citrina*	Hooded warbler		SC	G5	S3	E	2005-07-12	2021-05-30
Animal	*Thamnophis butleri*	Butler's garter snake		SC	G4	S4	BC	2015-06-03	2021-05-08
Animal	*Ventridens suppressus*	Flat dome		SC	G5	SNR	H	1943-08-23	1943-08-23
Animal	*Ventridens suppressus*	Flat dome		SC	G5	SNR	H	1943-09-05	1943-09-05
Plant	*Agrimonia rostellata*	Beaked agrimony		SC	G5	S2	C	2012-07-24	2012-07-24

Plant	*Agrimonia rostellata*	Beaked agrimony		SC	G5	S2	E	2018-07-24	2018-08-23
Plant	*Angelica venenosa*	Hairy angelica		SC	G5	S3	H		1924-PRE
Plant	*Chenopodium standleyanum*	Woodland goosefoot		SC	G5	SNR	H	1959-08-18	1959-08-18
Plant	*Conioselinum chinense*	Hemlock-parsley		SC	G5	SNR	E	2011-09-19	2011-09-19
Plant	*Helianthus hirsutus*	Whiskered sunflower		SC	G5	S3	H	1868	1868-09-16
Plant	*Hybanthus concolor*	Green violet		SC	G5	S3	H	1870	1919-06-01
Plant	*Hybanthus concolor*	Green violet		SC	G5	S3	H	1919	1919-05-31
Plant	*Jeffersonia diphylla*	Twinleaf		SC	G5	S3	B	1995	2011-07-10
Plant	*Scleria triglomerata*	Tall nut rush		SC	G5	S3	H	1838	1838-06-27
Plant	*Strophostyles helvula*	Trailing wild bean		SC	G5	S3	H	1924	1924

Comments for Table 2

Beaked agrimony (*Agrimonia rostellata*)

Habitat

Known to occur in the area. Occurs in openings within oak-hickory forest, or, less commonly, beech-maple forest.

Management Recommendations

Requires the inhibition of spread of exotic species in understory, but also likely requires a natural disturbance regime such as prescribed fire to maintain openings in dry mesic forest.
For more information, see the *Agrimonia rostellata* species page on the MNFI website.

Hooded warbler (*Setophaga citrina*)

Habitat

Known to occur in the area. A species of beech-maple and floodplain forest the Hooded Warbler occurs in the understory of mesic and wet broad-leaved forests. Small saplings of trees such as beech, maple and basswood are the most frequent nest sites, however, shrubs and herbaceous plants can also serve as nest sites.

Management Recommendations

Hooded warblers nest in a variety of forest types that all have a mature forest canopy and a dense

understory of small trees and shrubs. Management should focus on preserving these characteristics in large contiguous blocks to reduce the threat of brood parasitism by Brown-headed cowbirds and nest predation by small mammals like raccoons. Occasionally overstory trees may be selectively logged to encourage shrub or sapling growth, where the birds nest, but this activity should be conducted in the fall or winter when the warblers are on their wintering grounds to avoid direct impacts to nesting birds.
For more information, see the *Setophaga citrina* species page on the MNFI website.

Blanding's turtle (*Emydoidea blandingii*)

Habitat

Known to occur in the area. Blanding's Turtles inhabit clean, shallow waters with abundant aquatic vegetation and soft muddy bottoms over firm substrates. This species is found in ponds, marshes, swamps, bogs, wet prairies, river backwaters, embayments, sloughs, slow-moving rivers, and lake shallows and inlets. Blanding's Turtles also occupy terrestrial habitats in the spring and summer during the mating and nesting seasons and in the fall to a lesser extent. Females nest in open uplands adjacent to wetland habitats, preferring sunny areas with moist but well-drained sandy or loamy soil. They will nest in lawns, gardens, plowed fields or even gravel road embankments if suitable natural nesting habitat is not available.

Management Recommendations

The most critical conservation need for this species is protection and management of suitable wetland and adjacent upland habitats. Maintaining good water quality, restricting herbicide and pesticide use in or near wetlands, implementing minimum development set-back distances, leaving buffer zones during timber harvest, grazing and agricultural operations, and minimizing the construction of roads in or near suitable wetlands would be beneficial to this species. Timber harvesting can benefit this species by creating or maintaining open habitat conditions for thermoregulation and nesting. Minimizing adult mortality or removal is crucial for population viability given this species' life history. Thus, habitat management activities should be conducted in such a manner so as to minimize the potential for causing take of adults (e.g., timber harvesting during the inactive season). Minimizing road mortality and illegal collection also would beneficial to this species. In some cases, on-site protection of nest sites and predator control may be necessary to facilitate or increase successful reproduction or population recruitment
For more information, see the *Emydoidea blandingii* species page on the MNFI website.

Codes to accompany tables

State Protection Status Code Definitions
E = Endangered
T = Threatened
SC = Special concern

Federal Protection Status Code Definitions
LE = listed endangered
LT = listed threatened
LELT = partly listed endangered and partly listed threatened
PDL = proposed delist
E(S/A) = endangered based on similarities/appearance
PS = partial status (federally listed in only part of its range)
C = species being considered for federal status

Global Heritage Status Rank Definitions (G RANK)
The priority assigned by NatureServe's national office for data collection and protection based upon the element's status throughout its entire world-wide range. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.
G1 = critically imperiled globally because of extreme rarity (5 or fewer occurrences range-wide or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.
G2 = imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.
G3 = Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g. a single western state, a physiographic region in the East) or because of other factor(s) making it vulnerable to extinction throughout its range; in terms of occurrences, in the range of 21 to 100.
G4 = Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.
G5 = Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.
Q = Taxonomy uncertain

State Heritage Status Rank Definitions (S RANK)
The priority assigned by the Michigan Natural Features Inventory for data collection and protection based upon the element's status within the state. Criteria not based only on number of occurrences; other critical factors also apply. Note that ranks are frequently combined.
S1 = Critically imperiled in the state because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extirpation in the state.
S2 = Imperiled in state because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extirpation from the state.
S3 = Rare or uncommon in state (on the order of 21 to 100 occurrences). S4 = apparently secure in state, with many occurrences.
S5 = demonstrably secure in state and essentially ineradicable under present conditions.
SX = apparently extirpated from state.

EO Rank Codes

Element Occurrence (EO) ranks refer to the viability or ecological integrity of the occurrence; they provide an assessment of the likelihood that if current conditions prevail the EO will persist for a defined period of time, typically 20-100 years.

A - Excellent estimated viability/ecological integrity
A? - Possibly excellent estimated viability/ecological integrity
AB - Excellent or good estimated viability/ecological integrity
AC - Excellent, good, or fair estimated viability/ecological integrity
B - Good estimated viability/ecological integrity
B? - Possibly good estimated viability/ecological integrity
BC - Good or fair estimated viability/ecological integrity
BD - Good, fair, or poor estimated viability/ecological integrity
C - Fair estimated viability/ecological integrity
C? - Possibly fair estimated viability/ecological integrity
CD - Fair or poor estimated viability/ecological integrity
D - Poor estimated viability/ecological integrity
D? - Possibly poor estimated viability/ecological integrity
E - Verified extant (viability/ecological integrity not assessed)
F - Failed to find
F? - Possibly failed to find
H - Historical
H? - Possibly historical
X - Extirpated
X? - Possibly extirpated
U - Unrankable
NR - Not ranked

Grenada Substation

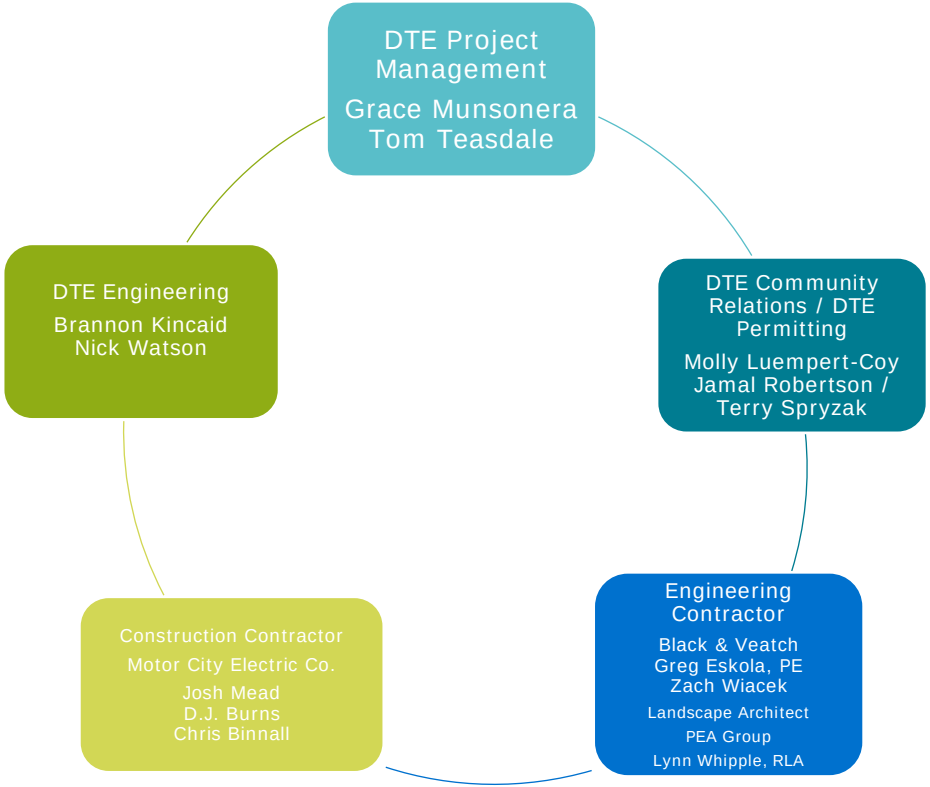
Planning Commission Meeting Conditional Use Plan – (Superior Township)

Township meeting – 12/17/2025

Executive Summary

- DTE has assigned a cross functional team to ensure a successful project
- Superior Township electrical substations have capacity and voltage compatibility issues
- Substations being over capacity and voltage incompatibility restrict restoration options and result in longer outages
- The proposed project doubles the Grenada substation capacity, limit future outage size, while providing more options for faster restoration
- These actions will facilitate the upgrade of the Prospect circuits
- The guidance on the past proposal was incorporated into the latest proposal
- Substation footprint was reduced, helping to minimize tree removals

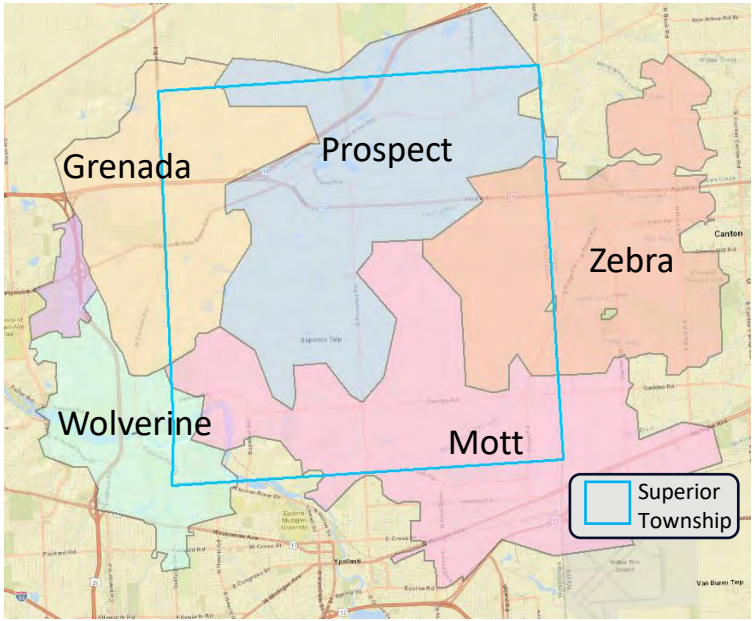
We have several team members in attendance to discuss the project and respond to questions



DTE

Superior Township is fed by five substations — three are over capacity and one has an incompatible voltage class

- Superior Township is fed via five substations: Grenada, Prospect, Mott, Wolverine and Zebra, serving over 30,000 customers
- Grenada, Prospect and Wolverine substations are currently operating near or above capacity
- Overcapacity limits restoration options and increases restoration time
- Prospect's voltage is not compatible with surrounding substations
    - Prospect is a 4.8kV substation while the surrounding substations are 13.2kV
- Voltage incompatibility also limits restoration options and increase restoration time

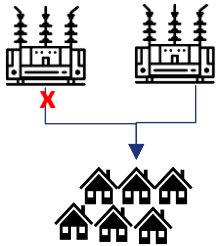


Substation	City/Twp	Substation Age	Capacity	Cust.	Miles	Circuit Voltage
GRENA	Superior Twp	1989	Over	1211	31.83	13.2
PROSP	Superior Twp	1951	Near	762	53.54	4.8
MOTT	Ypsilanti	1966	Available	9088	79.17	13.2
WLVRN	Ann Arbor	1970	Over	6896	30.69	13.2
ZEBRA	Canton	2002	Available	12892	225.40	13.2

DTE

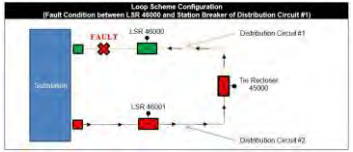
Capacity constraints can create multiple operational, reliability and customer impacts that require long lead-time to resolve

Resilience to major events



Areas without capacity have limited redundancy. Without the ability to reroute load, single points of failure will result in outages, often for extended periods of time

Enabling Automation



Power cannot be automatically rerouted using smart devices if adjacent circuits and substations don't have extra capacity

Supporting New Business



New customers may experience delays in connecting to the system if capacity is not available

Integration of Clean Technologies



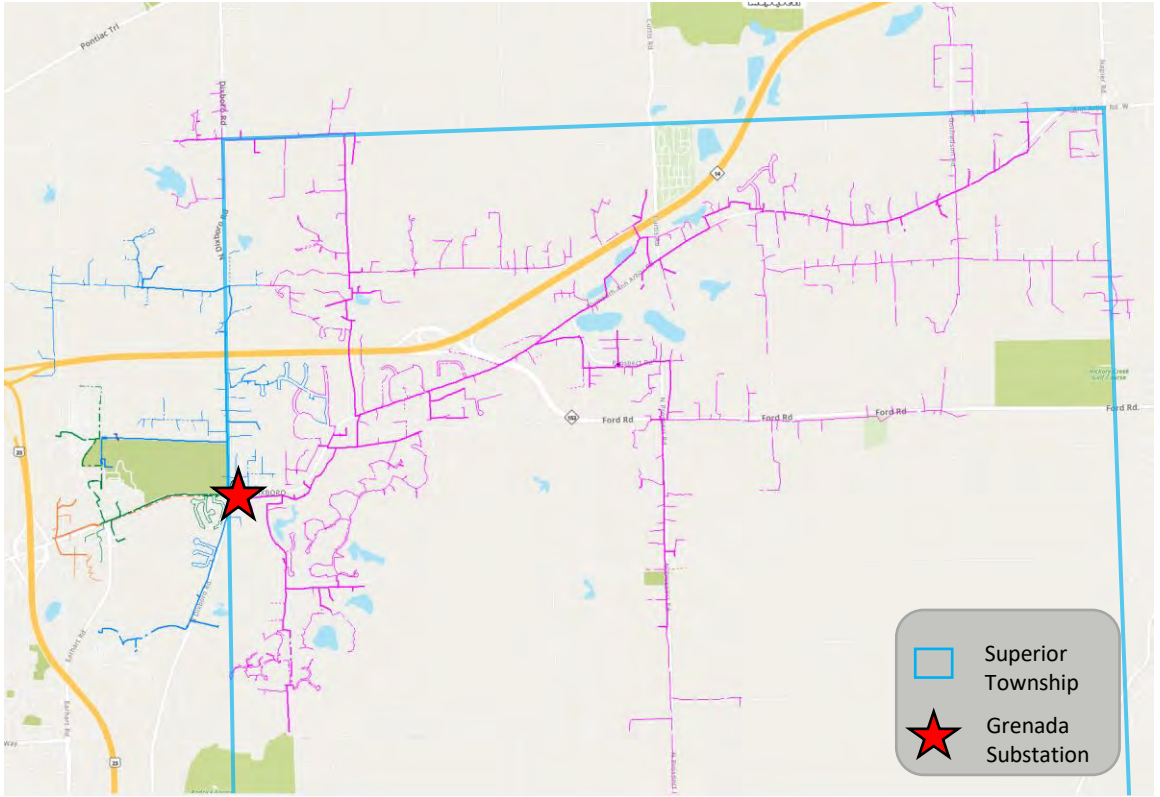
Increased loading from customers adopting new technologies may require additional capacity or capabilities

Capacity upgrades take multiple years to complete – requiring land acquisition, community engagement, ITC co-ordination, long-lead equipment, etc.

DTE

DTE has multiple projects over the next few years to address the capacity and voltage incompatibility concerns

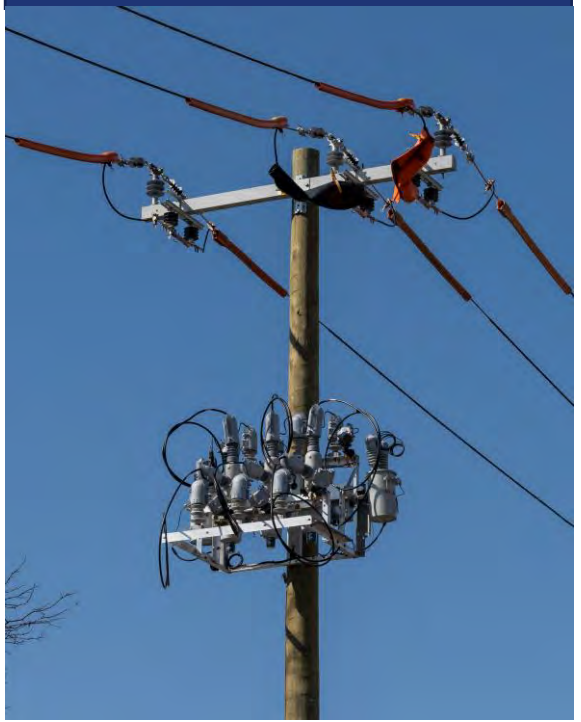
- Upgrade the Grenada Substation to increase its capacity
- Establish four new Grenada circuits to increase capacity and minimize outage size
- Replace outdated overhead and underground conductor, cable and poles
- Install new sectionalizing and operating devices to facilitate faster restoration
- Rebuild the existing Prospect circuits to the higher voltage and transfer them to the upgraded Grenada Substation



The proposed project increases capacity, improves reliability, reduces restoration time and facilitates the conversion of the Prospect circuits

- The proposed project will double the amount of load Grenada substation can support and will resolve existing capacity limitations
- Replacing outdated equipment, poles and overhead/underground conductor as needed, will increase reliability
- Adding new smart devices to help quickly find and isolate problems so power can be restored faster
- Facilitates the conversion of the Prospect's 4.8kV substation to make it compatible with surrounding substations

Viper Recloser



The Grenada project is part of DTE's four-point plan to build the grid of the future, improving reliability for our customers

1 Trimming Trees



- **Complete tree trim surge**
- **Optimize trim cycle**

- Trim and remove trees that grow too close to our electric lines and may damage our equipment, causing power outages.
- Superior Township is on a 5-year maintenance cycle
- Approximately three miles have been trimmed under existing conversion work
- An additional five miles will be trimmed by the end of the Grenada Initiative

2 Updating Existing Infrastructure



- **Ramp up maintenance to a 10-year pole and 5-year pole-top equipment cycle**

- Harden system to reduce outages and increase storm resiliency
- Replace aging, at-risk infrastructure, including poles and crossarms

3 Rebuilding Significant Portions of the Grid



- **Accelerate conversion of 4.8kV system**

- Plan to convert potions of Superior Township from 4.8kV to 13.2kV
- The Grenada-01 project has already converted a large portion of Prospect with the Grenada-02 project converting the majority of the remaining 4.8kV infrastructure
- Conversion supports EV charging and helps to facilitate connecting wind, solar and storage to the grid

4 Accelerating our Transition to a Smart Grid



- **The grid will be fully automated in the next five to six years**

- Remote monitoring and control will be widely deployed, enabling our System Operations Center to isolate damage and remotely restore customers

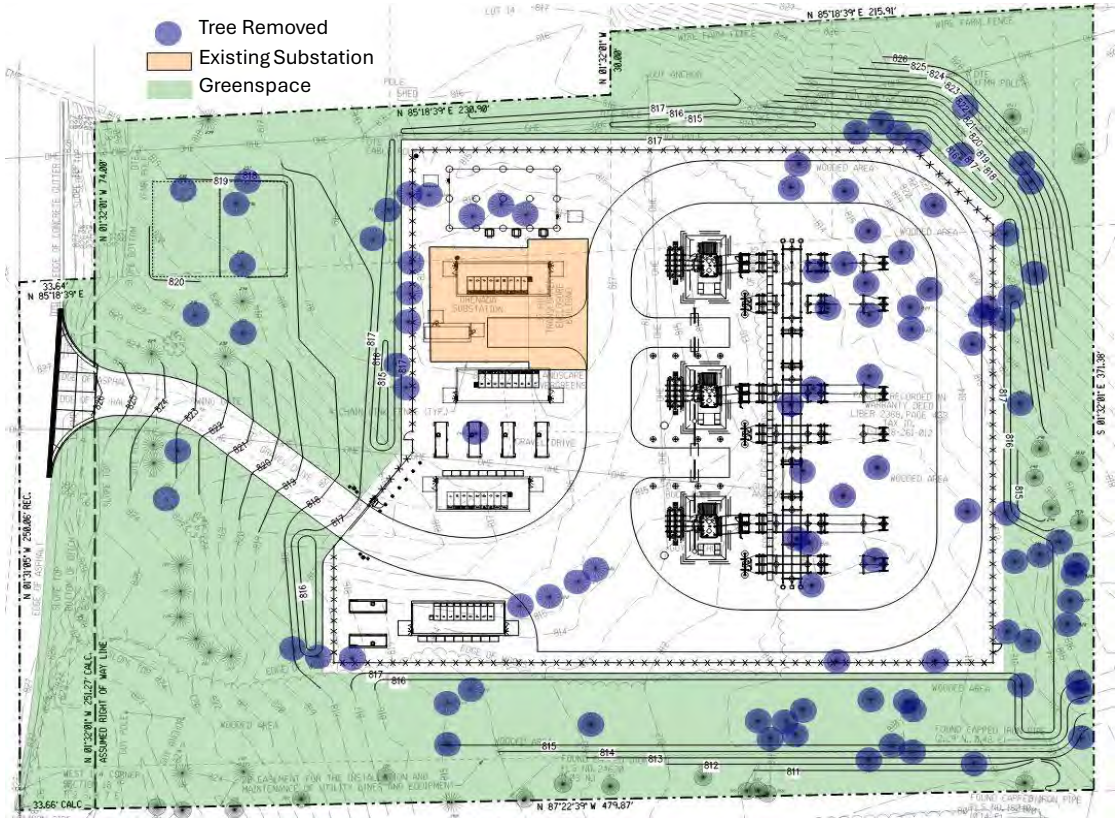
Strategic Focus

DTE has been implementing its plan to build the grid of the future to drive reliability and system improvements for customers in Superior Township.

DTE

Early 2025 DTE presented the initial substation design to the Township and received feedback to explore footprint reduction and tree preservation opportunities

- Presented to Planning Commission February 2025
- Current substation footprint (Shown in orange)
- Substation footprint and grading nearly extends to north, south and east property boundaries
- Tree removal count estimated to be 100 trees to construct site (blue highlights).
- Superior Township requested that DTE reduce the footprint and tree removal impacts



DTE revised the substation configuration design to reflect Township guidance; resulting in a smaller footprint and improved tree conservation

- Revised Site Layout submitted for review November 2025
- Substation footprint reduced by 45% from layout presented to Planning Commission in December 2024
- DTE removed provisions for future expansion (Transformer #3)
- DTE removed restroom and septic field
- Tree removal count reduced to 26 trees to construct site (blue highlights)



Landscaping updates

- Revised Landscape Plan submitted for review November 2025
- DTE engaged a Registered Landscape Architect to improve the landscape plan and view lines from adjacent properties
- Tree heights increased to a minimum of 12'-0" tall
- Diverse Michigan fast-growing native species provided
- Proposed landscape design optimized to screen fence and equipment within substation
- Tree installation estimated to be 92 Trees, 296 Shrubs



Roadside View



South View



Northeast View



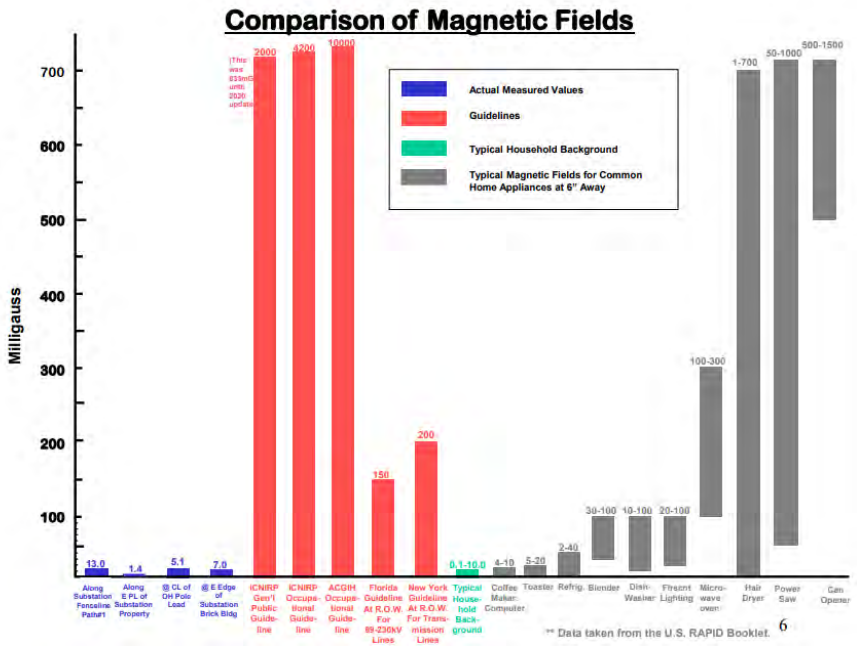
East View



Project Environmental Impact

- EMF – EMF studies were also conducted at the existing Grenada site and similar sites. While there are no current federal or Michigan state regulations on EMF emissions. The ACGIH and INCIRP both provide guidelines for maximum recommended EMF exposure both occupationally and for the public. The lower of the two values is 2,000mG, for the general public. It was found that the EMF readings for 60-hertz electrical fields at the substation site boundaries were similar to that of typical household background readings, in the area, of ~10mG, which is well below the recommended exposure guidelines.

- Noise – Sound Pressure Level ratings of similar substations constructed within the past 2 years have been found to be minimal. With site boundary readings of 65dBA rated transformers coming in at ~30dBA which is equivalent to a whisper or the ticking of a watch. (See appendix A for GRAMR SPL study)



Project Environmental Impact

- Site Drainage - Stormwater runoff from access drive and substation will be managed per Washtenaw County Drain Commission requirements, including detention and infiltration measures. Reducing the substation footprint has reduced the size of proposed underground detention facility required to manage the developed runoff on-site. Reduced site footprint has also allowed off site drainage to be routed around substation following current drainage paths.

- Tree plan – Tree removal count has been significantly reduced. Trees required to be removed will be cleared during the dormant season in Michigan from late fall through winter to minimize erosion, pest and disease transmission, and to protect bats.

- Endangered species – Eastern Massasauga Rattlesnake (EMR), Eastern Box Turtle, and Butler's Garter Snake were identified during a desktop review to potentially occupy the area. A field habitat assessment determined that there was not suitable habitat for the EMR. Project will use appropriate Wildlife Protection BMP's to ensure there is no taking of these species.

- Cultural and Historic Resources - DTE requested a cultural resources desktop review of the state SHPO database. Based on this review there are no adverse impacts expected to Cultural or Historic Resources.

- Lighting - Site Lighting is limited and only to be used when workers are onsite.

Next Steps

- Incorporate today's feedback
- Finalize and submit materials for the meeting with the township in December
- Complete all documentation additional required materials
- Provide updated site plans incorporating feedback from Superior Township for final CUP approval
- Questions

Appendix A
Grammer Noise Study

DTE

Corporate Safety
Industrial Hygiene Report

Date: August 27, 2025
To: R. Miller, M. Muntasir, R. Nasutovich, M. Rajewski
CC: A. Boatner, M. Listello, R. Marvin, G. Maudie
From: B. Kositz, CIH, CSP
Subject: Gramer Substation Sound Pressure Level Survey

On Wednesday August 27, Corporate Safety Rob Marvin and I conducted a Sound Pressure Level Survey of the Gramer Substation, located at 65541 Gramer Road in Lenox Township. This was at th request of DTE PMO Musnad Muntasir.

Upon arrival to this location, we received a prejob brief from the substation operator, who escorte throughout the facility. This survey covers:

1. Survey of the of the immediate perimeter of transformers 101 and 102
2. Survey of the property fence line on all four sides

These surveys were conducted utilizing the Quest Technologies SoundPro Model SE-DL Sound Lev Meter (S/N BBF100001). This unit was last serviced in October 2024. This unit was successfully calibrated prior to use on August 28 with the Quest Technologies QC-10 Calibrator (S/N QIF09022 The unit was last serviced in October 2024. The meter was set to a fast response and A- weighted results.

Transformers 101 and 102
8 Sound Pressure Level (SPL) readings were taken around each transformer, 6 feet from transformer, 5 feet above grade. The results are as follows:

- Trans 101 (South): Average SPL = 65.8 dBA
- Trans 102 (North): Average SPL = 63.8 dBA

The average SPL as measured by the manufacturer is found in the Pennsylvania Transformer Technology Certified Test Report. The average SPL found on page 67 of the report is 66.5 dBA.

Fence Line Survey
Sound Pressure Level readings were taken on all four sides of the property: north, south, east and west. The results are as follows:

- North: Average SPL = 33.9 dBA
- South: Average SPL = 32.5 dBA
- East: Average SPL = 30.8 dBA
- West: Average SPL = 26.8 dBA

Please let me know if you have any questions.

Brian Kositz, CIH, CSP
Safety & Health Expert

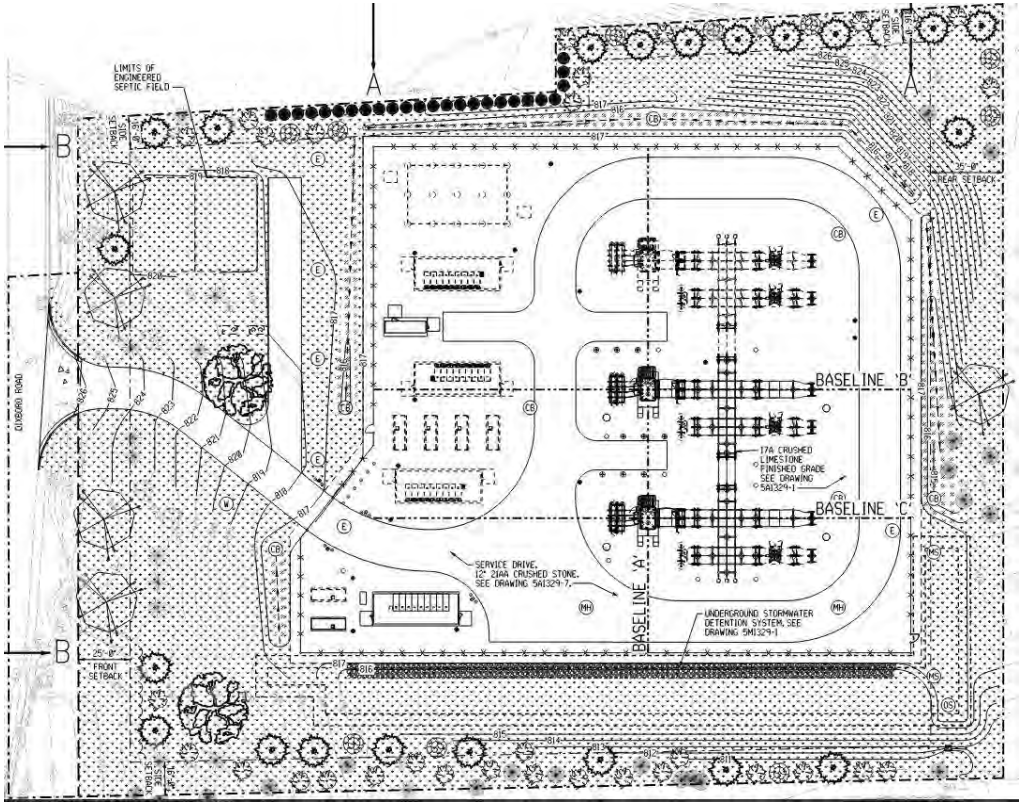
Attorney- Client Privilege
Communication shall not be shared outside DTE Energy without approval from DTE Corporate Legal

Appendix B
EMF Study – Grenada Class 'A'

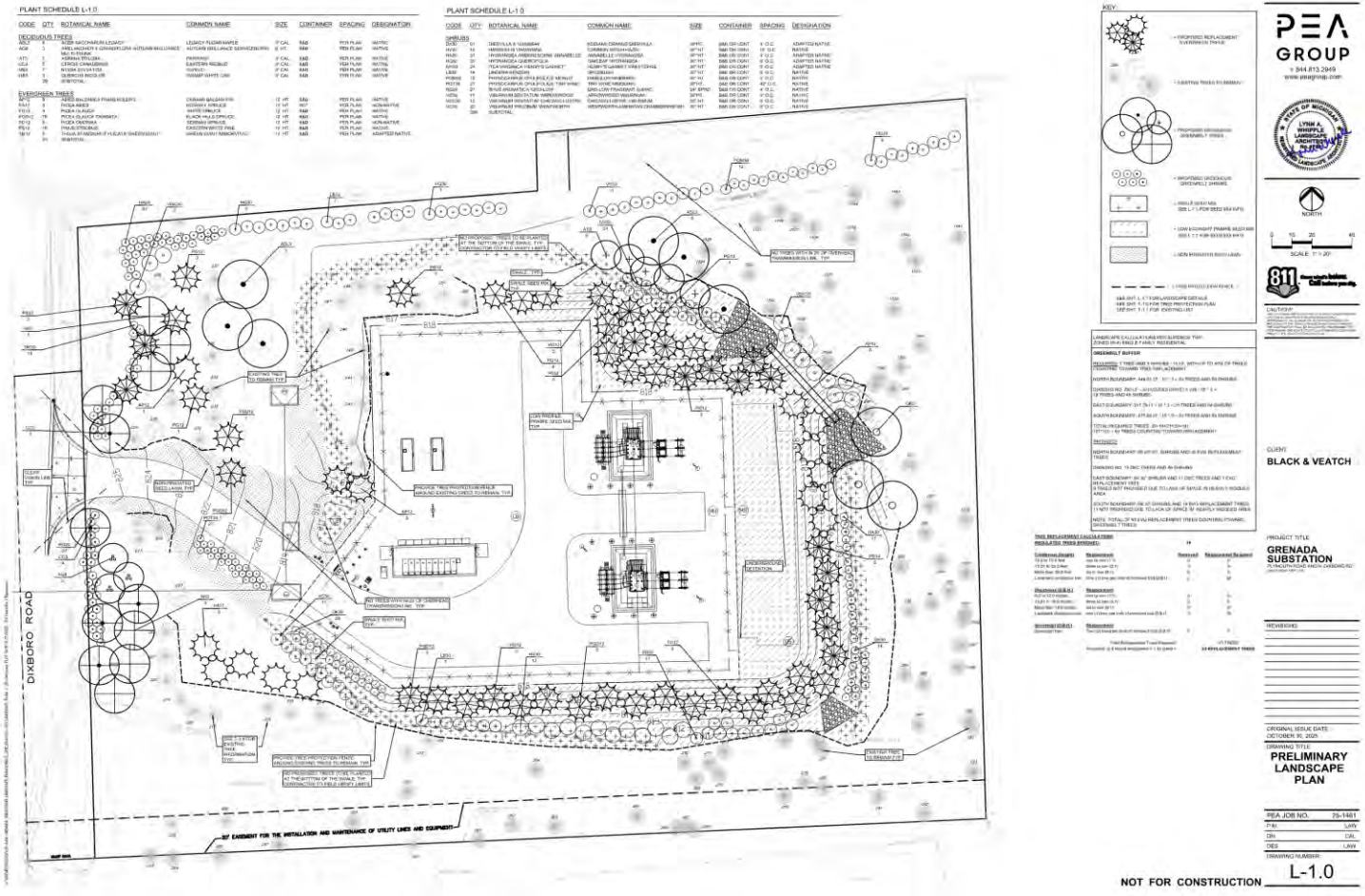


Landscape Plan Submitted last December with old layout

- Original Landscape Plan presented to Planning Commission December 2024
- Proposed plantings to be provided on site: 97 Trees
- Proposed Planting heights specified as minimum 6'-0" tall
- Township requested planting heights be increased to a minimum of 12'-0" tall and reduce number of removed trees
- Township requested plantings that provide year-round screening comprised of diverse Michigan native species, fast-growing and durable
- Township requested that plantings be tall and dense enough to screen substation fence and equipment from all sides of the property



Revised Landscape Plan





PLANNED PROJECT

GRENADA SUBSTATION

5A1329-1	SITE PLAN
5A1329-4	EXISTING CONDITIONS PLAN
5A1329-5	SITE PREPARATION AND DEMOLITION PLAN
5A1329-6	FENCE AND SERVICE DRIVE PLAN
5A1329-7	SITE DETAILS
5A1329-8	SOIL EROSION AND SEDIMENT CONTROL PLAN
5A1329-9	SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
5M1329-1	STORMWATER MANAGEMENT PLAN
5M1329-2	STORMWATER DETAILS (1 OF 4)
5M1329-3	STORMWATER DETAILS (2 OF 4)
5M1329-4	STORMWATER DETAILS (3 OF 4)
5M1329-5	STORMWATER DETAILS (4 OF 4)

GRENADA SUBSTATION LANDSCAPE PLANS - PEA:

L-1.0	PRELIMINARY LANDSCAPE PLAN
L-1.1	LANDSCAPE DETAILS
L-2.1	LANDSCAPE SPECIFICATIONS
L-2.2	LANDSCAPE SPECIFICATIONS
T-1.0	TREE PROTECTION AND REMOVAL PLAN
T-1.1	EXISTING TREE LIST

PROPERTY OWNER/APPLICANT/DEVELOPER:

DTE ENERGY - DTE ELECTRIC CO.
ONE ENERGY PLAZA
DETROIT, MI 48226-1279
(313)235-0177

ENGINEER:

BLACK & VEATCH LTD. OF MICHIGAN
3550 GREEN COURT
ANN ARBOR, MICHIGAN 48105
(734) 655-1000 FAX (734) 622-8816

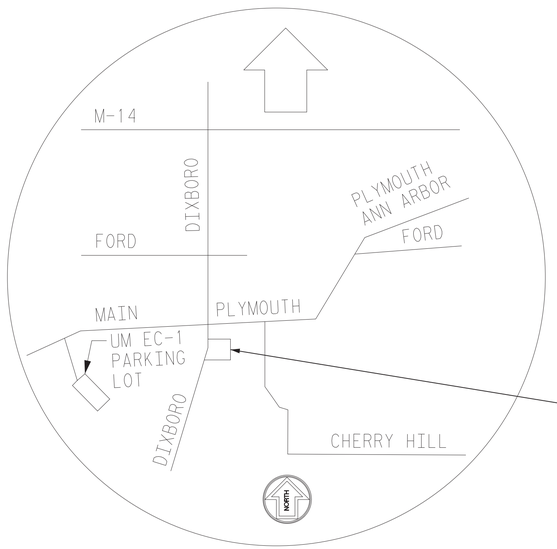
ADDRESS:

GRENADA SUBSTATION
3270 N. DIXBORO RD.
ANN ARBOR, MI. 48105

NOTES TO CONTRACTOR:

1. THE CONTRACTOR IS RESPONSIBLE FOR SECURING CONSTRUCTION PERMITS FOR ALL JURISDICTIONAL AGENCIES.
2. APPROVAL BY WASHTENAW COUNTY DEPARTMENT OF ROADS IS REQUIRED FOR THE PROPOSED WORK WITHIN THE ROW (INCLUDING DRIVEWAYS).
3. APPROVAL BY WASHTENAW COUNTY SOIL EROSION OFFICE IS REQUIRED BY THE PROPOSED ACTIVITIES.
4. APPROVAL BY WASHTENAW COUNTY DRAIN IS REQUIRED FOR ANY RUNOFF DISCHARGE TO A WATER COURSE.
5. APPROVALS BY WASHTENAW COUNTY HEALTH DEPARTMENT IS REQUIRED FOR ALL PROPOSED WELL AND SEPTIC SYSTEMS.
6. THE TOWNSHIP SHALL BE HELD HARMLESS FOR LIABILITIES OR DAMAGES OF ANY STORM, DRAINAGE, AND FLOODING ISSUES AS A RESULT OF THE PROPOSED ACTIVITIES.
7. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING POSITIVE DRAINAGE TO STORM WATER OUTLETS ON SITE TO ELIMINATE STANDING WATER IN VACANT AREAS DURING CONSTRUCTION.

NORTH ARROW



GRENADA SUBSTATION
3270 N. DIXBORO RD.
ANN ARBOR, MI. 48105

SITE LOCATION MAP
SCALE: NONE

DTE Energy

PROJECT DESCRIPTION

THIS PROJECT IS TO CONSTRUCT AN ELECTRICAL SUBSTATION WHICH WILL IMPROVE POWER RELIABILITY IN THE SURROUNDING AREAS. WORK INCLUDES OVERHEAD SUPPORT STRUCTURES, LIGHTNING MASTS, TRANSFORMERS, CIRCUIT BREAKERS, POWER DISTRIBUTION CONTROL EQUIPMENT, ITC CONTROL HOUSE, ACCESS DRIVES WITH SECURITY FENCE AND LIGHTING.

GRENADA SUBSTATION IS AN UN-OCCUPIED ELECTRIC SWITCHING/DISTRIBUTION SUBSTATION. AFTER CONSTRUCTION IS COMPLETE, AN OPERATOR WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH TO PERFORM ROUTINE MAINTENANCE AND DATA COLLECTION.

LEGAL DESCRIPTION

ALL THE PART OF SECTION 18, TOWN 2 SOUTH, RANGE 7 EAST, SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MICHIGAN, DESCRIBED AS BEGINNING AT THE WEST 1/4 CORNER OF SECTION 18, AFORESAID; THENCE NORTH 02°30'36" EAST, 250.06 FEET ALONG THE WEST LINE OF SAID SECTION 18, (BEING COMMON TO THE EAST LINE OF SECTION 13, TOWN 2 SOUTH, RANGE 6 EAST); THENCE NORTH 89°20'20" EAST, 33.64 FEET TO THE SOUTHWEST CORNER OF LOT 13 ON THE PLAT OF THE VILLAGE OF DIXBORO, AS RECORDED IN LIBER A ON PAGE 272, WASHTENAW COUNTY RECORDS; THENCE NORTH 02°29'40" EAST, 74.00 FEET ALONG THE WEST LINE OF SAID LOT 134; THENCE NORTH 89°20'20" EAST, 230.90 FEET (ALSO RECORDED AS 231.00 FEET); THENCE NORTH 02°29'40" EAST, 30.00 FEET ALONG THE LINE COMMON TO LOTS 14 AND 15 ON SAID PLAT OF THE VILLAGE OF DIXBORO; THENCE NORTH 89°20'20" EAST, 215.91 FEET; THENCE SOUTH 02°29'40" WEST, 371.38 FEET; THENCE NORTH 88°35'40" WEST, ALONG THE SOUTH LINE OF THREE PARCELS OF LAND AS MONUMENTED AND DESCRIBES IN WARRANTY DEEDS RECORDED IN LIBER 1528, PAGE 598, LIBER 1535, PAGE 253, AND LIBER 1674, PAGE 890, WASHTENAW COUNTY RECORDS TO THE POINT OF BEGINNING, BEING PART OF LOTS 13, 14, 15, 16, AND 17 ON THE SAID PLATE OF THE VILLAGE OF DIXBORO. RESERVING AN EASEMENT FOR THE INSTALLATION AND MAINTENANCE OF UTILITY LINES AND EQUIPMENT OF THE SOUTHERLY 20 FEET OF THE SUBJECT PROPERTY FOR THE BENEFIT OF THE PROPERTY LYING ADJACENT AND TO THE EAST OF THE ABOVE DESCRIBED PROPERTY.

QUANTITATIVE SUMMARY

TOTAL ACREAGE OF LAND AREA: 3.76 ACRES

ELECTRICAL EQUIPMENT SUMMARY:

* DTE PDC EQUIPMENT ENCLOSURE: AREA = 116 SFT / HEIGHT = 12 FT / USE = UTILITY
* REPLACEMENT PDC EQUIPMENT ENCLOSURES: AREA = 116 SFT / HEIGHT = 12 FT / USE = UTILITY
* LOT COVERAGE = 0.93 AC / 3.76 AC = 25%
* LIGHTNING MASTS - HEIGHT = 50 FT
* TRANSFORMER - HEIGHT = 13 FT
  STRUCTURE COUNT ONLY INCLUDES CONTROL ENCLOSURE AND DOES NOT INCLUDE EXTERIOR ELECTRICAL EQUIPMENT.

GROUND FLOOR COVERAGE/FLOOR AREA RATIO:

SITE DOES NOT INCLUDE "BUILDINGS", ONLY ELECTRICAL DISTRIBUTION EQUIPMENT. THE AREA OF ELECTRICAL EQUIPMENT REPLACES THE AREA OF PRINCIPLE/ACCESSORY BUILDINGS FOR THIS CALCULATION.

EQUIPMENT AREA (PDC #1, TRANS #4/#5, CAP BANKS): 440 SF
NET LOT AREA: 163,785.6 SF
GFC = 440/163,785.6 = 0.27%

SITE ZONING:

* DESIGNATION: R4 (SINGLE FAMILY RESIDENTIAL)
* FRONT SETBACK: 25'
* REAR SETBACKS: 35'
* SIDE SETBACKS: 16'

GENERAL NOTES

DURING CONSTRUCTION APPROXIMATELY 2.5 ACRES OF LAND WILL BE DISTURBED. THE EXPANSION OF THE SUBSTATION PAD WILL BE A TOTAL OF 0.93 ACRES AND THE REMAINING CONSTRUCTION OUTSIDE OF THE PAD FOR GRADING, STORMWATER, AND LANDSCAPING, WILL BE APPROXIMATELY 1.57 ACRES.

GRENADA SUBSTATION IS AN UN-OCCUPIED ELECTRIC SWITCHING/DISTRIBUTION SUBSTATION. AFTER CONSTRUCTION IS COMPLETE, AN OPERATOR WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH TO PERFORM ROUTINE MAINTENANCE AND DATA COLLECTION.

THERE WILL NOT BE CONNECTIONS TO PUBLIC SEWER AND WATER UTILITIES AT THIS SITE.

THIS FACILITY WILL GENERATE LESS THAT 100 PEAK HOUR DIRECTIONAL TRIPS. DURING UNDERGROUND UTILITY CONSTRUCTION, DIXBORO ROAD WILL REMAIN OPEN AND HAVE MINIMAL IMPACTS TO TRAFFIC.

SITE TRANSFORMER MAY EMIT LOW LEVEL NOISE. THIS NOISE WILL BE ATTENUATED BY HAVING TRANSFORMERS SETBACK 120 FT FROM THE ADJACENT PROPERTY LINES.

CONSTRUCTION PHASING NOTES

PHASE 1: CONTRACTOR TO CLEAR SITE AND ROUGH GRADE PROPOSED SUBSTATION PAD. INSTALL FOUNDATIONS AND ALL UNDERGROUND UTILITIES FOR ELECTRICAL AND CIVIL. INSTALL TRANSFORMER #4 AND #5, PDC #1, AND CAP BANKS PER PLANS.
PHASE 2: TRANSFER ELECTRICAL LOAD TO NEW ELECTRICAL DISTRIBUTION EQUIPMENT AND DECOMISSION EXISTING SUBSTATION.
PHASE 3: RESTORE SITE TO FINISH GRADE PER PLANS AND FURNISH PROPOSED LANDSCAPING.

PRELIMINARY

STATE OF MICHIGAN
GREGORY J. ESKOLA
ENGINEER
No. 046904
LICENSED PROFESSIONAL ENGINEER

This Revision Only
For Permitting
11/14/2025

DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
11/17/25	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT
DATE	SUBMITTED FOR
12/13/24	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT

SITE INFORMATION:

EXISTING AND PROPOSED LAND USE:
ELECTRICAL SUBSTATION EXPANSION
(120-40kV)

EXISTING AND PROPOSED ZONING CLASSIFICATION:
R4 (SINGLE FAMILY RESIDENTIAL)

ADJACENT ZONING CLASSIFICATIONS:
NORTH: R4 (SINGLE-FAMILY RESIDENTIAL)
SOUTH: R1 (SINGLE-FAMILY RESIDENTIAL)
EAST: PSP (PUBLIC/SEMI PUBLIC SERVICES)
WEST: PUD (PLANNED UNIT DEVELOPMENT)
VC: VILLAGE CENTER

SITE AREA:
163,606.77 S.F. (3.76 ACRES)

SETBACKS:
FRONT: 25'
SIDES: 16'
REAR: 35'
45% LOT COVERAGE (SUBSTATION PAD)

PROPERTY OWNER/ APPLICANT/DEVELOPER:

DTE ENERGY - DTE ELECTRIC CO.
ONE ENERGY PLAZA
DETROIT, MI 48226-1279
(313)235-0177

ENGINEER:

BLACK & VEATCH LTD. OF MICHIGAN
3550 GREEN COURT
ANN ARBOR, MICHIGAN 48105
(734) 665-1000 FAX (734) 622-8816

ADDRESS:

3270 N. DIXBORO RD.
ANN ARBOR, MI. 48105

WETLAND NOTE:

NO REGULATED OR UNREGULATED WETLANDS PRESENT WITHIN THE SUBJECT PARCEL BOUNDARY.

UTILITY WARNING:

UNDERGROUND UTILITY LOCATIONS, AS SHOWN ON THE PLAN, WERE OBTAINED FROM TOPOGRAPHIC SURVEY DRAWING NUMBER 5SE 1502-001 DATED 5/19/2022. THE ACCURACY AND COMPLETENESS OF THE UTILITY INFORMATION CAN NOT BE GUARANTEED.

A MINIMUM OF 3 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY 'MISS DIG' AND HAVE ALL UNDERGROUND UTILITIES STAKED BEFORE ANY WORK MAY BEGIN.

FLOODPLAIN NOTE:

SITE IS WITHIN ZONE 'X' AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN, PER FLOOD INSURANCE RATE MAP NUMBER 26161C0266E, DATED APRIL 3, 2012.

NORTH ARROW

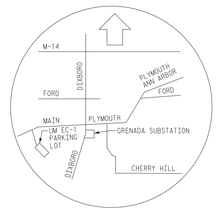
SITE LIGHTING FIXTURE TABLE (SEE NOTE 4)			
FIXTURE	QTY	LABEL	DESCRIPTION
	2	P1	LITHONIA MRW LED P1 SP2 40K MVOLT
	6	P2	LITHONIA DSX1 LED P2 40K 70CRI TFTM
	2	P4	LITHONIA DSX1 LED P4 40K 70CRI TFTM

GENERAL NOTES:

1. SEE 5A1329-4 FOR PARCEL DESCRIPTION. ALL EXISTING INFORMATION SHOWN IS OBTAINED FROM THE SURVEY DRAWING PREPARED BY DTE ENERGY'S SURVEYING SERVICE. DWG. 6SE-1329-002, DATED: 07-17-2023.
2. REFER TO DRAWING 5A1329-2 FOR LANDSCAPING AND RESTORATION.
3. FIELD TO VERIFY CONDITIONS THAT AFFECT THE WORK. INFORM THE ARCHITECTS/ENGINEERS OF ANY DISCREPANCIES IN DIMENSIONS, SIZE, LOCATIONS AND CONDITIONS BEFORE PROCEEDING WITH THE WORK.
4. STATION LIGHTING: EXTERIOR LIGHTING CONSISTS OF LED WALLPACK LIGHTS MOUNTED ON THE PDC AND RESTROOM WALLS NEAR EACH DOORWAY, LITHONIA D-SERIES DSX1 LED LIGHT FIXTURES MOUNTED ON 15' TALL, SQUARE STRAIGHT STEEL POLES FOR GENERAL SITE LIGHTING. LIGHTS ARE NORMALLY OFF EXCEPT DURING EMERGENCY SWITCHING OR MAINTENANCE OPERATIONS. REFER TO THIS DRAWING FOR LIGHTING FIXTURE TABLE AND FIXTURE LOCATIONS.
5. THIS FACILITY WILL NOT BE USED FOR OUTDOOR STORAGE OF ANY ADDITIONAL MATERIAL OTHER THAN PROPOSED ELECTRICAL EQUIPMENT ON PLANS.
6. CALL 'MISS DIG' (811) 3 WORKING DAYS PRIOR TO START OF CONSTRUCTION.
7. THERE WILL BE NO TRASH RECEPTACLES ON SITE. NO TRASH WILL BE LEFT ON SITE OVERNIGHT.
8. PROVIDE SEDIMENTATION CONTROLS AS INDICATED ON PLANS. REFER TO SOIL EROSION PLAN 5A1329-8.
9. THE OWNER, DTE ELECTRIC COMPANY, SHALL BE RESPONSIBLE FOR MAINTAINING ALL OPEN AREAS ON SITE.
10. PROPOSED STORM STRUCTURE. REFER TO M-DRAWINGS FOR STORMWATER MANAGEMENT PLAN AND DETAILS.
11. ALL AGGREGATE MATERIALS SHALL COMPLY WITH PROJECT CONSTRUCTION SPECIFICATION SECTION 312000, 334600, AND 312302.

GRADING NOTES:

1. ALL UNSUITABLE MATERIAL (TOP SOIL, ORGANICS, ETC.) TO BE STRIPPED FROM AREA COMPRISING DTE STATION BOUNDARY. ANY BACKFILL MATERIAL NEEDED IS TO MEET MDOT CLASS II SPECIFICATION. COMPACT BACKFILL IN 8" LIFTS TO 95% MAX. DENSITY AS DETERMINED BY MODIFIED PROCTOR TEST (ASTM D1557) ENGINEER TO APPROVE THIS FILL MATERIAL PRIOR TO ITS INSTALLATION.
2. SITE GRADING SHALL BE 4:1 SLOPES OR LESS PER SUPERIOR TOWNSHIP UNLESS NOTES OTHERWISE ON PLANS.
3. ALL EXCAVATED MATERIALS THAT CANNOT BE RE-USED SHALL BE DISPOSED OF AT AN APPROVED FACILITY IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS.
4. PROTECT IMPROVEMENTS ON ADJOINING PROPERTIES AS WELL AS THOSE ON DTE ELECTRIC COMPANY'S PROPERTY. RESTORE ANY IMPROVEMENTS DAMAGED BY THIS WORK TO THEIR ORIGINAL CONDITION, AS ACCEPTABLE TO DTE ELECTRIC COMPANY OR OTHER PARTIES OR AUTHORITIES HAVING JURISDICTION. PROVIDE AND MAINTAIN SHORING, BRACING, SHEET PILING, UNDERPINNING OR OTHER TEMPORARY WORK AS REQUIRED TO PREVENT CAVE-INS AND TO PROTECT ADJACENT PROPERTY. PROVIDE SAFETY FENCING AROUND EXCAVATIONS AS REQUIRED TO PROTECT THE PUBLIC.
5. THE SUBGRADE SHALL BE THOROUGHLY PROOF-ROLLED WITH A HEAVY RUBBER-TIRED VEHICLE SUCH AS A LOADED SCRAPER OR LOADED DUMP TRUCK. ANY AREAS THAT EXHIBIT EXCESSIVE PUMPING AND YEILDING DURING PROOF-ROLLING SHALL BE STABILIZED BY AERATION, DRYING AND COMPACTION IF WEATHER CONDITIONS ARE FAVORABLE OR REMOVAL AND REPLACEMENT WITH ENGINEERED FILL.
6. DO NOT PLACE, SPREAD OR COMPACT ANY FILL MATERIAL DURING UNFAVORABLE WEATHER CONDITIONS AND DO NOT RESUME COMPACTION OPERATIONS UNTIL MOISTURE CONTENT AND DENSITY OF IN-PLACE FILL MATERIAL ARE WITHIN SPECIFIED LIMITS.
7. PLACE FILL MATERIAL IN 8" MAXIMUM LIFTS AND COMPACT TO 95% MODIFIED PROCTOR DRY DENSITY (ASTM D-1557) W/-3% TO +3% OPTIMUM WATER CONTENT. FILL MATERIAL SHALL BE FREE FROM ORGANIC MATTER, DEBRIS AND OTHER DELETERIOUS SUBSTANCES.
8. TESTING FREQUENCY
   COMPACTION TESTING
   SUBGRADE: ONE TEST PER 2,500 SQ. FT.
   GRANULAR FILL: ONE TEST PER 2,500 SQ. FT. PER LIFT
9. GRANULAR BACKFILL MATERIAL SHALL BE CLASS II GRANULAR SAND MATERIAL PER SECTION 902 OF MICHIGAN DOT SPECIFICATIONS.
10. ALL DISTURBED AREAS OUTSIDE OF SUBSTATION PAD SHALL BE RESTORED WITH GRASSES AND NATIVE PLANTS TO NATURAL CONDITIONS. REFER TO LANDSCAPE PLAN 5A1329-2.



SITE LOCATION MAP
1 MILE

LEGEND:

- PROPERTY LINE
- PROPOSED FENCE
- EXISTING FENCE
- RIGHT-OF-WAY
- SETBACKS
- STORM/WATER UTILITY EASEMENT
- EDGE OF STONE
- EXISTING FIRE HYDRANT
- EXISTING WATER SHUT OFF
- EXISTING ELECTRICAL MANHOLE
- EXISTING CATCH BASIN
- ABANDONED CONTOUR
- EXISTING CONTOURS
- PROPOSED CONTOURS
- CABLE TRENCH
- CLEANOUT
- (MH) PROPOSED STORM MANHOLE
- (E) UNDERGROUND CONDUIT MANHOLE
- (OS) PROPOSED STORM OUTLET STRUCTURE
- (CB) PROPOSED CATCH BASIN
- REMOVABLE BOLLARD
- FIXED BOLLARD
- CARD READER
- DRAINAGE FLOW
- XXX.XX PROPOSED SPOT GRADE
- PROPOSED DRAINAGE SWALE CENTERLINE
- CONCRETE PAVEMENT
- LM ZONING IDENTIFICATION

REFERENCE DRAWINGS:

LANDSCAPE PLAN — 5A1329-2
MASONRY TRANSFORMER ENCLOSURE PLAN, ELEVATIONS & SECTIONS — 5A1329-3
EXISTING CONDITIONS PLAN — 5A1329-4
SITE PREPARATION AND DEMOLITION PLAN — 5A1329-5
FENCE AND SERVICE DRIVE PLAN — 5A1329-6
SITE DETAILS — 5A1329-7
SOIL EROSION AND SEDIMENT CONTROL PLAN — 5A1329-8
SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS — 5A1329-9
LANDSCAPE DETAILS — 5A1329-10
STORMWATER MANAGEMENT PLAN — 5M1329-1
STORMWATER DETAILS (1 OF 4) — 5M1329-2
STORMWATER DETAILS (2 OF 4) — 5M1329-3
STORMWATER DETAILS (3 OF 4) — 5M1329-4
STORMWATER DETAILS (4 OF 4) — 5M1329-5

DATE	SUBMITTED FOR
11/17/25	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT
12/13/24	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT

STOP THINK ACT REVIEW

811 Know what's below. Call before you dig.

PRELIMINARY
NOT FOR CONSTRUCTION

0 30 60
SCALE IN FEET

SHARED DRAWING
INFORMATION ON DRAWING SHARED WITH ITC HOLDINGS CORP.

REV	NOTE TO FIELD
B	FOR ANY QUESTIONS ON THIS DESIGN, PLEASE CONTACT:
	PROJECT ENGINEER
	ERIC M. MYRICK (313)235-6728

C	PROJ DESIGN	PROJ MANAGER	OTHERS
DATE			

WO

MADE BY	DATE	ACT	RELAY
CH'K BY	DATE	EPPM	APVD FOR ISSUE

B	PROJ DESIGN	PROJ MANAGER	OTHERS
DATE			

EXISTING SUBSTATION DECOMMISIONED AND DEMOLISHED. NEW SUBSTATION REDRAWN IN MICROSTATION AND SHEET SIZE CHANGED FROM SIZE 6 TO 5. DRAWING RENAMED FROM PLOT PLAN TO SITE PLAN.

GRENA-PDL-A-69084198 WO69084198

MADE BY	DATE	ACT	RELAY
ZEW/BV	11/17/25		
CH'K BY	DATE	EPPM	APVD FOR ISSUE
GJE/BV	11/17/25		

A	PROJ DESIGN	PROJ MANAGER	OTHERS
DATE			

ADDED GRASS PAVER DRIVE ALONG NORTH PROPERTY LINE.

PROJECT NO RFW NO 9GA6A

MADE BY	DATE	ACT	RELAY
G.K.YEE	4-25-91		
CH'K BY	DATE	EPPM	APVD FOR ISSUE
D.KELLY	4-26-91		D.M.KELLY

APPROVALS	OTHER	DATE
RELAY		
EPPM		
ACT		
OTHERS		

ENGINEERING	
MADE BY	DATE
GORDON K. YEE	9/27/89
LAYOUT BY	DATE
CHECKED BY	DATE
DENNIS M. KELLY	9/27/89
PROJECT DESIGN/ELECT	DATE
M. HUDAH	9/27/89
PROJECT DESIGN/ACT	DATE
D. M. KELLY	9/27/89
APPROVED FOR ISSUE	DATE

DTE Energy *DTE Electric* *Central Design/Standards*

TITLE
SITE PLAN

LOCATION NAME	SERVICE CENTER	SCALE
GRENADA SUBSTATION	ANN ARBOR	1"=30'-0"

DRAWING NUMBER	WORK ORDER	PROJECT DOCUMENT LIST
5A1329-1		

DOCUMENTUM FILENAME
GRENA-A-0001

c:\pw working\bve powerdelivery\na kry116972\d3311542\GRENA-A-0001B.dgn
11/13/2025 / Kry116972



PROPERTY OWNER/ APPLICANT/DEVELOPER:

DTE ENERGY - DTE ELECTRICAL CO.
ONE ENERGY PLAZA
DETROIT, MI 48226-1279
(313) 235-0177

ENGINEER:

BLACK & VEATCH LTD. OF MICHIGAN
3550 GREEN COURT
ANN ARBOR, MICHIGAN 48105
(734) 665-1000 FAX (734) 622-8816

ADDRESS:

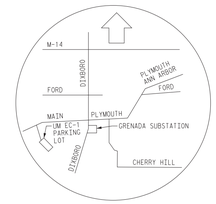
3270 N. DIXBORO RD.
ANN ARBOR, MI. 48105

BENCHMARKS:

BM *1:
ARROW ON HYDRANT
NORTHING: 296276.69
EASTING 13314441.90
ELEV: 828.62'

BM*2:
NAIL IN S. SIDE OF POLE
NORTHING: 296444.93
EASTING 13314414.33
ELEV: 817.01'

BM*3:
ARROW ON HYDRANT
NORTHING: 296378.21
EASTING 13314088.67
ELEV: 828.62'



SITE LOCATION MAP

NOT TO SCALE

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY
- STORM/WATER UTILITY EASEMENT
- EXISTING SWING GATE
- EXISTING FENCE
- EXISTING CONTOUR
- EXISTING OVERHEAD ELECTRIC
- EXISTING GRAVEL DRIVE
- EXISTING CATCH BASIN
- EXISTING CULVERT
- EXISTING TREE LINE
- EXISTING TREES
- EXISTING ELECTRICAL MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER SHUT OFF
- EXISTING DTE POLE

NOTES:

1. DRAWING IS SET UP IN THE MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, INTERNATIONAL FOOT.
2. THE HORIZONTAL DATUM IS NAD 83 (2011).
3. THE ELEVATIONS ARE IN FEET AND DECIMALS THEREOF AND ARE REFERENCED TO THE NAVD 88 DATUM.
4. CONTOURS INDICATED ARE AT 1 FOOT INTERVALS.
5. BEARING STRUCTURE IS BASED ON THE MICHIGAN STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, INTERNATIONAL FOOT.
6. THE LOCATION OF UTILITIES AND IMPROVEMENTS INDICATED HEREON ARE APPROXIMATE ONLY AND WERE OBTAINED FROM SOURCES BELEIVED TO BE RELIABLE, BUT NO GUARANTEE IS EXPRESSED OR IMPLIED AS TO LOCATION, TYPE OR COMPLETENESS OF UTILITIES OR IMPROVEMENTS.
7. SITE IS WITHIN ZONE 'X', AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN, PER FLOOD INSURANCE RATE MAP NUMBER 26161C0266E EFFECTIVE APRIL 3, 2012.
8. SEE DRAWING 5A1329-5 FOR TREE REMOVAL AND TREE PROTECTION REQUIREMENTS.
9. PROPERTY LINE INFORMATION, TOPOGRAPHY, UNDERGROUND UTILITIES, AND SITE FEATURES SHOWN ON THIS DRAWING WERE OBTAINED FROM DTE DRAWING 6SE 1329-002 TOPOGRAPHIC SURVEY.

REFERENCE DRAWINGS:

TOPOGRAPHIC SURVEY — — — — — — — — — — — — 6SE 1329-002
SITE PLAN — — — — — — — — — — — — — — — — 5A1329-1
SITE PREPARATION AND DEMOLITION PLAN — — — 5A1329-5

LEGAL DESCRIPTION

ALL THE PART OF SECTION 18, TOWN 2 SOUTH, RANGE 7 EAST, SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MICHIGAN, DESCRIBED AS BEGINNING AT THE WEST 1/4 CORNER OF SECTION 18, AFORESAID; THENCE NORTH 02°30'36" EAST, 250.06 FEET ALONG THE WEST LINE OF SAID SECTION 18, (BEING COMMON TO THE EAST LINE OF SECTION 13, TOWN 2 SOUTH, RANGE 6 EAST); THENCE NORTH 89°20'20" EAST, 33.64 FEET TO THE SOUTHWEST CORNER OF LOT 13 ON THE PLAT OF THE VILLAGE OF DIXBORO, AS RECORDED IN LIBER A ON PAGE 272, WASHTENAW COUNTY RECORDS; THENCE NORTH 02°29'40" EAST, 74.00 FEET ALONG THE WEST LINE OF SAID LOT 13; THENCE NORTH 89°20'20" EAST, 230.90 FEET (ALSO RECORDED AS 231.00 FEET); THENCE NORTH 02°29'40" EAST, 30.00 FEET ALONG THE LINE COMMON TO LOTS 14 AND 15 ON SAID PLAT OF THE VILLAGE OF DIXBORO; THENCE NORTH 89°20'20" EAST, 215.91 FEET; THENCE SOUTH 02°29'40" WEST, 371.38 FEET; THENCE NORTH 88°35'40" WEST, ALONG THE SOUTH LINE OF THREE PARCELS OF LAND AS MONUMENTED AND DESCRIBES IN WARRANTY DEEDS RECORDED IN LIBER 1528, PAGE 598, LIBER 1535, PAGE 253, AND LIBER 1674, PAGE 898, WASHTENAW COUNTY RECORDS TO THE POINT OF BEGINNING, BEING PART OF LOTS 13, 14, 15, 16, AND 17 ON THE SAID PLATE OF THE VILLAGE OF DIXBORO, RESERVING AN EASEMENT FOR THE INSTALLATION AND MAINTENANCE OF UTILITY LINES AND EQUIPMENT OF THE SOUTHERLY 20 FEET OF THE SUBJECT PROPERTY FOR THE BENEFIT OF THE PROPERTY LYING ADJACENT AND TO THE EAST OF THE ABOVE DESCRIBED PROPERTY.

STOP THINK ACT REVIEW

Know what's below. Call before you dig.

PRELIMINARY
NOT FOR CONSTRUCTION

0 30 60
SCALE IN FEET

REV	NOTE TO FIELD
-	FOR ANY QUESTIONS ON THIS DESIGN, PLEASE CONTACT:
	PROJECT ENGINEER
	ERIC M. MYRICK (313)235-6728

DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
11/17/25	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT
DATE	SUBMITTED FOR
12/13/24	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT

	PROJ DESIGN	PROJ MANAGER	OTHERS
C			
DATE			
B			
DATE			
A			
DATE			

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MADE BY	DATE	ACT	RELAY
CH'K BY	DATE	EPPM	APVD FOR ISSUE

APPROVALS

	OTHER	DATE
RELAY		
EPPM		
ACT		
OTHERS		

ENGINEERING	DATE
MADE BY	
I. KRYCHYLSKA/BV	11/17/25
LAYOUT BY	DATE
Z.E. WIACEK/BV	11/17/25
CHECKED BY	DATE
G.J. ESKOLA/BV	11/17/25
PROJECT DESIGN/ELECT	DATE
PROJECT DESIGN/ACT	DATE
APPROVED FOR ISSUE	DATE

DTE Energy *DTE Electric* *Central Design/Standards*

TITLE

EXISTING CONDITIONS PLAN

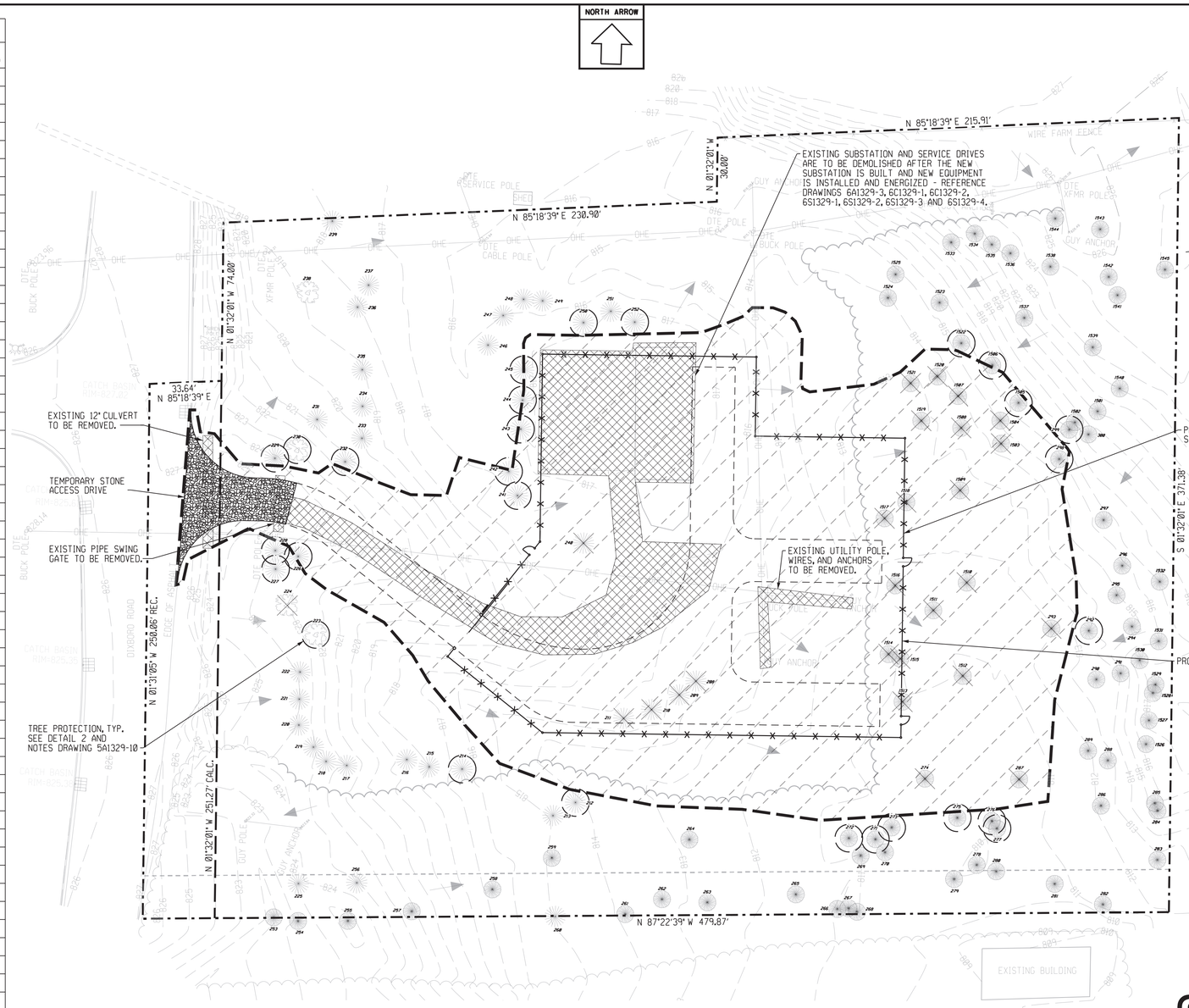
LOCATION NAME	SERVICE CENTER	SCALE
GRENADA SUBSTATION	ANN ARBOR	1"=30'-0"
DRAWING NUMBER	WORK ORDER	PROJECT DOCUMENT LIST
5A1329-4	69084198	GRENA-PDL-A-69084198

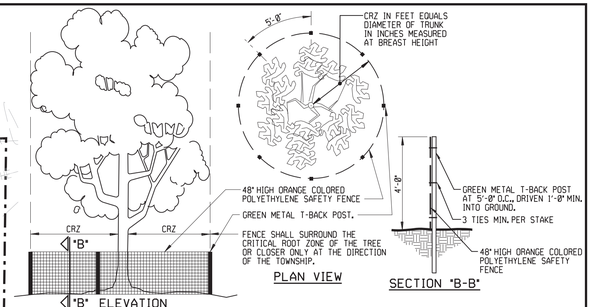
DOCUMENTUM FILENAME
GRENA-A-0004

c:\pw working\bve powerdelivery\na kryf16972\d3311542\GRENA-A-0004.0.dgn
11/13/2025
/ Kryf16972

TREE SPECIES DATA

TAG #	REMARKS	DBH (INCHES)	TAG #	REMARKS	DBH (INCHES)
~~206~~	~~NORWAY SPRUCE/PICEA ABIES~~	19	279	AMERICAN ELM/ULMUS AMERICANA	9
~~207~~	~~BLUE SPRUCE/PICEA PUNGENS~~	10	280	EASTERN COTTONWOOD/POPULUS DELTOIDES	16
~~210~~	~~NORWAY SPRUCE/PICEA ABIES~~	16	281	BLACK CHERRY/PRUNUS SEROTINA	10
~~211~~	~~NORWAY SPRUCE/PICEA ABIES~~	19	282	BOXELDER/ACER NEGUNDO	28
212	WHITE PINE/PINUS STROBUS	18	283	BLACK CHERRY/PRUNUS SEROTINA	16
213	WHITE PINE/PINUS STROBUS	25	284	BOXELDER/ACER NEGUNDO	12
214	NORWAY SPRUCE/PICEA ABIES	30	285	BOXELDER/ACER NEGUNDO	14
215	NORWAY SPRUCE/PICEA ABIES	32	286	BLACK CHERRY/PRUNUS SEROTINA	24
216	NORWAY SPRUCE/PICEA ABIES	30	~~287~~	~~BLACK WALNUT/JUGLANS NIGRA~~	7
217	WHITE PINE/PINUS STROBUS	22	288	HACKBERRY/CELTIS OCCIDENTALIS	10
218	WHITE PINE/PINUS STROBUS	13	289	BLACK WALNUT/JUGLANS NIGRA	8
219	WHITE PINE/PINUS STROBUS	9, 18	290	HACKBERRY/CELTIS OCCIDENTALIS	14
220	WHITE PINE/PINUS STROBUS	16	291	BOXELDER/ACER NEGUNDO	10
221	WHITE PINE/PINUS STROBUS	18	292	AMERICAN ELM/ULMUS AMERICANA	7
222	WHITE PINE/PINUS STROBUS	15	~~293~~	~~BLACK WALNUT/JUGLANS NIGRA~~	14
223	SUGAR MAPLE/ACER SACCHARUM	16	294	BLACK CHERRY/PRUNUS SEROTINA	12
~~224~~	~~SUGAR MAPLE/ACER SACCHARUM~~	15	295	BLACK WALNUT/JUGLANS NIGRA	12
225	WHITE PINE/PINUS STROBUS	17	296	BLACK WALNUT/JUGLANS NIGRA	14
226	BLUE SPRUCE/PICEA PUNGENS	10	297	BLACK CHERRY/PRUNUS SEROTINA	12
227	BLUE SPRUCE/PICEA PUNGENS	12	298	BLACK WALNUT/JUGLANS NIGRA	10
228	BLUE SPRUCE/PICEA PUNGENS	13	299	HACKBERRY/CELTIS OCCIDENTALIS	7
229	BLUE SPRUCE/PICEA PUNGENS	11	300	HACKBERRY/CELTIS OCCIDENTALIS	13
230	SUGAR MAPLE/ACER SACCHARUM	20	1501	BLACK WALNUT/JUGLANS NIGRA	11
231	BLUE SPRUCE/PICEA PUNGENS	13	1502	BOXELDER/ACER NEGUNDO	16
232	WHITE PINE/PINUS STROBUS	7, 10	~~1503~~	~~BLACK WALNUT/JUGLANS NIGRA~~	20
233	WHITE PINE/PINUS STROBUS	17	~~1504~~	~~BLACK WALNUT/JUGLANS NIGRA~~	18
234	WHITE PINE/PINUS STROBUS	19	1505	BLACK WALNUT/JUGLANS NIGRA	6
235	WHITE PINE/PINUS STROBUS	20	1506	BOXELDER/ACER NEGUNDO	7
236	NORWAY SPRUCE/PICEA ABIES	25	~~1507~~	~~NORTHERN CATALPA/CATALPA SPECIOSA~~	8
237	NORWAY SPRUCE/PICEA ABIES	28	~~1508~~	~~BLACK WALNUT/JUGLANS NIGRA~~	16
238	SUGAR MAPLE/ACER SACCHARUM	14	~~1509~~	~~BLACK WALNUT/JUGLANS NIGRA~~	6
239	BLUE SPRUCE/PICEA PUNGENS	15	~~1510~~	~~BLACK WALNUT/JUGLANS NIGRA~~	9
~~240~~	~~WHITE PINE/PINUS STROBUS~~	8	~~1511~~	~~BLACK WALNUT/JUGLANS NIGRA~~	9
241	WHITE PINE/PINUS STROBUS	20	~~1512~~	~~BLACK WALNUT/JUGLANS NIGRA~~	7
242	WHITE PINE/PINUS STROBUS	17	~~1513~~	~~BOXELDER/ACER NEGUNDO~~	9
243	NORWAY SPRUCE/PICEA ABIES	14	~~1514~~	~~BLACK WALNUT/JUGLANS NIGRA~~	6
244	NORWAY SPRUCE/PICEA ABIES	12, 13	~~1515~~	~~BLACK WALNUT/JUGLANS NIGRA~~	8
245	NORWAY SPRUCE/PICEA ABIES	17	~~1516~~	~~BLACK WALNUT/JUGLANS NIGRA~~	8
246	WHITE PINE/PINUS STROBUS	13	~~1517~~	~~BLACK WALNUT/JUGLANS NIGRA~~	8
247	WHITE PINE/PINUS STROBUS	18	~~1518~~	~~BOXELDER/ACER NEGUNDO~~	11
248	WHITE PINE/PINUS STROBUS	16	~~1519~~	~~BOXELDER/ACER NEGUNDO~~	6
249	WHITE PINE/PINUS STROBUS	17	~~1520~~	~~EASTERN COTTONWOOD/POPULUS DELTOIDES~~	12
250	NORWAY SPRUCE/PICEA ABIES	20	~~1521~~	~~EASTERN COTTONWOOD/POPULUS DELTOIDES~~	16
251	NORWAY SPRUCE/PICEA ABIES	16	1522	BLACK WALNUT/JUGLANS NIGRA	16
252	NORWAY SPRUCE/PICEA ABIES	20	1523	BLACK WALNUT/JUGLANS NIGRA	14
253	AMERICAN ELM/ULMUS AMERICANA	9	1524	BLACK WALNUT/JUGLANS NIGRA	16
254	BLACK CHERRY/PRUNUS SEROTINA	28	1525	BLACK WALNUT/JUGLANS NIGRA	14
255	BLACK CHERRY/PRUNUS SEROTINA	17, 24	1526	BOXELDER/ACER NEGUNDO	12
256	WHITE PINE/PINUS STROBUS	10	1527	BOXELDER/ACER NEGUNDO	8
257	BOXELDER/ACER NEGUNDO	13, 14	1528	BOXELDER/ACER NEGUNDO	9, 9
258	BLACK WALNUT/JUGLANS NIGRA	13	1529	BOXELDER/ACER NEGUNDO	10
259	BLACK WALNUT/JUGLANS NIGRA	8	1530	BOXELDER/ACER NEGUNDO	7
260	WHITE PINE/PINUS STROBUS	21	1531	BLACK WALNUT/JUGLANS NIGRA	8
261	BLACK CHERRY/PRUNUS SEROTINA	25	1532	BOXELDER/ACER NEGUNDO	9
262	BLACK CHERRY/PRUNUS SEROTINA	21, 14	1533	BOXELDER/ACER NEGUNDO	12
263	BLACK CHERRY/PRUNUS SEROTINA	11, 14, 14	1534	BLACK WALNUT/JUGLANS NIGRA	18
264	BLACK WALNUT/JUGLANS NIGRA	10	1535	BLACK WALNUT/JUGLANS NIGRA	11
265	NORWAY MAPLE/ACER PLATANOIDES	18	1536	BLACK WALNUT/JUGLANS NIGRA	7
266	BLACK CHERRY/PRUNUS SEROTINA	10, 12	1537	BLACK WALNUT/JUGLANS NIGRA	9
267	BLACK CHERRY/PRUNUS SEROTINA	7, 10	1538	ULMUS PUMILA/SIBERIAN ELM	18
268	BLACK CHERRY/PRUNUS SEROTINA	15	1539	ULMUS PUMILA/SIBERIAN ELM	42
269	BOXELDER/ACER NEGUNDO	10	1540	BLACK WALNUT/JUGLANS NIGRA	14
270	BOXELDER/ACER NEGUNDO	11	1541	COMMON BUCKHORN	6
271	BOXELDER/ACER NEGUNDO	9	1542	ULMUS PUMILA/SIBERIAN ELM	8
272	BOXELDER/ACER NEGUNDO	8	1543	BLACK WALNUT/JUGLANS NIGRA	12
273	BOXELDER/ACER NEGUNDO	13	1544	BLACK WALNUT/JUGLANS NIGRA	11
~~274~~	~~BOXELDER/ACER NEGUNDO~~	16	1545	ULMUS PUMILA/SIBERIAN ELM	11
275	BLACK WALNUT/JUGLANS NIGRA	7			
276	BOXELDER/ACER NEGUNDO	8, 10			
277	BOXELDER/ACER NEGUNDO	11			
278	EASTERN COTTONWOOD/POPULUS DELTOIDES	22			





1 / A5 TEMPORARY TREE PROTECTION BARRIER FENCE DETAIL
NO SCALE

TREE PROTECTION NOTES:

1. ALL TREES TO BE REMOVED WILL BE IDENTIFIED BY RED FLAGGING.
2. TREES NOT INDICATED TO BE REMOVED OR TRANSPLANTED SHALL BE FENCED OFF WITH 4' HIGH ORANGE CONSTRUCTION FENCE AT A DISTANCE OFF THE TREE OF THE TRUNK DIAMTER IN INCHES MEASURED AT BREAST HEIGHT.
3. TREE PROTECTION FENCING IS TO BE ERECTED PRIOR TO ANY EARTHWORK OR CONSTRUCTION AND IS TO REMAIN IN PLACE UNTIL CONSTRUCTION GRADING IS COMPLETE.
4. INSTALL TREE PROTECTION FENCING SURROUNDING THE CRITICAL ROOT ZONE (CRZ), THE CRZ IS THE RADIAL DISTANCE FROM THE TRUNK IN FEET EQUAL TO THE DIAMETER IN INCHES MEASURED AT BREAST HEIGHT (dbh).
5. ALL DEBRIS, FILL, EQUIPMENT OR MATERIAL IS TO BE KEPT CLEAR OF AREA WITHIN PROTECTIVE FENCE. NO CLEANING OF EQUIPMENT OR MATERIAL STORAGE OR STORAGE OR DISPOSAL OF ANY MATERIAL WITHIN THE DRIP LINE OF ANY TREES TO BE SAVED.
6. REFERENCE SOIL EROSION PLAN DRAWING 5A1329-8 PRIOR TO ANY DEMOLITION OR TREE REMOVAL.

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY
- PROPOSED GRADING LIMITS
- EDGE OF PROPOSED DRIVE
- PROPOSED FENCE
- EXISTING FENCE
- STORM/WATER UTILITY EASEMENT
- EXISTING CONTOUR
- EXISTING DRAINAGE FLOW DIRECTION
- EXISTING DTE POLE
- EXISTING OVERHEAD ELECTRICAL LINE
- EXISTING TREE LINE
- EXISTING WATER SHUT OFF
- EXISTING FIRE HYDRANT
- EXISTING CATCH BASIN
- LIMITS OF TREE REMOVAL
- EXISTING TREES
- TREE REMOVAL
- TREE PROTECTION BARRIER
- TEMPORARY STONE ACCESS DRIVE
- LIMITS OF DISTURBANCE
- TO BE DEMOLISHED/REMOVED

DEMOLITION NOTES:

1. ALL EXCAVATED MATERIALS SHALL BE DISPOSED OF AT AN OWNER APPROVED FACILITY IN ACCORDANCE WITH APPLICABLE STATE AND FEDERAL REGULATIONS. SITE SOILS SHALL NOT BE RELOCATED OR STOCK PILED ON SITE UNLESS NOTED ON PLANS BY THE ENGINEER.

0 30 60
SCALE IN FEET

STOP THINK ACT REVIEW

Know what's below. Call before you dig. 811

PRELIMINARY
NOT FOR CONSTRUCTION

REV	NOTE TO FIELD
-	FOR ANY QUESTIONS ON THIS DESIGN, PLEASE CONTACT:
	PROJECT ENGINEER
	ERIC M. MYRICK (313)235-6728

ESTIMATED CLEAN FILL VOLUME
COMPACTED IN PLACE VOLUME (CY)
xx,xxx

TOPSOIL SOIL REMOVAL VOLUME
COMPACTED IN PLACE VOLUME (CY)
x,xxx FROM SITE
x,xxx FROM OFFSITE

* QUANTITIES LISTED ARE IN-PLACE BANK VOLUME ESTIMATES AND ARE FOR INFORMATION ONLY. CONTRACTOR SHALL DO THEIR OWN QUANTITY ESTIMATE AND INCLUDE ALL SOIL ADJUSTMENTS NECESSARY FOR EXPANSION, HAULING, UNIT WEIGHTS ETC, IN ORDER TO PROVIDE A NOT TO EXCEED LUMP SUM BID.

REFERENCE DRAWINGS:

TOPOGRAPHIC SURVEY	6SE 1329-002
SITE PLAN	5A1329-1
EXISTING CONDITIONS PLAN	5A1329-4
SOIL EROSION AND SEDIMENT CONTROL PLAN	5A1329-8
SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	5A1329-9
LANDSCAPE DETAILS	5A1329-10

DATE	SUBMITTED FOR
11/17/25	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT
DATE	SUBMITTED FOR
12/13/24	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT

C	PROJ DESIGN	PROJ MANAGER	OTHERS
DATE			

WO

MADE BY	DATE	ACT	RELAY
CH'K BY	DATE	EPPM	APVD FOR ISSUE

B	PROJ DESIGN	PROJ MANAGER	OTHERS
DATE			

WO

MADE BY	DATE	ACT	RELAY
CH'K BY	DATE	EPPM	APVD FOR ISSUE

A	PROJ DESIGN	PROJ MANAGER	OTHERS
DATE			

WO

MADE BY	DATE	ACT	RELAY
CH'K BY	DATE	EPPM	APVD FOR ISSUE

APPROVALS	OTHER	DATE
RELAY		
EPPM		
ACT		
OTHERS		

ENGINEERING	
MADE BY	DATE
I. KRYCHYLSKA/BV	11/17/25
LAYOUT BY	DATE
Z.E. WIACEK/BV	11/17/25
CHECKED BY	DATE
G.J. ESKOLA/BV	11/17/25
PROJECT DESIGN/ELECT	DATE
PROJECT DESIGN/ACT	DATE
APPROVED FOR ISSUE	DATE

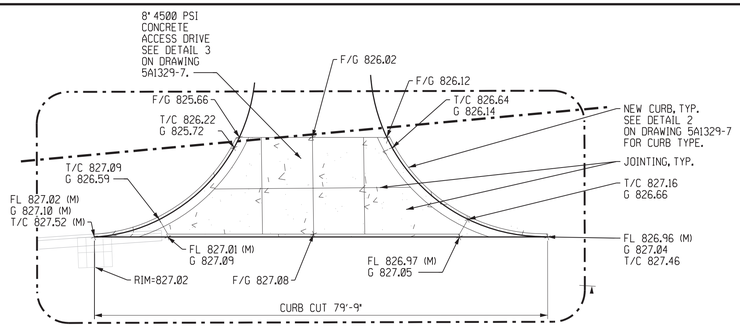
DTE Energy *DTE Electric* *Central Design/Standards*

TITLE
SITE PREPARATION AND DEMOLITION PLAN

LOCATION NAME	SERVICE CENTER	SCALE
GRENADA SUBSTATION	ANN ARBOR	1"=30'-0"
DRAWING NUMBER	WORK ORDER	PROJECT DOCUMENT LIST
5A1329-5	69084198	GRENA-PDL-A-69084198

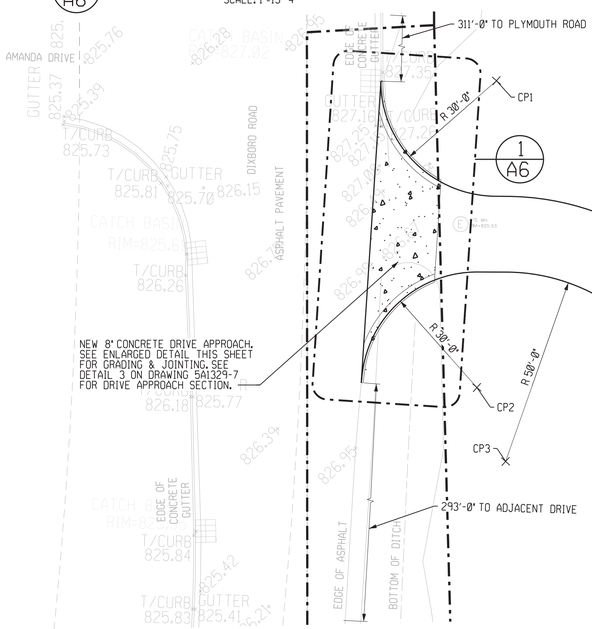
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GRENA-A-0005

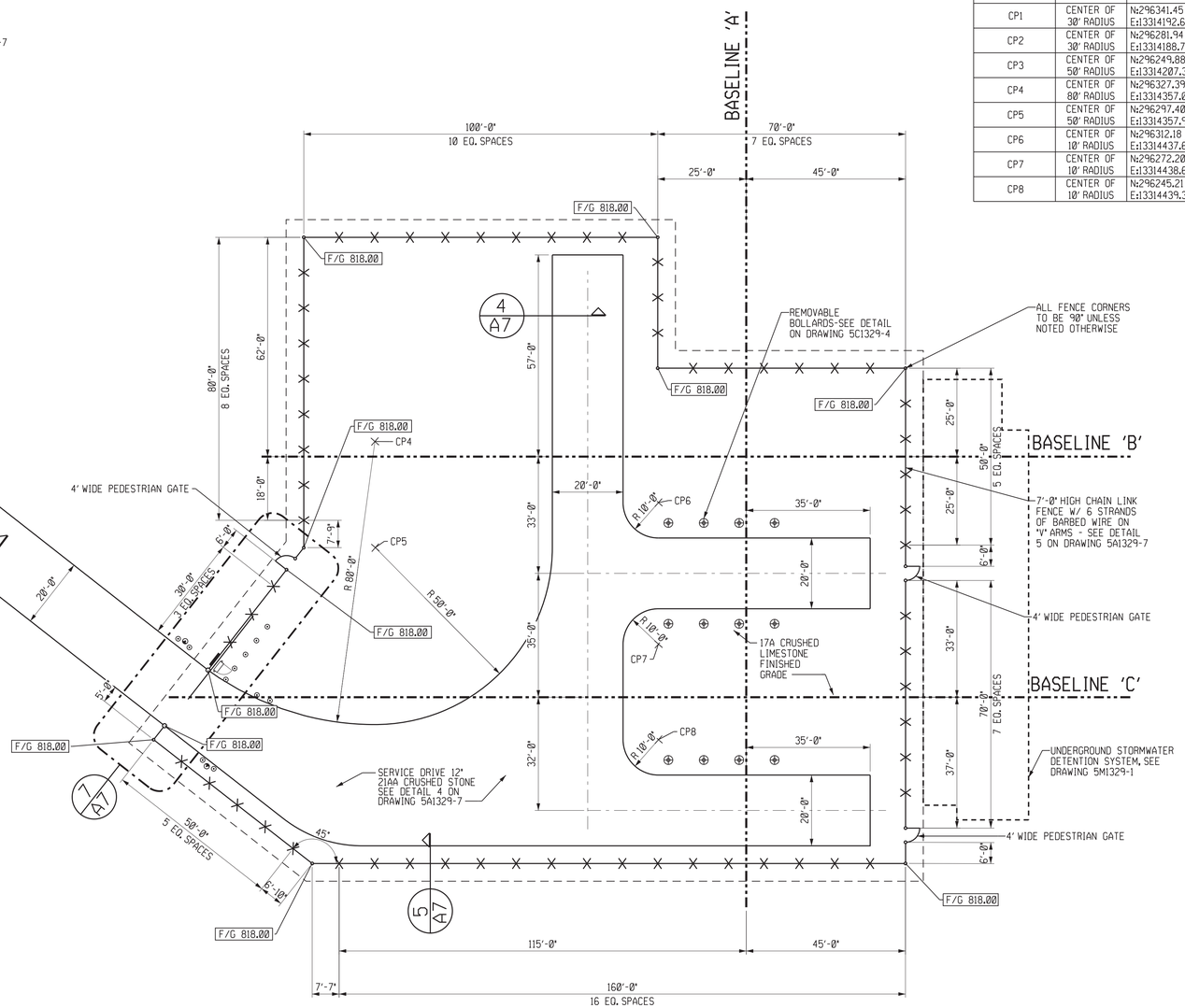
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11/13/2025 / Kry116972



1 A6 ENLARGED CONCRETE DRIVE APPROACH

SCALE: 1"=13'-4"





NORTH ARROW

DRIVEWAY RADII TABLE		
CONSTRUCTION POINT	POINT DESCRIPTION	COORDINATE
CP1	CENTER OF 30' RADIUS	N:296341.45 E:13314192.69
CP2	CENTER OF 30' RADIUS	N:296281.94 E:13314188.75
CP3	CENTER OF 50' RADIUS	N:296249.88 E:13314207.32
CP4	CENTER OF 80' RADIUS	N:296327.39 E:13314357.09
CP5	CENTER OF 50' RADIUS	N:296297.40 E:13314357.98
CP6	CENTER OF 10' RADIUS	N:296312.18 E:13314437.62
CP7	CENTER OF 10' RADIUS	N:296272.20 E:13314438.65
CP8	CENTER OF 10' RADIUS	N:296245.21 E:13314439.35

GENERAL NOTES:

1. REFER TO SITE PLAN DRAWING 5A1329-1 FOR SITE GRADING CONTOURS.
2. ALL RADII FOR PROPOSED DRIVES ARE DIMENSIONED TO EDGE OF GRAVEL. RADII FOR COMMERCIAL DRIVE APPROACH ARE DIMENSIONED TO BACK OF CURB.
3. ALL AGGREGATE MATERIALS SHALL COMPLY WITH PROJECT CONSTRUCTION SPECIFICATION SECTION 312000 EARTH MOVING.
4. JOINTING SHALL CONFORM TO THE LATEST EDITION OF ACI 330 GUIDE FOR DESIGN & CONSTRUCTION OF CONCRETE PARKING LOTS AS WELL AS OTHER APPLICABLE GOVERNING STANDARDS.
5. INSTALL MDOT 21AA UNDER NEW CURB TO MATCH NEW PAVEMENT SECTION AGGREGATE BASE THICKNESS. EXTEND MDOT 21AA 12" BEYOND BACK OF CURB.
6. ADJUST TO GUTTER PAN SPILL OUT AT 1" PER FOOT AS REQUIRED TO PROVIDE POSITIVE DRAINAGE OR NOTED ON PLAN.
7. BACKFILL BEHIND BACK OF CURB TO MATCH EXISTING AND PROVIDE POSITIVE DRAINAGE UNLESS OTHERWISE NOTED.
8. JOINTS SHALL BE PLACED AT RIGHT ANGLES TO THE EDGE OF CONCRETE CURB AND GUTTER.
9. BOTTOM SLOPE OF CURB AND GUTTER STRUCTURE MAY BE THE SAME SLOPE AS TOP OF PAVEMENT. BACK OF CURB AND VERTICAL EDGE OF GUTTER PAN MAY HAVE A MAXIMUM 1/2" BATTER TO FACILITATE FORMING.
10. TAPER CURB TO ZERO AT FREE ENDS.
11. ALL FENCE MATERIALS SHALL COMPLY WITH PROJECT CONSTRUCTION SPECIFICATION SECTION 323100 CHAINLINK FENCE AND GATES.

LEGEND:

- PROPERTY LINE
- PROPOSED FENCE
- EDGE OF STONE
- EXISTING FIRE HYDRANT
- EXISTING WATER SHUT OFF
- EXISTING ELECTRICAL MANHOLE
- EXISTING CATCH BASIN
- 827.92 EXISTING SPOT GRADE
- XXX.XX PROPOSED SPOT GRADE
- CONCRETE PAVEMENT
- REMOVABLE BOLLARD
- FIXED BOLLARD
- CARD READER
- F/G FINISH GRADE ELEVATION
- T/C TOP OF CURB ELEVATION
- G GUTTER ELEVATION
- FL FLOWLINE ELEVATION
- (M) MATCH GRADE ELEVATION

REFERENCE DRAWINGS:

SITE PLAN - 5A1329-1
SITE DETAILS - 5A1329-7

DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
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DATE	SUBMITTED FOR
11/17/25	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT
DATE	SUBMITTED FOR
12/13/24	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT

0 20 40
SCALE IN FEET

PRELIMINARY
NOT FOR CONSTRUCTION

REV	NOTE TO FIELD
-	FOR ANY QUESTIONS ON THIS DESIGN, PLEASE CONTACT: PROJECT ENGINEER ERIC M. MYRICK (313)235-6728

STOP THINK ACT REVIEW

811 Know what's below. Call before you dig.

	PROJ DESIGN	PROJ MANAGER	OTHERS
DATE			

WO

MADE BY	DATE	ACT	RELAY
CH'K BY	DATE	EPPM	APVD FOR ISSUE

APPROVALS		
OTHER		DATE
RELAY		
EPPM		
ACT		
OTHERS		

ENGINEERING	
MADE BY	DATE
I. KRYCHYLSKA/BV	11/17/25
LAYOUT BY	DATE
Z.E. WIACEK/BV	11/17/25
CHECKED BY	DATE
G.J. ESKOLA/BV	11/17/25
PROJECT DESIGN/ELECT	DATE
PROJECT DESIGN/ACT	DATE
APPROVED FOR ISSUE	DATE

DTE Energy *DTE Electric* *Central Design/Standards*

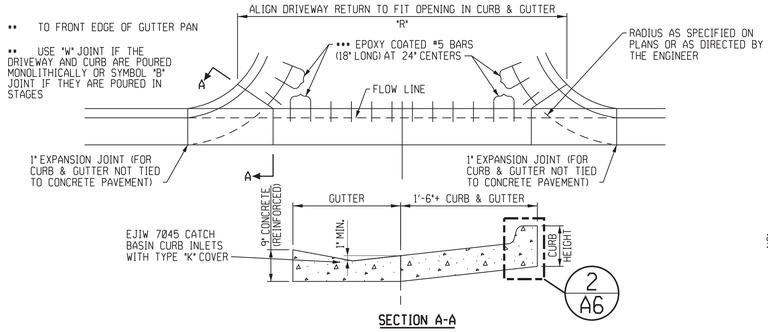
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FENCE AND SERVICE DRIVE PLAN

LOCATION NAME	SERVICE CENTER	SCALE
GRENADA SUBSTATION	ANN ARBOR	1"=20'-0"
DRAWING NUMBER	WORK ORDER	PROJECT DOCUMENT LIST
5A1329-6	69084198	GRENA-PDL-A-69084198

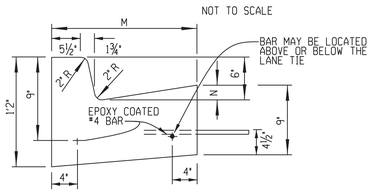
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11/13/2025 /Kry116972



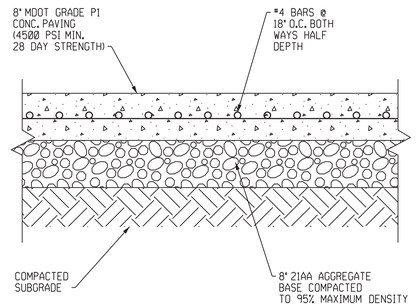
1 / A6 CONCRETE DRIVEWAY OPENING LAYOUT

NOT TO SCALE



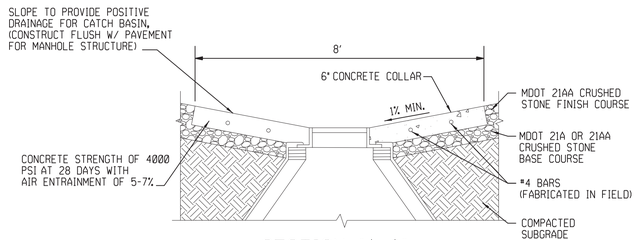
2 / A6 CURB & GUTTER DETAIL

NOT TO SCALE



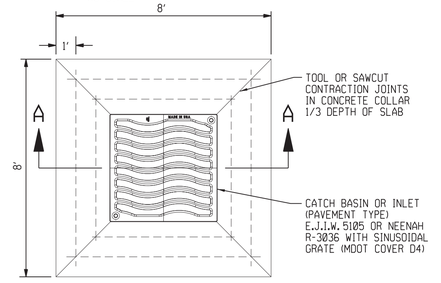
3 / A6 TYPICAL 8" CONCRETE DRIVEWAY APPROACH PAVEMENT SECTION

NOT TO SCALE



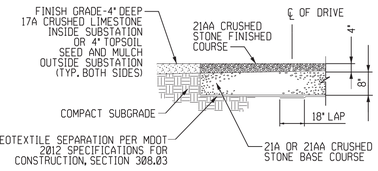
SECTION "A-A"

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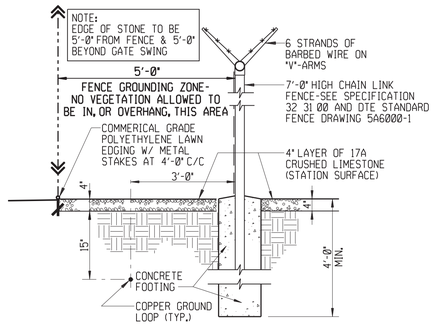
6 / A1 CONCRETE COLLAR AT CATCH BASIN

NO SCALE



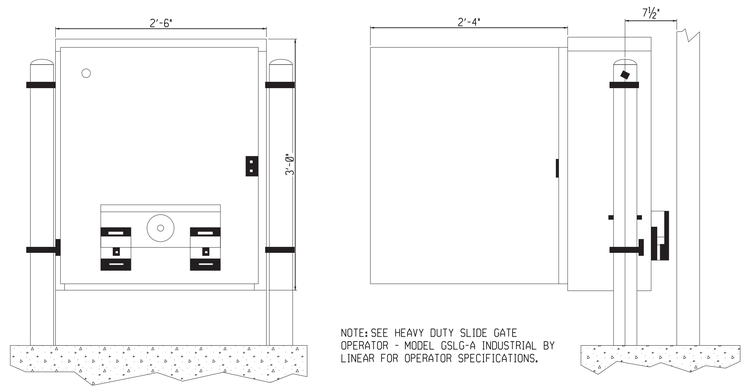
4 / A6 SECTION THRU SUBSTATION AND ACCESS DRIVE

NO SCALE



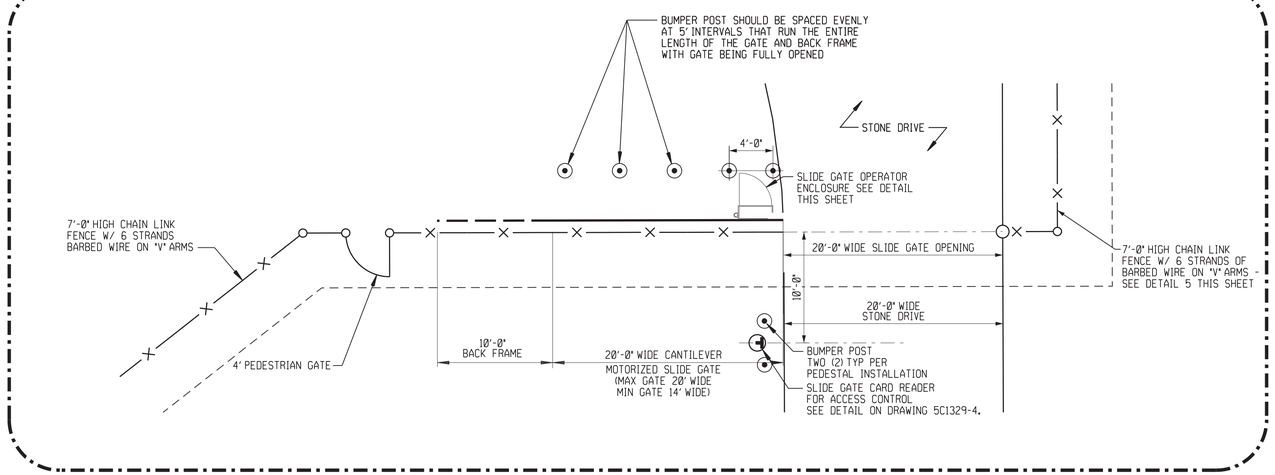
5 / A6 YARD EDGE DETAIL

NOT TO SCALE



GSGL-A SERIES SLIDE GATE OPERATOR SPECIFICATIONS

SLIDE GATE OPERATOR W/ COLD WEATHER PACKAGE, #50 CHAIN LINEAR CORP. MODEL GSLA-A (1HP, 115VAC, SINGLE PHASE)	BY CONTRACTOR

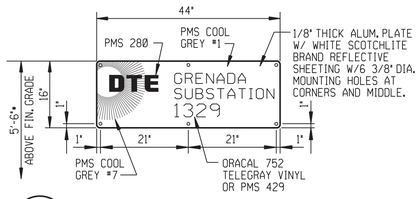


7 / A6 ENLARGED SLIDE GATE LAYOUT

SCALE: NOT TO SCALE

HEAVY DUTY SLIDE GATE OPERATOR

SCALE: NOT TO SCALE



8 / A1 SUBSTATION IDENTIFICATION SIGN

NO SCALE

PRELIMINARY
NOT FOR CONSTRUCTION

REV.	NOTE TO FIELD
-	FOR ANY QUESTIONS ON THIS DESIGN, PLEASE CONTACT:
	PROJECT ENGINEER
	ERIC M. MYRICK (313)235-6728

STOP THINK ACT REVIEW

811 Know what's below. Call before you dig.

REFERENCE DRAWINGS:

SITE PLAN ---------- 5A1329-1
FENCE AND SERVICE DRIVE PLAN ---------- 5A1329-6

DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
11/17/25	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT
DATE	SUBMITTED FOR
12/13/24	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT

C	PROJ DESIGN	PROJ MANAGER	OTHERS
DATE			

WO

MADE BY	DATE	ACT	RELAY
CH'K BY	DATE	EPPM	APVD FOR ISSUE

B	PROJ DESIGN	PROJ MANAGER	OTHERS
DATE			

WO

MADE BY	DATE	ACT	RELAY
CH'K BY	DATE	EPPM	APVD FOR ISSUE

A	PROJ DESIGN	PROJ MANAGER	OTHERS
DATE			

WO

MADE BY	DATE	ACT	RELAY
CH'K BY	DATE	EPPM	APVD FOR ISSUE

APPROVALS	OTHER	DATE
RELAY		
EPPM		
ACT		
OTHERS		

ENGINEERING	
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I. KRYCHYLSKA/BV	11/17/25
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Z.E. WIACEK/BV	11/17/25
CHECKED BY	DATE
G.J. ESKOLA/BV	11/17/25
PROJECT DESIGN/ELECT	DATE
PROJECT DESIGN/ACT	DATE
APPROVED FOR ISSUE	DATE

DTE Energy *DTE Electric* *Central Design/Standards*

TITLE

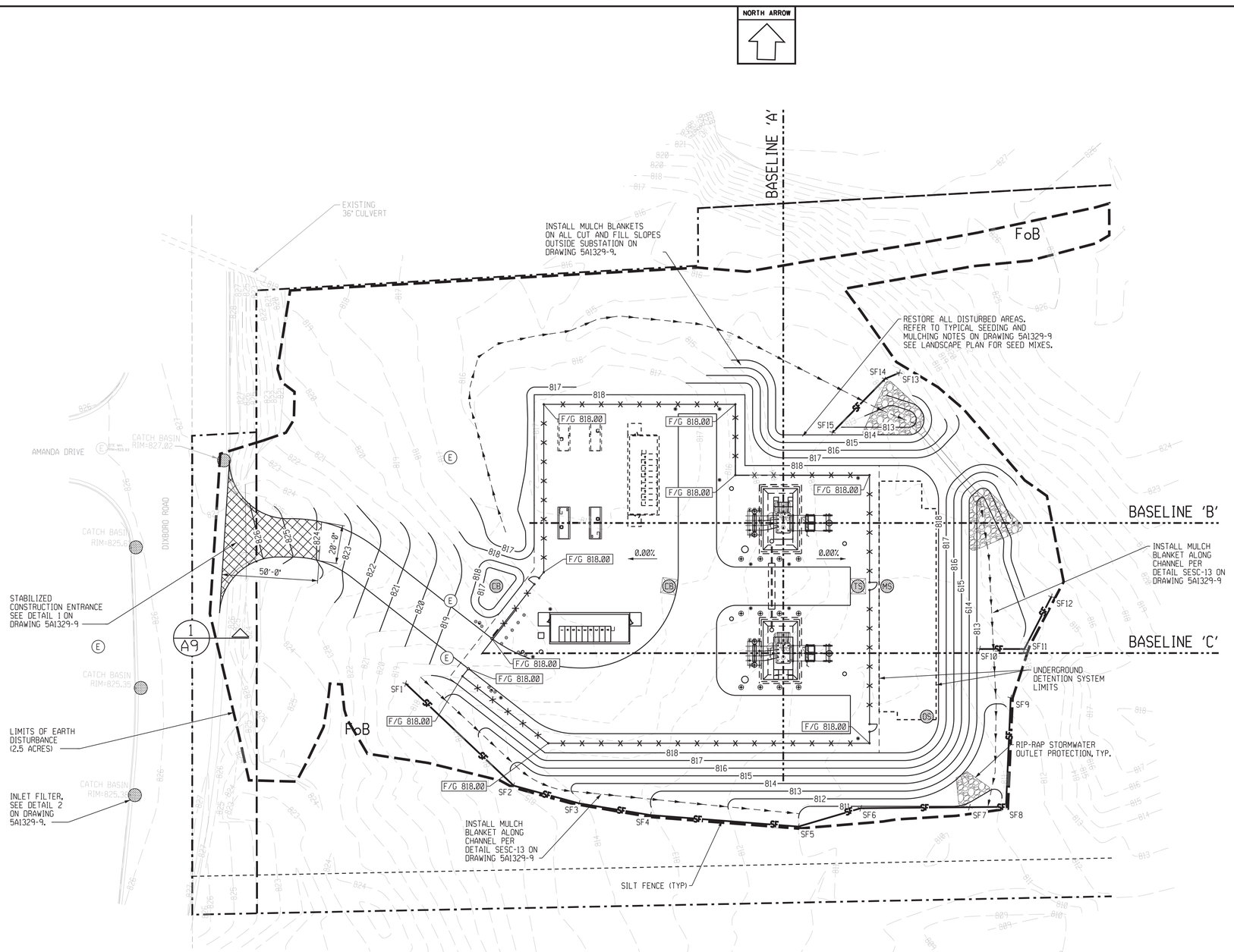
SITE DETAILS

LOCATION NAME	SERVICE CENTER	SCALE
GRENADA SUBSTATION	ANN ARBOR	NONE

DRAWING NUMBER	WORK ORDER	PROJECT DOCUMENT LIST
5A1329-7	69084198	GRENA-PDL-A-69084198

DOCUMENTUM FILENAME GRENA-A-0007

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11/13/2025 / Kry116972



PROPERTY OWNER/ APPLICANT/DEVELOPER:

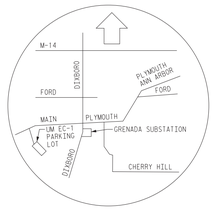
DTE ENERGY - DTE ELECTRIC CO.
ONE ENERGY PLAZA
DETROIT, MI 48226-1279
(313)235-0177

ENGINEER:

BLACK & VEATCH LTD. OF MICHIGAN
3550 GREEN COURT
ANN ARBOR, MICHIGAN 48105
(734) 665-1000 FAX (734) 622-8816

ADDRESS:

3270 N. DIXBORO RD.
ANN ARBOR, MI. 48105



SITE LOCATION MAP

1 MILE

USDA SOIL CLASSIFICATIONS	
MAP UNIT SYMBOL	MAP UNIT NAME
FoB	FOX SANDY LOAM, TILL PLAIN, 2 TO 6 PERCENT SLOPES

SOIL EROSION GENERAL NOTES:

1. REFER TO DRAWING 5A1329-9 FOR GENERAL SOIL EROSION NOTES AND DETAILS.
2. EGLE WETLAND INVENTORY INDICATES NEAREST WATER BODY IS ASSOCIATED WITH FLEMMING CREEK AND IS APPROXIMATELY 300' SOUTH OF SITE PROPERTY BOUNDARIES.

LEGEND:

- PROPERTY LINE
- PROPOSED FENCE
- LIMITS OF DISTURBANCE
- EXISTING CONTOUR
- ABANDONED CONTOUR
- PROPOSED CONTOUR
- EXISTING CULVERT
- RIGHT-OF-WAY
- EDGE OF STONE
- STORM/WATER UTILITY EASEMENT
- SILT FENCE
- XXX.XX PROPOSED SPOT GRADE
- PROPOSED DRAINAGE SWALE CENTERLINE
- EXISTING CATCH BASIN
- EXISTING ELECTRICAL MANHOLE
- PROPOSED CATCH BASIN
- PROPOSED MANHOLE
- UNDERGROUND CONDUIT MANHOLE
- PROPOSED STORM OUTLET STRUCTURE
- TREATMENT STRUCTURE
- REMOVABLE BOLLARD
- FIXED BOLLARD
- CARD READER
- TEMPORARY STONE ACCESS DRIVE
- INLET FILTER
- SF9 SILT FENCE LOCATION
- CLEANOUT

SILT FENCE CONSTRUCTION POINT TABLE	
POINT NUMBER	COORDINATE
SF1	N:296236.91 E:13314267.23
SF2	N:296185.08 E:13314324.98
SF3	N:296176.72 E:13314359.32
SF4	N:296171.57 E:13314396.70
SF5	N:296167.54 E:13314471.03
SF6	N:296177.97 E:13314506.33
SF7	N:296179.98 E:13314562.99
SF8	N:296180.65 E:13314582.06
SF9	N:296237.63 E:13314583.08
SF10	N:296262.70 E:13314566.15
SF11	N:296263.31 E:13314589.55
SF12	N:296290.97 E:13314602.92
SF13	N:296405.85 E:13314520.64
SF14	N:296402.44 E:13314513.18
SF15	N:296373.82 E:13314486.55

REFERENCE DRAWINGS:

SITE PLAN	5A1329-1
LANDSCAPE PLAN	5A1329-2
EXISTING CONDITIONS PLAN	5A1329-4
FENCE AND SERVICE DRIVE PLAN	5A1329-6
SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	5A1329-9
STORMWATER MANAGEMENT PLAN	5M1329-1

LEGAL DESCRIPTION

ALL THE PART OF SECTION 18, TOWN 2 SOUTH, RANGE 7 EAST, SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MICHIGAN, DESCRIBED AS BEGINNING AT THE WEST 1/4 CORNER OF SECTION 18, AFORESAID; THENCE NORTH 02°30'36" EAST, 250.06 FEET ALONG THE WEST LINE OF SAID SECTION 18, (BEING COMMON TO THE EAST LINE OF SECTION 13, TOWN 2 SOUTH, RANGE 6 EAST); THENCE NORTH 89°20'20" EAST, 33.64 FEET TO THE SOUTHWEST CORNER OF LOT 13 ON THE PLAT OF THE VILLAGE OF DIXBORO, AS RECORDED IN LIBER A ON PAGE 272, WASHTENAW COUNTY RECORDS; THENCE NORTH 02°29'40" EAST, 74.00 FEET ALONG THE WEST LINE OF SAID LOT 134; THENCE NORTH 89°20'20" EAST, 230.90 FEET (ALSO RECORDED AS 231.00 FEET); THENCE NORTH 02°29'40" EAST, 30.00 FEET ALONG THE LINE COMMON TO LOTS 14 AND 15 ON SAID PLAT OF THE VILLAGE OF DIXBORO; THENCE NORTH 89°20'20" EAST, 215.91 FEET; THENCE SOUTH 02°29'40" WEST, 371.38 FEET; THENCE NORTH 89°35'40" WEST, ALONG THE SOUTH LINE OF THREE PARCELS OF LAND AS MONUMENTED AND DESCRIBES IN WARRANTY DEEDS RECORDED IN LIBER 1528, PAGE 598, LIBER 1535, PAGE 253, AND LIBER 1674, PAGE 890, WASHTENAW COUNTY RECORDS TO THE POINT OF BEGINNING, BEING PART OF LOTS 13, 14, 15, 16, AND 17 ON THE SAID PLATE OF THE VILLAGE OF DIXBORO, RESERVING AN EASEMENT FOR THE INSTALLATION AND MAINTENANCE OF UTILITY LINES AND EQUIPMENT OF THE SOUTHERLY 20 FEET OF THE SUBJECT PROPERTY FOR THE BENEFIT OF THE PROPERTY LYING ADJACENT AND TO THE EAST OF THE ABOVE DESCRIBED PROPERTY.

REV	NOTE TO FIELD
–	FOR ANY QUESTIONS ON THIS DESIGN, PLEASE CONTACT:
	PROJECT ENGINEER
	ERIC M. MYRICK (313)235-6728

PRELIMINARY
NOT FOR CONSTRUCTION

0 30 60
SCALE IN FEET

STOP THINK ACT REVIEW

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DATE	SUBMITTED FOR
11/17/25	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT
12/13/24	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT

	PROJ DESIGN	PROJ MANAGER	OTHERS
DATE			

WO

MADE BY	DATE	ACT	RELAY
CH'K BY	DATE	EPPM	APVD FOR ISSUE

APPROVALS		
	OTHER	DATE
RELAY		
EPPM		
ACT		
OTHERS		

ENGINEERING	
MADE BY	DATE
I. KRYCHYLSKA/BV	11/17/25
LAYOUT BY	DATE
Z.E. WIACEK/BV	11/17/25
CHECKED BY	DATE
G.J. ESKOLA/BV	11/17/25
PROJECT DESIGN/ELECT	DATE
PROJECT DESIGN/ACT	DATE
APPROVED FOR ISSUE	DATE

DTE Energy *DTE Electric* *Central Design/Standards*

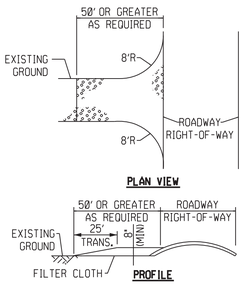
TITLE

SOIL EROSION AND SEDIMENT CONTROL PLAN

LOCATION NAME	SERVICE CENTER	SCALE
GRENADA SUBSTATION	ANN ARBOR	1"=30'-0"
DRAWING NUMBER	WORK ORDER	PROJECT DOCUMENT LIST
5A1329-8	69084198	GRENA-PDL-69084198

DOCUMENTUM FILENAME
GRENA-A-008

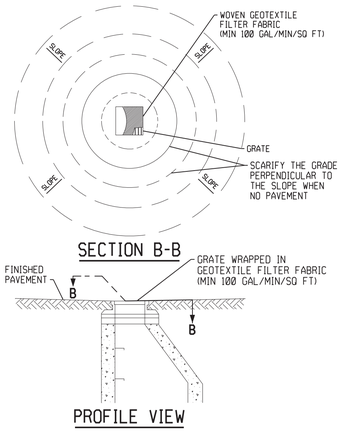
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11/13/2025 /Kry116972



1. PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC R.O.W.
2. DESIGN CRITERIA FOR STABILIZED CONSTRUCTION ENTRANCE.
   A. STONE SIZE - USE ASTM C-33, SIZE NO 2 OR 3, USE CRUSHED STONE. (NO CRUSHED CONCRETE)
   B. THICKNESS - NOT LESS THAN 8 INCHES.
   C. WIDTH - NOT LESS THAN FULL WIDTH OF POINTS OF INGRESS OR EGRESS.
   D. LENGTH - 50 FEET MINIMUM WHERE THE SOILS ARE SAND OR GRAVEL OR 100 FEET MINIMUM WHERE SOILS ARE CLAYS OR SILTS, EXCEPT WHERE THE TRAVELED LENGTH IS LESS THAN 50 TO 1 FEET RESPECTIVELY. THESE LENGTHS MAY BE INCREASED WHERE FIELD CONDITIONS DICTATE.
   E. FILTER CLOTH - WILL BE PLACED OVER ENTIRE AREA PRIOR TO PLACING OF STONE.
   F. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ON TO PUBLIC RIGHT-OF WAY THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

1/A9 STABILIZED CONSTRUCTION ENTRANCE DETAIL

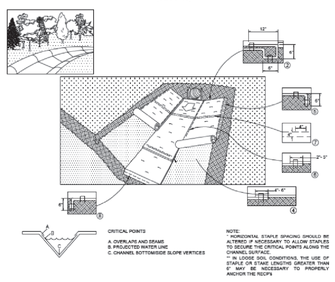
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2/A9 INLET FILTER DETAIL

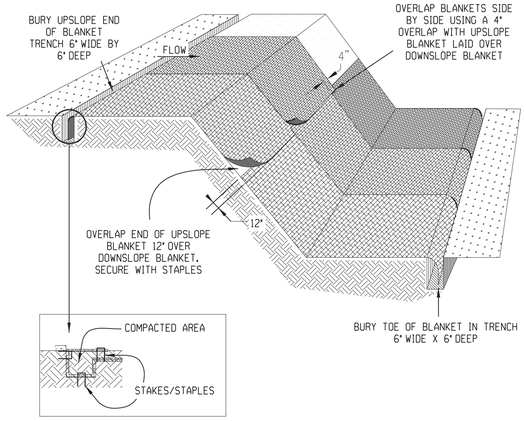
NO SCALE

MULCH BLANKET CHANNEL INSTALLATION
(SESC-13)



1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECPS), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE RECPS IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECPS EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECPS WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECPS BACK OVER SEED AND COMPACTED SOIL. SECURE RECPS OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" ACROSS THE WIDTH OF THE RECPS.
3. ROLL CENTER RECPS IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. RECPS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECPS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE (SEE DETAIL SESC-14). WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED ALONG THE OUTER EDGES OF THE OVERLAPPED RECPS AS WELL AS IN THE CENTER OF THE CHANNEL.
4. PLACE CONSECUTIVE RECPS END OVER END (SHINGLE STYLE) WITH A 4" 6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE RECPS.
5. FULL LENGTH EDGES OF RECPS AT TOP OF CHANNEL SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART ON A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT RECPS MUST BE OVERLAPPED APPROXIMATELY 2"-6" (DEPENDING ON RECPS TYPE) AND STAPLED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FT. INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. TERMINAL END OF RECPS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

MULCH BLANKETS



NOTES: (1) PLACE MULCH BLANKET PARALLEL TO FLOW AND ANCHOR SECURELY.

(2) WHEN BLANKETS ARE USED IN FLOWING DITCH, BLANKETS SHOULD NOT OVERLAP IN DITCH CENTER PARALLEL TO FLOW.

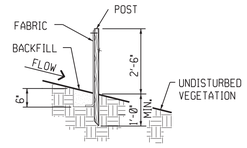
(3) STAPLES INSTALLED/SECURED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

(4) WHERE POSSIBLE, CONSTRUCT WITH BIODEGRADABLE MATERIAL.

1. PREPARE SUBGRADE TO PROPER GRADE AND COMPACTION REQUIREMENTS.
2. REMOVE RUTS, ROOTS, SOIL CLODS, OR OTHER DEBRIS FROM SURFACE SUBJECT TO MULCH BLANKET INSTALLATION.
3. SPREAD OR DRILL SEED.
4. CONSULT WITH EROSION CONTROL MATERIAL SUPPLIER TO SELECT MULCH BLANKET BASED ON SLOPE GRADIENT, EXPECTED SURFACE RUN-OFF, AND PROTECTION TERM NECESSARY (LONG OR SHORT TERM).
5. POSITION SELECTED MULCH BLANKET AS CLOSE AS POSSIBLE TO INTENDED USE LOCATION.
6. INSTALL BLANKET AT TOP OF SLOPE, FIRST ANCHORING TOE IN TRENCH 6" WIDE X 6" DEEP, PROGRESSING DOWN-SLOPE OR DOWN-GRADIENT WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH.
7. ANCHOR THE BLANKET WITH STAPLES/STAKES PLACED APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER SECURING.
8. APPLY SEED TO COMPACTED SOIL AND FOLD THE 12" PORTION OF THE BLANKET OVER COMPACTED AREA AND SECURE WITH A ROW OF STAPLES/STAKES PLACED 12" APART ACROSS THE WIDTH OF THE BLANKET.
9. UNROLL THE BLANKETS DOWN OR HORIZONTALLY ACROSS THE SLOPE.
10. OVERLAP BLANKET EDGES BY A MINIMUM OF 4" AND BLANKET ENDS BY A MINIMUM OF 12". OVERLAPS SHOULD BE IN THE DIRECTION OF EXPECTED FLOW WITH THE UP-SLOPE BLANKET PLACED OVER THE DOWN-SLOPE BLANKET EDGE.
11. SECURE DOWN-SLOPE END OF BLANKET WITH STAPLES/STAKES AND TRENCH IN.

GENERAL SEDIMENTATION AND EROSION CONTROL NOTES:

1. THIS PROJECT SHALL BE CONSTRUCTED IN COMPLIANCE WITH PART 91 OF MICHIGAN ACT 451 OF 1994, AS AMENDED. THE SOIL EROSION AND SEDIMENT CONTROL ACT.
2. CONTRACTOR SHALL NOTIFY WASHTENAW COUNTY SOIL EROSION INSPECTORS OFFICE 48 HOURS BEFORE WORK IS TO BEGIN (734) 222-6860.
3. THE CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED, AND AS DIRECTED ON THESE PLANS. THE CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAVE BEEN ACCOMPLISHED.
4. STAGING OF THE WORK SHALL BE DONE BY THE CONTRACTOR AS DIRECTED IN THESE PLANS, AND AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED EARTH.
5. PERMANENT SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY PERMANENT SOIL EROSION CONTROL MEASURES FOR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN 5 CALENDAR DAYS AFTER FINAL GRADING, OR THE FINAL EARTH CHANGE, HAS BEEN COMPLETED. WHEN IT IS NOT POSSIBLE TO PERMANENTLY STABILIZE A DISRUPTED AREA AFTER EARTH CHANGE HAS BEEN COMPLETED, OR WHERE SIGNIFICANT EARTH CHANGE ACTIVITY CEASES, TEMPORARY SOIL EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IMMEDIATELY UNTIL A NOTICE OF TERMINATION IS OBTAINED FORM THE EGLE.
6. ALL STOCKPILED SOILS SHALL BE MAINTAINED IN SUCH A WAY AS TO PREVENT EROSION FROM THE SITE. ANY STOCKPILE THAT REMAINS LONGER THAN 15 DAYS SHALL BE GRASS SEEDED.
7. BURLAP IS NOT ALLOWED, AND STRAW BALES CAN ONLY BE USED TO BACKUP SILT FENCES.
8. NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL NECESSARY EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AS IDENTIFIED BY THE OWNER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE TO IMPLEMENT THE ACTIONS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
10. STORM WATER FROM THE SITE SHALL NOT BE PERMITTED TO ADVERSELY IMPACT TO ADJACENT PROPERTIES.



3/A9 SEDIMENTATION CONTROL FABRIC FENCE (SF)

NO SCALE

SEQUENCE OF CONSTRUCTION AND SOIL EROSION AND SEDIMENTATION CONTROL:

SUBSTATION CONSTRUCTION (DATE TBD)

1. INSTALL FILTERS WITHIN DIXBORO ROAD FOR SEWER INLET PROTECTION DURING CONSTRUCTION AS INDICATED ON DRAWING 5A1329-8. (DAY 1)
2. INSTALL TEMPORARY STABILIZED CONSTRUCTION ACCESS ENTRANCE AS INDICATED ON DRAWING 5A1329-8. (DAY 1)
3. INSTALL SILT FENCE ALONG PROPERTY LINE OR AT LIMITS OF GRADING AS INDICATED ON DRAWING 5A1329-8. (DAY 1)
4. SITE WORK. (DAY 2 - DATE TBD)
   A. TOTAL AREA OF DISTURBANCE 2.5 ACRES.
   B. DURING DRY PERIODS ALL AREAS SHALL BE WATER FOR DUST CONTROL.
   C. ALL DIRT AND MUD TRACKED ONTO ROADWAY SHALL BE REMOVED IMMEDIATELY.
   D. EXCAVATE AND DISPOSE OF SOIL AS INDICATED ON DRAWING 5A1329-5.
   E. MASS GRADE SITE TO ROUGH GRADE.
   F. MAINTAIN ALL TEMPORARY SOIL EROSION MEASURES DURING AND AFTER MASS GRADING OF SITE. INSPECT AND REPAIR ANY TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES ON A WEEKLY BASIS AND WITHIN 24 HOURS OF A RAINFALL EVENT.
   G. INSTALL ALL STORM SEWER STRUCTURES, SOLID STORM PIPING AND INLET PROTECTION ON NEW STORM SEWER, CAP AND PROTECT UNDERDRAIN CONNECTIONS AT MANHOLE UNTIL UNDERDRAINS ARE INSTALLED. INSTALL PERFORATED UNDERDRAIN SYSTEM AND CONNECT TO STORM STRUCTURES PER DRAWING 5M1329-1.
   H. INSTALL UNDERGROUND DETENTION SYSTEM AND TREATMENT UNIT PER VENDOR SPECIFICATIONS. PROTECT INSPECTION PORTS, ACCESS RISERS, STORM SEWER CONNECTIONS UNTIL DETENTION SYSTEM OUTLET IS INSTALLED.
   I. INSTALL OUTLET CONTROL STRUCTURE AND DISCHARGE PIPE AS INDICATED ON STORMWATER MANAGEMENT PLANS.
   J. ROUTE ALL SURFACE WATER TO NEW STORM OUTLET. CONTRACTOR IS RESPONSIBLE TO MANAGE SURFACE WATER DURING CONSTRUCTION AND PROVIDE PROPER AND NECESSARY FILTRATION TO ENSURE THAT NO SEDIMENT ENTERS DETENTION SYSTEM.
   K. INSTALL ALL UNDERGROUND ELECTRIC MANHOLES AND CONDUIT.
   L. INSTALL REMAINING UNDERGROUND UTILITIES AND FOUNDATIONS.
   M. CONSTRUCT 12-INCH THICK GRAVEL DRIVES AS INDICATED ON PLANS.
   N. INSTALL 4-INCH THICK SURFACING STONE OVER REMAINDER OF SITE TO RESTORE AND STABILIZE SURFACE.
   O. INSTALL PROPOSED LANDSCAPING AND SCREENING PER DRAWING 5A1329-2.
   P. RESTORE GREENBELT AREA BETWEEN SUBSTATION AND PROPERTY LINES WITH SEED AND MULCH PER PLANS.
   Q. INSTALL ABOVE GRADE STRUCTURES AND EQUIPMENT.
   R. REMOVE TEMPORARY STABILIZED CONSTRUCTION ENTRANCES AFTER SUBSTATION WORK IS COMPLETE AND INSTALL NEW CONCRETE CURBS AND DRIVE APRONS AS INDICATED ON PLANS.
5. REMOVE REMAINING TEMPORARY SOIL EROSION MEASURES AFTER SURFACE RESTORATION IS COMPLETE AND STABILIZED AFTER ACCEPTANCE BY WASHTENAW COUNTY SOIL EROSION INSPECTOR.

NOTES:

1. DATES, IF PROVIDED ARE ESTIMATES ONLY, AND MAY VARY DUE TO WEATHER OR PROJECT DELAYS. REFER TO SOIL EROSION CONTROL SEQUENCE OF CONSTRUCTION NOTES ON THIS SHEET.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF SOIL EROSION AND SEDIMENTATION CONTROL DEVICES AND SHALL COMPLY WITH THE WASHTENAW COUNTY PERMIT PROCEDURES FOR SOIL EROSION AND SEDIMENTATION CONTROL PER WASHTENAW COUNTY DEPARTMENT OF PUBLIC SERVICES AND LAND RESOURCE MANAGEMENT DIVISION.

DEWATERING:

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING APPROPRIATE PERMITS FROM LOCAL AUTHORITIES FOR DISCHARGE INTO RECEIVING WATERS WHEN APPLICABLE.
2. IF REQUIRED, DEWATERING MUST BE CONDUCTED SO THAT DISCHARGE WATER VELOCITY DOESN'T CAUSE SCOURING OF RECEIVING AREA.
3. IF SEDIMENT IS PRESENT IT SHALL BE REMOVED PRIOR TO DISCHARGE. DISCHARGE SHALL BE MAINTAINED A MINIMUM OF 100'-0" AWAY FROM ANY WETLAND OR WATER BODY.
4. SURFACE WATER THAT CONTACTS CONTAMINATED SOILS, AND DECONTAMINATION WATER THAT IS GENERATED WHILE CLEANING EQUIPMENT WILL BE CONSIDERED CONTACT WATER. CONTACT WATER SHALL BE COLLECTED AND STORED AND PROPERLY DISPOSED OF OFF SITE AT OWNER APPROVED FACILITY BY THE CONTRACTOR.
5. DEWATERING SHALL BE CONDUCTED IN ACCORDANCE TO DEWATERING PLAN PROVIDED BY THE CONTRACTOR AND APPROVED BY DTE. SEE SPECIFICATIONS FOR DETAILS.

SEEDING AND MULCHING:

1. ALL DISTURBED AREAS NOT AGGREGATE SURFACED SHALL BE STABILIZED WITH SEED AND MULCH. THE AREA TO BE SEEDED SHALL BE GRADED TO A SMOOTH EVEN SUBGRADE TO AN ELEVATION THREE INCHES BELOW THE PREPARED FINISHED GRADE.
2. AFTER APPROVAL BY THE ENGINEER OF THE GRADING OF THE SUBGRADE AS ABOVE DESCRIBED, THREE INCHES OF TOPSOIL SHALL BE PLACED THEREON. AFTER SPREADING OF TOPSOIL TO THE PREPARED FINISHED GRADE, ANY LARGE CLODS OR LUMPS SHALL BE BROKEN WITH A PULVERIZER OR OTHER EFFECTIVE MEANS AND ALL FOREIGN MATTER SHALL BE REMOVED AND DISPOSED OF OFF THE SITE. IMMEDIATELY BEFORE FERTILIZING AND SEEDING, THE TOPSOIL SHALL BE BROUGHT TO A FRIABLE CONDITION BY DISKING AND HARROWING TO A DEPTH OF THREE INCHES.
3. MDOT CLASS A CHEMICAL FERTILIZER SHALL BE UNIFORMLY APPLIED ON THE PREPARED TOPSOIL SURFACE AT A RATE OF 540 POUNDS PER ACRE OF 12-12-12, PER MDOT SPEC 917.10.
4. IMMEDIATELY AFTER THE FERTILIZER HAS BEEN PLACED, GRASS SEED MIXTURE TDS SHALL BE SOWN IN ACCORDANCE WITH MDOT SPEC. 816. REFER TO MDOT TABLE 917-1 FOR SEED MIXTURE TDS.
5. SEEDS SHALL NOT BE SOWN THROUGH MULCH. THE SEED MIXTURE REQUIRED SHALL BE SOWN, OR RESOWN, AT A RATE OF 220 POUNDS PER ACRE WITH EITHER MECHANICAL DRILLS, BROADCAST, OR HYDRO-SEEDER TYPE EQUIPMENT. AREAS THAT ARE SOWN BY HYDRO-SEEDER OR THE BROADCAST METHOD WILL BE VISUALLY INSPECTED FOR UNIFORMITY OF APPLICATION. AREAS SOWN BY HYDRO-SEEDER OR THE BROADCAST METHOD SHALL BE FLOATED AND LIGHTLY COMPACTED TO INCORPORATE THE SEED INTO THE UPPERMOST 1*4 INCH OF THE SOIL.
6. SEED SHALL BE SOWN IN THE PERIOD FROM APRIL 20 TO OCTOBER 1. NO SEED SHALL BE SOWN OUTSIDE THIS PERIOD UNLESS APPROVED BY ENGINEER.
7. IMMEDIATELY AFTER COMPLETION OF THE SEEDING OPERATION, THE SEEDED AREAS SHALL BE MULCHED. MULCH SHALL CONSIST OF STRAW SPREAD OVER THE SURFACE TO A UNIFORM THICKNESS AT A RATE OF 2 TONS PER ACRE (0.83 POUNDS PER SQUARE YARD) OR AS APPROVED BY THE ENGINEER. UNLESS OTHERWISE SPECIFIED, THE MULCH SHALL BE HELD IN PLACE BY A SPRAY COATING OF ADHESIVE MATERIAL APPROVED BY THE ENGINEER OR BY USING A NOTCHED DISK THAT PUNCHES AND ANCHORS THE MULCH MATERIAL. THE CONTRACTOR SHALL PROTECT ALL TRAFFIC SIGNS, STRUCTURES, AND OTHER OBJECTS FROM BEING MARKED OR DISFIGURED BY THE ADHESIVE MATERIAL. THE MULCH SHALL BE LOOSE ENOUGH TO ALLOW SUNLIGHT TO PENETRATE AND AIR TO SLOWLY CIRCULATE, BUT THICK ENOUGH TO SHADE THE GROUND, REDUCE THE RATE OF WATER EVAPORATION, AND PREVENT OR REDUCE WATER AND WIND EROSION. MULCH THAT HAS BECOME DISPLACED SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
8. DURING THE PERIOD FROM APRIL 20 TO NOVEMBER 1, ALL AREAS SEEDED SHALL BE WATERED AS NECESSARY UNTIL THE GRASS HAS BEEN ESTABLISHED AS REQUIRED BY THE SOIL EROSION PERMIT.
9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN A FINAL RESULT THAT WILL PROVIDE A WELL ROOTED GROWTH, RESISTANT TO NORMAL WASHING AND DROUGHT. SHOULD THE FIRST ATTEMPT AT SEEDING FAIL TO PRODUCE THE REQUIRED RESULT, THE CONTRACTOR WILL BE RESPONSIBLE FOR REPEATING THE NECESSARY OPERATIONS TO PRODUCE THE DESIGNED RESULTS, AT NO ADDITIONAL COST TO OWNER.
10. AFTER VEGETATION IS ESTABLISHED, SLOPED AREAS WILL BE MOWED ONLY TO DETER THE GROWTH OF BRUSH.

SOIL EROSION & SEDIMENTATION CONTROL MAINTENANCE:

1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN THE SOIL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS BEFORE AND AT ALL TIMES DURING CONSTRUCTION ON THE PROJECT. ANY MODIFICATIONS OR ADDITIONS TO SOIL EROSION CONTROL MEASURES DUE TO CONSTRUCTION OR CHANGED CONDITIONS SHALL BE COMPLIED WITH AS REQUIRED OR DIRECTED BY THE ENGINEER OR ENFORCEMENT AGENCY.
2. ALL SOIL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE PERMIT REQUIREMENTS OF WASHTENAW COUNTY.
3. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR, PERIODIC INSPECTIONS MAY BE MADE BY THE OWNER/ENGINEER TO DETERMINE THE EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY CORRECTIONS SHALL BE MADE WITHIN 48 HOURS.
4. ALL SILT FENCE SHALL BE INSPECTED DAILY, INCLUDING AROUND YARD DRAINS. SILT FENCE WHICH IS UNDERMINED, CLOGGED, FALLING OVER, OR OTHERWISE FUNCTIONING IMPROPERLY SHALL BE REPAIRED AND RESTORED TO ITS ORIGINAL INSTALLATION DETAIL WITHIN 48 HRS.
5. EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
6. THE CONTRACTOR SHALL INSTRUCT ALL DRIVERS TO CLEAN SOIL MATERIALS FROM TIRES PRIOR TO EXITING THE SITE.
7. ALL MUD/DIRT TRACKED INTO CITY STREETS & STATE ROADS FROM THIS SITE DUE TO CONSTRUCTION SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR. ALL MUD/DIRT TRACKED OR SPILLED ON PAVED ROAD SURFACES WITHIN AND ADJACENT TO THIS SITE SHALL BE PROMPTLY REMOVED BY THE CONTRACTOR DAILY. STREETS SHALL BE SWEEPED WEEKLY AT A MINIMUM.
8. SHOULD DUST BECOME A PROBLEM ON SITE, CONTRACTOR SHALL USE WATERING OR ANY OTHER METHOD OF DUST CONTROL ACCEPTABLE TO THE OWNER.
9. THE GENERAL CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
10. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTION.

REFERENCE DRAWINGS:

SITE PLAN	5A1329-1
SITE PREPARATION AND DEMOLITION PLAN	5A1329-5
SOIL EROSION AND SEDIMENT CONTROL PLAN	5A1329-8
STORMWATER MANAGEMENT PLAN	5M1329-1

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	PROJECT ENGINEER
	ERIC M. MYRICK (313)235-6728

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DATE	SUBMITTED FOR
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DATE	SUBMITTED FOR
12/13/24	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT

	PROJ DESIGN	PROJ MANAGER	OTHERS
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ENGINEERING	
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I. KRYCHYLSKA/BV	11/17/25
LAYOUT BY	DATE
Z.E. WIACEK/BV	11/17/25
CHECKED BY	DATE
G.J. ESKOLA/BV	11/17/25
PROJECT DESIGN/ELECT	DATE
PROJECT DESIGN/ACT	DATE
APPROVED FOR ISSUE	DATE

DTE Energy *DTE Electric* *Central Design/Standards*

TITLE

SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

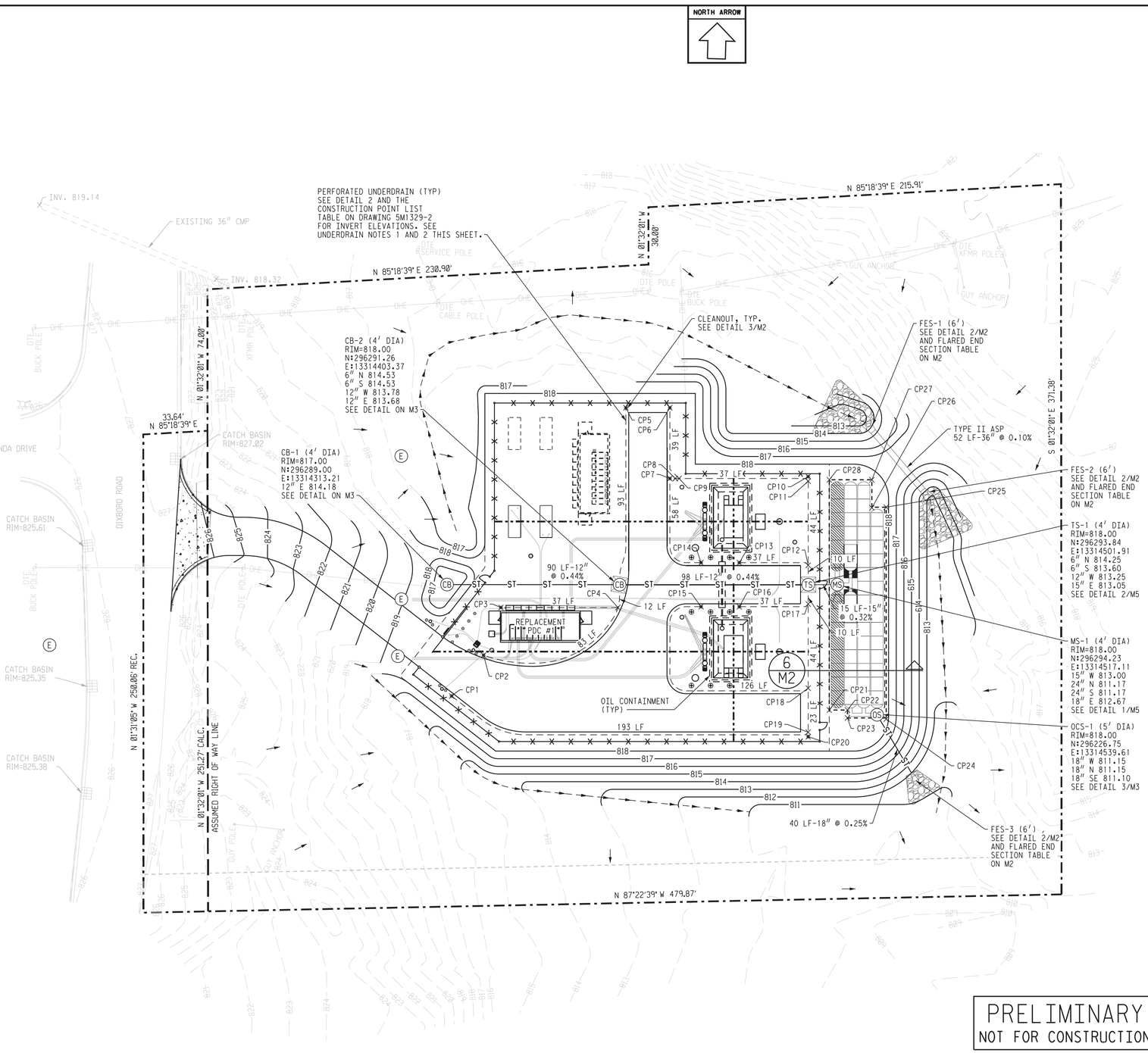
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GRENADA SUBSTATION	ANN ARBOR	NONE
DRAWING NUMBER	WORK ORDER	PROJECT DOCUMENT LIST
5A1329-9	69084198	GRENA-PDL-A-69084198

DOCUMENTUM FILENAME
GRENA-A-009

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11/13/2025 / Kry116972

STORMWATER MANAGEMENT

THE GRENADA SUBSTATION SITE IS LOCATED WITHIN SUPERIOR TOWNSHIP, EAST OF DIXBORO ROAD AND SOUTH OF PLYMOUTH ROAD IN WASHTENAW COUNTY, MI. THE TOPOGRAPHY OF THE SITE HAS SLOPES ACROSS THE SITE RANGING FROM (1.25% - 33.25%) WITH ELEVATIONS RANGING BETWEEN (810.00 AND 826.00) AND HAS A NATURAL DRAINAGE PATH FROM THE NORTHWEST CORNER TO THE SOUTH EAST CORNER OF THE PROPERTY. THE SITE HAS AN EXISTING SUBSTATION BUILDING AND YARD THAT WILL BE EXPANDED AS PART OF THIS PROJECT. THE COMPLETED SUBSTATION YARD WILL BE SURFACED WITH LOOSE MDOT 17A STONE MATERIAL ABOVE A CLEAN FILL MATERIAL LAYER WITH INTERIOR DRIVEWAYS SURFACED WITH 21AA CRUSHED GRAVEL. THE EXISTING ACCESS DRIVEWAY TO THE SUBSTATION WILL BE WIDENED TO 20-FEET WIDE AND A NEW CONCRETE APPROACH OFF OF DIXBORO ROAD WILL BE CONSTRUCTED. AREAS OUTSIDE OF THE SUBSTATION WILL BE STABILIZED WITH SEED AND MULCH, AND NEW TREES WILL BE FURNISHED FOR SCREENING. STORMWATER GENERATED ON SITE WILL FILTER THROUGH THE LOOSE STONE SURFACING OF THE SUBSTATION AND WILL BE COLLECTED BY A PERFORATED UNDERDRAIN SYSTEM. THESE UNDERDRAINS CONNECT TO A NETWORK OF STORM SEWERS AND STRUCTURES THAT WILL CONVEY RUNOFF ON SITE TO AN UNDERGROUND DETENTION SYSTEM EAST OF THE SUBSTATION PAD. AN OUTLET CONTROL STRUCTURE WILL BE INSTALLED WITHIN THE DETENTION AREA. THE STRUCTURE WILL CONTAIN AN 18" OUTLET PIPE AND A PRECAST CONCRETE FLOW RESTRICTOR WALL WITH AN OVERFLOW OPTION. THE PRECAST RESTRICTOR WALL WILL HAVE A TWO-STAGED OUTLET CONTROLLING THE 100-YEAR DETENTION VOLUME. THE FIRST FLUSH AND BANKFULL VOLUMES WILL BE INFILTRATED THROUGH THE BOTTOM OF THE DETENTION SYSTEM. THE 18" OUTLET PIPE WILL DISCHARGE TO A LOW AREA IN THE SOUTH EAST CORNER OF THE SITE, HEAVY LINED WITH RIP-RAP TO AVOID EROSION OF ADJACENT PROPERTIES. OFFSITE DRAINAGE WILL BE ABLE TO FLOW AROUND THE SITE THROUGH A 36" CULVERT TO THE SOUTHEAST CORNER OF THE SITE AS IT DOES CURRENTLY. ALL RUNOFF FROM THE SITE WILL ULTIMATELY DRAIN BACK TO FLEMMING CREEK. THERE ARE NO WETLANDS, STREAMS, OR LAKES WITHIN THE PROPERTY OR WITHIN 1,000 FEET OF THE PROPERTY THAT WILL BE AFFECTED DURING CONSTRUCTION.



PIPE MATERIAL:

ALL DRAIN PIPES ARE 6" DIAMETER PERFORATED ADS N-12 DUAL WALL PIPE WITH PROTECTIVE WRAP U.N.O.
ESTIMATED QUANTITY 6" ADS N-12 ST IB HDPE PERFORATED PIPE = 883 LINEAL FT.
ESTIMATED QUANTITY 12" CL IV REINFORCED CONCRETE PIPE = 188 LINEAL FT.
ESTIMATED QUANTITY 15" CL IV REINFORCED CONCRETE PIPE = 15 LINEAL FT.
ESTIMATED QUANTITY 18" CL IV REINFORCED CONCRETE PIPE = 40 LINEAL FT.
ESTIMATED QUANTITY 36" TYPE II ALUMINIZED STEEL = 52 LINEAL FT.
(VERIFY ALL LENGTHS OF PIPE IN THE FIELD)

STORMWATER NOTES:

1. SEE DRAWING 5M1329-3 FOR ALL STORM STRUCTURE FRAMES AND COVERS.
2. SEE DETAIL ON DRAWING 5M1329-2 FOR TYPICAL SECTION THRU UNDERGROUND DETENTION.
3. MDOT 17A STONE AROUND FOUNDATIONS SHALL BE COMPACTED TO 95% OF ITS' MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR METHODS (ASTM D1557), IN LIFTS NOT EXCEEDING 12-INCHES.
4. SEE DRAWING 5M1329-4 AND 5 FOR UNDERGROUND DETENTION SYSTEM DETAILS.
5. CONTRACTOR SHALL HAVE AN ENGINEER ONSITE FROM ADVANCED DRAINAGE SYSTEMS DURING CONSTRUCTION OF THE STORMWATER DETENTION SYSTEM AND STRUCTURES FOR INSPECTION.
6. CONTRACTOR TO NOTIFY BLACK AND VEATCH 48 HOURS PRIOR TO INSTALLING BASE STONE, PRE-TREATMENT STRUCTURES, AND STORMWATER DETENTION CHAMBERS FOR INSPECTION.

UTILITY WARNING

A MINIMUM OF 3 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY "MISS DIG" AND HAVE ALL UNDERGROUND UTILITIES STAKED BEFORE ANY WORK MAY BEGIN.

UNDERDRAIN NOTES:

1. ALL UNDERDRAIN PIPE SHALL BE SLOPED AT A MINIMUM 0.50%.
2. ALL UNDERDRAIN SHALL BE 6" DIAMETER UNLESS NOTED OTHERWISE ON THIS PLAN.

LEGEND:

- EXISTING FIRE HYDRANT
- EXISTING WATER SHUT OFF
- EXISTING CATCH BASIN
- EXISTING STORM MANHOLE
- PROPERTY LINE
- PROPOSED FENCE
- PROPOSED FOUNDATION
- FUTURE FOUNDATION
- 6" PERFORATED UNDERDRAIN
- ST — PROPOSED STORM SEWER
- REMOVABLE BOLLARD
- FIXED BOLLARD
- PROPOSED DRAINAGE SWALE CENTERLINE
- STORM/WATER UTILITY EASEMENT
- EXISTING CONTOUR
- 000 — PROPOSED CONTOUR
- (MS) PROPOSED MANHOLE
- (CB) PROPOSED CATCH BASIN
- (OS) PROPOSED STORM OUTLET STRUCTURE
- (TS) TREATMENT STRUCTURE
- (E) UNDERGROUND CONDUIT MANHOLE
- CARD READER
- CLEANOUT
- DRAINAGE FLOW ARROW
- RIP RAP
- CABLE TRENCH

REFERENCE DRAWINGS:

SITE PLAN	5A1329-1
EXISTING CONDITIONS PLAN	5A1329-4
SOIL EROSION AND SEDIMENT CONTROL PLAN	5A1329-8
SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS	5A1329-9
RESTROOM LAYOUT AND ELEVATIONS	5A1329-11
STORMWATER DETAILS (1 OF 4)	5M1329-2
STORMWATER DETAILS (2 OF 4)	5M1329-3
STORMWATER DETAILS (3 OF 4)	5M1329-4
STORMWATER DETAILS (4 OF 4)	5M1329-5

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DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
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DATE	SUBMITTED FOR
11/17/25	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT
DATE	SUBMITTED FOR
12/13/24	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT

	PROJ DESIGN	PROJ MANAGER	OTHERS
DATE			

WO

MADE BY	DATE	ACT	RELAY
CH'K BY	DATE	EPPM	APVD FOR ISSUE

(duplicate of the above)

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APPROVALS		
OTHER		DATE
RELAY		
EPPM		
ACT		
OTHERS		

ENGINEERING	
MADE BY	DATE
I. KRYCHYLSKA/BV	11/17/25
LAYOUT BY	DATE
Z.E. WIACEK/BV	11/17/25
CHECKED BY	DATE
G.J. ESKOLA/BV	11/17/25
PROJECT DESIGN/ELECT	DATE
PROJECT DESIGN/ACT	DATE
APPROVED FOR ISSUE	DATE

DTE Energy *DTE Electric* *Central Design/Standards*

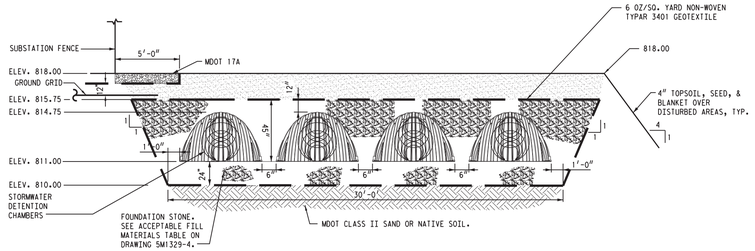
TITLE
STORMWATER MANAGEMENT PLAN

LOCATION NAME	SERVICE CENTER	SCALE
GRENADA SUBSTATION	ANN ARBOR	1"=30'-0"
DRAWING NUMBER	WORK ORDER	PROJECT DOCUMENT LIST
5M1329-1	69084198	GRENA-PDL-A-69084198

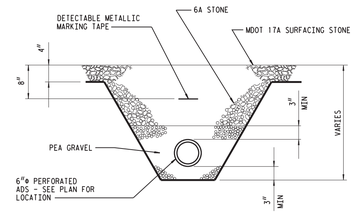
DOCUMENTUM FILENAME
GRENA-M-0001

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11/13/2025 /Kry116972

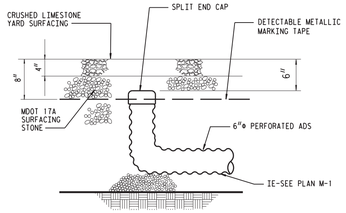
CONSTRUCTION POINT LIST			
CONSTRUCTION POINT	COORDINATE	INVERT	DESCRIPTION
CP-1	N:296230.70 E:13314317.00	815.00	6″ CLEANOUT
CP-2	N:296252.61 E:13314333.25	815.00	6″ CLEANOUT
CP-3	N:296277.76 E:13314341.64	814.78	6″ CLEANOUT
CP-4	N:296279.34 E:13314402.80	814.59	6″ TEE
CP-5	N:296383.86 E:13314404.26	815.00	6″ CLEANOUT
CP-6	N:296384.45 E:13314427.25	814.73	6″ CLEANOUT
CP-7	N:296347.45 E:13314428.21	814.90	6″ CLEANOUT
CP-8	N:296347.53 E:13314431.03	814.71	6″ WYE
CP-9	N:296347.58 E:13314433.03	814.70	6″ WYE
CP-10	N:296350.32 E:13314500.45	814.54	6″ CLEANOUT
CP-11	N:296347.94 E:13314500.51	814.52	6″ WYE
CP-12	N:296303.97 E:13314501.64	814.30	6″ WYE
CP-13	N:296304.41 E:13314465.62	814.48	6″ CLEANOUT
CP-14	N:296303.89 E:13314445.63	815.00	6″ CLEANOUT
CP-15	N:296280.90 E:13314446.22	814.50	6″ CLEANOUT
CP-16	N:296281.41 E:13314466.22	813.83	6″ CLEANOUT
CP-17	N:296283.72 E:13314502.17	814.64	6″ WYE
CP-18	N:296239.73 E:13314503.31	813.86	6″ WYE
CP-19	N:296216.74 E:13314503.90	814.00	6″ WYE
CP-20	N:296214.36 E:13314503.96	814.02	6″ CLEANOUT
CP-21	N:296228.61 E:13314514.60	-	DETENTION BASIN CORNER
CP-22	N:296228.86 E:13314524.09	-	DETENTION BASIN CORNER
CP-23	N:296224.72 E:13314524.20	-	DETENTION BASIN CORNER
CP-24	N:296225.24 E:13314544.46	-	DETENTION BASIN CORNER
CP-25	N:296335.38 E:13314541.62	-	DETENTION BASIN CORNER
CP-26	N:296335.18 E:13314534.10	-	DETENTION BASIN CORNER
CP-27	N:296349.51 E:13314533.73	-	DETENTION BASIN CORNER
CP-28	N:296348.93 E:13314511.49	-	DETENTION BASIN CORNER



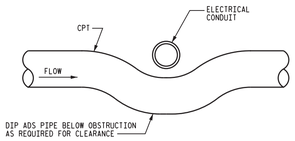
1 M1 SECTION THRU UNDERGROUND DETENTION
NO SCALE



2 M1 TYPICAL SUBSURFACE DRAINAGE SECTION
NO SCALE

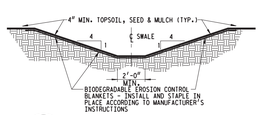


3 M1 TYPICAL SUBDRAIN CLEANOUT AT SPLIT END CAP
NO SCALE

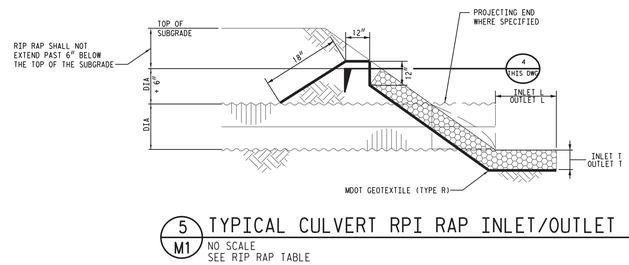


DETAIL @ INTERSECTION OF ADS
(NO SCALE) TO BE USED AT ANY OBSTRUCTION

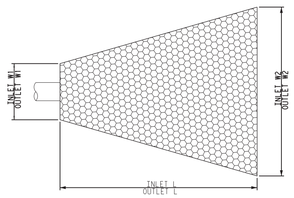
NOTE: IF CPT IS ENCASED IN CONCRETE AT INTERSECTION AND CPT ENCASEMENT IS CAUSING OBSTRUCTION, CPT ENCASEMNT SHALL BE TERMINATED AS NEEDED TO DIP PIPE BELOW OBSTRUCTION.



4 M1 TYPICAL SWALE SECTION
NO SCALE



5 M1 TYPICAL CULVERT RPI RAP INLET/OUTLET END
NO SCALE
SEE RIP RAP TABLE



SECTION 4
NO SCALE
SEE RIP RAP TABLE

FLARED END SECTION TABLE										
FLARED END SECTION					RIP RAP					REMARKS
F.E.S. NO.	NORTH	EAST	DIA	INV. EL.	L	T	W1	W2	D50	
1	296379.24	13314529.84	36″	813.00	23′-0″	0′-9″	9′-0″	32′-0″	SEE NOTE 1	DESIGNED FOR 25-YEAR STORM EVENT
2	296340.40	13314564.42	36″	812.95	23′-0″	0′-9″	9′-0″	32′-0″	SEE NOTE 1	DESIGNED FOR 25-YEAR STORM EVENT
3	296192.85	13314560.85	18″	811.00	14′-0″	0′-9″	4′-6″	19′-0″	SEE NOTE 1	DESIGNED FOR 25-YEAR STORM EVENT

1. RIP RAP SHALL BE MDOT PLAIN REVETMENT GRADATION AND SHALL BE INSTALLED PER MDOT STANDARD SPECIFICATION 916.01.0 FOR RIP RAP SPECIFICATIONS.

REFERENCE DRAWINGS:

SITE PLAN	5A1329-1
STORMWATER MANAGEMENT PLAN	5M1329-1
STORMWATER DETAILS (2 OF 4)	5M1329-3
STORMWATER DETAILS (3 OF 4)	5M1329-4
STORMWATER DETAILS (4 OF 4)	5M1329-5

PRELIMINARY
NOT FOR CONSTRUCTION

REV	NOTE TO FIELD
-	FOR ANY QUESTIONS ON THIS DESIGN, PLEASE CONTACT:
	PROJECT ENGINEER
	ERIC M. MYRICK (313)235-6728

STOP THINK ACT REVIEW

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DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
11/17/25	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT
DATE	SUBMITTED FOR
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	PROJ DESIGN	PROJ MANAGER	OTHERS
DATE			
WO			
MADE BY	DATE	ACT	RELAY
CH'K BY	DATE	EPPM	APVD FOR ISSUE

APPROVALS			
OTHER		DATE	ENGINEERING
RELAY			MADE BY: I. KRYCHYLSKA/BV — DATE: 11/17/25
EPPM			LAYOUT BY: Z.E. WIACEK/BV — DATE: 11/17/25
ACT			CHECKED BY: G.J. ESKOLA/BV — DATE: 11/17/25
OTHERS			PROJECT DESIGN/ELECT — DATE
			PROJECT DESIGN/ACT — DATE
			APPROVED FOR ISSUE — DATE

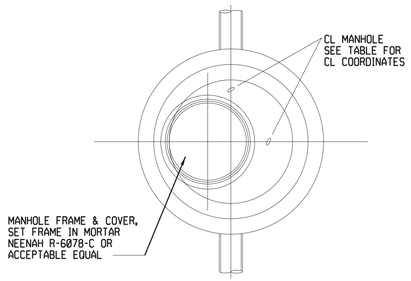
DTE Energy *DTE Electric* *Central Design/Standards*

TITLE
STORMWATER DETAILS
(1 OF 4)

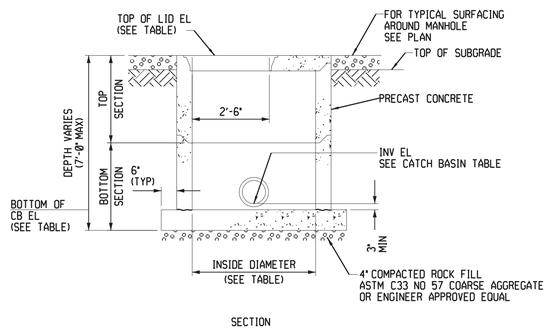
LOCATION NAME	SERVICE CENTER	SCALE
GRENADA SUBSTATION	ANN ARBOR	NONE
DRAWING NUMBER: 5M1329-2	WORK ORDER: 69084198	PROJECT DOCUMENT LIST: GRENA-PDL-A-69084198

DOCUMENTUM FILENAME: GRENA-M-0002

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11/13/2025 / Kry116972

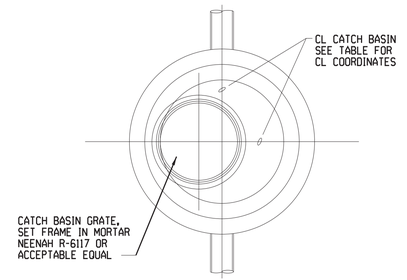


PLAN

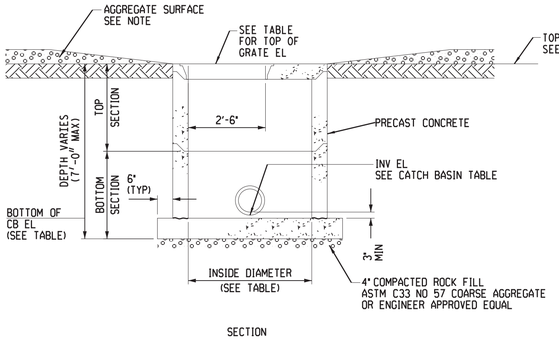


SECTION

TYPICAL PRECAST MANHOLE UNDER 7'-0"
NO SCALE

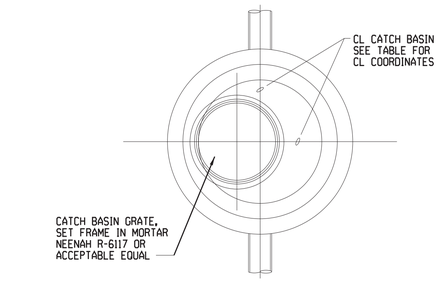


PLAN

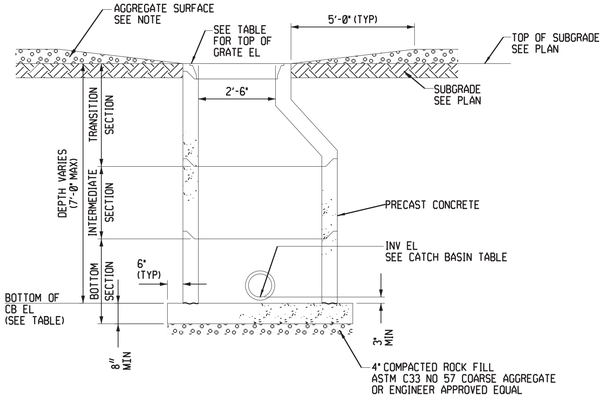


SECTION

TYPICAL PRECAST CATCH BASIN UNDER 7'-0"
NO SCALE

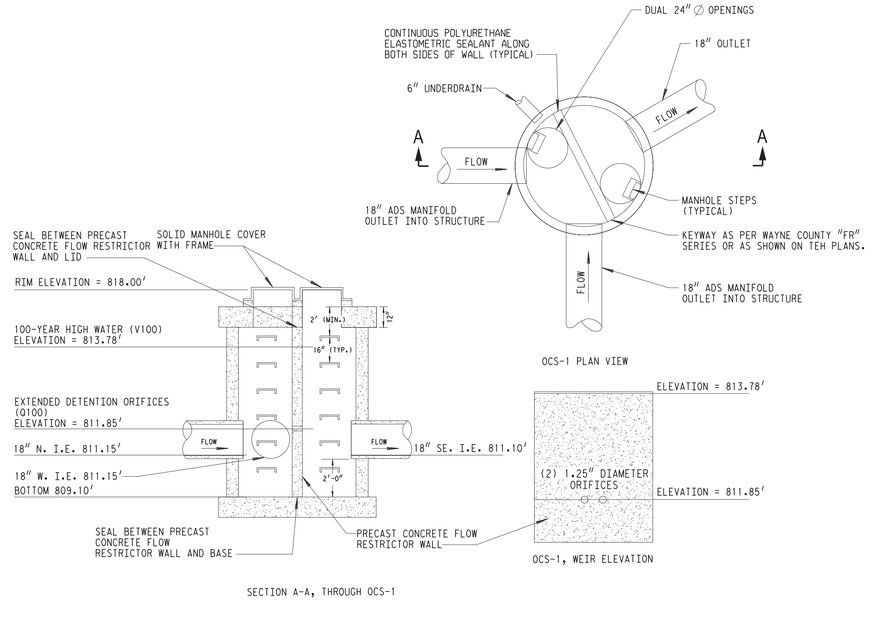


PLAN

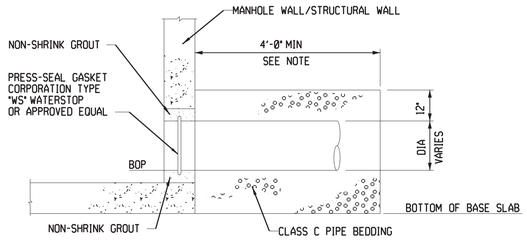


SECTION

TYPICAL PRECAST CATCH BASIN 7'-0" AND OVER
NO SCALE



3 / M3 OUTLET CONTROL STRUCTURE (OCS-1)
NO SCALE



NOTE: CLASS C PIPE BEDDING TO LIMITS SHOWN OR EDGE OF MANHOLE EXCAVATION WHICHEVER IS GREATER.

TYPICAL WALL PENETRATION DETAIL
NO SCALE

PRELIMINARY
NOT FOR CONSTRUCTION

REV	NOTE TO FIELD
-	FOR ANY QUESTIONS ON THIS DESIGN, PLEASE CONTACT:
	PROJECT ENGINEER
	ERIC W. MYRICK (313)235-6728

STOP THINK ACT REVIEW

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REFERENCE DRAWINGS:

SITE PLAN ---------- 5A1329-1
SOIL EROSION AND SEDIMENT CONTROL PLAN ---------- 5A1329-8
STORMWATER MANAGEMENT PLAN ---------- 5M1329-1
STORMWATER DETAILS (1 OF 4) ---------- 5A1329-2
STORMWATER DETAILS (3 OF 4) ---------- 5A1329-4
STORMWATER DETAILS (4 OF 4) ---------- 5A1329-5

DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
DATE	SUBMITTED FOR
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11/17/25	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT
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DATE		

WO

MADE BY	DATE	ACT	RELAY
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APPROVALS		
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I. KRYCHYLSKA/BV	11/17/25
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PROJECT DESIGN/ACT	DATE
APPROVED FOR ISSUE	DATE

DTE Energy *DTE Electric* *Central Design/Standards*

TITLE

STORMWATER DETAILS (2 OF 4)

LOCATION NAME	SERVICE CENTER	SCALE
GRENADA SUBSTATION	ANN ARBOR	NONE
DRAWING NUMBER	WORK ORDER	PROJECT DOCUMENT LIST
5M1329-3	69084198	GRENA-PDL-A-69084198

DOCUMENTUM FILENAME
GRENA-M-0003

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11/13/2025 / Kry116972

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	
ADS SALES REP	
PROJECT NO.	

ADS
Advanced Drainage Systems, Inc.

ADS SiteAssist™
FOR STORMTECH INSTALLATION INSTRUCTIONS VISIT OUR APP

DTE GRENADA

ANN ARBOR, MI, USA

MC-3500 STORMTECH CHAMBER SPECIFICATIONS

1. CHAMBERS SHALL BE STORMTECH MC-3500.
2. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
3. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
4. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
5. THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
6. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
7. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT/% AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
8. ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE. AS FOLLOWS:
   - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
   - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
   - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
9. CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.
10. MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH NOTE #6.32 FOR MANIFOLD SIZING GUIDANCE, DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD.
11. ADS DOES NOT DESIGN OR PROVIDE MEMBRANE LINER SYSTEMS. TO MINIMIZE THE LEAKAGE POTENTIAL OF LINER SYSTEMS, THE MEMBRANE LINER SYSTEM SHOULD BE DESIGNED BY A KNOWLEDGEABLE GEOTEXTILE PROFESSIONAL AND INSTALLED BY A QUALIFIED CONTRACTOR.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

1. STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
   - STONESHOOTER LOCATED OFF THE CHAMBER BED.
   - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
6. MAINTAIN MINIMUM -6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
8. EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE; AASHTO M43 #3, 357, 4, 467, 5, 56, OR 57.
9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
11. ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

NOTES FOR CONSTRUCTION EQUIPMENT

1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
2. THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
   - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
   - NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
   - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.

CONTACT STORMTECH AT 1-800-821-6710 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

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PROPOSED LAYOUT

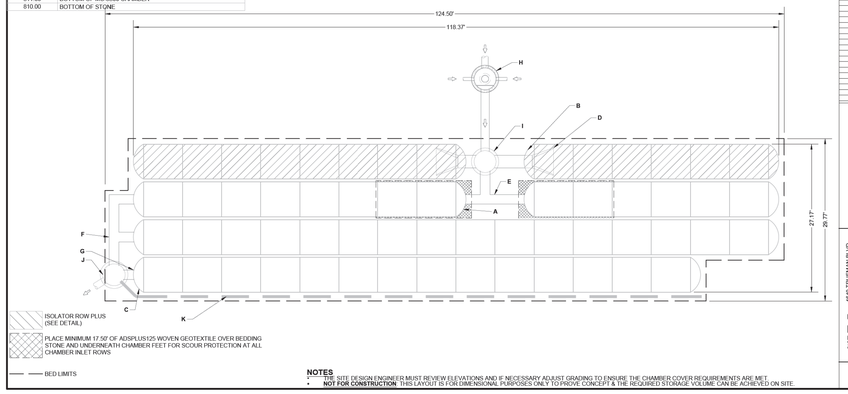
58	STORMTECH MC-3500 CHAMBERS
12	STORMTECH MC-3500 END CAPS
12	STONE ABOVE (in)
12	STONE BELOW (in)
30	% STONE VOID
10,729	**INSTALLED SYSTEM VOLUME (CF) (PERIMETER STONE INCLUDED)**
3559	SYSTEM AREA (ft²)
309	SYSTEM PERIMETER (ft)

PROPOSED ELEVATIONS

822.75	MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)
816.75	MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC)
816.25	MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC)
816.25	MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)
816.25	MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)
815.75	TOP OF STONE
814.75	TOP OF MC-3500 CHAMBER
812.67	18" TOP MANIFOLD/CONNECTION INVERT
811.17	24" ISOLATOR ROW PLUS CONNECTION INVERT
811.15	18" BOTTOM MANIFOLD/CONNECTION INVERT
811.15	6" UNDERDRAIN INVERT
811.00	BOTTOM OF MC-3500 CHAMBER
810.00	BOTTOM OF STONE

*INVERT ABOVE BASE OF CHAMBER

PART TYPE	ITEM ON LAYOUT	DESCRIPTION	INVERT*	MAX FLOW
PREFABRICATED END CAP	A	18" TOP PRE-CORED END CAP, PART# MC3500EPP18TC / TYP OF ALL 18" TOP CONNECTIONS	20.03"	
PREFABRICATED END CAP	B	24" BOTTOM PRE-CORED END CAP, PART# MC3500EPP24BC / TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR PLUS ROWS	2.06"	
PREFABRICATED END CAP	C	18" BOTTOM PRE-CORED END CAP, PART# MC3500EPP18BC / TYP OF ALL 18" BOTTOM CONNECTIONS	1.77"	
FLAMP	D	INSTALL FLAMP ON 24" ACCESS PIPE / PART#: MCFLAMP (TYP 2 PLACES)		
MANIFOLD	E	18" x 18" TOP MANIFOLD, ADS N-12	20.03"	
MANIFOLD	F	18" x 18" BOTTOM MANIFOLD, ADS N-12	1.77"	
PIPE CONNECTION	G	18" BOTTOM CONNECTION	1.77"	
CONCRETE STRUCTURE	H	MH - 48" ECCENTRIC MANHOLE WITH QUALITY LINT (SEE SEPARATE SUBMITTAL)		
CONCRETE STRUCTURE	I	DESIGN ENGINEER - PROVIDED BY OTHERS		5.5 CFS IN
CONCRETE STRUCTURE	J	DCS (DESIGN BY ENGINEER - PROVIDED BY OTHERS)		8.0 CFS OUT
UNDERDRAIN	K	6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN		



ISOLATOR ROW PLUS (SEE DETAIL)

PLACE MINIMUM 17.50' OF ADSPLUS125 WOVEN GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS

BED LIMITS

NOTES
- THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET.
- **NOT FOR CONSTRUCTION** THIS LAYOUT IS FOR DIMENSIONAL PURPOSES ONLY TO PROVE CONCEPT & THE REQUIRED STORAGE VOLUME CAN BE ACHIEVED ON SITE.

DTE GRENADA
ANN ARBOR, MI, USA
DRAWN: ZW
CHECKED: NA
DATE: 10/15/2025
PROJECT #

DATE	ISSUE

StormTech® Chamber System

4640 TRUEMAN BLVD
HILLIARD, OH 43026
1-800-733-7473

SCALE: 0 10 20

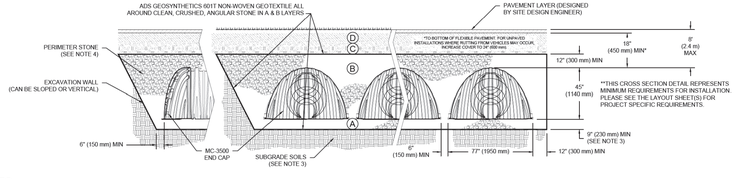
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SHEET 2 OF 6

ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS

	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	**FINAL FILL:** FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	**INITIAL FILL:** FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145[1] A-1, A-2-4, A-3 OR AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	**EMBEDMENT STONE:** FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[3]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
A	**FOUNDATION STONE:** FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE OR RECYCLED CONCRETE[3]	AASHTO M43[1] 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE.[2,3]

PLEASE NOTE:
1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
2. STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
4. ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.
5. WHERE RECYCLED CONCRETE AGGREGATE IS USED IN LAYERS 'A' OR 'B' THE MATERIAL SHOULD ALSO MEET THE ACCEPTABILITY CRITERIA OUTLINED IN TECHNICAL NOTE 6.20 "RECYCLED CONCRETE STRUCTURAL BACKFILL".



NOTES:

1. CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
2. MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
3. THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS. REFERENCE STORMTECH DESIGN MANUAL FOR BEARING CAPACITY GUIDANCE.
4. PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
5. REQUIREMENTS FOR HANDLING AND INSTALLATION:
   - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
   - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
   - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 500 LBS/FT/% AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

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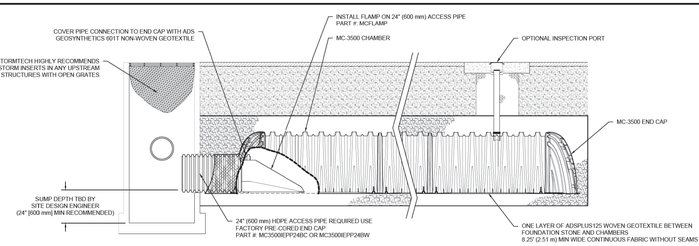
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StormTech® Chamber System

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HILLIARD, OH 43026
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SHEET 3 OF 6



MC-3500 ISOLATOR ROW PLUS DETAIL
NTS

INSPECTION & MAINTENANCE

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT
- A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR PLUS ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

NOTES

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

DTE GRENADA
ANN ARBOR, MI, USA
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SHEET 4 OF 6

REFERENCE DRAWINGS:

SITE PLAN	5A1329-1
STORMWATER MANAGEMENT PLAN	5M1329-1
STORMWATER DETAILS (1 OF 4)	5M1329-2
STORMWATER DETAILS (2 OF 4)	5M1329-3
STORMWATER DETAILS (4 OF 4)	5M1329-5

PRELIMINARY
NOT FOR CONSTRUCTION

REV	NOTE TO FIELD
-	FOR ANY QUESTIONS ON THIS DESIGN, PLEASE CONTACT:
	PROJECT ENGINEER
	ERIC M. MYRICK (313)235-6728

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APPROVALS		
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ENGINEERING	
MADE BY	DATE
I. KRYCHYLSKA/BV	11/17/25
LAYOUT BY	DATE
Z.E. WIACEK/BV	11/17/25
CHECKED BY	DATE
G.J. ESKOLA/BV	11/17/25
PROJECT DESIGN/ELECT	DATE
PROJECT DESIGN/ACT	DATE
APPROVED FOR ISSUE	DATE

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11/17/25	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT
DATE	SUBMITTED FOR
12/13/24	SUPERIOR TOWNSHIP CONDITIONAL USE PERMIT

DTE Energy *DTE Electric* *Central Design/Standards*

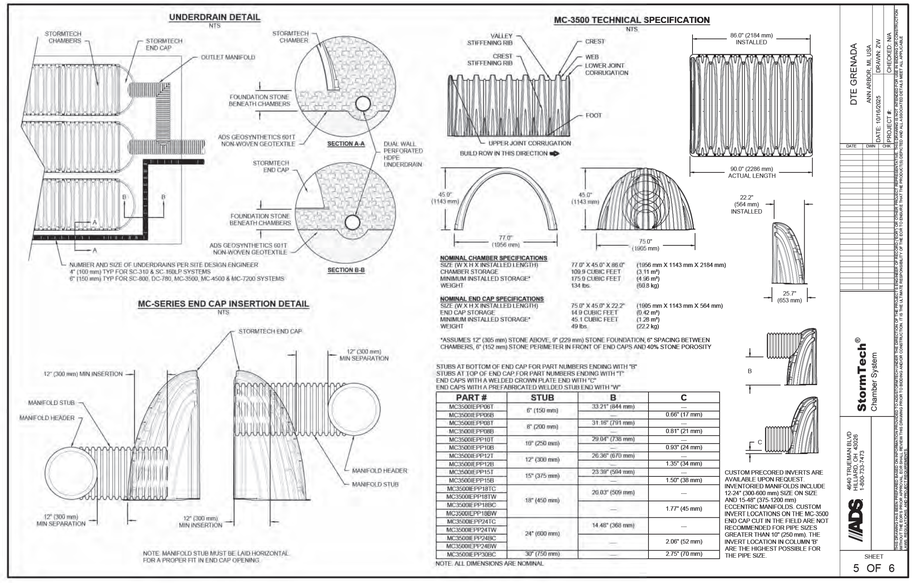
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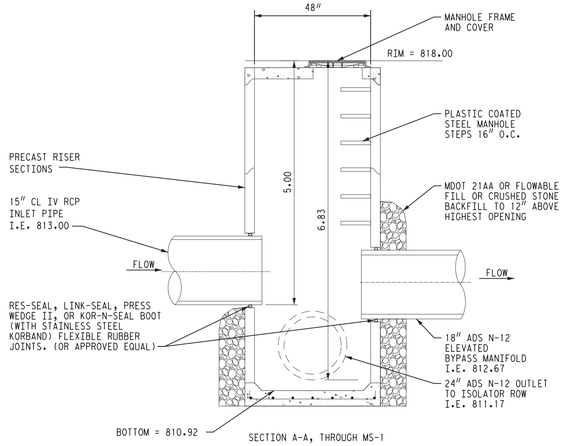
STORMWATER DETAILS
(3 OF 4)

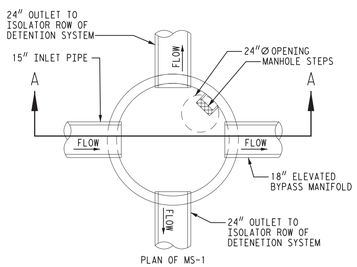
LOCATION NAME	SERVICE CENTER	SCALE
GRENADA SUBSTATION	ANN ARBOR	NONE
DRAWING NUMBER	WORK ORDER	PROJECT DOCUMENT LIST
5M1329-4	69084198	GRENA-PDL-A-69084198

DOCUMENTUM FILENAME
GRENA-M-0004

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11/13/2025 / Kry116972







1 M5 MANIFOLD STRUCTURE (MS-1)
NO SCALE

PRE-MANUFACTURED STORMWATER UNDERGROUND DETENTION TREATMENT SYSTEM CONSTRUCTION NOTES

TESTING:
THE MANUFACTURER OF UNDERGROUND DETENTION SYSTEM ELEMENTS MUST CONTACT THE WASHTENAW COUNTY TESTING OFFICE (734-222-6860) AT LEAST 72 HOURS PRIOR TO FABRICATION TO SCHEDULE INSPECTION DURING FABRICATION. WASHTENAW COUNTY INSPECTS THE MATERIAL FABRICATION PROCESS TO ENSURE THAT THE MANUFACTURER'S TESTING OF THE PRODUCT OCCURS AT THE APPLICABLE AASHTO OR ASTM STANDARDS. TESTING OF PIPE MATERIALS SHOULD OCCUR AT THE FOLLOWING FREQUENCIES:

TESTING OF SCC AND END CAPS SHOULD OCCUR AT A FREQUENCY OF ONE TEST PER 200 PIECES (CHAMBERS OR END CAPS) OR PER SHIFT, WHICHEVER IS LESS.

FOR UNDERGROUND DETENTION SYSTEMS CONSISTING OF PIPES AND SCC, A STABLE FOUNDATION IS NECESSARY TO INSURE THAT THE PROPER LINE AND GRADE IS MAINTAINED. UNSTABLE FOUNDATIONS MAY BE UNDERCUT AND REPLACED WITH MDOT CLASS I GRANULAR BEDDING MATERIAL PLACED IN 6 INCH LIFTS AND COMPACTED TO 95% OF ITS MAXIMUM UNIT WEIGHT. OTHER METHODS OF STABILIZATION CAN BE USED IF APPROVED BY THE WASHTENAW COUNTY PERMIT ENGINEER.

WHEN INSTALLING UNDERGROUND PIPE AS PART OF A UNDERGROUND DETENTION SYSTEM, BACKFILL SHOULD BE AS FOLLOWS:

FOR UNDERGROUND DETENTION SYSTEMS CONSISTING OF SCC, FOUNDATIONS AND EMBEDMENT STONE SHOULD BE CLEAN, ANGULAR STONE MEETING THE REQUIREMENTS OF MDOT 4AA, 6AA, 6A OR THE REQUIREMENTS OF WAYNE COUNTY SPECIFICATIONS FOR 3-IN X 1-IN MAINTENANCE AGGREGATE (NO CRUSH CONCRETE) WITH A MAXIMUM PERCENTAGE OF 5% PASSING THE #200 SIEVE.

BACKFILL FOR ALL TYPES OF UNDERGROUND DETENTION SYSTEM SHOULD BE INSTALLED AS FOLLOWS:

- ALL BACKFILL MATERIALS SHOULD BE PLACED IN A BALANCED MANNER MAKING SURE THAT NO MORE THAN A 2 LIFT DIFFERENTIAL IS PRESENT FROM ONE SIDE OF THE PIPE/SCC/STRUCTURE TO THE OTHER. BALANCED LIFTS SHOULD BE ADVANCED ACROSS THE WIDTH OF THE SYSTEM, EVENLY ALONG THE LENGTH OF THE SYSTEM THROUGHOUT THE BACKFILLING PROCESS.
- ALL BACKFILL MATERIALS SHOULD BE PLACED IN LIFTS OF MAXIMUM 10-INCHES.
- FOR EACH BACKFILL LIFT, ALL MATERIALS SHOULD BE COMPACTED TO A MINIMUM OF 95% (90% MINIMUM REQUIRED FOR 6A AND 21AA) OF THE BACKFILL MATERIAL'S MAXIMUM UNIT WEIGHT AT MOISTURE CONTENT NOT GREATER THAN OPTIMUM. THE MAXIMUM UNIT WEIGHT OF THE BACKFILL MATERIALS SHOULD BE DETERMINED BY THE AASHTO T 180 OR MICHIGAN CONE METHOD. THE FREQUENCY OF THE COMPACTION TESTING SHOULD BE ONE TEST PER LIFT OF BACKFILL PER 200 LINEAL FEET OR LESS OF TRENCH.

A WASHTENAW COUNTY PERMIT ENGINEER MUST OBSERVE THE INSTALLATION OF ALL UNDERGROUND DETENTION SYSTEMS. CONTACT THE WASHTENAW COUNTY PERMIT OFFICE (734-222-6860) AT LEAST 72 HOURS PRIOR TO INSTALLATION TO SCHEDULE INSPECTION DURING INSTALLATION. WASHTENAW COUNTY WILL NOT ACCEPT ANY UNDERGROUND DETENTION SYSTEMS INSTALLED WHEN A COUNTY PERMIT ENGINEER IS NOT PRESENT; PERMITS AND FINANCIAL ASSURANCES WILL NOT BE RELEASED AT THE CONCLUSION OF CONSTRUCTION FOR SUCH SYSTEMS.

DOCUMENTATION OF THE FOLLOWING ITEMS RELATIVE TO THE INSTALLATION OF UNDERGROUND DETENTION SYSTEMS IS REQUIRED TO BE SUBMITTED TO THE WASHTENAW COUNTY PERMIT ENGINEER BEFORE PERMITS AND FINANCIAL ASSURANCES ARE RELEASED:

- ALL BACKFILL MATERIALS ARE FROM WAYNE COUNTY TESTED STOCK.
- ALL BACKFILL MATERIALS WERE PLACED IN LIFTS OF MAXIMUM 10-INCHES.
- FOR EACH BACKFILL LIFT, ALL MATERIALS WERE COMPACTED TO A MINIMUM OF 95% OF THE BACKFILL MATERIAL'S MAXIMUM UNIT WEIGHT AT MOISTURE CONTENT NOT GREATER THAN OPTIMUM. IF 6A AND 21AA BACKFILL WAS USED, MATERIALS WERE COMPACTED TO 90% OF THE BACKFILL MATERIAL'S MAXIMUM UNIT WEIGHT AT MOISTURE CONTENT NOT GREATER THAN OPTIMUM.
- THE MAXIMUM UNIT WEIGHT OF THE BACKFILL MATERIAL WAS DETERMINED BY THE AASHTO T 180 OR MICHIGAN CONE METHOD.
- THE COMPACTION WAS TESTED A MINIMUM OF ONE TEST PER LIFT OF BACKFILL PER 200 LINEAL FEET OR LESS OF TRENCH.

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER:	MIGUEL VARGAS 810.965.0574 MIGUEL.VARGAS@ADSPIPE.COM
ADS SALES REP:	RYAN METCALF 810.965.0574 RYAN.METCALF@ADSPIPE.COM
PROJECT NO:	5423944

Advanced Drainage Systems, Inc.

DTE GRENADA SUBSTATION

SUPERIOR TWP, MI

ARCADIA SPECIFICATIONS

MATERIALS AND DESIGN
CONCRETE STRUCTURES: DESIGNED FOR H-20 AND/OR HS-20 TRAFFIC LOADING AND APPLICABLE SOIL LOADS OR AS OTHERWISE DETERMINED BY A LICENSED PROFESSIONAL ENGINEER. THE MATERIALS AND STRUCTURAL DESIGN OF THE DEVICES SHALL BE PER ASTM C857 AND ASTM C858.

HP MANHOLE STRUCTURES: MADE FROM AN IMPACT MODIFIED COPOLYMER POLYPROPYLENE MEETING THE MATERIAL REQUIREMENTS OF ASTM F2764. I.H.S.CUM1140 CUM0. HI.GUG.H SHALL BE: MMAH-ALI UNI-ELI-HUM-PULYTI-HYLENE MATERIAL MEETING ASTM D3350 CELL CLASS 213320C. GASKETS SHALL BE MADE OF MATERIAL MEETING THE REQUIREMENTS OF ASTM F477.

PERFORMANCE
THE STORMWATER TREATMENT UNIT SHALL BE AN INLINE UNIT CAPABLE OF CONVEYING 100% OF THE DESIGN PEAK FLOW. IF PEAK FLOW RATES EXCEED MAXIMUM HYDRAULIC RATE, THE UNIT SHALL BE INSTALLED OFFLINE.

THE STORMWATER TREATMENT UNIT INTERNALS SHALL CONSIST OF (1) SEPARATOR ASSEMBLY,

THE ARCADIA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 80% OF THE SUSPENDED SOLIDS ON AN ANNUAL AGGREGATE REMOVAL BASIS. SAID REMOVAL SHALL BE BASED ON FULL-SCALE THIRD PARTY TESTING USING OK-110 MEDIA GRADATION OR EQUIVALENT AND 300 mg/L INFLUENT CONCENTRATION. SAID FULL SCALE TESTING SHALL HAVE INCLUDED SEDIMENT CAPTURE BASED ON ACTUAL TOTAL MASS COLLECTED BY THE STORMWATER TREATMENT UNIT.
- OR -
THE ARCADIA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS USING A MEDIA MIX WITH d50=75 MICRON AND 200 MG/L INFLUENT CONCENTRATION.
- OR -
THE ARCADIA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS PER CURRENT NJDEP/NJCAT HDS PROTOCOL.

MANUFACTURER
EACH STORMWATER TREATMENT SYSTEM SHALL BE AN ARCADIA SYSTEM AS MANUFACTURED BY ADVANCED DRAINAGE SYSTEMS™, 2650 HAMILTON-EATON RD., HAMILTON, OH, 45011.

ARCADIA MAINTENANCE

ARCADIA SYSTEMS MUST BE INSPECTED AND MAINTAINED PERIODICALLY. INSPECTION IS MADE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMILAR DEVICE. MAINTENANCE IS REQUIRED WHEN THE SEDIMENT DEPTH EXCEEDS 18 INCHES. MINIMUM INSPECTION IS RECOMMENDED TWICE A YEAR TO MAINTAIN OPERATION AND FUNCTION OF THE UNIT.

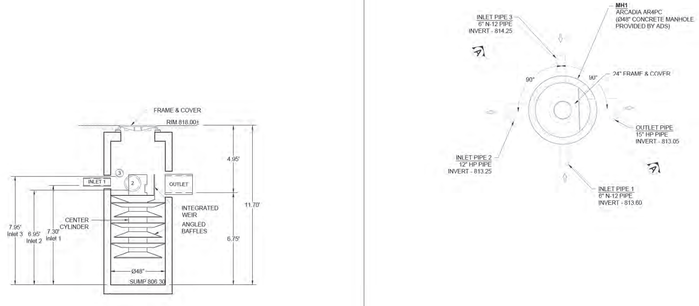
MAINTENANCE INSTRUCTIONS
1. REMOVE THE MANHOLE COVER TO PROVIDE ACCESS TO THE POLLUTANT STORAGE. POLLUTANTS ARE STORED IN THE SUMP, BELOW THE BOWL ASSEMBLY VISIBLE FROM THE SURFACE. YOU'LL ACCESS THIS AREA THROUGH THE CENTER ACCESS CYLINDER.
2. USE A VACUUM TRUCK OR OTHER SIMILAR EQUIPMENT TO REMOVE ALL WATER, DEBRIS, OILS AND SEDIMENT.
3. USE A HIGH PRESSURE HOSE TO CLEAN THE MANHOLE OF ALL THE REMAINING SEDIMENT AND DEBRIS. THEN, USE THE VACUUM TRUCK TO REMOVE THE WATER.
4. FILL THE CLEANED MANHOLE WITH WATER UNTIL THE LEVEL REACHES THE INVERT OF THE OUTLET PIPE.
5. REPLACE THE MANHOLE COVER.
6. DISPOSE OF THE POLLUTED WATER, OILS, SEDIMENT AND TRASH AT AN APPROVED FACILITY.
   - LOCAL REGULATIONS PROHIBIT THE DISCHARGE OF SOLID MATERIAL INTO THE SANITARY SYSTEM. CHECK WITH THE LOCAL SEWER AUTHORITY FOR AUTHORITY TO DISCHARGE THE LIQUID.
   - SOME LOCALITIES TREAT THE POLLUTANTS AS LEACHATE. CHECK WITH LOCAL REGULATORS ABOUT DISPOSAL REQUIREMENTS.
   - ADDITIONAL LOCAL REGULATIONS MAY APPLY TO THE MAINTENANCE PROCEDURE.

ARCADIA INSTALLATION NOTES

INSTALLATION OF THE STORMWATER TREATMENT UNIT(S) SHALL BE PERFORMED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. SUCH INSTRUCTIONS CAN BE OBTAINED BY CALLING ADVANCED DRAINAGE SYSTEMS AT (800) 821-6710 OR BY LOGGING ON TO WWW.ADSPIPE.COM.

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ARCADIA AR4PC			MH1
TREATMENT RATE (OK-110 80% REMOVAL)			2.75 CFS
BYPASS RATE			—
	DIAMETER	PIPE MATERIAL	INVERT
INLET 1	6"	N-12	813.60
INLET 2	11.2"	HP	813.25
INLET 3	6"	N-12	814.25
INLET 4			
OUTLET	15"	HP	813.05



PROFILE VIEW
NTS

2 M5 TREATMENT STRUCTURE (TS-1)
NO SCALE

SITE SPECIFIC PLAN VIEW
SCALE: 1/4"=1'

PRODUCT SPECIFICATIONS

- THE STORMWATER TREATMENT UNIT SHALL BE AN INLINE UNIT CAPABLE OF CONVEYING 100% OF THE DESIGN PEAK FLOW. IF PEAK FLOW RATES EXCEED MAXIMUM HYDRAULIC RATE, THE UNIT SHALL BE INSTALLED OFFLINE.
- THE ARCADIA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 80% OF THE SUSPENDED SOLIDS ON AN ANNUAL AGGREGATE REMOVAL BASIS. SAID REMOVAL SHALL BE BASED ON FULL-SCALE THIRD PARTY VERIFIED TESTING USING OK-110 MEDIA GRADATION OR EQUIVALENT AND 300 MG/L INFLUENT CONCENTRATION. FULL SCALE TESTING SHALL HAVE INCLUDED SEDIMENT CAPTURE BASED ON ACTUAL TOTAL MASS COLLECTED BY THE STORMWATER TREATMENT UNIT.
  - OR -
  THE ARCADIA UNIT SHALL BE DESIGNED TO REMOVE AT LEAST 50% OF TSS USING A MEDIA MIX WITH D50=75 MICRON AND 200 MG/L INFLUENT CONCENTRATION PER CURRENT NJDEP/NJCAT HDS PROTOCOL.

DTE GRENADA SUBSTATION
SUPERIOR TWP, MI
DATE: 10/16/2025 DRAWN: ZW CHECKED: MDV
PROJECT #: 5423944
ARCADIA Stormwater Separator
ADS TECHNICAL 1-800-733-7473
AS NOTED
SHEET 2 OF 3

REFERENCE DRAWINGS:

SITE PLAN ——— 5A1329-1
STORMWATER MANAGEMENT PLAN ——— 5M1329-1
STORMWATER DETAILS (1 OF 4) ——— 5M1329-2
STORMWATER DETAILS (2 OF 4) ——— 5M1329-3
STORMWATER DETAILS (3 OF 4) ——— 5M1329-4

PRELIMINARY
NOT FOR CONSTRUCTION

REV —
NOTE TO FIELD
FOR ANY QUESTIONS ON THIS DESIGN, PLEASE CONTACT:
PROJECT ENGINEER
ERIC M. MYRICK
(313)235-6728

STOP THINK ACT REVIEW

811 Know what's below. Call before you dig.

DATE	SUBMITTED FOR
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DATE	SUBMITTED FOR
11/17/25	SUPERIOR TOWNSHIP CONDITIIONAL USE PERMIT
DATE	SUBMITTED FOR
12/13/24	SUPERIOR TOWNSHIP CONDITIIONAL USE PERMIT

PROJ DESIGN	PROJ MANAGER	OTHERS
DATE		
WO		
MADE BY	DATE	ACT / RELAY
CH'K BY	DATE	EPPM / APVD FOR ISSUE

APPROVALS		
OTHER		DATE
RELAY		
EPPM		
ACT		
OTHERS		

ENGINEERING	
MADE BY	DATE
I. KRYCHYLSKA/BV	11/17/25
LAYOUT BY	DATE
Z.E. WIACEK/BV	11/17/25
CHECKED BY	DATE
G.J. ESKOLA/BV	11/17/25
PROJECT DESIGN/ELECT	DATE
PROJECT DESIGN/ACT	DATE
APPROVED FOR ISSUE	DATE

DTE Energy *DTE Electric* *Central Design/Standards*

TITLE
STORMWATER DETAILS (4 OF 4)

LOCATION NAME	SERVICE CENTER	SCALE
GRENADA SUBSTATION	ANN ARBOR	NONE
DRAWING NUMBER	WORK ORDER	PROJECT DOCUMENT LIST
5M1329-5	69084198	GRENA-PDL-A-69084198

DOCUMENTUM FILENAME
GRENA-M-0005

c:\pw working\bve powerdelivery\na kry116972\d3311542\GRENA-M-0005.0.dgn
11/13/2025 / Kry116972

Environmental Impact Statement

Electrical Substation Project - Superior Township, MI

Introduction

This Environmental Impact Statement (EIS) provides a general overview of the potential environmental effects of upgrading and operating Grenada Substation in Superior Township, Michigan. The purpose of this document is to inform stakeholders and the public about the anticipated impacts and proposed mitigation measures.

Project Description

Grenada substation is located at 3270 N. Dixboro Road, on a 3.76 Acre Parcel. The current substation will be rebuilt and upgraded. The facility expansion will include two transformers, switchgear, PDC Enclosure, gravel surfacing, fencing and underground stormwater detention with associated infrastructure. The substation is intended to improve electrical reliability and support future growth in the region.

Superior Township is characterized by a mix of residential, and natural areas. The proposed site currently developed with a substation enclosure and gravel surfacing surrounded with lawn area, grasslands and woodlands. The substation location is set just outside the Historic Village of Dixboro.

Alternatives Analysis

Prior to kicking off large capital projects DTE subjects every proposal to a project value analysis. During this analysis the proposed project is scrutinized by all associated internal stakeholders, alternative options are discussed, and their costs, benefits, and overall feasibility are weighed against each other. The following alternatives were pursued during this process:

1. Upgrading Prospect Substation: This proposal consisted of building a new 13.2kV Prospect substation that would provide load relief to the surrounding area and serve to convert the existing 4.8kV Prospect circuits. It was found that this task would be impossible. There is no additional room/land at the existing Prospect site meaning to build a new substation there would require that the current load of Prospect be

transferred to the surrounding circuits which are already limited by capacity and cannot take Prospects full loading. Additionally, it was found that the overhead span over Frain Lake would potentially not be able to support larger wire sizes resulting in costly circuit construction to reroute Prospect's main circuit backbone.

2. Constructing a new substation: A few properties within the service area were analyzed, some of which were suggested by the township in prior meetings. Most lied along Plymouth Ann Arbor Road, towards the center of the township. These sites were rejected for two main reasons: the ability to pull new circuits and distance from 40kV lines. 40kV lines are costly to construct and with none nearby, significant new build would be required. Additionally, it was found that with the current township and electrical system layout, only two circuits could be pulled from the proposed substation, which would not be enough to support the surrounding area.
3. Upgrade Wolverine Substation: With growing load in Ann Arbor and the potential ability to resolve Grenada capacity issues this option had potential. However, Wolverine is already a Class 'A' substation. To upgrade the site, an additional transformer and PDC would have to be installed, which the site does not have room for. Additionally, this would not have resolved any issues at Prospect and would only have provided minimal load relief to the Grenada area, resulting in the need for a future project at Grenada.

DTE submitted a site plan to the planning commission for a Conditional Use Permit review on December 20, 2024. This original site plan included a substantially larger footprint that would have impacted over 100 exiting trees and impacted the entire 3.76-acre parcel. Superior Township recommended several changes to reduce the site impact and area disturbed.
DTE has incorporated Superior Township recommendations and made changes to reduce the site footprint and impacts to neighboring properties. The restroom, drain field, and well were removed from the site plan. Provisions for future circuits into the substation are removed from site plan. DTE was able to reduce the planned substation footprint by 47%. These changes will allow protection of 74 existing trees and reduces the impact to only 26 trees. These changes are significant to allow most to the existing vegetative screening to remain in place. The landscape plan has also been revised to include mature 12' trees and underlying shrubs to shield the fence and equipment from each property line.

Potential Environmental Impacts

Woodlands and Trees

DTE conducted a tree survey of the project parcel, identifying a total of 138 trees. Of these, 64 are classified as Protected and 30 as Landmark trees, according to Article 14 of the Superior Township Zoning Ordinance.
The design of the new substation footprint prioritizes the preservation of existing woodlands and natural screening by minimizing tree removal. However, the project will require the removal of 24 trees, including 10 Protected and 4 Landmark trees.

To safeguard the remaining trees during construction, protective fencing will be installed. Additionally, a comprehensive landscape plan will be implemented to replant trees around the substation perimeter, helping to maintain the site's woodland character and visual screening.

Threatened and Endangered Species Review

DTE conducted a Michigan Natural Features Inventory (MNFI) Rare Species review for the substation parcel. The review identified potential occurrences of the following threatened and endangered species:

- Goldenseal (*Hydrastis canadensis*)
- Eastern Massasauga Rattlesnake (*Sistrurus catenatus*)
- Northern Long-eared Bat (*Myotis septentrionalis*)
- Little Brown Bat (*Myotis lucifugus*)

Following this, DTE performed a site-specific habitat assessment and determined:

- The site does not contain preferred habitat for Goldenseal.
- There are no potential bat roost trees present on the property.

An additional habitat and species review was conducted, focusing on rare amphibians and reptiles, particularly the Eastern Massasauga Rattlesnake (EMR). The findings are summarized below:

- Eastern Massasauga Rattlesnake (*Sistrurus catenatus*)
  Status: Federally and State Threatened
  Findings: No suitable habitat was identified within the project area. The species is unlikely to be impacted if recommended mitigation measures are implemented.
- Eastern Box Turtle (*Terrapene carolina carolina*)
  Status: State Threatened
  Findings: Suitable habitat exists in forested areas near the project site. The species may use the site seasonally and could be affected by construction activities.
- Butler's Garter Snake (*Thamnophis butleri*)
  Status: State Special Concern
  Findings: Suitable habitat was found in nearby forested and roadside grassland areas.

To minimize potential impacts to threatened and endangered species, DTE will implement the following Best Management Practices:

- Install wildlife barrier fencing (3-foot silt fencing) around the project perimeter.
- Conduct pre-construction wildlife surveys and relocate any encountered individuals to adjacent suitable habitat.
- Use biodegradable, wildlife-friendly erosion control materials to prevent entanglement.
- Post educational signage about rare species at worksite entrances and high-traffic areas.

- Coordinate with Superior Township to obtain approval for tree clearing activities within the USFWS bat tree clearing window: October 15, 2025 – March 31, 2026

Air Quality

The daily operations of the expanded electrical substation will have no impact on air quality. During construction appropriate best management practices including dust control measures such as watering and temporary coverings will be incorporated.

Water Quality

DTE worked with EGLE to confirm the substation parcel has no regulated features (wetlands or streams/lakes) on the parcel to be impacted.

The plans incorporate underground stormwater detention and infiltration designed in accordance with Washtenaw County requirements to ensure that there are no impacts to water quality. Plans will be submitted to Washtenaw County for review and approval.

The plans include a soil erosion and sediment control plan that ensures existing vegetation is protected to the extent possible. Construction best management practices including silt fence perimeter protection, dust control, stabilized construction entrance, and appropriate construction sequencing will be used during construction to protect water quality. Plans will be submitted to Washtenaw County for review and approval.

Historic and Cultural Resources

DTE conducted a cultural resources desktop review of the state SHPO database. Bases on this review there are no adverse impacts expected to Cultural or Historic Resources.

Social Impacts

Site currently operates as a substation and there will be no change to the current operation of the substation.

Noise studies were conducted at the existing site and similar substations. It was found that for Class 'A' substations with transformers rated at 65dBA, like that of Grenada's proposal. Ratings were accurate up to 5 feet from the operational transformers with noise falling to ~30dBA at the substation boundary. 30 dBA is roughly equivalent to a whisper or the ticking of a watch and should provide no significant disturbance to the surrounding neighborhoods.

EMF studies were also conducted at the existing Grenada site and similar sites. While there are no current federal or Michigan state regulations on EMF emissions. The ACGIH and INCIRP both provide guidelines for maximum recommended EMF exposure both occupationally and for the public. The lower of the two values is 2,000mG, for the general public. It was found that the EMF readings for 60-hertz electrical fields at the substation site boundaries were similar to that of typical household background readings, in the area, of ~10mG, which is well below the recommended exposure guidelines.

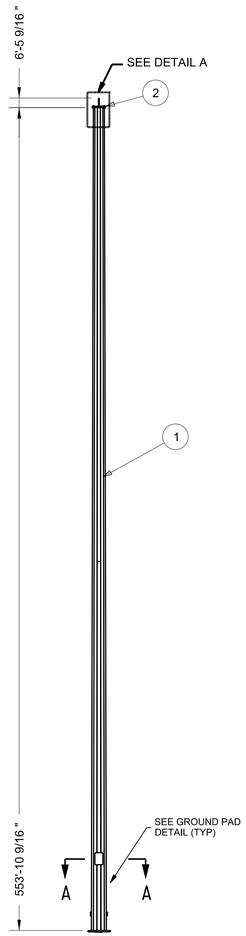
Economic Impacts

This expansion will allow for more flexibility in load transferring between adjacent substations on the grid. This ensures fewer outages and has a positive economic impact.

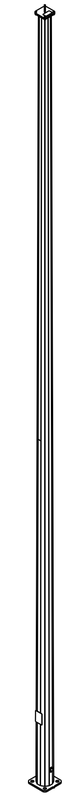
6. Conclusion

The proposed electrical substation in Superior Township, MI is expected to provide significant benefits to the local electrical infrastructure. While some environmental impacts are anticipated, appropriate mitigation measures will be implemented to minimize these effects. Continued engagement with local stakeholders will ensure that concerns are addressed throughout the project lifecycle.

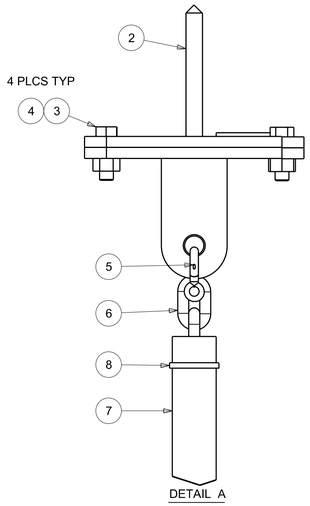
With proper implementation of these Best Management Practices, the risk to endangered and rare species can be significantly minimized, ensuring compliance with conservation regulations and promoting ecological stewardship.



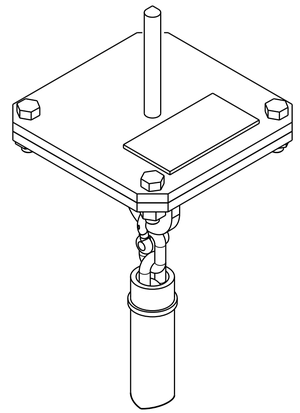
ELEVATION



ISOMETRIC VIEW



DETAIL A



DTE Energy		:
TITLE 50' LIGHTNING MAST SKETCH		
LOCATION NAME	SERVICE CENTER	SCALE
DRAWING NUMBER	WORK ORDER	PROJECT DOCUMENT LIST
DOCUMENTUM FILENAME		

3	REVISION	
DISCIPLINE	NAME	DATE
ARCH/CIVIL	Cody Watkins	8/19/20
ELECTRICAL	William Brody	12/17/19
UG		
OH		
MADE BY	Amreen Bhullar	7/10/19
APPROVED BY	Syed Hussain	7/10/19

SECTION 32 31 00

CHAIN LINK FENCES AND GATES

PART 1. GENERAL

1.01 SECTION INCLUDES

A. Chain link type of fencing, including 6 strands of barbed wire on "V" arms, at perimeter of substation yard.

1.02 WORK BY DTE

A. Padlock for fence gate will be furnished and installed by DTE.

1.03 RELATED SECTIONS

A. Section 31 10 00 - Site Preparation.
B. Section 31 20 00 - Earthwork: Service drive and station yard aggregate surface.
C. Section 33 79 00 - Station Grounding: Fence grounding.
D. Section 03 30 00 – Cast-in-Place Concrete

1.04 REFERENCES

A. DTE Energy Specification 390(Current Revision) – Chain Line Type Fence, Materials and Erection.

1.05 DELIVERY, STORAGE AND HANDLING

A. General Requirements: Refer to Section 01 60 00.
B. Receiving Products Furnished Under Other Sections: Be responsible for receiving and storing products delivered to the Project Site under other sections and installed under this section.

PART 2. PRODUCTS

2.01 General:

A. Material specified in DTE Energy Specification 390(Current Revision) – Chain Link type Fence, Materials and Erection.
B. For medium and high security substations, a 7′ fence with 1′ of barbwire must be used.
   1. DTE Physical security to determine low, medium, or high risk at beginning of project.

2.02 MANUFACTURERS

A. Acceptable Manufacturers: Subject to compliance with requirements, manufacturer's offering fencing which may be incorporated into the work include the following:
   1. Ameristar Fence Products
   2. Guardian Fence Suppliers
   3. Master-Halco
   4. Merchants Metals
   5. Southwestern Wire, Inc.
   6. South Lyon
B. Substitutions will be considered under provisions of Section 00 16 00.

2.03 GATES

A. Duel outwards swing gates will be the typical installation. Gates will be 2 – 12′ gates with a nominal opening of 20′. The opening is achieved due to 2′ staggers between the main fence end post and the gate post.
B. Personnel gates will be installed at convenient locations that will not interfere with the main gate.
C. Gates may differ from the above if the design drawings/project description specify other.

PART 3. EXECUTION

3.01 EXAMINATION

A. Examine previously performed work on which specified work is in any way dependent to ensure that conditions are satisfactory for the execution of specified work.
B. Report defects in previously performed work which may influence satisfactory completion of specified work. Absence of such notification will be construed as acceptance of the previously performed work.

3.02 PREPARATION

A. Contractor shall verify the presence of any underground utilities inside the substation via hand excavation. If utilities are present the contractor shall contact the engineer for instructions prior to any further excavation.

3.03 INSTALLATION

A. General: Erect fence material in accordance with Detroit Edison Specification 390 – Chain Link type Fence, Materials and Erection.

3.04 FIELD QUALITY CONTROL

A. DTE Energy will inspect the installation of all fence material.
B. Notify Contract Administrator 48 hours prior to placing concrete for post footing.

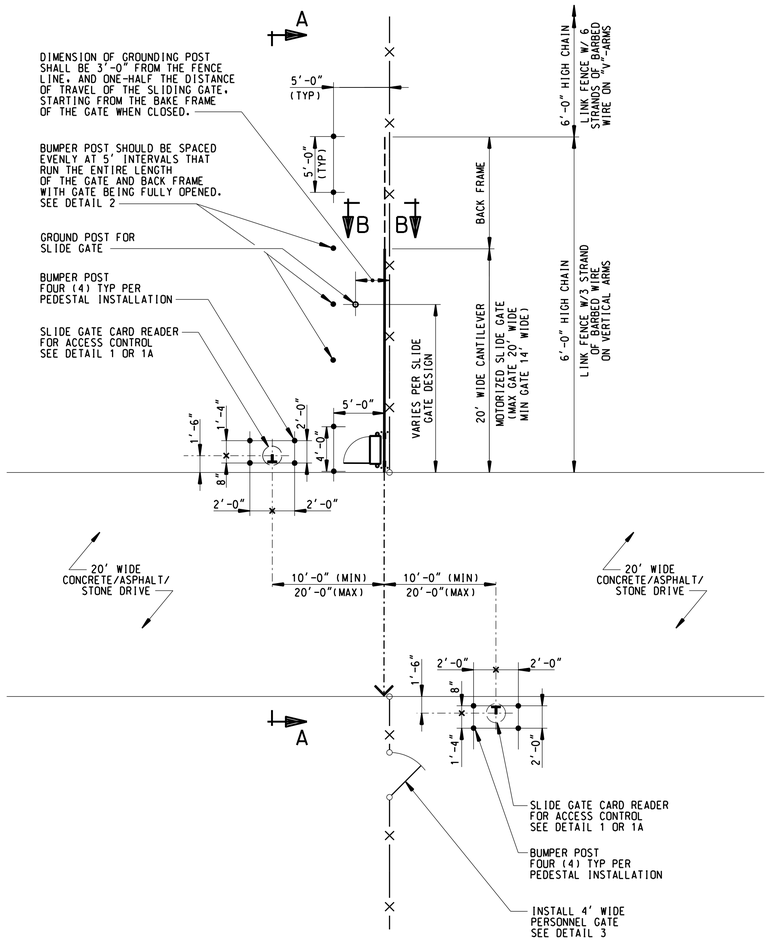
3.05 ADJUSTING AND FINISHING

A. Adjust brace rods at corner, end and gate posts for rigid installation.
B. Adjust barbed wire turnbuckles for taut barbed wire installation.
C. Touch-Up Painting:
   1. Touch-up paint areas where zinc coating or other protective coating has been damaged.
   2. Wire brush and solvent clean surfaces to be touch-up painted to remove all oil, loose rust and other contaminants.
   3. Apply 1 coat of touch-up paint in accordance with manufacture's instructions.

3.06 CLEANING

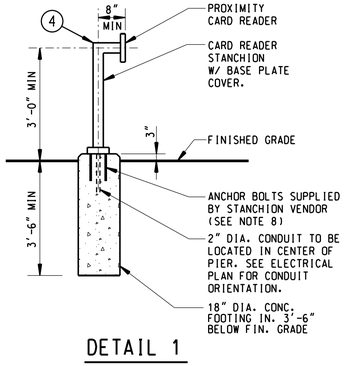
A. Remove excess and waste materials from the Project Site.

END OF SECTION



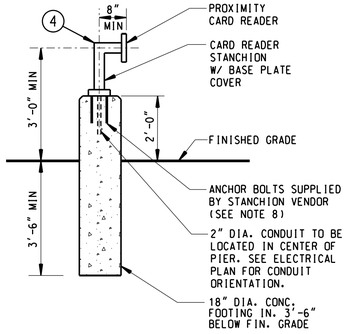
PLAN VIEW

NOTE: SLIDE GATE CAN BE INSTALLED ON EITHER SIDE OF DRIVE. DESIGN TO DICTATE ORIENTATION OF GATE



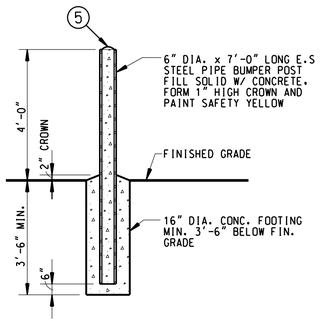
DETAIL 1

NO SCALE



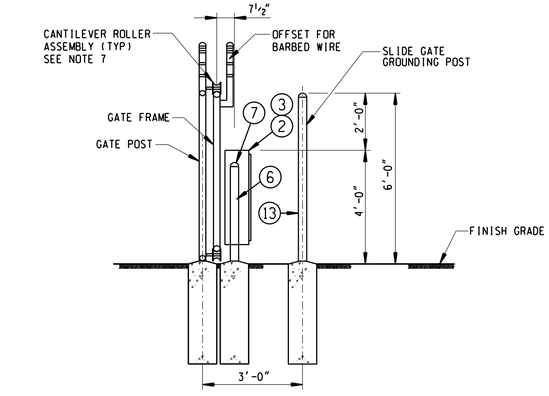
DETAIL 1A

NO SCALE



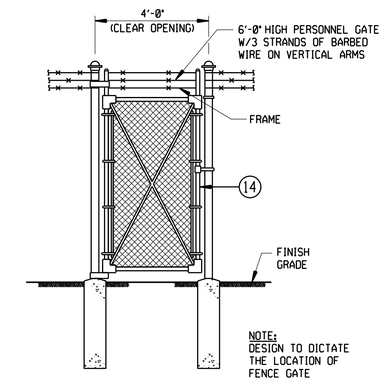
DETAIL 2

NO SCALE



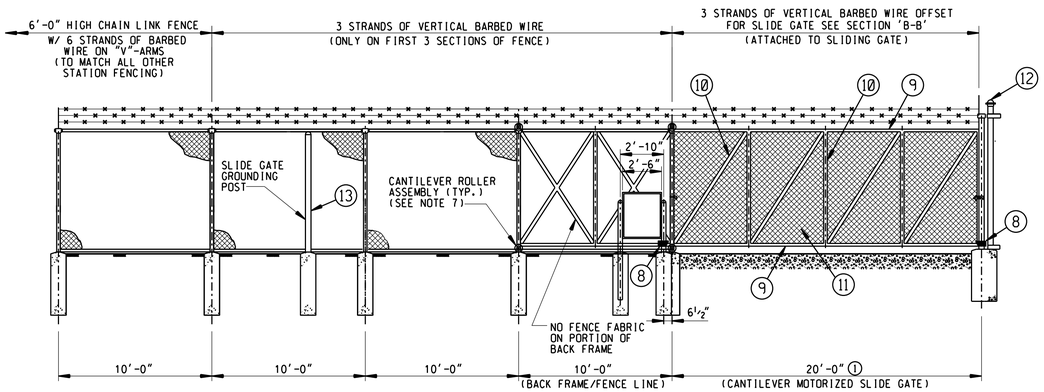
SECTION 'B-B'

NO SCALE



DETAIL 3

NO SCALE



SECTION 'A-A'

NO SCALE

MATERIAL LIST FOR ONE (1) MOTORIZED SLIDE GATE & ASSOCIATED EQUIPMENT

ITEM	QUAN	DESCRIPTION	REMARKS
1	1	6'-0" HIGH SLIDE GATE W/ 3 STRANDS OF BARBED WIRE ON THE OFFSET VERTICAL ARM & BACK FRAME COUNTER WEIGHT (MAX GATE WIDTH 20' MIN GATE WIDTH 14')	BY CONTRACTOR
2	1	SLIDE GATE OPERATOR W/ COLD WEATHER PACKAGE. #50 CHAIN LINEAR CORP. MODEL GSLA-A (1HP, 115VAC. SINGLE PHASE)	BY CONTRACTOR
3	1	115VAC HEATER WITH CAGE, SUPPLIED WITH LINEAR GATE OPERATOR	BY CONTRACTOR
4	2	CARD READER FOR ACCESS CONTROL W/ STANTION. FOUNDATION & ANCHOR BOLTS. CARD READER TO BE APPROVED BY CORPORATE SECURITY. SANCHION TO BE PAINTED OR GALVINZED.	BY CONTRACTOR SEE DETAIL 1 OR 1A
5	PER DESIGN	BUMPER POST W/ FOUNDATION	BY CONTRACTOR SEE DETAIL 2
6	2	3 1/2" DIA. BY 6'-6" LENGTH RIGID PIPE (GALV), SCH 40 W/ FOUNDATION	BY CONTRACTOR
7	2	3 1/2" DIA. STEEL CAP	BY CONTRACTOR
8	2	THRU-BEAM PHOTOEYE ALBANO INFRARED PHOTOELECTRIC CELL MODEL IR-55 FOR OUTDOOR USE	BY CONTRACTOR
9	2	2 1/2" DIA. RIGID PIPE (GALV), SCH 40 W/ FOUNDATION	BY CONTRACTOR
10	PER DESIGN	1 3/4" DIA. (MIN) RIGID PIPE (GALV), SCH 40 W/ FOUNDATION	BY CONTRACTOR
11	-	FENCE FABRIC W/ 2" SQUARE UNIFORM WEAVE (MUST ADHERE TO FENCE SPEC 390)	BY CONTRACTOR
12	2	4" DIA. BY 9'-0" LENGTH RIGID PIPE (GALV), SCH 40 W/ FOUNDATION	BY CONTRACTOR
13	1	2 1/2" DIA. BY 9'-0" LONG RIGID PIPE (GALV), SCH 40 W/ FOUNDATION	BY CONTRACTOR
14	1	4'-0" WIDE PERSONNEL GATE	BY CONTRACTOR SEE DETAIL 3

NOTES:

1. MOTORIZED SLIDE GATE TO BE FABRICATED TO MEET ASTM F2200-11b, STANDARD SPECIFICATION FOR AUTOMATED VEHICULAR GATE CONSTRUCTION CLASS III GATE REQUIREMENTS.
2. SEE DRAWING 6E6000-84 FOR FENCE GROUNDING DETAILS.
3. FOR SLIDE GATE GROUNDING DETAILS REFERENCE ELECTRICAL DESIGN
4. SEE SPECIFICATION 390 REV 'X' FOR CHAIN LINK FENCE INSTALLATION DETAILS AND ADDITIONAL SLIDE GATE INFORMATION.
5. SEE MANUFACTURER INSTALLATION GUIDE FOR DETAILED INSTALLATION INSTRUCTIONS ON SLIDE GATE EQUIPMENT AND CONTROLS.
6. THE FIELD CREW SHALL VERIFY THE PRESENCE OF ANY UNDERGROUND UTILITIES INSIDE/OUTSIDE THE STATION BEFORE CONSTRUCTION COMMENCES. IF UTILITIES ARE PRESENT IN PLANNED WORK AREA FIELD CREW SHALL CONTACT THE ENGINEER FOR INSTRUCTIONS PRIOR TO ANY FURTHER EXCAVATION.
7. INSTALL SAFETY GUARDS ON ALL CANTILEVER ROLLER ASSEMBLIES.
8. ALL ANCHOR BOLTS INSTALLED FOR STANCHION MUST BE GALVINIZED AND FURNISHED WITH ONE (1) GALVINIZED ASTM A563A HEX NUT AND ONE (1) ASTM F436 STD. WASHER PER ANCHOR BOLT.
9. TOTAL VOLUME OF CONCRETE IS APPROXIMATELY 0.36 CU YDS PER CAR READER PEDESTAL.
10. STANDARD INSTALLATION WILL BE AS SHOWN, DERIVATIONS ARE TO BE INDICATED ON THE PROJECT DRAWINGS.

STOP THINK ACT REVIEW

811 Know what's below. Call before you dig.

USE DIMENSIONS ONLY DO NOT SCALE

APPROVALS					
OTHER		DATE	ENGINEERING		
PROJECT MANAGER			MADE BY	NEAL SKLARCZYK	DATE 10-22-18
RELAY			LAYOUT BY	NEAL SKLARCZYK	DATE 2-7-19
EP&PM			CHECKED BY	ERIC MYRICK	DATE 2-8-19
ARCH CIVIL TOWERS UG/SUR			PROJECT DESIGN/ELECT		DATE
			A/C/T/UG/SUR	MARK FAIRLESS	DATE 2-14-19
OTHERS	W.B.	11-27-18	APPROVED FOR ISSUE	MARK FAIRLESS	DATE 2-14-19

DTE Energy — DTE Electric Company — Central Design

TITLE: SLIDE GATE LAYOUT

LOCATION NAME	REGION	SCALE
ALL VOLTAGES		NONE
DRAWING NUMBER: 5A6000-1	WO NUMBER	PROJECT DOCUMENT LIST

ARCHITECTURAL/CIVIL/TOWERS
R:\SPE Projects\Arch Civil\Working Folder\2019\Slide Gate Project\Specs\6000-A-001-00.0.dgn
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DIXBORO ROAD
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Grenada Substation-East View

November, 2025



Site Plan

PEA GROUP

Grenada Substation-West View

November, 2025



Site Plan

PEA GROUP

Grenada Substation-South View

November, 2025



Site Plan

PEA GROUP

Grenada Substation-Northeast View

November, 2025



Site Plan

PEA GROUP

DTE Grenada Substation

Subject: Responses to Comments from Superior Township Planning Commission Action Item Letter dated March 10, 2025.

Comment/Responses

1. Confirm/justify the need for expansion of the substation facility (e.g., elaborate on how much additional electrical capacity and/or stability will be brought to Superior Township and the region as a whole).

   Response - Expanding Grenada Substation in Superior Township is both necessary and strategically beneficial for enhancing electrical capacity and system reliability.
   Electric Service for the vast majority of Superior Township is provided by the following five area substations. Three of the substations that provide service to Superior Township are not located in Superior Township.

   1. Grenada Substation
      3270 Dixboro Road
      Superior Township
      Current Percent of Capacity: 111%
      Expanded Percent of Capacity: 55%
   2. Prospect Substation
      3725 Prospect Road
      Superior Township
      Current Percent of Capacity: 66% - Prior to the start of the Grenada project and partial conversion of Prospect in 2024, Prospect's percent of capacity was 91%. Work was done under the assumption that Grenada substation work would take place.
   3. Mott Substation
      1475 Ridge Road
      Ypsilanti Township
      Current Percent of Capacity: 91%

4. Zebra Substation
   5055 Proctor Road
   Canton Township
   Current Percent of Capacity: 79%
5. Wolverine Substation
   65 S. Dixboro Road
   Ann Arbor Township
   Current Percent of Capacity: 130%

These five substations combined serve over 30,000 customers. Four out of the five substations currently work in an interconnected manner with the ability to transfer load between each other and the surrounding system in the event of planned or unplanned outages. The Prospect Substation currently operates as a "service island" within this system because it is a small substation only designed to operate at 4.8kV while the four other substations operate at 13.2kV. The 4.8kV Prospect circuits cannot accept 13.2kV electric transmission. This means service cannot be transferred from any of the four other substations to the Prospect circuits in the event of an outage at the Prospect Substation.

Electric Service provided from a 13.2kV feed is much safer, more efficient, and more reliable than service provided from older 4.8kV feed. DTE is making significant investments and efforts to modernize and convert its existing 4.8kV infrastructure to 13.2kV. One of the key reasons for the Grenada Substation expansion is to allow for the future conversion of the Prospect Substation circuits from 4.8kV to 13.2kV. The rebuilt 13.2kV infrastructure will be fed from the newly expanded Grenada Substation.

The Grenada, Prospect and Wolverine Substations are all currently operating near or above capacity. In addition to not being able to meet future increased demand, overcapacity limits restoration options, increases restoration times and puts continuous enhanced strain on the existing substation infrastructure especially during peak demand periods. Operating at overcapacity significantly increases the risk of overloads, equipment failure, and unplanned outages which can last for extended periods of time due to long lead times to obtain and replace failed equipment.

For the Wolverine Substation, the expansion of the Grenada Substation will help to mitigate Wolverine's current overcapacity issues. The Wolverine Substation is already a Class A Substation with limited expansion capabilities. The Grenada expansion will provide the capability and capacity to transfer power to the Wolverine Circuits in the event of Wolverine Substation overloading.

In summary, current system configuration constraints prevent load transfers between the Grenada Substation and the Wolverine Substation and isolate the Prospect Substation as a 4.8kV island. These limitations restrict operational flexibility during maintenance or emergencies. Upgrading Grenada and integrating all of these stations into the broader 13.2kV network will enable dynamic load balancing and improve system resilience. Currently in the event of a transformer outage, parts of Superior Township face stranded load until a portable transformer is deployed. This delay can result in prolonged outages for residents and businesses. Expansion of the Grenada Substation allows for enhanced capacity and reliability and also provides necessary redundant capacity and backup pathways which will minimizing downtime and improve service continuity for the entire Substation Network that serves all of Superior Township.

2. Explore alternative restroom options including elimination of septic field. Staff will reach out to County Health to coordinate conversation.

   Response - DTE adjusted its operation plan for this site to remove the proposed restroom facility and drain field. This has greatly reduced the site impact.

3. Preserve and reduce the number of existing trees removed.
   Response – Site footprint is reduced by more than 40% and the tree removal is significantly reduced to 24 trees, including only 3 landmark trees and only 10 protected trees.

4. Increase the size, height (at least 12 ft), and diameter of mitigation/landscaping trees required to be planted on site. Staff can work with DTE to relieve mitigation tree numbers in exchange for larger trees planted on site.

   Response – All replacement trees are specified as 12’ height evergreens to maximize screening on the site.

5. Ensure planting provides year-round screening and is comprised of diverse Michigan native species that are fast growing but durable to storm damage and that provide immediate screening to the fullest extent possible. The object of the screening should be that the surrounding fence and the 16 ft high equipment inside the fence are not visible from any of the four sides of the property at the completion of the project. Further, the object is that growth of the plantings will shield the 16 ft high equipment inside the fence within a relatively short period of time.

   Response – The plantings are made up of a mix of deciduous and evergreen material. The evergreen trees will form a dense wall around the fence and the addition of shrubs

and deciduous trees will add additional screening and visual, seasonal interest. 12' evergreens are specified for the replacement trees to provide screening as quickly as possible.

6. Provide a maintenance plan that describes the specific practices and products that will be used to implement the landscape management plan, along with a schedule of annual maintenance practices.

   Response – A maintenance schedule is provided, please the landscape details sheet. Please refer to landscape specifications for recommended practices.

7. Provide a visual 3-D model of the facility from all four cardinal directions with landscape screening in place.

   Response – Model from each cardinal direction has been provided.

8. Photometric plan and description of when and how light sources will be used.

   Response – Lighting will only be used when operator is visiting site after dark. This would be a limited occurrence during outages affected by Grenada Substation. Photometric Plan and description of fixtures has been provided.

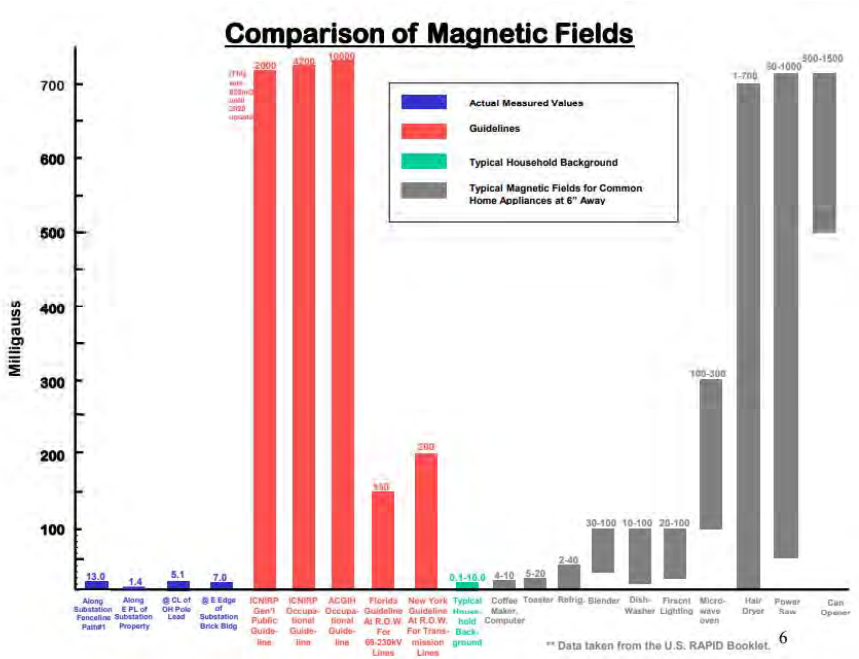
9. Provide an environmental impact statement (EIS) that outlines the environmental and potential health and safety risks of the proposed substation expansion.

   Response - Environmental Impact Statement is provided to outline the potential health and safety risks of the proposed substation expansion.

Project Environmental Impact

- EMF – EMF studies were also conducted at the existing Grenada site and similar sites. While there are no current federal or Michigan state regulations on EMF emissions. The ACGIH and INCIRP both provide guidelines for maximum recommended EMF exposure both occupationally and for the public. The lower of the two values is 2,000mG, for the general public. It was found that the EMF readings for 60-hertz electrical fields at the substation site boundaries were similar to that of typical household background readings, in the area, of ~10mG, which is well below the recommended exposure guidelines.

- Noise – Sound Pressure Level ratings of similar substations constructed within the past 2 years have been found to be minimal. With site boundary readings of 65dBA rated transformers coming in at ~30dBA which is equivalent to a whisper or the ticking of a watch. (See appendix A for GRAMR SPL study)



Appendix A
Grammer Noise Study

DTE

Corporate Safety
Industrial Hygiene Report

Date: August 27, 2025
To: R. Miller, M. Muntasir, R. Nasutovich, M. Rajewski
CC: A. Boatner, M. Listello, R. Marvin, G. Maudie
From: B. Kositz, CIH, CSP
Subject: Gramer Substation Sound Pressure Level Survey

On Wednesday August 27, Corporate Safety Rob Marvin and I conducted a Sound Pressure Level Survey of the Gramer Substation, located at 65541 Gramer Road in Lenox Township. This was at th request of DTE PMO Musnad Muntasir.

Upon arrival to this location, we received a prejob brief from the substation operator, who escorte throughout the facility. This survey covers:

1. Survey of the of the immediate perimeter of transformers 101 and 102
2. Survey of the property fence line on all four sides

These surveys were conducted utilizing the Quest Technologies SoundPro Model SE-DL Sound Lev Meter (S/N BBF100001). This unit was last serviced in October 2024. This unit was successfully calibrated prior to use on August 28 with the Quest Technologies QC-10 Calibrator (S/N QIF09022 The unit was last serviced in October 2024. The meter was set to a fast response and A- weighted results.

Transformers 101 and 102
8 Sound Pressure Level (SPL) readings were taken around each transformer, 6 feet from transformer, 5 feet above grade. The results are as follows:

- Trans 101 (South): Average SPL = 65.8 dBA
- Trans 102 (North): Average SPL = 63.8 dBA

The average SPL as measured by the manufacturer is found in the Pennsylvania Transformer Technology Certified Test Report. The average SPL found on page 67 of the report is 66.5 dBA.

Fence Line Survey
Sound Pressure Level readings were taken on all four sides of the property: north, south, east and west. The results are as follows:

- North: Average SPL = 33.9 dBA
- South: Average SPL = 32.5 dBA
- East: Average SPL = 30.8 dBA
- West: Average SPL = 26.8 dBA

Please let me know if you have any questions.

Brian Kositz, CIH, CSP
Safety & Health Expert

Attorney- Client Privilege
Communication shall not be shared outside DTE Energy without approval from DTE Corporate Legal

Appendix B
EMF Study – Grenada Class 'A'

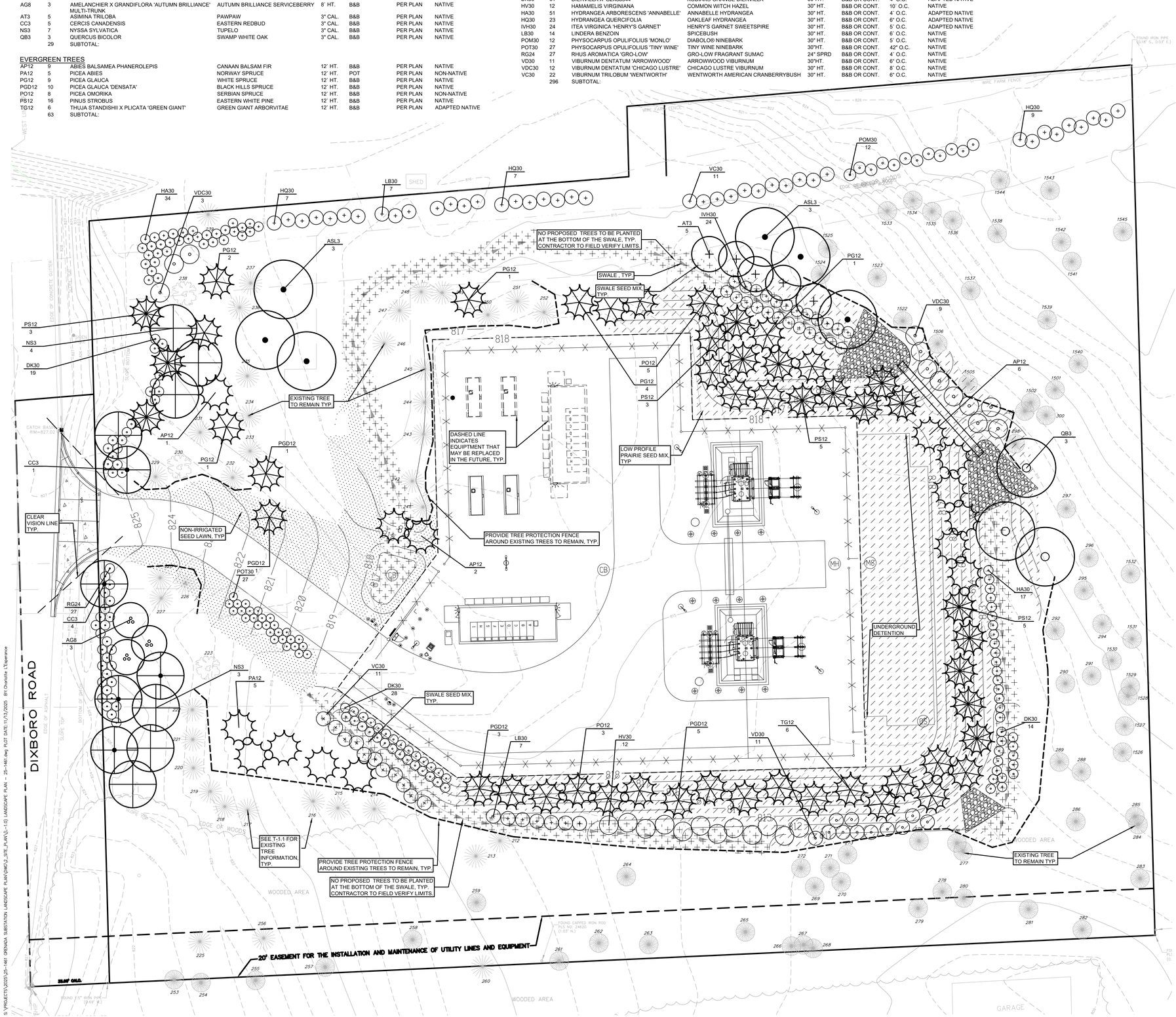


PLANT SCHEDULE L-1.0

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING	DESIGNATION
DECIDUOUS TREES							
ASL3	6	ACER SACCHARUM 'LEGACY'	LEGACY SUGAR MAPLE	3" CAL.	B&B	PER PLAN	NATIVE
AG8	3	AMELANCHIER X GRANDIFLORA 'AUTUMN BRILLIANCE' MULTI-TRUNK	AUTUMN BRILLIANCE SERVICEBERRY	8' HT.	B&B	PER PLAN	NATIVE
AT3	5	ASIMINA TRILOBA	PAWPAW	3" CAL.	B&B	PER PLAN	NATIVE
CC3	5	CERCIS CANADENSIS	EASTERN REDBUD	3" CAL.	B&B	PER PLAN	NATIVE
NS3	7	NYSSA SYLVATICA	TUPELO	3" CAL.	B&B	PER PLAN	NATIVE
QB3	3	QUERCUS BICOLOR	SWAMP WHITE OAK	3" CAL.	B&B	PER PLAN	NATIVE
	29	SUBTOTAL:					
EVERGREEN TREES							
AP12	9	ABIES BALSAMEA PHANEROLEPIS	CANAAN BALSAM FIR	12' HT.	B&B	PER PLAN	NATIVE
PA12	5	PICEA ABIES	NORWAY SPRUCE	12' HT.	POT	PER PLAN	NON-NATIVE
PG12	9	PICEA GLAUCA	WHITE SPRUCE	12' HT.	B&B	PER PLAN	NATIVE
PGD12	10	PICEA GLAUCA 'DENSATA'	BLACK HILLS SPRUCE	12' HT.	B&B	PER PLAN	NATIVE
PO12	8	PICEA OMORIKA	SERBIAN SPRUCE	12' HT.	B&B	PER PLAN	NON-NATIVE
PS12	16	PINUS STROBUS	EASTERN WHITE PINE	12' HT.	B&B	PER PLAN	NATIVE
TG12	6	THUJA STANDISHII X PLICATA 'GREEN GIANT'	GREEN GIANT ARBORVITAE	12' HT.	B&B	PER PLAN	ADAPTED NATIVE
	63	SUBTOTAL:					

PLANT SCHEDULE L-1.0

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	SPACING	DESIGNATION
SHRUBS							
DK30	61	DIERVILLA X 'G2X88544'	KODIAK® ORANGE DIERVILLA	30"HT.	B&B OR CONT.	4' O.C.	ADAPTED NATIVE
HV30	12	HAMAMELIS VIRGINIANA	COMMON WITCH HAZEL	30" HT.	B&B OR CONT.	10' O.C.	NATIVE
HA30	51	HYDRANGEA ARBORESCENS 'ANNABELLE'	ANNABELLE HYDRANGEA	30" HT.	B&B OR CONT.	4' O.C.	ADAPTED NATIVE
HQ30	23	HYDRANGEA QUERCIFOLIA	OAKLEAF HYDRANGEA	30" HT.	B&B OR CONT.	6" O.C.	ADAPTED NATIVE
IVH30	24	ITEA VIRGINICA 'HENRY'S GARNET'	HENRY'S GARNET SWEETSPIRE	30" HT.	B&B OR CONT.	5' O.C.	ADAPTED NATIVE
LB30	14	LINDERA BENZOIN	SPICEBUSH	30" HT.	B&B OR CONT.	6' O.C.	NATIVE
POM30	12	PHYSOCARPUS OPULIFOLIUS 'MONLO'	DIABOLO® NINEBARK	30" HT.	B&B OR CONT.	5' O.C.	NATIVE
POT30	27	PHYSOCARPUS OPULIFOLIUS 'TINY WINE'	TINY WINE NINEBARK	30"HT.	B&B OR CONT.	42" O.C.	NATIVE
RG24	27	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	24" SPRD	B&B OR CONT.	4' O.C.	NATIVE
VD30	11	VIBURNUM DENTATUM 'ARROWWOOD'	ARROWWOOD VIBURNUM	30"HT.	B&B OR CONT.	6' O.C.	NATIVE
VDC30	12	VIBURNUM DENTATUM 'CHICAGO LUSTRE'	CHICAGO LUSTRE VIBURNUM	30" HT.	B&B OR CONT.	8' O.C.	NATIVE
VC30	22	VIBURNUM TRILOBUM 'WENTWORTH'	WENTWORTH AMERICAN CRANBERRYBUSH	30" HT.	B&B OR CONT.	6" O.C.	NATIVE
	296	SUBTOTAL:					



KEY:

= PROPOSED REPLACEMENT EVERGREEN TREES

= EXISTING TREES TO REMAIN

= PROPOSED DECIDUOUS GREENBELT TREES

= PROPOSED DECIDUOUS GREENBELT SHRUBS

= SWALE SEED MIX SEE L-1.1 FOR SEED MIX INFO

= LOW ECONOMY PRAIRIE SEED MIX SEE L-1.1 FOR SEED MIX INFO

= NON IRRIGATED SEED LAWN

= TREE PROTECTION FENCE

SEE SHT. L-1.1 FOR LANDSCAPE DETAILS
SEE SHT. T-1.0 FOR TREE PROTECTION PLAN
SEE SHT. T-1.1 FOR EXISTING LIST

LANDSCAPE CALCULATIONS PER SUPERIOR TWP.
ZONED (R-4) SINGLE FAMILY RESIDENTIAL

GREENBELT BUFFER

REQUIRED: 1 TREE AND 3 SHRUBS / 15 LF, WITH UP TO 50% OF TREES COUNTING TOWARD TREE REPLACEMENT

NORTH BOUNDARY: 446.81 LF / 15 * 3 = 30 TREES AND 90 SHRUBS

DIXBORO RD: 250 LF - 20 (ACCESS DRIVE) = 230 / 15 * 3 = 18 TREES AND 46 SHRUBS

EAST BOUNDARY: 317.39 LF / 15 * 3 = 21 TREES AND 64 SHRUBS

SOUTH BOUNDARY: 479.88 LF / 15 * 3 = 32 TREES AND 96 SHRUBS

TOTAL REQUIRED TREES: 30+18+21+32=101
101* 0.5 = 50 TREES COUNTING TOWARD REPLACEMENT

PROVIDED

NORTH BOUNDARY: 90 30" HT. SHRUBS AND 30 EVG REPLACEMENT TREES

DIXBORO RD: 15 DEC TREES AND 46 SHRUBS

EAST BOUNDARY: 64 30" SHRUBS AND 11 DEC TREES AND 1 EVG REPLACEMENT TREE
9 TREES NOT PROVIDED DUE TO LACK OF SPACE IN HEAVILY WOODED AREA

SOUTH BOUNDARY: 96 30" SHRUBS AND 19 EVG REPLACEMENT TREES
11 NOT PROVIDED DUE TO LACK OF SPACE IN HEAVILY WOODED AREA

NOTE: TOTAL OF 50 EVG REPLACEMENT TREES COUNTING TOWARD GREENBELT TREES

TREE REPLACEMENT CALCULATIONS

REGULATED TREES REMOVED: **15**

Coniferous (height)	**Replacement**	**Removed**	**Replacement Required**
10.0 to 15.0 feet	one to one (1:1)	0	0
15.01 to 30.0 feet	three to one (3:1)	3	9
More than 30.0 feet	six to one (6:1)	0	0
Landmark coniferous tree	One (1) tree per inch of removed tree D.B.H	2	38
Deciduous (D.B.H.)	**Replacement**		
8.0 to 12.0 inches	one to one (1:1)	6	6
12.01 to 16.0 inches	three to one (3:1)	2	6
More than 16.0 inches	six to one (6:1)	0	0
Landmark deciduous tree	one (1) tree per inch of removed tree D.B.H	2	38
Sovereign (D.B.H.)	**Replacement**		
Sovereign tree	Two (2) trees per inch of removed tree D.B.H	0	0

Total Replacement Trees Required: 97 TREES
Proposed 12 ft height evergreens = 1.55 credit = **63 REPLACEMENT TREES**

PEA GROUP
t: 844.813.2949
www.peagroup.com

STATE OF MICHIGAN
LYNN A. WHIPPLE
LANDSCAPE ARCHITECT
No. 1301001746
REGISTERED LANDSCAPE ARCHITECT

NORTH

0 10 20 40
SCALE: 1" = 20'

811 Know what's below. Call before you dig.

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INVESTIGATE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT
BLACK & VEATCH

PROJECT TITLE
GRENADA SUBSTATION
PLYMOUTH ROAD AND N. DIXBORO RD
ANN ARBOR TWP. / MI

REVISIONS
- -

ORIGINAL ISSUE DATE:
OCTOBER 30, 2025

DRAWING TITLE
PRELIMINARY LANDSCAPE PLAN

PEA JOB NO.	25-1461
P.M.	LAW
DN.	CAL
DES.	LAW

DRAWING NUMBER:
L-1.0

NOT FOR CONSTRUCTION

S:\PROJECTS\2025\25-1461 GRENADA SUBSTATION LANDSCAPE PLAN\SHEETS\25-1461_SITE_PLAN\L-1.0 LANDSCAPE PLAN - 25-1461.dwg PLOT DATE: 11/13/2025 BY: Charlotte L'Esperance

NATIVE SEED MIX. BY STANTEC NATIVE PLANT NURSERY, 574-586-2412, OR EQUAL SPECIES TO BE NATIVE TO COUNTY, NO INVASIVE SPECIES ALLOWED

FOR ALL SEED MIXES, PROVIDE EROSION MAT ON SLOPES AND AREAS OF WASH OUT TYP. INSTALL AND PREP PER MANUFACTURES SPECIFICATIONS.

Swale Seed Mix

Stantec Native Plant Nursery 574-586-2412
stantec.com/native-plant-nursery

Botanical Name	Common Name
Permanent Grasses/Sedges:	
Andropogon gerardii	Big Bluestem
Carex comosa	Bristly Sedge
Carex cristatella	Crested Oval Sedge
Carex lurida	Bottlebrush Sedge
Carex spp.	Prairie Sedge Mix
Carex vulpinoidea	Brown Fox Sedge
Elymus virginicus	Virginia Wild Rye
Glyceria striata	Fowl Manna Grass
Panicum virgatum	Switch Grass
Scirpus atrovirens	Dark Green Rush
Scirpus cyperinus	Wool Grass
Spartina pectinata	Prairie Cord Grass
Temporary Cover:	
Avena sativa	Common Oat
Lolium multiflorum	Annual Rye
Forbs:	
Alisma spp.	Water Plantain (Various Mix)
Asclepias incarnata	Swamp Milkweed
Coreopsis tripteris	Tall Coreopsis
Eutrochium maculatum	Spotted Joe-Pye Weed
Iris virginica	Blue Flag
Liatris spicata	Marsh Blazing Star
Lobelia cardinalis	Cardinal Flower
Lobelia siphilitica	Great Blue Lobelia
Lycopus americanus	Common Water Horehound
Pycnanthemum virginianum	Common Mountian Mint
Rudbeckia triloba	Brown-Eyed Susan
Sagittaria latifolia	Common Arrowhead
Senna hebecarpa	Wild Senna
Silphium terebinthinaceum	Prairie Dock
Symphyotrichum novae-angli	New England Aster
Verbena hastata	Blue Vervain
Zizia aurea	Golden Alexanders

Low-profile Prairie Seed Mix

Stantec Native Plant Nursery 574-586-2412
stantec.com/native-plant-nursery

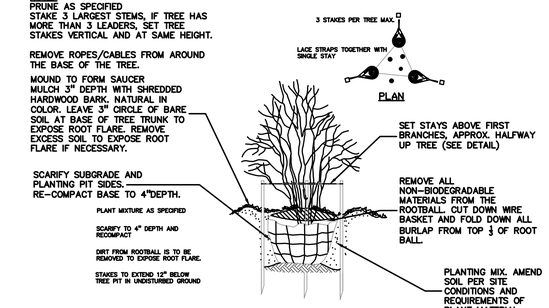
Botanical Name	Common Name
Permanent Grasses:	
Bouteloua curtipendula	Side Oats Grama
Carex spp.	Prairie Carex Mix
Elymus canadensis	Canada Wild Rye
Koeleria pyramidata	June Grass
Panicum virgatum	Switch Grass
Schizachyrium scoparium	Little Bluestem
Temporary Cover:	
Avena sativa	Common Oat
Lolium multiflorum	Annual Rye
Forbs:	
Amorpha canescens	Lead Plant
Anemone cylindrica	ThimbleWeed
Asclepias syriaca	Common Milkweed
Asclepias tuberosa	Butterfly MilkWeed
Baptisia alba	White Wild Indigo
Chamaecrista fasciculata	Partridge Pea
Coreopsis lanceolata	Sand Coreopsis
Coreopsis palmata	Prairie Coreopsis
Dalea candida	White Prairie Clover
Dalea purpurea	Purple Prairie Clover
Desmanthus illinoensis	Illinois Sensitive Plant
Echinacea purpurea	Broad-Leaved Purple Coneflower
Eryngium yuccifolium	Rattlesnake Master
Lespedeza capitata	Round-Head Bush Clover
Liatris aspera	Rough Blazing Star
Lupinus perennis	Wild Lupine
Monarda fistulosa	Wild Bergamot
Oligoneuron rigidum	Stiff Goldenrod
Parthenium integrifolium	Wild Quinine
Penstemon digitalis	Foxglove Beard Tongue
Penstemon hirsutus	Hairy Beard Tongue
Pycnanthemum virginianum	Common Mountain Mint
Ratibida pinnata	Yellow Coneflower
Rudbeckia hirta	Black-Eyed Susan
Rudbeckia subtomentosa	Sweet Black-Eyed Susan
Silphium terebinthinaceum	Prairie Dock
Solidago speciosa	Showy Goldenrod
Symphyotrichum ericoides	Heath Aster
Symphyotrichum laeve	Smooth Blue Aster
Symphyotrichum novae-angliae	New England Aster
Tradescantia ohiensis	Common Spiderwort
Verbena stricta	Hoary Vervain
Vernonia spp.	Ironweed (Various Mix)
Veronicastrum virginicum	Culvers Root

MAINTENANCE SCHEDULE

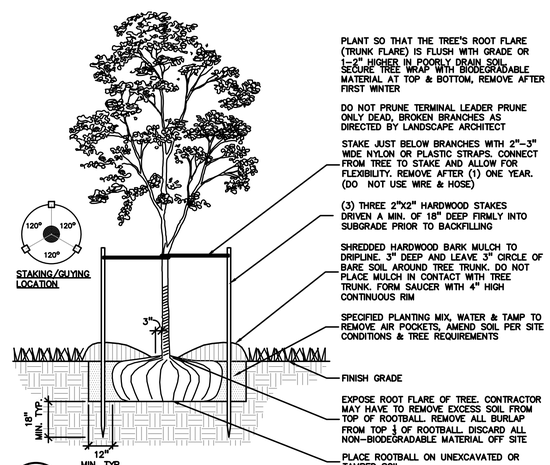
LAWN	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Comments
Soil Aeration													Every 3 Years
Watering													Untill Established
Mowing													Weekly
Fertilization													
Weed Control													
Pest Control													As Needed
Lawn Restoration													
Clean-up													
TREES, SHRUBS AND GROUNDCOVER													
Planting													
Fertilization													
Weed Control													Bi-Weekly
Pest Control													As Needed
Plant Repair													As Needed
Pruning													See Specs
Mulching													

GENERAL PLANTING NOTES:

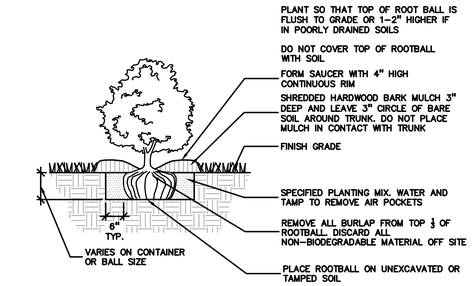
1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
3. ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSERYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1. GRADE.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
5. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
6. ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
7. ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
8. ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
9. ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
10. ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
11. NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
12. ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
13. IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
14. ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
15. SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.
16. FOR NON-LAWN SEED MIX AREAS, AS NOTED ON PLAN, BRUSH MOW ONCE SEASONALLY FOR INVASIVE SPECIES CONTROL.
17. CONTRACTOR SHALL NOT INSTALL PLANTS UNDER BUILDING OVERHANG AND SHALL NOTIFY LANDSCAPE ARCHITECT IF DRAWINGS CONFLICT WITH BUILDING OVERHANGS.
18. TREES SHALL NOT CONFLICT/ BLOCK PROPOSED REGULATORY/ DIRECTION SIGNAGE, MONUMENT SIGNS, ADDRESS OR LIGHT POLES. SHIFT TREES AS NECESSARY TYP.



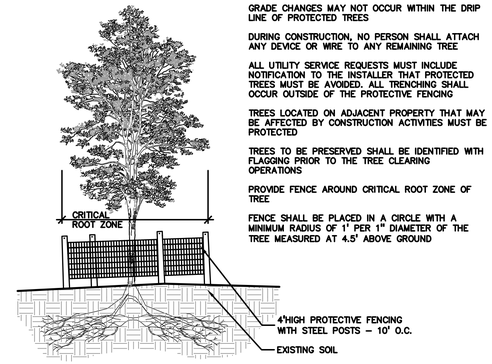
5 MULTI-STEM TREE PLANTING DETAIL
SCALE: 1" = 2'-0"



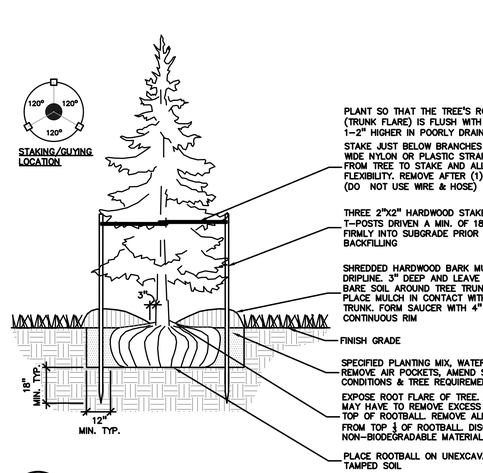
4 DECIDUOUS TREE PLANTING DETAIL
SCALE: 1" = 3'-0"



3 SHRUB PLANTING DETAIL
SCALE: 1" = 2'-0"



2 TREE PROTECTION DETAIL
SCALE: 1" = 3'-0"



1 EVERGREEN TREE PLANTING DETAIL
SCALE: 1" = 3'-0"

NOT FOR CONSTRUCTION

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STATE OF MICHIGAN
LYNN A. WHIPPLE
LANDSCAPE ARCHITECT
No. 4100
REGISTERED LANDSCAPE ARCHITECT

811 Know what's below. Call before you dig.

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT
BLACK & VEATCH

PROJECT TITLE
GRENADA SUBSTATION
PLYMOUTH ROAD AND N. DIXBORO RD
ANN ARBOR TWP. / MI

REVISIONS
- -

ORIGINAL ISSUE DATE:
OCTOBER 30, 2025

DRAWING TITLE
LANDSCAPE DETAILS

PEA JOB NO.	25-1461
P.M.	LAW
DN.	CAL
DES.	LAW

DRAWING NUMBER:
L-1.1

S:\PROJECTS\2025\25-1461 GRENADA SUBSTATION LANDSCAPE PLAN\CIVIL\L_SITE_PLAN\(L-1.1) LANDSCAPE DETAILS- 25-1461.DWG PLOT DATE: 11/7/2025 BY: Charlotte L'Esperance

GENERAL LANDSCAPING REQUIREMENTS

1.0 GENERAL

1.1 SUMMARY

1.1.1 Includes But Not Limited To

1. General procedures and requirements for Site Work.

2.0 PRODUCTS - Not Used

3.0 EXECUTION

3.1 PREPARATION

3.1.1 Protection

1. Spillage:

A. Avoid spillage by covering and securing loads when hauling on or adjacent to public streets or highways.

B. Remove spillage and sweep, wash, or otherwise clean project, streets, and highways.

2. Erosion Control:

A. Take precautions necessary to prevent erosion and transportation of soil downstream, to adjacent properties, and into on-site or off-site drainage systems.

B. Develop, install, and maintain an erosion control plan if required by law.

C. Repair and correct damage caused by erosion.

3. Existing Plants And Features:

A. Do not damage tops, trunks, and roots of existing trees and shrubs on site which are intended to remain.

B. Do not use heavy equipment within branch spread. Interfering branches may be removed only with permission of Landscape Architect.

C. Do not damage other plants and features which are to remain.

3.1.2 If specified precautions are not taken or corrections and repairs made promptly, Owner may take such steps as may be deemed necessary and deduct costs of such from monies due to Contractor. Such action or lack of action on Owner's part does not relieve Contractor from responsibility for proper protection of the Work.

END OF SECTION

LANDSCAPING PREPARATION

1.0 GENERAL

1.1 SUMMARY

1.1.1 Includes But Not Limited To

1. General landscape work requirements.

1.2 QUALITY ASSURANCE

1.2.1 Comply with all applicable local, state and federal requirements, regarding materials, methods of work, and disposal of excess and waste materials.

1.2.2 Obtain and pay for all required inspections, permits, and fees.

1.2.3 Provide notices required by governmental authorities.

1.3 PROJECT CONDITIONS

1.3.1 Locate and identify existing underground and overhead services and utilities within contract limit work areas. (Call Miss Dig: 1-800-482-7171 in Michigan).

1.3.2 Provide adequate means to protect utilities and services designated to remain.

1.3.3 Repair utilities damaged during site work operations at Subcontractor's expense.

1.3.4 When uncharted or incorrectly charted underground piping or other utilities and services are encountered during site work operations, notify the applicable utility company immediately to obtain procedure directions. Cooperate with the applicable utility company in maintaining active services in operation.

1.3.5 Locate, protect, and maintain benchmarks, monuments, control points and project engineering reference points. Re-establish disturbed or destroyed items at Subcontractor's expense.

1.3.6 Perform landscape work operations and the removal of debris and materials to assure minimum interference with streets, walks, and other adjacent facilities.

1.3.7 Obtain governing authorities' written permission when required to close or obstruct streets, walks and adjacent facilities. Provide alternate routes around closed or obstructed traffic ways when required by governing authorities.

1.3.8 Protect and maintain street lights, utility poles and services, traffic signal control boxes, curb boxes, valves and other services, except items designated for removal.

1.3.9 The General Contractor will occupy the premises and adjacent facilities during the entire period of construction. Perform landscape work operations to minimize conflicts and to facilitate General Contractor's use of the premises and conduct of his normal operations.

1.3.10 Perform landscape preparation work before commencing landscape construction.

1.3.11 Provide necessary barricades, coverings and protection to prevent damage to existing improvements indicated to remain.

1.3.12 Protect existing trees scheduled to remain against injury or damage including cutting, breaking or skinning of roots, trunks or branches, smothering by stockpiled construction materials, excavated materials or vehicular traffic within branch spread.

2.0 PRODUCTS

2.1 MATERIALS/EQUIPMENT

2.1.1 As selected by the General Contractor, except as indicated.

1. Tree protection:

A. Wood fencing - Snow fencing 4' height.

B. Posts - Steel fence post.

C. Herbicide for lawn restoration - "Round-up" by Monsanto.

3.0 EXECUTION

3.1 EXISTING UTILITIES

3.1.1 Call "MISS DIG" 811 before construction begins. Information on the drawings related to existing utility lines and services is from the best sources presently available. All such information is furnished only for information and is not guaranteed. Excavate test pits as required to determine exact locations of existing utilities.

3.2 CLEARING

3.2.1 Locate and suitably identify trees and improvements indicated to remain.

3.2.2 Fencing/soil erosion fence is to be installed.

3.2.3 Any equipment that compacts the soil in the areas of existing trees is not allowed.

3.2.4 Protect trees scheduled to remain with 4' high snow fence per plans.

3.2.5 No vehicular traffic is permitted beneath drip line at any time. All lawn areas are to be worked by hand.

3.2.6 Clear and grub areas within contract limits as required for site access and execution of the work.

3.2.7 Remove trees, plants, undergrowth, other vegetation and debris, except items indicated to remain.

3.2.8 Treat planting and lawn areas as required with herbicide per manufacturer recommendations to kill existing vegetation prior to planting, seeding and sodding.

3.2.9 Remove stumps and roots to a clear depth of 36" below subgrades. Remove stumps and roots to their full depth within 5'0" of underground structures, utility lines, footings, and paved areas.

3.3 DISPOSAL OF WASTE MATERIALS

3.3.1 Stockpile, haul from site and legally dispose of waste materials and debris. Accumulation is not permitted.

3.3.2 Maintain disposal routes, clear, clean and free of debris.

3.3.3 On site burning of combustible cleared materials is not permitted.

3.3.4 Upon completion of landscape preparation work, clean areas within contract limits, remove tools and equipment. Site to be clear, clean and free of materials and debris and suitable for site work operations.

3.3.5 Materials, items and equipment not scheduled for reinstallation or salvaged for the General Contractor are the property of the Landscape Contractor. Remove cleared materials from the site as the work progresses. Storage and sale of Landscape Contractors salvage items on site is not permitted.

END OF SECTION

FINISH GRADING AND TOPSOIL PLACEMENT

1.0 GENERAL

1.1 SUMMARY

1.1.1 Includes But Not Limited To

1. Perform finish grading and topsoil placement required to prepare site for installation of landscaping as described in Contract Documents.

1.2 SUBMITTALS

1.2.1 Quality Assurance

1. Submit test on imported topsoil and on site stockpiled topsoil by independent licensed testing laboratory prior to use. Imported topsoil shall meet minimum specified requirements and be approved by Landscape Architect prior to use.

2. Provide and pay for testing and inspection during topsoil operations. Laboratory, inspection services, and Soils Engineer shall be acceptable to the Landscape Architect.

3. Submit report stating location of source of imported topsoil and account of recent use.

4. Test for pH factor, mechanical analysis, and percentage of organic content.

5. Submit test reports to General Contractor.

6. Sub-Contractor, or testing agency to make recommendations on type of quantity of additives required to establish satisfactory pH factor and supply of nutrients to bring nutrients to satisfactory level for planting.

1.3 QUALITY ASSURANCE

1.3.1 Participate in pre-installation meeting with Landscape Architect.

1.4 PROJECT CONDITIONS

1.4.1 Also see Landscape Preparation Section.

1.4.2 Protect existing trees, plants, lawns, and other features designated to remain as part of the landscaping work.

1.4.3 Promptly repair damage to adjacent facilities caused by topsoil operations. Cost of repair at Subcontractor's expense.

1.4.4 Promptly notify the General Contractor and Landscape Architect of unexpected subsurface conditions.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1 Topsoil: supplied and stockpiled topsoil proposed for use must meet the testing criteria results specified. Topsoil must conform to adjustments and recommendations from the soil test and by the Landscape Architect.

2.1.2 Existing topsoil: existing topsoil from on-site stockpile shall be utilized. All processing, cleaning, and preparation of this stored topsoil to render it acceptable for use is the responsibility of the Subcontractor.

2.1.3 Provide additional topsoil as required to complete the job. Topsoil must meet testing criteria results specified.

2.1.4 All processing, cleaning, and preparation of this supplied topsoil to render it acceptable for use is the responsibility of the Subcontractor.

2.1.5 Supplied and stockpiled topsoil, shall be fertile, friable, dark in color and representative of local productive soil, capable of sustaining vigorous plant growth and free of clay lumps, subsoil, noxious weeds or other foreign matter such as stones of 1" in any dimension, roots, sticks, and other extraneous material: not frozen or muddy. PH of soil range between 5.0 and 7.5

2.1.6 Soil shall not contain more than 2 percent of particles measuring over 2.0 mm in largest size

2.1.7 Prepared topsoil shall be used in planting mixtures as specified in Trees, Plants, and Ground Cover; all beds prepared as specified.

3.0 EXECUTION

3.1 EXAMINATION

3.1.1 Do not commence work of this Section until grading tolerances specified are met.

3.2 PREPARATION

3.2.2 Prior to grading, dig out weeds from planting areas by their roots and remove from site. Before placing top soil inlandscape areas, remove rocks larger than 1 inch in any dimension and foreign matter such as building rubble, wire, cans, sticks, concrete, etc.

3.2.3 Prior to placing topsoil, remove any imported base material present in planting areas down to natural subgrade or other material acceptable to Landscape Architect.

3.3 PERFORMANCE

3.3.1 Site Tolerances

1. Total Topsoil Depth -

A. Lawn And Groundcover Planting Areas - 3 inches minimum compacted.

B. Shrub Planting Areas - 12 inches minimum throughout entire shrub bed area.

2. Elevation of topsoil relative to walks or curbs -

A. Seeded Lawn Areas - 1/4 inch below

B. Sodded Lawn Areas - 1 1/2 inches below

C. Shrub And Ground Cover Areas - 3 inches below

3.3.2 Do not expose or damage existing shrub or tree roots.

3.3.3 Redistribute approved existing top soil stored on site as a result of rough grading. Remove organic material, rocks and clods greater than 1 inch in any dimension, and other objectionable materials. Provide additional approved imported topsoil required for specified topsoil depth and bring surface to specified elevation relative to walk or curb.

3.3.4 For trees, shrubs, ground cover beds and plant mix for beds see Exterior Plants section.

3.3.5 Provide earth berming where indicated on Plans.

3.3.6 Berming to be free flowing in shape and design, as indicated, and to blend into existing grades gradually so that the toe of slope is not readily visible. Landscape Architect or General Contractor's representative to verify final contouring before planting.

3.3.7 Regardless of finish grading elevations indicated, it is intended that grading be such that proper drainage of surface water away from buildings will occur and that no low areas are created to allow ponding. Subcontractor to consult the General Contractor and Landscape Architect regarding variations in grade elevations before rough grading is completed.

3.3.8 Slope grade away from building for 12 feet minimum from walls at slope of 1/2 inch per ft minimum unless otherwise noted. High point of finish grade at building foundation shall be 6 inches minimum below finish floor level. Direct surface drainage in manner indicated on Drawings by molding surface to facilitate natural run-off of water. Fill low spots and pockets with top soil and grade to drain properly.

3.3.9 Rake all topsoil to remove clods, rocks, weeds, and debris.

3.3.10 Grade and shape area to bring surface to true uniform planes free from irregularities and to provide proper drainage and slopes per plans.

3.4 CLEANING

3.4.1 Upon completion of topsoil operations, clean areas within contract limits, remove tools, equipment, and haul all excess topsoil off-site. Site shall be clear, clean, free of debris, and suitable for site work operations.

END OF SECTION

LAWN SEEDING

1.0 GENERAL

1.1 SUMMARY

1.1.1 Includes But Not Limited To

1. Furnish and install seeded lawn as described in Contract Documents.

1.2 SUBMITTALS

1.2.1 Submit seed vendor's certification for required grass seed mixture, indicating percentage by weight, and percentage of purity, germination, and weed seed for each grass species.

1.3 DELIVERY AND STORAGE

1.3.1 Deliver seed and fertilizer materials in original unopened containers, showing weight, analysis, and name of manufacturer. Store in a manner to prevent wetting and deterioration.

1.4 PROJECT CONDITIONS

1.4.1 See landscape preparation section.

1.4.2 Work notification: Notify Landscape Architect of General Contractor's representative at least seven (7) working days prior to start of seeding operation.

1.4.3 Protect existing utilities, paving, and other facilities from damage caused by seeding operations.

1.4.4 Perform seeding work only after planting and other work affecting ground surface has been completed.

1.4.5 Provide hose and lawn watering equipment as required.

1.4.6 The irrigation system will be installed prior to seeding. Locate, protect, and maintain the irrigation system during seeding operations. Repair irrigation system components damaged during seeding operations at the Sub-Contractor's expense.

1.5 WARRANTY

1.5.1 See Landscape Maintenance and Warranty Section

2.0 PRODUCTS

2.1 MATERIALS

2.1.1 Topsoil for Seeded Areas: See Topsoil Placement and Drawings.

2.1.2 Lawn seeded areas: Fresh, clean and new crop seed mixture. Mixed by approved methods.

2.1.3 Seed mixture composed of the following varieties, mixed to the specified proportions by weight and tested to minimum percentages of purity and germination.

2.1.4 Irrigated Lawn Seed Mixture proportioned by volume as indicated below:

SEED TYPE	PROPORTION	PURITY	GERMINATION
Kentucky Bluegrass	50%	90%	75%
Penn Lawn Fescue	30%	95%	80%
Annual Ryegrass	20%	95%	80%

2.1.5 Non-Irrigated Seed Mixture proportioned by volume as indicated below:

SEED TYPE	PROPORTION	PURITY	GERMINATION
Penn Lawn Fescue	60%	90%	85%
Kentucky 28# Common Bluegrass	20%	90%	90%
Pennfine Perennial Rye	20%	90%	90%

2.1.6 Fertilizer: granular, non burning product composed of not less that 50% organic slow acting, guaranteed analysis professional fertilizer.

2.1.7 Ground Limestone: Used if required by soil test report: Containing not less than 85% of total carbonates and ground to such fineness that 50% will pass through a 100 mesh sieve and 90% will pass through a 20% mesh sieve.

2.1.8 Straw Mulch: Used in crimping process only. Clean oat or wheat straw well seasoned before bailing, free from mature seed-bearing status, or roots of prohibited or noxious weeds.

2.1.9 Water: Free of substance harmful to seed growth. Hoses or other methods to transpiration furnished by Sub Contractor.

3.0 EXECUTION

3.1 INSPECTION

3.1.1 Landscape Architect or General Contractor's representative must approve finish surfaces, grades, topsoil quality and depth. Do not start seeding work until unsatisfactory conditions are corrected.

3.2 PREPARATION

3.2.1 SURFACE PREPARATION

1. Seven days maximum prior to seeding, -

A. Treat Lawn areas if required with "Round-Up" by Monsanto, per label direction to kill existing vegetation prior to seeding.

B. Loosen topsoil areas to minimum depth of 4", dampen thoroughly, and cultivate to properly break up clods and lumps.

C. Rake area to remove clods, rocks, weeds, roots, debris, and stones over 1" in any dimension.

D. Grade lawn areas to smooth, free draining even surface with a loose, moderately coarse texture. Roll and rake, remove ridges, and fill depressions as required to drain.

E. Apply limestone to supplied topsoil if required by soil test report at rate determined by the soil test, to adjust pH of topsoil to not less than 6.0 no more that 6.8. Distribute evenly by machine and incorporate thoroughly into topsoil.

F. Apply fertilizers to indicated turf areas at a rate equal to 1 lb. of actual nitrogen 1,000 sq. ft. (43 lbs / acre).

G. Apply fertilizers by mechanical rotary or drop type distributor, thoroughly and evenly incorporated with soil to a depth of 1" by approved method. Fertilize areas inaccessible to power equipment with hand tools and incorporate into soil.

H. After lawn areas have been prepared, take no heavy objects over them except lawn rollers.

I. After preparation of lawn areas and with topsoil in semi-dry condition, roll lawn planting areas in two directions at approximately right angles with water ballast roller weighing 100 to 300 lbs according to soil type.

J. Rake or scarify and cut or fill irregularities that develop as required until area is true and uniform, free from lumps, depressions, and irregularities.

K. Restore prepared areas to specified condition if eroded, settled or otherwise disturbed after fine grading and prior to seeding.

3.3 INSTALLATION

3.3.1 SEEDING

1. Seed lawns only between April 1, and June 1, and fall seeding between August 15, and October 15, or at such other times acceptable to Landscape Architect.

2. Seed immediately after preparation of bed. Seed indicated areas within contract Limits and areas adjoining contract limits disturbed as a result of construction operations.

3. Perform seeding operations when the soil is dry and when the winds do not exceed five(5) miles per hour velocity.

4. Apply seed with a rotary or drop type distributor. Install seed evenly by sowing equal quantities in two (2) directions, at right angles to each other.

5. Sow seed at a rate of 300 lbs./acre.

6. After seeding, rake or drag surface of soil lightly to incorporate seed into top 1/8" of soil. Roll with light lawn roller.

7. Provide soil erosion planting mat where grade conditions required to stabilize the planting area.

3.3.2 HYDRO-SEEDING

1. Hydro-seeding: The application of grass seed and a wood cellulose fiber mulch tinted green shall be accomplished in one operation by use of an approved spraying machine.

A. Mix seed, fertilizer, and wood cellulose fiber in required amount of water to produce a homogeneous slurry. Add wood cellulous fiber after seed, water, and fertilizer have been thoroughly mixed and apply at the rate of 200 pounds per acre dry weight.

B. For hydro-seeding, wood cellulose fiber shall be used. Silva-Fiber Mulch by Weyerhaeuer Company, Tacoma, WA (800-443-9179).

C. Hydraulically spray material on ground to form a uniform cover impregnated with grass seed.

D. Immediately following application of slurry mix, make separate application of wood cellulose mulch at the rate of 1,000 pounds, dry weight, per acre.

E. Apply cover so that rainfall or applied water will percolate to underlying soil.

3.3.3 MULCHING

1. Place straw mulch on seeded areas within 24-hours after seeding.

2. Place straw mulch uniformly in a continuous blanket at a rate of 2-1/2 tons per acre, or two (2) 50 lb. bales per 1,000 sq. ft. of area. A mechanical blower may be used for straw mulch application when acceptable to the Landscape Architect.

3. Crimp straw into soil by use of a "crimper". Two passes in alternate direction required. Alternative methods on areas too small for crimper must be approved by the Landscape Architect or Owner's Representative.

3.3.3 ESTABLISH LAWN

1. Establish dense lawn of permanent grasses, free from lumps and depressions. Any area failing to show uniform germination to be reseeded; continue until dense lawn established.

2. Damage to seeded area resulting from erosion to be repaired by Sub Contractor.

3. In event Sub Contractor does not establish dense lawn during first germination period, return to project to refertilize and reseed to establish dense lawn.

4. Should the seeded lawn become largely weeds after germination, Sub Contractor is responsible to kill the weeds and reseed the proposed lawn areas to produce a dense turf, as specified.

3.4 CLEANING

3.4.1 Perform Cleaning during installation of the work and upon completion of the work to the approval of the Landscape Architect. Remove from site all excess materials, debris, and equipment. Repair damage resulting from seeding operations.

3.5 MAINTENANCE

3.5.1 See Landscape Maintenance and Warranty Section.

3.6 ACCEPTANCE

3.6.1 See Landscape Maintenance and Warranty Section.

END OF SECTION

LAWN SODDING

1.0 GENERAL

1.1 SUMMARY

1.1.1 Includes But Not Limited To

1. Furnish and install sodded lawn as described in Contract Documents.

1.2 QUALITY ASSURANCE

1.2.1 Sod: Comply with American Sod Producers Association (ASPA) classes of sod materials.

1.3 SUBMITTALS

1.3.1 Submit sod growers certification of grass species. Identify source location.

1.3.2 Submit manufacturer's certification of fertilizer.

1.4 DELIVERY, STORAGE, AND HANDLING

1.4.1 Cut, deliver, and install sod within 24 hour period.

1.4.2 Do not harvest or transport sod when moisture content may adversely affect sod survival.

1.4.3 Protect sod from sun, wind, and dehydration prior to installation. Do not tear, stretch, or drop sod during handling and installation.

1.4.4 Sod which dries out before installation will be rejected.

1.5 PROJECT CONDITIONS

1.5.1 See Landscape Preparation section.

1.5.2 Work notification: Notify Landscape Architect or General Contractor's representative at least seven (7) working days prior to start of sodding operation.

1.5.3 Protect existing utilities, paving, and other facilities from damage caused by sodding operations.

1.5.4 Perform sodding work only after planting and other work affecting ground surface has been completed.

1.5.5 Restrict traffic from lawn areas until grass is established. Erect signs and barriers as required.

1.5.6 Provide hose and lawn watering equipment as required.

1.5.7 The irrigation system will be installed prior to sodding. Locate, protect, and maintain the irrigation system during sodding operations. Repair irrigation system components damaged during sodding operations at the Subcontractor's expense.

1.6 WARRANTY

1.6.1 See Landscape Maintenance and Warranty Section.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1 Sod: An "approved" nursery grown blend of improved Kentucky Bluegrass varieties.

2.1.2 Sod containing Common Bermudagrass, Quackgrass, Johnsongrass, Poison Ivy, Nutsedge, Nimblewill, Canada Thistle, Timothy, Bentgrass, Wild Garlic, Ground Ivy, Perennial Sorrel, or Bramegrass weeds will not be acceptable.

2.1.3 Provide well rooted, healthy sod, free of diseases, nematodes and soil borne insects. Provide sod uniform in color, leaf texture, density, and free of weeds, undesirable grasses, stones, roots, thatch, and extraneous material; viable and capable of growth and development when planted.

2.1.4 Furnish sod, machine stripped in square pads or strips not more than 3'-0" long; uniformly 1" to 1-1/2" thick with clean cut edges. Mow sod before stripping.

2.1.5 Fertilizer: granular, non burning product composed of not less that 50% organic slow acting, guaranteed analysis professional fertilizer.

2.1.6 Type A: starter fertilizer containing 20% nitrogen, 12% phosphoric acid, and 8% potash by by weight or similar approved composition.

2.1.7 Ground Limestone: Used if required by soil test report: Containing not less than 85% of total carbonates and ground to such fineness that 50% will pass through a 100 mesh sieve and 90% will pass through a 20% mesh sieve.

2.1.8 Stakes: softwood, 3/4" x 8" long.

2.1.9 Water: Free of substance harmful to seed growth. Hoses or other methods to transpiration furnished by Sub Contractor.

2.1.10 Topsoil: see Topsoil Placement section.

3.0 EXECUTION

3.1 INSPECTION

3.1.1 Landscape Architect or General Contractor's representative must approve finish surfaces, grades, topsoil quality and depth. Do not start sodding work until unsatisfactory conditions are corrected.

3.2 PREPARATION

3.2.1 Surface Preparation:

1. Seven days maximum prior to sodding, -

a. Treat Lawn areas if required with herbicide per manufacturer recommendations to kill existing vegetation prior to sodding.

b. Loosen topsoil areas to minimum depth of 4", dampen thoroughly, and cultivate to properly break up clods and lumps.

c. Rake area to remove clods, rocks, weeds, roots, debris, and stones over 1" in any dimension.

d. Grade lawn areas to smooth, free draining even surface with a loose, moderately coarse texture. Roll and rake, remove ridges, and fill depressions as required to drain.

e. Apply limestone to supplied topsoil if required by soil test report at rate determined by the soil test, to adjust pH of topsoil to not less than 6.0 no more that 6.8. Distribute evenly by machine and incorporate thoroughly into topsoil.

f. Apply fertilizers to indicated turf areas at a rate equal to 1 lb. of actual nitrogen 1,000 sq. ft. (43 lbs / acre).

g. Apply fertilizers by mechanical rotary or drop type distributor, thoroughly and evenly incorporated with soil to a depth of 1" by approved method. Fertilize areas inaccessible to power equipment with hand tools and incorporate into soil.

h. After lawn areas have been prepared, take no heavy objects over them except lawn rollers.

i. After preparation of lawn areas and with topsoil in semi-dry condition, roll lawn planting areas in two directions at approximately right angles with water ballast roller weighing 100 to 300 lbs.

j. Rake or scarify and cut or fill irregularities that develop as required until area is true and uniform, free from lumps, depressions, and irregularities.

k. Restore prepared areas to specified condition if eroded, settled or otherwise disturbed after fine grading and prior to sodding.

l. Dampen dry soil prior to sodding.

3.3 INSTALLATION

3.3.1 Sodding:

1. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips. Do not overlay edges. Stagger strips to offset joints in adjacent course. Remove excess sod to avoid othering of adjacent grass. Provide sod pad top flush with adjacent curbs, sidewalks, drains, and seeded areas.

2. Do not lay dormant sod or install sod on saturated, frozen soil.

3. Install initial row of sod in a straight line, beginning at the bottom of slopes, perpendicular to direction of the sloped area. Place subsequent rows parallel to and lightly against previously installed row.

4. Peg sod on slopes greater than 3 to 1 or in centerline of swales to prevent slippage at a rate of 2 stakes per yard of sod.

5. Water sod thoroughly with a fine spray immediately after laying to obtain moisture penetration through sod into top 4 inches of topsoil.

6. Roll with light lawn roller in two directions perpendicular to each other to ensure contact with sub grade.

7. Install sod at indicated areas within contract limits and areas adjoining contract limits disturbed as a result of construction operations.

8. Damage to sodded area resulting from erosion to be repaired by Subcontractor.

3.4 CLEANING

3.4.1 Perform Cleaning during installation of the work and upon completion of the work to the approval of the Landscape Architect. Remove from site all excess materials, debris, and equipment. Repair damage resulting from sodding operations.

3.5 MAINTENANCE

3.5.1 See Landscape Maintenance and Warranty Section.

3.6 ACCEPTANCE

3.6.1 See Landscape Maintenance and Warranty Section.

END OF SECTION

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Know what's below. Call before you dig. 811

CAUTION!!
THE LOCATIONS AND ELEVATIONS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS DRAWING ARE ONLY APPROXIMATE AND NOT NECESSARILY COMPLETE. NO REPRESENTATION IS MADE OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

CLIENT
BLACK & VEATCH

PROJECT TITLE
GRENADA SUBSTATION
PLYMOUTH ROAD AND N. DIXBORO RD
ANN ARBOR TWP. / MI

REVISIONS
-

ORIGINAL ISSUE DATE:
OCTOBER 30, 2025

DRAWING TITLE
LANDSCAPE SPECIFICATIONS

PEA JOB NO.	25-1461
P.M.	LAW
DN.	CAL
DES.	LAW

DRAWING NUMBER:
L-2.1

NOT FOR CONSTRUCTION

S:\PROJECTS\2025\25-1461 GRENADA SUBSTATION LANDSCAPE PLAN\DWG\L-SITE_PLAN\L-2.0 LANDSCAPE SPECS 1_2024-10-23.dwg PLOT DATE:11/7/2025 BY:Charlotte L'Esperance

EXTERIOR PLANTS

1.0 GENERAL

1.1 SUMMARY

1.1.1 Includes But Not Limited To

1. Furnish and install landscaping plants as described in Contract Documents.

1.2 QUALITY ASSURANCE

1.2.1 Plant names indicated, comply with "Standardized Plant Names" as adopted by the latest edition of the American Joint Committee of Horticultural Nomenclature. Names of varieties not listed conform generally with names accepted by the nursery trade. Provide stock true to botanical name and legibly tagged.

1.2.2 Comply with sizing and grading standards of the latest edition of "American Standard for Nursery Stock". A plant shall be dimensioned as it stands in its natural position.

1.2.3 All plants shall be nursery grown under climatic conditions similar to those in the locality of the project for a minimum of two years.

1.2.4 Stock furnished shall be at least the minimum size indicated. Larger stock is acceptable, at no additional charge. Larger plants shall not be cut back to size indicated.

1.2.5 Provide "specimen" plants with a special height, shape, or character of growth. Landscape Subcontractor is to tag specimen trees or shrubs at the source of supply. The Landscape Subcontractor shall inspect all plant material at source prior to Landscape Architect's approval. Landscape Subcontractor shall accompany Landscape Architect on final selection trip. The Landscape Architect will inspect specimen selections for suitability and adaptability to selected location. When specimen plants cannot be purchased locally, provide sufficient photographs of the proposed specimen plants for approval.

1.2.6 Plants may be inspected and approved at the place of growth for compliance with specification requirements for quality, size, and variety.

1.2.7 Approval of plant selection at the place of growth shall not impair the right of inspection and rejection upon delivery at the site or during progress of the work.

1.2.8 Provide percolation testing by filling plant pits with water and monitoring length of time for water to completely percolate into soil. Submit test results to Landscape Architect prior to starting work.

1.2.9 Before proceeding with work, check and verify dimensions and quantities. Report variations between Drawings and site to Landscape Architect before proceeding with work of this section.

1.2.10 Plant totals are for convenience only and are not guaranteed. Verify amounts shown on Drawings. All plantings indicated on Drawings are required unless indicated otherwise.

1.3 SUBMITTALS

1.3.1 Provide and pay for material testing. Testing agency shall be acceptable to the Landscape Architect. Provide the following data:

1. The loss of weight by ignition and moisture absorption capacity shall be tested for peat moss.

1.3.2 Submit the following material samples to Landscape Architect:

1. Peat moss, shredded hardwood bark mulch, planting accessories, pre-emergent herbicides, and plant fertilizers.

1.3.3 Submit the following materials certification to Landscape Architect:

1. Topsoil source and ph value, peat moss, and plant fertilizer.

1.4 DELIVERY, STORAGE, AND HANDLING

1.4.1 Deliver fertilizer materials in original, unopened and undamaged containers showing weight, analysis, and name of manufacturer. Store in manner to prevent wetting and deterioration.

1.4.2 Take all precautions customary in good trade practice in preparing plants for moving. Workmanship that fails to meet the highest standards will be rejected.

1.4.3 Spray deciduous plants in foliage with an approved "Anti-Desiccant" immediately after digging to prevent dehydration.

1.4.4 Dig, pack, transport, and handle plants with care to ensure protection against injury.

1.4.5 Inspection certificates required by law shall accompany each shipment invoice or order to stock on arrival. The certificate shall be filed with the General Contractor's representative.

1.4.6 Protect all plants from drying out. If plants cannot be planted immediately upon delivery, properly protect them with soil, shredded hardwood bark mulch, or in a manner acceptable to the General Contractor's representative.

1.4.7 Water heeled in plantings daily.

1.4.8 No plant shall be bound with rope or wire in a manner that could damage or break the branches.

1.4.9 Cover plants transported on open vehicles with a protective covering to prevent wind burn.

1.4.10 Frozen or muddy topsoil is not acceptable.

1.5 PROJECT CONDITIONS

1.5.1 See Landscape Preparation Section.

1.5.2 Work notification: notify Landscape Architect at least seven working days prior to installation of plant material.

1.5.3 Protect existing utilities, paving, and other facilities from damage caused by landscaping operations.

1.5.4 A complete list of plants, including a schedule of sizes, quantities, and other requirements is shown on the proposal form. In the event that quantity discrepancies or material omissions occur in the proposal form, Subcontractor shall notify the Landscape Architect during the proposal bidding process.

1.5.5 An irrigation system will be installed prior to planting. Locate, protect, and maintain the irrigation system during planting operations. Repair irrigation system components, damaged during planting operations, at the Landscape Subcontractor's expense.

1.5.6 The Landscape Subcontractor shall inspect existing soil conditions in all areas of the site where his operations will take place, prior to the beginning of work. It is the responsibility of the Landscape Subcontractor to notify the General Contractor's representative and the Landscape Architect in writing of any conditions which could affect the survivability of plant material to be installed.

1.6 WARRANTY

1.6.1 See Landscape Maintenance and Warranty Standards.

2.0 PRODUCTS

2.1 MATERIALS

2.1.1 Plants: Provide plants typical of their species or variety; with normal, densely developed branches and vigorous, fibrous root systems. Provide only sound, healthy, vigorous plants free from defects, disfiguring knots, sunscald injuries, frost cracks, abrasions of the bark, plant diseases, insect eggs, borers, and all forms of infestation. All plants shall have a fully developed form without voids and open spaces.

1. Dig balled and burlapped plants with firm, natural balls of earth of sufficient diameter and depth to encompass the fibrous and feeding root system necessary for full recovery of the plant. Provide ball sizes complying with the latest edition of the "American Standard for Nursery Stock". Cracked or mushroomed balls are not acceptable.
2. All trees shall have clay or clay loam balls. Trees with sand balls will be rejected.
3. Provide tree species that mature at heights over 25'-0" with a single, main trunk. Trees that have the main trunk forming a "Y" shape are not acceptable.
4. Plants planted in rows shall be matched in form, (see specimen stock).
5. Plants larger than those specified in the plant list may be used when acceptable to the Landscape Architect.
6. No pruning wounds shall be present with a diameter of more than 1" and such wounds must show vigorous bark on all edges.
7. Evergreen trees shall be unsheared and branched to the ground.
8. Shrubs and small plants shall meet the requirements for spread and height indicated on the drawings.
9. Plant materials shall be subject to approval by the Landscape Architect as to size, health, quality, and character.
10. Bare root trees are not acceptable.
11. Provide plant materials from licensed nursery or grower.

2.1.2 Bare root plants: dug with adequate fibrous roots, to be covered with a uniformly thick coating of mud by being puddled immediately after they are dug or packed in moist straw or peat moss.

2.1.3 Container grown stock: grown in a container for sufficient length of time for the root system to have developed to hold its soil together, firm, and whole.

1. No plants shall be loose in the container.
2. Container stock shall not be root bound.
3. Single stemmed or thin plants will not be accepted.
4. Side branches shall be generous, well twigged, and the plant as a whole well bushed to the ground.
5. Plants shall be in a moist, vigorous condition, free from dead wood, bruises or other root or branch injuries.

2.1.4 Collected stock consists of plants growing under natural conditions in soils and climate as exist at location to be planted, in locations lending themselves to proper collecting practices. Root system (balls) to be at least twenty-five (25%) percent larger than specified for nursery grown material.

2.1.5 Specimen stock: all specimen designated plantings are to be nursery grown, fully developed, excellent quality, and typical example of the species. Plants designated to be planted in rows must be matched, symmetrical, and uniform in height, spread, caliper, and branching density.

1. Matched plantings should be obtained from the same nursery and, preferably, from the same row or line. All specimen material will be approved by the Landscape Architect at nursery.

2.1.6 Topsoil for planting mix: fertile, friable, natural topsoil of loamy character, without admixture of subsoil material, obtained from a well drained arable site, reasonably free from clay, lumps, coarse sands, stones, plants, roots, sticks, and other foreign materials with acidity range of between ph 6.0-6.8 for ericaceous plants.

2.1.7 Peat moss: brown to black in color, weed and seed free granulated raw peat.

1. Provide ASTM D2607 sphagnum peat moss with a ph below 6.0 for ericaceous plants.

2.1.8 Planting mixture Type A - trees: standard planting backfill shall be a mixture of ½ native soil (excavated from plant pits), ¼ topsoil, and ¼ sand. Add fertilizer Type "A" and "B" to planting mixture per manufacturer's requirements. Follow planting details.

2.1.9 Planting mixture Type B for perennial flowers, groundcover beds, and ericaceous plants: planting backfill shall be a mixture of 1/3 screened topsoil, 1/3 sand and 1/3 peat. All existing soil shall be excavated and removed. Adding fertilizer types "A" and "B" to mixture per manufacturer's requirements. Follow planting details.

2.1.10 Planting mixture Type C for annual flower beds: same as Type "B". Submit a sample to the Landscape Architect for approval prior to installation.

2.1.11 Planting mixture Type D for Bioretention Soil Mix, for use with shrubs and perennials in a bioswale rain garden or bioretention area. Planting backfill shall be a mixture of 50%-60% coarse sand, 25%–35% screened topsoil, and 10-15% Compost by volume. The following criteria for bioretention soil mix shall be provided:

1. Maximum clay content: 15%
2. Clay and silt content: 25%-40%
3. Nutrient content: 15-30 mg/kg
4. Hydraulic Conductivity: 1-4 inches per hour
5. Organic Matter Content: 2%-5%

Adding fertilizer to mixture per manufacturer's requirements and soil testing recommendations. Follow detail for installation. Submit a sample and testing results to the Landscape Architect for approval prior to installation.

2.1.12 Planting mixture Type E for Planter Soil Mix, Metro Mix 900 in 3 cubic foot bags or approved equal.

2.1.13 Plant fertilizer Type A to be "Drimanure" applied per manufacturer recommendations.

2.1.14 Plant fertilizer Type B to be "14-14-14". Apply per manufacturer recommendations.

2.1.15 Bone Meal - 5 lbs. per cubic yard of soil mixes.

2.1.16 Lime to be ground dolomitic limestone, ninety-five percent (95%) passing through #100 mesh screen. Use to adjust soil pH only, under direction of Landscape Architect.

2.1.17 Sand to be clean, coarse, ungraded conforming to ASTM-C-3 for fine aggregates.

2.1.18 Anti-Desiccant: protective film emulsion providing a protective film over plant surfaces; permeable to permit transpiration. Mixed and applied in accordance with Manufacturer's instructions.

2.1.19 Shredded bark mulch shall be double processed, dark shredded hardwood bark that is clean, free of debris and sticks. Materials shall be uniform in size, shape, and texture. Submit samples to Landscape Architect for approval prior to installation. Install mulch to finish grade, level smooth, without ridges, humps, or depressions.

2.1.20 Water: free of substances harmful to plant growth. Hoses or other methods of transportation shall be furnished by Sub Contractor.

2.1.21 Stakes for staking :(3) Three Hardwood, 2" x 2" x 8'-0" long. Driven a min. of 18" deep firmly into subgrade prior to backfilling. Stakes for guying: Hardwood, 2" x 2" x 36" long.

2.1.22 Guying/staking material:With 2"-3" wide fabric straps, connect from tree to stake. Remove after (1) year, allow for flexibility (do not use wire & hose).

2.1.23 Tree wrap: standard waterproofed tree wrapping paper, 2-1/2" wide, made of 2 layers of crepe kraft paper weighing not less than 30 lbs. per ream, cemented together with asphalt. Secure tree wrap with biodegradable material at top and bottom. Remove after first winter.

2.1.21 Twine: two-ply jute material.

2.2 MEASUREMENTS

2.2.1 Measure height and spread of specimen plant materials with branches in their normal positions as indicated on Drawings or Plant List.

2.2.2 The measurements for height shall be taken from the ground level to the average height of the top of the plant and not the longest branch.

2.2.3 Measurement should be average of plant, not greatest diameter. For example, plant measuring 15 inches in widest direction and 9 inches in narrowest direction would be classified as 12 inch stock.

2.2.4 Plants properly trimmed and transplanted should measure same in every direction.

2.2.5 Measure caliper of trees 6 inches above surface of ground.

2.2.6 Where caliper or other dimensions of plant materials are omitted from Plant List, plant materials shall be normal stock for type listed.

2.2.7 Plant materials larger than those specified may be supplied, with prior written approval of Landscape Architect, and:

1. If complying with Contract Document requirements in all other respects.
2. If at no additional cost to Owner.
3. If sizes of roots or balls are increased proportionately.

2.2.8 The height of the trees, specified by height, measured from the crown of the roots to the top of the top branch, shall not be less than the minimum size designated on the drawings.

3.0 EXECUTION

3.1 INSPECTION

3.1.1 Landscape Architect or General Contractor's representative must approve proposed planting areas and conditions of installation. Do not start planting work until unsatisfactory conditions are corrected.

3.1.2 Individual plant locations shall be staked on the project site by the Landscape Contractor and approved by the Landscape Architect before any planting pits are dug. The Landscape Architect reserves the right to adjust plant material locations to meet field conditions, without additional cost to the General Contractor / Owner.

3.1.3 Accurately stake plant material according to the Drawings. Stakes shall be above grade, painted a bright color, and labeled with the name of the plant material to be installed at that location.

3.2 TIME OF PLANTING

3.2.1 Evergreen material: Plant Evergreen materials between September 1 and October 15 or in spring before new growth begins. If project requirements require planting at other times, plants shall be sprayed with anti-desiccant prior to planting operations.

3.2.2 Deciduous material: Plant deciduous materials in a dormant condition. If deciduous trees are planted in leaf, they shall be sprayed with anti-desiccant prior to planting operation.

3.2.3 Planting times other than those indicated must be acceptable to the Landscape Architect.

3.3 PREPARATION

3.3.1 General: See Landscape Preparation Section

3.3.2 Vegetation Removal

1. Strip existing grass and weeds, including roots from all bed areas leaving the soil surface one (1") inch below finish grade.
2. Herbicide: as required to prepare area for new planting applied to all ground cover, evergreen and shrubbery beds and all mulch areas before application of preemergence herbicide, per manufacture's recommendations. Clean area of all dead material after five (5) days.
3. Pre-Emergence Herbicide: applied per manufacturer recommendations to same area where "Herbicide" has been applied and to planting bed areas, after area is cleared of dead vegetation.
4. Herbicides to be applied by licensed applicator as required by the State.
5. Excavate circular plant pits with vertical sides, except for plants specifically indicated to be planted in beds. Provide plant pits per planting details. Depth of pit shall accommodate the root system. Scarify the bottom of the pit to a depth of 6".
6. Roughen sides of excavations.
7. Provide premixed planting mixture Type "A" for use around the balls and roots of all deciduous and evergreen tree plantings.

3.3.3 Percolation Testing of Plant Beds

Provide percolation testing by filling plant pits with water and monitoring length of time for water to completely percolate into soil. Submit test results to Landscape Architect prior to starting work.

1. Dig a hole at least 12" in diameter by 12" in depth, with straight sides, In excavated plant beds.
2. Fill hole with water and let it sit overnight.
3. Refill hole the next day.
4. Measure the water level by laying a straight edge across the top of the hole, then use a tape measure or yardstick to determine the water level. Continue to measure the water level every hour until the hole is empty, noting the number of inches the water level drops per hour.

Any test holes with a rate of 1" or less an hour is considered to slow and recommendations to remedy issue shall be provide to Architect and Owner.

3.3.4 Ground Cover Beds, Perennial Flower Beds, and Ericaceous Plant Beds

1. Excavate existing soil to 12" depth over entire bed area and remove soil from site. Scarify bottom of bed to a 4" depth. Set plants according to drawings and backfill entire bed with premixed planting mixture "Type B". Ground Cover shall be planted after bed has been backfilled with plant mix and mulched. Plant ground cover through mulch and into plant mix.

3.3.5 Mass Shrub Beds / Hedge Beds:

1. Excavate existing soil to 18" depth over entire bed area and remove soil from site. Scarify bottom of the bed to a 4" depth. Set plants according to drawings and Specifications. Backfill entire bed with (premixed) specified planting mixture Type "A".

3.3.6 Annual Flower Beds:

1. Excavate existing soil to 8" depth over entire bed area and remove soil from site. Scarify bottom of bed to a 4" depth. Backfill entire bed to an 8" depth with premixed planting mixture "Type B".

3.4 INSTALLATION

3.4.1 Planting shall be performed only by experienced workman familiar with planting procedures under the supervision of a qualified supervisor.

3.4.2 Planting pits shall be round, with vertical sides and flat bottoms, and sized in accordance with outlines and dimensions shown on the planting details.

3.4.3 See drawings for planting details.

3.4.4 If obstructions are encountered that are not indicated, do not proceed with planting operations until alternative plant locations have been selected and approved in writing by the Landscape Architect. Where location or spacing dimensions are not clearly shown, request clarification by the Landscape Architect.

3.4.5 Set plant material in the planting pit to proper grade and alignment.

1. Set plants upright, plumb, and faced to give the best appearance or relationship to each other or adjacent structure.
2. Set plant material so it is flush to finish grade after settling, or 1-2" higher in poorly drained soil, or as directed by Landscape Architect.
3. No filling will be permitted around the trunks or stems.
4. Do not cover top of root ball with soil.
5. Backfill pit with planting mixture. Do not use frozen or muddy mixtures for backfilling.
6. Form a ring of soil around the edge of the planting pit to retain water.

3.4.6 After balled and burlapped plants are set, tamp planting mixture around of balls and fill all voids and remove air pockets.

3.4.7 Remove all burlap, ropes, and wires from top 1/3 of balls.

3.4.8 Space ground cover plants in accordance with indicated dimensions. Adjust spacing as necessary to evenly fill planting bed with indicated quantity of plants. Plant to within 12" of trunks and shrubs and to within 6" of planting bed.

3.4.9 Spread and arrange roots of bare rooted plants in their natural position. Work in planting mixture. Do not mat roots together. Cut all broken and frayed roots before installing planting mixture.

3.4.10 Water immediately after planting.

3.4.11 Apply pre-emergent herbicide to bed areas per manufacturer's recommendations before mulching.

3.5 MULCHING

3.5.1 Mulch trees and shrub planting pits and shrub beds with shredded hardwood bark mulch 3" deep to dripline immediately after planting. Leave 3" circle of bare soil around tree trunk. Thoroughly water mulched areas. After watering, rake mulch to provide a uniform finished surface.

3.5.2 Mulch shall not be placed in contact with trunks or stems.

3.5.3 Mulch ground cover beds with shredded bark mulch 2" to 3" deep prior to planting.

3.5.4 Plant ground cover through mulch.

3.6 WRAPPING, GUYING, AND STAKING

3.6.1 Inspect trees for injury to trunks, evidence of insect infestation and improper pruning before wrapping.

3.6.2 Wrap trunks of all trees spirally from bottom to top with specified tree wrap and secure in place.

3.6.3 Stake deciduous trees under 4" caliper. Stake evergreen trees under 6'-0" tall and over with metal fence post, three (3)per tree.

3.6.4 Stake/guy all trees immediately after installation. When high winds or other conditions which may effect tree survival or appearance occur during the warranty period, the Sub-Contractor shall immediately repair the staking/guying.

3.6.5 Guy deciduous trees 4" caliper and over. Stake evergreen trees 6'-0" tall and over with metal fence post, three (3) per tree.

3.6.6 All work shall be acceptable to the Landscape Architect/Owner's representative.

3.7 PRUNING

3.7.1 Remove or cut back broken, damaged, and unsymmetrical growth of new wood.

3.7.2 Multiple leader plants: preserve the leader which will best promote the symmetry of the plant. Do not prune terminal leader.
Cut branches flush with the trunk of the main branch, at a point beyond a lateral shoot or bud a distance of not less than ½ the diameter of the supporting branch. Make cut on an angle.

3.7.3 Prune evergreens only to remove broken or damaged branches.

3.8 MAINTENANCE

3.8.1 See Landscape Maintenance and Warranty Standards.

3.9 CLEANING

3.9.1 Perform cleaning during installation of the work and upon completion of the work. Remove from all site excess materials, soil, debris, and equipment. Repair damage resulting from planting operations.

END OF SECTION

LANDSCAPE MAINTENANCE AND WARRANTY STANDARDS

1.0 GENERAL

1.1 SUMMARY

1.1.1 Includes But Not Limited To

1. Provide maintenance for new landscaping as described in Contract Documents.
2. The requirements of the Section include a one (1) year warranty period from date of acceptance of installation performed by the General Contractor's Representative and Landscape Architect.

2.0 PRODUCTS - Not Used

3.0 EXECUTION

3.1 PERFORMANCE

3.1.1 Acceptance of Installation

1. At the completion of all landscape installation, or pre-approved portions thereof, the Landscape Subcontractor shall request in writing an inspection for Acceptance of Installation in which the Landscape Subcontractor, Landscape Architect, and General Contractor's Representative shall be present.
   a. Following the acceptance inspection a punch list will be issued by the Landscape Architect.
   b. Upon completion of all punch list items, the Landscape Architect and/or General Contractor's Representative shall reinspect the project and issue a written statement of Acceptance of Installation and establish the beginning of the Project Warranty Period.
   c. At the time of acceptance all plant material shall be of vigorous health and planting bed and mulch rings are weed free.
   d. It is the responsibility of the Landscape Subcontractor to make the written request for inspection of installation in a timely fashion.
   e. If there is plant material loss prior to the Landscape Subcontractor's written request for inspection of installation, the Landscape Contractor shall make all replacements of this dead material at no additional cost These replacements are not considered to be the required one (1) replacement of dead plant material by the Landscape Subcontractor during the one (1) year project warranty period, as outlined below.
2. Landscape work may be inspected for acceptance in parts agreeable to the General Contractor's Representative and Landscape Architect provided work offered for Inspection is complete, including maintenance as required.
3. For work to be inspected for partial acceptance, the Landscape Subcontractor shall provide a drawing outlining work completed and supply a written statement requesting acceptance of this work completed to date.

3.1.2 Project Warranty

1. The Project Warranty Period begins upon written preliminary acceptance of the project installation by the Landscape Architect and General Contractor's representative.
2. The Landscape Subcontractor shall guarantee trees, shrubs, ground cover beds and seeded or sodded areas through construction and for a period of one (1) year after date of Acceptance of Installation against defects including death and unsatisfactory growth, except for defects resulting from neglect, abuse or damage by others or unusual phenomena or incidents which are beyond Landscape Subcontractor's control.

3.1.3 Maintenance During One (1) Year Project Warranty

1. To insure guarantee standards, the following maintenance procedures for trees, shrubs, and ground covers shall be executed during construction and for the full Project Warranty Periods.
   a. Landscape Subcontractor shall be responsible for only one (1) replacement of any plant materials during the one (1) year Project Warranty Period. These include those which are dead or in the opinion of the Landscape Architect are in an unhealthy or unsightly condition, or having lost natural shape, resulting from dieback, excessive pruning, or inadequate or improper maintenance as part of the guarantee.
   b. Prior to any replacements, Landscape Subcontractor shall review individual plants in question with Landscape Architect to determine reason for plant demise.
   c. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings.
   d. Fill in, as necessary, soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
   e. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices when possible to minimize use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.
   f. The contractor will be responsible for irrigation system operation, watering schedules, watering amounts and general monitoring of irrigation system throughout construction, maintenance, and warranty period. Over watering or lack of water from the irrigation system is the responsibility of the landscape contractor and any required replacements at the cost of the contractor and not part of the warranty replacement.
2. Replacements must meet the standards specified on the Landscape plans and in the specifications, i.e. quality, species of plant material and planting procedures to receive approval of replacement materials by Landscape Architect.
3. Costs for replacements are assumed part of bid quotations and therefore will not result in an additional cost to General Contractor or Landscape Architect.
4. Areas damaged as a result of replacement operation are to be restored by Landscape Subcontractor at no cost to the General Contractor or Landscape Architect.
5. The Landscape Subcontractor shall be responsible for watering all plantings through the warranty period and shall keep guy wires taut, raise tree balls which settle, furnish and apply sprays as necessary to keep the plantings free of disease and insects until the end of the warranty period.
6. The Landscape Subcontractor shall remove and replace trees, shrubs or other plants found to be dead or in unhealthy condition.
   a. Rejected plants and materials shall be removed promptly.
   b. Replacements shall be made during the following normal planting schedule.
   c. Trees and shrubs which are in doubt shall be replaced, unless, in the opinion of the Landscape Architect, it is advisable to extend Project Warranty Period for full growing Season.
7. The Landscape Contractor shall apply anti-desiccants on evergreen trees and evergreen shrub beds within 150' of major streets and drives, no later than December 1, during the one (1) year project warranty.
8. The first spring after plant installation the contractor shall check all trees to insure twine has rotted from around the trunk. If twine is still present, it shall be removed and disposed of off-site.
9. All stakes, guy wires, tree wrap paper, dead twigs and branches shall be removed from tree and plant materials at the end of this warranty period.

3.1.4 Maintenance of Seeded Lawn Areas

1. The Landscape Subcontractor shall maintain seeded lawn areas.
   a. Water, fertilize, weed, and apply chemicals until a dense lawn of permanent grasses, free from lumps and depressions or any bare spots, none of which is larger than one (1) foot of area up to a maximum of 3% of the total seeded lawn area is established.
   b. Seeded lawn that fails to show a uniform growth and/or germination shall be reseeded until a dense cover is established, regardless of what season the seed was installed.
2. The Landscape Subcontractor shall maintain and mow all lawn areas for until acceptance of installation (typically 3 mows) . When lawn reaches 3" in height it shall be cut to 2" in height.
3. The Owner assumes cutting responsibilities following the Acceptance of Installation of the seeded lawn.
4. At conclusion of Project Warranty Period and after receiving Written Final Acceptance by General Contractor's representative and Landscape Architect, the Owner shall assume all seeded lawn maintenance responsibilities.

3.1.5 Maintenance of Sodded Lawn Areas

1. The Landscape Subcontractor shall maintain sodded lawn areas.
   a. Water, fertilize, spot weed, apply herbicides, fungicides, insecticides and resod until a full uniform, smooth stand of sod is knitted to topsoil, and accepted by the Landscape Architect or his or her representative.
2. Water sod thoroughly, as required to establish proper rooting.
3. Repair, rework, and resod all areas that have washed out or are eroded. Replace undesirable or dead areas with new sod.
4. Mow lawn areas once as soon as sod has rooted sufficiently and knitted to the topsoil. Cut back to 2" height. Not more than 40% of grass leaf shall be removed at any single mowing. Excess clipping to be removed by the Landscape Subcontractor. The Landscape Subcontractor shall be responsible for lawn mowing until acceptance of installation (typically 3-mows).
5. The Owner assumes mowing responsibilities following the Acceptance of Installation of the sodded lawn.
6. At conclusion of Project Warranty Period and after receiving Written Final Acceptance by General Contractor's representative and Landscape Architect, the Owner shall assume all sodded lawn maintenance responsibilities.

3.1.6 Final Acceptance Upon Conclusion of the Warranty Period

1. At the conclusion of the Project Warranty Period the Landscape Subcontractor shall request a project inspection for final acceptance in which the Landscape Contractor, Landscape Architect and Owner's Representative shall be present.
2. After the inspection for final acceptance, a punch list will be issued by the Landscape Architect. Upon completion of all punch list items, the Landscape Architect and the Owner's Representative shall reinspect the project and issue a Written Statement of Final Acceptance.

END OF SECTION

NOTE: The Owners may at their option elect to utilize a Construction Manager in lieu of a General Contractor for all matters pertaining to these specifications and the site work.

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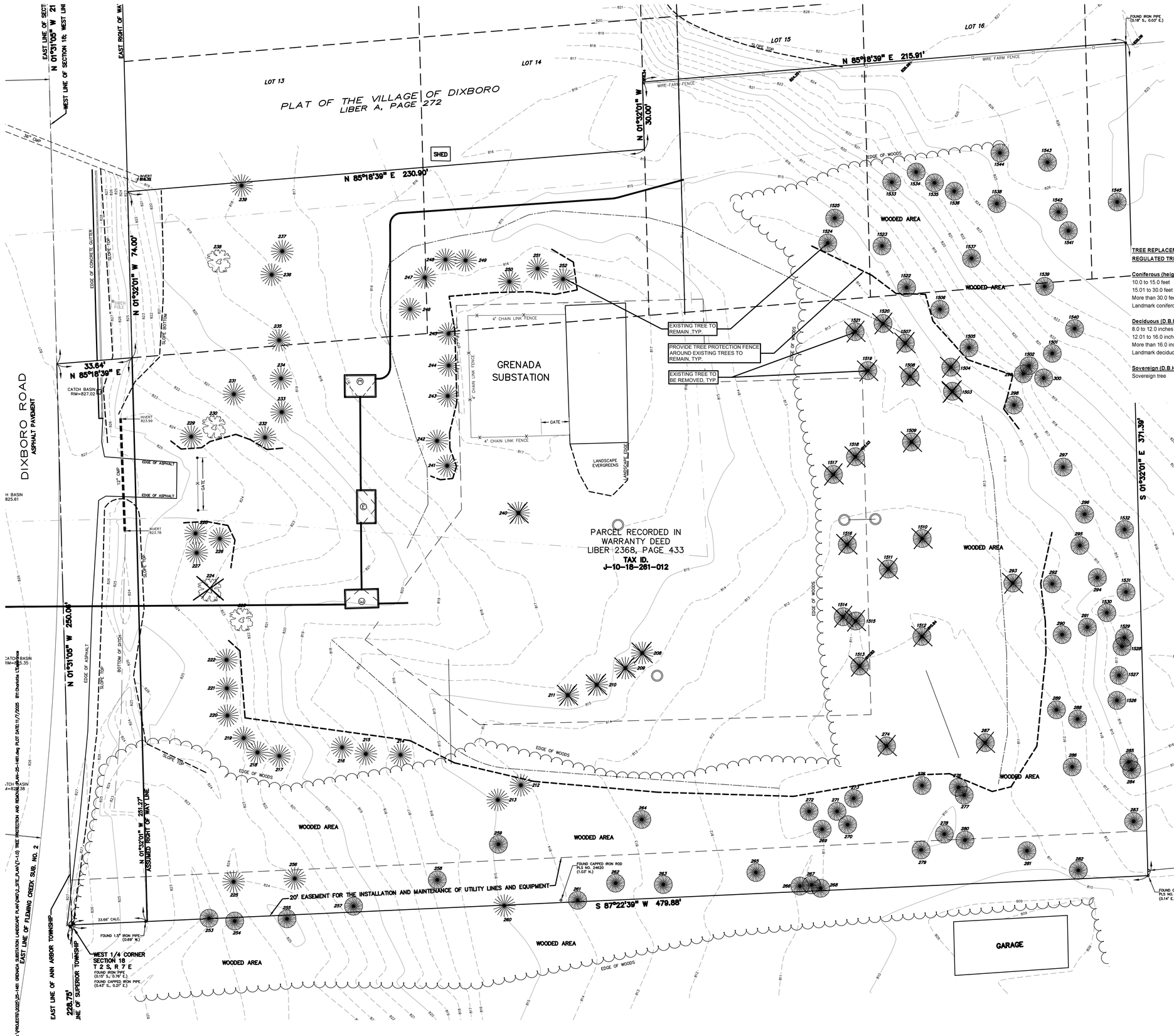
DRAWING TITLE
LANDSCAPE SPECIFICATIONS

PEA JOB NO.	25-1461
P.M.	LAW
DN.	CAL
DES.	LAW

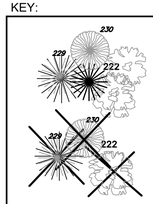
DRAWING NUMBER:
L-2.2

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S:\PROJECTS\2025\25-1461 GRENADA SUBSTATION LANDSCAPE PLAN\DWG\2_SITE_PLAN\(L-2.0) LANDSCAPE SPECS 1_2024-10-23.dwg PLOT DATE: 11/7/2025 BY: Charlotte L'Esperance



KEY:



= EXISTING TREES

= EXISTING TREES TO BE REMOVED

= TREE PROTECTION FENCE

SEE LANDSCAPE DETAIL L-1.1 FOR TREE PROTECTION DETAIL

TREE REPLACEMENT CALCULATIONS

REGULATED TREES REMOVED: 16

Coniferous (height)	Replacement	Removed	Replacement Required
10.0 to 15.0 feet	one to one (1:1)	0	0
15.01 to 30.0 feet	three to one (3:1)	3	9
More than 30.0 feet	six to one (6:1)	0	0
Landmark coniferous tree	One (1) tree per inch of removed tree D.B.H	2	38
Deciduous (D.B.H.)	**Replacement**		
8.0 to 12.0 inches	one to one (1:1)	6	6
12.01 to 16.0 inches	three to one (3:1)	2	6
More than 16.0 inches	six to one (6:1)	0	0
Landmark deciduous tree	one (1) tree per inch of removed tree D.B.H	2	38
Sovereign (D.B.H.)	**Replacement**		
Sovereign tree	Two (2) trees per inch of removed tree D.B.H	0	0

Total Replacement Trees Required: 97 TREES

Proposed 12 ft height evergreens = 1.55 credit = **63 REPLACEMENT TREES**

PEA GROUP
t: 844.813.2949
www.peagroup.com

STATE OF MICHIGAN
LYNN A. WHIPPLE
LANDSCAPE ARCHITECT
No. 4100
REGISTERED LANDSCAPE ARCHITECT

0 10 20 40
SCALE: 1" = 20'

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DRAWING TITLE
TREE PROTECTION AND REMOVAL PLAN

PEA JOB NO.	25-1461
P.M.	LAW
DN.	CAL
DES.	LAW

DRAWING NUMBER:
T-1.0

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S:\PROJECTS\2025-1461 GRENADA SUBSTATION LANDSCAPE PLAN\CAD\L_SITE PLAN\T-1.0 TREE PROTECTION AND REMOVAL PLAN-25-1461.dwg PLOT DATE:11/7/2025 BY:Charlotte L'Esperance

TAG NO.	DBH	COMMON NAME	LATIN NAME	HEIGHT	NOTES	TYPE	SAVE / REMOVE
~~208~~	~~19~~	~~Norway spruce~~	~~Picea abies~~	~~25~~		~~LANDMARK~~	~~R~~
~~209~~	~~10~~	~~Blue spruce~~	~~Picea pungens~~	~~25~~		~~PROTECTED~~	~~R~~
~~210~~	~~16~~	~~Norway spruce~~	~~Picea abies~~	~~30~~		~~PROTECTED~~	~~R~~
~~211~~	~~19~~	~~Norway spruce~~	~~Picea abies~~	~~35~~		~~LANDMARK~~	~~R~~
212	18	White pine	Pinus strobus			LANDMARK	S
213	25	White pine	Pinus strobus		Poor, broken limbs, dead branches	LANDMARK	S
214	30	Norway spruce	Picea abies			LANDMARK	S
215	32	Norway spruce	Picea abies			LANDMARK	S
216	30	Norway spruce	Picea abies			LANDMARK	S
217	22	White pine	Pinus strobus		Poor, broken limbs, dead branches	LANDMARK	S
218	13	White pine	Pinus strobus			PROTECTED	S
219	9, 18	White pine	Pinus strobus		Split-trunk	LANDMARK	S
220	16	White pine	Pinus strobus			PROTECTED	S
221	18	White pine	Pinus strobus			LANDMARK	S
222	15	White pine	Pinus strobus			PROTECTED	S
223	16	Sugar maple	Acer saccharum			LANDMARK	S
~~224~~	~~15~~	~~Sugar maple~~	~~Acer saccharum~~		~~Dead~~	~~EXEMPT~~	~~R~~
225	17	White pine	Pinus strobus			PROTECTED	S
226	10	Blue spruce	Picea pungens			PROTECTED	S
227	12	Blue spruce	Picea pungens			PROTECTED	S
228	13	Blue spruce	Picea pungens			PROTECTED	S
229	11	Blue spruce	Picea pungens			PROTECTED	S
230	20	Sugar maple	Acer saccharum			LANDMARK	S
231	13	Blue spruce	Picea pungens			PROTECTED	S
232	7, 10	White pine	Pinus strobus		Split-trunk	PROTECTED	S
233	17	White pine	Pinus strobus			PROTECTED	S
234	19	White pine	Pinus strobus			LANDMARK	S
235	20	White pine	Pinus strobus			LANDMARK	S
236	25	Norway spruce	Picea abies			LANDMARK	S
237	28	Norway spruce	Picea abies		Poor, broken limbs, dead branches	LANDMARK	S
238	14	Sugar maple	Acer saccharum			PROTECTED	S
239	15	Blue spruce	Picea pungens			PROTECTED	S
~~240~~	~~8~~	~~White pine~~	~~Pinus strobus~~	~~25~~		~~PROTECTED~~	~~R~~
241	20	White pine	Pinus strobus	30		LANDMARK	S
242	17	White pine	Pinus strobus	35		PROTECTED	S
243	14	Norway spruce	Picea abies	40		PROTECTED	S
244	12, 13	Norway spruce	Picea abies	40	Split-trunk	PROTECTED	S
245	17	Norway spruce	Picea abies	35		PROTECTED	S
246	13	White pine	Pinus strobus			PROTECTED	S
247	18	White pine	Pinus strobus			LANDMARK	S
248	16	White pine	Pinus strobus			PROTECTED	S
249	17	White pine	Pinus strobus			PROTECTED	S
250	20	Norway spruce	Picea abies			LANDMARK	S
251	16	Norway spruce	Picea abies			PROTECTED	S
252	20	Norway spruce	Picea abies			LANDMARK	S
253	9	American elm	Ulmus americana			PROTECTED	S
254	28	Black cherry	Prunus serotina			LANDMARK	S
255	17, 24	Black cherry	Prunus serotina		Split-trunk	LANDMARK	S
256	10	White pine	Pinus strobus		Poor, broken limbs	PROTECTED	S
257	13, 14	Boxelder	Acer negundo		Split-trunk	EXEMPT	S
258	13	Black walnut	Juglans nigra			PROTECTED	S
259	8	Black walnut	Juglans nigra			PROTECTED	S
260	21	White pine	Pinus strobus			LANDMARK	S
261	25	Black cherry	Prunus serotina			LANDMARK	S
262	21, 14	Black cherry	Prunus serotina		Split-trunk	LANDMARK	S
263	11, 14, 14	Black cherry	Prunus serotina		Multi-trunk	PROTECTED	S
264	10	Black walnut	Juglans nigra			PROTECTED	S
265	18	Norway maple	Acer platanoides			LANDMARK	S
266	10, 12	Black cherry	Prunus serotina		Split-trunk	PROTECTED	S
267	7, 10	Black cherry	Prunus serotina		Split-trunk	PROTECTED	S
268	15	Black cherry	Prunus serotina			PROTECTED	S
269	10	Boxelder	Acer negundo			EXEMPT	S
270	11	Boxelder	Acer negundo			EXEMPT	S
271	9	Boxelder	Acer negundo			EXEMPT	S
272	8	Boxelder	Acer negundo			EXEMPT	S
273	13	Boxelder	Acer negundo			EXEMPT	S
~~274~~	~~16~~	~~Boxelder~~	~~Acer negundo~~			~~EXEMPT~~	~~R~~
275	7	Black walnut	Juglans nigra			EXEMPT	S
276	8, 10	Boxelder	Acer negundo		Split-trunk	EXEMPT	S

TAG NO.	DBH	COMMON NAME	LATIN NAME	HEIGHT	NOTES	TYPE	SAVE / REMOVE
277	11	Boxelder	Acer negundo			EXEMPT	S
278	22	Eastern cottonwood	Populus deltoides			EXEMPT	S
279	9	American elm	Ulmus americana			PROTECTED	S
280	16	Eastern cottonwood	Populus deltoides			EXEMPT	S
281	10	Black cherry	Prunus serotina			PROTECTED	S
282	28	Boxelder	Acer negundo			EXEMPT	S
283	16	Black cherry	Prunus serotina			PROTECTED	S
284	12	Boxelder	Acer negundo			EXEMPT	S
285	14	Boxelder	Acer negundo			EXEMPT	S
286	24	Black cherry	Prunus serotina			LANDMARK	S
~~287~~	~~7~~	~~Black walnut~~	~~Juglans nigra~~			~~EXEMPT~~	~~R~~
288	10	Hackberry	Celtis occidentalis			PROTECTED	S
289	8	Black walnut	Juglans nigra			PROTECTED	S
290	14	Hackberry	Celtis occidentalis			PROTECTED	S
291	10	Boxelder	Acer negundo			EXEMPT	S
292	7	American elm	Ulmus americana			EXEMPT	S
~~293~~	~~14~~	~~Black walnut~~	~~Juglans nigra~~			~~PROTECTED~~	~~R~~
294	12	Black cherry	Prunus serotina			PROTECTED	S
295	12	Black walnut	Juglans nigra			PROTECTED	S
296	14	Black walnut	Juglans nigra			PROTECTED	S
297	12	Black cherry	Prunus serotina			PROTECTED	S
298	10	Black walnut	Juglans nigra			PROTECTED	S
299	7	Hackberry	Celtis occidentalis			EXEMPT	S
300	13	Hackberry	Celtis occidentalis			PROTECTED	S
1501	11	Black walnut	Juglans nigra			PROTECTED	S
1502	16	Boxelder	Acer negundo			EXEMPT	S
~~1503~~	~~20~~	~~Black walnut~~	~~Juglans nigra~~			~~LANDMARK~~	~~R~~
~~1504~~	~~18~~	~~Black walnut~~	~~Juglans nigra~~			~~LANDMARK~~	~~R~~
1505	6	Black walnut	Juglans nigra			EXEMPT	S
1506	7	Boxelder	Acer negundo			EXEMPT	S
~~1507~~	~~8~~	~~Northern catalpa~~	~~Catalpa speciosa~~			~~PROTECTED~~	~~R~~
~~1508~~	~~16~~	~~Black walnut~~	~~Juglans nigra~~			~~PROTECTED~~	~~R~~
~~1509~~	~~6~~	~~Black walnut~~	~~Juglans nigra~~			~~EXEMPT~~	~~R~~
~~1510~~	~~9~~	~~Black walnut~~	~~Juglans nigra~~			~~PROTECTED~~	~~R~~
~~1511~~	~~9~~	~~Black walnut~~	~~Juglans nigra~~			~~PROTECTED~~	~~R~~
~~1512~~	~~7~~	~~Black walnut~~	~~Juglans nigra~~			~~EXEMPT~~	~~R~~
~~1513~~	~~9~~	~~Boxelder~~	~~Acer negundo~~			~~EXEMPT~~	~~R~~
~~1514~~	~~6~~	~~Black walnut~~	~~Juglans nigra~~			~~EXEMPT~~	~~R~~
~~1515~~	~~8~~	~~Black walnut~~	~~Juglans nigra~~			~~PROTECTED~~	~~R~~
~~1516~~	~~8~~	~~Black walnut~~	~~Juglans nigra~~			~~PROTECTED~~	~~R~~
~~1517~~	~~8~~	~~Black walnut~~	~~Juglans nigra~~			~~PROTECTED~~	~~R~~
~~1518~~	~~11~~	~~Boxelder~~	~~Acer negundo~~			~~EXEMPT~~	~~R~~
~~1519~~	~~6~~	~~Boxelder~~	~~Acer negundo~~			~~EXEMPT~~	~~R~~
~~1520~~	~~12~~	~~Eastern cottonwood~~	~~Populus deltoides~~			~~EXEMPT~~	~~R~~
~~1521~~	~~16~~	~~Eastern cottonwood~~	~~Populus deltoides~~			~~EXEMPT~~	~~R~~
1522	16	Black walnut	Juglans nigra			PROTECTED	S
1523	14	Black walnut	Juglans nigra			PROTECTED	S
1524	16	Black walnut	Juglans nigra			PROTECTED	S
1525	14	Black walnut	Juglans nigra			PROTECTED	S
1526	12	Boxelder	Acer negundo			EXEMPT	S
1527	8	Boxelder	Acer negundo			EXEMPT	S
1528	9, 9	Boxelder	Acer negundo		Split-trunk	EXEMPT	S
1529	10	Boxelder	Acer negundo			EXEMPT	S
1530	7	Boxelder	Acer negundo			EXEMPT	S
1531	8	Black walnut	Juglans nigra			PROTECTED	S
1532	9	Boxelder	Acer negundo		poor, broken, dead branches	EXEMPT	S
1533	12	Boxelder	Acer negundo			EXEMPT	S
1534	18	Black walnut	Juglans nigra			LANDMARK	S
1535	11	Black walnut	Juglans nigra			PROTECTED	S
1536	7	Black walnut	Juglans nigra			EXEMPT	S
1537	9	Black walnut	Juglans nigra			PROTECTED	S
1538	18	Siberian elm	Ulmus pumila			EXEMPT	S
1539	42	Siberian elm	Ulmus pumila			EXEMPT	S
1540	14	Black walnut	Juglans nigra			PROTECTED	S
1541	6	Common buckthorn	Rhamnus cathartica			EXEMPT	S
1542	8	Siberian elm	Ulmus pumila			EXEMPT	S
1543	12	Black walnut	Juglans nigra			PROTECTED	S
1544	11	Black walnut	Juglans nigra			PROTECTED	S
1545	11	Siberian elm	Ulmus pumila			EXEMPT	S

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DRAWING TITLE
EXISTING TREE LIST

PEA JOB NO.	25-1461
P.M.	LAW
DN.	CAL
DES.	LAW

DRAWING NUMBER:
T-1.1

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S:\PROJECTS\2025\25-1461 GRENADA SUBSTATION LANDSCAPE PLAN\DWG\2_SITE_PLAN\T-1.1(I) TREE PROTECTION AND REMOVAL PLAN-25-1461.dwg PLOT DATE: 11/7/2025 BY: Charlotte K Epperson



MRW LED

Architectural Wall Sconce

Inverted available with WLU option only.

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

Introduction

Classic Architectural Wall Sconce with the LED technology. Long-life, maintenance-free product with typical energy savings of 80% compared to metal halide versions. The integral battery backup option provides emergency egress lighting, without the use of a back-box or remote gear, so installations maintain their aesthetic integrity. The MRW LED is ideal for replacing existing 50 – 250W metal halide wall-mounted products. The expected service life is 20+ years of nighttime use.

Specifications

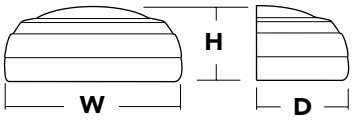
Luminaire

Height: 7-1/4" *(18.4 cm)*

Width: 18" *(45.7 cm)*

Depth: 9" *(22.8 cm)*

Weight: 18 lbs *(8.2 kg)*

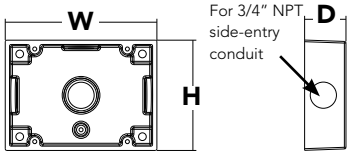


Optional Back Box (BBW)

Height: 4" *(10.2 cm)*

Width: 5-1/2" *(14.0 cm)*

Depth: 1-1/2" *(3.8 cm)*



Ordering Information

EXAMPLE: MRW LED P2 40K SR3 MVOLT DDBTXD

MRW LED							
Series	**Performance Package**	**Color Temperature**	**Distribution**	**Voltage**	**Mounting**	**Options**	**Finish *(required)***
MRW LED	P1 P2 P3 P4	30K 40K 50K	SR2 Type II SR3 Type III SR4 Type IV	MVOLT [1] 120 208 240 277 347 480	**Shipped included** (blank) Surface mount **Shipped separately** BBW Surface-mounted back box	**Shipped installed** PE Photoelectric cell, button type [2] SF Single fuse (120, 277, 347V) [3] DF Double fuse (208, 240, 480V) [3] DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) E20WC Emergency battery backup, Certified in CA Title 20 MAEDBS (18W, -20°C) [4] E10WH Emergency battery backup, Certified in CA Title 20 MAEDBS (10W, 5°C)[4] WLU Wet location door for up orientation [5] PIR Motion/ambient light sensor [6] DS Dual switching [7] SPD Separate Surge Protection [8] **Shipped separately** VG Vandal guard WG Wire guard	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSXD Sandstone DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white DSSTXD Textured sandstone

Emergency Battery Operation

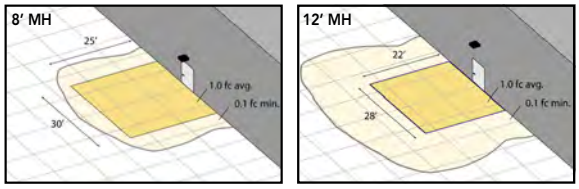
The emergency battery backup (E20WC & E10WH options) is integral to the luminaire - no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product.

All E20WC & E10WH configurations include an independent secondary driver with an integral relay to immediately detect AC power loss.

The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time supply power is lost, per International Building Code Section 1006 and NFPA 101 Life Safety Code Section 7.9, provided luminaires are mounted at an appropriate height and illuminate an open space with no major obstructions.

The examples below show illuminance of 1 fc average and 0.1 fc minimum of the P1 power package Type IV product in emergency mode.

MRW LED P1 40K SR4 MVOLT E20WC
10' x 10' Gridlines
8' and 12' Mounting Height



NOTES

1. MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
2. When PE is ordered, voltage needs to be specified. Not available with 480V option.
3. Single fuse (SF) requires 120V, 277V or 347V options. Double fuse (DF) requires 208V, 240V or 480V options,
4. Not available with 347V or 480V. Not available with WLU.
5. WLU not available with PIR, E20WC or E10WH.
6. When ordering PIR, "PE" will be automatically added to the order line for "dim to off" capability. See PIR Table for default settings.
7. Only available with P3 & P4 packages. Provides 50/50 luminaire operation via two independent drivers and light engines on two separate circuits. Not available with E20WC, E10WH, WLU, SF, or DF. When ordered with photocell (PE) or motion sensor (PIR), only the primary power source leads will be controlled.
8. See electrical section on page 2 for more details.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts.

Performance Package	System Watts (MVOLT[1])	Dist. Type	30K (3000K, 70CRI)		40K (4000K, 70CRI)		50K (5000K, 70CRI)	
			Lumens	LPW	Lumens	LPW	Lumens	LPW
P1	20W	SR2	2,111	108	2,251	115	2,305	118
		SR3	2,104	108	2,244	115	2,298	117
		SR4	2,053	105	2,189	112	2,242	115
P2	29W	SR2	2,943	101	3,139	108	3,214	110
		SR3	2,934	101	3,129	107	3,204	110
		SR4	2,863	98	3,053	105	3,126	107
P3	40W	SR2	4,500	114	4,799	122	4,913	125
		SR3	4,486	114	4,784	122	4,898	125
		SR4	4,377	111	4,667	119	4,779	122
P4	61W	SR2	6,159	102	6,567	108	6,724	111
		SR3	6,139	101	6,547	108	6,703	110
		SR4	5,991	99	6,388	105	6,541	108

Motion/Ambient Sensor Default Settings						
	Dimmed State	High Level (when triggered)	Photocell Operation	Ramp-up Time	Dwell Time	Ramp-down Time
*PIR	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	3 sec	5 min	5 min
*PIR USES SFOD 7						

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Normalized Lumen Multiplier
0°C	32°F	1.05
10°C	50°F	1.03
20°C	68°F	1.01
25°C	**77°F**	**1.00**
30°C	86°F	0.99
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the **MRW LED P4** platform in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25000	50000	100000	L90
Lumen Maintenance Factor	1	0.96	0.95	0.92	>60000

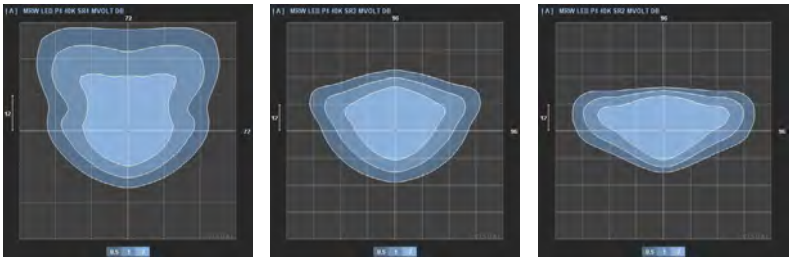
Electrical Load

Power Package	System Watts	Current (A)					
		120V	208V	240V	277V	347V	480V
P1	20W	0.17	0.10	0.09	0.08	0.06	0.05
P2	29W	0.26	0.15	0.13	0.12	0.09	0.07
P3	40W	0.37	0.21	0.18	0.16	0.13	0.09
P4	61W	0.59	0.33	0.18	0.25	0.19	0.14

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's MRW LED homepage.

Isofootcandle plots for the MRW LED P4 40K SR2, SR3, and SR4. Distances are in units of mounting height (12').



FEATURES & SPECIFICATIONS

INTENDED USE
The classic architectural shape of the MRW LED was designed for applications such as hospitals, schools, malls, restaurants, and commercial buildings. The long life LEDs and driver make this luminaire nearly maintenance-free.

CONSTRUCTION
The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP65 rating for the luminaire.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS
Precision-molded acrylic lenses are engineered for superior distribution, uniformity, and spacing in wall-mount applications. Light engines are 4000K (70 CRI). The MRW LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine(s) consist of 10 high-efficacy LEDs mounted to a metal core circuit board and integral aluminum heat sinks to maximize heat dissipation and promote long life (100,000 hrs at 25°C, L77). Class 2 electronic driver has a power factor >90%, THD <20%and a minimum 6 KV surge protection. When ordering the SPD option, a separate surge protection device is installed within the luminaire which meets a minimum Category C low operation (per ANSI/IEEE C62.41.2).

INSTALLATION
A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections.

LISTINGS
CSA certified to U.S. and Canadian standards. Light engines are IP66 rated; luminaire is IP65 rated and suitable for wet locations when mounted with the lenses down. WLU option offers wet location listing in "up"orientation. Rated for -30°C minimum ambient.

GOVERNMENT PROCUREMENT
BAA – Buy America(n) Act: Product qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product also qualifies as manufactured in the United States under DOT Buy America regulations.
BABA – Build America Buy America: Product qualifies as produced in the United States under the definitions of the Build America, Buy America Act.
Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY-5YR
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:
www.acuitybrands.com/support/customer-support/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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D-Series Size 1
LED Area Luminaire

Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

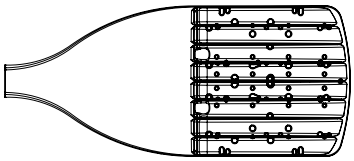
Introduction

The modern styling of the D-Series features a highly refined aesthetic that blends seamlessly with its environment. The D-Series offers the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire.

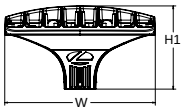
The photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. D-Series outstanding photometry aids in reducing the number of poles required in area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Specifications

EPA:	0.69 ft² (0.06 m²)
Length:	32.71" (83.1 cm)
Width:	14.26" (36.2 cm)
Height H1:	7.88" (20.0 cm)
Height H2:	2.73" (6.9 cm)
Weight:	34 lbs (15.4 kg)







Design Select options indicated by this color background.

design select

Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

Ordering Information

EXAMPLE: DSX1 LED P7 40K 70CRI T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

Series	LEDs	Color temperature [2]	Color Rendering Index [2]	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P6 P2 P7 P3 P8 P4 P9 P5 **Rotated optics** P10 [1] P12 [1] P11 [1] P13 [1]	(this section 70CRI only) 30K 3000K 40K 4000K 50K 5000K 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K	70CRI 70CRI 70CRI 80CRI 80CRI 80CRI 80CRI 80CRI	AFR Automotive front row T1S Type I short T2M Type II medium T3M Type III medium T3LG Type III low glare [3] T4M Type IV medium T4LG Type IV low glare [3] TFTM Forward throw medium T5M Type V medium T5LG Type V low glare T5W Type V wide BLC3 Type III backlight control [3] BLC4 Type IV backlight control [3] LCCO Left corner cutoff [3] RCCO Right corner cutoff [3]	MVOLT (120V-277V) [4] HVOLT (347V-480V) [5,6] XVOLT (277V - 480V) [7,8] 120 [16, 26] 208 [16, 26] 240 [16, 26] 277 [16, 26] 347 [16, 26] 480 [16, 26]	**Shipped included** SPA Square pole mounting (#8 drilling) RPA Round pole mounting (#8 drilling) SPA5 Square pole mounting #5 drilling [9] RPA5 Round pole mounting #5 drilling [9] SPA8N Square narrow pole mounting #8 drilling WBA Wall bracket [10] MA Mast arm adapter (mounts on 2 3/8" OD horizontal tenon)

Control options

Shipped installed

NLTAIR2 PIRHN	nLight AIR gen 2 enabled with bi-level motion / ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc. [11, 12, 20, 21]
PIR	High/low, motion/ambient sensor, 8-40' mounting height, ambient sensor enabled at 2fc [13, 20, 21]
PER	NEMA twist-lock receptacle only (controls ordered separate) [14]
PER5	Five-pin receptacle only (controls ordered separate) [14, 21]
PER7	Seven-pin receptacle only (controls ordered separate) [14, 21]
FAO	Field adjustable output [15, 21]
BL30	Bi-level switched dimming, 30% [16, 21]
BL50	Bi-level switched dimming, 50% [16, 21]
DMG	0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately) [17]
DS	Dual switching [18, 19, 21]

Other options

Shipped installed

SPD20KV	20KV surge protection
HS	Houseside shield (black finish standard) [22]
L90	Left rotated optics [1]
R90	Right rotated optics [1]
CCE	Coastal Construction [23]
HA	50°C ambient operation [24]
BAA	Buy America(n) Act and/or Build America Buy America Qualified
SF	Single fuse (120, 277, 347V) [26]
DF	Double fuse (208, 240, 480V) [26]

Shipped separately

EGSR	External Glare Shield (reversible, field install required, matches housing finish)
BSDB	Bird Spikes (field install required)

Finish *(required)*

DDBXD	Dark Bronze
DBLXD	Black
DNAXD	Natural Aluminum
DWHXD	White
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white

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Ordering Information

Accessories

Ordered and shipped separately.

DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [25]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [25]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [25]
DSHORT SBK	Shorting cap [25]
DSX1HS P#	House-side shield (enter package number 1-13 in place of #)
DSXRPA (FINISH)	Round pole adapter (#8 drilling, specify finish)
DSXSPA5 (FINISH)	Square pole adapter #5 drilling (specify finish)
DSXRPA5 (FINISH)	Round pole adapter #5 drilling (specify finish)
DSX1EGSR (FINISH)	External glare shield (specify finish)
DSX1BSDB (FINISH)	Bird spike deterrent bracket (specify finish)

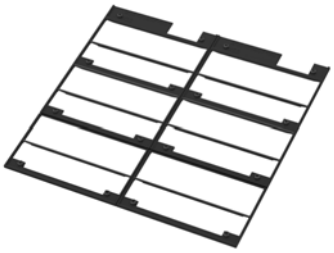
NOTES

1 Rotated optics available with packages P10, P11, P12 and P13. Must be combined with option L90 or R90.
2 30K, 40K, and 50K available in 70CRI and 80CRI. 27K and 35K only available with 80CRI. Contact Technical Support for other possible combinations.
3 T3LG, T4LG, BLC3, BLC4, LCCO, RCCO not available with option HS.
4 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
5 HVOLT driver operates on any line voltage from 347-480V (50/60 Hz).
6 HVOLT not available with package P1 and P10 when combined with option NLTAIR2 PIRHN or option PIR.
7 XVOLT operates with any voltage between 277V and 480V (50/60 Hz).
8 XVOLT not available in packages P1 or P10. XVOLT not available with P1 ,P2, P5, P7, P9, P10, P11 and P13 when combined with option NLTAIR2 PIRHN or PIR. XVOLT not available with fusing (SF or DF).
9 SPA5 and RPA5 for use with #5 drilling only (Not for use with #8 drilling).
10 WBA cannot be combined with Type 5 distributions plus photocell (PER).
11 NLTAIR2 and PIRHN must be ordered together. For more information on nLight AIR2 visit this link
12 NLTAIR2 PIRHN not available with other controls including PIR, PER, PER5, PER7, FAO, BL30, BL50, DMG and DS. NLTAIR2 PIRHN not available with P1 and P10 using HVOLT.
13 PIR not available with NLTAIR2 PIRHN, PER, PER5, PER7, FAO BL30, BL50, DMG and DS.
14 PER/PER5/PER7 not available with NLTAIR2 PIRHN, PIR, BL30, BL50, FAO, DMG and DS. Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
15 FAO not available with other dimming control options NLTAIR2 PIRHN, PIR, PER5, PER7, BL30, BL50, DMG and DS.
16 BL30 and BL50 are not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, FAO, DMG and DS. BL30 or BL50 must specify 120 or 277V.
17 DMG not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, BL30, BL50, FAO and DS.
18 DS not available with NLTAIR2 PIRHN, PIR, PER, PER5, PER7, BL30, BL50, FAO and DMG.
19 DS requires (2) separately switched circuits. DS provides 50/50 fixture operation via (2) different sets of leads using (2) drivers. DS only available with packages P8, P9, P10, P11, P12 and P13.
20 Reference Motion Sensor Default Settings table on page 4 to see functionality.
21 Reference Controls Options table on page 4.
22 HS not available with T3LG, T4LG, BLC3, BLC4, LCCO and RCCO distribution. Also available as a separate accessory; see Accessories information.
23 CCE option not available with option BS and EGSR. Contact Technical Support for availability.
24 Option HA not available with performance packages P4, P5, P7, P8, P9 and P13.
25 Requires luminaire to be specified with PER, PER5 or PER7 option. See Controls Table on page 4.
26 Single fuse (SF) requires 120V, 277V, or 347V. Double fuse (DF) requires 208V, 240V or 480V. XVOLT not available with fusing (SF or DF).

Shield Accessories



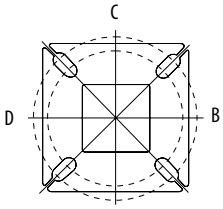
External Glare Shield (EGSR)

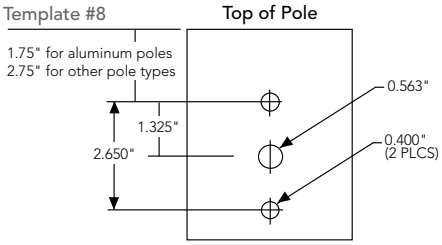


House Side Shield (HS)

Drilling

HANDHOLE ORIENTATION





Tenon Mounting Slipfitter

Tenon O.D.	Mounting	Single Unit	2 @ 180	2 @ 90	3 @ 90	3 @120	4 @ 90
2-3/8"	RPA	AS3-5 190	AS3-5 280	AS3-5 290	AS3-5 390	AS3-5 320	AS3-5 490
2-7/8"	RPA	AST25-190	AST25-280	AST25-290	AST25-390	AST25-320	AST25-490
4"	RPA	AST35-190	AST35-280	AST35-290	AST35-390	AST35-320	AST35-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19AS	DM28AS	DM29AS	DM39AS	DM32AS	DM49AS
		Minimum Acceptable Outside Pole Dimension					
SPA	#8	3.5"	3.5"	3.5"	3.5"		3.5"
RPA	#8	3"	3"	3"	3"	3"	3"
SPA5	#5	3"	3"	3"	3"		3"
RPA5	#5	3"	3"	3"	3"	3"	3"
SPA8N	#8	3"	3"	3"	3"		3"

DSX1 Area Luminaire - EPA

*Includes luminaire and integral mounting arm. Other tenons, arms, brackets or other accessories are not included in this EPA data.

Fixture Quantity & Mounting Configuration	Single DM19	2 @ 180 DM28	2 @ 90 DM29	3 @ 90 DM39	3 @ 120 DM32	4 @ 90 DM49
Mounting Type						
DSX1 with SPA	0.69	1.38	1.23	1.54	---	1.58
DSX1 with SPA5, SPA8N	0.70	1.40	1.30	1.66	---	1.68
DSX1 with RPA, RPA5	0.70	1.40	1.30	1.66	1.60	1.68
DSX1 with MA	0.83	1.66	1.50	2.09	2.09	2.09

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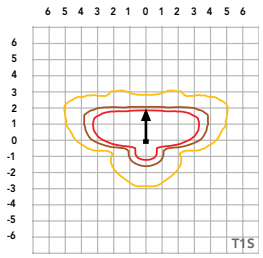
Photometric Diagrams

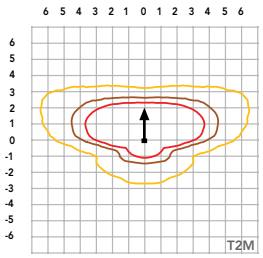
To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's homepage.

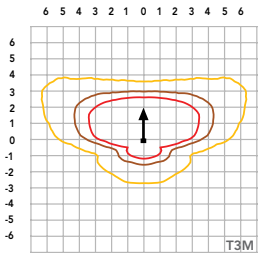
Isofootcandle plots for the DSX1 LED P9 40K 70CRI. Distances are in units of mounting height (25').

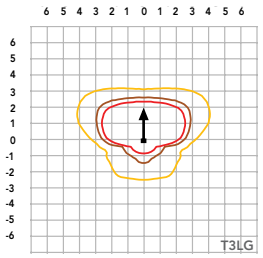
LEGEND

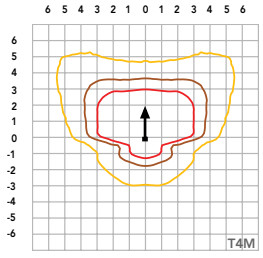
- 0.1 fc
- 0.5 fc
- 1.0 fc

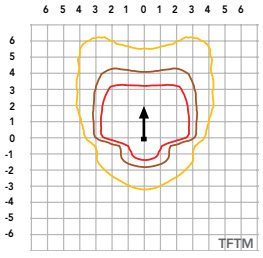


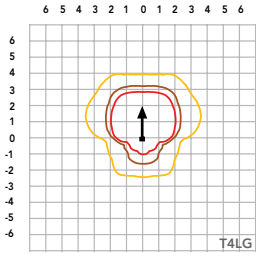


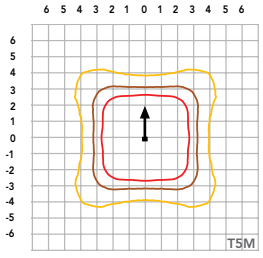


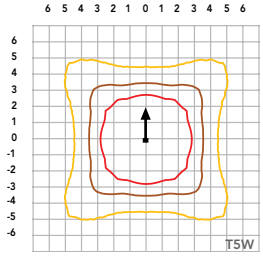


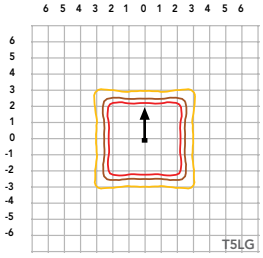


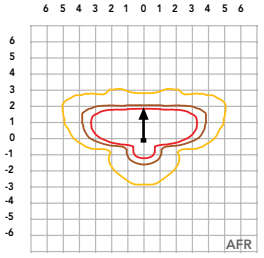


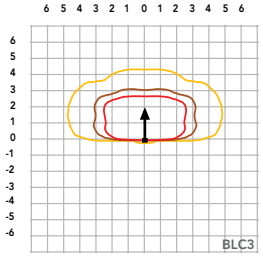


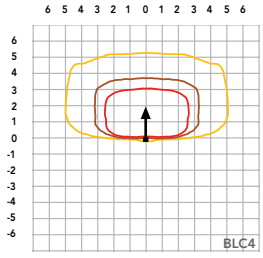


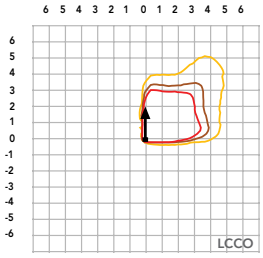


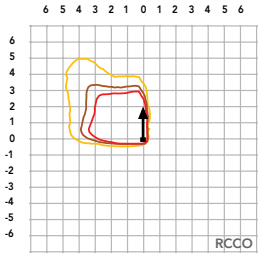












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Performance Data

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°C**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
0	1.00
25,000	0.95
50,000	0.90
100,000	0.81

FAO Dimming Settings

FAO Position	% Wattage	% Lumen Output
8	100%	100%
7	93%	95%
6	80%	85%
5	66%	73%
4	54%	61%
3	41%	49%
2	29%	36%
1	15%	20%

*Note: Calculated values are based on original performance package data. When calculating new values for given FAO position, use maximum published values by package listed on specification sheet (input watts and lumens by optic type).

Electrical Load

					Current (A)					
	Performance Package	LED Count	Drive Current (mA)	Wattage	120V	208V	240V	277V	347V	480V
Forward Optics (Non-Rotated)	P1	30	530	51	0.42	0.24	0.21	0.18	0.15	0.11
	P2	30	700	68	0.56	0.33	0.28	0.24	0.20	0.14
	P3	30	1050	104	0.85	0.49	0.43	0.37	0.29	0.21
	P4	30	1250	125	1.03	0.60	0.52	0.45	0.36	0.26
	P5	30	1400	142	1.15	0.66	0.58	0.50	0.40	0.29
	P6	40	1250	167	1.38	0.79	0.69	0.60	0.48	0.34
	P7	40	1400	188	1.54	0.89	0.77	0.67	0.53	0.38
	P8	60	1100	216	1.80	1.04	0.90	0.78	0.62	0.45
	P9	60	1400	279	2.31	1.33	1.15	1.00	0.80	0.58
Rotated Optics (Requires L90 or R90)	P10	60	530	101	0.84	0.49	0.42	0.37	0.29	0.21
	P11	60	700	135	1.12	0.65	0.56	0.49	0.39	0.28
	P12	60	1050	206	1.72	0.99	0.86	0.74	0.59	0.43
	P13	60	1400	279	2.30	1.33	1.15	1.00	0.79	0.57

LED Color Temperature / Color Rendering Multipliers

	70 CRI		80CRI		90CRI	
	Lumen Multiplier	Availability	Lumen Multiplier	Availability	Lumen Multiplier	Availability
5000K	102%	Standard	92%	Extended lead-time	71%	(see note)
4000K	100%	Standard	92%	Extended lead-time	67%	(see note)
3500K	100%	(see note)	90%	Extended lead-time	63%	(see note)
3000K	96%	Standard	87%	Extended lead-time	61%	(see note)
2700K	94%	(see note)	85%	Extended lead-time	57%	(see note)

Note: Some LED types are available as per special request. Contact Technical Support for more information.

Motion Sensor Default Settings

Option	Unoccupied Dimmed Level	High Level (when occupied)	Phototcell Operation	Dwell Time	Ramp-up Time	Dimming Fade Rate
PIR	30%	100%	Enabled @ 2FC	7.5 min	3 sec	5 min
NLTAIR2 PIRHN	30%	100%	Enabled @ 2FC	7.5 min	3 sec	5 min

Controls Options

Nomenclature	Description	Functionality	Primary control device	Notes
FAO	Field adjustable output device installed inside the luminaire; wired to the driver dimming leads.	Allows the luminaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS (not available on DSX0)	Drivers wired independently for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two separately switched circuits. Consider nLight AIR as a more cost effective alternative.
PER5 or PER7	Twist-lock photocell receptacle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire. Cannot be used with other controls options that need the 0-10V leads.
PIR	Motion sensor with integral photocell. Sensor suitable for 8' to 40' mounting height.	Luminaires dim when no occupancy is detected.	Acuity Controls rSBG	Cannot be used with other controls options that need the 0-10V leads.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclypse.	nLight Air rSBG	nLight AIR sensors can be programmed and commissioned from the ground using the CIAIRity Pro app. Cannot be used with other controls options that need the 0-10V leads.
BL30 or BL50	Integrated bi-level device that allows a second control circuit to switch all light engines to either 30% or 50% light output	BLC device provides input to 0-10V dimming leads on all drivers providing either 100% or dimmed (30% or 50%) control by a secondary circuit	BLC UVOLT1	BLC device is powered off the 0-10V dimming leads, thus can be used with any input voltage from 120 to 480V

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Performance Data

Lumen Output

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Contact factory for performance data on any configurations not shown here.

Forward Optics

Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P1	51W	30	530	T1S	7,776	1	0	2	153	8,104	1	0	2	159	8,262	1	0	2	162
				T2M	7,203	1	0	3	142	7,507	2	0	3	147	7,653	2	0	3	150
				T3M	7,287	1	0	3	143	7,594	1	0	3	149	7,742	1	0	3	152
				T3LG	6,509	1	0	1	128	6,783	1	0	1	133	6,916	1	0	1	136
				T4M	7,395	1	0	3	145	7,707	1	0	3	151	7,857	1	0	3	154
				T4LG	6,726	1	0	1	132	7,010	1	0	1	138	7,146	1	0	1	140
				TFTM	7,446	1	0	3	146	7,760	1	0	3	152	7,912	1	0	3	155
				T5M	7,609	3	0	2	149	7,930	3	0	2	156	8,084	3	0	2	159
				T5W	7,732	3	0	2	152	8,058	4	0	2	158	8,215	4	0	2	161
				T5LG	7,631	3	0	1	150	7,953	3	0	1	156	8,108	3	0	1	159
				BLC3	5,300	0	0	2	104	5,524	0	0	2	109	5,631	0	0	2	111
				BLC4	5,474	0	0	3	108	5,705	0	0	3	112	5,816	0	0	3	114
				RCCO	5,348	0	0	2	105	5,573	0	0	2	109	5,682	0	0	2	112
				LCCO	5,348	0	0	2	105	5,573	0	0	2	109	5,682	0	0	2	112
				AFR	7,776	1	0	2	153	8,104	1	0	2	159	8,262	1	0	2	162
P2	68W	30	700	T1S	9,997	1	0	2	147	10,418	1	0	2	154	10,621	1	0	2	157
				T2M	9,260	2	0	3	137	9,651	2	0	3	142	9,839	2	0	3	145
				T3M	9,368	2	0	3	138	9,763	2	0	3	144	9,953	2	0	3	147
				T3LG	8,368	1	0	2	123	8,721	1	0	2	129	8,891	1	0	2	131
				T4M	9,507	2	0	3	140	9,909	2	0	3	146	10,102	2	0	3	149
				T4LG	8,647	1	0	2	128	9,012	1	0	2	133	9,187	1	0	2	136
				TFTM	9,573	2	0	3	141	9,977	2	0	3	147	10,172	2	0	3	150
				T5M	9,782	4	0	2	144	10,195	4	0	2	150	10,393	4	0	2	153
				T5W	9,940	4	0	2	147	10,360	4	0	2	153	10,562	4	0	2	156
				T5LG	9,810	3	0	1	145	10,224	3	0	1	151	10,423	3	0	1	154
				BLC3	6,814	0	0	2	101	7,101	0	0	2	105	7,240	0	0	2	107
				BLC4	7,038	0	0	3	104	7,334	0	0	3	108	7,477	0	0	3	110
				RCCO	6,875	1	0	2	101	7,165	1	0	2	106	7,305	1	0	2	108
				LCCO	6,875	1	0	2	101	7,165	1	0	2	106	7,305	1	0	2	108
				AFR	9,997	1	0	2	147	10,418	1	0	2	154	10,621	1	0	2	157
P3	102W	30	1050	T1S	14,093	2	0	2	138	14,687	2	0	2	144	14,973	2	0	2	147
				T2M	13,055	2	0	3	128	13,605	2	0	3	133	13,871	2	0	3	136
				T3M	13,206	2	0	4	129	13,763	2	0	4	135	14,031	2	0	4	137
				T3LG	11,797	2	0	2	115	12,294	2	0	2	120	12,534	2	0	2	123
				T4M	13,403	2	0	4	131	13,968	2	0	4	137	14,241	2	0	4	139
				T4LG	12,190	2	0	2	119	12,704	2	0	2	124	12,952	2	0	2	127
				TFTM	13,496	2	0	4	132	14,065	2	0	4	138	14,339	2	0	4	140
				T5M	13,790	4	0	2	135	14,371	4	0	2	141	14,652	4	0	2	143
				T5W	14,013	4	0	3	137	14,605	4	0	3	143	14,889	4	0	3	146
				T5LG	13,830	3	0	2	135	14,413	3	0	2	141	14,694	3	0	2	144
				BLC3	9,606	0	0	2	94	10,011	0	0	2	98	10,206	0	0	2	100
				BLC4	9,921	0	0	3	97	10,340	0	0	3	101	10,541	0	0	3	103
				RCCO	9,692	1	0	2	95	10,101	1	0	2	99	10,298	1	0	2	101
				LCCO	9,692	1	0	2	95	10,101	1	0	2	99	10,298	1	0	2	101
				AFR	14,093	2	0	2	138	14,687	2	0	2	144	14,973	2	0	2	147

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Performance Data

Lumen Output

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Forward Optics

Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P4	124W	30	1250	T1S	16,416	2	0	3	132	17,109	2	0	3	138	17,442	2	0	3	141
				T2M	15,207	3	0	4	123	15,849	3	0	4	128	16,158	3	0	4	130
				T3M	15,383	2	0	4	124	16,032	2	0	4	129	16,345	2	0	4	132
				T3LG	13,742	2	0	2	111	14,321	2	0	2	116	14,600	2	0	2	118
				T4M	15,613	2	0	4	126	16,272	2	0	4	131	16,589	2	0	4	134
				T4LG	14,200	2	0	2	115	14,799	2	0	2	119	15,087	2	0	2	122
				TFTM	15,721	2	0	4	127	16,384	2	0	4	132	16,703	2	0	4	135
				T5M	16,063	4	0	2	130	16,741	4	0	2	135	17,067	4	0	2	138
				T5W	16,324	5	0	3	132	17,013	5	0	3	137	17,344	5	0	3	140
				T5LG	16,110	3	0	2	130	16,790	4	0	2	135	17,117	4	0	2	138
				BLC3	11,190	0	0	3	90	11,662	0	0	3	94	11,889	0	0	3	96
				BLC4	11,557	0	0	3	93	12,044	0	0	3	97	12,279	0	0	4	99
				RCCO	11,291	1	0	3	91	11,767	1	0	3	95	11,996	1	0	3	97
				LCCO	11,291	1	0	3	91	11,767	1	0	3	95	11,996	1	0	3	97
				AFR	16,416	2	0	3	132	17,109	2	0	3	138	17,442	2	0	3	141
P5	138W	30	1400	T1S	18,052	2	0	3	131	18,814	2	0	3	136	19,180	2	0	3	139
				T2M	16,723	3	0	4	121	17,428	3	0	4	126	17,768	3	0	4	129
				T3M	16,917	3	0	4	122	17,630	3	0	4	128	17,974	3	0	4	130
				T3LG	15,111	2	0	2	109	15,749	2	0	2	114	16,055	2	0	2	116
				T4M	17,169	3	0	5	124	17,893	3	0	5	130	18,242	3	0	5	132
				T4LG	15,615	2	0	2	113	16,274	2	0	2	118	16,591	2	0	2	120
				TFTM	17,288	2	0	4	125	18,017	2	0	5	130	18,368	3	0	5	133
				T5M	17,664	5	0	3	128	18,410	5	0	3	133	18,768	5	0	3	136
				T5W	17,951	5	0	3	130	18,708	5	0	3	135	19,073	5	0	3	138
				T5LG	17,716	4	0	2	128	18,463	4	0	2	134	18,823	4	0	2	136
				BLC3	12,305	0	0	3	89	12,824	0	0	3	93	13,074	0	0	3	95
				BLC4	12,709	0	0	4	92	13,245	0	0	4	96	13,503	0	0	4	98
				RCCO	12,416	1	0	3	90	12,940	1	0	3	94	13,192	1	0	3	95
				LCCO	12,416	1	0	3	90	12,940	1	0	3	94	13,192	1	0	3	95
				AFR	18,052	2	0	3	131	18,814	2	0	3	136	19,180	2	0	3	139
P6	165W	40	1250	T1S	21,031	2	0	3	127	21,918	2	0	3	133	22,345	2	0	3	135
				T2M	19,482	3	0	4	118	20,303	3	0	4	123	20,699	3	0	4	125
				T3M	19,708	3	0	5	119	20,539	3	0	5	124	20,939	3	0	5	127
				T3LG	17,604	2	0	2	107	18,347	2	0	2	111	18,704	2	0	2	113
				T4M	20,001	3	0	5	121	20,845	3	0	5	126	21,251	3	0	5	129
				T4LG	18,191	2	0	2	110	18,959	2	0	2	115	19,328	2	0	2	117
				TFTM	20,140	3	0	5	122	20,989	3	0	5	127	21,398	3	0	5	129
				T5M	20,579	5	0	3	125	21,447	5	0	3	130	21,865	5	0	3	132
				T5W	20,912	5	0	3	127	21,795	5	0	3	132	22,219	5	0	3	134
				T5LG	20,638	4	0	2	125	21,509	4	0	2	130	21,928	4	0	2	133
				BLC3	14,335	0	0	3	87	14,940	0	0	3	90	15,231	0	0	3	92
				BLC4	14,805	0	0	4	90	15,430	0	0	4	93	15,731	0	0	4	95
				RCCO	14,464	1	0	3	88	15,074	1	0	3	91	15,368	1	0	3	93
				LCCO	14,464	1	0	3	88	15,074	1	0	3	91	15,368	1	0	3	93
				AFR	21,031	2	0	3	127	21,918	2	0	3	133	22,345	2	0	3	135

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Performance Data

Lumen Output

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Forward Optics

Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P7	184W	40	1400	T1S	22,741	2	0	3	123	23,700	2	0	3	129	24,162	3	0	3	131
				T2M	21,066	3	0	4	114	21,955	3	0	4	119	22,383	3	0	4	121
				T3M	21,311	3	0	5	116	22,210	3	0	5	120	22,642	3	0	5	123
				T3LG	19,036	2	0	2	103	19,839	2	0	3	108	20,226	2	0	3	110
				T4M	21,628	3	0	5	117	22,541	3	0	5	122	22,980	3	0	5	125
				T4LG	19,671	2	0	2	107	20,501	2	0	3	111	20,900	2	0	3	113
				TFTM	21,778	3	0	5	118	22,697	3	0	5	123	23,139	3	0	5	125
				T5M	22,252	5	0	3	121	23,191	5	0	3	126	23,643	5	0	3	128
				T5W	22,613	5	0	3	123	23,567	5	0	4	128	24,027	5	0	4	130
				T5LG	22,317	4	0	2	121	23,258	4	0	2	126	23,712	4	0	2	129
				BLC3	15,501	0	0	3	84	16,155	0	0	4	88	16,470	0	0	4	89
				BLC4	16,010	0	0	4	87	16,685	0	0	4	90	17,010	0	0	4	92
				RCCO	15,641	1	0	3	85	16,301	1	0	3	89	16,619	1	0	3	90
				LCCO	15,641	1	0	3	85	16,301	1	0	3	89	16,619	1	0	3	90
				AFR	22,741	2	0	3	123	23,700	2	0	3	129	24,162	3	0	3	131
P8	216W	60	1100	T1S	28,701	3	0	3	133	29,912	3	0	4	139	30,495	3	0	4	141
				T2M	26,587	3	0	5	123	27,709	3	0	5	128	28,249	3	0	5	131
				T3M	26,895	3	0	5	125	28,030	3	0	5	130	28,576	3	0	5	132
				T3LG	24,025	3	0	3	111	25,038	3	0	3	116	25,526	3	0	3	118
				T4M	27,296	3	0	5	127	28,448	3	0	5	132	29,002	3	0	5	134
				T4LG	24,826	3	0	3	115	25,873	3	0	3	120	26,378	3	0	3	122
				TFTM	27,485	3	0	5	127	28,645	3	0	5	133	29,203	3	0	5	135
				T5M	28,084	5	0	4	130	29,269	5	0	4	136	29,839	5	0	4	138
				T5W	28,539	5	0	4	132	29,743	5	0	4	138	30,323	5	0	4	141
				T5LG	28,165	4	0	2	131	29,354	4	0	2	136	29,926	4	0	2	139
				BLC3	19,563	0	0	4	91	20,388	0	0	4	94	20,786	0	0	4	96
				BLC4	20,205	0	0	5	94	21,057	0	0	5	98	21,468	0	0	5	99
				RCCO	19,740	1	0	4	91	20,572	1	0	4	95	20,973	1	0	4	97
				LCCO	19,740	1	0	4	91	20,572	1	0	4	95	20,973	1	0	4	97
				AFR	28,701	3	0	3	133	29,912	3	0	4	139	30,495	3	0	4	141
P9	277W	60	1400	T1S	34,819	3	0	4	126	36,288	3	0	4	131	36,996	3	0	4	134
				T2M	32,255	3	0	5	116	33,616	3	0	5	121	34,271	3	0	5	124
				T3M	32,629	3	0	5	118	34,006	3	0	5	123	34,668	3	0	5	125
				T3LG	29,146	3	0	3	105	30,376	3	0	4	110	30,968	3	0	4	112
				T4M	33,116	3	0	5	120	34,513	3	0	5	125	35,185	3	0	5	127
				T4LG	30,119	3	0	3	109	31,389	3	0	4	113	32,001	3	0	4	116
				TFTM	33,345	3	0	5	120	34,751	3	0	5	125	35,429	3	0	5	128
				T5M	34,071	5	0	4	123	35,509	5	0	4	128	36,201	5	0	4	131
				T5W	34,624	5	0	4	125	36,084	5	0	4	130	36,788	5	0	4	133
				T5LG	34,170	5	0	3	123	35,612	5	0	3	129	36,306	5	0	3	131
				BLC3	23,734	0	0	4	86	24,735	0	0	4	89	25,217	0	0	4	91
				BLC4	24,513	0	0	5	88	25,547	0	0	5	92	26,045	0	0	5	94
				RCCO	23,948	1	0	4	86	24,958	1	0	4	90	25,445	1	0	4	92
				LCCO	23,948	1	0	4	86	24,958	1	0	4	90	25,445	1	0	4	92
				AFR	34,819	3	0	4	126	36,288	3	0	4	131	36,996	3	0	4	134

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Performance Data

Lumen Output

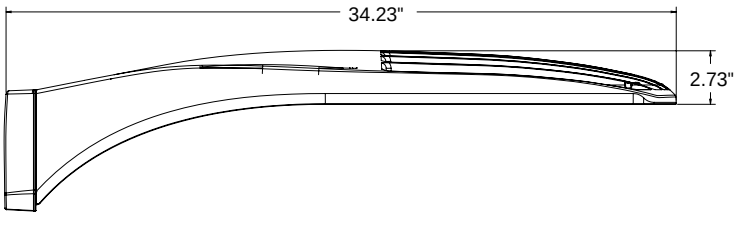
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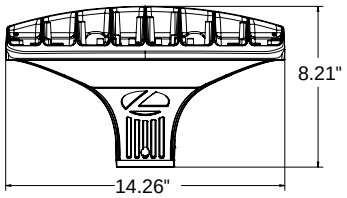
Rotated Optics

Performance Package	System Watts	LED Count	Drive Current (mA)	Distribution Type	30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P10	101W	60	530	T1S	15,164	3	0	3	150	15,803	3	0	3	156	16,112	3	0	3	159
				T2M	14,047	4	0	4	139	14,640	4	0	4	145	14,925	4	0	4	147
				T3M	14,208	4	0	4	140	14,807	4	0	4	146	15,096	4	0	4	149
				T3LG	12,693	3	0	3	125	13,229	3	0	3	131	13,487	3	0	3	133
				T4M	14,420	4	0	4	142	15,028	4	0	4	148	15,321	4	0	4	151
				T4LG	13,115	3	0	3	129	13,668	3	0	3	135	13,934	3	0	3	138
				TFTM	14,522	4	0	4	143	15,134	4	0	4	149	15,429	4	0	4	152
				T5M	14,836	4	0	2	146	15,462	4	0	2	153	15,763	4	0	2	156
				T5W	15,076	4	0	3	149	15,712	5	0	3	155	16,019	5	0	3	158
				T5LG	14,879	3	0	2	147	15,507	3	0	2	153	15,809	3	0	2	156
				BLC3	10,335	3	0	3	102	10,771	4	0	4	106	10,981	4	0	4	108
				BLC4	10,674	4	0	4	105	11,124	4	0	4	110	11,341	4	0	4	112
				RCCO	10,429	1	0	2	103	10,869	1	0	2	107	11,080	1	0	2	109
				LCCO	10,429	1	0	2	103	10,869	1	0	2	107	11,080	1	0	2	109
				AFR	15,164	3	0	3	150	15,803	3	0	3	156	16,112	3	0	3	159
P11	135W	60	700	T1S	19,437	4	0	4	144	20,257	4	0	4	150	20,651	4	0	4	153
				T2M	18,005	4	0	4	133	18,765	4	0	4	139	19,131	4	0	4	142
				T3M	18,211	4	0	4	135	18,980	4	0	4	141	19,350	4	0	4	143
				T3LG	16,270	3	0	3	121	16,957	3	0	3	126	17,287	4	0	4	128
				T4M	18,483	4	0	4	137	19,263	5	0	5	143	19,638	5	0	5	146
				T4LG	16,810	3	0	3	125	17,519	3	0	3	130	17,861	3	0	3	132
				TFTM	18,614	4	0	4	138	19,399	4	0	4	144	19,777	5	0	5	147
				T5M	19,017	5	0	3	141	19,819	5	0	3	147	20,205	5	0	3	150
				T5W	19,325	5	0	3	143	20,140	5	0	3	149	20,533	5	0	3	152
				T5LG	19,072	4	0	2	141	19,876	4	0	2	147	20,264	4	0	2	150
				BLC3	13,247	4	0	4	98	13,806	4	0	4	102	14,075	4	0	4	104
				BLC4	13,682	4	0	4	101	14,259	4	0	4	106	14,537	4	0	4	108
				RCCO	13,367	1	0	3	99	13,931	1	0	3	103	14,203	1	0	3	105
				LCCO	13,367	1	0	3	99	13,931	1	0	3	103	14,203	1	0	3	105
				AFR	19,437	4	0	4	144	20,257	4	0	4	150	20,651	4	0	4	153
P12	206W	60	1050	T1S	27,457	4	0	4	133	28,616	4	0	4	139	29,174	4	0	4	142
				T2M	25,436	5	0	5	124	26,509	5	0	5	129	27,025	5	0	5	131
				T3M	25,727	5	0	5	125	26,812	5	0	5	130	27,335	5	0	5	133
				T3LG	22,984	4	0	4	112	23,954	4	0	4	116	24,421	4	0	4	119
				T4M	26,110	5	0	5	127	27,212	5	0	5	132	27,742	5	0	5	135
				T4LG	23,747	4	0	4	115	24,749	4	0	4	120	25,231	4	0	4	123
				TFTM	26,295	5	0	5	128	27,404	5	0	5	133	27,938	5	0	5	136
				T5M	26,864	5	0	4	130	27,997	5	0	4	136	28,543	5	0	4	139
				T5W	27,299	5	0	4	133	28,451	5	0	4	138	29,006	5	0	4	141
				T5LG	26,942	4	0	2	131	28,078	4	0	2	136	28,626	4	0	2	139
				BLC3	18,714	4	0	4	91	19,504	4	0	4	95	19,884	4	0	4	97
				BLC4	19,327	5	0	5	94	20,143	5	0	5	98	20,535	5	0	5	100
				RCCO	18,883	1	0	4	92	19,680	1	0	4	96	20,064	1	0	4	97
				LCCO	18,883	1	0	4	92	19,680	1	0	4	96	20,064	1	0	4	97
				AFR	27,457	4	0	4	133	28,616	4	0	4	139	29,174	4	0	4	142
P13	276W	60	1400	T1S	34,436	5	0	5	125	35,889	5	0	5	130	36,588	5	0	5	133
				T2M	31,900	5	0	5	116	33,246	5	0	5	121	33,894	5	0	5	123
				T3M	32,265	5	0	5	117	33,626	5	0	5	122	34,282	5	0	5	124
				T3LG	28,826	4	0	4	105	30,042	4	0	4	109	30,628	4	0	4	111
				T4M	32,746	5	0	5	119	34,128	5	0	5	124	34,793	5	0	5	126
				T4LG	29,782	4	0	4	108	31,039	4	0	4	113	31,644	5	0	4	115
				TFTM	32,978	5	0	5	120	34,369	5	0	5	125	35,039	5	0	5	127
				T5M	33,692	5	0	4	122	35,113	5	0	4	127	35,797	5	0	4	130
				T5W	34,238	5	0	4	124	35,682	5	0	4	129	36,378	5	0	4	132
				T5LG	33,789	5	0	3	122	35,215	5	0	3	128	35,901	5	0	3	130
				BLC3	23,471	5	0	5	85	24,461	5	0	5	89	24,937	5	0	5	90
				BLC4	24,240	5	0	5	88	25,262	5	0	5	92	25,755	5	0	5	93
				RCCO	23,683	1	0	4	86	24,682	1	0	4	89	25,163	1	0	4	91
				LCCO	23,683	1	0	4	86	24,682	1	0	4	89	25,163	1	0	4	91
				AFR	34,436	5	0	5	125	35,889	5	0	5	130	36,588	5	0	5	133

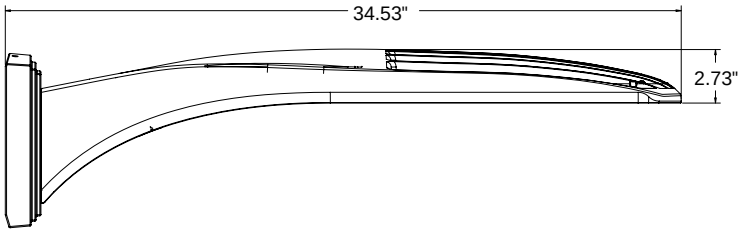
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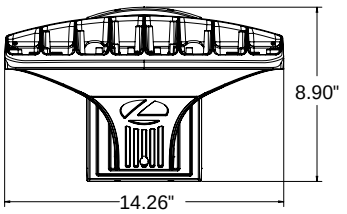
Dimensions



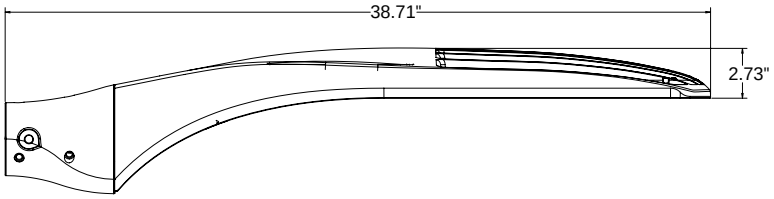


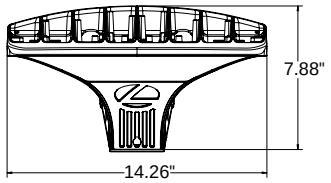
DSX1 with RPA, RPA5, SPA5, SPA8N mount
Weight: 36 lbs





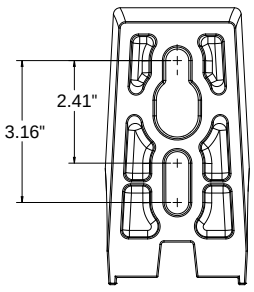
DSX1 with WBA mount
Weight: 38 lbs



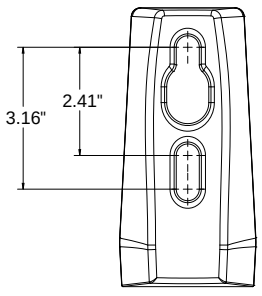


DSX1 with MA mount
Weight: 39 lbs

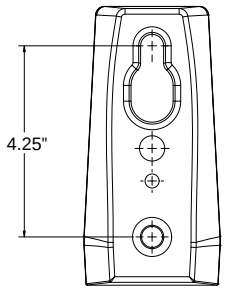
SPA (STANDARD ARM)



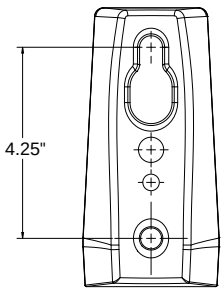
RPA



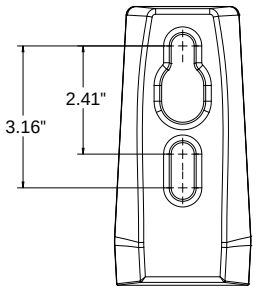
SPA5



RPA5



SPA8N



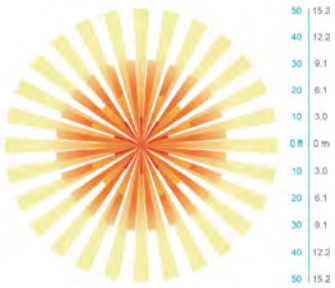
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nLight Control - Sensor Coverage and Settings

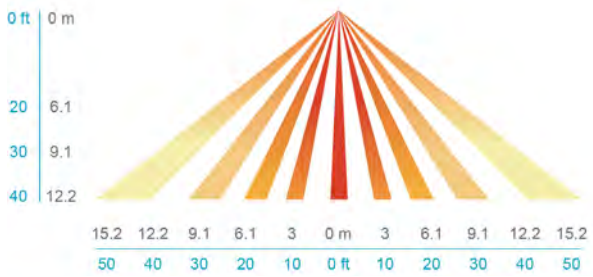
nLight Sensor Coverage Pattern

NLTAIR2 PIRHN





Top



Side

FEATURES & SPECIFICATIONS

INTENDED USE
The sleek design of the D-Series Size 1 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

CONSTRUCTION
Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED drivers are mounted in direct contact with the casting to promote low operating temperature and long life. Housing driver compartment is completely sealed against moisture and environmental contaminants (IP66). Vibration rated per ANSI C136.31 for 3G for SPA and MA. 1.5G for mountings RPA, RPA5, SPA5 and SPA8N. Low EPA (0.69 ft^2) for optimized pole wind loading.

FINISH
Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

Coastal Construction (CCE)
Optional corrosion resistant construction is engineered with added corrosion protection in materials and/or pre-treatment of base material under super durable paint. Provides additional corrosion protection for applications near coastal areas. Finish is salt spray tested to over 5,000 hours per ASTM B117 with scribe rating of 10. Additional lead-times may apply.

OPTICS
Precision-molded proprietary silicone lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 3000 K, 4000 K and 5000 K (70 CRI) configurations. 80CRI configurations are also available. The D-Series Size 1 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L81/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS
The DSX1 LED area luminaire has a number of control options. DSX Size 1, comes standard with 0-10V dimming drivers. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. Integrated motion sensor with on-board photocells feature field-adjustable programing and are suitable for mounting heights up to 40 feet. Control option BL features a bi-level device that allows a second control circuit to switch all light engines to either 30% or 50% light output.

nLIGHT AIR CONTROLS
The DSX1 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to-use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclypse. Additional information about nLight Air can be found here.

INSTALLATION
Integral mounting arm allows for fast mounting using Lithonia standard #8 drilling and accommodates pole drilling's from 2.41 to 3.12" on center. The standard "SPA" option for square poles and the "RPA" option for round poles use the #8 drilling. For #5 pole drillings, use SPA5 or RPA5. Additional mountings are available including a wall bracket (WBA) and mast arm (MA) option that allows luminaire attachment to a 2 3/8" horizontal mast arm.

LISTINGS
UL listed to meet U.S. and Canadian standards. UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP66 rated. Rated for -40ºC minimum ambient.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

GOVERNMENT PROCUREMENT
BAA – Buy America(n) Act: Product with the BAA option qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product with the BAA option also qualifies as manufactured in the United States under DOT Buy America regulations.
BABA – Build America Buy America: Product with the BAA option also qualifies as produced in the United States under the definitions of the Build America, Buy America Act.
Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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LITHONIA LIGHTING®

Catalog Number	
Notes	
Type	

FEATURES & SPECIFICATIONS

INTENDED USE — **These specifications are for USA standards only.** Square Straight Steel is a general purpose light pole for up to 39-foot mounting heights. This pole provides a robust yet cost effective option for mounting area lights and floodlights.

CONSTRUCTION —

Pole Shaft: The pole shaft is of uniform dimension and wall thickness and is made of a weldable-grade, hot-rolled, commercial-quality steel tubing with a minimum yield of 55 KSI (11-gauge, 0.120"), or 50 KSI (7-gauge, 0.179"). Shaft is one-piece with a full-length longitudinal high-frequency electric resistance weld. Uniformly square in cross-section with flat sides, small corner radii and excellent torsional qualities. Available shaft widths are 4", 5" and 6".

Pole Top: Options include 4" tenon top, drilled for side mount fixture, tenon with drilling (includes extra handhole) and open top. Side drilled and open top poles include a removable top cap.

Handhole: A reinforced handhole with grounding provision is provided at 18" from the base on side A. Positioning the handhole lower may not be possible and requires engineering review; consult Tech Support-Outdoor for further information. Every handhole includes a cover and cover attachment hardware. The handhole has a nominal dimension of 2.5" x 5".

Base Cover: A durable ABS plastic two-piece full base cover, finished to match the pole, is provided with each pole assembly. Additional base cover options are available upon request.

Anchor Base/Bolts: Anchor base is fabricated from steel that meets ASTM A36 standards and can be altered to match existing foundations; consult factory for modifications. Anchor bolts are manufactured to ASTM F1554 Standards grade 55, (55 KSI minimum yield strength and tensile strength of 75-95 KSI). Top threaded portion (nominal 12") is hot-dipped galvanized per ASTM A-153.

HARDWARE — All structural fasteners are high-strength galvanized carbon steel. All non-structural fasteners are galvanized or zinc-plated carbon steel or stainless steel.

FINISH — Extra durable painted finish is coated with TGIC (Triglycidyl Isocyanurate) Polyester powder that meets 5A and 5B classifications of ASTM D3359. Powder-coat finishes include Dark Bronze, White, Black, and Natural Aluminum colors. Architectural Colors and Special Finishes are available by quote and include, but are not limited to Paint over Hot-dipped Galvanized, RAL Colors, Custom Colors and Extended Warranty Finishes.

GOVERNEMENT PROCUREMENT —

BAA – Buy America(n) Act: Product qualifies as a domestic end product under the Buy American Act as implemented in the FAR and DFARS. Product also qualifies as manufactured in the United States under DOT Buy America regulations.

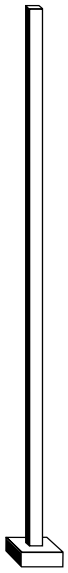
BABA – Build America Buy America: Product qualifies as produced in the United States under the definitions of the Build America, Buy America Act.

Please refer to www.acuitybrands.com/buy-american for additional information.

INSTALLATION — **Do not** erect poles without having fixtures installed. Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not accept claim for incorrect anchorage placement due to failure to use Lithonia Lighting factory templates. If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage. Lithonia Lighting is not responsible for the foundation design.

WARRANTY — 1-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

NOTE: Actual performance may differ as a result of end-user environment and application.
Specifications subject to change without notice.



Anchor Base Poles

SSS

SQUARE STRAIGHT STEEL

BAA BABA

SSS Square Straight Steel Poles

ORDERING INFORMATION Lead times will vary depending on options selected. Consult with your sales representative. **Example:** SSS 20 5C DM28AS DDBXD

SSS					
Series	**Nominal fixture mounting height**	**Nominal shaft base size/wall thickness[1]**	**Mounting[2]**	**Options**	**Finish**
SSS	10'-39' (for 1/2 ft increments, add -6 to the pole height. **Ex:** 20-6 equals 20ft 6in.) (See technical information table for complete ordering information.)	4C 4" 11g (0.120") 4G 4" 7g (0.179") 5C 5" 11g (0.120") 5G 5" 7g (0.179") 6G 6" 7g (0.179") (See technical information table for complete ordering information.)	Tenon mounting PT Open top (includes top cap) T20 2-3/8" O.D. (2" NPS) T25 2-7/8" O.D. (2-1/2" NPS) T30 3-1/2" O.D. (3" NPS) T35 4" O.D. (3-1/2" NPS) DSX/RSX/OMERO™ Drill mounting[3] DM19AS 1 at 90° DM28AS 2 at 180° DM29AS 2 at 90° DM39AS 3 at 90° DM49AS 4 at 90° RAD drill mounting[3] DM19RAD 1 at 90° DM28RAD 2 at 180° DM29RAD 2 at 90° DM39RAD 3 at 90° DM49RAD 4 at 90° ESX Drill mounting[3] DM19ESX 1 at 90° DM28ESX 2 at 180° DM29ESX 2 at 90° DM39ESX 3 at 90° DM49ESX 4 at 90° Arm drill mounting To be added as series + drill orientations **EX:** SMAC19 for SMAC arm drilling 1 at 90°	Shipped installed VD Vibration damper[4] JHxy J-Hook for cable strain relief[5] HAxy Horizontal arm bracket (1 fixture)[5,6] FDLxy Festoon outlet less electrical[5,7] FDLGFCIxy Festoon with GFCI outlet and in-use cover[5,8] CPL12/xy 1/2" coupling[5] CPL34/xy 3/4" coupling[5] CPL1/xy 1" coupling[5] NPL12/xy 1/2" threaded nipple[5] NPL34/xy 3/4" threaded nipple[5] NPL1/xy 1" threaded nipple[5] EHHxy Extra handhole[5,9] STLTMP Steel anchor bolt template (standard is paper) STLHHC Steel handhole cover (standard is plastic, finish is smooth)[10] FBCSTL2PC 2 Piece steel base cover (standard is plastic)[10] IC Interior coating[11] L/AB Less anchor bolts (Include when anchor bolts are not needed) TP Tamper resistant handhole cover fasteners NEC NEC 410.30 compliant gasketed handhole (Not UL Labeled) UL UL listed with label (Includes NEC compliant cover) BAA Buy America(n) Act Compliant[12] VM/original order# Match pole to prior order or project[13]	Super durable paint colors DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DSSXD Sandstone DGCXD Charcoal gray DTGXD Tennis green DBRXD Bright red DSBXD Steel blue DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white Other finishes GALV Galvanized finish Architectural colors and special finishes[14] [PAINT] GALV Paint over galvanizing VP30 3 year warranty extension VP53 5 year warranty extension RAL#### Use designated Lithonia Lighting nomenclature in brochure Custom color Nomenclature assigned through Customer Care "Custom Color Process"

Accessories: *Order as separate catalog number.*	
PL DT20	Plugs for ESX drillings
PL DT8	Plugs for DMxxAS drillings
FVD xxFT	Field installed vibration damper (snake style)

NOTES:
1. Wall thickness will be signified with a "C" (11 Gauge) or a "G" (7-Gauge) in nomenclature. "C" - 0.120" | "G" - 0.179".
2. PT open top poles include top cap. When ordering tenon mounting and drill mounting for the same pole, specify as drilling option/tenon option. The combination includes a required extra handhole.
   Example: DM28/T20.
3. Refer to the fixture spec sheet for the correct drilling template pattern and orientation compatibility.
4. On 4" and 5" poles, VD cannot be installed if provisions (EHH, FDL, NPL, CPL) are located higher than 2/3 of the pole's total height.
   Example: Pole height is 25ft, A provision cannot be placed above 16ft.
5. Specify location and orientation when ordering option.
   For "x": Specify the height above the base of pole in feet or feet and inches; separate feet and inches with a "-".
   Example: 5ft = 5 and 20ft 3in = 20-3
   For "y": Specify orientation from handhole (A,B,C,D) Refer to the Handhole Orientation diagram below.
   Example: 1/2" coupling at 5' 8 ", orientation C = CPL12/5-8C
6. Horizontal arm is 18" x 2-3/8" O.D. tenon standard, with radius curve providing 12" rise and 2-3/8" O.D. If ordering two horizontal arm at the same height, specify with HAxyy.
   Example: HA20BD.
7. FDL does not come with GFCI outlet or handhole cover. These must be supplied by contractor or electrician.
8. Festoon option that comes with GFCI and in-use cover. GFCI and in-use cover ship separately from pole.
9. Combination of tenon-top and drill mount includes extra handhole. EHH includes cover.
10. Plastic hand hole cover and base covers come standard with all poles. Items ship separately. Additional parts can be ordered as replacements.
11. N/A with GALV.
12. Use when mill certifications are required.
13. Must add original order number. Not for replacement parts or post sales issues, contact tech support or post sales teams. VM is used to ensure poles match in appearance exactly from order to order, on a single project site. A common use case would be a multi-phase project with multiple orders. *Example: VM/010-36784*
14. Must be quoted through AQD. Finishes do not require RFA. RAL colors available are shown in "Architectural Colors brochure". Lead times may be extended up to 2 weeks due to paint procurement.

OUTDOOR: One Lithonia Way Conyers, GA 30012 Phone: 800-705-SERV (7378) TechSupport-Lighting@Acuitybrands.com www.lithonia.com
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Rev. 02/27/25

SSS Square Straight Steel Poles

TECHNICAL INFORMATION — EPA (ft^2) with 1.3 gust

Catalog Number	Nominal Shaft Length (ft.)*	Pole Shaft Size (Base in. x Top in. x ft.)	Wall thick (in.)	Gauge	EPA (ft^2) with 1.3 gust						Approximate ship weight (lbs.)
					80 MPH	Max. weight	90 MPH	Max. weight	100 MPH	Max. weight	
SSS 10 4C	10	4.0 x 10.0	0.120"	11	30.6	765	23.8	595	18.9	473	75
SSS 12 4C	12	4.0 x 12.0	0.120"	11	24.4	610	18.8	470	14.8	370	90
SSS 14 4C	14	4.0 x 14.0	0.120"	11	19.9	498	15.1	378	11.7	293	100
SSS 16 4C	16	4.0 x 16.0	0.120"	11	15.9	398	11.8	295	8.9	223	115
SSS 18 4C	18	4.0 x 18.0	0.120"	11	12.6	315	9.2	230	6.7	168	125
SSS 20 4C	20	4.0 x 20.0	0.120"	11	9.6	240	6.7	167	4.5	150	140
SSS 20 4G	20	4.0 x 20.0	0.179"	7	14	350	11	275	8	200	198
SSS 20 5C	20	5.0 x 20.0	0.120"	11	17.7	443	12.7	343	9.4	235	185
SSS 20 5G	20	5.0 x 20.0	0.179"	7	28.1	703	21.4	535	16.2	405	265
SSS 25 4C	25	4.0 x 25.0	0.120"	11	4.8	150	2.6	100	1	50	170
SSS 25 4G	25	4.0 x 25.0	0.179"	7	10.8	270	7.7	188	5.4	135	245
SSS 25 5C	25	5.0 x 25.0	0.120"	11	9.8	245	6.3	157	3.7	150	225
SSS 25 5G	25	5.0 x 25.0	0.179"	7	18.5	463	13.3	333	9.5	238	360
SSS 30 4G	30	4.0 x 30.0	0.179"	7	6.7	168	4.4	110	2.6	65	295
SSS 30 5C	30	5.0 x 30.0	0.120"	11	4.7	150	2	50	--	--	265
SSS 30 5G	30	5.0 x 30.0	0.179"	7	10.7	267	6.7	167	3.9	100	380
SSS 30 6G	30	6.0 x 30.0	0.179"	7	19	475	13.2	330	9	225	520
SSS 35 5G	35	5.0 x 35.0	0.179"	7	5.9	150	2.5	100	--	--	440
SSS 35 6G	35	6.0 x 35.0	0.179"	7	12.4	310	7.6	190	4.2	105	540
SSS 39 6G	39	6.0 x 39.0	0.179"	7	7.2	180	3	75	--	--	605

NOTE: EPA values are based ASCE 7-93 wind map.
* For 1/2 ft increments, add -6 to the pole height. Ex: 20-6 equals 20ft 6in.

TECHNICAL INFORMATION — EPA (ft^2) WITH 3-SECOND GUST PER AASHTO 2013

Series	Mounting Height (ft.)*	Shaft Base Size	90 MPH	Max. weight	100 MPH	Max. weight	110 MPH	Max. weight	120 MPH	Max. weight	130 MPH	Max. weight	140 MPH	Max. weight	150 MPH	Max. weight	Approximate ship weight (lbs.)
SSS	10	4C	20	500	16	400	13	325	10.5	263	8.5	213	7	175	6	150	75
SSS	12	4C	16	400	13	325	10	250	8	200	6.5	163	5	125	4	100	90
SSS	14	4C	13.5	338	10	250	7.5	188	6	150	4.5	113	3.5	88	2.5	63	100
SSS	16	4C	10.5	263	7.5	188	5.5	138	4	100	3	75	1.5	38	1	25	115
SSS	18	4C	8	200	5.5	138	4	100	2.5	63	1.5	38	0.5	13	-	-	125
SSS	18	4G	13	325	9.5	238	7	175	5	125	3.5	88	2.5	63	1.5	38	185
SSS	18	5C	13	325	9.5	238	6.5	163	4.5	113	3	75	1.5	38	.5	13	170
SSS	20	4C	6	150	4	100	2.5	63	1	25	-	-	-	-	-	-	140
SSS	20	4G	10.5	263	7.5	188	5.5	138	3.5	88	2	50	1	25			205
SSS	20	5C	10	250	7	175	4.5	113	2.5	63	1	25	-	-	-	-	185
SSS	20	5G	20	500	15	375	11.5	288	8.5	213	6	150	4.5	113	3	75	265
SSS	25	4C	2	50	0.5	13	-	-	-	-	-	-	-	-	-	-	170
SSS	25	4G	5.5	138	3	75	1.5	38	-	-	-	-	-	-	-	-	245
SSS	25	5C	4.5	113	2	50	-	-	-	-	-	-	-	-	-	-	225
SSS	25	5G	12	300	8.5	213	5.5	138	3	75	1.5	38	-	-	-	-	360
SSS	25	6G	19	475	13.5	338	9	225	5.5	138	3	75	1	25			445
SSS	30	4G	1.5	38	-	-	-	-	-	-	-	-	-	-	-	-	291
SSS	30	5C	-	-	-	-	-	-	-	-	-	-	-	-	-	-	265
SSS	30	5G	6.5	163	3.5	88	1	25	-	-	-	-	-	-	-	-	380
SSS	30	6G	11	275	6	150	2.5	63	-	-	-	-	-	-	-	-	520
SSS	35	5G	2	50	-	-	-	-	-	-	-	-	-	-	-	-	440
SSS	35	6G	4	100	-	-	-	-	-	-	-	-	-	-	-	-	540
SSS	39	6G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	605

NOTE: AASHTO 2013 design criteria is the most common EPA and uses wind map ASCE7-05. Please review the project Spec document to determine the correct design criteria for the poles on your jobsite.
*For 1/2 ft increments, add -6 to the pole height. Ex: 20-6 equals 20ft 6in.

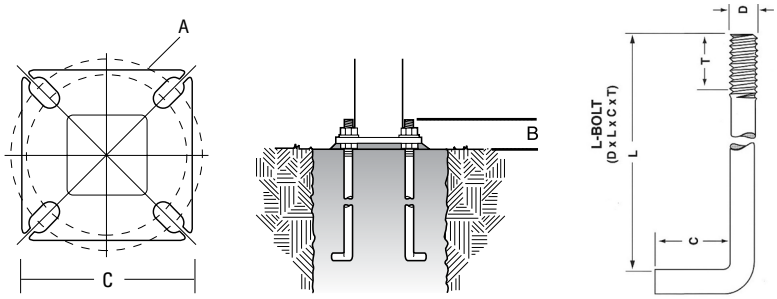
OUTDOOR: One Lithonia Way Conyers, GA 30012 Phone: 800-705-SERV (7378) TechSupport-Lighting@Acuitybrands.com www.lithonia.com
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Rev. 02/27/25

SSS Square Straight Steel Poles

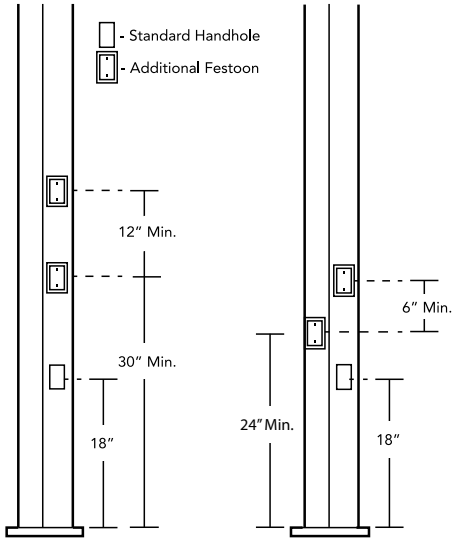
ANCHORAGE AND TEMPLATE INFORMATION								
Shaft base size	**Bolt circle A**	**Bolt projection B**	**Base square C**	**Base plate thickness**	**Template description ***	**Anchor bolt description**	**Bolt size (in.) D x L x C**	**Anchor bolt/ Template Combo**
4"C	8" – 9"	3.25"- 3.75"	8"- 8.25"	0.75"	ABTEMPLATE PJ50004	AB18-0	3/4 x 18 x 3	ABSSS-4C
4"G	8" – 9"	3.38"- 3.75"	8"- 8.25"	0.875"	ABTEMPLATE PJ50004	AB30-0	3/4 x 30 x 3	ABSSS-4G
5"	10" – 12"	3.5"- 4"	11"	1"	ABTEMPLATE PJ50010	AB36-0	1 x 36 x 4	ABSSS-5
6"	11" – 13"	4"- 4.50"	12.5"	1"	ABTEMPLATE PJ50011	AB36-0	1 x 36 x 4	N/A

* Paper template standard. Add STL to end of description for the steel template.

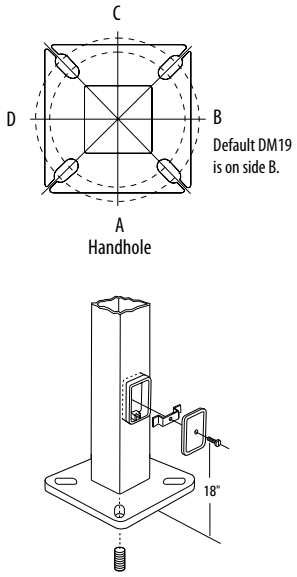
BASE & BOLT DETAIL



SQUARE STEEL HANDHOLE AND FESTOON - PLACEMENT RULES



HANDHOLE DETAIL



IMPORTANT INSTALLATION NOTES:

- **Do not** erect poles without having fixtures installed.
- Factory-supplied templates must be used when setting anchor bolts. Lithonia Lighting will not accept claim for incorrect anchorage placement due to failure to use Lithonia Lighting factory templates.
- If poles are stored outside, all protective wrapping must be removed immediately upon delivery to prevent finish damage.
- Lithonia Lighting is not responsible for the foundation design.
- Bolt circles have +/- 1/2" tolerance.

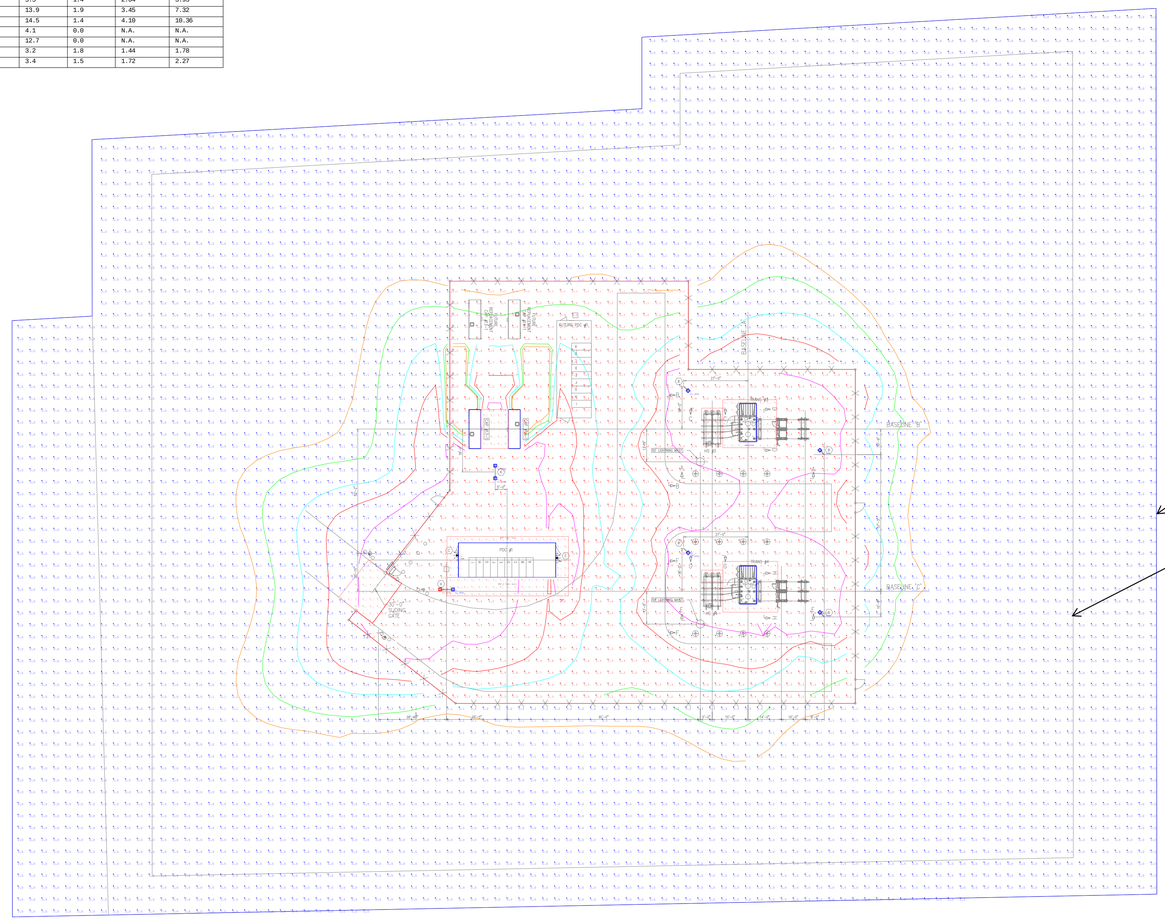
CAUTION: These specifications are intended for general purposes only. Lithonia Lighting reserves the right to change material or design, without prior notice, in a continuing effort to upgrade its products.

OUTDOOR: One Lithonia Way Conyers, GA 30012 Phone: 800-705-SERV (7378) TechSupport-Lighting@Acuitybrands.com www.lithonia.com ©1994-2025 Acuity Brands Lighting, Inc. All rights reserved. Rev. 02/27/25

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens
	2	DSX1_LED_P4_40K_70CRI_TFTM	Single	DSX1 LED P4 40K 70CRI TFTM	P4 TFTM	0.800	16383
	2	M8W_LED_P1_SR2_40K_MVOLT	Single	M8W LED P1 SR2 40K MVOLT	M8W	0.800	2251
	6	DSX1_LED_P2_40K_70CRI_TFTM	Single	DSX1 LED P2 40K 70CRI TFTM	P2 TFTM	0.800	9976

Luminaire Location Summary						
		Insertion Point				
LumNo	Label	X	Y	Z	Orient	Tilt
1	DSX1_LED_P2_40K_70CRI_TFTM	293.613	225.592	15	315	0
2	DSX1_LED_P2_40K_70CRI_TFTM	348.856	200.67	15	135	0
3	DSX1_LED_P2_40K_70CRI_TFTM	212.739	194.195	15	90	0
4	DSX1_LED_P2_40K_70CRI_TFTM	212.739	180.828	15	270	0
5	DSX1_LED_P2_40K_70CRI_TFTM	293.627	157.624	15	315	0
6	M8W_LED_P1_SR2_40K_MVOLT	197.299	156.533	7.5	180	0
7	M8W_LED_P1_SR2_40K_MVOLT	238.156	155.451	7.5	0	0
8	DSX1_LED_P4_40K_70CRI_TFTM	189.627	142.288	15	180	0
9	DSX1_LED_P4_40K_70CRI_TFTM	195.02	142.288	15	0	0
10	DSX1_LED_P2_40K_70CRI_TFTM	348.84	132.668	15	135	0

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
CAP	Illuminance	Fc	4.01	5.4	2.8	1.43	1.93
HS #3	Illuminance	Fc	3.42	3.8	3.1	1.10	1.23
HS #4	Illuminance	Fc	3.48	3.8	3.2	1.09	1.19
Main Gate	Illuminance	Fc	2.85	5.5	1.4	2.04	3.93
PDC	Illuminance	Fc	6.55	13.9	1.9	3.45	7.32
PDC_1	Illuminance	Fc	5.74	14.5	1.4	4.10	10.36
Property Line	Illuminance	Fc	0.09	4.1	0.0	N.A.	N.A.
Switchyard	Illuminance	Fc	1.73	12.7	0.0	N.A.	N.A.
TRANS #3	Illuminance	Fc	2.59	3.2	1.8	1.44	1.78
TRANS #4	Illuminance	Fc	2.58	3.4	1.5	1.72	2.27

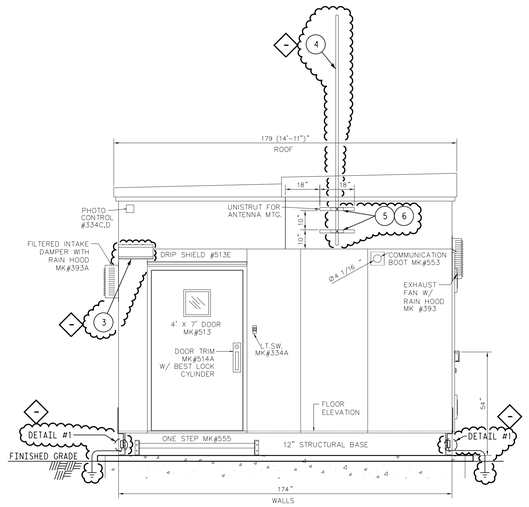


GRENADA SUBSTATION PHOTOMETRIC PLAN - 11/13/2025 - BV

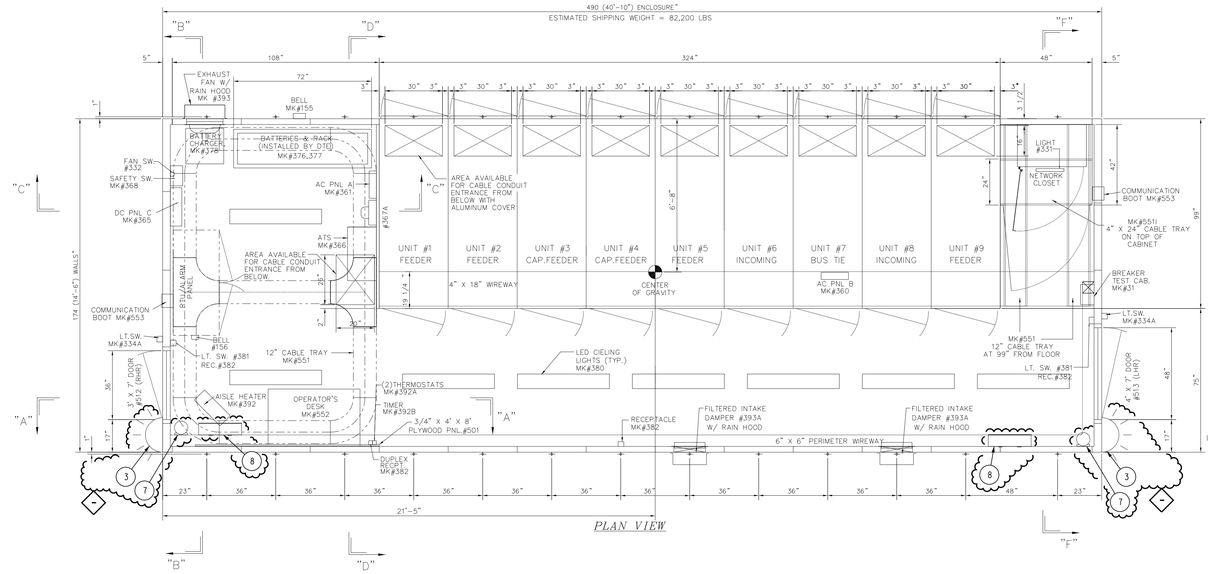
0 30 60

SCALE IN FEET

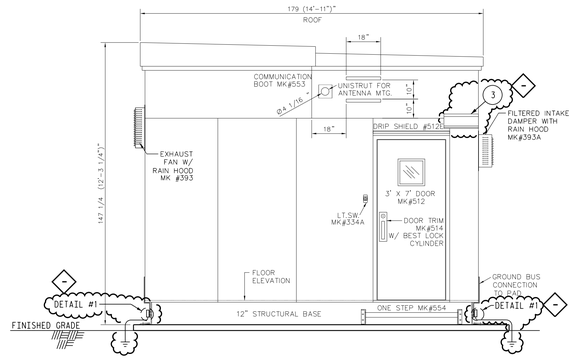
ITEM	SAP NUMBER	DECO NUMBER	DESCRIPTION	DET/ASSY	ELECTRICAL DRAWING	CIVIL DRAWING
1	100085907	721-1406	COMPRESSION TERMINALS, LONG BARREL LUG, 4/0 AWG COPPER CABLE, 2 HOLE 1/2" STUD			
2	100095211	710-0070	#4/0 BARE STRANDED COPPER, FT			
3	-	-	LED LIGHT, LITHONIA WSR LED P1 SR2 40K MVOLT PE PIR VC			
4	-	-	GALVANIZED STEEL PIPE, 2 3/8" OD X 10' SCH 40			
5	100305657	-	PORCE-A-CLAMP UNISTRUT #P1791A			
6	100011487	760-0138	ROLL 1/32" x 2" 30FT NEOPRENE TAPE			
7	-	-	ANSUL SENTRY 20 LB CO2 FIRE EXTINGUISHER, UL/ULC RATING: 10-B:C MODEL CD20A-1, PART NO. 431556			
8	-	-	GROUND LEAD RACK, EUCLID INDUSTRIES INC			



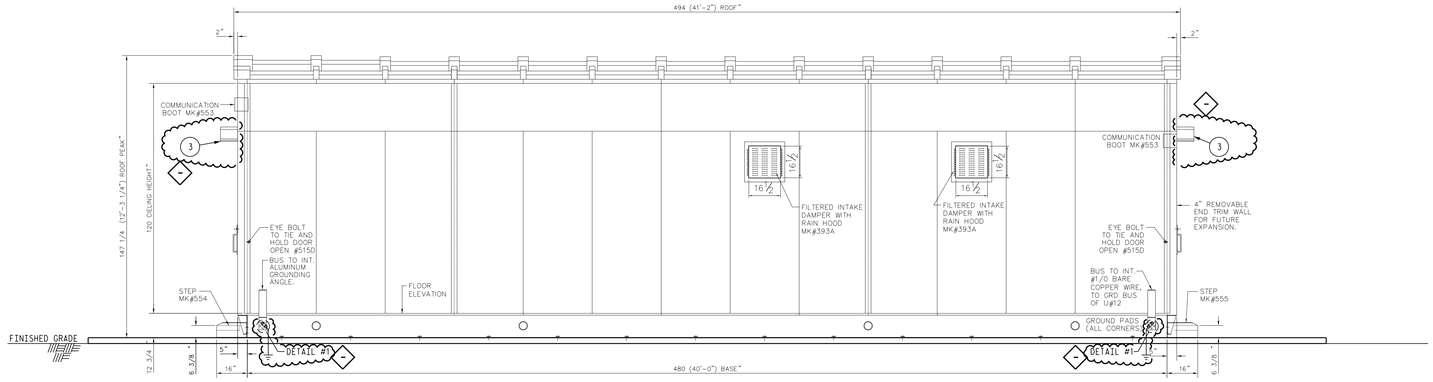
RIGHT END ELEVATION



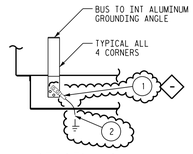
PLAN VIEW



LEFT END ELEVATION

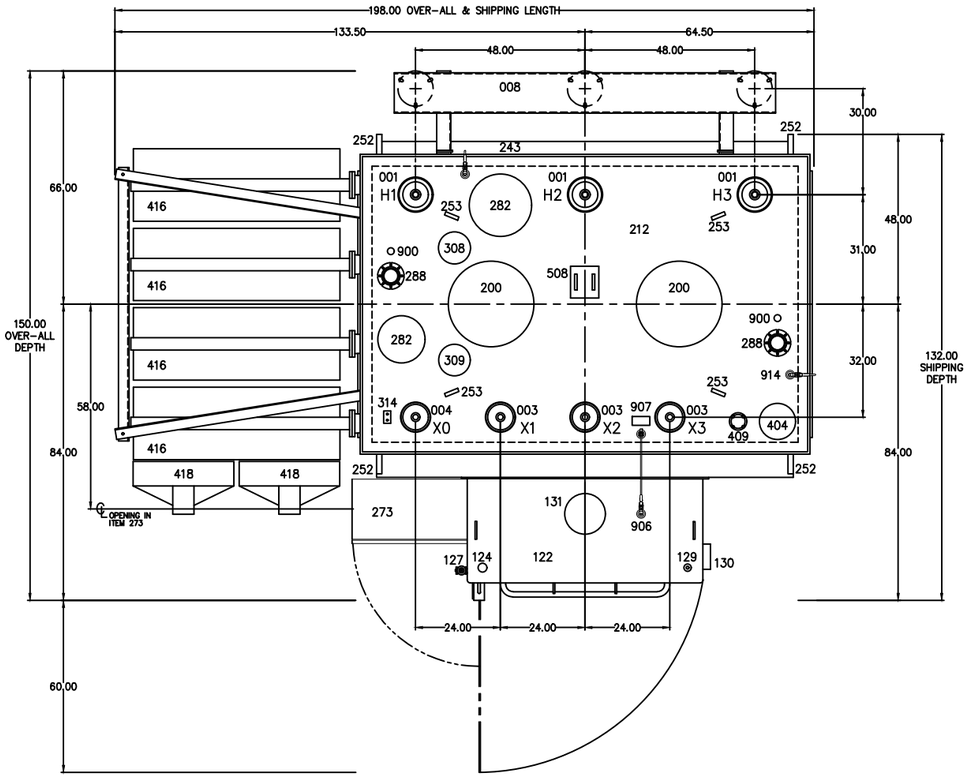


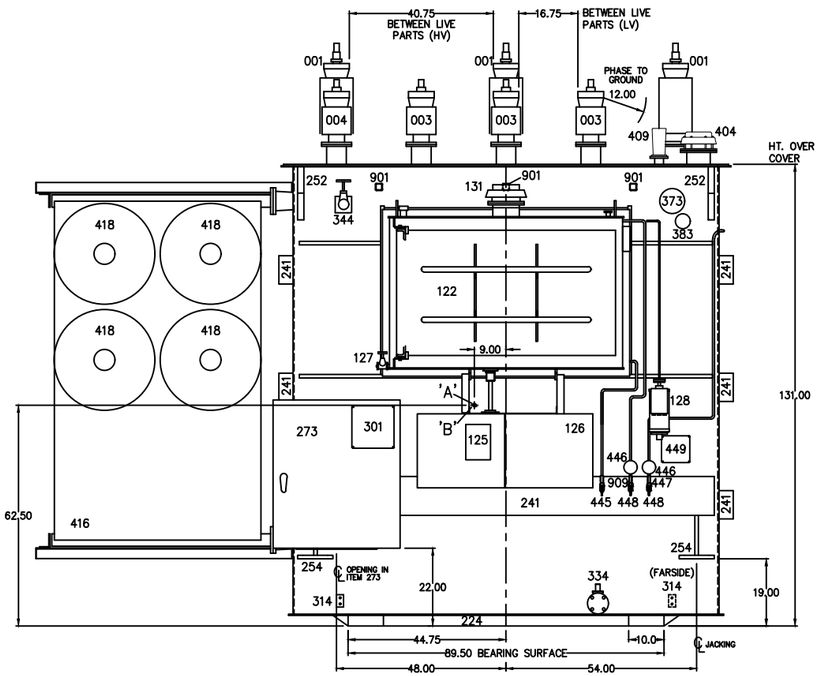
FRONT ELEVATION

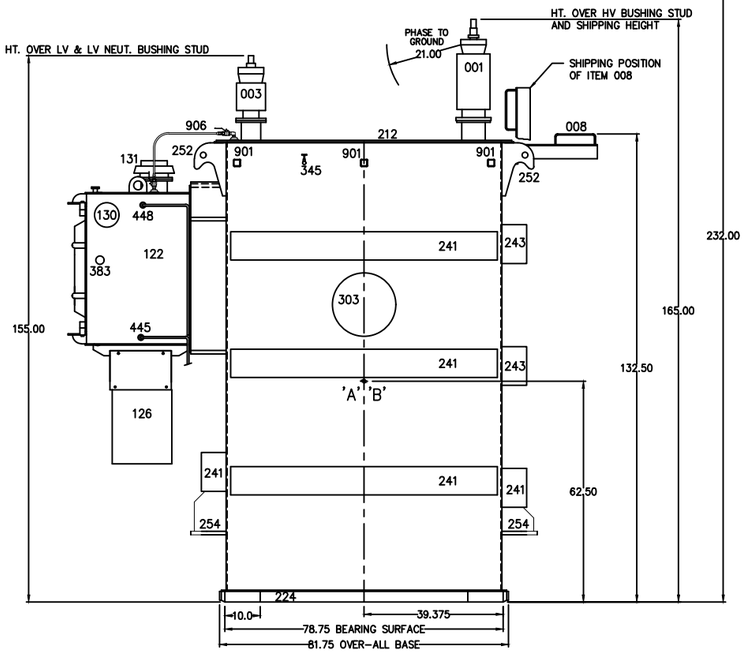


DETAIL #1
NOT TO SCALE

DTE Energy	DTE Electric	Central Design/Standards
TITLE: PDC #2 PLAN & SECTIONS PRELIMINARY SKETCH		
LOCATION NAME: GRENADA SUBSTATION	SERVICE CENTER: ANN ARBOR	SCALE: 3/8"=1'-0"
DRAWING NUMBER	WORK ORDER	PROJECT DOCUMENT LIST
DOCUMENTUM FILENAME		







HEIGHT REQUIRED TO UNTANK CORE & COILS EXCLUDING SLINGS

TRANSFORMER SKETCH

Carlisle | Wortman
ASSOCIATES, INC.

117 NORTH FIRST STREET SUITE 70 ANN ARBOR, MI 48104 734.662.2200 734.662.1935 FAX

Date: December 11, 2025

Rezoning and Area Plan Review
For
Superior Township, Michigan

Applicant:	Brad Botham, M/I Homes
Project Name:	Prospect Pointe South
Location:	East side of North Prospect Road, south of Geddes Rd, north of W. Clark Rd (PIN: J -10-34-300-001 and J -10-34-300-019)
Initial Plan Date:	June 26, 2025
Revised:	October 29, 2025
Current Zoning:	PC, Planned Community District and R4 Single Family Res
Action Requested:	Rezoning and Area Plan Approval

PROJECT DESCRIPTION

An application has been submitted for a rezoning and area plan approval to construct a single-family residential development on approximately 49.68-acres of land on two adjacent parcels. The property is situated on the east side of North Prospect Road, south of the Prospect Pointe East subdivision, in the southwest corner of Section 34. The northern subject parcel is zoned PC, Planned Community, and the southern subject parcel is zoned R4, single family residential. The property is vacant. Roughly 1/3 of the subject property has historically been used for farmland, while the remainder is wooded.

The proposed plan includes 118 single-family detached homes, a retention basin on the east side, and a conservation easement area on 17.20 acres of the southern subject parcel. The project is proposed in three (3) phases.

Benjamin R. Carlisle, *President* John L. Enos, *Vice President*
Paul Montagno, *Principal* Megan Masson-Minock, *Principal* Laura Kreps, *Principal* Brent Strong, *Principal*
David Scurto, *Principal* Sally M. Elmiger, *Principal* Craig Strong, *Principal* Douglas J. Lewan, *Principal*
Richard K. Carlisle, *Past President/Senior Principal* R. Donald Wortman, *Past Principal*

Figure 1. Aerial view of subject site and vicinity



Source: Nearmap.com

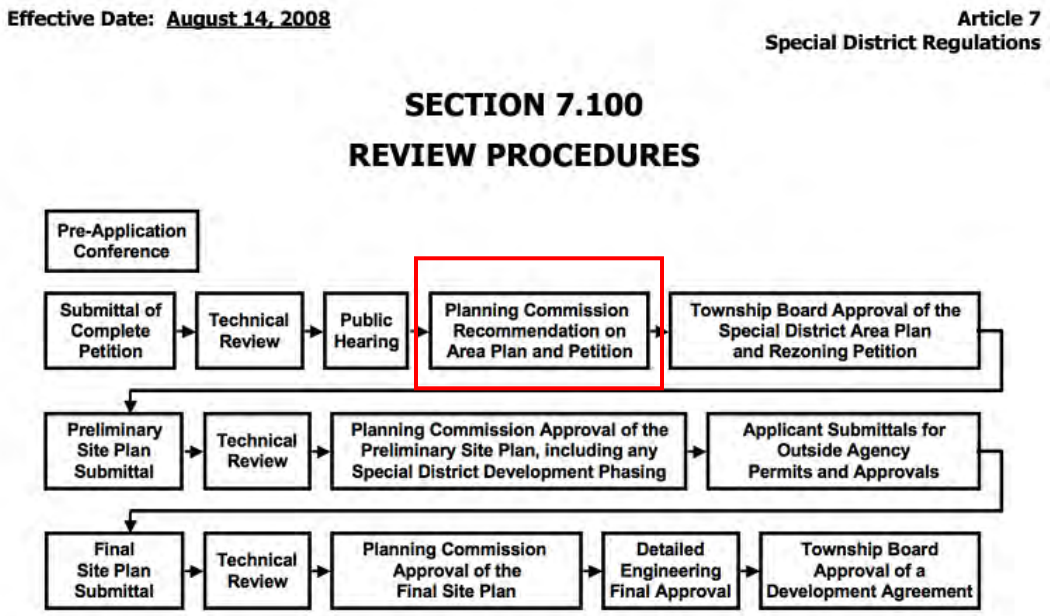
The Zoning and existing land uses for the subject site and surrounding parcels are identified in the following table:

Direction	Zoning	Existing Use
North	R4	Single Family Residential
South	PC	Vacant, Single Family Residential, Multiple Family Residential
East	PC and R4	Single Family Residential, Multiple Family Residential
West	PC, R3, A2	Rural Residential and Single Family Residential

PROCESS

The process to rezone a property to a PC, Planned Community District is outlined in Section 7.100. At this point in the process, the applicant is seeking approval of the Area Plan, which would rezone the southern parcel from R4 to PC, Planned Community District and approve the area plan for both parcels.

The Planning Commission holds the public hearing, which occurred on August 27, 2025, and is the recommending body on the Area Plan. The Township Board has ultimate authority or approval or denial upon the Area Plan.



At the August 27, 2025, meeting, the Planning Commission postponed action on the proposed area plan and directed the applicant to address the following items:

a. Traffic study, including coordination with the Washtenaw County Road Commission

CWA Response: The applicant provided a traffic study dated December 3, 2025, that was prepared by a third party.

b. Road connections, including private roads

CWA Response: The road connections have been altered. A breakaway gate was added between the existing Lakeview Drive (public road) and the proposed Lakeview Drive (public road). As discussed later in this report, we have concerns with a breakaway gate separating two segments of a public road.

The connection to Park Lane (private road) has been removed, and the road segment has been reconfigured to provide access only from Lakeview Drive.

Original submittal



Revised submittal



c. Stormwater management

CWA Response: We defer to the Township Engineer to review changes to stormwater management.

d. Landscape buffer

CWA Response: The applicant added tree protection fencing along the property lines of the southern units of the development. No additional landscaping is proposed in these areas. It appears that there are no other changes to the landscape buffers proposed. These changes do not address the concerns expressed by the Planning Commission regarding additional buffering between this proposed development and the neighboring residential properties. After the Planning Commission meeting, we met with the applicant and offered additional buffering and site layout considerations based on the direction of the Planning Commission. The applicant did not incorporate these considerations.

e. Power grid capacity

CWA Response: The applicant has not provided any site-specific information regarding power grid capacity.

f. Density concerns

CWA Response: The revised site plan reduces the lot size of several of the southeastern units and reduces the number of units from 119 to 118.

AREA PLAN

The Area Plan includes 118 single family residential units on lots that range from 6,000 square feet to 13,327 square feet. The previous area plan submittal included several larger lots in the southeast project area that have been reduced to accommodate the altered road configuration in this area. Twenty-one units are proposed to front Berkshire Drive. Access to the remaining units is provided by the extension of Lakeview Drive, a public road on the

northern parcel. The applicant is proposing a breakaway gate between the existing Lakeview Drive and the new road extension, although the new segment is indicated as a public road.

The area plan includes the following areas in addition to the homes:

- 17.20-acre conservation easement area across the majority of the southern parcel, which is currently wooded.
- 17,555 square foot open space area, a slight increase from the previous submission (17,555 sq ft).
- 32,381 square foot open space area with playscape, a slight increase from the previous submission (32,041 sq ft).
- Sidewalks throughout the development and along North Prospect Road.
- Retention basin on east side of northern parcel.



Please note that most of the southern portion of the site, currently zoned R-4, Single Family residential, has previously been used as an illegal dumping area and is proposed to be maintained in perpetuity as a conservation easement.

PREVIOUS APPROVAL

The northern parcel is zoned PC. The southern subject parcel is zoned R4, and rezoning to PC is required for the entire site, since the parcels are planned to be used as one development. An area plan was previously approved by the Planning Commission for the northern parcel in 2004 to allow for 77 single family homes on lots ranging from 6,820 square feet to 16,672 square feet. The approved area plan was comparable to the impact and layout of the northern portion of the subject property, with access similarly proposed along Berkshire and Lakeview Drives, but with an additional access entry along Berkshire Drive. The approved area plan did not include the southern parcel and so omitted the conservation easement area that is included in the current proposal.

CURRENT ZONING

The subject property is currently surrounded by residentially used and zoned parcels on all sides, including small lot single family, larger lot single family, and attached condo units.

DENSITY / LOT SIZE and HOUSE SIZE

The subject property is currently surrounded by residentially used and zoned parcels on all sides, including small lot single family, larger lot single family, and attached condo units.

As set forth in Article 7: Density Regulations.

Density shall be regulated as follows: 1. Maximum net residential density. The maximum permitted net residential density for a PC Special District shall not exceed the planned residential density for the area included in the PC Special District, as shown on the Township's adopted Growth Management Plan. If the Growth Management Plan does not show a residential density for land included in a PC rezoning petition, the maximum net residential density permitted in the standard zoning district most nearly reflecting the policies in the Growth Management Plan that apply to the area in question shall be used as the density limit, and the residential density and character of the surrounding area.

The maximum permitted density was not included in the Master Plan; however, the most applicable districts based on Master Plan is R-4, Single Family Residential District, and R-7, Multiple-Family Residential District. R-4 permits a density of 4.0 units per acre, and R-7 permits a density of 8.0 units per acre. The proposed net density of 2.4 units per acre is well under what is permitted in the PC District and envisioned in the Master Plan.

With regards to individual lot size, the applicant is proposing a number of 6,000 square-foot, 50-foot-wide lots. While this lot configuration is not specifically addressed in the zoning ordinance, the PC district allows such flexibility. Many prospective buyers—including those seeking to downsize—find smaller lots appealing.

However, a recurring concern with reduced lot sizes is that the corresponding homes are not proportionately small. Developers often propose houses in the 3,000–4,000 square-foot range that maximize allowable building area and height and only provide 5-foot side yard setback. This approach can create issues of scale, compatibility with surrounding development, and overall building massing.

We recommend that the applicant confirm the anticipated house sizes and building heights for the 6,000 square-foot lots. The Planning Commission may wish to consider establishing limits on house size or height for these lots to ensure compatibility and preserve neighborhood character. Additionally, the provided elevations show side facades with vinyl siding and few or no windows.

MASTER PLAN

The Master Plan has designated this area as the Geddes Road Urban Sub-Area, described on pages 51-55 of the Growth Management and Future Land Use section of the Comprehensive Master Plan:

> *"This is the most densely and intensely developed area within the Township, containing about 65% of the Township population. The development and land use patterns in this area is reflected by the fact that this area is served with public utilities. The established public utility boundary south of Geddes Road is long standing policy and planned to continue into the future.*
>
> *This area also has the beginning of a planned employment center with the development of the Hyundai-Kia America Technical Center at the southwest corner of Geddes and LeForge Roads. Scattered throughout this area there are also several community/institutional uses including churches, parks, the library, and municipal facilities. This sub area currently contains a range of zoning designations including several that are unique to this area: Planned Manufactured, Neighborhood Commercial, and Multi-Family Residential.*
>
> *This sub-area provides a wide range of housing types and affordability. There is a mix of well-established and new single-family neighborhoods, multi-family developments, and manufactured neighborhoods. Existing housing ranges in age from many decades old to new construction and varies in size from small apartment units to large homes. This sub-area includes designated affordable, assisted living, and co-op housing all of which help to support the community's more vulnerable residents.*

> *In recent years, stalled or partially completed housing developments in this sub-area, which had previously received preliminary or final approval from the Township, have received updated approvals and construction has once again begun. Additionally, undeveloped land in this sub-area has received interest in new residential development. This sub-area is very important to the Township as it provides a variety of housing types at densities that would not be possible without the availability of a municipal sewer and water system."*

Planned Uses

As stated on Page 53:

> *"East of Prospect Road and south of Geddes Road, the undeveloped land could be used for multiple-family residential developments. Some approved residential projects have multi-year buildout plans. The diverse population in this area will benefit from diverse housing options. This is the most developed area within the Township, but there are still wooded lots, wetlands, and other natural resources which warrant protection. A special effort will be made to ensure preservation of open space and significant natural features in this area as it is developed."*

The Master Plan establishes the specific goal of siting denser housing types, including multiple-family housing, on this subject property. The zoning ordinance is currently undergoing a rewrite to reflect the 2024 Master Plan goals, which would likely result in a rezoning from the undeveloped parcels in the Geddes Road Urban Sub-Area from R4 to R7. We find that this site is an opportunity, particularly along Prospect, to include lower density attached single family residential (townhomes) or lower density multiple family housing.

Page 54 includes a list of uses within the Geddes Road Urban Sub-Area, including "*Attached residential and multiple-family residential along neighborhood edges and adjacent to arterial corridors."*

Design Characteristics

The Master Plan also includes a list of planned "Design Characteristics" for the Geddes Road Urban Sub-Area, including the following relating to new housing:

- *New development shall be reviewed on a case-by-case basis to respect the existing scale and character of the surrounding area.*
- *Each individual neighborhood has a unique character that must be respected and preserved.*
- *Walkability and non-motorized connections are essential to maintain neighborhood character and access to daily needs and services.*

- *Ensure appropriate transition of intensity of uses and scale to adjacent single-family neighborhoods.*
- *Peripheral attached residential and multiple-family residential along neighborhood edges and arterial corridors should be at a scale and density consistent with the surrounding area.*
- *Ensure appropriate transition of intensity of uses and scale to adjacent single-family neighborhoods.*
- *Varied mix of uses is encouraged.*
- *Single and lower multi-story structures oriented toward the street.*

Growth Management

The Master Plan includes 10 growth management policies that encourage land uses that are best suited to the existing conditions and development plan for different portions of the Township, including the following relevant policies:

> **Policy 2:** The type and density of new development should remain consistent with existing types and densities of nearby land uses.
>
> **Policy 6:** Superior Charter Township supports diverse land uses that provide residents convenient access to housing, goods, and services.
>
> **Policy 7:** Superior Charter Township believes that any new development (Residential/Commercial/Industrial) should be focused within designated and planned areas.
>
> **Policy 8:** Superior Charter Township believes that any new development (Residential/Commercial/Industrial) should be done in a sustainable manner.
>
> **Policy 10:** Superior Charter Township's land use goals support regional land use goals.

The vast majority of the existing housing stock in the Geddes Road Urban Sub-Area are detached single family homes on smaller lots, reflective of the proposed Area Plan for the subject property. The Master Plan for this area establishes the goal to site higher-density housing on the subject parcel, particularly given the low availability of undeveloped parcels in the Geddes Road Urban Sub-Area and high demand and need for more attainable housing options.

Housing

Page 39 of the Master Plan includes housing policies, many of which intersect with the growth management goals. All of the housing policies are relevant to this Area Plan, as the development of this project will impact the total housing stock – both existing and future.

> **Policy 1:** Superior Charter Township recognizes that the existing neighborhoods and the existing housing stock are an essential part of the community's character.
>
> **Policy 2:** Superior Charter Township recognizes the need for a diversity in housing stock to support the housing needs of all its residents, including young people, families, and seniors aging in place.
>
> **Policy 3:** Superior Charter Township supports the development of senior housing options.
>
> **Policy 4**: Superior Charter Township supports housing densities where additional population will not overburden the existing or planned infrastructure.
>
> **Policy 5:** Superior Charter Township promotes residential development in a manner which will create, preserve, and enhance a quality living environment for existing and future Township residents and workers.
>
> **Policy 6:** Superior Charter Township recognizes that the voices of all existing and even potential future residents are not always at the table and extra effort may be needed to consider all housing needs, not just existing property owners.
>
> **Policy 7:** Superior Charter Township supports increased housing density in planned areas, where feasible, to promote maximum retention of open space and natural features in other portions of the Township and region.
>
> **Policy 8:** Superior Charter Township supports neighborhood commercial development that provides higher density residential neighborhoods with convenient access to day-to-day businesses and employment.

Open Space and Land Preservation

The Master Plan further includes the following relevant policies related to Open Space and Land Preservation, detailed on page 38 of the Master Plan:

> **Policy 1:** Natural features, land preservation, and open space are key components of Superior Charter Township's community character and quality of life.
>
> **Policy 2:** Superior Charter Township actively strives to protect, preserve, and acquire additional open space and natural features.

Most of this site is currently woodland, but with no preservation protection. The Area Plan establishes a conservation easement on roughly one-third of the site.

Master Plan Summary Findings

We find that the proposed Area Plan petition to rezone the property from R4 and PC to PC, Planned Community for single family residential development is partially compatible with many of the elements of the Master Plan for the following reasons:

1. The Master Plan envisions that the dense portion of development in the Township should occur in the Geddes Road Urban Sub-Area, in part to protect the rural nature of the Township as well as to concentrate development in areas where municipal sewer and water is accessible.
2. Providing additional housing units adjacent to areas containing housing is a Master Plan policy goal.
3. The proposed Area Plan includes conservation of the woodlands on the southern portion of the subject property, reflecting the open space and land preservation policies in the Township, particularly when located in proximity to many residents.

However, the proposed Area Plan petition appears to be incompatible with other elements of the Master Plan for the following reasons.

1. New housing development should be consistent with the type and density of nearby uses. The subject property is surrounded by attached housing units to the south and east and detached single family units to the north and west.
2. Master Plan goals and policies aim to provide a diversity of housing styles, and the majority of existing and planning-approved housing units in the Township are detached single family homes, comparable in density and lot size to the proposed development.
3. The Geddes Road Urban Sub Area future land use policies create the goal for this specific property to include multiple-family residences. We find that this site is an opportunity, particularly along Prospect, to include lower density attached single family residential (townhomes) or lower density multiple family housing that provide varied housing options that are not currently provided, or planned for, in Superior Township.

DISTRICT INTENT

Special Districts

As set forth in Section 7.001, the Authority to Establish Special Districts as defined in Article 2.0 (Zoning Districts), is established in accordance with Section 503 of the Michigan Zoning Enabling Act. These Special Districts are designed to accomplish the objectives of this Ordinance through a development review process intended to achieve integration of the proposed development project with the characteristics of the project area. These Special Districts are intended to permit flexibility in the regulation of land development; encourage innovation in land use and variety in design, layout, and type of structures constructed; achieve economy and efficiency in the development and use of land, natural resources, energy, and the provision of public services and facilities; encourage useful open space; and provide better housing, employment, and shopping opportunities particularly suited to the needs of the residents of the Township. The intent of these special districts is to:

- Provide for increased flexibility and encourage innovation in design and layout of land development, subject to proper administrative standards and procedures.
- Lessen the burden of traffic on streets and highways, and provide for an integrated system of sidewalks, pedestrian pathways, and other non-transportation facilities.
- Provide for a compatible mix of land uses in each Special District.
- Establish planning, review, and approval procedures that properly relate the type, design, and layout of development to the site and surrounding area.
- Encourage innovation in residential and nonresidential development so that greater opportunities for better housing, recreation, and shops conveniently located to each other may extend to all citizens and residents of Superior Township; and so that the growing demands of the Township's population may be met by a greater variety in type, design, and layout of buildings and by the conservation and more efficient use of open space ancillary to these buildings.

Planned Community District

The Township Zoning Ordinance has multiple "special districts", one of which is the PC, Planned Community District. The intent of the PC, Planned Community District is as follows:

The Planned Community (PC) Special District option encourages greater collaboration between the developer and the Township in the development process, and allows additional freedom for the developer to take an even more creative approach to land use and development than otherwise permitted under this Ordinance. The PC Special District option offers greater flexibility in the design of land development, maximizing the developer's ability to take advantage of natural topography, vegetation, watercourses, and other site features in designing the development.

PLANNED COMMUNITY DISTRICT REQUIREMENTS

As set forth in Section 7.301. A, to be eligible for approval as a Planned Community (PC) Special District, the petitioner shall demonstrate, to the Township Board's satisfaction after recommendation from the Planning Commission, that the petition and Area Plan are compatible with the following:

1. **Compatibility with the Special District intent.** The proposed development shall be consistent with the intent and scope of this Article and the intent and purposes of the specific Special District.

   CWA Finding:..The PC, Planned Community District is intended to allow for greater collaboration to allow for a creative approach to land use and development. Through the PC, Planned Community District, the township and the applicant are able to collaborate to better protect the site's natural features and reduce impact upon adjacent properties than could be accomplished through a by-right site plan or through a conventional subdivision development.

2. **Compatibility with the Growth Management Plan.** The proposed development shall be compatible with the adopted Growth Management Plan.

   CWA Finding:..We find that the proposed Area Plan petition to rezone the property from PC, Planned Community (single-family residential) to PC, Planned Community is compatible with many elements of the Master Plan and the Growth Management Plan. However, we note that the master plan establishes a goal of more dense housing development in this area. Attached single family, reflective of the surrounding parcels to the south and east, or multiple-family housing is more aligned with the Master Plan goals for this particular area. The conservation easement offered by this Area Plan is supportive of Master Plan growth management goals.

3. **Availability and capacity of public services.** The proposed type and intensity of use shall not exceed the existing or planned capacity of existing public services and facilities, including police and fire protection, traffic capacity of the Township's public roads, drainage and stormwater management facilities, availability of water, and suitability for septic or capacity of existing or planned utility facilities.

   CWA Finding:.Capacity availability unknown at this time, particularly with regards to utilities; however, this property is within the Urban Services Area with utility access available.

4. **Sufficient land area for proposed uses.** The proposed Planned Community (PC) site shall include sufficient contiguous land area to comply with all applicable regulations of this Ordinance, to adequately serve the needs of all permitted uses in the PC project, and to ensure compatibility between uses and the surrounding area. Additional non-contiguous land areas within the Township may be included as part of the proposed open space dedications for a PC project.

   CWA Finding:...The site area is 48.31 net acres, and the applicant has agreed to preserve 17.20 wooded acres as a conservation easement. The planned density is 2.4 acres/lot with minimum lot sizes of 6,000 square feet. The minimum lot size in the R4 zoning district is 7,200 square feet. The lot size, however, varies considerably. Information on the median and average lot size might reveal if the Area Plan offers smaller lots than otherwise permitted in the R4 zoning district in a manner to preserve additional open space and to create more affordable housing styles.

5. **Additional eligibility criteria.** The petition and Area Plan shall be compatible with one (1) or more of the following additional criteria:
   a. Conservation of open space. Long-term conservation of open space, agricultural lands, or lands with significant natural features in the Township will be achieved in accordance with the adopted Growth Management Plan.
   b. Preservation of natural resources. Long-term conservation of natural resources will be achieved, where such resources of the Township would otherwise be destroyed or degraded by development as permitted by the underlying zoning district(s).
   c. Public benefit. A recognizable and material benefit will be realized by both the future users of the development and the Township as a whole, where such benefit would otherwise be unachievable under the provisions of this Ordinance.
   d. Economic impact. The proposed development shall not impede the continued use or development of surrounding properties for uses that are permitted in the Zoning Ordinance or planned in the adopted Growth Management Plan.

   CWA Finding:.The proposed Area Plan both conserves open space and preserves natural resources. Because the applicant is proposing an Area Plan, these areas are able to be conserved and protected in perpetuity, which may not be accomplished through a conventional subdivision development or as shown on the approved Area Plan for the northern subject parcel. However, again we note that based on the growth management and housing policies of the Master Plan, the detached single family style is less dense than the housing stock envisioned in the Master Plan for this area.

STANDARDS

As set forth in Section 7.102.C, when reviewing an Area Plan petition, the Planning Commission shall determine and provide evidence in its report to the Township Board that the petition meets the following standards:

1. **Growth Management Plan policies.** The proposed development shall conform to the adopted Growth Management Plan.

   CWA Finding:..The proposed Area Plan is partially incompatible with the adopted Growth Management Plan and other provisions of the Township Master Plan. See Master Plan Findings for more details.

2. **Ordinance standards.** The proposed development shall conform to the intent, regulations, and standards of the proposed Special District and this Ordinance.

   CWA Finding: The proposed Area Plan is compatible with the ordinance standards. The PC, Planned Community District is intended to allow for greater collaboration to allow for a creative approach to land use and development. Through the PC, Planned Community District the township and the applicant are able to collaborate to better protect the site's natural features and reduce impact upon adjacent properties than could be accomplished through a by-right site plan or through a conventional subdivision development or as shown on the approved Area Plan for the site.

3. **Public facilities.** The proposed development shall be adequately served by public facilities and services, such as highways, streets, police and fire protection, drainage courses, water and sanitary sewer facilities, and refuse disposal, or that the persons or agencies responsible for the proposed development shall be able to provide, in a manner acceptable to the Township Board, such facilities and services.

   CWA Finding:.Capacity availability unknown at this time, particularly with regards to utilities; however, this property is within the Urban Services Area with utility access available.

4. **Open space and recreation areas.** The common open space, any other common properties, individual properties, and all other elements of a Special District are so planned that they will achieve a unified open space and recreation area system, with open space and all other elements in appropriate locations, suitably related to each other, the site, and the surrounding land.

   CWA Finding:.The site includes two open space areas including a playscape. There are also nonmotorized pathways around the property and along North Prospect Road.

The Planning Commission can discuss which features within the open space areas are necessary to ensure an adequate recreation area system, such as ADA compliant playground features or inclusive design.

5. **Common areas and improvements.** The petitioner shall have made satisfactory provision to ensure that those areas shown on the plan for use by the public or by occupants of the development will be or have been irrevocably committed for that purpose. Provisions shall have been made to provide for the financing and maintenance of improvements shown on the plan for open space areas, and common use areas which are to be included within the development.

   CWA Finding:.The site is controlled by one entity. If approved, the proposed Area Plan will dictate the development of the site.

6. **Location and layout.** The location of the proposed uses, layout of the site, and its relation to streets giving access to it, shall be such that traffic to, from, and within the site, and assembly of persons in connection therewith, will not be hazardous or inconvenient to the project or the neighborhood. In applying this standard, the Planning Commission shall consider, among other things, convenient routes for pedestrian traffic, particularly of children, relationship of the proposed project to main thoroughfares and street intersections, and the general character and intensity of the existing and potential development of the neighborhood.

   CWA Finding:. The proposed Area Plan shows two points of access to the site: Berkshire Drive and Lakeview Drive, both public roads. Onsite circulation appears sufficient for vehicular traffic, but traffic impacts will be reviewed by the Washtenaw County Road Commission. Sidewalks are proposed along all street frontages, including North Prospect Road, and additional pathways are shown through the two open space areas.

7. **Compatibility of land uses.** The proposed use(s), mix of housing unit types and densities, or mix of residential and non-residential uses shall satisfy the intent of the proposed Special District, conform to applicable use standards and limitations, and be acceptable in terms of convenience, privacy, compatibility, and similar standards.

   CWA Finding:..As part of the deliberation, the Planning Commission should discuss if the proposed housing style is reflective of the intent of the Master Plan and Planned Community.

8. **Minimize adverse impacts.** That noise, odor, light, or other external effects from any source whatsoever, which is connected with the proposed use, will not adversely affect adjacent and neighboring lands and uses.

   CWA Finding:.Through the Area Plan and site plan review, the Township can review and place reasonable conditions upon the application to minimize adverse impacts.

9. **Preservation of natural features.** The proposed development shall create a minimum disturbance to natural features and landforms.

   CWA Finding:.The site area is 48.31 net acres, and the applicant has agreed to preserve 17.20 wooded acres as a conservation easement. The planned density is 2.4 acres/lot with minimum lot sizes of 6,000 square feet. The minimum lot size in the R4 zoning district is 7,200 square feet. The lot size, however, varies considerably. Information on the median and average lot size might reveal if the Area Plan offers smaller lots than otherwise permitted in the R4 zoning district in a manner to preserve additional open space and to create more affordable housing styles.

10. **Streets.** Streets shall follow topography, be properly spaced, and be located and aligned in accordance with the intended function of each street. The property shall have adequate access to public streets. The plans shall provide for logical extensions of public streets and shall provide suitable street connections to adjacent parcels, where applicable.

    CWA Finding: Access to the 21 homes is provided from Berkshire Drive, which the homes will front. Access to the remainder of the development (97 units) is proposed from one public road entrances from Prospect Road. One public access road serving 97 units may create a choke point. In our meeting after the last Planning Commission meeting, we had suggested that the applicant consider reconfigure the site layout and flip the proposed homes along Berkshire Drive such that the rear yards face Berkshire Drive. To accommodate this change, we recommend providing another access drive within the development, south of lots 1 through 21. Traffic impacts will be reviewed by the Washtenaw County Road Commission.

    The proposed breakaway gate between the existing and proposed portions of Lakeview Drive, all public roads, appears to pose more challenges. This breakaway gate would prohibit Lakeview Condo residents from using the new public road extension to access their property from North Prospect Road, requiring those residents to continue using Berkshire Drive. The breakaway gate appears to exacerbate the increased traffic issues that this new development poses to existing residents to the north and east. Removing the breakaway gate and continuing the

designation of the Lakeview Drive extension as a public road may offer a community benefit to the Lakeview Condo residents in terms of improved vehicle access for the residents to the east while alleviating the anticipated traffic increase along Berkshire Drive as a result of the 21 new lots.

11. **Pedestrian facilities.** Major pedestrian circulation shall be provided for within the site and shall interconnect all use areas, where applicable. The pedestrian system shall provide for logical extensions of pedestrian ways outside the site, and pedestrian connections to the site boundaries, where applicable.

    CWA Finding:.The Area Plan proposes sidewalks along all street frontages, including North Prospect Road, and additional pathways are shown through the two open space areas. There is, however, no direct connection provided to the open space areas for units 1 through 21. A sidewalk along the existing portion of Lakeview Drive could offer more direct access to the two open space areas for the residents of units 1 through 21, while also providing a scenic pathway along the planned retention basin.

SUMMARY OF ALL FINDINGS

Our review finds that while certain elements of the proposed Area Plan are consistent with the Township's Master Plan and Growth Management Strategy, other aspects are not. The applicant proposes a development that includes housing and conserves natural features; however, the Area Plan does not incorporate a mix of housing densities or provide higher-density housing options as envisioned in the Master Plan.

The intent of the PC, Planned Community district is to permit flexibility in land development regulations, encourage innovation in land use, and promote variety in design, layout, and building types. In contrast, the proposed layout appears relatively conventional and lacks the creativity and diversity anticipated under the PC district.

Outstanding Questions for Planning Commission Deliberation

1. Does the Planning Commission support the proposed housing product type and density? What additional housing styles or alternative uses could be incorporated to better meet Master Plan objectives?
2. Does the proposed site layout offer strong road connections that support the Master Plan objectives?
3. Does removing the breakaway gate between the existing portion of the public Lakeview Drive and the proposed new portion of public Lakeview Drive offer a community benefit in terms of improved accessibility for surrounding residents?
4. Should additional site layout considerations be considered?
    1. Access from Berkshire

2. Reconfiguration of lots on Berkshire
3. Additional landscape buffering

5. Has the applicant completed a utility capacity assessment?
6. Are additional pedestrian amenities warranted—for example, should sidewalks be provided on both sides of the internal roads?

RECOMMENDATION

We recommend that the Planning Commission discuss the noted questions in our report with the applicant, consider public testimony, and either:

A. Postpone action to allow the applicant to provide additional information; or
B. Direct staff to draft a resolution based on the discussion.

Sincerely,

CARLISLE/WORTMAN ASSOC., INC.
Benjamin R. Carlisle, AICP, LEED AP

CARLISLE/WORTMAN ASSOC., INC.
Michelle Marin, AICP

cc: Emily Dabish Yahkind, Township Supervisor
Angela Robinson, Township Clerk
Bill Balmes, Building Official
George Tsakof, Township Engineer
Cresson Slotten, Township Engineer

December 10, 2025

CHARTER TOWNSHIP OF SUPERIOR
3040 N. Prospect Road
Ypsilanti, MI 48198

Attention: **Emily Dabish Yahkind, Township Supervisor**

Regarding: **Prospect Pointe South**
Area Plan for PC Rezoning – Review No. 2
OHM Job No. 0140-25-1030

Dear Ms. Dabish Yahkind,

On behalf of the Township, we have reviewed the revised Area Plan submittal for the above referenced project, as provided to the Township by the Applicant on November 4, 2025, but then updated in a plan submittal to the Washtenaw County Water Resources Commissioner's Office (WCWRC) on November 20, 2025 with plans dated November 20, 2025. We understand that the application will be considered by the Planning Commission at their regular meeting on December 17th regarding Area Plan and PC District rezoning. Therefore, we offer the following comments to the Planning Commission related to the site/civil engineering aspects of the area plan for their consideration during the decision process.

1. The site will be serviced by connecting to the existing Superior Township public sanitary sewers in the North Prospect Road right-of-way (ROW), the Berkshire Drive ROW and an existing Superior Township public cross lot sanitary sewer main on the adjacent Lake View Estates Condominium site. The proposed sanitary layout and connections to the Superior Township system appear to be viable at the conceptual level, however a more detailed technical review of the facilities will take place during potential future site plan stages. A basis-of-design, along with future review and approval by the Ypsilanti Community Utilities Authority (YCUA) and permit by the Michigan Department of Environment, Great Lakes, and Energy (EGLE) under Part 41 will be required for sanitary main construction.

2. The site will be serviced by connecting to the existing Superior Township public water mains in the North Prospect Road Right-of-way (ROW), Lakeview Drive and Park Lane in the Prospect Woods Condominiums. The proposed water main layout and connections to the Superior Township water system appear to be viable at the conceptual level, however a more detailed technical review of the facilities will take place during potential future site plan stages. A basis-of-design, along with future review and approval by YCUA and permitting by EGLE under PA 399 will be required for water main construction.

3. The OHM Transportation Group has reviewed this plan and the Prospect Pointe South Traffic Impact Study (TIS) prepared by Fishbeck dated November 20, 2025. The comments from their review are provided in the attached memo. In addition to these comments regarding the TIS itself, it is noted that improvements are being recommended which would be coordinated through the Washtenaw County Road Commission (WCRC).

4. Future, later stage plan submittals should include the size of the existing water main and sanitary sewers adjacent to the site and being utilized for connections to the Superior Township utility system.

5. Please note that a more detailed technical review of the site engineering will take place during a potential future preliminary/final site plan stage. Grading details would be reviewed at future stages of the project if a site plan were to move forward.

6. The stormwater management design on the site plan will be required to meet Washtenaw County Water Resources Commissioner (WCWRC) Standards. It is noted that a Retention Basin is indicated on this Area Plan which has specific requirements by the WCWRC and may require approval of the Washtenaw County Road Commission (WCRC) as the basin's emergency overflow may impact Lakeview Drive which is a WCRC road.

   The WCWRC reviewed plans for this proposal dated October 28, 2025 (plans revised after the August 27, 2025 public hearing on this application) and provided a review letter dated November 12, 2025. Their review letter contained several comments, most of which are items that would need to be addressed prior to future stages of the project if a site plan were to move forward. But two comments deal with the viability of the proposed Retention Basin:

   - Based on the geotechnical report prepared by McDowell & Associates, it appears that the long-term groundwater level in the vicinity of the retention basin is above the proposed bottom of basin elevation. The volume below the long-term groundwater level will not be available for storage.
   - Based on the proposed invert elevations of ES-1 and ES-3, the invert elevation at the respective upstream manholes, and the top of forebay elevation, it appears likely that water entering the forebays will back up in the storm pipes before entering the basin. This is not acceptable under the rules of this office.

   The revised plans dated November 20, 2025 appear to have been revised (in part) to respond to these two comments.

   - The bottom elevation of the Retention Basin has been raised from 776 shown on earlier plans to 779.
   - The open area forebays shown on earlier plans have been removed and proposed sediment separator structures are shown before the storm sewers inletting to the Retention Basin.

   As noted earlier, the plans OHM reviewed were submitted to WCWRC on November 20, 2025, and are currently under review by their office.

7. Soil erosion and sedimentation control (SESC) measures shall be included on the site plan and need to meet the requirements of WCWRC. Review and approval will be required from WCWRC in the future prior to a final site plan approval.

8. Work proposed in the North Prospect Road, Berkshire Drive and Lakeview Drive ROWs should meet the requirements of the WCRC. Future review and approval from WCRC will be required during the site plan stage as they have jurisdiction over these public ROWs.

If you have any questions regarding our review, please do not hesitate to contact me at (734) 466-4585, or George Tsakoff at (734) 466-4439.

Sincerely,
OHM Advisors

Cresson Slotten, P.E.

Digitally signed by Cresson Slotten, P.E.
DN: CN=C
cresson.slotten@ohm-advisors.com,
OU=OHM Advisors, CN="Cresson
Slotten, P.E."
Date: 2025.12.10 13:14:46-05'00'

Cresson Slotten, PE
Senior Project Manager

cc: Angela Robinson, Township Clerk
Bill Balmes, Building Department
Ben Carlisle, CWA, Township Planner
Michelle Marin, CWA, Township Planner
George Tsakoff, OHM Advisors
Claire Martin, OHM Advisors
Mariah Cummings, OHM Advisors
Gary Streight, WCRC
Brad Botham, M/I Homes
Jason Rickard, SKE Group

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memorandum

Date: December 9, 2025

To: Cresson Slotten, PE

From: Stephan Maxe, PE, PTOE & Emma Ritchie

Re: Prospect Pointe South
Traffic Impact Study Review

We have reviewed the traffic impact study for the proposed Prospect Pointe South development in Superior Township, a residential neighborhood development consisting of 118 single-family detached dwelling units. The development is located in the southeast quadrant of Prospect Road and Berkshire Drive in Superior Township. The traffic impact study was prepared by Fishbeck and is dated November 20th, 2025.

At this time, OHM does not object to the findings of the traffic impact study but would note a few minor items that are not likely to make a significant impact to the study's validity.

OHM's comments are as follows:

1. Traffic Impact Study:

    a. Include the mentioned WCRC scope of the TIS in the report appendix.

    b. The TIS indicates that there is an emergency access gate separating the newly constructed portion of Lakeview Drive from the existing Lakeview Drive to the east. This does not appear to be present in the latest version of the Site Plan dated 11-20-25. If the gate is not present there will be minor changes in the trip distribution as some traffic from the existing neighborhood may access Prospect Road to or from the new Lakeview Drive intersection.

    c. Table 4 shows the existing 2025 conditions, but these conditions are not acceptable with many LOS E and F at the Prospect Road and Geddes Road intersection. Please correct verbiage to indicate these unacceptable LOS.

    d. Section 2.3 indicates that data from January 1, 2022, to December 31, 2025, was utilized, but tables show that 2025 was not used. Please update accordingly.

    e. Please include which edition of the ITE Trip Generation Manual was utilized for background and future trip generations.

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GRETCHEN DRISKELL

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Harry Sheehan
Chief Deputy Water Resources Commissioner

Scott Miller P.E.
Deputy Water Resources Commissioner

Theo Eggermont
Public Works Director

December 10, 2025

Jason Rickard, P.E.
SKE Group
39205 Country Club Drive, Suite C8
Farmington Hills, Michigan 48331

RE: Prospect Pointe South
Superior Township, Michigan
WCWRC Project No. 12780

Dear Mr. Rickard:

This office has reviewed the site plans for the above-referenced project to be located in Superior Township. These plans have a job number of 25-002, a date of November 20, 2025, and were received on November 20, 2025. As a result of our review, we would like to offer the following comments:

1. Your response letter, included with the submittal and dated November 20, 2025, indicated that comments 1, 2, 6, 17, 19, and 22 from our review letter dated November 12, 2025 will be addressed in the final site plan submittal. With the exception of comment 2, related to the engineer's certificate of outlet, that is acceptable.
2. The engineer's certificate of outlet, accompanied by corresponding calculations and documentation, should be submitted to our office for review. **Repeat Comment.**
    a. Plan approval at all levels of WCWRC review require a certificate of outlet.
    b. The retention basin overflow receiving channel appears to be a structure within Lakeview Drive. It is unclear where the stormwater pipe network goes from that structure along Lakeview Court. The certificate of outlet must include detailed route and course information along with pipe capacity information for this receiving channel.
3. The response to comments 4 and 10 in our previous review letter indicated that the sediment forebays would be eliminated and replaced with mechanical pre-treatment devices. This is not acceptable for the proposed development.
4. Drainage easements must extend across private road rights-of-way (ROW) where the storm sewer is adjacent to or within the ROW.
5. The minimum velocity of 3 feet per second was not met within some of the storm water pipes. **Repeat Comment.**

a. The maximum velocity of 10 feet per second was exceeded in the pipe run between structure 54 to ES3.

6. Please see the attached invoice for the current fees and remit these fees upon receipt. As requested, the invoice is being submitted directly to M/I Homes of Michigan, LLC.

At your convenience, please send us a complete set of revised plans and the additional information requested above so that we may continue our review. If you have any questions, please contact our office.

Sincerely,

Theresa M. Marsik, P.E.
Stormwater Engineer
(drainage district\Prospect Pointe South rev2)

cc: Brad Botham, M/I Homes of Michigan, LLC
Brandon Guest, M/I Homes of Michigan, LLC
Emily Dabish Yahkind, Superior Township Supervisor
Angela Robinson, Superior Township Clerk
Michelle Marin, Superior Township Planning & Zoning Administrator
George Tsakoff, P.E., Superior Township Engineer (OHM)
Cresson Slotten, P.E., Superior Township Engineer (OHM)

M/I HOMES

Welcome to Better

October 11, 2025

Ben Carlisle
Township Planner
117 North First Street, Suite 70
Ann Arbor, MI 48104

RE: Prospect Pointe South – Planned Community Area Plan Resubmittal

Good afternoon, Ben:

M/I Homes is pleased to present for review and commentary the revised Prospect Pointe South project. The attached plan set is reflective of the following, taking into consideration feedback of the neighboring HOAs:

- Unit count has been reduced from 119 to 118, and some units in the southeast corner of our site have been pulled into our property to reduce impact to neighboring homes.
- The road connection onto Park Lane has been removed, per the Prospect Park HOA's request.
- A breakaway gate is shown at the intersection of our proposed private Lakeview Drive and the existing, public Lakeview Drive, per the Lakeview Estates HOA's request.

As mentioned in my previous cover letter, 5 different floorplans, each with multiple façade choices, will be offered. Homes will be in the 1,950-2,600 sq. ft. range, and will allow prospective residents new home affordability, with starting prices in the high $300,000s-low $400,000s, inclusive of brick masonry on at least 50% of the front and side elevations.

Per the Township's Master Plan objectives of the Geddes Road Urban Sub-Area, the site will include a 17-acre conservation area that prioritizes environmental sustainability and protection, preserving over 35% of the overall net site area in its natural state. Additionally, we have incorporated multiple recreational open spaces, including a park with a modern playscape, and a pond overlook area, designed to foster community interaction and provide recreational opportunities for residents of all ages.

We initially presented our project to the Township Planning Commission on August 27th, 2025, and were directed to take into consideration the following items in bold, with M/I's responses noted in plain font:

a. **Traffic Study, including coordination with the Washtenaw County Road Commission**; A traffic study is underway and will be provided to the planning staff upon completion.

b. **Road Connections, including private roads**; We've removed a connection to Park Lane and we show a breakaway gate from our proposed private Lakeview Drive, onto the public Lakeview Drive (as requested by the Lakeview HOA and the Prospect Park HOA).

c. **Stormwater Management**; A 100-year storm event refers to a rainfall event that has a 1% chance of occurring in any given year, and our retention basin is designed to store our community's stormwater for 2 back-to-back 100-year storm events. This design will improve stormwater runoff in the general vicinity, not worsen it, a concern that some of the Lakeview residents expressed at the August 27th meeting.

d. **Landscape Buffer;** Our plans show retention basin tree plantings around the entire pond to help with screening to the east. Additionally, our revised plans show more preserved trees to the south of lots 113 and 114 to help buffer to Prospect Park, south of our site. We also created a larger natural buffer between our site and Prospect Park through the elimination of the road connection to Park Lane.

e. **Power Grid Capacity**; DTE/ITC is currently investing $40m towards improving the power grid in Superior Township/Ann Arbor. Jasmin Conway, the ITC project engineer for these improvements, linked me to the two following articles detailing the improvements, specifically the fact that this project will create "a significant improvement in electric reliability, especially during extreme weather: this means that customers can expect a 90% reduction in the time their power is interrupted. The added capacity will allow us to deliver reliable power to even more customers in the area. It will also help us support Superior Township's growing energy needs."

https://empoweringmichigan.com/reliability-boost-coming-superior-township-northeast-ann-arbor/

https://empoweringmichigan.com/increasing-electric-reliability-for-superior-township-northeast-ann-arbor/#

f. **Density Concerns**; The zoning on the subject property is PC and R-4. The PC zoned portion (north parcel) currently has an area plan approved for 77 units on 22.5 net acres (3.42 units/net acre). The R-4 component (south parcel) allows for 4 units/acre in Superior Township's zoning ordinance. Our revised plan shows 118 units on 48.31 net acres, or 2.44 units/net acre.

While Superior Township's Master Plan Growth Management policies establish a goal for higher density on our two subject parcels, neighbors had expressed concerns regarding density at the August 27th Planning Commission meeting, so we thought it was important to note that we are significantly less dense than what is currently approved under the PC zoned parcel and what's permitted under the R-4 zoned parcel.

We look forward to presenting our project, and we respectfully request to be placed on the next available Township Planning Commission meeting agenda.

Brad Botham
M/I Homes of Michigan LLC
40950 Woodward Avenue, Suite 203
Bloomfield Hills, MI 48304
P: (248) 990-6514
E: bbotham@mihomes.com

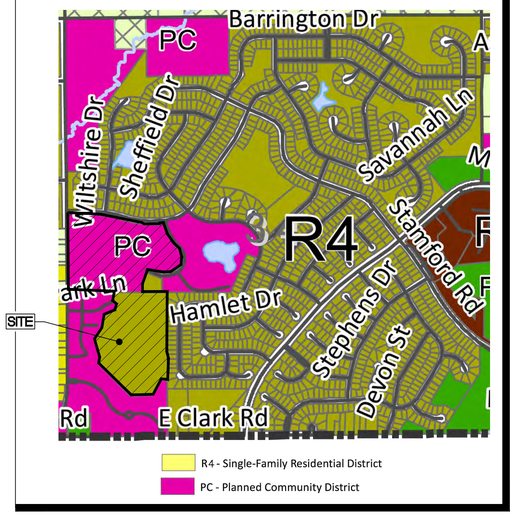
SITE PLAN FOR
PROSPECT POINTE SOUTH

PART OF WEST 1/2 OF SECTION 34, TOWN 2S, RANGE 7E,
SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

PREPARED FOR:

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

ZONING MAP



LEGAL DESCRIPTION

SCHEDULE A EXHIBIT "A" PROPERTY DESCRIPTION (PER ALTA COMMITMENT FOR TITLE INSURANCE, ISSUED BY ATA NATIONAL TITLE GROUP, LLC,
FILE NUMBER 81-24938507-SCM, COMMITMENT DATE: DECEMBER 10, 2024:

THE LAND IS DESCRIBED AS FOLLOWS: SITUATED IN THE TOWNSHIP OF SUPERIOR, COUNTY OF WASHTENAW, STATE OF MICHIGAN

PARCEL 1
PART OF THE WEST 1/2 OF SECTION 34, TOWN 2 SOUTH, RANGE 7 EAST, TOWNSHIP OF SUPERIOR, WASHTENAW COUNTY, MICHIGAN, DESCRIBED AS FOLLOWS: BEGINNING AT THE WEST 1/4 CORNER OF SAID SECTION 34; THENCE SOUTH 01 DEGREES 53 MINUTES 15 SECONDS EAST 809.69 FEET; THENCE NORTH 87 DEGREES 59 MINUTES 50 SECONDS EAST 945.00 FEET; THENCE NORTH 02 DEGREES WEST 90.00 FEET; THENCE NORTH 19 DEGREES 02 MINUTES 36 SECONDS EAST 169.25 FEET; THENCE SOUTH 71 DEGREES 39 MINUTES 25 SECONDS EAST 166.00 FEET; THENCE 40.21 FEET ON THE ARC OF CURVE HAVING A RADIUS OF 288.00 FEET AND A CHORD BEARING SOUTH 75 DEGREES 50 MINUTES 11 SECONDS EAST 40.18 FEET; THENCE NORTHERLY ON THE WEST LINE OF LAKEVIEW EAST DRIVE TO THE SOUTH LINE OF BERKSHIRE DRIVE; THENCE WESTERLY ON SAID SOUTH LINE TO THE WEST LINE OF SECTION 34; THENCE SOUTH 02 DEGREES 25 MINUTES 10 SECONDS EAST 183.31 FEET TO THE POINT OF BEGINNING.

PARCEL 2
COMMENCING AT THE SOUTHWEST CORNER OF SECTION 34, TOWN 2 SOUTH, RANGE 7 EAST, TOWNSHIP OF SUPERIOR, WASHTENAW COUNTY, MICHIGAN; THENCE NORTH 01 DEGREES 53 MINUTES 15 SECONDS WEST 993.00 FEET; THENCE NORTH 88 DEGREES 06 MINUTES 45 SECONDS EAST 291.00 FEET; THENCE SOUTH 60 DEGREES 28 MINUTES 40 SECONDS EAST 132.27 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00 DEGREES 03 MINUTES 25 SECONDS WEST 68.97 FEET; THENCE NORTH 14 DEGREES 47 MINUTES 28 SECONDS WEST 244.57 FEET; THENCE NORTH 27 DEGREES 28 MINUTES 02 SECONDS EAST 174.16 FEET; THENCE NORTH 10 DEGREES 48 MINUTES 39 SECONDS EAST 158.69 FEET; THENCE NORTH 60 DEGREES 31 MINUTES 29 SECONDS EAST 116.27 FEET; THENCE NORTH 76 DEGREES 30 MINUTES 08 SECONDS EAST 40.00 FEET; THENCE NORTH 00 DEGREES 23 MINUTES 53 SECONDS WEST 83.71 FEET; THENCE NORTH 58 DEGREES 48 MINUTES 28 SECONDS WEST 50.00 FEET; THENCE NORTH 02 DEGREES 00 MINUTES 10 SECONDS WEST 123.28 FEET; THENCE NORTH 87 DEGREES 59 MINUTES 50 SECONDS EAST 704.00 FEET; THENCE SOUTH 01 DEGREES 53 MINUTES 15 SECONDS EAST 1111.04 FEET; THENCE SOUTH 88 DEGREES 05 MINUTES 58 SECONDS WEST 83.93 FEET; THENCE SOUTH 26 DEGREES 38 MINUTES 37 SECONDS WEST 222.79 FEET; THENCE SOUTH 86 DEGREES 07 MINUTES 55 SECONDS WEST 271.42 FEET; THENCE NORTH 46 DEGREES 57 MINUTES 41 SECONDS WEST 579.25 FEET TO THE POINT OF BEGINNING.

BENCHMARKS

SITE BENCHMARKS:
BENCHMARK #1
RAILROAD SPIKE IN NORTH FACE OF GUY POLE ON SOUTH SIDE OF BERKSHIRE DRIVE ACROSS FROM HOUSE #8315.
ELEV.=794.27 (NAVD88)

BENCHMARK #2
ARROW ON HYDRANT #73 SOUTH SIDE OF BERKSHIRE DRIVE AND 75' EAST OF PROSPECT ROAD.
ELEV.=800.97 (NAVD88)

BENCHMARK #3
RAILROAD SPIKE IN SOUTH FACE OF UTILITY POLE AT THE SOUTHEAST CORNER OF PROSPECT ROAD AND PARK LANE.
ELEV.=794.11 (NAVD88)

BENCHMARK #4
ARROW ON HYDRANT #462 100' EAST OF THE END OF PARK LANE.
ELEV.=792.46 (NAVD88)

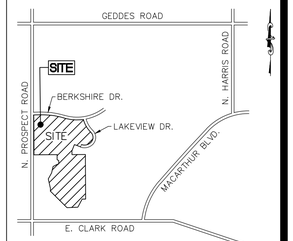
BENCHMARK #5
ARROW ON HYDRANT AT COMMUNITY CENTER W/POOL #8300 LAKEVIEW DRIVE.
ELEV.=788.94 (NAVD88)



N

GRAPHIC SCALE
200 0 100 200 400
(IN FEET)
1" = 200'

LOCATION MAP



LOCATION MAP
NOT TO SCALE

SHEET INDEX

C1	COVER SHEET
C2-C7	ALTA/NSPS LAND TITLE SURVEY AND BOUNDARY/TOPOGRAPHIC SURVEY
C8	OVERALL SITE PLAN
C9	SITE PLAN - NORTH
C10	SITE PLAN - SOUTH
C11	GRADING PLAN - NORTH
C12	GRADING PLAN - SOUTH
C13	STORM WATER MANAGEMENT PLAN
C14	EMERGENCY VEHICLE ROUTE
C15	NOTES AND DETAILS

LANDSCAPE:

L1-L3	LANDSCAPE PLAN
L4	GREENBELT PLAN
L5	LANDSCAPE DETAILS
L6-L8	WOODLAND PLAN
L9-L12	TREE LIST

ARCHITECTURE:

1.0E-1.1H	AUBREY BRICK SERIES
1.0E-1.1H	BROOKLYN SERIES
1.0E-1.1H	JULIET BRICK SERIES
1.0E-1.1H	PEYTON SERIES
1.0E-1.1H	SAWYER SERIES

PHOTOMETRIC:

1	PHOTOMETRIC PLANS

STANDARD NOTES

1. ALL CONSTRUCTION MUST CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS ADOPTED BY THE TOWNSHIP OF SUPERIOR.
2. CALL MISS DIG (800-482-7171) A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
3. ALL SOIL EROSION AND SILTATION MUST BE CONTROLLED AND CONTAINED ON SITE.
4. ALL EXCAVATION UNDER OR WITHIN THE INFLUENCE OF ANY PAVEMENT, EXISTING OR PROPOSED, OR WHERE SAND BACKFILL IS CALLED FOR ON THE PLAN, SHALL BE BACK FILLED AND COMPACTED WITH GRANULAR MATERIAL (SAND) MDOT CLASS II TO 95 PERCENT MAXIMUM UNIT DENSITY. MAXIMUM LIFT THICKNESS FOR GRANULAR FILL SHALL NOT BE IN EXCESS OF 12 INCHES.
5. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES AND FACILITIES. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT THE PROPOSED UTILITIES CROSSINGS PRIOR TO THE START OF UNDERGROUND CONSTRUCTION. ANY CONFLICTS WITH UTILITIES SHALL BE IMMEDIATELY REPORTED TO THE PROJECT ENGINEER.
6. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE TOWNSHIP ENGINEER 10 DAYS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE A PRE-CONSTRUCTION MEETING WHICH SHOULD OCCUR WITHIN 5 DAYS PRIOR TO CONSTRUCTION COMMENCEMENT. UNDER NO CIRCUMSTANCES SHALL ANY CONSTRUCTION ACTIVITIES BE ENGAGED IN PRIOR TO THE PRE-CONSTRUCTION MEETING, WHERE TWO UTILITIES CROSS INCLUDING SANITARY SEWER LEAD, PROVIDED POROUS GRADE "B" BACKFILL
7. MATERIAL COMPACTED IN 6 INCH LAYERS TO THE UNDERSIDE OF THE HIGHER UTILITY.
8. DUST CONTROL SHALL, BE MAINTAINED AT ALL TIMES.
9. ANY MUD TRACKED ONTO THE EXISTING ROADS SHALL BE REMOVED DAILY.
10. SURVEY MONUMENTS ARE TO BE PLACED AT ALL PROPOSED PROPERTY CORNERS AND RIGHT OF WAY CORNERS INCLUDING P.C.'S AND P.T.'S.

PROSPECT POINTE SOUTH
Quantity Summary

SANITARY SEWER

	ITEM	QUANTITY	
1	6" PVC SDR 23.5 LEAD	4,425	L.F.
2	8" PVC SDR 26 SANITARY SEWER	4,824	L.F.
3	4' DIA. MANHOLE	44	EA.

WATER MAIN

	ITEM	QUANTITY	
1	8" WATER MAIN D.I. CL 54	4,753	L.F.
2	1.5" DOMESTIC WATER SERVICE-TYPE "K" COPPER	4,996	L.F.
3	HYDRANT, VALVE & BOX	9	EA.
4	8" G.V.&W.	9	EA.
5	8" T.S.V.&W.	1	EA.

STORM SEWER

	ITEM	QUANTITY	
1	12" C-76 CL 4	2,005	L.F.
2	15" C-76 CL 4	1,270	L.F.
3	18" C-76 CL 4	996	L.F.
4	24" C-76 CL 4	1,990	L.F.
5	36" C-76 CL 4	425	L.F.
6	2' DIA. INLET	50	EA.
7	4' DIA. CATCH BASIN	51	EA.
8	4' DIA. MANHOLE	4	EA.
9	12" CONC. END SECTION WITH RIP RAP	1	EA.
10	15" CONC. END SECTION WITH RIP RAP	1	EA.
11	30" CONC. END SECTION WITH RIP RAP	1	EA.

PAVING

	ITEM	QUANTITY	
1	24" MOUNTABLE CONC. CURB & GUTTER	6,842	L.F.
2	24" REVERSE 6" STRAIGHT FACE CONC. CURB AND GUTTER	664	L.F.
3	90° MITER RJ NEBS CONC. CURB AND GUTTER	140	L.F.
4	ASPHALT PAVEMENT	14,098	S.Y.
5	5' WIDE CONCRETE SIDEWALK	4,498	S.Y.
6	8' WIDE ASPHALT PATH	803	S.Y.

SOIL EROSION

	ITEM	QUANTITY	
1	SILT FENCE	5,890	L.F.
2	SILT SACKS	102	EA.

STATE OF MICHIGAN
JASON A RICKARD
License No. 6201046145
LICENSED PROFESSIONAL ENGINEER

ENGINEERING | PLANNING
LAND DEVELOPMENT CONSULTING
39205 COUNTRY CLUB DR. STE C8
FARMINGTON HILLS, MI 48331
248.308.3331
SKE GROUP

SUBMITTAL DATE:		
NO.	REVISION	DATE
1.	REV PER TOWNSHIP REVIEW	10-23-25

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

CLIENT:
M/I HOMES OF MICHIGAN, LLC
40950 WOODWARD AVE.
SUITE 203
BLOOMFIELD HILLS,
MI 48304

PROJECT NAME:
PROSPECT POINTE SOUTH
PART OF THE WEST 1/2 OF SECTION 34, T.2S., R.7E., SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MI

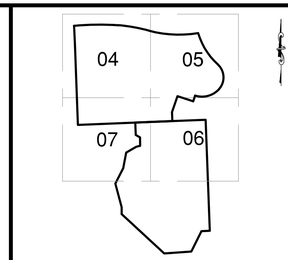
SHEET TITLE:
COVER SHEET

PROJECT NUMBER:
25-002

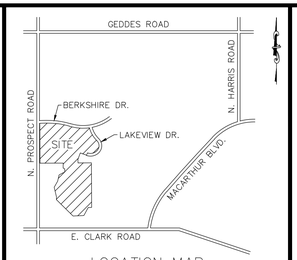
PAGE No.:
C1

G:\25\25-002 MI Homes - Prospect Road\CAD DRAWINGS\SITE PLAN\25-02039-Cover.dwg 10/21/2025 3:27 PM Nicole Goodwin

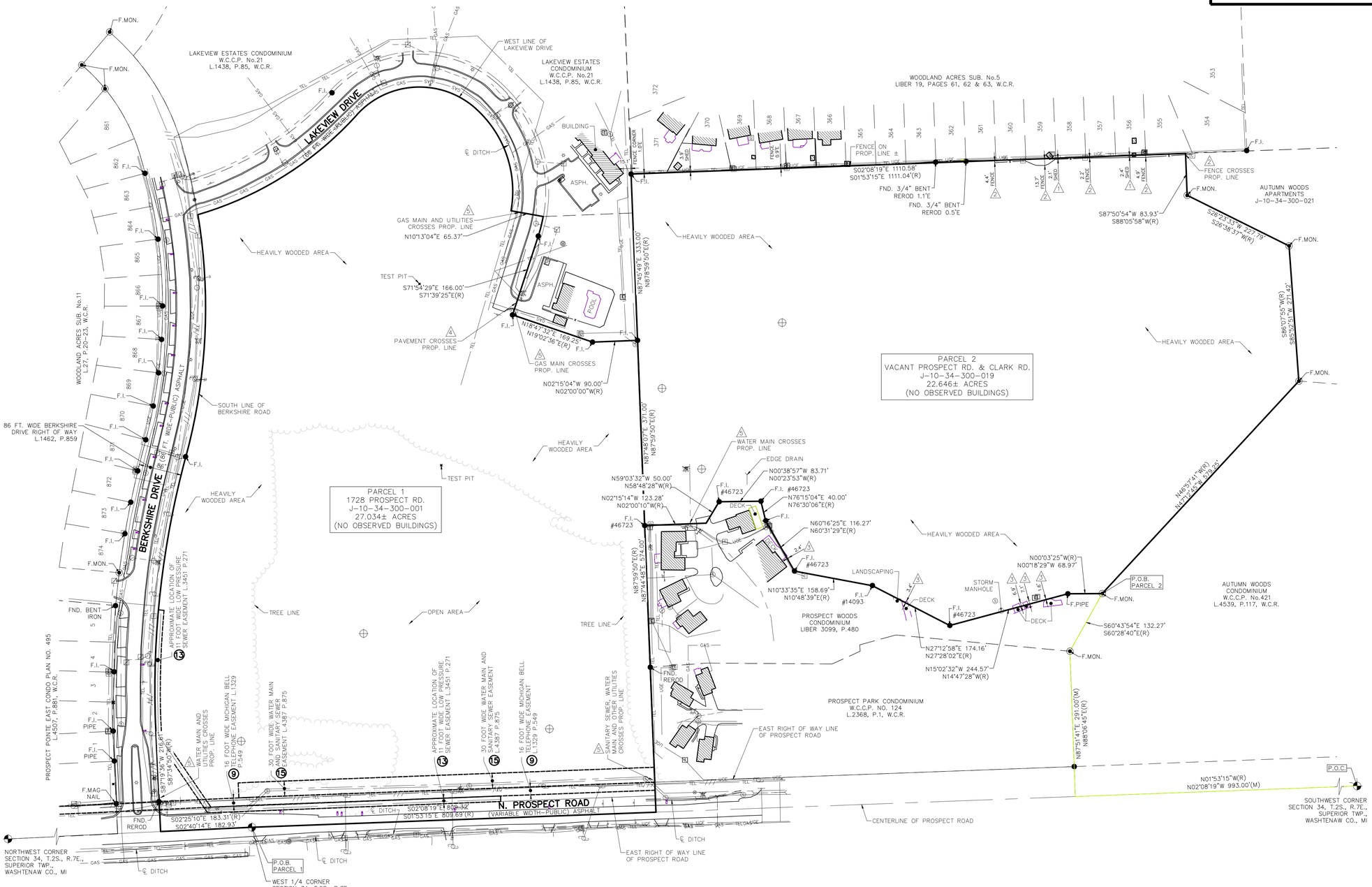
"ALTA/NSPS LAND TITLE SURVEY"



KEY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE



EXISTING LEGEND

- EASEMENT
- GAS MAIN
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UNDERGROUND UTILITY LINES
- FENCE
- DITCH CENTERLINE
- UNDERGROUND CABLE
- UNDERGROUND TELEPHONE
- UNDERGROUND ELECTRICAL
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM SQUARE CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WELL
- GAS VALVE
- GAS TEST STATION
- ELECTRICAL TRANSFORMER
- ELECTRICAL RISER
- ELECTRICAL MANHOLE
- TELEPHONE RISER
- TELEPHONE MANHOLE
- CABLE RISER
- UTILITY FLAG
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- MAILBOX
- GUARDPOST / BOLLARD
- FENCE POST
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- SET IRON
- FOUND IRON
- FOUND MONUMENT
- ℄ CENTERLINE
- P.O.B. POINT OF BEGINNING
- P.O.C. POINT OF COMMENCEMENT
- OFFSITE BUILDING
- ONSITE BUILDING

BOUNDARY LINE OBSERVATIONS:

1. BUILDING/SHED CROSSES PROPERTY LINE
2. FENCE CROSSES PROPERTY LINE
3. DECK CROSSES PROPERTY LINE
4. PAVEMENT CROSSES PROPERTY LINE
5. UTILITY CROSSES PROPERTY LINE

SNOW NOTE:
SNOW AND ICE CONDITIONS WERE PRESENT DURING THE FIELD WORK OF THIS SURVEY. THEREFORE, SOME SITE FEATURES AND/OR UTILITIES MAY NOT BE SHOWN ON THIS SURVEY.

PARCEL ID#:
J-10-34-300-001 & J-10-34-300-019

FLOOD ZONE:
PARCEL 1 AND PARCEL 2 ARE LOCATED IN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE. FLOODPLAIN) PER FIRM MAP NO. 26161C0288E, DATED 04/03/2012.

WETLANDS:
POSSIBLE FRESHWATER FORESTED/SHRUB WETLAND HABITAT CLASSIFIED AS A PF01C LOCATED ON PARCEL 2 PER NATIONAL WETLANDS INVENTORY MAPPER.

BEARINGS AND DATUM:
BEARINGS ARE BASED ON MICHIGAN STATE PLANE COORDINATES (NAD83), SOUTH ZONE, INTERNATIONAL FEET, GROUND DISTANCES. VERTICAL DATUM IS BASED ON NAVD88.

MEASURED BEARINGS DIFFER FROM RECORD TITLE BEARINGS.

NOTE:
ALL EXISTING UTILITIES HAVE BEEN FIELD LOCATED WHERE VISIBLE. UNDERGROUND LOCATIONS HAVE BEEN TAKEN FROM RECORD DOCUMENTS AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, EXACTNESS OR CORRECTNESS OF LOCATIONS. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF EXISTING UTILITIES AND RELOCATE AS NECESSARY TO AVOID CONFLICTS WITH NEW CONSTRUCTION.

GRAPHIC SCALE
100 0 50 100 200
(IN FEET)
1" = 100'

ENGINEERING | PLANNING
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PROSPECT POINTE SOUTH
PART OF THE WEST 1/2 OF SECTION 34, T.2S., R.7E., SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MI

SHEET TITLE:
ALTA/NSPS LAND TITLE SURVEY AND BOUNDARY/TOPOGRAPHIC SURVEY

PROJECT NUMBER:
25-002

PAGE No.:
C2

SCHEDULE A EXHIBIT "A" PROPERTY DESCRIPTION (PER ALTA COMMITMENT FOR TITLE INSURANCE, ISSUED BY ATA NATIONAL TITLE GROUP, LLC, FILE NUMBER 81-24938507-SCM, COMMITMENT DATE: DECEMBER 10, 2024:
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PARCEL 2
COMMENCING AT THE SOUTHWEST CORNER OF SECTION 34, TOWN 2 SOUTH, RANGE 7 EAST, TOWNSHIP OF SUPERIOR, WASHTENAW COUNTY, MICHIGAN; THENCE NORTH 01 DEGREES 53 MINUTES 15 SECONDS WEST 993.00 FEET; THENCE NORTH 88 DEGREES 06 MINUTES 45 SECONDS EAST 291.00 FEET; THENCE SOUTH 60 DEGREES 28 MINUTES 40 SECONDS EAST 132.27 FEET TO THE POINT OF BEGINNING; THENCE NORTH 00 DEGREES 03 MINUTES 25 SECONDS WEST 68.97 FEET; THENCE NORTH 14 DEGREES 47 MINUTES 28 SECONDS WEST 244.57 FEET; THENCE NORTH 27 DEGREES 28 MINUTES 02 SECONDS EAST 174.16 FEET; THENCE NORTH 10 DEGREES 48 MINUTES 39 SECONDS EAST 158.69 FEET; THENCE NORTH 60 DEGREES 31 MINUTES 29 SECONDS EAST 116.27 FEET; THENCE NORTH 76 DEGREES 30 MINUTES 08 SECONDS EAST 40.00 FEET; THENCE NORTH 00 DEGREES 23 MINUTES 53 SECONDS WEST 83.71 FEET; THENCE NORTH 58 DEGREES 48 MINUTES 28 SECONDS WEST 50.00 FEET; THENCE NORTH 02 DEGREES 00 MINUTES 10 SECONDS WEST 123.28 FEET; THENCE NORTH 87 DEGREES 59 MINUTES 50 SECONDS EAST 704.00 FEET; THENCE SOUTH 01 DEGREES 53 MINUTES 15 SECONDS EAST 1111.04 FEET; THENCE SOUTH 88 DEGREES 05 MINUTES 58 SECONDS WEST 83.93 FEET; THENCE SOUTH 26 DEGREES 38 MINUTES 37 SECONDS WEST 222.79 FEET; THENCE SOUTH 86 DEGREES 07 MINUTES 55 SECONDS WEST 271.42 FEET; THENCE NORTH 46 DEGREES 57 MINUTES 41 SECONDS WEST 579.25 FEET TO THE POINT OF BEGINNING.

SCHEDULE B PART II EXCEPTIONS PER REFERENCED TITLE COMMITMENT FILE NUMBER 81-24938507-SCM:
8. EASEMENT FOR OPERATION, REPAIR AND MAINTENANCE OF WATER AND SEWER MAINS RESERVED BY GRANTOR IN INSTRUMENT RECORDED IN LIBER 708, PAGE 117, WASHTENAW COUNTY RECORDS.
(COVERS PARCEL 1 AND ADDITIONAL LANDS)

(9) 9. RIGHT OF WAY GRANTED TO MICHIGAN BELL TELEPHONE COMPANY FOR CONSTRUCTION, OPERATION AND MAINTENANCE OF LINES OF COMMUNICATIONS FACILITIES RECORDED IN LIBER 1329, PAGE 549, AS AFFECTED AND/OR MODIFIED BY RELEASE OF EASEMENT RECORDED IN LIBER 4343, PAGE 374, WASHTENAW COUNTY RECORDS.
(COVERS PARCEL 1 AND ADDITIONAL LANDS, EASEMENT AS SHOWN)

10. RIGHT OF WAY GRANTED TO MICHIGAN BELL TELEPHONE COMPANY FOR CONSTRUCTION, OPERATION AND MAINTENANCE OF LINES OF COMMUNICATIONS FACILITIES RECORDED IN LIBER 1329, PAGE 567, WASHTENAW COUNTY RECORDS.
(COVERS PARCEL 2 AND ADDITIONAL LANDS, EASEMENT APPEARS TO BE LOCATED SOUTH OF PARCEL 2)

11. RIGHT OF WAY GRANTED TO MICHIGAN BELL TELEPHONE COMPANY FOR CONSTRUCTION, OPERATION AND MAINTENANCE OF LINES OF COMMUNICATIONS FACILITIES RECORDED IN LIBER 1329, PAGE 571, WASHTENAW COUNTY RECORDS.
(COVERS PARCEL 2 AND ADDITIONAL LANDS – EASEMENTS APPEAR TO BE LOCATED WEST AND SOUTH OF PARCEL 2)

12. TERMS, CONDITIONS AND PROVISIONS CONTAINED IN AGREEMENT REGARDING ESTABLISHMENT OF SUPERIOR PROSPECT DRAINAGE DISTRICT RECORDED IN LIBER 2872, PAGE 484, WASHTENAW COUNTY RECORDS.
(COVERS PARCEL 2 AND ADDITIONAL LANDS)

(13) 13. EASEMENT FOR LOW PRESSURE SEWER RECORDED IN LIBER 3451, PAGE 271, WASHTENAW COUNTY RECORDS.
(COVERS PARCEL 1 AND ADDITIONAL LANDS – EASEMENT APPROXIMATELY AS SHOWN)

14. PUBLIC UTILITIES EASEMENT GRANTED TO THE CHARTER TOWNSHIP OF SUPERIOR FOR INSTALLATION AND MAINTENANCE OF SANITARY SEWER RECORDED IN LIBER 3993, PAGE 206, WASHTENAW COUNTY RECORDS.
(COVERS PARCEL 2 AND ADDITIONAL LANDS – EASEMENT LOCATED SOUTH OF PARCEL 2)

(15) 15. PUBLIC UTILITIES EASEMENT GRANTED TO THE CHARTER TOWNSHIP OF SUPERIOR FOR INSTALLATION AND MAINTENANCE OF WATER MAIN AND SANITARY SEWER RECORDED IN LIBER 4387, PAGE 875, WASHTENAW COUNTY RECORDS.
(COVERS PARCEL 1 – EASEMENT AS SHOWN)

16. TERMS, CONDITIONS AND PROVISIONS CONTAINED IN ORDER OF ABANDONMENT AND VACATING A COUNTY DRAIN OR ANY PORTION THEREOF RECORDED IN LIBER 5108, PAGE 1, WASHTENAW COUNTY RECORDS.
(ABANDONMENT AND VACATING DRAINAGE DISTRICT AS RECORDED IN LIBER 2872, PAGE 484)

17. TERMS, CONDITIONS AND PROVISIONS CONTAINED IN FINAL ORDER OF DETERMINATION REGARDING IMPROVEMENTS TO BAILEY FOSTER DRAIN RECORDED IN LIBER 5148, PAGE 353, WASHTENAW COUNTY RECORDS.
(APPEARS TO COVER PARCEL 2, DRAIN LOCATED EAST OF SUBJECT PROPERTY)

NOTES:
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PARCEL ID#:
J-10-34-300-001 & J-10-34-300-019

FLOOD ZONE:
PARCEL 1 AND PARCEL 2 ARE LOCATED IN ZONE "X" (AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE. FLOODPLAIN) PER FIRM MAP NO. 26161C0288E, DATED 04/03/2012.

WETLANDS:
POSSIBLE FRESHWATER FORESTED/SHRUB WETLAND HABITAT CLASSIFIED AS A PF01C LOCATED ON PARCEL 2 PER NATIONAL WETLANDS INVENTORY MAPPER.

BEARINGS AND DATUM:
BEARINGS ARE BASED ON MICHIGAN STATE PLANE COORDINATES (NAD83), SOUTH ZONE, INTERNATIONAL FEET, GROUND DISTANCES. VERTICAL DATUM IS BASED ON NAVD88.

MEASURED BEARINGS DIFFER FROM RECORD TITLE BEARINGS.

CERTIFICATE:
TO:
– M/I HOMES OF MICHIGAN, LLC, A DELAWARE LIMITED LIABILITY COMPANY
– ATA NATIONAL TITLE GROUP, LLC
– CHICAGO TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2021 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4 AND 8 OF TABLE A THEREOF. THE FIELDWORK WAS COMPLETED ON APRIL 3, 2025.

DATE OF PLAT OR MAP: APRIL 7, 2025

MICHAEL D. EMBREE, P.S.
MIKEE@SKL-ENG.COM
PROFESSIONAL LAND SURVEYOR
REGISTRATION/LICENSE NO. 4001056860

STATE OF MICHIGAN – MICHAEL D. EMBREE – License No. 4001056860 – LICENSED PROFESSIONAL SURVEYOR

ENGINEERING | PLANNING
LAND DEVELOPMENT CONSULTING
39205 COUNTRY CLUB DR, STE C8
FARMINGTON HILLS, MI 48331
248.308.3331
SKE GROUP

NO.	REVISION	DATE
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SUBMITTAL DATE:

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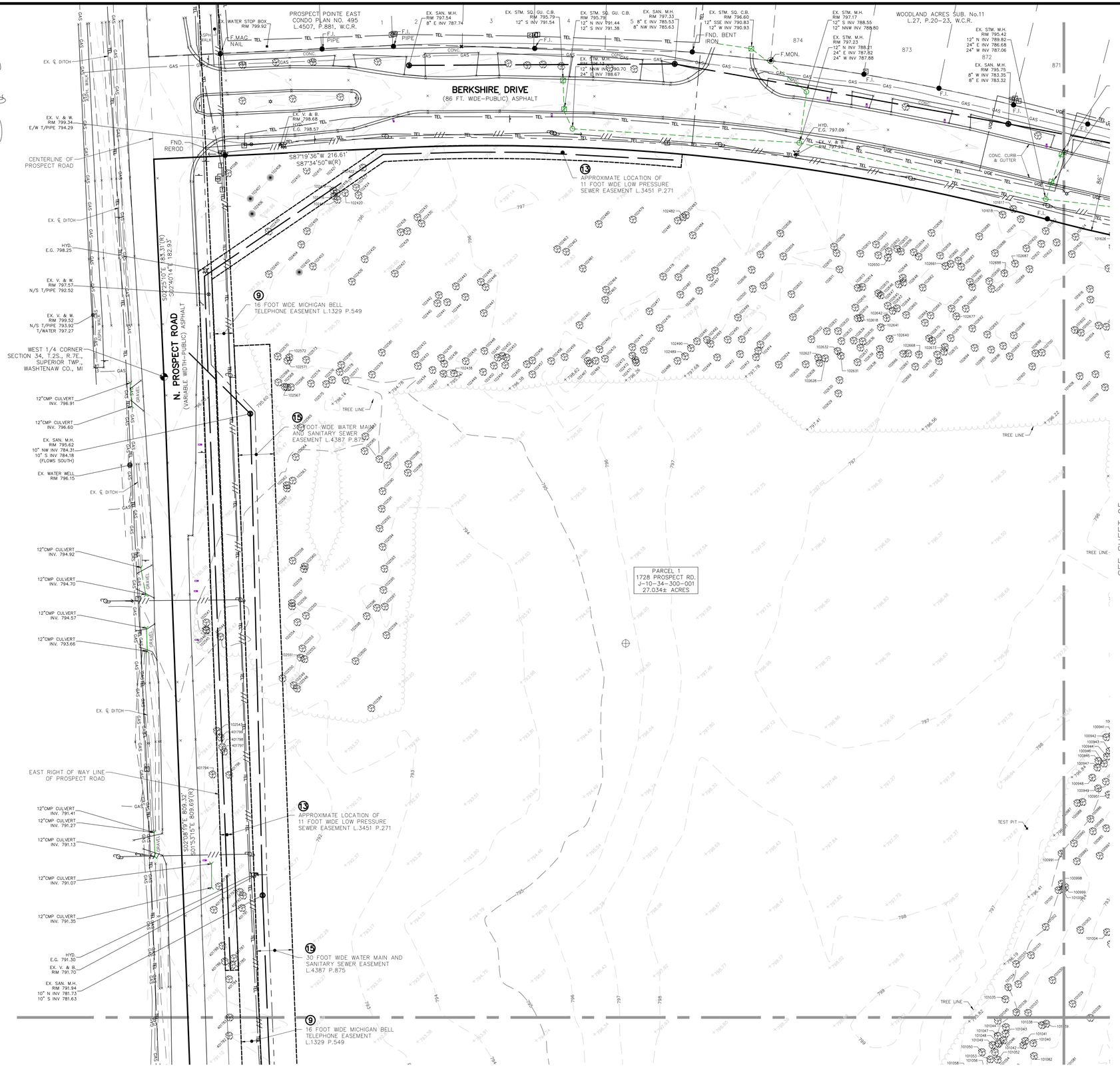
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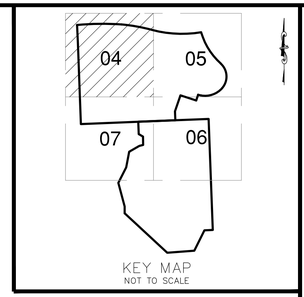
PROJECT NAME:
PROSPECT POINTE SOUTH
PART OF THE WEST 1/2 OF SECTION 34,
T2S, R7E, SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MI

SHEET TITLE:
ALTA/NSPS LAND TITLE SURVEY AND BOUNDARY/TOPOGRAPHIC SURVEY

PROJECT NUMBER:
25-002

PAGE No.:
C3





KEY MAP
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- STORM SEWER
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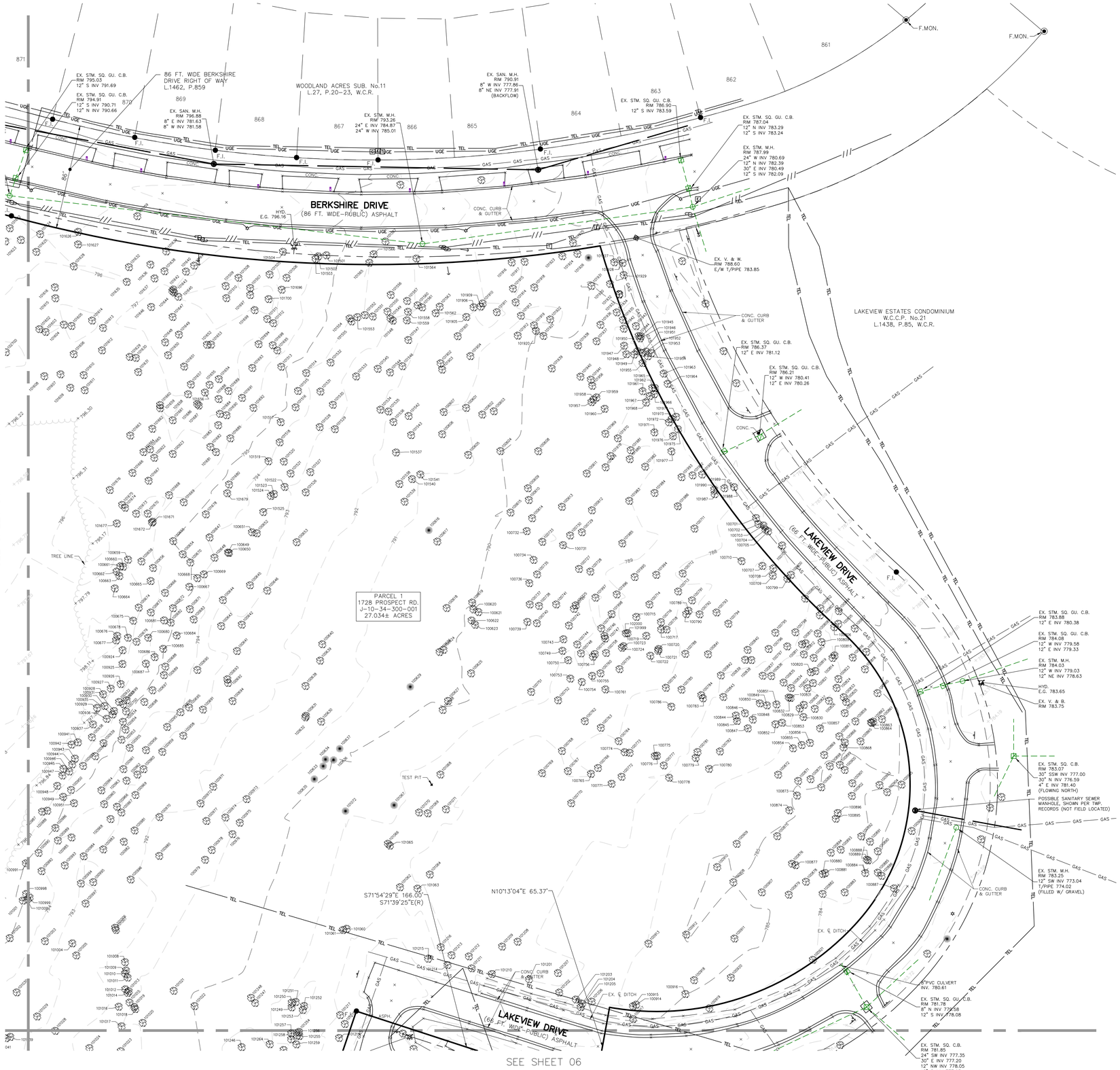
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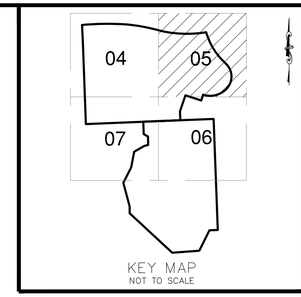
PROJECT NAME:
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PART OF THE WEST 1/2 OF SECTION 34, T.2S., R.7E., SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MI

SHEET TITLE:
ALTA/NSPS LAND TITLE SURVEY AND BOUNDARY/TOPOGRAPHIC SURVEY

PROJECT NUMBER:
25-002

PAGE No.:
C4





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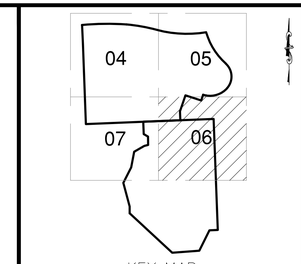
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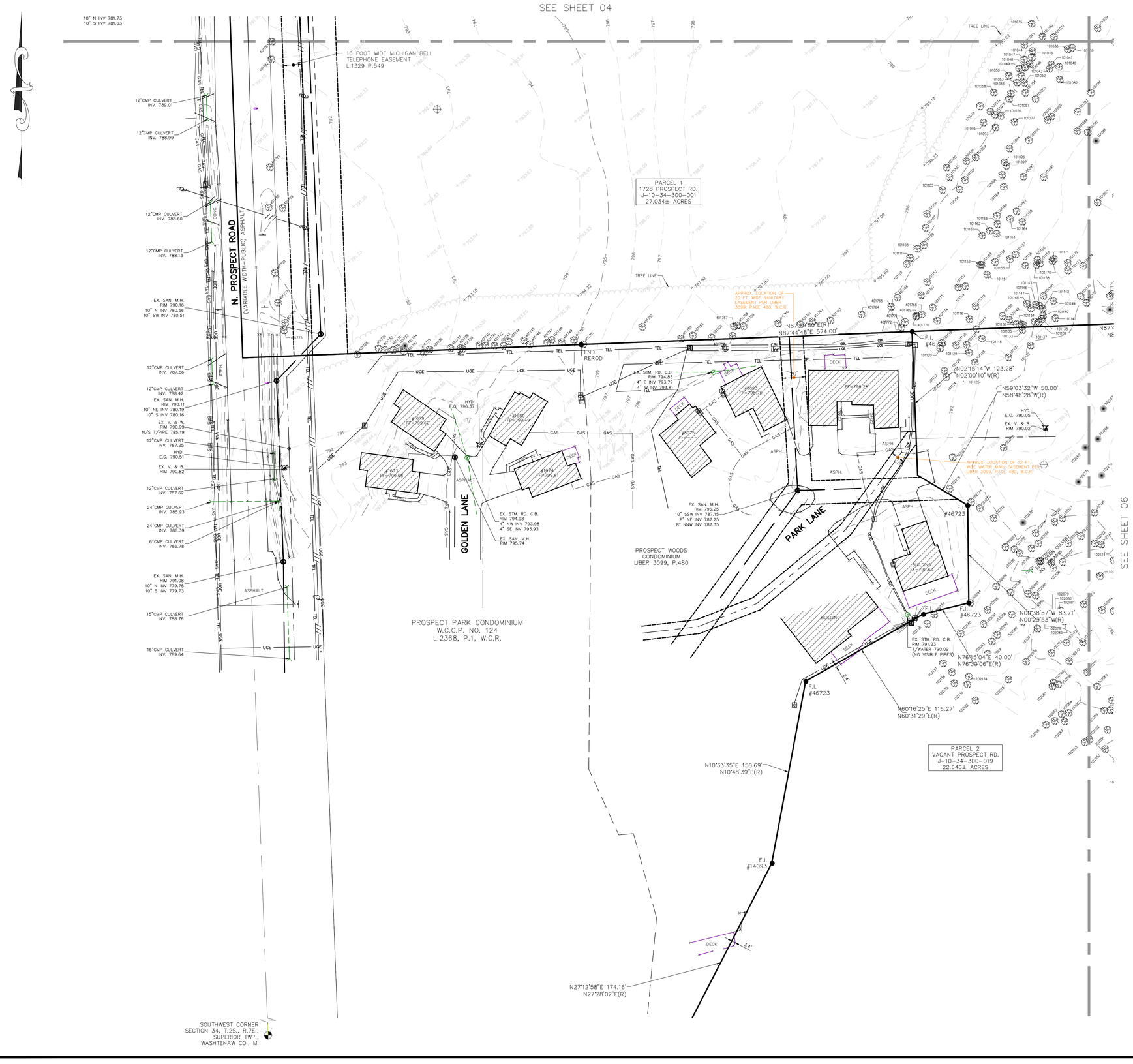
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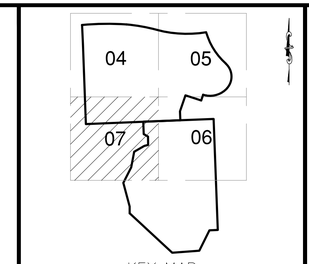
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1" = 40'

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39205 COUNTRY CLUB DR. STE C8
FARMINGTON HILLS, MI 48331
248.308.3331
SKE GROUP

NO.	REVISION	DATE
1.	REV PER TOWNSHIP REVIEW	10-23-25

SUBMITTAL DATE:

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

CLIENT:
M/I HOMES OF MICHIGAN, LLC
40950 WOODWARD AVE.
SUITE 203
BLOOMFIELD HILLS, MI 48304

PROJECT NAME:
PROSPECT POINTE SOUTH
PART OF THE WEST 1/2 OF SECTION 34, T.2S., R.7E., SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MI

SHEET TITLE:
ALTA/NSPS LAND TITLE SURVEY AND BOUNDARY/TOPOGRAPHIC SURVEY

PROJECT NUMBER:
25-002

PAGE No.:
C7



SIGN QUANTITIES

SYMBOL	DESCRIPTION	QUANITITY PANEL	POST
	R1-1 30"x30" "STOP" SIGN	5	5
	R1-2 30" "YIELD" SIGN	1	1
	12" D3-1 STREET NAME ATOP SIGN	6	0
	R2-1(25) "25 MPH SPEED LIMIT" SIGN	2	2

N

GRAPHIC SCALE
80 0 40 80 160
(IN FEET)
1" = 80'

PHASING

PHASE 1: 1–21	= 21 LOTS	
PHASE 2: 22–79	= 58 LOTS	
PHASE 3: 80–118	= 39 LOTS	
	118 LOTS TOTAL	

LOT COVERAGE & FAR REQUIREMENT

R-4 ZONING

MINIMUM LOT SIZE	7200	SF
LOT COVERAGE 25%	1800	SF
FAR 0.40	2880	SF

PROPOSED ZONING PC

MINIMUM LOT SIZE	6000	SF
MAXIMUM LOT COVERAGE	1800	SF
MAXIMUM LOT COVERAGE	30	%
MAXIMUM FAR SF	2880	SF
MAXIMUM FAR	0.48	

UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
1	6,000	50.00'
2	6,092	51.91'
3	6,076	51.46'
4	6,076	51.46'
5	6,076	51.46'
6	6,076	51.46'
7	6,076	51.46'
8	6,076	51.46'
9	6,076	51.46'
10	6,076	51.46'
11	6,076	51.46'
12	6,080	50.00'
13	6,256	50.00'
14	6,372	50.00'
15	6,206	50.00'
16	6,276	50.00'
17	6,297	50.00'
18	6,330	50.00'
19	6,349	50.00'
20	6,250	50.00'

UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
21	6,176	50.00'
22	8,459	71.18'
23	6,000	50.00'
24	6,082	50.23'
25	6,546	50.19'
26	6,170	50.73'
27	10,096	50.00'
28	11,883	50.00'
29	9,230	50.00'
30	7,166	50.00'
31	6,873	51.15'
32	6,324	51.12'
33	6,248	50.01'
34	6,369	50.00'
35	6,439	50.00'
36	6,415	50.00'
37	6,339	50.00'
38	6,204	50.00'
39	6,044	50.00'
40	6,031	50.00'

UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
41	6,313	55.62'
42	6,066	50.00'
43	6,053	50.00'
44	7,202	50.04'
45	8,899	50.11'
46	8,261	50.00'
47	8,261	50.00'
48	8,261	50.00'
49	6,322	54.35'
50	6,097	50.41'
51	7,758	66.60'
52	6,178	52.85'
53	6,037	50.07'
54	6,000	50.00'
55	6,000	50.00'
56	8,400	70.00'
57	8,400	70.00'
58	6,356	50.00'
59	6,707	68.35'
60	6,671	75.78'

UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
61	6,679	76.35'
62	6,088	51.16'
63	8,400	70.00'
64	8,782	61.80'
65	9,266	70.00'
66	9,266	70.00'
67	6,618	50.00'
68	6,618	50.00'
69	6,618	50.00'
70	6,610	50.02'
71	7,368	68.81'
72	6,000	50.00'
73	6,000	50.00'
74	6,000	50.00'
75	6,000	50.00'
76	6,000	50.00'
77	8,400	70.00'
78	13,327	72.33'
79	6,824	50.00'
80	6,779	50.00'

UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
81	7,350	51.18'
82	7,655	81.24'
83	7,490	79.02'
84	7,927	63.81'
85	8,445	50.04'
86	8,166	80.60'
87	6,181	53.31'
88	9,956	50.00'
89	12,575	50.00'
90	8,005	50.00'
91	7,623	50.00'
92	7,783	50.00'
93	7,959	50.00'
94	7,660	56.57'
95	6,000	50.00'
96	6,000	50.00'
97	6,000	50.00'
98	6,615	50.00'
99	6,826	50.00'
100	6,826	50.00'

UNIT AREA TABLE

UNIT #	AREA (SF)	LOT WIDTH
101	6,826	50.00'
102	7,491	55.00'
103	7,491	55.00'
104	6,832	50.00'
105	6,137	50.00'
106	6,000	50.00'
107	8,400	70.00'
108	6,000	50.00'
109	8,345	64.19'
110	7,149	62.95'
111	6,163	50.16'
112	6,543	55.70'
113	6,628	57.51'
114	6,025	50.06'
115	6,000	50.00'
116	6,000	50.00'
117	6,000	50.00'
118	8,459	71.17'

SITA DATA

CURRENT ZONING	PLANNED COMMUNITY (PC) NORTH PARCEL SINGLE-FAMILY RESIDENTIAL (R-4) SOUTH PARCEL
PROPOSED ZONING	PLANNED COMMUNITY (PC)
GROSS AREA	49.68 Ac
ROW	1.37 Ac
NET SITE AREA	48.31 Ac
CONSERVATION AREA	17.20 Ac
TOTAL LOTS	118
LOT DENSITY	2.44 LOTS / Ac
MIN LOT AREA	6000 SF
MIN LOT WIDTH	50 FT
FRONT SETBACK	25 FT
REAR SETBACK	35 FT
SIDE SETBACK	5 FT

LEGEND

EXISTING / PROPOSED

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- DITCH/SWALE
- FENCE (PROPOSED TREE PROTECTION)
- SILT FENCE
- FLOOD PLAIN PER FEMA MAP
- WETLANDS
- CONTOUR
- CURB AND GUTTER
- EASEMENT
- GAS MAIN
- OVERHEAD UTILITY LINES
- SANITARY MANHOLE
- STORM MANHOLE
- REAR YARD CATCH BASIN
- ROAD CATCH BASIN
- END SECTION
- FIRE HYDRANT
- GATE VALVE AND WELL
- PAVEMENT (ASPHALT)
- PAVEMENT (CONCRETE SIDEWALK)
- DIRECTION SURFACE WATER FLOW
- OVERFLOW ROUTE
- GRADE (1000.00)

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SKE GROUP

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PROSPECT POINTE SOUTH
PART OF THE WEST 1/2 OF SECTION 34, T.2S., R.7E., SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MI

SHEET TITLE:
OVERALL SITE PLAN

PROJECT NUMBER:
25-002

PAGE No.:
C8

R:\25\25-002 MI Homes – Prospect Bond\CAD DRAWINGS\SITE PLAN\25-002SP-OVR.dwg 10/23/2025 3:28 PM Nicole Gordon

BERKSHIRE DRIVE
(86 FT. WIDE-PUBLIC) ASPHALT

PROPOSED SANITARY SEWER, TYP.

PROPOSED SANITARY SEWER TIE INTO EXISTING

BORE AND JACK 8" SANITARY SEWER

PROPOSED 5' CONCRETE WALK

BERKSHIRE DRIVE
(86 FT. WIDE-PUBLIC) ASPHALT

PROPOSED 66' R.O.W.

N. PROSPECT ROAD
(VARIABLE WIDTH-PUBLIC) ASPHALT

APPROXIMATE LOCATION OF 11 FOOT WIDE LOW PRESSURE SEWER EASEMENT L.3451 P.271

PROPOSED 30' STORM SEWER AND DRAINAGE EASEMENT

PROPOSED STORM SEWER, TYP.

PROPOSED 15' SANITARY SEWER EASEMENT

PROPOSED 10' PUBLIC UTILITY EASEMENT

30 FOOT WIDE WATER MAIN AND SANITARY SEWER EASEMENT L.4387 P.875

PROPOSED WATER MAIN, TYP.

PROPOSED 5' CONC. WALK, TYP.

PROPOSED 8' ASPHALT PATH

BIRCHWAY LANE
(PRIVATE)

PROPOSED SANITARY SEWER, TYP.

PROPOSED 15' SANITARY SEWER EASEMENT

PROPOSED 30' STORM SEWER AND DRAINAGE EASEMENT

PROPOSED WATER MAIN, TYP.

MAPLEGROVE ROAC (PRIVATE)

CONNECT TO EXISTING WATERMAIN WITH TAPPING SLEEVE VALVE IN WELL

REMOVE EXISTING CULVERT

RELOCATE EXISTING HYDRANT

LAKEVIEW DRIVE
(PUBLIC)

EX. SAN. M.H.
RIM 791.94
10" N INV 781.73
10" S INV 781.63

PROPOSED SANITARY SEWER TIE INTO EXISTING

PROPOSED ENTRANCE SIGN

BIRCHWAY COURT (PRIVATE)

PROPOSED 10' PUBLIC UTILITY EASEMENT, TYP.

PROPOSED 15' SANITARY SEWER EASEMENT, TYP.

PROPOSED 5' CONC. WALK, TYP.

PHASE 2

PHASE 3

PROPOSED STORM SEWER, TYP.

PLAYSCAPE

PROPOSED OPEN SPACE: 32,381 S.F.

PROPOSED 15' STORM SEWER AND DRAINAGE EASEMENT

OAKLYNN DRIVE (PRIVATE)

LAKEVIEW DRIVE (PUBLIC)

PROPOSED WATER MAIN, TYP.

PROPOSED OPEN SPACE: 17,942 S.F.

PROPOSED SANITARY SEWER, TYP.

PROPOSED 5' CONC. WALK, TYP.

PROPOSED OVERLOOK BENCH

EMERGENCY SPILLWAY

RETENTION BASIN

LAKEVIEW DRIVE
(66 FT. WIDE-PUBLIC) ASPHALT

PROPOSED WATERMAIN TIE INTO EXISTING

8"PVC CULVERT
INV. 780.61

EX. STM. SQ. GU. C.B.
RIM 781.78
8" N INV 779.58
12" S INV 778.08

EX. STM. SQ. C.B.
RIM 781.85
24" SW INV 777.35
30" E INV 777.20
12" NW INV 778.05
12" S INV 777.95

APPROX. LOCATION UNDERGROUND TELEPHONE (PER MISSING UTILITY MAPS)

SEE SHEET C10 FOR CONTINUATION

NOTES:
THE MAXIMUM ENCROACHMENT FOR PORCHES OR DECKS IN THE SETBACK IS LIMITED TO TEN (10) FEET IN DEPTH AND 200 SQUARE FEET IN AREA.

TYPICAL LOT DATA

35' REAR SETBACK
5' TYP.
120' TYP.
1' TYP.
50' MIN. R.O.W. LINE
5' CONC. WALK
25' FRONT SETBACK

LEGEND

EXISTING	PROPOSED	
		SANITARY SEWER
		WATER MAIN
		STORM SEWER
		DITCH/SWALE
		FENCE (PROPOSED TREE PROTECTION)
		SILT FENCE
		FLOOD PLAIN PER FEMA MAP
		WETLANDS
		CONTOUR
		CURB AND GUTTER
		EASEMENT
		GAS MAIN
		OVERHEAD UTILITY LINES
		SANITARY MANHOLE
		STORM MANHOLE
		REAR YARD CATCH BASIN
		ROAD CATCH BASIN
		END SECTION
		FIRE HYDRANT
		GATE VALVE AND WELL
		PAVEMENT (ASPHALT)
		PAVEMENT (CONCRETE SIDEWALK)
		DIRECTION SURFACE WATER FLOW
		OVERFLOW ROUTE
1000.00		GRADE

N

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1" = 50'

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SKE GROUP

NO.	REVISION	DATE
1.	REV PER TOWNSHIP REVIEW	10-23-25

SUBMITTAL DATE:

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PROJECT NAME:
PROSPECT POINTE SOUTH
PART OF THE WEST 1/2 OF SECTION 34, T.2S., R.7E., SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MI

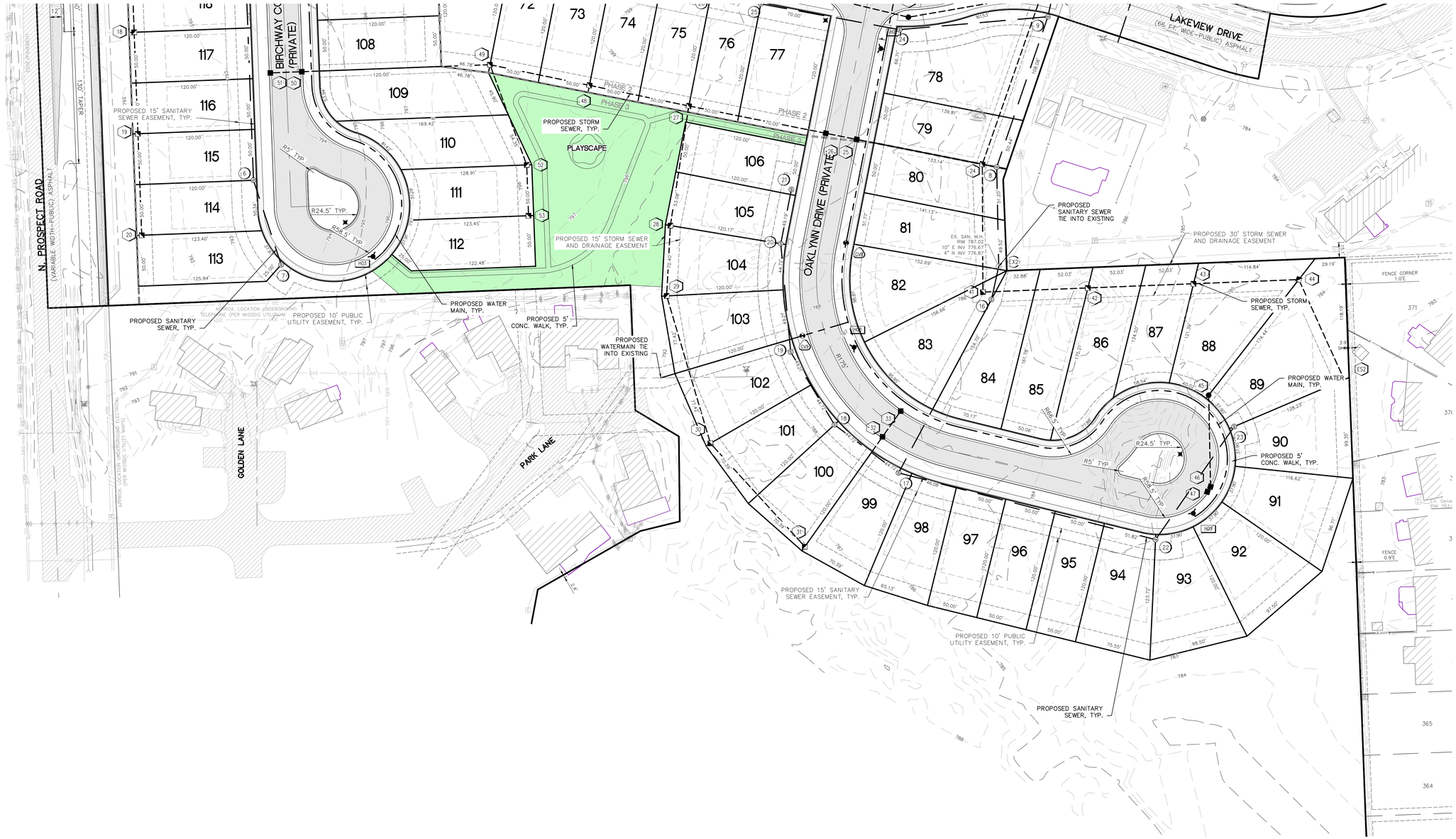
SHEET TITLE:
SITE PLAN - NORTH

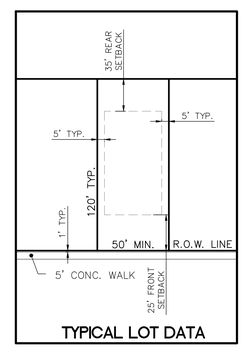
PROJECT NUMBER:
25-002

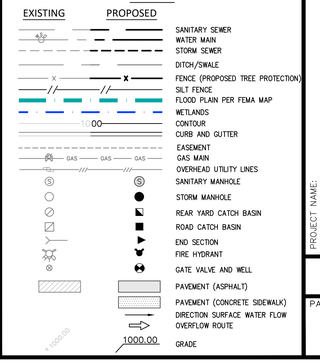
PAGE No.:
C9

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SEE SHEET C9 FOR CONTINUATION







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SHEET TITLE:
SITE PLAN - SOUTH

PROJECT NUMBER:
25-002

PAGE No.:
C10

P:\25\25-002 MI Homes - Prospect Pointe\CAD DRAWINGS\SITE PLAN\25-002SP-.dwg 10/23/2025 3:28 PM Nicole Gordon

BERKSHIRE DRIVE
(86 FT. WIDE-PUBLIC) ASPHALT

PROPOSED SANITARY SEWER, TYP.

BERKSHIRE DRIVE
(86 FT. WIDE-PUBLIC) ASPHALT

N. PROSPECT ROAD
(VARIABLE WIDTH-PUBLIC) ASPHALT

PROPOSED STORM SEWER, TYP.

BIRCHWAY LANE

PROPOSED WATER MAIN, TYP.

PROPOSED SANITARY SEWER, TYP.

MAPLEGROVE ROAD

LAKEVIEW DRIVE
(66 FT. WIDE-PUBLIC) ASPHALT

RETENTION BASIN

BIRCHWAY COURT

PROPOSED STORM SEWER, TYP.

PLAYSCAPE

TREE FENCE, TYP

OAKLYNN DRIVE

SILT FENCE AND LIMITS OF DISTURBANCE, TYP

PROPOSED SANITARY SEWER, TYP.

PROPOSED WATER MAIN, TYP.

SILT FENCE AND LIMITS OF DISTURBANCE, TYP

SEE SHEET C12 FOR CONTINUATION

N

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1" = 50'

LEGEND

EXISTING	PROPOSED	
		SANITARY SEWER
		WATER MAIN
		STORM SEWER
		DITCH/SWALE
X	X	FENCE (PROPOSED TREE PROTECTION)
		SILT FENCE
		FLOOD PLAIN PER FEMA MAP
		WETLANDS
00		CONTOUR
		CURB AND GUTTER
		EASEMENT
GAS GAS GAS		GAS MAIN
		OVERHEAD UTILITY LINES
S		SANITARY MANHOLE
		STORM MANHOLE
		REAR YARD CATCH BASIN
		ROAD CATCH BASIN
		END SECTION
		FIRE HYDRANT
		GATE VALVE AND WELL
		PAVEMENT (ASPHALT)
		PAVEMENT (CONCRETE SIDEWALK)
		DIRECTION SURFACE WATER FLOW OVERFLOW ROUTE
1000.00		GRADE

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SHEET TITLE:
GRADING PLAN - NORTH

PROJECT NUMBER:
25-002

PAGE No.:
C11

R:\25\25-002 MI Homes - Prospect Pointe\CAD DRAWINGS\SITE PLAN\25-002SP-GP.dwg, 10/23/2025 1:28 PM, Nicole Goodell

SEE SHEET C11 FOR CONTINUATION



N

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1" = 50'

LEGEND

EXISTING	PROPOSED	
		SANITARY SEWER
		WATER MAIN
		STORM SEWER
		DITCH/SWALE
X	X	FENCE (PROPOSED TREE PROTECTION)
		SILT FENCE
		FLOOD PLAIN PER FEMA MAP
		WETLANDS
00		CONTOUR
		CURB AND GUTTER
		EASEMENT
GAS	GAS	GAS MAIN
		OVERHEAD UTILITY LINES
S	S	SANITARY MANHOLE
		STORM MANHOLE
		REAR YARD CATCH BASIN
		ROAD CATCH BASIN
		END SECTION
		FIRE HYDRANT
		GATE VALVE AND WELL
		PAVEMENT (ASPHALT)
		PAVEMENT (CONCRETE SIDEWALK)
		DIRECTION SURFACE WATER FLOW
		OVERFLOW ROUTE
1000.00	1000.00	GRADE

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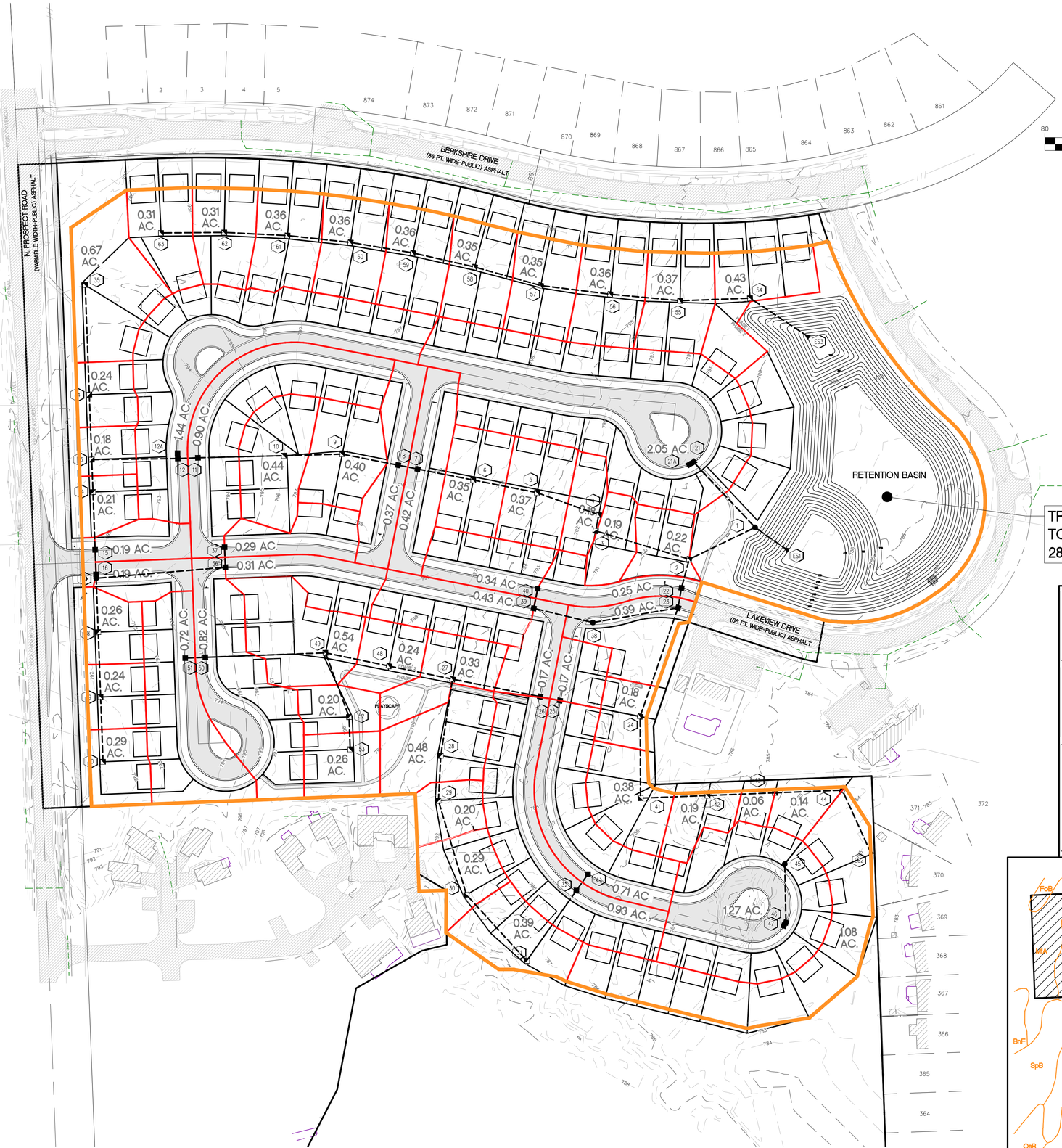
PROJECT NAME:
PROSPECT POINTE SOUTH
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SHEET TITLE:
GRADING PLAN - SOUTH

PROJECT NUMBER:
25-002

PAGE No.:
C12

R:\25\25-002 MI Homes - Prospect Road\CAD DRAWINGS\SITE PLAN\25-002SP-GR.dwg 10/23/2025 1:39 PM Nicole Goodwin



VOLUME PROVIDED IN SOUTH FOREBAY

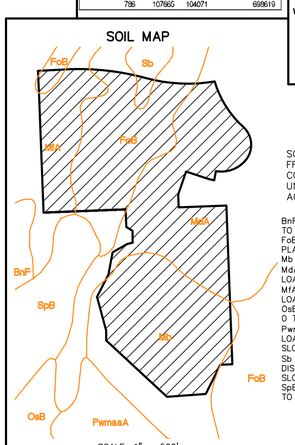
Elevation	Area	Vol (ft³)	Total Vol (ft³)
776	6341		
777	8016	7179	7179
778	9897	8957	16135
779	11936	10917	27052
780	14149	13043	40094
781	16535	15342	55436

VOLUME PROVIDED IN NORTH FOREBAY

Elevation	Area	Vol (ft³)	Total Vol (ft³)
776	1031		
777	1803	1417	1417
778	2781	2292	3708
779	3972	3377	7085
780	5394	4683	11768
781	7060	6227	17995

VOLUME PROVIDED IN RETENTION BASIN

Elevation	Area	Vol (ft³)	Forebay	Total Vol (ft³)
776	27232			
777	30997	29115	8505	37710
778	34990	32994	11248	81951
779	39218	37104	14245	133348
780	43694	41456	17726	192530
781	48423	46059	21509	260157
782	79955	64189		324346
783	86573	83264		407610
784	93413	89993		497603
785	100477	96945		594548
786	107865	104071		698619



SOIL CLASSIFICATIONS

SOILS CLASSIFICATIONS WERE DETERMINED FROM THE SOIL SURVEY OF WASHTENAW COUNTY, MICHIGAN. PUBLISHED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE.

BnF – SOIL GROUP A – BOYER LOAMY SAND, 25 TO 50 PERCENT SLOPES
FoB – SOIL GROUP B – FOX SANDY LOAM, TILL PLAIN, 2 TO 6 PERCENT SLOPES
Mb – MADE LAND
MdA – SOIL GROUP B/D – MATHERTON SANDY LOAM, 0 TO 4 PERCENT SLOPES
MfA – SOIL GROUP C/D – METAMORA SANDY LOAM, 0 TO 4 PERCENT SLOPES
OsB – SOIL GROUP A – OSHTEMO LOAMY SAND, 0 TO 6 PERCENT SLOPES
PwmaaA – SOIL GROUP C/D – PEWAMO CLAY LOAM, DENSE SUBSTRATUM, 0 TO 1 PERCENT SLOPES
Sb – SOIL GROUP B/D – SEBEWA LOAM, DISINTEGRATION MORAINE, 0 TO 2 PERCENT SLOPES
SpB – SOIL GROUP A – SPINKS LOAMY SAND, 0 TO 6 PERCENT SLOPES

C-Factor Determination (POST CONST.)

Tributary Area = 28.49 Acres

Impervious Areas				
Bldgs, Roads and S/W =	8.82	Ac.	at C =	0.95
Pervious Areas				
Lawn Areas =	19.67	Ac.	at C =	0.33
Low Water	1.11	Ac.	at C =	1.00
			C Avg. =	0.56

SUPERIOR TWP
WASHTENAW CO. SWM STANDARDS

WORKSHEET 2

FIRST FLUSH RUNOFF CALCULATIONS V_{ff}

A= 29.50 Ac
C= 0.56

V_{ff} =(1")x(1/12)x(43560 1ac)xCxA = 59,968 ft³ REQUIRED
73,431 ft³ PROVIDED

WORKSHEET 3

Bankfull Runoff Calculations

Pre-development Bankfull Runoff Calculations ($V_{bf\text{-}pre}$)

A.	2 year/24 hour storm event	P=	2.35	in
B.	Pre-development = Meadow	CN=	58	
C.	S = (1000/CN)-10	S=	7.24	in
D.	$Q = (P-0.2S)^2/(P+0.8S)$	Q=	0.10	in
E.	Total Site Area (ft²)	A=	1285020.0	ft²
F.	$V_{BF\text{-}PRE} = Q(1/12) \times A$	$V_{BF\text{-}PRE}$ =	10,663	ft³

WORKSHEET 4

Pervious post-development Bankfull Runoff Calculations ($V_{bf\text{-}per\text{-}post}$)

A.	2 year/24 hour storm event	P=	2.35	in
B.	Pervious Cover CN	CN=	72	
C.	S = (1000/CN)-10	S=	3.89	in
D.	$Q = (P-0.2S)^2/(P+0.8S)$	Q=	0.45	in
E.	Pervious Cover Area (ft²)	A=	899825.2	ft²
F.	$V_{BF\text{-}post\text{-}per} = Q(1/12) \times A_{per}$	$V_{BF\text{-}Post\text{-}per}$ =	32,319	ft³

WORKSHEET 5

Impervious post-development Bankfull Runoff Calculations ($V_{bf\text{-}per\text{-}post}$)

A.	2 year/24 hour storm event	P=	2.35	in
B.	Impervious Cover CN	CN=	98	
C.	S = (1000/CN)-10	S=	0.20	in
D.	$Q = (P-0.2S)^2/(P+0.8S)$	Q=	2.12	in
E.	Impervious Cover Area (ft²)	A=	432474.2	ft²
F.	$V_{BF\text{-}Post\text{-}Imp} = Q(1/12) \times A_{Imp}$	$V_{BF\text{-}Post\text{-}Imp}$	76,464	ft³

WORKSHEET 6

100-year Storm Runoff Calculations

Pervious post-development 100-Year Runoff Calculations ($V_{100\text{-}per\text{-}post}$)

A.	100-Year Storm Event	P=	5.11	in
B.	Pervious Cover CN	CN=	72.00	
C.	S = (1000/CN)-10	S=	3.89	in
D.	$Q_{100\text{-}per} = (P-0.2S)^2/(P+0.8S)$	Q=	2.28	in
E.	Pervious Cover Area (ft²)	A=	899825.2	ft²
F.	$V_{100\text{-}per\text{-}post} = Q(1/12) \times A$	$V_{100\text{-}per\text{-}post}$=	163,005	ft³

WORKSHEET 7

Impervious post-development 100-Year Runoff Calculations ($V_{100\text{-}per\text{-}post}$)

A.	100-Year Storm Event	P=	5.11	in
B.	Impervious Cover CN	CN=	98.00	
C.	S = (1000/CN)-10	S=	0.20	in
D.	$Q_{100\text{-}imp} = (P-0.2S)^2/(P+0.8S)$	Q=	4.87	in
E.	Impervious Cover Area (ft²)	A=	432474.2	ft²
F.	$V_{100\text{-}imp\text{-}post} = Q(1/12) \times A$	$V_{100\text{-}imp\text{-}post}$=	175,621	ft³

WORKSHEET 8

Determine Time of Concentration for Applicable Flow Types

Based on Storm Sewer Calculations
21.88 min

WORKSHEET 9

Runoff Summary

First Flush Volume (V_{ff})	=	59,968	ft³
Pre-Development Bankfull Runoff Volume ($V_{bf\text{-}pre}$)	=	10,693	ft³
Pervious Cover Post-Development Bankfull Runoff Volume	=	32,319	ft³
Impervious Cover Post-Development Bankfull Runoff Volume	=	76,464	ft³
Total BF Volume	=	108,783	ft³
Pervious Cover Post-Development 100-Year Runoff Volume	=	163,005	ft³
Impervious Cover Post-Development 100-Year Runoff Volume	=	175,621	ft³
Total 100-Year Volume	=	338,626	ft³

WORKSHEET 10

Retention Requirement

$V_{RET} = 2(V_{100})$ = 677,252 ft³ REQUIRED
698,619 ft³ PROVIDED

LEGEND

EXISTING	PROPOSED	
45c		SANITARY SEWER
		WATER MAIN
		STORM SEWER
		DITCH/SWALE
X	X	FENCE (PROPOSED TREE PROTECTION)
		SILT FENCE
		FLOOD PLAIN PER FEMA MAP
		WETLANDS
00		CONTOUR
		CURB AND GUTTER
		EASEMENT
GAS	GAS	GAS MAIN
		OVERHEAD UTILITY LINES
S	S	SANITARY MANHOLE
		STORM MANHOLE
		REAR YARD CATCH BASIN
		ROAD CATCH BASIN
		END SECTION
		FIRE HYDRANT
		GATE VALVE AND WELL
		PAVEMENT (ASPHALT)
		PAVEMENT (CONCRETE SIDEWALK)
		DIRECTION SURFACE WATER FLOW
		OVERFLOW ROUTE
1000.00		GRADE

ENGINEERING | PLANNING
LAND DEVELOPMENT CONSULTING
39205 COUNTRY CLUB DR. STE C8
FARMINGTON HILLS, MI 48331
248.308.3331
SKE GROUP

NO.	REVISION	DATE
1.	REV PER TOWNSHIP REVIEW	10-23-25

SUBMITTAL DATE:

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

CLIENT:
M/I HOMES OF MICHIGAN, LLC
40950 WOODWARD AVE.
SUITE 203
BLOOMFIELD HILLS,
MI 48304

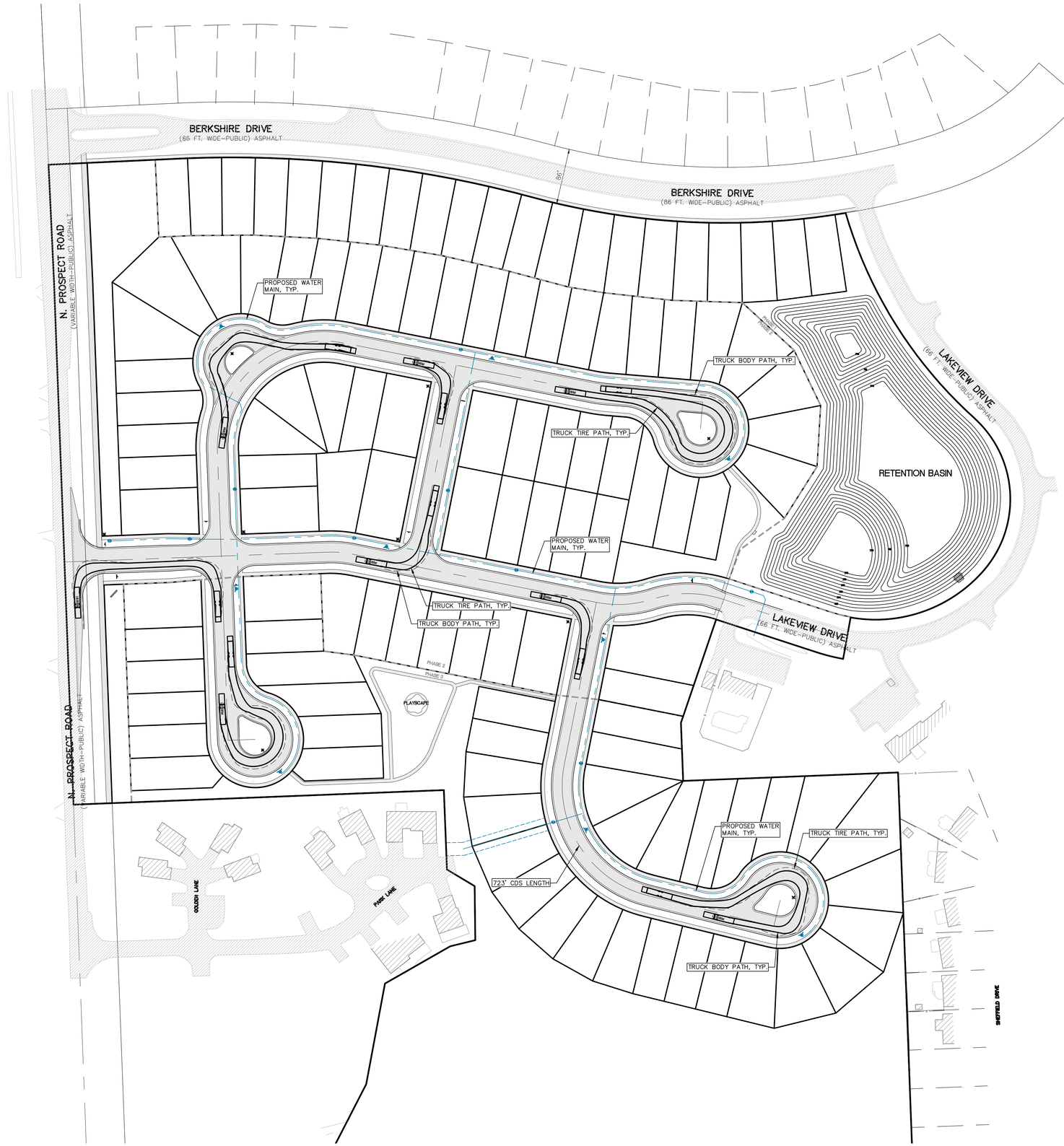
PROJECT NAME:
PROSPECT POINTE SOUTH
PART OF THE WEST 1/2 OF SECTION 34, T.2S., R.7E., SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MI

SHEET TITLE:
STORM WATER MANAGEMENT PLAN

PROJECT NUMBER:
25-002

PAGE No.:
C13

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N

GRAPHIC SCALE

80 0 40 80 160

(IN FEET)
1" = 80'

LEGEND

EXISTING	PROPOSED	
		SANITARY SEWER
		WATER MAIN
		STORM SEWER
		DITCH/SWALE
		FENCE (PROPOSED TREE PROTECTION)
		SILT FENCE
		FLOOD PLAIN PER FEMA MAP
		WETLANDS
		CONTOUR
		CURB AND GUTTER
		EASEMENT
GAS	GAS	GAS MAIN
		OVERHEAD UTILITY LINES
		SANITARY MANHOLE
		STORM MANHOLE
		REAR YARD CATCH BASIN
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		END SECTION
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		DIRECTION SURFACE WATER FLOW
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PART OF THE WEST 1/2 OF SECTION 34, T.2S., R.7E., SUPERIOR TOWNSHIP, WASHTENAW COUNTY, MI

SHEET TITLE:
EMERGENCY VEHICLE ROUTE

PROJECT NUMBER:
25-002

PAGE No.:
C14

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STORM SEWER CALCS

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	Length ft	Dia in	Pipe slope-%	Rim	Invert upst.	Invert dnst.	Invert drop	HGL	Hyd.Gr. %	Vel. ft/sec	Tr Time min	RIM - HGL	T/Pipe - RIM
63	62	0.31	0.47	0.15			0.15	15.00	4.38	0.64	97.30	12	0.34	795.40	791.39	791.06		792.64	0.03	2.65	0.61	2.76	3.01
62	61	0.31	0.47	0.15			0.29	15.61	4.31	1.26	97.66	12	0.34	795.70	791.06	790.73		792.61	0.12	2.65	0.62	3.09	3.64
61	60	0.36	0.47	0.17			0.46	16.23	4.24	1.96	97.66	12	0.34	795.60	790.73	790.40		792.49	0.30	2.65	0.62	3.11	3.87
60	59	0.36	0.47	0.17			0.63	16.84	4.18	2.63	97.66	12	0.34	796.40	790.40	790.06		792.20	0.55	3.35	0.49	4.20	5.00
59	58	0.36	0.47	0.17			0.80	17.33	4.13	3.30	97.66	12	0.34	796.20	790.06	789.73		791.66	0.86	4.21	0.39	4.54	5.14
58	57	0.35	0.47	0.16			0.96	17.72	4.10	3.95	105.71	15	0.34	795.60	789.53	789.17		790.83	0.37	3.22	0.55	4.77	4.82
57	56	0.35	0.47	0.16			1.13	18.26	4.04	4.56	107.96	15	0.26	794.80	789.17	788.89		790.43	0.50	3.72	0.48	4.37	4.38
56	55	0.36	0.47	0.17			1.30	18.75	4.00	5.19	107.97	15	1.90	794.80	788.89	786.84		789.89	1.90	7.26	0.25	4.91	4.66
55	54	0.37	0.47	0.17			1.47	19.00	3.98	5.85	108.00	15	2.00	793.50	786.84	784.68	6.50	787.84	2.00	7.44	0.24	5.66	5.41
54	ES3	0.43	0.47	0.20			1.67	19.24	3.96	6.62	109.02	15	2.00	790.60	778.18	776.00		779.18	2.00	7.44	0.24	11.42	4.67
																		777.00					
53	52	0.26	0.47	0.12			0.12	15.00	4.38	0.53	50.00	12	1.50	795.50	790.52	789.77		791.32	1.50	5.56	0.15	4.18	3.98
52	49	0.20	0.47	0.09			0.22	15.15	4.36	0.94	105.13	12	2.50	795.80	789.77	787.14		790.57	2.50	7.17	0.24	5.23	5.03
51	50	0.72	0.47	0.34			0.34	15.00	4.38	1.48	31.00	12	0.34	792.83	787.88	787.77		789.45	0.17	2.65	0.20	3.38	3.95
50	49	0.82	0.47	0.39			0.72	15.20	4.35	3.15	185.47	12	0.34	792.83	787.77	787.14		789.39	0.78	4.01	0.77	3.44	4.06
49	48	0.54	0.47	0.25	52	0.22	1.19	15.97	4.27	5.10	100.00	15	1.50	792.80	786.94	785.44		787.94	1.50	6.45	0.26	4.86	4.61
48	27	0.24	0.47	0.11			1.31	16.22	4.25	5.55	100.00	15	1.50	793.10	785.44	783.94	2.00	786.44	1.50	6.45	0.26	6.66	6.41
47	46	0.64	0.47	0.30			0.81	15.00	4.38	3.53	6.00	12	0.34	789.07	783.68	783.66		786.36	0.98	4.49	0.02	2.71	4.39
46	45	0.64	0.47	0.30			1.10	15.02	4.37	4.83	90.04	12	0.50	789.07	783.66	783.21		786.30	1.84	6.15	0.24	2.77	4.41
45	44						1.10	15.27	4.35	4.80	144.37	15	0.50	791.30	783.01	782.29		784.65	0.55	3.91	0.62	6.65	7.04
ES2	44	1.08	0.47	0.51			0.51	15.00	4.38	2.22	108.20	12	0.34		782.86	782.49		784.27	0.39	2.83	0.64		
44	43	0.14	0.47	0.07	45	1.10	1.17	15.64	4.31	5.04	103.78	15	0.26	786.00	782.29	782.02		783.85	0.61	4.11	0.42	2.15	2.46
43	42	0.06	0.47	0.03			1.20	16.06	4.26	5.11	104.07	18	0.20	787.50	781.82	781.61		783.22	0.24	2.89	0.60	4.28	4.18
42	41	0.19	0.47	0.09			1.29	16.66	4.20	5.41	103.49	18	0.20	787.30	781.61	781.41	0.00	782.97	0.27	3.06	0.56	4.33	4.19
41	24	0.38	0.47	0.18			1.47	17.22	4.14	6.08	125.89	24	0.14	786.70	781.01	780.83		782.70	0.14	2.69	0.78	4.00	3.69
40	39	0.34	0.47	0.16			0.16	15.00	4.38	0.70	31.00	12	3.00	794.93	789.39	788.46	0.10	790.19	3.00	7.86	0.07	4.74	4.54
39	38	0.43	0.47	0.20			0.36	15.07	4.37	1.58	93.70	12	3.00	794.93	788.36	785.55		789.16	3.00	7.86	0.20	5.77	5.47
38	23						0.36	15.26	4.35	1.57	133.15	12	3.00	792.20	785.55	781.55	0.10	786.35	3.00	7.86	0.28	5.85	5.65
37	36	0.29	0.47	0.14			0.14	15.00	4.38	0.60	31.00	12	1.00	794.86	789.52	789.21	0.10	790.32	1.00	4.54	0.11	4.54	4.34
36	17	0.31	0.47	0.15			0.28	15.11	4.36	1.23	199.73	12	2.00	794.86	789.11	785.11	0.10	789.91	0.12	6.42	0.52	4.95	4.65
35	34	0.67	0.47	0.31			0.31	15.00	4.38	1.38	169.19	12	1.00	794.70	789.48	787.79		790.28	1.00	4.54	0.62	4.42	4.22
34	13	0.24	0.47	0.11			0.43	15.62	4.31	1.84	100.00	12	3.40	793.70	787.79	784.39	0.00	788.59	0.27	8.36	0.20	5.11	4.91
33	32	0.71	0.47	0.33			0.33	15.00	4.38	1.46	31.00	12	0.34	790.49	783.93	783.82		786.40	0.17	2.65	0.20	4.09	5.56
32	31	0.93	0.47	0.44			0.77	15.20	4.35	3.36	132.50	12	0.34	790.49	783.82	783.37		786.35	0.89	4.27	0.52	4.14	5.67
31	30	0.39	0.47	0.18			0.95	15.71	4.30	4.10	137.83	15	0.26	788.00	783.17	782.81	0.10	785.17	0.40	3.34	0.69	2.83	3.58
30	29	0.29	0.47	0.14			1.09	16.40	4.23	4.61	151.42	15	0.26	789.40	782.71	782.32		784.62	0.51	3.76	0.67	4.78	5.34
29	28	0.20	0.47	0.09			1.18	17.07	4.16	4.93	69.33	18	0.20	790.00	782.12	781.98		783.85	0.22	2.79	0.41	6.15	6.38
28	27	0.48	0.47	0.23			1.41	17.49	4.12	5.81	119.15	18	0.20	789.80	781.98	781.74		783.70	0.31	3.29	0.60	6.10	6.32
27	26	0.33	0.47	0.16	48	1.31	2.87	18.09	4.06	11.66	137.50	24	0.14	792.50	781.34	781.15	0.10	783.33	0.27	3.71	0.62	9.17	7.31
26	25	0.17	0.47	0.08			2.95	18.71	4.00	11.82	31.00	24	0.14	792.05	781.05	781.01		782.97	0.27	3.76	0.14	9.08	8.90
25	24	0.17	0.47	0.08			3.03	18.84	3.99	12.10	126.12	24	0.14	792.05	781.01	780.83		782.88	0.29	3.85	0.55	9.17	9.04
24	23	0.18	0.47	0.08	41	1.47	4.58	19.39	3.94	18.07	177.36	36	0.10	788.60	780.03	779.85		782.52	0.10	2.98	0.99	6.08	5.57
23	22	0.39	0.47	0.18	38	0.36	5.13	20.38	3.86	19.77	31.00	36	0.10	787.24	779.85	779.82		782.34	0.10	2.98	0.17	4.90	4.39
22	2	0.25	0.47	0.12			5.25	20.55	3.84	20.15	45.78	36	0.10	787.24	779.82	779.78	0.10	782.31	0.10	2.98	0.26	4.93	4.42
21A	21	1.03	0.47	0.48			0.48	15.00	4.38	2.11	7.79	12	0.34	791.54	787.49	787.47	0.10	788.29	0.35	2.68	0.05	3.25	3.05
21	1	1.03	0.47	0.48			0.96	15.05	4.37	4.21	138.38	12	3.40	791.54	787.37	782.66	5.00	788.17	3.40	8.36	0.28	3.37	3.07
12A	12	0.72	0.47	0.34			0.34	15.00	4.38	1.48	8.24	12	4.80	792.89	786.60	786.21	2.00	787.40	4.80	9.94	0.01	5.49	5.29
20	19	0.29	0.47	0.14			0.14	15.00	4.38	0.60	100.00	12	0.34	792.50	787.11	786.77		787.96	0.34	2.65	0.63	4.54	4.39
19	18	0.24	0.47	0.11			0.25	15.63	4.31	1.07	100.00	12	0.34	792.00	786.77	786.43		787.62	0.09	2.65	0.63	4.38	4.23
18	17	0.26	0.47	0.12			0.37	16.26	4.24	1.57	83.00	12	1.70	792.00	786.43	785.01		787.53	0.20	5.91	0.23	4.47	4.57
17	16				36	0.28	0.65	16.49	4.22	2.76	6.00	12	0.34	792.40	785.01	784.99		787.37	0.60	3.51	0.03	5.03	6.29
16	15	0.19	0.47	0.09			0.74	16.52	4.21	3.13	38.00	12	0.34	791.91	784.99	784.86		787.33	0.77	3.98	0.16	4.58	5.92
15	14	0.19	0.47	0.09			0.83	16.68	4.20	3.49	89.00	12	0.34	791.91	784.86	784.56		787.04	0.96	4.45	0.33	4.87	6.05
14	13	0.21	0.47	0.10			0.93	17.02	4.17	3.88	50.00	12	0.34	791.80	784.56	784.39		786.18	1.18	4.94	0.17	5.62	6.24
13	12	0.18	0.47	0.08	34	0.43	1.44	17.18	4.15	5.99	132.63	24	0.14	791.80	783.59	783.41		785.59	0.07	2.69	0.82	6.21	6.21
12	11	0.72	0.47	0.34	12A	0.34	2.12	18.00	4.07	8.63	31.00	24	0.14	792.89	783.41	783.36		785.50	0.15	2.75	0.19	7.39	5.68
11	10	0.90	0.47	0.42			2.54	18.19	4.05	10.30	132.51	24	0.14	792.89	783.36	783.18		785.46	0.21	3.28	0.67	7.43	7.53
10	9	0.44	0.47	0.21			2.75	18.87	3.99	10.97	90.07	24	0.14	792.30	783.18	783.05		785.18	0.24	3.49	0.43	7.12	7.12
9	8	0.40	0.47	0.19			2.94	19.30	3.95	11.61	87.50	24	0.14	796.10	783.05	782.93		784.97	0.26	3.69	0.39	11.13	11.05
8	7	0.37	0.47	0.17			3.11	19.69	3.92	12.18	31.00	24	0.14	796.73	782.93	782.89		784.74	0.29	3.88	0.13	11.99	11.80
7	6	0.42	0.47	0.20			3.31	19.82	3.90	12.92	87.50	24	0.14	796.73	782.89	782.76		784.65	0.33	4.11	0.35	12.08	11.84
6	5	0.35	0.47	0.16			3.47	20.18	3.87	13.45	100.00	24	1.70	795.70	782.76	781.06		784.36	0.35	9.39	0.18	11.34	10.94
5	4	0.37	0.47	0.17			3.65	20.36	3.86	14.07	101.12	24	0.14	795.70	781.06	780.92	0.10	783.38	0.39	4.48	0.38	12.32	12.64
4	3	0.18	0.47	0.08			3.73	20.73	3.83	14.28	25.15	24	0.14	793.50	780.82	780.79	0.10	782.99	0.40	4.55	0.09	10.51	10.58
3	2	0.19	0.47	0.09			3.82	20.82	3.82	14.59	150.75	24	0.14	792.90	780.69	780.48		782.89	0.42	4.64	0.54	10.01	10.11
2	1	0.22	0.47	0.10	22	5.25	9.17	21.37	3.77	34.61	112.74	36	0.10	787.50	779.68	779.56	3.50	782.27	0.27	4.90	0.38	5.23	4.72
1	ES1				21	0.96	10.13	21.75	3.74	37.93	62.41	36	0.10	787.00	776.06	776.00		778.60	0.32	5.37	0.19	8.40	3.34
																		778.40					

SANITARY SEWER DESIGN

MH	MH	Length ft	Pipe slope-%	Invert upst.	Invert dnst.	Rim	Rim - Inv
34	33	112.71	1.00	789.32	788.20	797.9	8.58
33	32	156.25	1.00	788.10	786.53	797.3	9.20
32	31	156.25	1.00	786.43	784.87	798.1	11.67
31	30	153.78	1.00	784.77	783.23	797.6	12.83
30	29	147.08	1.00	783.13	781.66	796.8	13.67
29	28	147.08	1.00	781.56	780.09	797.5	15.94
28	27	125.78	1.00	779.99	778.73	794.9	14.91
27	EX3	72.49	1.00	778.63	777.91	791.7	13.07
26	25	60.02	3.00	784.74	782.94	798.0	13.26
25	24	139.01	3.00	782.84	778.67	796.8	13.96
24	9	146.54	0.40	778.57	777.99	792.5	13.93
23	22	135.55	1.00	780.38	779.02	790.8	10.42
22	17	261.46	0.40	778.92	777.88	791.3	12.38
21	20	54.35	1.00	779.80	779.26	792.4	12.60
20	19	107.04	0.40	779.16	778.73	791.8	12.64
19	18	83.64	0.40	778.63	778.29	791.2	12.57
18	17	78.50	0.40	778.19	777.88	791.0	12.81
17	16	193.70	0.40	777.78	777.00	791.9	14.12
16	EX2	33.20	0.40	776.90	776.77	787.2	10.30

SANITARY SEWER DESIGN

MH	MH	Length ft	Pipe slope-%	Invert upst.	Invert dnst.	Rim	Rim - Inv
15	14	87.90	1.00	786.48	785.61	797.7	11.22
14	13	256.00	1.00	785.51	782.95	799.0	13.49
13	12	200.01	1.00	782.85	780.85	798.9	16.05
12	11	122.29	1.00	780.75	779.00	795.8	15.05
11	10	116.55	0.40	778.92	778.46	792.6	13.68
10	9	92.31	0.40	778.35	777.99	787.4	9.04
9	8	156.38	0.40	777.89	777.26	787.9	10.01
8	EX2	97.90	0.40	777.16	776.77	788.5	11.34
7	6	87.48	1.00	784.26	783.38	795.0	10.74
6	1	219.27	0.40	783.28	782.41	794.7	11.42
5	4	188.69	1.00	785.38	783.50	797.1	11.72
4	1	246.79	0.40	783.40	782.41	794.2	10.80
3	2	200.75	1.00	786.41	784.40	799.2	12.79
2	1	189.02	1.00	784.30	782.41	797.3	13.00
1	EX1	144.47	0.40	782.31	781.73	793.5	11.19

SANITARY BASIS OF DESIGN

NUMBER OF UNITS	118	UNITS
POPULATION	3.5	PEOPLE/UNITS
	413	PEOPLE
AVERAGE FLOW		
PEOPLE X 100 GAL/CAP/DAY	41300	GAL/DAY
	0.064	CFS
PEAK FLOW		
PEAK FACTOR (< 500 PEOPLE)	4	
PEAK FACTOR X AVERAGE FLOW	0.256	CFS
	114.71	GPM
Q PROVIDED (8" sanitary)	0.764	CFS
	342.88	GPM

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

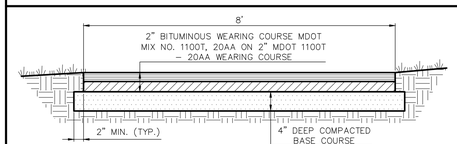
1. INSTALL ALL SOIL EROSION AND TREE PROTECTION FENCING AS PER APPROVED PLANS. CLEAR ONLY WHAT IS NECESSARY TO INSTALL FENCING. INSTALL TRACKING MAT.
2. STRIP AND STOCKPILE TOPSOIL IN A LOCATION APPROVED BY THE OWNER/ENGINEER. PLACEMENT OF ADDITIONAL CONTROL MEASURES MUST BE INSTALLED ON AND AROUND THE 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

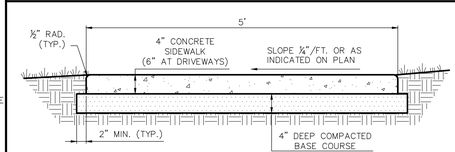
SILT FENCES SHOULD BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND SEVERAL TIMES DURING PROLONGED RAINFALLS. IF THE FENCE IS SAGGING OR THE SOIL HAS REACHED ONE HALF THE HEIGHT OF THE FABRIC, THE SOIL BEHIND THE FABRIC MUST BE REMOVED AND DISPOSED OF IN A STABLE UPLAND SITE. THE SOIL CAN BE ADDED TO 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

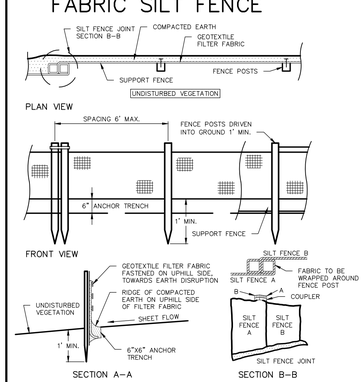
SEEDED, SODDED OR MULCHED AREAS SHOULD BE CHECKED FOLLOWING EACH RAIN TO ENSURE THE MATERIAL IS STAYING IN PLACE. ADDITIONAL TACKING MATERIALS OR NETTING MAY BE NEEDED TO BE APPLIED TO HOLD THE AFOREMENTIONED MATERIALS IN PLACE. MAINTENANCE PROCEDURES SHOULD ALSO BE FOLLOWED FOR THE BMP'S WHICH WERE IMPLEMENTED TO KEEP ERODED SOIL OR CONCENTRATED RUNOFF AWAY FROM THESE TARGET AREAS.



ASPHALT PATHWAY DETAIL



CONCRETE SIDEWALK DETAIL


SILT FENCE JOINT SECTION B–B
COMPACTED EARTH
GEOTEXTILE FILTER FABRIC
SUPPORT FENCE
FENCE POSTS
UNDISTURBED VEGETATION
PLAN VIEW
SPACING 6' MAX.
FENCE POSTS DRIVEN INTO GROUND 1' MIN.
6" ANCHOR TRENCH
1' MIN.
SUPPORT FENCE
FRONT VIEW
GEOTEXTILE FILTER FABRIC FASTENED ON UPHILL SIDE, TOWARDS EARTH DISRUPTION
RIDGE OF COMPACTED EARTH ON UPHILL SIDE OF FILTER FABRIC
SHEET FLOW
UNDISTURBED VEGETATION
1' MIN.
6"X6" ANCHOR TRENCH
SECTION



Landscape Summary - This Sheet

Street Trees

Street Frontage Length	6,371'
Trees Required	106 Trees (6,371 / 60)
Trees Provided	106 Trees
Woodland Replacement Required	2,913 Trees
Woodland Replacement Provided	284 Trees
Sheet L-1	149 Trees
Sheet L-2	126 Trees
Sheet L-3	9 Trees
Sheet L-4	0 Trees

Plant List - This Sheet

sym.	qty.	botanical name	common name	caliper	spacing	root	height
Woodland Replacement							
ARR	19	Acer rubrum 'Red Pointe'	Red Pointe Maple	2.5"	as shown	B&B	
ASR	5	Acer saccharum 'Green Mountain'	Sugar Maple	2.5"	as shown	B&B	
BNR	18	Betula nigra	Multi-Stem River Birch		as shown	B&B	10'-12'
PAR	16	Picea abies	Norway Spruce		as shown	B&B	6'-7'
PGR	20	Picea glauca var. densata	Black Hills Spruce		as shown	B&B	6'-7'
PSR	12	Pinus strobus	White Pine		as shown	B&B	6'-7'
QMR	13	Quercus macrocarpa	Bur Oak	2.5"	as shown	B&B	
SYR	4	Syringa reticulata 'Ivry Silk'	Ivory Silk Lilac Tree	2.5"	as shown	B&B	
TAR	14	Tilia americana 'Redmond'	Redmond Linden	2.5"	as shown	B&B	
UPR	28	Ulmus x holandica 'Pioneer'	Pioneer Elm	2.5"	as shown	B&B	
	149	Woodland Replacement Trees Provided					

sym.	qty.	botanical name	common name	caliper	spacing	root	height
Street Trees							
AF	8	Acer x. freemanii 'Autumn Blaze'	Autumn Blaze Maple	2.5"	as shown	B&B	
AS	24	Acer saccharum 'Green Mountain'	Sugar Maple	2.5"	as shown	B&B	
LT	18	Liriodendron tulipifera	Tulip Tree	2.5"	as shown	B&B	
GT	12	Gleditsia tiacanthos var. Inermis	Honeylocust	2.5"	as shown	B&B	
PE	11	Platanus x acerifolia 'Exclamation'	Exclamation London Planetree	2.5"	as shown	B&B	
SY	2	Syringa reticulata 'Ivry Silk'	Ivory Silk Lilac Tree	2.5"	as shown	B&B	
TA	12	Tilia americana 'Redmond'	Redmond Linden	2.5"	as shown	B&B	
UP	19	Ulmus x holandica 'Pioneer'	Pioneer Elm	2.5"	as shown	B&B	
	106	Street Trees Provided					

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STATE OF MICHIGAN
JAMES C. ALLEN
Landscape Architect
No. 1301
REGISTERED LANDSCAPE ARCHITECT

Title:

Landscape Plan

Project:

Prospect Point South
Superior Township, Michigan

Prepared for:

M/I Homes of Michigan, LLC
40950 Woodward Avenue, Suite 203
Bloomfield Hills, Michigan 48304

Revision:	Issued:
Review	June 4, 2025
Revised	June 20, 2025
Revised	September 25, 2025

Job Number:

25-035

Drawn By:	Checked By:
jca	jca

0' 25' 50'

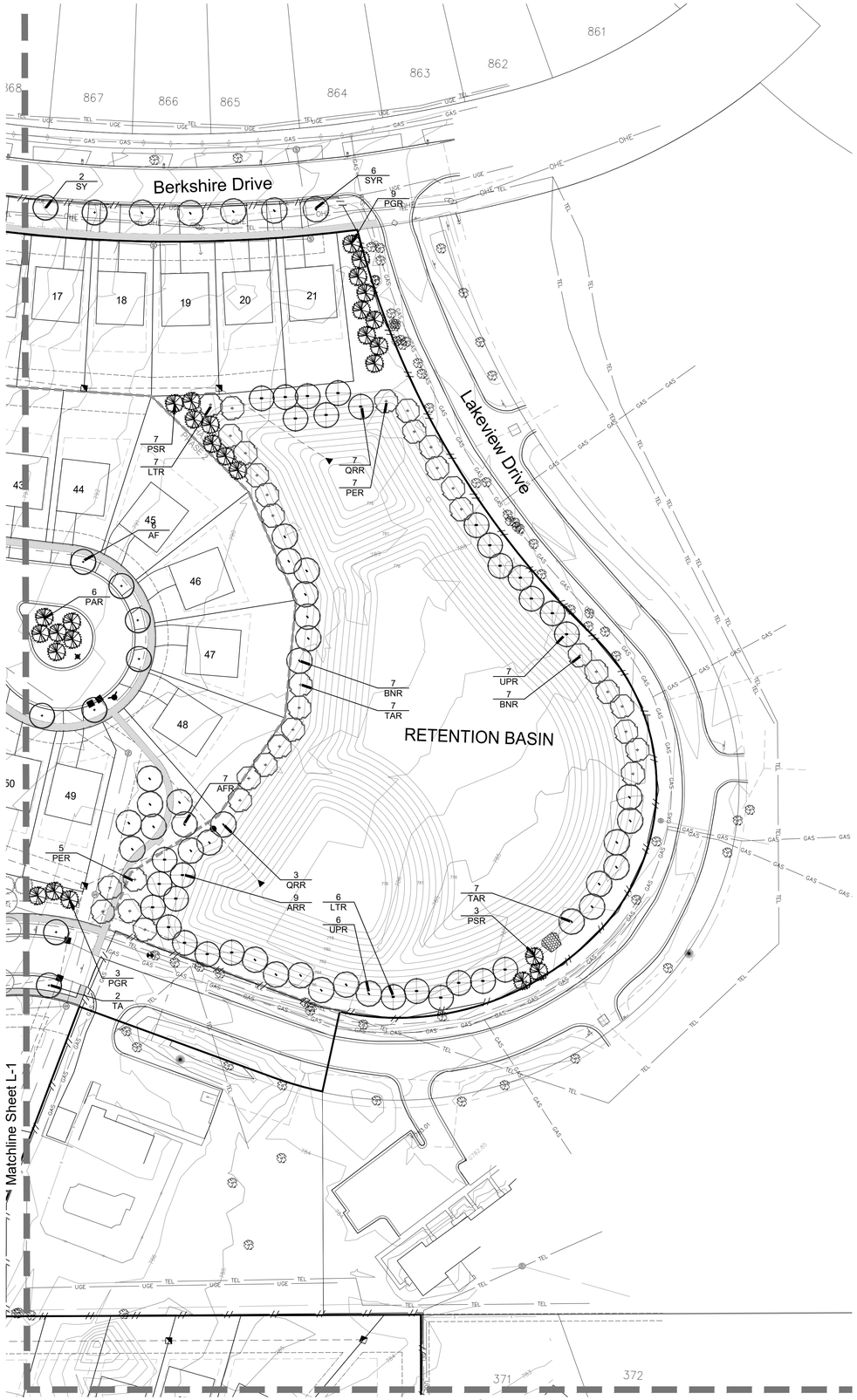
NORTH
1"=50'

Sheet No.

L-1

Know what's below. Call before you dig.

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Landscape Summary - This Sheet

Street Trees

Street Frontage Length	590'
Trees Required	9.8 Trees (590 / 60)
Trees Provided	10 Trees
Woodland Replacement Provided	126 Trees

Plant List - This Sheet

sym.	qty.	botanical name	common name	caliper	spacing	root	height
Street Trees							
AF	8	Acer x. freemanii 'Autumn Blaze'	Autumn Blaze Maple	2.5"	as shown	B&B	
AS	24	Acer saccharum 'Green Mountain'	Sugar Maple	2.5"	as shown	B&B	
LT	18	Liriodendron tulipifera	Tulip Tree	2.5"	as shown	B&B	
GT	12	Gleditsia tiacanthos var. inermis	Honeylocust	2.5"	as shown	B&B	
PE	11	Platanus x acerifolia 'Exclamation'	Exclamation London Planetree	2.5"	as shown	B&B	
SY	2	Syringa reticulata 'Ivry Silk'	Ivory Silk Lilac Tree	2.5"	as shown	B&B	
TA	12	Tilia americana 'Redmond'	Redmond Linden	2.5"	as shown	B&B	
UP	19	Ulmus x holandica 'Pioneer'	Pioneer Elm	2.5"	as shown	B&B	
	106	Street Trees Provided					

L-2

sym.	qty.	botanical name	common name	caliper	spacing	root	height
Woodland Replacement							
AFR	7	Acer x. freemanii 'Autumn Blaze'	Autumn Blaze Maple	2.5"	as shown	B&B	
ARR	9	Acer rubrum 'October Glory'	Red Maple 'October Glory'	2.5"	as shown	B&B	
BNR	14	Betula nigra	Multi-Stem River Birch		as shown	B&B	10'-12'
LTR	13	Liriodendron tulipifera	Tulip Tree	2.5"	as shown	B&B	
PAR	6	Picea abies	Norway Spruce		as shown	B&B	6'-7'
PER	12	Platanus x acerifolia 'Exclamation'	Exclamation London Planetree	2.5"	as shown	B&B	
PGR	12	Picea glauca var. densata	Black Hills Spruce		as shown	B&B	6'-7'
PSR	10	Pinus strobus	White Pine		as shown	B&B	6'-7'
QRR	10	Quercus rubra	Red Oak	2.5"	as shown	B&B	
SYR	6	Syringa reticulata 'Ivry Silk'	Ivory Silk Lilac Tree	2.5"	as shown	B&B	
TAR	14	Tilia americana 'Redmond'	Redmond Linden	2.5"	as shown	B&B	
UPR	13	Ulmus x holandica 'Pioneer'	Pioneer Elm	2.5"	as shown	B&B	
	126	Woodland Replacement Trees Provided					

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STATE OF MICHIGAN
JAMES C. ALLEN
Landscape Architect
6001766
REGISTERED LANDSCAPE ARCHITECT

Title:

Landscape Plan

Project:

Prospect Point South
Superior Township, Michigan

Prepared for:

M/I Homes of Michigan, LLC
40950 Woodward Avenue, Suite 203
Bloomfield Hills, Michigan 48304

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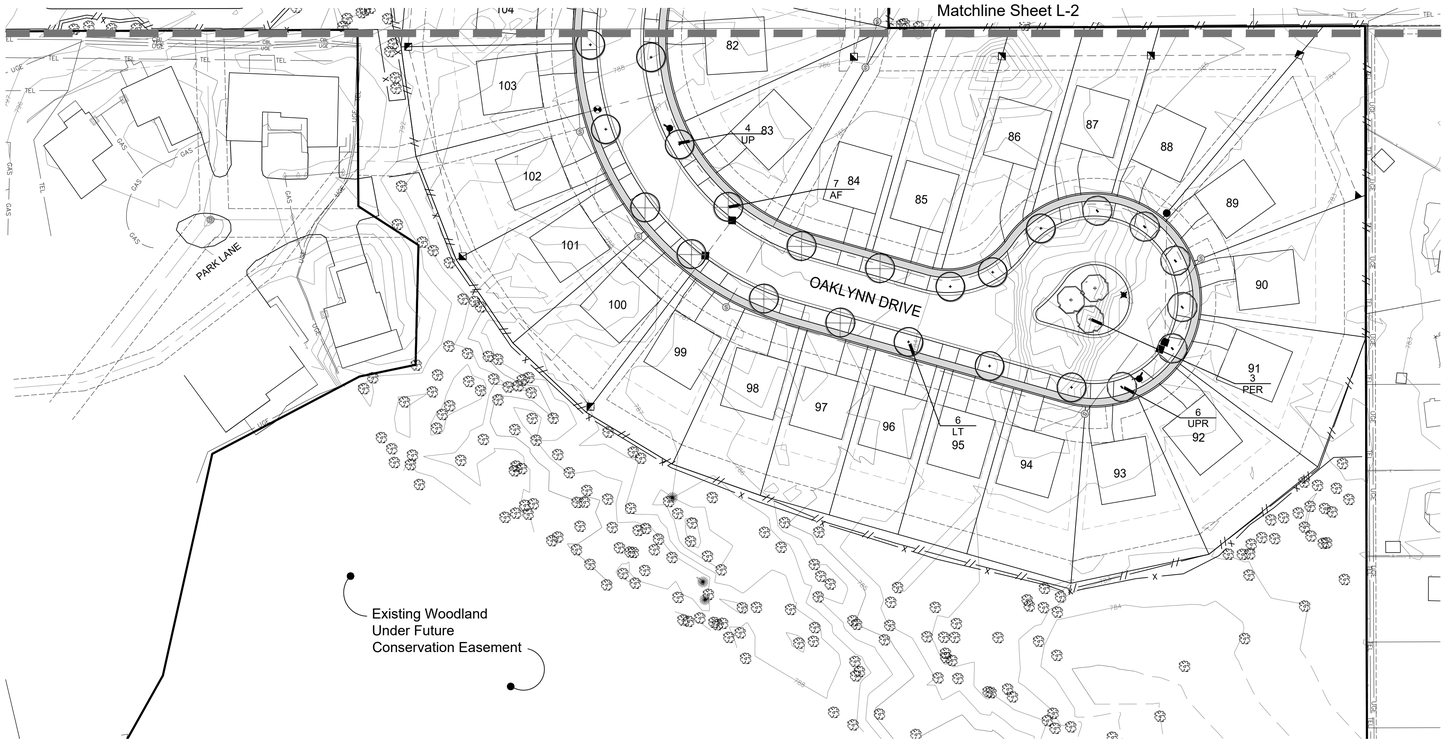
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NORTH
1"=50'

811 Know what's below. Call before you dig.

Sheet No.

L-2



Landscape Summary - This Sheet

Street Trees

Street Frontage Length	1,020'
Trees Required	17 Trees (1,020 / 60)
Trees Provided	17 Trees
Woodland Replacement Provided	9 Trees

Plant List - This Sheet

sym.	qty.	botanical name	common name	caliper	spacing	root	height
Woodland Replacement							
PER	3	Platanus x acerifolia 'Exclamation'	Exclamation London Planetree	2.5"	as shown	B&B	
UPR	6	Ulmus x holandica 'Pioneer'	Pioneer Elm	2.5"	as shown	B&B	
	9	Woodland Replacement Trees Provided					

sym.	qty.	botanical name	common name	caliper	spacing	root	height
Street Trees							
AF	7	Acer x. freemanii 'Autumn Blaze'	Autumn Blaze Maple	2.5"	as shown	B&B	
LT	6	Liriodendron tulipifera	Tulip Tree	2.5"	as shown	B&B	
UP	4	Ulmus x holandica 'Pioneer'	Pioneer Elm	2.5"	as shown	B&B	
	17	Street Trees Provided					

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Seal:



Title:

Landscape Plan

Project:

Prospect Point South
Superior Township, Michigan

Prepared for:

M/I Homes of Michigan, LLC
40950 Woodward Avenue, Suite 203
Bloomfield Hills, Michigan 48304

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Drawn By:	Checked By:
jca	jca

0' 25' 50'

NORTH
1"=50'

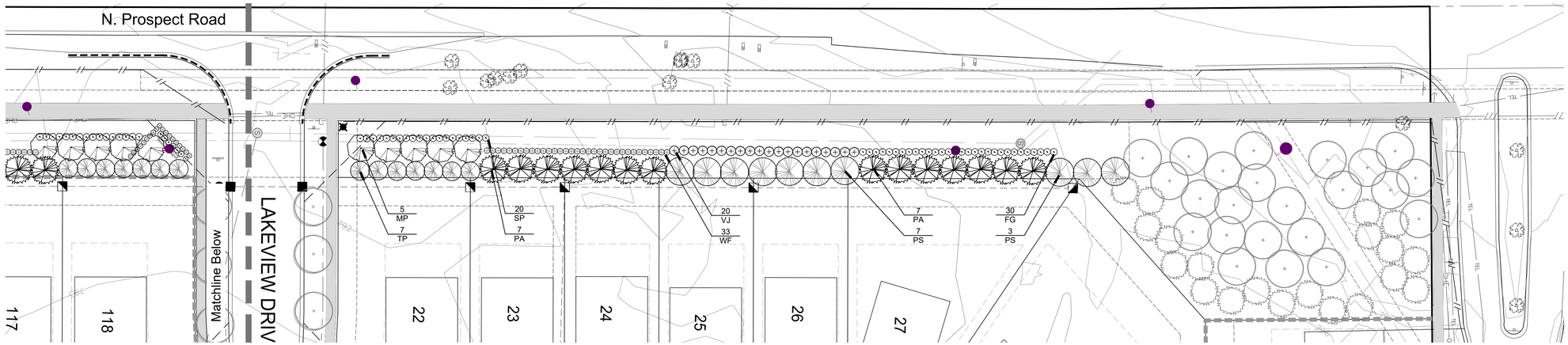
Know what's below. Call before you dig.

Sheet No.

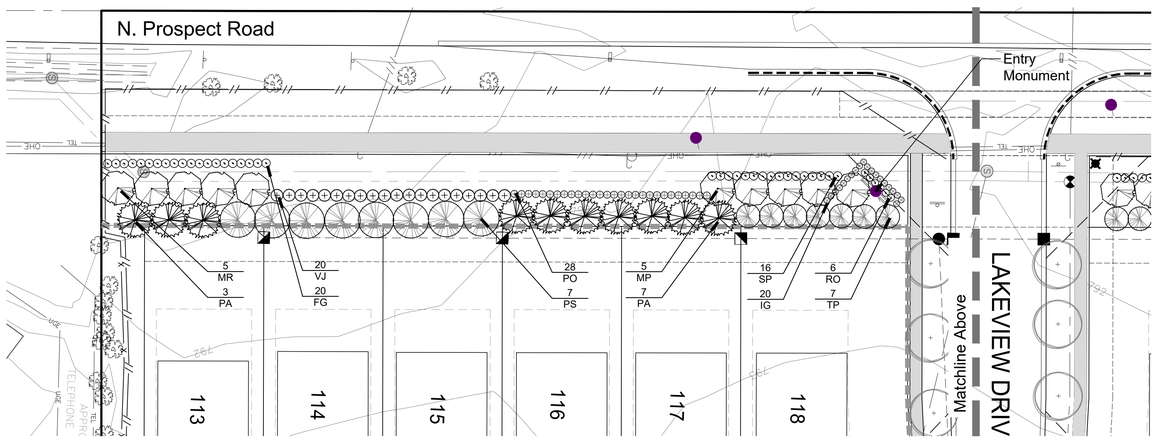
L-3

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North Greenbelt



South Greenbelt



Landscape Summary - This Sheet

Greenbelt	
Total Street Frontage	992'
Deciduous or Evergreens Required	66.1 Trees (992' / 15')
Deciduous or Evergreens Provided	70 Trees
Shrubs Required	198.4 Shrubs (992' / 15') x 3
Shrubs Provided	213 Shrubs

Plant List - This Sheet

sym.	qty.	botanical name	common name	caliper	spacing	root	height
Greenbelt Trees							
MP	10	Malus 'Profusion'	Profusion Crab Apple	2.0"	as shown	B&B	
MR	5	Malus 'Royal Raindrops'	Royal Raindrops Crab Apple	2.0"	as shown	B&B	
PA	24	Picea abies	Norway Spruce		as shown	B&B	6'-7'
PS	17	Pinus strobus	White Pine		as shown	B&B	6'-7'
TP	14	Thuja pl. 'Green Giant'	Green Giant Arborvitae		as shown	B&B	6'-7'
	70	Trees Provided					
Greenbelt Shrubs							
FG	50	Forsythia x 'Lynwood Gold'	Lynwood Gold Forsythia		as shown	cont	30"
IG	20	Ilex glabra 'Nordic'	Inkberry		as shown	cont	30"
PO	28	Physocarpus opulifolius 'Summer Wine'	Summer Wine Ninebark		as shown	cont	30"
RO	6	Rosa 'O'so Red	Red O'so Rose		as shown	cont	30"
SP	36	Spiraea x. bumalda	Anthony Waterer Spirea		as shown	cont	30"
VJ	40	Viburnum x juddi	Judd Viburnum		as shown	cont	30"
WF	33	Weigela f 'Spilled Wine'	Spilled Wine Weigela		as shown	cont	30"
	213	Shrubs Provided					

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LAND PLANNING / LANDSCAPE ARCHITECTURE
557 Carpenter
Northville, Michigan 48167
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t. 248.467.4668

Seal:



Title:

Greenbelt Plan

Project:

Prospect Point South
Superior Township, Michigan

Prepared for:

M/I Homes of Michigan, LLC
40950 Woodward Avenue, Suite 203
Bloomfield Hills, Michigan 48304

Revision:	Issued:
Review	June 4, 2025
Revised	June 20, 2025
Revised	September 25, 2025

Job Number:

25-035

Drawn By:	Checked By:
jca	jca

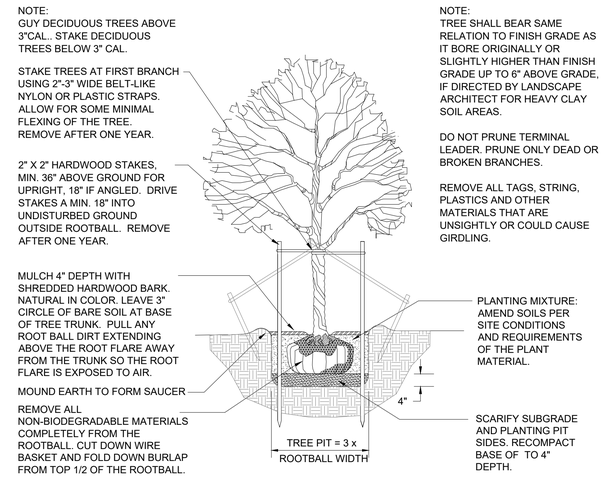
0' 15' 30'

NORTH
1"=30'

Know what's **below.** **Call** before you dig.

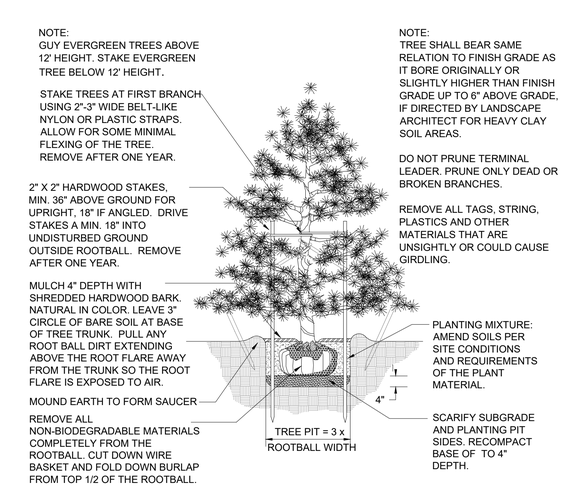
Sheet No.

L-4



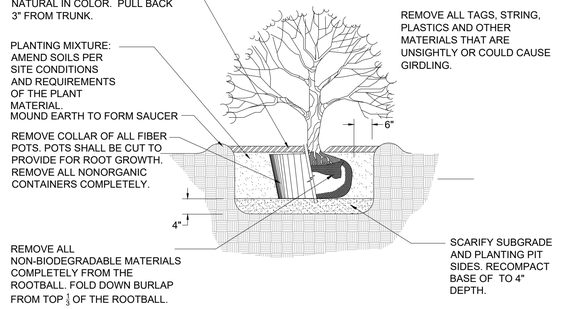
DECIDUOUS TREE PLANTING DETAIL

Not to scale



EVERGREEN TREE PLANTING DETAIL

Not to scale



SHRUB PLANTING 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.
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 peat, 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. See Stormwater Notes to the Left Regarding Chemical Applications within Stormwater Areas.
18. Sod shall be two year old "Baron/Cheriadelphi" Kentucky Blue Grass grown in a sod nursery on loam soil.
19. Deciduous Trees to be Provided Buck Guards.

PERENNIAL PLANTING DETAIL

Not to scale

TREE STAKING DETAIL

Not to scale

TRANSFORMER SCREENING DETAIL

Not to scale

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Seal:

STATE OF MICHIGAN
JAMES C. ALLEN
Landscape Architect
No. 1301
REGISTERED LANDSCAPE ARCHITECT

Title:

Landscape Details

Project:

Prospect Point South
Superior 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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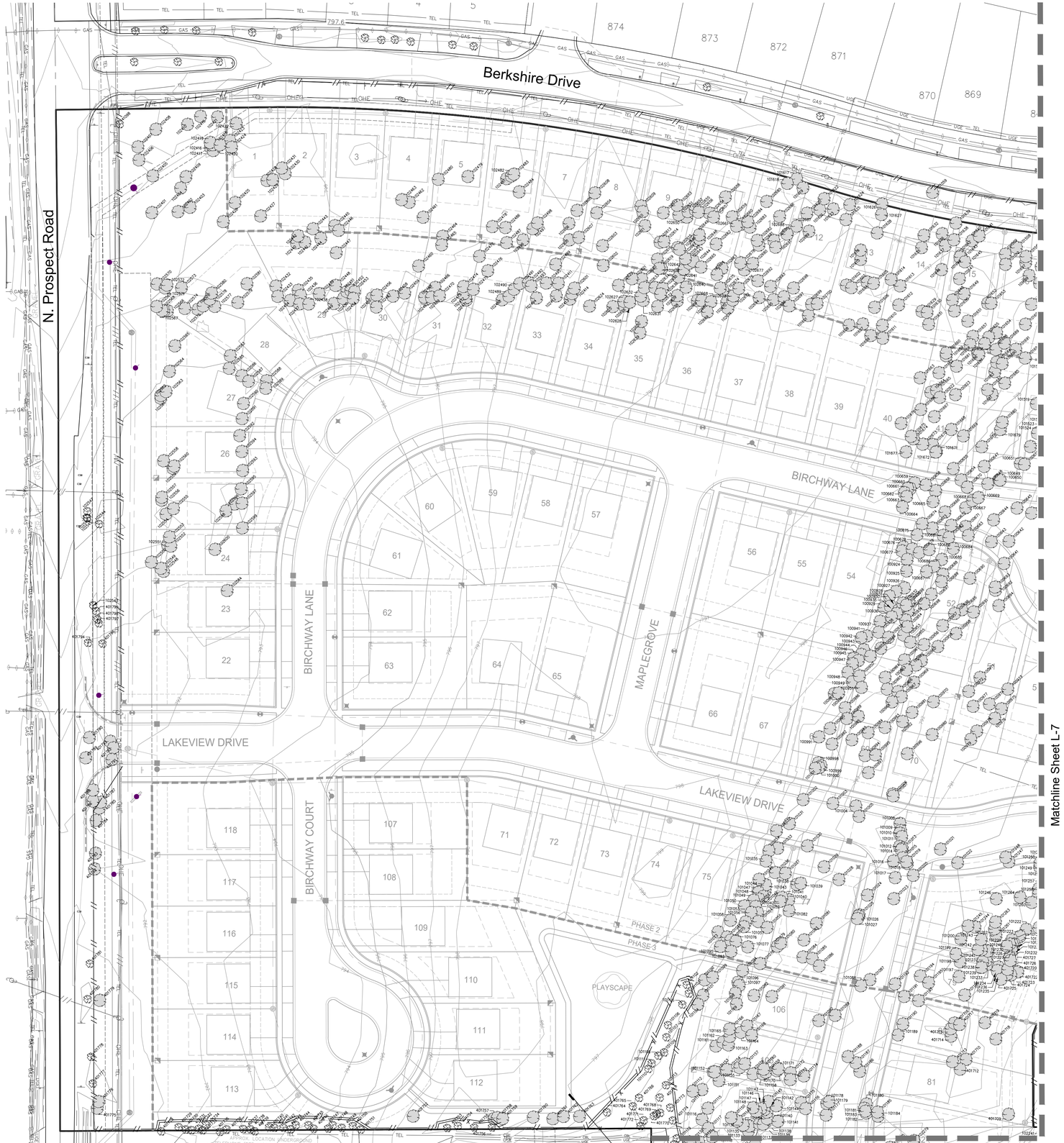
Drawn By:	Checked By:
jca	jca

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Sheet No.

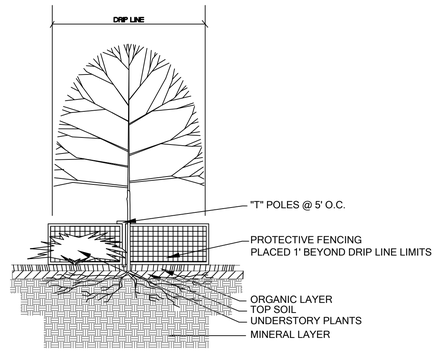
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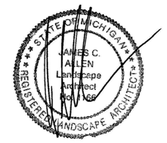
Tree Protection Detail



1. Either Plastic or Wood Orange Snow Fencing Shall be Installed at or Beyond the Dripline, Unless More Substantial Fencing is Required.
2. Stakes Shall be Metal "T" Poles Spaced no Further than 5' on Center.
3. Fencing Shall not be Installed Closer to the Tree than the Dripline of Those Trees to be Saved. Special Circumstances Shall be Reviewed by the City.
4. Fencing Shall be Erected Prior to Construction. The City Shall be Notified Once the Fencing is Instaled for Inspection.
5. Under no Circumstances Shall the Portective Fencing be Removed Without Proper Approval from the City.
6. No Person Shall Conduct any Activity Within Areas Proposed to Remain. This Shall Include, but not Limited to:
   a. No Solvents or Chemicals Within Protected Areas.
   b. No Building Materials or Construction Equipment Within Protected Areas.
   c. No Grade Changes, Including Fill, Within Protected Areas.
   d. No Removal of Vegetation from the Ground Up Without Permission from the Proper Reviewing Authority, Including the Woodlands Review Board.
   e. Any Required Swale Needs to be Directed Around the Protected Areas. Instances Where Swales are Approved Through a Protected Area, the Swales Need to be HAND DUG. Machinery of Any Kind is Prohibited.
7. Regulated Woodland or Regulated Trees Adjacent to the Property are Also Required to be Protected Whether or not they are Shown on the Plan.

Note:
Shaded Trees to be Removed

Seal:



Title:

Woodland Plan

Project:

Prospect Point South
Superior Township, Michigan

Prepared for:

M/I Homes of Michigan, LLC
40950 Woodward Avenue, Suite 203
Bloomfield Hills, Michigan 48304

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Drawn By:	Checked By:
jca	jca

0' 25' 50'

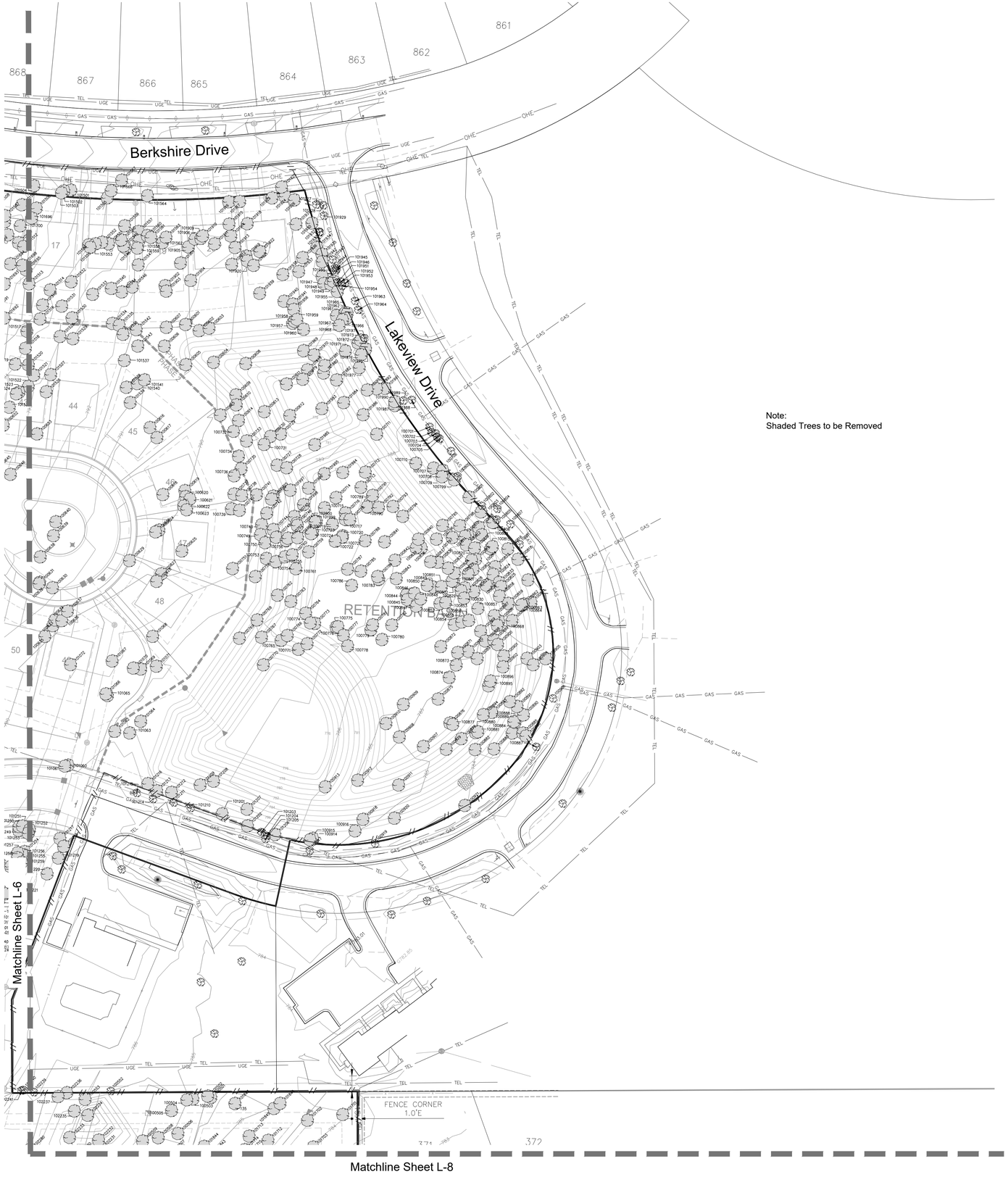
NORTH
1"=50'

Know what's below. Call before you dig.

Sheet No.

L-6

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Note:
Shaded Trees to be Removed

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STATE OF MICHIGAN
JAMES C. ALLEN
Landscape Architect
6/9/06
REGISTERED LANDSCAPE ARCHITECT

Title:

Woodland Plan

Project:

Prospect Point South
Superior Township, Michigan

Prepared for:

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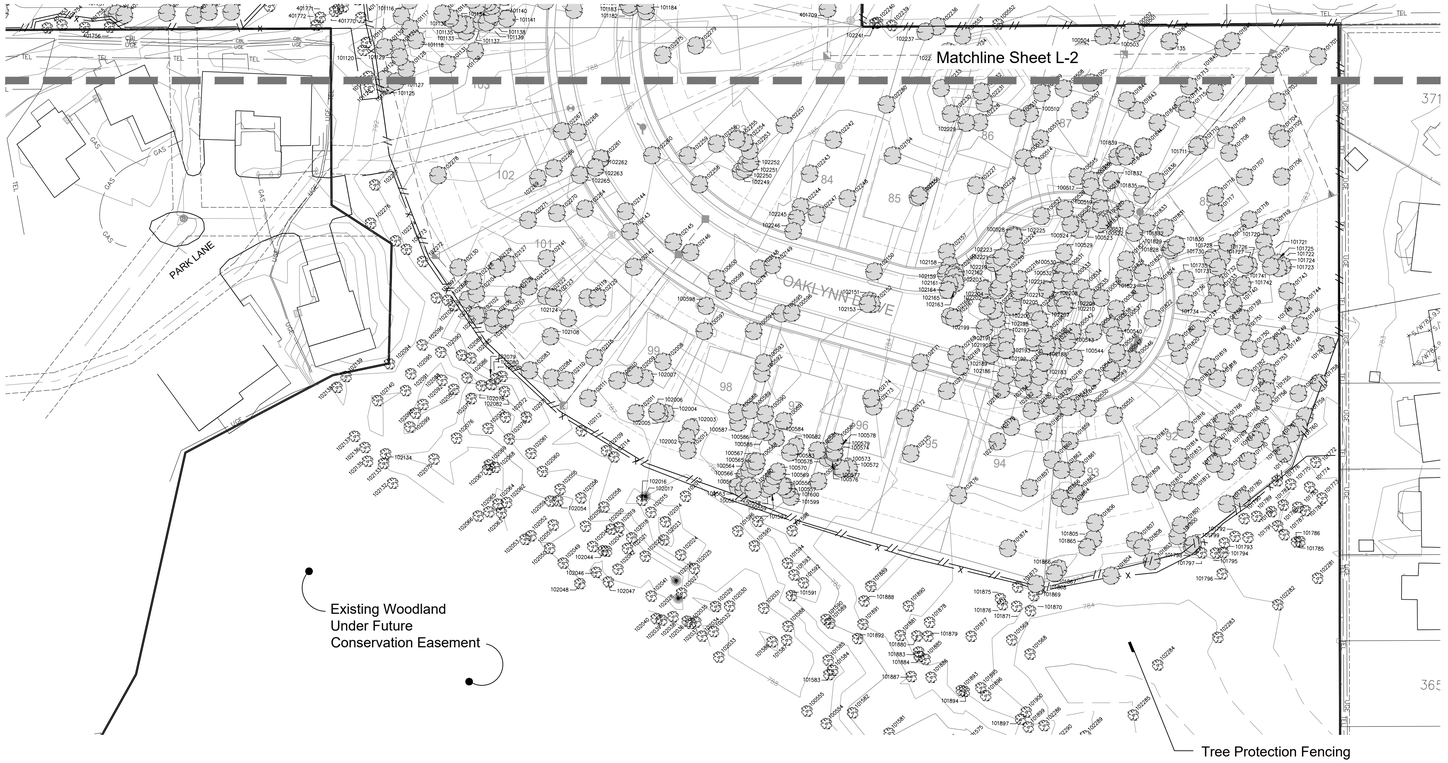
0' 25' 50'
NORTH
1"=50'

Know what's below. Call before you dig.

Sheet No.

L-7

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Note:
Shaded Trees to be Removed

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Seal:

STATE OF MICHIGAN
JAMES C. ALLEN
Landscape Architect
REGISTERED LANDSCAPE ARCHITECT

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Prospect Point South
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25-035

Drawn By:	Checked By:
jca	jca

0' 25' 50'

NORTH
1"=50'

Know what's below. Call before you dig.

Sheet No.

L-8

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Tree List

TAG#	SIZE	SPECIES	COMMON NAME	CONDITION	REMOVE	LANDMARK	REGULATED REPLACEMENTS	LANDMARK REPLACEMENT
100501	6	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
100502	7	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
100503	6	Betula papyrifera	WHITE BIRCH	GOOD	YES		0	
100504	6	Betula papyrifera	WHITE BIRCH	FAIR	YES		0	
100505	38	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES	YES		38
100506	8	Fraxinus pennsylvanica	GREEN ASH	FAIR	YES		1	
100507	8, 7, 9	Acer negundo	BOX ELDER	FAIR	YES		1	
100508	6	Quercus alba	WHITE OAK	FAIR	YES		0	
100509	14	Juglans nigra	BLACK WALNUT	FAIR	YES		3	
100510	13	Fraxinus pennsylvanica	GREEN ASH	FAIR	YES		3	
100511	8	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100512	12	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100513	8	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
100514	10	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100515	7	Acer negundo	BOX ELDER	FAIR	YES		0	
100516	7	Acer negundo	BOX ELDER	FAIR	YES		0	
100517	8	Acer negundo	BOX ELDER	FAIR	YES		1	
100518	7	Acer negundo	BOX ELDER	GOOD	YES		0	
100519	6	Acer negundo	BOX ELDER	GOOD	YES		0	
100520	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100521	7	Acer negundo	BOX ELDER	GOOD	YES		0	
100522	10	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
100523	6	Acer negundo	BOX ELDER	FAIR	YES		0	
100524	6	Acer negundo	BOX ELDER	FAIR	YES		0	
100525	7	Acer negundo	BOX ELDER	FAIR	YES		0	
100526	9	Acer negundo	BOX ELDER	FAIR	YES		1	
100527	15	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		3	
100528	8	Acer saccharinum	SILVER MAPLE	FAIR	YES		1	
100529	10	Acer negundo	BOX ELDER	FAIR	YES		1	
100530	8	Acer negundo	BOX ELDER	FAIR	YES		1	
100531	6	Acer negundo	BOX ELDER	FAIR	YES		0	
100532	6	Acer negundo	BOX ELDER	FAIR	YES		0	
100533	6	Acer negundo	BOX ELDER	FAIR	YES		0	
100534	10	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
100535	8	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
100536	9	Quercus alba	WHITE OAK	FAIR	YES		1	
100537	6	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
100538	7	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
100539	7	Acer negundo	BOX ELDER	FAIR	YES		0	
100540	8	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100541	9	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100542	6	Acer negundo	BOX ELDER	FAIR	YES		0	
100543	9	Acer negundo	BOX ELDER	FAIR	YES		1	
100544	14	Prunus serotina	BLACK CHERRY	FAIR	YES		3	
100545	6	Acer negundo	BOX ELDER	FAIR	YES		0	
100546	9	Betula papyrifera	WHITE BIRCH	FAIR	YES		1	
100547	9	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100548	9	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100549	11	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100550	9	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100551	15	Prunus serotina	BLACK CHERRY	FAIR	YES		3	
100552	8	Juglans nigra	BLACK WALNUT	FAIR	NO			
100553	20	Quercus alba	WHITE OAK	FAIR	YES	YES		20
100554	15	Quercus alba	WHITE OAK	FAIR	NO			
100555	42	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO	YES		
100556	12	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		1	
100557	6	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
100558	14	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		3	
100559	6	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
100560	6	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
100561	8	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100562	24, 14	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES	YES		24
100563	7	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
100564	6	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
100565	15	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		3	
100566	6	Malus domestica	APPLE	FAIR	YES		0	
100567	16	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		3	
100568	7		UNKNOWN TREE	FAIR	YES		0	
100569	9	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		1	
100570	15	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		3	
100571	9, 6	Juglans cinerea	BUTTERNUT	FAIR	YES		1	
100572	17	Juglans cinerea	BUTTERNUT	FAIR	YES		6	
100573	17	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		6	
100574	19, 8	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		6	
100575	7	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		0	
100576	7	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		0	
100577	6	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		0	
100578	10	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		1	
100579	14,14	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		3	
100580	13	Prunus serotina	BLACK CHERRY	FAIR	YES		3	
100581	6	Juglans cinerea	BUTTERNUT	FAIR	YES		0	
100582	12	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		1	
100583	13, 12	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		3	
100584	13	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		3	
100585	15	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		3	
100586	12	Fraxinus americana	WHITE ASH	FAIR	YES		1	
100587	11	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100588	14	Prunus serotina	BLACK CHERRY	FAIR	YES		3	
100589	23	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		6	
100590	25	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES	YES		25
100591	9	Malus domestica	APPLE	FAIR	YES		1	
100592	6	Juglans nigra	BLACK WALNUT	FAIR	YES		0	
100593	8	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
100594	6, 15	Juglans nigra	BLACK WALNUT	FAIR	YES		3	
100595	6	Juglans nigra	BLACK WALNUT	FAIR	YES		0	
100596	5, 6	Juglans nigra	BLACK WALNUT	FAIR	YES		0	
100597	7	Juglans nigra	BLACK WALNUT	FAIR	YES		0	
100598	7	Juglans nigra	BLACK WALNUT	FAIR	YES		0	
100599	11	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
100600	9	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		1	
100601	26	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		26
100602	12	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100603	24	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		24
100604	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100605	13,11,15,16	Acer rubrum	RED MAPLE	GOOD	YES	YES		16
100606	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100607	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100608	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
100609	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100610	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100611	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100612	13	Ulmus rubra	SLIPPERY ELM	GOOD	YES		3	
100613	8	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100614	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100615	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100616	8	Pinus sylvestris	SCOTT PINE	GOOD	YES		1	
100617	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
100618	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
100619	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
100620	11	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
100621	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
100622	36	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		36
100623	13	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
100624	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
100625	11	Pyrus communis	PEAR	GOOD	YES		1	
100626	16	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
100627	9	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100628	10.9	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100629	6	Pinus sylvestris	SCOTT PINE	GOOD	YES		0	
100630	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100631	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100632	6,6	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
100633	8	Pinus sylvestris	SCOTT PINE	GOOD	YES		1	
100634	8	Pinus sylvestris	SCOTT PINE	GOOD	YES		1	
100635	8	Pinus sylvestris	SCOTT PINE	GOOD	YES		1	
100636	6	Pinus sylvestris	SCOTT PINE	GOOD	YES		0	
100637	6	Pinus sylvestris	SCOTT PINE	GOOD	YES		0	
100638	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100639	8	Prunus serotina	BLACK CHERRY	DEAD	YES		1	
100640	6,6	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
100641	10,6,8	Acer saccharinum	SILVER MAPLE	GOOD	YES		1	
100642	6	Pyrus communis	PEAR	GOOD	YES		0	
100643	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
100644	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100645	30	Acer saccharinum	SILVER MAPLE	FAIR	YES	YES		30
100646	10	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100647	10	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100648	11	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100649	6	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
100650	6	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
100651	7	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
100652	8,6	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100653	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100654	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100655	7	Carya laciniosa	SHELLBARK HICKORY	GOOD	YES		0	
100656	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100658	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100659	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100660	14,16	Morus	MULBERRY	GOOD	YES		3	
100661	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100662	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100663	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100664	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100665	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100666	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100667	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100668	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100669	8	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100670	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100671	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100672	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100673	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100674	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100675	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100676	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100677	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100678	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100679	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100680	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100681	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100682	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100683	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100684	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100685	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100686	13	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
100687	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100688	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100689	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100690	9	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
100691	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100692	6	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
100693	6	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
100694	7	Pyrus communis	PEAR	GOOD	YES		0	
100695	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100696	20,22	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		22
100697	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100698	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100699	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100700	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100701	9	Juglans nigra	BLACK WALNUT	GOOD	NO			
100702	10	Juglans nigra	BLACK WALNUT	GOOD	NO			
100703	6	Juglans nigra	BLACK WALNUT	GOOD	NO			
100704	7	Juglans nigra	BLACK WALNUT	GOOD	NO			
100705	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	NO			
100706	10	Juglans nigra	BLACK WALNUT	GOOD	NO			
100707	20,22,16	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
100708	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100709	8	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100710	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100711	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100712	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100713	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100714	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100715	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100716	8	Prunus serotina	BLACK CHERRY	DEAD	YES		1	
100717	9	Prunus serotina	BLACK CHERRY	POOR	YES		1	
100718	6	Prunus serotina	BLACK CHERRY	DEAD	YES		1	
100719	6	Prunus serotina	BLACK CHERRY	POOR	YES		0	
100720	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100721	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100722	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100723	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100724	6,6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100725	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100726	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100727	10	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100728	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100729	8	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100730	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100731	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100732	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100733	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100734	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100735	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100736	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100737	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100738	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100739	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100740	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100741	6,6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100742	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100743	7,9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100744	11	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100745	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100746	7	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
100747	7	Prunus serotina	BLACK CHERRY	POOR	YES		0	
100748	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100749	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100750	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100751	11	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100752	11	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100753	9	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100754	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100755	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100756	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100757	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100758	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100759	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100760	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100761	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100762	12	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100763	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100764	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100765	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100766	11	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100767	20	Prunus serotina	BLACK CHERRY	GOOD	YES	YES		20
100768	6,7,7,9	Pyrus communis	PEAR	GOOD	YES		1	
100769	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
100770	18	Prunus serotina	BLACK CHERRY	GOOD	YES	YES		18
100771	12	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100772	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100773	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100774	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100775	11	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100776	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100777	9.8	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100778	8	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100779	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100780	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100781	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100782	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100783	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100784	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100785	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100786	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100787	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100788	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100789	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100790	6,11	Pyrus communis	PEAR	FAIR	YES		1	
100791	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100792	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100793	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100794	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100795	12	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
100796	12	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100797	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100798	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100799	17	Juglans nigra	BLACK WALNUT	GOOD	YES		6	
100800	10	Juglans nigra	BLACK WALNUT	GOOD	NO			
100801	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100802	12	Juglans nigra	BLACK WALNUT	GOOD	NO			
100803	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100804	8	Juglans nigra	BLACK WALNUT	GOOD	NO			
100805	11	Juglans nigra	BLACK WALNUT	GOOD	NO			
100806	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100807	11	Juglans nigra	BLACK WALNUT	GOOD	NO			
100808	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100809	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100810	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100811	6,7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100812	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100813	7,7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100814	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100815	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100816	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100817	11	Juglans nigra	BLACK WALNUT	GOOD	NO			
100818	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100819	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100820	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100821	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100822	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100823	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100824	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100825	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100826	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100827	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100828	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100829	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100830	10	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100831	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100832	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100833	12,10,8	Ulmus americana	AMERICAN ELM	DEAD	YES			
100834	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100835	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100836	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100837	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100838	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100839	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100840	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100841	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100842	8	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100843	6,7,8	Pyrus communis	PEAR	GOOD	YES		1	
100844	7	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
100845	6	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
100846	6	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
100847	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100848	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100849	8,6	Fraxinus pennsylvanica	GREEN ASH	GOOD	YES		1	
100850	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100851	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100852	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100853	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100854	7	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
100855	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100856	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100857	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100858	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100859	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100860	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100861	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100862	8	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100863	8,7	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100864	7	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
100865	12,9,13	Prunus serotina	BLACK CHERRY	FAIR	YES			
100866	8	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100867	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100868	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	

Tree List

TAG#	SIZE	SPECIES	COMMON NAME	CONDITION	REMOVE	LANDMARK	REGULATED REPLACEMENTS	LANDMARK REPLACEMENT
100970	10,9,8	Acer saccharinum	SILVER MAPLE	GOOD	YES		1	
100971	28	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		28
100972	24	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		24
100973	10,8,11	Pyrus communis	PEAR	GOOD	YES		1	
100974	12	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100975	10	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
100976	24	Acer rubrum	RED MAPLE	GOOD	YES	YES		24
100977	8	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
100978	20	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		20
100979	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100980	16	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
100981	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100982	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100983	7	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
100984	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100985	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100986	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100987	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100988	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100989	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100990	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100991	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100992	13	Acer negundo	BOX ELDER	POOR	YES		3	
100993	8	Ulmus americana	AMERICAN ELM	DEAD	YES		1	
100994	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100995	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100996	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
100997	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100998	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
100999	22	Juglans nigra	BLACK WALNUT	GOOD	YES	YES		22
101000	30	Juglans nigra	BLACK WALNUT	GOOD	YES	YES		30
101001	17	Juglans nigra	BLACK WALNUT	GOOD	YES		6	
101002	22	Juglans nigra	BLACK WALNUT	GOOD	YES	YES		22
101003	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101004	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101005	16	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
101006	18	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		18
101007	17	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		17
101008	24	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		24
101009	22	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101010	22	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101011	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101012	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101013	24	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		24
101014	8	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
101015	16	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
101016	24	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		24
101017	24	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		24
101018	15	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
101019	7	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
101020	26	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		26
101021	11	Pyrus communis	PEAR	GOOD	YES		1	
101022	16,8,6	Acer rubrum	RED MAPLE	GOOD	YES	YES		16
101023	17	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101024	8	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
101025	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101026	9	Acer saccharinum	SILVER MAPLE	GOOD	YES		1	
101027	30	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		30
101028	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101029	20,18,13,10,11,8	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		20
101030	20	Ulmus americana	AMERICAN ELM	GOOD	YES	YES		20
101031	11	Quercus velutina	BLACK OAK	GOOD	YES		1	
101032	8,9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101033	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101034	7	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
101035	9	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
101036	38	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		38
101037	12,10,9	Fraxinus americana	WHITE ASH	GOOD	YES		1	
101038	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101039	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101040	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101041	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101042	11	Ulmus americana	AMERICAN ELM	DEAD	YES		1	
101043	10	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
101044	7	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
101045	9	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
101046	6		UNKNOWN TREE	DEAD	YES		0	
101047	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101048	6		UNKNOWN TREE	DEAD	YES		0	
101049	10	Ulmus rubra	SLIPPERY ELM	GOOD	YES		1	
101050	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101051	10	Ulmus rubra	SLIPPERY ELM	DEAD	YES		1	
101052	8	Ulmus rubra	SLIPPERY ELM	DEAD	YES		1	
101053	10	Ulmus rubra	SLIPPERY ELM	GOOD	YES		1	
101054	10	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
101055	12,13	Juglans nigra	BLACK WALNUT	GOOD	YES			
101056	11	Ulmus rubra	SLIPPERY ELM	GOOD	YES		1	
101057	7	Ulmus rubra	SLIPPERY ELM	DEAD	YES		0	
101058	7	Morus	MULBERRY	GOOD	YES		0	
101059	20,22	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101060	20,24	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		24
101061	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101062	20,24,10	Aesculus glabra	OHIO BUCKEYE	GOOD	YES	YES		24
101063	20,12	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101064	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101065	18	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		18
101066	16	Acer rubrum	RED MAPLE	GOOD	YES	YES		16
101067	22	Conium maculatum	HEMLOCK	POOR	YES		6	
101068	7	Acer saccharinum	SILVER MAPLE	GOOD	YES		0	
101069	18	Acer rubrum	RED MAPLE	GOOD	YES	YES		18
101070	15	Pyrus communis	PEAR	GOOD	YES		3	
101071	9	Pyrus communis	PEAR	GOOD	YES		1	
101072	7	Conium maculatum	HEMLOCK	GOOD	YES		0	
101073	7,8	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
101074	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101075	7	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
101076	9	Ulmus americana	AMERICAN ELM	DEAD	YES		1	
101077	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101078	10		UNKNOWN TREE	DEAD	YES		1	
101079	10		UNKNOWN TREE	DEAD	YES		1	
101080	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101081	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101082	8	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
101083	6,7	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
101084	16,10	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		16
101085	18	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		18
101086	10	Pinus sylvestris	SCOTT PINE	GOOD	YES		1	
101087	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101088	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101089	12,16,13,10	Acer saccharinum	SILVER MAPLE	GOOD	YES			
101090	16,10,15	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		16
101091	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101092	6	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
101093	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101094	22	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		22
101095	9	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
101096	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101097	13	Ulmus americana	AMERICAN ELM	DEAD	YES		3	
101098	17	Acer saccharum	SUGAR MAPLE	GOOD	YES	YES		17
101099	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101100	14	Juglans nigra	BLACK WALNUT	GOOD	NO			
101101	10	Juglans nigra	BLACK WALNUT	GOOD	NO			
101102	7	Morus	MULBERRY	GOOD	NO			
101103	22,30	Juglans nigra	BLACK WALNUT	GOOD	NO	YES		
101104	7	Prunus serotina	BLACK CHERRY	GOOD	NO			
101105	12	Juglans nigra	BLACK WALNUT	GOOD	NO			
101106	8,6	Juglans nigra	BLACK WALNUT	GOOD	NO			
101107	8	Prunus serotina	BLACK CHERRY	GOOD	NO			
101108	7	Prunus serotina	BLACK CHERRY	GOOD	NO			
101109	6	Prunus serotina	BLACK CHERRY	GOOD	NO			
101110	8	Juglans nigra	BLACK WALNUT	GOOD	NO			
101111	6	Juglans nigra	BLACK WALNUT	GOOD	NO			
101112	9	Juglans nigra	BLACK WALNUT	GOOD	NO			
101113	6	Prunus serotina	BLACK CHERRY	GOOD	NO			
101114	8	Prunus serotina	BLACK CHERRY	GOOD	NO			
101115	6,6	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
101116	6	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
101117	18	Ulmus americana	AMERICAN ELM	GOOD	YES	YES		18
101118	13	Juglans nigra	BLACK WALNUT	FAIR	YES		3	
101119	16	Acer negundo	BOX ELDER	FAIR	YES	YES		16
101120	13	Ulmus americana	AMERICAN ELM	FAIR	YES		3	
101121	20	Ulmus americana	AMERICAN ELM	FAIR	YES	YES		20
101122	28,13	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES	YES		28
101123	18, 14	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		6	
101124	7	Ulmus americana	AMERICAN ELM	FAIR	YES		0	
101125	10	Ulmus americana	AMERICAN ELM	FAIR	YES		1	
101126	18, 6	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		6	
101127	10	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
101128	11	Morus	MULBERRY	FAIR	YES		1	
101129	9	Ulmus americana	AMERICAN ELM	FAIR	YES		1	
101130	15		UNKNOWN TREE	FAIR	YES		3	
101131	8	Ulmus americana	AMERICAN ELM	FAIR	YES		1	
101132	7, 18	Salix alba	WILLOW	FAIR	YES			
101133	7	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
101134	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101135	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101136	30	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		30
101137	6,7,8	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
101138	20,20	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		6	
101139	15	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
101140	16	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
101141	12	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
101142	18,15	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101143	8		UNKNOWN TREE	DEAD	YES		1	
101144	6	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
101145	36	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		36
101146	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101147	11	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
101148	10	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
101149	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101150	8	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
101151	9,7	Acer negundo	BOX ELDER	GOOD	YES		1	
101152	9	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
101153	6	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
101154	7	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
101155	30	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		30
101156	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101157	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101158	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101159	14	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
101160	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101161	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101162	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101163	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101164	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101165	12,14	Ulmus americana	AMERICAN ELM	DEAD	YES			
101166	8	Acer negundo	BOX ELDER	GOOD	YES		1	
101167	7	Cornus florida	FLOWERING DOGWOOD	GOOD	YES		0	
101168	10,12,8	Morus	MULBERRY	GOOD	YES		1	
101169	10	Ulmus americana	AMERICAN ELM	FAIR	YES		1	
101170	17	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101171	7	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
101172	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101173	12	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
101174	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101175	30	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		30
101176	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101177	12	Juniperus virginiana	EASTERN RED CEDAR	GOOD	YES		1	
101178	22	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101179	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101180	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101181	10	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
101182	20,16,12	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101183	9	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
101184	28	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		28
101185	8	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
101186	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101187	8	Acer negundo	BOX ELDER	GOOD	YES		1	
101188	15	Prunus serotina	BLACK CHERRY	GOOD	YES		3	
101189	24	Juniperus virginiana	EASTERN RED CEDAR	GOOD	YES	YES		24
101190	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101191	9	Acer negundo	BOX ELDER	GOOD	YES		1	
101192	15	Pyrus communis	PEAR	GOOD	YES		3	
101193	11	Fraxinus nigra	BLACK ASH	GOOD	YES		1	
101194	15,12,8	Acer rubrum	RED MAPLE	GOOD	YES		3	
101195	15	Pinus sylvestris	SCOTT PINE	GOOD	YES		3	
101196	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101197	10	Acer negundo	BOX ELDER	GOOD	YES		1	
101198	15	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
101199	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101200	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101201	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101202	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101203	6	Juglans nigra	BLACK WALNUT	GOOD	NO			
101204	6	Juglans nigra	BLACK WALNUT	GOOD	NO			
101205	6	Juglans nigra	BLACK WALNUT	GOOD	NO			
101206	6	Pyrus communis	PEAR	GOOD	YES		0	
101207	8,9	Acer negundo	BOX ELDER	GOOD	YES		1	
101208	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101209	24	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		24
101210	8	Acer negundo	BOX ELDER	GOOD	NO			
101211	10	Juglans nigra	BLACK WALNUT	GOOD	NO			
101212	8	Ulmus americana	AMERICAN ELM	DEAD	YES		1	
101213	9	Gymnocladus dioicus	KENTUCKY COFFEETREE	DEAD	YES		1	
101214	12	Ulmus americana	AMERICAN ELM	GOOD	NO			
101215	10	Juglans nigra	BLACK WALNUT	GOOD	NO			
101216	9	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
101217	36,30	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		36
101218	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101219	16	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
101220	16	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
101221	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101222	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101223	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101224	16	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
101225	10	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
101226	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101227	11	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
101228	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101229	13	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
101230	18,20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101231	6	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
101232	7	Ulmus americana	AMERICAN ELM	DEAD	YES		0	
101233	20	Ulmus americana	AMERICAN ELM	GOOD	YES	YES		20
101234	10	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
101235	13	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
101236	8	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
101237	16	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
101238	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101239	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101240	18,12,16	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101241	16	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
101242	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101243	13	Ulmus americana	AMERICAN ELM	GOOD	YES		3	
101244	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101245	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101246	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101247	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101248	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101249	9	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
101250	8	Populus deltoides	EASTERN COTTONWOOD	DEAD	YES		1	
101251	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101252	6,8,9	Acer negundo	BOX ELDER	GOOD	YES		1	
101253	8,6	Acer negundo	BOX ELDER	GOOD	YES		1	
101254	15	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		3	
101255	12	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
101256	20,11	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101257	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
101258	6	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		0	
101259	12	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
101260	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101261	12	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
101262	8	Acer negundo	BOX ELDER	FAIR	YES		1	
101263	20,12	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		6	
101264	8,6	Pyrus communis	PEAR	FAIR	YES		1	
101501	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101502	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101503	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101504	15	Fraxinus americana	WHITE ASH	GOOD	YES		3	
101505	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101506	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101507	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101508	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101509	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101510	12	Fraxinus americana	WHITE ASH	POOR	YES		1	
101511	8	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101512	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101513	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101514	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101515	18	Prunus serotina	BLACK CHERRY	GOOD	YES	YES		18
101516	20	Prunus serotina	BLACK CHERRY	GOOD	YES	YES		20
101517	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101518	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101519	7	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
101520	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101521	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
101522	8	Fraxinus americana	WHITE ASH	FAIR	YES		1	
101523	6	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
101524	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101525	11	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
101526	22	Quercus alba	WHITE OAK	GOOD	YES	YES		22
101527	12	Prunus serotina	BLACK CHERRY	DEAD	YES		1	
101528	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101529	18	Prunus serotina	BLACK CHERRY	GOOD	YES	YES		18
101530	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101531	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101532	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101533	22	Quercus alba	WHITE OAK	GOOD	YES	YES		22
101534	22	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		22
101535	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
101536	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101537	12	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
101538	20	Carya ovata	SHAGBARK HICKORY	GOOD	YES	YES		20
101539	15	Prunus serotina	BLACK CHERRY	POOR	YES		3	
101540	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101541	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101542	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101543	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101544	11	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
101545	9	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101546	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101547	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101548	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101549	18	Prunus serotina	BLACK CHERRY	GOOD	YES	YES		18
101550	8	Pyrus communis	PEAR	POOR	YES		1	
101551	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101552	10	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101553	17	Prunus serotina	BLACK CHERRY	GOOD	YES		6	
101554	10		UNKNOWN TREE	DEAD	YES		1	
101555	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101556	16	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
101557	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101558	16	Prunus serotina	BLACK CHERRY	GOOD	YES		3	
101559	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101560	15	Prunus serotina	BLACK CHERRY	GOOD	YES		3	
101561	20	Prunus serotina	BLACK CHERRY	GOOD	YES	YES		20
101562	10,8	Ulmus americana	AMERICAN ELM	FAIR	YES		1	
101563	15	Prunus serotina	BLACK CHERRY	GOOD	YES		3	
101564	11	Acer negundo	BOX ELDER	GOOD	YES		1	
101565	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101566	8	Pyrus communis	PEAR	POOR	YES		1	
101567	9	Ulmus americana	AMERICAN ELM

Tree List

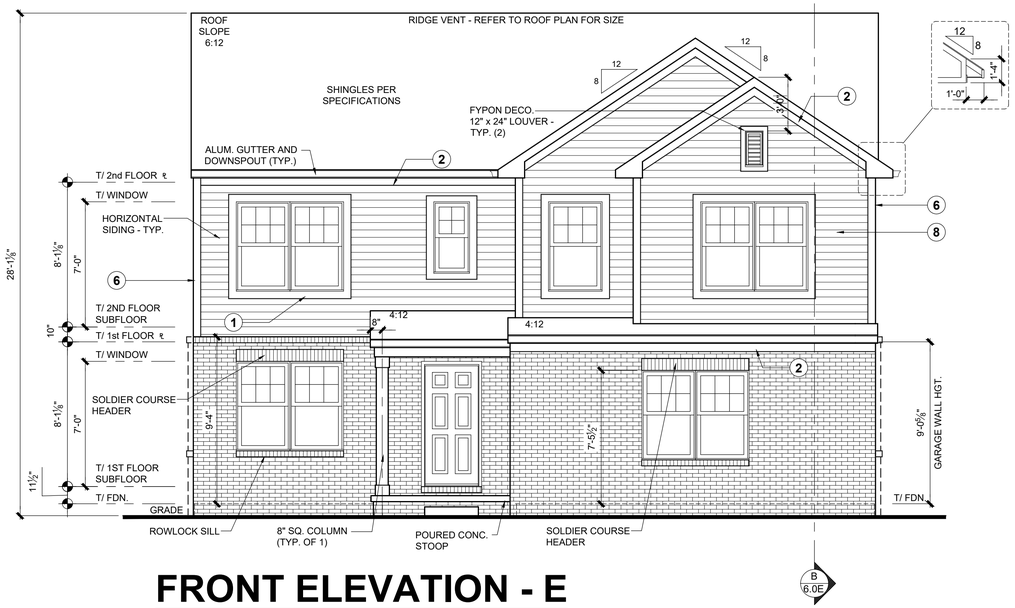
TAG#	SIZE	SPECIES	COMMON NAME	CONDITION	REMOVE	LANDMARK	REGULATED REPLACEMENTS	LANDMARK REPLACEMENT
101676	8	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101677	11	Acer negundo	BOX ELDER	GOOD	YES		1	
101678	17	Juglans nigra	BLACK WALNUT	GOOD	YES		6	
101679	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101680	12,10	Fraxinus americana	WHITE ASH	GOOD	YES		1	
101681	18	Juglans nigra	BLACK WALNUT	GOOD	YES	YES		18
101682	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101683	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101684	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101685	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101686	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101687	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101688	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101689	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101690	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101691	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101692	18	Ulmus americana	AMERICAN ELM	GOOD	YES	YES		18
101693	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101694	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101695	12	Fraxinus americana	WHITE ASH	DEAD	YES		1	
101696	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101697	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101698	10	Fraxinus americana	WHITE ASH	DEAD	YES		1	
101699	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101700	16	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
101701	50	Quercus alba	WHITE OAK	FAIR	YES	YES		50
101702	38	Prunus serotina	BLACK CHERRY	FAIR	YES	YES		38
101703	8	Fraxinus americana	WHITE ASH	FAIR	YES		1	
101704	9	Carya laciniosa	SHELLBARK HICKORY	FAIR	YES		1	
101705	8, 14	Carya laciniosa	SHELLBARK HICKORY	FAIR	YES		3	
101706	8	Juniperus virginiana	EASTERN RED CEDAR	FAIR	YES		1	
101707	7, 9, 10	Fraxinus americana	WHITE ASH	FAIR	YES		1	
101708	11	Fraxinus americana	WHITE ASH	FAIR	YES		1	
101709	11	Fraxinus americana	WHITE ASH	FAIR	YES		1	
101710	11	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101711	11	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101712	39	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES	YES		39
101713	9	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101714	9	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101715	6	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
101716	30	Carya laciniosa	SHELLBARK HICKORY	FAIR	YES	YES		30
101717	11	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101718	12	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101719	19	Quercus alba	WHITE OAK	FAIR	YES	YES		19
101720	14	Carya glabra	PIGNUT HICKORY	FAIR	YES		3	
101721	8	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101722	11	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101723	11	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101724	11	Fraxinus americana	WHITE ASH	FAIR	YES		1	
101725	10	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101726	10	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101727	8	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101728	15	Fraxinus americana	WHITE ASH	FAIR	YES		3	
101729	17	Quercus alba	WHITE OAK	FAIR	YES	YES		17
101730	14	Betula papyrifera	WHITE BIRCH	FAIR	YES		3	
101731	6	Carya glabra	PIGNUT HICKORY	FAIR	YES		0	
101732	11	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101733	12	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101734	12	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101735	15	Carya glabra	PIGNUT HICKORY	FAIR	YES		3	
101736	13	Carya glabra	PIGNUT HICKORY	FAIR	YES		3	
101737	8	Fraxinus americana	WHITE ASH	FAIR	YES		1	
101738	11	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101739	9	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101740	6	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
101741	10	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101742	8	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101743	18	Acer negundo	BOX ELDER	FAIR	YES	YES		18
101744	8	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101745	10	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101746	9	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101747	12, 13, 18	Quercus alba	WHITE OAK	FAIR	YES	YES		18
101748	12	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101749	14	Carya glabra	PIGNUT HICKORY	FAIR	YES		3	
101750	10	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101751	14	Prunus serotina	BLACK CHERRY	FAIR	YES		3	
101752	12	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101753	11	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101754	8	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101755	12	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101756	12	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101757	6	Quercus alba	WHITE OAK	FAIR	YES		0	
101758	11	Fraxinus americana	WHITE ASH	FAIR	YES		1	
101759	19	Fraxinus americana	WHITE ASH	FAIR	YES		6	
101760	14	Juglans nigra	BLACK WALNUT	FAIR	YES		3	
101761	6	Acer negundo	BOX ELDER	FAIR	YES		0	
101762	9	Quercus alba	WHITE OAK	FAIR	YES		1	
101763	9	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101764	7	Carya ovata	SHAGBARK HICKORY	FAIR	YES		0	
101765	7	Fraxinus americana	WHITE ASH	FAIR	YES		0	
101766	7	Carya ovata	SHAGBARK HICKORY	FAIR	YES		0	
101767	10	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101768	8	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101769	8	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101770	6.5	Carya ovata	SHAGBARK HICKORY	FAIR	YES		0	
101771	6	Carya ovata	SHAGBARK HICKORY	FAIR	NO			
101772	13	Acer negundo	BOX ELDER	FAIR	NO			
101773	28	Fraxinus pennsylvanica	GREEN ASH	FAIR	NO	YES		
101774	13	Juglans nigra	BLACK WALNUT	GOOD	NO			
101775	7	Carya ovata	SHAGBARK HICKORY	FAIR	NO			
101776	11	Carya ovata	SHAGBARK HICKORY	FAIR	NO			
101777	24	Quercus alba	WHITE OAK	FAIR	YES	YES		24
101778	6	Carya ovata	SHAGBARK HICKORY	FAIR	YES		0	
101779	18	Quercus alba	WHITE OAK	FAIR	YES	YES		18
101780	11	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101781	11	Carya ovata	SHAGBARK HICKORY	FAIR	NO			
101782	6	Carya ovata	SHAGBARK HICKORY	FAIR	NO			
101783	12	Acer negundo	BOX ELDER	FAIR	NO			
101784	28	Fraxinus pennsylvanica	GREEN ASH	FAIR	NO	YES		
101785	10	Carya ovata	SHAGBARK HICKORY	FAIR	NO			
101786	11	Carya ovata	SHAGBARK HICKORY	FAIR	NO			
101787	14	Carya ovata	SHAGBARK HICKORY	FAIR	NO			
101788	9	Carya ovata	SHAGBARK HICKORY	FAIR	NO			
101789	9	Carya ovata	SHAGBARK HICKORY	FAIR	NO			
101790	8	Carya ovata	SHAGBARK HICKORY	FAIR	NO			
101791	13	Carya ovata	SHAGBARK HICKORY	FAIR	NO			
101792	13	Quercus alba	WHITE OAK	FAIR	NO			
101793	13	Quercus alba	WHITE OAK	FAIR	NO			
101794	13	Quercus alba	WHITE OAK	FAIR	NO			
101795	12	Quercus alba	WHITE OAK	FAIR	NO			
101796	16, 6	Acer negundo	BOX ELDER	FAIR	NO	YES		
101797	13	Quercus alba	WHITE OAK	FAIR	NO			
101798	18	Quercus alba	WHITE OAK	GOOD	YES	YES		18
101799	6	Quercus alba	WHITE OAK	FAIR	YES		0	
101800	24	Quercus alba	WHITE OAK	FAIR	YES	YES		24
101801	15	Quercus alba	WHITE OAK	FAIR	YES		3	
101803	7	Carya ovata	SHAGBARK HICKORY	FAIR	YES		0	
101804	13	Fraxinus americana	WHITE ASH	FAIR	YES		3	
101805	10, 6	Fraxinus americana	WHITE ASH	FAIR	YES		1	
101806	16	Fraxinus americana	WHITE ASH	FAIR	YES		3	
101807	15	Fraxinus pennsylvanica	GREEN ASH	FAIR	YES		3	
101808	20	Carya glabra	PIGNUT HICKORY	FAIR	YES	YES		20
101809	14	Carya ovata	SHAGBARK HICKORY	FAIR	YES		3	
101810	6	Carya ovata	SHAGBARK HICKORY	FAIR	YES		0	
101811	8	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101812	8	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101813	13	Carya ovata	SHAGBARK HICKORY	FAIR	YES		3	
101814	8	Fraxinus americana	WHITE ASH	FAIR	YES		1	
101815	8	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101816	13	Fraxinus americana	WHITE ASH	FAIR	YES		3	
101817	36	Juglans nigra	BLACK WALNUT	FAIR	YES	YES		36
101818	8	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101819	8	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101820	14	Carya ovata	SHAGBARK HICKORY	FAIR	YES		3	
101821	6	Ulmus americana	AMERICAN ELM	FAIR	YES		0	
101822	7	Carya ovata	SHAGBARK HICKORY	FAIR	YES		0	
101823	7	Carya ovata	SHAGBARK HICKORY	FAIR	YES		0	
101824	9	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101825	14	Ulmus americana	AMERICAN ELM	FAIR	YES		3	
101826	8	Fraxinus americana	WHITE ASH	FAIR	YES		1	
101827	11	Ulmus americana	AMERICAN ELM	FAIR	YES		1	
101828	8	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101829	11	Carya glabra	PIGNUT HICKORY	FAIR	YES		1	
101830	8	Ulmus americana	AMERICAN ELM	FAIR	YES		1	
101831	8	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101832	6	Carya ovata	SHAGBARK HICKORY	FAIR	YES		0	

TAG#	SIZE	SPECIES	COMMON NAME	CONDITION	REMOVE	LANDMARK	REGULATED REPLACEMENTS	LANDMARK REPLACEMENT
101833	9	Pinus sylvestris	SCOTT PINE	FAIR	YES		1	
101834	7	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
101835	8	Acer rubrum	RED MAPLE	FAIR	YES		1	
101836	9	Pyrus communis	PEAR	FAIR	YES		1	
101837	9	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101838	13	Ulmus americana	AMERICAN ELM	FAIR	YES		3	
101839	8	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101840	8	Pinus sylvestris	SCOTT PINE	FAIR	YES		1	
101841	8	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101842	11	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101843	9	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101844	14	Prunus serotina	BLACK CHERRY	FAIR	YES		3	
101845	11	Acer negundo	BOX ELDER	FAIR	YES		1	
101846	11	Acer negundo	BOX ELDER	FAIR	YES		1	
101847	13	Acer rubrum	RED MAPLE	FAIR	YES		3	
101848	8	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101849	7	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
101856	10, 8, 9, 11	Carpinus caroliniana	AMERICAN HORNBEAM	FAIR	YES		1	
101857	7	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
101858	9	Carya ovata	SHAGBARK HICKORY	FAIR	YES		1	
101859	6	Acer rubrum	RED MAPLE	FAIR	YES		0	
101860	8	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101861	13	Quercus alba	WHITE OAK	FAIR	YES		3	
101862	6	Carya ovata	SHAGBARK HICKORY	FAIR	YES		0	
101863	12	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		1	
101864	7	Carpinus caroliniana	AMERICAN HORNBEAM	FAIR	YES		0	
101865	8	Acer negundo	BOX ELDER	FAIR	YES		1	
101866	7	Acer negundo	BOX ELDER	FAIR	YES		0	
101867	13	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		3	
101868	24	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO	YES		
101869	9	Acer rubrum	RED MAPLE	FAIR	NO			
101870	12, 9	Acer negundo	BOX ELDER	FAIR	NO			
101871	8	Acer negundo	BOX ELDER	FAIR	NO			
101873	6	Ulmus americana	AMERICAN ELM	FAIR	YES		0	
101874	16, 8	Quercus alba	WHITE OAK	FAIR	YES	YES		16
101875	12	Acer rubrum	RED MAPLE	FAIR	NO			
101876	7	Ulmus americana	AMERICAN ELM	FAIR	NO			
101877	19, 6	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
101878	20	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
101879	20	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
101880	14	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
101881	26	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO	YES		
101883	17	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
101884	25	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO	YES		
101885	7	Acer negundo	BOX ELDER	FAIR	NO			
101886	19, 17	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
101887	6	Juglans nigra	BLACK WALNUT	FAIR	NO			
101888	31	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO	YES		
101889	19	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
101890	24, 18, 8	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO	YES		
101891	7	Acer negundo	BOX ELDER	FAIR	NO			
101892	7	Acer negundo	BOX ELDER	FAIR	NO			
101893	8	Acer negundo	BOX ELDER	FAIR	NO			
101894	10	Acer negundo	BOX ELDER	FAIR	NO			
101895	20	Ulmus americana	AMERICAN ELM	FAIR	NO	YES		
101896	7	Acer negundo	BOX ELDER	FAIR	NO			
101897	32	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO	YES		
101899	23	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
101900	10	Acer negundo	BOX ELDER	FAIR	NO			
101901	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101902	12	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
101903	7	Prunus serotina	BLACK CHERRY	GOOD	YES		0	
101904	16	Acer saccharinum	SILVER MAPLE	GOOD	YES	YES		16
101905	11	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101906	18,15,8	Acer negundo	BOX ELDER	FAIR	YES	YES		18
101909	12	Acer negundo	BOX ELDER	FAIR	YES		1	
101910	10	Acer negundo	BOX ELDER	FAIR	YES		1	
101911	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101912	14	Prunus serotina	BLACK CHERRY	GOOD	YES		3	
101913	12	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101914	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101915	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101916	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101917	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101918	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101919	14	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
101920	10,10	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
101921	18	Juglans nigra	BLACK WALNUT	GOOD	YES	YES		18
101922	14	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
101923	7,5	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101924	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101925	8	Acer negundo	BOX ELDER	FAIR	YES		1	
101926	9	Pinus sylvestris	SCOTT PINE	GOOD	YES		1	
101927	7	Acer saccharinum	SILVER MAPLE	GOOD	NO			
101928	10	Carya ovata	SHAGBARK HICKORY	GOOD	NO			
101929	9	Acer saccharinum	SILVER MAPLE	GOOD	NO			
101930	11,8	Ulmus americana	AMERICAN ELM	FAIR	YES			
101931	7	Acer saccharinum	SILVER MAPLE	GOOD	YES		0	
101932	24	Juglans nigra	BLACK WALNUT	GOOD	NO	YES		
101933	10	Juglans nigra	BLACK WALNUT	GOOD	NO			
101934	11,13	Ulmus americana	AMERICAN ELM	GOOD	YES		3	
101935	14,11,10,8	Ulmus americana	AMERICAN ELM	FAIR	YES		3	
101936	6,7	Ulmus americana	AMERICAN ELM	FAIR	YES		0	
101937	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101938	10	Ulmus rubra	SLIPPERY ELM	GOOD	YES		1	
101939	10	Acer negundo	BOX ELDER	GOOD	YES		1	
101940	8	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101941	16	Carya ovata	SHAGBARK HICKORY	GOOD	YES	YES		16
101942	9	Acer saccharinum	SILVER MAPLE	GOOD	YES		1	
101943	9	Carya ovata	SHAGBARK HICKORY	GOOD	NO			
101944	8	Acer saccharinum	SILVER MAPLE	GOOD	NO			
101945	8	Acer saccharinum	SILVER MAPLE	GOOD	NO			
101946	11	Ulmus americana	AMERICAN ELM	GOOD	NO			
101947	11	Acer saccharinum	SILVER MAPLE	GOOD	YES		1	
101948	7	Carya ovata	SHAGBARK HICKORY	GOOD	YES		0	
101949	11	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101950	9	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101951	9	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101952	7	Acer saccharinum	SILVER MAPLE	GOOD	NO			
101953	7	Acer saccharinum	SILVER MAPLE	GOOD	NO			
101954	7	Acer saccharinum	SILVER MAPLE	GOOD	NO			
101955	6	Carya ovata	SHAGBARK HICKORY	GOOD	YES		0	
101956	8	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101957	8	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101958	8	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101959	6	Carya ovata	SHAGBARK HICKORY	GOOD	YES		0	
101960	14	Acer negundo	BOX ELDER	GOOD	YES		3	
101961	7	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
101962	11	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101963	10		UNKNOWN TREE	DEAD	NO			
101964	17	Populus deltoides	EASTERN COTTONWOOD	GOOD	NO			
101965	10	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101966	6	Carya ovata	SHAGBARK HICKORY	GOOD	YES		0	
101967	7	Carya ovata	SHAGBARK HICKORY	GOOD	YES		0	
101968	10	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101969	8	Acer negundo	BOX ELDER	GOOD	YES		1	
101970	10	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
101971	9	Acer negundo	BOX ELDER	GOOD	YES		1	
101972	7	Fraxinus americana	WHITE ASH	FAIR	YES		0	
101973	8	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
101974	8	Acer negundo	BOX ELDER	FAIR	YES		1	
101975	11	Acer negundo	BOX ELDER	GOOD	YES		1	
101976	10	Acer negundo	BOX ELDER	GOOD	YES		1	
101977	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101978	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101979	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101980	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101981	10	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101982	8	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101983	14	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
101984	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101985	24,18	Juglans nigra	BLACK WALNUT	GOOD	YES	YES		24
101986	9	Pyrus communis	PEAR	POOR	YES		1	
101987	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101988	11	Acer negundo	BOX ELDER	GOOD	NO			
101989	10	Ulmus americana	AMERICAN ELM	POOR	NO			
101990	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101991	9	Prunus serotina	BLACK CHERRY	POOR	YES		1	
101992	6	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
101993	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101994	8	Carya ovata	SHAGBARK HICKORY	GOOD	YES		1	
101995	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
101996	16	Quercus alba	WHITE OAK	GOOD	YES	YES		16
101997	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
101998	13	Ulmus americana	AMERICAN ELM	GOOD	YES		3	
101999	9,8	Prunus serotina	BLACK CHERRY	GOOD	YES		1	

TAG#	SIZE	SPECIES	COMMON NAME	CONDITION	REMOVE	LANDMARK	REGULATED REPLACEMENTS	LANDMARK REPLACEMENT
102000	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102002	8	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
102003	14	Ulmus americana	AMERICAN ELM	FAIR	YES		3	
102004	11	Acer negundo	BOX ELDER	FAIR	YES		1	
102005	11	Acer negundo	BOX ELDER	FAIR	YES		1	
102006	12	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
102007	12	Acer negundo	BOX ELDER	FAIR	YES		1	
102008	9	Ulmus americana	AMERICAN ELM	DEAD	YES		1	
102009	8	Ulmus americana	AMERICAN ELM	DEAD	YES		1	
102010	10	Quercus alba	WHITE OAK	DEAD	YES		1	
102011	14		UNKNOWN TREE	DEAD	YES		3	
102012	6	Prunus serotina	BLACK CHERRY	DEAD	YES		0	
102013	16	Populus deltoides	EASTERN COTTONWOOD	DEAD	NO			
102014	8	Prunus serotina	BLACK CHERRY	DEAD	NO			
102015	6	Malus domestica	APPLE	DEAD	NO			
102016	14	Quercus alba	WHITE OAK	FAIR	NO			
102017	18	Pinus sylvestris	SCOTT PINE	FAIR	NO	YES		
102018	8	Acer negundo	BOX ELDER	FAIR	NO			
102019	8	Acer negundo	BOX ELDER	FAIR	NO			
102020	18, 17	Acer negundo	BOX ELDER	FAIR	NO	YES		
102021	7	Acer negundo	BOX ELDER	FAIR	NO			
102022	11	Acer negundo	BOX ELDER	FAIR	NO			
102023	8	Acer negundo	BOX ELDER	FAIR	NO			
102024	6	Acer negundo	BOX ELDER	FAIR	NO			
102025	7	Acer negundo	BOX ELDER	FAIR	NO			
102026	26	Pinus sylvestris	SCOTT PINE	FAIR	NO	YES		
102027	6	Acer negundo	BOX ELDER	FAIR	NO			
102028	18	Pinus sylvestris	SCOTT PINE	FAIR	NO	YES		
102029	14	Prunus serotina	BLACK CHERRY	FAIR	NO			
102030	8	Malus domestica	APPLE	FAIR	NO			
102031	11	Acer negundo	BOX ELDER	FAIR	NO			
102032	13	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
102033	12	Acer negundo	BOX ELDER	FAIR	NO			
102034	18	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
102035	7	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
102036	6	Acer negundo	BOX ELDER	FAIR	NO			
102037	7	Acer negundo	BOX ELDER	FAIR	NO			
102038	19	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
102039	6	Acer negundo	BOX ELDER	FAIR	NO			
102040	24	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO	YES		
102041	6	Acer negundo	BOX ELDER	FAIR	NO			
102042	9	Acer negundo	BOX ELDER	FAIR	NO			
102043	7	Prunus serotina	BLACK CHERRY	GOOD	NO			
102044	6	Quercus alba	WHITE OAK	GOOD	NO			
102045	18	Populus deltoides	EASTERN COTTONWOOD	GOOD	NO			
102046	7	Acer negundo	BOX ELDER	FAIR	NO			
102047	8	Acer negundo	BOX ELDER	FAIR	NO			
102048	9, 3	Cornus florida	FLOWERING DOGWOOD	FAIR	NO			
102049	8	Ulmus americana	AMERICAN ELM	FAIR	NO			
102050	10	Acer rubrum	RED MAPLE	FAIR	NO			
102051	8	Acer negundo	BOX ELDER	FAIR	NO			
102052	7	Prunus serotina	BLACK CHERRY	FAIR	NO			
102053	20	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
102054	14, 8, 6, 18	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
102055	9	Acer negundo	BOX ELDER	FAIR	NO			
102056	8	Acer negundo	BOX ELDER	FAIR	NO			
102057	18	Populus deltoides	EASTERN CO

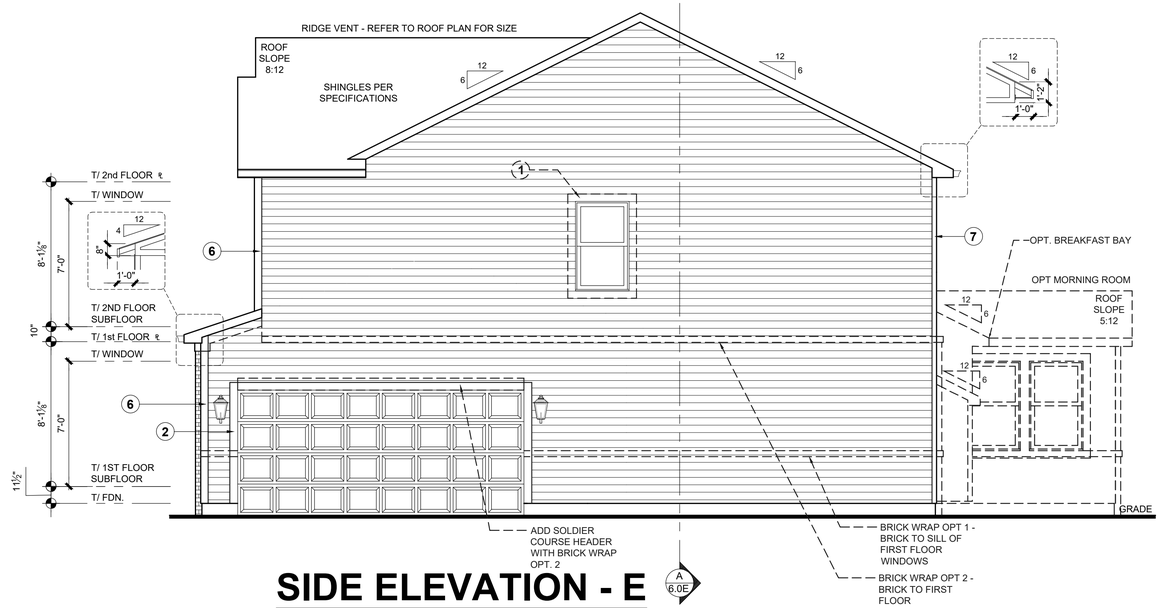
Tree List

TAG#	SIZE	SPECIES	COMMON NAME	CONDITION	REMOVE	LANDMARK	REGULATED REPLACEMENTS	LANDMARK REPLACEMENT
102164	10	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102165	9	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		1	
102166	7	Acer negundo	BOX ELDER	FAIR	YES		0	
102167	12	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		1	
102168	11	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102169	12	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102170	13	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		3	
102171	8	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102172	8, 5	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102173	9	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102174	9	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102175	6	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102176	13	Pinus nigra	AUSTRIAN PINE	FAIR	YES		3	
102177	7	Juglans nigra	BLACK WALNUT	FAIR	YES		0	
102178	6	Prunus serotina	BLACK CHERRY	DEAD	YES		0	
102179	10	Juglans nigra	BLACK WALNUT	DEAD	YES		1	
102180	6	Acer rubrum	RED MAPLE	DEAD	YES		0	
102181	11	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
102182	7	Acer negundo	BOX ELDER	FAIR	YES		0	
102183	8	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102184	8	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102185	10	Acer negundo	BOX ELDER	FAIR	YES		1	
102186	6	Juglans nigra	BLACK WALNUT	FAIR	YES		0	
102187	6	Acer negundo	BOX ELDER	FAIR	YES		0	
102188	7	Carya glabra	PIGNUT HICKORY	FAIR	YES		0	
102189	7	Juglans nigra	BLACK WALNUT	FAIR	YES		0	
102190	11	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102191	10	Acer negundo	BOX ELDER	FAIR	YES		1	
102192	7	Acer negundo	BOX ELDER	FAIR	YES		0	
102193	10	Acer negundo	BOX ELDER	FAIR	YES		1	
102194	8	Juglans nigra	BLACK WALNUT	FAIR	YES		0	
102195	6	Acer negundo	BOX ELDER	FAIR	YES		0	
102196	13	Acer platanoides	NORWAY MAPLE	FAIR	YES		3	
102197	6	Acer negundo	BOX ELDER	FAIR	YES		0	
102198	10	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102199	9	Acer negundo	BOX ELDER	FAIR	YES		1	
102200	9	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102201	7	Acer negundo	BOX ELDER	FAIR	YES		0	
102202	10	Acer negundo	BOX ELDER	FAIR	YES		1	
102203	8	Acer negundo	BOX ELDER	FAIR	YES		1	
102204	9	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102205	9, 4	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102206	6	Acer negundo	BOX ELDER	FAIR	YES		0	
102207	6	Prunus serotina	BLACK CHERRY	FAIR	YES		0	
102208	12	Ulmus americana	AMERICAN ELM	FAIR	YES		1	
102209	8, 6		UNKNOWN TREE	FAIR	YES		1	
102210	10	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
102212	10	Acer negundo	BOX ELDER	FAIR	YES		1	
102217	6	Acer negundo	BOX ELDER	FAIR	YES		0	
102218	7	Acer negundo	BOX ELDER	FAIR	YES		0	
102219	9	Acer negundo	BOX ELDER	FAIR	YES		1	
102220	7	Acer negundo	BOX ELDER	FAIR	YES		0	
102221	9	Acer negundo	BOX ELDER	FAIR	YES		1	
102223	9	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102224	8	Acer negundo	BOX ELDER	FAIR	YES		1	
102225	12	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102226	8	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102227	6	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102228	9	Acer negundo	BOX ELDER	FAIR	YES		1	
102229	15	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES		3	
102230	16	Juglans nigra	BLACK WALNUT	FAIR	YES		3	
102231	6	Juglans nigra	BLACK WALNUT	DEAD	YES		0	
102232	7	Acer platanoides	NORWAY MAPLE	DEAD	YES		0	
102233	12	Juglans nigra	BLACK WALNUT	DEAD	YES		1	
102234	13	Juglans nigra	BLACK WALNUT	DEAD	YES		3	
102235	11	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102236	12, 16, 16	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES			
102237	24, 26	Populus deltoides	EASTERN COTTONWOOD	FAIR	YES	YES		24
102239	13, 28, 14	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO	YES		
102240	8	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
102241	19, 15	Populus deltoides	EASTERN COTTONWOOD	FAIR	NO			
102242	9	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102243	9	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102244	8, 7, 5, 5	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102245	8	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102246	8	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102247	8	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102248	8	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102249	9	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102250	11	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102251	10	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102252	7	Juglans nigra	BLACK WALNUT	FAIR	YES		0	
102253	9	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102254	8	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102255	8	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102256	8	Juglans nigra	BLACK WALNUT	FAIR	YES		1	
102257	7	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102258	7	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102259	7	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102260	6, 6	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102261	6	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102262	6	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102263	6	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102264	6	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102265	6	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102266	6	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102267	11	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102268	9	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102269	8	Pinus nigra	AUSTRIAN PINE	FAIR	YES		1	
102270	6	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102271	6	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102272	7	Juglans nigra	BLACK WALNUT	FAIR	NO			
102273	8	Juglans nigra	BLACK WALNUT	FAIR	NO			
102274	13	Juglans nigra	BLACK WALNUT	FAIR	NO			
102275	7	Juglans nigra	BLACK WALNUT	FAIR	YES		0	
102276	17	Juglans nigra	BLACK WALNUT	FAIR	NO			
102277	4,8,6,5,6,6	Juglans nigra	BLACK WALNUT	FAIR	NO			
102278	7	Juglans nigra	BLACK WALNUT	FAIR	YES		0	
102279	7	Juglans nigra	BLACK WALNUT	FAIR	YES		0	
102280	6, 3	Pinus nigra	AUSTRIAN PINE	FAIR	YES		0	
102281	12, 28	Quercus alba	WHITE OAK	FAIR	NO	YES		
102282	7	Juglans nigra	BLACK WALNUT	FAIR	NO			
102283	12	Juglans nigra	BLACK WALNUT	FAIR	NO			
102284	11	Carya glabra	PIGNUT HICKORY	FAIR	NO			
102285	6	Juglans nigra	BLACK WALNUT	FAIR	NO			
102286	6	Acer negundo	BOX ELDER	FAIR	NO			
102288	8	Acer negundo	BOX ELDER	FAIR	NO			
102289	12, 6	Acer negundo	BOX ELDER	DEAD	NO			
102290	16	Juglans nigra	BLACK WALNUT	GOOD	NO			
102401	16	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
102402	14	Pinus sylvestris	SCOTT PINE	DEAD	YES		3	
102403	7	Acer negundo	BOX ELDER	DEAD	YES		0	
102404	16	Robinia pseudoacacia	BLACK LOCUST	GOOD	YES		3	
102405	16	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
102406	21	Pinus strobus	WHITE PINE	GOOD	YES	YES		21
102407	21	Pinus strobus	WHITE PINE	GOOD	YES	YES		21
102408	26	Pinus strobus	WHITE PINE	GOOD	YES	YES		26
102409	9	Acer negundo	BOX ELDER	GOOD	YES		1	
102410	26	Fraxinus americana	WHITE ASH	GOOD	YES	YES		26
102411	17	Juglans nigra	BLACK WALNUT	GOOD	YES		6	
102412	10	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102413	15	Carpinus caroliniana	AMERICAN HORNBEAM	GOOD	YES		3	
102414	15	Carpinus caroliniana	AMERICAN HORNBEAM	GOOD	YES		3	
102415	11	Picea glauca	WHITE SPRUCE	GOOD	YES		1	
102416	12	Cornus florida	FLOWERING DOGWOOD	FAIR	YES		1	
102417	6		UNKNOWN TREE	DEAD	YES		0	
102418	9	Cornus florida	FLOWERING DOGWOOD	GOOD	YES		1	
102419	10	Acer saccharum	SUGAR MAPLE	GOOD	YES		1	
102420	7	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
102421	18	Juniperus virginiana	EASTERN RED CEDAR	GOOD	YES		6	
102422	6	Fraxinus americana	WHITE ASH	GOOD	YES		0	
102423	8,12		UNKNOWN TREE	POOR	YES		1	
102424	10	Pyrus communis	PEAR	FAIR	YES		1	
102425	13	Carya glabra	PIGNUT HICKORY	GOOD	YES		3	
102426	12	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102427	6,7,8,8	Acer saccharum	SUGAR MAPLE	FAIR	YES		1	
102428	17	Acer saccharum	SUGAR MAPLE	GOOD	YES	YES		17
102429	12	Populus deltoides	EASTERN COTTONWOOD	POOR	YES		1	
102430	12		UNKNOWN TREE	POOR	YES		1	
102431	8,8		UNKNOWN TREE	POOR	YES		1	
102432	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102433	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102434	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102435	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102436	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102437	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102438	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102439	26	Juglans nigra	BLACK WALNUT	GOOD	YES	YES		26
102440	9	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102441	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
102442	8	Ulmus americana	AMERICAN ELM	FAIR	YES		1	
102443	8,7	Ulmus americana	AMERICAN ELM	FAIR	YES		1	
102444	9,8	Quercus rubra	RED OAK	GOOD	YES		1	
102445	8	Fraxinus americana	WHITE ASH	FAIR	YES		1	
102446	9		UNKNOWN TREE	DEAD	YES		1	
102447	8	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
102448	7	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
102449	9	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102450	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102451	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102452	13	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
102453	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102454	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102455	19	Fraxinus americana	WHITE ASH	GOOD	YES		6	
102456	15	Fraxinus americana	WHITE ASH	FAIR	YES		3	
102457	12	Ulmus rubra	SLIPPERY ELM	GOOD	YES		1	
102458	12,10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102459	24,18	Juglans nigra	BLACK WALNUT	GOOD	YES	YES		24
102460	15,12	Acer saccharum	SUGAR MAPLE	GOOD	YES		3	
102461	12	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102462	13	Malus domestica	APPLE	FAIR	YES		3	
102463	10		UNKNOWN TREE	DEAD	YES		1	
102464	12	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102465	12	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102466	18	Fraxinus americana	WHITE ASH	GOOD	YES		6	
102467	8	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
102468	8	Ulmus americana	AMERICAN ELM	DEAD	YES		1	
102469	16	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
102470	18	Juglans nigra	BLACK WALNUT	GOOD	YES	YES		18
102471	15	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
102472	15	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
102473	15	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
102474	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102475	18	Prunus serotina	BLACK CHERRY	FAIR	YES	YES		18
102476	18	Quercus velutina	BLACK OAK	GOOD	YES	YES		18
102477	13	Prunus serotina	BLACK CHERRY	GOOD	YES		3	
102478	8	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
102479	22	Acer saccharum	SUGAR MAPLE	GOOD	YES	YES		22
102480	16	Acer saccharum	SUGAR MAPLE	GOOD	YES	YES		16
102481	18	Ulmus americana	AMERICAN ELM	GOOD	YES	YES		18
102482	8	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102483	9	Ulmus americana	AMERICAN ELM	FAIR	YES		1	
102484	8	Ulmus americana	AMERICAN ELM	FAIR	YES		1	
102485	16		UNKNOWN TREE	DEAD	YES		3	
102486	9	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102487	7	Fraxinus americana	WHITE ASH	FAIR	YES		0	
102488	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102489	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102490	12		UNKNOWN TREE	DEAD	YES		1	
102491	15	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
102492	12	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102493	15	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
102494	24	Juglans nigra	BLACK WALNUT	GOOD	YES	YES		24
102495	8,14,14,6	Juglans nigra	BLACK WALNUT	FAIR	YES		3	
102496	7	Ulmus americana	AMERICAN ELM	FAIR	YES		0	
102497	7	Ulmus americana	AMERICAN ELM	FAIR	YES		0	
102498	10	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
102499	18	Ulmus rubra	SLIPPERY ELM	GOOD	YES	YES		18
102500	10	Fraxinus americana	WHITE ASH	FAIR	YES		1	
102543	10	Carya ovata	SHAGBARK HICKORY	GOOD	NO			
102544	44	Carya ovata	SHAGBARK HICKORY	GOOD	NO	YES		
102545	6	Carya ovata	SHAGBARK HICKORY	GOOD	NO			
102546	6	Carya ovata	SHAGBARK HICKORY	GOOD	NO			
102547	8	Ulmus americana	AMERICAN ELM	GOOD	NO			
102548	17	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
102549	23	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
102550	21	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
102551	23	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
102552	6	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		0	
102553	17	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
102554	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
102555	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
102556	20	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
102557	19	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		6	
102558	27	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES	YES		27
102559	7	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		0	
102560	7	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		0	
102561	7	Fraxinus pennsylvanica	GREEN ASH	GOOD	YES		0	
102562	6,7	Quercus alba	WHITE OAK	GOOD	YES		0	
102563	6	Quercus alba	WHITE OAK	GOOD	YES		0	
102564	6	Quercus alba	WHITE OAK	GOOD	YES		0	
102565	11	Quercus alba	WHITE OAK	GOOD	YES		1	
102566	10	Quercus alba	WHITE OAK	GOOD	YES		1	
102567	7	Quercus alba	WHITE OAK	GOOD	YES		0	
102568	12	Quercus alba	WHITE OAK	GOOD	YES		1	
102569	11	Quercus alba	WHITE OAK	FAIR	YES		1	
102570	16	Quercus alba	WHITE OAK	GOOD	YES	YES		16
102571	8	Quercus alba	WHITE OAK	GOOD	YES		1	
102572	8	Ulmus rubra	SLIPPERY ELM	GOOD	YES		1	
102573	10	Quercus alba	WHITE OAK	GOOD	YES		1	
102574	11	Quercus alba	WHITE OAK	GOOD	YES		1	
102575	13	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
102576	15	Ulmus americana	AMERICAN ELM	GOOD	YES		3	
102577	6	Ulmus americana	AMERICAN ELM	GOOD	YES		0	
102578	18	Juglans nigra	BLACK WALNUT	GOOD	YES	YES		18
102579	16	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
102580	13	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
102581	15	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
102583	16	Juglans nigra	BLACK WALNUT	GOOD	YES		3	
102584	14,8,6	Acer platanoides	NORWAY MAPLE	GOOD	YES		3	
102585	10	Ulmus rubra	SLIPPERY ELM	GOOD	YES		1	
102586	9	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102587	7	Acer negundo	BOX ELDER	GOOD	YES		0	
102588	10	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
102589	11	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
102590	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102591	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102592	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102593	12	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102594	7	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
102595	8	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102596	7	Fraxinus americana	WHITE ASH	GOOD	YES		0	
102597	7	Fraxinus americana	WHITE ASH	GOOD	YES		0	
102598	7	Ulmus rubra	SLIPPERY ELM	GOOD	YES		0	
102599	7	Acer negundo	BOX ELDER	GOOD	YES		0	
102600	6	Acer negundo	BOX ELDER	GOOD	YES		0	
102601	15	Prunus serotina	BLACK CHERRY	FAIR	YES		3	
102602	9	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102603	15	Prunus serotina	BLACK CHERRY	GOOD	YES		3	
102604	24	Acer saccharum	SUGAR MAPLE	GOOD	YES	YES		24
102605	15	Fraxinus americana	WHITE ASH	DEAD	YES		3	
102606	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102607	15	Fraxinus americana	WHITE ASH	DEAD	YES		3	
102608	18	Fraxinus americana	WHITE ASH	POOR	YES		6	
102609	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102610	12	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102611	12	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102612	10		UNKNOWN TREE	DEAD	YES		1	
102613	13	Prunus serotina	BLACK CHERRY	GOOD	YES		3	
102614	9	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102615	14	Prunus serotina	BLACK CHERRY	GOOD	YES		3	
102616	18	Prunus serotina	BLACK CHERRY	GOOD	YES	YES		18
102618	7	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102619	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102620	10	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
102621	15		UNKNOWN TREE	DEAD	YES		3	
102622	20	Prunus serotina	BLACK CHERRY	GOOD	YES	YES		20
102623	8		UNKNOWN TREE	GOOD	YES		1	
102624	8,7		UNKNOWN TREE	DEAD	YES		1	
102625	10,11	Acer negundo	BOX ELDER	POOR	YES		1	
102626	8	Acer negundo	BOX ELDER	GOOD	YES		1	
102627	6	Acer negundo	BOX ELDER	GOOD	YES		0	
102628	10	Cucurbita moschata	BUTTERNUT	DEAD	YES		1	
102629	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102630	10	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
102631	15		UNKNOWN TREE	DEAD	YES		3	
102632	8	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
102633	15	Prunus serotina	BLACK CHERRY	POOR	YES		3	
102634	14	Ulmus americana	AMERICAN ELM	GOOD	YES		3	
102635	13	Prunus serotina	BLACK CHERRY	POOR	YES		3	
102636	16		UNKNOWN TREE	DEAD	YES		3	
102637	12	Acer negundo	BOX ELDER	FAIR	YES		1	
102638	13	Acer negundo	BOX ELDER	FAIR	YES		3	
102639	22	Quercus alba	WHITE OAK	GOOD	YES	YES		22
102640	15,18	Prunus serotina	BLACK CHERRY	FAIR	YES	YES		18
102641	12	Acer negundo	BOX ELDER	DEAD	YES		1	
102642	8	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102643	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102644	11	Acer negundo	BOX ELDER	DEAD	YES		1	
102645	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102646	12	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102647	13	Prunus serotina	BLACK CHERRY	GOOD	YES		3	
102648	14	Prunus serotina	BLACK CHERRY	GOOD	YES		3	
102649	11	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102650	9	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102651	9	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102652	8	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102653	10	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102654	11	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102655	11	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102656	6	Fraxinus americana	WHITE ASH	GOOD	YES		0	
102657	12	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
102658	10	Prunus serotina	BLACK CHERRY	FAIR	YES		1	
102659	12	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102660	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102661	8	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
102662	8	Ulmus americana	AMERICAN ELM	GOOD	YES		1	
102663	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102664	18	Populus deltoides	EASTERN COTTONWOOD	DEAD	YES		6	
102665	10	Prunus serotina	BLACK CHERRY	GOOD	YES		1	
102666	12,10	Fraxinus americana	WHITE ASH	FAIR	YES		1	
102667	11		UNKNOWN TREE	DEAD	YES		1	
102668	16	Fraxinus americana	WHITE ASH	POOR	YES		3	
102669	8	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102670	10		UNKNOWN TREE	DEAD	YES		1	
102671	10	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
102672	9	Populus deltoides	EASTERN COTTONWOOD	DEAD	YES		1	
102673	11		UNKNOWN TREE	DEAD	YES		1	
102674	8	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
102675	8	Pyrus communis	PEAR	DEAD	YES		1	
102676	15	Prunus serotina	BLACK CHERRY	POOR	YES		3	
102677	9	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
102678	10	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102680	10	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102681	7,9	Fraxinus americana	WHITE ASH	FAIR	YES		1	
102682	11	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102683	11	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102684	9	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102685	10	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102686	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102687	6	Juglans nigra	BLACK WALNUT	GOOD	YES		0	
102688	11	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102689	8	Prunus serotina	BLACK CHERRY	POOR	YES		1	
102690	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102691	10	Juglans nigra	BLACK WALNUT	GOOD	YES		1	
102692	10	Populus deltoides	EASTERN COTTONWOOD	GOOD	YES		1	
102693	22	Prunus serotina	BLACK CHERRY	GOOD	YES	YES		22
102694	12	Fraxinus americana	WHITE ASH	GOOD	YES		1	
102695	15	Acer negundo	BOX ELDER	DEAD	YES		3	
102696	8	Populus deltoides	EASTERN COTTONWOOD	GO



FRONT ELEVATION - E

SCALE: 1/4" = 1'-0"



SIDE ELEVATION - E

SCALE: 1/4" = 1'-0"

Division Note

IT IS THE RESPONSIBILITY OF EACH DIVISION TO DETERMINE, AT A DIVISIONAL LEVEL AS WELL AS COMMUNITY SPECIFIC LEVEL, THE DESIRED FINISH REQUIREMENTS OF SPECIFIC TIME PIECES; WHETHER PAINTED, VINYL OR ALUMINUM WRAPPED.

Typ Ext Trim Finish

THE TRIM NOTED ON THE ELEVATIONS IS PROVIDED SOLELY AS A GUIDE FOR TRIM SIZES. ALL TRIM NOTED ON THE ELEVATIONS IS NOMINAL. SEE SPECIFICATIONS FROM TRIM FINISH AND MATERIAL

Window Grid Note

1. FRONT WINDOW GRIDS (MUNTINS) ARE STANDARD

Trim Schedule

KEY #	DESCRIPTION
1	4" TRIM (2x4)
2	6" TRIM (2x6)
3	8" TRIM (2x8)
4	10" TRIM (2X10)
5	12" TRIM (2X12)
6	FRONT CORNERS = 4" TRIM PER DIVISION - SEE SPECS
7	REAR CORNERS = 4" TRIM PER DIVISION - SEE SPECS
8	VINYL ACCENT SIDING

REFER TO PROJECT SPECIFIC SPECIFICATIONS REGARDING TRIM THICKNESS; 1X_ OR ⅝ TRIM THICKNESS

Fascia / Rakes

1. FASCIAS: ALUMINUM GUTTERS ON 1X6 FASCIA W/ 1X6 FRIEZE BOARD
2. RAKES: 1X6 RAKE W/ 1X6 RAKE FRIEZE BOARD

SEE DETAILS SHEETS

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Plan Issued Date: 1-30-24

BASE PLAN REVISION:

1	----
2	----
3	----
4	----

ESSENTIAL BRICK SERIES

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1668 S. Telegraph Road, Suite 200
Bloomfield Hills, MI 48302
Phone#: 248-221-5000

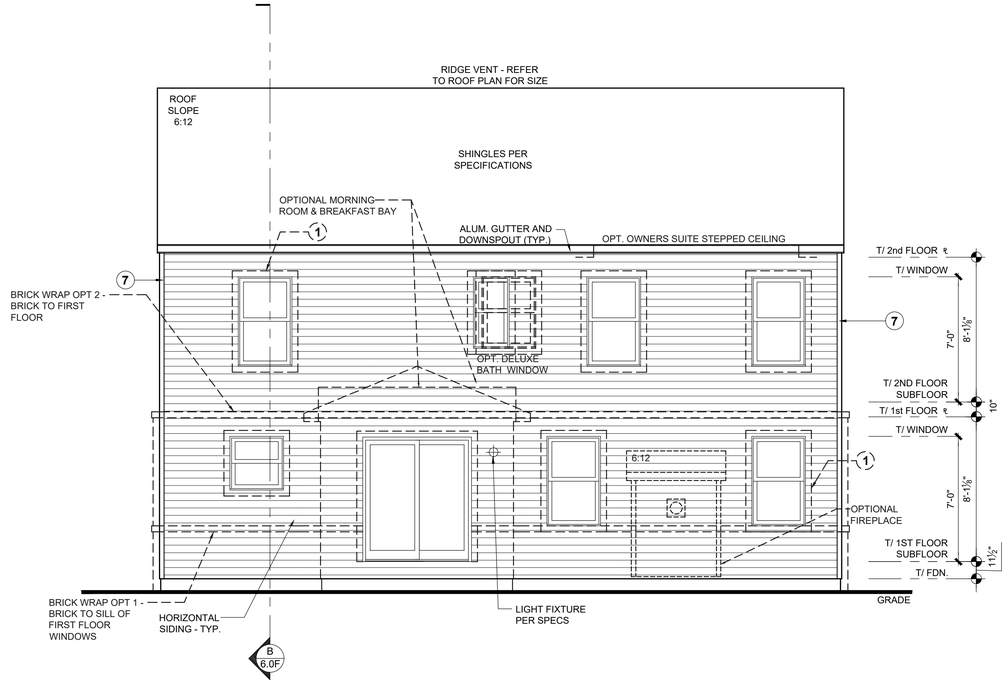
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Aubrey SL

Lot # - Subdivision
Address, City, MI Zip Code

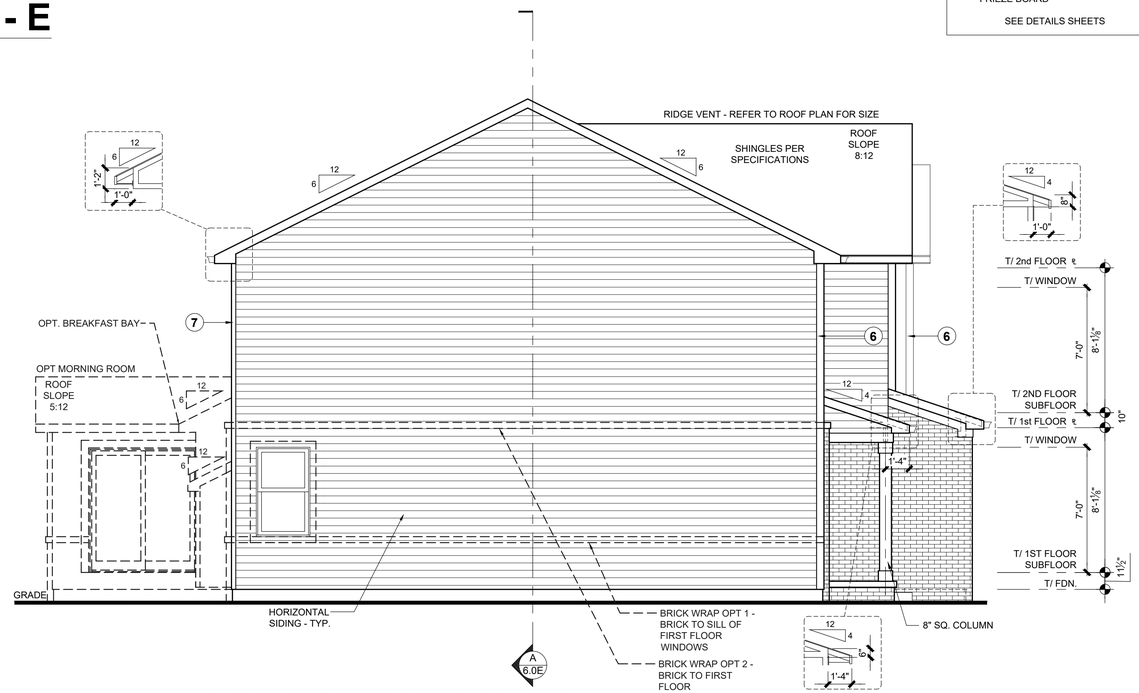
11x17 PRINTS ARE ½ SCALE

Job #:	XXX
LSP Date:	XX/XX /XX
LSP By:	XXX
LSP Rev:	
Sheet Title :	Front & Garage Side Elevations
Sheet:	1.0E



REAR ELEVATION - E

SCALE: 1/4" = 1'-0"



SIDE ELEVATION - E

SCALE: 1/4" = 1'-0"

Division Note

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Typ Ext Trim Finish

THE TRIM NOTED ON THE ELEVATIONS IS PROVIDED SOLELY AS A GUIDE FOR TRIM SIZES. ALL TRIM NOTED ON THE ELEVATIONS IS NOMINAL. SEE SPECIFICATIONS FROM TRIM FINISH AND MATERIAL

Window Grid Note

1. FRONT WINDOW GRIDS (MUNTINS) ARE STANDARD

Trim Schedule

KEY #	DESCRIPTION
1	4" TRIM (2x4)
2	6" TRIM (2x6)
3	8" TRIM (2x8)
4	10" TRIM (2X10)
5	12" TRIM (2X12)
6	FRONT CORNERS = 4" TRIM PER DIVISION - SEE SPECS
7	REAR CORNERS = 4" TRIM PER DIVISION - SEE SPECS
8	VINYL ACCENT SIDING

REFER TO PROJECT SPECIFIC SPECIFICATIONS REGARDING TRIM THICKNESS; 1X_ OR ⅝ TRIM THICKNESS

Fascia / Rakes

1. FASCIAS: ALUMINUM GUTTERS ON 1X6 FASCIA W/ 1X6 FRIEZE BOARD
2. RAKES: 1X6 RAKE W/ 1X6 RAKE FRIEZE BOARD

SEE DETAILS SHEETS

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ESSENTIAL BRICK SERIES

Plan Issued Date: 1-30-24

BASE PLAN REVISION:

1	----
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1668 S. Telegraph Road, Suite 200
Bloomfield Hills, MI 48302
Phone#: 248-221-5000

M/I HOMES

11x17 PRINTS ARE ½ SCALE

Aubrey SL

Lot # - Subdivision
Address, City, MI Zip Code

Job #:	XXX
LSP Date:	XX/XX /XX
LSP By:	XXX
LSP Rev:	

Sheet Title : Rear & Side Elevations

Sheet: 1.1E