Planning Commission
Regular Meeting
September 20, 2022
7:00 p.m.

1. CALL MEETING TO ORDER

2. PLEDGE OF ALLEGIANCE

3. ROLL CALL

4. APPROVAL OF AGENDA

5. APPROVAL OF MINUTES

   -August 23, 2022 Special Meeting

6. CORRESPONDENCE / BOARD REPORTS / PRESENTATIONS
   A. Thering updates from Board of Trustees
   B. Buckley updates from ZBA
   C. Shingles updates from Sidewalk and Pathways

7. PUBLIC COMMENT: Restricted to (3) minutes regarding items not on this agenda

8. NEW BUSINESS
   A. PSPR22-11 Preliminary Site Plan Application – Clint's Auto Body Expansion, 5598 S. Mission Rd.
      a. Introduction by staff
      b. Updates from the applicant
      c. Commission review of the site plan
      d. Commission deliberation and action (approval, denial, approval with conditions, or postpone action)

   B. PSPR22-14 Final Site Plan Application – Michael Engineering Expansion, 5625 Venture Way
      a. Introduction by staff
      b. Updates from the applicant
      c. Commission review of the site plan
      d. Commission deliberation and action (approval, denial, approval with conditions, or postpone action)

C. **PSPR22-15 Combined Preliminary and Final Site Plan Application -Mid Michigan College Athletic Fields, 2600 S. Summerton Road**
    a. Introduction by staff
    b. Updates from the applicant
    c. Commission review of the site plan
    d. Commission deliberation and action (approval, denial, approval with conditions, or postpone action)

D. **Adoption of the 2023 Schedule of Meetings**
    a. Updates by Staff
    b. Discussion
    c. Commission deliberation and action (approval, denial, approval with conditions, or postpone action)

9. OTHER BUSINESS

10. EXTENDED PUBLIC COMMENT: Restricted to 5 minutes regarding any issue

11. FINAL BOARD COMMENT

12. ADJOURNMENT

CHARTER TOWNSHIP OF UNION
Planning Commission
Special Meeting Minutes

A special meeting of the Charter Township of Union Planning Commission was held on August 23, 2022, at 7:00 p.m. at the Township Hall.

Meeting was called to order at 7:01 p.m.

Roll Call
Present:
Albrecht, Buckley, Gross, LaBelle, Lapp, Squattrito, Thering and Williams
Excused:
Shingles
Others Present
Rodney Nanney, Community and Economic Development Director; Peter Gallinat, Zoning Administrator; Tera Green, Administrative Assistant

Approval of Agenda
Gross moved **Lapp** supported to approve the agenda as presented. **Vote: Ayes: 8. Nays: 0. Motion Carried**

Approval of Minutes
Williams moved **Gross** supported to approve the regular meeting minutes from July 19, 2022 as presented. **Vote: Ayes: 8. Nays: 0. Motion carried.**

Correspondence / Reports/ Presentations

A. Board of Trustees updates by Thering – Gave the Board of Trustee updates on the First Reading of the Mid-Michigan College Rezoning Application and reported that the Board of Trustees will implement hybrid style meetings beginning August 24th.
B. ZBA updates by Buckley – Buckley reported no meetings held due to a lack of agenda items.
C. Sidewalks and Pathway Prioritization Committee by Shingles – No updates were given.
D. Isabella County Master Plan Update – Nanney gave an update on Isabella County's Master Plan Updates.

Public Comment
Open 7:08 p.m.
No comments were offered.
Closed 7:08 p.m.

New Business

A. PSPR22-13 Final Site Plan Application – Heirloom Grove Agri-Tourism Business, 5297 S. Whiteville Rd. (Michael & Jamie Klumpp)
   a. Introduction by staff
   b. Updates from the applicant

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c. Commission deliberation and action (approval, denial, approval with conditions or postpone action)

Nanney gave an introduction of the PSPR22-13 Final Site Plan Application for the Heirloom Grove Agri-Tourism business noting that the overall plans are in order.

Tim Beebe, CMS&D was available for questions. Deliberation by the Commissioners.

LaBelle moved **Gross** supported to approve the PSPR22-13 final site plan for the proposed Heirloom Grove Agri-Tourism business located at 5297 S. Whiteville Road in the northwest quarter of Section 32 and in the AG (Agricultural) District, finding that the site plan dated July 1, 2022 can comply with applicable Zoning Ordinance requirements for final site plan approval, including Sections 14.2.P. (Required Site Plan information) and 14.2.S. (Standards for Site Plan Approval), subject to the following conditions:

1. The following condition of special use permit approval shall be satisfied by the applicant prior to occupancy and operation of the Agri-Tourism business on the site:

   The change-of use for and necessary modifications to the existing agricultural building to establish a commercial Farm Market shall be subject to a building permit, compliance with Building Code requirements for a non-agricultural building with access by the general public, and issuance of a new certificate of occupancy by the Township's Building Official.

2. Documentation of permits or approvals from the Central Michigan District Health Department shall be submitted to the Zoning Administrator prior to issuance of a building permit for this project.

Roll Call Vote: Ayes: Albrecht, Buckley, Gross, LaBelle, Lapp, Squattrito, Thering, and Williams. Nays: 0. Motion carried.

Extended Public Comments

Open: 7:20 p.m.

No comments were offered.
Closed 7:20 p.m.

Final Board Comment

Squattrito – Commented on the recent MTA training workshop.
Buckley – Inquired if the Planning Commission will implement hybrid style meetings.

Adjournment – Chairman Squattrito adjourned the meeting at 7:25 p.m.

APPROVED BY: _____

Doug LaBelle – Secretary

(Recorded by Tera Green) Tera Albrecht – Vice Secretary

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Charter Township Of Union

Board Expiration Dates

Planning Commission Board Members (9 Members) 3 year term			
#	F Name	L Name	Expiration Date
1-BOT Representative	James	Thering	11/20/2024
2-Chair	Phil	Squattrito	2/15/2023
3-Vice Chair	Ryan	Buckley	2/15/2025
4-Secretary	Doug	LaBelle II	2/15/2025
5 - Vice Secretary	Tera	Albrecht	2/15/2024
6	Stan	Shingles	2/15/2024
7	Paul	Gross	2/15/2025
8	Jack	Williams	2/15/2023
9	Jessica	Lapp	2/15/2023
Zoning Board of Appeals Members (5 Members, 2 Alternates) 3 year term			
#	F Name	L Name	Expiration Date
1- PC Rep	Ryan	Buckley	2/15/2025
2 - Chair	Andy	Theisen	12/31/2022
3 - Vice Chair	Liz	Presnell	12/31/2022
4 -	Breanne	Moeggenberg	12/31/2022
5 -	Brandon	LaBelle	12/31/2022
Alt. #1	vacant seat		12/31/2022
Alt. #2	vacant seat		2/15/2021
Board of Review (3 Members) 2 year term			
#	F Name	L Name	Expiration Date
1	Doug	LaBelle II	12/31/2022
2	Sarvjit	Chowdhary	12/31/2022
3	Bryan	Neyer	12/31/2022
Alt #1	Randy	Golden	12/31/2022
Construction Board of Appeals (3 Members) 2 year term			
#	F Name	L Name	Expiration Date
1	Colin	Herren	12/31/2023
2	Joseph	Schafer	12/31/2023
3	Andy	Theisen	12/31/2023
Hannah's Bark Park Advisory Board (2 Members from Township) 2 year term			
1	Mark	Stuhldreher	12/31/2022
2	John	Dinse	12/31/2023
Chippewa River District Library Board 4 year term			
1	Ruth	Helwig	12/31/2023
2	Lynn	Laskowsky	12/31/2025

Charter Township Of Union

Board Expiration Dates

EDA Board Members (9 Members) 4 year term			
#	F Name	L Name	Expiration Date
1-BOT Representative	Bryan	Mielke	11/20/2024
2	Thomas	Kequom	4/14/2023
3	James	Zalud	4/14/2023
4	Richard	Barz	2/13/2025
5	Robert	Bacon	1/13/2023
6	Marty	Figg	6/22/2026
7	Cheryl	Hunter	6/22/2023
8	Jeff	Sweet	2/13/2025
9	David	Coyne	3/26/2026
Mid Michigan Area Cable Consortium (2 Members)			
#	F Name	L Name	Expiration Date
1	Kim	Smith	12/31/2022
2	vacant seat		
Cultural and Recreational Commission (1 seat from Township) 3 year term			
#	F Name	L Name	Expiration Date
1	Robert	Sommerville	12/31/2022
Sidewalks and Pathways Prioritization Committee (2 year term -PC Appointments)			
#	F Name	L Name	Expiration Date
1 - BOT Representative	Kimberly	Rice	11/20/2024
2 - PC Representative	Stan	Shingles	2/15/2024
3 - Township Resident	Jeff	Siler	8/15/2023
4 - Township Resident	Jeremy	MacDonald	10/17/2022
5 - Member at large	Phil	Hertzler	8/15/2023
Mid Michigan Aquatic Recreational Authority (2 seat from Township) 3 year term			
#	F Name	L Name	Expiration Date
1-City of Mt. Pleasant	John	Zang	12/31/2023
2-City of Mt. Pleasant	Judith	Wagley	12/31/2022
1-Union Township	Stan	Shingles	12/31/2023
2-Union Township	Allison	Chiodini	12/31/2022
1-Mt. Pleasant Schools	Lisa	Diaz	12/31/2022

Charter Township of Union

APPLICATION FOR SITE PLAN REVIEW

☐ Minor Site Plan ☑ Preliminary Site Plan ☐ Final Site Plan

A Completed Application will contain all the information required per the Zoning Ordinance, Section 14.2 (Site Plan Review).

Name of Proposed Development/Project: CLINT'S BODY SHOP
Common Description of Property & Address (if issued): 5598 S. MISSION ROAD
MT. PLEASANT, 48858

Applicant's Name(s): CLINT'S BODY SHOP
Phone/Fax numbers: 989-317-0742 Email: gwendalyn@gmail.com
Address: 5598 S. MISSION ROAD City: MT. PLEASANT Zip: 48858

Legal Description: ☐ Attached ☑ Included on Site Plan Tax Parcel ID Number(s): 14-034-40-001-08
Existing Zoning: B-4 Land Acreage: 1.73 Existing Use(s): AUTO BODY SHOP / RESIDENTIAL
☑ **ATTACHED: Letter describing the project and how it conforms to Section 14.2.S. (Standards for Site Plan Approval)**

Firm(s) or Individuals(s) who prepared site plan(s)	1. Name: CENTRAL MI SURVEYING & DEV. Phone: 989-775-0756 Email: tbebee@cms-d.com 2. Address: 2257 EAST BROOMFIELD ROAD City: MT. PLEASANT State: MIMI Zip: 48858 Contact Person: TIMOTHY BEBEE Phone 989-775-0756
Legal Owner(s) of Property. All persons having legal interest in the property must sign this application. Attach a separate sheet if more space is needed.	1. Name: GWENDALYN OSWALD Phone: 989-317-0742 Address: 5594 SOUTH MISSION ROAD City: MT. PLEASANT State: MI MI Zip: 48858 Signature: _____ Interest in Property: owner/lessee/other 2. Name: _____ Phone: _____ Address: _____ City: _____ State: MI Zip: _____ Signature: _____ Interest in Property: owner/lessee/other

I do hereby affirm that all the statements, signatures, descriptions, exhibits submitted on or with this application are true and accurate to the best of my knowledge and that I am authorized to file this application and act on behalf of all the owners of the property. False or inaccurate information placed upon this plan may be cause for revocation of any permits issued pursuant to site plan approval and/or removal of work installed. Approval of this plan shall not constitute the right to violate any provisions of the Zoning Ordinance or other applicable codes and ordinances.

Gwendalyn Oswald 6-27-22

Signature of Applicant Date

Office Use Only

Application Received By: _____ Fee Paid: $_____

Date Received: _____ Escrow Deposit Paid: $_____

Preliminary Site Plan Review Procedure

Each preliminary site plan application shall be made by filing one (1) completed and signed copy of the required application form, the required fee and any required escrow deposit, one (1) large (up to 24-inch by 36-inch maximum) printed site plan set, and eleven (11) paper copies and one (1) digital copy in .PDF format of the complete set of application materials and reduced 11-inch by 17-inch site plan sets at the Township Hall.

Effect of Preliminary Site Plan Approval

Approval of a preliminary site plan by the Planning Commission shall indicate its general acceptance of the proposed layout of buildings, streets, drives, parking areas, and other facilities and areas in accordance with the standards for preliminary site plan approval specified in subsection 14.2(S). The Planning Commission may, at its discretion and with appropriate conditions attached, authorize limited work to begin for soils exploration, incidental site clearing, and other preliminary site work as specified in the authorization.

Outside Agency Approvals

The applicant shall be responsible for obtaining all necessary permits or approvals from applicable outside agencies, prior to final site plan approval.

Final Site Plan Review Procedure

Each final site plan application shall be made by filing one (1) completed and signed copy of the required application form, the required fee and any required escrow deposit, one (1) large (up to 24-inch by 36-inch maximum) printed site plan set, and eleven (11) paper copies and one (1) digital copy in .PDF format of the complete set of application materials and reduced 11-inch by 17-inch site plan sets at the Township Hall.

Effect of Final Site Plan Approval

Approval of a final site plan by the Planning Commission constitutes the final zoning approval for the project and allows for issuance of a building permit to begin site work or construction, provided all other construction and engineering requirements have been met.

Minor Site Plan Review Procedure

A minor site plan application shall be made by filing one (1) completed and signed copy of the required application form, the required fee, and two (2) paper copies and one (1) digital copy in .PDF format of the complete set of application materials and site plans, at a maximum sheet size of 11 inches by 17 inches, at the Township Hall. The Zoning Administrator shall review the application materials and site plan for completeness, accuracy, and compliance with all applicable requirements and standards of this Ordinance and other Township ordinances.

The minor site plan shall be approved by the Zoning Administrator upon determination that all required information for the type of site plan has been provided per subsection 14.2(P), the site plan satisfies the applicable standards for site plan approval per subsection 14.2(S); and the site plan conforms to all other applicable requirements and standards of this Ordinance and other Township ordinances.

CHARTER TOWNSHIP OF UNION

SITE PLAN REVIEW
HAZARDOUS SUBSTANCES REPORTING FORM

This form must be completed and submitted as part of the site plan for facilities which may use, store, or generate hazardous substances or polluting materials (including petroleum-based products)

Name of business: CLINT'S BODY SHOP

Name of business owner(s): CLINT AND GWENDALYN OSWALD

Street and mailing address: 5598 SOUTH MISSION ROAD
MT. PLEASANT, MI 48858

Telephone: 989-317-0742

Fax: N/A

Email: gwendalyn@gmail.com

I affirm that the information submitted is accurate.

Owner(s) signature and date: Clint 6-27-22
Gwendalyn Oswald 6-27-22

Information compiled by:

Types and Quantities of Hazardous Substances and Polluting Materials Used, Stored or Generated On-Site

Please list the hazardous substances and polluting materials (including chemicals, hazardous materials, petroleum products, hazardous wastes and other polluting materials) which are expected to be used, stored or generated on -site. Quantities should reflect the maximum volumes on hand at any time. Attach additional pages if necessary to list all hazardous substances and polluting materials.

COMMON NAME	CHEMICAL NAME (components)	FORM	MAX QUANTITY ON HAND AT ONE TIME	TYPE OF STORAGE CONTAINERS
Paint		liquid		Metal
_____ NONE	KEY: LIQ. = liquid P.LIQ = pressurized liquid S = solids G = gas PG = pressurized gas			KEY: AGT = above ground tank DM = drums UGT = underground tank Cy = cylinders CM = metal cylinders CW = wooden or composition container TP = portable tank

PERMIT INFORMATION CHECKLIST FOR FINAL SITE PLANS

Michigan.gov/EGLEpermits

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) has prepared a list of key questions to help identify what EGLE permits, licenses, or approvals of a permit-like nature may be needed. By contacting the appropriate offices indicated, you will help reduce the possibility that your project or activity will be delayed due to the untimely discovery of additional permitting requirements later in the construction process. While this list covers the existence of permits and approvals required from EGLE, it is not a comprehensive list of all legal responsibilities. A useful way to learn whether other requirements will apply is to go through the Self-Environmental Assessment in the Michigan Guide to Environmental, Health, and Safety Regulations, online at: Michigan.gov/EHSguide. Please call the Environmental Assistance Center at 800-662-9278 to talk with any of the EGLE programs noted below. [insertions and edits by Union Township]

How Do I Know that I Need a State of Michigan, County or Local Permit or Approval?	Yes ☐	No ☐
1) Will your business involve the installation or construction of any process equipment that has the potential to emit air contaminants (e.g. dry sand blasting, boilers, standby generators)? Air Quality Permit to Install, Air Quality Division (AQD), Permit Section	Y☐	N☒
2) Does the project involve renovating or demolishing all or portions of a building? Notification is required for asbestos removal and required for all demolitions even if the structure never contained asbestos. Asbestos Notification, AQD, Asbestos Program, 517-284-6777	Y☐	N☒
3) Please consult the Permitting at the Land and Water Interface Decision Tree document to evaluate whether your project needs a land and water management permit (i.e., Does the project involve filling, dredging, placement of structures, draining, or use of a wetland?). Land and Water Featured Programs (Water Resources Division - WRD) - Joint Permit Application, 517-284-5567:		
a. Does the project involve construction of a building or septic system in a designated Great Lakes high risk erosion area?	Y☐	N☒
b. Does the project involve dredging, filling, grading, or other alteration of the soil, vegetation, or natural drainage, or placement of permanent structures in a designated environmental area?	Y☐	N☒
c. Does the project propose any development, construction, silvicultural activities or contour alterations within a designated critical dune area?	Y☐	N☒
d. Does the project involve construction of a dam, weir or other structure to impound flow?	Y☐	N☒
4) Does the project involve an earth change activity (including land balancing, demolition involving soil movement, and construction) or does the project involve construction which will disturb one or more acres that come into contact with storm water that enters a storm sewer, drain, lake, stream, or other surface water? **Union Township and Isabella County**	Y☐	N☒
5) Does the project involve the construction or alteration of a water supply system system? **Union Township Public Services Department** and Drinking Water & Environmental Health Division (DWEHD), 517-284-6524	Y☐	N☒
6) Does the project involve construction or alteration of any sewage collection or treatment facility? **Union Township Public Services Department** and WRD, Part 41 Construction Permit Program (staff), 906-228-4527, or EGLE District Office	Y☐	N☒
7) Public Swimming Pool Construction (Spas/Hot Tubs) Permits: Will your business involve the construction or modification of a public swimming pool, spa or hot tub? **Union Township** and Public Swimming Pool Program, 517-284-6541, or EGLE District Office	Y☐	N☒
8) Does the project involve the construction or modification of a campground? **Union Township** and DWEHD,Campgrounds program, 517-284-6529	Y☐	N☒

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9) Does the project involve construction of a facility that landfills, transfers, or processes of any type of solid non-hazardous waste on-site, or places industrial residuals/sludge into or onto the ground? Materials Management Division (MMD), Solid Waste, 517-284-6588, or EGLE District Office	Y☐	N☒
10) Does the project involve the construction of an on-site treatment, storage, or disposal facility for hazardous waste? MMD, Hazardous Waste Section, Treatment, Storage and Disposal, 517-284-6562	Y☐	N☒
Who Regulates My Drinking (Potable) Water Supply?		
11) I am buying water from the municipal water supply system Contact the **Union Township Public Services Dept.**	Y☐	N☒
12) I have a Non-Community Water Supply (Type II) Guide, Contact (District or County) Local Health Department, 517-485-0660	Y☒	N☐
13) I am a community water supply (Type I) Community Water Supply, DWEHD District Office Community Water Supply Program, 517-284-6512	Y☐	N☒
14) Do you desire to develop a withdrawal of over 2,000,000 gallons of water per day from any source including groundwater, inland surface water, or the Great Lakes and their connecting waterways? WRD, Great Lakes Shorelands Unit, Water Use Program, 517-284-5563	Y☐	N☒
Who Regulates My Wastewater Discharge System?		
15) NPDES: Does the project involve the discharge of any type of wastewater to a storm sewer, drain, lake, stream, or other surface water? WRD, EGLE District Office, or National Pollutant Discharge Elimination (NPDES) Permit Program, 517-284-5568	Y☐	N☒
16) Does the facility have industrial activity that comes into contact with storm water that enters a storm sewer, drain, lake, stream, or other surface water? WRD, Permits Section, or EGLE District Office, 517-284-5588	Y☐	N☒
17) Does the project involve the discharge of wastewaters into or onto the ground (e.g. subsurface disposal or irrigation)? WRD, Groundwater Permits Program, 517-290-2570	Y☐	N☐
18) Does the project involve the drilling or deepening of wells for waste disposal? Oil, Gas and Minerals Division (OGMD), 517-284-6841	Y☐	N☒
What Operational Permits Are Relevant to My Operation and Air Emissions?		
19) Renewable Operating Permit: Does your facility have the potential to emit any of the following: 100 tons per year or more of any criteria pollutant; 10 tons per year or more of any hazardous air pollutant; or 25 tons per year or more of any combination of hazardous air pollutants? AQD, Permit Section, 517-284-6634	Y☐	N☒
20) Does your facility have an electric generating unit that sells electricity to the grid and burns a fossil fuel? AQD, Acid Rain Permit Program, 517-780-7843	Y☐	N☒
What Operational Permits Are Relevant to My Waste Management?		
21) Does the project involve landfilling, transferring, or processing of any type of solid non-hazardous waste on-site, or placing industrial residuals/sludge into or onto the ground? MMD, 517-284-6588 or EGLE District Office	Y☐	N☒
22) Does the project involve the on-site treatment, storage, or disposal of hazardous waste? MMD, Hazardous and Liquid Waste, 517-284-6562	Y☐	N☒
23) Does the project require a site identification number (EPA number) for regulated waste activities (used oil, liquid waste, hazardous waste, universal waste, PCBs)? (Hazardous Waste Program Forms & License Applications) MMD, EGLE District Office, 517-284-6562	Y☐	N☒

24) Does the project involve the receipt, possession, manufacture, use, storage, transport, transfer, release, or disposal of radioactive material in any form? MMD, Radioactive Material and Standards Unit, 517-284-6581	Y☐	N☒
25) Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background? MMD Radioactive Material and Standards Unit, 517-284-6581	Y☐	N☒
26) Does the project involve the generation of medical waste or a facility that treats medical waste prior to its disposal? MMD, Medical Waste Regulatory Program, 517-284-6594	Y☐	N☒
What Sector-Specific Permits May be Relevant to My Business?		
Transporters		
27) Does the project involve the *transport* of some other facility's non-hazardous liquid waste? MMD, Transporter Program, 517-284-6562	Y☐	N☒
28) Does the project involve the *transport* of hazardous waste? MMD, Transporter Program, 517-284-6562	Y☐	N☒
29) Do you engage in the business of transporting bulk water for drinking or household purposes (except for your own household use)? DWEHD, Water Hauler Information, 517-284-6527	Y☐	N☒
30) Does the project involve *transport* of septic tank, cesspool, or dry well contents or the discharge of septage or sewage sludge into or onto the ground? DWEHD, Septage Program, 517-284-6535	Y☐	N☒
31) Do you store, haul, shred or process *scrap tires*? MMD, Scrap Tire Program, 517-284-6586	Y☐	N☒
Sectors		
32) Is the project a *dry cleaning* establishment utilizing perchloroethylene or a flammable solvent in the cleaning process? AQD, Dry Cleaning Program, 517-284-6780	Y☐	N☒
33) Does your *laboratory* test potable water as required for compliance and monitoring purposes of the Safe Drinking Water Act? Laboratory Services Certifications, 517-284-5424	Y☐	N☒
34) Does the project involve the operation of a *public swimming pool*? DWEHD, Public Swimming Pools Program, 517-284-6529	Y☐	N☒
35) Does the project involve the operation of a *campground*? **Union Township** and DWEHD, Campgrounds, 517-284-6529	Y☐	N☒
What Permits Do I Need to Add Chemicals to Lakes and Streams?		
36) Are you applying a chemical treatment for the purpose of aquatic nuisance control (pesticide/herbicide etc.) in a water body (i.e. lake, pond or river)? WRD, Aquatic Nuisance Control , 517-284-5593	Y☐	N☒
37) Are you applying materials to a water body for a water resource management project (i.e. mosquito control treatments, dye testing, or fish reclamation projects)? WRD, Surface Water Assessment Section, 517-331-5228	Y☐	N☒

Why would I be subject to Oil, Gas and Mineral Permitting?		
38) Do you want to operate a central production facility (applies to oil and gas production facilities where products of diverse ownership are commingled)? OGMD, Petroleum Geology and Production Unit, 517-284-6826	Y☐	N☒
39) Does the project involve the removal of sand from a sand dune area within two (2) miles of a Great Lakes shoreline? OGMD, Minerals and Mapping Unit, Sand Dune Mining Program, 517-284-6826	Y☐	N☒
40) Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background? MMD, Radioactive Protection Programs, 517-284-6581	Y☐	N☒
Petroleum & Mining, OGMD, 517-284-6826		
41) Does the project involve the diversion and control of water for the mining and processing of low-grade iron ore?	Y☐	N☒
42) Does the project involve the surface or open-pit mining of metallic mineral deposits?	Y☐	N☒
43) Does the project involve the mining of nonferrous mineral deposits at the surface or in underground mines?	Y☐	N☒
44) Does the project involve mining coal?	Y☐	N☒
45) Does the project involve changing the status or plugging of a mineral well?	Y☐	N☒
46) Does the project involve the drilling or deepening of wells for brine production, solution mining, storage, or as test wells?	Y☐	N☒

Contact **Union Township** and EGLE Permits & Bonding, OGMD, 517-284-6841

CLINT'S BODY SHOP

PRELIMINARY SITE PLAN REVIEW LETTER

Project Description

The project consists of a proposed single story addition of 3,200 sq. ft. for use by the Auto Body Shop.

Standards for Preliminary Site Plan Approval (Section 14.2.S)

1.) The applicant is legally authorized to apply for site plan approval, and all required information has been provided.
The applicant is the legal owner for the property.

2.) The proposed development conforms to the applicable standards and conditions imposed by this Ordinance and other applicable Township ordinances.
Yes, the proposed development conforms to the applicable standards and conditions imposed by this Ordinance and other applicable Township ordinances.

3.) The proposed development will be harmonious with and not harmful, injurious, or objectionable to the environment or land uses in surrounding area.
The proposed development is consistent with the zoned uses for the property which is B-4, so it is harmonious with and not harmful, injurious, or objectionable to the environment or land uses in the surrounding area which is also B-4 properties.

4.) The proposed development respects natural topography, floodways, and floodplains; and minimizes the amount and extent of cutting or filling.
The proposed development respects natural topography. No floodways and floodplains exist on this site.

5.) Organic, wet, or other soils that are not suitable for development will be undisturbed or modified in such fashion as to make development feasible.
The development will disturb only what is necessary to create the proper foundation for the overall site.

6.) The movement of the vehicular and pedestrian traffic within the site and in relation to access streets and sidewalks will safe and convenient.
The proposed development is designed to accommodate traffic flow and parking in accordance with the Township ordinances.

7.) The proposed development is adequately coordinated with improvements serving the area, and with other existing or planned development in the vicinity.

Yes, the proposed development is adequately coordinated with improvements serving the area and at this time the applicant is not aware of any planned development in the vicinity at this time.

8.) Satisfactory and harmonious relationships will exist between the proposed development and the existing and planned development of contiguous lands and the surrounding area, including provisions for proper extensions of public roads and sidewalks through the development in accordance with the Township ordinances. *The proposed development is surrounded by similarly zoned properties and its nature will be harmonious with the contiguous lands and the surrounding area. The project is adding an addition to an already existing business.*

9.) Development phases are in logical sequence so that any phase will not depend upon a subsequent phase for access, utilities, drainage or erosion control.
The proposed development only has one phase for the site plan review.

CLINT'S BODY SHOP

PROPOSED BUILDING ADDITION

5598 S. MISSION ROAD, MT. PLEASANT, MICHIGAN

PROOF OF OWNERSHIP:

WARRANTY DEED, LIBER 1851, PAGE 404, ISABELLA COUNTY RECORDS.

GRANTED BY GARY P. GARDINER AS MEMBER AND PAMELA K. GARDINER AS MEMBER OF KASTLE LEASING, LLC, A MICHIGAN LIMITED LIABILITY COMPANY, FKA KASTLE LEASING COMPANY, A MICHIGAN CORPORATION, WHOSE ADDRESS IS 3209 E. SOUTH COUNTY LINE ROAD, SHEPHERD, MI 48883-9515, TO CLINTON JERRY OSWALD AND GWENDALYN CORA OSWALD, HUSBAND AND WIFE, WHOSE ADDRESS IS 5598 S. MISSION ROAD, MT. PLEASANT, MI 48858.

DATED JUNE 24, 2019

OVERALL PARCEL DESCRIPTION:

PART OF THE NORTH 1/2 OF THE NORTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 34, T.14 N.- R.4 W., UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN, TO FIX THE POINT OF BEGINNING, COMMENCE AT THE EAST 1/4 CORNER OF SAID SECTION; THENCE S.00-15'-25"W., ON AND ALONG THE EAST LINE OF SAID SECTION, 220.00 FEET TO THE POINT OF BEGINNING OF THIS DESCRIPTION; THENCE CONTINUING S.00'-15'-25"W., ON SAID EAST SECTION LINE, 188.00 FEET; THENCE S.89'-29'-18"W., PARALLEL WITH THE EAST AND WEST 1/4 LINE OF SAID SECTION, 400.00 FEET; THENCE N.00'-15'-25"E., PARALLEL WITH SAID EAST SECTION LINE, 188.00 FEET; THENCE N.89'-29'-18"E., PARALLEL WITH SAID EAST AND WEST 1/4 LINE, 400.00 FEET BACK TO THE POINT OF BEGINNING, CONTAINING 1.73 ACRES OF LAND AND SUBJECT TO HIGHWAY USE FOR S. MISSION ROAD OF THE EAST 50.00 FEET THEREOF AND ALSO SUBJECT TO AND TOGETHER WITH ANY OTHER EASEMENTS AND/OR RESTRICTIONS OF RECORD.

ENHANCEMENT PARCEL DESCRIPTION:

PART OF THE NORTH 1/2 OF THE NORTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 34, T.14 N.- R.4 W., UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN, TO FIX THE POINT OF BEGINNING, COMMENCE AT THE EAST 1/4 CORNER OF SAID SECTION; THENCE S.00-15'-25"W., ON AND ALONG THE EAST LINE OF SAID SECTION, 408.00 FEET TO THE POINT OF BEGINNING OF THIS DESCRIPTION; THENCE CONTINUING S.00'-15'-25"W., ON SAID EAST SECTION LINE, 40.00 FEET; THENCE S.89'-29'-18"W., PARALLEL WITH THE EAST AND WEST 1/4 LINE OF SAID SECTION, 400.00 FEET; THENCE N.00'-15'-25"E., PARALLEL WITH SAID EAST SECTION LINE, 40.00 FEET; THENCE N.89'-29'-18"E., PARALLEL WITH SAID EAST AND WEST 1/4 LINE, 400.00 FEET BACK TO THE POINT OF BEGINNING, CONTAINING 0.37 ACRES OF LAND AND SUBJECT TO HIGHWAY USE FOR S. MISSION ROAD OF THE EAST 50.00 FEET THEREOF AND ALSO SUBJECT TO AND TOGETHER WITH ANY OTHER EASEMENTS AND/OR RESTRICTIONS OF RECORD.

ENHANCED PARCEL DESCRIPTION:

PART OF THE NORTH 1/2 OF THE NORTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 34, T.14 N.- R.4 W., UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN, TO FIX THE POINT OF BEGINNING, COMMENCE AT THE EAST 1/4 CORNER OF SAID SECTION; THENCE S.00-15'-25"W., ON AND ALONG THE EAST LINE OF SAID SECTION, 220.00 FEET TO THE POINT OF BEGINNING OF THIS DESCRIPTION; THENCE CONTINUING S.00'-15'-25"W., ON SAID EAST SECTION LINE, 228.00 FEET; THENCE S.89'-29'-18"W., PARALLEL WITH THE EAST AND WEST 1/4 LINE OF SAID SECTION, 400.00 FEET; THENCE N.00'-15'-25"E., PARALLEL WITH SAID EAST SECTION LINE, 228.00 FEET; THENCE N.89'-29'-18"E., PARALLEL WITH SAID EAST AND WEST 1/4 LINE, 400.00 FEET BACK TO THE POINT OF BEGINNING, CONTAINING 2.10 ACRES OF LAND AND SUBJECT TO HIGHWAY USE FOR S. MISSION ROAD OF THE EAST 50.00 FEET THEREOF AND ALSO SUBJECT TO AND TOGETHER WITH ANY OTHER EASEMENTS AND/OR RESTRICTIONS OF RECORD.

B-4 - GENERAL BUSINESS DISTRICT	
MINIMUM FRONT YARD SETBACK	20 FT
MINIMUM SIDE YARD SETBACK	10 FT (J)
MINIMUM REAR YARD SETBACK	20 FT (J)
MINIMUM LOT FRONTAGE	80 FT
MINIMUM LOT AREA (SQ FT)	12,000 SQ FT
MAXIMUM BUILDING HEIGHT	35 FT
MAXIMUM LOT COVERAGE (%)	50%

J. AN ADDITIONAL 20.0 FEET OF SIDE AND REAR YARD SETBACK SHALL BE PROVIDED WHEN ABUTTING THE AG (AGRICULTURAL) DISTRICT, ANY RESIDENTIAL DISTRICT, OR AN EXISTING AGRICULTURAL OR RESIDENTIAL USE.

MISS DIG:

FOR PROTECTION OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL CALL "MISS DIG" 1-800-482-7171 A MINIMUM OF 3 WORKING DAYS PRIOR TO ANY EXCAVATION. ALL "MISS DIG" PARTICIPATING MEMBERS WILL BE APPROPRIATELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

UTILITY NOTE:

THE UTILITY LOCATIONS AS HEREON SHOWN ARE BASED ON FIELD OBSERVATIONS AND A CAREFUL REVIEW OF MUNICIPAL AND UTILITY COMPANY RECORDS. HOWEVER, IT IS NOT POSSIBLE TO DETERMINE THE PRECISE LOCATION AND DEPTH OF UNDERGROUND UTILITIES WITHOUT EXCAVATION. THEREFORE, WE CANNOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE BURIED UTILITY INFORMATION HEREON SHOWN. THE CONTRACTOR SHALL CALL "MISS DIG" (1-800-282-7171) PRIOR TO ANY EXCAVATION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THESE UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND SHALL MAKE EVERY EFFORT TO PROTECT AND OR RELOCATE THEM AS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER/SURVEYOR AS SOON AS POSSIBLE IN THE EVENT A DISCREPANCY IS FOUND. UNDERGROUND SERVICE LEADS FOR GAS, ELECTRIC, TELEPHONE AND CABLE MAY BE ACROSS PROPERTY, NO INFORMATION AVAILABLE PLEASE CALL MISS DIG.

LEGEND

SYMBOLS

BOLLARD	GAS RISER	SOIL BORING
CATCH BASIN (CURB INLET)	GUY ANCHOR	STORM SEWER MANHOLE
CATCH BASIN (ROUND)	HYDRANT - EXISTING	TELEPHONE RISER
CATCH BASIN (SQUARE)	HYDRANT - PROPOSED	TREE - CONIFEROUS
CLEAN OUT	LIGHT POLE	TREE - DECIDUOUS
DRAINAGE FLOW	MAILBOX	UTILITY POLE
ELECTRICAL BOX	MONITORING WELL	WATER MAIN VALVE
FOUND CONC. MONUMENT	SANITARY SEWER MANHOLE	WATER SHUT-OFF
FOUND IRON	SET IRON	WATER WELL
GAS MAIN VALVE	SIGN	WOOD STAKE

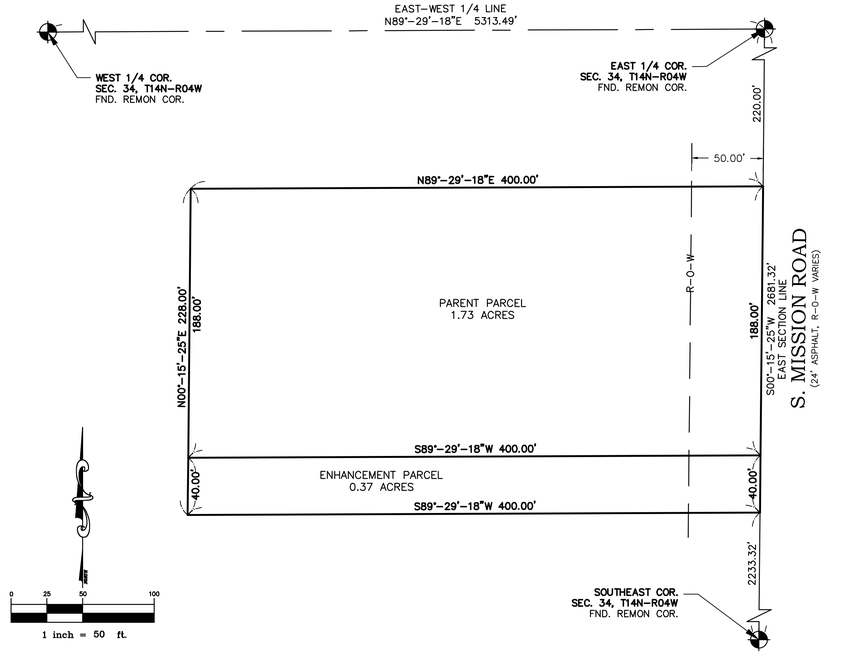
LINETYPES

ELEC	BURIED ELECTRICAL CABLE
PHONE	BURIED TELEPHONE CABLE
DITCH-CL	CENTERLINE OF DITCH
FM	FORCE MAIN
GAS	GAS MAIN
RD-CL	ROAD CENTERLINE
8" SAN	SANITARY SEWER
12" SS	STORM SEWER
EX-TOS	TOE OF SLOPE
EX-TOB	TOP OF BANK
OHE	UTILITIES - OVERHEAD
UTIL	UTILITIES - UNDERGROUND
12" WM	WATER MAIN

HATCH PATTERNS

	ASPHALT - EXISTING
	ASPHALT - PROPOSED
	CONCRETE
	GRAVEL
	LANDSCAPING
	RIP-RAP

LOCATION MAP
NOT TO SCALE



BOUNDARY SURVEY

SHEET INDEX

1	COVER SHEET
2	EXISTING TOPOGRAPHY & DEMOLITION
3	SITE HORIZONTAL PLAN
4	RESIDENTIAL FLOOR PLAN
5	GENERAL SITE GRADING PLAN
6	SOIL EROSION PLAN
7	DETAILS SHEET

BEARING BASIS:
PER GEODETIC OBSERVATION WGS-84, THE BEARING OF THE EAST SECTION LINE BETWEEN THE EAST 1/4 CORNER AND THE SOUTHEAST CORNER WAS DETERMINED TO BE S00°-15'-25"W.

SITE: 5598 S. MISSION ROAD
MT. PLEASANT, MI 48858

CLIENT: CLINT'S BODY SHOP
5598 S. MISSION ROAD
MT. PLEASANT, MI 48858
CONTACT: GWENDALYN OSWALD
PHONE: (989) 317-0742
EMAIL: gwendalyn@gmail.com

CONSULTANT: CENTRAL MICHIGAN SURVEYING & DEVELOPMENT CO., INC.
2257 E. BROOMFIELD ROAD
MT. PLEASANT, MI 48858
CONTACT PERSON: TIMOTHY E BEBEE
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

CHARTER COMMUNICATIONS
915 E. BROOMFIELD STREET
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(989) 621-4932
RANDY BUNKER
rbunker@chartercom.com

CONSUMERS ENERGY
1325 WRIGHT AVENUE
ALMA, MI 48801
(989) 466-4282
KIM STUDT
kimberly.studt@cmsenergy.com

FRONTIER
345 PINE AVENUE
ALMA, MI 48801
(989) 463-0392
MARK A. MARSHALL
Mark.Marshall@ftr.com

DTE ENERGY
4420 44TH STREET S.E., SUITE B
KENTWOOD, MI 49512
(616) 954-4623
MARY JO MCKERSIE
mckersiem@dteenergy.com

MT. PLEASANT FIRE DEPARTMENT
804 E. HIGH STREET
MT. PLEASANT, MI 48858
(989) 779-5100 EXT 5122
LT. BRAD DOEPKER
bdoepker@mt-pleasant.org

CHARTER TOWNSHIP OF UNION
PUBLIC WATER/PUBLIC SEWER
2010 S. LINCOLN ROAD
MT. PLEASANT, MI 48858
(989) 772-4600 EXT 24
KIM SMITH
ksmith@uniontownshipmi.com

CHARTER TOWNSHIP OF UNION
PLANNING & ZONING
2010 S. LINCOLN ROAD
MT. PLEASANT, MI 48858
(989) 772-4600 EXT 241
PETER GALLINAT
pgallinat@uniontownshipmi.com

DRAIN COMMISSIONERS OFFICE
ISABELLA COUNTY BUILDING
200 N. MAIN STREET ROOM 140
MT. PLEASANT, MI 48857
(989) 317-4072
ROBERT WILLOUGHBY
drain@isabellacounty.org

ISABELLA COUNTY ROAD COMMISSION
2261 E. REMUS ROAD
MT. PLEASANT, MI 48858
(989) 773-7131 EXT 115
PATRICK GAFFNEY
PGaffney@isabellaroads.com

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EMAIL: info@cms-d.com

COVER SHEET
CLINT'S BODY SHOP
PART OF THE NORTH 1/2 OF THE NORTH 1/2 OF THE SOUTHEAST 1/4, SECTION 34, T14N-R04W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS: PER UNION TOWNSHIP AND CLIENT 8-22-22

SUBMITTALS: PRELIMINARY SUBMITTAL TO UNION TWP. 6-28-22
SUBMITTAL TO UNION TOWNSHIP 8-24-22

JOB NUMBER: 2108-132
DRAWN BY: CDS
DESIGNED BY: CDS
CHECKED BY: TELB
SCALE: N/A
SHEET NUMBER: 1 OF 7

WITNESSES:
EAST 1/4 COR.
SEC. 34, T14N–R04W
FND. REMON COR., PER LCRC L. 2, P. 163

S70°W	35.46'	CENTER OF A ROAD SIGN POST
WEST	43.23'	FND N&D IN THE S FACE OF A POWER POLE
N55°E	59.73'	FND N&T IN THE SE FACE OF A 26" TREE
S45°E	57.70'	FND N&T IN THE SW FACE OF A POWER POLE

SOUTHEAST COR.
SEC. 34, T14N–R04W
FND. REMON. COR., PER LCRC L. 2, P. 165

S40°W	101.65'	NE CORNER OF A BRICK CHURCH SIGN
S60°E	101.77'	FND SPIKE IN THE N FACE OF A 30" MAPLE TREE
N70°E	85.05'	FND N&T IN THE NW FACE OF A 12" MAPLE TREE
N35°W	60.48'	FND N&T IN THE SW FACE OF A STUB POWER POLE

VONDOLOSKI FAMILY TRUST
MARTIN & SHERRY VONDOLOSKI TRUSTEES
4293 E. MILLBROOK ROAD
MT. PLEASANT, MI 48858
14–034–40–001–05
ZONED: B4 (MIXED USE)

OSWALD CLINTON J & GWENDALYN C
5598 S. MISSION ROAD
MT. PLEASANT, MI 48858
14–034–40–001–09
ZONED: AG & B4 (RESIDENTIAL USE)

OSWALD GWENDALYN
5594 S. MISSION ROAD
MT. PLEASANT, MI 48858
14–034–40–001–08
ZONED: B4 (MIXED USE)

SHOEMAKER THOMAS J
5505 S. MISSION ROAD
MT. PLEASANT, MI 48858
14–035–30–006–00
ZONED: AG

CRAWFORD ANTHONY & NICOLE
5595 S. MISSION ROAD
MT. PLEASANT, MI 48858
14–035–30–007–00
ZONED: AG

OSWALD CLINTON J & GWENDALYN C
5598 S. MISSION ROAD
MT. PLEASANT, MI 48858
14–034–40–001–09
ZONED: AG & B4 (RESIDENTIAL USE)

POND
1.81 ACRES

APPROX. EX. FLOW PATH

PARENT PARCEL
1.73 ACRES

ENHANCEMENT PARCEL
0.37 ACRES

S. MISSION ROAD
(28' ASPHALT, R-O-W VARIES)

EAST SECTION LINE
S00°–31'–44"W 220.00'

S89°–29'–18"W 400.00'

N00°–15'–25"E 228.00'

S00°–31'–44"W 2233.32'

10' SIDE YARD SETBACK
40' REAR YARD SETBACK
30' SIDE YARD SETBACK
20' FRONT YARD SETBACK

EAST 1/4 COR.
SEC. 34, T14N–R04W
FND. REMON COR.

SOUTHEAST COR.
SEC. 34, T14N–R04W
FND. REMON COR.

EX. ASPHALT
EX. ASPHALT TRAIL
EX. GRAVEL
EX. CONC.
EX. WATER WELL
SEPTIC FIELD
SAN–MH#1
RIM: 851.09
SEPTIC ACCESS
FRAME HOUSE #5514
SHIPPING CONTAINER
STORAGE LEAN–TO
AUTO BODY SHOP
2,100 SQ. FT.
FF: 850.0
11.8' GARAGE DOOR
3' DOOR
OFFICE AREA
1,200 SQ. FT.
FF: 851.4
BF SIGN
THREE BEDROOM RESIDENTIAL
1,440 SQ. FT.
FF: 851.4
COMMERCIAL STORAGE AREA
1,200 SQ. FT.
FF: 851.4
WOOD FENCE
MAILBOX #5514
MAILBOX #5505
MAILBOX #5594
MAILBOX #5598
MAILBOX #5595
CB#1
RIM: 847.72
INV. 844.42
CB#2
RIM: 849.06
INV. 846.25
PASS WITH CARE SIGN
12" RCP STORM

REMOVE 1,621 SQ. FT. EX. GRAVEL
REMOVE 848 SQ. FT. EX. GRAVEL
REMOVE 782 SQ. FT. EX. CONC.
REMOVE EX. 11.8' GARAGE
REMOVE 296 SQ. FT. EX. GRAVEL
RELOCATE EX. 6'X3' DUMPSTER

1 inch = 20 ft.

CMS & D
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EMAIL: info@cms–d.com

EXISTING TOPOGRAPHY & DEMOLITION

CLINT'S BODY SHOP

PART OF THE NORTH 1/4 OF THE NORTH 1/2 OF THE SOUTHEAST 1/4, SECTION 34, T14N–R04W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:
PER UNION TOWNSHIP AND CLIENT 8–22–22

SUBMITTALS:
PRELIMINARY SUBMITTAL TO UNION TWP. 6–28–22
SUBMITTAL TO UNION TOWNSHIP 8–24–22

JOB NUMBER: 2108–132
DRAWN BY: CDS
DESIGNED BY: CDS
CHECKED BY: TELB
SCALE: 1" = 20'
SHEET NUMBER: 2 OF 7

SELLING/LEASING NOTE: THE OWNER DOES NOT INTEND TO SELL OR LEASE THE AUTO BODY SHOP PORTION OF THE PROPERTY PRIOR TO OR AFTER THE COMPLETION OF THE PROPOSED SITE WORK. THE OWNER INTENDS TO LEASE THE THREE BEDROOM RESIDENTIAL PORTION OF THE PROPERTY TO TENANTS.

USE STATEMENT: THE CURRENT USE OF THE PROPERTY IS A MIXED USE BETWEEN AN AUTO BODY SHOP IN THE SOUTHERN PORTION OF THE MAIN BUILDING, AND A THREE BEDROOM RESIDENTIAL RENTAL UNIT IN THE NORTHERNMOST PORTION. WITH THIS ADDITION, THERE WILL BE NO CHANGE TO THE STATED USES. THE ADDITION WILL BE FOR THE AUTO BODY SHOP ONLY.

EXISTING NATURAL FEATURES: THE AREA OF THE PROPOSED EXPANSION IS CURRENTLY LAWN AND GRAVEL AREAS. NO CHANGES TO THE EXISTING SITE FOLIAGE ARE PROPOSED.

EXISITING AND PROPOSED UTILITIES: EXISTING ON-SITE SEPITC SYSTEM WILL SERVICE THE PROPOSED EXPANSION. THERE ARE NO PUBLIC SEWER OR WATER SERVICES AVAILABLE ALONG S. MISSION ROAD.

RECYCLING NOTE: THE PROPERTY UTILIZES RECYCLING BINS FOR METAL AND CARDBOARD LOCATED WITHIN THE BUILDING. THIS WILL REMAIN UNCHANGED DURING CONSTRUCTION AND EXPANSION.

HOURS OF OPERATION: THE EXISTING BUSINESS IS OPEN TO THE PUBLIC FROM 8:00AM TO 5:00PM ON WEEKDAYS AND CLOSED ON WEEKENDS. WORKING HOURS ARE FROM 7:00AM TO 7:00PM ON WEEKDAYS AND AS NEEDED ON WEEKENDS. THE BUSINESS IS ALSO OPEN BY APPOINTMENT DURING ALL WORKING HOURS.

DEVELOPMENT SCEHDULE: PROPOSED BUILDING ADDITION, ALL CONCRETE ADDITIONS, AND COMMERCIAL PARKING SPACES WILL BE INSTALLED BY THE END OF THE 2023 CONSTRUCTION SEASON. PROPOSED RESIDENTIAL PARKING SPACES AND DRIVEWAY WILL BE INSTALLED BY THE END OF THE 2025 CONSTRUCTION SEASON.

PARKING TABLE:

AUTO REPAIR SHOP:
EMPLOYEE PARKING:
REQUIRED: 1 SPACE FOR EACH EMPLOYEE

MAX EMPLOYEES = 3 = **3 SPACES**

CUSTOMER PARKING:
REQUIRED: 1 SPACE FOR EVERY 2 CUSTOMERS

MAX OCCUPANCY = 12 = **6 SPACES**

RESIDENTIAL UNIT:
REQUIRED: 2 SPACES PER DWELLING UNIT

1 DWELLING UNIT = 2 = **2 SPACES**

TOTAL REQUIRED SPACES: 3 FOR EMPLOYEES
6 FOR CUSTOMERS
2 FOR RESIDENTS
11 TOTAL REQUIRED (1 REQ. ADA SPACE)

PLANNED PARKING:
REG. PAVED PARKING: 10 SPACES
ADA PAVED PARKING: 1 SPACES
TOTAL PLANNED PARKING: 11 SPACES (1 REQ. ADA SPACES)

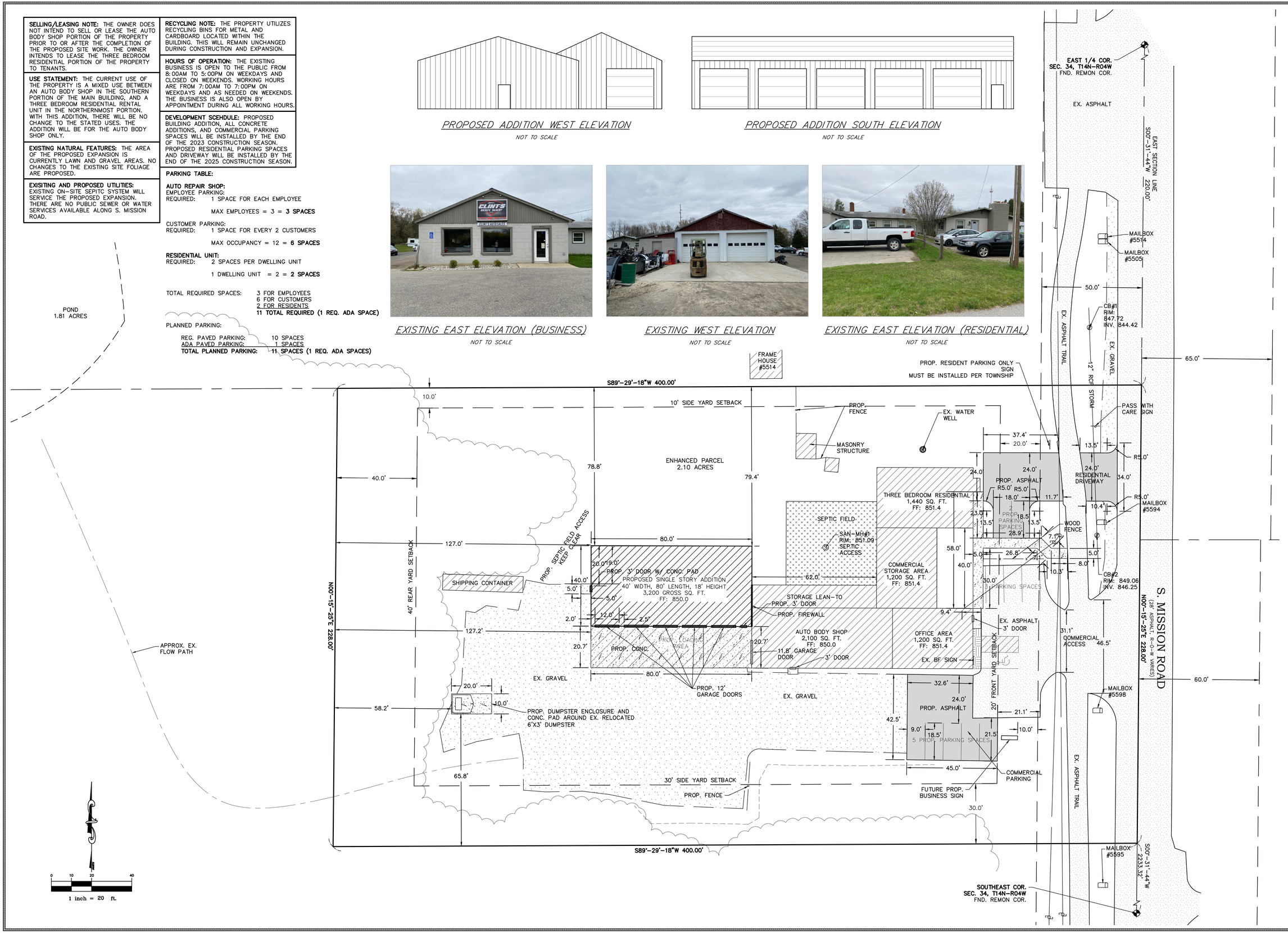
PROPOSED ADDITION WEST ELEVATION
NOT TO SCALE

PROPOSED ADDITION SOUTH ELEVATION
NOT TO SCALE

EXISTING EAST ELEVATION (BUSINESS)
NOT TO SCALE

EXISTING WEST ELEVATION
NOT TO SCALE

EXISTING EAST ELEVATION (RESIDENTIAL)
NOT TO SCALE



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OVERALL HORIZONTAL PLAN
CLINT'S BODY SHOP
PART OF THE NORTH 1/4 OF THE SOUTHEAST 1/4, SECTION 34, T14N-R04W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

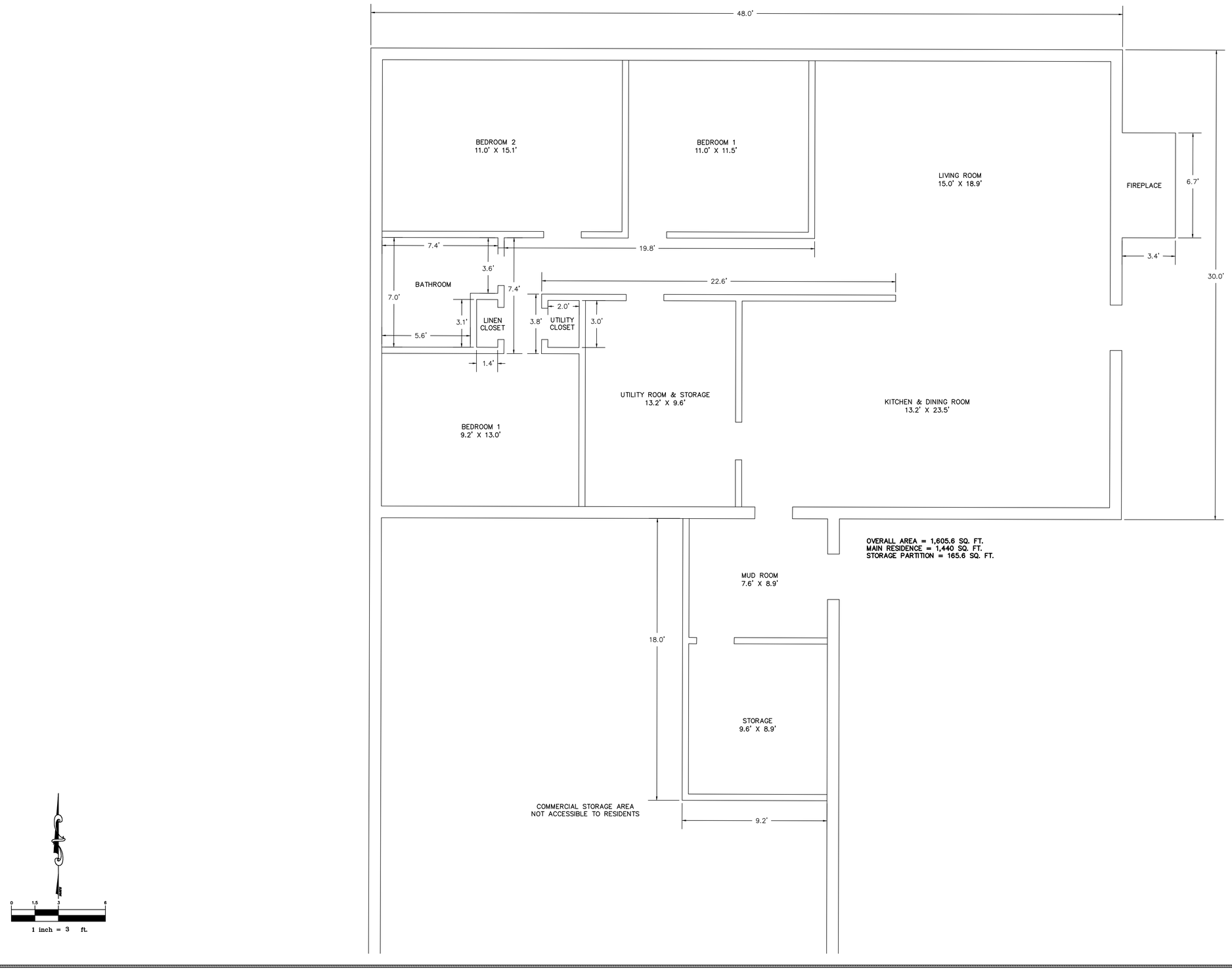
REVISIONS:
PER UNION TOWNSHIP AND CLIENT 8-22-22

SUBMITTALS:
PRELIMINARY SUBMITTAL TO UNION TWP. 6-28-22
SUBMITTAL TO UNION TOWNSHIP 8-24-22

JOB NUMBER: 2108-132
DRAWN BY: CDS
DESIGNED BY: CDS
CHECKED BY: TELB

SCALE 1" = 20'

SHEET NUMBER 3 OF 7



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RESIDENTIAL FLOOR PLAN

CLINT'S BODY SHOP

PART OF THE NORTH 1/4 OF THE NORTH 1/2 OF THE SOUTHEAST 1/4, SECTION 34, T14N-R04W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:
PER UNION TOWNSHIP AND CLIENT 8-22-22

SUBMITTALS:
PRELIMINARY SUBMITTAL TO UNION TWP. 6-28-22
SUBMITTAL TO UNION TOWNSHIP 8-24-22

JOB NUMBER: 2108-132
DRAWN BY: CDS
DESIGNED BY: CDS
CHECKED BY: TELB
SCALE: 1" = 3'
SHEET NUMBER: 4 OF 7

CMS & D
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GENERAL SITE GRADING PLAN

CLINT'S BODY SHOP

PART OF THE NORTH 1/4 OF THE NORTH 1/2 OF THE SOUTHEAST 1/4, SECTION 34, T14N-R04W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:
PER UNION TOWNSHIP AND CLIENT 8-22-22

SUBMITTALS:
PRELIMINARY SUBMITTAL TO UNION TWP. 6-28-22
SUBMITTAL TO UNION TOWNSHIP 8-24-22

JOB NUMBER: 2108-132
DRAWN BY: CDS
DESIGNED BY: CDS
CHECKED BY: TELB

SCALE 1" = 20'

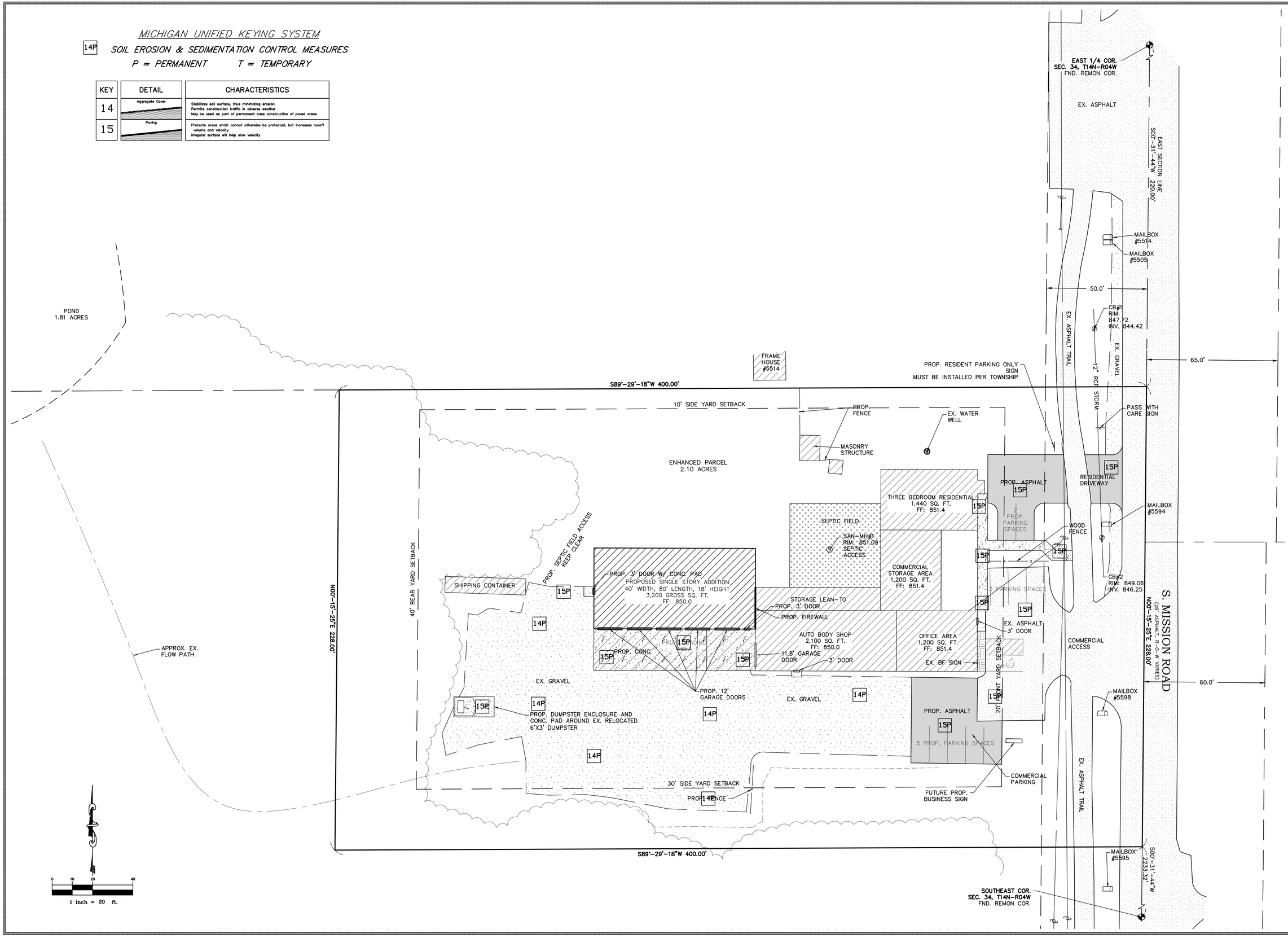
SHEET NUMBER 5 OF 7

MICHIGAN UNIFIED KEYING SYSTEM

14P SOIL EROSION & SEDIMENTATION CONTROL MEASURES

P = PERMANENT T = TEMPORARY

KEY	DETAIL	CHARACTERISTICS
14	Aggregate Cover	Stabilizes soil surface, thus minimizing erosion Permits construction traffic in adverse weather May be used as part of permanent base construction of paved areas
15	Paving	Protects areas which cannot otherwise be protected, but increases runoff volume and velocity Irregular surface will help slow velocity



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SOIL EROSION PLAN
CLINT'S BODY SHOP

PART OF THE NORTH 1/4 OF THE NORTH 1/2 OF THE SOUTHEAST 1/4, SECTION 34, T14N-R04W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

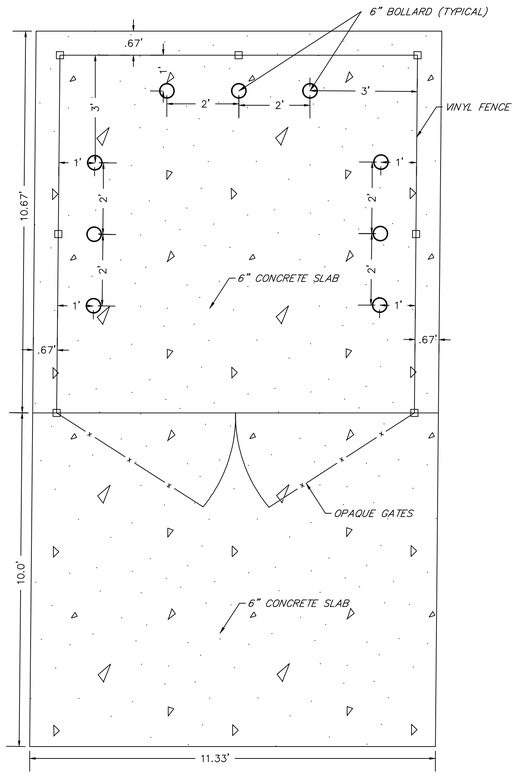
REVISIONS:
PER UNION TOWNSHIP AND CLIENT 8-22-22

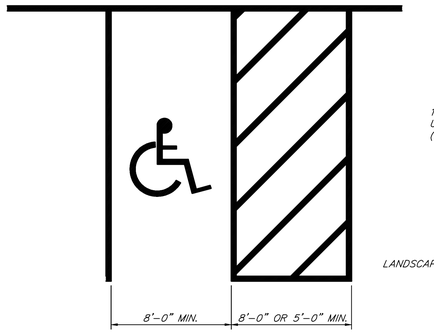
SUBMITTALS:
PRELIMINARY SUBMITTAL TO UNION TWP. 6-28-22
SUBMITTAL TO UNION TOWNSHIP 8-24-22

JOB NUMBER: 2108-132
DRAWN BY: CDS
DESIGNED BY: CDS
CHECKED BY: TELB

SCALE 1" = 20'

SHEET NUMBER 6 OF 7

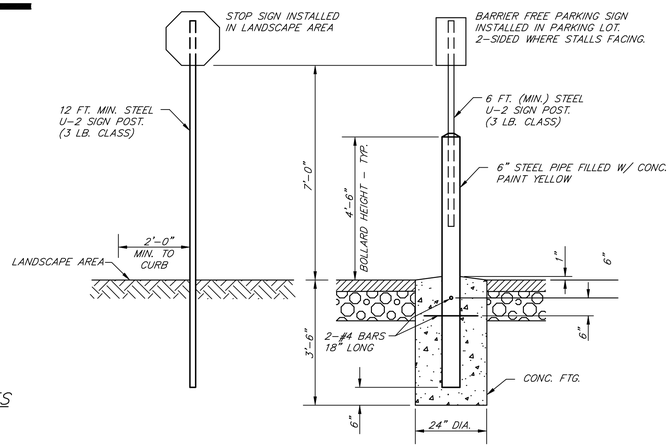




4" WIDE PAINTED STRIPES
PAINT FOR PARKING SLOTS, ARROWS, AND ISLANDS SHALL BE MDOT APPROVED TRAFFIC MARKING PAINT

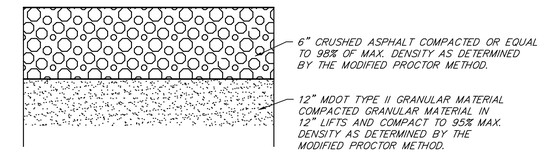
BARRIER FREE PARKING SPACES

NOT TO SCALE



PARKING LOT SIGN POST DETAILS

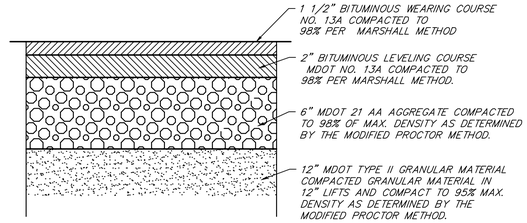
NOT TO SCALE



NOTE: COMPACTION TESTS ARE REQUIRED. RESULTS SHALL BE SUBMITTED TO OWNER PRIOR TO FINAL ACCEPTANCE OF SUB-BASE, BASE AND ASPHALT MATERIALS.

PARKING LOT GRAVEL CROSS-SECTION

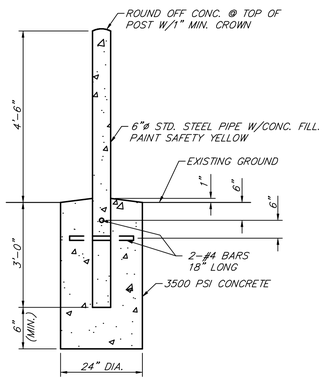
NOT TO SCALE



NOTE: COMPACTION TESTS ARE REQUIRED. RESULTS SHALL BE SUBMITTED TO OWNER PRIOR TO FINAL ACCEPTANCE OF SUB-BASE, BASE AND ASPHALT MATERIALS.

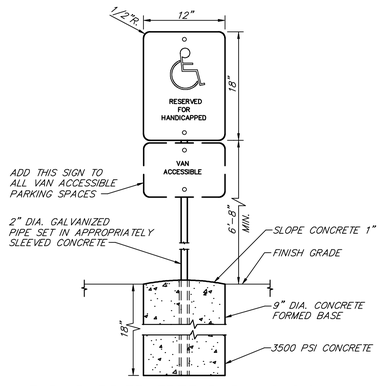
PARKING LOT ASPHALT PAVEMENT CROSS-SECTION

NOT TO SCALE



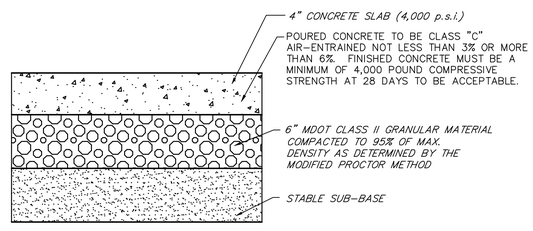
BOLLARD DETAIL

NOT TO SCALE



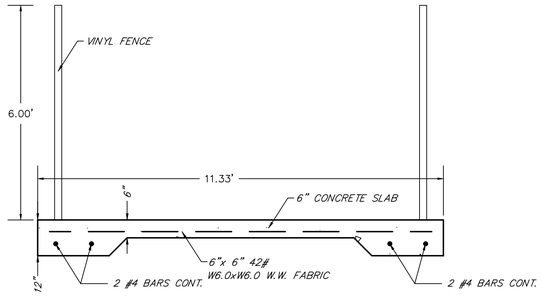
TYP. BARRIER FREE PARKING SIGN

NOT TO SCALE



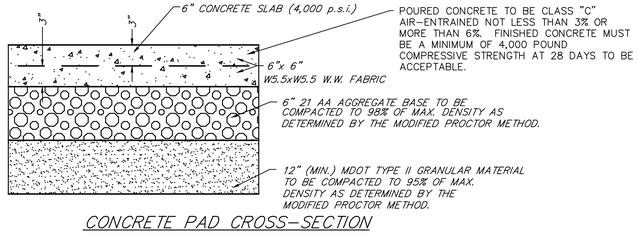
CONCRETE SIDEWALK CROSS-SECTION

NOT TO SCALE



DUMPSTER DETAIL

NOT TO SCALE



CONCRETE PAD CROSS-SECTION

NOT TO SCALE

CMS & D
SURVEYING / ENGINEERING
2257 E. BROOMFIELD ROAD
MT. PLEASANT, MICHIGAN 48858
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

DETAILS SHEET
CLINT'S BODY SHOP

PART OF THE NORTH 1/4 OF THE NORTH 1/2 OF THE SOUTHEAST 1/4, SECTION 34, T14N-R04W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:
PER UNION TOWNSHIP AND CLIENT 8-22-22

SUBMITTALS:
PRELIMINARY SUBMITTAL TO UNION TWP. 6-28-22
SUBMITTAL TO UNION TOWNSHIP 8-24-22

JOB NUMBER: 2108-132
DRAWN BY: CDS
DESIGNED BY: CDS
CHECKED BY: TELB

SCALE: 1" = 20'
SHEET NUMBER: 7 OF 7

Community and Economic Development Department
2010 S. Lincoln Rd.
Mt. Pleasant, MI 48858
989-772-4600 ext. 241

PRELIMINARY SITE PLAN REPORT

TO:	Planning Commission	**DATE:**	September 12, 2022
FROM:	Peter Gallinat Zoning Administrator	**ZONING:**	B-4, General Business District

PROJECT: PSPR22-11 preliminary site plan approval– Clint's Auto Body Shop Addition

PARCEL(S): PID 14-034-40-001-08

OWNER(S): Gwendalyn Oswald

LOCATION: Approximately 1.73 acres located at 5594 and 5598 S. Mission Road in the SE 1/4 of Section 34.

EXISTING USE: Major auto repair, body and paint shop; plus an existing dwelling unit. The dwelling unit is currently not being used. **ADJACENT ZONING:** B-4, AG

FUTURE LAND USE DESIGNATION: *Retail/Service*: This district is intended for the widest variety of retail and service businesses. They could range from apparel shops, auto service, and restaurants through small commercial strip centers and office buildings. This district is not intended for heavy commercial/light industrial uses like landscaping or contractor yards, heavy auto repair, or similar uses that may require some form of outside storage. Locations for this district are based on arterial road frontage and the need for high traffic volumes with convenient, well managed access.

ACTION: To review the PSPR22-11 preliminary site plan dated 8/22/2022 for a 3,200 square-foot addition to the existing Clint's Auto Body Shop located at 5594 and 5598 S. Mission Road in the SE 1/4 of Section 34 and in the B-4 (General Business) District.

Site Plan Approval Process

Per Section 14.2.C. of the Zoning Ordinance, both preliminary site plan approval and final site plan approval are required for this project**.** Per Section 14.2.J., approval of a preliminary site plan by the Planning Commission "*shall indicate its general acceptance of the proposed layout of buildings, streets, drives, parking areas, and other facilities and areas*." Planning Commission approval of a final site plan "*constitutes the final zoning approval for the project and allows for issuance of a building permit to begin site work or construction,* provided *all other construction and engineering requirements have been met*" (Section 14.2.L.). Documentation of applicable outside agency permits and approvals will be required as part of a final site plan application.

Background Information

The existing structure contains 2,100 square-feet of building floor area dedicated to Clint's Auto Body Shop, and 2,400 square-feet of floor area divided equally between office space and commercial storage associated with the autobody shop. There is also a 1,463 square-foot building area dedicated for residential use. The proposed project is to add a 40-foot by 80-foot by 18-foot-high addition for an autobody shop expansion.

Nonconforming Site

Because this is a site that was originally developed many years before adoption of the current Zoning Ordinance site development standards, it is subject to the provisions of Section 12.5 (Nonconforming Sites) of the Zoning Ordinance. Under this Section, the "scope of any additional site improvements requested by the Planning Commission shall be in reasonable proportion to the scale and construction cost of proposed building improvements, expansions, or other improvements" depicted on the site plan.

This Section requires that public safety deficiencies be corrected as part of any site plan application, but also allows the applicant the option to propose "*a reasonable timeline for completion of site improvements*" on the site plan for Planning Commission consideration and approval. In this case, the proposed site plan and scope of improvements are consistent with the provisions of Section 12.5. A proposal has been included to allow for a delayed completion of certain paving improvements (see #3 below) has been included as a "Development Schedule" note on sheet 3 consistent with Section 12.5.

Status of the Existing Dwelling

In addition to the existing commercial building and proposed commercial addition, the site plan shows an existing "*three-bedroom residential*" (1,463 square-foot) building space attached to the north side of the existing commercial building. This site plan application was initially submitted to the Township for review in late June, but after an initial report was prepared and shared with the project engineer, further review was halted by the Community and Economic Development Director due to identification of a serious safety concern and Township ordinance violation.

Residence was in violation of the Township's Housing Licensing Code Ordinance.

The Township's Rental Inspector confirmed that an existing rental use of the dwelling was in violation of the Township's Housing Licensing Code Ordinance No. 20-04. It was occupied as a rental without the required annual inspection and certification. The Rental Inspector also reported that the dwelling would need substantial safety-related improvements before it could qualify for certification under our Housing Licensing Code Ordinance.

Following notification of the violations, the owner took prompt action to respond to a notice of violation and has cooperated fully with the Township's Rental Inspector. At this time the unit is vacant and the owner is complying with the Township's requirements to update the dwelling and to secure the required inspection and rental certification. Following confirmation of these changes, the Director removed the hold on the site plan review. Subsequently, the applicant chose to submit an updated preliminary site plan for review.

Legal nonconforming residential use.

According to available historical data from our Twp. Assessor, the existing residence on the premises was constructed in 1960 or 1961, which means it predates the adoption of the Township's 1971 Zoning Ordinance and associated Official Zoning Map. Under the current B-4 (General Business) zoning district, the residence has been treated as a legal nonconforming use,

which means it can remain in place as a protected (or "grandfathered") activity and can continue to be occupied as a residence as long as the use remains otherwise in compliance with applicable Township ordinances. However, the owner is restricted from modernizing or making any alterations to the unit that would expand or extend the nonconforming residential use.

Compliance with Section 6.24 (Mixed Use Buildings) to remove legal nonconformity.

The new Zoning Ordinance No. 20-06 was adopted in September of 2020. This Ordinance includes an expanded allowance for "mixed-use buildings" in the Township's business districts. Section 6.24 (Mixed Use Buildings) of the Zoning Ordinance includes both provisions designed for new construction (such as the planned "Den on Broomfield" multi-story mixed-use commercial-residential building, and for cases like this one involving an existing, legal nonconforming residential use in the business districts. Documentation of compliance with the applicable requirements of Section 6.24 through an approved final site plan and completion of necessary improvements would remove the legal nonconforming use restrictions for the residence.

Preliminary Site Plan Review Comments

The following comments are based on the standards for preliminary site plan approval and specific elements of the proposed site plan:

1. **Section 14.2.P. (Required Site Plan Information).** With the exception of details noted elsewhere in this report that could be addressed by the applicant on the final site plan for this project, the site plan can conform to the minimum Section 14.2.P. information requirements for a preliminary site plan.

2. **Section 8 (Environmental Performance Standards).** The hazardous substance reporting form and EGLE permit checklist form are included in the application materials.

3. **Section 9 (Off-Street Parking, Loading Requirements).** The parking layout has been provided for both the industrial and office uses of the proposed buildings. The calculations are correct, and the parking proposed exceeds the minimum requirement. A 20.7-foot by 55.9-foot concrete apron is depicted in the rear yard adjacent to the south side of the proposed addition that is sufficient in size for a loading area per Section 9.5.B and has been labeled as such.

   Parking areas for the commercial use and residential use are both proposed to be paved with asphalt. The plan notes a "Development Schedule" timeline on sheet 3 for when both will be completed, with the commercial paving to be completed by the end of the 2023 construction season and the residential paving by the same in 2025. Staff has no objection to the proposed timing of the commercial area paving, but for purposes of tracking and timely resolution would recommend that the Planning Commission require that the residential parking be completed by the end of the 2024 construction season.

4. **Section 7.5 (Accessory Uses, Buildings, and Structures).** A shipping container is shown at a location west of the proposed addition. Unfortunately, there is not allowance under the current (or prior) Zoning Ordinance for a shipping container to be used as a

permanent storage building on the site. If the container is already on the premises, it is in violation of Zoning Ordinance requirements. Any permanent accessory building or structure would be required to conform to the requirements of Section 7.5 of the Zoning Ordinance, with details provided on the final site plan.

Per Section 7.12 (Temporary…Structures), the shipping container could be used for incidental storage only during the period of construction for the building addition, and would be subject to a separate administrative zoning permit approval. <u>The following details will need to be addressed by the applicant on the final site plan</u>:

- ❑ Remove the shipping container from the site plan and add a note confirming that no shipping containers will be brought on to or maintained on the premises; or
- ❑ Add a note that the proposed shipping container will be used for temporary storage during the building addition construction, and will be removed from the premises prior to issuance of a certificate of occupancy for the addition.

5. **Section 7.10 (Sidewalks and Pathways).** Due to the location of an existing pathway along S. Mission Road no sidewalk will be required along the public road. The applicant has added internal sidewalks five-feet in width that connects the pathway to the business and the residential dwelling, which are consistent with Township ordinance standards.

6. **Section 7.14 (Trash Removal and Collection).** A dumpster is located in the rear of the building. The dumpster meets the requirements for screening, location, and concrete pad. Details are found on sheet 7 of 7. It is noted on sheet 3 of 7 that recycling bins are used inside the shop for metal and cardboard. This will continue with the expansion.

7. **Section 6.24 (Mixed-Use Buildings).** The project shows an attached three-bedroom 1,463 square foot residential unit to the commercial building. All the buildings are attached and a single story in height. Typically, mixed-use buildings are two-stories in height with business on the first floor and residential on the second floor. However, Section 6.24.G. (Legal Nonconforming Structures) includes an allowance for a residential use on the first floor of a single-story mixed-use building. Sheet 4 of 7 demonstrates a floor plan that shows adequate sleeping, kitchen, bathroom, living, and household storage space to accommodate the maximum allowable unit occupancy. The floor plan demonstrates separate access to the residential unit without the occupant needing to enter through the business to access the residential dwelling. Two parking spots have been reserved on the plan for residential occupants. With the exception of the delay in completion of the residential parking area paving (see #3 above), site plan details for the residence are generally consistent with Zoning Ordinance standards for a mixed-use building.

<u>Looking Ahead for the Final Site Plan</u>

8. **Section 10 (Landscaping and Screening).** Although not required as part of a preliminary plan, the applicant has provided a previous draft landscaping plan. The draft used the correct formulas for number of shrubs, ornamental trees, and deciduous trees; and for parking lot landscaping. The revised preliminary site plan submitted does not show any landscaping

plan. Township staff has discussed with the owner and applicant about landscaping requirements and options for the final site plan.

9. **Section 8.2 (Exterior Lighting).** Exterior lighting details and photometric plan sheet will need to be included with the final site plan. Illumination is not permitted to exceed 10 foot-candles. Lighting needs to be down-shielded and no light pole erected may exceed 22-feet in height from grade level to the top of the light fixture. Any existing lighting that will not be disturbed due to new construction can remain in place. However, all new or altered/relocated lighting must conform to Section 8.2 (Exterior Lighting) requirements.

10. **Outside agency approvals.** The applicant is responsible for obtaining all necessary permits or approvals from applicable outside agencies prior to submittal of the final site plan application for approval. Final documentation of permits or approvals will be required from the following agencies prior to or as part of the final site plan application submittal:

    - ❑ Mt. Pleasant Fire Department
    - ❑ Isabella County Road Commission
    - ❑ Isabella County Drain Office for Storm Water Management
    - ❑ Isabella County Transportation Commission
    - ❑ Township Public Services Department

Objective

The Planning Commission shall review the application materials and site plan, together with any reports and recommendations. The Planning Commission shall identify and evaluate all relevant factors and shall then take action by motion to approve the site plan, to approve the site plan with conditions, to deny the site plan application, or to postpone further consideration of the site plan to a date certain in accordance with Section 14.2.H. of the Zoning Ordinance.

Key Findings

- The preliminary site plan application as presented is ready for Planning Commission review and action.
- With the exception of details that can be addressed on the final site plan, the site plan conforms to the minimum requirements of Section 14.2.P. (Required Site Plan Information).

Recommendations

Based on the above findings, I recommend approval of the PSPR22-11 preliminary site plan application, subject to resolution of the residential parking timeframe and shipping container status. Please contact me at (989) 772-4600 ext. 241, or via email at pgallinat@uniontownshipmi.com, with any questions about this information.

Respectfully submitted,
Peter Gallinat – Zoning Administrator

Draft Motions: PSPR 22-11 Preliminary Site Plan Application for Clint's Auto Body Shop Addition, 5594 & 5598 S. Mission Road

MOTION TO APPROVE THE PRELIMINARY SITE PLAN:

Motion by _____, supported by _____, to approve the PSPR 22-11 preliminary site plan dated August 22, 2022 for a 3,200 square-foot addition to the existing Clint's Auto Body Shop located at 5594 and 5598 S. Mission Road in the southeast quarter of Section 34 and in the B-4 (General Business) zoning district, finding that it fully complies with applicable Zoning Ordinance requirements for preliminary site plan approval, including Sections 14.2.P. (Required Site Plan information) and 14.2.S. (Standards for Site Plan Approval).

MOTION TO APPROVE THE PRELIMINARY SITE PLAN WITH CONDITIONS:

Motion by _____, supported by _____, to approve the PSPR 22-11 preliminary site plan dated August 22, 2022 for a 3,200 square-foot addition to the existing Clint's Auto Body Shop located at 5594 and 5598 S. Mission Road in the southeast quarter of Section 34 and in the B-4 (General Business) zoning district, finding that it can fully comply with applicable Zoning Ordinance requirements for preliminary site plan approval, including Sections 14.2.P. (Required Site Plan information) and 14.2.S. (Standards for Site Plan Approval), subject to the following conditions:

1. Paving of the residential parking area as depicted on the site plan shall be completed by the end of the 2024 construction season, rather than in 2025 as proposed.
2. Remove the shipping container and add a note to the final site plan confirming that no shipping containers will be brought on to or maintained on the premises, or add a note to the final site plan confirming that the proposed shipping container will only be used for temporary storage during the building addition construction and will be removed from the premises prior to issuance of a certificate of occupancy for the addition.

_____

_____

_____

_____

MOTION TO POSTPONE ACTION ON THE PRELIMINARY SITE PLAN:

Motion by _____, supported by _____, to postpone action on the PSPR 22-11 preliminary site plan dated August 22, 2022 for a 3,200 square-foot addition to the existing Clint's Auto Body Shop located at 5594 and 5598 S. Mission Road until _____ _____, 2022 for the following reasons:

_____

_____

Draft Motions: PSPR 22-11 Preliminary Site Plan Application for Clint's Auto Body Shop Addition, 5594 & 5598 S. Mission Road

MOTION TO DENY THE PRELIMINARY SITE PLAN:

Motion by _____, supported by _____, to deny the PSPR 22-11 preliminary site plan dated August 22, 2022 for a 3,200 square-foot addition to the existing Clint's Auto Body Shop located at 5594 and 5598 S. Mission Road in the southeast quarter of Section 34 and in the B-4 (General Business) zoning district, finding that it does not comply with applicable Zoning Ordinance requirements for preliminary site plan approval, including Sections 14.2.P. (Required Site Plan information) and 14.2.S. (Standards for Site Plan Approval), for the following reasons:

_____

_____

_____

_____

_____

_____

RECEIVED
AUG 24 2022

Charter Township of Union

APPLICATION FOR SITE PLAN REVIEW

☐ Minor Site Plan ☐ Preliminary Site Plan ☑ Final Site Plan

A Completed Application will contain all the information required per the Zoning Ordinance, Section 14.2 (Site Plan Review).

Name of Proposed Development/Project: MICHAEL ENGINEERING
Common Description of Property & Address (if issued): 5625 VENTURE WAY
MT. PLEASANT, 48858

Applicant's Name(s): MICHAEL ENGINEERING
Phone/Fax numbers: 989-772-4073/ 989-772-3500 Email: eric@michaelengineering.com
Address: 5625 VENTURE WAY City: MT. PLEASANT Zip: 48858

Legal Description: ☐ Attached ☑ Included on Site Plan Tax Parcel ID Number(s): 14-152-00-006-01
Existing Zoning: I-2 Land Acreage: 2.77 Existing Use(s): INDUSTRIAL
☑ **ATTACHED: Letter describing the project and how it conforms to Section 14.2.S. (Standards for Site Plan Approval)**

Firm(s) or Individuals(s) who prepared site plan(s)	1. Name: CENTRAL MI SURVEYING & DEV. Phone: 989-775-0756 Email: tbebee@cms-d.com 2. Address: 2257 EAST BROOMFIELD ROAD City: MT. PLEASANT State: MI Zip: 48858 Contact Person: TIMOTHY BEBEE Phone 989-775-0756
Legal Owner(s) of Property. All persons having legal interest in the property must sign this application. Attach a separate sheet if more space is needed.	1. Name: REC INVESTMENTS LLC. Phone: 989-772-4073 Address: 5625 VENTURE WAY City: MT. PLEASANT State: MI Zip: 48858 Signature: _____ Interest in Property: _____ 2. Name: _____ Phone: _____ Address: _____ City: _____ State: _____ Zip: _____ Signature: _____ Interest in Property: _____

I do hereby affirm that all the statements, signatures, descriptions, exhibits submitted on or with this application are true and accurate to the best of my knowledge and that I am authorized to file this application and act on behalf of all the owners of the property. False or inaccurate information placed upon this plan may be cause for revocation of any permits issued pursuant to site plan approval and/or removal of work installed. Approval of this plan shall not constitute the right to violate any provisions of the Zoning Ordinance or other applicable codes and ordinances.

Signature of Applicant — Date: 8/23/2022

Office Use Only

Application Received By: _____ Fee Paid: $_____

Date Received: _____ Escrow Deposit Paid: $_____

CHARTER TOWNSHIP OF UNION

SITE PLAN REVIEW
HAZARDOUS SUBSTANCES REPORTING FORM

This form must be completed and submitted as part of the site plan for facilities which may use, store, or generate hazardous substances or polluting materials (including petroleum-based products)

Name of business: MICHAEL ENGINEERING

Name of business owner(s): ERIC PREWETT

Street and mailing address: 5625 VENTURE WAY
MT. PLEASANT, MI 48858

Telephone: 989-772-4073

Fax: 989-772-3500

Email: eric@michaelengineering.com

I affirm that the information submitted is accurate.

Owner(s) signature and date: Eric V. Prewett
Ralph A. Prewett

Information compiled by:

ERIC V. PREWETT
RALPH A. PREWETT

Types and Quantities of Hazardous Substances and Polluting Materials Used, Stored or Generated On-Site

Please list the hazardous substances and polluting materials (including chemicals, hazardous materials, petroleum products, hazardous wastes and other polluting materials) which are expected to be used, stored or generated on -site. Quantities should reflect the maximum volumes on hand at any time. Attach additional pages if necessary to list all hazardous substances and polluting materials.

COMMON NAME	CHEMICAL NAME (components)	FORM	MAX QUANTITY ON HAND AT ONE TIME	TYPE OF STORAGE CONTAINERS
ACETONE	ACETONE	LIQ	20 GAL	5GAL DRUM-DM
USED ACETONE	ACETONE+RESIN	LIQ	55 GAL	DM
HYDRAULIC OIL	PETROLEUM	LIQ	50 GAL	DM
MACHINE OILS	PETROLEUM	LIQ	20 GAL	DM
MESAMOL	AROMATIC ESTER	LIQ	300 GAL	DM
COOLANT CONC.	SEVERELY HYDROTREATED	LIQ	100 GAL	DM
USED COOLANT DILU	NAPTHENIC DIST.	LIQ	100 GAL	DM
BATTERY ACID	SULFURIC ACID	LIQ	2GAL	1GAL JUG
PAINT	ENAMEL	LIQ	5 GAL	PAIL
CABOSIL	FUMED SILICA	POWDER(S)	25 LBS	CW
ACETLYENE		GAS	100 LBS	CM
____ NONE	KEY: LIQ. = liquid P.LIQ = pressurized liquid S = solids G = gas PG = pressurized gas			KEY: AGT = above ground tank DM = drums UGT = underground tank Cy = cylinders CM = metal cylinders CW = wooden or composition container TP = portable tank

PERMIT INFORMATION CHECKLIST FOR FINAL SITE PLANS

Michigan.gov/EGLEpermits

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) has prepared a list of key questions to help identify what EGLE permits, licenses, or approvals of a permit-like nature may be needed. By contacting the appropriate offices indicated, you will help reduce the possibility that your project or activity will be delayed due to the untimely discovery of additional permitting requirements later in the construction process. While this list covers the existence of permits and approvals required from EGLE, it is not a comprehensive list of all legal responsibilities. A useful way to learn whether other requirements will apply is to go through the Self-Environmental Assessment in the Michigan Guide to Environmental, Health, and Safety Regulations, online at: Michigan.gov/EHSguide. Please call the Environmental Assistance Center at 800-662-9278 to talk with any of the EGLE programs noted below. [insertions and edits by Union Township]

How Do I Know that I Need a State of Michigan, County or Local Permit or Approval?	Yes ☐	No ☐
1) Will your business involve the installation or construction of any process equipment that has the potential to emit air contaminants (e.g. dry sand blasting, boilers, standby generators)? Air Quality Permit to Install, Air Quality Division (AQD), Permit Section	Y☐	N☒
2) Does the project involve renovating or demolishing all or portions of a building? Notification is required for asbestos removal and required for all demolitions even if the structure never contained asbestos. Asbestos Notification, AQD, Asbestos Program, 517-284-6777	Y☐	N☒
3) Please consult the Permitting at the Land and Water Interface Decision Tree document to evaluate whether your project needs a land and water management permit (i.e., Does the project involve filling, dredging, placement of structures, draining, or use of a wetland?). Land and Water Featured Programs (Water Resources Division - WRD) - Joint Permit Application, 517-284-5567:		
a. Does the project involve construction of a building or septic system in a designated Great Lakes high risk erosion area?	Y☐	N☒
b. Does the project involve dredging, filling, grading, or other alteration of the soil, vegetation, or natural drainage, or placement of permanent structures in a designated environmental area?	Y☐	N☒
c. Does the project propose any development, construction, silvicultural activities or contour alterations within a designated critical dune area?	Y☐	N☒
d. Does the project involve construction of a dam, weir or other structure to impound flow?	Y☐	N☒
4) Does the project involve an earth change activity (including land balancing, demolition involving soil movement, and construction) or does the project involve construction which will disturb one or more acres that come into contact with storm water that enters a storm sewer, drain, lake, stream, or other surface water? **Union Township and Isabella County**	Y☒	N☐
5) Does the project involve the construction or alteration of a water supply system system? **Union Township Public Services Department** and Drinking Water & Environmental Health Division (DWEHD), 517-284-6524	Y☐	N☒
6) Does the project involve construction or alteration of any sewage collection or treatment facility? **Union Township Public Services Department** and WRD, Part 41 Construction Permit Program (staff), 906-228-4527, or EGLE District Office	Y☐	N☒
7) Public Swimming Pool Construction (Spas/Hot Tubs) Permits: Will your business involve the construction or modification of a public swimming pool, spa or hot tub? **Union Township** and Public Swimming Pool Program, 517-284-6541, or EGLE District Office	Y☐	N☒
8) Does the project involve the construction or modification of a campground? **Union Township** and DWEHD,Campgrounds program, 517-284-6529	Y☐	N☒

9) Does the project involve construction of a facility that landfills, transfers, or processes of any type of solid non-hazardous waste on-site, or places industrial residuals/sludge into or onto the ground? Materials Management Division (MMD), Solid Waste, 517-284-6588, or EGLE District Office	Y☐	N☒
10) Does the project involve the construction of an on-site treatment, storage, or disposal facility for hazardous waste? MMD, Hazardous Waste Section, Treatment, Storage and Disposal, 517-284-6562	Y☐	N☒
Who Regulates My Drinking (Potable) Water Supply?		
11) I am buying water from the municipal water supply system Contact the **Union Township Public Services Dept.**	Y☒	N☐
12) I have a Non-Community Water Supply (Type II) Guide, Contact (District or County) Local Health Department, 517-485-0660	Y☐	N☒
13) I am a community water supply (Type I) Community Water Supply, DWEHD District Office Community Water Supply Program, 517-284-6512	Y☐	N☒
14) Do you desire to develop a withdrawal of over 2,000,000 gallons of water per day from any source including groundwater, inland surface water, or the Great Lakes and their connecting waterways? WRD, Great Lakes Shorelands Unit, Water Use Program, 517-284-5563	Y☐	N☒
Who Regulates My Wastewater Discharge System?		
15) NPDES: Does the project involve the discharge of any type of wastewater to a storm sewer, drain, lake, stream, or other surface water? WRD, EGLE District Office, or National Pollutant Discharge Elimination (NPDES) Permit Program, 517-284-5568	Y☐	N☒
16) Does the facility have industrial activity that comes into contact with storm water that enters a storm sewer, drain, lake, stream, or other surface water? WRD, Permits Section, or EGLE District Office, 517-284-5588	Y☐	N☒
17) Does the project involve the discharge of wastewaters into or onto the ground (e.g. subsurface disposal or irrigation)? WRD, Groundwater Permits Program, 517-290-2570	Y☐	N☒
18) Does the project involve the drilling or deepening of wells for waste disposal? Oil, Gas and Minerals Division (OGMD), 517-284-6841	Y☐	N☒
What Operational Permits Are Relevant to My Operation and Air Emissions?		
19) Renewable Operating Permit: Does your facility have the potential to emit any of the following: 100 tons per year or more of any criteria pollutant; 10 tons per year or more of any hazardous air pollutant; or 25 tons per year or more of any combination of hazardous air pollutants? AQD, Permit Section, 517-284-6634	Y☐	N☒
20) Does your facility have an electric generating unit that sells electricity to the grid and burns a fossil fuel? AQD, Acid Rain Permit Program, 517-780-7843	Y☐	N☒
What Operational Permits Are Relevant to My Waste Management?		
21) Does the project involve landfilling, transferring, or processing of any type of solid non-hazardous waste on-site, or placing industrial residuals/sludge into or onto the ground? MMD, 517-284-6588 or EGLE District Office	Y☐	N☐
22) Does the project involve the on-site treatment, storage, or disposal of hazardous waste? MMD, Hazardous and Liquid Waste, 517-284-6562	Y☒	N☒
23) Does the project require a site identification number (EPA number) for regulated waste activities (used oil, liquid waste, hazardous waste, universal waste, PCBs)? (Hazardous Waste Program Forms & License Applications) MMD, EGLE District Office, 517-284-6562	Y☐	N☒

MIK656579612

24) Does the project involve the receipt, possession, manufacture, use, storage, transport, transfer, release, or disposal of radioactive material in any form? MMD, Radioactive Material and Standards Unit, 517-284-6581	Y☐	N☒
25) Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background? MMD Radioactive Material and Standards Unit, 517-284-6581	Y☐	N☒
26) Does the project involve the generation of medical waste or a facility that treats medical waste prior to its disposal? MMD, Medical Waste Regulatory Program, 517-284-6594	Y☐	N☒
What Sector-Specific Permits May be Relevant to My Business?		
Transporters	Y☐	N☒
27) Does the project involve the *transport* of some other facility's non-hazardous liquid waste? MMD, Transporter Program, 517-284-6562	Y☐	N☒
28) Does the project involve the *transport* of hazardous waste? MMD, Transporter Program, 517-284-6562	Y☐	N☒
29) Do you engage in the business of transporting bulk water for drinking or household purposes (except for your own household use)? DWEHD, Water Hauler Information, 517-284-6527	Y☐	N☒
30) Does the project involve *transport* of septic tank, cesspool, or dry well contents or the discharge of septage or sewage sludge into or onto the ground? DWEHD, Septage Program, 517-284-6535	Y☐	N☒
31) Do you store, haul, shred or process *scrap tires*? MMD, Scrap Tire Program, 517-284-6586	Y☐	N☒
Sectors		
32) Is the project a *dry cleaning* establishment utilizing perchloroethylene or a flammable solvent in the cleaning process? AQD, Dry Cleaning Program, 517-284-6780	Y☐	N☒
33) Does your *laboratory* test potable water as required for compliance and monitoring purposes of the Safe Drinking Water Act? Laboratory Services Certifications, 517-284-5424	Y☐	N☒
34) Does the project involve the operation of a *public swimming pool*? DWEHD, Public Swimming Pools Program, 517-284-6529	Y☐	N☒
35) Does the project involve the operation of a *campground*? **Union Township** and DWEHD, Campgrounds, 517-284-6529	Y☐	N☒
What Permits Do I Need to Add Chemicals to Lakes and Streams?		
36) Are you applying a chemical treatment for the purpose of aquatic nuisance control (pesticide/herbicide etc.) in a water body (i.e. lake, pond or river)? WRD, Aquatic Nuisance Control , 517-284-5593	Y☐	N☒
37) Are you applying materials to a water body for a water resource management project (i.e. mosquito control treatments, dye testing, or fish reclamation projects)? WRD, Surface Water Assessment Section, 517-331-5228	Y☐	N☒

Why would I be subject to Oil, Gas and Mineral Permitting?		
38) Do you want to operate a central production facility (applies to oil and gas production facilities where products of diverse ownership are commingled)? OGMD, Petroleum Geology and Production Unit, 517-284-6826	Y☐	N☒
39) Does the project involve the removal of sand from a sand dune area within two (2) miles of a Great Lakes shoreline? OGMD, Minerals and Mapping Unit, Sand Dune Mining Program, 517-284-6826	Y☐	N☒
40) Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background? MMD, Radioactive Protection Programs, 517-284-6581	Y☐	N☒
Petroleum & Mining, OGMD, 517-284-6826		
41) Does the project involve the diversion and control of water for the mining and processing of low-grade iron ore?	Y☐	N☒
42) Does the project involve the surface or open-pit mining of metallic mineral deposits?	Y☐	N☒
43) Does the project involve the mining of nonferrous mineral deposits at the surface or in underground mines?	Y☐	N☒
44) Does the project involve mining coal?	Y☐	N☒
45) Does the project involve changing the status or plugging of a mineral well?	Y☐	N☒
46) Does the project involve the drilling or deepening of wells for brine production, solution mining, storage, or as test wells?	Y☐	N☒

Contact **Union Township** and EGLE Permits & Bonding, OGMD, 517-284-6841

ROOK METERING / MICHAEL ENGINEERING

PROPOSED FINAL SITE PLAN

5625 VENTURE WAY, MT. PLEASANT, MICHIGAN

LOCATION SKETCH

NOT TO SCALE

I-2 – GENERAL INDUSTRIAL DISTRICT	
MINIMUM FRONT YARD SETBACK	25 FT (I)
MINIMUM SIDE YARD SETBACK	20 FT (K)
MINIMUM REAR YARD SETBACK	30 FT (K)
MAXIMUM BUILDING HEIGHT	60 FT
MINIMUM LOT AREA	50,000 SQ. FT.
MINIMUM LOT WIDTH	100 FT.
MINIMUM LOT COVERAGE (%)	60%

I. OFF-STREET PARKING SHALL BE PERMITTED TO OCCUPY A PORTION OF THE REQUIRED FRONT YARD, SUBJECT TO COMPLIANCE WITH SECTION 10 (LANDSCAPING AND SCREENING) STANDARDS AND PROVIDED THAT THERE SHALL BE MAINTAINED A MINIMUM SETBACK OF 20.0 FEET BETWEEN THE NEAREST POINT OF THE OFF-STREET PARKING AND THE NEAREST ROAD RIGHT-OF-WAY LINE.

K. AN ADDITIONAL 30.0 FEET OF SIDE AND REAR YARD SETBACK SHALL BE PROVIDED WHEN ABUTTING THE AG (AGRICULTURAL) DISTRICT, ANY RESDIENTIAL DISTRICT, OR AN EXISTING AGRICULTURAL OR RESIDENTIAL USE.

MISS DIG:
FOR PROTECTION OF UNDERGROUND UTILITIES,THE CONTRACTOR SHALL CALL "MISS DIG" 1-800-482-7171 A MINIMUM OF 3 WORKING DAYS PRIOR TO ANY EXCAVATION. ALL "MISS DIG" PARTICIPATING MEMBERS WILL BE APPROPRIATELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

UTILITY NOTE:

THE UTILITY LOCATIONS AS HEREON SHOWN ARE BASED ON FIELD OBSERVATIONS AND A CAREFUL REVIEW OF MUNICIPAL AND UTILITY COMPANY RECORDS. HOWEVER, IT IS NOT POSSIBLE TO DETERMINE THE PRECISE LOCATION AND DEPTH OF UNDERGROUND UTILITIES WITHOUT EXCAVATION. THEREFORE, WE CANNOT GUARANTEE THE ACCURACY OR COMPLETENESS OF THE BURIED UTILITY INFORMATION HEREON SHOWN. THE CONTRACTOR SHALL CALL "MISS DIG" (1-800-282-7171) PRIOR TO ANY EXCAVATION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THESE UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND SHALL MAKE EVERY EFFORT TO PROTECT AND OR RELOCATE THEM AS REQUIRED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER/SURVEYOR AS SOON AS POSSIBLE IN THE EVENT A DISCREPANCY IS FOUND. UNDERGROUND SERVICE LEADS FOR GAS, ELECTRIC, TELEPHONE AND CABLE MAY BE ACROSS PROPERTY, NO INFORMATION AVAILABLE PLEASE CALL MISS DIG.

LEGEND

SYMBOLS

BOLLARD	GAS RISER	SOIL BORING
CATCH BASIN (CURB INLET)	GUY ANCHOR	STORM SEWER MANHOLE
CATCH BASIN (ROUND)	HYDRANT – EXISTING	TELEPHONE RISER
CATCH BASIN (SQUARE)	HYDRANT – PROPOSED	TREE – CONIFEROUS
CLEAN OUT	LIGHT POLE	TREE – DECIDUOUS
DRAINAGE FLOW	MAILBOX	UTILITY POLE
ELECTRICAL BOX	MONITORING WELL	WATER MAIN VALVE
FOUND CONC. MONUMENT	SANITARY SEWER MANHOLE	WATER SHUT-OFF
FOUND IRON	SET IRON	FLOOD LIGHT
GAS MAIN VALVE	SIGN	GAS METER

LINETYPES

ELEC.	BURIED ELECTRICAL CABLE
PHONE	BURIED TELEPHONE CABLE
DITCH-CL	CENTERLINE OF DITCH
FM	FORCE MAIN
GAS	GAS MAIN
RD-CL	ROAD CENTERLINE
8" SAN	SANITARY SEWER
12" SS	STORM SEWER
EX-TOS	TOE OF SLOPE
EX-TOB	TOP OF BANK
OHE	UTILITIES – OVERHEAD
UTL	UTILITIES – UNDERGROUND
12" WM	WATER MAIN

HATCH PATTERNS

	ASPHALT – EXISTING
	ASPHALT – PROPOSED
	CONCRETE
	GRAVEL
	LANDSCAPING
	RIP-RAP
	EXISTING BUILDING

PARCEL DESCRIPTION:
THE SOUTH 377.96 FEET OF LOT 6, ENTERPRISE PARK SUBDIVISION, A PART OF SECTION 13, T14N-R4W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN.

SHEET INDEX

1	COVER SHEET
2	EXISTING TOPOGRAPHY & DEMOLITION
3	CONSTRUCTION PHASING PLAN
4	SITE HORIZONTAL PLAN
5	SITE HORIZONTAL PLAN PHASE TWO
6	SITE GRADING & UTILITY PLAN
7	SITE GRADING PLAN PHASE TWO
8	SITE LANDSCAPING & SCREENING PLAN
9	SITE SOIL EROSION PLAN
10	SANTIARY LEAD PLAN & PROFILE
11	PUBLIC WATER MAIN PLAN & PROFILE
12	PUBLIC WATER MAIN DETAILS
13	DETAILS SHEET
A1	DEMO/FLOOR PLAN
A2	ELEVATIONS
ES1	SITE LIGHTING PLAN
ES2	SITE LIGHTING PLAN
ES3	SITE LIGHTING PLAN

CONTROL POINTS:

CP#10
N: 768037.70
E: 13025801.23
ELEV: 637.04

CP#11
N: 768440.73
E: 13025760.84
ELEV: 637.37

BENCHMARKS:

BM#1: NW BOLT TOP FLANGE ("x" IN BOLT) OF FIRE HYDRANT AT NE CORNER OF INTERSECTION OF VENTURE WAY AND NORTHWAY DRIVE
ELEV. = 638.89

BM#2: NW BOLT TOP FLANGE ("x" IN BOLT) OF FIRE HYDRANT 500'± EAST OF INTERSECTION OF VENTURE WAY AND NORTHWAY DRIVE ON THE NORTH SIDE OF THE ROAD
ELEV. = 637.63

BEARING BASIS:
PER PLAT OF ENTERPRISE PARK, AS RECORDED IN LIBER 10 OF PLATS, PAGE 589 OF ISABELLA COUNTY RECORDS, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN.

SITE: 5625 VENTURE WAY
MT. PLEASANT, MI 48858

CLIENT: ROOK METERING/MICHAEL ENGINEERING
5625 VENTURE WAY
MT. PLEASANT, MI 48858
CONTACT: ERIC
PHONE: (989) 944-2993
EMAIL: eric@michaelengineering.com

CONSULTANT: CENTRAL MICHIGAN SURVEYING & DEVELOPMENT CO., INC.
2257 E. BROOMFIELD ROAD
MT. PLEASANT, MI 48858
CONTACT PERSON: TIMOTHY E BEBEE
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

CHARTER COMMUNICATIONS
915 E. BROOMFIELD STREET
MT. PLEASANT, MI 48858
(989) 621-4932
RANDY BUNKER
rbunker@chartercom.com

CONSUMERS ENERGY
1325 WRIGHT AVENUE
ALMA, MI 48801
(989) 466-4282
KIM STUDT
kimberly.studt@cmsenergy.com

FRONTIER
345 PINE AVENUE
ALMA, MI 48801
(989) 463-0392
MARK A. MARSHALL
Mark.Marshall@ftr.com

DTE ENERGY
4420 44TH STREET S.E., SUITE B
KENTWOOD, MI 49512
(616) 954-4623
MARY JO MCKERSIE
mckersiem@dteenergy.com

MT. PLEASANT FIRE DEPARTMENT
804 E. HIGH STREET
MT. PLEASANT, MI 48858
(989) 779-5100 EXT 5122
LT. BRAD DOEPKER

CHARTER TOWNSHIP OF UNION
PUBLIC WATER/PUBLIC SEWER
2010 S. LINCOLN ROAD
MT. PLEASANT, MI 48858
(989) 772-4600 EXT 24
KIM SMITH
ksmith@uniontownshipmi.com

CHARTER TOWNSHIP OF UNION
PLANNING & ZONING
2010 S. LINCOLN ROAD
MT. PLEASANT, MI 48858
(989) 772-4600 EXT 241
PETER GALLINAT
pgallinat@uniontownshipmi.com

DRAIN COMMISSIONERS OFFICE
ISABELLA COUNTY BUILDING
200 N. MAIN STREET ROOM 140
MT. PLEASANT, MI 48857
(989) 317-4072
ROBERT WILLOUGHBY
drain@isabellacounty.org

ISABELLA COUNTY ROAD COMMISSION
2261 E. REMUS ROAD
MT. PLEASANT, MI 48858
(989) 773-7131 EXT 115
PATRICK GAFFNEY
PGaffney@isabellaroads.com

CMS & D
SURVEYING / ENGINEERING
2257 E. BROOMFIELD ROAD
MT. PLEASANT, MICHIGAN 48858
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

COVER SHEET
ROOK METERING/MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:
PER MT. PLEASANT FIRE DEPARTMENT 8-17-22

SUBMITTALS:
SUBMITTAL TO CLIENT FOR REVIEW 8-9-22
SUBMITTAL TO UNION TOWNSHIP 8-18-22
SUBMITTAL TO UNION TOWNSHIP 8-31-22
SUBMITTAL TO UNION TOWNSHIP 9-7-22

JOB NUMBER: 2203-042
DRAWN BY: CDS
DESIGNED BY: TELB
CHECKED BY: TELB

SCALE: N/A
SHEET NUMBER: 1 OF 18

038

EXISTING STORM STRUCTURES

CB#1
RIM: 635.31
W INV. = 631.08 (6" STEEL)
N INV. = 631.2 (12" CMP)

CB#2
RIM: 635.11
E INV. = 630.90 (18" RCP)
W INV. = 631.00 (18" RCP)
S INV. = 631.17 (12" RCP)

CB#3
RIM: 634.87
N INV. = 631.42 (12" RCP)

CB#4
RIM: 635.54
E INV. = 631.15 (18" RCP)
W INV. = 630.61 (15" PVC)

CB#5
RIM: 635.81
E INV. =
W INV. = 631.69 (18" RCP)
S INV. = 631.76 (12" RCP)

CB#6
RIM: 635.79

CB#7
RIM: 636.45

CB#8
RIM: 636.89

CB#9
RIM: 637.04

CB#10
RIM: 634.69

STMH#1
RIM: 638.43

EXISTING SAN. STRUCTURES

SMH#1
RIM: 637.03
FLOW LINE: 631.93 (6" PVC)

UNPLATTED
SAGINAW CHIPPEWA INDIAN TRIBE
7070 E. BROADWAY ROAD
MT. PLEASANT, MI 48858
14-013-20-024-00
ZONED: SCIT

LOT 7
PROUT CRAIG A
4021 E. WILDCAT DRIVE
CAVE CREEK, AZ 85331
14-150-00-007-00
ZONED: I2

UNPLATTED
PLEASANT PLAZA #1 LLC
5580 VENTURE WAY
MT. PLEASANT, MI 48858
14-152-00-022-01
ZONED: I2 & B4

LOT 22
PLEASANT PLAZA #1 LLC
5580 VENTURE WAY
MT. PLEASANT, MI 48858
14-152-00-022-01
ZONED: I2 & B4

ASPLUNDH TREE CO.
708 BLAIR MILL ROAD
WILLOW GROVE, PA 19090
14-152-00-006-00
ZONED: I2

REC INVESTMENTS LLC
5625 VENTURE WAY
MT. PLEASANT, MI 48858
14-152-00-006-01
ZONED: I2

HD DEVELOPMENT OF MARYLAND, IN
PO BOX 105842
ATLANTA, GA 30348-5842
14-013-20-033-02
ZONED: B7

HD DEVELOPMENT OF MARYLAND, IN
PO BOX 105842
ATLANTA, GA 30348-5842
14-013-20-033-02
ZONED: B7

AVENUE A PROPERTIES LLC
325 ENTERPRISE DRIVE
BRECKENRIDGE, MI 48615
14-152-00-005-02
ZONED: B7

CUDD PRESSURE CONTROL INC
2801 BUFORD HIGHWAY STE 520
ATLANTA, GA 30329
14-152-00-004-00
ZONED: I2

BM#1
FCM (HELD)

BM#2

FCM (HELD)

FND 3/4" PIPE
N 0.80'
W 0.34'

FND T IRON (BENT)
S 0.13'
W 0.15'

CB#10
RIM. 634.69

EX. WELL

S00°-18'-40"W 377.76'(M)
S00°-02'-10"W 377.96'(R)

S89°-44'-38"E 319.00'(M)
S89°-53'-50"E(R)

N89°-44'-38"W 279.56'(M)
N89°-57'-50"W 279.49'(R)

N05°-38'-57"W 379.78'(M)
N05°-55'-10"W(R)

30.00'

30' REAR YARD SETBACK

25' FRONT YARD SETBACK

20.00' UTILITY EASEMENT PER PLAT

10.00' UTILITY EASEMENT PER L. 731, P. 158

20' PUBLIC UTILITY EASEMENT

10' PUBLIC UTILITY EASEMENT

EX. 18" MAPLE

6" CMP
INV. 634.69

EX. 6"X6" DUMPSTER

EX. CONC.

EX. GRAVEL

EX. ASPHALT

18 EX. PARKING SPACES

6 EX. PARKING SPACES

SINGLE-STORY
STEEL COMMERCIAL BUILDING
5625 VENTURE WAY
16,560 GROSS SQ. FT.
FF = 637.50

EX. PHONE AND ELECTRIC LEADS

EX. TRANSFORMER PAD

EX. UTILITY BOX

12" CMP
INV. 634.19

50 LF 12" CMP

52 LF 4" PVC

50 LF 4" PVC

4" PVC
INV. 635.91

4" PVC
INV. 636.25

CP#10

CP#11

CB#1
RIM: 635.31

CB#2
RIM: 635.11

CB#3
RIM: 634.87

CB#4
INV. 635.54

CB#5
INV. 635.81

CB#6
RIM: 635.79

CB#7
INV. 636.45

CB#8
RIM. 636.89

CB#9 (NOT PICTURED)
RIM: 637.04

SMH#1
RIM: 637.03

STMH#1
RIM: 638.43

243 LF 18" RCP

134 LF 18" RCP

37 LF 18" RCP

29 LF 12" RCP

29 LF 12" RCP

151 LF 18" RCP

96 LF 18" RCP

52 LF 12" RCP

243 LF STORM

VENTURE WAY
(30' ASPHALT, 66' R-O-W)

NORTHWAY DRIVE
(PRIVATE ROAD, 26' ASPHALT, 66' R-O-W)

R-O-W

PLAT BOUNDARY

LOT 6

LOT 5

LOT 4

LOT 6
EX. GRAVEL

REMOVE EX. FENCE ENCLOSURE AND SALVAGE FOR OWNER

REGRADE EXISTING SWALES ALONG NORTH AND EAST PROPERTY LINES

REMOVE 210 SQ. FT. OF EX. CONCRETE PAD AND SALVAGE DUMPSTER

PROTECT EX. CONCRETE

REMOVE AND SALVAGE ALL GRAVEL ON PROPERTY

REMOVE 901 SQ. FT. OF CONCRETE

PROTECT EX. CATCH BASIN

REMOVE EX 4" PVC

REMOVE EX 50 LF 12" CMP

REMOVE EX. PIPE AS NEEDED

PROTECT EX. TREE

SAWCUT AND REMOVE EX. CURB FOR PROPOSED SIDEWALK

EX. STOP SIGN
VENTURE WAY &
NORTHWAY DRIVE
STREET SIGNS

PROTECT EX. ASPHALT

PROTECT EX. CONC.

1-1/4" GAS

2" GAS

8" WM

8" SAN

1 inch = 20 ft.

0 10 20 40

CMS & D
SURVEYING / ENGINEERING
2257 E. BROOMFIELD ROAD
MT. PLEASANT, MICHIGAN 48858
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

EXISTING TOPOGRAPHY & DEMOLITION
ROOK METERING/MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:
PER MT. PLEASANT FIRE DEPARTMENT 8-17-22

SUBMITTALS:
SUBMITTAL TO CLIENT FOR REVIEW 8-9-22
SUBMITTAL TO UNION TOWNSHIP 8-18-22
SUBMITTAL TO UNION TOWNSHIP 8-31-22
SUBMITTAL TO UNION TOWNSHIP 9-7-22

JOB NUMBER: 2203-042
DRAWN BY: CDS
DESIGNED BY: TELB
CHECKED BY: TELB

SCALE 1" = 20'

SHEET NUMBER 2 OF 13

USE STATEMENT: THE CURRENT USE OF THE PROPERTY IS AN INDUSTRIAL USE FOR THE MANUFACTURE AND SUPPLY OF METER MIXING AND DISPENSING EQUIPMENT FOR ONE, TWO, AND THREE PART MATERIALS MADE OF EPOXY, ACRYLIC, URETHANE, UREA FORMALDEHYDE, AND PVA. THE PROPOSED SITE PLAN IS AN ADDITION MEANT TO FACILITATE AND EXPANSION OF OPERATIONS, AND THUS THE STATED USE OF THE PROPERTY WILL REMAIN UNCHANGED.

DEVELOPMENT SCEHDULE: PROPOSED PHASE ONE WILL OCCUR DURING 2022 AND 2023. PHASE TWO WILL OCCUR BASED ON THE NEED FOR EXPANSION. ESTIMATED TIMING 2024–2025.

EXISTING NATURAL FEATURES: THE UNIMPROVED AREAS OF THE EXISTING SITE ARE CURRENTLY LAWN AREAS AND DRAINAGE SWALES.

PROPOSED WATER/SEWER SERVICE: THE EXISTING WATER SERVICE WILL BE UTILIZED TO PROVIDE SERVICE TO THE PROPOSED EXPANSION. THE EXISTING SEWER SERVICE WILL BE UTILIZED TO PROVIDE SERVICE TO THE PROPOSED EXPANSION.

SELLING/LEASING NOTE: THE OWNER DOES NOT INTEND TO SELL OR LEASE ANY PART OF THE PROPERTY PRIOR TO OR AFTER THE PROPOSED ADDITION IS CONSTRUCTED.

RECYCLING NOTE: THE PROPERTY UTILIZES RECYCLING BINS LOCATED WITHIN THE BUILDING. THIS WILL REMAIN UNCHANGED DURING CONSTRUCTION AND EXPANSION.

SIDEWALK WAIVER REQUEST: CONCRETE SIDEWALKS ARE SHOWN AS PER UNION TOWNSHIP ORDINANCE. WE ARE REQUESTING A TEMPORARY WAIVER FOR CONSTRUCTION OF SIDEWALKS, WITH THE REASONS BEING:

1. THE SITE IS LOCATED WITHIN AN INDUSTRIAL ZONE (I–2).
2. LESS THAN 50% OF THE ROADS OF THE SURVEYED SECTION WITHIN THE TOWNSHIP HAS SIDEWALKS. SECTION 13 IS BOUNDED BY PICKARD, SUMMERTON, REMUS, AND ISABELLA ROADS, WITH BROADWAY ROAD RUNNING ON THE EAST–WEST QUARTER LINE. 100% OF PICKARD ROAD HAS SIDEWALKS, 5% OF REMUS ROAD HAS SIDEWALKS, 16% OF BROADWAY ROAD HAS SIDEWALKS, 11% OF SUMMERTON ROAD HAS SIDEWALKS, AND 35% OF ISABELLA ROAD HAS SIDEWALKS, ADDING TO A TOTAL OF 33.4% OF THE ROADS ALONG THE SURVEYED SECTION POSSESSING SIDEWALKS. THE NEAREST "NEARBY" SIDEWALK NORTHERLY OF THE PROPERTY IS 1,496 FEET FROM SAID PROPERTY ALONG PAVED ROADS. THE NEAREST SIDEWALK EASTERLY IS 2,324 FEET ALONG PAVED ROADS. THE NEAREST SIDEWALK SOUTHERLY IS 2,230 FEET ALONG PAVED ROADS. THE NEAREST SIDEWALK WESTERLY IS 5,586 FEET ALONG PAVED ROADS.

CAUTION: EXISTING WATER MAIN LINE IS DIRECTLY BESIDE AN EXISTING GAS PIPELINE. CONSULT WITH UNION TOWNSHIP DPW DIRECTOR BEFORE INSTALLATION OF PROPOSED FIRE LINE.

EXISTING STORM STRUCTURES

CB#1
RIM: 635.31
W INV. = 631.08 (6" STEEL)
N INV. = 631.2 (12" CMP)

CB#2
RIM: 635.11
E INV. = 630.90 (18" RCP)
W INV. = 631.00 (18" RCP)
S INV. = 631.17 (12" RCP)

CB#3
RIM: 634.87
N INV. = 631.42 (12" RCP)

CB#4
RIM: 635.54
E INV. = 631.15 (18" RCP)
W INV. = 630.61 (15" PVC)

CB#5
RIM: 635.81
E INV. =
W INV. = 631.69 (18" RCP)
S INV. = 631.76 (12" RCP)

CB#6
RIM: 635.79

CB#7
RIM: 636.45

CB#8
RIM: 636.89

CB#9
RIM: 637.04

CB#10
RIM: 634.69

STMH#1
RIM: 638.43

EXISTING SAN. STRUCTURES

SMH#1
RIM: 637.03
FLOW LINE: 631.93 (6" PVC)

PROPOSED STORM STRUCTURES

P–STMH#1
RIM: 637.75
CONC. WEIR = 635.0
N INV. = 631.35 (12" N–12)
S INV. = 631.25 (12" N–12)

P–CB#1
2' DIA MDOT HEAVY WALL W/ E.J.I.W. 1040 TYPE 02 BEEHIVE GRATE
RIM: 635.5
S INV. = 631.7 (12" RCP)

P–CB#2
2' DIA MDOT HEAVY WALL W/ E.J.I.W. 1040 TYPE 01 TYPE M1 GRATE
RIM: 636.72
SE INV. = 634.0 (8" SDR–26)

CB#2
RIM: 635.11
E INV. = 630.90 (18" RCP)
W INV. = 631.00 (18" RCP)
S INV. = 631.17 (12" RCP)
N INV. = 631.00 (12" N–12)

NOTE: BICYCLE PARKING IS PROVIDED INSIDE THE BUILDING.

NOTE: ALL STORM WATER MANAGEMENT SYSTEMS TO BE CONSTRUCTED IN PHASE ONE.

NOTE: ALL LANDSCAPING AND SCREENING TO BE INSTALLED IN PHASE ONE.

PARKING TABLE:

EXISTING OFFICE AREA:
OFFICE GFA: 1,800 SQ. FT.
REQUIRED: 1 SPACE FOR EACH 300 SQ. FT. OF UFA.

UFA = 80% GFA = 1,440 SQ. FT.
1,440 SQ. FT. / 300 SQ. FT. = **5 SPACES**

MANUFACTURING:
EX. MANUFACTURING GFA: 14,700 SQ. FT.
PROP. ADDITIONAL GFA: 20,160 SQ. FT.
TOTAL MANUFACTURING GFA: 34,860 SQ. FT.
REQUIRED: 1 SPACE FOR EACH 2,000 SQ. FT. OF UFA

UFA = 90% GFA = 31,374 SQ. FT.
31,374 SQ. FT. / 2,000 SQ. FT. = **15 SPACES**

TOTAL REQUIRED SPACES: 5 FOR OFFICE SPACE
15 FOR MANUFACTURING
20 TOTAL REQUIRED (1 REQ. ADA SPACE)

PLANNED PARKING (PHASE ONE):

REG. PAVED PARKING: 39 SPACES
ADA PAVED PARKING: 2 SPACES
TOTAL PLANNED PARKING: 41 SPACES (2 REQ. ADA SPACES)

PLANNED PARKING (PHASE TWO):

REG. PAVED PARKING: 51 SPACES
ADA PAVED PARKING: 3 SPACES
TOTAL PLANNED PARKING: 54 SPACES (3 REQ. ADA SPACES)

UNPLATTED
PLAT BOUNDARY
FCM (HELD)
FND 3/4" PIPE N 0.80' W 0.34'
CB#10 RIM. 634.69
LOT 7
S00°–18'–40"W 377.76'(M)
S00°–02'–10"W 377.96'(R)
20.00' UTILITY EASEMENT PER PLAT
FND T IRON (BENT) S 0.13' W 0.15'
BM#2
EX. WELL
ROLLED ASPHALT CURB TYP.
200 LF PROP. 12" ADS–HP @ 0.25%
PROP. RIP–RAP SUMP INV. 633.5
30' REAR YARD SETBACK
PROPOSED TOP–OF–BANK
PROPOSED PHASE TWO
PROP. ASPHALT
636.0 FREEBOARD
635.0 MAX PONDING
634.0
633.0
632.0
INV. 633.0
SEE SHEET 11 OF 21 FOR SEDIMENT TRAP DETAIL
PROP. 8 SQ. YDS. RIP–RAP
PROP. SUMP INV. 631.5
EX. 18" MAPLE
631.5
30 LF PROP. 12" SDR–35 @ 0.5%
50 LF PROP. 12" SDR–35 @ 0.5%
243 LF 18" RCP
CB#2 RIM: 635.11
CB#3 RIM: 634.87
29 LF 12" RCP
PLAT BOUNDARY
30.00'
634.0
635.0
INV. 634.2
ROLLED ASPHALT CURB TYP. REFER TO DETAIL
PROPOSED PHASE TWO SINGLE–STORY ADDITION 84' X 84' 8,400 GROSS SQ. FT. FF = 637.50
PROP. BLDG CONSTRUCTION TYPE 3B
CIP DITCH
133 LF PROP. 8" C–900 FIRE LINE
P–STMH#1 CONC. WEIR RIM: 637.75
8" TAPPING SLEEVE AND VALVE
16 LF PROP. 6" C–900 FIRE LINE
8" TO 6" REDUCING 90° BEND
6 PROPOSED PARKING SPACES
13 PROPOSED PARKING SPACES
PROP. DUMPSTER ENCLOSURE ON CONC. PAD
33 LF PROP. 24" PERF CMP–12 W/ FLOW STOCK @ 0.3%
120 LF PROP. 8" SDR–26 @ 0.83%
PROP. TEMPORARY GRAVEL DRIVE TO BE REMOVED IN PHASE TWO
PHASE TWO RELOCATE P–CB#2 FOR UTILIZATION FOR ROOF DRAINAGE
PROP. ASPHALT
ROLLED ASPHALT CURB TYP. REFER TO DETAIL
EX. ASPHALT
INV. 634.3
PHASE ONE P–CB#2 RIM: 636.75
PROP. BOLLARDS 2' OFF BUILDING REFER TO DETAIL
PROP. CONC.
3' DOOR
14' GARAGE DOOR
PROP. SIDEWALK (REQUEST WAIVER)
134 LF 18" RCP
EX. CONC.
3 EX. PARKING SPACES
25' FRONT YARD SETBACK
20' PUBLIC UTILITY EASEMENT
N89°–44'–38"W 279.56'(M)
N89°–57'–50"W 279.49'(R)
VENTURE WAY (30' ASPHALT, 66' R–O–W)
10' PUBLIC UTILITY EASEMENT
8" SAN
LOT 6
S89°–44'–38"E 319.00'(M)
S88°–53'–50"E(R)
30' REAR YARD SETBACK
635.0
638.0
PROP. CONC. PROPOSED LOADING AREA
PROPOSED PHASE ONE SINGLE–STORY ADDITION 84' X 140' 11,760 GROSS SQ. FT. FF = 637.50
PROP. BLDG CONSTRUCTION TYPE 3B
14' GARAGE DOOR
3' DOOR
PROP. 2HR FIRE WALL W/ FIRE DOORS
SINGLE–STORY STEEL COMMERCIAL BUILDING 5625 VENTURE WAY 16,560 GROSS SQ. FT. FF = 637.50
EX. BLDG CONSTRUCTION TYPE 3B
CURRENT INDOOR BICYCLE PARKING
EX. SAN LEAD
CB#4 INV. 635.54
CB#5 INV. 635.81
37 LF 15" PVC
29 LF 12" RCP
CB#6 RIM: 635.79
61 LF PROP. 6" SDR–35 SAN LEAD @ 0.8%
10 LF PROP. 6" SDR–35 SAN LEAD @ 0.8%
P–RISER#1 RIM: 636.5 5' OFF BLDG
P–RISER#2 RIM: 636.5 5' OFF BLDG
P–RISER#3 RIM: 636.5 5' OFF BLDG
P–CLEANOUT#5 5' OFF PROP. BLDG RIM: 637.7
P–CLEANOUT#4 RIM: 638.0
EX. PHONE AND ELECTRIC LEADS
P–CLEANOUT#3 RIM: 637.4
P–CLEANOUT#2 RIM: 637.4
63 LF PROP. 6" SDR–35 SAN LEAD @ 0.8%
64 LF PROP. 6" SDR–35 SAN LEAD @ 0.8%
64 LF PROP. 6" SDR–35 SAN LEAD @ 0.8%
PROP. ASPHALT
25' FRONT YARD SETBACK
PROP. SIDEWALK (REQUEST WAIVER)
BM#1
CP#10
P–CLEANOUT#1 RIM: 637.1
131 LF 18" RCP
FCM (HELD)
45 LF PROP. 6" SDR–26 @ 0.83%
135 LF PROP. 6" SDR–26 @ 0.83%
6" N–12
EX. TRANSFORMER PAD
N05°–38'–57"W 379.78'(M)
N05°–55'–10"W(R)
PROPOSED SIDEWALK EASEMENT
1–1/4" GAS
EX. TRANSFORMER PAD
25.00'
10.00' UTILITY EASEMENT PER L. 731, P. 158
PROP. SIDEWALK (REQUEST WAIVER)
DUB DOWN
100 LF PROP. 12" CLASS IV RCP STORM @ 0.5%
PROP. CONC.
P–CB#1 RIM: 635.5
CP#11
EX. UTILITY BOX
CB#1 RIM: 635.31
6" STEEL
6" N–12 INV. 635.5
6" N–12 INV. 635.9 RE–RUN
6" N–12 INV. 636.25 RE–RUN
SMH#1 RIM: 637.03
NORTHWAY DRIVE
(PRIVATE ROAD, 26' ASPHALT, 66' R–O–W)
EX. STOP SIGN VENTURE WAY & NORTHWAY DRIVE STREET SIGNS
PLAT BOUNDARY
UNPLATTED
R–O–W
STMH#1 RIM: 638.43
243 LF STORM
CB#7 INV. 636.45
CB#8 RIM. 636.89
96 LF 18" RCP
32 LF 12" RCP
CB#9 (NOT PICTURED) RIM: 637.04
LOT 5
LOT 4
LOT 22
0 10 20 40
1 inch = 20 ft.

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CONSTRUCTION PHASING PLAN
ROOK METERING/MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:
PER MT. PLEASANT FIRE DEPARTMENT 8–17–22

SUBMITTALS:
SUBMITTAL TO CLIENT FOR REVIEW 8–9–22
SUBMITTAL TO UNION TOWNSHIP 8–18–22
SUBMITTAL TO UNION TOWNSHIP 8–31–22
SUBMITTAL TO UNION TOWNSHIP 9–7–22

JOB NUMBER: 2203–042
DRAWN BY: CDS
DESIGNED BY: TELB
CHECKED BY: TELB

SCALE 1" = 20'

SHEET NUMBER 3 OF 18

040

EXISTING STORM STRUCTURES

CB#1
RIM: 635.31
W INV. = 631.08 (6" STEEL)
N INV. = 631.2 (12" CMP)

CB#2
RIM: 635.11
E INV. = 630.90 (18" RCP)
W INV. = 631.00 (18" RCP)
S INV. = 631.17 (12" RCP)

CB#3
RIM: 634.87
N INV. = 631.42 (12" RCP)

CB#4
RIM: 635.54
E INV. = 631.15 (18" RCP)
W INV. = 630.61 (15" PVC)

CB#5
RIM: 635.81
E INV. =
W INV. = 631.69 (18" RCP)
S INV. = 631.76 (12" RCP)

CB#6
RIM: 635.79

CB#7
RIM: 636.45

CB#8
RIM: 636.89

CB#10
RIM: 634.69

STMH#1
RIM: 638.43

EXISTING SAN. STRUCTURES

SMH#1
RIM: 637.03
FLOW LINE: 631.93 (6" PVC)

PROPOSED STORM STRUCTURES

P-STMH#1
RIM: 637.75
CONC. WEIR = 635.0
N INV. = 631.35 (12" N-12)
S INV. = 631.25 (12" N-12)

P-CB#1
2' DIA MDOT HEAVY WALL W/ E.J.I.W. 1040 TYPE 02 BEEHIVE GRATE
RIM: 635.5
S INV. = 631.7 (12" RCP)

P-CB#2
2' DIA MDOT HEAVY WALL W/ E.J.I.W. 1040 TYPE 01 TYPE M1 GRATE
RIM: 636.72
SE INV. = 634.0 (8" SDR-26)

CB#2
RIM: 635.11
E INV. = 630.90 (18" RCP)
W INV. = 631.00 (18" RCP)
S INV. = 631.17 (12" RCP)
N INV. = 631.00 (12" N-12)

NOTE: BICYCLE PARKING IS PROVIDED INSIDE THE BUILDING.

NOTE: ALL STORM WATER MANAGEMENT SYSTEMS TO BE CONSTRUCTED IN PHASE ONE.

NOTE: ALL LANDSCAPING AND SCREENING TO BE INSTALLED IN PHASE ONE.

CAUTION: EXISTING WATER MAIN LINE IS DIRECTLY BESIDE AN EXISTING GAS PIPELINE. CONSULT WITH UNION TOWNSHIP DPW DIRECTOR BEFORE INSTALLATION OF PROPOSED FIRE LINE.

1 inch = 20 ft.

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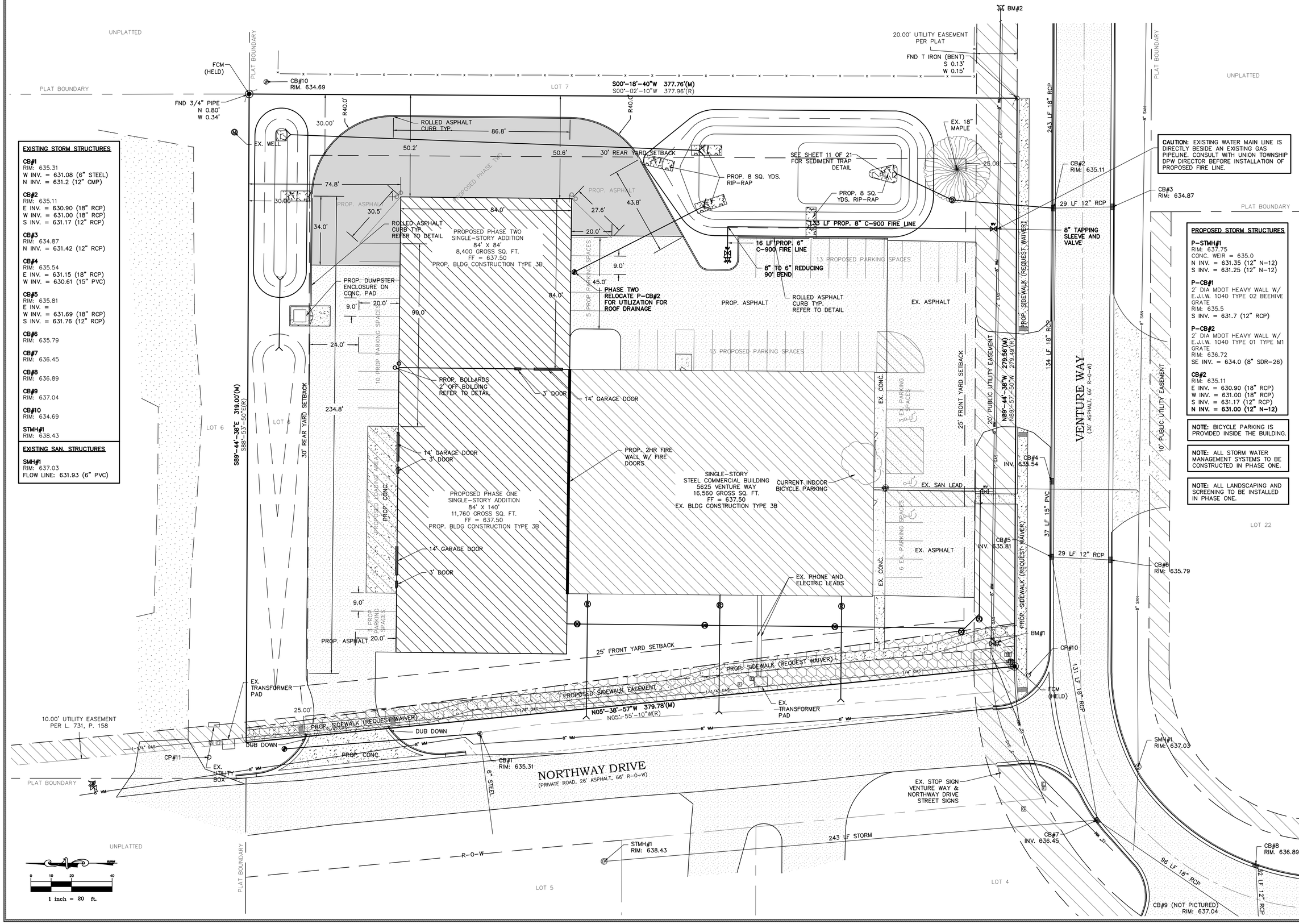
SITE HORIZONTAL PLAN
ROOK METERING/MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:
PER MT. PLEASANT FIRE DEPARTMENT 8-17-22

SUBMITTALS:
SUBMITTAL TO CLIENT FOR REVIEW 8-9-22
SUBMITTAL TO UNION TOWNSHIP 8-18-22
SUBMITTAL TO UNION TOWNSHIP 8-31-22
SUBMITTAL TO UNION TOWNSHIP 9-7-22

JOB NUMBER: 2203-042
DRAWN BY: CDS
DESIGNED BY: TELB
CHECKED BY: TELB
SCALE: 1" = 20'
SHEET NUMBER: 4 OF 18



EXISTING STORM STRUCTURES

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RIM: 635.11
E INV. = 630.90 (18" RCP)
W INV. = 631.00 (18" RCP)
S INV. = 631.17 (12" RCP)

CB#3
RIM: 634.87
N INV. = 631.42 (12" RCP)

CB#4
RIM: 635.54
E INV. = 631.15 (18" RCP)
W INV. = 630.61 (15" PVC)

CB#5
RIM: 635.81
E INV. =
W INV. = 631.69 (18" RCP)
S INV. = 631.76 (12" RCP)

CB#6
RIM: 635.79

CB#7
RIM: 636.45

CB#8
RIM: 636.89

CB#9
RIM: 637.04

CB#10
RIM: 634.69

STMH#1
RIM: 638.43

EXISTING SAN. STRUCTURES

SMH#1
RIM: 637.03
FLOW LINE: 631.93 (6" PVC)

PROPOSED STORM STRUCTURES

P-STMH#1
RIM: 637.75
CONC. WEIR = 635.0
N INV. = 631.35 (12" N-12)
S INV. = 631.25 (12" N-12)

P-CB#1
2' DIA MDOT HEAVY WALL W/ E.J.I.W. 1040 TYPE 02 BEEHIVE GRATE
RIM: 635.5
S INV. = 631.7 (12" RCP)

P-CB#2
2' DIA MDOT HEAVY WALL W/ E.J.I.W. 1040 TYPE 01 TYPE M1 GRATE
RIM: 636.72
SE INV. = 634.0 (8" SDR-26)

CB#2
RIM: 635.11
E INV. = 630.90 (18" RCP)
W INV. = 631.00 (18" RCP)
S INV. = 631.17 (12" RCP)
N INV. = 631.00 (12" N-12)

NOTE: BICYCLE PARKING IS PROVIDED INSIDE THE BUILDING.

NOTE: ALL STORM WATER MANAGEMENT SYSTEMS TO BE CONSTRUCTED IN PHASE ONE.

NOTE: ALL LANDSCAPING AND SCREENING TO BE INSTALLED IN PHASE ONE.

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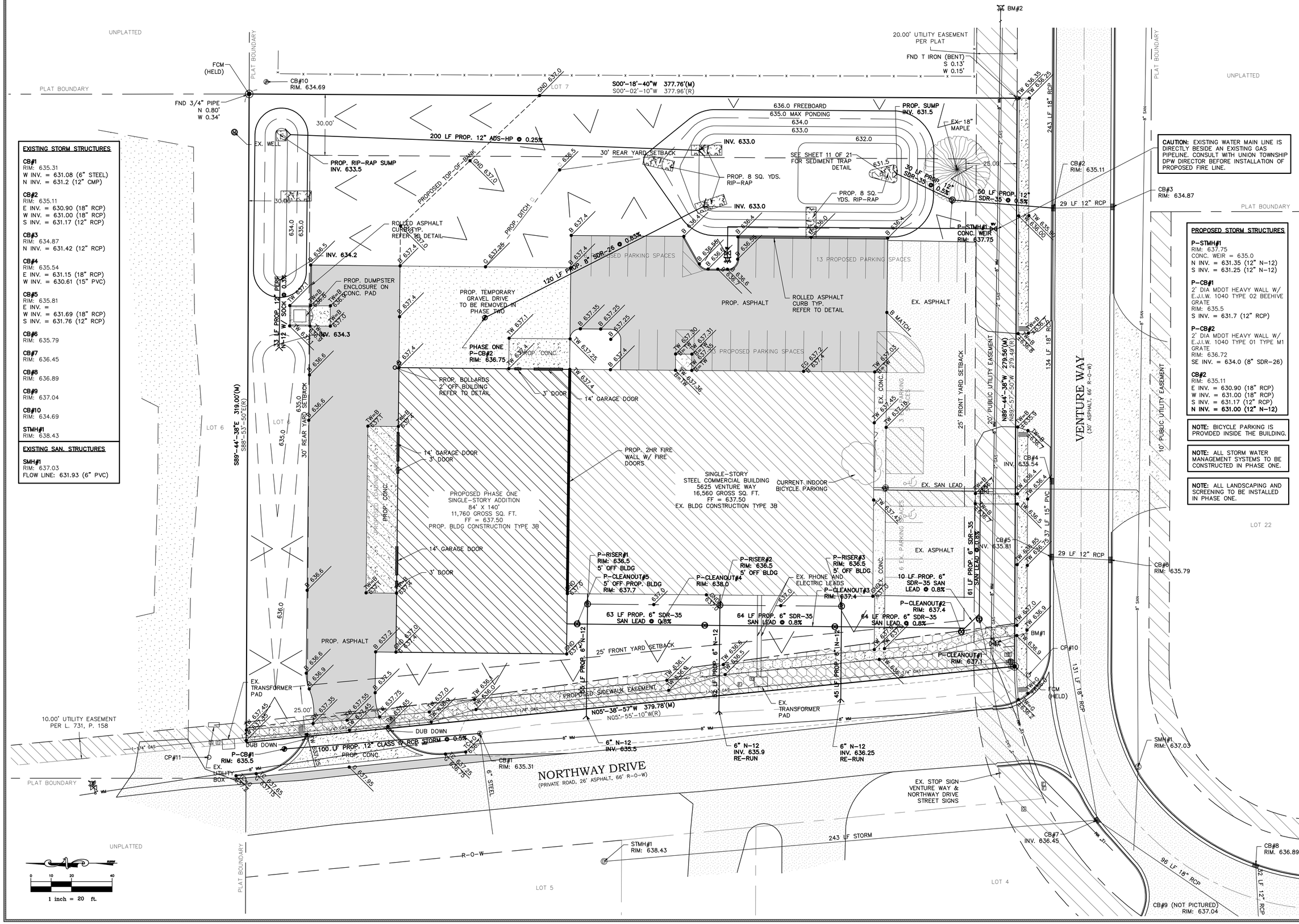
SITE HORIZONTAL PLAN PHASE TWO
ROOK METERING/MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REMISIONS:	SUBMITTALS:	JOB NUMBER:	SCALE
PER MT. PLEASANT FIRE DEPARTMENT 8-17-22	SUBMITTAL TO CLIENT FOR REVIEW 8-9-22	2203-042	1" = 20'
	SUBMITTAL TO UNION TOWNSHIP 8-18-22	DRAWN BY: CDS	
	SUBMITTAL TO UNION TOWNSHIP 8-31-22	DESIGNED BY: TELB	SHEET NUMBER 5 OF 18
	SUBMITTAL TO UNION TOWNSHIP 9-7-22	CHECKED BY: TELB	

042



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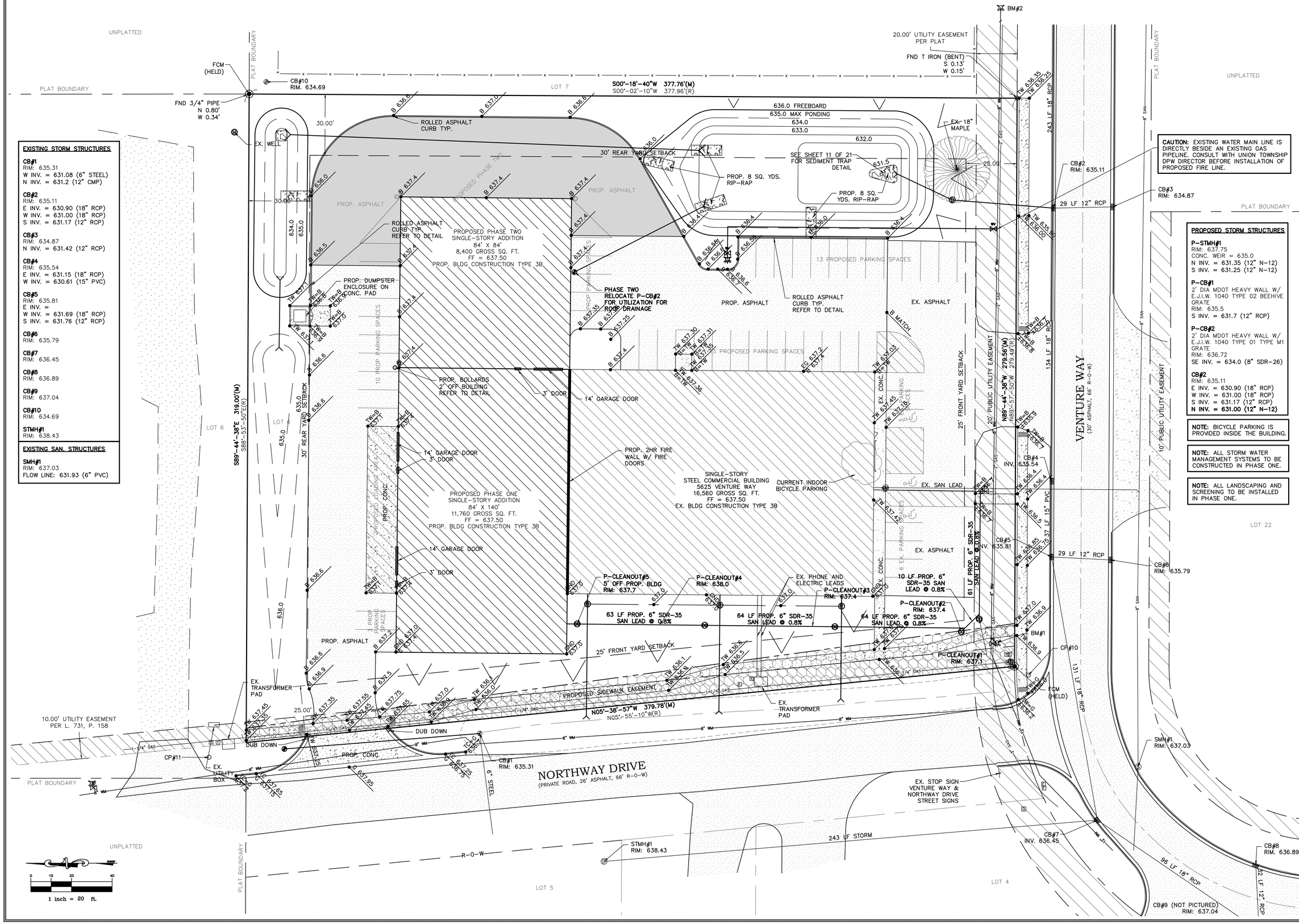
SITE GRADING & UTILITY PLAN
ROOK METERING/MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:	SUBMITTALS:	JOB NUMBER:	SCALE
PER MT. PLEASANT FIRE DEPARTMENT 8-17-22	SUBMITTAL TO CLIENT FOR REVIEW 8-9-22	2203-042	1" = 20'
	SUBMITTAL TO UNION TOWNSHIP 8-18-22	DRAWN BY:	
	SUBMITTAL TO UNION TOWNSHIP 8-31-22	CDS	
	SUBMITTAL TO UNION TOWNSHIP 9-7-22	DESIGNED BY:	SHEET NUMBER
		TELB	6 OF 18
		CHECKED BY:	
		TELB	



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CB#3
RIM: 634.87
N INV. = 631.42 (12" RCP)

CB#4
RIM: 635.54
E INV. = 631.15 (18" RCP)
W INV. = 630.61 (15" PVC)

CB#5
RIM: 635.81
E INV. =
W INV. = 631.69 (18" RCP)
S INV. = 631.76 (12" RCP)

CB#6
RIM: 635.79

CB#7
RIM: 636.45

CB#8
RIM: 636.89

CB#9
RIM: 637.04

CB#10
RIM: 634.69

STMH#1
RIM: 638.43

EXISTING SAN. STRUCTURES

SMH#1
RIM: 637.03
FLOW LINE: 631.93 (6" PVC)

PROPOSED STORM STRUCTURES

P-STMH#1
RIM: 637.75
CONC. WEIR = 635.0
N INV. = 631.35 (12" N-12)
S INV. = 631.25 (12" N-12)

P-CB#1
2' DIA MDOT HEAVY WALL W/ E.J.I.W. 1040 TYPE 02 BEEHIVE GRATE
RIM: 635.5
S INV. = 631.7 (12" RCP)

P-CB#2
2' DIA MDOT HEAVY WALL W/ E.J.I.W. 1040 TYPE 01 TYPE M1 GRATE
RIM: 636.72
SE INV. = 634.0 (8" SDR-26)

CB#2
RIM: 635.11
E INV. = 630.90 (18" RCP)
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NOTE: BICYCLE PARKING IS PROVIDED INSIDE THE BUILDING.

NOTE: ALL STORM WATER MANAGEMENT SYSTEMS TO BE CONSTRUCTED IN PHASE ONE.

NOTE: ALL LANDSCAPING AND SCREENING TO BE INSTALLED IN PHASE ONE.

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SITE GRADING PLAN PHASE TWO
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UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:
PER MT. PLEASANT FIRE DEPARTMENT 8-17-22

SUBMITTALS:
SUBMITTAL TO CLIENT FOR REVIEW 8-9-22
SUBMITTAL TO UNION TOWNSHIP 8-18-22
SUBMITTAL TO UNION TOWNSHIP 8-31-22
SUBMITTAL TO UNION TOWNSHIP 9-7-22

JOB NUMBER: 2203-042
DRAWN BY: CDS
DESIGNED BY: TELB
CHECKED BY: TELB

SCALE: 1" = 20'
SHEET NUMBER: 7 OF 18

REQUIRED PROJECT LANDSCAPING:

IN ACCORDANCE WITH SECTION 10, LANDSCAPING AND SCREENING OF THE UNION CHARTER TOWNSHIP ORDINANCE, THE FOLLOWING SHALL BE PLANTED IN ACCORDANCE WITH SECTION 10.2 SUMMARY OF MINIMUM PLANTING REQUIREMENTS AND SUMMARY OF PLANT MATERIAL SPECIFICATIONS OF PLANTING AND SECTION 10.4, STANDARDS FOR LANDSCAPING MATERIALS.

LANDSCAPING ADJACENT TO VENTURE WAY.

1) THERE ARE SHOWN (7) "STREET" TREES FOR THE 279.56 FEET OF ROAD FRONTAGE, LESS THE ACCESS DRIVE ON VENTURE WAY. 1 TREE FOR EVERY 40 FRONT FEET.
2) THERE ARE (3) ORNAMENTAL STREET TREES FOR THE 279.56 FEET OF ROAD FRONTAGE, LESS THE ACCESS DRIVE ON VENTURE WAY. 1 TREE FOR EVERY 100 FRONT FEET.
3) THERE ARE (56) SHRUBS FOR THE 279.56 FEET OF ROAD FRONTAGE, LESS THE ACCESS DRIVE ON VENTURE WAY. 8 SHRUBS FOR EVERY 40 FRONT FEET.

LANDSCAPING ADJACENT TO NORTHWAY DRIVE.

1) THERE ARE SHOWN (9) "STREET" TREES FOR THE 379.78 FEET OF ROAD FRONTAGE, LESS THE ACCESS DRIVE ON NORTHWAY DRIVE. 1 TREE FOR EVERY 40 FRONT FEET.
2) THERE ARE (4) ORNAMENTAL STREET TREES FOR THE 379.78 FEET OF ROAD FRONTAGE, LESS THE ACCESS DRIVE ON NORTHWAY DRIVE. 1 TREE FOR EVERY 100 FRONT FEET.
3) THERE ARE (76) SHRUBS FOR THE 379.78 FEET OF ROAD FRONTAGE, LESS THE ACCESS DRIVE ON NORTHWAY DRIVE. 8 SHRUBS FOR EVERY 40 FRONT FEET.

PARKING LOT LANDSCAPING SHALL BE 1 TREE FOR EVERY 5 PARKING SPACES, AND 30 SQ. FT. OF LANDSCAPE SPACE PER PARKING SPACE. THERE ARE (9) SHADE TREES AND 1,350 SQ. FT. OF LANDSCAPE SPACE FOR THE 45 PARKING SPACES INCLUDED IN THE PROJECT.

LANDSCAPING SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH SECTION 10.5, INSTALLATION AND MAINTENANCE. LANDSCAPING WILL HAVE ONE YEAR GUARANTEE FROM THE INSTALLER. PRIOR TO THE ONE YEAR ANNIVERSARY, THE INSTALLER WILL REPLACE ANY DAMAGED, DYING OR DEAD PLANTINGS. FOLLOWING THIS GUARANTEE PERIOD, EACH SPRING, THE PLANTINGS SHALL BE INSPECTED AND ANY DAMAGED, DYING OR DEAD PLANTINGS WILL BE REPLACED. GENERAL LAWN AREAS WILL BE MAINTAINED AND MOWED REGULARLY.

STREET PLANTING – NORTHWAY DRIVE

9 DECIDUOUS TREES
4 ORNAMENTAL TREES
76 SHRUBS

STREET PLANTING – VENTURE WAY

7 DECIDUOUS TREES
3 ORNAMENTAL TREES
56 SHRUBS

BERMS

BERMS REQUIRED IF PARKING IS 40 FEET OR CLOSER TO RIGHT-OF-WAY LINE. PROPOSED PARKING IS WITHIN 40 FEET OF VENTURE WAY.

PARKING LOT PLANTING

30 SQ FT OF INTERIOR LANDSCAPING PER SPACE
45 SPACES X 30 = 1,290 SQ. FT.

1 SHADE TREE PER 5 SPACES
45 SPACES / 5 = 9 TREES

0 10 20 40
1 inch = 20 ft.

PROP DECIDUOUS TREE WITH A MIN. CALIPER OF 2.5 INCHES AND A MIN. HEIGHT OF 4 FEET TO FIRST BRANCH.

PROP ORNATMENTAL TREE – MIN. CALIPER OF 2.0 INCHES & A MIN. HEIGHT OF 4 FEET TO FIRST BRANCH.

PROP SHRUB– MIN. HEIGHT OF 3 FEET AND A MIN. SPREAD OF 2 FEET.

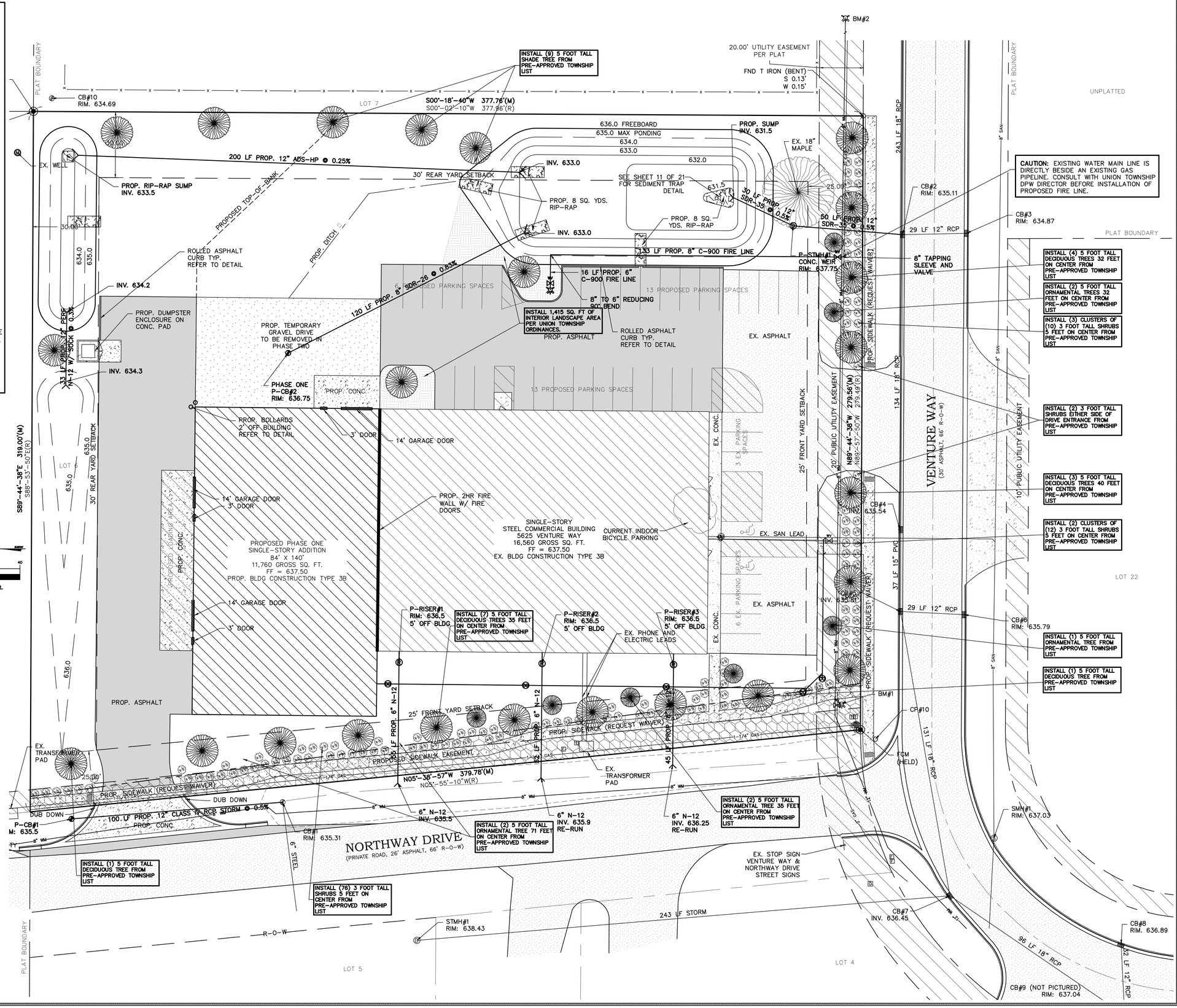
PROP. EVERGREEN TREE – MIN. HEIGHT 8 FEET

TREE PLANTING GENERAL NOTES:

1. *STAKE TREES UNDER 4" CALIPER*
2. *GUY TREES 4" CALIPER & OVER*
3. *PRUNE TO THIN & SHAPE CANOPY*
4. *CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION*
5. *SET TOP OF BALL TO CORRESPOND WITH FINISH GRADE*
6. *SET STAKES VERTICAL AND EVENLY*
7. *STAYS OR GUYS TO BE SET ABOVE FIRST BRANCH*
8. *SCARIFY SOIL TO 4" DEPTH & RECOMPACT*
9. *STAKES TO EXTEND 18" BELOW PIT IN UNDISTURBED SOIL*

NOTE: ALL OTHER SOFT AREAS NOT DESIGNATED AS COVERED SHALL BE GRASS COVERED.

= LANDSCAPE AREA



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SITE LANDSCAPING & SCREENING PLAN

ROOK METERING/MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:
PER MT. PLEASANT FIRE DEPARTMENT 8-17-22

SUBMITTALS:
SUBMITTAL TO CLIENT FOR REVIEW 8-9-22
SUBMITTAL TO UNION TOWNSHIP 8-18-22
SUBMITTAL TO UNION TOWNSHIP 8-31-22
SUBMITTAL TO UNION TOWNSHIP 9-7-22

JOB NUMBER: 2203-042
DRAWN BY: CDS
DESIGNED BY: TELB
CHECKED BY: TELB

SCALE 1" = 20'

SHEET NUMBER 8 OF 18

MICHIGAN UNIFIED KEYING SYSTEM

XP | XT

SOIL EROSION & SEDIMENTATION CONTROL MEASURES

P = PERMANENT T = TEMPORARY

KEY	DETAIL	CHARACTERISTICS
2	Selective Grading & Shaping	Water can be diverted to minimize erosion Flatter slopes ease erosion problems
7	Hydro-seeding	Effective on large areas Mulch tacking agent used to provide immediate protection until grass is rooted Should include prepared topsoil bed
13	Riprap, Rubble, Gabions	Used where vegetation is not easily established Effective for high velocities or high concentration Permits runoff to infiltrate soil Dissipates energy flow at system outlets
14	Aggregate Cover	Stabilizes soil surface, thus minimizing erosion Permits construction traffic in adverse weather May be used as part of permanent base construction of paved areas
15	Paving	Protects areas which cannot otherwise be protected, but increases runoff volume and velocity Irregular surface will help slow velocity
24	Grassed Waterway	Much more stable form of drainageway than bare channel Grass tends to slow runoff and filter out sediment Used where bare channel would be eroded
35	Storm Sewer (C.B. C.B.)	System removes collected runoff from site, particularly from paved areas Can accept large concentrations of runoff Conducts runoff to municipal sewer system or stabilized outfall location Use catch basins to collect sediment
36	Catch Basin, Drain Inlet	Collects high velocity concentrated runoff May use filter cloth over inlet
55	Geotextile Silt Fence (3' / 6' / 6')	Controls and Contains sediment from sheet flow conditions. Fabric must be "toed" into the soil 6" or more to prevent underflow. Must be constructed of addequate strength filter fabric and stakes.

✱ INSTALL STRAW MATT ON ALL DETENTION POND SLOPES FOR EROSION PROTECTION.

STORM WATER CALCULATIONS

Total Drainage Area: 113,055 sq. ft. = 2.60 acres
Total Impervious Area: 71,904 sq. ft. = 1.65 acres
Total Pervious Area: 41,151 sq. ft. = 0.95 acres

STORM WATER CALCULATIONS:

Allowable Discharge (0.10 cfs/acre) – 2.60 acres * 0.10 cfs/acre = 0.26 cfs
Total Contributing Area = 2.60 acres
Total Impervious Area = 1.65 acres
Total Pervious Area = 0.95 acres
Design Ponding Elevation = 635.05
Invert of Restrictor Elevation = 631.3

Restrictor Calculation
Formula: $a = Qa / [0.62[(64.4(h)]^{1/2}$
a = Area of orifice in sq. ft.
Qa = Allowable outflow
h = elevation difference from maximum ponding elevation to centerline of orifice
$a = 0.26 \text{ cfs} / 0.62\ [(64.4)\ (635.05 - 631.3)]^{1/2}$
$a = 0.027$ sft
$a = \pi(D*D) / 4 = D = 0.185$ ft = 2.2 inches

Therefore the required on site detention for a 25 Year/24 Hour Storm Event is 15,125 cft. The system as proposed provides the required detention at 635.05 elevation.

The required on site detention for a 100 Year/24 Hour Storm Event is 19,328 cft. The system as proposed provides 24,757 cft at the 636.0 ponding elevation. Therefore the 100 Year Storage Elevation would occur at 635.4 contour.

POND VOLUME CALCULATIONS

MAIN POND
631.5 CONTOUR = 86 SF
632.0 CONTOUR = 1,508 SF
633.0 CONTOUR = 3,876 SF
634.0 CONTOUR = 5,081 SF
635.0 CONTOUR = 6,416 SF
636.0 CONTOUR = 7,893 SF

VOL 632 = (86 + 1,508)/2 * 1/2 = 398.5 CF
VOL 633 = (1,508 + 3,876)/2 * 1 = 2,692 CF T-VOL = 3,090.50 CF
VOL 634 = (3,876 + 5,081)/2 * 1 = 4,478.5 CF T-VOL = 7,569 CF
VOL 635 = (5,081 + 6,416)/2 * 1 = 5,748.5 CF T-VOL = 13,317.50 CF
VOL 636 = (6,416 + 7,893)/2 * 1 = 7,154.5 CF T-VOL = 20,472 CF

EAST SWALE
633.5 CONTOUR = 10 SF
634.0 CONTOUR = 431 SF
635.0 CONTOUR = 1,276 SF
636.0 CONTOUR = 2,273 SF

VOL 634 = (10 + 431)/2 * 1/2 = 110.25 CF
VOL 635 = (431 + 1,276)/2 * 1 = 853.5 CF T-VOL = 963.75 CF
VOL 636 = (1,276 + 2,277)/2 * 1 = 1,774.5 CF T-VOL = 2,738.25 CF

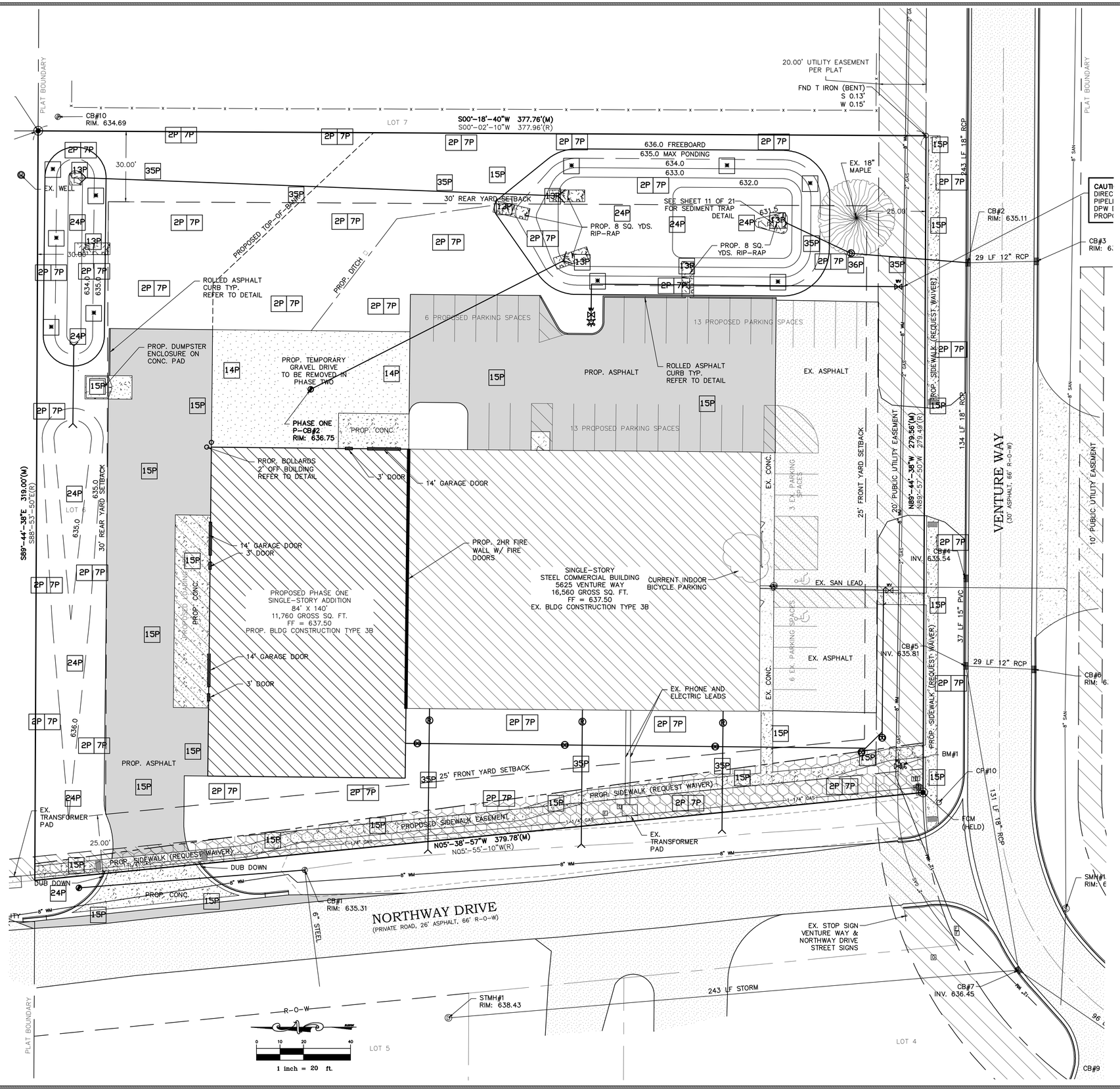
WEST SWALE
634.5 CONTOUR = 10 SF
635.0 CONTOUR = 716 SF
636.0 CONTOUR = 2,011 SF

VOL 635 = (10 + 716)/2 * 1/2 = 181.5 CF
VOL 636 = (716 + 2,011)/2 * 1 = 1,363.5 CF T-VOL = 1,545 CF

200 LF 12" ADS-HP PIPE AREA = 157.08 CF

33 LF 12" N-12 PIPE AREA = 25.92 CF

VOLUME AT CONTOUR 635.05 PROVIDES A MINIMUM 1 FT FREEBOARD FOR POND



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CONSTRUCTION PHASE ONE SOIL EROSION PLAN

ROOK METERING/MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:
PER MT. PLEASANT FIRE DEPARTMENT 8-17-22

SUBMITTALS:
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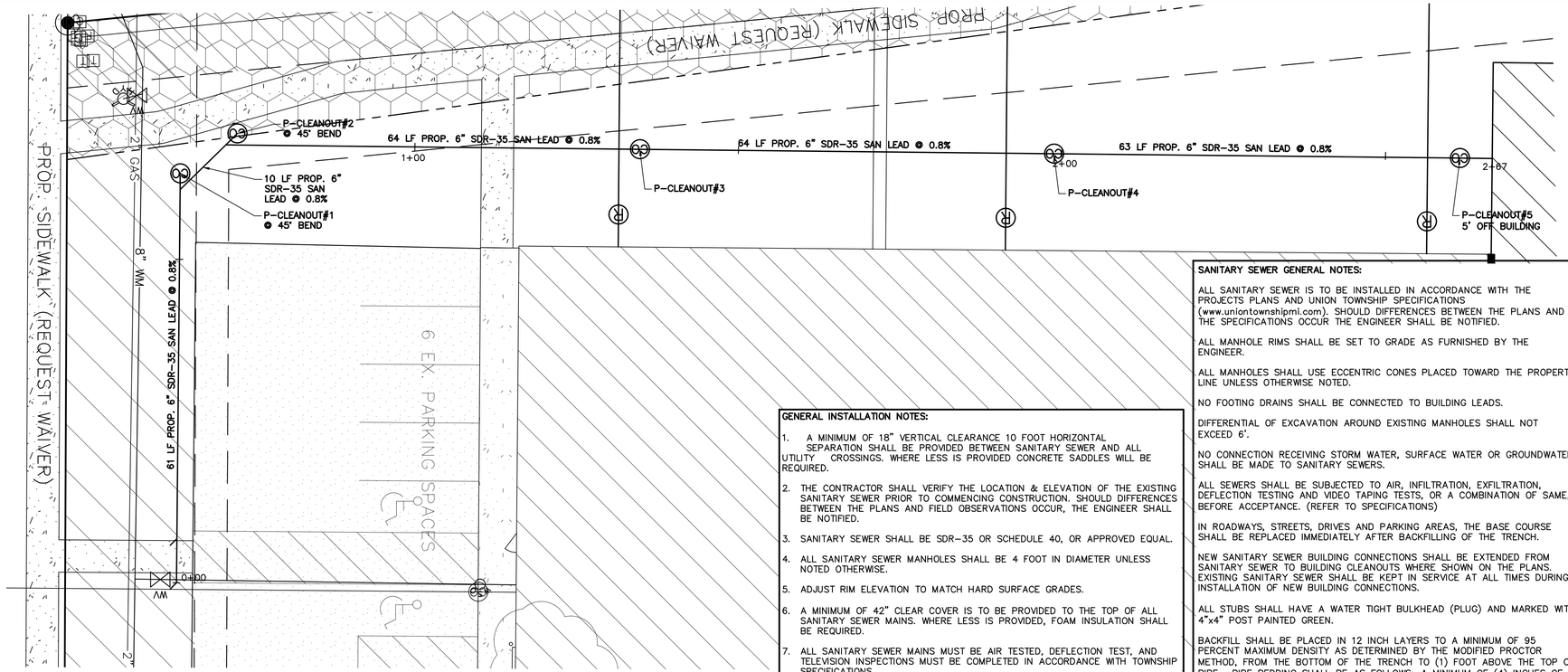
JOB NUMBER: 2203-042
DRAWN BY: CDS
DESIGNED BY: TELB
CHECKED BY: TELB

SCALE 1" = 20'

SHEET NUMBER 9 OF 18



PRIVATE SANITARY SEWER LEAD PLAN

1 inch = 10 ft.

NOTE: CONTRACTOR TO VERIFY DEPTH OF EXISTING PRIVATE SEWER LINE PRIOR TO ANY INSTALLATION.

GENERAL INSTALLATION NOTES:

1. A MINIMUM OF 18" VERTICAL CLEARANCE 10 FOOT HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN SANITARY SEWER AND ALL UTILITY CROSSINGS. WHERE LESS IS PROVIDED CONCRETE SADDLES WILL BE REQUIRED.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION & ELEVATION OF THE EXISTING SANITARY SEWER PRIOR TO COMMENCING CONSTRUCTION. SHOULD DIFFERENCES BETWEEN THE PLANS AND FIELD OBSERVATIONS OCCUR, THE ENGINEER SHALL BE NOTIFIED.
3. SANITARY SEWER SHALL BE SDR-35 OR SCHEDULE 40, OR APPROVED EQUAL.
4. ALL SANITARY SEWER MANHOLES SHALL BE 4 FOOT IN DIAMETER UNLESS NOTED OTHERWISE.
5. ADJUST RIM ELEVATION TO MATCH HARD SURFACE GRADES.
6. A MINIMUM OF 42" CLEAR COVER IS TO BE PROVIDED TO THE TOP OF ALL SANITARY SEWER MAINS. WHERE LESS IS PROVIDED, FOAM INSULATION SHALL BE REQUIRED.
7. ALL SANITARY SEWER MAINS MUST BE AIR TESTED, DEFLECTION TEST, AND TELEVISION INSPECTIONS MUST BE COMPLETED IN ACCORDANCE WITH TOWNSHIP SPECIFICATIONS.
8. OWNER AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY AND FOLLOWED WITH WRITTEN DESCRIPTION OF FIELD FINDINGS NOTING SPECIFIC ELEVATIONS AND CONDITIONS THAT DIFFER FROM PLANED DESIGNS 2± FEET OF EXISTING CONDITIONS IS TO BE CORRECTED WITHOUT COST DEVIATION AND ACCEPTED AS FIELD CONDITIONS.
9. INSTALLATION OF ANY SEWER MAIN OR APPURTENANCES MUST BE INSPECTED BY UNION TOWNSHIP DURING INSTALLATION AND SCHEDULED WITH UNION TOWNSHIP UTILITY DEPARTMENT, AT (989) 772-4600 EXT. 224, AT LEAST 48 HOURS IN ADVANCE OF ANY WORK COMMENCING.

SANITARY SEWER GENERAL NOTES:

ALL SANITARY SEWER IS TO BE INSTALLED IN ACCORDANCE WITH THE PROJECTS PLANS AND UNION TOWNSHIP SPECIFICATIONS (www.uniontownshipmi.com). SHOULD DIFFERENCES BETWEEN THE PLANS AND THE SPECIFICATIONS OCCUR THE ENGINEER SHALL BE NOTIFIED.

ALL MANHOLE RIMS SHALL BE SET TO GRADE AS FURNISHED BY THE ENGINEER.

ALL MANHOLES SHALL USE ECCENTRIC CONES PLACED TOWARD THE PROPERTY LINE UNLESS OTHERWISE NOTED.

NO FOOTING DRAINS SHALL BE CONNECTED TO BUILDING LEADS.

DIFFERENTIAL OF EXCAVATION AROUND EXISTING MANHOLES SHALL NOT EXCEED 6'.

NO CONNECTION RECEIVING STORM WATER, SURFACE WATER OR GROUNDWATER SHALL BE MADE TO SANITARY SEWERS.

ALL SEWERS SHALL BE SUBJECTED TO AIR, INFILTRATION, EXFILTRATION, DEFLECTION TESTING AND VIDEO TAPING TESTS, OR A COMBINATION OF SAME, BEFORE ACCEPTANCE. (REFER TO SPECIFICATIONS)

IN ROADWAYS, STREETS, DRIVES AND PARKING AREAS, THE BASE COURSE SHALL BE REPLACED IMMEDIATELY AFTER BACKFILLING OF THE TRENCH.

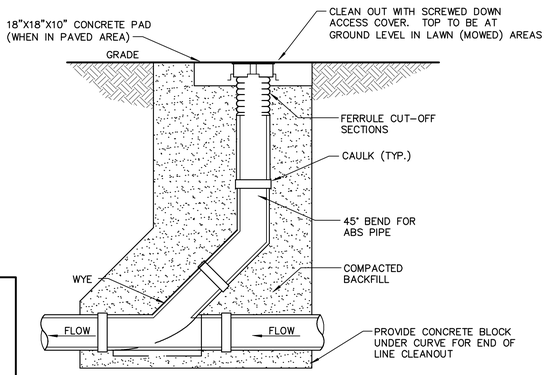
NEW SANITARY SEWER BUILDING CONNECTIONS SHALL BE EXTENDED FROM SANITARY SEWER TO BUILDING CLEANOUTS WHERE SHOWN ON THE PLANS. EXISTING SANITARY SEWER SHALL BE KEPT IN SERVICE AT ALL TIMES DURING INSTALLATION OF NEW BUILDING CONNECTIONS.

ALL STUBS SHALL HAVE A WATER TIGHT BULKHEAD (PLUG) AND MARKED WITH 4"x4" POST PAINTED GREEN.

BACKFILL SHALL BE PLACED IN 12 INCH LAYERS TO A MINIMUM OF 95 PERCENT MAXIMUM DENSITY AS DETERMINED BY THE MODIFIED PROCTOR METHOD, FROM THE BOTTOM OF THE TRENCH TO (1) FOOT ABOVE THE TOP OF PIPE. PIPE BEDDING SHALL BE AS FOLLOWS; A MINIMUM OF (4) INCHES OF 6A STONE PLACED BELOW THE PIPE AND EXTENDED UP TO THE TOP OF THE PIPE. THE REMAINING (1) FOOT SHALL BE MDOT CLASS II GRANULAR MATERIAL WITH A MODIFIED GRADATION SUCH THAT MAXIMUM PARTICLE SIZE IS 1 1/2". ALL TRENCHES IN HARD SURFACE AREAS SHALL CONTINUE THE MDOT CLASS II GRANULAR MATERIAL UP TO THE SUBBASE OF THE PAVED AREA. LIFTS MAY NOT EXCEED (12) INCHES. THIS BACKFILL SHALL ALSO BE PLACED TO 95 PERCENT OF ITS MAXIMUM DENSITY.

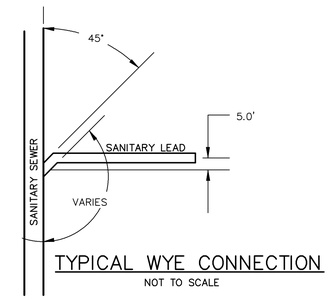
ALL 6" SERVICE LEADS SHALL RUN AT A MINIMUM GRADE OF 0.8 PERCENT (0.8%).

A SEPARATE FLOW CHANNEL SHALL BE PROVIDED FOR ALL 6" SANITARY LEADS THAT ARE CONNECTED DIRECTLY TO A MANHOLE.



CLEAN OUT DETAIL

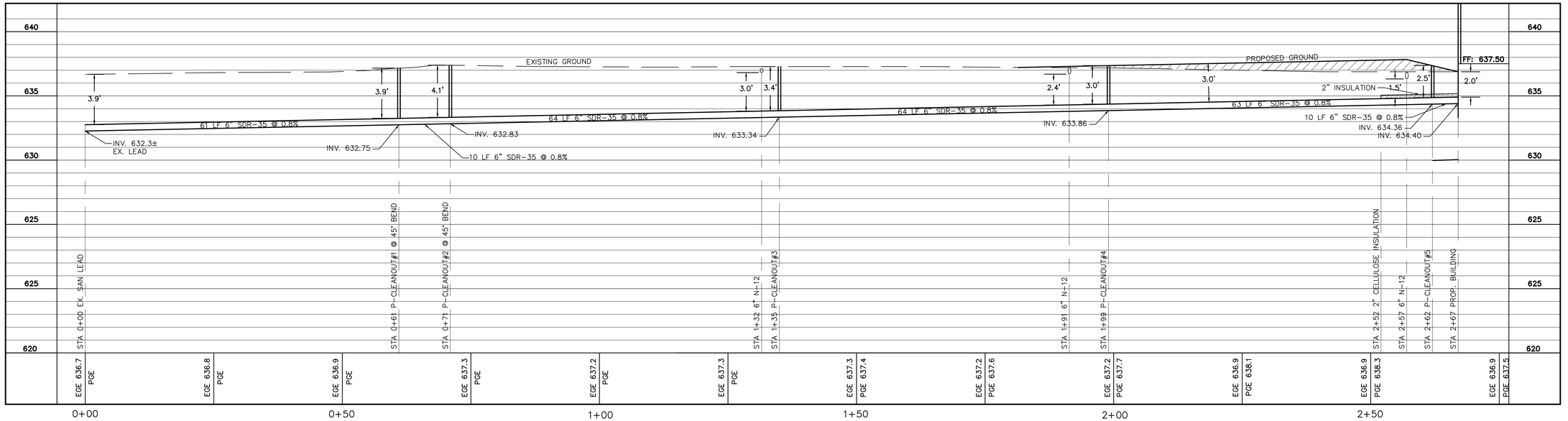
NOT TO SCALE



TYPICAL WYE CONNECTION

NOT TO SCALE

PROFILE SCALE: 1" = 10' HORIZONTAL
1" = 4' VERTICAL



NOTE:
EGE – EXISTING GROUND ELEVATION
PGE – PROPOSED GROUND ELEVATION
VERTICAL SCALE 1" = 4'
HORIZONTAL SCALE 1" = 10'

1 inch = 10 ft.

PRIVATE SANITARY SEWER SERVICE LEAD
PROFILE
STA. 0+00 – 2+67

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SANITARY LEAD PLAN & PROFILE
ROOK METERING/MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REMISIONS:
PER MT. PLEASANT FIRE DEPARTMENT 8-17-22

SUBMITTALS:
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SUBMITTAL TO UNION TOWNSHIP 8-18-22
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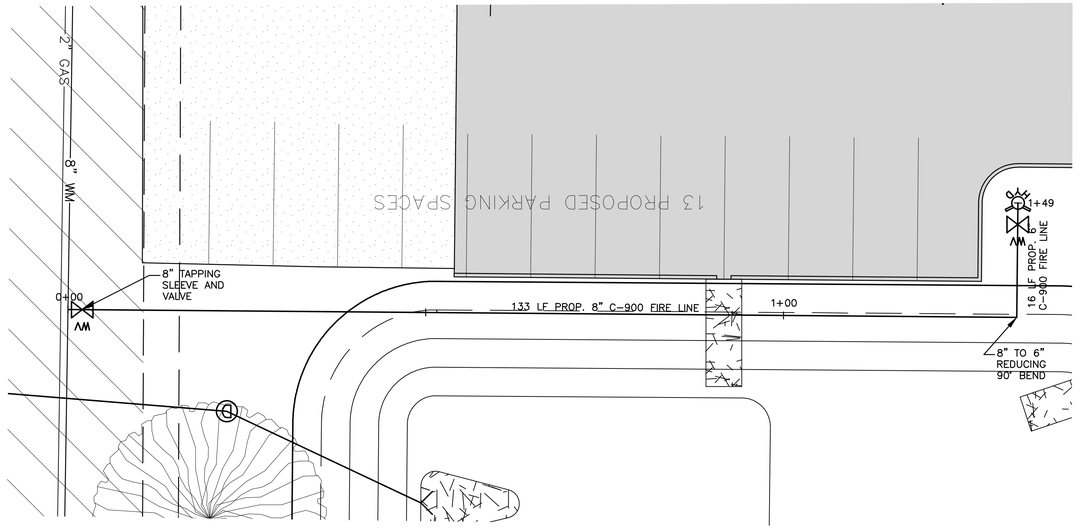
SUBMITTAL TO UNION TOWNSHIP 9-7-22

JOB NUMBER: 2203-042
DRAWN BY: CDS
DESIGNED BY: TELB
CHECKED BY: TELB

SCALE: 1" = 10'

SHEET NUMBER: 10 OF 18

047



PRIVATE FIRE LINE PLAN

NOTE:
EGE – EXISTING GROUND ELEVATION
PGE – PROPOSED GROUND ELEVATION
VERTICAL SCALE 1" = 2.5'
HORIZONTAL SCALE 1" = 10'

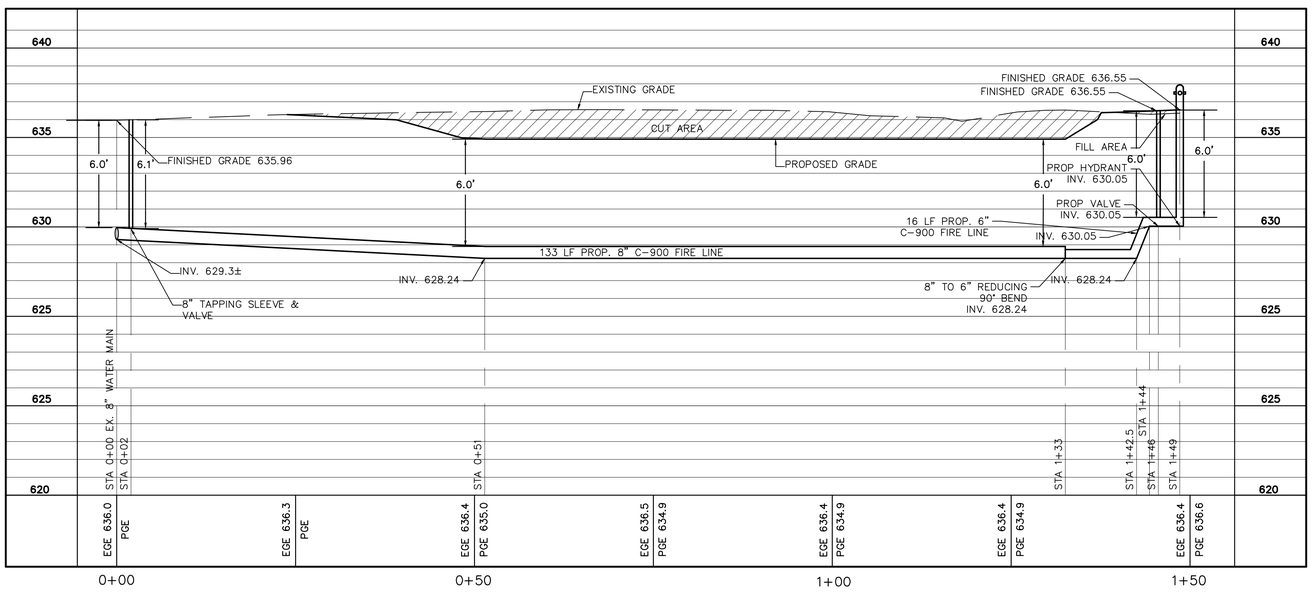
0 5 10 20
1 inch = 10 ft.

NOTES:

1. 18" MINIMUM VERTICAL CLEARANCE AND 10 FOOT HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN WATER MAIN AND ALL UTILITY CROSSINGS. WHERE LESS VERTICAL CLEARANCE IS PROVIDED, CONCRETE SADDLES WILL BE REQUIRED.
2. CONTRACTOR MAY RAISE HYDRANTS TO 6'–6" BURY BY ADDING MECHANICAL JOINTS, INSTALLED IN ACCORDANCE WITH UNION TOWNSHIP STANDARDS.
3. CONTRACTOR SHALL VERIFY THE ELEVATION OF THE EXISTING WATER MAIN PRIOR TO CONSTRUCTION. SHOULD DIFFERENCES BETWEEN THE FIELD MEASUREMENTS AND PLANS OCCUR, THE ENGINEER SHALL BE NOTIFIED.
4. ALL WATER MAIN CONSTRUCTED WITHIN THE INFLUENCE OF EITHER PROPOSED OR EXISTING ROADS SHALL BE COMPLETELY BACKFILLED WITH M.D.O.T CLASS II SAND IN MAXIMUM 12" LIFTS. BACKFILL DENSITY SHALL BE AS SPECIFIED IN THE ASPHALT PAVEMENT CROSS SECTION.
5. CARE IS TO BE TAKEN WHEN INSTALLING WATER SERVICE LEAD TO BUILDINGS TO INSURE THAT ACCEPTABLE UTILITY CROSSING CLEARANCES ARE MAINTAINED. (NO SERVICE LEADS ARE PROPOSED)
6. CONTRACTOR SHALL CALL "MISS DIG" A MINIMUM OF A 3 DAYS PRIOR TO COMMENCING ANY CONSTRUCTION WORK.
7. ALL MATERIALS AND CONSTRUCTION PROCEDURES SHALL BE IN COMPLIANCE WITH UNION TOWNSHIP STANDARDS (www.uniontownshipmi.com).
8. WATER MAIN TO BE AWWA C–900. WATER MAIN MUST BE STAMPED/MARKED NSF APPROVED ON PIPE.
9. THE CONTRACTOR IS REQUIRED TO ADJUST ALL FIRE HYDRANTS, VALVES, AND WATER SHUTOFF TO FINISH GRADE.
10. CONTRACTOR TO ENSURE A MINIMUM OF 5'–6" OF COVER OVER ALL WATER LEADS. (NO SERVICE LEADS ARE PROPOSED)
11. PRIOR TO CONNECTION OF EXISTING WATER MAIN THE NEW WATER MAIN ALL NEW WATER MAIN SHALL BE FLUSHED, CHLORINATED AND PRESSURE TESTED IN ACCORDANCE TO TOWNSHIP SPECIFICATIONS.
12. THE BACK FLOW PREVENTOR AND FIRE HYDRANTS SHALL BE BURIED A MINIMUM OF 6 FEET FROM THE FINISHED GRADE OF THE FIRE HYDRANT TO THE TOP OF THE PIPE.
13. ALL WATER MAINS MUST BE FLUSHED AND CLEANED OF SAND AND DEBRIS USING THE "POLY PIG" METHOD OF FLUSHING.
14. ALL SERVICE LEADS ARE TO BE CAPPED 5' FROM PROPOSED BUILDINGS AND/OR COORDINATED WITH PLUMBER. (NO SERVICE LEADS ARE PROPOSED)
15. PRESSURE TESTING MUST BE DONE IN ACCORDANCE WITH TOWNSHIP SPECIFICATION AND NOT MORE THAN 2,500 LF OF WATER MAIN WILL BE TESTED AT ONE TIME.
16. DISINFECTING OF WATER MAINS WILL BE DONE IN ACCORDANCE TO ALL TOWNSHIP SPECIFICATIONS AND WILL BE COMPLETED AFTER ALL WATER MAIN HAS BEEN FLUSHED AND PRESSURE TESTED.
17. OWNER AND ENGINEER SHALL BE NOTIFIED IMMEDIATELY AND FOLLOWED WITH WRITTEN DESCRIPTION OF FIELD FINDINGS NOTING SPECIFIC ELEVATIONS AND CONDITIONS THAT DIFFER FROM PLANNED DESIGNS. 2± FEET OF EXISTING CONDITIONS IS TO BE CORRECTED WITHOUT COST DEVIATION AND ACCEPTED AS FIELD CONDITIONS.
18. INSTALLATION OF ANY WATER MAIN, HYDRANT OR VALVES MUST BE INSPECTED BY UNION TOWNSHIP DURING INSTALLATION AND SCHEDULED WITH UNION TOWNSHIP UTILITY DEPARTMENT, AT (989) 772–4600 EXT. 224, AT LEAST 48 HOURS IN ADVANCE OF ANY WORK COMMENCING.

NOTE: CONTRACTOR TO VERIFY DEPTH OF EXISTING PUBLIC WATER LINE PRIOR TO ANY INSTALLATION.

PROFILE SCALE: 1" = 10' HORIZONTAL
1" = 4' VERTICAL



0 5 10 20
1 inch = 10 ft.

NOTE:
EGE – EXISTING GROUND ELEVATION
PGE – PROPOSED GROUND ELEVATION
VERTICAL SCALE 1" = 4'
HORIZONTAL SCALE 1" = 10'

PRIVATE FIRE LINE PROFILE
STA. 0+00 – 1+49

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PUBLIC WATER MAIN PLAN & PROFILE
ROOK METERING/MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:
PER MT. PLEASANT FIRE DEPARTMENT 8–17–22

SUBMITTALS:
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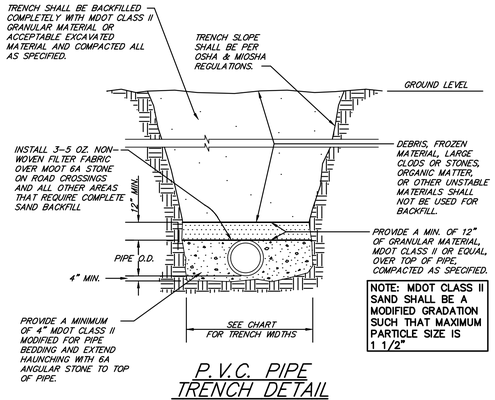
SUBMITTAL TO UNION TOWNSHIP 8–18–22
SUBMITTAL TO UNION TOWNSHIP 8–31–22
SUBMITTAL TO UNION TOWNSHIP 9–7–22

JOB NUMBER: 2203–042
DRAWN BY: CDS
DESIGNED BY: TELB
CHECKED BY: TELB

SCALE: 1" = 10'

SHEET NUMBER: 11 OF 18

046

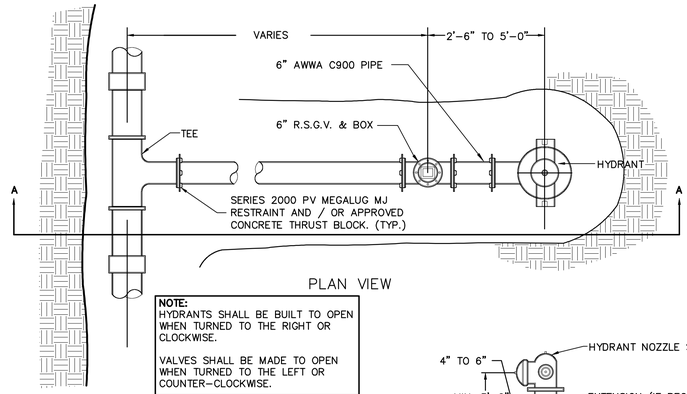


P.V.C. PIPE TRENCH DETAIL

NOT TO SCALE

TRENCH WIDTH CHART

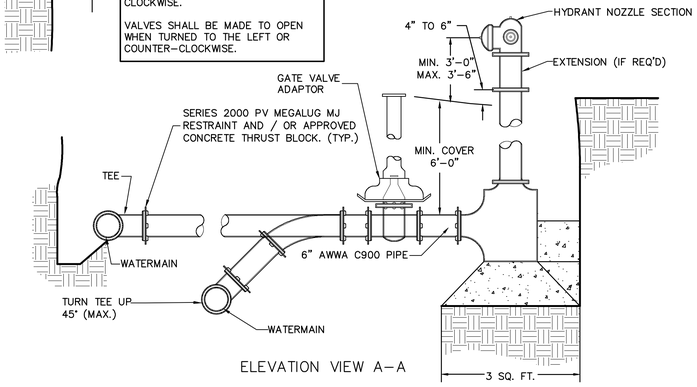
PIPE SIZE	MINIMUM	MAXIMUM
8" & 10"	24"	30"
12" & 15"	30"	36"
18"	34"	40"
21"	38"	42"
24"	42"	46"
27"	45"	49"
30"	49"	53"
36"	56"	60"
LARGER THAN 36"	I.D. +20"	I.D. +24"



PLAN VIEW

NOTE:
HYDRANTS SHALL BE BUILT TO OPEN WHEN TURNED TO THE RIGHT OR CLOCKWISE.

VALVES SHALL BE MADE TO OPEN WHEN TURNED TO THE LEFT OR COUNTER-CLOCKWISE.

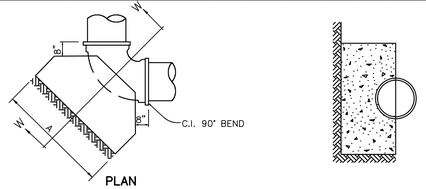


ELEVATION VIEW A-A

TYPICAL HYDRANT CONNECTION

NOT TO SCALE

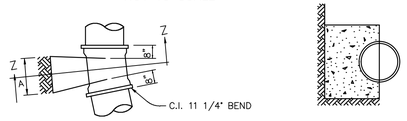
PIPE SIZE	90° BEND OR TEE				Q	45° BEND				Q	22 1/2° BEND				Q	11 1/4° BEND				Q	PLUG				Q
	A	B	C			A	B	C			A	B	C			A	B	C			A	B	C		
6",8" & 10"	3'-0"	2'-0"	1'-3"		0.3	2'-0"	1'-6"	1'-3"		0.1	1'-6"	1'-0"	1'-3"		0.1	1'-0"	1'-0"	1'-3"		0.1	2'-0"	2'-0"	1'-6"		0.2
12"	3'-0"	2'-6"	1'-6"		0.4	2'-0"	2'-0"	1'-6"		0.2	2'-0"	1'-0"	1'-6"		0.1	1'-0"	1'-0"	1'-6"		0.1	2'-0"	2'-6"	1'-6"		0.3



PLAN

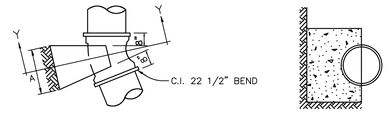
DETAIL OF BLOCK FOR 90° BEND OR TEE

Q = MIN. CU. YD. CONCRETE PER BLOCK
NOT TO SCALE



DETAIL OF BLOCK FOR 11 1/4° BEND

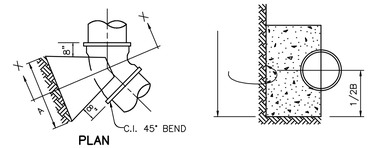
Q = MIN. CU. YD. CONCRETE PER BLOCK
NOT TO SCALE



PLAN

DETAIL OF BLOCK FOR 22 1/2° BEND

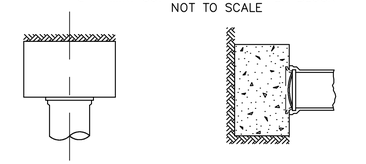
Q = MIN. CU. YD. CONCRETE PER BLOCK
NOT TO SCALE



PLAN

DETAIL OF BLOCK FOR 45° BEND

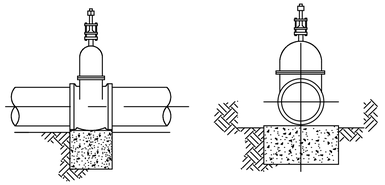
Q = MIN. CU. YD. CONCRETE PER BLOCK
NOT TO SCALE



PLAN SEC. V-V

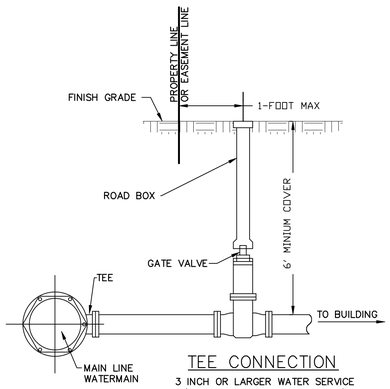
DETAIL OF BLOCK FOR PLUG

Q = MIN. CU. YD. CONCRETE PER BLOCK
NOT TO SCALE



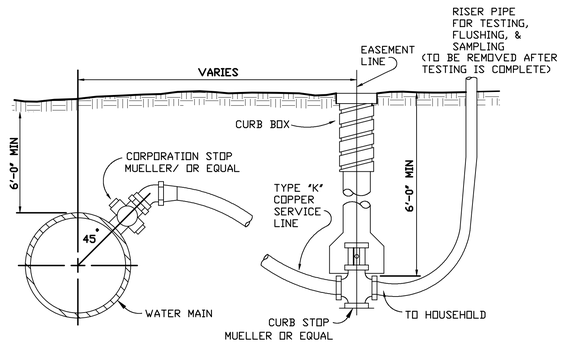
DETAIL OF BLOCK FOR GATE VALVES

NOT TO SCALE



TEE CONNECTION

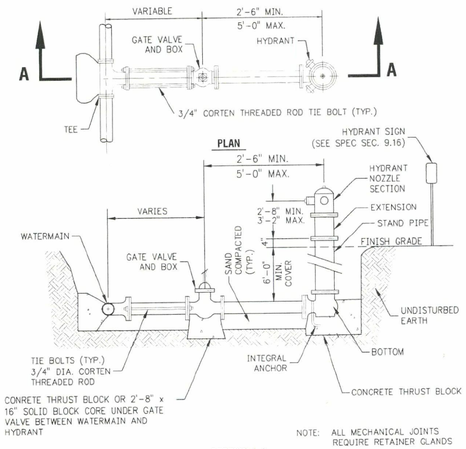
3 INCH OR LARGER WATER SERVICE
(INSTALLATION BY CONTRACTOR)



NOTE: ALL 2" BLOWOFFS AT WATERMAIN STUBS TO BE LOCATED BY ENGINEER/FIELD REPRESENTATIVE.

SERVICE CONNECTION DETAIL

NO SCALE



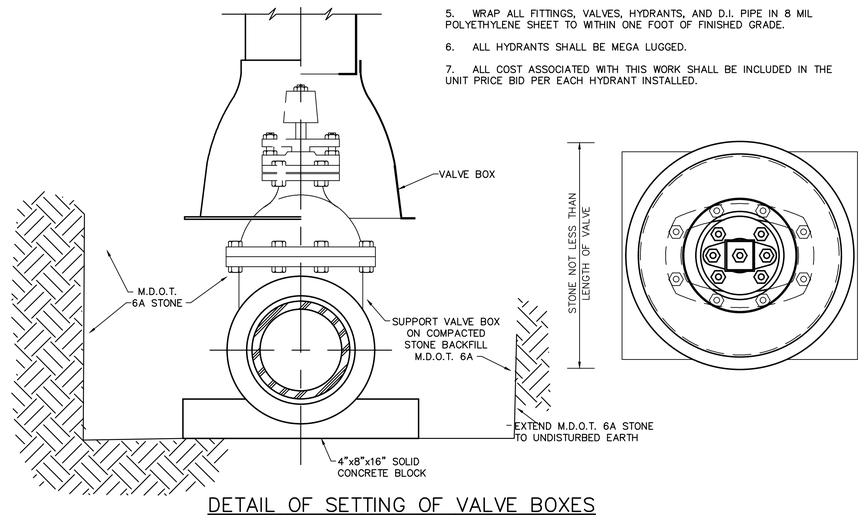
SECTION A-A

HYDRANT ASSEMBLY DETAIL

NO SCALE

NOTES:

1. THE CONCRETE USED FOR BLOCKING SHALL HAVE A MINIMUM COMPERSSIVE STRENGTH OF 3000 PSI IN 28 DAYS.
2. THE CONTRACTOR SHALL SECURE ALL VERTICAL BENDS WITH A MINIMUM OF 2/3/4 " ANCHOR RODS FITTING EITHER CONCRETE BLOCK, WELDED STEEL PIPE SLEEVE OR COLLARS. METHOD USED SHALL BE DETERMINED BY THE ENGINEER.
3. ALL BENDS SHALL BE MECHANICAL JOINT.
4. ALL FERROUS PARTS SHALL RECEIVE A 10 MIL (DMT) COATING OF COAL TAR EPOXY.
5. WRAP ALL FITTINGS, VALVES, HYDRANTS, AND D.I. PIPE IN 8 MIL POLYETHYLENE SHEET TO WITHIN ONE FOOT OF FINISHED GRADE.
6. ALL HYDRANTS SHALL BE MEGA LUGGED.
7. ALL COST ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH HYDRANT INSTALLED.



DETAIL OF SETTING OF VALVE BOXES

NOT TO SCALE

CMS & D
SURVEYING / ENGINEERING
2257 E. BROOMFIELD ROAD
MT. PLEASANT, MICHIGAN 48858
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

PUBLIC WATER MAIN DETAILS
ROOK METERING/MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:
PER MT. PLEASANT FIRE DEPARTMENT 8-17-22

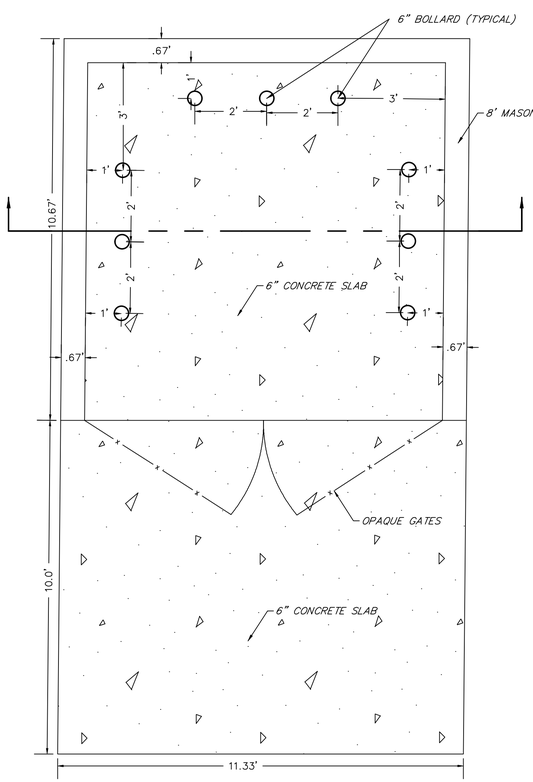
SUBMITTALS:
SUBMITTAL TO CLIENT FOR REVIEW 8-9-22
SUBMITTAL TO UNION TOWNSHIP 8-18-22
SUBMITTAL TO UNION TOWNSHIP 8-31-22
SUBMITTAL TO UNION TOWNSHIP 9-7-22

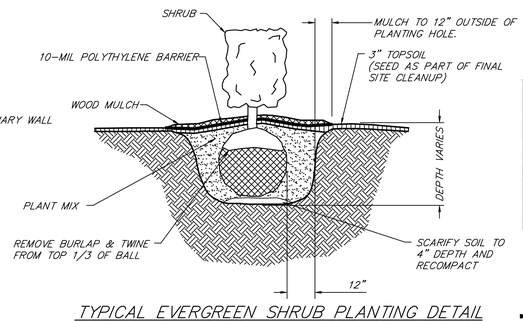
JOB NUMBER: 2203-042
DRAWN BY: CDS
DESIGNED BY: TELB
CHECKED BY: TELB

SCALE 1" = 10'

SHEET NUMBER 12 OF 18

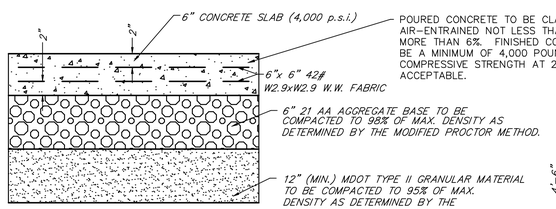
049





TYPICAL EVERGREEN SHRUB PLANTING DETAIL

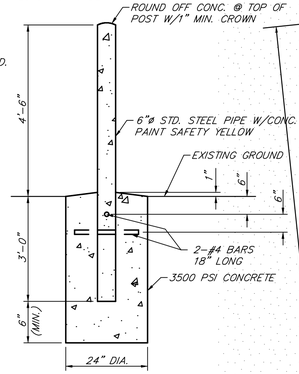
NOT TO SCALE



POURED CONCRETE TO BE CLASS "C" AIR-ENTRAINED NOT LESS THAN 3% OR MORE THAN 6%. FINISHED CONCRETE MUST BE A MINIMUM OF 4,000 POUND COMPRESSIVE STRENGTH AT 28 DAYS TO BE ACCEPTABLE.

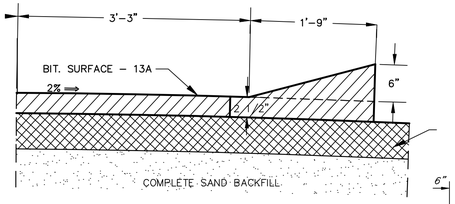
CONCRETE PAD CROSS-SECTION

NOT TO SCALE



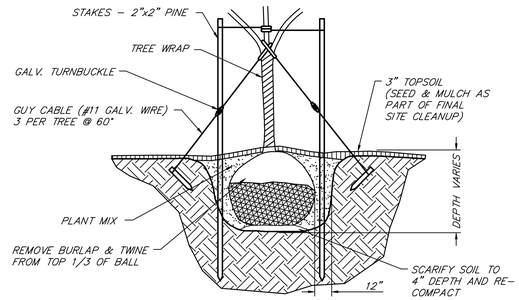
BOLLARD DETAIL

NOT TO SCALE



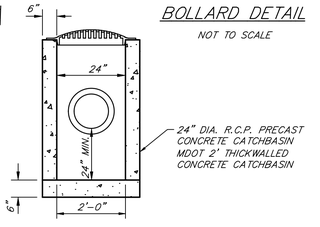
PROPOSED ASPHALT CURB DETAIL

NOT TO SCALE



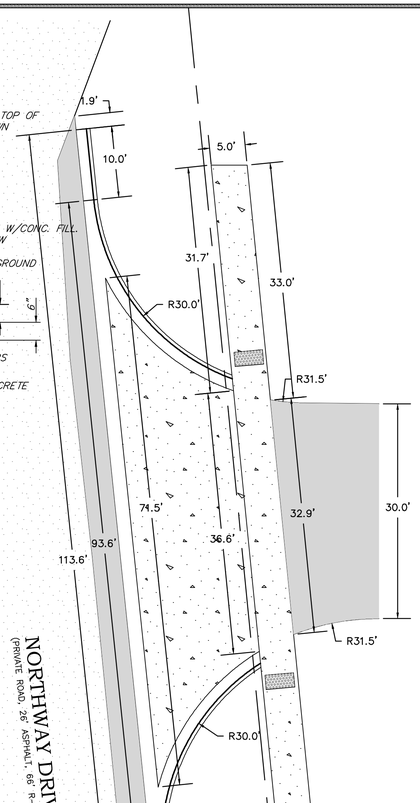
TYP. TREE PLANTING DETAIL

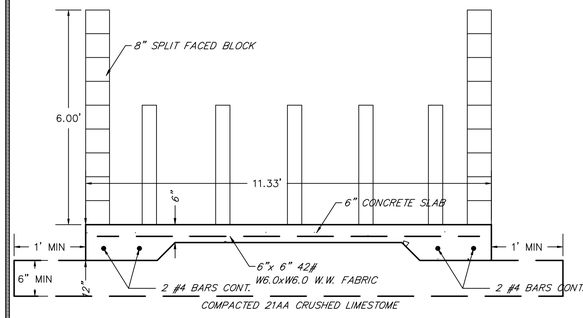
NOT TO SCALE



2' DIA. CATCH BASIN DETAIL

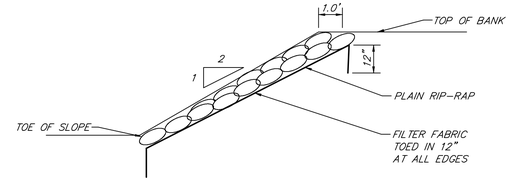
NOT TO SCALE





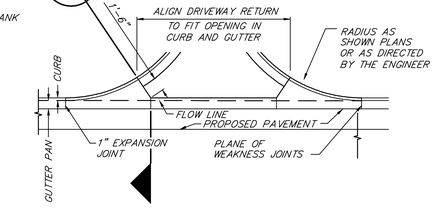
DUMPSTER DETAIL

NOT TO SCALE



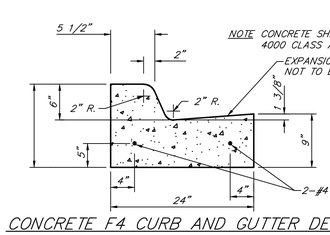
D / SXX RIP-RAP SPILLWAY

NOT TO SCALE



CONCRETE DRIVEWAY OPENING - DETAIL M

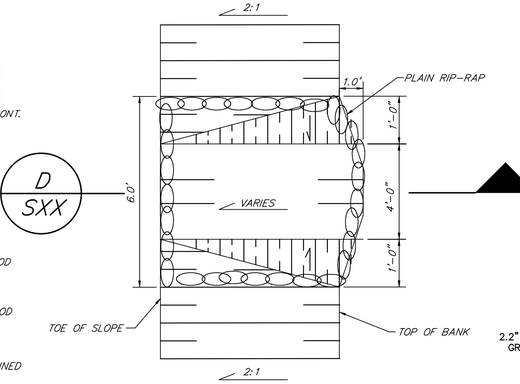
NOT TO SCALE



CONCRETE F4 CURB AND GUTTER DETAIL

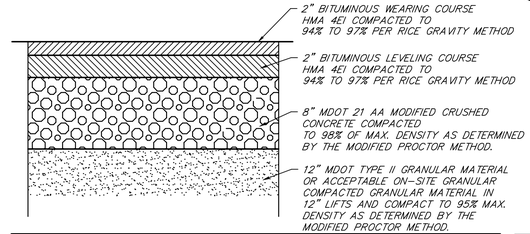
REGULAR PAN

NOT TO SCALE



RIP-RAP SPILLWAY

NOT TO SCALE



NOTE: THESE SECTIONS ARE CONSIDERED MINIMUM SECTIONS. COMPACTION TESTS ARE REQUIRED. RESULTS SHALL BE SUBMITTED TO OWNER PRIOR TO FINAL ACCEPTANCE OF SUB-BASE, BASE AND ASPHALT MATERIALS.

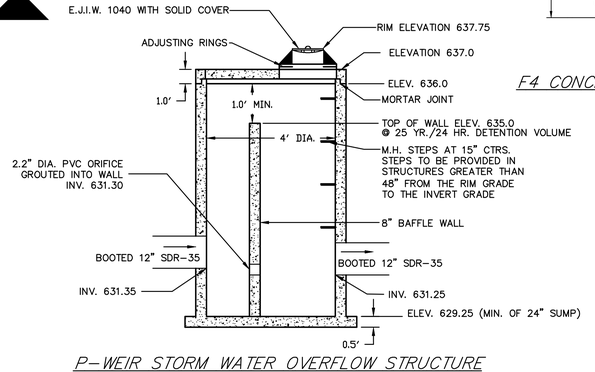
NOTE: FOR ASPHALT MIXTURE DESIGN REQUIREMENTS REFER TO GEOTECHNICAL EVALUATION REPORT

STANDARD DUTY ASPHALT PAVEMENT CROSS-SECTION

NOT TO SCALE

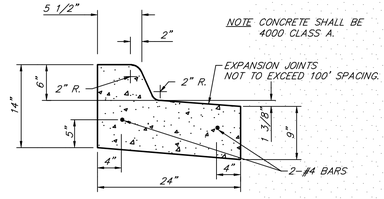
BAFFLE WALL CONSTRUCTION NOTES

1. BAFFLE WALL TO BE CONSTRUCTED OF 8" CONCRETE BLOCK WITH SMOOTH-RAKED JOINTS.
2. EPOXY #4 REINFORCING BARS INTO THE SIDEWALLS AND BASE OF THE PRECAST STRUCTURE AT 8" SPACING. BARS ARE TO EXTEND ACROSS THE ENTIRE WIDTH OF THE STRUCTURE.
3. PLACE #4 REINFORCING BARS IN THE BAFFLE WALL VERTICALLY AT 12" SPACINGS. THE VERTICAL BARS TO HORIZONTAL BARS.
4. GROUT-FILL ALL CONCRETE BLOCK
5. COAT ENTIRE BAFFLE WALL WITH XYPEX WATERPROOFING OR APPROVED EQUAL.



P-WEIR STORM WATER OVERFLOW STRUCTURE

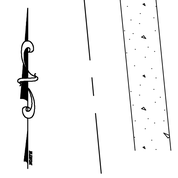
NOT TO SCALE



F4 CONCRETE CURB AND GUTTER DETAIL

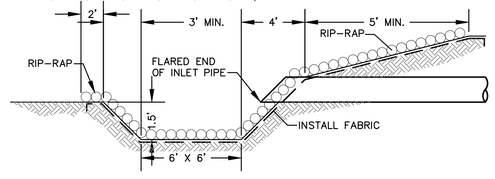
REVERSE PAN

NOT TO SCALE



DRIVE ENTRANCE DETAIL

NOT TO SCALE



RIP-RAP SEDIMENT TRAP DETAIL

NOT TO SCALE

CMS & D
SURVEYING / ENGINEERING
2257 E. BROOMFIELD ROAD
MT. PLEASANT, MICHIGAN 48858
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

DETAILS SHEET

ROOK METERING/MICHAEL ENGINEERING
PART OF LOT 6
ENTERPRISE PARK
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

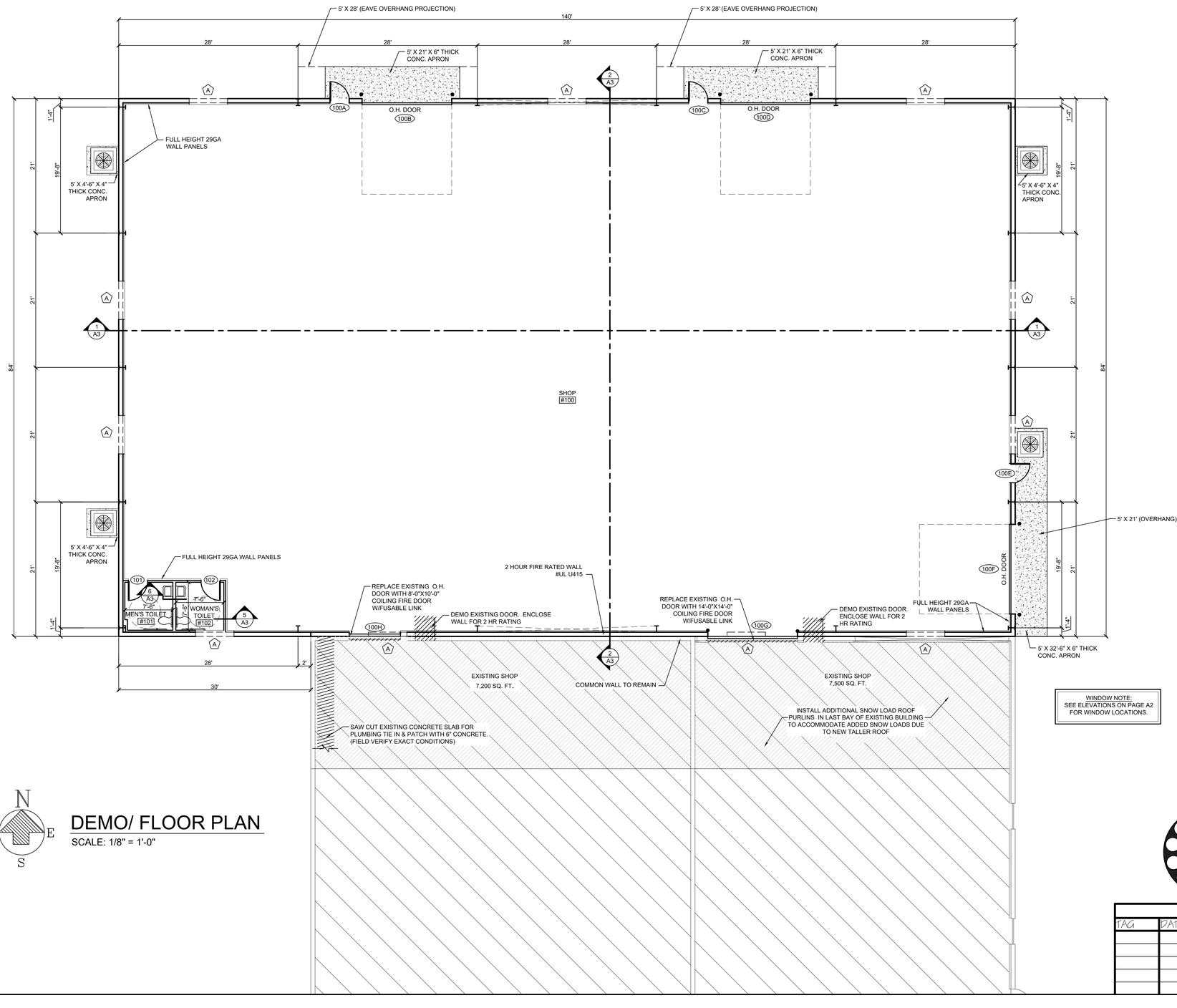
REVISIONS:
PER MT. PLEASANT FIRE DEPARTMENT 8-17-22

SUBMITTALS:
SUBMITTAL TO CLIENT FOR REVIEW 8-9-22
SUBMITTAL TO UNION TOWNSHIP 8-18-22
SUBMITTAL TO UNION TOWNSHIP 8-31-22
SUBMITTAL TO UNION TOWNSHIP 9-7-22

JOB NUMBER: 2203-042
DRAWN BY: CDS
DESIGNED BY: TELB
CHECKED BY: TELB

SCALE 1" = 20'

SHEET NUMBER 13 OF 18



WINDOW NOTE:
SEE ELEVATIONS ON PAGE A2
FOR WINDOW LOCATIONS.

N
W E
S

DEMO/ FLOOR PLAN

SCALE: 1/8" = 1'-0"

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

JBS JOB NUMBER:
DRAWING NAME: DEMO/ FLOOR PLAN
DRAWN BY: DKG
REVIEWED BY:
FIELD SUPERVISOR:
DATE: 7-20-2022

ENGINEER'S SEAL:

MICHAEL ENGINEERING
5625 VENTURE WAY
MT. PLEASANT, MI 48858

JBS Contracting Inc.
COMMERCIAL/INDUSTRIAL CONSTRUCTION
1680 GOVER PARKWAY
MT. PLEASANT, MI 48858
(989) 775-0770

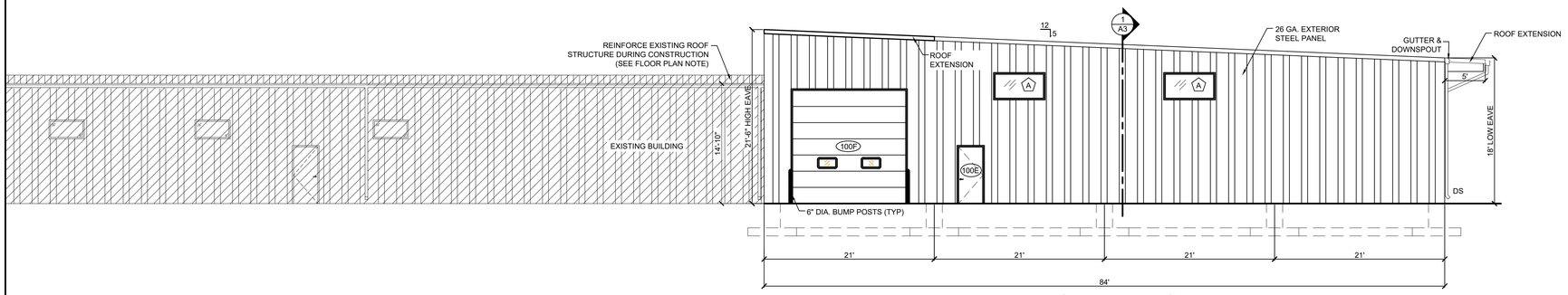
SCALE:
1/8" = 1'-0"

REVISIONS

TAG	DATE:	CHANGE:

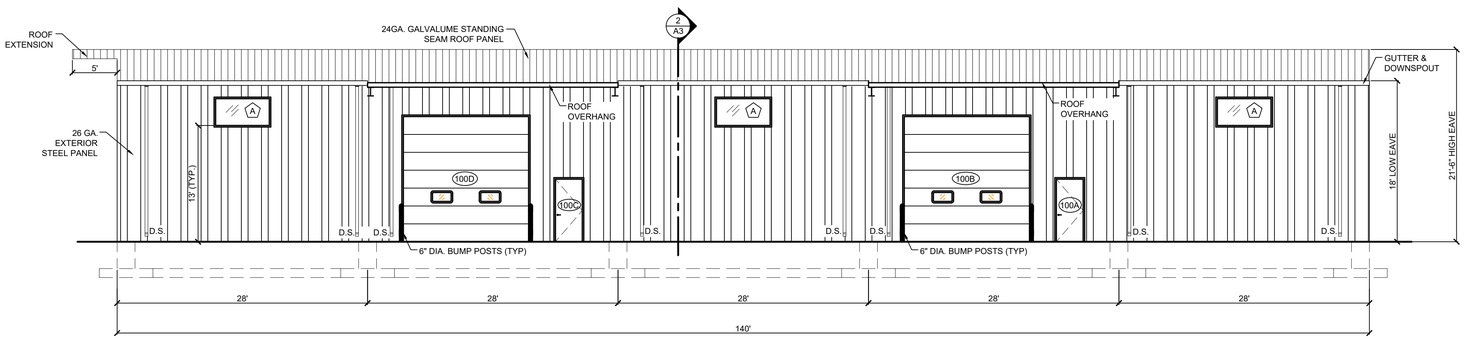
A1

MICHAEL ENGINEERING



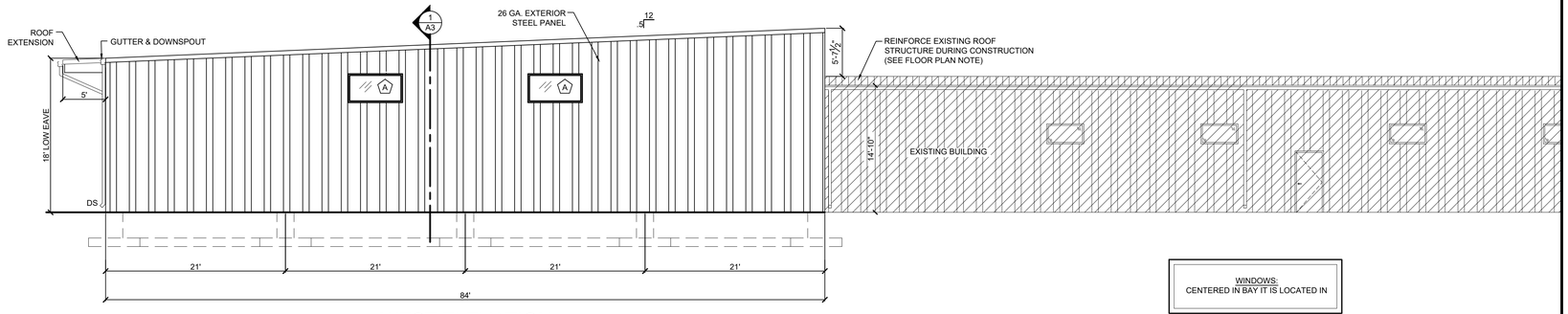
EAST ELEVATION

SCALE: 1/8"=1'-0"



NORTH ELEVATION

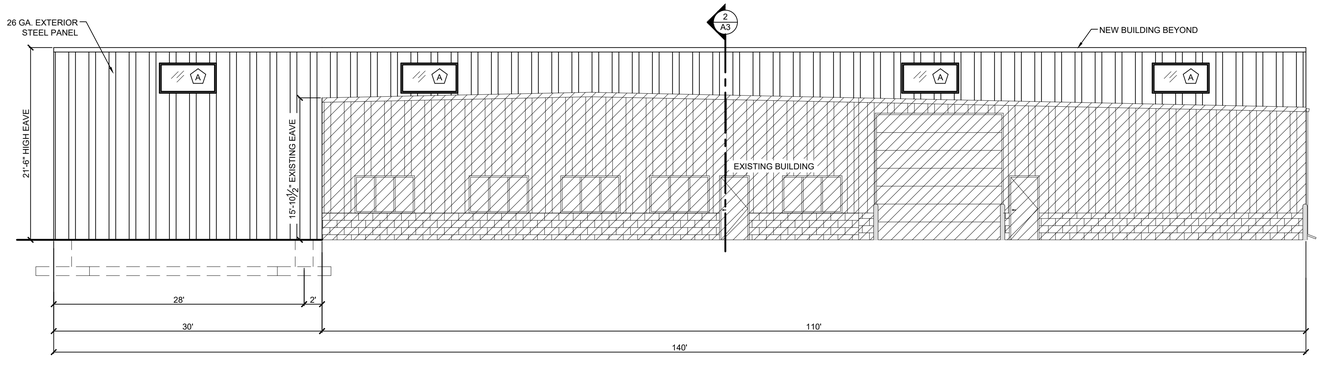
SCALE: 1/8"=1'-0"



WEST ELEVATION

SCALE: 1/8"=1'-0"

WINDOWS:
CENTERED IN BAY IT IS LOCATED IN



SOUTH ELEVATION

SCALE: 1/8"=1'-0"

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

REVISIONS		
TAG	DATE:	CHANGE:

JBS JOB NUMBER:
DRAWING NAME: ELEVATIONS
DRAWN BY: DKG
REVIEWED BY:
FIELD SUPERVISOR:
DATE: 7-20-2022

ENGINEER'S SEAL:

MICHAEL ENGINEERING
5625 VENTURE WAY
MT. PLEASANT, MI 48858

COMMERCIAL/INDUSTRIAL CONSTRUCTION

JBS Contracting Inc.
1680 COVER PARKWAY
MT. PLEASANT, MI 48858
(989) 775-0770

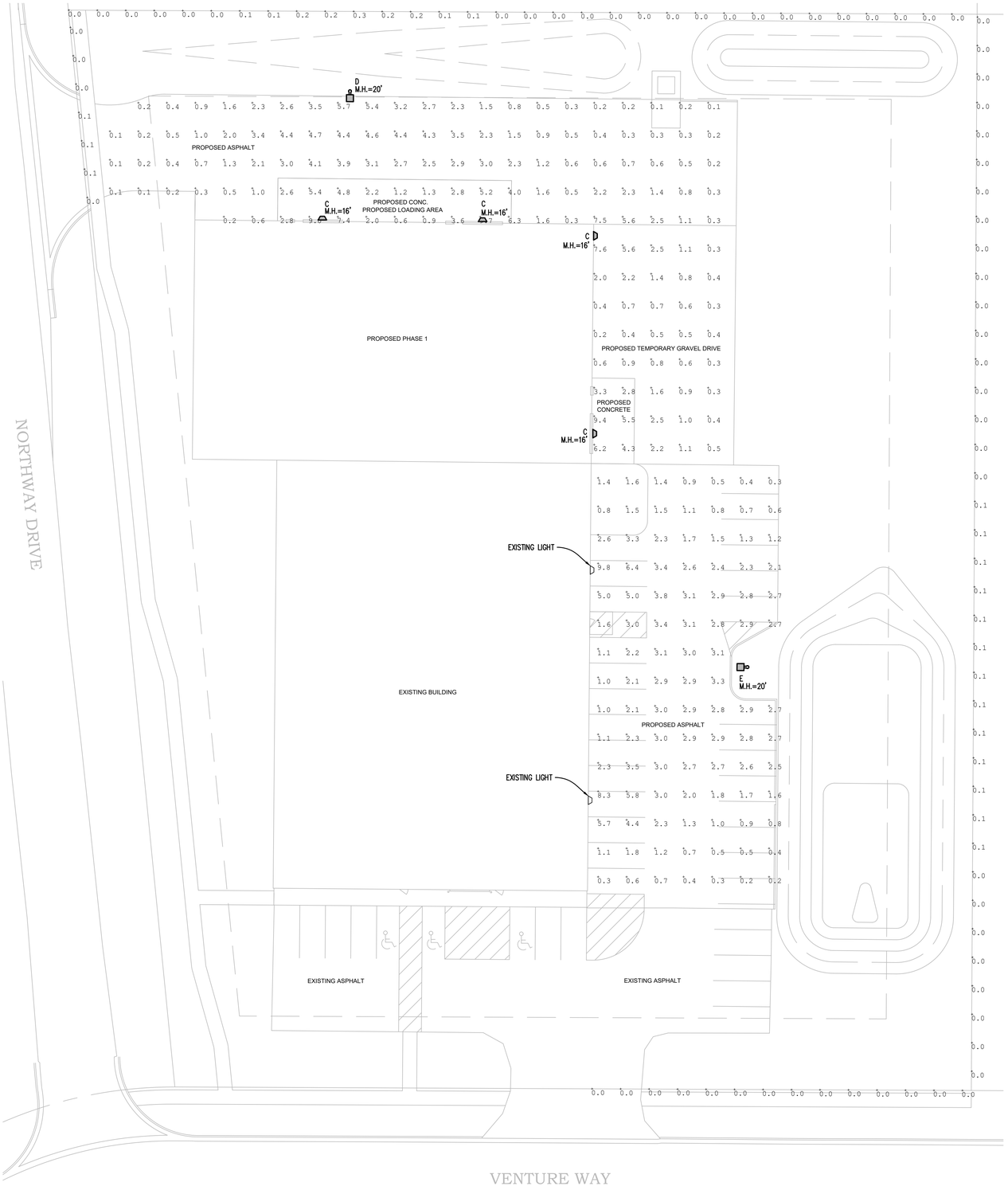
SCALE:
1/8" = 1'-0"

A2

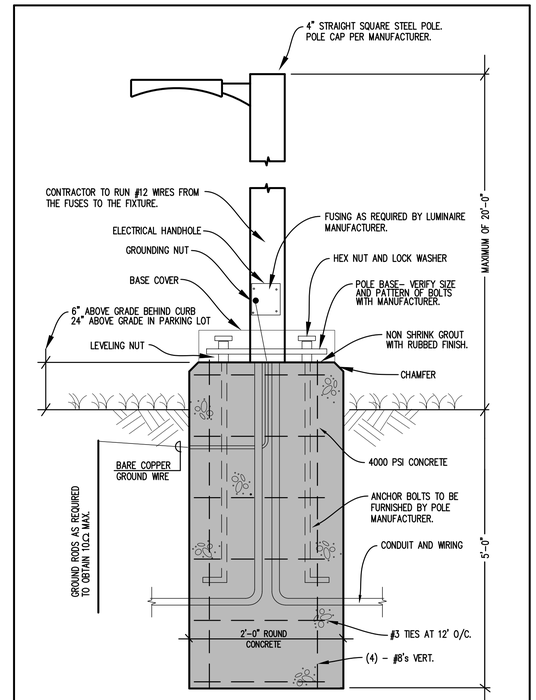
MICHAEL ENGINEERING

052

THESE DRAWINGS ARE THE PROPERTY OF THE ARCHITECT/ENGINEER AND ARE NOT TO BE REUSED OR REPRODUCED WITHOUT THEIR WRITTEN PERMISSION. THIS DRAWING IS COPYWRITTEN



Phase 1 Site Lighting Plan
SCALE: 1" = 20'-0"



LIGHT POLE BASE DETAIL

NO SCALE

PHOTOMETRIC VALUES

	AVERAGE	MAXIMUM	MINIMUM	AVE/MAX
PARKING LOT (FC)	2.12	9.8	0.1	21.2
PROPERTY LINE (FC)	0.03	0.3	0.0	N/A

SITE LIGHTING SCHEDULE

SYMBOL	QTY	"MANUFACTURER" MODEL #	ARRANGEMENT	LUMENS	WATTS	NOTES
C D	6	"ORION" - LSWF1-B1UNV-FD-8CS-BR	N/A	7000	45	ON FROM DUSK TO DAWN, SECURITY LIGHTING
D	1	"BEACON" - VP-1-160L-75-4K7-2-UNV-A-XXX-BTS-40F *	N/A	10000	75	ON FROM DUSK TO DAWN, SECURITY LIGHTING
E	1	"BEACON" - VP-1-160L-160-4K7-5QW-UNV-A-XXX-BTS-40F *	N/A	21000	160	ON FROM DUSK TO DAWN, SECURITY LIGHTING

* FINISH COLOR TO BE CHOSEN BY OWNER

GENERAL SITE NOTES:

1. THE CONTRACTOR SHALL CALL "MISS DIG" (811) 3 WORKING DAYS BEFORE DIGGING ON THE PROJECT TO VERIFY EXISTING UNDERGROUND UTILITIES.
2. EXISTING UNDERGROUND UTILITIES ARE NOT SHOWN ON THIS PLAN. CONTRACTOR SHALL CONSULT THE CIVIL ENGINEERING DRAWINGS FOR LOCATIONS OF UNG'D. UTILITIES.
3. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR PROTECTION OF EXISTING UTILITIES DURING CONSTRUCTION. COSTS FOR LOCATING, REMOVING, REPLACING OR RELOCATING THESE UTILITIES SHALL BE INCIDENTAL TO CONSTRUCTION. UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED WITH LIKE MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

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

CONSULTING ENGINEER
KTS ENGINEERING GROUP
P.O. BOX 446
SHEPHERD, MI. 48883
(PH) 989-567-1100
info@KTSEngineeringGroup.com

JBS JOB NUMBER:
DRAWING NAME: SITE LIGHTING PLAN
DRAWN BY: AMT
REVIEWED BY: KTS
FIELD SUPERVISOR:
DATE: 8/17/2022

ENGINEER'S SEAL:

MICHAEL ENGINEERING
5625 VENTURE WAY
MT. PLEASANT, MI 48858

JBS Contracting Inc.
COMMERCIAL/INDUSTRIAL CONSTRUCTION
1680 GOVER PARKWAY
MT. PLEASANT, MI 48858
(989) 775-0770

SCALE:
1" = 20'-0"

REVISIONS		
TAG	DATE:	CHANGE:

ES1

MICHAEL ENGINEERING

053

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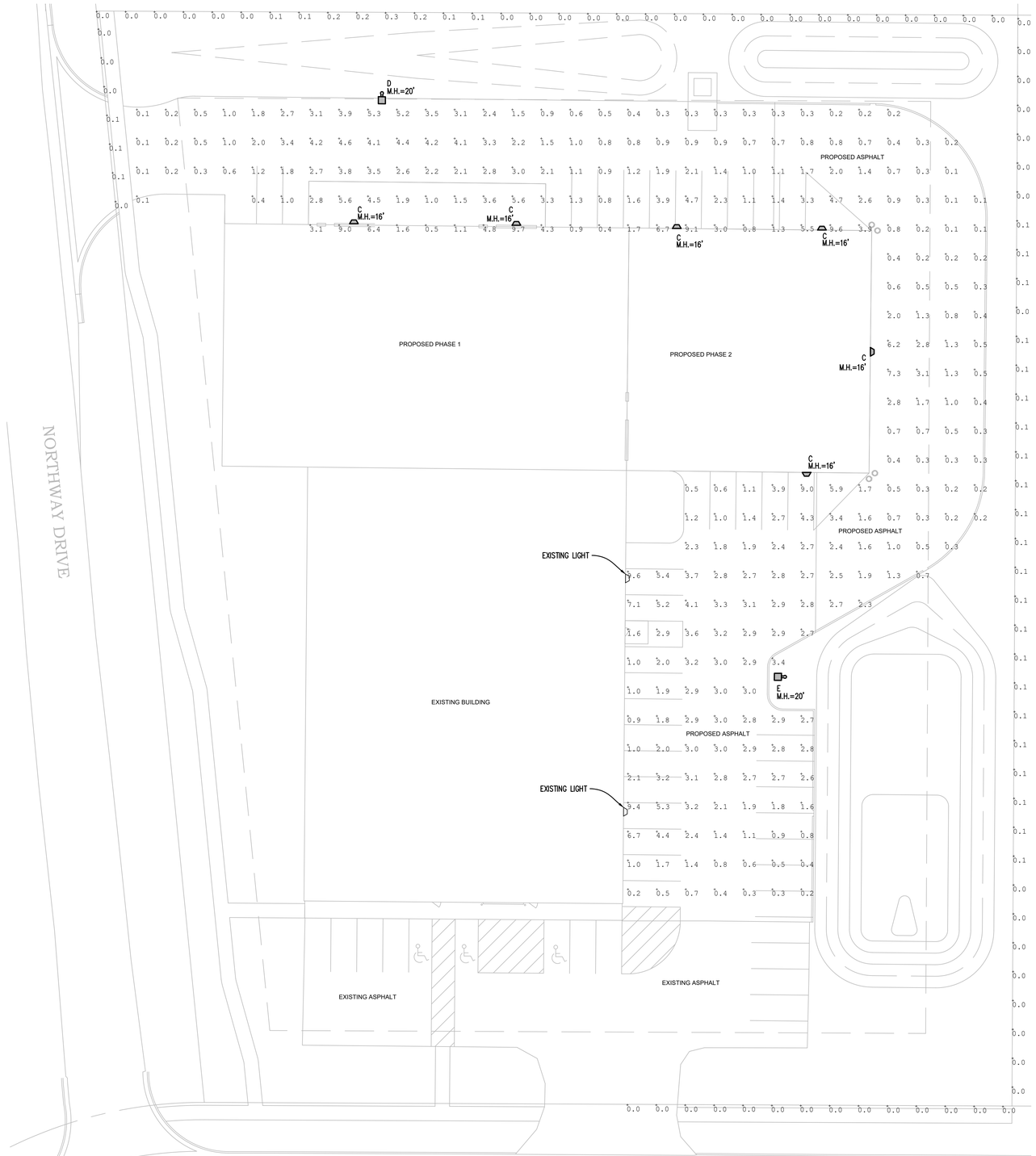
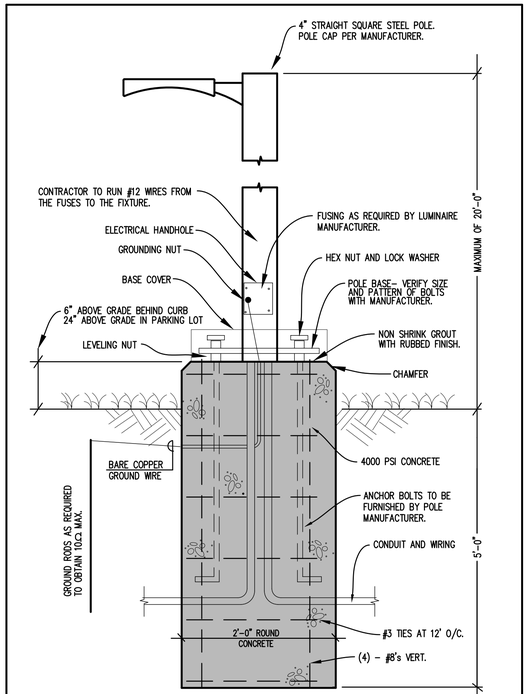


Phase 2 Site Lighting Plan
SCALE: 1" = 20'-0"



LIGHT POLE BASE DETAIL
NO SCALE

PHOTOMETRIC VALUES

	AVERAGE	MAXIMUM	MINIMUM	AVE/MAX
PARKING LOT (FC)	2.09	9.7	0.1	20.9
PROPERTY LINE (FC)	0.04	0.3	0.0	N/A

GENERAL SITE NOTES:

1. THE CONTRACTOR SHALL CALL "MISS DIG" (811) 3 WORKING DAYS BEFORE DIGGING ON THE PROJECT TO VERIFY EXISTING UNDERGROUND UTILITIES.
2. EXISTING UNDERGROUND UTILITIES ARE NOT SHOWN ON THIS PLAN. CONTRACTOR SHALL CONSULT THE CIVIL ENGINEERING DRAWINGS FOR LOCATIONS OF UNG'D. UTILITIES.
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SITE LIGHTING SCHEDULE

SYMBOL	QTY	"MANUFACTURER" MODEL #	ARRANGEMENT	LUMENS	WATTS	NOTES
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D	1	"BEACON" - VP-1-160L-75-4K7-2-UNV-A-XXX-BTS-40F *	N/A	10000	75	ON FROM DUSK TO DAWN, SECURITY LIGHTING
E	1	"BEACON" - VP-1-160L-160-4K7-5QW-UNV-A-XXX-BTS-40F *	N/A	21000	160	ON FROM DUSK TO DAWN, SECURITY LIGHTING

* FINISH COLOR TO BE CHOSEN BY OWNER

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

REVISIONS

TAG	DATE:	CHANGE:

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SHEPHERD, MI. 48883
(PH) 989-567-1100
info@KTSEngineeringGroup.com

JBS JOB NUMBER:
DRAWING NAME: SITE LIGHTING PLAN
DRAWN BY: AMT
REVIEWED BY: KTS
FIELD SUPERVISOR:
DATE: 8/17/2022

ENGINEER'S SEAL:

MICHAEL ENGINEERING
5625 VENTURE WAY
MT. PLEASANT, MI 48858

JBS Contracting Inc.
1680 COVER PARKWAY
MT. PLEASANT MI 48858
(989) 775-0770

COMMERCIAL/INDUSTRIAL
CONSTRUCTION

SCALE:
1" = 20'-0"

ES2

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KTS ENGINEERING GROUP
P.O. BOX 446
SHEPHERD, MI. 48883
(PH) 989-567-1100
info@KTSEngineeringGroup.com

JBS JOB NUMBER:
DRAWING NAME: SITE LIGHTING PLAN
DRAWN BY: AMT
REVIEWED BY: KTS
FIELD SUPERVISOR:
DATE: 8/17/2022

ENGINEER'S SEAL:

MICHAEL ENGINEERING
5625 VENTURE WAY
MT. PLEASANT, MI 48858

COMMERCIAL/INDUSTRIAL CONSTRUCTION

JBS Contracting Inc.
1680 COVER PARKWAY
MT. PLEASANT, MI 48858
(989) 773-0770

SCALE:
NO SCALE

REVISIONS		
TAG	DATE:	CHANGE:

ES3

MICHAEL ENGINEERING

HARRIS LUMEN SELECT WALL PACK, FULL CUTOFF, GEN 1

LSWF1

Applications
Full cutoff light output is ideal for exterior walls, entrance ways, pathways and steps. The HARRIS LSWF1 delivers energy savings and reduced maintenance costs and ideally replace any existing traditional style HID wall packs with similar look and size. It is the ultimate flexible wall pack fixture with lumen output and color temperature selection at the point of installation.

LSWF1A1UNVFD8CSBR-SP

FIELD ADJUSTABLE WATTAGE/LIGHT OUTPUT AND CCT

Features

- Die-cast aluminum housing with UV stabilized powder coat finish for harsh outdoor environments. Bronze fixture housing color is standard. Black and white fixture housing colors available.
- UV resistant polycarbonate lens
- Two fixture sizes with selectable power/lumens between 3,000-18,000 lumen outputs provide flexibility to adjust in the field
- 80 CRI minimum; CCT selectable between 3000K, 4000K or 5000K
- Latest generation of LED technology enables fixture to run at lower wattages resulting in additional energy savings
- Meets full cutoff requirements at 90° horizontal
- Battery back up option available (90 minutes; A1 lumen package only)
- Integrated photocell standard
- PIR and Microwave sensor options

Electrical

- Available in 120v-277v
- 0-10v Continuous Dimming
- Power Factor >0.90
- Total Harmonic Distortion < 20%
- 10kV/5kA Surge Protection Standard

Ambient Operating Range

See ambient operating table on page 2

Fixture Certifications & Listings

- cUL/cULus Listed
- UL Wet Listed
- DesignLights Consortium™ Premium qualified luminaire
- Visit the DLC QPL for listed models

Lumen Maintenance

See lumen maintenance table on page 2

Warranty

See Orion's Product Limited Warranty for more details and information

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HARRIS LUMEN SELECT WALL PACK, FULL CUTOFF, GEN 1

LSWF1

Performance Information, 277v, ≥80 CRI[2]

Nominal Lumen Code	Wattage	3000K		4000K		5000K		Input Current
		Actual Lumens	LPW	Actual Lumens	LPW	Actual Lumens	LPW	
A1	24w	2,995lm	125	3,102lm	129	3,059lm	128	0.2A
	30w	3,555lm	118	3,682lm	123	3,631lm	121	0.24A
	40w	4,782lm	120	4,953lm	124	4,885lm	122	0.35A
B1	45w	6,013lm	134	6,768lm	150	6,674lm	148	0.37A
	54w	7,237lm	134	8,146lm	151	8,033lm	149	0.46A
	70w	8,779lm	125	9,881lm	141	9,745lm	139	0.59A
	80w	9,657lm	121	10,870lm	136	10,719lm	134	0.66A
C1	83w	11,480lm	138	11,890lm	143	11,726lm	141	0.69A
	111w	14,614lm	132	15,137lm	136	14,928lm	134	0.93A
	150w	18,421lm	123	19,080lm	127	18,816lm	125	1.21A

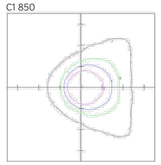
Lumen Maintenance

Nominal Lumen Code	Nominal Lumens	Calculated Lumen Maintenance		
		L70	L80	L90
A1	3,000/4,000/5,000	372,000	228,000	101,000
B1	6,000/7,000/9,000/10,000	372,000	228,000	101,000
C1	12,000/15,000/18,000	372,000	228,000	101,000

Photometrics

Visit orionlighting.com to obtain all .IES files

C1 850



Distance in Units of Mounting Height
Mounting Height: 30'
Max. Calculated Value: 8.09 FC

Ambient Operating Temperatures[4,5]

Nominal Lumen Code	Standard Range
All Lumen Packages	-40°C to 50°C [-40°F to 122°F]

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HARRIS LUMEN SELECT WALL PACK, FULL CUTOFF, GEN 1

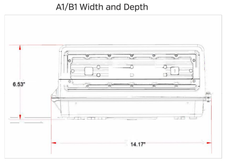
LSWF1

Physical Information[3]

Nominal Lumen Code	Height	Width	Depth	Weight
A1/B1	9.29"	14.17"	6.53"	7.50lbs.
C1	9.29"	14.17"	9.65"	11.20lbs.

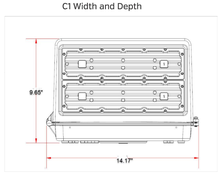
A1/B1 Height

A1/B1 Width and Depth



C1 Height

C1 Width and Depth



Additional Specification Information

[1] For actual lumens, see performance table
[2] Actual performance may vary by up to ±10% of values listed; facility factors and fixture options can affect performance values.
[3] Weight will vary based on option selection
[4] Ambient operating temperature range for battery back up is -20°C to 50°C [-4°F to 122°F]
[5] Ambient operating temperature for sensors only go down to -30°C [-22°F]

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P-INTXS-198 Rev. 211105

HARRIS LUMEN SELECT WALL PACK, FULL CUTOFF, GEN 1

LSWF1

Ordering Information Example (NOTE: No dashes or spaces unless noted below)

Series	Nominal Lumen Code	Voltage	Driver Type	CRI; Color Temp	Fixture Colors	Fixture Options	Packaging Options
LSWF1	C1	UNV	FD	8CS	BR	[blank]	-SP

Ordering Information

Series	Nominal Lumen Code[1]	Voltage	Driver Type	CRI; Color Temp	Fixture Colors	Fixture Options	Packaging Options
LSWF1= HARRIS LED Lumen Selectable Wall pack, Full Cutoff, Gen 1	**A1**= Lumen Selectable 3,000 lm/ 4,000 lm/ 5,000 lm **B1**= Lumen Selectable 6,000 lm/ 7,000 lm/ 9,000 lm/ 10,000 lm **C1**= Lumen Selectable 12,000 lm/ 15,000 lm/ 18,000 lm	**UNV**= 120v-277v	**FD**= Factory Wired for Dimming Applications	**8CS**= 80CRI; Color Selectable 3000K/ 4000K/ 5000K	**BR**= Bronze **BL**= Black* **WH**= White* *Note: These fixture colors are special order and have longer lead times	**[Blank]**= No Options **BB**= Battery Back Up[4] *Note: Available with **A1** model only	**-SP**= Single Pack

Fixture Options (Field Installed)

Sensor Options[5]	
EXT-LSW-MS	Microwave Sensor
EXT-LSW-PIR	PIR Sensor
EXT-LSW-RC	Sensor Remote Control

Microwave Sensor [EXT-LSW-MS]

PIR Sensor [EXT-LSW-PIR]

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P-INTXS-198 Rev. 210810

BEACON
design · performance · technology

DATE: LOCATION:
TYPE: SA/SB/SC PROJECT:
CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

MICROSTRIKE OPTICS | STRIKE

FEATURES

- Low profile LED area/site luminaire with a variety of IES distributions for lighting applications such as auto dealership, retail, commercial, and campus parking lots
- Featuring two different optical technologies, Strike and Micro Strike Optics, which provide the best distribution patterns for retrofit or new construction
- Rated for high vibration applications including bridges and overpasses. All sizes are rated for 1.5G
- Control options including photo control, occupancy sensing, NX Distributed Intelligence™, wiSCAPE and 7-Pin with networked controls
- New customizable lumen output feature allows for the wattage and lumen output to be customized in the factory to meet whatever specification requirements may entail
- Field interchangeable mounting provides additional flexibility after the fixture has shipped

cULus IP65 — Buy American Solutions — See Certification Specifications

CONTROL TECHNOLOGY

NX DISTRIBUTED INTELLIGENCE wiSCAPE

SPECIFICATIONS

CONSTRUCTION
- Die-cast housing with hidden vertical heat fins are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with 1000 hour powder coat paint finish
- External hardware is corrosion resistant

OPTICS
- Micro Strike Optics (160, 320, 480, or 720 LED counts) maximize uniformity in applications and come standard with mid-power LEDs which evenly illuminate the entire luminous surface area to provide a low glare appearance. Catalog logic found on page 2
- Strike Optics (36, 72, 108, or 162 LED counts) provide best in class distributions and maximum pole spacing in new applications with high powered LEDs. Strike optics are held in place with a polycarbonate bezel to mimic the appearance of the Micro Strike Optics so both solutions can be combined on the same application. Catalog logic found on page 3
- Both optics maximize target zone illumination with minimal losses at the house-side, reducing light trespass issues. Additional backlight control shields and house side shields can be added for further reduction of illumination behind the pole
- One-piece silicone gasket ensures a weatherproof seal
- Zero up-light at 0 degrees of tilt
- Field rotatable optics

INSTALLATION
- Mounting patterns for each arm can be found on page 11
- Optional universal mounting block for ease of installation during retrofit applications. Available as an option (ASQU) or accessory for square and round poles.
- All mounting hardware included

INSTALLATION (CONTINUED)
- Knuckle arm fitter option available for 2-3/8" OD tenon
- For products with EPA less than 1 mounted to a pole greater that 20ft, a vibration damper is recommended

ELECTRICAL
- Universal 120-277 VAC or 347-480 VAC input voltage, 50/60 Hz
- Ambient operating temperature -40°C to 40°C
- Drivers have greater than 90% power factor and less than 20% THD
- LED drivers have output power over-voltage, over-current protection and short circuit protection with auto recovery
- Field replaceable surge protection device provides 20kA protection meeting ANSI/ IEEE C62.41.2 Category C High and Surge Location Category C3; Automatically takes fixture off-line for protection when device is compromised

CONTROLS
- Photo control, occupancy sensor programmable controls, and Zigbee wireless controls available for complete on/off and dimming control
- Please consult brand or sales representative when combining control and electrical options as some combinations may not operate as anticipated depending on your application
- 7-pin ANSI C136.41-2013 photocontrol receptacle option available for twist lock photocontrols or wireless control modules (control accessories sold separately)
- 0- 10V Dimming Drivers are standard and dimming leads are extended out of the luminaire unless control options require connection to the dimming leads. Must specify if wiring leads are to be greater than the 6" standard

CONTROLS (CONTINUED)
- NX Distributed Intelligence™ available with in fixture wireless control module, features dimming and occupancy sensor
- wiSCAPE® available with in fixture wireless control module, features dimming and occupancy sensor. Also available in 7-pin configuration

CERTIFICATIONS
- Meets the qualifications for DLC Premium
- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- 1.5 G rated for ANSI C136.31 high vibration applications
- Fixture is IP65 rated
- Meets IDA recommendations using 3K CCT configuration at 0 degrees of tilt
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/23/2020. See Buy American Solutions.

WARRANTY
- 5 year warranty
- See HLI Commercial and Industrial Outdoor Lighting Warranty for additional information

KEY DATA	
Lumen Range	5,000–80,000
Wattage Range	36–600
Efficacy Range (LPW)	92–155
Weight lbs. (kg)	13.7-30.9 (6.2-13.9)

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HUBBELL Lighting

BEACON
design · performance · technology

DATE: LOCATION:
TYPE: SA/SB/SC PROJECT:
CATALOG #:

VIPER Area/Site

VIPER LUMINAIRE

MICROSTRIKE OPTICS – ORDERING GUIDE

Example: VP–2–320L-145–3K7–2–R–UNV–A3–BLT

CATALOG #

VP										
Series	**Optic Platform**	**Size**	**Light Engine**	**CCT/CRI**	**Distribution**	**Optic Rotation**	**Voltage**			
VP Viper	Micro Strike	1 Size 1	**160L-35** [1] 5500 Lumens	AP AP-Amber Phosphor Converted	**2** Type 2	**L** Optic rotation left	**UNV** 120-277V			
			160L-50 [1] 7500 Lumens		**3** Type 3					
			160L-75 10000 Lumens	**27K8** 2700K, 80 CRI	**4F** Type 4 Forward	**R** Optic rotation right	**120** 120V			
			160L-100 12500 Lumens		**4W** Type 4 Wide		**208** 208V			
			160L-115 15000 Lumens	**3K7** 3000K, 70 CRI	**5QM** Type 5 Square Medium		**240** 240V			
			160L-135 18000 Lumens				**277** 277V			
			160L-160 21000 Lumens	**3K8** 3000K, 80 CRI	**5QW** Type 5 Square Wide		**347** 347V			
		2 Size 2	**320L-145** 21000 Lumens	**35K8** 3500K, 80 CRI			**480** 480V			
			320L-170 24000 Lumens							
			320L-185 27000 Lumens	**3K9** 3000K, 90 CRI						
			320L-210 30000 Lumens							
			320L-235 33000 Lumens	**4K7** 4000K, 70 CRI						
			320L-255 36000 Lumens							
			320L-315 [1] 40000 Lumens	**4K8** 4000K, 80 CRI						
		3 Size 3	**480L-285** 40000 Lumens							
			480L-320 44000 Lumens	**4K9** 4000K, 90 CRI						
			480L-340 48000 Lumens							
			480L-390 52000 Lumens	**5K7** 5000K, 70 CRI						
			480L-425 55000 Lumens							
			480L-470 60000 Lumens	**5K8** 5000K, 80 CRI						
		4 Size 4	**720L-435** 60000 Lumens							
			720L-475 65000 Lumens							
			720L-515 70000 Lumens							
			720L-565 [1] 75000 Lumens							
			720L-600 [1] 80000 Lumens							
			CLO Custom Lumen Output [1]							

Mounting	
A_	Arm mount for square pole/flat surface
A_	Arm mount for round pole [2]
ASQU	Universal arm mount for square pole
A_U	Universal arm mount for round pole [2]
AAU	Adjustable arm for pole mounting (universal drill pattern)
AA_U	Adjustable arm mount for round pole [2]
ADU	Decorative upsweept Arm (universal drill pattern)
AD_U	Decorative upsweept arm mount for round pole [2]
MAF	Mast arm fitter for 2-3/8" OD horizontal arm
K	Knuckle
T	Trunnion
WB	Wall Bracket, horizontal tenon with MAF
WM	Wall mount bracket with decorative upsweept arm
WA	Wall mount bracket with adjustable arm

Color	
BLT	Black Matte Textured
BLS	Black Gloss Smooth
DBT	Dark Bronze Matte Textured
DBS	Dark Bronze Gloss Smooth
GTT	Graphite Matte Textured
LGS	Light Grey Gloss Smooth
LGT	Light Grey Gloss Textured
PSS	Platinum Silver Smooth
WHT	White Matte Textured
WHS	White Gloss Smooth
VGT	Verde Green Textured
Color Option	
CC	Custom Color

Options	
F	Fusing
2PF	Dual Power Feed
2DR	Dual Driver
TE	Tooless Entry
BC	Backlight Control
TB	Terminal Block

Network Control Options	
NXSPW-14F	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14' [3,4]
NXSPW-40F	NX Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting, 40' [3,4]
NXSP-14F	NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 14' [3,4]
NXSP-40F	NX, PIR Occupancy Sensor, Dimming Daylight Harvesting, 40' [3,4]
NXWE	NX Wireless Enabled (module + radio) [3,4]
WIR	wiSCAPE® In-Fixture Module [3,4]
WIRSC	wiSCAPE® Module and Occupancy Sensor [3,4]
Stand Alone Sensors	
BTS-14F	Bluetooth® Programmable, PIR Occupancy/Daylight Sensor [4]
BTS-40F	Bluetooth® Programmable, PIR Occupancy/Daylight Sensor [4]
BTSO-12F	Bluetooth® Programmable, PIR Occupancy/Daylight Sensor, up to 12' mounting height [4]
7PR	7-Pin Receptacle [4]
7PR-SC	7-Pin Receptacle with shorting cap [4]
3PR	3-Pin twist lock [4]
3PR-SC	3-Pin receptacle with shorting cap [4]
3PR-TL	3-Pin PCR with photocontrol [4]
Programmed Controls	
ADD	AutoDim Timer Based Dimming [4]
ADT	AutoDim Time of Day Dimming [4]
Photocontrols	
PC	Button Photocontrol [4,7]

1 – Items with a grey background can be done as a custom order. Contact brand representative for more information
2 – Replace "_" with "2" for 2.5"-3.4" OD pole, "3" for 3.5"-4.13" OD pole, "4" for 4.18"-5.25" OD pole, "5" for 5.5"-6.5" OD pole
3 – Networked Controls cannot be combined with other control options
4 – Not available with 2PF option
5 – Not available with Dual Driver option
6 – Some voltage restrictions may apply when combined with controls
7 – Not available with 480V

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HUBBELL Lighting

Community and Economic Development Department
2010 S. Lincoln Rd.
Mt. Pleasant, MI 48858
989-772-4600 ext. 241

FINAL SITE PLAN REPORT

TO:	Planning Commission	**DATE:**	September 9, 2022
FROM:	Peter Gallinat, Zoning Administrator	**ZONING:**	I-2, General Industrial District

PROJECT: PSPR22-14 final site plan approval application – Rook Metering - Michael Engineering building expansion.

PARCEL(S): PID 14-152-00-006-01

OWNER(S): REC Investments LLC

LOCATION: Approximately 2.77 acres located at 5625 Venture Way in the NE 1/4 of Section 13.

EXISTING USE: Michael Engineering **ADJACENT ZONING:** B-4, I-2, and SCIT

FUTURE LAND USE DESIGNATION: *Industrial/Employment*: This category promotes traditional industrial employment. Located near regional nodes with convenient access to interchanges, this district provides an opportunity to diversify the industrial employment base of the township by reserving areas for research, development, technology, and corporate offices or campuses that will have less of an impact than traditional industrial uses. Uses to complement CMU's Smart Zone would include research, design, engineering, testing, laboratories, diagnostics, and experimental product development. Types of industries may include automotive, electronics, alternative energy technologies, computers, communications, information technology, chemical or biomedical engineering.

ACTION: To review the PSPR22-14 final site plan dated 8/23/2022 for an 11,760 square-foot phase one addition and an additional 8,400 square-foot phase two addition to the Rook Metering - Michael Engineering building located at 5625 Venture Way in the NE 1/4 of Section 13 and in the I-2 (General Industrial) zoning district.

Site Plan Approval Process

Per Section 14.2.C. of the Zoning Ordinance, both preliminary site plan approval and final site plan approval are required for this project**.** Per Section 14.2.J., approval of a preliminary site plan by the Planning Commission "*shall indicate its general acceptance of the proposed layout of buildings, streets, drives, parking areas, and other facilities and areas*." Planning Commission approval of a final site plan "*constitutes the final zoning approval for the project and allows for issuance of a building permit to begin site work or construction,* provided *all other construction and engineering requirements have been met*" (Section 14.2.L.). Documentation of applicable outside agency permits and approvals will be required as part of a final site plan application.

Background Information

Currently there is an existing 16,560 square-foot building on the lot, which is divided into a 7,200 square-feet of manufacturing space, 1,800 square-feet of office space, and a 7,500 square-foot "commercial building addition." The proposed expansion is divided into two construction

phases. The first phase would be constructed in 2022-2023 that includes a 11,760SF addition. (84' x 140') Phase two would be constructed in 2024-2025 and includes an 84' x 84' 8,400SF addition.

Final Site Plan Review Comments

The following comments are based on the standards for final site plan approval and specific elements of the proposed site plan:

1. **Section 14.2.P. (Required Site Plan Information).** With the exception of a few remaining details noted elsewhere in this report, the site plan can fully conform to the minimum Section 14.2.P. information requirements for a final site plan.

2. **Section 8 (Environmental Performance Standards).** The hazardous substance reporting form and EGLE permit checklist form are included in the application materials. **CONFORMS**

3. **Section 9 (Off-Street Parking, Loading Requirements).** The parking layout has been provided for both the industrial and office uses of the proposed buildings. The calculations are correct, and the parking proposed exceeds the minimum requirement. With the exception of a temporary gravel area proposed to be in place in between phases one and two of the development project, all other parking and loading facilities are shown on the final site plan to be hard-surfaced with asphalt or concrete. Staff would recommend that this area be treated as a temporary heavy equipment storage area, which would allow it to be eligible for temporary relief from the parking area paving requirements. The temporary gravel area would be eliminated with the phase two building expansion.

   The plan indicates current indoor bicycle parking, but no details have been provided on the final site plan. Section 9.1C.5. of the Zoning Ordinance requires that the bicycle parking facilities be located "*at least 3 feet from adjacent walls, poles, landscaping, street furniture, drive aisles, and primary pedestrian routes and at least 6 feet from vehicle parking*." Further, this subsection requires that bicycle parking facilities "*shall allow a cyclist to safely secure a bicycle from incidental damage or theft*." It appears that this could all be achieved with having the facility indoors, subject to verification through sufficient documentation on the final site plan. <u>The following details will need to be added to a revised final site plan</u>:

   - ❑ Add the location, dimensions, and details for the current bicycle parking area to page A1 of the floor plan.

4. **Section 7.10 (Sidewalks and Pathways).** The applicant has shown a proposed 5-foot-wide sidewalk along both Northway Drive and Venture Way, along with an extension of an existing sidewalk along the south side of the existing building west to connect to the proposed sidewalk on Northway Drive. The note on sheet 3 of the site plan has been updated to request temporary relief from construction of this sidewalk for the stated reason that "*development is located on property zoned industrial,*" which is listed as a

valid reason in the Township's adopted policy for granting temporary relief from required sidewalk construction. This is also consistent with the Planning Commission's motion as part of the preliminary site plan approval to authorize the requested temporary relief. **CONFORMS**

5. **Section7.14 (Trash Removal and Collection).** Two existing dumpster location on site will be removed and replaced with one location on the east of the property. The dumpster pad is hard surfaced and of sufficient size. The dumpster location has been adjusted as needed to be in the rear yard area and is proposed to be screened as required. Details are found on page 13 and a note regarding existing recycling activities on the site has been added to sheet 3. **CONFORMS**

6. **Section 10 (Landscaping and Screening).** Landscaping plan on page 8 meets the minimum requirements for deciduous tree, ornamental tree, and shrub plantings. With the exception of one (1) missing shade tree required due to 51 parking spaces with the completion of phase two, the parking landscaping is otherwise consistent with Minimum requirements. <u>The following detail will need to be added to a revised final site plan</u>:

   - ❑ Add the location and planting details for the one (1) additional shade tree required per Section 10.2F.4.b. of the Zoning Ordinance.

7. **Section 8.2 (Exterior Lighting).** The lighting plan as demonstrated on pages ES1-ES3 meet the requirements of section 8.2 for exterior lighting. Two light poles and additional wall pack lights have been proposed. The light poles are listed at 20 feet in height and the foot-candle levels for all lighting will be under the maximum allowed limit of 10 foot-candles. **CONFORMS**

8. **Outside agency approvals.** The applicant is responsible for obtaining all necessary permits or approvals from applicable outside agencies prior to submittal of the final site plan application for approval. Required final documentation of permits or approvals has been received from the Mt. Pleasant Fire Department, the Isabella County Road Commission, and the Isabella County Drain Office for stormwater management approval. <u>Final documentation of permits or approvals is still needed from following agencies</u>, but staff does not anticipate that these approvals will have an impact on the overall site design and arrangement of the phase one and phase two construction projects:

   - ❑ Isabella County Transportation Commission
   - ❑ Township Public Services Department

<u>Objective</u>

The Planning Commission shall review the application materials and site plan, together with any reports and recommendations. The Planning Commission shall identify and evaluate all relevant factors and shall then take action by motion to approve the site plan, to approve the site plan with conditions, to deny the site plan application, or to postpone further consideration of the site plan to a date certain in accordance with Section 14.2.H. of the Zoning Ordinance.

Key Findings

- The application and site plan are ready for Planning Commission review and action.
- With the exception of a few remaining details, the final site plan can conform to the minimum requirements of Section 14.2.P. (Required Site Plan Information).
- Final documentation of permits or approvals is still needed from the Isabella County Transportation Commission and the Township Public Services Department, but staff does not anticipate that these approvals will have an impact on the overall site design and arrangement of the phase one and phase two construction projects.

Recommendations

Based on the findings I would recommend that the PSPR22-14 final site plan be approved subject to the following conditions:

1. Final documentation of permits or approvals from the Isabella County Transportation Commission and the Township Public Services Department that outside agencies Transportation Commission and Public Works is approved.
2. Add the location, dimensions, and details for the current bicycle parking area to page A1 of the floor plan.
3. Add the location and planting details for the one (1) additional shade tree required per Section 10.2F.4.b. of the Zoning Ordinance.

Please contact me at (989) 772-4600 ext. 241, or via email at pgallinat@uniontownshipmi.com, with any questions about this information.

Respectfully submitted,

Peter Gallinat, Zoning Administrator
Community and Economic Development Department

Draft Motions: PSPR 22-14 Final Site Plan Application for the Rook Metering - Michael Engineering Building Expansion, 5625 Venture Way

MOTION TO APPROVE THE FINAL SITE PLAN:

Motion by _____, supported by _____, to approve the PSPR 22-14 final site plan dated August 23, 2022 for additions to the Rook Metering - Michael Engineering building located at 5625 Venture Way in the northeast quarter of Section 13 and in the I-2 (General Industrial) zoning district, finding that it fully complies with applicable Zoning Ordinance requirements for final site plan approval, including Sections 14.2.P. (Required Site Plan information) and 14.2.S. (Standards for Site Plan Approval).

MOTION TO APPROVE THE FINAL SITE PLAN WITH CONDITIONS:

Motion by _____, supported by _____, to approve the PSPR 22-14 final site plan dated August 23, 2022 for additions to the Rook Metering - Michael Engineering building located at 5625 Venture Way in the northeast quarter of Section 13 and in the I-2 (General Industrial) zoning district, finding that it fully complies with applicable Zoning Ordinance requirements for final site plan approval, including Sections 14.2.P. (Required Site Plan information) and 14.2.S. (Standards for Site Plan Approval), subject to the following conditions:

1. Documentation of permits or approvals from the Isabella County Transportation Commission and Township Public Services Department shall be submitted to the Zoning Administrator prior to issuance of a building permit for this project.
2. Add the location, dimensions, and details for the current bicycle parking area to the floor plan sheet A1.
3. Add the location and planting details for the one (1) additional shade tree required per Section 10.2F.4.b. to the site landscaping and screening plan sheet 8 of 18.
4. Zoning Administrator review and acceptance of the revised sheet A1 and revised sheet 8 of 18 prior to issuance of a building permit for this project.

_____

_____

_____

MOTION TO POSTPONE ACTION ON THE FINAL SITE PLAN:

Motion by _____, supported by _____, to postpone action on the PSPR 22-14 final site plan dated August 23, 2022 for additions to the Rook Metering - Michael Engineering building located at 5625 Venture Way until _____ _____, 2022 for the following reasons:

_____

_____

Draft Motions: PSPR 22-14 Final Site Plan Application for the Rook Metering - Michael Engineering Building Expansion, 5625 Venture Way

MOTION TO DENY THE FINAL SITE PLAN:

Motion by _____, supported by _____, to deny the PSPR 22-14 final site plan dated August 23, 2022 for additions to the Rook Metering - Michael Engineering building located at 5625 Venture Way in the northeast quarter of Section 13 and in the I-2 (General Industrial) zoning district, finding that it does not comply with applicable Zoning Ordinance requirements for final site plan approval, including Sections 14.2.P. (Required Site Plan information) and 14.2.S. (Standards for Site Plan Approval), for the following reasons:

_____

_____

_____

_____

_____

_____

ROWE PROFESSIONAL SERVICES COMPANY

Large Firm Resources. Personal Attention. sm

LETTER OF TRANSMITTAL

TO: Charter Township of Union
2010 S. Lincoln Road
Mount Pleasant, MI 48858
Attn: Mr. Rodney Nanney

DATE: 8/26/2022
JOB NO.: 22M0013
RE: MMC Athletic Complex
Shipped via: ☐ By 10am next business day
☐ By end of next business day
☒ Standard delivery

cc: H&B - Martin Ruiter
MCC - Matt Miller

If shipping via UPS please provide Recipient's Phone No.

WE ARE SENDING YOU:

☒ Attached ☐ Under separate cover via _____

COPIES	DATE	NO	DESCRIPTION
1	8/26/2022		Application for Final Site Plan Review
1	8/25/2022		Final Site Plan - Plans (2 - 24x36 set, 11 - 11x17 sets)
1	8/26/2022		Isabella County Road Commission Approval

THESE ARE TRANSMITTED:

☒ For your use ☐ As requested ☐ Other _____

REMARKS:

See attached final site plan documents for the MidMichigan College Athletic Complex for your review. Please contact us with any questions or clarifications regarding the documents. Electronic documents will be emailed in addition to the hard copies delivered. We are anticipating being on the September 20, 2022 planning commission agenda.

Signed: _____
Jeffrey B. Markstrom, P.E.

This communication contains **privileged or confidential** information intended exclusively for the use of the Person(s) or Entity named above. If the reader of this cover page is not the intended Recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please telephone (collect) the Sender immediately. Thank you very much.

Charter Township of Union

APPLICATION FOR SITE PLAN REVIEW

☐ Minor Site Plan ☐ Preliminary Site Plan ☑ Final Site Plan

A Completed Application will contain all the information required per the Zoning Ordinance, Section 14.2 (Site Plan Review).

Name of Proposed Development/Project: Mid Michigan College - Mt. Pleasant Athletic Complex

Common Description of Property & Address (if issued): Mid Michigan College - Mt. Pleasant Campus
2600 S Summerton Road

Applicant's Name(s): Hobbs and Black Architects (c/o Martin H. Ruiter Jr.)

Phone/Fax numbers: 517-484-4870/517-484-1369 Email: mruiter@hobbs-black.com

Address: 117 East Allegan City: Lansing Zip: 48933

Legal Description: ☐ Attached ☑ Included on Site Plan Tax Parcel ID Number(s): See Sheet C-200

Existing Zoning: B-4 Land Acreage: 46.99 Existing Use(s): General Business

☐ **ATTACHED: Letter describing the project and how it conforms to Section 14.2.S. (Standards for Site Plan Approval)**

Firm(s) or Individuals(s) who prepared site plan(s)	1. Name: ROWE Professional Services Company Phone: 989-772-2138 Email: jmarkstrom@roweps 2. Address: 127 S Main Street City: Mt. Pleasant State: Zip: 48858 Contact Person: Jeff Markstrom, P.E. Phone: 989-772-2138
Legal Owner(s) of Property. All persons having legal interest in the property must sign this application. Attach a separate sheet if more space is needed.	1. Name: Mid Michigan College Phone: Address: 1375 S Claire Ave City: Harrison State: Zip: 48625 Signature: Richard K Smith Interest in Property: Owner 2. Name: Matthew Miller, VP Student Services Phone: 989-386-6600 Address: 1375 S Clare Ave City: Harrison State: Zip: 48625 Signature: Interest in Property:

I do hereby affirm that all the statements, signatures, descriptions, exhibits submitted on or with this application are true and accurate to the best of my knowledge and that I am authorized to file this application and act on behalf of all the owners of the property. False or inaccurate information placed upon this plan may be cause for revocation of any permits issued pursuant to site plan approval and/or removal of work installed. Approval of this plan shall not constitute the right to violate any provisions of the Zoning Ordinance or other applicable codes and ordinances.

Signature of Applicant — Date: 8-26-22

Office Use Only

Application Received By: _____ Fee Paid: $_____

Date Received: _____ Escrow Deposit Paid: $_____

Revised: 9/14/2020

CHARTER TOWNSHIP OF UNION

SITE PLAN REVIEW
HAZARDOUS SUBSTANCES REPORTING FORM

This form must be completed and submitted as part of the site plan for facilities which may use, store, or generate hazardous substances or polluting materials (including petroleum-based products)

Name of business: Mid Michigan College

Name of business owner(s): Lillian Frick, VP Finance

Street and mailing address: 1375 South Clare Avenue
Harrison, MI 48625

Telephone:
Fax: Ph: 989-386-6605 Fax: 989-386-9088

Email: lfrick@midmich.edu

I affirm that the information submitted is accurate.

Owner(s) signature and date: Lillian K. Frick
8/26/2022

Information compiled by:

ROWE Professional Services Company
127 S. Main Street, Mt. Pleasant, MI 48858

Jeff Markstrom

From: Pat Gaffney <PGaffney@isabellaroads.com>
Sent: Thursday, August 18, 2022 12:28 PM
To: Matt Motz
Subject: RE: [EXTERNAL]: RE: Mid Michigan College Athletic Fields - Preliminary Site Plan Approval

Matt,

No I do not unless something else gets changed.

Patrick J. Gaffney, PE
Engineer Superintendent
Isabella CRC
989-773-7131 x115
989-772-2371 fax
pgaffney@isabellaroads.com

From: Matt Motz <MMotz@rowepsc.com>
Sent: Thursday, August 18, 2022 11:51 AM
To: Pat Gaffney <PGaffney@isabellaroads.com>
Subject: RE: [EXTERNAL]: RE: Mid Michigan College Athletic Fields - Preliminary Site Plan Approval

Thanks Pat. Do you anticipate any other comments coming from the road commission? We plan on submitting this for final site plan review with Union Township next Thursday.

Matthew J. Motz, EIT | Assistant Project Engineer
ROWE Professional Services Company

O: (616) 272-7125 | F: (800) 974-1704
4345 44th Street SE, Ste. A | Kentwood, MI 49512
www.rowepsc.com

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From: Pat Gaffney <PGaffney@isabellaroads.com>
Sent: Wednesday, August 17, 2022 11:09 AM
To: Matt Motz <MMotz@rowepsc.com>
Subject: RE: [EXTERNAL]: RE: Mid Michigan College Athletic Fields - Preliminary Site Plan Approval

Matt,

That is correct we do not want ramps that don't go to another sidewalk ramp. We also don't want any mid block crosswalks.

Patrick J. Gaffney, PE
Engineer Superintendent
Isabella CRC
989-773-7131 x115
989-772-2371 fax
pgaffney@isabellaroads.com

From: Matt Motz <MMotz@rowepsc.com>
Sent: Wednesday, August 17, 2022 11:00 AM
To: Pat Gaffney <PGaffney@isabellaroads.com>
Subject: RE: [EXTERNAL]: RE: Mid Michigan College Athletic Fields - Preliminary Site Plan Approval

Pat,

I heard from Matt Seitz that you won't allow this dead end sidewalk ramp that the township is requiring. Could I get your decision in writing so we have that on file to present to the township?

Thanks,

Matthew J. Motz, EIT | Assistant Project Engineer
ROWE Professional Services Company

O: (616) 272-7125 | F: (800) 974-1704
4345 44th Street SE, Ste. A | Kentwood, MI 49512
www.rowepsc.com

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From: Pat Gaffney <PGaffney@isabellaroads.com>
Sent: Thursday, July 28, 2022 2:36 PM
To: Matt Motz <MMotz@rowepsc.com>
Subject: RE: [EXTERNAL]: RE: Mid Michigan College Athletic Fields - Preliminary Site Plan Approval

Matt,

Why is this being required or requested? There is nothing on the other side to warrant a cross walk. We do not want mid-block cross walks anyway.

Patrick J. Gaffney, PE
Engineer Superintendent
Isabella CRC
989-773-7131 x115
989-772-2371 fax
pgaffney@isabellaroads.com

From: Matt Motz <MMotz@rowepsc.com>
Sent: Thursday, July 28, 2022 2:25 PM
To: Pat Gaffney <PGaffney@isabellaroads.com>
Cc: Peter Gallinat (pgallinat@uniontownshipmi.com) <pgallinat@uniontownshipmi.com>; Rodney Nanney <RNanney@uniontownshipmi.com>; Jeff Markstrom <JMarkstrom@rowepsc.com>
Subject: RE: [EXTERNAL]: RE: Mid Michigan College Athletic Fields - Preliminary Site Plan Approval

Pat,

See attached sketch of a proposed sidewalk ramp connection to Summerton Rd at the south end of our proposed sidewalk. This connection is being required by the township as part of the site plan approval process, but we wanted to see if you had any thoughts/comments on it first.

Thanks,

Matthew J. Motz, EIT | Assistant Project Engineer
ROWE Professional Services Company

O: (616) 272-7125 | F: (800) 974-1704
4345 44th Street SE, Ste. A | Kentwood, MI 49512
www.rowepsc.com

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From: Pat Gaffney <PGaffney@isabellaroads.com>
Sent: Wednesday, July 27, 2022 3:19 PM
To: Matt Motz <MMotz@rowepsc.com>
Cc: Peter Gallinat (pgallinat@uniontownshipmi.com) <pgallinat@uniontownshipmi.com>
Subject: RE: [EXTERNAL]: RE: Mid Michigan College Athletic Fields - Preliminary Site Plan Approval

Matt,

Questions I have are as follows:

- Nothing being done with the existing driveway?
- Sidewalk location? (Not dimension on the plans) In the ROW outside the ROW?

- Drainage from the existing pond to storm sewer, was there a restrictor? New out let control structure has a 4" restrictor? Has this all been approved by the drain commission?

Patrick J. Gaffney, PE
Engineer Superintendent
Isabella CRC
989-773-7131 x115
989-772-2371 fax
pgaffney@isabellaroads.com

From: Matt Motz <MMotz@rowepsc.com>
Sent: Friday, July 15, 2022 1:13 PM
To: Pat Gaffney <PGaffney@isabellaroads.com>
Subject: RE: [EXTERNAL]: RE: Mid Michigan College Athletic Fields - Preliminary Site Plan Approval

Here's the most recent set of plans. Some minor layout changes from the plans I previously sent.

Mid Michigan College Athletic Complex

From: Pat Gaffney <PGaffney@isabellaroads.com>
Sent: Thursday, July 14, 2022 3:07 PM
To: Matt Motz <MMotz@rowepsc.com>
Subject: [EXTERNAL]: RE: Mid Michigan College Athletic Fields - Preliminary Site Plan Approval

CAUTION: This email originated externally. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Matt,

Is this the same plan as one I received on 6/13/2022?

Patrick J. Gaffney, PE
Engineer Superintendent
Isabella CRC
989-773-7131 x115
989-772-2371 fax
pgaffney@isabellaroads.com

From: Matt Motz <MMotz@rowepsc.com>
Sent: Thursday, July 14, 2022 1:50 PM
To: Pat Gaffney <PGaffney@isabellaroads.com>
Subject: RE: Mid Michigan College Athletic Fields - Preliminary Site Plan Approval

Pat,

Just following up on this. Let me know if you need anything else from us.

Matthew J. Motz, EIT | Assistant Project Engineer

ROWE Professional Services Company

O: (616) 272-7125 | F: (800) 974-1704

4345 44th Street SE, Ste. A | Kentwood, MI 49512

www.rowepsc.com

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From: Matt Motz
Sent: Friday, June 10, 2022 8:08 AM
To: pgaffney@isabellaroads.com
Subject: Mid Michigan College Athletic Fields - Preliminary Site Plan Approval

Good morning Patrick,

MMC is planning on building a new athletic complex at their Mt. Pleasant campus and we are currently going through the preliminary site plan approval process in Union Township. Per the township's request, please see below a link to the site plan that was submitted as part of this process. Please let me know if you have any questions or if you'd like hard copies of the plans. My cell # is 989-289-1673.

Mid Michigan College Athletic Complex

Thank you,

Matthew J. Motz, EIT | Assistant Project Engineer

ROWE PROFESSIONAL
SERVICES COMPANY

4345 44th Street SE, Ste. A | Kentwood, MI 49512
O: (616) 272-7125 | F: (800) 974-1704
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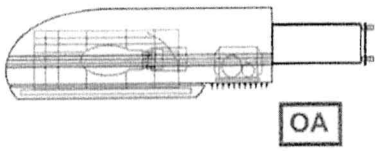


Housing
Rugged anodizing quality extruded 6063 T6 aluminum Min 0.100" (2mm) max 0.470" (10mm) incorporating precision, internally welded with clamp joint construction. Extruded aluminum finned, heat-sink removable ballast door provides increased ballast life.

Reflector
Constructed using high performance mirror polished anodized and sealed specular grade aluminum with a total reflectance no less than 95%. Multi stage optics are segmented, multi -faceted and rotatable in 90 degree increments. With a unique reflector design, uniformity is maximized and the 'hot spot' is difused.

Lens / Frame
6063 T6 clear extruded aluminum. Servicing is made easy with an invisible self hinged design incorporating spring loaded tool-less latches. The standard flat tempered safety glass is fully encased with high temperature EPDM gasket. When glare-control is required an optional semi-transparent frosted glass is available

Electrical
High power factor ballasts rated to -30 Deg C (-20 Deg F). 5 KV rated mogul base lamp holders are fixed to an aluminum heat-sink bracket and can be field adjusted for lamp center and rotation for position sensitive lamps.

Finish
Rugged, long life, oven baked polyester powder coatings utilizing multi-stage pre-treatment for outstanding adhesion. Optional Hard color anodizing provides a superior protection in hash and corrosive applications.

Lamping
Horizontal Burn Position and mogul base for all reflector types.

400w - 175MH Mogul Base ED-28
400w - 200 HPS Mogul Base ET-18

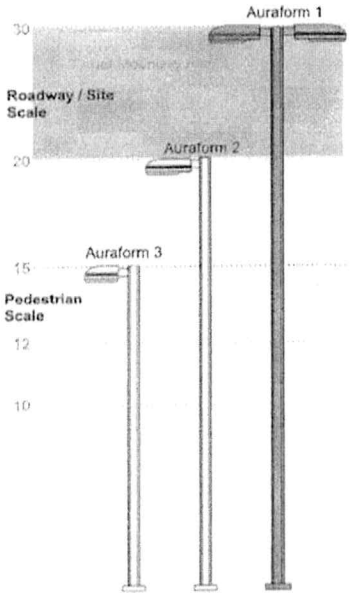
Warranty
A three year warranty against defects in material and workmanship. Lamp and ballast and ballast components warranties are provided by manufacturer. All warranties are limited to replacement and/ or repair.

Listed for Wet Location

Effective **P**rojected **A**rea:

E.P.A measured in sq/ft and includes a 12" mounting arm.

1 Fixture	2.21
2 Fixture	4.42
3 Fixture	5.24
4 Fixture	6.24



AU1

	Pulse	Standard	
400 MHP	400 MHP	400 MH	400 HPS
	320 MHP	250 MH	250 HPS
	250 MHP	175 MH	200 HPS
	200 MHP		
	175 MHP		

Lamp

480V — 120, 208, 240, 277, 347, 480, 600
MT- 120/208/240/277 (US)
MT- 120/277/347 (CAN)
Voltage

VQ — VQ, III, II, FF-(IES 4)
Distribution

LG — Flat Glass (LG), Frosted Glass (FG)
Lens

PM-FT2 — Pole Mount (PM), Wall Mount (WM)
Single Slipfitter (FT1)
Twin Slipfitter @ 90 (FT2-90)
Twin Slipfitter @ 180 (FT2-180)
Triple Slipfitter (FT3)
Quad Slipfitter (FT4)
Mounting

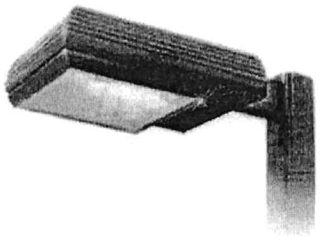
AS6 — 4" Pole Mount Arm (AS4), 6" Pole Mount Arm (AS6), 12" Pole Mount Arm (AS12)
Photo Control (PC)
Quartz Restrike (Q)
Fuse(s) (F)
Modular Discon. (MD)
House Side Shield (HS)
Options

SPC — Color / Finish

Powder Coating
White (WHI)
Black (MBK)
Bronze (BZS)
Special (SPC)

Anodizing
Clear (CLA)
Black (MBA)
Bronze (BZA)

Match existing site luminaires finish



Pappi Lighting

www.pappilighting.com Tel: 888-453-1139 Fax: 866-720-3015

2-3

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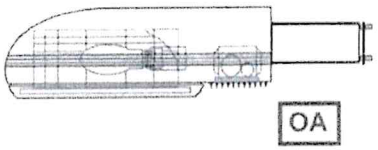
400 watt HID Full Cut-Off
Dark Skies Compliant
Pole Mounted Luminaire



Housing
Rugged anodizing quality extruded 6063 T6 aluminum Min 0.100" (2mm) max 0.470" (10mm) incorporating precision, internally welded with clamp joint construction. Extruded aluminum finned, heat-sink removable ballast door provides increased ballast life.

Reflector
Constructed using high performance mirror polished anodized and sealed specular grade aluminum with a total reflectance no less than 95%. Multi stage optics are segmented, multi -faceted and rotatable in 90 degree increments. With a unique reflector design, uniformity is maximized and the 'hot spot' is difused.

Lens / Frame
6063 T6 clear extruded aluminum. Servicing is made easy with an invisible self hinged design incorporating spring loaded tool-less latches. The standard flat tempered safety glass is fully encased with high temperature EPDM gasket. When glare-control is required an optional semi-transparent frosted glass is available

Electrical
High power factor ballasts rated to -30 Deg C (-20 Deg F). 5 KV rated mogul base lamp holders are fixed to an aluminum heat-sink bracket and can be field adjusted for lamp center and rotation for position sensitive lamps.

Finish
Rugged, long life, oven baked polyester powder coatings utilizing multi-stage pre-treatment for outstanding adhesion. Optional Hard color anodizing provides a superior protection in hash and corrosive applications.

Lamping
Horizontal Burn Position and mogul base for all reflector types.

400w - 175MH Mogul Base ED-28
400w - 200 HPS Mogul Base ET-18

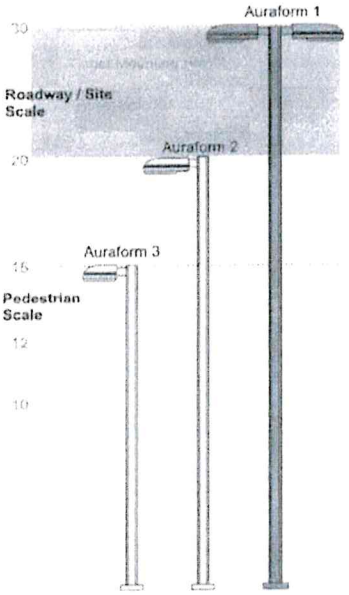
Warranty
A three year warranty against defects in material and workmanship. Lamp and ballast and ballast components warranties are provided by manufacturer. All warranties are limited to replacement and/ or repair.

UL UL
Listed for Wet Location

Effective **P**rojected **A**rea:

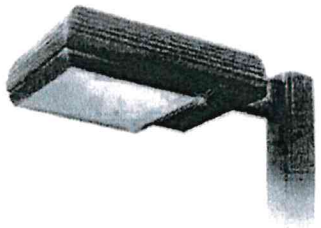
E.P.A measured in sq/ft and includes a 12" mounting arm.

1 Fixture	2.21
2 Fixture	4.42
3 Fixture	5.24
4 Fixture	6.24



AU1

400 MHP (Lamp)	Pulse: 400 MHP, 320 MHP, 250 MHP, 200 MHP, 175 MHP	Standard: 400 MH, 250 MH, 175 MH	400 HPS, 250 HPS, 200 HPS
480V (Voltage)	120, 208, 240, 277, 347, 480, 600	MT- 120/208/240/277 (US)	MT- 120/277/347 (CAN)
VQ (Distribution)	VQ III, II, FF-(IES 4)		
LG (Lens)	Flat Glass (LG)	Frosted Glass (FG)	
PM-FT2 (Mounting)	Pole Mount (PM)	Wall Mount (WM)	Single Slipfitter (FT1); Twin Slipfitter @ 90 (FT2-90); Twin Slipfitter @ 180 (FT2-180); Triple Slipfitter (FT3); Quad Slipfitter (FT4)
AS6 (Options)	4" Pole Mount Arm (AS4); 6" Pole Mount Arm (AS6); 12" Pole Mount Arm (AS12)	Photo Control (PC); Quartz Restrike (Q); Fuse(s) (F); Modular Discon. (MD); House Side Shield (HS)	
SPC (Color / Finish)	**Powder Coating**: White (WHI), Black (MBK), Bronze (BZS), Special (SPC)	**Anodizing**: Clear (CLA), Black (MBA), Bronze (BZA)	Match existing site luminaires finish



Pappi Lighting
www.pappilighting.com Tel: 888-453-1139 Fax: 866-720-3015

2-3

Final Site Plan Review Application

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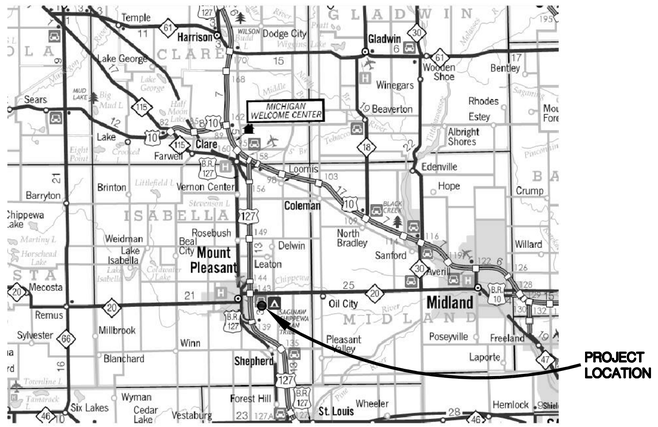

NORTH

VICINITY MAP
SCALE - N.T.S.

BUILDING HEIGHTS AND AREAS

TRAINING BUILDING

FIRST FLOOR	10,647 sf
MEZZANINE	831 sf
BUILDING HEIGHT	25'-5"

MAINTENANCE BUILDING

FIRST FLOOR	10,647 sf
MEZZANINE	564 sf
BUILDING HEIGHT	25'-5"

DUGOUTS BASEBALL

HOME	612 sf
VISITORS	504 sf
BUILDING HEIGHTS	11'-0"

DUGOUTS SOFTBALL

HOME	468 sf
VISITORS	355 sf
BUILDING HEIGHT	11'-0"

ANNOUNCERS BOOTH BASEBALL

FIRST FLOOR	112 sf
SECOND FLOOR	112 sf
BUILDING HEIGHT	19'-6"

ANNOUNCERS BOOTH SOFTBALL

FIRST FLOOR	112 sf
SECOND FLOOR	112 sf
BUILDING HEIGHT	19'-6"

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ELECTRICAL:

L201 LIGHTING CALCULATIONS

Sheet Size - 24x36
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FINAL SITE PLAN REVIEW 8/26/2022
PRELIM. SITE PLAN REVIEW 5/31/2022
DATE ISSUED

DRAWN BY

CHECKED BY

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PROJECT

CONSULTANT

TITLE SHEET

SHEET TITLE

22-703

PROJECT NUMBER

A-000

SHEET NUMBER

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Date: Aug 26, 2022, 8:03am Layout: A-000 Plotted by: jhortmore

GENERAL CONSTRUCTION NOTES

EMERGENCY CONTACTS
BEFORE BEGINNING WORK ON THE PROJECT, THE CONTRACTOR SHALL PROVIDE THE OWNER WITH THE NAMES AND TELEPHONE NUMBERS OF EMERGENCY CONTACTS. AT LEAST ONE PERSON REPRESENTING THE CONTRACTOR SHALL BE AVAILABLE TO RESPOND TO EMERGENCIES THROUGHOUT THE LIFE OF THE PROJECT, 24 HOURS A DAY, 7 DAYS A WEEK.

UNDERGROUND UTILITY IDENTIFICATION AND LOCATION
THE CONTRACTOR SHALL CALL MISS DIG (1-800-482-7171) A MINIMUM OF THREE WORK DAYS IN ADVANCE OF BEGINNING EXCAVATION. THE CONTRACTOR IS RESPONSIBLE TO IDENTIFY AND NOTIFY UTILITY AGENCIES WITHIN THE PROJECT AREA WHICH DO NOT PARTICIPATE IN THE MISS DIG NOTIFICATION PROGRAM.

PUBLIC UTILITIES
EXISTING UTILITIES ARE SHOWN BASED UPON RECORDS AND LOCATIONS PROVIDED BY UTILITY AGENCIES. THE INFORMATION SHOWN IS CONSIDERED APPROXIMATE AND SHALL BE VERIFIED BY THE CONTRACTOR. UNLESS THE PLANS SPECIFICALLY SHOW THAT EXISTING UTILITIES ARE TO BE MOVED, THE CONTRACTOR IS RESPONSIBLE TO PROTECT AND MAINTAIN EXISTING UTILITIES.

VERIFICATION OF UNDERGROUND UTILITIES
THE CONTRACTOR SHALL EXCAVATE AND LOCATE ALL EXISTING UTILITIES IN THE PROJECT AREA IN ADVANCE OF CONSTRUCTION TO VERIFY THEIR ACTUAL LOCATION. POTENTIAL CONFLICTS SHALL BE REPORTED TO THE ENGINEER. THE CONTRACTOR SHALL MAKE SUCH CHANGES TO GRADE AND ALIGNMENT OF PROPOSED WORK AS DIRECTED BY THE ENGINEER TO AVOID CONFLICTS, AT NO INCREASE IN COST TO THE OWNER.

UTILITY SERVICE
UNLESS SPECIFICALLY PROVIDED OTHERWISE IN THE CONTRACT DOCUMENTS, ALL EXISTING UTILITIES ARE TO REMAIN IN SERVICE DURING THE PROJECT.

IRRIGATION SYSTEMS
WHERE IRRIGATION SYSTEMS WILL INTERFERE WITH THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE PROPERTY OWNERS THAT IT IS THEIR RESPONSIBILITY TO REMOVE AND PROTECT THEIR IRRIGATION SYSTEM. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH A COPY OF THE NOTIFICATION.

WHERE THE OWNER HAS NOT REMOVED THEIR PRIVATE IRRIGATION SYSTEM, THE CONTRACTOR SHALL CUT AND PLUG THOSE SECTIONS OF PIPING WHICH INTERFERE WITH CONSTRUCTION. SPRINKLER HEADS, VALVES, AND PIPING WHICH INTERFERES WITH THE CONTRACTOR'S WORK, SHALL BE REMOVED AND STOCKPILED ON THE OWNER'S PROPERTY.

SOIL BORINGS / PAVEMENT CORES
IF PROVIDED ON THE PLANS OR IN THE CONTRACT DOCUMENTS, LOGS OF SOIL BORINGS OR PAVEMENT CORES REPRESENT THE SUBSURFACE CONDITIONS ENCOUNTERED AT SPECIFIC POINTS. THE INFORMATION IS PROVIDED FOR THE CONTRACTOR'S INFORMATION ONLY.

MAINTAINING TRAFFIC
LOCAL AND EMERGENCY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES WITHIN THE PROJECT AREA.

WHEN EXCAVATION, FRESH CONCRETE, OR OTHER CONSTRUCTION WORK WILL RESULT IN THE CLOSURE OF A STREET OR DRIVEWAY FOR A PERIOD OF TIME, THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL AFFECTED RESIDENTS AND BUSINESSES IN ADVANCE.

THE CONTRACTOR SHALL NOTIFY EMERGENCY RESPONSE AGENCIES IN ADVANCE OF ROAD CLOSURES OR THE ESTABLISHMENT OF DETOURS.

SCHEDULE
THE CONTRACTOR SHALL COMPLETE ALL WORK IN AN EXPEDITIOUS MANNER AND SHALL NOT STOP WORK ON THE PROJECT ONCE BEGUN.

LAYOUT
LAYOUT AND GRADES FOR CURB AND GUTTER (INCLUDING THROUGH RAMPS AND DRIVEWAY OPENINGS) SHOWN ON THE PLANS ARE FOR THE TOP, BACK OF CURB, UNLESS SPECIFICALLY SHOWN OTHERWISE ON THE PLANS.

THE HORIZONTAL LAYOUT SHOWN ON THE DRAWINGS FOR DRAINAGE STRUCTURES LOCATED IN THE CURB LINE IS TO THE CENTER OF THE CASTING.

THE HORIZONTAL LAYOUT SHOWN ON THE DRAWINGS FOR DRAINAGE STRUCTURES WHICH ARE NOT IN THE CURB LINE AND FOR MANHOLES IS TO THE CENTER OF THE STRUCTURE.

WHERE RIM ELEVATIONS ARE PROVIDED ON THE PLANS FOR MANHOLE CASTINGS, THE ELEVATION PROVIDED IS FOR THE TOP OF THE CASTING.

WHERE RIM ELEVATIONS ARE PROVIDED FOR INLET TYPE CASTINGS, THE ELEVATIONS ARE PROVIDED AS FOLLOWS:
- CURB INLETS – THE ELEVATION OF THE TOP OF CURB
- ALL OTHER INLETS – THE ELEVATION OF THE FLOW LINE

WHERE RIM ELEVATIONS ARE PROVIDED ON THE PLANS FOR INLETS OR MANHOLE CASTINGS, THE ELEVATIONS PROVIDED ARE CONSIDERED PRELIMINARY. THE CONTRACTOR SHALL MAKE THE FINAL ADJUSTMENT FOLLOWING THE ESTABLISHMENT OF ACTUAL GRADING AND PAVEMENT ELEVATIONS.

CONSTRUCTION STAKING
WHEN CONSTRUCTION STAKING IS TO BE PROVIDED BY THE OWNER, THE CONTRACTOR SHALL REQUEST STAKING AT LEAST THREE WORKING DAYS IN ADVANCE.

WHEN CONSTRUCTION STAKING IS TO BE PROVIDED BY THE OWNER, STAKING WILL BE PROVIDED ONE TIME. THE CONTRACTOR SHALL PROTECT AND PRESERVE SURVEY CONTROL AND STAKING. RE-STAKING WILL BE AT THE CONTRACTOR'S EXPENSE.

SURVEY CORNERS, BENCHMARKS, AND CONTROL POINTS
THE CONTRACTOR SHALL PRESERVE ALL GOVERNMENT CORNERS, PROPERTY CORNERS, BENCHMARKS, SURVEY CONTROL POINTS AND OTHER SURVEY POINTS WITHIN THE PROJECT AREA. WHERE CORNERS, BENCHMARKS, OR SURVEY POINTS ARE ENCOUNTERED WHICH WILL BE DISTURBED BY THE CONTRACTOR'S ACTIVITIES; A LICENSED SURVEYOR SHALL WITNESS THE POINT BEFORE DISTURBANCE AND SHALL RE-SET THE POINT FOLLOWING THE COMPLETION OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL PAY THE SURVEYOR TO WITNESS AND TO RE-SET THE POINTS.

PROTECTION OF TREES, SHRUBS, AND LANDSCAPING
ALL TREES, SHRUBS, AND LANDSCAPING WITHIN THE CONSTRUCTION AREA WHICH ARE NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR. DAMAGED TREES, SHRUBS, AND LANDSCAPING SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

CONSTRUCTION SIGNING AND BARRICADING
THE CONTRACTOR SHALL PROTECT HAZARDOUS AREAS WITH BARRICADES. BARRICADES LEFT IN PLACE AFTER SUNSET SHALL BE LIGHTED.

THE CONTRACTOR SHALL PROVIDE SUITABLE SANDBAGS OR OTHER SUITABLE MEASURES FOR ANCHORING OF TEMPORARY SIGNS AND BARRICADES, TO PREVENT THEIR TIPPING OR DISPLACEMENT BY WIND OR AIR FLOW FROM VEHICLES.

THE CONTRACTOR SHALL PROVIDE SIGNING, BARRICADES, TRAFFIC REGULATORS, CONES, AND OTHER TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION OVER STREETS OR ROADS IN THE PROJECT AREA, THE CURRENT MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL COVER OR REMOVE TEMPORARY SIGNS DURING PERIODS WHEN THEY ARE NOT APPROPRIATE.

TURF ESTABLISHMENT
ALL DISTURBED AREAS WHICH ARE NOT TO BE SURFACED WITH PAVEMENT, AGGREGATE OR OTHER APPROVED SURFACES SHALL BE ESTABLISHED WITH TURF.

TURF AREAS SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE.

DISTURBED AREAS SHALL BE SURFACED WITH THREE INCHES OF SCREENED TOPSOIL.

THE CONTRACTOR IS RESPONSIBLE TO ESTABLISH TURF WHICH IS SUBSTANTIALLY FREE OF BARE SPOTS AND FREE OF WEEDS. THE GROUND SURFACE IN TURF AREAS SHALL BE SMOOTH AND PROVIDE A NATURAL TRANSITION TO ADJACENT, UNDISTURBED AREAS.

THE CONTRACTOR IS RESPONSIBLE TO PROVIDE WATERING, WEEDING, RESEEDING, AND REWORKING AS NECESSARY TO ESTABLISH TURF AREAS TO THE REQUIRED STANDARD.

ADA COMPLIANCE
ALL PROPOSED CONSTRUCTION SHALL COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT (ADA), AND APPLICABLE GUIDELINES OR STANDARDS. WHERE EXISTING CONDITIONS AND/OR THE REQUIREMENTS OF THE PLANS WILL RESULT IN FINISHED CONDITIONS THAT DO NOT MEET THE ADA REQUIREMENTS, GUIDELINES, OR STANDARDS; THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO REMOVE AND REPLACE WORK DETERMINED TO BE NOT IN ACCORDANCE WITH APPLICABLE REQUIREMENTS, GUIDELINES, OR STANDARDS.

EARTHWORK
THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF THE EARTHWORK QUANTITIES, AND BASE THEIR BID ON THEIR DETERMINATION OF THE QUANTITIES OF WORK REQUIRED.

IF ADDITIONAL FILL MATERIAL MUST BE PROVIDED TO ATTAIN THE FINISH GRADES SHOWN ON THE PLANS, THE CONTRACTOR SHALL PROVIDE THE REQUIRED FILL MATERIAL, UNLESS A SPECIFIC BORROW AREA IS IDENTIFIED ON THE PLANS.

EXCESS SOILS RESULTING FROM EXCAVATION AND EARTHWORK SHALL BECOME THE CONTRACTOR'S PROPERTY AND DISPOSED OF PROPERLY, UNLESS AN AREA(S) HAS BEEN DESIGNATED FOR STOCKPILING OR "BLENDING IN" THE EXCESS MATERIAL WITHIN THE PROJECT LIMITS.

BACKFILL AND EMBANKMENT
BACKFILL OF AN EXCAVATION UNDER OR WITHIN THE ONE ON ONE INFLUENCE OF AN EXISTING OR PROPOSED ROAD, SIDEWALK, DRIVEWAY, PAVEMENT, OR AGGREGATE SURFACE, SHALL BE SAND, MEETING THE REQUIREMENTS OF GRANULAR MATERIAL CLASS II AS DESCRIBED IN THE CURRENT MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE SAND BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

BACKFILL OF AN EXCAVATION WHICH IS NOT UNDER OR WITHIN THE ONE ON ONE INFLUENCE OF AN EXISTING OR PROPOSED ROAD, SIDEWALK, DRIVEWAY, PAVEMENT, OR AGGREGATE SURFACE MAY BE SUITABLE EXCAVATED MATERIAL OR OTHER SOIL, WHICH IS FREE OF ORGANIC MATTER, STONES AND ROCKS, ROOTS, BROKEN CONCRETE, FROZEN MATERIAL, OR DEBRIS. THE BACKFILL SHALL BE COMPACTED TO AT LEAST 90% OF ITS MAXIMUM UNIT WEIGHT.

THE CONTRACTOR SHALL INDICATE THE SOURCE OF SAND USED FOR BACKFILL TO THE OWNER, AND PROVIDE THE OWNER WITH THE RESULTS OF A GRADATION TEST PERFORMED ON A SAMPLE OF THE SAND. THE CONTRACTOR SHALL NOTIFY THE OWNER IN ADVANCE OF USING SAND FROM OTHER SOURCES.

EMBANKMENT USED TO BUILD THE SUBGRADE TO REQUIRED ELEVATION SHALL BE SUITABLE SOIL EXCAVATED FROM THE PROJECT SITE, OR FURNISHED BY THE CONTRACTOR FROM OTHER SOURCES. SUITABLE SOIL IS FREE FROM ORGANIC MATTER, ROCKS AND STONES, FROZEN MATERIAL, BROKEN CONCRETE, AND DEBRIS.

EMBANKMENT CONSTRUCTED OF GRANULAR SOILS SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 10 INCHES TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

EMBANKMENT CONSTRUCTED OF COHESIVE SOILS SHALL BE COMPACTED IN LIFTS NOT EXCEEDING 10 INCHES TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

DENSITY TESTING
THE MAXIMUM UNIT WEIGHT OF SAND AND OTHER GRANULAR SOILS WILL BE DETERMINED BY THE ONE POINT CONE TEST, AS DESCRIBED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S DENSITY TESTING AND INSPECTION MANUAL, EXCEPT WHEN ANOTHER TEST METHOD IS SPECIFIED.

THE MAXIMUM UNIT WEIGHT OF COHESIVE SOILS WILL BE DETERMINED BY THE ONE POINT PROCTOR TEST, AS DESCRIBED IN THE MICHIGAN DEPARTMENT OF TRANSPORTATION'S DENSITY TESTING AND INSPECTION MANUAL, EXCEPT WHEN ANOTHER TEST METHOD IS SPECIFIED.

WORK HOURS
WORK HOURS TO BE APPROVED BY THE OWNER.

DRAINAGE
THE CONTRACTOR SHALL MAINTAIN DRAINAGE OF THE PROJECT AREA AND ADJACENT AREAS. WHERE EXISTING DRAINAGE FACILITIES ARE DISTURBED OR BLOCKED BY CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY PROVISIONS FOR DRAINAGE.

WHERE CONSTRUCTION HAS DISTURBED EXISTING DITCHES, SWALES, OR OTHER DRAINAGE FACILITIES; THE CONTRACTOR SHALL RESTORE THEM TO THEIR GRADES AND DIMENSIONS WHICH EXISTED PRIOR TO THE BEGINNING OF CONSTRUCTION, UNLESS DIRECTED OTHERWISE.

DRAINAGE SHALL NOT BE REROUTED ONTO ADJACENT PROPERTIES NOR ALLOWED TO DRAIN ONTO ADJACENT PROPERTIES AT AN INCREASED RATE, AS A RESULT OF THE CONTRACTOR'S WORK.

SITE PROJECTS

ADJUSTING STRUCTURES
WHERE CASTINGS FOR MANHOLES, CATCH BASINS, INLETS, VALVE BOXES, AND MONUMENT BOXES ARE TO BE ADJUSTED TO MEET A NEW PAVEMENT SURFACE ELEVATION, THE FINAL ADJUSTMENT SHALL NOT BE COMPLETED UNTIL ALL PAVEMENT COURSES HAVE BEEN PLACED EXCEPT THE FINAL COURSE. THE FINAL ADJUSTMENT SHALL BE COMPLETED JUST PRIOR TO PLACEMENT OF THE FINAL COURSE OF PAVEMENT.

THE MATERIALS AND PROCEDURES FOR ADJUSTING STRUCTURES SHALL MEET THE REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION OVER THE ROAD AND UTILITIES.

SUBGRADE PREPARATION
TOPSOIL, PEAT, AND ORGANIC MATERIAL SHALL BE EXCAVATED AND REMOVED.

SOFT AND YIELDING SOILS SHALL BE REMOVED OR DRIED IF THE RESULT OF EXCESSIVE MOISTURE CONTENT.

PRIOR TO CONSTRUCTING FILLS, SUBBASE, OR PAVEMENT ON A SUBGRADE; THE SUBGRADE SHALL BE PROOF-ROLLED TO DETERMINE THE SUITABILITY OF THE SUBGRADE. THE CONTRACTOR SHALL DRIVE A HEAVY PIECE OF WHEELED CONSTRUCTION EQUIPMENT OVER THE SUBGRADE WHILE THE ENGINEER IS OBSERVING. THE CONSTRUCTION OF FILLS, SUBBASE, OR PAVEMENTS SHALL NOT PROCEED UNTIL THE SUBGRADE HAS BEEN DEMONSTRATED TO BE FREE OF SOFT AREAS.

THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE MOISTURE CONTENT OF SUBGRADE SOILS WITHIN A SUITABLE RANGE TO ALLOW FOR COMPACTION TO THE REQUIRED DENSITY. WHEN THE SOIL IS TOO DRY, THE CONTRACTOR SHALL ADD WATER. WHEN THE SOIL IS TOO WET, THE CONTRACTOR SHALL PROVIDE DRAINAGE OR AERATE THE SOIL.

THE SURFACE OF THE SUBGRADE SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT, PRIOR TO CONSTRUCTING FILLS, SUBBASE, OR PAVEMENTS.

HOT MIX ASPHALT (HMA) PAVING
PAVEMENTS WHICH ARE TO BE OVERLAID WITH A NEW PAVEMENT COURSE SHALL BE SWEPT TO REMOVE ALL DIRT AND DEBRIS.

A BITUMINOUS BOND COAT SHALL BE APPLIED TO PAVEMENTS WHICH ARE TO BE OVERLAID WITH A NEW PAVEMENT COURSE AND ALLOWED TO CURE PRIOR TO CONSTRUCTING THE NEW PAVEMENT COURSE.

HMA PAVEMENT SHALL NOT BE PLACED WHEN THE SURFACE BEING OVERLAID IS WET, OR WHEN RAIN IS FORECAST OR THREATENING.

DRIVEWAY CONSTRUCTION
DRIVEWAY SLOPES SHALL NOT EXCEED 10%, EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE ON THE PLANS OR DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL PROVIDE PROPERTY OWNERS WITH SUITABLE NOTICE BEFORE REMOVING AND REPLACING AN EXISTING DRIVEWAY.

SIDEWALK CONSTRUCTION
SIDEWALKS SHALL BE CONSTRUCTED TO PROVIDE POSITIVE DRAINAGE OF THE SIDEWALK AND ADJACENT SURFACES.

EXCEPT WHERE NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SURFACES, SIDEWALK SHALL BE CONSTRUCTED WITH A CROSS SLOPE SLOPED AWAY FROM BUILDINGS.

SIDEWALK CROSS SLOPES SHALL NOT EXCEED 2%.

IN TURF AREAS, THE SURFACE OF THE SIDEWALK SHALL BE ABOUT 1/4 INCH HIGHER THAN THE ADJACENT GROUND SURFACES, EXCEPT WHERE NECESSARY TO PROVIDE POSITIVE DRAINAGE OR MEET EXISTING SIDEWALKS, CURBS, OR PAVEMENTS.

SIDEWALK SHALL BE CONSTRUCTED ON A SAND BASE, COMPACTED TO AT LEAST 95% OF ITS MAXIMUM UNIT WEIGHT.

THE CONTRACTOR SHALL NOTIFY THE OWNER WHEN SIDEWALK FORMS HAVE BEEN SET AND THE SAND BASE PREPARED. CONCRETE SHALL NOT BE PLACED UNTIL THE OWNER HAS OBSERVED THE FORMS. CONCRETE DELIVERY SHALL BE SCHEDULED TO ALLOW SUFFICIENT TIME FOR ADJUSTMENT OF THE FORMS, IN THE EVENT THAT ADJUSTMENT IS NECESSARY.

THE CONTRACTOR SHALL PROTECT FRESH CONCRETE FROM DAMAGE BY THE WEATHER, TRAFFIC, OR VANDALISM. DAMAGED CONCRETE SHALL BE REPLACED BY THE CONTRACTOR'S EXPENSE.

SANITARY SEWER CONSTRUCTION NOTES
SANITARY SEWER SHALL CONFORM WITH THE CHARTER TOWNSHIP OF UNION APPROVAL AND DESIGN REQUIREMENTS, THE CURRENT STANDARDS OF THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY, AND THE TEN STATES STANDARDS.

THE NEW SANITARY SEWER SHALL NOT BE CONNECTED TO THE EXISTING SEWER UNTIL APPROVED BY THE OWNER.

AT LEAST TEN FEET OF HORIZONTAL AND EIGHTEEN INCHES OF VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN THE SEWER AND EXISTING WATER MAINS.

MANHOLES SHALL BE CONSTRUCTED FROM PRECAST CONCRETE MANHOLE SECTIONS, MEETING ASTM C443. MANHOLE JOINTS SHALL BE MADE WITH RUBBER O-RING GASKETS. THE SECTION BETWEEN THE TOP OF THE PRECAST CONE AND THE BOTTOM OF THE CASTING SHALL BE CONSTRUCTED OF PRECAST GRADE RINGS, OF TOTAL THICKNESS SO THAT THE MANHOLE CASTING IS PLACED AT THE PROPER FINAL ELEVATION, EXCEPT THAT THE TOTAL THICKNESS SHALL NOT EXCEED TEN INCHES.

MANHOLE STEPS SHALL BE EQUALLY SPACED AT 15 INCHES. THE DISTANCE FROM THE TOP STEP TO THE TOP OF THE MANHOLE CASTING SHALL NOT EXCEED 16 INCHES.

THE CONTRACTOR SHALL CONDUCT A LOW PRESSURE AIR TEST ON ALL SANITARY SEWERS LESS THAN 24 INCHES IN DIAMETER. THE AIR TEST SHALL MEET THE REQUIREMENTS OF ASTM F1471 FOR PLASTIC PIPE. IN AREAS WHERE GROUNDWATER IS OVER THE PIPE, THE TEST PRESSURE SHALL BE INCREASED EQUAL TO THE HYDRAULIC PRESSURE EXERTED BY THE WATER OVER THE PIPE, AS DETERMINED BY THE ENGINEER.

WATER MAIN CONSTRUCTION NOTES
WATER MAINS AND SERVICES SHALL CONFORM WITH THE CHARTER TOWNSHIP OF UNION USE OF APPROVAL AND DESIGN REQUIREMENTS, THE CURRENT STANDARDS OF THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY, AND THE "TEN STATES STANDARDS FOR WATER WORKS".

HYDRANTS, VALVES, AND OTHER MATERIALS SHALL MEET THE OWNER'S STANDARDS, WITH REGARD TO MANUFACTURER AND MODEL, AND DETAILS SUCH AS OPENING DIRECTION, HYDRANT COLOR, HYDRANT CONFIGURATION, AND HYDRANT THREAD PATTERN.

NEW WATER MAIN AND SERVICE SHALL NOT BE CONNECTED TO THE EXISTING WATER MAIN WITHOUT THE APPROVAL OF THE OWNER.

AT LEAST TEN FEET OF HORIZONTAL AND EIGHTEEN INCHES OF VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN THE WATER MAIN AND SEWERS (STORM OR SANITARY).

THE DEPTH OF BURY SHOWN ON THE PLANS SHALL BE PROVIDED, AS A MINIMUM, OVER THE TOP OF THE WATER MAIN PIPE TO THE FINISHED GROUND OR PAVEMENT SURFACE. UNLESS SPECIFICALLY DIRECTED OTHERWISE ON THE DRAWINGS, THE DEPTH OF BURY SHOWN ON THE PLANS SHALL BE MAINTAINED BETWEEN THE BOTTOM OF DITCHES AND THE TOP OF THE PIPE.

ALL BENDS, TEES, PLUGS, HYDRANTS, VALVES, AND OTHER FITTINGS WHERE THRUST MAY OCCUR SHALL BE RESTRAINED APPROPRIATELY BY THRUST BLOCKS OR JOINT RESTRAINT.

EXISTING WATER VALVES SHALL BE OPERATED ONLY BY THE WATER DEPARTMENT'S PERSONNEL.

THE SHUTTING DOWN OF EXISTING WATER MAINS TO ALLOW FOR COMPLETING THE CONTRACTOR'S WORK SHALL BE SCHEDULED IN ADVANCE BY THE CONTRACTOR WITH THE OWNER. THE CONTRACTOR SHALL PROVIDE NOTIFICATION TO AFFECTED WATER CUSTOMERS IN AT LEAST A DAY IN ADVANCE OF ANY SCHEDULED SERVICE DISRUPTIONS.

THE CONTRACTOR SHALL EXPOSE EXISTING MAINS TO VERIFY THE SIZE, MATERIALS, AND ANY FITTINGS NECESSARY BEFORE SHUTTING DOWN EXISTING WATER MAINS FOR NEW CONNECTIONS. ALL FITTINGS, PARTS, AND EQUIPMENT NECESSARY TO COMPLETE THE PROPOSED CONNECTIONS TO THE EXISTING MAIN SHALL BE AVAILABLE AT THE SITE BEFORE THE EXISTING MAIN IS SHUT DOWN.

THE COMPLETED WATER MAIN SHALL BE SUBJECTED TO A HYDROSTATIC PRESSURE. THE TEST PRESSURE SHALL BE 150 PSI. THE TEST DURATION SHALL BE 2 HOURS. THE CONTRACTOR SHALL CONDUCT SUCH PRELIMINARY TESTING TO EXPEL AIR AND VERIFY THAT THERE ARE NO LEAKS IN THE PIPELINE. THE TEST SHALL BE WITNESSED BY THE ENGINEER OR OWNER. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR OWNER AT LEAST 24 HOURS IN ADVANCE OF THE TIME FOR TESTING.

IF THE CONTRACTOR ELECTS TO PRESSURE TEST AGAINST AN EXISTING VALVE, THE OWNER DOES NOT GUARANTEE THAT EXISTING VALVES CAN RESIST THE TEST PRESSURE. IF THE CONTRACTOR BELIEVES THAT AN EXISTING VALVE IS THE CAUSE OF A FAILED PRESSURE TEST, THE CONTRACTOR SHALL EITHER REPAIR THE VALVE AND RETEST OR TEST AGAINST A PLUG, AT THEIR EXPENSE.

UNLESS SPECIFICALLY PROVIDED OTHERWISE, THE CONTRACTOR IS RESPONSIBLE TO FURNISH WATER FOR TESTING AND DISINFECTION.

WATER FROM THE CONTRACTOR'S FLUSHING AND DISINFECTION ACTIVITIES SHALL BE DISPOSED OF TO PREVENT EROSION OR FLOODING.

THE CONTRACTOR SHALL FURNISH AND INSTALL CORPORATIONS, TAPS, PIPING, AND FITTINGS AS NECESSARY TO COMPLETE THE REQUIRED FLUSHING AND TESTING FOR ACCEPTANCE. AFTER ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL CORPORATIONS, TAPS, PIPING, AND FITTINGS USED FOR FLUSHING AND TESTING. TAPS TO THE WATER MAIN SHALL BE PLUGGED WITH BRASS PLUGS.

TAPS FOR SERVICE CONNECTIONS SHALL BE COMPLETED UNDER PRESSURE. THE CORPORATION AND SERVICE LEAD SHALL BE VISUALLY CHECKED FOR LEAKAGE WHILE UNDER PRESSURE. ALL JOINTS SHALL REMAIN EXPOSED UNTIL THE ENGINEER HAS OBSERVED THEM.

CORPORATIONS SHALL BE LEFT IN THE "OPEN" POSITION. CURB STOPS FOR FUTURE CONNECTIONS SHALL BE LEFT "CLOSED"; CURB STOPS FOR CURRENT WATER CUSTOMERS SHALL BE LEFT "OPEN" ONCE CONNECTED.

STORM SEWER CONSTRUCTION NOTES
STORM SEWER SHALL CONFORM WITH LOCAL & STATE STANDARDS.

DRAINAGE STRUCTURES SHALL BE CONSTRUCTED FROM PRECAST CONCRETE MANHOLE SECTIONS, MEETING ASTM C478.

SUMPS IN DRAINAGE STRUCTURES AND PIPELINES SHALL BE FREE OF SEDIMENT AND DEBRIS AT THE TIME OF ACCEPTANCE BY THE OWNER.

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FINAL SITE PLAN REVIEW	8/26/2022
ADDENDUM 1	8/12/2022
ISSUED FOR BIDS	8/1/2022
PRELIM. SITE PLAN REVIEW	5/31/2022

DATE ISSUED

M.M
DRAWN BY

JBM
CHECKED BY

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MID MICHIGAN COLLEGE NEW SPORTS COMPLEX

PROJECT

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CONSULTANT

SITE NOTES

SHEET TITLE

22-703
PROJECT NUMBER

C-100
SHEET NUMBER

Know what's **below.**
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Drawing: R:\Projects\22\MOO13\Working\construction drawings\SH-21\MOO13-NT.dwg
Date: Aug 25, 2022, 1:56pm Layout: NOTES Plotted by: TSYMJM

May 25, 2022

Parking Lot Usage Statement

For over a month, during both peak and slow times, Mid Michigan College has been conducting a detailed survey of parking lot usage. This survey, conducted primarily in the early afternoon, was meant to determine existing and future parking lot capacity.

The addition of a baseball and softball field complex would create increased demand for parking.

- In most instances, the demand will be heaviest in the early afternoon. Collegiate baseball and softball games generally begin between 1pm and 2pm, which is when player and spectator parking would be heaviest.
- Use of the ball field complex for rentals, tournaments, or camps will most often occur on evenings and weekends – and typically in the summer – when parking lot usage is minimal.

The details of the parking lot survey can be found on the following pages. The survey started on April 11, 2022 (week 14 of the semester) and concluded on May 17, 2022 (two weeks after classes ended). Weeks 15, 16, and 17 of the semester have a high volume of students as they make sure to attend classes as finals approach. As you can see, Week 15 saw the highest number of cars in the parking lot.

The parking lot survey includes all cars – including Mid employees. During the semester, from Monday through Thursday, there are about 85-95 employees on campus at the high point of activity in the afternoon. On low-volume days, which includes Fridays and all of summer, there about 50-60 employees on campus.

During the course of the survey, the highest level of parking lot usage was at 36% of available spots used. The average was at only 18% of the available spots used.

The site plan for the ball field complex calls for eliminating 123 spaces. Even with those spots gone, the highest level of parking lot usage would have been at 43% of available spots used. The average would have been at only 22% of the available spots used. At the highest (and rarest) level of usage, there would still be 372 parking spots available.

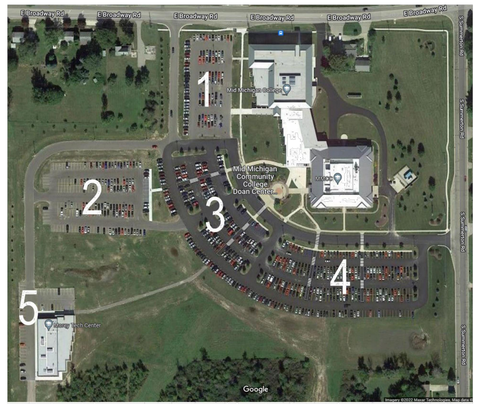
Mid currently uses the baseball and softball fields at Shepherd High School. Those fields are served by a parking lot with 105 spaces and there have been no issues with parking.

Based on the survey of current usage, the College's historic usage at Shepherd, and the anticipated timeframes for most field use (evening and summer), the College believes that its current parking – even with the loss of 123 spaces – will be more than adequate to meet the needs of the new facility.

Please let me know if you have any questions. You can reach me at mmiller@midmich.edu or at 386-6600.

Matt Miller
VP Student Services

Current Parking Lots



Note: This image was taken on September 22, 2015. There were many more cars in the parking lot because overall enrollment was higher at that time and fewer students were taking classes online. There were 19,611 credits being taken on the Mt. Pleasant Campus in Fall 2015. There were only 7,593 credits taken on the Mt. Pleasant Campus in Fall 2021 – a 61% decline. The parking lot survey on the following page is an accurate reflection of current use.

Total Available Spaces

	Current	Proposed
Lot 1	104	104
Lot 2	182	182
Lot 3	163	163
Lot 4*	272	149
Lot 5	50	50
Total	771	648

*123 spaces lost

Parking Lot Survey

		Lot 1		Lot 2		Lot 3		Lot 4		Lot 5		Total - Current		Total - Proposed		
Date	Time	Cars	% used	Cars	% used	Cars	% used	Cars	% used	Cars	% used	Cars	% used	Cars	% used	
Monday, April 11, 2022	3:30pm	46	44%	0	0%	55	34%	45	17%	9	18%	155	20%	155	24%	Week 14
Wednesday, April 13, 2022	4:15pm	46	44%	0	0%	24	15%	18	7%	7	14%	95	12%	95	15%	
Thursday, April 14, 2022	1:20pm	70	67%	0	0%	61	37%	51	19%	10	20%	192	25%	192	30%	
Friday, April 15, 2022	12:15pm	37	36%	1	1%	27	17%	33	12%	3	6%	101	13%	101	16%	
Monday, April 18, 2022	10:00am	60	58%	0	0%	46	28%	45	17%	13	26%	164	21%	164	25%	Week 15
Monday, April 18, 2022	1:40pm	73	70%	0	0%	68	42%	49	18%	16	32%	206	27%	206	32%	
Monday, April 18, 2022	5:20pm	30	29%	0	0%	28	17%	16	6%	9	18%	83	11%	83	13%	
Tuesday, April 19, 2022	1:25pm	46	44%	0	0%	72	44%	68	25%	13	26%	199	26%	199	31%	
Wednesday, April 20, 2022	1:10pm	94	90%	0	0%	109	67%	61	22%	12	24%	276	36%	276	43%	
Thursday, April 21, 2022	1:30pm	61	59%	0	0%	60	37%	71	26%	13	26%	205	27%	205	32%	
Friday, April 22, 2022	2:30pm	34	33%	0	0%	21	13%	14	5%	7	14%	76	10%	76	12%	
Monday, April 25, 2022	1:45pm	66	63%	0	0%	71	44%	58	21%	12	24%	207	27%	207	32%	Week 16
Tuesday, April 26, 2022	2:10pm	71	68%	0	0%	66	40%	66	24%	12	24%	215	28%	215	33%	
Wednesday, April 27, 2022	1:25pm	49	47%	0	0%	60	37%	63	23%	14	28%	186	24%	186	29%	
Thursday, April 28, 2022	1:40pm	58	56%	0	0%	72	44%	59	22%	10	20%	199	26%	199	31%	
Thursday, April 28, 2022	6:00pm	15	14%	0	0%	15	9%	29	11%	8	16%	67	9%	67	10%	
Monday, May 2, 2022	2:05pm	76	73%	0	0%	56	34%	43	16%	14	28%	189	25%	189	29%	Week 17
Tuesday, May 3, 2022	2:10pm	62	60%	0	0%	60	37%	48	18%	17	34%	187	24%	187	29%	
Wednesday, May 4, 2022	1:15pm	94	90%	0	0%	67	41%	45	17%	6	12%	212	27%	212	33%	
Thursday, May 5, 2022	1:55pm	51	49%	0	0%	38	23%	33	12%	11	22%	133	17%	133	21%	
Friday, May 6, 2022	1:50pm	25	24%	0	0%	17	10%	18	7%	10	20%	70	9%	70	11%	
Monday, May 9, 2022	1:25pm	22	21%	0	0%	14	9%	11	4%	13	26%	60	8%	60	9%	No classes
Tuesday, May 10, 2022	1:10pm	24	23%	0	0%	11	7%	14	5%	13	26%	62	8%	62	10%	
Wednesday, May 11, 2022	1:20pm	22	21%	0	0%	22	13%	18	7%	16	32%	78	10%	78	12%	
Thursday, May 12, 2022	1:45pm	22	21%	0	0%	22	13%	31	11%	13	26%	88	11%	88	14%	
Monday, May 16, 2022	1:35pm	20	19%	0	0%	17	10%	16	6%	13	26%	66	9%	66	10%	
Tuesday, May 17, 2022	2:10pm	18	17%	0	0%	15	9%	11	4%	10	20%	54	7%	54	8%	
												142	18%	142	22%	Average

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CONSULTANT

PARKING LOT STATEMENT

SHEET TITLE

22–703

PROJECT NUMBER

C–101

SHEET NUMBER

Know what's **below.**
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Drawing: R:\Projects\22\MID13\dwg\construction drawings\SH-22MID13-NT.dwg
Date: Aug 25, 2022, 1:56pm Layout: NOTES (2) Plotted by: TSHMJM

STRUCTURE SYMBOLS

- EXISTING CATCH BASIN IN CURB LINE
- PROPOSED CATCH BASIN IN CURB LINE
- EXISTING CATCH BASIN IN GREEN SPACE
- PROPOSED CATCH BASIN IN GREEN SPACE
- EXISTING STORM MANHOLE
- PROPOSED STORM MANHOLE
- PROPOSED CULVERT END SECTION
- EXISTING HEADWALL
- PROPOSED HEADWALL
- EXISTING GATE VALVE AND BOX
- EXISTING WATER SHUT OFF (CURB BOX)
- PROPOSED GATE VALVE AND BOX
- EXISTING GATE VALVE AND WELL
- PROPOSED GATE VALVE AND WELL
- EXISTING SPRINKLER HEAD
- EXISTING WATER WELL
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROPOSED WATER MAIN FITTINGS
- EXISTING CLEAN OUT
- EXISTING SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER MANHOLE
- EXISTING MONITORING WELL

EXISTING TOPOGRAPHICAL SYMBOLS

- SIGN
- STREET SIGN
- END OF PIPE
- SWAMP OR WETLAND
- DECIDUOUS TREE
- CONIFEROUS TREE
- TREE STUMP
- MAIL BOX
- SOIL BORING
- ROCK
- METAL POST
- BUMPER BLOCK

UTILITY SYMBOLS

- UTILITY POLE
- GUY ANCHOR CABLE
- LIGHT POLE / ORNAMENTAL LIGHT
- POWER LIGHT POLE
- TELEPHONE MANHOLE
- UNDERGROUND GAS LINE MARKER
- GAS RISER
- GAS VENT
- GAS VALVE
- RAILROAD SIGNAL
- METAL LIGHT POLE
- OUTLET
- CIRCUIT BREAKER PANEL
- ELECTRICAL TRANSFORMER PAD
- ELECTRICAL TRANSFORMER RISER
- ELECTRIC METER
- TELEPHONE PEDESTAL / RISER
- TRAFFIC SIGNAL ON POLE
- PHONE BOOTH / PAY PHONE

SURVEY SYMBOLS

- MONUMENT
- BENCHMARK
- TRAVERSE POINT
- SECTION CORNER
- FOUND SURVEY MONUMENTATION

MISCELLANEOUS SYMBOLS

- EX 1812 — EXISTING STORM SEWER STRUCTURE NUMBER
- EX 5236 — EXISTING SANITARY SEWER STRUCTURE NUMBER
- 1 — PROPOSED STORM SEWER STRUCTURE NUMBER
- A — PROPOSED SANITARY SEWER STRUCTURE NUMBER
- FLOW DIRECTION
- EXISTING RIP-RAP
- PROPOSED RIP-RAP

CAUTION SYMBOLS

- ••CAUTION•• HAZARDOUS FLAMMABLE MATERIAL UNDERGROUND — USED WITH UNDERGROUND GAS & ELECTRICAL LINES
- ••CAUTION•• FIBER OPTIC — USED WITH FIBER OPTIC LINES

PLAN VIEW LINE TYPES

- 12" STM — EXISTING STORM SEWER
- 12" CONC — EXISTING CULVERT
- PROPOSED STORM SEWER LESS THAN 24"
- PROPOSED STORM SEWER 24" AND GREATER
- 12" SAN — EXISTING SANITARY SEWER
- PROPOSED SANITARY SEWER
- 12" WM — EXISTING WATER MAIN
- PROPOSED WATER MAIN
- SECTION LINE
- 60' ROW — EXISTING RIGHT OF WAY
- 60' ROW — PROPOSED RIGHT OF WAY
- PROPOSED EASEMENT
- EXISTING CENTER LINE DITCH
- PROPOSED DITCH CENTERLINE
- EXISTING CENTER LINE ROADWAY
- PARCEL LINE / LOT LINE
- O/H — EXISTING OVERHEAD UTILITIES
- U/G ELEC — UNDERGROUND ELECTRICAL LINE
- 6" S-MP GAS — GAS LINE OR PETROLEUM PIPELINE
- U/G TEL — UNDERGROUND TELEPHONE LINE
- U/G CATV — UNDERGROUND CABLE TV LINE
- U/G FIBER OPTIC — UNDERGROUND FIBER OPTIC
- 11+00 — PROJECT CONTROL LINE
- TREE LINE
- BRUSH LINE
- EXISTING FENCE
- PROPOSED FENCE
- EXISTING GUARD RAIL
- PROPOSED SLOPE STAKE LINE
- PROPOSED SILT FENCE

TOPOGRAPHY

- 960 — EXISTING CONTOURS MAJOR
- 958 — EXISTING CONTOURS MINOR
- 960 — PROPOSED CONTOURS MAJOR
- 958 — PROPOSED CONTOURS MINOR

PARCEL INFORMATION

- 401-069 — PARCEL/TAX IDENTIFICATION NUMBER
- #5324 — ADDRESS/BUSINESS NAME

PAVEMENT IDENTIFICATION

- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER

HATCHING LEGEND

- REMOVE PAVEMENT
- REMOVE SIDEWALK
- PROPOSED CONCRETE SIDEWALK
- PROPOSED CONCRETE PAVEMENT
- PROPOSED AGGREGATE SIDEWALK
- PROPOSED AGGREGATE DRIVEWAY
- PROPOSED HMA SURFACE
- REMOVE STORM SEWER
- REMOVE CURB AND GUTTER

PROPOSED CALLOUTS

PLAN VIEW

- (ADJ) — ADJUST STRUCTURE
- (ADJ-X) — ADJUST STRUCTURE W/ NEW COVER
- (ADJ-B/O) — ADJUST STRUCTURE BY OTHERS
- (REC) — RECONSTRUCT STRUCTURE
- (REL) — RELOCATE
- (REL-B/O) — RELOCATE BY OTHERS
- (R) — REMOVE
- (R&R) — REMOVE AND REPLACE
- (SALV) — SALVAGE
- (S) — SAVE
- (A) — ABANDON
- (C) — CLEARING
- (B) — BULKHEAD
- (SR-F) — SIDEWALK RAMP TYPE
- [6] — SOIL EROSION CONTROL MEASURE

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DRAWN BY

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CONSULTANT

SITE LEGEND

SHEET TITLE

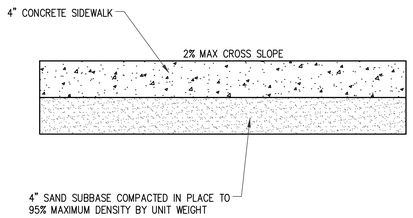
22-703

PROJECT NUMBER

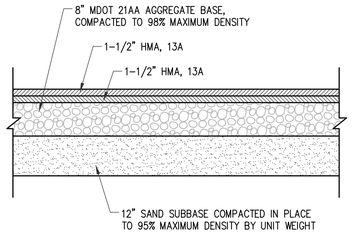
C-102

SHEET NUMBER

Drawing: R:\Projects\22\M000.13\Dwg\Construction drawings\SH-22M000.13-LEG.dwg
Date: Aug 25, 2022, 1:56pm Layout: LEG Plotted by: TSINUM



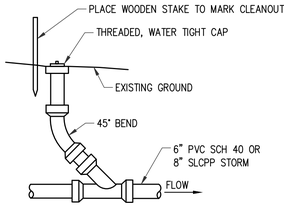
CONCRETE SIDEWALK CROSS SECTION
NOT TO SCALE



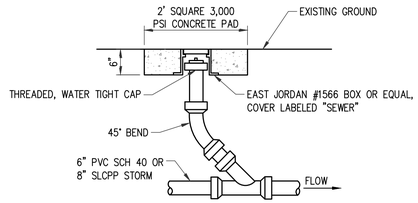
HMA PAVEMENT CROSS SECTION
NOT TO SCALE

HMA APPLICATION CHART

ITEM/HMA PAVEMENT	RATE OF APPLICATION	ESTIMATED THICKNESS	PERFORMANCE GRADE	COMMENTS
HMA, 13A	165#/SYD	1.5"	58-28	TOP COURSE (AWI=260 MINIMUM)
HMA, 13A	165#/SYD	1.5"	58-28	LEVELING COURSE
HMA, 13A	VARIES	VARIES	58-28	HAND PATCHING FOR PAVEMENT REPAIRS
HMA BOND COAT	0.05-0.15 GAL	–	–	FOR INFORMATION ONLY

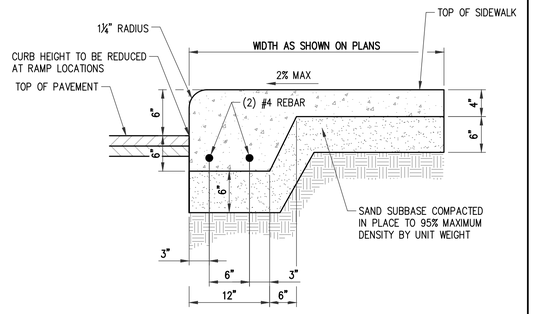


FOR GRASS AREAS

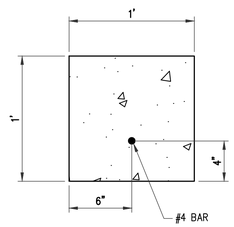


FOR PAVEMENT AREAS

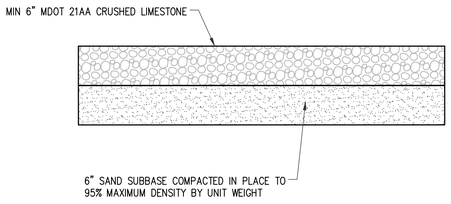
CLEANOUT RISER DETAIL
NOT TO SCALE



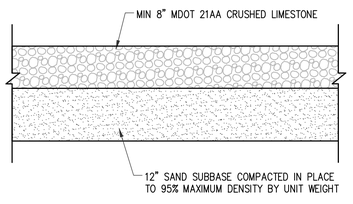
RAISED EDGE WALK DETAIL
NOT TO SCALE



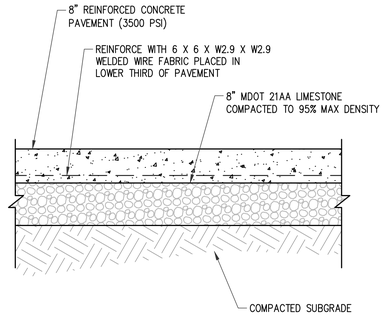
CONCRETE CURB
NOT TO SCALE



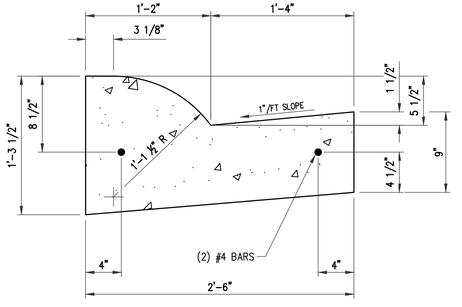
AGGREGATE SIDEWALK CROSS SECTION
NOT TO SCALE



AGGREGATE DRIVEWAY CROSS SECTION
NOT TO SCALE



CONCRETE PAVEMENT CROSS SECTION
NOT TO SCALE



CONCRETE CURB & GUTTER
DETAIL B-2
NOT TO SCALE

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ADDENDUM 2	8/18/2022
ADDENDUM 1	8/12/2022
ISSUED FOR BIDS	8/1/2022
PRELIM. SITE PLAN REVIEW	5/31/2022

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MJM
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CONSULTANT

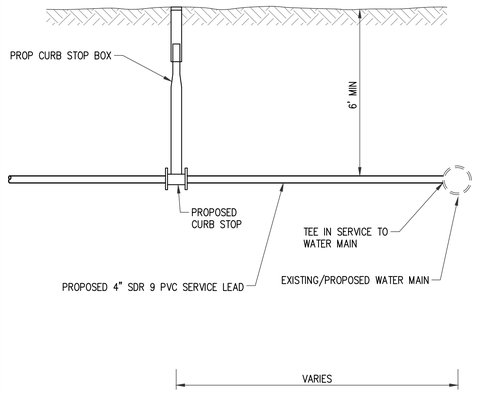
SITE DETAILS

SHEET TITLE

22-703
PROJECT NUMBER

C-103
SHEET NUMBER

Drawing: R:\Projects\22\MOD13\Design\construction drawings\SH-22MOD13-DET.dwg
Date: Aug 25, 2022, 1:56pm Layout: DET Plotted by: TSMMM

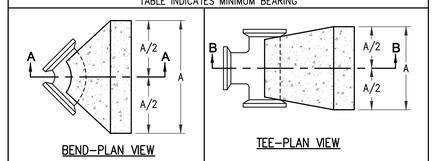


DOMESTIC WATER SERVICE DETAIL

NOT TO SCALE

DIA. OF PIPE OR BRANCH OF TEE	90° BEND			45° BEND			22 1/2° BEND 11 1/4° BEND			PLUGS, HYDRANTS AND TEE		
	A	B	C	A	B	C	A	B	C	A	B	C
6"	2'-0"	2'-0"	0'-9"	2'-0"	1'-0"	0'-9"	2'-0"	1'-0"	0'-9"	2'-0"	2'-0"	1'-0"
8"	3'-0"	2'-0"	1'-0"	2'-6"	2'-0"	1'-3"	2'-0"	1'-0"	1'-0"	3'-0"	2'-0"	1'-9"
12"	4'-0"	3'-0"	1'-6"	3'-0"	3'-0"	1'-6"	2'-0"	2'-0"	1'-6"	4'-0"	3'-0"	2'-0"
16"	6'-0"	4'-0"	1'-6"	4'-0"	4'-0"	1'-6"	3'-0"	3'-0"	1'-6"	5'-0"	4'-0"	2'-0"
24"	8'-0"	6'-0"	2'-0"	5'-0"	5'-0"	2'-0"	4'-0"	4'-0"	2'-0"	8'-0"	6'-0"	2'-6"

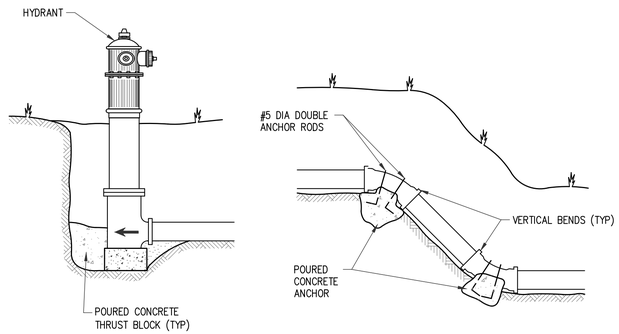
TABLE INDICATES MINIMUM BEARING

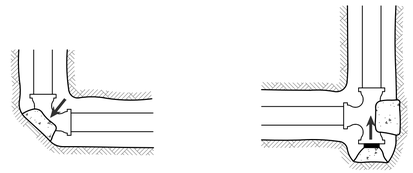


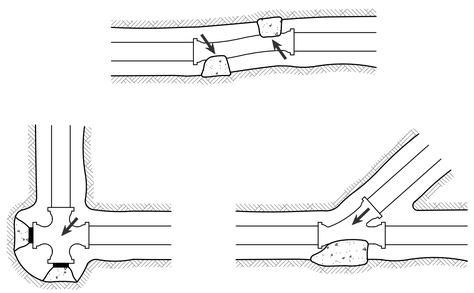
NOTE:
1. USE 2,500 PSI CONCRETE FOR ALL THRUST BLOCKS.
2. POUR AGAINST UNDISTURBED SOIL.
3. KEEP BOLTS, FITTINGS AND JOINTS CLEAR OF CONCRETE.
4. BEARING AREA IS BASED ON 2,000 PSI SOIL CAPACITY.

THRUST BLOCK DETAILS

NOT TO SCALE

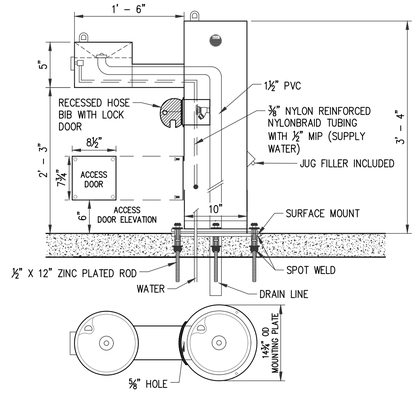






LOCATION OF THRUST BLOCK RESTRAINT

NOT TO SCALE



NOTES:
1. MEETS ADA REGULATIONS
2. STAINLESS STEEL SURFACE CARRIER
3. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
4. DO NOT SCALE DRAWING.
5. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT, BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.
6. MANUFACTURER IS: MOST DEPENDABLE FOUNTAINS, INC. MODEL NO. 440 SMFA WITH OPTIONAL RECESSED HOSE BIB, JUG FILLER, AND LOCK DOOR OR APPROVED EQUAL – (901) 867-0039. COLOR TO BE APPROVED BY THE OWNER

DRINKING FOUNTAIN DETAIL

NOT TO SCALE

MINIMUM PIPE RESTRAINT SCHEDULE FOR GROUND BURIED PRESSURE PIPES (SEE NOTE 1)

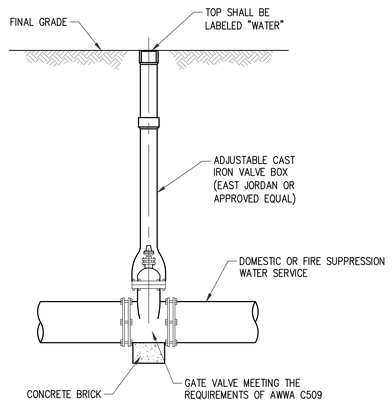
LENGTH (IN FEET) OF RESTRAINT REQUIRED (SEE NOTE 2)							
PIPE DIAMETER \ DEFLECTION ANGLE	22 1/2°	33 3/4°	45°	56 1/4°	67 1/2°	78 3/4°	90° TEE OR DEAD END
6"	3	6	11	16	23	29	37
8"	4	8	15	22	31	41	50
10"	5	11	18	28	38	49	61
12"	6	13	22	33	45	59	73
14"	7	14	25	37	52	68	84
16"	8	16	28	42	59	77	95
18"	8	18	31	47	66	86	107
20"	9	20	35	53	73	95	118
24"	11	23	40	61	85	111	138
30"	13	29	50	75	105	136	170
36"	15	34	59	88	123	160	199
42"	17	39	67	101	141	184	228
48"	19	43	75	113	157	206	255

NOTES:

1. THIS TABLE IS BASED ON A TEST PRESSURE OF 180 PSI (OPERATING PRESSURE + WATER HAMMER.) FOR OTHER TEST PROCEDURES, ALL VALUES ARE TO BE INCREASED OR DECREASED PROPORTIONALLY.
2. IN EACH DIRECTION FROM POINT OF DEFLECTION OR TERMINATION EXCEPT FOR A TEE AT WHICH ONLY THE BRANCH IN THE DIRECTION OF THE TEE STEM.
3. IF TIE RODS ARE USED, PLACE 2 RODS 5/8 INCH DIAMETER MINIMUM FOR WATER MAIN 6 INCH TO 10 INCH AND 4 RODS 5/8 INCH DIAMETER MINIMUM FOR 12 INCH AND LARGER.

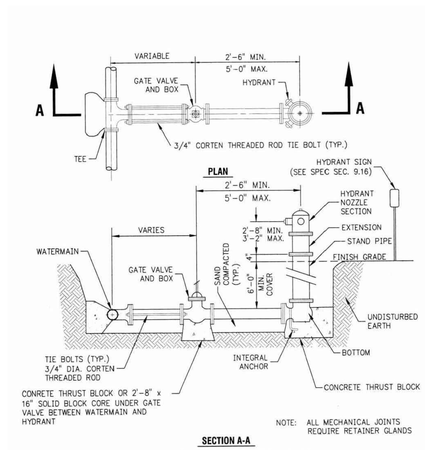
PIPE RESTRAINT SCHEDULE

NOT TO SCALE



GATE VALVE AND BOX DETAIL

NOT TO SCALE



HYDRANT ASSEMBLY DETAIL

NO SCALE

NOTE: DETAIL PROVIDED BY THE CHARTER TOWNSHIP OF UNION

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JBM
CHECKED BY

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CONSULTANT

SITE DETAILS

SHEET TITLE

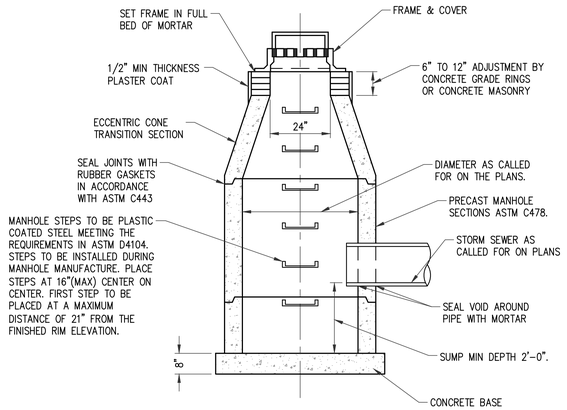
22-703

PROJECT NUMBER

C-104

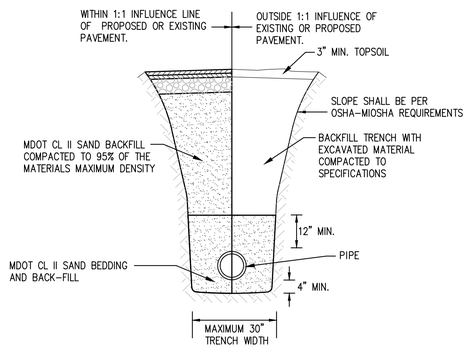
SHEET NUMBER

Drawing: R:\Projects\22\K00130\Dwg\construction drawings\SH-22MOD13-DET.dwg
Date: Aug 25, 2022, 1:56pm Layout: DET 2 Plotted by: TSYNUM



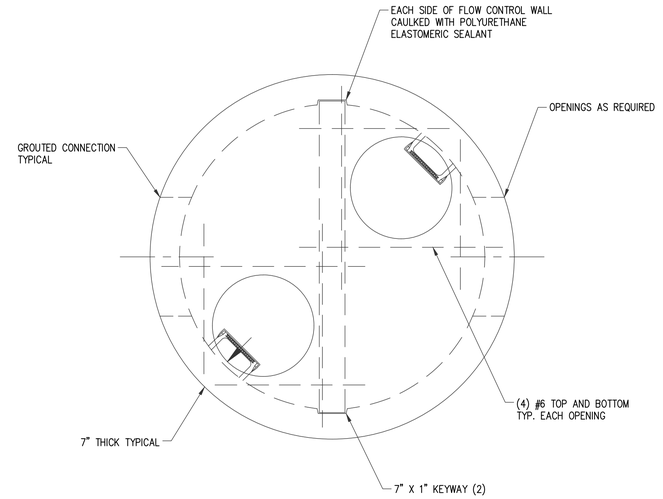
STANDARD DRAINAGE STRUCTURE WITH 2' SUMP

NOT TO SCALE

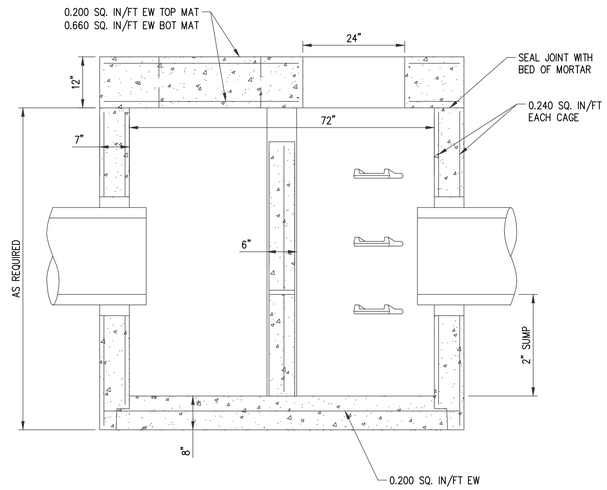


PIPE BEDDING DETAIL

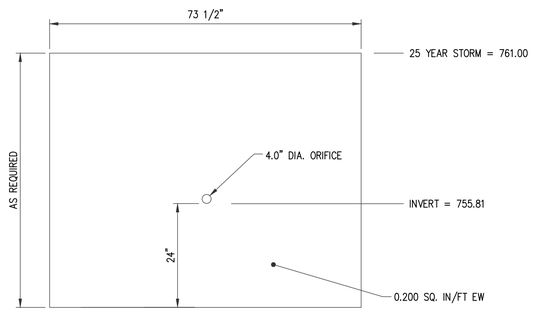
NOT TO SCALE



TOP VIEW



CROSS SECTION VIEW



WEIR SIDE VIEW

NOTES:

1) MANHOLE SECTIONS TO BE MANUFACTURED TO ASTM C-478 SPECIFICATIONS AND IN ACCORDANCE WITH NORTHERN CONCRETE PIPE, INC. (800-222-9918)

2) REINFORCING SHOWN FOR SCHEMATIC ONLY. ALL STEEL AREAS ARE MINIMUMS.

3) CONTRACTOR TO SEAL BETWEEN PRECAST WALL & BASE WITH BUTYL ROPE.

72" PRECAST OUTLET CONTROL STRUCTURE W/ OVERFLOW

NOT TO SCALE

Drawing: R:\Projects\22M0013\Dwg\construction drawings\SH-22M0013-DET.dwg
Date: Aug 25, 2022, 1:57pm Layout: DET 3 Plotted by: 759MJM

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DATE ISSUED

MJM
DRAWN BY

JBM
CHECKED BY

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CONSULTANT

SITE DETAILS

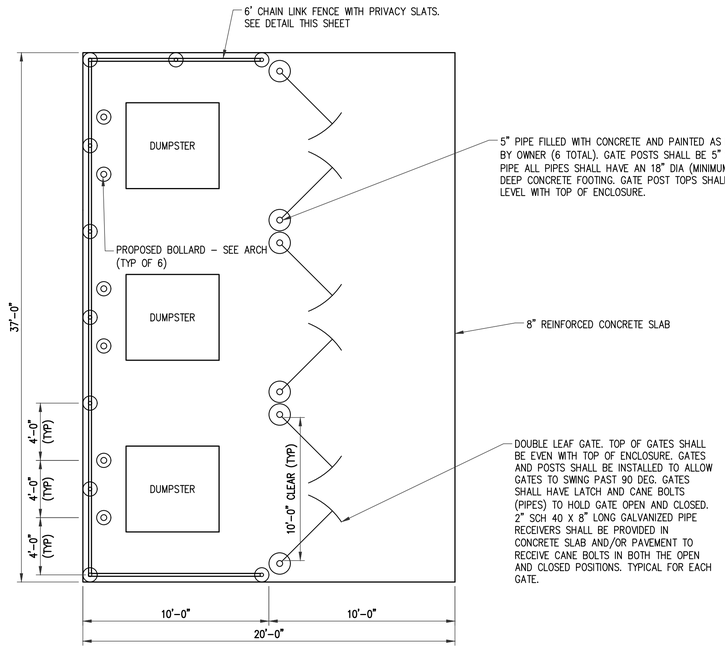
SHEET TITLE

22-703

PROJECT NUMBER

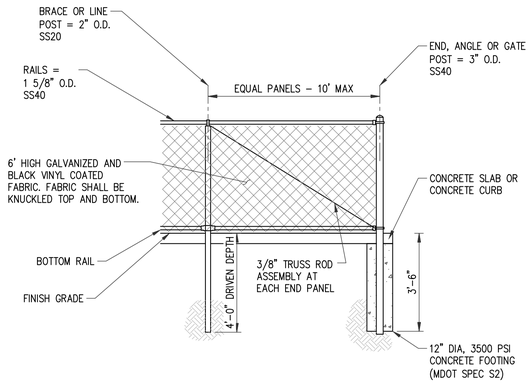
C-105

SHEET NUMBER



DUMPSTER ENCLOSURE DETAIL

NOT TO SCALE



NOTES:
1. INSTALL PRIVACY SLATS IN FENCE SURROUNDING DUMPSTER ENCLOSURE. COLOR TO BE APPROVED BY THE OWNER.
2. ALL FENCE MATERIAL TO APPROVED BY THE OWNER.
3. FENCE POSTS TO BE CENTERED IN 1' CONCRETE CURB.
4. VINYL COATED FABRIC SHALL BE PLACED:
   DUMPSTER ENCLOSURE – ON OUTSIDE OF ENCLOSURE
   BALL FIELDS – ON FIELD SIDE OF POSTS

6' CHAIN LINK FENCE DETAIL

NOT TO SCALE

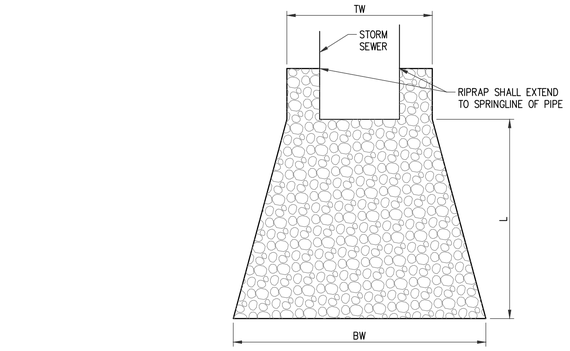
MDOT STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS, THEY ARE TO CONFORM TO THE MDOT STANDARD PLANS LISTED UNLESS OTHERWISE INDICATED.

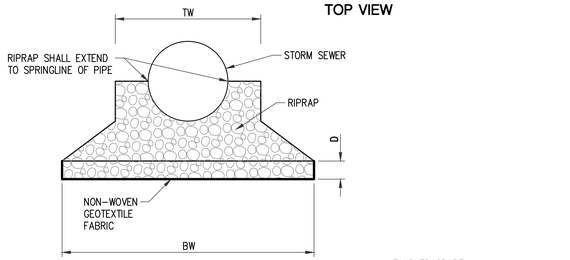
R-7-F	COVER B
R-12-E	COVER G
R-28-J	CURB RAMP AND DETECTABLE WARNING DETAILS
R-30-G	CONCRETE CURB AND CONCRETE CURB & GUTTER

RIPRAP APRON DIMENSIONS

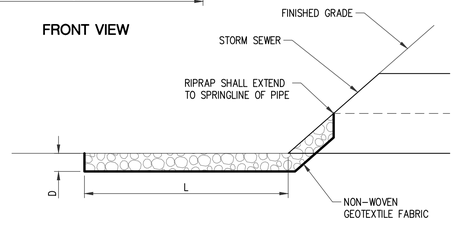
LOCATION	DEPTH (D)	LENGTH (L)	TOP WIDTH (TW)	BOTTOM WIDTH (BW)
END SECTION	INCH	FT	FT	FT
9	12	10	6	8
12	12	10	6	8
13	12	15	12	15
15	12	5	6	8
16	12	5	6	8
18	12	5	6	8



TOP VIEW



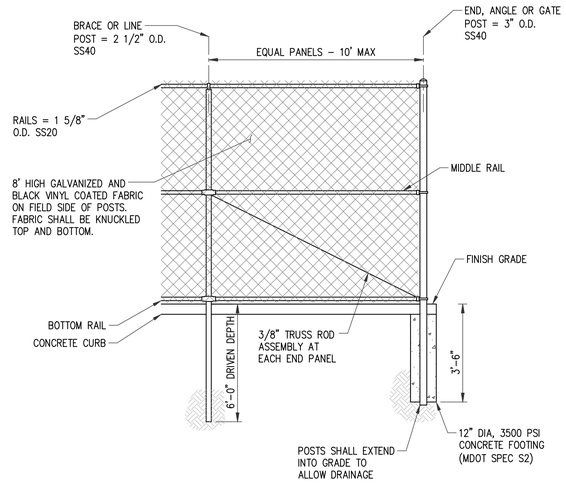
FRONT VIEW



SIDE VIEW

RIPRAP OUTLET DETAIL

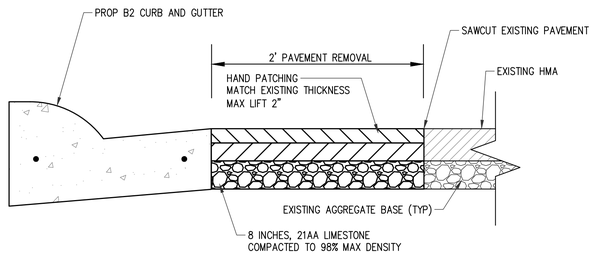
NOT TO SCALE



NOTES:
1. ALL FENCE MATERIAL TO BE APPROVED BY THE OWNER.
2. FENCE POSTS TO BE CENTERED IN 1' CONCRETE CURB.

8' CHAIN LINK FENCE DETAIL

NOT TO SCALE



HAND PATCH DETAIL

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PRELIM. SITE PLAN REVIEW	5/31/2022

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CONSULTANT

SITE DETAILS

SHEET TITLE

22-703

PROJECT NUMBER

C-106

SHEET NUMBER

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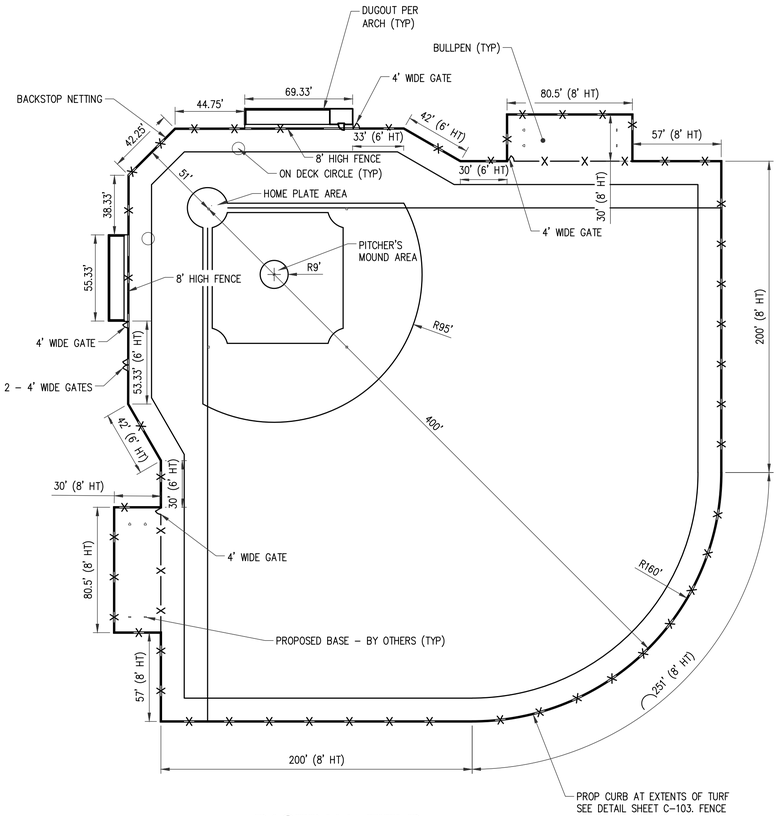
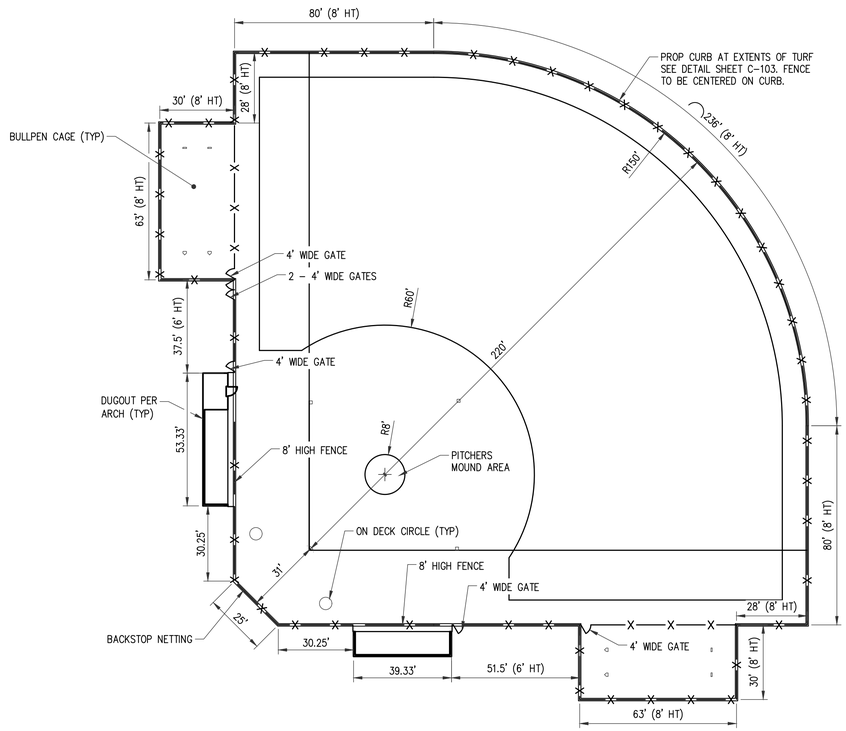
Drawing: R:\Projects\22\MOD13\dwg\construction drawings\SH-22MOD13-DET.dwg
Date: Aug 25, 2022, 1:57pm Layout: DET 3.1 Plotted by: TSOMJM



BASEBALL FIELD

NOT TO SCALE



SOFTBALL FIELD

NOT TO SCALE

NOTES:
1. TURF STRUCTURE AND BASES TO BE PROVIDED AS PART OF SEPARATE CONTRACT.
2. TURF TO EXTEND TO LIMITS OF FENCE IN FIELDS AND BULLPENS.
3. FIELD DIMENSIONS TO CONFORM WITH NCAA REGULATIONS.

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CONSULTANT

SITE DETAILS

SHEET TITLE

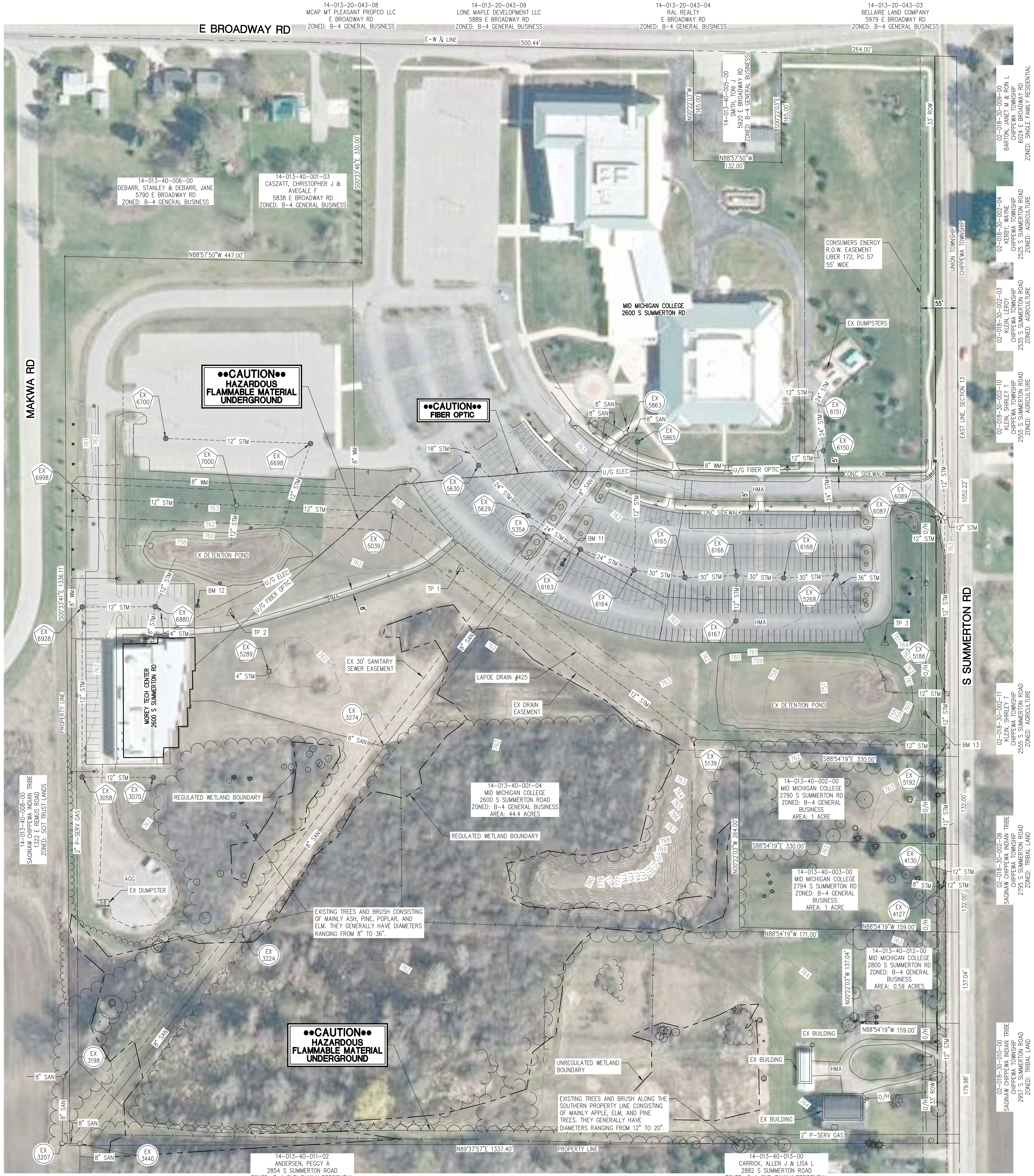
22–703

PROJECT NUMBER

C–107

SHEET NUMBER

Drawing: R:\Projects\22MOO 1\3D\dwg\construction drawings\SH-22MOO 1 3-DET.dwg
Date: Aug 25, 2022, 1:57pm Layout: DET 4 Plotted by: TSHMJM



LEGAL DESCRIPTION

PARCEL #14-013-40-001-04
PART OF THE EAST ONE-HALF OF THE SOUTHEAST ONE-QUARTER OF SECTION 13, T14N, R4W, UNION TOWNSHIP, ISABELLA COUNTY, STATE OF MICHIGAN DESCRIBED AS: BEGINNING AT THE EAST ONE-QUARTER CORNER OF SAID SECTION 13; THENCE N 88° 57' 50" W, ALONG THE EAST-WEST ONE-QUARTER LINE, 264.00 FEET; THENCE S 00° 22' 03" E, PARALLEL TO THE EAST SECTION LINE, 165.00 FEET; THENCE N 88° 57' 50" W, PARALLEL TO SAID EAST-WEST ONE-QUARTER LINE, 132.00 FEET; THENCE N 00° 22' 03" W, PARALLEL TO SAID EAST SECTION LINE, 165.00 FEET TO THE EAST-WEST ONE-QUARTER LINE; THENCE N 88° 57' 50" W, ALONG SAID EAST-WEST ONE-QUARTER LINE, 500.44 FEET; THENCE S 00° 33' 46" E, 330.00 FEET; THENCE N 88° 57' 50" W, PARALLEL TO SAID EAST-WEST ONE-QUARTER LINE, 447.00 FEET TO THE EAST ONE-EIGHTH LINE; THENCE S 00° 33' 41" E, ALONG SAID EAST ONE-EIGHTH LINE, 1336.11 FEET; THENCE N 89° 37' 57" E, 1337.40 FEET TO THE EAST SECTION LINE; THENCE N 00° 22' 03" W, ALONG SAID EAST SECTION LINE, 179.98 FEET; THENCE N 88° 54' 19" W, PARALLEL TO THE SOUTH ONE-EIGHTH LINE, 159.00 FEET; THENCE N 00° 22' 03" W, PARALLEL TO SAID EAST SECTION LINE, 137.00 FEET TO THE SOUTH ONE-EIGHTH LINE; THENCE N 88° 54' 19" W, ALONG SAID SOUTH ONE-EIGHTH LINE, 171.00 FEET; THENCE N 00° 22' 03" W, PARALLEL TO SAID EAST SECTION LINE, 264.00 FEET; THENCE S 88° 54' 19" E, PARALLEL TO SAID SOUTH ONE-EIGHTH LINE, 330.00 FEET TO THE EAST SECTION LINE; THENCE N 00° 22' 03" W, ALONG SAID EAST SECTION LINE, 1052.22 FEET BACK TO THE PLACE OF BEGINNING. THIS PROPERTY IS SUBJECT TO AN EASEMENT FOR THE INSTALLATION AND MAINTENANCE OF PUBLIC UTILITIES WITHIN THE RIGHT-OF-WAY OF BROADWAY ROAD AND SUMMERTON ROAD. CONTAINING 44.4 ACRES AND BEING SUBJECT TO RESTRICTIONS, RESERVATIONS, EASEMENTS, RIGHTS-OF-WAY, ZONING, GOVERNMENTAL REGULATIONS, AND MATTERS VISIBLE, IF ANY, UPON OR AFFECTING SAID LANDS.

PARCEL #14-013-40-002-00
COMMENCING 132 FEET NORTH OF THE SOUTHEAST CORNER OF THE NORTHEAST ¼ OF THE SOUTHEAST ¼ OF SECTION 13, T14N, R4W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN; THENCE WEST 320 FEET; NORTH 132 FEET; EAST 330 FEET; SOUTH 132 FEET TO THE POINT OF BEGINNING.

PARCEL #14-013-40-003-00
COMMENCING AT THE SOUTHEAST OF THE NORTHEAST ¼ OF THE SOUTHEAST ¼ OF SECTION 13, T14N, R4W, CHARTER TOWNSHIP OF UNION, ISABELLA COUNTY, MICHIGAN; THENCE WEST 330 FEET, THENCE NORTH 132 FEET, THENCE EAST 330 FEET, THENCE SOUTH 132 FEET TO POINT OF BEGINNING.

PARCEL #14-013-40-012-00
A PARCEL OF LAND DESCRIBED AS THE NORTH 137 FEET OF THE EAST 159 FEET OF THE SOUTHEAST QUARTER (SE ¼) OF SECTION 13, T14N, R4W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

NOTE: PARCELS ARE IN THE PROCESS OF BEING COMBINED.

EX STRUCTURE INVENTORY

MH# 3058
TYPE: STORM
COVER: BEEHIVE
RIM= 760.95
12" RCP N INV.=757.85
12" RCP E INV.=757.85

MH# 3070
TYPE: STORM
COVER: BEEHIVE
RIM= 761.35
12" RCP W INV.=758.25

MH# 3198
TYPE: SANITARY
COVER: SOLID
RIM= 764.10
8" PVC S INV.=750.90
8" PVC W INV.=750.90

MH# 3207
TYPE: SANITARY
COVER: SOLID
RIM= 764.03
8" PVC N INV.=750.53
8" PVC E INV.=750.43

MH# 3224
TYPE: SANITARY
COVER: SOLID
RIM= 763.76
8" PVC NE INV.=751.46
8" PVC SW INV.=751.36

MH# 3274
TYPE: SANITARY
COVER: SOLID
RIM= 762.58
8" PVC SW INV.=752.68
8" PVC NE INV.=752.68
8" PVC W INV.=755.38

MH# 3440
TYPE: SANITARY
COVER: SOLID
RIM= 763.33
8" PVC S INV.=749.63
8" PVC W INV.=750.23
8" PVC NE INV.=749.73

MH# 4127
TYPE: STORM
COVER: CURB INLET
RIM= 763.87
12" RCP E INV.=755.57
12" RCP S INV.=755.27
12" RCP W INV.=755.57
12" RCP N INV.=755.37

MH# 4130
TYPE: STORM
COVER: BEEHIVE
RIM= 761.78
8" PVC W INV.=756.58
12" RCP E INV.=756.48

MH# 5039
TYPE: STORM
COVER: SOLID
RIM= 761.30
12" RCP W INV.=756.30
12" RCP SE INV.=756.30

MH# 5139
TYPE: STORM
COVER: SOLID
RIM= 761.60
12" RCP NW INV.=755.90
12" RCP E INV.=755.90

MH# 5188
TYPE: STORM
COVER: CURB INLET
RIM= 763.12
12" RCP N INV.=755.72
12" RCP S INV.=755.62
12" RCP W INV.=755.72

MH# 5192
TYPE: STORM
COVER: CURB INLET
RIM= 763.38
12" RCP S INV.=755.68
12" RCP W INV.=755.78
12" RCP N INV.=755.78

MH# 5268
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.96
24" RCP N INV.=756.16
30" RCP W INV.=756.06
36" RCP SE INV.=755.96

MH# 5289
TYPE: STORM
COVER: FLAT GRATE
RIM= 761.65
4" CPP S INV.=760.85

MH# 5354
TYPE: SANITARY
COVER: SOLID
RIM= 761.50
8" PVC SW INV.=754.50
8" PVC NE INV.=754.60

MH# 5629
TYPE: STORM
COVER: FLAT GRATE
RIM= 761.04
24" RCP NW INV.=756.74
24" RCP SE INV.=756.74

MH# 5630
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.99
18" RCP NW INV.=756.79
24" RCP SE INV.=756.79

MH# 5863
TYPE: SANITARY
COVER: SOLID
RIM= N/A
8" PVC E INV.=N/A
8" VCP NW INV.=N/A
8" VCP SW INV.=N/A
8" PVC N INV.=N/A

MH# 5865
TYPE: STORM
COVER: BEEHIVE
RIM= 762.44
8" CPP NW INV.=758.33
12" RCP S INV.=757.14
6" PV NE INV.=758.94

MH# 6087
TYPE: STORM
COVER: FLAT GRATE
RIM= 762.25
12" RCP E INV.=758.45

MH# 6089
TYPE: STORM
COVER: SOLID
RIM= 762.68
12" RCP N INV.=758.48
12" RCP S INV.=756.88
12" RCP W INV.=758.38
12" CMP E INV.=758.38

MH# 6150
TYPE: STORM
COVER: SOLID
RIM= 763.96
24" RCP S INV.=756.46
24" RCP N INV.=756.46
12" RCP W INV.=757.76

MH# 6151
TYPE: STORM
COVER: SOLID
RIM= 763.19
24" RCP NE INV.=756.39
24" RCP S INV.=756.39
12" PV W INV.=758.09

MH# 6163
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.97
24" RCP NW INV.=756.67
24" RCP SE INV.=756.67

MH# 6164
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.98
12" RCP N INV.=756.68
24" RCP NW INV.=756.68
30" RCP E INV.=756.68

MH# 6165
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.91
30" RCP W INV.=756.61
30" RCP E INV.=756.61

MH# 6166
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.87
30" RCP W INV.=756.37
12" RCP S INV.=756.47
30" RCP E INV.=756.37

MH# 6167
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.87
12" RCP N INV.=756.57

MH# 6168
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.84
30" RCP E INV.=756.04
30" RCP W INV.=756.04

MH# 6698
TYPE: STORM
COVER: FLAT GRATE
RIM= 762.35
12" RCP W INV.=758.15
12" RCP S INV.=758.15

MH# 6700
TYPE: STORM
COVER: FLAT GRATE
RIM= 762.19
12" RCP E INV.=758.39

MH# 6880
TYPE: STORM
COVER: FLAT GRATE
RIM= 760.93
4" CPP SE INV.=758.43
12" RCP W INV.=757.83
8" CPP SW INV.=757.83
12" RCP N INV.=757.63

MH# 6928
TYPE: STORM
COVER: BEEHIVE
RIM= 760.83
12" RCP W INV.=757.83
12" RCP E INV.=757.83

MH# 6998
TYPE: STORM
COVER: BEEHIVE
RIM= 761.82
12" RCP W INV.=757.12
8" PV S INV.=757.12
12" RCP E INV.=756.82

MH# 7000
TYPE: STORM
COVER: SOLID
12" RCP N INV.=756.50
12" RCP W INV.=756.50
12" RCP E INV.=756.50

BENCHMARK DATA TABLE

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM 11	766298	13027153	764.98	SET "SQUARE" MARK ON SW SIDE OF CONCRETE LIGHT POLE BASE, THIRD LIGHT POLE FROM SE END OF PARKING LOT
BM 12	766236	13026605	764.75	SET "SQUARE" MARK ON EAST SIDE OF CONCRETE LIGHT POLE BASE, EAST END OF SMALL PARKING LOT, 50'± NORTH OF NE CORNER OF BUILDING
BM 13	766074	13027699	763.78	SET SPIKE IN WEST FACE OF POWER POLE, EAST SIDE OF EXISTING DETENTION POND

TRAVERSE POINT DATA TABLE

NUMBER	NORTHING	EASTING	DESCRIPTION
TP 1	766291.6960	13027000.2720	SET IRON W/ "ROWE TRAV" CAP, 27' SW OF PARKING LOT EDGE, 32' SE OF BIT WALK, 16' EASTERLY OF 4" TREE
TP 2	766224.9610	13026654.8100	SET IRON W/ "ROWE TRAV" CAP, 65' NE OF NE CORNER OF TECH CENTER BUILDING, 18' NORTH OF BIT WALK
TP 3	766180.7600	13027638.5860	SET IRON W/ "ROWE TRAV" CAP, SE SIDE OF PARKING LOT, S24E 69' OF LIGHT POLE, 30'± WEST OF PINE TREE

Know what's **below.**
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FINAL SITE PLAN REVIEW	8/26/2022
ADDENDUM 1	8/12/2022
ISSUED FOR BIDS	8/1/2022
PRELIM. SITE PLAN REVIEW	5/31/2022

DATE ISSUED

MJM
DRAWN BY

JBM
CHECKED BY

HOBBS + BLACK ARCHITECTS
117 E. Allegan Street
Lansing, MI 48933
P: 517 484 4870
www.hobbs-black.com

MID MICHIGAN COLLEGE
NEW SPORTS COMPLEX
PROJECT

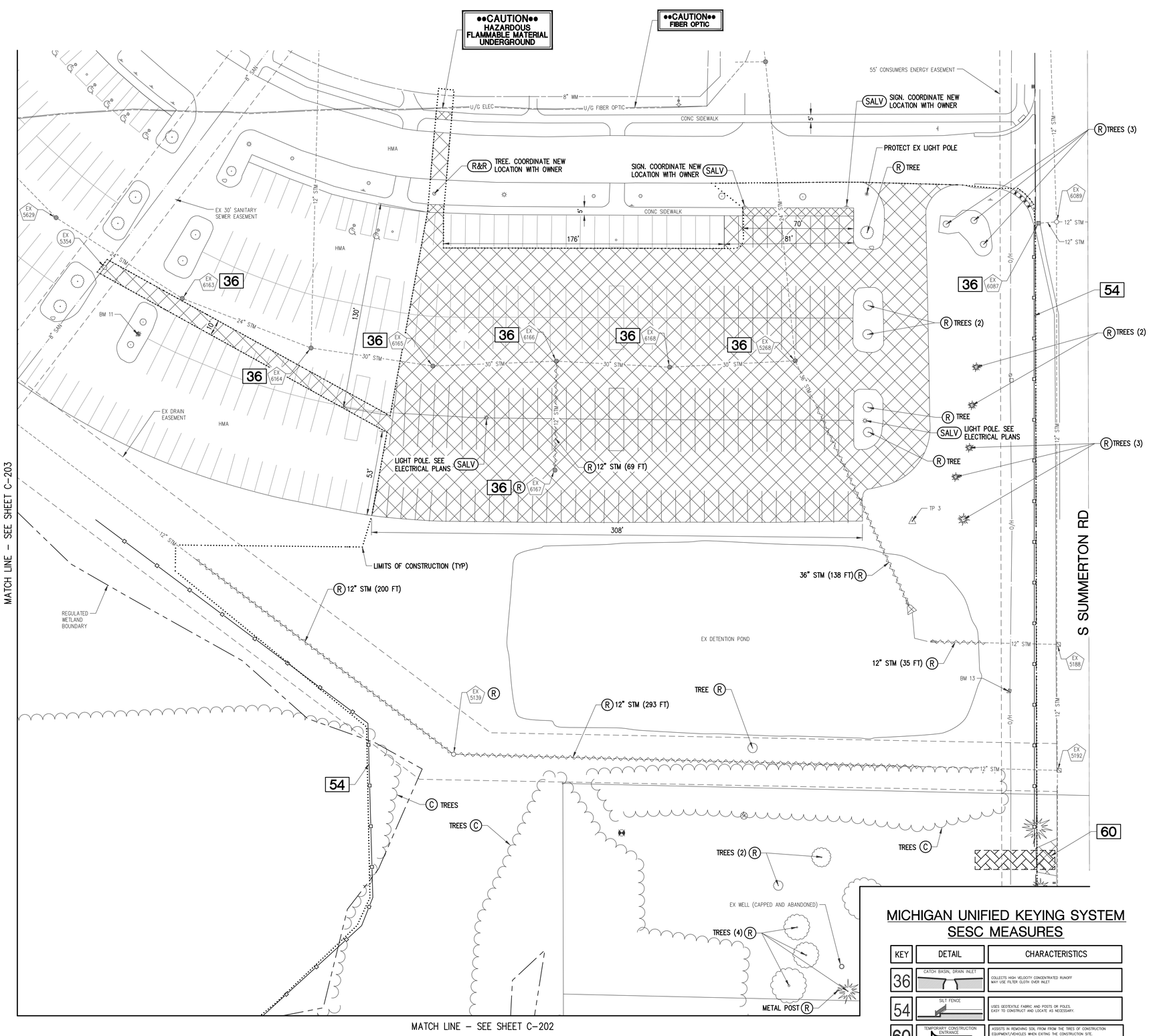
ROWE PROFESSIONAL SERVICES COMPANY
127 S. Main Street
Mt. Pleasant, MI 48858
O: (989) 772-2138
F: (989) 773-7757
www.rowepsc.com
CONSULTANT

EXISTING CONDITIONS
SHEET TITLE

22-703
PROJECT NUMBER

C-200
SHEET NUMBER

Drawing: R:\Projects\22M0013\Dwg\construction drawings\SH-22M0013-SURV.dwg
Date: Aug 25, 2022, 1:57pm Layout: EX CONDITIONS Plotted by: 759MJM



MICHIGAN UNIFIED KEYING SYSTEM SESC MEASURES

KEY	DETAIL	CHARACTERISTICS
36	CATCH BASIN, DRAIN INLET	COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF MAY USE FILTER CLOTH OVER INLET
54	SILT FENCE	USES GEOTEXTILE FABRIC AND POSTS OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY.
60	TEMPORARY CONSTRUCTION ENTRANCE	ASSISTS IN REMOVING SOIL FROM FROM THE TIRES OF CONSTRUCTION EQUIPMENT/VEHICLES WHEN EXITING THE CONSTRUCTION SITE. THIS REDUCES TRACKING EXCESSIVE SEDIMENT/SOIL ONTO THE ADJACENT ROAD.

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FINAL SITE PLAN REVIEW	8/26/2022
ADDENDUM 2	8/18/2022
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JBM
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CONSULTANT

DEMOLITION PLAN NORTHEAST

SHEET TITLE

22–703

PROJECT NUMBER

C–201

SHEET NUMBER

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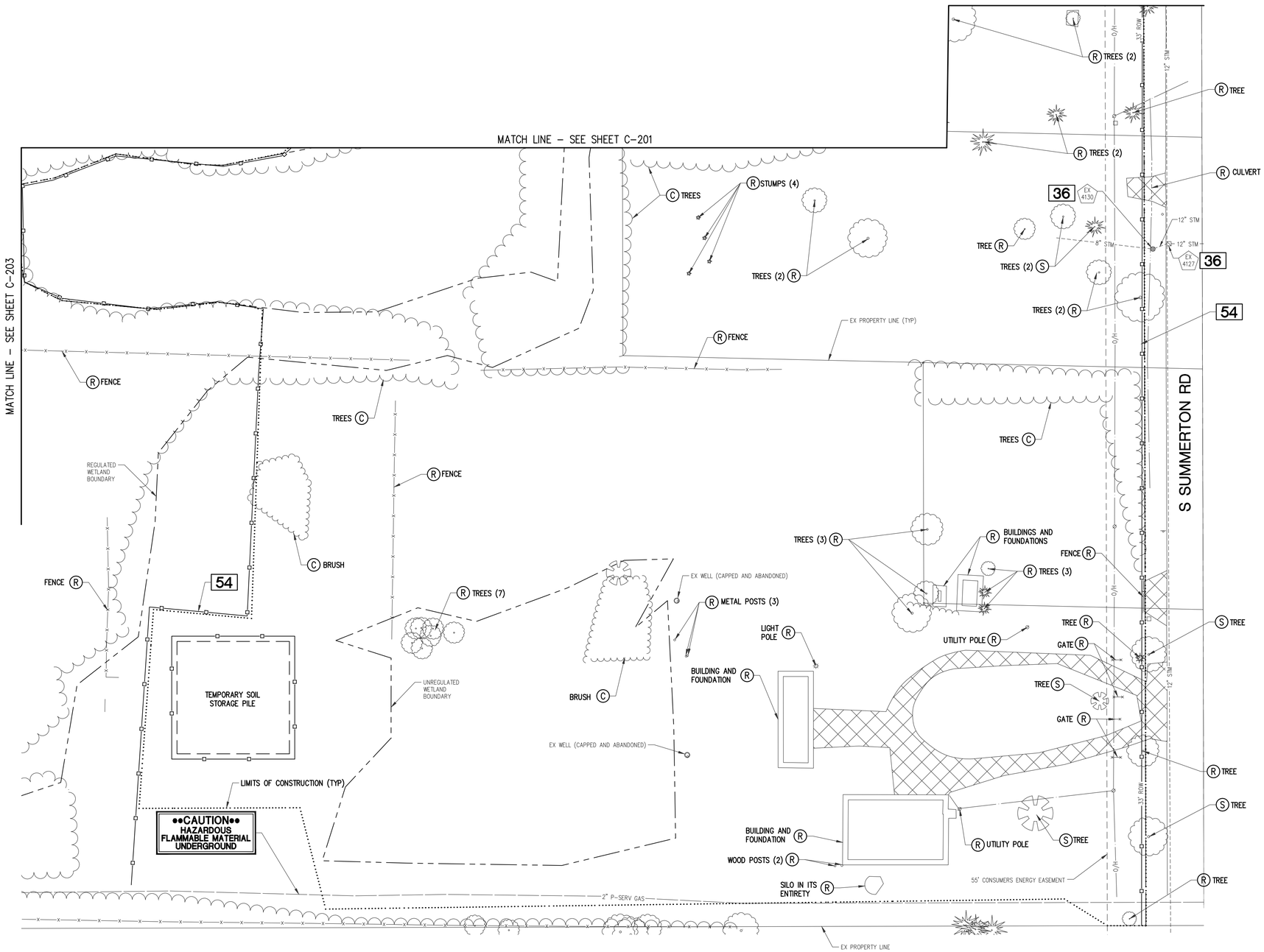

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FINAL SITE PLAN REVIEW	8/26/2022
ADDENDUM 2	8/18/2022
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DEMOLITION PLAN SOUTHEAST

SHEET TITLE

22–703

PROJECT NUMBER

C–202

SHEET NUMBER

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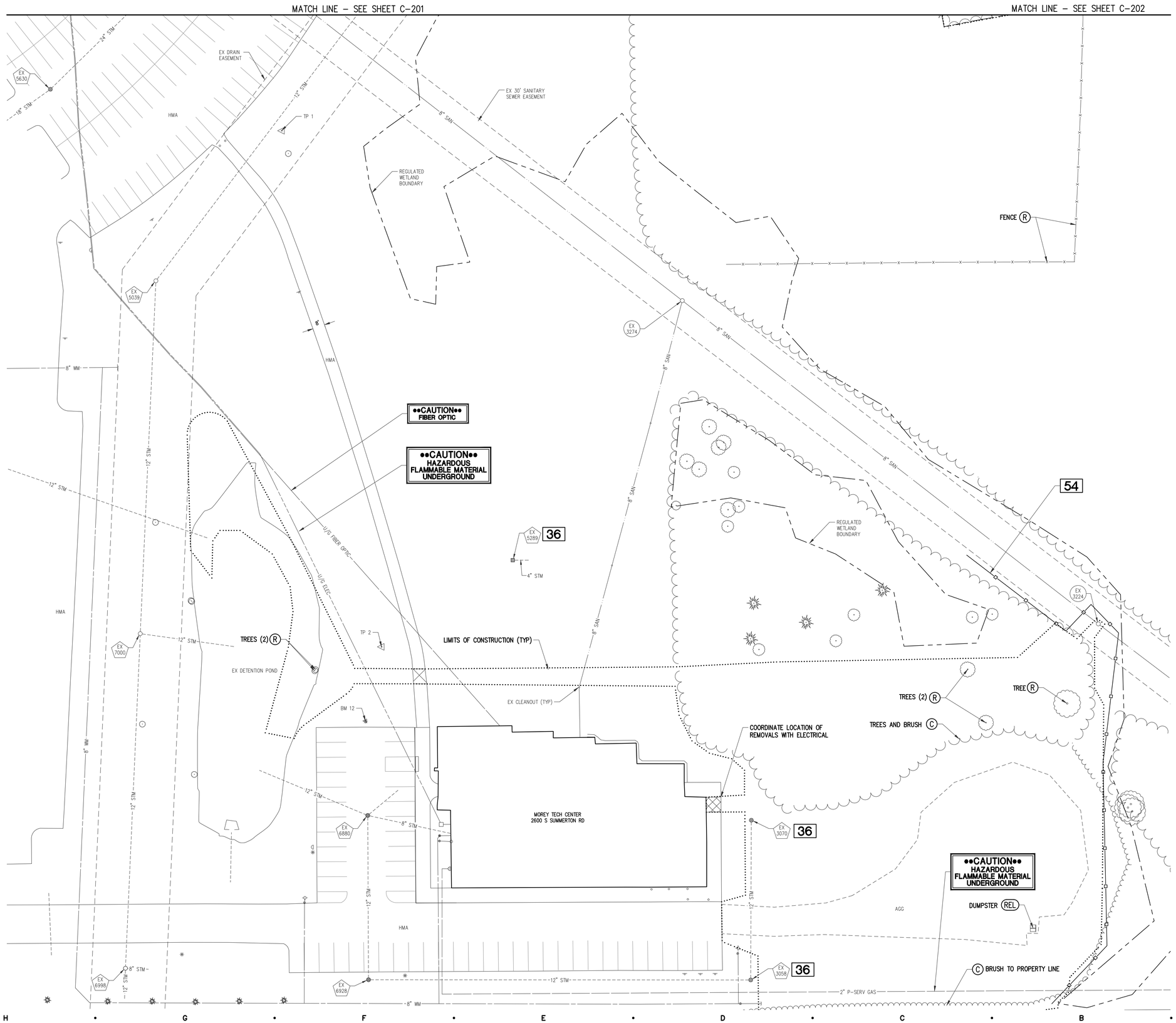

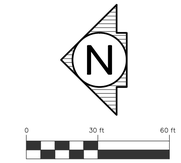

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CONSULTANT

DEMOLITION PLAN
NORTHWEST

SHEET TITLE

22–703

PROJECT NUMBER

C–203

SHEET NUMBER

811
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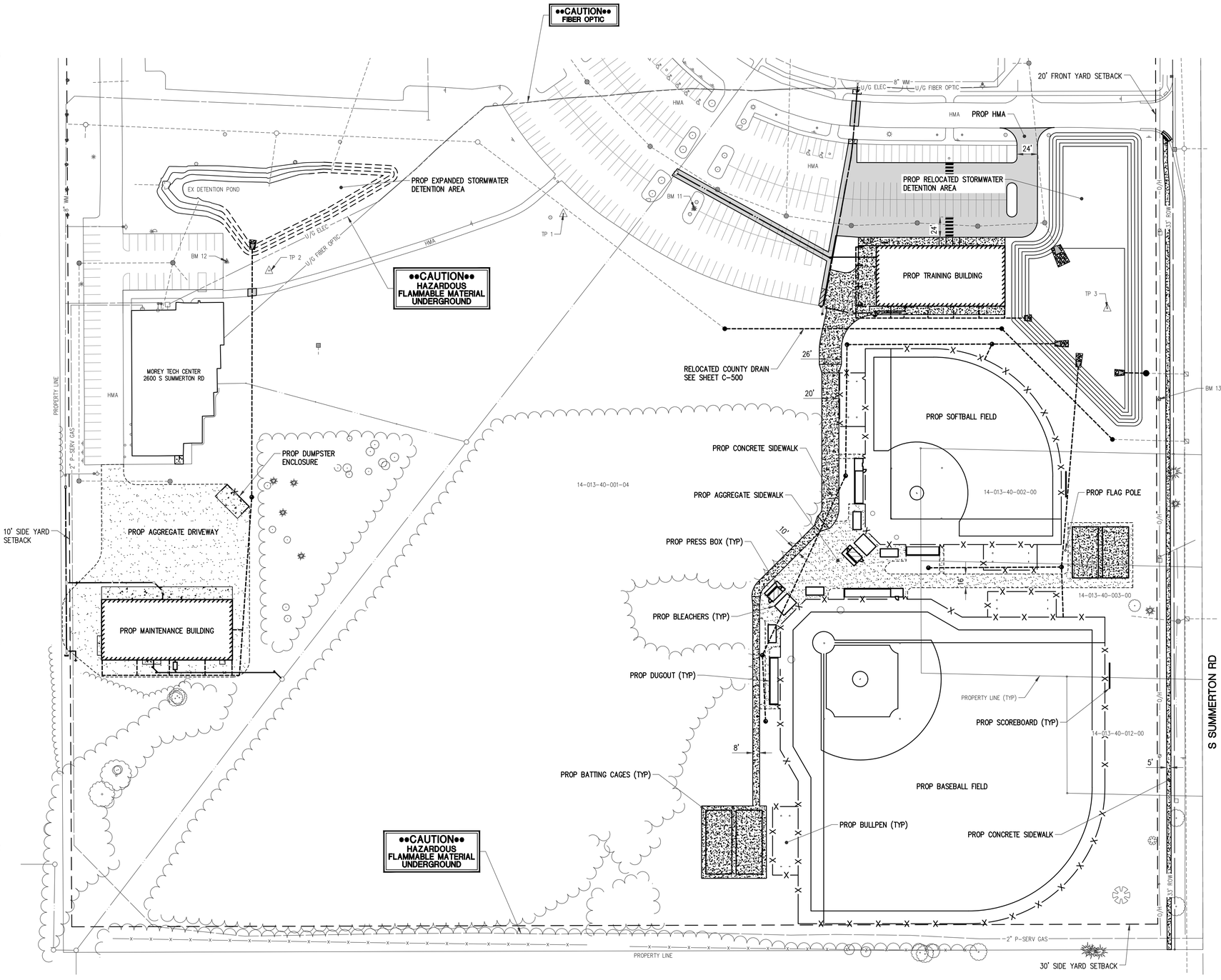

SITE PLAN NOTES

1. APPLICANT/PROPERTY OWNER
MID MICHIGAN COLLEGE
ATTN: MATT MILLER
1375 S CLARE RD
HARRISON, MI 48625
P – (989) 386-6600

2. FIRM PREPARING SITE PLAN
ROWE PROFESSIONAL SERVICES COMPANY
127 S MAIN ST
MT PLEASANT, MI 48858
P – (989) 772-2138

3. ADDRESS AND PROPERTY I.D. NUMBER
PARCEL: 14-013-40-001-04
2600 S SUMMERTON RD, MT PLEASANT, MI 48858

PARCEL: 14-013-40-002-00
2790 S SUMMERTON RD, MT PLEASANT, MI 48858

PARCEL: 14-013-40-003-00
2794 S SUMMERTON RD, MT PLEASANT, MI 48858

PARCEL: 14-03-40-012-00
2800 S SUMMERTON RD, MT PLEASANT, MI 48858

4. DETAILED USE STATEMENT
THE MID MICHIGAN COLLEGE BASEBALL AND SOFTBALL COMPLEX AND MAINTENANCE BUILDING, PROPOSED TO BE LOCATED AT 2600 SOUTH SUMMERTON ROAD IN THE CHARTER TOWNSHIP OF UNION, WILL BE THE HOME FIELDS FOR THE COLLEGE'S BASEBALL AND SOFTBALL TEAMS AS WELL AS A SITE FOR STORAGE AND SITE MAINTENANCE.

THE RURAL SITE IS A 47-ACRE PARCEL LOCATED DIRECTLY SOUTHWEST FROM THE INTERSECTION OF E BROADWAY AND S SUMMERTON ROADS. IT IS THE LOCATION OF THE COLLEGE'S CAMPUS AND IS SURROUNDED BY A MIX OF USES INCLUDING RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL.

IN ADDITION TO EXISTING STRUCTURES, THE SITE WILL INCLUDE A NEW MAINTENANCE BUILDING, A NEW TRAINING CENTER/CONCESSIONS/RESTROOM BUILDING, AND NEW BASEBALL AND SOFTBALL FIELDS WITH TYPICAL SURROUNDING STRUCTURES (ANNOUNCER BOOTHS, DUGOUTS, BATTING CAGES, BLEACHERS, ETC.). THE MAINTENANCE BUILDING WILL BE APPROXIMATELY 300 FEET SOUTH OF THE EXISTING MOREY TECH CENTER. THE TRAINING CENTER, BASEBALL AND SOFTBALL FIELDS, AND ASSOCIATED STRUCTURES WILL BE DIRECTLY SOUTH OF THE EXISTING PARKING LOT AND ADJACENT TO SOUTH SUMMERTON ROAD.

WHILE PLANNING THE SITE, THE COLLEGE CONTACTED THE SAGINAW CHIPPEWA INDIAN TRIBE ABOUT CONNECTING MAKWA ROAD IN THE INDUSTRIAL PARK TO THE COLLEGE'S DRIVE NEAR THE MOREY TECH CENTER. THE TRIBE IS DISCUSSING THE POSSIBILITY INTERNALLY, BUT HAD NO FEEDBACK FOR THE COLLEGE AT THIS TIME.

THE COLLEGE COLLECTED DATA OF CURRENT PARKING LOT USAGE. THE FINDINGS HAVE BEEN PROVIDED TO UNION TOWNSHIP. THE SITE PLAN CALLS FOR THE REMOVAL OF 123 SPACES FROM THE EXISTING PARKING LOT IN THE SOUTHEAST CORNER OF CAMPUS. BASED ON THE RESULTS OF THE DATA COLLECTION, THE COLLEGE'S HISTORIC USAGE AT ITS CURRENT OFF-SITE BASEBALL AND SOFTBALL FIELDS, AND THE ANTICIPATED FUTURE USE, THE COLLEGE'S CURRENT PARKING – EVEN WITH THE LOSS OF 123 SPACES – WILL BE MORE THAN ADEQUATE TO MEET THE NEEDS OF THE NEW FACILITY.

THE BASEBALL AND SOFTBALL FIELDS WILL BE FULLY ARTIFICIAL TURF WITH PROPER DRAINAGE. CONCRETE AND GRAVEL PATHS NEAR THE ATHLETIC FIELDS WILL FACILITATE SPECTATOR MOVEMENT WITH THE OUTLYING AREAS LEFT NATURAL GRASS, HOWEVER MAINTAINED. NATURAL LANDSCAPE SCREENING HAS BEEN INCORPORATED TO SCREEN AND DIFFUSE VEHICULAR MOVEMENTS AND HEADLIGHTS FROM NEIGHBORING PARCELS. SITE LIGHTING WILL BE MINIMAL AND WILL BE LOCATED ON NEW STRUCTURES AS NECESSARY TO FACILITATE SAFE MOVEMENT AT DUSK. THE BASEBALL AND SOFTBALL FIELDS WILL NOT HAVE FIELD LIGHTING FOR NIGHT GAMES.

THE NEW MAINTENANCE FACILITY WILL HOUSE THE SHIPPING/RECEIVING AND GENERAL MAINTENANCE AND STORAGE OPERATIONS FOR THE COLLEGE. THIS BUILDING WILL BE USED YEAR-ROUND, GENERALLY 7AM TO 5PM MONDAY THROUGH FRIDAY WITH 4-7 EMPLOYEES IN AND OUT OF THE BUILDING THROUGHOUT THE DAY.

THE NEW TRAINING CENTER/CONCESSIONS/RESTROOM BUILDING WILL BE USED YEAR-ROUND FOR VARIOUS PURPOSES. WHILE THE CONCESSIONS AND LARGE RESTROOMS WILL PRIMARILY BE USED MARCH THROUGH NOVEMBER, THOSE AREAS WILL BE HEATED TO ALLOW FOR ACCESS IN THE WINTER. THE TRAINING CENTER, WHICH INCLUDES AN INDOOR TURF ROOM, WILL BE USED THROUGHOUT THE YEAR FOR TRAINING, CAMPS, AND VARIOUS ACTIVITIES. THE BASEBALL AND SOFTBALL FIELDS (AND ASSOCIATED STRUCTURES) WILL PRIMARILY BE USED MARCH THROUGH NOVEMBER. THE FIELDS WILL BE THE VENUE FOR THE COLLEGE'S BASEBALL AND SOFTBALL HOME GAMES AND PRACTICES. THE FIELDS WILL ALSO BE AVAILABLE FOR RENT BY COMMUNITY GROUPS FOR CAMPS, TOURNAMENTS, OR OTHER ACTIVITIES.

STORM WATER MANAGEMENT HAS BEEN ADDRESSED FOR THE PROPOSED IMPROVEMENTS BY ENLARGING THE EXISTING STORM WATER DETENTION AREA NEAR THE SOUTHEAST CORNER OF THE EXISTING PARKING AREA. THE DESIGN TEAM HAS COORDINATED THE RELOCATION OF AN EXISTING UNDERGROUND COUNTY DRAIN AND ENLARGEMENT OF THE EXISTING DETENTION AREA WITH THE COUNTY DRAIN COMMISSION. THE EXISTING DETENTION AREA NORTH OF THE MOREY TECH CENTER WILL ALSO BE ENLARGED TO ACCOMMODATE THE ADDITIONAL RUNOFF GENERATED FROM THE ADDITION OF THE MAINTENANCE BUILDING.

5. FLOODPLAINS AND WETLANDS
THE SITE IS NOT AFFECTED BY A FLOODPLAIN. WETLANDS WILL BE IMPACTED BY THE PROJECT. A PART 303 WETLANDS PROTECTION PERMIT FROM EGLE WAS OBTAINED ON 8/25/2022.

6. UTILITIES
DEVELOPMENT WILL BE SERVED BY PUBLIC SEWER AND PUBLIC WATER.
PRIVATE UTILITIES (GAS, ELECTRIC, PHONE) SHALL BE UNDERGROUND.

7. LIGHTING
ALL PROPOSED SITE LIGHTING WILL BE ATTACHED TO BUILDINGS AND WILL BE DIRECTED DOWNWARD. TWO EXISTING PARKING LOT LIGHT POLES WILL BE RELOCATED. NO ATHLETIC FIELD LIGHTING IS PROPOSED.

8. STORMWATER MANAGEMENT
ON SITE DETENTION WILL BE PROVIDED BY THE EXPANSION OF EXISTING DETENTION AREAS NEAR THE PROPOSED TRAINING BUILDING AND EXISTING MOREY TECH CENTER.

9. TOTAL ACREAGE
DIMENSIONS OF LAND: SEE EXISTING CONDITIONS
ACREAGE:
14-013-40-001-04 – 44.4 ACRE
14-013-40-001-04 – 1.00 ACRE
14-013-40-003-00 – 1.00 ACRE
14-013-40-012-00 – 0.59 ACRE

TOTAL ACREAGE: 46.99 ACRE

10. ZONING CLASSIFICATION
14-013-40-001-04 – GENERAL BUSINESS
14-013-40-001-04 – GENERAL BUSINESS
14-013-40-003-00 – GENERAL BUSINESS
14-013-40-012-00 – GENERAL BUSINESS
NOTE: PARCELS ARE IN THE PROCESS OF BEING COMBINED.

11. PARKING
SEE PARKING STATEMENT INCLUDED WITH THIS SUBMITTAL.

PARKING PROPOSED: 648 SPACES

RESIDENTIAL BUFFER STATEMENT

EXISTING WOODLAND AREA ALONG THE SOUTHEAST PROPERTY LINE CONSISTS OF MAINLY APPLE, ELM, AND PINE TREES. THEY GENERALLY HAVE DIAMETERS RANGING FROM 12" TO 20". A MAJORITY OF THE EXISTING GROWTH IS ON PARCELS 14-013-40-013-00 AND 14-013-40-011-02. SEE SHEET C-600 FOR THE PROPOSED LANDSCAPING PLAN.

BUILDING HEIGHTS AND AREAS

TRAINING BUILDING
FIRST FLOOR 10,647 sf
MEZZANINE 831 sf
BUILDING HEIGHT 25'-5"

MAINTENANCE BUILDING
FIRST FLOOR 10,647 sf
MEZZANINE 528 sf
BUILDING HEIGHT 25'-5"

DUGOUTS BASEBALL
HOME 612 sf
VISITORS 504 sf
BUILDING HEIGHTS 11'-0"

DUGOUTS SOFTBALL
HOME 468 sf
VISITORS 355 sf
BUILDING HEIGHT 11'-0"

ANNOUNCERS BOOTH BASEBALL
FIRST FLOOR 112 sf
SECOND FLOOR 112 sf
BUILDING HEIGHT 19'-6"

ANNOUNCERS BOOTH SOFTBALL
FIRST FLOOR 112 sf
SECOND FLOOR 112 sf
BUILDING HEIGHT 19'-6"

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

Drawing: R:\Projects\22MOO13\Dwg\construction drawings\SH-22MOO13-OVERALL_SITE.dwg
Date: Aug 25, 2022, 1:58pm Layout: OVERALL SITE Plotted by: 7591MJM

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FINAL SITE PLAN REVIEW	8/26/2022
ADDENDUM 3	8/19/2022
ADDENDUM 2	8/18/2022
ADDENDUM 1	8/12/2022
ISSUED FOR BIDS	8/1/2022
PRELIM. SITE PLAN REVIEW	5/31/2022

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PROJECT

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O: (989) 772-2138
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CONSULTANT

OVERALL SITE PLAN

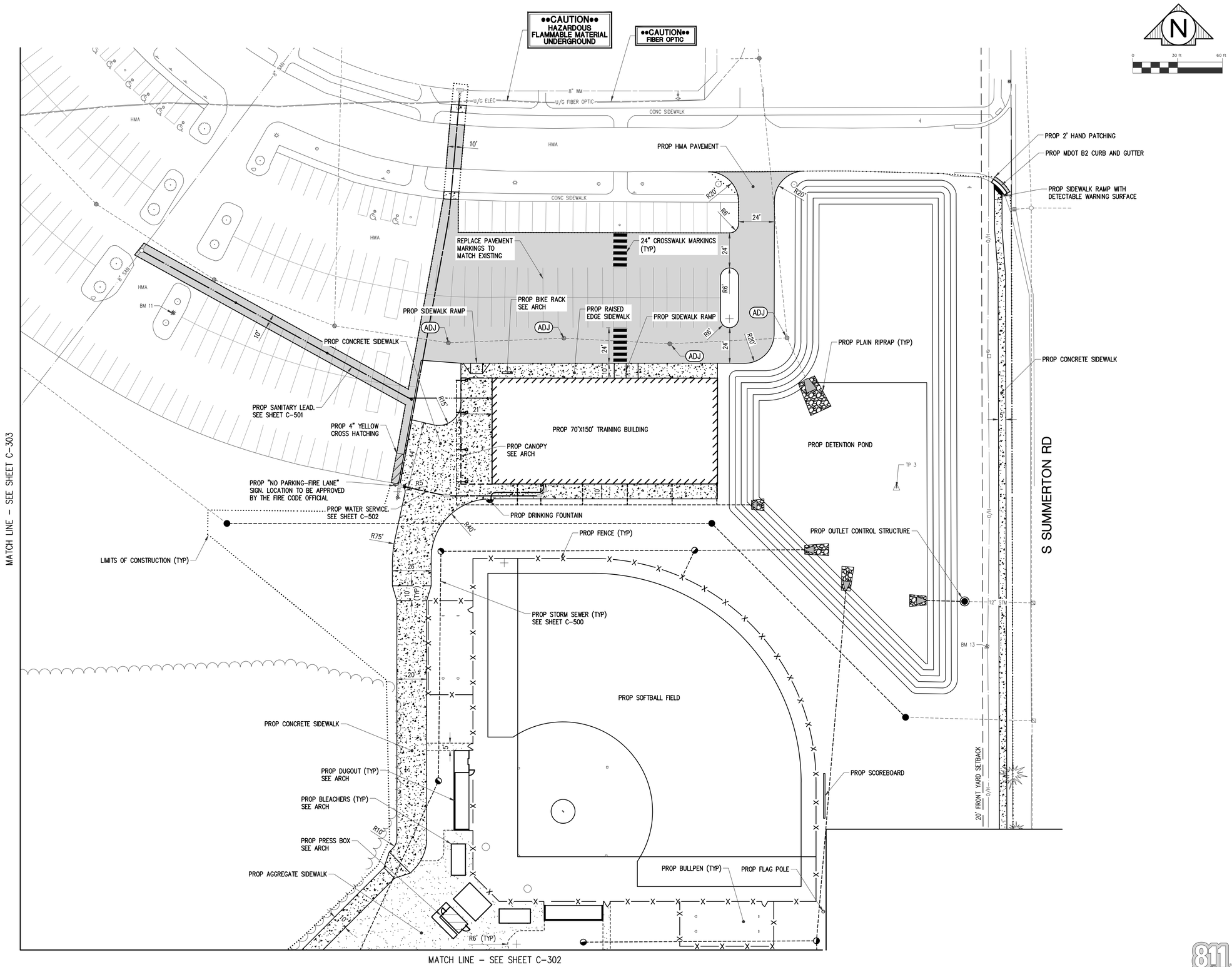
SHEET TITLE

22-703

PROJECT NUMBER

C-300

SHEET NUMBER



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CONSULTANT

SITE PLAN NORTHEAST

SHEET TITLE

22-703

PROJECT NUMBER

C-301

SHEET NUMBER

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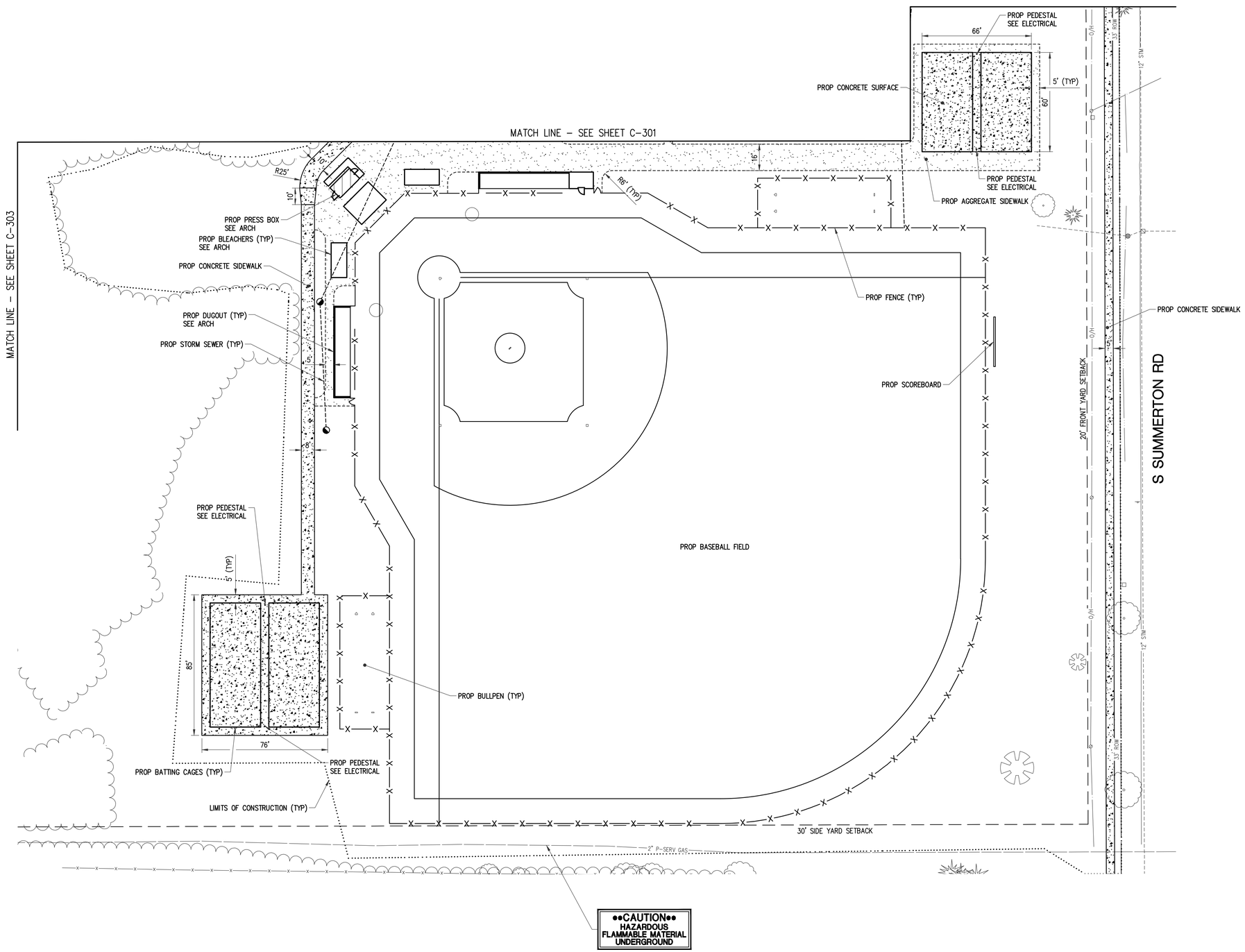
Drawing: R:\Projects\22M0013\Dwg\construction drawings\SH-22M0013-SITE.dwg
Date: Aug 25, 2022, 1:58pm Layout: SITE - NE Plotted by: 759MJM



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FINAL SITE PLAN REVIEW	8/26/2022
ADDENDUM 1	8/12/2022
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CONSULTANT

SITE PLAN SOUTHEAST

SHEET TITLE

22–703

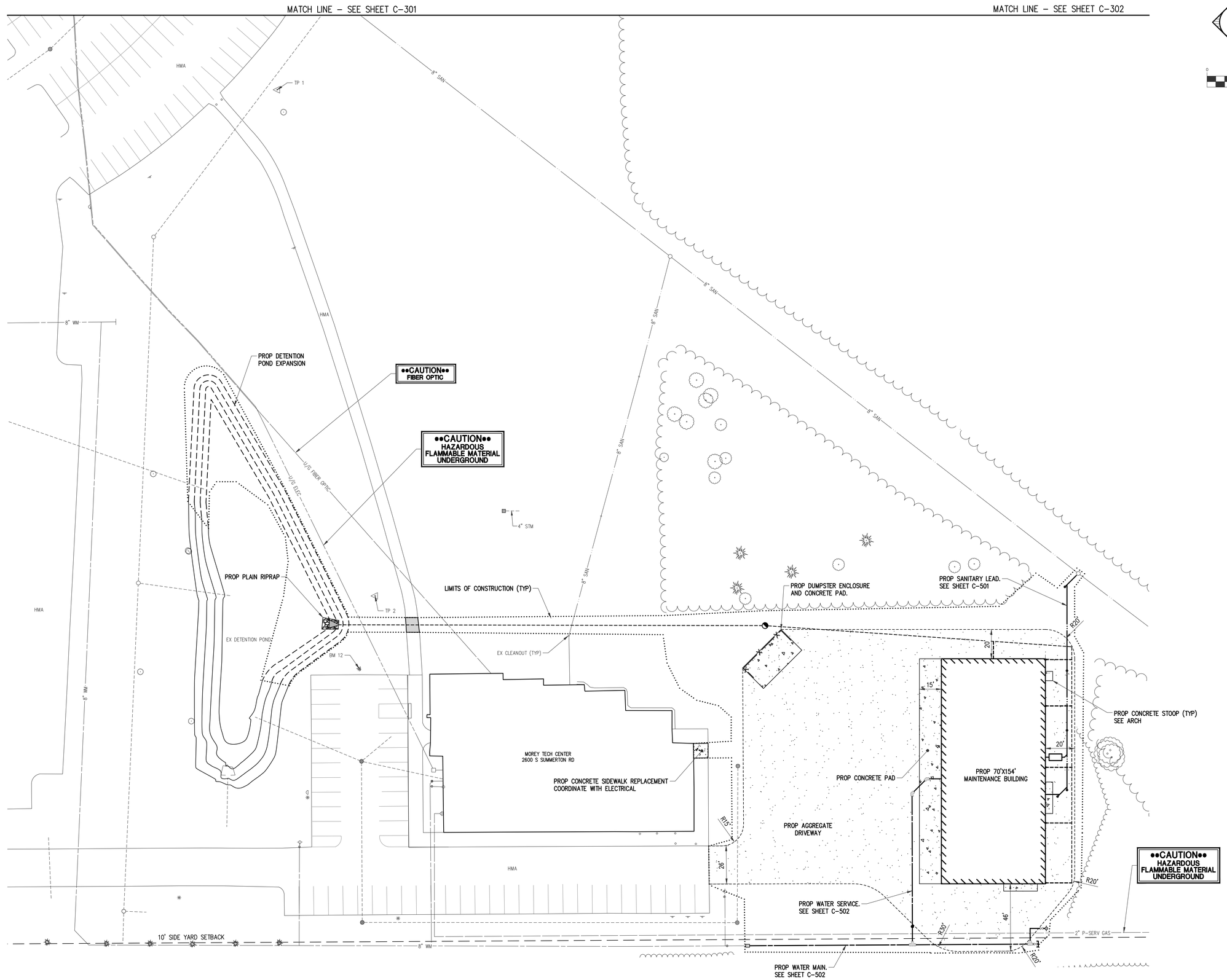
PROJECT NUMBER

C–302

SHEET NUMBER

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

Drawing: R:\Projects\22\M001\30\dwg\construction drawings\SH-22M001 3-SITE.dwg
Date: Aug 25, 2022, 2:13pm Layout: SITE - SE Plotted by: TSPMJM



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CONSULTANT

SITE PLAN NORTHWEST

SHEET TITLE

22–703

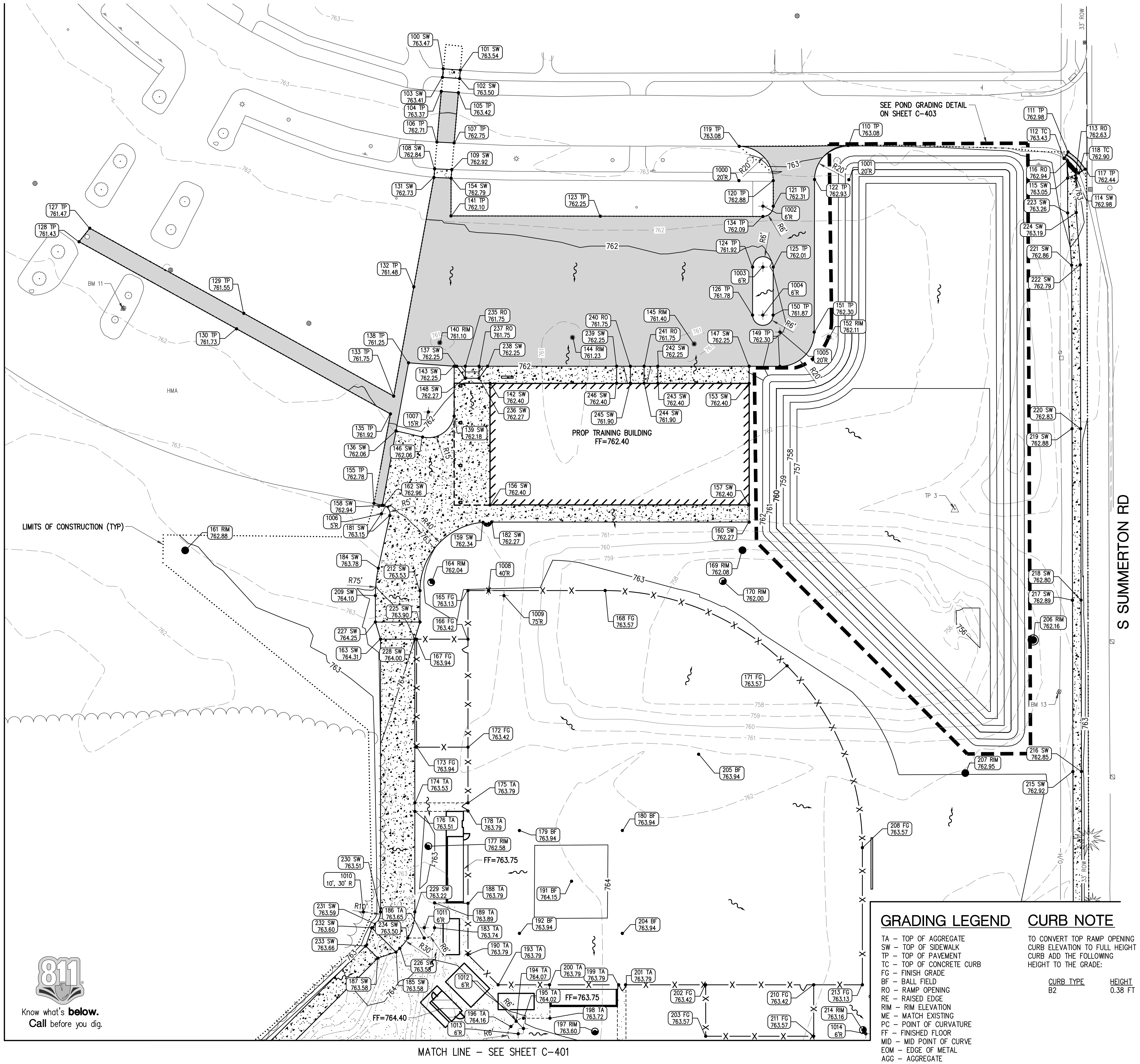
PROJECT NUMBER

C–303

SHEET NUMBER

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

Drawing: R:\Projects\22M0013\Dwg\construction drawings\SH-22M0013-SITE.dwg
Date: Aug 25, 2022, 1:58pm Layout: SITE - NW Plotted by: 759MJM



GRADING LEGEND

TA – TOP OF AGGREGATE
SW – TOP OF SIDEWALK
TP – TOP OF PAVEMENT
TC – TOP OF CONCRETE CURB
FG – FINISH GRADE
BF – BALL FIELD
RO – RAMP OPENING
RE – RAISED EDGE
RIM – RIM ELEVATION
ME – MATCH EXISTING
PC – POINT OF CURVATURE
FF – FINISHED FLOOR
MID – MID POINT OF CURVE
EOM – EDGE OF METAL
AGG – AGGREGATE
– SURFACE FLOW DIRECTION

CURB NOTE

TO CONVERT TOP RAMP OPENING CURB ELEVATION TO FULL HEIGHT CURB ADD THE FOLLOWING HEIGHT TO THE GRADE:

CURB TYPE	HEIGHT
B2	0.38 FT

GRADING TABLE

POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING
100	SW=763.47	ME	766437.67	13027340.23
101	SW=763.54	ME	766436.94	13027350.20
102	SW=763.50	ME	766431.97	13027349.77
103	SW=763.41	ME	766432.69	13027339.80
104	TP=763.37	ME	766424.51	13027339.10
105	TP=763.42	ME	766423.72	13027349.07
106	TP=762.71	ME	766394.91	13027336.56
107	TP=762.75	ME	766394.42	13027346.55
108	SW=762.84	ME	766379.30	13027335.22
109	SW=762.92	ME	766378.86	13027345.22
110	TP=763.08	ME, PC	766392.96	13027576.39
111	TP=762.98	ME	766389.17	13027704.61
112	TC=763.43	ME	766385.38	13027702.26
113	RO=762.63	SW, TC	766378.89	13027709.32
114	SW=762.98		766373.89	13027709.34
115	SW=763.05		766373.88	13027704.34
116	RO=762.94	SW, TC	766383.95	13027704.31
117	TP=762.44	ME	766379.12	13027714.54
118	TC=762.90	ME	766376.82	13027710.73
119	TP=763.08	ME, PC	766392.44	13027512.85
120	TP=762.88	PC, ME	766372.41	13027532.69
121	TP=762.31	PC, ME	766357.51	13027532.68
122	TP=762.93	PC	766373.09	13027556.76
123	TP=762.25	ME	766351.69	13027431.84
124	TP=761.92	PC	766322.02	13027520.66
125	TP=762.01	PC	766322.00	13027532.66
126	TP=761.78	PC	766294.00	13027520.60
127	TP=761.47	ME	766344.66	13027134.10
128	TP=761.43	ME	766336.79	13027127.86
129	TP=761.55	ME	766295.01	13027223.94
130	TP=761.73	ME	766285.98	13027219.70
131	SW=762.73	TP, ME	766374.30	13027334.79
132	TP=761.48	ME	766310.50	13027323.06
133	TP=761.75	ME	766246.71	13027311.34
134	TP=762.09	PC, ME	766351.52	13027526.66
135	TP=761.92	ME	766236.34	13027309.43
136	SW=762.06		766226.44	13027312.69
137	SW=762.25	RE	766264.15	13027348.11
138	TP=761.25		766266.14	13027319.99
139	SW=762.18	PC	766235.09	13027346.58
140	RIM=761.10		766277.86	13027338.19
141	TP=762.10	ME	766351.85	13027344.75
142	SW=762.40	FF	766254.15	13027367.51
143	SW=762.25	RE	766264.15	13027346.58
144	RIM=761.23		766280.95	13027415.59
145	RIM=761.40		766277.17	13027486.56
146	SW=762.06		766222.84	13027328.20
147	SW=762.25	RE	766264.15	13027518.63
148	SW=762.27		766257.15	13027353.11
149	TP=762.30	PC	766264.08	13027536.57
150	TP=761.87	PC	766293.98	13027532.60
151	TP=762.30	PC	766284.05	13027556.58
152	RIM=762.11		766281.18	13027565.21
153	SW=762.40	FF	766254.15	13027518.63
154	SW=762.79	TP, ME	766373.84	13027344.79
155	TP=762.78	ME	766184.14	13027299.84
156	SW=762.40	FF	766183.23	13027367.51
157	SW=762.40	FF	766183.23	13027518.50
158	SW=762.94	TP	766183.08	13027304.72
159	SW=762.34	PC	766173.10	13027363.41
160	SW=762.27		766173.23	13027518.63
161	RIM=762.88		766156.72	13027189.73
162	SW=762.96	PC	766182.94	13027305.33
163	SW=764.31		766104.92	13027303.66
164	RIM=762.04		766138.08	13027333.19
165	FG=763.13		766133.30	13027354.66
166	FG=763.42		766104.92	13027354.66
167	FG=763.94		766104.92	13027324.66
168	FG=763.57		766133.30	13027434.66
169	RIM=762.08		766156.80	13027514.75
170	RIM=762.00		766138.73	13027503.29
171	FG=763.57	MID	766089.37	13027540.73
172	FG=763.42		766041.92	13027354.66
173	FG=763.94		766041.92	13027324.66
174	TA=763.53	SW	766009.43	13027323.66
175	TA=763.79		766009.43	13027354.66
176	TA=763.51	SW	766004.43	13027323.66
177	RIM=762.58		765984.14	13027331.55
178	TA=763.79		766004.68	13027354.66
179	BF=763.94		765993.30	13027384.66
180	BF=763.94		765993.34	13027444.69
181	SW=763.15	PC	766177.00	13027309.09
182	SW=762.27	PC	766173.23	13027368.41

GRADING TABLE

POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING
183	TA=763.74	PC	765936.60	13027335.16
184	SW=763.78	PC	766146.31	13027302.39
185	SW=763.58	TA	765922.40	13027312.70
186	TA=763.65	PC	765930.60	13027329.16
187	SW=763.58	PC	765918.86	13027302.09
188	TA=763.79	BF	765950.85	13027354.66
189	TA=763.89		765951.10	13027335.16
190	TA=763.79	BF	765920.87	13027354.66
191	BF=764.15		765963.71	13027415.07
192	BF=763.94		765933.30	13027384.66
193	TA=763.79	BF	765903.30	13027372.24
194	TA=764.07	PC	765882.04	13027382.79
195	TA=764.02	PC	765883.80	13027387.03
196	TA=764.16	PC	765878.97	13027379.71
197	RIM=763.60		765876.05	13027428.69
198	TA=763.72		765883.80	13027402.46
199	TA=763.79		765903.30	13027442.55
200	TA=763.79		765903.30	13027402.21
201	TA=763.79		765903.30	13027446.55
202	FG=763.42		765903.30	13027493.29
203	FG=763.57		765873.30	13027493.29
204	BF=763.94		765933.30	13027444.66
205	BF=763.94		766037.80	13027489.16
206	RIM=762.16		766104.48	13027684.30
207	RIM=762.95		766026.79	13027644.67
208	FG=763.57	PC	765983.30	13027584.66
209	SW=764.10	PC	766130.32	13027300.66
210	FG=763.42		765903.30	13027556.29
211	FG=763.57		765873.30	13027556.29
212	SW=763.53	PC	766133.23	13027326.66
213	FG=763.13		765903.30	13027584.66
214	RIM=763.16		765876.94	13027584.95
215	SW=762.92		766027.69	13027707.44
216	SW=762.85		766027.73	13027712.43
217	SW=762.89		766127.66	13027707.19
218	SW=762.80		766127.71	13027712.19
219	SW=762.88		766227.70	13027706.94
220	SW=762.83		766227.73	13027711.94
221	SW=762.86		766323.06	13027706.70
222	SW=762.79		766323.26	13027711.70
223	SW=763.26		766353.59	13027704.39
224	SW=763.19		766353.78	13027709.39
225	SW=763.90		766114.92	13027326.66
226	SW=763.58	PC	765924.58	13027314.88
227	SW=764.25		766114.92	13027300.66
228	SW=764.00		766104.92	13027323.66
229	SW=763.22	PC	765945.79	13027323.66
230	SW=763.51	PC	765945.79	13027303.66
231	SW=763.59	PC	765938.72	13027300.74
232	SW=763.60		765936.54	13027298.56
233	SW=763.66	PC	765925.93	13027295.02
234	SW=763.50	TA	765930.60	13027319.54
235	RO=761.75	SW, TP	766264.15	13027353.11
236	SW=762.27		766257.15	13027361.11
237	RO=761.75	SW, TP	766264.15	13027361.11
238	SW=762.25	RE	766264.15	13027366.11
239	SW=762.25	RE	766264.15	13027441.37
240	RO=761.75	SW, TP	766264.15	13027449.37
241	RO=761.75	SW, TP	766264.15	13027457.37
242	SW=762.25	RE	766264.15	13027465.37
243	SW=762.40		766254.25	13027465.37
244	SW=761.90		766254.25	13027457.37
245	SW=761.90		766254.25	13027449.37
246	SW=762.40		766254.25	13027441.37

RADIUS POINTS

POINT	DESCRIPTION	NORTHING	EASTING
1000	20' EOM RADIUS	766372.44	13027512.69
1001	20' EOM RADIUS	766372.96	13027576.76
1002	6' EOM RADIUS	766357.52	13027526.68
1003	6' EOM RADIUS	766322.01	13027526.66
1004	6' EOM RADIUS	766293.99	13027526.60
1005	20' EOM RADIUS	766284.08	13027536.58
1006	5' SW RADIUS	766178.06	13027304.20
1007	15' SW RADIUS	766237.46	13027331.58
1008	40' SW RADIUS	766133.23	13027366.66
1009	75' SW RADIUS	766130.32	13027375.66
1010	10', 30' SW RADIUS	765945.79	13027293.66
1011	6' AGG RADIUS	765936.60	13027329.16
1012	6' AGG RADIUS	765877.80	13027387.03
1013	6' AGG RADIUS	765874.72	13027383.95
1014	6' AGG RADIUS	765874.72	13027586.66

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CONSULTANT

GRADING PLAN NORTHEAST

SHEET TITLE

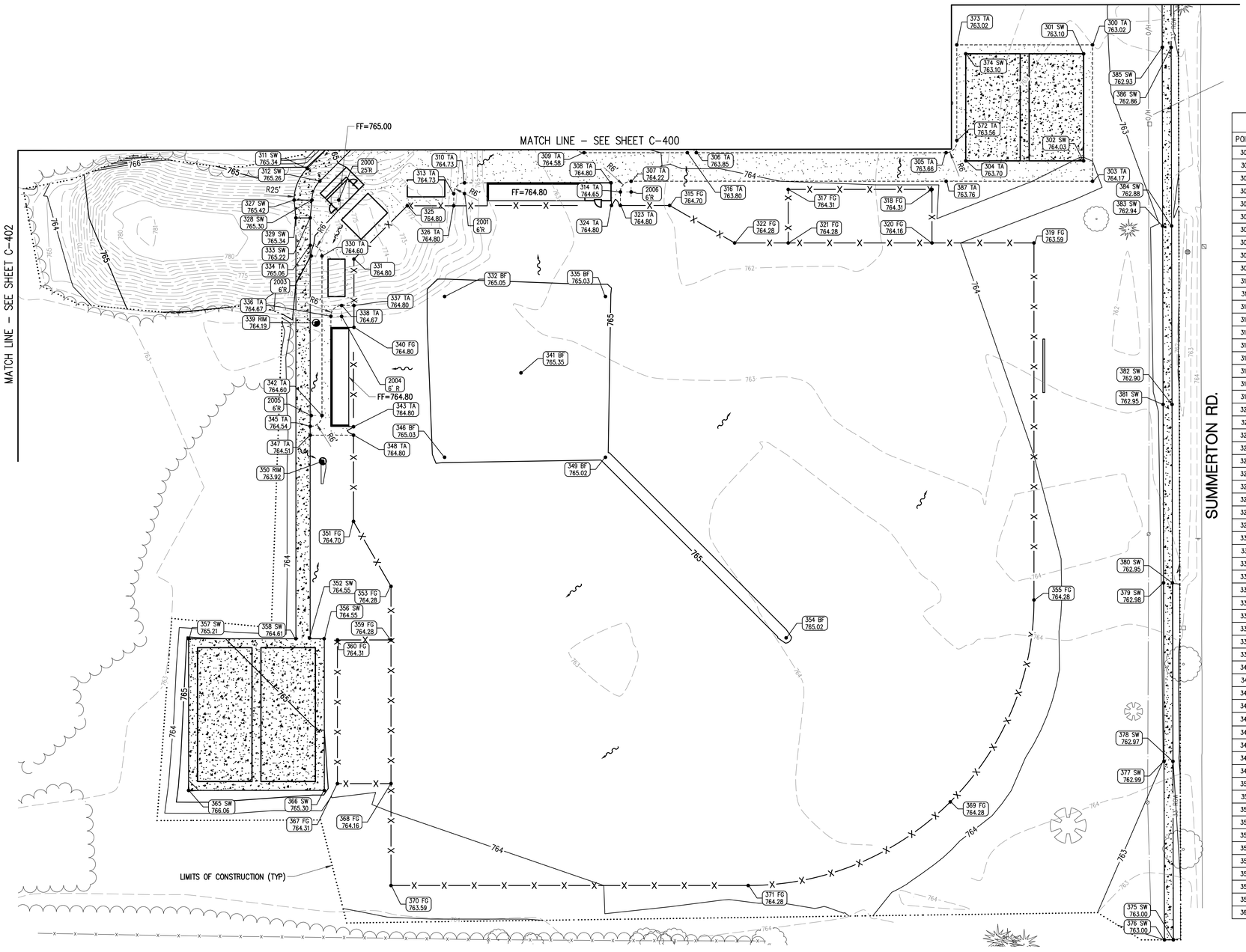
22-703

PROJECT NUMBER

C-400

SHEET NUMBER

Drawing: R:\Projects\22M0013\Dwg\construction drawings\SH-22M0013-GRAD.dwg
Date: Aug 25, 2022, 1:58pm Layout: GRAD - NE Plotted by: 759MJM



GRADING TABLE				
POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING
300	TA=763.02		765929.14	13027668.66
301	SW=763.10	TA	765924.14	13027663.66
302	SW=764.03	TA	765864.14	13027663.66
303	TA=764.17		765852.72	13027668.66
304	TA=763.70		765864.14	13027597.66
305	TA=763.66	PC	765868.72	13027586.66
306	TA=763.85		765868.72	13027446.80
307	TA=764.22	PC	765852.72	13027410.33
308	TA=764.80		765851.81	13027399.08
309	TA=764.58	PC	765868.72	13027383.95
310	TA=764.73	PC	765851.81	13027317.00
311	SW=765.34	PC	765859.86	13027228.95
312	SW=765.26	PC	765852.79	13027236.02
313	TA=764.73	PC	765845.81	13027311.00
314	TA=764.65	PC	765846.72	13027404.33
315	FG=764.70		765839.14	13027431.90
316	TA=763.80		765868.72	13027441.80
317	FG=764.31		765848.14	13027498.27
318	FG=764.31		765848.14	13027578.77
319	FG=763.59		765818.14	13027635.88
320	FG=764.16		765818.14	13027578.77
321	FG=764.28		765818.14	13027498.27
322	FG=764.28		765818.14	13027468.27
323	TA=764.80		765839.14	13027404.33
324	TA=764.80		765839.14	13027399.33
325	=764.80		765838.98	13027285.00
326	TA=764.80		765838.98	13027311.00
327	SW=765.42	PC	765842.18	13027221.63
328	SW=765.30	PC	765842.18	13027231.63
329	SW=765.34		765832.18	13027222.63
330	TA=764.60	PC	765810.85	13027237.21
331	=764.80		765809.10	13027255.13
332	BF=765.05		765788.15	13027305.88
333	SW=765.22		765832.18	13027230.63
334	TA=765.06	SW, PC	765816.85	13027230.63
335	BF=765.03		765788.14	13027395.94
336	TA=764.67	PC	765777.10	13027242.21
337	TA=764.80		765783.10	13027255.13
338	TA=764.67	PC	765783.10	13027248.21
339	RIM=764.19		765773.37	13027233.92
340	FG=764.80		765770.86	13027255.13
341	BF=765.35		765745.36	13027348.66
342	TA=764.60	PC	765721.44	13027237.21
343	TA=764.80		765715.19	13027254.88
345	TA=764.54	SW, PC	765715.44	13027230.63
346	BF=765.03		765698.08	13027305.88
347	TA=764.51	SW	765710.44	13027230.63
348	TA=764.80		765710.44	13027254.88
349	BF=765.02		765698.08	13027395.94
350	RIM=763.92		765695.85	13027237.67
351	FG=764.70		765662.12	13027254.88
352	SW=764.55		765596.80	13027230.24
353	FG=764.28		765625.75	13027275.88
354	BF=765.02		765596.90	13027497.12
355	FG=764.28	PC	765618.14	13027635.88
356	SW=764.55		765596.41	13027238.44
357	SW=765.21		765596.41	13027162.54
358	SW=764.61		765596.41	13027222.63
359	FG=764.28		765595.75	13027275.88
360	FG=764.31		765595.75	13027245.88

GRADING TABLE				
POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING
365	SW=766.06		765511.41	13027162.54
366	SW=765.30		765511.41	13027238.54
367	FG=764.31		765515.25	13027245.88
368	FG=764.16		765515.25	13027275.88
369	FG=764.28	MID	765505.01	13027589.01
370	FG=763.59		765458.14	13027275.88
371	FG=764.28	PC	765458.14	13027475.88
372	TA=763.56	PC	765875.62	13027592.66
373	TA=763.02		765929.14	13027592.66
374	SW=763.10	TA	765924.14	13027597.66
375	SW=763.00		765427.74	13027713.93
376	SW=763.00		765427.73	13027708.93
377	SW=762.99		765527.72	13027708.68
378	SW=762.97		765527.72	13027713.68
379	SW=762.98		765627.72	13027708.43
380	SW=762.95		765627.72	13027713.40
381	SW=762.95		765727.70	13027708.18
382	SW=762.90		765727.71	13027713.18
383	SW=762.94		765827.68	13027707.93
384	SW=762.88		765827.68	13027712.93
385	SW=762.93		765927.72	13027707.68
386	SW=762.86		765927.70	13027712.68
387	TA=763.76		765852.72	13027586.66

RADIUS POINTS			
POINT	DESCRIPTION	NORTHING	EASTING
2000	25' SW RADIUS	765842.18	13027246.63
2001	6' AGG RADIUS	765845.81	13027317.00
2003	6' AGG RADIUS	765810.85	13027231.21
2004	6' AGG RADIUS	765777.01	13027248.21
2005	6' AGG RADIUS	765721.44	13027231.21
2006	6' AGG RADIUS	765846.72	13027410.33

GRADING LEGEND

TA – TOP OF AGGREGATE
SW – TOP OF SIDEWALK
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TC – TOP OF CONCRETE CURB
FG – FINISH GRADE
BF – BALL FIELD
RO – RAMP OPENING
RE – RAISED EDGE
RIM – RIM ELEVATION
ME – MATCH EXISTING
PC – POINT OF CURVATURE
FF – FINISHED FLOOR
MID – MID POINT OF CURVE
EOM – EDGE OF METAL
AGG – AGGREGATE
~~~ – SURFACE FLOW DIRECTION

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ADDENDUM 1	8/12/2022
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CONSULTANT

GRADING PLAN SOUTHEAST

SHEET TITLE

22–703

PROJECT NUMBER

C–401

SHEET NUMBER
~~~
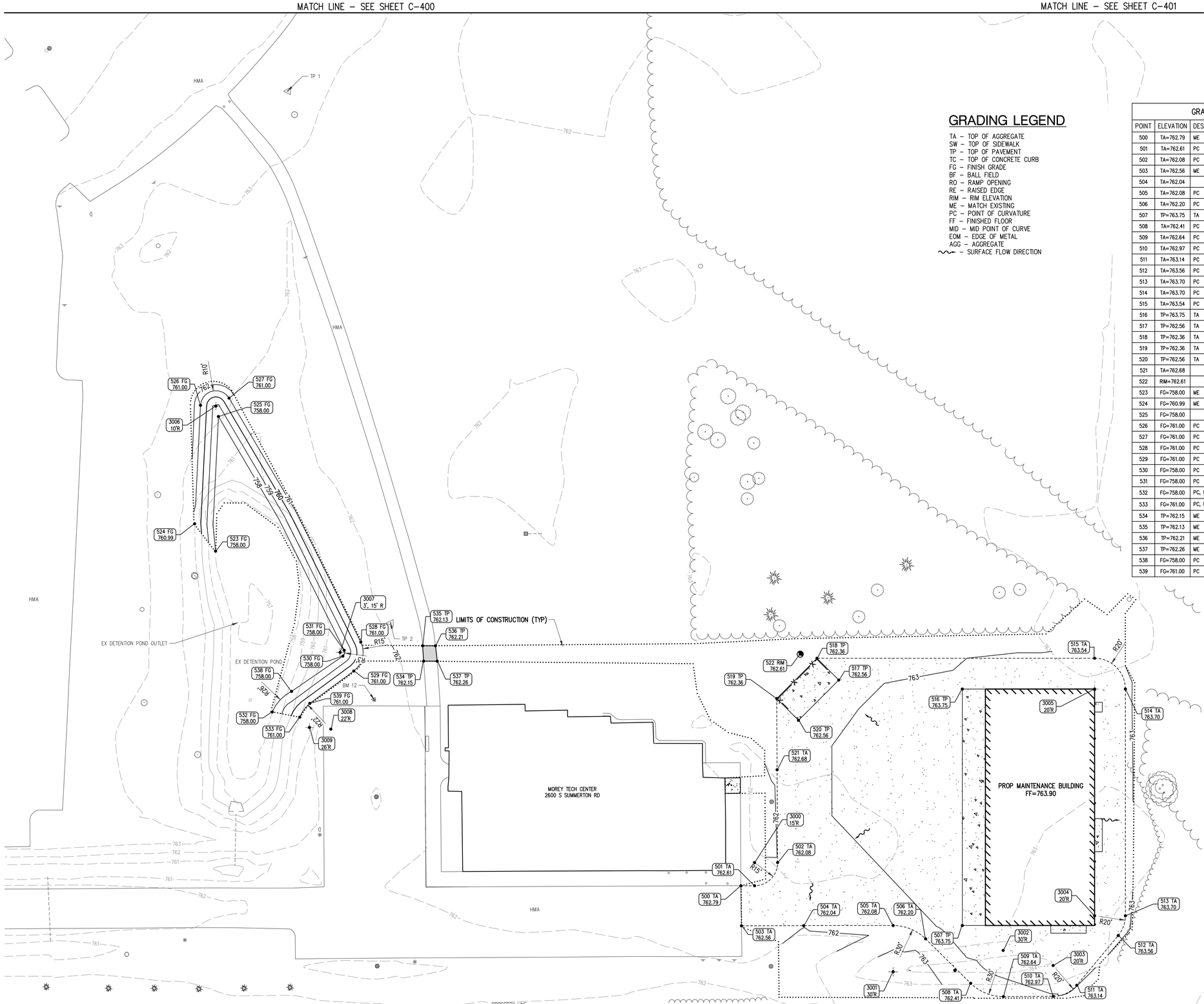

MATCH LINE – SEE SHEET C-400

MATCH LINE – SEE SHEET C-401



GRADING LEGEND

TA – TOP OF AGGREGATE
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TP – TOP OF PAVEMENT
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MID – MID POINT OF CURVE
EOM – EDGE OF METAL
AGG – AGGREGATE
~~~ – SURFACE FLOW DIRECTION

GRADING TABLE

POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING
500	TA=762.79	ME	765997.47	1302684.16
501	TA=762.61	PC	765988.60	1302684.19
502	TA=762.08	PC	765973.64	1302699.28
503	TA=762.56	ME	765997.14	1302658.16
504	TA=762.04		765956.72	1302658.24
505	TA=762.08	PC	765898.62	1302658.35
506	TA=762.20	PC	765877.55	1302649.71
507	TP=763.75	TA	765853.71	1302658.35
508	TA=762.41	PC	765848.26	1302620.82
509	TA=762.64	PC	765827.02	1302612.18
510	TA=762.97	PC	765794.61	1302612.38
511	TA=763.14	PC	765779.36	1302619.57
512	TA=763.56	PC	765752.44	1302651.85
513	TA=763.70	PC	765747.80	1302664.66
514	TA=763.70	PC	765747.80	1302611.93
515	TA=763.54	PC	765767.80	1302631.93
516	TP=763.75	TA	765853.71	1302611.93
517	TP=762.56	TA	765933.94	1302617.79
518	TP=762.36	TA	765948.08	1302631.93
519	TP=762.36	TA	765974.24	1302605.77
520	TP=762.56	TA	765960.10	1302591.63
521	TA=762.68		765973.98	1302559.54
522	RIM=762.61		765958.97	1302634.57
523	FG=758.00	ME	766338.67	1302701.55
524	FG=760.99	ME	766352.25	1302719.28
525	FG=758.00		766336.78	1302788.95
526	FG=761.00	PC	766348.43	1302796.21
527	FG=761.00	PC	766329.89	1302800.90
528	FG=761.00	PC	766244.36	1302664.42
529	FG=761.00	PC	766248.89	1302623.64
530	FG=758.00	PC	766256.00	1302633.31
531	FG=758.00	PC	766255.10	1302637.08
532	FG=758.00	PC, ME	766301.82	1302597.04
533	FG=761.00	PC, ME	766283.97	1302593.66
534	TP=762.15	ME	766203.53	1302630.04
535	TP=762.13	ME	766204.19	1302640.05
536	TP=762.21	ME	766195.84	1302640.03
537	TP=762.26	ME	766194.70	1302630.03
538	FG=758.00	PC	766289.30	1302610.41
539	FG=761.00	PC	766277.46	1302602.64

RADIUS POINTS

POINT	DESCRIPTION	NORTHING	EASTING
3000	15' AGG RADIUS	765988.64	1302649.19
3001	30' AGG RADIUS	765898.62	1302642.35
3002	30' AGG RADIUS	765827.20	1302644.18
3003	20' AGG RADIUS	765794.72	1302643.38
3004	20' AGG RADIUS	765767.80	1302646.66
3005	20' AGG RADIUS	765767.81	1302661.95
3006	10' FG RADIUS	766338.44	1302679.72
3007	3', 15' FG RADIUS	766257.78	1302663.73
3008	22' FG RADIUS	766263.80	1302658.90
3009	26' FG RADIUS	766277.68	1302658.98

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CONSULTANT

GRADING PLAN NORTHWEST

SHEET TITLE

22–703

PROJECT NUMBER

C–402

SHEET NUMBER
~~~

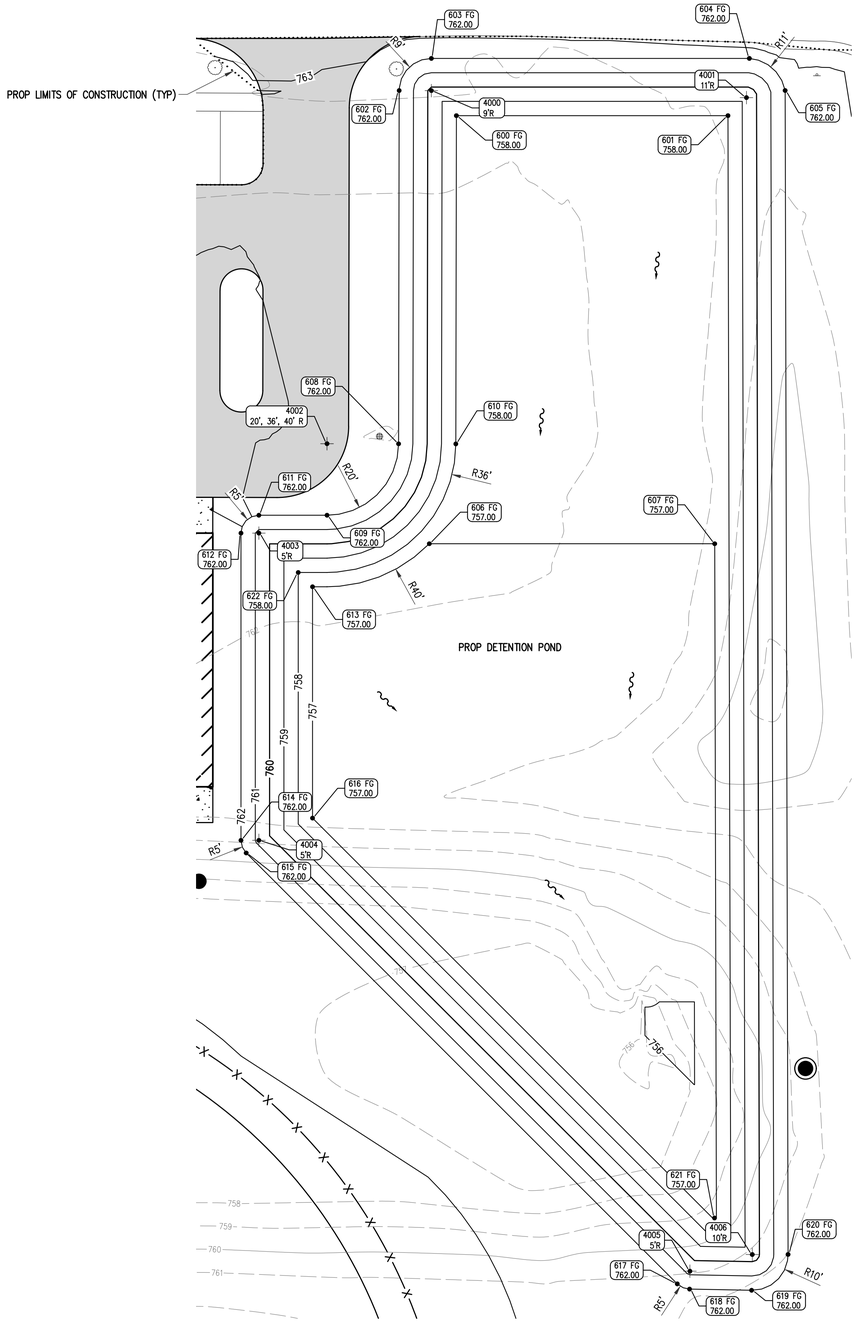

GRADING TABLE				
POINT	ELEVATION	DESCRIPTION	NORTHING	EASTING
600	FG=758.00		766370.85	13027586.71
601	FG=758.00		766370.85	13027662.60
602	FG=762.00	PC	766377.87	13027570.72
603	FG=762.00	PC	766386.85	13027579.72
604	FG=762.00	PC	766386.85	13027668.58
605	FG=762.00	PC	766377.87	13027678.58
606	FG=757.00	PC	766251.17	13027579.14
607	FG=757.00		766251.17	13027658.90
608	FG=762.00	PC	766279.11	13027570.55
609	FG=762.00	PC	766259.15	13027550.55
610	FG=758.00	PC	766279.08	13027586.55
611	FG=762.00	PC	766259.15	13027531.50
612	FG=762.00	PC	766254.15	13027526.50
613	FG=757.00	PC	766239.15	13027546.50
614	FG=762.00		766168.26	13027526.50
615	FG=762.00		766164.72	13027527.97
616	FG=757.00		766174.47	13027546.50
617	FG=762.00	PC	766044.27	13027648.43
618	FG=762.00	PC	766042.80	13027651.87
619	FG=762.00	PC	766042.47	13027669.20
620	FG=762.00	PC	766052.49	13027679.39
621	FG=757.00		766062.67	13027658.83
622	FG=758.00	PC	766243.15	13027542.50

RADIUS POINTS			
POINT	DESCRIPTION	NORTHING	EASTING
4000	9' FG RADIUS	766377.85	13027579.72
4001	11' FG RADIUS	766375.89	13027667.77
4002	20', 36', 40' FG RADIUS	766279.15	13027550.55
4003	5' FG RADIUS	766254.15	13027531.50
4004	5' FG RADIUS	766168.26	13027531.50
4005	5' FG RADIUS	766047.80	13027651.97
4006	10' FG RADIUS	766052.47	13027669.39

GRADING LEGEND

TA – TOP OF AGGREGATE
SW – TOP OF SIDEWALK
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EOM – EDGE OF METAL
AGG – AGGREGATE
~~~ – SURFACE FLOW DIRECTION

N

0 20 ft 40 ft

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GRADING DETAIL

SHEET TITLE

22–703
PROJECT NUMBER

C–403
SHEET NUMBER

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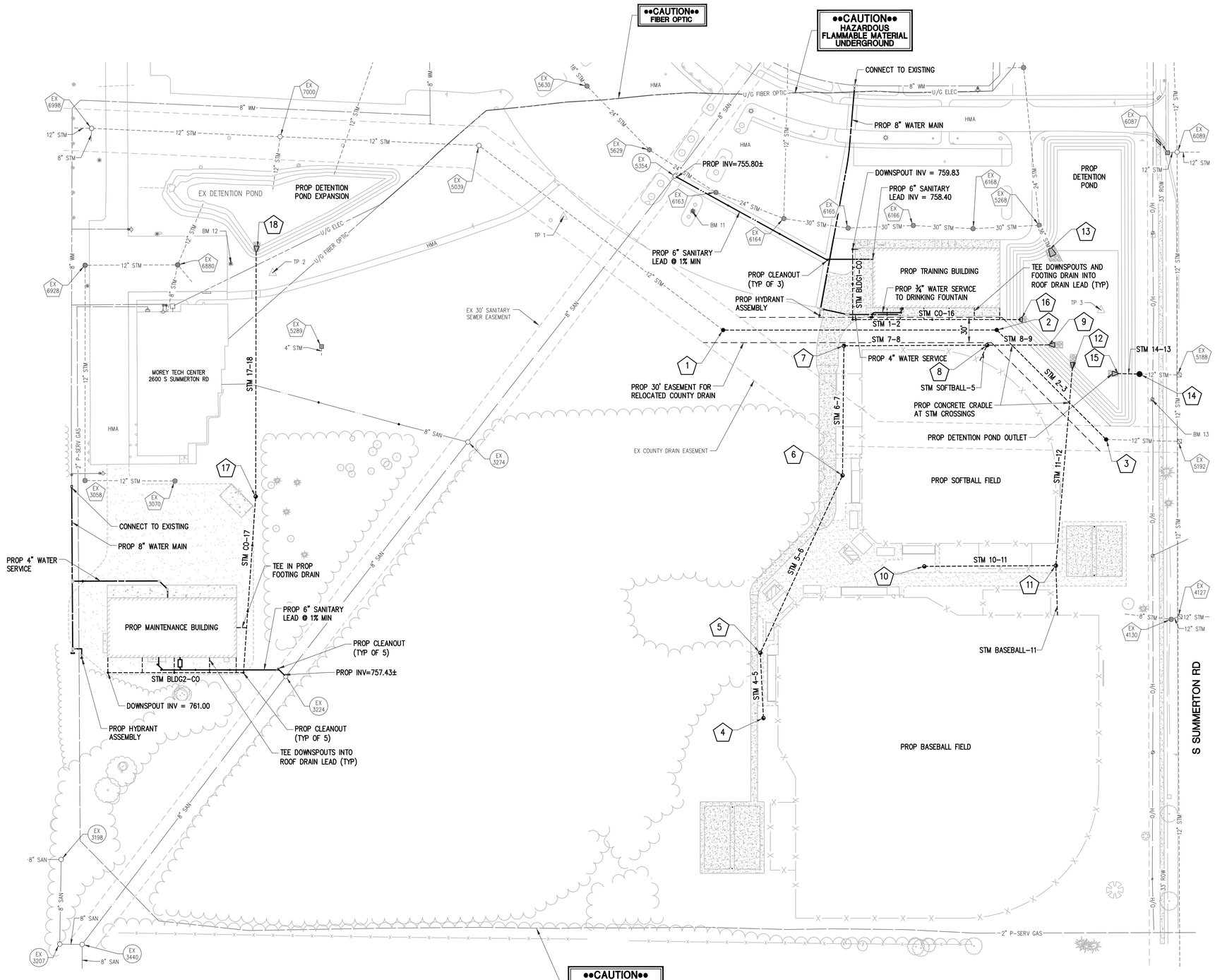

STORM WATER MANAGEMENT NOTES

REQUIRED WEST DETENTION VOLUME: 44,140 CFT
PROVIDED WEST DETENTION VOLUME: 46,147 CFT
REQUIRED EAST DETENTION VOLUME: 131,371 CFT
PROVIDED EAST DETENTION VOLUME: 132,493 CFT

N

0 60 ft 120 ft

PROPOSED STORM SEWER STRUCTURE TABLE

STRUCT NO.	DIA.	COVER TYPE	RIM ELEVATION	INVERT	NORTHING	EASTING
1	48"	B	RIM=762.88	12" 756.05 E (PR) 12" 756.05 NW (EX)	766156.72	13027189.73
2	48"	B	RIM=762.10	12" 755.90 W (PR) 12" 755.90 SE (PR)	766156.80	13027514.75
3	48"	B	RIM=762.35	12" 755.81 NW (PR) 12" 755.81 E (EX)	766026.79	13027644.67
4	48"	G	RIM=763.92	12" 760.90 N (PR)	765695.85	13027237.67
5	48"	G	RIM=764.19	12" 760.51 S (PR) 12" 760.51 NE (PR)	765773.37	13027233.92
6	48"	G	RIM=762.58	12" 759.35 N (PR) 12" 759.35 SW (PR)	765984.14	13027331.55
7	48"	G	RIM=761.91	12" 758.58 E (PR) 12" 758.58 S (PR)	766138.08	13027333.19
8	48"	G	RIM=762.00	12" 757.73 W (PR) 18" 757.73 E (PR) 12" 757.73 SW (PR)	766138.73	13027503.29
10	48"	G	RIM=763.60	12" 760.50 E (PR)	765876.05	13027428.69
11	48"	G	RIM=763.58	12" 759.59 W (PR) 18" 759.59 N (PR) 12" 759.59 S (PR)	765876.94	13027584.95
14	72"	B	RIM=762.16	12" 755.81 W (PR) 12" 755.81 E (EX)	766104.48	13027684.26
17	48"	G	RIM=762.61	12" 759.20 N (PR) 8" 759.20 S (PR)	765958.97	13026634.57

PROPOSED STORM SEWER END SECTION TABLE

STRUCT NO.	DIA.	END OF PIPE INVERT	END OF PIPE NORTHING	END OF PIPE EASTING
9	18"	18" 757.36	766139.12	13027577.02
12	18"	18" 757.18	766111.70	13027604.61
13	36"	36" 756.30	766253.20	13027578.20
15	12"	12" 755.86	766105.05	13027658.50
16	8"	8" 758.40	766169.23	13027543.04
18	12"	12" 758.00	766249.86	13026635.13

PROPOSED STORM SEWER PIPE TABLE

PIPE NUMBER	DIAMETER	TOTAL LENGTH	SLOPE
STM 1–2	12"	325'	0.05%
STM 2–3	12"	184'	0.05%
STM 4–5	12"	78'	0.50%
STM 5–6	12"	232'	0.50%
STM 6–7	12"	154'	0.50%
STM 7–8	12"	170'	0.50%
STM 8–9	18"	74'	0.50%
STM 10–11	12"	156'	0.59%
STM 11–12	18"	236'	1.02%
STM 14–13	12"	26'	0.19%
STM 17–18	12"	291'	0.41%
STM BASEBALL–11	12"	59'	0.50%
STM BLDG1–CO	8"	83'	0.50%
STM BLDG2–CO	8"	161'	0.49%
STM CO–16	8"	199'	0.51%
STM CO–17	8"	210'	0.48%
STM SOFTBALL–5	12"	20'	0.50%

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ADDENDUM 2	8/18/2022
ADDENDUM 1	8/12/2022
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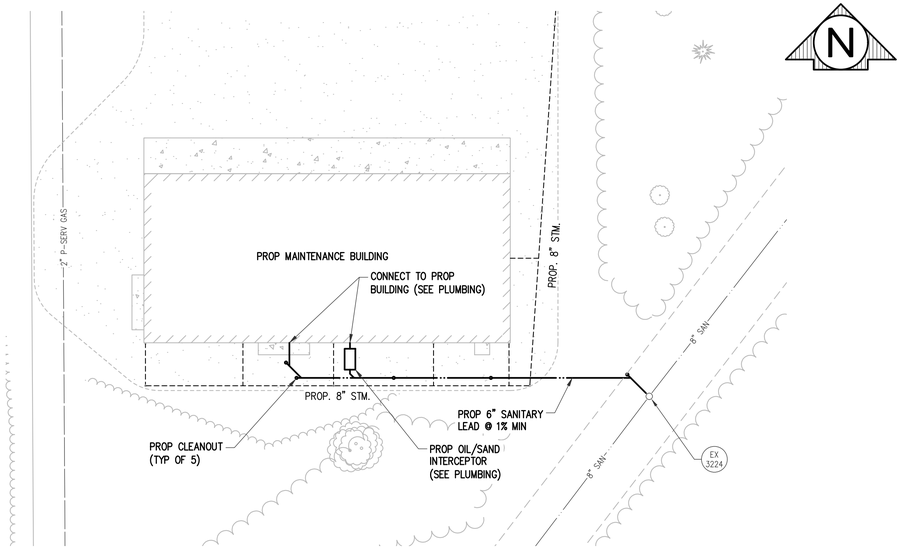
CONSULTANT

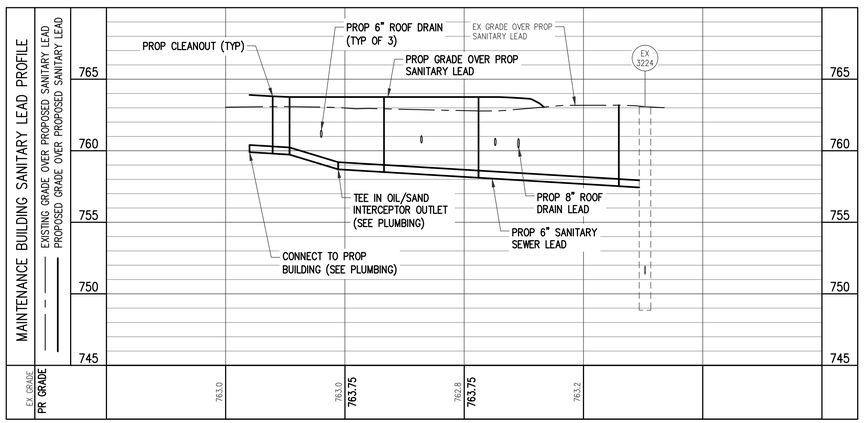
UTILITY PLAN

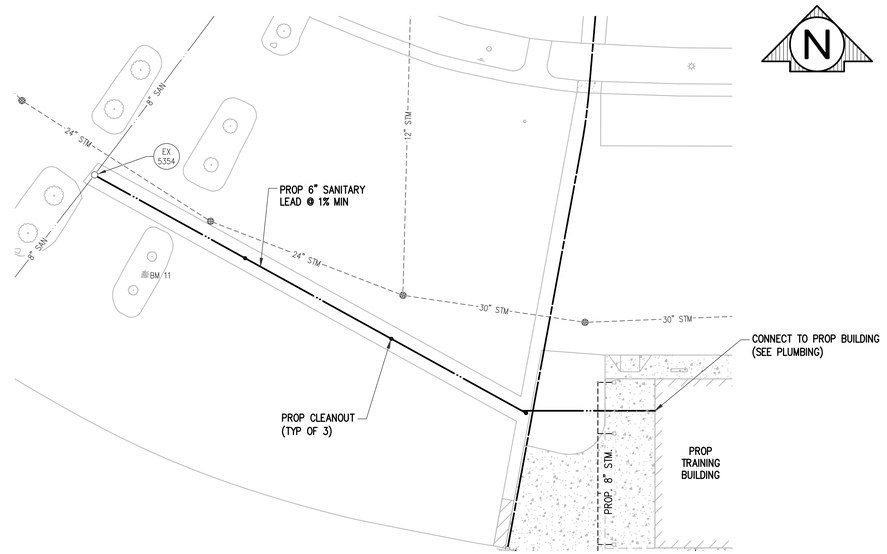
SHEET TITLE

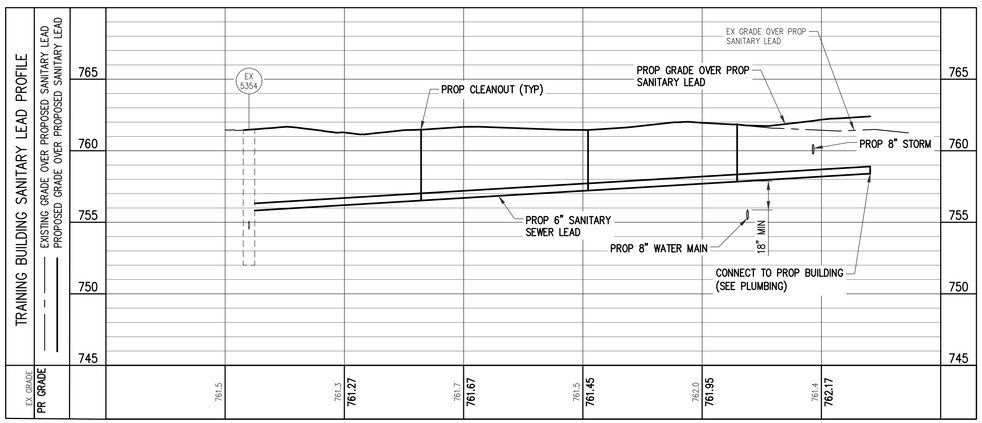
22–703
PROJECT NUMBER

C–500
SHEET NUMBER









HOR: 0 30 ft 60 ft
VERT: 0 5 ft 10 ft

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SANITARY SEWER PLAN & PROFILE

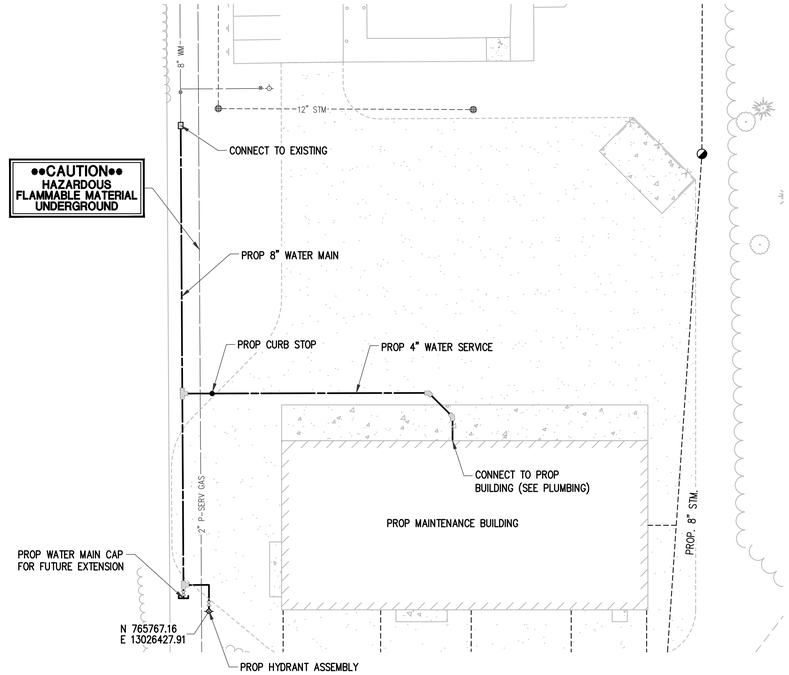
SHEET TITLE

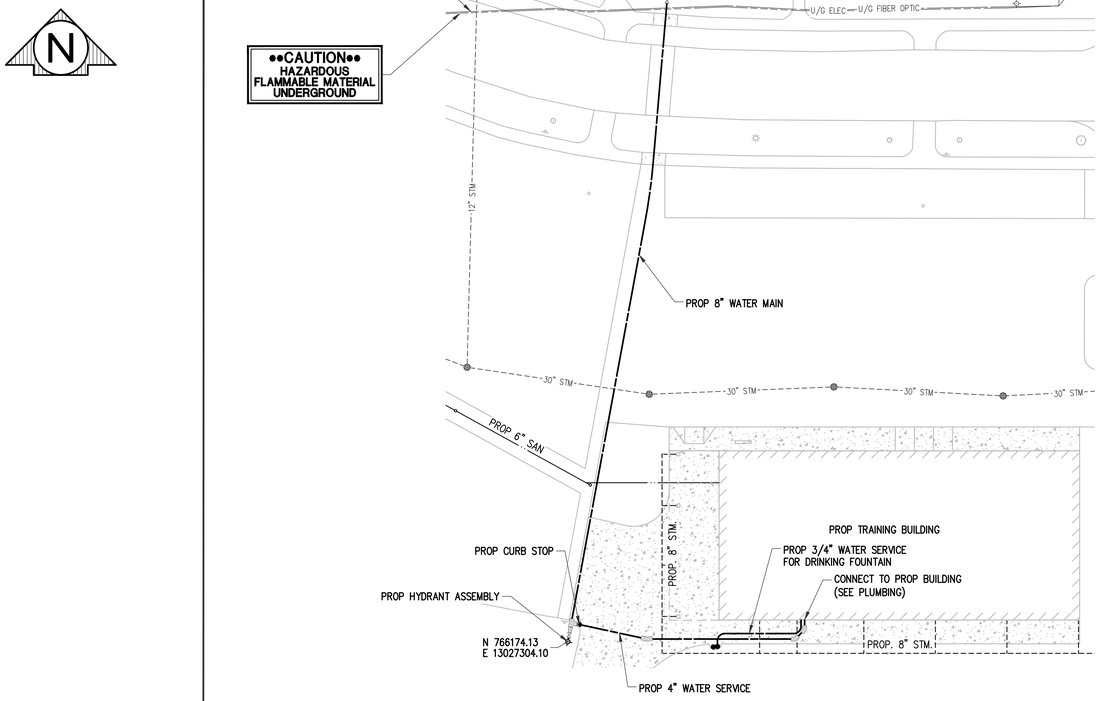
22–703

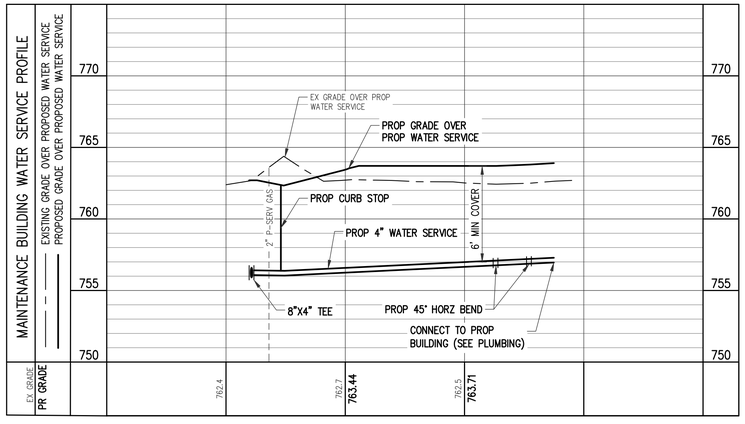
PROJECT NUMBER

C–501

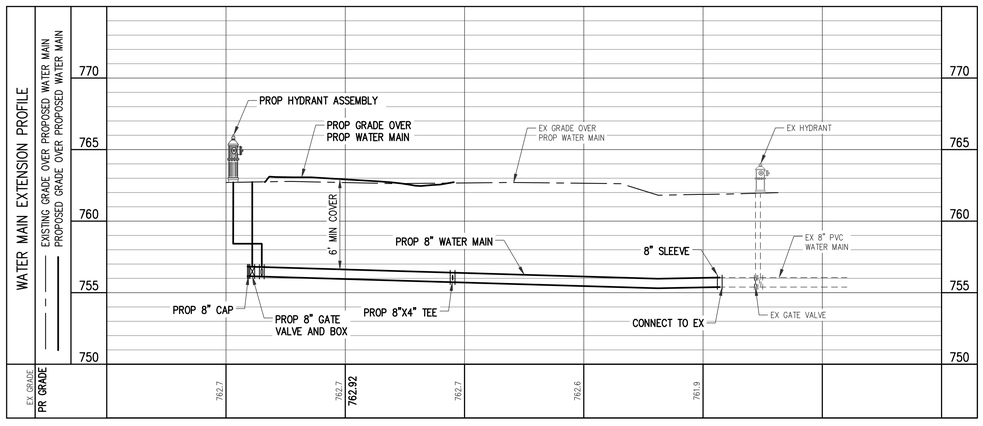
SHEET NUMBER

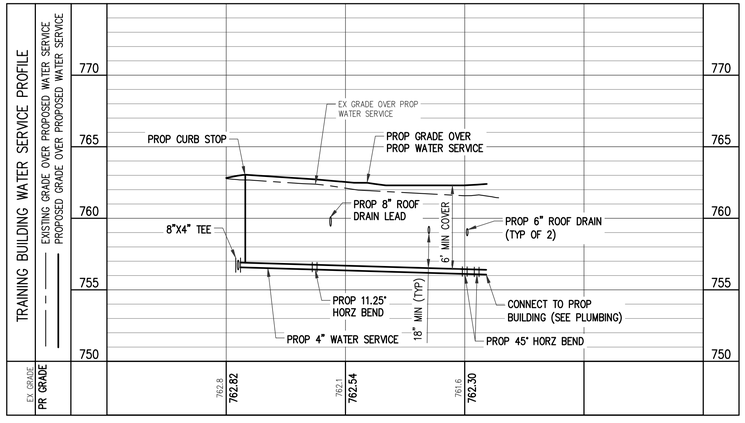




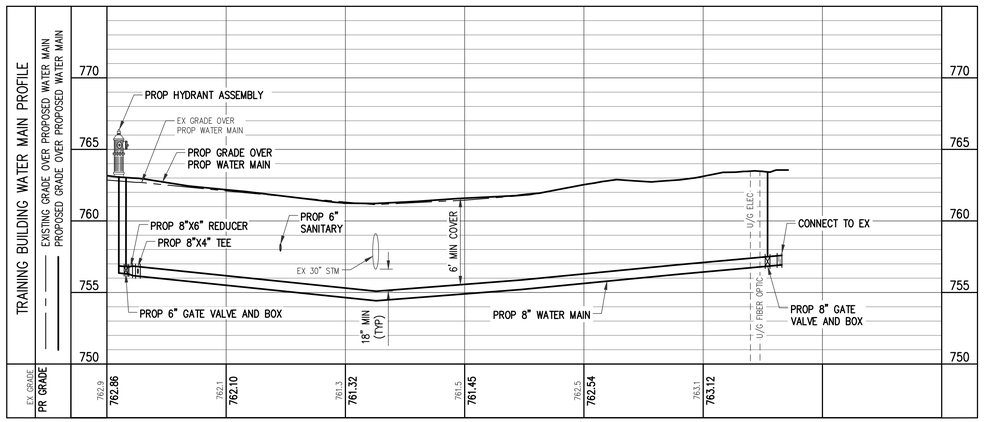


WATER MAIN FITTING TABLE		
FITTING TYPE	NORTHING	EASTING
8" CAP	765772.63	13026417.25
8" GATE VALVE AND BOX	765774.68	13026417.24
HYDRANT TEE	765778.18	13026417.22
4" 45° HZ BEND	765848.77	13026530.02
8"X4" TEE	765858.46	13026416.75
4" 45° HZ BEND	765858.74	13026520.02
8" SLEEVE	765970.85	13026416.06





WATER MAIN FITTING TABLE		
FITTING TYPE	NORTHING	EASTING
4" 45° HZ BEND	766175.23	13027399.46
4" 11.25° HZ BEND	766175.23	13027337.19
8"X6" REDUCER	766179.08	13027305.01
4" 45° HZ BEND	766179.17	13027403.34
8"X4" TEE	766182.02	13027305.55
8" GATE VALVE AND BOX	766442.94	13027345.70
8" TAPPING SLEEVE	766447.46	13027346.08



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FINAL SITE PLAN REVIEW	8/26/2022
ADDENDUM 3	8/19/2022
ADDENDUM 1	8/12/2022
ISSUED FOR BIDS	8/1/2022
PRELIM. SITE PLAN REVIEW	5/31/2022

DATE ISSUED

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DRAWN BY

JBM
CHECKED BY

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CONSULTANT

WATER
PLAN & PROFILE

SHEET TITLE

22–703
PROJECT NUMBER

C–502
SHEET NUMBER

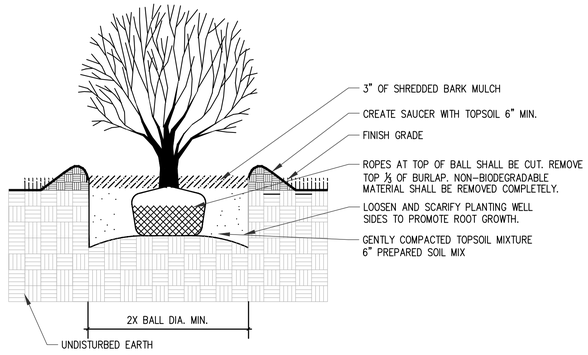
Drawing: R:\Projects\22\MOD\3\Dwg\Construction drawings\SH-22\MOD13-UTIL PROFILE5.dwg
Date: Aug 25, 2022, 1:59pm Layout: WATER Plotted by: 759UM

DECIDUOUS SHADE TREE SCHEDULE					
KEY	SIZE	BOTANICAL NAME	COMMON NAME	NOTES	QUANTITY
AF	2 ½" CAL.	ACER PLATANOIDES 'DEBORAH'	DEBORAH NORWAY MAPLE	B&B	8
AO	2 ½" CAL.	ACER RUBURM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	B&B	8
PC	2 ½" CAL.	PYRUS CALLERYANA 'CHANTICLEER'	CHANTICLEER PEAR	B&B	8

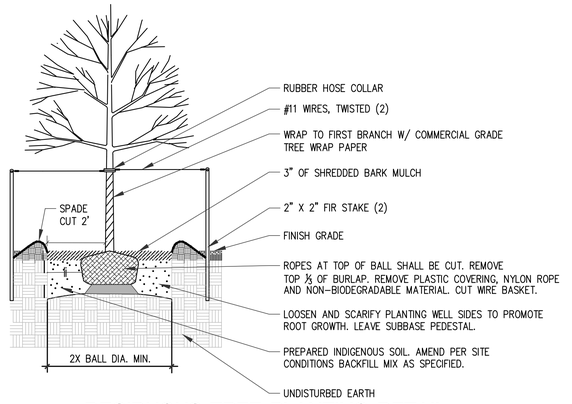
EVERGREEN TREE SCHEDULE					
KEY	SIZE	BOTANICAL NAME	COMMON NAME	NOTES	QUANTITY
JC	6' HT.	JUNIPERUS CHINENSIS 'HETZII COLUMNARIS'	GREEN COLUMNAR JUNIPER	B&B	23
PA	6' HT.	PICEA ABIES	NORWAY SPRUCE	B&B	25
PP	6' HT.	PICEA PUNGENS	COLORADO SPRUCE	B&B	25

ORNAMENTAL TREE SCHEDULE					
KEY	SIZE	BOTANICAL NAME	COMMON NAME	NOTES	QUANTITY
AL	2" CAL.	AMELANCHIER LAEVIS	ALLEGHGHENY SERVICEBERRY	CLUMPED B&B	2
BN	2" CAL.	BETULA NIGRA	RIVER BIRCH	B&B	2
CI	2" CAL.	CRAEGUS CRUSGALI INERMIS 'CRUZAM'	CRUSADER HAWTHORN	B&B	2
MP	2" CAL.	MALUS 'PRARIEFIRE'	PRARIEFIRE CRABAPPLE	B&B	4

DECIDUOUS SHRUB SCHEDULE					
KEY	SIZE	BOTANICAL NAME	COMMON NAME	NOTES	QUANTITY
AM	3' HT.	ARONIA MELANOCARPA	BLACK CHOKEBERRY	NO. 5 CONT.	35 @ 4' SPACING
CS	3' HT.	CORNUS SERICEA	RED OSIER DOGWOOD	NO. 5 CONT.	38 @ 4' SPACING
EC	3' HT.	EUONYMUS ALATUS 'COMPACTUS'	COMPACT BURNING BUSH	NO. 5 CONT.	28 @ 6' SPACING
SG	3' HT.	SPIRAEA x BUMALDA 'GOLD FLAME'	GOLD FLAME SPIREA	NO. 5 CONT.	38 @ 4' SPACING
SP	3' HT.	SPIRAEA PRUNIFOLIA	BRIDALWREATH SPIREA	NO. 5 CONT.	26 @ 6' SPACING
VD	3' HT.	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	NO. 5 CONT.	28 @ 6' SPACING



SHRUB PLANTING DETAIL
NOT TO SCALE



DECIDUOUS TREE PLANTING DETAIL
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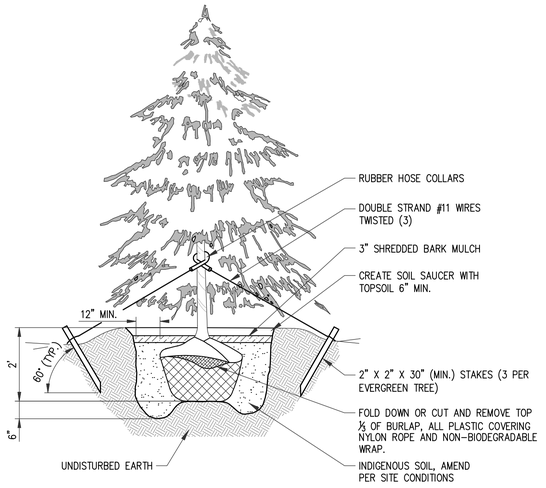
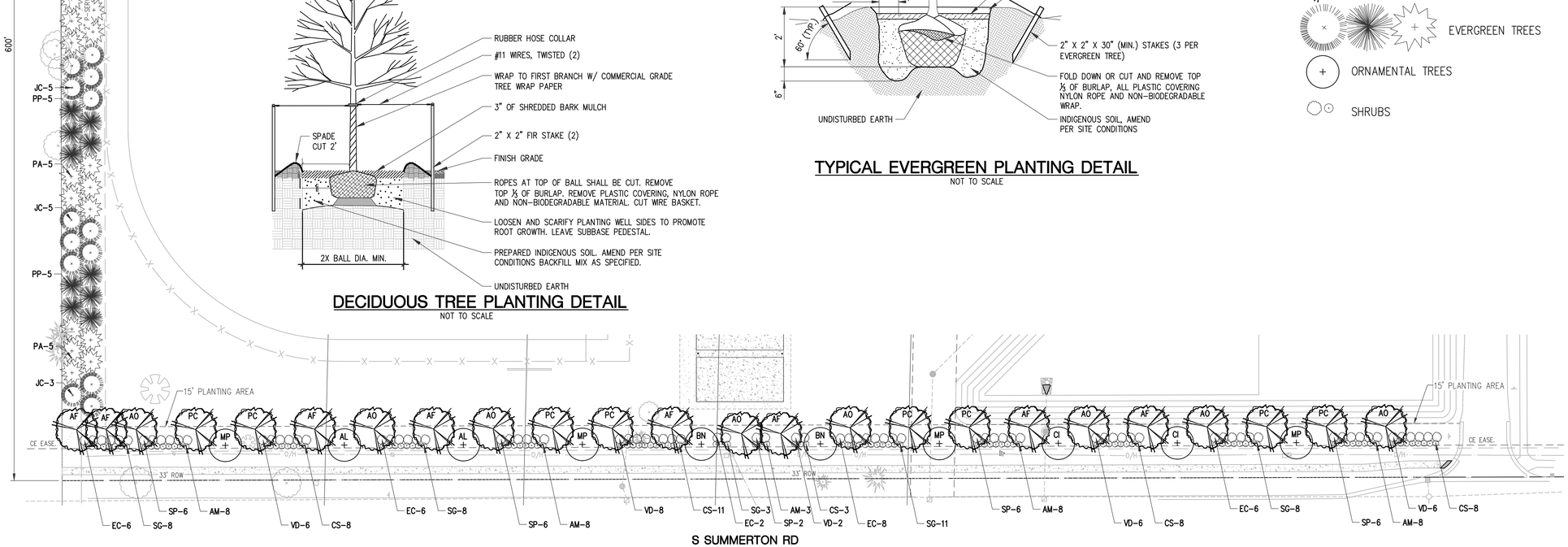
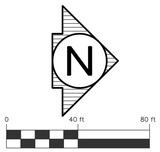


TYPICAL EVERGREEN PLANTING DETAIL
NOT TO SCALE



S SUMMERTON RD LANDSCAPE PLANTING PLAN



LANDSCAPE NOTES:

1. ALL LANDSCAPE MATERIALS SHALL BE HEALTHY AT THE TIME OF INSTALLATION.
2. THE CONTRACTOR SHALL GUARANTEE ALL PLANTS TO BE IN A HEALTHY CONDITION FOR A PERIOD OF TWO YEARS FOLLOWING ACCEPTANCE. CONTRACTOR SHALL REPLACE WITHOUT COST TO THE OWNER ANY DEAD OR UNACCEPTABLE PLANTS, AS DETERMINED BY THE OWNER'S REPRESENTATIVE DURING AND AT THE END OF THE GUARANTEE PERIOD.
3. ALL PLANTINGS SHALL CONFORM TO ANSI 260.1 OR CURRENT EDITION.
4. AREAS SPECIFIED WITH PLANT MATERIAL SHALL BE FINE GRADED AND SEEDED FOR TURF ESTABLISHMENT.
5. ALL EXCESS EXCAVATED MATERIALS AND DEBRIS WHICH ARE NOT ACCEPTED FOR DISPOSAL ON SITE BY THE OWNER SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF LEGALLY OFF SITE.
6. ALL LANDSCAPE AREAS SHALL HAVE PROPER DRAINAGE THAT PREVENTS EXCESS WATER FROM STANDING ON LAWN AREAS OR AROUND TREES & SHRUBS.
7. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY MATERIAL NOT MEETING SPECIFICATIONS.
8. THE CONTRACTOR SHALL PLACE 3" OF SHREDDED BARK MULCH IN LANDSCAPE BEDS PER SPECIFICATIONS.
9. STEEL LANDSCAPE EDGING IS TO BE INSTALLED ALONG PLANTING BED EDGES WHERE MULCH AND LAWN MEET.
10. LANDSCAPING ADJACENT TO ROADS (ORDINANCE SECTION 10.2, SUBSECTION B)

S. SUMMERTON ROAD REQUIREMENTS
ROAD FRONTAGE = 937 LFT
DECIDUOUS STREET TREES – 1/40 LFT FRONTAGE
REQUIRED: 24 TREES
PROPOSED: 24 TREES
ORNAMENTAL TREES – 1/100 LFT FRONTAGE
REQUIRED: 10 TREES
PROPOSED 10 TREES
SHRUBS – 8/40 LFT FRONTAGE
REQUIRED: 192 SHRUBS
PROPOSED: 192 SHRUBS

LEGEND

DECIDUOUS STREET TREES

EVERGREEN TREES

ORNAMENTAL TREES

SHRUBS

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ISSUED FOR BIDS	8/1/2022
PRELIM. SITE PLAN REVIEW	5/31/2022

DATE ISSUED

MJM
DRAWN BY

JBM
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CONSULTANT

LANDSCAPE PLAN

SHEET TITLE

22–703
PROJECT NUMBER

C–600
SHEET NUMBER

Drawing: R:\Projects\22\MOO13\Dwg\construction drawings\SH-22MOO13-LA.dwg
Date: Aug 25, 2022, 2:00pm Layout: LA Plotted by: TYLMUM

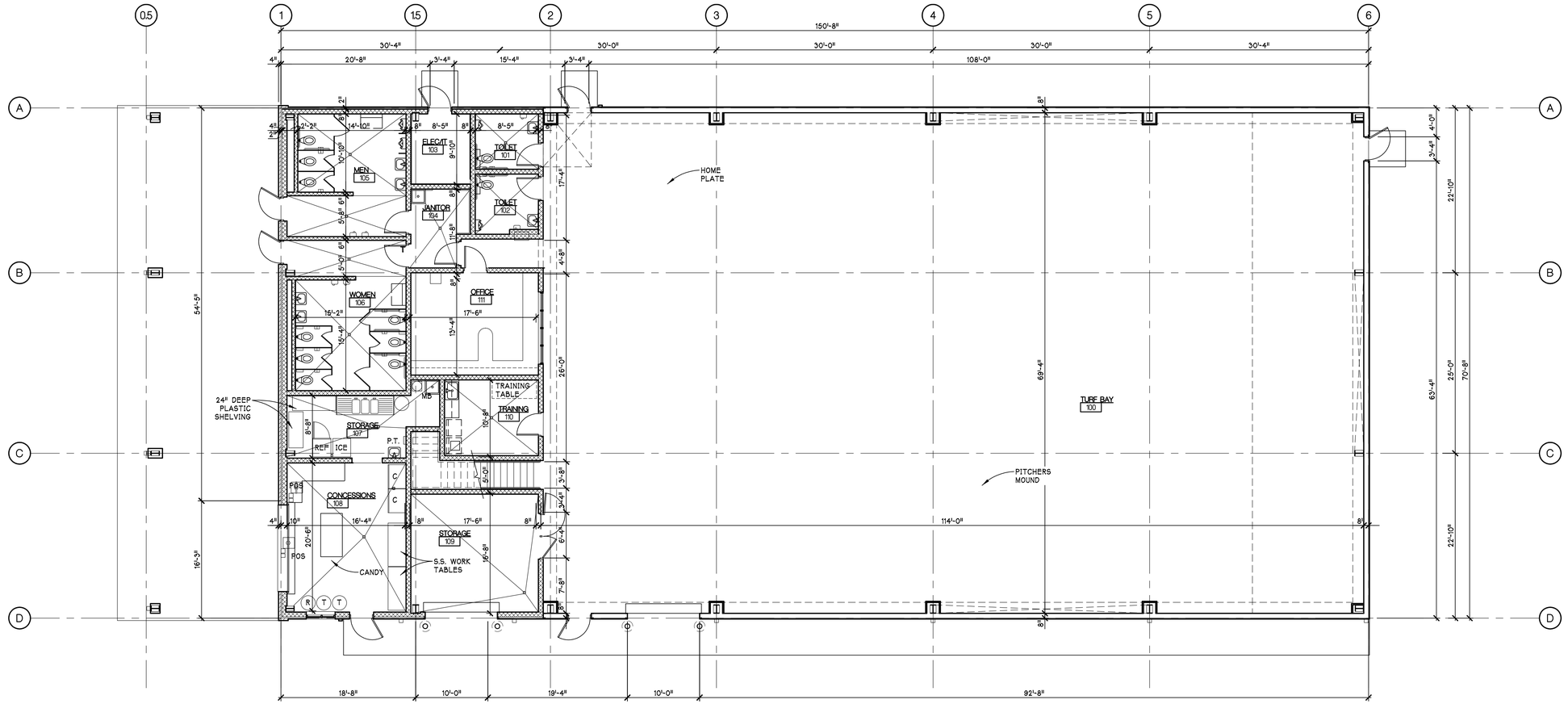
ABBREVIATIONS

BCS - BABY CHANGING STATION
DS - DOWN SPOUT
CR - CARD READER
FD - FLOOR DRAIN
CB - CATCH BASIN
EHD - ELECTRIC HAND DRYER
MS - MOP SINK
MB - MOP BUCKET
PC - POP COOLER
ICE - ICE MACHINE
PCM - POPCORN MACHINE
HDR - HOTDOG ROLLER
HWS - HAND WASH SINK
T - TRASH
R - RECYCLE
POS - POINT OF SALE
FEC - FIRE EXTINGUISHER CABINET
FEH - FIRE EXTINGUISHER HOOK

TB X'-X" TACKBOARD LENGTH
GB X'-X" GLASSBOARD LENGTH
+ 100'-0" FLOOR ELEVATION

FLOOR PLAN NOTES

1. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS AND PROMPTLY NOTIFY ARCHITECT OF ANY DISCREPANCIES.
2. ALL DIMENSIONS ARE TO CENTER OF COLUMN, FACE OF STUD WALL, OR FACE OF MASONRY WALL, UNLESS NOTED OTHERWISE.
3. FINISH FLOOR ELEVATION = 100'-0" UNLESS NOTED OTHERWISE
4. WHERE FLOOR DRAINS OCCUR, SLOPE FLOOR TO DRAIN.
5. INDICATES PARTITION TYPE - SEE SHEET A-910.A FOR PARTITION DETAILS
6. ALL PARTITIONS TO BE TYPE 1A U.N.O.
8. ALL EXPOSED OUTSIDE CORNERS OF CMU TO BE BULLNOSE CMU



NORTH

TRAINING BUILDING FLOOR PLAN

SCALE - 1/8"=1'-0"
RFSHTA100 10,647 SQ.FT.

8' 4' 0 8' 16' 24'

Sheet Size - 24x36

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PRELIM. SITE PLAN REVIEW 5/31/2022

DATE ISSUED

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Mt. Pleasant, Michigan

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CONSULTANT

FIRST FLOOR PLAN TRAINING BUILDING

SHEET TITLE

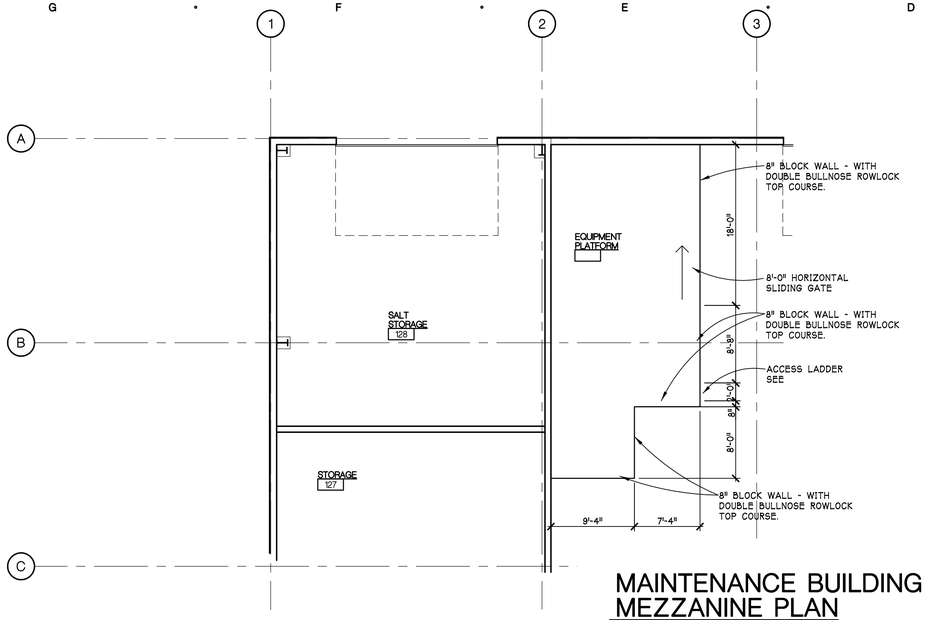
22-703

PROJECT NUMBER

A-100

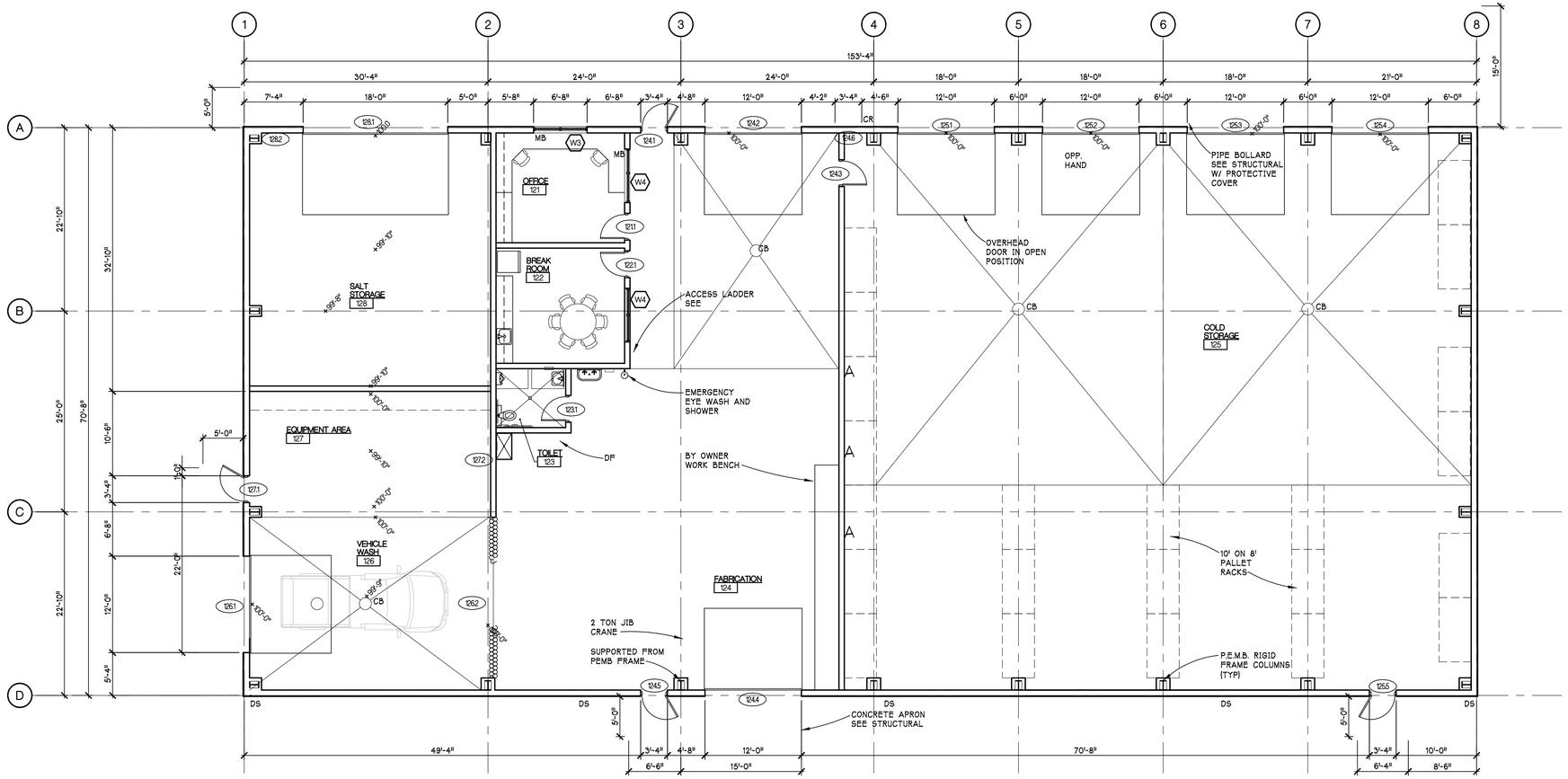
SHEET NUMBER

Drawing: P:\2022\22703\Dwgs\CD\Arch\DWG\SITE PLAN REVIEW\RFSHTA100.dwg
Date: Aug 25, 2022, 4:31 pm Layout: A-100 Plotted by: jmortimore



MAINTENANCE BUILDING MEZZANINE PLAN

SCALE - 1/8"=1'-0" 564 SQ.FT.



NORTH

MAINTENANCE BUILDING FLOOR PLAN

SCALE - 1/8"=1'-0" 7,260 SQ.FT.

8' 4' 0 8' 16' 24'

Sheet Size - 24x36
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FIRST FLOOR PLAN MAINTENANCE BUILDING

SHEET TITLE

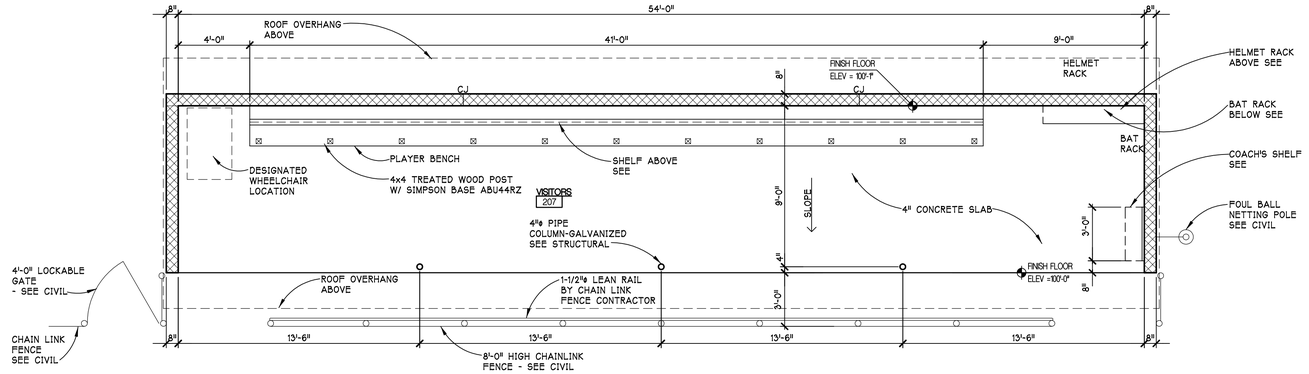
22-703

PROJECT NUMBER

A-101

SHEET NUMBER

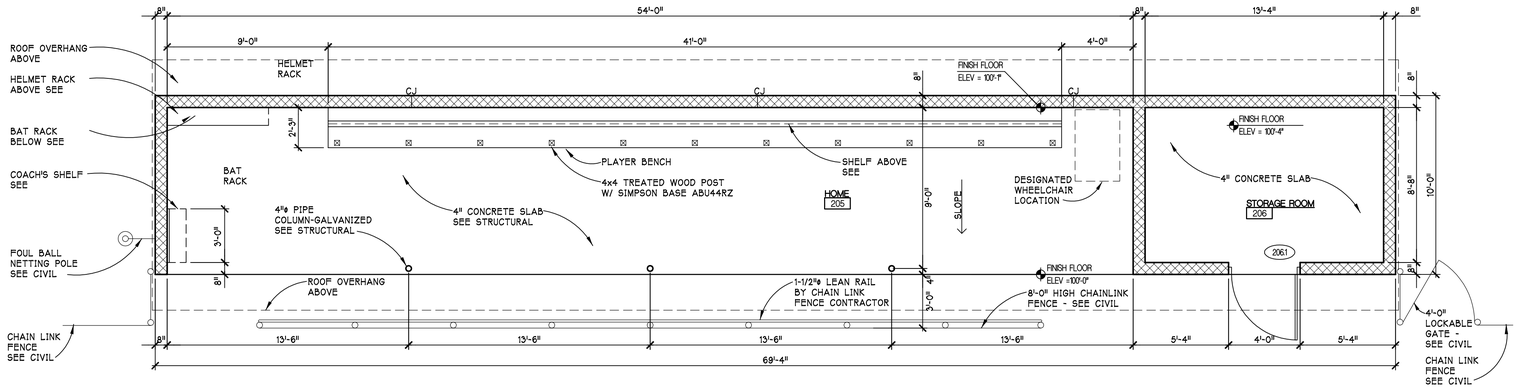
Drawing: P:\2022\22703\Dwgs\CD\Arch\DWG\SITE PLAN REVIEW#5\ITA101.dwg
Date: Aug 25, 2022, 4:33pm Layout: A-101 Plotted by: jmortimore



PLAN NORTH

FLOOR PLAN
VISITOR BASEBALL DUGOUT

SCALE - 1/4" = 1'-0"



PLAN NORTH

FLOOR PLAN
HOME BASEBALL DUGOUT

SCALE - 1/4" = 1'-0"

FLOOR PLAN NOTES

1. DIMENSIONS READ FACE TO CMU
2. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS AND PROMPTLY NOTIFY ARCHITECT OF ANY DISCREPANCIES
3. SEE FLOOR PLAN FOR FINISH FLOOR ELEVATIONS
4. ALL DIMENSIONED LUMBER FOR BENCHES AND SHELVING TO BE PRESSURE TREATED
5. CJ - INDICATES MASONRY CONTROL JOINT

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BASEBALL DUGOUT PLANS

SHEET TITLE

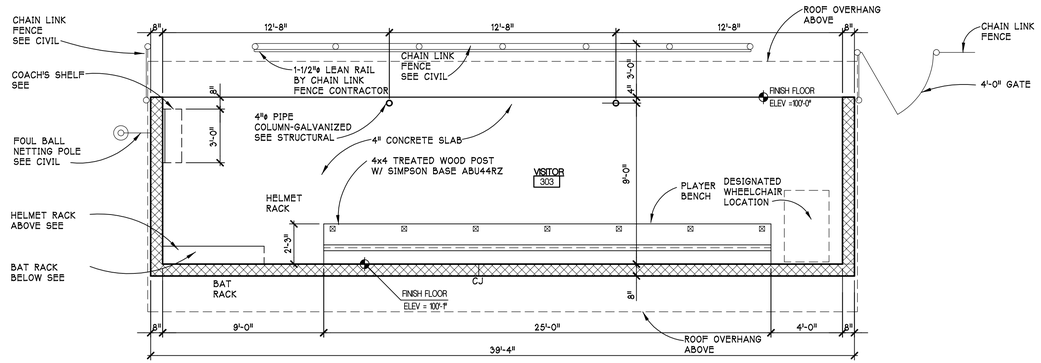
22-703

PROJECT NUMBER

A-102

SHEET NUMBER

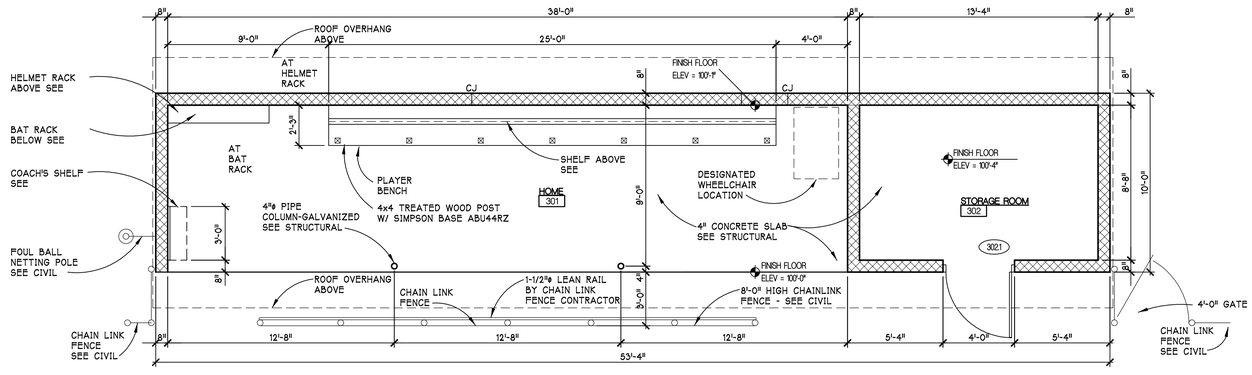
Drawing: P:\2022\22703\Dwgs\CD\Arch\DWG\SITE PLAN REVIEW\RF5HTA102.dwg
Date: Aug 25, 2022, 4:34pm Layout: A-102 Plotted by: jmortimore



PLAN NORTH

FLOOR PLAN
VISITOR SOFTBALL DUGOUT

SCALE - 1/4" = 1'-0"



PLAN NORTH

FLOOR PLAN
HOME SOFTBALL DUGOUT

SCALE - 1/4" = 1'-0"

FLOOR PLAN NOTES

1. DIMENSIONS READ FACE TO CMU
2. CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS AND PROMPTLY NOTIFY ARCHITECT OF ANY DISCREPANCIES
3. SEE FLOOR PLAN FOR FINISH FLOOR ELEVATIONS
4. ALL DIMENSIONED LUMBER FOR BENCHES AND SHELVING TO BE PRESSURE TREATED
5. CJ - INDICATES MASONRY CONTROL JOINT

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SOFTBALL DUGOUT PLANS

SHEET TITLE

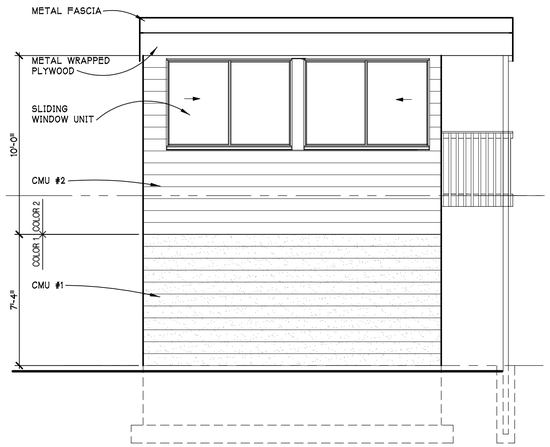
22-703

PROJECT NUMBER

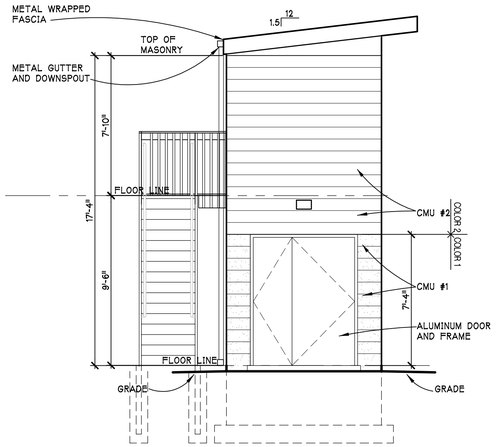
A-103

SHEET NUMBER

Drawing: P:\2022\22703\Dwgs\CDArch\DWG\SITE PLAN REVIEW\FSHTA1 03.dwg
Date: Aug 25, 2022, 4:34pm Layout: A-1 03 Plotted by: jmortimore



FIELD
ANNOUNCER BOOTH
SOUTH ELEVATION
SCALE - 1/4" = 1'-0"



FIELD
ANNOUNCER BOOTH
WEST ELEVATION
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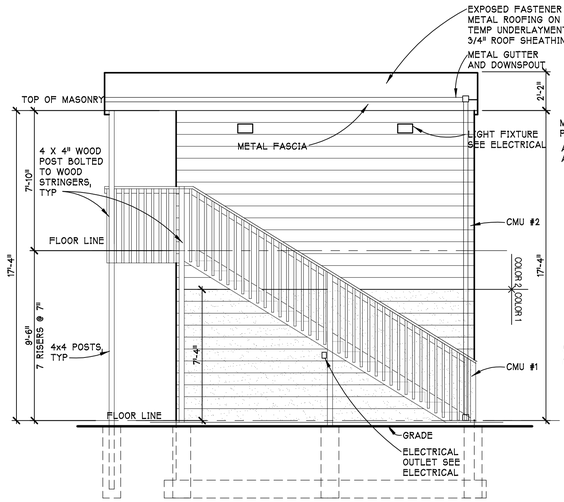
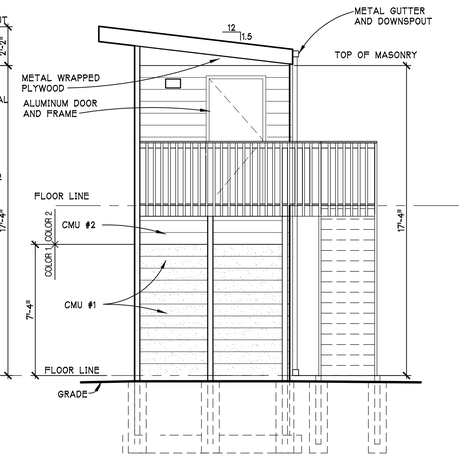
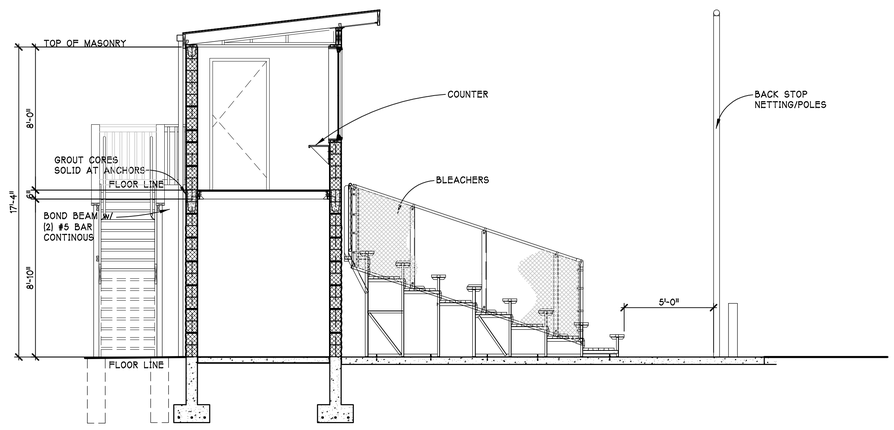


FIELD
ANNOUNCER BOOTH
NORTH ELEVATION
SCALE - 1/4" = 1'-0"

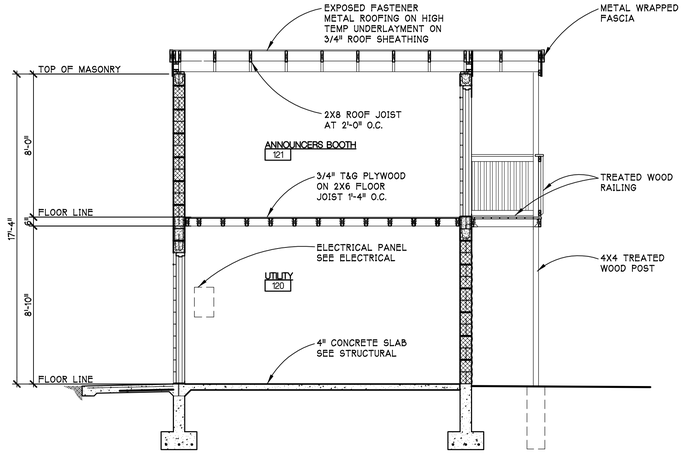


FIELD
ANNOUNCER BOOTH
EAST ELEVATION
SCALE - 1/4" = 1'-0"



G1
A-303

FIELD
ANNOUNCER BOOTH
SECTION B
SCALE - 1/4" = 1'-0"
RFSHTA304



C1
A-303

FIELD
ANNOUNCER BOOTH
SECTION A
SCALE - 1/4" = 1'-0"
RFSHTA304

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PROJECT

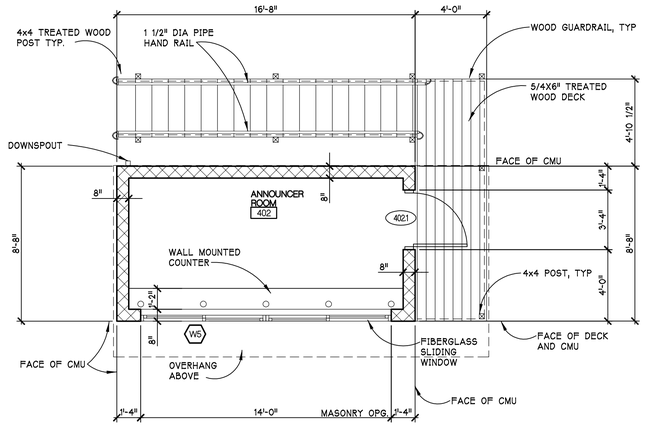
CONSULTANT

EXTERIOR ELEVATIONS ANNOUNCERS BOOTHS
SHEET TITLE

22-703
PROJECT NUMBER

A-304
SHEET NUMBER

Drawing: P:\2022\22703\Dwgs\CDArch\DWG\SITE PLAN REVIEW\RFSHTA304.dwg
Date: Aug 25, 2022, 4:45pm Layout: A-304 Plotted by: jmortimore

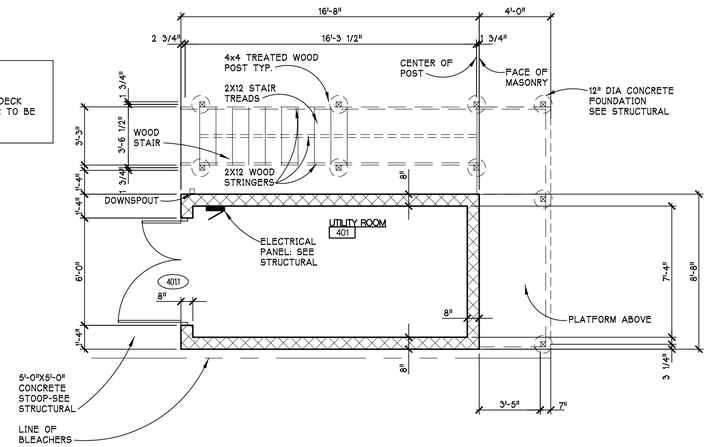


BASEBALL FIELD ANNOUNCERS BOOTH SECOND FLOOR PLAN

SCALE - 1/4" = 1'-0"

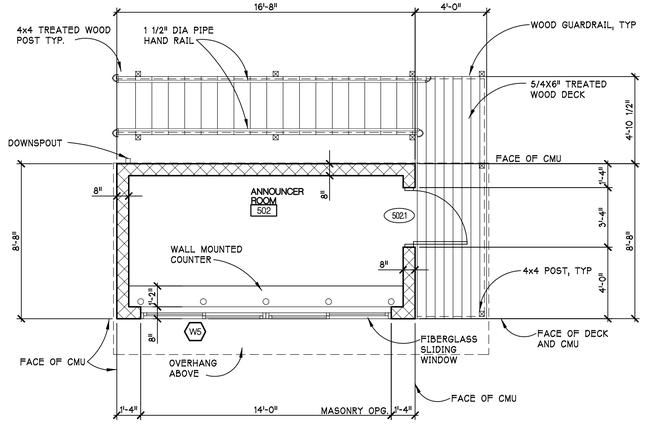
NOTE:

ALL EXPOSED WOOD FRAMING AND DECK MATERIAL AT PLATFORM AND STAIR TO BE PRESSURE TREATED.



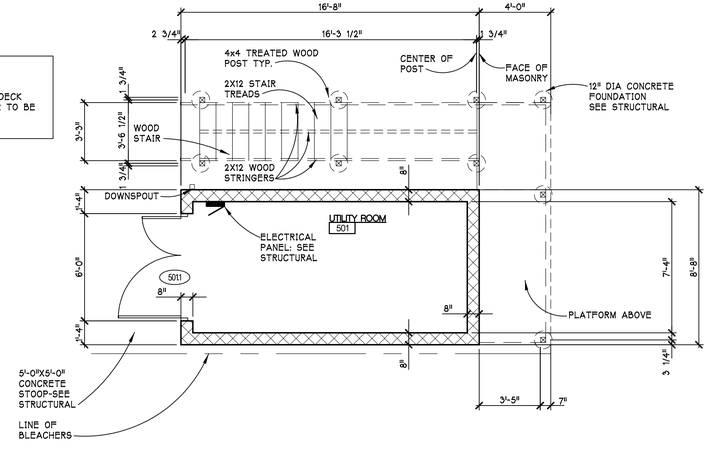
BASEBALL FIELD ANNOUNCERS BOOTH FIRST FLOOR PLAN

SCALE - 1/4" = 1'-0"



SOFTBALL FIELD ANNOUNCERS BOOTH SECOND FLOOR PLAN

SCALE - 1/4" = 1'-0"



SOFTBALL FIELD ANNOUNCERS BOOTH FIRST FLOOR PLAN

SCALE - 1/4" = 1'-0"

Sheet Size - 24x36
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PRELIM. SITE PLAN REVIEW 5/31/2022
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Mt. Pleasant, Michigan

PROJECT

CONSULTANT

FIELD ANNOUNCER BOOTH PLANS

SHEET TITLE

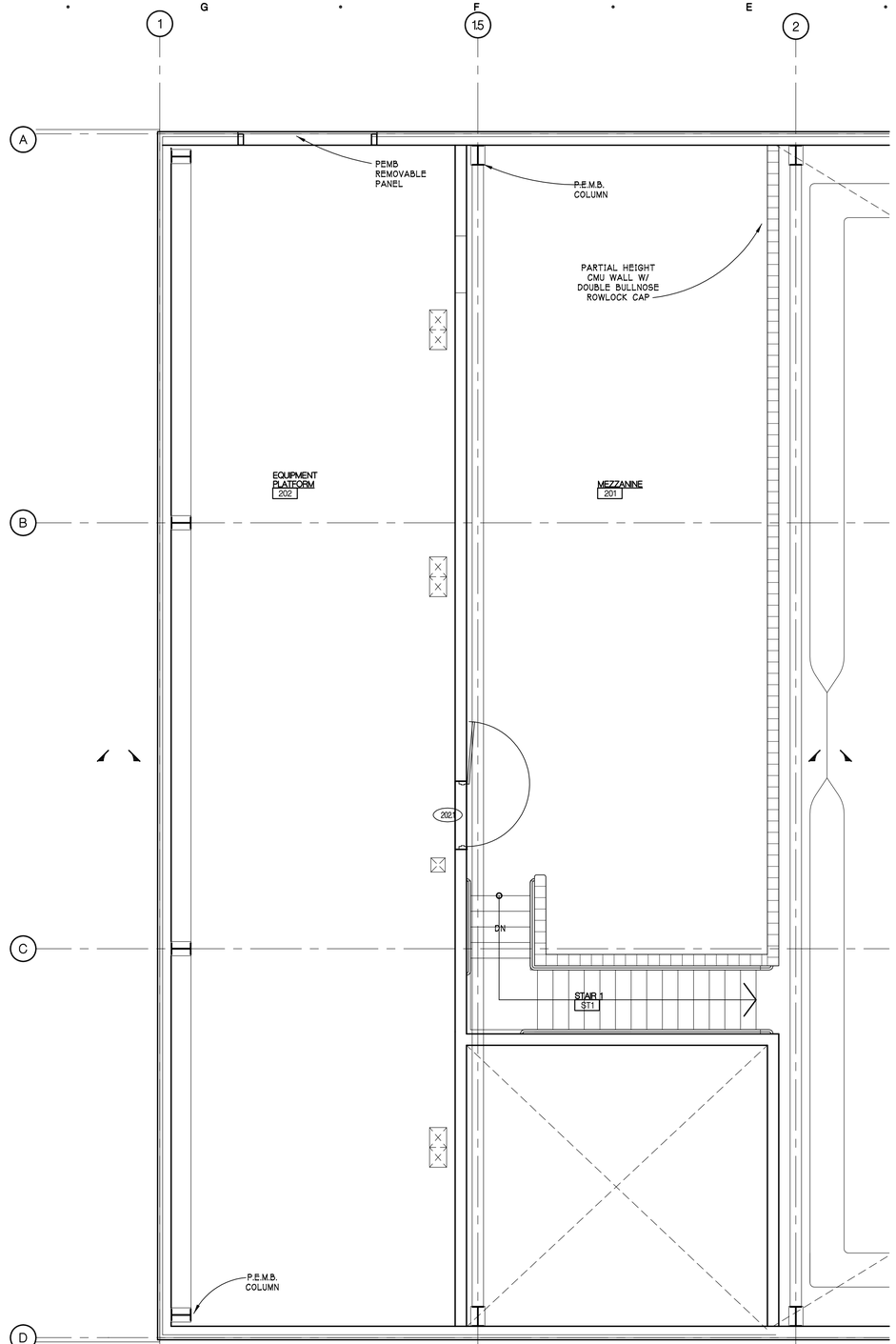
22-703

PROJECT NUMBER

A-104

SHEET NUMBER

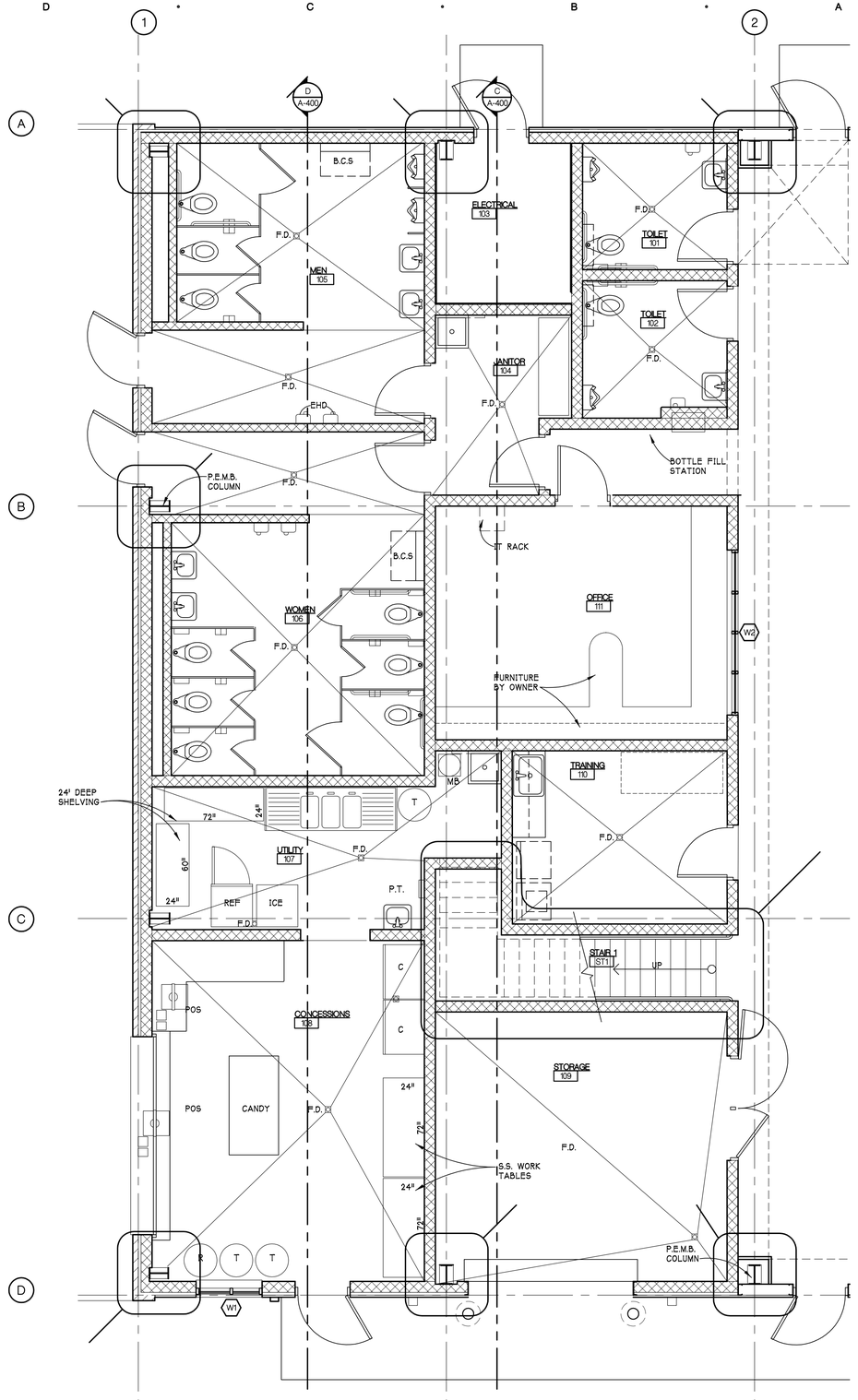
Drawing: P:\2022\22703\Dwgs\CDArch\DWGS\SITE PLAN REVIEW\PSHTA104.dwg
Date: Aug 25, 2022, 4:43pm Layout: A-104 Plotted by: jmortimore



NORTH

ENLARGED SECOND FLOOR PLAN

SCALE - 1/4" =1'-0"



NORTH

ENLARGED FIRST FLOOR PLAN

SCALE - 1/4" =1'-0"

Sheet Size - 24x36

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PROJECT

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ENLARGED FLOOR PLAN

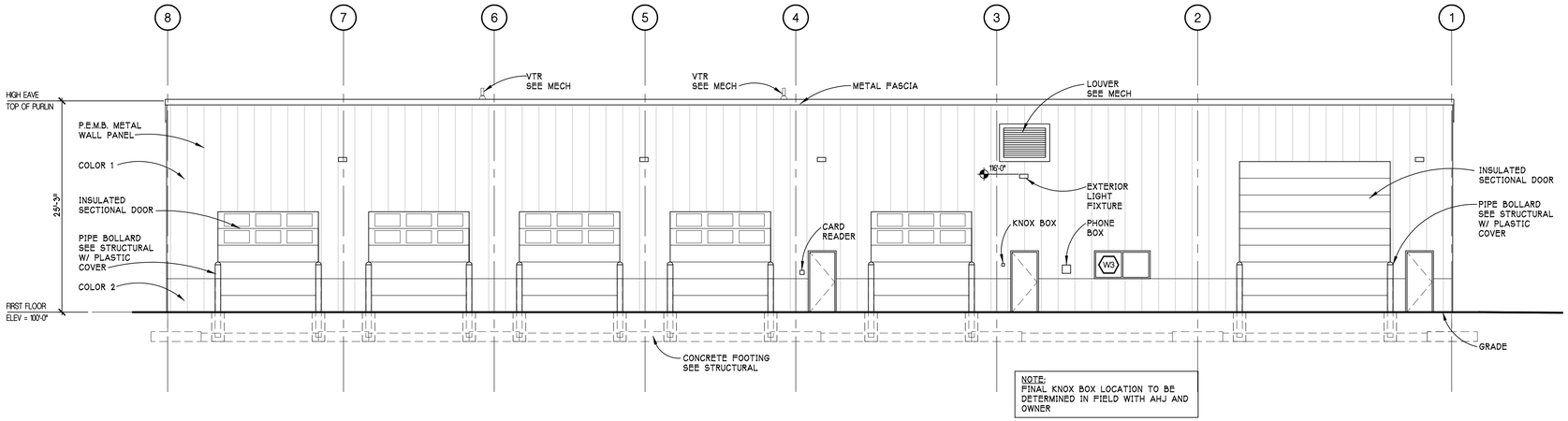
SHEET TITLE

22-703

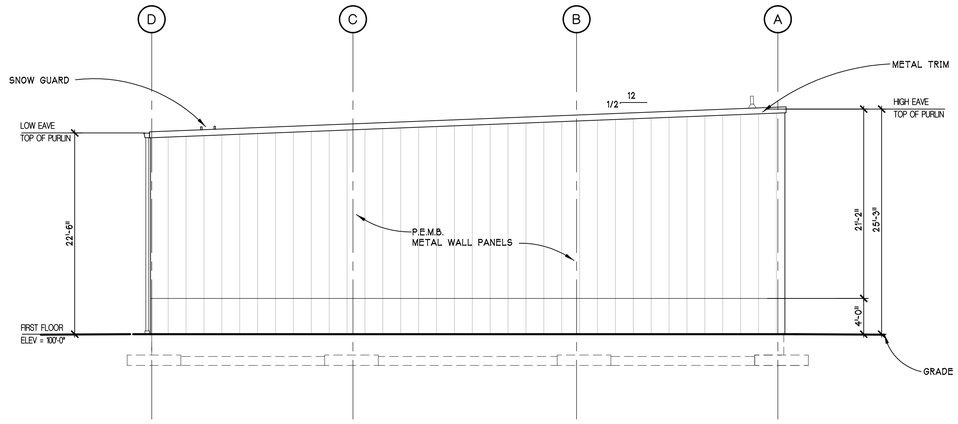
PROJECT NUMBER

A-110

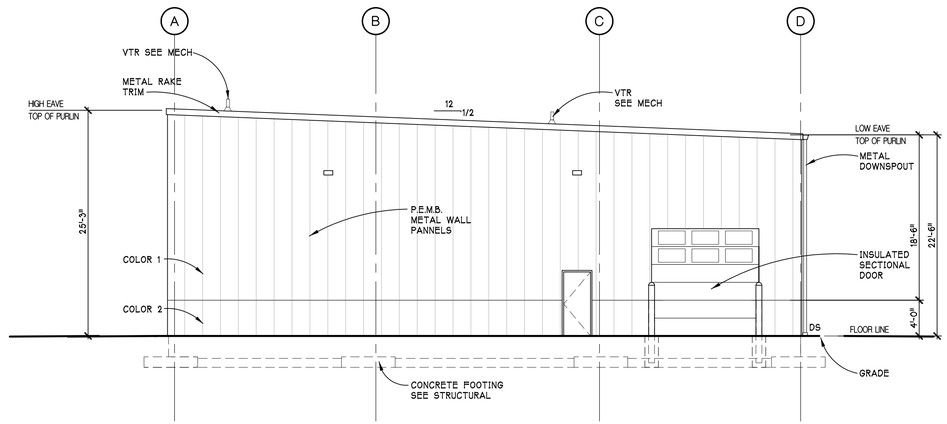
SHEET NUMBER



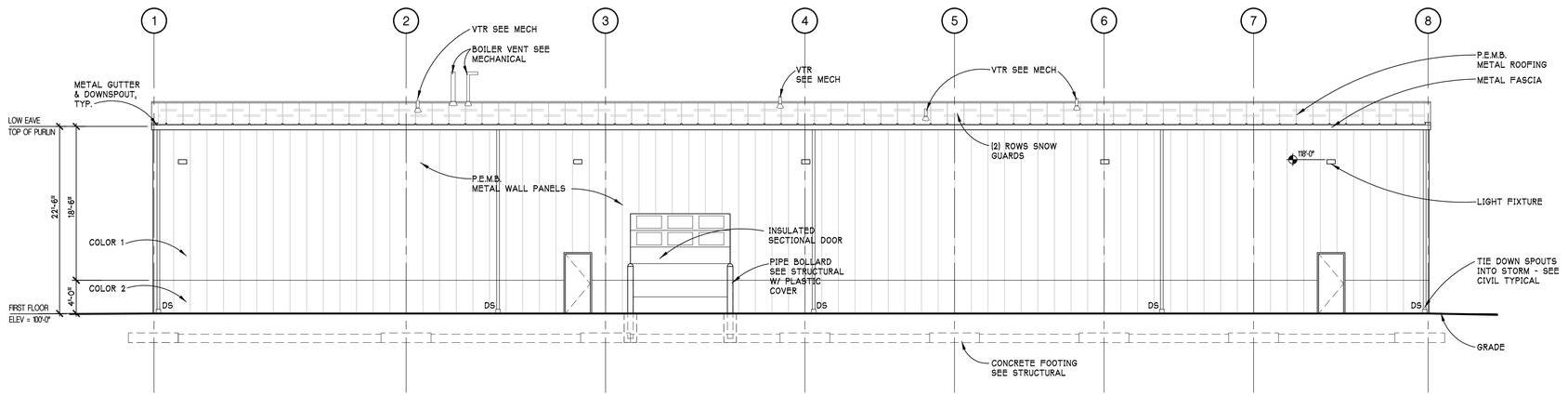
F5 A-301 **NORTH ELEVATION**
SCALE - 1/8" = 1'-0"
RFSHTA301



F3 A-300 **EAST ELEVATION**
SCALE - 1/8" = 1'-0"
RFSHTA301



C3 A-300 **WEST ELEVATION**
SCALE - 1/8" = 1'-0"
RFSHTA301



F1 A-300 **SOUTH ELEVATION**
SCALE - 1/8" = 1'-0"
RFSHTA301

8' 4' 0 8' 16' 24'

Drawing: P:\2022\22703\Dwgs\CDArch\DWG\SITE PLAN REVIEW\RFSHTA301.dwg
Date: Aug 25, 2022, 4:37pm Layout: A-301 Plotted by: jmortimore

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Mt. Pleasant, Michigan

PROJECT

CONSULTANT

EXTERIOR ELEVATIONS MAINTENANCE BUILDING

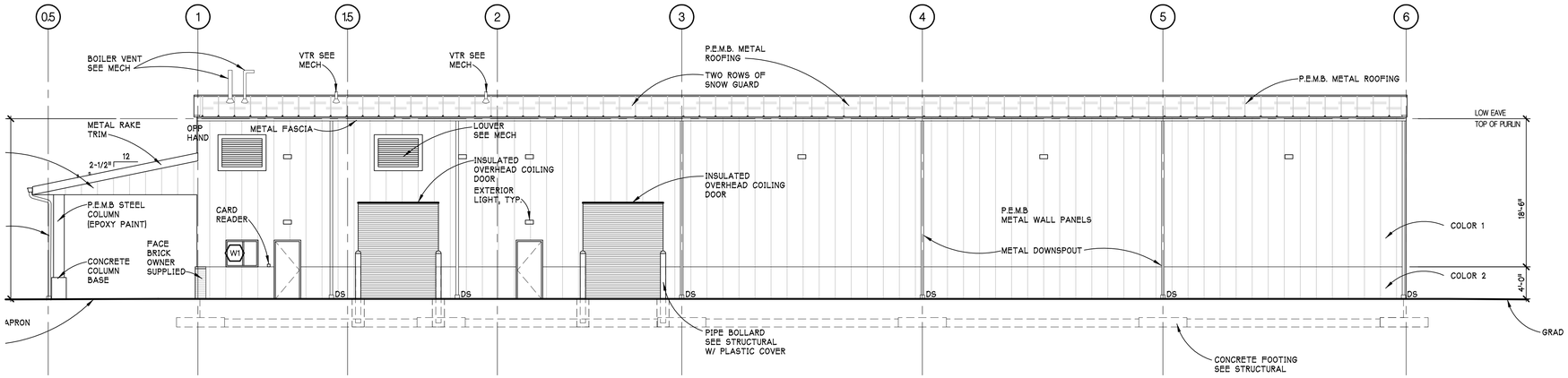
SHEET TITLE

22-703

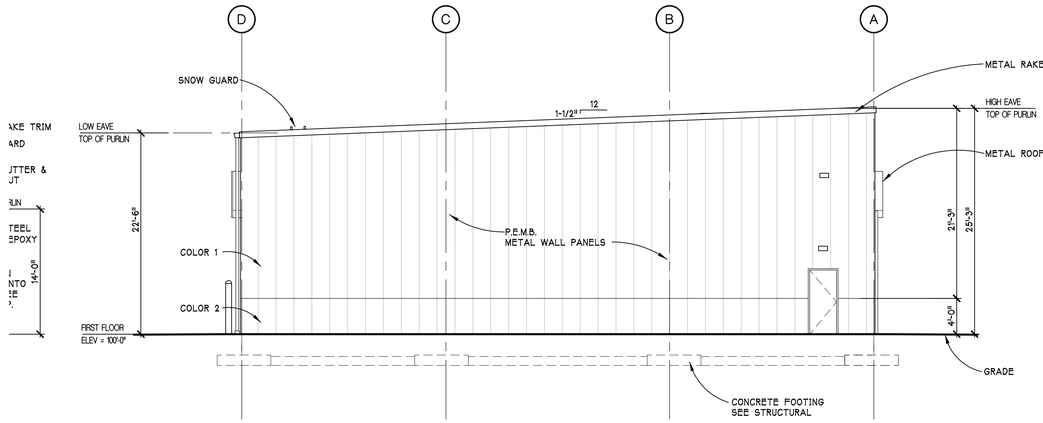
PROJECT NUMBER

A-301

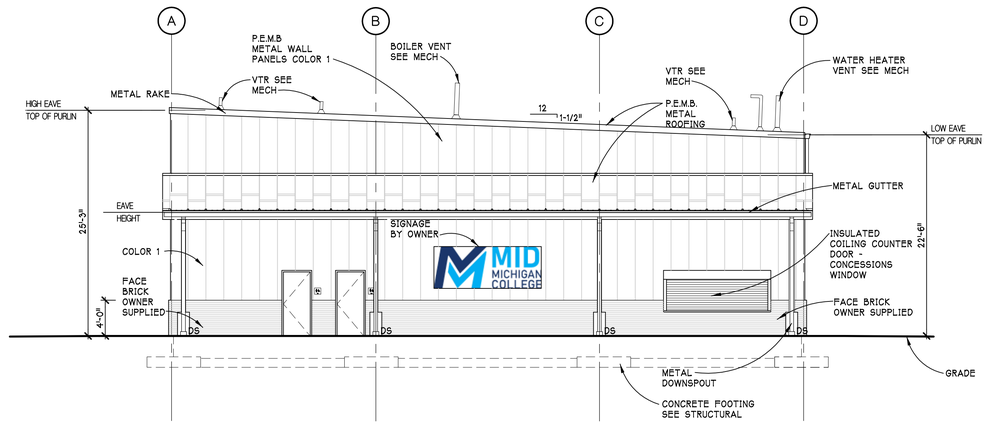
SHEET NUMBER



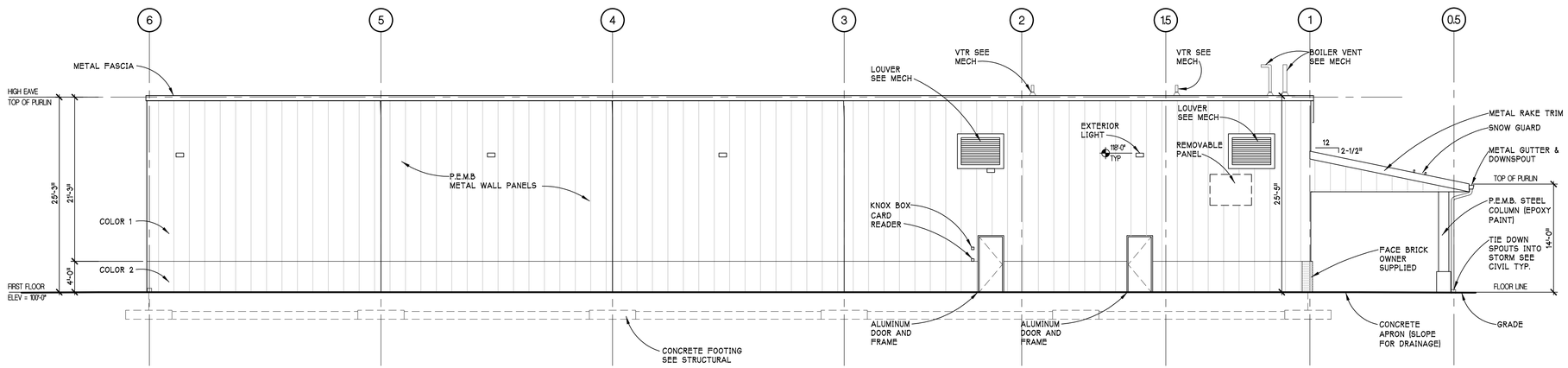
F5 A-300 **SOUTH ELEVATION**
SCALE - 1/8" = 1'-0"



F3 A-300 **EAST ELEVATION**
SCALE - 1/8" = 1'-0"



C3 A-300 **WEST ELEVATION**
SCALE - 1/8" = 1'-0"



F1 A-300 **NORTH ELEVATION**
SCALE - 1/8" = 1'-0"

NOTE:
FINAL KNOX BOX LOCATION TO BE DETERMINED IN FIELD WITH AHJ AND OWNER

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Mt. Pleasant, Michigan

PROJECT

CONSULTANT

EXTERIOR ELEVATIONS TRAINING BUILDING

SHEET TITLE

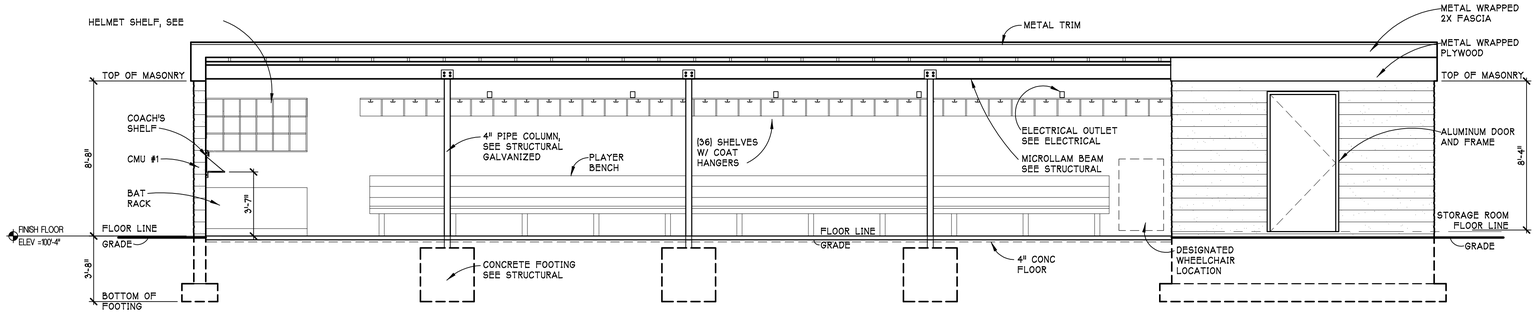
22-703

PROJECT NUMBER

A-300

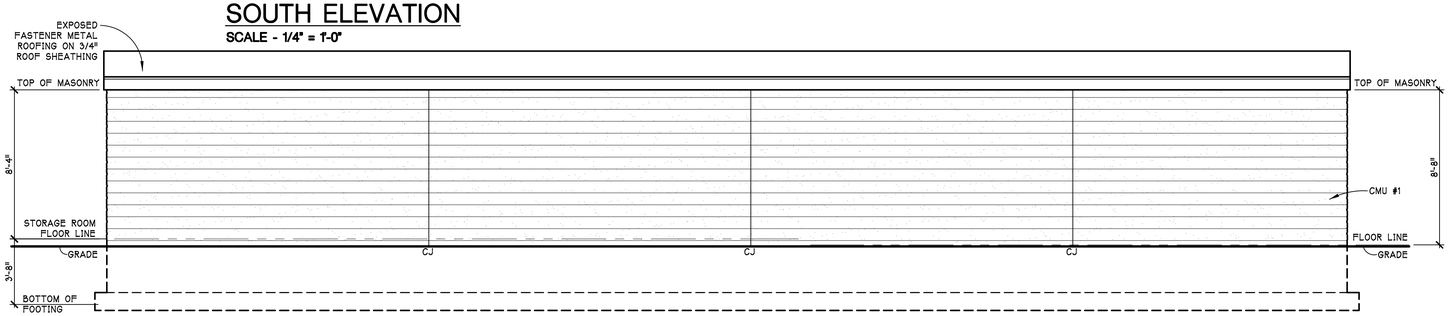
SHEET NUMBER

Drawing: P:\2022\22703\Dwgs\CD\Arch\DWG\SITE PLAN REVIEW\RFSHTA300.dwg
Date: Aug 25, 2022, 4:40pm Layout: A-300 Plotted by: jmortimore



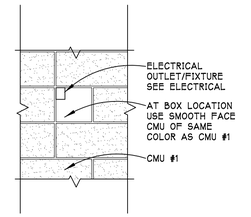
BASEBALL HOME DUGOUT SOUTH ELEVATION

SCALE - 1/4" = 1'-0"



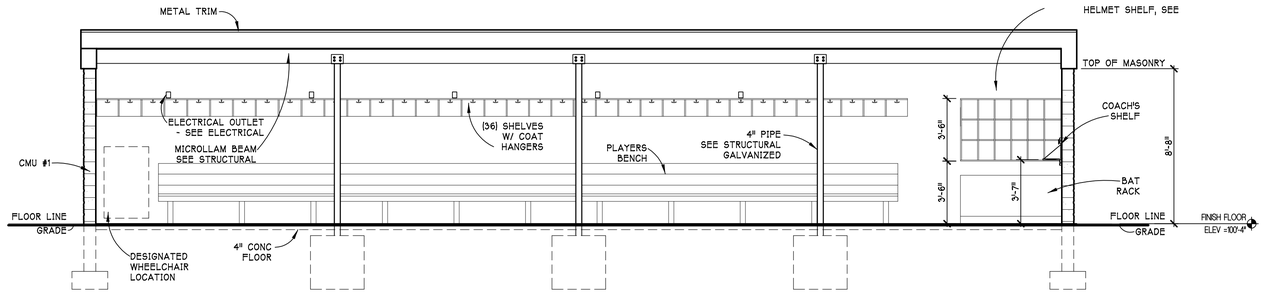
BASEBALL HOME DUGOUT NORTH ELEVATION

SCALE - 1/4" = 1'-0"



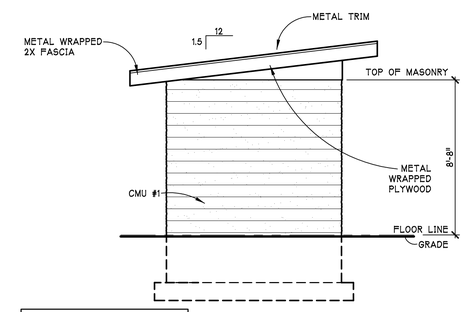
A4 / A-302 **ELEVATION DETAIL**

SCALE - 3/4" = 1'-0"



BASEBALL VISITOR DUGOUT EAST ELEVATION

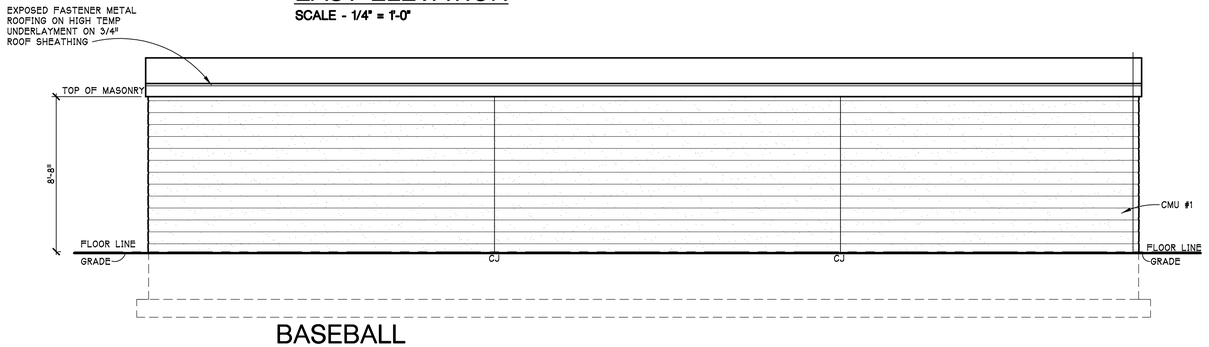
SCALE - 1/4" = 1'-0"



NOTE:
VISITOR DUGOUT SOUTH ELEVATION SIMILAR.

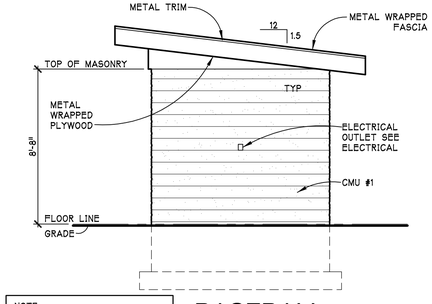
BASEBALL HOME DUGOUT WEST ELEVATION

SCALE - 1/4" = 1'-0"



BASEBALL VISITOR DUGOUT WEST ELEVATION

SCALE - 1/4" = 1'-0"



NOTE:
VISITOR DUGOUT NORTH ELEVATION SIMILAR

BASEBALL HOME DUGOUT EAST ELEVATION

SCALE - 1/4" = 1'-0"

Drawing: P:\2022\22703\Dwgs\CD\Arch\DWG\SITE PLAN REVIEW\RFSHTA302.dwg
Date: Aug 25, 2022, 4:41 pm Layout: A-303 Plotted by: jmortimore

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Mt. Pleasant, Michigan

PROJECT

CONSULTANT

EXTERIOR ELEVATIONS BASEBALL DUGOUTS

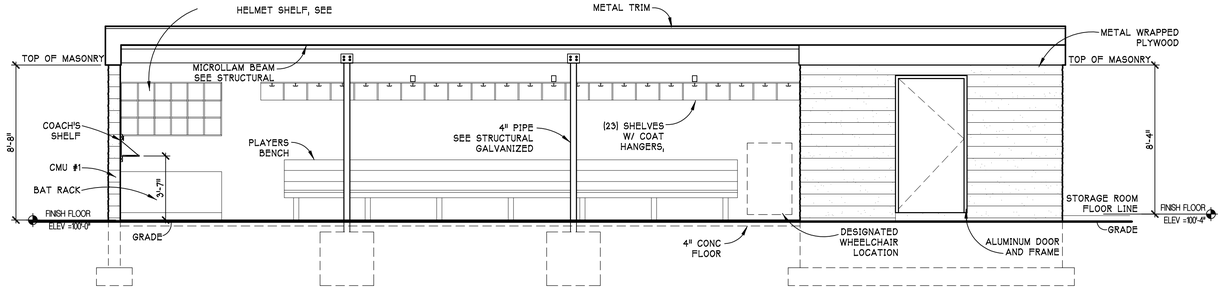
SHEET TITLE

22-703

PROJECT NUMBER

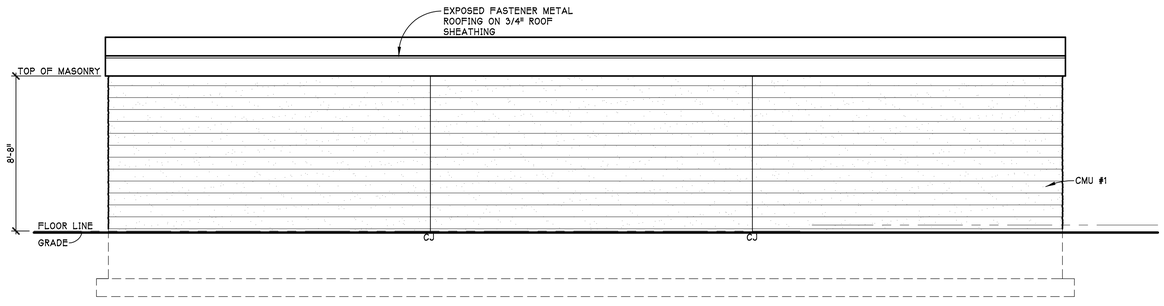
A-302

SHEET NUMBER



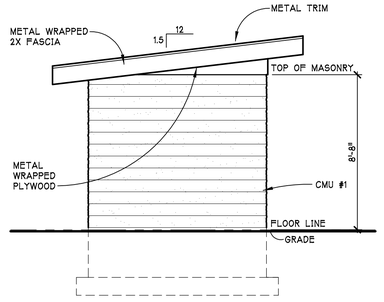
SOFTBALL HOME DUGOUT EAST ELEVATION

SCALE - 1/4" = 1'-0"



SOFTBALL HOME DUGOUT WEST ELEVATION

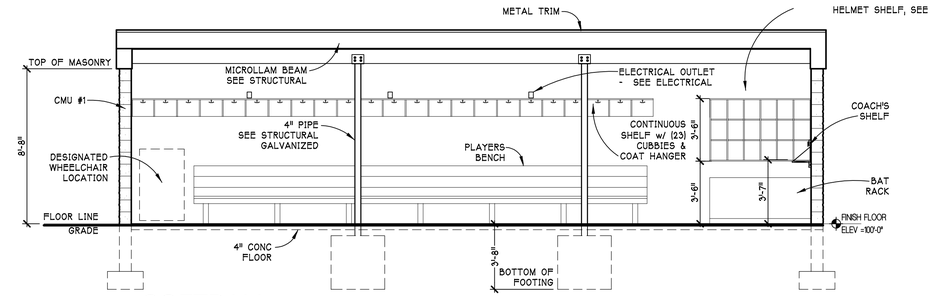
SCALE - 1/4" = 1'-0"



SOFTBALL HOME DUGOUT SOUTH ELEVATION

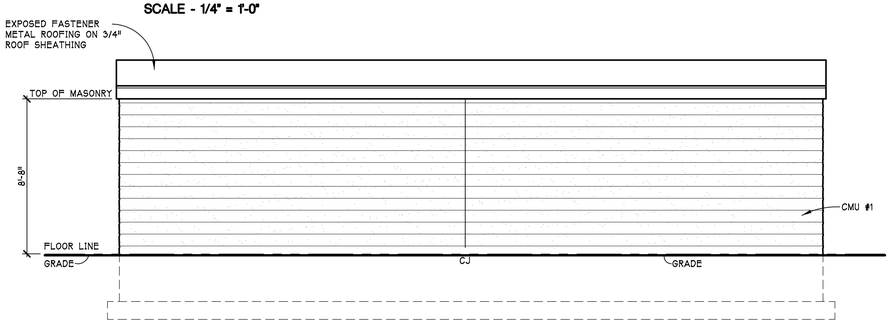
SCALE - 1/4" = 1'-0"

NOTE: NORTH ELEVATION SIMILAR BUT OPPOSITE HAND.



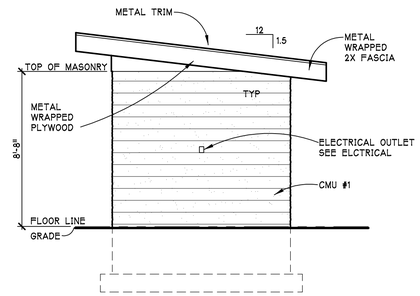
SOFTBALL VISITOR DUGOUT NORTH ELEVATION

SCALE - 1/4" = 1'-0"



SOFTBALL VISITOR DUGOUT SOUTH ELEVATION

SCALE - 1/4" = 1'-0"



SOFTBALL VISITOR DUGOUT WEST ELEVATION

SCALE - 1/4" = 1'-0"

NOTE: EAST ELEVATION SIMILAR BUT OPPOSITE HAND

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Mt. Pleasant, Michigan

PROJECT

CONSULTANT

EXTERIOR ELEVATIONS SOFTBALL DUGOUTS

SHEET TITLE

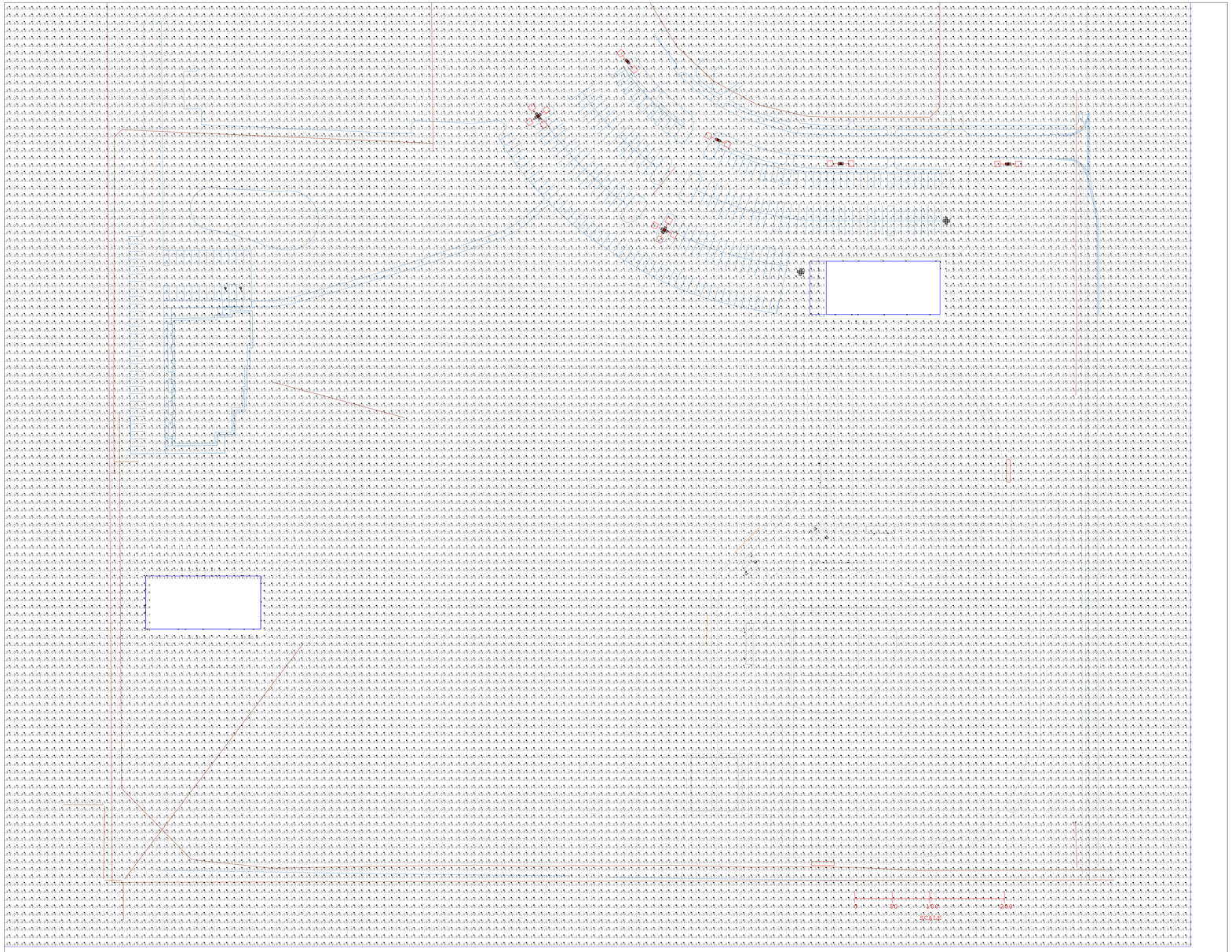
22-703

PROJECT NUMBER

A-303

SHEET NUMBER

Drawing: P:\2022\22703\dwgs\CDAs+sht\DWG\SITE PLAN REVIEW\PSHTA303.dwg
Date: Aug 25, 2022, 4:42pm Layout: A-303 Plotted by: jmortimore



Scale: 1 inch= 75 Ft.

Luminaire Schedule								
Symbol	Qty	Label	Lumens/Lamp	No. Lamps	Lum. Lumens	LLF	Lum. Watts	Description
	4	EX SB	36000	1	22968	0.750	0	AU1 400 MH (Volt) III LG (color)
	4	EX SA	36000	1	26194	0.750	0	AU1 400 MH (Volt) VQ LG (color)
	47	WDGE3_LE	N.A.	1	8519	0.900	59.2761	WDGE3 LED P2 70CRI R3 40K
	6	LD6B30D0	N.A.	1	1662	0.900	28	LD6B30D010 EU6B30508030 6LBWB1

Calculation Summary					
Label	Units	Avg	Max	Min	Max/Min
Site_Planar	Fc	0.36	14.1	0.0	N.A.

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5145 Livernois, Suite 100
Troy, Michigan 48098-3275
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www.PeterBassoAssociates.com
PBA Project #

REVISION

date

PROJECT TITLE
MID MICHIGAN COLLEGE
NEW SPORTS COMPLEX

SHEET TITLE
LIGHTING CALCULATIONS

DATE
08-25-2022
ISSUE
PERMITS
SHEET No.
L201

Community and Economic Development Department
2010 S. Lincoln Rd.
Mt. Pleasant, MI 48858
989-772-4600 ext. 241

COMBINED PRELIMINARY - FINAL SITE PLAN REPORT

TO:	Planning Commission	**DATE:**	September 12, 2022
FROM:	Rodney C. Nanney, AICP Community and Economic Development Director	**ZONING:**	B-4, General Business District; and R-1, Rural Residential

PROJECT: PSPR22-15 combined preliminary - final site plan approval application – Mid Michigan College Mt. Pleasant Athletic Complex

PARCEL(S): PID 14-013-40-001-04, 14-013-40-002-00, 14-013-40-003-00, 14-013-40-012-00

OWNER(S): Mid Michigan College

LOCATION: Approximately 47 acres located at 2600 S. Summerton Road in the SE 1/4 of Section 13.

EXISTING USE: Mid Michigan College **ADJACENT ZONING:** B-4, R-1, SCIT, and Commercial/AG in Chippewa Township

FUTURE LAND USE DESIGNATION: *Recreation/Institutional*: This category is designated primarily for indoor/outdoor recreation both private and publicly owned.

ACTION: To review the PSPR22-15 combined preliminary - final site plan dated 8/26/2022 for the Mid Michigan College Sports Complex located at 2600 Summerton Road in the SE 1/4 of Section 13 and in the B-4 (General Business) District.

Site Plan Approval Process

Per Section 14.2.C. of the Zoning Ordinance, both preliminary site plan approval and final site plan approval are required for this project**.** Per Section 14.2.J., approval of a preliminary site plan by the Planning Commission "*shall indicate its general acceptance of the proposed layout of buildings, streets, drives, parking areas, and other facilities and areas*." Planning Commission approval of a final site plan "*constitutes the final zoning approval for the project and allows for issuance of a building permit to begin site work or construction,* provided *all other construction and engineering requirements have been met*" (Section 14.2.L.). Documentation of applicable outside agency permits and approvals will be required as part of a final site plan application.

Background Information

In March 2010, Mid Michigan College was before the Planning Commission for approval of a 15,800 square foot addition to the south of their main building. In March of 2013, the College was again before the Planning Commission for the construction of a new Tech Center. Both additions have been open to the public since 2014. During both additions, the College was known as Mid Michigan Community College (MMCC). Since that time, the College has rebranded to Mid Michigan College. The College now proposes to construct a set of athletics-related improvements

to their campus, including two (2) 10,500 square foot buildings for training and for maintenance, along with batting cages and two (2) new state-of-the-art fields for softball and baseball.

Rezoning and Land Combination Required.

This project involves a total of four different parcels. The largest of the four, PID 14-013-40-001-04, is occupied by the existing Mid Michigan College facilities. The other three (PID 14-013-40-002-00, -003-00, & -012-00) were acquired in more recent years by the College, which recently completed an effort to successfully rezone the parcels from R-1 (Rural Residential) District to the B-4 (General Business) District.

In addition, the 4 parcels must also be combined into one (1) new parcel through a land division/land combination application to the Township Assessor. If not combined, the current layout of the athletic complex would not be able to meet setback requirements for the parcels left as individual lots. The applicant has submitted an application to have the separate parcels combined into one as required, which is currently under review and is expected to be approved.

Combined Preliminary - Final Site Plan Review Comments

The following comments are based on the standards for the preliminary site plan and final site plan approvals, and the specific elements of the proposed site plan:

1. **Section 14.2.P. (Required Site Plan Information).** The site plan substantially conforms to the minimum Section 14.2.P. information requirements for a preliminary site plan. However, significant details are missing from the site plan and clarifications to the information provided on the site plan are needed to verify compliance with applicable Zoning Ordinance requirements. The site plan as presented does not fully conform to the requirements for a final site plan.

2. **Section 8 (Environmental Performance Standards).** The hazardous substance reporting form and EGLE permit checklist form are included in the application materials.

3. **Section 9 (Off-Street Parking, Loading Requirements).** The current parking layout contains five (5) parking areas with a total of 771 parking spaces. The project includes reducing parking spaces in lot 4 from 272 to 149 for a reduction of 123 spaces. The plan notes the total will then drop to 657 spaces which would be an elimination of 114 spaces. Section 9 only requires a minimum of one (1) space per employee based on the largest daily work shift plus adequate off-street parking for students and visitors based on anticipated use.

   An updated parking study is included on sheet C-101, which addresses changes in student enrollment and includes a detailed usage survey which shows significant excess capacity in the existing parking areas. The survey includes both parking for students and College employees together. Staff has no objection to the proposed adjustments in the number of spaces and would recommend that the proposed number of spaces for the expanded site be accepted as presented.

Section 9.5.B.7 requires one (1) loading area for the proposed maintenance building, which will need to be correctly depicted and dimensioned (10-foot x 50-foot x 15-foot high) on the final site plan. It appears that the loading area depicted near the maintenance building is sufficient in size but is not labeled on the plan as such.

Per Section 9.1.C.5 (Bicycle Parking), the minimum required amount of open short-term bicycle parking capacity is based on 5% of capacity for the sports complex. This calculation and the proposed number of bicycle parking spaces are missing. A bike rack is depicted on the plan but no details are given and the current location interferes with pedestrian and barrier-free access on the sidewalk. There is also no detail showing how large the rack is or how many bicycles could fit on the rack. Based on the size of the space and multiple nodes of activity, it may be best to consider establishing several decentralized locations for bicycle parking. The following details will need to be addressed on a revised final site plan:

- ❑ Add the required bicycle parking calculation and proposed number of bicycle parking spaces to the final site plan.
- ❑ Revise the location(s) of bicycle parking to eliminate pedestrian and barrier-free conflicts while maintaining safe and convenient access to the bicycle facilities.
- ❑ Label the loading area near the maintenance building.

4. **Section 7.10 (Sidewalks and Pathways).** The applicant has proposed to provide additional 5-foot-wide sidewalk along S. Summerton Rd. from the south end of the existing sidewalk approximately 940 feet to the south lot boundary. In addition to sidewalks along the road frontages, there exists an internal path connecting parking lot 3 to parking lot 5 where the Morey Tech Center is located. A similar internal path or sidewalk system connections need to be added as necessary to allow for pedestrians to navigate the various parking areas, existing college, and new facilities without needing to cross grassy areas or through parking spaces. The plan shows a striped walking area from the College to the Athletic fields but there are two (2) parking spaces gapped in-between the stripes. These parking spaces need to be removed and the pathway must be fully stripped from beginning to end. The following sidewalk and pathway details will need to be addressed on a revised final site plan:

   - ❑ Revise the parking arrangement and pavement striping to provide a safe sidewalk pathway connection through the parking lot from the College to the Athletic fields, which would include replacing the two (2) parking spaces with a pedestrian pathway.

5. **Section7.14 (Trash Removal and Collection).** It is presumed but needs to be noted on the plan that the trash collection for these new facilities will be incorporated with the College's existing on-site dumpster and trash removal process. Sheet C-106 identifies three (3) separate dumpsters inside of the enclosure, but it is unclear if all three are for trash or if some are utilized for recycling. In addition, the proposed chain-link fencing with privacy slats is not consistent with the minimum screening standards found in Section 7.14. The following details will need to be addressed on a revised final site plan:

- ❑ Update Sheet C-106 to identify dumpsters used for trash and for recycling.
- ❑ Correct the enclosure design to be fully consistent with Section 7.14 standards. A masonry wall with opaque gates is recommended, but a robust privacy fence design can also be acceptable.

6. **Section 10 (Landscaping and Screening).** Per Section 10.3.A.4. standards, the landscape plan on sheet C-600 includes a proposed mix of evergreen trees and large evergreen shrubs along the southern border of the property where it abuts part of the adjacent property that is zoned R-1. However, the very limited site depiction on sheet C-600 prevents verification of adequate screening for adjacent residential areas. The planting calculations are based upon the correct formula for number of shrubs, ornamental trees, and deciduous trees, and the proposed landscaping improvements along the portion of S. Summerton Rd. frontage adjacent to the ballfields and other site improvements are consistent with Section 10 greenbelt standards.

   Staff recommends that the applicant consider an alternative landscaping design [see Section 10.7 (Modifications…)] for the greenbelt plantings along the S. Summerton Rd. frontage to make better use of the space for a more naturalized approach that perhaps includes replacing some or all shrub plantings with some additional trees. The arrangement of tree plantings in this area could be spread out a bit more to make the overall landscaping arrangement easier to maintain. An adjustment could also be made with the plantings along the section of the south lot boundary nearest to S. Summerton Rd., perhaps by allowing the two staggered rows of evergreen trees to emulate the curve of the baseball field's outfield fence-line. <u>The following details will need to be addressed by the applicant on a revised plan</u>:

   - ❑ Revise the plantings along the southern border of the property where it abuts land zoned R-1 to replace the large evergreen shrub (columnar juniper) with another evergreen tree species suitable for the location and purpose.
   - ❑ Consider an alternative landscaping design for the greenbelt plantings along the S. Summerton Rd. frontage per staff comments.
   - ❑ Consider an adjustment to the evergreen treerows along the south lot boundary to allow the two staggered rows of evergreen trees to emulate the curve of the baseball field's outfield fence-line.
   - ❑ Move the planting details to a separate landscape plan sheet so that more of the existing and proposed site features can be depicted for reference, and add to this sheet an indication of where the adjacent residences are located to the immediate south of the baseball field.

7. **Section 8.2 (Exterior Lighting).** A note on sheet C-300 confirms that the athletic fields are <u>not</u> proposed to be illuminated for nighttime activities. The applicant has provided a photometric plan (sheet L-201), but it is not readable on either the reduced or the full-size printed plans. It is partially legible in digital form at a very high magnification, but it appears (likely due to overlapping numbers) that certain areas of the site would be

illuminated at more than 20 and 40 footcandles, well above the maximum 10.0 footcandles allowed per Section 8.2. The table on the photometric plan also references a maximum illumination level of above 14 footcandles, although it is unclear where on the site this level can be found.

Plan notes on sheet C-300 that only wall pack lighting on the buildings are proposed, but the photometric plan sheet also includes references to multiple building-mounted recessed lighting. The notes on sheet C-300 also indicate that two (2) existing light poles will be re-located, but no details have been provided related to the location or height of the relocated fixtures. New or relocated poles cannot exceed 22-feet in height. Existing light poles not disturbed by the proposed development can remain "as is" even where they may not fully conform to current Zoning Ordinance requirements. Specification sheets for the other proposed lighting are also missing from the site plan sheets. <u>The following exterior lighting details will need to be addressed on a revised final site plan</u>:

- ❑ Add the locations and details for the two (2) relocated light poles to the photometric plan as required.
- ❑ Add the specifications sheets and pictures or drawings for each fixture and all new or relocated pole lighting on the revised final site plan as part of an updated photometric plan set, rather than as attachments with the application.
- ❑ Revise the photometrics to be clearly legible at the full 24" x 36" print size. If necessary, use more than one sheet. Per Section 14.2, the map scale of this photometric plan cannot exceed 1:50.
- ❑ Revise the exterior lighting layout for proposed and relocated fixtures to ensure that maximum illumination levels remain below 10.0 footcandles. Any area that exceeds this maximum under existing light fixtures that will remain "as is" on the site should be noted as such on the updated photometric plan.
- ❑ Correct the exterior lighting note on sheet C-300 to eliminate conflicts with the proposed lighting design, and consider moving this note to the photometric plan.
- ❑ Clarify the locations of each fixture type on the photometric plan. Recessed lighting under eaves or roof overhangs need to be more clearly depicted as such.

8. **Outside agency approvals.** At this time, the Township has received approval for the project from the Township Public Services Department, Isabella County Transportation Commission, Isabella County Road Commission, and Mt. Pleasant Fire Department. <u>The following agencies still need to review the plan and submit their comments to Township Staff</u>.

    - ❑ Isabella County Drain Office for Storm Water Management. The applicant is working with the County Drain Office through the legal process to relocate a County Drain. Aside from this the Drain Office saw no other issues with the project. The 30' easement for Country Drain re-location is shown on sheet C-500. This re-location must first receive necessary legal authorizations prior to any final site plan approval.

Objective

The Planning Commission shall review the application materials and site plan, together with any reports and recommendations. The Planning Commission shall identify and evaluate all relevant factors and shall then take action by motion to approve the site plan, to approve the site plan with conditions, to deny the site plan application, or to postpone further consideration of the site plan to a date certain in accordance with Section 14.2.H. of the Zoning Ordinance.

Key Findings

1. The site plan substantially conforms to the minimum Section 14.2.P. information requirements for a preliminary site plan, but does not fully conform to all applicable final site plan information requirements.
2. Approval has not been obtained by the County Drain Office for Stormwater management. The applicant is currently working with the County Drain Office for the re-location of a County Drain. This action is necessary to allow the development as depicted on the site plan, so his re-location must receive necessary legal authorizations prior to any final site plan approval.
3. For the site plan to be ready for final site plan approval, revisions and additional details are also needed for bicycle parking, sidewalks and pathways, the dumpster enclosure, landscaping and screening, and exterior lighting to verify compliance with applicable Zoning Ordinance requirements.
4. The application as presented is ready for Planning Commission review and action as a preliminary site plan, but is not ready for any final site plan approval.

Recommendations

Based on the above findings, I would not recommend a combined preliminary - final site plan approval action as requested by the applicant, but would recommend that the Planning Commission consider taking action to grant preliminary site plan approval only for the PSPR 22-15 site plan dated 8/26/2022 for the Mid Michigan College Sports Complex located at 2600 Summerton Road in the SE 1/4 of Section 13 and in the B-4 (General Business) District, subject to submittal of an updated final site plan application for Planning Commission review and approval.

Please contact me at (989) 772-4600 ext. 232, or via email at rnanney@uniontownshipmi.com, with any questions about this information.

Respectfully submitted,

Rodney C. Nanney, AICP
Community and Economic Development Director

Draft Motions: PSPR 22-15 Mid Michigan College Mt. Pleasant Athletic Complex Combined Preliminary - Final Site Plan Review Application

MOTION TO APPROVE THE COMBINED PRELIMINARY – FINAL SITE PLAN AS PRESENTED:

Motion by _____, supported by _____, to approve the PSPR 22-15 combined preliminary and final site plan dated August 26, 2022 for the Mid Michigan College Mt. Pleasant Athletic Complex located at 2600 Summerton Road in the southeast quarter of Section 13 and in the B-4 (General Business) zoning district, finding that the site plan fully complies with the applicable Zoning Ordinance requirements for preliminary and final site plan approval, including Sections 14.2.P. (Required Site Plan Information) and 14.2.S. (Standards for Site Plan Approval).

MOTION TO APPROVE ONLY THE PRELIMINARY SITE PLAN AS PRESENTED:

Motion by _____, supported by _____, to approve only the PSPR 22-15 preliminary site plan dated August 26, 2022 for the Mid Michigan College Mt. Pleasant Athletic Complex located at 2600 Summerton Road in the southeast quarter of Section 13 and in the B-4 (General Business) zoning district, finding that the site plan fully complies with the applicable Zoning Ordinance requirements for preliminary site plan approval, including Sections 14.2.P. (Required Site Plan Information) and 14.2.S. (Standards for Site Plan Approval).

MOTION TO APPROVE ONLY THE PRELIMINARY SITE PLAN WITH CONDITIONS:

Motion by _____, supported by _____, to approve only the PSPR 22-15 preliminary site plan dated August 26, 2022 for the Mid Michigan College Mt. Pleasant Athletic Complex located at 2600 Summerton Road in the southeast quarter of Section 13 and in the B-4 (General Business) zoning district, finding that the site plan can comply with applicable Zoning Ordinance requirements for preliminary site plan approval, including Sections 14.2.P. (Required Site Plan Information) and 14.2.S. (Standards for Site Plan Approval), subject to the following condition(s):

1. Approval from the Isabella County Drain Office for stormwater management and for the re-location of a County Drain prior to submittal of an updated final site plan.
2. Revise and update details for bicycle parking, sidewalks and pathways, the dumpster enclosure, landscaping and screening, and exterior lighting on an updated final site plan per applicable Zoning Ordinance standards.

_____

_____

MOTION TO POSTPONE ACTION:

Motion by _____, supported by _____, to postpone action on the PSPR 22-15 combined preliminary and final site plan for the Mid Michigan College Mt. Pleasant Athletic Complex located at 2600 Summerton Road until _____ _____, 2022 for the following reasons:

_____

_____

Draft Motions: PSPR 22-15 Mid Michigan College Mt. Pleasant Athletic Complex Combined Preliminary - Final Site Plan Review Application

MOTION TO DENY:

Motion by _____, supported by _____, to deny the PSPR 22-15 combined preliminary and final site plan dated August 26, 2022 for the Mid Michigan College Mt. Pleasant Athletic Complex located at 2600 Summerton Road in the southeast quarter of Section 13 and in the B-4 (General Business) zoning district, finding that the site plan does not comply with applicable Zoning Ordinance requirements, including Sections 14.2.P. (Required Site Plan Information) and 14.2.S. (Standards for Site Plan Approval), for the following reasons:

_____

_____

_____

_____

_____

_____

CHARTER TOWNSHIP OF UNION

Scheduled Meetings for 2023

BOARD OF TRUSTEES: *(Second and Fourth Wednesday of each Month)*

January 11	**April 5 (***Joint Meeting)*	**June 28**	**September 27**
January 25	**April 12**	**July12**	**October 11**
February 8	**April 26**	**July 26**	**October 25**
February 22	**May 10**	**August 9**	**November 8**
March 8	**May 24**	**August 23**	**November 29**
March 22	**June 14**	**September 13**	**December 13**

BOARD OF REVIEW:

EDA Board (*Third Tuesday of each Month)* All meetings begin at 4:30p.m.

January 17	**April 18**	**July 25 *Informational***	**September 19**
February 21	**May 16**	**August 15 *Informational***	**October 17**
March 21	**June 21**	*****regular meeting to follow***	**November 21**
April 5 (*Joint Meeting)*	**July 18**	**August 15**	**December 19**

PLANNING COMMISSION: (*Third Tuesday of each Month)*

**Sidewalks and Pathways Prioritization Committee invited to January17th meeting*

January 17*	**April 18**	**August 15**	**December 19**
February 21	**May 16**	**September 19**	
March 21	**June 21**	**October 17**	
April 5 (*Joint Meeting)*	**July 18**	**November 21**	

ZONING BOARD OF APPEALS: *(First Wednesday of each Month)*

January 4	**April 5 (***Joint Meeting)*	**July 5**	**October 4**
February 1	**May 3**	**August 2**	**November 1**
March 1	**June 7**	**September 6**	**December 6**

JOINT MEETING DATE: ***(Board of Trustees, ZBA, Planning Commission, and EDA)*** **Date April 5 7:00pm**

All the above meetings are to be held at the Union Township Hall, 2010 S. Lincoln Road. All meetings except for the Board of Review and EDA start at 7:00 p.m. Minutes and Agendas may be obtained at the Township Hall, during regular business hours. Phone 989-772-4600

DRAFT