

**Village of Somers
7511 12th Street
Somers, WI 53171**

**Village Plan Commission
Meeting Agenda
Monday, October 10, 2022
5:30 P.M.**

1. Call to order
2. Pledge of Allegiance
3. Approve Minutes from September 12, 2022
4. Correspondence
5. Citizen Comments

6. **Rezone:**

Public Hearing and Action on Request by: Enrico Mosconi Declaration of Trust, 715 Benson Ln., Libertyville, IL60048 (Owner), Rocco Castellano, Design Studio, Inc., 30 N. Vincennes Cir., North Bay, WI 53402 (Agent), requests a rezoning from A-1 Agricultural Preservation Dist. & R-2 Suburban Single-Family Residential Dist. to B-3 Highway Business Dist. & PUD Planned Unit Development Overlay Dist., on Tax Parcel #82-4-221-131-0201, located in the NE 1/4 of Section 13, T2N, R21E, Village of Somers.

7. **Conditional Use Permit:**

Public Hearing and Action on Request by: Enrico Mosconi Declaration of Trust, 715 Benson Ln., Libertyville, IL60048 (Owner), Rocco Castellano, Design Studio, Inc., 30 N. Vincennes Cir., North Bay, WI 53402 (Agent), requests a Conditional Use Permit for large size vehicle or equipment sales involving extensive outdoor display and storage in the B-3 Highway Business Dist. on Tax Parcel #82-4-221-131-0201, located in the NE 1/4 of Section 13, T2N, R21E, Village of Somers.

8. **Site Plan Review & Exterior Fenestration:**

Discussion and Action on Request by: Enrico Mosconi Declaration of Trust, 715 Benson Ln., Libertyville, IL60048 (Owner), Rocco Castellano, Design Studio, Inc., 30 N. Vincennes Cir., North Bay, WI 53402 (Agent), requests approval of overall site plan and exterior fenestration on part of Tax Parcel #82-4-221-131-0201, located in the NE 1/4 of Section 13, T2N, R21E, Village of Somers.

9. **Plan Commission Conceptual Approval:**

Discussion and Action on Request by: North Shore Bank, 15700 W Bluemound Rd, Brookfield, WI 53005 (Owner), Glenn Davie, Benchmark Development Solutions LLC, 2305 Lisa Ct., Palatine, IL 60067 (Agent), requesting a conceptual approval for a car wash on Tax Parcel #82-4-222-224-0503, located in the SE 1/4 of Section 22, T2N, R22E, Village of Somers. Said conceptual approval is subject to formal approvals by the Village Board of a rezoning, conditional use permit, overall site plans, building fenestration and stormwater management, as well as City of Kenosha airport site plan review and approval.

10. **Plan Commission Conceptual Approval:**

Discussion and Action on Request by: Archives and Armory PMML Wisconsin LLC, 104 S Michigan Ave Ste 500, Chicago, IL 60603 (Owner), Mark Wershay, Zimmerman Architectural Studios, Inc., 2122 West Mt. Vernon Ave., Milwaukee, WI 53233 (Agent), requesting a conceptual approval for an indoor shooting range facility on Tax Parcel #82-4-222-181-0201, located in the NE 1/4 of Section 18, T2N, R22E, Village of Somers. Said conceptual approval is subject to formal approvals by the Village Board of overall site plans, building fenestration and stormwater management, as well as City of Kenosha airport site plan review and approval.

11. Adjourn

I hereby certify that as the designee of the chief elected official of the Village of Somers, I posted this notice of the October 10, 2022 Village Plan Commission Meeting in 1 public place & on the Village website.

Dated this 27th day of September, 2022

Brandi Baker Clerk/Treasurer

Requests from person with disabilities who need assistance to participate in this meeting should be made to the Clerk's Office at 262-859-2822 with as much notice as possible. Notice is hereby given that members of the Plan Commission members may participate telephonically. Notice is hereby given that members of the Village & Town Board may be in attendance for the sole purpose of gathering information. A quorum may be present. However, no Board action will be taken.



**Village of Somers
Proceeding from the Village Plan Commission Meeting
September 12, 2022**

1. Call to Order

Chairman Stoner called the meeting to order at 5:30 p.m.

Present: Chairman George Stoner, as well as Commissioners, Boxx, Fredrick, Gardinier, and Grimes. Commissioners Lee and Aiello had excused absences.

Staff Present in person: Assistant to the Administrator Cassandra Bodenbach, Administrator Jason Peters, and Chief Ben Andersen, Kenosha County Planners Luke Godshall

Representing Partners in Design: Mark Molinaro

Representing Carthage Maintenance: Ted Fares

2. Pledge of Allegiance

Chairman Stoner led everyone in stating the Pledge of Allegiance.

3. Approve Minutes of August 8, 2022

Commissioner Boxx moved to approve to the Minutes from the August 8th Meeting. Seconded by Commissioner Grimes. Motion carried. 5-0 vote.

4. Correspondence

None.

5. Citizen Comments

None.

6. Comp. Plan Amendment:

Public Hearing and Action on Request by: Carthage College, 2001 Alford Park Dr., Kenosha, WI 53140; Phillip Godin, 6301 Green Bay Rd., Kenosha, WI 53142 (Owners), Mark Molinaro, Jr., 600 52nd St., Suite 220, Kenosha, WI 53140 (Agent), **requests an amendment to the land use plan map for the Village of Somers (Map 80) as adopted in the Multi-Jurisdictional Comprehensive Plan for Kenosha County: 2035 from "Medium-Density Residential" to "Governmental and Institutional"**, on Tax Parcels #83-4-223-184-0685, -0690, -0695, -0700, -0705, & -0710, located in the SE 1/4 of Section 18, T2N, R22E, Village of Somers. *(For informational purposes only, these properties are located at 729 17th St., 803 17th St., 17th Street, 809 17th St., 815 17th St.,*

and 819 17th St.)

Public Hearing was opened at 5:32 p.m.

Public Comment:

625 17th Street – Candice Peterson

Inquired as to what will this development mean for the rest of the street. She was concerned possible traffic.

President Stoner stated that it would not affect the surrounding area. The entrance will be off of 17th Street.

Public Hearing was closed at 5:32 p.m.

Commissioner Boxx moved to approve requests an amendment to the land use plan map for the Village of Somers (Map 80) as adopted in the Multi-Jurisdictional Comprehensive Plan for Kenosha County: 2035 from “Medium-Density Residential” to “Governmental and Institutional”. Seconded by Fredrick.

Commissioner’s Discussion:

None.

Motion passed 5-0 vote.

7. **Rezone:**

Public Hearing and Action on Request by: Carthage College, 2001 Alford Park Dr., Kenosha, WI 53140; Phillip Godin, 6301 Green Bay Rd., Kenosha, WI 53142 (Owners), Mark Molinaro, Jr., 600 52nd St., Suite 220, Kenosha, WI 53140 (Agent), **requests a rezoning from R-5 Urban Single-Family Residential Dist. to I-1 Institutional Dist. & PUD Planned Unit Development Overlay Dist.**, on Tax Parcels #83-4-223-184-0685, -0690, -0695, -0700, -0705, & -0710, located in the SE 1/4 of Section 18, T2N, R22E, Village of Somers. *(For informational purposes only, these properties are located at 729 17th St., 803 17th St., 17th Street, 809 17th St., 815 17th St., and 819 17th St.)*

Public Hearing was opened at 5:35 p.m.

Public Comment:

None.

Public Hearing was closed at 5:35 p.m.

Commissioner Fredrick moved to approve requests a rezoning from R-5 Urban Single-Family Residential Dist. to I-1 Institutional Dist. & PUD Planned Unit Development Overlay Dist., Seconded by Boxx.

Commissioner’s Discussion:

None.

Motion passed 5-0 vote.

8. Site Plan Review & Exterior Fenestration:

Carthage College, 2001 Alford Park Dr., Kenosha, WI 53140; Phillip Godin, 6301 Green Bay Rd., Kenosha, WI 53142 (Owners), Mark Molinaro, Jr., 600 52nd St., Suite 220, Kenosha, WI 53140 (Agent), **requests site plan and exterior fenestration review** on Tax Parcels #83-4-223-184-0685, -0690, -0695, -0700, -0705, & -0710, located in the SE 1/4 of Section 18, T2N, R22E, Village of Somers. *(For informational purposes only, these properties are located at 729 17th St., 803 17th St., 17th Street, 809 17th St., 815 17th St., and 819 17th St.)*

Commissioner Fredrick moved to approve site plan and exterior fenestration review. Seconded by Boxx.

Commissioner's Discussion:

Mr. Molinaro stated that have been no major changes to the site plan aside from the ingress/egress off of 17th Street. To Ms. Peterson's concern, the interior connection for vehicles will come from the inside and will not be seen.

Commissioner Fredrick asked how many people will be occupying the building? Fares stated there would be approximately 15 people. To Ms. Peterson's concern, he replied there will only be a possibility of 15 cars going in and out, but some will be parking on campus. There are only seven spaces on site.

There was discussion on the issues of students parking on the street especially in the winter from a present resident. Chairman Stoner commented that any tires on the street should be getting ticketed. Fares explained that unless they are blocking the driveway, there is nothing that can be enforced.

The wood fence and landscaping were discussed as there may need to be more trees per the ordinance especially for surrounding residents. Chairman Stoner brought up non-taxable properties now owned by Carthage. Fares stated he has already communicated with Carthage on this subject and there are no concerns paying the Village.

Commissioner Fredrick asked what type of chemicals would be kept on site as well as materials for safety precautions. Fares stated there will be approximately 50 gallons of gasoline and smoking is prohibited on the property. Fire Chief Andersen spoke on the necessities of the fire protection needed.

Motion carried 5-0 vote.

9. Adjourn

Commissioner Boxx moved to adjourn at 6:06 p.m. Seconded by Grimes.

Motion carried. 5-0 vote.

Drafted this 13th day of September 2022. These minutes are not official until approved by the Plan Commission. Submitted by Cassandra Bodenbach, Assistant to the Village Administrator



COUNTY OF KENOSHA

Division of Planning & Development

Andy M. Buehler, Director
Division of Planning & Development
19600 75th Street, Suite 185-3
Bristol, WI 53104-9772
(262) 857-1895

TO: Intergovernmental Agreement (IGA) Joint Commission & Village of Somers Plan Commission
FROM: Luke Godshall, Senior Land Use Planner
RPT DATE: 09-27-22
MTG DATE: 10-10-22
RE: Somers Bobcat

BACKGROUND:

1. Petitioner/Agent: Steve Folkman, Bobcat Plus
2. Property Owner: Enrico Mosconi Declaration of Trust
3. Location/Address: 1242 122nd Ave.
4. Tax key Number(s): 82-4-221-131-0201
5. Area: 4.32 acres
6. Existing Zoning: R-2 Suburban Single-Family Residential Dist. & A-1 Agricultural Preservation Dist.
7. Proposed Zoning: B-3 Highway Business Dist. & PUD Planned Unit Development Overlay Dist.
8. Existing Land Use: Commercial
9. Proposed Land Use: Commercial

OVERVIEW:

The Petitioner, Steve Folkman of Bobcat Plus, requests review and approval by the Intergovernmental Agreement (IGA) Joint Commission and Somers Plan Commission of a proposed commercial project located within the Village of Somers Growth Area to construct a 13,325 square foot Bobcat dealership with associated outside equipment display area. The development would be located on an existing 4.32-acre parcel located at the SE corner of 122nd Avenue & the West Frontage Road of I-94. The subject parcel has been attached into the Village of Somers from the Town of Paris. The Petitioner previously presented a concept of this project to the IGA Joint Commission in August of 2022 for recommendations and feedback, and is now seeking a formal approval from the IGA Joint Commission so that the project can proceed onto the next steps which would be public hearings & approvals by the Village of Somers Plan Commission and Village Board.

Approval of this project will require a rezoning approval from R-2 Suburban Single-Family Residential Dist. & A-1 Agricultural Preservation Dist. to B-3 Highway Business Dist. & PUD Planned Unit Development Overlay Dist., a Conditional Use Permit for large size vehicle or equipment sales involving extensive outdoor display and storage, and approval of the overall site plans & building architecture/fenestration.

PLANNER COMMENTS:

The plans submitted by the Petitioner on 8-30-22 (consisting of 3 sheets dated 8-30-22 by rocco castellano design studio/Bukacek Construction, 17 sheets dated 7-18-22 by Pinnacle Engineering Group, and 3 sheets dated 8-29-22 by Kornacki and Associates, Inc.) generally comply with Village of Somers zoning ordinance standards in terms of minimum required principal building setbacks, parking/driveway setbacks, building height, landscaping, and lighting, with a couple exceptions noted below. Staff would support a favorable approval by the IGA Joint Commission for this project to be able to move forward to review and approval by the Village of Somers Plan Commission and Village Board.

BUILDING & SITE PLANS:

The submitted floor plan indicates the building would be 13,325 sf in area. The submitted exterior elevations indicate the building will be 26' in height (35' maximum permitted in the B-3 zoning district). The proposed building is shown to meet all required minimum yard setbacks. It shall be noted that the proposed setback from the northeast corner of the building to I-94 is 65.3' (65' minimum requirement).



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Four overhead drive-in doors are located on each the north and south sides of the building and do not face directly upon street rights-of-way. The four overhead doors on the north side of the building will face towards the neighboring residential property but would be shielded from view with fencing and landscaping.

The exterior building elevations indicate the building would be composed of a variety of materials on all four elevations. Although the elevations do indicate the names of colors to be used, color elevations and color perspective drawings were not included with the updated plan set. The submitted building plans also do not indicate the location of auxiliary building equipment such as heating, ventilating, and/or air-conditioning equipment, which are required to be screened appropriately. It is recommended that updated or additional plans be submitted to show these details.

The site plan indicates that a fence will surround the equipment display area and outside vehicle/equipment storage areas on the north, east and south sides of the building. However, no details are provided on the submitted plans regarding the height or composition of the fence. The site design standards contained in the I-94 Corridor Neighborhood Plan indicate that outdoor storage areas shall be screened from view of any public street right-of-way, public park or public open space area, and from the view from all residential areas. Solid walls or fences shall be a minimum of 8 feet in height. Details of the proposed fence enclosing the outside storage areas will need to be provided.

The submitted plans do not show where, if any, outdoor trash dumpsters or garbage receptacles will be located. It is required that any outdoor trash dumpsters and garbage receptacles be screened by an enclosure consisting of masonry materials and coniferous landscaping materials of an adequate height (at the time of installation) to totally screen the trash storage areas from view from public rights-of-way and adjacent property. The enclosure shall not be less than 6 feet in height nor exceed 8 feet in height. Details of any proposed trash enclosures will need to be provided.

PARKING:

The submitted site plan shows a total of 13 customer parking stalls being provided. Under the Somers zoning ordinance, the number of off-street parking stalls required for "Automobile sales or rental, farm equipment sales or service" uses are 1 space for every 100 sf, plus 1 space per 500 sf of outdoor display area. The Petitioner is proposing a building of 13,325 sf (133 spaces), and an outdoor display area of approximately 19,000 sf (38 spaces) – for a total of 171 spaces required by ordinance. It is recognized that applying this standard to the subject site would not be feasible. Therefore, it is suggested that the IGA Joint Commission & Village of Somers Plan Commission allow the Petitioner to submit evidence and documentation as provided for under Section ZN 3.06(3)(d) of the Somers zoning ordinance to show that adequate parking and unloading areas will be provided for customers, clients, visitors, and employees and that the proposed operation requires less parking than the ordinance requires. In light of concerns brought up by the IGA Joint Commission at the conceptual hearing in August, it is reiterated that all customer parking, loading, unloading and/or parking of trailers must be provided on-site and in no case shall any parking, loading, unloading and/or parking of trailers occur within any road rights-of-way.

Parking spaces are shown to be sized at 10'x20', which exceeds the Somers zoning ordinance standard of 9'x18'. Drive aisles within parking lots are shown to be at least 24' in width between ends of parking spaces, and all paved parking and drive areas meet the required 20' setback from street rights-of-way.

Because the proposed use borders a neighboring residential use to the north, the Somers zoning ordinance requires a parking surface setback of 20'. The Petitioner is requesting relief from this standard to allow a 10' parking surface setback from the north lot line through a PUD Planned Unit Development Overlay request.

GAS PIPELINE EASEMENT:

There is a gas pipeline easement running through roughly the middle of the property in an east-west direction. The submitted site plans show a major portion of the proposed equipment display area and fencing located within the easement area. At this time, it is unknown if the pipeline will allow these improvements to be located within the pipeline easement. The Petitioner has indicated to staff they are in communication with the pipeline and have so far received only a verbal approval pending further review by the pipeline. If approval by the pipeline is granted, it is recommended that written



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documentation be provided. If the pipeline does not grant approval, the site plan will need to be revised to remove/relocate the improvements from the pipeline area.

LANDSCAPING/OPEN SPACE:

The submitted landscaping plan (sheets L-1 through L-4 dated 7-18-22 by Pinnacle Engineering Group) shows compliance with Village of Somers zoning ordinance requirements. The plan meets the minimum open space requirements of both the I-94 Corridor Neighborhood Plan (25% requirement) and the Village of Somers (15% requirement). The submitted plans indicate 52.7% of the site (2.28 acre) is contained in green space.

PHOTOMETRICS/LIGHTING:

A photometric site plan (dated 08-29-22 by Kornacki and Associated, Inc.) was submitted by the Petitioner and shows compliance with Village of Somers zoning ordinance requirements for light intensity (not to exceed 0.5 footcandles at property lines), fixture height (a maximum of 25' in height is permitted for parking lots serving 20 or fewer parking spaces and up to 30' in height for parking lots with more than 20 spaces), and use of fully-shielded fixtures.

AIRPORT REVIEW:

This project is located within an Airport Overlay zone of the Kenosha Regional Airport and will therefore require review & approval from the City of Kenosha of an Airport Site Plan review. The Petitioner is encouraged to contact the City of Kenosha City Development office to begin this review process. No project permits will be granted until an airport site plan review approval has been obtained.

STAFF RECOMMENDATION:

Should the IGA Joint Commission and Plan Commission choose to approve this project, staff would recommend said approval include the following conditions:

1. That the approval of a PUD Planned Unit Development Overlay district includes the following departure from Village ordinance standards as listed in the Petitioner's submitted letter dated September 26, 2022:
 - a. To allow a parking lot setback of **10 feet** which abuts an existing or planned residential district (20 feet required by Section ZN 3.06(3)(j)).
2. That the conditional use permit be subject to the following minimum conditional use standards as listed in Sections ZN 5.03(8)(b)107 & ZN 5.03(8)(b)13 of the Village of Somers zoning ordinance, below:
 107. *Recreational vehicle, motor home or similar large size equipment or vehicle sales involving extensive outdoor display and storage in the B-3 District.*
 - a. *Those requirements set forth for the granting of a conditional use permit for automotive sales, service and repairs in the B-2 and B-3 Districts shall be complied with.*
 - b. *A detailed site plan and stormwater drainage plan shall be submitted to the Plan Commission for approval with said plans taking into consideration security, fencing, lighting, location of signs, and traffic and parking proposals.*
 13. *Automotive Sales, Service and Repairs in the B-2, B-3, and B-5 Districts.*
 - a. *All servicing and repair work shall be within an enclosed structure. Repair materials, new, used or junk parts shall not be stored outside unless the storage area has a solid fence enclosure. Junk materials shall be removed at least once a month to avoid unsightliness of the site. Fences shall be of uniform design and height and be properly maintained for aesthetic purposes.*



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- b. No cars shall be parked within the vision triangle and all parking lots shall meet all yard requirements.*
 - c. Lights shall not be beamed directly onto adjoining property.*
3. The Petitioner shall submit written authorization from TC Energy that proposed equipment display area and fencing are permitted to be located within the gas pipeline easement.
4. The Petitioner shall provide evidence and documentation as provided for under Section ZN 3.06(3)(d) of the Somers zoning ordinance to show that adequate parking will be provided for customers, clients, visitors, and employees and that the proposed operation requires less parking than the ordinance requires. All customer parking, loading, unloading and/or parking of trailers must be provided on-site and in no case shall any parking, loading, unloading and/or parking of trailers occur within any road rights-of-way.
5. The Petitioner shall submit color building elevations and perspective drawings, as well as plans that indicate the location of any auxiliary building equipment such as heating, ventilating, and/or air-conditioning equipment and how this equipment will be screened.
6. The Petitioner shall provide details regarding the proposed outside storage area fence enclosure, particularly fence height and type (material) of fence to be installed.
7. The Petitioner shall provide details regarding any proposed outdoor trash enclosures, as well as including the location of any such trash enclosures on the site plan.
8. Any environmental features such as wetlands that are identified within the project site shall be properly protected or mitigated in accordance with applicable local, state and/or federal regulations.
9. Approval of a City of Kenosha airport site plan review shall be obtained by the Petitioner.
10. Subject to receiving full stormwater plan approval by the Village of Somers engineer.
11. Subject to implementation of a Developer's Agreement between the Petitioner and the Village of Somers.



VILLAGE OF SOMERS

Department of Planning & Development

VILLAGE OF SOMERS REZONING PROCEDURES

1. Contact the Kenosha County Department of Planning & Development and check with staff to determine if your proposed zoning change meets the requirements of the Multi-Jurisdictional Comprehensive Plan for Kenosha County: 2035, Village of Somers General Zoning and Shoreland/Floodplain Zoning Ordinance and the Village of Somers Land Division and Platting Control Ordinance. Note: If the proposed rezoning is part of a proposed land division see the Certified Survey Map Information and Procedures.

2. Contact the Kenosha County Department of Planning & Development and schedule a pre-conference meeting, which is required for all rezoning requests.

Meeting Date: _____

3. Contact the Village of Somers to determine if your rezoning petition requires concept review by the Village Plan Commission. If so, contact the Village of Somers clerk to schedule a concept meeting with the Village Plan Commission.

Meeting Date: _____

4. Complete and submit to the Kenosha County Department of Planning & Development the Village of Somers Rezoning Application by the filing deadline.

Filing Deadline: _____

5. Upon submission you will be given two copies of the date-stamped application. Submit 10 copies of the date-stamped application to the Village of Somers clerk for placement on the agendas of the Village of Somers Plan Commission and the Village of Somers Board and keep one for your records.

7. Attend the Village Plan Commission and the Village Board meetings. **NOTE:** You must attend or the Village will not be able to act on your request. At these meetings you will be asked to brief the committee on your request.

Village Plan Commission meeting date (tentative): _____

Village Board meeting date (tentative): _____

8. Village clerk will provide written notice of final action to property owner/applicant.

IMPORTANT TELEPHONE NUMBERS

Kenosha County Center
 Department of Public Works & Development Services
 19600 - 75th Street, Suite 185-3
 Bristol, Wisconsin 53104-9772

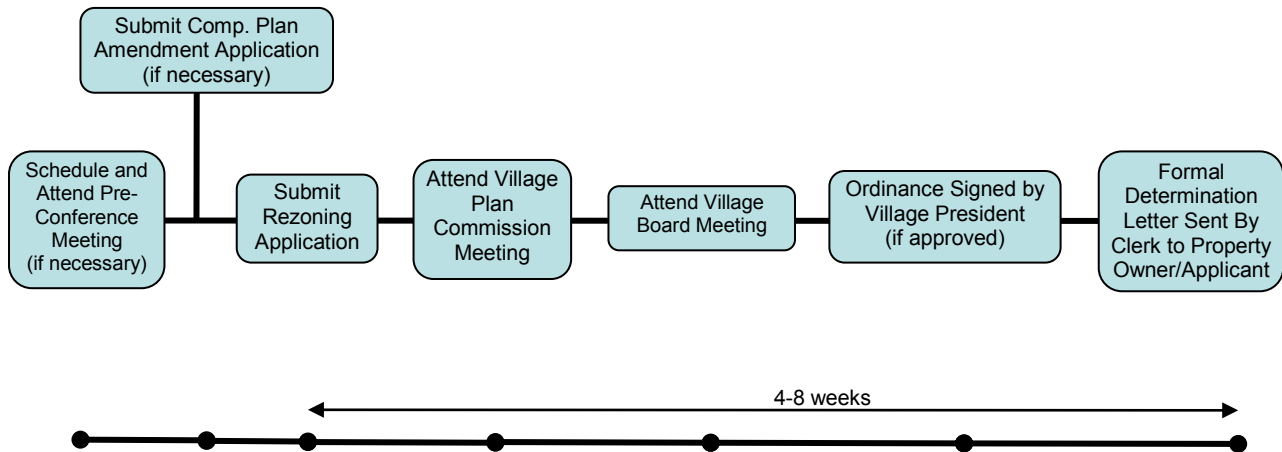
Division of Planning & Development (including Sanitation & Land Conservation)..... **857-1895**
 Facsimile #..... 857-1920

Public Works Division of Highways 857-1870

Administration Building
 Division of Land Information..... 653-2622

Village of Somers 859-2822
 Wisconsin Department of Natural Resources - Sturtevant Office 884-2300
 Wisconsin Department of Transportation - Waukesha Office 548-8722

Rezoning Procedure Timeline



For Reference Purposes



VILLAGE OF SOMERS

Department of Planning and Development

REZONING APPLICATION

(a) Property Owner's Name:

Print Name: _____ Signature: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ E-mail (optional): _____

Note: Unless the property owner's signature can be obtained in the above space, a letter of agent status **signed** by the legal property owner **must** be submitted if you are a tenant, leaseholder, or authorized agent representing the legal owner, allowing you to act on their behalf.

(b) Agent's Name (if applicable):

Print Name: _____ Signature: Stu Folb

Business Name: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ E-mail (optional): _____

(c) Tax key number(s) of property to be rezoned:

Property Address of property to be rezoned:

(d) Proposed use (a statement of the type, extent, area, etc. of any development project):

REZONING APPLICATION

(e) Check the box next to any and all of the **existing** zoning district classifications present on the subject property:

A-1 Agricultural Preservation District	B-1 Neighborhood Business District
A-2 General Agricultural District	B-2 Community Business District
A-3 Agricultural Related Manufacturing, Warehousing and Marketing District	B-3 Highway Business District
A-4 Agricultural Land Holding District	B-4 Planned Business District
AE-1 Agricultural Equestrian Cluster Single-Family District	B-5 Wholesale Trade and Warehousing District
R-1 Rural Residential District	BP-1 Business Park District
R-2 Suburban Single-Family Residential District	B-94 Interstate Highway 94 Special Use Business District
R-3 Urban Single-Family Residential District	M-1 Limited Manufacturing District
R-4 Urban Single-Family Residential District	M-2 Heavy Manufacturing District
R-4.5 Urban Single-Family Residential District	M-3 Mineral Extraction District
R-5 Urban Single-Family Residential District	M-4 Sanitary Landfill and Hazardous Waste Disposal District
R-6 Urban Single-Family Residential District	I-1 Institutional District
R-7 Suburban Two-Family and Three-Family Residential District	PR-1 Park-Recreational District
R-8 Urban Two-Family Residential District	C-1 Lowland Resource Conservancy District
R-9 Multiple-Family Residential District	C-2 Upland Resource Conservancy District
R-10 Multiple-Family Residential District	FPO Floodplain Overlay District
R-11 Multiple-Family Residential District	PUD Planned Unit Development Overlay District
R-12 Mobile Home/Manufactured Home Park-Subdivision District	AO Airport Overlay District
	RC Rural Cluster Development Overlay District

(f) Check the box next to any and all of the **proposed** zoning district classifications proposed for the subject property:

A-1 Agricultural Preservation District	B-1 Neighborhood Business District
A-2 General Agricultural District	B-2 Community Business District
A-3 Agricultural Related Manufacturing, Warehousing and Marketing District	B-3 Highway Business District
A-4 Agricultural Land Holding District	B-4 Planned Business District
AE-1 Agricultural Equestrian Cluster Single-Family District	B-5 Wholesale Trade and Warehousing District
R-1 Rural Residential District	BP-1 Business Park District
R-2 Suburban Single-Family Residential District	B-94 Interstate Highway 94 Special Use Business District
R-3 Urban Single-Family Residential District	M-1 Limited Manufacturing District
R-4 Urban Single-Family Residential District	M-2 Heavy Manufacturing District
R-4.5 Urban Single-Family Residential District	M-3 Mineral Extraction District
R-5 Urban Single-Family Residential District	M-4 Sanitary Landfill and Hazardous Waste Disposal District
R-6 Urban Single-Family Residential District	I-1 Institutional District
R-7 Suburban Two-Family and Three-Family Residential District	PR-1 Park-Recreational District
R-8 Urban Two-Family Residential District	C-1 Lowland Resource Conservancy District
R-9 Multiple-Family Residential District	C-2 Upland Resource Conservancy District
R-10 Multiple-Family Residential District	FPO Floodplain Overlay District
R-11 Multiple-Family Residential District	PUD Planned Unit Development Overlay District
R-12 Mobile Home/Manufactured Home Park-Subdivision District	AO Airport Overlay District
	RC Rural Cluster Development Overlay District

REZONING APPLICATION

(g) Your request must be consistent with the existing planned land use category as shown on Map 65 of the adopted [“Multi-Jurisdictional Comprehensive Plan for Kenosha County: 2035”](#).

The existing planned land use category for the subject property is:

Farmland Protection	Governmental and Institutional
General Agricultural and Open Land	Park and Recreational
Rural-Density Residential	Street and Highway Right-of-Way
Agricultural and Rural Density Residential	Other Transportation, Communication, and Utility
Suburban-Density Residential	Extractive
Medium-Density Residential	Landfill
High-Density Residential	Primary Environmental Corridor
Mixed Use	Secondary Environmental Corridor
Commercial	Isolated Natural Resource Area
Office/Professional Services	Other Conservancy Land to be Preserved
Industrial	Nonfarmed Wetland
Business/Industrial Park	Surface Water

(h) Attach a plot plan or survey plat of property to be rezoned (showing location, dimensions, zoning of adjacent properties, existing uses and buildings of adjacent properties, floodways and floodplains)—drawn to scale.

(i) The Village of Somers Department of Planning and Development may ask for additional information.

(j) The name of the County Supervisor of the district wherein the property is located ([District Map](#)):

Supervisory District Number: _____ County Board Supervisor: _____

(k) The fee specified in Section 12.05-8 of this ordinance.

Request for Rezoning Petition (payable to “Kenosha County”).....\$1,450.00

(For other fees see the [Fee Schedule](#))

Note: Agricultural Use Conversion Charge

The use value assessment system values agricultural land based on the income that would be generated from its rental for agricultural use rather than its fair market value. When a person converts agricultural land to a non-agricultural use (e.g. residential or commercial development), that person may owe a conversion charge. To obtain more information about the use value law or conversion charge, contact the Wisconsin Department of Revenue’s Equalization Section at 608-266-2149 or visit <http://www.revenue.wi.gov/faqs/slf/useassmt.html>.

Note that the act of rezoning property from an agricultural zoning district to a non-agricultural zoning district does not necessarily trigger the agricultural use conversion charge. It is when the use of the property changes from agricultural that the conversion charge is assessed.



Village of Somers
Department of Planning and Development
7511 – 12th Street
Kenosha, WI 53144

Re: Approval of a Planned Unit Development Overlay District

To whom it may concern,

Rocco Castellano Design Studio Inc., on behalf of Bobcat Plus, is the Architect of Record for the development of a retail industrial equipment sales and service center for the property located at 1242 122nd Ave. Somers, WI (tax key No. 82-4-221-131-0201). Due to the site constraints, we are pursuing the approval of a Planned Unit Development Overlay District to address our site plan improvements plan and our petition regarding the north extent of the property requesting relief to the north property line setback.

The below is a summary breakdown for the proposed improvements related to the Planned Unit Development Overlay District request:

- **Total Area to be included in the Planned Unit Development:** The area of the parcel is 4.322 acres (188,266 square feet). The proposed building area of the property is .306 acres (13,325 square feet). The resulting open space is 4.016 acres (174,941 square feet). As part of our application the existing use (zoned as A-1/R-2) is being rezoned as a B-3 Highway Business District. Accordingly, there are no residential calculations or dwelling units proposed for the development. The municipal services associated with the development of this property for business retail use includes storm / sewer connections to future infrastructures and waste management services for standard operating of a business use.
- **Estimated Value of the Improvements:** The anticipated site development improvements (including landscaping) and building construction costs associated with the development are projected to approximate between \$4 – 4.5M.
- **Organizational Structure:** The current Owner of the property is Enrico Mosconi Declaration of Trust pending the sale of the property to Bobcat Plus. Upon re-zoning approval, the property will transfer ownership to Bobcat Plus and will be operated and maintained by Bobcat Plus, accordingly.
- **Proposed Departures from the Standards of Development (per Village zoning regulations):** We are seeking a hard surface parking setback reduction to allow a 10' pavement setback from the north lot line (the ordinance requires a 20' setback due to it being a neighboring residential use).
- **Expected Date of Commencement:** Pending approval of the property re-zoning and conditional use, the expected date for the Issue for Permit Construction Documents is set for **December 26, 2022**. The expected date for commencement



rocco
castellano

design
studio

30 North Vincennes Circle
North Bay, Wisconsin 53402
Phone 312.925.0907
rocco.castellano@castellano.design

of construction activities is anticipated for **February 17, 2023**. There are no plans for a multi-phase construction currently.

We are currently in review with the Wisconsin Department of Natural Resources (DNR) for our site development plan regarding the required floodplain protection and wetland protection measures set forth in the Village Ordinance.

Thank you in advance for your consideration for our request for a Planned Unit Development Overlay District.

Sincerely,

C. Rocco Castellano
Principal



VILLAGE OF SOMERS

Department of Planning & Development

VILLAGE OF SOMERS CONDITIONAL USE PERMIT PROCEDURES

1. Contact the Kenosha County Department of Planning & Development and check with staff to determine if your proposed use is a permitted use, an accessory use or a conditional use. If it is a conditional use, then a conditional use permit must be applied for and received prior to occupying or using the site for that use.

2. Contact the Kenosha County Department of Planning & Development and schedule a pre-conference meeting, which is required for all conditional use permit requests.

Meeting Date: _____

3. Contact the Village of Somers to determine if your conditional use permit application requires requires concept review by the Village Plan Commission. If so, contact the Village of Somers clerk to schedule a concept meeting with the Village Plan Commission.

Meeting Date: _____

4. Complete and submit to the Kenosha County Department of Planning & Development the Village of Somers Conditional Use Permit Application by the filing deadline.

Filing Deadline: _____

5. Upon submission you will be given two copies of the date-stamped application. Submit a copy of the date-stamped application to the Village of Somers clerk for placement on the agendas of the Village of Somers Plan Commission and the Village of Somers Board. Keep the other copy for your records.

6. Attend the Village Plan Commission and the Village Board meetings. **NOTE:** You must attend or the Village will not be able to act on your request. At these meeting you will be asked to brief the committee on your request and ultimately agree to a list of conditions of approval relating to your proposed use.

Village Plan Commission meeting date (tentative): _____

Village Board meeting date (tentative): _____

7. Village clerk will provide written notice of final action to property owner/applicant.

8. If approved, you may commence with applying for and obtaining any necessary zoning permit(s) for construction (i.e. new buildings, building additions, signage, fencing, etc...) with the Kenosha County Department of Planning and Development.

IMPORTANT TELEPHONE NUMBERS

Kenosha County Center
 Department of Public Works & Development Services
 19600 - 75th Street, Suite 185-3
 Bristol, Wisconsin 53104-9772

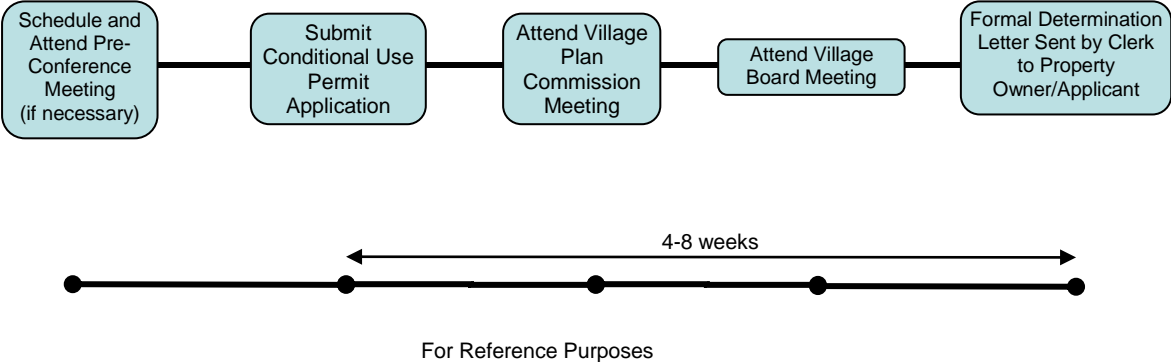
Division of Planning & Development (including Sanitation & Land Conservation) **857-1895**
 Facsimile # 857-1920

Public Works Division of Highways 857-1870

Administration Building
 Division of Land Information 653-2622

Village of Somers 859-2822
 Wisconsin Department of Natural Resources - Sturtevant Office 884-2300
 Wisconsin Department of Transportation - Waukesha Office 548-8722

Conditional Use Permit Timeline





VILLAGE OF SOMERS

Department of Planning & Development

CONDITIONAL USE PERMIT APPLICATION

(a) Property Owner's Name:

Print Name: _____ Signature: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ E-mail (optional): _____

Note: Unless the property owner's signature can be obtained in the above space, a letter of agent status signed by the legal property owner must be submitted if you are a tenant, leaseholder, or authorized agent representing the legal owner, allowing you to act on their behalf.

(b) Agent's Name (if applicable):

Print Name: _____ Signature: St. John

Business Name: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ E-mail (optional): _____

(c) Architect's Name (if applicable):

Print Name: _____ Signature: [Handwritten Signature]

Business Name: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ E-mail (optional): _____

(d) Engineer's Name (if applicable):

Print Name: _____ Signature: [Handwritten Signature]

Business Name: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ E-mail (optional): _____

CONDITIONAL USE PERMIT APPLICATION

(e) Tax key number(s) of subject site:

Address of the subject site:

(f) Plan of Operation (or attach separate plan of operation)

Type of structure:

Proposed operation or use of the structure or site:

Number of employees (by shift): _____

Hours of Operation: _____

Any outdoor entertainment? If so, please explain: _____

Any outdoor storage? If so, please explain: _____

Zoning district of the property: _____

(g) Attach a plat of survey prepared by a professional land surveyor or site plan drawn to scale and approved by the Kenosha County Department of Planning & Development showing all of the information required under section 12.05-1(h)3 for a zoning permit. In addition, the plat of survey or site plan layout shall show the location, elevation and use of any abutting lands and the location and foundation elevations of structures within 50 feet of the subject site; soil mapping unit lines; ordinary high water mark, historic high water marks and floodlands on or within 50 feet of the subject premises, existing and proposed gravel, asphalt and concrete surfaces, existing and proposed signage, existing and proposed buildings, and existing and proposed landscaping.

CONDITIONAL USE PERMIT APPLICATION

For conditional use permit applications that are made within shoreland and floodland areas, such description shall also include information that is necessary for the Village Plan Commission to determine whether the proposed development will hamper flood flows, impair floodplain storage capacity, or cause danger to human, animal or aquatic life. This additional information may include plans, certified by a registered professional engineer or professional surveyor, showing existing and proposed elevations or contours of the ground; fill or storage elevation; basement and first floor elevations of structures; size, location, and spatial arrangement of all existing and proposed structures on the site; location and elevation of streets water supply and sanitary facilities; aerial photographs, and photographs showing existing surrounding land uses and vegetation upstream and downstream; soil types and any other pertinent information required by either the Village of Somers Planning & Development office, Village Plan Commission or Village Board:

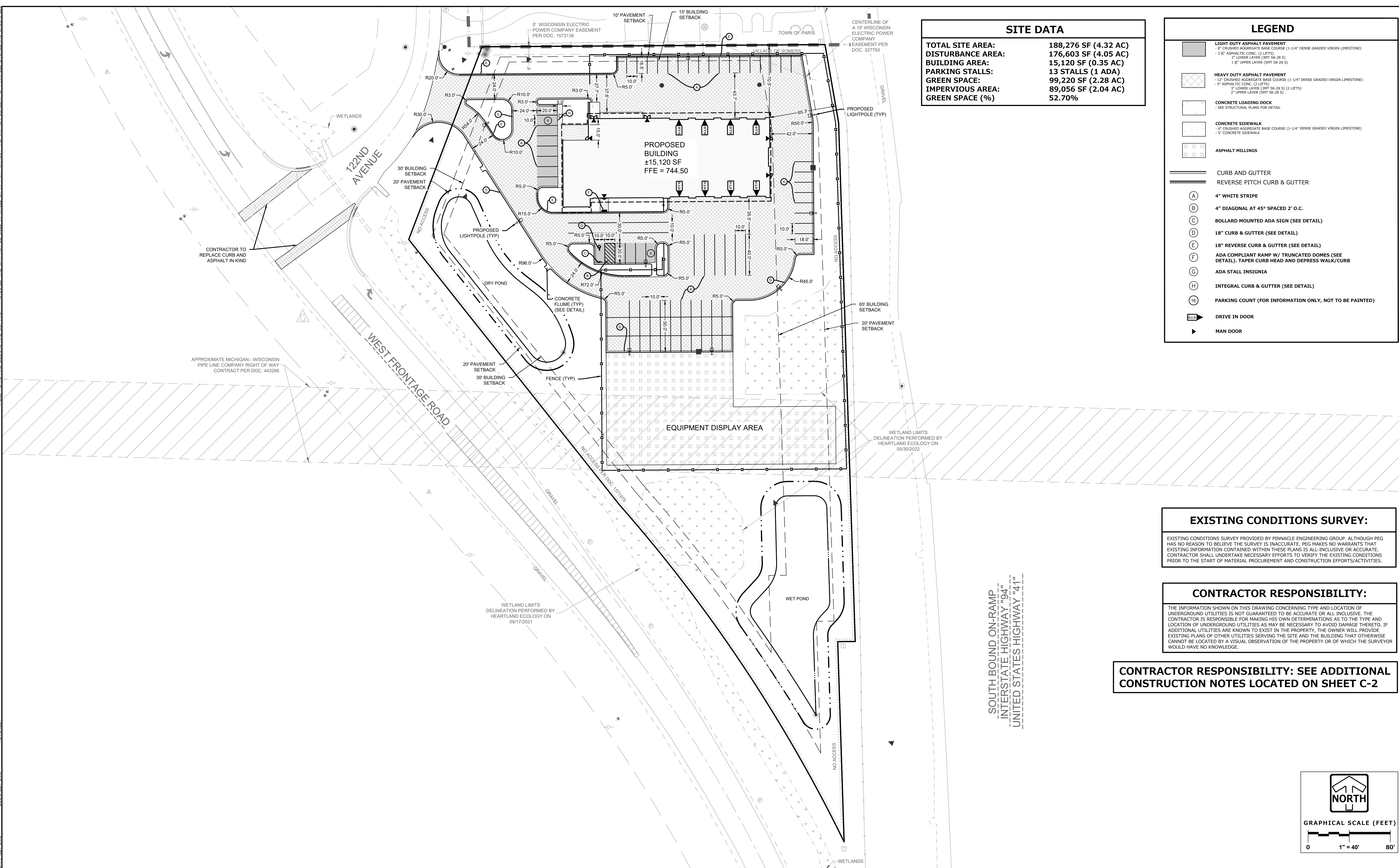
(h) The Kenosha County Department of Planning & Development may ask for additional information.

(i) The fee specified in Section 12.05-8 of this ordinance.

Request for Conditional Use Permit (payable to "Kenosha County") \$1,350.00

(For other fees see the [Fee Schedule](#))

THESE PLANS AND DESIGNS ARE COPYRIGHT PROTECTED AND MAY NOT BE USED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF PINNACLE ENGINEERING GROUP, LLC.



SITE DATA	
TOTAL SITE AREA:	188,276 SF (4.32 AC)
DISTURBANCE AREA:	176,603 SF (4.05 AC)
BUILDING AREA:	15,120 SF (0.35 AC)
PARKING STALLS:	13 STALLS (1 ADA)
GREEN SPACE:	99,220 SF (2.28 AC)
IMPERVIOUS AREA:	89,056 SF (2.04 AC)
GREEN SPACE (%)	52.70%

LEGEND	
	LIGHT DUTY ASPHALT PAVING - 6" CRUSHED AGGREGATE BASE COURSE (1-1/4" DENSE GRADED VIRGIN LIMESTONE) - 3/4" ASPHALTIC CONC. (2 LIFTS) 2" LOWER LAYER (SMT 58-28.5) 1 1/2" UPPER LAYER (SMT 58-28.5)
	HEAVY DUTY ASPHALT PAVING - 12" CRUSHED AGGREGATE BASE COURSE (1-1/4" DENSE GRADED VIRGIN LIMESTONE) - 5" ASPHALTIC CONC. (2 LIFTS) 2" LOWER LAYER (SMT 58-28.5) (2 LIFTS) 2" UPPER LAYER (SMT 58-28.5)
	CONCRETE LOADING DOCK - SEE STRUCTURAL PLANS FOR DETAIL
	CONCRETE SIDEWALK - 6" CRUSHED AGGREGATE BASE COURSE (1-1/4" DENSE GRADED VIRGIN LIMESTONE) - 5" CONCRETE SIDEWALK
	ASPHALT MILLINGS
	CURB AND GUTTER
	REVERSE PITCH CURB & GUTTER
	4" WHITE STRIPE
	4" DIAGONAL AT 45° SPACED 2' O.C.
	BOLLARD MOUNTED ADA SIGN (SEE DETAIL)
	18" CURB & GUTTER (SEE DETAIL)
	18" REVERSE CURB & GUTTER (SEE DETAIL)
	ADA COMPLIANT RAMP W/ TRUNCATED DOMES (SEE DETAIL). TAPER CURB HEAD AND DEPRESS WALK/CURB
	ADA STALL INSIGNIA
	INTEGRAL CURB & GUTTER (SEE DETAIL)
	PARKING COUNT (FOR INFORMATION ONLY, NOT TO BE PAINTED)
	DRIVE IN DOOR
	MAN DOOR

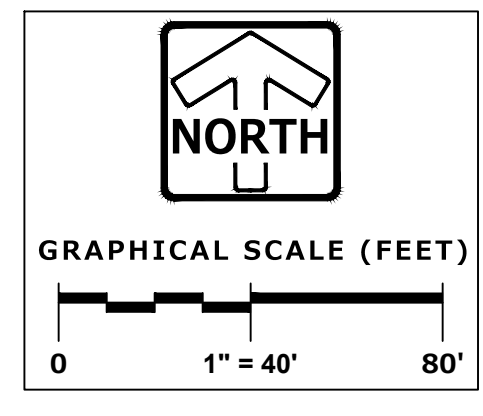
EXISTING CONDITIONS SURVEY:

EXISTING CONDITIONS SURVEY PROVIDED BY PINNACLE ENGINEERING GROUP. ALTHOUGH PEG HAS NO REASON TO BELIEVE THE SURVEY IS INACCURATE, PEG MAKES NO WARRANTIES THAT EXISTING INFORMATION CONTAINED WITHIN THESE PLANS IS ALL-INCLUSIVE OR ACCURATE. CONTRACTOR SHALL UNDERTAKE NECESSARY EFFORTS TO VERIFY THE EXISTING CONDITIONS PRIOR TO THE START OF MATERIAL PROCUREMENT AND CONSTRUCTION EFFORTS/ACTIVITIES.

CONTRACTOR RESPONSIBILITY:

THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. IF ADDITIONAL UTILITIES ARE KNOWN TO EXIST IN THE PROPERTY, THE OWNER WILL PROVIDE EXISTING PLANS OF OTHER UTILITIES SERVING THE SITE AND THE BUILDING THAT OTHERWISE CANNOT BE LOCATED BY A VISUAL OBSERVATION OF THE PROPERTY OR OF WHICH THE SURVEYOR WOULD HAVE NO KNOWLEDGE.

CONTRACTOR RESPONSIBILITY: SEE ADDITIONAL CONSTRUCTION NOTES LOCATED ON SHEET C-2



DESIGNED: DMS
DRAFTED: DMS

PLAN | DESIGN | DELIVER
www.pinnacle-engr.com

PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

WISCONSIN OFFICE:
20725 WATERTOWN ROAD,
SUITE 100, BROOKFIELD, WI 53186
(262) 754-8888
CHICAGO | MILWAUKEE | NATIONWIDE

BOBCAT SOMERS

122ND AVE & WEST FRONTAGE ROAD

SITE DIMENSIONAL & PAVING PLAN

REVISIONS	

REG JOB No. 2402.00A
REG PM: MTS
START DATE: 07-18-22
SCALE: 1"=40'

SHEET
C-4
C-13

www.pinnacle-engr.com FOR REVIEW ONLY SITE DIMENSIONAL & PAVING PLAN © COPYRIGHT 2018

VILLAGE OF SOMERS

Department of Planning and Development

VILLAGE OF SOMERS SITE PLAN REVIEW PROCEDURES

1. Contact the Kenosha County Department of Planning & Development and check with staff to determine if your proposed zoning change meets the requirements of the Multi-Jurisdictional Comprehensive Plan for Kenosha County: 2035, Village of Somers General Zoning and Shoreland/Floodplain Zoning Ordinance and the Village of Somers Land Division and Platting Control Ordinance.

2. Contact the Kenosha County Department of Planning & Development and schedule a pre-conference meeting, which is required for all site plan review requests.

Meeting Date: _____

3. Contact the Village of Somers to determine if your site plan review application requires concept review by the Village Plan Commission. If so, contact the Village of Somers clerk to schedule a concept meeting with the Village Plan Commission.

Meeting Date: _____

4. Complete and submit to the Kenosha County Department of Planning & Development the Village of Somers Site Plan Review Application by the filing deadline.

Filing Deadline: _____

5. Upon submission you will be given two copies of the date-stamped application. Submit a copy of the date-stamped application to the Village of Somers clerk for placement on the agendas of the Village of Somers Plan Commission and the Village of Somers Board. Keep the other copy for your records.

7. Attend the Village Plan Commission and the Village Board meetings. **NOTE:** You must attend or the Village will not be able to act on your request. At these meetings you will be asked to brief the committee on your request.

Village Plan Commission meeting date (tentative): _____

Village Board meeting date (tentative): _____

8. Village clerk will provide written notice of final action to property owner/applicant.

SITE PLAN REVIEW
CHECKLIST

Owner: _____ Date _____

Mailing Address: _____ Phone # _____

_____ Phone # _____

Agent: _____ Phone # _____

Mailing Address: _____ Phone # _____

Architect/Engineer: _____ Phone # _____

Mailing Address: _____ Phone # _____

Tax Parcel Number(s): _____ Acreage of Project: _____

Existing Zoning: _____ Proposed Zoning: _____

Conditional Use Permit: _____

Description of Project: (include the following when applicable):

Description of project: _____

Size of existing building(s): _____

Size of new building(s) and/or addition(s): _____

Number of current and projected full-time and part-time employees, number of shifts: _____

Number of proposed units: _____ Description of units: _____

Density: _____

Plat of Survey Submitted:

Covenants and Restrictions Submitted

A. BUILDING PLANS SUBMITTED? (BUILDING APPEARANCE)

No building shall be permitted the design or exterior appearance of which is of such unorthodox or abnormal character in relation to its surroundings as to be unsightly or offensive to generally accepted taste and community standards.

No building shall be permitted the design or exterior appearance of which is so identical with those adjoining as to create excessive monotony or drabness.

No building shall be permitted where any exposed facade is not constructed or faced with a finished material which is aesthetically compatible with the other facades and presents an attractive appearance to the public and to surrounding properties.

Building Scale and Mass. The relative proportion of a building to its neighboring buildings, to pedestrians and observers, or to other existing buildings shall be maintained or enhanced when new buildings are built or when existing buildings are remodeled or altered.

Building Rooflines and Roof Shapes. The visual continuity of roofs and their contributing elements (parapet walls, coping, and cornices) shall be maintained in building development and redevelopment.

Since the selection of building colors has a significant impact upon the public and neighboring properties, color shall be selected in general harmony with existing neighborhood buildings.

No building or sign shall be permitted to be sited on the property in a manner which would unnecessarily destroy or substantially damage the natural beauty of the area, particularly insofar as it would adversely affect values incident to ownership of land in that area, or which would unnecessarily have an adverse effect on the beauty and general enjoyment of existing structures on adjoining properties.

The facade of all buildings which face upon a street right-of-way shall be finished with an aesthetically pleasing material. A minimum of 50 percent of a facade facing an existing or future street shall be finished with a combination of brick, decorative masonry material, decorative pre-cast concrete panels, decorative glass panels, wood, or decorative metal or vinyl siding. Such finished material shall extend for a distance of at least 10 feet along the sides of the structure. All buildings on corner lots shall have the required finished facade facing each street.

B. SITE PLAN SUBMITTED?

Building locations shall maintain required setbacks from property lines and road rights-of-way.

Buildings and uses shall provide for safe traffic circulation and safe driveway locations.

Buildings and uses shall be provided with adequate public services as approved by the appropriate utility.

**SITE PLAN REVIEW
CHECKLIST**

Buildings and uses shall provide adequate parking and loading areas. No loading dock or overhead doors shall face upon a street right-of-way without approval of the zoning administrator.

Parking areas shall maintain required setbacks and parking spaces shall be of minimum required size (10' x 20'). Aisle widths within parking lots shall be a minimum of 24' between the ends of the parking spaces. **SEE REZONING APPLICATION**

Each parking space shall be on the same lot or parcel as the principal use, and all parking lots shall have the same zoning district as the principal use. Parking spaces and driveways shall be a minimum of 20 feet from the established highway right-of-way and a minimum of 10 feet from all rear and side lot lines. Curbs or barriers shall be installed so as to prevent vehicles from extending beyond designated parking or driving areas.

Parking areas for five or more vehicles adjoining a residential use, shall be screened from such use by a solid wall, fence, evergreen planting of equivalent visual density or other effective means, and built and maintained at a minimum height of four feet at the time of planting or installation.

Adequate access to a public or private roadway shall be provided for each parking space. For all non-residential properties, driveways for vehicular ingress and egress shall be a minimum of 10 feet in width and not exceed 35 feet in width at the property line.

All off-street parking of more than five vehicles shall be graded and surfaced with asphalt or concrete.

C. LANDSCAPING AND LIGHTING PLAN SUBMITTED?

Buildings and uses shall make appropriate use of open spaces. The zoning administrator or Village Board may require appropriate landscaping and planting screens. A landscaping maintenance program, together with appropriate assurances, shall be submitted.

Dumpsters and other trash receptacles shall be fenced and/or screened from view from street rights-of-way and adjacent residential uses.

Exterior lighting used for parking lots, recreation facilities, product display, and security shall not spill-over on operators of motor vehicles, pedestrians, and/or adjacent residential property (cut-off type luminaries only).

Appropriate buffers shall be provided between dissimilar uses.

D. SEWER VERIFICATION/SANITATION EVALUATION OR APPLICATION SUBMITTED?

E. UTILITY PLANS SUBMITTED?

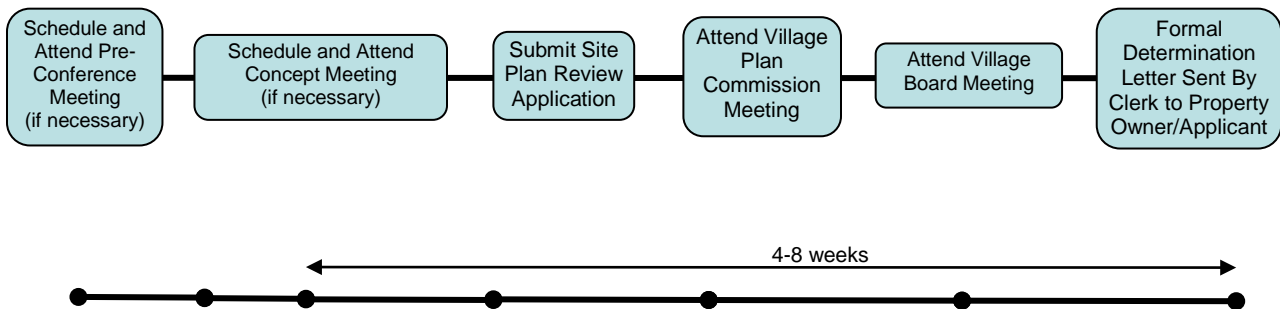
F. STORMWATER DRAINAGE AND EROSION CONTROL PLAN SUBMITTED?

Appropriate erosion control and stormwater management measures shall be utilized in all new development. Buildings and uses shall maintain existing topography, drainage patterns, and vegetative cover insofar as is practical. The zoning administrator or Village Board may require that drainage easements be executed.

IMPORTANT TELEPHONE NUMBERS

Kenosha County Center	
Department of Planning & Development	
19600 - 75 th Street, Post Office, Suite 185-3	
Bristol, Wisconsin 53104-9772	
Division of County Development (including Sanitation & Land Conservation).....	857-1895
Facsimile #.....	857-1920
Public Works Division of Highways	857-1870
Administration Building	
Division of Land Information.....	653-2622
Village of Somers	859-2822
Wisconsin Department of Natural Resources - Sturtevant Office	884-2300
Wisconsin Department of Transportation - Waukesha Office	548-8722

Site Plan Review Procedure Timeline



For Reference Purposes

SOMERS BOBCAT RETAIL DEALERSHIP

NEW CONSTRUCTION

1242 122nd AVENUE | SOMERS, WI 53171

OWNER
ENRICO MOSCONI
DECLARATION OF TRUST
715 BENSON LN
LIBERTYVILLE, IL 60048

CONSTRUCTION MANAGER
BUKACEK CONSTRUCTION
GROUP, INC.
2429 SUMMIT AVE.
RACINE, WI 53404
(262) 637-9791

ARCHITECT
ROCCO CASTELLANO
DESIGN STUDIO, INC.
30 N. VINCENNES CIR.
NORTH BAY, WI 53402
(312) 925-0907

CIVIL ENGINEER
PINNACLE ENGINEERING GROUP
20725 W. WATERTOWN RD.
BROOKFIELD, WI 53186
(262) 754 - 8888

LIFE SAFETY & FIRE PROTECTION
DELEGATED DESIGN (TBD)

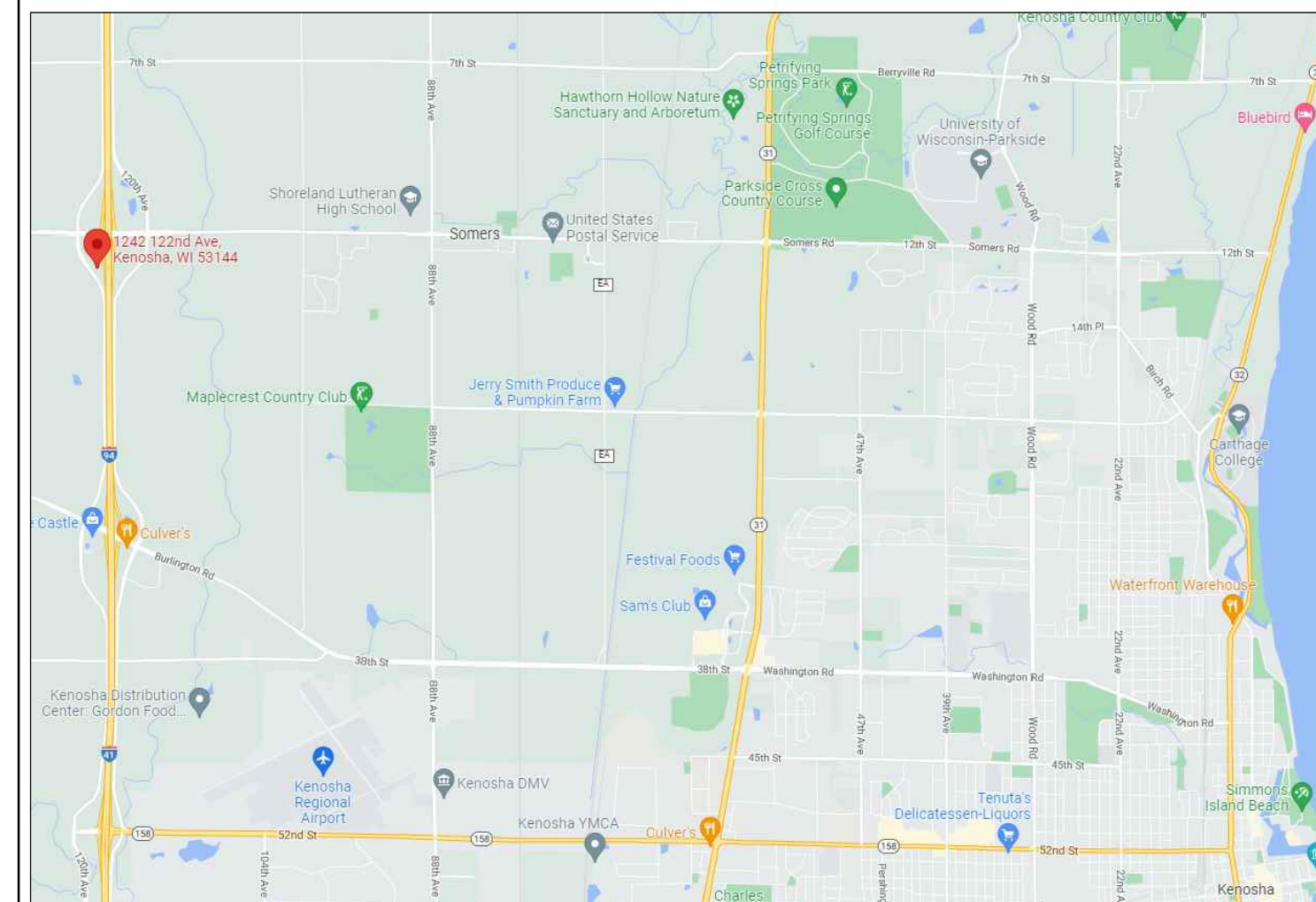
STRUCTURAL ENGINEER
GRAEF USA
332 SOUTH MICHIGAN AVE
CHICAGO, IL 60604
(312) 582 - 2000

SIGNAGE CONSULTANT
INKSPOT DESIGN INC.
320 W. OHIO ST.
CHICAGO, IL 60654
(312) 337 - 9600

LANDSCAPE ARCHITECT
CHEN SITE DESIGN STUDIO LLC
195 N HARBOR DR.
CHICAGO, IL
(847) 363 - 0168

ELECTRICAL / PLUMBING ENGINEER
KORNACKI & ASSOCIATES
5420 SOUTH WESTRIDGE DR
NEW BERLIN, WI 53151
(262) 784-3323

MECHANICAL / PLUMBING ENGINEER
LBG ENGINEERING, LLC
13355 ANNE DR.
LEMONT, IL
(630) 247-2270



K11

SITE LOCATION MAP

N.T.S.

GENERAL NOTES

ZONING AND SITE DATA	
ZONING DISTRICT:	R2 - SUBURBAN SINGLE-FAMILY RESIDENTIAL DISTRICT
USE GROUP:	B - BUSINESS
LOT AREA:	+ 188,276 SF (4,3222 ACRES)
APPLICABLE BUILDING CODES	
2015 INTERNATIONAL BUILDING CODE (IBC)	W/ LOCAL AMENDMENTS
2014 NATIONAL ELECTRIC CODE	W/ LOCAL AMENDMENTS
CURRENT STATE OF ILLINOIS PLUMBING CODE	W/ LOCAL AMENDMENTS
2015 INTERNATIONAL MECHANICAL CODE	W/ LOCAL AMENDMENTS
2015 INTERNATIONAL FUEL GAS CODE	W/ LOCAL AMENDMENTS
2015 INTERNATIONAL ENERGY CONSERVATION CODE	W/ LOCAL & STATE AMENDMENTS
2003 LIFE SAFETY CODE - NFPA 101	W/ LOCAL AMENDMENTS
CURRENT STATE OF ILLINOIS ACCESSIBILITY CODE	W/ LOCAL & STATE AMENDMENTS
CURRENT DOWNERS GROVE ZONING ORDINANCE	W/ LOCAL AMENDMENTS
CURRENT DOWNERS GROVE STORMWATER & FLOOD PLAN ORD	
PARKING SUMMARY	
	NO CHANGE
BUILDING DATA	
USE GROUP:	BUSINESS GROUP B
BUILDING AREA:	13,325 SF
ALLOWABLE HEIGHTS & AREAS	
AREA (PER STORY):	23,000 SF (NON-SPRINKLERED)
STORIES (ABOVE GRADE PLANS):	3 STORIES (NON-SPRINKLERED)
BUILDING HEIGHT (ABOVE GRADE PLANS):	55' (NON-SPRINKLERED)
ACTUAL BUILDING HEIGHT (ABOVE GRADE PLANS):	1 STORY / +26'-6" (1-3 STY / 55')
ACTUAL BUILDING AREA:	13,325 SF (+ 23,000 SF)
CONSTRUCTION TYPE	
	I-B
FIRE SUPPRESSION	
	NON SPRINKLERED
FIRE RESISTANCE RATINGS	
BUILDING ELEMENT:	
PRIMARY STRUCTURAL FRAME:	0 HR
BEARING WALLS:	
EXTERIOR:	0 HR
INTERIOR:	0 HR
NON-BEARING WALLS & PARTITIONS (EXTERIOR):	0 HR
NON-BEARING WALLS & PARTITIONS (INTERIOR):	0 HR
FLOOR CONSTRUCTION & SECONDARY MEMBERS:	0 HR
ROOF CONSTRUCTION & SECONDARY MEMBERS:	0 HR
CORRIDORS (BC 2015 TABLE 1002.1):	-30' OCC - 1 HR (NON-SPRINKLERED) / NA
DEAD END CORRIDOR:	-20' 0"
DESIGN LOADS	
OFFICES:	LIVE LOAD: 50 PSF
	DEAD LOAD: 15 PSF
	PARTITION LOAD: 20 PSF
	TOTAL: 85 PSF
BALCONIES & STAIRS:	LIVE LOAD: 100 PSF
	DEAD LOAD: 10 PSF
	TOTAL: 110 PSF
COMMERCIAL:	LIVE LOAD: 100 PSF
	DEAD LOAD: 15 PSF
	TOTAL: 115 PSF
ROOF:	SNOW LOAD: 30 PSF
	DEAD LOAD: 25 PSF
	TOTAL: 55 PSF
WIND:	MWRA CLADDING: 20 PSF
	25 PSF
FIRE EXTINGUISHERS:	
	MIN DISTANCE BETWEEN = 75'

GENERAL

GO01 TITLE SHEET & PROJECT INFORMATION

ARCHITECTURAL

- *A001 LEGENDS, ABBREVIATIONS & SPECIFICATIONS
- *A002 PARTITION SCHEDULE & DETAILS
- *A003 DOOR, FRAME & WINDOW TYPES & SCHEDULES
- *A004 HARDWARE SCHEDULE (FUTURE DRAWING)

- A101 FLOOR PLAN
- *A102 ROOF PLAN
- *A141 FURNITURE PLAN
- *A161 LIFE SAFETY PLAN

- A201 EXTERIOR ELEVATIONS
- *A201 BUILDING SECTIONS

- *A401 REFLECTED CEILING PLAN

- *A501 EXTERIOR DETAILS - WALL SECTIONS

- *A601 ENLARGED BATHROOM PLANS & INTERIOR DETAILS

CIVIL

- C-1 COVER SHEET
- C-2 GENERAL NOTES
- C-3 EXISTING CONDITIONS & DEMO PLANS
- C-4 SITE DIMENSIONAL & PAVING PLAN
- C-5 GRADING & EROSION CONTROL PLAN
- C-6 SPOT GRADE PLAN
- C-7 STORM SEWER PLAN
- C-8 SANITARY & WATERMAIN PLAN
- C-9 PUBLIC SANITARY PLAN & PROFILE
- C-10 PUBLIC WATERMAIN PLAN & PROFILE
- C-11 CONSTRUCTION DETAILS
- C-12 CONSTRUCTION DETAILS
- C-13 CONSTRUCTION DETAILS

LANDSCAPE

- L-1 LANDSCAPE OVERVIEW
- L-2 LANDSCAPE ENLARGEMENT
- L-3 LANDSCAPE ENLARGEMENT
- L-4 LANDSCAPE NOTES & DETAILS

STRUCTURAL

TO BE DETERMINED

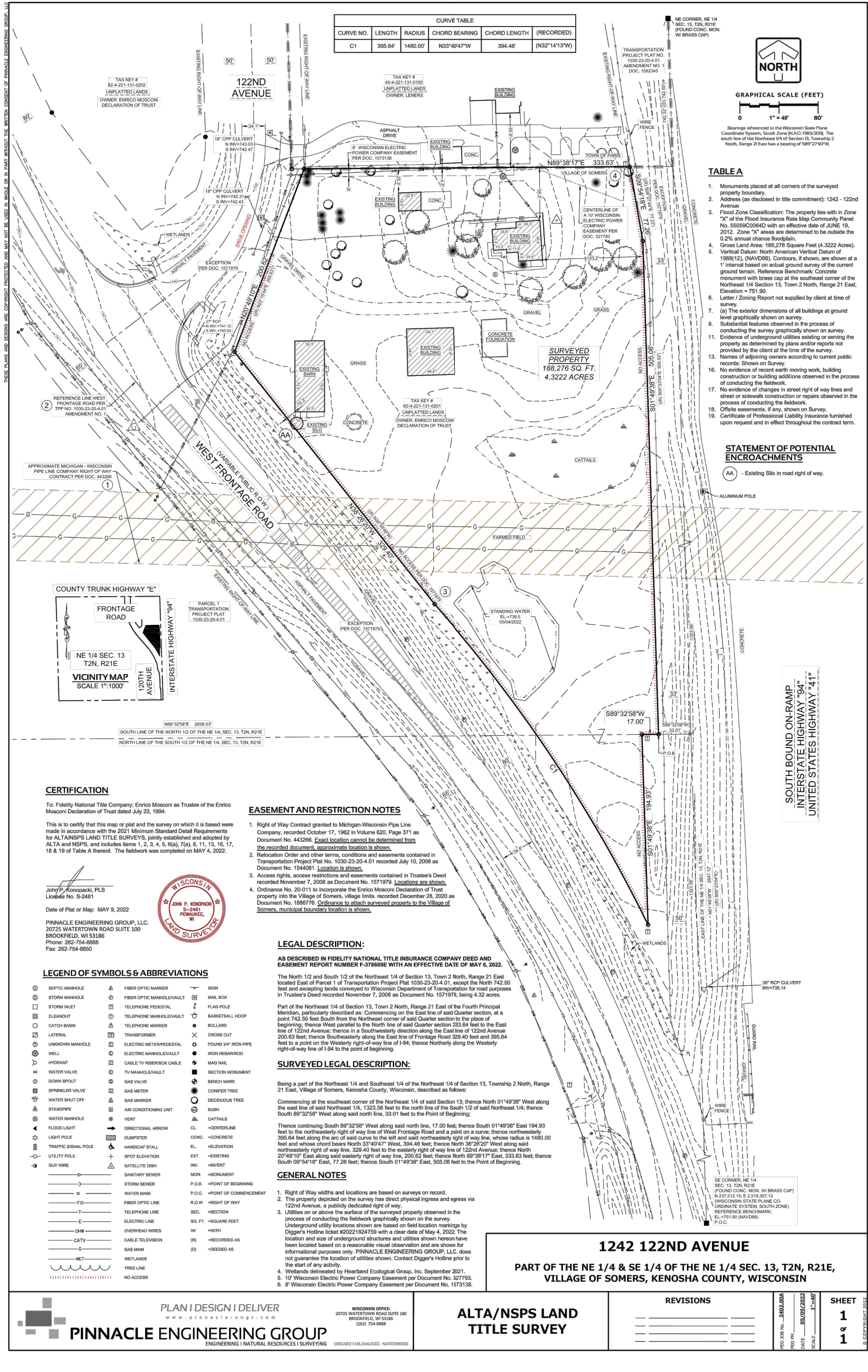
MECHANICAL / PLUMBING

TO BE DETERMINED

ELECTRICAL

- E100 ELECTRICAL SITE PLAN
- E101 POTOMETRIC SITE PLAN
- E200 ELECTRICAL SCHEDULES AND DETAILS

* TO BE PROVIDED IN FUTURE ISSUANCES



SHEET 1 OF 1

A1 SURVEY - FOR REFERENCE
SCALE 1" = 100'-0"

A6 RESERVED
SCALE TBD

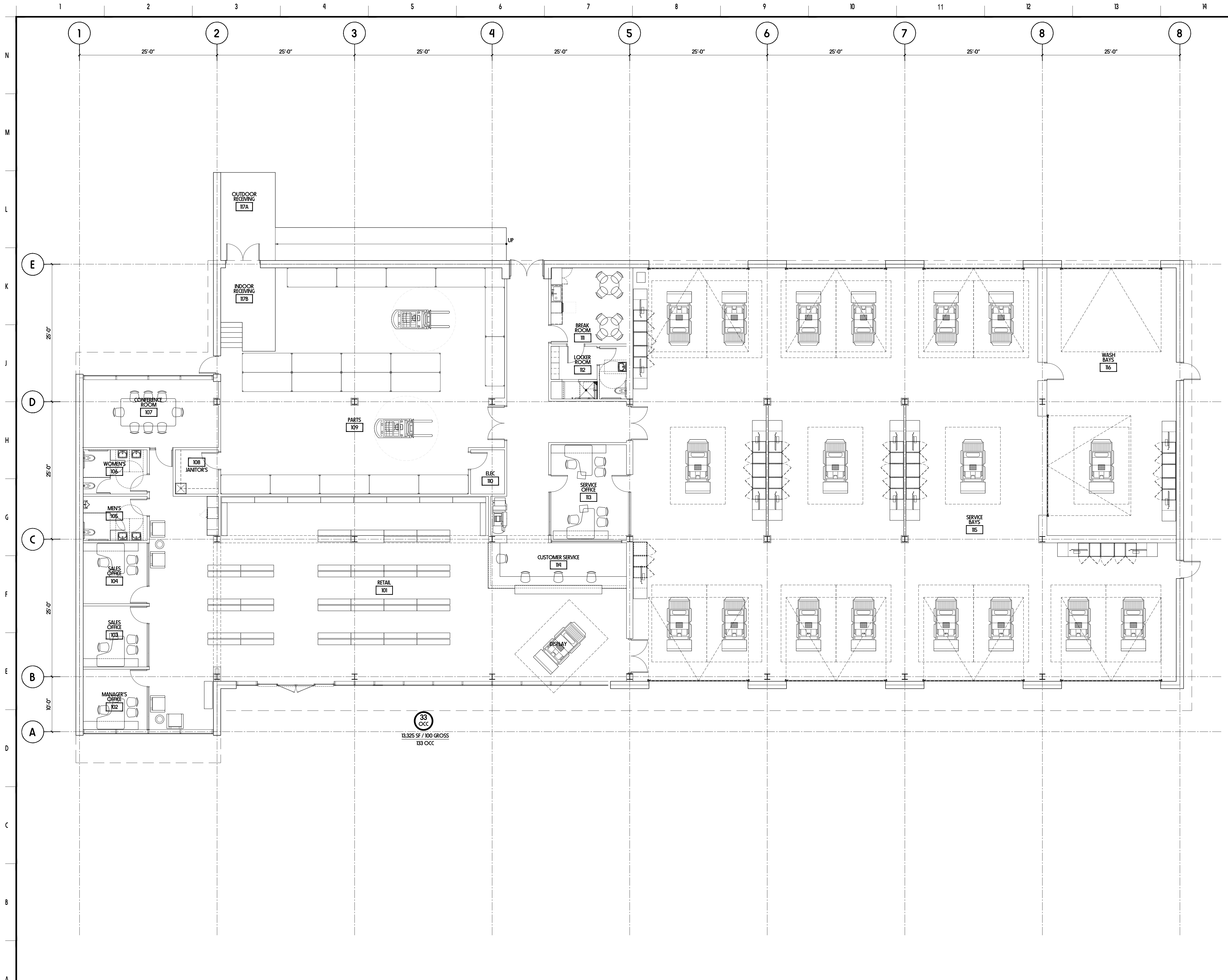
A11 DRAWING SHEET INDEX
N.T.S.

BUKACEK CONSTRUCTION

building your vision

SOMER'S BOBCAT
1242 122nd AVENUE
SOMERS WI 53171

TITLE SHEET & PROJECT INFORMATION



33
OCC
13,325 SF / 100 GROSS
133 OCC

GENERAL NOTES

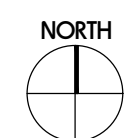
2	8/30/22	ISSUE FOR SITE PLAN REVIEW
1	6/22/22	ISSUE FOR CONCEPT DESIGN REVIEW
drawn by: CRC		checked by: CRC
		project no.: 2022.07.01

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WIS.
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BUKACEK CONSTRUCTION
building your vision

SOMER'S BOBCAT
1242 122nd AVENUE
SOMERS WI 53171

FLOOR PLAN
FIRST FLOOR

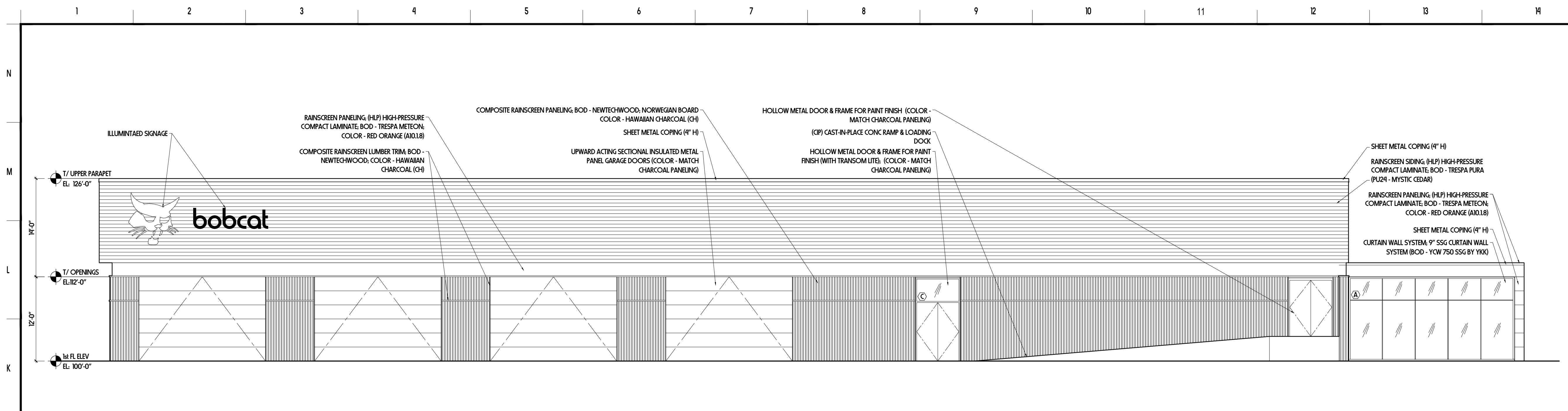


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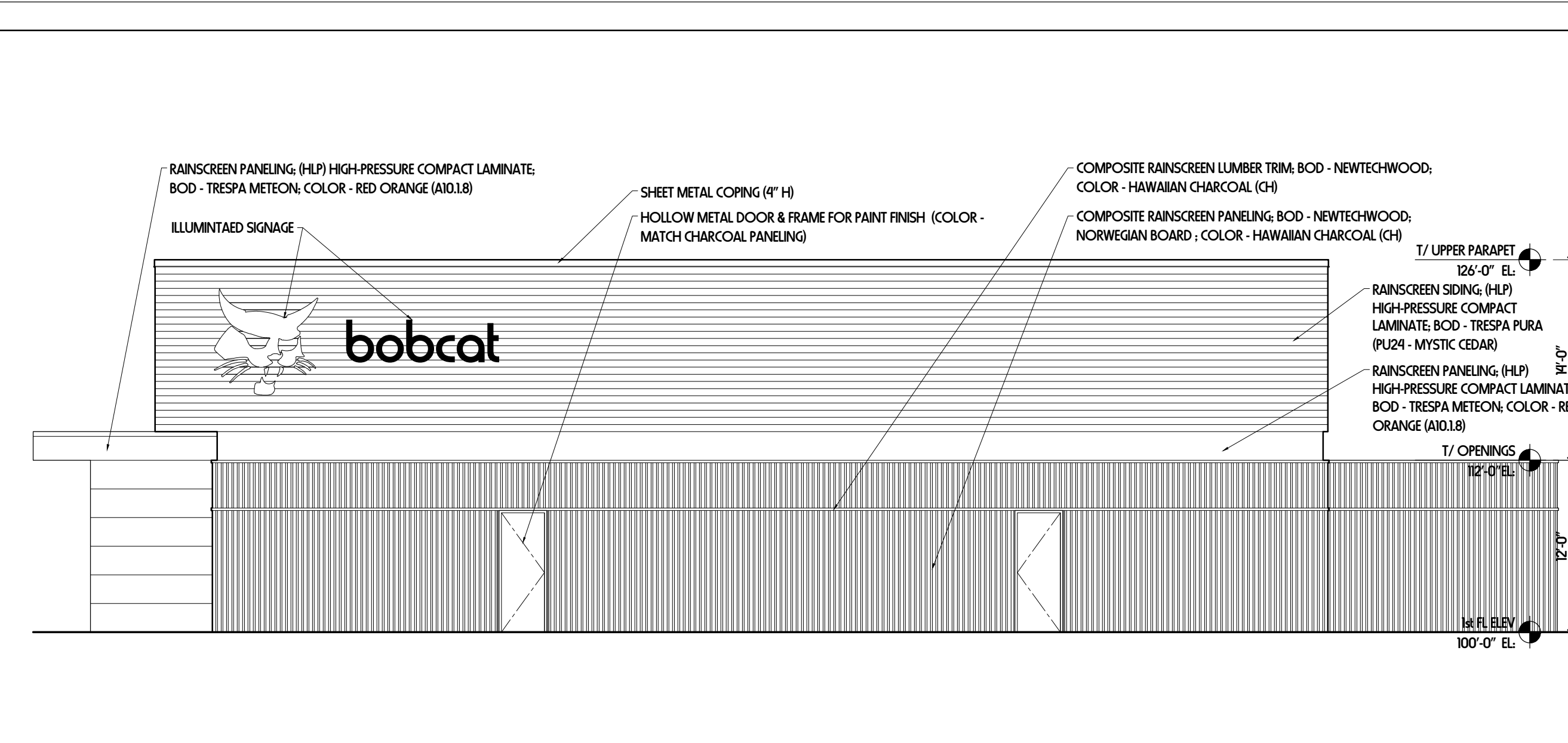
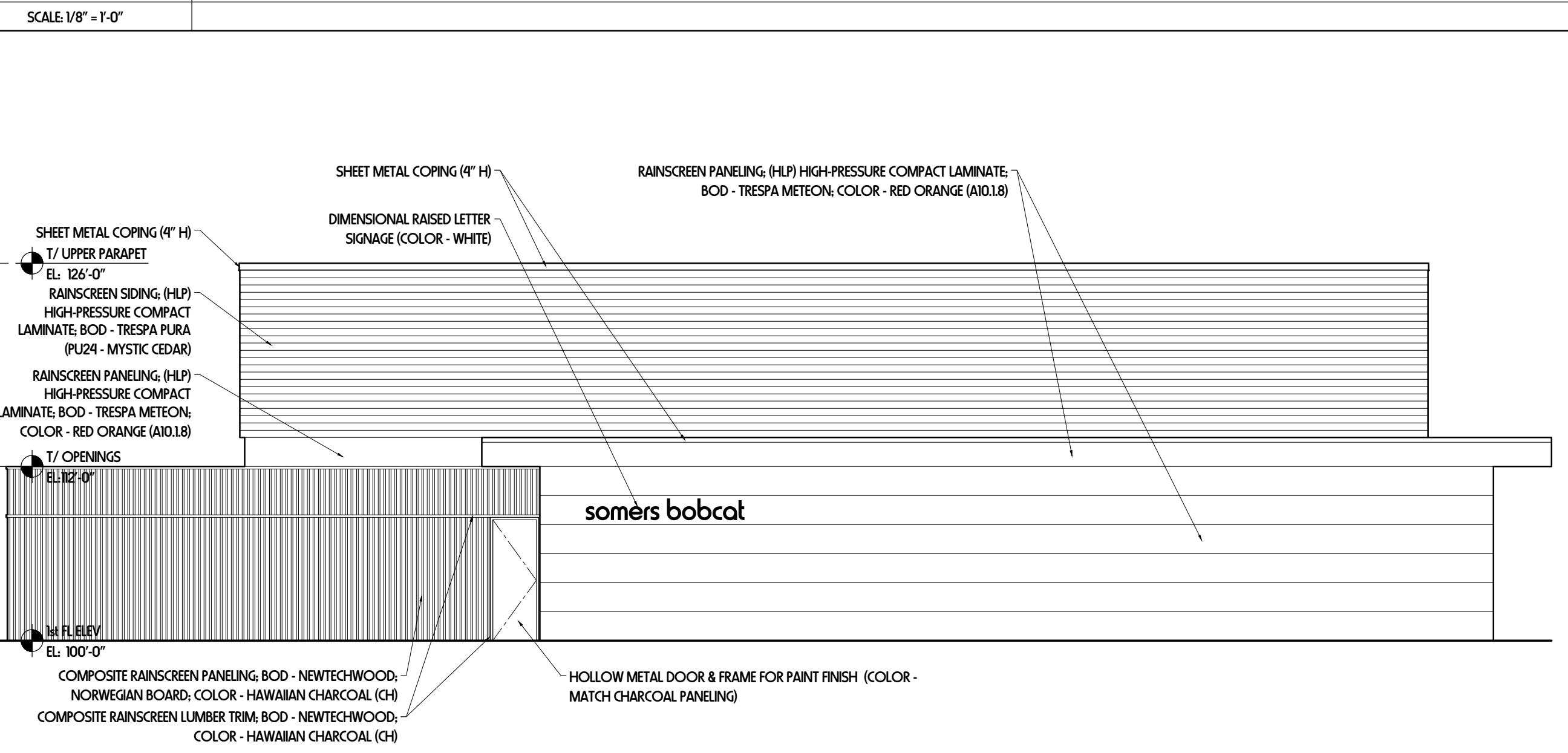
FLOOR PLAN

SCALE 1/8" = 1'-0"



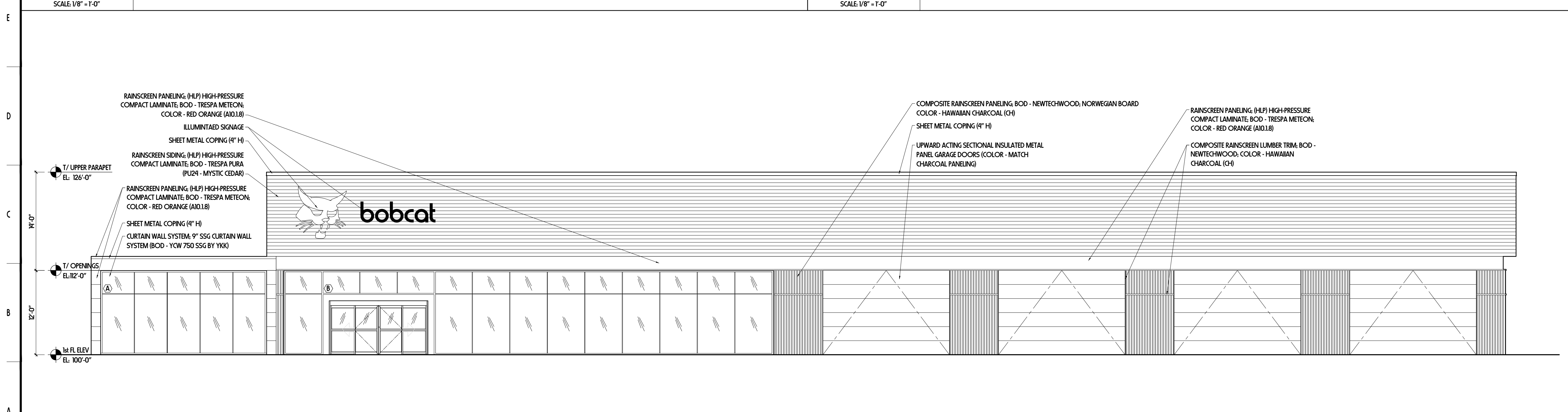
GENERAL NOTES

J1 EXTERIOR ELEVATIONS - NORTH FACADE



E1 EXTERIOR ELEVATIONS - WEST FACADE

E8 EXTERIOR ELEVATIONS - EAST FACADE



A1 EXTERIOR ELEVATIONS - SOUTH FACADE

2	8/30/22	ISSUE FOR SITE PLAN REVIEW
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SOMER'S BOBCAT
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SOMERS WI 53171

EXTERIOR ELEVATIONS

NORTH

A201

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DESIGNED: DMS

REVIEWED:

DRAWN: DMS

ONSITE CIVIL ENGINEERING INFRASTRUCTURE PLANS

FOR

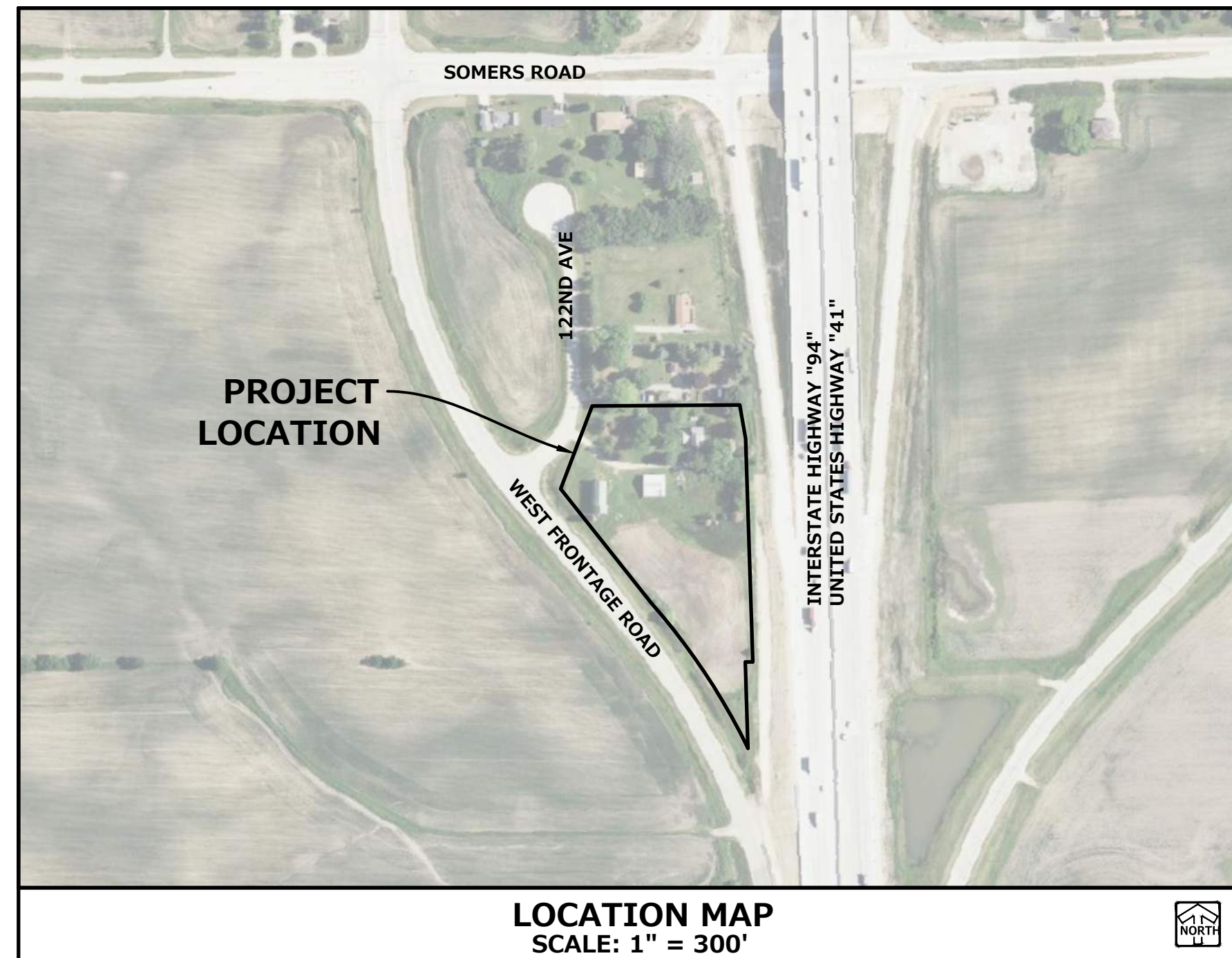
BOBCAT SOMERS

122ND AVE & WEST FRONTAGE ROAD

PLANS PREPARED FOR

BOBCAT PLUS

12411 W SILVER SPRING DR
BUTLER, WI 53007



LEGEND		
	EXISTING	PROPOSED
SANITARY SEWER MANHOLE	⊙	⊙
STORM SEWER MANHOLE	⊙	⊙
STORM SEWER AREA DRAIN	□	□
STORM SEWER INLET (ROUND CASTING)	○	○
STORM SEWER INLET (RECTANGULAR CASTING)	□	□
PRECAST FLARED END SECTION	△	△
CONCRETE HEADWALL	∩	∩
VALVE VAULT	⊗	⊗
VALVE BOX	⊞	⊞
FIRE HYDRANT	⊕	⊕
BUFFALO BOX	⊙	⊙
CLEANOUT	⊞	⊞
SANITARY SEWER	—	—
FORCE MAIN	—	—
STORM SEWER	—	—
DRAIN TILE	—	—
WATER MAIN	—	—
UTILITY CROSSING	—	—
LIGHTING	⊙	⊙
ELECTRICAL CABLE	—	—
OVERHEAD WIRES	—	—
CAUTION EXISTING UTILITIES NEARBY	—	—
ELECTRICAL TRANSFORMER OR PEDESTAL	⊞	⊞
POWER POLE	⊙	⊙
POWER POLE WITH LIGHT	⊙	⊙
STREET SIGN	⊙	⊙
GAS MAIN	—	—
TELEPHONE LINE	—	—
CONTOUR	749	749
SPOT ELEVATION	x (750.00)	x 750.00
WETLANDS	—	—
FLOODWAY	—	—
FLOODPLAIN	—	—
HIGH WATER LEVEL (HWL)	—	—
NORMAL WATER LEVEL (NWL)	—	—
DIRECTION OF SURFACE FLOW	→	→
DITCH OR SWALE	—	—
DIVERSION SWALE	—	—
OVERFLOW RELIEF ROUTING	→	→
TREE WITH TRUNK SIZE	⊙	⊙
SOIL BORING	⊙	⊙
TOPSOIL PROBE	⊙	⊙
FENCE LINE, TEMPORARY SILT	—	—
FENCE LINE, WIRE	—	—
FENCE LINE, CHAIN LINK OR IRON	—	—
FENCE LINE, WOOD OR PLASTIC	—	—
CONCRETE SIDEWALK	—	—
CURB AND GUTTER	—	—
DEPRESSED CURB	—	—
REVERSE PITCH CURB & GUTTER	—	—
EASEMENT LINE	—	—

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GOVERNMENT CONTACTS	

PROJECT TEAM CONTACTS	
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APPLICANT/OWNER: STEVE FOLKMAN BOBCAT PLUS 12411 W SILVER SPRING DR BUTLER, WI 53007 E-MAIL: sfolkman@bobcatplus.com	Architect: C. ROCCO CASTELLANO, AIA, LEED AP ROCCO CASTELLANO DESIGN STUDIO, INC 30 N. VINCENTS CIR. NORTH BAY, WI 53402

ABBREVIATIONS			
BL	BASE LINE	NWL	NORMAL WATER LEVEL
C	LONG CHORD OF CURVE	PC	POINT OF CURVATURE
C & G	CURB AND GUTTER	PT	POINT OF TANGENCY
CB	CATCH BASIN	PVI	POINT OF VERTICAL INTERSECTION
CL	CENTERLINE	R	RADIUS
D	DEGREE OF CURVE	ROW	RIGHT-OF-WAY
EP	EDGE OF PAVEMENT	SAN	SANITARY SEWER
FF	FINISHED FLOOR	ST	STORM SEWER
FG	FINISHED GRADE	T	TANGENCY OF CURVE
FL	FLOW LINE	TB	TOP OF BANK
FP	FLOODPLAIN	TC	TOP OF CURB
FR	FRAME	TF	TOP OF FOUNDATION
FW	FLOODWAY	TP	TOP OF PIPE
HWL	HIGH WATER LEVEL	TS	TOP OF SIDEWALK
INV	INVERT	TW	TOP OF WALK
L	LENGTH OF CURVE	WM	WATER MAIN
MH	MANHOLE	Δ	INTERSECTION ANGLE
NTS	NOT TO SCALE		

BENCHMARKS	
VERTICAL DATUM:	NAVD88
REF BM:	CONCRETE MONUMENT WITH BRASS CAP AT THE SOUTHEAST CORNER OF THE NORTHEAST 1/4 SECTION 13, TOWN 2 NORTH, RANGE 21 EAST EL.=751.90

GENERAL NOTES	
1. THE INTENTION OF THE PLANS AND SPECIFICATIONS IS TO SET FORTH PERFORMANCE AND CONSTRUCTION MATERIAL STANDARDS FOR THE PROPER EXECUTION OF WORK. ALL WORKS CONTAINED WITHIN THE PLANS AND SPECIFICATIONS SHALL BE COMPLETED IN ACCORDANCE WITH ALL REQUIREMENTS FROM LOCAL, STATE, FEDERAL OR OTHER GOVERNING AGENCIES' LAWS, REGULATIONS, JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., AND THE OWNER'S DIRECTION.	9. SHOULD ANY DISCREPANCIES OR CONFLICTS IN THE PLANS OR SPECIFICATIONS BE DISCOVERED AFTER THE AWARD OF CONTRACT, ENGINEER SHALL BE NOTIFIED IN WRITING IMMEDIATELY AND CONSTRUCTION OF ITEMS AFFECTED BY THE DISCREPANCIES/CONFLICTS SHALL NOT COMMENCE OR CONTINUE, UNTIL A WRITTEN RESPONSE FROM ENGINEER/OWNER IS DISTRIBUTED. IN THE EVENT OF A CONFLICT BETWEEN REFERENCED CODES, STANDARDS, SPECIFICATIONS AND PLANS, THE ONE ESTABLISHING THE MOST STRINGENT REQUIREMENTS SHALL BE FOLLOWED.
2. A GEOTECHNICAL HAS NOT BEEN PREPARED FOR THE PROJECT SITE. THE DATA ON SUB-SURFACE SOIL CONDITIONS IS NOT INTENDED AS A REPRESENTATION OR WARRANTY OF THE CONTINUITY OF SUCH CONDITIONS BETWEEN BORINGS OR INDICATED SAMPLING LOCATIONS. IT SHALL BE EXPRESSLY UNDERSTOOD THAT OWNER WILL NOT BE RESPONSIBLE FOR ANY INTERPRETATIONS OR CONCLUSIONS DRAWN THERE FROM BY THE CONTRACTOR. DATA IS MADE AVAILABLE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ANY ADDITIONAL SOILS INVESTIGATIONS THEY FEEL IS NECESSARY FOR THE PROPER EVALUATION OF THE SITE FOR PURPOSES OF PLANNING, BIDDING, OR CONSTRUCTING THE PROJECT AT NO ADDITIONAL COST TO THE OWNER.	10. THE CONTRACTOR SHALL, AT ITS OWN EXPENSE, OBTAIN ALL NECESSARY PERMITS AND LICENSES TO COMPLETE THE PROJECT. OBTAINING PERMITS, OR DELAYS, IS NOT CAUSE FOR DELAY OF THE CONTRACT OR SCHEDULE. CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS.
3. THE CONTRACTOR IS RESPONSIBLE TO REVIEW AND UNDERSTAND ALL COMPONENTS OF THE PLANS AND SPECIFICATIONS, INCLUDING FIELD VERIFYING SOIL CONDITIONS, PRIOR TO SUBMISSION OF A BID PROPOSAL.	11. THE CONTRACTOR SHALL NOTIFY ALL INTERESTED GOVERNING AGENCIES, UTILITY COMPANIES AFFECTED BY THIS CONSTRUCTION PROJECT, AND DIGGERS HOTLINE IN ADVANCE OF CONSTRUCTION TO COMPLY WITH ALL JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., PERMIT STIPULATIONS, AND OTHER APPLICABLE STANDARDS.
4. THE CONTRACTOR SHALL PROMPTLY REPORT ANY ERRORS OR AMBIGUITIES LEARNED AS PART OF THEIR REVIEW OF PLANS, SPECIFICATIONS, REPORTS AND FIELD INVESTIGATIONS.	12. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO INITIATE, INSTITUTE, ENFORCE, MAINTAIN, AND SUPERVISE ALL SAFETY PRECAUTIONS AND JOB SITE SAFETY PROGRAMS IN CONNECTION WITH THE WORK.
5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COMPUTATION OF QUANTITIES AND WORK REQUIRED TO COMPLETE THIS PROJECT. THE CONTRACTOR'S BID SHALL BE BASED ON ITS OWN COMPUTATIONS AND IN NO SUCH INSTANCE RELY ON THE ENGINEER'S ESTIMATE.	13. CONTRACTOR SHALL KEEP THE JOBSITE CLEAN AND ORDERLY AT ALL TIMES. ALL LOCATIONS OF THE SITE SHALL BE KEPT IN A WORKING MANNER SUCH THAT DEBRIS IS REMOVED CONTINUOUSLY AND ALL RESPECTIVE CONTRACTORS OPERATE UNDER GENERAL "GOOD HOUSEKEEPING."
6. QUESTIONS/CLARIFICATIONS WILL BE INTERPRETED BY ENGINEER/OWNER PRIOR TO THE AWARD OF CONTRACT. ENGINEER/OWNER WILL SUBMIT OFFICIAL RESPONSES IN WRITING. INTERPRETATIONS PRESENTED IN OFFICIAL RESPONSES SHALL BE BINDING ON ALL PARTIES ASSOCIATED WITH THE CONTRACT. IN NO WAY SHALL WORD-OF-MOUTH DIALOG CONSTITUTE AN OFFICIAL RESPONSE.	14. THE CONTRACTOR SHALL INDEMNIFY THE OWNER, ENGINEER, AND THEIR AGENTS FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.
7. PRIOR TO START OF WORK, CONTRACTOR SHALL BE COMPLETELY FAMILIAR WITH ALL CONDITIONS OF THE SITE, AND SHALL ACCOUNT FOR CONDITIONS THAT AFFECT, OR MAY AFFECT CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, LIMITATIONS OF WORK ACCESS, SPACE LIMITATIONS, OVERHEAD OBSTRUCTIONS, TRAFFIC PATTERNS, LOCAL REQUIREMENTS, ADJACENT ACTIVITIES, ETC. FAILURE TO CONSIDER SITE CONDITIONS SHALL NOT BE CAUSE FOR CLAIM OF JOB EXTRAS.	15. DPW ENGINEERING INSPECTION REQUIRED FOR ALL WORK IN PUBLIC RIGHT-OF-WAY/ EASEMENTS. CONTACT JASON HERZOG, INSPECTION SUPERVISOR (262-787-3541), 72 HOURS PRIOR TO SCHEDULING WORK.
8. COMMENCEMENT OF CONSTRUCTION SHALL EXPLICITLY CONFIRM THAT THE CONTRACTOR HAS REVIEWED THE PLANS AND SPECIFICATIONS IN ENTIRETY AND CERTIFIES THAT THEIR SUBMITTED BID PROPOSAL CONTAINS PROVISIONS TO COMPLETE THE PROJECT, WITH THE EXCEPTION OF UNFORESEEN FIELD CONDITIONS. ALL APPLICABLE PERMITS HAVE BEEN OBTAINED, AND CONTRACTOR UNDERSTANDS ALL OF THE REQUIREMENTS OF THE PROJECT.	16. GRADING AND DRAINAGE RECORD DRAWINGS AND UTILITY ASBUILTS/ RECORDS ARE REQUIRED BY DEVELOPMENT AGREEMENT. THESE SUBMITTALS SHALL BE PREPARED PER CITY STANDARDS UPON COMPLETION OF SITE WORK FOR ENGINEERING REVIEW. PUBLIC INFRASTRUCTURE DEDICATION SHALL BE ACCEPTED BY COMMON COUNCIL PRIOR TO OCCUPANCY PERMITS.

DIGGERS HOTLINE

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PINNACLE ENGINEERING GROUP, LLC
ENGINEER'S LIMITATION

PINNACLE ENGINEERING GROUP, LLC AND THEIR CONSULTANTS DO NOT WARRANT OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE DELIVERABLES HEREIN BEYOND A REASONABLE DILIGENCE. IF ANY MISTAKES, OMISSIONS, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE DELIVERABLES, THE ENGINEER SHALL BE PROMPTLY NOTIFIED PRIOR TO BID SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH FAILURE. ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT OF THE ENGINEER, OR IN CONTRADICTION TO THE ENGINEER'S DELIVERABLES OR RECOMMENDATIONS, SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER BUT OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION.

FURTHERMORE, PINNACLE ENGINEERING GROUP, LLC IS NOT RESPONSIBLE FOR CONSTRUCTION SAFETY OR THE MEANS AND METHODS OF CONSTRUCTION.

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PINNACLE ENGINEERING GROUP
ENGINEERING | NATURAL RESOURCES | SURVEYING

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(262) 754-8888
CHICAGO | MILWAUKEE | NATIONWIDE

BOBCAT SOMERS

122ND AVE & WEST FRONTAGE ROAD

COVER SHEET

REVISIONS		SHEET
NO.	DATE	
		C-1
		C-13

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GENERAL SPECIFICATIONS FOR CONSTRUCTION ACTIVITIES

- THE PROPOSED IMPROVEMENTS SHALL BE CONSTRUCTED ACCORDING TO THE WISCONSIN D.O.T. STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION, THE STANDARD SPECIFICATIONS FOR SEWER & WATER IN WISCONSIN, AND WISCONSIN ADMINISTRATIVE CODE, SPS 360, 382-383, AND THE LOCAL ORDINANCES AND SPECIFICATIONS.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR EXECUTION OF THE WORK. THE CONTRACTOR SHALL CONDUCT THEIR WORK ACCORDING TO THE REQUIREMENTS OF THE PERMITS.
- THE CONTRACTOR SHALL NOTIFY THE OWNER AND THE MUNICIPALITY FORTY-EIGHT (48) HOURS PRIOR TO THE START OF CONSTRUCTION.
- THE MUNICIPALITY SHALL HAVE THE RIGHT TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION OF THE PUBLIC PORTIONS OF THE WORK. THE OWNER SHALL HAVE THE RIGHT TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION OF ALL PRIVATE PORTIONS OF THE WORK.
- THE CONTRACTOR SHALL INDEMNIFY THE OWNER, THE ENGINEER, AND THE MUNICIPALITY, THEIR AGENTS, ETC. FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.
- SITE SAFETY SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL UTILITY INFORMATION SHOWN ON THE PLANS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CALL DIGGERS' HOTLINE AT 1-800-242-8511 TO NOTIFY THE UTILITIES OF HIS INTENTIONS, AND TO REQUEST FIELD STAKING OF EXISTING UTILITIES.
- SILT FENCE AND OTHER EROSION CONTROL FACILITIES MUST BE INSTALLED PRIOR TO CONSTRUCTION OR ANY OTHER LAND DISTURBING ACTIVITY. FOLLOW THE SEQUENCE OF CONSTRUCTION ON THE GRADING & EROSION CONTROL PLAN FOR MORE DETAILS. INSPECTIONS SHALL BE MADE WEEKLY OR AFTER EVERY RAINFALL OF 0.5" OR MORE. REPAIRS SHALL BE MADE IMMEDIATELY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EROSION CONTROL FACILITIES ONCE THE THREAT OF EROSION HAS PASSED WITH THE APPROVAL OF THE GOVERNING AGENCY.
- ANY ADJACENT PROPERTIES OR ROAD RIGHT-OF-WAYS WHICH ARE DAMAGED DURING CONSTRUCTION MUST BE RESTORED BY THE CONTRACTOR.
- TRASH AND DEBRIS SHALL BE NOT BE ALLOWED TO ACCUMULATE ON THIS SITE AND THE SITE SHALL BE CLEAN UPON COMPLETION OF WORK.
- THE OWNER SHALL HAVE THE RIGHT TO HAVE ALL MATERIALS USED IN CONSTRUCTION TESTED FOR COMPLIANCE WITH THESE SPECIFICATIONS.
- SPOT ELEVATIONS REPRESENT THE GRADE ON PAVEMENT SURFACE OR FLOW LINE UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER/OWNER IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION.
- WORK WITHIN ANY ROADWAY RIGHT-OF-WAY SHALL BE COORDINATED WITH THE APPROPRIATE MUNICIPAL OFFICIAL PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FEES. GRADING WITHIN RIGHT-OF-WAY IS SUBJECT TO APPROVAL BY SAID OFFICIALS. RESTORATION OF RIGHT-OF-WAY IS CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE COST OF GRADING. RESTORATION SHALL INCLUDE ALL ITEMS NECESSARY TO RESTORE RIGHT-OF-WAY IN-KIND INCLUDING LANDSCAPING.
- CONTRACTOR SHALL COMPLY WITH ALL VILLAGE OF SOMERS CONSTRUCTION STANDARDS/ORDINANCES.
- LANDSCAPE AND TURF AREAS SHALL HAVE A MINIMUM OF 4-INCH TOPSOIL REPLACEMENT.

SPECIFICATIONS FOR GRADING & EROSION CONTROL

- THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE COMPUTATIONS OF ALL GRADING AND FOR ACTUAL LAND BALANCE, INCLUDING UTILITY TRENCH SPOIL. THE CONTRACTOR SHALL IMPORT OR EXPORT MATERIAL AS NECESSARY TO COMPLETE THE PROJECT. CONTRACTOR SHALL NOTIFY OWNER OF THE NEED TO IMPORT OR Haul OFF SOIL. ON-SITE LOCATIONS SUITABLE FOR BORROW OR FILL MAY BE PRESENT. COORDINATE WITH OWNER.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING SOIL CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. A GEOTECHNICAL REPORT MAY BE AVAILABLE FROM THE OWNER.
- SITE SHALL BE CLEARED TO THE LIMITS SHOWN ON THE PLANS. REMOVE VEGETATION FROM THE SITE. BURNING IS NOT PERMITTED. PROTECT TREES AND OTHER FEATURES FROM DAMAGE WITH FENCING. STOCKPILES SHALL NOT BE LOCATED CLOSER THAN 25' TO A DRAINAGE STRUCTURE OR FEATURE AND SHALL BE SURROUNDED WITH SILT FENCE.
- THE GEOTECHNICAL ENGINEER IS RESPONSIBLE FOR VERIFYING COMPACTION AND FILL PLACEMENT IN THE FIELD. THE GEOTECHNICAL ENGINEER MAY SUPERCEDE THESE SPECIFICATIONS IF THERE IS GOOD CAUSE TO DO SO. AN EXPLANATION MUST BE SUBMITTED TO THE ENGINEER IN WRITING BEFORE ANY DEVIATIONS ARE MADE.
- IF NO GEOTECHNICAL RECOMMENDATION IS AVAILABLE, THEN THE FOLLOWING SPECIFICATIONS SHALL APPLY. ALL FILL SHALL BE CONSIDERED STRUCTURAL FILL AND SHALL BE PLACED IN ACCORDANCE WITH THE FOLLOWING: THE COMPACTED FILL SUBGRADE SHALL CONSIST OF AND SHALL BE UNDERLAIN BY SUITABLE BEARING MATERIALS, FREE OF ALL ORGANIC, FROZEN OR OTHER DELETERIOUS MATERIAL AND INSPECTED AND APPROVED BY THE RESIDENT GEOTECHNICAL ENGINEER. PREPARATION OF THE SUBGRADE, AFTER STRIPPING, SHALL CONSIST OF PROOF-ROLLING TO DETECT UNSTABLE AREAS THAT MIGHT BE UNDERCUT, AND COMPACTING THE SCARIFIED SURFACE TO THE SAME MINIMUM DENSITY INDICATED BELOW. THE COMPACTED FILL MATERIALS SHALL BE FREE OF ANY DELETERIOUS, ORGANIC OR FROZEN MATTER AND SHALL HAVE A MAXIMUM LIQUID LIMIT (ASTM-D-423) AND PLASTICITY INDEX (ASTM D-424) IF 30 AND 10 RESPECTIVELY, UNLESS SPECIFICALLY TESTED AND FOUND TO HAVE LOW EXPANSIVE PROPERTIES AND APPROVED BY AN EXPERIENCED SOILS ENGINEER. THE TOP TWELVE (12") INCHES OF COMPACTED FILL SHOULD HAVE A MAXIMUM THREE (3") INCH PARTICLE DIAMETER AND ALL UNDERLYING COMPACTED FILL A MAXIMUM SIX (6") INCH PARTICLE DIAMETER UNLESS SPECIFICALLY APPROVED BY AN EXPERIENCED SOILS ENGINEER. ALL FILL MATERIAL MUST BE TESTED AND APPROVED UNDER THE DIRECTION AND SUPERVISION OF AN EXPERIENCED SOILS ENGINEER PRIOR TO PLACEMENT. IF THE FILL IS TO PROVIDE NON-FROST SUSCEPTIBLE CHARACTERISTICS, IT MUST BE CLASSIFIED AS A CLEAN GW, GP, SW, OR SP PER UNITED SOIL CLASSIFICATION SYSTEM (ASTM D-2487). FOR STRUCTURAL FILL, THE DENSITY OF THE STRUCTURAL COMPACTED FILL AND SCARIFIED SUBGRADE AND GRADES SHALL NOT BE LESS THAN 95 PERCENT OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR (ASTM D-698) WITH THE EXCEPTION TO THE TOP 12 INCHES OF PAVEMENT SUBGRADE WHICH SHALL A MINIMUM IN-SITU DENSITY OF 100 PERCENT OF THE MAXIMUM DRY DENSITY, OR 5 PERCENT HIGHER THAN UNDERLYING FILL MATERIALS. THE MOISTURE CONTENT OF COHESIVE SOIL SHALL NOT VARY BY MORE THAN -1 TO +3 PERCENT AND GRANULAR SOIL ±5 PERCENT OF OPTIMUM WHEN PLACED AND COMPACTED OR RECOMPACTED, UNLESS SPECIFICALLY APPROVED BY THE SOILS ENGINEER TAKING INTO CONSIDERATION THE TYPE OF MATERIALS AND COMPACTION EQUIPMENT BEING USED. THE COMPACTION EQUIPMENT SHOULD CONSIST OF SUITABLE MECHANICAL EQUIPMENT SPECIFICALLY DESIGNED FOR SOIL COMPACTION. BULLDOZERS OR SIMILAR TRACKED VEHICLES ARE TYPICALLY NOT SUITABLE FOR COMPACTION. MATERIAL THAT IS TOO WET TO PERMIT PROPER COMPACTION MAY BE SPREAD ON THE FILL AND PERMITTED TO DRY. DISCS, HARROWING OR PULVERIZING MAY BE NECESSARY TO REDUCE THE MOISTURE CONTENT TO A SATISFACTORY VALUE. AFTER WHICH IT SHALL BE COMPACTED. THE FINISHED SUBGRADE AREAS OF THE SITE SHALL BE COMPACTED TO 100 PERCENT OF THE STANDARD PROCTOR (ASTM D-398) MAXIMUM DENSITY.
- NO FILL SHALL BE PLACED ON A WET OR SOFT SUBGRADE. THE SUBGRADE SHALL BE PROOF-ROLLED AND INSPECTED BY THE GEOTECHNICAL ENGINEER BEFORE ANY MATERIAL IS PLACED.
- SUBGRADE TOLERANCES ARE ±1" FOR LANDSCAPE AREAS AND ±1/2" FOR ALL PAVEMENT AND BUILDING AREAS.
- TOPSOIL SHALL BE FREE OF DELETERIOUS MATERIALS, ROOTS, OLD VEGETATION, ROCKS OVER 2' DIAMETER AND SHALL NOT BE EXCESSIVELY CLAYEY IN NATURE. NO CLUMPS LARGER THAN 4" ARE ACCEPTABLE. TOPSOIL MAY BE AMENDED AS NEEDED WITH SAND OR COMPOST TO BE LOOSE WHEN SPREAD.
- THE CONTRACTOR SHALL MAINTAIN SITE DRAINAGE THROUGHOUT CONSTRUCTION. THIS MAY INCLUDE THE EXCAVATION OF TEMPORARY DITCHES OR PUMPING TO ALLEVIATE WATER PONDING. ANY DEWATERING SHALL NOT GO DIRECTLY TO STREAMS, CREEKS, WETLANDS OR OTHER ENVIRONMENTALLY SENSITIVE AREAS WITHOUT BEING TREATED FIRST. A DIRT BAG OR OTHER DEWATERING TREATMENT DEVICE MAY BE USED TO CAPTURE SEDIMENT FROM THE PUMPED WATER.
- CONTRACTOR IS ADVISED THAT ALL MUD AND DEBRIS MUST NOT BE DEPOSITED ONTO THE ADJACENT ROADWAYS PER THE REQUIREMENT OF THE MUNICIPALITY OR OTHER APPROPRIATE GOVERNMENT AGENCIES. IN THE EVENT THIS OCCURS, THE ROADWAYS SHALL BE POWER SWEEP IMMEDIATELY AND ALL SEDIMENT REMOVED FROM DOWNSTREAM FACILITIES.

SPECIFICATIONS FOR PRIVATE UTILITIES

- BEFORE PROCEEDING WITH ANY UTILITY CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE EACH EXISTING LATERAL OR POINT OF CONNECTION AND VERIFY THE LOCATION AND ELEVATION OF ALL UTILITIES. IF ANY EXISTING UTILITIES ARE NOT AS SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY FOR POSSIBLE REDESIGN.
- ALL CONNECTIONS TO EXISTING PIPES AND MANHOLES SHALL BE CORED CONNECTIONS. CONNECTIONS TO WATERMAIN SHALL BE WET TAPED WITH A STAINLESS STEEP TAPPING SLEEVE.
- PROPOSED SANITARY SEWER AND INTERNALLY CONNECTED STORM SEWER SHOWN ON THIS PLAN SHALL TERMINATE AT A POINT FIVE (5) FEET FROM THE EXTERIOR BUILDING WALL. THE EXACT LOCATION OF ALL DOWN SPOUTS CONNECTIONS SHALL BE PER THE ARCHITECTURAL PLANS.
- CONTRACTOR SHALL NOT SHUT OFF WATER OR PLUG SANITARY SEWER IN MUNICIPAL LINES WITHOUT PRIOR APPROVAL.
- MATERIALS FOR STORM SEWER SHALL BE AS FOLLOWS: STORM SEWER PIPE 48" OR LESS SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) CORRUGATED PIPE WITH AN INTEGRALLY FORMED SMOOTH WATERWAY SUCH AS ADS N-12. FOR PIPE 10" OR LESS IN DIAMETER, PVC, ASTM D-3034, SDR-26, MAY ALSO BE USED, WHERE SPECIFICALLY REQUIRED, REINFORCED CONCRETE PIPE (RCP), ASTM C-76, CLASS II OR HIGHER, MAY BE USED. TRENCH SECTION SHALL BE CLASS "B" FOR PVC AND HDPE AND CLASS "C" FOR CONCRETE (PER STANDARD SPECIFICATIONS). MANHOLES, INLETS AND CATCH BASINS SHALL BE PRE CAST REINFORCED CONCRETE, ASTM C-478. CASTINGS SHALL BE HEAVY DUTY CAST IRON. AREA DRAINS SHALL BE PER DETAIL ON PLAN OR EQUIVALENT AND SHALL BE A MINIMUM OF 24" IN DIAMETER. CONNECTIONS TO EXISTING PIPES SHALL BE MADE WITH INSERTA WYE OR EQUIVALENT. LAST (3) THREE JOINTS SHALL BE RESTRAINED WITH RODS.
- MATERIALS FOR SANITARY SEWER SHALL BE AS FOLLOWS: SANITARY SEWER SHALL BE PVC, ASTM D-3034, SDR-35 WITH RUBBER GASKETED JOINTS, CONFORMING TO ASTM D-3212. TRENCH SECTIONS SHALL BE CLASS "B" BEDDING (PER STANDARD SPECIFICATIONS). CRUSHED STONE CHIPS SHALL BE USED FOR BEDDING MATERIAL. CONNECTIONS SHALL BE MADE WITH A INSERTA WYE OR EQUIVALENT. A MINIMUM OF 6" OF COVER IS REQUIRED FOR ALL SANITARY SEWER.
- MATERIALS FOR WATER SERVICES AND PRIVATE HYDRANTS SHALL BE AS FOLLOWS: WATER SERVICES SHALL BE PVC, HDPE, OR DI AS ALLOWED BY MUNICIPAL CODE. PVC SHALL BE AWWA C-900. DI SHALL BE AWWA C151, CLASS S2 (OR AS REQUIRED BY LOCAL CODE). TRENCH SECTIONS SHALL BE CLASS "B" BEDDING (PER STANDARD SPECIFICATIONS). CRUSHED STONE CHIPS SHALL BE USED FOR BEDDING MATERIAL. CONNECTION SHALL BE MADE WITH A WET TAP, CORPORATE STOP AND VALVE BOX PER MUNICIPAL STANDARDS. A MINIMUM OF 6" COVER IS REQUIRED FOR ALL WATERMAIN. VALVES SHALL BE NONRISING STEM, RESILIENT SEATED GATE VALVES COMPLYING WITH AWWA C509 WITH A THREE PIECE CAST IRON VALVE BOX. INSTALL THRUST BLOCKS AT ALL BENDS AND TEES. DISINFECT ALL NEW LINES AND OBTAIN SAFE WATER SAMPLE PRIOR TO USE.
- EXTREME CAUTION MUST BE FOLLOWED REGARDING THE COMPACTION OF ALL UTILITY TRENCHES. MECHANICALLY COMPACTED GRANULAR BACKFILL IS REQUIRED UNDER & WITHIN 5 FEET OF ALL PAVEMENT INCLUDING SIDEWALKS. FLOODING OF BACKFILL MATERIAL IS NOT ALLOWED.
- TRACER WIRE (NO. 12 SINGLE STRAND COPPER) AND WARNINGS TAPE SHALL BE INSTALLED ON ALL UTILITIES IN ACCORDANCE WITH THE LOCAL AND STATE CODES. TRACER WIRE SHALL TERMINATE IN A VALVE CO TERMINAL BOX AT EACH END.
- MANDREL TESTING ON SANITARY LINES AND PRESSURE TESTING ON WATERMAIN MAY BE REQUIRED BY THE OWNER OR MUNICIPALITY.
- UPON COMPLETION OF FINAL PAVING OPERATIONS, THE UTILITY CONTRACTOR SHALL ADJUST ALL MANHOLE AND INLET RIMS AND VALVE BOXES TO FINISHED GRADE.
- 45° BENDS SHALL BE USED IN PLACE OF 90° BENDS WHEREVER POSSIBLE

SPECIFICATIONS FOR PAVING

- ALL DIMENSIONS ARE TO FACE OF CURB OR FACE OF BUILDING UNLESS NOTED OTHERWISE. ALL UTILITY DIMENSIONS ARE TO OUTSIDE OF PIPE OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED. ALL PAVING DIMENSIONS ARE TO FACE OF CURB OR TO EDGE OF PAVEMENT, EXCEPT FOR THE SETBACK FROM PARKING LOTS, MANUEVERING LANES AND FIRE ACCESS LANES, WHERE THE SETBACK IS MEASURED FROM THE BACK OF CURB TO THE PROPERTY LINE.
- AGGREGATES USED IN THE CRUSHED STONE BASE SHALL CONFORM TO THE GRADATION REQUIREMENTS SECTIONS 301.2 AND 305.2.2 OF THE STANDARD SPECIFICATIONS. THICKNESS SHALL BE PER THE DETAIL ON THE PLANS. BASE SHALL BE 1 1/2 INCH DIAMETER LIMESTONE UNLESS NOTED OTHERWISE. RECYCLED MATERIALS MAY BE ALLOWED WITH APPROVAL FROM THE OWNER.
- SUBGRADE SHALL BE PROOFROLLED AND APPROVED BY A GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF STONE BASE. EXCAVATE UNSUITABLE AREAS AND REPLACE WITH BREAKER RUN STONE AND RECOMPACT. REFER TO THE GEOTECHNICAL REPORT FOR ADDITIONAL SPECIFICATIONS.
- EXISTING PAVEMENT SHALL BE SAWCUT IN NEAT STRAIGHT LINES TO FULL DEPTH AT ANY POINT WHERE EXISTING PAVEMENT IS REMOVED. CURB AND WALK SHALL BE REMOVED TO THE NEAREST JOINT. REMOVED PAVEMENT SHALL BE REPLACED WITH THE SAME SECTION AS EXISTING. MUNICIPAL STANDARDS MAY REQUIRE ADDITIONAL WORK.
- ASPHALT FOR PARKING AREAS AND THE PRIVATE ROAD SHALL BE PER THE DETAIL. MATERIALS AND PLACEMENT SHALL CONFORM TO THE BEST STANDARD SPECIFICATIONS. SECTION 4A0 AND 4B0 TYPE LT IS REQUIRED UNLESS NOTED OTHERWISE. A COMMERCIAL GRADE MIX MAY BE SUBSTITUTED ONLY WITH APPROVAL FROM THE OWNER.
- CONCRETE FOR CURB, DRIVEWAY, WALKS AND NON-FLOOR SLABS SHALL CONFORM TO THE SECTION 415 OF THE STANDARD SPECIFICATIONS. GRADE A, ASTM C-94, 6 BAG MIX, WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI. JOINTING SHALL BE PER SECTION 415.3.7 OF THE STANDARD SPECIFICATION WITH CONSTRUCTION JOINTS HAVING A MAXIMUM SPACING OF 10'. EXPANSION JOINTS SHALL BE PROVIDED EVERY 50'. CONCRETE SHALL BE FINISHED PER SECTION 415.3.8 WITH A MEDIUM BROOM TEXTURE. A CURING MEMBRANE IN CONFORMANCE WITH SECTION 415.3.12 IS REQUIRED.
- PROVIDE CONTRACTOR GRADE ACRYLIC, STRIPING PAINT FOR NEW ASPHALT OR COATED ASPHALT. APPLY MARKING PAINT AT A RATE OF ONE (1) GALLON PER THREE TO FOUR HUNDRED (300-400) LINEAL FEET OF FOUR (4) INCH WIDE STRIPES OR TO MANUFACTURER'S SPECIFICATION, WHICHEVER IS GREATER.
- THOROUGHLY CLEAN SURFACES FREE OF DIRT, SAND, GRAVEL, OIL AND OTHER FOREIGN MATTER. CONTRACTOR RESPONSIBLE TO INSPECT EXISTING PAVEMENT SURFACES FOR CONDITIONS AND DEFECTS THAT WILL ADVERSELY AFFECT QUALITY OF WORK, AND WHICH CANNOT BE PUT INTO AN ACCEPTABLE CONDITION THROUGH NORMAL PREPARATORY WORK AS SPECIFIED.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- ALL CONSTRUCTION SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN EPA'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER GENERAL PERMIT FOR CONSTRUCTION SITE LAND DISTURBANCE ACTIVITIES. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL TECHNICAL STANDARDS AND PROVISIONS IN EFFECT AT THE TIME OF CONSTRUCTION. THESE PROCEDURES AND STANDARDS SHALL BE REFERRED TO AS BEST MANAGEMENT PRACTICES (BMP'S). IT IS THE RESPONSIBILITY OF ALL CONTRACTORS ASSOCIATED WITH THE PROJECT TO OBTAIN A COPY OF, AND UNDERSTAND, THE BMP'S PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.
- THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL CONTROL MEASURES AS DIRECTED BY OWNER/ENGINEER OR GOVERNING AGENCIES SHALL BE INSTALLED WITHIN 24 HOURS OF REQUEST.
- MODIFICATIONS TO THE APPROVED SWPPP IN ORDER TO MEET UNFORESEEN FIELD CONDITIONS ARE ALLOWED IF MODIFICATIONS CONFORM TO BMP'S. ALL MODIFICATIONS MUST BE APPROVED BY OWNER/ENGINEER/GOVERNING AGENCY PRIOR TO DEVIATION OF THE APPROVED PLAN.
- INSTALL PERIMETER EROSION CONTROL MEASURES (SUCH AS CONSTRUCTION ENTRANCES, SILT FENCE AND EXISTING INLET PROTECTION) PRIOR TO ANY SITE WORK, INCLUDING GRADING OR DISTURBANCE OF EXISTING SURFACE COVER, AS SHOWN ON PLAN IN ORDER TO PROTECT ADJACENT PROPERTIES/STORM SEWER SYSTEMS FROM SEDIMENT TRANSPORT.
- CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL LOCATIONS OF VEHICLE INGRESS/EGRESS POINTS. CONTRACTOR IS RESPONSIBLE TO COORDINATE LOCATION(S) WITH THE PROPER AUTHORITIES, PROVIDE NECESSARY FEES AND OBTAIN ALL REQUIRED APPROVALS OR PERMITS. ADDITIONAL CONSTRUCTION ENTRANCES OTHER THAN AS SHOWN ON THE PLANS MUST BE APPROVED BY THE APPLICABLE GOVERNING AGENCIES PRIOR TO INSTALLATION.
- PAVED SURFACES ADJACENT TO CONSTRUCTION ENTRANCES SHALL BE SWEEP AND/OR SCRAPED TO REMOVE ACCUMULATED SOIL, DIRT AND/OR DUST IMMEDIATELY AND AS REQUESTED BY THE GOVERNING AGENCIES.
- ALL EXISTING STORM SEWER FACILITIES THAT WILL COLLECT RUNOFF FROM DISTURBED AREAS SHALL BE PROTECTED TO TO PREVENT SEDIMENT DEPOSITION WITHIN STORM SEWER SYSTEMS. INLET PROTECTION SHALL BE IMMEDIATELY FITTED AT THE INLET OF ALL INSTALLED STORM SEWER AND SILT FENCE SHALL BE IMMEDIATELY FITTED AT ALL INSTALLED CULVERT INLETS. ALL INLETS, STRUCTURES, PIPES, AND SWALES SHALL BE KEPT CLEAN AND FREE OF SEDIMENTATION AND DEBRIS.
- EROSION CONTROL FOR UTILITY CONSTRUCTION (STORM SEWER, WATER MAIN, ETC.) OUTSIDE OF THE PERIMETER CONTROLS SHALL INCORPORATE THE FOLLOWING:

PLACE EXCAVATED TRENCH MATERIAL ON THE HIGH SIDE OF THE TRENCH.

BACKFILL, COMPACT AND STABILIZE THE TRENCH IMMEDIATELY AFTER PIPE CONSTRUCTION.

DISCHARGE TRENCH WATER INTO A SEDIMENTATION BASIN OR FILTERING TANK IN ACCORDANCE WITH BMP'S PRIOR TO RELEASE INTO STORM SEWER OR DITCHES.

- AT A MINIMUM, SEDIMENT BASINS AND NECESSARY TEMPORARY DRAINAGE PROVISIONS SHALL BE CONSTRUCTED AND OPERATIONAL BEFORE BEGINNING OF SIGNIFICANT MASS GRADING OPERATIONS TO PREVENT OFFSITE DISCHARGE OF UNTREATED RUNOFF.
- IF APPLICABLE, ALL WATERCOURSES AND WETLANDS SHALL BE PROTECTED WITH DOUBLE ROW OF SILT FENCE TO PREVENT ANY DIRECT DISCHARGE FROM DISTURBED SOILS.
- ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED. THE GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR INSPECTION AND REPAIR DURING CONSTRUCTION. THE OWNER WILL BE RESPONSIBLE IF EROSION CONTROL IS REQUIRED AFTER THE CONTRACTOR HAS COMPLETED THE PROJECT.
- TOPSOIL STOCKPILES SHALL HAVE A BERM OR TRENCH AROUND THE CIRCUMFERENCE AND PERIMETER SILT FENCE TO CONTROL SILT. IF TOPSOIL STOCKPILE REMAINS UNDISTURBED FOR MORE THAN SEVEN (7) DAYS, TEMPORARY SEEDING AND STABILIZATION IS REQUIRED.
- EROSION CONTROL MEASURES TEMPORARILY REMOVED FOR UNAVOIDABLE CONSTRUCTION ACTIVITIES SHALL BE IN WORKING ORDER IMMEDIATELY FOLLOWING COMPLETION OF SUCH ACTIVITIES OR PRIOR TO THE COMPLETION OF EACH WORK DAY, WHICH EVER OCCURS FIRST.
- MAINTAIN SOIL EROSION CONTROL DEVICES THROUGH THE DURATION OF THIS PROJECT. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. DISTURBANCES ASSOCIATED WITH EROSION CONTROL REMOVAL SHALL BE IMMEDIATELY STABILIZED.
- PUMPS MAY BE USED AS BYPASS DEVICES. IN NO CASE SHALL PUMPED WATER BE DIVERTED OUTSIDE THE PROJECT LIMITS. PUMP DISCHARGE SHALL BE DIRECTED INTO AN APPROVED FILTER BAG OR APPROVED SETTLING DEVICE.
- GRADING EFFORTS SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. EROSION AND SEDIMENT CONTROL MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS, AND THE USE OF TEMPORARY OR PERMANENT MEASURES. ALL DISTURBED AREAS THAT WILL NOT BE WORKED FOR A PERIOD OF FOURTEEN (14) DAYS REQUIRE TEMPORARY SEEDING FOR EROSION CONTROL. SEEDING FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH TECHNICAL STANDARDS.
- ALL DISTURBED SLOPES EXCEEDING 4:1, SHALL BE STABILIZED WITH NORTH AMERICAN GREEN S75BN EROSION MATTING (OR APPROVED EQUAL) AND ALL CHANNELS SHALL BE STABILIZED WITH NORTH AMERICAN GREEN C125BN (OR APPROVED EQUAL) OR APPLICATION OF AN APPROVED POLYMER SOIL STABILIZATION TREATMENT OR A COMBINATION THEREOF, AS REQUIRED. EROSION MATTING AND/OR NETTING USED ONSITE SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S GUIDELINES.
- DURING PERIODS OF EXTENDED DRY WEATHER, THE CONTRACTOR SHALL KEEP A WATER TRUCK ON SITE FOR THE PURPOSE OF WATERING DOWN SOILS WHICH MAY OTHERWISE BECOME AIRBORNE. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING WIND EROSION (DUST) DURING CONSTRUCTION AT HIS/HER EXPENSE.
- DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE VISUALLY INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM ON A DAILY BASIS.
- QUALIFIED PERSONNEL (PROVIDED BY THE GENERAL/PRIME CONTRACTOR) SHALL INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED AND EROSION AND SEDIMENT CONTROLS WITHIN 24 HOURS OF ALL 0.5-INCH, OR MORE, PRECIPITATION EVENTS WITH A MINIMUM INSPECTION INTERVAL OF ONCE EVERY SEVEN (7) CALENDAR DAYS IN THE ABSENCE OF A QUALIFYING RAIN OR SNOWFALL EVENT. REPORTING SHALL BE IN ACCORDANCE WITH THE GENERAL PERMIT. CONTRACTOR SHALL IMMEDIATELY ARRANGE TO HAVE ANY DEFICIENT ITEMS REVEALED DURING INSPECTIONS REPAIRED/REPLACED.
- SEE ADDITIONAL DETAILS AND NOTES ON SITE STABILIZATION AND CONSTRUCTION DETAILS.

DEMOLITION NOTES

- PERIMETER SILT FENCING AND CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO ANY DEMOLITION. PLEASE REFER TO GRADING AND EROSION AND SEDIMENT CONTROL PLAN SHEETS FOR FURTHER DETAILS.
- EXISTING FEATURES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE TYPE, LOCATION, SIZE AND ELEVATION OF UNDERGROUND UTILITIES AS THEY DEEM NECESSARY TO AVOID DAMAGE THERETO. CONTRACTOR/OWNER SHALL CALL "MISS DIG" PRIOR TO ANY DEMOLITION.
- CONTRACTOR SHALL PERFORM ALL DEMOLITION WORK IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REQUIREMENTS.
- COORDINATE WITH ALL APPLICABLE UTILITY COMPANIES AND THE MUNICIPALITY TO PROTECT EXISTING FUNCTIONING UTILITIES, BULKHEAD/REMOVE CONNECTIONS AS NECESSARY, AND TO ENSURE ALL UTILITIES ARE INACTIVE PRIOR TO ANY DEMOLITION ACTIVITIES. CONTRACTOR SHALL TAKE ADEQUATE PRECAUTIONS TO ENSURE PROTECTION OF EXISTING UTILITIES THAT ARE NOT TO BE IMPACTED. THE CONTRACTOR IS RESPONSIBLE FOR REPAIR OF ANY EXISTING UTILITIES DAMAGED AS A RESULT OF THE DEMOLITION.
- VOIDS LEFT BY REMOVAL OF FEATURES SHALL BE MODIFIED/FILLED TO PREVENT PONDING OF WATER.
- DEMOLISH AND DISPOSE EXISTING PIPING, CABLEWIRES, STRUCTURES, OR OTHER SURFACE FEATURES INDICATED ON THE PLANS TO BE REMOVED.
- CLEARING AND GRUBBING DESIGNATIONS SHALL INCLUDE CLEARING, GRUBBING, REMOVING, AND DISPOSING OF ALL VEGETATION AND DEBRIS WITHIN THE LIMITS OF CONSTRUCTION, AS DESIGNATED ON THE PLANS. CONTRACTOR SHALL REMOVE ONLY THOSE TREES ABSOLUTELY NECESSARY TO ALLOW FOR CONSTRUCTION.
- CONTRACTOR SHALL REMOVE EXISTING FENCING IN A MANNER TO ALLOW REUSE. ANY FENCING MATERIAL TO BE REUSED IN THE CONSTRUCTION OF RELOCATED FENCE LINES SHALL BE PRESENTED TO ENGINEER FOR INSPECTION AND PROPOSED CONTRACT DEDUCT ASSOCIATED WITH REUSE OF THE SALVAGED MATERIAL. ENGINEER OR OWNER WILL PROVIDE WRITTEN ACCEPTANCE OF THE PROPOSED SALVAGED MATERIAL.
- CONTRACTOR SHALL COORDINATE WITH THE MUNICIPALITY FOR TERMINATION OF PUBLIC UTILITY CONNECTIONS TO SITE.
- CONTRACTOR SHALL COORDINATE STOCKPILE LIMITS AND LOCATIONS WITH ENGINEER/OWNER PRIOR TO DEMOLITION.

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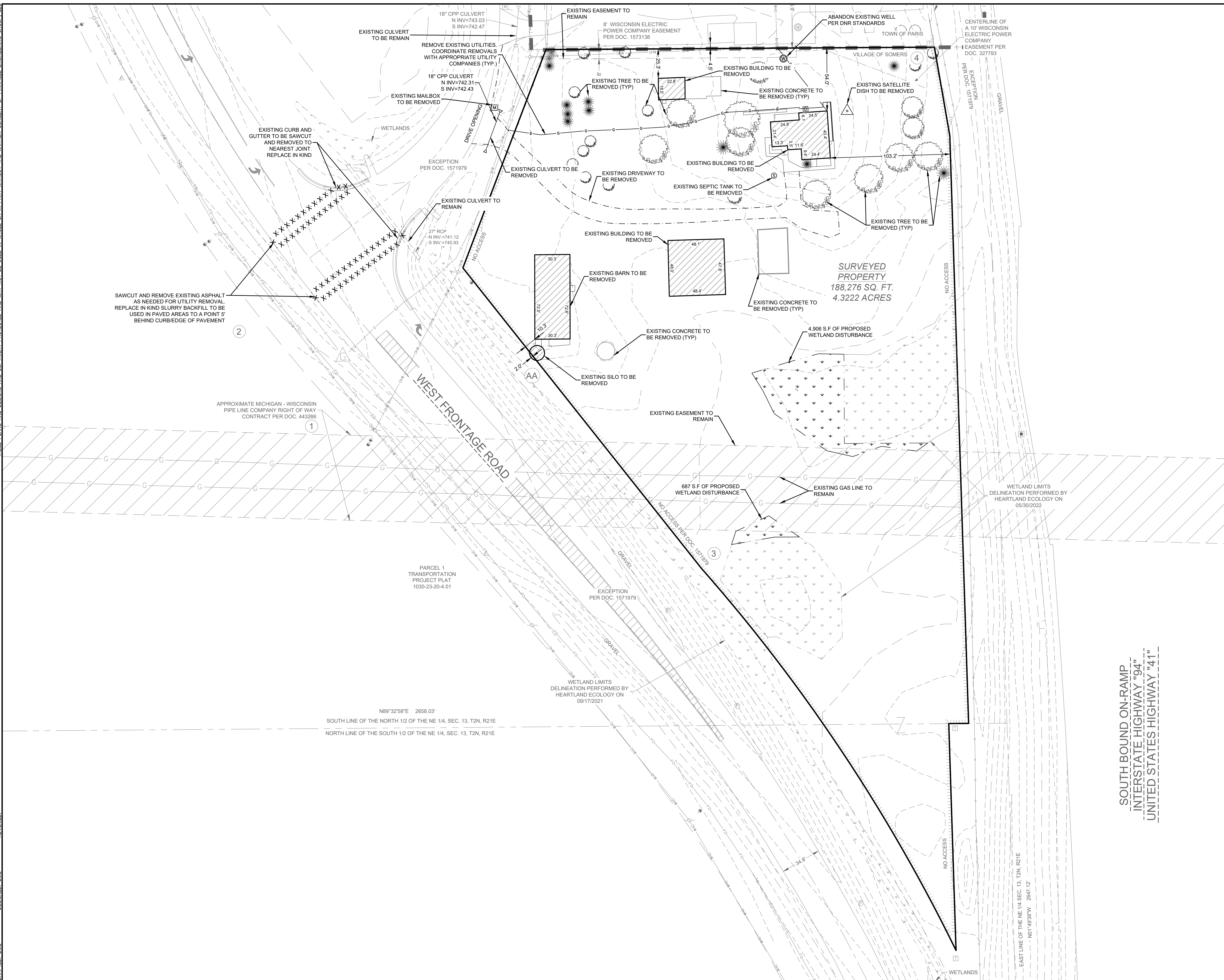
GENERAL NOTES

REVISIONS

PEC JOB No. 2402.00A	MTS	SHEET
PEC PM	DATE	C-2
START DATE 07-18-22	SCALE	C-13
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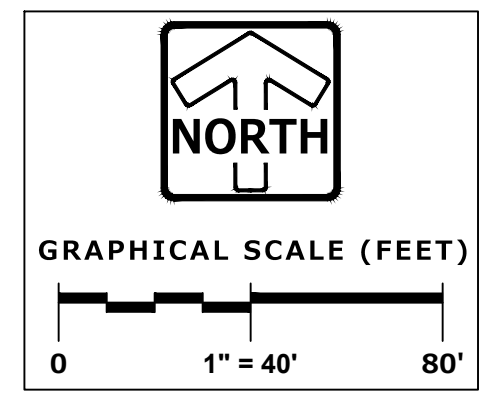


LEGEND	
SANITARY MANHOLE	STORM SEWER
STORM MANHOLE	WATER MAIN
CATCH BASIN	LIGHTING
INLET	ELECTRICAL CABLE
PRECAST FLARED END SECTION	ELECTRICAL TRANSFORMER OR PEDESTAL
CONCRETE HEADWALL	POWER POLE
VALVE VAULT	POWER POLE WITH LIGHT
VALVE BOX	GUY WIRE
FIRE HYDRANT	STREET SIGN
CLEANOUT	GAS MAIN
SANITARY SEWER	TELEPHONE LINE
FORCE MAIN	CONTOUR
CONCRETE SIDEWALK	TREE
	EASEMENT LINE

CONTRACTOR RESPONSIBILITY: SEE ADDITIONAL CONSTRUCTION NOTES LOCATED ON SHEET C-2

EXISTING CONDITIONS SURVEY:
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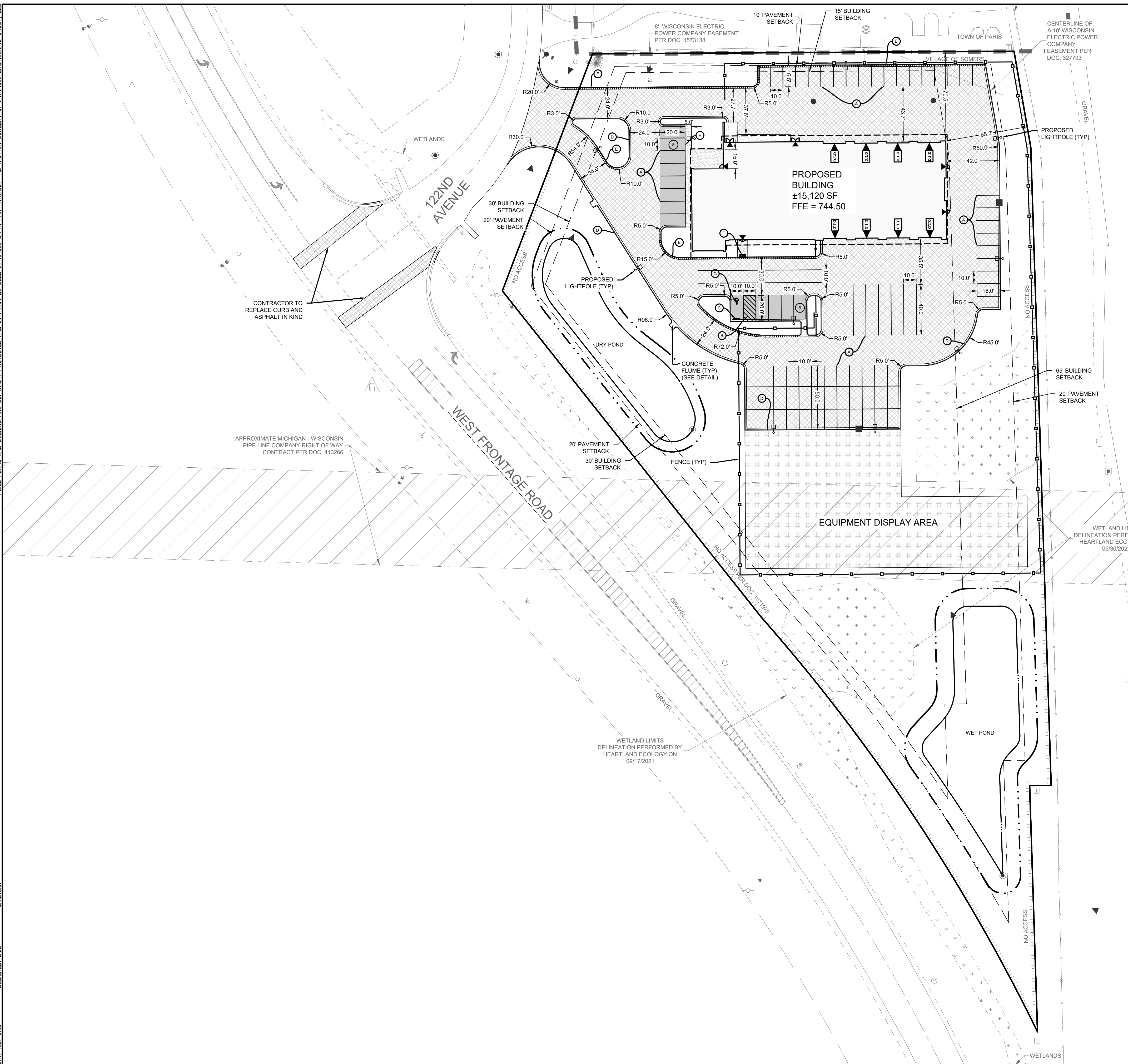
EXISTING CONDITIONS & DEMO PLAN

REVISIONS	

PEG JOB No. 2402.00A	MTS	SHEET
REG PM	START DATE 07-18-24	C-3
SCALE 1" = 40'		C-13

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SITE DATA	
TOTAL SITE AREA:	188,276 SF (4.32 AC)
DISTURBANCE AREA:	176,603 SF (4.05 AC)
BUILDING AREA:	15,120 SF (0.35 AC)
PARKING STALLS:	13 STALLS (1 ADA)
GREEN SPACE:	99,220 SF (2.28 AC)
IMPERVIOUS AREA:	89,056 SF (2.04 AC)
GREEN SPACE (%)	52.70%

LEGEND	
	LIGHT DUTY ASPHALT PAVEMENT - 6" CRUSHED AGGREGATE BASE COURSE (1-1/4" DENSE GRADED VIRGIN LIMESTONE) - 3/4" ASPHALTIC CONC. (2 LIFTS) 2" LOWER LAYER (SMT 58-28.5) 1 1/2" UPPER LAYER (SMT 58-28.5)
	HEAVY DUTY ASPHALT PAVEMENT - 12" CRUSHED AGGREGATE BASE COURSE (1-1/4" DENSE GRADED VIRGIN LIMESTONE) - 5" ASPHALTIC CONC. (2 LIFTS) 2" LOWER LAYER (SMT 58-28.5) (2 LIFTS) 2" UPPER LAYER (SMT 58-28.5)
	CONCRETE LOADING DOCK - SEE STRUCTURAL PLANS FOR DETAIL
	CONCRETE SIDEWALK - 6" CRUSHED AGGREGATE BASE COURSE (1-1/4" DENSE GRADED VIRGIN LIMESTONE) - 5" CONCRETE SIDEWALK
	ASPHALT MILLINGS
	CURB AND GUTTER
	REVERSE PITCH CURB & GUTTER
	4" WHITE STRIPE
	4" DIAGONAL AT 45° SPACED 2' O.C.
	BOLLARD MOUNTED ADA SIGN (SEE DETAIL)
	18" CURB & GUTTER (SEE DETAIL)
	18" REVERSE CURB & GUTTER (SEE DETAIL)
	ADA COMPLIANT RAMP W/ TRUNCATED DOMES (SEE DETAIL). TAPER CURB HEAD AND DEPRESS WALK/CURB
	ADA STALL INSIGNIA
	INTEGRAL CURB & GUTTER (SEE DETAIL)
	PARKING COUNT (FOR INFORMATION ONLY, NOT TO BE PAINTED)
	DRIVE IN DOOR
	MAN DOOR

EXISTING CONDITIONS SURVEY:

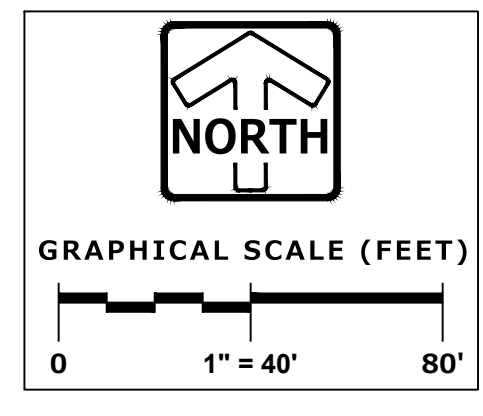
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CONTRACTOR RESPONSIBILITY:

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CONTRACTOR RESPONSIBILITY: SEE ADDITIONAL CONSTRUCTION NOTES LOCATED ON SHEET C-2

SOUTH BOUND ON-RAMP
 INTERSTATE HIGHWAY "94"
 UNITED STATES HIGHWAY "41"



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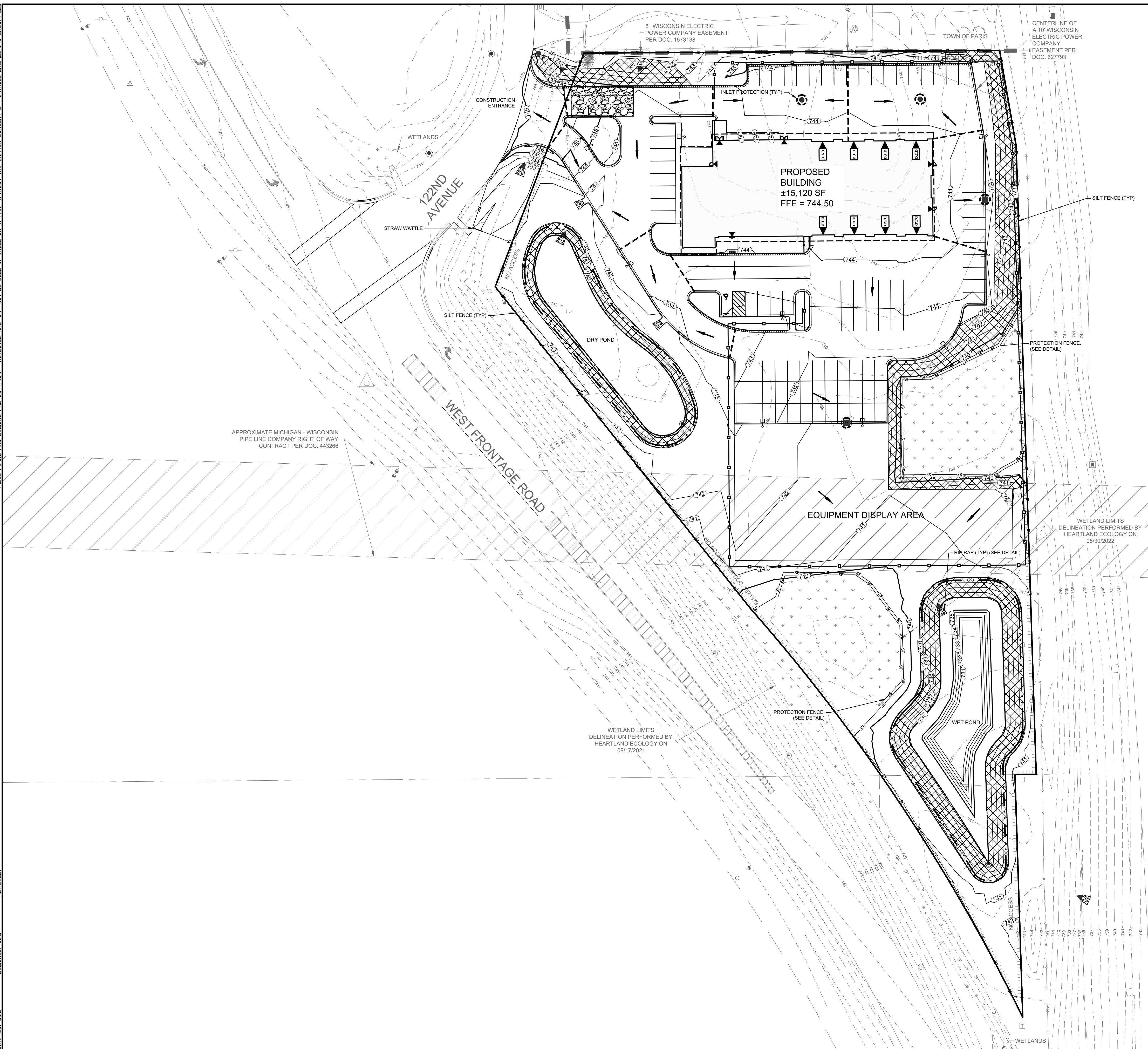
SITE DIMENSIONAL & PAVING PLAN

REVISIONS	

SHEET
C-4
 C-13
 PEG JOB No. 2402.00A
 MTS
 START DATE 07-18-22
 SCALE 1"=40'
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 SITE DIMENSIONAL & PAVING PLAN

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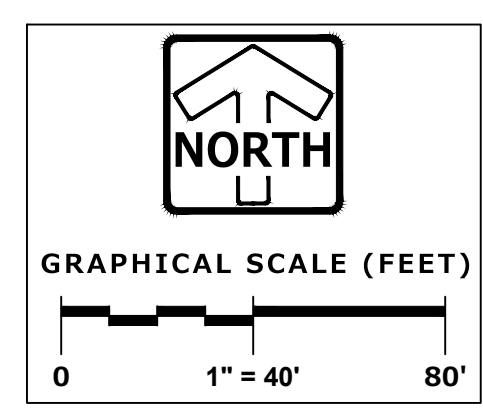
LEGEND	
	SANITARY SEWER MANHOLE
	STORM SEWER MANHOLE
	STORM CATCH BASIN (ROUND CASTING)
	STORM CATCH BASIN (RECTANGULAR CASTING)
	PRECAST FLARED END SECTION
	CLEANOUT
	VALVE BOX
	FIRE HYDRANT
	PROPOSED CONTOUR
	PROPOSED SPOT ELEVATION
	DIRECTION OF SURFACE FLOW
	OVERFLOW RELIEF ROUTING
	SILT FENCE
	WISDOT TYPE D INLET PROTECTION
	CONSTRUCTION ENTRANCE
	HYDROSEED
	TURF REINFORCED MATTING (N.A.G. C-350 OR EQUIVALENT)

- CONSTRUCTION SITE SEQCING**
1. INSTALL PERIMETER SILT FENCE, INLET PROTECTION, TEMPORARY CONSTRUCTION ENTRANCE AND ANY OTHER EROSION CONTROL MEASURES
 2. DEMOLITION AND REMOVALS OF BUILDINGS, PAVEMENTS & LANDSCAPING.
 3. STRIP AND STOCKPILE TOPSOIL. INSTALL SILT FENCE AROUND PERIMETER OF STOCKPILE.
 4. CONDUCT ROUGH GRADING EFFORTS AND INSTALL CHECK DAMS AND SEDIMENT TRAP/BASINS AS NEEDED. IF SEDIMENT BASINS (BIO RETENTION BASINS) ARE TO BE USED, BOTTOM OF BASIN SHALL BE LEFT A MINIMUM OF 1' ABOVE FINAL GRADE IN ORDER TO PRESERVE NATIVE SOIL INTERFACE. DO NOT EXCAVATE FINAL 1' UNTIL FINAL SITE STABILIZATION OCCURS.
 5. CONSTRUCTION OF FOUNDATIONS AND BUILDING.
 6. INSTALL UTILITY PIPING AND STRUCTURES. IMMEDIATELY INSTALL INLET PROTECTION.
 7. COMPLETE FINAL GRADING, INSTALLATION OF GRAVEL BASE COURSES, PLACEMENT OF CURBS, PAVEMENTS, WALKS, ETC.
 8. INSTALL TOPSOIL, AND LANDSCAPING. IMMEDIATELY STABILIZE DISTURBED AREAS WITH EROSION CONTROLS.
 9. EROSION CONTROL MEASURES SHALL BE REMOVED ONLY AFTER SITE CONSTRUCTION IS COMPLETE WITH ALL SOIL SURFACES HAVING AN ESTABLISHED VEGETATIVE COVER.
- CONTRACTOR MAY MODIFY SEQCING AFTER ITEM 1 AS NEEDED TO COMPLETE CONSTRUCTION IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS.

NOTE :
 REMAINING DISTURBED AREAS OF SLOPES 5:1 OR FLATTER TO BE HYDROSEED

CONTRACTOR RESPONSIBILITY: SEE ADDITIONAL CONSTRUCTION NOTES LOCATED ON SHEET C-2

SOUTH BOUND ON-RAMP
 INTERSTATE HIGHWAY "94"
 UNITED STATES HIGHWAY "41"



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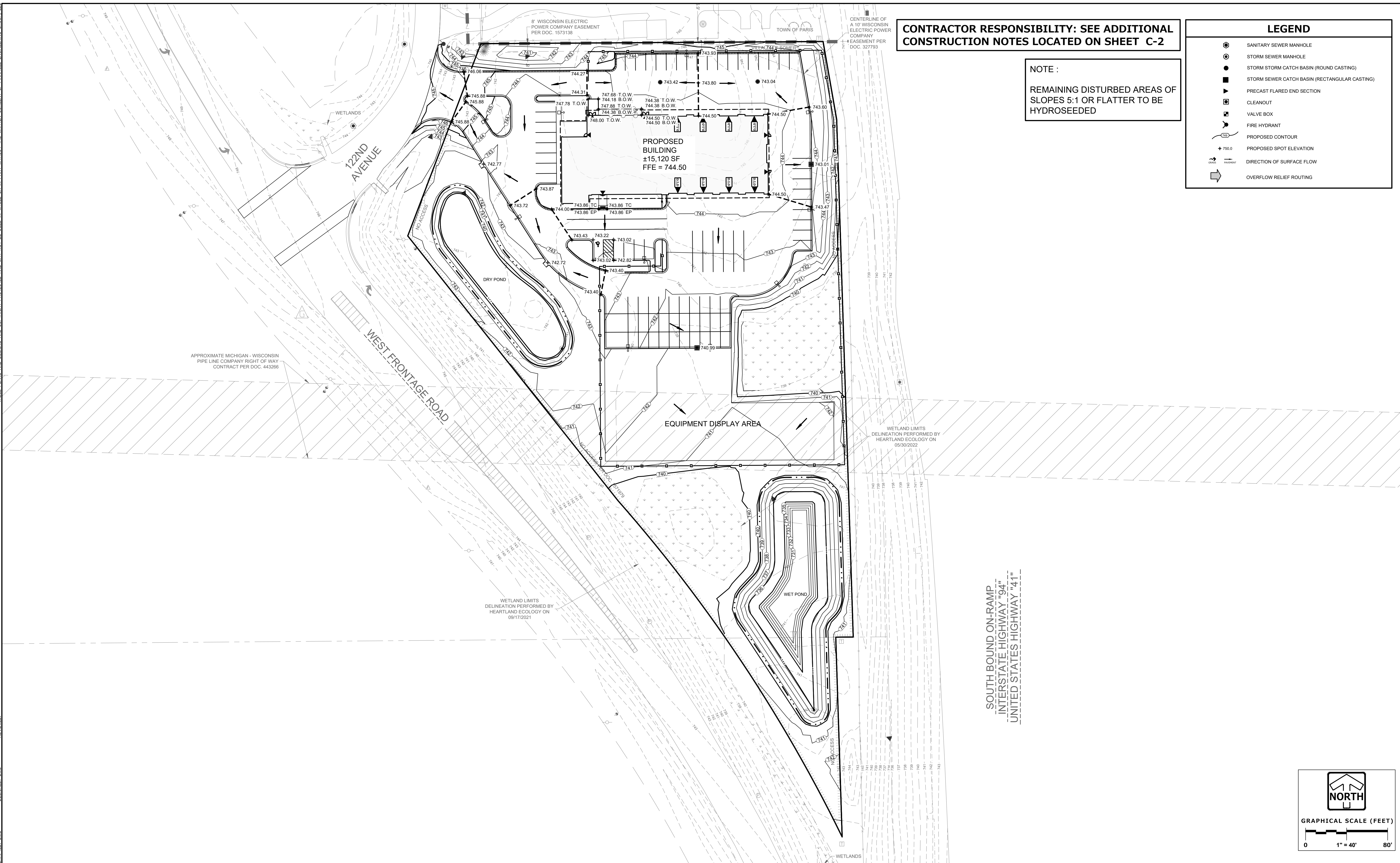
GRADING & EROSION CONTROL PLAN

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C-13
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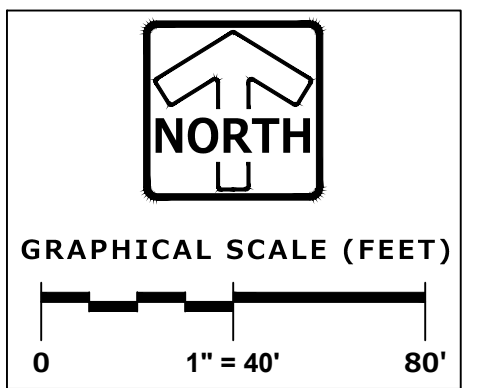
NOTE :
REMAINING DISTURBED AREAS OF SLOPES 5:1 OR FLATTER TO BE HYDROSEEDED

LEGEND	
	SANITARY SEWER MANHOLE
	STORM SEWER MANHOLE
	STORM CATCH BASIN (ROUND CASTING)
	STORM CATCH BASIN (RECTANGULAR CASTING)
	PRECAST FLARED END SECTION
	CLEANOUT
	VALVE BOX
	FIRE HYDRANT
	PROPOSED CONTOUR
	PROPOSED SPOT ELEVATION
	DIRECTION OF SURFACE FLOW
	OVERFLOW RELIEF ROUTING

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SPOT GRADE PLAN



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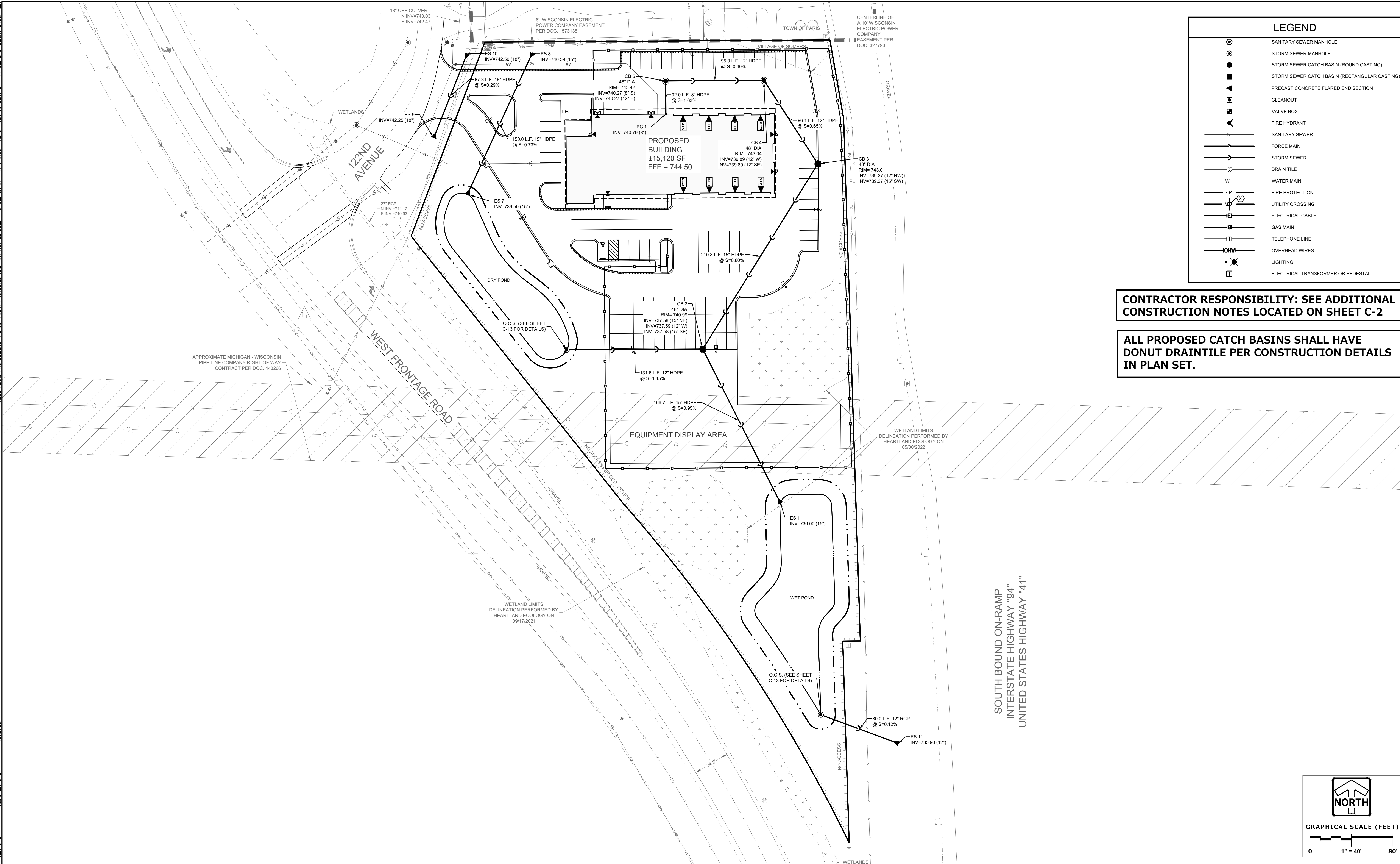
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SPOT GRADE PLAN

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REG PM	START DATE 07-18-22	C-6
SCALE 1"=40'		C-13

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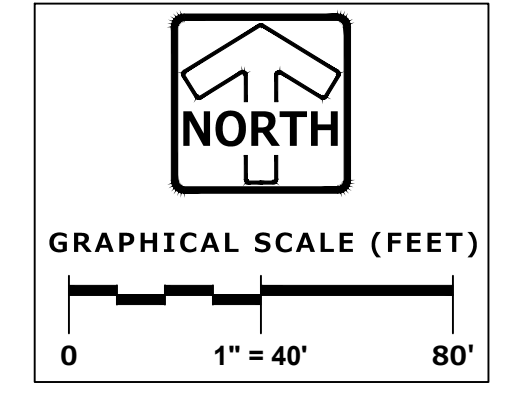


LEGEND	
	SANITARY SEWER MANHOLE
	STORM SEWER MANHOLE
	STORM SEWER CATCH BASIN (ROUND CASTING)
	STORM SEWER CATCH BASIN (RECTANGULAR CASTING)
	PRECAST CONCRETE FLARED END SECTION
	CLEANOUT
	VALVE BOX
	FIRE HYDRANT
	SANITARY SEWER
	FORCE MAIN
	STORM SEWER
	DRAIN TILE
	WATER MAIN
	FIRE PROTECTION
	UTILITY CROSSING
	ELECTRICAL CABLE
	GAS MAIN
	TELEPHONE LINE
	OVERHEAD WIRES
	LIGHTING
	ELECTRICAL TRANSFORMER OR PEDESTAL

CONTRACTOR RESPONSIBILITY: SEE ADDITIONAL CONSTRUCTION NOTES LOCATED ON SHEET C-2

ALL PROPOSED CATCH BASINS SHALL HAVE DONUT DRAINTILE PER CONSTRUCTION DETAILS IN PLAN SET.

SOUTH BOUND ON-RAMP
 INTERSTATE HIGHWAY "94"
 UNITED STATES HIGHWAY "41"



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STORM SEWER PLAN

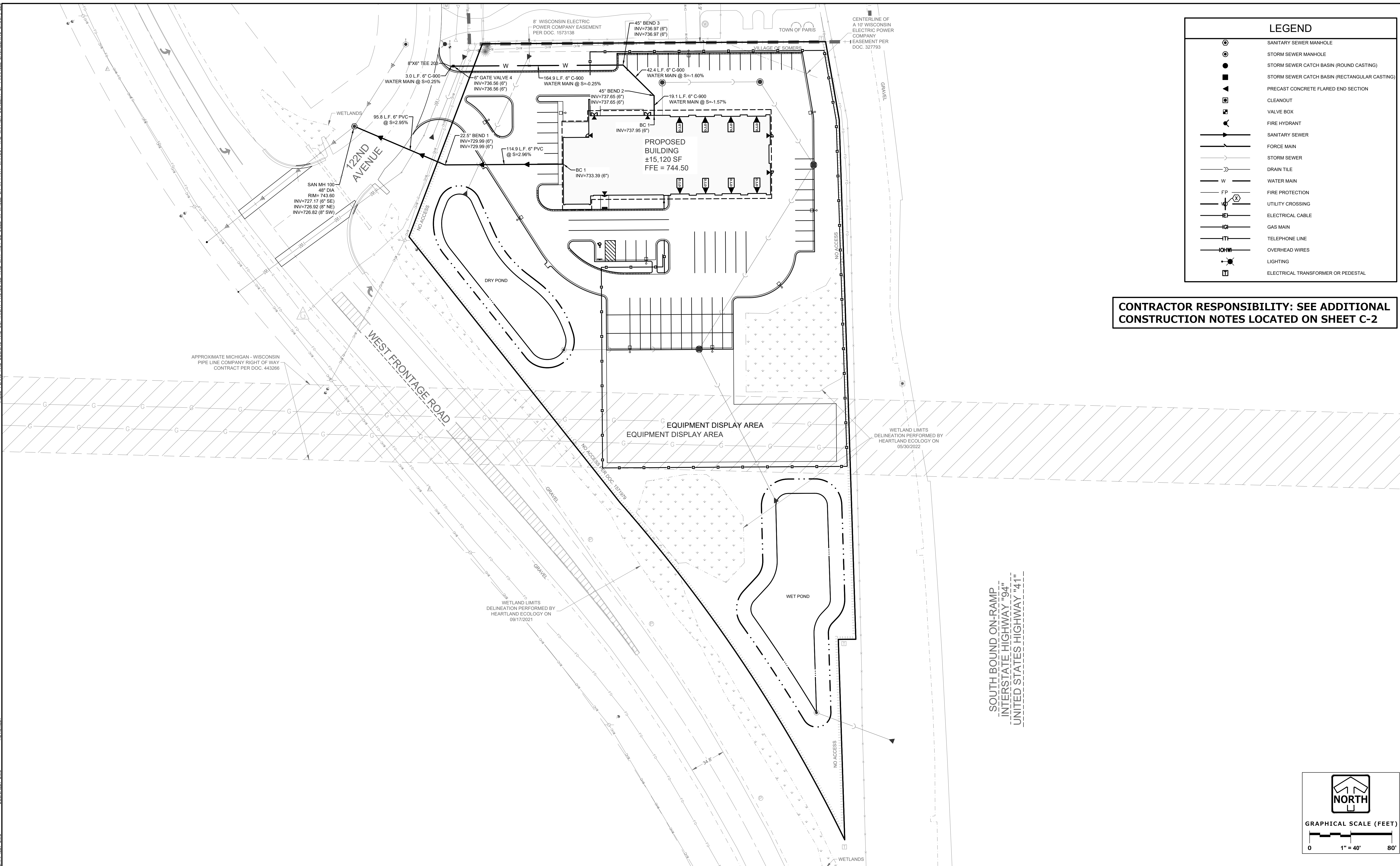
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REG JOB No. 2402.00A REG PM MTS START DATE 07-18-22 SCALE 1"=40'	SHEET C-7 C-13
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 STORM SEWER PLAN

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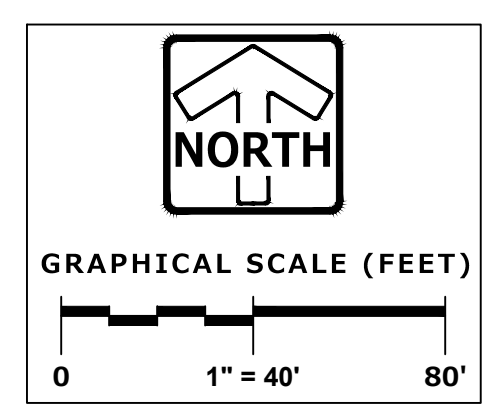
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LEGEND	
	SANITARY SEWER MANHOLE
	STORM SEWER MANHOLE
	STORM SEWER CATCH BASIN (ROUND CASTING)
	STORM SEWER CATCH BASIN (RECTANGULAR CASTING)
	PRECAST CONCRETE FLARED END SECTION
	CLEANOUT
	VALVE BOX
	FIRE HYDRANT
	SANITARY SEWER
	FORCE MAIN
	STORM SEWER
	DRAIN TILE
	WATER MAIN
	FIRE PROTECTION
	UTILITY CROSSING
	ELECTRICAL CABLE
	GAS MAIN
	TELEPHONE LINE
	OVERHEAD WIRES
	LIGHTING
	ELECTRICAL TRANSFORMER OR PEDESTAL

CONTRACTOR RESPONSIBILITY: SEE ADDITIONAL CONSTRUCTION NOTES LOCATED ON SHEET C-2

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**SANITARY & WATERMAIN
 PLAN**

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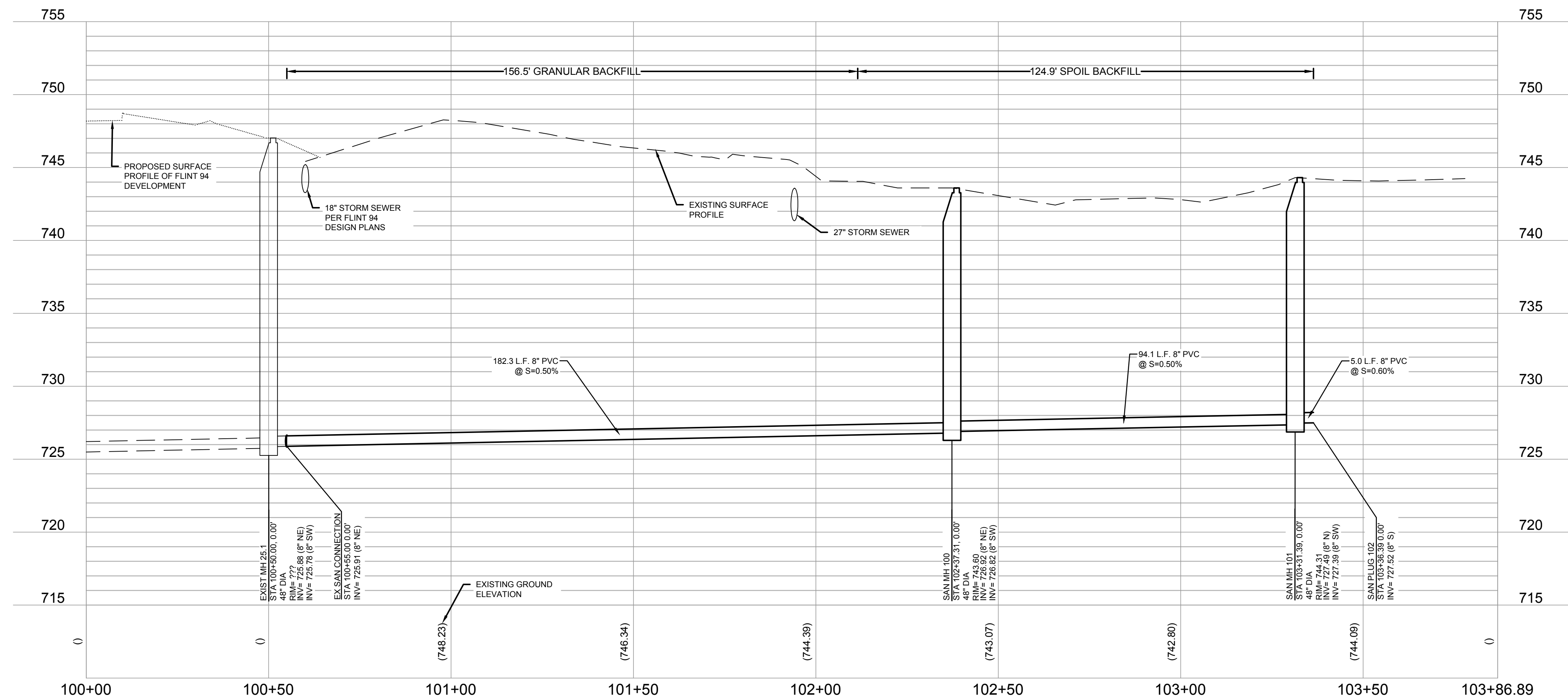
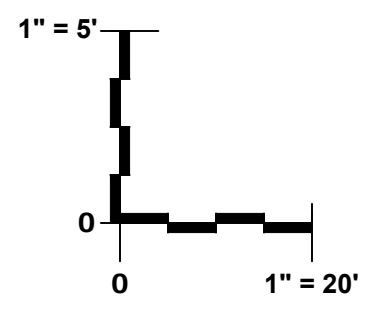
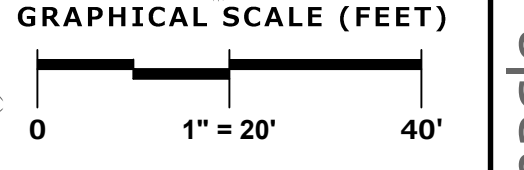
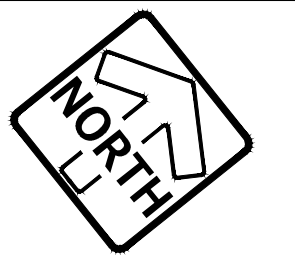
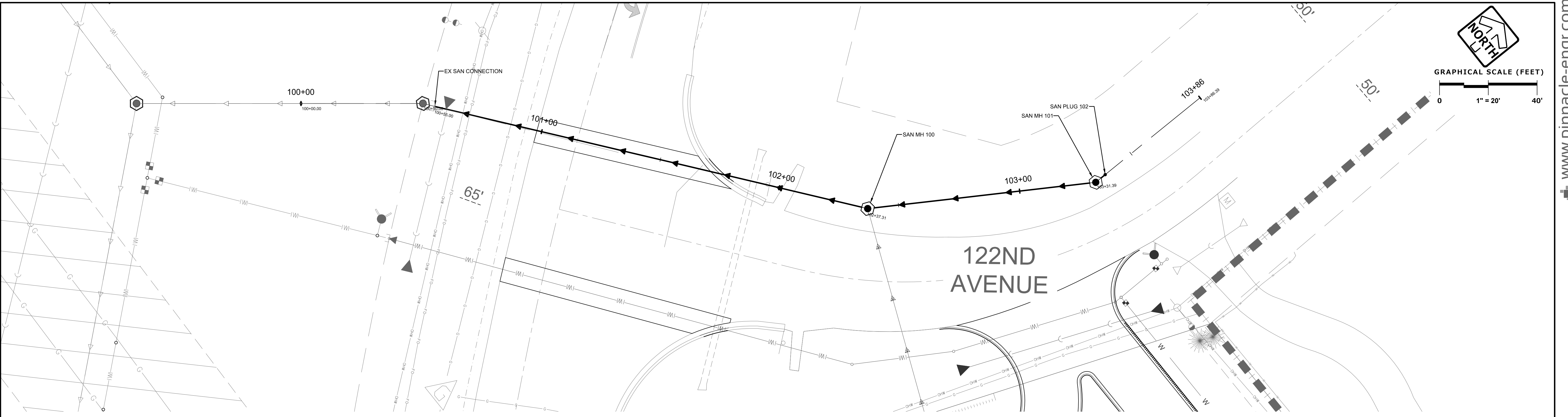
SANITARY & WATERMAIN PLAN

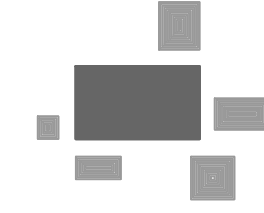
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 PEG PRJ. MTS
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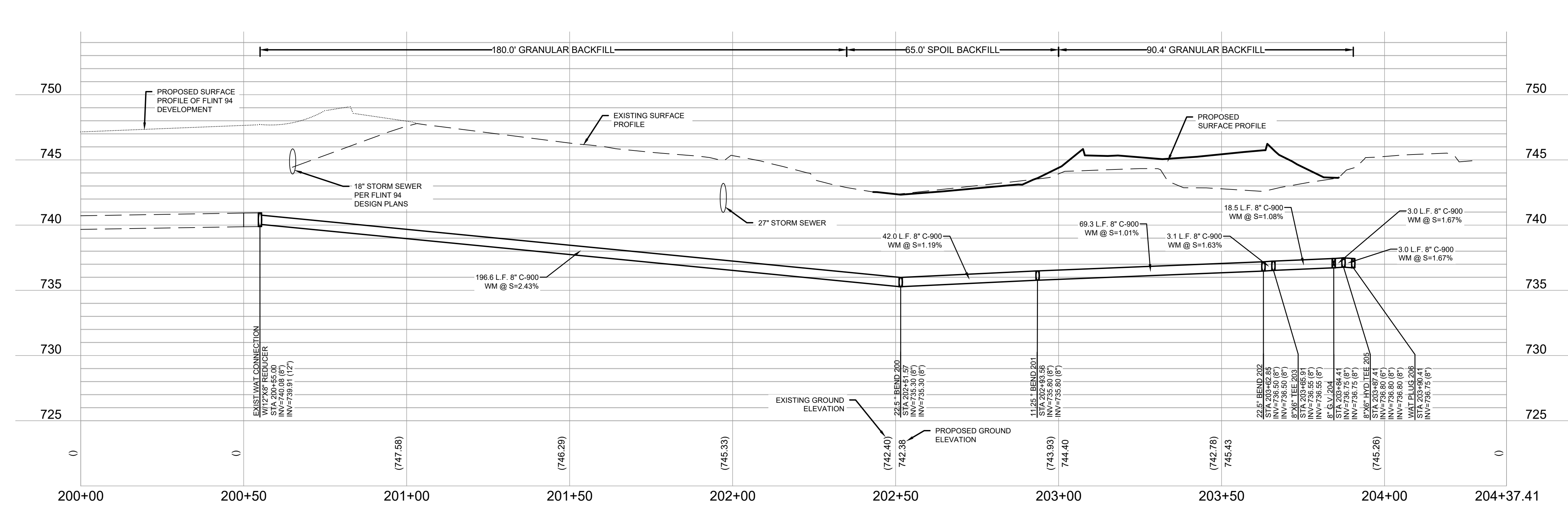
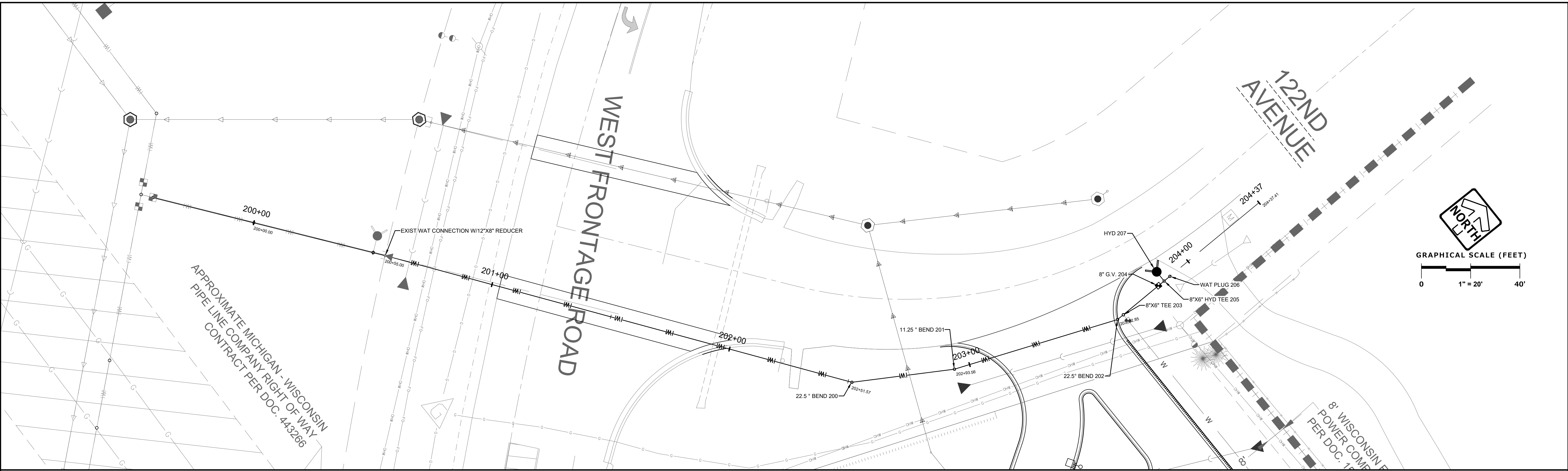
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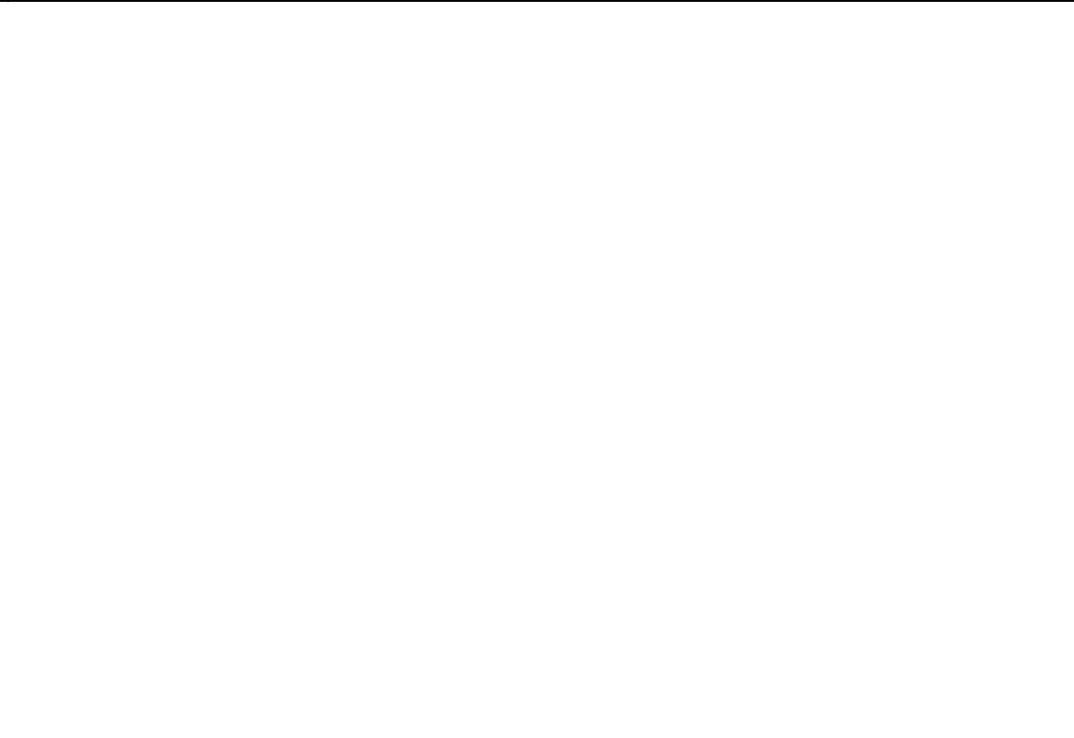
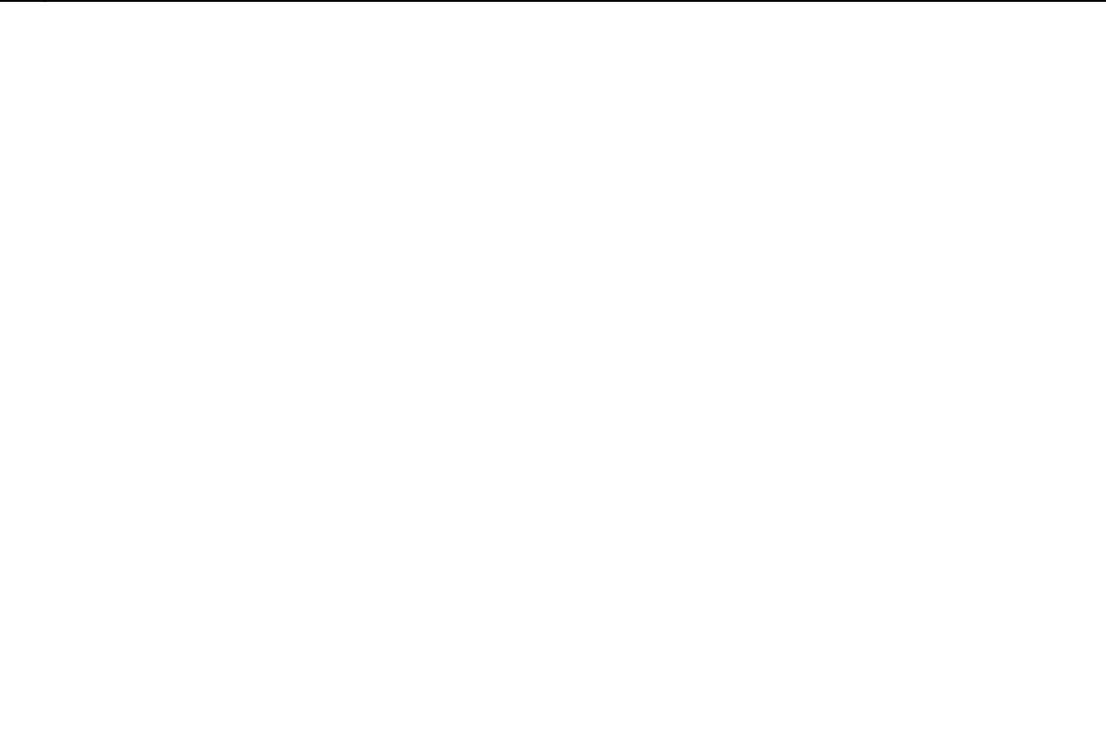
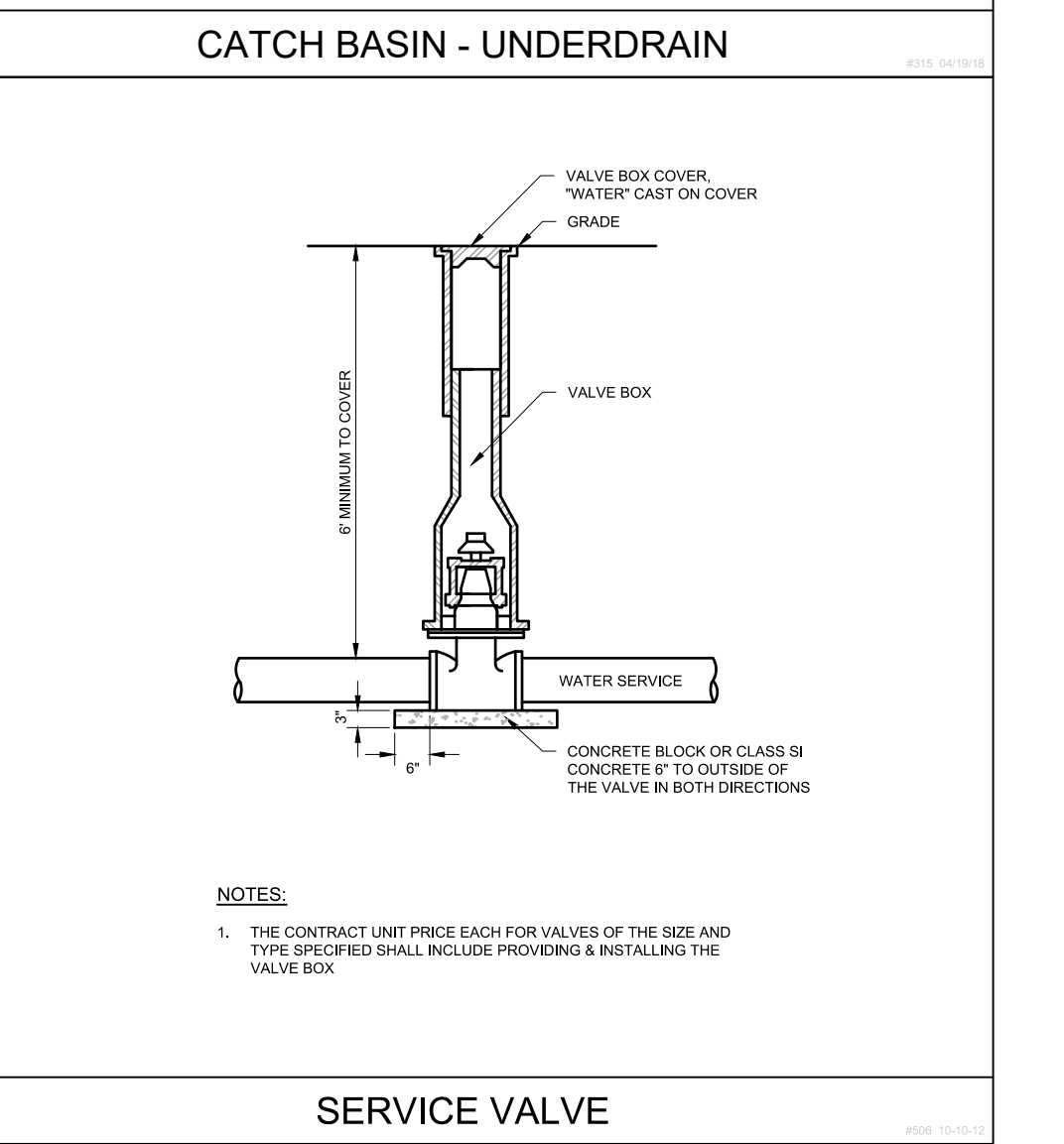
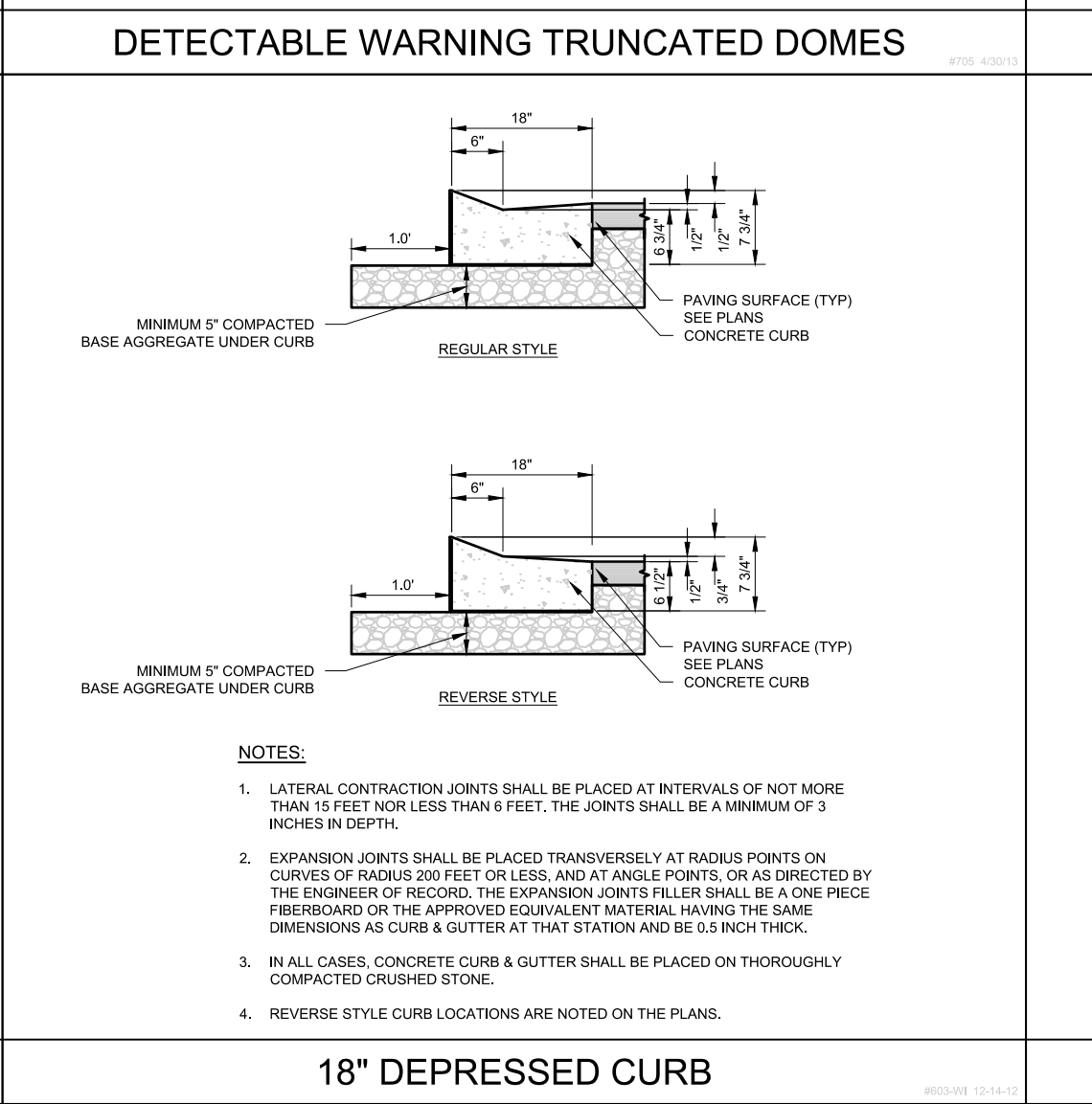
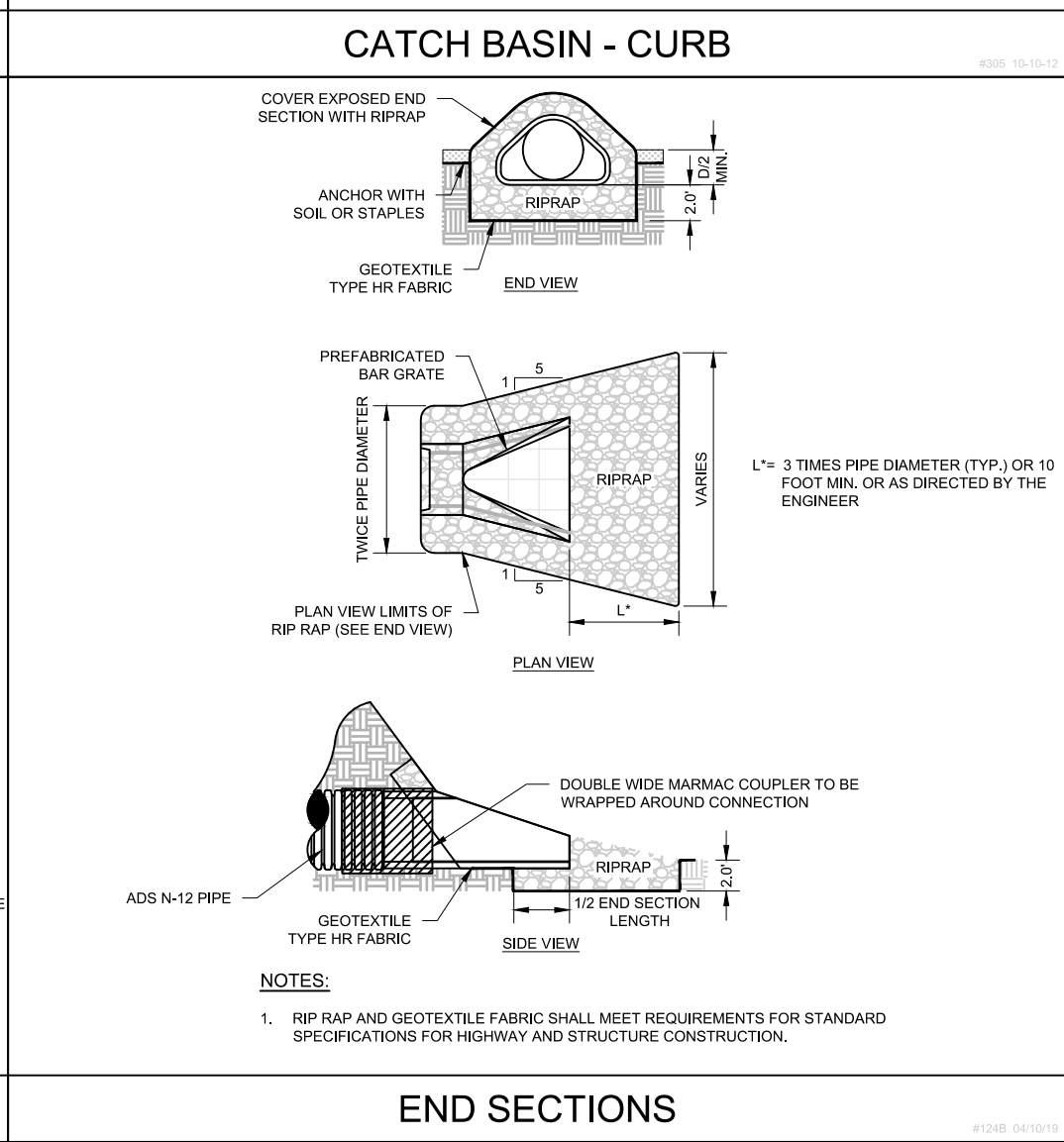
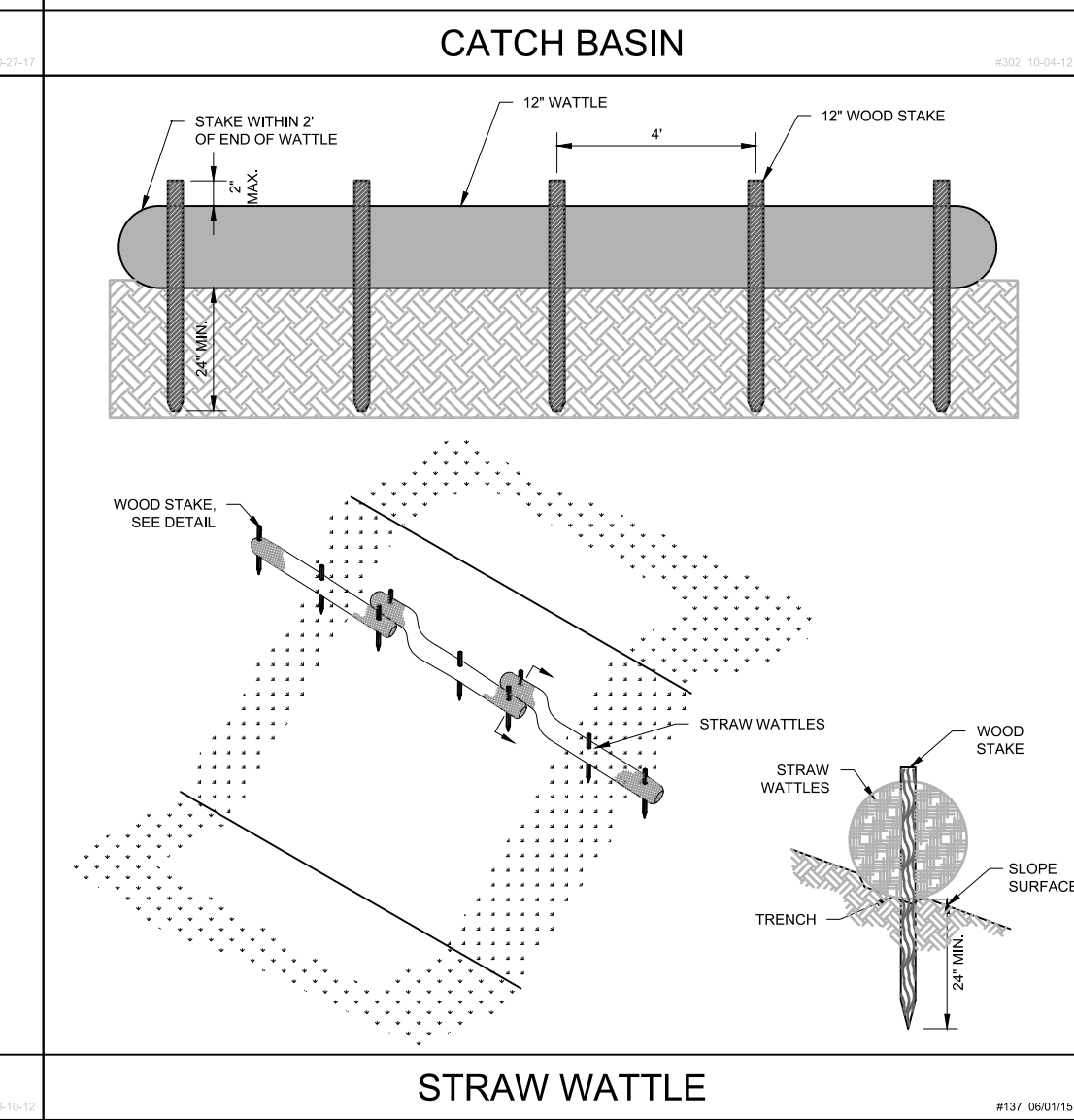
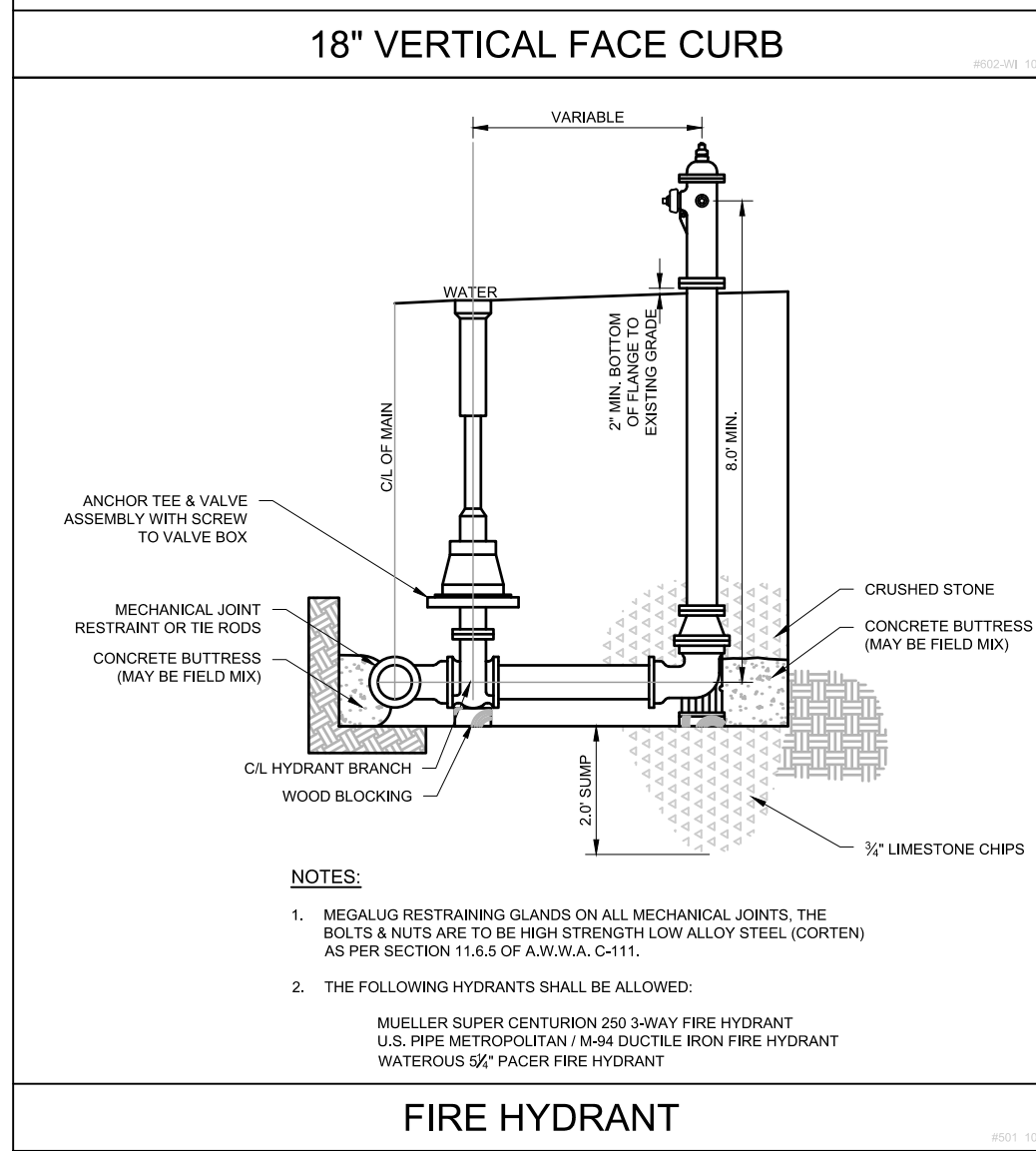
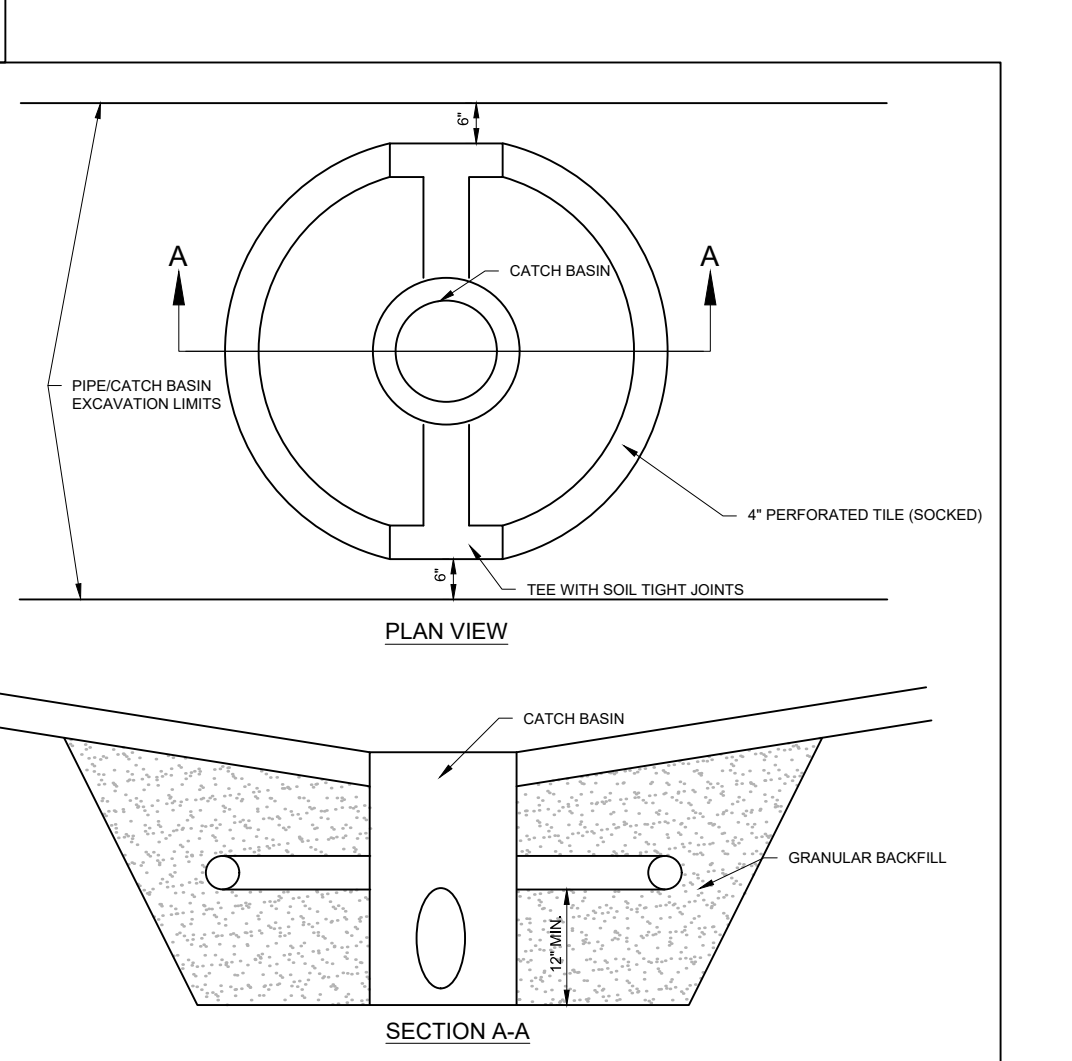
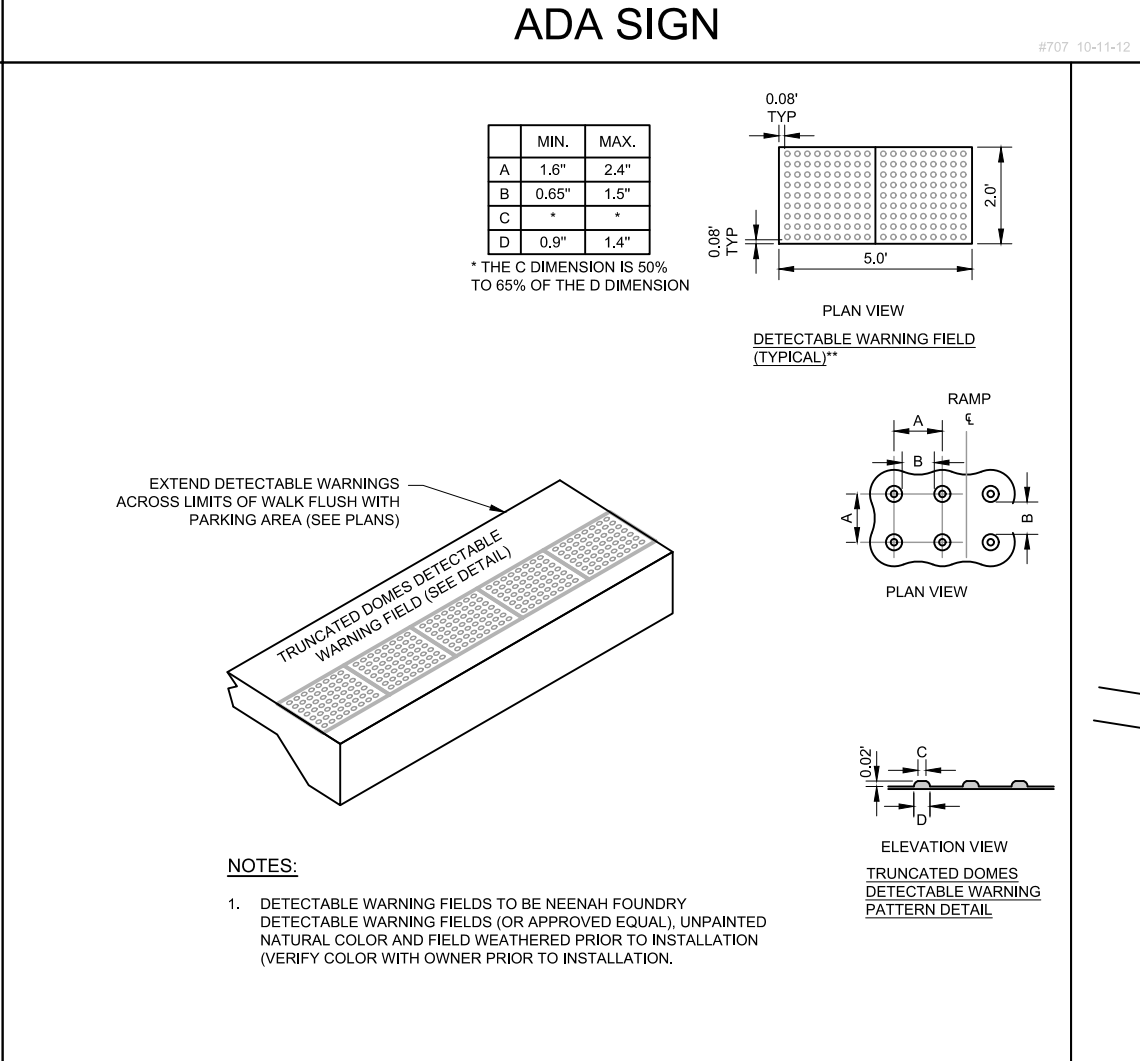
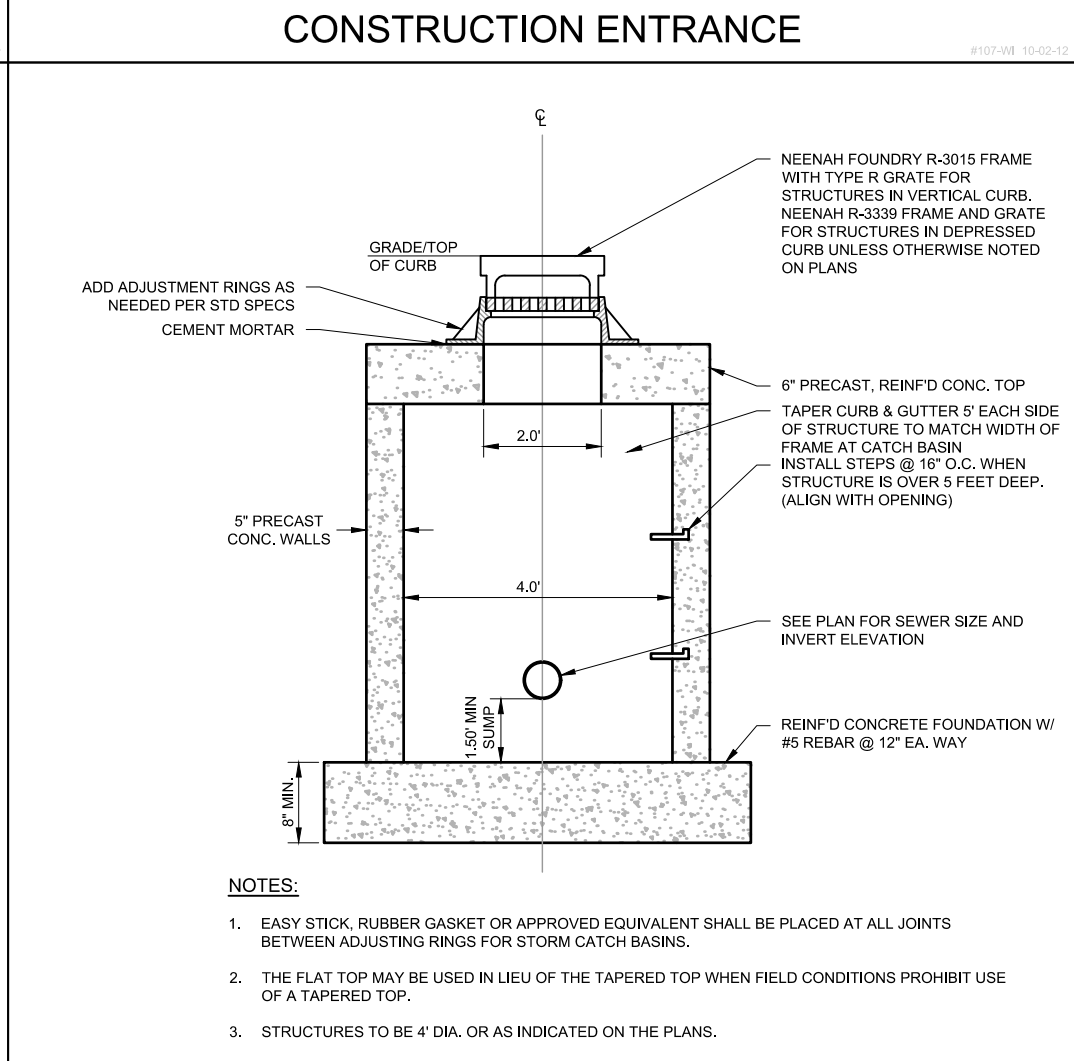
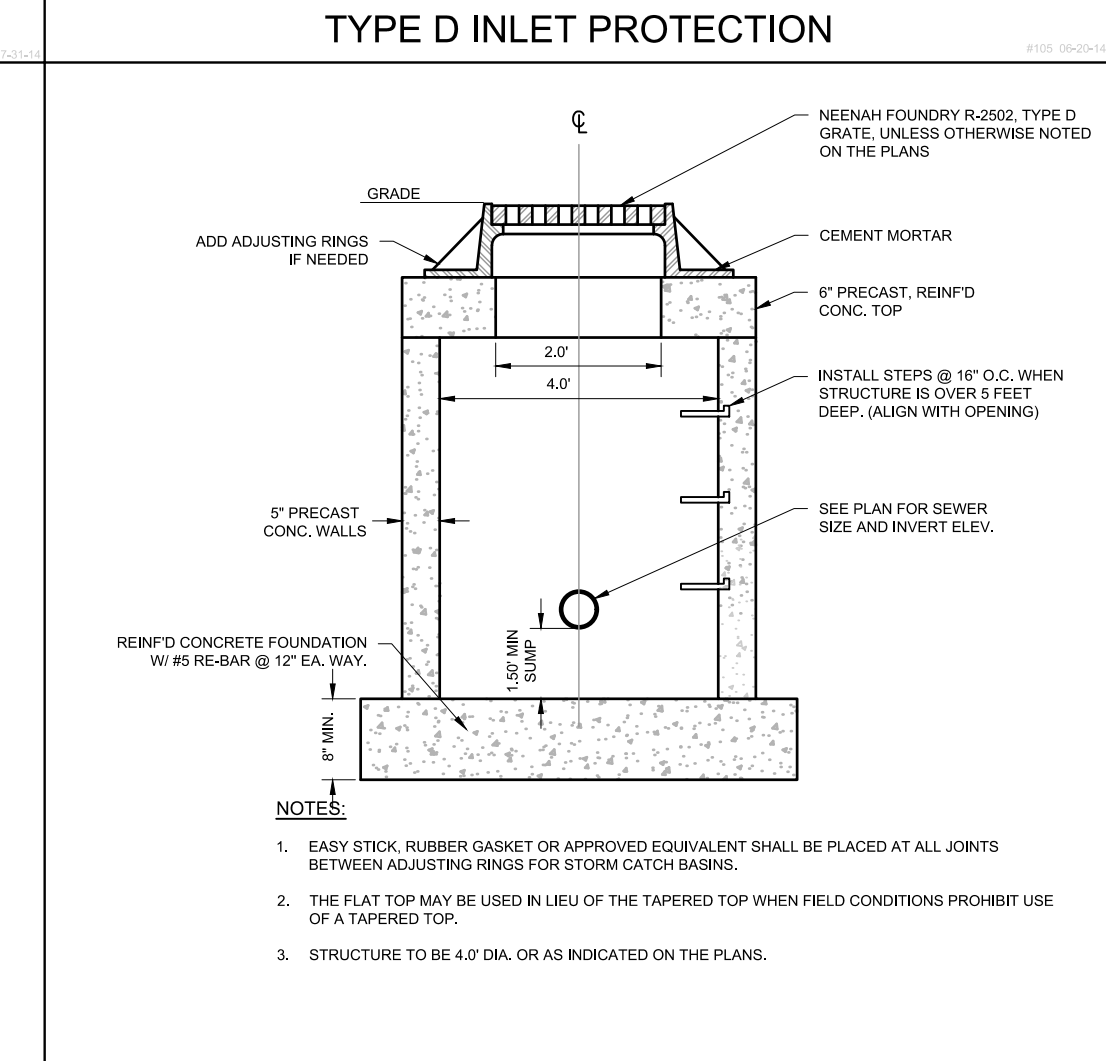
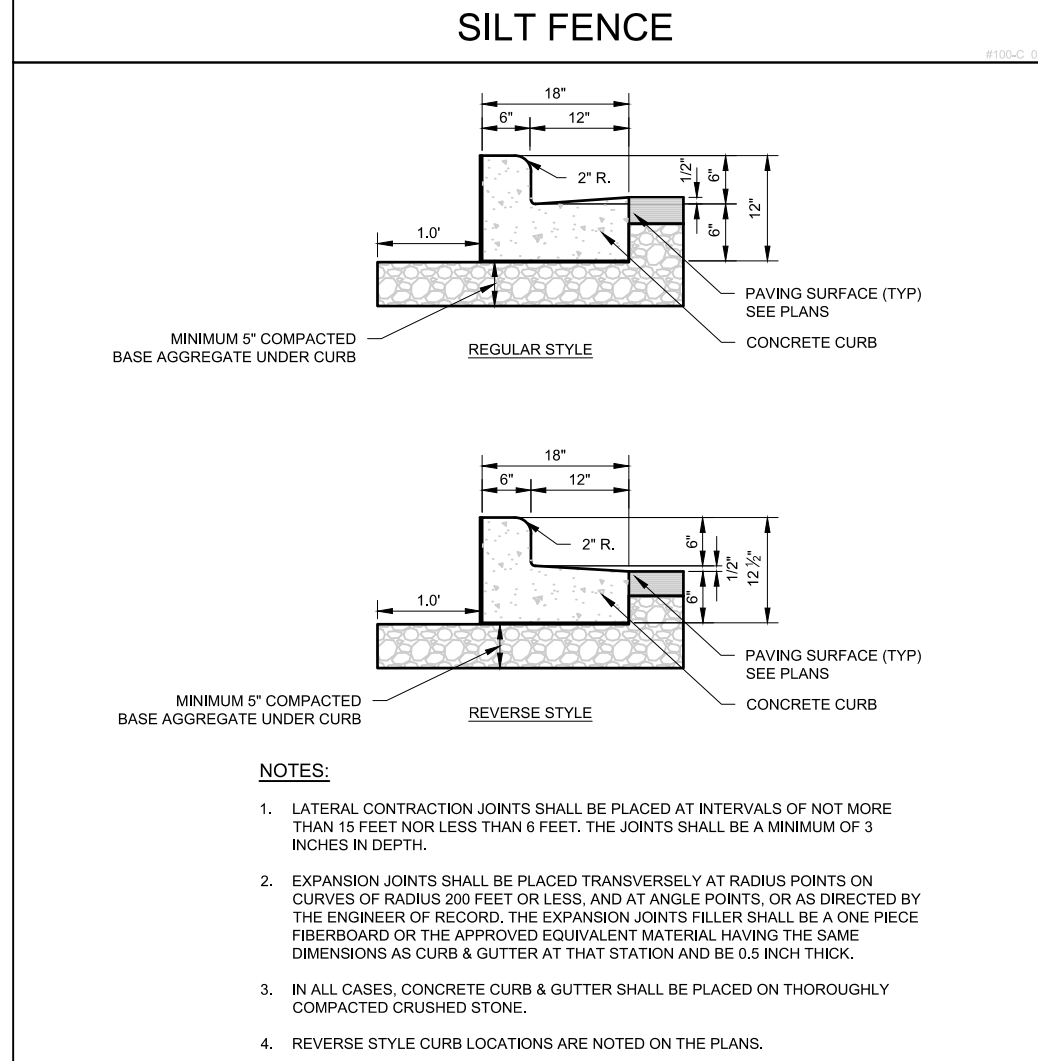
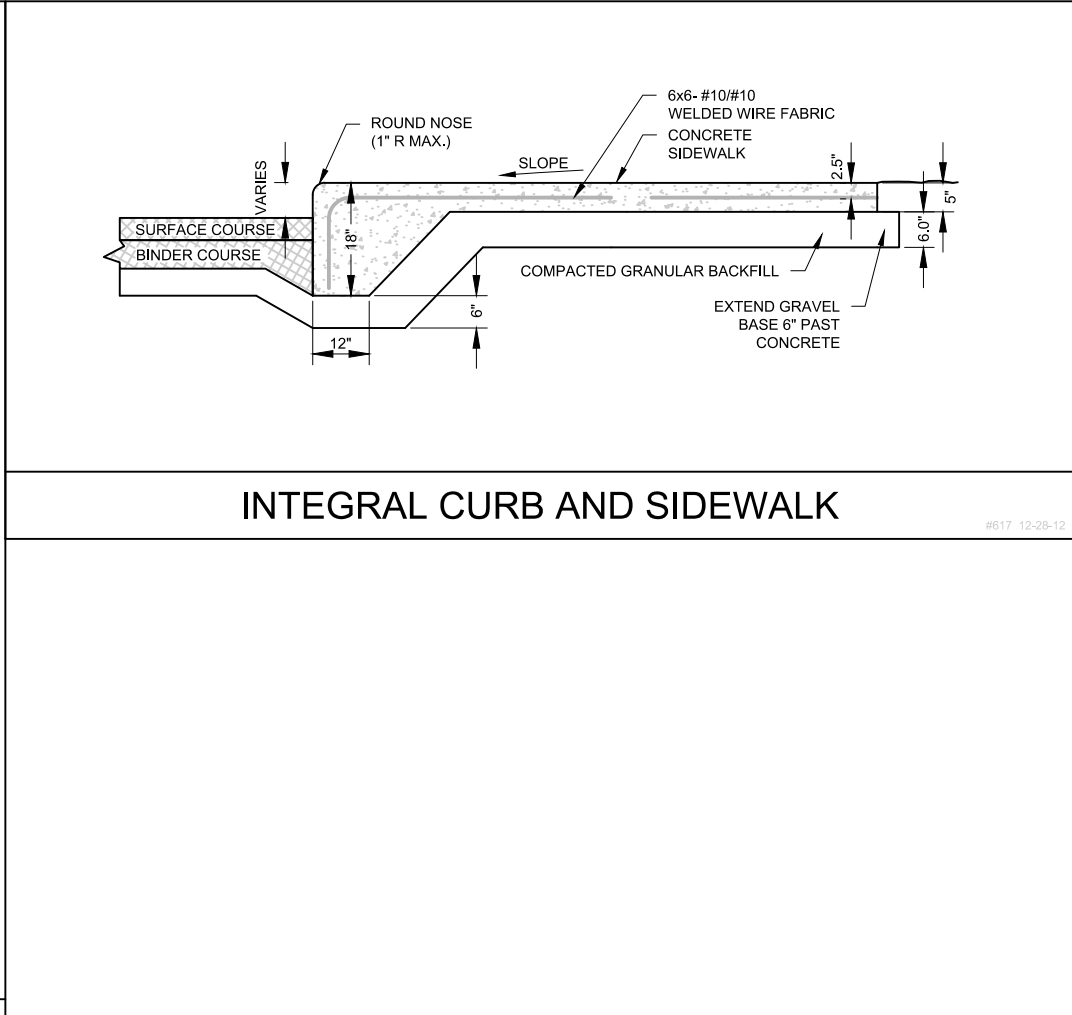
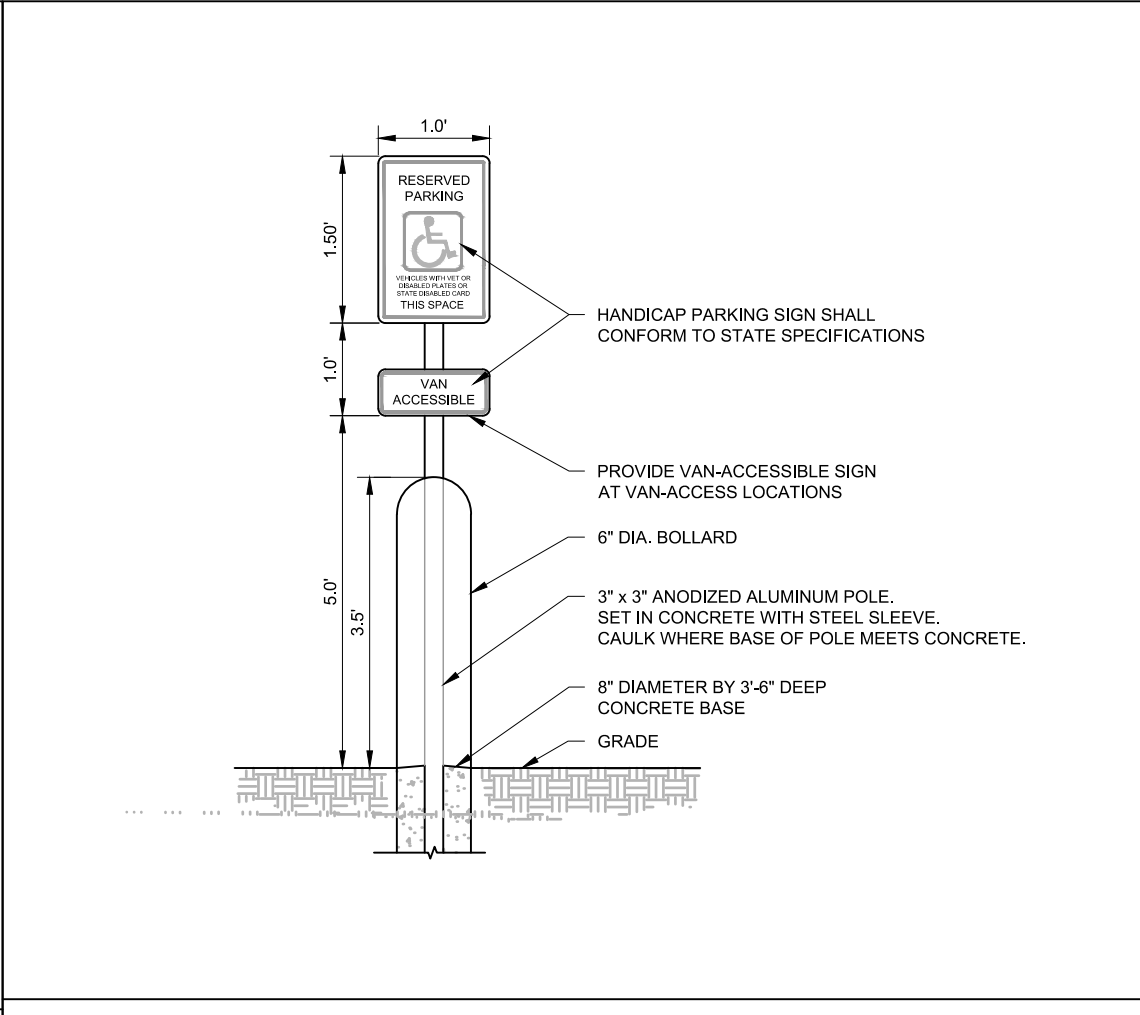
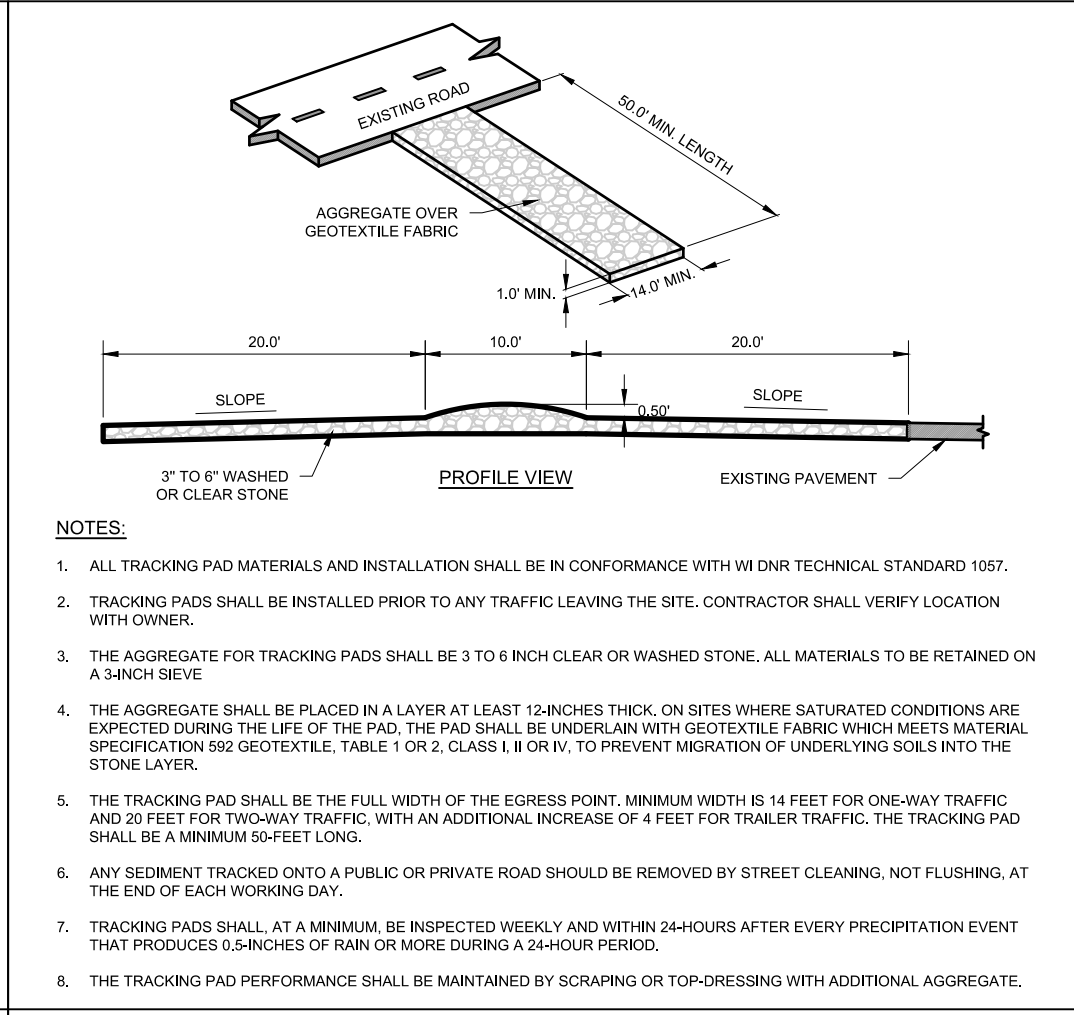
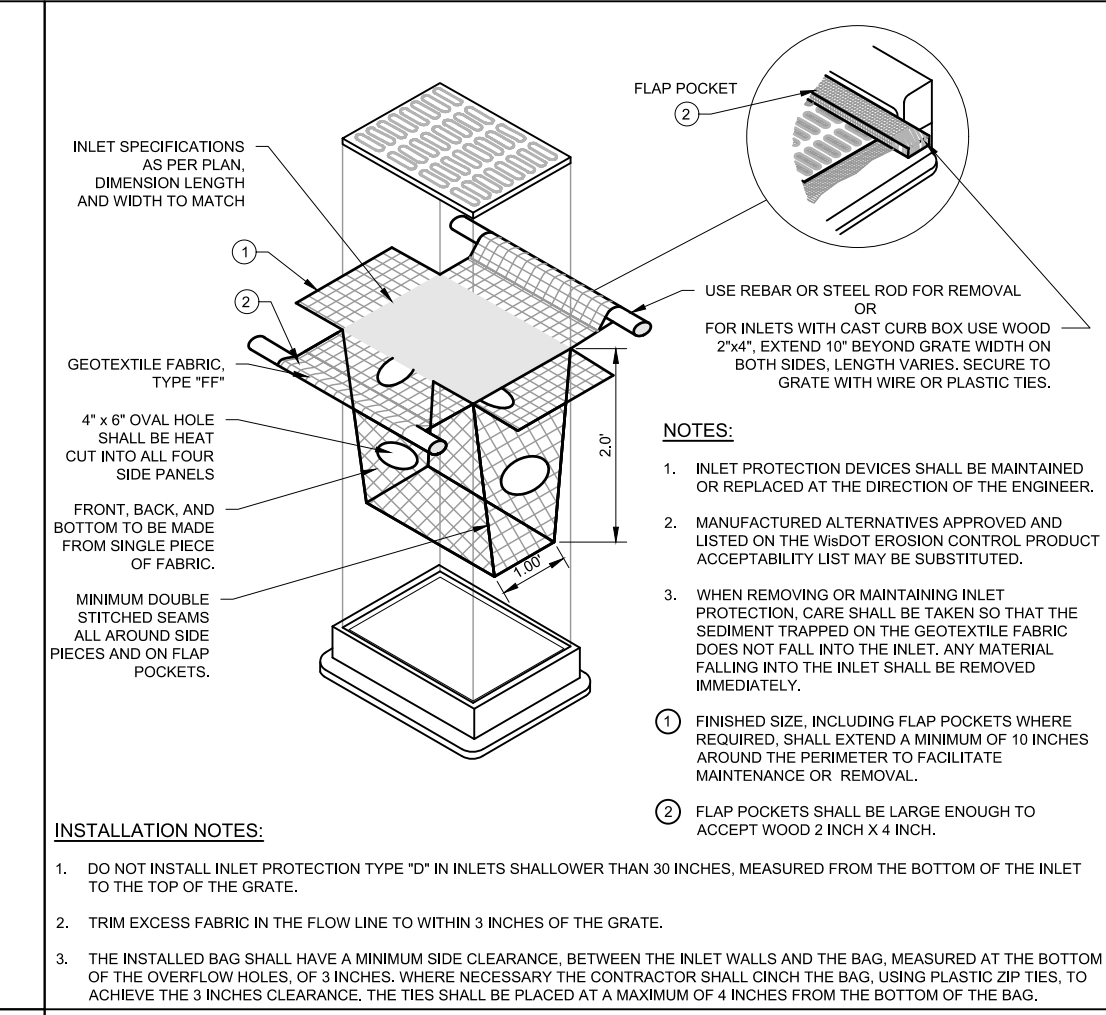
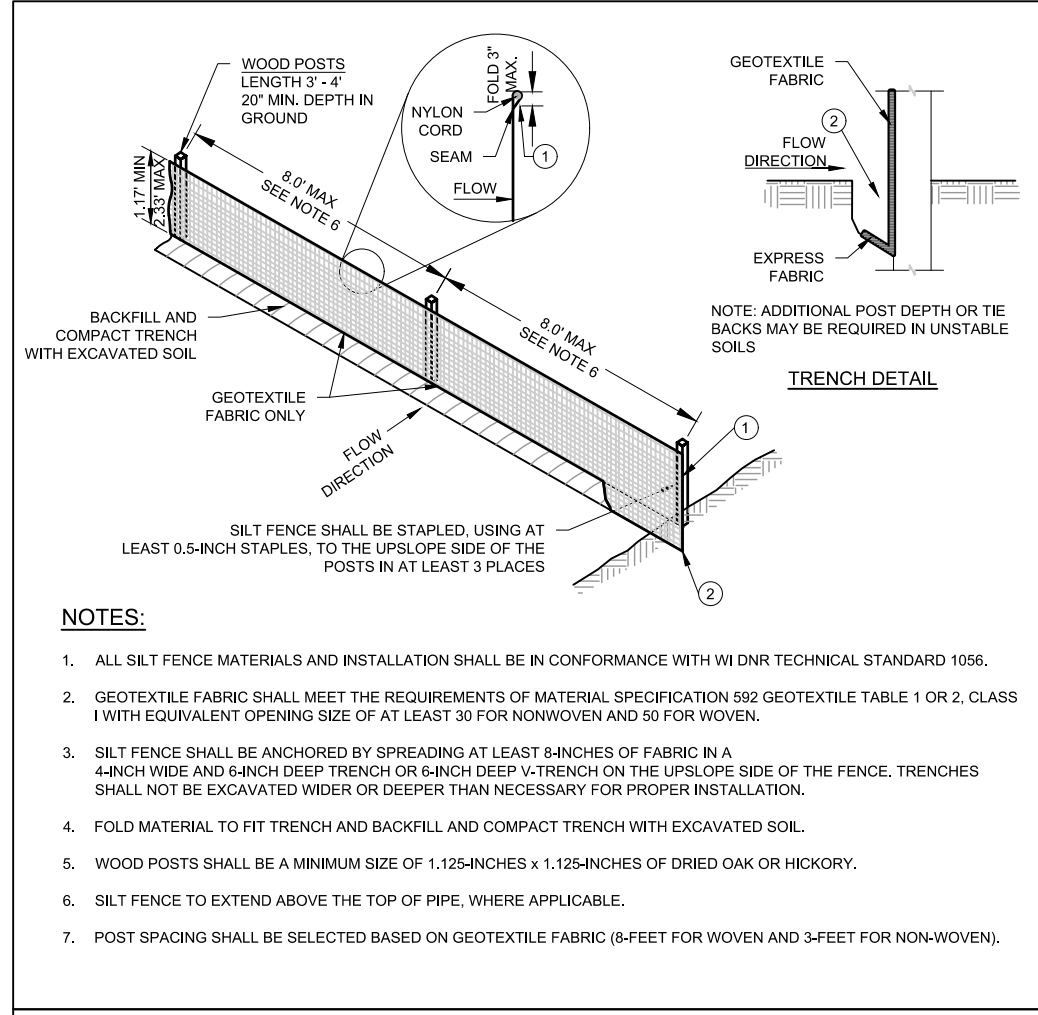
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PEG JOB NO. 2402.00A
PEG PH. MTS
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SCALE 1"=20'

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BOBCAT SOMERS

CONSTRUCTION DETAILS

122ND AVE & WEST FRONTAGE ROAD

CONSTRUCTION DETAILS

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FEES JOB No. 2402.00A
REG. PM. MTS
START DATE 07-18-22
SCALE N.T.S.

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1.0 POTENTIAL POLLUTANT SOURCES

GIVEN THE PROPOSED ACTIVITY ON THE PROJECT SITE, THE PRIMARY POTENTIAL POLLUTANT SOURCE ASSOCIATED WITH THIS CONSTRUCTION PROJECT IS SOIL EROSION AND TRANSPORTATION; REFER TO SECTION 4 OF THIS PLAN. ADDITIONAL POTENTIAL SOURCES OF POLLUTION MAY INCLUDE: FUEL TANKS; WASTE CONTAINERS, OIL OR OTHER PETROLEUM PRODUCTS, DETERGENTS, PAINTS, CONSTRUCTION DEBRIS, SANITARY STATIONS, FERTILIZERS, AND DUST; REFER TO SECTION 5 OF THIS PLAN.

2.0 EROSION AND SEDIMENT CONTROL IMPLEMENTATION

THE FOLLOWING ARE DESCRIPTIONS OF THE EROSION AND SEDIMENT CONTROL PRACTICES THAT SHALL BE IMPLEMENTED DURING CONSTRUCTION OF THIS PROJECT. IN ADDITION TO THESE MEASURES, CONTRACTOR SHALL DISTURB ONLY AREAS NECESSARY TO COMPLETE THE CONSTRUCTION PROJECT. ALL PRACTICES SHALL BE CONDUCTED IN ACCORDANCE WITH THE BEST MANAGEMENT PRACTICES (BMP).

2.1 CONSTRUCTION AND EROSION CONTROL SEQUENCING

CONSTRUCTION SEQUENCING WILL BE UTILIZED AS A MEANS OF CONTROLLING EROSION AND LIMITING SEDIMENT TRANSPORT. SEQUENCING AS LISTED BELOW IS GENERAL IN NATURE AND MAY VARY DEPENDING ON WEATHER CONDITIONS AND/OR PHASING OF CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A DETAILED SITE SEQUENCING PLAN TO OWNER FOR APPROVAL AT LEAST 5 BUSINESS DAYS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. CONTRACTOR MAY MODIFY SEQUENCING AFTER ITEM 6 AS NEEDED TO COMPLETE CONSTRUCTION ONLY IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL REQUIREMENTS.

- 1. INSTALL TEMPORARY CONSTRUCTION ENTRANCES, INLET PROTECTION ON EXISTING STORM SEWER AND CULVERT INLET LOCATIONS, AND PERIMETER SILT FENCING.
2. INSTALL SILT FENCING ALONG THE PERIMETER OF PROPOSED TOPSOIL STOCKPILE LOCATIONS. THE FIRST TOPSOIL DEPOSITED WITHIN THE STOCKPILE LIMITS SHALL BE PLACED TO CREATE TEMPORARY BERMING ALONG THE SILT FENCE TO PREVENT DIRECT STORMWATER RUNOFF AGAINST SILT FENCING.
3. STRIP TOPSOIL WITHIN THE LIMITS OF THE SEDIMENT TRAPS THAT WILL BE USED FOR TEMPORARY SEDIMENT CONTROL. STRIPPED TOPSOIL SHALL BE PLACED TO CONSTRUCT DIVERSION BERMING OR PLACED WITHIN THE STOCKPILE LIMITS.
4. STRIP TOPSOIL ALONG THE REMAINDER OF DIVERSION BERMING AND IMMEDIATELY PLACE TOPSOIL TO CREATE THE BERMING. MASS TOPSOIL STRIPPING SHALL NOT OCCUR UNTIL ALL DOWNSTREAM SEDIMENT CONTROLS ARE IN PLACE.
5. CONDUCT ROUGH GRADING OPERATIONS AND UTILITY PIPING INSTALLATION. DRAIN TILE SHALL NOT BE INSTALLED UNTIL UPLAND AREAS CONTRIBUTING STORMWATER RUNOFF ARE STABILIZED. DITCH CHECKS SHALL BE INSTALLED WITHIN DRAINAGE DITCHES IMMEDIATELY FOLLOWING CREATION OF DITCHES AND INLET PROTECTION SHALL BE INSTALLED TO PROTECT ANY STORM SEWER OR CULVERTS THAT WILL FUNCTION DURING CONSTRUCTION.
6. FINE GRADE SUB-GRADE SOILS WITHIN PAVEMENT AND BUILDING LIMITS. PLACE STONE BASE MATERIAL AS SOON AS POSSIBLE FOLLOWING COMPLETION OF FINE GRADING EFFORTS.
7. FINE GRADE REMAINING DISTURBED AREAS. PLACE SALVAGED TOPSOIL, EROSION BLANKETS/MATTING, AND SEED/MULCH AS SOON AS POSSIBLE FOLLOWING COMPLETION OF FINE GRADING EFFORTS.
8. EROSION CONTROLS SHALL NOT BE REMOVED UNTIL SITE IS FULLY STABILIZED OR 70% VEGETATIVE COVER IS ESTABLISHED. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF SILT FENCE, TEMPORARY FENCING/PRETECTION, DITCH CHECKS, AND OTHER TEMPORARY CONTROLS, AND RESTORATION PRACTICES AS NECESSARY, TO THE SATISFACTION OF THE OWNER.

2.2 STABILIZATION PRACTICES

THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR, WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE, AND WHEN STABILIZATION MEASURES ARE INITIATED, SHALL BE RECORDED ON THE STABILIZATION SCHEDULE FOR MAJOR GRADING ACTIVITIES.

STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. NO MORE THAN SEVEN (7) DAYS SHALL PASS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS PERMANENTLY CEASED UNLESS:

THE INITIATION OF STABILIZATION MEASURES BY THE SEVENTH (7) DAY AFTER CONSTRUCTION ACTIVITY TEMPORARILY OR PERMANENTLY CEASE IS PRECLUDED BY SNOW COVER. IN THAT EVENT, STABILIZATION MEASURE SHALL BE INITIATED AS SOON AS PRACTICABLE.

CONSTRUCTION ACTIVITY WILL RESUME ON A PORTION OF THE SITE WITHIN FOURTEEN (14) DAYS FROM WHEN ACTIVITIES CEASED, I.E. THE TOTAL TIME PERIOD THAT THE CONSTRUCTION ACTIVITY IS TEMPORARILY CEASED IS LESS THAN FOURTEEN (14) DAYS). IN THAT EVENT, STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE BY THE SEVENTH (7) DAY AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED. SEE THE SOIL PROTECTION CHART PRESENTED IN THE CONSTRUCTION DOCUMENTS FOR RATES OF PERMANENT AND TEMPORARY VEGETATION.

STABILIZATION MEASURES SHALL BE DETERMINED BASED ON SITE CONDITIONS AT THE TIME CONSTRUCTION ACTIVITY HAS CEASED, INCLUDING BUT NOT LIMITED TO WEATHER CONDITIONS AND LENGTH OF TIME MEASURE MUST BE EFFECTIVE. THE FOLLOWING ARE ACCEPTABLE STABILIZATION MEASURES.

- PERMANENT SEEDING: IN ACCORDANCE WITH APPROVED LANDSCAPING PLAN
TEMPORARY SEEDING MAY CONSIST OF SPRING OATS (100LBS/ACRE) AND/OR WHEAT OR CEREAL RYE (150LBS/ACRE)
HYDRO-MULCHING WITH A TACKIFIER
GEOTEXTILE EROSION MATTING
SODDING

2.3 STRUCTURAL PRACTICES

THE FOLLOWING ARE DESCRIPTIONS OF STRUCTURAL PRACTICES TO BE IMPLEMENTED TO DIVERT FLOWS FROM EXPOSED SOILS, STORE FLOWS, OR OTHERWISE LIMIT THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS OF THE SITE INCLUDING THE PROPOSED AND EXISTING WETLAND AREAS. SUCH PRACTICES COULD INCLUDE SILT FENCE, PROTECTION FENCE, CONSTRUCTION ENTRANCE, DITCH CHECK, EROSION CONTROL MATTING, DIVERSION BERMS/WALE, SEDIMENT TRAP, LEVEL SPREADER, INLET PROTECTION, OUTLET PROTECTION, AND TEMPORARY OR PERMANENT SEDIMENT BASIN. THE FOLLOWING STRUCTURAL PRACTICES ARE TO BE UTILIZED DURING THIS PROJECT.

SILT FENCE SHALL BE PLACED DOWN SLOPE OF DISTURBED AREAS OF THE CONSTRUCTION SITE AND AROUND THE PERIMETER OF THE TOPSOIL STOCKPILE. THIS INCLUDES PROTECTION OF EXISTING WETLAND AREAS TO BE MAINTAINED. SILT FENCE MAY ALSO BE USED AS A TEMPORARY CONTROL DEVICE WHERE SEDIMENTATION RUNOFF IS DISCOVERED.

CONSTRUCTION ENTRANCE SHALL BE INSTALLED TO REDUCE SOIL EROSION POLLUTANTS FROM LEAVING THE SITE DURING CONSTRUCTION ACTIVITIES. IF THE CRUSHED STONE DOES NOT ADEQUATELY REMOVE MUD FROM VEHICLE TIRES, THEY SHALL BE HOSED OFF BEFORE ENTERING A PAVED ROADWAY. ANY SOIL DEPOSITED ON THE PUBLIC PAVED ROAD WAY SHALL BE REMOVED IMMEDIATELY.

DITCH CHECK (STRAW BALES) SHALL BE INSTALLED IN DRAINAGE CHANNELS AS NEEDED.

EROSION CONTROL MATTING SHALL BE PLACED ON AREAS OR EMBANKMENTS HAVING SLOPES GREATER THAN OR EQUAL TO 3H:1V, BEFORE VEGETATION IS ESTABLISHED.

DIVERSION BERMS/WALE SHALL BE CONSTRUCTED TO DIVERT RUNOFF AROUND THE SITE AND TO DIVERT RUNOFF FROM THE DISTURBED AREA TO A SEDIMENT TRAP OR OTHER CONTROL. BERMS/WALES SHALL BE STABILIZED WITH EQUIPMENT TRACKING AND TEMPORARY SEEDING.

SEDIMENT TRAPS/BASIN SHALL BE CONSTRUCTED TO COLLECT RUNOFF AND RUNOFF FROM SITE DIVERSION BERMS/WALES.

INLET PROTECTION SHALL BE INSTALLED AT STORMWATER DRAINAGE INLETS TO REDUCE SEDIMENT WITHIN STORM SEWER CONVEYANCE FEATURES.

OUTLET SCOUR PROTECTION SHALL BE INSTALLED AT STORMWATER DRAINAGE OUTLETS TO DIFFUSE FLOWS.

3.0 ADDITIONAL PRACTICES

ADDITIONAL POLLUTANT CONTROL MEASURES TO BE IMPLEMENTED DURING CONSTRUCTION ACTIVITIES SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING.

CONSTRUCTION WASTE SHALL BE PROPERLY DISPOSED OF. THIS INCLUDES ALL CONSTRUCTION SITE WASTE MATERIAL, SANITARY WASTE, AND WASTE FROM VEHICLE TRACKING OF SEDIMENTS. THE CONTRACTOR SHALL ENSURE THAT NO MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, BURNED, OR DISCHARGED TO THE WATERS OF THE STATE. VEHICLES HAULING MATERIAL AWAY FROM THE SITE SHALL BE COVERED WITH A TARP/LIN TO PREVENT BLOWING DEBRIS.

DUST CONTROL SHALL BE ACCOMPLISHED BY ONE OR MORE OF THE FOLLOWING METHODS:

COVERING 30% OR MORE OF THE SOIL SURFACE WITH A NON-ERODIBLE MATERIAL.
ROUGHENING (EQUIPMENT TRACKING) THE SOIL TO PRODUCE RIDGES PERPENDICULAR TO THE PREVAILING WIND. RIDGES SHALL BE AT LEAST SIX (6) INCHES IN HEIGHT.

FREQUENT WATERING OF EXCAVATION AND FILL AREAS.
PROVIDING GRAVEL OR PAVING AT ENTRANCE/EXIT DRIVES, PARKING AREAS AND TRANSIT PATHS.

STREET SWEEPING SHALL BE PERFORMED TO IMMEDIATELY REMOVE ANY SEDIMENT TRACKED ON PAVEMENTS.

4.0 EROSION AND SEDIMENT STRUCTURAL PRACTICE MAINTENANCE

THE FOLLOWING MAINTENANCE PRACTICES SHALL BE USED TO MAINTAIN, IN GOOD AND EFFECTIVE OPERATING CONDITIONS, VEGETATION, EROSION AND SEDIMENT CONTROL MEASURES, AND OTHER PROTECTIVE MEASURES IDENTIFIED IN THIS PLAN, UPON IDENTIFICATION, DEFICIENCIES IN STORMWATER CONTROLS SHALL BE ADDRESSED IMMEDIATELY. THE MAINTENANCE PROCEDURES FOR THIS DEVELOPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO THE BELOW.

SILT FENCE - REPAIR OR REPLACE ANY DAMAGED FILTER FABRIC AND/OR STAKES. REMOVE ACCUMULATED SEDIMENT WHEN IT HAS REACHED ONE-HALF THE ABOVE GROUND HEIGHT OF THE FENCE.

CONSTRUCTION ENTRANCE - AS NEEDED, ADD STONE TO MAINTAIN CONSTRUCTION ENTRANCE DIMENSIONS AND EFFECTIVENESS.

DITCH CHECK (STRAW BALES) - RE-SECURE STAKES, ADJUST OR REPOSITION BALES TO ADDRESS PROPER FLOW OF STORMWATER, AND REMOVE ACCUMULATED SEDIMENT WHEN IT HAS REACHED ONE-HALF THE HEIGHT OF THE BALE.

EROSION CONTROL MATTING - REPAIR MATTING IMMEDIATELY IF INSPECTION REVEALS BREACHED OR FAILED CONDITIONS. REPAIR AND RE-GRADE SOIL WHERE CHANNELIZATION HAS OCCURRED.

DIVERSION BERMS/WALE - REPLACE OR RE-COMPACT THE CONSTRUCTION MATERIALS AS NECESSARY.

SEDIMENT TRAP - REMOVE AND DISPOSE OF THE ACCUMULATED SEDIMENT WHEN IT HAS REACHED THE SEDIMENT STORAGE ELEVATION.

INLET PROTECTION - CLEAN, REPAIR OR REPLACE FILTER FABRIC AND/OR STONE WHEN CONTROL MEASURE IS CLOGGED. INLET FILTER BAGS SHALL BE REPLACED ONCE ONE-HALF FULL OF SEDIMENT.

OUTLET PROTECTION - CLEAN, REPAIR OR REPLACE FILTER FABRIC, TURF REINFORCEMENT MATTING AND/OR STONE WHEN CONTROL MEASURE IS ONE-HALF FULL OF SEDIMENT.

SEDIMENT BASIN - AT THE END OF CONSTRUCTION, CONTRACTOR SHALL REMOVE AND DISPOSE OF THE ACCUMULATED SEDIMENT AND RESTORE BASIN AREA TO INTENDED POST-CONSTRUCTION DESIGN GRADES.

5.0 INSPECTION

INSPECTIONS SHALL BE COMPLETED WITHIN TWENTY-FOUR (24) HOURS OF THE END OF A RAINFALL EVENT THAT IS ONE-HALF INCH OR GREATER OR

EQUIVALENT SNOWFALL, OR AT A MINIMUM ONCE EVERY SEVEN (7) CALENDAR DAYS. INSPECTIONS SHALL BE UNDERTAKEN BY QUALIFIED PERSONNEL PROVIDED BY THE CONTRACTOR, AND SHALL INCLUDE: DISTURBED AREAS OF THE CONSTRUCTION SITE THAT HAVE NOT BEEN FINALLY STABILIZED, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE. A STORMWATER POLLUTION PREVENTION PLAN INSPECTION REPORT SHALL BE COMPLETED AND ADDED TO THE SWPPP. RAINFALL SHALL BE RECORDED ON THE SWPPP RAINFALL LOG. CONTRACTOR SHALL IMMEDIATELY ARRANGE FOR REPAIR OR REPLACEMENT OF ANY DAMAGED OR DEFICIENT CONTROL MEASURES OBSERVED DURING THE INSPECTION.

QUALIFIED PERSONNEL MEANS A PERSON KNOWLEDGEABLE IN THE PRINCIPLES AND PRACTICES OF EROSION AND SEDIMENT CONTROL MEASURES, SUCH AS A LICENSED PROFESSIONAL ENGINEER, A CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL, A CERTIFIED EROSION SEDIMENT OR STORMWATER INSPECTOR, OR OTHER TRAINED INDIVIDUAL.

6.0 SPILL PREVENTION

6.1 GENERAL MATERIAL MANAGEMENT PRACTICES

THE GOOD HOUSEKEEPING PRACTICES LISTED BELOW SHALL BE FOLLOWED THROUGHOUT THE CONSTRUCTION PROJECT.

- 1. CONTRACTOR SHALL STORE ONLY ENOUGH PRODUCTS REQUIRED TO COMPLETE THIS PROJECT.
2. ALL MATERIAL SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR ORIGINAL CONTAINERS CONTAINING MANUFACTURER'S LABEL.
3. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED.
4. MATERIALS REQUIRED TO HAVE A MATERIAL SAFETY DATA SHEET (MSDS) SHALL HAVE A COPY STORED IN THE PROJECT'S MSDS DATABASE.

6.2 SPILL CONTROL PRACTICES

THE PRACTICES LISTED BELOW SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP.

- 1. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE MAINTAINED ONSITE.
2. IMMEDIATELY UPON DISCOVERY, ALL SPILLS SHALL BE CLEANED UP ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS.
3. PERSONNEL CLEANING UP A SPILL SHALL USE PERSONAL PROTECTIVE EQUIPMENT.
4. IMMEDIATELY UPON DISCOVERY OF TOXIC OR HAZARDOUS MATERIALS SHALL BE REPORTED TO THE OWNER AND GENERAL CONTRACTOR.
5. NOTIFICATION AND DISCOVERY TO THE APPROPRIATE FEDERAL, STATE, AND LOCAL GOVERNMENT AGENCIES SHALL BE MADE AS REQUIRED.

GENERAL INFORMATION:

THIS STORMWATER POLLUTION PREVENTION PLAN (SWPPP) HAS BEEN DEVELOPED TO FULFILL ONE OF THE REQUIREMENTS OF THE GENERAL ENVIRONMENTAL PROTECTION AGENCY (EPA) NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (WISCONSIN POLLUTION DISCHARGE ELIMINATION SYSTEM "WPDES" PERMIT NO. W9-5087831-4) FOR THE DISCHARGE OF STORMWATER ASSOCIATED WITH CONSTRUCTION PROJECTS DISTURBING ONE ACRE OR MORE. THE OWNER AND CONTRACTORS SHALL COMPLY WITH ALL REQUIREMENTS OF THE WPDES FOR ALL SUCH CONSTRUCTION PROJECTS. THE STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY FROM THIS SITE ARE SUBJECT TO THE CONDITIONS AND REQUIREMENTS OF THE PERMITS.

THE EXECUTED OWNER CERTIFICATION AND THE CONTRACTOR CERTIFICATIONS SHALL BE KEPT ONSITE WITH THE APPROVED PLANS.

SWPPP AVAILABILITY:

THE OWNER SHALL RETAIN A COPY OF THE SWPPP AT THE CONSTRUCTION SITE FROM THE DATE OF THE PROJECT INITIATION TO THE DATE OF FINAL STABILIZATION.

KEEPING PLANS CURRENT:

THE CONTRACTOR SHALL AMEND THE PLAN WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, WHICH HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE PLAN OR IF THE PLAN PROVES TO BE INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION SITE ACTIVITY. IN ADDITION, THE PLAN SHALL BE AMENDED TO IDENTIFY ANY NEW CONTRACTOR AND/OR SUBCONTRACTOR THAT WILL IMPLEMENT A MEASURE OF THE PLAN. AMENDMENTS TO THE PLAN MAY BE REQUIRED BY THE MUNICIPALITY, OWNER, OR OTHER REVIEWING AGENCY. COPIES OF THE AMENDMENTS SHALL BE KEPT ONSITE AS PART OF THE SWPPP.

RETENTION OF RECORDS:

THE OWNER SHALL RETAIN COPIES OF THIS AND ALL REPORTS AND NOTICES REQUIRED BY THIS PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT, FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE PERMIT COVERAGE EXPIRES OR IS TERMINATED. THIS PERIOD MAY BE EXTENDED BY THE REQUEST OF THE AGENCY AT ANY TIME. IN ADDITION, THE OWNER SHALL RETAIN A COPY OF THE PLAN REQUIRED BY THIS PERMIT AT THE CONSTRUCTION SITE FROM THE DATE OF PROJECT INITIATION TO THE DATE OF FINAL STABILIZATION.

A NOTICE OF INTENT (NOI) APPLICATION MUST BE COMPLETED AND INCORPORATED INTO THE SWPPP.

WPDES NOTICE OF TERMINATION GUIDANCE:

WHEN A SITE HAS BEEN FINALLY STABILIZED AND ALL STORMWATER DISCHARGES FROM CONSTRUCTION SITES THAT ARE AUTHORIZED BY THE PERMIT ARE ELIMINATED, THE OWNER OF THE FACILITY MUST SUBMIT A COMPLETED NOTICE OF TERMINATION THAT IS SIGNED IN ACCORDANCE WITH THE PERMIT. CONTRACTOR SHALL SUBMIT A COMPLETED NOTICE OF TERMINATION TO OWNER FOR EXECUTION PRIOR TO THEIR FINAL PAY APPLICATION REQUEST.

Table with 3 columns: CONTROL MEASURE GROUP, CONTROL MEASURE, CONTROL MEASURE CHARACTERISTICS. Rows include Vegetative Soil Cover, Non Vegetative Soil Cover, Diversions, Enclosed Drainage, Outlets, Sediment Basins, Sediment Filters, Mud and Dust Control.

STABILIZATION EFFECTIVENESS (TIME OF YEAR)

Stabilization Effectiveness chart showing months (JAN to DEC) and stabilization type (PERMANENT SEEDING, DORMANT SEEDING, TEMPORARY SEEDING, SODDING) with arrows indicating timing.

- A. KENTUCKY BLUEGRASS 90 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 30 LBS/ACRE.
B. KENTUCKY BLUEGRASS 135 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 45 LBS/ACRE + 2 TONS STRAW MULCH/ACRE.
C. SPRING OATS 100 LBS/ACRE.
D. WHEAT OR CEREAL RYE 150 LBS/ACRE.
E. SOD.
F. STRAW MULCH 2 TONS/ACRE.

* IRRIGATION/WATERING REQUIRED TO SUPPORT ESTABLISHMENT AS NEEDED.

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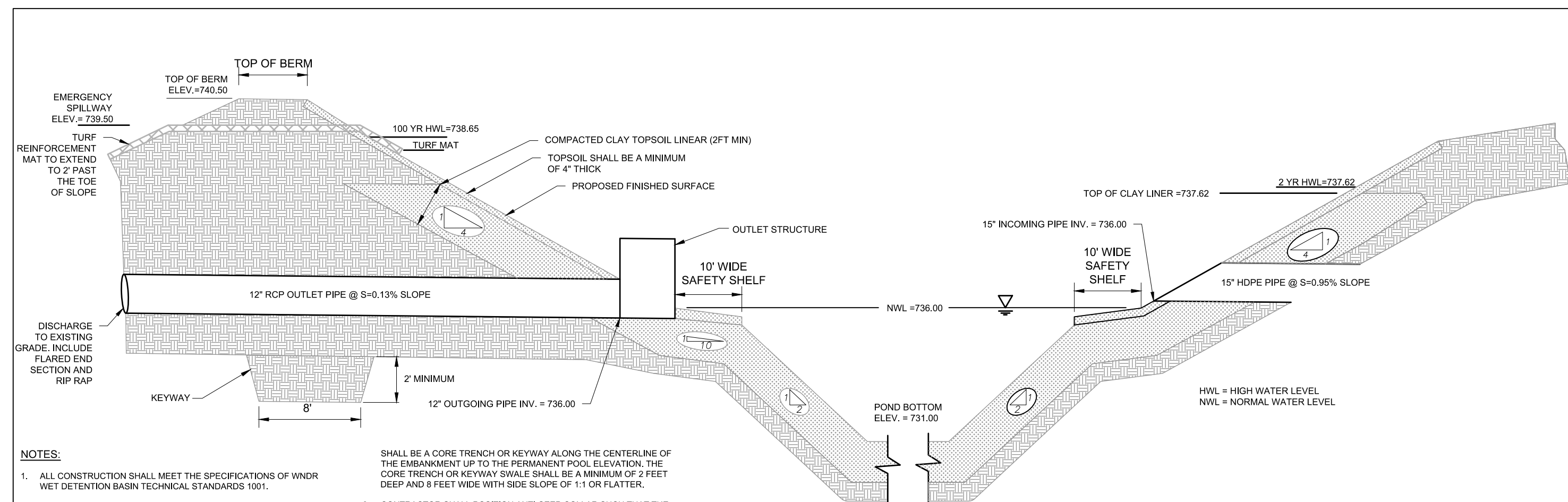
CONSTRUCTION DETAILS

REVISIONS table with columns for description and date.

Project information: PEG JOB No. 2402.00A, REG PM: MTS, START DATE: 07-18-24, SCALE: N.T.S., SHEET C-12, C-13.

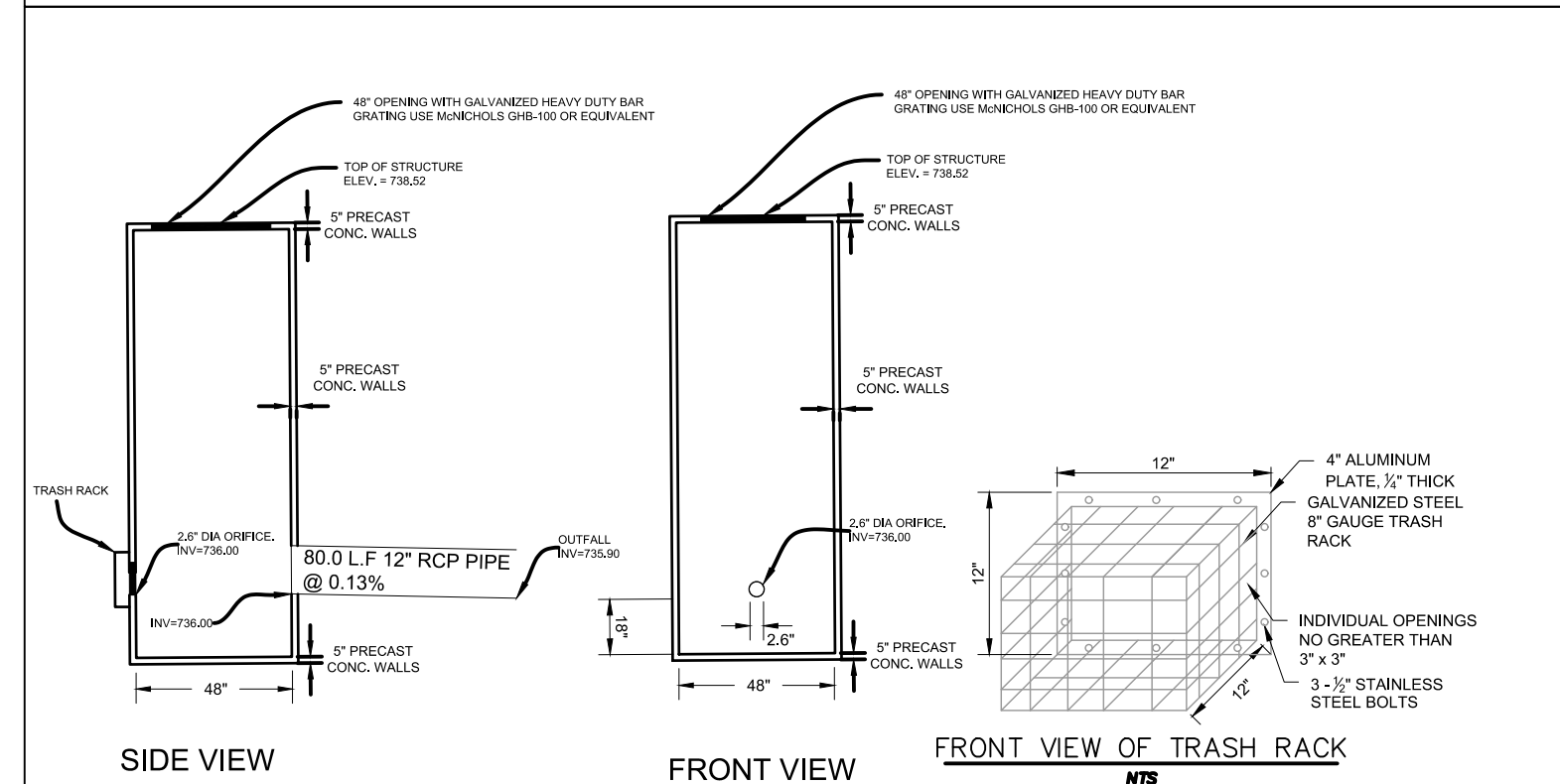
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DESIGNED: DMS
DRAFTED: DMS
REVIEWED:

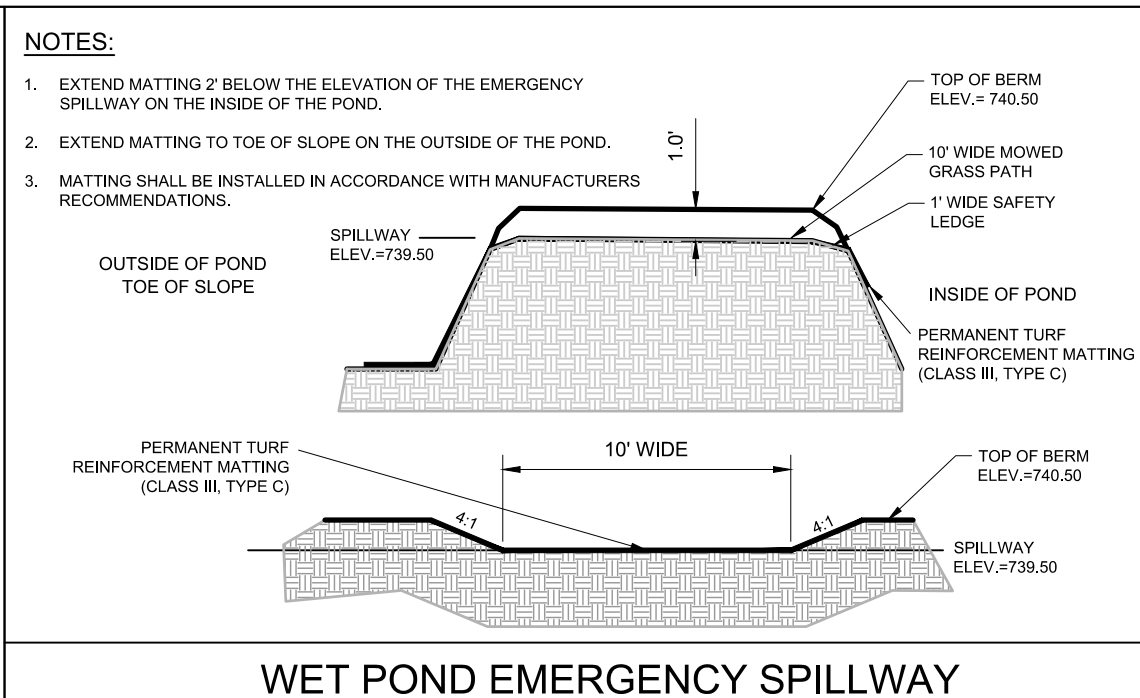


- NOTES:**
- ALL CONSTRUCTION SHALL MEET THE SPECIFICATIONS OF WMDR WET DETENTION BASIN TECHNICAL STANDARDS 1001.
 - ALL WORK TO BE CONDUCTED IN CONFORMANCE WITH THE STORM WATER MANAGEMENT PLAN FOR THE PROJECT SITE AS APPROVED BY THE REGULATORY ENGINEER OF RECORD.
 - HDPE PIPING & INSTALLATION WITHIN THE BASIN SHALL BE IN ACCORDANCE WITH ASSTHO M-294 TYPE 'S' WITH WATER TIGHT JOINTS.
 - CLAY LINER SHALL BE A MINIMUM OF 2 FEET THICK. CLAY SHALL BE COMPACTED AT 95% OPTIMAL MOISTURE CONTENT TO 80%.
 - FOR CONSTRUCTED EMBANKMENTS WHERE THE PERMANENT POOL IS PONDING 3 FEET OR MORE AGAINST THE EMBANKMENT, THERE SHALL BE A CORE TRENCH OR KEYWAY ALONG THE CENTERLINE OF THE EMBANKMENT UP TO THE PERMANENT POOL ELEVATION. THE CORE TRENCH OR KEYWAY SHALL BE A MINIMUM OF 2 FEET DEEP AND 8 FEET WIDE WITH SIDE SLOPE OF 1:1 OR FLATTER.
 - CONTRACTOR SHALL POSITION ANTI-SEEP COLLAR SUCH THAT THE COLLARS ARE COMPLETELY CONTAINED WITHIN THE EMBANKMENT.
 - CONTRACTOR SHALL FIT STANDPIPES WITH REMOVABLE CONSTRUCTION ORIFICE PLATE OVER THE PERMANENT DEWATERING ORIFICE. THE CONSTRUCTION ORIFICE SHALL REMAIN IN PLACE UNTIL 70% VEGETATION IS ESTABLISHED OVER THE CONTRIBUTING AREA OF THE POND.
 - IMMEDIATELY INSTALL FILTER FABRIC OVER ALL OUTLETS TO PREVENT SEDIMENT DEPOSITION IN THE PIPING. (REMOVE FOLLOWING AREA STABILIZATION).
 - TURF REINFORCEMENT MATTING SHALL BE INSTALLED IN ACCORDANCE WITH WMDR TECH STANDARD 1052.

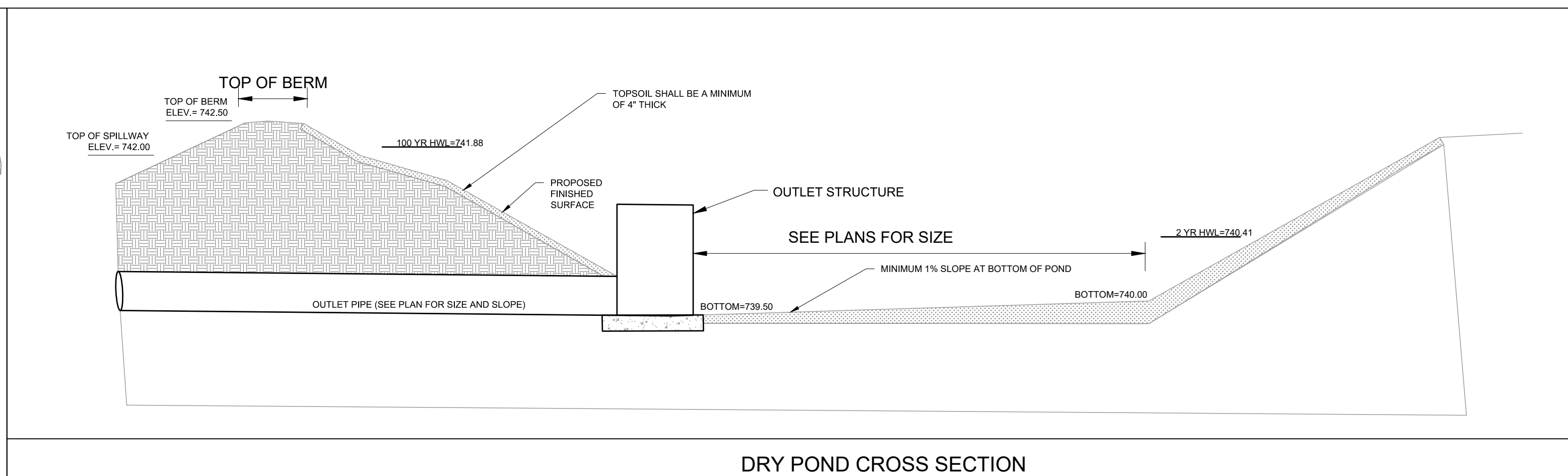
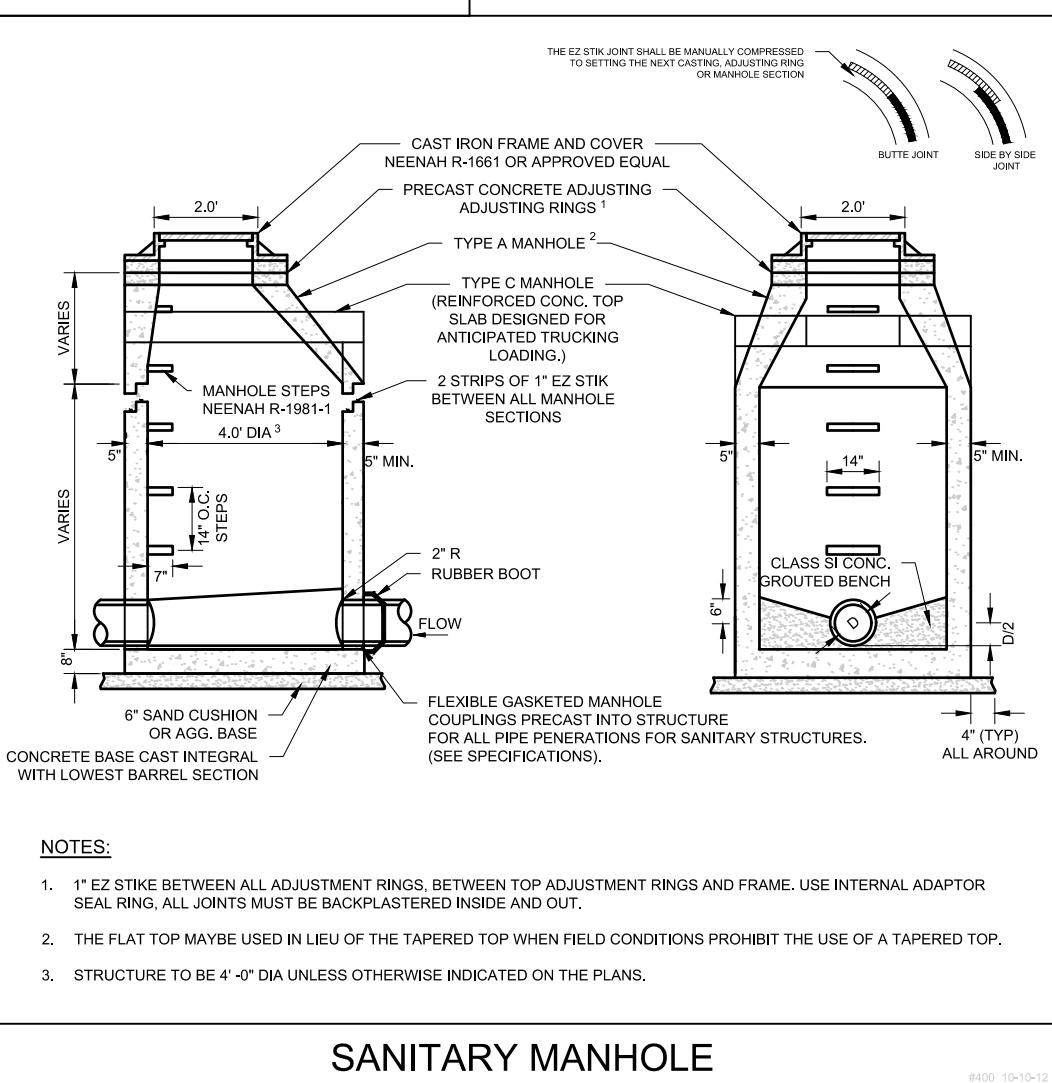
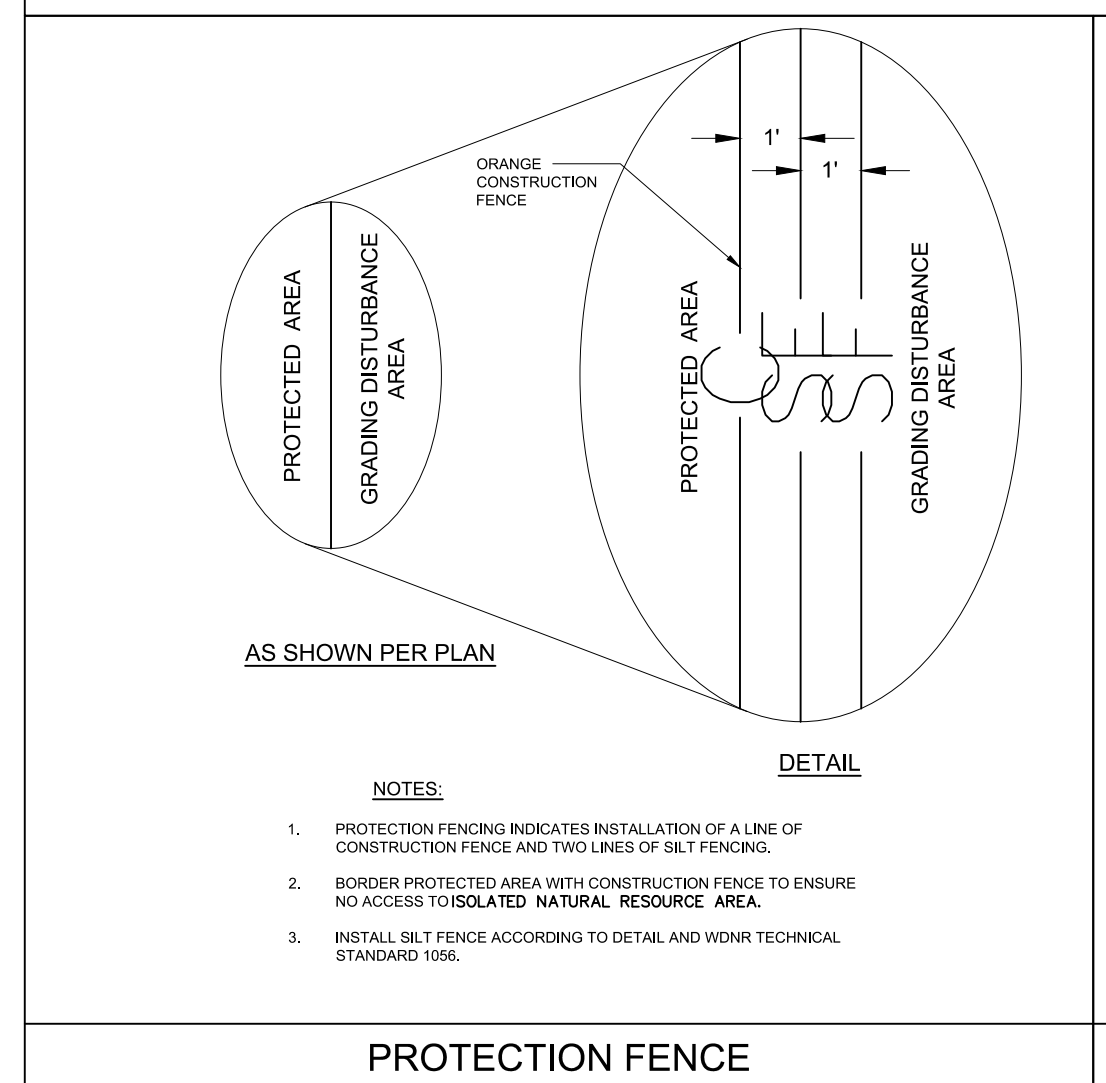
TYPICAL WET POND CROSS SECTION



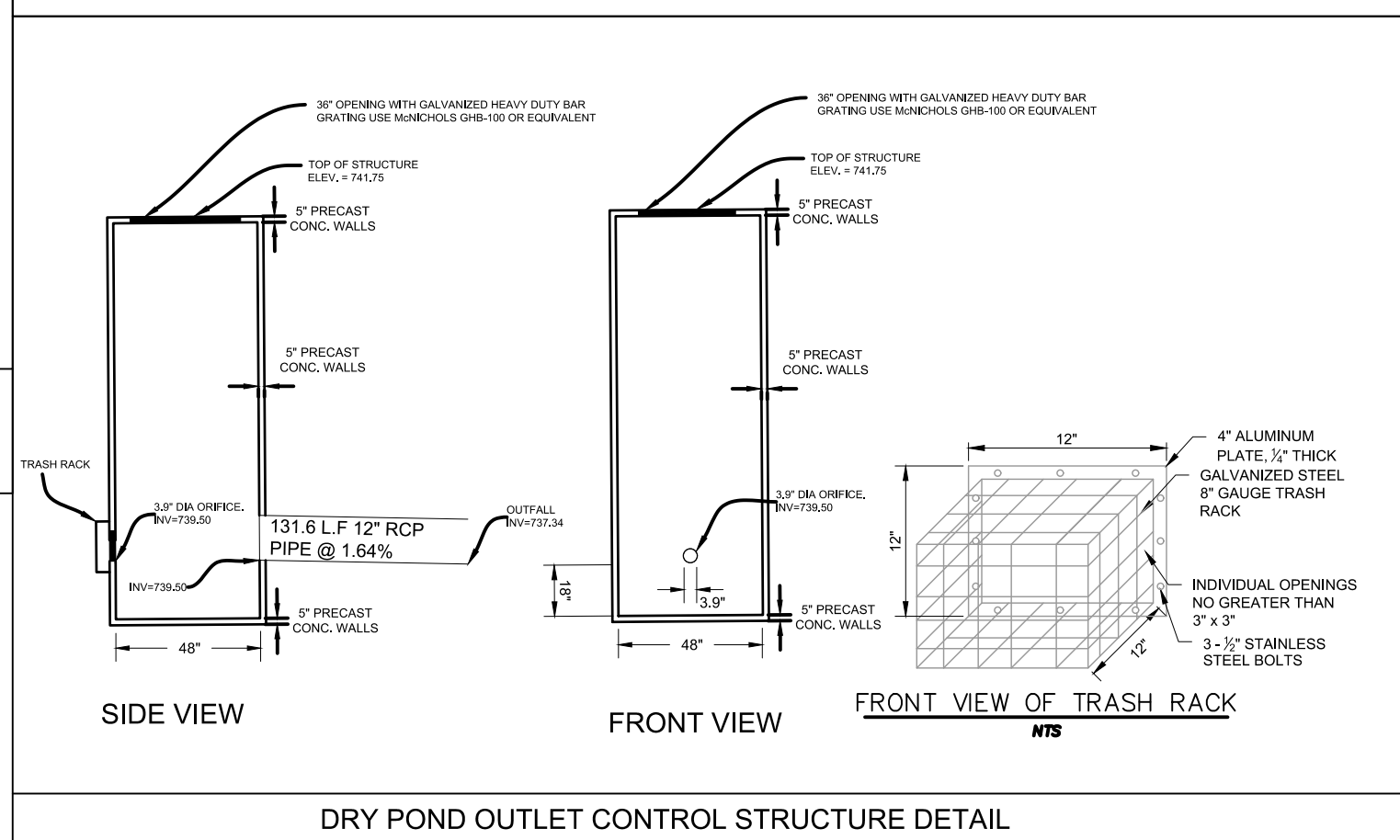
WET POND OUTLET CONTROL STRUCTURE DETAIL



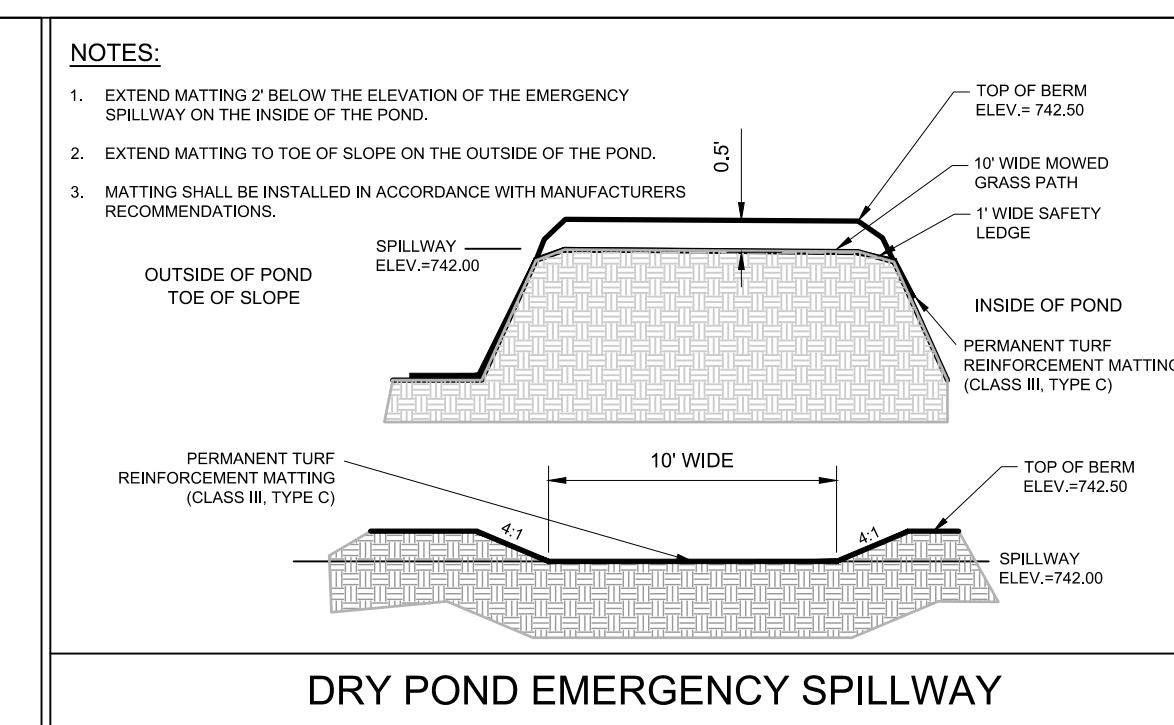
WET POND EMERGENCY SPILLWAY



DRY POND CROSS SECTION



DRY POND OUTLET CONTROL STRUCTURE DETAIL



DRY POND EMERGENCY SPILLWAY

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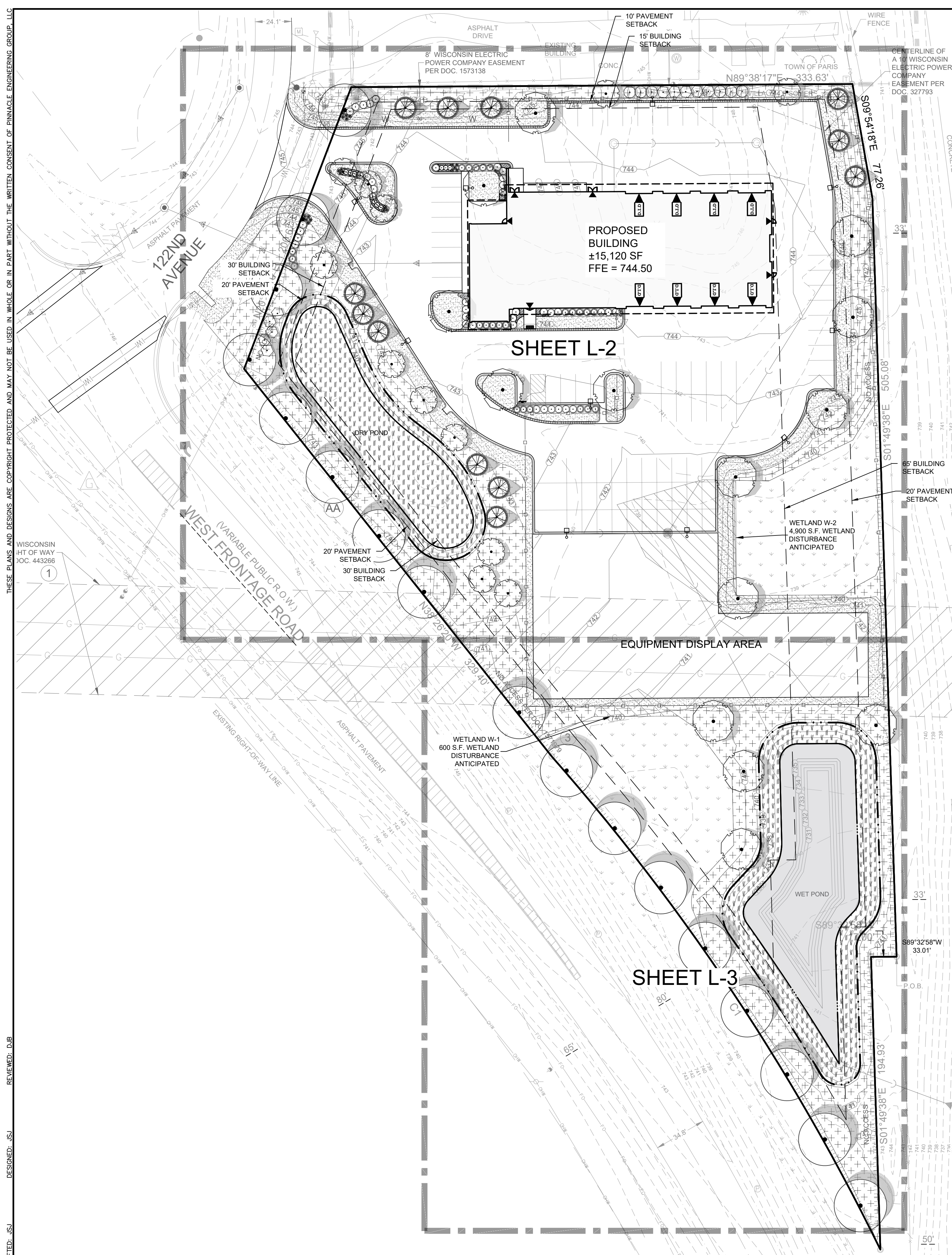
CONSTRUCTION DETAILS

REVISIONS	

FEES JOB No. **2402-00A**
 REG. PM. **MTS**
 START DATE **07-18-22**
 SCALE **N.T.S.**

SHEET C-13
C-13

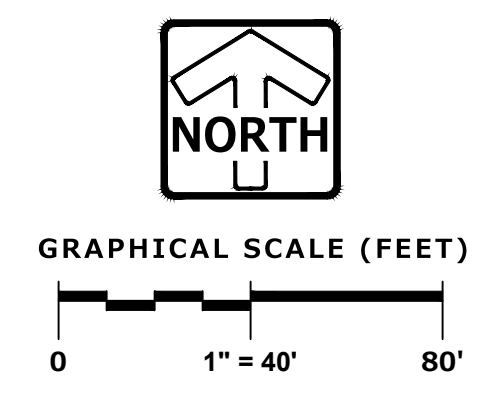
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PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE		
LIST OF POSSIBLE PLANTS:						
	14	DECIDUOUS TREE				
		Acer freemanii 'Autumn Fantasy'	Autumn Fantasy Maple	2" Cal.		
		50' T x 40' W				
		Acer saccharum	Sugar Maple	2" Cal.		
		60' T x 45' W				
		Gleditsia triacanthos inermis 'Shademaster'	Shademaster Locust	2" Cal.		
		60' T x 50' W				
		Gymnocladus dioicus	Kentucky Coffee Tree	2" Cal.		
		70' T x 45' W				
		Quercus x schuetti	Swamp Bur Oak	2" Cal.		
70' T x 65' W						
Tilia tomentosa 'Sterling'	Sterling Silver Linden	2" Cal.				
45' T x 50' W						
	12	ORNAMENTAL TREE				
		Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	1.5" Cal.		
		20' T x 20' W				
		Malus x 'Prairie Maid'	Prairie Maid Crabapple	1.5" Cal.		
		20' T x 25' W				
Malus x 'Sugar Tyme'	Sugar Tyme Crabapple	1.5" Cal.				
25' T x 25' W						
Syringa reticulata 'Ivory Silk'	Ivory Silk Tree Lilac	1.5" Cal.				
25' T x 15' W						
	12	EVERGREEN TREE				
		Abies concolor	White Fir	5' Ht.		
		40' T x 23' W				
		Picea glauca 'Densata'	Black Hills Spruce	5' Ht.		
		30' T x 15' W				
Pinus strobus	White Pine	5' Ht.				
65' T x 30' W						
	17	STREET TREES				
		Acer freemanii 'Autumn Fantasy'	Autumn Fantasy Maple	3" Cal.		
		50' T x 40' W				
		Acer saccharum	Sugar Maple	3" Cal.		
		60' T x 45' W				
		Gleditsia triacanthos inermis 'Shademaster'	Shademaster Locust	3" Cal.		
		60' T x 50' W				
		Gymnocladus dioicus	Kentucky Coffee Tree	3" Cal.		
		70' T x 45' W				
		Quercus x schuetti	Swamp Bur Oak	3" Cal.		
		70' T x 65' W				
		Tilia tomentosa 'Sterling'	Sterling Silver Linden	3" Cal.		
		45' T x 50' W				
		SHRUBS				
			6	LARGE EVERGREEN SHRUB		
				Juniperus x 'J.N Select Blue'	Star Power Juniper	4' Ht.
		Thuja occidentalis 'Holmstrup'	Holmstrup Cedar	4' Ht.	14' T x 4' W	
	10	LARGE DECIDUOUS SHRUB				
		Cephalanthus occidentalis 'Ping Pong'	Ping Pong Buttonbush	3' Ht.	8' T x 8' W	
Physocarpus opulifolius 'Center Glow'	Center Glow Ninebark	3' Ht.	8' T x 8' W			
	26	MEDIUM EVERGREEN SHRUB				
		Juniperus chinensis 'Old Gold'	Old Gold Juniper	2' Ht.	3' T x 5' W	
		Juniperus chinensis 'Sea Green'	Sea Green Juniper	2' Ht.	5' T x 5' W	
		Juniperus virginiana 'Grey Owl'	Eastern Redcedar Juniper	2' Ht.	3' T x 5' W	
		Taxus x media 'Tauntonii'	Tauton Yew	2' Ht.	4' T x 5' W	
	37	MEDIUM DECIDUOUS SHRUB				
		Cornus stolonifera 'Arctic Fire'	Arctic Fire Dogwood	2' Ht.	3' T x 4' W	
		Hydrangea p 'Vanilla Strawberry'	Vanilla Strawberry Hydrangea	2' Ht.	6' T x 5' W	
		Ilex verticillata 'Jim Dandy'	Jim Dandy Winterberry	2' Ht.	5' T x 5' W	
		Ilex verticillata 'Red Sprite'	Red Sprite Winterberry	2' Ht.	5' T x 5' W	
		Rosa rugosa 'Purple Pavement'	Purple Pavement Rugosa Rose	2' Ht.	5' T x 5' W	
		Sambucus nigra 'Black Lace'	Black Lace Elderberry	2' Ht.	6' T x 6' W	
		Syringa meyeri 'Palibin'	Dwarf Korean Lilac	2' Ht.	5' T x 6' W	
	1	LOW EVERGREEN SHRUB				
		Juniperus sabina 'Buffalo'	Buffalo Juniper	24" W	1' T x 7' W	
Taxus x media 'Everlow'	Everlow Yew	24" W	3' T x 5' W			
	9	SMALL DECIDUOUS SHRUB				
		Diervilla lonicera 'Kodiak Orange'	Kodiak Orange Diervilla	1.5' Ht.	4' T x 4' W	
		Hydrangea paniculata 'Bobo'	Bobo Hydrangea	1.5' Ht.	3' T x 4' W	
		Itea virginica 'Little Henry'	Little Henry Sweetspire	1.5' Ht.	3' T x 3' W	
Spiraea japonica 'Magic Carpet'	Magic Carpet Spirea	1.5' Ht.	2' T x 3' W			
	21	TALL ORNAMENTAL GRASS				
		Andropogon gerardii 'Dancing Wind'	Dancing Wind Big Blue Stem	1 gal.	36" T x 30" W	
		Calamagrostis x a 'Karl Foerster'	Karl Foerster Reed Grass	1 gal.	36" T x 24" W	
		Calamagrostis x a 'Overdam'	Overdam Reed Grass	1 gal.	24" T x 24" W	
		Panicum virgatum 'Northwind'	Northwind Switch Grass	1 gal.	42" T x 28" W	
Schizachyrium scoparium 'Blue Heaven'	Blue Heaven Little Bluestem Grass	1 gal.	30" T x 28" W			
	6	SHORT ORNAMENTAL GRASS				
		Deschampsia cespitosa	Tufted Hair Grass	1 gal.	2' T x 2' W	
		Eragrostis spectabilis	Purple Love Grass	1 gal.	24" T x 18" W	
Sporobolus heterolepis 'Tara'	Prairie Dropseed	1 gal.	15" T x 20" W			
SHRUB AREAS						
	140 sf	PERENNIALS	VARIETY			
GROUND COVERS						
	16,561 sf	TURF	Reinders - Cadet 70/30 Fescue/Blue Mix			
	66,686 sf	NO MOW TURF	Reinders No Mow/Low Grow Mix			
	17,734 sf	NATIVE PLANTING	AGRECOL RAINWATER RENEWAL SEED MIX			

LANDSCAPE IMPROVEMENT TABLE	REQUIRED	PROVIDED
TOTAL SITE AREA 188,276 SF		
• OPEN SPACE MINIMUM 15%	28,241 SF	99,220 SF
• TREES 2/1000 SF	99	56
• SHRUBS 2=1 TREE		44.5 (89 SHRUBS)
* NOTE: GAS EASEMENT AREA REMOVED FROM PARKWAY		
PARKWAY 780 FT *		
• TREES 1/50 FT	16	17
FOUNDATION PLANTINGS AREA 130 FT		
• SHRUBS 2/20 FT	13	20
PARKING AREA LANDSCAPE		
• TREES 1/25 FT	3.5	2
• SHRUBS 4=1 TREE		4.5 (18 SHRUBS)



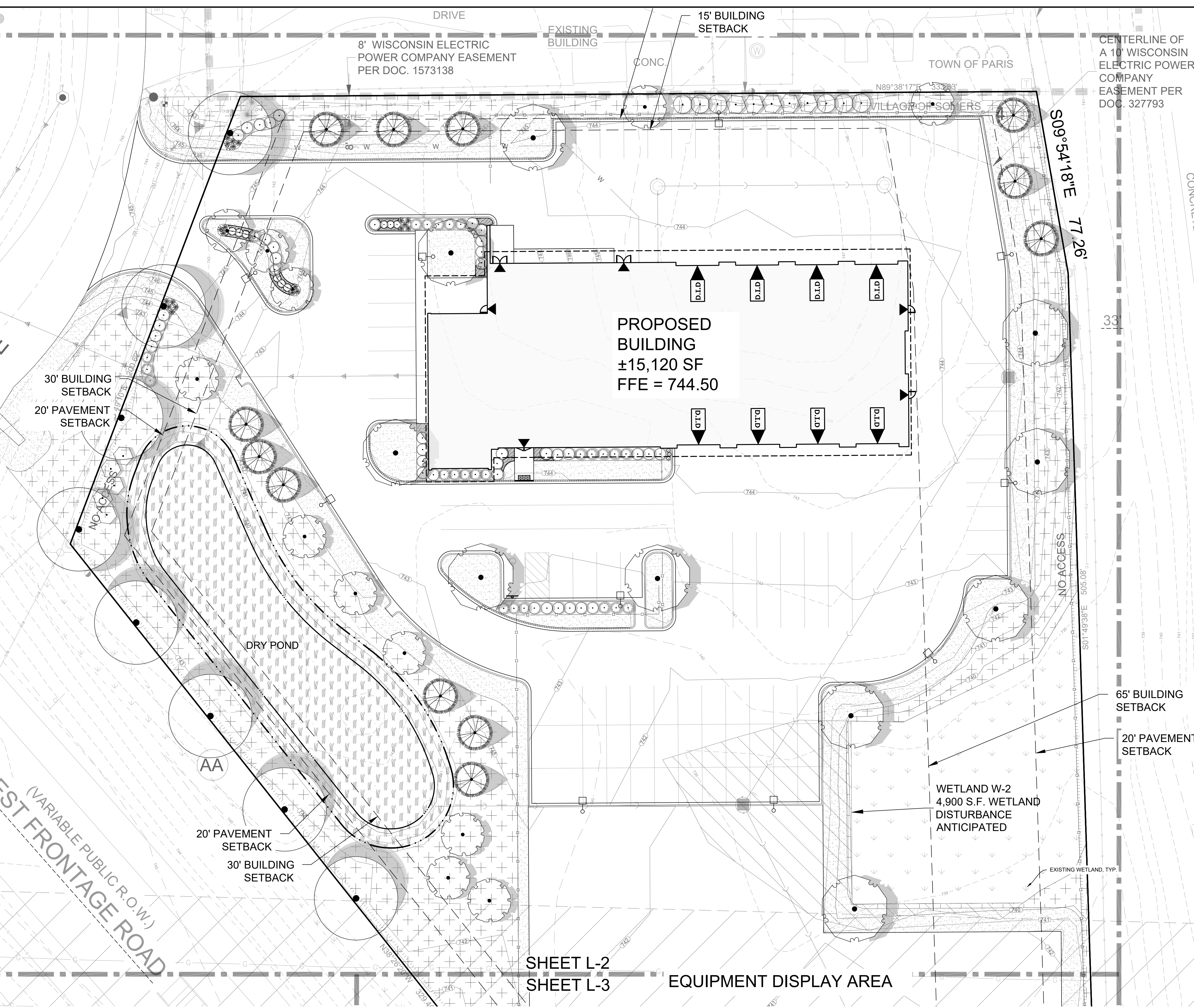
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 PEG JOB No. 2402.00A
 MTS
 START DATE 07-18-24
 SCALE 1" = 40'
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 REVIEWED: DUB
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PLANT KEY				
	TREES	BOTANICAL NAME LIST OF POSSIBLE PLANTS: DECIDUOUS TREE Acer freemanii 'Autumn Fantasy' Acer saccharum Gleditsia triacanthos inermis 'Shademaster' Gymnocladus dioica Quercus x schuetti Tilia tomentosa 'Sterling' ORNAMENTAL TREE Amelanchier x grandiflora 'Autumn Brilliance' Malus x 'Prairie Maid' Malus x 'Sugar Tyne' Syringa reticulata 'Ivory Silk' EVERGREEN TREE Abies concolor Picea glauca 'Densata' Pinus strobus STREET TREES Acer freemanii 'Autumn Fantasy' Acer saccharum Gleditsia triacanthos inermis 'Shademaster' Gymnocladus dioica Quercus x schuetti Tilia tomentosa 'Sterling'	COMMON NAME Autumn Fantasy Maple Sugar Maple Shademaster Locust Kentucky Coffee Tree Swamp Bur Oak Sterling Silver Linden Autumn Brilliance Serviceberry Prairie Maid Crabapple Sugar Tyne Crabapple Ivory Silk Tree Lilac White Fir Black Hills Spruce White Pine Autumn Fantasy Maple Sugar Maple Shademaster Locust Kentucky Coffee Tree Swamp Bur Oak Sterling Silver Linden	
		SHRUBS LARGE EVERGREEN SHRUB Juniperus x 'J.N Select Blue' Thuja occidentalis 'Holmstrup' LARGE DECIDUOUS SHRUB Cephalanthus occidentalis 'Ping Pong' Physocarpus opulifolius 'Center Glow' MEDIUM EVERGREEN SHRUB Juniperus chinensis 'Old Gold' Juniperus chinensis 'Sea Green' Juniperus virginiana 'Grey Owl' Taxus x media 'Tauntonii' MEDIUM DECIDUOUS SHRUB Cornus stolonifera 'Arctic Fire' Hydrangea p 'Vanilla Strawberry' Ilex verticillata 'Jim Dandy' Ilex verticillata 'Red Sprite' Rosa rugosa 'Purple Pavement' Sambucus nigra 'Black Lace' Syringa meyeri 'Palibin' LOW EVERGREEN SHRUB Juniperus sabina 'Buffalo' Taxus x media 'Everlow' SMALL DECIDUOUS SHRUB Diervilla lonicera 'Kodiak Orange' Hydrangea paniculata 'Bobo' Itea virginica 'Little Henry' Spiraea japonica 'Magic Carpet'	COMMON NAME Star Power Juniper Holmstrup Cedar Ping Pong Buttonbush Center Glow Ninebark Old Gold Juniper Sea Green Juniper Eastern Redcedar Juniper Taunton Yew Arctic Fire Dogwood Vanilla Strawberry Hydrangea Jim Dandy Winterberry Red Sprite Winterberry Purple Pavement Rugosa Rose Black Lace Elderberry Dwarf Korean Lilac Buffalo Juniper Everlow Yew Kodiak Orange Diervilla Bobo Hydrangea Little Henry Sweetspire Magic Carpet Spirea Dancing Wind Big Blue Stem Karl Foerster Reed Grass Overdam Reed Grass Northwind Switch Grass Blue Heaven Little Bluestem Grass	
		SHRUB AREAS 	BOTANICAL NAME PERENNIALS	COMMON NAME VARIETY
		GROUND COVERS 	BOTANICAL NAME TURF	COMMON NAME Reinders - Cadet 70/30 Fescue/Blue Mix
			NO MOW TURF	Reinders No Mow/Low Grow Mix
			NATIVE SEED PLANTING	AGRECOLD RAINWATER RENEWAL SEED MIX

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 SUITE 100, BROOKFIELD, WI 53186
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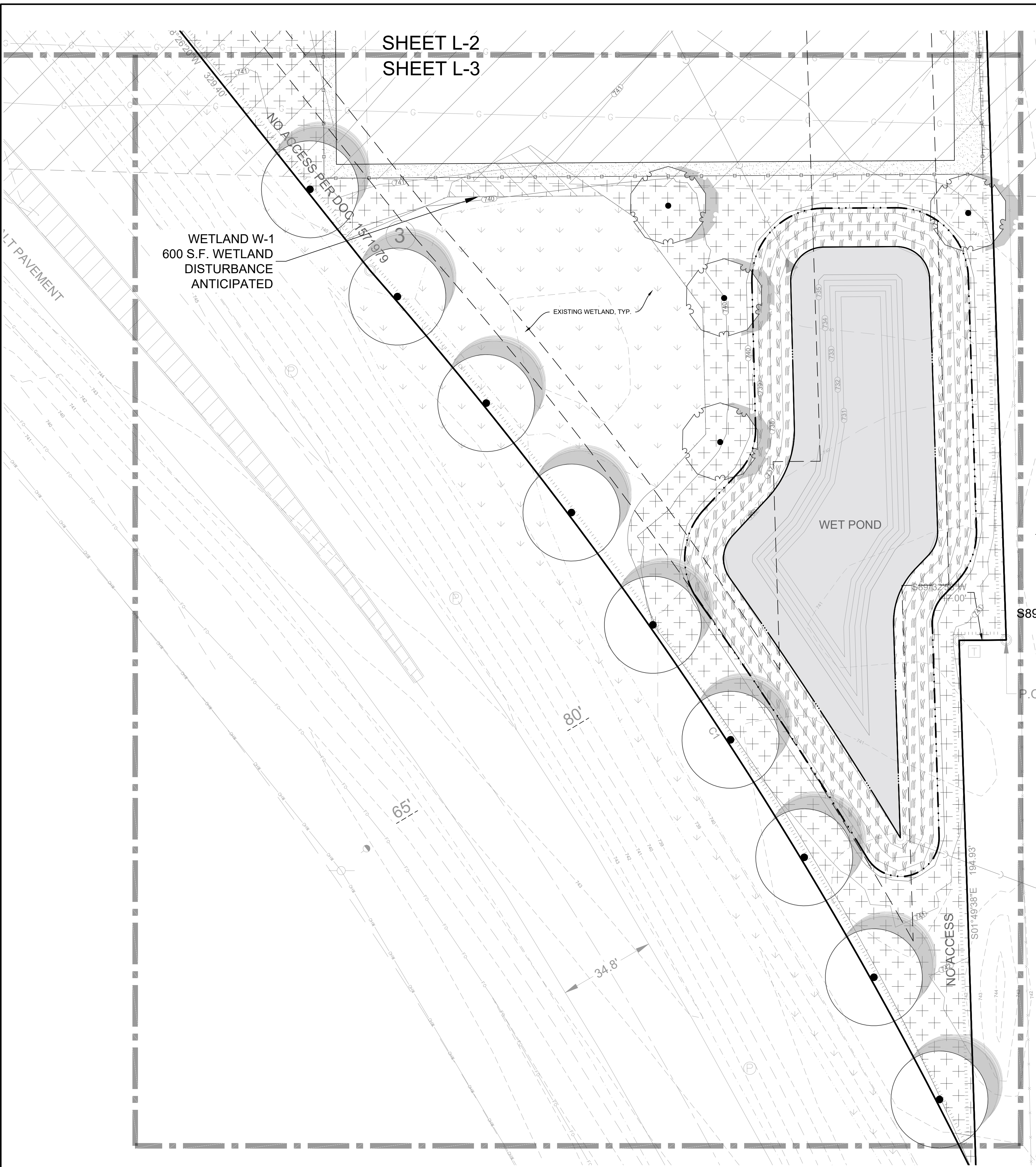
BOBCAT SOMERS
LANDSCAPE ENLARGEMENT
 122ND AVE & WEST FRONTAGE ROAD
 SHEET L-2
 SHEET L-3

REVISIONS

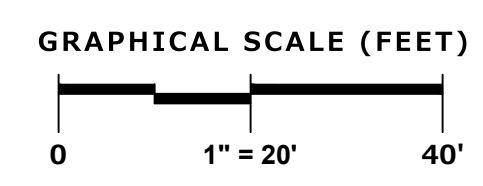
SHEET
L-2
L-4
 PEG JOB No. 2402.00A
 MTS
 START DATE 07-18-24
 SCALE 1" = 20'
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PLANT KEY		
TREES	BOTANICAL NAME LIST OF POSSIBLE PLANTS:	COMMON NAME
	DECIDUOUS TREE	
	Acer freemanii 'Autumn Fantasy'	Autumn Fantasy Maple
	Acer saccharum	Sugar Maple
	Gleditsia triacanthos inermis 'Shademaster'	Shademaster Locust
	Gymnocladus dioica	Kentucky Coffee Tree
	ORNAMENTAL TREE	
	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry
	Malus x 'Prairie Maid'	Prairie Maid Crabapple
	Malus x 'Sugar Tyme'	Sugar Tyme Crabapple
	Syringa reticulata 'Ivory Silk'	Ivory Silk Tree Lilac
	EVERGREEN TREE	
	Abies concolor	White Fir
	Picea glauca 'Densata'	Black Hills Spruce
	Pinus strobus	White Pine
	STREET TREES	
	Acer freemanii 'Autumn Fantasy'	Autumn Fantasy Maple
	Acer saccharum	Sugar Maple
	Gleditsia triacanthos inermis 'Shademaster'	Shademaster Locust
	Gymnocladus dioica	Kentucky Coffee Tree
	Quercus x schuetti	Swamp Bur Oak
	Tilia tomentosa 'Sterling'	Sterling Silver Linden
	SHRUBS	
	BOTANICAL NAME	COMMON NAME
	LARGE EVERGREEN SHRUB	
	Juniperus x 'J.N Select Blue'	Star Power Juniper
	Thuja occidentalis 'Holmstrup'	Holmstrup Cedar
	LARGE DECIDUOUS SHRUB	
	Cephalanthus occidentalis 'Ping Pong'	Ping Pong Buttonbush
	Physocarpus opulifolius 'Center Glow'	Center Glow Ninebark
	MEDIUM EVERGREEN SHRUB	
	Juniperus chinensis 'Old Gold'	Old Gold Juniper
Juniperus chinensis 'Sea Green'	Sea Green Juniper	
Juniperus virginiana 'Grey Owl'	Eastern Redcedar Juniper	
Taxus x media 'Tauntonii'	Tauntun Yew	
MEDIUM DECIDUOUS SHRUB		
Cornus stolonifera 'Arctic Fire'	Arctic Fire Dogwood	
Hydrangea p 'Vanilla Strawberry'	Vanilla Strawberry Hydrangea	
Ilex verticillata 'Jim Dandy'	Jim Dandy Winterberry	
Ilex verticillata 'Red Sprite'	Red Sprite Winterberry	
Rosa rugosa 'Purple Pavement'	Purple Pavement Rugosa Rose	
Sambucus nigra 'Black Lace'	Black Lace Elderberry	
Syringa meyeri 'Palibin'	Dwarf Korean Lilac	
LOW EVERGREEN SHRUB		
Juniperus sabinia 'Buffalo'	Buffalo Juniper	
Taxus x media 'Everlow'	Everlow Yew	
SMALL DECIDUOUS SHRUB		
Diervilla lonicera 'Kodiak Orange'	Kodiak Orange Diervilla	
Hydrangea paniculata 'Bobo'	Bobo Hydrangea	
Itea virginica 'Little Henry'	Little Henry Sweetpire	
Spiraea japonica 'Magic Carpet'	Magic Carpet Spirea	
TALL ORNAMENTAL GRASS		
Andropogon gerardii 'Dancing Wind'	Dancing Wind Big Blue Stem	
Calamagrostis x a 'Karl Foerster'	Karl Foerster Reed Grass	
Calamagrostis x a 'Overdam'	Overdam Reed Grass	
Panicum virgatum 'Northwind'	Northwind Switch Grass	
Schizachyrium scoparium 'Blue Heaven'	Blue Heaven Little Bluestem Grass	
SHORT ORNAMENTAL GRASS		
Deschampsia cespitosa	Tufted Hair Grass	
Eragrostis spectabilis	Purple Love Grass	
Sporobolus heterolepis 'Tara'	Prairie Dropseed	
SHRUB AREAS	BOTANICAL NAME	COMMON NAME
PERENNIALS		VARIETY
GROUND COVERS	BOTANICAL NAME	COMMON NAME
TURF		Reinders - Cadet 70/30 Fescue/Blue Mix
NO MOW TURF		Reinders No Mow/Low Grow Mix
NATIVE SEED PLANTING		AGRECOL RAINWATER RENEWAL SEED MIX



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REVISIONS

PEG JOB No. 2402.00A MTS START DATE 07-18-22 SCALE 1" = 20'	SHEET L-3 L-4
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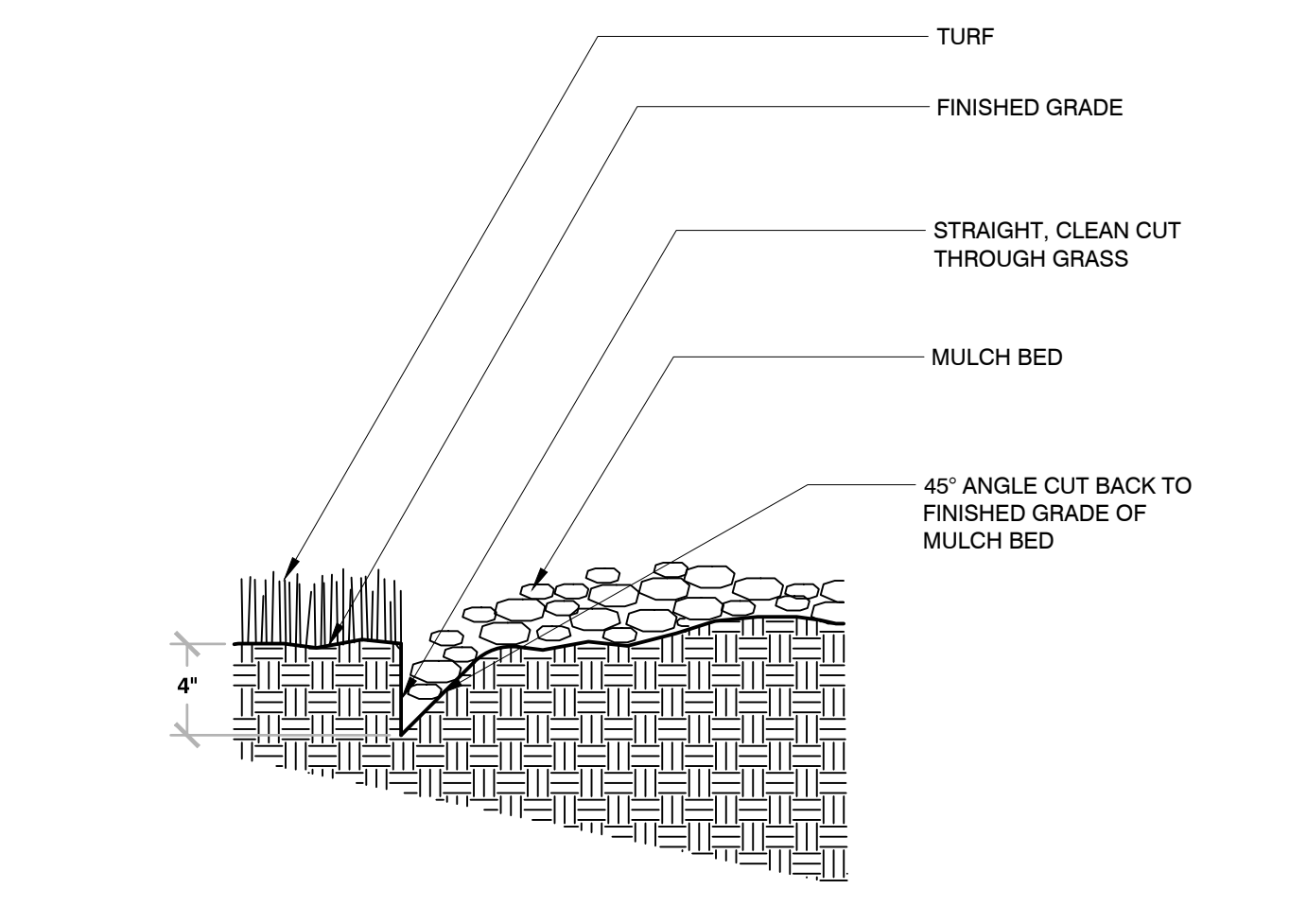
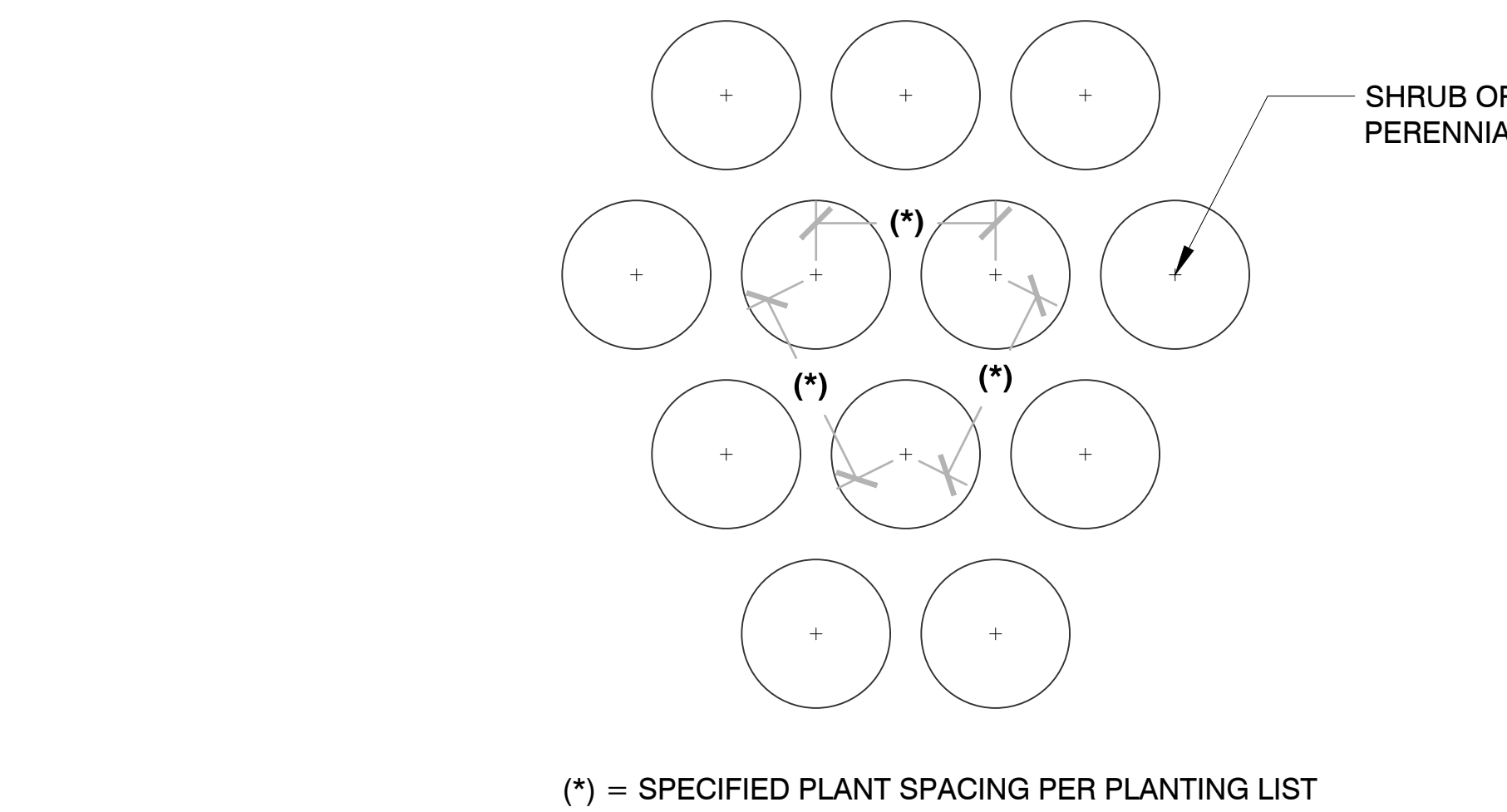
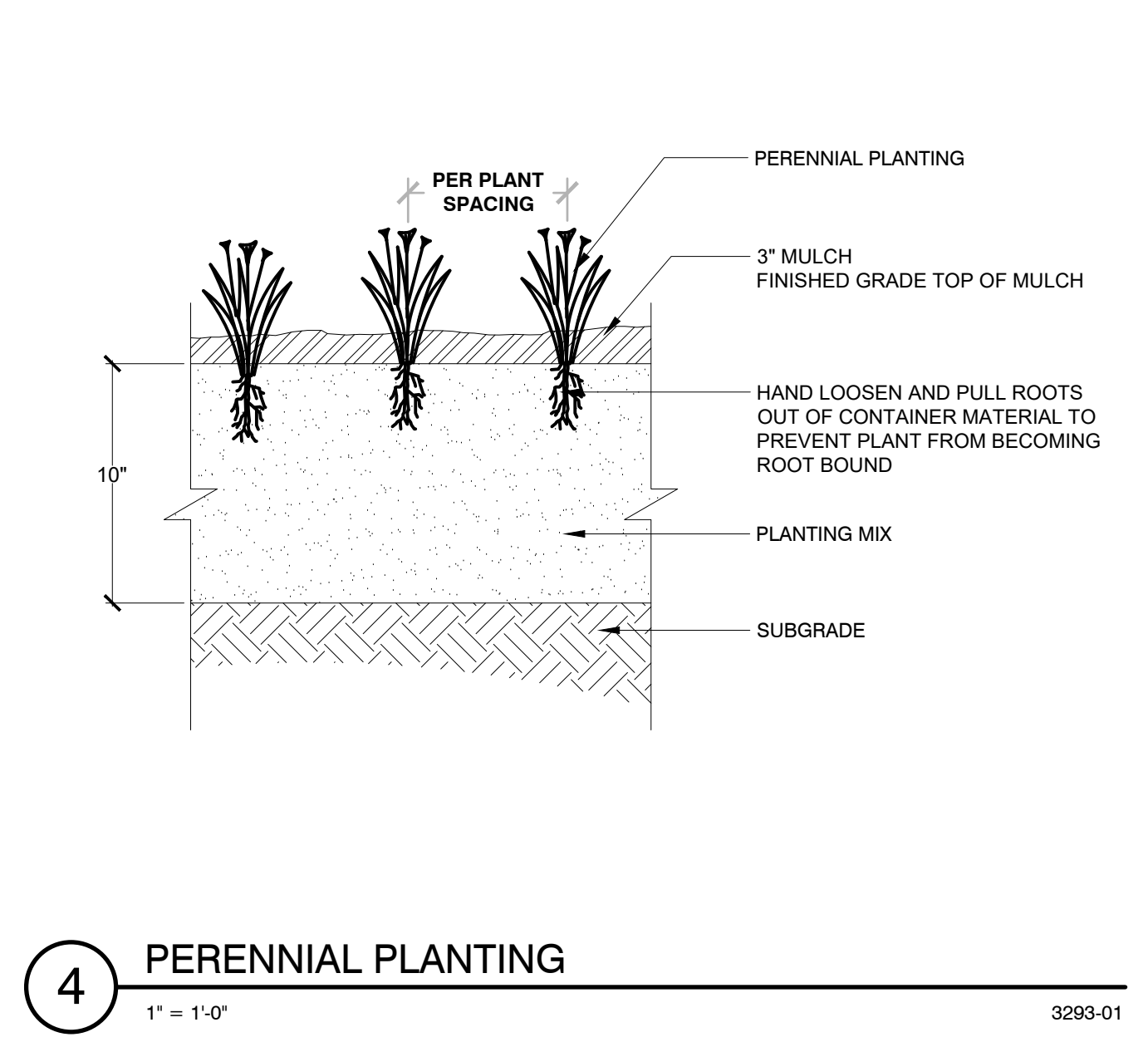
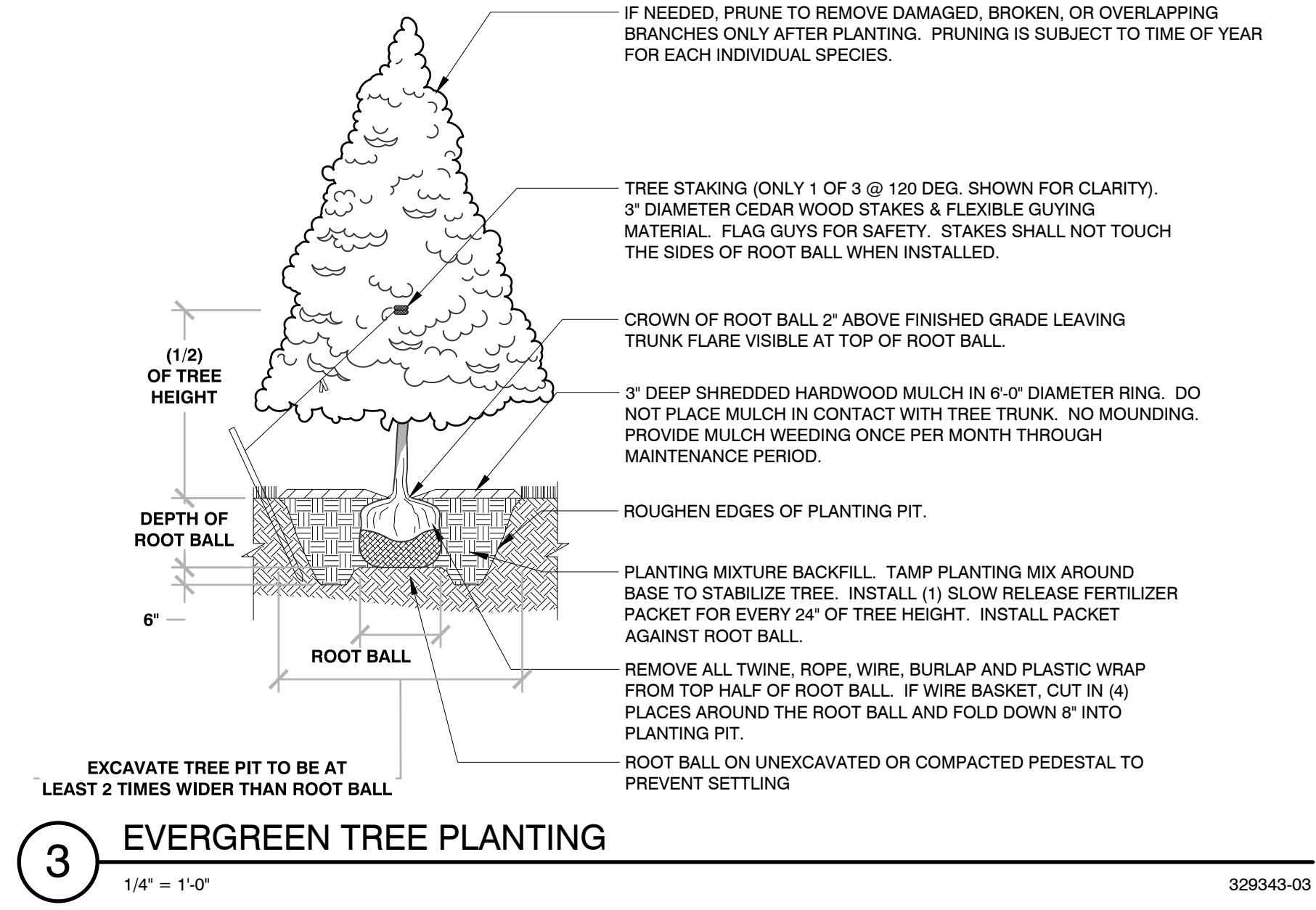
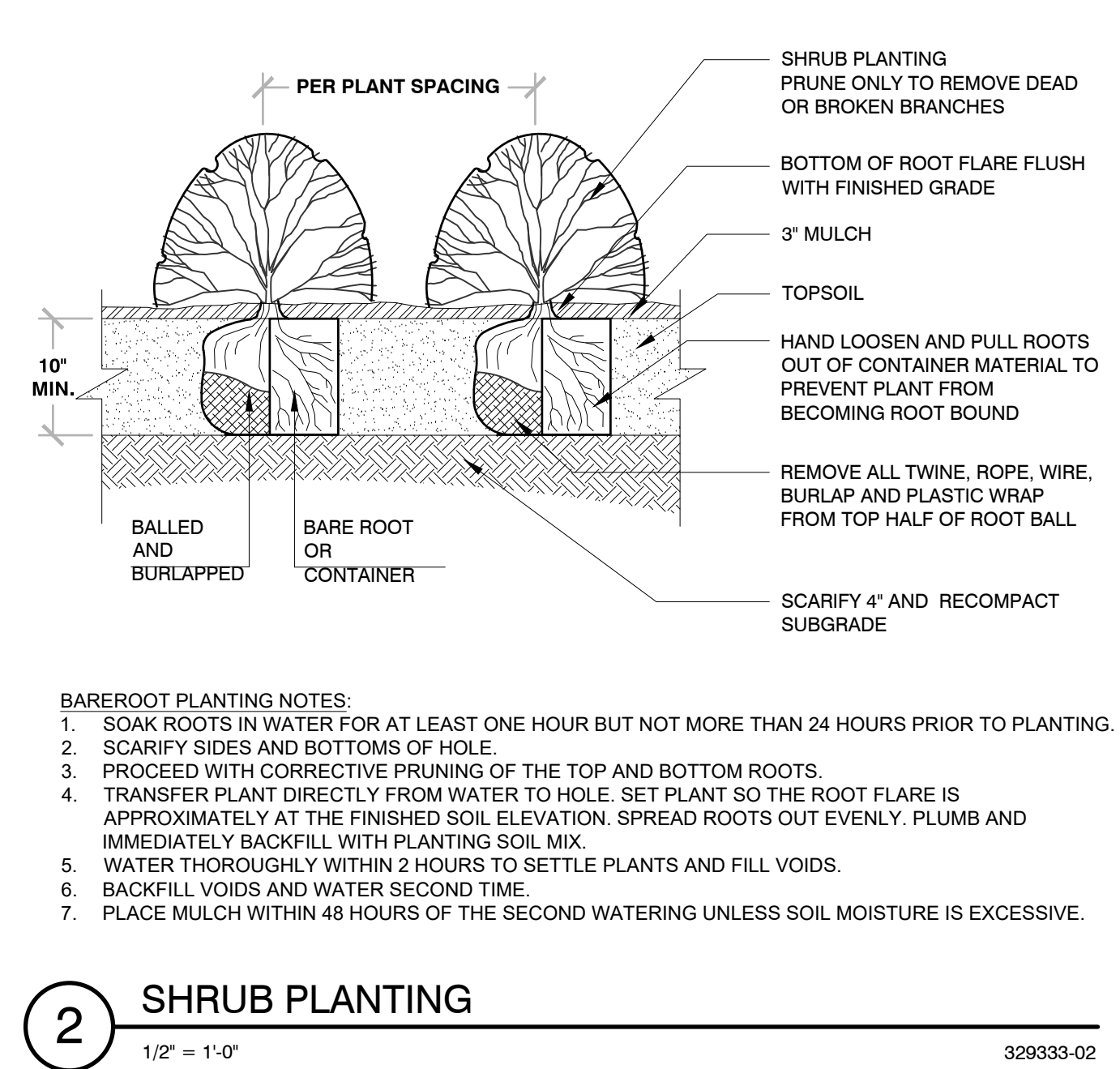
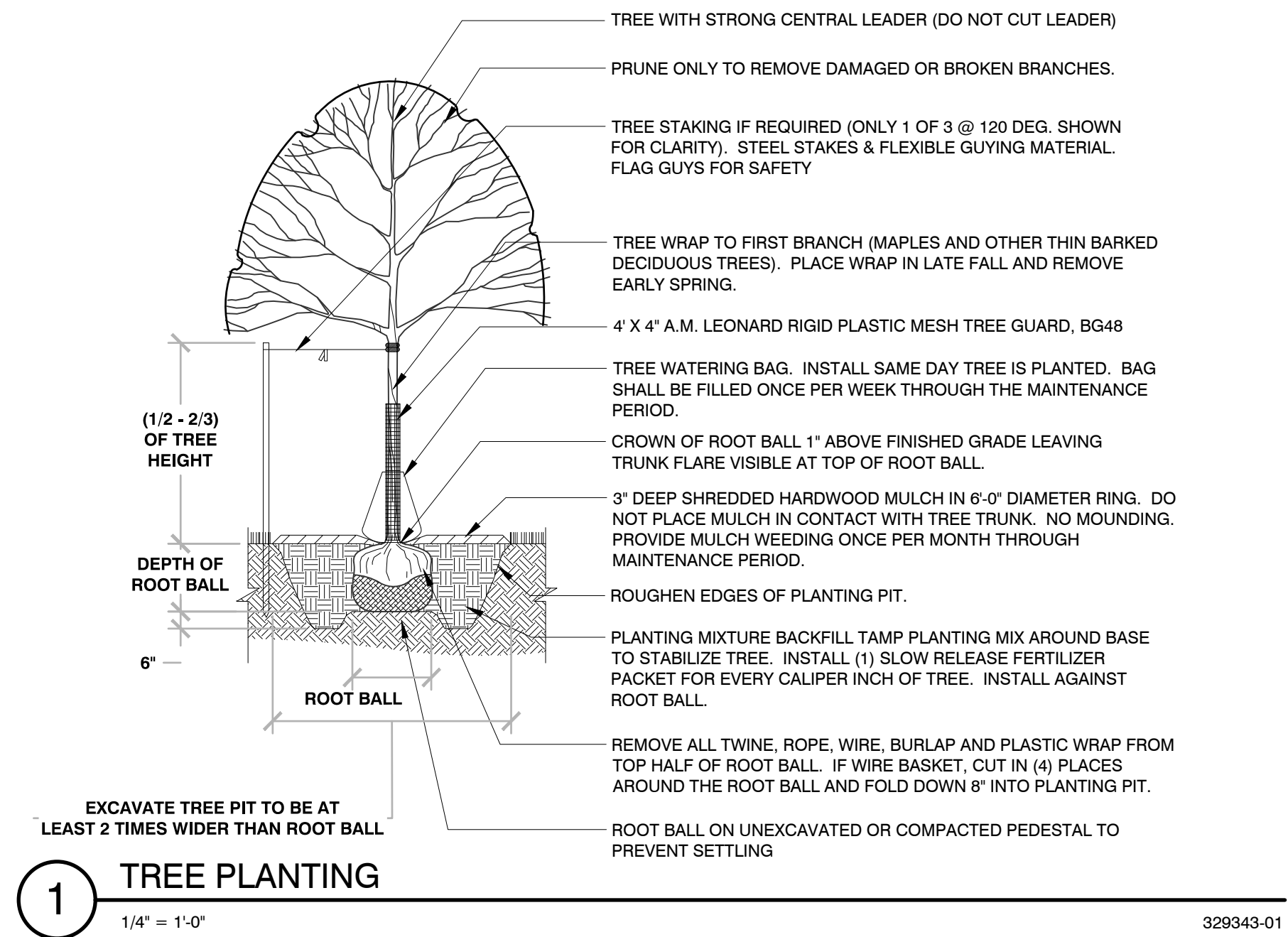
GENERAL PLANTING NOTES

- THE LAYOUT OF ALL PLANTING BEDS AND INDIVIDUAL TREES AND SHRUBS SHALL BE STAKED BY THE CONTRACTOR IN ADVANCE OF INSTALLATION. FLAGGING, STAKES, OR PAINT MAY BE USED TO DELINEATE LOCATIONS AS SCALED FROM THE PLANS. AN APPROVED REPRESENTATIVE WILL REVIEW THESE LOCATIONS WITH THE CONTRACTOR AND MAKE MINOR ADJUSTMENTS AS NECESSARY. BED LAYOUT SHALL ALSO INCLUDE PERENNIAL GROUPINGS BY SPECIES.
- THE CONTRACTOR IS RESPONSIBLE FOR INDEPENDENTLY DETERMINING THE PLANT MATERIAL QUANTITIES REQUIRED BY THE LANDSCAPE PLANS. REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT.
- NO PLANT MATERIAL OR PLANT SIZE SUBSTITUTIONS WILL BE ACCEPTED WITHOUT APPROVAL BY THE LANDSCAPE ARCHITECT. ANY CHANGES SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT IN WRITING PRIOR TO INSTALLATION.
- ALL BNB STOCK SHALL BE NURSERY GROWN IN A CLAY LOAM SOIL FOR A MINIMUM OF THREE GROWING SEASONS WITHIN 200 MILES OF PROJECT LOCATION, IN A ZONE COMPATIBLE WITH USDA HARDINESS ZONE 5A. SEED SHALL BE PROVIDED FROM A NURSERY (WITHIN 200 MILES) WITH A SIMILAR PLANT HARDINESS ZONE AS PROJECT LOCATION. EXISTING SOIL SHALL BE AMENDED PER SOIL ANALYSIS REPORT TO ENSURE A PROPER GROWING MEDIUM IS ACHIEVED.
- ALL PLANT MATERIAL SHALL COMPLY WITH STANDARDS DESCRIBED IN AMERICAN STANDARD OF NURSERY STOCK - Z60.1 ANSI. LANDSCAPE ARCHITECT OR OWNERS AUTHORIZED REPRESENTATIVE RESERVES THE RIGHT TO INSPECT AND POTENTIALLY REJECT ANY PLANT MATERIAL DEEMED TO NOT MEET THE REQUIRED STANDARDS.
- ALL STOCK SHALL BE FREE OF DISEASES AND HARMFUL INSECTS, DAMAGE, DISORDERS AND DEFORMITIES.
- TREES SHALL HAVE SINGLE, STRAIGHT TRUNKS AND WELL BALANCED BRANCH SYSTEMS. MULTI-STEM TREES SHALL HAVE 3-4 STRAIGHT TRUNKS AND WELL BALANCED BRANCH SYSTEMS. HEIGHT-TO-CALIPER RATIOS SHALL BE CONSISTENT WITH THE LATEST EDITION OF ANSI Z60.1.
- ROOT SYSTEMS SHALL BE LARGE ENOUGH TO ALLOW FOR FULL RECOVERY OF THE TREE, AND SHALL CONFORM TO STANDARDS AS THEY APPEAR IN THE MOST CURRENT REVISION OF THE AMERICAN ASSOCIATION OF NURSEYMEN'S AMERICAN STANDARD OF NURSERY STOCK ANSI Z60.1.
- BNB TREES SHALL BE DUG WITH A BALL OF SOIL, NOT SOFT BALLED OR POTTED AND SHALL BE FIRM IN THEIR ROOTBALL. ROOT BALL SHALL BE WRAPPED (WITH BIODEGRADABLE MATERIAL). THE TREE ROOT FLARE, OR COLLAR, SHALL BE AT OR WITHIN THE TOP THREE INCHES OF GRADE.
- ALL SPRING TREES MUST BE FRESHLY DUG IN THE MOST RECENT SPRING.
- ALL AUTUMN TREES MUST BE FRESHLY DUG IN THE MOST RECENT AUTUMN.
- TREES SHALL BE ALIVE, HEALTHY AND APPROPRIATELY MOIST, AT TIME OF DELIVERY. TREES SHALL BE SUBJECT TO INSPECTION FOR CONFORMITY TO SPECIFICATION REQUIREMENTS AND APPROVAL BY THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE. THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY TREES THAT DO NOT MEET THE SPECIFICATIONS OR THAT HAVE BEEN DAMAGED DURING SHIPMENT. THE LANDSCAPE INSTALLER MUST RECEIVE APPROVAL FROM LANDSCAPE ARCHITECT FOR ANY SUBSTITUTIONS OR ALTERATIONS.
- ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH PLANTING DETAILS.
- ALL PLANTING BEDS SHALL HAVE A MINIMUM 10" DEPTH OF PREPARED SOIL. WITH APPROVAL, EXISTING SOIL MAY BE UTILIZED PROVIDED THE PROPER SOIL AMENDMENTS ARE TILLED THOROUGHLY INTO THE TOP 10" OF SOIL. REFER TO SOIL PLACEMENT NOTES.
- WHILE PLANTING TREES AND SHRUBS, BACKFILL 2/3 OF PLANTING HOLE AND WATER TREE THOROUGHLY BEFORE INSTALLING THE REMAINDER OF SOIL MIXTURE. AFTER ALL SOIL HAS BEEN PLACED INTO THE PLANTING HOLE WATER THOROUGHLY AGAIN.
- THE CONTRACTOR MUST LABEL ALL TREES WITH THE COMMON AND BOTANICAL NAMES PRIOR TO FINAL INSPECTION.
- ALL PLANTING BEDS SHALL BE MULCHED WITH 3" DEEP SHREDDED HARDWOOD MULCH, AND ALL TREES PLANTED IN TURF AREAS SHALL RECEIVE A 3" DEEP SHREDDED HARDWOOD MULCHED RING AS SHOWN IN PLANTING DETAILS.
- ALL PLANTING BEDS AND TREE RINGS SHALL HAVE A 4" DEEP TRENCHED BED EDGE CREATED BY EITHER A FLAT LANDSCAPE SPADE OR MECHANICAL EDGER. BED EDGES ARE TO BE CUT CLEAN AND SMOOTH AS SHOWN ON LANDSCAPE PLANS WITH A CLEAN DEFINITION BETWEEN TURF AND PLANTING AREAS.
- ALL TURF SEED AREAS SHALL RECEIVE A MINIMUM OF 6" DEPTH OF TOPSOIL. WITH APPROVAL, EXISTING SOIL MAY BE UTILIZED PROVIDED THE PROPER SOIL AMENDMENTS ARE TILLED THOROUGHLY INTO THE TOP 6" OF SOIL AS INDICATED IN THE SOIL PLACEMENT NOTES. REQUIRED AMENDMENTS SHALL BE DETERMINED BASED ON A SOIL ANALYSIS TO BE PERFORMED. ALL TOPSOIL AMENDMENT SHALL BE AGED WEED FREE MANURE OR CLASS 1 ORGANIC MATTER.
- FOR LAWN SEEDING, APPLY A STARTER FERTILIZER AND SEED UNIFORMLY AT THE RATE RECOMMENDED BY MANUFACTURER, AND PROVIDE A MULCH COVERING THAT IS SUITABLE TO PROMOTE SEED GERMINATION AND TURF ESTABLISHMENT. CONTRACTOR TO PROVIDE FERTILIZER, SEED, AND MULCH SPECIFICATIONS TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION. EROSION CONTROL MEASURES ARE TO BE INSTALLED IN THOSE AREAS REQUIRING STABILIZATION (SWALES, SLOPES EXCEEDING 1:3, AND THOSE LOCATIONS INDICATED IN CIVIL DRAWINGS).
- THE CONTRACTOR TO ENSURE A SMOOTH, UNIFORM QUALITY TURF IS ACHIEVED WITH NO BARE SPOTS LARGER THAN 6" X 6". ANY BARE SPOTS LARGER THAN 6" X6" AT THE END OF ESTABLISHMENT PERIOD SHALL BE RESEED AT THE CONTRACTORS EXPENSE TO OBTAIN A DENSE, UNIFORM LAWN.
- ALL FINISH GRADING AND LAWN AREAS TO BE INSTALLED BY LANDSCAPE CONTRACTOR.
- ALL DISTURBED AREAS WITHIN THE PROJECT SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
- ALL DISTURBED AREAS OUTSIDE THE LIMITS OF WORK SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, INCLUDING ANY IRRIGATION LINES, PRIOR TO DIGGING. CONSULT DIGGERS HOTLINE.

- TREES SHALL BE INSTALLED NO CLOSER THAN:
 - 10 FEET FROM ANY FIRE HYDRANT
 - 7 FEET FROM STORM SEWER, SANITARY SEWER LATERALS, AND WATER SERVICE
- THE CONTRACTOR SHALL ENSURE THAT SOIL CONDITIONS AND COMPACTION ARE ADEQUATE TO ALLOW FOR PROPER DRAINAGE AROUND THE CONSTRUCTION SITE. UNDESIRABLE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING OF WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE PROPER SURFACE AND SUBSURFACE DRAINAGE IN ALL AREAS
- THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS, FEES, AND LICENSES NECESSARY FOR THE INSTALLATION OF THIS PLAN.
- THE CONTRACTOR IS TO REVIEW ALL SITE ENGINEERING DOCUMENTS PRIOR TO INSTALLATION. ANY CONFLICTS MUST BE REPORTED TO THE LANDSCAPE ARCHITECT. THESE LANDSCAPE DRAWINGS ARE FOR THE INSTALLATION OF PLANT MATERIALS ONLY UNLESS OTHERWISE STATED.
- THE CONTRACTOR SHALL PROVIDE WATERING AND MAINTENANCE SERVICES FOR A PERIOD OF 60 DAYS TO ENSURE VEGETATIVE ESTABLISHMENT. UPON COMPLETION OF THE PROJECT, CONTRACTOR SHALL SUPPLY THE OWNER IN WRITING WITH ONGOING WATERING AND MAINTENANCE INSTRUCTIONS.
- PLANT MATERIALS SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM TIME OF OWNER ACCEPTANCE. ONLY ONE REPLACEMENT PER PLANT WILL BE REQUIRED DURING THE WARRANTY PERIOD EXCEPT IN THE EVENT OF FAILURE TO COMPLY WITH THE SPECIFIED REQUIREMENTS.
- THE CONTRACTOR IS RESPONSIBLE TO CONDUCT A FINAL WALK THROUGH WITH THE LANDSCAPE ARCHITECT AND OR OWNERS REPRESENTATIVE TO ANSWER QUESTIONS, PROVIDE INSTRUCTIONS, AND ENSURE THAT PROJECT REQUIREMENTS HAVE BEEN MET.

SOIL PLACEMENT NOTES

- LOOSEN SUBGRADE TO A MINIMUM DEPTH INDICATED IN PLANTING NOTES USING A CULTI-MULCHER OR SIMILAR EQUIPMENT, AND REMOVE STONES MEASURING OVER 1-1/2 INCHES IN ANY DIMENSION, STICKS, RUBBISH AND OTHER EXTRANEOUS MATTER. AREAS ADJACENT TO WALKS AND PAVEMENT SHALL BE FREE OF EXCESS STONE AND PAVING MATERIALS SO AS TO PROVIDE AN UNINTERRUPTED CROSS SECTION OF SOIL. INTERNAL PARKING ISLANDS SHALL BE LOOSENED TO A DEPTH OF 30".
- THOROUGHLY BLEND PLANTING SOIL MIX FOR PLANTING BED AREAS. (1 PART EXISTING SOIL, 1 PART TOPSOIL, 1 PART ORGANIC SOIL AMENDMENT, 2.9 POUNDS PER CUBIC YARD OF 4-4-4 ANALYSIS SLOW-RELEASE FERTILIZER)
- TREE AND SHRUB HOLES SHALL BE FILLED WITH A PREPARED PLANTING MIXTURE OF 1 PART TOPSOIL, 2 PARTS PLANTING SOIL MIX.
- SPREAD SOIL AND SOIL AMENDMENTS TO DEPTH INDICATED ON DRAWINGS, BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER NATURAL SETTLEMENT. (FINISH GRADE OF PLANTING BEDS SHALL BE 3" BELOW ALL ADJACENT SURFACES. FINISH GRADE OF TURF SEEDING AREAS SHALL BE 1" BELOW ALL ADJACENT HARD SURFACES, WALKS, AND CURBS.)
- PLACE APPROXIMATELY 1/2 OF TOTAL AMOUNT OF SOIL REQUIRED. WORK INTO TOP OF LOOSENED SUBGRADE TO CREATE A TRANSITION LAYER, THEN PLACE REMAINDER OF THE SOIL. SOIL TRANSITION LAYER SHALL BE TILLED TO A MINIMUM DEPTH OF 6" BELOW THE DEPTH OF NEWLY PLACED SOIL. PARKING LOT ISLANDS SHALL BE CROWNED TO A HEIGHT OF 6" TO PROVIDE PROPER DRAINAGE UNLESS OTHERWISE NOTED.
- DO NOT SPREAD IF PLANTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.
- FINISH GRADING: GRADE SOIL TO A SMOOTH, UNIFORM SURFACE PLANE WITH A LOOSE, UNIFORMLY FINE TEXTURE.
- ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES.
- RESTORE PLANTING BEDS IF ERODED OR OTHERWISE DISTURBED AFTER FINISH GRADING AND BEFORE PLANTING.



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BOBCAT SOMERS

122ND AVE & WEST FRONTAGE ROAD

LANDSCAPE NOTES & DETAILS

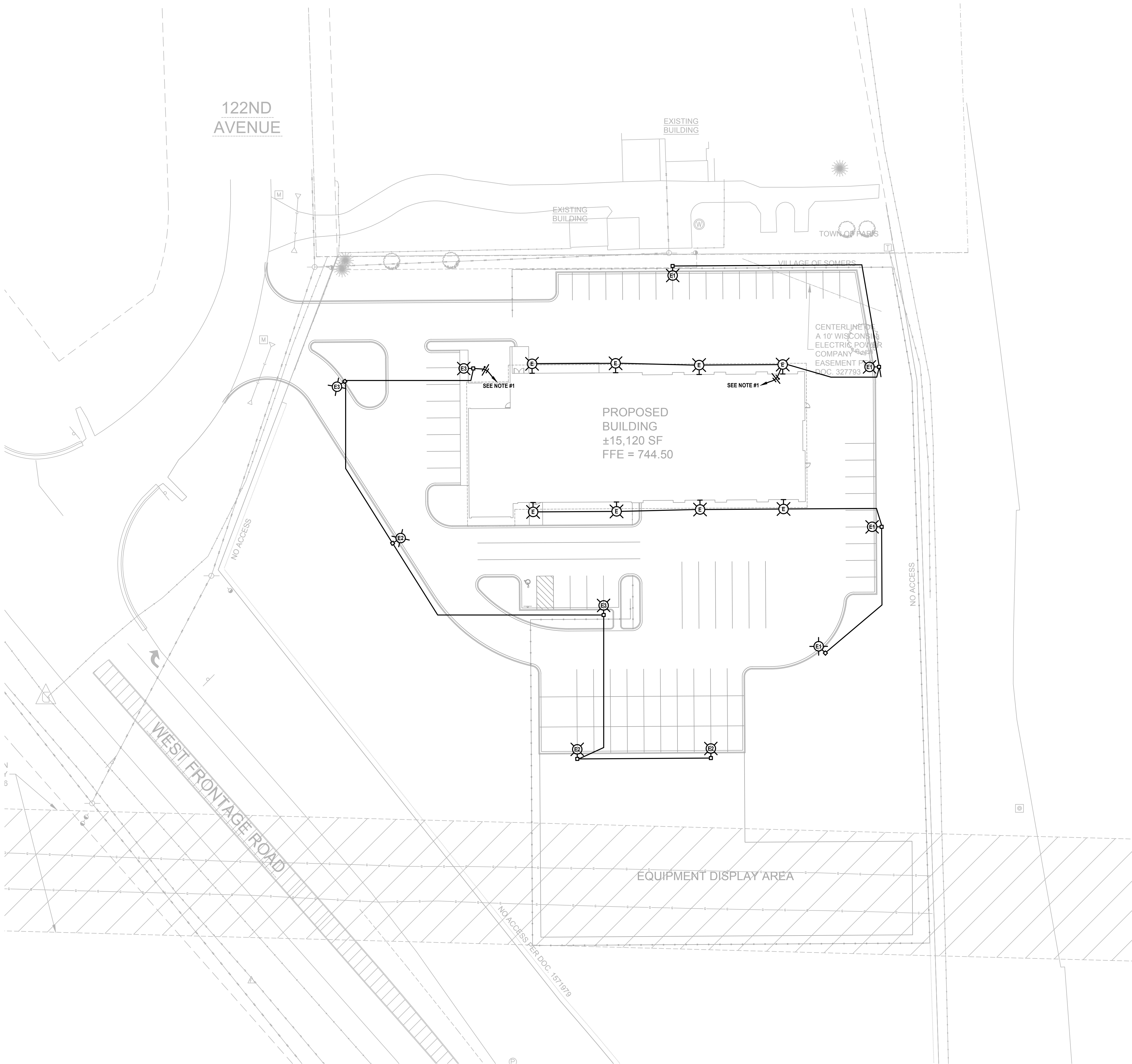
REVISIONS	

PEG JOB No. 2402.00A
MTS
START DATE 07-18-22
SCALE VARIES

SHEET
L-4
L-4

DESIGNED: JSJ
REVIEWED: DUB
DRAFTED: JSJ

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NOTES:
 1. 2 #8 THWN & 1 #8 GND. IN 3/4" C. TO LIGHTING PANEL VIA PHOTOCELL-ON, TIMECLOCK-OFF.

REVISIONS	
DATE	DESCRIPTION

PROJECT:
Somer's Bobcat
 1242 122nd Avenue
 Somers, WI 53171

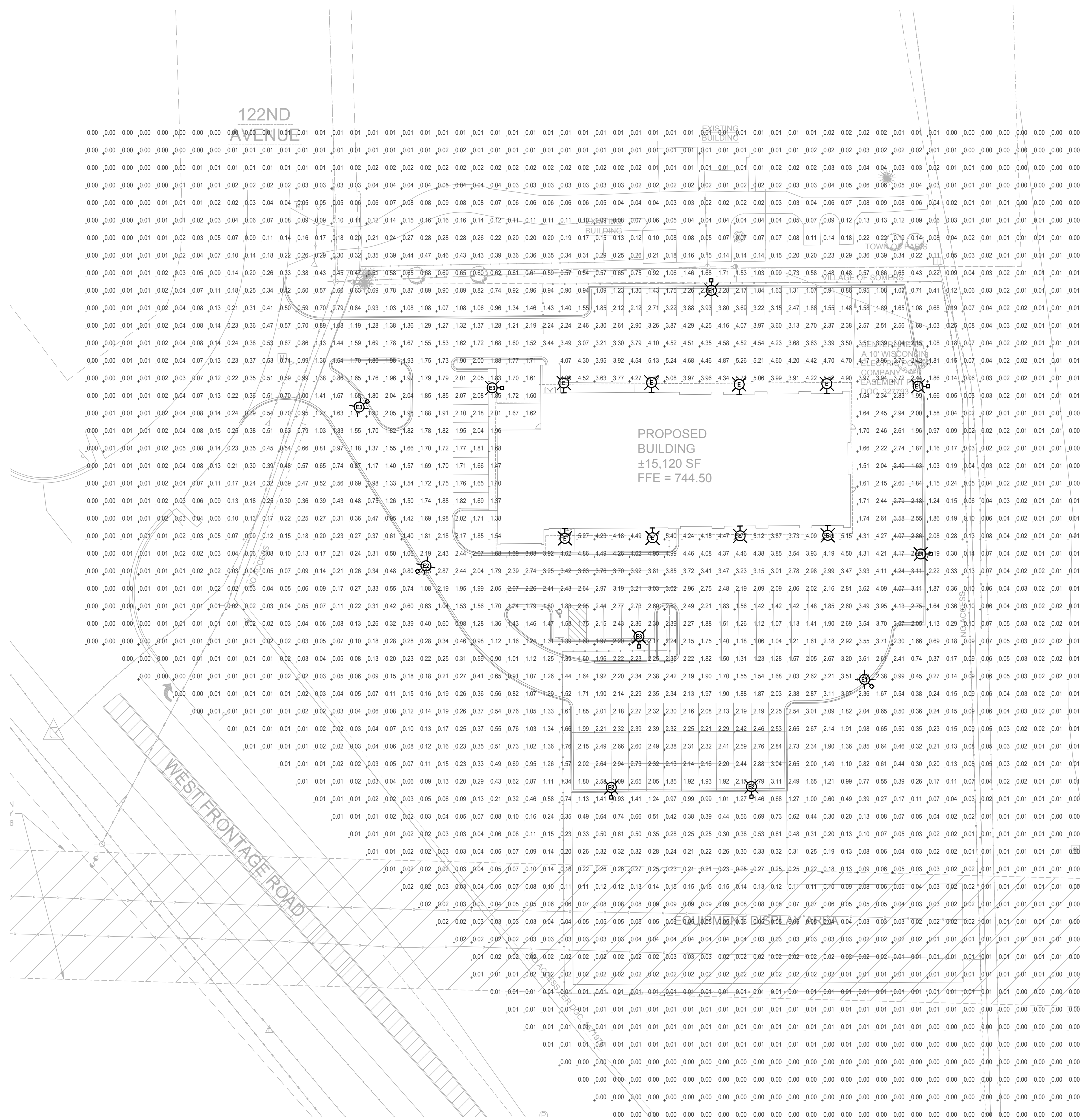
Power • Lighting • Systems • Controls Corporation Registration #33120-6-1K10672
Kornacki and Associates, Inc.
 Consulting Electrical Engineers
 2945 South Moorland Road New Berlin, Wisconsin 53151 (262) 784-3523 Fax 784-5014

DATE ISSUED
 08/29/22
 PROJECT NO.
 22110
 PROJECT MANAGER
 D.B.K.
 DRAWN BY
 S.M.B.
 CHECKED BY
 D.B.K.
 APPROVED BY
 D.B.K.

SHEET NO.
E100

ELECTRICAL SITE PLAN
 SCALE: 1"=30'-0"

WISCONSIN PROFESSIONAL ENGINEER
 DAVID B. KORNACKI
 E-33120-6
 NEW BERLIN
 WI
David B. Kornacki
 Date: 08/29/22



PHOTOMETRIC SITE PLAN
SCALE: 1"=30'-0"

REVISIONS	
DATE	DESCRIPTION

PROJECT:
Somer's Bobcat
1242 122nd Avenue
Somers, WI 53171

Corporation Registration #33120-6-1K10672
Kornacki and Associates, Inc.
Consulting Electrical Engineers
2045 South Moorland Road New Berlin, Wisconsin 53151 (262) 784-3323 Fax 784-5014

- LIGHTING ANALYSIS NOTES:
(SOMER'S REQUIREMENTS)**
1. AVERAGE FOOTCANDLES: > 2.0
 2. MAXIMUM FOOTCANDLES: NA
 3. MINIMUM FOOTCANDLES: NA
 4. MAXIMUM/MINIMUM RATIO: NA
 5. AVERAGE/MINIMUM RATIO: NA
 6. MAXIMUM FOOTCANDLES @ PROPERTY LINE: < 0.5
 7. MAXIMUM MOUNTING HEIGHT: < 30'

- LIGHTING ANALYSIS NOTES:
(PAVED AREAS ONLY)**
1. AVERAGE FOOTCANDLES: 2.52
 2. MAXIMUM FOOTCANDLES: 5.77
 3. MINIMUM FOOTCANDLES: 0.86
 4. MAXIMUM/MINIMUM RATIO: 6.7:1
 5. AVERAGE/MINIMUM RATIO: 2.9:1
 6. MAXIMUM FOOTCANDLES @ PROPERTY LINE IS < 0.5



David B. Kornacki
Date: 08/29/22

DATE ISSUED
08/29/22
PROJECT NO.
22110
PROJECT MANAGER
D.B.K.
DRAWN BY
S.M.B.
CHECKED BY
D.B.K.
APPROVED BY
D.B.K.

SHEET NO.
E101

FIXTURE SCHEDULE

22110

TYPE	INPUT WATTS	VOLTS	LUMENS	COLOR TEMP	CRI			DESCRIPTION	MANUFACTURER	CATALOG NUMBER	SHIELDING	FINISH	MOUNTING	CONTROLS		SEE NOTES
					70+	80+	90+							INTEGRAL	REMOTE	
E	89	277	11434	4000K	●			EXTERIOR WALL BRACKET	LITHONIA	DSX0 LED-P5-40K-T4M-MVOLT-WBA		SBA	WALL 15' A.F.G.		PHOTO-ON TC-OFF	
E1	134	277	13090	4000K	●			POLE & LUMINAIRE	LITHONIA	DSX0 LED-P6-40K-BLC-MVOLT-SPA		SBA	SEE DETAIL 1/E200		PHOTO-ON TC-OFF	
E2	166	277	17969	4000K	●			POLE & LUMINAIRE	LITHONIA	DSX0 LED-P7-40K-T4M-MVOLT-SPA		SBA	SEE DETAIL 1/E200		PHOTO-ON TC-OFF	
E3	166	277	19059	4000K	●			POLE & LUMINAIRE	LITHONIA	DSX0 LED-P7-40K-T5M-MVOLT-SPA		SBA	SEE DETAIL 1/E200		PHOTO-ON TC-OFF	

SYMBOLS / ABBREVIATIONS

WALL BRACKET/WALL SCONCE FIXTURE - SEE FIXTURE SCHEDULE
SURFACE/PENDANT FIXTURE - SEE FIXTURE SCHEDULE
RECESSED DOWNLIGHT FIXTURE - SEE FIXTURE SCHEDULE
POLE & LUMINAIRE(S) FIXTURE - SEE FIXTURE SCHEDULE
SWITCHED CIRCUIT
BRANCH CIRCUIT
AFF ABOVE FINISHED FLOOR
AFG ABOVE FINISHED GRADE
AFI ARC FAULT INTERRUPTER
AMP AMPERES/AMPERAGE
AV AUDIO VISUAL
BB BATTERY BACKUP
BFC BELOW FINISHED CEILING
BOL BUILT-IN OVERLOAD
BRKR BREAKER
BWE BAKED WHITE ENAMEL
CBA COLOR BY ARCHITECT
CP CONTROL PANEL
CRCT CIRCUIT
CTL CONTROL
DCP DOCK EQUIPMENT CONTROL PANEL
DISC DISCONNECT
EC ELECTRICAL CONTRACTOR
EM EMERGENCY
ER EXISTING RELOCATED
ETC ELECTRONIC TIME CLOCK CONTROL
EX EXISTING TO REMAIN
EXD EXISTING TO BE DEMO'D
EXR EXISTING TO BE RELOCATED
EWC ELECTRIC WATER COOLER
FAAP FIRE ALARM ANNUNCIATOR PANEL
FAFP FIRE ALARM CONTROL PANEL
FLA FULL LOAD AMPS
FLSW FLOAT SWITCH
FPC FIRE PROTECTION CONTRACTOR
FURN FURNISHED
GC GENERAL CONTRACTOR
GFCI GROUND FAULT CIRCUIT INTERRUPTER
GND GROUND
HDA HAND-OFF-AUTOMATIC SWITCH
HHP HORSEPOWER
HVAC HEATING AND VENTILATING CONTRACTOR
IG ISOLATED GROUND
INT INTEGRAL
IR IN ROOM
IU IN UNIT
JB JUNCTION BOX
KW KILOWATTS
LCP LIGHTING CONTROL PANEL
LOC LOCATION
LT LOW TEMPERATURE
LTSW LIGHT SWITCH
LVT LOW VOLTAGE THERMOSTAT
MAG MAGNETIC STARTER
MAN MANUAL STARTER
MCA MINIMUM CIRCUIT AMPS
MSPL MANUAL STARTER WITH PILOT LIGHT
NL NIGHT LIGHT
NU NEAR UNIT
OHP OVERHEAT PROTECTION
OS OCCUPANCY SENSOR
OU ON UNIT
PB PUSH BUTTON
PC PLUMBING CONTRACTOR
PESW PNEUMATIC ELECTRIC SWITCH
PHOTO PHOTOCELL
PW PREWIRED
RC REFRIGERATION CONTRACTOR
RCC REFRIGERATION CONTROL CONTRACTOR
RECEPT RECEPTACLE
SBA SELECTED BY ARCHITECT
SC SEPARATE CIRCUIT
SPSW SPEED SWITCH
SS SOFT START
ST SHUNT TRIP
SW SWITCH
T LINE VOLTAGE THERMOSTAT
TBD TO BE DETERMINED
TC TIME CLOCK
TCC TEMPERATURE CONTROL CONTRACTOR
TCP TEMPERATURE CONTROL PANEL
UM UNIT MANUFACTURER
UNO UNLESS NOTED OTHERWISE
VFD VARIABLE FREQUENCY DRIVE
W WATTS
WP WEATHER PROOF ("WHILE-IN-USE")
XFMR TRANSFORMER



D-Series Size 0 LED Area Luminaire

Specifications

EPA:	0.95 ft ² (0.09m ²)
Length:	25" (0.635m)
Width:	13" (0.330m)
Height:	3" (0.076m)
Height:	2" (0.051m)
Weight:	1.6 lbs (0.72kg)
Weight (max):	2.3 (1.04kg)

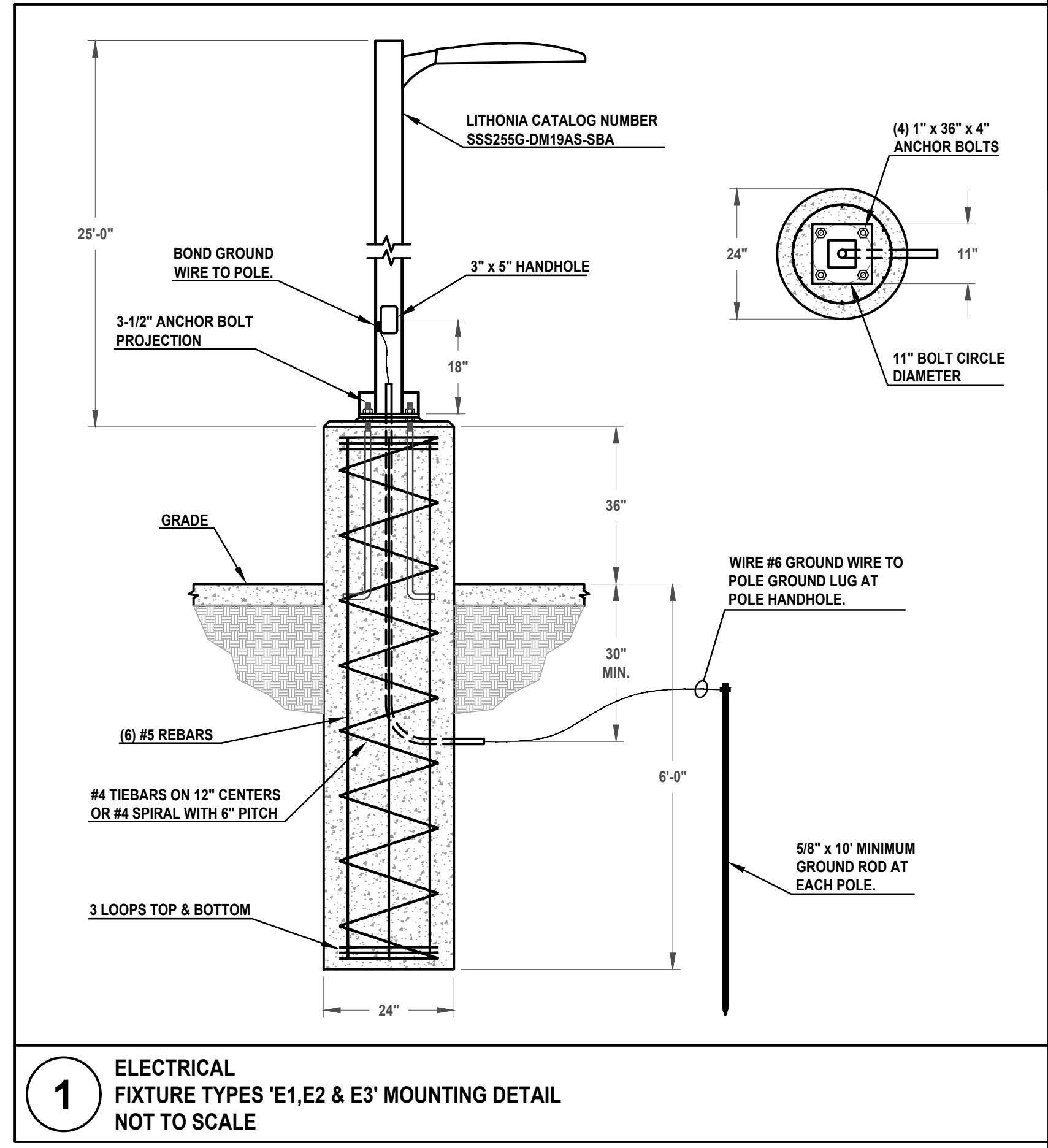
Ordering Information

EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA NLTAR2 PIRHN DDBXD

Series	LED	Color Temperature	Distribution	Mounting	Shipped included	
DSX0 LED	Forward optics	P1	30K 3000 K	T1S Type I short (Automotive)	T5S Type V short ¹	MVOLT (120V-277V) ¹⁰
		P1	40K 4000 K	T2S Type I short	T3M Type V medium ¹	XVOLT (277V-480V) ¹⁰
		P2	50K 5000 K	T2M Type I medium	T5W Type V wide ¹	120"
		P3		T3S Type III short	BLC Backlight control ⁴	208"
		P4		T3M Type III medium	LCCO Left corner cutoff ¹	240"
		P4		T3M Type III medium	RCCO Right corner cutoff ¹	277"
	Rotated optics	P10 ¹		T4M Type IV medium	RCCO Right corner cutoff ¹	277"
		P12 ¹		TFTM Forward throw medium		347"
		P11 ¹		T5VS Type V very short ¹		480"
		P13 ¹				

Control options	Other options	Finish
Shipped installed	Shipped installed	Shipped installed
NLTAR2 High IR generation 2 enabled ^{10,11}	PIR High flow, motion/ambient sensor, 6-15' mounting height, ambient sensor enabled at 16" ^{10,11}	DDBD Dark bronze
PIRHN Network, high flow motion/ambient sensor ¹¹	PIRH High flow, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 16" ^{10,11}	DBLD Black
PER NEMA twist-lock receptacle only (control ordered separately) ¹⁰	PIR1FCV High flow, motion/ambient sensor, 6-15' mounting height, ambient sensor enabled at 16" ^{10,11}	DNAXD Natural aluminum
PER5 Five-pin receptacle only (control ordered separately) ^{10,11}	PIR1FCVW High flow, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 16" ^{10,11}	DWHD White
PER7 Seven-pin receptacle only (leads exit fixture) (control ordered separately) ^{10,11}	FAO Field adjustable output ¹¹	DBRDX Textured dark bronze
DMG 0-10V dimming ordered out back of housing for external control (control ordered separately) ¹⁰		R90 Right rotated optics ¹
		DBL Diffused lens ¹⁰
		HA 50°C ambient operation ¹
		BAA Buy America(s) Act Compliant
		Shipped separately
		BS Bird spikes ¹⁰
		E65 External glare shield

LITHONIA LIGHTING
One Lithonia Way • Conyers, Georgia 30012 • Phone: 1-800-705-SERV (7378) • www.lithonia.com
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1 ELECTRICAL FIXTURE TYPES 'E1, E2 & E3' MOUNTING DETAIL NOT TO SCALE

REVISIONS	
DATE	DESCRIPTION

PROJECT: **Somer's Bobcat**
1242 122nd Avenue
Somers, WI 53171

Power • Lighting • Systems • Controls Corporation Registration #33120-6-1K10672
Kornacki and Associates, Inc.
Consulting Electrical Engineers
2045 South Moorland Road, New Berlin, Wisconsin 53151 (262) 784-3323 Fax 784-5014

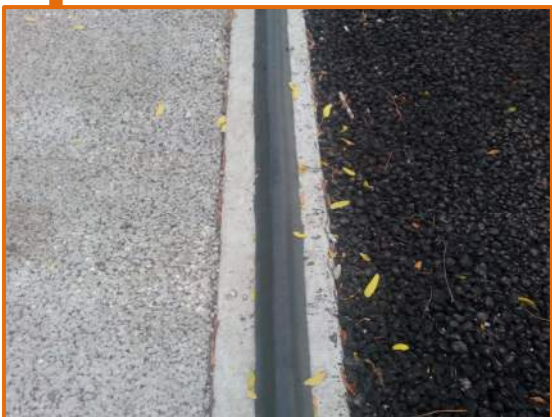
DATE ISSUED	08/29/22
PROJECT NO.	22110
PROJECT MANAGER	D.B.K.
DRAWN BY	S.M.B.
CHECKED BY	D.B.K.
APPROVED BY	D.B.K.

SHEET NO.
E200



David B. Kornacki
Date: 08/29/22

STORMWATER MANAGEMENT PLAN



BOBCAT SOMERS

Village of Somers, Kenosha County, Wisconsin
PEG Project Number: 2402.00A-WI

Prepared for:

Bobcat

08/23/2022



PINNACLE ENGINEERING GROUP

20725 Watertown Road | Suite 100 | Brookfield, WI 53186

52 of 143

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APPENDICIES

APPENDIX 1 – MAPS

- Vicinity Map
- USDA SCS Soils Map
- Rainfall Data

APPENDIX 2 – PRE-DEVELOPMENT CONDITIONS INFORMATION

- Hydrology Exhibit – Existing Conditions
- Hydrographs

APPENDIX 3 – POST-DEVELOPMENT CONDITIONS (RATE ATTENUATION)

- Hydrology Exhibit – Proposed Conditions
- Hydrographs

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- Redevelopment and New development Map
- WinSLAMM Modeling Input Data & Output Computations

APPENDIX 5 – STORM SEWER, CULVERT CALC.

- Storm Sewer Calculations
- Culvert Calculation

APPENDIX 6 – POND DETAILS

Questions and comments can be directed to:

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 Project manager, P.E
 Phone: 262.754.8888 | Fax: 262.754.8891
 mgarner@pinnacle-engr.com



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 Brookfield, WI 53186
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INTRODUCTION

The project site is located on the southwest corner of 122nd Ave, and the WisDOT owned west frontage road. The entire site is located in the Village of Somers, Kenosha County, WI. The site is approximately 4.32 acres in size and is currently used for agriculture. A location map that illustrates the tract of land is included as **Appendix 1**.

The proposed Bobcat development consists of a 15,126 SF commercial building. The proposed building includes a show room, and passenger car parking. A portion of the property to the north is planned for future expansion. The ponds will be sized to accommodate the future expansion being 80% impervious. Stormwater features will be provided to meet the Des Plaines River watershed requirements that apply to this development.

DESIGN CRITERIA

Village of Somers:Chapter 17 of the City Ordinances

Wisconsin Department of Natural Resources:NR 216 & NR 151

Water Quantity: The SEWRPC Report 44 - A Comprehensive Plan for the Des Plaines River Watershed, June 2003 criteria for peak flow attenuation standards permit maximum allowable runoff release rates for 2-year and 100-year storm events of 0.04 cfs/acre, and 0.30 cfs/acre, respectively. Rainfall depths for the 2 and 100-year storm events are 2.70 and 5.86 inches in accordance with SEWRPC and NOAA Atlas 14, Volume 8, Version 2,

SEWRPC Report 44 is more restrictive than the Village of Somers ordinance so the SEWRPC criteria will be used.

Water Quality: Both the County ordinance and NR 151 require removal of 80% of the annual total suspended solids (TSS) load for new developments, and 40% of new pavement in redevelopment. Thus an aggregate of the two will be used to determine the performance standard.

Infiltration: Both the Village ordinance and NR 151 require infiltration to achieve 60% of the average annual pre-development infiltration volume, or 10% of the 2-year, 24-hour storm, or provide an effective infiltration area equal to at least 2% of the total site area, unless the site is exempted or excepted from the requirement.

ANALYSIS METHODS

HydroCAD® (Version 10.00) software has been used to analyze stormwater characteristics for this stormwater management plan. HydroCAD uses the accepted TR-55 methodology for determining peak discharge runoff rates.

TSS reduction characteristics for the proposed water quality facilities were determined using WinSLAMM® (Version 10.4.1) Source Loading and Management Model.

PRE-DEVELOPMENT CONDITIONS

The existing site currently is comprised of a barn, and three existing buildings which will be removed. The remainder of the site is open farmland. The site drains from the north to the southeast. This results in the formation of wetlands on the east end of the site. There is also an existing ditch that runs along the frontage road, to the west of the site which creates a wetland on the west side of the site. These wetlands have been delineated by Heartland Ecological Group on May 30, 2022. Currently, there are proposed impacts to wetlands W-2 with wetland W-2 falling under USACOE jurisdiction. The disturbance and permitting to the wetland is currently under review by the WDNR and USACOE.

The on-site soils are Elliot silt loam (EtA), and Markham silt loam (MeB). See USDA Soil Maps in **Appendix 1** and the geotechnical report in **Appendix 5**.

Existing Onsite Basins

Existing conditions for the project area show one main drainage area located on the site. Measuring in at 4.32 acres is drainage area “Existing onsite Basin,” takes water from the north end of the site and discharges east of the site. In the hydrocad model only 3.93 acres is shown, this is due to a portion of wetlands on the site remaining and being left undisturbed. Those will not be included in the hydrocad model.

Existing Offsite Basins

There is a small amount of existing offsite called “Existing offsite Basin” that passes through the site as well. This offsite area is around 0.23 acres in total and travels to the site from the north through farmland. This flow will then travel through the site via the overland flow, eventually making its way to the ultimate discharge point.

Existing Basin Summary

The table below summarizes the existing drainage Basins showing the drainage Basin area, curve number, impervious value, and the 2-year and 100-year peak discharge rates. A Pre-Development Hydrology Exhibit and Modeling can be found in **Appendix 2**.

EXISTING DRAINAGE DATA

Area	Drainage Area (ac)	CN	2-year Discharge (cfs)	100-year Discharge (cfs)
Existing Onsite Basin	3.93	80	4.77	17.20
Total Drainage Area (Ac)	3.93	-	-	-

Area	Drainage Area (ac)	CN	2-year Discharge (cfs)	100-year Discharge (cfs)
Existing offsite Basin	0.23	87	0.43	1.24
Total Drainage Area (Ac)	0.23	-	-	-

POST-DEVELOPMENT CONDITIONS

Proposed Onsite Basins

Under the post-development conditions, the on-site will be broken into 3 drainage areas. Two of these areas will drain into their own respective onsite Ponds (Dry Pond and Wet Pond) which are designed to detain the site runoff to meet SEWRPC Report 44 requirements and water quality requirements. The remaining “Undetained” basin will drain off the site.

The flows from offsite areas, Existing Offsite Basin, and Future Buildout will be captured as they leave the adjacent site and will be routed to the dry pond. The existing basin is being left untouched and will flow to a proposed flared end section on the proposed site. The future buildout has been designed to account for the land to the north being 80 percent total impervious for a maximum buildout. The future buildout is adjusted to be 88% impervious to account for the existing basin. This has been done to be conservative in the pond sizing and ensuring if the site is expanded to the north. The ponds will still be sized correctly. A lateral stub will be created to create a connection point for possible expansion.

PROPOSED DRAINAGE DATA

Area	Drainage Area (ac)	CN	2-year Discharge (cfs)	100-year Discharge (cfs)
Existing Offsite Basin	0.230	87	0.52	1.47
Area to Dry Pond	0.990	81	1.93	6.51
Future Buildout	0.770	95	2.76	6.36
Area To Wet Pond	2.610	90	7.84	20.34
UNDETAINED	0.360	74	0.45	1.98
Total Drainage Area (Ac)	4.960	-	-	-

Proposed Ponds

The Dry Pond is located on the Southwest corner of the site. The main purpose of this pond is to detain the west portion of the sites flow, as well as the future land to the north of the site. Flow leaving the pond will be controlled by a 12” storm sewer pipe that will connect the Dry Pond to the wet pond.

The onsite runoff from the building, and most of the west side of the site will drain or be conveyed to the wet pond before ultimately leaving the site. The wet pond will release water offsite via a 12" culvert pipe, or in a clogged condition by overtopping the spillway. Flow leaving through this outlet will be controlled by a 48" diameter vertical outlet structure with 2.6" water quality orifice.

The primary conveyance to the proposed wet detention ponds will be accomplished through onsite storm sewer, while flows more than the design capacity of the storm sewer in emergency events will be routed along designed overland relief paths. The stormwater facilities and associated outlet structures for the proposed site will provide 846.15 pounds or greater TSS removal and comply with discharge rate requirements of the Des Plaines River Watershed.

A Post-Development Hydrology Exhibit and Modeling can be found in **Appendix 3**.

SUMMARY OF RESULTS

Peak Runoff Rate Attenuation

Design post-development release rates for the project have been calculated using the Des Plaines River Watershed standards of 0.04 cfs/acre and 0.30 cfs/acre for the respective 2-year and 100-year rainfall events for areas which will be developed.

There is also one offsite area that flow through the site which will contribute to the overall release rate. The release rates for these areas have been added to Des Plaines release rates and the calculations for the final site release rates are included in the following table.

ALLOWABLE DISCHARGE RATES

Area	Drainage Area (ac)	2-year Discharge (cfs)	100-year Discharge (cfs)
Onsite Basins*	3.93	0.15	1.18
Offsite Flows	0.23	0.43	1.24
Total	4.16	0.58	2.42

*Onsite Ponds are subject to Des Plaines release rate calculations:

(2-yr) $3.93 \text{ ac} \times 0.04 \text{ cfs/ac} = 0.15 \text{ cfs}$

(100-yr) $3.93 \text{ ac} \times 0.30 \text{ cfs/ac} = 1.18 \text{ cfs}$

The proposed site will be graded to maximize the area which drains to the proposed Dry pond and wet pond, while adhering to the Village Standards. These requirements include maximum 3:1 slopes onsite and provisions for overland flow paths to the ponds. Site constraints, such as earthwork balance, were also taken into consideration.

The following tables summarize how the proposed Dry and wet ponds will function in the proposed condition:

DRY POND SUMMARY

Pond	Peak Flow 2-Year (cfs)	Peak Flow 100-Year (cfs)	Normal Water Elev.	Peak W.S. Elev. 2-Year	Peak W.S. Elev. 100-Year	Spillway Elev.	Top of Berm Elev.
	0.34	0.74	739.50	740.41	741.88	742.00	742.50

WET DETENTION POND SUMMARY

Pond	Peak Flow 2-Year (cfs)	Peak Flow 100-Year (cfs)	Normal Water Elev.	Peak W.S. Elev. 2-Year	Peak W.S. Elev. 100-Year	Spillway Elev.	Top of Berm Elev.
	0.22	2.23	736.00	737.62	738.65	739.50	740.50

COMPARISON OF PROPOSED TO ALLOWABLE PEAK FLOWS

Location	Peak Flows 2-yr (cfs)	Peak Flows 100-yr (cfs)
TOTAL SITE DISCHARGE	0.57	2.40
ALLOWABLE	0.58	2.42
MEETS CODE (?)	YES	YES

Runoff Water Quality

Post-development water quality will be obtained in the wet pond. Since this site will be considered partially new development and redevelopment, a weighted aggregate score of TSS removal rates shall be considered. 80% TSS removal rates only apply to the improvements only within existing undeveloped areas only. 40% TSS removal rates apply to the areas considered redevelopment.

In order to determine how much TSS removal is required for the project site each area must be modeled. To meet the minimum goals, the total re-developed area is modeled and then 40% TSS removal from pavement areas determines the minimum goal. The total new development area is modeled and then 80% TSS removal of that number is the minimum goal. We then add up the two minimum amounts to get a total TSS removal amount for the whole development. The land that is undisturbed and the undisturbed wetlands were not included in this calculation. Below is a

table showing these calculations. The minimum TSS removal shall be 846.15 pounds. A Proposed SLAMM Delineation Exhibit and SLAMM model can be found in Appendix 4.

Area	TSS		
	Generated (lbs)	Removal Rate	Min. TSS to be Removed
Redevelopment to Dry Pond – Pavement	180.81	40%	72.32
Redevelopment to Dry Pond - Grass	57.60	0%	0.00
New development to Dry Pond	15.78	80%	12.62
Redevelopment area to wet pond - pavement	531.83	40%	212.73
Redevelopment area to wet pond - Grass and roof	80.24	0%	0.00
New development to wet pond	417.79	80%	334.23
Offsite Pond Grass and roof	13.41	0%	0.00
Redeveloped undetained	17.28	0%	0.00
New development Undetained	21.54	80%	17.23
Offsite Pond Pavement area	68.58	40%	27.43
Future Redevelopment Pavement	423.97	40%	169.59
Future Redevelopment grass	9.60	0%	0.00
Total			846.15

In modeling water quality, Re-development Non-Pavement areas are run through an “other device” which removes all of the TSS from calculations but keeps the volume of water intact. In this way, the TSS removal from the areas can be ignored as defined per code treatment standards in calculations while still modeling the facilities with the correct amount of runoff being routed through them.

Offsite areas that are routed through the proposed pond are included in the water quality calculations to accurately model the magnitude of flow going through the pond. The TSS from the offsite areas have been modeled as a redevelopment, taking the grass and roof in the WinSLAMM modeling using “Other Devices” that remove 100% of the TSS while maintaining the volume. This was done to account for the future expansion to the north of the site. Settings are correctly applied in WinSLAMM to omit the offsite “Other Device” pollutant load reductions from the development site pollutant load reduction. Refer to **Appendix 4** for WinSLAMM modeling input/output summaries.

WATER QUALITY SUMMARY

Area (ac)	Pounds of TSS Generated	Pounds of TSS Remaining	Amount Removed	Percent Removal
4.96	1660	221.7	1438.3	86.64%

Stormwater Infiltration

Stormwater Infiltration has not been incorporated into this storm water management due to clayey soils present onsite. Per DNR Technical Standard 1002, sites with clayey soils are exempt from NR 151 infiltration requirements.

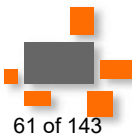
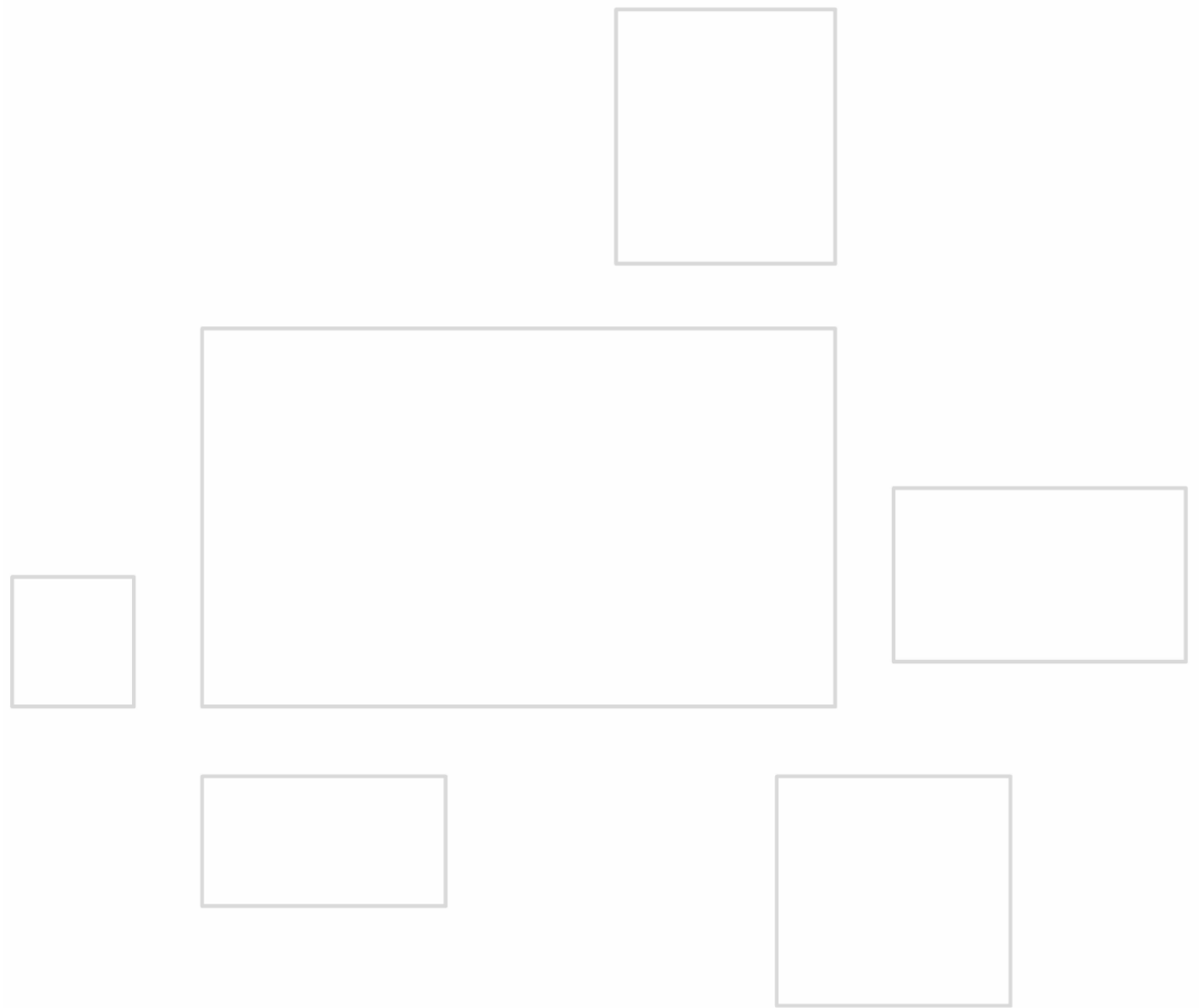
Protective Areas

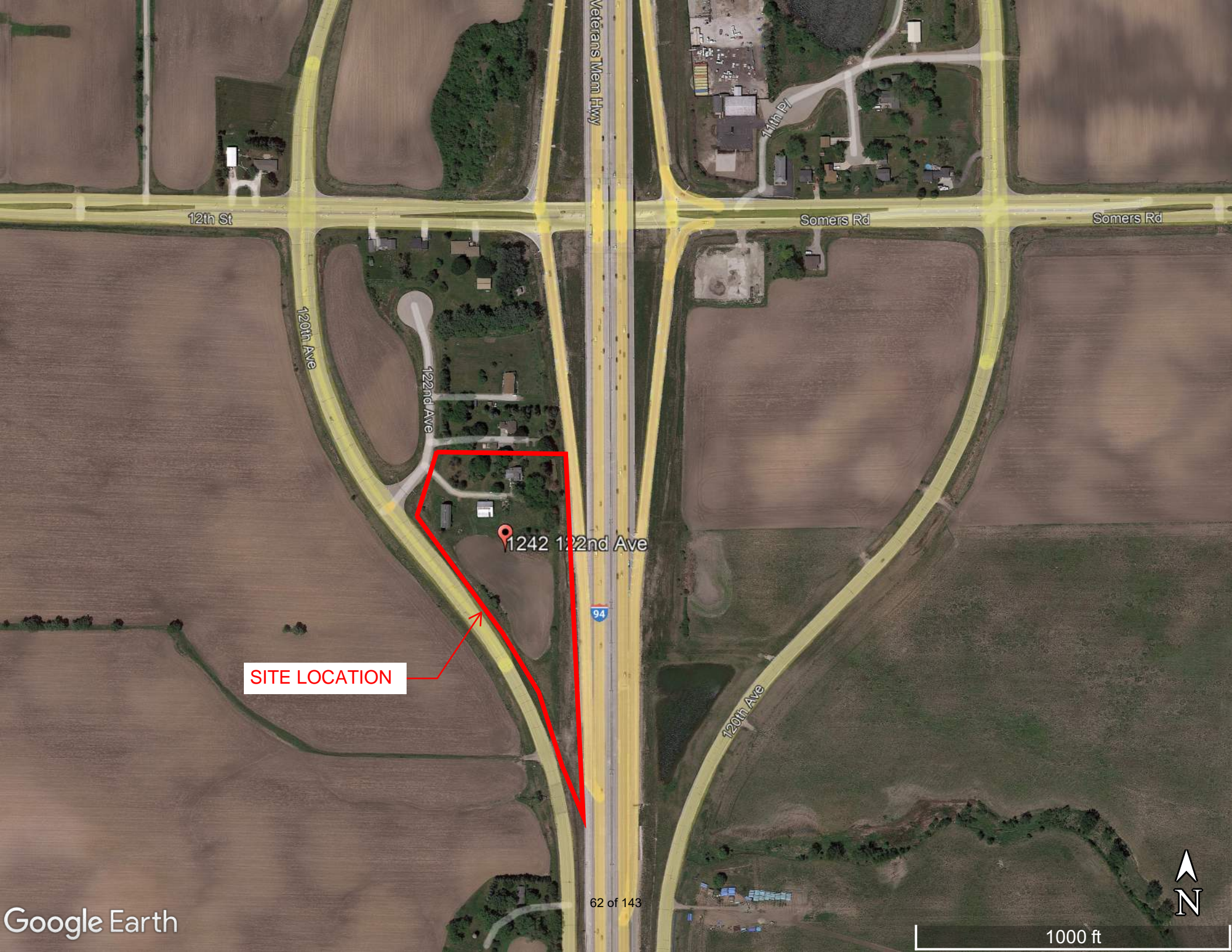
On this project, no undetained impervious surfaces are directed to protected areas and all impervious runoff directed to the Dry Pond and wet detention Pond is treated to the aggregate of new and redevelopment TSS removal standard. Thus, protective areas are not required under this plan.

CONCLUSION

The stormwater management features for the development have been designed to comply with the Village of Somers Ordinance/Des Plaines River Watershed and WDNR technical standards NR216/151. Proposed runoff rates will be reduced for the 2-year and 100-year storm events to meet the Des Plaines River Watershed regulations. Storm water runoff from the site will be treated to remove at least 846.15 pounds of total suspended solids annually. Offsite areas have been accommodated in the design. Infiltration is not required due to the clayey soils present throughout the site. Protective areas are not required under the proposed drainage pattern. Maintenance is expected to occur on a regular basis; an agreement with the Village of Somers will be executed to ensure this occurs.

APPENDIX 1 MAPS





12th St

Veterans Mem Hwy

11th Pl

Somers Rd

Somers Rd

120th Ave

122nd Ave

1242 122nd Ave

94

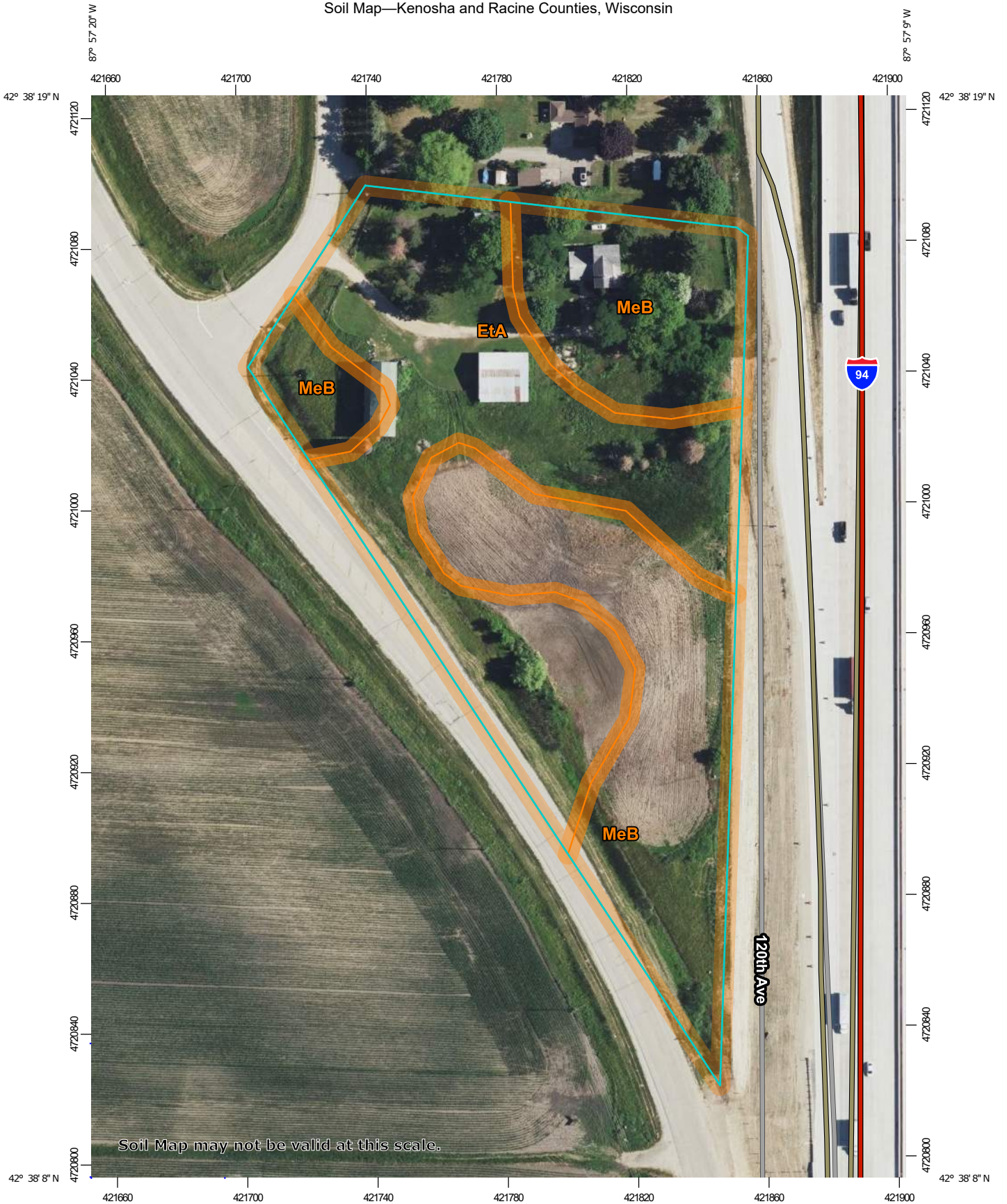
120th Ave

SITE LOCATION



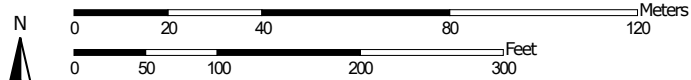
1000 ft

Soil Map—Kenosha and Racine Counties, Wisconsin



Soil Map may not be valid at this scale.

Map Scale: 1:1,610 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey




4/21/2022
Page 1 of 3

MAP LEGEND




















Area of Interest (AOI)






Area of Interest (AOI)

Soils


-  Soil Map Unit Polygons
-  Soil Map Unit Lines
-  Soil Map Unit Points

Special Point Features






-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

-  Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Kenosha and Racine Counties, Wisconsin
 Survey Area Data: Version 18, Sep 9, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 20, 2020—Jun 25, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
EtA	Elliott silt loam, 0 to 2 percent slopes	2.8	47.3%
MeB	Markham silt loam, 2 to 6 percent slopes	3.1	52.7%
Totals for Area of Interest		5.8	100.0%



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Deborah Martin, Sandra Pavlovic, Ishani Roy, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Michael Yekta, Geoffery Bonnin

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aerals](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.333 (0.265-0.417)	0.392 (0.311-0.491)	0.489 (0.387-0.615)	0.572 (0.450-0.720)	0.687 (0.526-0.886)	0.778 (0.583-1.01)	0.871 (0.632-1.15)	0.967 (0.675-1.30)	1.10 (0.738-1.50)	1.19 (0.786-1.65)
10-min	0.487 (0.388-0.611)	0.573 (0.455-0.720)	0.716 (0.567-0.900)	0.837 (0.659-1.06)	1.01 (0.770-1.30)	1.14 (0.853-1.48)	1.27 (0.925-1.68)	1.42 (0.988-1.90)	1.60 (1.08-2.19)	1.75 (1.15-2.41)
15-min	0.594 (0.473-0.745)	0.699 (0.555-0.877)	0.874 (0.692-1.10)	1.02 (0.804-1.29)	1.23 (0.939-1.58)	1.39 (1.04-1.81)	1.56 (1.13-2.05)	1.73 (1.21-2.32)	1.96 (1.32-2.67)	2.13 (1.40-2.94)
30-min	0.831 (0.661-1.04)	0.982 (0.780-1.23)	1.23 (0.977-1.55)	1.45 (1.14-1.82)	1.74 (1.33-2.24)	1.97 (1.48-2.56)	2.21 (1.60-2.91)	2.45 (1.71-3.28)	2.77 (1.87-3.78)	3.02 (1.99-4.16)
60-min	1.04 (0.830-1.31)	1.26 (1.00-1.59)	1.63 (1.29-2.05)	1.94 (1.53-2.44)	2.37 (1.81-3.05)	2.71 (2.02-3.52)	3.05 (2.21-4.02)	3.40 (2.37-4.56)	3.87 (2.61-5.29)	4.24 (2.79-5.84)
2-hr	1.26 (1.01-1.56)	1.55 (1.24-1.92)	2.03 (1.63-2.52)	2.43 (1.94-3.03)	3.00 (2.32-3.82)	3.44 (2.61-4.42)	3.89 (2.86-5.07)	4.35 (3.08-5.77)	4.98 (3.40-6.72)	5.45 (3.64-7.43)
3-hr	1.38 (1.12-1.70)	1.72 (1.39-2.11)	2.27 (1.83-2.80)	2.74 (2.20-3.39)	3.40 (2.66-4.31)	3.93 (3.00-5.01)	4.46 (3.31-5.78)	5.01 (3.58-6.60)	5.75 (3.97-7.72)	6.33 (4.26-8.56)
6-hr	1.66 (1.36-2.01)	2.02 (1.66-2.45)	2.63 (2.15-3.20)	3.16 (2.58-3.86)	3.93 (3.12-4.93)	4.54 (3.52-5.74)	5.18 (3.90-6.64)	5.84 (4.24-7.63)	6.76 (4.74-8.98)	7.48 (5.12-10.0)
12-hr	2.02 (1.68-2.42)	2.35 (1.95-2.81)	2.92 (2.41-3.50)	3.43 (2.82-4.12)	4.18 (3.38-5.21)	4.81 (3.80-6.03)	5.48 (4.20-6.97)	6.20 (4.59-8.03)	7.21 (5.15-9.50)	8.03 (5.58-10.6)
24-hr	2.38 (2.01-2.82)	2.70 (2.27-3.19)	3.25 (2.73-3.86)	3.76 (3.14-4.47)	4.53 (3.71-5.57)	5.17 (4.14-6.40)	5.86 (4.56-7.36)	6.60 (4.96-8.45)	7.66 (5.56-9.97)	8.51 (6.02-11.1)
2-day	2.69 (2.29-3.13)	3.08 (2.63-3.59)	3.76 (3.20-4.39)	4.36 (3.69-5.11)	5.23 (4.33-6.31)	5.93 (4.81-7.22)	6.68 (5.26-8.26)	7.46 (5.68-9.40)	8.56 (6.31-11.0)	9.43 (6.78-12.2)
3-day	2.94 (2.53-3.40)	3.36 (2.89-3.89)	4.09 (3.50-4.74)	4.72 (4.03-5.49)	5.64 (4.70-6.75)	6.39 (5.22-7.70)	7.16 (5.69-8.79)	7.98 (6.13-9.98)	9.12 (6.78-11.6)	10.0 (7.28-12.9)
4-day	3.16 (2.73-3.64)	3.60 (3.11-4.14)	4.35 (3.74-5.01)	5.00 (4.29-5.79)	5.95 (4.99-7.08)	6.72 (5.52-8.06)	7.52 (6.02-9.18)	8.37 (6.47-10.4)	9.55 (7.15-12.1)	10.5 (7.66-13.4)
7-day	3.73 (3.26-4.24)	4.20 (3.67-4.78)	5.01 (4.36-5.71)	5.71 (4.95-6.53)	6.73 (5.71-7.92)	7.55 (6.28-8.96)	8.41 (6.81-10.2)	9.32 (7.30-11.5)	10.6 (8.02-13.3)	11.6 (8.57-14.6)
10-day	4.25 (3.74-4.80)	4.75 (4.18-5.37)	5.61 (4.92-6.36)	6.36 (5.55-7.23)	7.43 (6.35-8.67)	8.30 (6.95-9.76)	9.19 (7.49-11.0)	10.1 (8.00-12.4)	11.4 (8.74-14.2)	12.4 (9.30-15.6)
20-day	5.82 (5.19-6.48)	6.45 (5.75-7.19)	7.49 (6.66-8.37)	8.36 (7.40-9.37)	9.58 (8.27-11.0)	10.5 (8.93-12.2)	11.5 (9.49-13.5)	12.5 (9.97-15.0)	13.8 (10.7-16.9)	14.7 (11.2-18.3)
30-day	7.20 (6.47-7.95)	7.97 (7.16-8.81)	9.20 (8.24-10.2)	10.2 (9.10-11.3)	11.5 (10.0-13.1)	12.6 (10.7-14.4)	13.5 (11.3-15.8)	14.5 (11.7-17.3)	15.8 (12.4-19.2)	16.7 (12.8-20.6)
45-day	9.01 (8.17-9.88)	9.98 (9.04-10.9)	11.5 (10.4-12.6)	12.7 (11.4-14.0)	14.2 (12.4-15.9)	15.3 (13.2-17.3)	16.3 (13.7-18.8)	17.3 (14.1-20.4)	18.5 (14.6-22.2)	19.3 (15.0-23.6)
60-day	10.6 (9.67-11.6)	11.8 (10.7-12.8)	13.6 (12.3-14.8)	14.9 (13.5-16.3)	16.6 (14.6-18.4)	17.8 (15.4-20.0)	18.9 (15.9-21.5)	19.8 (16.2-23.1)	20.9 (16.6-24.9)	21.6 (16.9-26.3)

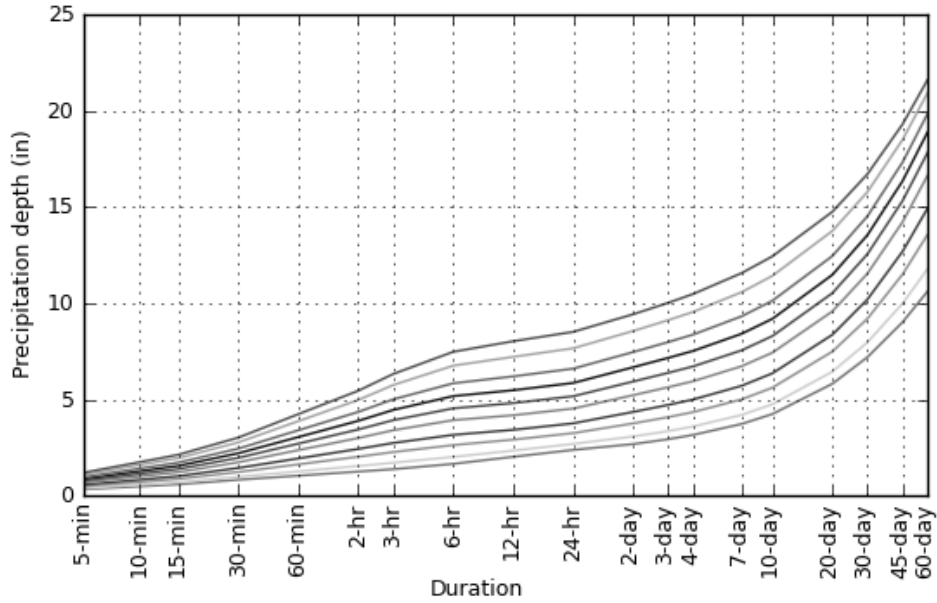
¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

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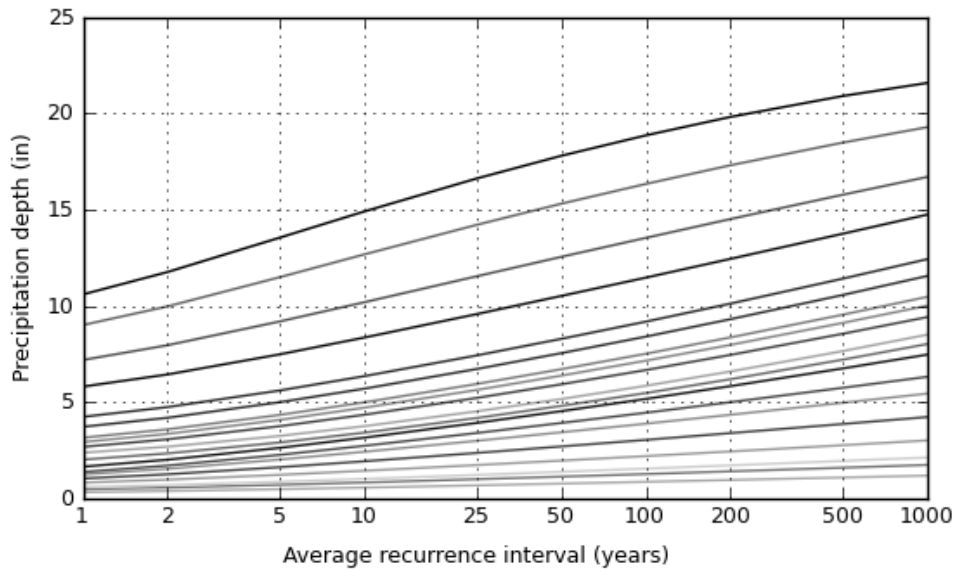
PF graphical

PDS-based depth-duration-frequency (DDF) curves

Latitude: 42.6242°, Longitude: -87.9483°



Average recurrence interval (years)
1
2
5
10
25
50
100
200
500
1000

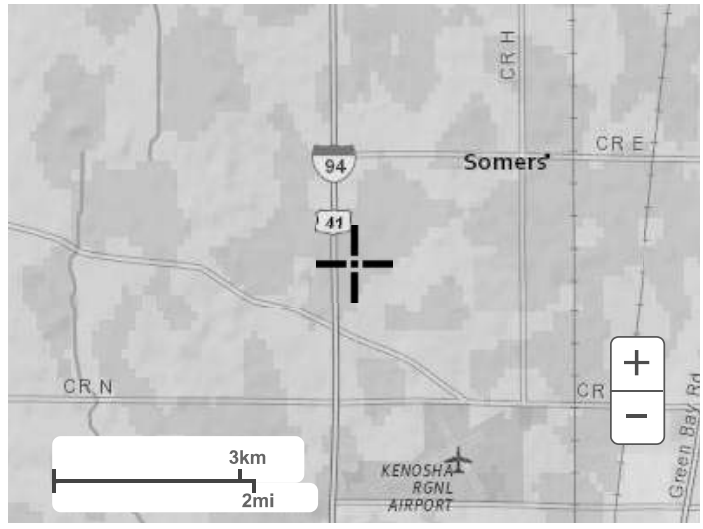


Duration	
5-min	2-day
10-min	3-day
15-min	4-day
30-min	7-day
60-min	10-day
2-hr	20-day
3-hr	30-day
6-hr	45-day
12-hr	60-day
24-hr	

[Back to Top](#)

Maps & aerials

Small scale terrain



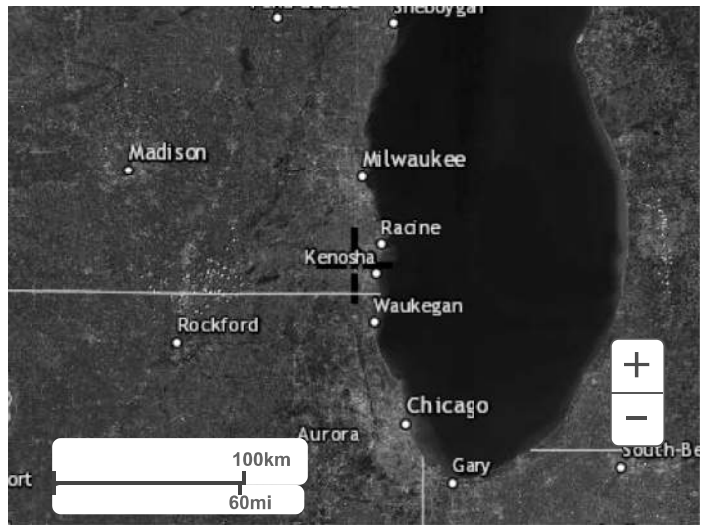
Large scale terrain



Large scale map



Large scale aerial



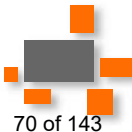
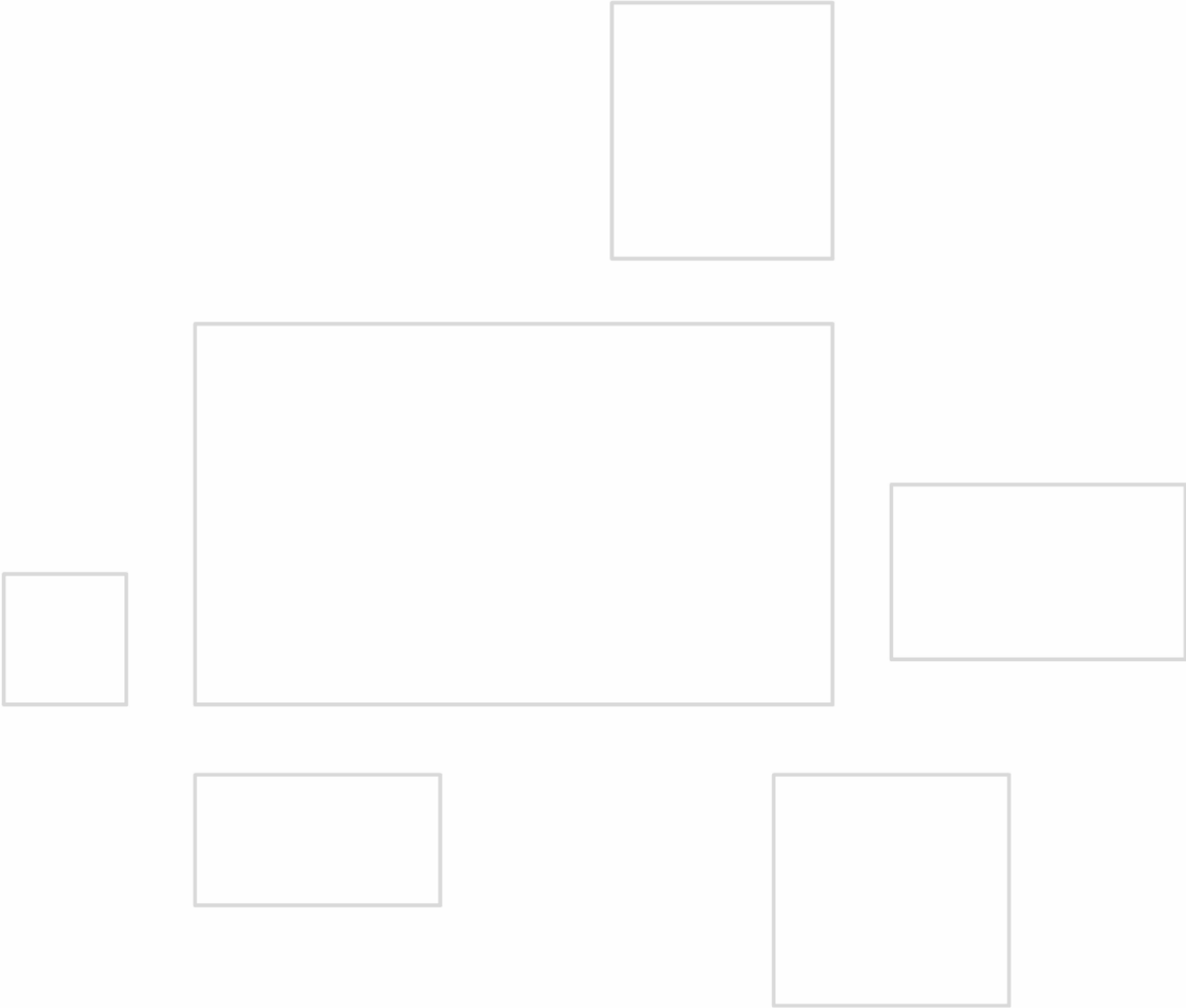
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[National Weather Service](#)
[National Water Center](#)
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

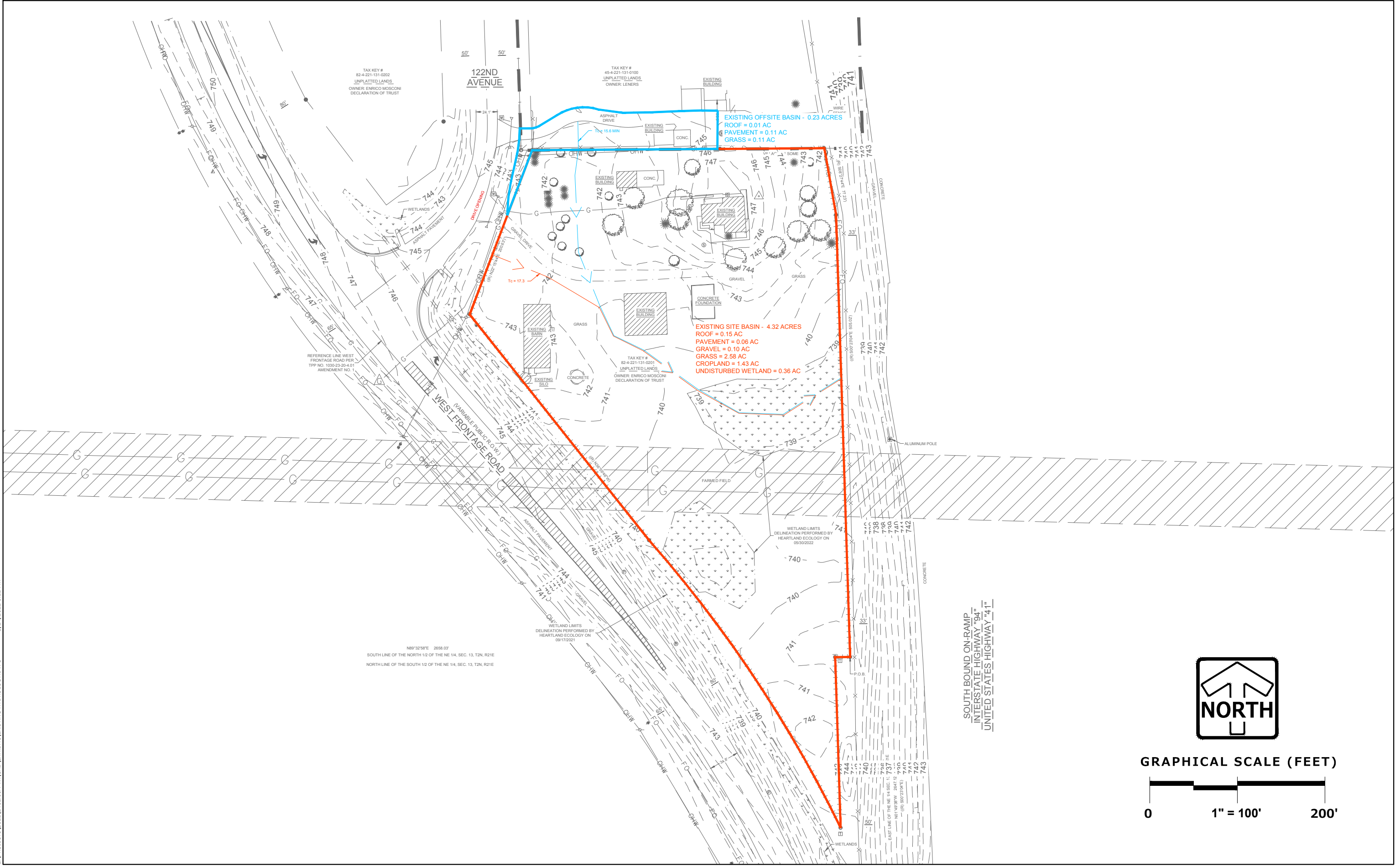
[Disclaimer](#)

APPENDIX 2

PRE-DEVELOPMENT CONDITIONS



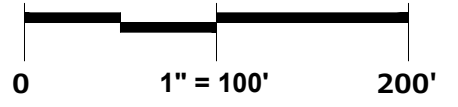
Z:\PROJECTS\2402\2402.00A-W\CAD\EXHIBITS\EXISTING HYDROLOGY.DWG 8/24/2022 6:11 PM



SOUTH BOUND ON-RAMP
INTERSTATE HIGHWAY "94"
UNITED STATES HIGHWAY "41"



GRAPHICAL SCALE (FEET)



BOBCAT SOMERS - EXISTING HYDROLOGY

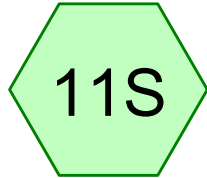
08-23-2022

PINNACLE ENGINEERING GROUP

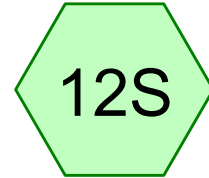
20725 WATERTOWN ROAD | SUITE 100 | BROOKFIELD, WI 53186 | WWW.PINNACLE-ENGR.COM |

PLAN | DESIGN | DELIVER

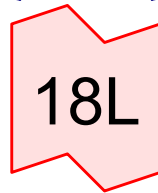
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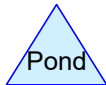
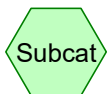
EXISTING OFFSITE
BASIN



EXISTING ONSITE
BASIN



total



Routing Diagram for 2402.00A PRELIM SWMP
Prepared by {enter your company name here}, Printed 8/25/2022
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2402.00A PRELIM SWMP

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Page 2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.330	74	GRASS (11S, 12S)
0.100	96	Gravel surface, HSG C (12S)
0.170	98	PAVE (11S, 12S)
0.160	98	ROOF (11S, 12S)
1.430	85	Row crops, straight row, Good, HSG C (12S)
4.190	80	TOTAL AREA

2402.00A PRELIM SWMP

MSE 24-hr 3 2-YR Rainfall=2.70"

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method

Subcatchment 11S: EXISTING OFFSITE Runoff Area=0.230 ac 52.17% Impervious Runoff Depth=1.48"
Flow Length=563' Tc=15.6 min CN=87 Runoff=0.43 cfs 0.028 af

Subcatchment 12S: EXISTING ONSITE Runoff Area=3.960 ac 5.30% Impervious Runoff Depth=1.03"
Flow Length=468' Tc=17.3 min CN=80 Runoff=4.81 cfs 0.340 af

Link 18L: total Inflow=5.23 cfs 0.368 af
Primary=5.23 cfs 0.368 af

Total Runoff Area = 4.190 ac Runoff Volume = 0.368 af Average Runoff Depth = 1.05"
92.12% Pervious = 3.860 ac 7.88% Impervious = 0.330 ac

2402.00A PRELIM SWMP

MSE 24-hr 3 2-YR Rainfall=2.70"

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Summary for Subcatchment 11S: EXISTING OFFSITE BASIN

Runoff = 0.43 cfs @ 12.25 hrs, Volume= 0.028 af, Depth= 1.48"

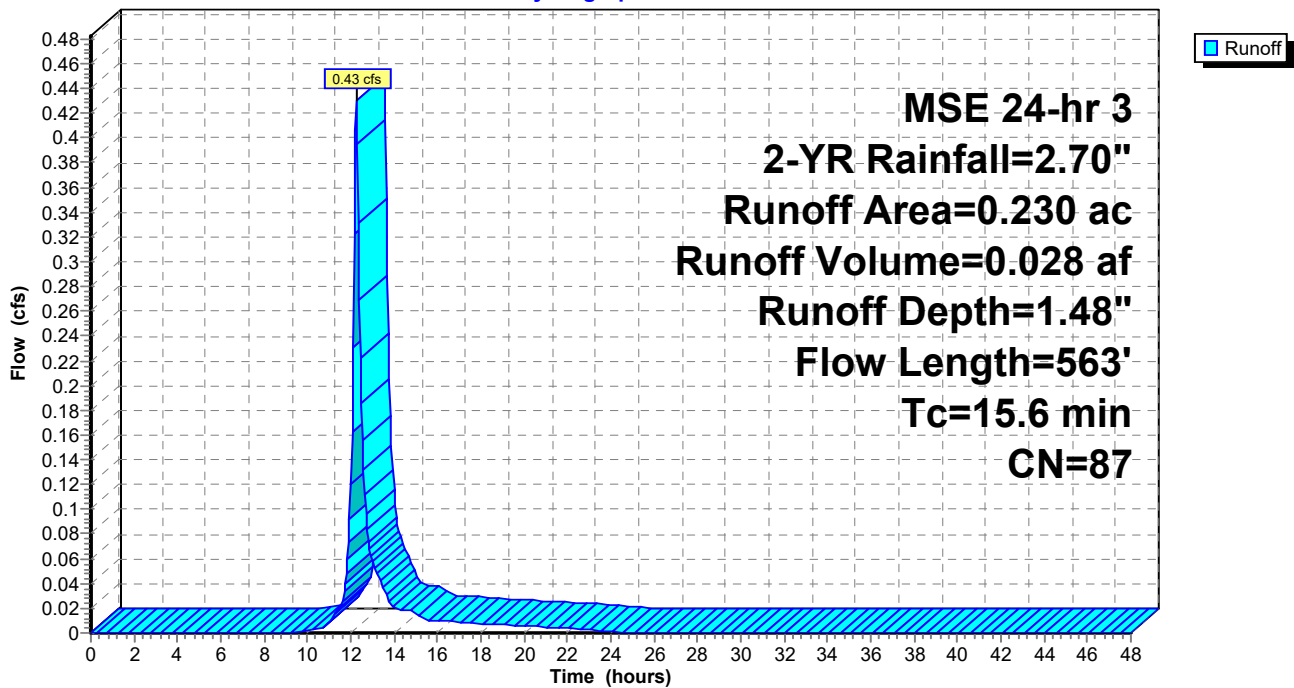
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-YR Rainfall=2.70"

Area (ac)	CN	Description
* 0.010	98	ROOF
* 0.110	98	PAVE
* 0.110	74	GRASS
0.230	87	Weighted Average
0.110		47.83% Pervious Area
0.120		52.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.1	75	0.0227	0.16		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 2.70"
3.8	305	0.0078	1.32		Shallow Concentrated Flow, SHALLOW Grassed Waterway Kv= 15.0 fps
3.7	183	0.0030	0.82		Shallow Concentrated Flow, SHALLOW Grassed Waterway Kv= 15.0 fps
15.6	563	Total			

Subcatchment 11S: EXISTING OFFSITE BASIN

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 2-YR Rainfall=2.70"

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Summary for Subcatchment 12S: EXISTING ONSITE BASIN

Runoff = 4.81 cfs @ 12.27 hrs, Volume= 0.340 af, Depth= 1.03"

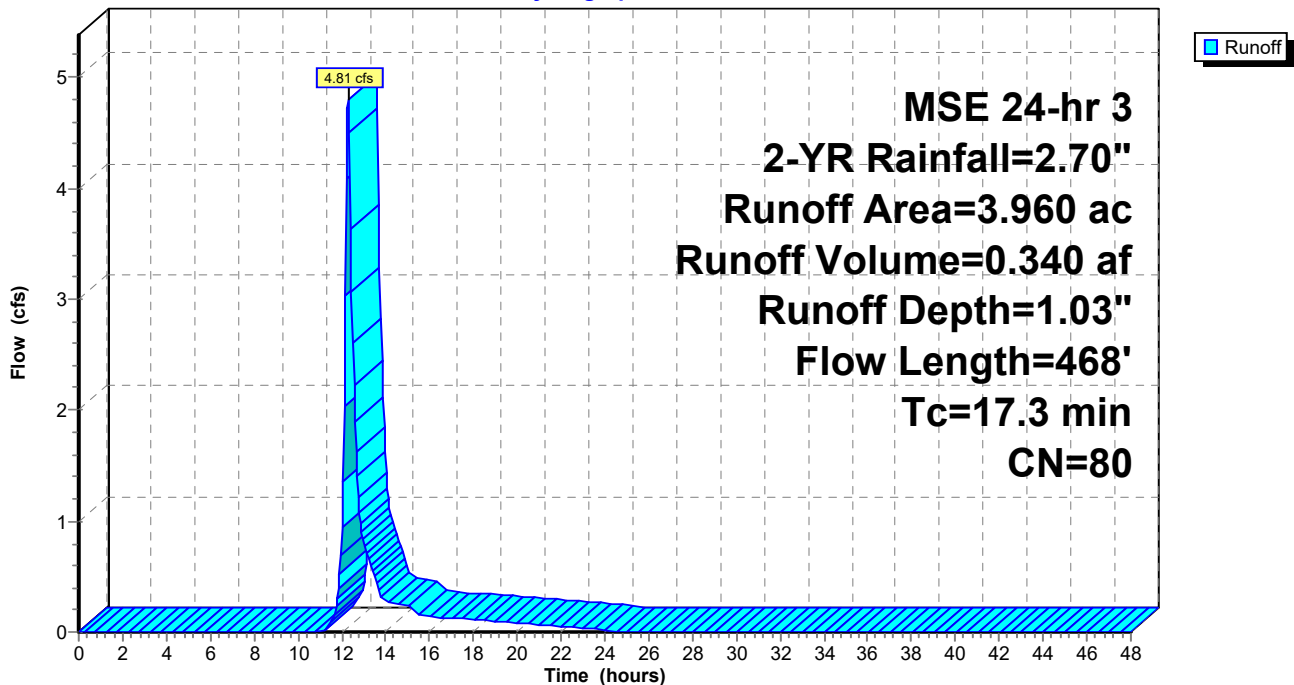
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-YR Rainfall=2.70"

Area (ac)	CN	Description
* 0.150	98	ROOF
* 0.060	98	PAVE
0.100	96	Gravel surface, HSG C
* 2.220	74	GRASS
1.430	85	Row crops, straight row, Good, HSG C
3.960	80	Weighted Average
3.750		94.70% Pervious Area
0.210		5.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	100	0.0148	0.14		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 2.70"
1.8	185	0.0130	1.71		Shallow Concentrated Flow, SHALLOW Grassed Waterway Kv= 15.0 fps
3.5	183	0.0033	0.86		Shallow Concentrated Flow, SHALLOW Grassed Waterway Kv= 15.0 fps
17.3	468	Total			

Subcatchment 12S: EXISTING ONSITE BASIN

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 2-YR Rainfall=2.70"

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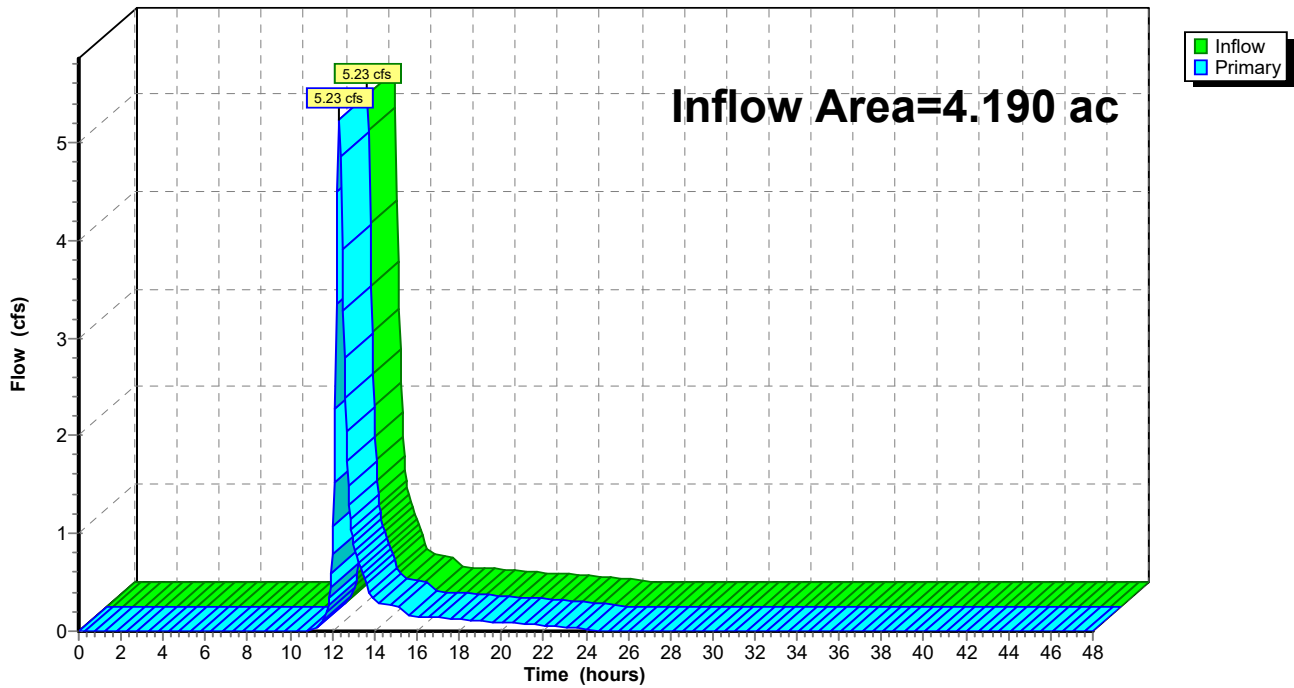
Summary for Link 18L: total

Inflow Area = 4.190 ac, 7.88% Impervious, Inflow Depth = 1.05" for 2-YR event
Inflow = 5.23 cfs @ 12.27 hrs, Volume= 0.368 af
Primary = 5.23 cfs @ 12.32 hrs, Volume= 0.368 af, Atten= 0%, Lag= 3.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 18L: total

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 100-YR Rainfall=5.86"

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method

Subcatchment 11S: EXISTING OFFSITE Runoff Area=0.230 ac 52.17% Impervious Runoff Depth=4.38"
Flow Length=563' Tc=15.6 min CN=87 Runoff=1.24 cfs 0.084 af

Subcatchment 12S: EXISTING ONSITE Runoff Area=3.960 ac 5.30% Impervious Runoff Depth=3.66"
Flow Length=468' Tc=17.3 min CN=80 Runoff=17.33 cfs 1.206 af

Link 18L: total

Inflow=18.55 cfs 1.290 af
Primary=18.55 cfs 1.290 af

Total Runoff Area = 4.190 ac Runoff Volume = 1.290 af Average Runoff Depth = 3.70"
92.12% Pervious = 3.860 ac 7.88% Impervious = 0.330 ac

2402.00A PRELIM SWMP

MSE 24-hr 3 100-YR Rainfall=5.86"

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Summary for Subcatchment 11S: EXISTING OFFSITE BASIN

Runoff = 1.24 cfs @ 12.24 hrs, Volume= 0.084 af, Depth= 4.38"

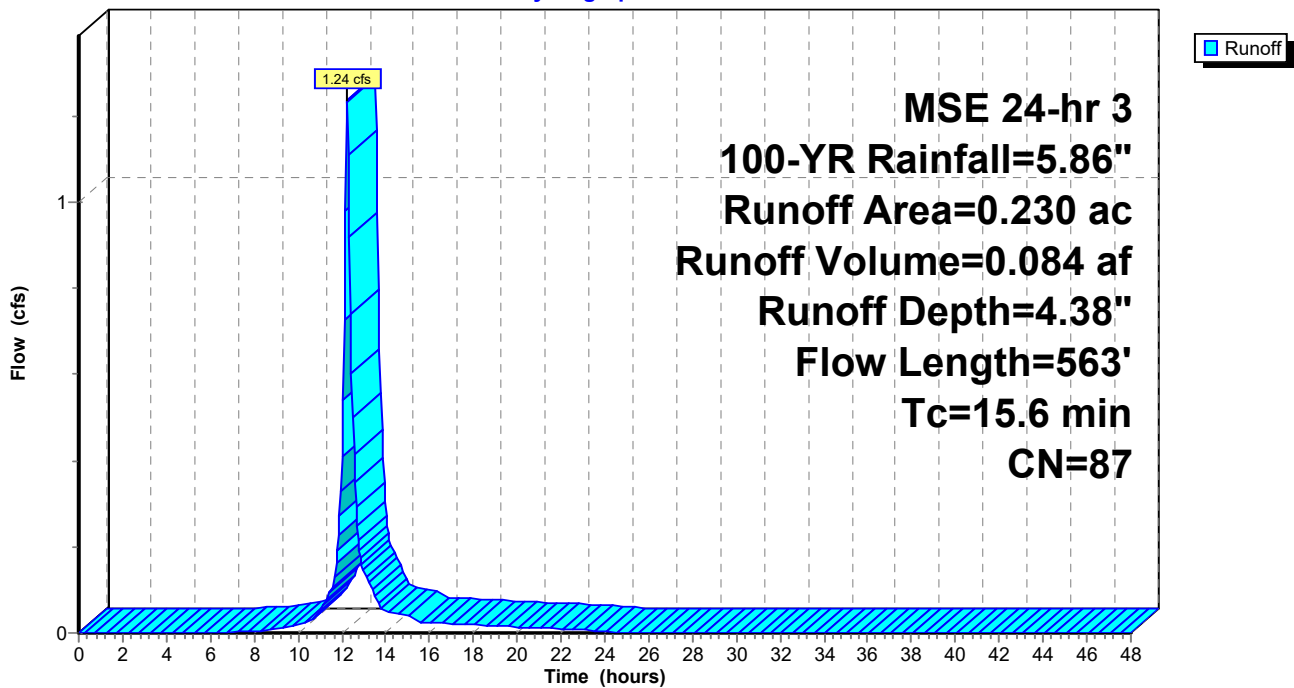
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-YR Rainfall=5.86"

Area (ac)	CN	Description
* 0.010	98	ROOF
* 0.110	98	PAVE
* 0.110	74	GRASS
0.230	87	Weighted Average
0.110		47.83% Pervious Area
0.120		52.17% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.1	75	0.0227	0.16		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 2.70"
3.8	305	0.0078	1.32		Shallow Concentrated Flow, SHALLOW Grassed Waterway Kv= 15.0 fps
3.7	183	0.0030	0.82		Shallow Concentrated Flow, SHALLOW Grassed Waterway Kv= 15.0 fps
15.6	563	Total			

Subcatchment 11S: EXISTING OFFSITE BASIN

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 100-YR Rainfall=5.86"

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Summary for Subcatchment 12S: EXISTING ONSITE BASIN

Runoff = 17.33 cfs @ 12.26 hrs, Volume= 1.206 af, Depth= 3.66"

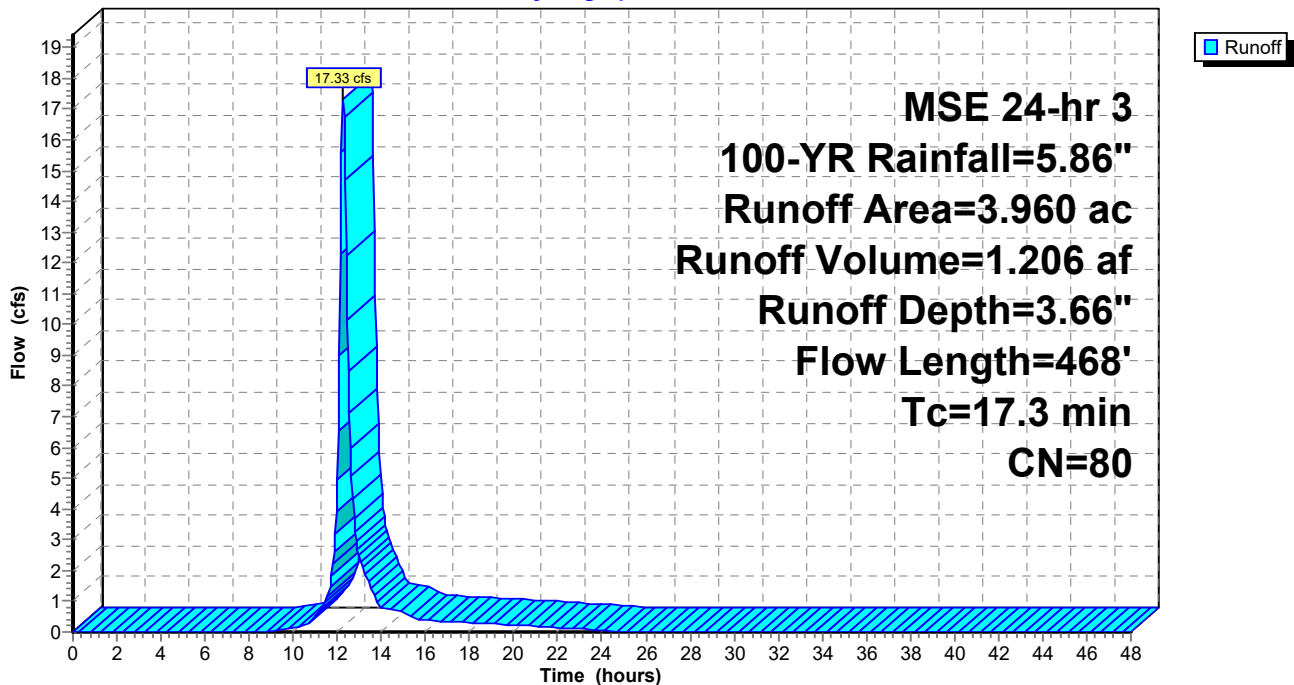
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-YR Rainfall=5.86"

Area (ac)	CN	Description
* 0.150	98	ROOF
* 0.060	98	PAVE
0.100	96	Gravel surface, HSG C
* 2.220	74	GRASS
1.430	85	Row crops, straight row, Good, HSG C
3.960	80	Weighted Average
3.750		94.70% Pervious Area
0.210		5.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.0	100	0.0148	0.14		Sheet Flow, SHEET Grass: Short n= 0.150 P2= 2.70"
1.8	185	0.0130	1.71		Shallow Concentrated Flow, SHALLOW Grassed Waterway Kv= 15.0 fps
3.5	183	0.0033	0.86		Shallow Concentrated Flow, SHALLOW Grassed Waterway Kv= 15.0 fps
17.3	468	Total			

Subcatchment 12S: EXISTING ONSITE BASIN

Hydrograph



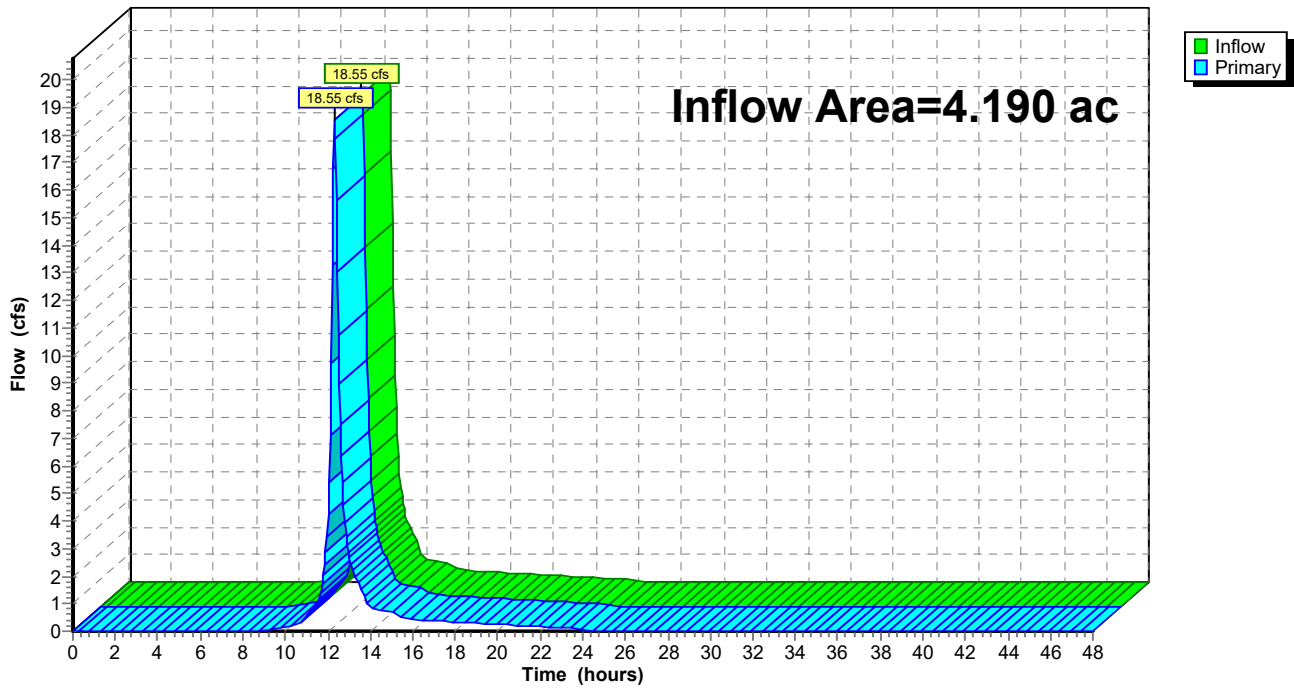
Summary for Link 18L: total

Inflow Area = 4.190 ac, 7.88% Impervious, Inflow Depth = 3.70" for 100-YR event
Inflow = 18.55 cfs @ 12.26 hrs, Volume= 1.290 af
Primary = 18.55 cfs @ 12.31 hrs, Volume= 1.290 af, Atten= 0%, Lag= 3.0 min

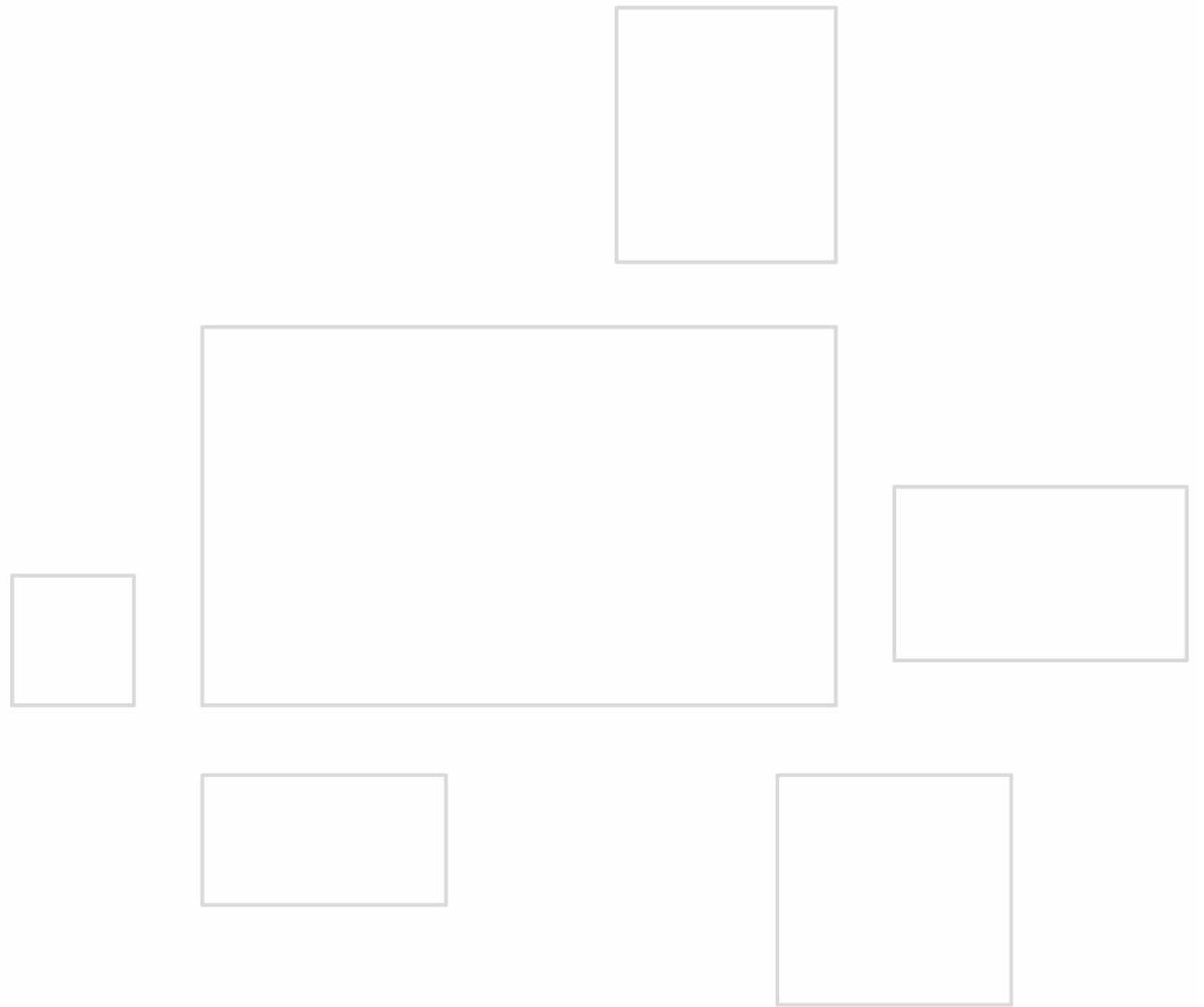
Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

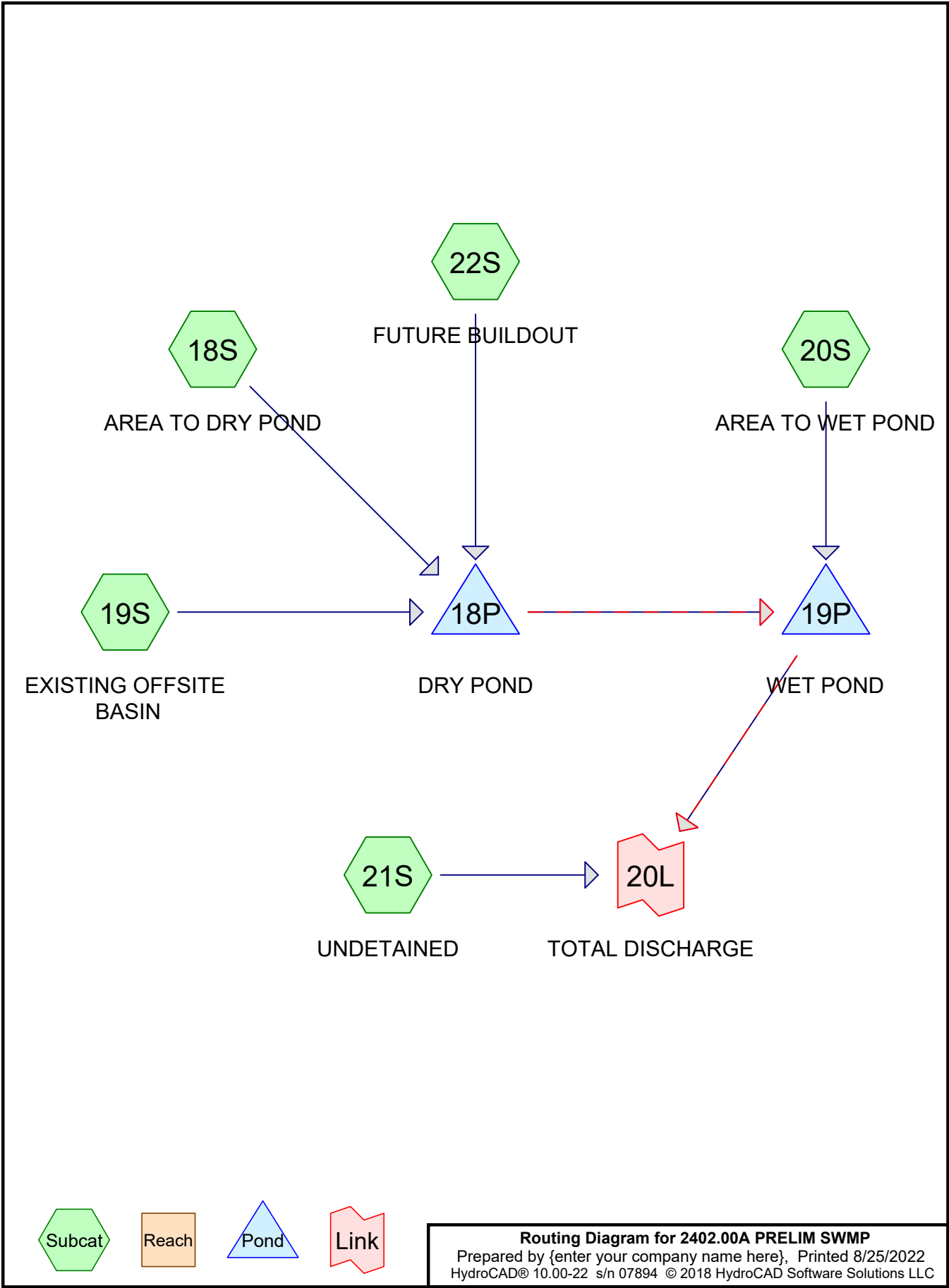
Link 18L: total

Hydrograph



APPENDIX 3 POST-DEVELOPMENT CONDITIONS (RATE ATTENUATION)





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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
2.120	74	GRASS (18S, 19S, 20S, 21S, 22S)
0.450	96	GRAVEL (20S)
1.350	98	PAVE (18S, 19S, 20S)
0.680	98	PAVEMENT (22S)
0.360	98	ROOF (19S, 20S)
4.960	88	TOTAL AREA

2402.00A PRELIM SWMP

MSE 24-hr 3 2-YR Rainfall=2.70"

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method

Subcatchment18S: AREA TO DRY POND Runoff Area=0.990 ac 30.30% Impervious Runoff Depth=1.09"
Tc=6.0 min CN=81 Runoff=1.93 cfs 0.090 af

Subcatchment19S: EXISTING OFFSITE Runoff Area=0.230 ac 52.17% Impervious Runoff Depth=1.48"
Tc=10.0 min CN=87 Runoff=0.52 cfs 0.028 af

Subcatchment20S: AREA TO WET POND Runoff Area=2.610 ac 49.43% Impervious Runoff Depth=1.71"
Tc=6.0 min CN=90 Runoff=7.84 cfs 0.372 af

Subcatchment21S: UNDETAINED Runoff Area=0.360 ac 0.00% Impervious Runoff Depth=0.72"
Tc=6.0 min CN=74 Runoff=0.45 cfs 0.022 af

Subcatchment22S: FUTURE BUILDOUT Runoff Area=0.770 ac 88.31% Impervious Runoff Depth=2.16"
Tc=6.0 min CN=95 Runoff=2.76 cfs 0.138 af

Pond 18P: DRY POND Peak Elev=740.41' Storage=0.154 af Inflow=5.15 cfs 0.257 af
Primary=0.34 cfs 0.252 af Secondary=0.00 cfs 0.000 af Outflow=0.34 cfs 0.252 af

Pond 19P: WET POND Peak Elev=737.62' Storage=0.411 af Inflow=8.06 cfs 0.624 af
Primary=0.22 cfs 0.528 af Secondary=0.00 cfs 0.000 af Outflow=0.22 cfs 0.528 af

Link 20L: TOTAL DISCHARGE Inflow=0.57 cfs 0.549 af
Primary=0.57 cfs 0.549 af

Total Runoff Area = 4.960 ac Runoff Volume = 0.650 af Average Runoff Depth = 1.57"
51.81% Pervious = 2.570 ac 48.19% Impervious = 2.390 ac

2402.00A PRELIM SWMP

MSE 24-hr 3 2-YR Rainfall=2.70"

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Summary for Subcatchment 18S: AREA TO DRY POND

Runoff = 1.93 cfs @ 12.14 hrs, Volume= 0.090 af, Depth= 1.09"

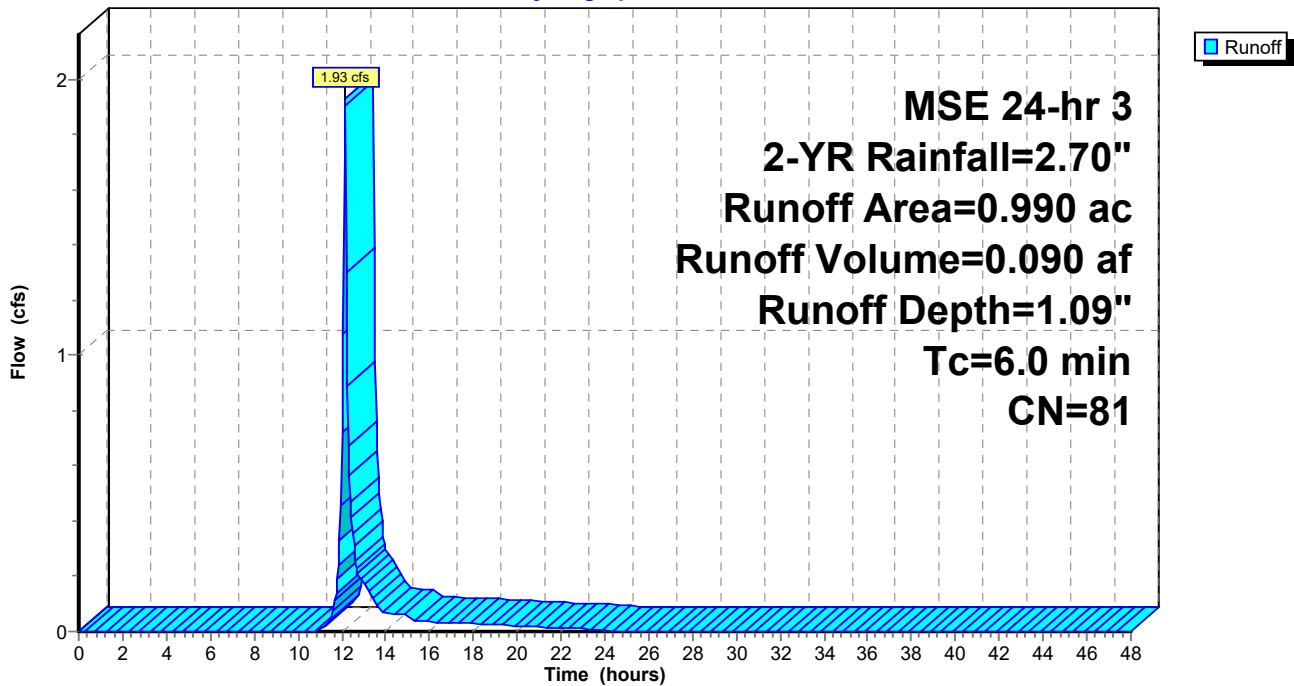
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-YR Rainfall=2.70"

Area (ac)	CN	Description
* 0.300	98	PAVE
* 0.690	74	GRASS
0.990	81	Weighted Average
0.690		69.70% Pervious Area
0.300		30.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN ALLOWED PER TR-55

Subcatchment 18S: AREA TO DRY POND

Hydrograph



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MSE 24-hr 3 2-YR Rainfall=2.70"

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Summary for Subcatchment 19S: EXISTING OFFSITE BASIN

Runoff = 0.52 cfs @ 12.18 hrs, Volume= 0.028 af, Depth= 1.48"

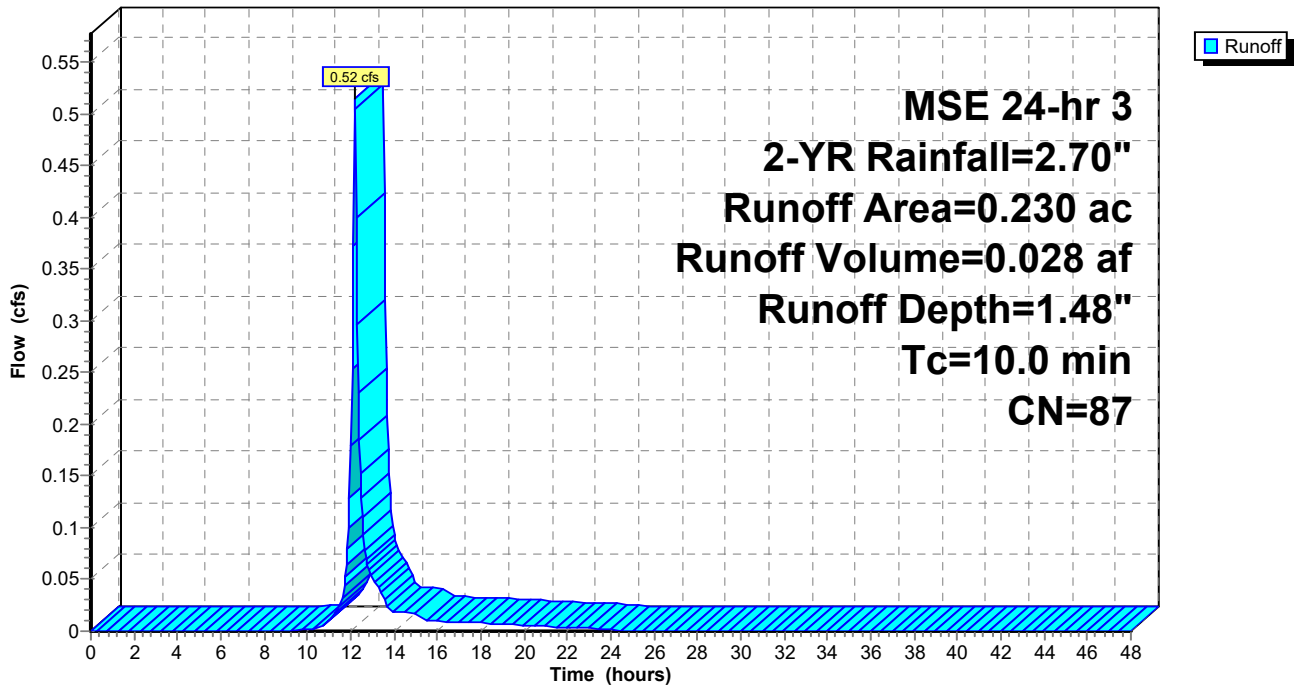
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-YR Rainfall=2.70"

Area (ac)	CN	Description
* 0.010	98	ROOF
* 0.110	98	PAVE
* 0.110	74	GRASS
0.230	87	Weighted Average
0.110		47.83% Pervious Area
0.120		52.17% Impervious Area

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

Subcatchment 19S: EXISTING OFFSITE BASIN

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 2-YR Rainfall=2.70"

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Summary for Subcatchment 20S: AREA TO WET POND

Runoff = 7.84 cfs @ 12.13 hrs, Volume= 0.372 af, Depth= 1.71"

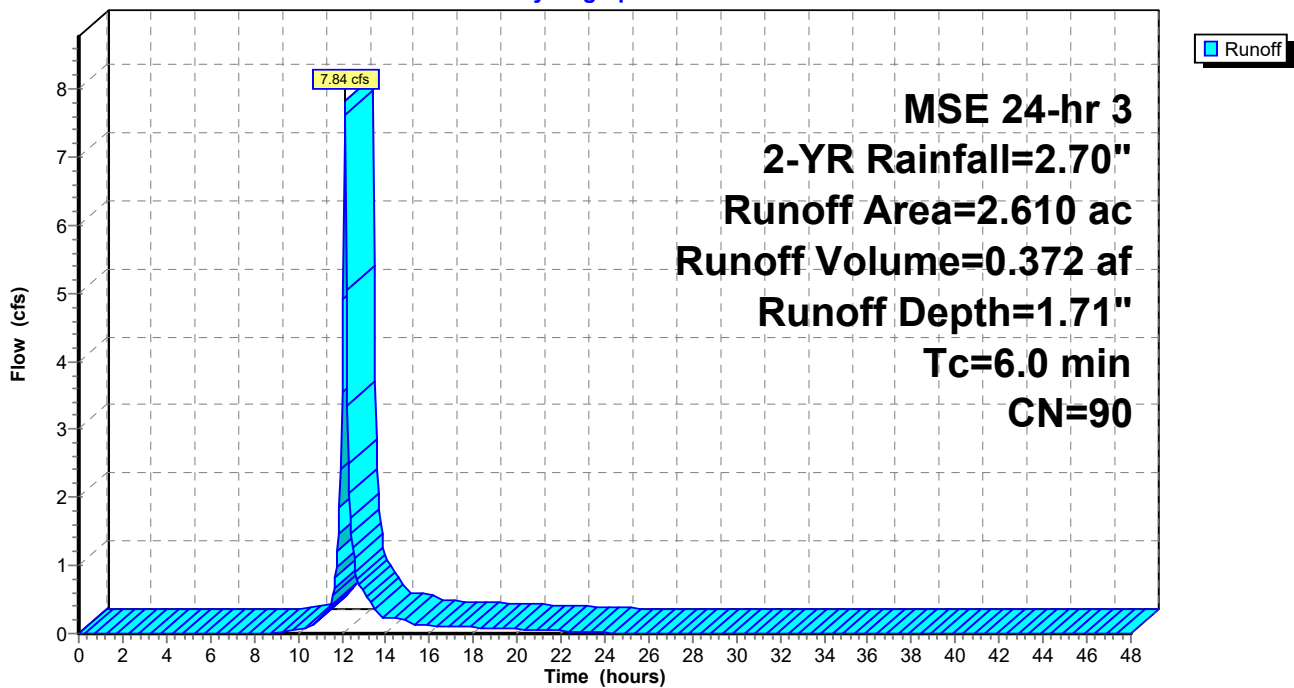
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-YR Rainfall=2.70"

Area (ac)	CN	Description
* 0.350	98	ROOF
* 0.940	98	PAVE
* 0.450	96	GRAVEL
* 0.870	74	GRASS
2.610	90	Weighted Average
1.320		50.57% Pervious Area
1.290		49.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN ALLOWED PER TR-55

Subcatchment 20S: AREA TO WET POND

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 2-YR Rainfall=2.70"

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Summary for Subcatchment 21S: UNDETAINED

Runoff = 0.45 cfs @ 12.14 hrs, Volume= 0.022 af, Depth= 0.72"

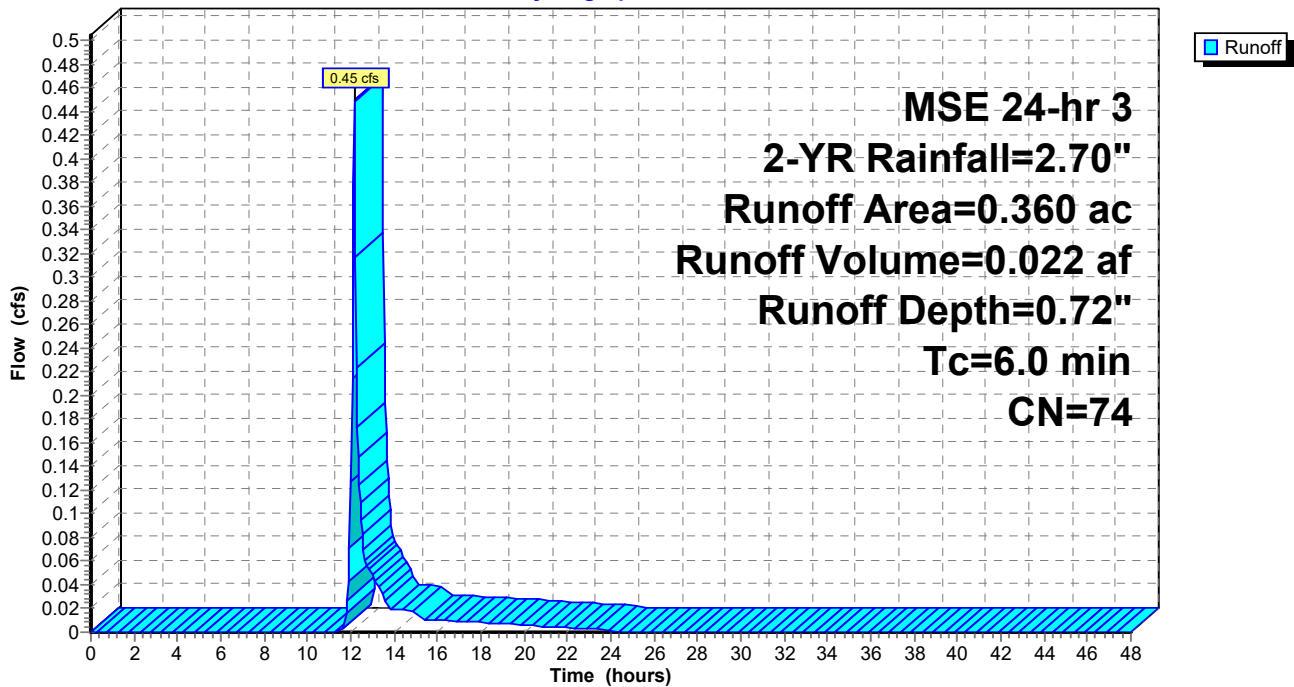
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-YR Rainfall=2.70"

Area (ac)	CN	Description
* 0.360	74	GRASS
0.360		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 21S: UNDETAINED

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 2-YR Rainfall=2.70"

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Summary for Subcatchment 22S: FUTURE BUILDOUT

Runoff = 2.76 cfs @ 12.13 hrs, Volume= 0.138 af, Depth= 2.16"

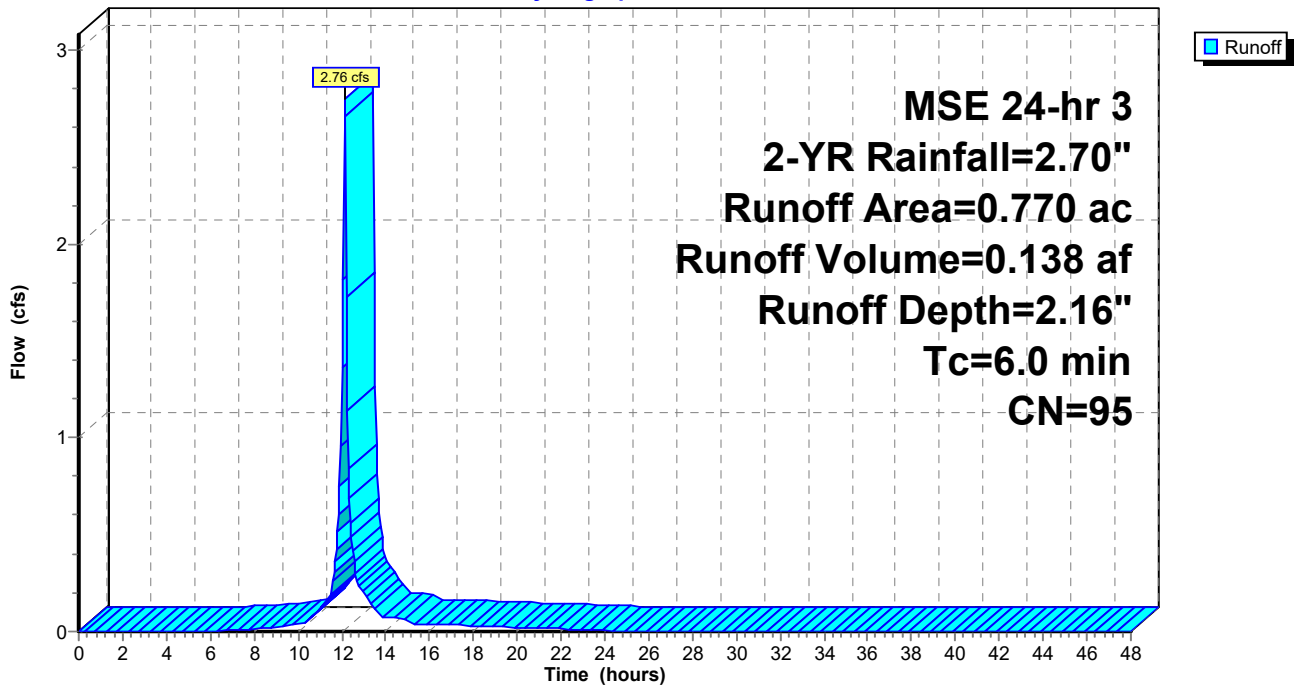
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-YR Rainfall=2.70"

Area (ac)	CN	Description
* 0.680	98	PAVEMENT
* 0.090	74	GRASS
0.770	95	Weighted Average
0.090		11.69% Pervious Area
0.680		88.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MINIMUM TC

Subcatchment 22S: FUTURE BUILDOUT

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 2-YR Rainfall=2.70"

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Summary for Pond 18P: DRY POND

Inflow Area = 1.990 ac, 55.28% Impervious, Inflow Depth = 1.55" for 2-YR event
 Inflow = 5.15 cfs @ 12.14 hrs, Volume= 0.257 af
 Outflow = 0.34 cfs @ 13.29 hrs, Volume= 0.252 af, Atten= 93%, Lag= 69.1 min
 Primary = 0.34 cfs @ 13.29 hrs, Volume= 0.252 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 740.41' @ 13.29 hrs Surf.Area= 0.189 ac Storage= 0.154 af

Plug-Flow detention time= 286.8 min calculated for 0.252 af (98% of inflow)
 Center-of-Mass det. time= 277.6 min (1,070.9 - 793.3)

Volume	Invert	Avail.Storage	Storage Description
#1	739.50'	0.642 af	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
739.50	0.151	0.000	0.000
742.50	0.277	0.642	0.642

Device	Routing	Invert	Outlet Devices
#1	Primary	739.50'	12.0" Round Culvert L= 131.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 739.50' / 737.34' S= 0.0164 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	739.50'	3.9" Vert. Orifice/Grate C= 0.600
#3	Device 1	741.75'	36.0" Vert. Orifice/Grate C= 0.600
#4	Secondary	742.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.34 cfs @ 13.29 hrs HW=740.41' TW=737.21' (Dynamic Tailwater)

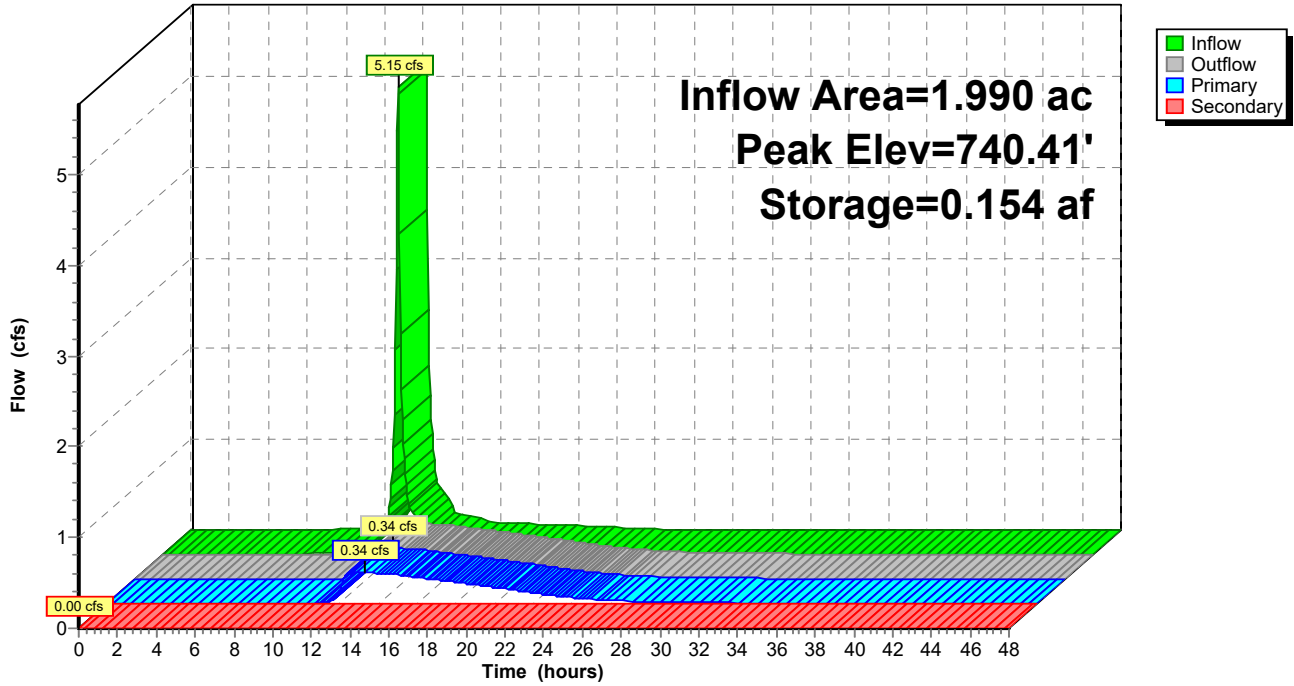
- ↑ **1=Culvert** (Passes 0.34 cfs of 1.92 cfs potential flow)
- ↑ **2=Orifice/Grate** (Orifice Controls 0.34 cfs @ 4.15 fps)
- ↑ **3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=739.50' TW=736.00' (Dynamic Tailwater)

- ↑ **4=Broad-Crested Rectangular Weir**(Controls 0.00 cfs)

Pond 18P: DRY POND

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 2-YR Rainfall=2.70"

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Summary for Pond 19P: WET POND

Inflow Area = 4.600 ac, 51.96% Impervious, Inflow Depth > 1.63" for 2-YR event
 Inflow = 8.06 cfs @ 12.13 hrs, Volume= 0.624 af
 Outflow = 0.22 cfs @ 20.79 hrs, Volume= 0.528 af, Atten= 97%, Lag= 519.2 min
 Primary = 0.22 cfs @ 20.79 hrs, Volume= 0.528 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 737.62' @ 20.79 hrs Surf.Area= 0.295 ac Storage= 0.411 af

Plug-Flow detention time= 871.7 min calculated for 0.528 af (84% of inflow)
 Center-of-Mass det. time= 782.6 min (1,688.4 - 905.8)

Volume	Invert	Avail.Storage	Storage Description
#1	736.00'	1.474 af	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
736.00	0.213	0.000	0.000
740.50	0.442	1.474	1.474

Device	Routing	Invert	Outlet Devices
#1	Primary	736.00'	12.0" Round Culvert L= 80.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 736.00' / 735.90' S= 0.0013 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	736.00'	2.6" Vert. Orifice/Grate C= 0.600
#3	Device 1	738.52'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	739.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.22 cfs @ 20.79 hrs HW=737.62' TW=0.00' (Dynamic Tailwater)

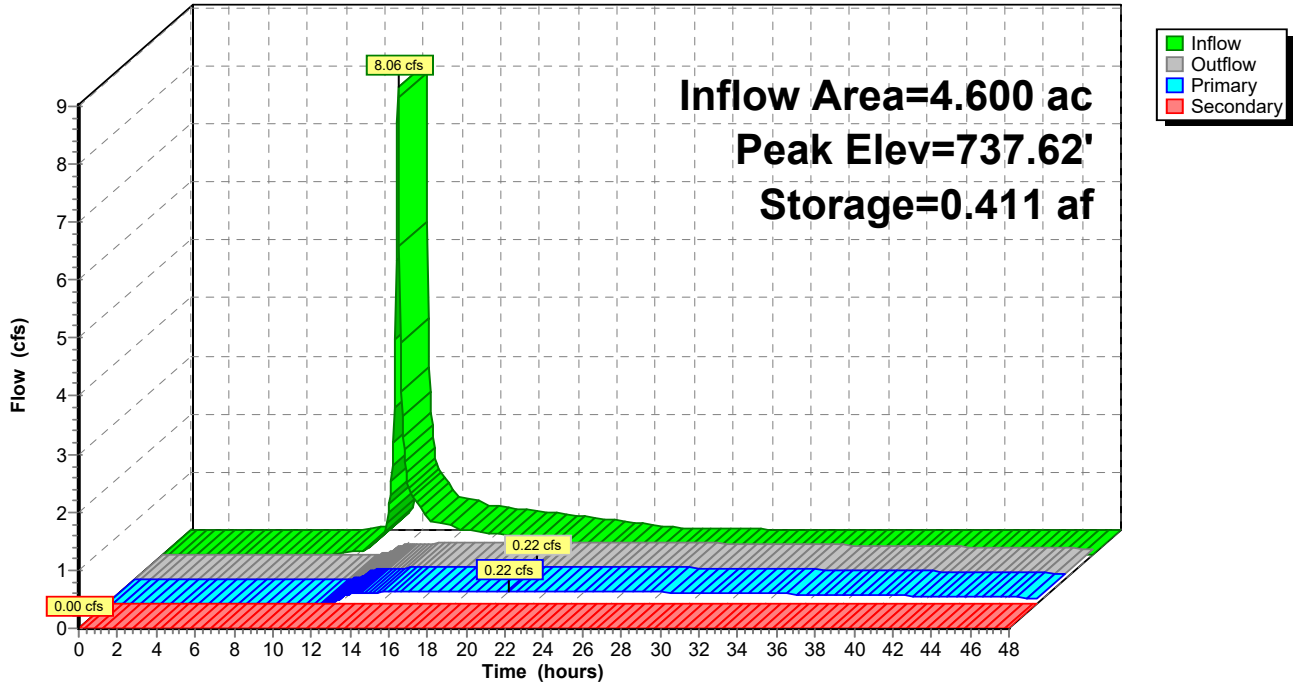
- ↑ **1=Culvert** (Passes 0.22 cfs of 2.66 cfs potential flow)
- ↑ **2=Orifice/Grate** (Orifice Controls 0.22 cfs @ 5.92 fps)
- ↑ **3=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=736.00' TW=0.00' (Dynamic Tailwater)

- ↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 19P: WET POND

Hydrograph



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MSE 24-hr 3 2-YR Rainfall=2.70"

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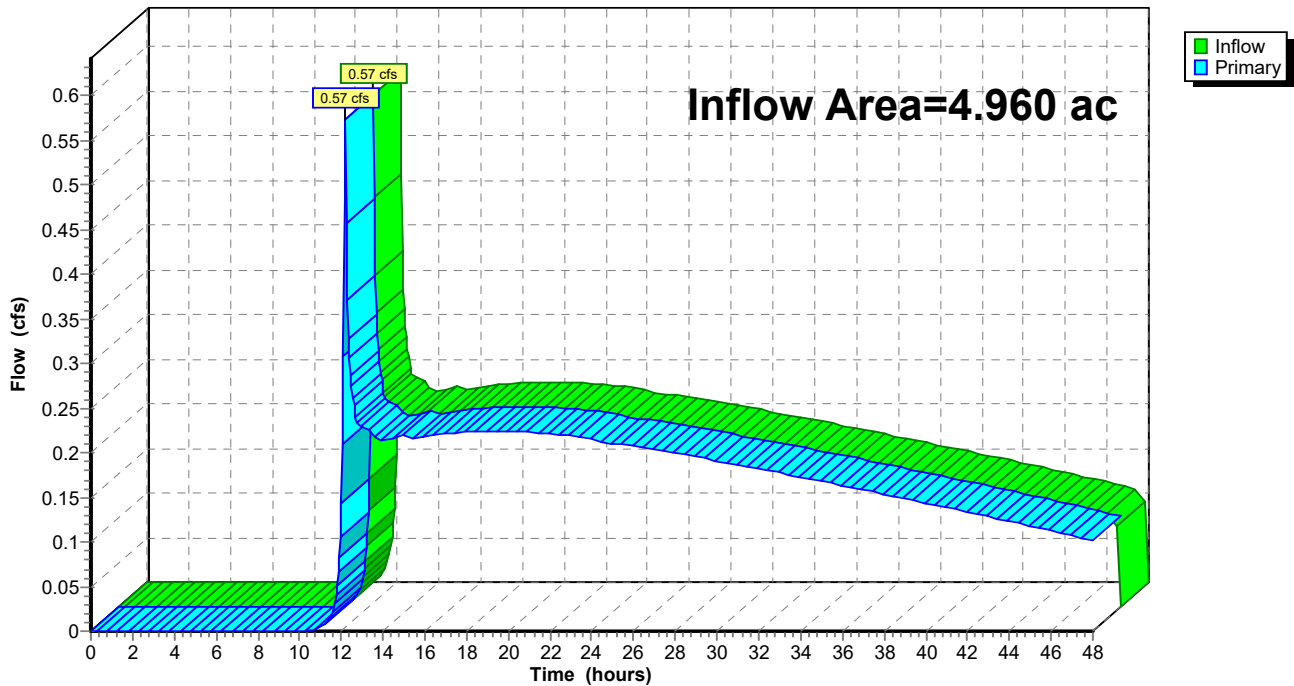
Summary for Link 20L: TOTAL DISCHARGE

Inflow Area = 4.960 ac, 48.19% Impervious, Inflow Depth > 1.33" for 2-YR event
Inflow = 0.57 cfs @ 12.15 hrs, Volume= 0.549 af
Primary = 0.57 cfs @ 12.20 hrs, Volume= 0.549 af, Atten= 0%, Lag= 3.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link 20L: TOTAL DISCHARGE

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 100-YR Rainfall=5.86"

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Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Sim-Route method - Pond routing by Sim-Route method

Subcatchment18S: AREA TO DRY POND Runoff Area=0.990 ac 30.30% Impervious Runoff Depth=3.76"
Tc=6.0 min CN=81 Runoff=6.51 cfs 0.310 af

Subcatchment19S: EXISTING OFFSITE Runoff Area=0.230 ac 52.17% Impervious Runoff Depth=4.38"
Tc=10.0 min CN=87 Runoff=1.47 cfs 0.084 af

Subcatchment20S: AREA TO WET POND Runoff Area=2.610 ac 49.43% Impervious Runoff Depth=4.71"
Tc=6.0 min CN=90 Runoff=20.34 cfs 1.024 af

Subcatchment21S: UNDETAINED Runoff Area=0.360 ac 0.00% Impervious Runoff Depth=3.07"
Tc=6.0 min CN=74 Runoff=1.98 cfs 0.092 af

Subcatchment22S: FUTURE BUILDOUT Runoff Area=0.770 ac 88.31% Impervious Runoff Depth=5.27"
Tc=6.0 min CN=95 Runoff=6.36 cfs 0.338 af

Pond 18P: DRY POND Peak Elev=741.88' Storage=0.479 af Inflow=14.23 cfs 0.732 af
Primary=0.74 cfs 0.726 af Secondary=0.00 cfs 0.000 af Outflow=0.74 cfs 0.726 af

Pond 19P: WET POND Peak Elev=738.65' Storage=0.743 af Inflow=20.78 cfs 1.751 af
Primary=2.23 cfs 1.385 af Secondary=0.00 cfs 0.000 af Outflow=2.23 cfs 1.385 af

Link 20L: TOTAL DISCHARGE Inflow=2.40 cfs 1.476 af
Primary=2.40 cfs 1.476 af

Total Runoff Area = 4.960 ac Runoff Volume = 1.849 af Average Runoff Depth = 4.47"
51.81% Pervious = 2.570 ac 48.19% Impervious = 2.390 ac

2402.00A PRELIM SWMP

MSE 24-hr 3 100-YR Rainfall=5.86"

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Summary for Subcatchment 18S: AREA TO DRY POND

Runoff = 6.51 cfs @ 12.13 hrs, Volume= 0.310 af, Depth= 3.76"

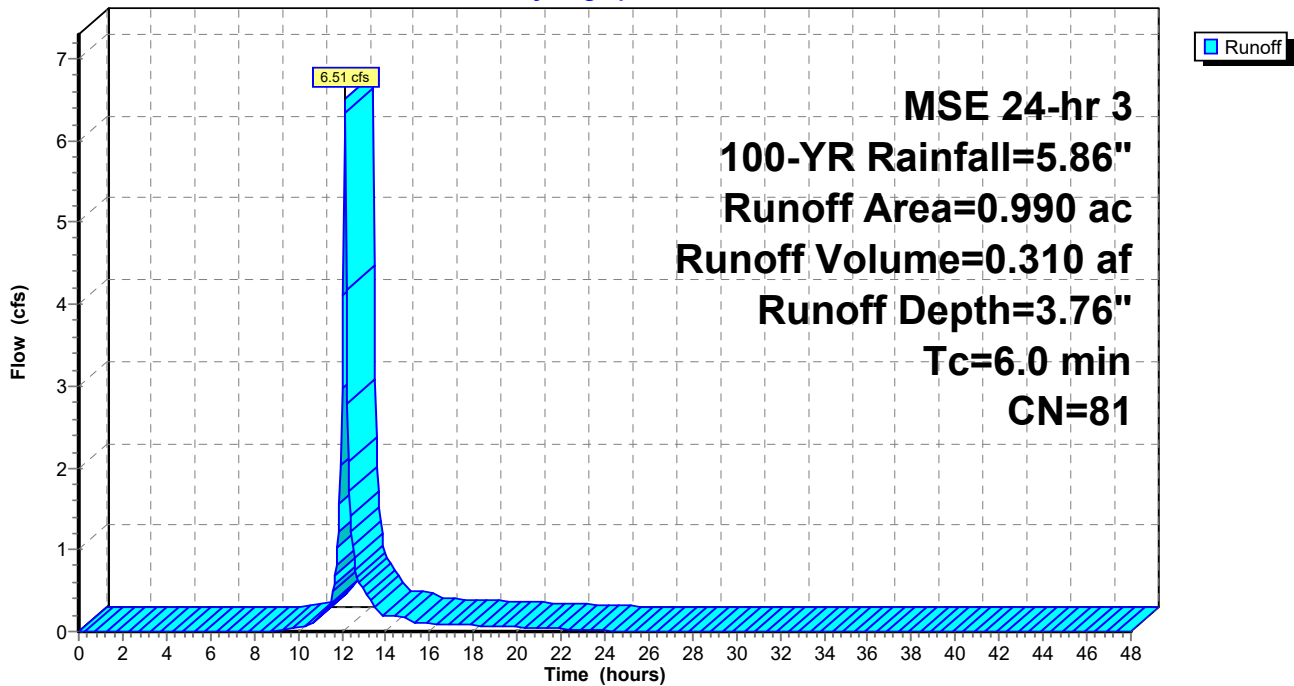
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-YR Rainfall=5.86"

Area (ac)	CN	Description
* 0.300	98	PAVE
* 0.690	74	GRASS
0.990	81	Weighted Average
0.690		69.70% Pervious Area
0.300		30.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN ALLOWED PER TR-55

Subcatchment 18S: AREA TO DRY POND

Hydrograph



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MSE 24-hr 3 100-YR Rainfall=5.86"

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Summary for Subcatchment 19S: EXISTING OFFSITE BASIN

Runoff = 1.47 cfs @ 12.17 hrs, Volume= 0.084 af, Depth= 4.38"

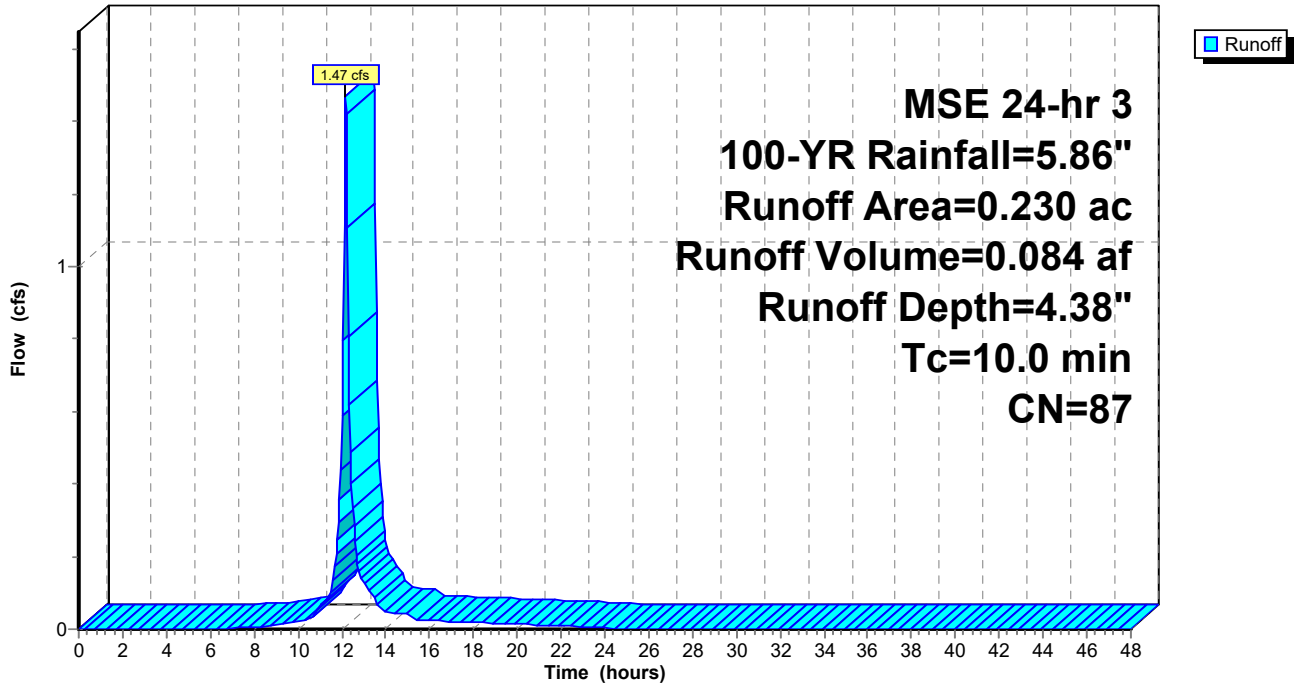
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-YR Rainfall=5.86"

Area (ac)	CN	Description
* 0.010	98	ROOF
* 0.110	98	PAVE
* 0.110	74	GRASS
0.230	87	Weighted Average
0.110		47.83% Pervious Area
0.120		52.17% Impervious Area

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

Subcatchment 19S: EXISTING OFFSITE BASIN

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 100-YR Rainfall=5.86"

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Summary for Subcatchment 20S: AREA TO WET POND

Runoff = 20.34 cfs @ 12.13 hrs, Volume= 1.024 af, Depth= 4.71"

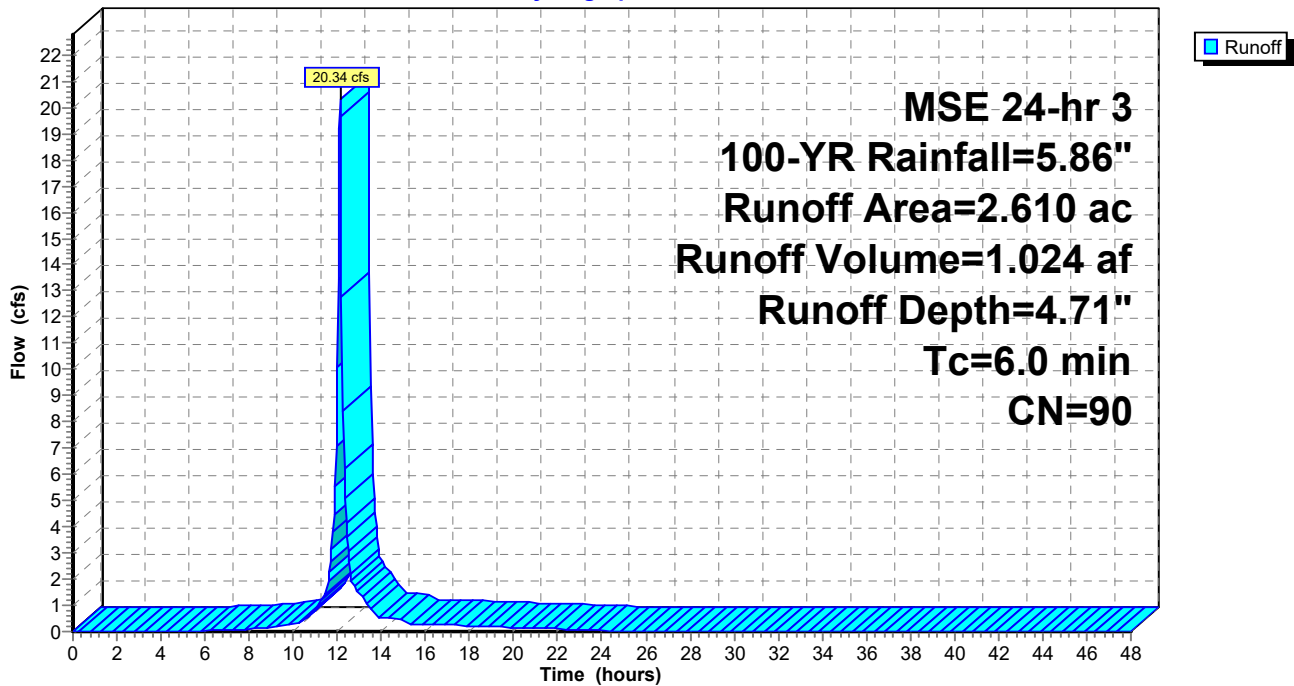
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-YR Rainfall=5.86"

Area (ac)	CN	Description
* 0.350	98	ROOF
* 0.940	98	PAVE
* 0.450	96	GRAVEL
* 0.870	74	GRASS
2.610	90	Weighted Average
1.320		50.57% Pervious Area
1.290		49.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN ALLOWED PER TR-55

Subcatchment 20S: AREA TO WET POND

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 100-YR Rainfall=5.86"

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Summary for Subcatchment 21S: UNDETAINED

Runoff = 1.98 cfs @ 12.13 hrs, Volume= 0.092 af, Depth= 3.07"

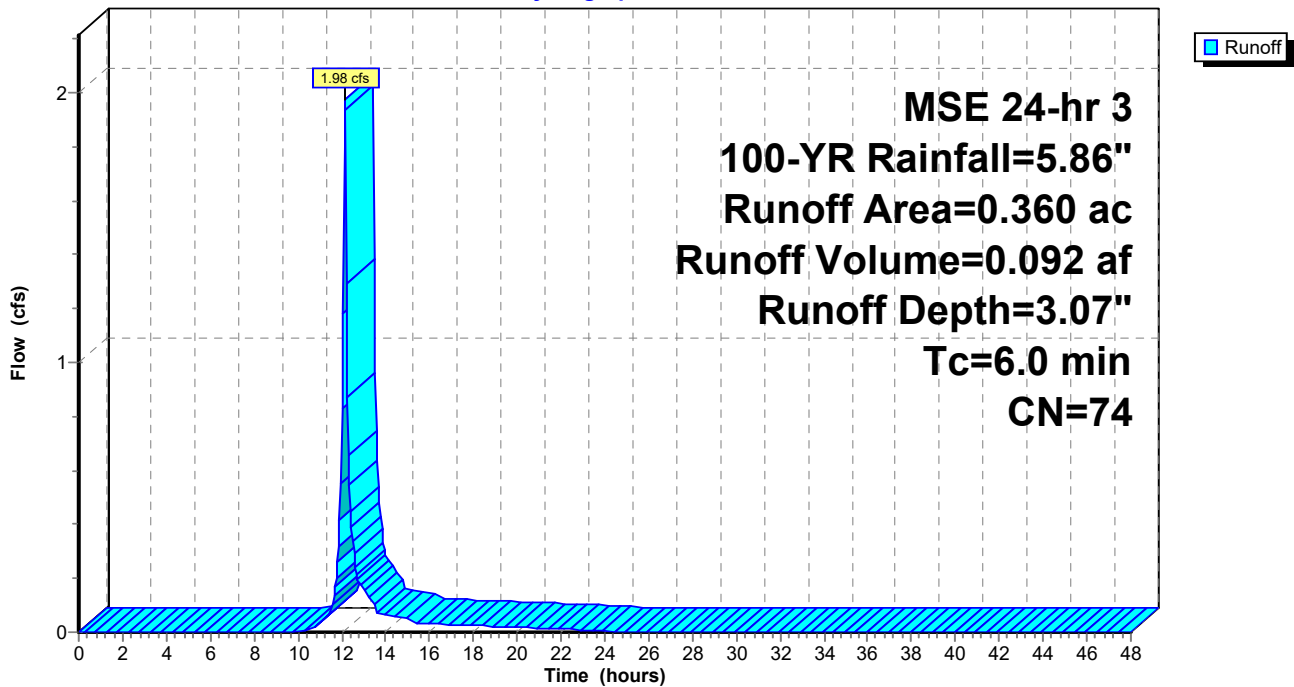
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-YR Rainfall=5.86"

Area (ac)	CN	Description
* 0.360	74	GRASS
0.360		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 21S: UNDETAINED

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 100-YR Rainfall=5.86"

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Summary for Subcatchment 22S: FUTURE BUILDOUT

Runoff = 6.36 cfs @ 12.13 hrs, Volume= 0.338 af, Depth= 5.27"

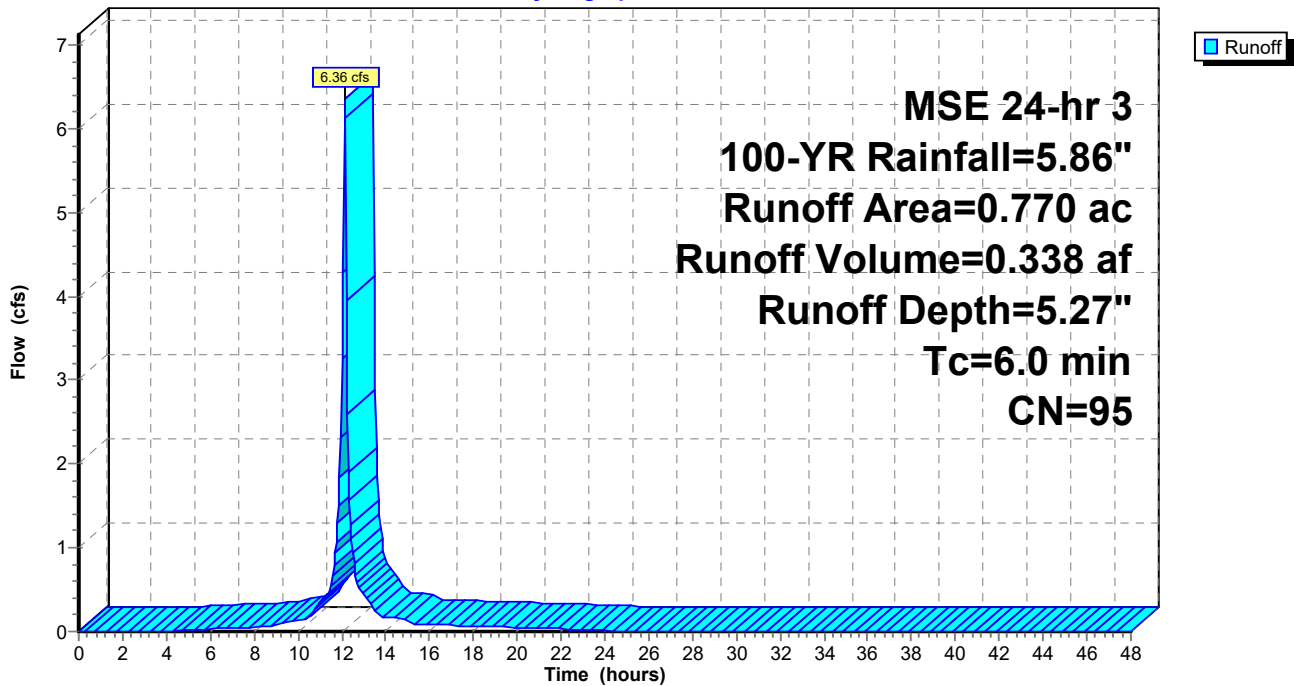
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-YR Rainfall=5.86"

Area (ac)	CN	Description
* 0.680	98	PAVEMENT
* 0.090	74	GRASS
0.770	95	Weighted Average
0.090		11.69% Pervious Area
0.680		88.31% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MINIMUM TC

Subcatchment 22S: FUTURE BUILDOUT

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 100-YR Rainfall=5.86"

Prepared by {enter your company name here}

Printed 8/25/2022

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Page 20

Summary for Pond 18P: DRY POND

Inflow Area = 1.990 ac, 55.28% Impervious, Inflow Depth = 4.42" for 100-YR event
 Inflow = 14.23 cfs @ 12.13 hrs, Volume= 0.732 af
 Outflow = 0.74 cfs @ 13.45 hrs, Volume= 0.726 af, Atten= 95%, Lag= 78.9 min
 Primary = 0.74 cfs @ 13.45 hrs, Volume= 0.726 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 741.88' @ 13.45 hrs Surf.Area= 0.251 ac Storage= 0.479 af

Plug-Flow detention time= 422.2 min calculated for 0.726 af (99% of inflow)
 Center-of-Mass det. time= 417.2 min (1,193.0 - 775.8)

Volume	Invert	Avail.Storage	Storage Description
#1	739.50'	0.642 af	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
739.50	0.151	0.000	0.000
742.50	0.277	0.642	0.642

Device	Routing	Invert	Outlet Devices
#1	Primary	739.50'	12.0" Round Culvert L= 131.6' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 739.50' / 737.34' S= 0.0164 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	739.50'	3.9" Vert. Orifice/Grate C= 0.600
#3	Device 1	741.75'	36.0" Vert. Orifice/Grate C= 0.600
#4	Secondary	742.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.74 cfs @ 13.45 hrs HW=741.88' TW=738.64' (Dynamic Tailwater)

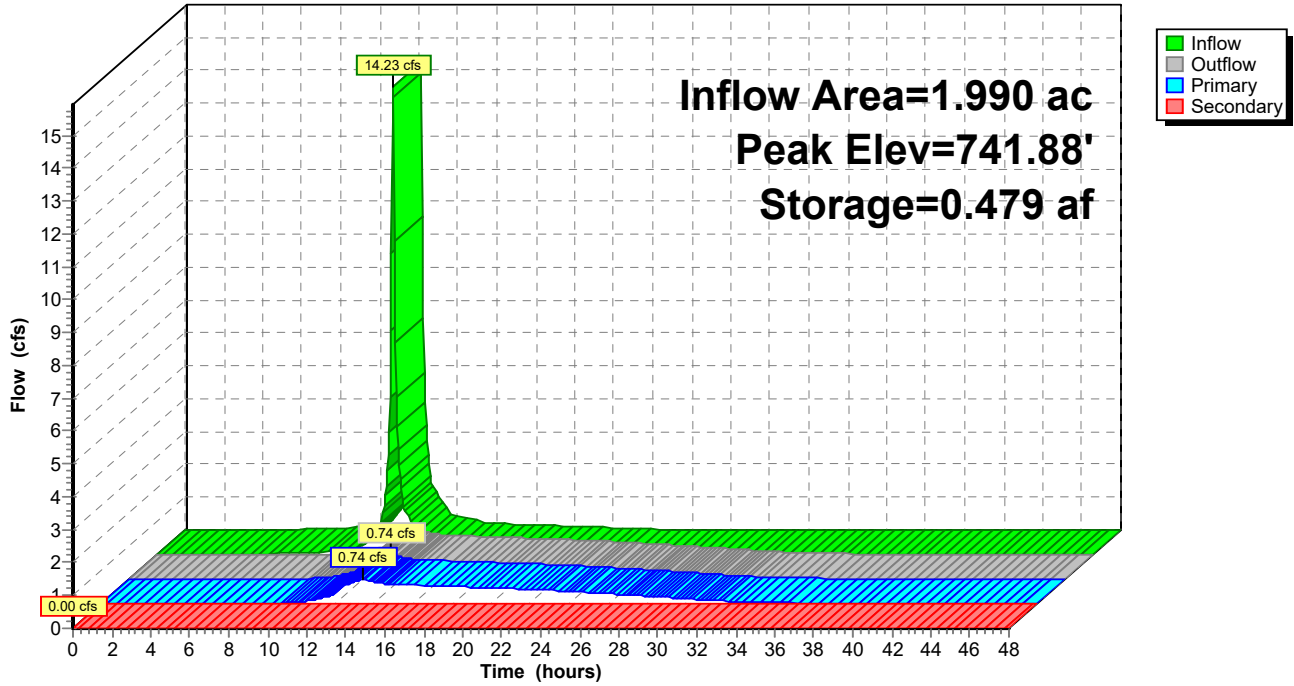
- ↑ **1=Culvert** (Passes 0.74 cfs of 4.10 cfs potential flow)
- ↑ **2=Orifice/Grate** (Orifice Controls 0.60 cfs @ 7.18 fps)
- ↑ **3=Orifice/Grate** (Orifice Controls 0.14 cfs @ 1.25 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=739.50' TW=736.00' (Dynamic Tailwater)

- ↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 18P: DRY POND

Hydrograph



2402.00A PRELIM SWMP

MSE 24-hr 3 100-YR Rainfall=5.86"

Prepared by {enter your company name here}

Printed 8/25/2022

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Summary for Pond 19P: WET POND

Inflow Area = 4.600 ac, 51.96% Impervious, Inflow Depth > 4.57" for 100-YR event
 Inflow = 20.78 cfs @ 12.13 hrs, Volume= 1.751 af
 Outflow = 2.23 cfs @ 12.92 hrs, Volume= 1.385 af, Atten= 89%, Lag= 47.4 min
 Primary = 2.23 cfs @ 12.92 hrs, Volume= 1.385 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Sim-Route method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Peak Elev= 738.65' @ 12.92 hrs Surf.Area= 0.348 ac Storage= 0.743 af

Plug-Flow detention time= 610.5 min calculated for 1.385 af (79% of inflow)
 Center-of-Mass det. time= 465.6 min (1,413.3 - 947.7)

Volume	Invert	Avail.Storage	Storage Description
#1	736.00'	1.474 af	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
736.00	0.213	0.000	0.000
740.50	0.442	1.474	1.474

Device	Routing	Invert	Outlet Devices
#1	Primary	736.00'	12.0" Round Culvert L= 80.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 736.00' / 735.90' S= 0.0013 '/' Cc= 0.900 n= 0.012, Flow Area= 0.79 sf
#2	Device 1	736.00'	2.6" Vert. Orifice/Grate C= 0.600
#3	Device 1	738.52'	48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	739.50'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=2.23 cfs @ 12.92 hrs HW=738.65' TW=0.00' (Dynamic Tailwater)

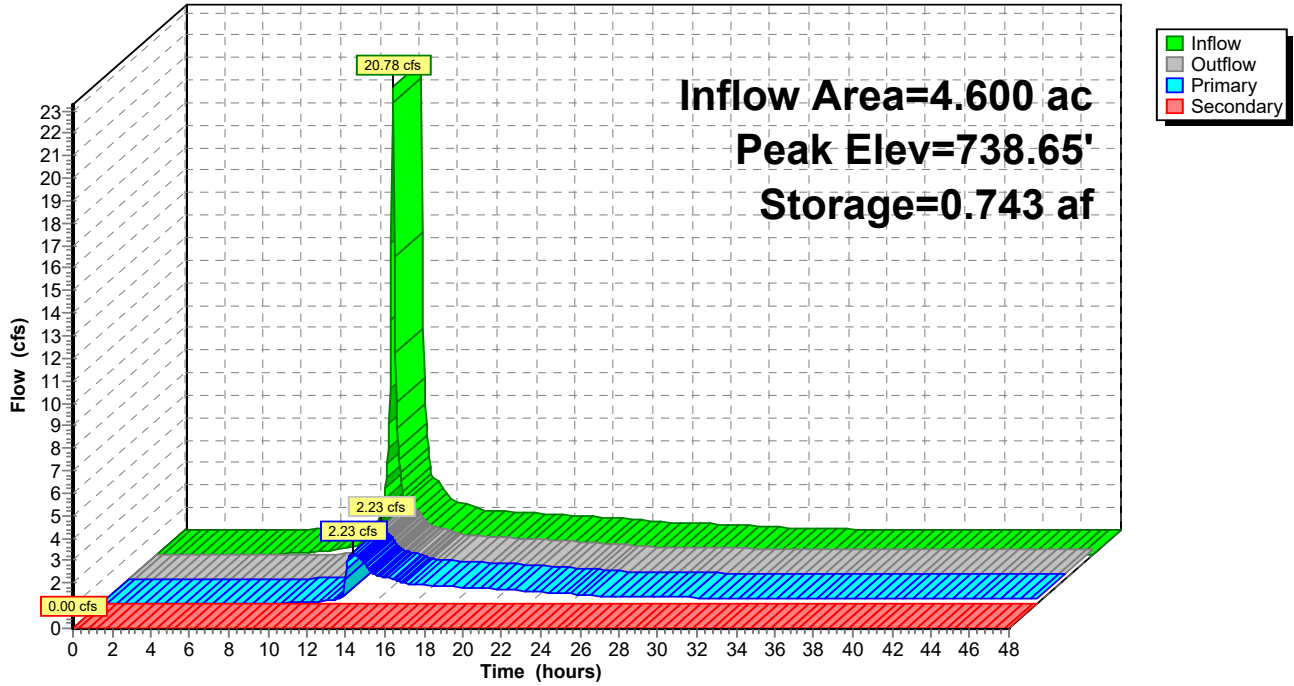
- ↑ **1=Culvert** (Passes 2.23 cfs of 4.15 cfs potential flow)
- ↑ **2=Orifice/Grate** (Orifice Controls 0.28 cfs @ 7.68 fps)
- ↑ **3=Orifice/Grate** (Weir Controls 1.94 cfs @ 1.18 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=736.00' TW=0.00' (Dynamic Tailwater)

- ↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 19P: WET POND

Hydrograph



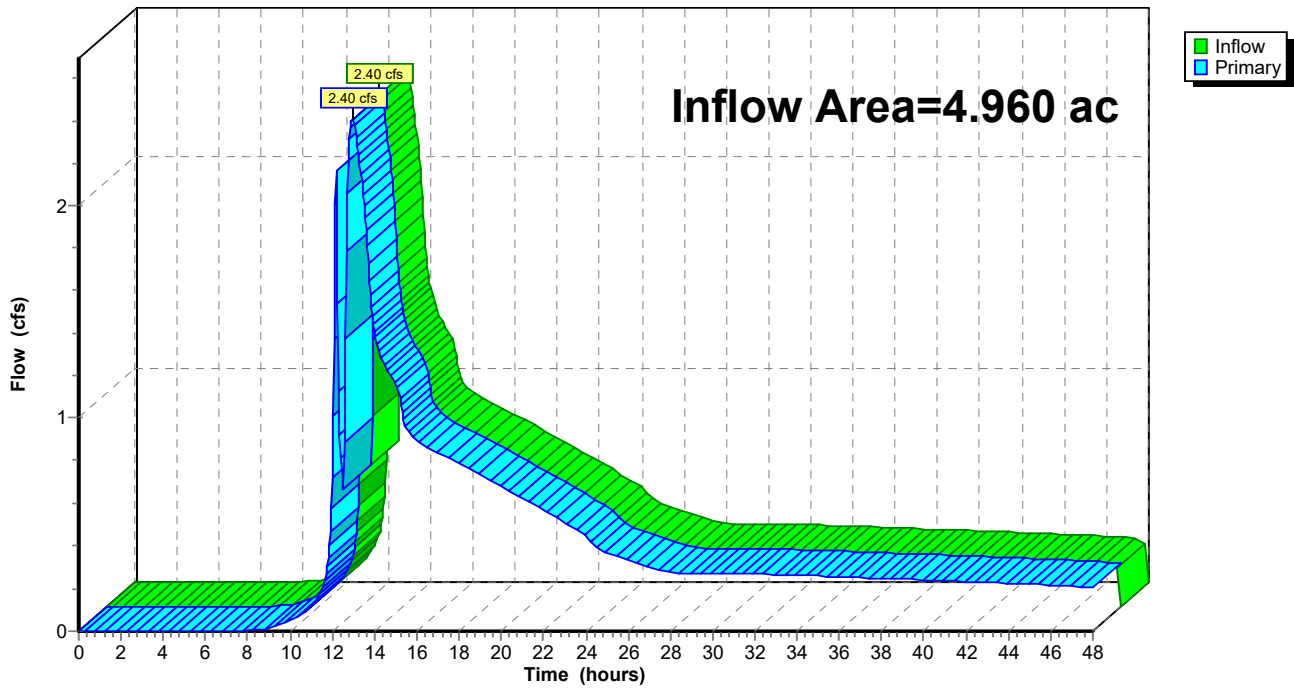
Summary for Link 20L: TOTAL DISCHARGE

Inflow Area = 4.960 ac, 48.19% Impervious, Inflow Depth > 3.57" for 100-YR event
Inflow = 2.40 cfs @ 12.90 hrs, Volume= 1.476 af
Primary = 2.40 cfs @ 12.95 hrs, Volume= 1.476 af, Atten= 0%, Lag= 3.0 min

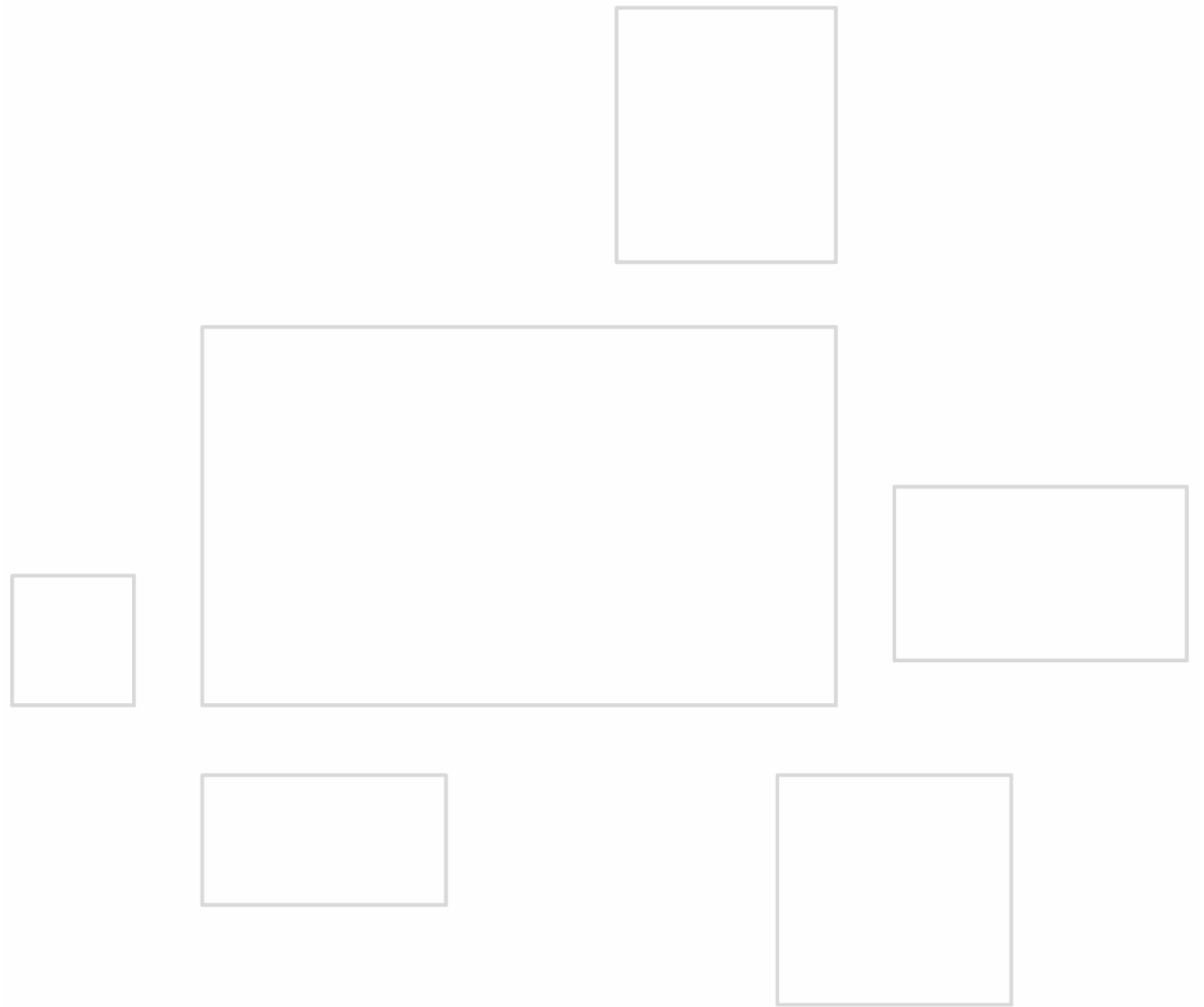
Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

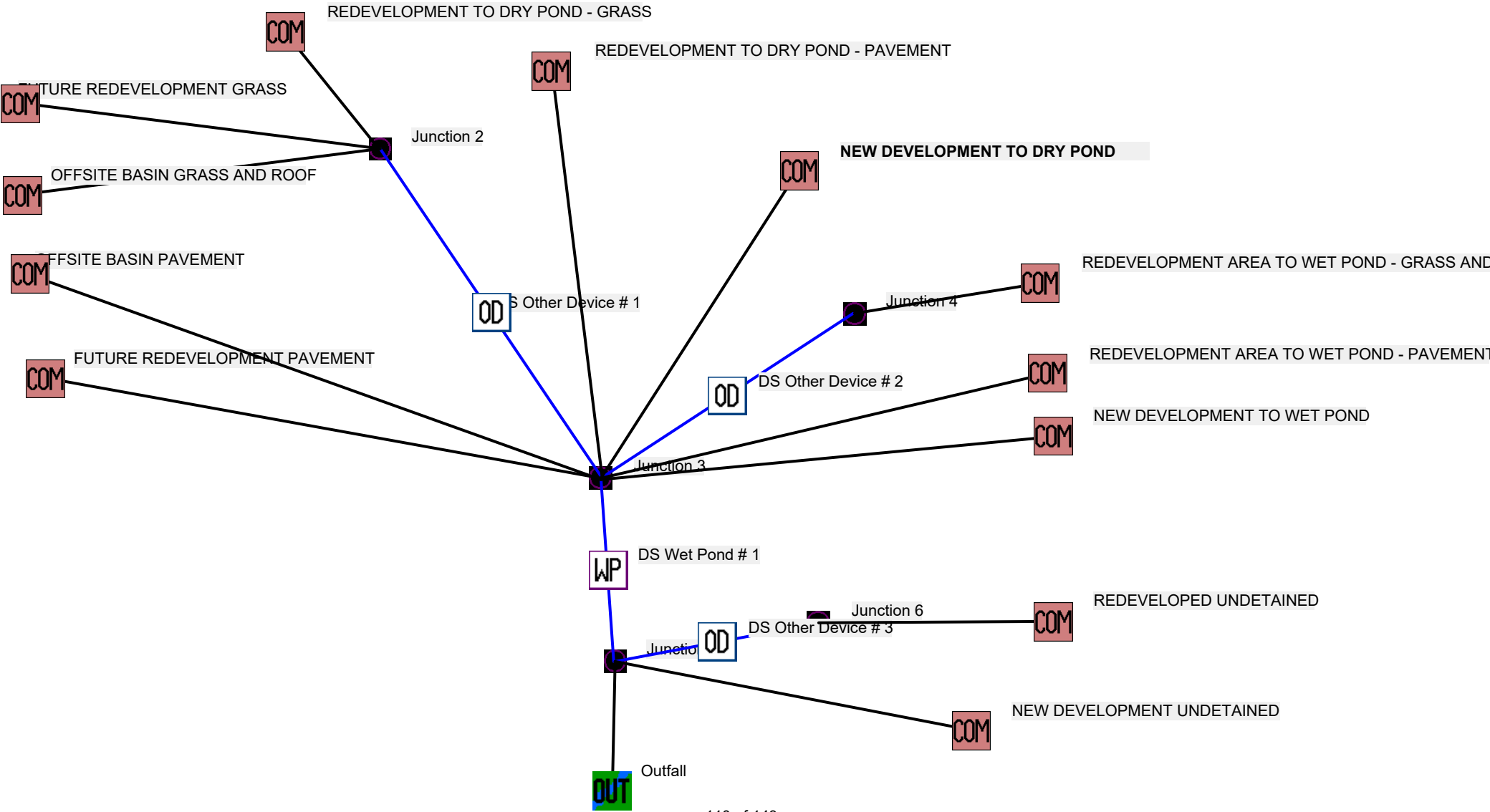
Link 20L: TOTAL DISCHARGE

Hydrograph



APPENDIX 4 POST-DEVELOPMENT CONDITIONS (WATER QUALITY)





Data file name: Z:\Projects\2021\2402.00A-WI\DESIGN\SWMP\SLAMM\2022-08-24 DRY POND.mdb

WinSLAMM Version 10.4.1

Rain file name: C:\WinSLAMM Files\Rain Files\WI Milwaukee 69.RAN

Particulate Solids Concentration file name: C:\WinSLAMM Files\10.1 WI_AVG01.pscx

Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx

Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std

Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std

Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std

Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std

Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False

Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx

Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv

Cost Data file name:

If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations

Seed for random number generator: -42

Study period starting date: 01/05/69

Study period ending date: 12/31/69

Start of Winter Season: 12/06

End of Winter Season: 03/28

Date: 08-25-2022

Time: 16:21:58

Site information:

LU# 1 - Commercial: REDEVELOPMENT TO DRY POND - PAVEMENT Total area (ac): 0.290
13 - Paved Parking 1: 0.290 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Commercial: REDEVELOPMENT TO DRY POND - GRASS Total area (ac): 0.540
51 - Small Landscaped Areas 1: 0.540 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 3 - Commercial: NEW DEVELOPMENT TO DRY POND Total area (ac): 0.148
51 - Small Landscaped Areas 1: 0.148 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 4 - Commercial: REDEVELOPMENT AREA TO WET POND - PAVEMENT Total area (ac): 0.853
13 - Paved Parking 1: 0.853 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 5 - Commercial: REDEVELOPMENT AREA TO WET POND - GRASS AND ROOF Total area (ac): 0.450
1 - Roofs 1: 0.347 ac. Pitched Connected PSD File: C:\WinSLAMM Files\NURP.cpz
45 - Large Landscaped Areas 1: 0.103 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 6 - Commercial: NEW DEVELOPMENT TO WET POND Total area (ac): 1.315
13 - Paved Parking 1: 0.087 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
14 - Paved Parking 2: 0.450 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz
51 - Small Landscaped Areas 1: 0.778 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 7 - Commercial: OFFSITE BASIN GRASS AND ROOF Total area (ac): 0.120
1 - Roofs 1: 0.010 ac. Flat Connected PSD File: C:\WinSLAMM Files\NURP.cpz
51 - Small Landscaped Areas 1: 0.110 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 8 - Commercial: REDEVELOPED UNDETAINED Total area (ac): 0.162
51 - Small Landscaped Areas 1: 0.162 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 9 - Commercial: NEW DEVELOPMENT UNDETAINED Total area (ac): 0.202
51 - Small Landscaped Areas 1: 0.202 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 10 - Commercial: OFFSITE BASIN PAVEMENT Total area (ac): 0.110
13 - Paved Parking 1: 0.110 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 11 - Commercial: FUTURE REDEVELOPMENT PAVEMENT Total area (ac): 0.680
13 - Paved Parking 1: 0.680 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 12 - Commercial: FUTURE REDEVELOPMENT GRASS Total area (ac): 0.090
45 - Large Landscaped Areas 1: 0.090 ac. Normal Clayey Low Density PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Other Device CP# 1 (DS) - DS Other Device # 1

Fraction of drainage area served by device (ac) = 1.00

Particulate Concentration reduction fraction = 1.00

Filterable Concentration reduction fraction = 1.00

Runoff volume reduction fraction = 0

Control Practice 2: Other Device CP# 2 (DS) - DS Other Device # 2

Fraction of drainage area served by device (ac) = 1.00

Particulate Concentration reduction fraction = 1.00

Filterable Concentration reduction fraction = 1.00

Runoff volume reduction fraction = 0

Control Practice 3: Wet Detention Pond CP# 1 (DS) - DS Wet Pond # 1

Particle Size Distribution file name: Not needed - calculated by program

Initial stage elevation (ft): 5

Peak to Average Flow Ratio: 3.8

Maximum flow allowed into pond (cfs): No maximum value entered

Outlet Characteristics:

Outlet type: Orifice 1

1. Orifice diameter (ft): 0.22
2. Number of orifices: 1
3. Invert elevation above datum (ft): 5

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 10
2. Weir crest width (ft): 10
3. Height from datum to bottom of weir opening: 8

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 4
2. Stand pipe height above datum (ft): 7.52

Pond stage and surface area

Entry Number	Stage (ft)	Pond Area (acres)	Natural Seepage (in/hr)	Other Outflow (cfs)
0	0.00	0.0000	0.00	0.00
1	0.01	0.0492	0.00	0.00
2	1.00	0.0632	0.00	0.00
3	4.00	0.1120	0.00	0.00
4	5.00	0.2130	0.00	0.00
5	9.00	0.4130	0.00	0.00

Control Practice 4: Other Device CP# 3 (DS) - DS Other Device # 3

Fraction of drainage area served by device (ac) = 1.00

Particulate Concentration reduction fraction = 1.00

Filterable Concentration reduction fraction = 1.00

Runoff volume reduction fraction = 0

Data file name: Z:\Projects\2021\2402.00A-WI\DESIGN\SWMP\SLAMM\2022-08-24 DRY POND.mdb
WinSLAMM Version 10.4.1

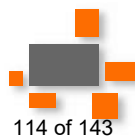
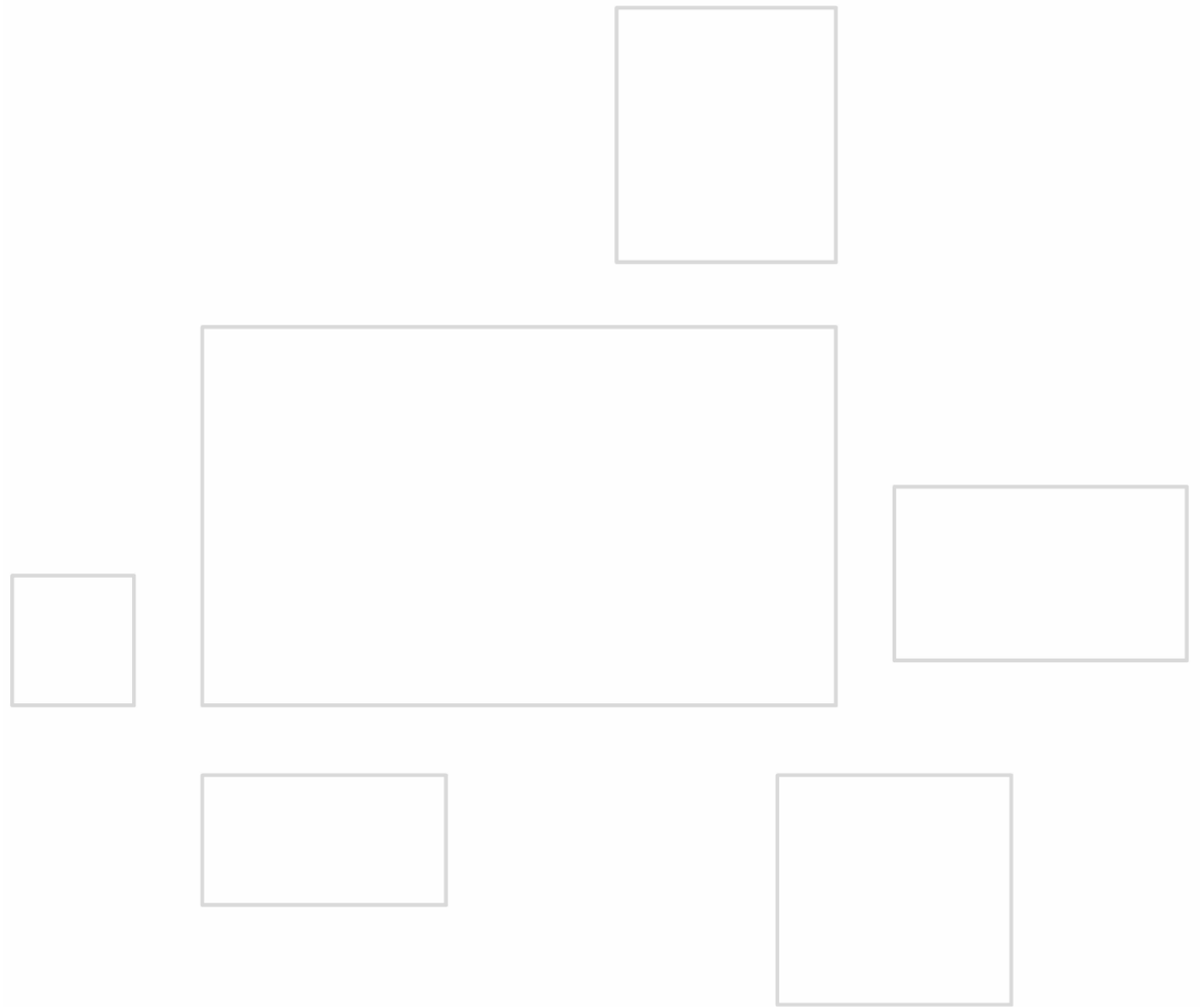
Rain file name: C:\WinSLAMM Files\Rain Files\WI Milwaukee 69.RAN
Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI_AVG01.pscx
Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdx
Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv

Cost Data file name:
If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations
Seed for random number generator: -42
Study period starting date: 01/05/69 Study period ending date: 12/31/69
Start of Winter Season: 12/06 End of Winter Season: 03/28
Model Run Start Date: 01/05/69 Model Run End Date: 12/31/69
Date of run: 08-25-2022 Time of run: 16:22:50
Total Area Modeled (acres): 4.960
Years in Model Run: 0.99

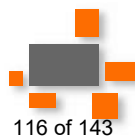
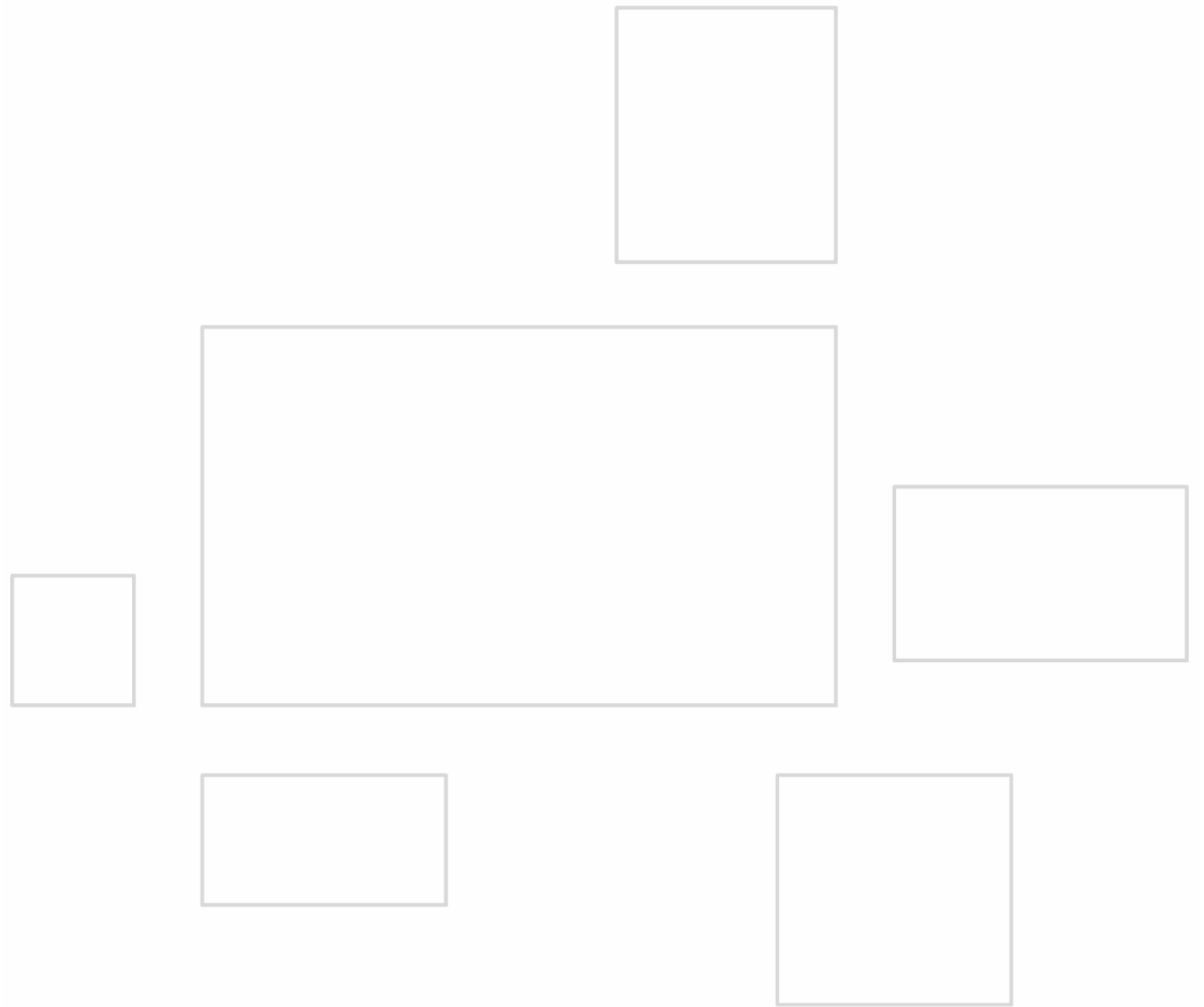
	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	240242	-	110.7	1660	-
Outfall Total with Controls:	240467	-0.09%	14.77	221.7	86.64%
Annualized Total After Outfall Controls:	243807			224.8	

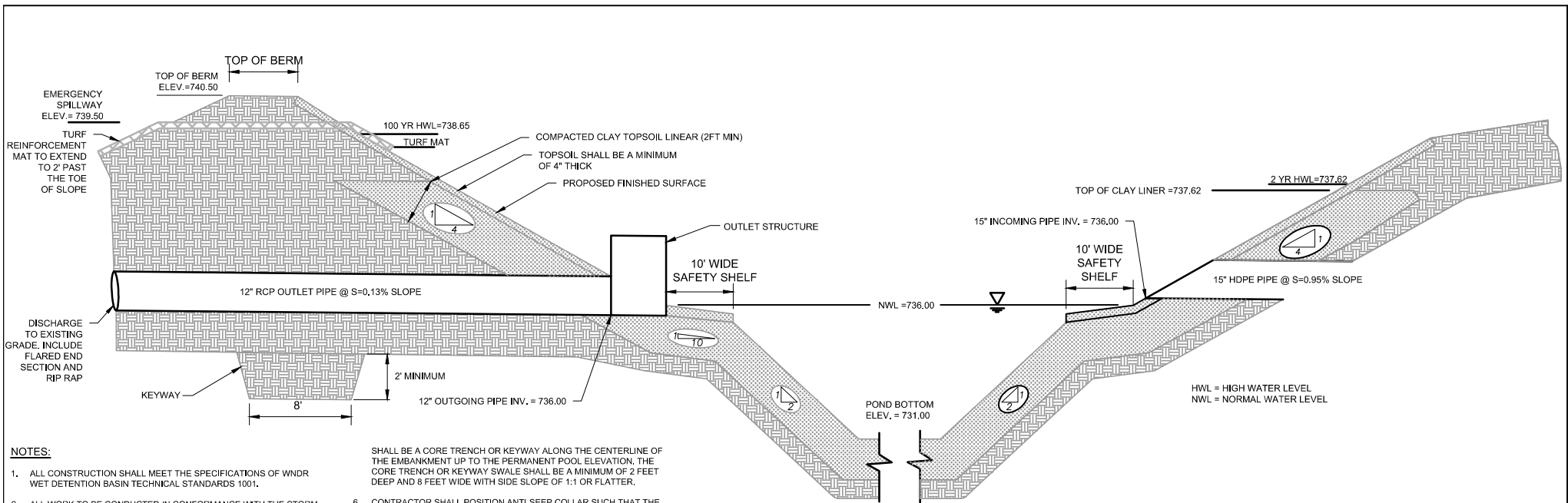
APPENDIX 5

STORM SEWER SPREADSHEET



APPENDIX 6 POND DETAILS

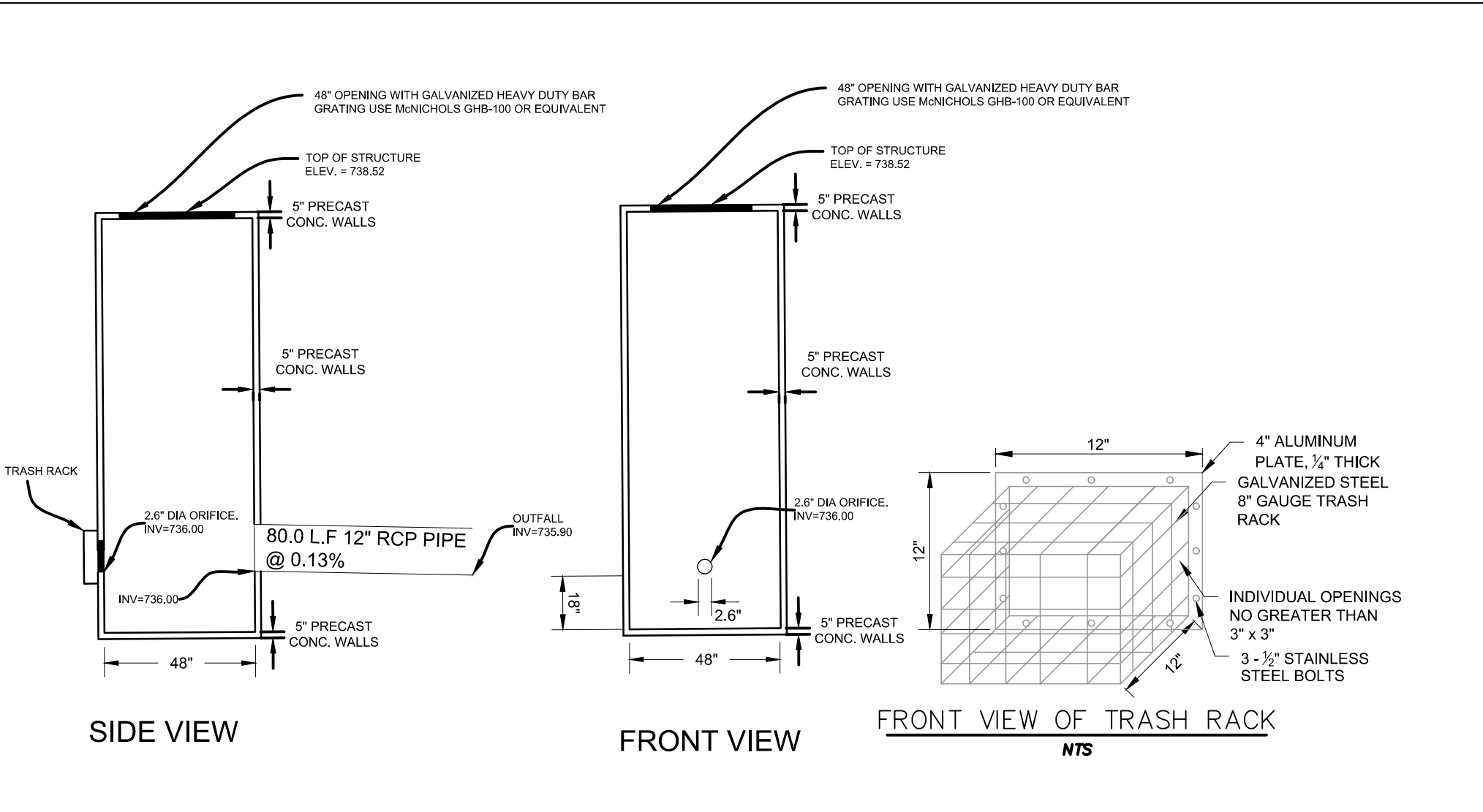




- NOTES:**
1. ALL CONSTRUCTION SHALL MEET THE SPECIFICATIONS OF WNDR WET DETENTION BASIN TECHNICAL STANDARDS 1001.
 2. ALL WORK TO BE CONDUCTED IN CONFORMANCE WITH THE STORM WATER MANAGEMENT PLAN FOR THE PROJECT SITE AS APPROVED BY THE REGULATORY ENGINEER OF RECORD.
 3. HDPE PIPING & INSTALLATION WITHIN THE BASIN SHALL BE IN ACCORDANCE WITH ASTM M-294 TYPE "S" WITH WATER TIGHT JOINTS.
 4. CLAY LINER SHALL BE A MINIMUM OF 2 FEET THICK. CLAY SHALL BE COMPACTED AT $\pm 210\%$ OPTIMAL MOISTURE CONTENT TO 90% MODIFIED PROCTOR.
 5. FOR CONSTRUCTED EMBANKMENTS WHERE THE PERMANENT POOL IS PONDED 3 FEET OR MORE AGAINST THE EMBANKMENT, THERE

6. SHALL BE A CORE TRENCH OR KEYWAY ALONG THE CENTERLINE OF THE EMBANKMENT UP TO THE PERMANENT POOL ELEVATION. THE CORE TRENCH OR KEYWAY SWALE SHALL BE A MINIMUM OF 2 FEET DEEP AND 8 FEET WIDE WITH SIDE SLOPE OF 1:1 OR FLATTER.
7. CONTRACTOR SHALL POSITION ANTI-SEEP COLLAR SUCH THAT THE COLLARS ARE COMPLETELY CONTAINED WITHIN THE EMBANKMENT.
8. CONTRACTOR SHALL FIT STANDPIPES WITH REMOVABLE CONSTRUCTION ORIFICE PLATE OVER THE PERMANENT DEWATERING ORIFICE. THE CONSTRUCTION ORIFICE SHALL REMAIN IN PLACE UNTIL 70% VEGETATION IS ESTABLISHED OVER THE CONTRIBUTING AREA OF THE POND.
9. IMMEDIATELY INSTALL FILTER FABRIC OVER ALL OUTLETS TO PREVENT SEDIMENT DEPOSITION IN THE PIPING. (REMOVE FOLLOWING AREA STABILIZATION).
10. TURF REINFORCEMENT MATTING SHALL BE INSTALLED IN ACCORDANCE WITH WDNr TECH STANDARD 1052.

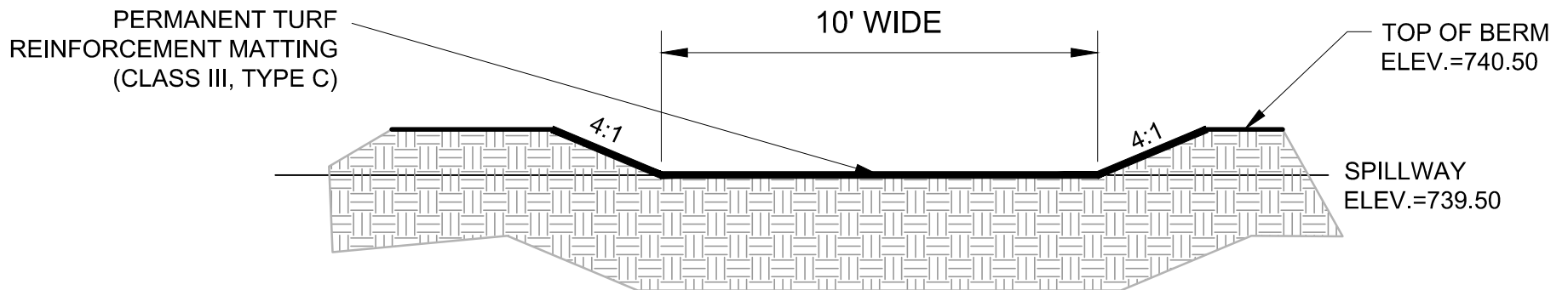
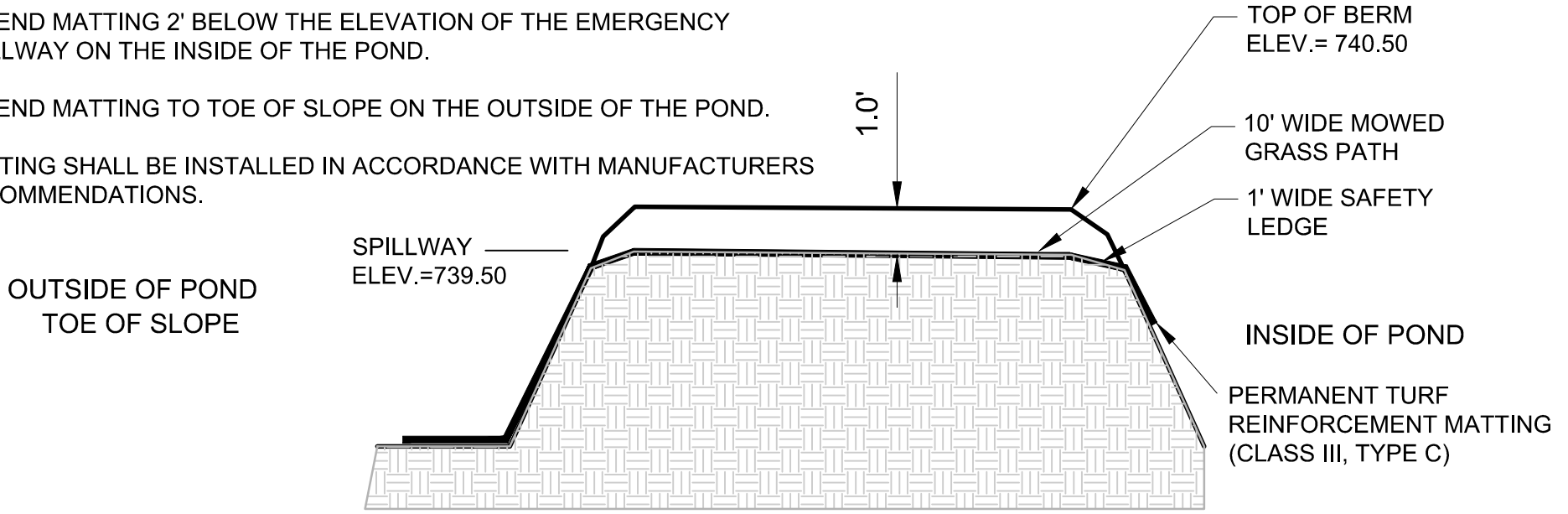
TYPICAL WET POND CROSS SECTION



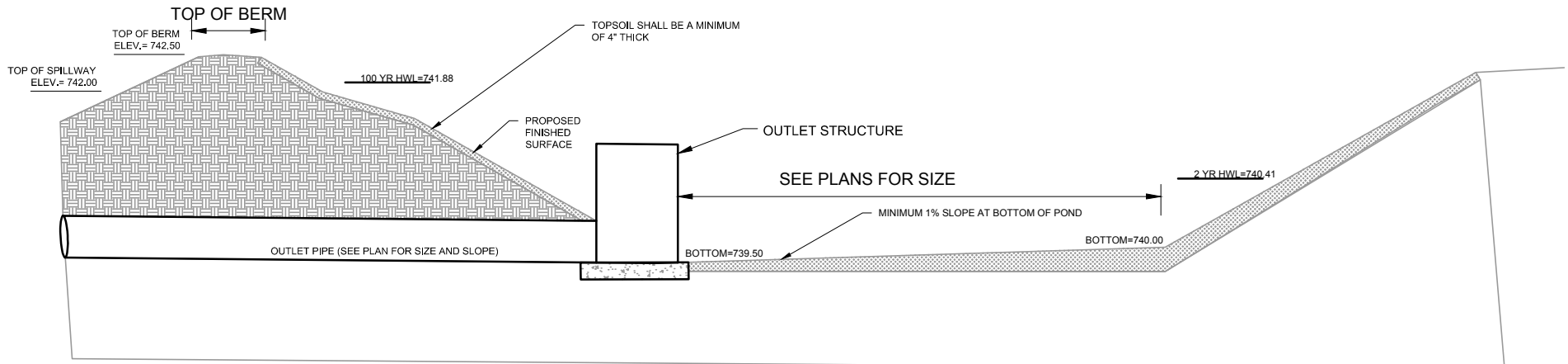
WET POND OUTLET CONTROL STRUCTURE DETAIL

NOTES:

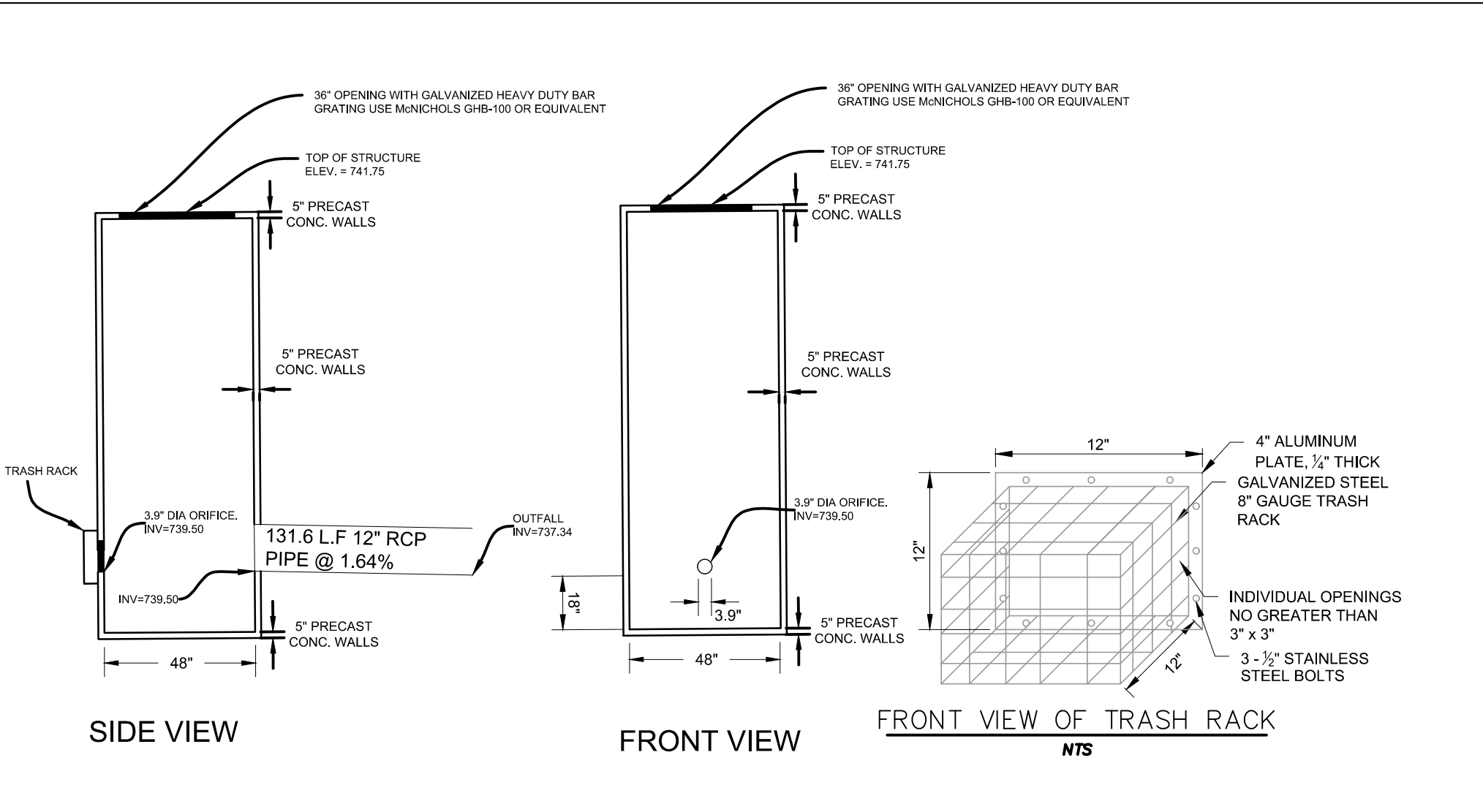
- 1. EXTEND MATTING 2' BELOW THE ELEVATION OF THE EMERGENCY SPILLWAY ON THE INSIDE OF THE POND.
- 2. EXTEND MATTING TO TOE OF SLOPE ON THE OUTSIDE OF THE POND.
- 3. MATTING SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



WET POND EMERGENCY SPILLWAY



DRY POND CROSS SECTION



SIDE VIEW

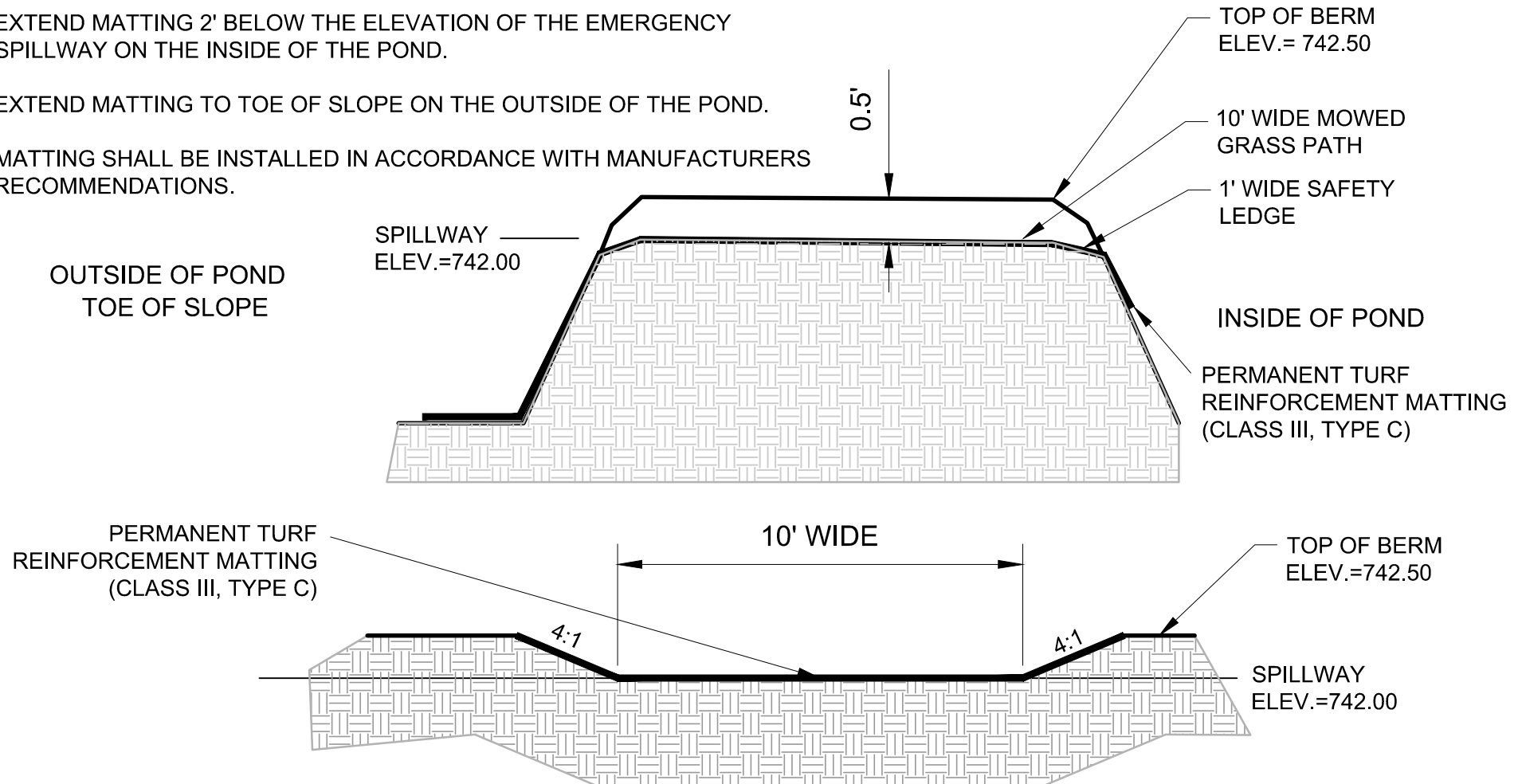
FRONT VIEW

FRONT VIEW OF TRASH RACK
NTS

DRY POND OUTLET CONTROL STRUCTURE DETAIL

NOTES:

1. EXTEND MATTING 2' BELOW THE ELEVATION OF THE EMERGENCY SPILLWAY ON THE INSIDE OF THE POND.
2. EXTEND MATTING TO TOE OF SLOPE ON THE OUTSIDE OF THE POND.
3. MATTING SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.



DRY POND EMERGENCY SPILLWAY



COUNTY OF KENOSHA

Division of Planning & Development

Andy M. Buehler, Director
Division of Planning & Development
19600 75th Street, Suite 185-3
Bristol, WI 53104-9772
(262) 857-1895

MEMORANDUM

TO: Jason Peters, Village of Somers Administrator
FROM: Luke Godshall, Senior Land Use Planner
DATE: 2022-09-27
RE: Proposed Zips Car Wash

Project: Zips Car Wash
Owner: North Shore Bank
Agent: Glenn Davie, Benchmark Development Solutions, LLC
Parcel(s): 82-4-222-224-0503

Proposed Use: Automated single-bay car wash facility

Sanitation: Sewered

Existing Land Use Plan: Commercial
Proposed Land Use Plan: Commercial

Current Zoning: A-2 General Agricultural District
Proposed Zoning: B-3 Highway Business Dist. & PUD Planned Unit Development Overlay Dist.

Project Overview:

The applicant is seeking a conceptual review/approval from the Plan Commission for a proposed Zips Car Wash facility. This facility would be located on tax parcel #82-4-222-224-0503, directly north of the existing Kwik Trip located at 5800 31st Street in front of Festival Foods. This site would require approval of a rezoning to B-3 Highway Business Dist. with a PUD Planned Unit Development Overlay Dist. (to allow for a reduced highway building setback, discussed below). Car washes in the B-3 district also require approval of a Conditional Use Permit.

The submitted project narrative and plans indicate the proposed car wash would be an automated single-bay 130-foot tunnel. The building itself would be 26' in height, which is well under the 35' height maximum allowed under the B-3 zoning district.

The submitted site plan (dated 8-12-22 by Spangenberg Phillips Trice Architecture) shows the proposed building being located 30' from the right-of-way of STH 31/Green Bay Rd., which will require approval of a reduction through a PUD Planned Unit Development Overlay request since the minimum required setback by ordinance is 65'. For context, the Kwik Trip site immediately to the south of the proposed Zips site was granted a PUD setback reduction of 30' from Green Bay Rd., so it would not seem unreasonable to grant this same deviation for the Zips site. Scaling off the site plan, it appears the building would meet all other minimum setback requirements for the B-3 zoning district (30' from Village road rights-of-way and 55' from the side (south) lot line).

Although their setbacks are not indicated on the site plan, hard surface parking and drive areas appear to also meet required minimum setbacks of 20' from street rights-of-way and 10' from rear lot line. It is recommended that future versions of the site plans clearly show that these setbacks can be met, especially the parking area along the western side of the site which looks to be very close to the 20' setback requirement.

The site plan provides for (17) 14'x18' car vacuum spaces, and (3) 9'x18' employee parking spaces. Automatic car washes require 1 employee parking space for every wash bay, so only 1 employee space would be required on this site.

The submitted site plan and floor plan drawing indicate that there would be at least 14 car stacking spaces before the wash bay (at least 5 required by ordinance), and 1 space after the bay (at least 2 required by ordinance). The Petitioner would be encouraged to revise the plans to show that at least 2 stacking spaces can be provided after the wash bay.

The submitted project narrative states that the building was designed specifically to be in harmony with surrounding recent developments (Festival Foods, Kwik Trip, Firestone). The building's proposed materials and colors are detailed on the submitted exterior elevation drawings and would appear to meet Village standards in terms of appearance and use of varied materials. The exterior elevations also show roof screens that would presumably be installed to shield roof-mounted building mechanical equipment from public view.

Access for this site is shown to be gained via two points along 58th Avenue, at the northwest and southwest portions of the property. At the initial staff-level concept meeting, some concern was expressed that the northwest access point as both an entrance/exit could potentially lead to congestion issues at the intersection of 58th Avenue & 28th Place. A suggestion was made to limit the northwest access point to an exit only. Access to/from STH 31/Green Bay Rd. is prohibited on the site by WisDOT.

The applicant has indicated that stormwater management still needs to be investigated for this site but are awaiting feedback and comments from the Plan Commission before doing so. The applicant also understands that full landscaping and lighting plans would be required to be submitted if they choose to move forward with the project and seek formal approvals from the Plan Commission and Village Board.

- **Necessary Applications/Approvals for this project would include:**
 - Rezoning to B-3 Highway Business Dist. & PUD Planned Unit Development Overlay Dist.
 - Conditional Use Permit
 - Site Plan & Building Fenestration Review
 - Stormwater management
 - City of Kenosha airport site plan approval

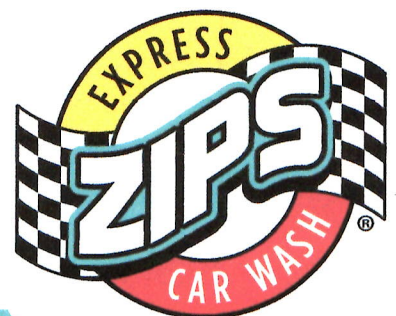
Proposed Zips Car Wash
Located at: SWC of Green Bay Road & 28th Place, Somers, WI
Parcel ID 82-4-222-224-0503
Zoned: A-2 (General Agricultural District)
Need: estimated B-3 Highway Zoning with a Conditional Use Permit & Site Plan Approval

On behalf of the Zips officers, we are pleased to submit to you our Concept Site Plan and Custom architectural concept building elevations for a Concept Review meeting on August 18. We submit that our car wash use is consistent with the character of the other similar uses fronting the Green Bay Road corridor (such as Firestone, Kwik Trip, Jiffy Lube), and in harmony with the long-term Land Use Plan. We look forward to your input to our plans and would hope that you would provide Zips the support and the ability for our team to pursue and move forward the necessary rezoning, conditional use permit and site plan approval. Zips have an experienced developer and field agent quarterbacking our expansion into Somers.

Some snip-it's about Zips (and available programs), that set Zips apart from the competition:

Zips car wash is the largest privately held operator nationwide. and is among the fastest growing express car wash chains in the country operating more than 240 locations across 24 states.

With over 17 years of car washing experience, Zips has invested in industry leading technology, creative hiring and training methods, local partnerships and a laser focus on customer care as driving forces behind Zips growing business model.



GIVING BACK

Zips Car Wash is proud to support military personnel, first responders, and their families with hiring initiatives, community outreach programs and vendor sourcing, plus free washes for veterans on July 4th and Veterans Day. This is just a small way for the team at Zips Car Wash to give back to the brave and say "thank you" to those who sacrificed by serving our country. In the last five (5) years, Zips has donated over 10,000 car washes to military veterans!

SHOWING THE COMMUNITY LOVE FROM TOWN TO TOWN

At Zips Car Wash, we love giving back to the community. It's one of our most important values, by far. From fundraisers for groups like Susan G. Komen to raffles, silent auctions, and military offers, we're all about uplifting local heroes and bringing people together across America's neighborhoods. After all, making people feel good comes with the territory! We're all about supporting neighbors in need and raising money for a good cause. With a range of fundraising programs, military initiatives, and community events, our forté is uplifting charities and helping local groups through philanthropy.

NIGHT TO SHINE

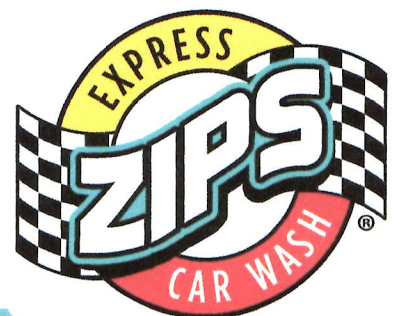
Tell all your friends it's your Night to Shine at Zips Car Wash! Choose a date for a fundraiser and we'll donate 50% of every sale.

SEASON TO SHINE

Get a helping hand from Zips during your fundraising season. We'll create a code that your supporters can use, so you receive 25% of the sale.

UNLIMITED MEMBERSHIPS AVAILABLE

Monthly memberships are available in a variety of three levels. Single washes are also available. Memberships are good to use at any of the Zips Car Wash locations that accept Unlimited Wash Club memberships.



SPOTLIGHT TO SHINE

Whether it's a raffle or an auction, Zips can add a little shine to a charity event with a 3-Month Unlimited Membership in our Top Wash Club.

SET YOUR GROUP UP WITH THE BEST

Whether you work at a car dealership or you've got dozens of cars at home for reasons you can't explain, any group in need of car wash after car wash can get set up spectacularly with a fleet car wash account at Zips! Give your team the best convenience.

Some site-specific details:

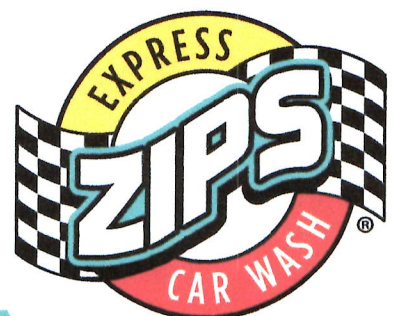
The Zips car wash is an automated 130 ft. tunnel car wash utilizing industry leading technology. A floor plan has been included in the Concept Mtg. packet for clarity.

The height of the building is 26 ft meeting the village codes.

Care was taken to provide greenbelt buffering (see site plan in the packet), around the perimeter of the site plan. Although the landscaping is only concept in nature at this time, the Zips agent will work with staff to design a final planting plan.

Access to the property exists from the newer 28th Place Road that parallels the west side of the subject property and connects to Green Bay Road to the north and the Festival Foods and Kwik Trip to the south.

A sidewalk is proposed on the west side of the subject property along the east side of 28th Place Road.



The proposed queuing lanes for the Zips car wash are situated along the East side of the subject property facing the busy Green Bay Road. Greenbelt buffering is contemplated along the east edge of the queuing lanes facing Green Bay Road.

Greenbelt buffering is also contemplated along the north, west and south yards to buffer the site plan improvements as shown on the attached color site plan.

The proposed architecture is custom in nature as depicted on the attached color building elevations. The proposed architecture exceeds the standard prototypical Zips architecture and color scheme of the corporate prototype. For Somers, colors and materials were chosen to be in harmony with the contiguous Festival Foods, Kwik Trip and Firestone, all located to the south, but to NOT draw attention in such a way to stand out from the neighbors. Note, there is NO development to the north or west of the subject property.

There are many different material changes, and awnings worked into the proposed architecture as directed by the Somers governing municipal codes.

Additionally, it's noteworthy to point out that there is no pre-wash of aluminum rims, (outside the facility) or drying of the cars outside the exit door of the car wash facility. All these functions are contained INSIDE the facility. The customer remains in the car riding on a conveyor belt the whole way through the tunnel and exits the facility themselves.

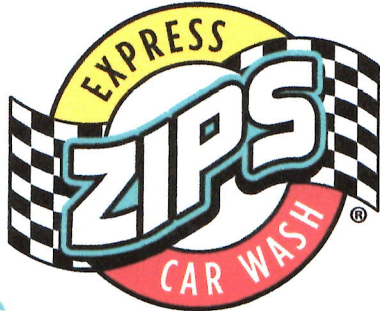
The car mat washing station is housed INSIDE the car wash facility.

The vacuum stations are self-serve outside if chosen to use. 14' wide stalls are provided.

General Business

Zips hours of operation are as follows:
Mon. - Sun. – 8 am – 8 pm

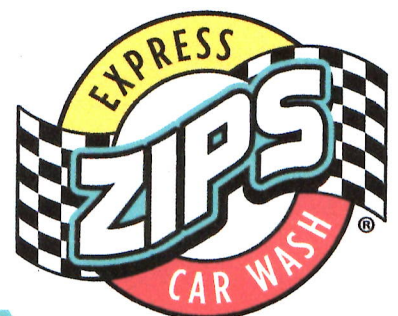
Expected employee count:
3 employees

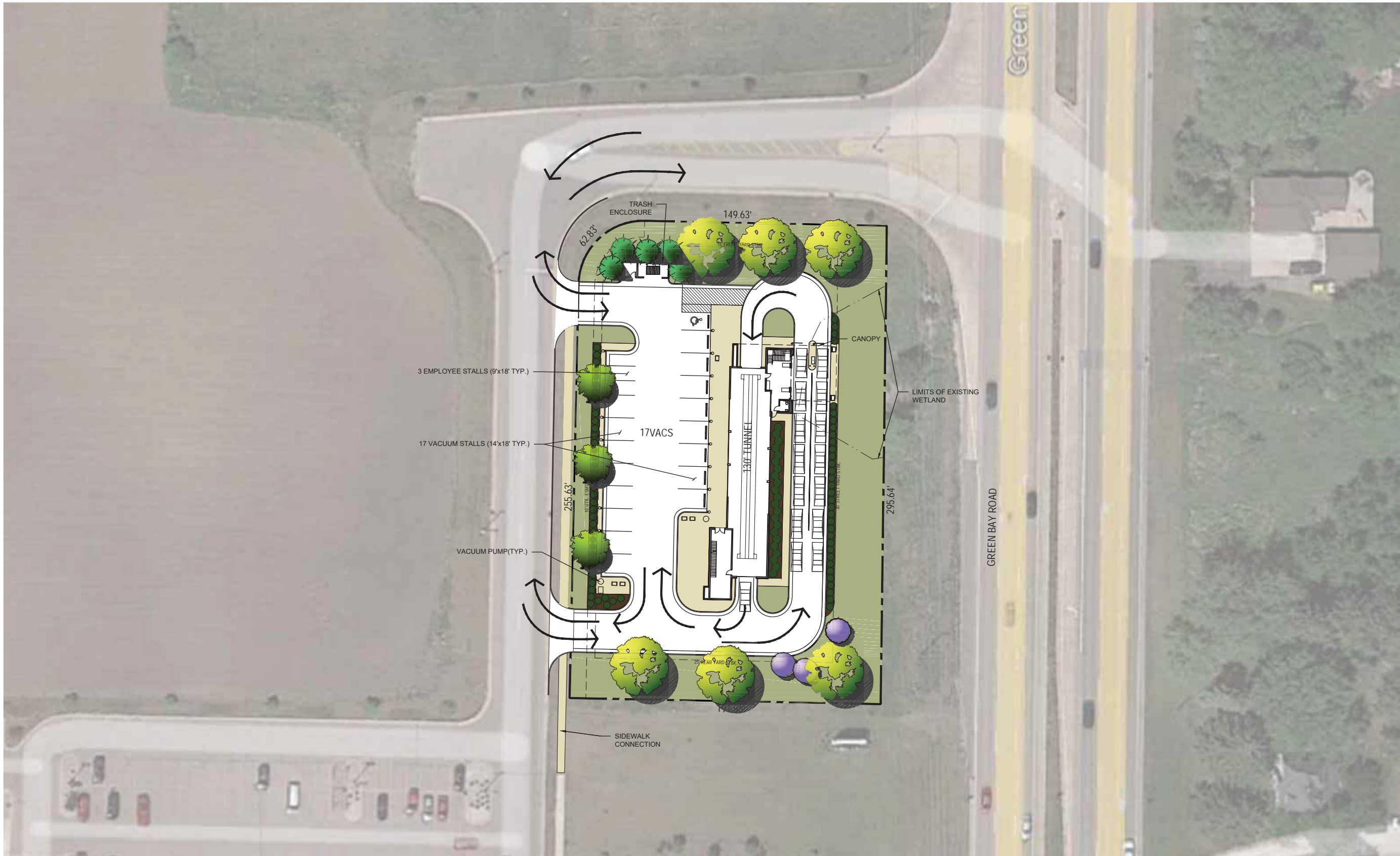


Summary

On behalf of Zips, we submit, the subject A-2 zoned property is well situated in an existing BUSINESS zoning classification with contiguous businesses and services throughout the corridor. The site is supported by the high volume north-south throughfare Green Bay Road running along the front east property frontage. The Zips business is a quick and efficient business that allows for a quick turn-a-round of customers in a short timeframe unlike other businesses that may require park and shop or park and dine or other more demanding uses.

It is our request that the Zips concept packet be recommended to continue through to the Planning Commission and Village Board, (once the drawing and filing requirements are met), for the purpose of rezoning, conditional use and site plan approval entitlements. Thank you very much!



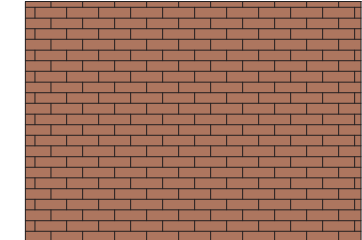
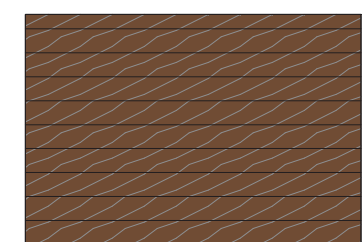
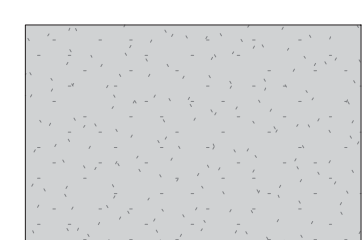
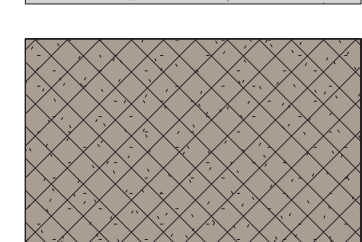


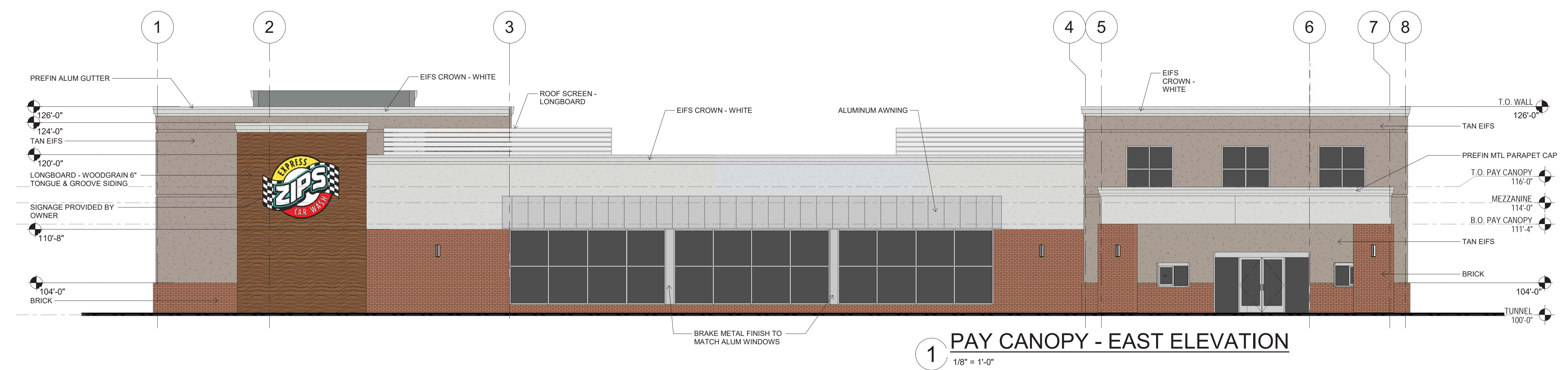
ZONING
 EXISTING: A-2 AGRICULTURAL DISTRICT
 PROPOSED: B-3 W/CUP

56,062 SQ.FT.
 1.28 AC

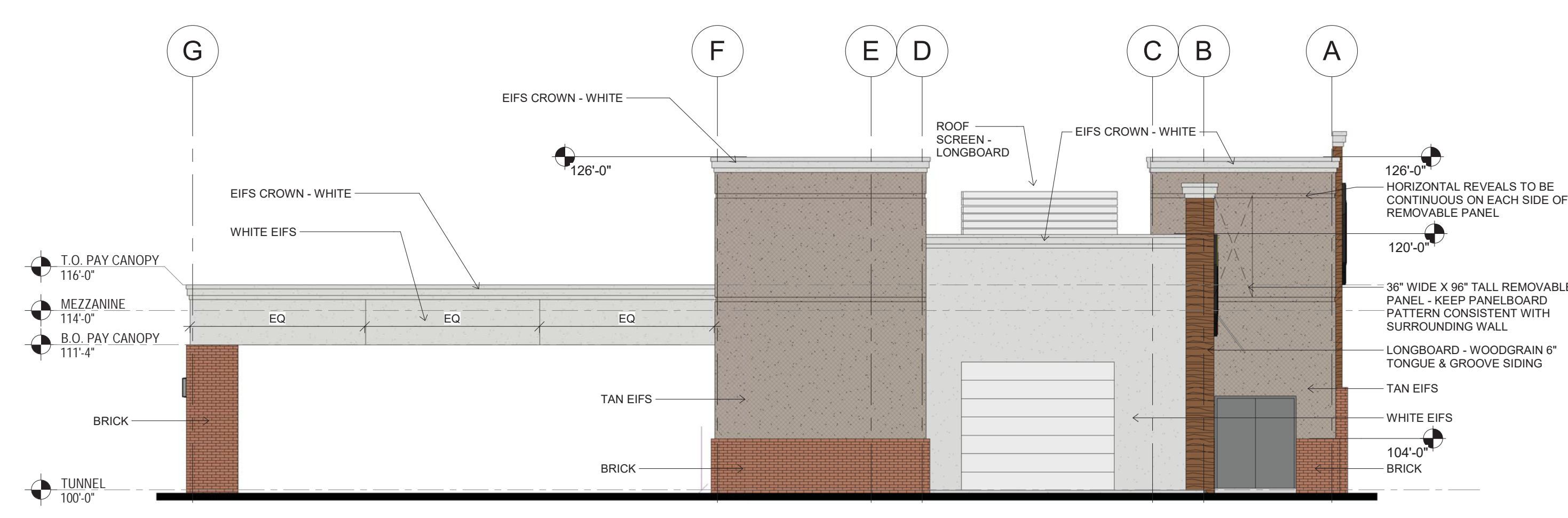
1 SITE PLAN
 1"=30'
 0 30'

EXTERIOR FINISH LEGEND

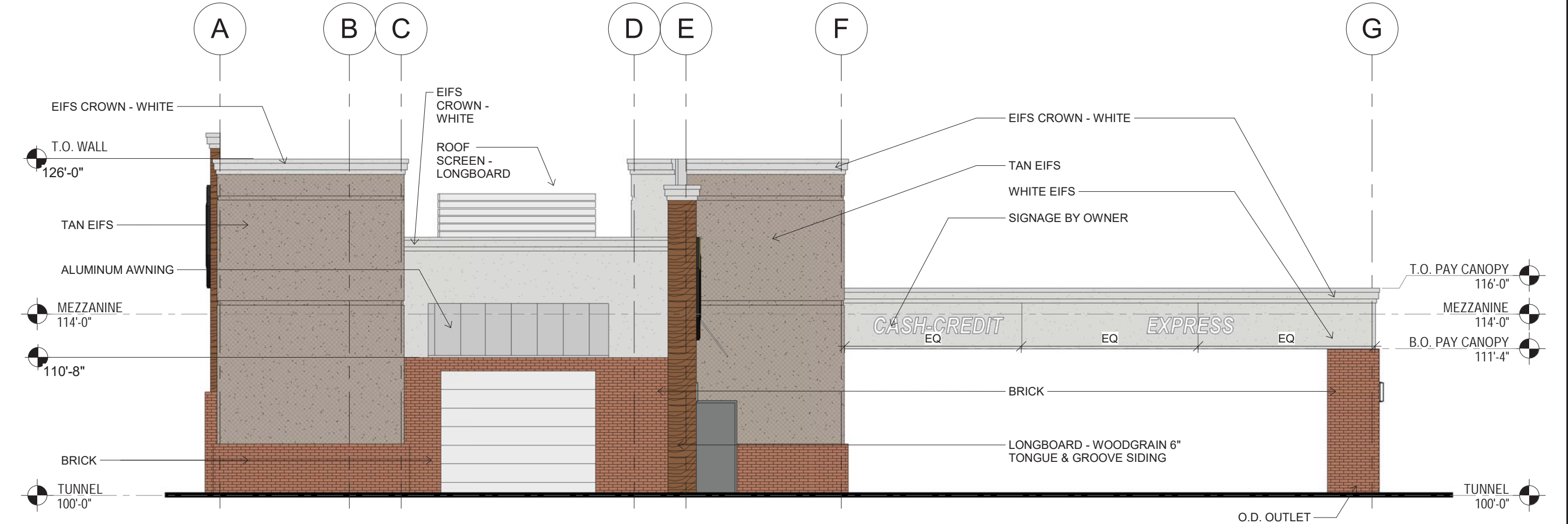
	BRICK MERIDIAN BRICK COLOR: OLD LEXINGTON, MODULAR
	WOODGRAIN LONGBOARD SIDING 6" PROFILE COLOR: TABLE WALNUT
	WHITE EIFS SAND TEXTURE COLOR: INGLES STANDARD
	TAN EIFS SAND TEXTURE COLOR: INGLES STANDARD



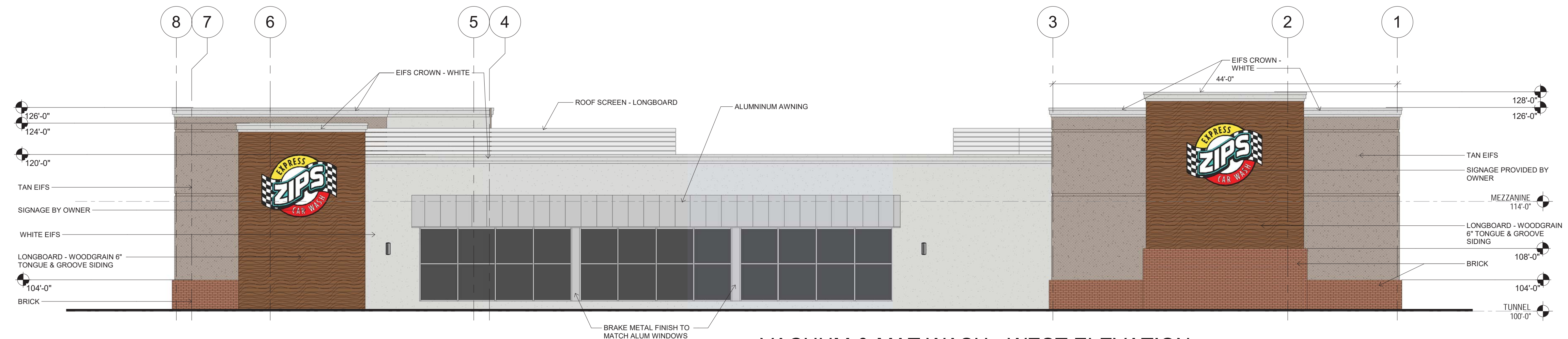
1 PAY CANOPY - EAST ELEVATION
1/8" = 1'-0"



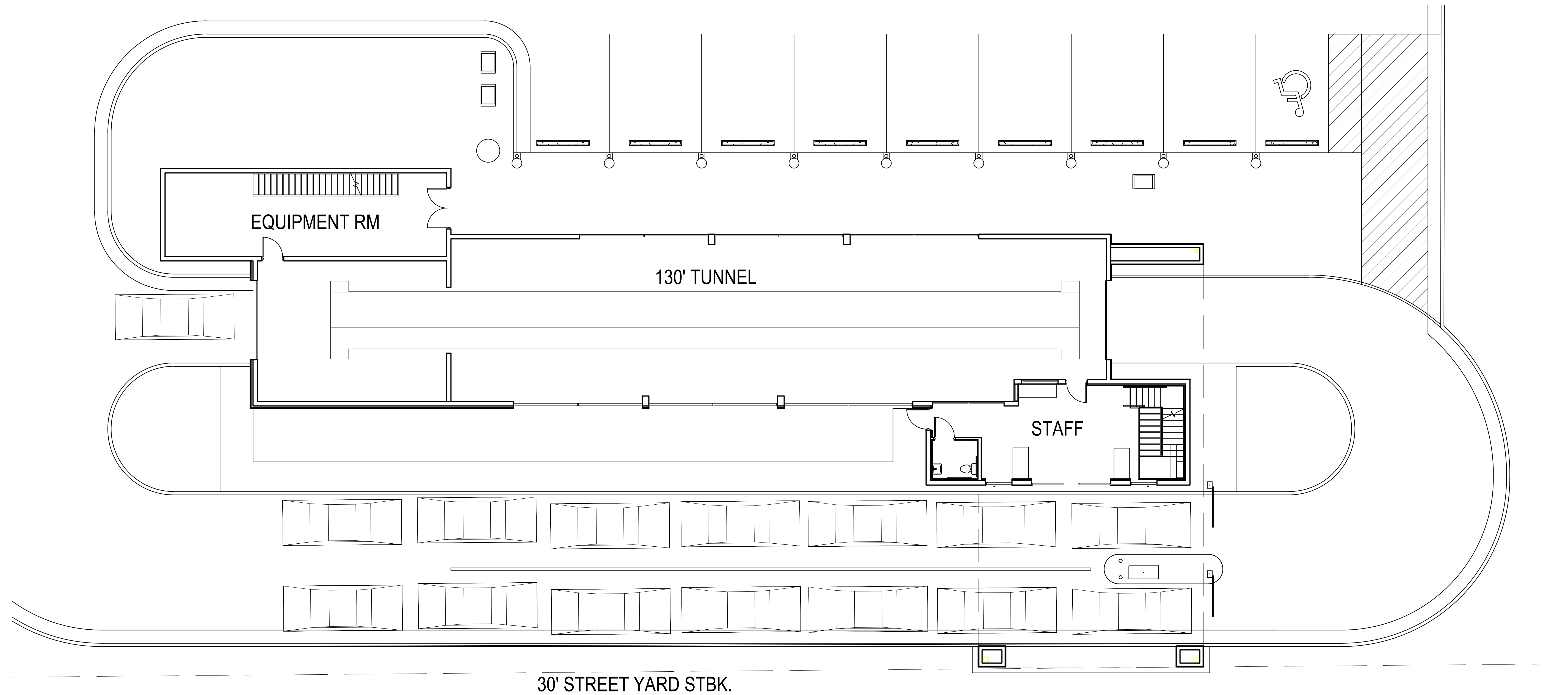
3 TUNNEL ENTRY - NORTH ELEVATION
1/8" = 1'-0"



4 TUNNEL EXIT - SOUTH ELEVATION
1/8" = 1'-0"



2 VACUUM & MAT WASH - WEST ELEVATION
1/8" = 1'-0"



ZONING
 EXISTING: A-2 AGRICULTURAL DISTRICT
 PROPOSED: B-3 W/CUP

56,062 SQ.FT.
 1.28 AC

1 FLOOR PLAN
 1/8"=1'
 0 8'



COUNTY OF KENOSHA

Division of Planning & Development

Andy M. Buehler, Director
Division of Planning & Development
19600 75th Street, Suite 185-3
Bristol, WI 53104-9772
(262) 857-1895

MEMORANDUM

TO: Jason Peters, Village of Somers Administrator
FROM: Luke Godshall, Senior Land Use Planner
DATE: 2022-09-16
RE: Proposed Indoor Shooting Range Facility

Project: Mission 94 Firearms Education Center
Owner: Archives and Armory PMML Wisconsin LLC
Agent: Mark Wershay, Zimmerman Architectural Studios, Inc.
Parcel(s): 82-4-222-181-0201

Proposed Use: Indoor shooting range facility

Sanitation: Sewered

Existing Land Use Plan: Park and Recreational

Proposed Land Use Plan: Park and Recreational

Current Zoning: PR-1 Park-Recreational District

Proposed Zoning: PR-1 Park-Recreational District

Project Overview:

The applicant is seeking a conceptual review/approval from the Plan Commission for a proposed indoor shooting range facility to be known as 'Mission 94 Firearms Education Center. This facility would be located at 1487 120th Avenue, on the southwest portion of tax parcel #82-4-222-181-0201. This is the same 243-acre parcel on which the Pritzker Military Archives Center is currently being constructed.

The Pritzker Archives & Memorial Park Center's website (<https://www.pritzkerarchivespark.com/>) describes the Mission 94 Firearms Education Center as follows:

"Safety, awareness, education and training are leading principles at the Mission94 Firearms Education Center. Education and training in a safe, family friendly environment by top-rated certified instructors will be a hallmark of the facility. Licensed and certified in-house instructors will provide classroom and interactive training to beginners as well as more advanced students on subjects like concealed carry, home defense, firearm safety, distance shooting, and modern sporting rifle.

Students and patrons (from beginners to more advanced) will be able to participate in coordinated, historical packages to gain familiarity of particular firearms from certain eras of conflict and select countries, while under supervision of instructors. This will allow researchers, historians, and the public the opportunity to operate historical replicas and modern firearms to better understand the experiences of the Citizen Soldier.

The training area will be built underground, making it fully enclosed. The air filtration system will be state-of-the-art and exceed many industry standards and other regulations."

The submitted site plan (dated 7-7-22 by Harwood Engineering Consultants) shows that the proposed building would meet all required setbacks. Scaling from the site plan, the building would be located approximately 225' from the right-of-way of East Frontage Road (65' required), and approximately 106' from the south side lot line (40' required).

The proposed building is depicted on six colored renderings that were submitted by the project architect. Further information/details as to the building's materials will eventually be needed, but the renderings appear to show that the building exterior would meet Village standards in terms of appearance and use of varied materials. The renderings also depict general landscaping (trees) throughout the site. A detailed landscaping plan, as well as a site lighting plan, will eventually be required should the applicant decide to seek formal approvals from the Plan Commission and Board.

The submitted floor plans (dated 7-6-22 by Zimmerman Architectural Studios, Inc.) show that there will be two floors to the building – one at grade (first floor) and one below grade (lower level). The first floor contains various office spaces, storage areas, and two classrooms each containing 24 seats. The lower level contains the range's 15 shooting lanes (ten 75-foot lanes and five 150-foot lanes) along with a lounge, kitchenette, retail desk and storage. There is an area above-grade to the east of the building which shows the range's roof top equipment (presumably air filtration, HVAC and other mechanical equipment) to be enclosed behind a screening wall and lined on the north and south sides with landscaping.

The proposed parking lot area would be located approximately 68' from the right-of-way of East Frontage Road (20' required) and is shown to be located entirely outside of the 40' utility easement that runs along the southern property line. The site plan shows 70 parking spaces provided, with an additional 14 future spaces shown along the northern edge of the entrance drive for a total of 84 spaces. Without knowing the total number of employees this facility would have, the parking lot as depicted on the site plan would likely be enough to meet Village zoning ordinance off-street parking requirements ('indoor shooting ranges' require 1 space/shooting lane and 1 space/full-time employee. In addition, there should be at least 10 spaces provided for the 48 total classroom seats, which uses the off-street parking guideline for 'colleges and high schools' (1 space/5 students)). All parking spaces are shown to be 9'x18' in size which meets Village requirement.

The submitted site plan shows a proposed new access from the East Frontage Road of I-94 shown at the southern portion of the site. Since the Frontage Road is under the jurisdiction of the Wisconsin Dept. of Transportation (WisDOT), the applicant will need to obtain formal approval from WisDOT for said access.

- **Necessary Applications/Approvals for this project would include:**
 - Site Plan & Building Fenestration Review
 - Stormwater management
 - Access approval from WisDOT
 - City of Kenosha airport site plan approval



MISSION GAP
PREMIER EDUCATION CENTER



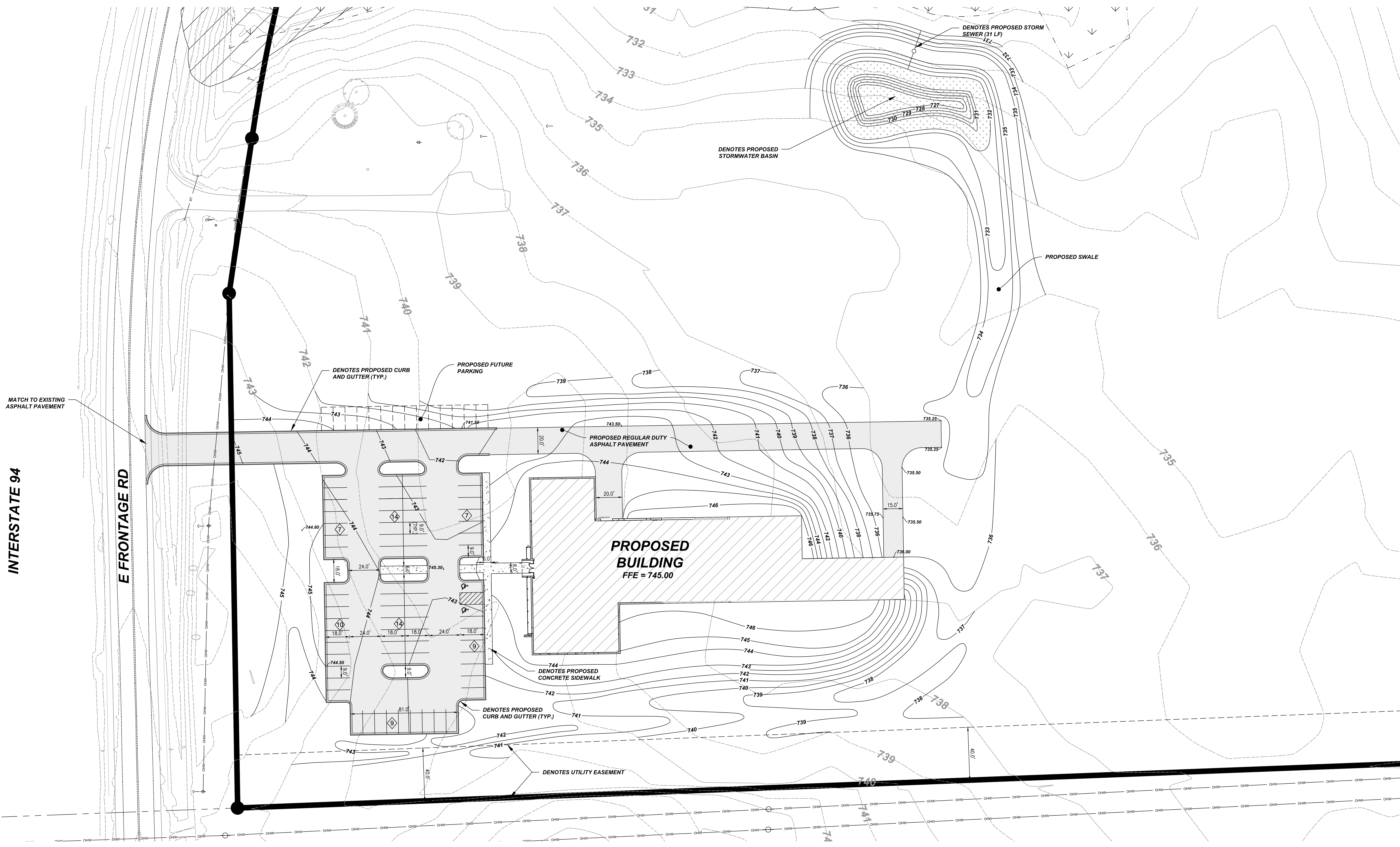
MISSION94
FIREARMS EDUCATION CENTER











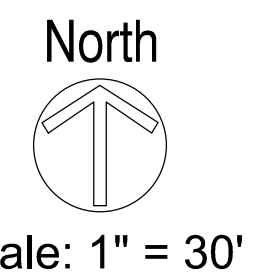
MATCH TO EXISTING ASPHALT PAVEMENT

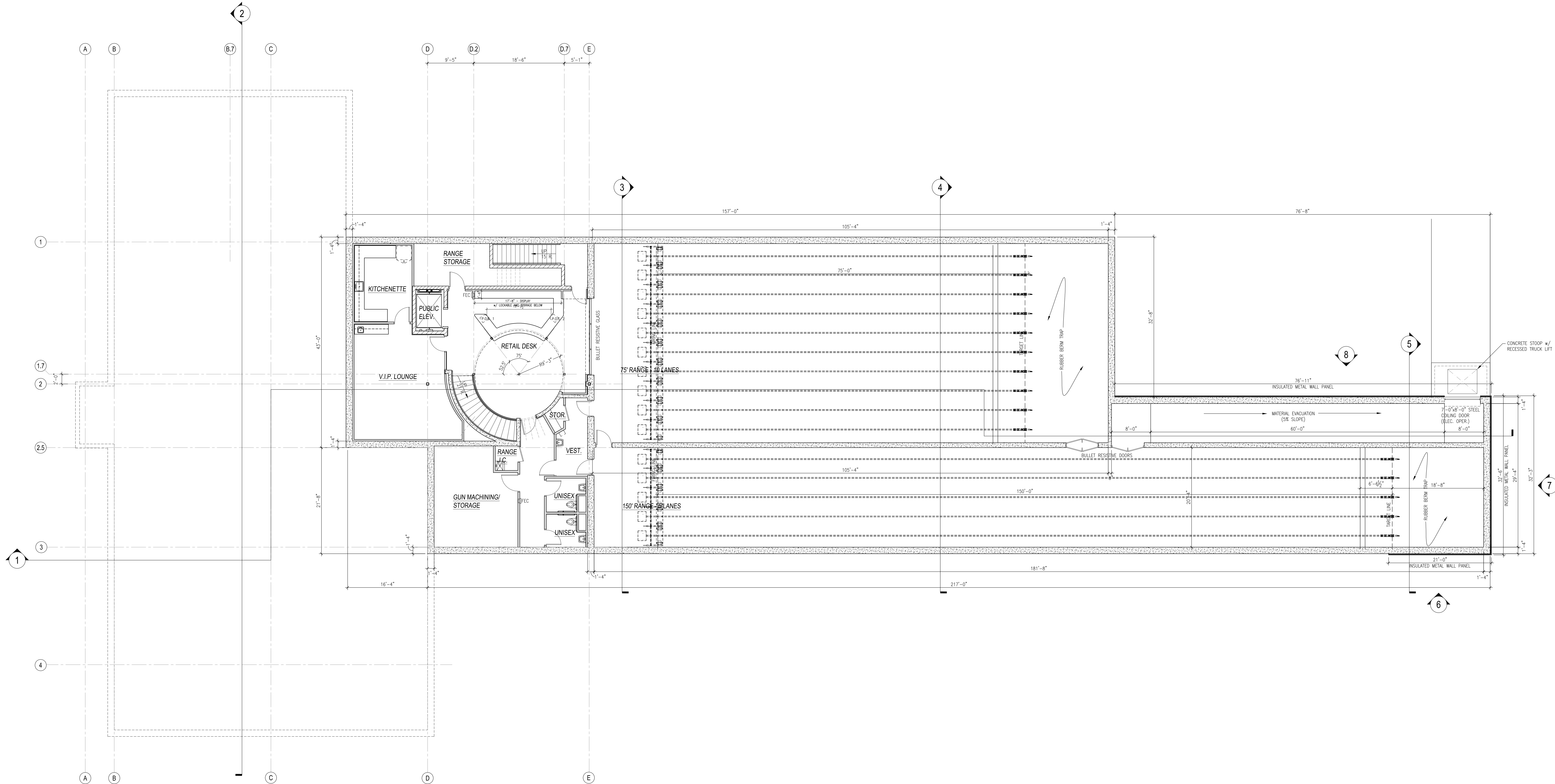
INTERSTATE 94

E FRONTAGE RD

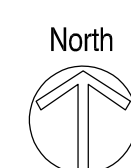
PROPOSED BUILDING
FFE = 745.00

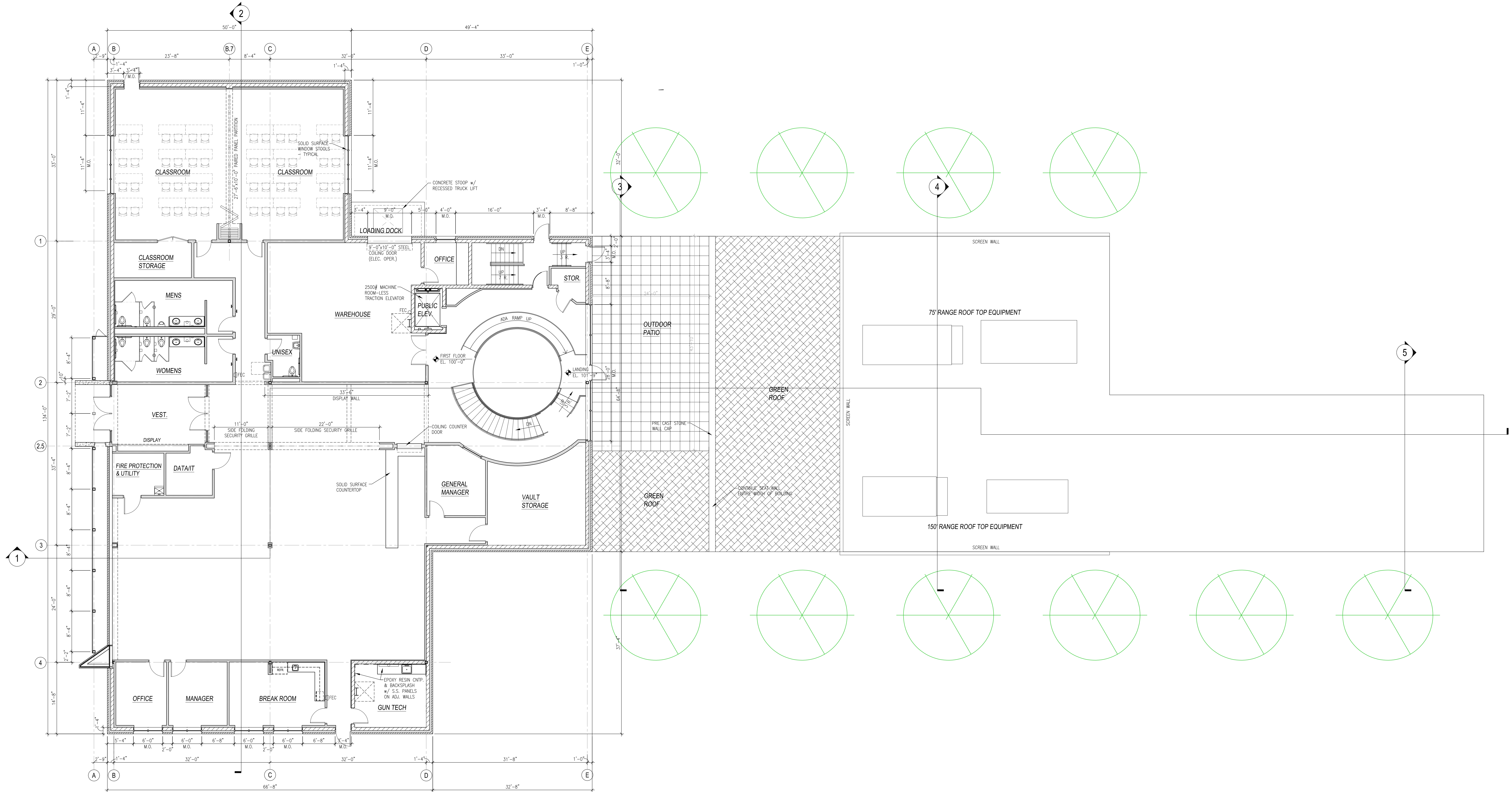
Mission 94
Site & Grading Plan
2022-07-07





1 Lower Level Plan
 1/8" = 1'-0"





1 First Floor Plan
 1/8" = 1'-0"