COTTAGE GROVE PLANNING COMMISSION

December 15, 2025

12800 RAVINE PARKWAY SOUTH
COTTAGE GROVE, MN 55016

COUNCIL CHAMBER - 7:00 PM

1 Call to Order

2 Roll Call

3 Approval of the Agenda

4 Open Forum

5 Chair's Explanation of the Hearing Process

6 Public Hearing and Applications

- A CUP/V2025-032 - 7430 80th Street Cannabis Retail Sales
  Discussion: Venus Creations LLC has applied for a Conditional Use Permit to engage in cannabis retail sales and a Variance to be less than 1,000 feet from another cannabis or lower potency hemp edible retail establishment.
- B SP/V2025-031 Van Meter Expansion
  Discussion: Van Meter Inc. has applied for a Site Plan Review for additions onto their existing building at 7450 95th Street South. The additions are comprised of two expansion areas. Expansion B is approximately 86,720 square feet to be used for receiving, warehousing, and will-call operations. Expansion A is approximately 38,220 square feet to be used for warehousing. The applicant has also applied for a Variance to allow Expansion A to expand into the required 100-foot property line setback from the residential zoned property to the north.
- C CUP2025-032 Van Meter Exterior Storage
  Discussion: Van Meter Inc. has applied for a Conditional Use Permit to allow for the exterior storage of materials within a 10,000 square foot enclosed area with 8- to 10-foot tall vinyl fencing.
- D PUD/SP/PP2025-030 Yellow Tree Apartments
  Discussion: Yellow Tree Development has submitted a planning application for a Site Plan Review and Planned Unit Development (PUD), for a proposed 186-unit, market-rate apartment building to be located on East Point Douglas Road. A Preliminary Plat application has also been submitted for Everwood 6th Addition.

7 Approval of Minutes

- A Approval of November 24, 2025, Planning Commission Minutes

8 Reports

- A Recap of November City Council Meetings
- B Response to Planning Commission Inquiries - None
- C Planning Commission Requests

9 Adjournment

STAFF REPORT CASE: CUP/V2025-032

ITEM: 6.1

PUBLIC MEETING DATE: 12/15/25 TENTATIVE COUNCIL REVIEW DATE: 1/21/26

APPLICATION

APPLICANT: Venus Creations LLC

REQUEST: A Conditional Use Permit to engage in cannabis retail sales and a Variance to be less than 1,000 feet from another cannabis or lower potency hemp edible retail establishment.

SITE DATA

LOCATION: 7430 80th Street South, Suite 105

ZONING: M-U, Mixed Use

GUIDED LAND USE: Mixed Use within 300 Feet of Arterial Roadways

LAND USE OF ADJACENT PROPERTIES:	CURRENT	GUIDED
NORTH:	Parks/OS & MDR	P/OS & Medium Density Res
EAST:	Commercial	Mixed Use
SOUTH:	Commercial	Mixed Use w/in 300 feet
WEST:	Commercial	Mixed Use w/in 300 feet

SIZE: N/A

DENSITY: N/A

RECOMMENDATION

Denial, based on the findings of fact listed in this staff report.

COTTAGE GROVE PLANNING DIVISION

Planning Staff Contact: Samantha Pierret, Senior Planner; 651-458-2825; spierret@cottagegrovemn.gov

Application Accepted: 11/25/2025 60-Day Review Deadline: 1/26/2026

Planning Staff Report
Venus Creations LLC
Planning Case No. CUP/V2025-032
December 15, 2025

Proposal

Venus Creations LLC has submitted an application requesting a Conditional Use Permit to engage in cannabis retail sales at 7430 80th Street South, Suite #105. The Applicant has also submitted a variance application to be less than 1,000 feet from another cannabis or lower potency hemp edible retail establishment.



Location Map

Review Schedule
Application Received: November 12, 2025
Application Accepted: November 26, 2025
Planning Commission Date: December 15, 2025
Tentative City Council Date: January 21, 2026
60-Day Review Deadline: January 25, 2026

Background

The State of Minnesota legalized recreational cannabis use and sales in 2023 under Statute 342. The Office of Cannabis Management (OCM) oversaw the preparation of cannabis rules from 2023 to 2025. The City of Cottage Grove Zoning Ordinance was updated in 2024 to add cannabis uses

and regulations including regulations for cannabis retail sales and lower potency hemp edible retail sales. All businesses in the cannabis and lower potency hemp edible retail sales market must obtain proper licensure with the State of Minnesota as well as local permits and registration with the City of Cottage Grove.

The Applicant is proposing to lease 2,200 square feet of space in the eastern building on the property (former Subway) to operate a cannabis retail business. The property owner, Oak Park Commons LLC, has acknowledged the Applicant's request to conduct cannabis retail sales on site.

To operate a cannabis retail business in the City of Cottage Grove, the Applicant must obtain a Conditional Use Permit, local registration, and license from the State Office of Cannabis Management. Local registrations are approved by Council and are issued after the approval of a license by the Office of Cannabis Management.

Planning Considerations

Conditional Use Permit

The purpose of a Conditional Use Permit is to authorize and regulate uses that may be beneficial in a specific instance to the general welfare of the community yet ensure that such uses are not detrimental to surrounding properties and are consistent with the stated purpose of the zoning district.

The permit shall be approved solely for the proposed use of a particular site, not for a particular person or firm. When granting a Conditional Use Permit, the City may impose conditions as it deems necessary to serve and protect the health, safety, convenience, and general welfare of the community.

When evaluating any proposed conditional use permit, the Planning Commission shall consider the following findings:

1. *Compliance with and effect upon the Comprehensive Plan, including public facilities and capital improvement plans.*
2. *The establishment, maintenance or operation of the conditional use will promote and enhance the general public welfare and will not be detrimental to or endanger the public health, safety, morals or comfort.*
3. *The conditional use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood.*
4. *The establishment of the conditional use will not impede the normal and orderly development and improvement of surrounding property for uses permitted in the district.*
5. *Adequate public facilities and services are available or can be reasonably provided to accommodate the use which is proposed.*
6. *The conditional use shall, in all other respects, conform to the applicable regulations of the district in which it is located.*

7. *The conditional use complies with the general and specific performance standards as specified by the Zoning Code.*

The proposed use of Cannabis Retail Sales on the subject property is not consistent with the findings above as described in the following report.

Zoning and Comprehensive Plan

The parcel at 7430 80th Street South is zoned M-U, Mixed-Use Business District. Cannabis Retail sales are a Conditional Use in the M-U District. The property is currently guided for commercial use in the 2040 Comprehensive Plan. All cannabis uses must comply with Title 11-4-18 of the City's Zoning Code.



Current Zoning

State of Minnesota Cannabis Requirements

Minnesota Statute 342 was passed in 2023 and amended in 2024 creating an adult use cannabis market. This includes the creation of the Office of Cannabis Management (OCM), which now oversees the cannabis licensing and enforcement process including adult use cannabis and lower-potency hemp edibles. OCM worked to draft cannabis rules between 2023 and 2025. These rules were officially adopted in April 2025.

OCM has licensing processes for adult-use cannabis sales. Adult use retailers begin the licensure process with OCM by submitting required information and documentation. OCM conducts background checks and reviews application materials and preliminarily approves licenses. After pre-approval, Applicants have 18 months to secure a location, submit final documents to OCM, and work with their local government to secure local zoning approvals. Upon receiving local zoning approval, OCM conducts a pre-licensure inspection. If the inspection passes, fees are paid to OCM and a license is issued.

Statute 342.46 includes several standards business owners must adhere to, including age verification standards, display and storage standards, allowable products that may be sold, building condition requirements, and on-site consumption standards. These standards are overseen by

OCM, and age verification compliance checks are performed by local law enforcement as required by statute.

City of Cottage Grove Registration Requirements

City Code Title 3-13, Cannabis Business and Lower-Potency Hemp Edible Business Regulations, was adopted in 2024. With the legislative and statutory changes, local units of government in Minnesota must verify cannabis businesses comply with local zoning regulations before OCM will issue a license. In Cottage Grove, all businesses licensed by the OCM must register with the city. The Applicant must be in compliance with Title 3-13 and all zoning requirements, pay the registration fee, be current on all property taxes and assessments, have a state license issued by OCM, and be current on payment of all other City fees and charges. Under City of Cottage Grove rules, only after OCM issues a license will a local registration be brought to the City Council for approval. This approval must be obtained before commencing operations.

The registration term runs concurrently with the business' state license term and if the state license is suspended, revoked, or terminated, the City's registration shall also be suspended, revoked, or terminated. All registered businesses must be open to inspection by local law enforcement or other authorized city official during regular business hours. City registrations must be annually renewed. Before renewal, the city may enter and inspect the business to ensure compliance with zoning ordinance, state laws, and Title 3-13.

Title 3-13-4 includes the cap on retail registrations. State Statute allows local government to restrict the number of retail registrations to no less than one per 12,500 residents based on the most recent state demographer's estimate. This cap only applies to adult use cannabis retailers, not lower-potency hemp edible retailers. The Applicant would be the second adult use cannabis registration issued in the City (Highnorth was the first). The City of Cottage Grove is required to issue four registrations based on the 2024 State Demographer's population estimate of 43,690 (43,690 divided by 12,500 equals 3.49). The Office of Cannabis Management has been clear that any fraction over a whole number must be rounded up to the next number of allowed registrations.

City of Cottage Grove Cannabis Requirements (Title 11-4-18)

City Code Title 11-4-18 details Cannabis Uses and Lower-Potency Hemp Edible Uses performance standards:

G.1. Hours of operation for retail sales of cannabis or lower-potency hemp edible products are permitted from 10:00 a.m. to 10:00 p.m. seven days a week.

The Applicant has proposed hours of operation seven days a week from 10:00 a.m. to 10:00 p.m.

G.3. No cannabis or lower-potency hemp edible use is allowed as part of an Adult Use Establishment, as defined in City Code Section 3-14-2.

The business is not an Adult Use Establishment.

G.4. No retail sales are allowed in the Agricultural or Industrial zoning districts.

The property is not zoned Agricultural or Industrial.

G.5. No on-site consumption is allowed in the Agricultural or Industrial zoning districts.

The property is not zoned Agricultural or Industrial. The Applicant has indicated no on-site consumption is proposed.

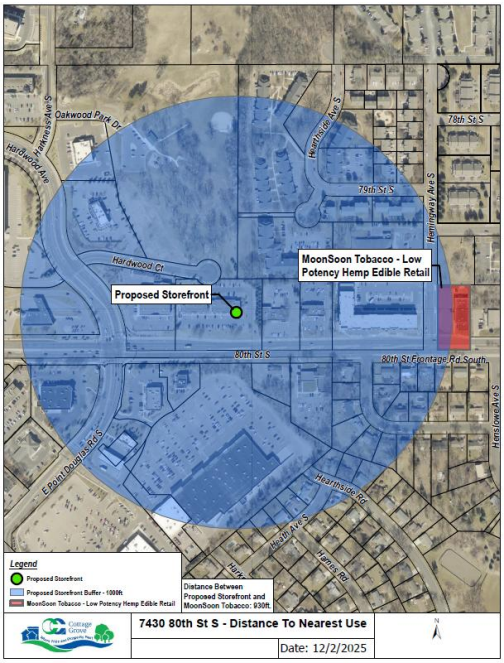
G.6. Cannabis and lower-potency hemp edible uses shall not violate federal laws, state laws or any provisions of City Code. Cannabis and lower-potency hemp edible uses shall not be a public nuisance or violate Chapter 4, Section 8 regarding odors. The City may impose odor suppression or odor mitigation conditions as part of the conditional use permit.

The business will not be growing or processing cannabis therefore, no odor nuisances are anticipated. The Applicant has provided specifications for a room air purifier with a carbon filtration system.

G.7 Distance Restrictions: Distances from a cannabis use or lower-potency hemp edible use are measured from the storefront of a cannabis or lower-potency hemp edible retail use to the property line of all other cannabis or lower-potency hemp edible uses:

a. There must be at least 1,000 feet between each cannabis or lower-potency hemp edible use.

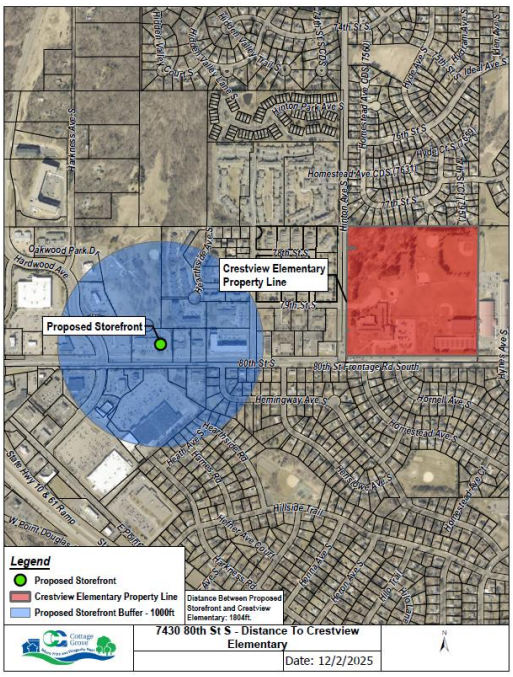
The proposed business is less than 1,000 feet from the nearest cannabis or lower-potency hemp edible use (MoonSoon Tobacco, 7584 80th Street). MoonSoon Tobacco was approved for a lower-potency hemp edible retail conditional use permit by the City Council on December 3, 2025. A City registration and state license have not been issued yet.



b. The location of all cannabis uses must comply with the following:

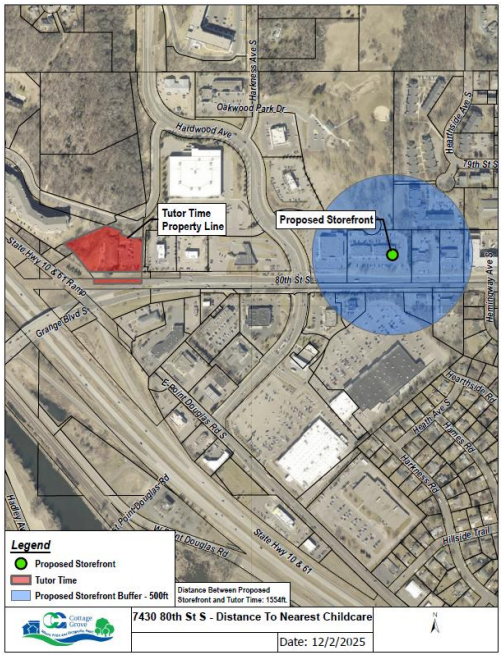
1. More than 1,000 feet from a school as measured from property line of the school to the cannabis business.

The property is over 1,000 feet from the nearest school (Crestview Elementary School) at 7830 80th Street.



2. More than 500 feet from a day care that is in the B1, B2, B3, PB, or MU zoning district as measured from property line of the day care to the cannabis business.

The property is over 1,000 feet from the nearest day care in the B-1, B-2, B-3, PB, or MU Districts (Tutor Time, 7071 East Point Douglas).

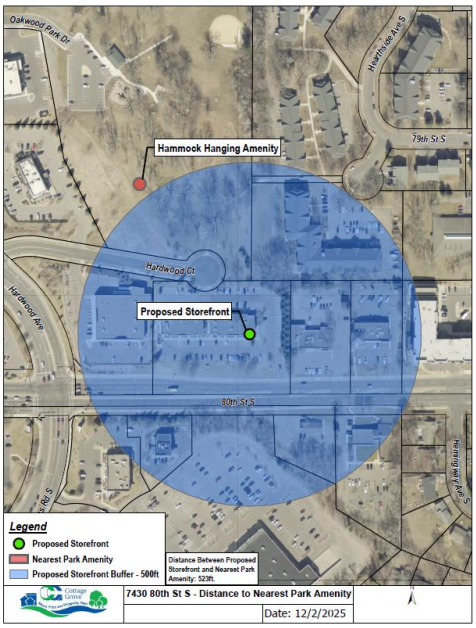


3. More than 500 feet from a residential treatment facility, as measured from the property line of the facility to the cannabis business.

The property is not within 500 feet of any residential treatment facilities.

4. More than 500 feet from an attraction within a public park that is regularly used by minors, such as, but not limited to a playground, athletic field, athletic court, picnic area or permanent restrooms, pavilion or park building, disc golf features, as measured from the location of the public park attraction to the cannabis business.

The business is not located within 500 feet of any public park attractions. The nearest park attraction in Oakwood Park (hammock area) is located over 500 feet from the proposed establishment.



G.8. Signage restrictions

All signage must be reviewed for compliance with the City Code and obtain appropriate permits prior to installation.

G.9. Cannabis uses must meet the minimum parking requirements for each type of use as stated in City Code 11-3-4. If there is a combination of cannabis uses at the same location, the use that requires the largest number of spaces must be met.

The property contains two buildings with multiple commercial tenants. There are 149 parking spaces on site shared by all uses. With 2,200 square feet of retail space proposed, there must be at least one space for every 200 square feet for a total of 11 spaces. The existing parking on site will accommodate the proposed use and existing uses.

G.10. A security plan must be submitted to and approved by the Director of Public Safety to address security issues in order to protect the public health, safety, and welfare. The security plan

must include, but is not limited to addressing issues surrounding parking, traffic, securing of monetary transactions, building security and alarm systems both internal and external, screening, lighting, window and door placement, landscaping, age verification devices, and hours of operation.

A security plan has been submitted to the Director of Public Safety.

Variance – Distance between other cannabis and lower potency hemp edible businesses
The purpose of a variance is to allow variation from the strict application of City Code Title 11 (Zoning Regulations) by reason of the characteristics of the property that cause practical difficulties for the landowner/applicant. Variances require the Applicant to submit an official application form with all information outlined in City Code Title 11-2-5. The Applicant has submitted a variance request to allow a cannabis retail establishment less than 1,000 feet from a lower potency hemp edible retail establishment.

City Code Title 11-4-18G(7)(a) requires that there be at least 1,000 feet between each cannabis or lower-potency hemp edible use as measured from the storefront of the cannabis or lower-potency hemp edible retail use to the property line of all other cannabis or lower-potency hemp edible uses. This distance requirement is not included in state statutes or state rules. When the City of Cottage Grove drafted cannabis rules in 2024, the 1,000-foot separation between retail cannabis uses was included to mimic off-sale liquor (liquor stores) distance separation in Cottage Grove. The requirements for off-sale liquor distance separation are found in Title 3-11-3D of the City Code and are not required by state statute or rule.

The distance for off-sale liquor establishments is measured from the nearest building walls of the establishments, whereas cannabis and lower-potency hemp edible retail uses are measured from property lines. An off-sale liquor establishment may sell lower-potency hemp edibles in Cottage Grove with an Administrative Conditional Use Permit. Liquor stores that sell lower-potency hemp edibles are not subject to the 1,000-foot distance requirement from other lower-potency hemp edible retailers or cannabis retailers. The City of Cottage Grove does not have a distance restriction for tobacco retailers/license holders.

Findings
The findings of fact recommending denial of the variance for a cannabis retail establishment to be less than 1,000 feet from a lower-potency hemp edible retail establishment are as follows:

A. The variance is not in harmony with the general purposes and intent of the Zoning Code to protect the health, safety, morals, comfort, convenience, and general welfare of the public. The distance regulations were enacted to protect public morals and general welfare.
B. The variance is consistent with the Comprehensive Plan. The 2040 Comprehensive Plan identifies this parcel for commercial use. Cannabis retail is a commercial use allowed with a conditional use permit in the Mixed Use District subject to compliance with the City Code.
C. The applicant for the variance establishes that there are practical difficulties in complying with this Title. “Practical difficulties,” as used in connection with the granting of a variance, means that all of the following must be found to apply:

a. The property owner proposes to use the land in a reasonable manner for a use permitted in the zone where the land is located, but the proposal is not permitted by other official controls.

   The proposed use as a cannabis retailer is a reasonable use of the property.

b. The plight of the landowner is due to circumstances unique to the property and that are not created by the landowner.

   The request is not unique to this property. There are several commercial zoned properties in the City of Cottage Grove where cannabis retail sales are not allowed due to setback distances from other lower-potency hemp edible uses or cannabis retail uses. There are very few locations left within the City that could accommodate cannabis retail establishment due to the required setbacks and zoning district restrictions. While the landowner did not create this issue, staff had multiple conversations with the applicant regarding the City Code restrictions on distance between establishments.

c. The variance, if granted, will not alter the essential character of the neighborhood.

   Cannabis retailers are restricted as to the allowed signage and security systems required. It is not anticipated that the cannabis retail establishment would alter the neighborhood character.

D. Economic considerations alone do not constitute a practical difficulty.

   The request may be solely economical in nature because without the variance the applicant cannot operate their business on site.

Public Hearing Notices
The public hearing notice was published in the *St. Paul Pioneer Press* and mailed to the 22 property owners within 500 feet of the property on December 3, 2025.

Recommendation

That the Planning Commission recommend that the City Council deny a Conditional Use Permit and Variance based on the findings for a Cannabis Retailer at 7430 80th Street South, Suite #105.

Prepared by:

Samantha Pierret, AICP
Senior Planner

Attachments:
Application Materials
Buffer Maps

Community Development Department
12800 Ravine Parkway South
Cottage Grove, MN 55016
www.cottagegrovemn.gov

Planning Division
Telephone: 651-458-2827
Fax: 651-458-2897
E-Mail: CGSubmittals@cottagegrovemn.gov

VARIANCE

APPLICATION SUBMITTAL CHECK LIST

- ☒ Planning Commission Application completed and signed by applicant and property owners.
- ☒ Provide the complete legal description of the property in Word format and the property identification number.
- ☒ Attach a written narrative explaining the reason for the application.
- ☒ Complete the “Response to Ordinance Criteria” form.
- ☒ Attach the property survey and a site plan, drawn to scale, showing all existing and proposed improvements.
- ☒ Email the above information to CGSubmittals@cottagegrovemn.gov.
- ☒ Submit the $255 application fee. (Note: The variance application fee is increased to $875 for projects started prior to obtaining city approvals.) Payment can be made over the telephone with a credit card; mailing a check; or in person via check, cash, or credit card.

APPLICATION REVIEW PROCESS

- Applicant submits application, exhibits, narrative explaining the application, application fee, and escrow.
- The City determines if application is complete.
- The City will notify property owners within 500 feet.
- The City will publish the public hearing notice.
- Planning Staff will prepare the staff report.
- The Planning Commission holds the public hearing.
- Planning Commission and staff's recommendations forwarded to City Council.
- Action by City Council.
- The City will record the resolution with Washington County.
- Variance must be used within one year.

Cottage Grove
Where Pride and Prosperity Meet

Community Development Department
12800 Ravine Parkway South
Cottage Grove, MN 55016
www.cottagegrovemn.gov

Planning Division
Telephone: 651-458-2827
Fax: 651-458-2897
E-Mail: CGSubmittals@cottagegrovemn.gov

VARIANCE APPLICATION – RESPONSE TO ORDINANCE CRITERIA

The Planning Commission and City Council may recommend a variance from the strict application of the zoning ordinance, if they find that your application meets the findings below. **Please provide a DETAILED response to all of the following findings:**

1. The variance is in harmony with the purposes and intent of this title. Please circle: (Yes) No

See attached response under section 1.

2. The variance is consistent with the comprehensive plan. Please circle: (Yes) No

See attached response under section 2.

3. The proposal puts the property to a reasonable use. Please explain.

See attached response under Section 3.

4. There are unique circumstances to the property not created by the landowner. Please identify these circumstances.

See attached response under Section 4.

5. The conditions upon which an application for a variance is based are unique to the parcel of land for which the variance is sought and are not applicable, generally to other property within the same zoning classifications. Please list the conditions that are unique.

See attached response under Section 5.

6. The purpose of the variance is not based exclusively upon a financial hardship. Please circle: (Yes) No

The purpose of the variance is not based upon financial hardship.

7. The granting of the variance will not be detrimental to the public welfare or injurious to other land or improvements in the neighborhood in which the parcel of land is located. Please circle: (Yes) No

See attached response under Section 6.

8. The proposed variance will not impair an adequate supply of light and air to adjacent property, or substantially increase the congestion of the public streets, or increase the danger of fire, or endanger the public safety. Please identify any potential impact the requested variance may have.

See attached response under Section 7.

Economic hardship is not regarded by the Courts as a reason for approval. Neighborhood support or opposition, without any basis of facts, is not regarded by the Courts as reason for either approval or denial.

Applicant Name: Venus Creations LLC Case #: _____

City of Cottage Grove, MN Variance Question Responses - Venus Creations LLC

Introduction: The applicant, Venus Creations LLC, intends to operate a State of Minnesota-licensed cannabis retail dispensary at 7430 80th St S, Suite 105, Cottage Grove, MN 55016. The reason for the variance application is the fact that City Code 11-4-18 7 specifies that the City of Cottage Grove, MN measures from the storefront of the cannabis/lower potency hemp edible retail use to the property line of all other cannabis or lower potency hemp edible uses. Measuring to the property line of the nearest low-potency hemp retailer results in approximately 915 feet of distance, which is less than the 1000 feet required by the City of Cottage Grove, MN; thereby requiring the applicant to apply for a variance.

Section 1: The variance is in harmony with the purposes and intent of this title.

City of Cottage Grove, MN Ordinance #1088 stipulates that cannabis retail is allowed as a conditionally-approved use in the City's B-3, P-B, and M-U zones. Given such, 7430 80th St S, Suite 105, Cottage Grove, MN 55016 is zoned compliantly for cannabis retail operations. Additionally, the variance is in harmony with the purposes since the requested variance is not due to economic hardship, it is not broadly applicable to all properties within the same zoning type, and puts the property to reasonable use.

Section 2: The variance is consistent with the comprehensive plan.

As the City of Cottage Grove's Comprehensive Plan was adopted in 2020, cannabis uses were not considered. That being said, the future proposed land use for the location at 7430 80th St S, Suite 105, Cottage Grove, MN 55016 is "Mixed Use", which stipulates: *Areas designated "Mixed Use" are intended to provide flexibility to allow complementary uses within a district. A mixed use land use pattern generally includes any combination of higher density residential, commercial services, employment opportunities, and transit.* Given such, cannabis retail is consistent with the future land use indicated in the City's Comprehensive Plan.

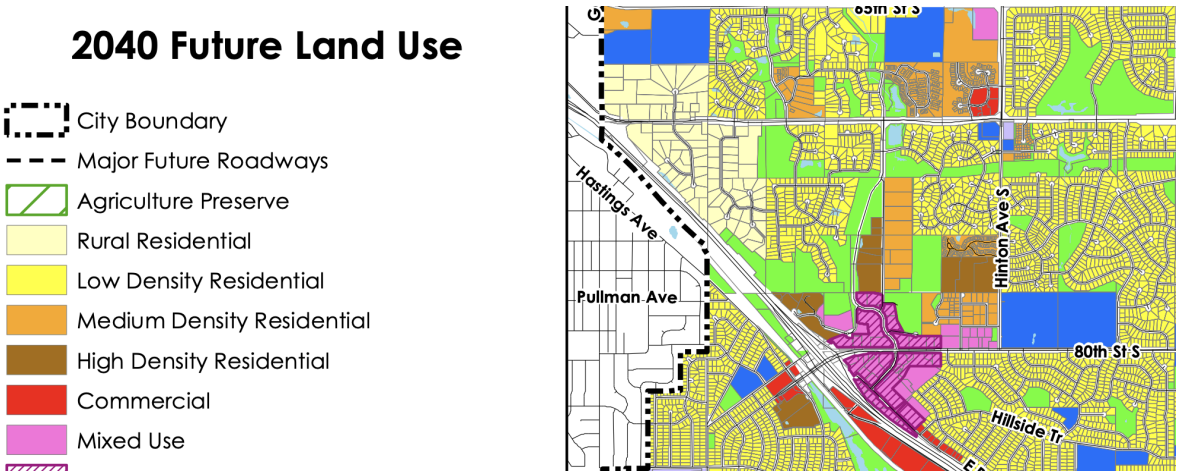


Image #1 - Future Land Use - City of Cottage Grove, MN

Section 3: The proposal puts the property to reasonable use.

City of Cottage Grove, MN Ordinance #1088 stipulates that cannabis retail is allowed as a conditionally-approved use in the City's B-3, P-B, and M-U zones. Therefore, the proposal puts the property at 7430 80th St S, Suite 105, Cottage Grove, MN 55016 to reasonable use.

Section 4: The unique circumstances of the property are not caused by the landowner.

As stated in the introduction, the circumstances of the property are not caused by the landowner. The circumstances are caused by the City's Ordinance #1088, which requires the following distance buffers between licensed cannabis businesses and the following uses.

- There must be at least one thousand feet (1,000') between each cannabis or lower-potency hemp edible use.
- More than one thousand feet (1,000') from a school as measured from property line of the school to the cannabis business;
- More than five hundred feet (500') from a day care that is in the B1, B2, B3, PB, or MU zoning district as measured from property line of the day care to the cannabis business;
- More than five hundred feet (500') from a residential treatment facility, as measured from the property line of the facility to the cannabis business;
- More than five hundred feet (500') from an attraction within a public park that is regularly used by minors, such as, but not limited to a playground, athletic field, athletic court, picnic area or permanent restrooms, pavilion or park building, disc golf features, as measured from the location of the public park attraction to cannabis business.

The requirement that a cannabis retailer be 1,000' from a lower-potency hemp edible use but is only required to be 500' from child-oriented areas such as daycares or attractions within public parks, or 500' from a residential treatment facility is arbitrary and does not have a clear logic based on the premise of public health and safety. Given that a cannabis retailer can be located within 500' of a daycare, the applicant considers operating 915' from a lower-potency hemp edible retailer is not unreasonable and does not demonstrably harm public health and safety. Furthermore, the applicant is compliant with all other above-listed distance requirements necessitated by the City of Cottage Grove.

Section 5: Please list unique conditions. The property's condition must not be broadly applicable to all properties within the same zoning type.

As noted, the sole reason for this variance request is the proximity of the applicant's location at 7430 80th St S, Suite 105, Cottage Grove, MN 55016 is 915' away from the property line of the nearest registered lower-potency hemp edible retailer. The condition is specific to this property and is not applicable to all properties within the same zoning type.

Section 6: The granting of the variance will not be detrimental to the public welfare or injurious to other land or improvements in the area.

Granting a variance to allow the applicant, Venus Creations LLC, to operate a licensed cannabis dispensary at 7430 80th St S, Suite 105, Cottage Grove, MN 55016 will not be detrimental to the public welfare or injurious to other land or improvements in the area. City of Cottage Grove, MN Ordinance #1088 stipulates that cannabis retail is allowed as a conditionally-approved use in the City's B-3, P-B, and M-U zones. Given such, 7430 80th St S, Suite 105, Cottage Grove, MN 55016 is zoned compliantly for cannabis retail operations and will not be injurious to other land or improvements in the area.

It is important to note that the applicant, Venus Creations LLC cannot begin licensed cannabis retail sales until the company receives local retail cannabis licensure from the City of Cottage Grove, MN and passes a final comprehensive inspection from the State of Minnesota pertaining to operational security and regulatory compliance. This means that at minimum, six

figures of security equipment including 24/7 surveillance cameras, a comprehensive alarm system, restricted-access product vaults, and more, must be installed prior to operations beginning. Given the State's extremely stringent security requirements, the proposed cannabis retail use will not not be detrimental to or endanger the public health and safety.

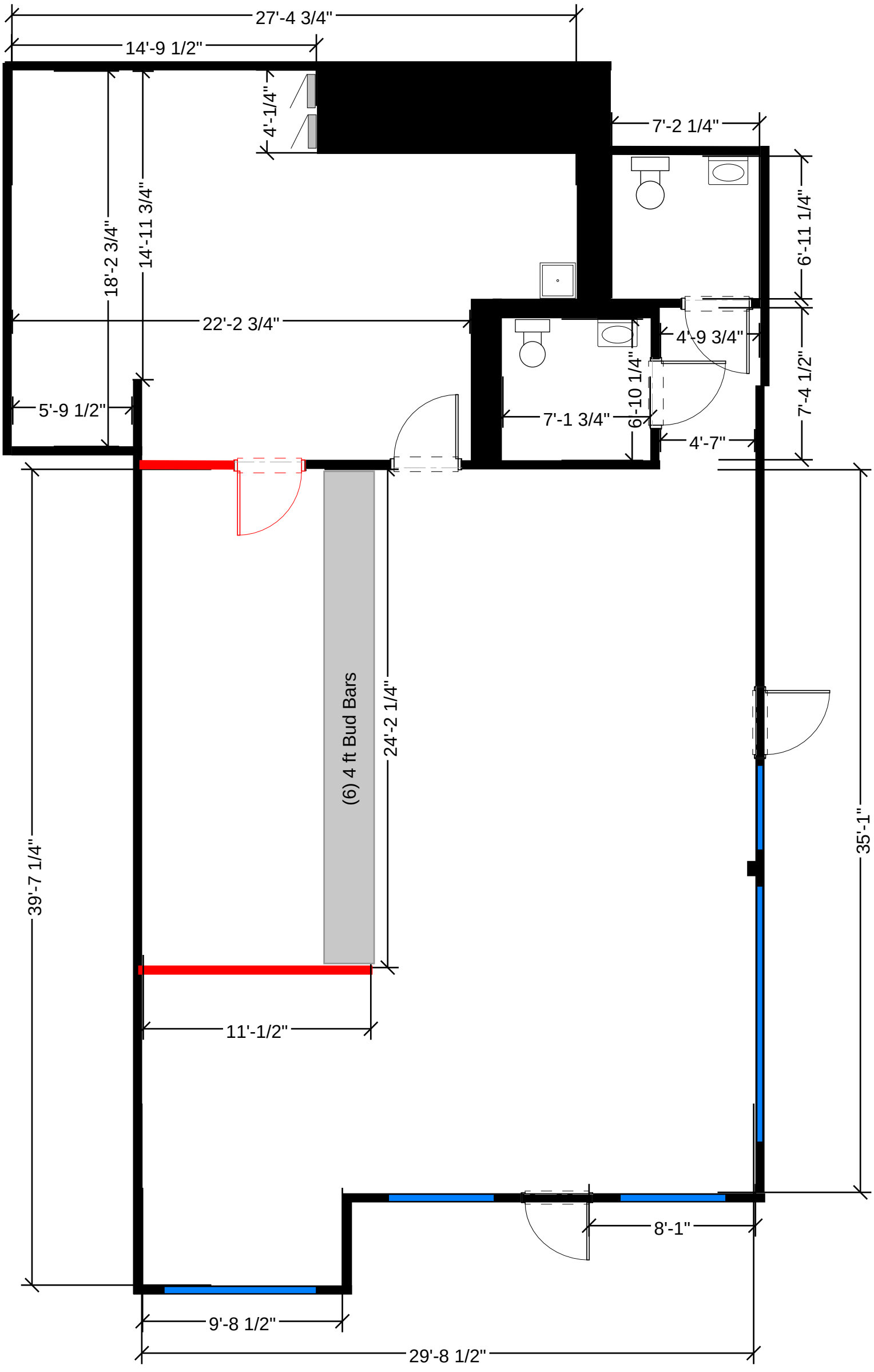
Going further, Venus Creations LLC plans to operate a dual adult-use and medical-use retail dispensary. That means that Minnesotans who are enrolled in the State's medical cannabis program will be able to purchase the medicine that they need in a location that is more convenient for them. For local medical cannabis patients, the proposed use would undoubtedly promote and enhance the general public welfare.

Section 7: The proposed variance will not impair an adequate supply of air or light to adjacent property or substantially increase congestion on public streets, increase danger of fire, or endanger public health and safety.

The location at 7430 80th St S, Suite 105, Cottage Grove, MN 55016 is located in a commercial strip center which has over 100 parking spots. Therefore, public streets would not be overburdened with respect to parking. Public roads would also not be overburdened as the business would solely receive product deliveries from State of Minnesota-approved cannabis transport businesses. Going further, the amount of products sold would not necessitate delivery via semi and given the State's regulations, outfitting a semi-truck to transport cannabis would be financially infeasible. Accordingly, incoming products would likely be delivered via transport vans; which would not overburden the city's service capacity.

Furthermore, the proposed retail dispensary use is proposed to be roughly 2,200 SF. Therefore, the utility usage for water, power, and sewer services would likely directly correlate to that of a tobacco shop of comparable size. Given the minimal proposed utility usage, the proposed use would not overburden the city's service capacity. Ultimately, the overall utility usage would likely not be significantly greater than a single-family home of a comparable size. The applicant also does not propose to change the physical envelope of the address in question. Accordingly, the proposed variance will not impair an adequate supply of air or light to adjacent property.

Store# 4017
7430 80th St S., Suite 105
Cottage Grove, MN
Floor Plan Layout



From: OCM_NOREPLY@accela.com
Date: July 11, 2025 at 3:52:36 PM EDT
To: BECKYHIDALGO2000@gmail.com
Subject: Congratulations on receiving preliminary license approval for MICRO-A25-000639

Dear Applicant,

We are pleased to inform you that you have received preliminary license approval. Please note that you have 18 months to obtain a cannabis business license upon receiving this notification.

A notice of preliminary approval is intended to demonstrate an applicant's preparedness and qualifications on the pathway to licensure and can be a tool utilized for securing funds, receiving local approvals, and preparing to be in full compliance.

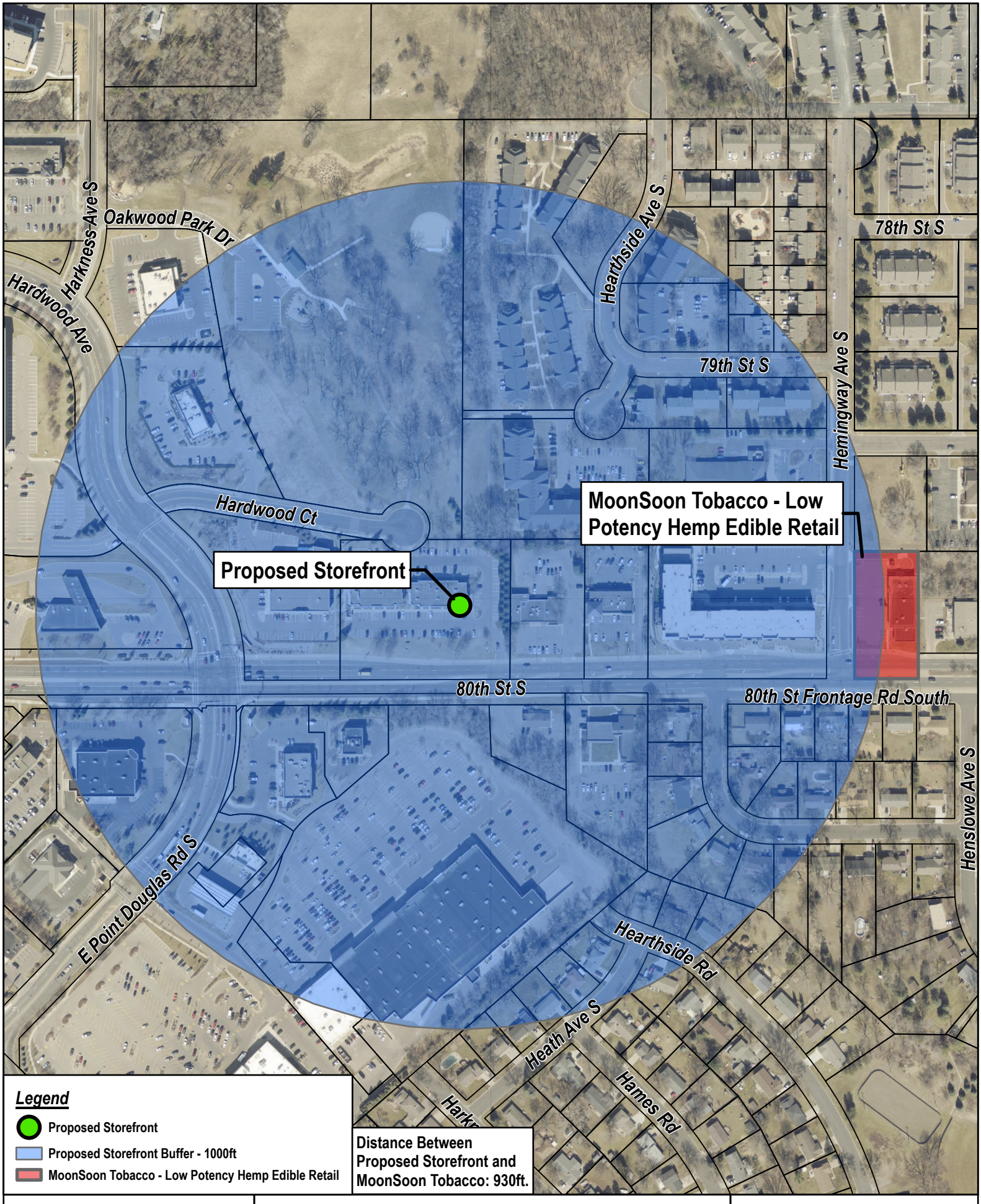
Please be aware this notice does not convey license approval. Your application is moving forward, but you are not yet authorized to conduct any of the activities for any license type. To continue the process and receive your license, you must first complete the following steps:

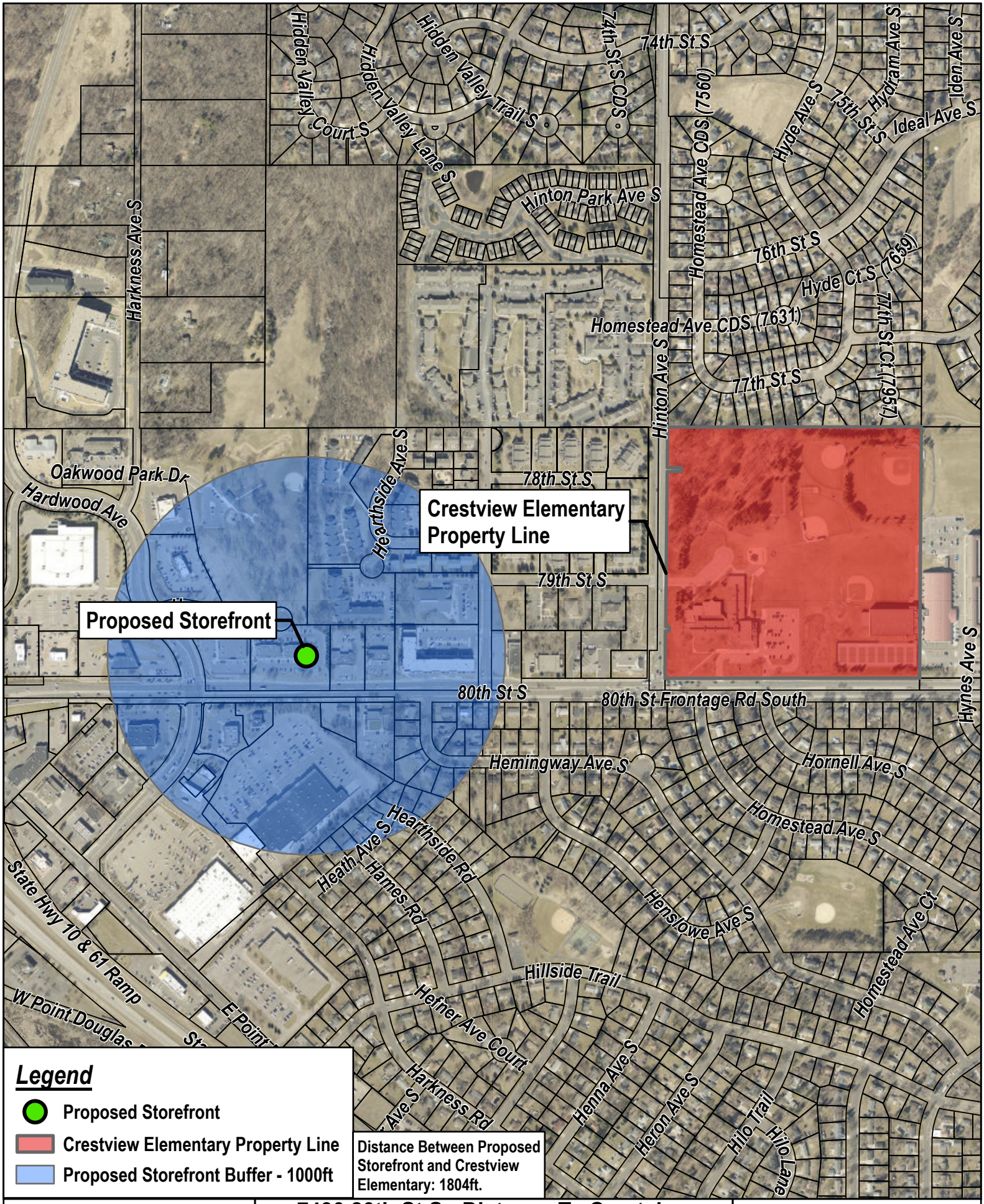
1. **Engage with local governments.** Begin discussions with your local government early to understand and meet all local requirements, including zoning, any necessary conditional use permits, building/fire code inspections, and retail registration (if applicable, and see below). You must secure a physical location that complies with local zoning ordinances and update your application documents showing you are compliant with all local requirements. You are strongly encouraged to engage with local governments at the earliest stage possible before you invest in any location in order to understand what a local government may require for your business to operate in their jurisdiction.

2. **Submit final documents.** Preliminarily approved applicants will submit final application materials to OCM when they can demonstrate compliance with all applicable rules. The materials include details about the site location, final operational documentation, and documentation of any ownership changes, and are referred to as final plans of record. Links to complete online fillable forms that will make up your final plans of record are at: https://mn.gov/ocm/businesses/licensing/final-plan-of-record.jsp. Preliminarily approved applicants should not complete site registration until they have received confirmation that they have met all applicable requirements for local zoning approval, are compliant with state fire and building codes, and if applicable, and are **less than 90 days from being able to open their doors**.

3. Once you have completed and submitted the online forms, you will receive PDFs of your final plans of record via email that must be uploaded to the Office of Cannabis Management (OCM) through Accela. OCM will forward your application to the local government indicated on your application.

4. **Local government zoning compliance certification.** Local governments have 30 days to certify that your application complies with zoning and land use ordinances. Important: be sure to engage early with your local government so


Oakwood Park Dr
Harkness Ave S
Hardwood Ave
Hearthside Ave S
78th St S
79th St S
Hemingway Ave S
Hardwood Ct
MoonSoon Tobacco - Low Potency Hemp Edible Retail
Proposed Storefront
80th St S
80th St Frontage Rd South
Henslowe Ave S
E Point Douglas Rd S
Hearthside Rd
Heath Ave S
Hames Rd
Legend
Proposed Storefront
Proposed Storefront Buffer - 1000ft
MoonSoon Tobacco - Low Potency Hemp Edible Retail
Distance Between Proposed Storefront and MoonSoon Tobacco: 930ft.
Cottage Grove
Where Pride and Prosperity Meet
7430 80th St S - Distance To Nearest Use
Date: 12/2/2025
N



Legend

- Proposed Storefront
- Crestview Elementary Property Line
- Proposed Storefront Buffer - 1000ft

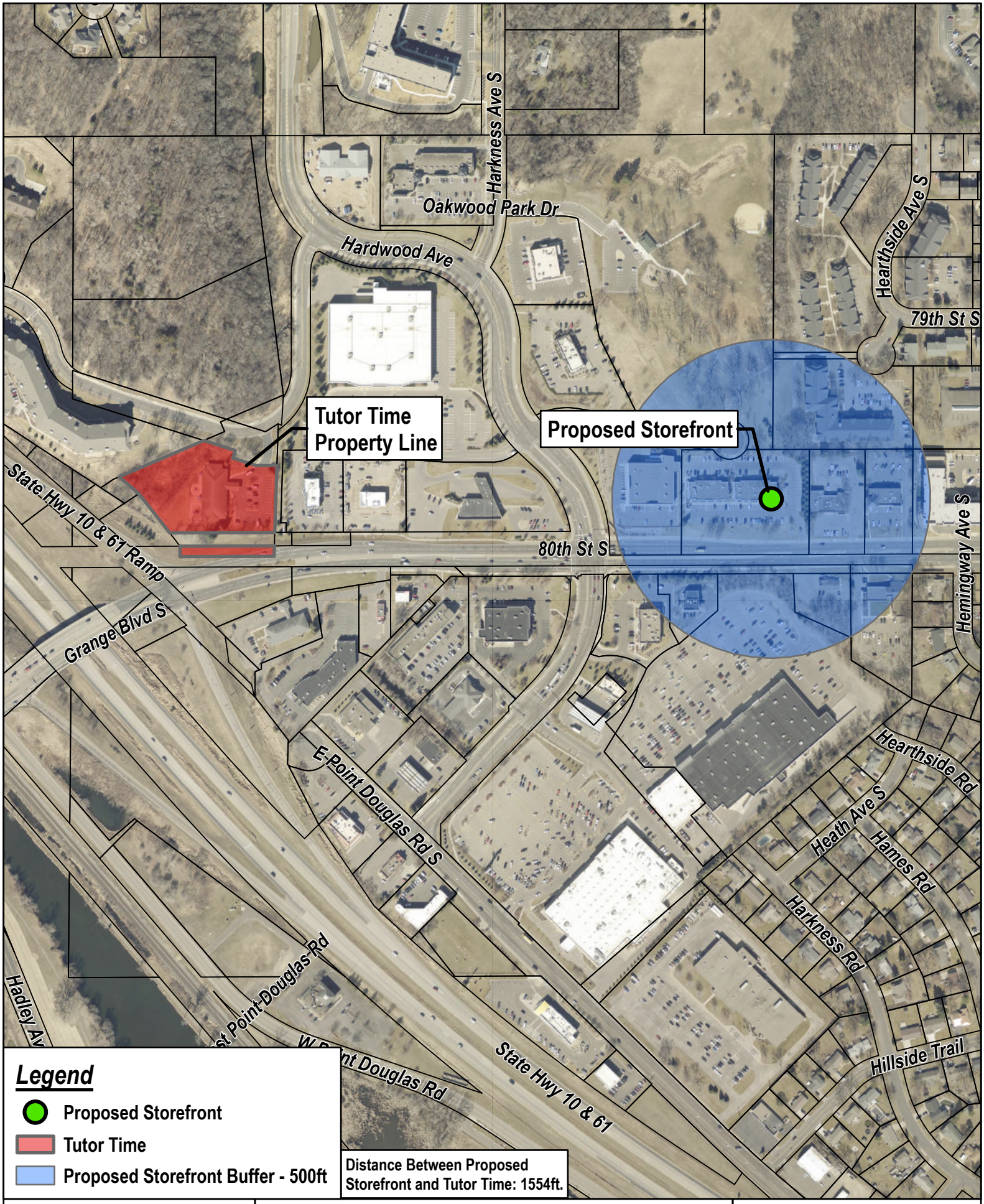
Distance Between Proposed Storefront and Crestview Elementary: 1804ft.

Cottage Grove
Where Pride and Prosperity Meet

7430 80th St S - Distance To Crestview Elementary

Date: 12/2/2025

N

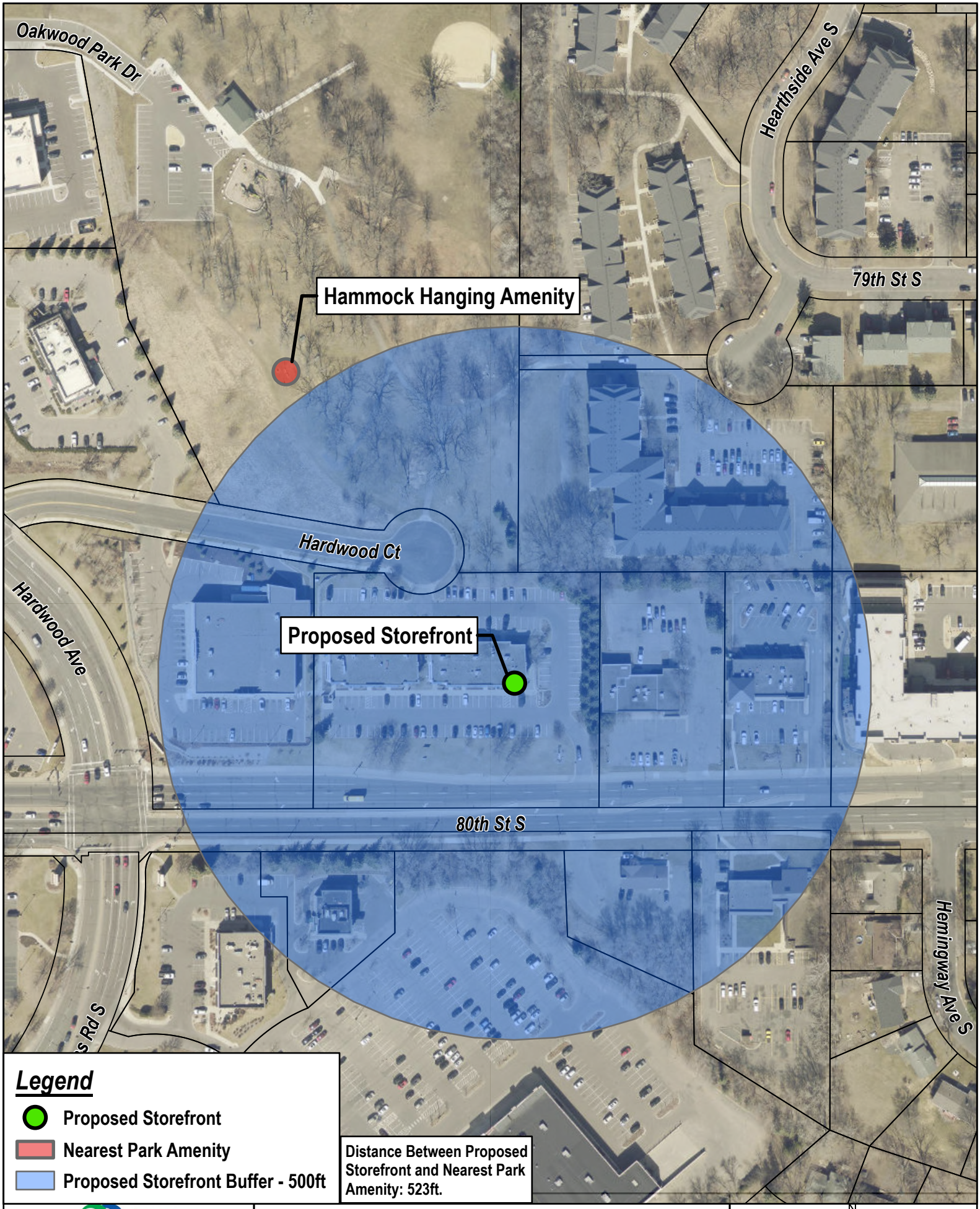


Cottage Grove
Where Pride and Prosperity Meet

7430 80th St S - Distance To Nearest Childcare

Date: 12/2/2025

N


Oakwood Park Dr
Hearthside Ave S
79th St S
Hammock Hanging Amenity
Hardwood Ct
Hardwood Ave
Proposed Storefront
80th St S
Hemingway Ave S
Legend
Proposed Storefront
Nearest Park Amenity
Proposed Storefront Buffer - 500ft
Distance Between Proposed Storefront and Nearest Park Amenity: 523ft.
Cottage Grove
Where Pride and Prosperity Meet
7430 80th St S - Distance to Nearest Park Amenity
Date: 12/2/2025
N

Tutor Time
(1,554ft from proposed business front)

Hammock Hanging Amenity (3,654 ft from proposed business front)

Proposed Storefront

Crestview Elementary (1,804ft from proposed business front)

MoonSoon Tobacco
(930ft from proposed business front)

Burr Oak Ave S
Aspen Cove
Harkness Ave S
Oakwood Park Dr
Hardwood Ave
Hearthside Ave S
76th St S
Hyde Ct S (7659)
Homestead Ave CDS (7631)
77th St S
Immanual Ave S
78th St S
Hinton Ave S
79th St S
Hardwood Ct
Douglas Rd S
State Hwy 10 & 61 Ramp
Gary Blvd
Grange Blvd S
Belden Blvd S
80th St S
80th St Frontage Rd South
Hemingway Ave S
Hornell Ave S
Hynes Ave S
Hyde Lane S
Hearthside Rd
Heath Ave S
Hames Rd
Harkness Rd
Homestead Ave S
Homestead Ave Ct
Hensjowe Ave S
Hillside Trail
Hyde Ct S (8265)
7084 West Point Douglas Rd
W Point Douglas Rd
State Hwy 10 & 61
Hefner Ave Court
Hefner Ave S
Henna Ave S
Heron Ave S
Hilo Trail
Hyde Ave S
83rd St S
Hale Ave S

Legend

- Buffer To Hammock Hanging Amenity - 523ft
- Buffer To Tutor Time - 1,554ft
- Buffer to Crestview Elementary - 1,804ft
- Buffer To MoonSoon Tobacco - 930ft

Cottage Grove
Where Pride and Prosperity Meet

7430 80th St S - Overall Buffers

Date: 12/5/2025

N

0 625 1,250 Feet

STAFF REPORT CASE: SP/V2025-031

ITEM: 6.2

PUBLIC MEETING DATE: 12/15/25 TENTATIVE COUNCIL REVIEW DATE: 1/21/26

APPLICATION

APPLICANT: Van Meter Inc.

REQUEST: A Site Plan Review for additions onto the existing building. The additions are comprised of two expansion areas. Expansion B is approximately 86,720 square feet to be used for receiving, warehousing, and will-call operations. Expansion A is approximately 38,220 square feet to be used for warehousing. The applicant has also applied for a Variance to allow Expansion A to expand into the required 100-foot property line setback from the residential zoned property to the north.

SITE DATA

LOCATION: 7450 95th Street South

ZONING: I-1, General Industrial

GUIDED LAND USE: Industrial

LAND USE OF ADJACENT PROPERTIES:	CURRENT	GUIDED
NORTH:	Single Family Res.	Parks/Open Space
EAST:	General Industrial	Industrial and Parks/Open Space
SOUTH:	Single Family Res.	Low-Density Res.
WEST:	Single Family Res.	Parks/Open Space

SIZE: 20.12 Acres

DENSITY: N/A

RECOMMENDATION

Approval, based on the findings of fact and subject to the conditions stipulated in this staff report.

COTTAGE GROVE PLANNING DIVISION

Planning Staff Contact: Kelly Becker, Associate Planner; 651-458-2834; kbecker@cottagegrovemn.gov

Application Accepted: 11/12/2025 60-Day Review Deadline: 1/11/2026 120-Day Review Deadline: 3/12/2026

Planning Staff Report
Van Meter – Additions Site Plan Review and Variance
Planning Case No. SP/V2025-031
December 15, 2025

Proposal

Van Meter Inc. has submitted applications for a Variance and Site Plan Review for building additions to Van Meter's existing facility located at 7450 95th Street South. The addition is comprised of two expansion areas: Expansion A and Expansion B. Expansion A is located at the northeast corner of the existing building and is approximately 38,220 square feet; it will be used primarily for warehousing. The applicant has requested a variance to the required setback to the north property line for Expansion A. Expansion B is located on the south end of the existing building; the addition will be approximately 86,720 square feet and will be used primarily for receiving, warehousing, and will-call operations.



Site Location

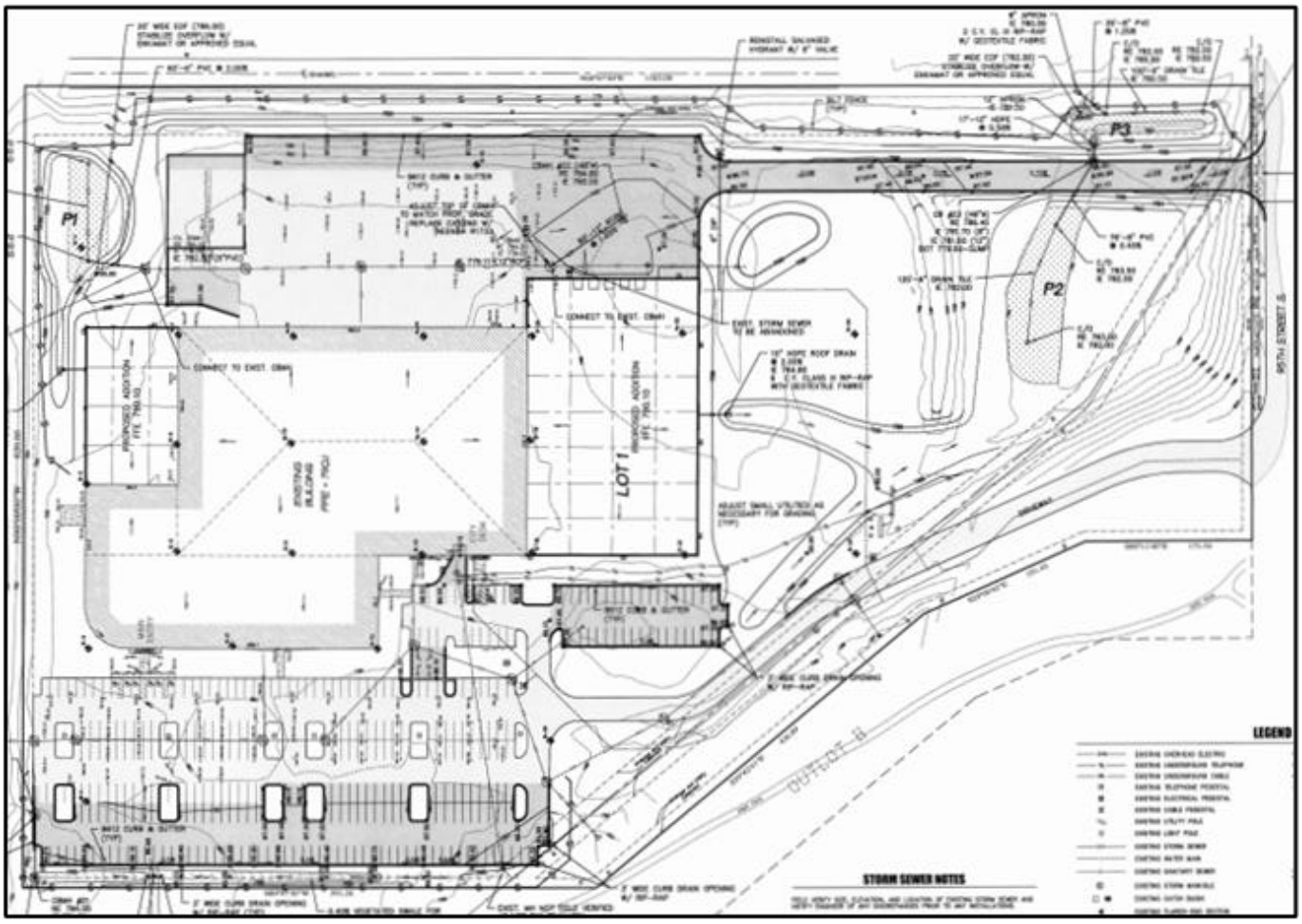
Review Schedule

Application Received: November 12, 2025
Application Accepted: November 12, 2025
Planning Commission Meeting: December 15, 2025
Tentative City Council Meeting: January 21, 2026
60-Day Review Deadline: January 11th, 2026
120-Day Review Deadline: March 12, 2026

Background

Werner Electric received site plan approval for the original building construction with approximately 35,496 square feet of office space and 81,000 square feet of warehouse and distribution space in 2007 and began operating in 2008. The site plan approval also included plans for future phases of site development, comprised of a 12,076 square foot office addition and an 83,500 square foot warehouse addition. The proposal for the original construction and future phases was found to meet all performance standards in the ordinance at the time, including setbacks.

In 2015, a revised development plan for Werner Electric was received, which proposed 15,333 square feet of office area, 49,946 square feet of warehouse area, and additional parking lot area, loading docks and trailer parking expansion areas. Although the revised plans included slightly larger office space, the proposed warehouse expansion at that time was about 35,500 square feet smaller than originally proposed. Expansion B with this current proposal will encompass a portion of that excess square footage that was previously approved. The plans also included a new private access drive along the east side of the property, connecting to 95th Street. The plans submitted in 2015 were found to be generally consistent with the originally approved 2007 site plan identifying the future expansions.



2015 Development Expansion

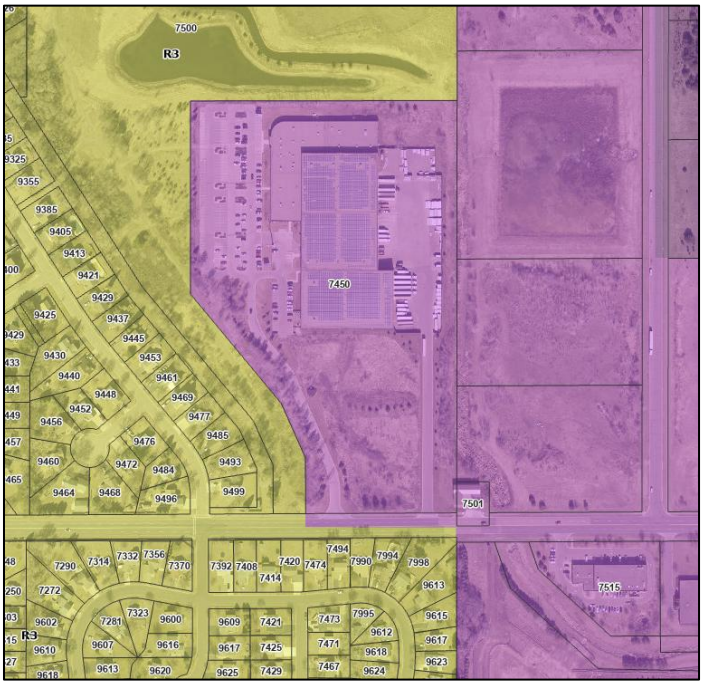
Additional prior approvals on the site include an Interim Conditional Use Permit for a rooftop community solar garden in 2017, which was granted for a 25-year period and expires in September 2042. A variance and conditional use permit approval was granted in 2012 for an electric wind turbine. The wind turbine is proposed to be removed with this project; therefore, Resolution 2012-045 shall be rescinded. Lastly, in 2022 a Conditional Use Permit was approved for a 10-foot-tall black vinyl coated chainlink fence with an opaque fabric to assist in screening and securing the existing semi-trailers, exterior storage areas, and loading dock area. That fence has since been installed and runs along the east side of the property and the gate into the loading area and will be maintained as part of the proposed building additions.

Werner Electric has since been acquired by Van Meter Inc. The facility has transitioned from a corporate headquarters to a local branch facility that offers warehousing, distribution, demos, and training services. Van Meter is now requesting additional expansions to support their continued growth and site operations.

Planning Considerations

Zoning and Comprehensive Plan

The Van Meter facility at 7450 95th Street is zoned I-1, General Industrial, and is guided as Industrial on the 2040 Comprehensive Plan Land Use Map. Warehouse and distribution facilities are a permitted use in the I-1 zoning district.



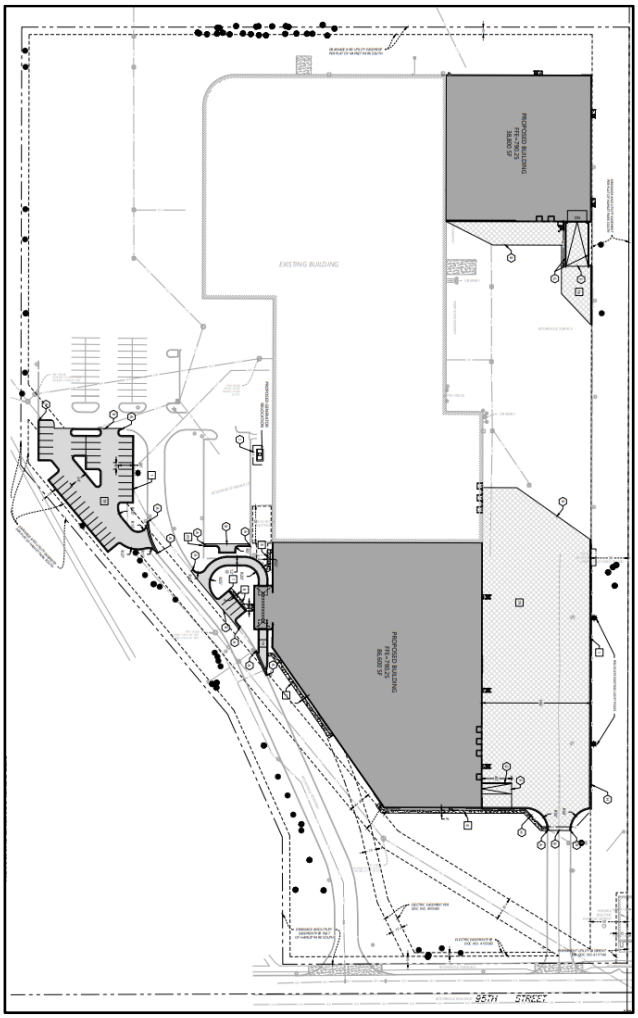
Current Zoning

Site Plan

The existing Van Meter facility is located on a 20.12-acre parcel immediately south of Hamlet Park. The applicant is proposing two building expansions, Expansion A and Expansion B, as well as an expansion to the parking lot to accommodate the additional square footage of the building as required by city code. Portions of new heavy duty bituminous pavement will be added at the loading dock areas on the east side of the building. A generator will be relocated from the east

side of the building to the front of the building on the west side. Grading will occur on multiple areas of the site for new or modified stormwater retention areas. Notably, an underground storm-water filtration system will be installed adjacent to the east side of Expansion B.

Several easements exist on the property, including a 30-foot wide drainage and utility easement encompassing a sanitary sewer line running along the south and west sides of the lot. Additionally, a 50-foot wide drainage and utility easement runs along the length of the east side of the lot. A private 15-foot wide utility easement with Northern States Power Company runs through the central, southern portion of the property, at the proposed Expansion B area. The property owner will be required to secure approval from the easement holder prior to construction within the easement.



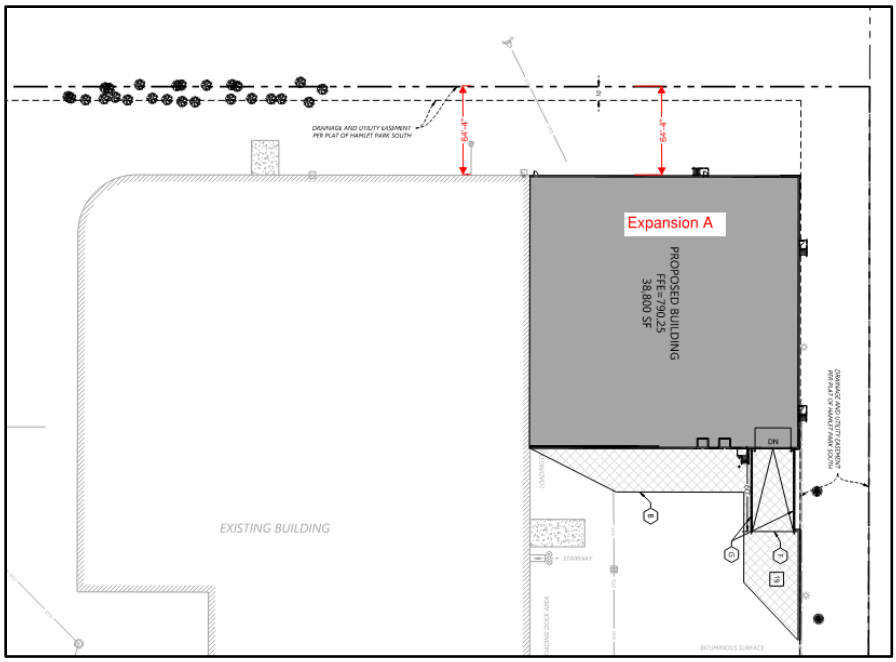
Proposed Site Plan

Variance Request – Property Line Setback

The purpose of a variance is to allow variation from the application of City Code Title 11 if there are characteristics of the property that cause practical difficulties for the landowner/applicant to meet minimum code standards. Variances require the Applicant to submit an official application form with all information outlined in City Code Title 11-2-5. City Code Title 11-9-3 lists development standards within the Industrial zoning districts. Applicable and proposed setbacks are shown below.

Applicable Building Setbacks	Required Setbacks	Expansion A Proposed Setbacks	Expansion B Proposed Setbacks
Minimum Front Yard	40’	1000’	210’
Minimum Side Yard abutting a residential district (west)	100’	573’	101’
Minimum Side Yard (east)	40’	50’	196’
Minimum Rear Yard abutting a residential district (north)	100’	**64’**	695’

The abutting property to the north is Hamlet Park, which is zoned R-3, Single Family Residential. The park property houses multiple baseball diamonds and a stormwater system. The stormwater basin on the park property is adjacent to the north lot line of the Van Meter property. The proposed Expansion A on the northeast corner of the building will encroach into the required 100-foot rear yard setback abutting a residential district; the property owner has submitted a variance request to allow the proposed Expansion A addition to be approximately 64 feet from the north property line. An existing portion of the building that houses office areas is approximately 64 feet from the north property line, thus the proposed Expansion A will align with the existing portion of the building. The existing portions of the building that encroach into the current rear yard setback were compliant with all setbacks when reviewed and approved in 2007 and 2015. All other setbacks will be met with both proposed expansion areas.



Proposed North Lot Line Setback

Variance Requirements

With all variance requests, the Planning Commission must look to the zoning ordinance for guidance and direction. City Code Title 11-2-5: Variances, states the following:

A. Purpose. The purpose of the variance is to allow variation from the strict application of the terms of this Title where, by reason of the exceptional physical characteristics of the property, the literal enforcement of the requirements of this Title would cause practical difficulties for the land-owner.

F. Findings. A variance may be granted only when all of the following conditions are found:

1. *The variance is in harmony with the general purposes and intent of this Title.*
2. *The variance is consistent with the Comprehensive Plan.*
3. *The applicant for the variance establishes that there are practical difficulties in complying with this Title. "Practical difficulties," as used in connection with the granting of a variance, means that all of the following must be found to apply:*
    a. *The property owner proposes to use the land in a reasonable manner for a use permitted in the zone where the land is located, but the proposal is not permitted by other official controls;*
    b. *The plight of the landowner is due to circumstances unique to the property and that are not created by the landowner; and*
    c. *The variance, if granted, will not alter the essential character of the neighborhood.*
4. *Economic considerations alone do not constitute practical difficulties.*

Variance Findings

The findings of fact for a favorable recommendation that were considered during the review are identified as follows:

A. Warehouses and distribution facilities are a permitted use in the I-1 zoning district. The existing building with planned future phases of expansion was approved in 2007, and the first expansions to the building were reviewed again and approved in 2015, which were compliant with setback standards at the time.

B. The property is guided Industrial in the 2040 Comprehensive Plan.

C. Expansion A will house additional warehouse areas, which is an existing use of the building. Additional warehouse expansion is needed for continued growth and site operations.

D. The proposed building additions do not alter the character of the residential neighborhood, as the additions will closely match the appearance of the existing building and be screened as required by code.

E. The building has been designed to minimize the impacts to the residential neighborhood by constructing the addition on the north side of the property, no further to the property line than an existing portion of the building.

F. The location of the expansion on the north side of the building is guided by limitations from existing drainage and utility easements on site and not created by the property owner.

G. The request is not based on economic considerations alone.

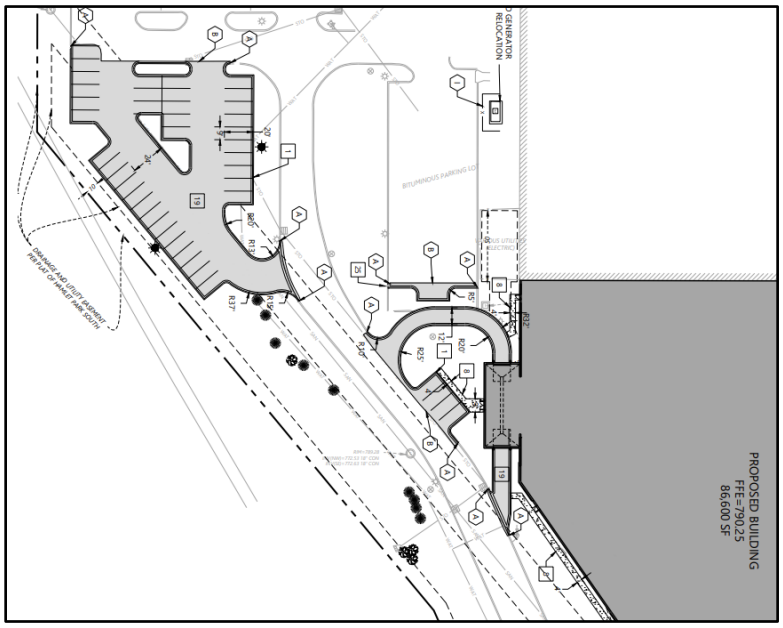
Site Access

The site currently has two existing access points from 95th Street. The western access drive leads to the main entrance and parking area on the west side of the building. The eastern private access leads to the loading areas on the east side building and was added to the property with the expansions to the building in 2015. There are no changes to either access point proposed with this application.

Parking

Per City Code, one parking space for each 250 square feet of office space, and one parking space per each 2,000 square feet of warehouse space is required. With the current combination of office and warehouse space in the existing building, 274 parking spaces are required, and 302 parking spaces actually exist on the property, currently providing a surplus of 28 spaces. Between both proposed expansions, an additional 123,893 square feet of warehouse space will be added, which would require 62 parking spaces. By taking the difference of the 62 spaces required with the new additions from the surplus 28 spaces onsite currently, only an additional 34 parking spaces are required to be added to the total existing parking areas with this proposal. The applicant has provided an additional 38 spaces on the site plans.

A 10-foot setback to property applies to parking lots and will be met with the new spaces. Drive aisle widths and parking space sizes comply with the city's parking requirements as well. However, a portion of the additional parking spaces will be placed over the 30-foot drainage and utility easement which runs through the property and contains a public sanitary sewer line. An existing encroachment agreement for parking within the easement exists and a new encroachment agreement will be required for the newly placed parking spaces over the drainage and utility easement.



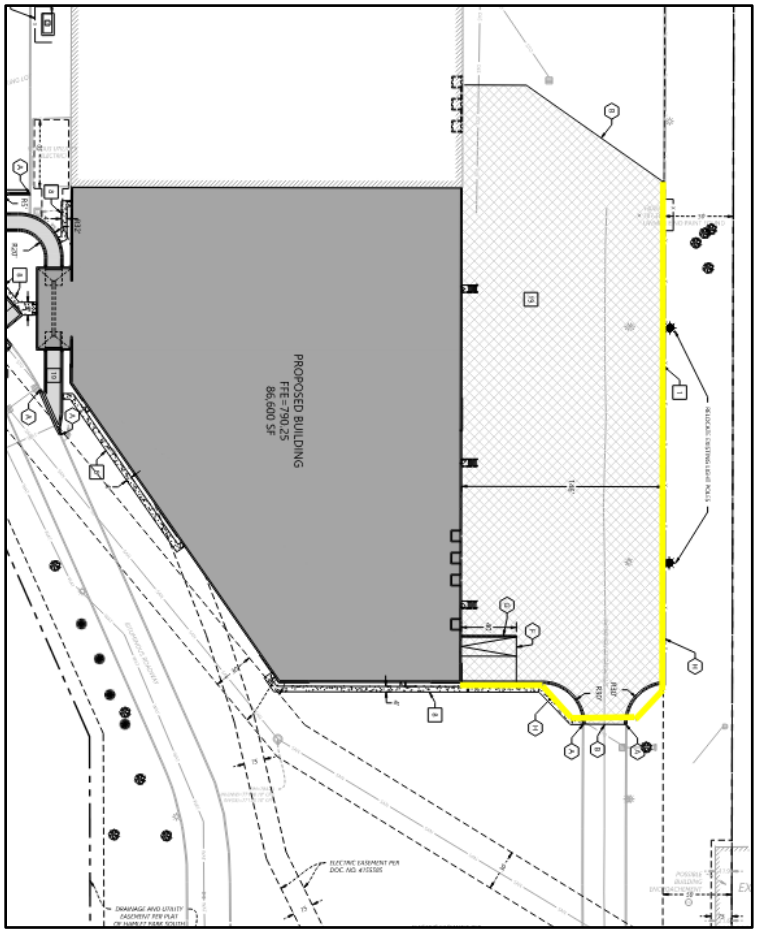
Proposed Parking Space Additions

Fencing and Exterior Storage

In 2022, Van Meter received a Conditional Use Permit approval for construction of a 10-foot-tall black vinyl-coated chainlink fence with an opaque fabric to assist in screening and securing the semi-trailer storage and loading dock area on the east side of their property. The applicant has

indicated that the existing fencing will remain and will be extended south to align with Expansion B, as highlighted in yellow on the image below. Vinyl coated chain link fencing is approved in the Industrial district, but fabric is not an approved material for fencing in the current ordinance. However, due to the previous conditional use permit approval, a continuation of the black vinyl coated chain link fence with fabric material along the east side of the loading area is acceptable given the approved CUP2022-012. The fabric material shall be maintained tightly against the chain link and without rips or tears.

In order to reduce the visual impact of the fabric fencing, staff have requested that the fence along the entrance to the loading area facing the street be shielded from view with vegetation as opposed to utilizing the fabric material to screen the loading area at that location. Exterior storage of 10-foot and 20-foot gray PVC conduit materials will continue to be stored outside in the loading dock area on the east side of the building as previously approved in 2022; however, storage cannot be above the fence height at any time.

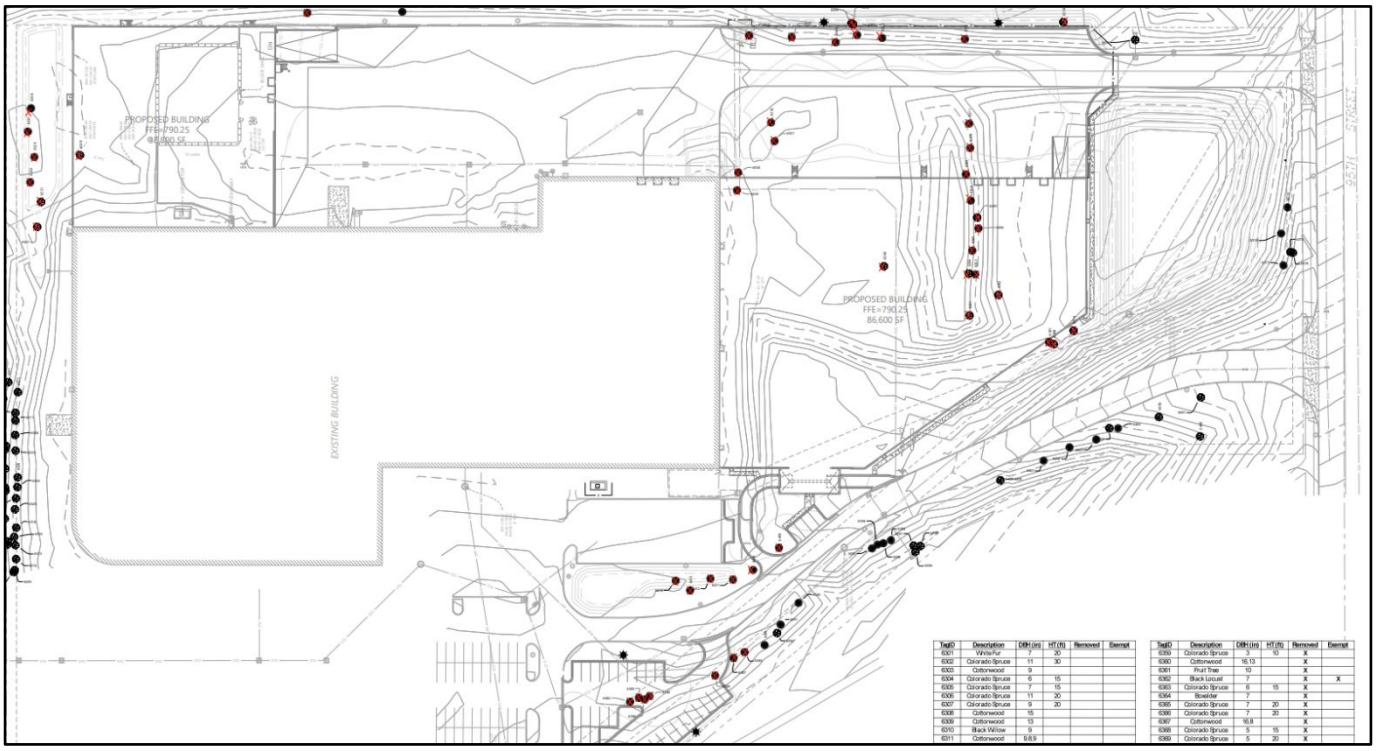


Area of Fence Extension

Tree Preservation

City Code Title 11-3-13 requires completion of a tree inventory (all qualifying trees) for the project area of a proposed development. A qualifying tree is a healthy tree meeting one (1) of the following definitions: a hardwood deciduous tree at least six inches (6") DBH, a softwood deciduous tree at least eight inches (8") DBH, or a coniferous tree at least ten feet (10') in height but does not include any trees on the Minnesota Department of Natural Resources invasive species list. In

industrial districts, a maximum of 50 percent of existing qualifying inches may be removed without mitigation required. The applicant has provided a detailed tree inventory, which states approximately 35 percent of qualifying inches will be removed; therefore, a mitigation plan is not required. A total of 42 qualifying trees will be removed in the areas of the proposed expansions, new parking lot area, and stormwater basins.



Proposed Tree Removal

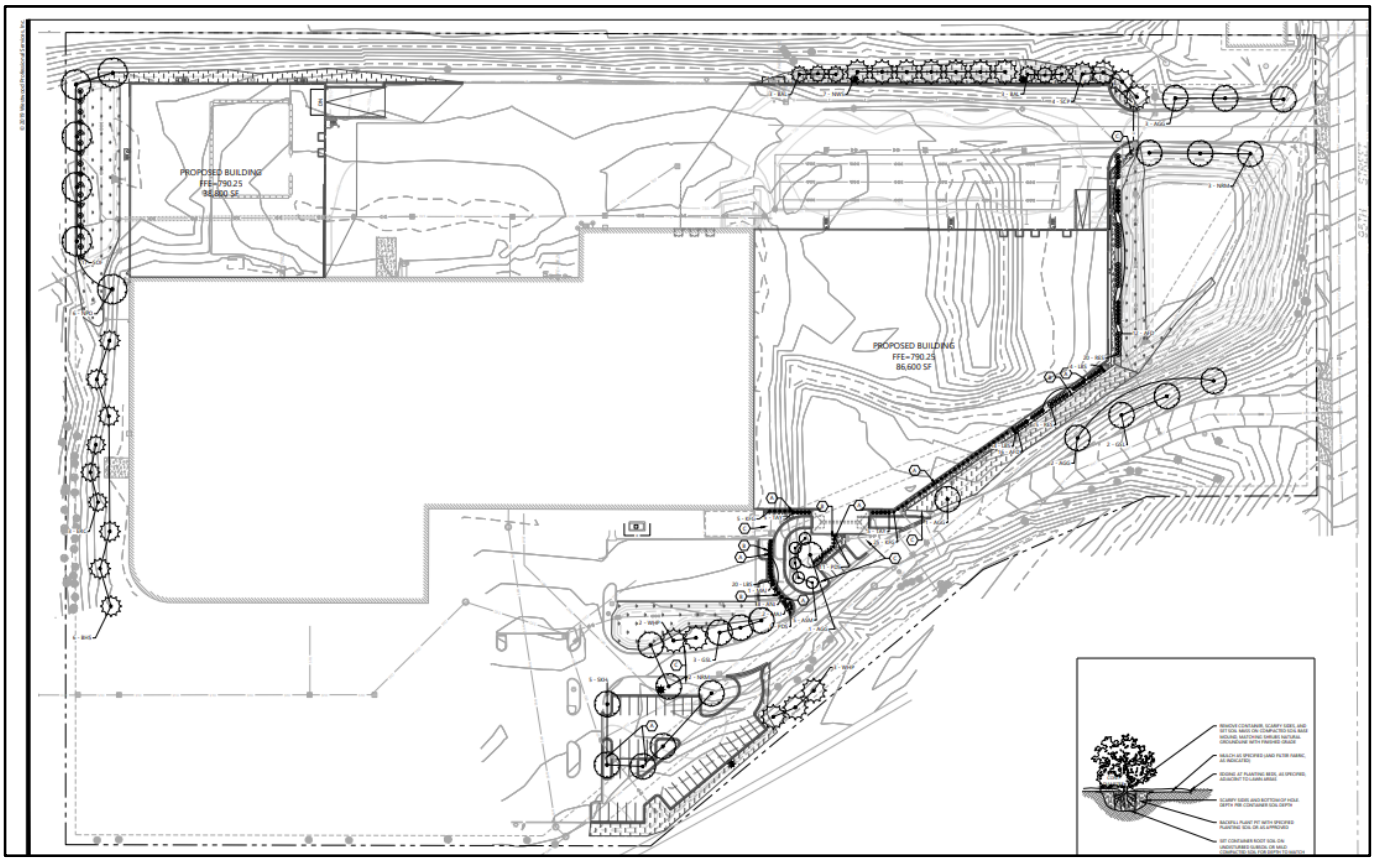
Landscaping

The Applicant has submitted a detailed landscape plan including proposed additional landscaping throughout the site. Per City Code T itle 11-3-12, the area within 15 feet of a parking lot perimeter shall be landscaped with clustered materials. The applicant has proposed turf mix along the west side of the new parking lot area, which is an approved landscaping material. The new parking lot area contains interior landscaped islands in compliance with code standards; however, there are two trees shown within the drainage and utility easement in one of the parking islands. These two trees will need to be relocated outside of the easement and another approved landscape material, such as small shrubs, shall be added to the parking island.

Additionally, the code requires the sides of a building that face a public street or parking lot shall be landscaped for a length equal to one-half (1/2) of the building dimension, with the landscaped region having an average depth of four feet (4'). The applicant has proposed a combination of turf mix, shrubs, and deciduous and coniferous trees that meet or exceed code standards for building perimeter screening at both Expansion A and Expansion B. Lastly, the loading and mechanical areas of a building must be screened per City Code Title 11-3-12. The loading areas of the building are all located on the east side of the existing façade and Expansion B, which abuts other industrial zoned property. That area is currently being screened by the existing fabric chain link fence as approved in a previous Conditional Use Permit. The fence will be extended to screen the east side of Expansion B and additional deciduous trees will be placed along the east side as well.

However, to minimize the visual impact of the fabric material from 95th Street, staff requested additional evergreen trees be placed in front of the fence on the south side of the site.

Title 11-3-12 requires industrial districts to have at least 15 percent open space, or space not covered by a building or other impervious surface. The property will retain approximately 37 percent open space after all improvements. The total project disturbance area, minus stormwater areas, is 232,399 square feet; therefore, per the coefficients for industrial districts in the city code, 33 new deciduous trees, 31 new coniferous trees, and 91 shrubs are required. The applicant has proposed the exact number of trees and shrubs as required and is therefore meeting code requirements.



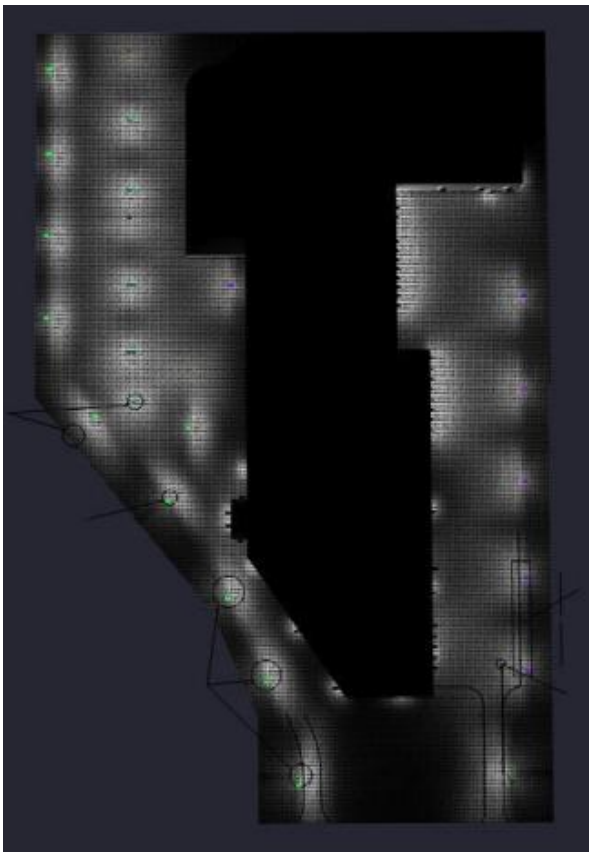
Proposed Landscaping Plan

Screening and Mechanical Equipment

An existing generator will be relocated from the northeast corner of the existing building to the "west side of the existing building to accommodate Expansion A. City Code Title 11-3-9 requires all ground mounted mechanical equipment accessory to the principal structure thirty inches (30") or greater than twelve (12) cubic feet shall be screened from public views with landscaping, berming, or screen wall." The applicant has proposed a 10-foot vinyl fence around the new generator and utility locations on the west side of the building. A stationary trash collector area similar to the building's existing trash management is proposed along the east side of expansion B, which will be screened from public view by the existing fencing. Rooftop mechanical equipment on Expansion A and B has not yet been identified on submitted plans. Final plans identifying location of rooftop mechanical equipment and proposed screening will need to be submitted and reviewed by staff prior to building permit approval.

Photometric Plan

City code standard requires reflected glare of spill light not to exceed 0.5 foot-candle as measured on the property line when abutting any residential parcel or one (1) foot-candle as measured on the property line when abutting any business or industrial parcel. The Applicant has provided a photometric plan indicating new lighting at Expansion A will not cast light into adjacent properties and will align with the requirements of 0.5 foot-candles or less at the north property line abutting the residential district. Proposed lighting at Expansion B will not exceed 1 foot-candle at the adjacent Industrial zoned property line to the east. All new wall mount and overhead parking lot lighting will be directed downward. New overhead lighting in the new parking lot area will not exceed 0.5 foot candles at west residential property line and is therefore compliant as well.

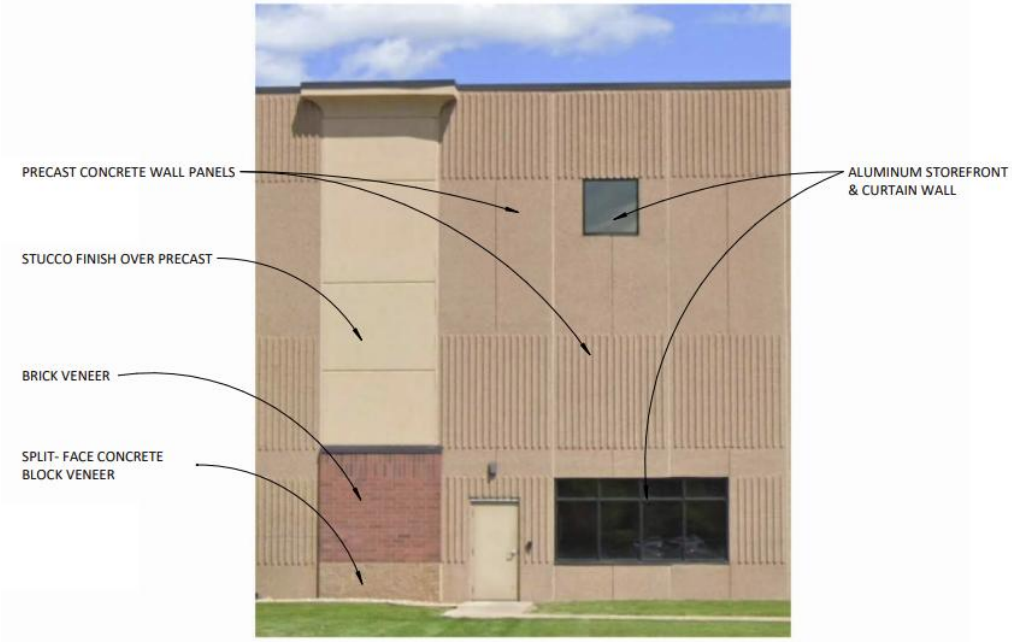


Aerial View of Photometrics

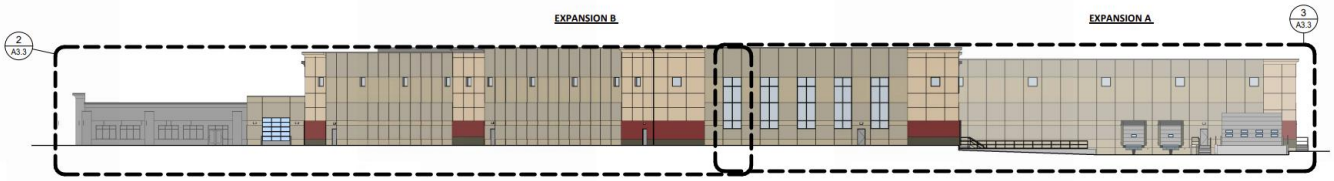
Architectural Materials

City Code Title 11-3-11 requires exterior materials of structures in the industrial districts be comprised of at least two (2) different Class 1 or 2 materials and be composed of at least sixty-five percent (65%) Class 1 or 2 materials and not more than ten percent (10%) of Class 4 materials. For industrial zoned property, grade A or B architecturally finished precast concrete panels are considered a Class 2 material. Grade C precast panels are prohibited. Additionally, in industrial districts no wall that faces a public right-of-way, park, or a residential use or district, may have an uninterrupted length exceeding one hundred feet (100') without including at least two (2) of the following: change in plane, change in texture or masonry pattern, windows, or an equivalent element that subdivides the wall into human scale proportions.

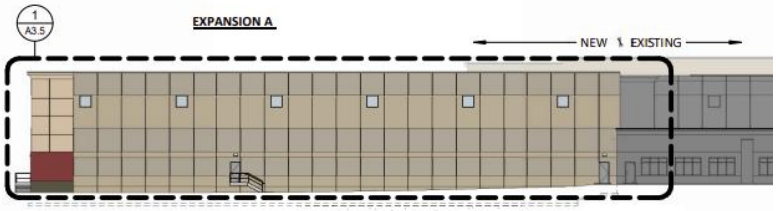
The proposed additions will be comprised of almost 100 percent Class 1 and Class 2 materials, including a combination of precast concrete panels (Grade A or B), stucco, brick veneer, split-face concrete block veneer, and aluminum storefront and curtain wall. Materials have been chosen to match the exterior finishes on the existing building. Every façade of each new addition will not exceed 100 feet without change in plane or material. The maximum permitted building height in the Industrial-1 zoning district is 55 feet. Expansion A and Expansion B will both be approximately 42 feet tall.



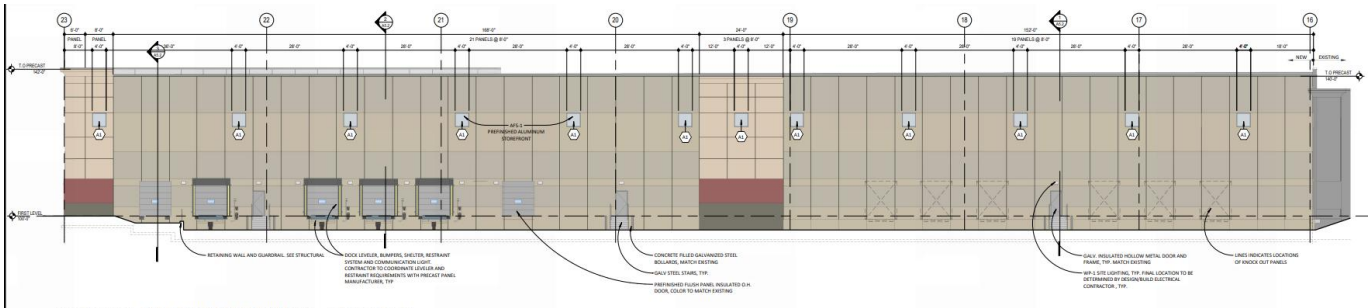
EXISTING FACADE – MATERIAL REFERENCE
NOTE: EXPANSION BUILDING TO MATCH EXISTING FACADE MATERIALS AND FINISHES.

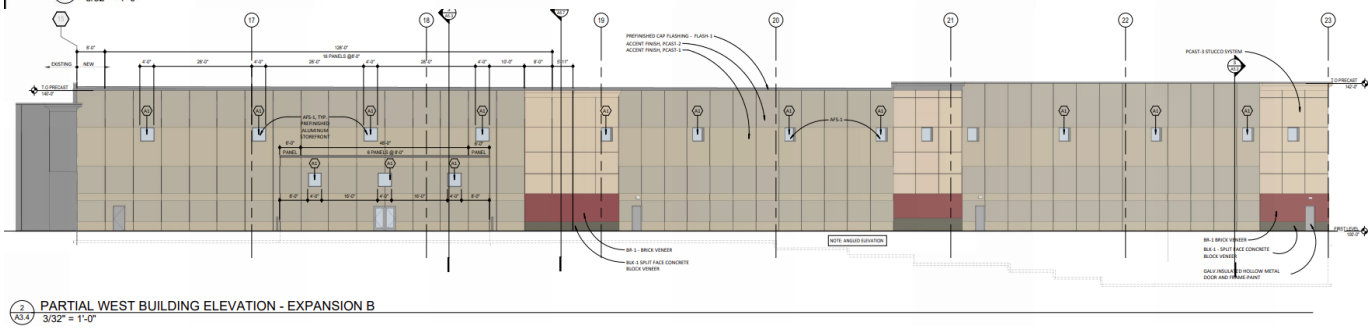


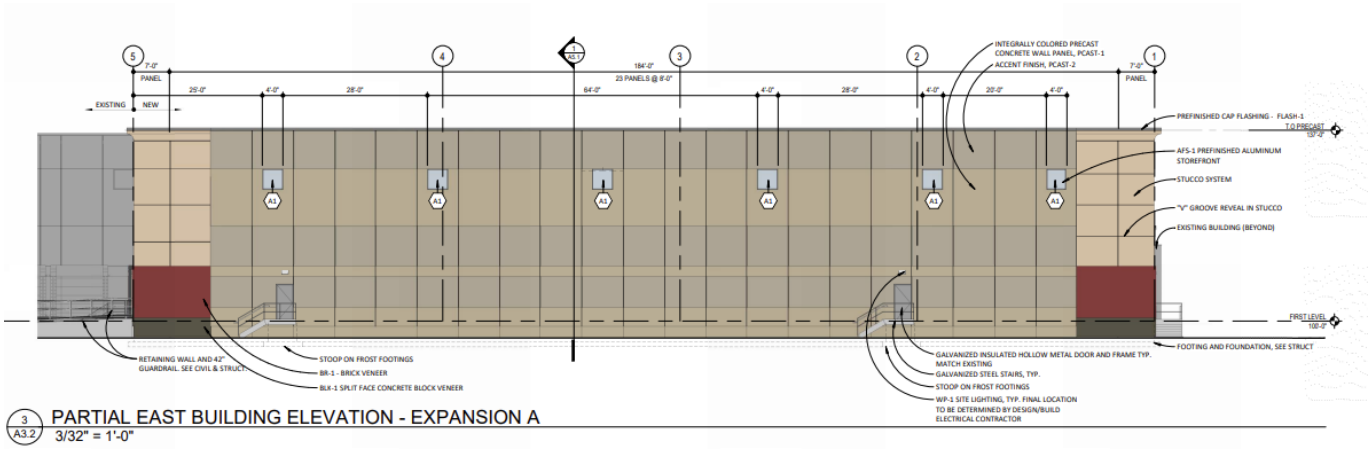
2 A3.1 OVERALL SOUTH BUILDING ELEVATION
1/32" = 1'-0"



1 A3.1 OVERALL NORTH BUILDING ELEVATION
1/32" = 1'-0"







Easements

The standard 10-foot wide drainage and utility system runs adjacent to the south, west, and north lot lines on the property. A 50-foot wide drainage and utility system runs along the entire east property line. Minor encroachments into that easement include two sets of emergency stairs on Expansion A, light poles, and a fire hydrant. An additional 30-foot wide drainage and utility easement runs through the southwest area of the property. As previously noted, the proposed parking lot expansion will be placed over the 30-foot wide easement as well as proposed and existing private utilities. An encroachment agreement will be required prior to issuance of a building permit for all encroachments.

Lastly, a private 15-foot wide electric easement is located on the south end of the existing building, extending to 95th Street. The applicant will need to secure approval for placement of Expansion B over the easement area from the easement holder or vacate the easement prior to issuance of a building permit.

Utilities
The site is currently served by public sewer and water. The project will require the extension of sanitary sewer and water service lines. The applicant has submitted civil plans with proposed utility work and shall comply with the City Engineer Review Memo dated 12/9/2025. Final utility layout must be submitted for review.

Grading and Storm Water Management
The Applicant is proposing grading in multiple areas of the site to account for the additions. A detailed stormwater management plan was submitted, and the Applicant shall comply with all comments included in the City Engineer Review Memo dated 12/9/2025. The applicant proposes to treat stormwater runoff with existing and new infrastructure: a new underground stormwater filtration system; a new filtration basin in the northeast corner; a realigned filtration system on the south side; and an existing filtration basin in the southeast corner. An updated Stormwater Maintenance Agreement will be required to be executed prior to issuance of a building permit.

Public Hearing Notices
The public hearing notice for the December 15, 2025, Planning Commission meeting was published in the *Saint Paul Pioneer Press* and mailed to 62 property owners within 500 feet of the proposed project on December 2, 2025. Staff have not received any written comments at the time of writing the report.

Recommendation

That the Planning Commission recommend that the City Council take the following actions:

A. Approve the variance to allow the proposed building addition for Expansion A to be 64 feet from the north property line when a 100-foot setback to the residential property line is required.

B. Approve a site plan review for Expansion A and Expansion B totaling approximately 124,940 square feet and associated site work at Van Meter Inc. located at 7450 95th Street.

The approvals are subject to the following conditions:

1. The project shall be completed in accordance with the plans submitted by the conditions of approval. Any significant changes to the plans, as determined by planning staff, shall require review and approval by the Planning Commission and City Council.

2. Prior to the issuance of a building permit, the applicant shall incorporate the recommendations, requirements, and evaluations noted in the engineering comment letter dated 12/9/2025, and subject to modifications that are agreed to by the Applicant and City Engineer. All comments shall be adopted herein by reference.

3. Resolution No. 2012-045 shall be rescinded.

4. All applicable permits (i.e., building, demo, electrical, grading, right-of-way, and mechanical) and a commercial plan review packet must be completed, submitted, and approved by the City prior to the commencement of any construction activities. Detailed construction

plans must be reviewed and approved by the Building Official, City Engineer, and Fire Marshal.

5. Installation of landscaping shall occur in a timely fashion and be consistent with an approved plan. Prior to the issuance of a building permit, a letter of credit in the amount of 150 percent of the landscape estimate shall be submitted to the City as required by City ordinance. The financial guarantee shall be held until all required plantings are installed. At such time of installation, the Planning Department shall conduct an inspection to verify compliance with the landscape plan. If the inspection is approved, 50 percent of the financial guarantee shall be released. One year from the date of initial inspection a follow-up inspection shall be conducted to verify survivability. If the follow-up inspection is approved, the remainder of the financial guarantee shall be released.

6. The grading and erosion control plan for the site must comply with NPDES II permit requirements. Erosion control devices must be installed prior to commencement of any grading activity. Erosion control must be performed in accordance with the recommended practices of the Minnesota Stormwater Manual and the conditions stipulated in Title 9-7-1, Erosion Control During Construction, of the City's Subdivision Ordinance. The Applicant shall be responsible for the costs for the City to inspect the site in relation to erosion control conformance.

7. The Applicant must provide the City with an as-built survey of all utilities and grading plan.

8. The Applicant is responsible for removing debris from all adjacent public and private roadways during their grading and construction process. The adjacent streets shall be swept clean daily or as needed.

9. All areas of the site, where practical, shall be established and maintained per the approved final landscaping plan.

10. All new lighting shall be downward directed.

11. The property owner shall secure approval from the easement holder to locate Expansion B over the existing 15-foot wide private electric easement on the property (Document #4155585) or vacate the easement prior to issuance of a building permit. Verification of either action shall be supplied to City staff.

12. An encroachment agreement for parking lot, utilities, lights poles, emergency staircases, and stormwater areas within the existing drainage and utility easements shall be recorded prior to the approval of any building permits.

13. An updated stormwater maintenance agreement shall be recorded to reflect the proposed stormwater additions prior to the issuance of a building permit.

14. If the trash compactor and storage area become visible from public view at any time, compliant screening for trash enclosures per City code shall be provided.

15. At such a time as the fabric material on the fencing falls into a state of disrepair, the fabric shall be removed and replaced with code compliant screening materials.

16. Final plans identifying location of rooftop mechanical equipment and proposed screening shall be submitted and reviewed by staff prior to building permit approval.

17. The proposed new trees along the east side of the loading area abutting the pavement shall be permitted to remain in the drainage and utility easement. However, the two trees within the parking island of the new parking lot area, over the 30-foot wide drainage and utility easement must be relocated and another approved landscape material, such as small shrubs, shall be added to the parking island.

18. Two trees shall be located on the south end of the loading area on the east side of the building facing 95th Street to provide a visual barrier to the fence from 95th Street.

19. Signage is not approved as part of this application. Any proposed signage shall meet the requirements of the sign ordinance and require a separate building permit.

20. A grading LOC is required prior to the issuance of a grading permit.

21. Remove vegetation from existing stormwater BMPs, as needed, and ensure that any structures in the existing BMPs are functioning as designed.

Prepared by
Kelly Becker
Associate Planner

Attachments
Stormwater Report
Civil Packet
Revised Photometric Plan
Supplemental Architectural Plans
Variance Request Narrative
Engineer Review Memo dated 12/9/2025
Resolution No. 2012-045

Westwood

Stormwater Management Plan for

Van Meter
Cottage Grove, MN

Prepared for:
Van Meter, Inc.
850 32nd Avenue SW
Cedar Rapids, IA 52404

Prepared by:
Westwood Professional Services
12701 Whitewater Drive, Suite #300
Minnetonka, MN 55343
(952) 937-5150

Project Number: 0058882.00
Submittal Date: 11/11/2025

CONTENTS

INTRODUCTION 2
REGULATIONS 2
Rate Control 2
Volume Control 2
Water Quality 2
EXISTING CONDITIONS 3
PROPOSED CONDITIONS 3
RATE CONTROL 4
VOLUME CONTROL 4
WATER QUALITY 5
CONCLUSIONS 6

EXHIBITS

Exhibit 1: Existing Drainage Map
Exhibit 2: Proposed Drainage Map
Exhibit 3: Soil Borings
Exhibit 4: 2007 and 1015 Drainage Areas
Exhibit 5: Existing HydroCAD Report
Exhibit 6: Proposed HydroCAD Report
Exhibit 7: Stage Storage Tables
Exhibit 8: P8 Report

INTRODUCTION

This drainage study summarizes the stormwater analysis for the proposed Van Meter Addition project located at 7450 95th Street in Cottage Grove, Minnesota. The proposed project will consist of 2 building additions to the existing building with associated truck dock areas and utility infrastructure. The original site development, including future expansion of the building and paving, was included as part of the Hamlet Park Pond Improvement Project in 2007. Previous building additions were constructed in 2015.

An existing drainage map is shown in Exhibit 1. The proposed drainage map is shown on Exhibit 2. For reference, drainage area maps for the original development and 2015 additions are included as Exhibit 4. The site was modeled in HydroCAD to analyze the existing conditions and proposed conditions, as shown in Exhibits 5 and 6. The rainfall distributions and depths that were used in the HydroCAD analysis are from NOAA Atlas 14.

REGULATIONS

The project site is under the regulatory authority of the City of Cottage Grove, South Washington Watershed District, and the MPCA.

Rate Control

Peak flow rates after development shall not exceed pre-development peak flow rates for the critical 2, 10, and 100-year storm events.

Volume Control

The City requires a uniform volume control equal to 1" of runoff from the sum of new and fully reconstructed impervious surfaces. Site soils are primarily soil group D with pervious areas having a curve number of 80. Soil Borings are included in Exhibit 3.

The site is located within the 10-year composite groundwater capture zone, where infiltration is prohibited. In addition, the soil borings indicate high bedrock which also prohibits infiltration. An Alternative Sequencing procedure will be applied to achieve compliance through the use of filtration practices.

Water Quality

The City requires that new development projects include BMPs that at a minimum achieve post-development reductions in TP and TSS by 50% and 80%, respectively. South Washington Watershed rules also call for TP loading rate of 0.22 lbs/acre/year or existing loading rates, whichever is less.

EXISTING CONDITIONS

The existing site consists of an existing building and paved parking and truck dock areas. The majority of the site drainage is collected via storm sewer and discharges to the existing Hamlet Park Pond on the north side of the site. The south portion of the site drains to two shallow basins that overflow to the existing channel east of the site.

The 2007 Hamlet Park Pond Improvement Project was designed to include 460,300 SF (10.567 Ac) impervious area from the site. The 2015 building additions brought the total site impervious area up to 440,645 SF (10.116 Ac) per the Drainage Report done for that project.

PROPOSED CONDITIONS

The proposed site consists of two building additions on the northeast and south of the existing building, along with associated paving and utility infrastructure. Proposed conditions cover is presented in Table 1 below.

Table 1: Proposed Conditions Cover

Cover	Area [ac]
Impervious	14.614
Pervious	5.503
Total	21.117

The proposed development exceeds the original design impervious area discharging to Hamlet Park Pond. Additional stormwater management is proposed to meet current requirements. In addition, the existing BMPs constructed with the 2015 additions are proposed to be disturbed by the proposed project, and the proposed BMPs were sized to accommodate the impervious area previously treated by the existing BMPs.

The north basin will be reconstructed north of the building addition. Both the north building addition and the 2015 building addition will discharge to the north basin.

The underground chamber system will be constructed in the loading dock area east of the proposed south addition. The east half of the south addition and the 2015 south building addition will discharge to the underground system before connecting to the existing storm sewer discharging north to Hamlet Park Pond, consistent with the original design.

The south basin is an existing low area south of the proposed building addition. The draintile will be relocated to the proposed basin edge, similar to the existing condition. Drainage to the

south basin will be reduced to the west half of the south addition. The south basin will continue to discharge to the channel east of the site.

The west basin will be constructed in an existing green space area to treat discharge from the existing parking lot area previously treated by the south basin per the 2015 design. The swales that conveyed this drainage to the south basin are impacted by the proposed south addition. Instead, a new curb cut will direct the discharge to the west to the basin and then connect via storm sewer to the north. This area was originally designed to discharge north.

Since the site is located within the 10-year groundwater capture zone, lined filtration basins and underground chamber system are proposed using the Alternative Sequencing procedure.

RATE CONTROL

The proposed project peak flow rates shall not exceed the existing rates. The table below shows a summary of the runoff rates from the 20.117-acre parcel. Complete calculations can be found in Exhibits 5 and 6.

Table 2: Peak Discharge Rates

Storm Event	Existing Site Discharge Rate [cfs]	Proposed Site Discharge Rate [cfs]
2-year	38.43	30.28
10-year	63.92	63.00
100-year	123.08	120.10

The 100-yr HWL of north basin is 786.04. The 100-yr HWL of underground chamber system basin is 784.14. The 100-yr HWL of south basin is 784.18. The 100-yr HWL of west basin is 786.73. With the building FEE at 790.25, the 3-foot freeboard requirement is met.

Much of the proposed impervious area is building roof which does not require pretreatment. For the new pavement area draining to underground chamber system, pretreatment will be provided by the Isolator Row of the StormTech system.

VOLUME CONTROL

The City of Cottage Grove requires volume control equal to 1" of runoff from the sum of new and fully reconstructed impervious surfaces sum of new and fully reconstructed impervious surfaces. In addition, the existing impervious areas that were treated by the existing BMPs

impacted by the proposed project are included. The following table is a summary of the proposed areas for volume control.

Table 3: Volume Control Area Summary

New Impervious Area	4.498 acres
Reconstructed Impervious Area	0.362 acres
Existing Impervious Area treated by impacted BMPs	2.519 acres
Total to be treated	7.379 acres

As previously discussed, an Alternative Sequencing procedure will be applied to achieve compliance where infiltration is not allowed within the 10-yr Groundwater Recapture Zone. Biofiltration and filtration with liner and underdrain are proposed to meet the volume control requirement. The table below shows the required and provided filtration volumes. The Other impervious area in the table is the proposed parking and will call drive lane in the west portion of the site that connect to existing storm sewer draining north and the reconstructed pavement in the loading dock areas draining to existing storm sewer inlets. Site constraints limit the ability to provide volume control for these areas without further site impacts, but the total proposed filtration volume exceeds the total required volume.

Table 4: Volume Abstraction Requirement

Basin	Impervious Area [ac]	Required Vol [CF]	Provided Filtration Vol. [CF]
North	1.712	6,213	8,031
UG System	3.870	14,047	14,113
South	0.793	2,880	28,096
West	0.227	824	2,351
Other	0.777	2,822	
Total	7.379	26,786	52,591

HydroCAD Stage-storage tables for the basins can be found in Exhibit 7.

WATER QUALITY

The City of Cottage Grove requires that new development projects include BMPs that at a minimum achieve post-development reductions in TP and TSS by 50% and 80%, respectively. In addition, South Washington rules call for TP loading rate of 0.22 lbs/acre/year or existing loading rates, whichever is less. A P8 model with the required watershed adjustments was used for the analysis. The P8 input and output spreadsheets can be found in Exhibit 8.

Table 5: P8 modeling results

	TSS Inflow [lbs/yr]	TSS Trapped [lbs/yr]	TSS Load Reduction	TP Inflow [lbs/yr]	TP Trapped [lbs/yr]	TP Load Reduction
Total	3,627	3,301	91.0%	11.65	7.12	61.2%

The allowable TP loading rate for the proposed project area is 1.79 lbs/year (8.15 acres x 0.22 lbs/acre/year). The P8 model shows a TP loading of 4.51 lbs/year (135.27 lb/30 years) for the proposed condition.

It is proposed to purchase off-site mitigation credits for the excess 2.72 lbs of phosphorous loading, depending on whether credits were not previously purchased with the 2015 project. Note these calculations include drainage areas 2, 3, and 4, which include some existing impervious areas in addition to the new impervious areas.

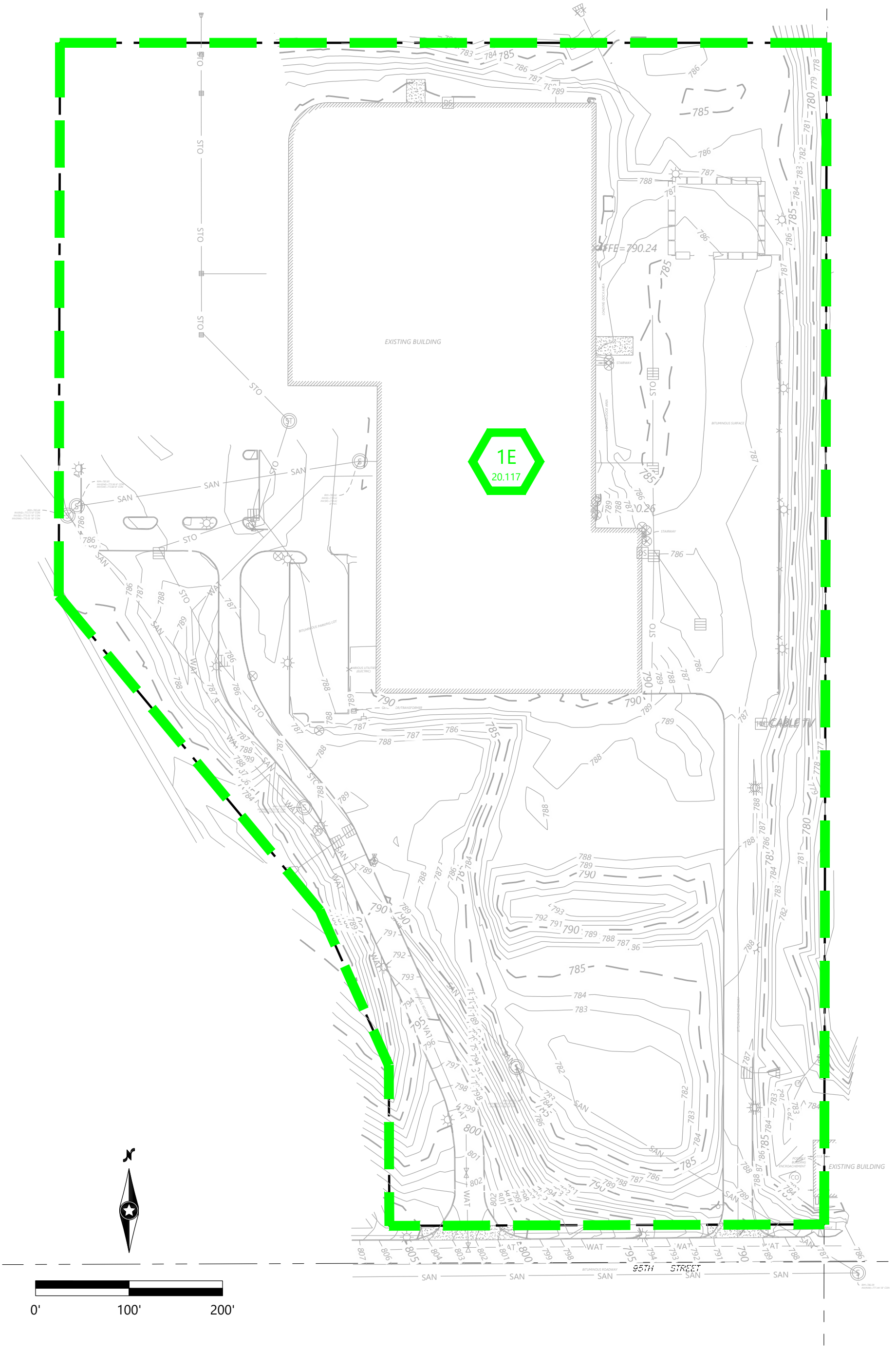
CONCLUSIONS

The proposed development has been designed to meet the requirements of the City of Cottage Grove and South Washington Watershed District for rate control, volume control and water quality with the proposed biofiltration basins and underground chamber system.

EXHIBIT 1

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Call 48 Hours before digging:
811 or call811.com
Common Ground Alliance



N:\0058882.00\DWG\0058882.00C-DRAN.DWG

VAN METER EXPANSION

DESIGNED: .
CHECKED: .
DRAWN: .
FIELD CREW: .
FIELD WORK DATE: .

VAN METER EXPANSION

COTTAGE GROVE, MN

Westwood

Phone (952) 937-5150
Fax (952) 937-5822
Toll Free (888) 937-5150
12701 Whitewater Drive, Suite #300
Minnetonka, MN 55343
westwoodps.com

Westwood Professional Services, Inc.

EXISTING DRAINAGE MAP

PROJECT NUMBER: 0058882.00

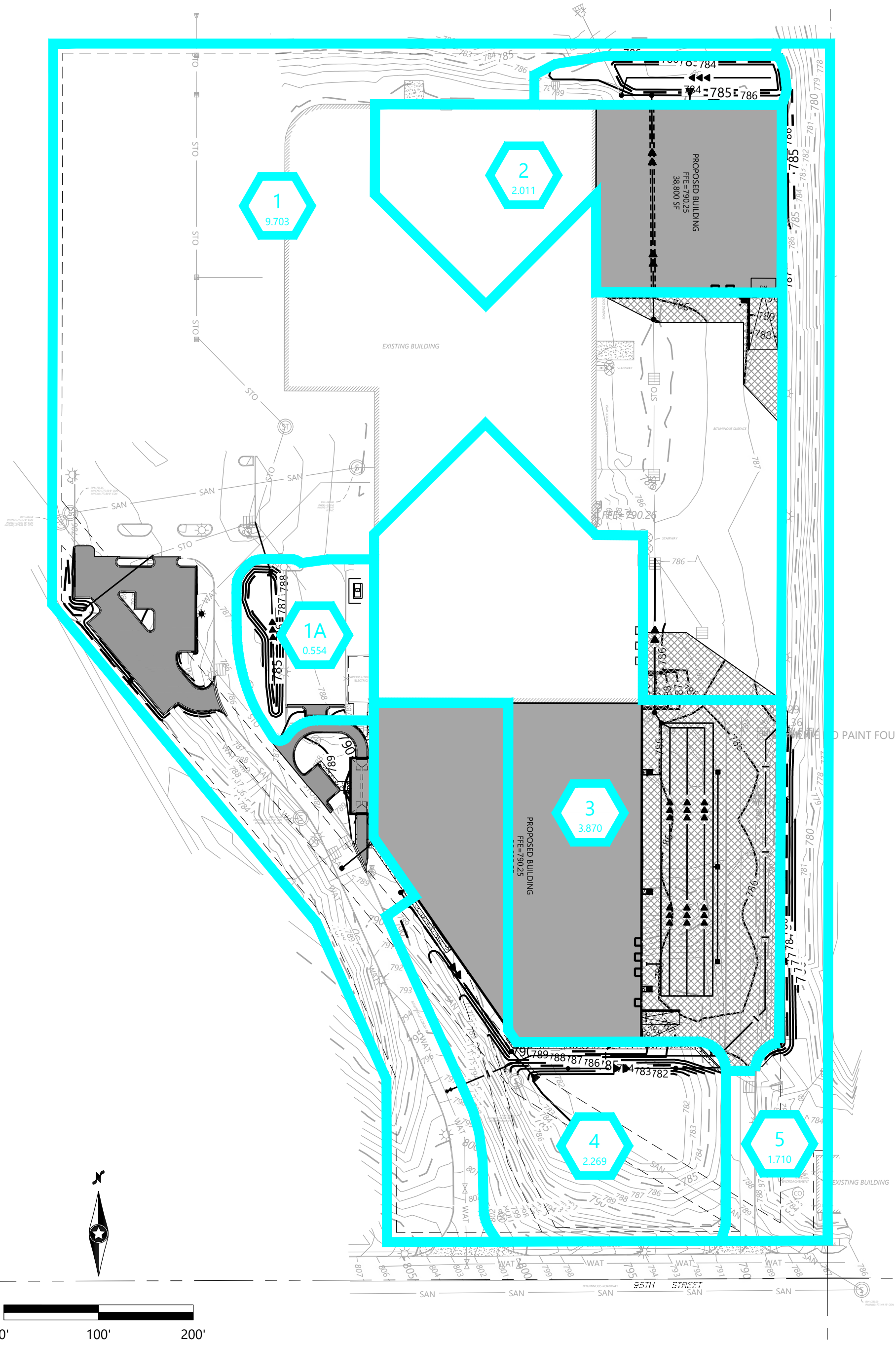
SHEET NUMBER: 1 OF 2

DATE: 11/12/2025

EXHIBIT 2

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VAN METER EXPANSION

DESIGNED: .
CHECKED: .
DRAWN: .
FIELD CREW: .
FIELD WORK DATE: .

VAN METER EXPANSION

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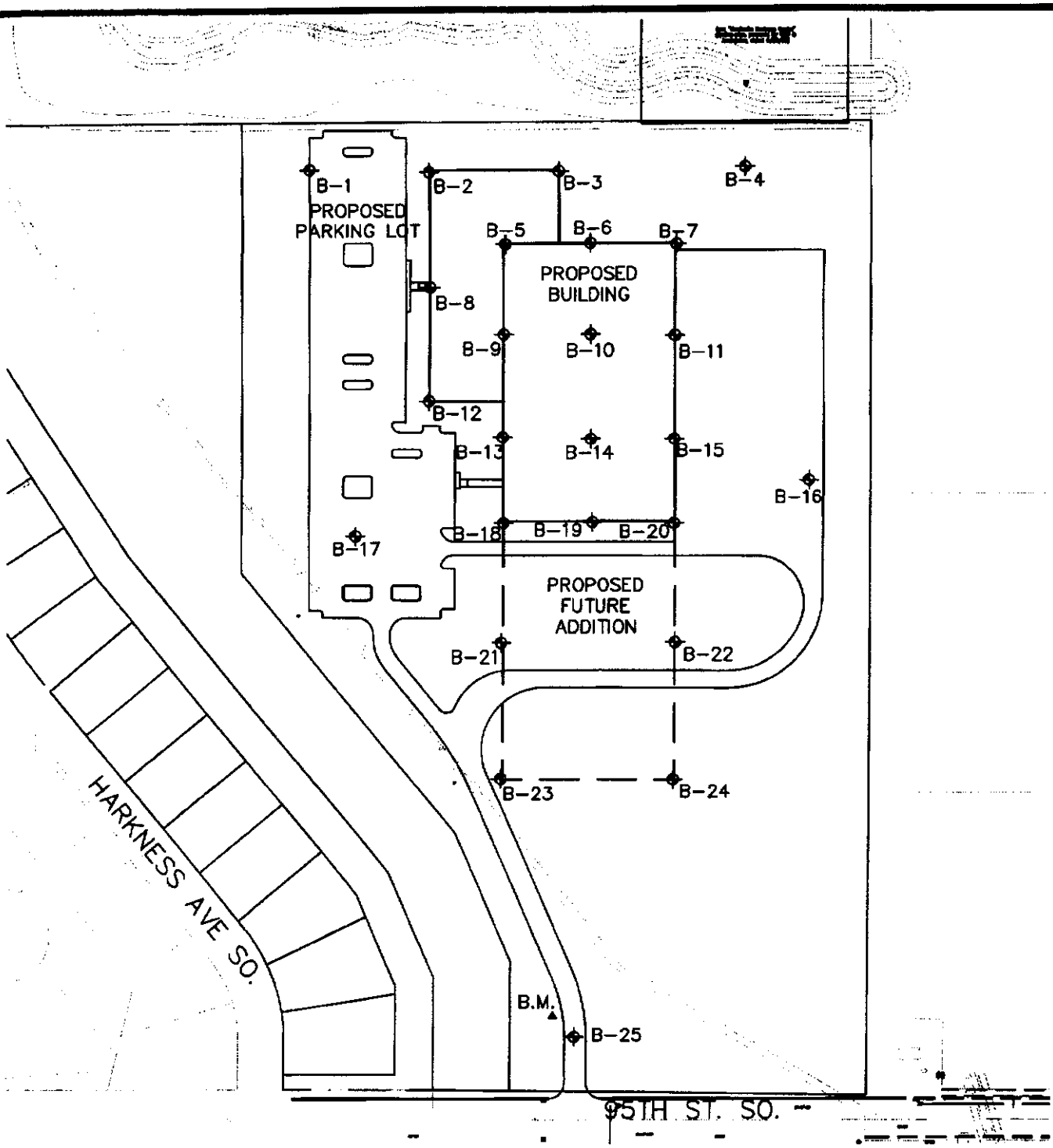
PROPOSED DRAINAGE MAP

PROJECT NUMBER: 0058882.00

SHEET NUMBER: 2 OF 2

DATE: 11/12/2025

EXHIBIT 3



LEGEND

⊕ = APPROXIMATE SOIL BORING LOCATION

▲ = BENCHMARK: STAKED HUB, ELEVATION = 789.13 FEET NGVD

AMERICAN ENGINEERING TESTING, INC.

CONSULTANTS
- GEOTECHNICAL
- ENVIRONMENTAL
- MATERIALS

550 Cleveland Avenue North
St. Paul, Minnesota 55114

Phone: 651-659-9001
Fax: 651-659-1379
Website: www.mnengtest.com

NO SCALE

FIGURE 1: BORING LOCATIONS

Werner Electric
Cottage Grove, Minnesota

DRAWN BY: VJL	CHECKED BY: JPB
DATE: 09/5/07	AET JOB NO. 01-03658

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-1 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 785.8 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly sandy lean clay, slightly organic, black to dark brown	FILL	5	M	SS	10	22				
2	FILL, mixture of silty sand and gravel, possible cobbles at 21", brown		114/0.4	M	SS	8					
3	DOLOSTONE, light brown Weathering: Highly to moderately weathered Hardness: Soft to moderately hard Obstructed to SS and HSA at 3.4' **END OF BORING**	SHAKOPEE FORMATION									

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-2' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: 8/29/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-2 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 786.7 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly silty sand, slightly organic, dark brown	FILL									
	FILL, mixture of gravelly silty sand, a little clayey sand, possible cobbles, brown and dark brown		19	M	SS	12					
2											
3			115	M	SS	6					
4	SILTY SAND, a little gravel, light brown and brown	COARSE ALLUVIUM									
5	DOLOSTONE, light brown Weathering: Very to moderately weathered Hardness: Soft to moderately hard	SHAKOPEE FORMATION	59	M	SS	12					
6			160/0.2	M	SS	2					
	Obstructed to SS and HSA at 6.7' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-6½' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: 8/29/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-3 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 786.6 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly silty sand, slightly organic, dark brown	FILL	19	M	SS	14					
	FILL, mixture of gravel and silty sand, brown and light brown										
2	FILL, mostly sand with silt and gravel, possible cobbles at 2'		19	M	SS	10	10				
3	FILL, mostly gravelly clayey sand, dark brown										
4	DOLOSTONE, light brown Weathering: Moderately weathered Hardness: Moderately hard	SHAKOPEE FORMATION	100/0.4	M	SS	1					
	Obstructed to SS and HSA at 4.9' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-4' 3.25" HSA							
BORING COMPLETED: 8/29/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-4 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 786.5 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand, surface roots, slightly organic, dark brown to black	FILL	8	M	SS	10	21 6				
2	FILL, mostly clayey sand with gravel, brown										
3	FILL, mostly gravelly clayey sand, possible cobbles, pieces of dolostone, brown and dark brown		16	M	SS	12	9				
4	DOLOSTONE, light brown Weathering: Highly to very weathered Hardness: Soft	SHAKOPEE FORMATION	68	M	SS	12					
5	Auger Refusal at 4.5'										
	END OF BORING										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-4½' 3.25" HSA							
BORING COMPLETED: 8/29/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-5 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

SURFACE ELEVATION: 787.0

DEPTH IN FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mixture of clayey sand and gravelly clayey sand, slightly organic, black, brown and light brown	FILL	21	M	SS	12	28 / 12				
2	FILL, mixture of sand with silt, clayey sand and lean clay with sand, possible cobbles, a little gravel, brown		29	M	SS	10	7				
3	FILL, mostly gravelly sandy lean clay, trace roots, dark brown										
4											
5	FILL, mostly sand with silt, a little lean clay with sand, a little gravel, pieces of dolostone, trace roots, light brown and brown		62	M	SS	12					
6											
	DOLOSTONE, light brown Weathering: Very weathered Hardness: Moderately hard	SHAKOPEE FORMATION	100/0.2	M	SS	3					
	Obstructed to HSA to 6.5', Obstructed to SS at 6.7' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-6½' 3.25" HSA							
BORING COMPLETED: 8/29/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **01-03658** LOG OF BORING NO. **B-6 (p. 1 of 1)**

PROJECT: **Werner Electric; Cottage Grove, MN**

DEPTH IN FEET	SURFACE ELEVATION: 786.8 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand, a little gravel, surface roots, slightly organic, dark brown	FILL					29				
	FILL, mixture of sand with silt and clayey sand, with gravel, brown		12	M	SS	10	11				
2	FILL, mostly clayey sand with gravel, brown, a little black										
3			24	M	SS	10	12				
4	GRAVEL WITH SAND AND SILT, brown, moist, very dense (GP-GM) (possible fill)	COARSE ALLUVIUM OR FILL									
5	SILTY SAND, a little gravel, fine grained, trace roots, light brown, moist, very dense (SM) (possible fill)		62	M	SS	10					
6	DOLOSTONE, light brown, Weathering: Moderately weathered, Hardness: Hard	SHAKOPEE FORMATION	100/0.1	M	SS	1					
	Obstructed to SS and HSA at 6.1'										
	END OF BORING										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-4½' 3.25" HSA							
BORING COMPLETED: 8/29/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-7 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 786.9 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand, slightly organic, dark brown	FILL					17				
	FILL, mostly clayey sand with gravel, grayish brown and brown		15	M/W	SS	12	9				
2	FILL, mostly gravelly sand with silt, brown						8				
3	FILL, mixture of sand with silt and clayey sand, possible cobbles, trace roots, brown and black		22	M	SS	12					
4											
5	GRAVELLY SAND WITH SILT, medium to fine grained, brown, moist, very dense (SP-SM)	COARSE ALLUVIUM	56	M	SS	10	9				
6	GRAVEL WITH SAND, light brown, moist, very dense (GP)										
7	SAND WITH SILT, a little gravel, light brown, a little gray, moist, very dense, laminations of lean clay (SP-SM)		100/0.4	M	SS	3					
	Obstructed to SS and HSA at 7.9' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-7' 3.25" HSA							
BORING COMPLETED: 8/29/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-8 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 787.5 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand, a little gravel, slightly organic, dark brown and black	FILL					19				
1	FILL, mixture of clayey sand and sand with silt, with gravel, possible cobbles, brown and grayish brown		20	M	SS	16	11				
2							16				
3			36	M	SS	10					
4	GRAVEL WITH SAND AND SILT, light brown, moist, very dense [(GP)/(GP-GM)]	COARSE ALLUVIUM	100/0.3	M	SS	4					
	Obstructed to SS and HSA at 4.3'										
	END OF BORING										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-4' 3.25" HSA							
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-9 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 787.1 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand with gravel, slightly organic, black	FILL									
2	FILL, mixture of clayey sand and sand with silt, with gravel, trace roots, brown and light brown		31	M	SS	12	24				
3			39	M	SS	16	8				
4	GRAVELLY SILTY SAND, fine to medium grained, light brown, moist, very dense (SM)	COARSE ALLUVIUM	100/0.3	M	SS	5					
	Obstructed to SS and HSA at 4.8' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-4' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **01-03658** LOG OF BORING NO. **B-10 (p. 1 of 1)**

PROJECT: **Werner Electric; Cottage Grove, MN**

DEPTH IN FEET	SURFACE ELEVATION: 788.2 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand, a little gravel, slightly organic, dark brown and black	FILL					14				
	FILL, mixture of sand with silt and clayey sand, with gravel, possible cobbles, brown		12	M	SS	8					
2							11				
3			30	M	SS	10					
4	GRAVEL WITH SAND AND SILT, medium to fine grained, light brown, a little dark brown, moist, very dense, laminations of silty sand (GP)	COARSE ALLUVIUM									
5			72	M	SS	10					
6	VERY WEATHERED DOLOSTONE, light brown, Textural Classification: Gravel with sand and silt, moist, very dense [(GP)/(GP-GM)]	SHAKOPEE FORMATION	100/0.5	M	SS	5					
	Obstructed to SS and HSA at 6.5' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-6' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: **8/30/07**							
DR: **EW** LG: **TK** Rig: **66C**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-12 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 788.9 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand, a little gravel, slightly organic, dark brown and black	FILL	9	M	SS	18	27				
2	FILL, mixture of sand with silt and clayey sand, with gravel, pieces of dolostone, trace roots, brown and black										
3	FILL, mixture of sand and sand with silt, with gravel, possible cobbles, brown		36	M	SS	13					
4	GRAVEL WITH SAND, light brown, a little brown, moist, dense, laminations of silty sand (GP)	COARSE ALLUVIUM									
	DOLOSTONE, light brown Weathering: Moderately weathered Hardness: Hard	SHAKOPEE FORMATION	50/0.1	M	SS	2					
	Obstructed to SS and HSA at 4.6'										
	END OF BORING										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
0-4' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
BORING COMPLETED: 8/30/07								
DR: EW LG: TK Rig: 66C								

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-14 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 788.9 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mixture of sand with silt and clayey sand, slightly organic, dark brown	FILL	22	M	SS	5					
2											
3	FILL, mixture of silty sand and clayey sand, brown and dark brown		27	M	SS	12					
4											
5	FILL, mostly clayey sand with gravel, possible cobbles, brown and dark brown			M	SS	18	8				
6	VERY WEATHERED DOLOSTONE, light brown, Textural Classification: Gravel with sand, moist, very dense (GP)	SHAKOPEE FORMATION									
	Obstructed to SS and HSA at 6' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-4½' 3.25" HSA							
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **01-03658** LOG OF BORING NO. **B-15 (p. 1 of 1)**

PROJECT: **Werner Electric; Cottage Grove, MN**

DEPTH IN FEET	SURFACE ELEVATION: 788.5 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly sandy lean clay, a little gravel, slightly organic, dark brown and black	FILL					22				
2	FILL, mixture of clayey sand and sand with silt, with gravel, possible cobbles at 3', brown and grayish brown		9	M	SS	12					
3			23	M	SS	12	8				
4											
5			26	M	SS						
6											
7	HIGHLY WEATHERED DOLOSTONE, light brown, Textural Classification: Gravel with sand and silt, light brown, moist, very dense [(GP)/(GP-GM)]	SHAKOPEE FORMATION	88	M	SS	10					
8	Obstructed to HSA at 6.5' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-6½' 3.25" HSA							
BORING COMPLETED: **8/30/07**							
DR: **EW** LG: **TK** Rig: **66C**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-16 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 787.1 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly sandy lean clay, a little gravel, slightly organic, dark brown and black	FILL	9	M	SS	20	20				
2	FILL, mostly sand with silt, a little gravel, brown						6				
3	FILL, mixture of gravelly sand with silt and clayey sand, brown		45	M	SS	12					
4											
5			51	M	SS	10					
6											
7	SILT WITH SAND, light brown and brown, moist, dense (ML)	FINE ALLUVIUM	64	M	SS	10	17				
	HIGHLY WEATHERED DOLOSTONE, light brown, Textural Classification: Silty sand with gravel, fine grained, very dense (SM)	SHAKOPEE FORMATION									
	Obstructed to SS and HSA at 7.7' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-6.2' 3.25" HSA							
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-17 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 789.3 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand, a little gravel, slightly organic, dark brown and black	FILL	9	M	SS	15	32				
	FILL, mostly silty sand with gravel, brown										
2	FILL, mostly sand with silt and gravel, possible cobbles, brown										
3	FILL, mostly silty sand with gravel, brown and dark brown		24	M	SS	12					
4	GRAVEL WITH SAND, light brown, moist, very dense (GP)	COARSE ALLUVIUM									
5			50/0.3	M	SS						
	GRAVELLY SAND WITH SILT, fine to medium grained, light brown and brown, moist, very dense, lenses and laminations of silty sand (SP-SM)										
	Obstructed to SS and HSA at 5.3'										
	END OF BORING										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-4½' 3.25" HSA							
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-18 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 789.4 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly sandy lean clay, a little gravel, slightly organic, dark brown and black	FILL	12	M	SS	12	24				
2	FILL, mixture of sand with silt, silty sand and clayey sand, with gravel, brown and grayish brown										
3			28	M	SS	10					
4											
5			51	M	SS	16	15				
6	GRAVELLY SAND WITH SILT, possible cobbles, medium to fine grained, light brown, moist, dense (SP-SM)	COARSE ALLUVIUM	50/0.3	M	SS	4					
	VERY WEATHERED DOLOSTONE, light brown, Textural Classification: Gravelly silty sand, medium to fine grained, moist, very dense (SM)	SHAKOPEE FORMATION									
	Obstructed to HSA at 6.2', Obstructed to SS at 6.6' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-6.2' 3.25" HSA							
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-19 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 789.3 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly sandy lean clay, a little gravel, slightly organic, dark brown and black	FILL	6	M	SS	18	28				
2	FILL, mixture of clayey sand, silty sand and sand with silt, with gravel, possible cobbles, brown and dark brown						10				
3			6	M	SS	10					
4											
5			89	M	SS	6					
6	GRAVEL WITH SAND WITH SILT, light brown, moist, very dense [(GP)/(GP-GM)]	COARSE ALLUVIUM	50/0.3	M	SS	1					
	Obstructed to SS and HSA at 6.8' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-6½' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-20 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 789.0 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly sandy lean clay, a little gravel, slightly organic, dark brown and black	FILL					12				
2	FILL, mixture of sand with silt and clayey sand, with gravel, brown and dark brown		12	M	SS	12					
3			70	M	SS	6	7				
4											
5			50/0.3	M	SS	6	5				
6											
7											
8	REDEPOSITED SANDSTONE, light brown and brown mottled, Textural Classification: Sand with silt, a little gravel, moist, very dense, laminations of silty sand (SP-SM) (possible fill)	COARSE ALLUVIUM OR FILL	54	M	SS	6					
9			50/0.3	M	SS						
	Obstructed to HSA at 9.4', Obstructed to SS at 9.7' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-9.4' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **01-03658** LOG OF BORING NO. **B-21 (p. 1 of 1)**

PROJECT: **Werner Electric; Cottage Grove, MN**

DEPTH IN FEET	SURFACE ELEVATION: 789.5 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mixture of silty sand and clayey sand, a little gravel, slightly organic, dark brown	FILL	20	M	SS	16	23				
2	FILL, mostly gravelly silty sand, possible cobbles at 2', brown		50/0.3	M	SS	6					
3											
4	FILL, mostly silty sand with gravel, brown										
5			24	M	SS	10					
6											
7			50/0.1	M	SS	6					
	DOLOSTONE, light brown, Weathering: Very weathered, Hardness: Moderately hard	SHAKOPEE FORMATION									
	Obstructed to SS at 7.6' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-7' 3.25" HSA							
BORING COMPLETED: 8/31/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-22 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 788.6 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mixture of silty sand and clayey sand, a little gravel, slightly organic, black to dark brown	FILL	10	M	SS	12	25				
2	FILL, mixture of silty sand with gravel, possible cobbles at 3', and gravelly silty sand, brown										
3			32	M	SS	3					
4											
5			51	M	SS	12					
6											
7	FILL, mixture of sand with silt and silty sand, with gravel, brown and light brown		50	M	SS	12					
8			50/0.2	M	SS	8					
	DOLOSTONE, light brown, Weathering: Highly weathered, Hardness: Soft	~~SHAKOPEE~~ FORMATION									
	Obstructed to SS at 8.4' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
0-7.7' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
BORING COMPLETED: 8/31/07								
DR: EW LG: TK Rig: 66C								

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-23 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 783.9 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mixture of silty sand and clayey sand, a little gravel, slightly organic, black to dark brown	FILL					28				
2	FILL, mostly gravel with sand and silt, possible cobbles at 4", brown	FILL OR COARSE ALLUVIUM	24	M	SS	10					
3	DOLOSTONE, light brown Weathering: Highly weathered to very weathered Hardness: Soft	SHAKOPEE FORMATION	46	M	SS	6					
4	Obstructed to SS at 4' END OF BORING		50/0.2	M	SS	2					

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-3.8' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: 8/31/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **01-03658** LOG OF BORING NO. **B-24 (p. 1 of 1)**

PROJECT: **Werner Electric; Cottage Grove, MN**

DEPTH IN FEET	SURFACE ELEVATION: 786.8 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mixture of silty sand and clayey sand, a little gravel, slightly organic, dark brown and brown	FILL	11	M	SS	8	23				
2	FILL, mixture of gravelly sand, clayey sand and silty sand, possible cobbles or boulders, brown and light brown		50/0.3	M	SS	0					
3											
4											
5			78/0.3	M	SS	12					
6											
7	GRAVELLY SILTY SAND, light brown, moist, very dense (SM)	COARSE ALLUVIUM	78	M	SS	10					
	Obstructed to SS at 7.7' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-6.2' 3.25" HSA							
BORING COMPLETED: 8/31/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-25 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 794.3 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	SILTY SAND, slightly organic, black to dark brown, moist, very loose (SM)	TOPSOIL	2	M	SS	10					
3	SILTY SAND, fine to medium grained, dark brown to brown, moist, trace roots, very loose to loose (SM)	COARSE ALLUVIUM	3	M	SS	12					
5			9	M	SS	10					
7	SAND, a little gravel, fine to medium grained, brown, moist, loose to very loose (SP)		9	M	SS	10					
10			4	M	SS	10					
12	SAND, a little gravel, fine to medium grained, brown, moist, medium dense (SP)		14	M	SS	12					
14	SAND WITH SILT, a little gravel, fine to medium grained, brown, moist, very dense (SP-SM)		50/0.4	M	SS	8					
15	SILTY SAND WITH GRAVEL, brown, moist, very dense (SM) Obstructed to SS at 15.4' END OF BORING										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-14½' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: 8/31/07							
DR: EW LG: TK Rig: 66C							

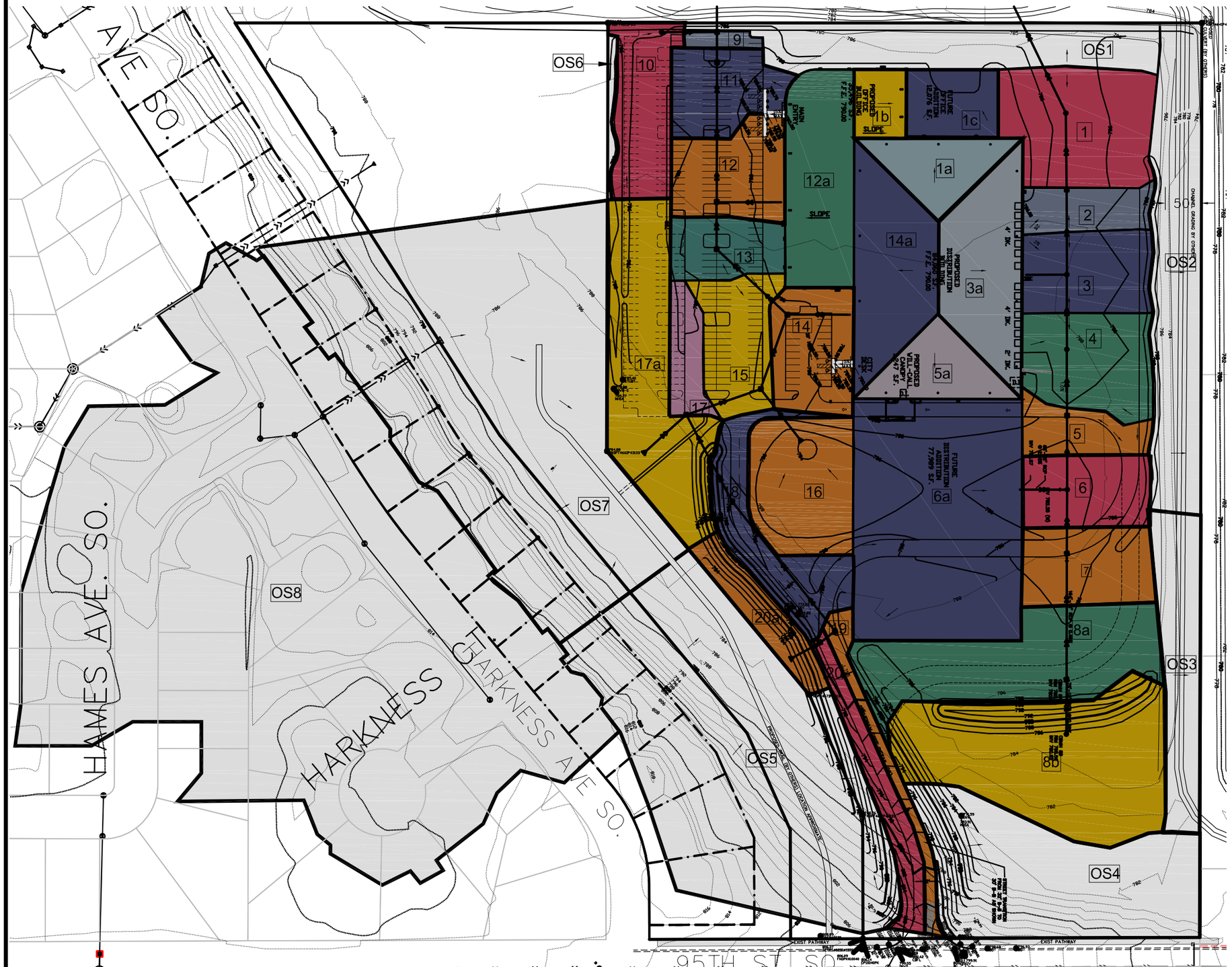
NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

EXHIBIT 4

WERNER ELECTRIC

Future Drainage Areas
Date: October 12, 2007



OFFSITE AREA 1
GRASS: 36,745 sq. ft.

OFFSITE AREA 2
GRASS: 45,372 sq. ft.

OFFSITE AREA 3
GRASS: 24,093 sq. ft.

OFFSITE AREA 4
GRASS: 59,790 sq. ft.

OFFSITE AREA 5
GRASS: 128,042 sq. ft.
ROOF: 6,875 sq. ft.

PROPOSED AREA 8b
GRASS: 62,140 sq. ft.

PROPOSED AREA 8a
GRASS: 25,204 sq. ft.
BITUMINOUS: 19,202 sq. ft.

PROPOSED AREA 7
BITUMINOUS: 19,408 sq. ft.

PROPOSED AREA 6
BITUMINOUS: 17,558 sq. ft.

PROPOSED AREA 6A
ROOF: 77,989 sq. ft.

PROPOSED AREA 5
BITUMINOUS: 11,349 sq. ft.

PROPOSED AREA 4
BITUMINOUS: 24,210 sq. ft.

PROPOSED AREA 3
BITUMINOUS: 20,153 sq. ft.

PROPOSED AREA 2
BITUMINOUS: 10,003 sq. ft.
GRASS: 818 sq. ft.

PROPOSED AREA 1
GRASS: 32,787 sq. ft.

PROPOSED AREA 5A
ROOF: 13,523 sq. ft.

PROPOSED AREA 3A
ROOF: 28,060 sq. ft.

PROPOSED AREA 1A
ROOF: 13,326 sq. ft.

PROPOSED AREA 1B
ROOF: 6,854 sq. ft.

PROPOSED AREA 1C
ROOF: 12,076 sq. ft.

OFFSITE AREA 6
GRASS: 2,153 sq. ft.

OFFSITE AREA 7
GRASS: 171,539 sq. ft.
ROOF: 10,625 sq. ft.

OFFSITE AREA 8
GRASS: 259,445 sq. ft.
ROOF: 70,020 sq. ft.
BITUMINOUS: 61,152 sq. ft.

PROPOSED AREA 9
BITUMINOUS: 2,405 sq. ft.

PROPOSED AREA 10
GRASS: 5,261 sq. ft.
BITUMINOUS: 14,570 sq. ft.

PROPOSED AREA 11
GRASS: 3,347 sq. ft.
BITUMINOUS: 13,525 sq. ft.

PROPOSED AREA 12
GRASS: 4,980 sq. ft.
BITUMINOUS: 14,501 sq. ft.

PROPOSED AREA 12A
ROOF: 28,642 sq. ft.

PROPOSED AREA 13
GRASS: 3,059 sq. ft.
BITUMINOUS: 9,919 sq. ft.

PROPOSED AREA 14
GRASS: 9,817 sq. ft.
BITUMINOUS: 9,588 sq. ft.

PROPOSED AREA 12A
ROOF: 29,151 sq. ft.

PROPOSED AREA 15
GRASS: 3,745 sq. ft.
BITUMINOUS: 14,897 sq. ft.

PROPOSED AREA 16
GRASS: 25,506 sq. ft.

PROPOSED AREA 17
GRASS: 526 sq. ft.
BITUMINOUS: 7,975 sq. ft.

PROPOSED AREA 17A
GRASS: 26,951 sq. ft.
BITUMINOUS: 17,622 sq. ft.

PROPOSED AREA 18
GRASS: 12,898 sq. ft.
BITUMINOUS: 9,432 sq. ft.

PROPOSED AREA 19
GRASS: 946 sq. ft.
BITUMINOUS: 7,386 sq. ft.

PROPOSED AREA 20
GRASS: 6,536 sq. ft.
BITUMINOUS: 6,974 sq. ft.

PROPOSED AREA 20A
GRASS: 11,306 sq. ft.

N00°07'30"E 1263.00

P1

P2

P3

A1

A2

A3

IMPROVEMENTS WERE NOT LOCATED IN THIS AREA DUE TO EXISTING TRAILERS

EXISTING BUILDING FFE = 790.I

CANOPY

DRIVEWAY

95TH STREET S.

820.05

N90°00'00"W

S00°07'30"W 591.24

S00°11'40"E 171.54

S24°00'42"E 181.43

S39°42'41"E 436.89

1/2 INCH IRON PIPE

Drainage and Utility Easement

NORTH

0 50 100

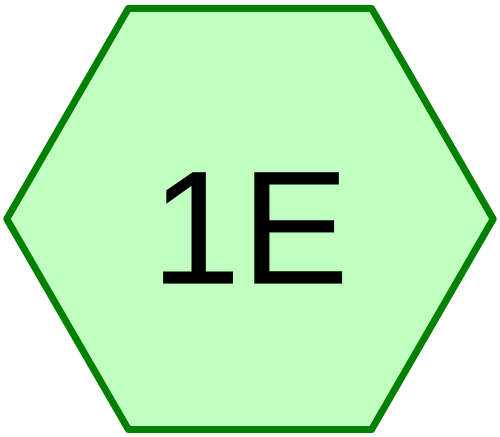
1 INCH = 100 FEET

3/30/2015

PROPOSED DRAINAGE AREAS

WERNER ELECTRIC ADDITION

EXHIBIT 5



Existing

Subcat Reach Pond Link

Routing Diagram for 25-11-07 Van Meter
Prepared by Westwood Professional Services, Printed 11/10/2025
HydroCAD® 10.20-6a s/n 02351 © 2024 HydroCAD Software Solutions LLC

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1E: Existing Runoff Area=20.117 ac 50.29% Impervious Runoff Depth=1.84"
Tc=20.0 min CN=80/98 Runoff=38.43 cfs 3.084 af

Summary for Subcatchment 1E: Existing

Runoff = 38.43 cfs @ 12.29 hrs, Volume= 3.084 af, Depth= 1.84"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.80"

Area (ac)	CN	Description
10.001	80	>75% Grass cover, Good, HSG D
10.116	98	Paved parking, HSG D
20.117	89	Weighted Average
10.001	80	49.71% Pervious Area
10.116	98	50.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0					**Direct Entry,**

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1E: Existing Runoff Area=20.117 ac 50.29% Impervious Runoff Depth=3.05"
Tc=20.0 min CN=80/98 Runoff=63.92 cfs 5.121 af

Summary for Subcatchment 1E: Existing

Runoff = 63.92 cfs @ 12.29 hrs, Volume= 5.121 af, Depth= 3.05"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=4.16"

Area (ac)	CN	Description
10.001	80	>75% Grass cover, Good, HSG D
10.116	98	Paved parking, HSG D
20.117	89	Weighted Average
10.001	80	49.71% Pervious Area
10.116	98	50.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0					**Direct Entry,**

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1E: Existing Runoff Area=20.117 ac 50.29% Impervious Runoff Depth=5.93"
Tc=20.0 min CN=80/98 Runoff=123.08 cfs 9.934 af

Summary for Subcatchment 1E: Existing

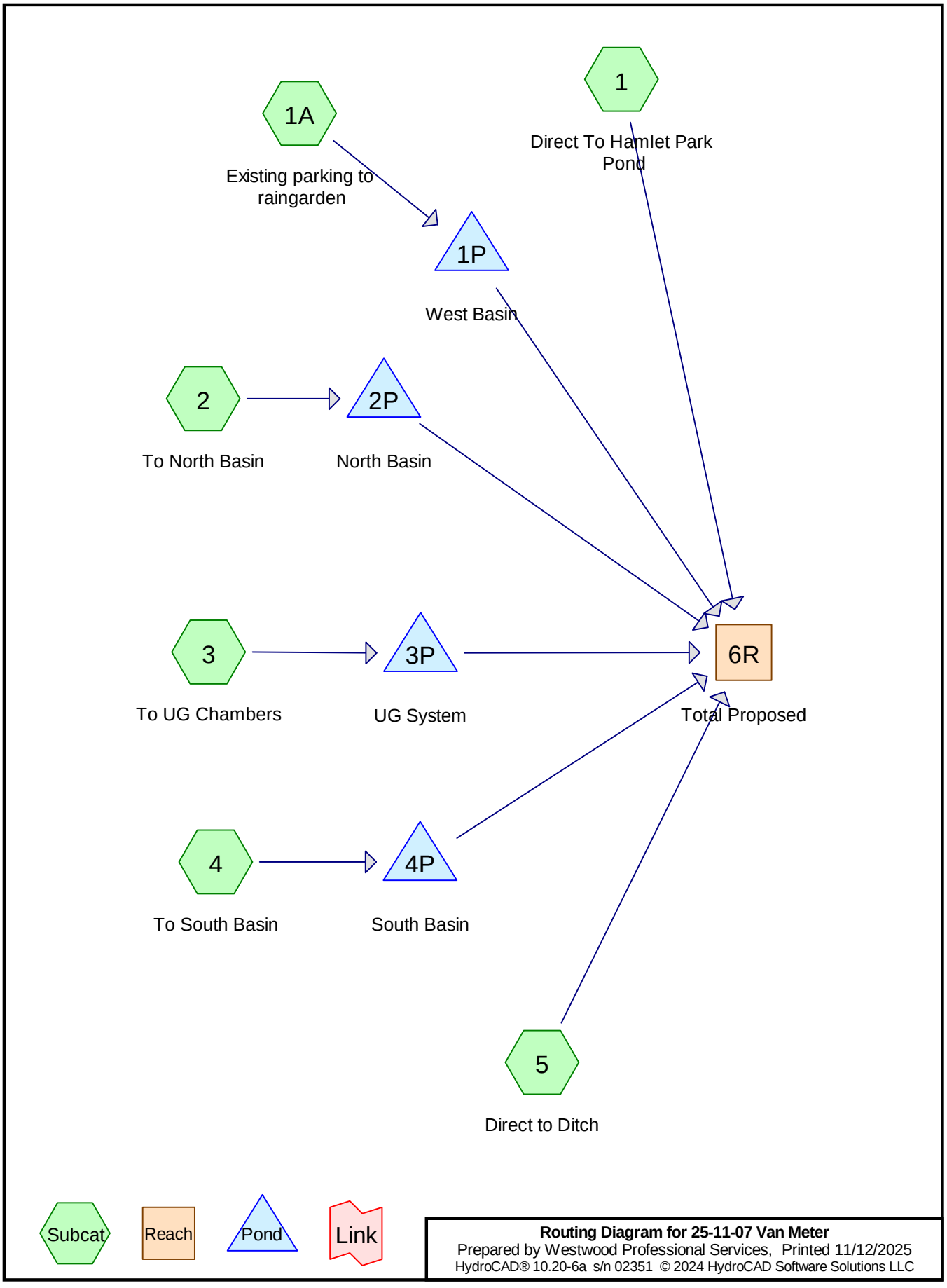
Runoff = 123.08 cfs @ 12.29 hrs, Volume= 9.934 af, Depth= 5.93"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=7.20"

Area (ac)	CN	Description
10.001	80	>75% Grass cover, Good, HSG D
10.116	98	Paved parking, HSG D
20.117	89	Weighted Average
10.001	80	49.71% Pervious Area
10.116	98	50.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0					**Direct Entry,**

EXHIBIT 6



Routing Diagram for 25-11-07 Van Meter
Prepared by Westwood Professional Services, Printed 11/12/2025
HydroCAD® 10.20-6a s/n 02351 © 2024 HydroCAD Software Solutions LLC

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: Direct To Hamlet Park Pond Runoff Area=9.703 ac 81.24% Impervious Runoff Depth=2.29"
Tc=20.0 min CN=80/98 Runoff=22.74 cfs 1.855 af

Subcatchment 1A: Existing parking to Runoff Area=0.554 ac 40.97% Impervious Runoff Depth=1.70"
Tc=7.0 min CN=80/98 Runoff=1.54 cfs 0.079 af

Subcatchment 2: To North Basin Runoff Area=2.011 ac 85.13% Impervious Runoff Depth=2.35"
Tc=10.0 min CN=80/98 Runoff=6.55 cfs 0.394 af

Subcatchment 3: To UG Chambers Runoff Area=3.870 ac 100.00% Impervious Runoff Depth=2.57"
Tc=10.0 min CN=0/98 Runoff=13.65 cfs 0.829 af

Subcatchment 4: To South Basin Runoff Area=2.269 ac 34.95% Impervious Runoff Depth=1.61"
Flow Length=10' Tc=0.0 min CN=80/98 Runoff=7.39 cfs 0.305 af

Subcatchment 5: Direct to Ditch Runoff Area=1.710 ac 7.54% Impervious Runoff Depth=1.21"
Tc=10.0 min CN=80/98 Runoff=3.14 cfs 0.173 af

Reach 6R: Total Proposed Inflow=30.28 cfs 3.404 af
Outflow=30.28 cfs 3.404 af

Pond 1P: West Basin Peak Elev=786.09' Storage=2,610 cf Inflow=1.54 cfs 0.079 af
Outflow=0.05 cfs 0.025 af

Pond 2P: North Basin Peak Elev=785.63' Storage=8,963 cf Inflow=6.55 cfs 0.394 af
Outflow=2.10 cfs 0.394 af

Pond 3P: UG System Peak Elev=783.00' Storage=0.397 af Inflow=13.65 cfs 0.829 af
Outflow=5.11 cfs 0.829 af

Pond 4P: South Basin Peak Elev=782.97' Storage=12,070 cf Inflow=7.39 cfs 0.305 af
Outflow=0.03 cfs 0.129 af

Total Runoff Area = 20.117 ac Runoff Volume = 3.634 af Average Runoff Depth = 2.17"
27.35% Pervious = 5.503 ac 72.65% Impervious = 14.614 ac

Summary for Subcatchment 1: Direct To Hamlet Park Pond

Runoff = 22.74 cfs @ 12.29 hrs, Volume= 1.855 af, Depth= 2.29"
Routed to Reach 6R : Total Proposed

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.80"

Area (ac)	CN	Description
7.883	98	Paved parking, HSG D
1.820	80	>75% Grass cover, Good, HSG D
9.703	95	Weighted Average
1.820	80	18.76% Pervious Area
7.883	98	81.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0					**Direct Entry,**

Summary for Subcatchment 1A: Existing parking to raingarden

Runoff = 1.54 cfs @ 12.14 hrs, Volume= 0.079 af, Depth= 1.70"
Routed to Pond 1P : West Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.80"

Area (ac)	CN	Description
0.227	98	Paved parking, HSG D
0.327	80	>75% Grass cover, Good, HSG D
0.554	87	Weighted Average
0.327	80	59.03% Pervious Area
0.227	98	40.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Summary for Subcatchment 2: To North Basin

Runoff = 6.55 cfs @ 12.17 hrs, Volume= 0.394 af, Depth= 2.35"
Routed to Pond 2P : North Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.80"

Area (ac)	CN	Description
1.712	98	Roofs, HSG D
0.299	80	>75% Grass cover, Good, HSG D
2.011	95	Weighted Average
0.299	80	14.87% Pervious Area
1.712	98	85.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 3: To UG Chambers

Runoff = 13.65 cfs @ 12.17 hrs, Volume= 0.829 af, Depth= 2.57"
Routed to Pond 3P : UG System

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.80"

Area (ac)	CN	Description
3.870	98	Paved parking, HSG D
3.870	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 4: To South Basin

Runoff = 7.39 cfs @ 12.09 hrs, Volume= 0.305 af, Depth= 1.61"
Routed to Pond 4P : South Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.80"

Area (ac)	CN	Description
0.793	98	Roofs, HSG D
1.476	80	>75% Grass cover, Good, HSG D
2.269	86	Weighted Average
1.476	80	65.05% Pervious Area
0.793	98	34.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0	10				**Direct Entry,**

Summary for Subcatchment 5: Direct to Ditch

Runoff = 3.14 cfs @ 12.18 hrs, Volume= 0.173 af, Depth= 1.21"
Routed to Reach 6R : Total Proposed

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.80"

Area (ac)	CN	Description
0.129	98	Paved parking, HSG D
1.581	80	>75% Grass cover, Good, HSG D
1.710	81	Weighted Average
1.581	80	92.46% Pervious Area
0.129	98	7.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Reach 6R: Total Proposed

Inflow Area = 20.117 ac, 72.65% Impervious, Inflow Depth > 2.03" for 2-Year event
Inflow = 30.28 cfs @ 12.32 hrs, Volume= 3.404 af
Outflow = 30.28 cfs @ 12.32 hrs, Volume= 3.404 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: West Basin

Inflow Area = 0.554 ac, 40.97% Impervious, Inflow Depth = 1.70" for 2-Year event
Inflow = 1.54 cfs @ 12.14 hrs, Volume= 0.079 af
Outflow = 0.05 cfs @ 13.64 hrs, Volume= 0.025 af, Atten= 96%, Lag= 89.7 min
Primary = 0.05 cfs @ 13.64 hrs, Volume= 0.025 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 786.09' @ 13.64 hrs Surf.Area= 2,930 sf Storage= 2,610 cf

Plug-Flow detention time= 416.0 min calculated for 0.025 af (31% of inflow)
Center-of-Mass det. time= 300.9 min (1,080.9 - 780.0)

Volume	Invert	Avail.Storage	Storage Description
#1	785.00'	5,703 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
785.00	1,864	0	0
786.00	2,837	2,351	2,351
787.00	3,868	3,353	5,703

Device	Routing	Invert	Outlet Devices
#1	Primary	782.50'	**12.0" Round Culvert**
			L= 56.0' RCP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 782.50' / 782.22' S= 0.0050 '/' Cc= 0.900
			n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Device 1	786.00'	**27.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.05 cfs @ 13.64 hrs HW=786.09' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.05 cfs of 6.17 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.05 cfs @ 1.02 fps)

Summary for Pond 2P: North Basin

Inflow Area = 2.011 ac, 85.13% Impervious, Inflow Depth = 2.35" for 2-Year event
Inflow = 6.55 cfs @ 12.17 hrs, Volume= 0.394 af
Outflow = 2.10 cfs @ 12.40 hrs, Volume= 0.394 af, Atten= 68%, Lag= 13.6 min
Primary = 2.10 cfs @ 12.40 hrs, Volume= 0.394 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 785.63' @ 12.40 hrs Surf.Area= 7,112 sf Storage= 8,963 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 752.2 min (1,514.6 - 762.4)

Volume	Invert	Avail.Storage	Storage Description
#1	784.00'	16,151 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
784.00	4,366	0	0
785.00	5,538	4,952	4,952
786.00	8,020	6,779	11,731
786.50	9,658	4,420	16,151

Device	Routing	Invert	Outlet Devices
#1	Primary	778.04'	**36.0" Round Culvert**
			L= 32.0' RCP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 778.04' / 777.85' S= 0.0059 '/' Cc= 0.900
			n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Device 1	785.50'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	784.00'	**0.500 in/hr Filtration over Surface area**

Primary OutFlow Max=2.10 cfs @ 12.40 hrs HW=785.63' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 2.10 cfs of 84.02 cfs potential flow)
├**2=Orifice/Grate** (Weir Controls 2.02 cfs @ 1.20 fps)
└**3=Filtration** (Exfiltration Controls 0.08 cfs)

Summary for Pond 3P: UG System

Inflow Area = 3.870 ac,100.00% Impervious, Inflow Depth = 2.57" for 2-Year event
Inflow = 13.65 cfs @ 12.17 hrs, Volume= 0.829 af
Outflow = 5.11 cfs @ 12.36 hrs, Volume= 0.829 af, Atten= 63%, Lag= 11.4 min
Primary = 5.11 cfs @ 12.36 hrs, Volume= 0.829 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 783.00' @ 12.36 hrs Surf.Area= 0.363 ac Storage= 0.397 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 476.2 min (1,234.0 - 757.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	781.17'	0.252 af	**54.83'W x 288.00'L x 2.33'H Field A** 0.846 af Overall - 0.217 af Embedded = 0.629 af x 40.0% Voids
#2A	781.67'	0.217 af	**ADS_StormTech SC-310 +Cap** x 640 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 640 Chambers in 16 Rows
#3	781.17'	0.003 af	**6.00'D x 4.83'H Vertical Cone/Cylinder**
		0.471 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	780.17'	**36.0" Round Culvert** L= 68.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 780.17' / 779.94' S= 0.0034 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Device 1	782.60'	**6.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Device 1	781.17'	**0.500 in/hr Filtration over Surface area**

Primary OutFlow Max=5.11 cfs @ 12.36 hrs HW=783.00' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Passes 5.11 cfs of 30.70 cfs potential flow)
↑**2=Sharp-Crested Rectangular Weir** (Weir Controls 4.92 cfs @ 2.07 fps)
3=Filtration (Exfiltration Controls 0.18 cfs)

Summary for Pond 4P: South Basin

Inflow Area = 2.269 ac, 34.95% Impervious, Inflow Depth = 1.61" for 2-Year event
Inflow = 7.39 cfs @ 12.09 hrs, Volume= 0.305 af
Outflow = 0.03 cfs @ 22.30 hrs, Volume= 0.129 af, Atten= 100%, Lag= 612.8 min
Primary = 0.03 cfs @ 22.30 hrs, Volume= 0.129 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 782.97' @ 22.30 hrs Surf.Area= 13,851 sf Storage= 12,070 cf

Plug-Flow detention time= 1,714.3 min calculated for 0.129 af (42% of inflow)

Center-of-Mass det. time= 1,616.4 min (2,394.0 - 777.5)

Volume	Invert	Avail.Storage	Storage Description
#1	782.00'	94,531 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
782.00	11,160	0	0
783.00	13,948	12,554	12,554
784.00	17,135	15,542	28,096
785.00	20,401	18,768	46,864
786.00	23,841	22,121	68,985
787.00	27,252	25,547	94,531

Device	Routing	Invert	Outlet Devices
#1	Primary	782.00'	**8.0" Round Culvert** L= 48.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 782.00' / 781.85' S= 0.0031 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	784.00'	**27.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	782.01'	**0.500 in/hr Filtration over Surface area above 782.01'** Excluded Surface area = 11,188 sf

Primary OutFlow Max=0.03 cfs @ 22.30 hrs HW=782.97' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.03 cfs of 1.08 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Filtration** (Exfiltration Controls 0.03 cfs)

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: Direct To Hamlet Park Pond Runoff Area=9.703 ac 81.24% Impervious Runoff Depth=3.60"
Tc=20.0 min CN=80/98 Runoff=35.26 cfs 2.908 af

Subcatchment 1A: Existing parking to Runoff Area=0.554 ac 40.97% Impervious Runoff Depth=2.89"
Tc=7.0 min CN=80/98 Runoff=2.61 cfs 0.134 af

Subcatchment 2: To North Basin Runoff Area=2.011 ac 85.13% Impervious Runoff Depth=3.66"
Tc=10.0 min CN=80/98 Runoff=10.06 cfs 0.614 af

Subcatchment 3: To UG Chambers Runoff Area=3.870 ac 100.00% Impervious Runoff Depth=3.92"
Tc=10.0 min CN=0/98 Runoff=20.46 cfs 1.266 af

Subcatchment 4: To South Basin Runoff Area=2.269 ac 34.95% Impervious Runoff Depth=2.79"
Flow Length=10' Tc=0.0 min CN=80/98 Runoff=12.55 cfs 0.527 af

Subcatchment 5: Direct to Ditch Runoff Area=1.710 ac 7.54% Impervious Runoff Depth=2.31"
Tc=10.0 min CN=80/98 Runoff=6.03 cfs 0.329 af

Reach 6R: Total Proposed Inflow=63.00 cfs 5.416 af
Outflow=63.00 cfs 5.416 af

Pond 1P: West Basin Peak Elev=786.31' Storage=3,265 cf Inflow=2.61 cfs 0.134 af
Outflow=0.61 cfs 0.079 af

Pond 2P: North Basin Peak Elev=785.83' Storage=10,419 cf Inflow=10.06 cfs 0.614 af
Outflow=7.95 cfs 0.614 af

Pond 3P: UG System Peak Elev=783.48' Storage=0.466 af Inflow=20.46 cfs 1.266 af
Outflow=15.90 cfs 1.266 af

Pond 4P: South Basin Peak Elev=783.56' Storage=20,844 cf Inflow=12.55 cfs 0.527 af
Outflow=0.05 cfs 0.220 af

Total Runoff Area = 20.117 ac Runoff Volume = 5.777 af Average Runoff Depth = 3.45"
27.35% Pervious = 5.503 ac 72.65% Impervious = 14.614 ac

Summary for Subcatchment 1: Direct To Hamlet Park Pond

Runoff = 35.26 cfs @ 12.29 hrs, Volume= 2.908 af, Depth= 3.60"
Routed to Reach 6R : Total Proposed

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=4.16"

Area (ac)	CN	Description
7.883	98	Paved parking, HSG D
1.820	80	>75% Grass cover, Good, HSG D
9.703	95	Weighted Average
1.820	80	18.76% Pervious Area
7.883	98	81.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0					**Direct Entry,**

Summary for Subcatchment 1A: Existing parking to raingarden

Runoff = 2.61 cfs @ 12.14 hrs, Volume= 0.134 af, Depth= 2.89"
Routed to Pond 1P : West Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=4.16"

Area (ac)	CN	Description
0.227	98	Paved parking, HSG D
0.327	80	>75% Grass cover, Good, HSG D
0.554	87	Weighted Average
0.327	80	59.03% Pervious Area
0.227	98	40.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Summary for Subcatchment 2: To North Basin

Runoff = 10.06 cfs @ 12.17 hrs, Volume= 0.614 af, Depth= 3.66"
Routed to Pond 2P : North Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=4.16"

Area (ac)	CN	Description
1.712	98	Roofs, HSG D
0.299	80	>75% Grass cover, Good, HSG D
2.011	95	Weighted Average
0.299	80	14.87% Pervious Area
1.712	98	85.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 3: To UG Chambers

Runoff = 20.46 cfs @ 12.17 hrs, Volume= 1.266 af, Depth= 3.92"
Routed to Pond 3P : UG System

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=4.16"

Area (ac)	CN	Description
3.870	98	Paved parking, HSG D
3.870	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 4: To South Basin

Runoff = 12.55 cfs @ 12.09 hrs, Volume= 0.527 af, Depth= 2.79"
Routed to Pond 4P : South Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=4.16"

Area (ac)	CN	Description
0.793	98	Roofs, HSG D
1.476	80	>75% Grass cover, Good, HSG D
2.269	86	Weighted Average
1.476	80	65.05% Pervious Area
0.793	98	34.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0	10				**Direct Entry,**

Summary for Subcatchment 5: Direct to Ditch

Runoff = 6.03 cfs @ 12.18 hrs, Volume= 0.329 af, Depth= 2.31"
Routed to Reach 6R : Total Proposed

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=4.16"

Area (ac)	CN	Description
0.129	98	Paved parking, HSG D
1.581	80	>75% Grass cover, Good, HSG D
1.710	81	Weighted Average
1.581	80	92.46% Pervious Area
0.129	98	7.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Reach 6R: Total Proposed

Inflow Area = 20.117 ac, 72.65% Impervious, Inflow Depth > 3.23" for 10-Year event
Inflow = 63.00 cfs @ 12.25 hrs, Volume= 5.416 af
Outflow = 63.00 cfs @ 12.25 hrs, Volume= 5.416 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: West Basin

Inflow Area = 0.554 ac, 40.97% Impervious, Inflow Depth = 2.89" for 10-Year event
Inflow = 2.61 cfs @ 12.14 hrs, Volume= 0.134 af
Outflow = 0.61 cfs @ 12.40 hrs, Volume= 0.079 af, Atten= 77%, Lag= 15.3 min
Primary = 0.61 cfs @ 12.40 hrs, Volume= 0.079 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 786.31' @ 12.40 hrs Surf.Area= 3,152 sf Storage= 3,265 cf

Plug-Flow detention time= 214.6 min calculated for 0.079 af (59% of inflow)
Center-of-Mass det. time= 133.1 min (907.3 - 774.2)

Volume	Invert	Avail.Storage	Storage Description
#1	785.00'	5,703 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
785.00	1,864	0	0
786.00	2,837	2,351	2,351
787.00	3,868	3,353	5,703

Device	Routing	Invert	Outlet Devices
#1	Primary	782.50'	**12.0" Round Culvert**
			L= 56.0' RCP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 782.50' / 782.22' S= 0.0050 '/' Cc= 0.900
			n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Device 1	786.00'	**27.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.61 cfs @ 12.40 hrs HW=786.31' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.61 cfs of 6.39 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.61 cfs @ 1.88 fps)

Summary for Pond 2P: North Basin

Inflow Area = 2.011 ac, 85.13% Impervious, Inflow Depth = 3.66" for 10-Year event
Inflow = 10.06 cfs @ 12.17 hrs, Volume= 0.614 af
Outflow = 7.95 cfs @ 12.24 hrs, Volume= 0.614 af, Atten= 21%, Lag= 3.9 min
Primary = 7.95 cfs @ 12.24 hrs, Volume= 0.614 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 785.83' @ 12.24 hrs Surf.Area= 7,603 sf Storage= 10,419 cf

Plug-Flow detention time= 516.7 min calculated for 0.614 af (100% of inflow)
Center-of-Mass det. time= 517.0 min (1,273.5 - 756.5)

Volume	Invert	Avail.Storage	Storage Description
#1	784.00'	16,151 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
784.00	4,366	0	0
785.00	5,538	4,952	4,952
786.00	8,020	6,779	11,731
786.50	9,658	4,420	16,151

Device	Routing	Invert	Outlet Devices
#1	Primary	778.04'	**36.0" Round Culvert**
			L= 32.0' RCP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 778.04' / 777.85' S= 0.0059 '/' Cc= 0.900
			n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Device 1	785.50'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	784.00'	**0.500 in/hr Filtration over Surface area**

Primary OutFlow Max=7.94 cfs @ 12.24 hrs HW=785.83' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 7.94 cfs of 85.37 cfs potential flow)
├**2=Orifice/Grate** (Weir Controls 7.85 cfs @ 1.88 fps)
└**3=Filtration** (Exfiltration Controls 0.09 cfs)

Summary for Pond 3P: UG System

Inflow Area = 3.870 ac,100.00% Impervious, Inflow Depth = 3.92" for 10-Year event
Inflow = 20.46 cfs @ 12.17 hrs, Volume= 1.266 af
Outflow = 15.90 cfs @ 12.24 hrs, Volume= 1.266 af, Atten= 22%, Lag= 4.1 min
Primary = 15.90 cfs @ 12.24 hrs, Volume= 1.266 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 783.48' @ 12.24 hrs Surf.Area= 0.363 ac Storage= 0.466 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 344.1 min (1,095.6 - 751.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	781.17'	0.252 af	**54.83'W x 288.00'L x 2.33'H Field A** 0.846 af Overall - 0.217 af Embedded = 0.629 af x 40.0% Voids
#2A	781.67'	0.217 af	**ADS_StormTech SC-310 +Cap** x 640 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 640 Chambers in 16 Rows
#3	781.17'	0.003 af	**6.00'D x 4.83'H Vertical Cone/Cylinder**
		0.471 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	780.17'	**36.0" Round Culvert** L= 68.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 780.17' / 779.94' S= 0.0034 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Device 1	782.60'	**6.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Device 1	781.17'	**0.500 in/hr Filtration over Surface area**

Primary OutFlow Max=15.89 cfs @ 12.24 hrs HW=783.48' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 15.89 cfs of 38.21 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 15.70 cfs @ 3.07 fps)
  └─**3=Filtration** (Exfiltration Controls 0.18 cfs)

Summary for Pond 4P: South Basin

Inflow Area = 2.269 ac, 34.95% Impervious, Inflow Depth = 2.79" for 10-Year event
Inflow = 12.55 cfs @ 12.09 hrs, Volume= 0.527 af
Outflow = 0.05 cfs @ 22.19 hrs, Volume= 0.220 af, Atten= 100%, Lag= 606.0 min
Primary = 0.05 cfs @ 22.19 hrs, Volume= 0.220 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 783.56' @ 22.19 hrs Surf.Area= 15,728 sf Storage= 20,844 cf

Plug-Flow detention time= 1,712.9 min calculated for 0.220 af (42% of inflow)

Center-of-Mass det. time= 1,615.7 min (2,387.1 - 771.4)

Volume	Invert	Avail.Storage	Storage Description
#1	782.00'	94,531 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
782.00	11,160	0	0
783.00	13,948	12,554	12,554
784.00	17,135	15,542	28,096
785.00	20,401	18,768	46,864
786.00	23,841	22,121	68,985
787.00	27,252	25,547	94,531

Device	Routing	Invert	Outlet Devices
#1	Primary	782.00'	**8.0" Round Culvert** L= 48.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 782.00' / 781.85' S= 0.0031 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	784.00'	**27.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	782.01'	**0.500 in/hr Filtration over Surface area above 782.01'** Excluded Surface area = 11,188 sf

Primary OutFlow Max=0.05 cfs @ 22.19 hrs HW=783.56' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.05 cfs of 1.64 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Filtration** (Exfiltration Controls 0.05 cfs)

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: Direct To Hamlet Park Pond Runoff Area=9.703 ac 81.24% Impervious Runoff Depth=6.57"
Tc=20.0 min CN=80/98 Runoff=63.54 cfs 5.313 af

Subcatchment 1A: Existing parking to Runoff Area=0.554 ac 40.97% Impervious Runoff Depth=5.73"
Tc=7.0 min CN=80/98 Runoff=5.11 cfs 0.265 af

Subcatchment 2: To North Basin Runoff Area=2.011 ac 85.13% Impervious Runoff Depth=6.65"
Tc=10.0 min CN=80/98 Runoff=17.97 cfs 1.115 af

Subcatchment 3: To UG Chambers Runoff Area=3.870 ac 100.00% Impervious Runoff Depth=6.96"
Tc=10.0 min CN=0/98 Runoff=35.60 cfs 2.245 af

Subcatchment 4: To South Basin Runoff Area=2.269 ac 34.95% Impervious Runoff Depth=5.61"
Flow Length=10' Tc=0.0 min CN=80/98 Runoff=24.41 cfs 1.060 af

Subcatchment 5: Direct to Ditch Runoff Area=1.710 ac 7.54% Impervious Runoff Depth=5.04"
Tc=10.0 min CN=80/98 Runoff=12.95 cfs 0.718 af

Reach 6R: Total Proposed Inflow=120.10 cfs 10.241 af
Outflow=120.10 cfs 10.241 af

Pond 1P: West Basin Peak Elev=786.73' Storage=4,706 cf Inflow=5.11 cfs 0.265 af
Outflow=3.27 cfs 0.211 af

Pond 2P: North Basin Peak Elev=786.04' Storage=12,029 cf Inflow=17.97 cfs 1.115 af
Outflow=16.26 cfs 1.115 af

Pond 3P: UG System Peak Elev=784.14' Storage=0.470 af Inflow=35.60 cfs 2.245 af
Outflow=35.72 cfs 2.245 af

Pond 4P: South Basin Peak Elev=784.18' Storage=31,163 cf Inflow=24.41 cfs 1.060 af
Outflow=1.78 cfs 0.640 af

Total Runoff Area = 20.117 ac Runoff Volume = 10.715 af Average Runoff Depth = 6.39"
27.35% Pervious = 5.503 ac 72.65% Impervious = 14.614 ac

Summary for Subcatchment 1: Direct To Hamlet Park Pond

Runoff = 63.54 cfs @ 12.29 hrs, Volume= 5.313 af, Depth= 6.57"
Routed to Reach 6R : Total Proposed

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=7.20"

Area (ac)	CN	Description
7.883	98	Paved parking, HSG D
1.820	80	>75% Grass cover, Good, HSG D
9.703	95	Weighted Average
1.820	80	18.76% Pervious Area
7.883	98	81.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0					**Direct Entry,**

Summary for Subcatchment 1A: Existing parking to raingarden

Runoff = 5.11 cfs @ 12.14 hrs, Volume= 0.265 af, Depth= 5.73"
Routed to Pond 1P : West Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=7.20"

Area (ac)	CN	Description
0.227	98	Paved parking, HSG D
0.327	80	>75% Grass cover, Good, HSG D
0.554	87	Weighted Average
0.327	80	59.03% Pervious Area
0.227	98	40.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Summary for Subcatchment 2: To North Basin

Runoff = 17.97 cfs @ 12.17 hrs, Volume= 1.115 af, Depth= 6.65"
Routed to Pond 2P : North Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=7.20"

Area (ac)	CN	Description
1.712	98	Roofs, HSG D
0.299	80	>75% Grass cover, Good, HSG D
2.011	95	Weighted Average
0.299	80	14.87% Pervious Area
1.712	98	85.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 3: To UG Chambers

Runoff = 35.60 cfs @ 12.17 hrs, Volume= 2.245 af, Depth= 6.96"
Routed to Pond 3P : UG System

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=7.20"

Area (ac)	CN	Description
3.870	98	Paved parking, HSG D
3.870	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 4: To South Basin

Runoff = 24.41 cfs @ 12.09 hrs, Volume= 1.060 af, Depth= 5.61"
Routed to Pond 4P : South Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=7.20"

Area (ac)	CN	Description
0.793	98	Roofs, HSG D
1.476	80	>75% Grass cover, Good, HSG D
2.269	86	Weighted Average
1.476	80	65.05% Pervious Area
0.793	98	34.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0	10				**Direct Entry,**

Summary for Subcatchment 5: Direct to Ditch

Runoff = 12.95 cfs @ 12.17 hrs, Volume= 0.718 af, Depth= 5.04"
Routed to Reach 6R : Total Proposed

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=7.20"

Area (ac)	CN	Description
0.129	98	Paved parking, HSG D
1.581	80	>75% Grass cover, Good, HSG D
1.710	81	Weighted Average
1.581	80	92.46% Pervious Area
0.129	98	7.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Reach 6R: Total Proposed

Inflow Area = 20.117 ac, 72.65% Impervious, Inflow Depth > 6.11" for 100-Year event
Inflow = 120.10 cfs @ 12.20 hrs, Volume= 10.241 af
Outflow = 120.10 cfs @ 12.20 hrs, Volume= 10.241 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: West Basin

Inflow Area = 0.554 ac, 40.97% Impervious, Inflow Depth = 5.73" for 100-Year event
Inflow = 5.11 cfs @ 12.14 hrs, Volume= 0.265 af
Outflow = 3.27 cfs @ 12.21 hrs, Volume= 0.211 af, Atten= 36%, Lag= 4.3 min
Primary = 3.27 cfs @ 12.21 hrs, Volume= 0.211 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 786.73' @ 12.21 hrs Surf.Area= 3,592 sf Storage= 4,706 cf

Plug-Flow detention time= 137.3 min calculated for 0.211 af (80% of inflow)
Center-of-Mass det. time= 76.0 min (842.0 - 765.9)

Volume	Invert	Avail.Storage	Storage Description
#1	785.00'	5,703 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
785.00	1,864	0	0
786.00	2,837	2,351	2,351
787.00	3,868	3,353	5,703

Device	Routing	Invert	Outlet Devices
#1	Primary	782.50'	**12.0" Round Culvert**
			L= 56.0' RCP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 782.50' / 782.22' S= 0.0050 '/' Cc= 0.900
			n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Device 1	786.00'	**27.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.27 cfs @ 12.21 hrs HW=786.73' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 3.27 cfs of 6.82 cfs potential flow)
└─**2=Orifice/Grate** (Orifice Controls 3.27 cfs @ 2.91 fps)

Summary for Pond 2P: North Basin

Inflow Area = 2.011 ac, 85.13% Impervious, Inflow Depth = 6.65" for 100-Year event
Inflow = 17.97 cfs @ 12.17 hrs, Volume= 1.115 af
Outflow = 16.26 cfs @ 12.21 hrs, Volume= 1.115 af, Atten= 10%, Lag= 2.4 min
Primary = 16.26 cfs @ 12.21 hrs, Volume= 1.115 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 786.04' @ 12.21 hrs Surf.Area= 8,141 sf Storage= 12,029 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 310.8 min (1,060.5 - 749.7)

Volume	Invert	Avail.Storage	Storage Description
#1	784.00'	16,151 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
784.00	4,366	0	0
785.00	5,538	4,952	4,952
786.00	8,020	6,779	11,731
786.50	9,658	4,420	16,151

Device	Routing	Invert	Outlet Devices
#1	Primary	778.04'	**36.0" Round Culvert**
			L= 32.0' RCP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 778.04' / 777.85' S= 0.0059 '/' Cc= 0.900
			n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Device 1	785.50'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	784.00'	**0.500 in/hr Filtration over Surface area**

Primary OutFlow Max=16.25 cfs @ 12.21 hrs HW=786.04' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 16.25 cfs of 86.75 cfs potential flow)
├─**2=Orifice/Grate** (Weir Controls 16.16 cfs @ 2.40 fps)
└─**3=Filtration** (Exfiltration Controls 0.09 cfs)

Summary for Pond 3P: UG System

Inflow Area = 3.870 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-Year event
Inflow = 35.60 cfs @ 12.17 hrs, Volume= 2.245 af
Outflow = 35.72 cfs @ 12.18 hrs, Volume= 2.245 af, Atten= 0%, Lag= 0.6 min
Primary = 35.72 cfs @ 12.18 hrs, Volume= 2.245 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 784.14' @ 12.18 hrs Surf.Area= 0.363 ac Storage= 0.470 af

Plug-Flow detention time= 220.0 min calculated for 2.245 af (100% of inflow)
Center-of-Mass det. time= 220.2 min (964.6 - 744.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	781.17'	0.252 af	**54.83'W x 288.00'L x 2.33'H Field A** 0.846 af Overall - 0.217 af Embedded = 0.629 af x 40.0% Voids
#2A	781.67'	0.217 af	**ADS_StormTech SC-310 +Cap** x 640 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 640 Chambers in 16 Rows
#3	781.17'	0.003 af	**6.00'D x 4.83'H Vertical Cone/Cylinder**
		0.471 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	780.17'	**36.0" Round Culvert** L= 68.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 780.17' / 779.94' S= 0.0034 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Device 1	782.60'	**6.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Device 1	781.17'	**0.500 in/hr Filtration over Surface area**

Primary OutFlow Max=35.72 cfs @ 12.18 hrs HW=784.14' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Passes 35.72 cfs of 45.56 cfs potential flow)
↑**2=Sharp-Crested Rectangular Weir** (Weir Controls 35.54 cfs @ 4.06 fps)
3=Filtration (Exfiltration Controls 0.18 cfs)

Summary for Pond 4P: South Basin

Inflow Area = 2.269 ac, 34.95% Impervious, Inflow Depth = 5.61" for 100-Year event
Inflow = 24.41 cfs @ 12.09 hrs, Volume= 1.060 af
Outflow = 1.78 cfs @ 12.69 hrs, Volume= 0.640 af, Atten= 93%, Lag= 36.2 min
Primary = 1.78 cfs @ 12.69 hrs, Volume= 0.640 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 784.18' @ 12.69 hrs Surf.Area= 17,710 sf Storage= 31,163 cf

Plug-Flow detention time= 895.1 min calculated for 0.640 af (60% of inflow)

Center-of-Mass det. time= 816.9 min (1,579.4 - 762.5)

Volume	Invert	Avail.Storage	Storage Description
#1	782.00'	94,531 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
782.00	11,160	0	0
783.00	13,948	12,554	12,554
784.00	17,135	15,542	28,096
785.00	20,401	18,768	46,864
786.00	23,841	22,121	68,985
787.00	27,252	25,547	94,531

Device	Routing	Invert	Outlet Devices
#1	Primary	782.00'	**8.0" Round Culvert** L= 48.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 782.00' / 781.85' S= 0.0031 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	784.00'	**27.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	782.01'	**0.500 in/hr Filtration over Surface area above 782.01'** Excluded Surface area = 11,188 sf

Primary OutFlow Max=1.78 cfs @ 12.69 hrs HW=784.18' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 1.78 cfs of 2.07 cfs potential flow)
  ├─**2=Orifice/Grate** (Weir Controls 1.71 cfs @ 1.37 fps)
  └─**3=Filtration** (Exfiltration Controls 0.08 cfs)

EXHIBIT 7

Stage-Area-Storage for Pond 2P: North Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
784.00	4,366	0
784.05	4,425	220
784.10	4,483	442
784.15	4,542	668
784.20	4,600	897
784.25	4,659	1,128
784.30	4,718	1,363
784.35	4,776	1,600
784.40	4,835	1,840
784.45	4,893	2,083
784.50	4,952	2,330
784.55	5,011	2,579
784.60	5,069	2,831
784.65	5,128	3,085
784.70	5,186	3,343
784.75	5,245	3,604
784.80	5,304	3,868
784.85	5,362	4,134
784.90	5,421	4,404
784.95	5,479	4,677
785.00	5,538	4,952
785.05	5,662	5,232
785.10	5,786	5,518
785.15	5,910	5,811
785.20	6,034	6,109
785.25	6,159	6,414
785.30	6,283	6,725
785.35	6,407	7,042
785.40	6,531	7,366
785.45	6,655	7,695
785.50	6,779	8,031
785.55	6,903	8,373
785.60	7,027	8,722
785.65	7,151	9,076
785.70	7,275	9,437
785.75	7,400	9,804
785.80	7,524	10,177
785.85	7,648	10,556
785.90	7,772	10,941
785.95	7,896	11,333
786.00	8,020	11,731
786.05	8,184	12,136
786.10	8,348	12,549
786.15	8,511	12,971
786.20	8,675	13,401
786.25	8,839	13,838
786.30	9,003	14,284
786.35	9,167	14,739
786.40	9,330	15,201
786.45	9,494	15,672
786.50	**9,658**	**16,151**

Stage-Area-Storage for Pond 3P: UG System

Elevation (feet)	Surface (acres)	Storage (acre-feet)
781.17	**0.363**	0.000
781.22	0.363	0.007
781.27	0.363	0.015
781.32	0.363	0.022
781.37	0.363	0.029
781.42	0.363	0.036
781.47	0.363	0.044
781.52	0.363	0.051
781.57	0.363	0.058
781.62	0.363	0.066
781.67	0.363	0.073
781.72	0.363	0.088
781.77	0.363	0.102
781.82	0.363	0.117
781.87	0.363	0.132
781.92	0.363	0.146
781.97	0.363	0.161
782.02	0.363	0.175
782.07	0.363	0.189
782.12	0.363	0.203
782.17	0.363	0.216
782.22	0.363	0.230
782.27	0.363	0.243
782.32	0.363	0.256
782.37	0.363	0.269
782.42	0.363	0.281
782.47	0.363	0.294
782.52	0.363	0.306
782.57	0.363	0.317
782.62	0.363	0.328
782.67	0.363	0.339
782.72	0.363	0.350
782.77	0.363	0.359
782.82	0.363	0.368
782.87	0.363	0.376
782.92	0.363	0.384
782.97	0.363	0.392
783.02	0.363	0.399
783.07	0.363	0.407
783.12	0.363	0.414
783.17	0.363	0.421
783.22	0.363	0.429
783.27	0.363	0.436
783.32	0.363	0.443
783.37	0.363	0.450
783.42	0.363	0.458
783.47	0.363	0.465
783.52	0.363	0.470
783.57	0.363	0.470
783.62	0.363	0.470
783.67	0.363	0.470
783.72	0.363	0.470
783.77	0.363	0.470
783.82	0.363	0.470
783.87	0.363	0.470
783.92	0.363	0.470
783.97	0.363	0.470
784.02	0.363	0.470
784.07	0.363	0.470
784.12	0.363	0.470
784.17	0.363	0.470
784.22	0.363	0.470
784.27	0.363	0.470
784.32	0.363	0.470
784.37	0.363	0.470
784.42	0.363	0.470
784.47	0.363	0.470
784.52	0.363	0.470
784.57	0.363	0.471
784.62	0.363	0.471
784.67	0.363	0.471
784.72	0.363	0.471
784.77	0.363	0.471
784.82	0.363	0.471
784.87	0.363	0.471
784.92	0.363	0.471
784.97	0.363	**0.471**

Stage-Area-Storage for Pond 4P: South Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
782.00	11,160	0
782.05	11,299	561
782.10	11,439	1,130
782.15	11,578	1,705
782.20	11,718	2,288
782.25	11,857	2,877
782.30	11,996	3,473
782.35	12,136	4,077
782.40	12,275	4,687
782.45	12,415	5,304
782.50	12,554	5,929
782.55	12,693	6,560
782.60	12,833	7,198
782.65	12,972	7,843
782.70	13,112	8,495
782.75	13,251	9,154
782.80	13,390	9,820
782.85	13,530	10,493
782.90	13,669	11,173
782.95	13,809	11,860
783.00	13,948	12,554
783.05	14,107	13,255
783.10	14,267	13,965
783.15	14,426	14,682
783.20	14,585	15,407
783.25	14,745	16,141
783.30	14,904	16,882
783.35	15,063	17,631
783.40	15,223	18,388
783.45	15,382	19,153
783.50	15,542	19,926
783.55	15,701	20,707
783.60	15,860	21,496
783.65	16,020	22,293
783.70	16,179	23,098
783.75	16,338	23,911
783.80	16,498	24,732
783.85	16,657	25,561
783.90	16,816	26,398
783.95	16,976	27,243
784.00	17,135	28,096
784.05	17,298	28,956
784.10	17,462	29,825
784.15	17,625	30,702
784.20	17,788	31,588
784.25	17,952	32,481
784.30	18,115	33,383
784.35	18,278	34,293
784.40	18,441	35,211
784.45	18,605	36,137
784.50	18,768	37,071
784.55	18,931	38,014
784.60	19,095	38,964
784.65	19,258	39,923
784.70	19,421	40,890
784.75	19,585	41,865
784.80	19,748	42,849
784.85	19,911	43,840
784.90	20,074	44,840
784.95	20,238	45,848
785.00	20,401	46,864
785.05	20,573	47,888
785.10	20,745	48,921
785.15	20,917	49,962
785.20	21,089	51,013
785.25	21,261	52,071
785.30	21,433	53,139
785.35	21,605	54,215
785.40	21,777	55,299
785.45	21,949	56,392
785.50	22,121	57,494
785.55	22,293	58,604
785.60	22,465	59,723
785.65	22,637	60,851
785.70	22,809	61,987
785.75	22,981	63,132
785.80	23,153	64,285
785.85	23,325	65,447
785.90	23,497	66,618
785.95	23,669	67,797
786.00	23,841	68,985
786.05	24,012	70,181
786.10	24,182	71,386
786.15	24,353	72,599
786.20	24,523	73,821
786.25	24,694	75,051
786.30	24,864	76,290
786.35	25,035	77,538
786.40	25,205	78,794
786.45	25,376	80,058
786.50	25,547	81,331
786.55	25,717	82,613
786.60	25,888	83,903
786.65	26,058	85,202
786.70	26,229	86,509
786.75	26,399	87,825
786.80	26,570	89,149
786.85	26,740	90,482
786.90	26,911	91,823
786.95	27,081	93,173
787.00	**27,252**	**94,531**

Stage-Area-Storage for Pond 1P: West Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
785.00	1,864	0
785.05	1,913	94
785.10	1,961	191
785.15	2,010	291
785.20	2,059	392
785.25	2,107	496
785.30	2,156	603
785.35	2,205	712
785.40	2,253	823
785.45	2,302	937
785.50	2,351	1,054
785.55	2,399	1,172
785.60	2,448	1,294
785.65	2,496	1,417
785.70	2,545	1,543
785.75	2,594	1,672
785.80	2,642	1,803
785.85	2,691	1,936
785.90	2,740	2,072
785.95	2,788	2,210
786.00	2,837	2,351
786.05	2,889	2,494
786.10	2,940	2,639
786.15	2,992	2,788
786.20	3,043	2,939
786.25	3,095	3,092
786.30	3,146	3,248
786.35	3,198	3,407
786.40	3,249	3,568
786.45	3,301	3,732
786.50	3,353	3,898
786.55	3,404	4,067
786.60	3,456	4,238
786.65	3,507	4,412
786.70	3,559	4,589
786.75	3,610	4,768
786.80	3,662	4,950
786.85	3,713	5,134
786.90	3,765	5,321
786.95	3,816	5,511
787.00	**3,868**	**5,703**
787.05	3,868	5,703
787.10	3,868	5,703
787.15	3,868	5,703
787.20	3,868	5,703
787.25	3,868	5,703
787.30	3,868	5,703
787.35	3,868	5,703
787.40	3,868	5,703
787.45	3,868	5,703
787.50	3,868	5,703
787.55	3,868	5,703
787.60	3,868	5,703
787.65	3,868	5,703
787.70	3,868	5,703
787.75	3,868	5,703
787.80	3,868	5,703
787.85	3,868	5,703
787.90	3,868	5,703
787.95	3,868	5,703
788.00	3,868	5,703
788.05	3,868	5,703
788.10	3,868	5,703
788.15	3,868	5,703
788.20	3,868	5,703
788.25	3,868	5,703

EXHIBIT 8

P8 Urban Catchment Model, Version 3.4				Run Date	11/10/25
Case	25-11-06 Van Meter.p8c	FirstDate	01/01/71	Precip(in)	870.4
Title	Van Meter	LastDate	12/31/00	Rain(in)	756.51
PrecFile	MSP_19700101-20001231.pcp	Events	2196	Snow(in)	113.84
PartFile	nurp50.p8p	TotalHrs	261888	TotalYrs	29.88

Case Title	Van Meter
Case Data File	25-11-06 Van Meter.p8c
Path	N:\0058882.00\docs\Design\Pond\P8\
Case Notes:	Van Meter Proposed Conditions
Storm Data File	MSP_19700101-20001231.pcp
Particle File	nurp50.p8p
Air Temp File File	MSP_19700101-20001231.tmp

Time Steps Per Hour	4
Minimum Inter-Event Time (hrs)	10
Maximum Continuity Error %	2
Rainfall Breakpoint (inches)	0.8
Precipitation Scale Factor	1
Air Temp Offset (deg-F)	0
Loops Thru Storm File	5
Simulation Dates	
Start	1/1/1971
Keep	1/1/1971
Stop	12/31/2000

Max Snowfall Temperature (deg-f)	32.0
SnowMelt Temperature (deg-f)	32.0
Snowmelt Coef (in/degF-Day)	0.06
Soil Freeze Temp (deg-F)	32.0
Snowmelt Abstraction Factor	1.00
Evapo-Trans. Calibration Factor	1.00
Growing Season Start Month	5
Growing Season End Month	10

5-Day Antecedent Rainfall + Runoff (inches)		
CN Antecedent Moisture Condition	AMC-II	AMC-III
Growing Season	1.40	2.10
NonGrowing Season	0.50	1.10

Watershed Data						
Watershed Name	Watershed 2	Watershed 3	Watershed 4			
Runoff to Device	North Basin	derground Sys	South Basin			
Infiltration to Device						

Watershed Area	2.011	3.87	2.269			
SCS Curve Number (Pervious)	80	80	80			
Scale Factor for Pervious Runoff Load	1	1	1			
Indirectly Connected Imperv Fraction	0	0	0			
UnSwept Impervious Fraction	0.85	1	0.35			
UnSwept Depression Storage (inches)	0.1	0.1	0.1			
UnSwept Imperv. Runoff Coefficient	0.9	0.9	0.9			
UnSwept Scale Factor for Particle Loads	1	1	1			
Swept Impervious Fraction	0	0	0			
Swept Depression Storage (inches)	0	0	0			
Swept Imperv. Runoff Coefficient	1	1	1			
Swept Scale Factor for Particle Loads	1	1	1			
Sweeping Frequency	0	0	0			
Sweeping Efficiency	1	1	1			
Sweeping Start Date (MMDD)	101	101	101			
Sweeping Stop Date (MMDD)	1231	1231	1231			

Device Data						
Device Name	North Basin	derground Sys	South Basin			
Device Type	INF_BASIN	INF_BASIN	INF_BASIN			
Infiltration Outlet						
Normal Outlet						
Spillway Outlet						
Particle Removal Scale Factor	1	1	1			
Bottom Elevation (ft)	784	780.17	782			
Bottom Area (acres)	0.1002	0.3625	0.2562			
Permanent Pool Area (acres)						
Permanent Pool Volume (ac-ft)						
Perm Pool Infilt Rate (in/hr)						
Flood Pool Area (acres)	0.1556	0.3625	0.3934			
Flood Pool Volume (ac-ft)	0.1844	0.324	0.645			
Flood Pool Infilt Rate (in/hr)	0.5	0.5	0.5			
Infilt Basin Void Fraction (%)	100	100	100			
Detention Pond Outlet Parameters						
Outlet Type						
Outlet Orifice Diameter (in)						
Orifice Discharge Coef						
Outlet Weir Length (ft)						
Weir Discharge Coef						
Perforated Riser Height (ft)						
Number of Holes in Riser						
Holes Diameter						
Flood Pool Drain Time (hrs)						
Swale Parameters						
Length of Flow Path (ft)						

Slope of Flow Path %						
Bottom Width (ft)						
Side Slope (ft-v/ft-h)						
Maximum Depth of Flow (ft)						
Mannings n Constant						
Hydraulic Model						
Pipe, Splitter, Aquifer Parameter						
Hydraulic Res. Time (hrs)						

Particle Data					
Particle File	nurp50.p8p				
Particle Class	P0%	P10%	P30%	P50%	P80%
Filtration Efficiency (%)	0	25	100	100	100
Settling Velocity (ft/hr)	0	0.03	0.3	1.5	15
First Order Decay Rate (1/da	0	0	0	0	0
2nd Order Decay (1/day-ppm	0	0	0	0	0
Impervious Runoff Conc (ppr	1	0	0	0	0
Pervious Runoff Conc (ppm)	1	100	100	100	200
Pervious Conc Exponent	0	1	1	1	1
Accum. Rate (lbs-ac-day)	0	1.75	1.75	1.75	3.5
Particle Removal Rate (1/day	0	0.25	0.25	0.25	0.25
Washoff Coefficient	0	20	20	20	20
Washoff Exponent	0	2	2	2	2
Sweeper Efficiency	0	0	0	5	15

Water Quality Component Data							
Component Name	TSS	TP	TKN	CU	PB	ZN	HC
Water Quality Criteria (ppm)							
Level 1	5	0.025	2	2	0.02	5	0.1
Level 2	10	0.05	1	0.0048	0.014	0.0362	0.5
Level 3	20	0.1	0.5	0.02	0.15	0.38	1
Content Scale Factor	1	1	1	1	1	1	1
Particle Composition (mg/kg)							
P0%	0	99000	600000	13600	2000	640000	250000
P10%	1000000	3850	15000	340	180	1600	22500
P30%	1000000	3850	15000	340	180	1600	22500
P50%	1000000	3850	15000	340	180	1600	22500
P80%	1000000	0	0	340	180	0	22500

P8 Urban Catchment Model, Version 3.4				Run Date	11/10/25
Case	25-11-06 Van Meter.p8c	FirstDate	01/01/71	Precip(in)	870.4
Title	Van Meter	LastDate	12/31/00	Rain(in)	756.51
PrecFile	MSP_19700101-20001231.pcp	Events	2196	Snow(in)	113.84
PartFile	nurp50.p8p	TotalHrs	261888	TotalYrs	29.88

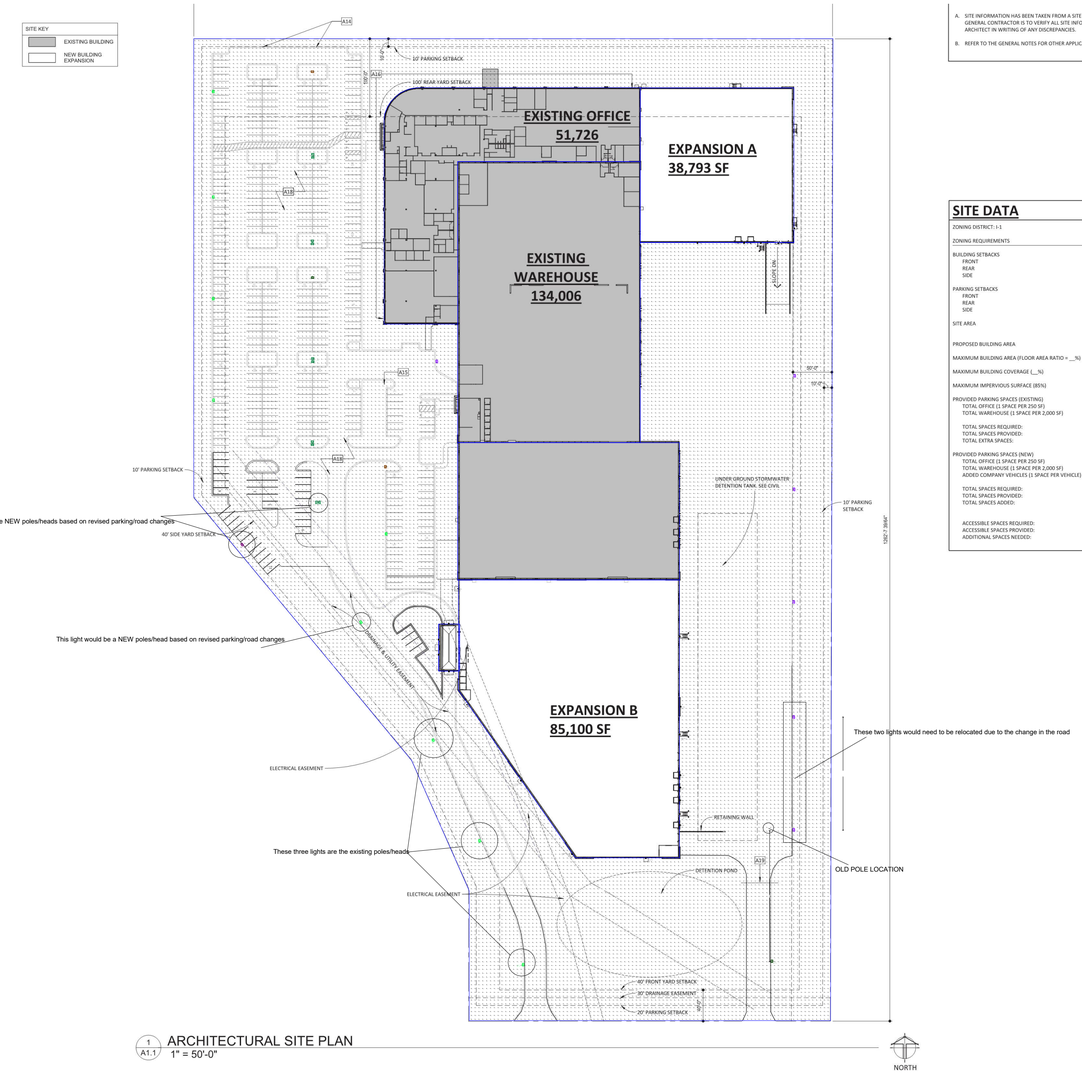
Mass Balances by Device

Device: OVERALL	Type:	NONE											
	Flow	Loads(lbs)											
Mass Balance Term	acre-ft	P0%	P10%	P30%	P50%	P80%	TSS	TP	TKN	CU	PB	ZN	HC
01 watershed inflows	364.54	990.81	21759.58	21759.58	21759.58	43519.16	108797.91	349.41	1573.66	50.47	21.57	738.56	2695.65
03 infiltrate	343.75	934.31	11868.11	2490.24	554.87	114.02	15027.23	149.91	784.29	17.82	4.57	621.82	571.69
04 exfiltrate	343.75	934.31	8901.08	0.00	0.00	0.00	8901.08	126.77	694.10	15.73	3.47	612.20	433.85
05 filtered	0.00	0.00	2967.03	2490.24	554.87	114.02	6126.15	23.15	90.18	2.08	1.10	9.62	137.84
07 spillway outlet	20.78	56.49	466.78	221.40	67.59	18.78	774.57	8.50	45.23	1.03	0.25	37.36	31.55
08 sedimen + decay	0.00	0.00	9327.24	19043.91	21136.26	43386.19	92893.61	190.60	742.61	31.58	16.72	79.21	2090.11
09 total inflow	364.54	990.81	21759.58	21759.58	21759.58	43519.16	108797.91	349.41	1573.66	50.47	21.57	738.56	2695.65
10 surface outflow	20.78	56.49	466.78	221.40	67.59	18.78	774.57	8.50	45.23	1.03	0.25	37.36	31.55
11 groundw outflow	343.75	934.31	8901.08	0.00	0.00	0.00	8901.08	126.77	694.10	15.73	3.47	612.20	433.85
12 total outflow	364.54	990.81	9367.86	221.40	67.59	18.78	9675.64	135.27	739.34	16.76	3.72	649.57	465.40
13 total trapped	0.00	0.00	12294.27	21534.16	21691.13	43500.20	99019.76	213.75	832.79	33.67	17.82	88.83	2227.94
14 storage increase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 mass balance check	0.00	0.00	97.45	4.02	0.86	0.17	102.50	0.39	1.53	0.03	0.02	0.16	2.31
Load Reduction (%)	0.00	0.00	56.50	98.96	99.69	99.96	91.01	61.17	52.92	66.71	82.65	12.03	82.65

Device: North Basin	Type:	INF_BASIN											
	Flow	Loads(lbs)											
Mass Balance Term	acre-ft	P0%	P10%	P30%	P50%	P80%	TSS	TP	TKN	CU	PB	ZN	HC
01 watershed inflows	96.06	261.09	5767.11	5767.11	5767.11	11534.23	28835.57	92.46	416.17	13.35	5.71	194.78	714.07
03 infiltrate	90.67	246.44	3227.74	681.78	152.19	31.35	4093.05	40.04	208.79	4.74	1.23	164.22	153.70
04 exfiltrate	90.67	246.44	2420.80	0.00	0.00	0.00	2420.80	33.72	184.18	4.17	0.93	161.60	116.08
05 filtered	0.00	0.00	806.93	681.78	152.19	31.35	1672.25	6.32	24.61	0.57	0.30	2.63	37.63
07 spillway outlet	5.39	14.65	137.87	79.24	35.29	14.49	266.89	2.42	12.58	0.29	0.08	9.78	9.67
08 sedimen + decay	0.00	0.00	2390.27	5005.86	5579.58	11488.38	24464.09	49.96	194.64	8.32	4.40	20.76	550.44
09 total inflow	96.06	261.09	5767.11	5767.11	5767.11	11534.23	28835.57	92.46	416.17	13.35	5.71	194.78	714.07
10 surface outflow	5.39	14.65	137.87	79.24	35.29	14.49	266.89	2.42	12.58	0.29	0.08	9.78	9.67
11 groundw outflow	90.67	246.44	2420.80	0.00	0.00	0.00	2420.80	33.72	184.18	4.17	0.93	161.60	116.08
12 total outflow	96.06	261.09	2558.67	79.24	35.29	14.49	2687.69	36.14	196.75	4.46	1.01	171.38	125.75
13 total trapped	0.00	0.00	3197.20	5687.64	5731.77	11519.73	26136.34	56.27	219.25	8.89	4.70	23.39	588.07
14 storage increase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 mass balance check	0.00	0.00	11.24	0.24	0.05	0.01	11.54	0.04	0.17	0.00	0.00	0.02	0.26
Load Reduction (%)	0.00	0.00	55.44	98.62	99.39	99.87	90.64	60.86	52.68	66.54	82.35	12.01	82.35

Device: Underground System	Type:	INF_BASIN											
	Flow	Loads(lbs)											
Mass Balance Term	acre-ft	P0%	P10%	P30%	P50%	P80%	TSS	TP	TKN	CU	PB	ZN	HC
01 watershed inflows	210.81	572.99	12788.34	12788.34	12788.34	25576.67	63941.69	204.43	919.27	29.53	12.66	428.09	1581.93
03 infiltrate	195.65	531.78	7033.48	1484.75	330.99	67.91	8917.14	86.72	451.81	10.26	2.67	354.50	333.58
04 exfiltrate	195.65	531.78	5275.11	0.00	0.00	0.00	5275.11	72.96	398.19	9.03	2.01	348.78	251.63
05 filtered	0.00	0.00	1758.37	1484.75	330.99	67.91	3642.02	13.76	53.61	1.24	0.66	5.72	81.95
07 spillway outlet	15.16	41.21	285.45	107.39	16.17	1.57	410.59	5.65	30.86	0.70	0.16	27.03	19.54
08 sedimen + decay	0.00	0.00	5419.09	11194.88	12440.89	25507.13	54561.98	111.86	435.82	18.55	9.82	46.49	1227.64
09 total inflow	210.81	572.99	12788.34	12788.34	12788.34	25576.67	63941.69	204.43	919.27	29.53	12.66	428.09	1581.93
10 surface outflow	15.16	41.21	285.45	107.39	16.17	1.57	410.59	5.65	30.86	0.70	0.16	27.03	19.54
11 groundw outflow	195.65	531.78	5275.11	0.00	0.00	0.00	5275.11	72.96	398.19	9.03	2.01	348.78	251.63
12 total outflow	210.81	572.99	5560.56	107.39	16.17	1.57	5685.70	78.61	429.05	9.73	2.17	375.81	271.17
13 total trapped	0.00	0.00	7177.46	12679.62	12771.88	25575.04	58204.01	125.62	489.43	19.79	10.48	52.21	1309.59
14 storage increase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 mass balance check	0.00	0.00	50.31	1.33	0.28	0.06	51.98	0.20	0.78	0.02	0.01	0.08	1.17
Load Reduction (%)	0.00	0.00	56.13	99.15	99.87	99.99	91.03	61.45	53.24	67.01	82.78	12.20	82.78

Device: South Basin	Type:	INF_BASIN											
	Flow	Loads(lbs)											
Mass Balance Term	acre-ft	P0%	P10%	P30%	P50%	P80%	TSS	TP	TKN	CU	PB	ZN	HC
01 watershed inflows	57.66	156.73	3204.13	3204.13	3204.13	6408.26	16020.65	52.52	238.22	7.58	3.20	115.69	399.65
03 infiltrate	57.43	156.10	1606.89	323.72	71.68	14.75	2017.04	23.16	123.69	2.81	0.68	103.10	84.41
04 exfiltrate	57.43	156.10	1205.17	0.00	0.00	0.00	1205.17	20.09	111.73	2.53	0.53	101.83	66.14
05 filtered	0.00	0.00	401.72	323.72	71.68	14.75	811.88	3.07	11.96	0.28	0.15	1.28	18.27
07 spillway outlet	0.23	0.63	43.46	34.78	16.13	2.72	97.08	0.43	1.80	0.04	0.02	0.56	2.34
08 sedimen + decay	0.00	0.00	1517.89	2843.18	3115.79	6390.68	13867.54	28.79	112.15	4.71	2.50	11.96	312.02
09 total inflow	57.66	156.73	3204.13	3204.13	3204.13	6408.26	16020.65	52.52	238.22	7.58	3.20	115.69	399.65
10 surface outflow	0.23	0.63	43.46	34.78	16.13	2.72	97.08	0.43	1.80	0.04	0.02	0.56	2.34
11 groundw outflow	57.43	156.10	1205.17	0.00	0.00	0.00	1205.17	20.09	111.73	2.53	0.53	101.83	66.14
12 total outflow	57.66	156.73	1248.63	34.78	16.13	2.72	1302.25	20.52	113.53	2.57	0.55	102.39	68.48
13 total trapped	0.00	0.00	1919.61	3166.90	3187.48	6405.43	14679.42	31.85	124.11	4.99	2.64	13.24	330.29
14 storage increase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 mass balance check	0.00	0.00	35.89	2.46	0.52	0.11	38.98	0.15	0.58	0.01	0.01	0.06	0.88
Load Reduction (%)	0.00	0.00	59.91	98.84	99.48	99.96	91.63	60.65	52.10	65.86	82.64	11.44	82.64



1 A1.1 ARCHITECTURAL SITE PLAN
1" = 50'-0"

A. SITE INFORMATION HAS BEEN TAKEN FROM A SITE SURVEY PREPARED BY (surveyer and address) DATED (date). GENERAL CONTRACTOR IS TO VERIFY ALL SITE INFORMATION BEFORE STARTING CONSTRUCTION, AND NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES.

B. REFER TO THE GENERAL NOTES FOR OTHER APPLICABLE INFORMATION.

SITE DATA

ZONING DISTRICT: I-1

ZONING REQUIREMENTS	REQUIRED	PROVIDED
BUILDING SETBACKS		
FRONT	40'	40'
REAR	100'	100'
SIDE	40'	40'
PARKING SETBACKS		
FRONT	20'	20'
REAR	10'	10'
SIDE	10'	10'
SITE AREA		875,161 SF (20.1 ACRES)
PROPOSED BUILDING AREA		309,624 SF
MAXIMUM BUILDING AREA (FLOOR AREA RATIO = __%)		_____ SF
MAXIMUM BUILDING COVERAGE (__%)		309,924 SF (54%)
MAXIMUM IMPERVIOUS SURFACE (85%)	743,886 SF MAX	555,423 SF (63%)
PROVIDED PARKING SPACES (EXISTING)		
TOTAL OFFICE (1 SPACE PER 250 SF)	207 SPACES	51,726 NSF
TOTAL WAREHOUSE (1 SPACE PER 2,000 SF)	67 SPACES	134,006 NSF
TOTAL SPACES REQUIRED:	274 SPACES	185,732 NSF
TOTAL SPACES PROVIDED:	302 SPACES	185,732 NSF
TOTAL EXTRA SPACES:	28 SPACES	
PROVIDED PARKING SPACES (NEW)		
TOTAL OFFICE (1 SPACE PER 250 SF)	0 SPACES	0 NSF
TOTAL WAREHOUSE (1 SPACE PER 2,000 SF)	62 SPACES	123,893 NSF
ADDED COMPANY VEHICLES (1 SPACE PER VEHICLE)	0 SPACES	0 VEHICLES
TOTAL SPACES REQUIRED:	336 SPACES	309,624 NSF
TOTAL SPACES PROVIDED:	302 SPACES	309,624 NSF
TOTAL SPACES ADDED:	38 SPACES	
ACCESSIBLE SPACES REQUIRED:	8 TOTAL	
ACCESSIBLE SPACES PROVIDED:	8 TOTAL	
ADDITIONAL SPACES NEEDED:	0 SPACES	

NOT FOR CONSTRUCTION

pope DESIGN GROUP
POPE DESIGN GROUP
767 N. EUSTIS STREET, SUITE 190
ST. PAUL, MINNESOTA 55114
651.642.9200
WWW.POPEDESIGN.COM

VAN METER

VAN METER FACILITY EXPANSION
7450 95TH ST S, COTTAGE GROVE, MN 55016

ARCHITECTURAL SITE PLAN

ISSUES & REVISIONS	DATE
80% PROGRESS SET	10-31-2025

COMMISSION NO: 81552-24199
DRAWN BY: LL
CHECKED BY: DP, RT
SHEET
A1.1

TRUE SHEET SCALE
0 1" 2"
Autodesk Docs://81552-24199 Van Meter Facility Expansion/81552-24199_Van Meter Facility Expansion_R23.rvt
11/4/2025 10:28:28 AM

VAN METER
A 100% EMPLOYEE-OWNED COMPANY

Van Meter Inc
Cottage Grove MN
6517698080

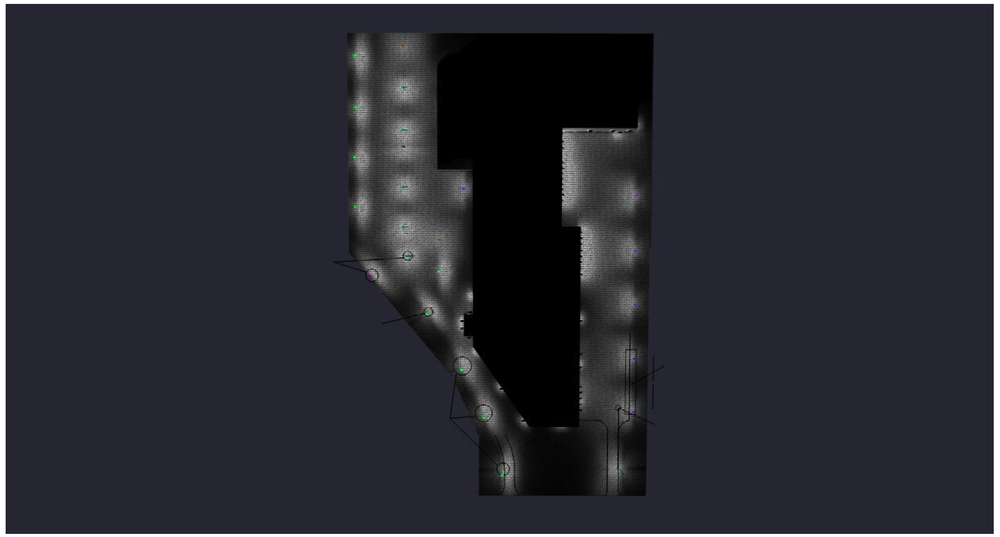
NCQLP LIGHTING CERTIFIED LC NCQLP

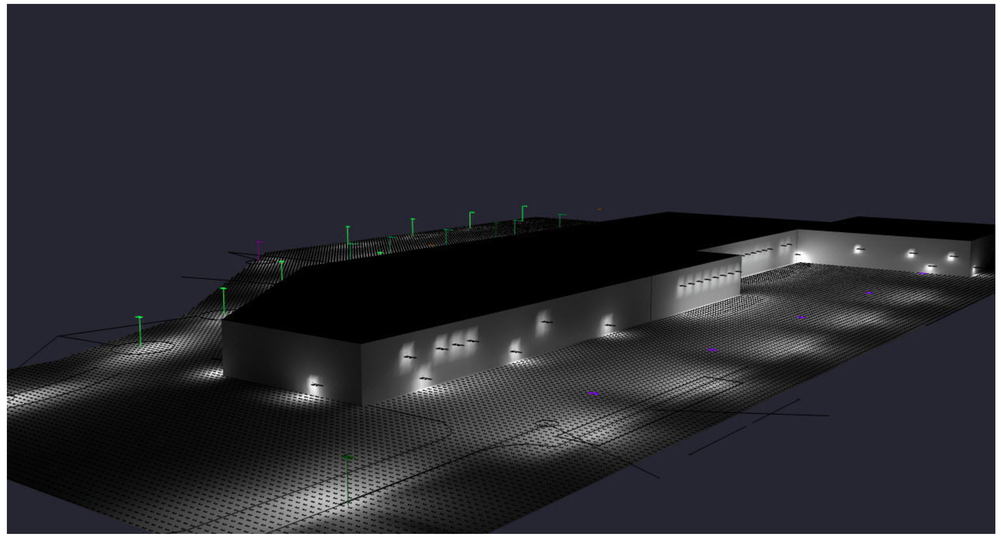
Drawn By: Charles R. Dix - LC
Date:11/10/2025
SCALE

Van Meter Cottage Grove
Expansion Project Photometrics

Luminaire Schedule									
Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	10	AXCS4A	Single	AXCS4A	WP-DOORS	1.000	5520	43.7	437
	10	GWC-SA1A-740-U-T4FT	Single	GWC-SA1A-740-U-T4FT	WP-2 NEW	1.000	5008	34	340
	2	SWP1-PS60-FCCT-U-a-b-c 30K-277V	Single	SWP1-PS60-FCCT-U-a-b-c at 3000K	WP-SMALL	1.000	7714	60	120
	19	SWP1-PS120-FCCT-U-a-b-c 30K-277V	Single	EIKO SWP1-PS120-FCCT-U-a-b-c at 3000K wall pack thin profile	WP2	1.000	15994	116.62	2215.78
	2	GLEON-SA6A-740-U-T3R_1	Single	GLEON-SA6A-740-U-T3R	AL-T3	1.000	28497	193	386
	5	GLEON-SA6A-740-U-T3R	Back-Back	GLEON-SA6A-740-U-T3R	AL-T3 - TWIN	1.000	28497	193	1930
	1	GLEON-SA6A-740-U-T2R-HSS	Single	GLEON-SA6A-740-U-T2R-HSS	AL-T2RHSS	1.000	22498	193	193
	6	GLEON-SA6A-740-U-T4FT	Single	GLEON-SA6A-740-U-T4FT	AL-T4	1.000	28040	193	1158
	2	GLEON-SA6A-740-U-5MQ	Single	GLEON-SA6A-740-U-5MQ	AL-T5	1.000	29281	193	386
	9	GLEON-SA6A-740-U-T2R	Single	GLEON-SA6A-740-U-T2R	AL-T2	1.000	29038	193	1737

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
GROUNDS-PROPERTY LINE_Planar	Illuminance	Fc	2.02	68.6	0.0	N.A.	N.A.





VAN METER
A 100% EMPLOYEE-OWNED COMPANY

Van Meter Inc
Cottage Grove MN
6517698080

NCQLP LIGHTING CERTIFIED NCQLP

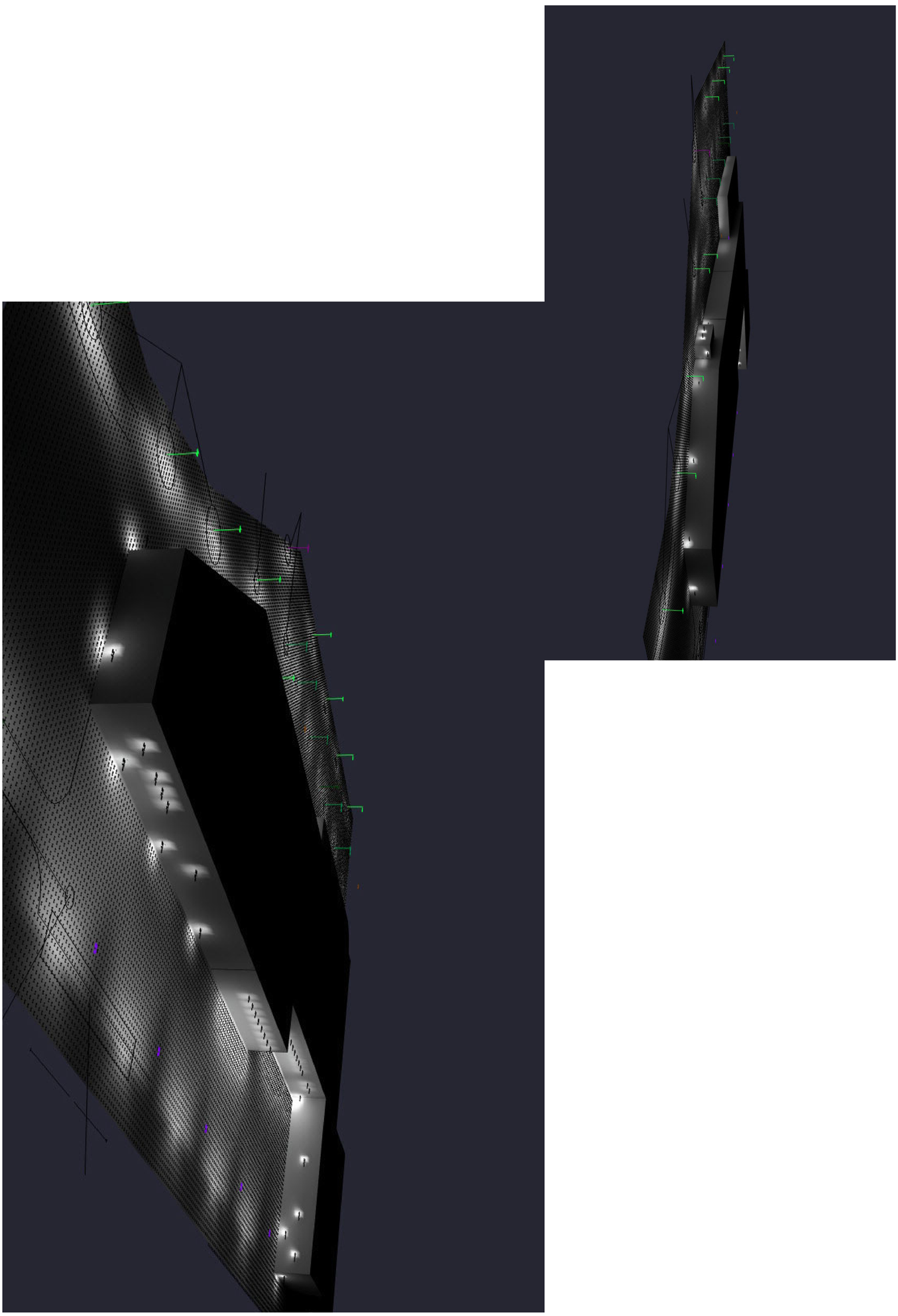
Drawn By: Charles R. Dix - LC

Date:11/10/2025

SCALE

Van Meter Cottage Grove

Expansion Project Photometrics



Van Meter Cottage Grove

Expansion Project Photometrics

Drawn By: Charles R. Dix - LC

Date:11/10/2025

SCALE

Van Meter Inc
Cottage Grove MN
6517698080

VAN METER
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Project		**Catalog #**		**Type**	
Prepared by		**Notes**		**Date**	



Lumark

Axcent

Wall Mount Luminaire

Product Certifications & Features

CERTIFIED · 3G VIB · IP66 · ISO SYSTEMS CERTIFIED · selectable lumens · DUSK-TO-DAWN · DLC LISTED · DLC LISTED PREMIUM · FC CLASS A CAN ICES-005 · RoHS COMPLIANT · DARKSKY APPROVED[1] · Light ARchitect™ · BAA · TAA · BABA · WaveLinx · 5 YEAR LIMITED WARRANTY

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Product Specifications page 4
- Energy and Performance Data page 4
- Control Options page 7

Quick Facts

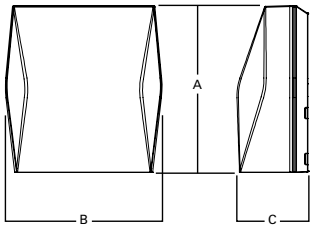
- Available in 12W - 116W (1,800 - 16,000 lumens) models
- Full cutoff and refractive lens models available
- Energy and maintenance savings up to 95% compared to HID
- Energy efficient illumination results in up to 177LPW
- Replaces 70W up to 450W HID equivalents

Connected Systems

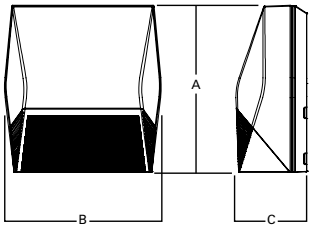
- WaveLinx PRO Wireless
- WaveLinx LITE Wireless

Dimensional Details

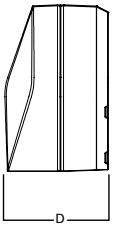
Full Cutoff



Refractive Lens[2]



Deep Back Housing



Dimensional Data

	AXCS Small	AXCL Large
A	8" [202mm]	11-1/2" [292mm]
B	7-1/2" [190mm]	10-3/4" [273mm]
C	3-5/8" [94mm]	4-7/8" [124mm]
D	6-1/8" [155mm]	7-1/8" [181mm]

NOTES:
1. DarkSky approved for 3000K CCT and warmer, with mounting options less than 10° of tilt.
2. Refractive Lens option does not comply with DarkSky.

Ordering Information

SAMPLE NUMBER: **AXCS1A-AP-347V**

Domestic Preferences	Model Series [1]	LED Color Temperature	Color	Options (Add as Suffix)
[Blank]=Standard **BAA**=Buy American Act [26] **TAA**=Trade Agreements Act [26] **BABA**=Build America Buy America Act [28]	**Full Cutoff** [29] **AXCS1A**=12W **AXCS2A**=16W **AXCS3A**=23W **AXCS4A**=38W **AXCS5A**=45W **AXCL6A**=50W **AXCL8A**=66W **AXCL10A**=89W **AXCL12A**=116W **Refractive Lens** **AXCS1ARL**=12W **AXCS2ARL**=16W **AXCS3ARL**=23W **AXCS4ARL**=38W **AXCS5ARL**=45W **AXCL6ARL**=50W **AXCL8ARL**=66W **AXCL10ARL**=89W **AXCL12ARL**=116W	**[Blank]**=4000K, Neutral **C**=5000K, Cool **W**=3000K, Warm [29]	**[Blank]**=Carbon Bronze (Standard) **WT**=Summit White **BK**=Black **AP**=Grey **GM**=Graphite Metallic **DP**=Dark Platinum	**347V**=347V [2] **480V**=480V [2] **PC1**=Photocontrol 120V [3, 4, 5] **PC2**=Photocontrol 208-277V, 347V, 480V [4, 5, 6] **PC**=Photocontrol 120-277V, 347V, 480V [4, 7, 8] **KKIT**=Knuckle Floodlight Mount [7] **TRNKIT**=Trunnion Floodlight Mount **SFKIT**=Slipfitter Floodlight Mount **PMAKIT**=Pole Mount Arm **WPS2XX**=Wavelinx Pro, SR Driver, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting Height [4, 9, 10, 11] **WPS4XX**=Wavelinx Pro, SR Driver, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting Height [4, 9, 10, 11] **WLS2XX**=WaveLinx Lite, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 7' - 15' Mounting [4, 9, 10, 11] **WLS4XX**=WaveLinx Lite, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 15' - 40' Mounting [4, 9, 10, 11] **MSP/DIM-L12**=Integrated Sensor for Dimming Operation, 8' - 12' Mounting Height [4, 9, 12] **MSP/DIM-L30**=Integrated Sensor for Dimming Operation, 12' - 30' Mounting Height [4, 9, 12] **MSP-L12**=Integrated Sensor for ON/OFF Operation, 8' - 12' Mounting Height [4, 9, 12] **MSP-L30**=Integrated Sensor for ON/OFF Operation, 12' - 30' Mounting Height [4, 9, 12] **CBP**=Cold Weather Battery Pack [3, 14, 15, 16, 17, 18] **CBP-CEC**=Cold Weather Battery Pack, CEC compliant [3, 13, 14, 15, 16, 17] **10K**=10kV/10kA Surge Protection **HA**=50°C High Ambient [14, 18] **GRF**=Glare Reducing Lens [19] **AHD145**=After Hours Dim, 5 Hours [5, 20] **AHD245**=After Hours Dim, 6 Hours [5, 20] **AHD255**=After Hours Dim, 7 Hours [5, 20] **AHD355**=After Hours Dim, 8 Hours [5, 20]

Accessories (Order Separately) [21, 27]

VS/AXCS-XX=Vandal Shield Axcent Small [7, 22]
VS/AXCS-MS=Vandal Shield Axcent Small (With Motion Sensor) [7, 22]
WG/AXCS=Wire Guard Axcent Small [7]
WG/AXCS-MS=Wire Guard Axcent Small (With Motion Sensor) [7]
VS/AXCL-XX=Vandal Shield Axcent Large [5, 22]
VS/AXCL-MS=Vandal Shield Axcent (With Motion Sensor) [5, 22]
WG/AXCL=Wire Guard Axcent Large [5]
WG/AXCL-MS=Wire Guard Axcent (With Motion Sensor) [5]
BB/AXC=Axcent Lumen Select Back Box, Carbon Bronze [23]
BB/AXC-PC=Axcent Lumen Select Back Box with PC, Carbon Bronze [23, 24]
BB/AXC-WT=Axcent Lumen Select Back Box, Summit White [23]
BB/AXC-WT-PC=Axcent Lumen Select Back Box with PC, Summit White [23, 24]

KKIT/AXCS-XX=Knuckle and Visor Floodlight Kit (For Axcent Small) [7]
SFKIT/AXCS-XX=Slipfitter Floodlight Kit (For Axcent Small) [7]
TRNKIT/AXCS-XX=Trunnion and Visor Floodlight Kit (For Axcent Small) [7]
TRNKIT-XX=Trunnion Floodlight Kit (For Axcent Large) [5]
SFKIT-XX=Slipfitter Floodlight Kit (For Axcent Large) [5]
PMAKIT-XX=Pole Mount Kit
ISHH-01=Integrated Sensor Programming Remote [25]
MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon

NOTES:

1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Transformer used only when ordered with motion sensor or AXCS1 through AXCS5 or AXCL6 fixture wattages.
3. Not available in 347 or 480 VAC.
4. Button photocontrol and any motion sensor (MSP or LWR) not offered together.
5. Only available on AXCL6-AXCL12 models.
6. Used with 277, 347, and 480 VAC options.
7. Only available on AXCS1-AXCS5 models.
8. This configuration may contain materials that are not RoHS compliant. Contact your lighting representative for more information.
9. Uses deep back housing.
10. Sensor passive infrared (PIR) may be overly sensitive when operating below -20°C (-4°F). For the device to be field-configurable, requires WAC Gateway components WAC-PoE and WPOE-120 in appropriate quantities. Only compatible with WaveLinx system and software and requires system components to be installed for operation. See website for more Wavelinx application information.
11. Replace XX with sensor color (WH, BZ, or BK).
12. The ISHH-01 accessory is required to adjust parameters.
13. Ambient operating temperature -20°C to 25°C for AXCL6 through AXCL10. Ambient operating temperature -20°C to 30°C on AXCS4 models. Ambient operating temperature -20°C to 40°C on AXCS1 through AXCS3 models.
14. Not available with AXCS5 or AXCL12 models.
15. Uses deep back housing for AXCS1, AXCLS2, AXCS3, and AXCS4 models.
16. Not to be mounted in upwards / inverted orientation. Downlight wall mount only for AXCS1 through AXCS4.
17. CBP cannot be used with PC and motion sensor (MSP). CBP can be used with PC or motion sensor (MSP).
15. Uses deep back housing for AXCS1, AXCLS2, AXCS3, and AXCS4 models.
16. Not to be mounted in upwards / inverted orientation. Downlight wall mount only for AXCS1 through AXCS4.
17. CBP cannot be used with PC and motion sensor (MSP or LWR). CBP can be used with PC or motion sensor (MSP).
18. Can not be ordered with CBP or PC options.
19. Use dedicated IES files on product website for lumen values and distributions.
20. Requires the use of PC1 or PC2 button photocontrol. See After Hours Dim supplemental guide for additional information.
21. Replace XX with color designation.
22. For use with full cutoff lens configurations only.
23. Lumen Select functionality not available in conjunction with any motion sensor option (MSP). Photocontrol back box not available with any photocontrol or motion sensor options (PC, MSP).
24. Photocell only operates at 120-277V input voltages. Not for use with 347 or 480V systems.
25. This tool enables adjustment to parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult you lighting representative for more information.
26. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be seperately analyzed under domestic preference requirements.
27. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
28.Only product configurations with these prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or the Build America Buy America Act (BABA). BABA is the minimum Government compliance requirement for the Build America Buy America standards which is part of the Infrastructure and Investment Jobs Act (IIJA). Individual Government Agencies may have more stringent compliance standards. Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
29. DarkSky approved when ordered with 3000K or warmer CCT.

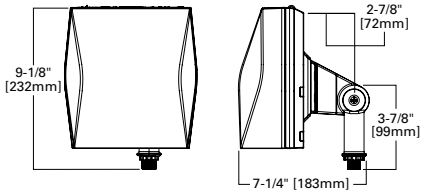
Stock Ordering Information

Model Series [1]			
Full Cutoff		**Refractive Lens**	
AXCS1A=12W	**AXCL10A**=102W	**AXCS1ARL**=12W	**AXCL10ARL**=89W
AXCS2A=16W	**AXCL12A**=123W	**AXCS2ARL**=16W	**AXCL12ARL**=116W
AXCS3A=23W	**AXCL6A-347V**=50W	**AXCS3ARL**=23W	**AXCL6ARL-347V**=50W
AXCS4A=38W	**AXCL8A-347V**=66W	**AXCS4ARL**=38W	**AXCL8ARL-347V**=66W
AXCS5A=45W	**AXCL10A-347V**=89W	**AXCS5ARL**=45W	**AXCL10ARL-347V**=89W
AXCL6A=56W	**AXCL12A-347V**=116W	**AXCL6ARL**=50W	**AXCL12ARL-347V**=116W
AXCL8A=72W		**AXCL8ARL**=66W	

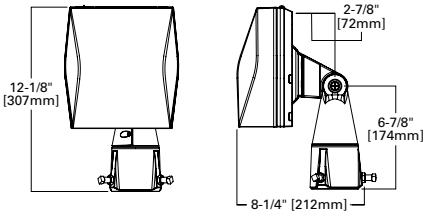
Note: All stock configurations are 4000K color temperatures, standard Carbon Bronze finish, and wall mount configuration.

Mounting Details

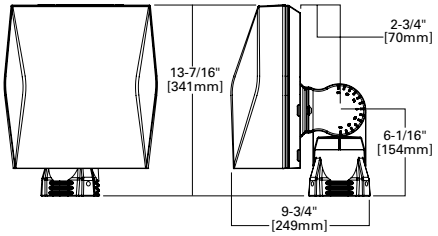
Knuckle Mount (Small)
Knuckle thread: 3/4" NPS



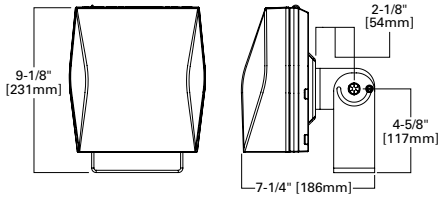
Slipfitter Mount (Small)
Tenon OD: 2-3/8" | **EPA**: 0.60



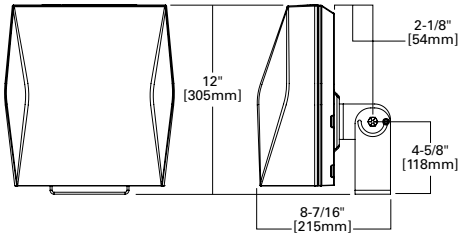
Slipfitter Mount (Large)
Tenon OD: 2-3/8" | **EPA**: 0.60



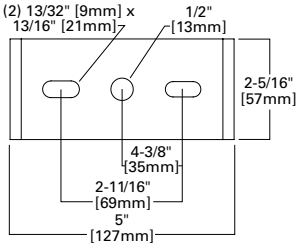
Trunnion Mount (Small)



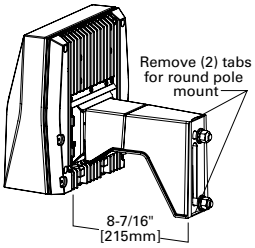
Trunnion Mount (Large)



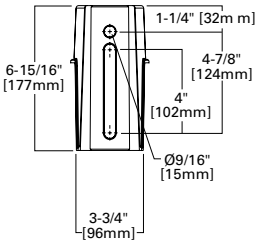
Trunnion Mount Detail



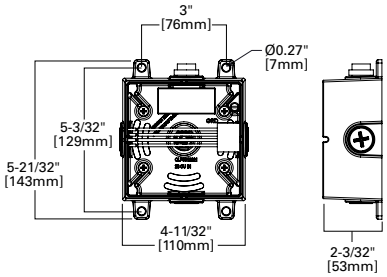
Pole Mount Arm (Large)
EPA: 1.10



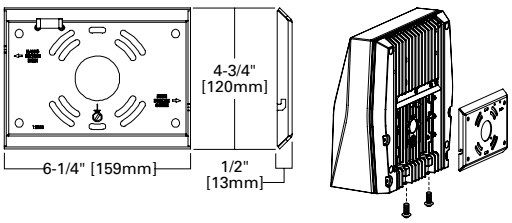
Pole Mount Arm Drill Pattern



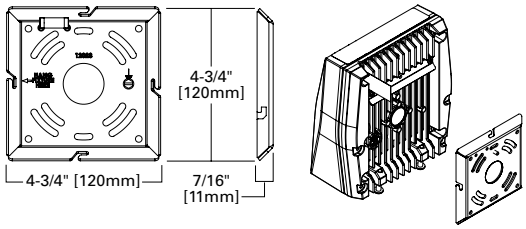
Lumen Select Back Box



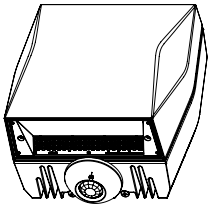
Wall Mount Plate Detail (Large)



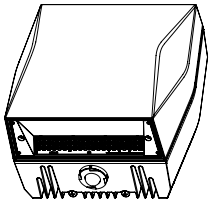
Wall Mount Plate Detail (Small)



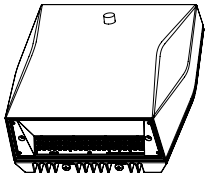
Wavelinx Sensor



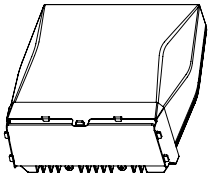
MSP Sensor



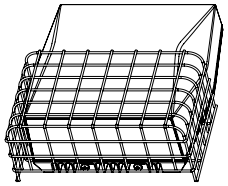
Button Photocontrol



Vandal Shield



Wire Guard



Product Specifications

Construction
- Die-cast aluminum housing
- External back fin design extracts heat from the surface to thermally optimize design for longer luminaire life

Optics
- Silicone-sealed optical LED chamber
- Acrylic refractive or full cutoff lens options for Type IV distributions

Electrical
- Standard universal voltage (120-277V, 50/60Hz)
- Driver incorporates 6kV surge protection
- <20% total harmonic distortion
- 0-10V dimming driver is standard with leads external to the fixture

Mounting
- Steel wedge mounting plate fits directly to 4" standard j-box or directly to wall with the "Hook-N-Lock" mechanism
- Stainless steel set screws
- Lumen Select Back Box accessory offers four 1/2" NPT conduit entry wire ways. Resistor Pack combinations allow field-dimming of 75% or 50% when connected to luminaire dimming leads
- Not suitable for indoor use when installed in inverted/uplight orientation

Emergency Egress
- Optional integral cold weather battery emergency egress includes emergency operation test switch, an AC-ON indicator light and a premium, maintenance-free battery pack
- The separate emergency lighting LEDs are wired to provide redundant emergency lighting. Listed to UL Standard 924, Emergency Lighting

Compliance
- cULus certified for use in -40°C to 40°C ambient environments
- Full cutoff models are IDA Certified 3000K and warmer only
- BAA domestic preference option meets BAA requirements. See DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information
- FHWA and FTA agencies are utilizing their BAA rules for BABA compliance. Cooper's products with a BAA designation are manufactured in the US and utilize a BAA COTS exemption rule for compliance. To verify a configured product with specific accessories and options meet BABA Domestic Preference Requirements; submit this catalog number to Cooper Lighting Quotation team for validation by our Engineering and Manufacturing teams.
- Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
- Components shipped separately may be separately analyzed under domestic preference requirements.

Finish
- Five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness

Shipping Data
- Small fixture=5 lbs. [2.36 kgs.]
- Small with sensor or CBP=10 lbs. [4.40 kgs.]
- Large fixture=12 lbs. [5.45 kgs.]
- Large with sensor or CBP=17 lbs. [7.73 kgs.]
- Large with sensor & CBP=21 lbs. [9.54 kgs.]

Warranty
- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

Energy and Performance Data

Power and Lumens (Axcent Small)

Light Engine		AXCS1A	AXCS2A	AXCS3A	AXCS4A	AXCS5A
Power (Watts)		12	16	23	38	45
Input Current @ 120V (A)		0.10	0.13	0.19	0.32	0.38
Input Current @ 240V (A)		0.05	0.07	0.10	0.16	0.19
Input Current @ 277V (A)		0.04	0.06	0.08	0.14	0.16
Input Current @ 347V (A)		0.03	0.05	0.07	0.11	0.13
Input Current @ 480V (A)		0.03	0.03	0.05	0.08	0.09
Configuration						
Full Cutoff	4000K/5000K Lumens	1,786	2,589	3,551	5,500	6,348
	3000K Lumens	1,509	2,188	3,001	4,648	5,365
	BUG Rating	B1-U0-G0	B1-U0-G0	B1-U0-G0	B2-U0-G1	B2-U0-G1
Refractive Lens	4000K/5000K Lumens	1,894	2,745	3,765	5,832	6,731
	3000K Lumens	1,600	2,320	3,182	4,928	5,688
	BUG Rating	B1-U3-G2	B1-U3-G2	B1-U3-G2	B1-U4-G3	B1-U4-G3

Power and Lumens (Axcent Large)

Light Engine		AXCL6A	AXCL8A	AXCL10A	AXCL12A
Power (Watts)		50	66	89	115
Input Current @ 120V (A)		0.41	0.54	0.74	0.96
Input Current @ 240V (A)		0.21	0.27	0.37	0.48
Input Current @ 277V (A)		0.18	0.24	0.32	0.42
Input Current @ 347V (A)		0.14	0.19	0.26	0.33
Input Current @ 480V (A)		0.10	0.14	0.19	0.24
Configuration					
Full Cutoff	4000K Lumens	7,594	9,716	12,719	16,302
	5000K Rating	7,501	9,598	12,564	16,103
	3000K Lumens	6,502	8,319	10,890	13,958
	BUG Rating	B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2
Refractive Lens	4000K Lumens	7,809	10,331	13,665	16,637
	5000K Rating	7,714	10,205	13,498	16,434
	3000K Lumens	6,686	8,845	11,700	14,244
	BUG Rating	B1-U4-G4	B2-U5-G5	B2-U5-G5	B2-U5-G5

Power and Lumens (Small + CBP)

Light Engine		AXCS1A	AXCS2A	AXCS3A	AXCS4A
Power (Watts)		16	20	27	42
Input Current @ 120V (A)		0.13	0.17	0.23	0.35
Input Current @ 240V (A)		0.07	0.08	0.11	0.18
Input Current @ 277V (A)		0.06	0.07	0.10	0.15
Configuration					
Full Cutoff	4000K/5000K Lumens	742	792	789	644
	3000K Lumens	627	670	667	545
Refractive Lens	4000K/5000K Lumens	787	841	837	684
	3000K Lumens	664	710	708	655

Note: Power and current based on full power consumption while CBP is charging. Lumen outputs are while operating in emergency mode only.

Power and Lumens (Large + CBP)

Light Engine		AXCL6A	AXCL8A	AXCL10A
Power (Watts)		54	70	93
Input Current @ 120V (A)		0.45	0.58	0.77
Input Current @ 240V (A)		0.22	0.29	0.38
Input Current @ 277V (A)		0.19	0.25	0.33
Configuration				
Full Cutoff	4000K/5000K Lumens	141*10W=1410		
	3000K Lumens	122*10=1220		
Refractive Lens	4000K/5000K Lumens	151*10=1510		
	3000K Lumens	131*10=1310		

Note: Power and current based on full power consumption while CBP is charging. Lumen outputs are while operating in emergency mode only.

Power and Lumens Multipliers
(Lumen Select Back Box + Axcent Small)

Configuration		~75% Nominal Output	~50% Nominal Output
Catalog Number	**Material Number**	**Connect per Installation Instructions**	
AXCS1A*	13109741 or 13109939 or Other	74%	50%
AXCS2A*	13109698 or 13109938 or Other	74%	50%
AXCS3A*	13109697 or 13109937 or Other	74%	50%
AXCS4A*	13109695 or 13109936	75%	40%
AXCS4A*	13495299 or 13495470 or Other	72%	50%
AXCS5A*	13109652 or 13109935	75%	40%
AXCS5A*	13495471 or 13495472 or Other	72%	50%

Power and Lumens Multipliers
(Lumen Select Back Box + Axcent Large)

Configuration		~75% Nominal Output	~50% Nominal Output
Catalog Number	**Material Number**	**Connect per Installation Instructions**	
AXCL6A*	13645910 or 13645979	69%	47%
AXCL8A*	13645970 or 13645984	69%	47%
AXCL10A*	13645971 or 13645989	69%	47%
AXCL12A*	13645972 & 13645993	72%	49%

Energy and Performance Data

Lumen Maintenance (Axcent Small)

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)
Up to 3A	
25°C	88%
40°C	87%
50°C	87%
Up to 4A	
25°C	88%
40°C	87%
50°C	87%
Up to 5A	
25°C	87%
40°C	86%

Lumen Maintenance (Axcent Large)

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)
Up to 8A	
25°C	89%
40°C	87%
50°C	86%
Up to 10A	
25°C	88%
40°C	86%
50°C	85%
Up to 12A	
25°C	85%
40°C	82%

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.97

Control Options

0-10V This fixture is offered standard with 0-10V dimming driver(s) for use with a lighting control panel or other control method.

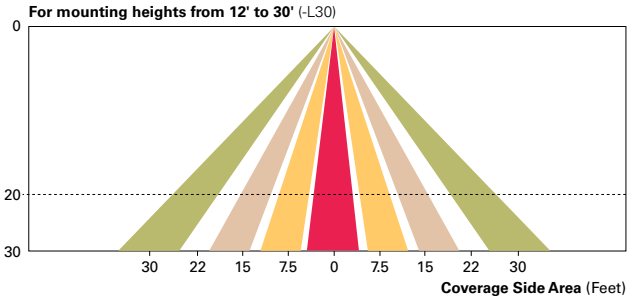
Photocontrol (PC1, PC2 and PC) Optional button-type photocontrol provides a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels.

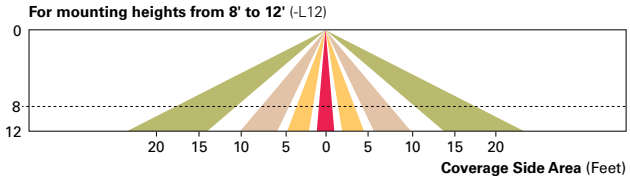
After Hours Dim (AHD) This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (MSP/DIM-LXX and MSP-LXX) These sensors are factory installed in the luminaire housing. When the MSP/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MSP/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of ten minutes. The MSP-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity.

These occupancy sensors includes an integrated photocell that can be activated with the ISHH-01 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is ON. The ISHH-01 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

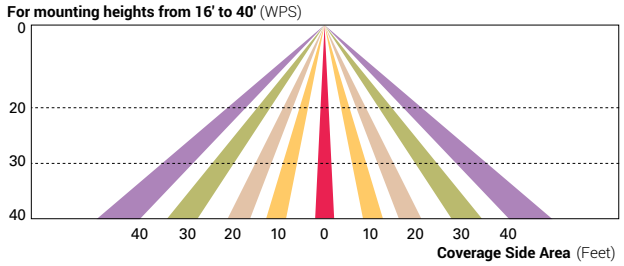
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-30'.





WaveLinx Wireless Control and Monitoring System The WaveLinx Outdoor control platform operates on a wireless mesh network based on IEEE 802.15.4 standards enabling wireless control of outdoor lighting. Use the WaveLinx Mobile application for set-up and configuration. At least one Wireless Area Controller (WAC) is required for full functionality and remote communication (including adjustment of any factory pre-sets).

WaveLinx Wireless Sensor (WPS2 and WPS4) These outdoor sensors offer passive infrared (PIR) occupancy and a photocell for closed loop daylight sensing. These sensors are factory preset to dim down to approximately 50 percent power after 15 minutes of no activity detected. These occupancy sensors include an integral photocell for "dusk-to-dawn" control or daylight harvesting that is factory-enabled. A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 7'-40'.



Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

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Specifications and dimensions
subject to change without notice.

Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

GWC Galleon Wall

Wall Mount Luminaire

Product Features

Light ARchitect™

Product Certifications

Interactive Menu

- Ordering Information page 2
- Product Specifications page 2
- Optical Configurations page 3
- Energy and Performance Data page 4
- Control Options page 6

Quick Facts

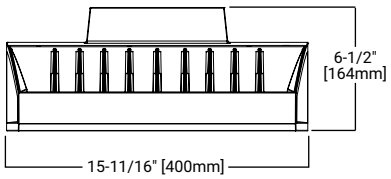
- Choice of thirteen high-efficiency, patented AccuLED Optics
- Downward and inverted wall mounting configurations
- Eight lumen packages from 3,215 up to 17,056
- Efficacies up to 154 lumens per watt

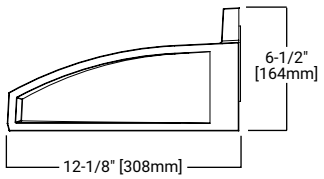
Connected Systems

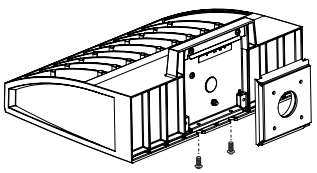
- WaveLinx PRO Wireless
- WaveLinx LITE Wireless

Dimensional Details

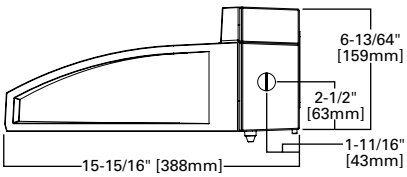
Net Weight: 17.0 lbs (7.7 kgs)



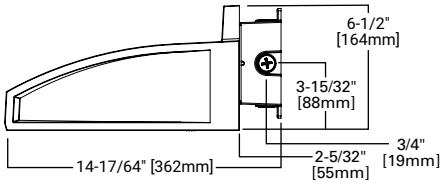




GWC with CBP option installed
(Thru-Branch Back Box accessory MA1059XX)



GWC with accessory BB/GWCXX Back Box installed



NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

Ordering Information

SAMPLE NUMBER: **GWC-SA2C-740-U-T4FT-GM**

Product Family [1]	Light Engine		Color Temperature	Voltage	Distribution	Finish
	Configuration	Drive Current				
GWC=Galleon Wall **BAA-GWC**=Galleon Wall, Buy American Act Compliant [33] **TAA-GWC**=Galleon Wall, Trade Agreements Act Compliant [33] **BABA-GWC**=Galleon Wall, Buy America Build America [41]	**SA1**=1 Square **SA2**=2 Squares [2]	**A**=615mA **B**=800mA **C**=1000mA **D**=1200mA [4] **Z**=Configured [39]	**722**=70CRI, 2200K **727**=70CRI, 2700K **730**=70CRI, 3000K **735**=70CRI, 3500K **740**=70CRI, 4000K **750**=70CRI, 5000K **760**=70CRI, 6000K **827**=80CRI, 2700K **830**=80CRI, 3000K **AMB**=Amber, 590nm [3, 4]	**U**=120-277V **1**=120V **2**=208V **3**=240V **4**=277V **8**=480V [6,7] **9**=347V [6] **DV**=277-480V DuraVolt Drivers [7, 8, 35]	**T2**=Type II **T3**=Type III **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **RW**=Rectangular Wide Type I **5NQ**=Type V Square Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide	~~**AP**=Grey~~ **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White

Options (Add as Suffix)	**Controls and Systems Options** (Add as Suffix)	**Accessories** (Order Separately) [34]
F=Single Fused (120, 277 or 347V. Must Specify Voltage) **FF**=Double Fused (208, 240 or 480V. Must Specify Voltage) **10K**=10kV Surge Module **20K**=Series 20kV UL 1449 Surge Protective Device **2L**=Two-Circuit Light Engine [36] **DIM**=External 0-10V Dimming Leads [9, 10] **CBP**=Battery Pack with Back Box, Cold Weather Rated [2, 4, 14, 31] **CBP-CEC**=Battery Pack with Back Box, Cold Weather Rated, CEC compliant [2, 4, 14] **BB**=Shipped with Back Box Accessory [37] **L90**=Optics Rotated 90° Left **R90**=Optics Rotated 90° Right **HSS**=Factory Installed House Side Shield [22] **GRSBK**=Factory Installed Glare Shield, BK [4, 26] **GRSWH**=Factory Installed Glare Shield, WH [4, 26] **UPL**=Uplight Housing [13] **HA**=50°C High Ambient [12] **LCF**=Light Square Trim Plate Painted to Match Housing [21] **MT**=Factory Installed Mesh Top **CC**=Coastal Construction finish [5] **CE**=CE Marking and Small Terminal Block [23] **AHD145**=After Hours Dim, 5 Hours [16] **AHD245**=After Hours Dim, 6 Hours [16] **AHD255**=After Hours Dim, 7 Hours [16] **AHD355**=After Hours Dim, 8 Hours [16] **DALI**=DALI Driver [11]	**BPC**=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) **PR**=NEMA 3-PIN Twistlock Photocontrol Receptacle **PR7**=NEMA 7-PIN Twistlock Photocontrol Receptacle [15] **FADC**=Field Adjustable Dimming Controller [38] **SPB1**=Dimming Occupancy Sensor with Bluetooth Interface, <8' Mounting [19, 32] **SPB2**=Dimming Occupancy Sensor with Bluetooth Interface, 8' - 20' Mounting [19, 32] **SPB4**=Dimming Occupancy Sensor with Bluetooth Interface, 21' - 40' Mounting [19, 32] **MS-LXX**=Motion Sensor for On/Off Operation [17, 18, 19] **MS/DIM-LXX**=Motion Sensor for Dimming Operation [17, 18, 19] **WPS2XX**=WaveLinx Pro, SR Driver, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting [29, 30, 39] **WPS4XX**=WaveLinx Pro, SR Driver, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting [29, 30, 39] **WLS2XX**=WaveLinx Lite, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 7' - 15' Mounting [30, 40] **WLS4XX**=WaveLinx Lite, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 15' - 40' Mounting [30, 40]	**OA/RA1013**=Photocontrol Shorting Cap **OA/RA1016**=NEMA Photocontrol - Multi-Tap 105-285V **OA/RA1201**=NEMA Photocontrol - 347V **OA/RA1027**=NEMA Photocontrol - 480V **MA1252**=10kV Circuit Module Replacement **MA1059XX**=Thru-branch Back Box (Must Specify Color) **BB/GWCXX**=Back Box (Must Specify Color) **LS/HSS**=Field Installed House Side Shield [22, 24] **LS/GRSBK-2PK**=Glare Shield, Black [24, 26] **LS/GRSWH-2PK**=Glare Shield, White [24, 26] **LS/PFS**=Perimeter Shield, Black [27] **FSIR-100**=Wireless Configuration Tool for Occupancy Sensor [17] **WOLC-7P-10A**=WaveLinx Outdoor Control Module (7-pin) [25, 28]

NOTES:

1. DesignLight Consortium® Qualified. Refer to www.designlights.org, Qualified Products List under Family Models for details.
2. Two light squares with CBP options limited to 25°C. CBP not available in combination with sensor options at 1200mA.
3. Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only.Exact luminaire wattage available in IES files. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option.
4. Not available with HA option.
5. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654.
6. Require the use of a step down transformer. Not available in combination with sensor options at 1200mA.
7. 480V not to be used with ungrounded or impedance grounded systems.
8. DuraVolt drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Visit www.signify.com/duravolt for more information.
9. Cannot be used with other control options.
10. Low voltage control leads extended 18" from fixture.
11. Not available in 1200mA. When used with CBP or HA options, only available with single light square.
12. Not available in 1200mA, UPL or CBP options. Available with single light square.
13. Not available with HA, CBP, PR or PR7 options.
14. Operates a single light square only. Operates at -20°C to +40°C. Backbox is non-IP rated.
15. Compatible with standard 3-PIN photocontrols, 5-PIN or 7-PIN ANSI controls.
16. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
17. The FSIR-100 configuration tool is required to adjust parameters such as high and low modes, sensitivity, time delay and cutoff. Consult your lighting representative at Cooper Lighting Solutions for more information.
18. Replace LXX with L08 (<8' mounting), L20 (8'-20' mounting) or L40W (21'-40' mounting.)
19. Includes integral photosensor.
20. White sensor shipped on all housing color options.
21. Not available with HSS or GRS options.
22. Not for use with 5NQ, 5MQ, 5WQ or RW optics. The light square trim plate is painted black when the HSS option is selected.
23. CE is not available with the 1200, DALI, LWR, MS, MS/DIM, BPC, PR or PR7 options. Available in 120-277V only.
24. One required for each light square.
25. Requires PR7.
26. Not for use with T4FT, T4W or SL4 optics.
27. Set of 4 pcs. Once set required per Light Square.
28. Cannot be used in conjunction with additional photocontrol or other controls systems (BPC, PR, PR7, MS, LWR).
29. WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed.
30. Replace XX with sensor color (WH, BZ, or BK).
31. Specify 120V or 277V.
32. Smart device with mobile application required to change system defaults. See controls section for details.
33. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
34. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
35. Not available in 1 square configuration at 800mA or below. Not available with any control option except SPB.
36. 2L not available with FF, AHD or DALI options. Controls and/or battery packs operate only one of the two circuits when 2L is specified. 2L with controls options not available with 347V or 480V.
37. Not available with CBP or CBP-CEC options.
38. Cannot be used with PR7 or other motion response control options.
39. Customer specific specifications utilizes standard products with small adjustments to meet unique requirements such as packaging, labels, wattage adjustments, etc.
40. Controls system is not available with photocontrol receptacles (PR , PR7) or other controls systems (FADC, SPBx).
41. Only product configurations with these prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or the Build America Buy America Act (BABA). BABA is the minimum Government compliance requirement for the Build America Buy America standards which is part of the Infrastructure and Investment Jobs Act (IIJA). Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.

Product Specifications

Construction

- Driver enclosure thermally isolated from optics for optimal thermal performance
- Die-cast aluminum heat sinks
- IP66 rated housing
- 1.5G vibration rated
- Vandal resistant with IK10 impact rated housing and optics

Optics

- Patented, high-efficiency injection-molded AccuLED Optics technology
- 13 optical distributions

Electrical

- LED driver assembly mounted for ease of maintenance
- Standard with 0-10V dimming
- Optional 10kV or 20kV surge module
- Suitable for operation in -40°C to 40°C ambient environments; Optional 50°C high ambient (HA) configuration
- Luminaire available with the field adjustable dimming controller (FADC) to manually adjust wattage and reduce the total lumen output and light levels. Comes pre-set to the highest position at the lumen output selected

Mounting

- Gasketed and zinc plated rigid steel mounting attachment
- "Hook-N-Lock" mechanism for easy installation

Finish

- Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Heat sink is powder coated black
- RAL and custom color matches available
- Coastal Construction (CC) option available

Compliance

- IDA Certified for 3000K CCT and warmer only.
- This Cooper product is manufactured in the US and meets the BABA cost of components rule. To verify a configured product with specific accessories and options meets BABA Domestic Preference Requirements; submit this catalog number to Cooper Lighting Quotation team for validation by our Engineering and Manufacturing teams. Our BABA designation is based on the minimum compliance requirement for BABA. Individual Government Agencies may have more stringent compliance standards.
- Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements

Typical Applications

- Exterior Wall, Walkway

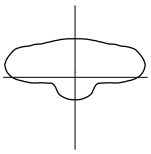
Warranty

- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

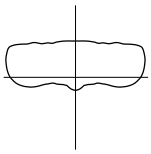
Optical Distributions

Asymmetric Area Distributions

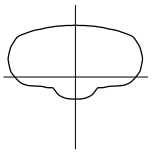
T2 (Type II)



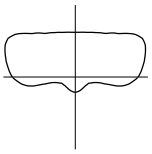
SL2 (Type II with Spill Control)



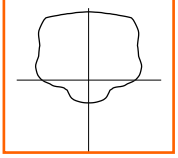
T3 (Type III)



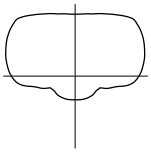
SL3 (Type III with Spill Control)



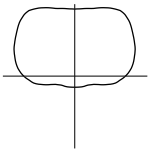
T4FT (Type IV Forward Throw)



T4W (Type IV Wide)

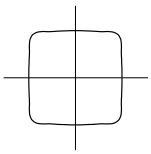


SL4 (Type IV with Spill Control)

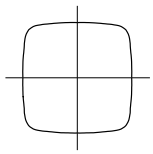


Symmetric Distributions

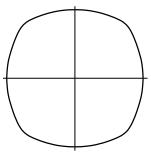
5NQ (Type V Square Narrow)



5MQ (Type V Square Medium)

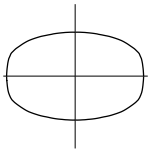


5WQ (Type V Square Wide)

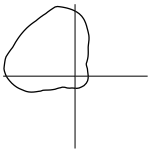


Specialized Distributions

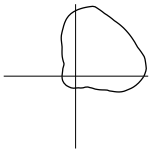
RW (Rectangular Wide Type I)



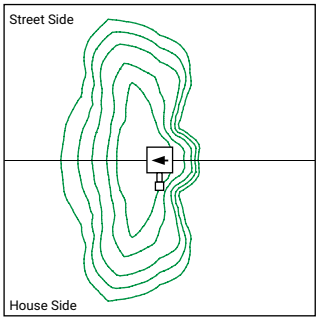
SLL (90° Spill Light Eliminator Left)



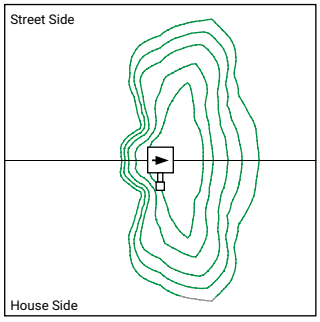
SLR (90° Spill Light Eliminator Right)



Optic Orientation



Optics Rotated Left @ 90° [L90]



Optics Rotated Right @ 90° [R90]

Energy and Performance Data

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0ºC	1.02
10ºC	1.01
25ºC	1.00
40ºC	0.99
50ºC	0.97

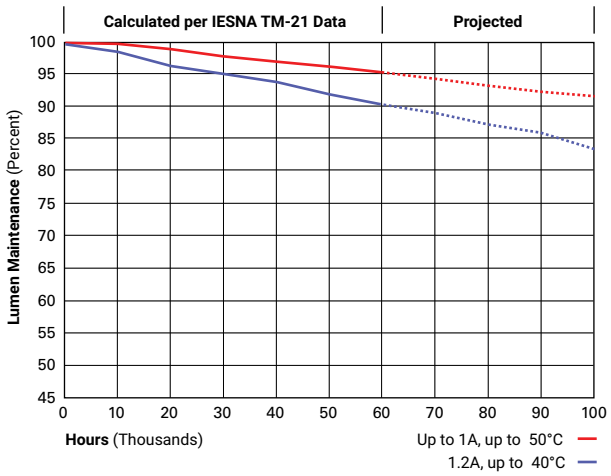
FADC Settings

FADC Position	Lumen Multiplier
1	25%
2	46%
3	55%
4	62%
5	72%
6	77%
7	82%
8	85%
9	90%
10	100%

Note: +/-5% typical value

Lumen Maintenance

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	> 416,000
1.2A	Up to 40°C	> 90%	> 205,000



Energy and Performance Data

View GWC Galleon Wall IES files

4000K/5000K/6000K CCT, 70 CRI

Number of Light Squares		1				2			
Drive Current		615mA	800mA	1050mA	1.2A	615mA	800mA	1050mA	1.2A
Nominal Power (Watts)		34	44	59	67	66	86	113	129
Input Current @ 120V (A)		0.30	0.39	0.51	0.58	0.58	0.77	1.02	1.16
Input Current @ 208V (A)		0.17	0.22	0.29	0.33	0.34	0.44	0.56	0.63
Input Current @ 240V (A)		0.15	0.19	0.26	0.29	0.30	0.38	0.48	0.55
Input Current @ 277V (A)		0.14	0.17	0.23	0.25	0.28	0.36	0.42	0.48
Input Current @ 347V (A)		0.11	0.15	0.17	0.20	0.19	0.24	0.32	0.39
Input Current @ 480V (A)		0.08	0.11	0.14	0.15	0.15	0.18	0.24	0.30
Optics									
T2	Lumens	4,883	5,989	7,412	8,131	9,543	11,703	14,485	15,891
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3
	Lumens per Watt	144	136	126	121	145	136	128	123
T3	Lumens	4,978	6,105	7,556	8,288	9,729	11,929	14,764	16,196
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
	Lumens per Watt	146	139	128	124	147	139	131	126
T4FT	Lumens	5,008	6,140	7,599	8,337	9,783	11,998	14,850	16,290
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	147	140	129	124	148	140	131	126
T4W	Lumens	4,942	6,060	7,502	8,229	9,658	11,843	14,658	16,080
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
	Lumens per Watt	145	138	127	123	146	138	130	125
SL2	Lumens	4,874	5,979	7,399	8,117	9,528	11,684	14,461	15,863
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3
	Lumens per Watt	143	136	125	121	144	136	128	123
SL3	Lumens	4,976	6,104	7,555	8,287	9,727	11,927	14,763	16,194
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	146	139	128	124	147	139	131	126
SL4	Lumens	4,729	5,799	7,178	7,873	9,239	11,333	14,025	15,387
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4
	Lumens per Watt	139	132	122	118	140	132	124	119
5NQ	Lumens	5,134	6,296	7,793	8,547	10,033	12,303	15,226	16,704
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2
	Lumens per Watt	151	143	132	128	152	143	135	129
5MQ	Lumens	5,228	6,412	7,935	8,705	10,216	12,529	15,508	17,011
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	154	146	134	130	155	146	137	132
5WQ	Lumens	5,242	6,428	7,956	8,728	10,244	12,563	15,548	17,056
	BUG Rating	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	154	146	135	130	155	146	138	132
SLL/SLR	Lumens	4,373	5,365	6,640	7,283	8,547	10,481	12,973	14,231
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	129	122	113	109	130	122	115	110
RW	Lumens	5,087	6,238	7,721	8,472	9,941	12,190	15,088	16,553
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	150	142	131	126	151	142	134	128

*** Nominal lumen data for 70 CRI. BUG rating for 4000K/5000K. Refer to IES files for 3000K BUG ratings.**

3000K CCT, 80 CRI

Number of Light Squares		1				2			
Drive Current		615mA	800mA	1050mA	1.2A	615mA	800mA	1050mA	1.2A
Nominal Power (Watts)		34	44	59	67	66	86	113	129
Input Current @ 120V (A)		0.30	0.39	0.51	0.58	0.58	0.77	1.02	1.16
Input Current @ 208V (A)		0.17	0.22	0.29	0.33	0.34	0.44	0.56	0.63
Input Current @ 240V (A)		0.15	0.19	0.26	0.29	0.30	0.38	0.48	0.55
Input Current @ 277V (A)		0.14	0.17	0.23	0.25	0.28	0.36	0.42	0.48
Input Current @ 347V (A)		0.11	0.15	0.17	0.20	0.19	0.24	0.32	0.39
Input Current @ 480V (A)		0.08	0.11	0.14	0.15	0.15	0.18	0.24	0.30
Optics									
T2	**Lumens**	3,880	4,759	5,890	6,461	7,583	9,300	11,510	12,628
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3
	Lumens per Watt	114	108	100	96	115	108	102	98
T3	**Lumens**	3,956	4,851	6,004	6,586	7,731	9,479	11,732	12,870
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2
	Lumens per Watt	116	110	102	98	117	110	104	100
T4FT	**Lumens**	3,980	4,879	6,038	6,625	7,774	9,534	11,800	12,945
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	117	111	102	99	118	111	104	100
T4W	**Lumens**	3,927	4,816	5,961	6,539	7,675	9,411	11,648	12,778
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
	Lumens per Watt	116	109	101	98	116	109	103	99
SL2	**Lumens**	3,873	4,751	5,880	6,450	7,571	9,285	11,491	12,605
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	114	108	100	96	115	108	102	98
SL3	**Lumens**	3,954	4,851	6,004	6,585	7,729	9,478	11,731	12,868
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	116	110	102	98	117	110	104	100
SL4	**Lumens**	3,758	4,608	5,704	6,256	7,342	9,006	11,145	12,227
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B1-U0-G3	B1-U0-G3	B1-U0-G3
	Lumens per Watt	111	105	97	93	111	105	99	95
5NQ	**Lumens**	4,080	5,003	6,193	6,792	7,973	9,776	12,099	13,274
	BUG Rating	B2-U0-G0	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2
	Lumens per Watt	120	114	105	101	121	114	107	103
5MQ	**Lumens**	4,154	5,095	6,305	6,917	8,118	9,956	12,323	13,518
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	122	116	107	103	123	116	109	105
5WQ	**Lumens**	4,166	5,108	6,322	6,936	8,140	9,983	12,355	13,553
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	123	116	107	104	123	116	109	105
SLL/SLR	**Lumens**	3,475	4,263	5,276	5,787	6,792	8,329	10,309	11,309
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	102	97	89	86	103	97	91	88
RW	**Lumens**	4,042	4,957	6,135	6,732	7,900	9,687	11,990	13,154
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2
	Lumens per Watt	119	113	104	100	120	113	106	102

*** Nominal lumen data for 70 CRI. BUG rating for 4000K/5000K. Refer to IES files for 3000K BUG ratings.**

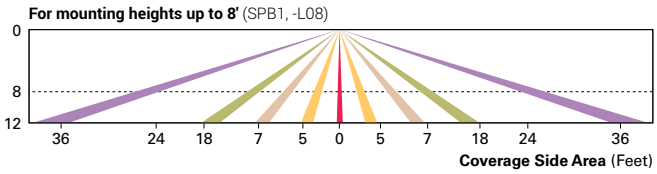
Control Options

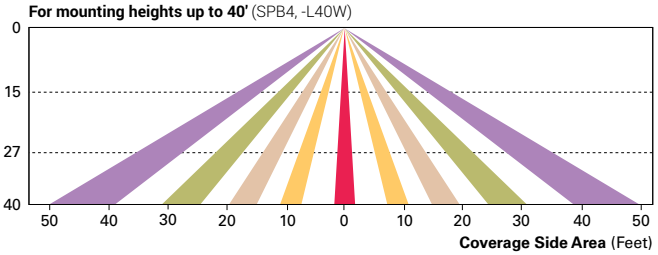
0-10V This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

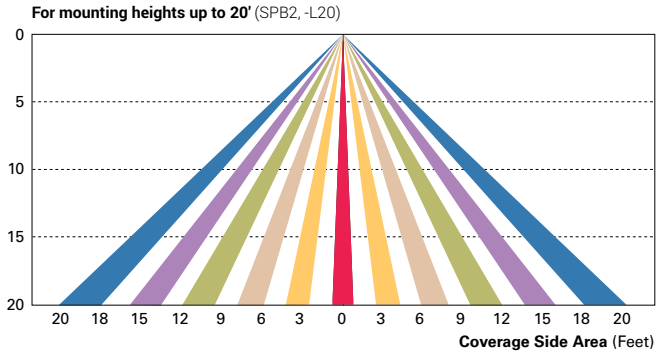
Photocontrol (BPC, PR, and PR7) Optional button-type photocontrol (BPC) and photocontrol receptacles (PR and PR7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PR7 receptacle.

After Hours Dim (AHD) This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (SPB, MS/DIM-LXX and MS-LXX) These sensors are factory installed in the luminaire housing. When the SPB or MS/DIM sensor options are selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. SPB motion sensors require the Sensor Configuration mobile application by Wattstopper to change factory default dimming level, time delay, sensitivity and other parameters. Available for iOS and Android devices. The SPB sensor is factory preset to dim down to approximately 10% power with a time delay of five minutes. The MS/DIM occupancy sensors require the FSIR-100 programming tool to adjust factory defaults.







WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A) The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

Cooper Lighting Solutions
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Peachtree City, GA 30269
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Specifications and dimensions
subject to change without notice.

Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

GLEON Galleon

Area / Site Luminaire

Product Features

Light ARchitect™

BAA

Product Certifications

ISO CERTIFIED

DLC LISTED [1]

DLC LISTED PREMIUM [1]

3G VIB

IP66

UL CERTIFIED

DARKSKY APPROVED [2]

5 YEAR LIMITED WARRANTY

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Optical Distributions page 4
- Product Specifications page 4
- Energy and Performance Data page 4
- Control Options page 9

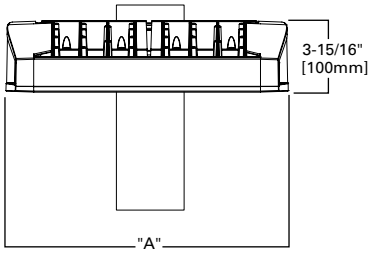
Quick Facts

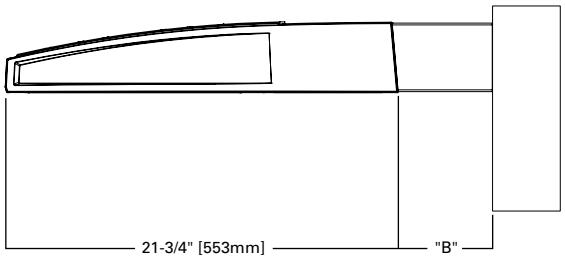
- Lumen packages range from 4,200 - 80,800 (34W - 640W)
- Efficacy up to 156 LPW
- Options to meet Buy American and other domestic preference requirements

Connected Systems

- WaveLinx PRO Wireless
- WaveLinx LITE Wireless
- Enlighted

Dimensional Details





Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Extended Arm Length [1]	"B" QM Arm Length	"B" QML Length	"B" QMEA Length
1-4	15-1/2"	7"	10"	10-5/8"	--	16-9/16"
5-6	21-5/8"	7"	10"	10-5/8"	--	16-9/16"
7-8	27-5/8"	7"	13"	10-5/8"	10-5/16"	--
9-10	33-3/4"	7"	16"	--	10-5/16"	--

NOTES:
For arm selection requirements and additional line art, see Mounting Details section.

NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

Ordering Information

SAMPLE NUMBER: **GLEON-SA4C-740-U-T4FT-GM**

Product Family [1, 2]	Light Engine		Color Temperature	Voltage	Distribution	Mounting	Finish
	Configuration	Drive Current					
GLEON=Galleon **BAA-GLEON**=Galleon, Buy American Act Compliant [34] **TAA-GLEON**=Galleon, Trade Agreements Act Compliant [34]	**SA1**=1 Square **SA2**=2 Squares **SA3**=3 Squares **SA4**=4 Squares **SA5**=5 Squares [4] **SA6**=6 Squares **SA7**=7 Squares [4] **SA8**=8 Squares [5] **SA9**=9 Squares [6] **SA0**=10 Squares [6]	**A**=600mA **B**=800mA **C**=1000mA **D**=1200mA [15]	**722**=70CRI, 2200K **727**=70CRI, 2700K **730**=70CRI, 3000K **735**=70CRI, 3500K **740**=70CRI, 4000K **750**=70CRI, 5000K **760**=70CRI, 6000K **827**=80CRI, 2700K **830**=80CRI, 3000K **AMB**=Amber, 590nm [13, 15]	**U**=120-277V **1**=120V **2**=208V **3**=240V **4**=277V **8**=480V [7, 8] **9**=347V [7]	**T2**=Type II **T2R**=Type II Roadway **T3**=Type III **T3R**=Type III Roadway **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **5NQ**=Type V Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **RW**=Rectangular Wide Type I **AFL**=Automotive Frontline	**[Blank]**=Arm for Round or Square Pole **EA**=Extended Arm [9] **MA**=Mast Arm Adapter [10] **WM**=Wall Mount **QM**=Quick Mount Arm (Standard Length) [11] **QMEA**=Quick Mount Arm (Extended Length) [12] **QML**=Quick Mount Arm (Standard Length, Large) [36]	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White **RALXX**=Custom Color

Options (Add as Suffix)	Controls and Systems Options (Add as Suffix)	Accessories (Order Separately)[35]
DIM=External 0-10V Dimming Leads [18, 19] **F**=Single Fuse (120, 277 or 347V Specify Voltage) **FF**=Double Fuse (208, 240 or 480V Specify Voltage) **20K**=Series 20kV UL 1449 Surge Protective Device **2L**=Two Circuits [16, 17] **HA**=50°C High Ambient **HSS**=Installed House Side Shield [27] **GRSBK**=Glare Reducing Shield, Black [22] **GRSWH**=Glare Reducing Shield, White [22] **LCF**=Light Square Trim Painted to Match Housing [26] **MT**=Installed Mesh Top **TH**=Tool-less Door Hardware **CC**=Coastal Construction finish [3] **L90**=Optics Rotated 90° Left **R90**=Optics Rotated 90° Right **CE**=CE Marking [28] **AHD145**=After Hours Dim, 5 Hours [21] **AHD245**=After Hours Dim, 6 Hours [21] **AHD255**=After Hours Dim, 7 Hours [21] **AHD355**=After Hours Dim, 8 Hours [21] **DALI**=DALI Drivers	**BPC**=Button Type Photocontrol **PR**=NEMA 3-PIN Photocontrol Receptacle **PR7**=NEMA 7-PIN Photocontrol Receptacle [20] **SPB2**=Dimming Occupancy Sensor with Bluetooth Interface, 8′ - 20′ Mounting [33] **SPB4**=Dimming Occupancy Sensor with Bluetooth Interface, 21′ - 40′ Mounting [33] **MS-L20**=Motion Sensor for ON/OFF Operation, 9′ - 20′ Mounting Height [23] **MS-L40W**=Motion Sensor for ON/OFF Operation, 21′ - 40′ Mounting Height [23] **MS/X-L20**=Bi-Level Motion Sensor, 9′ - 20′ Mounting Height [23, 24] **MS/X-L40W**=Bi-Level Motion Sensor, 21′ - 40′ Mounting Height [23, 24] **MS/DIM-L20**=Motion Sensor for Dimming Operation, 9′ - 20′ Mounting Height [23] **MS/DIM-L40W**=Motion Sensor for Dimming Operation, 21′ - 40′ Mounting Height [23] **WLS2XX**=WaveLinx LITE, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 7′ - 15′ Mounting [31] **WLS4XX**=WaveLinx LITE, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 15′ - 40′ Mounting [31] **WPS2XX**=WaveLinx PRO, SR Driver, Dimming Motion and Daylight, WAC Programmable, 7′ - 15′ Mounting [31,32] **WPS4XX**=WaveLinx PRO, SR Driver, Dimming Motion and Daylight, WAC Programmable, 15′ - 40′ Mounting [31,32] **LWR-LW**=Enlighted Sensor, 8′–16′ Mounting Height [25] **LWR-LN**=Enlighted Sensor, 16′–40′ Mounting Height [25] **DIM10-L08**=AirMesh Occupancy Sensor (<8′ Mounting) [18] **DIM10-L20**=AirMesh Occupancy Sensor (9′-20′ Mounting) [18] **DIM10-L40**=AirMesh Occupancy Sensor (21′-40′ Mounting) [18]	**OA/RA1013**=Photocontrol Shorting Cap **MA1252**=10kV Surge Module Replacement **MA1036-XX**=Single Tenon Adapter for 2-3/8" O.D. Tenon **MA1037-XX**=2@180° Tenon Adapter for 2-3/8" O.D. Tenon **MA1197-XX**=3@120° Tenon Adapter for 2-3/8" O.D. Tenon **MA1188-XX**=4@90° Tenon Adapter for 2-3/8" O.D. Tenon **MA1189-XX**=2@90° Tenon Adapter for 2-3/8" O.D. Tenon **MA1190-XX**=3@90° Tenon Adapter for 2-3/8" O.D. Tenon **MA1191-XX**=2@120° Tenon Adapter for 2-3/8" O.D. Tenon **MA1038-XX**=Single Tenon Adapter for 3-1/2" O.D. Tenon **MA1039-XX**=2@180° Tenon Adapter for 3-1/2" O.D. Tenon **MA1192-XX**=3@120° Tenon Adapter for 3-1/2" O.D. Tenon **MA1193-XX**=4@90° Tenon Adapter for 3-1/2" O.D. Tenon **MA1194-XX**=2@90° Tenon Adapter for 3-1/2" O.D. Tenon **MA1195-XX**=3@90° Tenon Adapter for 3-1/2" O.D. Tenon **FSIR-100**=Wireless Configuration Tool for Occupancy Sensor [23] **GLEON-MT1**=Field Installed Mesh Top for 1-4 Light Squares **GLEON-MT2**=Field Installed Mesh Top for 5-6 Light Squares **GLEON-MT3**=Field Installed Mesh Top for 7-8 Light Squares **GLEON-MT4**=Field Installed Mesh Top for 9-10 Light Squares **GLEON-QM**=Quick Mount Arm Kit [11] **GLEON-QMEA**=Quick Mount Extended Arm Kit [12] **LS/HSS**=Field Installed House Side Shield [27, 29] **LS/GRSBK-2PK** =Glare Reducing Shield, Black [22, 29] **LS/GRSWH-2PK** =Glare Reducing Shield, White [22, 29] **LS/PFS**=Perimeter Shield, Black [14] **WOLC-7P-10A**=WaveLinx Outdoor Control Module [18, 30] **TL7-HVG**= AirMesh 7-PIN node, 110-480V [18, 30]

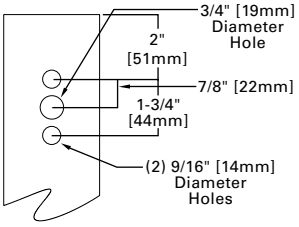
NOTES:

1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
2. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
3. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654. Not available with TH option.
4. Not compatible with MS/4-LXX or MS/1-LXX sensors.
5. Not compatible with extended quick mount arm (QMEA).
6. Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA).
7. Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A.
8. 480V must utilize Wye system only. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems.)
9. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.
10. Factory installed.
11. Maximum 8 light squares.
12. Maximum 6 light squares.
13. Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option.
14. Set of 4 pcs. One set required per Light Square.
15. Not available with HA option.
16. 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in SA2 through SA4 requires a larger housing, normally used for SA5 or SA6. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.
17. Not available with Enlighted wireless sensors.
18. Cannot be used with other control options.
19. Low voltage control lead brought out 18" outside fixture.
20. Not available if any "MS" sensor is selected. Motion sensor has an integral photocell.
21. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
22. Not for use with T4FT, T4W or SL4 optics. See IES files for details.
23. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Cooper Lighting Solutions for more information.
24. Replace X with number of Light Squares operating in low output mode.
25. Enlighted wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1 and LWP-PoE8 in appropriate quantities.
26. Not available with house side shield (HSS).
27. Not for use with 5NQ, 5MQ, 5WQ or RW optics. A black trim plate is used when HSS is selected.
28. CE is not available with the LWR, MS, MS/X, MS/DIM, BPC, PR or PR7 options. Available in 120-277V only.
29. One required for each Light Square.
30. Requires PR7.
31. Replace XX with sensor color (WH, BZ or BK.)
32. WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed.
33. Smart device with mobile application required to change system defaults. See controls section for details.
34. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
35. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
36. Available for 7 - 10 squares.

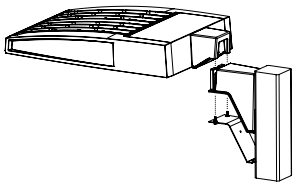
Mounting Details

Standard Arm (Drilling Pattern)

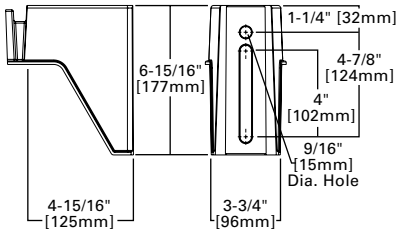
TYPE "N"



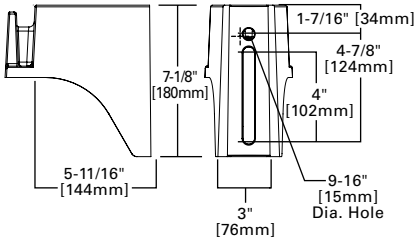
Quick Mount Arm (Includes fixture adapter)



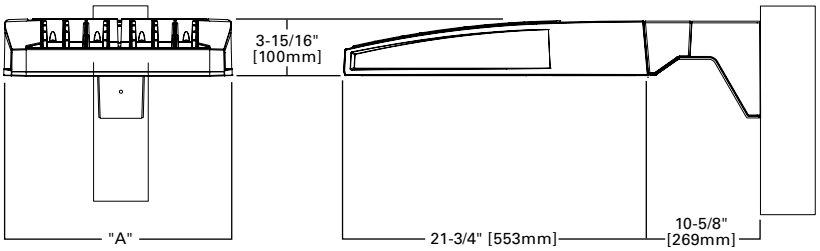
QM and QMEA Pole Mount (1 - 8 squares)



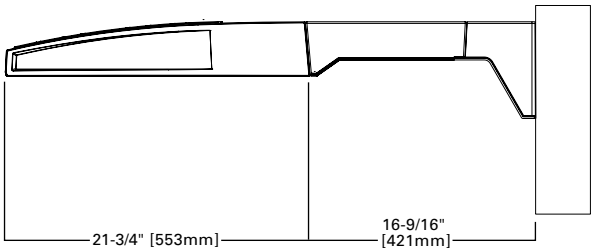
QML Pole Mount (7 - 10 squares)



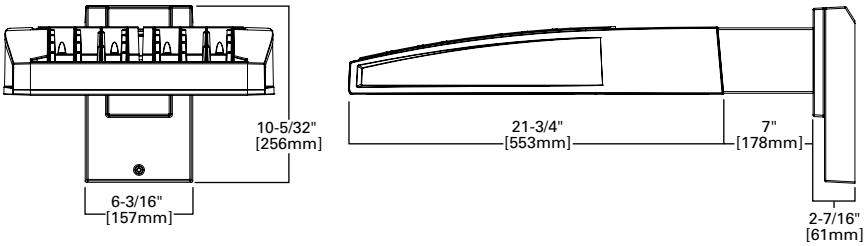
QM Quick Mount Arm (Standard, 1-8 squares)



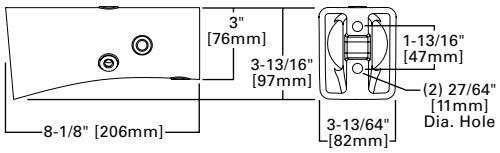
QMEA Quick Mount Arm (Extended, 1 - 6 squares)



Standard Wall Mount

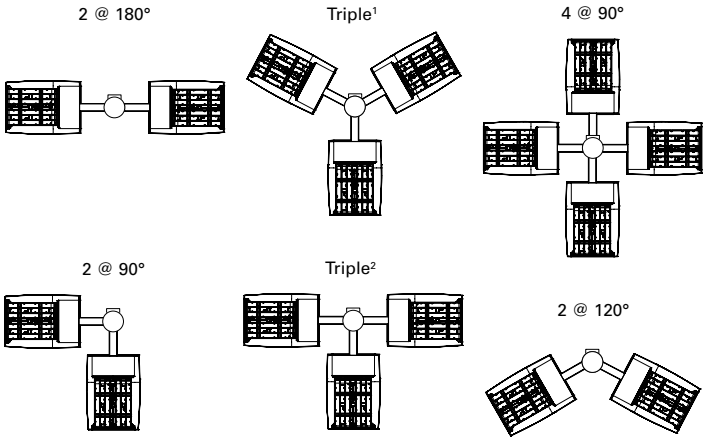


Mast Arm Mount



Arm Mounting Requirements

Number of Light Squares	Standard Arm @ 90° Apart	Standard Arm @ 120° Apart	Quick Mount Arm @ 90° Apart	Quick Mount Arm @ 120° Apart
1	Standard	Standard	QM Extended	Quick Mount
2	Standard	Standard	QM Extended	Quick Mount
3	Standard	Standard	QM Extended	Quick Mount
4	Standard	Standard	QM Extended	Quick Mount
5	Extended	Standard	QM Extended	Quick Mount
6	Extended	Standard	QM Extended	Quick Mount
7	Extended	Extended	--	Quick Mount
8	Extended	Extended	--	Quick Mount
9	Extended	Extended	--	--
10	Extended	Extended	--	--



NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. **2** Round poles are 3 @ 90°. **3** Shown with 4 square configurations.

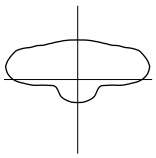
Fixture Weights and EPAs

Number of Light Squares	Weight with Standard and Extended Arm (lbs.)	EPA with Standard and Extended Arm (Sq. Ft.)	Weight with QM Arm (lbs.)	EPA with QM Arm (Sq. Ft.)	Weight with QML (lbs.)	EPA with QML (Sq. Ft.)	Weight with QMEA (lbs.)	EPA with QMEA (Sq. Ft.)
1-4	33	0.96	35	1.11	--	--	38	1.11
5-6	44	1.00	46	1.11	--	--	49	1.11
7-8	54	1.07	56	1.11	58	1.11	--	--
9-10	63	1.12	--	--	67	1.11	--	--

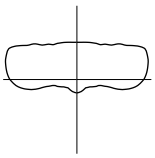
Optical Distributions

Asymmetric Area Distributions

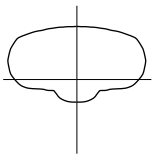
T2 (Type II)



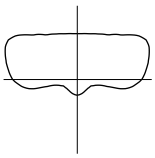
SL2 (Type II with Spill Control)



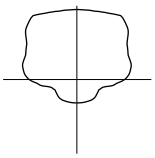
T3 (Type III)



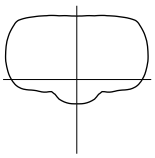
SL3 (Type III with Spill Control)



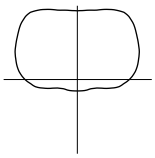
T4FT (Type IV Forward Throw)



T4W (Type IV Wide)

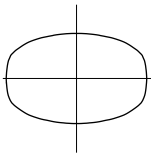


SL4 (Type IV with Spill Control)

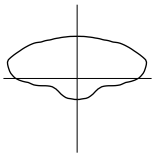


Asymmetric Roadway Distributions

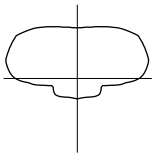
RW (Rectangular Wide Type I)



T2R (Type II Roadway)

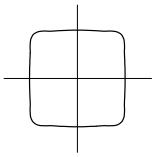


T3R (Type III Roadway)

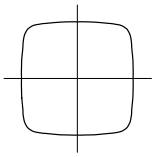


Symmetric Distributions

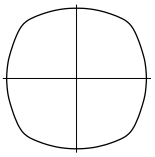
5NQ (Type V Square Narrow)



5MQ (Type V Square Medium)

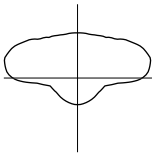


5WQ (Type V Square Wide)

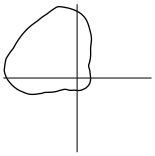


Specialized Distributions

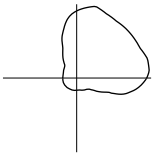
AFL (Automotive Frontline)



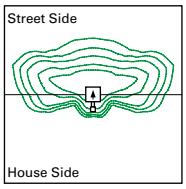
SLL (90° Spill Light Eliminator Left)



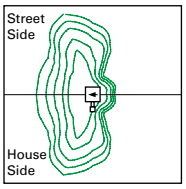
SLR (90° Spill Light Eliminator Right)



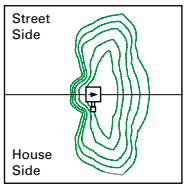
Rotated Optics



Standard



Optics Rotated Left @ 90° [L90]



Optics Rotated Right @ 90° [R90]

Product Specifications

Construction

- Extruded aluminum driver enclosure
- Heavy-wall, die-cast aluminum end caps
- Die-cast aluminum heat sinks
- Patent pending interlocking housing and heat sink

Optics

- Patented, high-efficiency injection-molded AccuLED Optics technology
- 16 optical distributions
- 3 shielding options including HSS, GRS and PFS
- IDA Certified (3000K CCT and warmer only)

Electrical

- LED drivers are mounted to removable tray assembly for ease of maintenance
- Standard with 0-10V dimming
- Standard with Cooper Lighting Solutions proprietary circuit module designed to withstand 10kV of transient line surge
- Suitable for operation in -40°C to 40°C ambient environments. Optional 50°C high ambient (HA) configuration.

Mounting

- Standard extruded arm includes internal bolt guides and round pole adapter
- Extended arms (EA and QMEA) may be required in 90° or 120° pole mount configurations, see arm mounting requirements table
- Mast arm (MA) factory installed
- Wall mount (WM) option available
- Quick mount arm (QM and QMEA) includes pole adapter and factory installed fixture mount for fast installation to square or round poles

Finish

- Super housing durable TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Heat sink is powder coated black
- RAL and custom color matches available
- Coastal Construction (CC) option available

Warranty

- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

Energy and Performance Data

Lumen Maintenance (TM-21)

Drive Current	Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours**	Theoretical L70 hours**
Up to 1A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.7%	98.3%	98.1%	97.4%	> 1.9M
	50°C	98.2%	97.2%	96.8%	95.2%	> 851,000
1.2A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.5%	97.9%	97.7%	96.7%	> 1.3M

* Supported by IES TM-21 standards
** Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, explaining proper use of IES TM-21 and LM-80.

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0ºC	1.02
10ºC	1.01
25ºC	1.00
40ºC	0.99
50ºC	0.97

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Nominal Power Lumens (1.2A)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		67	129	191	258	320	382	448	511	575	640
Input Current @ 120V (A)		0.58	1.16	1.78	2.31	2.94	3.56	4.09	4.71	5.34	5.87
Input Current @ 208V (A)		0.33	0.63	0.93	1.27	1.57	1.87	2.22	2.52	2.8	3.14
Input Current @ 240V (A)		0.29	0.55	0.80	1.10	1.35	1.61	1.93	2.18	2.41	2.71
Input Current @ 277V (A)		0.25	0.48	0.70	0.96	1.18	1.39	1.69	1.90	2.09	2.36
Input Current @ 347V (A)		0.20	0.39	0.57	0.78	0.96	1.15	1.36	1.54	1.72	1.92
Input Current @ 480V (A)		0.15	0.30	0.43	0.60	0.73	0.85	1.03	1.16	1.28	1.45
Optics											
T2	4000K Lumens	7,972	15,580	23,245	30,714	38,056	45,541	53,857	61,024	68,072	75,366
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	121	122	119	119	119	120	119	118	118
T2R	4000K Lumens	8,462	16,539	24,680	32,609	40,401	48,348	57,176	64,783	72,266	80,010
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	129	126	126	127	128	127	126	125
T3	4000K Lumens	8,125	15,879	23,693	31,307	38,787	46,417	54,893	62,197	69,381	76,818
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	123	124	121	121	122	123	122	121	120
T3R	4000K Lumens	8,306	16,232	24,220	32,001	39,651	47,447	56,114	63,580	70,924	78,523
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	124	126	127	124	124	124	125	124	123	123
T4FT	4000K Lumens	8,173	15,970	23,831	31,488	39,014	46,686	55,212	62,558	69,783	77,261
	BUG Rating	B1-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	122	124	125	122	122	122	123	122	121	121
T4W	4000K Lumens	8,067	15,764	23,522	31,080	38,510	46,082	54,499	61,751	68,881	76,263
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	120	122	123	120	120	121	122	121	120	119
SL2	4000K Lumens	7,958	15,552	23,206	30,662	37,989	45,462	53,763	60,920	67,952	75,235
	BUG Rating	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	121	121	119	119	119	120	119	118	118
SL3	4000K Lumens	8,124	15,877	23,690	31,302	38,784	46,410	54,885	62,189	69,372	76,805
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	123	124	121	121	121	123	122	121	120
SL4	4000K Lumens	7,719	15,085	22,510	29,741	36,850	44,097	52,148	59,089	65,913	72,977
	BUG Rating	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	115	117	118	115	115	115	116	116	115	114
5NQ	4000K Lumens	8,380	16,375	24,436	32,287	40,003	47,870	56,610	64,144	71,552	79,221
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	125	127	128	125	125	125	126	126	124	124
5MQ	4000K Lumens	8,534	16,676	24,885	32,881	40,739	48,752	57,653	65,326	72,868	80,679
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	127	129	130	127	127	128	129	128	127	126
5WQ	4000K Lumens	8,556	16,723	24,951	32,968	40,847	48,881	57,808	65,499	73,063	80,894
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	128	130	131	128	128	128	129	128	127	126
SLL/ SLR	4000K Lumens	7,140	13,951	20,817	27,506	34,081	40,783	48,231	54,649	60,959	67,492
	BUG Rating	B1-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	107	108	109	107	107	107	108	107	106	105
RW	4000K Lumens	8,304	16,228	24,215	31,994	39,641	47,437	56,100	63,566	70,907	78,504
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	124	126	127	124	124	124	125	124	123	123
AFL	4000K Lumens	8,335	16,287	24,302	32,110	39,784	47,610	56,303	63,796	71,163	78,790
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G5
	Lumens per Watt	124	126	127	124	124	125	126	125	124	123

*** Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.**

Nominal Power Lumens (1A)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.60	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	0.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K Lumens	7,267	14,201	21,190	28,000	34,692	41,515	49,096	55,627	62,053	68,703
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	126	128	124	124	125	126	125	124	123
T2R	4000K Lumens	7,715	15,077	22,497	29,725	36,829	44,073	52,122	59,056	65,876	72,937
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	131	133	136	132	132	132	133	133	131	131
T3	4000K Lumens	7,408	14,475	21,598	28,539	35,358	42,313	50,039	56,698	63,246	70,024
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	130	127	127	127	128	127	126	125
T3R	4000K Lumens	7,571	14,798	22,078	29,172	36,145	43,253	51,153	57,959	64,653	71,581
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	128	131	133	130	130	130	131	130	129	128
T4FT	4000K Lumens	7,451	14,559	21,725	28,703	35,564	42,558	50,330	57,027	63,613	70,430
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	129	131	128	127	128	129	128	127	126
T4W	4000K Lumens	7,354	14,371	21,442	28,333	35,105	42,007	49,681	56,291	62,792	69,521
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	125	127	129	126	126	126	127	126	125	125
SL2	4000K Lumens	7,254	14,178	21,155	27,951	34,631	41,443	49,011	55,533	61,944	68,584
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	125	127	124	124	124	125	125	124	123
SL3	4000K Lumens	7,406	14,474	21,596	28,534	35,355	42,307	50,033	56,690	63,237	70,014
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	130	127	127	127	128	127	126	125
SL4	4000K Lumens	7,037	13,751	20,519	27,112	33,592	40,198	47,538	53,864	60,087	66,524
	BUG Rating	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	119	122	124	120	120	121	122	121	120	119
5NQ	4000K Lumens	7,640	14,928	22,275	29,431	36,465	43,637	51,606	58,472	65,226	72,218
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	129	132	134	131	131	131	132	131	130	129
5MQ	4000K Lumens	7,779	15,203	22,684	29,973	37,137	44,441	52,555	59,549	66,427	73,545
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	132	135	137	133	133	133	134	134	133	132
5WQ	4000K Lumens	7,800	15,243	22,744	30,052	37,236	44,560	52,697	59,708	66,603	73,742
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	132	135	137	134	133	134	135	134	133	132
SLL/ SLR	4000K Lumens	6,510	12,719	18,977	25,075	31,067	37,176	43,967	49,817	55,569	61,525
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	110	113	114	111	111	112	112	112	111	110
RW	4000K Lumens	7,570	14,793	22,073	29,165	36,137	43,243	51,140	57,945	64,637	71,564
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	128	131	133	130	130	130	131	130	129	128
AFL	4000K Lumens	7,598	14,847	22,154	29,272	36,267	43,400	51,326	58,156	64,872	71,824
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
	Lumens per Watt	129	131	133	130	130	130	131	131	129	129

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Nominal Power Lumens (800mA)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		44	85	124	171	210	249	295	334	374	419
Input Current @ 120V (A)		0.39	0.77	1.13	1.54	1.90	2.26	2.67	3.03	3.39	3.80
Input Current @ 208V (A)		0.22	0.44	0.62	0.88	1.06	1.24	1.50	1.68	1.87	2.12
Input Current @ 240V (A)		0.19	0.38	0.54	0.76	0.92	1.08	1.30	1.46	1.62	1.84
Input Current @ 277V (A)		0.17	0.36	0.47	0.72	0.83	0.95	1.19	1.31	1.42	1.67
Input Current @ 347V (A)		0.15	0.24	0.38	0.49	0.63	0.77	0.87	1.01	1.15	1.52
Input Current @ 480V (A)		0.11	0.18	0.29	0.37	0.48	0.59	0.66	0.77	0.88	0.96
Optics											
T2	4000K Lumens	5,871	11,474	17,121	22,622	28,029	33,542	39,667	44,944	50,134	55,508
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	133	135	138	132	133	135	134	135	134	132
T2R	4000K Lumens	6,233	12,181	18,176	24,016	29,756	35,608	42,111	47,714	53,224	58,929
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5
	Lumens per Watt	142	143	147	140	142	143	143	143	142	141
T3	4000K Lumens	5,986	11,695	17,450	23,057	28,568	34,186	40,430	45,809	51,099	56,576
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	136	138	141	135	136	137	137	137	137	135
T3R	4000K Lumens	6,117	11,955	17,838	23,569	29,203	34,946	41,328	46,827	52,235	57,832
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	139	141	144	138	139	140	140	140	140	138
T4FT	4000K Lumens	6,019	11,763	17,551	23,190	28,734	34,384	40,663	46,074	51,396	56,904
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	137	138	142	136	137	138	138	138	137	136
T4W	4000K Lumens	5,942	11,610	17,324	22,891	28,363	33,940	40,138	45,480	50,732	56,169
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	135	137	140	134	135	136	136	136	136	134
SL2	4000K Lumens	5,862	11,454	17,091	22,583	27,980	33,484	39,598	44,867	50,048	55,411
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	133	135	138	132	133	134	134	134	134	132
SL3	4000K Lumens	5,985	11,694	17,447	23,053	28,565	34,182	40,424	45,804	51,092	56,568
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	136	138	141	135	136	137	137	137	137	135
SL4	4000K Lumens	5,685	11,111	16,577	21,905	27,140	32,478	38,409	43,520	48,546	53,748
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	129	131	134	128	129	130	130	130	130	128
5NQ	4000K Lumens	6,172	12,061	17,997	23,778	29,462	35,256	41,694	47,242	52,699	58,347
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	140	142	145	139	140	142	141	141	141	139
5MQ	4000K Lumens	6,285	12,283	18,328	24,217	30,004	35,907	42,462	48,112	53,669	59,421
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	143	145	148	142	143	144	144	144	144	142
5WQ	4000K Lumens	6,303	12,317	18,377	24,281	30,085	36,001	42,575	48,241	53,812	59,579
	BUG Rating	B3-U0-G1	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	143	145	148	142	143	145	144	144	144	142
SLL/ SLR	4000K Lumens	5,260	10,276	15,332	20,259	25,101	30,037	35,522	40,249	44,898	49,708
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	120	121	124	118	120	121	120	121	120	119
RW	4000K Lumens	6,116	11,952	17,834	23,563	29,196	34,938	41,317	46,817	52,224	57,819
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	139	141	144	138	139	140	140	140	140	138
AFL	4000K Lumens	6,139	11,996	17,899	23,650	29,302	35,064	41,468	46,987	52,412	58,030
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
	Lumens per Watt	140	141	144	138	140	141	141	141	140	138

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Nominal Power Lumens (600mA)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		34	66	96	129	162	193	226	257	290	323
Input Current @ 120V (A)		0.30	0.58	0.86	1.16	1.44	1.73	2.03	2.33	2.59	2.89
Input Current @ 208V (A)		0.17	0.34	0.49	0.65	0.84	0.99	1.14	1.30	1.48	1.63
Input Current @ 240V (A)		0.15	0.30	0.43	0.56	0.74	0.87	1.00	1.13	1.30	1.43
Input Current @ 277V (A)		0.14	0.28	0.41	0.52	0.69	0.81	0.93	1.04	1.22	1.33
Input Current @ 347V (A)		0.11	0.19	0.30	0.39	0.49	0.60	0.69	0.77	0.90	0.99
Input Current @ 480V (A)		0.08	0.15	0.24	0.30	0.38	0.48	0.53	0.59	0.71	0.77
Optics											
T2	4000K Lumens	4,787	9,357	13,961	18,448	22,856	27,353	32,347	36,651	40,884	45,265
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	141	142	145	143	141	142	143	143	141	140
T2R	4000K Lumens	5,083	9,934	14,822	19,585	24,266	29,038	34,341	38,911	43,404	48,055
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
	Lumens per Watt	150	151	154	152	150	150	152	151	150	149
T3	4000K Lumens	4,880	9,537	14,231	18,803	23,296	27,878	32,970	37,358	41,671	46,137
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	144	145	148	146	144	144	146	145	144	143
T3R	4000K Lumens	4,988	9,749	14,547	19,220	23,814	28,497	33,703	38,188	42,598	47,162
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	147	148	152	149	147	148	149	149	147	146
T4FT	4000K Lumens	4,909	9,591	14,312	18,911	23,432	28,040	33,161	37,574	41,913	46,404
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	144	145	149	147	145	145	147	146	145	144
T4W	4000K Lumens	4,845	9,468	14,128	18,668	23,130	27,678	32,732	37,088	41,371	45,805
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	143	143	147	145	143	143	145	144	143	142
SL2	4000K Lumens	4,779	9,341	13,937	18,416	22,818	27,305	32,292	36,589	40,813	45,188
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	141	142	145	143	141	141	143	142	141	140
SL3	4000K Lumens	4,879	9,536	14,229	18,800	23,294	27,874	32,965	37,351	41,666	46,130
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	144	144	148	146	144	144	146	145	144	143
SL4	4000K Lumens	4,637	9,059	13,519	17,863	22,132	26,486	31,322	35,490	39,589	43,831
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	136	137	141	138	137	137	139	138	137	136
5NQ	4000K Lumens	5,033	9,835	14,676	19,392	24,026	28,751	34,002	38,526	42,975	47,581
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	Lumens per Watt	148	149	153	150	148	149	150	150	148	147
5MQ	4000K Lumens	5,126	10,015	14,946	19,747	24,468	29,281	34,628	39,236	43,766	48,457
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	151	152	156	153	151	152	153	153	151	150
5WQ	4000K Lumens	5,139	10,043	14,985	19,801	24,533	29,359	34,721	39,339	43,883	48,586
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	151	152	156	153	151	152	154	153	151	150
SLL/ SLR	4000K Lumens	4,289	8,380	12,502	16,520	20,469	24,494	28,967	32,823	36,613	40,537
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	126	127	130	128	126	127	128	128	126	126
RW	4000K Lumens	4,987	9,746	14,543	19,215	23,808	28,491	33,695	38,178	42,587	47,151
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	147	148	151	149	147	148	149	149	147	146
AFL	4000K Lumens	5,007	9,782	14,597	19,285	23,896	28,594	33,817	38,317	42,742	47,322
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
	Lumens per Watt	147	148	152	149	148	148	150	149	147	147

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Control Options

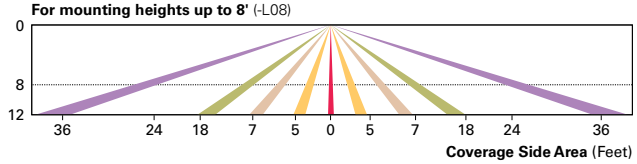
0-10V (DIM)
This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (BPC, PR and PR7)
Optional button-type photocontrol (BPC) and photocontrol receptacles (PR and PR7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PR7 receptacle.

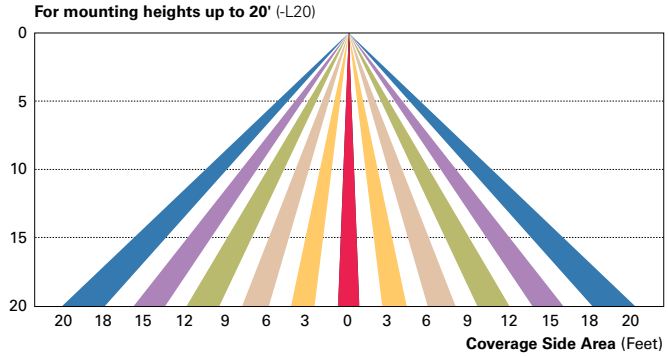
After Hours Dim (AHD)
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (SPB, MS/DIM-LXX, MS/X-LXX and MS-LXX)
These sensors are factory installed in the luminaire housing. When the SPB or MS/DIM sensor options are selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines. SPB motion sensors require the Sensor Configuration mobile application by Wattstopper to change factory default dimming level, time delay, sensitivity and other parameters. Available for iOS and Android devices. The SPB sensor is factory preset to dim down to approximately 10% power with a time delay of five minutes. The MS/DIM occupancy sensors require the FSIR-100 programming tool to adjust factory defaults.

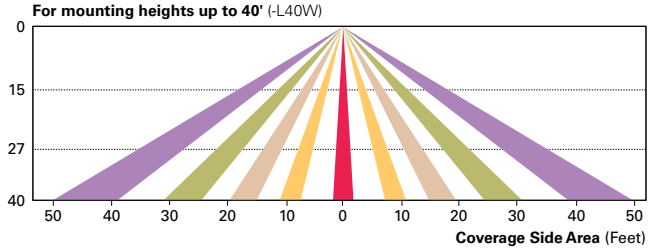
For mounting heights up to 8' (-L08)



For mounting heights up to 20' (-L20)

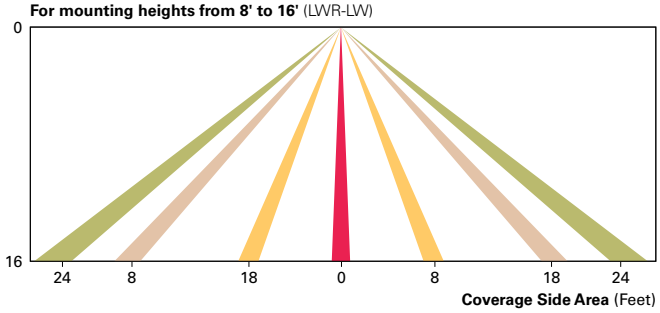


For mounting heights up to 40' (-L40W)

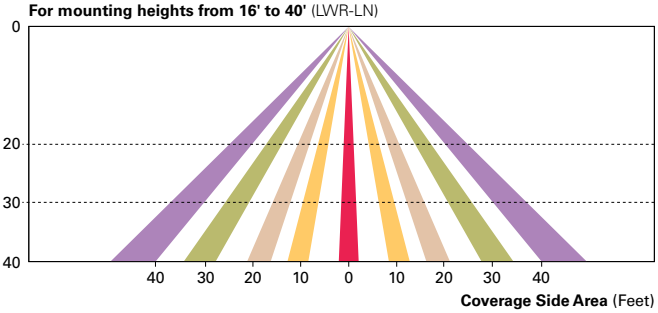


Enlighted Wireless Control and Monitoring System (LWR-LW and LWR-LN)
Enlighted is a connected lighting solution that combines a broad selection of energy-efficient LED luminaires with a powerful integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of building resources, beyond lighting.

For mounting heights from 8' to 16' (LWR-LW)



For mounting heights from 16' to 40' (LWR-LN)



WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A)
The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

AirMesh (DIM10)
AirMesh integrated wireless controls system includes factory installed DIM10 Synapse control module and FSP-201 motion sensor, requires additional AirMesh components for operation. Contact Synapse at www.synapsewireless.com for product support, warranty and terms and conditions.

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Specifications and dimensions
subject to change without notice.

VAN METER FACILITY EXPANSION

7450 95TH ST S, COTTAGE GROVE, MN 55016

SHEET INDEX PLANNING

SHEET NUMBER	SHEET NAME	PLANNING COMMISION 2025-11-12
GENERAL		
A0.1	TITLE SHEET	●
CIVIL		
C001	COVER	●
C100	EXISTING CONDITIONS & REMOVALS	●
C200	SITE PLAN	●
C300	GRADING PLAN	●
C400	EROSION CONTROL PLAN	●
C500	UTILITY PLAN	●
C600	DETAILS	●
C601	DETAILS	●
L100	TREE INVENTORY	●
L200	LANDSCAPE PLAN	●
ARCHITECTURAL		
A1.1	ARCHITECTURAL SITE PLAN	●
A2.2	OVERALL FIRST LEVEL FLOOR PLAN	●
A3.0	3D VIEW	●
A3.1	OVERALL EXTERIOR ELEVATIONS	●
A3.1B	FACADE MATERIAL COMPLIANCE	●
A3.2	PARTIAL ENLARGED EAST EXTERIOR ELEVATIONS	●
A3.3	PARTIAL ENLARGED SOUTH EXTERIOR ELEVATIONS	●
A3.4	PARTIAL ENLARGED WEST EXTERIOR ELEVATIONS	●
A3.5	EXTERIOR ELEVATIONS	●
Grand total: 20		

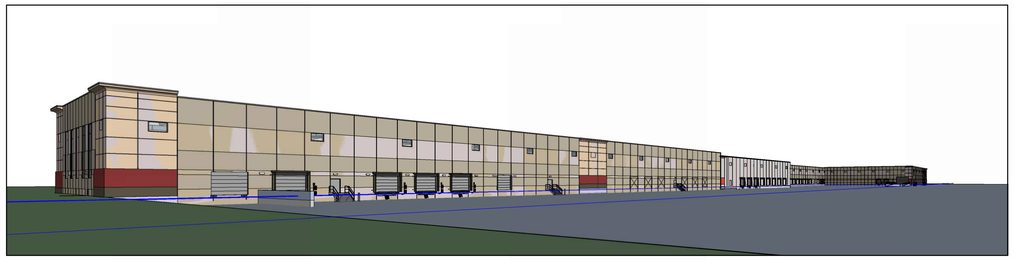


IMAGE FOR ILLUSTRATION PURPOSES ONLY- NOT TO BE USED FOR CONSTRUCTION

DEFERRED SUBMITTALS BY OTHERS

1. - REVIEW OF SPECIAL INSPECTIONS REPORTS
2. - FIRE SPRINKLER SYSTEM DRAWINGS
3. - DESIGN BUILD MECHANICAL AND ELECTRICAL DRAWINGS

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mvanderiet@isseng.com

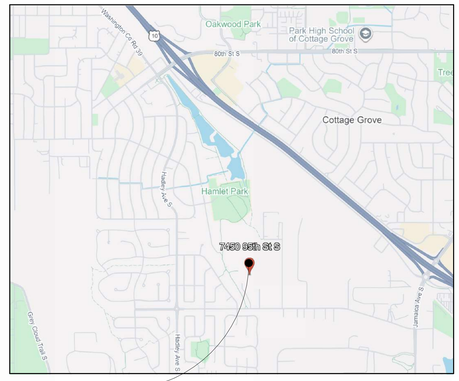
***MECHANICAL DESIGN BUILD**
TO BE DETERMINED

***ELECTRICAL DESIGN BUILD**
TO BE DETERMINED

***GENERAL CONTRACTOR**
RYAN COMPANIES

*** SERVICES CONTRACTED BY OTHERS**

LOCATION MAP



SITE LOCATION:
7450 95TH ST S, COTTAGE GROVE, MN 55016

NORTH

NOT FOR CONSTRUCTION

pope DESIGN GROUP

POPE DESIGN GROUP
767 N. EUSTIS STREET, SUITE 190
ST. PAUL, MINNESOTA 55114
651.642.9200
WWW.POPEDESIGN.COM

VAN METER

VAN METER FACILITY EXPANSION
7450 95TH ST S, COTTAGE GROVE, MN 55016

TITLE SHEET

ISSUES & REVISIONS	DATE
PLAN COMMN	11-12-2025

COMMISSION NO: 81552-24199
DRAWN BY: MP
CHECKED BY: DP, RT

SHEET

A0.1

TRUE SHEET SCALE
0" 1/2" 1"

Autodesk Docs://81552-24199 Van Meter Facility Expansion/81552-24199_Van Meter Facility Expansion_R25.rvt
11/12/2025 3:44:10 PM

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PRELIMINARY PLANS

FOR

EXISTING CONDITIONS, SITE, GRADING, UTILITIES, AND LANDSCAPE

FOR

VAN METER EXPANSION

COTTAGE GROVE, MN



Vicinity Map

PREPARED FOR:

VAN METER INC.

7450 95TH ST S.

COTTAGE GROVE, MN 55016

CONTACT: 612-363-8114

PHONE: JKRAUS@VANMETERINC.COM

EMAIL: JEFF KRAUS - DIRECTOR OF OPERATIONS

PREPARED BY:

Westwood

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Toll Free (800) 270-9495

1900 Medical Arts Ave S, Suite 100
Sartell, MN 56377
westwoodps.com

Westwood Professional Services, Inc.

PROJECT NUMBER: 0058882.00

CONTACT: GRETCHEN A. SCHROEDER

SHEET INDEX

Sheet List Table

SHEET NUMBER	SHEET TITLE
C001	COVER
C100	EXISTING CONDITIONS & REMOVALS
C200	SITE PLAN
C300	GRADING PLAN
C400	EROSION CONTROL PLAN
C500	UTILITY PLAN
C600	DETAILS
C601	DETAILS
L100	TREE INVENTORY
L200	LANDSCAPE PLAN

NO.	DATE	REVISION	SHEETS
	11/06/25	DD SET	
	11/12/25	PLAN COMMN	
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PRELIMINARY PLANS
FOR
EXISTING CONDITIONS, SITE, GRADING, UTILITIES, AND LANDSCAPE
FOR
VAN METER EXPANSION
COTTAGE GROVE, MN

INITIAL SUBMITTAL DATE: 11/03/25 SHEET: C001 OF 11

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811 or call811.com
Common Ground Alliance



LEGEND

- SANITARY MANHOLE
- SEWER CLEANOUT
- STORM MANHOLE
- CATCH BASIN
- FLARED END SECTION
- CULVERT
- DOWNSPOUT
- HYDRANT
- GATE VALVE
- WATER METER
- ELECTRIC BOX
- ELECTRIC METER
- STREET LIGHT
- POWER POLE WITH LIGHT
- GUY WIRE
- POWER POLE
- HAND HOLE/JUNCTION BOX
- STEEL/WOOD POST
- SIGN
- FLAG POLE
- CONIFEROUS TREE
- DECIDUOUS TREE
- BOUNDARY LINE
- RIGHT-OF-WAY LINE
- LOT LINE
- EASEMENT LINE
- SANITARY SEWER
- STORM SEWER
- WATERMAIN
- FENCE LINE
- CURB & GUTTER
- CONCRETE SURFACE
- BITUMINOUS SURFACE
- GRAVEL SURFACE

REMOVAL LEGEND

EXISTING / PROPOSED
- PROPERTY LINE
- SAW CUT PAVEMENT

EXISTING / REMOVALS
- CURB & GUTTER
- SANITARY SEWER
- WATER MAIN
- HYDRANT
- STORM SEWER
- FENCE
- CONCRETE
- BITUMINOUS
- BUILDING
- TREE
- LIGHT POLE
- TRAFFIC SIGN

REMOVAL NOTES

1. LOCATIONS AND ELEVATIONS OF EXISTING TOPOGRAPHY AND UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY SITE CONDITIONS AND UTILITY LOCATIONS PRIOR TO EXCAVATION/CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.
2. CONTRACTOR SHALL COORDINATE LIMITS OF REMOVALS WITH PROPOSED IMPROVEMENTS AND FIELD VERIFY CONDITION OF EXISTING APPURTENANCES TO REMAIN. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING OR REPLACING MISCELLANEOUS ITEMS (SUCH AS FENCES, SIGNS, IRRIGATION HEADS, ETC.) THAT MAY BE DAMAGED BY CONSTRUCTION.
3. CONTRACTOR SHALL PLACE ALL NECESSARY EROSION CONTROL MEASURES REQUIRED TO MAINTAIN SITE STABILITY PRIOR TO EXECUTING ANY SITE REMOVALS.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH UTILITY PROVIDERS FOR REMOVAL AND/OR RELOCATION OF EXISTING UTILITIES AFFECTED BY SITE DEVELOPMENT. ALL PERMITS, APPLICATIONS AND FEES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

0' 40' 80' 120'

PRELIMINARY PLANS

DESIGNED:
CHECKED:
DRAWN:
HORIZONTAL SCALE: 40'
VERTICAL SCALE: 8' or 4'

INITIAL ISSUE	11/03/2025	
REVISIONS:		
1	11/06/25	DD SET
2	11/12/25	PLAN COMMN
3		
4		
5		

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

GRETCHEN A. SCHROEDER
DATE: 11/12/2025 LICENSE NO. ---

PREPARED FOR:
VAN METER INC.
850 32ND AVENUE SW
CEDAR RAPIDS, IOWA, 52404

VAN METER EXPANSION
COTTAGE GROVE, MN

Westwood
Phone (952) 937-5150
Toll Free (888) 937-5150
2200 Veterans Drive, Suite #200
Minneapolis, MN, 55343
westwoodps.com
Westwood Professional Services, Inc.

EXISTING CONDITIONS & REMOVALS

SHEET NUMBER:
C100

DATE: 11/12/2025

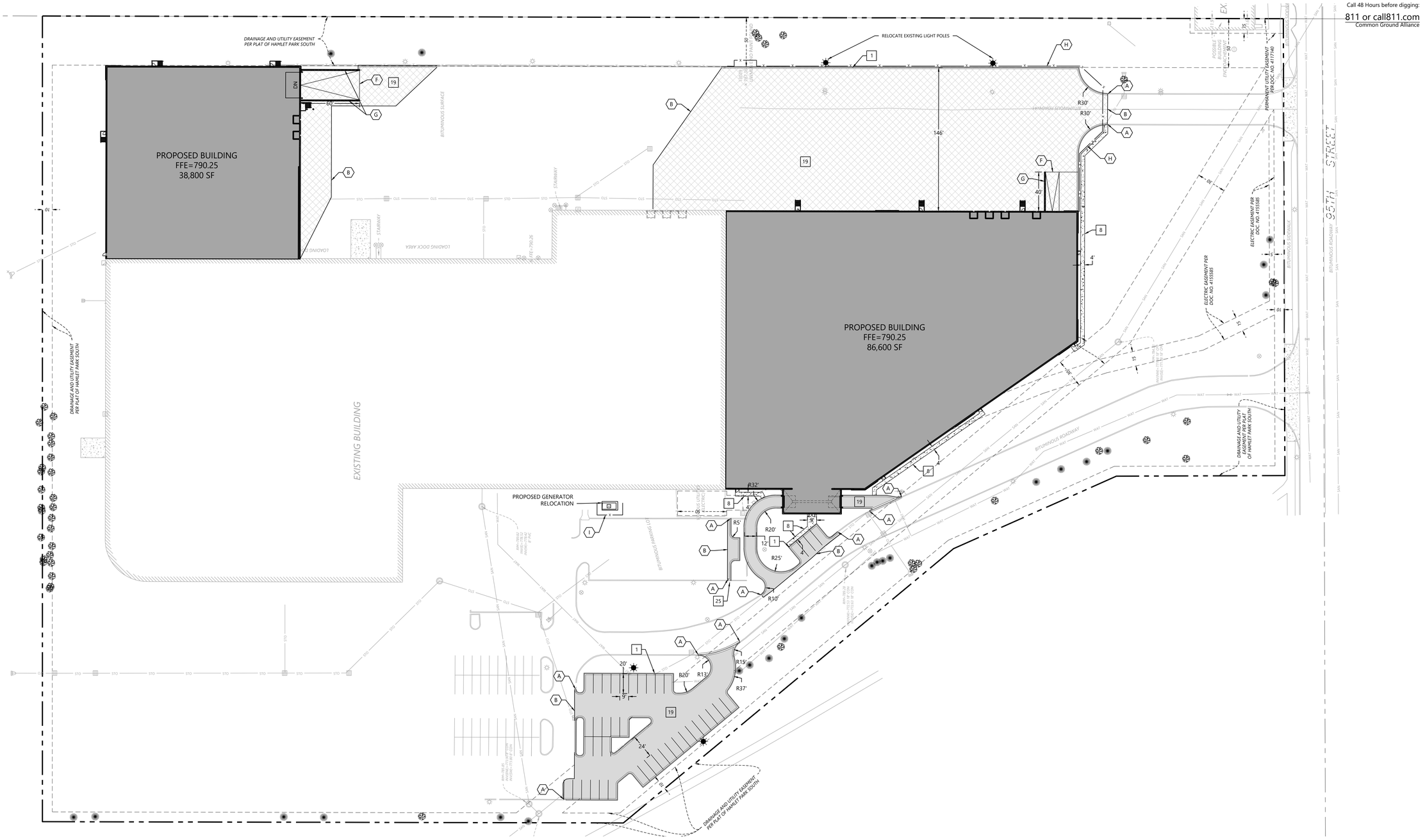
PROJECT NUMBER: 0058882.00

VAN METER EXPANSION

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SITE LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
		LOT LINE
		SETBACK LINE
		EASEMENT LINE
		CURB AND GUTTER
		TIP-OUT CURB AND GUTTER
		POND NORMAL WATER LEVEL
		RETAINING WALL
x	x	FENCE
		CONCRETE PAVEMENT
		NORMAL DUTY BITUMINOUS PAVEMENT
		HEAVY DUTY BITUMINOUS PAVEMENT
		NUMBER OF PARKING STALLS
		TRANSFORMER
		SITE LIGHTING
		TRAFFIC SIGN
		POWER POLE
		BOLLARD / POST

GENERAL SITE NOTES

1. BACKGROUND INFORMATION FOR THIS PROJECT PROVIDED BY ***WESTWOOD PROFESSIONAL SERVICES.***
2. LOCATIONS AND ELEVATIONS OF EXISTING TOPOGRAPHY AND UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY SITE CONDITIONS AND UTILITY LOCATIONS PRIOR TO EXCAVATION/CONSTRUCTION. IF ANY DISCREPANCIES ARE FOUND, THE ENGINEER SHOULD BE NOTIFIED IMMEDIATELY.
3. REFER TO BOUNDARY SURVEY FOR LOT BEARINGS, DIMENSIONS AND AREAS.
4. ALL DIMENSIONS ARE TO FACE OF CURB OR EXTERIOR FACE OF BUILDING UNLESS OTHERWISE NOTED.
5. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS AND LOCATIONS OF EXITS, RAMPS, AND TRUCK DOCKS.
6. ALL CURB RADII ARE SHALL BE 3.0 FEET (TO FACE OF CURB) UNLESS OTHERWISE NOTED.
7. ALL CURB AND GUTTER SHALL BE ***B612*** UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGGERS AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. PLACEMENT OF THESE DEVICES SHALL BE APPROVED BY THE CITY AND ENGINEER PRIOR TO PLACEMENT. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MNDOT STANDARDS.
9. BITUMINOUS PAVEMENT AND CONCRETE SECTIONS TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
10. CONTRACTOR SHALL MAINTAIN FULL ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION AND TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES.
11. SITE LIGHTING SHOWN ON PLAN IS FOR REFERENCE ONLY. REFER TO LIGHTING PLAN PREPARED BY OTHERS FOR SITE LIGHTING DETAILS AND PHOTOMETRICS.

1 SITE DETAILS (SI-0XX)

1 B612 CURB AND GUTTER
8 PRIVATE CONCRETE SIDEWALK
19 PAVEMENT SECTIONS
25 CURB CUT WITH EROSION CONTROL MAT

A SITE KEYNOTES

A MATCH EXISTING CURB
B MATCH EXISTING CONCRETE PAVEMENT WITH SAWCUT
E TRANSITION CURB
F RAMP
G RAMP RETAINING WALL
H SECURITY FENCE
I SCREEN FENCE

SITE DEVELOPMENT SUMMARY

• EXISTING ZONING:	***I-1, GENERAL INDUSTRIAL***
• PROPOSED ZONING:	***I-1, GENERAL INDUSTRIAL***
• PROPERTY AREA:	***876,227 SF (20.12 AC)***
• EXISTING IMPERVIOUS SURFACE:	***440,645 SF (50.3%)***
• PROPOSED IMPERVIOUS SURFACE:	***636,587 SF (72.6%)***
• EXISTING GREEN SPACE	***435,632 SF (49.7%)***
• PROPOSED GREEN SPACE	***239,690 SF (27.4%)***
• BUILDING GROSS SIZE:	***309,800 SF***
EXISTING BUILDING:	***184,400 SF***
NORTH ADDITION:	***38,800 SF***
SOUTH ADDITION:	***86,600 SF***
FLOOR-AREA-RATIO(FAR):	***0.35***
• BUILDING SETBACK PER CODE:	***40'*** =FRONT ***40'*** =SIDE / ***40'*** =SIDE TO ROW ***100'*** =REAR
• PARKING SETBACK:	***20'*** =FRONT AND ROW ***10'*** =SIDE AND REAR
• PARKING SPACE/DRIVE AISLE:	***9'*** WIDE X ***18'*** LONG, ***24'*** AISLE
• PARKING RATIO REQUIREMENT	***CITY OF COTTAGE GROVE***
RETAIL/OFFICE:	***1 SPACE / 250 SF OF BLDG***
WAREHOUSE:	***1 SPACE / 2000 SF OF BLDG***
RETAIL/OFFICE (51,800 SF)	***207 SPACES***
WAREHOUSE (134,000 SF)	***67 SPACES***
EXTRA SPACES	***28 SPACES***
TOTAL SPACES REQUIRED:	***336 SPACES***
• EXISTING PARKING:	***302 SPACES***
• PROPOSED PARKING:	***38 SPACES***
• TOTAL PARKING:	***340 SPACES***

0' 40' 80' 120'

PRELIMINARY PLANS

DESIGNED:
CHECKED:
DRAWN:
HORIZONTAL SCALE: 40'
VERTICAL SCALE: 8' or 4'

INITIAL ISSUE 11/03/2025
REVISIONS:
1 11/06/25 DD SET
2 11/12/25 PLAN COMMN
3 . .
4 . .
5 . .

PREPARED FOR:
VAN METER INC.
850 32ND AVENUE SW
CEDAR RAPIDS, IOWA, 52404

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

GRETCHEN A. SCHROEDER
DATE: 11/12/2025 LICENSE NO. ———

VAN METER EXPANSION
COTTAGE GROVE, MN

Westwood
Phone (952) 937-5150
Toll Free (888) 937-5150
3701 Inlet Pines Drive, Suite A-200
Minnetonka, MN, 55343
westwoodps.com
Westwood Professional Services, Inc.

SITE PLAN

SHEET NUMBER:
C200

DATE: 11/12/2025

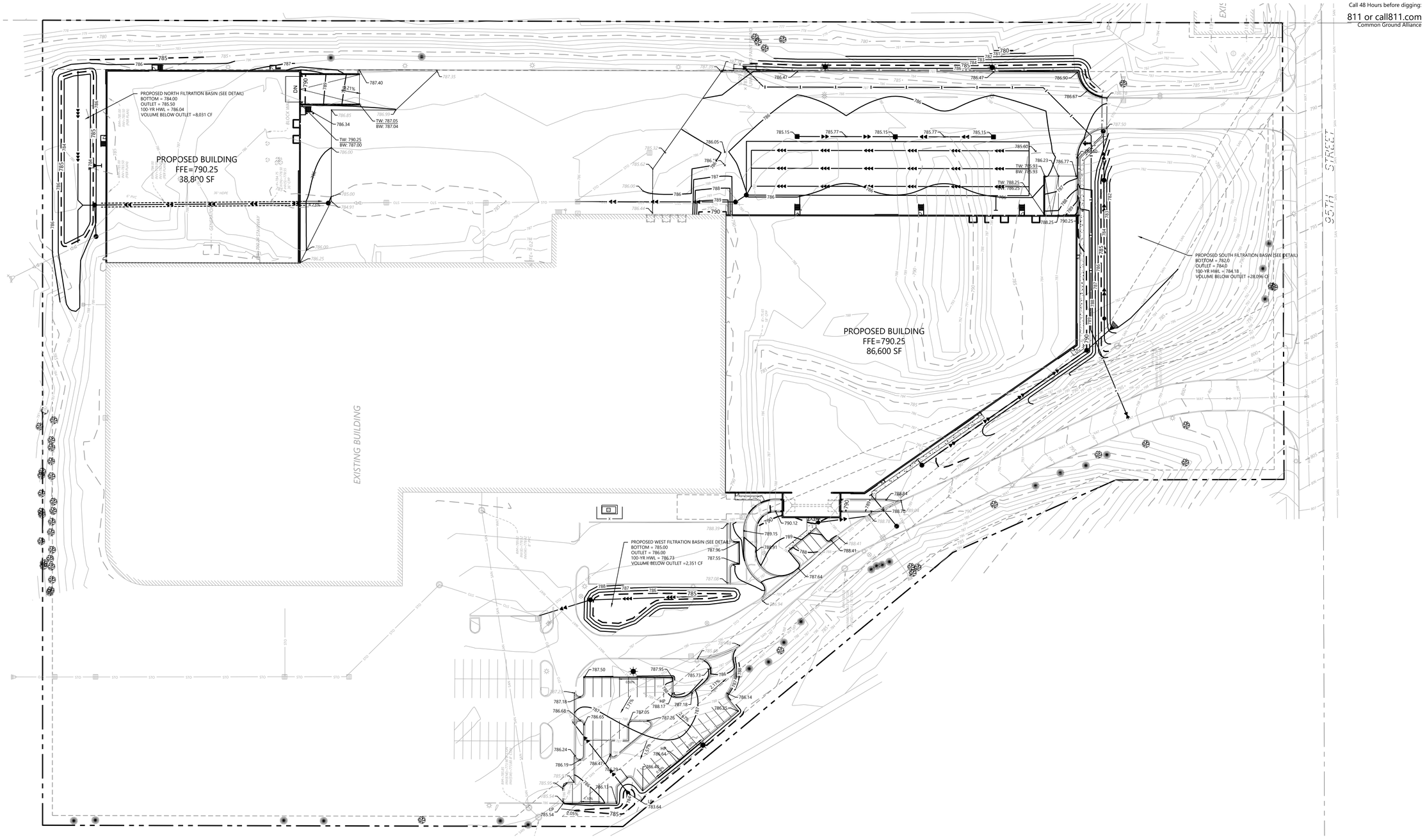
VAN METER EXPANSION

PROJECT NUMBER: 0058882.00

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GRADING NOTES

1. LOCATIONS AND ELEVATIONS OF EXISTING TOPOGRAPHY AND UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY SITE CONDITIONS AND UTILITY LOCATIONS PRIOR TO EXCAVATION/CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.
2. CONTRACTORS SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULE, SLOPED PAVEMENT, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY ENTRANCE LOCATIONS, AND EXACT LOCATIONS AND NUMBER OF DOWNSPOUTS.
3. ALL EXCAVATION SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF "STANDARD SPECIFICATIONS FOR TRENCH EXCAVATION AND BACKFILL/SURFACE RESTORATION" AS PREPARED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA.
4. ALL DISTURBED UNPAVED AREAS ARE TO RECEIVE SIX INCHES OF TOPSOIL AND SOD OR SEED. THESE AREAS SHALL BE WATERED UNTIL A HEALTHY STAND OF GRASS IS OBTAINED. SEE LANDSCAPE PLAN FOR PLANTING AND TURF ESTABLISHMENT.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGMEN AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. PLACEMENT OF THESE DEVICES SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MNDOT STANDARDS.
6. ALL SLOPES SHALL BE GRADED TO 3:1 OR FLATTER, UNLESS OTHERWISE INDICATED ON THIS SHEET.
7. CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING AND PROVIDE A SMOOTH FINISHED SURFACE WITH UNIFORM SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN OR BETWEEN SUCH POINTS AND EXISTING GRADES.
8. **SPOT ELEVATIONS SHOWN INDICATE FINISHED PAVEMENT ELEVATIONS & GUTTER FLOW LINE UNLESS OTHERWISE NOTED. PROPOSED CONTOURS ARE TO FINISHED SURFACE GRADE.**
9. SEE SOILS REPORT FOR PAVEMENT THICKNESSES AND HOLD DOWNS.
10. CONTRACTOR SHALL DISPOSE OF ANY EXCESS SOIL MATERIAL THAT EXISTS AFTER THE SITE GRADING AND UTILITY CONSTRUCTION IS COMPLETED. THE CONTRACTOR SHALL DISPOSE OF ALL EXCESS SOIL MATERIAL IN A MANNER ACCEPTABLE TO THE OWNER AND THE REGULATING AGENCIES.
11. CONTRACTOR SHALL PROVIDE A STRUCTURAL RETAINING WALL DESIGN CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER.
12. ALL CONSTRUCTION SHALL CONFORM TO LOCAL, STATE AND FEDERAL RULES INCLUDING THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS.
13. PRIOR TO PLACEMENT OF ANY STRUCTURE OR PAVEMENT, A PROOF ROLL, AT MINIMUM, WILL BE REQUIRED ON THE SUBGRADE. PROOF ROLLING SHALL BE ACCOMPLISHED BY MAKING MINIMUM OF 2 COMPLETE PASSES WITH FULLY-LOADED TANDEM-AXLE DUMP TRUCK, OR APPROVED EQUAL, IN EACH OF 2 PERPENDICULAR DIRECTIONS WHILE UNDER SUPERVISION AND DIRECTION OF THE INDEPENDENT TESTING LABORATORY. AREAS OF FAILURE SHALL BE EXCAVATED AND RE-COMPACTED AS SPECIFIED HEREIN.
14. EMBANKMENT MATERIAL PLACED BENEATH BUILDINGS AND STREET OR PARKING AREAS SHALL BE COMPACTED IN ACCORDANCE WITH THE SPECIFIED DENSITY METHOD AS OUTLINED IN MNDOT 2105.3F1 AND THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER.
15. EMBANKMENT MATERIAL NOT PLACED IN THE BUILDING PAD, STREETS OR PARKING AREA, SHALL BE COMPACTED IN ACCORDANCE WITH REQUIREMENTS OF THE ORDINARY COMPACTION METHOD AS OUTLINED IN MNDOT 2105.3F2.
16. ALL SOILS AND MATERIALS TESTING SHALL BE COMPLETED BY AN INDEPENDENT GEOTECHNICAL ENGINEER. EXCAVATION FOR THE PURPOSE OF REMOVING UNSTABLE OR UNSUITABLE SOILS SHALL BE COMPLETED AS REQUIRED BY THE GEOTECHNICAL ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOILS TESTS AND INSPECTIONS WITH THE GEOTECHNICAL ENGINEER.

GRADING LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
980	980	INDEX CONTOUR
982	982	INTERVAL CONTOUR
		CURB AND GUTTER
		POND NORMAL WATER LEVEL
STO	STO	STORM SEWER
		FLARED END SECTION (WITH RIPRAP)
WAT	WAT	WATER MAIN
SAN	SAN	SANITARY SEWER
		RETAINING WALL
		DRAIN TILE
		RIDGE LINE
	GL	GRADING LIMITS
× 900.00	× 900.00	SPOT ELEVATION
	0.00%	FLOW DIRECTION
	TW=XXX.XX BW=XXX.XX	TOP AND BOTTOM OF RETAINING WALL
	E.O.F.	EMERGENCY OVERFLOW
SB-19	SB-19	SOIL BORING LOCATION

0' 40' 80' 120'

PRELIMINARY PLANS

DESIGNED:	
CHECKED:	
DRAWN:	
HORIZONTAL SCALE:	40'
VERTICAL SCALE:	8' or 4'

INITIAL ISSUE	11/03/2025	
REVISIONS:		
1	11/06/25	DD SET
2	11/12/25	PLAN COMMN
3	-	-
4	-	-
5	-	-

PREPARED FOR:
VAN METER INC.
850 32ND AVENUE SW
CEDAR RAPIDS, IOWA, 52404

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

GRETCHEN A. SCHROEDER
DATE: 11/12/2025 LICENSE NO. ——

VAN METER EXPANSION
COTTAGE GROVE, MN

Westwood
Phone (952) 937-5150
Toll Free (888) 937-5150
3200 Whitewater Drive, Suite #200
Minnetonka, MN, 55343
www.wwpro.com
Westwood Professional Services, Inc.

GRADING PLAN

SHEET NUMBER:
C300

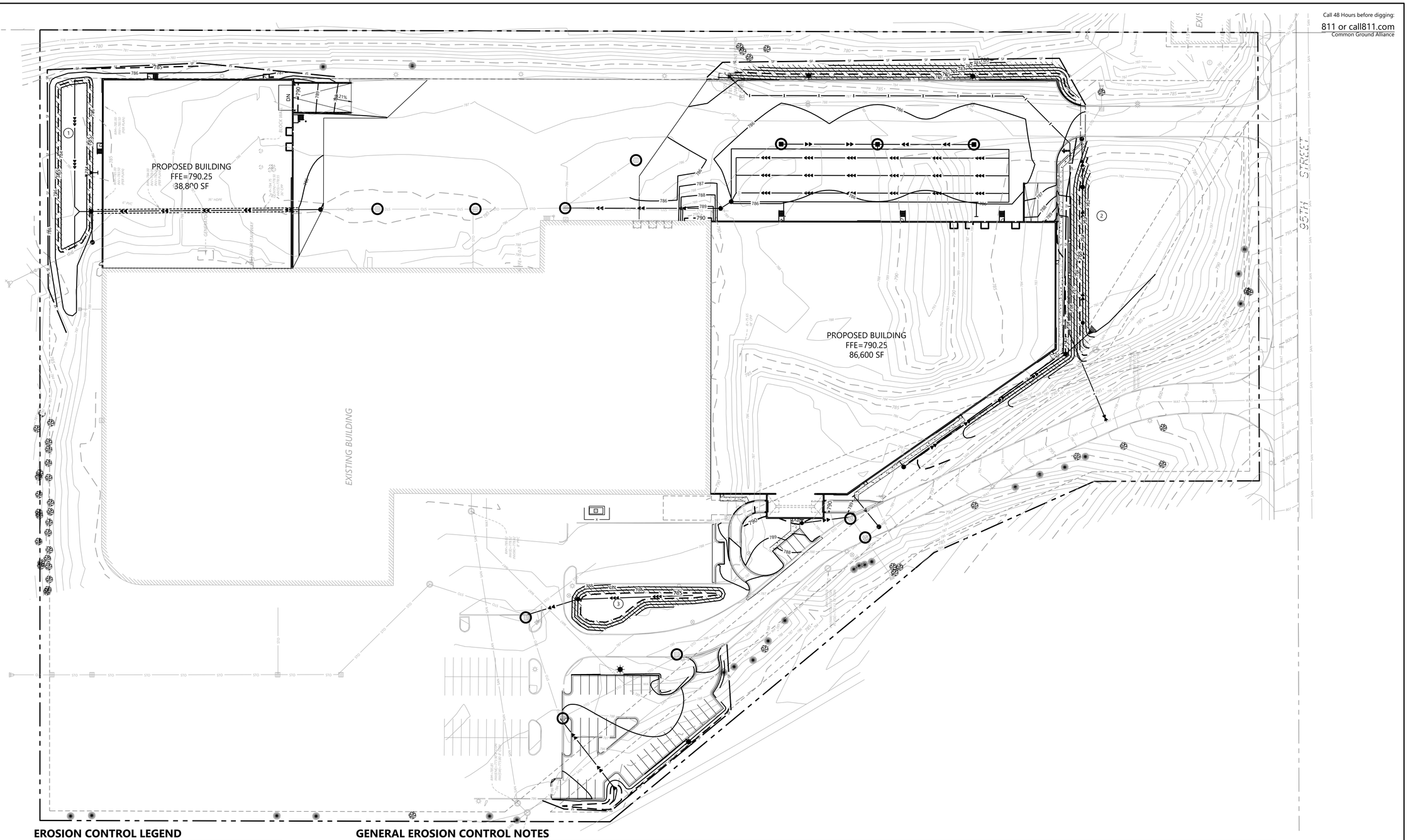
DATE: 11/12/2025

VAN METER EXPANSION

PROJECT NUMBER: 0058882.00

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EROSION CONTROL LEGEND

GENERAL EROSION CONTROL NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND LIMITED MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION SHALL NOT BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY THE OWNER OR ENGINEER OF DISCREPANCIES.
2. ALL SILT FENCE AND OTHER EROSION CONTROL FEATURES SHALL BE IN-PLACE PRIOR TO ANY EXCAVATION/CONSTRUCTION AND SHALL BE MAINTAINED UNTIL VIABLE TURF OR GROUND COVER HAS BEEN ESTABLISHED. EXISTING SILT FENCE ON-SITE SHALL BE MAINTAINED AND OR REMOVED AND SHALL BE CONSIDERED INCIDENTAL TO THE GRADING CONTRACT. IT IS OF EXTREME IMPORTANCE TO BE AWARE OF CURRENT FIELD CONDITIONS WITH RESPECT TO EROSION CONTROL. TEMPORARY PONDING, DIKES, HAYBALES, ETC., REQUIRED BY THE CITY SHALL BE INCIDENTAL TO THE GRADING CONTRACT.
3. EROSION AND SILTATION CONTROL (ESC): THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL THE EROSION AND SILTATION INCLUDING BUT NOT LIMITED TO: CATCH BASIN INSERTS, CONSTRUCTION ENTRANCES, EROSION CONTROL BLANKET, AND SILT FENCE. ESC SHALL COMMENCE WITH GRADING AND CONTINUE THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR'S RESPONSIBILITY INCLUDES ALL IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE OWNER MAY DIRECT THE CONTRACTOR'S METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITION OF SILT OR MUD ON NEW OR EXISTING PAVEMENT OR IN EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN EVENT. AFFECTED AREAS SHALL BE CLEANED TO THE SATISFACTION OF THE OWNER, ALL AT THE EXPENSE OF THE CONTRACTOR. ALL TEMPORARY EROSION CONTROL SHALL BE REMOVED BY THE CONTRACTOR AFTER THE TURF IS ESTABLISHED.
4. ALL STREETS DISTURBED DURING WORKING HOURS MUST BE CLEANED AT THE END OF EACH WORKING DAY. A CONSTRUCTION ENTRANCE TO THE SITE MUST BE PROVIDED ACCORDING TO DETAILS TO REDUCE TRACKING OF DIRT ONTO PUBLIC STREETS.
5. PROPOSED PONDS SHALL BE EXCAVATED FIRST AND USED AS TEMPORARY PONDING DURING CONSTRUCTION.
6. WHEN INSTALLING END-OF-LINE FLARED END SECTIONS, BRING THE SILT FENCE UP & OVER THE FLARED END SECTIONS & COVER DISTURBED AREAS WITH RIP RAP. THE UPSTREAM FLARED END SECTIONS SHALL HAVE WOOD FIBER BLANKET INSTALLED ON THE DISTURBED SOILS.
7. ALL UNPAVED AREAS ALTERED DUE TO CONSTRUCTION ACTIVITIES MUST BE RESTORED WITH SEED AND MULCH, SOD, EROSION CONTROL BLANKET OR BE HARD SURFACE WITHIN 2 WEEKS OF COMPLETION OF CONSTRUCTION.
8. THE SITE MUST BE STABILIZED PER THE REQUIREMENTS OF THE MPCA, NPDES, MNDOT, AND CITY.
   A. TEMPORARY (GREATER THAN 1-YEAR) SEED SHALL BE MNDOT SEED MIX 22-111 AT 30.5-POUNDS PER ACRE.
   B. TEMPORARY (LESS THAN 1-YEAR) SEED SHALL BE MNDOT SEED MIX 21-112 (FALL) OR 21-111 (SPRING/SUMMER) AT 100-POUNDS PER ACRE
   C. INFILTRATION/FILTRATION BASIN SHALL BE MNDOT SEED MIX 34-262 AT 14.5-POUNDS PER ACRE.
   D. POND SLOPES SHALL BE MNDOT SEED MIX 33-261 AT 35-POUNDS PER ACRE.
   E. GENERAL SEEDING SHALL BE MNDOT SEED MIX 25-151 AT 70-POUNDS PER ACRE.
   F. MULCH SHALL BE MNDOT TYPE 1 APPLIED AT 2-TONS PER ACRE.
9. FOR AREAS WITH SLOPE OF 3:1 OR GREATER, RESTORATION WITH SOD OR EROSION CONTROL BLANKET IS REQUIRED.
10. ALL TEMPORARY STOCKPILES MUST HAVE SILT FENCE INSTALLED AROUND THEM TO TRAP SEDIMENT.
11. ALL PERMANENT PONDS USED AS TEMPORARY SEDIMENT BASINS DURING CONSTRUCTION SHALL BE DREDGED AFTER THE SITE HAS BEEN STABILIZED TO RESTORE THE POND TO THE PROPOSED BOTTOM ELEVATION.
12. ALL CONSTRUCTION SHALL CONFORM TO LOCAL AND STATE RULES INCLUDING THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS.
13. THE SITE MUST BE KEPT IN A WELL-DRAINED CONDITION AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY DITCHES, PIPING OR OTHER MEANS REQUIRED TO INSURE PROPER DRAINAGE DURING CONSTRUCTION. LOW POINTS IN ROADWAYS OR BUILDING PADS MUST BE PROVIDED WITH A POSITIVE OUTFLOW.

0' 40' 80' 120'

PRELIMINARY PLANS

Call 48 Hours before digging:
811 or call811.com
Common Ground Alliance

DESIGNED:
CHECKED:
DRAWN:
HORIZONTAL SCALE: 40'
VERTICAL SCALE: 8' or 4'

INITIAL ISSUE 11/03/2025
REVISIONS:
1 11/06/25 DD SET
2 11/12/25 PLAN COMMN
3 . .
4 . .
5 . .

PREPARED FOR:
VAN METER INC.
850 32ND AVENUE SW
CEDAR RAPIDS, IOWA, 52404

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GRETCHEN A. SCHROEDER
DATE: 11/12/2025 LICENSE NO. ——

VAN METER EXPANSION
COTTAGE GROVE, MN

Westwood
Phone (952) 937-5150
Toll Free (888) 937-5150
3701 Wheeler Drive, Suite #300
Minnetonka MN, 55343
westwoodps.com
Westwood Professional Services, Inc.

EROSION CONTROL PLAN

SHEET NUMBER:
C400

DATE: 11/12/2025

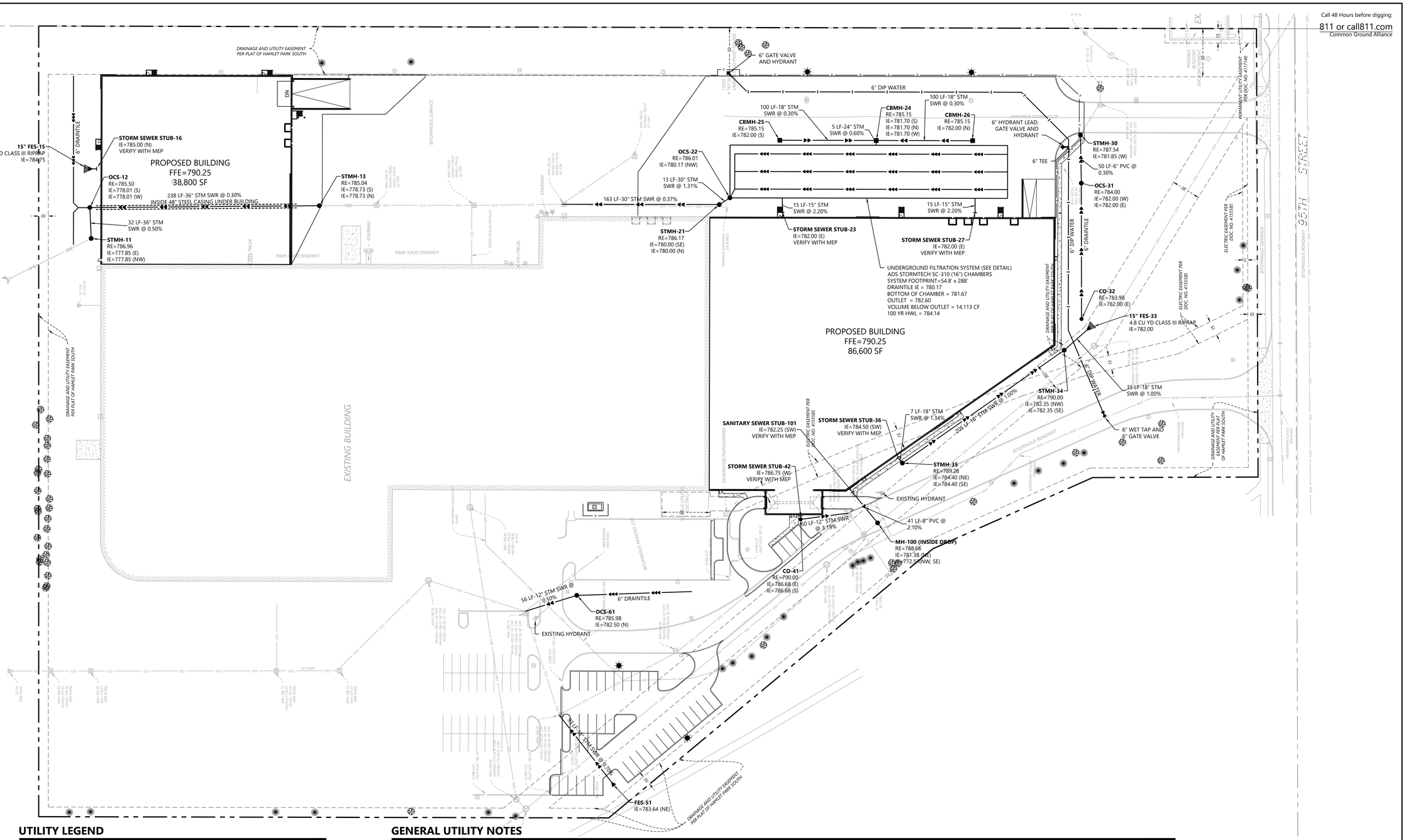
VAN METER EXPANSION

PROJECT NUMBER: 0058882.00

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UTILITY LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
		EASEMENT LINE
		CURB AND GUTTER
SAN SAN	SAN SAN	SANITARY SEWER
FM	FM	SANITARY SEWER FORCE MAIN
STO STO	STO STO	STORM SEWER
WAT WAT	WAT WAT	WATER MAIN
WAT WAT	WAT WAT	HYDRANT
GAS GAS	GAS GAS	GAS
PUG PUG	PUG PUG	UNDERGROUND ELECTRIC
POH POH	POH POH	OVERHEAD ELECTRIC
TUG TUG	TUG TUG	UNDERGROUND TELEPHONE
TOH TOH	TOH TOH	OVERHEAD TELEPHONE
FO FO	FO FO	TELEPHONE FIBER OPTIC
CTV CTV	CTV CTV	CABLE TELEVISION
DT DT	DT DT	DRAIN TILE
		GATE VALVE
		FLARED END SECTION (WITH RIPRAP)
		LIGHT POLE

GENERAL UTILITY NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND LIMITED MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION SHALL NOT BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY THE OWNER OR ENGINEER OF DISCREPANCIES.
2. ALL SANITARY SEWER, STORM SEWER AND WATER MAIN MATERIAL AND INSTALLATIONS SHALL BE PER CITY REQUIREMENTS, MINNESOTA PLUMBING CODE, AND IN ACCORDANCE WITH THE CURRENT EDITION OF "STANDARD SPECIFICATIONS FOR WATER MAIN AND SERVICE LINE INSTALLATION AND SANITARY SEWER AND STORM SEWER INSTALLATION" AS PREPARED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA.
3. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN THE NECESSARY FEDERAL, STATE AND LOCAL PERMITS FOR THE PROPOSED WORK OR VERIFY WITH THE OWNER OR ENGINEER THAT PERMITS HAVE BEEN OBTAINED. PERMIT FEES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS OTHERWISE ARRANGED WITH THE OWNER.
4. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND DIMENSIONS OF DOORWAYS, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY CONNECTION LOCATIONS.
5. ALL PRIVATE LARGE UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE LOCAL JURISDICTION AND MINNESOTA PLUMBING CODE. ALL SMALL / DRY UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE APPROPRIATE UTILITY COMPANY. THE CONTRACTOR SHALL COORDINATE THE SERVICE LINE CONSTRUCTION WITH THE UTILITY COMPANIES.
6. CONTRACTOR SHALL OBTAIN ALL NECESSARY CITY PERMITS FOR UTILITY CONNECTIONS, AND UTILITIES SHALL BE INSPECTED AND APPROVED BY THE CITY. THE CITY SHALL BE NOTIFIED 48-HOURS PRIOR TO COMMENCING WITH THE UTILITY CONSTRUCTION OR ANY REQUIRED TESTING. CONTRACTOR SHALL NOT OPERATE, INTERFERE WITH, CONNECT ANY PIPE OR HOSE TO, OR TAP ANY WATER MAIN BELONGING TO THE CITY UNLESS DULY AUTHORIZED TO DO SO BY THE CITY. ANY ADVERSE CONSEQUENCES OF SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
7. WATER MAIN LENGTHS AS SHOWN ARE APPROXIMATE HORIZONTAL LENGTHS. ALLOW FOR ADDITIONAL PIPE WHEN INSTALLING ON SLOPES OR WHEN DEFLECTIONS ARE REQUIRED. THE JOINT DEFLECTIONS SHALL NOT EXCEED THE MAXIMUM RECOMMENDED BY THE PIPE MANUFACTURER OR BY LOCAL GOVERNING SPECIFICATIONS. FITTINGS REQUIRED TO CONSTRUCT WATER MAIN SHALL BE INCLUDED IN WATER MAIN CONSTRUCTION.
8. PROVIDE WATER MAIN THRUST RESTRAINTS PER CITY STANDARD REQUIREMENTS.
9. A MINIMUM VERTICAL SEPARATION OF 18 INCHES IS REQUIRED AT ALL WATER LINE CROSSINGS WITH SANITARY SEWER OR STORM SEWER AND WATER LINES SHALL CROSS ABOVE ANY SEWER. IF THIS IS NOT ACHIEVABLE, SANITARY AND STORM SEWER SHALL BE CONSTRUCTED OF A MATERIAL APPROVED FOR USE WITHIN A BUILDING AND AS LISTED IN TABLE 701.2 OF THE MINNESOTA PLUMBING CODE. THE WATER LINE SHALL NOT HAVE JOINTS OR CONNECTION WITHIN 10-FEET OF THE CROSSING. INSULATE CROSSINGS WITH STORM SEWER.
10. UTILITY SERVICES TYPICALLY TERMINATE 5' OUTSIDE BUILDING WALL UNLESS OTHERWISE SHOWN OR NOTED.
11. DUCTILE IRON WATER LINES SHALL BE CLASS 52, PER AWWA C115 OR C151. COPPER WATER LINES SHALL BE TYPE K PER ASTM B88. PVC WATER LINES SHALL BE PER AWWA C900 AND INSTALLED PER AWWA C605 IF ALLOWED BY CITY.
12. ALL WATER LINES SHALL HAVE 8' MINIMUM COVER. INSULATE WATER MAIN IF LESS THAN 8' OF COVER. INSULATION SHALL BE DOW STYROFOAM HI BRAND 35 OR EQUIVALENT, WITH 4 INCHES OF THICKNESS.
13. SANITARY SEWER PIPE OUTSIDE THE BUILDING ENVELOPE AND NOT WITHIN 10' OF WATER LINE SHALL BE POLYVINYL CHLORIDE (PVC) SDR 35 OR 26. SDR 26 IS REQUIRED FOR DEPTHS GREATER THAN 15 FEET. SANITARY AND STORM SEWER PIPE WITHIN 10 FEET OF THE BUILDING AND UNDER FOOTINGS, AND WITHIN10 FEET OF WATER LINE SHALL BE SCHEDULE 40 PER ASTM D2665. ALL PLASTIC SANITARY SEWER SHALL BE INSTALLED PER D2321. SOLVENT WELD JOINTS MUST INCLUDE USE OF A PRIMER WHICH IS OF A CONTRASTING COLOR TO THE PIPE AND CEMENT. ALL SANITARY SEWER SHALL BE TESTED ACCORDING TO MINNESOTA PLUMBING CODE, PART 712.0.
14. STORM SEWER PIPE:
    - A. RCP AND HDPE PIPE MAY BE INSTALLED WITH APPROVAL OF LOCAL GOVERNING AGENCY OR MN DEPARTMENT OF LABOR .
    - B. REINFORCED CONCRETE PIPE SHALL BE CLASS 5 FOR PIPE DIAMETERS 18" AND SMALLER, CLASS 3 FOR PIPE DIAMETERS 21" AND LARGER UNLESS OTHERWISE NOTED, PER ASTM C76, WITH GASKETS PER ASTM C443.
    - C. HDPE STORM PIPE 4- TO 10-INCHES IN DIAMETER SHALL MEET REQUIREMENTS OF AASHTO M252. HDPE STORM PIPE 12- TO 60-INCHES IN DIAMETER SHALL MEET REQUIREMENTS OF ASTM F2306. FITTINGS SHALL BE PER ASTM D3212 AND INSTALLED PER ASTM D2321.
    - D. PVC STORM SEWER PIPE AND FITTINGS SHALL BE SCHEDULE 40 PIPE PER ASTM D2665 AND INSTALLED PER ASTM D2321.
    - E. CORRUGATED METAL PIPE (CMP) FOR SIZES 18- TO 120-INCH AND MUST MEET ASTM A760 OR ASTM A796 AND BE INSTALLED PER ASTM A798. CMP MAY NOT BE INSTALLED WITHIN 10-FEET OF A WATERMAIN, WATER SERVICE, OR A BUILDING.
    - F. ALL STORM SEWER JOINTS AND STRUCTURE CONNECTIONS SHALL BE GASTIGHT OR WATERTIGHT AS REQUIRED BY MINNESOTA PLUMBING CODE, PART 707.3. STORM SEWER LOCATED WITHIN 10-FEET OF A BUILDING AND/OR WATER LINE SHALL BE TESTED PER MINNESOTA PLUMBING CODE, PART 712.
15. ALL NONCONDUCTIVE PIPE SHALL BE INSTALLED WITH A LOCATE (TRACER) WIRE PER MINNESOTA PLUMBING CODE 604.10.1.
16. POST INDICATOR VALVES SHALL BE CLOW F-5750 (OR EQUIVALENT) MEETING AWWA STANDARD C509 AND CITY STANDARDS. VALVE TO BE MECHANICAL JOINT RESILIENT WEDGE GATE VALVE. POST TO BE ADJUSTABLE FOR 8 FEET WATER MAIN DEPTH. THE ELECTRICAL ALARM SWITCH SHALL BE PART NO. PCVS2 (OR EQUIVALENT).
17. AFTER CONSTRUCTION IS COMPLETED, THE CONTRACTOR SHALL PROVIDE THE OWNER WITH AN AS-BUILT RECORD OF UTILITY CONSTRUCTION. THE AS-BUILT SHALL INCLUDE LOCATION AND LENGTH DEVIATIONS OR CHANGES TO THE PLAN. CONTRACTOR TO VERIFY WITH OWNER OR

0' 40' 80' 120'

PRELIMINARY PLANS

DESIGNED:
CHECKED:
DRAWN:
HORIZONTAL SCALE: 40'
VERTICAL SCALE: 8' or 4'

INITIAL ISSUE 11/03/2025
REVISIONS:
1 11/06/25 DD SET
2 11/12/25 PLAN COMMN
3 . .
4 . .
5 . .

PREPARED FOR:
VAN METER INC.
850 32ND AVENUE SW
CEDAR RAPIDS, IOWA, 52404

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

GRETCHEN A. SCHROEDER
DATE: 11/12/2025 LICENSE NO. ——

VAN METER EXPANSION
COTTAGE GROVE, MN

Westwood
Phone (952) 937-5150
Toll Free (888) 937-5150
3701 Wayzata Blvd., Suite #200
Minneapolis, MN, 55343
westwoodps.com
Westwood Professional Services, Inc.

UTILITY PLAN

SHEET NUMBER:
C500

DATE: 11/12/2025

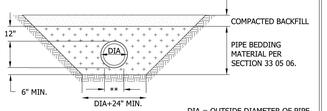
VAN METER EXPANSION

PROJECT NUMBER: 0058882.00

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Common Ground Alliance



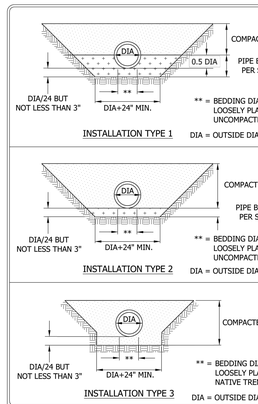
DIA = OUTSIDE DIAMETER OF PIPE
** = BEDDING DIA/3 WIDE. LOOSELY PLACED / UNCOMPACTED MATERIAL.

PVC AND POLYPROPYLENE PIPE FOUNDATION & BEDDING IN GOOD SOILS

Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
PIPE FOUNDATION & BEDDING METHOD FOR PVC & POLYPROPYLENE PIPE	
COTTAGE GROVE, MINNESOTA	PLATE NO. BED-1

48_BED1.DWG



** = BEDDING DIA/3 WIDE. LOOSELY PLACED / UNCOMPACTED MATERIAL.
DIA = OUTSIDE DIAMETER OF PIPE

INSTALLATION TYPE 1

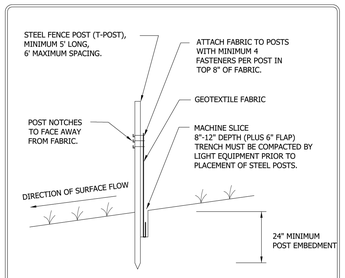
INSTALLATION TYPE 2

INSTALLATION TYPE 3

Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
PIPE FOUNDATION & BEDDING METHODS FOR RCP & DIP	
COTTAGE GROVE, MINNESOTA	PLATE NO. BED-2

48_BED2.DWG

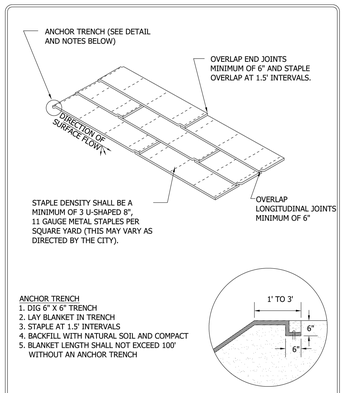


NOTE:
HEAVY-DUTY SILT FENCE INSTALLATION METHODS SHOULD BE USED WHEN DIRECTED BY THE CITY.

Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
MACHINE SLICED SILT FENCE	
COTTAGE GROVE, MINNESOTA	PLATE NO. ERO-1

48_ERO1.DWG

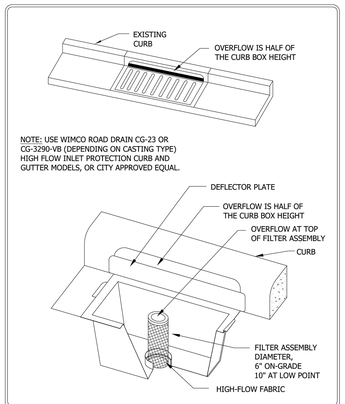


ANCHOR TRENCH
1. DIG 6" X 6" TRENCH
2. LAY BLANKET IN TRENCH
3. STAPLE AT 1.5' INTERVALS
4. BACKFILL WITH NATURAL SOIL AND COMPACT
5. BLANKET LENGTH SHALL NOT EXCEED 100' WITHOUT AN ANCHOR TRENCH

Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
ROLLED EROSION PREVENTION PRODUCTS INSTALLATION	
COTTAGE GROVE, MINNESOTA	PLATE NO. ERO-5

48_ERO5.DWG

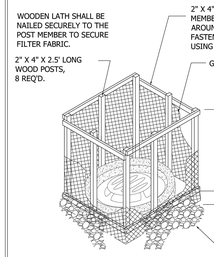


NOTE: USE WIMCO ROAD DRAIN CG-23 OR CG-3290-VB (DEPENDING ON CASTING TYPE) HIGH FLOW INLET PROTECTION CURB AND GUTTER MODELS, OR CITY APPROVED EQUAL.

Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
INLET PROTECTION CATCH BASIN INSERT	
COTTAGE GROVE, MINNESOTA	PLATE NO. ERO-9

48_ERO9.DWG

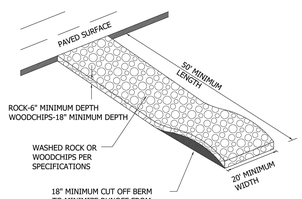


NOTES:
CONTRACTOR SHALL CONSTRUCT SILT BOX TO FIT AROUND THE INLET STRUCTURE WITH 6" MINIMUM CLEARANCE TO EDGES OF STRUCTURE. SILT BOX TO BE PLACED ON AN EVEN SURFACE 6" BELOW STRUCTURE OPENING. TOP OF SILT BOX TO EXTEND 18" MINIMUM ABOVE EXISTING GRADE.

Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
INLET PROTECTION SILT BOX FOR BEEHIVE CASTING	
COTTAGE GROVE, MINNESOTA	PLATE NO. ERO-10

48_ERO10.DWG

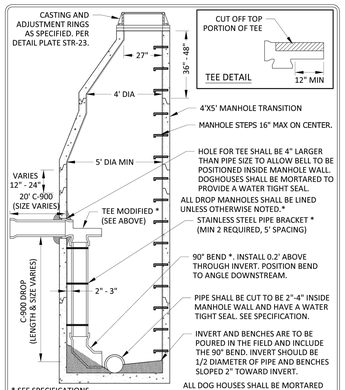


NOTES:
1. FILTER FABRIC SHALL BE PLACED UNDER ROCK OR WOODCHIPS TO STOP MUD MIGRATION THROUGH ROCK.
2. ENTRANCE MUST BE MAINTAINED REGUALRLY TO PREVENT SEDIMENTATION TRACKING.

Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
CONSTRUCTION ENTRANCE ROCK AND WOODCHIP	
COTTAGE GROVE, MINNESOTA	PLATE NO. ERO-12

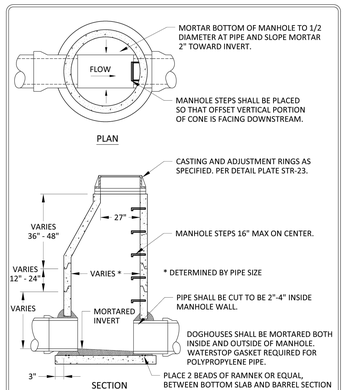
48_ERO12.DWG



Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
SANITARY SEWER DROP INLET MANHOLE	
COTTAGE GROVE, MINNESOTA	PLATE NO. SAN-4

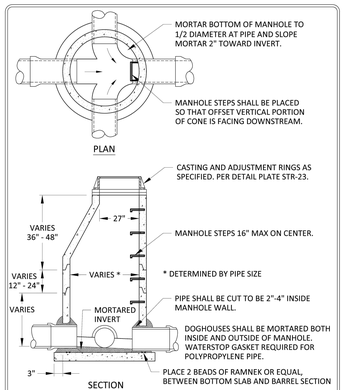
48_SAN4.DWG



Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
STORM SEWER MANHOLE	
COTTAGE GROVE, MINNESOTA	PLATE NO. STO-1

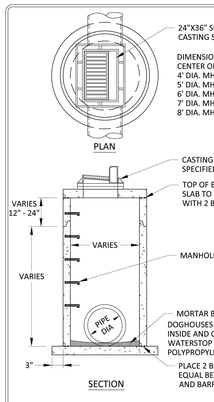
48_STO1.DWG



Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
STORM SEWER JUNCTION MANHOLE	
COTTAGE GROVE, MINNESOTA	PLATE NO. STO-2

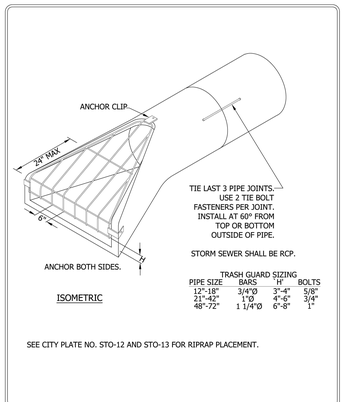
48_STO2.DWG



Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
CATCH BASIN MANHOLE	
COTTAGE GROVE, MINNESOTA	PLATE NO. STO-5

48_STO5.DWG

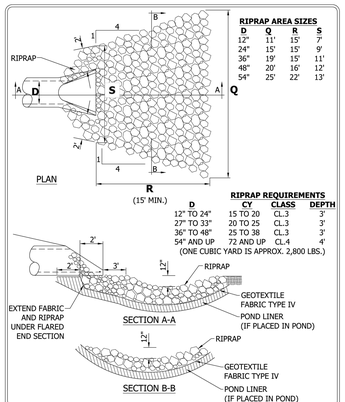


SEE CITY PLATE NO. STO-12 AND STO-13 FOR RIPRAP PLACEMENT.

Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
FLARED END SECTION AND TRASH GAURD	
COTTAGE GROVE, MINNESOTA	PLATE NO. STO-11

48_STO11.DWG



RIPRAP AREA SIZES

D	Q	R	S
12"	11'	15'	7'
24"	15'	15'	9'
36"	19'	15'	11'
48"	20'	16'	12'
54"	25'	22'	13'

RIPRAP REQUIREMENTS

D	CY	CLASS	DEPTH
12" TO 24"	15 TO 20	CL.3	3'
27" TO 33"	20 TO 25	CL.3	3'
36" TO 48"	25 TO 38	CL.3	3'
54" AND UP	72 AND UP	CL.4	4'

(ONE CUBIC YARD IS APPROX. 2,800 LBS.)

Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
RIPRAP AT FLARED END SECTION	
COTTAGE GROVE, MINNESOTA	PLATE NO. STO-12

48_STO12.DWG

DESIGNED:
CHECKED:
DRAWN:
HORIZONTAL SCALE: ###
VERTICAL SCALE: ### or ##

INITIAL ISSUE 11/03/2025

REVISIONS:		
1	11/06/25	DD SET
2	11/12/25	PLAN COMMN
3	.	.
4	.	.
5	.	.

PREPARED FOR:
VAN METER INC.
850 32ND AVENUE SW
CEDAR RAPIDS, IOWA, 52404

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

GRETCHEN A. SCHROEDER
DATE: 11/12/2025 LICENSE NO. ---

VAN METER EXPANSION
COTTAGE GROVE, MN

Westwood
Phone (952) 937-5150
Toll Free (888) 937-5150
12701 Whitewater Drive, Suite #200
Minnetonka, MN 55343
www.westwoodps.com
Westwood Professional Services, Inc.

DETAILS

SHEET NUMBER:
C600

DATE: 11/12/2025

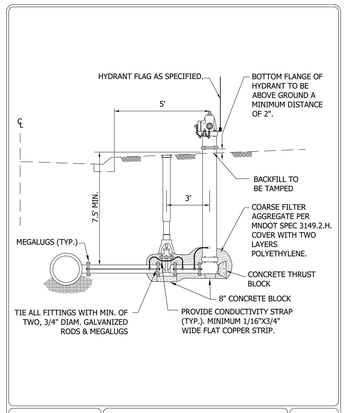
VAN METER EXPANSION

PROJECT NUMBER: 0058882.00

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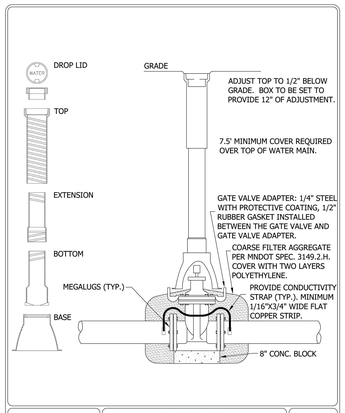
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811 or call811.com
Common Ground Alliance



Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
HYDRANT DETAIL	PLATE NO.
COTTAGE GROVE, MINNESOTA	WAT-1

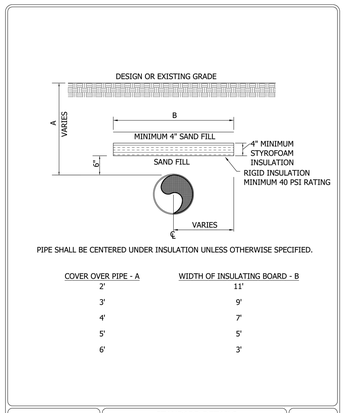
4B_WAT1.DWG



Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
GATE VALVE AND BOX INSTALLATION	PLATE NO.
COTTAGE GROVE, MINNESOTA	WAT-3

4B_WAT3.DWG



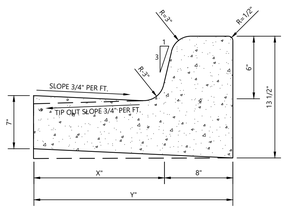
PIPE SHALL BE CENTERED UNDER INSULATION UNLESS OTHERWISE SPECIFIED.

COVER OVER PIPE - A	WIDTH OF INSULATING BOARD - B
2'	11'
3'	9'
4'	7'
5'	5'
6'	3'

Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS	JANUARY 2025
INSULATION DETAIL	PLATE NO.
COTTAGE GROVE, MINNESOTA	WAT-9

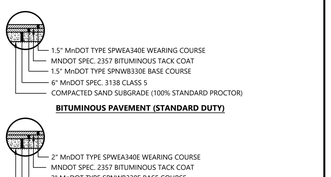
4B_WAT9.DWG



Curb Type	X	Y
B612	12"	20"
B618	18"	26"
B624	24"	32"

NOTES:
1. EXPANSION JOINT SPACING IS 100'
2. MIN. 3" CL. 5 UNDER C.&G.
3. CURB SHALL BE PER MnDOT SPEC 2531

Westwood	B6 STYLE CURB AND GUTTER	LAST REVISED: 01/09/20
		SI01



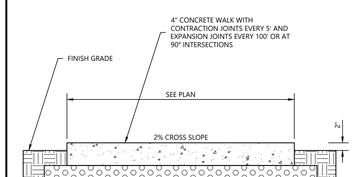
BITUMINOUS PAVEMENT (STANDARD DUTY)



BITUMINOUS PAVEMENT (HEAVY DUTY)

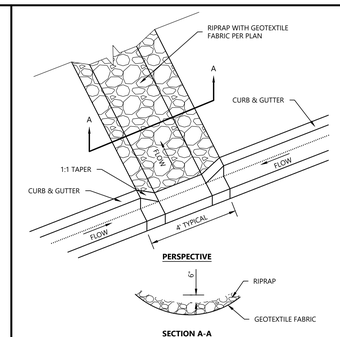
PAVEMENT SECTIONS SHOWN ARE FOR PLANNING PURPOSES ONLY. REFER TO GEOTECHNICAL REPORT FOR FINAL PAVEMENT SECTIONS.

Westwood	PAVEMENT SECTIONS	LAST REVISED: 08/15/17
		SI19A

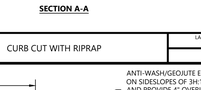


NOTES:
1. SEE ARCHITECTURAL PLANS FOR WALK SCORING AND JOINT LAYOUT.
2. WALK SHALL BE PER MnDOT SPEC 2521 MIX NO. 3A32 WITH A 28-DAY DESIGN STRENGTH OF 3900-PSI.

Westwood	PRIVATE CONCRETE SIDEWALK	LAST REVISED: 08/15/17
		SI08



PERSPECTIVE

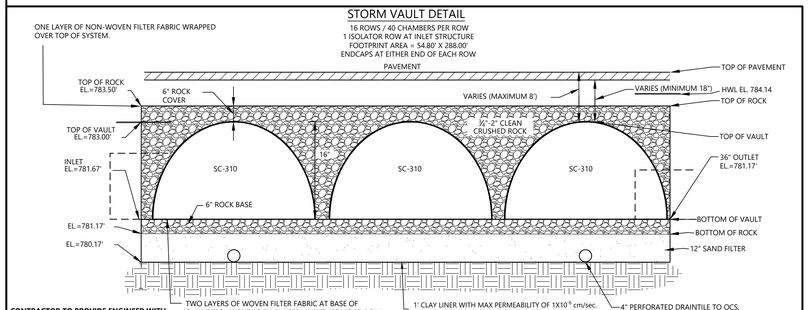


SECTION A-A

Westwood	CURB CUT WITH RIPRAP	LAST REVISED: 08/15/17
		SI32

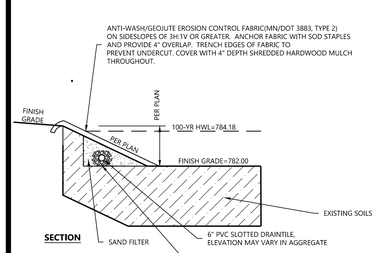
STORM VAULT DETAIL

16 ROWS / 40 CHAMBERS PER ROW
1 ISOLATOR ROW AT INLET STRUCTURE
FOOTPRINT AREA = 54.80' X 288.00'
ENDCAPS AT EITHER END OF EACH ROW



CONTRACTOR TO PROVIDE ENGINEER WITH SHOP DRAWINGS FROM MANUFACTURER.

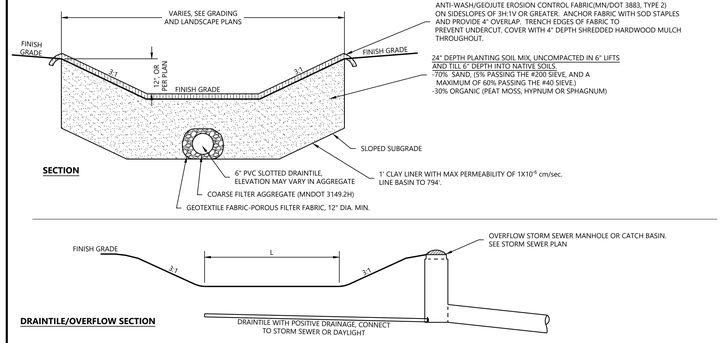
Westwood	UNDERGROUND CHAMBER SYSTEM - TYPICAL SECTION	NOT TO SCALE



NOTES:
1. USE LOW-IMPACT EARTH MOVING EQUIPMENT WITHIN THE BASIN AREA TO AVOID COMPACTION OF THE SOILS UNDER THE FILTRATION SYSTEM.
2. FINAL EXCAVATION OF THE BASIN AND INSTALLATION/INCORPORATION OF SOIL-MEDIA MIX MUST OCCUR IN DRY SOIL CONDITIONS TO PREVENT SMEARING AND COMPACTION. DO NOT WORK IN BASIN IF SOIL CONDITIONS ARE WET.
3. CARE MUST BE TAKEN TO AVOID CONTAMINATION OF SOIL MEDIA MIX WITH SEDIMENT, IN-SITU OR TOPSOIL DURING AND AFTER INSTALLATION. MATERIALS MUST BE SEGREGATED.
4. DO NOT USE LOADER WITHIN THE BASIN TO EXCAVATE OR PLACE SOIL AMENDMENT. LEVELING AND FINAL GRADING WITHIN THE BASIN MUST BE COMPLETED BY HAND.
5. IMMEDIATELY FOLLOWING BASIN CONSTRUCTION, THE BOTTOM AND SIDE SLOPES OF THE BASIN SHALL BE FULLY STABILIZED. TEMPORARY SILT FENCE SHALL BE INSTALLED AT THE TOP OF THE BASIN SIDE-SLOPE AND AS REQUIRED AT THE BOTTOM OF THE SIDE-SLOPE OF THE BASIN PERIMETER. EROSION CONTROL BLANKET ALONG SIDES AND BOTTOM. TEMPORARY EROSION CONTROL TO REMAIN UNTIL THE DRAINAGE AREA IS STABILIZED WITH FINAL IMPROVEMENTS.
6. FILTRATION RATE OF RAIN GARDEN TO BE DRY WITHIN 48 HOUR PERIOD.
7. SEE LANDSCAPE PLAN FOR ADDITIONAL INFO ON MULCH AND PLANTINGS.
8. CONTRACTOR SHALL SUBMIT PRODUCT INFO/SAMPLE FOR APPROVAL PRIOR TO INSTALLATION INVOLVING: SOIL, DRAINTILE, AGGREGATE, FILTER FABRIC, AND EROSION CONTROL FABRIC.

N.T.S.

Westwood	FILTRATION BASIN - SOUTH	LAST REVISED: 03/30/2022
		GD37



ANTI-WASH/GEOJUTE EROSION CONTROL FABRIC(MN/DOT 3883, TYPE 2) ON SIDESLOPES OF 3H:1V OR GREATER. ANCHOR FABRIC WITH SOD STAPLES AND PROVIDE 4" OVERLAP. TRENCH EDGES OF FABRIC TO PREVENT UNDERCUT. COVER WITH 4" DEPTH SHREDDED HARDWOOD MULCH THROUGHOUT.

24" DEPTH PLANTING SOIL MIX, UNCOMPACTED IN 6" LIFTS AND TILL 6" DEPTH INTO NATIVE SOILS.
-70%. SAND, (5% PASSING THE #200 SIEVE, AND A MAXIMUM OF 60% PASSING THE #40 SIEVE.)
-30% ORGANIC (PEAT MOSS, HYPNUM OR SPHAGNUM)

NOTES:
1. NO CONSTRUCTION EQUIPMENT SHALL TRAVEL WITHIN THE INFILTRATION BASIN AREA. USE EXCAVATOR WITH TOOTHED BUCKET FOR INFILTRATION BASIN EXCAVATION TO AVOID COMPACTING OR SMEARING OF SOILS.
2. FINAL EXCAVATION OF THE INFILTRATION BASIN AND INSTALLATION/INCORPORATION OF SOIL-MEDIA MIX MUST OCCUR IN DRY SOIL CONDITIONS TO PREVENT SMEARING AND COMPACTION. DO NOT WORK IN INFILTRATION BASIN IF SOIL CONDITIONS ARE WET.
3. 48-HOURS PRIOR TO INFILTRATION BASIN OVER-EXCAVATION, THE CONTRACTOR SHALL NOTIFY THE CITY AND/OR WATERSHED ENGINEER, AND THE OWNER (OR OWNER'S REPRESENTATIVE), THAT OVER-EXCAVATION WILL BE OCCURRING, TO INSPECT PRIOR TO SOIL MEDIA PLACEMENT, AND TO VERIFY THAT EXPECTED SUB-SOIL INFILTRATION RATES WILL BE ACHIEVED. CONTRACTOR TO PROVIDE INFILTRATION TESTING, ONLY AS REQUIRED.
4. CARE MUST BE TAKEN TO AVOID CONTAMINATION OF SOIL MEDIA MIX WITH SEDIMENT, IN-SITU OR TOPSOIL DURING AND AFTER INSTALLATION. MATERIALS MUST BE SEGREGATED.
5. AFTER OVER-EXCAVATION, AND PRIOR TO PLACEMENT OF SOIL MEDIA MIX, USE FROST RIPPER TO DEEPLY LOOSEN SUB-SOILS TO A MINIMUM DEPTH OF 24", BEFORE BACK-FILLING WITH SOIL MEDIA MIX. UPON PLACEMENT OF SOIL MEDIA MIX, INCORPORATE/RIP SOIL MEDIA MIX INTO THE LOOSENED UNDERLYING SOILS A MINIMUM DEPTH OF 6".
6. USE EXCAVATOR BUCKET TO PLACE SOIL-AMENDMENT - DO NOT USE LOADER WITHIN THE BASIN TO EXCAVATE OR PLACE SOIL AMENDMENT. LEVELING AND FINAL GRADING WITHIN THE BIORETENTION BASINS MUST BE COMPLETED BY HAND.
7. IMMEDIATELY FOLLOWING BASIN CONSTRUCTION, THE BOTTOM AND SIDE SLOPES OF THE BASIN SHALL BE FULLY STABILIZED. TEMPORARY SILT FENCE SHALL BE INSTALLED AT THE TOP OF THE INFILTRATION BASIN SIDE-SLOPE AND AS REQUIRED AT THE BOTTOM OF THE SIDE-SLOPE OF THE INFILTRATION BASIN PERIMETER. EROSION CONTROL BLANKET ALONG SIDES AND BOTTOM. TEMPORARY EROSION CONTROL TO REMAIN UNTIL THE DRAINAGE AREA IS STABILIZED WITH FINAL IMPROVEMENTS.
8. RAIN GARDEN TO BE DRY WITHIN 48 HOUR PERIOD.
9. SEE LANDSCAPE PLAN FOR ADDITIONAL INFO ON MULCH AND PLANTINGS.
10. CONTRACTOR SHALL SUBMIT PRODUCT INFO/SAMPLE FOR APPROVAL PRIOR TO INSTALLATION INVOLVING: SOIL, DRAINTILE, AGGREGATE, FILTER FABRIC, AND EROSION CONTROL FABRIC.

N.T.S.

Westwood	FILTRATION BASIN - NORTH AND WEST	LAST REVISED: 01/04/24
		GD37

DESIGNED:
CHECKED:
DRAWN:
HORIZONTAL SCALE: ###
VERTICAL SCALE: ### or ##

INITIAL ISSUE 11/03/2025
REVISIONS:
1 11/06/25 DD SET
2 11/12/25 PLAN COMMN
3 .
4 .
5 .

PREPARED FOR:
VAN METER INC.
850 32ND AVENUE SW
CEDAR RAPIDS, IOWA, 52404

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

GRETCHEN A. SCHROEDER
DATE: 11/12/2025 LICENSE NO. -

VAN METER EXPANSION
COTTAGE GROVE, MN

Westwood
Phone (952) 937-5150
Toll Free (888) 937-5150
2200 Veterans Drive, Suite #200
Minnesota Mn, 55043
westwoodps.com
Westwood Professional Services, Inc.

DETAILS

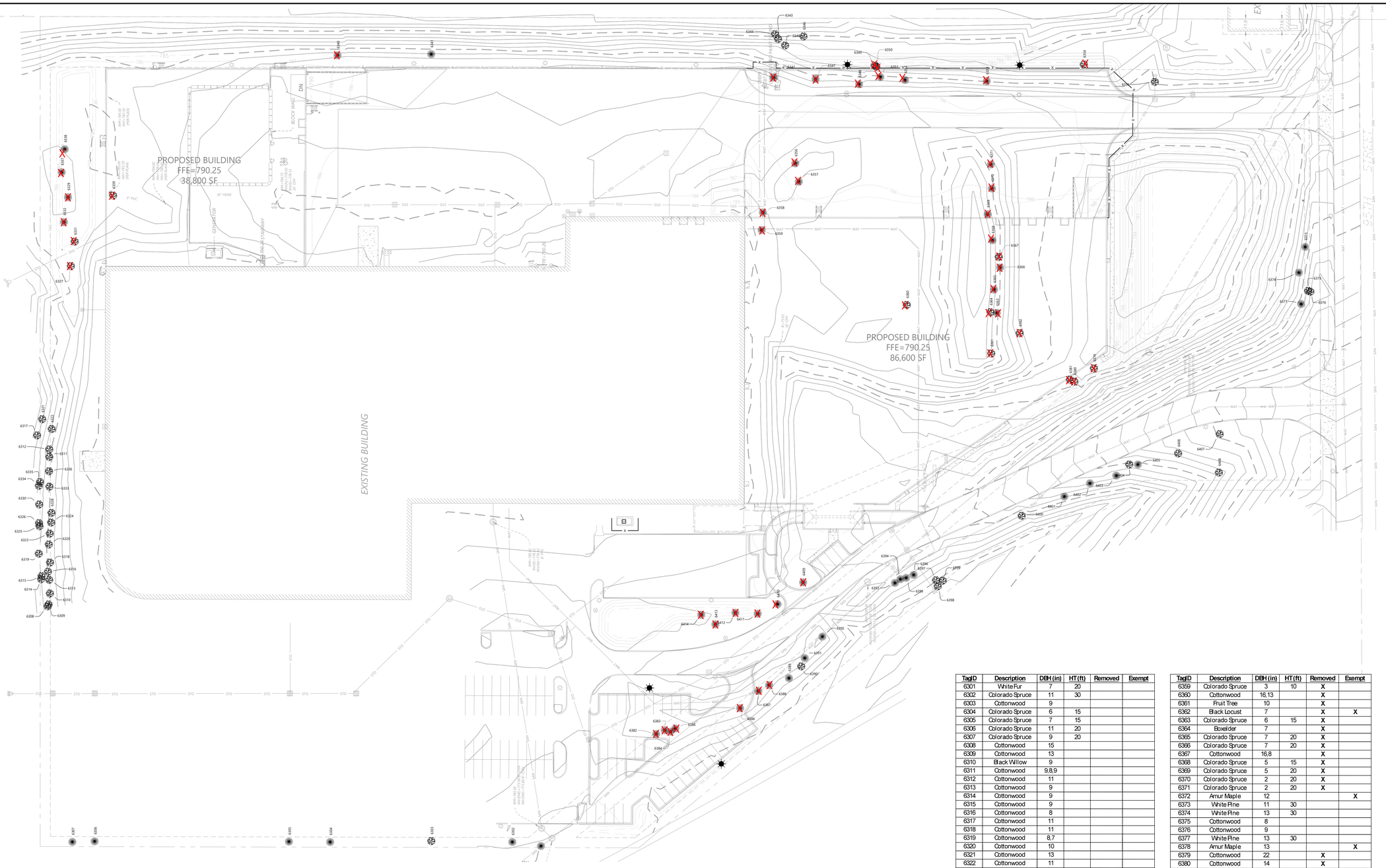
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C601
DATE: 11/12/2025

VAN METER EXPANSION

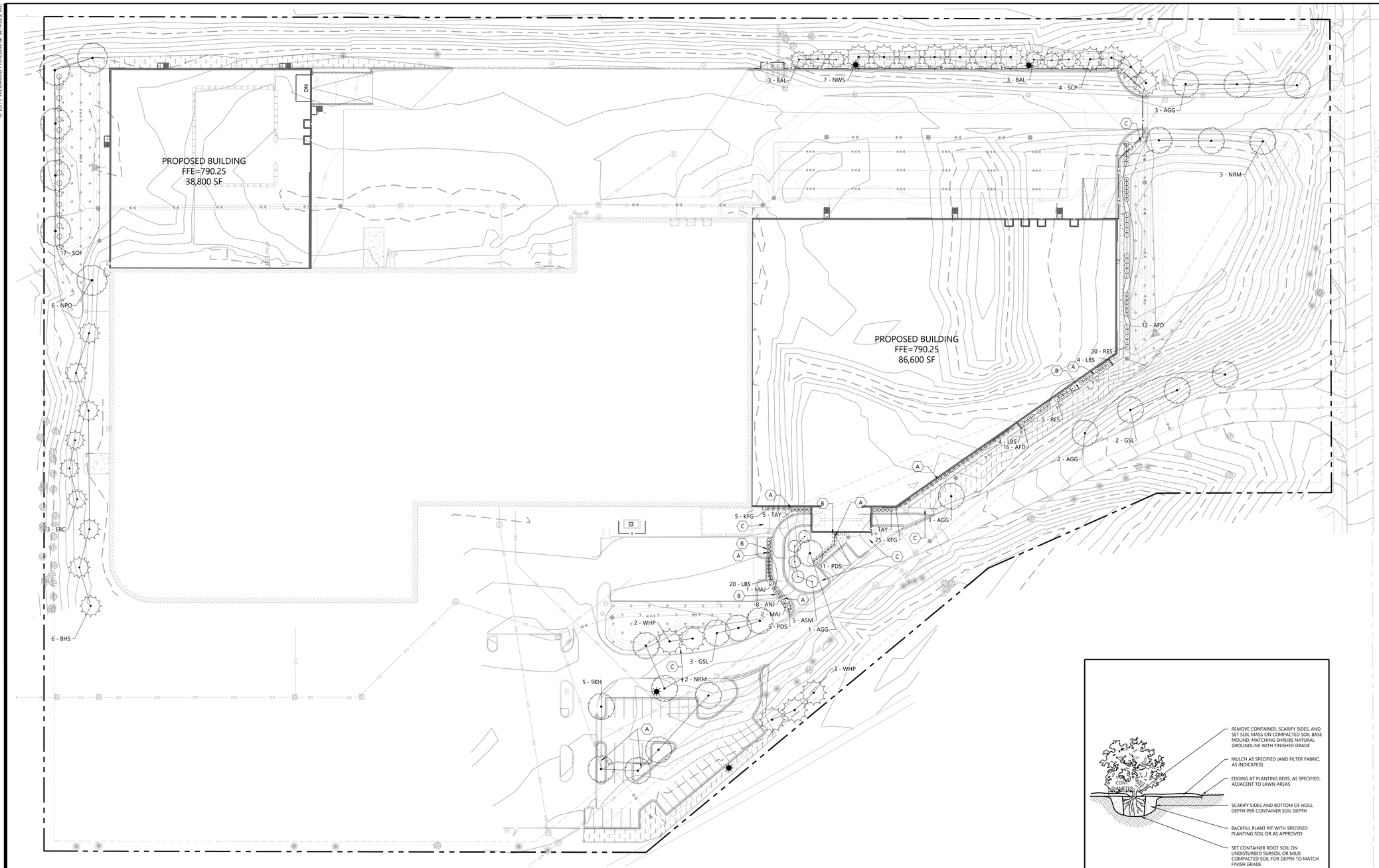
PROJECT NUMBER: 0058882.00

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Call 48 Hours before digging:
811 or call811.com
Common Ground Alliance

PLANTING NOTES

1. CONTRACTOR SHALL CONTACT COMMON GROUND ALLIANCE AT 811 OR CALL811.COM TO VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY PLANTS OR LANDSCAPE MATERIAL.
2. ACTUAL LOCATION OF PLANT MATERIAL IS SUBJECT TO FIELD AND SITE CONDITIONS.
3. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
4. ALL SUBSTITUTIONS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO SUBMISSION OF ANY BID AND/OR QUOTE BY THE LANDSCAPE CONTRACTOR.
5. CONTRACTOR SHALL PROVIDE TWO YEAR GUARANTEE OF ALL PLANT MATERIALS. THE GUARANTEE BEGINS ON THE DATE OF THE LANDSCAPE ARCHITECT'S OR OWNER'S WRITTEN ACCEPTANCE OF THE INITIAL PLANTING. REPLACEMENT PLANT MATERIAL SHALL HAVE A ONE YEAR GUARANTEE COMMENCING UPON PLANTING.
6. ALL PLANTS TO BE SPECIMEN GRADE, MINNESOTA-GROWN AND/OR HARDY. SPECIMEN GRADE SHALL ADHERE TO, BUT IS NOT LIMITED BY, THE FOLLOWING STANDARDS:
   - -ALL PLANTS SHALL BE FREE FROM DISEASE, PESTS, WOUNDS, SCARS, ETC.
   - -ALL PLANTS SHALL BE FREE FROM NOTICEABLE GAPS, HOLES, OR DEFORMITIES.
   - -ALL PLANTS SHALL BE FREE FROM BROKEN OR DEAD BRANCHES.
   - -ALL PLANTS SHALL HAVE HEAVY, HEALTHY BRANCHING AND LEAFING.
7. PLANTS TO MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2014 OR MOST CURRENT VERSION) REQUIREMENTS FOR SIZE AND TYPE SPECIFIED.
8. PLANTS TO BE INSTALLED AS PER MNLA & ANSI STANDARD PLANTING PRACTICES.
9. PLANTS SHALL BE IMMEDIATELY PLANTED UPON ARRIVAL AT SITE. PROPERLY HEEL-IN MATERIALS IF NECESSARY; TEMPORARY ONLY.
10. PRIOR TO PLANTING, FIELD VERIFY THAT THE ROOT COLLAR/ROOT FLAIR IS LOCATED AT THE TOP OF THE BALLED & BURLAP TREE. IF THIS IS NOT THE CASE, SOIL SHALL BE REMOVED DOWN TO THE ROOT COLLAR/ROOT FLAIR. WHEN THE BALLED & BURLAP TREE IS PLANTED, THE ROOT COLLAR/ROOT FLAIR SHALL BE EVEN OR SLIGHTLY ABOVE FINISHED GRADE.
11. OPEN TOP OF BURLAP ON BB MATERIALS; REMOVE POT ON POTTED PLANTS; SPLIT AND BREAK APART PEAT POTS.
12. PRUNE PLANTS AS NECESSARY - PER STANDARD NURSERY PRACTICE AND TO CORRECT POOR BRANCHING OF EXISTING AND PROPOSED TREES.
13. STAKING OF TREES AS REQUIRED; REPOSITION, PLUMB AND STAKE IF NOT PLUMB AFTER ONE YEAR.
14. THE NEED FOR SOIL AMENDMENTS SHALL BE DETERMINED UPON SITE SOIL CONDITIONS PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT FOR THE NEED OF ANY SOIL AMENDMENTS.
15. BACKFILL SOIL AND TOPSOIL TO ADHERE TO MN/DOT STANDARD SPECIFICATION 3877 (SELECT TOPSOIL BORROW) AND TO BE EXISTING TOP SOIL FROM SITE FREE OF ROOTS, ROCKS LARGER THAN ONE INCH, SUBSOIL DEBRIS, AND LARGE WEEDS UNLESS SPECIFIED OTHERWISE. MINIMUM 6" DEPTH TOPSOIL FOR ALL LAWN GRASS AREAS AND 12" DEPTH TOPSOIL FOR TREE, SHRUBS, AND PERENNIALS.
16. MULCH TO BE AT ALL TREE, SHRUB, PERENNIAL, AND MAINTENANCE AREAS. TREE AND SHRUB PLANTING BEDS SHALL HAVE 4" DEPTH OF SHREDDED HARDWOOD MULCH. SHREDDED HARDWOOD MULCH TO BE USED AROUND ALL PLANTS WITHIN TURF AREAS. PERENNIAL AND ORNAMENTAL GRASS BEDS SHALL HAVE 2" DEPTH SHREDDED HARDWOOD MULCH. MULCH TO BE FREE OF DELETERIOUS MATERIAL AND NATURAL COLORED, OR APPROVED EQUAL. MULCH TO MATCH EXISTING CONDITIONS (WHERE APPLICABLE).
17. EDGING TO BE COMMERCIAL GRADE VALLEY-VIEW BLACK DIAMOND (OR EQUAL) POLY EDGING OR SPADED EDGE, AS INDICATED. POLY EDGING SHALL BE PLACED WITH SMOOTH CURVES AND STAKED WITH METAL SPIKES NO GREATER THAN 4 FOOT ON CENTER WITH BASE OF TOP BEAD AT GRADE, FOR MOWERS TO CUT ABOVE WITHOUT DAMAGE. UTILIZE CURBS AND SIDEWALKS FOR EDGING WHERE POSSIBLE. SPADED EDGE TO PROVIDE V-SHAPED DEPTH AND WIDTH TO CREATE SEPARATION BETWEEN MULCH AND GRASS. INDIVIDUAL TREES TO BE SPADED EDGE, UNLESS NOTED OTHERWISE. EDGING TO MATCH EXISTING CONDITIONS (WHERE APPLICABLE).
18. ALL DISTURBED AREAS TO BE SODDED OR SEEDED, UNLESS OTHERWISE NOTED. PARKING LOT ISLANDS TO BE SODDED WITH SHREDDED HARDWOOD MULCH AROUND ALL TREES AND SHRUBS. SOD TO BE STANDARD MINNESOTA GROWN AND HARDY BLUEGRASS MIX, FREE OF LAWN WEEDS. ALL TOPSOIL AREAS TO BE RAKED TO REMOVE DEBRIS AND ENSURE DRAINAGE. SLOPES OF 3:1 OR GREATER SHALL BE STAKED. SEED AS SPECIFIED AND PER MN/DOT SPECIFICATIONS. IF NOT INDICATED ON LANDSCAPE PLAN, SEE EROSION CONTROL PLAN.
19. PROVIDE IRRIGATION TO ALL PLANTED AREAS ON SITE. IRRIGATION SYSTEM TO BE DESIGN/BUILD BY LANDSCAPE CONTRACTOR. LANDSCAPE CONTRACTOR TO PROVIDE SHOP DRAWINGS TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION OF IRRIGATION SYSTEM. CONTRACTOR TO PROVIDE OPERATION MANUALS, AS-BUILT PLANS, AND NORMAL PROGRAMMING. SYSTEM SHALL BE WINTERIZED AND HAVE SPRING STARTUP DURING FIRST YEAR OF OPERATION. SYSTEM SHALL HAVE ONE-YEAR WARRANTY ON ALL PARTS AND LABOR. ALL INFORMATION ABOUT INSTALLATION AND SCHEDULING CAN BE OBTAINED FROM THE GENERAL CONTRACTOR.
20. CONTRACTOR SHALL PROVIDE NECESSARY WATERING OF PLANT MATERIALS UNTIL THE PLANT IS FULLY ESTABLISHED OR IRRIGATION SYSTEM IS OPERATIONAL. OWNER WILL NOT PROVIDE WATER FOR CONTRACTOR.
21. REPAIR, REPLACE, OR PROVIDE SOD/SEED AS REQUIRED FOR ANY ROADWAY BOULEVARD AREAS ADJACENT TO THE SITE DISTURBED DURING CONSTRUCTION.
22. REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.

PLANT SCHEDULE

CONIFEROUS TREES	31				
BAL	BALSAM FIR / ABIES BALSAMEA	6' HT. B&B	AS SHOWN	H 30'-40'	W 15'-20'
ERC	EASTERN REDCEDAR / JUNIPERUS VIRGINIANA	6' HT. B&B	AS SHOWN	H 30'-40'	W 15'-20'
NWS	NORWAY SPRUCE / PICEA ABIES	6' HT. B&B	AS SHOWN	H 50'-60'	W 25'-30'
BHS	BLACK HILLS WHITE SPRUCE / PICEA GLAUCA 'DENSATA'	6' HT. B&B	AS SHOWN	H 35'-45'	W 20'-25'
WHP	WHITE PINE / PINUS STROBUS	6' HT. B&B	AS SHOWN	H 50'-80'	W 25'-40'
SCP	SCOTCH PINE / PINUS SYLVESTRIS	6' HT. B&B	AS SHOWN	H 30'-60'	W 30'-40'
DECIDUOUS TREES	33				
NRM	NORTHWOOD RED MAPLE / ACER RUBRUM 'NORTHWOOD'	2.5" CAL. B&B	AS SHOWN	H 40'-50'	W 30'-40'
ASM	APOLLO® SUGAR MAPLE / ACER SACCHARUM 'BARRETT COLE'	2.5" CAL. B&B	AS SHOWN	H 25-30'	W 10-12'
AGG	AUTUMN GOLD GINKGO / GINKGO BILOBA 'AUTUMN GOLD'	2.5" CAL. B&B	AS SHOWN	H 40'-50'	W 25'-35'
SKH	SKYLINE® HONEY LOCUST / GLEDITSIA TRIACANTHOS INERMIS 'SKYCOLE'	2.5" CAL. B&B	AS SHOWN	H 40'-50'	W 30'-35'
NPO	NORTHERN PIN OAK / QUERCUS ELLIPSOIDALIS	2.5" CAL. B&B	AS SHOWN	H 50'-60'	W 40'-50'
GSL	GREENSPIRE LITTLELEAF LINDEN / TILIA CORDATA 'GREENSPIRE'	2.5" CAL. B&B	AS SHOWN	H 40'-50'	W 30'-35'
CONIFEROUS SHRUBS	21				
MAJ	MANEY JUNIPER / JUNIPERUS CHINENSIS 'MANEYI'	#5 CONT.	5'-0" O.C.	H 4-5	W 5-6
ANJ	ANDORRA JUNIPER / JUNIPERUS HORIZONTALIS 'ANDORRA'	#5 CONT.	4'-0" O.C.	H 3-4'	W 3-4'
TAY	TAUNTON'S ANGLO-JAPANESE YEW / TAXUS X MEDIA 'TAUNTONII'	#5 CONT.	4'-0" O.C.	H 3-4'	W 3-4'
DECIDUOUS SHRUB	70				
RES	REGENT SERVICEBERRY / AMELANCHIER ALNIFOLIA 'REGENT'	#5 CONT.	5'-0" O.C.	H 4-6'	W 4-6'
AFD	ARCTIC FIRE® RED TWIG DOGWOOD / CORNUS SERICEA 'FARROW'	#5 CONT.	4'-0" O.C.	H 3-5'	W 3-5'
SOF	SHOW OFF® FORSYTHIA / FORSYTHIA X INTERMEDIA 'MINDOR'	#5 CONT.	5'-0" O.C.	H 5-6'	W 5-6'
GRASSES	74				
KFG	KARL FOERSTER FEATHER REED GRASS / CALAMAGROSTIS X ACUTIFLORA 'KARL FOERSTER'	#1 CONT.	30" O.C.	H 3-4'	W 2-3'
LBS	LITTLE BLUESTEM / SCHIZACHYRIUM SCOPARIUM	#1 CONT.	24" O.C.	H 2-3'	W 18-24"
PDS	PRAIRIE DROPSEED / SPOROBOLUS HETEROLEPIS	#1 CONT.	3'-0" O.C.	H 2-3'	W 2-3'

ABBREVIATIONS: B&B = BALLED AND BURLAPPED CAL. = CALIPER HT. = HEIGHT O.C. = ON CENTER QTY .= QUANTITY CONT. = CONTAINER

NOTE: QUANTITIES ON PLAN SUPERSEDE LIST QUANTITIES IN THE EVENT OF A DISCREPANCY.

LANDSCAPE LEGEND

- OVERSTORY DECIDUOUS TREE
- OVERSTORY CONIFEROUS TREE
- SHRUBS
- PERENNIALS
- EDGER
- WETLAND SEED MIX
- GENERAL TURF SEED MIX

LANDSCAPE KEYNOTES (A)

A SHREDDED HARDWOOD MULCH (TYP.)
B EDGER (TYP.)
C SOD (TYP.)

SEEDING NOTES

WETLAND SEED MIX

MNDOT WD - WET DITCH (OR A MIX COMPRISED OF SIMILAR VARIETIES OF GRASSES AND FORBES TO BE APPROVED BY LANDSCAPE ARCHITECT). SEED MIX AVAILABLE FROM TWIN CITIES SEED COMPANIES (twincityseed.com, 1.800.545.TURF)

SEED MIX TO BE APPLIED AT A RATE OF 6 LBS/ACRE

GENERAL TURF SEED MIX

MNDOT SB - SOUTHERN BOULEVARD (OR A MIX COMPRISED OF SIMILAR VARIETIES OF GRASSES AND FORBES TO BE APPROVED BY LANDSCAPE ARCHITECT). SEED MIX AVAILABLE FROM TWIN CITIES SEED COMPANIES (twincityseed.com, 1.800.545.TURF)

SEED MIX TO BE APPLIED AT A RATE OF 160 LBS/ACRE

SEED MIX TO BE APPLIED DURING RECOMMENDED PLANTING SEASON, AND USING AN APPROVED METHOD, AS FOUND IN THE MN-DOT SEEDING MANUAL.

LANDSCAPE SUMMARY

REQUIRED LANDSCAPING:

THE NUMBER OF TREES & SHRUBS REQUIRED SHALL BE CALCULATED BY MULTIPLYING THE DISTURBED SITE AREA (AREA IMPACTED BY DEVELOPMENT INCLUDING STRUCTURES, GRADING, PARKING, AND DRIVE LANES) IN SQUARE FEET BY THE COEFFICIENTS IN THE FOLLOWING TABLE FOR EACH LANDSCAPE AMTERIAL. DEVELOPMENT ON EXISTING SITES INCLUDING ADDITIONS AND REDEVELOPMENT SHALL BE CALCULATED USING ONLY THE SQUARE FOOTAGE OF ANY NEWLY DISTURBED AREAS:

DECIDUOUS OVERSTORY COEFFICIENT:	0.0001392
CONIFEROUS COEFFICIENT:	0.00013
SHRUB COEFFICIENT:	0.00039

REQUIRED TREES:

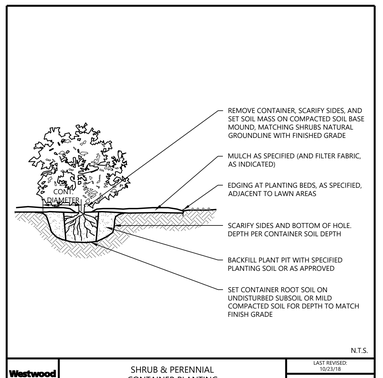
DISTURBED AREA (MINUS STORMWATER AREAS):	232,399.43 SF
DECIDUOUS TREES REQUIRED:	33 (232399.43*.0001392= 32.35= 33)
CONIFEROUS TREES REQUIRED:	31 (232399.43*.00013= 30.21= 31)
SHRUBS REQUIRED:	91 (232399.43*.00039= 90.65= 91)
DECIDUOUS TREES PROVIDED:	33
CONIFEROUS TREES PROVIDED:	31
SHRUBS PROVIDED:	91

+++CITY REQUIREMENTS MET+++



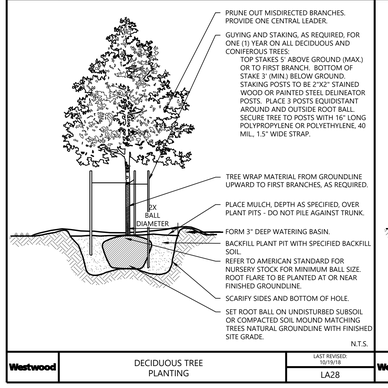
0' 40' 80' 120'

PRELIMINARY PLANS



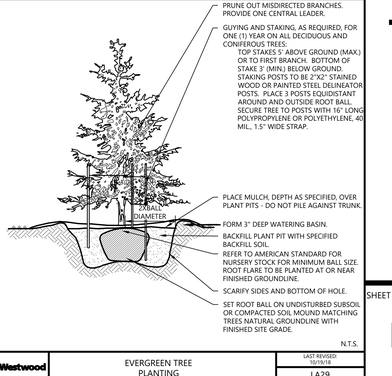
N.T.S.

Westwood | SHRUB & PERENNIAL CONTAINER PLANTING | LAST REVISED: 10/31/18 | LA27-C



N.T.S.

Westwood | DECIDUOUS TREE PLANTING | LAST REVISED: 10/19/18 | LA28



N.T.S.

Westwood | EVERGREEN TREE PLANTING | LAST REVISED: 10/19/18 | LA29

DESIGNED:
CHECKED:
DRAWN:
HORIZONTAL SCALE: 40'
VERTICAL SCALE: 8' or 4'

INITIAL ISSUE 11/03/2025
REVISIONS:
1 11/06/25 DD SET
2 11/12/25 PLAN COMMN
3 .
4 .
5 .

PREPARED FOR:
VAN METER INC.
850 32ND AVENUE SW
CEDAR RAPIDS, IOWA, 52404

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

JEFF WESTENDORF
DATE: 11/12/2025 LICENSE NO. 44018

VAN METER EXPANSION
COTTAGE GROVE, MN

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3200 Minnesota Drive, Suite #200
Minnetonka,MN, 55343
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LANDSCAPE PLAN

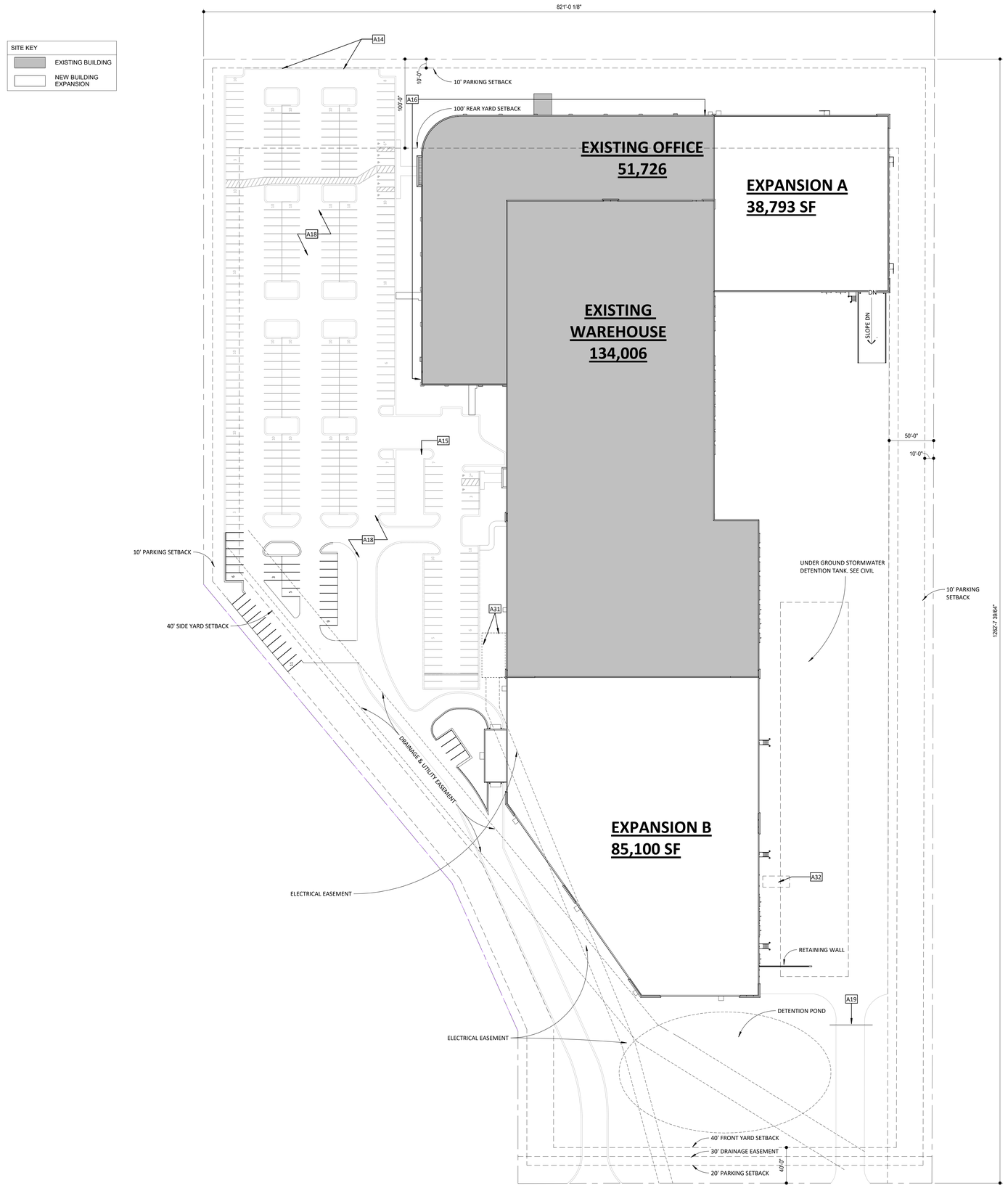
SHEET NUMBER:
L200

DATE: 11/12/2025

PROJECT NUMBER: 0058882.00

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VAN METER EXPANSION



1 A1.1 ARCHITECTURAL SITE PLAN
1" = 50'-0"

NORTH

SITE PLAN GENERAL NOTES

A. SITE INFORMATION HAS BEEN TAKEN FROM A SITE SURVEY PREPARED BY (surveyor and address) DATED (date). GENERAL CONTRACTOR IS TO VERIFY ALL SITE INFORMATION BEFORE STARTING CONSTRUCTION, AND NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES.

B. REFER TO THE GENERAL NOTES FOR OTHER APPLICABLE INFORMATION.

SITE DATA

ZONING DISTRICT: I-1

ZONING REQUIREMENTS	REQUIRED	PROVIDED
BUILDING SETBACKS		
FRONT	40'	40'
REAR	100'	100'
SIDE	40'	40'
PARKING SETBACKS		
FRONT	20'	20'
REAR	10'	10'
SIDE	10'	10'
SITE AREA		875,161 SF (20.1 ACRES)
PROPOSED BUILDING AREA		309,624 SF
MAXIMUM BUILDING AREA (FLOOR AREA RATIO = __%)		_____ SF
MAXIMUM BUILDING COVERAGE (__%)		309,924 SF (54%)
MAXIMUM IMPERVIOUS SURFACE (85%)	743,886 SF MAX	555,423 SF (63%)
PROVIDED PARKING SPACES (EXISTING)		
TOTAL OFFICE (1 SPACE PER 250 SF)	207 SPACES	51,726 NSF
TOTAL WAREHOUSE (1 SPACE PER 2,000 SF)	67 SPACES	134,006 NSF
TOTAL SPACES REQUIRED:	274 SPACES	185,732 NSF
TOTAL SPACES PROVIDED:	302 SPACES	185,732 NSF
TOTAL EXTRA SPACES:	28 SPACES	
PROVIDED PARKING SPACES (NEW)		
TOTAL OFFICE (1 SPACE PER 250 SF)	0 SPACES	0 NSF
TOTAL WAREHOUSE (1 SPACE PER 2,000 SF)	62 SPACES	123,893 NSF
ADDED COMPANY VEHICLES (1 SPACE PER VEHICLE)	0 SPACES	0 VEHICLES
TOTAL SPACES REQUIRED:	336 SPACES	309,624 NSF
TOTAL SPACES PROVIDED:	302 SPACES	309,624 NSF
TOTAL SPACES ADDED:	38 SPACES	
ACCESSIBLE SPACES REQUIRED:	8 TOTAL	
ACCESSIBLE SPACES PROVIDED:	8 TOTAL	
ADDITIONAL SPACES NEEDED:	0 SPACES	

FLOOR PLAN KEY NOTES

A14	REPAIR EMPLOYEE PARKING LOT DRAINS.
A15	REMOVE WINDMILL AND WINDMILL FOUNDATION.
A16	REMOVE DETERIORATED SEALANT AND RESEAL ALL WINDOWS WITH APPROVED SEALANT SYSTEM.
A18	REPAIR AND SEAL CRACKS IN ASPHALT. CONFIRM LOCATIONS WITH OWNER.
A19	INSTALL POWERED YARD GATE AT WAREHOUSE DOCK DRIVEWAY.
A31	CHAIN LINK FENCE AROUND GENERATOR. SEE CIVIL.
A32	STATIONARY TRASH COMPACTOR. ARCHITECTURE

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VAN METER FACILITY EXPANSION

7450 95TH ST S. COTTAGE GROVE, MN 55016

ARCHITECTURAL SITE PLAN

ISSUES & REVISIONS	DATE
PLAN COMMN	11-12-2025

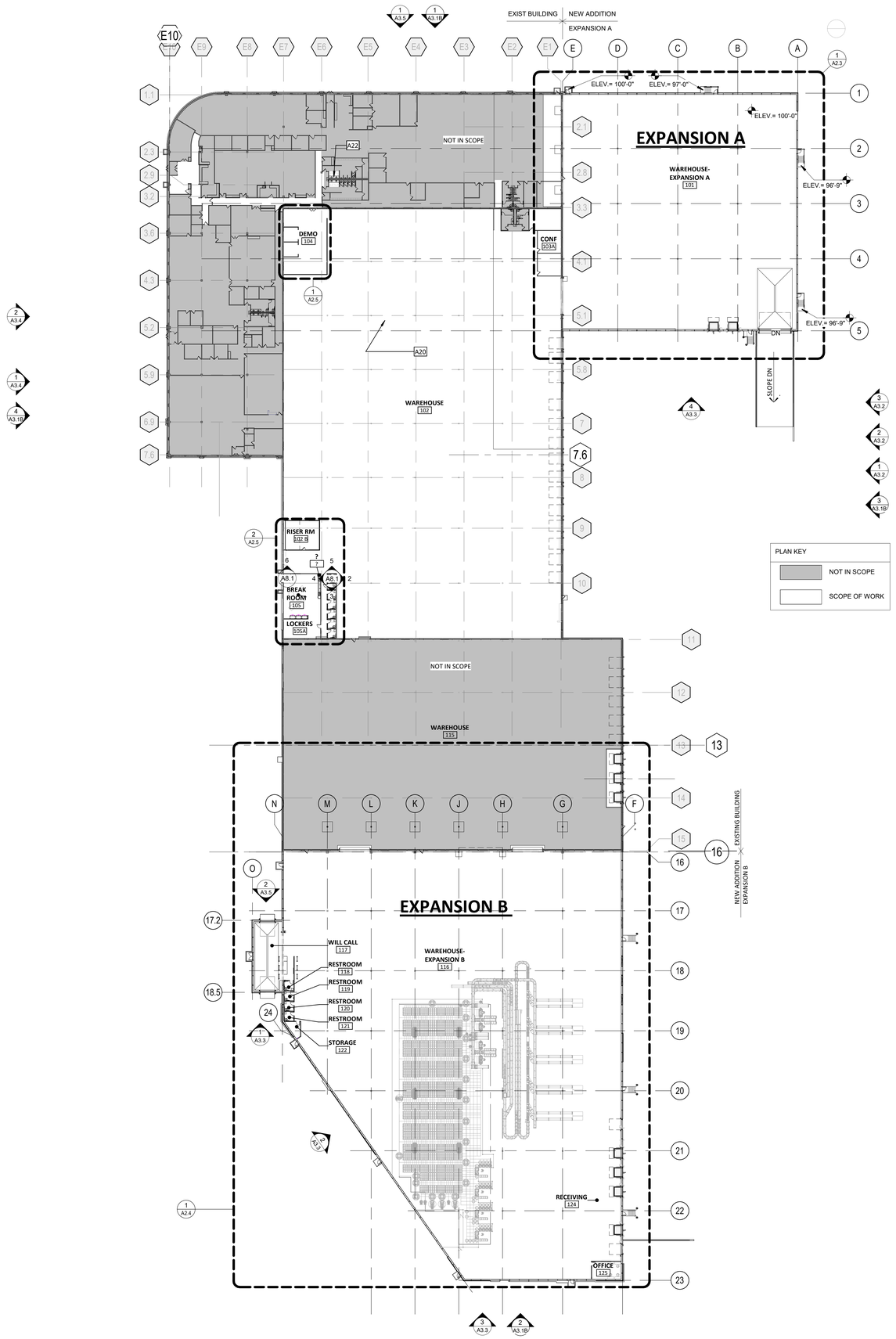
COMMISSION NO:	81552-24199
DRAWN BY:	LL
CHECKED BY:	DP, RT

SHEET

A1.1

TRUE SHEET SCALE
1/2"

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1 A2.2 OVERALL FIRST LEVEL FLOOR PLAN
1" = 40'-0"

FLOOR PLAN GENERAL NOTES

A. DO NOT SCALE DRAWINGS.

B. NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.

C. IN THE CASE OF AMBIGUITIES, DISCREPANCIES, OR IRREGULARITIES IN THE DRAWINGS AND/OR SPECIFICATIONS, THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.

D. IN ALL CONSTRUCTION TYPES, ALL WOOD USED IN THE FOLLOWING LOCATIONS IS TO BE PRESERVATIVE-TREATED:
1. WOOD IN CONTACT WITH THE GROUND OR WATER
2. WOOD IN EXTERIOR FOUNDATION WALLS.
3. WOOD IN CONTACT WITH CONCRETE SLABS-ON-GRADE, OR IN CONTACT WITH CONCRETE OR MASONRY FOUNDATION WALLS.
4. WOOD WITHIN A CRAWL SPACE OVER EXPOSED EARTH.
5. AT OTHER LOCATIONS NOTED ON THE CONSTRUCTION DOCUMENTS

E. ALL WOOD USED IN BUILDINGS OF TYPE I OR II CONSTRUCTION (SEE CODE DATA SHEET), IS TO BE FIRE-RETARDANT-TREATED, WITH THE FOLLOWING EXCEPTIONS:
1. PRESERVATIVE-TREATED WOOD AS NOTED IN GENERAL NOTE "D" ABOVE.
2. INTERIOR FLOOR FINISH AND INTERIOR FINISHES; TRIM AND MILLWORK SUCH AS CABINETRY, DOORS, DOOR FRAMES AND WINDOWS.
3. BLOCKING FOR HANDRAILS, MILLWORK, CABINETS, AND WINDOW AND DOOR FRAMES.

F. SEE SHEET A0.2 FOR SYMBOLS, INDICATION OF MATERIALS, PARTITION TYPE DETAILS & ABBREVIATIONS.

G. ALL NEW PENETRATIONS OF FIRE RATED PARTITIONS AND FLOOR/CEILING ASSEMBLIES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH AN APPROVED UL LISTED FIRESTOP ASSEMBLY.

H. CONTRACTOR SHALL NOTIFY ARCHITECT IN WRITING IF EXISTING CONDITIONS WILL PREVENT OR AFFECT THE NEW CONSTRUCTION.

I. NEW CONSTRUCTION ALIGNING WITH EXISTING CONSTRUCTION IS TO BE FEATHERED FLUSH WITH NO VISIBLE JOINT SHOWING, UNLESS NOTED OTHERWISE.

J. CONTRACTOR SHALL PATCH/REFINISH AFFECTED SURFACES TO MATCH THE ADJACENT CONDITIONS. PATCH/REFINISH SURFACES TO THE NEXT LOGICAL JOINT OR INTERIOR CORNER.

K. CONTRACTOR TO MAINTAIN CONTINUITY OF EXISTING MECHANICAL ELECTRICAL AND LIFE SAFETY SYSTEMS DURING CONSTRUCTION.

L. CONTRACTOR TO MAINTAIN THE FIRE RATING OF ALL EXISTING STRUCTURAL MEMBERS AND RESTORE FIRE RATED ASSEMBLIES DISRUPTED DURING CONSTRUCTION.

M. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE ANY NEW PENETRATIONS OF EXISTING FLOOR STRUCTURES WITH THE OWNER, ARCHITECT AND/OR STRUCTURAL ENGINEER TO CONFIRM THE IMPACT ON THE EXISTING BUILDING SYSTEMS AND STRUCTURES.

N. CONTRACTOR SHALL MAINTAIN/RESTORE EXISTING INSULATION AND/OR VAPOR RETARDER AFFECTED DURING THE CONSTRUCTION.

O. AT PRECAST DOOR OPENINGS, PROVIDE OPENING THAT IS 1" WIDER THAN THE FRAME WIDTH (EX. 3'-4" DOOR FRAME + 1" = 3'-5"). THIS IS TYPICAL AT ALL NEW PRECAST MAN DOOR OPENINGS.

FLOOR PLAN KEY NOTES

A20	INSTALL NEW LED LIGHTING IN ORIGINAL 83,000 SQ FT AREA. SEE DESIGN BUILD ELECTRICAL DRAWINGS.
A22	REPLACE MENS MAIN BATHROOM COUNTERTOP.

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OVERALL FIRST LEVEL FLOOR PLAN

ISSUES & REVISIONS	DATE
PLAN COMMN	11-12-2025

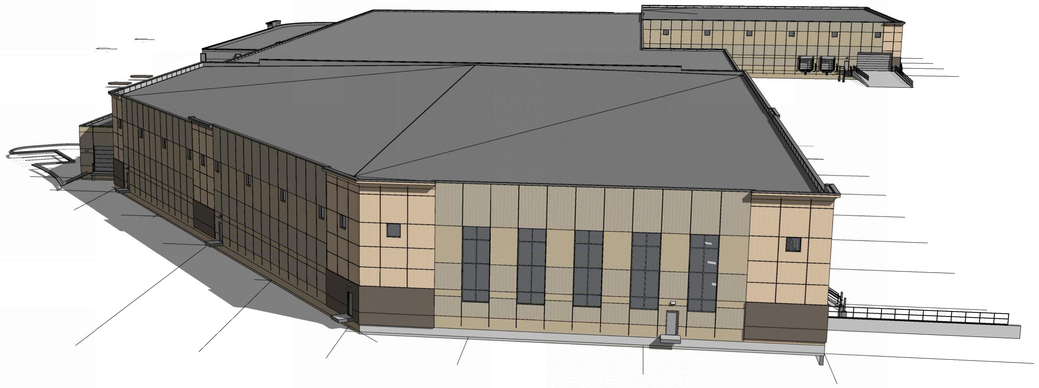
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DRAWN BY:	MP, JM
CHECKED BY:	DP, RT

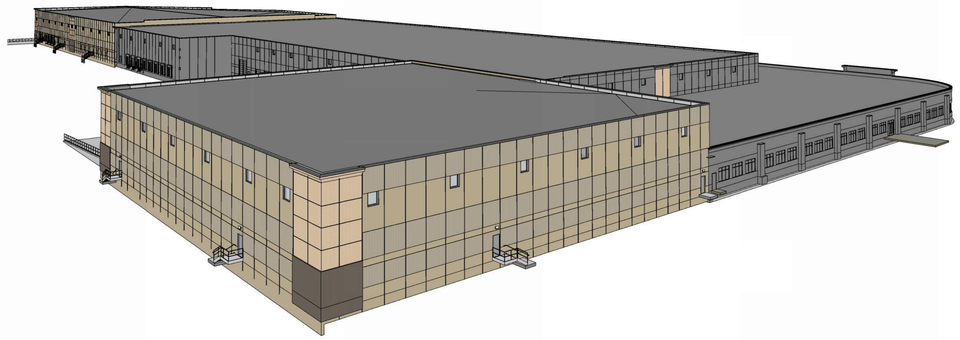
SHEET

A2.2

TRUE SHEET SCALE
0" 1/2" 1"

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VAN METER FACILITY EXPANSION

7450 95TH ST S. COTTAGE GROVE, MN 55016

3D VIEW

ISSUES & REVISIONS	DATE
PLAN COMMN	11-12-2025

COMMISSION NO:	81552-24199
DRAWN BY:	RT
CHECKED BY:	DP, RT

SHEET

A3.0

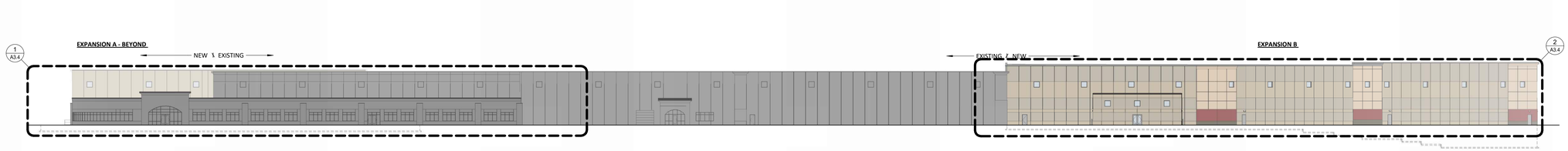
TRUE SHEET SCALE
0" 1/2" 1"

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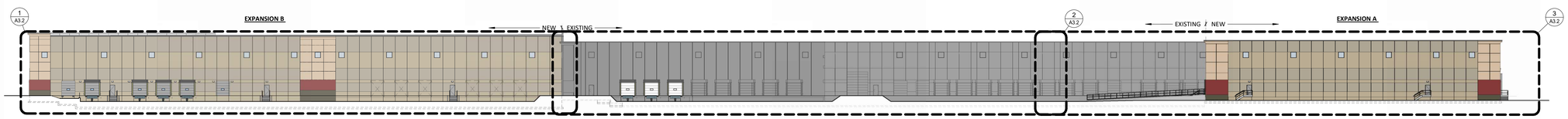
EXTERIOR MATERIAL FINISH SCHEDULE

MATERIAL ID	MATERIAL	MANUFACTURER	FINISH	COLOR	LOCATION
PCAST - 1	PRECAST CONCRETE WALL PANELS	FABCON PRECAST	EXPOSED AGGREGATE	INTEGRALLY COLORED – MATCH EXISTING PRECAST PANEL COLOR	SEE ELEVATIONS
PCAST - 2	PRECAST CONCRETE WALL PANELS	FABCON PRECAST	UNIFORM RIBS	INTEGRALLY COLORED – MATCH EXISTING PRECAST PANEL COLOR	SEE ELEVATIONS
STCO-1	STUCCO FINISH OVER PRECAST PANELS	TBD	SAND FINISH	MATCH EXISTING	SEE ELEVATIONS
BR-1	BRICK VENEER	TBD	TBD	MATCH EXISTING	SEE ELEVATIONS
BLK-1	SPLIT FACE CONCRETE BLOCK VENEER	TBD	TBD	MATCH EXISTING	SEE ELEVATIONS
FLASH - 1	PREFINISHED CAP FLASHING	PAC CLAD	PREFINISHED	MATCH EXISTING METAL COPING COLOR AND FINISH	SEE ELEVATIONS
ASF-1	ALUM STOREFRONT 2"X4 1/2"	OLDCASTLE	PREFIN ANODIZED	MATCH EXISTING	SEE ELEVATIONS
ACW-1	ALUM CURTAIN WALL 2 1/2" X 6"	OLDCASTLE	PREFINF ANODIZED	MATCH EXISTING	SEE ELEVATIONS
WP-1	WALL PACK LIGHTING	TBD	PREFIN POWDER COATED	MATCH EXISTING	SEE ELEVATIONS

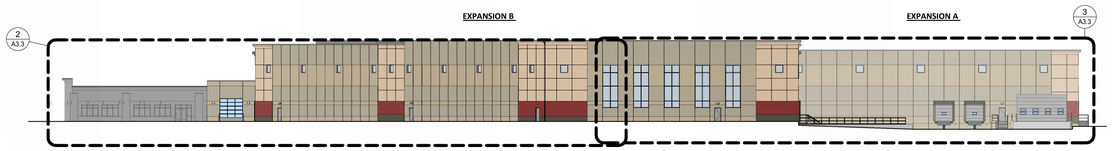
NOTE:
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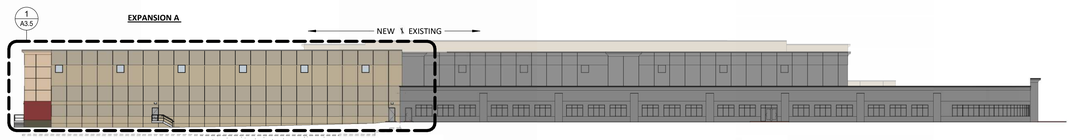
4 A3.1 OVERALL WEST BUILDING ELEVATION
1/32" = 1'-0"



3 A3.1 OVERALL EAST BUILDING ELEVATION
1/32" = 1'-0"



2 A3.1 OVERALL SOUTH BUILDING ELEVATION
1/32" = 1'-0"



1 A3.1 OVERALL NORTH BUILDING ELEVATION
1/32" = 1'-0"

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OVERALL EXTERIOR ELEVATIONS

ISSUES & REVISIONS	DATE
PLAN COMMN	11-12-2025

COMMISSION NO:	81552-24199
DRAWN BY:	MP
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SHEET

A3.1

TRUE SHEET SCALE
0" 1/2" 1"

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PRECAST CONCRETE WALL PANELS

STUCCO FINISH OVER PRECAST

EIFS

BRICK VENEER

SPLIT- FACE CONCRETE BLOCK VENEER

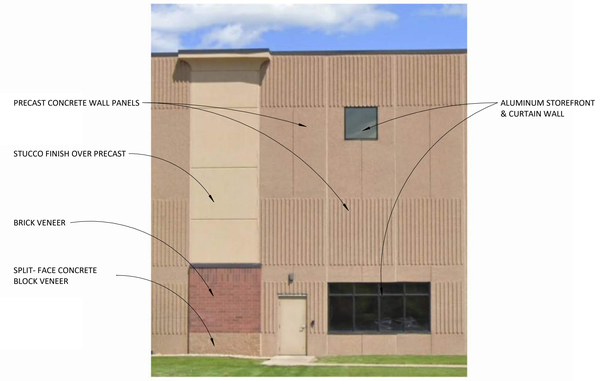
ALUMINUM STOREFRONT & CURTAIN WALL

EXISTING BUILDING

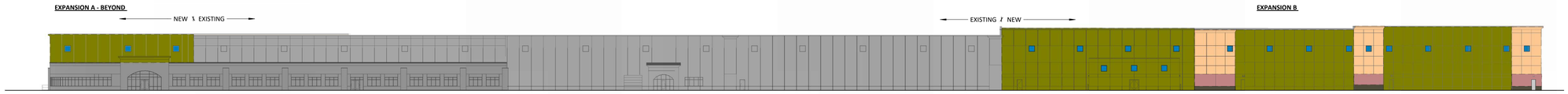
FACADE MATERIAL PERCENTAGE & ZONING COMPLIANCE I-1

ELEVATION	TOTAL FACADE AREA (SF)	PRECAST SF (CLASS 2)	STUCCO SF (CLASS 2)	SPLIT-FACE SF (CLASS 2)	BRICK SF (CLASS 1)	STOREFRONT/CURTAIN WALL (CLASS 1)	EIFS SF (CLASS 3)	CLASS 1 %	CLASS 2 %	CLASS 4 %	COMPLIANCE (≥65% CLASS1+2, ≤10% CLASS4)
NORTH	7887	7081	376	52	143	92	143	3%	94%	-	YES
SOUTH	17540	12741	2800	268	657	288	-	5%	95%	-	YES
EAST	23191	20041	1943	350	569	288	-	3%	97%	-	YES
WEST	16655	13876	2027	256	496	284	-	4%	96%	-	YES
ALL FACADES	65273	53739	7146	926	1736	952	143	4%	95%	-	YES

PERCENTAGES PROVIDED ARE REPRESENTATIVE AND INTENDED TO DEMONSTRATE ZONING COMPLIANCE.
FINAL QUANTITIES WILL BE VERIFIED DURING CONSTRUCTION DOCUMENTS.



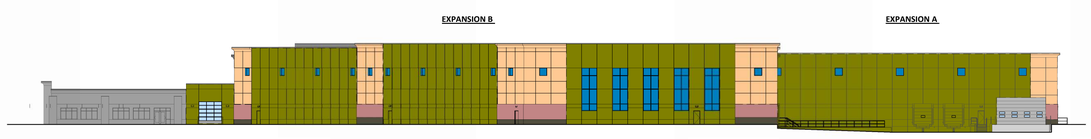
EXISTING FACADE – MATERIAL REFERENCE
NOTE: EXPANSION BUILDING TO MATCH EXISTING FACADE MATERIALS AND FINISHES.



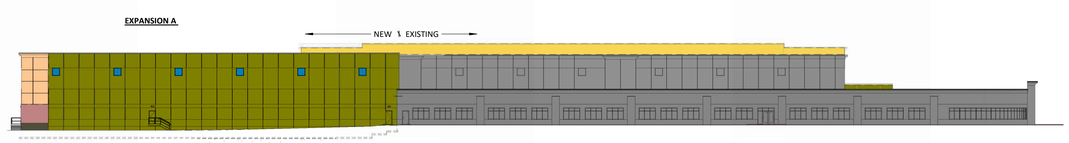
4 A3.1B OVERALL WEST BUILDING ELEVATION
1/32" = 1'-0"



3 A3.1B OVERALL EAST BUILDING ELEVATION
1/32" = 1'-0"



2 A3.1B OVERALL SOUTH BUILDING ELEVATION
1/32" = 1'-0"



1 A3.1B OVERALL NORTH BUILDING ELEVATION
1/32" = 1'-0"

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FACADE MATERIAL COMPLIANCE

ISSUES & REVISIONS	DATE
PLAN COMMN	11-12-2025

COMMISSION NO:	81552-24199
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A3.1B

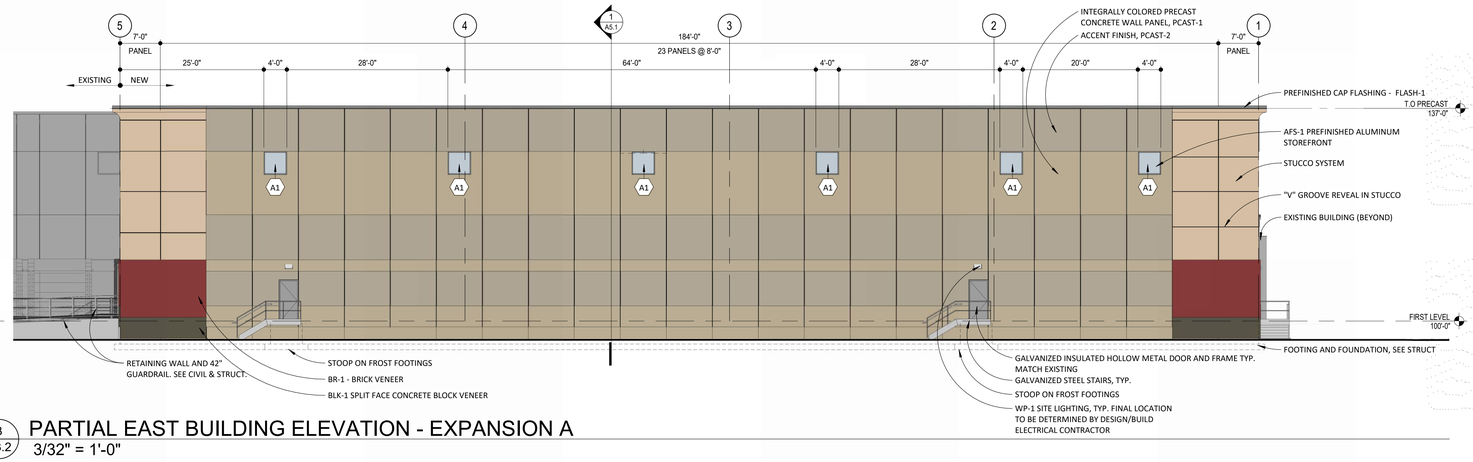
TRUE SHEET SCALE
0" 1/2" 1"

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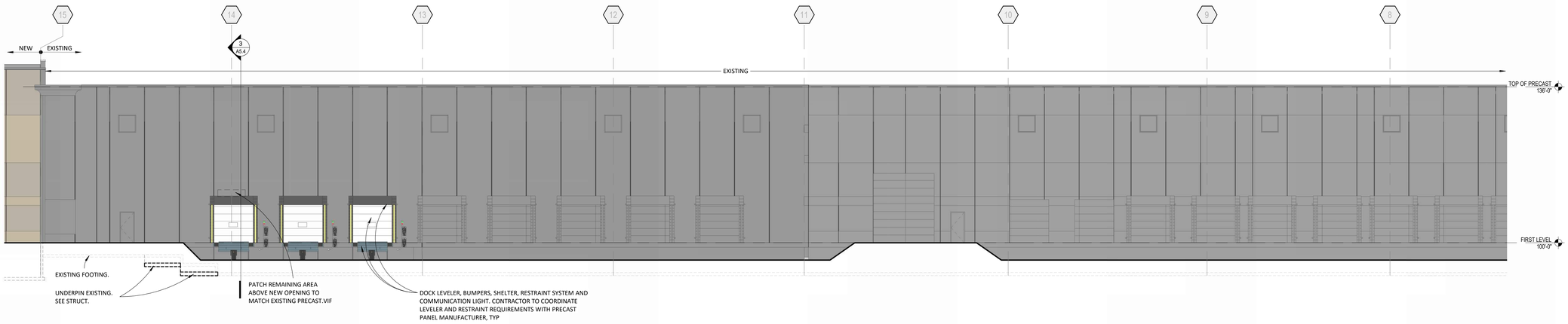
EXTERIOR MATERIAL FINISH SCHEDULE

MATERIAL ID	MATERIAL	MANUFACTURER	FINISH	COLOR	LOCATION
PCAST - 1	PRECAST CONCRETE WALL PANELS	FABCON PRECAST	EXPOSED AGGREGATE	INTEGRALLY COLORED – MATCH EXISTING PRECAST PANEL COLOR	SEE ELEVATIONS
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STCO-1	STUCCO FINISH OVER PRECAST PANELS	TBD	SAND FINISH	MATCH EXISTING	SEE ELEVATIONS
BR-1	BRICK VENEER	TBD	TBD	MATCH EXISTING	SEE ELEVATIONS
BLK-1	SPLIT FACE CONCRETE BLOCK VENEER	TBD	TBD	MATCH EXISTING	SEE ELEVATIONS
FLASH - 1	PREFINISHED CAP FLASHING	PAC CLAD	PREFINISHED	MATCH EXISTING METAL COPING COLOR AND FINISH	SEE ELEVATIONS
ASF-1	ALUM STOREFRONT 2"X4 1/2"	OLDCASTLE	PREFIN ANODIZED	MATCH EXISTING	SEE ELEVATIONS
ACW-1	ALUM CURTAIN WALL 2 1/2" X 6"	OLDCASTLE	PREFINF ANODIZED	MATCH EXISTING	SEE ELEVATIONS
WP-1	WALL PACK LIGHTING	TBD	PREFIN POWDER COATED	MATCH EXISTING	SEE ELEVATIONS

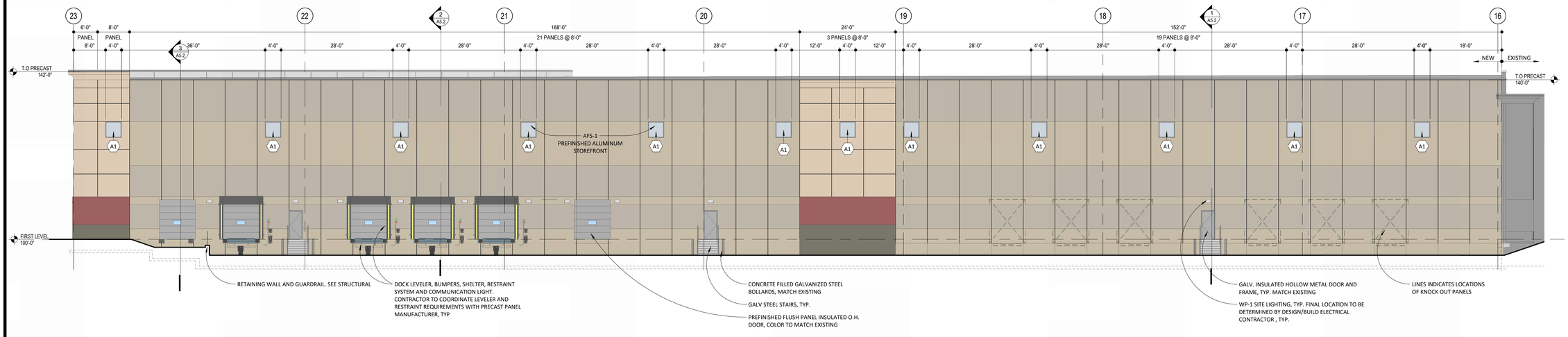
NOTE:
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3 / A3.2 PARTIAL EAST BUILDING ELEVATION - EXPANSION A
3/32" = 1'-0"



2 / A3.2 PARTIAL EAST BUILDING ELEVATION - EXISTING BUILDING AREA
3/32" = 1'-0"



1 / A3.2 PARTIAL EAST BUILDING ELEVATION - EXPANSION B
3/32" = 1'-0"

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PARTIAL ENLARGED EAST EXTERIOR ELEVATIONS

ISSUES & REVISIONS	DATE
PLAN COMMN	11-12-2025

COMMISSION NO:	81552-24199
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SHEET
A3.2

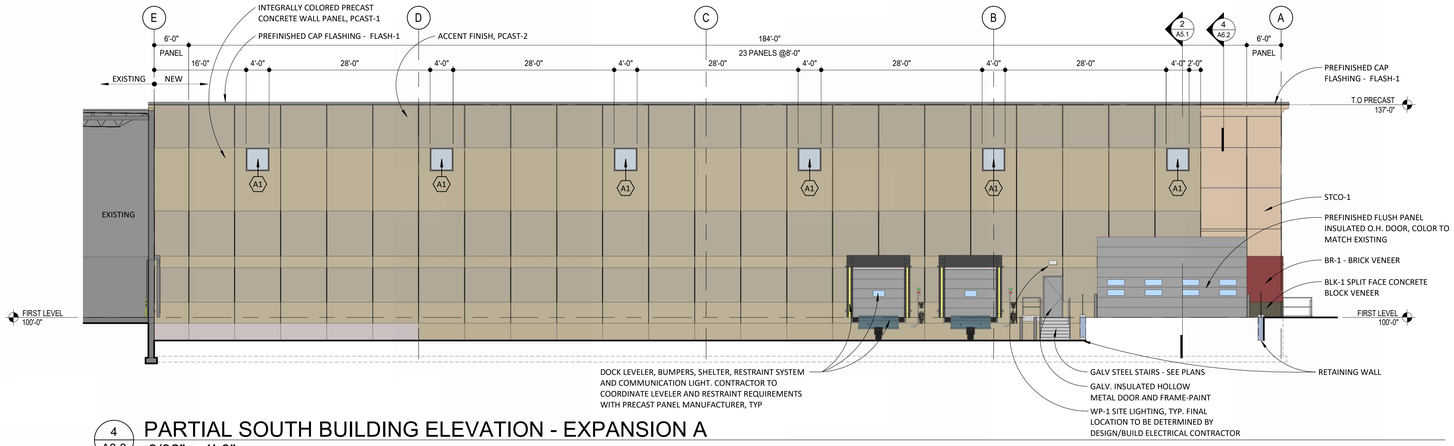
TRUE SHEET SCALE
0" 1/2" 1"

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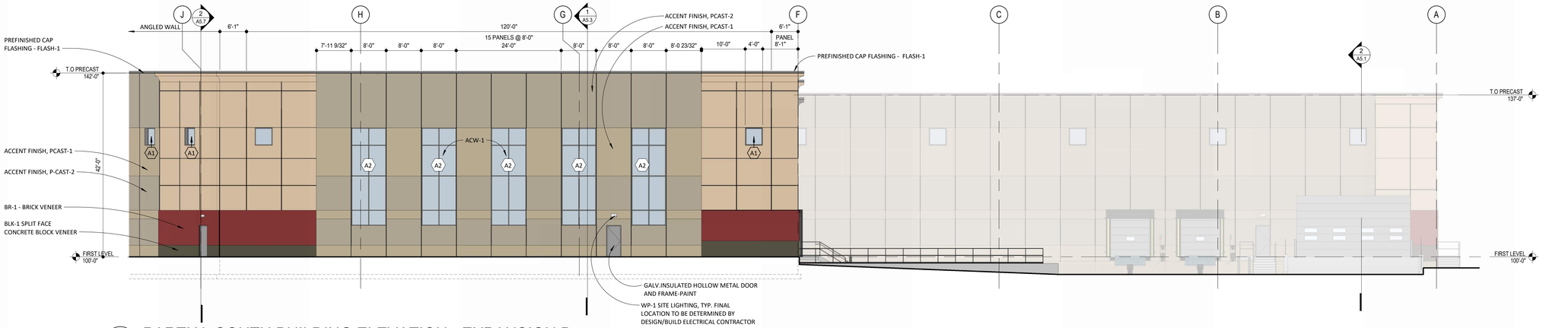
EXTERIOR MATERIAL FINISH SCHEDULE

MATERIAL ID	MATERIAL	MANUFACTURER	FINISH	COLOR	LOCATION
PCAST - 1	PRECAST CONCRETE WALL PANELS	FABCON PRECAST	EXPOSED AGGREGATE	INTEGRALLY COLORED – MATCH EXISTING PRECAST PANEL COLOR	SEE ELEVATIONS
PCAST - 2	PRECAST CONCRETE WALL PANELS	FABCON PRECAST	UNIFORM RIBS	INTEGRALLY COLORED – MATCH EXISTING PRECAST PANEL COLOR	SEE ELEVATIONS
STCO-1	STUCCO FINISH OVER PRECAST PANELS	TBD	SAND FINISH	MATCH EXISTING	SEE ELEVATIONS
BR-1	BRICK VENEER	TBD	TBD	MATCH EXISTING	SEE ELEVATIONS
BLK-1	SPLIT FACE CONCRETE BLOCK VENEER	TBD	TBD	MATCH EXISTING	SEE ELEVATIONS
FLASH - 1	PREFINISHED CAP FLASHING	PAC CLAD	PREFINISHED	MATCH EXISTING METAL COPING COLOR AND FINISH	SEE ELEVATIONS
ASF-1	ALUM STOREFRONT 2"X4 1/2"	OLDCASTLE	PREFIN ANODIZED	MATCH EXISTING	SEE ELEVATIONS
ACW-1	ALUM CURTAIN WALL 2 1/2" X 6"	OLDCASTLE	PREFINF ANODIZED	MATCH EXISTING	SEE ELEVATIONS
WP-1	WALL PACK LIGHTING	TBD	PREFIN POWDER COATED	MATCH EXISTING	SEE ELEVATIONS

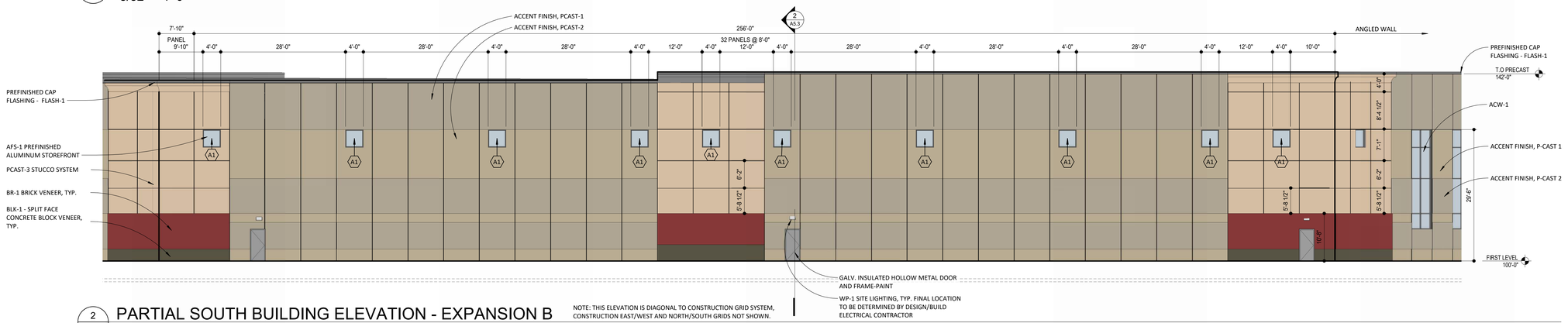
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4 A3.3 PARTIAL SOUTH BUILDING ELEVATION - EXPANSION A
3/32" = 1'-0"

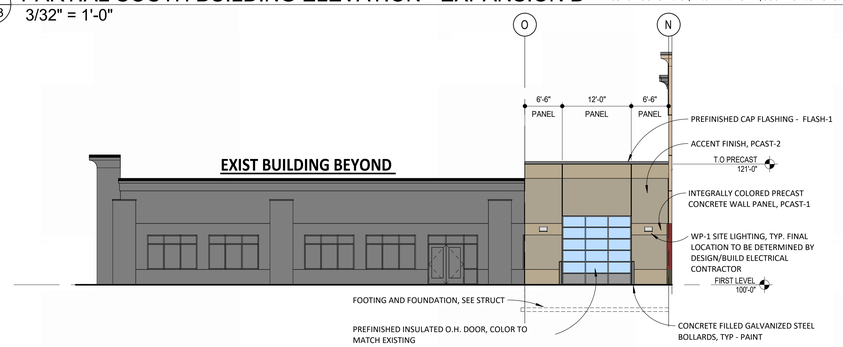


3 A3.3 PARTIAL SOUTH BUILDING ELEVATION - EXPANSION B
3/32" = 1'-0"



2 A3.3 PARTIAL SOUTH BUILDING ELEVATION - EXPANSION B
3/32" = 1'-0"

NOTE: THIS ELEVATION IS DIAGONAL TO CONSTRUCTION GRID SYSTEM, CONSTRUCTION EAST/WEST AND NORTH/SOUTH GRIDS NOT SHOWN.



1 A3.3 PARTIAL SOUTH BUILDING ELEVATION - EXPANSION B
3/32" = 1'-0"

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PARTIAL ENLARGED SOUTH EXTERIOR ELEVATIONS

ISSUES & REVISIONS	DATE
PLAN COMMN	11-12-2025

COMMISSION NO:	81552-24199
DRAWN BY:	MP
CHECKED BY:	DP, RT

SHEET
A3.3

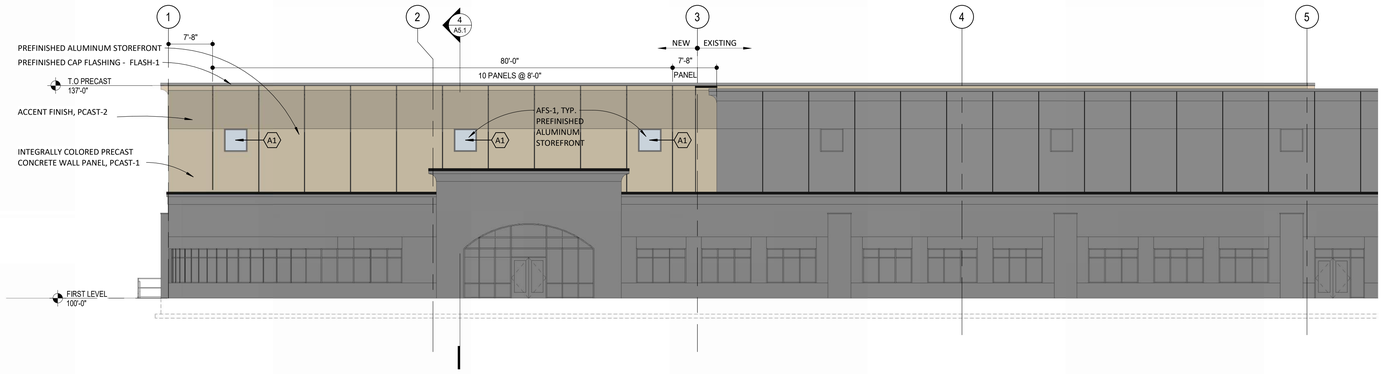
TRUE SHEET SCALE
0" 1/2" 1"

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EXTERIOR MATERIAL FINISH SCHEDULE

MATERIAL ID	MATERIAL	MANUFACTURER	FINISH	COLOR	LOCATION
PCAST - 1	PRECAST CONCRETE WALL PANELS	FABCON PRECAST	EXPOSED AGGREGATE	INTEGRALLY COLORED – MATCH EXISTING PRECAST PANEL COLOR	SEE ELEVATIONS
PCAST - 2	PRECAST CONCRETE WALL PANELS	FABCON PRECAST	UNIFORM RIBS	INTEGRALLY COLORED – MATCH EXISTING PRECAST PANEL COLOR	SEE ELEVATIONS
STCO-1	STUCCO FINISH OVER PRECAST PANELS	TBD	SAND FINISH	MATCH EXISTING	SEE ELEVATIONS
BR-1	BRICK VENEER	TBD	TBD	MATCH EXISTING	SEE ELEVATIONS
BLK-1	SPLIT FACE CONCRETE BLOCK VENEER	TBD	TBD	MATCH EXISTING	SEE ELEVATIONS
FLASH - 1	PREFINISHED CAP FLASHING	PAC CLAD	PREFINISHED	MATCH EXISTING METAL COPING COLOR AND FINISH	SEE ELEVATIONS
ASF-1	ALUM STOREFRONT 2"X4 1/2"	OLDCASTLE	PREFIN ANODIZED	MATCH EXISTING	SEE ELEVATIONS
ACW-1	ALUM CURTAIN WALL 2 1/2" X 6"	OLDCASTLE	PREFINF ANODIZED	MATCH EXISTING	SEE ELEVATIONS
WP-1	WALL PACK LIGHTING	TBD	PREFIN POWDER COATED	MATCH EXISTING	SEE ELEVATIONS

NOTE:
THE "BASIS OF DESIGN" MATERIALS FOR THE PROJECT ARE LISTED ON THE SCHEDULE ABOVE. SEE SPECIFICATIONS FOR ADDITIONAL MATERIAL INFORMATION AND OTHER APPROVE D SUBSTITUTIONS.



1 A3.4 PARTIAL WEST BUILDING ELEVATION - EXPANSION A BEYOND
3/32" = 1'-0"

2 A3.4 PARTIAL WEST BUILDING ELEVATION - EXPANSION B
3/32" = 1'-0"

NOT FOR CONSTRUCTION

pope DESIGN GROUP

POPE DESIGN GROUP
767 N. EUSTIS STREET, SUITE 190
ST. PAUL, MINNESOTA 55114
651.642.9200
WWW.POPEDESIGN.COM

VAN METER

VAN METER FACILITY EXPANSION
7450 95TH ST S. COTTAGE GROVE, MN 55016

PARTIAL ENLARGED WEST EXTERIOR ELEVATIONS

ISSUES & REVISIONS	DATE
PLAN COMMN	11-12-2025

COMMISSION NO:	81552-24199
DRAWN BY:	MP
CHECKED BY:	DP, RT

SHEET
A3.4

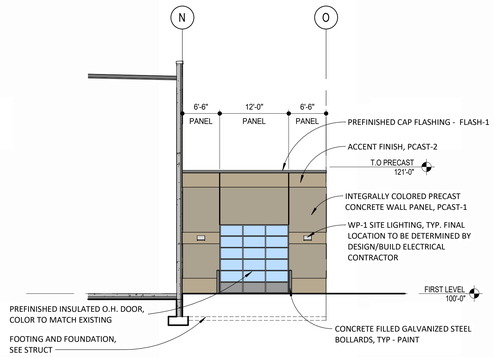
TRUE SHEET SCALE
0" 1/2" 1"

Autodesk Docs://81552-24199 Van Meter Facility Expansion/81552-24199_Van Meter Facility Expansion_R25.rvt
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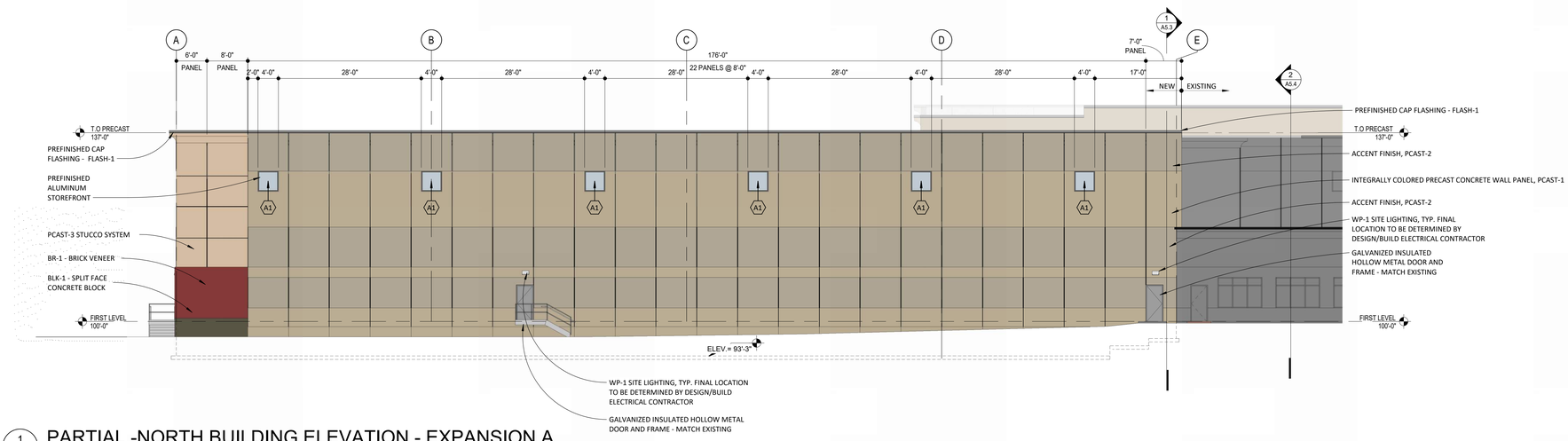
EXTERIOR MATERIAL FINISH SCHEDULE

MATERIAL ID	MATERIAL	MANUFACTURER	FINISH	COLOR	LOCATION
PCAST - 1	PRECAST CONCRETE WALL PANELS	FABCON PRECAST	EXPOSED AGGREGATE	INTEGRALLY COLORED – MATCH EXISTING PRECAST PANEL COLOR	SEE ELEVATIONS
PCAST - 2	PRECAST CONCRETE WALL PANELS	FABCON PRECAST	UNIFORM RIBS	INTEGRALLY COLORED – MATCH EXISTING PRECAST PANEL COLOR	SEE ELEVATIONS
STCO-1	STUCCO FINISH OVER PRECAST PANELS	TBD	SAND FINISH	MATCH EXISTING	SEE ELEVATIONS
BR-1	BRICK VENEER	TBD	TBD	MATCH EXISTING	SEE ELEVATIONS
BLK-1	SPLIT FACE CONCRETE BLOCK VENEER	TBD	TBD	MATCH EXISTING	SEE ELEVATIONS
FLASH - 1	PREFINISHED CAP FLASHING	PAC CLAD	PREFINISHED	MATCH EXISTING METAL COPING COLOR AND FINISH	SEE ELEVATIONS
ASF-1	ALUM STOREFRONT 2"X4 1/2"	OLDCASTLE	PREFIN ANODIZED	MATCH EXISTING	SEE ELEVATIONS
ACW-1	ALUM CURTAIN WALL 2 1/2" X 6"	OLDCASTLE	PREFINF ANODIZED	MATCH EXISTING	SEE ELEVATIONS
WP-1	WALL PACK LIGHTING	TBD	PREFIN POWDER COATED	MATCH EXISTING	SEE ELEVATIONS

NOTE:
THE "BASIS OF DESIGN" MATERIALS FOR THE PROJECT ARE LISTED ON THE SCHEDULE ABOVE. SEE SPECIFICATIONS FOR ADDITIONAL MATERIAL INFORMATION AND OTHER APPROVE D SUBSTITUTIONS.



2 / A3.5 PARTIAL NORTH ELEVATION - EXPANSION B - WILL CALL
3/32" = 1'-0"



1 / A3.5 PARTIAL -NORTH BUILDING ELEVATION - EXPANSION A
3/32" = 1'-0"

POPE DESIGN GROUP
767 N. EUSTIS STREET, SUITE 190
ST. PAUL, MINNESOTA 55114
651.642.9200
WWW.POPEDESIGN.COM

VAN METER

VAN METER FACILITY EXPANSION

7450 95TH ST S. COTTAGE GROVE, MN 55016

NOT FOR CONSTRUCTION

EXTERIOR ELEVATIONS

ISSUES & REVISIONS	DATE
PLAN COMMN	11-12-2025

COMMISSION NO:	81552-24199
DRAWN BY:	MP
CHECKED BY:	DP, RT

SHEET

A3.5

TRUE SHEET SCALE
0" 1/2" 1"

Autodesk Docs://81552-24199 Van Meter Facility Expansion/81552-24199_Van Meter Facility Expansion_R25.rvt
11/12/2025 3:45:00 PM

Westwood

Stormwater Management Plan for

Van Meter
Cottage Grove, MN

Prepared for:
Van Meter, Inc.
850 32nd Avenue SW
Cedar Rapids, IA 52404

Prepared by:
Westwood Professional Services
12701 Whitewater Drive, Suite #300
Minnetonka, MN 55343
(952) 937-5150

Project Number: 0058882.00
Submittal Date: 11/11/2025

CONTENTS

INTRODUCTION 2
REGULATIONS 2
Rate Control 2
Volume Control 2
Water Quality 2
EXISTING CONDITIONS 3
PROPOSED CONDITIONS 3
RATE CONTROL 4
VOLUME CONTROL 4
WATER QUALITY 5
CONCLUSIONS 6

EXHIBITS

Exhibit 1: Existing Drainage Map
Exhibit 2: Proposed Drainage Map
Exhibit 3: Soil Borings
Exhibit 4: 2007 and 1015 Drainage Areas
Exhibit 5: Existing HydroCAD Report
Exhibit 6: Proposed HydroCAD Report
Exhibit 7: Stage Storage Tables
Exhibit 8: P8 Report

INTRODUCTION

This drainage study summarizes the stormwater analysis for the proposed Van Meter Addition project located at 7450 95th Street in Cottage Grove, Minnesota. The proposed project will consist of 2 building additions to the existing building with associated truck dock areas and utility infrastructure. The original site development, including future expansion of the building and paving, was included as part of the Hamlet Park Pond Improvement Project in 2007. Previous building additions were constructed in 2015.

An existing drainage map is shown in Exhibit 1. The proposed drainage map is shown on Exhibit 2. For reference, drainage area maps for the original development and 2015 additions are included as Exhibit 4. The site was modeled in HydroCAD to analyze the existing conditions and proposed conditions, as shown in Exhibits 5 and 6. The rainfall distributions and depths that were used in the HydroCAD analysis are from NOAA Atlas 14.

REGULATIONS

The project site is under the regulatory authority of the City of Cottage Grove, South Washington Watershed District, and the MPCA.

Rate Control

Peak flow rates after development shall not exceed pre-development peak flow rates for the critical 2, 10, and 100-year storm events.

Volume Control

The City requires a uniform volume control equal to 1" of runoff from the sum of new and fully reconstructed impervious surfaces. Site soils are primarily soil group D with pervious areas having a curve number of 80. Soil Borings are included in Exhibit 3.

The site is located within the 10-year composite groundwater capture zone, where infiltration is prohibited. In addition, the soil borings indicate high bedrock which also prohibits infiltration. An Alternative Sequencing procedure will be applied to achieve compliance through the use of filtration practices.

Water Quality

The City requires that new development projects include BMPs that at a minimum achieve post-development reductions in TP and TSS by 50% and 80%, respectively. South Washington Watershed rules also call for TP loading rate of 0.22 lbs/acre/year or existing loading rates, whichever is less.

EXISTING CONDITIONS

The existing site consists of an existing building and paved parking and truck dock areas. The majority of the site drainage is collected via storm sewer and discharges to the existing Hamlet Park Pond on the north side of the site. The south portion of the site drains to two shallow basins that overflow to the existing channel east of the site.

The 2007 Hamlet Park Pond Improvement Project was designed to include 460,300 SF (10.567 Ac) impervious area from the site. The 2015 building additions brought the total site impervious area up to 440,645 SF (10.116 Ac) per the Drainage Report done for that project.

PROPOSED CONDITIONS

The proposed site consists of two building additions on the northeast and south of the existing building, along with associated paving and utility infrastructure. Proposed conditions cover is presented in Table 1 below.

Table 1: Proposed Conditions Cover

Cover	Area [ac]
Impervious	14.614
Pervious	5.503
Total	21.117

The proposed development exceeds the original design impervious area discharging to Hamlet Park Pond. Additional stormwater management is proposed to meet current requirements. In addition, the existing BMPs constructed with the 2015 additions are proposed to be disturbed by the proposed project, and the proposed BMPs were sized to accommodate the impervious area previously treated by the existing BMPs.

The north basin will be reconstructed north of the building addition. Both the north building addition and the 2015 building addition will discharge to the north basin.

The underground chamber system will be constructed in the loading dock area east of the proposed south addition. The east half of the south addition and the 2015 south building addition will discharge to the underground system before connecting to the existing storm sewer discharging north to Hamlet Park Pond, consistent with the original design.

The south basin is an existing low area south of the proposed building addition. The draintile will be relocated to the proposed basin edge, similar to the existing condition. Drainage to the

south basin will be reduced to the west half of the south addition. The south basin will continue to discharge to the channel east of the site.

The west basin will be constructed in an existing green space area to treat discharge from the existing parking lot area previously treated by the south basin per the 2015 design. The swales that conveyed this drainage to the south basin are impacted by the proposed south addition. Instead, a new curb cut will direct the discharge to the west to the basin and then connect via storm sewer to the north. This area was originally designed to discharge north.

Since the site is located within the 10-year groundwater capture zone, lined filtration basins and underground chamber system are proposed using the Alternative Sequencing procedure.

RATE CONTROL

The proposed project peak flow rates shall not exceed the existing rates. The table below shows a summary of the runoff rates from the 20.117-acre parcel. Complete calculations can be found in Exhibits 5 and 6.

Table 2: Peak Discharge Rates

Storm Event	Existing Site Discharge Rate [cfs]	Proposed Site Discharge Rate [cfs]
2-year	38.43	30.28
10-year	63.92	63.00
100-year	123.08	120.10

The 100-yr HWL of north basin is 786.04. The 100-yr HWL of underground chamber system basin is 784.14. The 100-yr HWL of south basin is 784.18. The 100-yr HWL of west basin is 786.73. With the building FEE at 790.25, the 3-foot freeboard requirement is met.

Much of the proposed impervious area is building roof which does not require pretreatment. For the new pavement area draining to underground chamber system, pretreatment will be provided by the Isolator Row of the StormTech system.

VOLUME CONTROL

The City of Cottage Grove requires volume control equal to 1" of runoff from the sum of new and fully reconstructed impervious surfaces sum of new and fully reconstructed impervious surfaces. In addition, the existing impervious areas that were treated by the existing BMPs

impacted by the proposed project are included. The following table is a summary of the proposed areas for volume control.

Table 3: Volume Control Area Summary

New Impervious Area	4.498 acres
Reconstructed Impervious Area	0.362 acres
Existing Impervious Area treated by impacted BMPs	2.519 acres
Total to be treated	7.379 acres

As previously discussed, an Alternative Sequencing procedure will be applied to achieve compliance where infiltration is not allowed within the 10-yr Groundwater Recapture Zone. Biofiltration and filtration with liner and underdrain are proposed to meet the volume control requirement. The table below shows the required and provided filtration volumes. The Other impervious area in the table is the proposed parking and will call drive lane in the west portion of the site that connect to existing storm sewer draining north and the reconstructed pavement in the loading dock areas draining to existing storm sewer inlets. Site constraints limit the ability to provide volume control for these areas without further site impacts, but the total proposed filtration volume exceeds the total required volume.

Table 4: Volume Abstraction Requirement

Basin	Impervious Area [ac]	Required Vol [CF]	Provided Filtration Vol. [CF]
North	1.712	6,213	8,031
UG System	3.870	14,047	14,113
South	0.793	2,880	28,096
West	0.227	824	2,351
Other	0.777	2,822	
Total	7.379	26,786	52,591

HydroCAD Stage-storage tables for the basins can be found in Exhibit 7.

WATER QUALITY

The City of Cottage Grove requires that new development projects include BMPs that at a minimum achieve post-development reductions in TP and TSS by 50% and 80%, respectively. In addition, South Washington rules call for TP loading rate of 0.22 lbs/acre/year or existing loading rates, whichever is less. A P8 model with the required watershed adjustments was used for the analysis. The P8 input and output spreadsheets can be found in Exhibit 8.

Table 5: P8 modeling results

	TSS Inflow [lbs/yr]	TSS Trapped [lbs/yr]	TSS Load Reduction	TP Inflow [lbs/yr]	TP Trapped [lbs/yr]	TP Load Reduction
Total	3,627	3,301	91.0%	11.65	7.12	61.2%

The allowable TP loading rate for the proposed project area is 1.79 lbs/year (8.15 acres x 0.22 lbs/acre/year). The P8 model shows a TP loading of 4.51 lbs/year (135.27 lb/30 years) for the proposed condition.

It is proposed to purchase off-site mitigation credits for the excess 2.72 lbs of phosphorous loading, depending on whether credits were not previously purchased with the 2015 project. Note these calculations include drainage areas 2, 3, and 4, which include some existing impervious areas in addition to the new impervious areas.

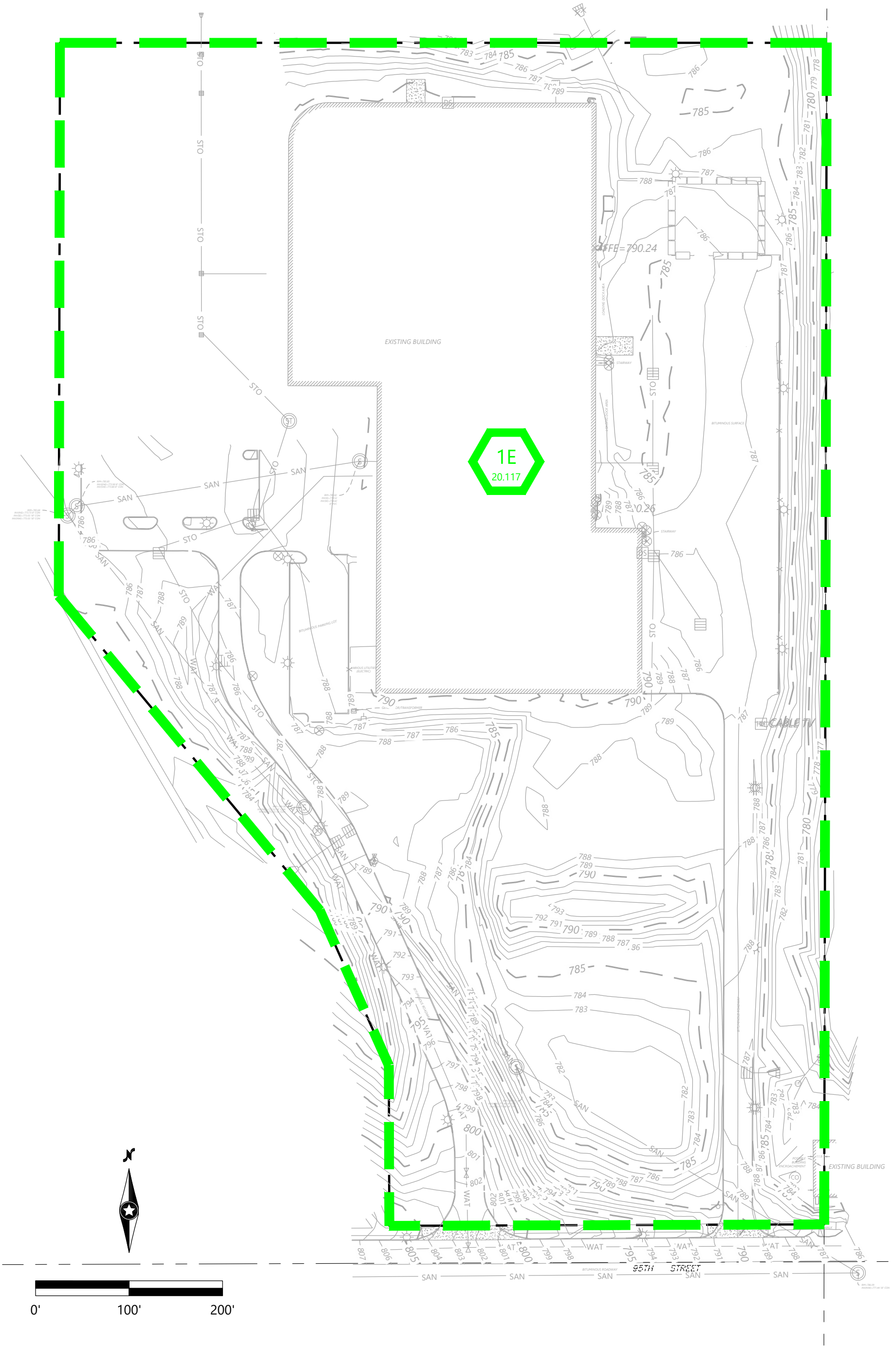
CONCLUSIONS

The proposed development has been designed to meet the requirements of the City of Cottage Grove and South Washington Watershed District for rate control, volume control and water quality with the proposed biofiltration basins and underground chamber system.

EXHIBIT 1

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N:\0058882.00\DWG\0058882.00C-DRAN.DWG

VAN METER EXPANSION

DESIGNED: .
CHECKED: .
DRAWN: .
FIELD CREW: .
FIELD WORK DATE: .

VAN METER EXPANSION

COTTAGE GROVE, MN

Westwood

Phone (952) 937-5150
Fax (952) 937-5822
Toll Free (888) 937-5150
12701 Whitewater Drive, Suite #300
Minnetonka, MN 55343
westwoodps.com

Westwood Professional Services, Inc.

EXISTING DRAINAGE MAP

PROJECT NUMBER: 0058882.00

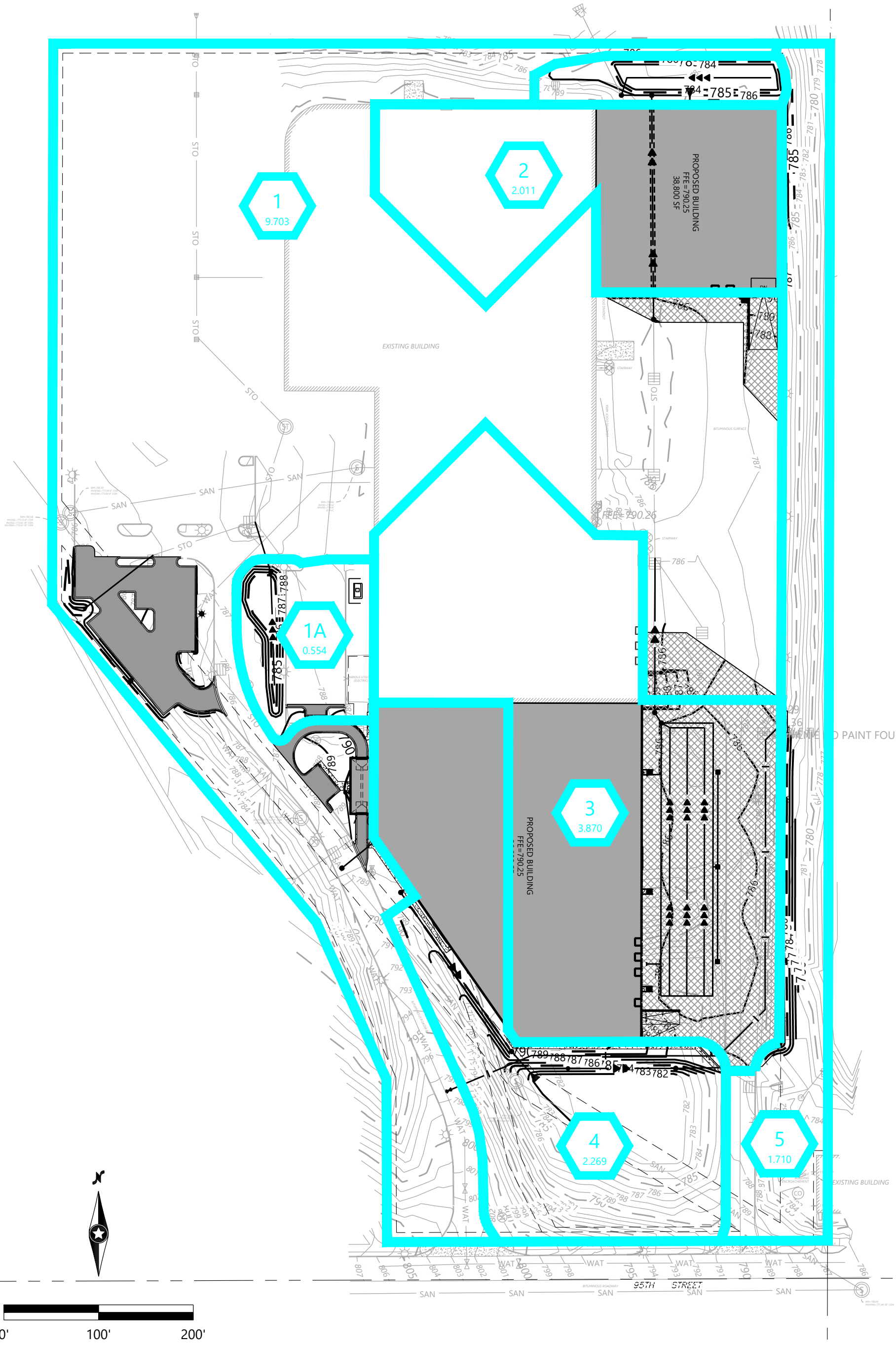
SHEET NUMBER: 1 OF 2

DATE: 11/12/2025

EXHIBIT 2

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FIELD WORK DATE: .

VAN METER EXPANSION

COTTAGE GROVE, MN

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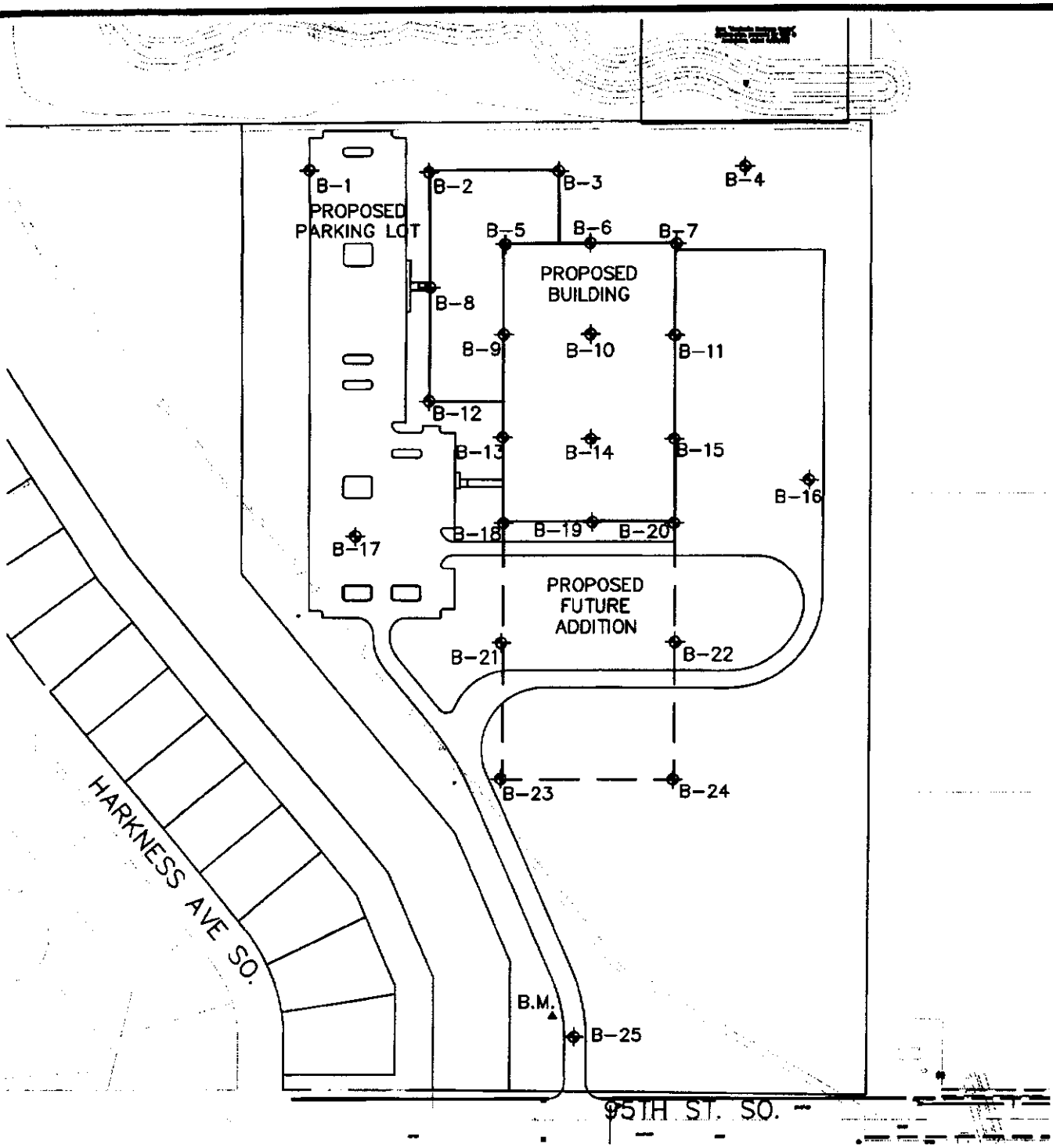
PROPOSED DRAINAGE MAP

PROJECT NUMBER: 0058882.00

SHEET NUMBER: 2 OF 2

DATE: 11/12/2025

EXHIBIT 3



LEGEND

⊕ = APPROXIMATE SOIL BORING LOCATION

▲ = BENCHMARK: STAKED HUB, ELEVATION = 789.13 FEET NGVD

AMERICAN ENGINEERING TESTING, INC.

CONSULTANTS
- GEOTECHNICAL
- ENVIRONMENTAL
- MATERIALS

550 Cleveland Avenue North
St. Paul, Minnesota 55114

Phone: 651-659-9001
Fax: 651-659-1379
Website: www.mnengtest.com

NO SCALE

FIGURE 1: BORING LOCATIONS

Werner Electric
Cottage Grove, Minnesota

DRAWN BY: VJL	CHECKED BY: JPB
DATE: 09/5/07	AET JOB NO. 01-03658

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-1 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 785.8 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly sandy lean clay, slightly organic, black to dark brown	FILL	5	M	SS	10	22				
2	FILL, mixture of silty sand and gravel, possible cobbles at 21", brown		114/0.4	M	SS	8					
3	DOLOSTONE, light brown Weathering: Highly to moderately weathered Hardness: Soft to moderately hard Obstructed to SS and HSA at 3.4' **END OF BORING**	SHAKOPEE FORMATION									

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-2' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: 8/29/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-2 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 786.7 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly silty sand, slightly organic, dark brown	FILL									
	FILL, mixture of gravelly silty sand, a little clayey sand, possible cobbles, brown and dark brown		19	M	SS	12					
2											
3			115	M	SS	6					
4	SILTY SAND, a little gravel, light brown and brown	COARSE ALLUVIUM									
5	DOLOSTONE, light brown Weathering: Very to moderately weathered Hardness: Soft to moderately hard	SHAKOPEE FORMATION	59	M	SS	12					
6			160/0.2	M	SS	2					
	Obstructed to SS and HSA at 6.7' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-6½' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: 8/29/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-3 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 786.6 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly silty sand, slightly organic, dark brown	FILL	19	M	SS	14					
	FILL, mixture of gravel and silty sand, brown and light brown										
2	FILL, mostly sand with silt and gravel, possible cobbles at 2'		19	M	SS	10	10				
3	FILL, mostly gravelly clayey sand, dark brown										
4	DOLOSTONE, light brown Weathering: Moderately weathered Hardness: Moderately hard	SHAKOPEE FORMATION	100/0.4	M	SS	1					
	Obstructed to SS and HSA at 4.9' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-4' 3.25" HSA							
BORING COMPLETED: 8/29/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-4 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 786.5 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand, surface roots, slightly organic, dark brown to black	FILL	8	M	SS	10	21 6				
2	FILL, mostly clayey sand with gravel, brown										
3	FILL, mostly gravelly clayey sand, possible cobbles, pieces of dolostone, brown and dark brown		16	M	SS	12	9				
4	DOLOSTONE, light brown Weathering: Highly to very weathered Hardness: Soft	SHAKOPEE FORMATION	68	M	SS	12					
5	Auger Refusal at 4.5'										
	END OF BORING										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-4½' 3.25" HSA							
BORING COMPLETED: 8/29/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-5 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

SURFACE ELEVATION: 787.0

DEPTH IN FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mixture of clayey sand and gravelly clayey sand, slightly organic, black, brown and light brown	FILL	21	M	SS	12	28 / 12				
2	FILL, mixture of sand with silt, clayey sand and lean clay with sand, possible cobbles, a little gravel, brown		29	M	SS	10	7				
3	FILL, mostly gravelly sandy lean clay, trace roots, dark brown										
4											
5	FILL, mostly sand with silt, a little lean clay with sand, a little gravel, pieces of dolostone, trace roots, light brown and brown		62	M	SS	12					
6											
	DOLOSTONE, light brown Weathering: Very weathered Hardness: Moderately hard	SHAKOPEE FORMATION	100/0.2	M	SS	3					
	Obstructed to HSA to 6.5', Obstructed to SS at 6.7' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-6½' 3.25" HSA							
BORING COMPLETED: 8/29/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **01-03658** LOG OF BORING NO. **B-6 (p. 1 of 1)**

PROJECT: **Werner Electric; Cottage Grove, MN**

DEPTH IN FEET	SURFACE ELEVATION: 786.8 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand, a little gravel, surface roots, slightly organic, dark brown	FILL					29				
	FILL, mixture of sand with silt and clayey sand, with gravel, brown		12	M	SS	10	11				
2	FILL, mostly clayey sand with gravel, brown, a little black										
3			24	M	SS	10	12				
4	GRAVEL WITH SAND AND SILT, brown, moist, very dense (GP-GM) (possible fill)	COARSE ALLUVIUM OR FILL									
5	SILTY SAND, a little gravel, fine grained, trace roots, light brown, moist, very dense (SM) (possible fill)		62	M	SS	10					
6	DOLOSTONE, light brown, Weathering: Moderately weathered, Hardness: Hard	SHAKOPEE FORMATION	100/0.1	M	SS	1					
	Obstructed to SS and HSA at 6.1'										
	END OF BORING										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-4½' 3.25" HSA							
BORING COMPLETED: 8/29/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-7 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 786.9 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand, slightly organic, dark brown	FILL					17				
	FILL, mostly clayey sand with gravel, grayish brown and brown		15	M/W	SS	12	9				
2	FILL, mostly gravelly sand with silt, brown						8				
3	FILL, mixture of sand with silt and clayey sand, possible cobbles, trace roots, brown and black		22	M	SS	12					
4											
5	GRAVELLY SAND WITH SILT, medium to fine grained, brown, moist, very dense (SP-SM)	COARSE ALLUVIUM	56	M	SS	10	9				
6	GRAVEL WITH SAND, light brown, moist, very dense (GP)										
7	SAND WITH SILT, a little gravel, light brown, a little gray, moist, very dense, laminations of lean clay (SP-SM)		100/0.4	M	SS	3					
	Obstructed to SS and HSA at 7.9' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-7' 3.25" HSA							
BORING COMPLETED: 8/29/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-8 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 787.5 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand, a little gravel, slightly organic, dark brown and black	FILL					19				
1	FILL, mixture of clayey sand and sand with silt, with gravel, possible cobbles, brown and grayish brown		20	M	SS	16	11				
2							16				
3			36	M	SS	10					
4	GRAVEL WITH SAND AND SILT, light brown, moist, very dense [(GP)/(GP-GM)]	COARSE ALLUVIUM	100/0.3	M	SS	4					
	Obstructed to SS and HSA at 4.3'										
	END OF BORING										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-4' 3.25" HSA							
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-9 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 787.1 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand with gravel, slightly organic, black	FILL									
2	FILL, mixture of clayey sand and sand with silt, with gravel, trace roots, brown and light brown		31	M	SS	12	24				
3			39	M	SS	16	8				
4	GRAVELLY SILTY SAND, fine to medium grained, light brown, moist, very dense (SM)	COARSE ALLUVIUM	100/0.3	M	SS	5					
	Obstructed to SS and HSA at 4.8' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-4' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **01-03658** LOG OF BORING NO. **B-10 (p. 1 of 1)**

PROJECT: **Werner Electric; Cottage Grove, MN**

DEPTH IN FEET	SURFACE ELEVATION: 788.2 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand, a little gravel, slightly organic, dark brown and black	FILL					14				
	FILL, mixture of sand with silt and clayey sand, with gravel, possible cobbles, brown		12	M	SS	8					
2							11				
3			30	M	SS	10					
4	GRAVEL WITH SAND AND SILT, medium to fine grained, light brown, a little dark brown, moist, very dense, laminations of silty sand (GP)	COARSE ALLUVIUM									
5			72	M	SS	10					
6	VERY WEATHERED DOLOSTONE, light brown, Textural Classification: Gravel with sand and silt, moist, very dense [(GP)/(GP-GM)]	SHAKOPEE FORMATION	100/0.5	M	SS	5					
	Obstructed to SS and HSA at 6.5' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-6' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: **8/30/07**							
DR: **EW** LG: **TK** Rig: **66C**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-12 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 788.9 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand, a little gravel, slightly organic, dark brown and black	FILL	9	M	SS	18	27				
2	FILL, mixture of sand with silt and clayey sand, with gravel, pieces of dolostone, trace roots, brown and black										
3	FILL, mixture of sand and sand with silt, with gravel, possible cobbles, brown		36	M	SS	13					
4	GRAVEL WITH SAND, light brown, a little brown, moist, dense, laminations of silty sand (GP)	COARSE ALLUVIUM									
	DOLOSTONE, light brown Weathering: Moderately weathered Hardness: Hard	SHAKOPEE FORMATION	50/0.1	M	SS	2					
	Obstructed to SS and HSA at 4.6'										
	END OF BORING										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
0-4' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
BORING COMPLETED: 8/30/07								
DR: EW LG: TK Rig: 66C								

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-14 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 788.9 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mixture of sand with silt and clayey sand, slightly organic, dark brown	FILL	22	M	SS	5					
2											
3	FILL, mixture of silty sand and clayey sand, brown and dark brown		27	M	SS	12					
4											
5	FILL, mostly clayey sand with gravel, possible cobbles, brown and dark brown			M	SS	18	8				
6	VERY WEATHERED DOLOSTONE, light brown, Textural Classification: Gravel with sand, moist, very dense (GP)	SHAKOPEE FORMATION									
	Obstructed to SS and HSA at 6' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-4½' 3.25" HSA							
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **01-03658** LOG OF BORING NO. **B-15 (p. 1 of 1)**

PROJECT: **Werner Electric; Cottage Grove, MN**

DEPTH IN FEET	SURFACE ELEVATION: 788.5 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly sandy lean clay, a little gravel, slightly organic, dark brown and black	FILL					22				
2	FILL, mixture of clayey sand and sand with silt, with gravel, possible cobbles at 3', brown and grayish brown		9	M	SS	12					
3			23	M	SS	12	8				
4											
5			26	M	SS						
6											
7	HIGHLY WEATHERED DOLOSTONE, light brown, Textural Classification: Gravel with sand and silt, light brown, moist, very dense [(GP)/(GP-GM)]	SHAKOPEE FORMATION	88	M	SS	10					
8	Obstructed to HSA at 6.5' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-6½' 3.25" HSA							
BORING COMPLETED: **8/30/07**							
DR: **EW** LG: **TK** Rig: **66C**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-16 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 787.1 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly sandy lean clay, a little gravel, slightly organic, dark brown and black	FILL	9	M	SS	20	20				
2	FILL, mostly sand with silt, a little gravel, brown						6				
3	FILL, mixture of gravelly sand with silt and clayey sand, brown		45	M	SS	12					
4											
5			51	M	SS	10					
6											
7	SILT WITH SAND, light brown and brown, moist, dense (ML)	FINE ALLUVIUM	64	M	SS	10	17				
	HIGHLY WEATHERED DOLOSTONE, light brown, Textural Classification: Silty sand with gravel, fine grained, very dense (SM)	SHAKOPEE FORMATION									
	Obstructed to SS and HSA at 7.7' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-6.2' 3.25" HSA							
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-17 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 789.3 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly clayey sand, a little gravel, slightly organic, dark brown and black	FILL	9	M	SS	15	32				
	FILL, mostly silty sand with gravel, brown										
2	FILL, mostly sand with silt and gravel, possible cobbles, brown										
3	FILL, mostly silty sand with gravel, brown and dark brown		24	M	SS	12					
4	GRAVEL WITH SAND, light brown, moist, very dense (GP)	COARSE ALLUVIUM									
5			50/0.3	M	SS						
	GRAVELLY SAND WITH SILT, fine to medium grained, light brown and brown, moist, very dense, lenses and laminations of silty sand (SP-SM)										
	Obstructed to SS and HSA at 5.3'										
	END OF BORING										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-4½' 3.25" HSA							
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-18 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 789.4 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly sandy lean clay, a little gravel, slightly organic, dark brown and black	FILL	12	M	SS	12	24				
2	FILL, mixture of sand with silt, silty sand and clayey sand, with gravel, brown and grayish brown										
3			28	M	SS	10					
4											
5			51	M	SS	16	15				
6	GRAVELLY SAND WITH SILT, possible cobbles, medium to fine grained, light brown, moist, dense (SP-SM)	COARSE ALLUVIUM	50/0.3	M	SS	4					
	VERY WEATHERED DOLOSTONE, light brown, Textural Classification: Gravelly silty sand, medium to fine grained, moist, very dense (SM)	SHAKOPEE FORMATION									
	Obstructed to HSA at 6.2', Obstructed to SS at 6.6' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-6.2' 3.25" HSA							
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-19 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 789.3 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly sandy lean clay, a little gravel, slightly organic, dark brown and black	FILL	6	M	SS	18	28				
2	FILL, mixture of clayey sand, silty sand and sand with silt, with gravel, possible cobbles, brown and dark brown						10				
3			6	M	SS	10					
4											
5			89	M	SS	6					
6	GRAVEL WITH SAND WITH SILT, light brown, moist, very dense [(GP)/(GP-GM)]	COARSE ALLUVIUM	50/0.3	M	SS	1					
	Obstructed to SS and HSA at 6.8' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-6½' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-20 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 789.0 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mostly sandy lean clay, a little gravel, slightly organic, dark brown and black	FILL					12				
2	FILL, mixture of sand with silt and clayey sand, with gravel, brown and dark brown		12	M	SS	12					
3			70	M	SS	6	7				
4											
5			50/0.3	M	SS	6	5				
6											
7											
8	REDEPOSITED SANDSTONE, light brown and brown mottled, Textural Classification: Sand with silt, a little gravel, moist, very dense, laminations of silty sand (SP-SM) (possible fill)	COARSE ALLUVIUM OR FILL	54	M	SS	6					
9			50/0.3	M	SS						
	Obstructed to HSA at 9.4', Obstructed to SS at 9.7' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-9.4' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: 8/30/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **01-03658** LOG OF BORING NO. **B-21 (p. 1 of 1)**

PROJECT: **Werner Electric; Cottage Grove, MN**

DEPTH IN FEET	SURFACE ELEVATION: 789.5 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mixture of silty sand and clayey sand, a little gravel, slightly organic, dark brown	FILL	20	M	SS	16	23				
2	FILL, mostly gravelly silty sand, possible cobbles at 2', brown		50/0.3	M	SS	6					
3											
4	FILL, mostly silty sand with gravel, brown										
5			24	M	SS	10					
6											
7			50/0.1	M	SS	6					
	DOLOSTONE, light brown, Weathering: Very weathered, Hardness: Moderately hard	SHAKOPEE FORMATION									
	Obstructed to SS at 7.6' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-7' 3.25" HSA							
BORING COMPLETED: 8/31/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-22 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 788.6 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mixture of silty sand and clayey sand, a little gravel, slightly organic, black to dark brown	FILL	10	M	SS	12	25				
2	FILL, mixture of silty sand with gravel, possible cobbles at 3', and gravelly silty sand, brown										
3			32	M	SS	3					
4											
5			51	M	SS	12					
6											
7	FILL, mixture of sand with silt and silty sand, with gravel, brown and light brown		50	M	SS	12					
8			50/0.2	M	SS	8					
	DOLOSTONE, light brown, Weathering: Highly weathered, Hardness: Soft	~~SHAKOPEE~~ FORMATION									
	Obstructed to SS at 8.4' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
0-7.7' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
BORING COMPLETED: 8/31/07								
DR: EW LG: TK Rig: 66C								

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-23 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 783.9 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mixture of silty sand and clayey sand, a little gravel, slightly organic, black to dark brown	FILL					28				
2	FILL, mostly gravel with sand and silt, possible cobbles at 4", brown	FILL OR COARSE ALLUVIUM	24	M	SS	10					
3	DOLOSTONE, light brown Weathering: Highly weathered to very weathered Hardness: Soft	SHAKOPEE FORMATION	46	M	SS	6					
4	Obstructed to SS at 4' END OF BORING		50/0.2	M	SS	2					

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-3.8' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: 8/31/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: **01-03658** LOG OF BORING NO. **B-24 (p. 1 of 1)**

PROJECT: **Werner Electric; Cottage Grove, MN**

DEPTH IN FEET	SURFACE ELEVATION: 786.8 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	FILL, mixture of silty sand and clayey sand, a little gravel, slightly organic, dark brown and brown	FILL	11	M	SS	8	23				
2	FILL, mixture of gravelly sand, clayey sand and silty sand, possible cobbles or boulders, brown and light brown		50/0.3	M	SS	0					
3											
4											
5			78/0.3	M	SS	12					
6											
7	GRAVELLY SILTY SAND, light brown, moist, very dense (SM)	COARSE ALLUVIUM	78	M	SS	10					
	Obstructed to SS at 7.7' **END OF BORING**										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-6.2' 3.25" HSA							
BORING COMPLETED: 8/31/07							
DR: EW LG: TK Rig: 66C							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

AMERICAN ENGINEERING TESTING, INC.

SUBSURFACE BORING LOG

AET JOB NO: 01-03658 LOG OF BORING NO. B-25 (p. 1 of 1)

PROJECT: Werner Electric; Cottage Grove, MN

DEPTH IN FEET	SURFACE ELEVATION: 794.3 MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	DEN	LL	PL	%-#200
1	SILTY SAND, slightly organic, black to dark brown, moist, very loose (SM)	TOPSOIL	2	M	SS	10					
3	SILTY SAND, fine to medium grained, dark brown to brown, moist, trace roots, very loose to loose (SM)	COARSE ALLUVIUM	3	M	SS	12					
5			9	M	SS	10					
7	SAND, a little gravel, fine to medium grained, brown, moist, loose to very loose (SP)		9	M	SS	10					
10			4	M	SS	10					
12	SAND, a little gravel, fine to medium grained, brown, moist, medium dense (SP)		14	M	SS	12					
14	SAND WITH SILT, a little gravel, fine to medium grained, brown, moist, very dense (SP-SM)		50/0.4	M	SS	8					
15	SILTY SAND WITH GRAVEL, brown, moist, very dense (SM) Obstructed to SS at 15.4' END OF BORING										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-14½' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
BORING COMPLETED: 8/31/07							
DR: EW LG: TK Rig: 66C							

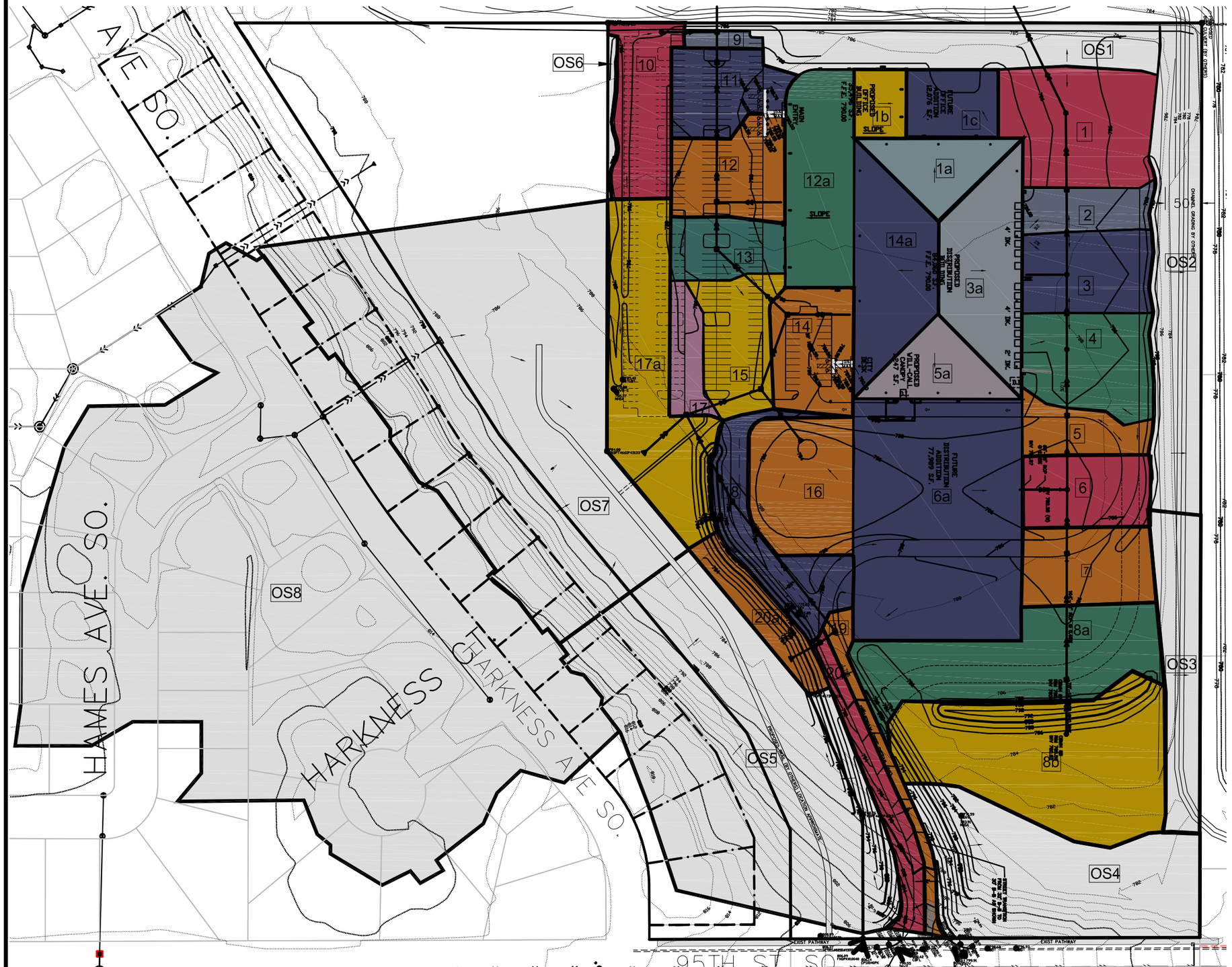
NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

06/04

EXHIBIT 4

WERNER ELECTRIC

Future Drainage Areas
Date: October 12, 2007



OFFSITE AREA 1
GRASS: 36,745 sq. ft.

OFFSITE AREA 2
GRASS: 45,372 sq. ft.

OFFSITE AREA 3
GRASS: 24,093 sq. ft.

OFFSITE AREA 4
GRASS: 59,790 sq. ft.

OFFSITE AREA 5
GRASS: 128,042 sq. ft.
ROOF: 6,875 sq. ft.

PROPOSED AREA 8b
GRASS: 62,140 sq. ft.

PROPOSED AREA 8a
GRASS: 25,204 sq. ft.
BITUMINOUS: 19,202 sq. ft.

PROPOSED AREA 7
BITUMINOUS: 19,408 sq. ft.

PROPOSED AREA 6
BITUMINOUS: 17,558 sq. ft.

PROPOSED AREA 6A
ROOF: 77,989 sq. ft.

PROPOSED AREA 5
BITUMINOUS: 11,349 sq. ft.

PROPOSED AREA 4
BITUMINOUS: 24,210 sq. ft.

PROPOSED AREA 3
BITUMINOUS: 20,153 sq. ft.

PROPOSED AREA 2
BITUMINOUS: 10,003 sq. ft.
GRASS: 818 sq. ft.

PROPOSED AREA 1
GRASS: 32,787 sq. ft.

PROPOSED AREA 5A
ROOF: 13,523 sq. ft.

PROPOSED AREA 3A
ROOF: 28,060 sq. ft.

PROPOSED AREA 1A
ROOF: 13,326 sq. ft.

PROPOSED AREA 1B
ROOF: 6,854 sq. ft.

PROPOSED AREA 1C
ROOF: 12,076 sq. ft.

OFFSITE AREA 6
GRASS: 2,153 sq. ft.

OFFSITE AREA 7
GRASS: 171,539 sq. ft.
ROOF: 10,625 sq. ft.

OFFSITE AREA 8
GRASS: 259,445 sq. ft.
ROOF: 70,020 sq. ft.
BITUMINOUS: 61,152 sq. ft.

PROPOSED AREA 9
BITUMINOUS: 2,405 sq. ft.

PROPOSED AREA 10
GRASS: 5,261 sq. ft.
BITUMINOUS: 14,570 sq. ft.

PROPOSED AREA 11
GRASS: 3,347 sq. ft.
BITUMINOUS: 13,525 sq. ft.

PROPOSED AREA 12
GRASS: 4,980 sq. ft.
BITUMINOUS: 14,501 sq. ft.

PROPOSED AREA 12A
ROOF: 28,642 sq. ft.

PROPOSED AREA 13
GRASS: 3,059 sq. ft.
BITUMINOUS: 9,919 sq. ft.

PROPOSED AREA 14
GRASS: 9,817 sq. ft.
BITUMINOUS: 9,588 sq. ft.

PROPOSED AREA 12A
ROOF: 29,151 sq. ft.

PROPOSED AREA 15
GRASS: 3,745 sq. ft.
BITUMINOUS: 14,897 sq. ft.

PROPOSED AREA 16
GRASS: 25,506 sq. ft.

PROPOSED AREA 17
GRASS: 526 sq. ft.
BITUMINOUS: 7,975 sq. ft.

PROPOSED AREA 17A
GRASS: 26,951 sq. ft.
BITUMINOUS: 17,622 sq. ft.

PROPOSED AREA 18
GRASS: 12,898 sq. ft.
BITUMINOUS: 9,432 sq. ft.

PROPOSED AREA 19
GRASS: 946 sq. ft.
BITUMINOUS: 7,386 sq. ft.

PROPOSED AREA 20
GRASS: 6,536 sq. ft.
BITUMINOUS: 6,974 sq. ft.

PROPOSED AREA 20A
GRASS: 11,306 sq. ft.

N00°07'30"E 1263.00

P1

P2

P3

A1

A2

A3

IMPROVEMENTS WERE NOT LOCATED IN THIS AREA DUE TO EXISTING TRAILERS

EXISTING BUILDING FFE = 790.I

CANOPY

DRIVEWAY

95TH STREET S.

820.05

N90°00'00"W

S00°07'30"W 591.24

S00°11'40"E 171.54

S24°00'42"E 181.43

S39°42'41"E 436.89

1/2 INCH IRON PIPE

Drainage and Utility Easement

NORTH

0 50 100

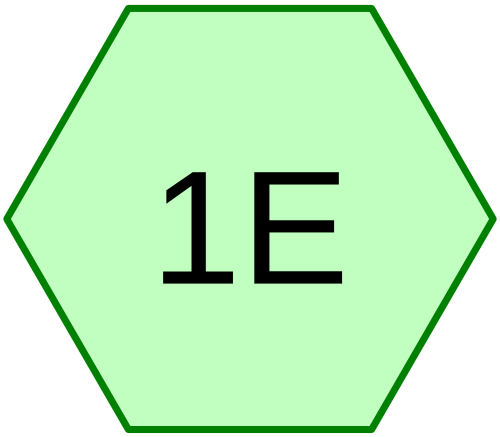
1 INCH = 100 FEET

3/30/2015

PROPOSED DRAINAGE AREAS

WERNER ELECTRIC ADDITION

EXHIBIT 5



Existing

Subcat Reach Pond Link

Routing Diagram for 25-11-07 Van Meter
Prepared by Westwood Professional Services, Printed 11/10/2025
HydroCAD® 10.20-6a s/n 02351 © 2024 HydroCAD Software Solutions LLC

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1E: Existing Runoff Area=20.117 ac 50.29% Impervious Runoff Depth=1.84"
Tc=20.0 min CN=80/98 Runoff=38.43 cfs 3.084 af

Summary for Subcatchment 1E: Existing

Runoff = 38.43 cfs @ 12.29 hrs, Volume= 3.084 af, Depth= 1.84"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.80"

Area (ac)	CN	Description
10.001	80	>75% Grass cover, Good, HSG D
10.116	98	Paved parking, HSG D
20.117	89	Weighted Average
10.001	80	49.71% Pervious Area
10.116	98	50.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0					**Direct Entry,**

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1E: Existing Runoff Area=20.117 ac 50.29% Impervious Runoff Depth=3.05"
Tc=20.0 min CN=80/98 Runoff=63.92 cfs 5.121 af

Summary for Subcatchment 1E: Existing

Runoff = 63.92 cfs @ 12.29 hrs, Volume= 5.121 af, Depth= 3.05"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=4.16"

Area (ac)	CN	Description
10.001	80	>75% Grass cover, Good, HSG D
10.116	98	Paved parking, HSG D
20.117	89	Weighted Average
10.001	80	49.71% Pervious Area
10.116	98	50.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0					**Direct Entry,**

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1E: Existing Runoff Area=20.117 ac 50.29% Impervious Runoff Depth=5.93"
Tc=20.0 min CN=80/98 Runoff=123.08 cfs 9.934 af

Summary for Subcatchment 1E: Existing

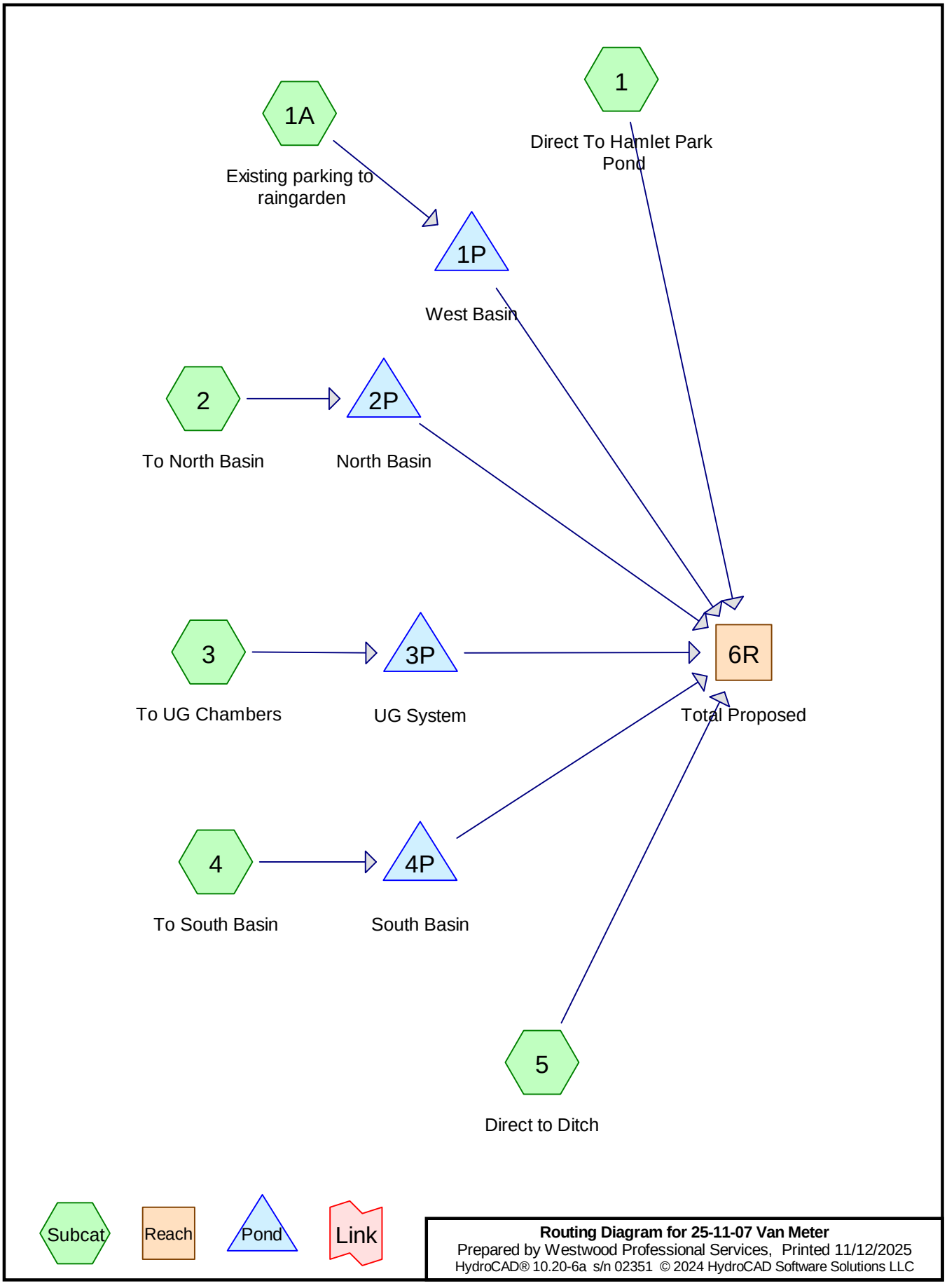
Runoff = 123.08 cfs @ 12.29 hrs, Volume= 9.934 af, Depth= 5.93"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=7.20"

Area (ac)	CN	Description
10.001	80	>75% Grass cover, Good, HSG D
10.116	98	Paved parking, HSG D
20.117	89	Weighted Average
10.001	80	49.71% Pervious Area
10.116	98	50.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0					**Direct Entry,**

EXHIBIT 6



Routing Diagram for 25-11-07 Van Meter
Prepared by Westwood Professional Services, Printed 11/12/2025
HydroCAD® 10.20-6a s/n 02351 © 2024 HydroCAD Software Solutions LLC

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: Direct To Hamlet Park Pond Runoff Area=9.703 ac 81.24% Impervious Runoff Depth=2.29"
Tc=20.0 min CN=80/98 Runoff=22.74 cfs 1.855 af

Subcatchment 1A: Existing parking to Runoff Area=0.554 ac 40.97% Impervious Runoff Depth=1.70"
Tc=7.0 min CN=80/98 Runoff=1.54 cfs 0.079 af

Subcatchment 2: To North Basin Runoff Area=2.011 ac 85.13% Impervious Runoff Depth=2.35"
Tc=10.0 min CN=80/98 Runoff=6.55 cfs 0.394 af

Subcatchment 3: To UG Chambers Runoff Area=3.870 ac 100.00% Impervious Runoff Depth=2.57"
Tc=10.0 min CN=0/98 Runoff=13.65 cfs 0.829 af

Subcatchment 4: To South Basin Runoff Area=2.269 ac 34.95% Impervious Runoff Depth=1.61"
Flow Length=10' Tc=0.0 min CN=80/98 Runoff=7.39 cfs 0.305 af

Subcatchment 5: Direct to Ditch Runoff Area=1.710 ac 7.54% Impervious Runoff Depth=1.21"
Tc=10.0 min CN=80/98 Runoff=3.14 cfs 0.173 af

Reach 6R: Total Proposed Inflow=30.28 cfs 3.404 af
Outflow=30.28 cfs 3.404 af

Pond 1P: West Basin Peak Elev=786.09' Storage=2,610 cf Inflow=1.54 cfs 0.079 af
Outflow=0.05 cfs 0.025 af

Pond 2P: North Basin Peak Elev=785.63' Storage=8,963 cf Inflow=6.55 cfs 0.394 af
Outflow=2.10 cfs 0.394 af

Pond 3P: UG System Peak Elev=783.00' Storage=0.397 af Inflow=13.65 cfs 0.829 af
Outflow=5.11 cfs 0.829 af

Pond 4P: South Basin Peak Elev=782.97' Storage=12,070 cf Inflow=7.39 cfs 0.305 af
Outflow=0.03 cfs 0.129 af

Total Runoff Area = 20.117 ac Runoff Volume = 3.634 af Average Runoff Depth = 2.17"
27.35% Pervious = 5.503 ac 72.65% Impervious = 14.614 ac

Summary for Subcatchment 1: Direct To Hamlet Park Pond

Runoff = 22.74 cfs @ 12.29 hrs, Volume= 1.855 af, Depth= 2.29"
Routed to Reach 6R : Total Proposed

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.80"

Area (ac)	CN	Description
7.883	98	Paved parking, HSG D
1.820	80	>75% Grass cover, Good, HSG D
9.703	95	Weighted Average
1.820	80	18.76% Pervious Area
7.883	98	81.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0					**Direct Entry,**

Summary for Subcatchment 1A: Existing parking to raingarden

Runoff = 1.54 cfs @ 12.14 hrs, Volume= 0.079 af, Depth= 1.70"
Routed to Pond 1P : West Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.80"

Area (ac)	CN	Description
0.227	98	Paved parking, HSG D
0.327	80	>75% Grass cover, Good, HSG D
0.554	87	Weighted Average
0.327	80	59.03% Pervious Area
0.227	98	40.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Summary for Subcatchment 2: To North Basin

Runoff = 6.55 cfs @ 12.17 hrs, Volume= 0.394 af, Depth= 2.35"
Routed to Pond 2P : North Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.80"

Area (ac)	CN	Description
1.712	98	Roofs, HSG D
0.299	80	>75% Grass cover, Good, HSG D
2.011	95	Weighted Average
0.299	80	14.87% Pervious Area
1.712	98	85.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 3: To UG Chambers

Runoff = 13.65 cfs @ 12.17 hrs, Volume= 0.829 af, Depth= 2.57"
Routed to Pond 3P : UG System

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.80"

Area (ac)	CN	Description
3.870	98	Paved parking, HSG D
3.870	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 4: To South Basin

Runoff = 7.39 cfs @ 12.09 hrs, Volume= 0.305 af, Depth= 1.61"
Routed to Pond 4P : South Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.80"

Area (ac)	CN	Description
0.793	98	Roofs, HSG D
1.476	80	>75% Grass cover, Good, HSG D
2.269	86	Weighted Average
1.476	80	65.05% Pervious Area
0.793	98	34.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0	10				**Direct Entry,**

Summary for Subcatchment 5: Direct to Ditch

Runoff = 3.14 cfs @ 12.18 hrs, Volume= 0.173 af, Depth= 1.21"
Routed to Reach 6R : Total Proposed

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 2-Year Rainfall=2.80"

Area (ac)	CN	Description
0.129	98	Paved parking, HSG D
1.581	80	>75% Grass cover, Good, HSG D
1.710	81	Weighted Average
1.581	80	92.46% Pervious Area
0.129	98	7.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Reach 6R: Total Proposed

Inflow Area = 20.117 ac, 72.65% Impervious, Inflow Depth > 2.03" for 2-Year event
Inflow = 30.28 cfs @ 12.32 hrs, Volume= 3.404 af
Outflow = 30.28 cfs @ 12.32 hrs, Volume= 3.404 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: West Basin

Inflow Area = 0.554 ac, 40.97% Impervious, Inflow Depth = 1.70" for 2-Year event
Inflow = 1.54 cfs @ 12.14 hrs, Volume= 0.079 af
Outflow = 0.05 cfs @ 13.64 hrs, Volume= 0.025 af, Atten= 96%, Lag= 89.7 min
Primary = 0.05 cfs @ 13.64 hrs, Volume= 0.025 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 786.09' @ 13.64 hrs Surf.Area= 2,930 sf Storage= 2,610 cf

Plug-Flow detention time= 416.0 min calculated for 0.025 af (31% of inflow)
Center-of-Mass det. time= 300.9 min (1,080.9 - 780.0)

Volume	Invert	Avail.Storage	Storage Description
#1	785.00'	5,703 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
785.00	1,864	0	0
786.00	2,837	2,351	2,351
787.00	3,868	3,353	5,703

Device	Routing	Invert	Outlet Devices
#1	Primary	782.50'	**12.0" Round Culvert**
			L= 56.0' RCP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 782.50' / 782.22' S= 0.0050 '/' Cc= 0.900
			n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Device 1	786.00'	**27.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.05 cfs @ 13.64 hrs HW=786.09' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.05 cfs of 6.17 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.05 cfs @ 1.02 fps)

Summary for Pond 2P: North Basin

Inflow Area = 2.011 ac, 85.13% Impervious, Inflow Depth = 2.35" for 2-Year event
Inflow = 6.55 cfs @ 12.17 hrs, Volume= 0.394 af
Outflow = 2.10 cfs @ 12.40 hrs, Volume= 0.394 af, Atten= 68%, Lag= 13.6 min
Primary = 2.10 cfs @ 12.40 hrs, Volume= 0.394 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 785.63' @ 12.40 hrs Surf.Area= 7,112 sf Storage= 8,963 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 752.2 min (1,514.6 - 762.4)

Volume	Invert	Avail.Storage	Storage Description
#1	784.00'	16,151 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
784.00	4,366	0	0
785.00	5,538	4,952	4,952
786.00	8,020	6,779	11,731
786.50	9,658	4,420	16,151

Device	Routing	Invert	Outlet Devices
#1	Primary	778.04'	**36.0" Round Culvert**
			L= 32.0' RCP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 778.04' / 777.85' S= 0.0059 '/' Cc= 0.900
			n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Device 1	785.50'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	784.00'	**0.500 in/hr Filtration over Surface area**

Primary OutFlow Max=2.10 cfs @ 12.40 hrs HW=785.63' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 2.10 cfs of 84.02 cfs potential flow)
├**2=Orifice/Grate** (Weir Controls 2.02 cfs @ 1.20 fps)
└**3=Filtration** (Exfiltration Controls 0.08 cfs)

Summary for Pond 3P: UG System

Inflow Area = 3.870 ac,100.00% Impervious, Inflow Depth = 2.57" for 2-Year event
Inflow = 13.65 cfs @ 12.17 hrs, Volume= 0.829 af
Outflow = 5.11 cfs @ 12.36 hrs, Volume= 0.829 af, Atten= 63%, Lag= 11.4 min
Primary = 5.11 cfs @ 12.36 hrs, Volume= 0.829 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 783.00' @ 12.36 hrs Surf.Area= 0.363 ac Storage= 0.397 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 476.2 min (1,234.0 - 757.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	781.17'	0.252 af	**54.83'W x 288.00'L x 2.33'H Field A** 0.846 af Overall - 0.217 af Embedded = 0.629 af x 40.0% Voids
#2A	781.67'	0.217 af	**ADS_StormTech SC-310 +Cap** x 640 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 640 Chambers in 16 Rows
#3	781.17'	0.003 af	**6.00'D x 4.83'H Vertical Cone/Cylinder**
		0.471 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	780.17'	**36.0" Round Culvert** L= 68.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 780.17' / 779.94' S= 0.0034 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Device 1	782.60'	**6.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Device 1	781.17'	**0.500 in/hr Filtration over Surface area**

Primary OutFlow Max=5.11 cfs @ 12.36 hrs HW=783.00' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Passes 5.11 cfs of 30.70 cfs potential flow)
↑**2=Sharp-Crested Rectangular Weir** (Weir Controls 4.92 cfs @ 2.07 fps)
3=Filtration (Exfiltration Controls 0.18 cfs)

Summary for Pond 4P: South Basin

Inflow Area = 2.269 ac, 34.95% Impervious, Inflow Depth = 1.61" for 2-Year event
Inflow = 7.39 cfs @ 12.09 hrs, Volume= 0.305 af
Outflow = 0.03 cfs @ 22.30 hrs, Volume= 0.129 af, Atten= 100%, Lag= 612.8 min
Primary = 0.03 cfs @ 22.30 hrs, Volume= 0.129 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 782.97' @ 22.30 hrs Surf.Area= 13,851 sf Storage= 12,070 cf

Plug-Flow detention time= 1,714.3 min calculated for 0.129 af (42% of inflow)

Center-of-Mass det. time= 1,616.4 min (2,394.0 - 777.5)

Volume	Invert	Avail.Storage	Storage Description
#1	782.00'	94,531 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
782.00	11,160	0	0
783.00	13,948	12,554	12,554
784.00	17,135	15,542	28,096
785.00	20,401	18,768	46,864
786.00	23,841	22,121	68,985
787.00	27,252	25,547	94,531

Device	Routing	Invert	Outlet Devices
#1	Primary	782.00'	**8.0" Round Culvert** L= 48.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 782.00' / 781.85' S= 0.0031 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	784.00'	**27.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	782.01'	**0.500 in/hr Filtration over Surface area above 782.01'** Excluded Surface area = 11,188 sf

Primary OutFlow Max=0.03 cfs @ 22.30 hrs HW=782.97' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.03 cfs of 1.08 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Filtration** (Exfiltration Controls 0.03 cfs)

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: Direct To Hamlet Park Pond Runoff Area=9.703 ac 81.24% Impervious Runoff Depth=3.60"
Tc=20.0 min CN=80/98 Runoff=35.26 cfs 2.908 af

Subcatchment 1A: Existing parking to Runoff Area=0.554 ac 40.97% Impervious Runoff Depth=2.89"
Tc=7.0 min CN=80/98 Runoff=2.61 cfs 0.134 af

Subcatchment 2: To North Basin Runoff Area=2.011 ac 85.13% Impervious Runoff Depth=3.66"
Tc=10.0 min CN=80/98 Runoff=10.06 cfs 0.614 af

Subcatchment 3: To UG Chambers Runoff Area=3.870 ac 100.00% Impervious Runoff Depth=3.92"
Tc=10.0 min CN=0/98 Runoff=20.46 cfs 1.266 af

Subcatchment 4: To South Basin Runoff Area=2.269 ac 34.95% Impervious Runoff Depth=2.79"
Flow Length=10' Tc=0.0 min CN=80/98 Runoff=12.55 cfs 0.527 af

Subcatchment 5: Direct to Ditch Runoff Area=1.710 ac 7.54% Impervious Runoff Depth=2.31"
Tc=10.0 min CN=80/98 Runoff=6.03 cfs 0.329 af

Reach 6R: Total Proposed Inflow=63.00 cfs 5.416 af
Outflow=63.00 cfs 5.416 af

Pond 1P: West Basin Peak Elev=786.31' Storage=3,265 cf Inflow=2.61 cfs 0.134 af
Outflow=0.61 cfs 0.079 af

Pond 2P: North Basin Peak Elev=785.83' Storage=10,419 cf Inflow=10.06 cfs 0.614 af
Outflow=7.95 cfs 0.614 af

Pond 3P: UG System Peak Elev=783.48' Storage=0.466 af Inflow=20.46 cfs 1.266 af
Outflow=15.90 cfs 1.266 af

Pond 4P: South Basin Peak Elev=783.56' Storage=20,844 cf Inflow=12.55 cfs 0.527 af
Outflow=0.05 cfs 0.220 af

Total Runoff Area = 20.117 ac Runoff Volume = 5.777 af Average Runoff Depth = 3.45"
27.35% Pervious = 5.503 ac 72.65% Impervious = 14.614 ac

Summary for Subcatchment 1: Direct To Hamlet Park Pond

Runoff = 35.26 cfs @ 12.29 hrs, Volume= 2.908 af, Depth= 3.60"
Routed to Reach 6R : Total Proposed

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=4.16"

Area (ac)	CN	Description
7.883	98	Paved parking, HSG D
1.820	80	>75% Grass cover, Good, HSG D
9.703	95	Weighted Average
1.820	80	18.76% Pervious Area
7.883	98	81.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0					**Direct Entry,**

Summary for Subcatchment 1A: Existing parking to raingarden

Runoff = 2.61 cfs @ 12.14 hrs, Volume= 0.134 af, Depth= 2.89"
Routed to Pond 1P : West Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=4.16"

Area (ac)	CN	Description
0.227	98	Paved parking, HSG D
0.327	80	>75% Grass cover, Good, HSG D
0.554	87	Weighted Average
0.327	80	59.03% Pervious Area
0.227	98	40.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Summary for Subcatchment 2: To North Basin

Runoff = 10.06 cfs @ 12.17 hrs, Volume= 0.614 af, Depth= 3.66"
Routed to Pond 2P : North Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=4.16"

Area (ac)	CN	Description
1.712	98	Roofs, HSG D
0.299	80	>75% Grass cover, Good, HSG D
2.011	95	Weighted Average
0.299	80	14.87% Pervious Area
1.712	98	85.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 3: To UG Chambers

Runoff = 20.46 cfs @ 12.17 hrs, Volume= 1.266 af, Depth= 3.92"
Routed to Pond 3P : UG System

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=4.16"

Area (ac)	CN	Description
3.870	98	Paved parking, HSG D
3.870	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 4: To South Basin

Runoff = 12.55 cfs @ 12.09 hrs, Volume= 0.527 af, Depth= 2.79"
Routed to Pond 4P : South Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=4.16"

Area (ac)	CN	Description
0.793	98	Roofs, HSG D
1.476	80	>75% Grass cover, Good, HSG D
2.269	86	Weighted Average
1.476	80	65.05% Pervious Area
0.793	98	34.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0	10				**Direct Entry,**

Summary for Subcatchment 5: Direct to Ditch

Runoff = 6.03 cfs @ 12.18 hrs, Volume= 0.329 af, Depth= 2.31"
Routed to Reach 6R : Total Proposed

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 10-Year Rainfall=4.16"

Area (ac)	CN	Description
0.129	98	Paved parking, HSG D
1.581	80	>75% Grass cover, Good, HSG D
1.710	81	Weighted Average
1.581	80	92.46% Pervious Area
0.129	98	7.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Reach 6R: Total Proposed

Inflow Area = 20.117 ac, 72.65% Impervious, Inflow Depth > 3.23" for 10-Year event
Inflow = 63.00 cfs @ 12.25 hrs, Volume= 5.416 af
Outflow = 63.00 cfs @ 12.25 hrs, Volume= 5.416 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: West Basin

Inflow Area = 0.554 ac, 40.97% Impervious, Inflow Depth = 2.89" for 10-Year event
Inflow = 2.61 cfs @ 12.14 hrs, Volume= 0.134 af
Outflow = 0.61 cfs @ 12.40 hrs, Volume= 0.079 af, Atten= 77%, Lag= 15.3 min
Primary = 0.61 cfs @ 12.40 hrs, Volume= 0.079 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 786.31' @ 12.40 hrs Surf.Area= 3,152 sf Storage= 3,265 cf

Plug-Flow detention time= 214.6 min calculated for 0.079 af (59% of inflow)
Center-of-Mass det. time= 133.1 min (907.3 - 774.2)

Volume	Invert	Avail.Storage	Storage Description
#1	785.00'	5,703 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
785.00	1,864	0	0
786.00	2,837	2,351	2,351
787.00	3,868	3,353	5,703

Device	Routing	Invert	Outlet Devices
#1	Primary	782.50'	**12.0" Round Culvert**
			L= 56.0' RCP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 782.50' / 782.22' S= 0.0050 '/' Cc= 0.900
			n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Device 1	786.00'	**27.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.61 cfs @ 12.40 hrs HW=786.31' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.61 cfs of 6.39 cfs potential flow)
└**2=Orifice/Grate** (Orifice Controls 0.61 cfs @ 1.88 fps)

Summary for Pond 2P: North Basin

Inflow Area = 2.011 ac, 85.13% Impervious, Inflow Depth = 3.66" for 10-Year event
Inflow = 10.06 cfs @ 12.17 hrs, Volume= 0.614 af
Outflow = 7.95 cfs @ 12.24 hrs, Volume= 0.614 af, Atten= 21%, Lag= 3.9 min
Primary = 7.95 cfs @ 12.24 hrs, Volume= 0.614 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 785.83' @ 12.24 hrs Surf.Area= 7,603 sf Storage= 10,419 cf

Plug-Flow detention time= 516.7 min calculated for 0.614 af (100% of inflow)
Center-of-Mass det. time= 517.0 min (1,273.5 - 756.5)

Volume	Invert	Avail.Storage	Storage Description
#1	784.00'	16,151 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
784.00	4,366	0	0
785.00	5,538	4,952	4,952
786.00	8,020	6,779	11,731
786.50	9,658	4,420	16,151

Device	Routing	Invert	Outlet Devices
#1	Primary	778.04'	**36.0" Round Culvert**
			L= 32.0' RCP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 778.04' / 777.85' S= 0.0059 '/' Cc= 0.900
			n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Device 1	785.50'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	784.00'	**0.500 in/hr Filtration over Surface area**

Primary OutFlow Max=7.94 cfs @ 12.24 hrs HW=785.83' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 7.94 cfs of 85.37 cfs potential flow)
├**2=Orifice/Grate** (Weir Controls 7.85 cfs @ 1.88 fps)
└**3=Filtration** (Exfiltration Controls 0.09 cfs)

Summary for Pond 3P: UG System

Inflow Area = 3.870 ac,100.00% Impervious, Inflow Depth = 3.92" for 10-Year event
Inflow = 20.46 cfs @ 12.17 hrs, Volume= 1.266 af
Outflow = 15.90 cfs @ 12.24 hrs, Volume= 1.266 af, Atten= 22%, Lag= 4.1 min
Primary = 15.90 cfs @ 12.24 hrs, Volume= 1.266 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 783.48' @ 12.24 hrs Surf.Area= 0.363 ac Storage= 0.466 af

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 344.1 min (1,095.6 - 751.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	781.17'	0.252 af	**54.83'W x 288.00'L x 2.33'H Field A** 0.846 af Overall - 0.217 af Embedded = 0.629 af x 40.0% Voids
#2A	781.67'	0.217 af	**ADS_StormTech SC-310 +Cap** x 640 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 640 Chambers in 16 Rows
#3	781.17'	0.003 af	**6.00'D x 4.83'H Vertical Cone/Cylinder**
		0.471 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	780.17'	**36.0" Round Culvert** L= 68.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 780.17' / 779.94' S= 0.0034 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Device 1	782.60'	**6.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Device 1	781.17'	**0.500 in/hr Filtration over Surface area**

Primary OutFlow Max=15.89 cfs @ 12.24 hrs HW=783.48' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 15.89 cfs of 38.21 cfs potential flow)
  ├─**2=Sharp-Crested Rectangular Weir** (Weir Controls 15.70 cfs @ 3.07 fps)
  └─**3=Filtration** (Exfiltration Controls 0.18 cfs)

Summary for Pond 4P: South Basin

Inflow Area = 2.269 ac, 34.95% Impervious, Inflow Depth = 2.79" for 10-Year event
Inflow = 12.55 cfs @ 12.09 hrs, Volume= 0.527 af
Outflow = 0.05 cfs @ 22.19 hrs, Volume= 0.220 af, Atten= 100%, Lag= 606.0 min
Primary = 0.05 cfs @ 22.19 hrs, Volume= 0.220 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 783.56' @ 22.19 hrs Surf.Area= 15,728 sf Storage= 20,844 cf

Plug-Flow detention time= 1,712.9 min calculated for 0.220 af (42% of inflow)

Center-of-Mass det. time= 1,615.7 min (2,387.1 - 771.4)

Volume	Invert	Avail.Storage	Storage Description
#1	782.00'	94,531 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
782.00	11,160	0	0
783.00	13,948	12,554	12,554
784.00	17,135	15,542	28,096
785.00	20,401	18,768	46,864
786.00	23,841	22,121	68,985
787.00	27,252	25,547	94,531

Device	Routing	Invert	Outlet Devices
#1	Primary	782.00'	**8.0" Round Culvert** L= 48.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 782.00' / 781.85' S= 0.0031 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	784.00'	**27.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	782.01'	**0.500 in/hr Filtration over Surface area above 782.01'** Excluded Surface area = 11,188 sf

Primary OutFlow Max=0.05 cfs @ 22.19 hrs HW=783.56' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.05 cfs of 1.64 cfs potential flow)
  ├─**2=Orifice/Grate** (Controls 0.00 cfs)
  └─**3=Filtration** (Exfiltration Controls 0.05 cfs)

Time span=1.00-72.00 hrs, dt=0.01 hrs, 7101 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1: Direct To Hamlet Park Pond Runoff Area=9.703 ac 81.24% Impervious Runoff Depth=6.57"
Tc=20.0 min CN=80/98 Runoff=63.54 cfs 5.313 af

Subcatchment 1A: Existing parking to Runoff Area=0.554 ac 40.97% Impervious Runoff Depth=5.73"
Tc=7.0 min CN=80/98 Runoff=5.11 cfs 0.265 af

Subcatchment 2: To North Basin Runoff Area=2.011 ac 85.13% Impervious Runoff Depth=6.65"
Tc=10.0 min CN=80/98 Runoff=17.97 cfs 1.115 af

Subcatchment 3: To UG Chambers Runoff Area=3.870 ac 100.00% Impervious Runoff Depth=6.96"
Tc=10.0 min CN=0/98 Runoff=35.60 cfs 2.245 af

Subcatchment 4: To South Basin Runoff Area=2.269 ac 34.95% Impervious Runoff Depth=5.61"
Flow Length=10' Tc=0.0 min CN=80/98 Runoff=24.41 cfs 1.060 af

Subcatchment 5: Direct to Ditch Runoff Area=1.710 ac 7.54% Impervious Runoff Depth=5.04"
Tc=10.0 min CN=80/98 Runoff=12.95 cfs 0.718 af

Reach 6R: Total Proposed Inflow=120.10 cfs 10.241 af
Outflow=120.10 cfs 10.241 af

Pond 1P: West Basin Peak Elev=786.73' Storage=4,706 cf Inflow=5.11 cfs 0.265 af
Outflow=3.27 cfs 0.211 af

Pond 2P: North Basin Peak Elev=786.04' Storage=12,029 cf Inflow=17.97 cfs 1.115 af
Outflow=16.26 cfs 1.115 af

Pond 3P: UG System Peak Elev=784.14' Storage=0.470 af Inflow=35.60 cfs 2.245 af
Outflow=35.72 cfs 2.245 af

Pond 4P: South Basin Peak Elev=784.18' Storage=31,163 cf Inflow=24.41 cfs 1.060 af
Outflow=1.78 cfs 0.640 af

Total Runoff Area = 20.117 ac Runoff Volume = 10.715 af Average Runoff Depth = 6.39"
27.35% Pervious = 5.503 ac 72.65% Impervious = 14.614 ac

Summary for Subcatchment 1: Direct To Hamlet Park Pond

Runoff = 63.54 cfs @ 12.29 hrs, Volume= 5.313 af, Depth= 6.57"
Routed to Reach 6R : Total Proposed

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=7.20"

Area (ac)	CN	Description
7.883	98	Paved parking, HSG D
1.820	80	>75% Grass cover, Good, HSG D
9.703	95	Weighted Average
1.820	80	18.76% Pervious Area
7.883	98	81.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0					**Direct Entry,**

Summary for Subcatchment 1A: Existing parking to raingarden

Runoff = 5.11 cfs @ 12.14 hrs, Volume= 0.265 af, Depth= 5.73"
Routed to Pond 1P : West Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=7.20"

Area (ac)	CN	Description
0.227	98	Paved parking, HSG D
0.327	80	>75% Grass cover, Good, HSG D
0.554	87	Weighted Average
0.327	80	59.03% Pervious Area
0.227	98	40.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.0					**Direct Entry,**

Summary for Subcatchment 2: To North Basin

Runoff = 17.97 cfs @ 12.17 hrs, Volume= 1.115 af, Depth= 6.65"
Routed to Pond 2P : North Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=7.20"

Area (ac)	CN	Description
1.712	98	Roofs, HSG D
0.299	80	>75% Grass cover, Good, HSG D
2.011	95	Weighted Average
0.299	80	14.87% Pervious Area
1.712	98	85.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 3: To UG Chambers

Runoff = 35.60 cfs @ 12.17 hrs, Volume= 2.245 af, Depth= 6.96"
Routed to Pond 3P : UG System

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=7.20"

Area (ac)	CN	Description
3.870	98	Paved parking, HSG D
3.870	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment 4: To South Basin

Runoff = 24.41 cfs @ 12.09 hrs, Volume= 1.060 af, Depth= 5.61"
Routed to Pond 4P : South Basin

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=7.20"

Area (ac)	CN	Description
0.793	98	Roofs, HSG D
1.476	80	>75% Grass cover, Good, HSG D
2.269	86	Weighted Average
1.476	80	65.05% Pervious Area
0.793	98	34.95% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0	10				**Direct Entry,**

Summary for Subcatchment 5: Direct to Ditch

Runoff = 12.95 cfs @ 12.17 hrs, Volume= 0.718 af, Depth= 5.04"
Routed to Reach 6R : Total Proposed

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
MSE 24-hr 3 100-Year Rainfall=7.20"

Area (ac)	CN	Description
0.129	98	Paved parking, HSG D
1.581	80	>75% Grass cover, Good, HSG D
1.710	81	Weighted Average
1.581	80	92.46% Pervious Area
0.129	98	7.54% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Reach 6R: Total Proposed

Inflow Area = 20.117 ac, 72.65% Impervious, Inflow Depth > 6.11" for 100-Year event
Inflow = 120.10 cfs @ 12.20 hrs, Volume= 10.241 af
Outflow = 120.10 cfs @ 12.20 hrs, Volume= 10.241 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: West Basin

Inflow Area = 0.554 ac, 40.97% Impervious, Inflow Depth = 5.73" for 100-Year event
Inflow = 5.11 cfs @ 12.14 hrs, Volume= 0.265 af
Outflow = 3.27 cfs @ 12.21 hrs, Volume= 0.211 af, Atten= 36%, Lag= 4.3 min
Primary = 3.27 cfs @ 12.21 hrs, Volume= 0.211 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 786.73' @ 12.21 hrs Surf.Area= 3,592 sf Storage= 4,706 cf

Plug-Flow detention time= 137.3 min calculated for 0.211 af (80% of inflow)
Center-of-Mass det. time= 76.0 min (842.0 - 765.9)

Volume	Invert	Avail.Storage	Storage Description
#1	785.00'	5,703 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
785.00	1,864	0	0
786.00	2,837	2,351	2,351
787.00	3,868	3,353	5,703

Device	Routing	Invert	Outlet Devices
#1	Primary	782.50'	**12.0" Round Culvert**
			L= 56.0' RCP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 782.50' / 782.22' S= 0.0050 '/' Cc= 0.900
			n= 0.012 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Device 1	786.00'	**27.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.27 cfs @ 12.21 hrs HW=786.73' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 3.27 cfs of 6.82 cfs potential flow)
└─**2=Orifice/Grate** (Orifice Controls 3.27 cfs @ 2.91 fps)

Summary for Pond 2P: North Basin

Inflow Area = 2.011 ac, 85.13% Impervious, Inflow Depth = 6.65" for 100-Year event
Inflow = 17.97 cfs @ 12.17 hrs, Volume= 1.115 af
Outflow = 16.26 cfs @ 12.21 hrs, Volume= 1.115 af, Atten= 10%, Lag= 2.4 min
Primary = 16.26 cfs @ 12.21 hrs, Volume= 1.115 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 786.04' @ 12.21 hrs Surf.Area= 8,141 sf Storage= 12,029 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 310.8 min (1,060.5 - 749.7)

Volume	Invert	Avail.Storage	Storage Description
#1	784.00'	16,151 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
784.00	4,366	0	0
785.00	5,538	4,952	4,952
786.00	8,020	6,779	11,731
786.50	9,658	4,420	16,151

Device	Routing	Invert	Outlet Devices
#1	Primary	778.04'	**36.0" Round Culvert**
			L= 32.0' RCP, square edge headwall, Ke= 0.500
			Inlet / Outlet Invert= 778.04' / 777.85' S= 0.0059 '/' Cc= 0.900
			n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Device 1	785.50'	**48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	784.00'	**0.500 in/hr Filtration over Surface area**

Primary OutFlow Max=16.25 cfs @ 12.21 hrs HW=786.04' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 16.25 cfs of 86.75 cfs potential flow)
├─**2=Orifice/Grate** (Weir Controls 16.16 cfs @ 2.40 fps)
└─**3=Filtration** (Exfiltration Controls 0.09 cfs)

Summary for Pond 3P: UG System

Inflow Area = 3.870 ac,100.00% Impervious, Inflow Depth = 6.96" for 100-Year event
Inflow = 35.60 cfs @ 12.17 hrs, Volume= 2.245 af
Outflow = 35.72 cfs @ 12.18 hrs, Volume= 2.245 af, Atten= 0%, Lag= 0.6 min
Primary = 35.72 cfs @ 12.18 hrs, Volume= 2.245 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 784.14' @ 12.18 hrs Surf.Area= 0.363 ac Storage= 0.470 af

Plug-Flow detention time= 220.0 min calculated for 2.245 af (100% of inflow)
Center-of-Mass det. time= 220.2 min (964.6 - 744.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	781.17'	0.252 af	**54.83'W x 288.00'L x 2.33'H Field A** 0.846 af Overall - 0.217 af Embedded = 0.629 af x 40.0% Voids
#2A	781.67'	0.217 af	**ADS_StormTech SC-310 +Cap** x 640 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 640 Chambers in 16 Rows
#3	781.17'	0.003 af	**6.00'D x 4.83'H Vertical Cone/Cylinder**
		0.471 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	780.17'	**36.0" Round Culvert** L= 68.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 780.17' / 779.94' S= 0.0034 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 7.07 sf
#2	Device 1	782.60'	**6.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Device 1	781.17'	**0.500 in/hr Filtration over Surface area**

Primary OutFlow Max=35.72 cfs @ 12.18 hrs HW=784.14' TW=0.00' (Dynamic Tailwater)
↑**1=Culvert** (Passes 35.72 cfs of 45.56 cfs potential flow)
↑**2=Sharp-Crested Rectangular Weir** (Weir Controls 35.54 cfs @ 4.06 fps)
3=Filtration (Exfiltration Controls 0.18 cfs)

Summary for Pond 4P: South Basin

Inflow Area = 2.269 ac, 34.95% Impervious, Inflow Depth = 5.61" for 100-Year event
Inflow = 24.41 cfs @ 12.09 hrs, Volume= 1.060 af
Outflow = 1.78 cfs @ 12.69 hrs, Volume= 0.640 af, Atten= 93%, Lag= 36.2 min
Primary = 1.78 cfs @ 12.69 hrs, Volume= 0.640 af
Routed to Reach 6R : Total Proposed

Routing by Dyn-Stor-Ind method, Time Span= 1.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 784.18' @ 12.69 hrs Surf.Area= 17,710 sf Storage= 31,163 cf

Plug-Flow detention time= 895.1 min calculated for 0.640 af (60% of inflow)

Center-of-Mass det. time= 816.9 min (1,579.4 - 762.5)

Volume	Invert	Avail.Storage	Storage Description
#1	782.00'	94,531 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
782.00	11,160	0	0
783.00	13,948	12,554	12,554
784.00	17,135	15,542	28,096
785.00	20,401	18,768	46,864
786.00	23,841	22,121	68,985
787.00	27,252	25,547	94,531

Device	Routing	Invert	Outlet Devices
#1	Primary	782.00'	**8.0" Round Culvert** L= 48.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 782.00' / 781.85' S= 0.0031 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	784.00'	**27.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	782.01'	**0.500 in/hr Filtration over Surface area above 782.01'** Excluded Surface area = 11,188 sf

Primary OutFlow Max=1.78 cfs @ 12.69 hrs HW=784.18' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 1.78 cfs of 2.07 cfs potential flow)
  ├─**2=Orifice/Grate** (Weir Controls 1.71 cfs @ 1.37 fps)
  └─**3=Filtration** (Exfiltration Controls 0.08 cfs)

EXHIBIT 7

Stage-Area-Storage for Pond 2P: North Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
784.00	4,366	0
784.05	4,425	220
784.10	4,483	442
784.15	4,542	668
784.20	4,600	897
784.25	4,659	1,128
784.30	4,718	1,363
784.35	4,776	1,600
784.40	4,835	1,840
784.45	4,893	2,083
784.50	4,952	2,330
784.55	5,011	2,579
784.60	5,069	2,831
784.65	5,128	3,085
784.70	5,186	3,343
784.75	5,245	3,604
784.80	5,304	3,868
784.85	5,362	4,134
784.90	5,421	4,404
784.95	5,479	4,677
785.00	5,538	4,952
785.05	5,662	5,232
785.10	5,786	5,518
785.15	5,910	5,811
785.20	6,034	6,109
785.25	6,159	6,414
785.30	6,283	6,725
785.35	6,407	7,042
785.40	6,531	7,366
785.45	6,655	7,695
785.50	6,779	8,031
785.55	6,903	8,373
785.60	7,027	8,722
785.65	7,151	9,076
785.70	7,275	9,437
785.75	7,400	9,804
785.80	7,524	10,177
785.85	7,648	10,556
785.90	7,772	10,941
785.95	7,896	11,333
786.00	8,020	11,731
786.05	8,184	12,136
786.10	8,348	12,549
786.15	8,511	12,971
786.20	8,675	13,401
786.25	8,839	13,838
786.30	9,003	14,284
786.35	9,167	14,739
786.40	9,330	15,201
786.45	9,494	15,672
786.50	**9,658**	**16,151**

Stage-Area-Storage for Pond 3P: UG System

Elevation (feet)	Surface (acres)	Storage (acre-feet)
781.17	**0.363**	0.000
781.22	0.363	0.007
781.27	0.363	0.015
781.32	0.363	0.022
781.37	0.363	0.029
781.42	0.363	0.036
781.47	0.363	0.044
781.52	0.363	0.051
781.57	0.363	0.058
781.62	0.363	0.066
781.67	0.363	0.073
781.72	0.363	0.088
781.77	0.363	0.102
781.82	0.363	0.117
781.87	0.363	0.132
781.92	0.363	0.146
781.97	0.363	0.161
782.02	0.363	0.175
782.07	0.363	0.189
782.12	0.363	0.203
782.17	0.363	0.216
782.22	0.363	0.230
782.27	0.363	0.243
782.32	0.363	0.256
782.37	0.363	0.269
782.42	0.363	0.281
782.47	0.363	0.294
782.52	0.363	0.306
782.57	0.363	0.317
782.62	0.363	0.328
782.67	0.363	0.339
782.72	0.363	0.350
782.77	0.363	0.359
782.82	0.363	0.368
782.87	0.363	0.376
782.92	0.363	0.384
782.97	0.363	0.392
783.02	0.363	0.399
783.07	0.363	0.407
783.12	0.363	0.414
783.17	0.363	0.421
783.22	0.363	0.429
783.27	0.363	0.436
783.32	0.363	0.443
783.37	0.363	0.450
783.42	0.363	0.458
783.47	0.363	0.465
783.52	0.363	0.470
783.57	0.363	0.470
783.62	0.363	0.470
783.67	0.363	0.470
783.72	0.363	0.470
783.77	0.363	0.470
783.82	0.363	0.470
783.87	0.363	0.470
783.92	0.363	0.470
783.97	0.363	0.470
784.02	0.363	0.470
784.07	0.363	0.470
784.12	0.363	0.470
784.17	0.363	0.470
784.22	0.363	0.470
784.27	0.363	0.470
784.32	0.363	0.470
784.37	0.363	0.470
784.42	0.363	0.470
784.47	0.363	0.470
784.52	0.363	0.470
784.57	0.363	0.471
784.62	0.363	0.471
784.67	0.363	0.471
784.72	0.363	0.471
784.77	0.363	0.471
784.82	0.363	0.471
784.87	0.363	0.471
784.92	0.363	0.471
784.97	0.363	**0.471**

Stage-Area-Storage for Pond 4P: South Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
782.00	11,160	0
782.05	11,299	561
782.10	11,439	1,130
782.15	11,578	1,705
782.20	11,718	2,288
782.25	11,857	2,877
782.30	11,996	3,473
782.35	12,136	4,077
782.40	12,275	4,687
782.45	12,415	5,304
782.50	12,554	5,929
782.55	12,693	6,560
782.60	12,833	7,198
782.65	12,972	7,843
782.70	13,112	8,495
782.75	13,251	9,154
782.80	13,390	9,820
782.85	13,530	10,493
782.90	13,669	11,173
782.95	13,809	11,860
783.00	13,948	12,554
783.05	14,107	13,255
783.10	14,267	13,965
783.15	14,426	14,682
783.20	14,585	15,407
783.25	14,745	16,141
783.30	14,904	16,882
783.35	15,063	17,631
783.40	15,223	18,388
783.45	15,382	19,153
783.50	15,542	19,926
783.55	15,701	20,707
783.60	15,860	21,496
783.65	16,020	22,293
783.70	16,179	23,098
783.75	16,338	23,911
783.80	16,498	24,732
783.85	16,657	25,561
783.90	16,816	26,398
783.95	16,976	27,243
784.00	17,135	28,096
784.05	17,298	28,956
784.10	17,462	29,825
784.15	17,625	30,702
784.20	17,788	31,588
784.25	17,952	32,481
784.30	18,115	33,383
784.35	18,278	34,293
784.40	18,441	35,211
784.45	18,605	36,137
784.50	18,768	37,071
784.55	18,931	38,014
784.60	19,095	38,964
784.65	19,258	39,923
784.70	19,421	40,890
784.75	19,585	41,865
784.80	19,748	42,849
784.85	19,911	43,840
784.90	20,074	44,840
784.95	20,238	45,848
785.00	20,401	46,864
785.05	20,573	47,888
785.10	20,745	48,921
785.15	20,917	49,962
785.20	21,089	51,013
785.25	21,261	52,071
785.30	21,433	53,139
785.35	21,605	54,215
785.40	21,777	55,299
785.45	21,949	56,392
785.50	22,121	57,494
785.55	22,293	58,604
785.60	22,465	59,723
785.65	22,637	60,851
785.70	22,809	61,987
785.75	22,981	63,132
785.80	23,153	64,285
785.85	23,325	65,447
785.90	23,497	66,618
785.95	23,669	67,797
786.00	23,841	68,985
786.05	24,012	70,181
786.10	24,182	71,386
786.15	24,353	72,599
786.20	24,523	73,821
786.25	24,694	75,051
786.30	24,864	76,290
786.35	25,035	77,538
786.40	25,205	78,794
786.45	25,376	80,058
786.50	25,547	81,331
786.55	25,717	82,613
786.60	25,888	83,903
786.65	26,058	85,202
786.70	26,229	86,509
786.75	26,399	87,825
786.80	26,570	89,149
786.85	26,740	90,482
786.90	26,911	91,823
786.95	27,081	93,173
787.00	**27,252**	**94,531**

Stage-Area-Storage for Pond 1P: West Basin

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
785.00	1,864	0
785.05	1,913	94
785.10	1,961	191
785.15	2,010	291
785.20	2,059	392
785.25	2,107	496
785.30	2,156	603
785.35	2,205	712
785.40	2,253	823
785.45	2,302	937
785.50	2,351	1,054
785.55	2,399	1,172
785.60	2,448	1,294
785.65	2,496	1,417
785.70	2,545	1,543
785.75	2,594	1,672
785.80	2,642	1,803
785.85	2,691	1,936
785.90	2,740	2,072
785.95	2,788	2,210
786.00	2,837	2,351
786.05	2,889	2,494
786.10	2,940	2,639
786.15	2,992	2,788
786.20	3,043	2,939
786.25	3,095	3,092
786.30	3,146	3,248
786.35	3,198	3,407
786.40	3,249	3,568
786.45	3,301	3,732
786.50	3,353	3,898
786.55	3,404	4,067
786.60	3,456	4,238
786.65	3,507	4,412
786.70	3,559	4,589
786.75	3,610	4,768
786.80	3,662	4,950
786.85	3,713	5,134
786.90	3,765	5,321
786.95	3,816	5,511
787.00	**3,868**	**5,703**
787.05	3,868	5,703
787.10	3,868	5,703
787.15	3,868	5,703
787.20	3,868	5,703
787.25	3,868	5,703
787.30	3,868	5,703
787.35	3,868	5,703
787.40	3,868	5,703
787.45	3,868	5,703
787.50	3,868	5,703
787.55	3,868	5,703
787.60	3,868	5,703
787.65	3,868	5,703
787.70	3,868	5,703
787.75	3,868	5,703
787.80	3,868	5,703
787.85	3,868	5,703
787.90	3,868	5,703
787.95	3,868	5,703
788.00	3,868	5,703
788.05	3,868	5,703
788.10	3,868	5,703
788.15	3,868	5,703
788.20	3,868	5,703
788.25	3,868	5,703

EXHIBIT 8

P8 Urban Catchment Model, Version 3.4				Run Date	11/10/25
Case	25-11-06 Van Meter.p8c	FirstDate	01/01/71	Precip(in)	870.4
Title	Van Meter	LastDate	12/31/00	Rain(in)	756.51
PrecFile	MSP_19700101-20001231.pcp	Events	2196	Snow(in)	113.84
PartFile	nurp50.p8p	TotalHrs	261888	TotalYrs	29.88

Case Title	Van Meter
Case Data File	25-11-06 Van Meter.p8c
Path	N:\0058882.00\docs\Design\Pond\P8\
Case Notes:	Van Meter Proposed Conditions
Storm Data File	MSP_19700101-20001231.pcp
Particle File	nurp50.p8p
Air Temp File File	MSP_19700101-20001231.tmp

Time Steps Per Hour	4
Minimum Inter-Event Time (hrs)	10
Maximum Continuity Error %	2
Rainfall Breakpoint (inches)	0.8
Precipitation Scale Factor	1
Air Temp Offset (deg-F)	0
Loops Thru Storm File	5
Simulation Dates	
Start	1/1/1971
Keep	1/1/1971
Stop	12/31/2000

Max Snowfall Temperature (deg-f)	32.0
SnowMelt Temperature (deg-f)	32.0
Snowmelt Coef (in/degF-Day)	0.06
Soil Freeze Temp (deg-F)	32.0
Snowmelt Abstraction Factor	1.00
Evapo-Trans. Calibration Factor	1.00
Growing Season Start Month	5
Growing Season End Month	10

5-Day Antecedent Rainfall + Runoff (inches)		
CN Antecedent Moisture Condition	AMC-II	AMC-III
Growing Season	1.40	2.10
NonGrowing Season	0.50	1.10

Watershed Data						
Watershed Name	Watershed 2	Watershed 3	Watershed 4			
Runoff to Device	North Basin	derground Sys	South Basin			
Infiltration to Device						

Watershed Area	2.011	3.87	2.269			
SCS Curve Number (Pervious)	80	80	80			
Scale Factor for Pervious Runoff Load	1	1	1			
Indirectly Connected Imperv Fraction	0	0	0			
UnSwept Impervious Fraction	0.85	1	0.35			
UnSwept Depression Storage (inches)	0.1	0.1	0.1			
UnSwept Imperv. Runoff Coefficient	0.9	0.9	0.9			
UnSwept Scale Factor for Particle Loads	1	1	1			
Swept Impervious Fraction	0	0	0			
Swept Depression Storage (inches)	0	0	0			
Swept Imperv. Runoff Coefficient	1	1	1			
Swept Scale Factor for Particle Loads	1	1	1			
Sweeping Frequency	0	0	0			
Sweeping Efficiency	1	1	1			
Sweeping Start Date (MMDD)	101	101	101			
Sweeping Stop Date (MMDD)	1231	1231	1231			

Device Data						
Device Name	North Basin	derground Sys	South Basin			
Device Type	INF_BASIN	INF_BASIN	INF_BASIN			
Infiltration Outlet						
Normal Outlet						
Spillway Outlet						
Particle Removal Scale Factor	1	1	1			
Bottom Elevation (ft)	784	780.17	782			
Bottom Area (acres)	0.1002	0.3625	0.2562			
Permanent Pool Area (acres)						
Permanent Pool Volume (ac-ft)						
Perm Pool Infilt Rate (in/hr)						
Flood Pool Area (acres)	0.1556	0.3625	0.3934			
Flood Pool Volume (ac-ft)	0.1844	0.324	0.645			
Flood Pool Infilt Rate (in/hr)	0.5	0.5	0.5			
Infilt Basin Void Fraction (%)	100	100	100			
Detention Pond Outlet Parameters						
Outlet Type						
Outlet Orifice Diameter (in)						
Orifice Discharge Coef						
Outlet Weir Length (ft)						
Weir Discharge Coef						
Perforated Riser Height (ft)						
Number of Holes in Riser						
Holes Diameter						
Flood Pool Drain Time (hrs)						
Swale Parameters						
Length of Flow Path (ft)						

Slope of Flow Path %						
Bottom Width (ft)						
Side Slope (ft-v/ft-h)						
Maximum Depth of Flow (ft)						
Mannings n Constant						
Hydraulic Model						
Pipe, Splitter, Aquifer Parameter						
Hydraulic Res. Time (hrs)						

Particle Data					
Particle File	nurp50.p8p				
Particle Class	P0%	P10%	P30%	P50%	P80%
Filtration Efficiency (%)	0	25	100	100	100
Settling Velocity (ft/hr)	0	0.03	0.3	1.5	15
First Order Decay Rate (1/da	0	0	0	0	0
2nd Order Decay (1/day-ppm	0	0	0	0	0
Impervious Runoff Conc (ppr	1	0	0	0	0
Pervious Runoff Conc (ppm)	1	100	100	100	200
Pervious Conc Exponent	0	1	1	1	1
Accum. Rate (lbs-ac-day)	0	1.75	1.75	1.75	3.5
Particle Removal Rate (1/day	0	0.25	0.25	0.25	0.25
Washoff Coefficient	0	20	20	20	20
Washoff Exponent	0	2	2	2	2
Sweeper Efficiency	0	0	0	5	15

Water Quality Component Data							
Component Name	TSS	TP	TKN	CU	PB	ZN	HC
Water Quality Criteria (ppm)							
Level 1	5	0.025	2	2	0.02	5	0.1
Level 2	10	0.05	1	0.0048	0.014	0.0362	0.5
Level 3	20	0.1	0.5	0.02	0.15	0.38	1
Content Scale Factor	1	1	1	1	1	1	1
Particle Composition (mg/kg)							
P0%	0	99000	600000	13600	2000	640000	250000
P10%	1000000	3850	15000	340	180	1600	22500
P30%	1000000	3850	15000	340	180	1600	22500
P50%	1000000	3850	15000	340	180	1600	22500
P80%	1000000	0	0	340	180	0	22500

P8 Urban Catchment Model, Version 3.4				Run Date	11/10/25
Case	25-11-06 Van Meter.p8c	FirstDate	01/01/71	Precip(in)	870.4
Title	Van Meter	LastDate	12/31/00	Rain(in)	756.51
PrecFile	MSP_19700101-20001231.pcp	Events	2196	Snow(in)	113.84
PartFile	nurp50.p8p	TotalHrs	261888	TotalYrs	29.88

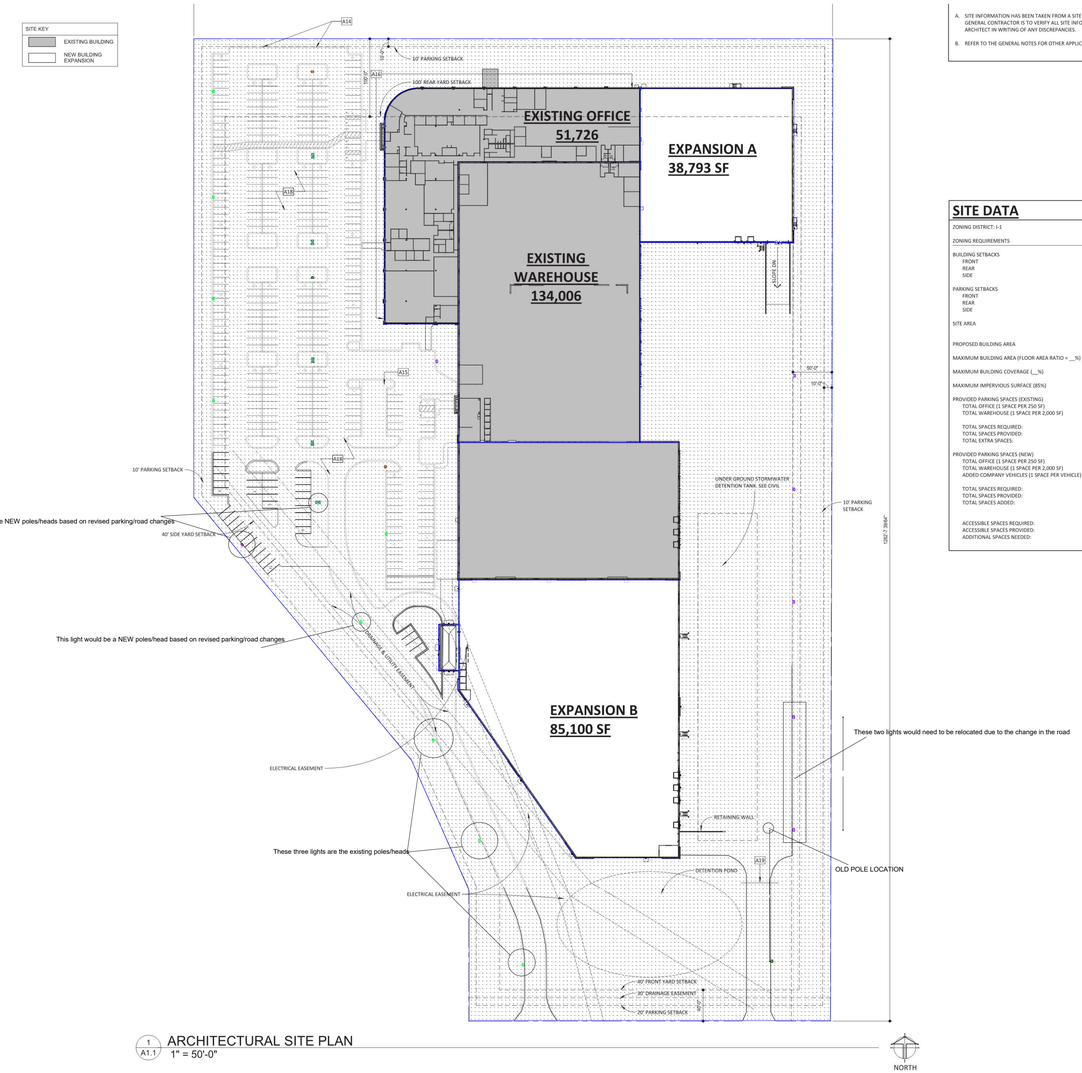
Mass Balances by Device

Device: OVERALL	Type:	NONE											
	Flow	Loads(lbs)											
Mass Balance Term	acre-ft	P0%	P10%	P30%	P50%	P80%	TSS	TP	TKN	CU	PB	ZN	HC
01 watershed inflows	364.54	990.81	21759.58	21759.58	21759.58	43519.16	108797.91	349.41	1573.66	50.47	21.57	738.56	2695.65
03 infiltrate	343.75	934.31	11868.11	2490.24	554.87	114.02	15027.23	149.91	784.29	17.82	4.57	621.82	571.69
04 exfiltrate	343.75	934.31	8901.08	0.00	0.00	0.00	8901.08	126.77	694.10	15.73	3.47	612.20	433.85
05 filtered	0.00	0.00	2967.03	2490.24	554.87	114.02	6126.15	23.15	90.18	2.08	1.10	9.62	137.84
07 spillway outlet	20.78	56.49	466.78	221.40	67.59	18.78	774.57	8.50	45.23	1.03	0.25	37.36	31.55
08 sedimen + decay	0.00	0.00	9327.24	19043.91	21136.26	43386.19	92893.61	190.60	742.61	31.58	16.72	79.21	2090.11
09 total inflow	364.54	990.81	21759.58	21759.58	21759.58	43519.16	108797.91	349.41	1573.66	50.47	21.57	738.56	2695.65
10 surface outflow	20.78	56.49	466.78	221.40	67.59	18.78	774.57	8.50	45.23	1.03	0.25	37.36	31.55
11 groundw outflow	343.75	934.31	8901.08	0.00	0.00	0.00	8901.08	126.77	694.10	15.73	3.47	612.20	433.85
12 total outflow	364.54	990.81	9367.86	221.40	67.59	18.78	9675.64	135.27	739.34	16.76	3.72	649.57	465.40
13 total trapped	0.00	0.00	12294.27	21534.16	21691.13	43500.20	99019.76	213.75	832.79	33.67	17.82	88.83	2227.94
14 storage increase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 mass balance check	0.00	0.00	97.45	4.02	0.86	0.17	102.50	0.39	1.53	0.03	0.02	0.16	2.31
Load Reduction (%)	0.00	0.00	56.50	98.96	99.69	99.96	91.01	61.17	52.92	66.71	82.65	12.03	82.65

Device: North Basin	Type:	INF_BASIN											
	Flow	Loads(lbs)											
Mass Balance Term	acre-ft	P0%	P10%	P30%	P50%	P80%	TSS	TP	TKN	CU	PB	ZN	HC
01 watershed inflows	96.06	261.09	5767.11	5767.11	5767.11	11534.23	28835.57	92.46	416.17	13.35	5.71	194.78	714.07
03 infiltrate	90.67	246.44	3227.74	681.78	152.19	31.35	4093.05	40.04	208.79	4.74	1.23	164.22	153.70
04 exfiltrate	90.67	246.44	2420.80	0.00	0.00	0.00	2420.80	33.72	184.18	4.17	0.93	161.60	116.08
05 filtered	0.00	0.00	806.93	681.78	152.19	31.35	1672.25	6.32	24.61	0.57	0.30	2.63	37.63
07 spillway outlet	5.39	14.65	137.87	79.24	35.29	14.49	266.89	2.42	12.58	0.29	0.08	9.78	9.67
08 sedimen + decay	0.00	0.00	2390.27	5005.86	5579.58	11488.38	24464.09	49.96	194.64	8.32	4.40	20.76	550.44
09 total inflow	96.06	261.09	5767.11	5767.11	5767.11	11534.23	28835.57	92.46	416.17	13.35	5.71	194.78	714.07
10 surface outflow	5.39	14.65	137.87	79.24	35.29	14.49	266.89	2.42	12.58	0.29	0.08	9.78	9.67
11 groundw outflow	90.67	246.44	2420.80	0.00	0.00	0.00	2420.80	33.72	184.18	4.17	0.93	161.60	116.08
12 total outflow	96.06	261.09	2558.67	79.24	35.29	14.49	2687.69	36.14	196.75	4.46	1.01	171.38	125.75
13 total trapped	0.00	0.00	3197.20	5687.64	5731.77	11519.73	26136.34	56.27	219.25	8.89	4.70	23.39	588.07
14 storage increase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 mass balance check	0.00	0.00	11.24	0.24	0.05	0.01	11.54	0.04	0.17	0.00	0.00	0.02	0.26
Load Reduction (%)	0.00	0.00	55.44	98.62	99.39	99.87	90.64	60.86	52.68	66.54	82.35	12.01	82.35

Device: Underground System	Type:	INF_BASIN											
	Flow	Loads(lbs)											
Mass Balance Term	acre-ft	P0%	P10%	P30%	P50%	P80%	TSS	TP	TKN	CU	PB	ZN	HC
01 watershed inflows	210.81	572.99	12788.34	12788.34	12788.34	25576.67	63941.69	204.43	919.27	29.53	12.66	428.09	1581.93
03 infiltrate	195.65	531.78	7033.48	1484.75	330.99	67.91	8917.14	86.72	451.81	10.26	2.67	354.50	333.58
04 exfiltrate	195.65	531.78	5275.11	0.00	0.00	0.00	5275.11	72.96	398.19	9.03	2.01	348.78	251.63
05 filtered	0.00	0.00	1758.37	1484.75	330.99	67.91	3642.02	13.76	53.61	1.24	0.66	5.72	81.95
07 spillway outlet	15.16	41.21	285.45	107.39	16.17	1.57	410.59	5.65	30.86	0.70	0.16	27.03	19.54
08 sedimen + decay	0.00	0.00	5419.09	11194.88	12440.89	25507.13	54561.98	111.86	435.82	18.55	9.82	46.49	1227.64
09 total inflow	210.81	572.99	12788.34	12788.34	12788.34	25576.67	63941.69	204.43	919.27	29.53	12.66	428.09	1581.93
10 surface outflow	15.16	41.21	285.45	107.39	16.17	1.57	410.59	5.65	30.86	0.70	0.16	27.03	19.54
11 groundw outflow	195.65	531.78	5275.11	0.00	0.00	0.00	5275.11	72.96	398.19	9.03	2.01	348.78	251.63
12 total outflow	210.81	572.99	5560.56	107.39	16.17	1.57	5685.70	78.61	429.05	9.73	2.17	375.81	271.17
13 total trapped	0.00	0.00	7177.46	12679.62	12771.88	25575.04	58204.01	125.62	489.43	19.79	10.48	52.21	1309.59
14 storage increase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 mass balance check	0.00	0.00	50.31	1.33	0.28	0.06	51.98	0.20	0.78	0.02	0.01	0.08	1.17
Load Reduction (%)	0.00	0.00	56.13	99.15	99.87	99.99	91.03	61.45	53.24	67.01	82.78	12.20	82.78

Device: South Basin	Type:	INF_BASIN											
	Flow	Loads(lbs)											
Mass Balance Term	acre-ft	P0%	P10%	P30%	P50%	P80%	TSS	TP	TKN	CU	PB	ZN	HC
01 watershed inflows	57.66	156.73	3204.13	3204.13	3204.13	6408.26	16020.65	52.52	238.22	7.58	3.20	115.69	399.65
03 infiltrate	57.43	156.10	1606.89	323.72	71.68	14.75	2017.04	23.16	123.69	2.81	0.68	103.10	84.41
04 exfiltrate	57.43	156.10	1205.17	0.00	0.00	0.00	1205.17	20.09	111.73	2.53	0.53	101.83	66.14
05 filtered	0.00	0.00	401.72	323.72	71.68	14.75	811.88	3.07	11.96	0.28	0.15	1.28	18.27
07 spillway outlet	0.23	0.63	43.46	34.78	16.13	2.72	97.08	0.43	1.80	0.04	0.02	0.56	2.34
08 sedimen + decay	0.00	0.00	1517.89	2843.18	3115.79	6390.68	13867.54	28.79	112.15	4.71	2.50	11.96	312.02
09 total inflow	57.66	156.73	3204.13	3204.13	3204.13	6408.26	16020.65	52.52	238.22	7.58	3.20	115.69	399.65
10 surface outflow	0.23	0.63	43.46	34.78	16.13	2.72	97.08	0.43	1.80	0.04	0.02	0.56	2.34
11 groundw outflow	57.43	156.10	1205.17	0.00	0.00	0.00	1205.17	20.09	111.73	2.53	0.53	101.83	66.14
12 total outflow	57.66	156.73	1248.63	34.78	16.13	2.72	1302.25	20.52	113.53	2.57	0.55	102.39	68.48
13 total trapped	0.00	0.00	1919.61	3166.90	3187.48	6405.43	14679.42	31.85	124.11	4.99	2.64	13.24	330.29
14 storage increase	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15 mass balance check	0.00	0.00	35.89	2.46	0.52	0.11	38.98	0.15	0.58	0.01	0.01	0.06	0.88
Load Reduction (%)	0.00	0.00	59.91	98.84	99.48	99.96	91.63	60.65	52.10	65.86	82.64	11.44	82.64



1 A1.1 ARCHITECTURAL SITE PLAN
1" = 50'-0"

A. SITE INFORMATION HAS BEEN TAKEN FROM A SITE SURVEY PREPARED BY (surveyer and address) DATED (date). GENERAL CONTRACTOR IS TO VERIFY ALL SITE INFORMATION BEFORE STARTING CONSTRUCTION, AND NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES.

B. REFER TO THE GENERAL NOTES FOR OTHER APPLICABLE INFORMATION.

SITE DATA

ZONING DISTRICT: I-1

ZONING REQUIREMENTS	REQUIRED	PROVIDED
BUILDING SETBACKS		
FRONT	40'	40'
REAR	100'	100'
SIDE	40'	40'
PARKING SETBACKS		
FRONT	20'	20'
REAR	10'	10'
SIDE	10'	10'
SITE AREA		875,161 SF (20.1 ACRES)
PROPOSED BUILDING AREA		309,624 SF
MAXIMUM BUILDING AREA (FLOOR AREA RATIO = __%)		_____ SF
MAXIMUM BUILDING COVERAGE (__%)		309,924 SF (54%)
MAXIMUM IMPERVIOUS SURFACE (85%)	743,886 SF MAX	555,423 SF (63%)
PROVIDED PARKING SPACES (EXISTING)		
TOTAL OFFICE (1 SPACE PER 250 SF)	207 SPACES	51,726 NSF
TOTAL WAREHOUSE (1 SPACE PER 2,000 SF)	67 SPACES	134,006 NSF
TOTAL SPACES REQUIRED:	274 SPACES	185,732 NSF
TOTAL SPACES PROVIDED:	302 SPACES	185,732 NSF
TOTAL EXTRA SPACES:	28 SPACES	
PROVIDED PARKING SPACES (NEW)		
TOTAL OFFICE (1 SPACE PER 250 SF)	0 SPACES	0 NSF
TOTAL WAREHOUSE (1 SPACE PER 2,000 SF)	62 SPACES	123,893 NSF
ADDED COMPANY VEHICLES (1 SPACE PER VEHICLE)	0 SPACES	0 VEHICLES
TOTAL SPACES REQUIRED:	336 SPACES	309,624 NSF
TOTAL SPACES PROVIDED:	302 SPACES	309,624 NSF
TOTAL SPACES ADDED:	38 SPACES	
ACCESSIBLE SPACES REQUIRED:	8 TOTAL	
ACCESSIBLE SPACES PROVIDED:	8 TOTAL	
ADDITIONAL SPACES NEEDED:	0 SPACES	

NOT FOR CONSTRUCTION

pope DESIGN GROUP
POPE DESIGN GROUP
767 N. EUSTIS STREET, SUITE 190
ST. PAUL, MINNESOTA 55114
651.642.9200
WWW.POPEDESIGN.COM

VAN METER

VAN METER FACILITY EXPANSION
7450 95TH ST S, COTTAGE GROVE, MN 55016

ARCHITECTURAL SITE PLAN

ISSUES & REVISIONS	DATE
80% PROGRESS SET	10-31-2025

COMMISSION NO: 81552-24199
DRAWN BY: LL
CHECKED BY: DP, RT
SHEET
A1.1

TRUE SHEET SCALE
0 1" 2"
Autodesk Docs://81552-24199 Van Meter Facility Expansion/81552-24199_Van Meter Facility Expansion_R23.rvt
11/4/2025 10:28:28 AM

VAN METER
A 100% EMPLOYEE-OWNED COMPANY

Van Meter Inc
Cottage Grove MN
6517698080

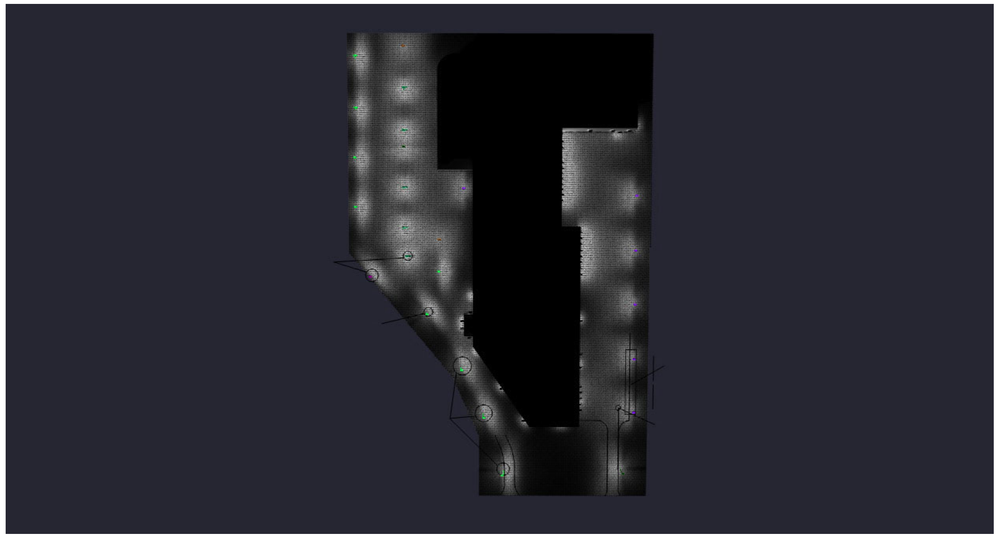
NCQLP LIGHTING CERTIFIED LC NCQLP

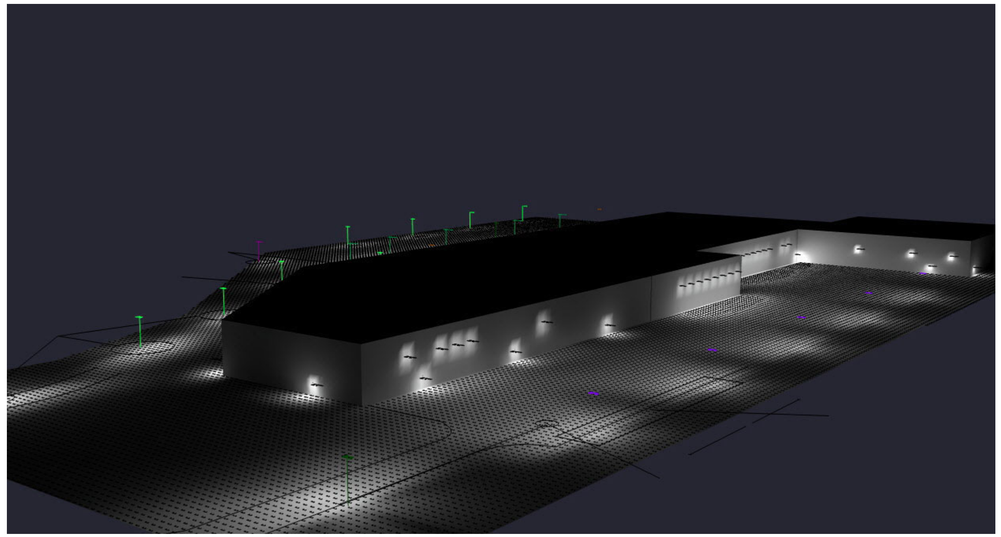
Drawn By: Charles R. Dix - LC
Date:11/10/2025
SCALE

Van Meter Cottage Grove
Expansion Project Photometrics

Luminaire Schedule									
Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	10	AXCS4A	Single	AXCS4A	WP-DOORS	1.000	5520	43.7	437
	10	GWC-SA1A-740-U-T4FT	Single	GWC-SA1A-740-U-T4FT	WP-2 NEW	1.000	5008	34	340
	2	SWP1-PS60-FCCT-U-a-b-c 30K-277V	Single	SWP1-PS60-FCCT-U-a-b-c at 3000K	WP-SMALL	1.000	7714	60	120
	19	SWP1-PS120-FCCT-U-a-b-c 30K-277V	Single	EIKO SWP1-PS120-FCCT-U-a-b-c at 3000K wall pack thin profile	WP2	1.000	15994	116.62	2215.78
	2	GLEON-SA6A-740-U-T3R_1	Single	GLEON-SA6A-740-U-T3R	AL-T3	1.000	28497	193	386
	5	GLEON-SA6A-740-U-T3R	Back-Back	GLEON-SA6A-740-U-T3R	AL-T3 - TWIN	1.000	28497	193	1930
	1	GLEON-SA6A-740-U-T2R-HSS	Single	GLEON-SA6A-740-U-T2R-HSS	AL-T2RHSS	1.000	22498	193	193
	6	GLEON-SA6A-740-U-T4FT	Single	GLEON-SA6A-740-U-T4FT	AL-T4	1.000	28040	193	1158
	2	GLEON-SA6A-740-U-5MQ	Single	GLEON-SA6A-740-U-5MQ	AL-T5	1.000	29281	193	386
	9	GLEON-SA6A-740-U-T2R	Single	GLEON-SA6A-740-U-T2R	AL-T2	1.000	29038	193	1737

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
GROUNDS-PROPERTY LINE_Planar	Illuminance	Fc	2.02	68.6	0.0	N.A.	N.A.





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Van Meter Inc
Cottage Grove MN
6517698080

NCQLP LIGHTING CERTIFIED NCQLP

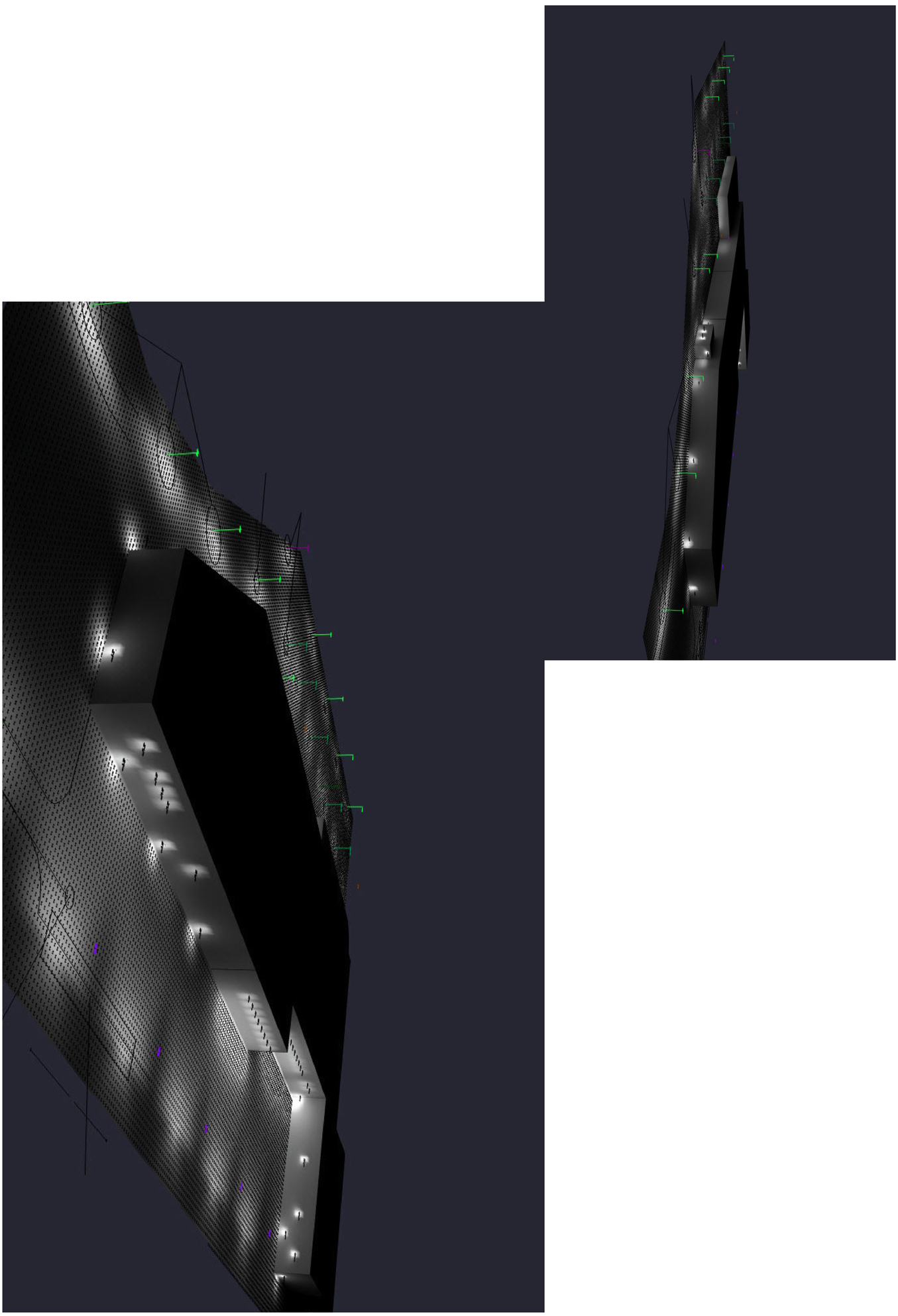
Drawn By: Charles R. Dix - LC

Date:11/10/2025

SCALE

Van Meter Cottage Grove

Expansion Project Photometrics



Van Meter Cottage Grove

Expansion Project Photometrics

Drawn By: Charles R. Dix - LC

Date:11/10/2025

SCALE

Van Meter Inc
Cottage Grove MN
6517698080

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Project		**Catalog #**		**Type**	
Prepared by		**Notes**		**Date**	



Lumark

Axcent

Wall Mount Luminaire

Product Certifications & Features

CERTIFIED · 3G VIB · IP66 · ISO SYSTEMS CERTIFIED · selectable lumens · DUSK-TO-DAWN · DLC LISTED · DLC LISTED PREMIUM · FC CLASS A CAN ICES-005 · RoHS COMPLIANT · DARKSKY APPROVED[1] · Light ARchitect™ · BAA · TAA · BABA · WaveLinx · 5 YEAR LIMITED WARRANTY

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Product Specifications page 4
- Energy and Performance Data page 4
- Control Options page 7

Quick Facts

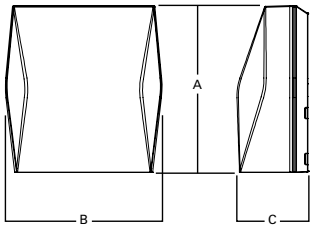
- Available in 12W - 116W (1,800 - 16,000 lumens) models
- Full cutoff and refractive lens models available
- Energy and maintenance savings up to 95% compared to HID
- Energy efficient illumination results in up to 177LPW
- Replaces 70W up to 450W HID equivalents

Connected Systems

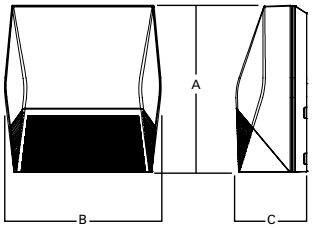
- WaveLinx PRO Wireless
- WaveLinx LITE Wireless

Dimensional Details

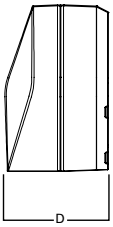
Full Cutoff



Refractive Lens[2]



Deep Back Housing



Dimensional Data

	AXCS Small	AXCL Large
A	8" [202mm]	11-1/2" [292mm]
B	7-1/2" [190mm]	10-3/4" [273mm]
C	3-5/8" [94mm]	4-7/8" [124mm]
D	6-1/8" [155mm]	7-1/8" [181mm]

NOTES:
1. DarkSky approved for 3000K CCT and warmer, with mounting options less than 10° of tilt.
2. Refractive Lens option does not comply with DarkSky.

Ordering Information

SAMPLE NUMBER: **AXCS1A-AP-347V**

Domestic Preferences	Model Series [1]	LED Color Temperature	Color	Options (Add as Suffix)
[Blank]=Standard **BAA**=Buy American Act [26] **TAA**=Trade Agreements Act [26] **BABA**=Build America Buy America Act [28]	**Full Cutoff** [29] **AXCS1A**=12W **AXCS2A**=16W **AXCS3A**=23W **AXCS4A**=38W **AXCS5A**=45W **AXCL6A**=50W **AXCL8A**=66W **AXCL10A**=89W **AXCL12A**=116W **Refractive Lens** **AXCS1ARL**=12W **AXCS2ARL**=16W **AXCS3ARL**=23W **AXCS4ARL**=38W **AXCS5ARL**=45W **AXCL6ARL**=50W **AXCL8ARL**=66W **AXCL10ARL**=89W **AXCL12ARL**=116W	**[Blank]**=4000K, Neutral **C**=5000K, Cool **W**=3000K, Warm [29]	**[Blank]**=Carbon Bronze (Standard) **WT**=Summit White **BK**=Black **AP**=Grey **GM**=Graphite Metallic **DP**=Dark Platinum	**347V**=347V [2] **480V**=480V [2] **PC1**=Photocontrol 120V [3, 4, 5] **PC2**=Photocontrol 208-277V, 347V, 480V [4, 5, 6] **PC**=Photocontrol 120-277V, 347V, 480V [4, 7, 8] **KKIT**=Knuckle Floodlight Mount [7] **TRNKIT**=Trunnion Floodlight Mount **SFKIT**=Slipfitter Floodlight Mount **PMAKIT**=Pole Mount Arm **WPS2XX**=Wavelinx Pro, SR Driver, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting Height [4, 9, 10, 11] **WPS4XX**=Wavelinx Pro, SR Driver, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting Height [4, 9, 10, 11] **WLS2XX**=WaveLinx Lite, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 7' - 15' Mounting [4, 9, 10, 11] **WLS4XX**=WaveLinx Lite, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 15' - 40' Mounting [4, 9, 10, 11] **MSP/DIM-L12**=Integrated Sensor for Dimming Operation, 8' - 12' Mounting Height [4, 9, 12] **MSP/DIM-L30**=Integrated Sensor for Dimming Operation, 12' - 30' Mounting Height [4, 9, 12] **MSP-L12**=Integrated Sensor for ON/OFF Operation, 8' - 12' Mounting Height [4, 9, 12] **MSP-L30**=Integrated Sensor for ON/OFF Operation, 12' - 30' Mounting Height [4, 9, 12] **CBP**=Cold Weather Battery Pack [3, 14, 15, 16, 17, 18] **CBP-CEC**=Cold Weather Battery Pack, CEC compliant [3, 13, 14, 15, 16, 17] **10K**=10kV/10kA Surge Protection **HA**=50°C High Ambient [14, 18] **GRF**=Glare Reducing Lens [19] **AHD145**=After Hours Dim, 5 Hours [5, 20] **AHD245**=After Hours Dim, 6 Hours [5, 20] **AHD255**=After Hours Dim, 7 Hours [5, 20] **AHD355**=After Hours Dim, 8 Hours [5, 20]

Accessories (Order Separately) [21, 27]

VS/AXCS-XX=Vandal Shield Axcent Small [7, 22]
VS/AXCS-MS=Vandal Shield Axcent Small (With Motion Sensor) [7, 22]
WG/AXCS=Wire Guard Axcent Small [7]
WG/AXCS-MS=Wire Guard Axcent Small (With Motion Sensor) [7]
VS/AXCL-XX=Vandal Shield Axcent Large [5, 22]
VS/AXCL-MS=Vandal Shield Axcent (With Motion Sensor) [5, 22]
WG/AXCL=Wire Guard Axcent Large [5]
WG/AXCL-MS=Wire Guard Axcent (With Motion Sensor) [5]
BB/AXC=Axcent Lumen Select Back Box, Carbon Bronze [23]
BB/AXC-PC=Axcent Lumen Select Back Box with PC, Carbon Bronze [23, 24]
BB/AXC-WT=Axcent Lumen Select Back Box, Summit White [23]
BB/AXC-WT-PC=Axcent Lumen Select Back Box with PC, Summit White [23, 24]

KKIT/AXCS-XX=Knuckle and Visor Floodlight Kit (For Axcent Small) [7]
SFKIT/AXCS-XX=Slipfitter Floodlight Kit (For Axcent Small) [7]
TRNKIT/AXCS-XX=Trunnion and Visor Floodlight Kit (For Axcent Small) [7]
TRNKIT-XX=Trunnion Floodlight Kit (For Axcent Large) [5]
SFKIT-XX=Slipfitter Floodlight Kit (For Axcent Large) [5]
PMAKIT-XX=Pole Mount Kit
ISHH-01=Integrated Sensor Programming Remote [25]
MA1010-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1011-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1017-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1018-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon

NOTES:

1. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
2. Transformer used only when ordered with motion sensor or AXCS1 through AXCS5 or AXCL6 fixture wattages.
3. Not available in 347 or 480 VAC.
4. Button photocontrol and any motion sensor (MSP or LWR) not offered together.
5. Only available on AXCL6-AXCL12 models.
6. Used with 277, 347, and 480 VAC options.
7. Only available on AXCS1-AXCS5 models.
8. This configuration may contain materials that are not RoHS compliant. Contact your lighting representative for more information.
9. Uses deep back housing.
10. Sensor passive infrared (PIR) may be overly sensitive when operating below -20°C (-4°F). For the device to be field-configurable, requires WAC Gateway components WAC-PoE and WPOE-120 in appropriate quantities. Only compatible with WaveLinx system and software and requires system components to be installed for operation. See website for more Wavelinx application information.
11. Replace XX with sensor color (WH, BZ, or BK).
12. The ISHH-01 accessory is required to adjust parameters.
13. Ambient operating temperature -20°C to 25°C for AXCL6 through AXCL10. Ambient operating temperature -20°C to 30°C on AXCS4 models. Ambient operating temperature -20°C to 40°C on AXCS1 through AXCS3 models.
14. Not available with AXCS5 or AXCL12 models.
15. Uses deep back housing for AXCS1, AXCLS2, AXCS3, and AXCS4 models.
16. Not to be mounted in upwards / inverted orientation. Downlight wall mount only for AXCS1 through AXCS4.
17. CBP cannot be used with PC and motion sensor (MSP). CBP can be used with PC or motion sensor (MSP).
15. Uses deep back housing for AXCS1, AXCLS2, AXCS3, and AXCS4 models.
16. Not to be mounted in upwards / inverted orientation. Downlight wall mount only for AXCS1 through AXCS4.
17. CBP cannot be used with PC and motion sensor (MSP or LWR). CBP can be used with PC or motion sensor (MSP).
18. Can not be ordered with CBP or PC options.
19. Use dedicated IES files on product website for lumen values and distributions.
20. Requires the use of PC1 or PC2 button photocontrol. See After Hours Dim supplemental guide for additional information.
21. Replace XX with color designation.
22. For use with full cutoff lens configurations only.
23. Lumen Select functionality not available in conjunction with any motion sensor option (MSP). Photocontrol back box not available with any photocontrol or motion sensor options (PC, MSP).
24. Photocell only operates at 120-277V input voltages. Not for use with 347 or 480V systems.
25. This tool enables adjustment to parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult you lighting representative for more information.
26. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be seperately analyzed under domestic preference requirements.
27. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
28.Only product configurations with these prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or the Build America Buy America Act (BABA). BABA is the minimum Government compliance requirement for the Build America Buy America standards which is part of the Infrastructure and Investment Jobs Act (IIJA). Individual Government Agencies may have more stringent compliance standards. Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
29. DarkSky approved when ordered with 3000K or warmer CCT.

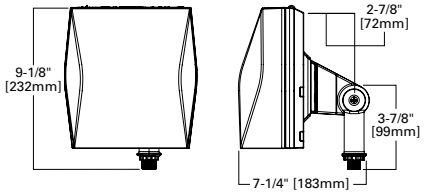
Stock Ordering Information

Model Series [1]			
Full Cutoff		**Refractive Lens**	
AXCS1A=12W	**AXCL10A**=102W	**AXCS1ARL**=12W	**AXCL10ARL**=89W
AXCS2A=16W	**AXCL12A**=123W	**AXCS2ARL**=16W	**AXCL12ARL**=116W
AXCS3A=23W	**AXCL6A-347V**=50W	**AXCS3ARL**=23W	**AXCL6ARL-347V**=50W
AXCS4A=38W	**AXCL8A-347V**=66W	**AXCS4ARL**=38W	**AXCL8ARL-347V**=66W
AXCS5A=45W	**AXCL10A-347V**=89W	**AXCS5ARL**=45W	**AXCL10ARL-347V**=89W
AXCL6A=56W	**AXCL12A-347V**=116W	**AXCL6ARL**=50W	**AXCL12ARL-347V**=116W
AXCL8A=72W		**AXCL8ARL**=66W	

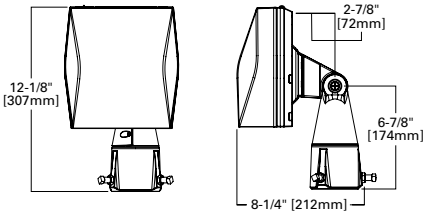
Note: All stock configurations are 4000K color temperatures, standard Carbon Bronze finish, and wall mount configuration.

Mounting Details

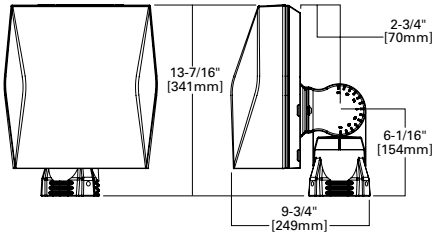
Knuckle Mount (Small)
Knuckle thread: 3/4" NPS



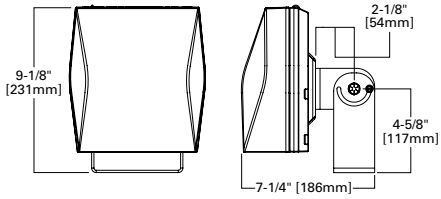
Slipfitter Mount (Small)
Tenon OD: 2-3/8" | **EPA**: 0.60



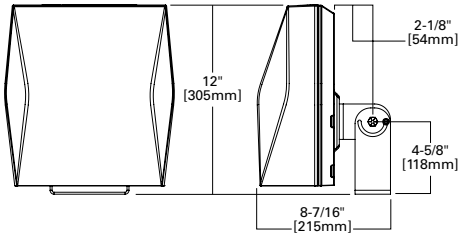
Slipfitter Mount (Large)
Tenon OD: 2-3/8" | **EPA**: 0.60



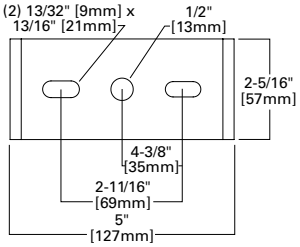
Trunnion Mount (Small)



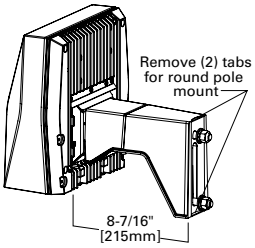
Trunnion Mount (Large)



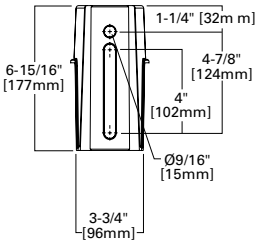
Trunnion Mount Detail



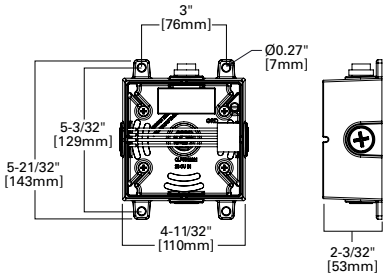
Pole Mount Arm (Large)
EPA: 1.10



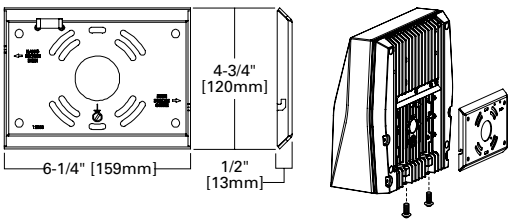
Pole Mount Arm Drill Pattern



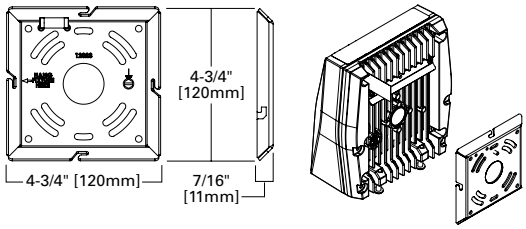
Lumen Select Back Box



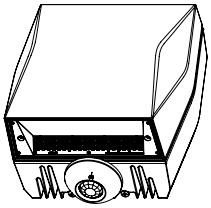
Wall Mount Plate Detail (Large)



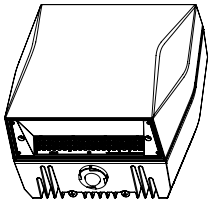
Wall Mount Plate Detail (Small)



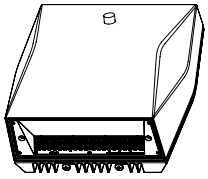
Wavelinx Sensor



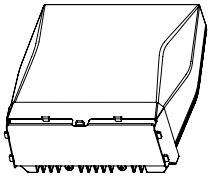
MSP Sensor



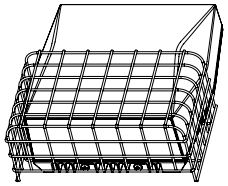
Button Photocontrol



Vandal Shield



Wire Guard



Product Specifications

Construction
- Die-cast aluminum housing
- External back fin design extracts heat from the surface to thermally optimize design for longer luminaire life

Optics
- Silicone-sealed optical LED chamber
- Acrylic refractive or full cutoff lens options for Type IV distributions

Electrical
- Standard universal voltage (120-277V, 50/60Hz)
- Driver incorporates 6kV surge protection
- <20% total harmonic distortion
- 0-10V dimming driver is standard with leads external to the fixture

Mounting
- Steel wedge mounting plate fits directly to 4" standard j-box or directly to wall with the "Hook-N-Lock" mechanism
- Stainless steel set screws
- Lumen Select Back Box accessory offers four 1/2" NPT conduit entry wire ways. Resistor Pack combinations allow field-dimming of 75% or 50% when connected to luminaire dimming leads
- Not suitable for indoor use when installed in inverted/uplight orientation

Emergency Egress
- Optional integral cold weather battery emergency egress includes emergency operation test switch, an AC-ON indicator light and a premium, maintenance-free battery pack
- The separate emergency lighting LEDs are wired to provide redundant emergency lighting. Listed to UL Standard 924, Emergency Lighting

Compliance
- cULus certified for use in -40°C to 40°C ambient environments
- Full cutoff models are IDA Certified 3000K and warmer only
- BAA domestic preference option meets BAA requirements. See DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information
- FHWA and FTA agencies are utilizing their BAA rules for BABA compliance. Cooper's products with a BAA designation are manufactured in the US and utilize a BAA COTS exemption rule for compliance. To verify a configured product with specific accessories and options meet BABA Domestic Preference Requirements; submit this catalog number to Cooper Lighting Quotation team for validation by our Engineering and Manufacturing teams.
- Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
- Components shipped separately may be separately analyzed under domestic preference requirements.

Finish
- Five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness

Shipping Data
- Small fixture=5 lbs. [2.36 kgs.]
- Small with sensor or CBP=10 lbs. [4.40 kgs.]
- Large fixture=12 lbs. [5.45 kgs.]
- Large with sensor or CBP=17 lbs. [7.73 kgs.]
- Large with sensor & CBP=21 lbs. [9.54 kgs.]

Warranty
- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

Energy and Performance Data

Power and Lumens (Axcent Small)

Light Engine		AXCS1A	AXCS2A	AXCS3A	AXCS4A	AXCS5A
Power (Watts)		12	16	23	38	45
Input Current @ 120V (A)		0.10	0.13	0.19	0.32	0.38
Input Current @ 240V (A)		0.05	0.07	0.10	0.16	0.19
Input Current @ 277V (A)		0.04	0.06	0.08	0.14	0.16
Input Current @ 347V (A)		0.03	0.05	0.07	0.11	0.13
Input Current @ 480V (A)		0.03	0.03	0.05	0.08	0.09
Configuration						
Full Cutoff	4000K/5000K Lumens	1,786	2,589	3,551	5,500	6,348
	3000K Lumens	1,509	2,188	3,001	4,648	5,365
	BUG Rating	B1-U0-G0	B1-U0-G0	B1-U0-G0	B2-U0-G1	B2-U0-G1
Refractive Lens	4000K/5000K Lumens	1,894	2,745	3,765	5,832	6,731
	3000K Lumens	1,600	2,320	3,182	4,928	5,688
	BUG Rating	B1-U3-G2	B1-U3-G2	B1-U3-G2	B1-U4-G3	B1-U4-G3

Power and Lumens (Axcent Large)

Light Engine		AXCL6A	AXCL8A	AXCL10A	AXCL12A
Power (Watts)		50	66	89	115
Input Current @ 120V (A)		0.41	0.54	0.74	0.96
Input Current @ 240V (A)		0.21	0.27	0.37	0.48
Input Current @ 277V (A)		0.18	0.24	0.32	0.42
Input Current @ 347V (A)		0.14	0.19	0.26	0.33
Input Current @ 480V (A)		0.10	0.14	0.19	0.24
Configuration					
Full Cutoff	4000K Lumens	7,594	9,716	12,719	16,302
	5000K Rating	7,501	9,598	12,564	16,103
	3000K Lumens	6,502	8,319	10,890	13,958
	BUG Rating	B2-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G2
Refractive Lens	4000K Lumens	7,809	10,331	13,665	16,637
	5000K Rating	7,714	10,205	13,498	16,434
	3000K Lumens	6,686	8,845	11,700	14,244
	BUG Rating	B1-U4-G4	B2-U5-G5	B2-U5-G5	B2-U5-G5

Power and Lumens (Small + CBP)

Light Engine		AXCS1A	AXCS2A	AXCS3A	AXCS4A
Power (Watts)		16	20	27	42
Input Current @ 120V (A)		0.13	0.17	0.23	0.35
Input Current @ 240V (A)		0.07	0.08	0.11	0.18
Input Current @ 277V (A)		0.06	0.07	0.10	0.15
Configuration					
Full Cutoff	4000K/5000K Lumens	742	792	789	644
	3000K Lumens	627	670	667	545
Refractive Lens	4000K/5000K Lumens	787	841	837	684
	3000K Lumens	664	710	708	655

Note: Power and current based on full power consumption while CBP is charging. Lumen outputs are while operating in emergency mode only.

Power and Lumens (Large + CBP)

Light Engine		AXCL6A	AXCL8A	AXCL10A
Power (Watts)		54	70	93
Input Current @ 120V (A)		0.45	0.58	0.77
Input Current @ 240V (A)		0.22	0.29	0.38
Input Current @ 277V (A)		0.19	0.25	0.33
Configuration				
Full Cutoff	4000K/5000K Lumens	141*10W=1410		
	3000K Lumens	122*10=1220		
Refractive Lens	4000K/5000K Lumens	151*10=1510		
	3000K Lumens	131*10=1310		

Note: Power and current based on full power consumption while CBP is charging. Lumen outputs are while operating in emergency mode only.

Power and Lumens Multipliers
(Lumen Select Back Box + Axcent Small)

Configuration		~75% Nominal Output	~50% Nominal Output
Catalog Number	**Material Number**	**Connect per Installation Instructions**	
AXCS1A*	13109741 or 13109939 or Other	74%	50%
AXCS2A*	13109698 or 13109938 or Other	74%	50%
AXCS3A*	13109697 or 13109937 or Other	74%	50%
AXCS4A*	13109695 or 13109936	75%	40%
AXCS4A*	13495299 or 13495470 or Other	72%	50%
AXCS5A*	13109652 or 13109935	75%	40%
AXCS5A*	13495471 or 13495472 or Other	72%	50%

Power and Lumens Multipliers
(Lumen Select Back Box + Axcent Large)

Configuration		~75% Nominal Output	~50% Nominal Output
Catalog Number	**Material Number**	**Connect per Installation Instructions**	
AXCL6A*	13645910 or 13645979	69%	47%
AXCL8A*	13645970 or 13645984	69%	47%
AXCL10A*	13645971 or 13645989	69%	47%
AXCL12A*	13645972 & 13645993	72%	49%

Energy and Performance Data

Lumen Maintenance (Axcent Small)

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)
Up to 3A	
25°C	88%
40°C	87%
50°C	87%
Up to 4A	
25°C	88%
40°C	87%
50°C	87%
Up to 5A	
25°C	87%
40°C	86%

Lumen Maintenance (Axcent Large)

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)
Up to 8A	
25°C	89%
40°C	87%
50°C	86%
Up to 10A	
25°C	88%
40°C	86%
50°C	85%
Up to 12A	
25°C	85%
40°C	82%

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.97

Control Options

0-10V This fixture is offered standard with 0-10V dimming driver(s) for use with a lighting control panel or other control method.

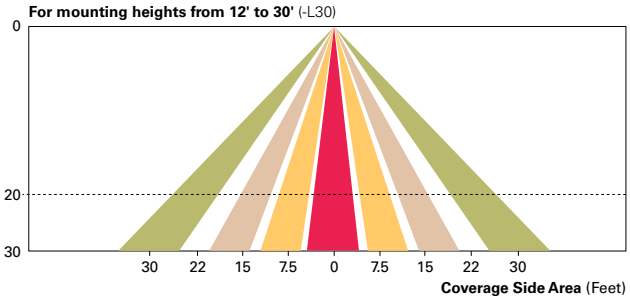
Photocontrol (PC1, PC2 and PC) Optional button-type photocontrol provides a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels.

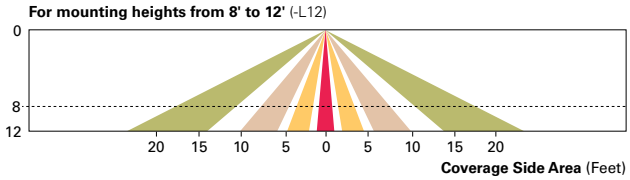
After Hours Dim (AHD) This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (MSP/DIM-LXX and MSP-LXX) These sensors are factory installed in the luminaire housing. When the MSP/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MSP/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of ten minutes. The MSP-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity.

These occupancy sensors includes an integrated photocell that can be activated with the ISHH-01 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is ON. The ISHH-01 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters.

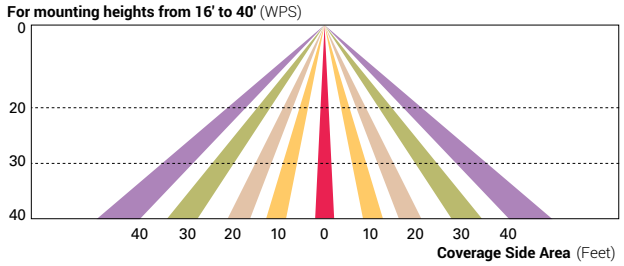
A variety of sensor lens are available to optimize the coverage pattern for mounting heights from 8'-30'.





WaveLinx Wireless Control and Monitoring System The WaveLinx Outdoor control platform operates on a wireless mesh network based on IEEE 802.15.4 standards enabling wireless control of outdoor lighting. Use the WaveLinx Mobile application for set-up and configuration. At least one Wireless Area Controller (WAC) is required for full functionality and remote communication (including adjustment of any factory pre-sets).

WaveLinx Wireless Sensor (WPS2 and WPS4) These outdoor sensors offer passive infrared (PIR) occupancy and a photocell for closed loop daylight sensing. These sensors are factory preset to dim down to approximately 50 percent power after 15 minutes of no activity detected. These occupancy sensors include an integral photocell for "dusk-to-dawn" control or daylight harvesting that is factory-enabled. A variety of sensor lenses are available to optimize the coverage pattern for mounting heights from 7'-40'.



Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

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Specifications and dimensions
subject to change without notice.

Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

GWC Galleon Wall

Wall Mount Luminaire

Product Features

Light ARchitect™

Product Certifications

Interactive Menu

- Ordering Information page 2
- Product Specifications page 2
- Optical Configurations page 3
- Energy and Performance Data page 4
- Control Options page 6

Quick Facts

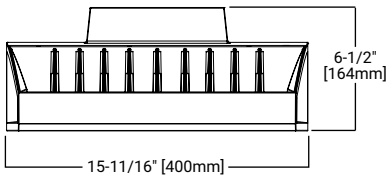
- Choice of thirteen high-efficiency, patented AccuLED Optics
- Downward and inverted wall mounting configurations
- Eight lumen packages from 3,215 up to 17,056
- Efficacies up to 154 lumens per watt

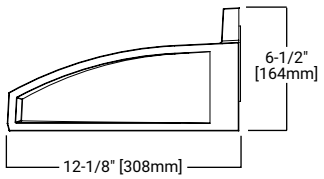
Connected Systems

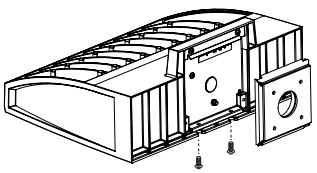
- WaveLinx PRO Wireless
- WaveLinx LITE Wireless

Dimensional Details

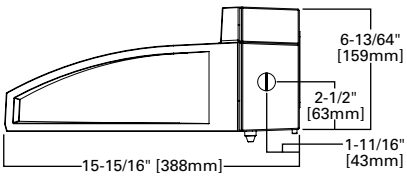
Net Weight: 17.0 lbs (7.7 kgs)



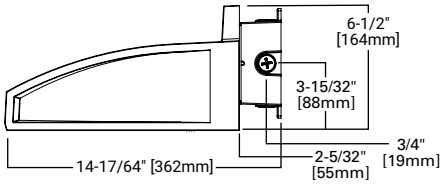




GWC with CBP option installed
(Thru-Branch Back Box accessory MA1059XX)



GWC with accessory BB/GWCXX Back Box installed



NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

Ordering Information

SAMPLE NUMBER: **GWC-SA2C-740-U-T4FT-GM**

Product Family [1]	Light Engine		Color Temperature	Voltage	Distribution	Finish
	Configuration	Drive Current				
GWC=Galleon Wall **BAA-GWC**=Galleon Wall, Buy American Act Compliant [33] **TAA-GWC**=Galleon Wall, Trade Agreements Act Compliant [33] **BABA-GWC**=Galleon Wall, Buy America Build America [41]	**SA1**=1 Square **SA2**=2 Squares [2]	**A**=615mA **B**=800mA **C**=1000mA **D**=1200mA [4] **Z**=Configured [39]	**722**=70CRI, 2200K **727**=70CRI, 2700K **730**=70CRI, 3000K **735**=70CRI, 3500K **740**=70CRI, 4000K **750**=70CRI, 5000K **760**=70CRI, 6000K **827**=80CRI, 2700K **830**=80CRI, 3000K **AMB**=Amber, 590nm [3, 4]	**U**=120-277V **1**=120V **2**=208V **3**=240V **4**=277V **8**=480V [6,7] **9**=347V [6] **DV**=277-480V DuraVolt Drivers [7, 8, 35]	**T2**=Type II **T3**=Type III **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **RW**=Rectangular Wide Type I **5NQ**=Type V Square Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide	~~**AP**=Grey~~ **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White

Options (Add as Suffix)	**Controls and Systems Options** (Add as Suffix)	**Accessories** (Order Separately) [34]
F=Single Fused (120, 277 or 347V. Must Specify Voltage) **FF**=Double Fused (208, 240 or 480V. Must Specify Voltage) **10K**=10kV Surge Module **20K**=Series 20kV UL 1449 Surge Protective Device **2L**=Two-Circuit Light Engine [36] **DIM**=External 0-10V Dimming Leads [9, 10] **CBP**=Battery Pack with Back Box, Cold Weather Rated [2, 4, 14, 31] **CBP-CEC**=Battery Pack with Back Box, Cold Weather Rated, CEC compliant [2, 4, 14] **BB**=Shipped with Back Box Accessory [37] **L90**=Optics Rotated 90° Left **R90**=Optics Rotated 90° Right **HSS**=Factory Installed House Side Shield [22] **GRSBK**=Factory Installed Glare Shield, BK [4, 26] **GRSWH**=Factory Installed Glare Shield, WH [4, 26] **UPL**=Uplight Housing [13] **HA**=50°C High Ambient [12] **LCF**=Light Square Trim Plate Painted to Match Housing [21] **MT**=Factory Installed Mesh Top **CC**=Coastal Construction finish [5] **CE**=CE Marking and Small Terminal Block [23] **AHD145**=After Hours Dim, 5 Hours [16] **AHD245**=After Hours Dim, 6 Hours [16] **AHD255**=After Hours Dim, 7 Hours [16] **AHD355**=After Hours Dim, 8 Hours [16] **DALI**=DALI Driver [11]	**BPC**=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Voltage) **PR**=NEMA 3-PIN Twistlock Photocontrol Receptacle **PR7**=NEMA 7-PIN Twistlock Photocontrol Receptacle [15] **FADC**=Field Adjustable Dimming Controller [38] **SPB1**=Dimming Occupancy Sensor with Bluetooth Interface, <8' Mounting [19, 32] **SPB2**=Dimming Occupancy Sensor with Bluetooth Interface, 8' - 20' Mounting [19, 32] **SPB4**=Dimming Occupancy Sensor with Bluetooth Interface, 21' - 40' Mounting [19, 32] **MS-LXX**=Motion Sensor for On/Off Operation [17, 18, 19] **MS/DIM-LXX**=Motion Sensor for Dimming Operation [17, 18, 19] **WPS2XX**=WaveLinx Pro, SR Driver, Dimming Motion and Daylight, WAC Programmable, 7' - 15' Mounting [29, 30, 39] **WPS4XX**=WaveLinx Pro, SR Driver, Dimming Motion and Daylight, WAC Programmable, 15' - 40' Mounting [29, 30, 39] **WLS2XX**=WaveLinx Lite, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 7' - 15' Mounting [30, 40] **WLS4XX**=WaveLinx Lite, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 15' - 40' Mounting [30, 40]	**OA/RA1013**=Photocontrol Shorting Cap **OA/RA1016**=NEMA Photocontrol - Multi-Tap 105-285V **OA/RA1201**=NEMA Photocontrol - 347V **OA/RA1027**=NEMA Photocontrol - 480V **MA1252**=10kV Circuit Module Replacement **MA1059XX**=Thru-branch Back Box (Must Specify Color) **BB/GWCXX**=Back Box (Must Specify Color) **LS/HSS**=Field Installed House Side Shield [22, 24] **LS/GRSBK-2PK**=Glare Shield, Black [24, 26] **LS/GRSWH-2PK**=Glare Shield, White [24, 26] **LS/PFS**=Perimeter Shield, Black [27] **FSIR-100**=Wireless Configuration Tool for Occupancy Sensor [17] **WOLC-7P-10A**=WaveLinx Outdoor Control Module (7-pin) [25, 28]

NOTES:

1. DesignLight Consortium® Qualified. Refer to www.designlights.org, Qualified Products List under Family Models for details.
2. Two light squares with CBP options limited to 25°C. CBP not available in combination with sensor options at 1200mA.
3. Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only.Exact luminaire wattage available in IES files. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option.
4. Not available with HA option.
5. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654.
6. Require the use of a step down transformer. Not available in combination with sensor options at 1200mA.
7. 480V not to be used with ungrounded or impedance grounded systems.
8. DuraVolt drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Visit www.signify.com/duravolt for more information.
9. Cannot be used with other control options.
10. Low voltage control leads extended 18" from fixture.
11. Not available in 1200mA. When used with CBP or HA options, only available with single light square.
12. Not available in 1200mA, UPL or CBP options. Available with single light square.
13. Not available with HA, CBP, PR or PR7 options.
14. Operates a single light square only. Operates at -20°C to +40°C. Backbox is non-IP rated.
15. Compatible with standard 3-PIN photocontrols, 5-PIN or 7-PIN ANSI controls.
16. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
17. The FSIR-100 configuration tool is required to adjust parameters such as high and low modes, sensitivity, time delay and cutoff. Consult your lighting representative at Cooper Lighting Solutions for more information.
18. Replace LXX with L08 (<8' mounting), L20 (8'-20' mounting) or L40W (21'-40' mounting.)
19. Includes integral photosensor.
20. White sensor shipped on all housing color options.
21. Not available with HSS or GRS options.
22. Not for use with 5NQ, 5MQ, 5WQ or RW optics. The light square trim plate is painted black when the HSS option is selected.
23. CE is not available with the 1200, DALI, LWR, MS, MS/DIM, BPC, PR or PR7 options. Available in 120-277V only.
24. One required for each light square.
25. Requires PR7.
26. Not for use with T4FT, T4W or SL4 optics.
27. Set of 4 pcs. Once set required per Light Square.
28. Cannot be used in conjunction with additional photocontrol or other controls systems (BPC, PR, PR7, MS, LWR).
29. WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed.
30. Replace XX with sensor color (WH, BZ, or BK).
31. Specify 120V or 277V.
32. Smart device with mobile application required to change system defaults. See controls section for details.
33. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
34. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
35. Not available in 1 square configuration at 800mA or below. Not available with any control option except SPB.
36. 2L not available with FF, AHD or DALI options. Controls and/or battery packs operate only one of the two circuits when 2L is specified. 2L with controls options not available with 347V or 480V.
37. Not available with CBP or CBP-CEC options.
38. Cannot be used with PR7 or other motion response control options.
39. Customer specific specifications utilizes standard products with small adjustments to meet unique requirements such as packaging, labels, wattage adjustments, etc.
40. Controls system is not available with photocontrol receptacles (PR , PR7) or other controls systems (FADC, SPBx).
41. Only product configurations with these prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or the Build America Buy America Act (BABA). BABA is the minimum Government compliance requirement for the Build America Buy America standards which is part of the Infrastructure and Investment Jobs Act (IIJA). Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements.

Product Specifications

Construction

- Driver enclosure thermally isolated from optics for optimal thermal performance
- Die-cast aluminum heat sinks
- IP66 rated housing
- 1.5G vibration rated
- Vandal resistant with IK10 impact rated housing and optics

Optics

- Patented, high-efficiency injection-molded AccuLED Optics technology
- 13 optical distributions

Electrical

- LED driver assembly mounted for ease of maintenance
- Standard with 0-10V dimming
- Optional 10kV or 20kV surge module
- Suitable for operation in -40°C to 40°C ambient environments; Optional 50°C high ambient (HA) configuration
- Luminaire available with the field adjustable dimming controller (FADC) to manually adjust wattage and reduce the total lumen output and light levels. Comes pre-set to the highest position at the lumen output selected

Mounting

- Gasketed and zinc plated rigid steel mounting attachment
- "Hook-N-Lock" mechanism for easy installation

Finish

- Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Heat sink is powder coated black
- RAL and custom color matches available
- Coastal Construction (CC) option available

Compliance

- IDA Certified for 3000K CCT and warmer only.
- This Cooper product is manufactured in the US and meets the BABA cost of components rule. To verify a configured product with specific accessories and options meets BABA Domestic Preference Requirements; submit this catalog number to Cooper Lighting Quotation team for validation by our Engineering and Manufacturing teams. Our BABA designation is based on the minimum compliance requirement for BABA. Individual Government Agencies may have more stringent compliance standards.
- Please refer to the DOMESTIC PREFERENCES website or consult the CLS Domestic Preferences team for more information. Components shipped separately may be separately analyzed under domestic preference requirements

Typical Applications

- Exterior Wall, Walkway

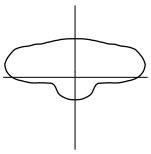
Warranty

- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

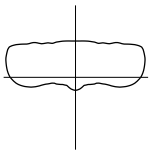
Optical Distributions

Asymmetric Area Distributions

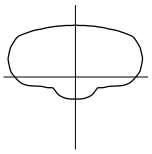
T2 (Type II)



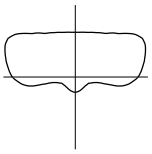
SL2 (Type II with Spill Control)



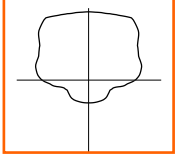
T3 (Type III)



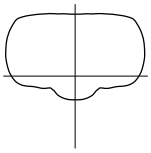
SL3 (Type III with Spill Control)



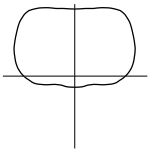
T4FT (Type IV Forward Throw)



T4W (Type IV Wide)

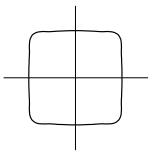


SL4 (Type IV with Spill Control)

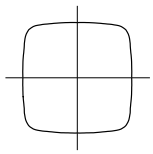


Symmetric Distributions

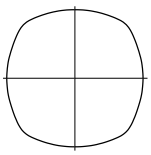
5NQ (Type V Square Narrow)



5MQ (Type V Square Medium)

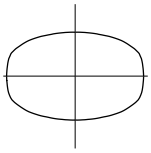


5WQ (Type V Square Wide)

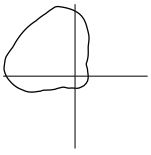


Specialized Distributions

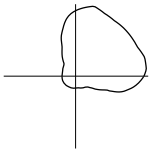
RW (Rectangular Wide Type I)



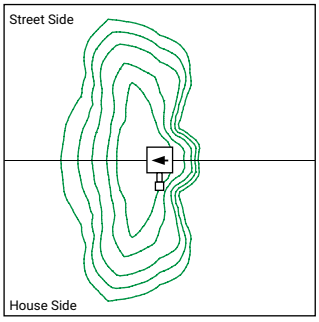
SLL (90° Spill Light Eliminator Left)



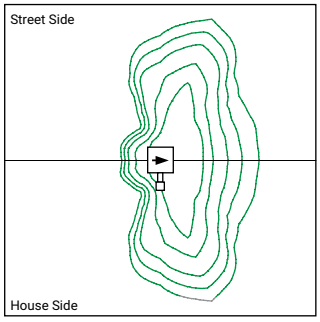
SLR (90° Spill Light Eliminator Right)



Optic Orientation



Optics Rotated Left @ 90° [L90]



Optics Rotated Right @ 90° [R90]

Energy and Performance Data

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0ºC	1.02
10ºC	1.01
25ºC	1.00
40ºC	0.99
50ºC	0.97

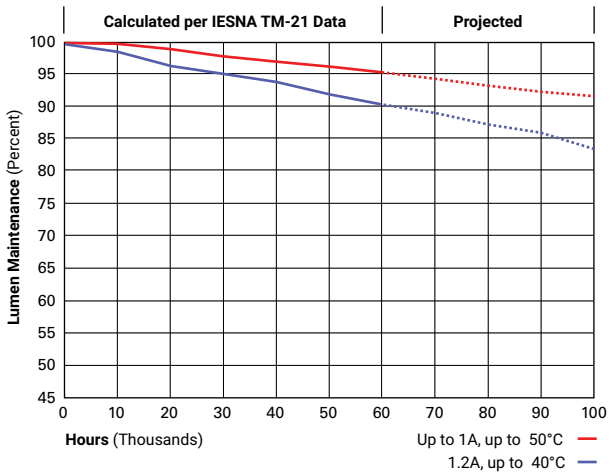
FADC Settings

FADC Position	Lumen Multiplier
1	25%
2	46%
3	55%
4	62%
5	72%
6	77%
7	82%
8	85%
9	90%
10	100%

Note: +/-5% typical value

Lumen Maintenance

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	> 416,000
1.2A	Up to 40°C	> 90%	> 205,000



Energy and Performance Data

View GWC Galleon Wall IES files

4000K/5000K/6000K CCT, 70 CRI

Number of Light Squares		1				2			
Drive Current		615mA	800mA	1050mA	1.2A	615mA	800mA	1050mA	1.2A
Nominal Power (Watts)		34	44	59	67	66	86	113	129
Input Current @ 120V (A)		0.30	0.39	0.51	0.58	0.58	0.77	1.02	1.16
Input Current @ 208V (A)		0.17	0.22	0.29	0.33	0.34	0.44	0.56	0.63
Input Current @ 240V (A)		0.15	0.19	0.26	0.29	0.30	0.38	0.48	0.55
Input Current @ 277V (A)		0.14	0.17	0.23	0.25	0.28	0.36	0.42	0.48
Input Current @ 347V (A)		0.11	0.15	0.17	0.20	0.19	0.24	0.32	0.39
Input Current @ 480V (A)		0.08	0.11	0.14	0.15	0.15	0.18	0.24	0.30
Optics									
T2	Lumens	4,883	5,989	7,412	8,131	9,543	11,703	14,485	15,891
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3
	Lumens per Watt	144	136	126	121	145	136	128	123
T3	Lumens	4,978	6,105	7,556	8,288	9,729	11,929	14,764	16,196
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
	Lumens per Watt	146	139	128	124	147	139	131	126
T4FT	Lumens	5,008	6,140	7,599	8,337	9,783	11,998	14,850	16,290
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	147	140	129	124	148	140	131	126
T4W	Lumens	4,942	6,060	7,502	8,229	9,658	11,843	14,658	16,080
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3
	Lumens per Watt	145	138	127	123	146	138	130	125
SL2	Lumens	4,874	5,979	7,399	8,117	9,528	11,684	14,461	15,863
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3
	Lumens per Watt	143	136	125	121	144	136	128	123
SL3	Lumens	4,976	6,104	7,555	8,287	9,727	11,927	14,763	16,194
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	146	139	128	124	147	139	131	126
SL4	Lumens	4,729	5,799	7,178	7,873	9,239	11,333	14,025	15,387
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B1-U0-G3	B1-U0-G3	B2-U0-G4	B2-U0-G4
	Lumens per Watt	139	132	122	118	140	132	124	119
5NQ	Lumens	5,134	6,296	7,793	8,547	10,033	12,303	15,226	16,704
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2
	Lumens per Watt	151	143	132	128	152	143	135	129
5MQ	Lumens	5,228	6,412	7,935	8,705	10,216	12,529	15,508	17,011
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	154	146	134	130	155	146	137	132
5WQ	Lumens	5,242	6,428	7,956	8,728	10,244	12,563	15,548	17,056
	BUG Rating	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	154	146	135	130	155	146	138	132
SLL/SLR	Lumens	4,373	5,365	6,640	7,283	8,547	10,481	12,973	14,231
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	129	122	113	109	130	122	115	110
RW	Lumens	5,087	6,238	7,721	8,472	9,941	12,190	15,088	16,553
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	150	142	131	126	151	142	134	128

*** Nominal lumen data for 70 CRI. BUG rating for 4000K/5000K. Refer to IES files for 3000K BUG ratings.**

3000K CCT, 80 CRI

Number of Light Squares		1				2			
Drive Current		615mA	800mA	1050mA	1.2A	615mA	800mA	1050mA	1.2A
Nominal Power (Watts)		34	44	59	67	66	86	113	129
Input Current @ 120V (A)		0.30	0.39	0.51	0.58	0.58	0.77	1.02	1.16
Input Current @ 208V (A)		0.17	0.22	0.29	0.33	0.34	0.44	0.56	0.63
Input Current @ 240V (A)		0.15	0.19	0.26	0.29	0.30	0.38	0.48	0.55
Input Current @ 277V (A)		0.14	0.17	0.23	0.25	0.28	0.36	0.42	0.48
Input Current @ 347V (A)		0.11	0.15	0.17	0.20	0.19	0.24	0.32	0.39
Input Current @ 480V (A)		0.08	0.11	0.14	0.15	0.15	0.18	0.24	0.30
Optics									
T2	**Lumens**	3,880	4,759	5,890	6,461	7,583	9,300	11,510	12,628
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G3
	Lumens per Watt	114	108	100	96	115	108	102	98
T3	**Lumens**	3,956	4,851	6,004	6,586	7,731	9,479	11,732	12,870
	BUG Rating	B1-U0-G1	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2
	Lumens per Watt	116	110	102	98	117	110	104	100
T4FT	**Lumens**	3,980	4,879	6,038	6,625	7,774	9,534	11,800	12,945
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	117	111	102	99	118	111	104	100
T4W	**Lumens**	3,927	4,816	5,961	6,539	7,675	9,411	11,648	12,778
	BUG Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3
	Lumens per Watt	116	109	101	98	116	109	103	99
SL2	**Lumens**	3,873	4,751	5,880	6,450	7,571	9,285	11,491	12,605
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	114	108	100	96	115	108	102	98
SL3	**Lumens**	3,954	4,851	6,004	6,585	7,729	9,478	11,731	12,868
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	116	110	102	98	117	110	104	100
SL4	**Lumens**	3,758	4,608	5,704	6,256	7,342	9,006	11,145	12,227
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B1-U0-G3	B1-U0-G3	B1-U0-G3
	Lumens per Watt	111	105	97	93	111	105	99	95
5NQ	**Lumens**	4,080	5,003	6,193	6,792	7,973	9,776	12,099	13,274
	BUG Rating	B2-U0-G0	B2-U0-G1	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2
	Lumens per Watt	120	114	105	101	121	114	107	103
5MQ	**Lumens**	4,154	5,095	6,305	6,917	8,118	9,956	12,323	13,518
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	122	116	107	103	123	116	109	105
5WQ	**Lumens**	4,166	5,108	6,322	6,936	8,140	9,983	12,355	13,553
	BUG Rating	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
	Lumens per Watt	123	116	107	104	123	116	109	105
SLL/SLR	**Lumens**	3,475	4,263	5,276	5,787	6,792	8,329	10,309	11,309
	BUG Rating	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G2	B1-U0-G3	B1-U0-G3	B2-U0-G3	B2-U0-G3
	Lumens per Watt	102	97	89	86	103	97	91	88
RW	**Lumens**	4,042	4,957	6,135	6,732	7,900	9,687	11,990	13,154
	BUG Rating	B2-U0-G1	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2
	Lumens per Watt	119	113	104	100	120	113	106	102

*** Nominal lumen data for 70 CRI. BUG rating for 4000K/5000K. Refer to IES files for 3000K BUG ratings.**

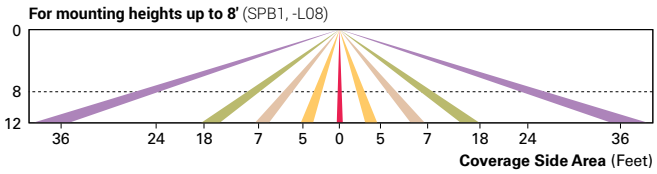
Control Options

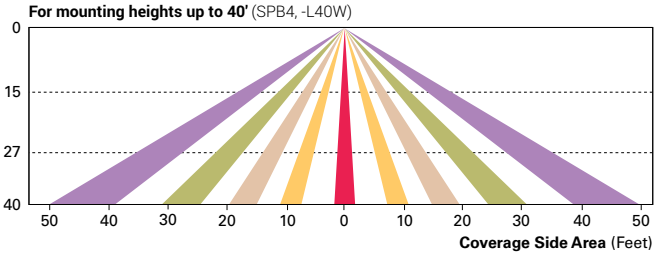
0-10V This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

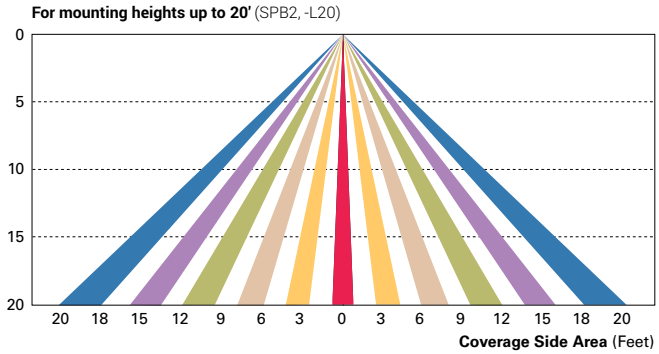
Photocontrol (BPC, PR, and PR7) Optional button-type photocontrol (BPC) and photocontrol receptacles (PR and PR7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PR7 receptacle.

After Hours Dim (AHD) This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (SPB, MS/DIM-LXX and MS-LXX) These sensors are factory installed in the luminaire housing. When the SPB or MS/DIM sensor options are selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. SPB motion sensors require the Sensor Configuration mobile application by Wattstopper to change factory default dimming level, time delay, sensitivity and other parameters. Available for iOS and Android devices. The SPB sensor is factory preset to dim down to approximately 10% power with a time delay of five minutes. The MS/DIM occupancy sensors require the FSIR-100 programming tool to adjust factory defaults.







WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A) The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

Cooper Lighting Solutions
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.cooperlighting.com

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Specifications and dimensions
subject to change without notice.

Project		Catalog #		Type	
Prepared by		Notes		Date	



McGraw-Edison

GLEON Galleon

Area / Site Luminaire

Product Features

Light ARchitect™

BAA

Product Certifications

ISO CERTIFIED

DLC LISTED [1]

DLC LISTED PREMIUM [1]

3G VIB

IP66

UL CERTIFIED

DARKSKY APPROVED [2]

5 YEAR LIMITED WARRANTY

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Optical Distributions page 4
- Product Specifications page 4
- Energy and Performance Data page 4
- Control Options page 9

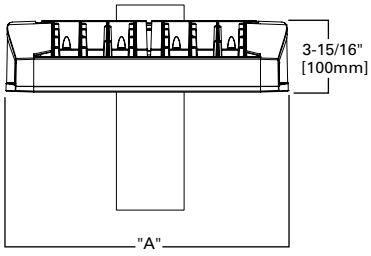
Quick Facts

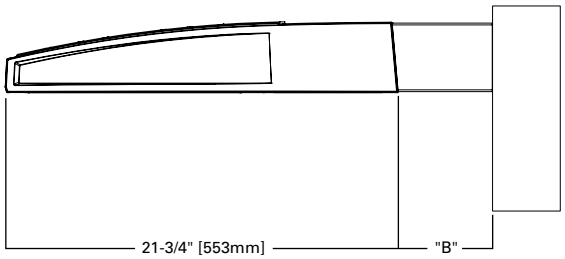
- Lumen packages range from 4,200 - 80,800 (34W - 640W)
- Efficacy up to 156 LPW
- Options to meet Buy American and other domestic preference requirements

Connected Systems

- WaveLinx PRO Wireless
- WaveLinx LITE Wireless
- Enlighted

Dimensional Details





Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Extended Arm Length [1]	"B" QM Arm Length	"B" QML Length	"B" QMEA Length
1-4	15-1/2"	7"	10"	10-5/8"	--	16-9/16"
5-6	21-5/8"	7"	10"	10-5/8"	--	16-9/16"
7-8	27-5/8"	7"	13"	10-5/8"	10-5/16"	--
9-10	33-3/4"	7"	16"	--	10-5/16"	--

NOTES:
For arm selection requirements and additional line art, see Mounting Details section.

NOTES:
1. Visit https://www.designlights.org/search/ to confirm qualification. Not all product variations are DLC qualified.
2. IDA Certified for 3000K CCT and warmer only.

Ordering Information

SAMPLE NUMBER: **GLEON-SA4C-740-U-T4FT-GM**

Product Family [1, 2]	Light Engine		Color Temperature	Voltage	Distribution	Mounting	Finish
	Configuration	Drive Current					
GLEON=Galleon **BAA-GLEON**=Galleon, Buy American Act Compliant [34] **TAA-GLEON**=Galleon, Trade Agreements Act Compliant [34]	**SA1**=1 Square **SA2**=2 Squares **SA3**=3 Squares **SA4**=4 Squares **SA5**=5 Squares [4] **SA6**=6 Squares **SA7**=7 Squares [4] **SA8**=8 Squares [5] **SA9**=9 Squares [6] **SA0**=10 Squares [6]	**A**=600mA **B**=800mA **C**=1000mA **D**=1200mA [15]	**722**=70CRI, 2200K **727**=70CRI, 2700K **730**=70CRI, 3000K **735**=70CRI, 3500K **740**=70CRI, 4000K **750**=70CRI, 5000K **760**=70CRI, 6000K **827**=80CRI, 2700K **830**=80CRI, 3000K **AMB**=Amber, 590nm [13, 15]	**U**=120-277V **1**=120V **2**=208V **3**=240V **4**=277V **8**=480V [7, 8] **9**=347V [7]	**T2**=Type II **T2R**=Type II Roadway **T3**=Type III **T3R**=Type III Roadway **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **5NQ**=Type V Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **RW**=Rectangular Wide Type I **AFL**=Automotive Frontline	**[Blank]**=Arm for Round or Square Pole **EA**=Extended Arm [9] **MA**=Mast Arm Adapter [10] **WM**=Wall Mount **QM**=Quick Mount Arm (Standard Length) [11] **QMEA**=Quick Mount Arm (Extended Length) [12] **QML**=Quick Mount Arm (Standard Length, Large) [36]	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White **RALXX**=Custom Color

Options (Add as Suffix)	Controls and Systems Options (Add as Suffix)	Accessories (Order Separately)[35]
DIM=External 0-10V Dimming Leads [18, 19] **F**=Single Fuse (120, 277 or 347V Specify Voltage) **FF**=Double Fuse (208, 240 or 480V Specify Voltage) **20K**=Series 20kV UL 1449 Surge Protective Device **2L**=Two Circuits [16, 17] **HA**=50°C High Ambient **HSS**=Installed House Side Shield [27] **GRSBK**=Glare Reducing Shield, Black [22] **GRSWH**=Glare Reducing Shield, White [22] **LCF**=Light Square Trim Painted to Match Housing [26] **MT**=Installed Mesh Top **TH**=Tool-less Door Hardware **CC**=Coastal Construction finish [3] **L90**=Optics Rotated 90° Left **R90**=Optics Rotated 90° Right **CE**=CE Marking [28] **AHD145**=After Hours Dim, 5 Hours [21] **AHD245**=After Hours Dim, 6 Hours [21] **AHD255**=After Hours Dim, 7 Hours [21] **AHD355**=After Hours Dim, 8 Hours [21] **DALI**=DALI Drivers	**BPC**=Button Type Photocontrol **PR**=NEMA 3-PIN Photocontrol Receptacle **PR7**=NEMA 7-PIN Photocontrol Receptacle [20] **SPB2**=Dimming Occupancy Sensor with Bluetooth Interface, 8′ - 20′ Mounting [33] **SPB4**=Dimming Occupancy Sensor with Bluetooth Interface, 21′ - 40′ Mounting [33] **MS-L20**=Motion Sensor for ON/OFF Operation, 9′ - 20′ Mounting Height [23] **MS-L40W**=Motion Sensor for ON/OFF Operation, 21′ - 40′ Mounting Height [23] **MS/X-L20**=Bi-Level Motion Sensor, 9′ - 20′ Mounting Height [23, 24] **MS/X-L40W**=Bi-Level Motion Sensor, 21′ - 40′ Mounting Height [23, 24] **MS/DIM-L20**=Motion Sensor for Dimming Operation, 9′ - 20′ Mounting Height [23] **MS/DIM-L40W**=Motion Sensor for Dimming Operation, 21′ - 40′ Mounting Height [23] **WLS2XX**=WaveLinx LITE, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 7′ - 15′ Mounting [31] **WLS4XX**=WaveLinx LITE, SR Driver, Dimming Motion and Daylight, Bluetooth Programmable, 15′ - 40′ Mounting [31] **WPS2XX**=WaveLinx PRO, SR Driver, Dimming Motion and Daylight, WAC Programmable, 7′ - 15′ Mounting [31,32] **WPS4XX**=WaveLinx PRO, SR Driver, Dimming Motion and Daylight, WAC Programmable, 15′ - 40′ Mounting [31,32] **LWR-LW**=Enlighted Sensor, 8′–16′ Mounting Height [25] **LWR-LN**=Enlighted Sensor, 16′–40′ Mounting Height [25] **DIM10-L08**=AirMesh Occupancy Sensor (<8′ Mounting) [18] **DIM10-L20**=AirMesh Occupancy Sensor (9′-20′ Mounting) [18] **DIM10-L40**=AirMesh Occupancy Sensor (21′-40′ Mounting) [18]	**OA/RA1013**=Photocontrol Shorting Cap **MA1252**=10kV Surge Module Replacement **MA1036-XX**=Single Tenon Adapter for 2-3/8" O.D. Tenon **MA1037-XX**=2@180° Tenon Adapter for 2-3/8" O.D. Tenon **MA1197-XX**=3@120° Tenon Adapter for 2-3/8" O.D. Tenon **MA1188-XX**=4@90° Tenon Adapter for 2-3/8" O.D. Tenon **MA1189-XX**=2@90° Tenon Adapter for 2-3/8" O.D. Tenon **MA1190-XX**=3@90° Tenon Adapter for 2-3/8" O.D. Tenon **MA1191-XX**=2@120° Tenon Adapter for 2-3/8" O.D. Tenon **MA1038-XX**=Single Tenon Adapter for 3-1/2" O.D. Tenon **MA1039-XX**=2@180° Tenon Adapter for 3-1/2" O.D. Tenon **MA1192-XX**=3@120° Tenon Adapter for 3-1/2" O.D. Tenon **MA1193-XX**=4@90° Tenon Adapter for 3-1/2" O.D. Tenon **MA1194-XX**=2@90° Tenon Adapter for 3-1/2" O.D. Tenon **MA1195-XX**=3@90° Tenon Adapter for 3-1/2" O.D. Tenon **FSIR-100**=Wireless Configuration Tool for Occupancy Sensor [23] **GLEON-MT1**=Field Installed Mesh Top for 1-4 Light Squares **GLEON-MT2**=Field Installed Mesh Top for 5-6 Light Squares **GLEON-MT3**=Field Installed Mesh Top for 7-8 Light Squares **GLEON-MT4**=Field Installed Mesh Top for 9-10 Light Squares **GLEON-QM**=Quick Mount Arm Kit [11] **GLEON-QMEA**=Quick Mount Extended Arm Kit [12] **LS/HSS**=Field Installed House Side Shield [27, 29] **LS/GRSBK-2PK** =Glare Reducing Shield, Black [22, 29] **LS/GRSWH-2PK** =Glare Reducing Shield, White [22, 29] **LS/PFS**=Perimeter Shield, Black [14] **WOLC-7P-10A**=WaveLinx Outdoor Control Module [18, 30] **TL7-HVG**= AirMesh 7-PIN node, 110-480V [18, 30]

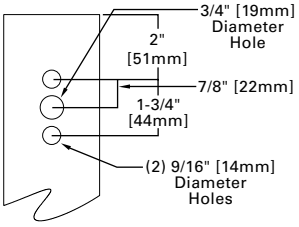
NOTES:

1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information.
2. DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details.
3. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654. Not available with TH option.
4. Not compatible with MS/4-LXX or MS/1-LXX sensors.
5. Not compatible with extended quick mount arm (QMEA).
6. Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA).
7. Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A.
8. 480V must utilize Wye system only. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems.)
9. May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table.
10. Factory installed.
11. Maximum 8 light squares.
12. Maximum 6 light squares.
13. Narrow-band 590nm +/- 5nm for wildlife and observatory use. Choose drive current A; supplied at 500mA drive current only. Available with 5WQ, 5MQ, SL2, SL3 and SL4 distributions. Can be used with HSS option.
14. Set of 4 pcs. One set required per Light Square.
15. Not available with HA option.
16. 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in SA2 through SA4 requires a larger housing, normally used for SA5 or SA6. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table.
17. Not available with Enlighted wireless sensors.
18. Cannot be used with other control options.
19. Low voltage control lead brought out 18" outside fixture.
20. Not available if any "MS" sensor is selected. Motion sensor has an integral photocell.
21. Requires the use of BPC photocontrol or the PR7 or PR photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information.
22. Not for use with T4FT, T4W or SL4 optics. See IES files for details.
23. The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Cooper Lighting Solutions for more information.
24. Replace X with number of Light Squares operating in low output mode.
25. Enlighted wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1 and LWP-PoE8 in appropriate quantities.
26. Not available with house side shield (HSS).
27. Not for use with 5NQ, 5MQ, 5WQ or RW optics. A black trim plate is used when HSS is selected.
28. CE is not available with the LWR, MS, MS/X, MS/DIM, BPC, PR or PR7 options. Available in 120-277V only.
29. One required for each Light Square.
30. Requires PR7.
31. Replace XX with sensor color (WH, BZ or BK.)
32. WAC Gateway required to enable field-configurability: Order WAC-PoE and WPOE-120 (10V to PoE injector) power supply if needed.
33. Smart device with mobile application required to change system defaults. See controls section for details.
34. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements.
35. For BAA or TAA requirements, Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information.
36. Available for 7 - 10 squares.

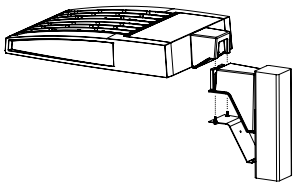
Mounting Details

Standard Arm (Drilling Pattern)

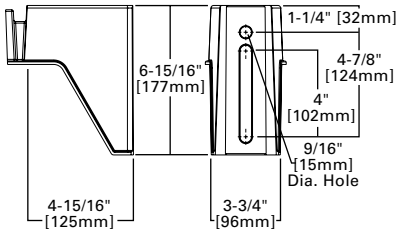
TYPE "N"



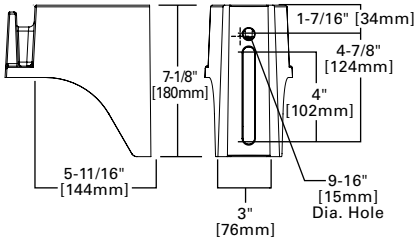
Quick Mount Arm (Includes fixture adapter)



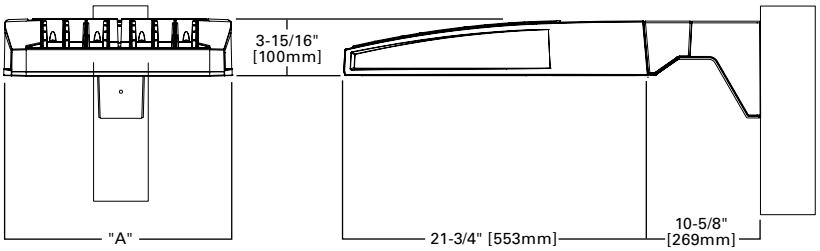
QM and QMEA Pole Mount (1 - 8 squares)



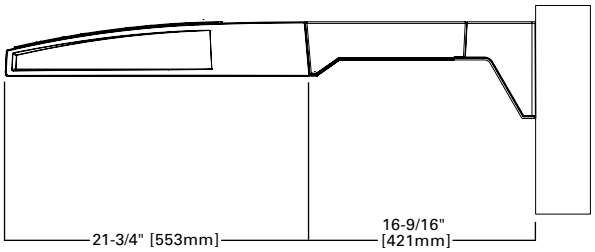
QML Pole Mount (7 - 10 squares)



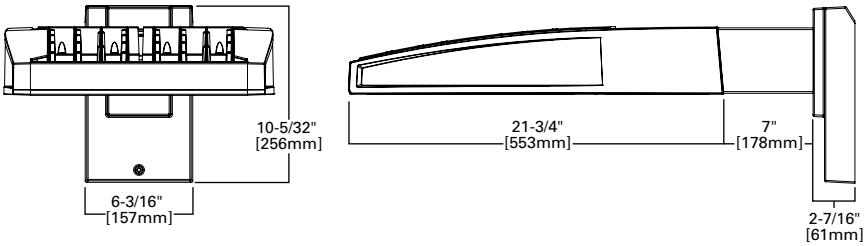
QM Quick Mount Arm (Standard, 1-8 squares)



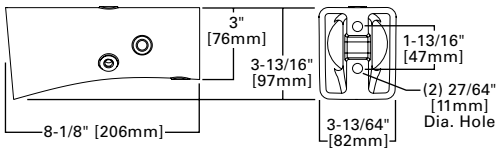
QMEA Quick Mount Arm (Extended, 1 - 6 squares)



Standard Wall Mount

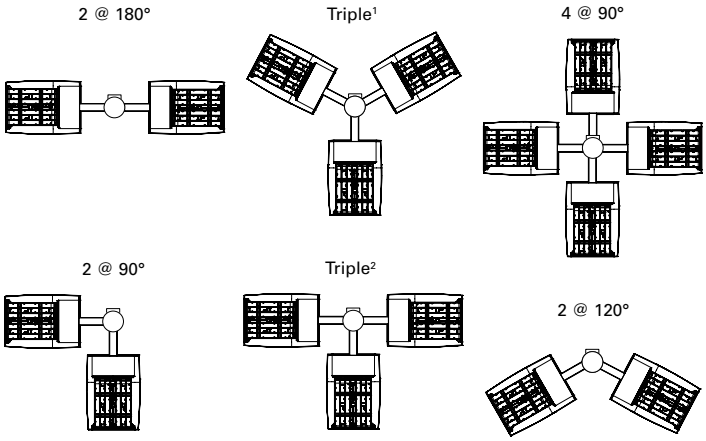


Mast Arm Mount



Arm Mounting Requirements

Number of Light Squares	Standard Arm @ 90° Apart	Standard Arm @ 120° Apart	Quick Mount Arm @ 90° Apart	Quick Mount Arm @ 120° Apart
1	Standard	Standard	QM Extended	Quick Mount
2	Standard	Standard	QM Extended	Quick Mount
3	Standard	Standard	QM Extended	Quick Mount
4	Standard	Standard	QM Extended	Quick Mount
5	Extended	Standard	QM Extended	Quick Mount
6	Extended	Standard	QM Extended	Quick Mount
7	Extended	Extended	--	Quick Mount
8	Extended	Extended	--	Quick Mount
9	Extended	Extended	--	--
10	Extended	Extended	--	--



NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. **2** Round poles are 3 @ 90°. **3** Shown with 4 square configurations.

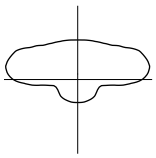
Fixture Weights and EPAs

Number of Light Squares	Weight with Standard and Extended Arm (lbs.)	EPA with Standard and Extended Arm (Sq. Ft.)	Weight with QM Arm (lbs.)	EPA with QM Arm (Sq. Ft.)	Weight with QML (lbs.)	EPA with QML (Sq. Ft.)	Weight with QMEA (lbs.)	EPA with QMEA (Sq. Ft.)
1-4	33	0.96	35	1.11	--	--	38	1.11
5-6	44	1.00	46	1.11	--	--	49	1.11
7-8	54	1.07	56	1.11	58	1.11	--	--
9-10	63	1.12	--	--	67	1.11	--	--

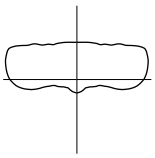
Optical Distributions

Asymmetric Area Distributions

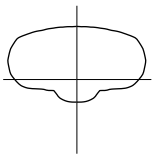
T2 (Type II)



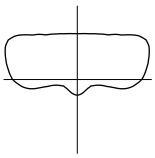
SL2 (Type II with Spill Control)



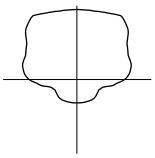
T3 (Type III)



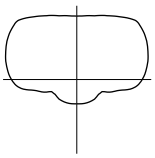
SL3 (Type III with Spill Control)



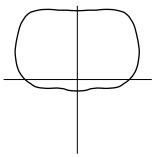
T4FT (Type IV Forward Throw)



T4W (Type IV Wide)

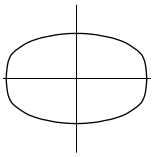


SL4 (Type IV with Spill Control)

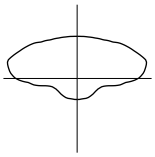


Asymmetric Roadway Distributions

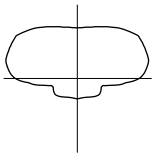
RW (Rectangular Wide Type I)



T2R (Type II Roadway)

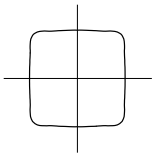


T3R (Type III Roadway)

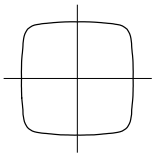


Symmetric Distributions

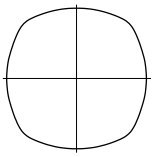
5NQ (Type V Square Narrow)



5MQ (Type V Square Medium)

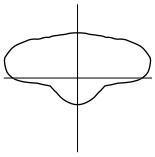


5WQ (Type V Square Wide)

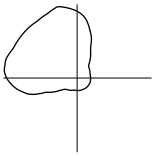


Specialized Distributions

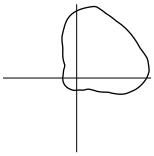
AFL (Automotive Frontline)



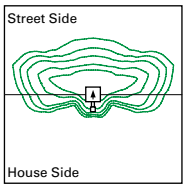
SLL (90° Spill Light Eliminator Left)



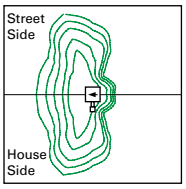
SLR (90° Spill Light Eliminator Right)



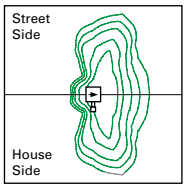
Rotated Optics



Standard



Optics Rotated Left @ 90° [L90]



Optics Rotated Right @ 90° [R90]

Product Specifications

Construction

- Extruded aluminum driver enclosure
- Heavy-wall, die-cast aluminum end caps
- Die-cast aluminum heat sinks
- Patent pending interlocking housing and heat sink

Optics

- Patented, high-efficiency injection-molded AccuLED Optics technology
- 16 optical distributions
- 3 shielding options including HSS, GRS and PFS
- IDA Certified (3000K CCT and warmer only)

Electrical

- LED drivers are mounted to removable tray assembly for ease of maintenance
- Standard with 0-10V dimming
- Standard with Cooper Lighting Solutions proprietary circuit module designed to withstand 10kV of transient line surge
- Suitable for operation in -40°C to 40°C ambient environments. Optional 50°C high ambient (HA) configuration.

Mounting

- Standard extruded arm includes internal bolt guides and round pole adapter
- Extended arms (EA and QMEA) may be required in 90° or 120° pole mount configurations, see arm mounting requirements table
- Mast arm (MA) factory installed
- Wall mount (WM) option available
- Quick mount arm (QM and QMEA) includes pole adapter and factory installed fixture mount for fast installation to square or round poles

Finish

- Super housing durable TGIC polyester powder coat paint, 2.5 mil nominal thickness
- Heat sink is powder coated black
- RAL and custom color matches available
- Coastal Construction (CC) option available

Warranty

- Five year limited warranty, consult website for details. www.cooperlighting.com/legal

Energy and Performance Data

Lumen Maintenance (TM-21)

Drive Current	Ambient Temperature	25,000 hours*	50,000 hours*	60,000 hours*	100,000 hours**	Theoretical L70 hours**
Up to 1A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.7%	98.3%	98.1%	97.4%	> 1.9M
	50°C	98.2%	97.2%	96.8%	95.2%	> 851,000
1.2A	25°C	99.4%	99.0%	98.9%	98.3%	> 2.4M
	40°C	98.5%	97.9%	97.7%	96.7%	> 1.3M

* Supported by IES TM-21 standards
** Theoretical values represent estimations commonly used; however, refer to the IES position on LED Product Lifetime Prediction, IES PS-10-18, explaining proper use of IES TM-21 and LM-80.

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0ºC	1.02
10ºC	1.01
25ºC	1.00
40ºC	0.99
50ºC	0.97

View GLEON IES files

Nominal Power Lumens (1.2A)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		67	129	191	258	320	382	448	511	575	640
Input Current @ 120V (A)		0.58	1.16	1.78	2.31	2.94	3.56	4.09	4.71	5.34	5.87
Input Current @ 208V (A)		0.33	0.63	0.93	1.27	1.57	1.87	2.22	2.52	2.8	3.14
Input Current @ 240V (A)		0.29	0.55	0.80	1.10	1.35	1.61	1.93	2.18	2.41	2.71
Input Current @ 277V (A)		0.25	0.48	0.70	0.96	1.18	1.39	1.69	1.90	2.09	2.36
Input Current @ 347V (A)		0.20	0.39	0.57	0.78	0.96	1.15	1.36	1.54	1.72	1.92
Input Current @ 480V (A)		0.15	0.30	0.43	0.60	0.73	0.85	1.03	1.16	1.28	1.45
Optics											
T2	4000K Lumens	7,972	15,580	23,245	30,714	38,056	45,541	53,857	61,024	68,072	75,366
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	121	122	119	119	119	120	119	118	118
T2R	4000K Lumens	8,462	16,539	24,680	32,609	40,401	48,348	57,176	64,783	72,266	80,010
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	129	126	126	127	128	127	126	125
T3	4000K Lumens	8,125	15,879	23,693	31,307	38,787	46,417	54,893	62,197	69,381	76,818
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	123	124	121	121	122	123	122	121	120
T3R	4000K Lumens	8,306	16,232	24,220	32,001	39,651	47,447	56,114	63,580	70,924	78,523
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	124	126	127	124	124	124	125	124	123	123
T4FT	4000K Lumens	8,173	15,970	23,831	31,488	39,014	46,686	55,212	62,558	69,783	77,261
	BUG Rating	B1-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	122	124	125	122	122	122	123	122	121	121
T4W	4000K Lumens	8,067	15,764	23,522	31,080	38,510	46,082	54,499	61,751	68,881	76,263
	BUG Rating	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B5-U0-G5
	Lumens per Watt	120	122	123	120	120	121	122	121	120	119
SL2	4000K Lumens	7,958	15,552	23,206	30,662	37,989	45,462	53,763	60,920	67,952	75,235
	BUG Rating	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	119	121	121	119	119	119	120	119	118	118
SL3	4000K Lumens	8,124	15,877	23,690	31,302	38,784	46,410	54,885	62,189	69,372	76,805
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	121	123	124	121	121	121	123	122	121	120
SL4	4000K Lumens	7,719	15,085	22,510	29,741	36,850	44,097	52,148	59,089	65,913	72,977
	BUG Rating	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	115	117	118	115	115	115	116	116	115	114
5NQ	4000K Lumens	8,380	16,375	24,436	32,287	40,003	47,870	56,610	64,144	71,552	79,221
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	125	127	128	125	125	125	126	126	124	124
5MQ	4000K Lumens	8,534	16,676	24,885	32,881	40,739	48,752	57,653	65,326	72,868	80,679
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	127	129	130	127	127	128	129	128	127	126
5WQ	4000K Lumens	8,556	16,723	24,951	32,968	40,847	48,881	57,808	65,499	73,063	80,894
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	128	130	131	128	128	128	129	128	127	126
SLL/ SLR	4000K Lumens	7,140	13,951	20,817	27,506	34,081	40,783	48,231	54,649	60,959	67,492
	BUG Rating	B1-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	107	108	109	107	107	107	108	107	106	105
RW	4000K Lumens	8,304	16,228	24,215	31,994	39,641	47,437	56,100	63,566	70,907	78,504
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	124	126	127	124	124	124	125	124	123	123
AFL	4000K Lumens	8,335	16,287	24,302	32,110	39,784	47,610	56,303	63,796	71,163	78,790
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G5
	Lumens per Watt	124	126	127	124	124	125	126	125	124	123

*** Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.**

Nominal Power Lumens (1A)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.60	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	0.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K Lumens	7,267	14,201	21,190	28,000	34,692	41,515	49,096	55,627	62,053	68,703
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	126	128	124	124	125	126	125	124	123
T2R	4000K Lumens	7,715	15,077	22,497	29,725	36,829	44,073	52,122	59,056	65,876	72,937
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	131	133	136	132	132	132	133	133	131	131
T3	4000K Lumens	7,408	14,475	21,598	28,539	35,358	42,313	50,039	56,698	63,246	70,024
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	130	127	127	127	128	127	126	125
T3R	4000K Lumens	7,571	14,798	22,078	29,172	36,145	43,253	51,153	57,959	64,653	71,581
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	128	131	133	130	130	130	131	130	129	128
T4FT	4000K Lumens	7,451	14,559	21,725	28,703	35,564	42,558	50,330	57,027	63,613	70,430
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	129	131	128	127	128	129	128	127	126
T4W	4000K Lumens	7,354	14,371	21,442	28,333	35,105	42,007	49,681	56,291	62,792	69,521
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	125	127	129	126	126	126	127	126	125	125
SL2	4000K Lumens	7,254	14,178	21,155	27,951	34,631	41,443	49,011	55,533	61,944	68,584
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	123	125	127	124	124	124	125	125	124	123
SL3	4000K Lumens	7,406	14,474	21,596	28,534	35,355	42,307	50,033	56,690	63,237	70,014
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	126	128	130	127	127	127	128	127	126	125
SL4	4000K Lumens	7,037	13,751	20,519	27,112	33,592	40,198	47,538	53,864	60,087	66,524
	BUG Rating	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	119	122	124	120	120	121	122	121	120	119
5NQ	4000K Lumens	7,640	14,928	22,275	29,431	36,465	43,637	51,606	58,472	65,226	72,218
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	129	132	134	131	131	131	132	131	130	129
5MQ	4000K Lumens	7,779	15,203	22,684	29,973	37,137	44,441	52,555	59,549	66,427	73,545
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	132	135	137	133	133	133	134	134	133	132
5WQ	4000K Lumens	7,800	15,243	22,744	30,052	37,236	44,560	52,697	59,708	66,603	73,742
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	132	135	137	134	133	134	135	134	133	132
SLL/ SLR	4000K Lumens	6,510	12,719	18,977	25,075	31,067	37,176	43,967	49,817	55,569	61,525
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	110	113	114	111	111	112	112	112	111	110
RW	4000K Lumens	7,570	14,793	22,073	29,165	36,137	43,243	51,140	57,945	64,637	71,564
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5
	Lumens per Watt	128	131	133	130	130	130	131	130	129	128
AFL	4000K Lumens	7,598	14,847	22,154	29,272	36,267	43,400	51,326	58,156	64,872	71,824
	BUG Rating	B1-U0-G1	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4	B4-U0-G4	B4-U0-G4
	Lumens per Watt	129	131	133	130	130	130	131	131	129	129

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Nominal Power Lumens (800mA)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		44	85	124	171	210	249	295	334	374	419
Input Current @ 120V (A)		0.39	0.77	1.13	1.54	1.90	2.26	2.67	3.03	3.39	3.80
Input Current @ 208V (A)		0.22	0.44	0.62	0.88	1.06	1.24	1.50	1.68	1.87	2.12
Input Current @ 240V (A)		0.19	0.38	0.54	0.76	0.92	1.08	1.30	1.46	1.62	1.84
Input Current @ 277V (A)		0.17	0.36	0.47	0.72	0.83	0.95	1.19	1.31	1.42	1.67
Input Current @ 347V (A)		0.15	0.24	0.38	0.49	0.63	0.77	0.87	1.01	1.15	1.52
Input Current @ 480V (A)		0.11	0.18	0.29	0.37	0.48	0.59	0.66	0.77	0.88	0.96
Optics											
T2	4000K Lumens	5,871	11,474	17,121	22,622	28,029	33,542	39,667	44,944	50,134	55,508
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	133	135	138	132	133	135	134	135	134	132
T2R	4000K Lumens	6,233	12,181	18,176	24,016	29,756	35,608	42,111	47,714	53,224	58,929
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5
	Lumens per Watt	142	143	147	140	142	143	143	143	142	141
T3	4000K Lumens	5,986	11,695	17,450	23,057	28,568	34,186	40,430	45,809	51,099	56,576
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	136	138	141	135	136	137	137	137	137	135
T3R	4000K Lumens	6,117	11,955	17,838	23,569	29,203	34,946	41,328	46,827	52,235	57,832
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	139	141	144	138	139	140	140	140	140	138
T4FT	4000K Lumens	6,019	11,763	17,551	23,190	28,734	34,384	40,663	46,074	51,396	56,904
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	137	138	142	136	137	138	138	138	137	136
T4W	4000K Lumens	5,942	11,610	17,324	22,891	28,363	33,940	40,138	45,480	50,732	56,169
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	135	137	140	134	135	136	136	136	136	134
SL2	4000K Lumens	5,862	11,454	17,091	22,583	27,980	33,484	39,598	44,867	50,048	55,411
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	133	135	138	132	133	134	134	134	134	132
SL3	4000K Lumens	5,985	11,694	17,447	23,053	28,565	34,182	40,424	45,804	51,092	56,568
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	136	138	141	135	136	137	137	137	137	135
SL4	4000K Lumens	5,685	11,111	16,577	21,905	27,140	32,478	38,409	43,520	48,546	53,748
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	129	131	134	128	129	130	130	130	130	128
5NQ	4000K Lumens	6,172	12,061	17,997	23,778	29,462	35,256	41,694	47,242	52,699	58,347
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	140	142	145	139	140	142	141	141	141	139
5MQ	4000K Lumens	6,285	12,283	18,328	24,217	30,004	35,907	42,462	48,112	53,669	59,421
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	143	145	148	142	143	144	144	144	144	142
5WQ	4000K Lumens	6,303	12,317	18,377	24,281	30,085	36,001	42,575	48,241	53,812	59,579
	BUG Rating	B3-U0-G1	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
	Lumens per Watt	143	145	148	142	143	145	144	144	144	142
SLL/ SLR	4000K Lumens	5,260	10,276	15,332	20,259	25,101	30,037	35,522	40,249	44,898	49,708
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	120	121	124	118	120	121	120	121	120	119
RW	4000K Lumens	6,116	11,952	17,834	23,563	29,196	34,938	41,317	46,817	52,224	57,819
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	139	141	144	138	139	140	140	140	140	138
AFL	4000K Lumens	6,139	11,996	17,899	23,650	29,302	35,064	41,468	46,987	52,412	58,030
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4
	Lumens per Watt	140	141	144	138	140	141	141	141	140	138

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Nominal Power Lumens (600mA)

Supplemental Performance Guide**

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		34	66	96	129	162	193	226	257	290	323
Input Current @ 120V (A)		0.30	0.58	0.86	1.16	1.44	1.73	2.03	2.33	2.59	2.89
Input Current @ 208V (A)		0.17	0.34	0.49	0.65	0.84	0.99	1.14	1.30	1.48	1.63
Input Current @ 240V (A)		0.15	0.30	0.43	0.56	0.74	0.87	1.00	1.13	1.30	1.43
Input Current @ 277V (A)		0.14	0.28	0.41	0.52	0.69	0.81	0.93	1.04	1.22	1.33
Input Current @ 347V (A)		0.11	0.19	0.30	0.39	0.49	0.60	0.69	0.77	0.90	0.99
Input Current @ 480V (A)		0.08	0.15	0.24	0.30	0.38	0.48	0.53	0.59	0.71	0.77
Optics											
T2	4000K Lumens	4,787	9,357	13,961	18,448	22,856	27,353	32,347	36,651	40,884	45,265
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	141	142	145	143	141	142	143	143	141	140
T2R	4000K Lumens	5,083	9,934	14,822	19,585	24,266	29,038	34,341	38,911	43,404	48,055
	BUG Rating	B1-U0-G1	B1-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5
	Lumens per Watt	150	151	154	152	150	150	152	151	150	149
T3	4000K Lumens	4,880	9,537	14,231	18,803	23,296	27,878	32,970	37,358	41,671	46,137
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	144	145	148	146	144	144	146	145	144	143
T3R	4000K Lumens	4,988	9,749	14,547	19,220	23,814	28,497	33,703	38,188	42,598	47,162
	BUG Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	147	148	152	149	147	148	149	149	147	146
T4FT	4000K Lumens	4,909	9,591	14,312	18,911	23,432	28,040	33,161	37,574	41,913	46,404
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5
	Lumens per Watt	144	145	149	147	145	145	147	146	145	144
T4W	4000K Lumens	4,845	9,468	14,128	18,668	23,130	27,678	32,732	37,088	41,371	45,805
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	143	143	147	145	143	143	145	144	143	142
SL2	4000K Lumens	4,779	9,341	13,937	18,416	22,818	27,305	32,292	36,589	40,813	45,188
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
	Lumens per Watt	141	142	145	143	141	141	143	142	141	140
SL3	4000K Lumens	4,879	9,536	14,229	18,800	23,294	27,874	32,965	37,351	41,666	46,130
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	144	144	148	146	144	144	146	145	144	143
SL4	4000K Lumens	4,637	9,059	13,519	17,863	22,132	26,486	31,322	35,490	39,589	43,831
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	136	137	141	138	137	137	139	138	137	136
5NQ	4000K Lumens	5,033	9,835	14,676	19,392	24,026	28,751	34,002	38,526	42,975	47,581
	BUG Rating	B2-U0-G1	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3
	Lumens per Watt	148	149	153	150	148	149	150	150	148	147
5MQ	4000K Lumens	5,126	10,015	14,946	19,747	24,468	29,281	34,628	39,236	43,766	48,457
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G4
	Lumens per Watt	151	152	156	153	151	152	153	153	151	150
5WQ	4000K Lumens	5,139	10,043	14,985	19,801	24,533	29,359	34,721	39,339	43,883	48,586
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5
	Lumens per Watt	151	152	156	153	151	152	154	153	151	150
SLL/ SLR	4000K Lumens	4,289	8,380	12,502	16,520	20,469	24,494	28,967	32,823	36,613	40,537
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
	Lumens per Watt	126	127	130	128	126	127	128	128	126	126
RW	4000K Lumens	4,987	9,746	14,543	19,215	23,808	28,491	33,695	38,178	42,587	47,151
	BUG Rating	B2-U0-G1	B3-U0-G1	B4-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
	Lumens per Watt	147	148	151	149	147	148	149	149	147	146
AFL	4000K Lumens	5,007	9,782	14,597	19,285	23,896	28,594	33,817	38,317	42,742	47,322
	BUG Rating	B1-U0-G1	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
	Lumens per Watt	147	148	152	149	148	148	150	149	147	147

* Nominal data for 70 CRI. ** For additional performance data, please reference the Galleon Supplemental Performance Guide.

Control Options

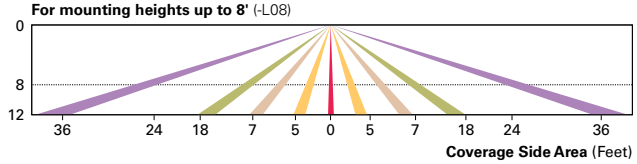
0-10V (DIM)
This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (BPC, PR and PR7)
Optional button-type photocontrol (BPC) and photocontrol receptacles (PR and PR7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PR7 receptacle.

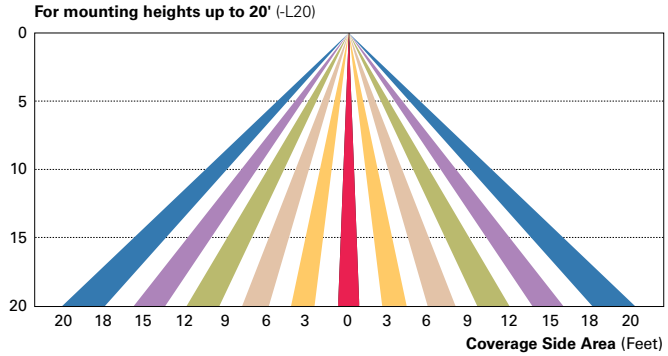
After Hours Dim (AHD)
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

Dimming Occupancy Sensor (SPB, MS/DIM-LXX, MS/X-LXX and MS-LXX)
These sensors are factory installed in the luminaire housing. When the SPB or MS/DIM sensor options are selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines. SPB motion sensors require the Sensor Configuration mobile application by Wattstopper to change factory default dimming level, time delay, sensitivity and other parameters. Available for iOS and Android devices. The SPB sensor is factory preset to dim down to approximately 10% power with a time delay of five minutes. The MS/DIM occupancy sensors require the FSIR-100 programming tool to adjust factory defaults.

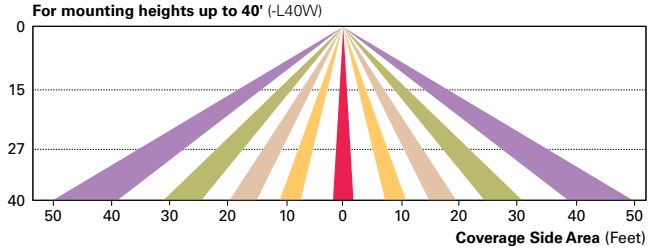
For mounting heights up to 8' (-L08)



For mounting heights up to 20' (-L20)

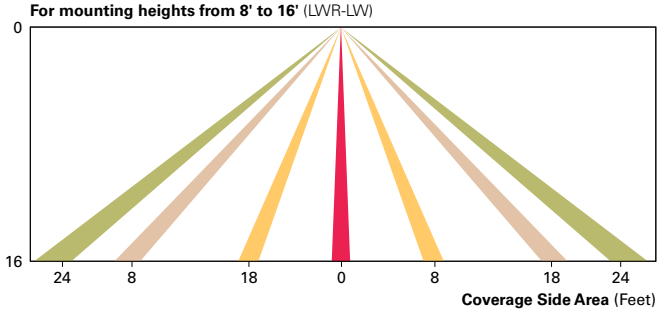


For mounting heights up to 40' (-L40W)

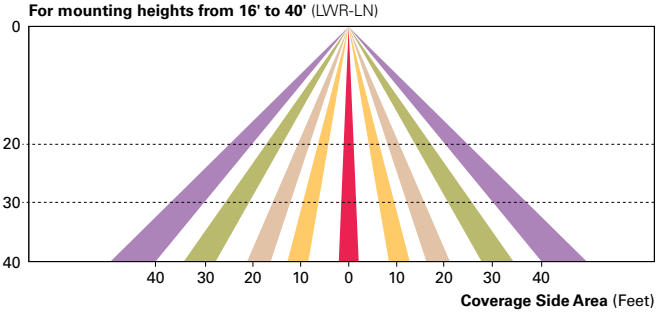


Enlighted Wireless Control and Monitoring System (LWR-LW and LWR-LN)
Enlighted is a connected lighting solution that combines a broad selection of energy-efficient LED luminaires with a powerful integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of building resources, beyond lighting.

For mounting heights from 8' to 16' (LWR-LW)



For mounting heights from 16' to 40' (LWR-LN)

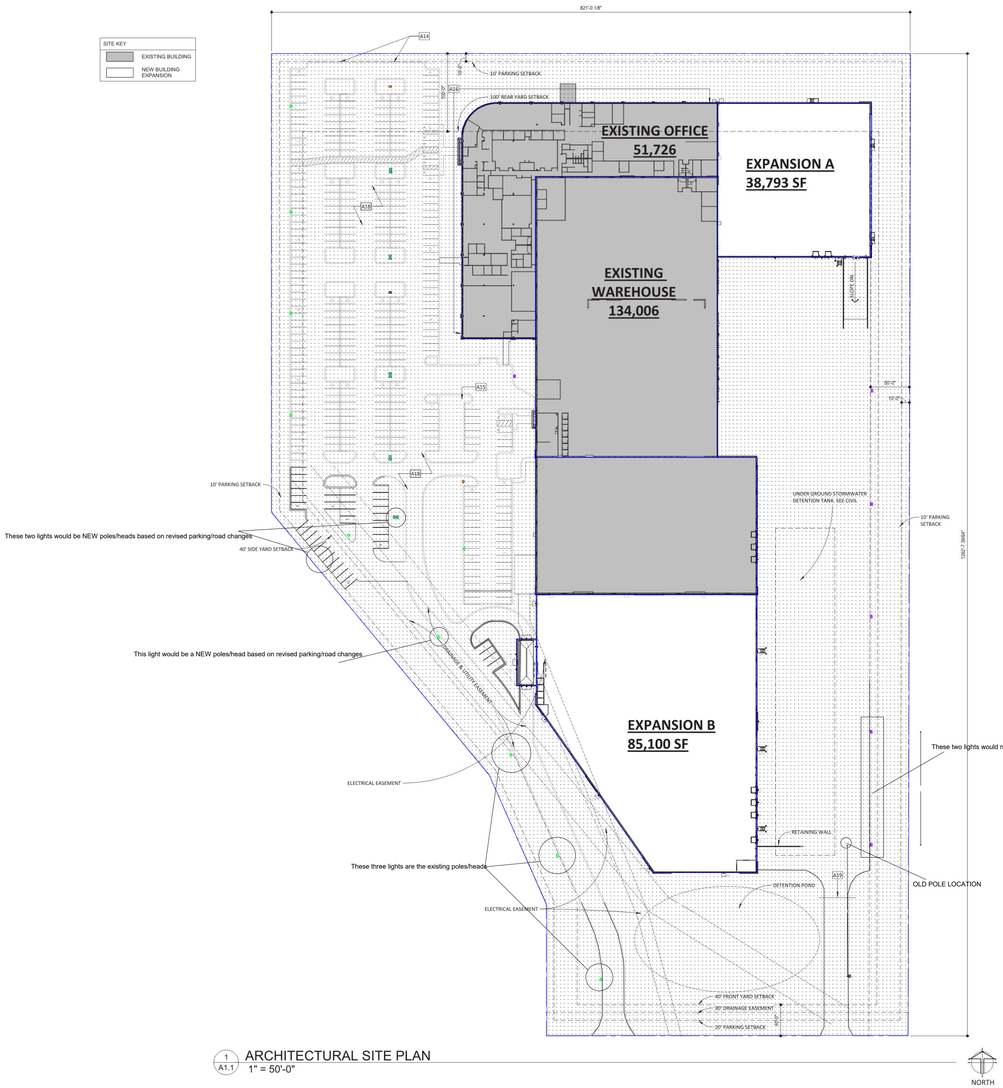


WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A)
The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

AirMesh (DIM10)
AirMesh integrated wireless controls system includes factory installed DIM10 Synapse control module and FSP-201 motion sensor, requires additional AirMesh components for operation. Contact Synapse at www.synapsewireless.com for product support, warranty and terms and conditions.

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Specifications and dimensions
subject to change without notice.



1 A1.1 ARCHITECTURAL SITE PLAN
1" = 50'-0"

SITE PLAN GENERAL NOTES

A. SITE INFORMATION HAS BEEN TAKEN FROM A SITE SURVEY PREPARED BY (surveyor and address) DATED (date) GENERAL CONTRACTOR IS TO VERIFY ALL SITE INFORMATION BEFORE STARTING CONSTRUCTION, AND NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES.

B. REFER TO THE GENERAL NOTES FOR OTHER APPLICABLE INFORMATION.

SITE DATA

ZONING DISTRICT: I-1

ZONING REQUIREMENTS	REQUIRED	PROVIDED
BUILDING SETBACKS		
FRONT	40'	40'
REAR	100'	100'
SIDE	40'	40'
PARKING SETBACKS		
FRONT	20'	20'
REAR	10'	10'
SIDE	10'	10'
SITE AREA		875,161 SF (20.1 ACRES)
PROPOSED BUILDING AREA		309,624 SF
MAXIMUM BUILDING AREA (FLOOR AREA RATIO = __%)		_____ SF
MAXIMUM BUILDING COVERAGE (__%)		309,924 SF (54%)
MAXIMUM IMPERVIOUS SURFACE (85%)	743,886 SF MAX	555,423 SF (63%)
PROVIDED PARKING SPACES (EXISTING)		
TOTAL OFFICE (1 SPACE PER 250 SF)	207 SPACES	51,726 NSF
TOTAL WAREHOUSE (1 SPACE PER 2,000 SF)	67 SPACES	134,006 NSF
TOTAL SPACES REQUIRED:	274 SPACES	185,732 NSF
TOTAL SPACES PROVIDED:	302 SPACES	185,732 NSF
TOTAL EXTRA SPACES:	28 SPACES	
PROVIDED PARKING SPACES (NEW)		
TOTAL OFFICE (1 SPACE PER 250 SF)	0 SPACES	0 NSF
TOTAL WAREHOUSE (1 SPACE PER 2,000 SF)	62 SPACES	123,893 NSF
ADDED COMPANY VEHICLES (1 SPACE PER VEHICLE)	0 SPACES	0 VEHICLES
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ACCESSIBLE SPACES REQUIRED:	8 TOTAL	
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ADDITIONAL SPACES NEEDED:	0 SPACES	

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767 N. EUSTIS STREET, SUITE 190
ST. PAUL, MINNESOTA 55114
651.642.9200
WWW.POPEDESIGN.COM

VAN METER

VAN METER FACILITY EXPANSION
7450 95TH ST S, COTTAGE GROVE, MN 55016

ARCHITECTURAL SITE PLAN

ISSUES & REVISIONS	DATE
80% PROGRESS SET	10-31-2025

COMMISSION NO:	81552-24199
DRAWN BY:	LL
CHECKED BY:	DP, RT

SHEET
A1.1

TRUE SHEET SCALE
Do not scale drawings

Autodesk Docs://81552-24199 Van Meter Facility Expansion/81552-24199_Van Meter Facility Expansion_R25.rvt
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VAN METER
A 100% EMPLOYEE-OWNED COMPANY

Van Meter Inc
Cottage Grove MN
6517698080

NCQLP LIGHTING CERTIFIED LC

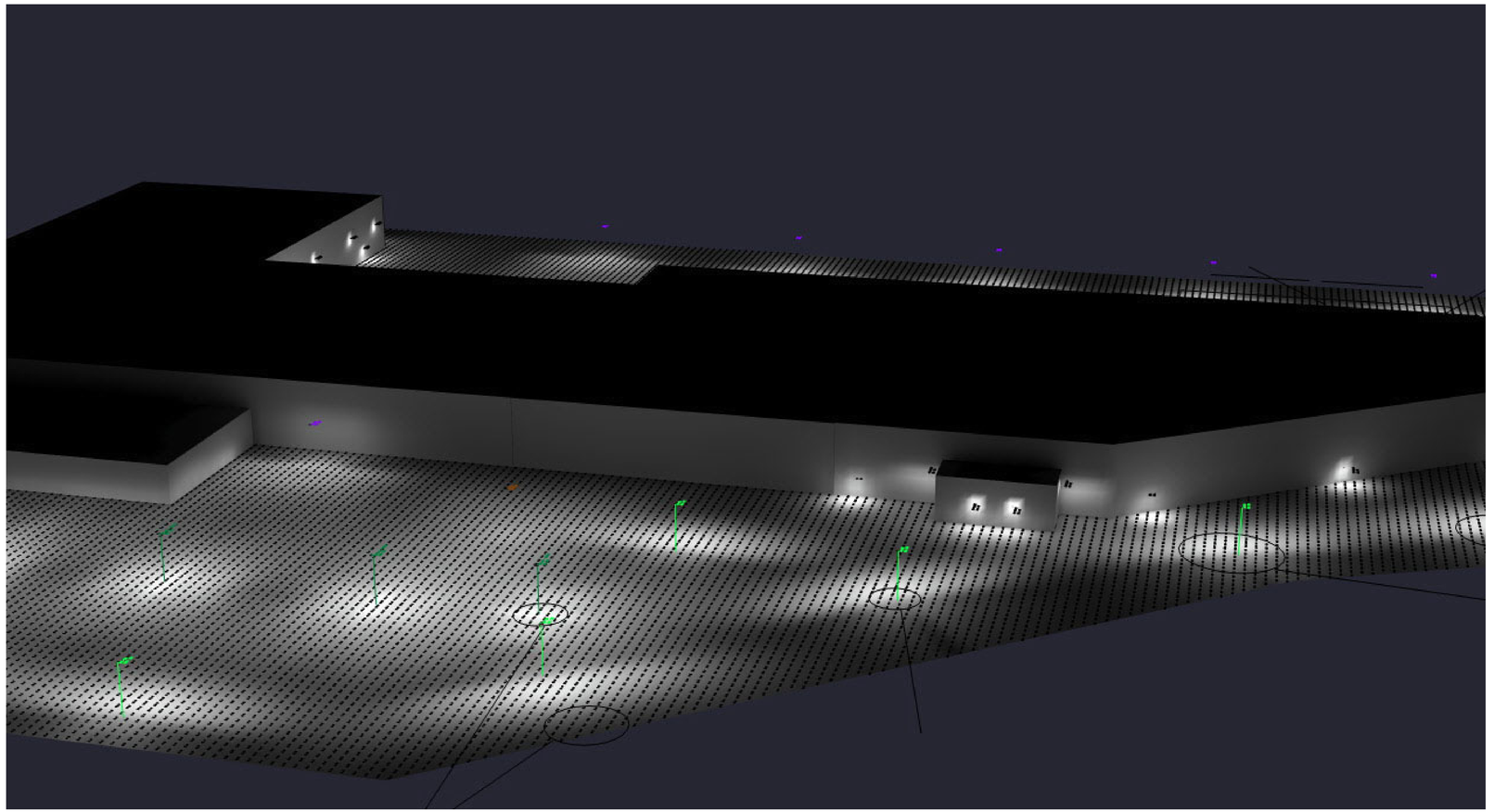
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Date:12/2/2025
SCALE

Van Meter Cottage Grove

Expansion Project Photometrics

Luminaire Schedule									
Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	10	AXCS4A	Single	AXCS4A	WP-DOORS	1.000	5520	43.7	437
	10	GWC-SA1A-740-U-T4FT	Single	GWC-SA1A-740-U-T4FT	WP-2 NEW	1.000	5008	34	340
	2	SWP1-PS60-FCCT-U-a-b-c 30K-277V	Single	SWP1-PS60-FCCT-U-a-b-c at 3000K	WP-SMALL	1.000	7714	60	120
	19	SWP1-PS120-FCCT-U-a-b-c 30K-277V	Single	EIKO SWP1-PS120-FCCT-U-a-b-c at 3000K wall pack thin profile	WP2	1.000	15994	116.62	2215.78
	2	GLEON-SA6A-740-U-T3R_1	Single	GLEON-SA6A-740-U-T3R	AL-T3	1.000	28497	193	386
	5	GLEON-SA6A-740-U-T3R	Back-Back	GLEON-SA6A-740-U-T3R	AL-T3 - TWIN	1.000	28497	193	1930
	6	GLEON-SA6A-740-U-T4FT	Single	GLEON-SA6A-740-U-T4FT	AL-T4	1.000	28040	193	1158
	2	GLEON-SA6A-740-U-5MQ	Single	GLEON-SA6A-740-U-5MQ	AL-T5	1.000	29281	193	386
	10	GLEON-SA6A-740-U-T2R	Single	GLEON-SA6A-740-U-T2R	AL-T2	1.000	29038	193	1930

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
GROUNDS-PROPERTY LINE_Planar	Illuminance	Fc	2.03	68.6	0.0	N.A.	N.A.



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Van Meter Inc
Cottage Grove MN
6517698080

NCQLP LIGHTING CERTIFIED LC NCQLP

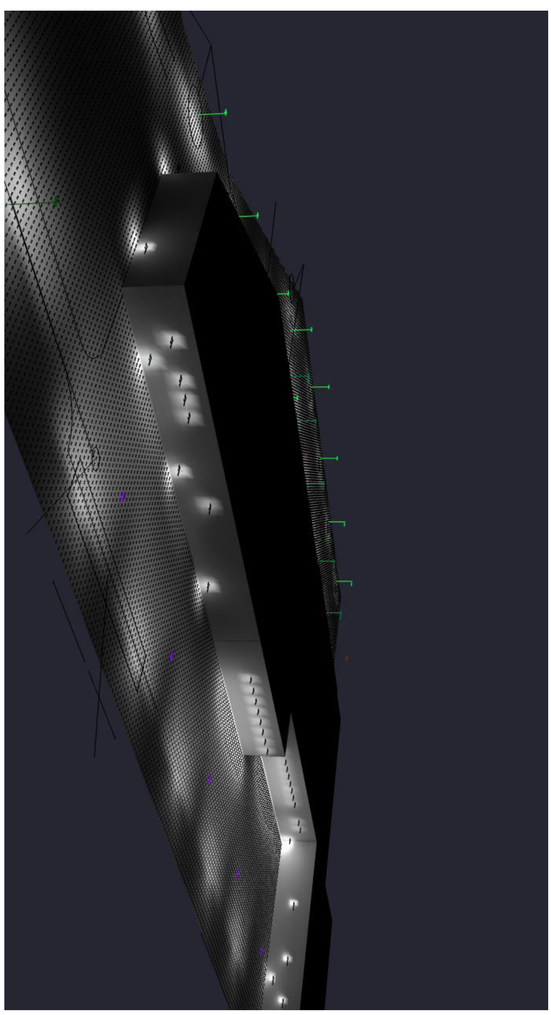
Drawn By: Charles R. Dix - LC

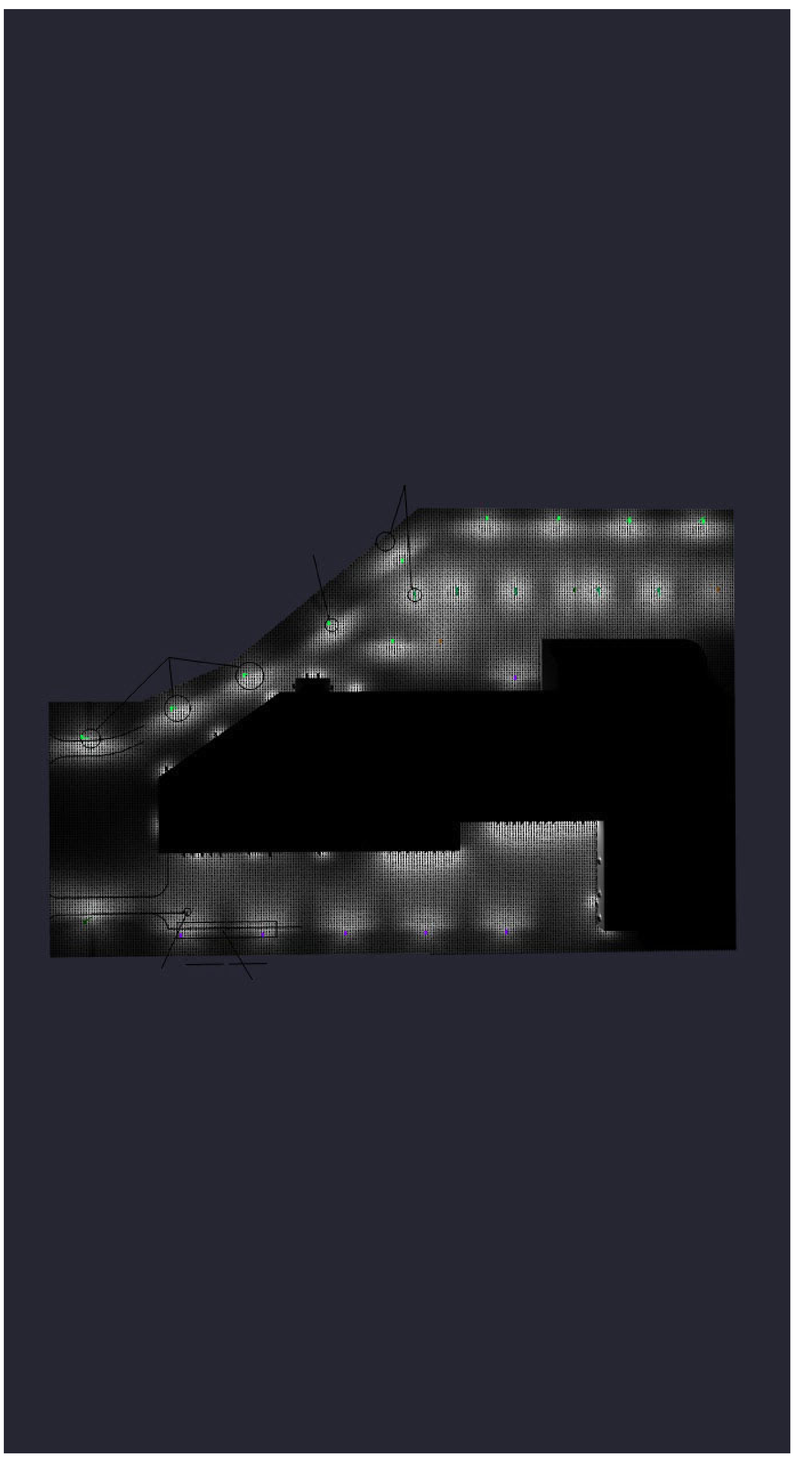
Date:12/2/2025

SCALE

Van Meter Cottage Grove

Expansion Project Photometrics

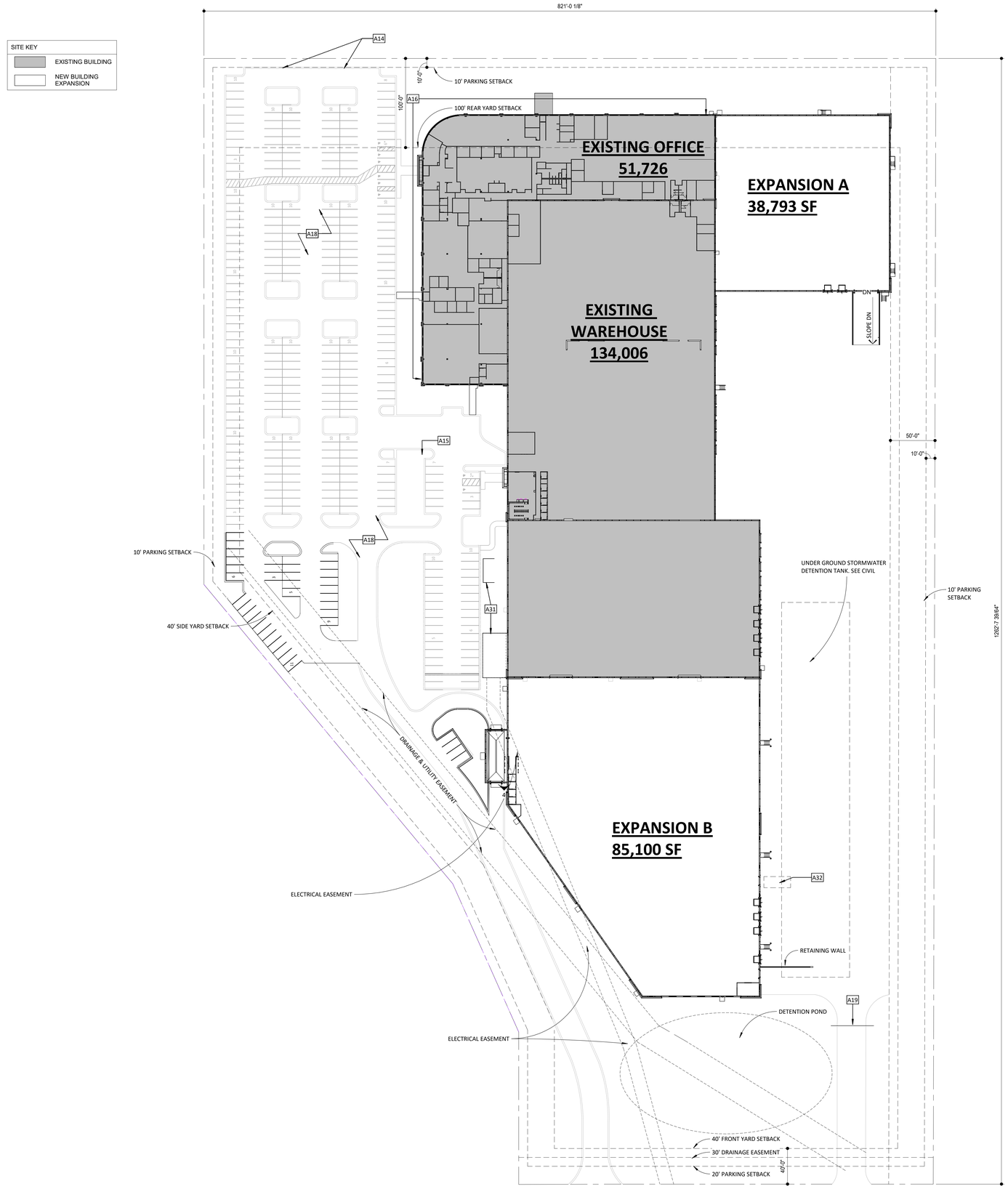




Van Meter Cottage Grove	Drawn By: Charles R. Dix - LC	
Expansion Project Photometrics	Date:12/2/2025	
	SCALE	

Van Meter Inc
Cottage Grove MN
6517698080

VAN METER
A 100% EMPLOYEE-OWNED COMPANY



1 A1.1 ARCHITECTURAL SITE PLAN
1" = 50'-0"

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SITE DATA

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ACCESSIBLE SPACES PROVIDED:	8 TOTAL	
ADDITIONAL SPACES NEEDED:	0 SPACES	

FLOOR PLAN KEY NOTES

A14	REPAIR EMPLOYEE PARKING LOT DRAINS.
A15	REMOVE WINDMILL AND WINDMILL FOUNDATION.
A16	REMOVE DETERIORATED SEALANT AND RESEAL ALL WINDOWS WITH APPROVED SEALANT SYSTEM.
A18	REPAIR AND SEAL CRACKS IN ASPHALT. CONFIRM LOCATIONS WITH OWNER.
A19	INSTALL POWERED YARD GATE AT WAREHOUSE DOCK DRIVEWAY.
A31	10'-0" HIGH VINYL FENCE. SEE CIVIL.
A32	STATIONARY TRASH COMPACTOR. ARCHITECTURE

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767 N. EUSTIS STREET, SUITE 190
ST. PAUL, MINNESOTA 55114
651.642.9200
WWW.POPEDESIGN.COM

VAN METER

VAN METER FACILITY EXPANSION
7450 95TH ST S. COTTAGE GROVE, MN 55016

ARCHITECTURAL SITE PLAN

ISSUES & REVISIONS	DATE
PLAN COMMN	11-12-2025

COMMISSION NO:	81552-24199
DRAWN BY:	LL
CHECKED BY:	DP, RT

SHEET

A1.1

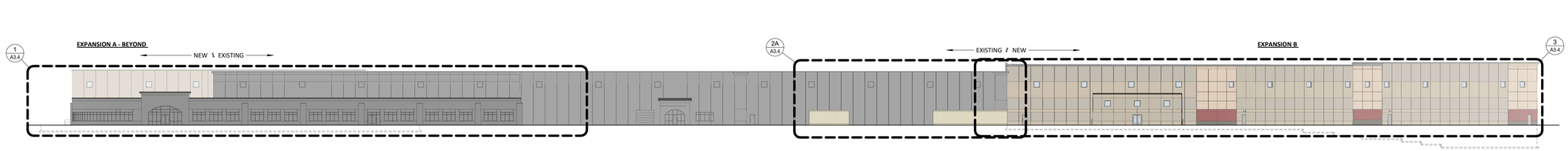
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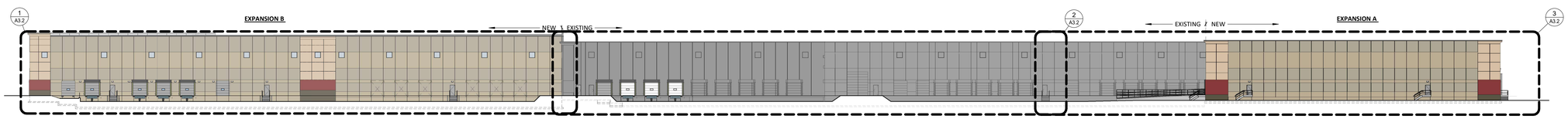
EXTERIOR MATERIAL FINISH SCHEDULE

MATERIAL ID	MATERIAL	MANUFACTURER	FINISH	COLOR	LOCATION
PCAST - 1	PRECAST CONCRETE WALL PANELS	FABCON PRECAST	EXPOSED AGGREGATE	INTEGRALLY COLORED – MATCH EXISTING PRECAST PANEL COLOR	SEE ELEVATIONS
PCAST - 2	PRECAST CONCRETE WALL PANELS	FABCON PRECAST	UNIFORM RIBS	INTEGRALLY COLORED – MATCH EXISTING PRECAST PANEL COLOR	SEE ELEVATIONS
STCO-1	STUCCO FINISH OVER PRECAST PANELS	TBD	SAND FINISH	MATCH EXISTING	SEE ELEVATIONS
BR-1	BRICK VENEER	TBD	TBD	MATCH EXISTING	SEE ELEVATIONS
BLK-1	SPLIT FACE CONCRETE BLOCK VENEER	TBD	TBD	MATCH EXISTING	SEE ELEVATIONS
FLASH - 1	PREFINISHED CAP FLASHING	PAC CLAD	PREFINISHED	MATCH EXISTING METAL COPING COLOR AND FINISH	SEE ELEVATIONS
ASF-1	ALUM STOREFRONT 2"X4 1/2"	OLDCASTLE	PREFIN ANODIZED	MATCH EXISTING	SEE ELEVATIONS
ACW-1	ALUM CURTAIN WALL 2 1/2" X 6"	OLDCASTLE	PREFINF ANODIZED	MATCH EXISTING	SEE ELEVATIONS
WP-1	WALL PACK LIGHTING	TBD	PREFIN POWDER COATED	MATCH EXISTING	SEE ELEVATIONS

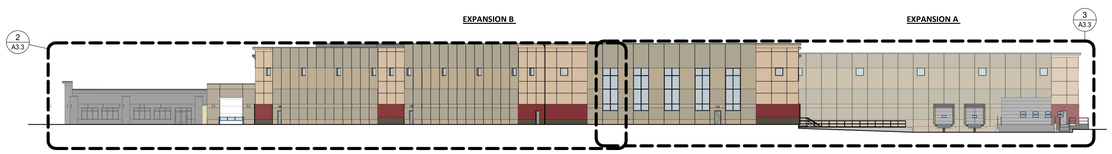
NOTE:
THE "BASIS OF DESIGN" MATERIALS FOR THE PROJECT ARE LISTED ON THE SCHEDULE ABOVE. SEE SPECIFICATIONS FOR ADDITIONAL MATERIAL INFORMATION AND OTHER APPROVE D SUBSTITUTIONS.



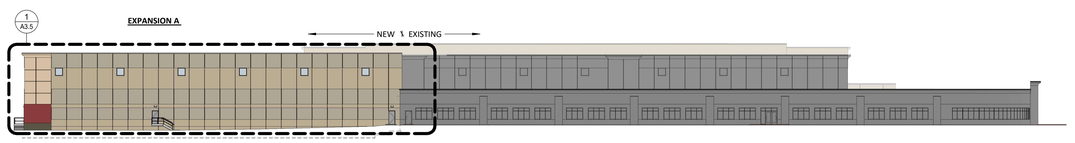
4 A3.1 OVERALL WEST BUILDING ELEVATION
1/32" = 1'-0"



3 A3.1 OVERALL EAST BUILDING ELEVATION
1/32" = 1'-0"



2 A3.1 OVERALL SOUTH BUILDING ELEVATION
1/32" = 1'-0"



1 A3.1 OVERALL NORTH BUILDING ELEVATION
1/32" = 1'-0"

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VAN METER FACILITY EXPANSION
7450 95TH ST S. COTTAGE GROVE, MN 55016

OVERALL EXTERIOR ELEVATIONS

ISSUES & REVISIONS	DATE
PLAN COMMN	11-12-2025

COMMISSION NO:	81552-24199
DRAWN BY:	MP
CHECKED BY:	DP, RT

SHEET
A3.1

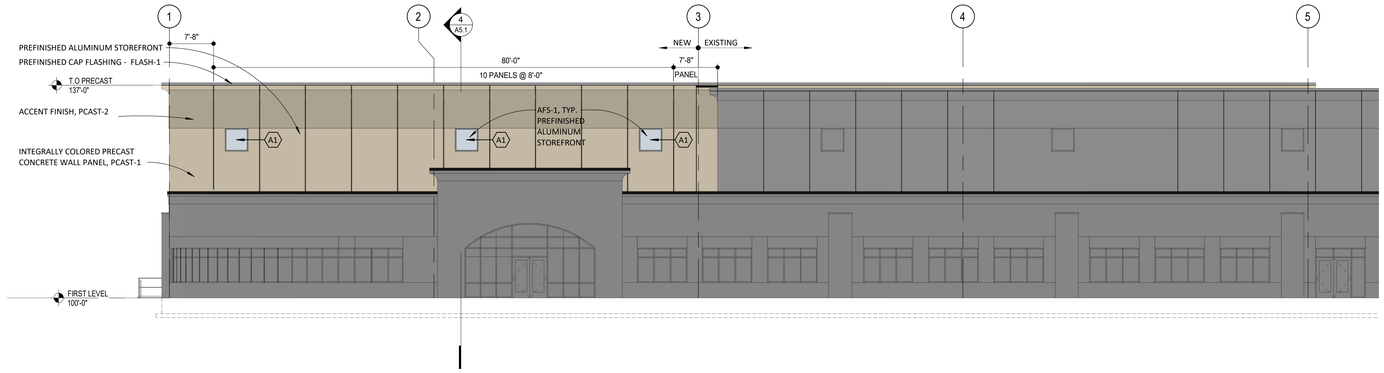
TRUE SHEET SCALE
0" 1/2" 1"

Autodesk Docs://81552-24199 Van Meter Facility Expansion/81552-24199_Van Meter Facility Expansion_R25.rvt
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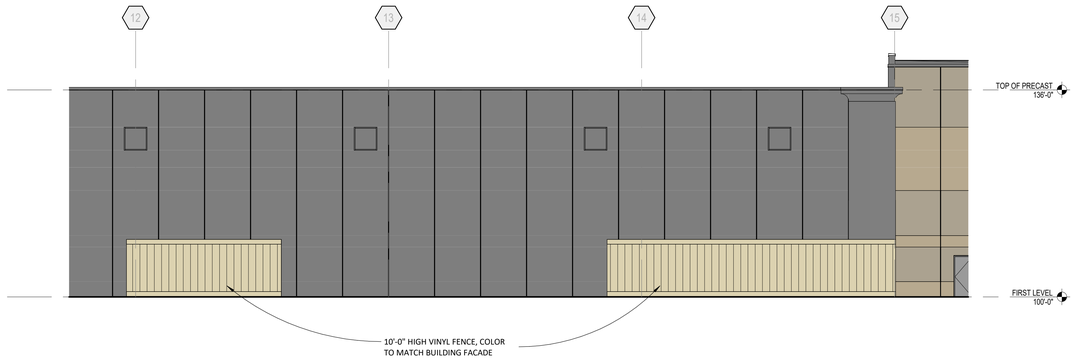
EXTERIOR MATERIAL FINISH SCHEDULE

MATERIAL ID	MATERIAL	MANUFACTURER	FINISH	COLOR	LOCATION
PCAST - 1	PRECAST CONCRETE WALL PANELS	FABCON PRECAST	EXPOSED AGGREGATE	INTEGRALLY COLORED – MATCH EXISTING PRECAST PANEL COLOR	SEE ELEVATIONS
PCAST - 2	PRECAST CONCRETE WALL PANELS	FABCON PRECAST	UNIFORM RIBS	INTEGRALLY COLORED – MATCH EXISTING PRECAST PANEL COLOR	SEE ELEVATIONS
STCO-1	STUCCO FINISH OVER PRECAST PANELS	TBD	SAND FINISH	MATCH EXISTING	SEE ELEVATIONS
BR-1	BRICK VENEER	TBD	TBD	MATCH EXISTING	SEE ELEVATIONS
BLK-1	SPLIT FACE CONCRETE BLOCK VENEER	TBD	TBD	MATCH EXISTING	SEE ELEVATIONS
FLASH - 1	PREFINISHED CAP FLASHING	PAC CLAD	PREFINISHED	MATCH EXISTING METAL COPING COLOR AND FINISH	SEE ELEVATIONS
ASF-1	ALUM STOREFRONT 2"X4 1/2"	OLDCASTLE	PREFIN ANODIZED	MATCH EXISTING	SEE ELEVATIONS
ACW-1	ALUM CURTAIN WALL 2 1/2" X 6"	OLDCASTLE	PREFINF ANODIZED	MATCH EXISTING	SEE ELEVATIONS
WP-1	WALL PACK LIGHTING	TBD	PREFIN POWDER COATED	MATCH EXISTING	SEE ELEVATIONS

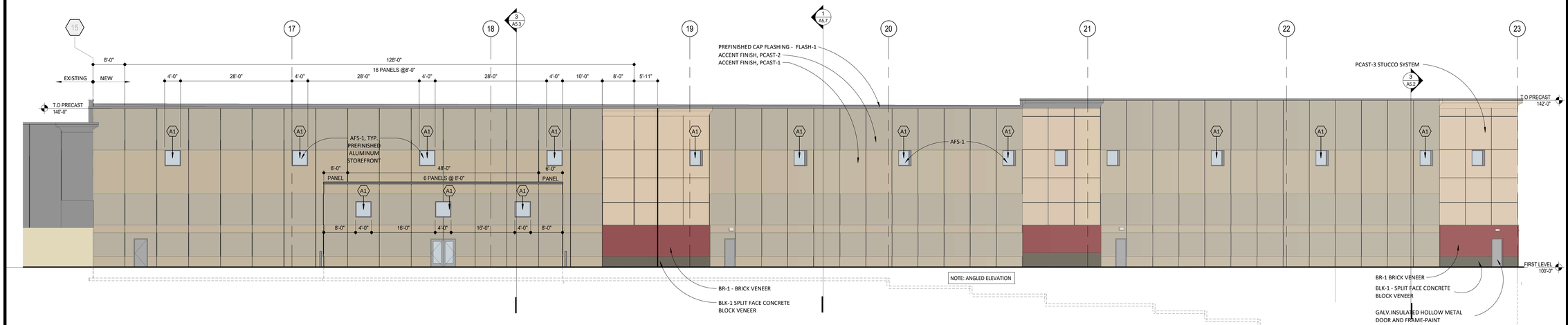
NOTE:
THE "BASIS OF DESIGN" MATERIALS FOR THE PROJECT ARE LISTED ON THE SCHEDULE ABOVE. SEE SPECIFICATIONS FOR ADDITIONAL MATERIAL INFORMATION AND OTHER APPROVE D SUBSTITUTIONS.



1 A3.4 PARTIAL WEST BUILDING ELEVATION - EXPANSION A BEYOND
3/32" = 1'-0"



2A A3.4 PARTIAL WEST BUILDING ELEVATION - EXISITNG BUILDING
3/32" = 1'-0"



3 A3.4 PARTIAL WEST BUILDING ELEVATION - EXPANSION B
3/32" = 1'-0"

NOT FOR CONSTRUCTION

POPE DESIGN GROUP
767 N. EUSTIS STREET, SUITE 190
ST. PAUL, MINNESOTA 55114
651.642.9200
WWW.POPEDESIGN.COM

VAN METER

VAN METER FACILITY EXPANSION

7450 95TH ST S. COTTAGE GROVE, MN 55016

PARTIAL ENLARGED WEST EXTERIOR ELEVATIONS

ISSUES & REVISIONS	DATE
PLAN COMMN	11-12-2025

COMMISSION NO:	81552-24199
DRAWN BY:	MP
CHECKED BY:	DP, RT

SHEET

A3.4

TRUE SHEET SCALE
0" 1/2" 1"

Autodesk Docs://81552-24199 Van Meter Facility Expansion/81552-24199_Van Meter Facility Expansion_R25.rvt
12/8/2025 11:39:40 AM

Cottage Grove
Where Pride and Prosperity Meet

Community Development Department
12800 Ravine Parkway South
Cottage Grove, MN 55016
www.cottagegrovemn.gov

Planning Division
Telephone: 651-458-2827
Fax: 651-458-2897
E-Mail: CGSubmittals@cottagegrovemn.gov

VARIANCE APPLICATION – RESPONSE TO ORDINANCE CRITERIA

The Planning Commission and City Council may recommend a variance from the strict application of the zoning ordinance, if they find that your application meets the findings below. **Please provide a DETAILED response to all of the following findings:**

1. The variance is in harmony with the purposes and intent of this title. Please circle: (Yes) No

2. The variance is consistent with the comprehensive plan. Please circle: (Yes) No

3. The proposal puts the property to a reasonable use. Please explain.

   Proposal will allow Van Meter to expand their facility to meet current operational requirements while minimizing impacts on adjacent properties.

4. There are unique circumstances to the property not created by the landowner. Please identify these circumstances.

   Utility Easements

5. The conditions upon which an application for a variance is based are unique to the parcel of land for which the variance is sought and are not applicable, generally to other property within the same zoning classifications. Please list the conditions that are unique.

   The site currently contains numerous utility easements that significantly restrict the owner's ability to expand the facility to meet current operational and space requirements. These existing constraints limit feasible building locations and necessitate the proposed placement and configuration of the addition. Additional detail regarding the site constraints and easement impacts is provided in the attached narrative.

6. The purpose of the variance is not based exclusively upon a financial hardship. Please circle: (Yes) No

7. The granting of the variance will not be detrimental to the public welfare or injurious to other land or improvements in the neighborhood in which the parcel of land is located. Please circle: (Yes) No

8. The proposed variance will not impair an adequate supply of light and air to adjacent property, or substantially increase the congestion of the public streets, or increase the danger of fire, or endanger the public safety. Please identify any potential impact the requested variance may have.

   The proposed building addition has been designed to match the architectural aesthetic, materials, and character of the existing facility, ensuring a cohesive appearance across the site. The addition maintains the same north property line setback as the existing building, preserving the established development pattern. Given the consistency in design and the continuity of setbacks, the proposed expansion will not negatively impact adjacent properties or alter the visual character of the surrounding area.

Economic hardship is not regarded by the Courts as a reason for approval. Neighborhood support or opposition, without any basis of facts, is not regarded by the Courts as reason for either approval or denial.

Applicant Name: Van Meter Inc. Case #: _____

Pope Design Group
767 N Eustis St, Suite 190
St Paul, MN 55114
612-222-9303
Rtejdea@popededsign.com

11/12/2025
City of Cottage Grove
Community Development Department
12800 Ravine Parkway South
Cottage Grove, MN 55016

Subject: Variance Request – Setback Requirement for Van Meter Inc. Expansion Project

Dear Members of the City of Cottage Grove Planning Commission,

Van Meter Inc. respectfully requests a variance from the current setback requirements for their planned facility expansion located at 7450 95th St S, Cottage Grove, MN 55016. The proposed 38,800 SF "Expansion A" addition is currently designed with a 60-foot setback, consistent with the existing building, whereas the City's ordinance requires a 100-foot setback for an I-1 General Industrial property that abuts an R-3 Single-Family Residential district.

This request is driven by several site-specific constraints that prevent compliance with the 100-foot setback requirement:

- Easement Restrictions: We are unable to extend "Expansion A" to the easternmost building setback line due to a 50-foot drainage and utility easement that must be maintained.
- Operational Circulation: Relocating "Expansion A" further south would impede truck circulation and disrupt essential on-site traffic flow and logistics.
- Alternative Design Considerations: Van Meter Inc. has explored the option of enlarging the proposed 85,100 SF "Expansion B" to offset a smaller "Expansion A" addition; however, drainage and utility easement along the southern and western property boundaries limits our ability to expand in those directions.

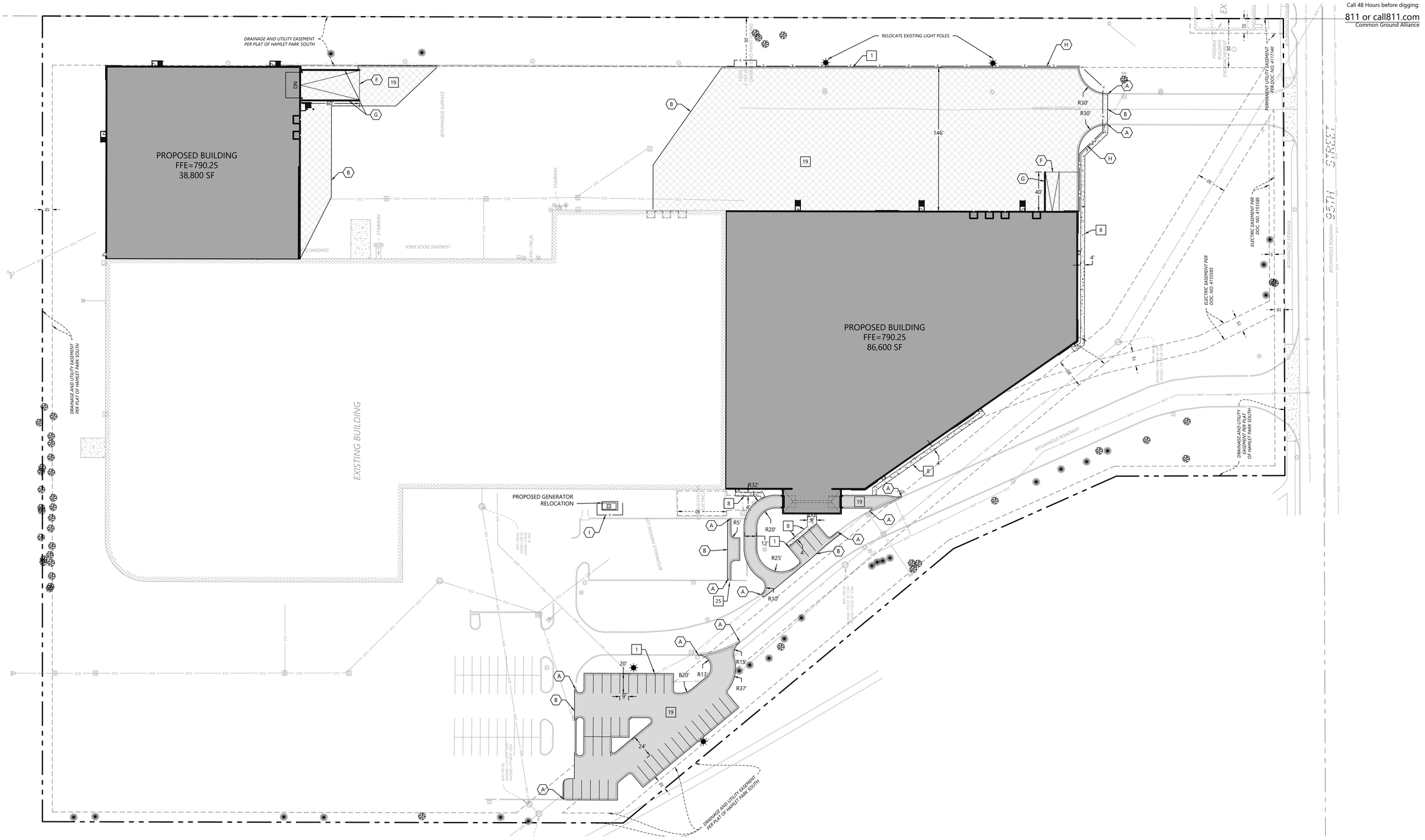
The requested 60-foot setback maintains consistency with the existing building footprint, supports efficient site operations, and accommodates the site's physical limitations while preserving the intent of the zoning ordinance.
We appreciate your consideration of this request and look forward to continuing our partnership with the City of Cottage Grove as Van Meter expands its operations to better serve its customers and the community. Please feel free to contact me at 612-222-9303 or Rtejeda@popedesign.com with any questions or requests for additional information.

Sincerely,

Ricky Tejeda
Project Manager
Pope Design Group

© 2019 Westwood Professional Services, Inc.

Call 48 Hours before digging:
811 or call811.com
Common Ground Alliance



SITE LEGEND

EXISTING	PROPOSED	
		PROPERTY LINE
		LOT LINE
		SETBACK LINE
		EASEMENT LINE
		CURB AND GUTTER
		TIP-OUT CURB AND GUTTER
		POND NORMAL WATER LEVEL
		RETAINING WALL
x	x	FENCE
		CONCRETE PAVEMENT
		NORMAL DUTY BITUMINOUS PAVEMENT
		HEAVY DUTY BITUMINOUS PAVEMENT
		NUMBER OF PARKING STALLS
		TRANSFORMER
		SITE LIGHTING
		TRAFFIC SIGN
		POWER POLE
		BOLLARD / POST

GENERAL SITE NOTES

1. BACKGROUND INFORMATION FOR THIS PROJECT PROVIDED BY ***WESTWOOD PROFESSIONAL SERVICES.***
2. LOCATIONS AND ELEVATIONS OF EXISTING TOPOGRAPHY AND UTILITIES AS SHOWN ON THIS PLAN ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY SITE CONDITIONS AND UTILITY LOCATIONS PRIOR TO EXCAVATION/CONSTRUCTION. IF ANY DISCREPANCIES ARE FOUND, THE ENGINEER SHOULD BE NOTIFIED IMMEDIATELY.
3. REFER TO BOUNDARY SURVEY FOR LOT BEARINGS, DIMENSIONS AND AREAS.
4. ALL DIMENSIONS ARE TO FACE OF CURB OR EXTERIOR FACE OF BUILDING UNLESS OTHERWISE NOTED.
5. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS AND LOCATIONS OF EXITS, RAMPS, AND TRUCK DOCKS.
6. ALL CURB RADII ARE SHALL BE 3.0 FEET (TO FACE OF CURB) UNLESS OTHERWISE NOTED.
7. ALL CURB AND GUTTER SHALL BE ***B612*** UNLESS OTHERWISE NOTED.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND MAINTAINING TRAFFIC CONTROL DEVICES SUCH AS BARRICADES, WARNING SIGNS, DIRECTIONAL SIGNS, FLAGGERS AND LIGHTS TO CONTROL THE MOVEMENT OF TRAFFIC WHERE NECESSARY. PLACEMENT OF THESE DEVICES SHALL BE APPROVED BY THE CITY AND ENGINEER PRIOR TO PLACEMENT. TRAFFIC CONTROL DEVICES SHALL CONFORM TO APPROPRIATE MNDOT STANDARDS.
9. BITUMINOUS PAVEMENT AND CONCRETE SECTIONS TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.
10. CONTRACTOR SHALL MAINTAIN FULL ACCESS TO ADJACENT PROPERTIES DURING CONSTRUCTION AND TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES.
11. SITE LIGHTING SHOWN ON PLAN IS FOR REFERENCE ONLY. REFER TO LIGHTING PLAN PREPARED BY OTHERS FOR SITE LIGHTING DETAILS AND PHOTOMETRICS.

1 SITE DETAILS (SI-0XX)

1 B612 CURB AND GUTTER
8 PRIVATE CONCRETE SIDEWALK
19 PAVEMENT SECTIONS
25 CURB CUT WITH EROSION CONTROL MAT

A SITE KEYNOTES

A MATCH EXISTING CURB
B MATCH EXISTING CONCRETE PAVEMENT WITH SAWCUT
E TRANSITION CURB
F RAMP
G RAMP RETAINING WALL
H SECURITY FENCE
I SCREEN FENCE

SITE DEVELOPMENT SUMMARY

• EXISTING ZONING:	***I-1, GENERAL INDUSTRIAL***
• PROPOSED ZONING:	***I-1, GENERAL INDUSTRIAL***
• PROPERTY AREA:	***876,227 SF (20.12 AC)***
• EXISTING IMPERVIOUS SURFACE:	***440,645 SF (50.3%)***
• PROPOSED IMPERVIOUS SURFACE:	***636,587 SF (72.6%)***
• EXISTING GREEN SPACE	***435,632 SF (49.7%)***
• PROPOSED GREEN SPACE	***239,690 SF (27.4%)***
• BUILDING GROSS SIZE:	***309,800 SF***
EXISTING BUILDING:	***184,400 SF***
NORTH ADDITION:	***38,800 SF***
SOUTH ADDITION:	***86,600 SF***
FLOOR-AREA-RATIO(FAR):	***0.35***
• BUILDING SETBACK PER CODE:	***40'*** =FRONT ***40'*** =SIDE / ***40'*** =SIDE TO ROW ***100'*** =REAR
• PARKING SETBACK:	***20'*** =FRONT AND ROW ***10'*** =SIDE AND REAR
• PARKING SPACE/DRIVE AISLE:	***9'*** WIDE X ***18'*** LONG, ***24'*** AISLE
• PARKING RATIO REQUIREMENT	***CITY OF COTTAGE GROVE***
RETAIL/OFFICE:	***1 SPACE / 250 SF OF BLDG***
WAREHOUSE:	***1 SPACE / 2000 SF OF BLDG***
RETAIL/OFFICE (51,800 SF)	***207 SPACES***
WAREHOUSE (134,000 SF)	***67 SPACES***
EXTRA SPACES	***28 SPACES***
TOTAL SPACES REQUIRED:	***336 SPACES***
• EXISTING PARKING:	***302 SPACES***
• PROPOSED PARKING:	***38 SPACES***
• TOTAL PARKING:	***340 SPACES***

0' 40' 80' 120'

PRELIMINARY PLANS

DESIGNED:
CHECKED:
DRAWN:
HORIZONTAL SCALE: 40'
VERTICAL SCALE: 8' or 4'

INITIAL ISSUE 11/03/2025
REVISIONS:
1 11/06/25 DD SET
2 11/12/25 PLAN COMMN
3 . .
4 . .
5 . .

PREPARED FOR:
VAN METER INC.
850 32ND AVENUE SW
CEDAR RAPIDS, IOWA, 52404

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

GRETCHEN A. SCHROEDER
DATE: 11/12/2025 LICENSE NO. ———

VAN METER EXPANSION
COTTAGE GROVE, MN

Westwood
Phone (952) 937-5150
Toll Free (888) 937-5150
3701 Inlet Pines Drive, Suite A-200
Minnetonka, MN, 55343
westwoodps.com
Westwood Professional Services, Inc.

SITE PLAN

SHEET NUMBER:
C200

DATE: 11/12/2025

VAN METER EXPANSION

PROJECT NUMBER: 0058882.00

N:\0058882.00\DWG\CIVIL\0058882.00SP01.DWG

Copy

HAMLET PARK SOUTH

KNOW ALL PERSONS BY THESE PRESENTS: That WAG Farms, Inc., a Minnesota corporation, WER DIS, LLC, a Minnesota company, Glendenning Farms, L.P., a Minnesota limited partnership, Joan Glendenning Kennedy Family Limited Partnership, a Minnesota limited partnership, Cottage Grove Economic Development Authority, a Minnesota public body and corporate and politic, and City of Cottage Grove, a Minnesota municipal corporation, owners of the following described property situated in the City of Cottage Grove, County of Washington, State of Minnesota:

That part of the Northwest Quarter of Section 20, Township 27, Range 21, Washington County, Minnesota, described as follows:

Beginning at the northeast corner of said Northwest Quarter; thence westerly along the north line of said Northwest Quarter to the east line of the West 725.60 feet of said Northwest Quarter; thence southerly along said east line of the West 725.60 feet to the northwest corner of Outlot B, PINEHILL ACRES FIRST ADDITION, according to the recorded plat thereof, Washington County, Minnesota; thence easterly along the northerly line of said Outlot B and the northerly line of Outlot C, of said plat, 250.00 feet to the northeast corner of said Outlot C; thence southerly and southeasterly along the easterly line of said Outlot C to the most easterly corner of said Outlot C, which is also the most northerly corner of Outlot A, PINEHILL ACRES FOURTH ADDITION, according to the recorded plat thereof, Washington County, Minnesota; thence southeasterly and southerly along the easterly line of said Outlot A, and its southerly extension thereof, to the south line of said Northwest Quarter; thence easterly along said south line to the southeast corner of said Northwest Quarter; thence northerly along the east line of said Northwest Quarter to the point of beginning.

Have caused the same to be surveyed and platted as HAMLET PARK SOUTH, and do hereby donate and dedicate to the public for public use forever the street and the drainage and utility easements as shown on the plat.

In witness whereof said WAG Farms, Inc. a Minnesota corporation, has caused these presents to be signed by its proper officer this 23rd day of July 2008 and in witness whereof said WER DIS, LLC, a Minnesota company has caused these to be signed by its proper officer this 5th day of August 2008, and in witness whereof said Glendenning Farms, L.P., a Minnesota limited partnership, has caused these presents to be signed by its proper officer this 23rd day of July 2008, and in witness whereof said Joan Glendenning Kennedy Family Limited Partnership, a Minnesota limited partnership has caused these presents to be signed by its proper officer this 23rd day of July 2008, and in witness whereof said Cottage Grove Economic Development Authority, a Minnesota public body corporate and politic has caused these presents to be signed by its proper officers this 1st day of August 2008, and in witness whereof said City of Cottage Grove, a Minnesota municipal corporation, has caused these presents to be signed by its proper officers this 1st day of August 2008.

Signed: WAG FARMS, INC.

William G. Glendenning, President

Signed: WER DIS, LLC.

Kevin R. Powell, Chief Manager

Signed: GLENDENNING FARMS, L.P.

William A. Glendenning, Its Partner

Signed: JOAN GLENDENNING KENNEDY FAMILY LIMITED PARTNERSHIP

William S. Kennedy, Its General Partner

Signed: COTTAGE GROVE ECONOMIC DEVELOPMENT AUTHORITY

Fred Luden as President

Ryan R. Schroeder as Administrator

Signed: CITY OF COTTAGE GROVE, MINNESOTA

Sandra Shirly as Mayor

Ryan R. Schroeder as Administrator

STATE OF MINNESOTA
COUNTY OF Ramsey

The foregoing instrument was acknowledged before me this 23rd day of July, 2008, by William G. Glendenning, its President of WAG Farms, Inc., a Minnesota corporation, on behalf of the corporation.

Barbara N. Gibson
(Signature)
Barbara N. Gibson
(Name Printed)
Notary Public, Ramsey County, Minnesota
My Commission Expires 1-31-09

STATE OF MINNESOTA
COUNTY OF Washington

The foregoing instrument was acknowledged before me this 5th day of August, 2008, by Kevin R. Powell, its Chief Manager of WER DIS, LLC, a Minnesota corporation, on behalf of the company.

Patricia K. Dillon
(Signature)
Patricia K. Dillon
(Name Printed)
Notary Public, Washington County, Minnesota
My Commission Expires Jan 31, 2010

STATE OF MINNESOTA
COUNTY OF Ramsey

The foregoing instrument was acknowledged before me this 23rd day of July, 2008, by William A. Glendenning, Its Partner of Glendenning Farms, L.P., a Minnesota partnership, on behalf of the partnership.

Barbara N. Gibson
(Signature)
Barbara N. Gibson
(Name Printed)
Notary Public, Ramsey County, Minnesota
My Commission Expires 1-31-09

STATE OF MINNESOTA
COUNTY OF Ramsey

The foregoing instrument was acknowledged before me this 23rd day of July, 2008, by William S. Kennedy, Its General Partner of Joan Glendenning Kennedy Family Limited Partnership, a Minnesota partnership, on behalf of the partnership.

LAURIE MURPHY
Notary Public-Minnesota
My Commission Expires Jan 31, 2010

Laurie Murphy
(Signature)
Laurie Murphy
(Name Printed)
Notary Public, Ramsey County, Minnesota
My Commission Expires 1-31-2010

STATE OF MINNESOTA
COUNTY OF Washington

The foregoing instrument was acknowledged before me this 1st day of August, 2008, by Fred Luden and Ryan R. Schroeder the President and Executive Director of Cottage Grove Economic Development Authority, a Minnesota public body corporation and politic on behalf of the Authority.

NEIL R. BELSCAMPER
Notary Public
Minnesota
My Commission Expires January 31, 2010

Neil R. Belscamper
(Signature)
Neil R. Belscamper
(Name Printed)
Notary Public, Washington County, Minnesota
My Commission Expires 1/31/2010

STATE OF MINNESOTA
COUNTY OF Washington

The foregoing instrument was acknowledged before me this 1st day of August, 2008, by Sandra Shirly and Ryan R. Schroeder the Mayor and City Administrator of the City of Cottage Grove, a Minnesota municipal corporation on behalf of the corporation.

NEIL R. BELSCAMPER
Notary Public
Minnesota
My Commission Expires January 31, 2010

Neil R. Belscamper
(Signature)
Neil R. Belscamper
(Name Printed)
Notary Public, Washington County, Minnesota
My Commission Expires 1/31/2010

I hereby certify that I have surveyed and platted or directly supervised the survey and platting of the property described on this plat as HAMLET PARK SOUTH; that this plat is a correct representation of the boundary survey; that all mathematical data and labels are correctly designated on the plat; that all monuments depicted on the plat have been or will be correctly set within one year as indicated on the plat; that all water boundaries and wet lands as defined in MS 505.01, Subd. 3 existing as of the date of this certification are shown and labeled on the plat.

Daniel J. Roeber, Land Surveyor
Minnesota License No. 43133

STATE OF MINNESOTA
COUNTY OF RAMSEY

The foregoing Surveyor's Certificate by Daniel J. Roeber, Minnesota License No. 43133, was acknowledged before me this 30th day of November, 2007.

Patricia J. Wegener
(Signature)

Patricia J. Wegener
Notary Public, Ramsey County, Minnesota
My Commission Expires January 31, 2010

CITY OF COTTAGE GROVE

Approved by the City Council of the City of Cottage Grove, Minnesota, this 17th day of October, 2007, and is in compliance with the provisions of Chapter 505.03, Subdivision 2, Minnesota Statutes.

Signed Sandra Shirly, Mayor Attest Leon M Stransky, City Clerk

COUNTY SURVEYOR

Pursuant to Chapter 820, Laws of Minnesota, 1971, this plat has been approved this 18th day of December, 2008.

By: MICHAEL J. WELLING
Washington County Surveyor

By: Marc Seniawski
Assistant County Surveyor

COUNTY AUDITOR/TREASURER

There are no delinquent taxes, the current taxes due and payable for the year 2008 have been paid and transfer has been entered this 18 day of December, 2008.

By: Mary O'Rourke
Washington County Auditor/Treasurer

By Barbara Christianson
Deputy

COUNTY RECORDER
DOCUMENT NUMBER 378758

I hereby certify that this instrument was recorded in the Office of the County Recorder for record on this 18 day of December, 2008 at 3:56 o'clock P.m., and was duly filed in Washington County Records.

By:
Washington County Recorder

By:
Deputy

Bonestroo

Copy

HAMLET PARK SOUTH

OUTLOT B

OUTLOT C

OUTLOT A

LOT 1

BLOCK 1

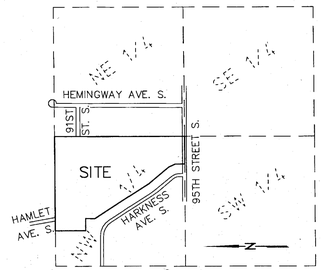
DRAINAGE & UTILITY EASEMENT

DRAINAGE AND UTILITY EASEMENTS ARE SHOWN THUS:
(NOT TO SCALE)

Being 10 feet in width and adjoining thoroughfares and lot lines unless otherwise indicated on this plat.

- ● DENOTES IRON MONUMENT FOUND
- ○ DENOTES 1/2 INCH BY 14 INCH IRON PIPE SET WITH PLASTIC CAP INSCRIBED WITH "BONESTROO 43133", WHICH HAS BEEN SET OR WILL BE SET IN ACCORDANCE WITH MS 505.021, SUBD. 10.
- ⊠ DENOTES PK NAIL, WHICH HAS BEEN SET OR WILL BE SET IN ACCORDANCE WITH MS 505.021, SUBD. 10.
- ◉ DENOTES WASHINGTON COUNTY CAST IRON MONUMENT

LOCATION MAP
(NOT TO SCALE)
SEC. 20, TWP. 27, RNG. 21



0 100 200
GRAPHIC SCALE IN FEET
1 INCH = 100 FEET

THE ORIENTATION OF THIS PLAT IS BASED ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SEC. 20, TWP. 27, RNG 21, WHICH IS ASSIGNED A BEARING OF SOUTH 89°47'05" WEST.

Bonestroo

BOLTON & MENK
Real People. Real Solutions.

3507 High Point Drive North
Bldg. 1 Suite E130
Oakdale, MN 55128

Ph: (651) 704-9970
Bolton-Menk.com

MEMORANDUM

Date: 12/09/2025

To: Paul Sponholz, PE

From: Mike Boex, PE

Subject: Van Meter Expansion
City of Cottage Grove, MN
Project No.: 24X141558000

This memo summarizes the review of site plan documents submitted by Westwood, dated 11/12/25 (received 11/14/25).

Civil Plans:

Title Sheet:

1. For clarity, please identify the horizontal and vertical datums for the project on the title sheet.

Sheet C200:

2. Fencing:
    a. Keynote A31 on Sheet A1.1 states to see Civil sheets for chain link fence. New fence does not appear to be identified on civil sheet C200 in this particular location of the site, rather, the generator is just to the north. Please clarify or make the sheets consistent.
    b. Keynotes H & I identify fence type; please provide details of each proposed fence for review.
3. The proposed parking lot expansion encroaches onto the drainage and utility easement for the trunk sanitary sewer; the city will prepare an encroachment agreement.

Sheet C300:

4. Freeboard Standards: Please label all pond and local drainage EOF locations and elevations throughout the site.
    a. No EOFs are identified for the three proposed basins.
    b. Below are the EOF standards for reference:
        i. For stormwater basins with emergency overflows, the low adjacent grade elevation for all new structures must be a minimum of 3 feet above both the peak surface water elevation for the 100-year precipitation event and 2 feet above the emergency overflow elevation of any immediately adjacent new stormwater basin.

Bolton & Menk is an equal opportunity employer.

ii. For temporary ponding areas, through the parking lot or other, there must be at least 1 foot between the overland overflow elevation and the low adjacent grade elevation of the adjacent structure.

5. There is private storm pipe and a storm basin proposed within the trunk sewer drainage and utility easement; the city will prepare an encroachment agreement.
6. The 6" drain tile does not appear to be at the bottom of basin per the detail on C601. Please confirm location or modify the standard detail to depict tile location/elevation and subgrade within the basin slope.

Sheet C500:

7. Sanitary Sewer: Instead of an inside drop manhole, a Kor-N-Tee connection is preferred (include city standard detail SER-8).
8. There does not appear to be a new water service to the building. Respond as to where water will be extended from (within the existing building or other).
9. East side of property: new lights, hydrant, and fence are all proposed in the public drainage and utility easement. The city will prepare an encroachment agreement.
10. Utility note #14.E: clarify if CMP pipe is proposed anywhere on the site.

Sheet L200:

11. Trees in existing public easements:
    a. Trees are not allowed in public easements. There are two proposed trees on a parking lot island on the west side of the site, within the sanitary easement, that should be removed from the plans. On the east side there are 18 proposed trees in the easement that the city will allow. These trees are placed a sufficient distance from the drainage swale so that they will not interfere either with the flow of water or with maintenance of the swale.
12. List the following planting restrictions on the plan such that they can be adhered to during installation. Please review and revise the plan for conformance.
    a. Deciduous trees should be located a minimum of 5' off any utility pipe.
    b. Coniferous trees should be located a minimum of 15' off any utility pipe.
    c. No tree should be located within 10' of a hydrant or 15' from a streetlight.
    d. No trees should be located within a storm pond HWL.
    e. No trees should be located within a storm pond's 20-ft access route, and no coniferous trees within 5' of the 20' pond access route.
    f. No coniferous trees within 20' of a proposed sidewalk/trail.
    g. No deciduous trees within 5' of sidewalk/trail/driveways.
    h. Trees should not be planted within drainage and utility easements.
13. Add a note to the plans directing that trees shall be staked prior to installation such that they can be reviewed for conformance to the planting restrictions.

Stormwater Comments:

14. Plan Sheets & Hydrology Report:
    a. Please indicate the total disturbed area in the hydrology report.
    b. Testing: The City will require post-construction testing to verify the infiltration/filtration rate and drawdown period of any infiltration/filtration basins. Please add the following to the filtration basin plan notes: "Post construction testing of the infiltration/filtration rate and drawdown period will be required." Post construction testing should yield results of approximately twice the design rate, providing a safety factor consistent with Section 16.11 of the NPDES Construction Stormwater Permit. If test results exceed 8.3 inches per hour, Section 16.16 requires that soils be amended to slow the infiltration rate below 8.3 inches per hour.
    c. The pipe outlet of OCS-22 on Sheet C500 is labeled as 30" but the detail on Sheet C601 and the HydroCAD model indicate this pipe is 36". Please revise the pipe size on C500 to 36" to be consistent.
    d. The underground filtration system outlet is listed as 782.60' on Sheet C500. The OCS-22 notes list rim elevation and invert, but no outlet information. Please include details for outlet structures in the plans. Provide a storm schedule identifying structure sizes, sumps, etc. Sump structures should be provided prior to discharge into a stormwater basin.
    e. C601 – Filtration Basin - South is missing impervious liner details on plan sheet C601.
15. HydroCAD:
    a. The site has two outfalls. Please model the outfall to the north and to the east in the existing and proposed conditions HydroCAD model. The north outfall is connected to Hamlet Park Pond, and the south portion of the site is connected to the flume channel east of the site. Ensure rates are not increased to either of these features.
    b. The existing site has stormwater best management practices as described in the stormwater report and shown on L200 Landscape Plan 3/20/2015 (pdf p. 59 of 126). Please update the existing conditions HydroCAD model to include the existing best management practices for accurate rate control analysis.
    c. The HydroCAD model of the Pond 3P Underground System lists an invert elevation for Volume #1A of 781.17, but sheet C601 shows the invert elevation to be 780.17 feet. Please check invert elevation and update the HydroCAD Volume #1A and Device #3 to be consistent with the invert elevation on the plan sheets (780.17).
    d. Please include filtration in the outlet structure HydroCAD modeling for the West Filtration Basin.
    e. Rainfall depths are required to use NOAA Atlas 14. Please update the 100-year rainfall to be 7.40" according to NOAA Atlas 14 for Cottage Grove. HydroCAD model currently has 7.20".
    f. Models: Please note that digital copies of the final version stormwater models and shapefiles or CAD drawings of existing and proposed drainage areas are to be submitted to the City once the review and revision process is complete.
16. Water Quality – P8:

a. The City of Cottage Grove requires that new development projects include BMPs that at a minimum achieve post-development reductions in TP and TSS by 50% and 80%, respectively. In addition, South Washington rules call for TP loading rate of 0.22 lbs./acre/year or existing loading rates, whichever is less. Please provide an existing and proposed conditions P8 water quality model including the total disturbed site area of 8.15 acres.

17. Rational Storm Sewer Design: Please provide rational storm sewer design table with the following documentation

    a. On-site storm sewer should be sized to a 5-year rational method design. Submit design calculations for the storm sewer system and a drainage area map showing each catchment with manholes and catch basins labeled. Include individual pipe segment velocities with calculations for review. Trunk facilities should be analyzed and designed to accommodate the 100-year ponded discharges plus 5-year rational flows from areas that enter the trunk to be carried to the next storage area downstream.

    b. Pipe sizes and slopes should be selected to provide a minimum open channel velocity of 3 feet per second.

    c. Maximum storm sewer velocities should be kept at 10 feet per second or less.

    d. When changing pipe sizes in structure, match crown of pipe elevations instead of inverts.

    e. Please show storm catch basin IDs, pipe sizes, grades, elevations, and drainage areas on the plans consistent with the rational design tables.

    f. Pipe outlets to wet ponds should be placed at the NWL and have design velocities of 6 fps or less. Pipe outlets into filtration basins or other overland discharge should have design velocities of 4 fps or less.

18. The City will require an executed stormwater maintenance agreement for the proposed stormwater features on the site.

19. Models: Please note that digital copies of the final version stormwater models and shapefiles or CAD drawings of existing and proposed drainage areas are to be submitted to the city once the review and revision process is complete.

RESOLUTION NO. 2012-045

A RESOLUTION GRANTING A VARIANCE TO CITY CODE TITLE 11, CHAPTER 4, SECTION 6(G), TO REDUCE THE WIND TURBINE MINIMUM SETBACK REQUIREMENT FROM 1,320 FEET TO 230 FEET FROM A PUBLIC PARK AND APPROVING A CONDITIONAL USE PERMIT TO ALLOW THE INSTALLATION OF A 20-KILOWATT WIND TURBINE AT THE SOUTHWEST CORNER OF WERNER ELECTRIC'S BUILDING LOCATED AT 7450 95TH STREET SOUTH

WHEREAS, Werner Electric has applied for a variance to Title 11, Chapter 4, Section 6(G), Siting of the City's Zoning Ordinance to reduce the 1,320 foot minimum setback requirement for a wind turbine from Hamlet Park's property boundary line and a conditional use permit to allow the installation of a 99-foot tall 20 kilowatt wind turbine with three 15-foot long blades onproperty legally described as:

> That part of the Northwest Quarter of Section 20, Township 27, Range 21, Washington County, Minnesota, described as follows:
>
> Beginning at the Southeast corner of said Northwest Quarter of said Section 20; thence North 00 degrees 07 minutes 30 seconds East, assumed bearing along the East line of said Northwest Quarter, 1303.00 feet; thence North 90 degrees 00 minutes 00 seconds West, 820.05 feet; thence South 00 degrees 07 minutes 30 seconds West, 591.24 feet; thence South 39 degrees 42 minutes 41 seconds East, 436.89 feet; thence South 24 degrees 00 minutes 42 seconds East, 181.43 feet; thence South 00 degrees 11 minutes 40 seconds East, 211.55 feet to the south line of said Northwest Quarter; thence easterly along said south line, 464.81 feet to the point of beginning.
>
> Said description contains ±20.54 acres or ±894,871 square feet.
>
> Commonly known as 7450 95th Street South, Cottage Grove, Washington County, State of Minnesota.

WHEREAS, public hearing notices were mailed to property owners within 500 feet of the property and a public hearing notice was published in the South Washington County Bulletin; and

WHEREAS, Werner Electric held an information meeting with surrounding property owners on January 26, 2012; and

WHEREAS, the Parks, Recreation and Natural Resources Commission unanimously supported the proposed wind turbine setback variance at their meeting on February 13, 2012; and

WHEREAS, the Planning Commission held a public hearing on March 26, 2012; and

WHEREAS, a planning staff report, which detailed specific information on the property and the application request, was prepared and presented; and

WHEREAS, the public hearing was open for public testimony and testimony from the applicant and the public was received and entered into the public record; and

WHEREAS, a petition opposing the applicant's wind turbine project contained the signatures of 25 residents representing 21 residential properties was presented to the Planning Commission. Their concerns pertained to potential visual and noise pollution and property values. The petition has been placed on file and is available for public viewing; and

WHEREAS, the Planning Commission reviewed the criteria and findings established by the Zoning Ordinance for granting a variance. A summary of these criteria is as follows: Is the variance in harmony with the purposes and intent of the ordinance? Is the variance consistent with the comprehensive plan? Does the proposal put property to use in a reasonable manner? Are there unique circumstances to the property not created by the landowner? Will the variance, if granted, alter the essential character of the locality? The City may impose conditions and safeguards in granting any variance.

WHEREAS, the Planning Commission on a 7-to-2 vote recommended to the City Council that the variance and conditional use permit applications be granted based in the findings of facts and the conditions of approval listed in the planning staff report; and

WHEREAS, the City Council discussed Werner Electric's planning applications at their meeting on April 4, 2012 and tabled the matter to April 18, 2012. Council requested the applicant provide additional information relative to wind direction and to consider placing the proposed wind turbine in the northeast corner of their site; and

WHEREAS, the City Council tabled the applications at their April 18, 2012 meeting and instructed City staff to prepare alternative findings of facts for the two locations on Werner Electric's property; and

WHEREAS, findings of facts for placing the proposed wind turbine at the southwest corner of Werner Electric's building and the northwest corner of Werner Electric's property were evaluated. City staff was unable to differentiate significant findings between both locations. The southwest corner of Werner Electric's building is apparently the best location for wind direction, has less wind turbulence that may be caused by their building, and is 230 feet from the Hamlet Park boundary line as compared to 127 feet if located in the northeast corner of their site. The northeast corner of their site will apparently have more wind turbulence from their building based on the 2007-2012 data set by Wind Alert and a prevailing wind direction report prepared by Matthew Giovanelli, Midwest Renewable Energy Association, dated April 11, 2012 but will be farther away from the public trail in Hamlet Park that is west of Werner Electric's property.

NOW, THEREFORE BE IT RESOLVED, the City Council of the City of Cottage Grove, Washington County, Minnesota, hereby grants a variance to reduce the 1,320-foot minimum wind turbine setback requirement from Hamlet Park to 230 feet based upon the findings of facts described below and approving a conditional use permit to allow the installation of a 99-foot tall monopole and 20 kilowatt wind turbine that has three 15-foot long blades at the southwest corner of Werner Electric's building located on property legally described above. Findings of facts for the variance application are:

A. The Wind Energy Conversion System Ordinance (WECS) defines a small wind turbine as having a total rated capacity less than 50 kW. The wind turbine model proposed by Werner Electric is a 20 kW unit and only one unit is proposed on their site.

B. The monopole height is 99 feet with a rotor diameter of 30 feet.

C. The City's Parks, Recreation and Natural Resources Commission reviewed Werner Electric's variance application and supported the placement of the wind turbine to be not less than 230 feet from the Hamlet Park boundary. The City's Economic Development Authority and Planning Commission have also recommended to the City Council approval of the variance and conditional use permit applications as presented by Werner Electric.

D. The proposed location is closest to their main building without impacting their future plans to expand their facility, parking areas and docking area.

E. The variance is in harmony with the purposes and intent of the Zoning Ordinance. The property is zoned General Industry and the proposed monopole structure and wind turbine size complies with installation, design and siting regulations required in the Zoning Ordinance. The requested variance setback from the Hamlet Park boundary line will not adversely impact the use of this park amenity.

F. The variance request is not specifically addressed in the City's Future Vision 2030 Comprehensive Plan, but its industrial characteristics are consistent the industrial land use designation for this property.

G. The proposal continues a reasonable use on the property.

H. The unique circumstances to the property were not created by the landowner. The parcel of land is not large enough to comply with 1,320-foot setback requirement for the proposed wind turbine.

I. The purpose of the variance is not based exclusively upon a financial hardship. The proposed wind turbine is an alternative sustainable energy resource that will reduce their electrical power usage from a private utility company.

J. The granting of the variance should not be detrimental to the public welfare or injurious to other land in the neighborhood. The proposed wind turbine will not impair an adequate supply of light and air to adjacent property. It will not create congestion in the public streets, become a fire danger, or endanger the public's safety.

K. Werner Electric provided to the City the 2007-2012 data set by Wind Alert that documents the prevailing wind direction for their site and the report prepared by Matthew Giovanelli, Midwest Renewable Energy Association, dated April 11, 2012. This information indicated that the predominant winds in this area come from the northwest, west, and southeast.

L. Based on the prevailing wind direction and average wind speed information, placement of the wind turbine at the southwest corner of their building as originally proposed will potentially produce more electricity and will experience less wind turbulence from their building as compared to placing the proposed wind turbine in the northeast corner of Werner Electric's property.

BE IT FURTHER RESOLVED, the approval of this variance and conditional use permit is subject to the following conditions:

1. All applicable permits (i.e., building, electrical, grading, and mechanical) and a commercial plan review packet must be completed, submitted, and approved by the City prior to the commencement of any construction activities. Detailed construction plans must be reviewed and approved by the Building Official and Fire Marshal.

2. Except for the minimum setback variance for the wind turbine, Werner Electric must comply with all other City ordinances and policies.

3. Werner Electric must abide by Title 11-6-17, Noise Control regulations of the City's Zoning Ordinance.

4. Lights, reflectors, flashers, or other illumination attached to the wind turbine or monopole is prohibited unless those devices are required by the Federal Aviation Administration.

5. City Council approval of the conditional use permit is contingent on Council's approval of the variance application.

Passed this 2nd day of May 2012.

Myron Bailey, Mayor

Attest:

Caron M. Stransky, City Clerk

3890321

Receipt#: 192038

VAR $46.00

Certified Filed and/or recorded on:
5/29/2012 3:48 PM

3890321

Office of the County Recorder
Property Records & Taxpayer Services
Washington County, MN
Jennifer Wagenius, County Recorder

Return to:
CITY OF COTTAGE GROVE
7516 80TH ST S
COTTAGE GROVE MN 55016

STATE OF MINNESOTA)
COUNTY OF WASHINGTON)
CITY OF COTTAGE GROVE)

I, the undersigned, being the duly qualified and acting City Clerk of the City of Cottage Grove, Minnesota, DO HEREBY CERTIFY, that I have carefully compared the attached copies of Resolution No. 2012-045 of the City of Cottage Grove with the original on file in my office and the same is a full, true and complete transcript therefrom.

WITNESS, my hand as such City Clerk and the corporate seal of the City this 22nd day of May, 2012.

Caron M Stransky

Caron M. Stransky
City Clerk

SEAL

G:\CITYFILES\12 CITYFILES\011CUP Werner Electric Wind Turbine\Planning\CUP12-011 Werner Electric Res. No. 2012-045 Recording Cover.docx

STAFF REPORT CASE: CUP2025-032

ITEM: 6.3

PUBLIC MEETING DATE: 12/15/25 TENTATIVE COUNCIL REVIEW DATE: 1/21/26

APPLICATION

APPLICANT: Van Meter Inc.

REQUEST: A Conditional Use Permit for the exterior storage of materials within a 10,000 square foot enclosed area with 8- to 10-foot tall vinyl fencing.

SITE DATA

LOCATION: 7601 100th Street South

ZONING: I-1, General Industrial

GUIDED LAND USE: Public/Semi-Public

LAND USE OF ADJACENT PROPERTIES:	CURRENT	GUIDED
NORTH:	Single Family Res.	Low-Density Res.
EAST:	General Industrial	Industrial
SOUTH:	General Industrial	Industrial
WEST:	High Density Res.	High Density Res.

SIZE: 25.35 Acres

DENSITY: N/A

RECOMMENDATION

Approval, subject to the conditions stipulated in this staff report.

COTTAGE GROVE PLANNING DIVISION

Planning Staff Contact: Kelly Becker, Associate Planner; 651-458-2834; kbecker@cottagegrovemn.gov

Application Accepted: 11/19/2025 60-Day Review Deadline: 1/18/2026 120-Day Review Deadline: 3/19/2026

Planning Staff Report
Van Meter Inc. – Exterior Storage
Planning Case No. CUP2025-032
December 15, 2025

Proposal

Van Meter Inc. (Applicant) has applied for a Conditional Use Permit (CUP) with approval from Northpoint Development (Property Owner) to allow for the exterior storage of materials within a 10,000 square foot enclosed area at their Wire Center facility located at 7601 100th Street South, Suite 100. The exterior storage area will be used for the temporary storage of materials THAT may need to be relocated during construction activities taking place at Van Meter's main facility located at 7450 95th Street South. The materials will be fully screened by an 8- to 10-foot-tall vinyl fence located in the southeast semi-trailer parking area of the property.



Site Location

Review Schedule

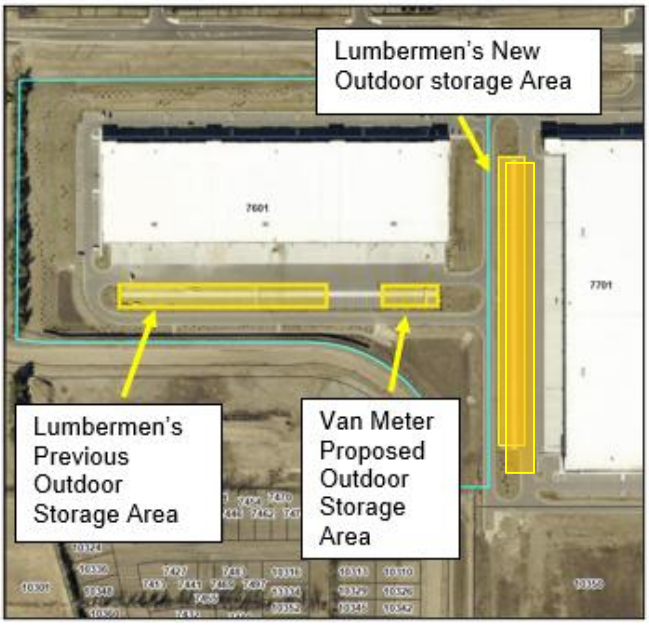
Application Received: November 12, 2025
Application Accepted: November 19, 2025
Planning Commission Meeting: December 15, 2025
Tentative City Council Meeting: January 21, 2026
60-Day Review Deadline: January 18, 2026
120-Day Review Deadline: March 19, 2026

Background

The subject site is located within the Master Site Plan for the Cottage Grove Logistics Park, which was approved by the City Council at their December 8, 2021, meeting and included approximately 252 total acres of land. In 2022, NorthPoint Development submitted an application for a Site Plan Review that was approved for the Phase 1 development, which allowed for the construction of two buildings (approximately 700,000 square feet) for warehouse, manufacturing, distribution, and office space.

Van Meter occupies a tenant space in the eastern portion of Building One of the Phase 1 development. Van Meter's main warehousing, distribution, and office space operations occur at their facility at 7450 95th Street South. The Applicant has submitted a Site Plan Review and Variance request for two building expansions for additional warehouse space at their main facility on 95th Street, and those requests are currently being reviewed alongside this application. If approved, the proposed outdoor storage at this site will be used for storage of materials, including PVC conduit from the main facility, while construction for the expansions is occurring. No hazardous materials will be stored within the proposed enclosure.

An additional tenant space within Building One of the Cottage Grove Logistics Park is occupied by Lumbermen's Inc. In 2023, Lumberman's obtained CUP approval (CUP2023-021) to utilize a portion of the southern parking lot at 7601 100th Street as storage and staging areas for their business. An Administrative CUP (ACUP2024-001) was later granted to expand the original proposed staging area that follows the conditions of Resolution 2024-004. The additional area had an increased fence height from 6 feet to 10 feet. Earlier in 2025, Lumberman's expanded into the building at 7701 100th Street and secured conditional use permit approval (CUP2025-007) for exterior storage within the semi-trailer parking spaces on the west side of the building. Lumberman's has since moved their materials stored outdoors at 7601 100th Street to their new space at 7701 100th Street.

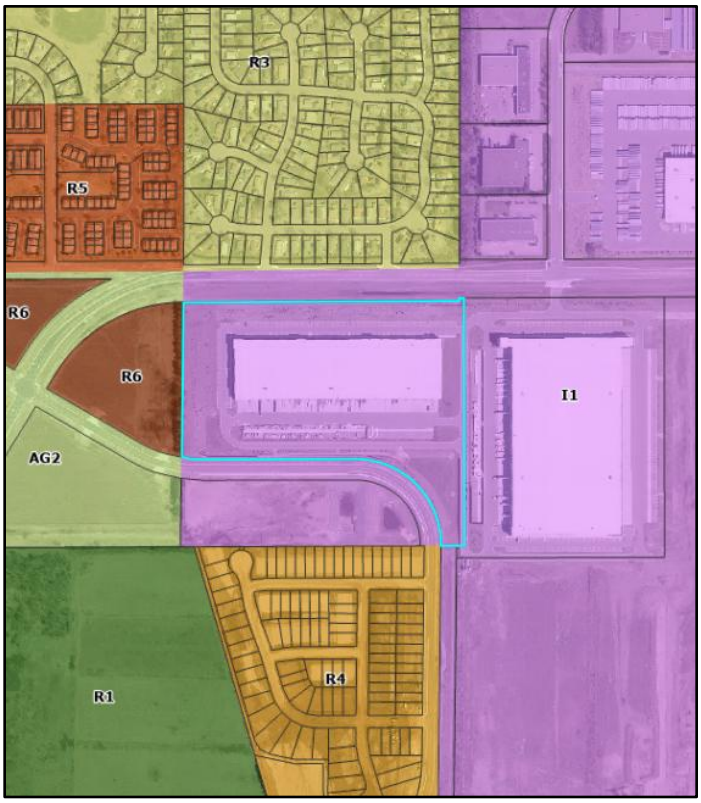


7601 100th St South Exterior Storage Areas

Planning Considerations

Land Use and Zoning

The subject site is currently zoned I-1, General Industrial, and is guided as Industrial in the 2040 Comprehensive Plan. The proposed use of the property is consistent with permitted and conditional uses allowed within this zoning district.



Zoning Map

Conditional Use Permit

City Code Title 11-9-2 requires a CUP for any outdoor storage area exceeding 5,000 square feet and that the area be fully screened. The Applicant is proposing to construct an 8- to 10-foot-tall privacy fence to enclose approximately 10,000 square feet of the southeast truck parking area to be used for outdoor storage. The criteria for issuance of a CUP are as follows:

1. *Compliance with and effect upon the Comprehensive Plan, including public facilities and capital improvement plans.*
2. *The establishment, maintenance, or operation of the conditional use will promote and enhance the general public welfare and will not be detrimental to or endanger the public health, safety, morals, or comfort.*
3. *The conditional use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood.*
4. *The establishment of the conditional use will not impede the normal and orderly development and improvement of surrounding property for uses permitted in the district.*

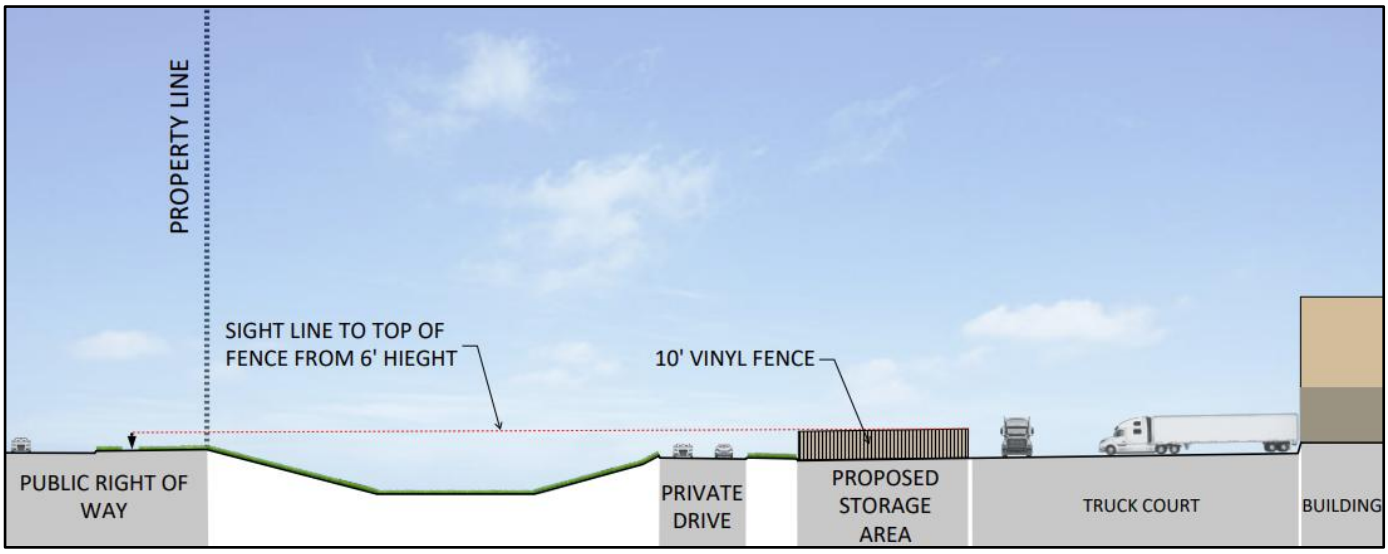
5. *Adequate public facilities and services are available or can be reasonably provided to accommodate the use which is proposed.*
6. *The conditional use shall, in all other respects, conform to the applicable regulations of the district in which it is located.*
7. *The conditional use complies with the general and specific performance standards as specified by the Zoning Code.*

Upon review, the proposal meets the forementioned criteria.

Fence Detail

The applicant is proposing an 8- to 10-foot-tall vinyl fence to fully enclose the outdoor storage area. City Code Title 11-3-6 allows for fences in industrial districts to be a maximum of 10 feet in height. The fencing would be constructed entirely within the southeast area of the property that was originally designated as semi-trailer parking. The fencing would provide screening from the adjacent properties and public right-of-way. The proposed fence as constructed may not impede on the approved drainage patterns within the site, and the storm sewer infrastructure within the enclosure must be protected from any stored materials washing into the storm sewer system. The enclosed area will not alter the site circulation patterns or access points on the property.

A condition of approval will require that the exterior storage of materials not be permitted outside of the approved area, that no materials be visible from public view, and that no materials exceed the height of the fence. In addition, a condition will also require that the exterior surface of the fence be maintained in sound and good condition, and that exterior surfaces shall be protected from the elements and decay by paint or other treatment.



Sight Line Section



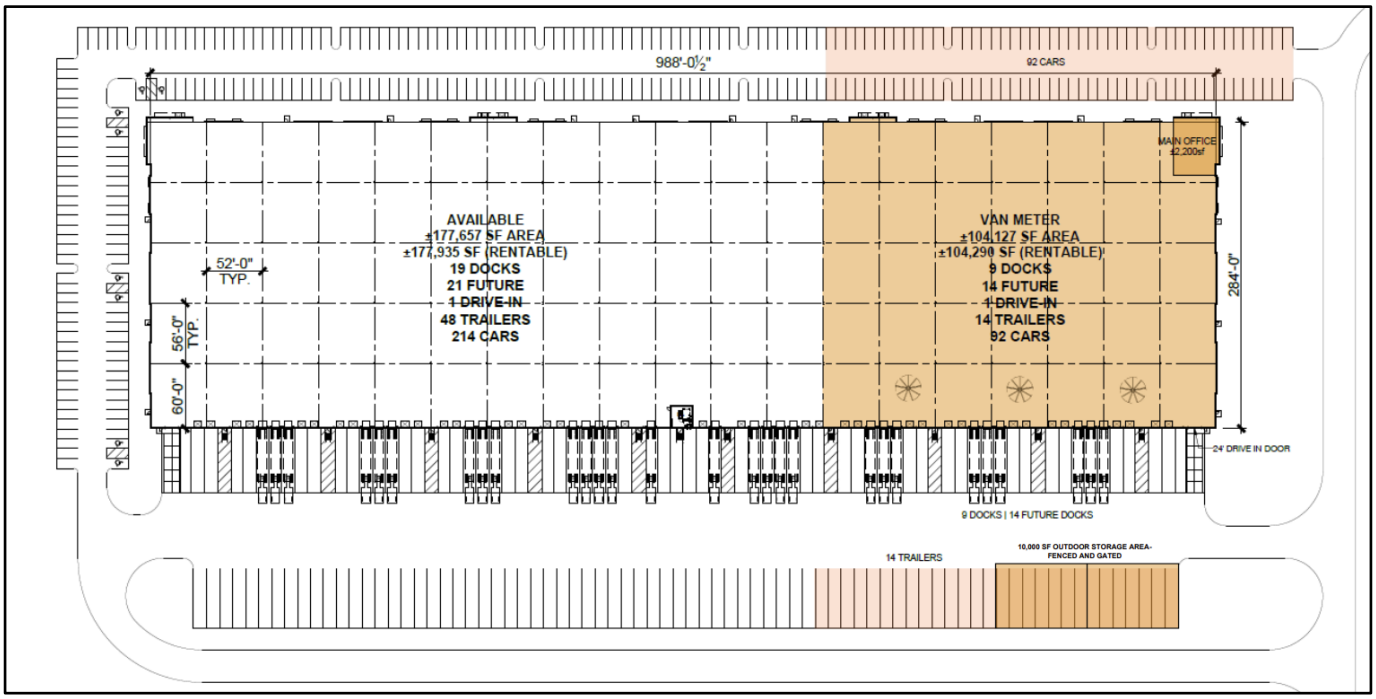
Site Rendering

Parking

Parking requirements for Phase 1 of the Cottage Grove Logistics Park were satisfied at the time of Site Plan Review approval by the City Council at their April 6, 2022, meeting. For the subject building site, the Property Owner proposed 306 total regular parking stalls when 141 parking stalls were required. The proposed fence encloses 14 semi-trailer parking stalls that will be unavailable for trailer storage; however, the applicant has indicated that they will retain 14 semi-trailer parking stalls, which exceeds their operational needs. Truck and/or truck and trailer parking and idling within the right-of-way of 100th Street, 105th Street, and Ideal Avenue are prohibited per Condition 15 of Resolution 2021-166.

City Code Title 11-3-4 states one parking space is required for 250 square feet of office space, and one parking space is required for 2,000 square feet of warehouse space. The tenant space consists of approximately 2,200 square feet of office space and 104,127 square feet of warehouse space, so a total of 62 parking spaces is required; the Property Owner has allocated 92 parking spaces to the Applicant. The Applicant has also indicated the provided onsite parking well exceeds their needs for staff parking, as only a total of 17 employees work at this facility. Therefore, the tenant space and use meet current parking requirements.

Proposed Use	Square Footage	Parking Spaces Required
Office	2,200	9
Storage	104,290	53



Onsite Parking

Public Hearing Notices

The public hearing notice for the December 15, 2025, Planning Commission meeting was published in the *Saint Paul Pioneer Press* and mailed on December 2, 2025, to 105 property owners that are within 500 feet of the proposed project property boundary. Staff have not received any comments at the time of writing this report.

Recommendation

That the Planning Commission recommend that the City Council approve a Conditional Use Permit to allow for outdoor material storage at 7601 100th Street South, Suite 100, subject to the following conditions:

1. All applicable permits (i.e., building, electrical, grading, mechanical) must be completed, submitted, and approved by the City prior to the commencement of any construction activities.

2. The exterior surface of the fence shall be maintained in sound and good condition. Exterior surfaces shall be protected from the elements and decay by paint or other treatment. Peeling, flaking, chipped, or fading paint and/or stain shall be eliminated and surfaces repainted/re-stained.

3. The exterior surface of the fence shall complement and be similar in color to the principal structure and site.

4. The fence shall not impede drainage patterns as they have been proposed and approved as part of the original site development, unless otherwise approved by the City Engineer.

5. Signage is not permitted on the fence.

6. Exterior storage of materials shall not be permitted outside of the approved area. Material storage shall not be visible from public view and shall not exceed the height of the fence.

7. The placement, movement, and/or stockpiling of materials in the approved exterior storage area shall be limited to 6:30 a.m. to 7:30 p.m.

8. No liquids or hazardous substances shall be stockpiled within the enclosed outdoor storage area.

9. The storm sewer infrastructure encompassed within the enclosure shall be protected from stored materials being washed into the storm sewer system. Inspections should be completed by property owner/tenant to ensure stored materials and packaging are in sound condition and will not wash into the storm sewer system.

10. The standard City and State noise rules shall be applicable to the outdoor storage area. If the City receives complaints related to noise, the property owner shall bring the noise onsite into compliance upon notification by the City.

11. Any substantial changes to the fence (i.e., height, material, etc.) shall be reviewed and approved by planning staff prior to the commencement of any onsite construction. Fences exceeding seven (7) feet in height require a building permit per State Building Code. If the proposed changes substantially alter site operations, planning staff may refer the proposal to the Planning Commission and City Council for review.

12. If the approved outdoor storage area is unused for material storage for a period of 12 months or more, the fence shall be removed upon notification by the City.

13. Repeat violations related to exterior storage outside of the approved areas, noise, unsightliness, or permit criteria will require additional review of the CUP by the City Council, with possible revocation of the CUP as a remedy.

Prepared by
Kelly Becker
Associate Planner

Attachments
Narrative
Site Section and Plan

11/12/2025

City of Cottage Grove
Attn: Community Development Department
12800 Ravine Parkway South
Cottage Grove, MN 55016

Re: Conditional Use Permit Request – Outdoor Lot Storage
Van Meter Inc.
7450 95th St S, Cottage Grove, MN 55016

Dear Community Development Staff,

On behalf of Van Meter Inc., we are submitting this request for a Conditional Use Permit to allow for a temporary outdoor lot storage area at Van Meter's Wire Center located at 7601 100th Street South, Suite 100, Cottage Grove, MN 55016. The property is zoned I-1, General Industrial.

Van Meter is proposing to install a temporary 10,000 square foot fenced storage enclosure within the existing paved lot along the south side of the building, within the truck court area. The enclosure will be used for the temporary storage of materials that need to be relocated during construction activities taking place at Van Meter's main facility located at 7450 95th Street South, Cottage Grove, MN 55016.

The proposed screening will consist of a 8- to 10-foot-tall vinyl fence. The fence will fully enclose the storage area, providing effective screening from adjacent properties and public rights-of-way. The enclosure will be maintained in good condition throughout its use and removed once construction at the main facility is complete.

Site Operations, Parking, and Truck Activity
Van Meter's operations will not require overnight parking of semi-trucks on site. Although the proposed storage enclosure reduces the number of semi-truck parking positions, Van Meter will retain access to 14 stalls, which exceeds operational needs. In addition, the property includes 92 standard vehicle parking spaces along the north side of the building. This exceeds both the City of Cottage Grove's parking requirements and Van Meter's staffing needs. Van Meter will never have more than 10 employees on site at one time, and a total of 17 individuals work at this facility. Please see the attached exhibit for more information.

No hazardous materials will be stored within the enclosure, and all activities associated with the proposed use will remain consistent with the operational nature of the site and the intent of the I-1 General Industrial District. The temporary storage area will not alter site circulation, drainage, or access patterns.

We respectfully request approval of this Conditional Use Permit to allow Van Meter to efficiently manage materials during this period of facility improvement. Please contact me at 612-222-9303 or Rtejeda@popedesign.com if additional information or supporting documentation is needed.

Thank you for your time and consideration.

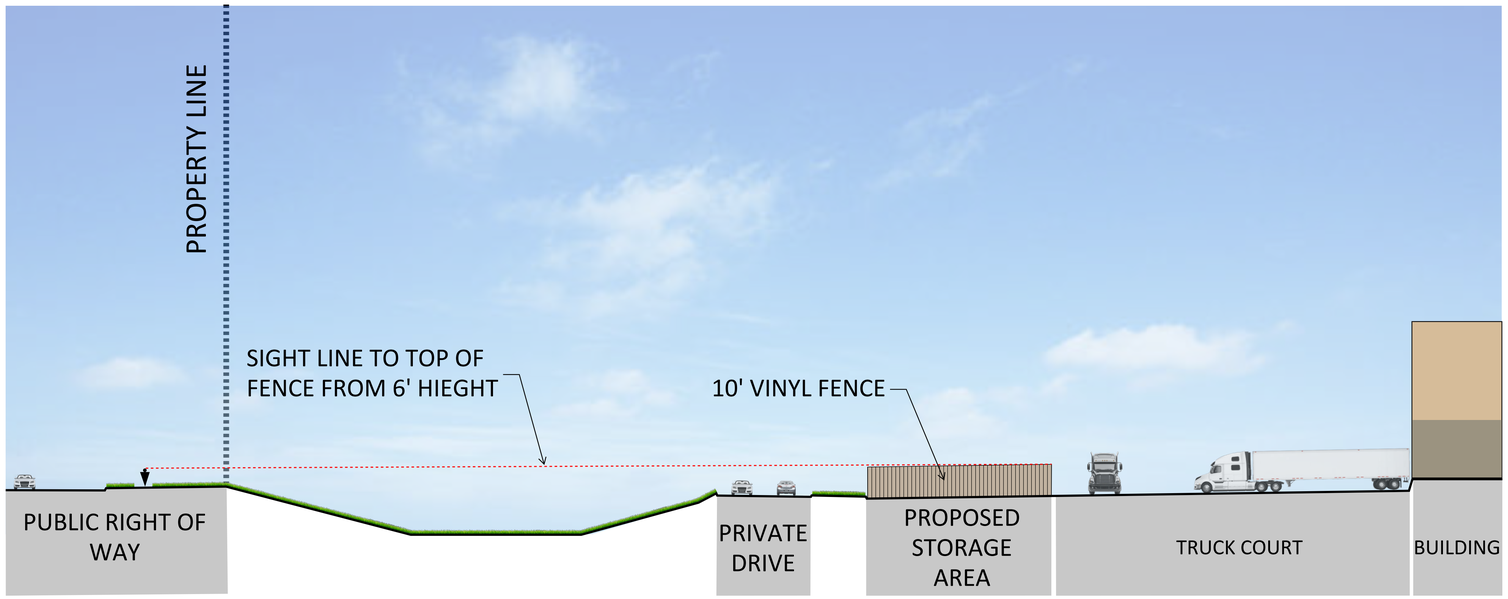
Sincerely,



Ricky Tejeda
Project Manager
Pope Design Group



SITE RENDERING



SITE SECTION

1" = 20'-0"



ENLARGED ARCHITECTURAL SITE PLAN

1" = 40'-0"

0' 30 60 120

NORTH

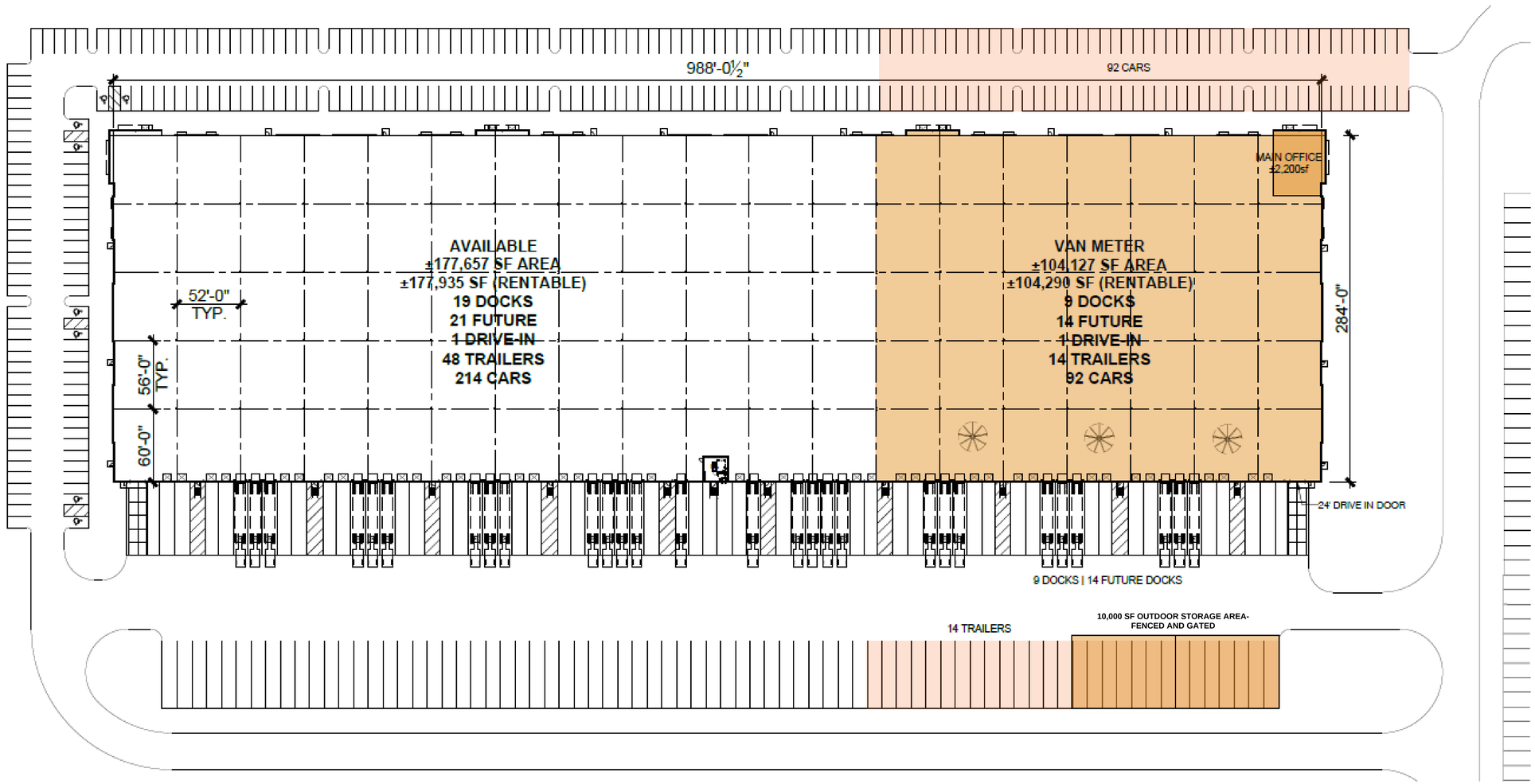
pope DESIGN GROUP

VAN METER - CUP SUBMISSION | SITE SECTION AND ENLARGED ARCHITECTURAL SITE PLAN

COTTAGE GROVE, MN | 12/4/25 | 81552-24199

VAN METER
AUTOMATION • ELECTRICAL • LIGHTING • DATACOMM • UTILITY • ENERGY

C:\Users\mgroth\Documents\Wire Center Site Plan_detached_MGroth_PDG.rvt



Overall Building Data	
Building Area:	± 282,225 SF
Building Clear Height:	36' clear
Drive-In Doors:	2 doors
Docks:	28 docks
Future Docks:	35 docks
Trailer Parking:	76 spaces
Car Parking:	306 spaces

Van Meter Car Parking Requirements	
Office Required:	9 Spaces
Warehouse Required:	53 Spaces
Total Required:	62 Spaces
Total Provided:	92 Spaces

OVERALL BUILDING SITE PLAN

1"= 40'-0"

STAFF REPORT CASE: PUD/SP/PP2025-030

ITEM: 6.4

PUBLIC MEETING DATE: 12/15/25 TENTATIVE COUNCIL REVIEW DATE: 1/21/26

APPLICATION

APPLICANT: Yellow Tree Development

REQUEST: A Preliminary Plat for Everwood 6th Addition, a Planned Unit Development (PUD), and a Site Plan Review of a proposed 186-unit apartment building to be located north of East Point Douglas Road and west of Hardwood Avenue. (Continued from November 24, 2025, Planning Commission meeting.)

SITE DATA

LOCATION: North of East Point Douglas Road and west of Hardwood Avenue

ZONING: M-U, Mixed Use

GUIDED LAND USE: Mixed Use

LAND USE OF ADJACENT PROPERTIES:	CURRENT	GUIDED
NORTH:	Park/Open Space	Park/Open Space
EAST:	Commercial	Mixed Use within 300'
SOUTH:	High Density Res.	High Density Res.
WEST:	High Density Res.	High Density Res.

SIZE: 186 Units on 6.12 Acres

DENSITY: 37.2 Units Per Acre

RECOMMENDATION

Approval, subject to the conditions stipulated in this staff report.

COTTAGE GROVE PLANNING DIVISION

Planning Staff Contact: Samanth Pierret, Senior Planner; 651-458-2825; spierret@cottagegrovemn.gov

Application Accepted: 10/29/25 60-Day Review Deadline: 12/28/25 120-Day Review Deadline: 2/26/26

Planning Staff Report
Yellow Tree Development
Site Plan Review, Planned Unit Development, and Preliminary Plat
Planning Case No. PUD/SP/PP2025-030
December 15, 2025

Proposal

Yellow Tree Development has submitted a planning application for a Site Plan Review and Planned Unit Development (PUD), for a proposed 186-unit, market-rate apartment building to be located on East Point Douglas Road. A Preliminary Plat application has also been submitted for Everwood 6th Addition.



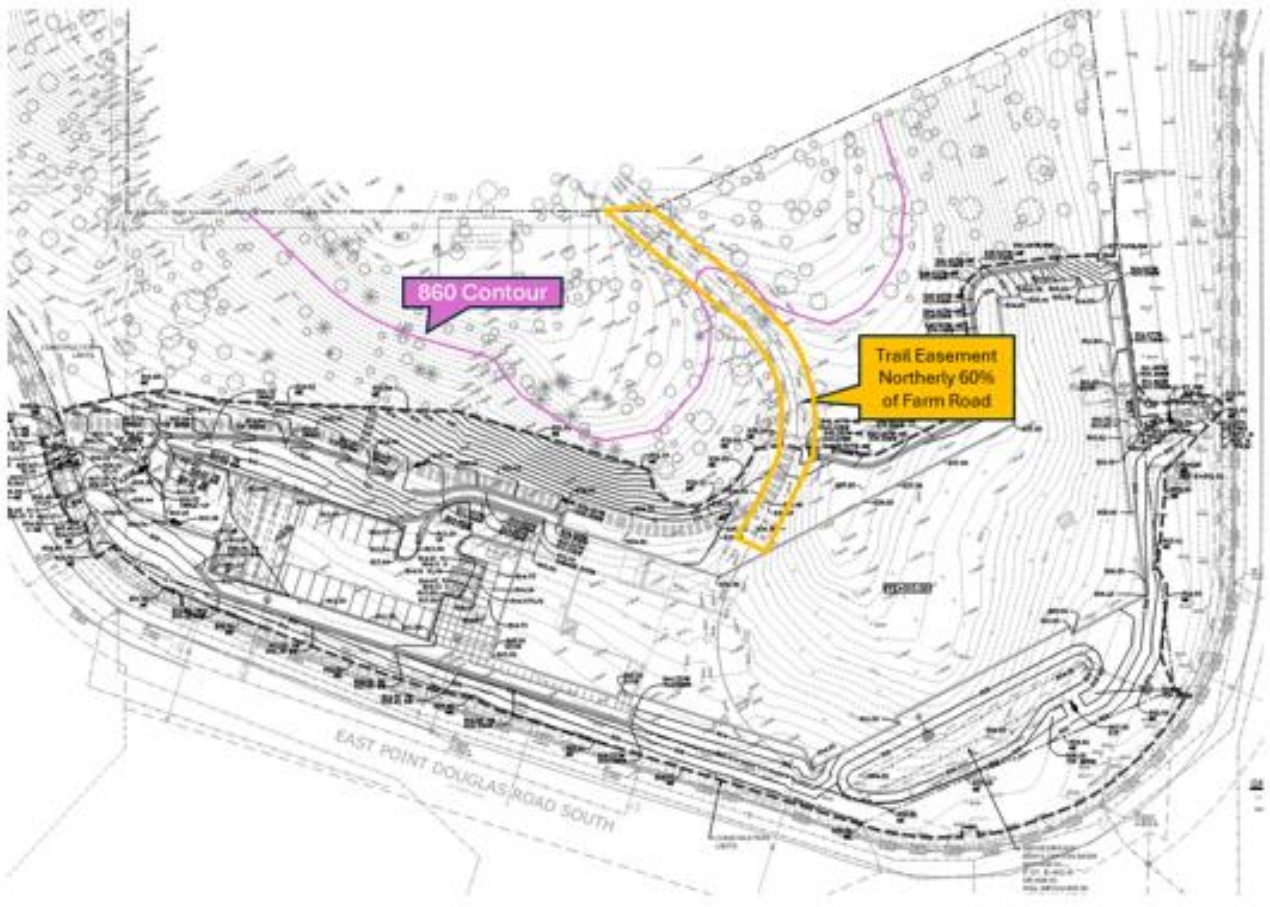
Location Map

Review Schedule

Application Received: October 29, 2025
Application Accepted: October 31, 2025
Planning Commission Meeting: December 15, 2025
Tentative City Council Meeting: January 21, 2025
120-Day Review Deadline: February 26, 2026

Background

The subject site consists of two wooded, vacant parcels: Outlot D of the Everwood plat and Outlot B of Frattalone's Southpoint Ridge. The site contains steep grades, increasing in elevation from East Point Douglas Road up to a vacant, city-owned parcel (Everwood Outlot C).



Trail Easement

A conservation easement in favor of the Minnesota Land Trust was established over what are now Outlots C and D of the Everwood plat in 1997. In 2007, in response to proposed development on the parcel, the Everwood plat was recorded, and the conservation easement on what is now Outlot D was partially vacated below the 860-elevation contour. No development including structures or grading may occur on site above the 860 contour. A trail easement running from the north property line to an area below the 860 contour remains in effect in favor of the Land Trust and the City of Cottage Grove. The easement documents reference a "Farm Road" that was originally on the property and still remains as a dirt path in some areas. The northerly 60 percent of the Farm Road must be maintained in a natural condition in its existing location while the lower 40 percent may be amended if development occurs. The existing trail easement, recorded as Document Number 3674924, is the northerly 60 percent of the Farm Road.

The 2007 development did not come to fruition; however, all future development must abide by the amended conservation easement development restrictions. There have been other development proposals on the property since 2007; however, none of these have been established.



Site Conditions

Planning Considerations

Use

The Applicant is proposing a market-rate apartment building consisting of 186 units.

There is a high demand for multi-family housing provided by this project due to limited availability in the city. The 2024 Housing Needs Analysis completed by Maxfield Research and Consulting identified a strong demand for multi-family rental units in Cottage Grove. A 2.7 percent vacancy rate was documented within market-rate rental units when equilibrium is considered to be 5 percent. During Maxfield's research period, the Norhart market-rate rental project was expected to begin construction; therefore, the recommendation was to hold on additional market-rate units. With the Norhart multi-family project being abandoned, those 299 proposed units are left unfilled and there is room in the market for the proposed 186 market-rate units.

The Maxfield study noted that three-bedroom units account for the highest proportion of market-rate units in Cottage Grove, which is dissimilar to other communities. The unit types proposed include studios to three bedrooms, with a majority of the units being a one-bedroom variety. The location is ideally situated for the proposed project given its proximity to the following:

- Gateway North Shopping Center (grocery, restaurant, services, etc.)
- Park Grove Library
- Camels Hump Park
- Access to transit options

The proposed amenities include a sky lounge with roof deck, fitness center, yoga studio, work from home stations, and community rooms with kitchen and gaming areas. Outdoor amenities will include a pool and amenity deck with turf area for yard games, patio space, grilling stations, and a sauna. There will also be a trail connection established on site to connect to the City-owned property to the north within the established conservation easement.



Amenity Areas

Comprehensive Plan

As part of the comprehensive planning process, state law requires cities in the seven-county metropolitan area to include standards, plans, and programs for providing adequate housing opportunities to meet existing and projected local and regional housing needs. One of the primary goals in the Cottage Grove 2040 Comprehensive Plan is to provide a diverse mix of housing types that are needed to serve all income levels and stages in the life cycle. The proposed development fulfills this goal as it provides a rental housing option for the community where there is a documented need for rental housing options, particularly one- and two-bedroom varieties. The proposed project also meets the following additional goals and policies found in the Comprehensive Plan.

- The proposed development provides residential housing near economic centers.
- The proposed development provides opportunities for alternative housing types that increase density and is responsive to the site and surrounding areas.
- Encourages the infilling of housing in urban areas that make more efficient use of existing infrastructure.
- Provides opportunities for alternative housing types and patterns, such as planned unit developments, mixed-uses, and other techniques that reduce development costs, increase density, and achieve projects that are flexible and responsive to the site and surroundings.

Land Use and Zoning

The 2040 Comprehensive Plan Land Use Plan guides the subject site as Mixed Use. The permitted density in this district is 20 to 40 units per acre. The proposed density of the project is in conformance with the district standard with 37.2 units per acre. The subject site is zoned Mixed Use, and apartment buildings are permitted uses in the district.



Current Zoning



Future Land Use

Preliminary Plat

The submitted plat proposes to combine Everwood Outlot D (5.03 acres) and Frattalone's Southpoint Ridge Outlot B (1.09 acres) into one 6.12-acre parcel. The existing parcels are in two different plats and to combine land in different plats, a new plat must be recorded. Outlot B of Frattalone's Southpoint Ridge is owned by the City of Cottage Grove. The Applicant is proposing to purchase Outlot B from the City for access to the proposed apartment building on Outlot D due to site constraints, topography, and safety of proposed access points on the East Point Douglas curve. Staff is agreeable to the land sale provided the Applicant provides a trail connection from the East Point Douglas sidewalk to the existing trail easement that is a part of the existing conservation easement on Outlot D. No portions of Outlot B are within the conservation easement.

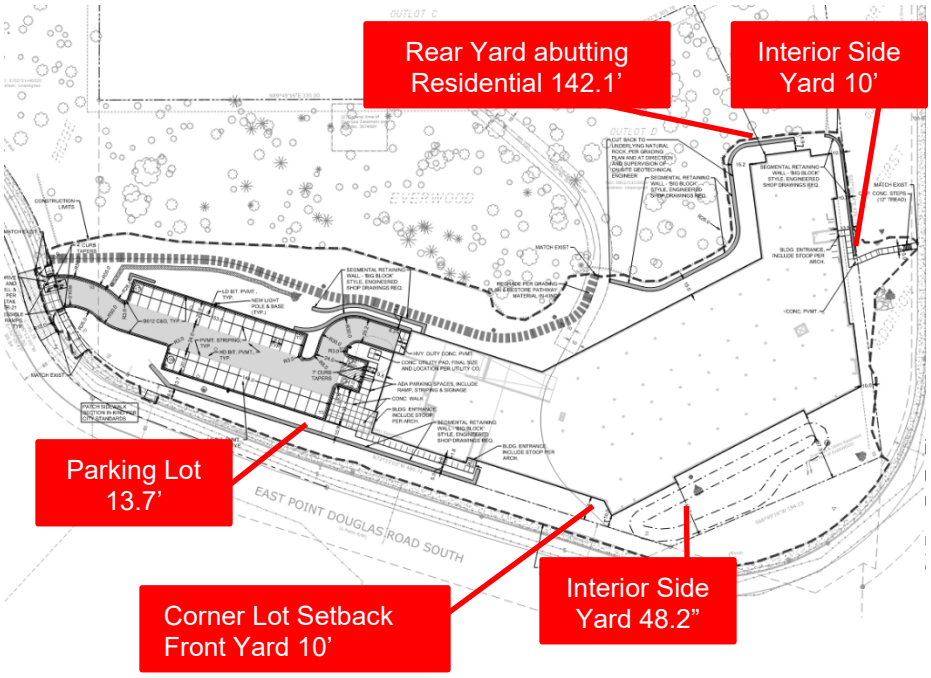
Planned Unit Development

The Planned Unit Development (PUD) is a zoning tool that provides additional flexibility for development that an underlying zoning district would not otherwise allow. For example, a PUD may make exceptions to setbacks, parking requirements, building height, etc. Due to site constraints, including the restriction on development above the 860 contour and site topography, the Applicant is proposing building height, building setback, parking lot setback, parking lot landscaped island area, architectural material percentage, and parking ratio flexibility. In return for the flexibility, the Applicant will install a natural trail segment along the north side of the proposed parking lot creating a public pedestrian connection from the East Point Douglas sidewalk to the area beyond the 860 contour/conservation easement area. Additionally, architectural materials on the portions of the structure facing the street will exceed the minimum 65 percent Class 1 or 2 material percentage required. The proposed development meets or exceeds all other zoning code requirements.

Site Plan Review

The Applicant is proposing to construct a six-story apartment building with four levels of residential and two levels of covered parking. Due to the existing trail easement and site constraints, the Applicant has requested that building setbacks and parking lot setbacks be reduced using the Planned Unit Development. The minimum setback for the building will be ten feet from the south and east property lines. A ten-foot setback ensures the building is not located in any drainage and utility easements. There are existing right-of-way parcels owned by the city and MnDOT that add a distance buffer from East Point Douglas Road to the proposed building on the east and south sides. The existing sidewalk and right of way width will provide an eight-foot-wide buffer from the sidewalk on the southwest side of the project area to a proposed retaining wall along the southwest property line.

Lot Development Performance Standards		
Standard	**Mixed Use District**	**Proposed Development**
Building Height	55 feet	74 feet*
Corner Lot Setback on Front and Side Yard	20 feet	10 feet minimum
Minimum Rear Yard Setback Abutting a Residential District	50 feet	142.1 feet
Minimum side yard, interior lot line	10 feet	10 feet
Parking Lot	20 Feet	13.7 feet
Maximum Site Coverage	70%	32.0%



Lot Development Performance Standards

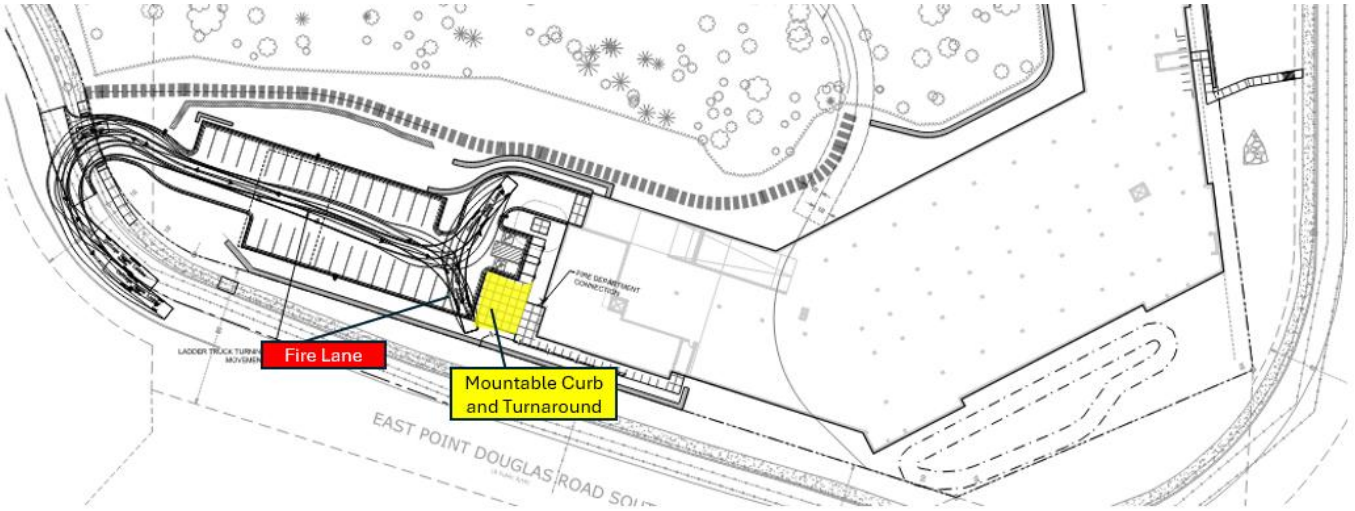
*Proposed plans show a 77-foot building height to the top of the parapet of the proposed building. City Code Title 11-3-3 Height Limit Modifications, allows parapet walls to extend not more than three feet above the limiting height of the building.

Parking and Site Access

The Applicant is proposing one access to the site from East Point Douglas Road. The proposed access crosses onto city-owned property (Outlot B of Frattalone's Southpoint Ridge). Given the proposed infrastructure over a city-owned lot, the Applicant shall take ownership of the additional lot and plat the two lots into one parcel.

The Applicant's proposed access location may need to be revised by shifting north, directly across from the access to the Legends apartments, to comply with sight line requirements. The Applicant and staff will continue to review proposed access for sight line compliance. A revised site plan showing access that meets sight lines shall be submitted prior to Council consideration.

A fire truck turnaround space will be provided along the west side of the building using mountable curbs at the hardscaped building entrance and a marked fire lane, allowing the fire truck space to turn around. The Fire Marshal must review and approve proposed turning movements. Creation of the marked fire lane may also result in some parking spaces being lost on the east side of the parking lot.



Revised Fire Truck Turnaround

City Code requires a minimum of 1.6 spaces per unit for apartment buildings or a total of 298 parking spaces for the proposed 186 dwelling units. The Applicant is requesting flexibility to reduce the number of parking stalls onsite via the PUD. The revised site plan shows 39 surface parking stalls. There will still be 258 garage parking stalls for a total of 297 proposed stalls. To accommodate fire truck turning radius on the hardscaped area along the west side of the building, up to three parking spaces may be lost in this area to be dedicated as a fire lane. It is proposed to reduce the proposed parking by up to four spaces to 294 total spaces and a parking ratio of 1.58 spaces per unit. The Applicant must submit updated parking calculations, updated fire truck turning movements, and show a fire lane prior to Council consideration of the project.

The garage stalls will be on two levels of the structure. The development is primarily (85 percent) composed of one bedroom style units. The proposed reduction in the required parking ratio is similar to the Legends of Cottage Grove and Roers Apartments, which had 1.2 and 1.5 spaces per unit respectively.

Traffic

Recent developments occurring along Hardwood Avenue (Aurilla Apartments, The View Apartments, Pizza Ranch, Chase Bank, and O2B Kids Daycare) and the future construction of the Roers Apartments at the end of East Point Douglas Road will contribute to the traffic within this corridor. A traffic analysis was completed indicating no additional traffic improvements required to support full development of this corridor.

Based on the ITE Trip Generation Manual, 11th Edition, it is estimated that the Roers and Yellow Tree projects combined would generate approximately 1,490 daily trips based on the proposed unit count. The current daily traffic volume on East Point Douglas Road is approximately 1,100 vehicles per day. The additional trips, combined with the current traffic, will total an estimated 2,600 vehicles per day. East Point Douglas Road capacity would be further evaluated if the trip counts were approaching 4,000-5,000 vehicles per day. In consideration of the fact that this parcel is the last remaining developable parcel along this corridor, East Point Douglas Road will not reach its design capacity with construction of this project. Studies of East Point Douglas Road and Hardwood Avenue found both roadways have sufficient capacity to handle the additional trips proposed.

Additionally, the study looked at the intersection of Hardwood Avenue and East Point Douglas Road, and upon review, the additional trips generated by these apartment buildings do not meet the warrants for an all-way stop control at this intersection at this time. The intersection could experience additional queuing during peak hours; however, the roadway is currently designed to accommodate the additional queuing.

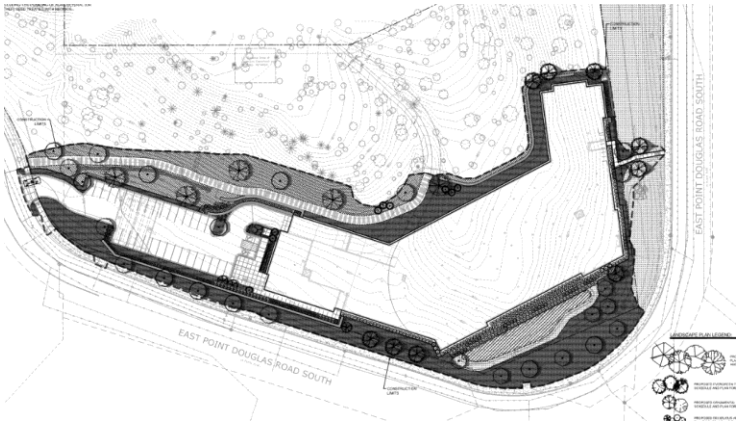
As with all areas of the community experiencing additional growth, staff continues to evaluate and analyze intersections and roadway corridors to ensure any required upgrades or improvements are being programmed into the City's 5-year Capital Improvement Plan (CIP) for implementation as necessary.

Site Lighting

The Applicant is required to submit a lighting plan that identifies pole heights and lumen levels throughout the site. The submitted photometric plan proposes four LED parking lot light poles, four light poles along the southwest sidewalk, and three wall mounted lights above the two exterior doors and the garage entrance. Per City Code, any lighting shall be directed away from any adjoining residential property or from the public streets and be compatible with adjacent lighting in adjoining districts. The Applicant is required to update their photometric plan to show lumens at all property lines and ensure all measurements are 0.5 foot candles or less.

Landscaping

The Applicant has submitted a detailed landscaping plan. The City's Zoning Code requires one tree per 40 linear feet of site perimeter. With 1,991 linear feet of site perimeter, a total of 50 trees are required to be planted on site. Of these 50 trees, 30 percent or 15 of them, must be coniferous trees. Shrubs must be planted on site at a ratio of one per five linear feet of site perimeter; therefore, 398 shrubs are required on site. The minimum landscaping requirements are shown in the table below.



Proposed Landscaping	
Type	**Amount**
Overstory Deciduous Trees	30
Ornamental Trees	4*
Coniferous Trees	18
Total	50
Shrubs	405

*Ornamental trees count towards the deciduous tree calculation at a two to one ratio

Parking lots with more than 25 spaces shall contain interior landscaped islands making up at least 8 percent of the parking lot size area. The proposed parking lot contains two landscaped bump-outs that do not equal 8 percent landscaped area. Due to existing site constraints, the limited size of the outdoor parking area, and the amount of conserved area on site, the 8 percent landscaped islands requirement will be waived via the PUD.

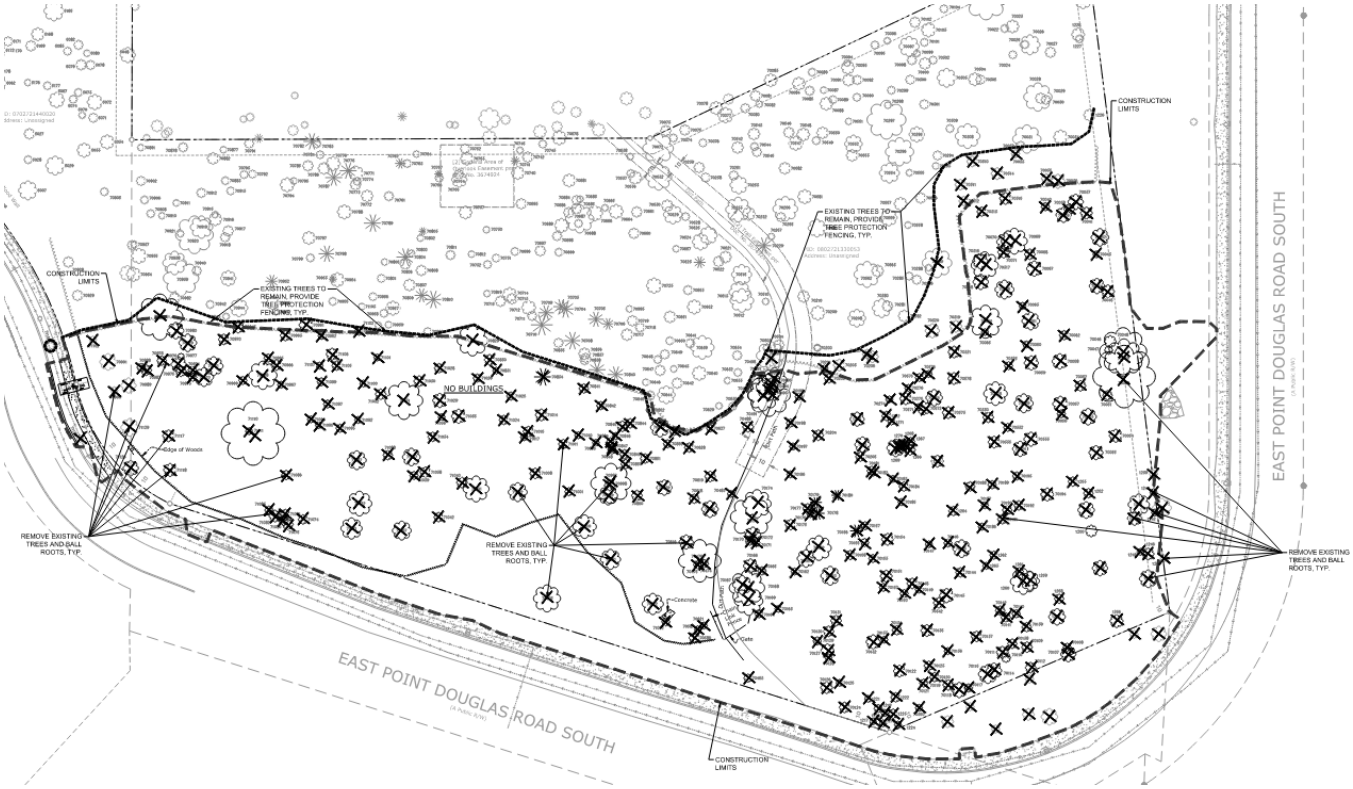
Two right of way parcels owned by the City of Cottage Grove and MnDOT abut the property on the east and south sides respectively. These parcels currently have brush and overgrowth present with some trees of significance. To meet City Code requirements to maintain property to the back of curb, the Applicant will be responsible for thinning the overgrowth and brush on these parcels. The eastern parcel will be overseeded to ensure vegetative growth due to steep slopes where sod would not likely survive. The southern parcel must be sodded and irrigated to the back of the sidewalk along East Point Douglas Road. As a condition of approval, planning staff shall review and approve a final landscaping plan prior to the issuance of a building permit.





Tree Preservation and Mitigation

City code requires mitigation if more than 40 percent of the existing qualifying trees onsite are removed as part of the development process. Due to the conservation easement restriction on tree removal above the 860 contour line, a significant number of trees will be protected on-site. There are 4,023 qualifying tree inches on site. The Applicant has proposed to remove 994 qualifying inches, or 24.7 percent of all qualifying inches; therefore, mitigation is not required.



Tree Removal and Preservation

Architecture

The Applicant has provided architectural plans using brick, cast stone, glass, and burnished block around the building.



Northeast Rendering



Southeast Rendering



South Corner

The City's Zoning Code requires an apartment to utilize three Class 1 materials as outlined in the City's Code and be composed of at least 65 percent Class 1 or 2 materials. Class 1 and 2 materials include the following:

Class 1

- Fired clay face brick.
- Natural stone, synthetic or cultured stone.
- Transparent glass, opaque or mirror window panels.

Class 2

- Concrete brick
- Masonry stucco/synthetic stucco.
- Specialty concrete block such as textured, burnished block or rock faced block.
- Tile



WINDOWS AND FIBER CEMENT PANEL - LT. GRAY



WOOD PRINTED METAL PANEL - CONCEALED FASTENERS LT. BROWN



FIBER CEMENT LAP SIDING GRAY



METAL ACCENT PANEL AND TRIM BLACK



BRICK - DARK GRAY



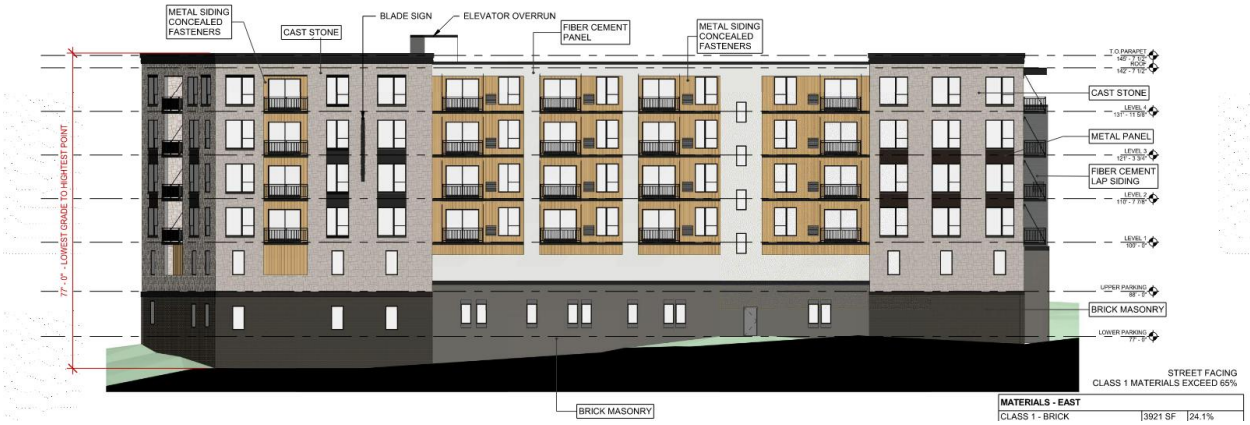
BRICK - MEDIUM GRAY



CULTURED STONE - WARM LT. GRAY

The Applicant has requested flexibility in the percentage of Class 1 and 2 materials via the PUD. The Applicant would utilize 61 percent Class 1 and 2 materials on the building. The Applicant has given consideration to the look of the building from East Point Douglas Road by ensuring over 65 percent of materials on the street-facing portions of the building will be composed of Class 1 materials. The proposed reduction in Class 1 and 2 materials is similar to the Roers project approved in 2024, which allowed 61 percent Class 1 and 2 materials with consideration given to ensure 65 percent of materials facing Highway 61 were Class 1 or 2.

Title 11-1-3 of the City Code defines building height as "The vertical distance from the average elevation of the adjoining ground level, or the established grade adjacent to the building, whichever is lower, to the top of the roof." The maximum permitted height in the Mixed-Use District is 55 feet. Due to site topography the Applicant designed the building so that the front of the building will have more wall face exposed than the rear of the building where the structure will be constructed into the hillside. The proposed building is proposed to be 77 feet tall from the lowest adjacent grade to the top of the parapet. Three feet of parapet height may be subtracted from total height resulting in a total height of 74 feet. Due to the changing adjacent grades around the structure, the shortest portion of the building as measured from lowest adjacent grade will be 45 feet in height.



East Elevation

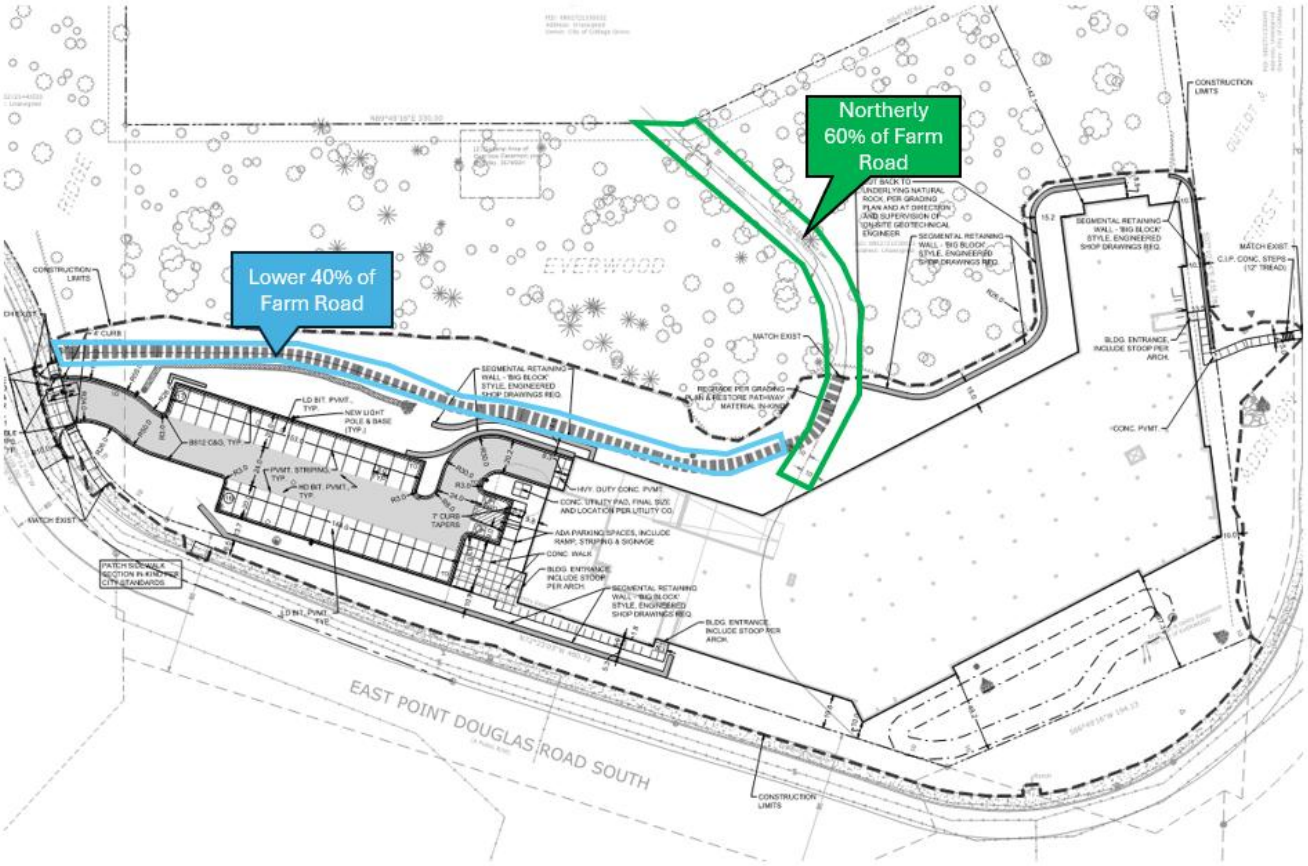
The proposed height of the building would generally be similar to the west side of the Legends of Cottage Grove across East Point Douglas Road, which is 73 feet in height to the top of the gabled roof. The increased height is proposed to be approved via the Planned Unit Development.



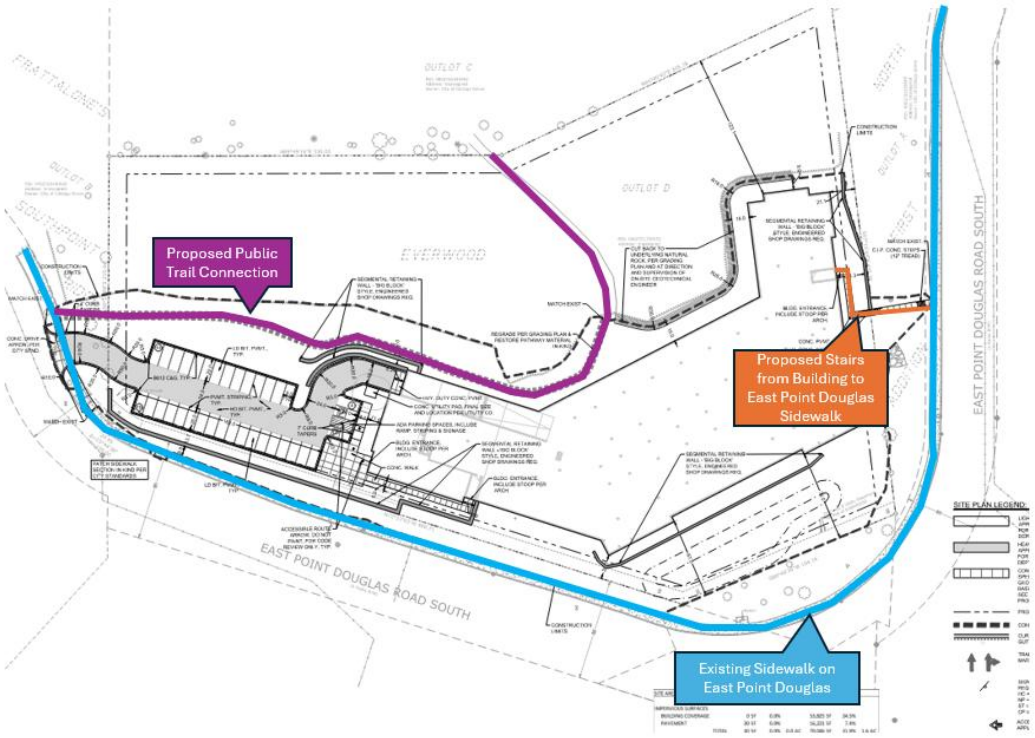
Legends of Cottage Grove – West Elevation Heights

Sidewalk and Trails

An existing unpaved natural trail runs through the center of the parcel connecting East Point Douglas Road to Aspen Cove to the north. There is an existing trail easement that is part of the conservation easement established in favor of the City and Minnesota Land Trust in 2007 that cannot be amended. The intent of the easement was to facilitate a pedestrian connection from East Point Douglas Road northwards over a historical, unpaved Farm Road, up the hillside to an overlook point established in the conservation easement. The trail continues to Aspen Cove. As part of the development project, the Applicant is proposing to reconfigure the connection to East Point Douglas Road to the west side of the property by installing a light-gravel trail segment along the rear of the proposed building and parking areas. The portion of the existing trail outside of the recorded easement may be reconfigured per the Land Trust. The Land Trust is aware of the proposed reconfiguration and supports the proposal. The trail segment within the easement will remain unpaved as recommended by the Land Trust. The Land Trust must review and approve the proposed trail configuration and any proposed grading within the trail easement prior to City Council consideration. The Applicant shall place an easement over the trail corridor on the final plat and enter into a Trail Maintenance Agreement with the City. The submitted plans also show an internal sidewalk system that connects to the existing sidewalk on East Point Douglas Road.



Trail Segments per Conservation Easement



Pedestrian Plan

Park Land and Open Space

A minimum of 10 percent of the developable land area shall be required to provide residents with public recreation facilities (0.61 acres for this project), including parks and open spaces, as a part of development projects per City Code Title 10-4-3. The City's Comprehensive Plan shows a recreation trail connection across the parcel connecting East Point Douglas Road to Camels Hump Park. The Applicant has proposed to construct a natural trail connection in compliance with the Comprehensive Plan and conservation easement. The existing trail easement and conservation easement are credited towards 10 percent of land needed. The total area of conservation easement plus trail easement equals 1.25 acres; therefore, park dedication requirements are met.

Utilities

The subject property is located within the Metropolitan Urban Service Area (MUSA). The development is planned to connect to available sanitary sewer and watermain stubs located within East Point Douglas Road.

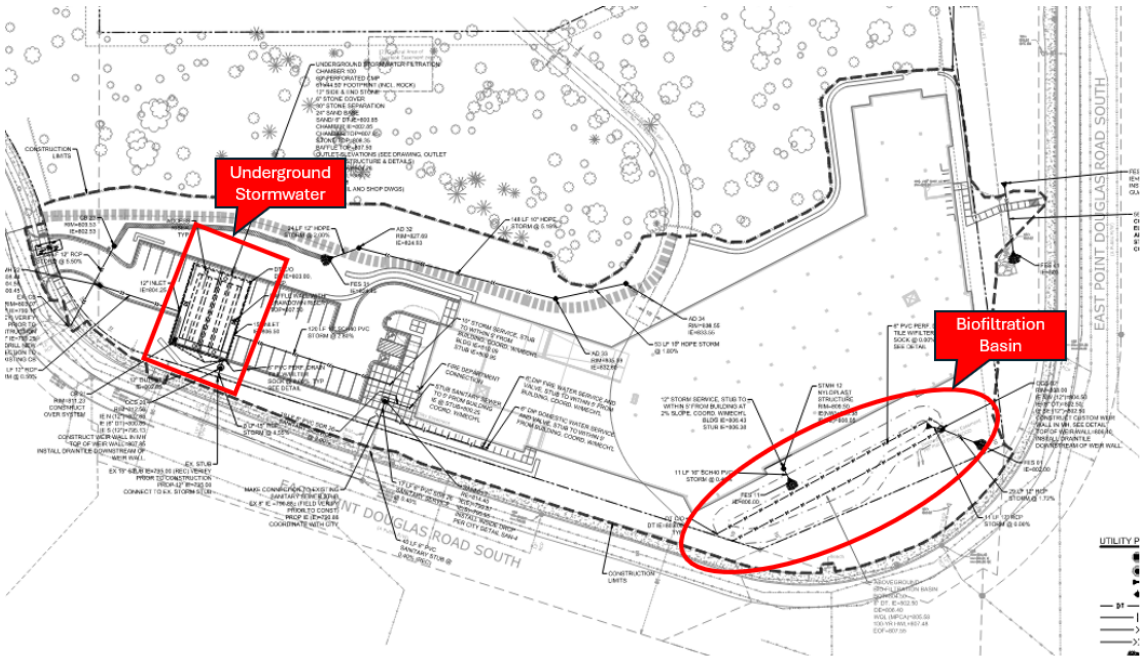
Area Charges

The Applicant will be responsible to pay for all associated Area Charges for Outlot D Everwood. Area Charges for Outlot B Frattalone's Southpoint Ridge were paid at the time of platting in 2007.

Grading and Stormwater

The site grading for the project is proposed to meet the requirements established by the State, Watershed District, and the City's Surface Water Management Plan. The development's stormwater management plan calls for the construction of a private underground stormwater management system within the parking lot. Additionally, the Applicant is proposing to construct a biofiltration basin along the south side of the site. The underground system and the biofilter will

be privately owned and maintained; therefore, a private maintenance agreement will be required to be executed and recorded with the property. Treated stormwater runoff from the site will discharge into existing City storm sewer infrastructure in the southwest area of the site.



Due to the nature of the site, the building will be constructed into the hillside, and retaining walls, as high as approximately 15 feet, are proposed around the building. Staff has requested that the Applicant provide additional details regarding retaining wall construction materials and methods. Additional engineering analysis will be completed when those details have been provided.

Neighborhood Meeting

The Applicant is required to schedule a neighborhood meeting with the residents of the Legends Apartments. The meeting must be held prior to City Council consideration of the request, and concerns heard at the meeting will be addressed in the City Council memo for consideration. The Applicant has been in contact with staff at the Legends.

Public Hearing Notices

Notices announcing this public hearing were published in the *St. Paul Pioneer Press* and mailed to 11 property owners within 500 feet of the proposed development property on December 3, 2025. Staff have not received any inquiries prior to writing this report.

Recommendation

That the Planning Commission recommend that the City Council approve the Site Plan Review, Planned Unit Development, and Preliminary Plat for Everwood 6th Addition for a 186-unit, six-story multi-family apartment building located on East Point Douglas Road, subject to the following conditions:

General Development

1. The project shall be completed in accordance with the plans submitted and as amended by the conditions of approval. Any significant changes to the plans, as determined by planning staff, shall require review and approval by the Planning Commission and City Council.

2. Planned Unit Development and Site Plan Review approvals shall expire one year from the date of City Council approval unless a building permit has been requested or a time extension has been granted by the City Council. The City Council may extend the expiration date of such approval upon written application by the person to whom the approval was granted.

3. The Applicant receives appropriate permits or approvals from other regulatory agencies including, but not limited to: Minnesota Department of Transportation, Minnesota Department of Health, Minnesota Department of Natural Resources, and Minnesota Pollution Control Agency.

4. Signage is not approved as part of this application. All signage shall meet the requirements of the sign ordinance, including a monument sign with a base wrapped in the similar materials as found on the principal structure, per the City Code.

5. Prior to the issuance of any building or grading permits, a plat combining parcels 0802721330053 and 0702721440020 shall be approved by the Planning Commission and City Council and shall be recorded with the Washington County Recorder's Office.

6. Prior to the release of a final plat, the Applicant shall enter into a private stormwater maintenance agreement with the City for the ownership and maintenance of the private storm sewer, pond, and filtration bench.

7. Prior to the release of a final plat, the Applicant shall enter into a Trail Maintenance Agreement with the City for the portion of the trail outside the existing easement.

8. Prior to the release of a final plat, the Applicant shall enter into an encroachment agreement for the stairs accessing the sidewalk on East Point Douglas Road South.

9. Prior to City Council consideration of the Site Plan Review, Planned Unit Development, Preliminary Plat, and/or Final Plat, a revised sight line analysis shall be submitted and approved by the City Engineer depicting proper sight distances per the AASHTO Green Book. Any proposed revisions to the development access shall be depicted on updated plans prior to Council consideration.

10. Prior to City Council consideration of the Site Plan Review, Planned Unit Development, Preliminary Plat, and/or Final Plat, written approval from the Minnesota Land Trust shall be received for the proposed project and trail connection.

11. Prior to City Council consideration of the Site Plan Review, Planned Unit Development, Preliminary Plat, and/or Final Plat, updated parking calculations shall be provided to Planning staff. A parking ratio of no less than 1.58 spaces per unit shall be permitted.

12. Prior to City Council consideration of the Site Plan Review, Planned Unit Development, Preliminary Plat, and/or Final Plat, a neighborhood meeting shall be held with residents of the Legends apartments.

13. Any site plan revisions that are deemed by the Community Development Director to significantly alter the plan reviewed by the Planning Commission shall be re-considered by the Planning Commission prior to City Council consideration.

14. Updated architectural material percentage breakdowns shall be submitted to Planning staff prior to Council consideration.

Platting, Land Dedication, and Easements

15. The Applicant is responsible for providing all necessary easements on the final plat, including, but not limited to, drainage and utility, trail, and conservation easements. The Applicant is responsible for any associated costs.

16. The Applicant must place iron monuments at all lot and block corners and at all other angle points on property lines. Iron monuments must be placed after all site and right-of-way grading has been completed in order to preserve the lot markers for future property owners.

17. The approvals for Site Plan Review, Planned Unit Development, Preliminary and Final Plat are contingent on the sale of Outlot B of the Frattalone's Southpoint Ridge addition from the City to the Applicant.

18. No grading, vegetation removal, or structure placement shall occur above the 860-contour line as required by the Partial Release of Conservation Easement, Agreement for Trail Easement and Restrictive Covenant recorded as Document No. 3674924 with the Washington County Recorder's Office.

19. Prior to the issuance of a building permit the final plat shall be recorded with the Washington County Recorder's Office.

Performance Standards

20. All site lighting must meet City Code requirements. All light fixtures must be downward directed with flush lenses. In addition, any lighting under canopies (building entries) shall be recessed and use a flush lens. The specifications of all light fixtures must be provided with the application for a building permit. The light poles and fixtures shall be consistent in design and color with the development. A lighting plan depicting no more than 0.5-foot candles at residential property lines and 1.0-foot candles at commercial property lines shall be submitted to Planning staff prior to building permit issuance.

21. All mechanical units shall be screened as required in Title 11-3-9 of the City's Zoning Ordinance. All mechanical equipment screening shall be consistent with the principal building architecture and must comply with City ordinance regulations and be reviewed and approved by the Community Development Department prior to the issuance of a building permit.

22. Rubbish, garbage, and recycling containers shall be stored indoors unless pickup is occurring.

23. No exterior storage shall be permitted.

24. Prior to the issuance of a building permit, planning staff shall approve all site fencing materials. Approved fencing shall be provided adjacent to the retaining wall along the natural pathway and adjacent to the retaining wall adjacent to the retaining wall adjacent to the parking lot and sidewalk. The city-standard Ameristar Montage Plus fence (style: Majestic) should be used adjacent to the retaining wall along the gravel pathway and adjacent to the retaining wall at the parking lot and sidewalk area.

Construction and Grading

25. All grading, drainage, erosion control, and utilities must conform to the final plans approved by the City Engineer.

26. A grading permit and financial security are required prior to grading activity related to the project. The financial security for grading shall encompass stabilization of slopes where retaining walls are proposed. Financial security shall also encompass any improvements within public right of way such as sidewalk or street patching, and connection to City infrastructure.

Landscaping

27. Irrigation shall be provided for all sodded and mulched landscaped areas. The irrigation system shall consist of an underground sprinkling system that is designed by a professional irrigation installer to meet the water requirements of the site's specific vegetation. The system shall be detailed on the final landscape plan.

28. All areas of the site, where practical, shall be sodded and maintained. The development shall mow and maintain all site boulevards to the curb line of the public streets.

29. The Applicant shall be responsible for removing brush and overgrown vegetation from parcels 0802721330013 and 0802721330045 and maintaining the parcels to the curb line prior to issuance of a final Certificate of Occupancy. No trees or shrubs shall be planted on these parcels.

30. Prior to the issuance of a building permit, the applicant shall submit a letter of credit in the amount of 150 percent of the landscape estimate shall be submitted to the City as required by City ordinance. The financial guarantee shall auto renew annually from the date of installation to ensure the installation, survival, and replacement of the landscaping improvements.

31. Prior to the issuance of a building permit, planning staff and the City Forester shall review and approve a final landscaping plan in writing.

Onsite Infrastructure Improvements

32. The Applicant is responsible for all street maintenance; upkeep, and repair of curbs, boulevards, and sod. The Applicant hereby agrees to indemnify and hold the City harmless from

any and all claims for damages of any nature whatsoever arising out of Applicant's acts or omissions in performing the obligations imposed upon Applicant by this paragraph.

33. Applicant will be required to conduct all major activities to construct the improvements during the following hours of operation:

Monday through Friday	7:00 A.M. to 7:00 P.M.
Saturday (requires 48-hour notice)	9:00 A.M. to 7:00 P.M.
Sunday	Not Allowed

This does not apply to activities that are required on a 24-hour basis such as dewatering or bypass pumping, etc. Any deviations from the above hours are subject to approval by the City.

34. The Applicant shall within 24 hours, or more often if required by the City Engineer, clear from the public streets and property any soil, earth, or debris resulting from construction work by the Applicant or its agents or assigns. All debris, including brush, vegetation, trees, and demolition materials, shall be properly disposed of off-site; burying construction debris, trees, and other vegetation is prohibited. Burning of trees and structures is prohibited, except for fire training only.

35. The Applicant grants the City, its agents, employees, officers, and contractors permission to enter the site to perform all necessary inspections during grading and construction activities.

36. The Applicant must provide the City with an as-built survey of all private and public utilities and grading plan prior to issuance of the certificate of occupancy.

37. Adequate dumpsters must be on site during construction. When the dumpsters are full, they must be emptied immediately or replaced with an empty dumpster. The builder is responsible for cleaning up debris onsite and on adjacent properties.

38. Construction parking on East Point Douglas Road is prohibited.

Prepared by:
Samantha Pierret, AICP
Senior Planner

Attachments:
A. Civil Plans
B. Architectural Plans
C. Preliminary Plat
D. Bolton & Menk Review Memorandum dated November 18, 2025

YELLOWTREE

October 29, 2024

Samantha Pierret, AICP
Senior Planner
City of Cottage Grove
12800 Ravine Parkway South, Cottage Grove, MN 55016

RE: Douglas Road market-rate housing proposal

Project Description:

The proposed project is located on an undeveloped hillside on Douglas Drive.

The building proposed will be four stories, with two levels of below grade parking. The building will contain a total of 186 market rate units, with a mix of studio, alcoves, 1-,1 bedroom den, 2-, and 3-bedroom units per the mix below. Note: Alcove units are a hybrid between a one bedroom and a studio where the units have a bed alcove area inside the unit. The range of units will provide for a diverse mix of household types, and different levels of rent. Although each unit type would attract a mix of tenants, we have found that some general trends do exist for the make-up of the residents. The residents in the smaller units would generally be a traditional younger renter starting out that wants to be in the community. The larger one-bedroom units and the one-bedroom units with dens tend to appeal to a more established single person, sometimes with part-time children, often working from home, especially with the dens. There are two-bedroom units that would appeal equally to young couples, or roommates. The three-bedroom units would generally appeal to young families. We have also included some upscale penthouse-style units on the fourth floor.

The resident mix and type is intended to meet the market with reasonable rents for the level of amenities, on this great site in a great community. Building amenities include a sky lounge with a roof deck, fitness center, yoga studio, package center, work from home stations, and community rooms with a kitchen and gaming areas. Potential outdoor amenities include a pool and amenity deck with turf area for yard games and volleyball, patio spaces, grilling stations, and a sauna.

Building Metrics:

	PROPOSED
Front yard setback at Douglas drive	25’
REVERSE Side yard setback at 71st	21’-4”"
Rear yard setback	GREATER THAN 50’
Floor Area Ratio	.77 (residential area)
Floor Area Ratio	1.24 total area.
Maximum Height	77’-7”

Building Design and Materials:

The site sits in a prominent area at the base of a large hill. The hill has approximately 40’ of grade change from the front (street side of the building to the back of the building (hill side). The design accommodates the hill and wraps around the base. The structure with a two-story parking area helps to mitigate the grade change and acts as a retaining wall. Aesthetically this creates a base for the building. The base around the building is articulated with masonry construction. The upper portion of the building highlights the two corners in a symmetrical pattern with a courtyard in the middle. The courtyard provides an amenity for the residents, and it also breaks up the mass of the building and provides a greater setback along Douglas Drive. The front entry is located on the north portion of the site and will be a two-story element to help reduce the scale and create an entry identity for the project. This area is an amenity for the residents and provides easy access for visitors. A canopy will highlight the entry.

The building is four stories of wood frame construction over two stories of concrete construction. The building is four stories tall on the hill side. On the street side the grade changes to expose one to two stories of the parking area.

Building materials will consist primarily of brick, and burnished block at the lower stories. Cultured stone, cement board in a lap siding profile, along with flat panel cement board, composite widows, and prefinished aluminum trim, Brick is located at the front of the building facing Douglas Drive. See elevations.

Height: The proposed project is four stories tall, over two levels of underground parking. The above ground portion of the building is generally 48'-0" above the parking. Most of the parking is below grade on the hillside. However, the below grade parking levels are exposed on the street sides. The average height is approximately 44'-8" above average site grade. There is also an elevator overrun, and a parapet that helps to screen mechanical units that is an additional 5' above the roof deck. From the building’s entry to the top of the parapet, the height is 68’-7” (55’ allowed per zoning). The project site has steep existing grade making the north side building height at 45’-7” at the highest grade along the building. Grade is at its lowest in the south side of the east wall where the building height appears 77’-7”. Retaining walls are

required to keep the existing higher grades, these could be as tall as 19' along the north side. These walls are held off the building 15' to allow for views and light into the units and provide a wide walking path. Grade is modified around the building to manage stormwater and provide egress and access. Please see sheet 2.1, Site Diagrams for grade related to building height.

VARIANCE REQUEST:

We are requesting a height variance for the project. This is necessary due to the extreme slopes of the site. On a typical flat site, the building would be less than 55' from typical grade. However, on this site the drop in grade is exposing an additional 12-16' of the building. Additionally, the site is irregular in shape. The site is further restricted by the curve along Douglas Drive and the limitations for safe vehicular access points along Douglas.

Therefore: The variance request is based on the conditions of the site, and is unique to the site, and not caused by the owner, and is not for financial reasons.

Site Access and Parking:

The site has one access point at the east end. This location is selected as it mitigates the grade differences on the site. The enclosed parking is accessed from the east side. There is an internal ramp that allows access to both levels of parking.

There are a total of 293 parking stalls proposed. 258 stalls are enclosed in two levels of underground parking .These stalls are for residents only. The surface area consists of 35 parking stalls. These stalls would be a mix of visitor parking as well as resident parking.

In suburban areas we have found that the appropriate level of parking is measured by the number of bedrooms. Typical parking ratios do not account for differences in unit sizes, thus a studio apartment would have the same parking requirement as a three bedroom apartment when looking at a per unit parking requirement. We have also found that when most parking requirement standards were implemented, the typical market for apartments was predominately two- and three-bedroom apartments (roughly 2/3 of the total). The current market for apartments, and this proposal is for smaller units. The proposed plan has 67% studio and one-bedroom units, and 33% two- and three-bedroom units. This proposed development has a total of 219 bedrooms.

The proposed plan provides 258 enclosed parking stalls for 219 bedrooms. Every unit will have an enclosed stall for every bedroom in their unit. We have proposed a few less as two- and three-bedroom units often have children, and to account for a standard vacancy rate of about 3%. We do recognize that some of the units will have multiple drivers, while some of the units will have multiple drivers that share a car. Additionally, there are 35 on-site parking stalls. This brings the overall parking ratio to 1.39 stalls per unit, and 1.18 stalls per bedroom.

We believe this parking ratio is more than sufficient to meet the needs of the development. Parking is not only expensive, but additional parking would take up valuable greenspace. Meeting the parking need or

our residents is of critical importance to us as not having enough would be a detriment to leasing, and therefore we need to make sure that there is enough parking while conserving greenspace. Based on our own properties, and evaluation of the overall market, resident demands, and parking use we know that a ratio of one stall per bedroom is sufficient.

The ITE parking generation Manual 2023 suggests the multi-family ratio for areas outside of transit service should be 1 stall per bedroom, and / or 1.7 stalls per unit. The proposed ITE standard for 219 bedrooms would be 219 parking stalls. We exceed this number by 74 parking stalls with the proposed plan. Based on unit count ITE would suggest 316 parking stalls, or 23 stalls more than provided. If we were to average the two we have excess stalls of 48. We also believe the per bedroom ratio is a more accurate means to determine true parking demand as this project is skewed to many more one-bedroom units.

PARKING RATIOS

	SURFACE	LOWER LEVEL ONE	LOWER LEVEL TWO	TOTAL	RATIO PER BEDROOM	RATIO PER UNIT
ENCLOSED STALLS		127	131	257	1.24	1.41
SURFACE STALLS	35			37	.18	.20
TOTAL	35	127	131	293	1.18	1.39

Please let me know if any of the items need additional information or clarifications.

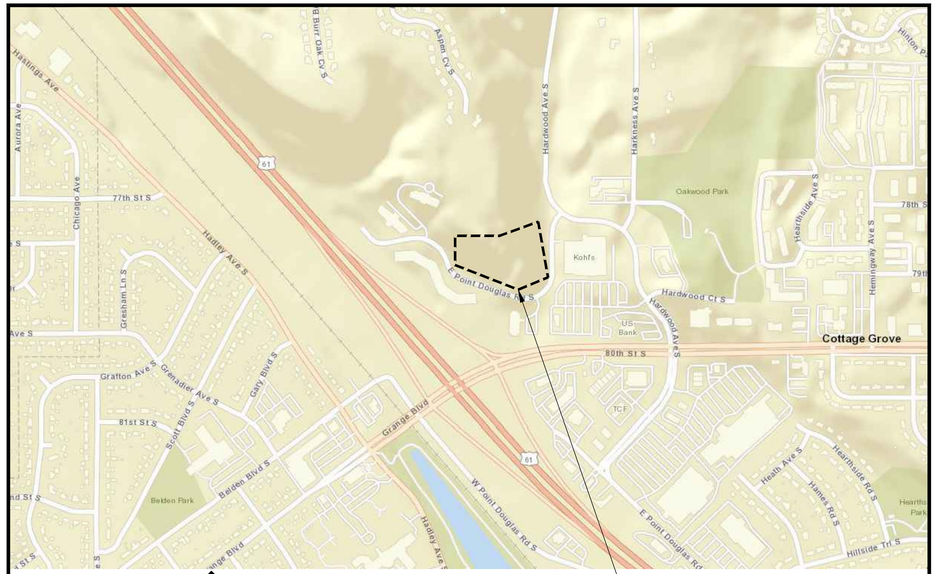
Sincerely,

Robb Lubenow
Owner

DOUGLAS ROAD MULTIFAMILY

COTTAGE GROVE, MINNESOTA

ISSUED FOR: CITY RESUBMITTAL



PROJECT CONTACTS		
	NAME & ADDRESS	CONTACT
CIVIL ENGINEER	CIVIL SITE GROUP 5000 GLENWOOD AVE GOLDEN VALLEY, MN 55422	ANDERS MELBY 612-615-0060 AMELBY@CIVILSITEGROUP.COM
LANDSCAPE ARCHITECT	CIVIL SITE GROUP 5000 GLENWOOD AVE GOLDEN VALLEY, MN 55422	PATRICK SARVER 612-615-0060 PSARVER@CIVILSITEGROUP.COM
DEVELOPER	YELLOWTREE CORPORATION 1834 EAST 38TH STREET MINNEAPOLIS, MN 55407	ROBB LUBENOW 612-275-7210
PROPERTY OWNER	YELLOWTREE CORPORATION 1834 EAST 38TH STREET MINNEAPOLIS, MN 55407	ROBB LUBENOW 612-275-7210
ARCHITECT	COLLAGE ARCHICTECTS 708 15TH AVE NE MINNEAPOLIS, MN 55413	PETE KEELY 612-720-9552 PKEELY@COLLAGEARCH.COM
SURVEYOR	CIVIL SITE GROUP 5000 GLENWOOD AVE GOLDEN VALLEY, MN 55422	RORY SYNSTELIEN 612-615-0060 X 712 RORY@CIVILSITEGROUP.COM
GEOTECHNICAL ENGINEER	BRAUN INTERTEC 11001 HAMPSHIRE AVE S BLOOMINGTON, MN 55348	952-995-2000

1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
2. CONTRACTOR SHALL CONFIRM THAT THE EXISTING CONDITIONS FOR THE SITE MATCH WHAT IS SHOWN ON THE DRAWINGS INCLUDED PRIOR TO CONSTRUCTION.
3. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICES COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.
4. ALL GENERAL CONTRACTOR WORK TO BE COMPLETED (EARTHWORK, FINAL UTILITIES, AND FINAL GRADING) BY THE MILESTONE DATE IN PROJECT DOCUMENTS.
5. CIVIL SITE GROUP SHALL HAVE NO LIABILITY WHATSOEVER FOR ANY COSTS ARISING OUT OF THE CLIENTS DECISION TO OBTAIN BIDS OR PROCEED WITH CONSTRUCTION BEFORE CIVIL SITE GROUP HAS ISSUED FINAL, FULLY-APPROVED PLANS AND SPECIFICATIONS. THE CLIENT ACKNOWLEDGES THAT ALL PRELIMINARY PLANS ARE SUBJECT TO SUBSTANTIAL REVISION UNTIL PLANS ARE FULLY APPROVED AND ALL PERMITS ARE OBTAINED.

GENERAL SURVEY NOTES

1. BEARINGS ARE BASED ON THE WASHINGTON COUNTY COORDINATE SYSTEM (1986 ADJUSTMENT).
2. ELEVATIONS ARE BASED ON THE NGVD 29 DATUM. SITE BENCHMARK IS THE TOP NUT OF THE FIRE HYDRANT LOCATED ON THE WEST SIDE OF EAST POINT DOUGLAS ROAD SOUTH, APPROXIMATELY 169 FEET SOUTHEAST FROM THE NORTHEAST CORNER OF THE SUBJECT PROPERTY, AS SHOWN HEREON. ELEVATION = 819.23.

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

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
C0.0	TITLE SHEET
C0.1	PROJECT NOTES
C1.0	REMOVALS PLAN
C1.1	TREE PRESERVATION PLAN
C1.2	TREE PRESERVATION PLAN
C1.3	TREE PRESERVATION PLAN
C2.0	SITE PLAN
C2.1	TURNING MOVEMENT
C3.0	GRADING PLAN
C4.0	UTILITY PLAN
C5.0	CIVIL DETAILS
C5.1	CIVIL DETAILS
C5.2	CIVIL DETAILS
C5.3	CIVIL DETAILS
C5.4	CIVIL DETAILS
L1.0	LANDSCAPE PLAN
L1.1	LANDSCAPE PLAN NOTES & DETAILS
LT1.0	LIGHTING PLAN
SW1.0	SWPPP - EXISTING CONDITIONS
SW1.1	SWPPP - PROPOSED CONDITIONS
SW1.2	SWPPP - DETAILS
SW1.3	SWPPP - NARRATIVE
SW1.4	SWPPP - ATTACHMENTS
SW1.5	SWPPP - ATTACHMENTS

CivilSite GROUP
Civil Engineering * Surveying * Landscape Architecture
5000 Glenwood Avenue
Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

PRELIMINARY: NOT FOR CONSTRUCTION

PROJECT
DOUGLAS ROAD MULTIFAMILY
E POINT DOUGLAS ROAD S, COTTAGE GROVE, 55016

OWNER
YELLOWTREE CORPORATION
1834 EAST 38TH STREET, MINNEAPOLIS, MN 55407

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Patrick J. Sarver
DATE 12/08/2025 LICENSE NO. 24904

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
10/29/2025	CITY SUBMITTAL
10/30/2025	WATERSHED SUBMITTAL
11/14/2025	CITY RESUBMITTAL
12/08/2025	CITY RESUBMITTAL

PROJECT MANAGER	PATRICK SARVER
CONTACT NUMBER	612-615-0060 X 702
DRAWN BY	BN, AM
REVIEWED BY	PS
PROJECT NUMBER	25157

REVISION SUMMARY

DATE	DESCRIPTION

TITLE SHEET

C0.0

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REMOVAL NOTES:

1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
2. SEE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PLAN FOR CONSTRUCTION STORM WATER MANAGEMENT PLAN.
3. REMOVAL OF MATERIALS NOTED ON THE DRAWINGS SHALL BE IN ACCORDANCE WITH MNDOT, STATE AND LOCAL REGULATIONS.
4. REMOVAL OF PRIVATE UTILITIES SHALL BE COORDINATED WITH UTILITY OWNER PRIOR TO CONSTRUCTION ACTIVITIES.
5. EXISTING PAVEMENTS SHALL BE SAWCUT IN LOCATIONS AS SHOWN ON THE DRAWINGS OR THE NEAREST JOINT FOR PROPOSED PAVEMENT CONNECTIONS.
6. REMOVED MATERIALS SHALL BE DISPOSED OF TO A LEGAL OFF-SITE LOCATION AND IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS.
7. ABANDON, REMOVAL, CONNECTION, AND PROTECTION NOTES SHOWN ON THE DRAWINGS ARE APPROXIMATE. COORDINATE WITH PROPOSED PLANS.
8. EXISTING ON-SITE FEATURES NOT NOTED FOR REMOVAL SHALL BE PROTECTED THROUGHOUT THE DURATION OF THE CONTRACT.
9. PROPERTY LINES SHALL BE CONSIDERED GENERAL CONSTRUCTION LIMITS UNLESS OTHERWISE NOTED ON THE DRAWINGS. WORK WITHIN THE GENERAL CONSTRUCTION LIMITS SHALL INCLUDE STAGING, DEMOLITION AND CLEAN-UP OPERATIONS AS WELL AS CONSTRUCTION SHOWN ON THE DRAWINGS.
10. MINOR WORK OUTSIDE OF THE GENERAL CONSTRUCTION LIMITS SHALL BE ALLOWED AS SHOWN ON THE PLAN AND PER CITY REQUIREMENTS. FOR ANY WORK ON ADJACENT PRIVATE PROPERTY, THE CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION FROM THE ADJACENT PROPERTY OWNER PRIOR TO ANY WORK.
11. DAMAGE BEYOND THE PROPERTY LIMITS CAUSED BY CONSTRUCTION ACTIVITY SHALL BE REPAIRED IN A MANNER APPROVED BY THE ENGINEER/LANDSCAPE ARCHITECT OR IN ACCORDANCE WITH THE CITY.
12. PROPOSED WORK (BUILDING AND CIVIL) SHALL NOT DISTURB EXISTING UTILITIES UNLESS OTHERWISE SHOWN ON THE DRAWINGS AND APPROVED BY THE CITY PRIOR TO CONSTRUCTION.
13. SITE SECURITY MAY BE NECESSARY AND PROVIDED IN A MANNER TO PROHIBIT VANDALISM, AND THEFT, DURING AND AFTER NORMAL WORK HOURS, THROUGHOUT THE DURATION OF THE CONTRACT. SECURITY MATERIALS SHALL BE IN ACCORDANCE WITH THE CITY.
14. VEHICULAR ACCESS TO THE SITE SHALL BE MAINTAINED FOR DELIVERY AND INSPECTION ACCESS DURING NORMAL OPERATING HOURS. AT NO POINT THROUGHOUT THE DURATION OF THE CONTRACT SHALL CIRCULATION OF ADJACENT STREETS BE BLOCKED WITHOUT APPROVAL BY THE CITY PRIOR TO CONSTRUCTION ACTIVITIES.
15. ALL TRAFFIC CONTROLS SHALL BE PROVIDED AND ESTABLISHED PER THE REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CITY. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, SIGNAGE, BARRICADES, FLASHERS, AND FLAGGERS AS NEEDED. ALL PUBLIC STREETS SHALL REMAIN OPEN TO TRAFFIC AT ALL TIMES. NO ROAD CLOSURES SHALL BE PERMITTED WITHOUT APPROVAL BY THE CITY.
16. SHORING FOR BUILDING EXCAVATION MAY BE USED AT THE DISCRETION OF THE CONTRACTOR AND AS APPROVED BY THE OWNERS REPRESENTATIVE AND THE CITY PRIOR TO CONSTRUCTION ACTIVITIES.
17. STAGING, DEMOLITION, AND CLEAN-UP AREAS SHALL BE WITHIN THE PROPERTY LIMITS AS SHOWN ON THE DRAWINGS AND MAINTAINED IN A MANNER AS REQUIRED BY THE CITY.
18. ALL EXISTING SITE TRAFFIC/REGULATORY SIGNAGE TO BE INVENTORIED AND IF REMOVED FOR CONSTRUCTION SHALL BE RETURNED TO LGU.
19. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.

CITY OF COTTAGE GROVE REMOVAL NOTES:

1. RESERVED FOR CITY SPECIFIC REMOVAL NOTES.

CITY OF COTTAGE GROVE STANDARD SPECIFICATIONS FOR STREET AND UTILITY CONSTRUCTION SHALL GOVERN FOR ALL IMPROVEMENTS WITHIN RIGHT-OF-WAY OR PUBLIC EASEMENT.

SITE LAYOUT NOTES:

1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
2. CONTRACTOR SHALL VERIFY LOCATIONS AND LAYOUT OF ALL SITE ELEMENTS PRIOR TO BEGINNING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO, LOCATIONS OF EXISTING AND PROPOSED PROPERTY LINES, EASEMENTS, SETBACKS, UTILITIES, BUILDINGS AND PAVEMENTS. CONTRACTOR IS RESPONSIBLE FOR FINAL LOCATIONS OF ALL ELEMENTS FOR THE SITE. ANY REVISIONS REQUIRED AFTER COMMENCEMENT OF CONSTRUCTION, DUE TO LOCATIONAL ADJUSTMENTS SHALL BE CORRECTED AT NO ADDITIONAL COST TO OWNER. ADJUSTMENTS TO THE LAYOUT SHALL BE APPROVED BY THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF MATERIALS. STAKE LAYOUT FOR APPROVAL.
3. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION, INCLUDING A RIGHT-OF-WAY AND STREET OPENING PERMIT.
4. THE CONTRACTOR SHALL VERIFY RECOMMENDATIONS NOTED IN THE GEO TECHNICAL REPORT PRIOR TO INSTALLATION OF SITE IMPROVEMENT MATERIALS.
5. CONTRACTOR SHALL FIELD VERIFY COORDINATES AND LOCATION DIMENSIONS & ELEVATIONS OF THE BUILDING AND STAKE FOR REVIEW AND APPROVAL BY THE OWNERS REPRESENTATIVE PRIOR TO INSTALLATION OF FOOTING MATERIALS.
6. LOCATIONS OF STRUCTURES, ROADWAY PAVEMENTS, CURBS AND GUTTERS, BOLLARDS, AND WALKS ARE APPROXIMATE AND SHALL BE STAKED IN THE FIELD, PRIOR TO INSTALLATION, FOR REVIEW AND APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT.
7. CURB DIMENSIONS SHOWN ARE TO FACE OF CURB. BUILDING DIMENSIONS ARE TO FACE OF CONCRETE FOUNDATION. LOCATION OF BUILDING IS TO BUILDING FOUNDATION AND SHALL BE AS SHOWN ON THE DRAWINGS.
8. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR SAMPLES AS SPECIFIED FOR REVIEW AND APPROVAL BY THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO FABRICATION FOR ALL PREFABRICATED SITE IMPROVEMENT MATERIALS SUCH AS, BUT NOT LIMITED TO THE FOLLOWING, FURNISHINGS, PAVEMENTS, WALLS, RAILINGS, BENCHES, FLAGPOLES, LANDING PADS FOR CURB RAMPS, AND LIGHT AND POLES. THE OWNER RESERVES THE RIGHT TO REJECT INSTALLED MATERIALS NOT PREVIOUSLY APPROVED.
9. CROSSWALK STRIPING SHALL BE 24" WIDE WHITE PAINTED LINE, SPACED 48" ON CENTER PERPENDICULAR TO THE FLOW OF TRAFFIC. WIDTH OF CROSSWALK SHALL BE 5' WIDE. ALL OTHER PAVEMENT MARKINGS SHALL BE WHITE IN COLOR UNLESS OTHERWISE NOTED OR REQUIRED BY ADA OR LOCAL GOVERNING BODIES.
10. SEE SITE PLAN FOR CURB AND GUTTER TYPE. TAPER BETWEEN CURB TYPES-SEE DETAIL.
11. ALL CURB RADII ARE MINIMUM 3' UNLESS OTHERWISE NOTED.
12. CONTRACTOR SHALL REFER TO FINAL PLAT FOR LOT BOUNDARIES, NUMBERS, AREAS AND DIMENSIONS PRIOR TO SITE IMPROVEMENTS.
13. FIELD VERIFY ALL EXISTING SITE CONDITIONS, DIMENSIONS.
14. PARKING IS TO BE SET PARALLEL OR PERPENDICULAR TO EXISTING BUILDING UNLESS NOTED OTHERWISE.
15. ALL PARKING LOT PAINT STRIPING TO BE WHITE, 4" WIDE TYP.
16. BITUMINOUS PAVING TO BE "LIGHT DUTY" UNLESS OTHERWISE NOTED. SEE DETAIL SHEETS FOR PAVEMENT SECTIONS.
17. ALL TREES THAT ARE TO REMAIN ARE TO BE PROTECTED FROM DAMAGE WITH A CONSTRUCTION FENCE AT THE DRIP LINE. SEE LANDSCAPE DOCUMENTS.
18. CONTRACTOR IS RESPONSIBLE TO INSTALL ANY SIDEWALK AND CURBING PER DESIGN PLAN. CONTRACTOR TO VERIFY ALL CURBS AND SIDEWALKS WILL DRAIN PROPERLY IN FIELD CONDITIONS. **CONTRACTOR MUST CONTACT THE CIVIL ENGINEER 24-HOURS PRIOR TO ANY CURB AND/OR SIDEWALK INSTALLATION TO REVIEW AND INSPECT CURB STAKES. CONTRACTOR IS RESPONSIBLE FOR ANY CURB OR SIDEWALK REPLACEMENT IF THIS PROCEDURE IS NOT FOLLOWED.**

CITY OF COTTAGE GROVE SITE SPECIFIC NOTES:

1. RESERVED FOR CITY SPECIFIC SITE NOTES.

OPERATIONAL NOTES	
SNOW REMOVAL	ALL SNOW SHALL BE STORED ON-SITE OUTSIDE PARKING LOT. WHEN FULL, REMOVAL CO. SHALL REMOVE EXCESS OFF-SITE.
TRASH REMOVAL	TRASH SHALL BE PLACED IN INTERIOR SOLID WASTE COLLECTION POINT, MOVED TO OUTSIDE OF GARAGE DOOR LOCATION ON COLLECTION DAY AND REMOVED BY COMMERCIAL CO.
DELIVERIES	DELIVERIES SHALL OCCUR AT THE FRONT DOOR VIA STANDARD COMMERCIAL DELIVERY VEHICLES (UPS, FED-EX, USPS).

GENERAL GRADING NOTES:

1. **CONTRACTOR SHALL VERIFY ALL BUILDING ELEVATIONS, (FFE, LFE, GFE), PRIOR TO CONSTRUCTION BY CROSS CHECKING WITH ARCHITECTURAL, STRUCTURAL AND CIVIL ELEVATIONS FOR EQUIVALENT "100" ELEVATIONS. THIS MUST BE DONE PRIOR TO EXCAVATION AND INSTALLATION OF ANY FOOTING MATERIALS. VERIFICATION OF THIS COORDINATION SHALL BE CONFIRMED IN WRITING BY CIVIL, SURVEYOR, ARCHITECTURAL, STRUCTURAL AND CONTRACTOR PRIOR TO CONSTRUCTION.**
2. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
3. SEE SITE PLAN FOR HORIZONTAL LAYOUT & GENERAL GRADING NOTES.
4. THE CONTRACTOR SHALL COMPLETE THE SITE GRADING CONSTRUCTION (INCLUDING BUT NOT LIMITED TO SITE PREPARATION, SOIL CORRECTION, EXCAVATION, EMBANKMENT, ETC.) IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER'S SOILS ENGINEER. ALL SOIL TESTING SHALL BE COMPLETED BY THE OWNER'S SOILS ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED SOIL TESTS AND INSPECTIONS WITH THE SOILS ENGINEER.
5. ANY ELEMENTS OF AN EARTH RETENTION SYSTEM AND RELATED EXCAVATIONS THAT FALL WITHIN THE PUBLIC RIGHT OF WAY WILL REQUIRE A "RIGHT OF WAY EXCAVATION PERMIT". CONTRACTOR IS RESPONSIBLE FOR AQUIRING THIS PERMIT PRIOR TO CONSTRUCTION IF APPLICABLE
6. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
7. GRADING AND EXCAVATION ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS & PERMIT REQUIREMENTS OF THE CITY.
8. PROPOSED SPOT GRADES ARE FLOW-LINE FINISHED GRADE ELEVATIONS, UNLESS OTHERWISE NOTED.
9. GRADES OF WALKS SHALL BE INSTALLED WITH 5% MAX. LONGITUDINAL SLOPE AND 1% MIN. AND 2% MAX. CROSS SLOPE, UNLESS OTHERWISE NOTED.
10. PROPOSED SLOPES SHALL NOT EXCEED 3:1 UNLESS INDICATED OTHERWISE ON THE DRAWINGS. MAXIMUM SLOPES IN MAINTAINED AREAS IS 4:1.
11. PROPOSED RETAINING WALLS, FREESTANDING WALLS, OR COMBINATION OF WALL TYPES GREATER THAN 4' IN HEIGHT SHALL BE DESIGNED AND ENGINEERED BY A REGISTERED RETAINING WALL ENGINEER. DESIGN DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF GRADE STAKES THROUGHOUT THE DURATION OF CONSTRUCTION TO ESTABLISH PROPER GRADES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR A FINAL FIELD CHECK OF FINISHED GRADES ACCEPTABLE TO THE ENGINEER/LANDSCAPE ARCHITECT PRIOR TO TOPSOIL AND SODDING ACTIVITIES.
13. IF EXCESS OR SHORTAGE OF SOIL MATERIAL EXISTS, THE CONTRACTOR SHALL TRANSPORT ALL EXCESS SOIL MATERIAL OFF THE SITE TO AN AREA SELECTED BY THE CONTRACTOR, OR IMPORT SUITABLE MATERIAL TO THE SITE.
14. EXCAVATE TOPSOIL FROM AREAS TO BE FURTHER EXCAVATED OR REGRADED AND STOCKPILE IN AREAS DESIGNATED ON THE SITE. THE CONTRACTOR SHALL SALVAGE ENOUGH TOPSOIL FOR RESPREADING ON THE SITE AS SPECIFIED. EXCESS TOPSOIL SHALL BE PLACED IN EMBANKMENT AREAS, OUTSIDE OF BUILDING PADS, ROADWAYS AND PARKING AREAS. THE CONTRACTOR SHALL SUBCUT CUT AREAS, WHERE TURF IS TO BE ESTABLISHED, TO A DEPTH OF 6 INCHES. RESPREAD TOPSOIL IN AREAS WHERE TURF IS TO BE ESTABLISHED TO A MINIMUM DEPTH OF 6 INCHES.
15. FINISHED GRADING SHALL BE COMPLETED. THE CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING, INCLUDING ADJACENT TRANSITION AREAS. PROVIDE A SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCES, WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS AND EXISTING GRADES. AREAS THAT HAVE BEEN FINISH GRADED SHALL BE PROTECTED FROM SUBSEQUENT CONSTRUCTION OPERATIONS, TRAFFIC AND EROSION. REPAIR ALL AREAS THAT HAVE BECOME RUTTED BY TRAFFIC OR ERODED BY WATER OR HAS SETTLED BELOW THE CORRECT GRADE. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO EQUAL OR BETTER THAN ORIGINAL CONDITION OR TO THE REQUIREMENTS OF THE NEW WORK.
16. PRIOR TO PLACEMENT OF THE AGGREGATE BASE, A TEST ROLL WILL BE REQUIRED ON THE STREET AND/OR PARKING AREA SUBGRADE. THE CONTRACTOR SHALL PROVIDE A LOADED TANDEM AXLE TRUCK WITH A GROSS WEIGHT OF 25 TONS. THE TEST ROLLING SHALL BE AT THE DIRECTION OF THE SOILS ENGINEER AND SHALL BE COMPLETED IN AREAS AS DIRECTED BY THE SOILS ENGINEER. THE SOILS ENGINEER SHALL DETERMINE WHICH SECTIONS OF THE STREET OR PARKING AREA ARE UNSTABLE. CORRECTION OF THE SUBGRADE SOILS SHALL BE COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS ENGINEER. NO TEST ROLL SHALL OCCUR WITHIN 10' OF ANY UNDERGROUND STORM RETENTION/DETENTION SYSTEMS.
17. TOLERANCES
    - 17.1. THE BUILDING SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.30 FOOT ABOVE, OR 0.30 FOOT BELOW, THE PRESCRIBED ELEVATION AT ANY POINT WHERE MEASUREMENT IS MADE.
    - 17.2. THE STREET OR PARKING AREA SUBGRADE FINISHED SURFACE ELEVATION SHALL NOT VARY BY MORE THAN 0.05 FOOT ABOVE, OR 0.10 FOOT BELOW, THE PRESCRIBED ELEVATION OF ANY POINT WHERE MEASUREMENT IS MADE.
    - 17.3. AREAS WHICH ARE TO RECEIVE TOPSOIL SHALL BE GRADED TO WITHIN 0.30 FOOT ABOVE OR BELOW THE REQUIRED ELEVATION, UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
    - 17.4. TOPSOIL SHALL BE GRADED TO PLUS OR MINUS 1/2 INCH OF THE SPECIFIED THICKNESS.
18. MAINTENANCE
    - 18.1. THE CONTRACTOR SHALL PROTECT NEWLY GRADED AREAS FROM TRAFFIC AND EROSION, AND KEEP AREA FREE OF TRASH AND DEBRIS.
    - 18.2. CONTRACTOR SHALL REPAIR AND REESTABLISH GRADES IN SETTLED, ERODED AND RUTTED AREAS TO SPECIFIED TOLERANCES. DURING THE CONSTRUCTION, IF REQUIRED, AND DURING THE WARRANTY PERIOD, ERODED AREAS WHERE TURF IS TO BE ESTABLISHED SHALL BE RESEEDED AND MULCHED.
    - 18.3. WHERE COMPLETED COMPACTED AREAS ARE DISTURBED BY SUBSEQUENT CONSTRUCTION OPERATIONS OR ADVERSE WEATHER, CONTRACTOR SHALL SCARIFY, SURFACE, RESHAPE, AND COMPACT TO REQUIRED DENSITY PRIOR TO FURTHER CONSTRUCTION.

CITY OF COTTAGE GROVE GRADING NOTES:

1. POST CONSTRUCTION INFILTRATION TESTING IS REQUIRED BY THE CITY OF COTTAGE GROVE. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL FIRM TO COMPLETED DOUBLE RING INFILTROMETER TESTING. INFILTRATION RATES TO BE BETWEEN 3.2-8.3 IN/HR.
2. CONTRACTOR SHALL NOT EXCAVATE INFILTRATION SYSTEMS TO FINAL GRADE, OR WITHIN 3 FEET OF FINAL GRADE, UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN CONSTRUCTED AND FULLY STABILIZED UNLESS THEY PROVIDE RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS TO KEEP SEDIMENT AND RUNOFF COMPLETELY AWAY FROM THE INFILTRATION AREA.
3. WHEN EXCAVATING THE INFILTRATION SYSTEM TO WITHIN 3 FEET OF FINAL GRADE, CONTRACTOR SHALL STAKE OFF AND MARK THE AREA SO HEAVE CONSTRUCTION VEHICLES OR EQUIPMENT DO NOT COMPACT THE SOIL IN THE INFILTRATION AREA.

GENERAL UTILITY NOTES:

1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
2. SEE SITE PLAN FOR HORIZONTAL DIMENSIONS AND LAYOUT.
3. CONTRACTOR SHALL FIELD VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF DISCREPANCIES OR VARIATIONS FROM THE PLANS.
4. UTILITY INSTALLATION SHALL CONFORM TO THE CURRENT EDITION OF "STANDARD SPECIFICATIONS FOR WATER MAIN AND SERVICE LINE INSTALLATION" AND "SANITARY SEWER AND STORM SEWER INSTALLATION" AS PREPARED BY THE CITY ENGINEERS ASSOCIATION OF MINNESOTA (CEAM), AND SHALL CONFORM WITH THE REQUIREMENTS OF THE CITY AND THE PROJECT SPECIFICATIONS.
5. CASTINGS SHALL BE SALVAGED FROM STRUCTURE REMOVALS AND RE-USED OR PLACED AT THE DIRECTION OF THE OWNER.
6. ALL WATER PIPE SHALL BE CLASS 52 DUCTILE IRON PIPE (DIP) AWWA C151, ASME B16.4, AWWA C110, AWWA C153 UNLESS OTHERWISE NOTED.
7. ALL SANITARY SEWER SHALL BE SDR 26 POLYVINYL CHLORIDE (PVC) ASTM D3034 & F679, OR SCH 40 ASTM D1785, 2665, ASTM F794, 1866) UNLESS OTHERWISE NOTED.
8. ALL STORM SEWER PIPE SHALL BE HDPE ASTM F714 & F2306 WITH ASTM D3212 SPEC FITTINGS UNLESS OTHERWISE NOTED.
9. PIPE LENGTHS SHOWN ARE FROM CENTER TO CENTER OF STRUCTURE OR TO END OF FLARED END SECTION.
10. UTILITIES ON THE PLAN ARE SHOWN TO WITHIN 5' OF THE BUILDING FOOTPRINT. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE FINAL CONNECTION TO BUILDING LINES. COORDINATE WITH ARCHITECTURAL AND MECHANICAL PLANS.
11. CATCH BASINS AND MANHOLES IN PAVED AREAS SHALL BE SUMPED 0.04 FEET. ALL CATCH BASINS IN GUTTERS SHALL BE SUMPED 0.15 FEET PER DETAILS. RIM ELEVATIONS SHOWN ON THIS PLAN DO NOT REFLECT SUMPED ELEVATIONS.
12. A MINIMUM OF 8 FEET OF COVER IS REQUIRED OVER ALL WATERMAIN, UNLESS OTHERWISE NOTED. EXTRA DEPTH MAY BE REQUIRED TO MAINTAIN A MINIMUM OF 18" VERTICAL SEPARATION TO SANITARY OR STORM SEWER LINES. EXTRA DEPTH WATERMAIN IS INCIDENTAL.
13. A MINIMUM OF 18 INCHES OF VERTICAL SEPARATION AND 10 FEET OF HORIZONTAL SEPARATION IS REQUIRED FOR ALL UTILITIES, UNLESS OTHERWISE NOTED.
14. ALL CONNECTIONS TO EXISTING UTILITIES SHALL BE IN ACCORDANCE WITH CITY STANDARDS AND COORDINATED WITH THE CITY PRIOR TO CONSTRUCTION.
15. CONNECTIONS TO EXISTING STRUCTURES SHALL BE CORE-DRILLED.
16. COORDINATE LOCATIONS AND SIZES OF SERVICE CONNECTIONS WITH THE MECHANICAL DRAWINGS.
17. COORDINATE INSTALLATION AND SCHEDULING OF THE INSTALLATION OF UTILITIES WITH ADJACENT CONTRACTORS AND CITY STAFF.
18. ALL STREET REPAIRS AND PATCHING SHALL BE PERFORMED PER THE REQUIREMENTS OF THE CITY. ALL PAVEMENT CONNECTIONS SHALL BE SAWCUT. ALL TRAFFIC CONTROLS SHALL BE PROVIDED BY THE CONTRACTOR AND SHALL BE ESTABLISHED PER THE REQUIREMENTS OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) AND THE CITY. THIS SHALL INCLUDE BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FLASHERS, AND FLAGGERS AS NEEDED. ALL PUBLIC STREETS SHALL BE OPEN TO TRAFFIC AT ALL TIMES. NO ROAD CLOSURES SHALL BE PERMITTED WITHOUT APPROVAL BY THE CITY.
19. ALL STRUCTURES, PUBLIC AND PRIVATE, SHALL BE ADJUSTED TO PROPOSED GRADES WHERE REQUIRED. THE REQUIREMENTS OF ALL OWNERS MUST BE COMPLIED WITH. STRUCTURES BEING RESET TO PAVED AREAS MUST MEET OWNERS REQUIREMENTS FOR TRAFFIC LOADING.
20. CONTRACTOR SHALL COORDINATE ALL WORK WITH PRIVATE UTILITY COMPANIES.
21. CONTRACTOR SHALL COORDINATE CONNECTION OF IRRIGATION SERVICE TO UTILITIES. COORDINATE THE INSTALLATION OF IRRIGATION SLEEVES NECESSARY AS TO NOT IMPACT INSTALLATION OF UTILITIES.
22. CONTRACTOR SHALL MAINTAIN AS-BUILT PLANS THROUGHOUT CONSTRUCTION AND SUBMIT THESE PLANS TO ENGINEER UPON COMPLETION OF WORK.
23. ALL JOINTS AND CONNECTIONS IN STORM SEWER SYSTEM SHALL BE GASTIGHT OR WATERTIGHT. APPROVED RESILIENT RUBBER JOINTS MUST BE USED TO MAKE WATERTIGHT CONNECTIONS TO MANHOLES, CATCHBASINS, OR OTHER STRUCTURES.
24. ALL PORTIONS OF THE STORM SEWER SYSTEM LOCATED WITHIN 10 FEET OF THE BUILDING OR WATER SERVICE LINE MUST BE TESTED IN ACCORDANCE WITH MN RULES, CHAPTER 4714, SECTION 1109.0.
25. FOR ALL SITES LOCATED IN CLAY SOIL AREAS, DRAIN TILE MUST BE INSTALLED AT ALL LOW POINT CATCH BASINS 25' IN EACH DIRECTION. SEE PLAN AND DETAIL. INSTALL LOW POINT DRAIN TILE PER PLANS AND GEOTECHNICAL REPORT RECOMMENDATIONS AND REQUIREMENTS.

CITY OF COTTAGE GROVE UTILITY NOTES:

1. PROVIDE MINIMUM 24" SEPARATION BETWEEN WATER MAIN AND ALL OTHER UTILITIES.

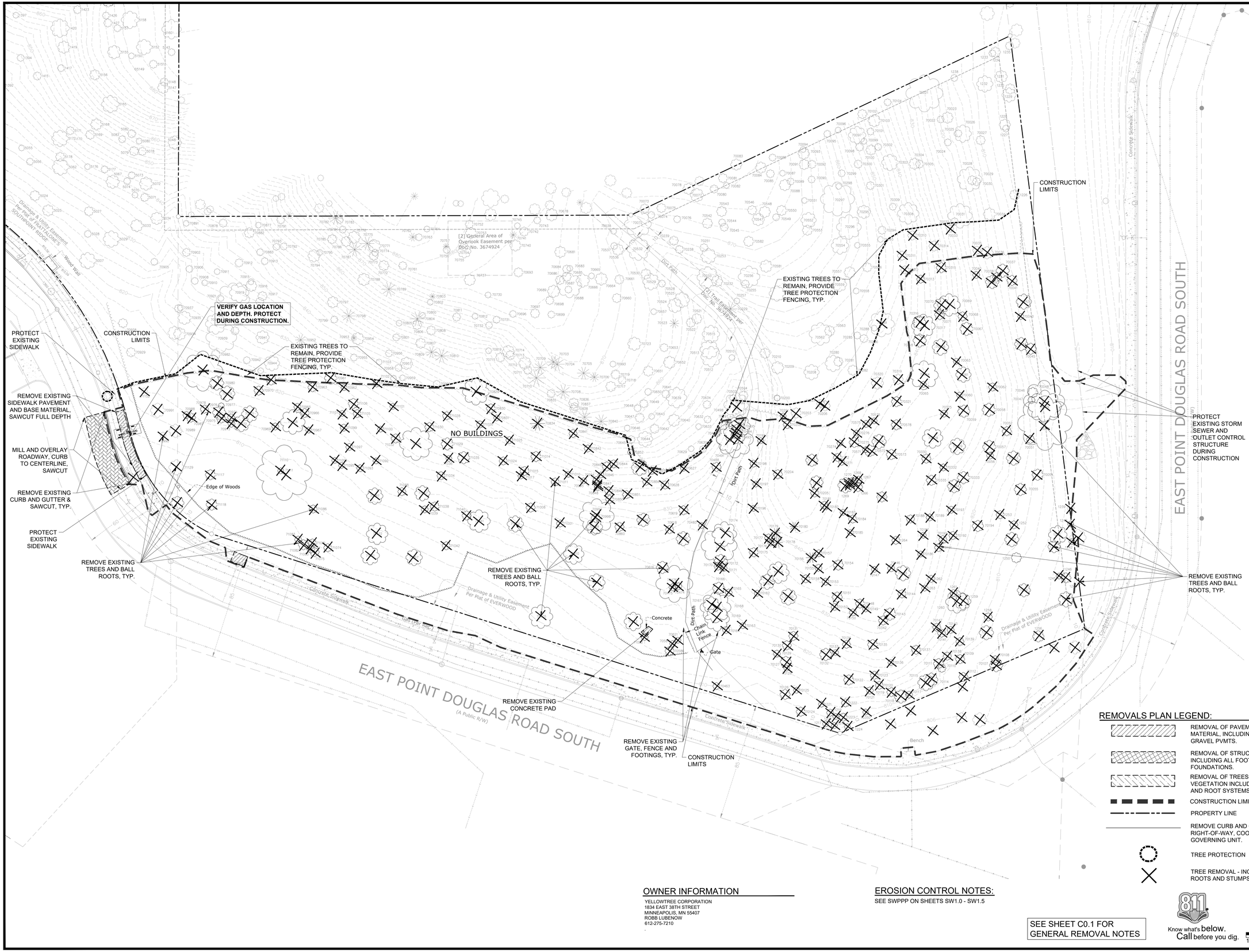
Know what's **below.** Call before you dig.

LANDSCAPE NOTES:

1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
2. REFERENCE MULCH SCHEDULE FOR MULCH MATERIALS AND LOCATIONS.
3. ALL TREES SHALL BE MULCHED WITH SHREDDED CEDAR MULCH TO OUTER EDGE OF SAUCER OR TO EDGE OF PLANTING BED, IF APPLICABLE. ALL MULCH SHALL BE KEPT WITHIN A MINIMUM OF 2" FROM TREE TRUNK.
4. IF SHOWN ON PLAN, RANDOM SIZED LIMESTONE BOULDERS COLOR AND SIZE TO COMPLIMENT NEW LANDSCAPING. OWNER TO APPROVE BOULDER SAMPLES PRIOR TO INSTALLATION.
5. PLANT MATERIALS SHALL CONFORM WITH THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS AND SHALL BE OF HARDY STOCK, FREE FROM DISEASE, DAMAGE AND DISFIGURATION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING PLUMPNESS OF PLANT MATERIAL FOR DURATION OF ACCEPTANCE PERIOD.
6. UPON DISCOVERY OF A DISCREPANCY BETWEEN THE QUANTITY OF PLANTS SHOWN ON THE SCHEDULE AND THE QUANTITY SHOWN ON THE PLAN, THE PLAN SHALL GOVERN.
7. CONDITION OF VEGETATION SHALL BE MONITORED BY THE LANDSCAPE ARCHITECT THROUGHOUT THE DURATION OF THE CONTRACT. LANDSCAPE MATERIALS PART OF THE CONTRACT SHALL BE WARRANTED FOR TWO (2) FULL GROWING SEASONS FROM SUBSTANTIAL COMPLETION DATE.
8. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL RECEIVE 6" LAYER TOPSOIL AND SOD AS SPECIFIED UNLESS OTHERWISE NOTED ON THE DRAWINGS.
9. COORDINATE LOCATION OF VEGETATION WITH UNDERGROUND AND OVERHEAD UTILITIES, LIGHTING FIXTURES, DOORS AND WINDOWS. CONTRACTOR SHALL STAKE IN THE FIELD FINAL LOCATION OF TREES AND SHRUBS FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
10. ALL PLANT MATERIALS SHALL BE WATERED AND MAINTAINED UNTIL ACCEPTANCE.
11. REPAIR AT NO COST TO OWNER ALL DAMAGE RESULTING FROM LANDSCAPE CONTRACTOR'S ACTIVITIES.
12. SWEEP AND MAINTAIN ALL PAVED SURFACES FREE OF DEBRIS GENERATED FROM LANDSCAPE CONTRACTOR'S ACTIVITIES.
13. PROVIDE SITE WIDE IRRIGATION SYSTEM DESIGN AND INSTALLATION. SYSTEM SHALL BE FULLY PROGRAMMABLE AND CAPABLE OF ALTERNATE DATE WATERING. THE SYSTEM SHALL PROVIDE HEAD TO HEAD OR DRIP COVERAGE AND BE CAPABLE OF DELIVERING ONE INCH OF PRECIPITATION PER WEEK. SYSTEM SHALL EXTEND INTO THE PUBLIC RIGHT-OF-WAY TO THE EDGE OF PAVEMENT/BACK OF CURB.
14. CONTRACTOR SHALL SECURE APPROVAL OF PROPOSED IRRIGATION SYSTEM INCLUDING PRICING FROM OWNER, PRIOR TO INSTALLATION.

IRRIGATION NOTES:

1. ENTIRE SITE SHALL BE FULLY IRRIGATED. THE CONTRACTOR SHALL SUBMIT IRRIGATION SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
2. PROVIDE SITE WIDE IRRIGATION SYSTEM DESIGN AND INSTALLATION. SYSTEM SHALL BE FULLY PROGRAMMABLE AND CAPABLE OF ALTERNATE DATE WATERING. THE SYSTEM SHALL PROVIDE HEAD TO HEAD OR DRIP COVERAGE AND BE CAPABLE OF DELIVERING ONE INCH OF PRECIPITATION PER WEEK. SYSTEM SHALL EXTEND INTO THE PUBLIC RIGHT-OF-WAY TO THE EDGE OF PAVEMENT/BACK OF CURB.
3. CONTRACTOR SHALL SECURE APPROVAL OF PROPOSED IRRIGATION SYSTEM INLCUDING PRICING FROM OWNER, PRIOR TO INSTALLATION.
4. SEE MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS FOR IRRIGATION WATER, METER, AND POWER CONNECTIONS.
5. CONTRACTOR TO VERIFY LOCATION OF ALL UNDERGROUND/ABOVE GROUND FACILITIES PRIOR TO ANY EXCAVATION/INSTALLATION. ANY DAMAGE TO UNDERGROUND/ABOVE GROUND FACILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND COSTS ASSOCIATED WITH CORRECTING DAMAGES SHALL BE BORNE ENTIRELY BY THE CONTRACTOR.
6. SERVICE EQUIPMENT AND INSTALLATION SHALL BE PER LOCAL UTILITY COMPANY STANDARDS AND SHALL BE PER NATIONAL AND LOCAL CODES. EXACT LOCATION OF SERVICE EQUIPMENT SHALL BE COORDINATED WITH THE LANDSCAPE ARCHITECT OR EQUIVALENT AT THE JOB SITE.
7. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY FOR THE PROPOSED ELECTRICAL SERVICE AND METERING FACILITIES.
8. IRRIGATION WATER LINE CONNECTION SIZE IS 1-½" AT BUILDING. VERIFY WITH MECHANICAL PLANS.
9. ALL MAIN LINES SHALL BE 18" BELOW FINISHED GR



OWNER INFORMATION

YELLOWTREE CORPORATION
1834 EAST 38TH STREET
MINNEAPOLIS, MN 55407
ROBB LUBENOW
612-275-7210

EROSION CONTROL NOTES:

SEE SWPPP ON SHEETS SW1.0 - SW1.5

SEE SHEET C0.1 FOR GENERAL REMOVAL NOTES

REMOVALS PLAN LEGEND:

- REMOVAL OF PAVEMENT AND ALL BASE MATERIAL, INCLUDING BIT., CONC., AND GRAVEL PVMTS.
- REMOVAL OF STRUCTURE INCLUDING ALL FOOTINGS AND FOUNDATIONS.
- REMOVAL OF TREES AND VEGETATION INCLUDING STUMPS AND ROOT SYSTEMS
- CONSTRUCTION LIMITS
- PROPERTY LINE
- REMOVE CURB AND GUTTER. IF IN RIGHT-OF-WAY, COORDINATE WITH LOCAL GOVERNING UNIT.
- TREE PROTECTION
- TREE REMOVAL - INCLUDING ROOTS AND STUMPS

Know what's below. Call before you dig.

1" = 30'-0"
15'-0" 0 30'-0"

CivilSite GROUP
Civil Engineering ˚ Surveying ˚ Landscape Architecture
5000 Glenwood Avenue
Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

PRELIMINARY: NOT FOR CONSTRUCTION

PROJECT
DOUGLAS ROAD MULTIFAMILY
E POINT DOUGLAS ROAD S, COTTAGE GROVE, 55016

OWNER
YELLOWTREE CORPORATION
1834 EAST 38TH STREET, MINNEAPOLIS, MN 55407

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Patrick J. Sarver
DATE 12/08/2025 LICENSE NO. 24904

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
10/29/2025	CITY SUBMITTAL
10/30/2025	WATERSHED SUBMITTAL
11/14/2025	CITY RESUBMITTAL
12/08/2025	CITY RESUBMITTAL

PROJECT MANAGER	PATRICK SARVER
CONTACT NUMBER	612-615-0060 X 702
DRAWN BY	BN, AM
REVIEWED BY	PS
PROJECT NUMBER	25157

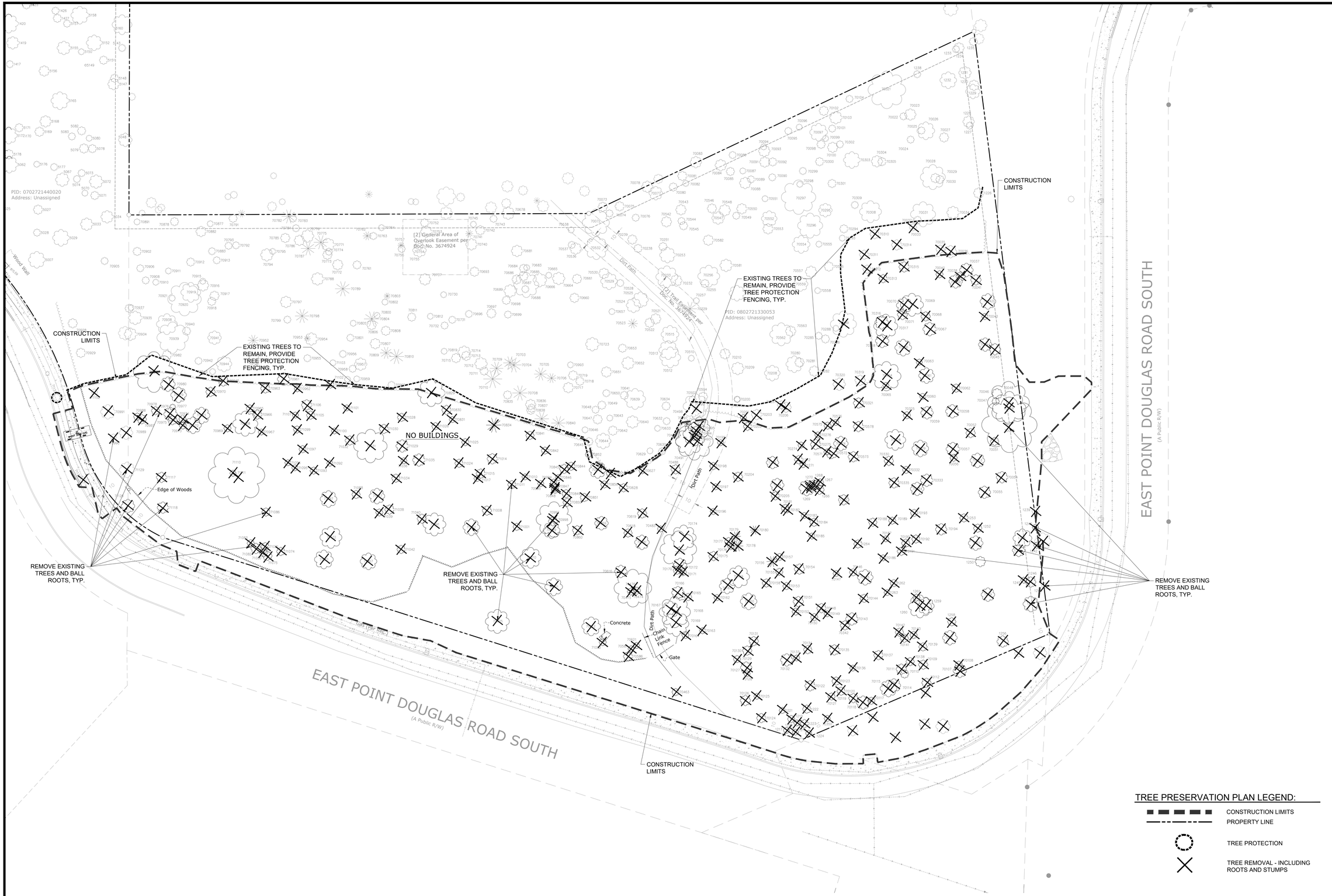
REVISION SUMMARY

DATE	DESCRIPTION

REMOVALS PLAN

C1.0

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TREE PRESERVATION PLAN LEGEND:

- CONSTRUCTION LIMITS
- PROPERTY LINE
- TREE PROTECTION
- TREE REMOVAL - INCLUDING ROOTS AND STUMPS

Know what's below. Call before you dig.

1" = 30'-0"
15'-0" 0 30'-0"

CivilSite GROUP
Civil Engineering ° Surveying ° Landscape Architecture
5000 Glenwood Avenue
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civilsitegroup.com 612-615-0060

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DRAWN BY	BN, AM
REVIEWED BY	PS
PROJECT NUMBER	25157

REVISION SUMMARY

DATE	DESCRIPTION

TREE PRESERVATION PLAN

C1.1

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TREE INVENTORY

NO	TYPE	SIZE	SPECIES	REMOVED	NOTES
1217	TRD	6	ASH	X	NON-QUALIFYING
1218	TRD	14	ASH	X	NON-QUALIFYING
1219	TRD	7	ASH	X	NON-QUALIFYING
1220	TRD	6	ASH	X	NON-QUALIFYING
1221	TRD	6	BUCKTHORN	X	INVASIVE
1222	TRD	8	ASH	X	NON-QUALIFYING
1223	TRD	8	ASH	X	NON-QUALIFYING
1224	TRD	6	ASH	X	NON-QUALIFYING
1226	TRD	10	HOPHORNBEAM		
1227	TRD	7	ASH		NON-QUALIFYING
1228	TRD	11	CHERRY		
1229	TRD	14	ASH		NON-QUALIFYING
1230	TRD	10	ASH		NON-QUALIFYING
1231	TRD	12	HACKBERRY		
1232	TRD	16	ASH		NON-QUALIFYING
1233	TRD	7	ASH		NON-QUALIFYING
1234	TRD	10	BASSWOOD		
1235	TRD	8	ASH		NON-QUALIFYING
1238	TRD	7	BITTERNUT		
1239	TRD	7	BOXELDER	X	
1240	TRD	6	BOXELDER	X	
1242	TRD	6	ASH	X	NON-QUALIFYING
1243	TRD	18	HACKBERRY	X	
1244	TRD	12	HACKBERRY	X	
1245	TRD	6	BOXELDER	X	
1246	TRD	10	ELM	X	NON-QUALIFYING
1248	TRD	15	ASH	X	NON-QUALIFYING
1249	TRD	13	WALNUT	X	
1250	TRD	10	HACKBERRY	X	
1251	TRD	14	WALNUT	X	
1252	TRD	8	ASH	X	NON-QUALIFYING
1253	TRD	8	ASH	X	NON-QUALIFYING
1256	TRD	11	HACKBERRY	X	
1257	TRD	14	HACKBERRY	X	
1258	TRD	8	HACKBERRY	X	
1259	TRD	16	HACKBERRY	X	
1260	TRD	22	OAK	X	
1261	TRD	7	BUCKTHORN	X	INVASIVE
1262	TRD	7	BUCKTHORN	X	INVASIVE
1263	TRD	6	PERSIMMON	X	
1264	TRD	8	ASH	X	NON-QUALIFYING
1265	TRD	10	HOPHORNBEAM	X	
1266	TRD	9	ASH	X	NON-QUALIFYING
1267	TRD	7	BUCKTHORN	X	INVASIVE
1268	TRD	10	OAK	X	
1269	TRD	15	CHERRY	X	
1270	TRD	7	ELM	X	NON-QUALIFYING
1271	TRD	6	BUCKTHORN	X	INVASIVE
1272	TRD	8	HOPHORNBEAM	X	
1273	TRD	12	ASH	X	NON-QUALIFYING
1274	TRD	13	COTTONWOOD	X	
70021	TRD	36	OAK		
70022	TRD	7	HACKBERRY		
70023	TRD	11	HICKORY		
70024	TRD	7	ELM		NON-QUALIFYING
70025	TRD	7	ELM		NON-QUALIFYING
70026	TRD	17	IRONWOOD		
70027	TRD	9	ASH		NON-QUALIFYING
70028	TRD	24	COTTONWOOD		
70029	TRD	9	HICKORY		
70030	TRD	8	HACKBERRY		
70031	TRD	24	COTTONWOOD		
70032	TRD	7	ELM		NON-QUALIFYING
70033	TRD	7	ELM	X	DEAD
70034	TRD	12	OAK		
70035	TRD	8	HACKBERRY	X	
70036	TRD	12	CHERRY	X	
70037	TRD	13	HICKORY	X	
70038	TRD	9	HACKBERRY	X	
70039	TRD	13	CHERRY	X	
70040	TRD	7	IRONWOOD	X	
70041	TRD	10	ASH	X	NON-QUALIFYING
70042	TRD	15	ASH	X	NON-QUALIFYING
70043	TRD	6	HICKORY	X	
70044	TRD	13	ELM	X	NON-QUALIFYING
70045	TRD	11	COTTONWOOD	X	
70046	TRD	10	BOXELDER	X	
70047	TRD	7	ELM	X	NON-QUALIFYING
70048	TRD	40	COTTONWOOD	X	
70049	TRD	32	COTTONWOOD	X	
70050	TRD	53	COTTONWOOD	X	
70051	TRD	8	ELM	X	NON-QUALIFYING
70052	TRD	9	ELM	X	NON-QUALIFYING
70053	TRD	14	HICKORY	X	
70054	TRD	11	COTTONWOOD	X	
70055	TRD	12	HACKBERRY	X	
70056	TRD	7	HICKORY	X	
70057	TRD	13	WALNUT	X	
70058	TRD	13	ELM	X	NON-QUALIFYING
70059	TRD	12	ASH	X	NON-QUALIFYING
70060	TRD	6	BOXELDER	X	
70061	TRD	15	OAK	X	
70062	TRD	8	BOXELDER	X	
70063	TRD	6	IRONWOOD	X	
70064	TRD	28	OAK	X	
70065	TRD	6	ELM	X	NON-QUALIFYING
70066	TRD	16	OAK	X	
70067	TRD	13	HACKBERRY	X	
70068	TRD	9	ELM	X	NON-QUALIFYING
70069	TRD	22	OAK	X	
70070	TRD	15	COTTONWOOD	X	
70071	TRD	10	ELM	X	NON-QUALIFYING
70072	TRD	26	COTTONWOOD		
70073	TRD	9	CHERRY		
70074	TRD	7	CHERRY		
70075	TRD	9	HICKORY		
70076	TRD	7	ELM		NON-QUALIFYING

TREE INVENTORY

NO	TYPE	SIZE	SPECIES	REMOVED	NOTES
70077	TRD	13	CHERRY		
70078	TRD	11	OAK		
70080	TRD	8	ELM		NON-QUALIFYING
70081	TRD	9	CHERRY		
70082	TRD	6	ELM		NON-QUALIFYING
70084	TRD	11	ASH		NON-QUALIFYING
70085	TRD	8	ASH		NON-QUALIFYING
70086	TRD	7	HICKORY		
70087	TRD	6	ASH		NON-QUALIFYING
70088	TRD	11	ASH		NON-QUALIFYING
70089	TRD	7	ASH		NON-QUALIFYING
70090	TRD	7	ASH		NON-QUALIFYING
70091	TRD	10	HICKORY		
70092	TRD	8	ASH		NON-QUALIFYING
70093	TRD	11	HICKORY		
70094	TRD	6	ASH		NON-QUALIFYING
70095	TRD	7	HICKORY		
70096	TRD	6	HICKORY		
70097	TRD	17	HICKORY		
70098	TRD	8	BASSWOOD		
70099	TRD	6	HICKORY		
70100	TRD	10	HICKORY		
70101	TRD	7	HICKORY		
70102	TRD	9	HICKORY		
70103	TRD	12	HICKORY		
70104	TRD	7	HICKORY		
70107	TRD	13	ELM	X	NON-QUALIFYING
70108	TRD	7	ELM	X	NON-QUALIFYING
70109	TRD	9	CHERRY	X	
70110	TRD	8	ELM	X	NON-QUALIFYING
70111	TRD	10	ASH	X	NON-QUALIFYING
70112	TRD	9	BOXELDER	X	
70114	TRD	13	ASH	X	NON-QUALIFYING
70115	TRD	16	CHERRY	X	
70117	TRD	7	ELM	X	NON-QUALIFYING
70118	TRD	13	ELM	X	NON-QUALIFYING
70119	TRD	9	CHERRY	X	
70120	TRD	8	ASH	X	NON-QUALIFYING
70121	TRD	7	ASH	X	NON-QUALIFYING
70122	TRD	10	ASH	X	NON-QUALIFYING
70123	TRD	8	CHERRY	X	
70124	TRD	9	HACKBERRY	X	
70125	TRD	6	ASH	X	NON-QUALIFYING
70126	TRD	10	ASH	X	NON-QUALIFYING
70127	TRD	11	HACKBERRY	X	
70128	TRD	6	ASH	X	NON-QUALIFYING
70129	TRD	7	BUCKTHORN	X	INVASIVE
70130	TRD	9	HACKBERRY	X	
70131	TRD	9	CHERRY	X	
70132	TRD	12	HACKBERRY	X	
70133	TRD	6	BUCKTHORN	X	INVASIVE
70134	TRD	8	ASH	X	NON-QUALIFYING
70135	TRD	10	BUCKTHORN	X	INVASIVE
70136	TRD	6	BUCKTHORN	X	INVASIVE
70137	TRD	9	CHERRY	X	
70138	TRD	8	ELM	X	NON-QUALIFYING
70139	TRD	8	HACKBERRY	X	
70140	TRD	7	BUCKTHORN	X	INVASIVE
70141	TRD	8	ASH	X	NON-QUALIFYING
70142	TRD	8	ASH	X	NON-QUALIFYING
70143	TRD	22	ASH	X	NON-QUALIFYING
70144	TRD	8	BOXELDER	X	
70145	TRD	15	ASH	X	NON-QUALIFYING
70146	TRD	7	BOXELDER	X	
70147	TRD	6	BUCKTHORN	X	INVASIVE
70148	TRD	9	ASH	X	NON-QUALIFYING
70149	TRD	6	ASH	X	NON-QUALIFYING
70150	TRD	7	ASH	X	NON-QUALIFYING
70151	TRD	10	ASH	X	NON-QUALIFYING
70152	TRD	7	BUCKTHORN	X	INVASIVE
70153	TRD	7	BUCKTHORN	X	INVASIVE
70154	TRD	10	ASH	X	NON-QUALIFYING
70155	TRD	7	CHERRY	X	
70156	TRC	10	PINE	X	
70157	TRD	7	BOXELDER	X	
70158	TRD	16	ASH	X	NON-QUALIFYING
70159	TRD	21	COTTONWOOD	X	
70160	TRD	16	MAPLE	X	
70161	TRD	15	WALNUT	X	
70162	TRD	6	ELM	X	NON-QUALIFYING
70163	TRD	6	HACKBERRY	X	
70164	TRD	7	ELM	X	NON-QUALIFYING
70165	TRD	7	ELM	X	NON-QUALIFYING
70166	TRD	12	ASH	X	NON-QUALIFYING
70167	TRD	16	ELM	X	NON-QUALIFYING
70168	TRD	30	COTTONWOOD	X	
70169	TRD	24	COTTONWOOD	X	
70170	TRD	8	BOXELDER	X	
70171	TRD	7	ELM	X	NON-QUALIFYING
70172	TRD	13	ELM	X	NON-QUALIFYING
70173	TRD	35	COTTONWOOD	X	
70174	TRD	24	COTTONWOOD	X	
70175	TRD	9	BOXELDER	X	
70176	TRD	6	BOXELDER	X	
70177	TRD	8	BOXELDER	X	DEAD
70178	TRC	10	CEDAR	X	
70179	TRC	9	CEDAR	X	
70180	TRC	8	CEDAR	X	
70181	TRD	8	OAK	X	
70182	TRD	6	BUCKTHORN	X	INVASIVE
70183	TRD	6	BUCKTHORN	X	INVASIVE
70184	TRD	8	BOXELDER	X	
70185	TRD	6	ASH	X	NON-QUALIFYING
70186	TRD	6	BOXELDER	X	
70187	TRD	6	BOXELDER	X	
70188	TRD	8	BOXELDER	X	
70189	TRD	7	COTTONWOOD	X	

TREE INVENTORY

NO	TYPE	SIZE	SPECIES	REMOVED	NOTES
70190	TRD	8	CHERRY	X	
70191	TRD	8	BOXELDER	X	
70192	TRD	8	HACKBERRY	X	
70193	TRD	7	BUCKTHORN	X	INVASIVE
70194	TRD	11	ASH	X	NON-QUALIFYING
70196	TRD	6	ELM	X	NON-QUALIFYING
70197	TRD	6	ELM	X	NON-QUALIFYING
70198	TRD	7	ELM	X	NON-QUALIFYING
70199	TRD	6	ELM	X	NON-QUALIFYING
70200	TRD	6	ELM		NON-QUALIFYING
70201	TRD	6	ASH	X	NON-QUALIFYING
70202	TRD	8	HICKORY	X	
70203	TRD	10	ASH	X	NON-QUALIFYING
70204	TRD	9	ASH	X	NON-QUALIFYING
70205	TRD	8	BUCKTHORN	X	INVASIVE
70206	TRD	10	ASH	X	NON-QUALIFYING
70207	TRD	8	HICKORY	X	
70208	TRD	15	OAK		INVASIVE
70209	TRD	12	CHERRY		
70210	TRD	10	OAK		INVASIVE
70229	TRC	13	CEDAR		
70232	TRD	11	ASH		NON-QUALIFYING
70233	TRD	21	COTTONWOOD		
70238	TRD	8	ASH		NON-QUALIFYING
70239	TRD	9	ELM		NON-QUALIFYING
70251	TRD	8	ELM		NON-QUALIFYING
70253	TRD	15	OAK		
70255	TRD	8	ELM		NON-QUALIFYING
70256	TRD	21	OAK		
70257	TRD	6	ELM		NON-QUALIFYING
70261	TRD	6	ELM		NON-QUALIFYING
70274	TRD	6	BUCKTHORN	X	INVASIVE
70275	TRD	10	ASH	X	NON-QUALIFYING
70276	TRD	6	CHERRY	X	
70280	TRD	16	OAK		
70281	TRD	9	ELM		NON-QUALIFYING
70282	TRD	10	ASH		NON-QUALIFYING
70285	TRD	7	HICKORY		
70286	TRD	8	HICKORY		
70288	TRD	6	ELM		NON-QUALIFYING
70289	TRD	25	COTTONWOOD	X	
70293	TRD	6	ELM		NON-QUALIFYING
70294	TRD	8	ELM		NON-QUALIFYING
70295	TRD	13	OAK		
70296	TRD	24	OAK		
70297	TRD	33	OAK		
70298	TRD	6	ASH		NON-QUALIFYING
70299	TRD	7	CHERRY		
70300	TRD	8	HICKORY		
70301	TRD	8	HICKORY		
70302	TRD	7	HICKORY		
70303	TRD	16	OAK		
70304	TRD	11	HICKORY		
70305	TRD	8	HICKORY		
70308	TRD	21	OAK		
70309	TRD	7	BOXELDER		
70310	TRD	9	HACKBERRY	X	
70311	TRD	9	HACKBERRY	X	
70312	TRD	8	BOXELDER	X	
70313	TRD	8	HICKORY	X	
70314	TRD	10	BOXELDER	X	
70315	TRD	10	HICKORY	X	
70316	TRD	13	OAK	X	
70317	TRD	23	COTTONWOOD	X	
70318	TRD	13	ELM	X	NON-QUALIFYING
70319	TRD	10	CHERRY	X	
70320	TRD	12	ASH	X	DEAD
70321	TRD	10	ASH	X	NON-QUALIFYING
70325	TRD	7	BOXELDER	X	
70328	TRD	20	OAK	X	
70329	TRD	16	HACKBERRY	X	
70330	TRD	9	HICKORY	X	
70332	TRD	7	CHERRY	X	
70333	TRD	12	CHERRY	X	
70334	TRD	13	BOXELDER	X	
70335	TRD	10	BOXELDER	X	
70342	TRD	9	BUCKTHORN	X	INVASIVE
70350	TRD	6	ASH	X	NON-QUALIFYING
70463	TRD	7	BLACK WALNUT	X	
70474	TRD	7	BOXELDER	X	
70475	TRD	7	BOXELDER	X	
70476	TRD	36	COTTONWOOD	X	
70481	TRD	14	OAK	X	
70483	TRD	6	COTTONWOOD	X	
70488	TRD	9	ASH	X	NON-QUALIFYING
70490	TRD	26	COTTONWOOD	X	
70491	TRD	36	COTTONWOOD	X	
70493	TRD	7	OAK	X	
70494	TRD	23	COTTONWOOD	X	
70495	TRD	9	ELM	X	NON-QUALIFYING
70496	TRD	21	COTTONWOOD	X	
70497	TRC	6	CEDAR	X	
70498	TRD	24	COTTONWOOD	X	
70499	TRC	6	CEDAR	X	
70502	TRD	7	HICKORY	X	
70504	TRD	9	OAK		
70510	TRD	6	ASH		NON-QUALIFYING
70512	TRD	20	OAK		
70513	TRD	18	OAK		
70515	TRD	17	OAK		
70521	TRD	10	OAK		
70522	TRD	9	OAK		
70523	TRC	9	CEDAR		
70524	TRD	14	OAK		
70525	TRD	15	OAK		
70528	TRD	7	HICKORY		
70529	TRD	16	OAK		

TREE INVENTORY

NO	TYPE	SIZE	SPECIES	REMOVED	NOTES
70530	TRD	10	BASSWOOD		
70532	TRD	22	OAK		
70536	TRD	11	OAK		
70537	TRD	7	ELM		NON-QUALIFYING
70538	TRD	6	ELM		NON-QUALIFYING
70542	TRD	10	OAK		
70543	TRD	10	ASPEN		
70544	TRD	7	ELM		NON-QUALIFYING
70545	TRD	8	ELM		NON-QUALIFYING
70546	TRD	9	CHERRY		
70547	TRD	12	ELM		NON-QUALIFYING
70548	TRD	11	ELM		NON-QUALIFYING
70549	TRD	7	ELM		NON-QUALIFYING
70550	TRD	10	ELM		NON-QUALIFYING
70551	TRD	6	ASH		NON-QUALIFYING
70552	TRD	15	OAK		
70553	TRD	10	ELM		NON-QUALIFYING
70554	TRD	17	OAK		
70555	TRD	6	HICKORY		
70556	TRD	9	CHERRY		
70557	TRD	11	CHERRY		
70558	TRD	6	ASH		NON-QUALIFYING
70559	TRD	14	ASH		NON-QUALIFYING
70562	TRD	22	OAK		
70563	TRD	10	HICKORY		
70571	TRD	6	ASH	X	NON-QUALIFYING
70572	TRD	11	ASH	X	NON-QUALIFYING
70573	TRD	10	ASH	X	NON-QUALIFYING
70574	TRD	14	ASH	X	NON-QUALIFYING
70575	TRD	7	ASH	X	NON-QUALIFYING
70576	TRD	6	ASH	X	NON-QUALIFYING
70578	TRD	10	BOXELDER	X	
70580	TRD	15	ASH		NON-QUALIFYING
70581	TRD	12	ELM		NON-QUALIFYING
70582	TRD	10	HACKBERRY		
70586	TRD	9	ASH	X	NON-QUALIFYING
70587	TRD	6	ASH	X	NON-QUALIFYING
70605	TRD	23	MAPLE	X	
70610	TRD	20	WALNUT	X	
70611	TRD	17	ASH	X	NON-QUALIFYING
70612	TRD	18	ASH	X	NON-QUALIFYING
70616	TRD	12	BUCKTHORN	X	INVASIVE
70618	TRD	8	ELM	X	NON-QUALIFYING
70619	TRD	9	HICKORY	X	
70621	TRD	6	ASH	X	NON-QUALIFYING
70627	TRD	6	ASH	X	NON-QUALIFYING
70628	TRD	8	ASH	X	NON-QUALIFYING
70629	TRD	6	BUCKTHORN		INVASIVE
70630	TRD	7	CHERRY		
70632	TRD	7	ASH		NON-QUALIFYING
70633	TRD	6	CHERRY		
70634	TRD	8	ASH		NON-QUALIFYING
70639	TRD	20	OAK		
70640	TRD	12	ELM		NON-QUALIFYING
70641	TRD	8	ASH		NON-QUALIFYING
70642	TRD	9	ELM		NON-QUALIFYING
70643	TRD	6	ASH		NON-QUALIFYING
70644	TRD	15	ASH		NON-QUALIFYING
70645	TRD	8	ASH		NON-QUALIFYING
70646	TRD	6	ASH		NON-QUALIFYING
70647	TRD	9	CHERRY		DEAD
70648	TRD	7	ASH		NON-QUALIFYING
70649	TRD	8	ASH		NON-QUALIFYING
70650	TRD	7	ASH		NON-QUALIFYING
70651	TRD	10	CHERRY		
70652	TRD	12	ASH		NON-QUALIFYING
70653	TRD	8	ASH		NON-QUALIFYING
70657	TRD	6	ASH		NON-QUALIFYING
70660	TRD	9	ASH		NON-QUALIFYING
70661	TRD	9	HACKBERRY		
70664	TRD	12	OAK		
70665	TRD	6	ASH		NON-QUALIFYING
70666	TRD	13	HICKORY		
70681	TRD	11	ASH		NON-QUALIFYING
70683	TRD	6	ELM		NON-QUALIFYING
70684	TRD	8	ELM		NON-QUALIFYING
70685	TRD	9	ELM		NON-QUALIFYING
70686	TRD	9	OAK		
70687	TRD	24	COTTONWOOD		
70688	TRD	16	ELM		NON-QUALIFYING
70689	TRD	12	OAK		
70693	TRD	9	ASH		NON-QUALIFYING
70696	TRD	7	ASH		NON-QUALIFYING
70697	TRD	9	ASH		NON-QUALIFYING
70698	TRD	8	HICKORY		
70699	TRD	7	ASH		NON-QUALIFYING
70703	TRC	12	CEDAR		
70704	TRC	14	CEDAR		
70705	TRC	24	CEDAR		
70706	TRC	9	CEDAR		
70708	TRC	14	CEDAR		
70709	TRC	12	CEDAR		
70710	TRC	17	CEDAR		
70711	TRD	8	ELM		NON-QUALIFYING
70712	TRD	12	ELM		NON-QUALIFYING
70713	TRD	9	ELM		NON-QUALIFYING
70714	TRD	12	ELM		NON-QUALIFYING
70715	TRD	9	ELM		NON-QUALIFYING
70717	TRD	10	BUCKTHORN		INVASIVE
70718	TRD	8	ASH		NON-QUALIFYING
70719	TRD	9	ASH		NON-QUALIFYING
70723	TRD	13	CHERRY		
70730	TRD	6	ASH		NON-QUALIFYING
70731	TRD	7	ELM		NON-QUALIFYING
70732	TRD	7	ELM		NON-QUALIFYING
70737	TRD	11	BUCKTHORN		INVASIVE
70740	TRD	11	CHERRY		

CivilSite GROUP
Civil Engineering ˚ Surveying ˚ Landscape Architecture
5000 Glenwood Avenue
Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

PRELIMINARY: NOT FOR CONSTRUCTION

PROJECT
DOUGLAS ROAD MULTIFAMILY
E POINT DOUGLAS ROAD S, COTTAGE GROVE, 55016

OWNER
YELLOWTREE CORPORATION
1834 EAST 38TH STREET, MINNEAPOLIS, MN 55407

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Patrick J. Sarver
DATE 12/08/2025 LICENSE NO. 24904

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
10/29/2025	CITY SUBMITTAL
10/30/2025	WATERSHED SUBMITTAL
11/14/2025	CITY RESUBMITTAL
12/08/2025	CITY RESUBMITTAL

PROJECT MANAGER	PATRICK SARVER
CONTACT NUMBER	612-615-0060 X 702
DRAWN BY	BN, AM
REVIEWED BY	PS
PROJECT NUMBER	25157

REVISION SUMMARY

DATE	DESCRIPTION

TREE PRESERVATION PLAN

C1.2

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TREE INVENTORY					
NO	TYPE	SIZE	SPECIES	REMOVED	NOTES
70741	TRC	7	CEDAR		
70742	TRD	9	ASH		NON-QUALIFYING
70743	TRD	7	ELM		NON-QUALIFYING
70745	TRD	6	ELM		NON-QUALIFYING
70752	TRD	8	ASH		NON-QUALIFYING
70753	TRD	11	CHERRY		
70754	TRD	8	ASH		NON-QUALIFYING
70755	TRD	13	CHERRY		
70756	TRD	7	ASPEN		
70757	TRC	6	CEDAR		
70761	TRD	8	HACKBERRY		
70762	TRC	8	CEDAR		
70763	TRD	7	ASPEN		
70764	TRD	6	ASPEN		
70771	TRD	12	ELM		NON-QUALIFYING
70772	TRD	10	ELM		NON-QUALIFYING
70773	TRD	9	ELM		NON-QUALIFYING
70774	TRD	7	ELM		NON-QUALIFYING
70775	TRC	13	CEDAR		
70776	TRD	12	ELM		NON-QUALIFYING
70782	TRC	13	CEDAR		
70783	TRD	7	ELM		NON-QUALIFYING
70784	TRD	7	ELM		NON-QUALIFYING
70785	TRD	9	ELM		NON-QUALIFYING
70786	TRD	10	ELM		NON-QUALIFYING
70787	TRC	13	CEDAR		
70788	TRD	12	WALNUT		
70789	TRC	14	CEDAR		
70791	TRD	8	ASH		NON-QUALIFYING
70792	TRD	7	ASH		NON-QUALIFYING
70793	TRD	7	ASH		NON-QUALIFYING
70794	TRD	12	WALNUT		
70795	TRD	6	ASH		NON-QUALIFYING
70797	TRD	11	HACKBERRY		
70798	TRC	13	CEDAR		
70799	TRD	7	ASH		NON-QUALIFYING
70800	TRD	6	ELM		NON-QUALIFYING
70801	TRD	7	BUCKTHORN		INVASIVE
70802	TRD	6	BUCKTHORN		INVASIVE
70803	TRC	6	CEDAR		
70804	TRC	14	CEDAR		
70805	TRD	6	BUCKTHORN		INVASIVE
70806	TRD	9	ELM		NON-QUALIFYING
70807	TRD	10	ELM		NON-QUALIFYING
70808	TRD	9	ELM		NON-QUALIFYING
70809	TRC	11	CEDAR		
70810	TRC	14	CEDAR		
70811	TRD	8	BUCKTHORN		INVASIVE
70812	TRD	6	BUCKTHORN		INVASIVE
70819	TRD	6	BUCKTHORN		INVASIVE
70829	TRD	26	ELM	X	NON-QUALIFYING
70830	TRD	9	HACKBERRY	X	
70831	TRD	6	HACKBERRY	X	
70834	TRC	14	CEDAR	X	
70835	TRD	8	CHERRY		
70836	TRD	10	ELM		NON-QUALIFYING
70837	TRD	8	ELM		NON-QUALIFYING
70838	TRD	8	ELM		NON-QUALIFYING
70839	TRC	13	CEDAR		
70840	TRC	13	CEDAR		
70841	TRD	8	ASH	X	NON-QUALIFYING
70842	TRD	7	BUCKTHORN	X	INVASIVE
70844	TRD	8	ELM	X	NON-QUALIFYING
70845	TRD	9	ELM	X	NON-QUALIFYING
70846	TRD	6	ELM	X	NON-QUALIFYING
70847	TRD	7	ELM	X	NON-QUALIFYING
70848	TRD	7	ELM	X	NON-QUALIFYING
70849	TRD	8	BOXELDER	X	
70850	TRD	8	ELM	X	NON-QUALIFYING
70851	TRD	8	ELM	X	NON-QUALIFYING
70852	TRD	6	ASH		NON-QUALIFYING
70853	TRD	16	ELM		NON-QUALIFYING
70855	TRD	7	CHERRY		
70856	TRD	7	ELM	X	NON-QUALIFYING
70859	TRD	13	ELM	X	NON-QUALIFYING
70860	TRD	9	BOXELDER	X	
70877	TRD	6	ASH		NON-QUALIFYING
70878	TRD	8	ASH		NON-QUALIFYING
70882	TRD	10	HACKBERRY		
70883	TRD	7	ASH		NON-QUALIFYING
70891	TRD	6	HACKBERRY		
70902	TRD	8	HACKBERRY		
70906	TRD	7	BOXELDER		
70908	TRD	7	ASH		NON-QUALIFYING
70910	TRD	6	HACKBERRY		
70911	TRD	6	COTTONWOOD		
70912	TRD	8	HACKBERRY		
70913	TRD	7	CHERRY		
70915	TRD	6	ASH		NON-QUALIFYING
70916	TRD	11	HACKBERRY		
70917	TRD	9	ASH		NON-QUALIFYING
70918	TRD	8	ASH		NON-QUALIFYING
70919	TRD	19	MAPLE		
70920	TRD	32	MAPLE		
70921	TRD	10	ELM		NON-QUALIFYING
70934	TRD	12	HACKBERRY		
70935	TRD	13	HACKBERRY		
70936	TRD	8	CHERRY		
70937	TRD	6	CHERRY		
70938	TRD	20	MAPLE		
70939	TRD	30	MAPLE		
70940	TRD	8	ELM		NON-QUALIFYING
70941	TRD	13	MAPLE		
70942	TRD	7	HACKBERRY		
70943	TRD	6	HACKBERRY		
70944	TRD	15	ELM		NON-QUALIFYING
70945	TRD	10	HACKBERRY	X	

TREE INVENTORY					
NO	TYPE	SIZE	SPECIES	REMOVED	NOTES
70946	TRD	11	CHERRY		
70947	TRD	6	BUCKTHORN		INVASIVE
70952	TRC	10	CEDAR		
70953	TRC	6	CEDAR		
70954	TRD	12	UNKNOWN		DEAD
70955	TRD	7	HACKBERRY		
70956	TRD	7	ASH		NON-QUALIFYING
70957	TRD	12	HACKBERRY		
70958	TRD	7	ASH		NON-QUALIFYING
70959	TRD	6	ASH		NON-QUALIFYING
70960	TRD	7	BOXELDER		
70961	TRD	12	HACKBERRY	X	
70962	TRD	6	BUCKTHORN	X	INVASIVE
70963	TRD	9	HACKBERRY	X	
70965	TRD	7	HACKBERRY	X	
70966	TRD	9	HACKBERRY	X	
70967	TRD	6	BOXELDER	X	
70968	TRD	24	OAK	X	
70969	TRD	7	HACKBERRY	X	
70970	TRD	9	HACKBERRY	X	
70971	TRD	16	BLACK WALNUT	X	
70972	TRD	16	ASH	X	NON-QUALIFYING
70973	TRD	7	HACKBERRY	X	
70974	TRD	7	HACKBERRY	X	
70975	TRD	9	HACKBERRY	X	
70976	TRD	13	ELM	X	NON-QUALIFYING
70977	TRD	6	HACKBERRY	X	
70978	TRD	8	HACKBERRY		
70979	TRD	15	MAPLE	X	
70980	TRD	14	MAPLE	X	
70981	TRD	39	MAPLE	X	
70982	TRD	9	HACKBERRY		
70987	TRD	9	ASH	X	NON-QUALIFYING
70988	TRD	7	HACKBERRY	X	
70993	TRD	6	BUCKTHORN		INVASIVE
70994	TRD	6	BUCKTHORN	X	INVASIVE
70995	TRD	6	BUCKTHORN	X	INVASIVE
70997	TRD	34	COTTONWOOD	X	
70998	TRD	9	ELM	X	NON-QUALIFYING
70999	TRD	16	ASH	X	NON-QUALIFYING
71001	TRD	7	MAPLE	X	
71002	TRD	16	HACKBERRY	X	
71008	TRD	9	ELM	X	NON-QUALIFYING
71010	TRD	6	BUCKTHORN	X	INVASIVE
71011	TRD	8	BOXELDER	X	
71014	TRD	10	BUCKTHORN	X	INVASIVE
71015	TRD	17	BOXELDER	X	
71017	TRD	6	BOXELDER	X	
71024	TRD	8	ASH	X	NON-QUALIFYING
71025	TRD	7	BOXELDER	X	
71026	TRD	7	BUCKTHORN		INVASIVE
71028	TRD	8	UNKNOWN	X	DEAD
71029	TRD	12	BOXELDER	X	
71030	TRD	9	BUCKTHORN	X	INVASIVE
71031	TRD	32	MAPLE	X	
71032	TRD	9	CHERRY	X	
71034	TRD	8	BUCKTHORN	X	INVASIVE
71035	TRD	12	BOXELDER	X	DEAD
71036	TRD	6	BUCKTHORN	X	INVASIVE
71037	TRD	15	CATALPA	X	
71038	TRD	9	HICKORY	X	
71039	TRD	7	BUCKTHORN	X	INVASIVE
71040	TRD	9	CHERRY	X	
71041	TRD	22	ELM	X	NON-QUALIFYING
71042	TRD	8	ELM	X	NON-QUALIFYING
71052	TRD	7	BOXELDER	X	
71067	TRD	16	ASH	X	NON-QUALIFYING
71071	TRD	18	ASH	X	NON-QUALIFYING
71072	TRD	21	ASH	X	NON-QUALIFYING
71074	TRD	8	ASH	X	NON-QUALIFYING
71075	TRD	9	CHERRY	X	
71080	TRD	8	HACKBERRY	X	
71081	TRD	8	BOXELDER	X	
71082	TRD	10	ASH	X	NON-QUALIFYING
71083	TRD	7	ELM	X	NON-QUALIFYING
71086	TRD	8	CATALPA	X	
71087	TRD	16	BOXELDER	X	
71088	TRD	8	ASH	X	NON-QUALIFYING
71092	TRD	6	ASH	X	NON-QUALIFYING
71093	TRD	7	HACKBERRY	X	
71095	TRD	6	BOXELDER	X	
71096	TRD	6	ASH	X	NON-QUALIFYING
71097	TRD	7	HACKBERRY	X	
71099	TRD	7	BOXELDER	X	
71100	TRD	6	BUCKTHORN	X	INVASIVE
71101	TRD	6	BUCKTHORN	X	INVASIVE
71102	TRD	6	BUCKTHORN		INVASIVE
71103	TRD	6	BUCKTHORN		INVASIVE
71104	TRD	7	BUCKTHORN	X	INVASIVE
71105	TRD	8	CHERRY	X	
71106	TRD	10	CHERRY	X	
71107	TRD	6	BOXELDER	X	DEAD
71110	TRD	54	MAPLE	X	
71111	TRD	6	HACKBERRY	X	
71117	TRD	10	BOXELDER	X	
71118	TRD	11	ELM	X	NON-QUALIFYING
71126	TRD	13	ELM	X	NON-QUALIFYING

TREE INVENTORY & REPLACEMENT CALCULATIONS	CAL IN.
TOTAL QUALIFYING HEALTH CAL. IN. (SEE INVENTORY)	4023
PERMITTED TREES REMOVAL WITH NO REPLACEMENT OBLIGATION (40% OR LESS)	1609
PROPOSED QUALIFYING CAL. IN. REMOVAL	994
DELTA	-615
REPLACEMENT OBLIGATION (IF DELTA IS LESS THAN 0 THEN NO REPLACEMENT TREES REQUIRED)	0

EXISTING TREE COUNT SUMMARY		
ASH	140	22.19%
ASPEN	4	0.63%
BASSWOOD	3	0.48%
BITTERNUT	1	0.16%
BLACK WALNUT	2	0.32%
BOXELDER	46	7.29%
BUCKTHORN	47	7.45%
CATALPA	2	0.32%
CEDAR	31	4.91%
CHERRY	44	6.97%
COTTONWOOD	29	4.60%
ELM	109	17.12%
HACKBERRY	61	9.67%
HICKORY	39	6.18%
HOPHORNBEAM	3	0.48%
IRONWOOD	3	0.48%
MAPLE	13	2.06%
OAK	44	6.97%
PERSIMMON	1	0.16%
PINE	1	0.16%
UNKNOWN	2	0.32%
WALNUT	7	1.11%
TOTAL	631	100.00%

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Civil Engineering ˚ Surveying ˚ Landscape Architecture
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Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

PRELIMINARY: NOT FOR CONSTRUCTION

PROJECT
DOUGLAS ROAD MULTIFAMILY
E POINT DOUGLAS ROAD S, COTTAGE GROVE, 55016

OWNER
YELLOWTREE CORPORATION
1834 EAST 38TH STREET, MINNEAPOLIS, MN 55407

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Patrick J. Sarver
DATE 12/08/2025 LICENSE NO. 24904

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
10/29/2025	CITY SUBMITTAL
10/30/2025	WATERSHED SUBMITTAL
11/14/2025	CITY RESUBMITTAL
12/08/2025	CITY RESUBMITTAL

PROJECT MANAGER	PATRICK SARVER
CONTACT NUMBER	612-615-0060 X 702
DRAWN BY	BN, AM
REVIEWED BY	PS
PROJECT NUMBER	25157

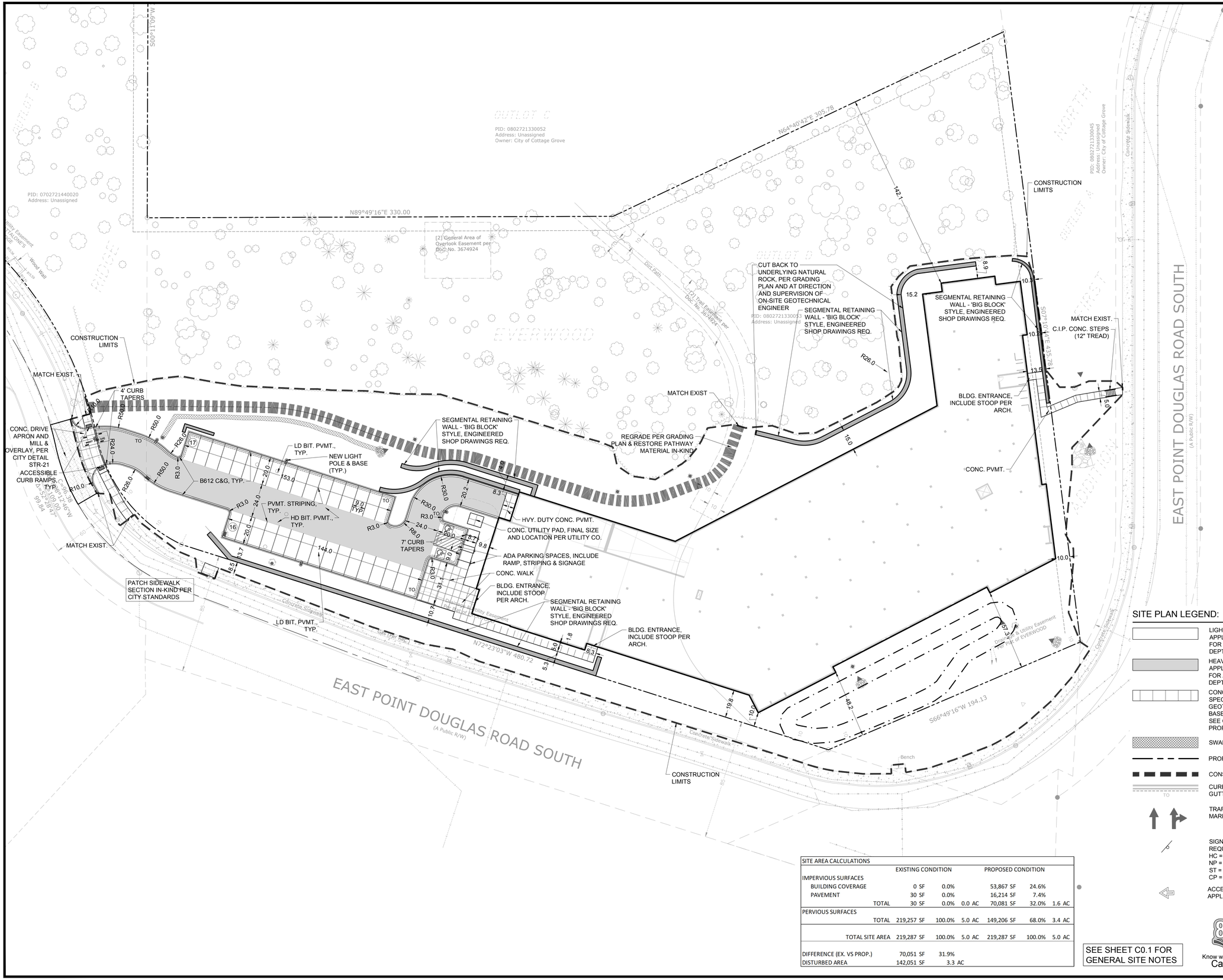
REVISION SUMMARY

DATE	DESCRIPTION

TREE PRESERVATION PLAN

C1.3

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SITE PLAN LEGEND:

- LIGHT DUTY BITUMINOUS PAVEMENT (IF APPLICABLE). SEE GEOTECHNICAL REPORT FOR AGGREGATE BASE & WEAR COURSE DEPTH, SEE DETAIL.
- HEAVY DUTY BITUMINOUS PAVEMENT (IF APPLICABLE). SEE GEOTECHNICAL REPORT FOR AGGREGATE BASE & WEAR COURSE DEPTH, SEE DETAIL.
- CONCRETE PAVEMENT (IF APPLICABLE) AS SPECIFIED (PAD OR WALK) SEE GEOTECHNICAL REPORT FOR AGGREGATE BASE & CONCRETE DEPTHS, WITHIN ROW SEE CITY DETAIL, WITHIN PRIVATE PROPERTY SEE CSG DETAIL
- SWALE BOTTOM FOOTPRINT
- PROPERTY LINE
- CONSTRUCTION LIMITS
- TO — CURB AND GUTTER-SEE NOTES (T.O.) TIP OUT GUTTER WHERE APPLICABLE-SEE PLAN
- TRAFFIC DIRECTIONAL ARROW PAVEMENT MARKINGS
- SIGN AND POST ASSEMBLY. SHOP DRAWINGS REQUIRED.
  HC = ACCESSIBLE SIGN
  NP = NO PARKING FIRE LANE
  ST = STOP
  CP = COMPACT CAR PARKING ONLY
- ACCESSIBILITY ROUTE ARROW (IF APPLICABLE) DO NOT PAINT.

SITE AREA CALCULATIONS	EXISTING CONDITION			PROPOSED CONDITION		
IMPERVIOUS SURFACES						
BUILDING COVERAGE	0 SF	0.0%		53,867 SF	24.6%	
PAVEMENT	30 SF	0.0%		16,214 SF	7.4%	
TOTAL	30 SF	0.0%	0.0 AC	70,081 SF	32.0%	1.6 AC
PERVIOUS SURFACES						
TOTAL	219,257 SF	100.0%	5.0 AC	149,206 SF	68.0%	3.4 AC
TOTAL SITE AREA	219,287 SF	100.0%	5.0 AC	219,287 SF	100.0%	5.0 AC
DIFFERENCE (EX. VS PROP.)	70,051 SF	31.9%				
DISTURBED AREA	142,051 SF	3.3 AC				

SEE SHEET C0.1 FOR GENERAL SITE NOTES

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PROJECT MANAGER	PATRICK SARVER
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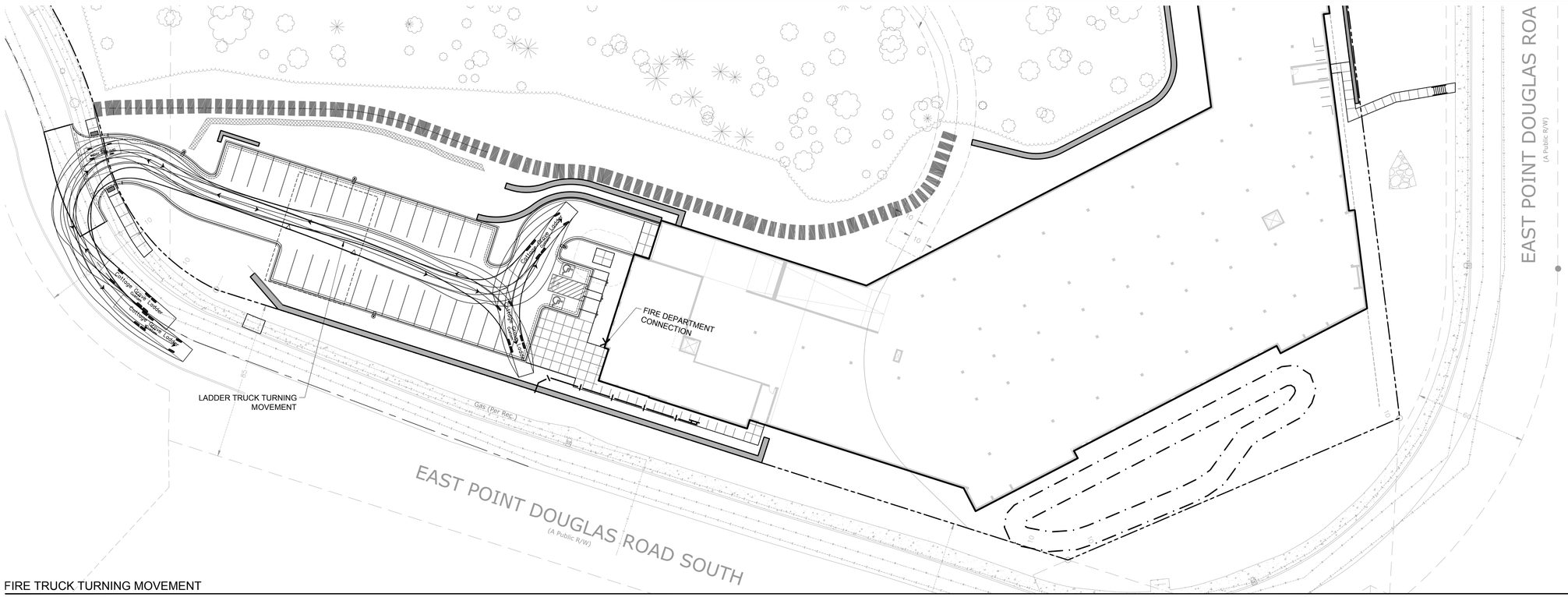
REVISION SUMMARY

DATE	DESCRIPTION

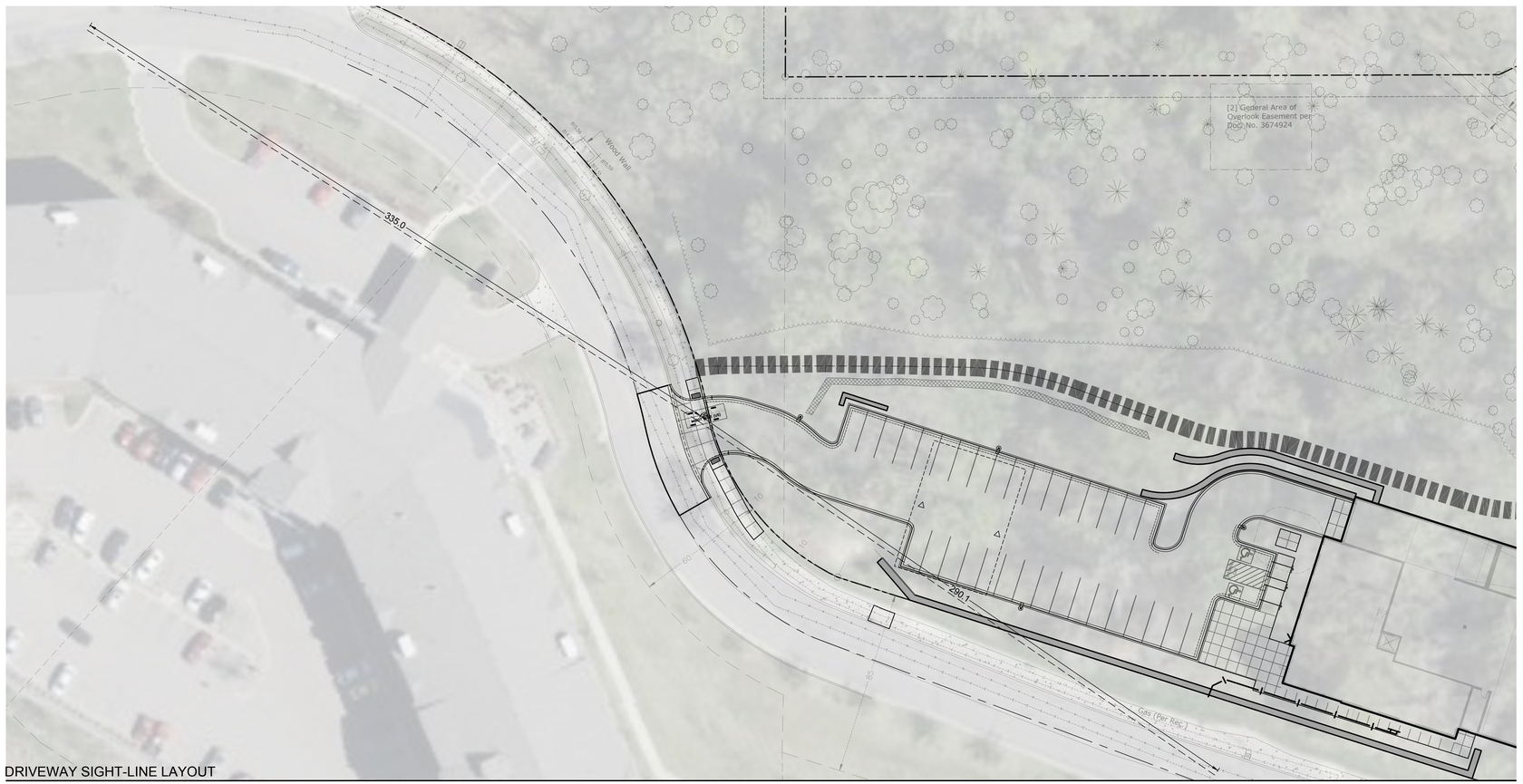
SITE PLAN

C2.0

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FIRE TRUCK TURNING MOVEMENT



DRIVEWAY SIGHT-LINE LAYOUT

Know what's below. Call before you dig.

1" = 30'-0"
15'-0" 0 30'-0"

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PROJECT MANAGER	PATRICK SARVER
CONTACT NUMBER	612-615-0060 X 702
DRAWN BY	BN, AM
REVIEWED BY	PS
PROJECT NUMBER	25157

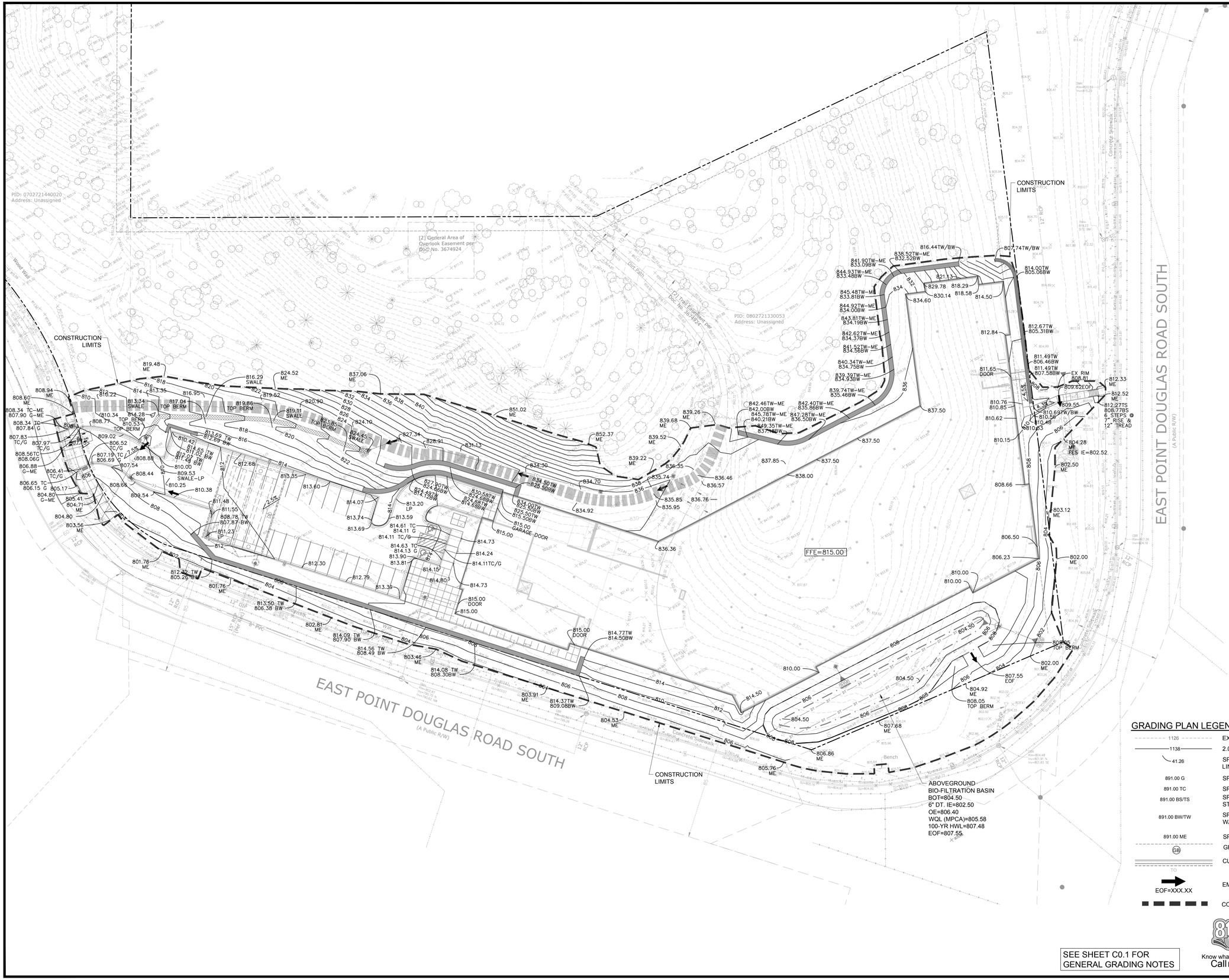
REVISION SUMMARY

DATE	DESCRIPTION

TURNING MOVEMENT & SITE-LINE LAYOUT

C2.1

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GRADING PLAN LEGEND:

1126	EX. 2' CONTOUR ELEVATION INTERVAL
1138	2.0' CONTOUR ELEVATION INTERVAL
41.26	SPOT GRADE ELEVATION (GUTTER/FLOW LINE UNLESS OTHERWISE NOTED)
891.00 G	SPOT GRADE ELEVATION GUTTER
891.00 TC	SPOT GRADE ELEVATION TOP OF CURB
891.00 BS/TS	SPOT GRADE ELEVATION BOTTOM OF STAIRS/TOP OF STAIRS
891.00 BW/TW	SPOT GRADE ELEVATION BOTTOM OF WALL/TOP OF WALL
891.00 ME	SPOT GRADE ELEVATION MATCH EXISTING
GB	GRADE BREAK - HIGH POINTS
TO	CURB AND GUTTER (T.O = TIP OUT)
EOF=XXX.XX	EMERGENCY OVERFLOW
	CONSTRUCTION LIMITS

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Patrick J. Sarver
DATE 12/08/2025 LICENSE NO. 24904

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
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DRAWN BY	BN, AM
REVIEWED BY	PS
PROJECT NUMBER	25157

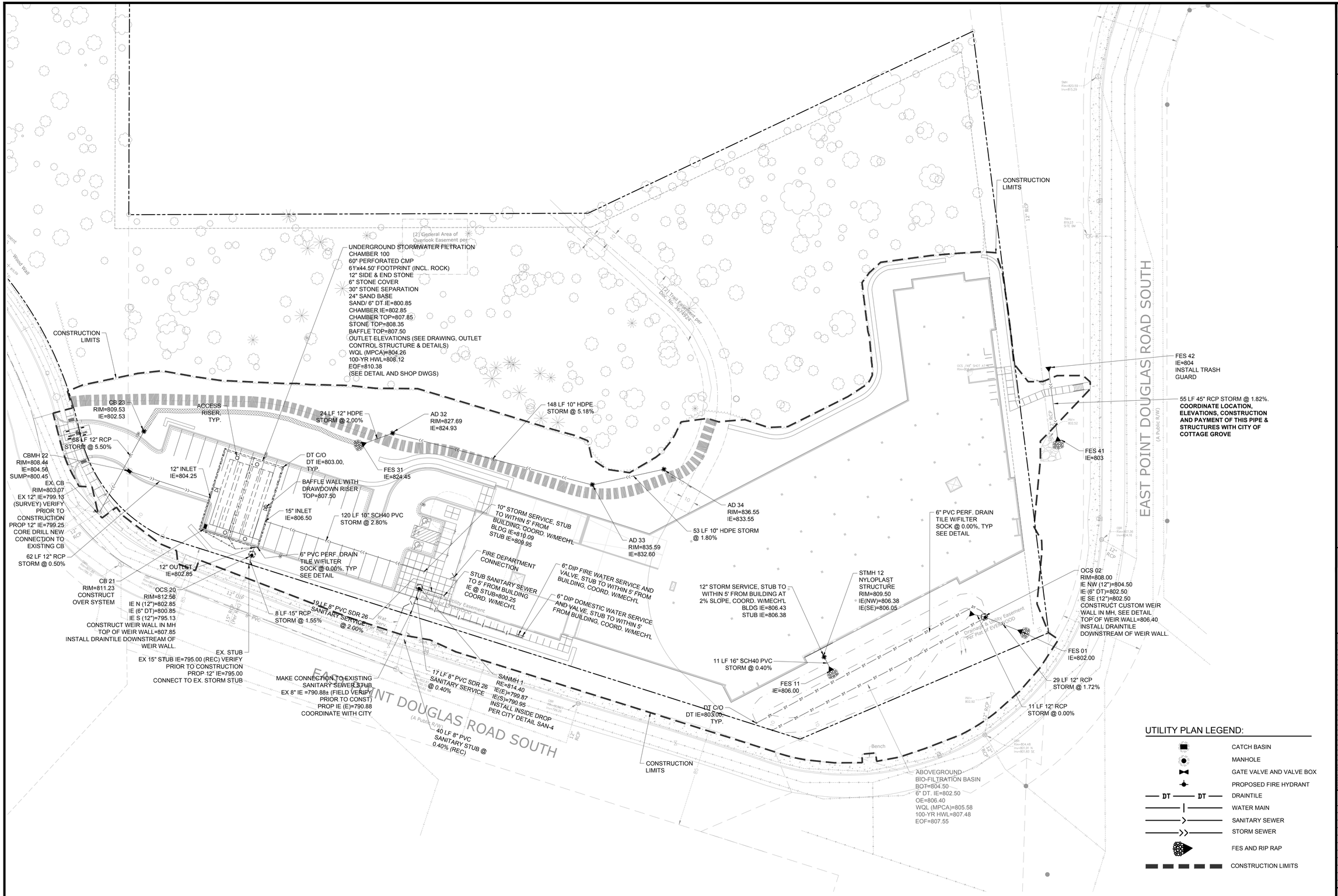
REVISION SUMMARY

DATE	DESCRIPTION

GRADING PLAN

C3.0

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UTILITY PLAN LEGEND:

- CATCH BASIN
- MANHOLE
- GATE VALVE AND VALVE BOX
- PROPOSED FIRE HYDRANT
- DT — DT — DRAINTILE
- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- FES AND RIP RAP
- CONSTRUCTION LIMITS

SEE SHEET C0.1 FOR GENERAL UTILITY NOTES

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

1" = 30'-0"
15'-0" 0 30'-0"

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PRELIMINARY: NOT FOR CONSTRUCTION

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OWNER
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ANDERS S. MELBY
DATE 12/08/2025 LICENSE NO. 58960

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
10/29/2025	CITY SUBMITTAL
10/30/2025	WATERSHED SUBMITTAL
11/14/2025	CITY RESUBMITTAL
12/08/2025	CITY RESUBMITTAL

PROJECT MANAGER	PATRICK SARVER
CONTACT NUMBER	612-615-0060 X 702
DRAWN BY	BN, AM
REVIEWED BY	PS
PROJECT NUMBER	25137

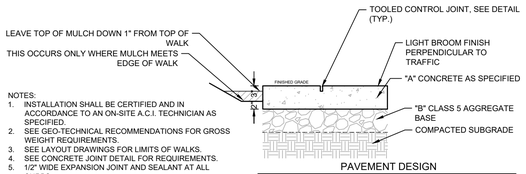
REVISION SUMMARY

DATE	DESCRIPTION

UTILITY PLAN

C4.0

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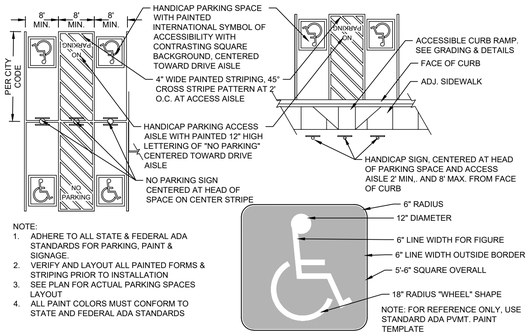
NOTES:
1. INSTALLATION SHALL BE CERTIFIED AND IN ACCORDANCE TO AN ON-SITE A.C.I. TECHNICIAN AS SPECIFIED.
2. SEE GEO-TECHNICAL RECOMMENDATIONS FOR GROSS WEIGHT REQUIREMENTS.
3. SEE LAYOUT DRAWINGS FOR LIMITS OF WALKS.
4. SEE CONCRETE JOINT DETAIL FOR REQUIREMENTS.
5. 1/2" WIDE EXPANSION JOINT AND SEALANT AT ALL CURBS.
6. IF NO DESIGN IS DEFINED IN CHART, SEE GEOTECH REPORT FOR FINAL PAVEMENT SECTION.
7. IF DESIGN IS DEFINED IN CHART, IT SHOULD BE CONSIDERED FOR BIDDING PURPOSES ONLY. REFER TO GEOTECH FOR FINAL PAVEMENT SECTION.

PAVEMENT DESIGN

TYPE	CONC. (A)	AGG.(B)
WALKS	6.0"	4.0"
CONC. PVMT.	X.X"	X.X"

1. CURING:
   1.1. APPLY CURING COMPOUNDS IMMEDIATELY UPON FINISHING OF CONC. SURFACE.
   1.2. ALL CONC. SURFACES SHALL HAVE CURING COMPOUNDS ALLIED PER ASTM C-309, AT 200 S.F. PER GAL.
   1.3. ALL CURING COMPOUNDS SHALL BE TYPE 1 (CLEAR) AND CONTAIN ACRYLIC BASED CLASS B RESTRICTED RESIN SOLIDS.

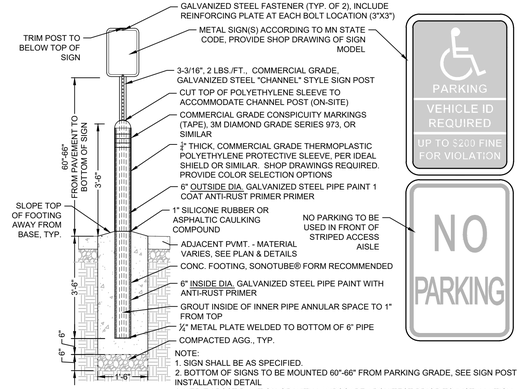
1 CONCRETE PVMT./WALK/PAD
N T S (PRIVATE PROPERTY)



NOTE:
1. ADHERE TO ALL STATE & FEDERAL ADA STANDARDS FOR PARKING, PAINT & SIGNAGE.
2. VERIFY AND LAYOUT ALL PAINTED FORMS & STRIPING PRIOR TO INSTALLATION
3. SEE PLAN FOR ACTUAL PARKING SPACES LAYOUT
4. ALL PAINT COLORS MUST CONFORM TO STATE AND FEDERAL ADA STANDARDS

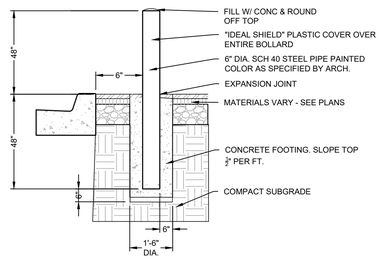
PAINTED SYMBOL DIAGRAM

2 ACCESSIBLE PARKING PAVEMENT MARKING
N T S

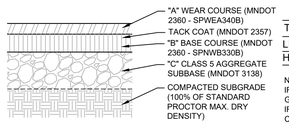


NOTE:
1. SIGN SHALL BE AS SPECIFIED.
2. BOTTOM OF SIGNS TO BE MOUNTED 60"-66" FROM PARKING GRADE, SEE SIGN POST INSTALLATION DETAIL
3. VERIFY POST PAINT COLOR WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

3 ACCESSIBLE SIGN & CHANNEL POST - LOT LOCATION
N T S



4 PIPE BOLLARD
N T S

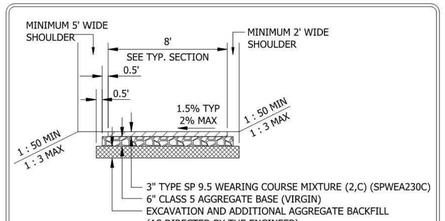


PAVEMENT DESIGN

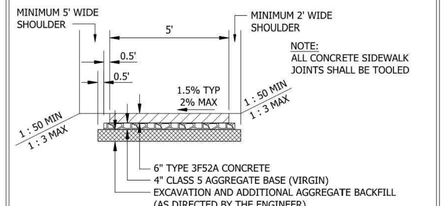
TYPE	WEAR (A)	BASE (B)	AGG.(C)
LIGHT DUTY	X.X"	X.X"	X.X"
HEAVY DUTY	X.X"	X.X"	X.X"

NOTE:
IF NO DESIGN IS DEFINED IN ABOVE CHART, SEE GEOTECH REPORT FOR FINAL PAVEMENT SECTION.
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5 BITUMINOUS PAVEMENT - ALL TYPES
N T S



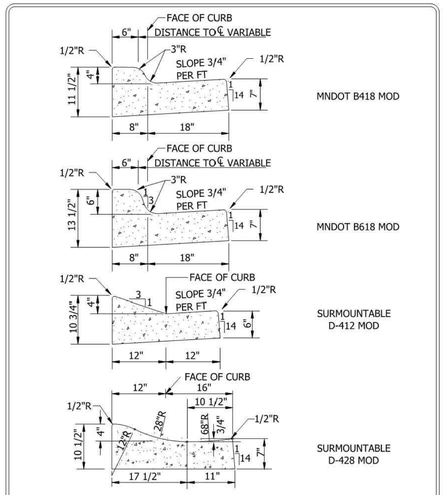
BITUMINOUS TRAIL



CONCRETE SIDEWALK

Cottage Grove — Where Pride and Prosperity Meet	STANDARD DETAILS TYPICAL BITUMINOUS TRAIL AND CONCRETE SIDEWALK SECTIONS COTTAGE GROVE, MINNESOTA	JANUARY 2023 PLATE NO. STR-9

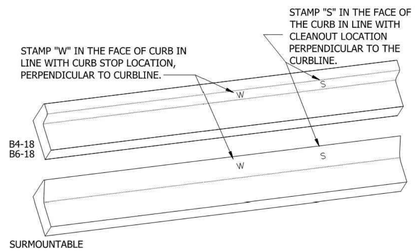
48_STR9.DWG

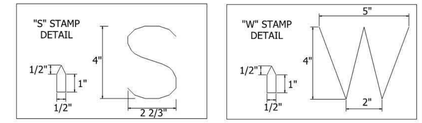


Cottage Grove — Where Pride and Prosperity Meet	STANDARD DETAILS CURB AND GUTTER COTTAGE GROVE, MINNESOTA	JANUARY 2023 PLATE NO. STR-10

48_STR10.DWG

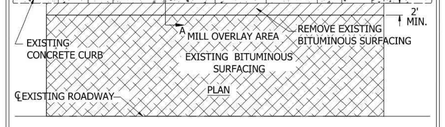
NOTES:
1. ALL NEW AND EXISTING WATER AND SEWER SERVICE LOCATIONS SHALL BE MARKED IN CURB AS SHOWN. STAMPING OF SERVICE LOCATIONS SHALL BE CONSIDERED INCIDENTAL TO THE PRICE OF CURB.
2. CONCRETE CURB PANELS WITH W'S AND S'S NOT PLACED BY SPECIFIED STAMP WILL NOT BE ACCEPTED.

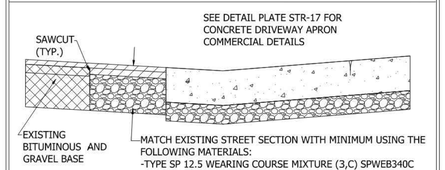




Cottage Grove — Where Pride and Prosperity Meet	STANDARD DETAILS WATER AND SEWER SERVICE LOCATION STAMP IN CURB COTTAGE GROVE, MINNESOTA	JANUARY 2023 PLATE NO. STR-11

48_STR11.DWG



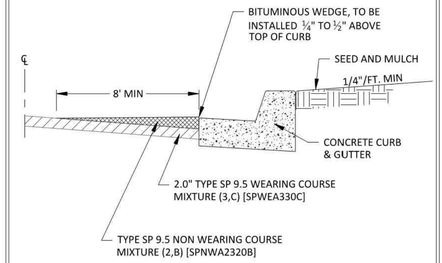


SECTION A-A

NOTES:
1. CITY RIGHT-OF-WAY PERMIT IS REQUIRED PRIOR TO CONSTRUCTION.
2. FOR MATERIAL SPECIFICATION, REFER TO RIGHT-OF-WAY PERMIT.

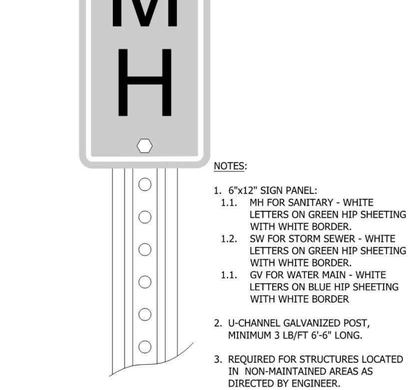
Cottage Grove — Where Pride and Prosperity Meet	STANDARD DETAILS CONCRETE COMMERCIAL DRIVEWAY APRON OR CURB AND GUTTER CONNECT TO EXISTING STREET COTTAGE GROVE, MINNESOTA	JANUARY 2025 PLATE NO. STR-21

48_STR21.DWG



Cottage Grove — Where Pride and Prosperity Meet	STANDARD DETAILS CONCRETE CURB PROTECTION BITUMINOUS WEDGE COTTAGE GROVE, MINNESOTA	JANUARY 2023 PLATE NO. STR-26

48_STR26.DWG



NOTES:
1. 6"x12" SIGN PANEL:
   1.1. MH FOR SANITARY - WHITE LETTERS ON GREEN HIP SHEETING WITH WHITE BORDER.
   1.2. SW FOR STORM SEWER - WHITE LETTERS ON GREEN HIP SHEETING WITH WHITE BORDER.
   1.1. GV FOR WATER MAIN - WHITE LETTERS ON BLUE HIP SHEETING WITH WHITE BORDER
2. U-CHANNEL GALVANIZED POST, MINIMUM 3 LB/FT 6'-6" LONG.
3. REQUIRED FOR STRUCTURES LOCATED IN NON-MAINTAINED AREAS AS DIRECTED BY ENGINEER.

Cottage Grove — Where Pride and Prosperity Meet	STANDARD DETAILS STRUCTURE MARKER SIGN COTTAGE GROVE, MINNESOTA	JANUARY 2023 PLATE NO. STR-41

48_STR41.DWG

CivilSite GROUP
Civil Engineering ˚ Surveying ˚ Landscape Architecture
5000 Glenwood Avenue
Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

PRELIMINARY: NOT FOR CONSTRUCTION

PROJECT: DOUGLAS ROAD MULTIFAMILY
E POINT DOUGLAS ROAD S, COTTAGE GROVE, 55016

OWNER: YELLOWTREE CORPORATION
1834 EAST 38TH STREET, MINNEAPOLIS, MN 55407

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LANDSCAPE ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.

Patrick J. Sarver
DATE 12/08/2025 LICENSE NO. 24904

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
10/29/2025	CITY SUBMITTAL
10/30/2025	WATERSHED SUBMITTAL
11/14/2025	CITY RESUBMITTAL
12/08/2025	CITY RESUBMITTAL

PROJECT MANAGER	PATRICK SARVER
CONTACT NUMBER	612-615-0060 X 702
DRAWN BY	BN, AM
REVIEWED BY	PS
PROJECT NUMBER	25137

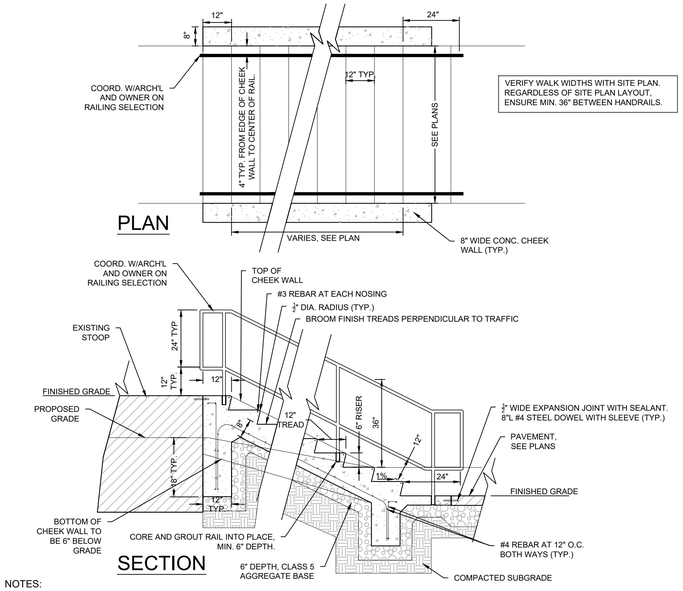
REVISION SUMMARY

DATE	DESCRIPTION

CIVIL DETAILS

C5.0

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NOTES:
1. SOIL TESTING, COMPACTION, AND BACKFILLING SHALL BE IN ACCORDANCE TO THE GEO-TECHNICAL RECOMMENDATIONS OR AS SPECIFIED.
2. SUBMIT RAILING SHOP DRAWINGS FOR REVIEW BY THE LANDSCAPE ARCHITECT PRIOR TO FABRICATION. COORDINATE FABRICATION OF RAILING WITH OTHER RAIL OR FENCE TYPES. SHOP DRAWINGS SHALL BE COMPLIANT WITH CURRENT ADA ACCESSIBILITY REQUIREMENTS.
3. COORDINATE INSTALLATION OF RETAINING WALL PRIOR TO INSTALLATION OF STAIRS-SEE RETAINING WALL DETAIL.
4. NO SPACE SHALL BE ALLOWED BETWEEN STAIRS AND RETAINING WALL UNLESS OTHERWISE SHOWN. CONCRETE SHALL DIRECTLY ABUT FACE OF RETAINING WALL.

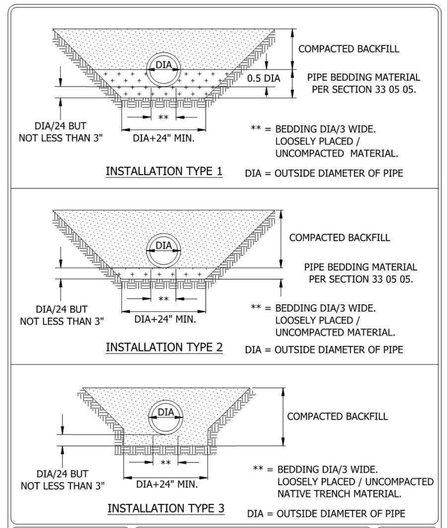
1 EXTERIOR SITE STAIR & HANDRAIL
NTS



PVC PIPE FOUNDATION & BEDDING IN GOOD SOILS

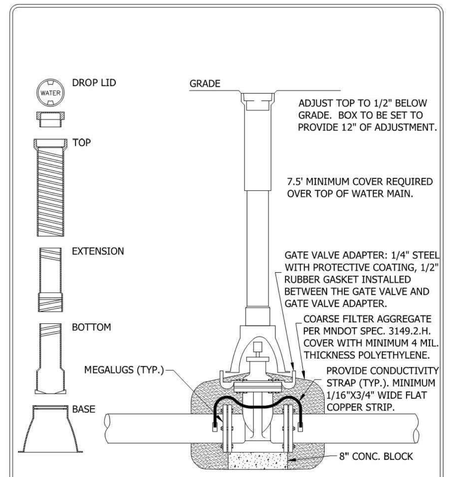
STANDARD DETAILS	JANUARY 2023
PIPE FOUNDATION & BEDDING METHOD FOR PVC	
COTTAGE GROVE, MINNESOTA	PLATE NO. BED-1

48_BED1.DWG



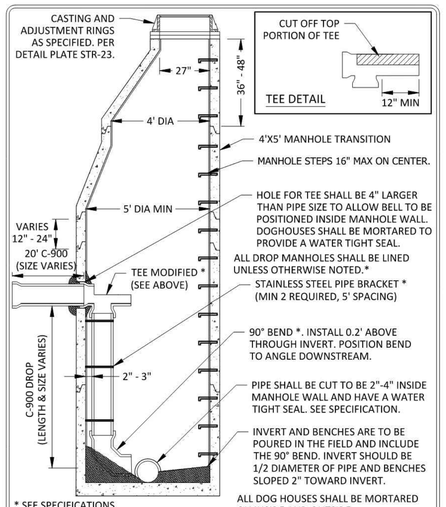
STANDARD DETAILS	JANUARY 2023
PIPE FOUNDATION & BEDDING METHODS FOR RCP & DIP	
COTTAGE GROVE, MINNESOTA	PLATE NO. BED-2

48_BED2.DWG



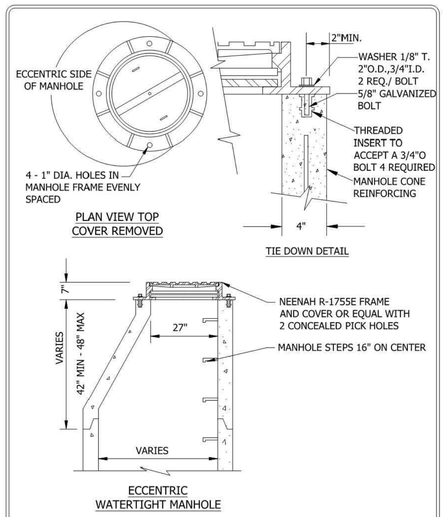
STANDARD DETAILS	JANUARY 2023
GATE VALVE AND BOX INSTALLATION	
COTTAGE GROVE, MINNESOTA	PLATE NO. WAT-3

48_WAT3.DWG



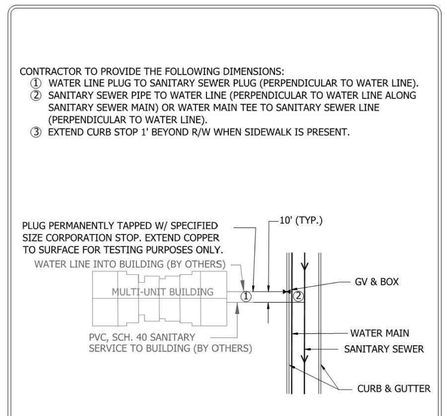
STANDARD DETAILS	JANUARY 2025
SANITARY SEWER DROP INLET MANHOLE	
COTTAGE GROVE, MINNESOTA	PLATE NO. SAN-4

48_SAN4.DWG



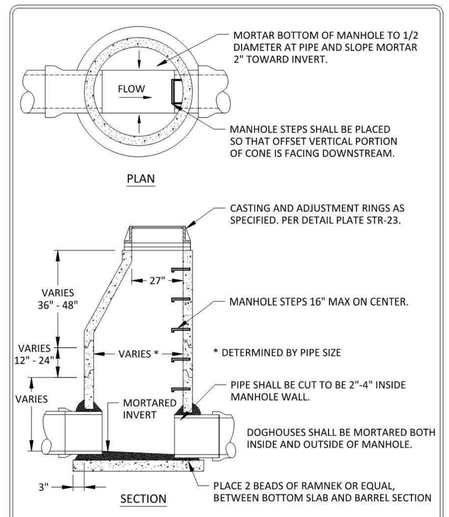
STANDARD DETAILS	JANUARY 2023
WATERTIGHT CASTING FOR SANITARY SEWER MANHOLE	
COTTAGE GROVE, MINNESOTA	PLATE NO. SAN-5

48_SAN5.DWG



STANDARD DETAILS	JANUARY 2023
LOCATING REQUIREMENTS FOR MULTI-UNIT AND COMMERCIAL BUILDINGS	
COTTAGE GROVE, MINNESOTA	PLATE NO. SER-6

48_SER6.DWG



STANDARD DETAILS	JANUARY 2023
STORM SEWER MANHOLE	
COTTAGE GROVE, MINNESOTA	PLATE NO. STO-1

48_STO1.DWG

CivilSite GROUP
Civil Engineering ˚ Surveying ˚ Landscape Architecture
5000 Glenwood Avenue
Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

PRELIMINARY: NOT FOR CONSTRUCTION

PROJECT
DOUGLAS ROAD MULTIFAMILY
E POINT DOUGLAS ROAD S, COTTAGE GROVE, 55016

OWNER
YELLOWTREE CORPORATION
1834 EAST 38TH STREET, MINNEAPOLIS, MN 55407

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PROJECT MANAGER	PATRICK SARVER
CONTACT NUMBER	612-615-0060 X 702
DRAWN BY	BN, AM
REVIEWED BY	PS
PROJECT NUMBER	25157

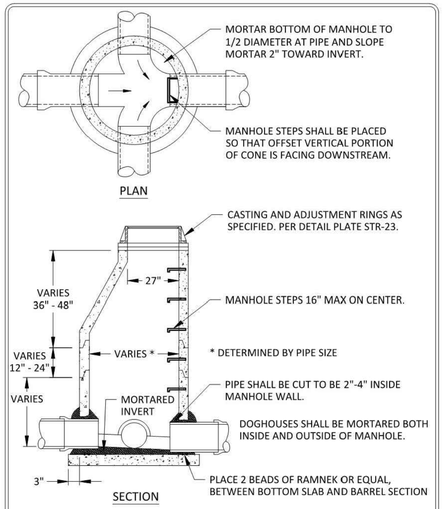
REVISION SUMMARY

DATE	DESCRIPTION

CIVIL DETAILS

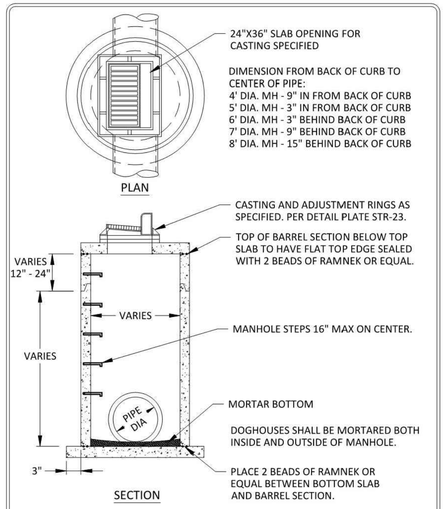
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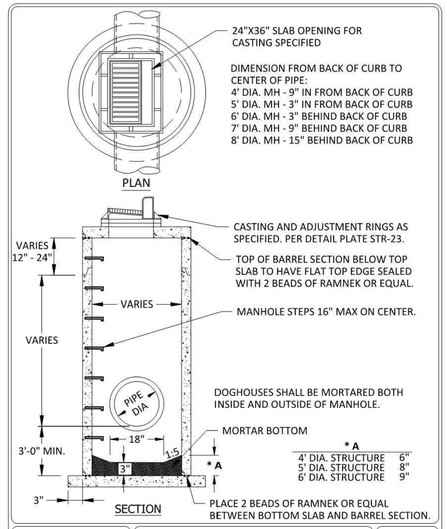
Cottage Grove	STANDARD DETAILS STORM SEWER JUNCTION MANHOLE COTTAGE GROVE, MINNESOTA	JANUARY 2023 PLATE NO. STO-2

48_STO2.DWG



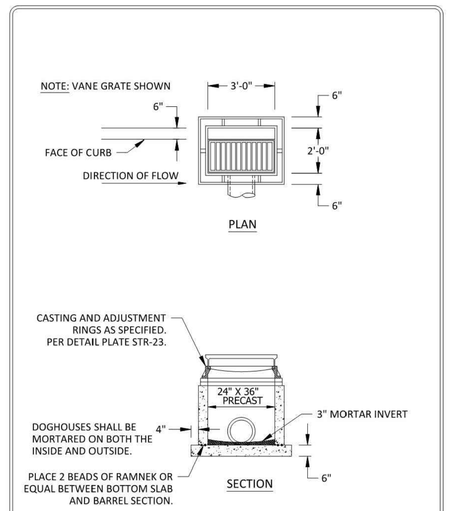
Cottage Grove	STANDARD DETAILS CATCH BASIN MANHOLE COTTAGE GROVE, MINNESOTA	JANUARY 2023 PLATE NO. STO-5

48_STO5.DWG



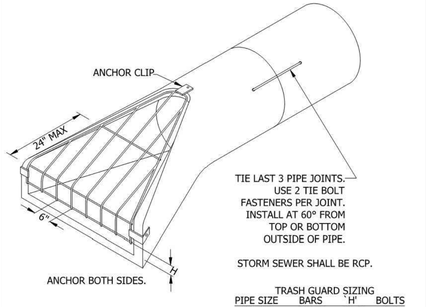
Cottage Grove	STANDARD DETAILS CATCH BASIN MANHOLE WITH SUMP COTTAGE GROVE, MINNESOTA	JANUARY 2023 PLATE NO. STO-6

48_STO6.DWG



Cottage Grove	STANDARD DETAILS CATCH BASIN COTTAGE GROVE, MINNESOTA	JANUARY 2023 PLATE NO. STO-7

48_STO7.DWG



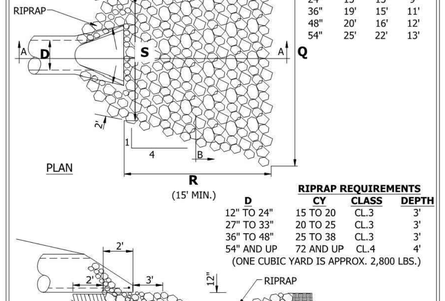
TRASH GUARD SIZING

PIPE SIZE	BARS	'H'	BOLTS
12"-18"	3/4"Ø	3"-4"	5/8"
21"-42"	1"Ø	4"-6"	3/4"
48"-72"	1 1/4"Ø	6"-8"	1"

SEE CITY PLATE NO. STO-12 AND STO-13 FOR RIPRAP PLACEMENT.

Cottage Grove	STANDARD DETAILS FLARED END SECTION AND TRASH GAURD COTTAGE GROVE, MINNESOTA	JANUARY 2023 PLATE NO. STO-11

48_STO11.DWG



RIPRAP AREA SIZES

D	Q	R	S
12"	11'	15'	7'
24"	15'	15'	9'
36"	19'	15'	11'
48"	20'	16'	12'
54"	25'	22'	13'

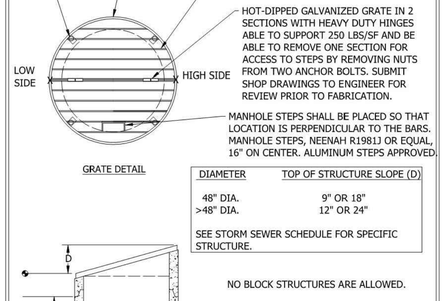
RIPRAP REQUIREMENTS

D	CY	CLASS	DEPTH
12" TO 24"	15 TO 20	CL.3	3'
27" TO 33"	20 TO 25	CL.3	3'
36" TO 48"	25 TO 38	CL.3	3'
54" AND UP	72 AND UP	CL.4	4'

(ONE CUBIC YARD IS APPROX. 2,800 LBS.)

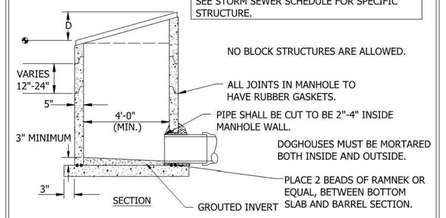
Cottage Grove	STANDARD DETAILS RIPRAP AT FLARED END SECTION COTTAGE GROVE, MINNESOTA	JANUARY 2023 PLATE NO. STO-12

48_STO12.DWG



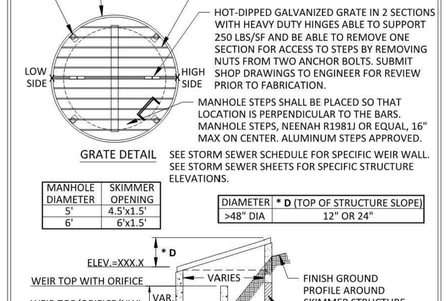
DIAMETER	TOP OF STRUCTURE SLOPE (D)
48" DIA.	9" OR 18"
>48" DIA.	12" OR 24"

SEE STORM SEWER SCHEDULE FOR SPECIFIC STRUCTURE.



Cottage Grove	STANDARD DETAILS STANDARD OVERFLOW STRUCTURE COTTAGE GROVE, MINNESOTA	JANUARY 2023 PLATE NO. STO-18

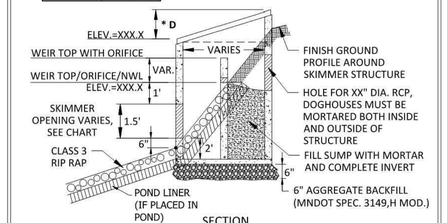
48_STO18.DWG



SEE STORM SEWER SCHEDULE FOR SPECIFIC WEIR WALL. SEE STORM SEWER SHEETS FOR SPECIFIC STRUCTURE ELEVATIONS.

MANHOLE DIAMETER	SKIMMER OPENING
5'	4.5'x1.5'
6'	6'x1.5'

DIAMETER	* D (TOP OF STRUCTURE SLOPE)
>48" DIA	12" OR 24"



Cottage Grove	STANDARD DETAILS STANDARD SKIMMER STRUCTURE WITH WEIR WALL COTTAGE GROVE, MINNESOTA	JANUARY 2023 PLATE NO. STO - 23

48_STO23.DWG

CivilSite GROUP
Civil Engineering ˚ Surveying ˚ Landscape Architecture
5000 Glenwood Avenue
Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

PRELIMINARY: NOT FOR CONSTRUCTION

PROJECT: DOUGLAS ROAD MULTIFAMILY
E POINT DOUGLAS ROAD S, COTTAGE GROVE, 55016

OWNER: YELLOWTREE CORPORATION
1834 EAST 38TH STREET, MINNEAPOLIS, MN 55407

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Patrick J. Sarver
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PROJECT MANAGER	PATRICK SARVER
CONTACT NUMBER	612-615-0060 X 702
DRAWN BY	BN, AM
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PROJECT NUMBER	25157

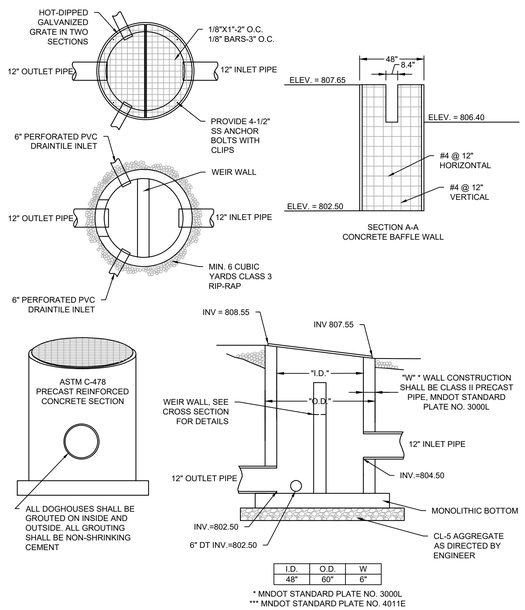
REVISION SUMMARY

DATE	DESCRIPTION

CIVIL DETAILS

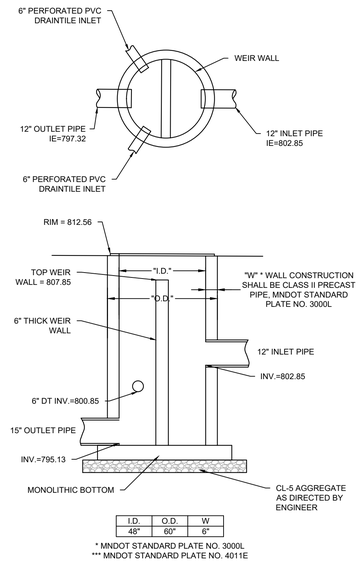
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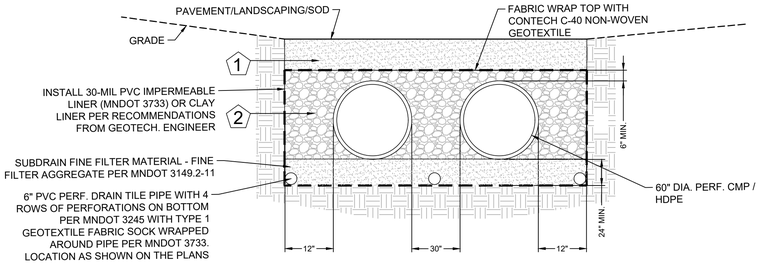
NOTES:
1. NO STRUCTURE SHALL BE ORDERED UNTIL THE ENGINEER APPROVES THE SHOP DRAWING.
2. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING THE POND OUTLET SKIMMER PRIOR TO FINAL ACCEPTANCE.
3. PLACE GEOTEXTILE BLANKET UNDER ALL RIPRAP.

1 CONCRETE OUTLET STRUCTURE OCS 02
N T S



NOTES:
1. NO STRUCTURE SHALL BE ORDERED UNTIL THE ENGINEER APPROVES THE SHOP DRAWING.
2. THE CONTRACTOR IS RESPONSIBLE FOR CLEANING THE POND OUTLET SKIMMER PRIOR TO FINAL ACCEPTANCE.
3. PLACE GEOTEXTILE BLANKET UNDER ALL RIPRAP.

2 CONCRETE OUTLET STRUCTURE OCS 20
N T S



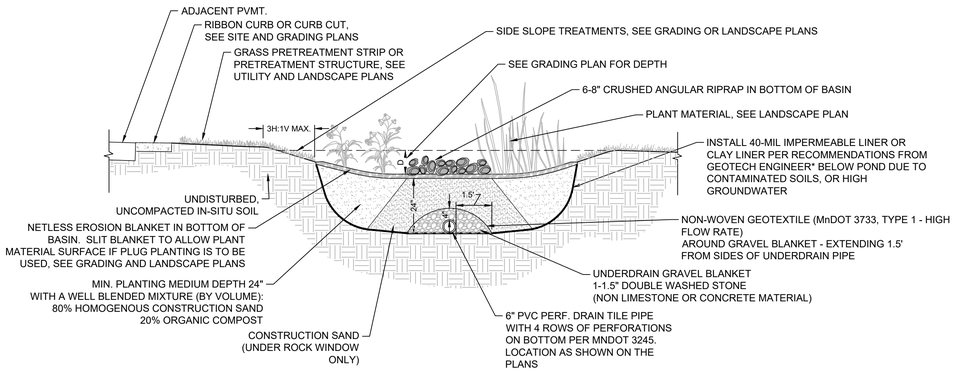
KEY
1. TOPSOIL
2. FREE DRAINING ANGULAR DOUBLE WASHED STONE 3/4" - 2" PARTICLE SIZE - NON CARBONATE (LIMESTONE) AND NON CONCRETE. COORDINATE MATERIAL / PARTICLE SIZE W/ MANUFACTURER. INSTALL TO MIN. 95% STANDARD DENSITY PER AASHTO T99.

CONSTRUCTION SEQUENCING

1. INSTALL SILT FENCE AND/OR OTHER APPROPRIATE TEMPORARY EROSION CONTROL DEVICES TO PREVENT SEDIMENT FROM LEAVING OR ENTERING THE PRACTICE DURING CONSTRUCTION.
2. ALL DOWN-GRADIENT PERIMETER SEDIMENT CONTROL BMP'S MUST BE IN PLACE BEFORE ANY UP-GRADIENT LAND DISTURBING ACTIVITY BEGINS.
3. PERFORM CONTINUOUS INSPECTIONS OF EROSION CONTROL PRACTICES.
4. INSTALL UTILITIES (WATER, SANITARY SEWER, ELECTRIC, PHONE, FIBER OPTIC, ETC) PRIOR TO THE STORMWATER SYSTEM.
5. PERFORM ALL OTHER SITE IMPROVEMENTS.
6. SEED AND MULCH ALL AREAS AFTER DISTURBANCE.
7. CONSTRUCT RETENTION DEVICE UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA.
8. IMPLEMENT TEMPORARY AND PERMANENT EROSION CONTROL PRACTICES.
9. PLANT AND MULCH SITE.
10. REMOVE TEMPORARY EROSION CONTROL DEVICES AFTER THE CONTRIBUTING DRAINAGE AREA IS ADEQUATELY VEGETATED.

GENERAL NOTES
1. IN THE EVENT THAT SEDIMENT IS INTRODUCED INTO THE BMP DURING OR IMMEDIATELY FOLLOWING EXCAVATION, THIS MATERIAL SHALL BE REMOVED FROM THE PRACTICE PRIOR TO CONTINUING CONSTRUCTION.
2. GRADING OF RETENTION DEVICES SHALL BE ACCOMPLISHED USING LOW-COMPACTION EARTH-MOVING EQUIPMENT TO PREVENT COMPACTION OF UNDERLYING SOILS.
3. ALL SUB MATERIALS BELOW THE SPECIFIED RETENTION DEPTH (ELEVATION) SHALL BE UNDISTURBED, UNLESS OTHERWISE NOTED.
4. SEE UTILITY PLAN / SHOP DRAWINGS FOR SYSTEM LAYOUT.
5. TYPICAL DETAILS ARE FOR REFERENCE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH REVIEWED SHOP DRAWINGS.

3 UNDERGROUND FILTRATION SYSTEM WITH LINER
N T S



CONSTRUCTION SEQUENCING

1. INSTALL SILT FENCE AND/OR OTHER APPROPRIATE TEMPORARY EROSION CONTROL DEVICES TO PREVENT SEDIMENT FROM LEAVING OR ENTERING THE PRACTICE DURING CONSTRUCTION.
2. ALL DOWN-GRADIENT PERIMETER SEDIMENT CONTROL BMP'S MUST BE IN PLACE BEFORE ANY UP-GRADIENT LAND DISTURBING ACTIVITY BEGINS.
3. PERFORM CONTINUOUS INSPECTIONS OF EROSION CONTROL PRACTICES.
4. INSTALL UTILITIES (WATER, SANITARY SEWER, ELECTRIC, PHONE, FIBER OPTIC, ETC) PRIOR TO THE STORMWATER SYSTEM.
5. ROUGH GRADE THE SITE. IF BIORETENTION AREAS ARE BEING USED AS TEMPORARY SEDIMENT BASINS, LEAVE A MINIMUM OF 3 FEET OF COVER OVER THE PRACTICE TO PROTECT THE UNDERLYING SOILS FROM CLOGGING.
6. PERFORM ALL OTHER SITE IMPROVEMENTS.
7. PLANT ALL AREAS AFTER DISTURBANCE.
8. CONSTRUCT BIORETENTION DEVICE UPON STABILIZATION OF CONTRIBUTING DRAINAGE AREA.
9. IMPLEMENT TEMPORARY AND PERMANENT EROSION CONTROL PRACTICES.
10. PLANT AND/OR ROCK MULCH BIORETENTION DEVICE.
11. REMOVE TEMPORARY EROSION CONTROL DEVICES AFTER THE CONTRIBUTING DRAINAGE AREA IS ADEQUATELY VEGETATED.

GENERAL NOTES
1. IN THE EVENT THAT SEDIMENT IS INTRODUCED INTO THE BMP DURING OR IMMEDIATELY FOLLOWING EXCAVATION, THIS MATERIAL SHALL BE REMOVED FROM THE PRACTICE PRIOR TO CONTINUING CONSTRUCTION.
2. GRADING OF BIORETENTION DEVICES SHALL BE ACCOMPLISHED USING LOW-COMPACTION EARTH-MOVING EQUIPMENT TO PREVENT COMPACTION OF UNDERLYING SOILS.
3. ALL SUB MATERIALS BELOW THE SPECIFIED BIORETENTION DEPTH (ELEVATION) SHALL BE UNDISTURBED, UNLESS OTHERWISE NOTED.
4. SEE UTILITY PLAN / SHOP DRAWINGS FOR SYSTEM LAYOUT.

4 LINED BIO-FILTRATION BASIN (RAIN GARDEN - TYP.)
N T S

CivilSite GROUP
Civil Engineering ˚ Surveying ˚ Landscape Architecture
5000 Glenwood Avenue
Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

PRELIMINARY: NOT FOR CONSTRUCTION

PROJECT
DOUGLAS ROAD MULTIFAMILY
E POINT DOUGLAS ROAD S, COTTAGE GROVE, 55016

OWNER
YELLOWTREE CORPORATION
1834 EAST 38TH STREET, MINNEAPOLIS, MN 55407

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Patrick J. Sarver
DATE 12/08/2025 LICENSE NO. 24904

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
10/29/2025	CITY SUBMITTAL
10/30/2025	WATERSHED SUBMITTAL
11/14/2025	CITY RESUBMITTAL
12/08/2025	CITY RESUBMITTAL

PROJECT MANAGER	PATRICK SARVER
CONTACT NUMBER	612-615-0060 X 702
DRAWN BY	BN, AM
REVIEWED BY	PS
PROJECT NUMBER	25137

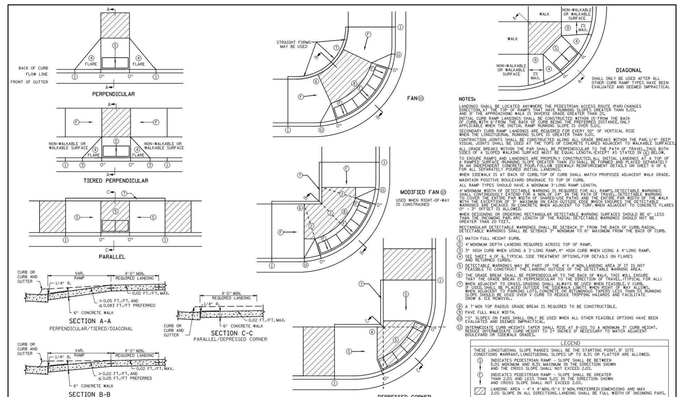
REVISION SUMMARY

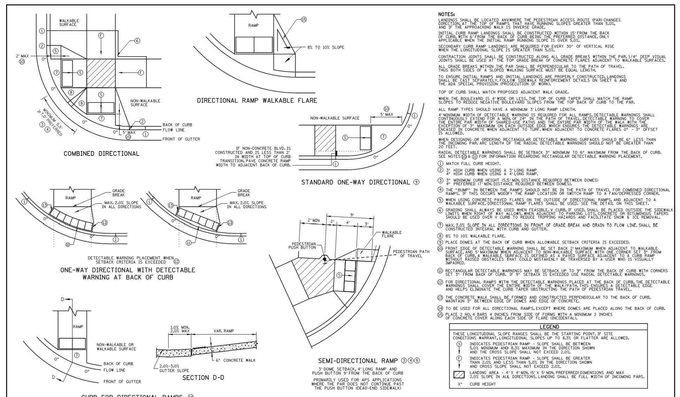
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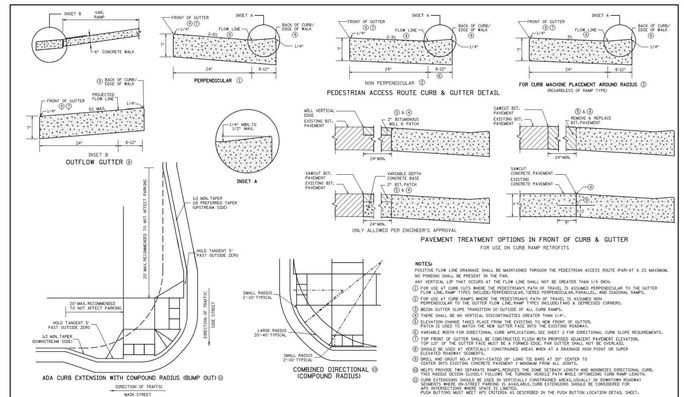
CIVIL DETAILS

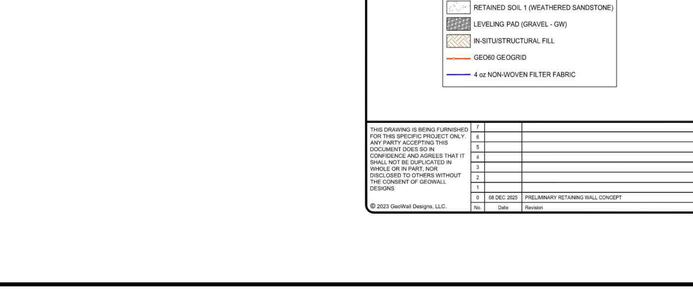
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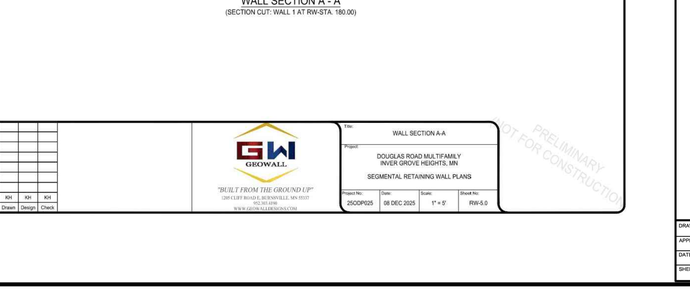
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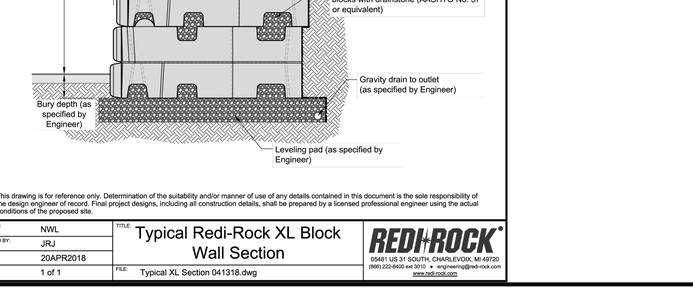












TRUNCATED DOMES ON PRIVATE PROPERTY ARE NOT REQUIRED. PROVIDE OWNER WITH ADD ALTERNATE ON INSTALLATION OF TRUNCATED DOMES.

GENERAL NOTES:

1. THE SECTION SHOWN IS A REPRESENTATIVE WALL SECTION. THE WALL HEIGHTS, ELEVATIONS, TOE SLOPES, AND BACK SLOPES VARY ACCORDING TO THE ELEVATION PLAN AND SITE PLAN RESPECTIVELY.
2. UPON EXCAVATION, WHERE UNSUITABLE SOILS ARE FOUND, SUBCUT AS REQUIRED BY THE ONSITE GEOTECHNICAL ENGINEER AND REPLACE WITH SUITABLE COMPACTED STRUCTURAL FILL TO ACHIEVE THE REQUIRED BEARING CAPACITY. THE STRUCTURAL FILL SHALL BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY.
3. APPROXIMATE LIMITS OF EXCAVATION VARIES WHERE SUBCUT IS REQUIRED. ACTUAL LIMITS AND SIDE SLOPES SHALL BE DETERMINED BY OSHA REGULATIONS AND MATCH FIELD CONDITIONS AS DETERMINED BY THE CONTRACTOR.
4. THE WALL IS DESIGNED AS A GRAVITY WALL WITHOUT REINFORCEMENT AT THE ELEVATIONS SHOWN AND SHALL BE CONSTRUCTED WITH RECON: SERIES 100 60", 45", 39", & 24" UNITS USING THE 3.6° BATTER.
5. 4" CORRUGATED PERFORATED DRAINPIPE INSTALLED AS LOW AS POSSIBLE WITH POSITIVE DRAINAGE. OUTLET INTO ONSITE DRAINAGE OR THROUGH WALL FACE AT 50.0' O.C. AND LOW ENDS OF WALL. SEE DETAIL 2/RW-6.0.
6. INSPECT EXCAVATION SLOPES FOR ACTIVE SEEPAGE AND PLACE ADDITIONAL DRAINS WHERE SEEPAGE OCCURS.
7. 1/4" EXPANSION MATERIAL SHALL BE PLACED BETWEEN THE MODULAR BLOCK RETAINING WALL UNITS AND ANY CONCRETE PLACED AFTER CONSTRUCTION OF THE MODULAR BLOCK RETAINING WALL.
8. DO NOT BRING HEAVY COMPACTION OR PAVING EQUIPMENT WITHIN 3' OF THE BACK OF THE RECON RETAINING WALL.
9. SEE MANUFACTURER'S INFORMATION FOR ADDITIONAL DETAILS ON THE RECON RETAINING WALL SYSTEM.

WALL SECTION A - A
(SECTION CUT: WALL 1 AT RW-STA. 180.00)

LEGEND
- LOW PERMEABLE SOIL
- DRAINAGE AGGREGATE (GRAVEL - GP)
- REINFORCED SOIL 1 (SAND - SP)
- RETAINED SOIL 1 (WEATHERED SANDSTONE)
- LEVELING PAD (GRAVEL - GW)
- IN-SITU STRUCTURAL FILL
- GEO60 GEOGRID
- 4 oz NON-WOVEN FILTER FABRIC

THIS DRAWING IS BEING FURNISHED FOR THIS SPECIFIC PROJECT ONLY. ANY PARTY ACCEPTING THIS DOCUMENT DOES SO SUBJECT TO THE RESTRICTIONS THAT IT SHALL NOT BE DUPLICATED IN WHOLE OR IN PART, NOR DISCLOSED TO OTHERS WITHOUT THE CONSENT OF GEOWALL DESIGNS

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No.	Date	Revision	Drawn	Design	Check
7					
6					
5					
4					
3					
2					
1					
0	08 DEC 2025	PRELIMINARY RETAINING WALL CONCEPT	KH	KH	KH

GEOWALL
"BUILT FROM THE GROUND UP"
1200 CLIFF ROAD E, BURNSVILLE, MN 55337
952.303.4598
WWW.GEOWALLDESIGNS.COM

Title: WALL SECTION A-A
Project: DOUGLAS ROAD MULTIFAMILY
INVER GROVE HEIGHTS, MN
SEGMENTAL RETAINING WALL PLANS
Project No.: 25DDP025 | Date: 08 DEC 2025 | Scale: 1" = 5' | Sheet No.: RW-5.0

PRELIMINARY - NOT FOR CONSTRUCTION

Typical XL Gravity Wall Section

This drawing is for reference only. Determination of the suitability and/or manner of use of any details contained in this document is the sole responsibility of the design engineer of record. Final project designs, including all construction details, shall be prepared by a licensed professional engineer using the actual conditions of the proposed site.

DRAWN BY:	NWL
APPROVED BY:	JRJ
DATE:	20APR2018
SHEET:	1 of 1

TITLE: Typical Redi-Rock XL Block Wall Section
FILE: Typical XL Section 041318.dwg

REDI-ROCK®
10481 US 31 SOUTH, CHARLEVOIX, MI 49720
(866) 222-8400 ext 3010 • engineering@redi-rock.com
www.redi-rock.com

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REVIEWED BY	PS
PROJECT NUMBER	25137

REVISION SUMMARY

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CIVIL DETAILS

C5.4

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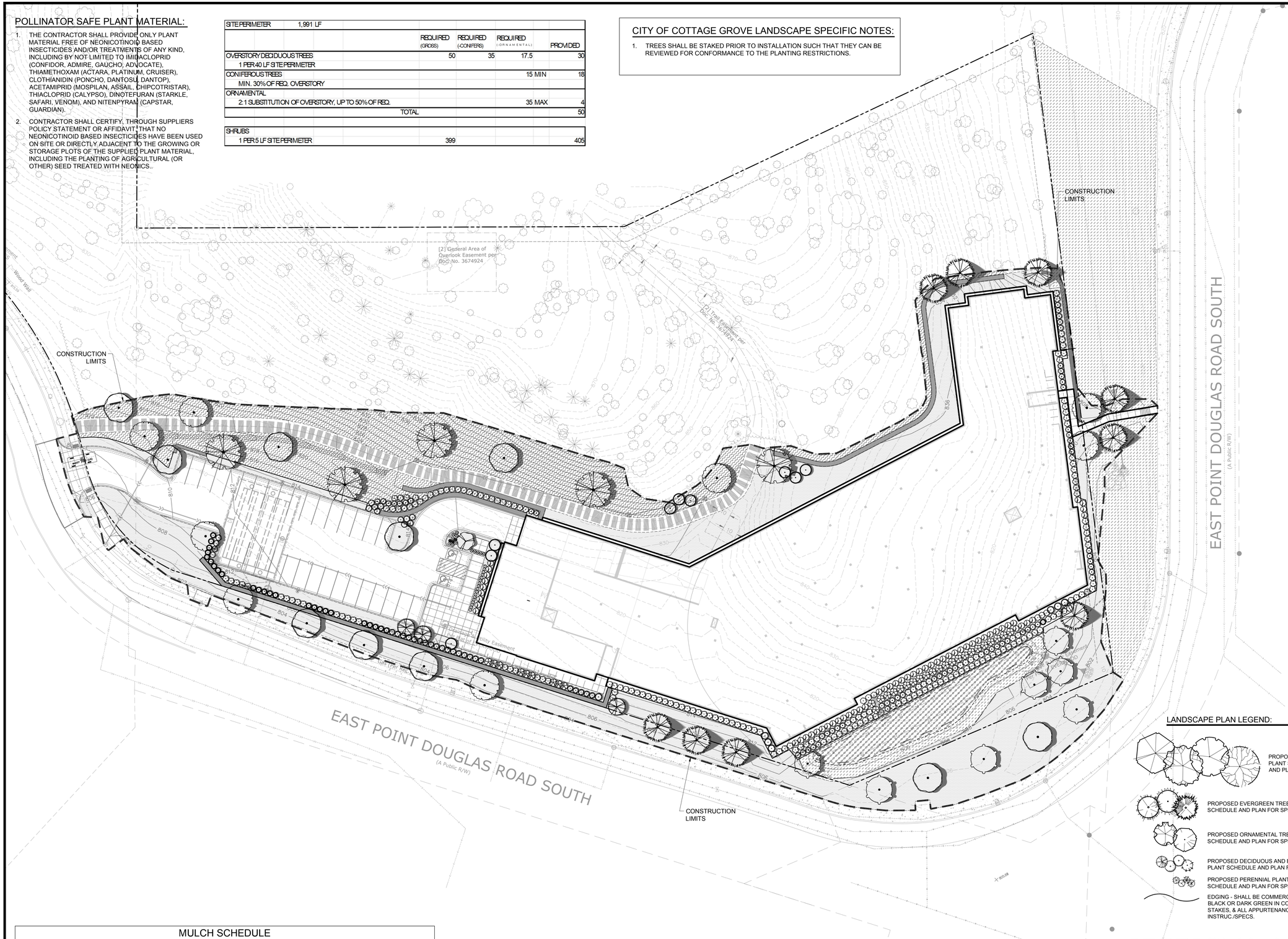
POLLINATOR SAFE PLANT MATERIAL:

1. THE CONTRACTOR SHALL PROVIDE ONLY PLANT MATERIAL FREE OF NEONICOTINOID BASED INSECTICIDES AND/OR TREATMENTS OF ANY KIND, INCLUDING BY NOT LIMITED TO IMIDACLOPRID (CONFIDOR, ADMIRE, GAUCHO, ADVOCATE), THIAMETHOXAM (ACTARA, PLATINUM, CRUISER), CLOTHIANIDIN (PONCHO, DANTOSU, DANTOP), ACETAMIPRID (MOSPILAN, ASSAIL, CHIPCOTRISTAR), THIACLOPRID (CALYPSO), DINOTEFURAN (STARKLE, SAFARI, VENOM), AND NITENPYRAM (CAPSTAR, GUARDIAN).
2. CONTRACTOR SHALL CERTIFY, THROUGH SUPPLIERS POLICY STATEMENT OR AFFIDAVIT, THAT NO NEONICOTINOID BASED INSECTICIDES HAVE BEEN USED ON SITE OR DIRECTLY ADJACENT TO THE GROWING OR STORAGE PLOTS OF THE SUPPLIED PLANT MATERIAL, INCLUDING THE PLANTING OF AGRICULTURAL (OR OTHER) SEED TREATED WITH NEONICS..

SITE PERIMETER 1,991 LF				
	REQUIRED (GROSS)	REQUIRED (-CONIFERS)	REQUIRED (-ORNAMENTAL)	PROVIDED
OVERSTORY DECIDUOUS TREES	50	35	17.5	30
1 PER 40 LF SITE PERIMETER				
CONIFEROUS TREES			15 MIN	18
MIN. 30% OF REQ. OVERSTORY				
ORNAMENTAL				
2:1 SUBSTITUTION OF OVERSTORY, UP TO 50% OF REQ.			35 MAX	4
TOTAL				50
SHRUBS				
1 PER 5 LF SITE PERIMETER	399			405

CITY OF COTTAGE GROVE LANDSCAPE SPECIFIC NOTES:

1. TREES SHALL BE STAKED PRIOR TO INSTALLATION SUCH THAT THEY CAN BE REVIEWED FOR CONFORMANCE TO THE PLANTING RESTRICTIONS.



LANDSCAPE PLAN LEGEND:

- PROPOSED CANOPY TREE SYMBOLS - SEE PLANT SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
- PROPOSED EVERGREEN TREE SYMBOLS - SEE PLANT SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
- PROPOSED ORNAMENTAL TREE SYMBOLS - SEE PLANT SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
- PROPOSED DECIDUOUS AND EVERGREEN SHRUB SYMBOLS - SEE PLANT SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
- PROPOSED PERENNIAL PLANT SYMBOLS - SEE PLANT SCHEDULE AND PLAN FOR SPECIES AND PLANTING SIZES
- EDGING - SHALL BE COMMERCIAL GRADE, 4" DEPTH ALUMINUM, BLACK OR DARK GREEN IN COLOR, INCLUDE ALL CONNECTORS, STAKES, & ALL APPURTENANCES PER MANUF. INSTALL PER MANUF. INSTRUC./SPECS.
- CONSTRUCTION LIMITS

MULCH SCHEDULE

AREA	MULCH TYPE	EDGING	FABRIC	REMARKS
TREE RINGS	4" DEPTH, SHREDDED CEDAR	YES	NO	SEE DETAIL SHT. L1.1
PLANTING BEDS	4" DEPTH, SHREDDED CEDAR	YES	NO	
MAINT. STRIP AT BUILDING FOUNDATION	3" DEPTH, 1-1/2" CRUSHED LIMESTONE	YES	YES	SEE DETAIL
NATIVE SEED AREAS	STRAW MULCH	NA	NA	PER SEED MANUF. & MNDOT SEEDING MANUAL

NOTE: COORDINATE ALL MULCH AND PLANTING BED MATERIAL PRIOR TO INSTALLATION, PROVIDE SAMPLES AND SHOP DRAWINGS/PHOTOS/DATA SHEETS OF ALL MATERIALS

PLANTING SEASON SCHEDULE

SEASON	CONIFEROUS	DECIDUOUS	REMARKS
SPRING PLANTING	APRIL 15 - JUNE 15	APRIL 15 - JUNE 15	
M	AUGUST 21 - SEPTEMBER 30	AUGUST 15 - NOVEMBER 15	

NOTE: ADJUSTMENTS TO PLANTING DATES MUST BE APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT.

SEE SHEET C0.1 FOR GENERAL LANDSCAPE NOTES

SEE SHEET L1.1 FOR PLANTING SCHEDULE AND GROUND COVER LEGEND
SEE SHEET LT1.0 FOR EXTERIOR LIGHTING PLAN

Know what's below. Call before you dig.

1" = 30'-0"
15'-0" 0 30'-0"

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Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

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REVIEWED BY	PS
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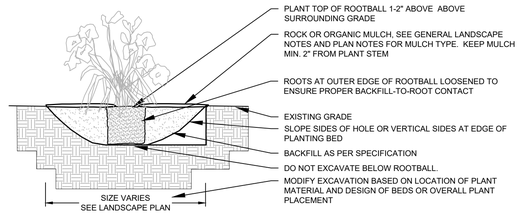
LANDSCAPE PLAN

L1.0

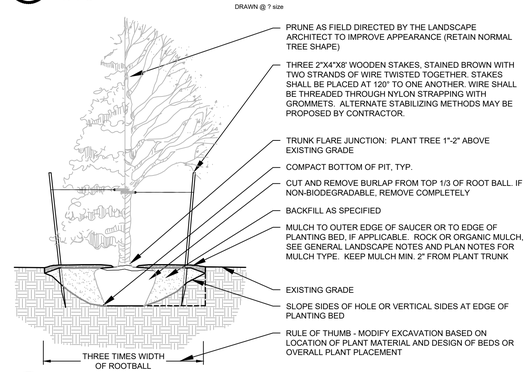
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PLANT SCHEDULE

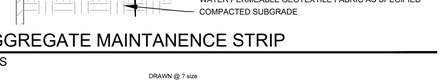
SYMBOL	CODE	QTY	COMMON / BOTANICAL NAME	CONT	NATIVE PLANTS	POLLINATOR FRIENDLY
TREES						
	RB	7	River Birch / Betula nigra	2.5" Cal. B&B	NATIVE	N
	EK	8	Espresso Kentucky Coffeetree / Gymnocladus dioica `Espresso`	2.5" Cal. B&B	NATIVE CULTIVAR	N
	QB	10	Swamp White Oak / Quercus bicolor	2.5" Cal. B&B	NATIVE	Y
	QE2	5	Northern Pin Oak / Quercus ellipsoidalis	2.5" Cal. B&B	NATIVE	
		30	SUBTOTAL:			
EVERGREEN TREES						
		9	Balsam Fir / Abies balsamea	6` B&B	NATIVE	
	JE	9	Eastern Red Cedar / Juniperus virginiana	6` B&B	NATIVE	
		18	SUBTOTAL:			
ORNAMENTAL TREES						
	CV2	3	Winter King Hawthorn / Crataegus viridis `Winter King`	#15 CONT	NOT NATIVE	Y
	MP	1	Prairifire Crabapple / Malus x `Prairifire`	1.5" Cal. B&B	NATIVE CULTIVAR	Y
		4	SUBTOTAL:			
SYMBOL	CODE	QTY	COMMON / BOTANICAL NAME	SIZE	NATIVE PLANTS	POLLINATOR FRIENDLY
SHRUBS						
	AA	77	Regent Serviceberry / Amelanchier alnifolia `Regent`	#5 CONT	NATIVE CULTIVAR	Y
	AA2	59	Autumn Magic Black Chokeberry / Aronia melanocarpa `Autumn Magic`	#5 CONT	NATIVE	Y
	CA2	114	Arctic Fire Dogwood / Cornus sericea `Arctic Fire`	#5 CONT	NATIVE CULTIVAR	Y
	HA	22	Annabelle Hydrangea / Hydrangea arborescens `Annabelle`	#5 CONT	NOT NATIVE	Y
	SGJ	25	Sea Green Juniper / Juniperus chinensis `Sea Green`	#5 CONT	NOT NATIVE	N
	JM2	7	Medora Juniper / Juniperus scopulorum `Medora`	#5 CONT	NOT NATIVE	N
	RG	14	Gro-Low Fragrant Sumac / Rhus aromatica `Gro-Low`	#5 CONT	NATIVE	Y
	SS	55	Sem Ash Leaf Spirea / Sorbaria sorbifolia `Sem`	#5 CONT	NOT NATIVE	Y
	VD	32	Arrowwood Viburnum / Viburnum dentatum 'Arrowwood'	#5 CONT	NATIVE	Y
		405	SUBTOTAL:			
GRASSES						
	CK	17	Feather Reed Grass / Calamagrostis x acutiflora `Karl Foerster`	#1 CONT	NOT NATIVE	N
	SH	4	Prairie Dropseed / Sporobolus heterolepis	#1 CONT	NATIVE	Y
		21	SUBTOTAL:			
PERENNIALS						
	EM	5	Magnus Purple Coneflower / Echinacea purpurea `Magnus`	#1 CONT	NATIVE CULTIVAR	Y
	HS	3	Stella Supreme Daylily / Hemerocallis x `Stella Supreme`	#1 CONT	NOT NATIVE	Y
	SA2	3	Showy Stonecrop / Sedum spectabile `Autumn Fire`	#1 CONT	NOT NATIVE	Y
		11	SUBTOTAL:			



1 PERENNIAL BED PLANTING
NTS

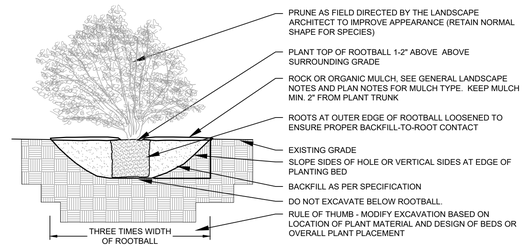


2 DECIDUOUS & CONIFEROUS TREE PLANTING
NTS

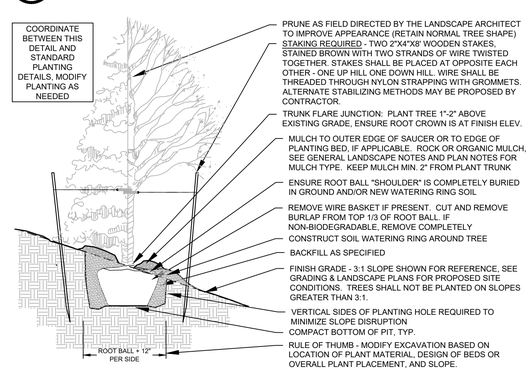


3 AGGREGATE MAINTANENCE STRIP
NTS

DRAWN @ ? size



4 DECIDUOUS & CONIFEROUS SHRUB PLANTING
NTS



5 DECIDUOUS & CONIFEROUS TREE PLANTING ON SLOPE
NTS

DRAWN @ ? size

PLANT SCHEDULE

SYMBOL	QTY	COMMON / BOTANICAL NAME	SIZE
GROUND COVERS			
	33,474 sf	BLUE GRASS SOD / SOD BLUE GRASS SOD W/IMPROVED VARIATIES, INSTALLED ON PREPARED SOIL, CONTAINING 6" OF TOPSOIL W/MINIMUM 4% ORGANICS BY WEIGHT. SCARIFIED AND EVENLY GRADED. BIG ROLL PREFERRED FOR LARGER AREAS.	Sod
MNDOT - SEED MIXES			
	22,957 sf	MN SEED MIX #35-221 DRY PRAIRIE GENERAL, / MNDOT - GENERAL RESTORATION SEED MIX SEEDING RATE: 36.5 LB/ACRE (98.7 SEEDS/SF). MNDOT TYPE1 MULCH W/STRAW, EROSION CONTROL BLANKET, OR HYDROMULCH. REFERENCE MNDOT SEEDING MANUAL SPECIFICATIONS (2023).	Seed Mix
	3,079 sf	MN SEED MIX #34-262 WET PRAIRIE / MNDOT - LOWER BASIN SEED MIX SEEDING RATE: 14.5 LB/ACRE (128.4 SEEDS/SF). MNDOT TYPE1 MULCH W/STRAW, EROSION CONTROL BLANKET, OR HYDROMULCH. REFERENCE MNDOT SEEDING MANUAL SPECIFICATIONS (2023).	Seed Mix
	15,472 sf	MN SEED MIX #36-711 WOODLAND EDGE, / MNDOT – SHADED GRASSLAND SEED MIX SEEDING RATE: 35.5 LB/ACRE (63.1 SEEDS/SF). MNDOT TYPE1 MULCH W/STRAW, EROSION CONTROL BLANKET, OR HYDROMULCH. REFERENCE MNDOT SEEDING MANUAL SPECIFICATIONS (2023).	Seed Mix

SEE SHEET L1.0 FOR GENERAL LANDSCAPE NOTES & LEGEND

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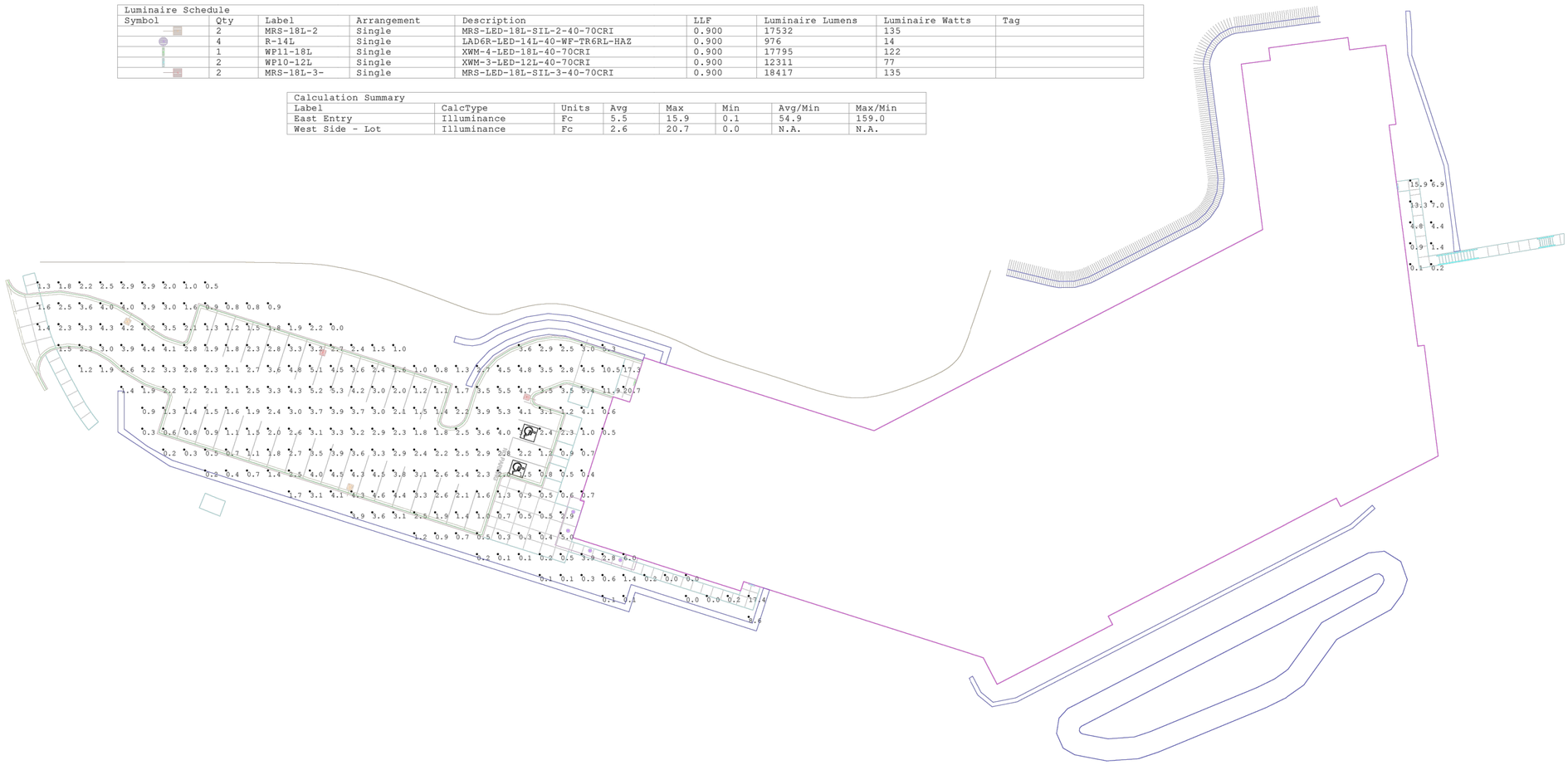
LANDSCAPE PLAN NOTES & DETAILS

L1.1

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Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Description	LLF	Luminaire Lumens	Luminaire Watts	Tag
	2	MRS-18L-2	Single	MRS-LED-18L-SIL-2-40-70CRI	0.900	17532	135	
	4	R-14L	Single	LAD6R-LED-14L-40-WF-TR6RL-HAZ	0.900	976	14	
	1	WP11-18L	Single	XWM-4-LED-18L-40-70CRI	0.900	17795	122	
	2	WP10-12L	Single	XWM-3-LED-12L-40-70CRI	0.900	12311	77	
	2	MRS-18L-3-	Single	MRS-LED-18L-SIL-3-40-70CRI	0.900	18417	135	

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
East Entry	Illuminance	Fc	5.5	15.9	0.1	54.9	159.0
West Side - Lot	Illuminance	Fc	2.6	20.7	0.0	N.A.	N.A.



Scale: 1 inch= 30 Ft.

REVISION SUMMARY	
DATE	DESCRIPTION

LIGHTING PLAN

LT1.0

These drawings are for conceptual use only and are not intended for construction. Fixture runs and quantities should be verified prior to order. Values represented are an approximation generated from manufacturers photometric inhouse or independent lab tests with data supplied by lamp manufacturers.

24x36

Luma Sales Associates
Lighting and Controls

Revisions

Comments

Date

Drawn By: Joe Frey

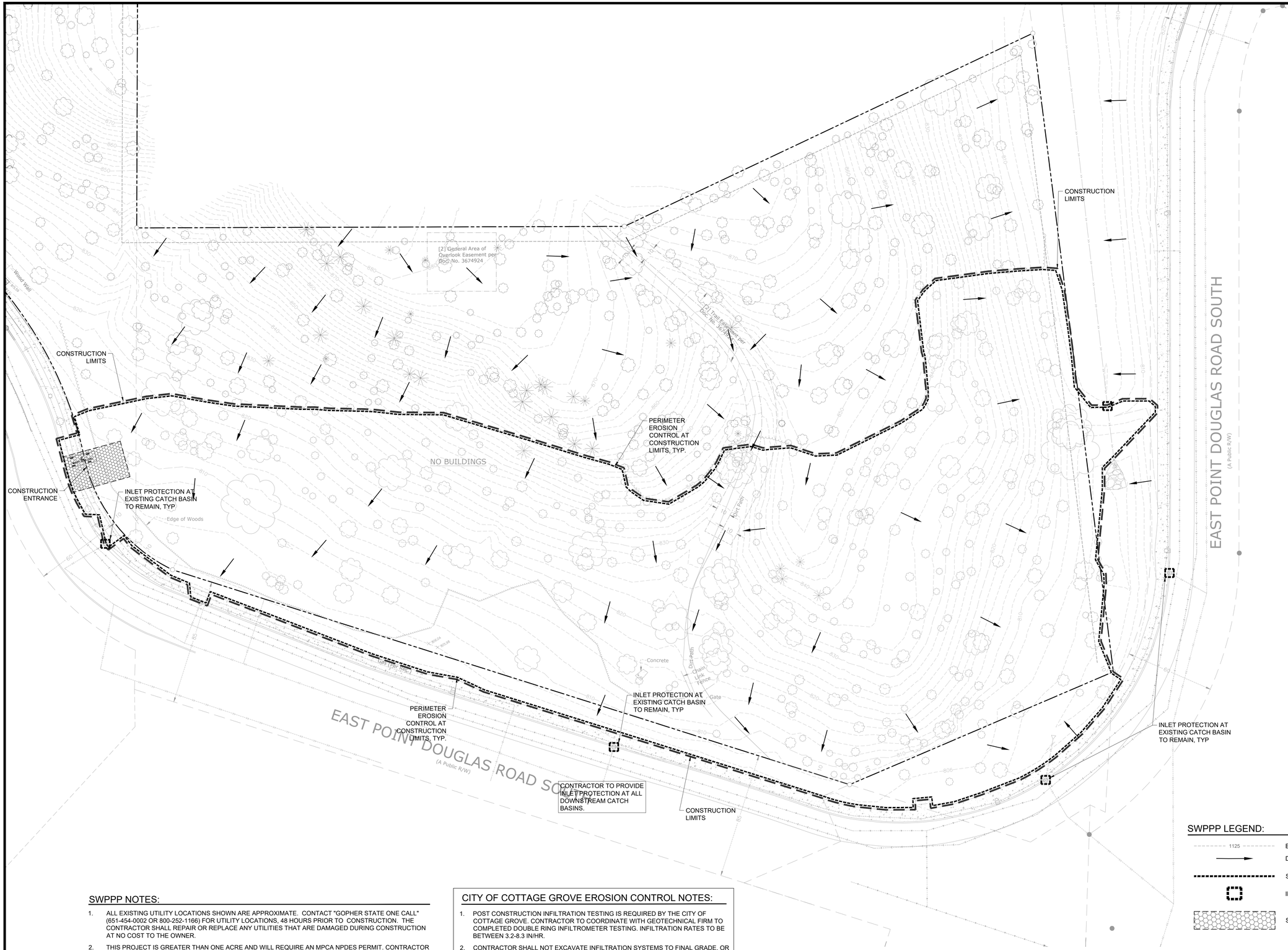
Date:11/6/2025

Sales Agent: Steve Hahn

Scale: 1" = 30'

Cottage Grove Apts.

LS952-4357



SWPPP NOTES:

1. ALL EXISTING UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CONTACT "GOPHER STATE ONE CALL" (651-454-0002 OR 800-252-1166) FOR UTILITY LOCATIONS, 48 HOURS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY UTILITIES THAT ARE DAMAGED DURING CONSTRUCTION AT NO COST TO THE OWNER.
2. THIS PROJECT IS GREATER THAN ONE ACRE AND WILL REQUIRE AN MPCA NPDES PERMIT. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY EROSION CONTROL PERMITS REQUIRED BY THE CITY.
3. SEE SHEETS SW1.0 - SW1.5 FOR ALL EROSION CONTROL NOTES, DESCRIPTIONS, AND PRACTICES.
4. SEE GRADING PLAN FOR ADDITIONAL GRADING AND EROSION CONTROL NOTES.
5. CONTRACTOR IS RESPONSIBLE FOR SWPPP IMPLEMENTATION, INSPECTIONS, MAINTENANCE AND COMPLIANCE WITH THE PERMIT.

CITY OF COTTAGE GROVE EROSION CONTROL NOTES:

1. POST CONSTRUCTION INFILTRATION TESTING IS REQUIRED BY THE CITY OF COTTAGE GROVE. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL FIRM TO COMPLETED DOUBLE RING INFILTROMETER TESTING. INFILTRATION RATES TO BE BETWEEN 3.2-8.3 IN/HR.
2. CONTRACTOR SHALL NOT EXCAVATE INFILTRATION SYSTEMS TO FINAL GRADE, OR WITHIN 3 FEET OF FINAL GRADE, UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN CONSTRUCTED AND FULLY STABILIZED UNLESS THEY PROVIDE RIGOROUS EROSION PREVENTION AND SEDIMENT CONTROLS TO KEEP SEDIMENT AND RUNOFF COMPLETELY AWAY FROM THE INFILTRATION AREA.
3. WHEN EXCAVATING THE INFILTRATION SYSTEM TO WITHIN 3 FEET OF FINAL GRADE, CONTRACTOR SHALL STAKE OFF AND MARK THE AREA SO HEAVE CONSTRUCTION VEHICLES OR EQUIPMENT DO NOT COMPACT THE SOIL IN THE INFILTRATION AREA.

ALL SPECIFIED EROSION AND SEDIMENT CONTROL PRACTICES, AND MEASURES CONTAINED IN THIS SWPPP ARE THE MINIMUM REQUIREMENTS. ADDITIONAL PRACTICES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION.

SWPPP LEGEND:

- 1125 — EX. 1' CONTOUR ELEVATION INTERVAL
- DRAINAGE ARROW
- SILT FENCE / BIOROLL - GRADING LIMIT
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE

Know what's below. Call before you dig.

1" = 30'-0"
15'-0" 0 30'-0"

CivilSite GROUP
Civil Engineering ° Surveying ° Landscape Architecture
5000 Glenwood Avenue
Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

PRELIMINARY: NOT FOR CONSTRUCTION

PROJECT
DOUGLAS ROAD MULTIFAMILY
E POINT DOUGLAS ROAD S, COTTAGE GROVE, 55016

OWNER
YELLOWTREE CORPORATION
1834 EAST 38TH STREET, MINNEAPOLIS, MN 55407

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ANDERS S. MELBY
DATE 12/08/2025 LICENSE NO. 58960

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
10/29/2025	CITY SUBMITTAL
10/30/2025	WATERSHED SUBMITTAL
11/14/2025	CITY RESUBMITTAL
12/08/2025	CITY RESUBMITTAL

PROJECT MANAGER	PATRICK SARVER
CONTACT NUMBER	612-615-0060 X 702
DRAWN BY	BN, AM
REVIEWED BY	PS
PROJECT NUMBER	25157

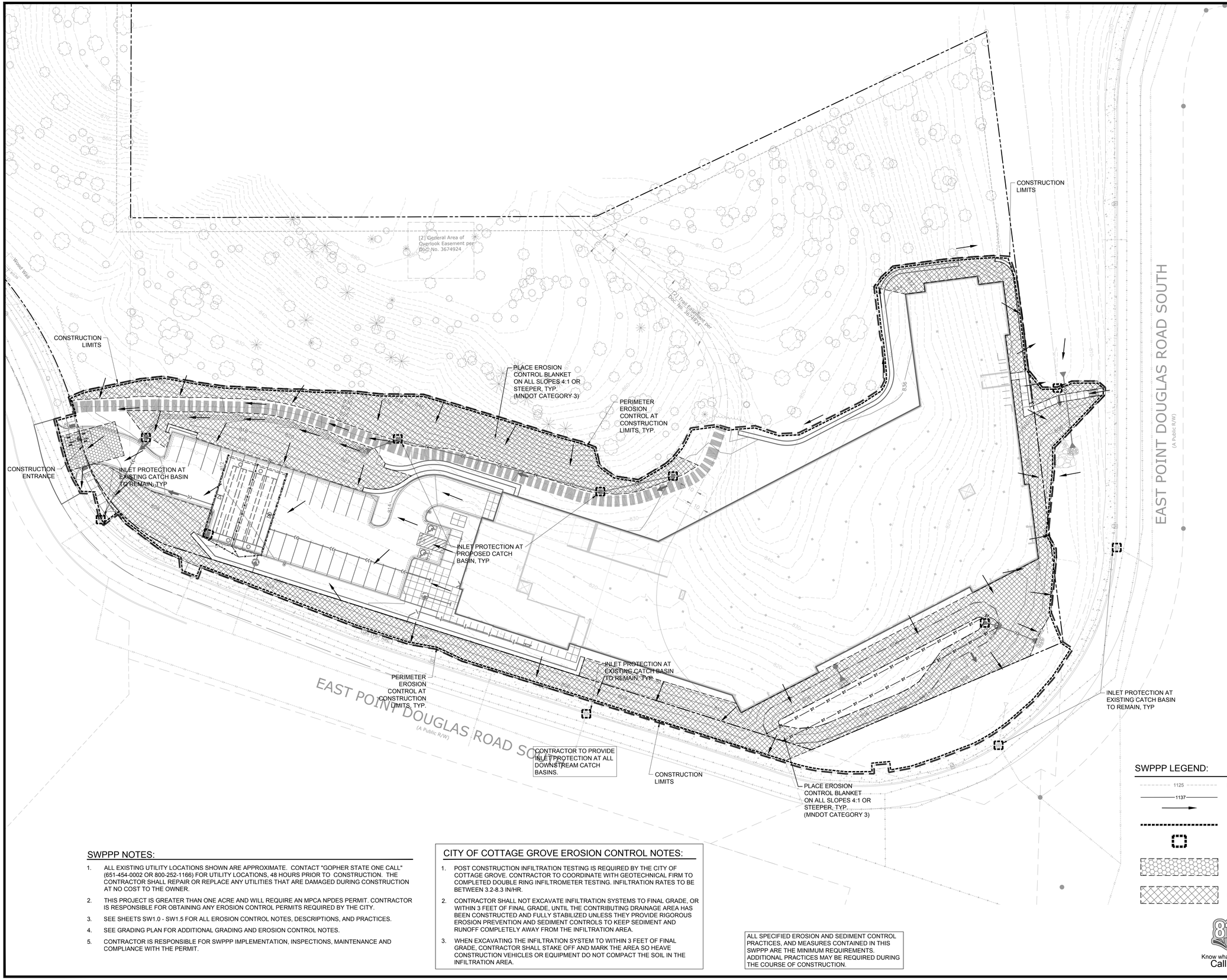
REVISION SUMMARY

DATE	DESCRIPTION

SWPPP - EXISTING CONDITIONS

SW1.0

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SWPPP NOTES:

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SWPPP LEGEND:

- 1125 — EX. 1' CONTOUR ELEVATION INTERVAL
- 1137 — 1.0' CONTOUR ELEVATION INTERVAL
- DRAINAGE ARROW
- SILT FENCE / BIOROLL - GRADING LIMIT
- INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE
- EROSION CONTROL BLANKET

Know what's below. Call before you dig.

1" = 30'-0"
15'-0" 0 30'-0"

CivilSite GROUP
Civil Engineering ˚ Surveying ˚ Landscape Architecture
5000 Glenwood Avenue
Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

PRELIMINARY: NOT FOR CONSTRUCTION

PROJECT
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E POINT DOUGLAS ROAD S, COTTAGE GROVE, 55016

OWNER
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ANDERS S. MELBY
DATE 12/08/2025 LICENSE NO. 58960

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
10/29/2025	CITY SUBMITTAL
10/30/2025	WATERSHED SUBMITTAL
11/14/2025	CITY RESUBMITTAL
12/08/2025	CITY RESUBMITTAL

PROJECT MANAGER	PATRICK SARVER
CONTACT NUMBER	612-615-0060 X 702
DRAWN BY	RN, AM
REVIEWED BY	PS
PROJECT NUMBER	25157

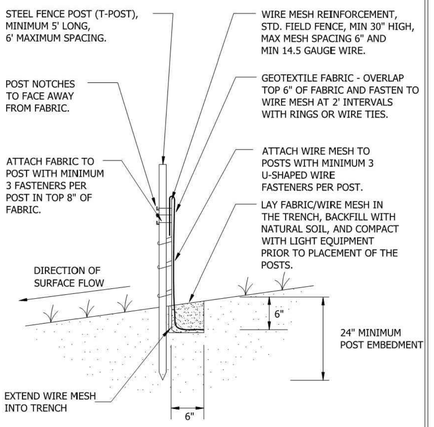
REVISION SUMMARY

DATE	DESCRIPTION

SWPPP - PROPOSED CONDITIONS

SW1.1

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NOTE: MACHINE SLICED HEAVY DUTY SILT FENCE SHOULD BE USED WHEN DIRECTED BY THE CITY.

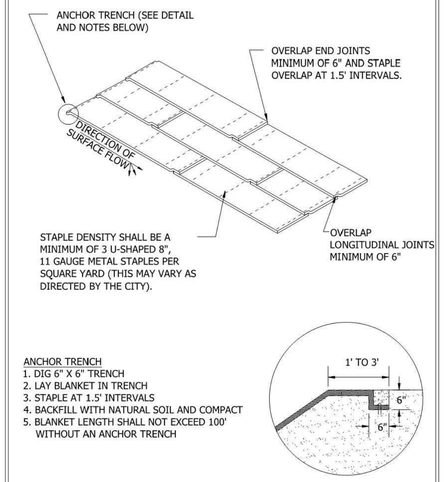
Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS
HEAVY DUTY SILT FENCE
COTTAGE GROVE, MINNESOTA

JANUARY 2023

PLATE NO. ERO-3

48_ERO3.DWG



ANCHOR TRENCH
1. DIG 6" X 6" TRENCH
2. LAY BLANKET IN TRENCH
3. STAPLE AT 1.5' INTERVALS
4. BACKFILL WITH NATURAL SOIL AND COMPACT
5. BLANKET LENGTH SHALL NOT EXCEED 100' WITHOUT AN ANCHOR TRENCH

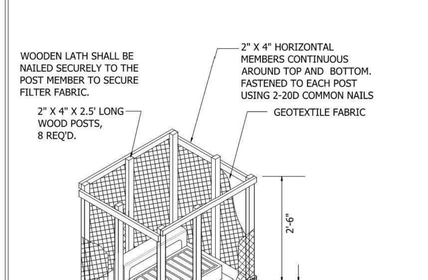
Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS
ROLLED EROSION PREVENTION PRODUCTS INSTALLATION
COTTAGE GROVE, MINNESOTA

JANUARY 2023

PLATE NO. ERO-5

48_ERO5.DWG



NOTES:
CONTRACTOR SHALL CONSTRUCT SILT BOX TO FIT AROUND THE INLET STRUCTURE WITH 6" MINIMUM CLEARANCE TO EDGES OF STRUCTURE. SILT BOX TO BE PLACED ON AN EVEN SURFACE 6" BELOW STRUCTURE OPENING. TOP OF SILT BOX TO EXTEND 18" MINIMUM ABOVE EXISTING GRADE.

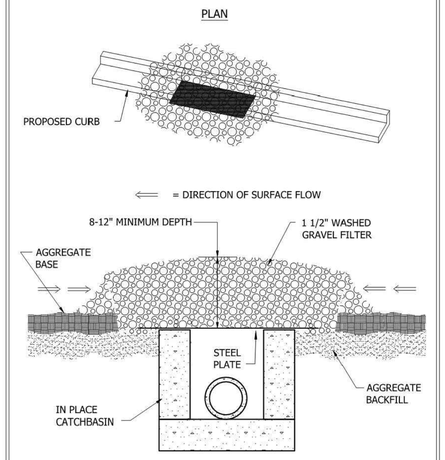
Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS
INLET PROTECTION SILT BOX FOR CATCH BASIN
COTTAGE GROVE, MINNESOTA

JANUARY 2023

PLATE NO. ERO-7

48_ERO7.DWG



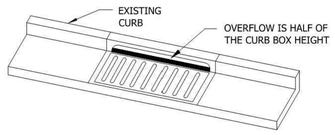
Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS
INLET PROTECTION ROCK FILTER FOR CATCH BASIN
COTTAGE GROVE, MINNESOTA

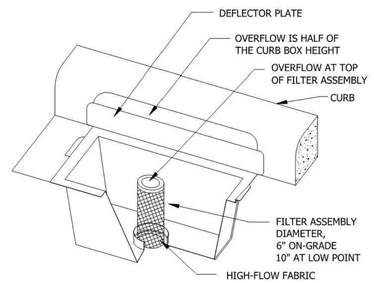
JANUARY 2023

PLATE NO. ERO-8

48_ERO8.DWG



NOTE: USE WIMCO ROAD DRAIN CG-23 OR CG-3290-VB (DEPENDING ON CASTING TYPE) HIGH FLOW INLET PROTECTION CURB AND GUTTER MODELS, OR CITY APPROVED EQUAL.



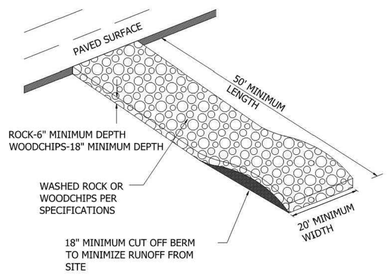
Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS
INLET PROTECTION CATCH BASIN INSERT
COTTAGE GROVE, MINNESOTA

JANUARY 2023

PLATE NO. ERO-9

48_ERO9.DWG



NOTES:
1. FILTER FABRIC SHALL BE PLACED UNDER ROCK OR WOODCHIPS TO STOP MUD MIGRATION THROUGH ROCK.
2. ENTRANCE MUST BE MAINTAINED REGULARLY TO PREVENT SEDIMENTATION TRACKING.

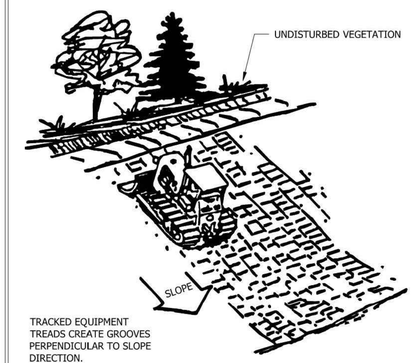
Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS
CONSTRUCTION ENTRANCE ROCK AND WOODCHIP
COTTAGE GROVE, MINNESOTA

JANUARY 2023

PLATE NO. ERO-12

48_ERO12.DWG



TRACKED EQUIPMENT TREADS CREATE GROOVES PERPENDICULAR TO SLOPE DIRECTION.

NOTE:
ALL SLOPES WITH A GRADE EQUAL TO OR STEEPER THAN 3:1 REQUIRE SLOPE TRACKING. SLOPES WITH A GRADE MORE GRADUAL THAN 3:1 REQUIRE SLOPE TRACKING IF THE STABILIZATION METHOD IS EROSION CONTROL BLANKET OR HYDROMULCH.

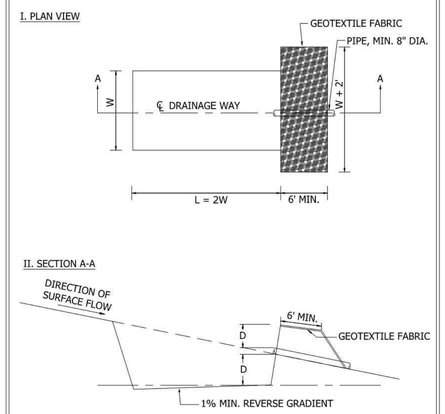
Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS
SLOPE TRACKING
COTTAGE GROVE, MINNESOTA

JANUARY 2023

PLATE NO. ERO-13

48_ERO13.DWG



NOTE:
D=2' MIN, 4' MAX
W=10' MIN, 25' MAX
W(FT.)= 10 X DRAINAGE AREA (AC.)

Cottage Grove — Where Pride and Prosperity Meet

STANDARD DETAILS
TEMPORARY SEDIMENT TRAP/BASIN
COTTAGE GROVE, MINNESOTA

JANUARY 2023

PLATE NO. ERO-14

48_ERO14.DWG

CivilSite GROUP
Civil Engineering ˚ Surveying ˚ Landscape Architecture
5000 Glenwood Avenue
Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

PRELIMINARY: NOT FOR CONSTRUCTION

PROJECT
DOUGLAS ROAD MULTIFAMILY
E POINT DOUGLAS ROAD S, COTTAGE GROVE, 55016

OWNER
YELLOWTREE CORPORATION
1834 EAST 38TH STREET, MINNEAPOLIS, MN 55407

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ANDERS S. MELBY
DATE 12/08/2025 LICENSE NO. 58960

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
10/29/2025	CITY SUBMITTAL
10/30/2025	WATERSHED SUBMITTAL
11/14/2025	CITY RESUBMITTAL
12/08/2025	CITY RESUBMITTAL

PROJECT MANAGER	PATRICK SARVER
CONTACT NUMBER	612-615-0060 X 702
DRAWN BY	BN, AM
REVIEWED BY	PS
PROJECT NUMBER	25137

REVISION SUMMARY

DATE	DESCRIPTION

SWPPP - DETAILS

SW1.2

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THE CONTRACTOR AND ALL SUBCONTRACTORS INVOLVED WITH A CONSTRUCTION ACTIVITY THAT DISTURBS SITE SOIL OR WHO IMPLEMENT A POLLUTANT CONTROL MEASURE IDENTIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) MUST COMPLY WITH THE REQUIREMENTS OF THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT (DATED AUGUST 1, 2018 # MNR100001) AND ANY LOCAL GOVERNING AGENCY HAVING JURISDICTION CONCERNING EROSION AND SEDIMENTATION CONTROL.

STORMWATER DISCHARGE DESIGN REQUIREMENTS

SWPPP

THE NATURE OF THIS PROJECT WILL BE CONSISTENT WITH WHAT IS REPRESENTED IN THIS SET OF CONSTRUCTION PLANS AND SPECIFICATIONS. SEE THE SWPPP PLAN SHEETS AND SWPPP NARRATIVE (ATTACHMENT A: CONSTRUCTION SWPPP TEMPLATE) FOR ADDITIONAL SITE SPECIFIC SWPPP INFORMATION. THE PLANS SHOW LOCATIONS AND TYPES OF ALL TEMPORARY AND PERMANENT EROSION PREVENTION AND SEDIMENT CONTROL BMP'S. STANDARD DETAILS ARE ATTACHED TO THIS SWPPP DOCUMENT.

THE INTENDED SEQUENCING OF MAJOR CONSTRUCTION ACTIVITIES IS AS FOLLOWS:
1. INSTALL STABILIZED ROCK CONSTRUCTION ENTRANCE
2. INSTALLATION OF SILT FENCE AROUND SITE
3. INSTALL ORANGE CONSTRUCTION FENCING AROUND INFILTRATION AREAS
4. INSTALL INLET PROTECTION AT ALL ADJACENT AND DOWNSTREAM CATCH BASINS
5. CLEAR AND GRUB FOR TEMPORARY SEDIMENT BASIN / POND INSTALL
6. CONSTRUCT TEMPORARY SEDIMENT BASIN / POND (SECTION 14)
7. CLEAR AND GRUB REMAINDER OF SITE
8. STRIP AND STOCKPILE TOPSOIL
9. ROUGH GRADING OF SITE
10. STABILIZE DENUDED AREAS AND STOCKPILES
11. INSTALL SANITARY SEWER, WATER MAIN STORM SEWER AND SERVICES
12. INSTALL SILT FENCE / INLET PROTECTION AROUND CB'S
13. INSTALL STREET SECTION
14. INSTALL CURB AND GUTTER
15. BITUMINOUS ON STREETS
16. FINAL GRADE BOULEVARD, INSTALL SEED AND MULCH
17. REMOVE ACCUMULATED SEDIMENT FROM BASIN / POND
18. FINAL GRADE POND / INFILTRATION BASINS (DO NOT COMPACT SOILS IN INFILTRATION AREAS.)
19. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED BY EITHER SEED OR SOD/LANDSCAPING, REMOVE SILT FENCE AND RESEED ANY AREAS DISTURBED BY THE REMOVAL.

RECORDS RETENTION:

THE SWPPP (ORIGINAL OR COPIES) INCLUDING, ALL CHANGES TO IT, AND INSPECTIONS AND MAINTENANCE RECORDS MUST BE KEPT AT THE SITE DURING CONSTRUCTION BY THE PERMITTEE WHO HAS OPERATIONAL CONTROL OF THAT PORTION OF THE SITE. THE SWPPP CAN BE KEPT IN EITHER THE FIELD OFFICE OR IN AN ON SITE VEHICLE DURING NORMAL WORKING HOURS.

ALL OWNER(S) MUST KEEP THE SWPPP, ALONG WITH THE FOLLOWING ADDITIONAL RECORDS, ON FILE FOR THREE (3) YEARS AFTER SUBMITTAL OF THE NOT AS OUTLINED IN SECTION 4. THIS DOES NOT INCLUDE ANY RECORDS AFTER SUBMITTAL OF THE NOT.

1. THE FINAL SWPPP;
2. ANY OTHER STORMWATER RELATED PERMITS REQUIRED FOR THE PROJECT;
3. RECORDS OF ALL INSPECTION AND MAINTENANCE CONDUCTED DURING CONSTRUCTION (SEE SECTION 11, INSPECTIONS AND MAINTENANCE);
4. ALL PERMANENT OPERATION AND MAINTENANCE AGREEMENTS THAT HAVE BEEN IMPLEMENTED, INCLUDING ALL RIGHT OF WAY, CONTRACTS, COVENANTS AND OTHER BINDING REQUIREMENTS REGARDING PERPETUAL MAINTENANCE; AND
5. ALL REQUIRED CALCULATIONS FOR DESIGN OF THE TEMPORARY AND PERMANENT STORMWATER MANAGEMENT SYSTEMS.

SWPPP IMPLEMENTATION RESPONSIBILITIES:

1. THE OWNER AND CONTRACTOR ARE PERMITTEE(S) AS IDENTIFIED BY THE NPDES PERMIT.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE IMPLEMENTATION OF THE SWPPP, INCLUDING THE ACTIVITIES OF ALL OF THE CONTRACTOR'S SUBCONTRACTORS.
3. CONTRACTOR SHALL PROVIDE A PERSON(S) KNOWLEDGEABLE AND EXPERIENCED IN THE APPLICATION OF EROSION PREVENTION AND SEDIMENT CONTROL BMPS TO OVERSEE ALL INSTALLATION AND MAINTENANCE OF BMPS AND IMPLEMENTATION OF THE SWPPP
4. CONTRACTOR SHALL PROVIDE PERSON(S) MEETING THE TRAINING REQUIREMENTS OF THE NPDES PERMIT TO CONDUCT INSPECTION AND MAINTENANCE OF ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS IN ACCORDANCE WITH THE REQUIREMENTS OF THE PERMIT. ONE OF THESE INDIVIDUAL(S) MUST BE AVAILABLE FOR AN ONSITE INSPECTION WITHIN 72 HOURS UPON REQUEST BY MPCA. CONTRACTOR SHALL PROVIDE TRAINING DOCUMENTATION FOR THESE INDIVIDUAL(S) AS REQUIRED BY THE NPDES PERMIT. THIS TRAINING DOCUMENTATION SHALL BE RECORDED IN OR WITH THE SWPPP BEFORE THE START OF CONSTRUCTION OR AS SOON AS THE PERSONNEL FOR THE PROJECT HAVE BEEN DETERMINED. DOCUMENTATION SHALL INCLUDE:
   - 4.1. NAMES OF THE PERSONNEL ASSOCIATED WITH THE PROJECT THAT ARE REQUIRED TO BE TRAINED PER SECTION 21 OF THE PERMIT.
   - 4.2. DATES OF TRAINING AND NAME OF INSTRUCTOR AND ENTITY PROVIDING TRAINING.
   - 4.3. CONTENT OF TRAINING COURSE OR WORKSHOP INCLUDING THE NUMBER OF HOURS OF TRAINING.
5. FOLLOWING FINAL STABILIZATION AND THE TERMINATION OF COVERAGE FOR THE NPDES PERMIT, THE OWNER IS EXPECTED TO FURNISH LONG TERM OPERATION AND MAINTENANCE (O & M) OF THE PERMANENT STORM WATER MANAGEMENT SYSTEM.

CONSTRUCTION ACTIVITY REQUIREMENTS

SWPPP AMENDMENTS (SECTION 6):

1. ONE OF THE INDIVIDUALS DESCRIBED IN ITEM 21.2.A OR ITEM 21.2.B OR ANOTHER QUALIFIED INDIVIDUAL MUST COMPLETE ALL SWPPP CHANGES. CHANGES INVOLVING THE USE OF A LESS STRINGENT BMP MUST INCLUDE A JUSTIFICATION DESCRIBING HOW THE REPLACEMENT BMP IS EFFECTIVE FOR THE SITE CHARACTERISTICS.
2. PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPS AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, WEATHER OR SEASONAL CONDITIONS HAVING A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER.
3. PERMITTEES MUST AMEND THE SWPPP TO INCLUDE ADDITIONAL OR MODIFIED BMPS AS NECESSARY TO CORRECT PROBLEMS IDENTIFIED OR ADDRESS SITUATIONS WHENEVER INSPECTIONS OR INVESTIGATIONS BY THE SITE OWNER OR OPERATOR, USEPA OR MPCA OFFICIALS INDICATE THE SWPPP IS NOT EFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OR GROUNDWATER OR THE DISCHARGES ARE CAUSING WATER QUALITY STANDARD EXCEEDANCES (E.G., NUISANCE CONDITIONS AS DEFINED IN MINN. R. 7050.0210, SUBP. 2) OR THE SWPPP IS NOT CONSISTENT WITH THE OBJECTIVES OF A USEPA APPROVED TMDL.

BMP SELECTION AND INSTALLATION (SECTION 7):

1. PERMITTEES MUST SELECT, INSTALL, AND MAINTAIN THE BMPS IDENTIFIED IN THE SWPPP AND IN THIS PERMIT IN AN APPROPRIATE AND FUNCTIONAL MANNER AND IN ACCORDANCE WITH RELEVANT MANUFACTURER SPECIFICATIONS AND ACCEPTED ENGINEERING PRACTICES.

EROSION PREVENTION (SECTION 8):

1. BEFORE WORK BEGINS, PERMITTEES MUST DELINEATE THE LOCATION OF AREAS NOT TO BE DISTURBED.
2. PERMITTEES MUST MINIMIZE THE NEED FOR DISTURBANCE OF PORTIONS OF THE PROJECT WITH STEEP SLOPES. WHEN STEEP SLOPES MUST BE DISTURBED, PERMITTEES MUST USE TECHNIQUES SUCH AS PHASING AND STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES (E.G., SLOPE DRAINING AND TERRACING).
3. PERMITTEES MUST STABILIZE ALL EXPOSED SOIL AREAS, INCLUDING STOCKPILES. STABILIZATION MUST BE INITIATED IMMEDIATELY TO LIMIT SOIL EROSION WHEN CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION MUST BE COMPLETED NO LATER THAN 14 CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY HAS CEASED. STABILIZATION IS NOT REQUIRED ON CONSTRUCTED BASE COMPONENTS OF ROADS, PARKING LOTS AND SIMILAR SURFACES. STABILIZATION IS NOT REQUIRED ON TEMPORARY STOCKPILES WITHOUT SIGNIFICANT SILT, CLAY OR ORGANIC COMPONENTS (E.G., CLEAN AGGREGATE STOCKPILES, DEMOLITION CONCRETE STOCKPILES, SAND STOCKPILES) BUT PERMITTEES MUST PROVIDE SEDIMENT CONTROLS AT THE BASE OF THE STOCKPILE.
4. FOR PUBLIC WATERS THAT THE MINNESOTA DNR HAS PROMULGATED "WORK IN WATER RESTRICTIONS" DURING SPECIFIED FISH SPAWNING TIME FRAMES, PERMITTEES MUST COMPLETE STABILIZATION OF ALL EXPOSED SOIL AREAS WITHIN 200 FEET OF THE WATER'S EDGE, AND THAT DRAIN TO THESE WATERS, WITHIN 24 HOURS DURING THE RESTRICTION PERIOD.
5. PERMITTEES MUST STABILIZE THE NORMAL WETTED PERIMETER OF THE LAST 200 LINEAR FEET OF TEMPORARY OR PERMANENT DRAINAGE DITCHES OR SWALES THAT DRAIN WATER FROM THE SITE WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE. PERMITTEES MUST COMPLETE STABILIZATION OF REMAINING PORTIONS OF TEMPORARY OR PERMANENT DITCHES OR SWALES WITHIN 14 CALENDAR DAYS AFTER CONNECTING TO A SURFACE WATER OR PROPERTY EDGE AND CONSTRUCTION IN THAT PORTION OF THE DITCH TEMPORARILY OR PERMANENTLY CEASES.
6. TEMPORARY OR PERMANENT DITCHES OR SWALES BEING USED AS A SEDIMENT CONTAINMENT SYSTEM DURING CONSTRUCTION (WITH PROPERLY DESIGNED ROCK-DITCH CHECKS, BIO ROLLS, SILT DIKES, ETC.) DO NOT NEED TO BE STABILIZED. PERMITTEES MUST STABILIZE THESE AREAS WITHIN 24 HOURS AFTER THEIR USE AS A SEDIMENT CONTAINMENT SYSTEM CEASES
7. PERMITTEES MUST NOT USE MULCH, HYDROMULCH, TACKIFIER, POLYACRYLAMIDE OR SIMILAR EROSION PREVENTION PRACTICES WITHIN ANY PORTION OF THE NORMAL WETTED PERIMETER OF A TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE SECTION WITH A CONTINUOUS SLOPE OF GREATER THAN 2 PERCENT.
8. PERMITTEES MUST PROVIDE TEMPORARY OR PERMANENT ENERGY DISSIPATION AT ALL PIPE OUTLETS WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER OR PERMANENT STORMWATER TREATMENT SYSTEM.
9. PERMITTEES MUST NOT DISTURB MORE LAND (I.E., PHASING) THAN CAN BE EFFECTIVELY INSPECTED AND MAINTAINED IN ACCORDANCE WITH SECTION 11.

SEDIMENT CONTROL (SECTION 9):

1. PERMITTEES MUST ESTABLISH SEDIMENT CONTROL BMPS ON ALL DOWNGRADIENT PERIMETERS OF THE SITE AND DOWNGRADIENT AREAS OF THE SITE THAT DRAIN TO ANY SURFACE WATER, INCLUDING CURB AND GUTTER SYSTEMS. PERMITTEES MUST LOCATE SEDIMENT CONTROL PRACTICES UPGRADIENT OF ANY BUFFER ZONES. PERMITTEES MUST INSTALL SEDIMENT CONTROL PRACTICES BEFORE ANY UPGRADIENT LAND-DISTURBING ACTIVITIES BEGIN AND MUST KEEP THE SEDIMENT CONTROL PRACTICES IN PLACE UNTIL THEY ESTABLISH PERMANENT COVER.
2. IF DOWNGRADIENT SEDIMENT CONTROLS ARE OVERLOADED, BASED ON FREQUENT FAILURE OR EXCESSIVE MAINTENANCE REQUIREMENTS, PERMITTEES MUST INSTALL ADDITIONAL UPGRADIENT SEDIMENT CONTROL PRACTICES OR REDUNDANT BMPS TO ELIMINATE THE OVERLOADING AND AMEND THE SWPPP TO IDENTIFY THESE ADDITIONAL PRACTICES AS REQUIRED IN ITEM 6.3.
3. TEMPORARY OR PERMANENT DRAINAGE DITCHES AND SEDIMENT BASINS DESIGNED AS PART OF A SEDIMENT CONTAINMENT SYSTEM (E.G., DITCHES WITH ROCK-CHECK DAMS) REQUIRE SEDIMENT CONTROL PRACTICES ONLY AS APPROPRIATE FOR SITE CONDITIONS.
4. A FLOATING SILT CURTAIN PLACED IN THE WATER IS NOT A SEDIMENT CONTROL BMP TO SATISFY ITEM 9.2 EXCEPT WHEN WORKING ON A SHORELINE OR BELOW THE WATERLINE, IMMEDIATELY AFTER THE SHORT TERM CONSTRUCTION ACTIVITY (E.G., INSTALLATION OF RIP RAP ALONG THE SHORELINE) IN THAT AREA IS COMPLETE, PERMITTEES MUST INSTALL AN UPLAND PERIMETER CONTROL PRACTICE IF EXPOSED SOILS STILL DRAIN TO A SURFACE WATER.
5. PERMITTEES MUST RE-INSTALL ALL SEDIMENT CONTROL PRACTICES ADJUSTED OR REMOVED TO ACCOMMODATE SHORT-TERM ACTIVITIES SUCH AS CLEARING OR GRUBBING, OR PASSAGE OF VEHICLES, IMMEDIATELY AFTER THE SHORT-TERM ACTIVITY IS COMPLETED. PERMITTEES MUST RE-INSTALL SEDIMENT CONTROL PRACTICES BEFORE THE NEXT PRECIPITATION EVENT EVEN IF THE SHORT-TERM ACTIVITY IS NOT COMPLETE.
6. PERMITTEES MUST PROTECT ALL STORM DRAIN INLETS USING APPROPRIATE BMPS DURING CONSTRUCTION UNTIL THEY ESTABLISH PERMANENT COVER ON ALL AREAS WITH POTENTIAL FOR DISCHARGING TO THE INLET.
7. PERMITTEES MAY REMOVE INLET PROTECTION FOR A PARTICULAR INLET IF A SPECIFIC SAFETY CONCERN (E.G. STREET FLOODING/FREEZING) IS IDENTIFIED BY THE PERMITTEES OR THE JURISDICTIONAL AUTHORITY (E.G., CITY/COUNTY/TOWNSHIP/MINNESOTA DEPARTMENT OF TRANSPORTATION ENGINEER). PERMITTEES MUST DOCUMENT THE NEED FOR REMOVAL IN THE SWPPP.
8. PERMITTEES MUST PROVIDE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS AT THE BASE OF STOCKPILES ON THE DOWNGRADIENT PERIMETER.
9. PERMITTEES MUST LOCATE STOCKPILES OUTSIDE OF NATURAL BUFFERS OR SURFACE WATERS, INCLUDING STORMWATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS UNLESS THERE IS A BYPASS IN PLACE FOR THE STORMWATER.
10. PERMITTEES MUST INSTALL A VEHICLE TRACKING BMP TO MINIMIZE THE TRACK OUT OF SEDIMENT FROM THE CONSTRUCTION SITE OR ONTO PAVED ROADS WITHIN THE SITE.
11. PERMITTEES MUST USE STREET SWEEPING IF VEHICLE TRACKING BMPS ARE NOT ADEQUATE TO PREVENT SEDIMENT TRACKING ONTO THE STREET.
12. PERMITTEES MUST INSTALL TEMPORARY SEDIMENT BASINS AS REQUIRED IN SECTION 14.
13. IN ANY AREAS OF THE SITE WHERE FINAL VEGETATIVE STABILIZATION WILL OCCUR, PERMITTEES MUST RESTRICT VEHICLE AND EQUIPMENT USE TO MINIMIZE SOIL COMPACTION.
14. PERMITTEES MUST PRESERVE TOPSOIL ON THE SITE, UNLESS INFEASIBLE.
15. PERMITTEES MUST DIRECT DISCHARGES FROM BMPS TO VEGETATED AREAS UNLESS INFEASIBLE.
16. PERMITTEES MUST PRESERVE A 50 FOOT NATURAL BUFFER OR, IF A BUFFER IS INFEASIBLE ON THE SITE, PROVIDE REDUNDANT (DOUBLE) PERIMETER SEDIMENT CONTROLS WHEN A SURFACE WATER IS LOCATED WITHIN 50 FEET OF THE PROJECT'S EARTH DISTURBANCES AND STORMWATER FLOWS TO THE SURFACE WATER. PERMITTEES MUST INSTALL PERIMETER SEDIMENT CONTROLS AT LEAST 5 FEET APART UNLESS LIMITED BY LACK OF AVAILABLE SPACE. NATURAL BUFFERS ARE NOT REQUIRED ADJACENT TO ROAD DITCHES, JUDICIAL DITCHES, COUNTY DITCHES, STORMWATER CONVEYANCE CHANNELS, STORM DRAIN INLETS, AND SEDIMENT BASINS. IF PRESERVING THE BUFFER IS INFEASIBLE, PERMITTEES MUST DOCUMENT THE REASONS IN THE SWPPP. SHEET PILING IS A REDUNDANT PERIMETER CONTROL IF INSTALLED IN A MANNER THAT RETAINS ALL STORMWATER.
17. PERMITTEES MUST USE POLYMERS, FLOCCULANTS, OR OTHER SEDIMENTATION TREATMENT CHEMICALS IN ACCORDANCE WITH ACCEPTED ENGINEERING PRACTICES, DOSING SPECIFICATIONS AND SEDIMENT REMOVAL DESIGN SPECIFICATIONS PROVIDED BY THE MANUFACTURER OR SUPPLIER. THE PERMITTEES MUST USE CONVENTIONAL EROSION AND SEDIMENT CONTROLS PRIOR TO CHEMICAL ADDITION AND MUST DIRECT TREATED STORMWATER TO A SEDIMENT CONTROL SYSTEM FOR FILTRATION OR SETTLEMENT OF THE FLOC PRIOR TO DISCHARGE.

DEWATERING AND BASIN DRAINING (SECTION 10):

1. PERMITTEES MUST DISCHARGE TURBID OR SEDIMENT-LADEN WATERS RELATED TO DEWATERING OR BASIN DRAINING (E.G., PUMPED DISCHARGES, TRENCH/DITCH CUTS FOR DRAINAGE) TO A TEMPORARY OR PERMANENT SEDIMENT BASIN ON THE PROJECT SITE UNLESS INFEASIBLE. PERMITTEES MAY DEWATER TO SURFACE WATERS IF THEY VISUALLY CHECK TO ENSURE ADEQUATE TREATMENT HAS BEEN OBTAINED AND NUISANCE CONDITIONS (SEE MINN. R. 7050.0210, SUBP. 2) WILL NOT RESULT FROM THE DISCHARGE. IF PERMITTEES CANNOT DISCHARGE THE WATER TO A SEDIMENTATION BASIN PRIOR TO ENTERING A SURFACE WATER, PERMITTEES MUST TREAT IT WITH APPROPRIATE BMPS SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE SURFACE WATER OR DOWNSTREAM PROPERTIES.
2. IF PERMITTEES MUST DISCHARGE WATER CONTAINING OIL OR GREASE, THEY MUST USE AN OIL-WATER SEPARATOR OR SUITABLE FILTRATION DEVICE (E.G., CARTRIDGE FILTERS, ABSORBENTS PADS) PRIOR TO DISCHARGE.
3. PERMITTEES MUST DISCHARGE ALL WATER FROM DEWATERING OR BASIN-DRAINING ACTIVITIES IN A MANNER THAT DOES NOT CAUSE EROSION OR SCOUR IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS OR INUNDATION OF WETLANDS IN THE IMMEDIATE VICINITY OF DISCHARGE POINTS THAT CAUSES SIGNIFICANT ADVERSE IMPACT TO THE WETLAND.
4. IF PERMITTEES USE FILTERS WITH BACKWASH WATER, THEY MUST HAUL THE BACKWASH WATER AWAY FOR DISPOSAL, RETURN THE BACKWASH WATER TO THE BEGINNING OF THE TREATMENT PROCESS, OR INCORPORATE THE BACKWASH WATER INTO THE SITE IN A MANNER THAT DOES NOT CAUSE EROSION.

INSPECTIONS AND MAINTENANCE (SECTION 11):

1. PERMITTEES MUST ENSURE A TRAINED PERSON, AS IDENTIFIED IN ITEM 21.2.B, WILL INSPECT THE ENTIRE CONSTRUCTION SITE AT LEAST ONCE EVERY SEVEN (7) DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 1/2 INCH IN 24 HOURS.
2. PERMITTEES MUST INSPECT AND MAINTAIN ALL PERMANENT STORMWATER TREATMENT BMPS.
3. PERMITTEES MUST INSPECT ALL EROSION PREVENTION AND SEDIMENT CONTROL BMPS AND POLLUTION PREVENTION MANAGEMENT MEASURES TO ENSURE INTEGRITY AND EFFECTIVENESS. PERMITTEES MUST REPAIR, REPLACE OR SUPPLEMENT ALL NONFUNCTIONAL BMPS WITH FUNCTIONAL BMPS BY THE END OF THE NEXT BUSINESS DAY AFTER DISCOVERY UNLESS ANOTHER TIME FRAME IS SPECIFIED IN ITEM 11.5 OR 11.6. PERMITTEES MAY TAKE ADDITIONAL TIME IF FIELD CONDITIONS PREVENT ACCESS TO THE AREA.
4. DURING EACH INSPECTION, PERMITTEES MUST INSPECT SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS BUT NOT CURB AND GUTTER SYSTEMS, FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION. PERMITTEES MUST REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGE WAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS AND RESTABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. PERMITTEES MUST COMPLETE REMOVAL AND STABILIZATION WITHIN SEVEN (7) CALENDAR DAYS OF DISCOVERY UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL ACCESS CONSTRAINTS. PERMITTEES MUST USE ALL REASONABLE EFFORTS TO OBTAIN ACCESS. IF PRECLUDED, REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN SEVEN (7) DAYS OF OBTAINING ACCESS. PERMITTEES ARE RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND RECEIVING ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK IN SURFACE WATERS.
5. PERMITTEES MUST INSPECT CONSTRUCTION SITE VEHICLE EXIT LOCATIONS, STREETS AND CURB AND GUTTER SYSTEMS WITHIN AND ADJACENT TO THE PROJECT FOR SEDIMENTATION FROM EROSION OR TRACKED SEDIMENT FROM VEHICLES. PERMITTEES MUST REMOVE SEDIMENT FROM ALL PAVED SURFACES WITHIN ONE (1) CALENDAR DAY OF DISCOVERY OR, IF APPLICABLE, WITHIN A SHORTER TIME TO AVOID A SAFETY HAZARD TO USERS OF PUBLIC STREETS.
6. PERMITTEES MUST REPAIR, REPLACE OR SUPPLEMENT ALL PERIMETER CONTROL DEVICES WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE HEIGHT OF THE DEVICE.
7. PERMITTEES MUST DRAIN TEMPORARY AND PERMANENT SEDIMENTATION BASINS AND REMOVE THE SEDIMENT WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES 1/2 THE STORAGE VOLUME.
8. PERMITTEES MUST ENSURE THAT AT LEAST ONE INDIVIDUAL PRESENT ON THE SITE (OR AVAILABLE TO THE PROJECT SITE IN THREE (3) CALENDAR DAYS) IS TRAINED IN THE JOB DUTIES DESCRIBED IN ITEM 21.2.B.
9. PERMITTEES MAY ADJUST THE INSPECTION SCHEDULE DESCRIBED IN ITEM 11.2 AS FOLLOWS:
   - a. INSPECTIONS OF AREAS WITH PERMANENT COVER CAN BE REDUCED TO ONCE PER MONTH, EVEN IF CONSTRUCTION ACTIVITY CONTINUES ON OTHER PORTIONS OF THE SITE; OR
   - b. WHERE SITES HAVE PERMANENT COVER ON ALL EXPOSED SOIL AND NO CONSTRUCTION ACTIVITY IS OCCURRING ANYWHERE ON THE SITE, INSPECTIONS CAN BE REDUCED TO ONCE PER MONTH AND, AFTER 12 MONTHS, MAY BE SUSPENDED COMPLETELY UNTIL CONSTRUCTION ACTIVITY RESUMES. THE MPCA MAY REQUIRE INSPECTIONS TO RESUME IF CONDITIONS WARRANT; OR
   - c. WHERE CONSTRUCTION ACTIVITY HAS BEEN SUSPENDED DUE TO FROZEN GROUND CONDITIONS, INSPECTIONS MAY BE SUSPENDED. INSPECTIONS MUST RESUME WITHIN 24 HOURS OF RUNOFF OCCURRING, OR UPON RESUMING CONSTRUCTION, WHICHEVER COMES FIRST.
10. PERMITTEES MUST RECORD ALL INSPECTIONS AND MAINTENANCE ACTIVITIES WITHIN 24 HOURS OF BEING CONDUCTED AND THESE RECORDS MUST BE RETAINED WITH THE SWPPP. THESE RECORDS MUST INCLUDE:
    - a. DATE AND TIME OF INSPECTIONS; AND
    - b. NAME OF PERSONS CONDUCTING INSPECTIONS; AND
    - c. ACCURATE FINDINGS OF INSPECTIONS, INCLUDING THE SPECIFIC LOCATION WHERE CORRECTIVE ACTIONS ARE NEEDED; AND
    - d. CORRECTIVE ACTIONS TAKEN (INCLUDING DATES, TIMES, AND PARTY COMPLETING MAINTENANCE ACTIVITIES); AND
    - e. DATE OF ALL RAINFALL EVENTS GREATER THAN 1/2 INCHES IN 24 HOURS, AND THE AMOUNT OF RAINFALL FOR EACH EVENT. PERMITTEES MUST OBTAIN RAINFALL AMOUNTS BY EITHER A PROPERLY MAINTAINED RAIN GAUGE INSTALLED ONSITE, A WEATHER STATION THAT IS WITHIN ONE (1) MILE OF YOUR LOCATION, OR A WEATHER REPORTING SYSTEM THAT PROVIDES SITE SPECIFIC RAINFALL DATA FROM RADAR SUMMARIES; AND
    - f. IF PERMITTEES OBSERVE A DISCHARGE DURING THE INSPECTION, THEY MUST RECORD AND SHOULD PHOTOGRAPH AND DESCRIBE THE LOCATION OF THE DISCHARGE (I.E., COLOR, ODOR, SETTLED OR SUSPENDED SOLIDS, OIL SHEEN, AND OTHER OBVIOUS INDICATORS OF POLLUTANTS); AND
    - g. ANY AMENDMENTS TO THE SWPPP PROPOSED AS A RESULT OF THE INSPECTION MUST BE DOCUMENTED AS REQUIRED IN SECTION 6 WITHIN SEVEN (7) CALENDAR DAYS.

POLLUTION PREVENTION MANAGEMENT (SECTION 12):

1. PERMITTEES MUST PLACE BUILDING PRODUCTS AND LANDSCAPE MATERIALS UNDER COVER (E.G., PLASTIC SHEETING OR TEMPORARY ROOFS) OR PROTECT THEM BY SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER. PERMITTEES ARE NOT REQUIRED TO COVER OR PROTECT PRODUCTS WHICH ARE EITHER NOT A SOURCE OF CONTAMINATION TO STORMWATER OR ARE DESIGNED TO BE EXPOSED TO STORMWATER.
2. PERMITTEES MUST PLACE PESTICIDES, FERTILIZERS AND TREATMENT CHEMICALS UNDER COVER (E.G., PLASTIC SHEETING OR TEMPORARY ROOFS) OR PROTECT THEM BY SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE CONTACT WITH STORMWATER.
3. PERMITTEES MUST STORE HAZARDOUS MATERIALS AND TOXIC WASTE, (INCLUDING OIL, DIESEL FUEL, GASOLINE, HYDRAULIC FLUIDS, PAINT SOLVENTS, PETROLEUM-BASED PRODUCTS, WOOD PRESERVATIVES, ADDITIVES, CURING COMPOUNDS, AND ACIDS) IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS OR OTHER DISCHARGE. STORAGE AND DISPOSAL OF HAZARDOUS WASTE MATERIALS MUST BE IN COMPLIANCE WITH MINN. R. CH. 7045 INCLUDING SECONDARY CONTAINMENT AS APPLICABLE.
4. PERMITTEES MUST PROPERLY STORE, COLLECT AND DISPOSE SOLID WASTE IN COMPLIANCE WITH MINN. R. CH. 7035.
5. PERMITTEES MUST POSITION PORTABLE TOILETS SO THEY ARE SECURE AND WILL NOT TIP OR BE KNOCKED OVER. PERMITTEES MUST PROPERLY DISPOSE SANITARY WASTE IN ACCORDANCE WITH MINN. R. CH. 7041.
6. PERMITTEES MUST TAKE REASONABLE STEPS TO PREVENT THE DISCHARGE OF SPILLED OR LEAKED CHEMICALS, INCLUDING FUEL, FROM ANY AREA WHERE CHEMICALS OR FUEL WILL BE LOADED OR UNLOADED INCLUDING THE USE OF DRIP PANS OR ABSORBENTS UNLESS INFEASIBLE. PERMITTEES MUST ENSURE ADEQUATE SUPPLIES ARE AVAILABLE AT ALL TIMES TO CLEAN UP DISCHARGED MATERIALS AND THAT AN APPROPRIATE DISPOSAL METHOD IS AVAILABLE FOR RECOVERED SPILLED MATERIALS. PERMITTEES MUST REPORT AND CLEAN UP SPILLS IMMEDIATELY AS REQUIRED BY MINN. STAT. 115.061, USING DRY CLEAN UP MEASURES WHERE POSSIBLE.
7. PERMITTEES MUST LIMIT VEHICLE EXTERIOR WASHING AND EQUIPMENT TO A DEFINED AREA OF THE SITE. PERMITTEES MUST CONTAIN RUNOFF FROM THE WASHING AREA IN A SEDIMENT BASIN OR OTHER SIMILARLY EFFECTIVE CONTROLS AND MUST DISPOSE WASTE FROM THE WASHING ACTIVITY PROPERLY. PERMITTEES MUST PROPERLY USE AND STORE SOAPS, DETERGENTS, OR SOLVENTS.
8. PERMITTEES MUST PROVIDE EFFECTIVE CONTAINMENT FOR ALL LIQUID AND SOLID WASTES GENERATED BY WASHOUT OPERATIONS (E.G., CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS) RELATED TO THE CONSTRUCTION ACTIVITY. PERMITTEES MUST PREVENT LIQUID AND SOLID WASHOUT WASTES FROM CONTACTING THE GROUND AND MUST DESIGN THE CONTAINMENT SO IT DOES NOT RESULT IN RUNOFF FROM THE WASHOUT OPERATIONS OR AREAS. PERMITTEES MUST PROPERLY DISPOSE LIQUID AND SOLID WASTES IN COMPLIANCE WITH MPCA RULES. PERMITTEES MUST INSTALL A SIGN INDICATING THE LOCATION OF THE WASHOUT FACILITY.

PERMIT TERMINATION (SECTION 4 AND SECTION 13):

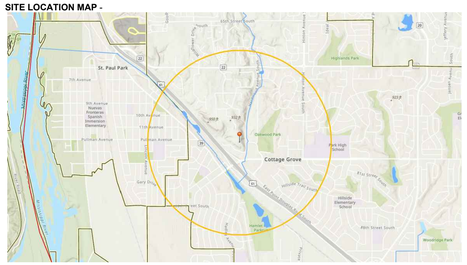
1. PERMITTEES MUST SUBMIT A NOT WITHIN 30 DAYS AFTER ALL TERMINATION CONDITIONS LISTED IN SECTION 13 ARE COMPLETE.
2. PERMITTEES MUST SUBMIT A NOT WITHIN 30 DAYS AFTER SELLING OR OTHERWISE LEGALLY TRANSFERRING THE ENTIRE SITE, INCLUDING PERMIT RESPONSIBILITY FOR ROADS (E.G., STREET SWEEPING) AND STORMWATER INFRASTRUCTURE FINAL CLEAN OUT, OR TRANSFERRING PORTIONS OF A SITE TO ANOTHER PARTY. THE PERMITTEES' COVERAGE UNDER THIS PERMIT TERMINATES AT MIDNIGHT ON THE SUBMISSION DATE OF THE NOT.
3. PERMITTEES MUST COMPLETE ALL CONSTRUCTION ACTIVITY AND MUST INSTALL PERMANENT COVER OVER ALL AREAS PRIOR TO SUBMITTING THE NOT. VEGETATIVE COVER MUST CONSIST OF A UNIFORM PERENNIAL VEGETATION WITH A DENSITY OF 70 PERCENT OF ITS EXPECTED FINAL GROWTH. VEGETATION IS NOT REQUIRED WHERE THE FUNCTION OF A SPECIFIC AREA DICTATES NO VEGETATION, SUCH AS IMPERVIOUS SURFACES OR THE BASE OF A SAND FILTER.
4. PERMITTEES MUST CLEAN THE PERMANENT STORMWATER TREATMENT SYSTEM OF ANY ACCUMULATED SEDIMENT AND MUST ENSURE THE SYSTEM MEETS ALL APPLICABLE REQUIREMENTS IN SECTION 15

ATTACHMENT A: SITE SPECIFIC SWPPP DOCUMENT

PROJECT LOCATION			
ADDRESS	E POINT DOUGLAS RD S	CITY/TOWNSHIP	COTTAGE GROVE
STATE	MN	COUNTY	WASHINGTON
ZIP CODE	55016	PROJECT SIZE	3.3 ACRES
LATTITUDE/LONGITUDE OF APPROX. CENTROID OF PROJECT		44.835656 N, 92.963918 W	
METHOD OF LAT/LONG COLLECTION		ONLINE TOOL	
PROJECT TYPE		RESIDENTIAL	
IMPERVIOUS SURFACES (ACRES)			
EXISTING		0.0	
PROPOSED		1.6	
DIFFERENCE		1.6	
ESTIMATED CONSTRUCTION TIMELINE			
START	JUNE 2026	END	NOVEMBER 2028
CONSTRUCTION ACTIVITY		APARTMENT AND SITE DEVELOPMENT	
SOIL TYPES		SANDY SOILS	

RECEIVING WATER BODIES					
	WATER BODY ID	NAME OF WATER BODY	WATER BODY TYPE	SPECIAL WATER (Y/N)	IMPAIRED WATER (Y/N)
1	NA	HWY 10/61 CORRIDOR	POND	N	N

SITE LOCATION MAP -


St. Paul Park
Cottage Grove
Park High School
Oakwood Park
Hillside Elementary School
Woodbury Park
Highland Park
Pine Tree Park
Keller Golf Course
Lower South Park
Lower North Park
Pine Tree Park
Keller Lake
Keller Lake Park
Keller Golf Course
Lower South Park
Lower North Park
Highland Park
Pine Tree

ATTACHMENT B: SWPPP INSPECTION FORM

NOTE: THIS INSPECTION REPORT DOES NOT ADDRESS ALL ASPECTS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM (NPDES/SDS) CONSTRUCTION STORMWATER PERMIT (PERMIT) ISSUED ON AUGUST 1, 2018. THE COMPLETION OF THIS CHECKLIST DOES NOT GUARANTEE THAT ALL PERMIT REQUIREMENTS ARE IN COMPLIANCE; IT IS THE RESPONSIBILITY OF THE PERMITTEE(S) TO READ AND UNDERSTAND THE PERMIT REQUIREMENTS.

FACILITY INFORMATION
SITE NAME:
SITE ADDRESS: PERMIT NUMBER:
CITY: STATE: ZIP CODE:

INSPECTION INFORMATION
INSPECTOR NAME: _____ PHONE NUMBER: _____
ORGANIZATION/COMPANY MAN: _____
DATE (MM/DD/YYYY): _____ TIME: _____ AM / PM

	Y	N
IS THE INSPECTOR CERTIFIED IN SEDIMENT AND EROSION CONTROL AND IS IT DOCUMENTED IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP)?	☐	☐

IS THIS INSPECTION ROUTINE OR IN RESPONSE TO A STORM EVENT:

7 DAY	RAIN
☐	☐

	Y	N
RAINFALL AMOUNT (IF APPLICABLE): _____		
IS SITE WITHIN ONE AERIAL MILE OF SPECIAL OR IMPAIRED WATER THAT CAN POTENTIALLY RECEIVE DISCHARGE FROM THE SITE?	☐	☐
IF YES, FOLLOW SECTION 23 AND OTHER APPLICABLE PERMIT REQUIREMENTS		

NOTE: IF N/A IS SELECTED AT ANY TIME, SPECIFY WHY IN THE COMMENT AREA FOR THAT SECTION.

EROSION CONTROL REQUIREMENT (SECTION 8.1)

	Y	N	N/A
1. ARE SOILS STABILIZED WHERE NO CONSTRUCTION ACTIVITY HAS OCCURRED FOR 14 DAYS (INCLUDING STOCKPILES)? (7 DAYS WHERE APPLICABLE, OR 24 HOURS DURING MINNESOTA DEPARTMENT OF NATURAL RESOURCES [DNR] FISH SPAWNING RESTRICTIONS)	☐	☐	☐
2. HAS THE NEED TO DISTURB STEEP SLOPES BEEN MINIMIZED?	☐	☐	☐
3. IF STEEP SLOPES ARE DISTURBED, ARE STABILIZATION PRACTICES DESIGNED FOR STEEP SLOPES USED?	☐	☐	☐
4. ALL DITCHES/SWALES STABILIZED 200' BACK FROM POINT OF DISCHARGE OR PROPERTY EDGE WITHIN 24 HOURS? (MULCH, HYDROMULCH, TACKIFIER, OR SIMILAR BEST MANAGEMENT PRACTICES [BMPS] ARE NOT ACCEPTABLE IN DITCHES/SWALES IF THE SLOPE IS GREATER THAN 2%)ARE APPROPRIATE BMP'S INSTALLED PROTECTING INLETS/OUTLETS?	☐	☐	☐
5. DO PIPE OUTLETS HAVE ENERGY DISSIPATION (WITHIN 24 HOURS OF CONNECTION)?	☐	☐	☐
6. IS CONSTRUCTION PHASING BEING FOLLOWED IN ACCORDANCE WITH THE SWPPP?	☐	☐	☐
7. ARE AREAS NOT TO BE DISTURBED MARKED OFF (FLAGS, SIGNS, ETC.)?	☐	☐	☐

COMMENTS:

SEDIMENT CONTROL REQUIREMENTS (SECTION 9.1)

	Y	N	N/A
1. ARE PERIMETER SEDIMENT CONTROLS INSTALLED PROPERLY ON ALL DOWN GRADIENT PERIMETERS?	☐	☐	☐
2. ARE APPROPRIATE BMPS INSTALLED PROTECTING INLETS, CATCH BASINS, AND CULVERT INLETS?	☐	☐	☐
3. IS A 50 FOOT NATURAL BUFFER PRESERVED AROUND ALL SURFACE WATERS DURING CONSTRUCTION?	☐	☐	☐
3.1. IF NO, HAVE REDUNDANT SEDIMENT CONTROLS BEEN INSTALLED?	☐	☐	☐
4. DO ALL ERODIBLE STOCKPILES HAVE PERIMETER CONTROL IN PLACE?	☐	☐	☐
5. IS THERE A TEMPORARY SEDIMENT BASIN ON SITE, AND IS IT BUILT AS REQUIRED IN SECTION 14 OF THE PERMIT?	☐	☐	☐
6. IS SOIL COMPACTION BEING MINIMIZED WHERE NOT DESIGNED FOR COMPACTION?	☐	☐	☐
7. IS TOPSOIL BEING PRESERVED UNLESS INFEASIBLE?	☐	☐	☐
8. IF CHEMICAL FLOCCULANTS ARE USED, IS THERE A CHEMICAL FLOCCULANT PLAN IN PLACE?	☐	☐	☐

COMMENTS:

MAINTENANCE AND INSPECTIONS (SECTION 11)

	Y	N	N/A
1. ARE ALL PREVIOUSLY STABILIZED AREAS MAINTAINING GROUND COVER?	☐	☐	☐
2. ARE PERIMETER CONTROLS MAINTAINED AND FUNCTIONING PROPERLY, SEDIMENT REMOVED WHEN ONE-HALF FULL?	☐	☐	☐
3. ARE INLET PROTECTION DEVICES MAINTAINED AND ADEQUATELY PROTECTING INLETS?	☐	☐	☐
4. ARE THE TEMPORARY SEDIMENT BASINS BEING MAINTAINED AND FUNCTIONING PROPERLY?	☐	☐	☐
5. ARE VEHICLE TRACKING BMPS AT SITE EXISTS IN PLACE AND MAINTAINED AND FUNCTIONING PROPERLY?	☐	☐	☐
6. IS ALL TRACKED SEDIMENT BEING REMOVED WITHIN 24 HOURS?	☐	☐	☐
7. HAVE ALL SURFACE WATERS, DITCHES, CONVEYANCES, AND DISCHARGE POINTS BEEN INSPECTED?	☐	☐	☐
8. WERE ANY DISCHARGES SEEN DURING THIS INSPECTION (I.E., SEDIMENT, TURBID WATER, OR OTHERWISE)?	☐	☐	☐

IF YES, RECORD THE LOCATION OF ALL POINTS OF DISCHARGE. PHOTOGRAPH AND DESCRIBE THE DISCHARGE (SIZE, COLOR, ODOR, FOAM, OIL SHEEN, TIME, ETC.). DESCRIBE HOW THE DISCHARGE WILL BE ADDRESSED. WAS THE DISCHARGE A SEDIMENT DELTA? IF YES, WILL THE DELTA BE RECOVERED WITHIN SEVEN DAYS AND IN ACCORDANCE WITH ITEM 11.5 OF THE PERMIT?

COMMENTS:

POLLUTION PREVENTION (SECTION 12)

	Y	N	N/A
1. ARE ALL CONSTRUCTION MATERIALS THAT CAN LEACH POLLUTANTS UNDER COVER OR PROTECTED?	☐	☐	☐
2. ARE HAZARDOUS MATERIALS BEING PROPERLY STORED?	☐	☐	☐
3. ARE APPROPRIATE BMPS BEING USED TO PREVENT DISCHARGES ASSOCIATED WITH FUELING AND MAINTENANCE OF EQUIPMENT OR VEHICLES?	☐	☐	☐
4. ARE ALL SOLID WASTES BEING PROPERLY CONTAINED AND DISPOSED OF?	☐	☐	☐
5. IS THERE A CONCRETE/OTHER MATERIAL WASHOUT AREA ON SITE AND IS IT BEING USED?	☐	☐	☐
6. IS THE CONCRETE WASHOUT AREA MARKED WITH A SIGN?	☐	☐	☐
7. ARE THE CONCRETE/OTHER MATERIAL WASHOUT AREAS PROPERLY MAINTAINED?	☐	☐	☐

COMMENTS:

OTHER

	Y	N	N/A
1. IS A COPY OF THE SWPPP, INSPECTION RECORDS, AND TRAINING DOCUMENTATION LOCATED ON THE CONSTRUCTION SITE, OR CAN IT BE MADE AVAILABLE WITHIN 72 HOURS?	☐	☐	☐
2. HAS THE SWPPP BEEN FOLLOWED AND IMPLEMENTED ON SITE, AND AMENDED AS NEEDED?	☐	☐	☐
3. IS ANY DEWATERING OCCURRING ON SITE?	☐	☐	☐
IF YES, WHAT BMPS ARE BEING USED TO ENSURE THAT CLEAN WATER IS LEAVING THE SITE AND THE DISCHARGE IS NOT CAUSING EROSION OR SCOUR?	☐	☐	☐
4. WILL A PERMANENT STORMWATER MANAGEMENT SYSTEM BE CREATED FOR THIS PROJECT IF REQUIRED AND IN ACCORDANCE WITH SECTION 15 OF THE PERMIT (IF ADDING AN ACRE OR MORE OF NEW IMPERVIOUS SURFACE)? IF YES, DESCRIBE:	☐	☐	☐
5. IF INFILTRATION/FILTRATION SYSTEMS ARE BEING CONSTRUCTED, ARE THEY MARKED AND PROTECTED FROM COMPACTION AND SEDIMENTATION?	☐	☐	☐

6. DESCRIPTION OF AREAS OF NON-COMPLIANCE NOTED DURING THE INSPECTION, REQUIRED CORRECTIVE ACTIONS, AND RECOMMENDED DATE OF COMPLETION OF CORRECTIVE ACTIONS:

7. PROPOSED AMENDMENTS TO THE SWPPP:

8. POTENTIAL AREAS OF FUTURE CONCERN:

9. ADDITIONAL COMMENTS

DISCLOSURES:

- AFTER DISCOVERY, THE PERMIT REQUIRES MANY OF THE DEFICIENCIES THAT MAY BE FOUND ON SITE BE CORRECTED WITHIN A SPECIFIED PERIOD OF TIME. SEE PERMIT FOR MORE DETAILS.
- THE PERMITTEE(S) IS/ARE RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY MANAGEMENT BMPS AS WELL AS EROSION PREVENTION AND SEDIMENT CONTROL BMPS UNTIL ANOTHER PERMITTEE HAS OBTAINED COVERAGE UNDER THIS PERMIT ACCORDING TO SECTION 3, OR THE PROJECT HAS MET THE TERMINATION CONDITIONS OF THE PERMIT AND A NOTICE OF TERMINATION HAS BEEN SUBMITTED TO THE MINNESOTA POLLUTION CONTROL AGENCY.

ATTACHMENT C: MAINTENANCE PLAN FOR PERMANENT STORM WATER TREATMENT SYSTEM

ATTACHMENT C - COMBINED
FACILITY MANAGEMENT SCHEDULE

1. ALL STORMWATER RETENTION, DETENTION AND TREATMENT BASINS MUST BE INSPECTED AT LEAST ONCE A YEAR TO DETERMINE THAT BASIN RETENTION AND TREATMENT CHARACTERISTICS ARE ADEQUATE. A STORAGE TREATMENT BASIN WILL BE CONSIDERED INADEQUATE IF SEDIMENT HAS DECREASED THE WET STORAGE VOLUME BY 50 PERCENT OR DRY STORAGE VOLUME BY 25 PERCENT OF ITS ORIGINAL DESIGN VOLUME. BASED ON THIS INSPECTION, IF A STORMWATER BASIN REQUIRES SEDIMENT CLEANOUT, THE BASIN WILL BE RESTORED TO ITS ORIGINAL DESIGN CONTOURS AND VEGETATED STATE WITHIN ONE YEAR OF THE INSPECTION DATE.
2. ALL GRIT CHAMBERS, SUMP CATCH BASINS, SUMP MANHOLES, OUTLET STRUCTURES, CULVERTS, OUTFALL STRUCTURES AND OTHER STORMWATER FACILITIES FOR WHICH MAINTENANCE REQUIREMENTS ARE NOT OTHERWISE SPECIFIED HEREIN MUST BE INSPECTED IN THE SPRING, SUMMER AND FALL OF EACH YEAR. WITHIN 30 DAYS OF THE INSPECTION DATE, ALL ACCUMULATED SEDIMENT AND DEBRIS MUST BE REMOVED SUCH THAT EACH STORMWATER FACILITY OPERATES AS DESIGNED AND PERMITTED. CONTRIBUTING DRAINAGE AREAS MUST BE KEPT CLEAR OF LITTER AND VEGETATIVE DEBRIS, INFLOW PIPES AND OVERFLOW SPILLWAYS KEPT CLEAR, INLET AREAS KEPT CLEAN, AND UNDESIRABLE VEGETATION REMOVED. EROSION IMPAIRING THE FUNCTION OR INTEGRITY OF THE FACILITIES, IF ANY, WILL BE CORRECTED, AND ANY STRUCTURAL DAMAGE IMPAIRING OR THREATENING TO IMPAIR THE FUNCTION OF THE FACILITIES MUST BE REPAIRED.
3. VOLUME CONTROL FACILITIES AND CONTRIBUTING DRAINAGE AREAS MUST BE INSPECTED EVERY THREE MONTHS DURING THE OPERATIONAL PERIOD (BETWEEN SPRING SNOWMELT AND FIRST SUBSTANTIAL SNOWFALL) AND MONITORED AFTER RAINFALL EVENTS OF 1 INCH OR MORE TO ENSURE THAT THE CONTRIBUTING DRAINAGE AREA IS CLEAR OF LITTER AND DEBRIS, INFLOW PIPES AND OVERFLOW SPILLWAYS ARE CLEAR, INLET AREAS ARE CLEAN, UNDESIRABLE VEGETATION IS REMOVED AND THERE IS NO EROSION IMPAIRING OR THREATENING TO IMPAIR THE FUNCTION OF A FACILITY. IF SEDIMENT HAS ACCUMULATED IN A INFILTRATION FEATURE, WITHIN 30 DAYS OF INSPECTION DEPOSITED SEDIMENTS MUST BE REMOVED, THE INFILTRATION CAPACITY OF THE UNDERLYING SOILS MUST BE RESTORED, AND ANY SURFACE DISTURBANCE MUST BE STABILIZED. INSPECTION MUST ENSURE THAT SEDIMENT TRAPS AND FOREBAYS ARE TRAPPING SEDIMENT AND THAT MORE THAN 50 PERCENT OF THE STORAGE VOLUME REMAINS, THE CONTRIBUTING DRAINAGE AREA IS STABLE (I.E., NO EROSION IS OBSERVED), AND INLETS AND OUTLET/OVERFLOW SPILLWAYS ARE IN GOOD CONDITIONS WITH NO EROSION. MAINTENANCE TECHNIQUES USED MUST PROTECT THE INFILTRATION CAPACITY OF THE PRACTICE BY LIMITING SOIL COMPACTION TO THE GREATEST EXTENT POSSIBLE (E.G., BY USING LOW-IMPACT EARTH-MOVING EQUIPMENT).
4. UNDERGROUND STORAGE CHAMBERS MUST BE INSPECTED AT LEAST ONCE A YEAR TO ENSURE THAT ADEQUATE STORAGE CAPACITY REMAINS. CAPACITY WILL BE CONSIDERED INADEQUATE IF SEDIMENT HAS DECREASED THE STORAGE VOLUME BY 50 PERCENT OF ITS ORIGINAL DESIGN VOLUME. ACCUMULATED DEBRIS AND SEDIMENT WILL BE REMOVED, AND INLET AND OUTLET STRUCTURES WILL BE CLEARED OF ANY FLOW IMPEDIMENTS.

CivilSite GROUP
Civil Engineering ˚ Surveying ˚ Landscape Architecture
5000 Glenwood Avenue
Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

PRELIMINARY: NOT FOR CONSTRUCTION

PROJECT
DOUGLAS ROAD MULTIFAMILY
E POINT DOUGLAS ROAD S, COTTAGE GROVE, 55016

OWNER
YELLOWTREE CORPORATION
1834 EAST 38TH STREET, MINNEAPOLIS, MN 55407

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

ANDERS S. MELBY
DATE 12/08/2025 LICENSE NO. 58960

ISSUE/SUBMITTAL SUMMARY

DATE	DESCRIPTION
10/29/2025	CITY SUBMITTAL
10/30/2025	WATERSHED SUBMITTAL
11/14/2025	CITY RESUBMITTAL
12/08/2025	CITY RESUBMITTAL

PROJECT MANAGER	PATRICK SARVER
CONTACT NUMBER	612-615-0060 X 702
DRAWN BY	BN, AM
REVIEWED BY	PS
PROJECT NUMBER	23157

REVISION SUMMARY

DATE	DESCRIPTION

SWPPP - ATTACHMENTS

SW1.5

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Tree Table		
Point #	Raw Description	
1217	TRD 6 ASH	
1218	TRD 8 # ASH	
1219	TRD 7 ASH	
1220	TRD 9 ASH	
1221	TRD 4 BUCK	
1222	TRD 8 ASH	
1223	TRD 8 ASH	
1224	TRD 9 ASH	
1225	TRD 10 HOPHORNBEAM	
1227	TRD 7 ASH	
1228	TRD 11 BLACK CHERRY	
1229	TRD 11 ASH	
1230	TRD 13 ASH	
1231	TRD 12 HACK	
1232	TRD 18 ASH	
1233	TRD 7 ASH	
1234	TRD 10 BASS	
1235	TRD 8 ASH	
1236	TRD 7 BITTERNUT	
1238	TRD 7 BOX	
1240	TRD 8 BOX	
1242	TRD 6 ASH	
1243	TRD 10 HACK	
1244	TRD 12 HACK	
1245	TRD 8 BOX	
1246	TRD 10 ELM	
1247	TRD 6 ELM	
1248	TRD 15 ASH	
1249	TRD 12 WALNUT	
1250	TRD 10 HACK	
1251	TRD 14 WALNUT	
1252	TRD 8 ASH	
1253	TRD 8 ASH	
1256	TRD 11 HACK	
1257	TRD 14 HACK	
1258	TRD 8 HACK	
1259	TRD 16 HACK	
1260	TRD 22 OAK	
1261	TRD 7 BUCK	
1262	TRD 7 BUCK	
1263	TRD 8 POPAWON	
1264	TRD 8 ASH	
1265	TRD 10 HOPHORNBEAM	
1266	TRD 9 ASH	
1267	TRD 7 BUCK	
1268	TRD 10 OAK	
1269	TRD 10 HACK	
1270	TRD 7 ELM	
1271	TRD 8 BUCK	
1272	TRD 8 HOPHORNBEAM	
1273	TRD 13 ASH	
1274	TRD 13 COTTONWOOD	
1359	TRD 8 ELM	
1360	TRD 7 ELM	
1375	TRD 8 CDT	
1376	TRD 10 CDT	
1377	TRD 10 CDT	
1378	TRD 10 WAP	
1379	TRD 8 WAP	
1380	TRD 7 WAP	
1381	TRD 13 WAP	
1382	TRD 8 ASH	
1383	TRD 7 WAP	
1397	TRD 8 ELM	
1407	TRD 12 ASH	
1409	TRD 13 CDT	
1411	TRD 28 CDT	
1413	TRD 18 ASH	
1415	TRD 8 OAK	
1417	TRD 7 ASH	
1419	TRD 12 ASH	
1420	TRD 18 ASH	
1423	TRD 8 HAC	
1425	TRD 11 OAK	
1426	TRD 7 ASH	
1427	TRD 8 ASH	
1428	TRD 15 ASH	
1431	TRD 22 ASH	
1432	TRD 19 ASH	
1433	TRD 7 ASH	
1435	TRD 13 ASH	
1436	TRD 21 CDT	
1438	TRD 7 ASH	
1439	TRD 20 OAK	
1441	TRD 10 HAC	
1442	TRD 7 ASH	
1444	TRD 9 ASH	
1481	TRD 11 OAK	
1482	TRD 7 ASH	
1484	TRD 8 OAK	
1963	TRD 6 ASH	
1466	TRD 6 ASH	
9497	TRD 16 GLADCASO	
9501	TRD 10 HAC	
9505	TRD 11 HAC	
9507	TRD 9 HAC	
9509	TRD 7 HAC	
9529	TRD 18 HAC	
9533	TRD 12 HAC	
9534	TRD 12 HAC	
9548	TRD 13 OAK	
9569	TRD 6 HAC	
9596	TRD 7 ELM	
9597	TRD 8 HAC	
9598	TRD 13 HAC	
9599	TRD 10 HAC	
9600	TRD 7 ASH	
9601	TRD 8 HAC	
9602	TRD 11 HAC	
9604	TRD 8 ASH	
9606	TRD 7 ELM	
9608	TRD 8 HAC	
9609	TRD 7 HAC	
9610	TRD 8 BAS	
9611	TRD 8 HAC	
9612	TRD 10 HAC	
9613	TRD 7 HAC	
9614	TRD 8 ASH	
9615	TRD 12 ELM	
9616	TRD 10 BLACKTHORN	

Tree Table		
Point #	Raw Description	
7012	TRD 9 BOX	
7014	TRD 13 ASH	
7015	TRD 16 ONE	
7017	TRD 7 ELM	
7018	TRD 13 ELM	
7019	TRD 6 ONE	
7030	TRD 8 ASH	
7031	TRD 7 ASH	
7032	TRD 10 ASH	
7033	TRD 6 ONE	
7034	TRD 9 HAC	
7035	TRD 9 HAC	
7036	TRD 10 ASH	
7037	TRD 11 HAC	
7038	TRD 8 ASH	
7039	TRD 7 BUCKTHORN	
7040	TRD 8 ASH	
7041	TRD 8 ASH	
7042	TRD 12 HAC	
7044	TRD 6 ASH	
7045	TRD 15 ASH	
7046	TRD 7 BOX	
7047	TRD 6 BUCKTHORN	
7048	TRD 8 ASH	
7049	TRD 7 ASH	
7050	TRD 10 ASH	
7051	TRD 7 BUCK	
7052	TRD 7 BUCKTHORN	
7053	TRD 7 BUCKTHORN	
7054	TRD 10 ASH	
7055	TRD 7 ASH	
7056	TRD 10 PIN	
7057	TRD 7 BOX	
7058	TRD 8 8 ASH	
7059	TRD 21 DST	
7060	TRD 16 WAP	
7061	TRD 10 WALNUT	
7062	TRD 6 ELM	
7063	TRD 6 ASH	
7064	TRD 7 ELM	
7065	TRD 7 ELM	
7066	TRD 12 ASH	
7067	TRD 18 ELM	
7068	TRD 30 CDT	
7069	TRD 24 CDT	
7070	TRD 8 BOX	
7071	TRD 7 ELM	
7072	TRD 13 ELM	
7073	TRD 35 CDT	
7074	TRD 24 CDT	
7075	TRD 9 BOX	
7076	TRD 6 BOX	
7077	TRD 8 BOX /DEAD	
7078	TRD 12 CDT	
7079	TRD 9 CED	
7080	TRD 6 ONE	
7081	TRD 9 ASH	
7082	TRD 8 ELM	
7083	TRD 7 ASH	
7084	TRD 11 ASH	
7085	TRD 8 ASH	
7086	TRD 7 ASH	
7087	TRD 8 ASH	
7088	TRD 8 HAC	
7089	TRD 7 ASH	
7090	TRD 8 OAK	
7091	TRD 8 BOX	
7092	TRD 8 HAC	
7093	TRD 7 ASH	
7094	TRD 11 ASH	
7095	TRD 6 ELM	
7096	TRD 8 ELM	
7097	TRD 7 ELM	
7098	TRD 8 ELM	
7099	TRD 8 ELM	
7100	TRD 8 ASH	
7101	TRD 8 ASH	
7102	TRD 8 ASH	
7103	TRD 8 BLACKTHORN	
7104	TRD 6 ONE	
7105	TRD 8 ASH	
7106	TRD 8 ASH	
7107	TRD 8 ASH	
7108	TRD 8 ASH	
7109	TRD 8 ASH	
7110	TRD 8 ASH	
7111	TRD 8 ASH	
7112	TRD 8 ASH	
7113	TRD 8 ASH	
7114	TRD 8 ASH	
7115	TRD 8 ASH	
7116	TRD 8 ASH	
7117	TRD 8 ASH	
7118	TRD 8 ASH	
7119	TRD 8 ASH	
7120	TRD 8 ASH	
7121	TRD 8 ASH	
7122	TRD 8 ASH	
7123	TRD 8 ASH	
7124	TRD 8 ASH	
7125	TRD 8 ASH	
7126	TRD 8 ASH	
7127	TRD 8 ASH	
7128	TRD 8 ASH	
7129	TRD 8 ASH	
7130	TRD 8 ASH	
7131	TRD 8 ASH	
7132	TRD 8 ASH	

Tree Table	
Point #	Raw Description
7018	TRD 8 ELM
7019	TRD 6 HAC
7021	TRD 6 ASH
7022	TRD 6 ASH
7023	TRD 6 ONE
7024	TRD 6 ONE
7025	TRD 7 BOX
7026	TRD 7 BUCK
7027	TRD 8 /DEAD
7028	TRD 12 BOX
7029	TRD 9 BUCK
7030	TRD 9 BUCK
7031	TRD 30 MAP
7032	TRD 9 ONE
7033	TRD 8 BUCK
7034	TRD 10 BOX /DEAD
7035	TRD 8 BOX
7036	TRD 15 CAT
7037	TRD 10 HAC
7038	TRD 7 BUCK
7039	TRD 8 /DEAD
7040	TRD 22 ELM
7041	TRD 8 ELM
7042	TRD 7 BOX
7043	TRD 18 ASH
7044	TRD 10 ASH
7045	TRD 21 ASH
7046	TRD 10 MAP
7047	TRD 8 BUCK
7048	TRD 8 ONE
7049	TRD 7 BUCK
7050	TRD 7 ASH
7051	TRD 8 ASH
7052	TRD 7 BUCK
7053	TRD 8 ASH
7054	TRD 7 ASH
7055	TRD 8 ASH
7056	TRD 8 ASH
7057	TRD 8 ELM
7058	TRD 8 ELM
7059	TRD 8 ELM
7060	TRD 8 ELM
7061	TRD 8 ELM
7062	TRD 8 ELM
7063	TRD 8 ELM
7064	TRD 8 ELM
7065	TRD 8 ELM
7066	TRD 8 ELM
7067	TRD 8 ELM
7068	TRD 8 ELM
7069	TRD 8 ELM
7070	TRD 8 ELM
7071	TRD 8 ELM
7072	TRD 8 ELM
7073	TRD 8 ELM
7074	TRD 8 ELM
7075	TRD 8 ELM
7076	TRD 8 ELM
7077	TRD 8 ELM
7078	TRD 8 ELM
7079	TRD 8 ELM
7080	TRD 8 ELM
7081	TRD 8 ELM
7082	TRD 8 ELM
7083	TRD 8 ELM
7084	TRD 8 ELM
7085	TRD 8 ELM
7086	TRD 8 ELM
7087	TRD 8 ELM
7088	TRD 8 ELM
7089	TRD 8 ELM
7090	TRD 8 ELM
7091	TRD 8 ELM
7092	TRD 8 ELM
7093	TRD 8 ELM
7094	TRD 8 ELM
7095	TRD 8 ELM
7096	TRD 8 ELM
7097	TRD 8 ELM
7098	TRD 8 ELM
7099	TRD 8 ELM
7100	TRD 8 ELM
7101	TRD 8 ELM
7102	TRD 8 ELM
7103	TRD 8 ELM
7104	TRD 8 ELM
7105	TRD 8 ELM
7106	TRD 8 ELM
7107	TRD 8 ELM
7108	TRD 8 ELM
7109	TRD 8 ELM
7110	TRD 8 ELM
7111	TRD 8 ELM
7112	TRD 8 ELM
7113	TRD 8 ELM
7114	TRD 8 ELM
7115	TRD 8 ELM
7116	TRD 8 ELM
7117	TRD 8 ELM
7118	TRD 8 ELM
7119	TRD 8 ELM
7120	TRD 8 ELM
7121	TRD 8 ELM
7122	TRD 8 ELM
7123	TRD 8 ELM
7124	TRD 8 ELM
7125	TRD 8 ELM
7126	TRD 8 ELM
7127	TRD 8 ELM
7128	TRD 8 ELM
7129	TRD 8 ELM
7130	TRD 8 ELM
7131	TRD 8 ELM
7132	TRD 8 ELM

DESCRIPTION OF PROPERTY SURVEYED

Parcel 1:
Outlot B, Frattalone's Southpoint Ridge, according to the recorded plat thereof, Washington County, Minnesota.
Being Registered land as is evidenced by Certificate of Title No. 74139

Parcel 2:
Outlot D, Everwood, according to the recorded plat thereof, Washington County, Minnesota.
(Abstract Property)

GENERAL SURVEY NOTES

1. Bearings are based on the Washington County Coordinate System (1986 Adjustment).
2. Elevations are based on the NGVD 29 Datum. Site Benchmark is the top nut of the fire hydrant located on the west side of East Point Douglas Road South, approximately 169 feet southeast from the northeast corner of the subject property, as shown hereon. Elevation = 819.23.
3. We have shown the location of utilities to the best of our ability based on observed evidence together with evidence from the following sources: plans obtained from utility companies, plans provided by client, markings by utility companies and other appropriate sources. We have used this information to develop a view of the underground utilities for this site. However, lacking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted. Where additional or more detailed information is required, the client is advised that excavation may be necessary. Also, please note that seasonal conditions may inhibit our ability to visibly observe all the utilities located on the subject property.

ALTA/NSPS LAND TITLE SURVEY NOTES

(numbered per Table A)

1. Monuments placed and/or found at all major corners of the boundary of the surveyed property as shown hereon.
2. Site Address: Address Unassigned East Point Douglas Road South, Cottage Grove, Minnesota 55016.
   (Washington County PID No. 0802721330053)
3. This property is contained in Zone X (area determined to be outside the 0.2% annual chance floodplain) per Flood Insurance Rate Map, Community Panel No. 27163C0405E, effective date of February 3, 2010.
4. The gross land area is 266,961 +/- square feet or 6.129 +/- acres.
7. (a) Exterior dimensions of buildings at ground level as shown hereon.
   (b)(1) Square footage of exterior footprint of buildings at ground level as shown hereon.
   No buildings were observed on the subject property while conducting the fieldwork.
8. Substantial features observed in the process of conducting the fieldwork as shown hereon. Please note that seasonal conditions may inhibit our ability to visibly observe all site features located on the subject property.
9. No striped parking stalls were observed on the subject property while conducting the fieldwork.
13. The names of the adjoining owners of the platted lands, as shown hereon, are based on information obtained from the Washington County Interactive Property Map.

SURVEY REPORT

1. This map and report was prepared with the benefit of a Commitment for Title Insurance issued by Guaranty Commercial Title, Inc. as agent for Old Republic National Title Insurance Company, File No. 1039435 (Revision No. 1), dated November 4, 2025.
   We note the following with regards to Schedule B II Exceptions of the herein referenced Title Commitment:
   a. Item no.'s 1-7 and 11-12 are not survey related.
   b. The following are numbered per the referenced Title Commitment:
   [8]. Drainage and utility easement(s) over said Lands as shown on the recorded plat of Frattalone's Southpoint Ridge.
   Easement is located along the south line of Parcel 1, a shown hereon.
   [9]. Drainage and utility easement(s) over said Lands as shown on the recorded plat of Everwood.
   Easement is located along the south line of Parcel 2, as shown hereon.
   [10]. Ingress and egress easement(s) over said Lands in favor of Ellen E. Munger, as created in Document No. T57003.
   Easement is located to the north of, does not appear to affect the subject property and is not shown hereon.
   [13]. Terms and conditions of Conservation Easement filed as Document No. 954996 and Partial Release of Conservation Easement, Agreement for Trail Easement Restrictive Covenant, filed as Document No. 3674924.
   Document creates a trail easement located over the middle portion of the subject property, as shown hereon. Document also provides for an overlook easement. Said easement is not specifically defined other than being above the 860-foot above sea level contour elevation. We have shown hereon the general area of said overlook easement per a sketch contained in said document.

ALTA CERTIFICATION

To: City of Cottage Grove, a Minnesota municipal corporation; Yorkhurst LLC, a Minnesota limited liability company; Yellow Tree; Guaranty Commercial Title, Inc.; and Old Republic National 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, 7(a), 7(b)(1), 8, 9, and 13 of Table A thereof.
The fieldwork was completed on 11-12-2025.
Dated this 14th day of November, 2025.

Rory L. Synstelien — Minnesota License No. 44565
rory@civilsitegroup.com

PARCEL 1
PID: 0702721440020
Address: Unassigned

PARCEL 2
PID: 0802721330053
Address: Unassigned

OUTLOT C
PID: 0802721330052
Address: Unassigned
Owner: City of Cottage Grove

PID: 0702721440023
Address: 6950 E Point Douglas Rd S
Owner: Cottage Grove WP II LLC

PID: 0802721330045
Address: Unassigned
Owner: City of Cottage Grove

[23] General Area of Overlook Easement per Doc. No. 3674924

(9) Drainage & Utility Easement Per Plat of EVERWOOD

(8) Drainage & Utility Easement Per Plat of EVERWOOD

NO BUILDINGS

Edge of Woods

Truncated Dome

Concrete Sidewalk

Bench

Gate

Chain Link Fence

Dirt Path

Drive Apron (Approx.) (A Public R/W)

EAST POINT DOUGLAS ROAD SOUTH (A Public R/W)

N49°30'16"E 172.04'
S00°11'09"W 286.59'
N23°51'05"E 152.70'
N72°23'03"W 480.72'
N64°40'42"E 305.78'
N89°49'16"E 330.00'
S66°49'16"W 194.13'
S24°10'43"E 315.78'
C=244.71'
CB=N39°21'02"W
R=260.00'
Δ=54°56'45"
L=249.28'
C=446.39'
CB=N38°09'12"W
R=400.00'
Δ=52°18'47"
L=438.34'

Linetype & Symbol Legend

- E — ELECTRIC LINE
- E — E — E — ELECTRIC LINE (RECORD)
- F — FIBER/COMM. LINE
- F — F — F — FIBER/COMM. LINE (RECORD)
- G — GASMAIN
- G — G — G — GASMAIN (RECORD)
- OH — OVERHEAD UTILITIES
- S — SANITARY SEWER
- S — S — S — SANITARY SEWER (RECORD)
- SS — STORM SEWER
- SS — SS — SS — STORM SEWER (RECORD)
- T — TELEPHONE LINE
- T — T — T — TELEPHONE LINE (RECORD)
- W — WATERMAIN
- W — W — W — WATERMAIN (RECORD)
- x — CHAINLINK FENCE LINE
- WOODEN FENCE LINE
- // — // — IRON FENCE LINE
- GUARDRAIL
- ACCESS RESTRICTION
- CONCRETE SURFACE
- PAVER SURFACE
- BITUMINOUS SURFACE
- GRAVEL/LANDSCAPE SURFACE

- AIR CONDITIONER
- CABLE TV BOX
- ELECTRIC MANHOLE
- ELECTRIC TRANSFORMER
- ELECTRICAL METER
- FIBER/COMM. MANHOLE
- POWER POLE
- GUY WIRE
- GAS METER
- GAS MANHOLE
- GAS VALVE
- ROOF DRAIN
- SEWER CLEAN OUT
- SANITARY MANHOLE
- STORM MANHOLE
- CATCH BASIN
- FLARED END SECTION
- TELEPHONE BOX
- TELEPHONE MANHOLE
- TRAFFIC SIGNAL
- HYDRANT
- FIRE CONNECTION
- POST INDICATOR VALVE
- WATER MANHOLE
- WATER VALVE
- WELL
- SATELLITE DISH

- UTILITY VAULT
- UTILITY MANHOLE
- ELECTRICAL OUTLET
- HAND HOLE
- BOLLARD
- FLAG POLE
- FUEL TANK
- HANDICAP SYMBOL
- LIGHT POLE
- MAIL BOX
- SIGN
- CONIFEROUS TREE
- DECIDUOUS TREE
- BUSH/SHRUB
- SB — SOIL BORING
- FOUND IRON MONUMENT
- SET OR TO BE SET IRON MONUMENT
- CAST IRON MONUMENT

SCALE IN FEET: 30 15 0 15 30 60

VICINITY MAP



REVISION SUMMARY

DATE	DESCRIPTION
11-17-25	Approx. Drive Aprons
12-1-25	Title Commitment

PROJECT NO.: 25157.00

ALTA/NSPS LAND TITLE SURVEY

V1.0

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CivilSite GROUP
Civil Engineering • Surveying • Landscape Architecture
5000 Glenwood Avenue
Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

PROJECT
East Point Douglas Road South
Unassigned Address, Cottage Grove, Washington County, Minnesota 55016

CLIENT
Yellowtree Corporation
1834 East 38th Street, Minneapolis, MN 55407

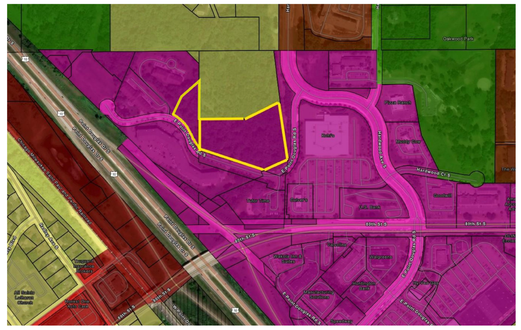
I HEREBY CERTIFY THAT THIS SURVEY, PLAN, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.
RORY L. SYNSTELIEN
DATE 11-14-2025 LICENSE NO. 44565

QA/QC

FIELD CREW	TK/VK
DRAWN BY	DS/JRN
REVIEWED BY	CJ
UPDATED BY	

ZONING AND SITE

PROPERTY AREA	266,961 SF (COMBINED LOTS)
ZONED	MU (BUSINESS DISTRICT)
MINIMUM LOT WIDTH	100'
PROPERTY LOT WIDTH	923'



SS 11-8-3 ITEM B - DEVELOPMENT STANDARDS TABLE:
25' FRONT YARD SETBACK
20' CORNER LOT ON FRONT AND SIDE YARD

FLOOR AREA RATIO DENSITY (FAR)

INCLUDING 2 PARKING LEVELS	1.02
NOT INCLUDING PARKING LEVELS	0.64

BUILDING AREAS

LEVEL	AREA
LOWER PARKING	52,360 SF
UPPER PARKING	50,120 SF
LEVEL 1	42,610 SF
LEVEL 2	42,610 SF
LEVEL 3	42,610 SF
LEVEL 4	42,030 SF
GRAND TOTAL	272,330 SF

UNIT MIX

UNIT TYPE	#	%	AREA*
1BR	72	39%	52,220 SF
1BR+D	29	16%	26,585 SF
2BR	23	12%	25,990 SF
3BR	5	3%	5,390 SF
ALCOVE	49	26%	31,130 SF
STUDIO	8	4%	3,990 SF
UNITS TOTAL	186		145,310 SF

PARKING

PARKING	#	%
ACCESSIBLE	6	2%
COMPACT	4	1%
STANDARD	283	97%
TOTAL PARKING	293	

STANDARD STALL = 20'x9'

PARKING LEVEL	#
LOWER PARKING	162
UPPER PARKING	131
TOTAL PARKING	293

SURFACE PARKING INCLUDED WITH LOWER PARKING LEVEL

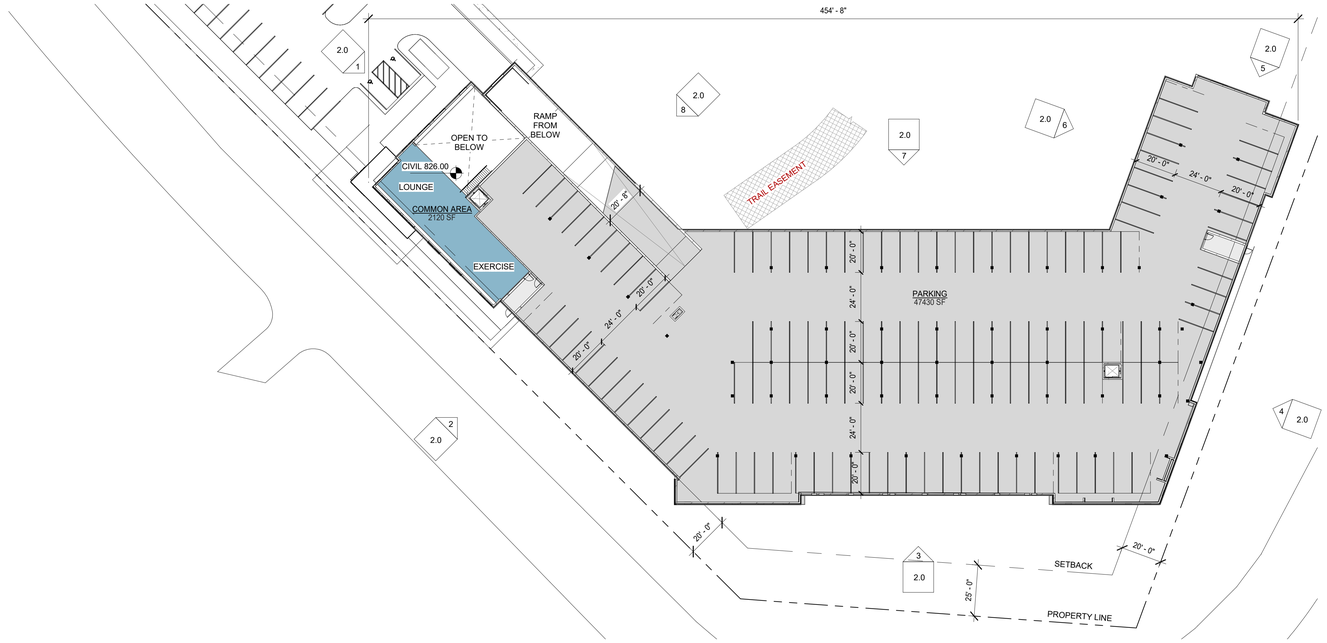
ZONING CODE PARKING:
SS 11-3-4: OFF-STREET PARKING AND LOADING
NO PARKING RATIO IDENTIFIED FOR MULTIFAMILY BUILDINGS IN BUSINESS DISTRICT

PARKING RATIO PROVIDED:

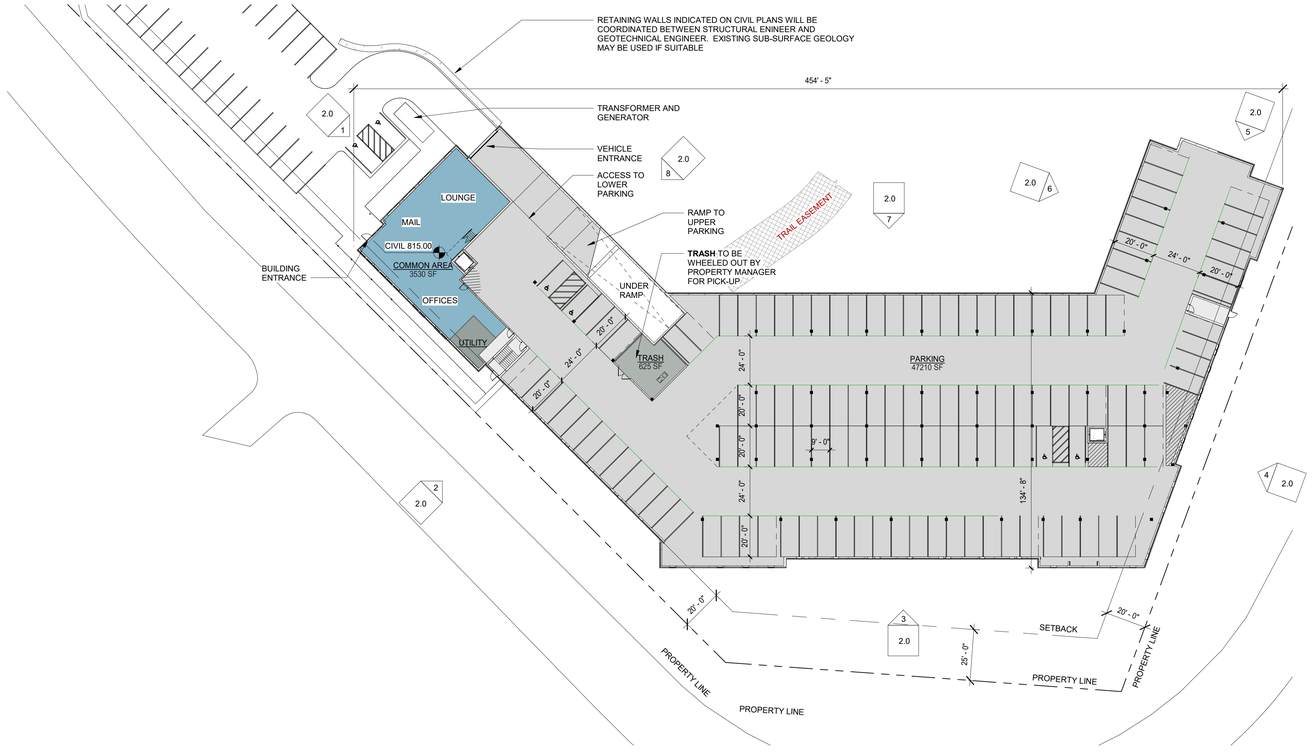
UNIT TYPE	COUNT	RATIO	TOTAL
STUDIO	8	1	8
ALCOVE	49	1	49
1 BR	72	1.5	108
1 BR + DEN	29	1.5	44
2 BR	23	2	46
3 BR	5	3	15
GUEST PARKING			23
			293



3 1.0 SITE CONTEXT
1" = 200'-0"



2 1.0 UPPER PARKING LEVEL
1" = 30'-0"



1 1.0 LOWER PARKING LEVEL
1" = 30'-0"

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YELLOW TREE

Cottage Grove - East Point Douglas Rd S

DATE: 12.08.2025

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MATTHEW PAVEK
PATRICK SARVER
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5000 GLENWOOD AVE
GOLDEN VALLEY, MN 55422

DATE: 12.08.2025

SITE PLAN REVIEW

REVISIONS:

No.	Date	Description

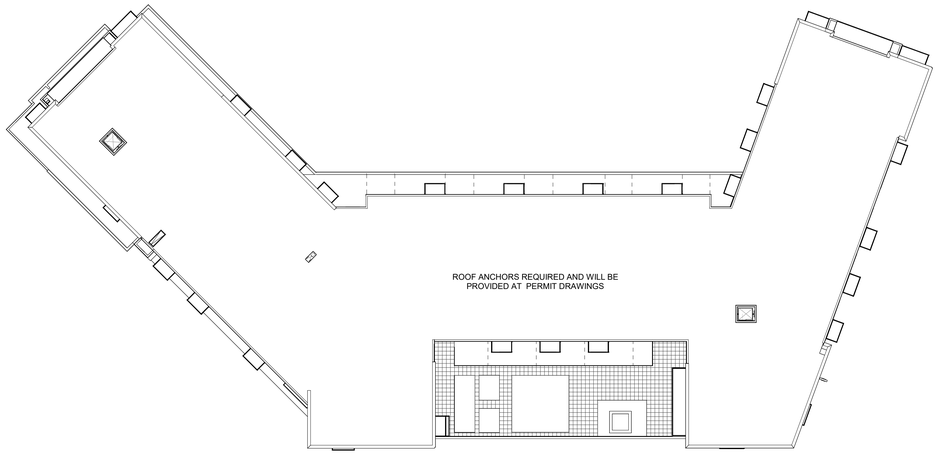
PROJECT NO:	Project Number
DRAWN BY:	Author
CHK'D BY:	Checker

SHEET TITLE

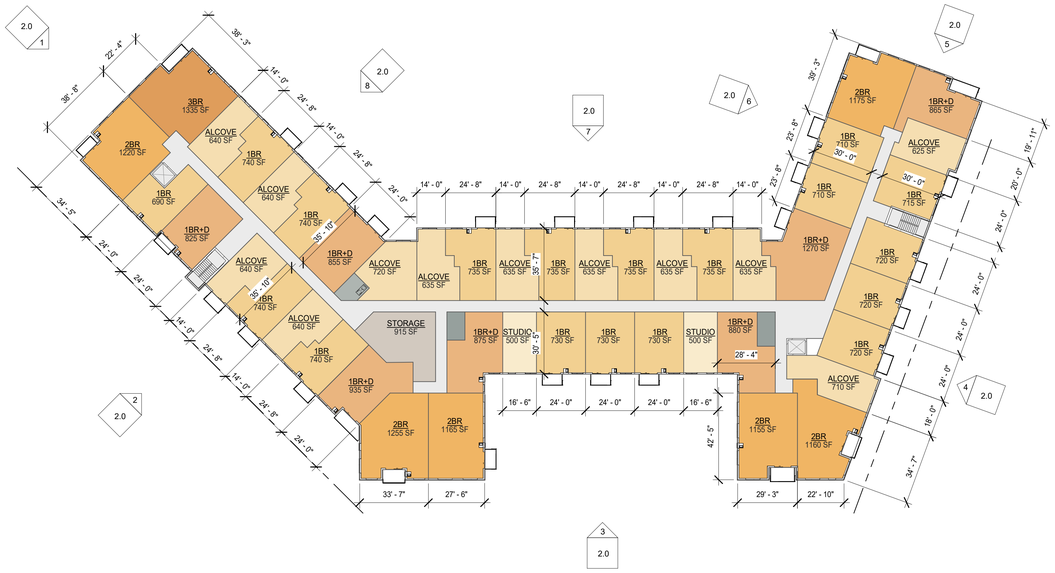
FLOOR PLANS

1.0

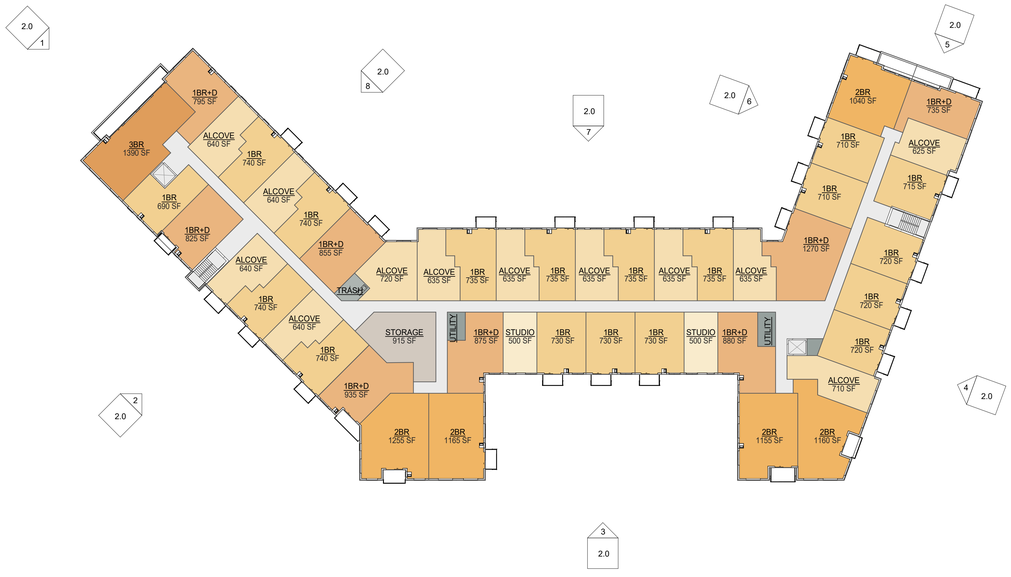
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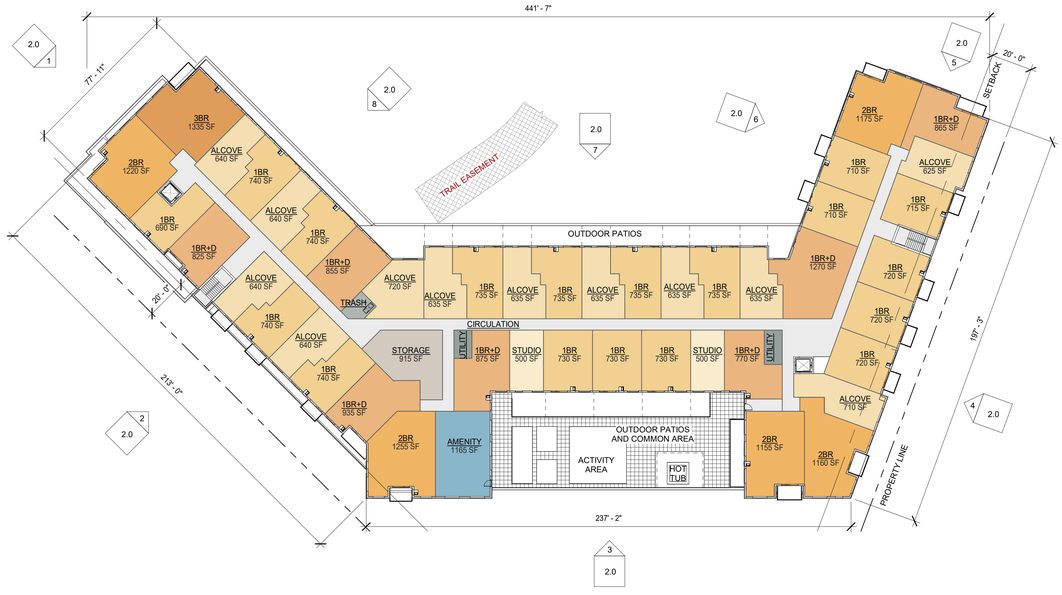
4 ROOF PLAN
1.1 1" = 30'-0"



2 LEVELS 2-3 FLOOR PLAN
1.1 1" = 30'-0"



3 LEVEL 4 FLOOR PLAN
1.1 1" = 30'-0"



1 LEVEL 1 FLOOR PLAN
1.1 1" = 30'-0"

7.5 15 30 60

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YELLOW TREE

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Douglas Rd S

DATE: 12.08.2025

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DATE: 12.08.2025

SITE PLAN REVIEW

REVISIONS:

No.	Date	Description

PROJECT NO:	Project Number
DRAWN BY:	Author
CHK'D BY:	Checker

SHEET TITLE

FLOOR PLANS

1.1

12/8/2025 10:22:04 AM



1 2.0 WEST LEG - WEST ELEVATION
1/16" = 1'-0"

MATERIALS - WEST LEG - WEST		
CLASS 1 - BRICK	822 SF	14.3%
CLASS 1 - CAST STONE	934 SF	16.2%
CLASS 1 - GLAZING	1948 SF	33.8%
CLASS 2 - BURNISHED BLOCK	331 SF	5.7%
CLASS 3 - FIBER CEMENT	1071 SF	18.6%
CLASS 3 - METAL PANEL	651 SF	11.3%
	5756 SF	



2 2.0 WEST LEG - SOUTH ELEVATION
1/16" = 1'-0"

ENTIRE BUILDING MATERIAL AREAS AND PERCENTAGE
CLASS 1 MATERIALS EXCEED 65%

MATERIALS - TOTAL MATERIALS		
CLASS 1 - BRICK	13253 SF	17.5%
CLASS 1 - CAST STONE	16356 SF	21.6%
CLASS 1 - GLAZING	21363 SF	28.3%
CLASS 2 - BURNISHED BLOCK	331 SF	0.4%
CLASS 3 - FIBER CEMENT	16173 SF	21.4%
CLASS 3 - METAL PANEL	8133 SF	10.8%

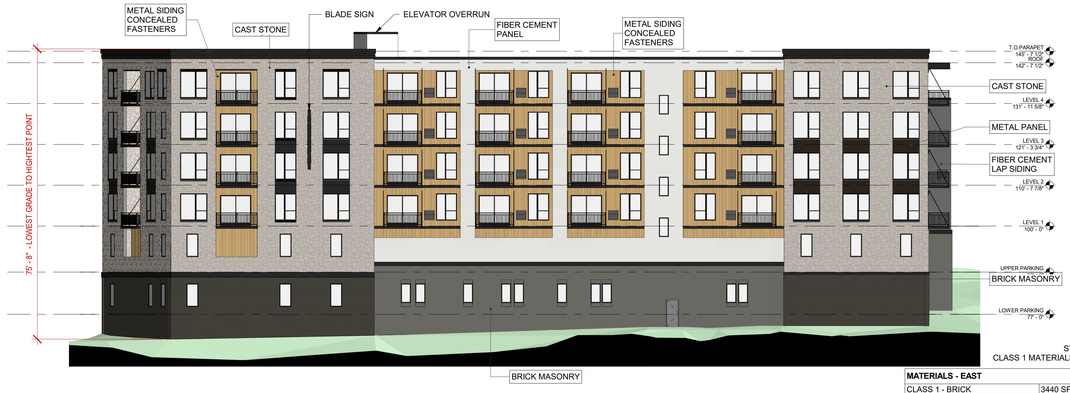
MATERIALS - WEST LEG - SOUTH		
CLASS 1 - BRICK	2869 SF	20.9%
CLASS 1 - CAST STONE	2034 SF	14.8%
CLASS 1 - GLAZING	3487 SF	25.4%
CLASS 3 - FIBER CEMENT	2227 SF	16.2%
CLASS 3 - METAL PANEL	3130 SF	22.8%
	13747 SF	



3 2.0 SOUTHEAST ELEVATION
1/16" = 1'-0"

STREET FACING
CLASS 1 MATERIALS EXCEED 65%

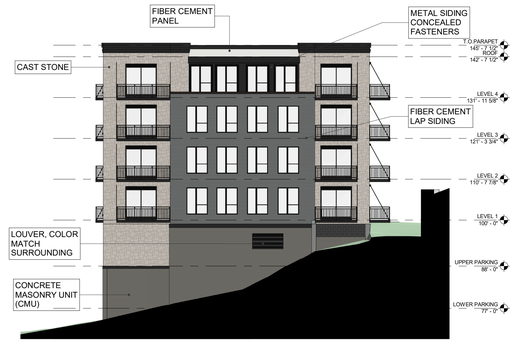
MATERIALS - SOUTHEAST		
CLASS 1 - BRICK	5092 SF	28.4%
CLASS 1 - CAST STONE	3789 SF	21.1%
CLASS 1 - GLAZING	4571 SF	25.5%
CLASS 3 - FIBER CEMENT	3491 SF	19.5%
CLASS 3 - METAL PANEL	976 SF	5.4%
	17919 SF	



4 2.0 EAST ELEVATION
1/16" = 1'-0"

STREET FACING
CLASS 1 MATERIALS EXCEED 65%

MATERIALS - EAST		
CLASS 1 - BRICK	3440 SF	21.8%
CLASS 1 - CAST STONE	4009 SF	25.4%
CLASS 1 - GLAZING	3577 SF	22.6%
CLASS 3 - FIBER CEMENT	2013 SF	12.7%
CLASS 3 - METAL PANEL	2769 SF	17.5%
	15808 SF	



5 2.0 NORTH LEG - NORTH ELEVATION
1/16" = 1'-0"

MATERIALS - NORTH LEG - NORTH		
CLASS 1 - BRICK	821 SF	19.6%
CLASS 1 - CAST STONE	1203 SF	28.7%
CLASS 1 - GLAZING	1112 SF	26.5%
CLASS 3 - FIBER CEMENT	919 SF	21.9%
CLASS 3 - METAL PANEL	134 SF	3.2%
	4189 SF	



6 2.0 NORTH LEG - WEST ELEVATION
1/16" = 1'-0"

MATERIALS - NORTH LEG - WEST		
CLASS 1 - CAST STONE	909 SF	20.5%
CLASS 1 - GLAZING	1496 SF	33.8%
CLASS 3 - FIBER CEMENT	1792 SF	40.5%
CLASS 3 - METAL PANEL	228 SF	5.2%
	4425 SF	



7 2.0 NORTHWEST ELEVATION
1/16" = 1'-0"

MATERIALS - NORTHWEST		
CLASS 1 - GLAZING	3130 SF	42.2%
CLASS 3 - FIBER CEMENT	4279 SF	57.8%
	7409 SF	



8 2.0 WEST LEG - NORTH ELEVATION
1/16" = 1'-0"

MATERIALS - WEST LEG - NORTH		
CLASS 1 - BRICK	210 SF	3.5%
CLASS 1 - CAST STONE	3476 SF	58.3%
CLASS 1 - GLAZING	1862 SF	31.2%
CLASS 3 - FIBER CEMENT	171 SF	2.9%
CLASS 3 - METAL PANEL	245 SF	4.1%
	5964 SF	

12/8/2025 10:22:25 AM

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YELLOW TREE

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612.615.0060
5000 GLENWOOD AVE
GOLDEN VALLEY, MN 55422

DATE: 12.08.2025

SITE PLAN REVIEW

REVISIONS:

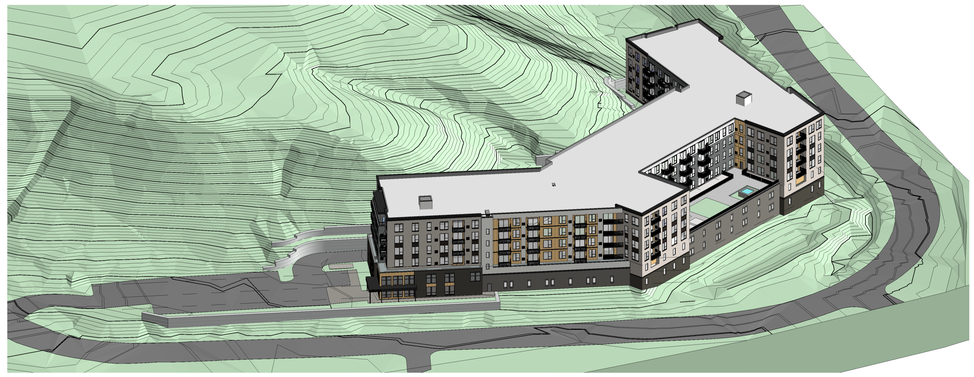
No.	Date	Description

PROJECT NO: Project Number
DRAWN BY: Author
CHK'D BY: Checker

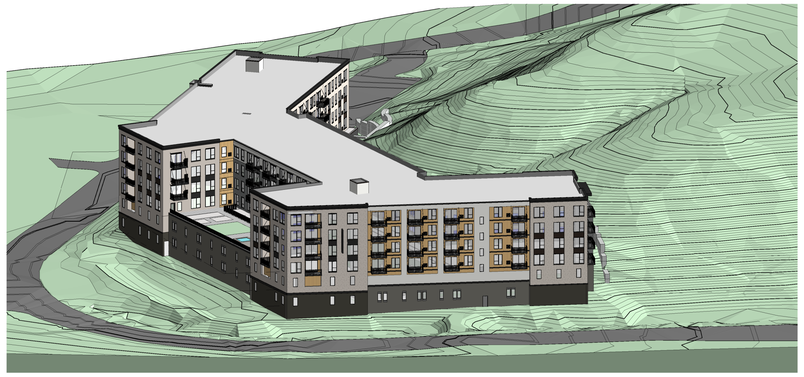
SHEET TITLE

ELEVATIONS

2.0



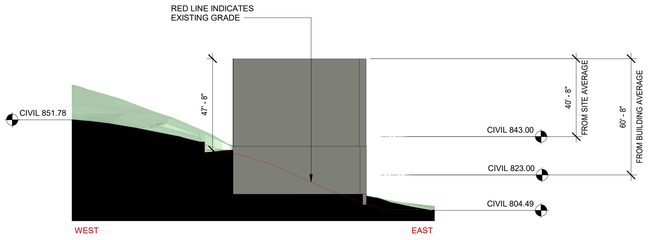
5.1 2.1 BIRDSEYE - SOUTHWEST LOOKING NORTHEAST



5.2 2.1 BIRDSEYE - EAST LOOKING WEST

GRADING NOTES

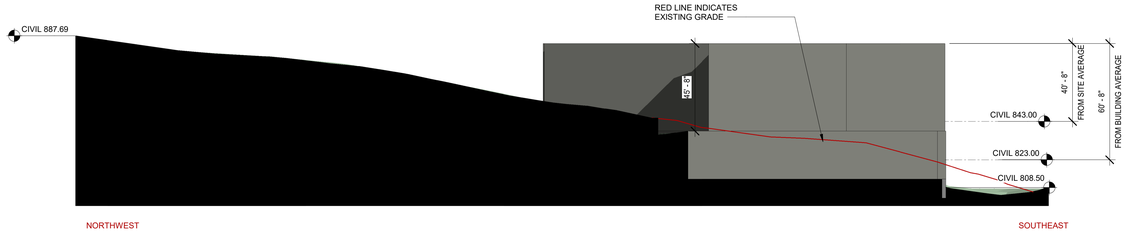
SITE HIGHEST POINT - APX	884.5'
SITE LOWEST POINT - APX	801.5'
SITE AVERAGE BEWTEEN =	843.0'
HIGHEST GRADE AT BUILDING -	838.0'
LOWEST GRADE AT BUILDING -	808.3'
AVERAGE GRADE BETWEEN	823.15'



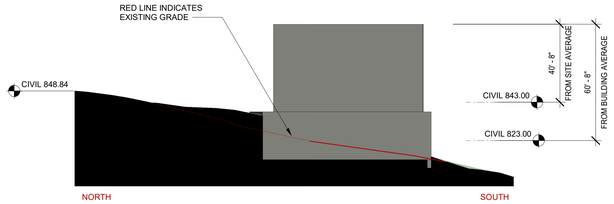
3 2.1 SECTION DIAGRAM 3 - EAST SIDE LOOKING NORTH
1/32" = 1'-0"



4 2.1 SITE GRADING DIAGRAM
1/64" = 1'-0"



2 2.1 SECTION DIAGRAM 2 - CENTER OF BUILDING LOOKING NORTHEAST
1/32" = 1'-0"



1 2.1 SECTION DIAGRAM 1 - WEST SIDE LOOKING EAST
1/32" = 1'-0"

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SITE PLAN REVIEW

REVISIONS:

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PROJECT NO:	Project Number
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SITE DIAGRAMS

2.1



NORTHEAST CORNER LOOKING SOUTHWEST



SOUTHEAST CORNER LOOKING WEST



SOUTH CORNER LOOKING NORTH



SOUTHWEST CORNER LOOKING NORTHEAST AT BUILDING ENTRY

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SITE PLAN REVIEW

REVISIONS:

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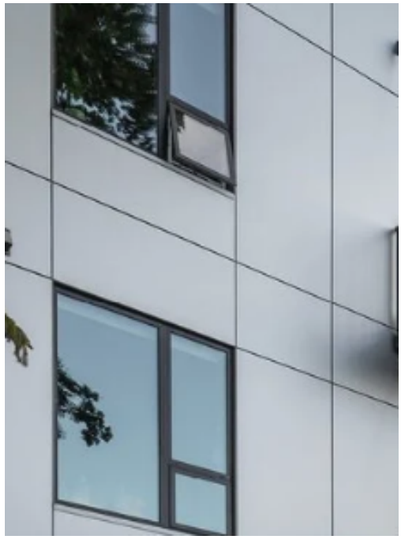
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PERSPECTIVES

3.0

10/29/2025 11:54:10 AM



WINDOWS AND FIBER CEMENT PANEL - LT. GRAY



WOOD PRINTED METAL PANEL - CONCEALED FASTENERS
LT. BROWN



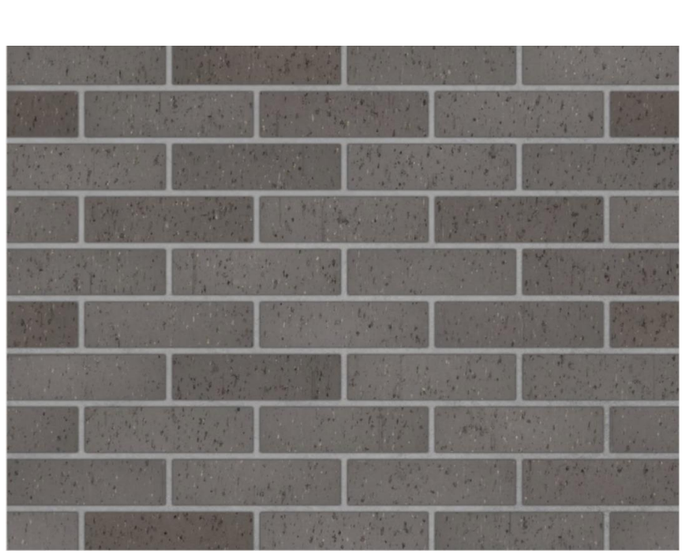
FIBER CEMENT LAP SIDING
GRAY



METAL ACCENT PANEL AND TRIM
BLACK



BRICK - DARK GRAY



BRICK - MEDIUM GRAY



CULTURED STONE - WARM LT. GRAY

PRELIMINARY PLAT: EVERWOOD 6TH ADDITION

Linetype & Symbol Legend

- ELECTRIC LINE
- ELECTRIC LINE (RECORD)
- FIBER/COMM. LINE
- FIBER/COMM. LINE (RECORD)
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- SET OR TO BE SET IRON MONUMENT
- CAST IRON MONUMENT

N

40 20 0 20 40 80

SCALE IN FEET

N00°11'09"E 1545.34

NE Corner of Sec. 7 & NW Corner of Sec. 8, Twp. 27, Rng. 21

Found 1/2 Inch Iron Pipe w/ Cap No. 25718

N49°30'18"E 172.04

Drainage & Utility Easement

Found 1/2 Inch Iron Pipe

S00°11'09"W 286.39

N23°15'16"E 153.70

Found Nail Not Tangent

Drainage & Utility Easement Per Plat of FRATTALONE'S SOUTHPOINT RIDGE

L=244.71'
CB=N39°21'32"W
R=266.00'
Δ=54°40'15" (Plat = 54°47'21")
254.28'

Proposed Trail Easement

60

C=96.28'
CB=N89°32'46"W
R=100.00'
Δ=52°28'47"
99.84'

Not Tangent

85.00'
S17°46'19"W

85'

N89°49'16"E 330.00

Drainage & Utility Easement

[13] General Area of Gas/Elec Easement per Doc. No. 3674924

LOT 1

BLOCK 1

EAST POINT DOUGLAS ROAD SOUTH

Proposed Trail Easement

Proposed Trail Easement

Edge of Woods

Drainage & Utility Easement Per Plat of EVERWOOD

N72°23'03"W 480.72'

E Line of Sec. 7 & W Line of Sec. 8, Twp. 27, Rng. 21

N00°11'09"E 496.58

NE Corner of Sec. 7 & NW Corner of Sec. 8, Twp. 27, Rng. 21

N64°40'42"E 305.78

Drainage & Utility Easement

S00°10'44"E 435.78

EAST POINT DOUGLAS ROAD SOUTH

Drainage & Utility Easement Per Plat of EVERWOOD

S66°49'16"W 194.13

60

85'

PRELIMINARY PLAT GENERAL NOTES

PROPERTY DESCRIPTION:

Outlot D, EVERWOOD, according to the recorded plat thereof, Washington County, Minnesota.

and

Outlot B, FRATTALONE'S SOUTHPOINT RIDGE, according to the recorded plat thereof, Washington County, Minnesota.

This preliminary plat was prepared without the benefit of a Commitment for Title Insurance. The property description listed hereon is per county tax records and may not be the description of record. There may be easements or other matters of record we are unaware of and thus not shown hereon.

DATE OF PREPARATION:

12-8-2025

Please note that the background survey information is per a survey performed by us dated 11-14-2025.

APPLICANT:

Yellowtree Corporation
1834 East 38th Street
Minneapolis, MN 55407
Robb Lubenow
612-275-7210

BENCHMARKS:

Elevations are based on the NGVD 29 Datum. Site Benchmark is the top nut of the fire hydrant located on the west side of East Point Douglas Road South, approximately 169 feet southeast from the northeast corner of the subject property, as shown hereon. Elevation = 819.23.

AREAS:

Proposed Lot 1 = 266,961 Sq. Ft. or 6.129 Acres

FLOOD ZONE:

This property is contained in Zone X (area determined to be outside the 0.2% annual chance floodplain) per Flood Insurance Rate Map, Community Panel No. 27163C0405E, effective date of February 3, 2010.

Rory L. Synstelien Minnesota License No. 44565
rory@civilsitegroup.com

CivilSite GROUP
Civil Engineering • Surveying • Landscape Architecture
5000 Glenwood Avenue
Golden Valley, MN 55422
civilsitegroup.com 612-615-0060

PROJECT
East Point Douglas Road South
Unassigned Address, Cottage Grove, Washington County, Minnesota 55016

CLIENT
Yellowtree Corporation
1834 East 38th Street, Minneapolis, MN 55407

I HEREBY CERTIFY THAT THIS SURVEY, PLAN, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

RORY L. SYNSTELIEN
DATE 12-8-2025 LICENSE NO. 44565

QA/QC

FIELD CREW	TK/VK
DRAWN BY	CJ
REVIEWED BY	RS
UPDATED BY	

VICINITY MAP



REVISION SUMMARY

DATE	DESCRIPTION

PROJECT NO.: 25157.00

PRELIMINARY PLAT

V2.0

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BOLTON & MENK
Real People. Real Solutions.

3507 High Point Drive North
Bldg. 1 Suite E130
Oakdale, MN 55128

Ph: (651) 704-9970
Bolton-Menk.com

MEMORANDUM

Date: 11/18/2025

To: Paul Sponholz, PE

From: Mike Boex, PE

Subject: Yellowtree Apartments
City of Cottage Grove, MN
Project No.: 24X141027000

This memo summarizes the review of site plan documents submitted by Civil Site Group., dated 10/29/25.

ALTA Survey:

1. The ALTA survey does not depict a trail easement that shows up in Washington County mapping (document no. 3674924). Please review the presence of easements on this site.
    a. It appears the proposed building may encroach into the existing easement. The Land Trust will need to be engaged to determine the feasibility of amending the easement.

Civil Plans:

Sheet C0.0:

2. For clarity, please identify the horizontal and vertical datums for the project on the title sheet.

Sheet C0.1:

3. There is a note within a box regarding "adjacent roadway and utility work…"; it appears this note is from a prior project and should be removed.

Sheet C1.0:

4. Clarify removals and restoration along the south and eastern sides of the property up to the back of the sidewalk within public right-of-way. The City expectation is shown in the image below:
    a. There are two notes on Sheet C0.1 that indicate the site will be irrigated into the right-of-way to the back of curb (in this case sidewalk), which is required per city code. Currently, no clearing in this area is depicted within the plans.

Bolton & Menk is an equal opportunity employer.


CONSTRUCTION LIMITS
EXISTING TREES TO REMAIN; PROVIDE TREE PROTECTION FENCING, TYP.
Overseed bare areas with MnDOT STR seed mixture.
EAST POINT DOUGLAS ROAD SOUTH
REMOVE EXISTING TREES AND BALL ROOTS, TYP.
Remove brushy vegetation and small trees. Sod and irrigate to back of sidewalk.
REMOVALS PLAN LEGEND:
REMOVAL OF PAV
MATERIAL, INCLU
GRAVEL PVMTS.
REMOVAL OF STR
INCLUDING ALL FC
FOUNDATIONS.
REMOVAL OF TRE

Sheet C2.0:

5. Site Access:
    a. Prepare a sight-line analysis for the proposed drive location. Proper sight distance shall be provided per the AASHTO Green Book:
        i. West of access: 335-lf needed, measured along vehicle path on East Point Douglas Rd
        ii. East of access: 290-lf needed, measured along vehicle path on East Point Douglas Rd
    b. There is little context depicted on the opposite side of East Point Douglas Road; depict driveways and curb lines on the opposite side of the street.
6. The access drive crosses a city-owned parcel. It is understood both parcel 0702721440020 and 0802721330053 will be incorporated into a new plat. 10-ft perimeter drainage and utility easement shall be provided.
7. The new drive connection to the existing street shall conform to city standard detail STR-21. The mill-overlay to center of roadway should be depicted and this detail referenced on the plan.
8. For the natural trail on the north side of the building, this sheet states "restore pathway material in-kind." City prefers this trail to be graded with a 2% cross slope and resurfaced with an aggregate base (class 5). Minnesota Land Trust may have a different opinion on the trail surface material. Coordinate final trail surface with City and Minnesota Land Trust staff.
9. Identify the temporary location planned for trash pickup.
10. Stairs/sidewalk on the east side of the building: an encroachment agreement will be necessary for encroachment into the city parcel and public right-of-way. City will draft this agreement and will provide it to the developer to review.
11. Provide truncated domes and pedestrian ramps for the public sidewalk at the concrete apron.
12. Retaining walls:
    a. Ensure all private walls are located on private property. It appears the wall on the eastern side of the building may be located in the city-owned parcel.
    b. Provide the anticipated wall designs for the various areas of the site, including areas of sandstone.
    c. Clarify how drainage is anticipated to be handled in areas of retaining wall (over wall?).
13. Identify areas of fencing on the plans. The city-standard Ameristar Montage Plus fence (style: Majestic) should be considered in the following areas:
    a. Adjacent to the retaining wall along the natural pathway
    b. Adjacent to the retaining wall adjacent to the parking lot and sidewalk

Sheet C2.1:

14. Identify where the exterior Fire Department Connection (FDC) is anticipated.

Sheet C3.0:

15. The access drive shall not exceed a 10% grade.

16. It appears there may be a 1.5H:1V slope proposed north of the building and garage entrance.
    a. 3H:1V slopes or retaining wall should be provided or describe the plan for slope stability; no erosion control blanket or other measure is depicted on sheet SW1.1. Similarly, a 2H:1V slope is proposed on the northeast side of the building; turf maintenance is a concern with that slope.
17. The grading intent should be clarified along the northern portions of the building, for example near AD-53 and AD-52. Add additional spot elevations and/or tie-in locations as appropriate.
    a. 2% minimum greenspace grades are desired for drainage.
18. Clarify if tip-out curb is proposed anywhere.
19. Freeboard Standards: Please label all pond and local drainage EOF locations and elevations throughout the site.
    a. The grading legend depicts a large arrow for an emergency overflow, yet no arrows are visible on the plan (the EOF of the aboveground bio-filtration basin is difficult to spot). Other local drainage EOFs are not labeled (curb overflow by CB 30, drainage across sidewalk/stairs to East Point Douglas Rd, etc.).
    b. Below are the EOF standards for reference:
        i. For stormwater facilities with emergency overflows, the low adjacent grade elevation for all new structures must be a minimum of 3 feet above both the peak surface water elevation for the 100-year precipitation event and 2 feet above the emergency overflow elevation of any immediately adjacent new stormwater basin.
        ii. For backyard and side-yard conveyance and temporary ponding areas, there must be at least 1 foot between the overland overflow elevation and the low adjacent grade elevation of the adjacent structure.

<u>Sheet C4.0:</u>

20. The storm sewer in East Point Douglas Road appears incorrect and a storm service pipe was provided to this site. It is preferred to use this existing service versus connect to a new structure in the street. Attached are record plans for reference.
21. Any patching of East Point Douglas Road for utility connections will require 3.5” bituminous pavement and 8” class 5 aggregate base.

<u>Sheet C5.0:</u>

22. On a future submittal, fill out the proposed pavement thicknesses in detail #1.
23. Clarify where the proposed valley gutter (detail #3) is within the site. To conform with the proposed drainage areas, it may make sense to place one across the entrance drive as it connects to the parking lot – please review.
24. Clarify where the proposed ribbon curb (detail #4) is within the site. It appears all on-site curb is B612 per sheet C2.0.

<u>Sheet L1.0:</u>

25. List the following planting restrictions on the plan such that they can be adhered to during installation. Please review and revise the plan for conformance. For example, the tree next to the existing water service pipe should be moved.
    a. Deciduous trees should be located a minimum of 5' off any utility pipe.
    b. Coniferous trees should be located a minimum of 15' off any utility pipe.
    c. No tree should be located within 10' of a hydrant or 15' from a streetlight.
    d. No trees should be located within a storm pond HWL.
    e. No trees should be located within a storm pond's 20-ft access route, and no coniferous trees within 5' of the 20' pond access route.
    f. No coniferous trees within 20' of a proposed sidewalk/trail.
    g. No deciduous trees within 5' of sidewalk/trail/driveways.
    h. Trees should not be planted within drainage and utility easements.
26. Add a note to the plans directing that trees are staked prior to installation such that they can be reviewed for conformance to the planting restrictions.
27. In conjunction with the brush clearing comment on Sheet C1.0, restoration should be identified in areas up to the existing sidewalk adjacent to this property. Where possible, sod should be provided.
28. Irrigation limits:
    a. Clarify what is intended to be irrigated. Sheet C0.1 states "Entire site shall be fully irrigated" which is likely not the intent. It is assumed sod and planting areas will be irrigated at a minimum.
29. Please provide the parking lot percentage of interior landscaped islands or other landscaped traffic controls or natural stormwater management features. City Code Title 11-3-12 requires a minimum of at least 8%.
30. A note references Sheet LT1.0 for exterior lighting, please provide with a future submittal.
    a. A photometrics submittal will be required.

Stormwater Comments:

31. The City will require an executed stormwater maintenance agreement for the proposed stormwater features on the site.
32. Plan revisions:
    a. Please revise the plans (Sheet C4.0 and Details on C5.3) to be consistent with the outlet structures for the underground and above ground filtration systems in HydroCAD.
        i. Detail 1 C5.3 lists inverts of 951.60' and a weir wall top elevation of 973.00' with pipe sizes of 15.0". Please adjust inverts, weir wall elevations and pipe sizes to match HydroCAD. HydroCAD lists the primary outlet pipe as a 12.0" round culvert with invert elevation of 802.00', and weir wall top elevation as 810.00'.

ii. Sheet C4.0 lists a 4" orifice opening at elevation 806.7 in the OCS 20. This opening is not simulated in the HydroCAD model. Please be consistent between the plans and models.

iii. Sheet C4.0 lists a custom weir wall for OCS 02. Please include the weir wall detail in the plans and be consistent with the models.

iv. Please correct outlet invert (12" OUTLET, IE=805.00') from Underground filtration basin on C4.0 to match HydroCAD (Primary outlet 12.0" round culvert with invert elevation of 802.00').

v. Please include an impervious liner in the underground filtration system.

vi. Please provide a detail for the aboveground bio-filtration basin including the proposed filtration media and the impervious liner that will be installed.

b. Swales and Overland Flow Routes:

i. Sheets C3.0 and C4.0 show a swale extending along the walking path from FES 50 to CB 30. This swale has a slope of about 9% (15 feet of fall in 140 feet). Please compute the design flows, depths and velocities in the swale and explain the proposed erosion protection.

ii. Sheets C3.0 and C4.0 show a surface drainage route between the NE building corner and the retaining wall. This overland flow route has a slope of about 37% (30 feet of fall in 80 feet). Please compute the design flows, depths and velocities in this overland flow route and explain the proposed erosion protection.

c. As previously mentioned, the preference is for the pathway to be an aggregate surface and will therefore add to the proposed site impervious surfaces.

d. Please label the 100-year HWL for the above-ground bio-filtration basin on Sheet C3.0.

33. HydroCAD:

a. Please edit the curve numbers listed in Tables 2.2 and 2.3 of the stormwater report to match the HydroCAD model. The report tables indicate CN=55, the HydroCAD and P8 models include CN=58.

b. Please include the proposed EOF spillway of the above ground filtration basin within the proposed condition HydroCAD model.

c. Please model CB 30 and the 12" RCP storm drain as a storage node to determine proposed conditions high water levels in the northwest portion of the site.

d. The Stormwater Rate Summary table in the Stormwater Management Report sums the peak flows from reaches 1R, 2R and 3R as 19.2 cfs. This value exceeds the target unit flow rate of 17.3 cfs. Please sum the Hydrographs within HydroCAD for reaches 1R, 2R and 3R for comparison of the proposed condition flow from the whole site to the target unit flow of 17.3 cfs (6.65 acre at 2.6 cfs/acre).

34. Water Quality – P8:

a. The P8 model is incorrectly simulating the filtration basins as though they were infiltration basins. The filtration basins selections within the "Devices Tab" should be adjusted so the Infiltration is directed to the Outlet Pipe instead of "Out". In this

manner, the dissolved phosphorus load will be routed downstream rather than discarded. The MPCA explains this approach:

"*If the infiltration device is assigned as "*OUT*" (the default entry), P8 will model the device as an infiltration BMP (i.e., dissolved pollutants associated with infiltration are "removed"). If a downstream device is assigned, the device is modeled as a filtration BMP (i.e., filtration efficiencies assigned in the "Particle Parameters" dialog box are used to calculate particulate and pollutant removal [3])*."[1]

b. Please update the existing P8 model to reflect the total site area of 5.0 acres. Currently, it has 4.8 acres listed.

c. A TP mitigation fee is available if reductions are unable to be met.

35. Rational Storm Sewer Design: Please provide rational storm sewer design table with the following documentation:

    a. On-site storm sewer should be sized to a 5-year rational method design. Submit design calculations for the storm sewer system and a drainage area map showing each catchment with manholes and catch basins labeled. Include individual pipe segment velocities with calculations for review. Trunk facilities should be analyzed and designed to accommodate the 100-year ponded discharges plus 5-year rational flows from areas that enter the trunk to be carried to the next storage area downstream.

    b. Pipe sizes and slopes should be selected to provide a minimum open channel velocity of 3 feet per second.

    c. Maximum storm sewer velocities should be kept at 10 feet per second or less.

    d. When changing pipe sizes in structure, match crown of pipe elevations instead of inverts.

    e. Please show storm catch basin IDs, pipe sizes, grades, elevations, and drainage areas on the plans consistent with the rational design tables.

    f. Pipe outlets to wet ponds should be placed at the NWL and have design velocities of 6 fps or less. Pipe outlets into filtration basins or other overland discharge should have design velocities of 4 fps or less.

36. Existing and future emergency overflows of approximately 60 cfs along Hardwood Avenue and East Point Douglas Road will need to be conveyed through the existing stormwater BMPs along Hardwood Avenue and East Point Douglas Road (built during the Everwood 4th Addition). This may require a culvert crossing of approximate 48" diameter under the proposed sidewalk from East Point Douglas Road S. Potential future conditions highwater levels of approximately 808 feet should be planned and considered for the drainage & utility easements and freeboard in the southeastern corner of the parcel downstream of the proposed sidewalk from East Point Douglas Road.

37. Models: Please note that digital copies of the final version stormwater models and shapefiles or CAD drawings of existing and proposed drainage areas are to be submitted to the city once the review and revision process is complete.

[1] Recommendations and guidance for utilizing P8 to meet TMDL permit requirements | Minnesota Stormwater Manual accessed 11-05-2025.

TRAIL EASEMENT EXHIBIT
Lot 1, Block 1, EVERWOOD 6TH ADDITION
City of Cottage Grove, Washington County, Minnesota

TRAIL EASEMENT DESCRIPTION

A 20.00 foot wide easement for public trail purposes over and across Lot 1, Block 1, EVERWOOD 6TH ADDITION, according to the recorded plat thereof, Washington County, Minnesota, the centerline of said easement being described as follows:

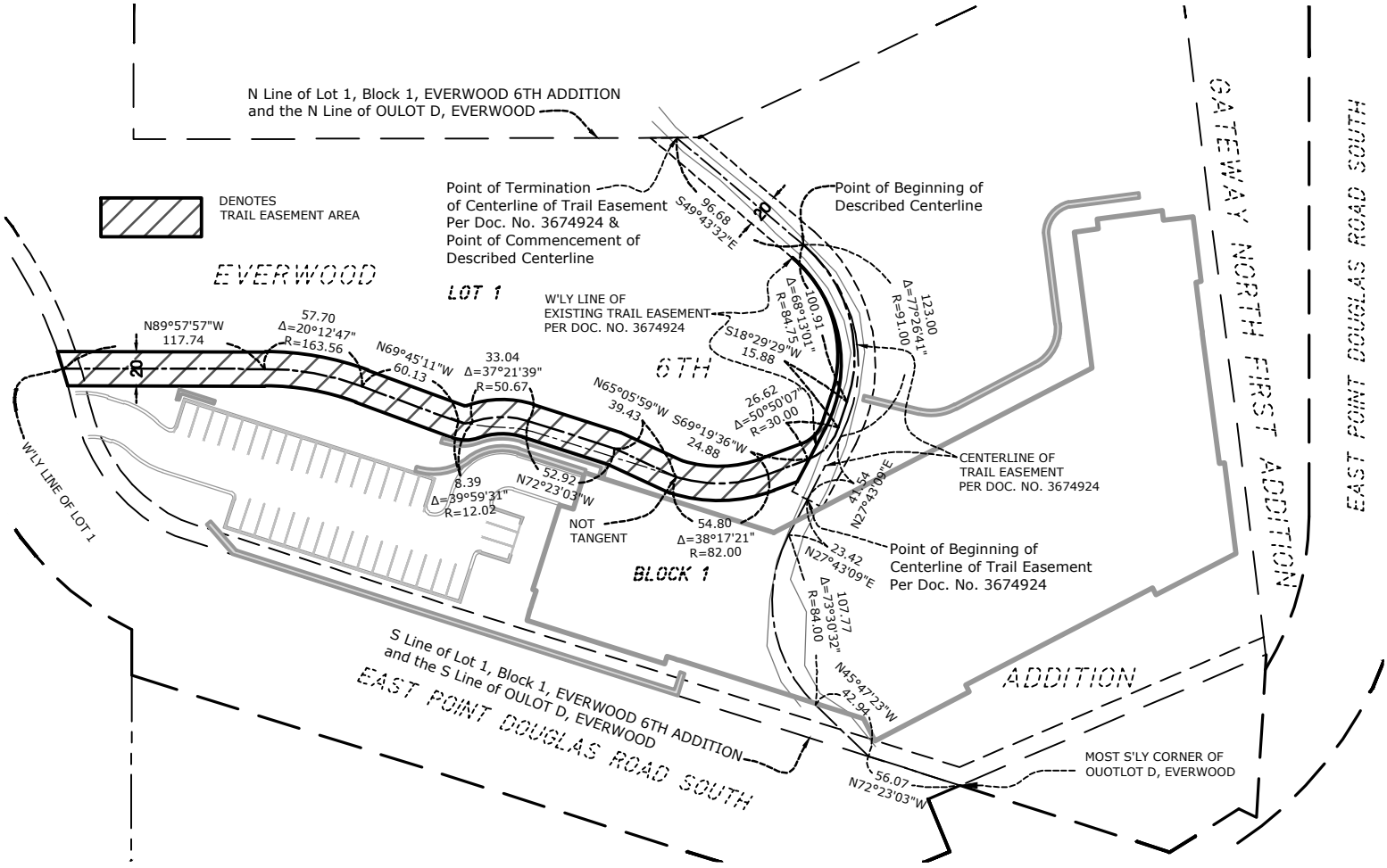
Commencing at the point of termination of the below described centerline of the Trail Easement described in Exhibit C, Document No. 3674924, filed in the Office of the County Recorder, Dakota County, Minnesota; thence South 49 degrees 43 minutes 32 seconds East along said centerline for 96.68 feet to the point of beginning of the centerline to be described; thence southerly for 100.91 feet along a tangential curve, concave to the west, having a radius of 84.75 feet and a central angle of 68 degrees 13 minutes 01 second; thence South 18 degrees 29 minutes 29 seconds West for 15.88 feet; thence southwesterly for 26.62 feet along a tangential curve, concave to the northwest, having a radius of 30.00 feet and a central angle of 50 degrees 50 minutes 07 seconds; thence South 69 degrees 19 minutes 36 seconds West for 24.88 feet; thence westerly for 54.80 feet along a tangential curve, concave to the north, having a radius of 82.00 feet and a central angle of 38 degrees 17 minutes 21 seconds; thence North 65 degrees 05 minutes 59 seconds West, not tangent to last said curve, for 39.43 feet; thence North 72 degrees 23 minutes 03 seconds West for 52.92 feet; thence westerly for 33.04 feet along a tangential curve, concave to the south, having a radius of 50.67 feet and a central angle of 37 degrees 21 minutes 39 seconds; thence westerly for 8.39 feet along a reverse curve, concave to the north, having a radius of 12.02 feet and a central angle of 39 degrees 59 minutes 31 seconds; thence North 69 degrees 45 minutes 11 seconds West for 60.13 feet; thence westerly for 57.70 feet along a tangential curve, concave to the south, having a radius of 163.56 feet and a central angle of 20 degrees 12 minutes 47 seconds; thence North 89 degrees 57 minutes 57 seconds West for 117.74 feet to the westerly line of said Lot 1 and said centerline there terminating.

The sidelines of said easement shall begin on the westerly line of said below described Trail Easement and terminate on the westerly line of said said Lot 1.

Description of Trail Easement per Exhibit C, Document No. 3674924:

A 20 foot wide strip of land over and across Outlot D, EVERWOOD, Washington County, Minnesota, the center line of said strip is described as follows:

Commencing at the most southerly corner of said Outlot D, thence North 72 degrees 23 minutes 03 seconds West along the south line of said Outlot D 56.07 feet; thence North 45 degrees 47 minutes 23 seconds West 42.94 feet; thence northerly 107.77 feet along a tangential curve to the right having a radius of 84.00 feet and a central angle of 73 degrees 30 minutes 32 seconds; thence North 27 degrees 43 minutes 09 seconds East 23.42 feet to the point of beginning of said center line to be described; thence continuing North 27 degrees 43 minutes 09 seconds East 41.54 feet; thence northerly 123.00 feet along a tangential curve to the left having a radius of 91.00 feet and a central angle of 77 degrees 26 minutes 41 seconds; thence North 49 degrees 43 minutes 32 seconds West 96.68 feet to the north line of said Outlot D and there terminating.



MINNESOTA CERTIFICATION

I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Dated this 8th day of December, 2025

Rory L. Synstelien Minnesota License No. 44565

N

0 100 200

SCALE IN FEET

CivilSite GROUP
5000 GLENWOOD AVENUE
GOLDEN VALLEY, MN 55422
CivilSiteGroup.com

Drawn By:TH
Project No. 25157.00 SHEET 1 OF 1

From: Emily Schmitz
To: Samantha Pierret; Kathy Dennis
Subject: FW: Voicemails Received
Date: Friday, December 12, 2025 3:00:39 PM
Attachments: image001.png
image004.png
image007.png

To include in the packet to ensure it is in the record.

Emily Schmitz
Community Development Director
City of Cottage Grove
651-458-2874 | eschmitz@cottagegrovemn.gov
12800 Ravine Parkway South, Cottage Grove, MN 55016

Cottage Grove
Where Pride and Prosperity Meet

From: hdg <hdg558@aol.com>
Sent: Friday, December 12, 2025 2:41 PM
To: Emily Schmitz <ESchmitz@cottagegrovemn.gov>
Subject: Re: Voicemails Received

EXTERNAL EMAIL WARNING: This email originated from an outside organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Dear Emily,

RE: previous communication and image below

As you know, I am a former owner of the subject property and am thoroughly familiar with its features, and with Everwood project in general and the residual "protected" area on the blufftop. This area is part of the Gateway North Open Space (GNOS) project. This area once had much greater protection as a result of a conservation easement I placed on it in the 1990's. The Minnesota Land Trust unwisely "reconfigured' the easement in a way that substantially reduced its conservation value.

I had some questions for City staff and spoke to Samantha today. I thought she was going to send me a better image, but I don't see any e-mail from her.

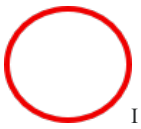
I am especially concerned that the building plans in the "corner " area will effectively require substantial alteration or even demolition of that key feature. The corner area is where the hillside turns abruptly at more than a 90 degree angle. It is a striking feature which deserves protection rather than destruction. The feature is clearly visible from the Legends senior living center and the Tutor Time property. I ask that the planning commission require further revision of the site plan to protect this unusual geophysical formation.

Kindly forward these comments to the members of the planning commission for consideration at their upcoming meeting.

Thank you.

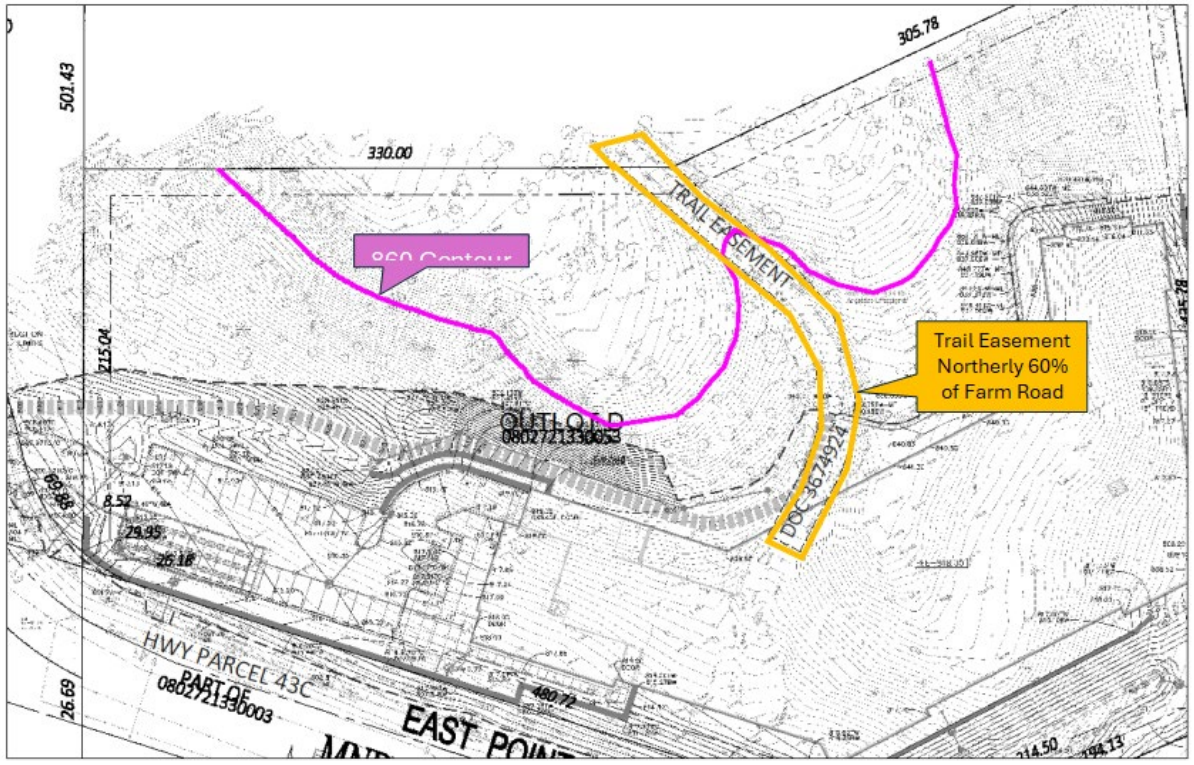
Hugh Gibson

On Wednesday, December 3, 2025 at 08:42:31 PM EST, Emily Schmitz <eschmitz@cottagegrovemn.gov> wrote:

> Hugh –
>
> 
> I received your several voicemails today.
>
> The below image better describes the originally proposed location of the building in relation to the existing ‘trail easement’. An image likely describes it better than I would be able to in a phone conversation.

I’ve circled in red the small location the building is shown encroaching into the trail easement.

The landowner is working to adjust the building on the site to remove the building from the easement as requested by the Land Trust. The Planning Commission will not review the application until the site plan has been adjusted.



Hopeful this helps provide clarification however, happy to set up a phone call if you have more specific questions.

Thanks!

Emily Schmitz

Community Development Director
City of Cottage Grove
651-458-2874 | eschmitz@cottagegrovemn.gov

12800 Ravine Parkway South, Cottage Grove, MN 55016

Cottage Grove

Where Pride and Prosperity Meet

COTTAGE GROVE PLANNING COMMISSION **November 24, 2025**
12800 Ravine Parkway South
Cottage Grove, MN 55016
COUNCIL CHAMBER - 7:00 P.M.

The Regular Meeting of the Planning Commission was held in the Council Chamber and telecast on Local Government Cable Channel 16.

1. CALL TO ORDER

Brittain called the Planning Commission meeting to order at 7:00 p.m.

2. ROLL CALL

Pradeep Bhat-Here; Ken Brittain-Here; Jessica Fisher-Here; Evan Frazier-Excused Absence; Eric Knable-Excused Absence; John Stechmann-Here; Terrence Woodman-Here.

Members Absent: Evan Frazier; Eric Knable

Staff Present: Emily Schmitz, Community Development Director; Samantha Pierret, Senior Planner; Kelly Becker, Associate Planner; Justin Olsen, City Council Liaison.

3. APPROVAL OF AGENDA

Brittain said he's looking for a motion to amend the agenda, to move Item C to Item A.

Stechmann made a motion to approve the amended agenda, as above. Fisher seconded. The motion was approved unanimously (5-to-0 vote).

4. OPEN FORUM

Brittain opened the Open Forum and asked if anyone wished to address the Planning Commission on any non-agenda item. No one spoke. Brittain closed the Open Forum.

5. CHAIR'S EXPLANATION OF THE PUBLIC HEARING PROCESS

Brittain explained the purpose of the Planning Commission, which serves in an advisory capacity to the City Council, and that the City Council makes all final decisions. In addition, he explained the process of conducting a public hearing and requested that any person wishing to speak should go to the podium and state their full name and address for the public record.

6. PUBLIC HEARINGS AND APPLICATIONS

A. Yellow Tree Apartments - Cases PUD2025-030 & SP2025-030
Discussion: CONTINUE TO DECEMBER 15, 2025 PLANNING COMMISSION MEETING. Yellow Tree Development has applied for a Planned Unit Development (PUD) and Site Plan Review of a proposed 186-unit apartment building to be located north of East Point Douglas Road and west of Hardwood Avenue.

Brittain said we are looking for a motion to continue the Yellow Tree Apartments case until December.

Fisher made a motion to continue the Yellow Tree Apartments case to the December meeting. Woodman seconded. The motion was approved unanimously (5-to-0 vote).

B. 95th Street Low-Potency Hemp Edible Warehouse - Case CUP2025-029
Michael Weis and Andrew Turner, on behalf of Banks Distro LLC, have applied for a Conditional Use Permit (CUP) for a low potency hemp edible warehouse and wholesale operation at 7769 95th Street South.

Pierret summarized the staff report and recommended approval, subject to the conditions stipulated in this staff report.

Brittain asked if there were any questions for staff, none were asked. Brittain asked if there were any questions for the applicant, none were asked.

Brittain asked if the applicant would like to add anything to the presentation. He indicated he would, so Brittain asked him to step to the podium and state his name and address for the public record.

My name is Michael Weis, my address is 10300 City Walk Drive, Woodbury, Minnesota, 55129. He said so, yes, we are basically moving back into Minnesota. We just need a warehouse right now and an office to ship our products to our registered hemp businesses that we sell to, currently. We do, however, have ambitions for manufacturing in the future. Right now, all of our manufacturing is done offsite, through other third parties. We do want to bring in stuff, like our beverage manufacturing, into this location; that is like a six-to-nine month timeline from now. I just wanted to add that into there, that is our ambitions. Thank you. Brittain replied all right, thank you.

Brittain asked if there was any further discussion from the commission; there was none.

Brittain opened the Public Hearing. No one spoke. Brittain closed the Public Hearing.

Stechmann made a motion to approve the Conditional Use Permit for a Lower Potency Hemp Edible Warehouse and Wholesale Operation at 7769 95th Street South, subject to the conditions stipulated in the staff report. Woodman seconded. The motion was approved unanimously (5-to-0 vote).

Brittain noted this will be on the December 3 agenda for the City Council.

C. MoonSoon Low Potency Hemp Edible Retailer - Case CUP2025-028
Giza Inc., DBA MoonSoon Tobacco, applied for a Conditional Use Permit (CUP) for a Lower Potency Hemp Edible Retailer at their existing business at 7584 80th Street South, Suite 201.

Becker summarized the staff report and recommended approval subject to the conditions stipulated in this staff report.

Brittain asked if there were any questions for staff.

Brittain said okay, I have one question. So, I see the 1,000-foot radius from other uses. What about schools and churches? Is there a limitation on how close that it can be to schools and churches? Becker replied there is not, for the lower potency adult cannabis uses. Brittain said okay, thank you.

Brittain asked if the applicant would like to add anything, but the applicant declined.

Brittain opened the Public Hearing. No one spoke. Brittain closed the Public Hearing.

Brittain asked if there was further discussion from staff.

Fisher said I have a question for the applicant, as far as the compliance check that happened. I'm just wondering, she said that you were going to be doing more training or something with the staff; I guess my biggest concern with all these applications coming through now is just the compliance and making sure they're being told appropriately. So, I'm just wondering what training steps you're taking to make sure that you're.

Brittain asked the applicant to just state his name and address for the public record.

Hi, my name is Ramadan Hussein, I'm the owner of MoonSoon Tobacco. Yes, unfortunately, this was the first violation in 36 months, and I have the store manager here. We have training every week and text message reminders every day to the staff, and we had this new employee, she was in the shop for about three weeks, four weeks. And she did actually check the IDENTIFICATION, and her excuse was she read the 2009 as 2004; and we do actually have an age identification scanner and she hadn't use it, unfortunately, because if she did scan the ID, it would have gone all red in front of her cash register. So, she was terminated the same day because she didn't follow the rules, and hopefully, it's never going to happen again. Fisher said thank you.

Brittain asked if there were further questions for the applicant, none were asked. Brittain said thank you, sir.

Woodman made a motion to approve the Conditional Use Permit to sell low potency hemp edibles at the existing business located at 7584 80th Street South, Suite 201, subject to the conditions stipulated in the staff report. Fisher seconded. The motion was approved unanimously (5-to-0 vote).

Brittain said this will move on to the City Council Agenda on December 3.

C. Yellow Tree Apartments - Cases PUD2025-030 & SP2025-030
Discussion: CONTINUE TO DECEMBER 15, 2025 PLANNING COMMISSION MEETING. Yellow Tree Development has applied for a Planned Unit Development (PUD) and Site Plan Review of a proposed 186-unit apartment building to be located north of East Point Douglas Road and west of Hardwood Avenue.

7. APPROVAL OF MINUTES

A. Approval of the October 27, 2025, Planning Commission Meeting Minutes

Fisher made a motion to approve the October 27, 2025, Planning Commission Meeting Minutes. Bhat seconded. Motion passed unanimously (5-to-0 vote).

8. REPORTS

A. RECAP OF NOVEMBER 2025 CITY COUNCIL MEETINGS

Schmitz summarized the actions taken at the November 5 and November 19, 2025, City Council Meetings:

Schmitz said with that, as always, Council Member Justin Olsen is here, and I will wish you all a very Happy Thanksgiving.

Council Member Olsen said just a couple things here for you, not necessarily fully related to Planning Commission business, but this certainly has a lot of interest for those who may be watching at home, hopefully, and that is all the various holiday events that we've got going on, as we approach Thanksgiving this week and then turn the corner rapidly, moving down Hale towards Christmas:

- This Thanksgiving Day, we've got our Hale to the Bird 5K. For those who aren't aware of what that is, it is a fundraiser that is put on for the Friends in Need Food Shelf and the Holiday Train. This event started here in Cottage Grove with a group of friends who wanted to find a way to give back, and it has grown exponentially every year ever since. I remember the first year, the mayor in a big, tall top hat pardoning the turkey. I don't think he'll be wearing that same top hat this year, but he's certainly going to be there this year, which starts at 8:00 a.m. at Hamlet Park for check in and 9:00 a.m. for the event. Again, it is Hale to the Bird, that is a 5K race; if you go to active.com, you can sign up if you'd care to participate. It's a great fundraising opportunity for those of us who love to support the Friends in Need and the Holiday Train.
- Speaking of the Holiday Train, it will be making its appearance this year in Cottage Grove on Saturday, December 13, and we don't always get it on a Saturday, so it's kind of nice that we're going to have it on a Saturday. The train will arrive at approximately 5:15 p.m.; this isn't Germany, so I don't know if the trails always run on time, but we're pretty close. The event actually starts at 3:30 p.m., and it will run until about 6:30 p.m. For people who are interested in attending, there's no charge to attending. The Holiday Train arrives right near the Youth Service Bureau on West Point

Douglas Road, and there will be music, there will be hot chocolate, there will be cookies, all kinds of different things. Again, this is a fundraiser for the Friends in Need Food Shelf, so if you'd like to bring either nonperishable items you'd like to donate to Friends in Need or straight up cash, which they absolutely love, there will be people there with buckets, walking around, where you can make your donations. I know that there will be a number of check presentations there that evening as well, from some of the local businesses and nonprofits, who are looking to donate. The Holiday Train is the largest fundraiser that Friends in Need has, and Cottage Grove is the most lucrative stop in the United States for the Holiday Train. This year the goal for Cottage Grove and the surrounding communities is to raise $125,000 for Friends in Need, which would be about 30% of their annual budget. So, hopefully we cannot just hit that number but smash it; we typically do pretty well, so please keep that in mind. Again, that's on December 13, near the Youth Service Bureau; you can park up by the 80th Street Crossing, or you can park over at All Saints Lutheran Church if you need to, and the Park and Ride is also a great spot to park. We will have wagon rides pulling people to and from the various parking areas, so come and enjoy yourself with the family.

- Speaking of family fun, we have an event right here at City Hall coming up, on December 4, that is our annual Hometown Holiday event, and it runs from 5:00 p.m. to 7:00 p.m. We would like you to park either at the South Washington County Service Center or the HERO Center next door. Again, we will have wagon rides back and forth, so you don't have to tromp through the snow or walk a very long distance to get here. Once you arrive here at City Hall, there'll be all kinds of fun things for you to do: We'll have live reindeer, Santa Claus, Mrs. Claus, and Sparkles the Elf will be here, a lot of food trucks, a lot of games. You'll see a lot of City vehicles and personnel here. We also have a little walkway out to the side here where you can get your picture taken and do some fun things with different holiday lighting, etc. So, we hope you'll come and join us, it's a great time. Again, it's from 5:00 to 7:00 p.m., and there's no charge. So, please come down and enjoy yourself, it's a very family-friendly Hometown Holiday event, and you'll get to hear the Park High School choir singing Christmas carols as well. So, we'd love to see you.
- The Cottage Grove Lions has their annual Santa Breakfast at the VFW this year on December 7, that runs from 8:00 a.m. to Noon. You'll have an opportunity to meet Santa Claus and get your picture taken. We also have a number of free giveaways that we do each year for the Lions Club, of which I'm a member; every kid that comes in gets a ticket, that ticket can get put into any number of buckets for free giveaways, and at the end of the day, we give away lots of fun things, like bikes and things like that. So, a lot of fun, December 7, 8:00 a.m. to Noon; the price to attend is $12 for adults, $8 for kids. There will be a lot of great food, a lot of family fun, and as I said, the opportunity to meet Santa, so please come and visit with us at the VFW on December 7.
- If you miss the Lions Santa Breakfast, or you just miss Santa Claus, you can come to River Oaks on December 21 for the annual Santa Breakfast at River Oaks. This is a really fun event, we have sleigh rides, we have all kinds of different things going on over there, a wonderful meal. The price is $25 for adults, $18 for kids ages 6 to 12, and then kids 5 and under are free. So, if you'd like to come and join us there, you can make your reservations right on the River Oaks website, or you can call River Oaks Municipal Golf right here in town and make your reservations; get in there early because it fills up fast.

Council Member Olsen said so that is all the fun stuff that's coming down the pipeline. If you have any not fun stuff you'd like to ask me about, I'm here for you, so please feel free.

Brittain asked if there was anything for Council Member Olsen.

Fisher said I want to add something to the Holiday Train plug. We have food trucks there, too, and they donate a substantial portion of what they make that night to the food shelf as well. So, I'd invite people to come and just eat dinner down by the train. Council Member Olsen said thank you for mentioning that, I appreciate it.

There were no other questions or comments from the commissioners.

Council Member Olsen said then just let me take a moment to say thank you for all that you do in service to our community as members of the Planning Commission. As I've told you before, we're extremely grateful for the residents of our community who volunteer in all of our advisory commission capacities. The Planning Commission tends to have a bit of a heavier lift sometimes, and I know that sometimes the packets that you get are a little thick, take a little time to read through them, so please know your dedication and your passion for serving the City is greatly appreciated. I wish you and your families all a very Happy Thanksgiving and a very happy holiday season.

B. RESPONSE TO PLANNING COMMISSION INQUIRIES - None.

C. PLANNING COMMISSION REQUESTS

Brittain asked if there were any requests for staff tonight.

Bhat said I don't know if this can be considered a request, but I was wondering, so one of the applications today had a warehouse Conditional Use Permit request and in the same location there is also a food packaging business. So, are there any restrictions with the warehousing of cannabis with having this food packaging in the same place? Schmitz replied yes, Mr. Chair, Commissioner Bhat, to clarify: So, our Code requires a Conditional Use Permit because it is the warehousing of low potency cannabis products. Simply a warehouse use for restaurant equipment or food, whatever that might be, our Code does not require a Conditional Use Permit because of the minimal impact. With the THC and the low potency and the cannabis, we want to make sure that we're treading lightly but learning as we go, right? We want to make sure that we're navigating slowly into this new world, right, where the State is creating standards that are trickling down to be enforced by the local government. So, we're making sure that we have the ability to review, and it sounds like maybe Council Member Olsen has some additional details to share.

Council Member Olsen asked, real quickly, was your concern that those two uses might be in conflict? Bhat replied yeah, so, I was wondering has the State or someone talked about this? Because one place you have cannabis packaging, and in the same location, the same building, I would say, you also have food packaging, right? So, are there any regulations or some kind of a safeguard put there so you don't have cross contamination? Schmitz replied Mr. Chair, Commissioner Bhat, I'll clarify: It's only storage of the material, the items, there's no manufacturing happening in either of those locations within the building. Bhat said okay, thank you.

Fisher said I was just going to say what Emily was saying, I think that they're already packaged, I think it's just a distribution versus an assembly, then distribution, so.

9. ADJOURNMENT

Stechmann made a motion to adjourn the meeting. Bhat seconded. Motion passed unanimously (5-to-0 vote). The meeting was adjourned at 7:27 p.m.