



**Planning Commission
Regular Meeting
April 19, 2022
7:00 p.m.**

The meeting will take place in-person. To better provide for social distancing during this public meeting, **the location of the Planning Commission meeting has been moved to the Lincoln Reception Center, 2300 S. Lincoln Road, Mt. Pleasant, MI 48858, which is located behind the Lux Funeral Home.** Enter at the Lux Funeral Home driveway and follow the directional signs around to the Lincoln Reception Center entrance and parking area on the south side of the building.

In the interest of creating the safest possible environment, all attendees are invited and encouraged to wear masks while in the building. Extra masks will be available for those that may need one.

1. CALL MEETING TO ORDER
2. PLEDGE OF ALLEGIANCE
3. ROLL CALL
4. APPROVAL OF AGENDA
5. APPROVAL OF MINUTES

-March 15, 2022

6. CORRESPONDENCE / BOARD REPORTS / PRESENTATIONS
 - A. Thering updates from Board of Trustees
 - B. Buckley updates from ZBA
 - C. Updates from Sidewalk and Pathways
7. PUBLIC COMMENT: Restricted to (3) minutes regarding items not on this agenda
8. NEW BUSINESS
 - A. **PREZ21-03 Planned Unit Development (PUD) Area Plan/Rezoning Application – Prestige Center Assisted Living Facility Expansion**
 - a. Introduction
 - b. Public hearing
 - c. Updates from staff and the applicant

- d. Commission deliberation and action (recommend approval, denial or approval with conditions to the Board of Trustees, or postpone action)

B. PSPR22-04 Krist Oil Filling Station – Final Site Plan Application

- a. Introduction by staff
- b. Updates from the applicant
- c. Commission deliberation and action (approval, denial, approval with conditions, or postpone action)

9. OTHER BUSINESS

A. Parks and Recreation Master Plan Update

- a. Updates by staff

B. Lincoln Reception Center Discussion

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

11. FINAL BOARD COMMENT

12. ADJOURNMENT

CHARTER TOWNSHIP OF UNION
Planning Commission
Regular Meeting Minutes

A regular meeting of the Charter Township of Union Planning Commission was held on March 15, 2022, at 7:00 p.m. at the Lincoln Reception Center, 2300 S. Lincoln Road.

Meeting was called to order at 7:00 p.m.

Roll Call

Present:

Albrecht, Buckley, LaBelle, Lapp, Shingles, Squattrito, Thering and Williams

Excused:

Gross

Others Present

Rodney Nanney, Community and Economic Development Director; Peter Gallinat, Zoning Administrator; Tera Green, Administrative Assistant

Approval of Agenda

LaBelle moved **Lapp** supported to approve the agenda as presented. **Vote: Ayes: 8. Nays: 0. Motion Carried**

Approval of Minutes

Shingles moved **Buckley** supported to approve the regular meeting minutes from February 15, 2022 as presented. **Vote: Ayes: 8. Nays: 0. Motion carried.**

Correspondence / Reports/ Presentations

- A. Board of Trustees updates by Thering – Gave updates on the Board of Trustee March 9th meeting.
- B. ZBA updates by Buckley – No updates given.
- C. Sidewalks and Pathway Prioritization Committee – Mr. Nanney indicated that their scheduled meeting in February was canceled due to inclement weather.

Public Comment

Open 7:09 p.m.

Ben Gunning, 2270 E. Broomfield Rd, welcomed the newly elected commissioners; commented on the Lincoln Broomfield Rd. improvements; commented on zoning on Broomfield Rd.

Closed 7:15 p.m.

New Business

Lapp moved **Buckley** supported to add Vice Secretary to item 8 A under New Business. **Vote: Ayes: 8. Nays: 0. Motion carried.**

A. Annual meeting for election of officers and representatives to other boards

a. Chair

Buckley moved **Thering** supported to appoint Commissioner Squattrito as Chair per the Planning Commission bylaws. **Vote: Ayes: 8. Nays: 0. Motion carried.**

b. Vice Chair

Shingles moved **Thering** supported to appoint Commissioner Buckley as Vice Chair per the Planning Commission bylaws. **Vote: Ayes: 8. Nays: 0. Motion carried.**

c. Secretary

Buckley moved **Shingles** supported to appoint Commissioner LaBelle as Secretary per the Planning Commission bylaws. **Vote: Ayes: 8. Nays: 0. Motion carried.**

d. Vice Secretary

Buckley moved **Lapp** supported to appoint Commissioner Albrecht as Vice Secretary per the Planning Commission bylaws. **Vote: Ayes: 8. Nays: 0. Motion carried.**

e. ZBA Representative

Thering moved **LaBelle** supported to reappoint Commissioner Buckley as the Planning Commission Liaison to the ZBA. **Vote: Ayes: 8. Nays: 0. Motion carried.**

f. Sidewalk and Pathways Prioritization Committee representative

Buckley moved **Thering** supported to appoint Commissioner Shingles as the Planning Commission Liaison to the Sidewalk and Pathways Prioritization Committee representative. **Vote: Ayes: 8. Nays: 0. Motion carried.**

B. PSUP22-02 Special Use Permit Application – Proposed Self-Storage Facility in the B4 District, 5252 S. Mission Rd. (Darwin Blanshan)

- a.** Introduction by staff
- b.** Presentation by the applicant
- c.** Public Hearing
- d.** Commission deliberation and action (approval, denial, approval with conditions, postpone action)

Nanney gave an introduction on the PSUP22-02 Special Use Permit application for a Self-Storage Facility located at 5252 S. Mission Road and confirmed that it is still a lawful special use in the B-4 Zoning District. Tim Beebe from CMS&D gave an overview of the project and the property surroundings.

Public Hearing

Open: 7:37 p.m.

Ben Gunning, 2270 E. Broomfield Rd., expressed his dissatisfaction with the introduction of the project.

Closed: 7:40 p.m.

Deliberation by the Commissioners. The applicant Darwin Blanshan and Tim Beebe from CMS&D were available for questions. The Chair read each of the Zoning Ordinance standards that apply to the Special Use Permit.

LaBelle moved **Thering** supported to approve the PSUP22-02 special use permit application for a self-storage facility at 5252 South Mission Road in the northeast quarter of Section 34 and in the B-4 (General Business) zoning district, finding that it fully complies with Section 14.3.J. (Standards for Special Use Approval). **Vote: Ayes: 8. Nays: 0. Motion carried.**

C. PSPR22-03 Preliminary Site Plan Application – Proposed Self Storage Facility in the B4 District 5252 S. Mission Rd. (Darwin Blanshan)

- a. Introduction by Staff
- b. Updates from staff and applicant
- c. Commission review of the preliminary site plan
- d. Commission deliberation and action (approval, denial, approval with conditions, postpone action)

Nanney introduced the Preliminary Site Plan for the PSPR22-03 Preliminary Site Plan for the Proposed Self Storage Facility in the B4 District 5252 S. Mission Rd.

Deliberation by the Commissioners. The applicant Darwin Blanshan and Tim Beebe from CMS&D were available for questions.

Buckley moved **Lapp** supported to approve the PSPR22-03 preliminary plan for a proposed self-storage facility at 5252 South Mission Road in the northeast quarter of Section 34 and in the B-4 (General Business) District, finding that the site plan dated February 16, 2022 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). **Vote: Ayes: 8. Nays: 0. Motion carried.**

D. PSUP22-01 Special Use Permit Application Proposed Agri-Tourism/Farm Market, 5297 S. Whiteville Rd. (Michael & Jamie Klumpp)

- a. Introduction by Staff
- b. Presentation by the applicant
- c. Questions from the Commissioners
- d. Commission deliberation and action (set a public hearing date or postpone action)

Nanney introduced the PSUP2-01 Special Use Permit application for a proposed Agri-Tourism/Farm Market at 5297 S. Whiteville Rd., explaining that a number of items of required information are missing from the application.

Tim Beebe from CMS&D gave information regarding the project and indicated the applicants' intention to prepare and submit updated applications. Deliberation by the Commissioners.

LaBelle moved Albrecht supported to postpone action on the PSUP22-01 special use permit application for the proposed Heirloom Grove Agri-Tourism business located at 5297 South Whiteville Road with a request for submittal of an updated special use permit and associated preliminary site plan for further review, for the following reasons:

1. As presented, the special use permit application is incomplete and not ready for a public hearing or final Planning Commission action.
2. Key information required in Section 6.51 (Agri-Tourism) of the Zoning Ordinance is missing from the application.

Vote: Ayes: 8. Nays: 0. Motion carried.

Other Business

A. PREZ21-03 Planned Unit Development (PUD) Area Plan/Rezoning Application – Prestige Center Assisted Living Facility Expansion

- a. Updates from staff and the applicant
- b. Request to Postpone Action

Nanney gave an update on the PREZ21-03 Planned Unit Development (PUD) Area Plan/Rezoning Application for the Prestige Center Assisted Living Facility Expansion. The project was brought before the Planning Commission in January and was postponed until the March 15th meeting. The project is still being updated. It is recommended that the Planning Commission postpone action until the April meeting.

Deliberation by the Commissioners. The applicant was available for questions.

Buckley moved Williams supported to postpone action on the PREZ21-03 request to rezone parcels 14-013-20-043-02 & -043-08 at 5785 E. Broadway Road from the B-4 (General Business) District to PUD (Planned Unit Development) until the municipal sewer system capacity concerns for the phase 2 project, as identified in the Public Services Director's March 2, 2022 letter, can be satisfactorily resolved by the applicant in a manner consistent with the Township's established Design Requirements and Specifications. **Vote: Ayes: 8. Nays: 0. Motion carried.**

B. Parks and Recreation Master Plan Update

- a. Updates by staff
- b. Commission review of the revised draft survey questions

Nanney updated the Commissioners on the revised Parks and Recreational Survey. It was the consensus of the Commissioners to move forward with the Parks and Recreation Survey as presented.

C. Reminder of the upcoming Joint Meeting of all Township Boards and Commission – Wednesday, April 6, 2022

Chair Squattrito encouraged the Commissioners to attend the Annual Joint Meeting of all the Boards on Wednesday April 6th at 7:00 p.m. at the Commission on Aging.

Extended Public Comments

Open – 9:32 p.m.

No comments were offered.

Closed – 9:32 p.m.

Final Board Comment

Commissioner Buckley – Commented on the Township’s ability to initiate a rezoning action.

Adjournment – Chairman Squattrito adjourned the meeting at 9:33 p.m.

APPROVED BY:

(Recorded by Tera Green)

Doug LaBelle – Secretary

Tera Albrecht – Vice Secretary

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	Squatrito	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	2/15/2022
2 - Chair	Andy	Theisen	12/31/2022
3 - Vice Chair	Liz	Presnell	12/31/2022
4 - Secretary	vacant seat		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



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	6/22/2022
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	8/15/2022
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 REZONING APPROVAL

A completed application will contain all information required per the Zoning Ordinance, Section 14.5 (Amendments); including:

- Response to Rezoning Criteria (Section 14.5.G.)
 Vicinity Map and Survey/Drawing (Section 14.5.F.1.d.)

Name of Proposed Development/Project _____		Prestige Centre	
Common Description of Property & Address (if issued) _____		5785 East Broadway Road	
Mt. Pleasant, MI			
Applicant's Name(s) _____		MCAP Mt. Pleasant Propco, LLC, a Delaware limited liability company	
Phone/Fax numbers _____	434.963.4917	Email _____	kwillis@mcapfunds.com
Address _____		534 E. Main Street, Suite B	City: Charlottesville, VA Zip: 22902

Legal Description: <input type="checkbox"/> Attached <input checked="" type="checkbox"/> Included on Survey	Tax Parcel ID Number(s):	14-013-20-043-02 14-013-20-043-08
Existing Zoning: B-4	Land Acreage: 7.227 ac.	Existing Use(s): Dependent Living (for Seniors)
<input checked="" type="checkbox"/> ATTACHED: Letter describing the proposed land uses and reasons for the requested zoning change.		

Firm(s) or Individuals(s) who prepared the Land Survey/Drawing	1. Name: GMB Phone: 616.963.4917 Email: andym@gmb.com 2. Address: 648 Monroe Avenue NW, Suite 500 City: Grand Rapids State: MI Zip: 49508 Contact Person: Andy McLeod Phone: 616.796.0200
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: MCAP Mt. Pleasant Propco, LLC Phone: 434.963.4917 Address: 534 E. Main Street, Suite B City: Charlottesville State: VA Zip: 22902 Signature:  Interest in Property: Owner 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 may be cause for rejection of the application. Approval of any requested zoning change shall not constitute the right to violate any provisions of the Zoning Ordinance or other applicable codes and ordinances.



Signature of Applicant



Date

Office Use Only

Application Received By: _____ Fee Paid: \$ _____

Date Received: _____ Escrow Deposit Paid: \$ _____

December 14, 2021

Union Township Planning Commission

RE: MCAP Prestige Centre PUD Application

Thank you for the opportunity to present our project and PUD application.

Attached and below you will find:

- Development team introductions
- Introduction letter
- Application
- Civil drawings indicating legal description, acreage, project scope, topographic survey, sewage and water supply, stormwater, existing zoning and sidewalk locations
- Statement of development experience
- General Schedule
- Resident Unit count

Development team:

Owner: MCAP Mt. Pleasant Propco, LLC
534 East Main Street, Suite B
Charlottesville, VA 22902

Represented by Kevin Willis (434.963.4917) & William Johnson (434.906.2882)

Legal: Woods Rogers PLC
123 East Main Street, 5th Floor
Charlottesville, VA 22902

Represented by Steven Blaine (434.220.6831)

Architect: GMB
648 Monroe Ave, NW, Suite 500
Grand Rapids, MI 49503

Represented by Andrew McLeod, AIA, LEED AP, EDAC, CDP, CMDCP (616.485.4036)

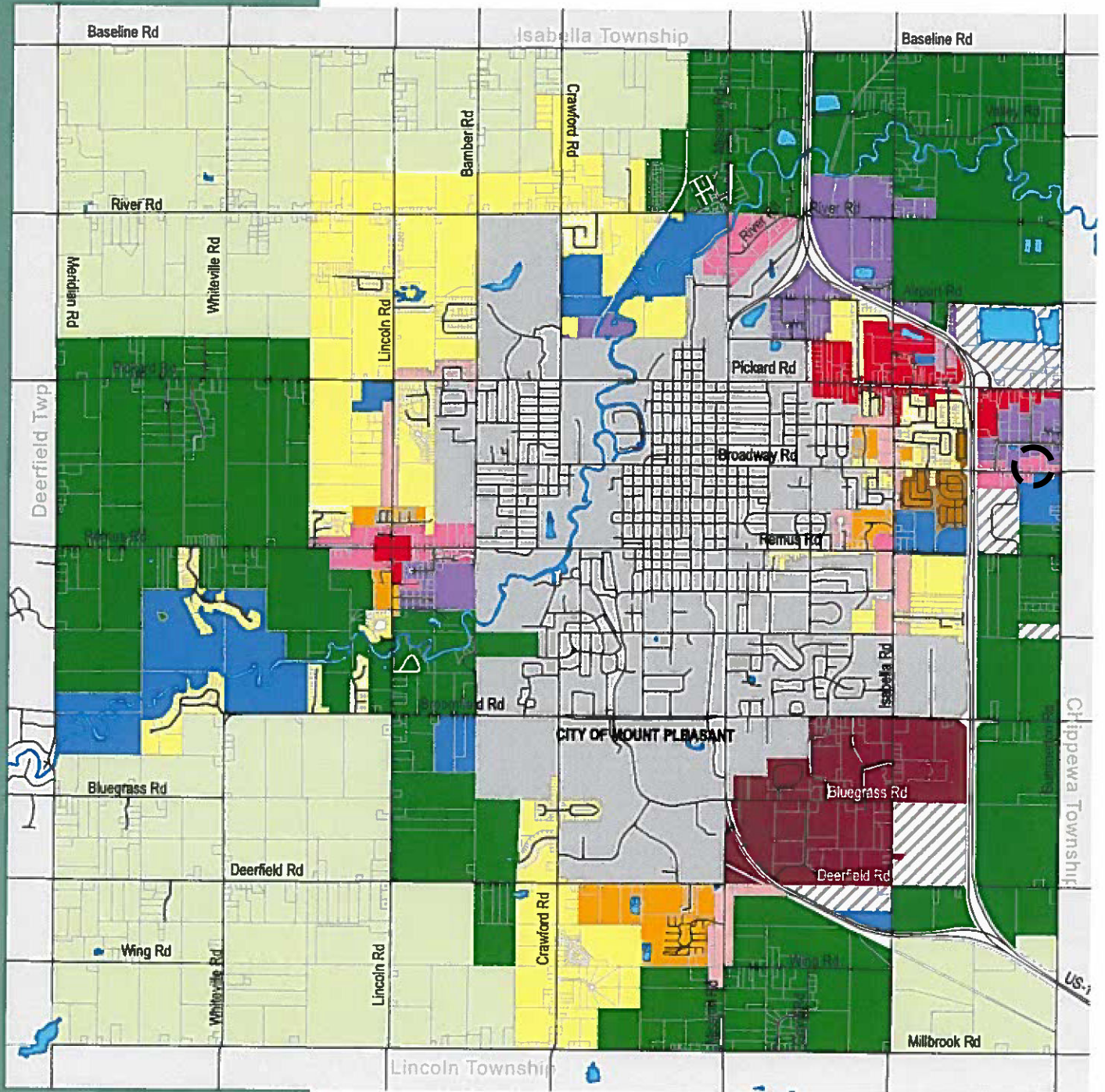
Civil Engineer: Moore + Bruggink Inc.
2020 Monroe Ave. NW
Grand Rapids, MI 49505

Represented by Justin Longstreth, PE, CFM, LEED AP (616.363.9801)

Included with this Application is a map that depicts the relationship of the proposed Planned Unit Development and the Future Land Use Map. The property lies within the Township's Growth Boundary area. As the Union Township Master Plan indicates, preserving the natural beauty and agricultural character of the Township and controlling urban sprawl are important priorities for planning the community. The Township also desires to be able to provide efficient infrastructure services to support development. The Growth Boundary concept in the Master Plan is designed to help implement that goal by encouraging compact, efficient land use, efficient provision of utilities, services and infrastructure, and diverse housing options. [Master Plan, page 11.] The proposed PUD project's location is consistent with those objectives that prioritize new development within the Growth Boundary.

Among the strategic goals of the Master Plan is to maintain a well-organized, balanced and efficient use of land in the Township. The particular strategies include expanding housing choices to support multiple options for a wide range of age groups and family types. According to the Master Plan, the housing needs of seniors is an important part of the commitment to provide appropriate housing choices for all of its residents. [Master Plan, page 26] The proposed improvements enabled by this PUD application, if approved, will expand housing options for seniors.

The Master Plan identifies as an aspirational goal the opportunity for older residents to remain at home as long as possible and especially for residents who want to stay in the neighborhoods they are most familiar with and be near family and friends. However, the Master Plan also recognizes that where "aging in place" is not feasible, special facilities, such as senior independent living, assisted living and congregate care is another important housing option to be provided within the community. [Master Plan, page 27] The proposed project fulfills this need recognized by the Master Plan.

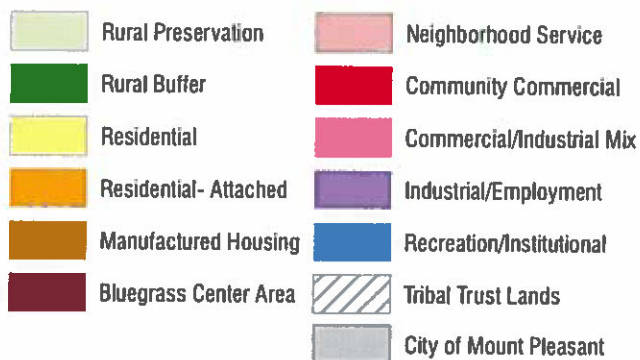


Union Charter Township Future Land Use



Sources: MCGI, Union Township,
LSL Planning

Read more about Rural
Preservation and Rural Buffer in
Chapter 2: Growth Management



Future Land Use Categories

The future land use categories described throughout the plan are summarized below:

Rural Preservation. Rural Preservation Areas outside of the growth boundary should be maintained at a low intensity rural character of development that will not adversely impact natural features and agricultural uses. Agriculture should be promoted and future rezoning requests for residential should be prohibited to prevent leapfrog development.

Rural Buffer. Rural Buffer areas generally do not have sewer and water, but are appropriate for agricultural, low density residential, and other uses allowed by zoning. Typically this buffer is located on the fringe between rural and more urbanized areas. Rezoning requests for more intensive uses should be limited, especially those requiring extended utility service.

Residential. After agriculture, this category is the township's predominant land use, and is meant to promote single-family homes on a variety of lot sizes. With new development, subdivision design should protect open space and natural features and limit single driveways onto corridors.

Residential – Attached. This land use category covers a variety of attached dwelling units and includes areas planned for both medium- and high-density residential development including duplexes, attached condominiums, townhomes, and flats.

Manufactured Housing. This category is provided primarily for manufactured housing communities, such as those located on Broadway Road between Isabella Road and US-127. This designation is limited to areas along Major Arterial roads served by utilities.

Neighborhood Service. Located primarily along corridors adjoining lower intensity land uses, the intent of this district is to limit future retail and focus on small-scale personal service and office uses. This district accommodates shallow lots, providing a good buffer and transition to residential uses and limiting heavy commercial and general retail uses so they can be focused on other areas of the township. Rear yards adjoining residential areas should be well-screened to limit impacts of higher intensity uses. These areas should be

accessible and comfortable for the pedestrian and should create a sense of place along the roadway.

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.

Commercial / Light Industrial. This district is intended for a blend of medium intensity commercial and small-scale light industrial uses. Light industrial uses include but are not limited to small-scale manufacturing, laboratories, R&D (research and development) firms, information technology firms, or other businesses that might be found in a technology park.

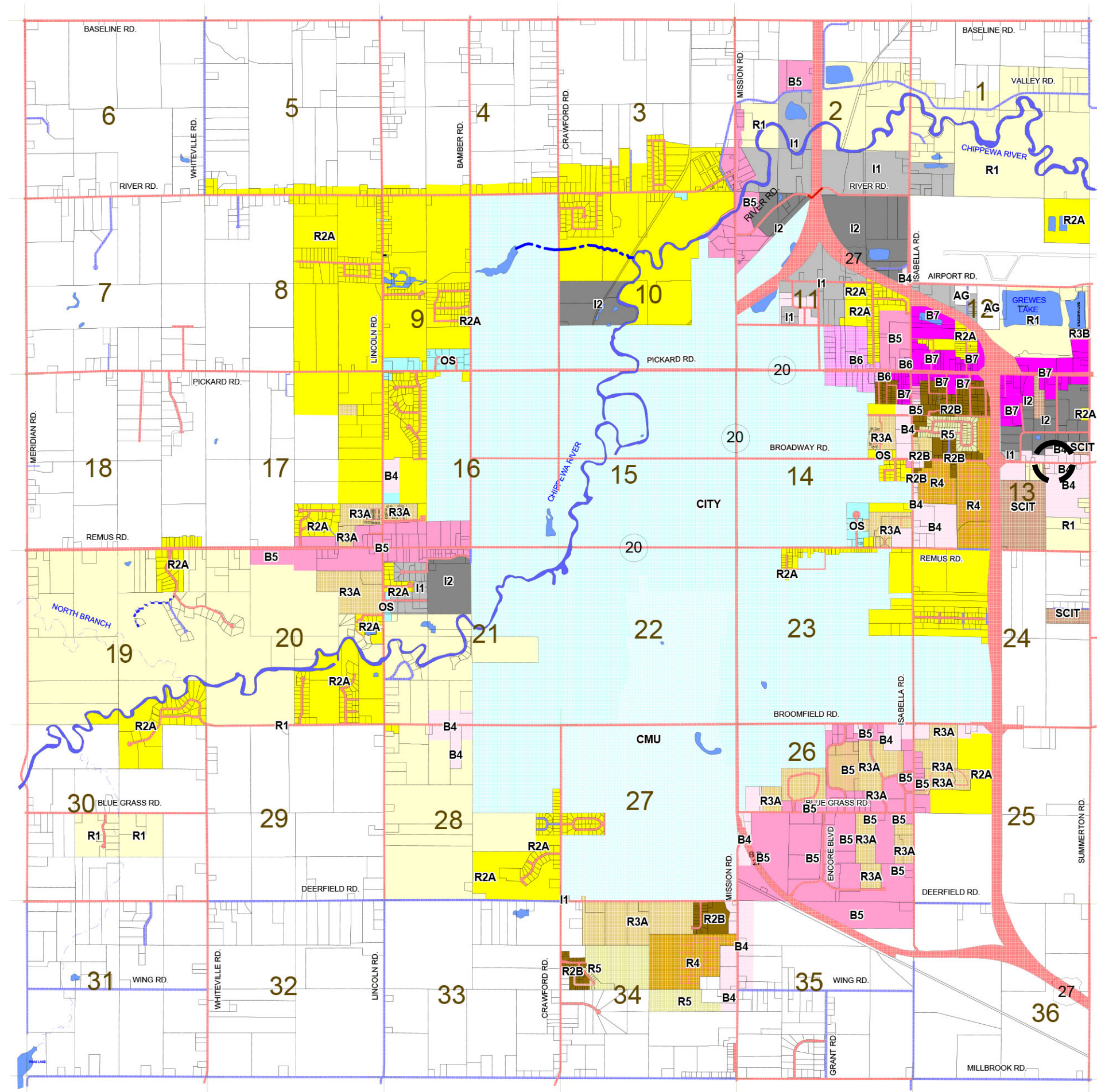
Industrial / Employment. This category promotes traditional industrial employment. Located near regional nodes with convenient access to interchanges, this district provides an opportunity to diversify the industrial employment base of the township by reserving areas for research, development, technology, 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.

Recreation / Institutional. This category is designated primarily for indoor/outdoor recreation both private and publicly owned.

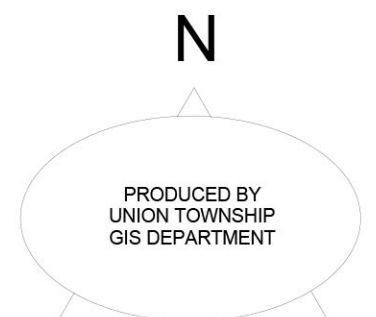
Tribal Trust Lands. These areas are under the jurisdiction of the Saginaw Chippewa Indian Tribe.

CHARTER TOWNSHIP OF UNION
ZONING MAP - Through Ordinance 2014-02

- AG Agricultural
- B-4 General Business
- B-5 Highway Business
- B-6 Auto-Related Highway Business
- B-7 Retail and Service Highway Business
- CITY
- CMU
- I-1 Light Industrial
- I-2 General Industrial
- OS Office / Service
- R-1 One-family Residential
- R-2A One and Two-Family District
- R-2B One and Two-Family District
- R-3A Apartment and Condominiums
- R-3B Medium Density Apartment & Condos
- R-4 Mobile or Modular Home District
- R-5 Single-wide Mobile Home District
- Saginaw Chippewa Indian Tribe Trust Lands



33 SECTION NUMBER
+ SECTION CORNER



CHARTER TOWNSHIP OF UNION
T14N, R4W
ISABELLA COUNTY, MICHIGAN

MCAP Construction & Development

Significant Capital Invested for Growth

- The MCAP Construction & Development (“MCAP C&D”) team brings decades of knowledge and experience in planning and overseeing the rehabilitation and expansion of real estate investments. These in-house professionals have served as developers, general contractors, subcontractors, and owners’ representatives throughout their respective careers, developing residential, seniors, healthcare, educational, commercial, and industrial real estate.
- In its senior living investments, the MCAP C&D team’s efforts have focused on enhanced service offerings, capacity expansion, unit conversions to meet market demand, and modernizing accommodations and amenities. These investments have significantly enhanced the positioning of the properties and reduced our portfolio’s average effective age.
- The MCAP C&D team has over 130 years of combined construction and development management experience and has completed \$151.5 million of capital improvements at MCAP properties. A total of 51 development projects were completed through mid-2021, primarily in the Mid-Atlantic region of the United States.

- Commonwealth Senior Living at the Eastern Shore - C&D Project



Management Team

MCAP's management team has decades of experience in implementing tax-efficient, alternative real estate investment strategies

Richard G. Corey
Managing Partner

Richard G. Corey is Managing Partner of the Manager and the General Partner. Mr. Corey oversees the sourcing of investments, restructuring of investments and implementing exit strategies. Prior to founding the MCAP Funds, Mr. Corey was a director of private equity funds and a private investor. Previously, Mr. Corey was an investment banker in municipal finance for 15 years. He has broad experience in municipal finance and underwriting, including secondary offerings and the structure and sale of derivative securities. Mr. Corey received a JD from the University of Pennsylvania Law School, an MA in Administrative Sciences from Yale University and a BA in Economics from Yale University.

Richard J. Brewer, Jr.
Partner

Richard J. Brewer, Jr. is a Partner of the Manager. Mr. Brewer supervises senior housing operations, including acquisitions, operations/management, expansions and re-development projects, financings and dispositions of senior living investments. Previously, he co-founded the predecessor to Commonwealth Senior Living ("CSL"), an affiliate of MCAP, with MCAP in 2002 and subsequently served as CSL's Chief Executive Officer for almost 19 years. Under his leadership, CSL grew to become the largest senior housing operator in Virginia and, with over 2,000 employees, one of the largest operators on the East Coast. Mr. Brewer also supervises financial management, growth of human capital, risk management, regulatory compliance, and programming for our senior living communities. He has deep experience in the design and construction of renovation and expansion projects and the financing and refinancing of properties (HUD, FNMA, Freddie Mac, CMBS and Conventional). Mr. Brewer formerly served as Vice Chair of the Virginia Assisted Living Association and the Jefferson Area Board on Aging and currently serves on the board of CATEC, a vocational training school in Virginia. He received a BA in Political Science from James Madison University.

Kevin W. Willis

Senior Vice President , Construction and Development

Kevin W. Willis is Senior Vice President of Construction & Development for the Manager. Mr. Willis supervises MCAP's construction and development staff, planning and coordination of development and procurement strategies. Prior to joining MCAP in 2019, he served as Senior Vice President of Construction & Development at the predecessor to Commonwealth Senior Living ("CSL"), an affiliate of MCAP. Previously, he was a consultant to CSL on a variety of projects since CSL's founding in 2002. Mr. Willis has over 25 years of experience in the construction industry, with a broad operations and management background, including performing the roles of General Contractor, Subcontractor, and Owner's Representative. Mr. Willis previously served as Chairman of the Board of Directors of the Associated General Contractors of Virginia, and is a former President of the Virginia Construction Industry Educational Foundation. He has also served as a member of the Piedmont Virginia Community College Construction Academy Advisory Board, and as a volunteer with the Building Goodness Foundation. Mr. Willis received an MBA from James Madison University and a BA in Economics from the University of Virginia.

Kevin I. Thompson

Senior Vice President

Kevin I. Thompson is Senior Vice President of the Manager. Mr. Thompson is responsible for investment due diligence, asset management and financial modeling of multifamily properties. He joined MCAP in 2010. Mr. Thompson received an MBA from the Columbia University Graduate School of Business, an MMS (Master of Management Studies) from the Duke University Fuqua School of Business and a BS in Economics from Duke University.

Nicholas J. Herbig

Vice President

Nicholas J. Herbig is Vice President of the Manager. Mr. Herbig is responsible for investment due diligence efforts in senior living communities and assists in financing and refinancing of portfolio properties and financial modeling of multifamily properties. Prior to joining MCAP in 2014, he was a Mortgage Underwriter at American Internet Mortgage, Inc. Mr. Herbig received an MBA and a BA in Business Administration from Point Loma Nazarene University.

Joseph A. Irving
Senior Director

Joseph A. Irving is Senior Director of the Manager. Mr. Irving is responsible for managing operations of our senior living communities outside of Virginia. He has overseen the management of the Regency at Glen Cove, an MCAP III investment, since 2007. In addition, he has overseen the management of the Saybrook at Haddam, an MCAP IV Holding senior living community investment, since 2009 and had overseen the Landing at Willow Grove, a previously owned MCAP V senior living community investment, from 2014 until 2019. Mr. Irving joined MCAP in 2012. He has over 30 years of experience in senior housing. Previously, Mr. Irving founded Senior Housing Solutions LLC, a management and consulting firm dedicated to developing, managing, and marketing assisted living facilities in 2003. Mr. Irving received a BA in Sociology and Gerontology from St. John Fisher College.

Charles W. Ix
Vice President of Acquisitions

Charles W. Ix is Vice President of Acquisitions for the Manager. Mr. Ix seeks and reviews potential and proposed acquisitions. He has over 22 years of experience in the senior living sector. Prior to joining MCAP in 2021, Mr. Ix was at the predecessor to Commonwealth Senior Living (“CSL”), an affiliate of MCAP. In his 11 years with CSL, Mr. Ix was an integral part of CSL’s growth from nine to 34 communities, having served as its Vice President of Sales & Marketing, Vice President of Operations, and President of the Home Care division. He also held various regional positions with CSL. Mr. Ix previously served on the Mountainside Senior Living Board, a nonprofit Assisted Living Community in Crozet, Virginia, of which he was past President and Treasurer. He is also Treasurer on the Commonwealth Cares Board, a nonprofit which assists needy employees of CSL and their families. Mr. Ix received a BS in Business Management from Northeastern University.

William Johnson
Vice President, Construction and Development

William L. Johnson is Vice President of Construction & Development for the Manager. Mr. Johnson produces feasibility studies and develops schematic plans for renovations and expansions and supervises execution of MCAP’s development strategy. Prior to joining MCAP in 2019, he served as Vice President of Construction & Development at the predecessor to Commonwealth Senior Living, an affiliate of MCAP. Mr. Johnson has over 38 years of experience in industrial, residential, and commercial construction and has managed single projects with contract values in excess of \$60 million. Mr. Johnson served in the U. S. Coast Guard.

Andy Sullivan
Vice President, Construction

Andy Sullivan is Vice President of Construction for the Manager. Mr. Sullivan supervises the construction management team, from property acquisition or development of expansion plans through design and completion. Prior to joining MCAP in 2019, he served as a Construction Manager at the predecessor to Commonwealth Senior Living, an affiliate of MCAP. Previously, he served as Director of Facilities Services, managing a campus of 1 million square feet, for a large continuing care retirement community with over 400 residents. Mr. Sullivan has over 20 years of experience in construction, with management roles in commercial and residential construction, facilities management and as an Owner's Representative. Mr. Sullivan has been a board member of Foothills Child Advocacy Center in Charlottesville, VA. An Eagle Scout, he is currently an Assistant Scoutmaster of a Troop in Crozet, VA. Mr. Sullivan received a Bachelor of Social Work from James Madison University.

Justin K. Bingler
Construction Manager, Construction

Justin K. Bingler is a Construction Manager for the Manager, managing property re-development projects and expansions. He also assists in planning and design for new acquisitions. Prior to joining MCAP in 2019, he served as a Construction Manager at the predecessor to Commonwealth Senior Living, an affiliate of MCAP. Previously, he was a Project Manager/Estimator for large regional electrical contractors in Pennsylvania and Virginia. With a strong background in electrical design and as well as construction, Mr. Bingler brings a diverse background and expertise to the team.

Ann M. Nelson
Project Coordinator, Construction & Development

Ann M. Nelson is Project Coordinator of Construction & Development for the Manager. Ms. Nelson works alongside the development team, assisting with coordination and communication of project timelines, goals and budgets, as well as contract administration. Prior to joining MCAP in 2019, she served as Project Coordinator of Construction & Development at the predecessor to Commonwealth Senior Living, an affiliate of MCAP. Ms. Nelson has over 20 years of construction experience. Ms. Nelson is active in the National Association of Women in Construction (NAWIC) and works on volunteer projects for both Albemarle Housing Improvement Project (AHIP) and Habitat for Humanity.

Jay K. Johnson
Chief Financial Officer

Jay K. Johnson is Chief Financial Officer of the Manager. Mr. Johnson supervises accounting and financial reporting functions. Prior to joining MCAP in 2003, he was Vice President, Finance for real estate opportunity funds at J.E. Robert Companies. Mr. Johnson was a tax accountant for Arthur Andersen & Co. from 1989 to 1992. He has extensive experience in real estate fund accounting, portfolio performance reporting, cash flow modeling and cash management. Mr. Johnson received an MS in Professional Accounting from the University of Hartford and a BA in Government from Wesleyan University.

Louis E. Winthal
Accounting Manager

Louis E. Winthal is an Accounting Manager of the Manager. Prior to joining MCAP in 2005, Mr. Winthal was a Senior Tax Associate in the real estate tax practice of PricewaterhouseCoopers LLP. Mr. Winthal received a BBA in Public Accounting, Summa Cum Laude from Pace University's Lubin School of Business.

Mathew Samuel
Accounting Manager

Mathew Samuel is an Accounting Manager of the Manager. Prior to joining MCAP in 2008, Mr. Samuel was a Senior Accountant at New York Life where he worked on real estate mezzanine financing. Mr. Samuel received a BA in Accounting and Information Systems from Queens College and is a CPA.

Hande Tuney
Director, Investor Relations

Hande Tuney is Director of Investor Relations of the Manager. Ms. Tuney supervises investor relations and joined MCAP in 2016. Previously, Ms. Tuney served as the Vice President of Investor Relations at Centerline Capital Group, an alternative asset manager focused on real estate funds and financing, and at a REIT, externally managed by Centerline. Prior to joining Centerline, she was an Associate of Investor Relations at AIG and joined AIG through its Prestigious Management Associate Program for college graduates. Ms. Tuney received an MS in Management Systems from New York University and a BBA in Finance from Pace University.

Alicia C. Bos
Executive Assistant

Alicia C. Bos is an Executive Assistant of the Manager. Ms. Bos provides administrative support to the MCAP Funds and its Managing Partner. Prior to joining MCAP in 2016, she was an Executive Assistant at Matrix Advisors, LLC. She also has experience in personal assisting, operations management, educational services, directing social media, and business and philanthropic event planning. Ms. Bos received a BA from Southern Methodist University.

Jordon Villines
Executive Assistant

Jordon Villines is an Executive Assistant of the Manager. Ms. Villines provides office, project and administrative support. Prior to joining MCAP in 2014, she was an Administrative Assistant at Warburg Pincus, LLC. Ms. Villines received a BA in Theatre-Performance and Psychology from Southern Illinois University Edwardsville.



Conceptual General Schedule:

Phase One (Assisted Living Additions and Renovations):

Design & Documentation Phase	current through May of 2022
Construction	May 2022 through June 2023
Licensing & Occupation	July 2023

Phase Two (Independent Living):

Design & Documentation Phase	December 2022 through June 2022
Construction	July 2023 through 2024
Occupation	August 2024

Resident Unit Count:

Assisted Living	76 beds in 64 units
Independent Living	100 units

Please feel free to reach out with any questions.

Sincerely,

GMB

A handwritten signature in blue ink, appearing to read 'Andrew D. McLeod'.

Andrew D. McLeod
AIA, LEED AP, EDAC, CDP, CMDCP

Senior Living Practice Leader

c. MCAP, WoodsRogers, file.



MCAP Mt. Pleasant Propco, LLC
March 22, 2022



MCAP Mt. Pleasant Propco, LLC
March 22, 2022



MCAP Mt. Pleasant Propco, LLC
March 22, 2022



0 15 30
PLAN SCALE: 1" = 30'



Know what's below.
Call before you dig.

March 22, 2022

Union Township Planning Commission

RE: MCAP Prestige Centre PUD Application

Thank you for the opportunity to present our project and PUD application.

Attached and below you will find:

- Development team introductions
- Introduction letter
- Application
- Civil drawings indicating legal description, acreage, project scope, topographic survey, sewage and water supply, stormwater, existing zoning and sidewalk locations
- Statement of development experience
- General Schedule
- Resident Unit count

Development team:

Owner: MCAP Mt. Pleasant Propco, LLC
534 East Main Street, Suite B
Charlottesville, VA 22902
Represented by Kevin Willis (434.963.4917) & William Johnson (434.906.2882)

Legal: Woods Rogers PLC
123 East Main Street, 5th Floor
Charlottesville, VA 22902
Represented by Steven Blaine (434.220.8831)

Architect: GMB
648 Monroe Ave, NW, Suite 500
Grand Rapids, MI 49503
Represented by Andrew McLeod, AIA, LEED AP, EDAC, CDP, CMDCP (616.485.4036)

Civil Engineer: Moore + Bruggink Inc.
2020 Monroe Ave. NW
Grand Rapids, MI 49505
Represented by Justin Longstreth, PE, CFM, LEED AP (616.363.9801)

The application and Concept Plan are compatible with the goals and policies of the Master Plan and other Township planning documents.

Master Plan Goals and Objectives (Master Plan, page 7)

Goal 1: Preserve and protect key natural and agricultural resources.

- 1.1. Protect significant, sensitive natural amenities such as water bodies, wetlands, mature trees and natural ecosystems.

The property lies within the Township's Growth Boundary area. As the Union Township Master Plan indicates, residents have consistently said that preserving the natural beauty and agricultural character of the Township and controlling urban sprawl are important priorities for planning the community. The Township also desires to be able to provide efficient infrastructure services to support development. The Growth Boundary concept in the Master Plan is designed to help implement that goal by encouraging compact, efficient land use, efficient provision of utilities, services and infrastructure, and diverse housing options. Master Plan, page 11. The proposed PUD project is consistent with those objectives that prioritize new development within the Growth Boundary.

- 1.2. Coordinate utility expansion in a way that encourages development along existing arterial roadways and on vacant or underutilized sites first.

The proposed project repurposes an existing senior housing project along a corridor that the Future Land Use map designates for future development of this kind. The project does not require the extension of utilities that would be inconsistent with this goal.

- 1.3. Preserve areas suitable for farming and agriculture-related uses.

The proposed PUD project is consistent with those objectives that prioritize new development within the Growth Boundary and thereby helps preserve areas suitable for farming and agriculture-related uses.

Goal 2: Create a safe, balanced and coordinated multi-modal transportation system adequate to accommodate the ongoing growth and (re)development of Union Township.

- 2.1. Connect schools, parks and other public facilities with a system of pathways, bikeways and trails.

Although the project is not located proximate to any schools or similar public facilities, a sidewalk will be provided for future connections to area pathways, bikeways and trails.

- 2.2. Prioritize sidewalks in areas where there are connectivity gaps first.

Please see the response to 2.1 above.

- 2.3. Work with the Road Commission to incorporate non-motorized facilities into road improvement projects

Please see 2.1 above.

Goal 3: Maintain a well-organized, balanced and efficient use of land in the Township.

- 3.1. Re-imagine the Bluegrass Road Subarea as a vibrant destination for community business, social and civic activity.

While this project is not located in the Bluegrass Road Subarea, the proposed senior housing project's amenities should promote social and civic activities for its senior residents.

- 3.2. Continue to encourage quality office and commercial development and redevelopment along corridors.

The quality of this project will be in keeping with the high standards of the applicant's other 50 projects throughout the U. S.

- 3.3. Encourage sensible, sustainable, diverse, high-quality office, commercial and industrial development in designated areas to ensure employment opportunities remain supported by the community's existing and reasonably anticipated future infrastructure.

The proposed PUD project is consistent with those objectives that prioritize new development within the Growth Boundary and thus is consistent with the goal to effectively deploy infrastructure improvements.

- 3.4. Encourage a transition between land uses that provides a logical progression towards more intense uses closer to the City.

The project is adjacent to City of Mount Pleasant limits and a logical extension of the commercial and residential growth pattern on of the area.

- 3.5. Expand housing choices to support multiple options for a wide range of age groups and family types.

Senior living facilities like the proposed offer aging residents in the community the option to age at home as long as possible and is especially important to residents who want to stay in the neighborhoods they are most familiar with and be near family and friends. As noted in the Master Plan, retrofitting existing homes to be accessible for seniors desiring to "age in place" could include ramps, wider doorways, and first floor bedrooms and accessible bathrooms. "But where "aging in place" is not feasible, special facilities, such as senior independent living, assisted living and congregate care is another important housing option to be provided within the community."

and congregate care is another important housing option to be provided within the community." The proposed assisted living facility provides this opportunity for residents.

Basic Principles of Access Management (Master Plan, page 20)

Six basic principles are used to achieve the benefits of access management:

- Limit the number of conflict points,
 - Separate conflict points,
 - Separate turning volumes from through movements,
 - Locate traffic signals to facilitate traffic movement,
 - Maintain a hierarchy of roadways by function, and
 - Limit direct access on higher speed roads
- Source: MDOT US-127 BR/M-20

Access Management Recommendations

While it may not be possible to retrofit certain corridor sections to meet current spacing guidelines for new driveways, the goal is still to minimize the number of driveways as much as possible.

- Establish future right-of-way needs (widths) for corridors, including:
 - » Allow for variations in road location, based on existing development and natural elements which the Township may wish to preserve
 - » Accommodate drainage needs and topographical changes
 - » Accommodate operational features such as turn lanes at intersections and potential transit facilities, and
 - » Flexibility in road design to allow for bike lanes, sidewalks, buffer strips between the curb and sidewalk, etc.
- Increase minimum lot frontage along corridors.
- Adjust front yard setback requirements.
- Adopt access-related recommendations from the plan as amendments to the Zoning Ordinance.

GMB
www.gmb.com

MCAP Mt. Pleasant Propco, LLC
March 22, 2022



Charter Township of Union

APPLICATION FOR REZONING APPROVAL

A completed application will contain all information required per the Zoning Ordinance, Section 14.5 (Amendments), including: Response to Rezoning Criteria (Section 14.5.G.) Vicinity Map and Survey/Drawing (Section 14.5.F.1.d.)

Name of Proposed Development/Project	Prestige Centre
Common Description of Property & Address (if issued)	5785 East Broadway Road Mt. Pleasant, MI
Applicant's Name(s)	MCAP Mt. Pleasant Propco, LLC, a Delaware limited liability company
Phone/Fax numbers	434.963.4917 Email kwillis@mcapfunds.com
Address	534 E. Main Street, Suite B City: Charlottesville, VA Zip: 22902

Legal Description:	Attached <input checked="" type="checkbox"/> Included on Survey <input type="checkbox"/> Tax Parcel ID Number(s): 14-013-20-043-02
Existing Zoning:	B-4 Land Acreage: 7.227 ac. Existing Use(s): Dependent Living (for Seniors)
<input checked="" type="checkbox"/> ATTACHED: Letter describing the proposed land uses and reasons for the requested zoning change.	

Firm(s) or Individual(s) who prepared the Land Survey/Drawing	1. Name: GMB Phone: 616.963.4917 Email: andym@gmb.com
	2. Address: 648 Monroe Avenue NW, Suite 500 City: Grand Rapids State: MI Zip: 49508 Contact Person: Andy McLeod Phone: 616.798.0200
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: MCAP Mt. Pleasant Propco, LLC Phone: 434.963.4917 Address: 534 E. Main Street, Suite B City: Charlottesville State: VA Zip: 22902 Signature: [Signature] Interest in Property: Owner
	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 may be cause for rejection of the application. Approval of any requested zoning change shall not constitute the right to violate any provisions of the Zoning Ordinance or other applicable codes and ordinances.

[Signature] Date: 12/10/21
Signature of Applicant Date

Office Use Only

Application Received By: _____ Fee Paid: \$ _____

Date Received: _____ Escrow Deposit Paid: \$ _____

Revised: 9/14/2020

DEVIATIONS FROM UNDERLYING ZONING:
+ None expected

PARKING NOTES:
Parking formulas for dependent living for seniors (applicant does not propose a nursing home) is shown below and relate to Section 9 F. of the Ordinance. The Ordinance's formula for dependent living for seniors does not make reference to off-street parking for visitors. Nevertheless, the spaces provided exceed the required number spaces by eight spaces. This is more than one-fourth of the total number of spaces provided. The applicant maintains that this should be more than adequate for visitor parking.

The applicant's actual experience in business throughout its various locations, including 38 assisted living facilities, has demonstrated that the actual parking usage is in most cases less than the prescribed parking requirements.

Dependent living for Seniors: 0.39 spaces per bed 76 beds = 30 required spaces 38 spaces provided

POTENTIAL USES OF SITE INCLUDE:
+ Assisted Living (Home for the Aged, Adult Foster Care)
+ Memory Care (Home for the Aged, Adult Foster Care)
+ Independent Living
+ Resident Centered Retail and Services
+ Commercial kitchen / cafe

P:\210207\01 Prestige Centre- Mt. Pleasant\CAD\DWG\210207\01 Prestige Centre- Mt. Pleasant-SPA DESIGN-SHEETS.DWG-2/3/2022 12:08:12 PM JUSTIN LONGSTRETH

PLAN REVISIONS

Moore + Bruggink
Consulting Engineers
2020 Monroe Ave. NW
Grand Rapids, MI 49505
(616) 363-9801
mailto:mail@mbce.com

PUD CONCEPT PLAN
FOR
PRESTIGE CENTRE
UNION TWP., ISABELLA COUNTY, MICHIGAN

FIELD SURVEY / DATE
EXCEL-2021

PROJECT NO.:
210207.01

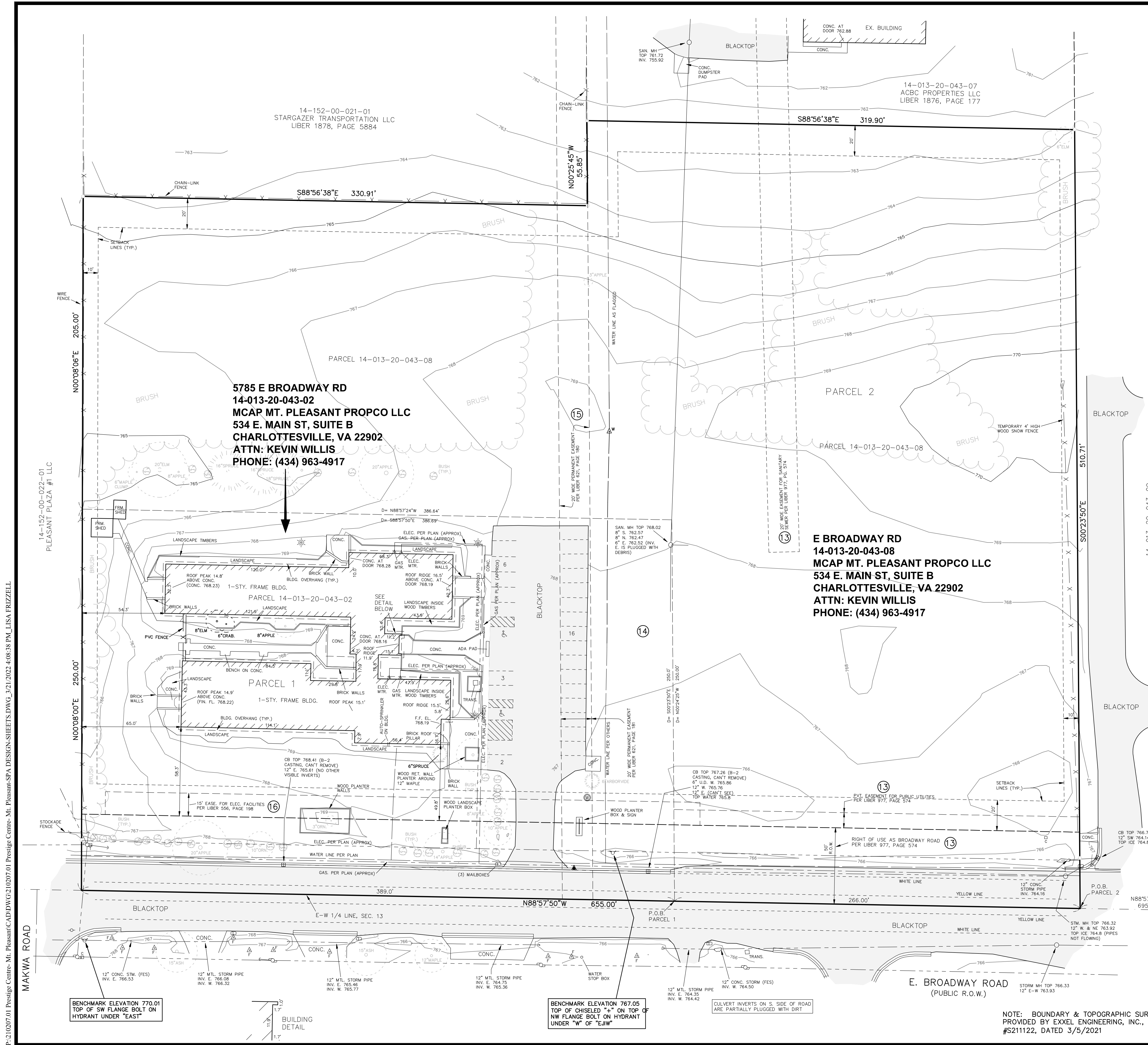
DESIGN DRAWN BY:
FEF

DESIGNED BY:
JFL

CHECKED BY:
JFL

PLAN DATE:
02-03-22

SHEET NUMBER



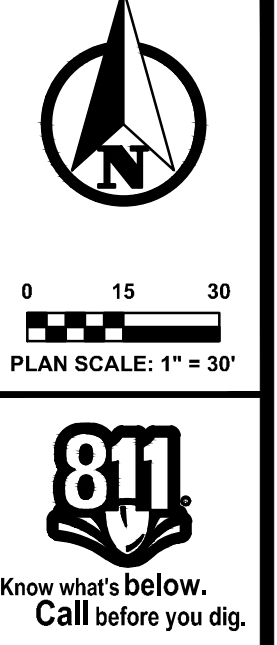
Property Description (from Commitment No.: 1900071447):
 Land Situated in the Township of Union, County of Isabella, State of Michigan:
Parcel 1:
 Part of the South 1/2 of the Northeast 1/4 of Section 13, Town 14 North, Range 4 West, Union Township, Isabella County, Michigan, described as: Beginning at a point on the East and West 1/4 line which is North 88 degrees 57 minutes 50 seconds West 961.0 feet from the East 1/4 corner of said Section 13; thence North 88 degrees 57 minutes 50 seconds West 389.0 feet; thence North 0 degrees 08 minutes East 250.0 feet; thence South 88 degrees 57 minutes 50 seconds East 386.69 feet; thence South 0 degrees 23 minutes 50 seconds East 250.0 feet to the point of beginning.
 Tax Parcel No: 14-013-20-043-02
 and
Parcel 2:
 Part of the Northeast 1/4 of Section 13, Town 14 North, Range 4 West, Township of Union, Isabella County, Michigan, more particularly described as: Beginning at a point on the East-West 1/4 line of said Section 13 which is North 88 degrees 57 minutes 50 seconds West, 695.00 feet from the East 1/4 corner of said Section 13; thence continuing along said 1/4 line, North 88 degrees 57 minutes 50 seconds West 266.00 feet; thence North 00 degrees 24 minutes 25 seconds West 250.00 feet; thence North 88 degrees 57 minutes 24 seconds West 386.64 feet (previously North 88 degrees 57 minutes 50 seconds West 386.69 feet); thence North 00 degrees 08 minutes 06 seconds East 205.00 feet; thence South 88 degrees 56 minutes 38 seconds East 330.91 feet; thence North 00 degrees 25 minutes 45 seconds West 55.85 feet; thence South 88 degrees 56 minutes 38 seconds East 319.90 feet; thence South 00 degrees 23 minutes 50 seconds East 510.71 feet to the point of beginning.
 Tax Parcel No: 14-013-20-043-08

- Notes:**
- Description of record and recorded easement information shown hereon is based on Stewart Title Guaranty Company, Commitment No. 19000071447, Revision Number 5, with a commitment date of February 18, 2020.
 - The bearings shown hereon are based on South line of the NE 1/4 of Section 13 as N88°57'50"W per furnished description. Distances shown hereon are ground distances. Michigan State Plane Coordinates for the East 1/4 Corner of Section 13 = 767060.85 N, 13027746.9 E. Bearings shown hereon can be rotated 00°13'50" clockwise to arrive at the Michigan State Plane bearing base.
 - This property contains 7.23 acres.
 - There were 29 striped parking spaces observed in the surveyed area, which includes 27 regular spaces and 2 disabled spaces.
 - No portion of this property lies within a Special Flood Hazard Area, as identified by the Federal Insurance Administration, Department of Homeland Security. This property lies within Zone X - Unshaded (areas determined to be outside of the 0.2% annual chance floodplain) as identified on Flood Insurance Rate Map, Panel 330 of 500, Map No. 2607300300D, Map Revised February 5, 2014, published by the Federal Emergency Management Agency.
 - The dimensions of the structures shown hereon are based on exterior building measurements at ground level. Building heights shown hereon are relative to the finish floor of the building which the peak height was observed.
 - Utility structures visible on the ground surface have been located and shown per actual measurements. Underground utility lines have been shown per available records and should not be interpreted as the exact location or the only utilities in this area. Lacking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted.
 - This property is accessed by Broadway Road which is a public right of way.
 - A zoning report or letter has not been provided to the surveyor. Zoning setbacks shown hereon are based on a previous survey furnished by client. Previous survey was prepared by American Surveying & Mapping, Inc., drawing name: 1909667-24676 MT PLEASANT MLDWG
 - On the date of this survey there was no visible evidence of earth moving, building construction or building additions within recent months, changes in street R.O.W. lines or recent street or sidewalk construction.
 - To our knowledge, a field delineation of wetlands was not conducted by a qualified specialist. On the date of survey, no wetland flag markers were observed.
 - This site was covered with significant amounts of snow and ice on the day of this survey.

- Notes regarding Schedule B - Section II Exceptions (see Note 1 for title commitment information): (Numbers correspond to specific exceptions listed)**
- Exception 13 Terms, Conditions, Easements, Right of Ways and Provisions as set forth in the Warranty Deed recorded March 21, 2000 in Liber 977, Page 574. (shown hereon)
- Exception 14 Easement No. 21 between Accord Properties, a Partnership and Union Township, a Municipal Corporation, for the purposes therein contained, including the terms, conditions and provisions as set forth in said instrument as recorded in Liber 621, Page 181. (shown hereon)
- Exception 15 Easement No. 20 between Roger R. Card, a single man and Union Township, a Municipal Corporation, for the purposes therein contained, including the terms, conditions and provisions as set forth in said instrument as recorded in Liber 621, Page 180. (shown hereon)
- Exception 16 Easement for Electrical Facilities in favor of Consumers Power Company, for the purposes therein contained, including the terms, conditions and provisions as set forth in said instrument as recorded May 23, 1947 in Liber 225, Page 125. (permits a route "in a Northwesterly and Southeasterly direction" in the SE 1/4 of the NE 1/4 of Section 13 - route not observed on date of survey, possibly on a parcel adjacent to surveyed property)

LEGEND

- = IRON STAKE FOUND
- ⊕ = UTILITY POLE & GUY WIRE
- ⊙ = LIGHT POLE
- ⊙ = SIGN
- ⊙ = HYDRANT
- ⊙ = WATERMAIN VALVE
- ⊙ = WELL
- ⊙ = CATCH BASIN
- ⊙ = MANHOLE
- ⊙ = MAILBOX
- ⊙ = TELEPHONE BOX
- ⊙ = CABLE TV BOX
- ⊙ = BURIED FIBER OPTIC MARKER
- ⊙ = BURIED WATERMAIN MARKER
- ⊙ = FENCE LINE
- ⊙ = OVERHEAD WIRES



PLAN REVISIONS

Moore + Bruggink
 Consulting Engineers
 2020 Monroe Ave.
 Grand Rapids, MI 49505
 (616) 363-9801
 mailbox@mbce.com

ME

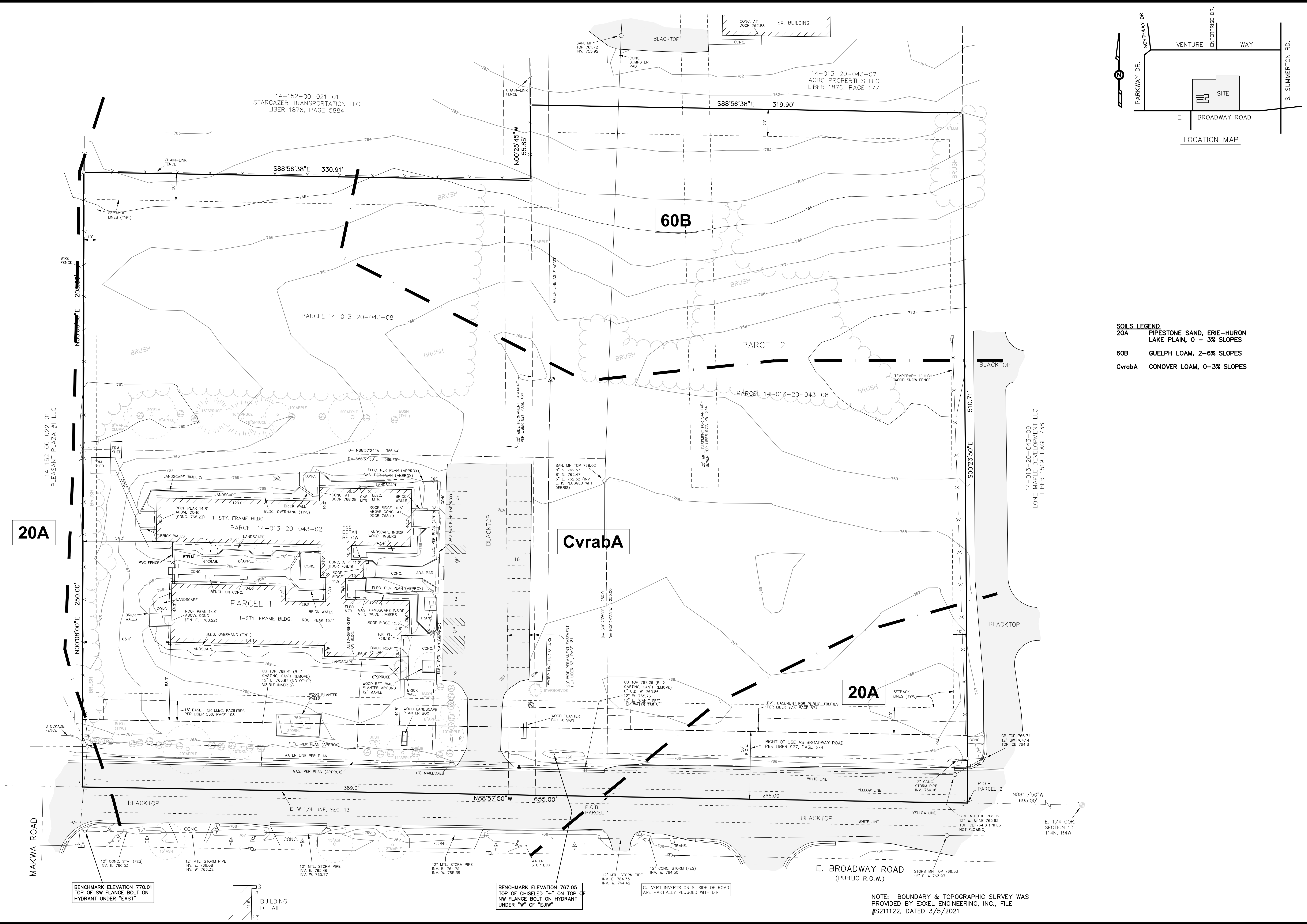
PUD CONCEPT PLAN FOR PRESTIGE CENTRE
 UNION TWP., ISABELLA COUNTY, MICHIGAN

FIELD SURVEY / DATE: EXCEL-2021
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 DESIGN DRAWN BY: FEF
 DESIGNED BY: JFL
 CHECKED BY: JFL
 PLAN DATE: 03-14-22
 SHEET NUMBER: 1

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NOTE: BOUNDARY & TOPOGRAPHIC SURVEY WAS PROVIDED BY EXCEL ENGINEERING, INC., FILE #S211122, DATED 3/5/2021

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PLAN SCALE: 1" = 30'

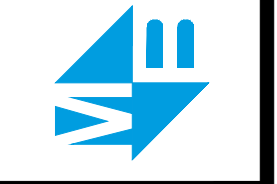
811
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Call before you dig.

SOILS LEGEND

20A	PIPESTONE SAND, ERIE-HURON LAKE PLAIN, 0 - 3% SLOPES
60B	GUELPH LOAM, 2-6% SLOPES
CvrabA	CONOVER LOAM, 0-3% SLOPES

PLAN REVISIONS

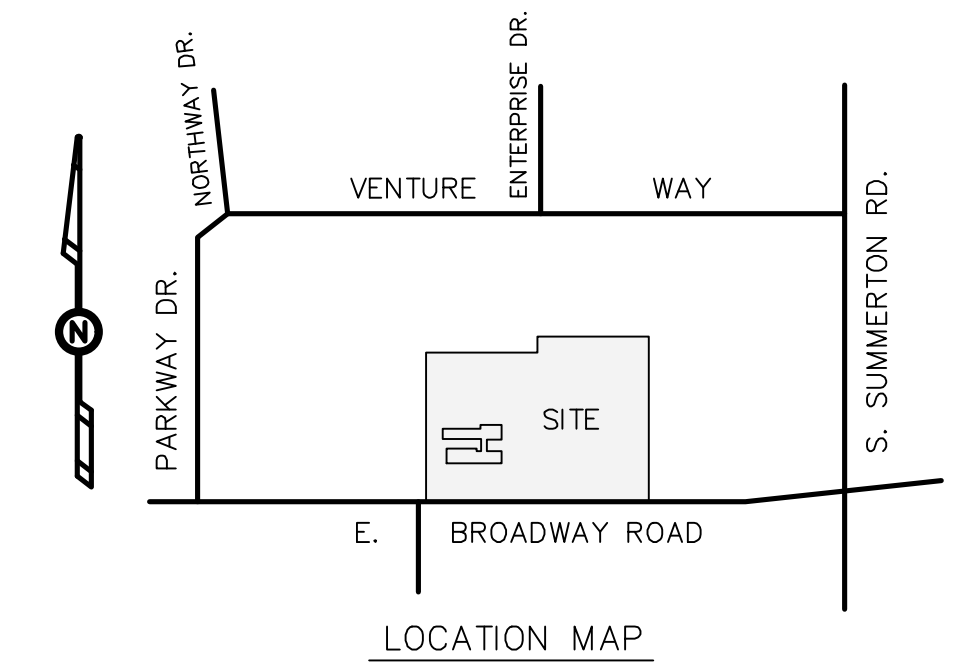
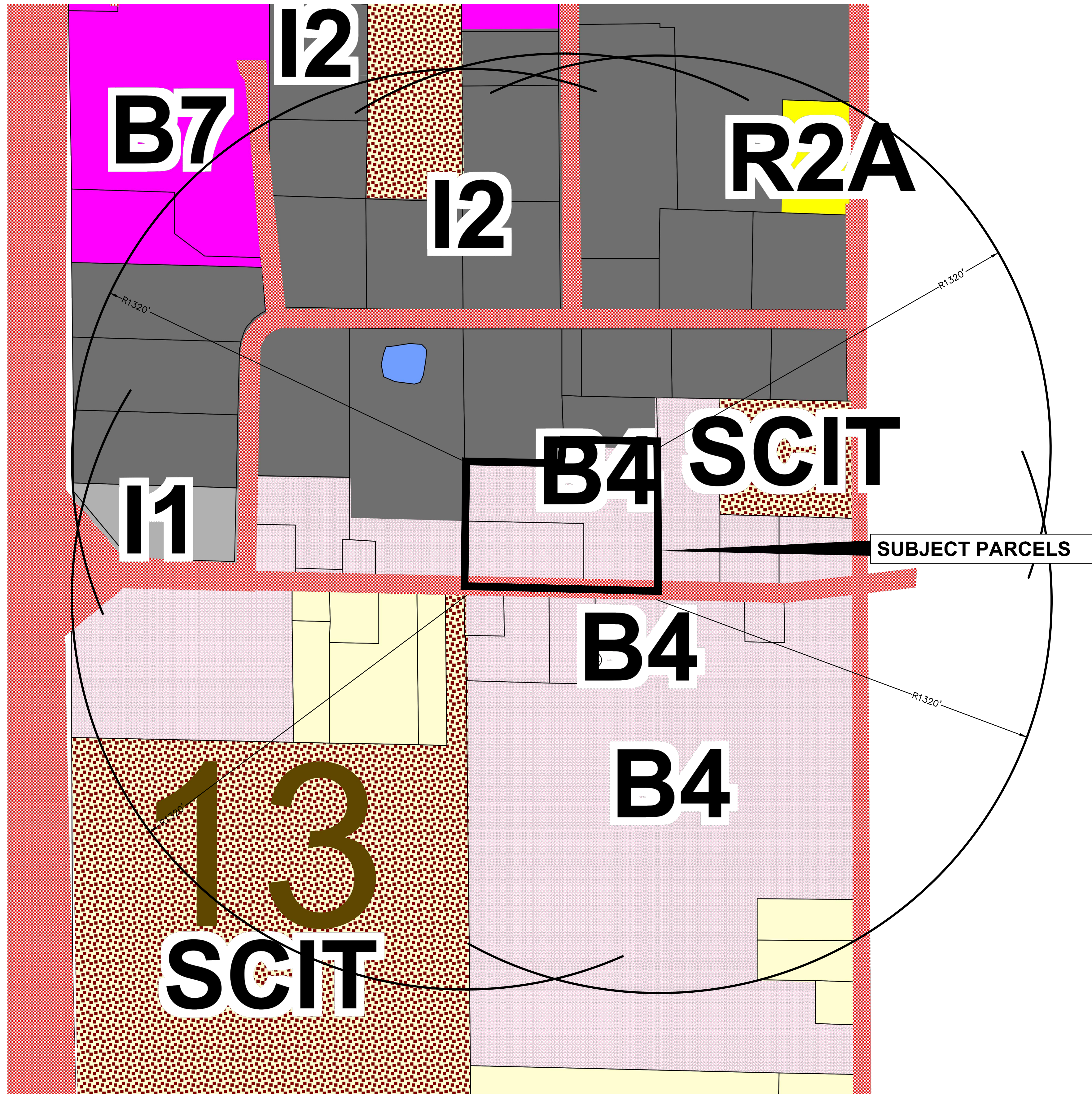
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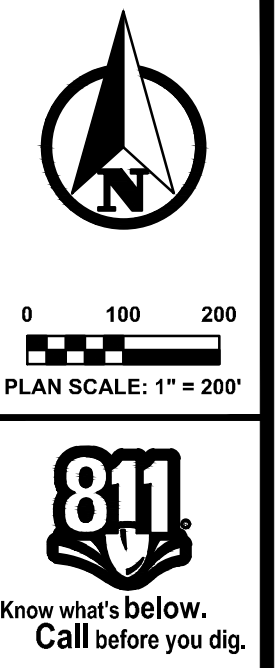
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DESIGNED BY:	JFL
CHECKED BY:	JFL
PLAN DATE:	03-14-22
SHEET NUMBER	2

NOTE: BOUNDARY & TOPOGRAPHIC SURVEY WAS PROVIDED BY EXCEL ENGINEERING, INC., FILE #S211122, DATED 3/5/2021



- CHARTER TOWNSHIP OF UNION
ZONING MAP - Through Ordinance 2014-02
- AG Agricultural
 - B-4 General Business
 - B-5 Highway Business
 - B-6 Auto-Related Highway Business
 - B-7 Retail and Service Highway Business
 - CITY
 - CMU
 - I-1 Light Industrial
 - I-2 General Industrial
 - OS Office / Service
 - R-1 One-family Residential
 - R-2A One and Two-Family District
 - R-2B One and Two-Family District
 - R-3A Apartment and Condominiums
 - R-3B Medium Density Apartment & Condos
 - R-4 Mobile or Modular Home District
 - R-5 Single-wide Mobile Home District
 - Saginaw Chippewa Indian Tribe Trust Lands



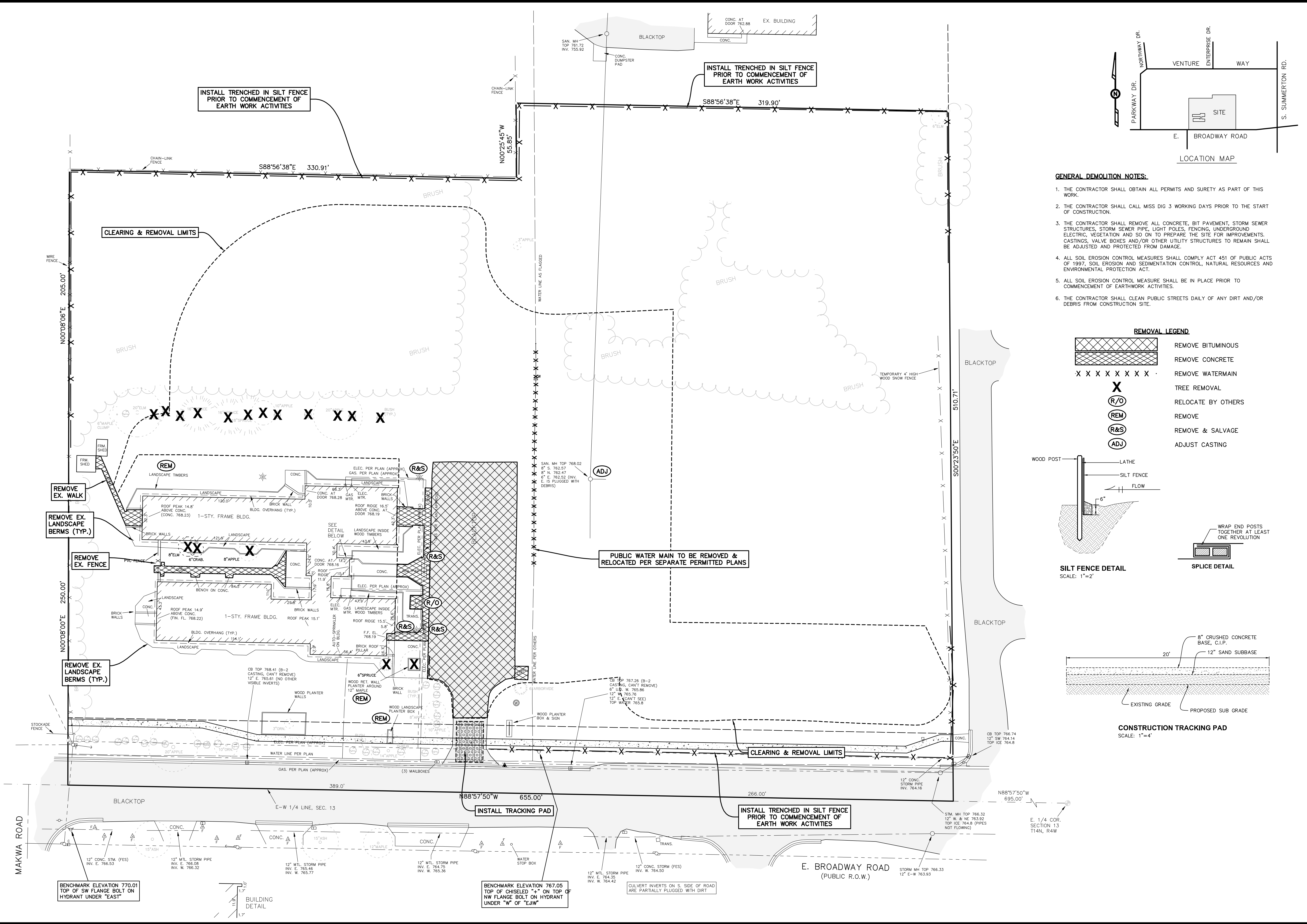
PLAN REVISIONS

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Grand Rapids, MI mailbox@mbce.com
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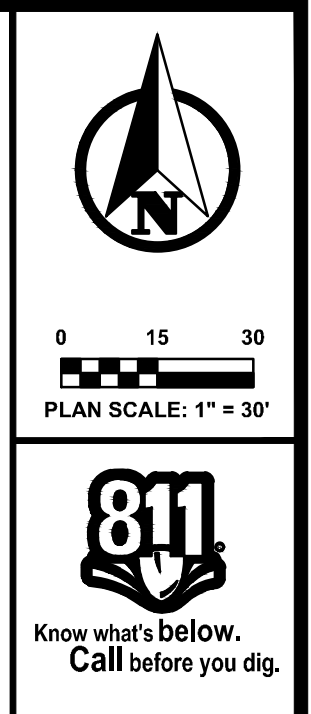
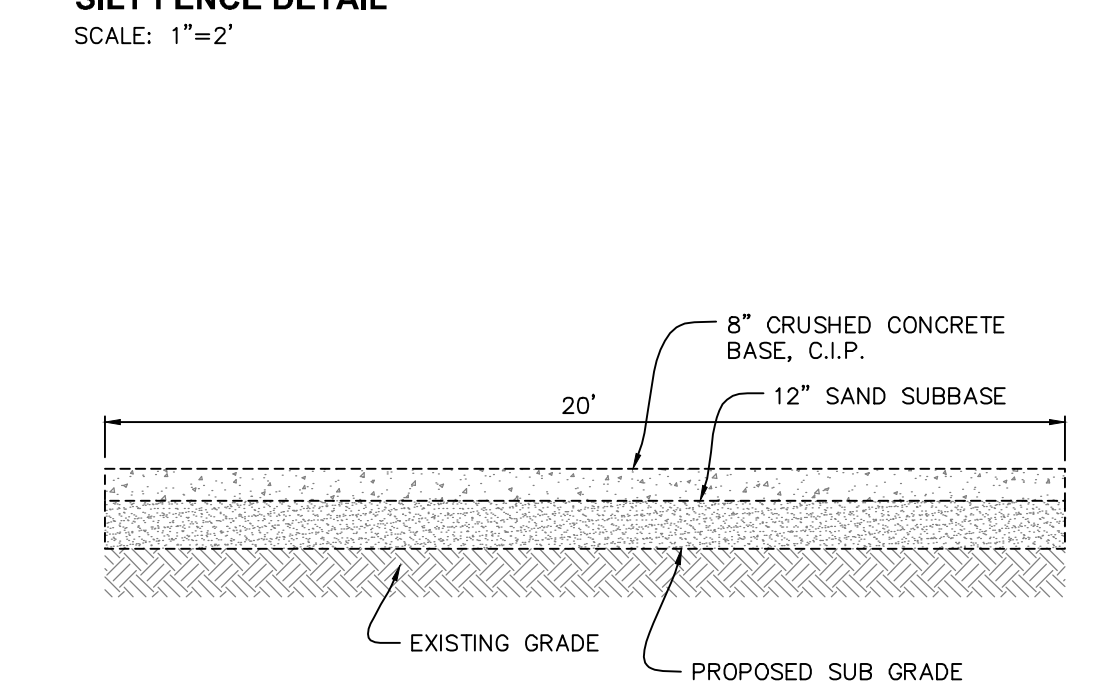
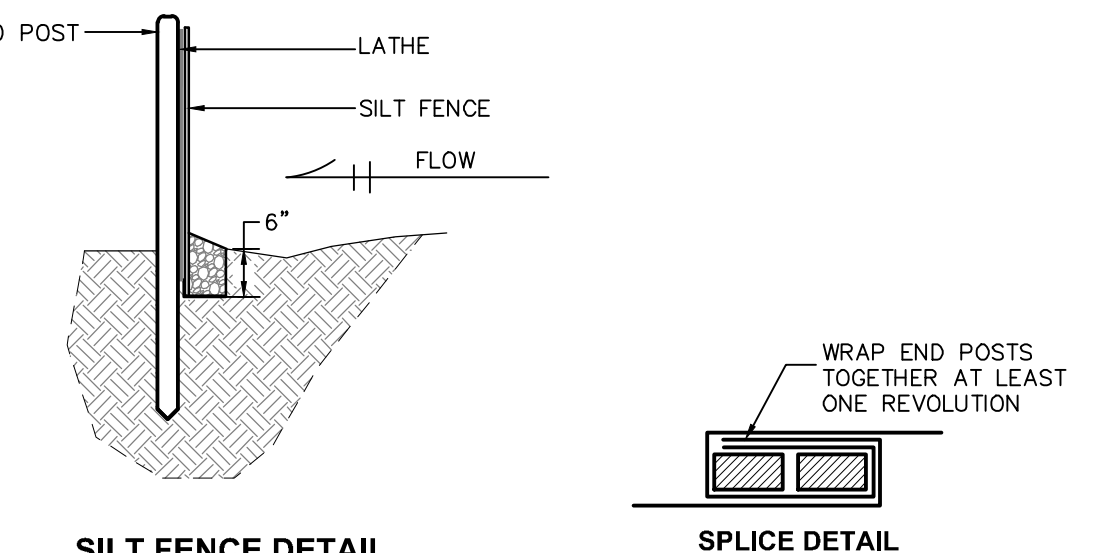
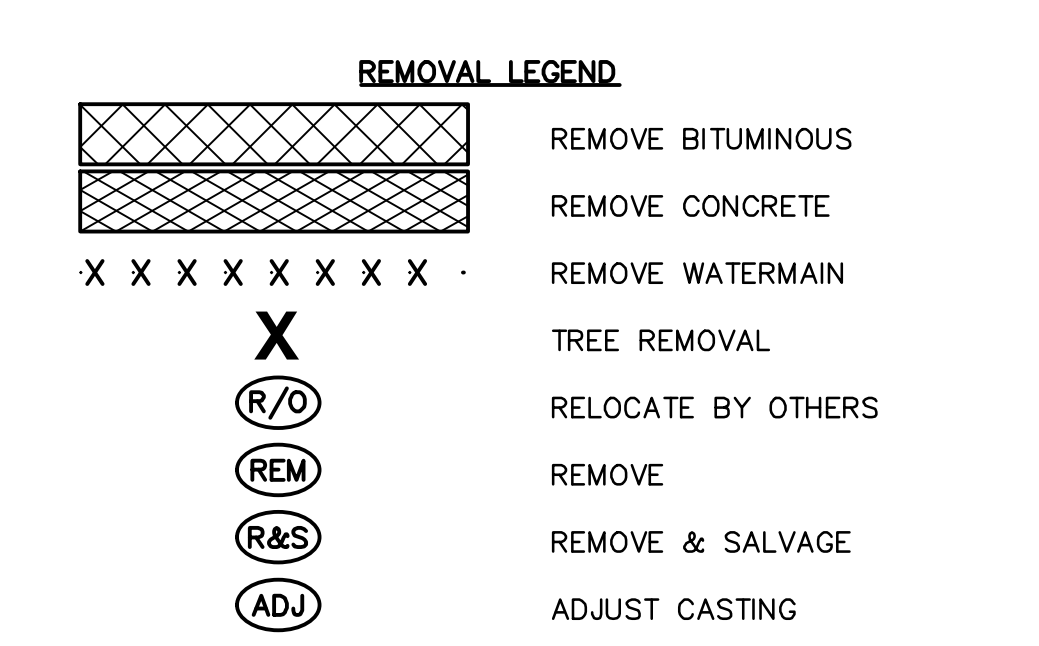
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FOR
PRESTIGE CENTRE
UNION TWP., ISABELLA COUNTY, MICHIGAN

FIELD SURVEY / DATE	EXCEL - 2021
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SHEET NUMBER	3

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- GENERAL DEMOLITION NOTES:**
1. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND SURETY AS PART OF THIS WORK.
 2. THE CONTRACTOR SHALL CALL MISS DIG 3 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
 3. THE CONTRACTOR SHALL REMOVE ALL CONCRETE, BIT PAVEMENT, STORM SEWER STRUCTURES, STORM SEWER PIPE, LIGHT POLES, FENCING, UNDERGROUND ELECTRIC, VEGETATION AND SO ON TO PREPARE THE SITE FOR IMPROVEMENTS. CASTINGS, VALVE BOXES AND/OR OTHER UTILITY STRUCTURES TO REMAIN SHALL BE ADJUSTED AND PROTECTED FROM DAMAGE.
 4. ALL SOIL EROSION CONTROL MEASURES SHALL COMPLY ACT 451 OF PUBLIC ACTS OF 1997. SOIL EROSION AND SEDIMENTATION CONTROL, NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT.
 5. ALL SOIL EROSION CONTROL MEASURE SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF EARTHWORK ACTIVITIES.
 6. THE CONTRACTOR SHALL CLEAN PUBLIC STREETS DAILY OF ANY DIRT AND/OR DEBRIS FROM CONSTRUCTION SITE.



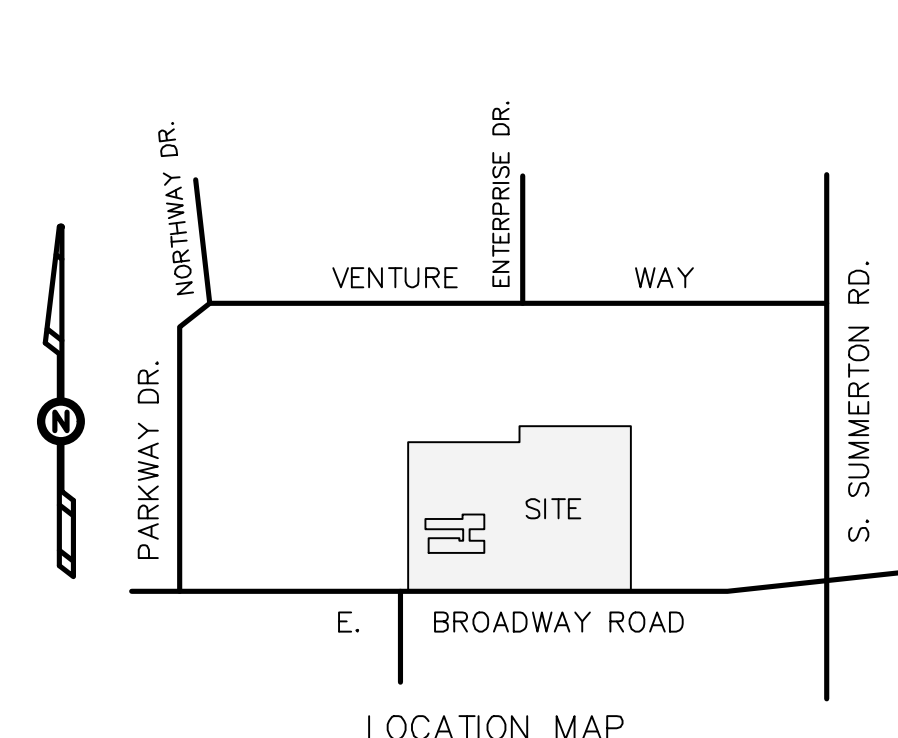
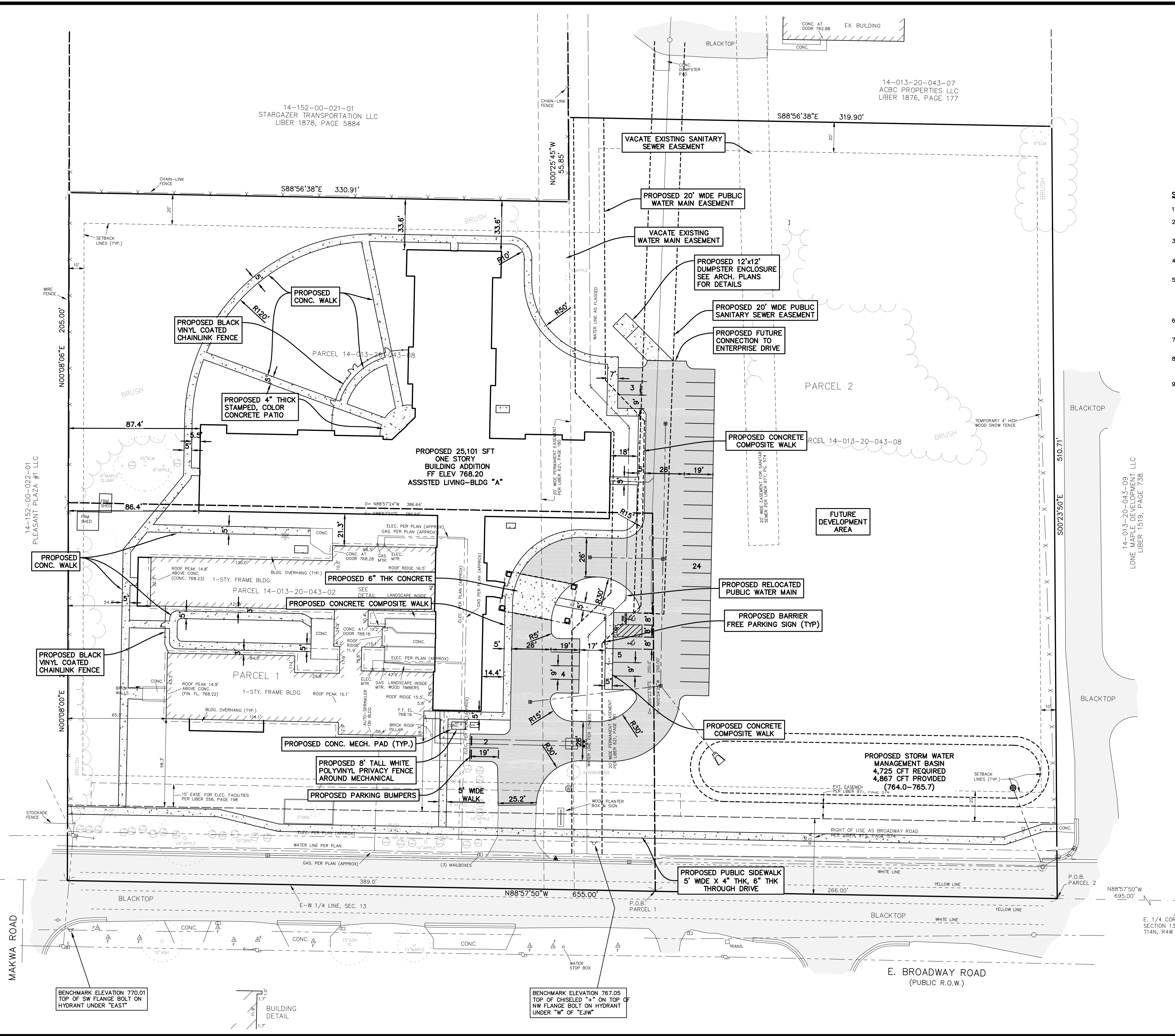
PLAN REVISIONS

Moore+Bruggink
Consulting Engineers
2020 Monroe Ave.
Grand Rapids, MI 49505
(616) 363-9801
mailbox@mbcoe.com

PUD CONCEPT PLAN
FOR
PRESTIGE CENTRE
UNION TWP., ISABELLA COUNTY, MICHIGAN

FIELD SURVEY / DATE: EXCEL-2021
PROJECT NO.: 210207.01
DESIGN DRAWN BY: FEF
DESIGNED BY: JFL
CHECKED BY: JFL
PLAN DATE: 03-14-22
SHEET NUMBER: 4

P:210207.01 Prestige Centre - M. Pleasant-SPA DESIGN-SHEETS.DWG_3/21/2022 4:09:00 PM_LISA FRIZZELL



- SITE PLAN GENERAL NOTES:**
1. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND SURETY AS PART OF THIS WORK.
 2. THE CONTRACTOR SHALL CALL MISS DIG 3 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
 3. ALL STORM SEWER PIPE SHALL BE ADS N-12 PLASTIC PIPE UNLESS OTHERWISE SPECIFIED.
 4. ALL CATCH BASINS AND MANHOLES SHALL BE MINIMUM 4' DIAMETER PRECAST CONCRETE, UNLESS NOTED OTHERWISE.
 5. PAVED AREAS SHALL BE CONSTRUCTED WITH:
12" MDT CL-2 SAND SUBBASE (C.I.P)
6" 21-AA GRAVEL BASE (C.I.P)
2" 3C HMA LEVELING COURSE
1 1/2" 5E3 HMA WEARING COURSE
 6. THE CONTRACTOR SHALL BED AND BACKFILL ALL UNDERGROUND PIPING WITH MDT CL-2 SAND TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM- 1557.
 7. THIS SITE PLAN SHALL NOT BE USED TO STAKE THE LOCATION OF PROPOSED BUILDING COLUMN LINES. THE SURVEYORS ARE TO USE THE BUILDING FOUNDATION PLANS.
 8. THE CONTRACTOR SHALL PLACE AND COMPACT FILL UNDER THE PROPOSED BUILDING AREA TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM-1557. ALL OTHER AREAS SHALL BE COMPACTED TO A MINIMUM OF 90% MAXIMUM DRY DENSITY.
 9. THE CONTRACTOR SHALL PIPE ALL BUILDING ROOF WATER TO THE STORM WATER COLLECTION SYSTEM.

PARKING REQUIREMENTS:
 75 AL BEDS x 0.39 SPACES PER BED = 30 SPACES REQUIRED
 30 SPACES REQUIRED
 38 SPACES PROVIDED
 NO NON-RESIDENTIAL UNITS PROPOSED

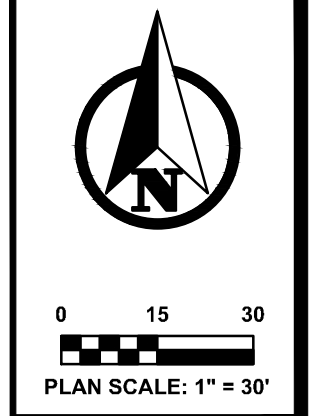
AREA CALCULATIONS:
 AREA INCLUDING R.O.W.: 314,815 SQ.FT. (7.23 ACRES)
 OVERALL IMPERVIOUS SURFACE: 93,883 SFT. (2.16 ACRES)
 OVERALL PERVIOUS SURFACE: 220,932 SFT (5.07 ACRES)

EXISTING ZONING: "B4" GENERAL BUSINESS DISTRICT
 MIN FRONT SETBACK: 20'
 MIN SIDE SETBACK: 10'
 MIN REAR SETBACK: 20'
 MIN LOT WIDTH: 80'
 MIN LOT AREA: 12,000 SFT
 MAX BLDG HEIGHT: 35'
 MAX LOT COVERAGE: 30%

THERE ARE "0" NON RESIDENTIAL UNITS PROPOSED FOR THIS PROPERTY.

CONSTRUCTION SCHEDULE

ITEM	2022	2023
	J F M A M J J A S O N D	J F M A M J J A S O N D
TEMP. EROSION CONTROL	■	■
TOPSOIL STRIPPING	■	■
SITE GRADING	■	■
SITE UTILITIES	■	■
DETENTION POND "A"	■	■
DETENTION POND "B"	■	■
BUILDING "A" CONSTRUCTION	■	■
BUILDING "B" CONSTRUCTION	■	■
PERM. EROSION CONTROL	■	■
LANDSCAPING	■	■
PAVING LOT "A"	■	■
PAVING LOT "B"	■	■
REMOVE TEMP. EROSION CONTROL	■	■



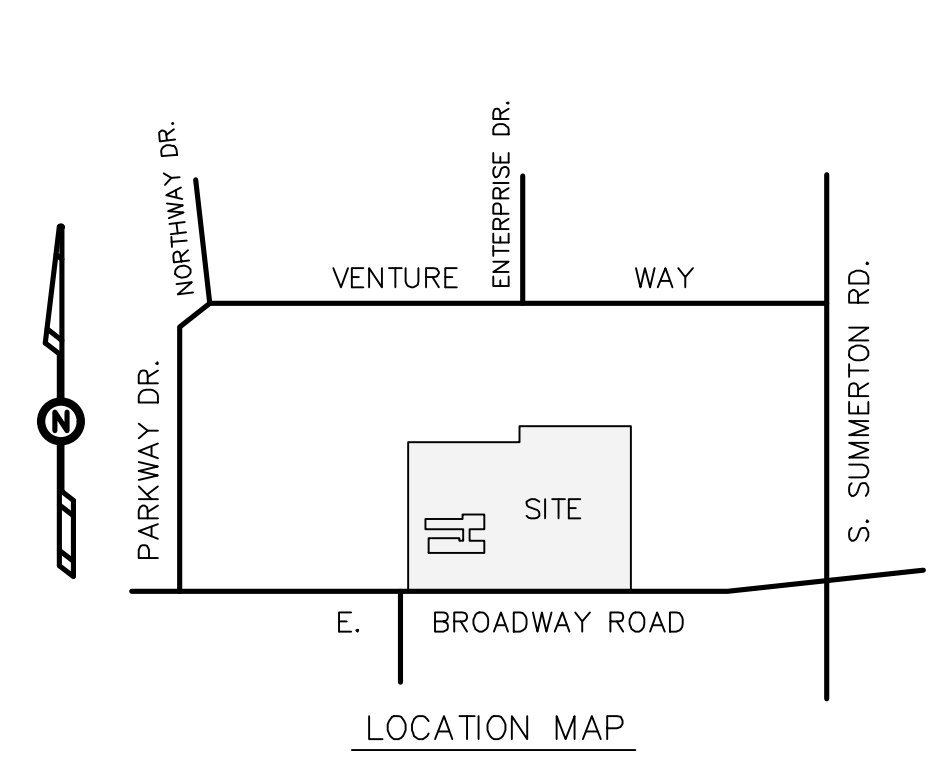
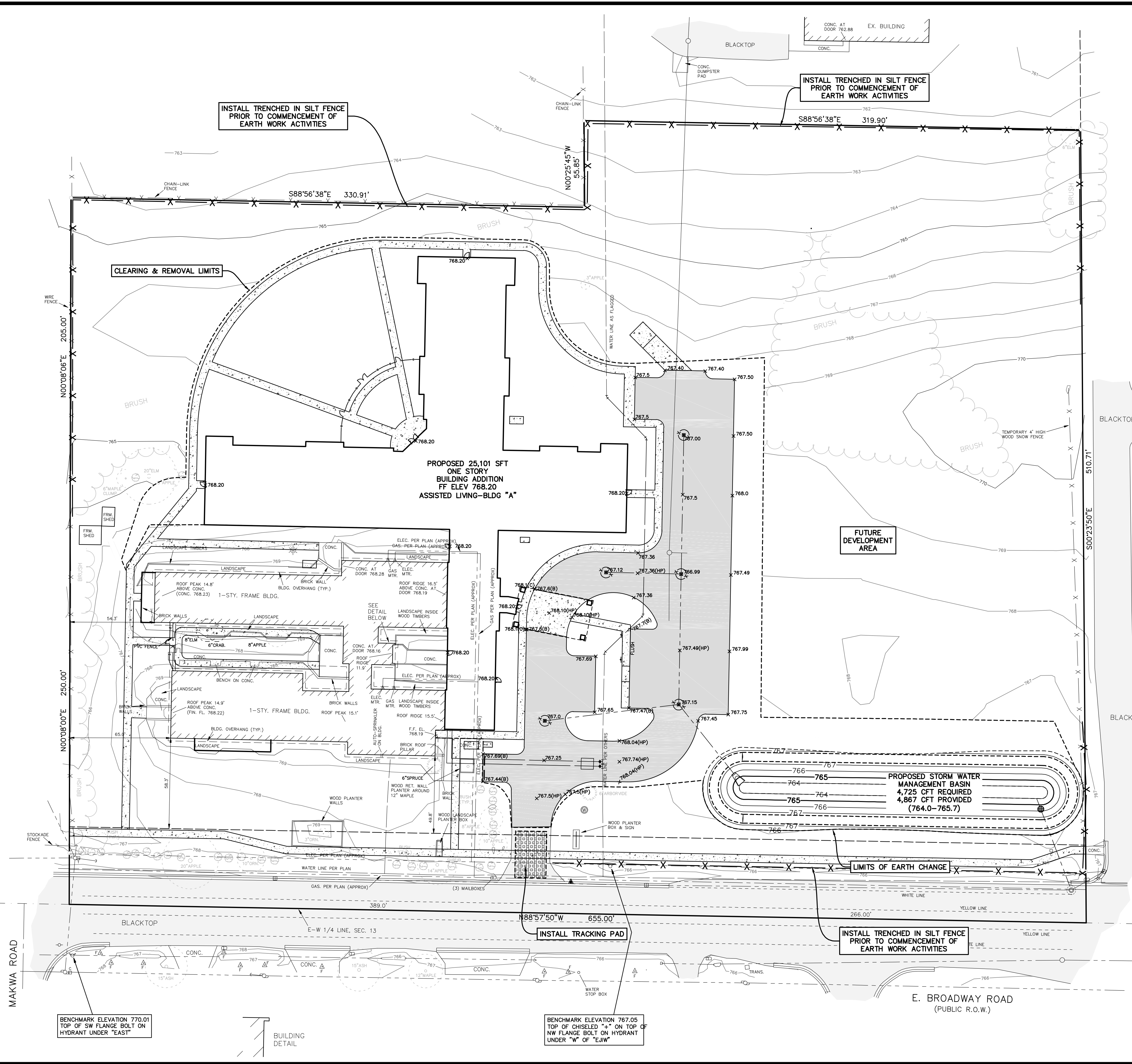
PLAN REVISIONS

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 Consulting Engineers
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 Grand Rapids, MI 49505
 (616) 363-9801
 mailbox@mbse.com

PUD CONCEPT PLAN FOR PRESTIGE CENTRE
 UNION TWP., ISABELLA COUNTY, MICHIGAN

FIELD SURVEY / DATE: EXCEL-2021
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 DESIGN DRAWN BY: JFL
 DESIGNED BY: JFL
 CHECKED BY: JFL
 PLAN DATE: 03-14-22
 SHEET NUMBER: 5

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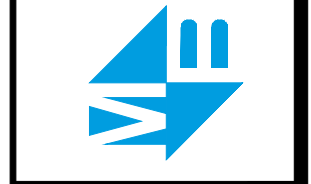
0 15 30
PLAN SCALE: 1" = 30'

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

- SOIL EROSION CONTROL NOTES:**
1. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND SURETY AS PART OF THIS WORK.
 2. THE CONTRACTOR SHALL CALL MISS DIG 3 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
 3. THE CONTRACTOR SHALL REQUEST CONSTRUCTION STAKING BY EMAIL USING THE MOORE & BRUGGINK, INC. CONTRACTORS CONSTRUCTION STAKING REQUEST FORM. ONLY COMPLETED REQUESTS WILL BE SCHEDULED. NOTE THE PROJECT OWNER WILL PAY THE SURVEYOR TO PLACE STAKES ONLY ONCE. ALL LOST AND DAMAGED STAKES ARE THE CONTRACTORS RESPONSIBILITY.
 4. THE CONTRACTOR SHALL REMOVE ALL CONCRETE, BIT PAVEMENT, STORM SEWER STRUCTURES, STORM SEWER PIPE, LIGHT POLES, FENCING, UNDERGROUND ELECTRIC, VEGETATION AND SO ON TO PREPARE THE SITE FOR IMPROVEMENTS. CASTINGS, VALVE BOXES AND/OR OTHER UTILITY STRUCTURES TO REMAIN SHALL BE ADJUSTED AND PROTECTED FROM DAMAGE.
 5. NORTH AMERICAN GREEN DS-150 EROSION CONTROL BLANKET SHALL BE PLACED ON ALL SLOPES 1:3 OR GREATER. SECURE BLANKET TO SLOPE PER MANUFACTURERS SPECIFICATIONS.
 6. ALL SILT FENCING SHALL BE TRENCHED IN PRIOR TO COMMENCEMENT OF EARTHWORK ACTIVITIES.
 7. SILT FENCING IS REQUIRED ALONG ALL DOWNSTREAM EDGES OF THE GRADING LIMITS AND MUST REMAIN IN PLACE UNTIL VEGETATION IS UNIFORMLY RE-ESTABLISHED.
 8. ALL SOIL EROSION CONTROL MEASURES SHALL COMPLY WITH ACT 451 OF PUBLIC ACTS OF 1997, SOIL EROSION AND SEDIMENTATION CONTROL, NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT.
 9. NEW & EXISTING STORM SEWER INLET POINTS SHALL BE PROTECTED FROM SEDIMENT INFILTRATION WITH INLET FABRIC DROP (SILT SACK).
 10. ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED ON A DAILY BASIS, AND IMMEDIATELY FOLLOWING EVERY SIGNIFICANT RAINFALL EVENT.
 11. ALL EXCESS SPOILS ARE TO BE REMOVED FROM THE SITE. OTHERWISE STOCKPILES MUST BE PROVIDED WITH TEMPORARY AND PERMANENT STABILIZATION MEASURES.
 12. IF EXCESS DIRT IS TO BE PLACED ON SITE, THE LOCATION SHALL BE APPROVED BY THE PROPERTY OWNER & ENGINEER.
 13. ALL TEMPORARY EROSION CONTROLS MUST REMAIN IN PLACE UNTIL VEGETATION IS UNIFORMLY RE-ESTABLISHED.
 14. DUST CONTROL SHALL BE PROVIDED BY MEANS OF WATER DISTRIBUTION ON A REGULAR BASIS OVER AREAS THAT COULD POTENTIALLY PRODUCE DUST CONDITIONS.
 15. A TRACKING PAD MUST BE PROVIDED AT CONSTRUCTION ACCESS POINTS TO PREVENT SOILS FROM BEING TRACKED OFF-SITE, PER DETAIL THIS SHEET.
 16. CONTRACTOR SHALL SWEEP PAVED AREAS EACH DAY (OR MORE AS NEEDED) BY MECHANICAL MEANS FOR ALL PAVED AREAS IN AND AROUND THE PERIMETER OF THE PROJECT AFFECTED BY TRUCKING OPERATIONS.
 17. ALL DISTURBED AREAS SHALL BE RESTORED WITH 4" TOPSOIL (MIN), SEED, FERTILIZER AND MULCH UNLESS OTHERWISE NOTED.
 18. CONSTRUCTION ENTRANCE SHALL BE PROVIDED FROM EAST BROADWAY ROAD.
 19. EXISTING SOIL CONDITIONS: LOAM PER USDA SOIL SURVEY

PLAN REVISIONS

Moore + Bruggink
Consulting Engineers
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Grand Rapids, MI
(616) 363-9801
mailto:mail@mbce.com



PUD CONCEPT PLAN
FOR
PRESTIGE CENTRE
UNION TWP., ISABELLA COUNTY, MICHIGAN

FIELD SURVEY / DATE
EXCEL-2021

PROJECT NO.:
210207.01

DESIGN DRAWN BY:
FEF

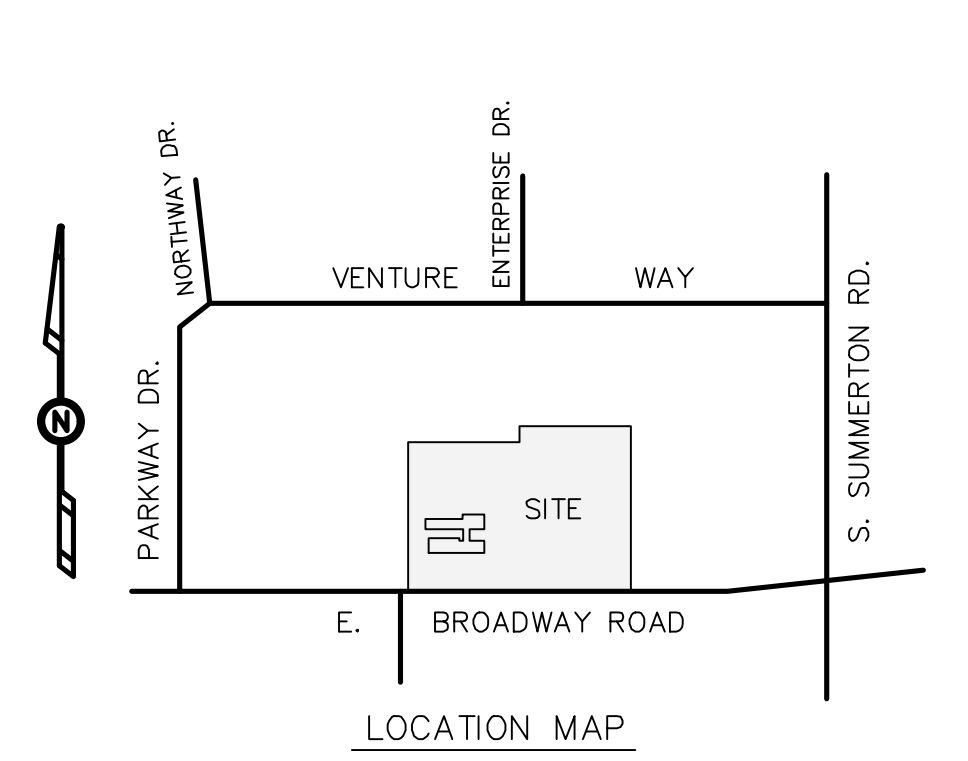
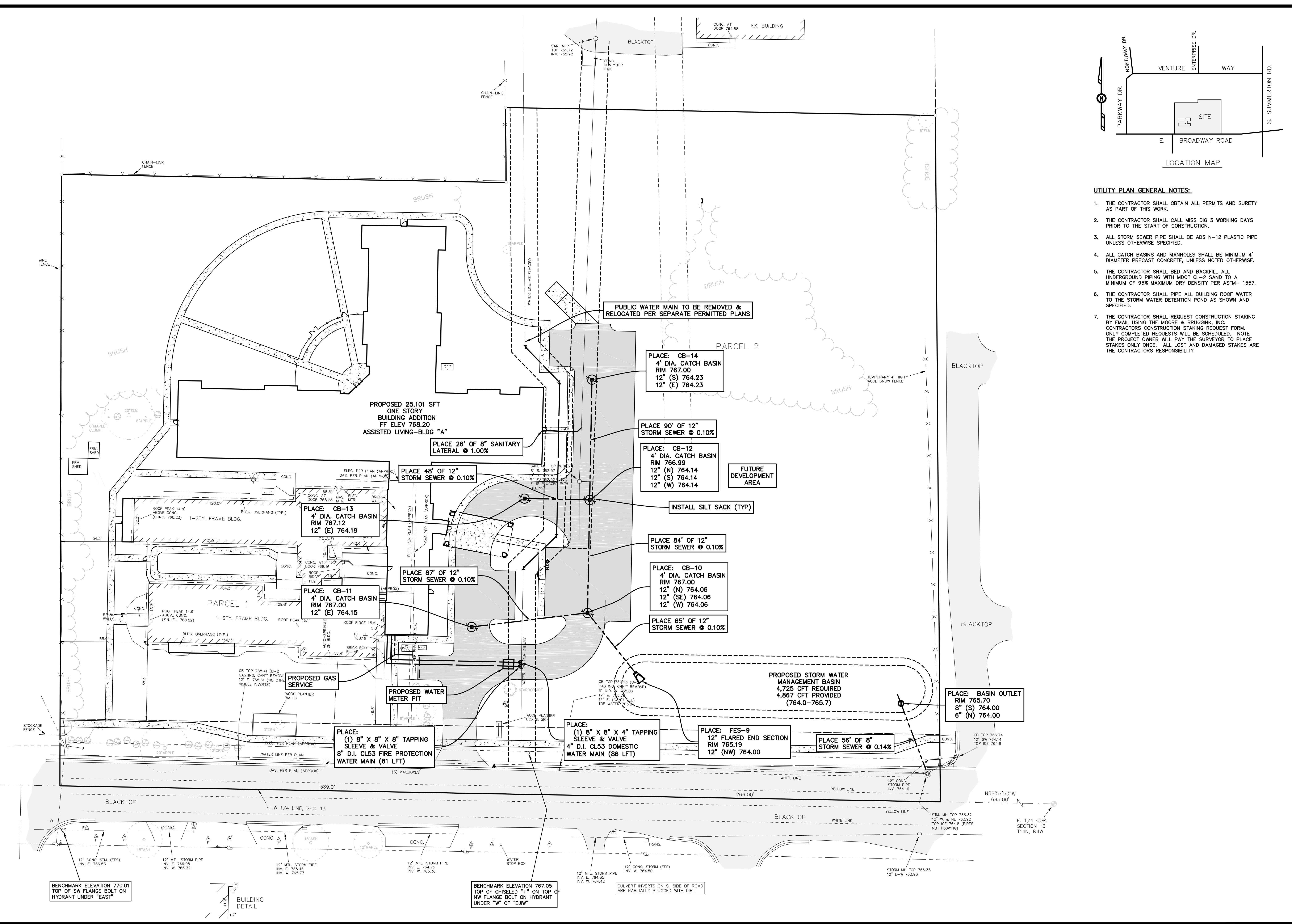
DESIGNED BY:
JFL

CHECKED BY:
JFL

PLAN DATE:
03-14-22

SHEET NUMBER
6

P:210207.01 Prestige Centre - M: Pleasant-SPA DESIGN-SHEETS.DWG_3/21/2022 4:09:10 PM_LISA FRIZZELL



- UTILITY PLAN GENERAL NOTES:**
1. THE CONTRACTOR SHALL OBTAIN ALL PERMITS AND SURETY AS PART OF THIS WORK.
 2. THE CONTRACTOR SHALL CALL MISS DIG 3 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
 3. ALL STORM SEWER PIPE SHALL BE ADS N-12 PLASTIC PIPE UNLESS OTHERWISE SPECIFIED.
 4. ALL CATCH BASINS AND MANHOLES SHALL BE MINIMUM 4' DIAMETER PRECAST CONCRETE, UNLESS NOTED OTHERWISE.
 5. THE CONTRACTOR SHALL BED AND BACKFILL ALL UNDERGROUND PIPING WITH MDOT CL-2 SAND TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM-1557.
 6. THE CONTRACTOR SHALL PIPE ALL BUILDING ROOF WATER TO THE STORM WATER DETENTION POND AS SHOWN AND SPECIFIED.
 7. THE CONTRACTOR SHALL REQUEST CONSTRUCTION STAKING BY EMAIL USING THE MOORE & BRUGINK, INC. CONTRACTORS CONSTRUCTION STAKING REQUEST FORM. ONLY COMPLETED REQUESTS WILL BE SCHEDULED. NOTE THE PROJECT OWNER WILL PAY THE SURVEYOR TO PLACE STAKES ONLY ONCE. ALL LOST AND DAMAGED STAKES ARE THE CONTRACTORS RESPONSIBILITY.

PLAN REVISIONS

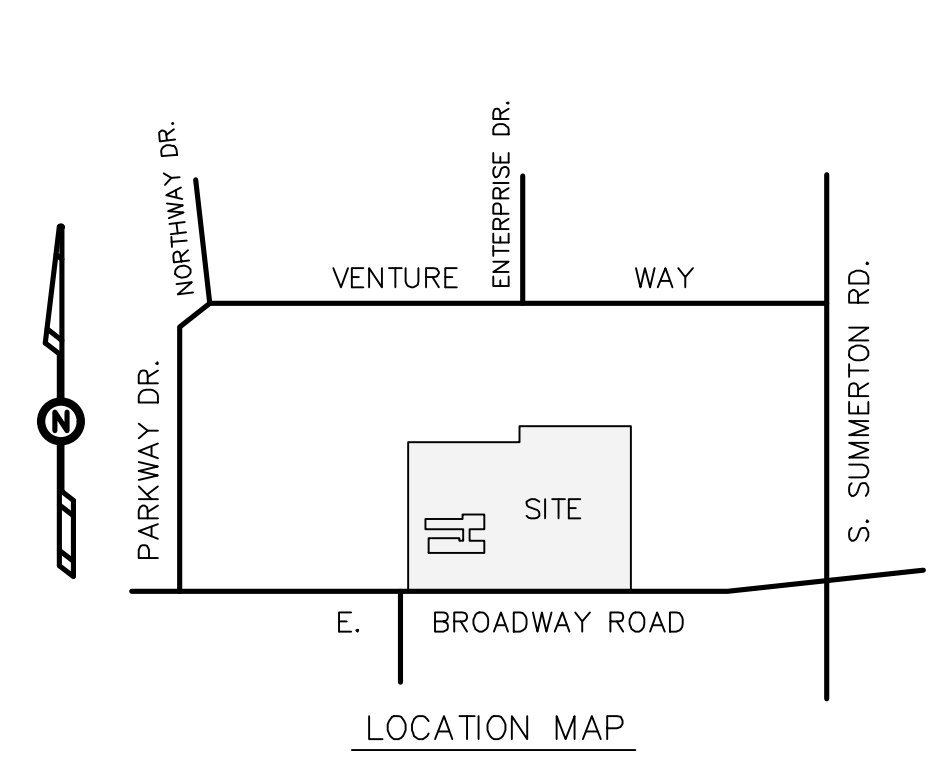
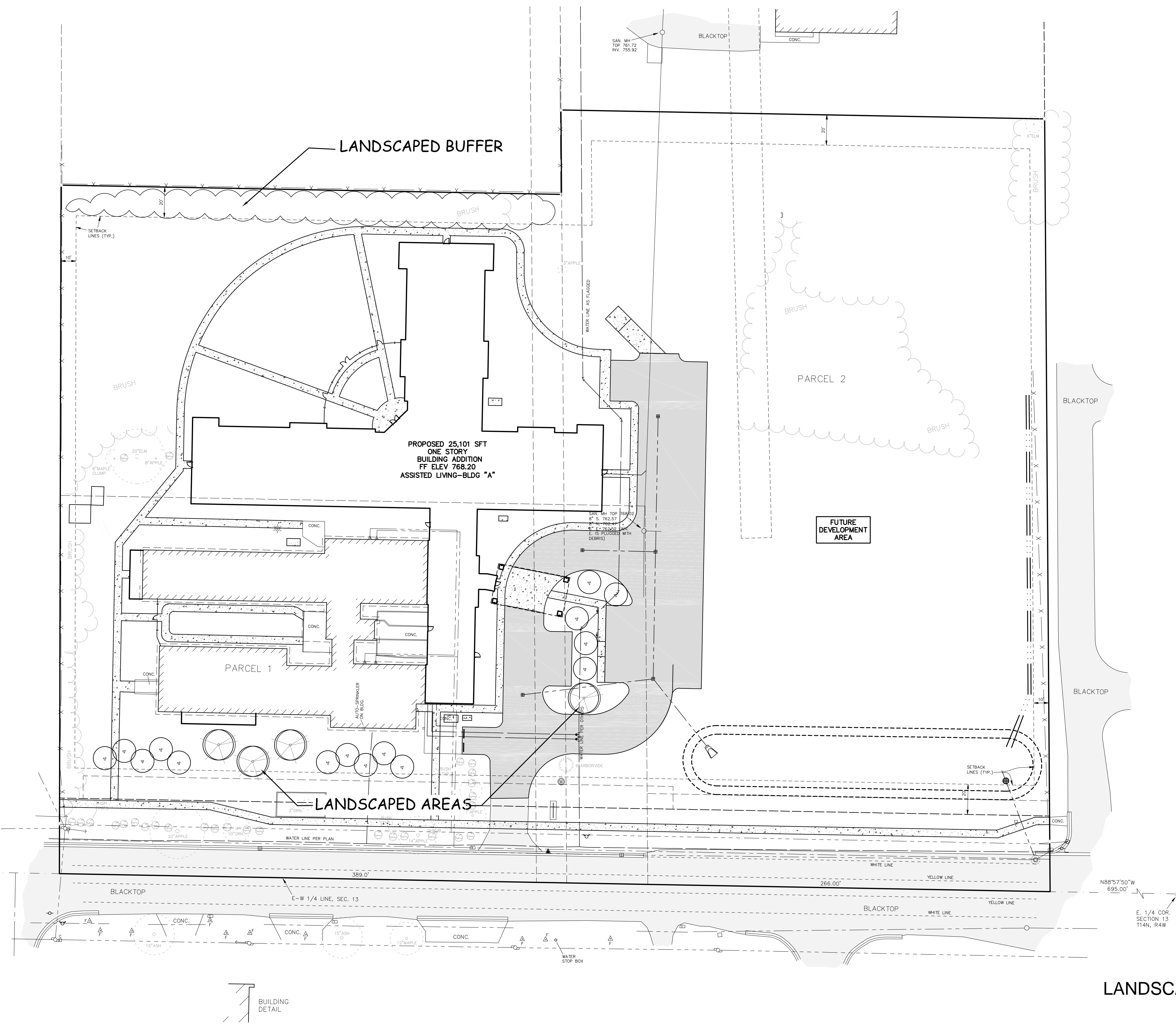
NO.	DATE	DESCRIPTION

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 (616) 363-9801
 mailbox@mbce.com

PUD CONCEPT PLAN FOR PRESTIGE CENTRE
 UNION TWP., ISABELLA COUNTY, MICHIGAN

FIELD SURVEY / DATE: EXCEL-2021
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 PLAN DATE: 03-14-22
 SHEET NUMBER: 7

P:210207.01 Prestige Centre - M: Pleasant-SPA DESIGN-SHEETS.DWG_3/21/2022 4:09:15 PM_LISA FRIZZELL



811
Know what's below.
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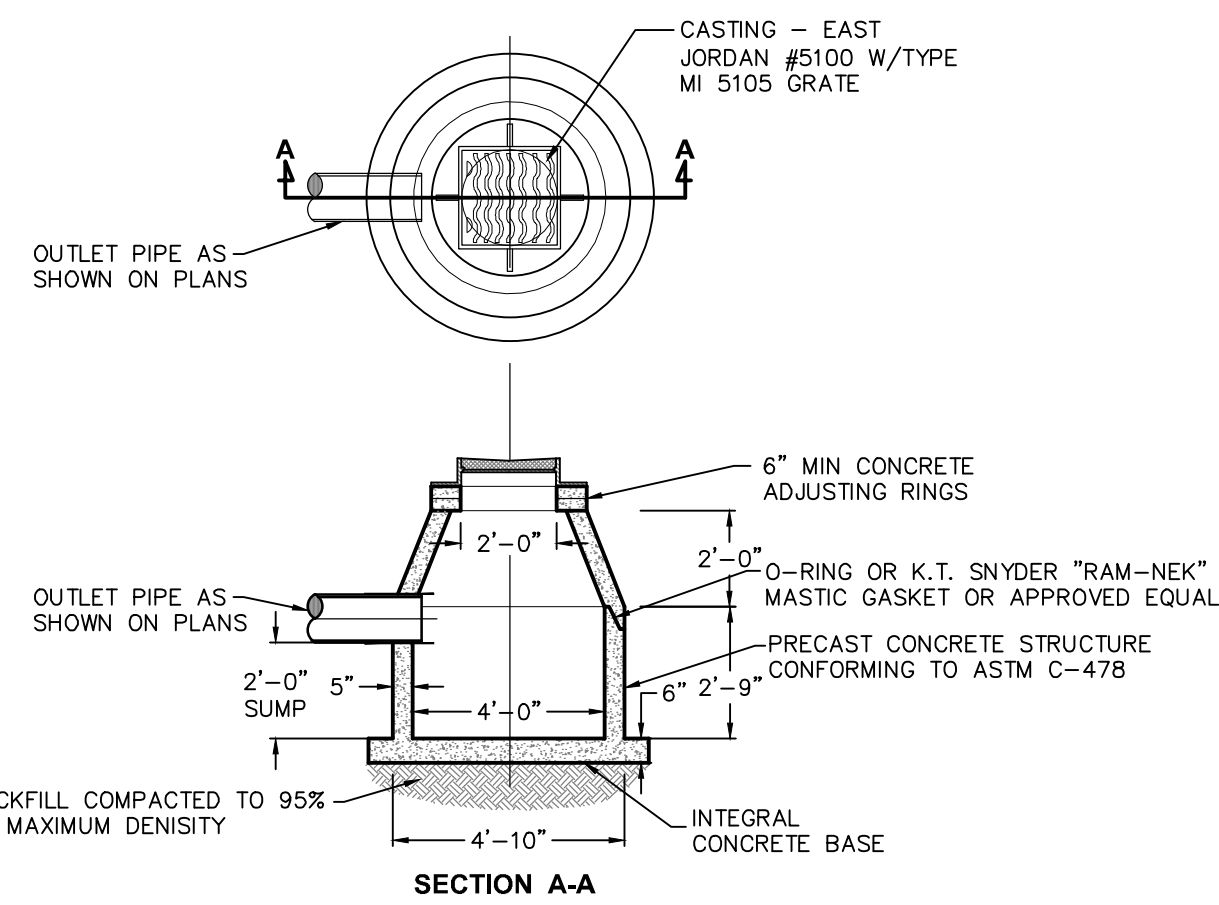
PLAN REVISIONS

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Consulting Engineers
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Grand Rapids, MI
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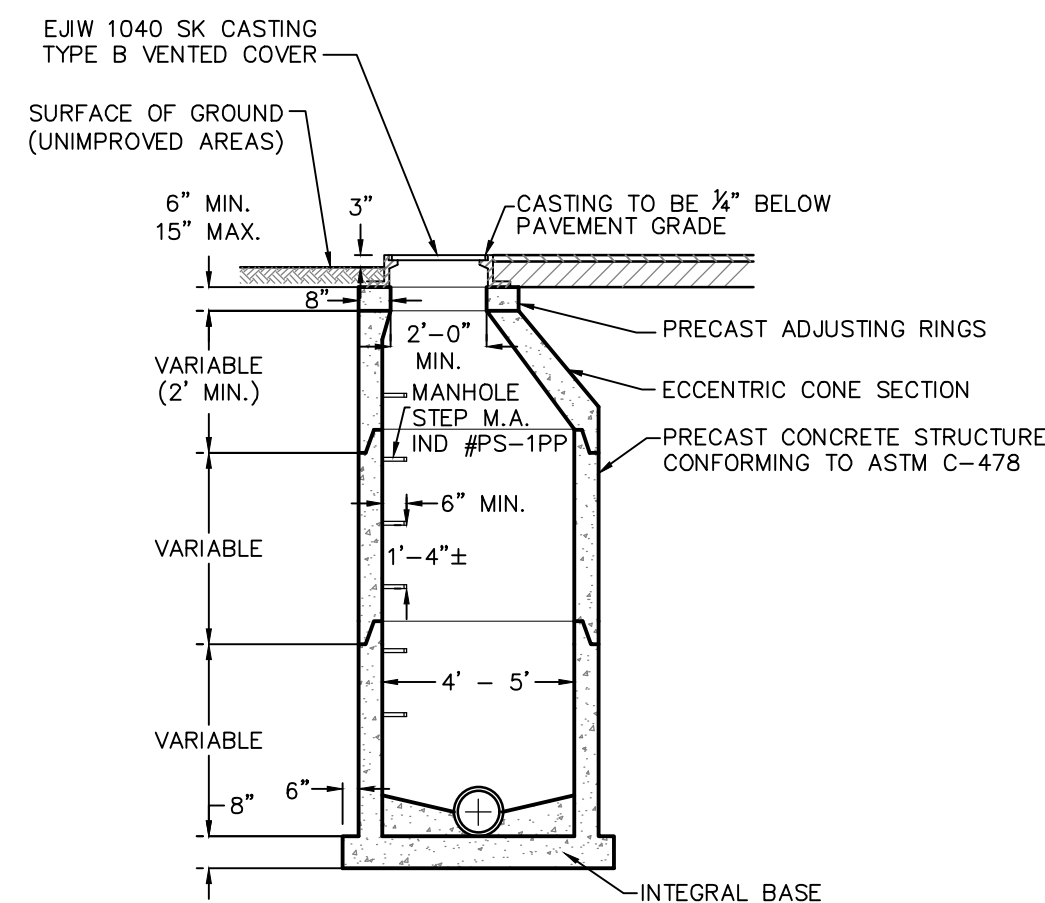
PUD CONCEPT PLAN
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UNION TWP., ISABELLA COUNTY, MICHIGAN

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DESIGN DRAWN BY:	FEF
DESIGNED BY:	JFL
CHECKED BY:	JFL
PLAN DATE:	03-14-22
SHEET NUMBER	8

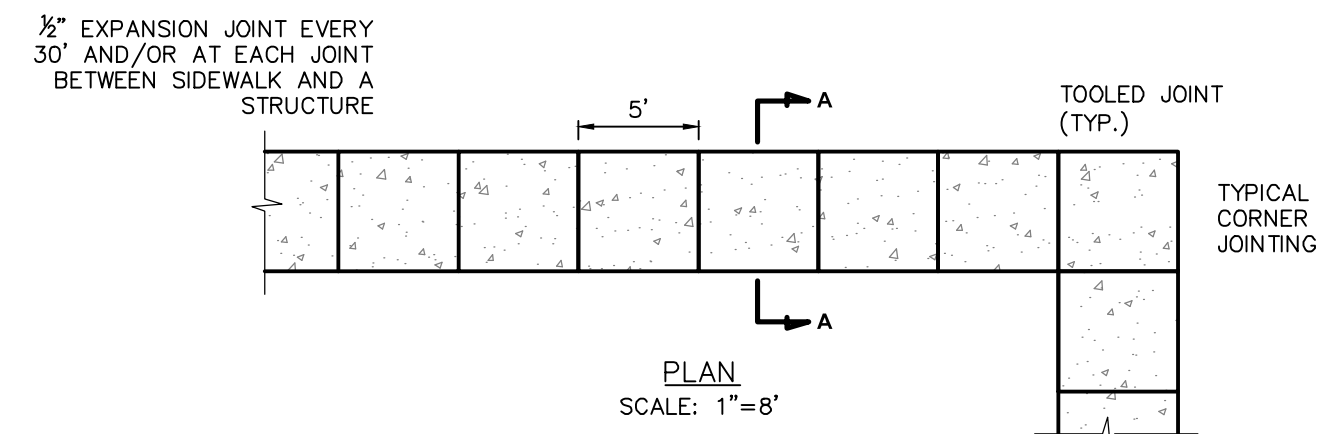
LANDSCAPE CONCEPT PLAN



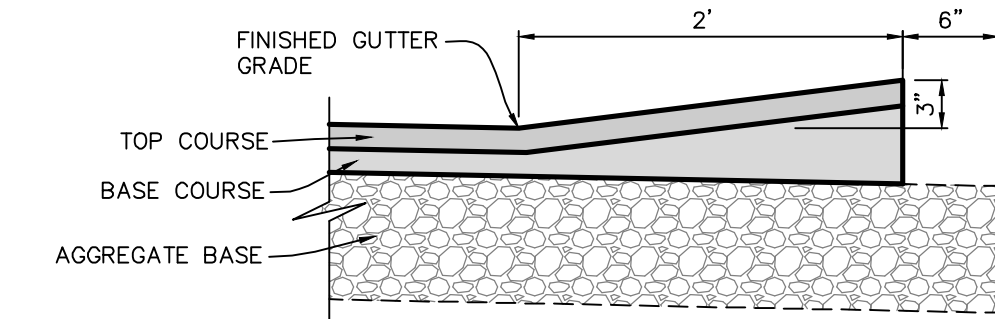
4' DIA. CATCH BASIN DETAIL (IN PAVED AREAS)
SCALE: 1"=4'



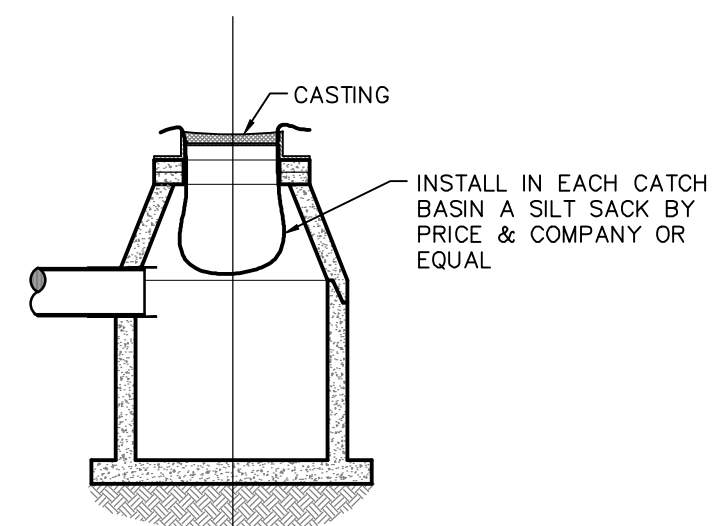
STORM SEWER MANHOLE DETAIL
SCALE: 1"=4'



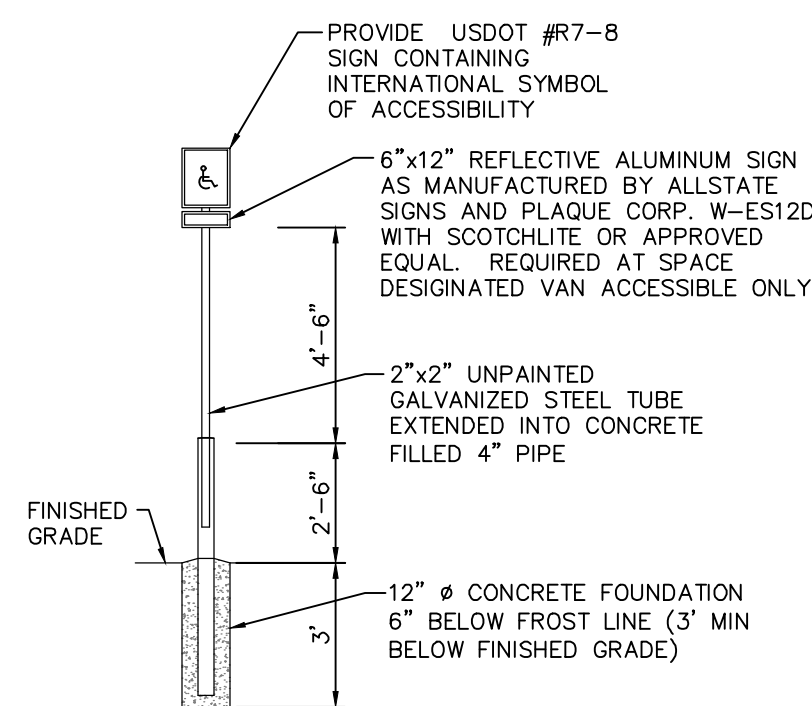
4" CONCRETE SIDEWALK DETAIL



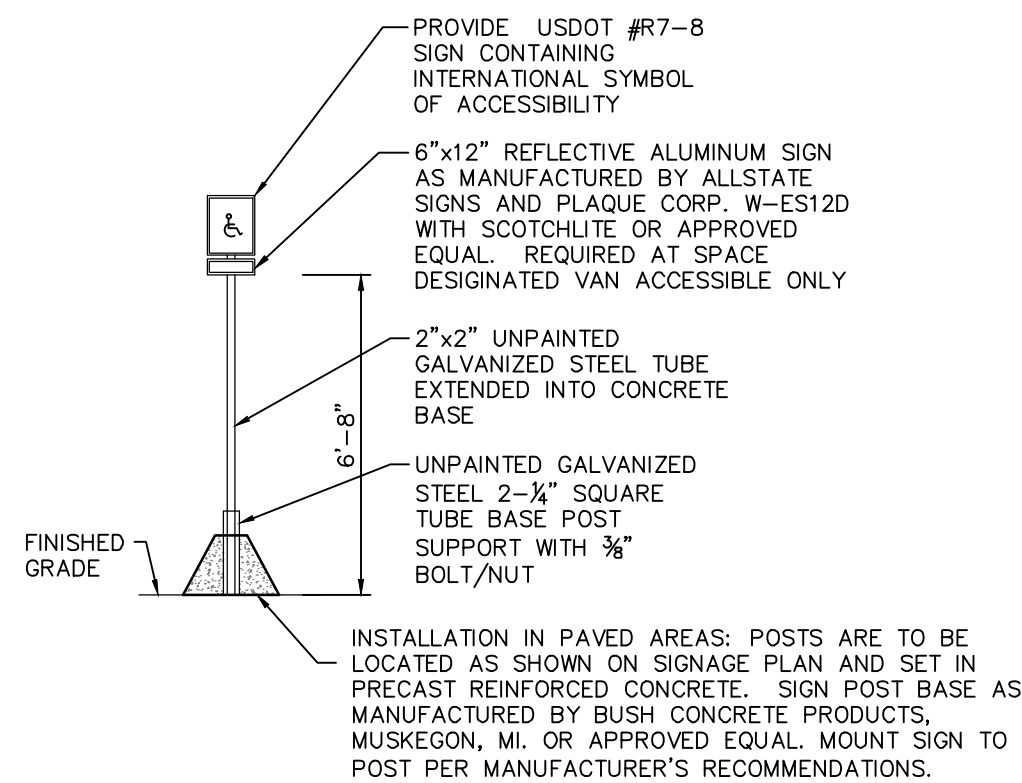
24" BITUMINOUS VALLEY GUTTER DETAIL
SCALE: 1"=1'



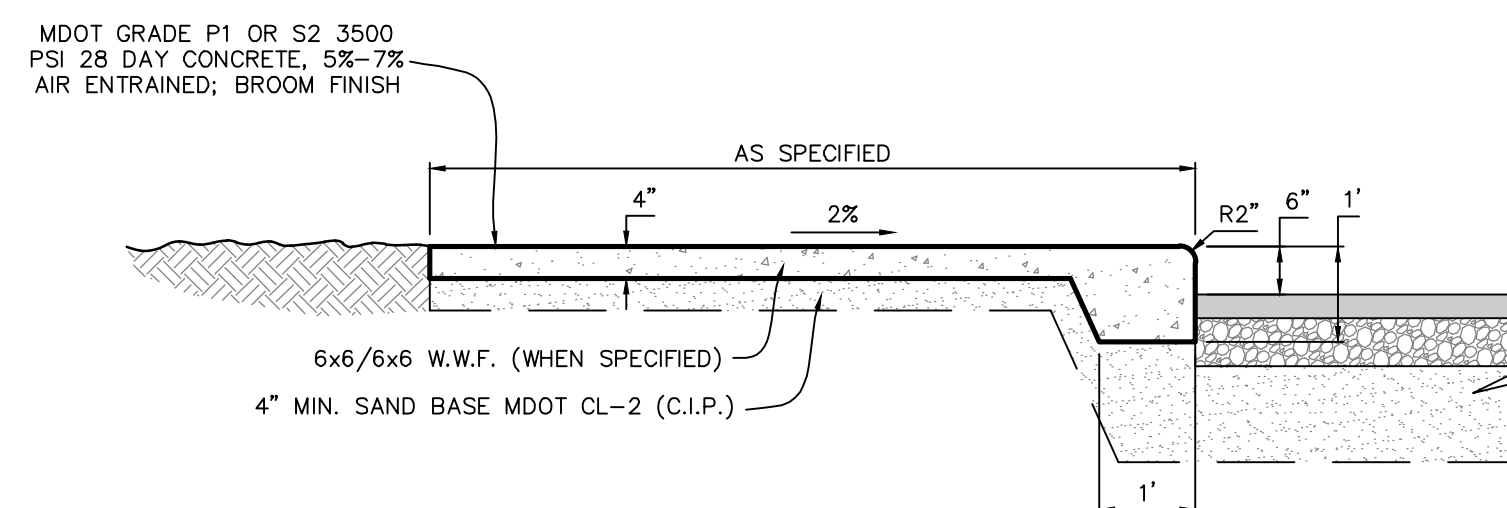
INLET PROTECTION DETAIL
SCALE: 1"=4'



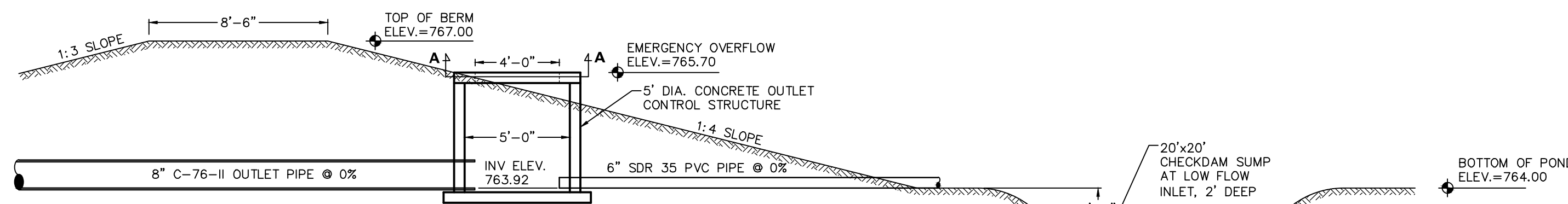
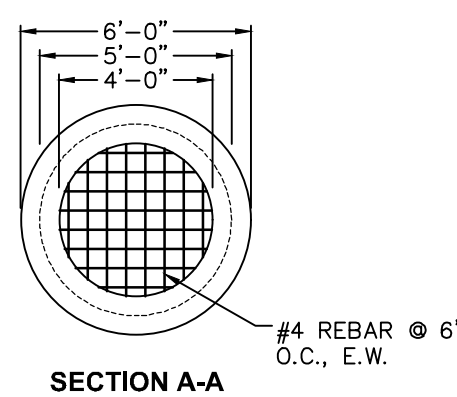
BARRIER FREE PARKING SIGN DETAIL (IN LAWN AREAS)
SCALE: 1"=4'



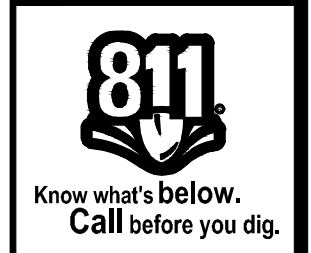
BARRIER FREE PARKING SIGN DETAIL (IN PAVED AREAS)
SCALE: 1"=4'



COMPOSITE CONCRETE WALK & CURB DETAIL
SCALE: 1"=2'



POND OUTLET CONTROL STRUCTURE DETAIL
SCALE: 1"=5'



PLAN REVISIONS

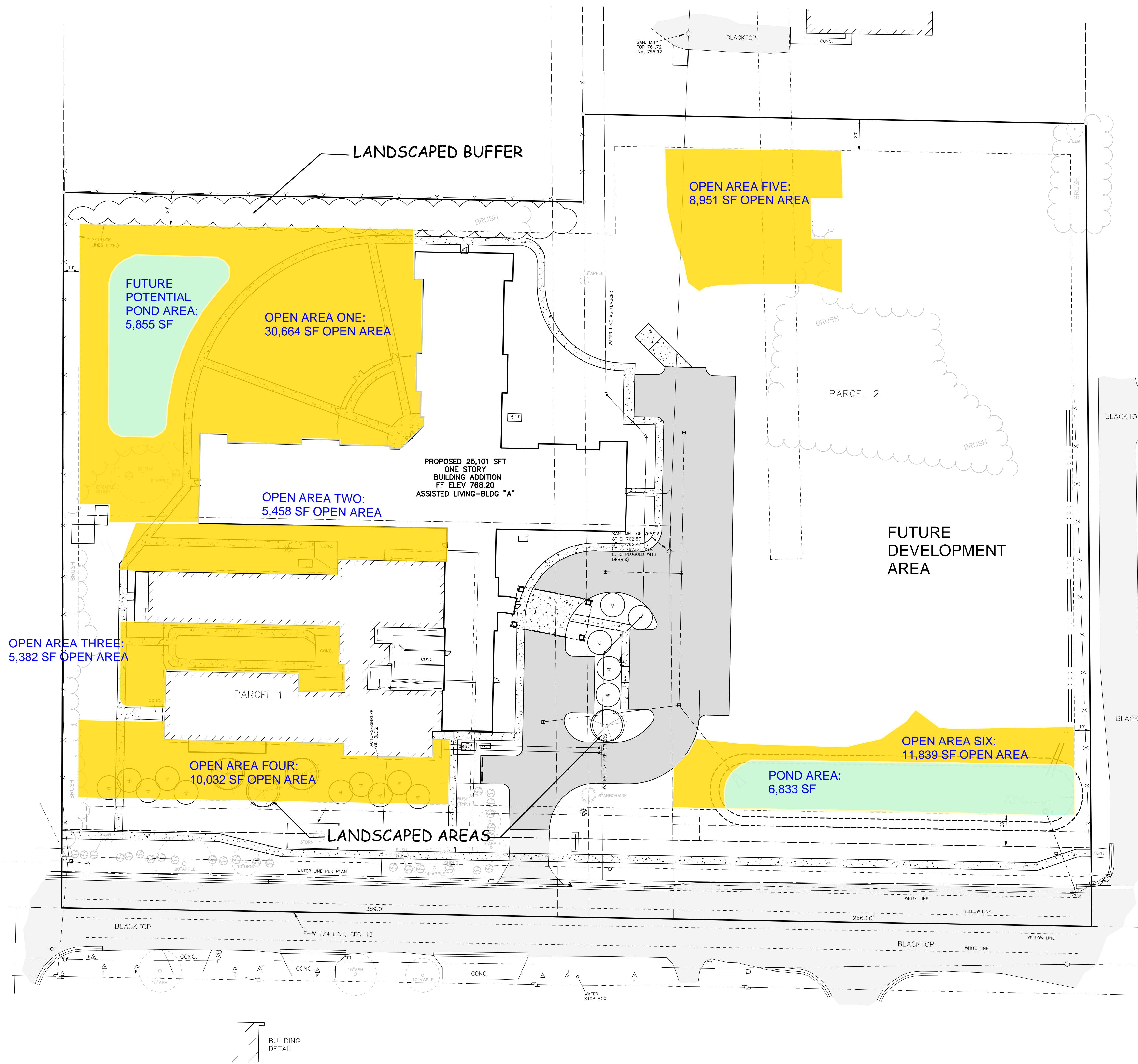
Moore+Bruggink
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mailto:mailbox@mrbse.com

PUD CONCEPT PLAN FOR PRESTIGE CENTRE
UNION TWP., ISABELLA COUNTY, MICHIGAN

FIELD SURVEY / DATE	EXCEL-2021
PROJECT NO.:	210207.01
DESIGN DRAWN BY:	FEF
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PLAN DATE:	03-14-22
SHEET NUMBER	9

P:210207.01 Prestige Centre - M; Pleasant-CAD.DWG:210207.01 Prestige Centre - M; Pleasant-SPA DESIGN-SHEETS.DWG_3/18/2022 4:21:34 PM_MATT KOZAK

P:210207.01 Prestige Centre - M: Pleasant-SPA DESIGN-SHEETS.DWG_3/18/2022 4:21:30 PM_MATT KOZAK



OPEN AREA CALCULATIONS:

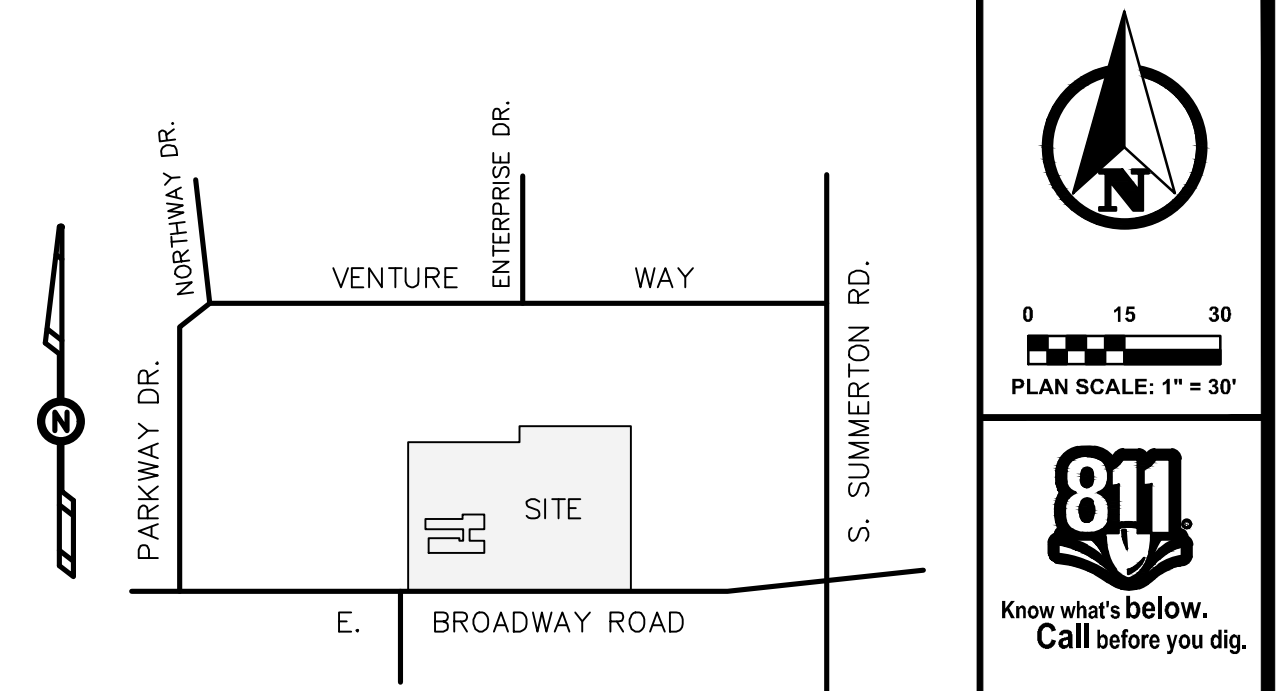
MIN. 20% OF GROSS AREA
 7.23 ACRES (314,938.8 SF)
 62,987.8 SF REQ'D

AREA ONE:	30,664 SF
AREA TWO:	5,458 SF
AREA THREE:	5,382 SF
AREA FOUR:	10,032 SF
AREA FIVE:	8,951 SF
AREA SIX:	11,839 SF
TOTAL OPEN AREA:	72,326 SF

WATER BASIN AREA WITHIN OPEN AREA:
 5,855 SF (POTENTIAL POND within area one)
 6,833 SF (within area five)
 12,688 SF TOTAL WATER BASIN AREA
 18,081.5 SF ALLOWABLE (72,326 * 0.25)

6. **Open Space Requirements.** Planned developments containing a residential component shall provide and maintain usable open space that is accessible to all residents, which shall comply with the following requirements:
- a. A minimum of twenty (20) percent of the gross area of the site or portion thereof that is designated for residential use shall be set aside for such common open space.
 - b. Any pervious land area that is available for the common use of all residents may be included as required open space, except as follows:
 - i. No more than twenty five percent (25%) of the required usable open space shall include the area of any water bodies or wetlands which are covered only periodically with standing water (such as hardwood swamps or "wet" meadows). Required usable open space shall not include the area of any designated wetland that is covered by water or muck such that it is not a suitable environment for walking or similar passive leisure pursuits.
 - ii. Required usable open space shall not include the area of any public or private road, the area of any easement providing access to the site, the area of any commercial recreation use (such as a golf course), or the area of any required setbacks.
 - c. The Township Board, upon receiving a recommendation from the Planning Commission, may require open space to be set aside by the developer through an irrevocable conveyance, such as deed restrictions or covenants that run with the land or through a conservation easement, whereby all rights to develop the land are conveyed to a land conservation organization or other public body, assuring that the open space will be developed according to the site plan. Such conveyance shall:
 - i. Indicate the proposed use(s) of the required open space.
 - ii. Indicate how the leisure and recreation needs of all segments of the population residing in or using the planned development will be accommodated.
 - iii. Provide for the privately-owned open space to be maintained by private property owners with an interest in the open space.
 - iv. Provide maintenance standards and a maintenance schedule.
 - v. Provide notice of possible assessment to the private property owners by Union Township for the cost of maintenance of the open space in the event that it is inadequately maintained and becomes a public nuisance.

OPEN AREA GRAPHIC



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

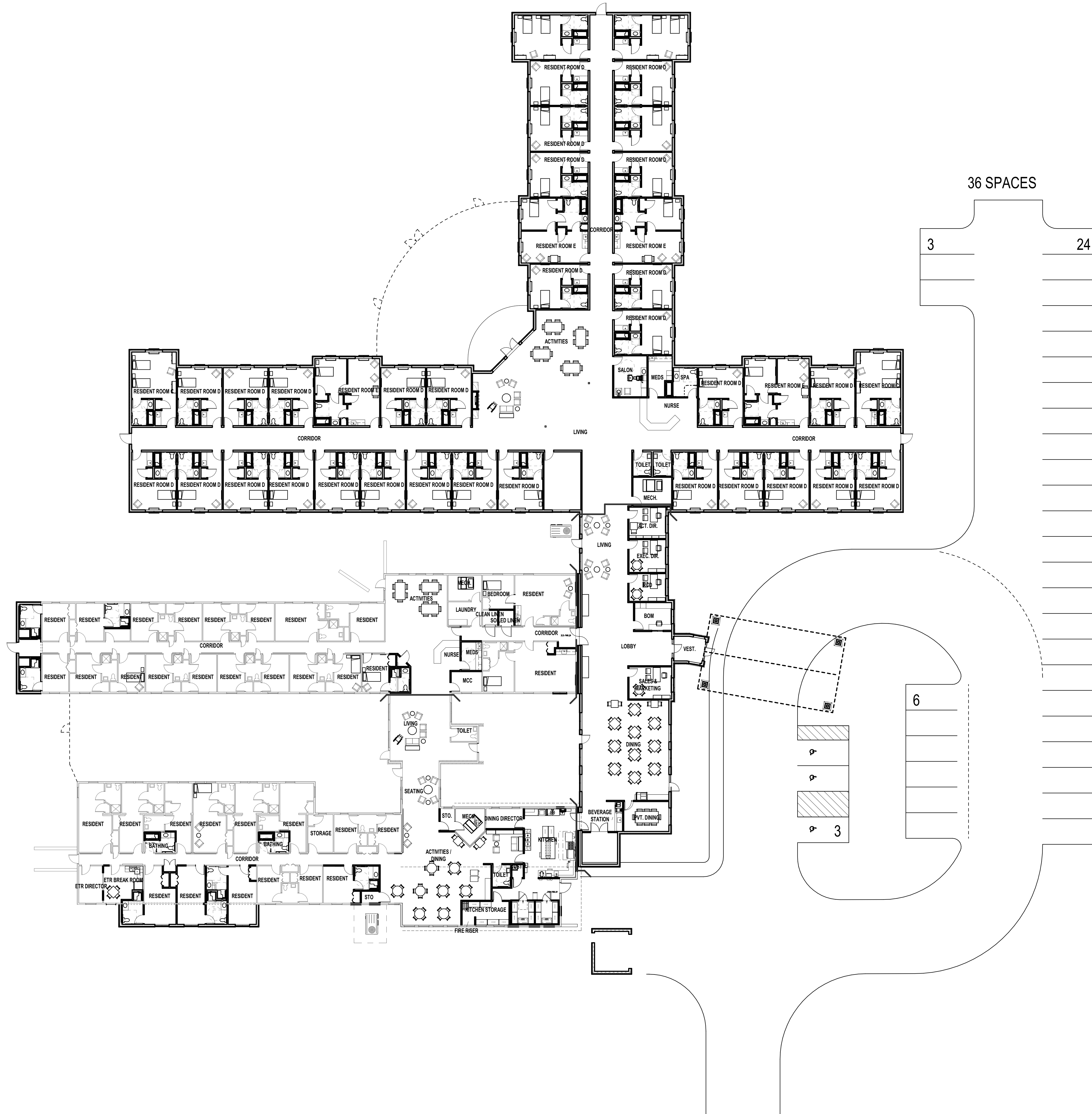
PLAN REVISIONS

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PUD CONCEPT PLAN FOR PRESTIGE CENTRE UNION TWP., ISABELLA COUNTY, MICHIGAN

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PRELIMINARY
NOT FOR CONSTRUCTION



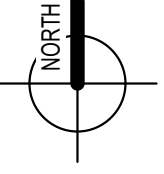
36 SPACES

3

24

6

3



OVERALL FLOOR PLAN

1/16" = 1'-0"

ADDITIONS AND RENOVATIONS
PRESTIGE CENTRE
MCAP MT PLEASANT
MT PLEASANT, MI

ISSUANCES
00.00.2020 SCHEMATIC DESIGN

DRAWN DJH
REVIEWED ADM

PROJECT NO. 5-5355

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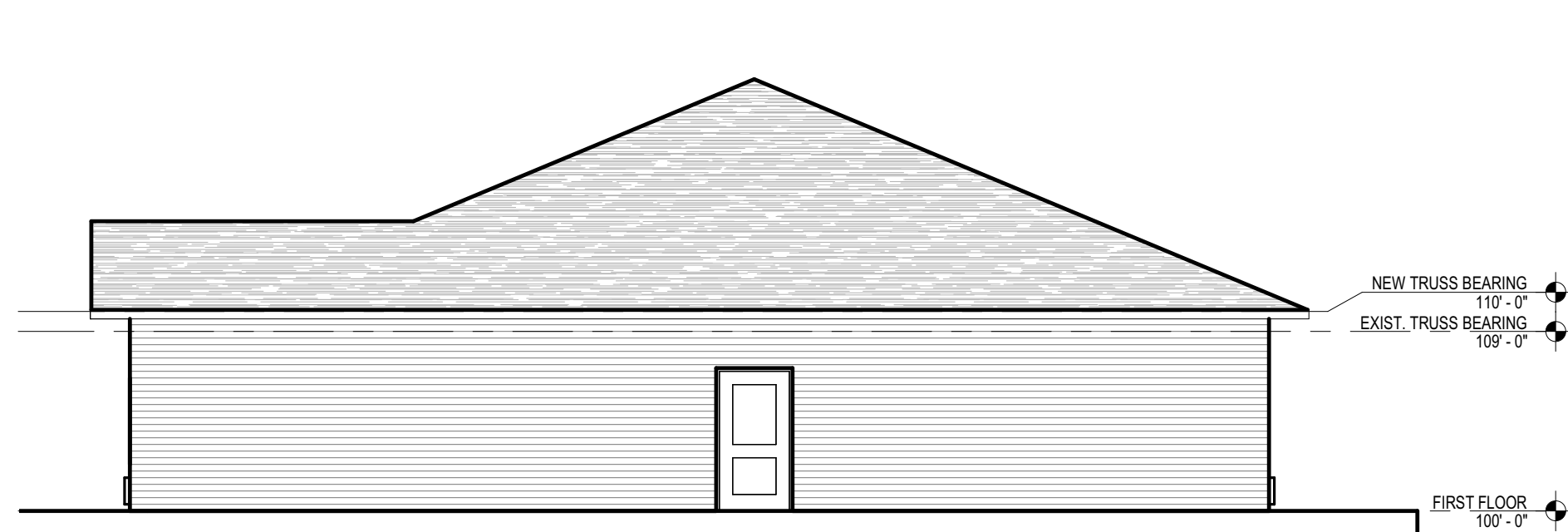
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OVERALL PLAN (AS REQUIRED)

A0.01

PRELIMINARY
NOT FOR CONSTRUCTION

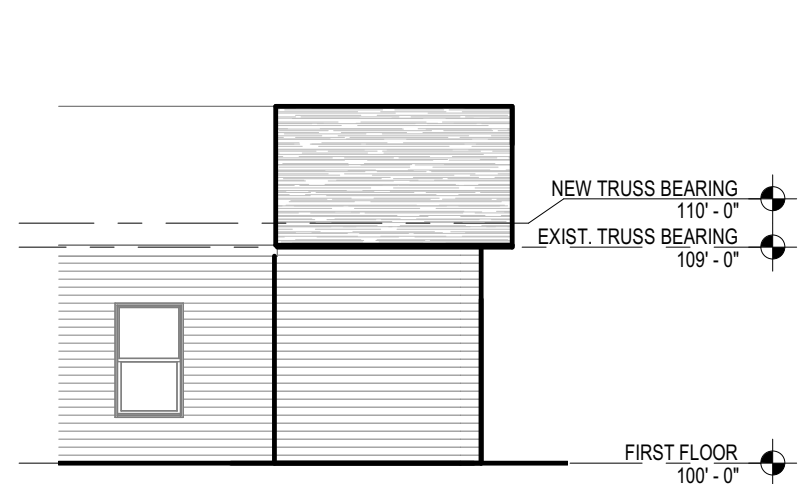
ADDITIONS AND RENOVATIONS
PRESTIGE CENTRE
MCAP MT PLEASANT
MT PLEASANT, MI



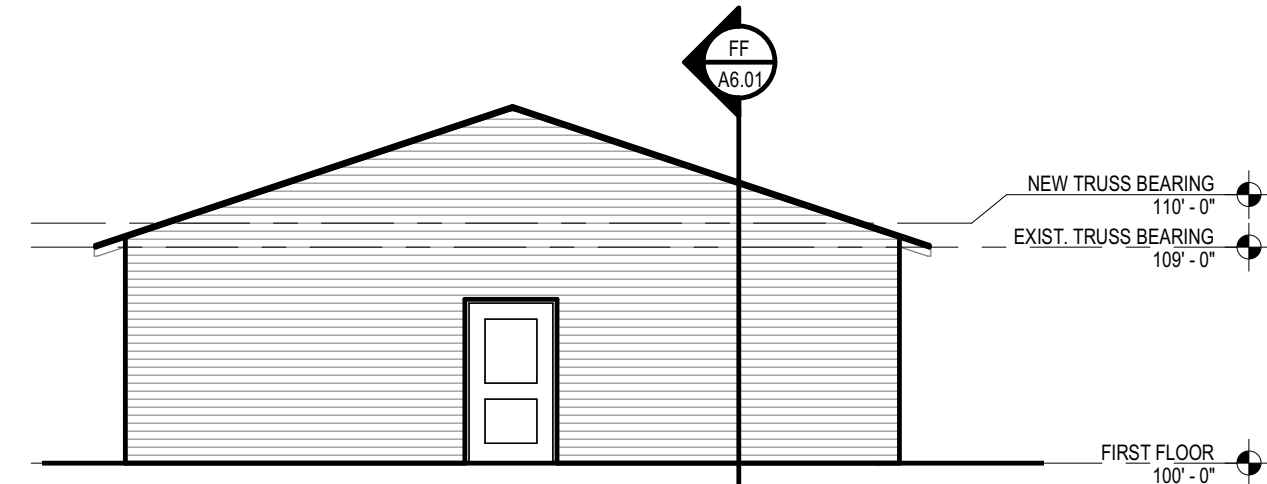
13 UNIT 'D' WEST WING WEST ELEVATION
A4.01 1/8" = 1'-0"



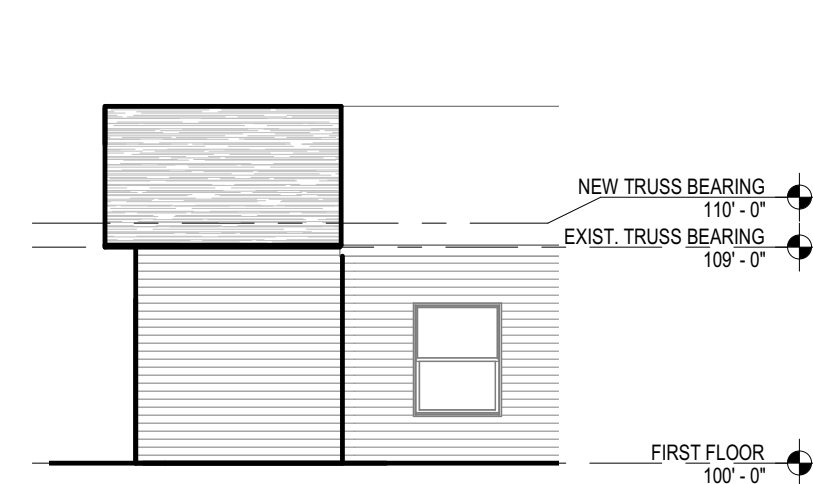
12 UNIT 'D' WEST WING SOUTH ELEVATION
A4.01 1/8" = 1'-0"



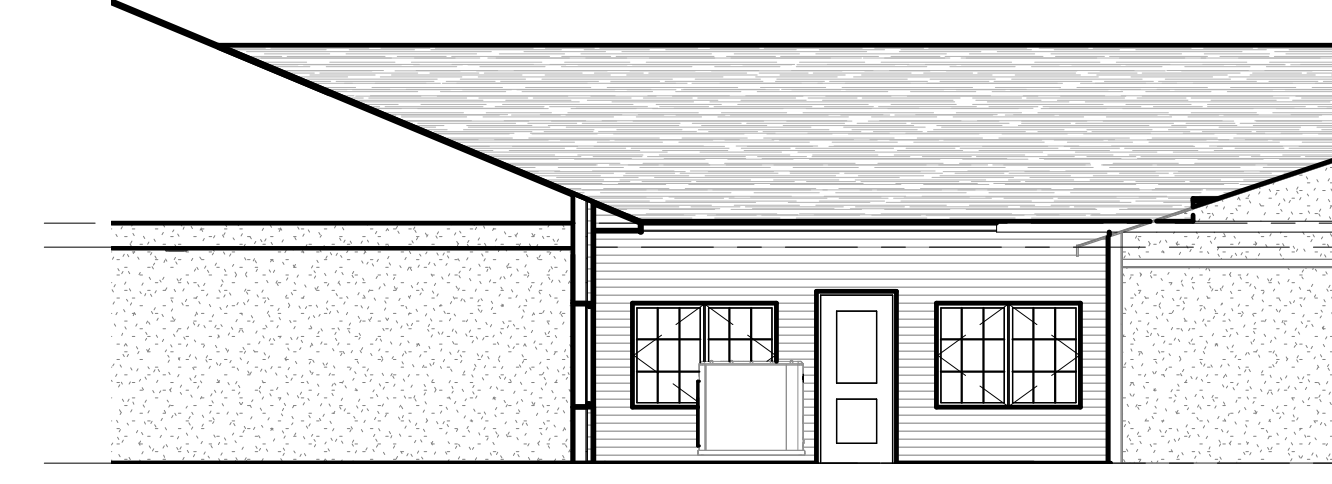
11 UNIT 'B' ADDITION NORTH ELEVATION
A4.01 1/8" = 1'-0"



10 UNIT 'B' ADDITION WEST ELEVATION
A4.01 1/8" = 1'-0"



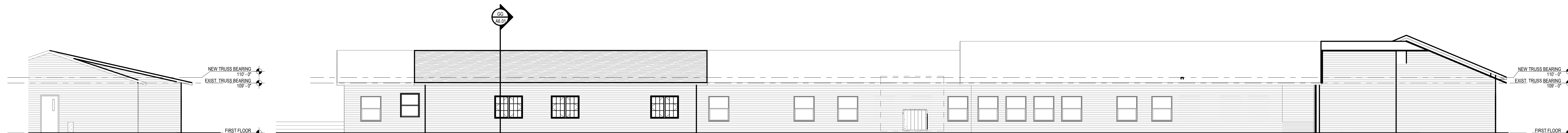
9 UNIT 'B' ADDITION SOUTH ELEVATION
A4.01 1/8" = 1'-0"



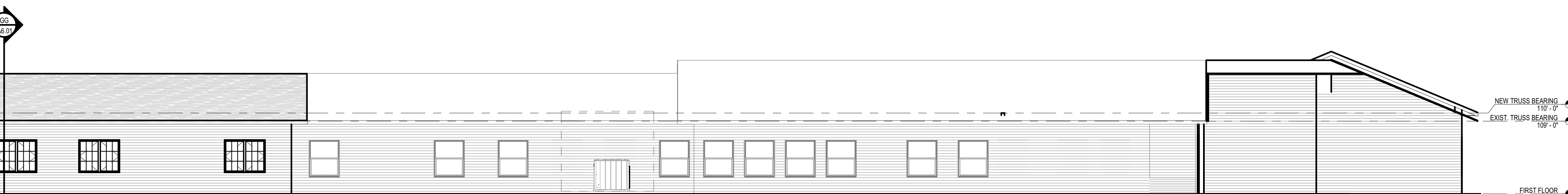
8 UNIT 'C' WEST ELEVATION - NORTH
A4.01 1/8" = 1'-0"



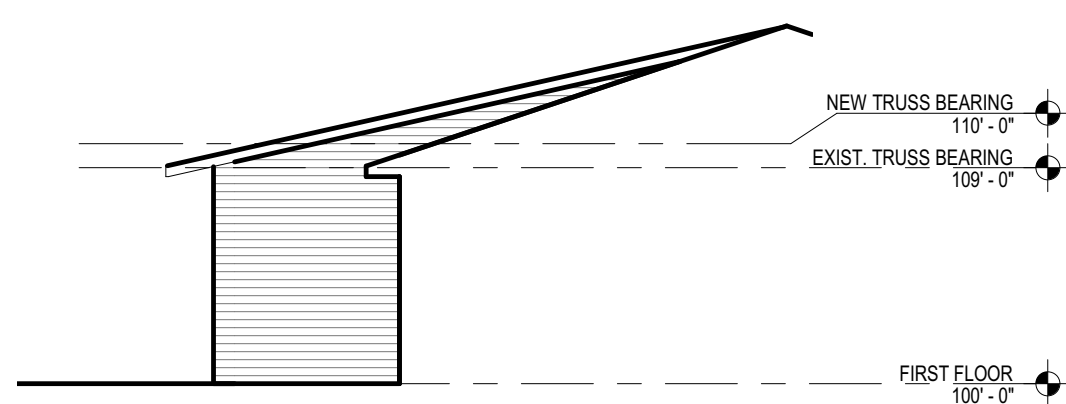
7 UNIT 'C' WEST ELEVATION - SOUTH
A4.01 1/8" = 1'-0"



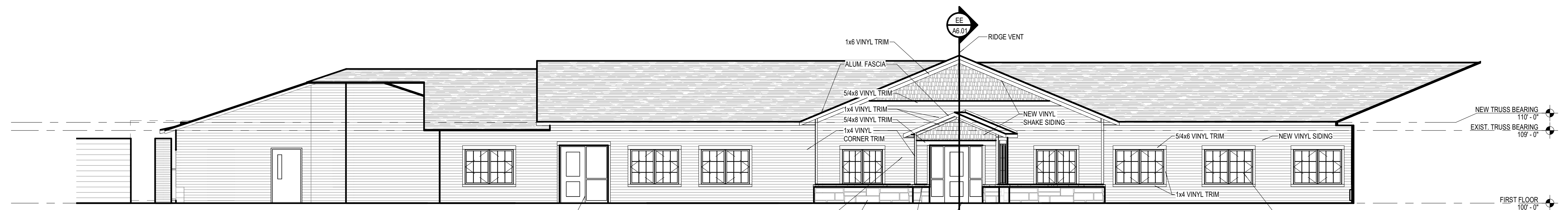
6 UNIT 'A' ADDITION WEST ELEVATION
A4.01 1/8" = 1'-0"



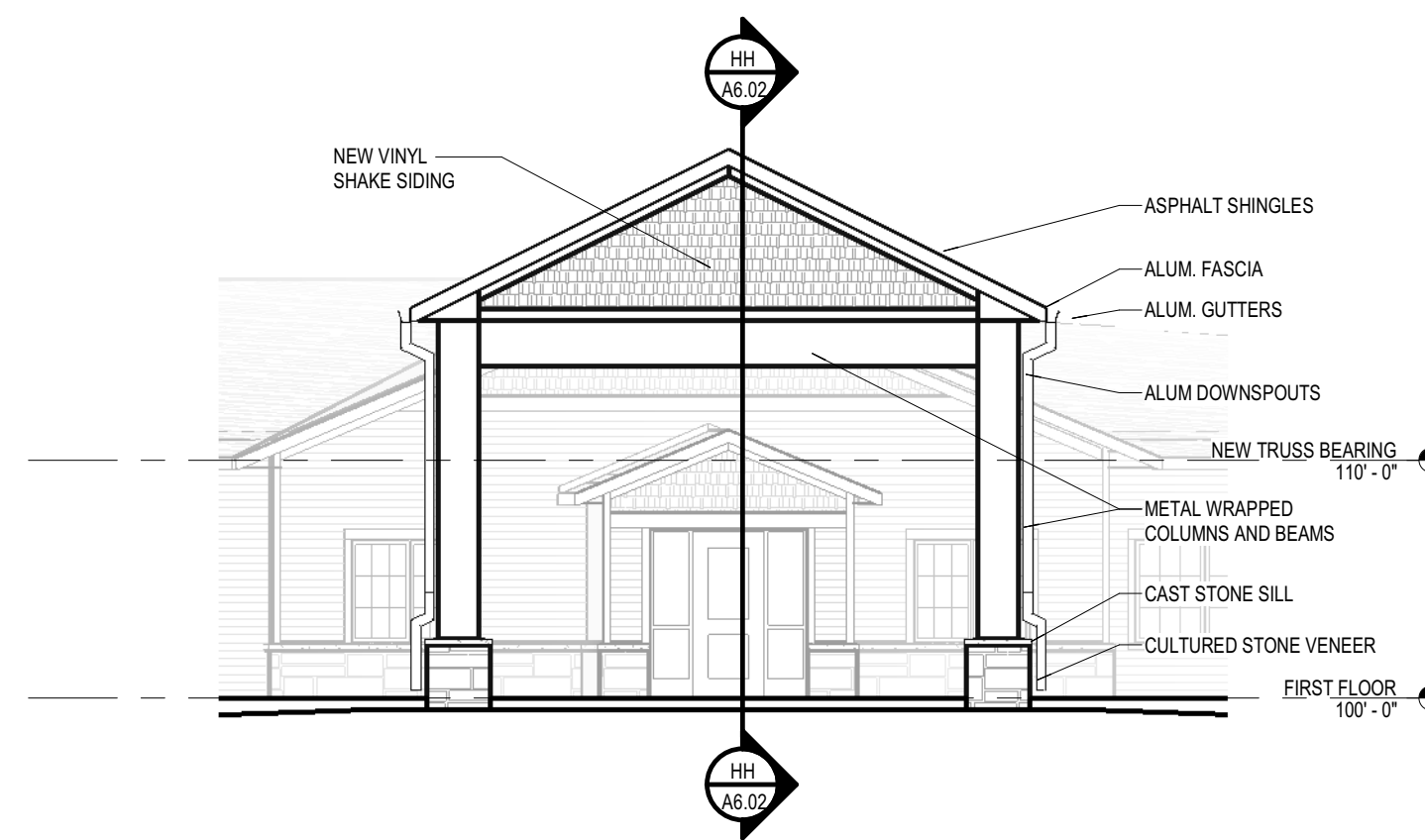
5 UNIT 'A' ADDITION SOUTH ELEVATION
A4.01 1/8" = 1'-0"



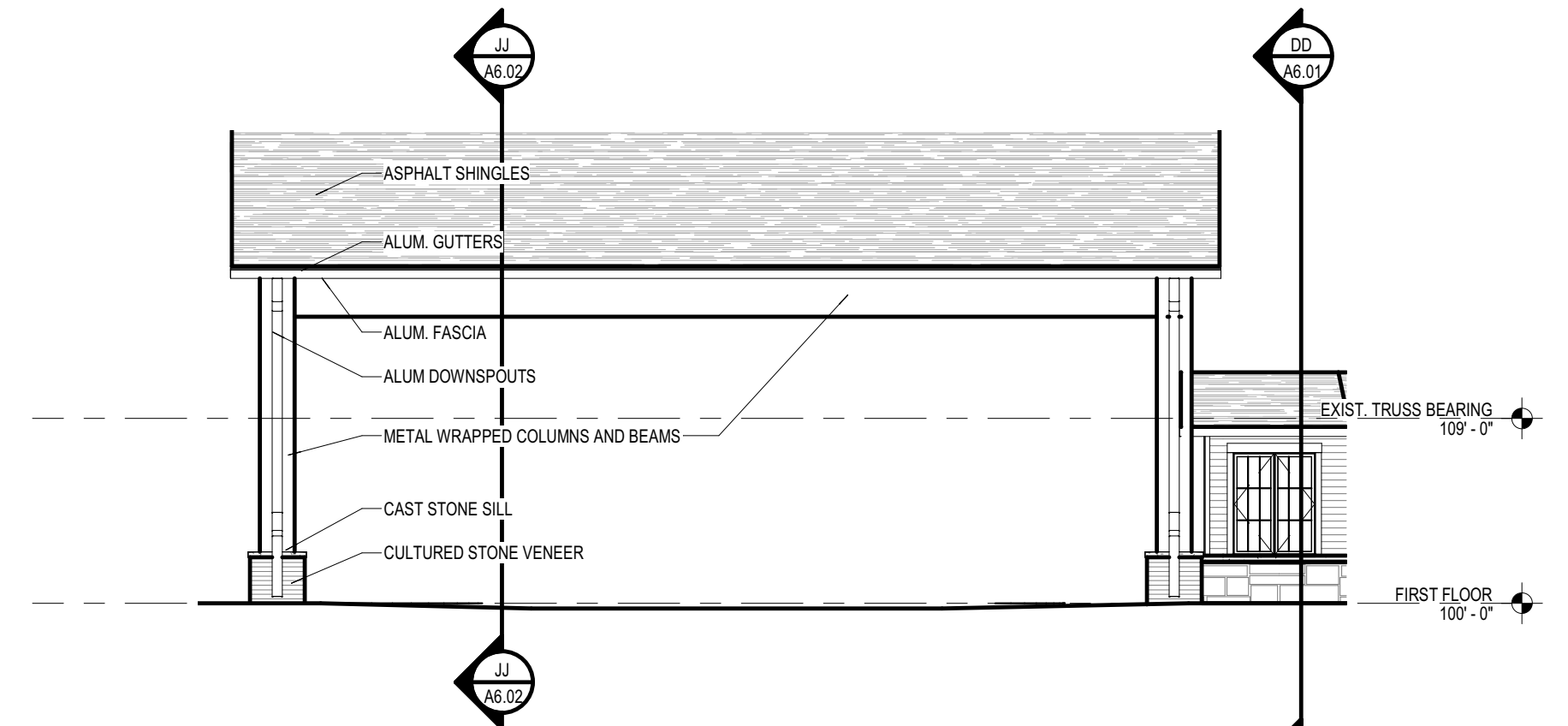
4 UNIT 'A' ADDITION EAST ELEVATION
A4.01 1/8" = 1'-0"



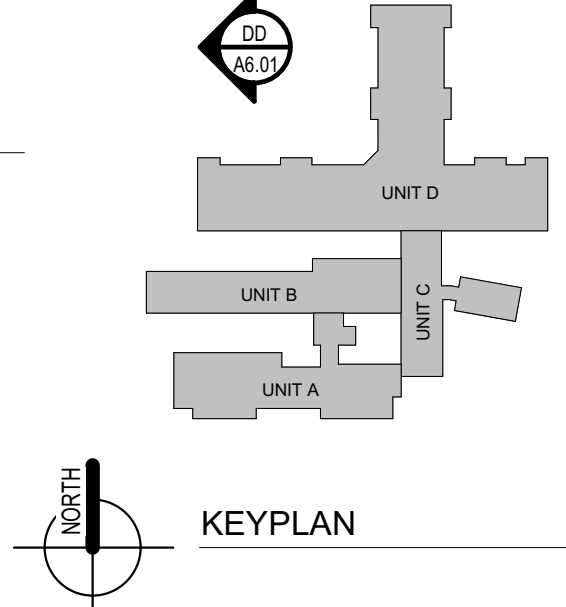
3 UNIT 'C' EAST ELEVATION
A4.01 1/8" = 1'-0"



2 PORTE COCHERE EAST ELEVATION
A4.01 1/8" = 1'-0"



1 PORTE COCHERE NORTH ELEVATION
A4.01 1/8" = 1'-0"



ISSUANCES
00.00.2020 SCHEMATIC
DESIGN

DRAWN DJH
REVIEWED ADM

PROJECT NO. 5-5355

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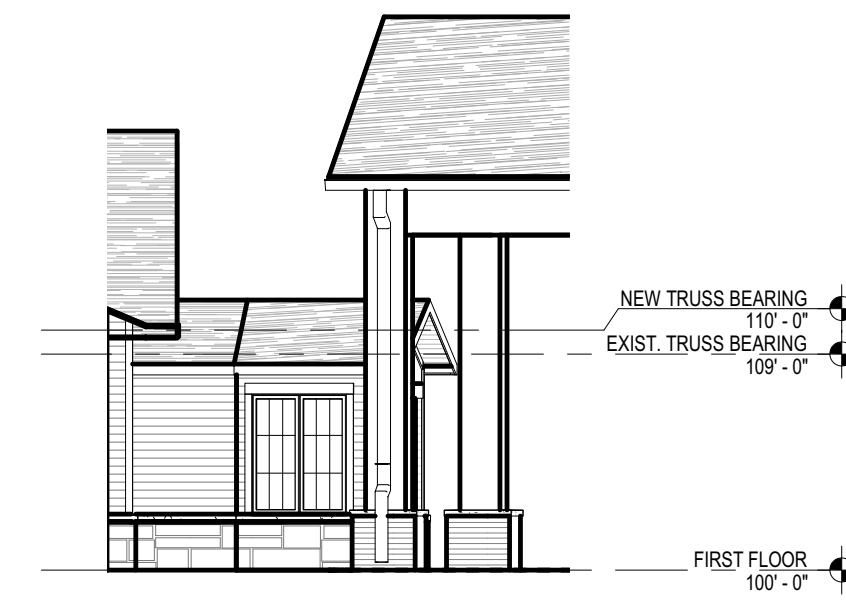
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EXTERIOR ELEVATIONS

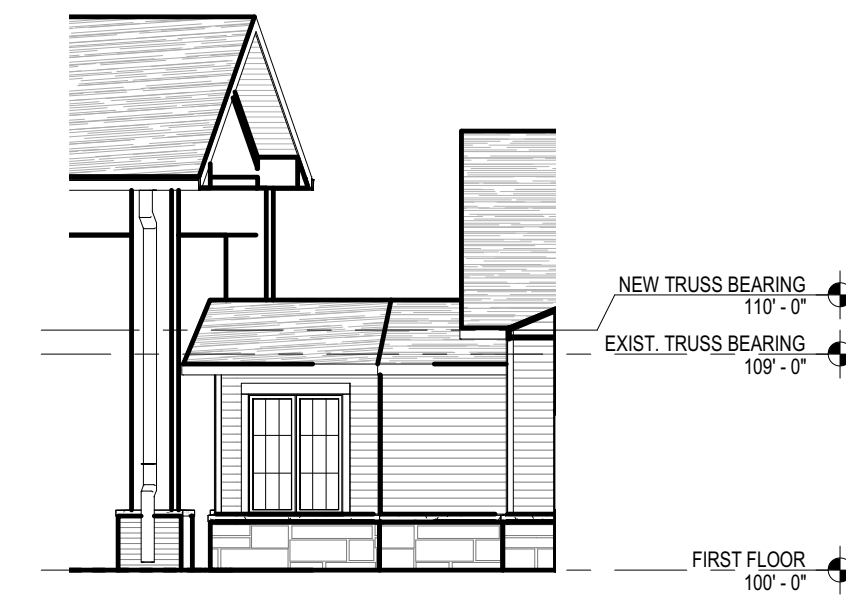
A4.01

PRELIMINARY
NOT FOR CONSTRUCTION

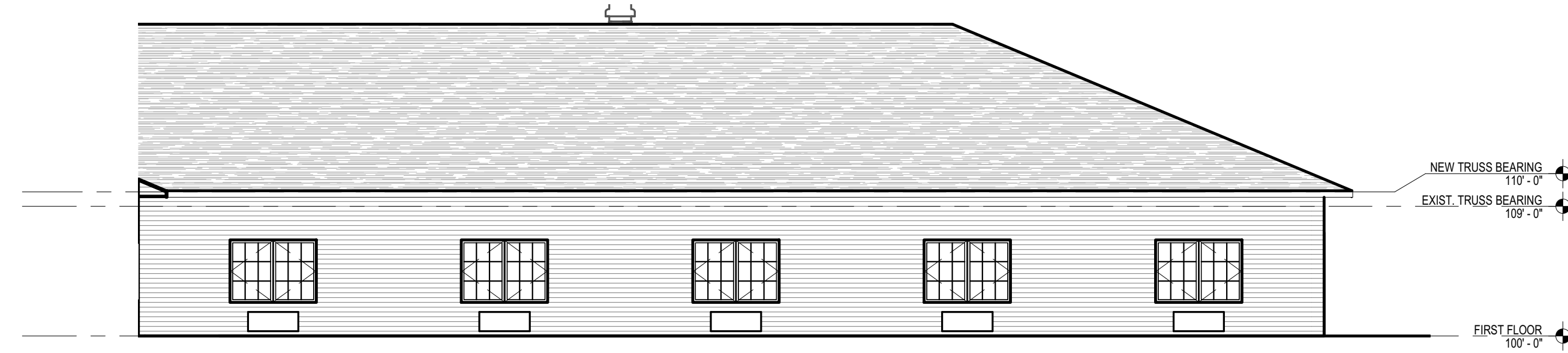
ADDITIONS AND RENOVATIONS
PRESTIGE CENTRE
MCAP MT PLEASANT
MT PLEASANT, MI



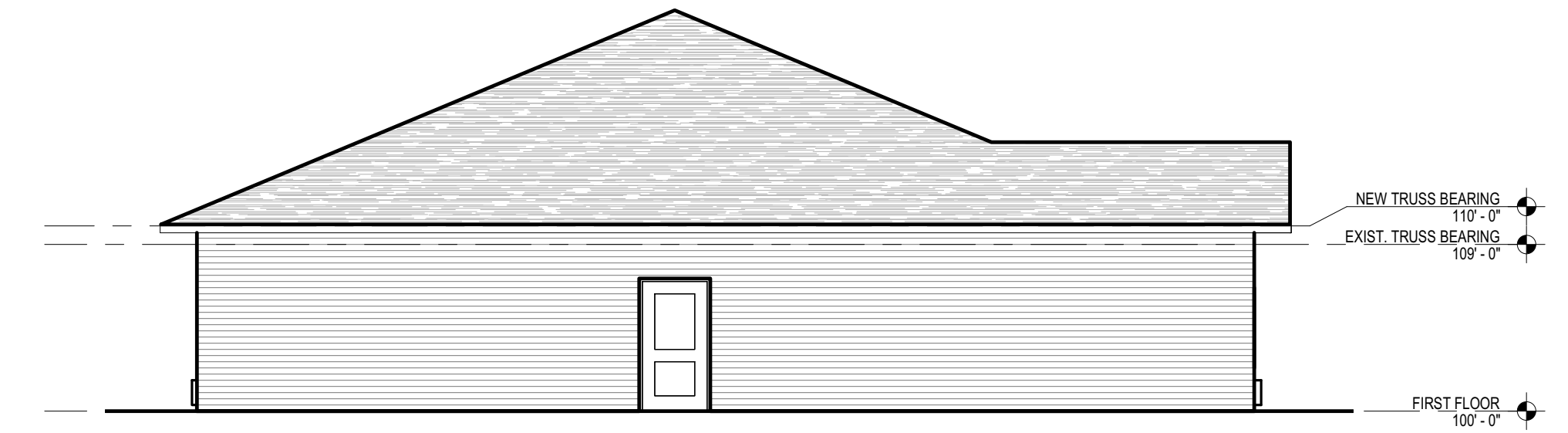
10 VEST. C101 SOUTH ELEVATION
1/8" = 1'-0"



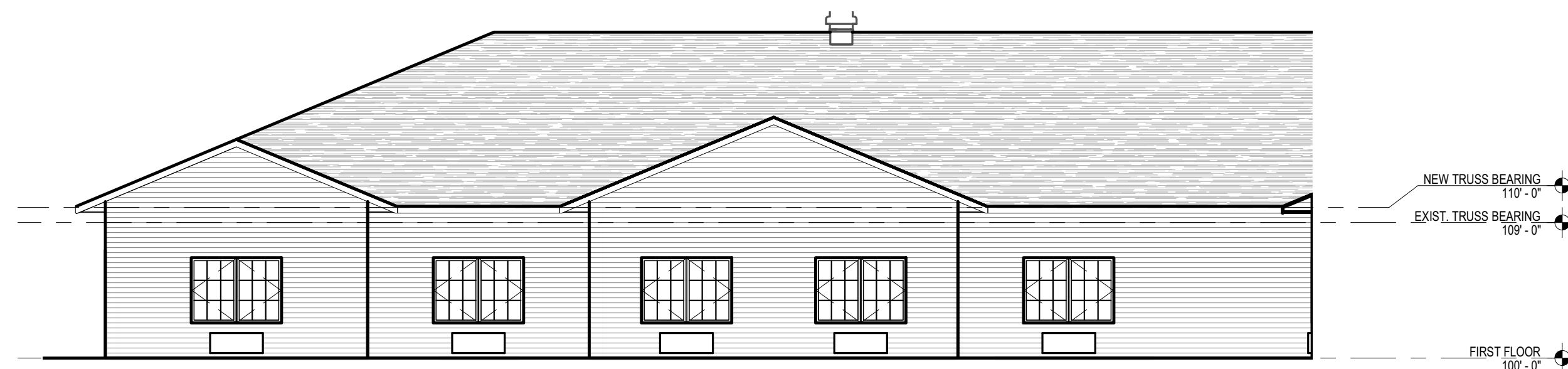
9 VEST. C101 NORTH ELEVATION
1/8" = 1'-0"



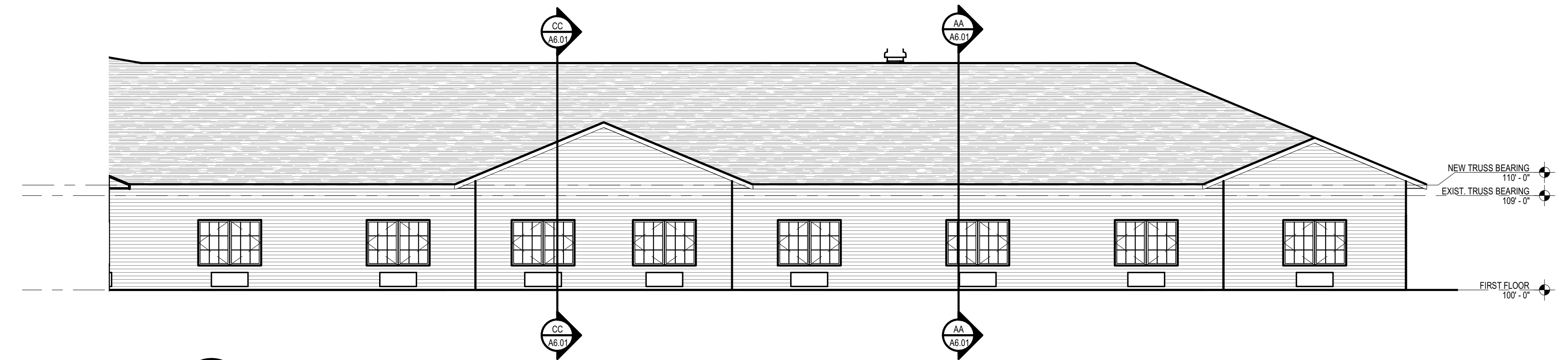
8 UNIT 'D' EAST WING SOUTH ELEVATION
1/8" = 1'-0"



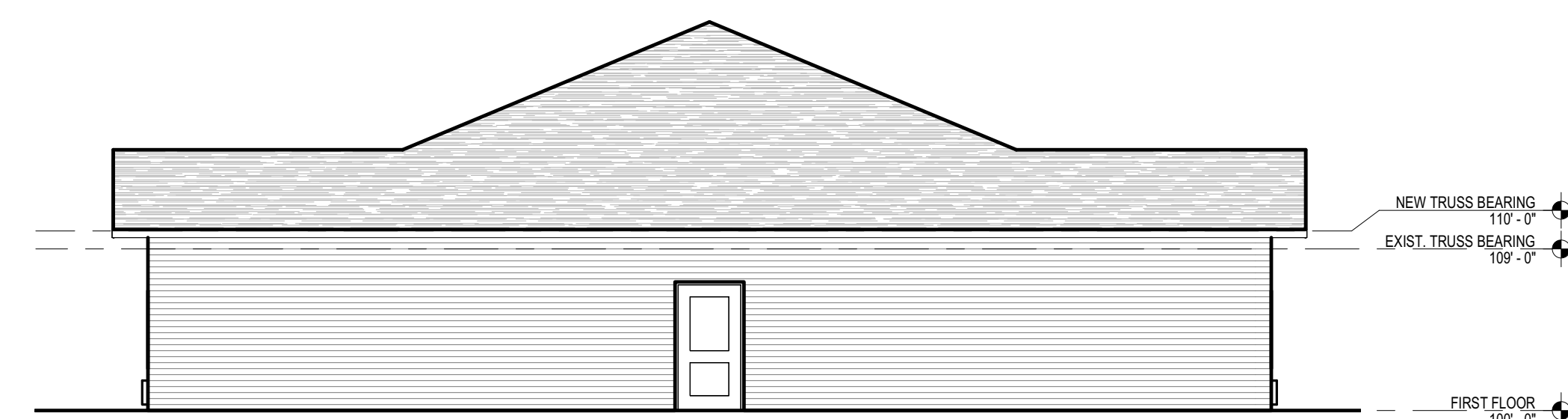
7 UNIT 'D' EAST WING EAST ELEVATION
1/8" = 1'-0"



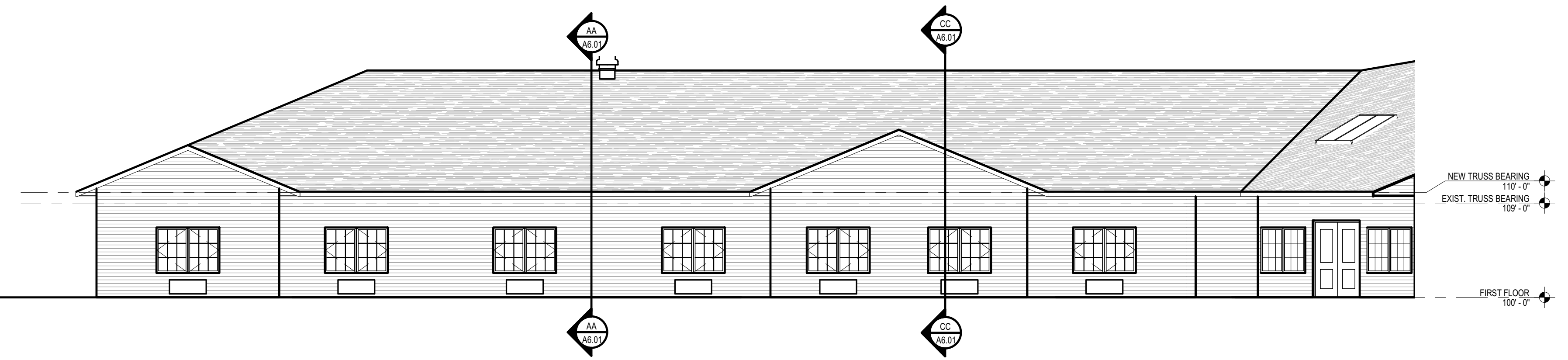
6 UNIT 'D' EAST WING NORTH ELEVATION
1/8" = 1'-0"



5 UNIT 'D' NORTH WING EAST ELEVATION
1/8" = 1'-0"



4 UNIT 'D' NORTH WING NORTH ELEVATION
1/8" = 1'-0"



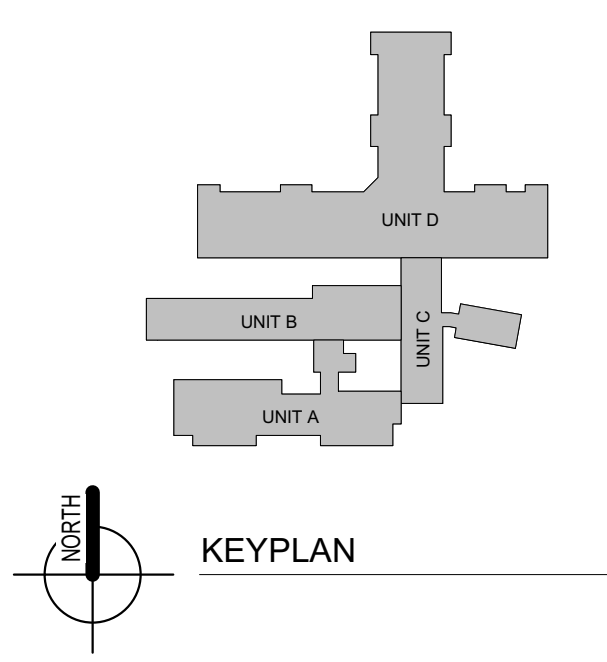
3 UNIT 'D' NORTH WING WEST ELEVATION
1/8" = 1'-0"



2 UNIT 'D' WEST WING PATIO ELEVATION
1/8" = 1'-0"



1 UNIT 'D' WEST WING NORTH ELEVATION
1/8" = 1'-0"



ISSUANCES
00.00.2020 SCHEMATIC DESIGN

DRAWN Author
REVIEWED Approver

PROJECT NO. 5-5355

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EXTERIOR ELEVATIONS

A4.02

PLANNED UNIT DEVELOPMENT (PUD) APPLICATION REPORT

TO:	Planning Commission	DATE:	April 12, 2022
FROM:	Peter Gallinat, Zoning Administrator	ZONING:	B-4, General Business
PROJECT:	PREZ21-03 request to rezone parcels 14-013-20-043-02 & -043-08 at 5785 E. Broadway Road from the B-4 (General Business) District to the PUD (Planned Unit Development) per Section 3.19 (PUD, Planned Unit Development District), and to approve the associated PUD Concept Plan for an expanded assisted living and dependent living for seniors		
PARCELS:	5785 E. Broadway Road, parcels 14-013-20-043-02 & -043-08		
OWNER:	MCAP MT PLEASANT PROPCO LLC (Prestige Centre)		
LOCATION:	Approximately 7.23 acres on the north side of E. Broadway Road in the NE 1/4 of Section 13.		
EXISTING USE:	Assisted living facility	ADJACENT ZONING:	B-4, I-2
FUTURE LAND USE DESIGNATION:	<u>Commercial/Light Industrial</u> . This district is intended for a blend of medium intensity commercial and small-scale light industrial uses. Light industrial uses include but are not limited to small-scale manufacturing, laboratories, R&D (research and development) firms, information technology firms, or other businesses that might be found in a technology park.		
ACTIONS REQUESTED:	To hold a public hearing and to review the PREZ21-03 request to rezone parcels 14-013-20-043-02 & -043-08 at 5785 E. Broadway Road from the B-4 (General Business) District to PUD (Planned Unit Development) and the associated PUD Concept Plan dated March 14, 2022.		

BACKGROUND INFORMATION

The applicant desires to expand an existing assisted living facility, which was originally constructed as part of two (2) special use permits granted by the Township in 1983 and 1987 for a combined 40 bed foster care home facility. The PUD rezoning allows the applicant additional flexibility to pursue approval of this unique project while assuring that the land will only be used in the manner as depicted on an approved PUD Concept Plan.

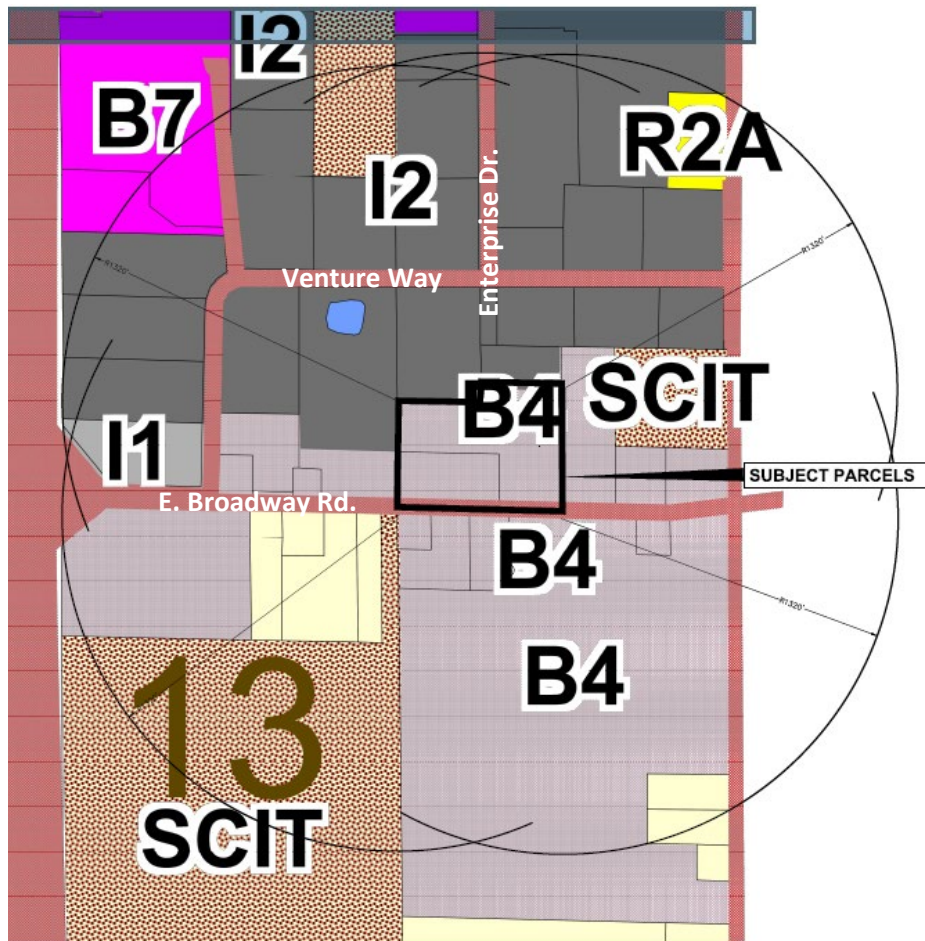
No Independent Senior Living Proposed on the Revised PUD Concept Plan.

The former “phase 2” Independent Senior Living component has been removed from the revised PUD Concept Plan, which now only includes was formerly labeled as “phase 1” of the original project. This was done in response to comments received from the Township’s Public Services Department indicating that the could not be supported by the existing capacity of the sanitary

sewer system serving this area. The former “phase 2” project area is proposed to be left vacant, with any future development to be subject to an amended PUD Concept Plan approval.

Existing Zoning

Both parcels are zoned B-4 (General Business) District. The Master Plan Future Land Use map calls for both parcels to be zoned either B-4 or B-5. The following is an excerpt from the Township’s Official Zoning Map showing the subject parcels:



Nursing Home vs. Dependent/Assisted Senior Living

A nursing home is allowed as a special use in the B-4 zoning district. However, staff concurs with the applicant’s previously expressed concern that the full scope of their expanded facility would exceed the limited scope of a nursing home as defined in the Zoning Ordinance. Instead, the proposed development is for “housing for the elderly” (dependent living and assisted living for seniors), which is a broader land use category that is not an allowable land use in the existing B-4 District, but is specifically included in Section 3.19 as a category that can be authorized as part of a PUD rezoning action.

Land Combination Required.

The project includes the current parcel 14-013-20-043-02 and the larger vacant neighboring parcel 14-013-20-043-08. It is not required for this rezoning and PUD Concept Plan approval stage, but the applicant and landowners will need to be aware that Township Assessor approval of a land division/land combination application to combine the subject parcels into one (1) new tax parcel will be required to be completed prior to issuance of any building permit for this project, with documentation provided documentation to the Zoning Administrator.

PLANNED UNIT DEVELOPMENT REQUIREMENTS (SECTION 3.19)

The PUD Concept Plan is intended to establish the general arrangement of proposed buildings and site improvements, the specific land uses included as part of the PUD, and the scope and extent of any proposed deviations from Zoning Ordinance requirements. The Concept Plan resembles a site plan, but includes less detail. Preliminary and final site plan approvals will be required following any approval of the PUD rezoning and Concept Plan.

The following review comments are based upon Section 3.19 requirements. Where a ✓ is noted, the requirement has been met on the Concept Plan. Where a ☐ or a ○ is noted, the requirement has not been met and plan revisions are required. Where a ● is noted, it is an acknowledgement that the project can comply, and necessary actions are in process of completion to do so:

1. Eligibility Criteria

- ✓ The overall development site (two parcels) is more than the minimum parcel size of 5 acres of contiguous land. The entire project would encompass approx. 7.23 acres.
- ✓ The development will be under single ownership or control as required.

2. Regulatory Flexibility

- ✓ No deviation from zoning has been requested.

3. Permitted Uses and Density

- a. If the underlying zoning is B-4: any use allowed as principal permitted use or special use within the B-4 district, housing for the elderly, and shopping centers.*
 - ✓ Proposed project is housing for the elderly
- b. Residential Density*
 - ✓ Complies

4. Project Design Standards

- ✓ Project complies with required distances between buildings and shows the correct perimeter setback requirements of a B-4 parcel.
- ✓ Instead of the parking formula for a nursing home (0.43 spaces per bed), the applicant chose the dependent senior living formula of 0.39 spaces which does not require visitor parking.

- ✓ A conceptual landscaping and screening plan for the project is depicted on sheet 9. A detailed plan will be required as part of the final site plan for the project
- ✓ The proposed open areas and associated calculations shown on sheet 10 of the revised PUD Concept Plan are consistent with Section 3.19D.6. requirements.
- ✓ Natural features are preserved on site with trees and open areas.
- ✓ A proposed new public sidewalk is shown on the plan along E. Broadway Rd., along with 5-foot-wide internal sidewalks and connections to E. Broadway Rd.
- ✓ A conceptual layout for stormwater retention is depicted on the plan, and is sufficient for this stage of review. Stormwater management calculations and details will be required as part of the final site plan for the project.
- ✓ The increased service needs associated with the new and expanded facilities depicted on the PUD Concept Plan are not anticipated to exceed the capacity of existing and available public roads, police and fire protection services, and educational services.
- ✓ The Public Services Director confirmed in a meeting with the applicant that the applicant's proposal to relocate a portion of the existing municipal water and sewer infrastructure or easements slightly to the east to support the phase 1 Assisted Living Facility/Memory Care Expansion component of this PUD project is acceptable at a conceptual level, but will be subject to more detailed review and approval prior to Planning Commission action on a final site plan for the project.

5. Application Data Requirements.

- ✓ All required names, addresses and contact information are provided on the revised PUD Concept Plan cover sheet.
- ✓ The legal description of the land on which the Planned Unit Development project will be developed together with appropriate tax identification numbers.
- ✓ Except as otherwise noted in this report, the PUD Concept Plan includes all of the following required information:
 - A general location map.
 - The location of existing roads and highways adjacent to the proposed development.
 - The general layout of dwelling units, parking, open space, and recreation and park areas.
 - General locations and setbacks of each structure and use in the development.
 - Typical layouts and facade designs for each type of use or building.
 - In the case of single family detached development, the plan should indicate the setbacks and outline of the area within which a house could be constructed on each lot.
 - The vehicular circulation system planned for the proposed development.
 - Conceptual landscaping and screening plan.
- ✓ A topographic survey plan has been submitted (sheet 1).
- ✓ A soils inventory based on the County Soils Survey has been submitted (sheet 2).
- ✓ General locations and approximate dimensions of wetland areas and significant site

features such as tree stands, unusual slopes, streams and water drainage areas have been submitted on the Grading Plan (sheet 6).

- ✓ A conceptual utility plan has been provided (sheet 7).
- ✓ A conceptual layout of the proposed stormwater drainage system is included.
- ✓ A map showing existing zoning designations for the subject property and all land within one quarter mile has been provided on sheet 2.
- ✓ A map and written explanation of the relationship of the proposed Planned Unit Development to the Township's Master Plan and Future Land Use Map has been submitted (cover sheet).
- ✓ Documentation that the applicant has sufficient development experience to complete the proposed project in its entirety has been provided. MCAP has submitted bios of their management team. The company has a total of 51 development projects completed through mid-2021.
- ✓ A general schedule for design approval, construction, and occupation of buildings has been provided as required.
- ✓ The number of residential units to be developed has been provided: The project will contain a total of 164 units between phases 1 & 2.
- ✓ Proposed sidewalk along E. Broadway Rd. is shown on the plan. Internal sidewalks are shown that connect the phase 1 & 2 developments.
- ✓ A Transportation Impact Study is required for a PUD if the Planning Commission or Township Board deems it necessary. Previously staff recommended a Transportation Study but no longer sees a need for one with the current exclusion of the proposed Independent Senior Living.

CRITERIA FOR PUD REZONING AND CONCEPT PLAN APPROVAL

In considering any application for PUD rezoning and Concept Plan approval, the Planning Commission and Township Board shall make their determinations based on consistency with the following criteria:

- 1. The application and Concept Plan are compatible with the goals and policies of the Master Plan and any other Township planning documents.**
 - ✓ The revised PUD Concept Plan includes a more detailed evaluation of the connections between this project and goals 1 through 3 on page 7 of the Master Plan.
- 2. The application and Concept Plan conform to all requirements of this Section 3.19, and all other applicable requirements of this Ordinance and other Township ordinances.**
 - ✓ The revised PUD Concept Plan conforms to all requirements of the section 3.19

3. **The overall Concept Plan site layout and mix of land uses are compatible with the natural resources and environment, adjacent uses and development, the surrounding neighborhood, and the Township as a whole.**

✓ The revised PUD Concept Plan meets this requirement.

KEY FINDINGS

1. The applicant desires to expand the existing assisted living facility (Dependent Senior Living).
2. The site and proposed development satisfy the Eligibility Criteria for consideration as a PUD project.
3. The scope of proposed development activity on the revised PUD Concept Plan is now depicted as a single-phase project. The former “phase 2” Independent Senior Living component has been removed, with the area left vacant and designated as a “Future Development Area.”
4. The application and revised PUD Concept Plan fully satisfy the requirements of Section 3.19.
5. Township Assessor approval of a land division/land combination application to combine the subject parcels into one (1) new tax parcel will be required to be completed prior to issuance of any building permit for this project.

RECOMMENDATIONS

I would ask that the Planning Commission consider adopting a motion to recommend approval of PREZ21-03 request to rezone the parcels at 5785 E. Broadway Road from the B-4 (General Business) District to PUD (Planned Unit Development) and to recommend approval of the associated Prestige Center PUD Concept Plan dated March 14, 2022 as presented.

Respectfully submitted,

Peter Gallinat, Zoning Administrator

Community and Economic Development Department

Draft Motions: PREZ21-03 request to rezone parcels 14-013-20-043-02 & -043-08 at 5785 E. Broadway Road from the B-4 (General Business) District to PUD (Planned Unit Development) and to approve the associated PUD Concept Plan.

MOTION TO RECOMMEND APPROVAL OF THE PUD REZONING AS REQUESTED:

Motion by _____, supported by _____, to recommend to the Township Board of Trustees that the PREZ21-03 request to rezone parcels 14-013-20-043-02 & -043-08 at 5785 E. Broadway Road from the B-4 (General Business) District to a PUD (Planned Unit Development) District subject to the revised Prestige Center PUD Concept Plan dated March 14, 2022 be adopted as presented, based on the following findings and conclusions:

1. The site and proposed development satisfy the Eligibility Criteria for consideration as a PUD project as specified in Section 3.19.A. of the Zoning Ordinance.
2. The scope of proposed development activity on the revised PUD Concept Plan is now depicted as a single-phase project. The former “phase 2” Independent Senior Living component has been removed, with the area left vacant and designated as a “Future Development Area.”
3. The application and revised PUD Concept Plan fully satisfy the requirements of Section 3.19.
4. Planning Commission review and approval of preliminary and final site plans and Township Assessor approval of a land division/land combination application will be required for this project.

[If additional conditions or limitations on the recommendation are determined to be necessary:]

This recommendation for approval is offered subject to the following conditions:

1. _____

2. _____

3. _____

Draft Motions: PREZ21-03 request to rezone parcels 14-013-20-043-02 & -043-08 at 5785 E. Broadway Road from the B-4 (General Business) District to PUD (Planned Unit Development) and to approve the associated PUD Concept Plan.

MOTION TO RECOMMEND DENIAL OF THE REQUESTED REZONING:

Motion by _____, supported by _____, to recommend to the Township Board of Trustees that the PREZ21-03 request to rezone parcels 14-013-20-043-02 & -043-08 at 5785 E. Broadway Road from the B-4 (General Business) District to a PUD (Planned Unit Development) District subject to the revised Prestige Center PUD Concept Plan dated March 14, 2022 be denied based on the following findings and conclusions:

MOTION TO POSTPONE ACTION:

Motion by _____, supported by _____, to postpone action on the PREZ21-03 request to rezone parcels 14-013-20-043-02 & -043-08 at 5785 E. Broadway Road from the B-4 (General Business) District to PUD (Planned Unit Development) until the _____, 2022 regular Planning Commission meeting, for the following reasons:

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	KRIST FOOD MART
Common Description of Property & Address (if issued)	SOUTHWEST CORNER OF E. PICKARD RD. AND S. ISABELLA RD. / 4972 E. PICKARD RD. MOUNT PLEASANT, MI 48858
Applicant's Name(s)	KRIST OIL COMPANY INC.
Phone/Fax numbers	906-265-6144
Email	kristc@kristoil.com
Address	303 SELDEN RD.
City:	IRON RIVER, MI
Zip:	49935

Legal Description:	<input checked="" type="checkbox"/> Attached	Included on Site Plan	Tax Parcel ID Number(s):	SEE ATTACHED
Existing Zoning:	B-7	Land Acreage:	3.28	Existing Use(s):
VACANT/RESIDENTIAL				
<input checked="" type="checkbox"/> ATTACHED: Letter describing the project and how it conforms to Section 14.2.5. (Standards for Site Plan Approval)				

Firm(s) or Individuals(s) who prepared site plan(s)	1. Name: <u>GEI CONSULTANTS</u> Phone: <u>906-214-4151</u> Email: <u>SEE ATTACHED</u>
	2. Address: <u>990 LALLEY RD.</u> City: <u>IRON RIVER</u> State: <u>MI</u> Zip: <u>49935</u> Contact Person: <u>CRAIG RICHARDSON</u> Phone: <u>906-284-3903</u>
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: <u>MICHIGAN RESERVES INC.</u> Phone: _____
	Address: <u>PO BOX 329</u>
	City: <u>MOUNT PLEASANT</u> State: <u>MI</u> Zip: <u>48804</u>
	Signature:  Interest in Property: <u>OWNER</u>
	2. Name: <u>KRIST OIL COMPANY INC.</u> Phone: <u>906-265-6144</u>
	Address: <u>303 SELDEN RD.</u>
	City: <u>IRON RIVER</u> State: <u>MI</u> Zip: <u>49935</u>
	Signature:  Interest in Property: <u>BUYER</u>

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

3-15-22

Date

Office Use Only

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 <input type="checkbox"/>	No <input type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input checked="" type="checkbox"/>	N <input type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
c. Does the project propose any development, construction, silvicultural activities or contour alterations within a designated critical dune area?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
d. Does the project involve construction of a dam, weir or other structure to impound flow?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input checked="" type="checkbox"/>	N <input type="checkbox"/>
5) Does the project involve the construction or alteration of a water supply system? Union Township Public Services Department and Drinking Water & Environmental Health Division (DWEHD), 517-284-6524	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>
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 <input checked="" type="checkbox"/>	N <input type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
8) Does the project involve the construction or modification of a campground? Union Township and DWEHD, Campgrounds program , 517-284-6529	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>

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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input checked="" type="checkbox"/>	N <input type="checkbox"/>
12) I have a Non-Community Water Supply (Type II) Guide , Contact (District or County) Local Health Department , 517-485-0660	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
13) I am a community water supply (Type I) Community Water Supply, DWEHD District Office Community Water Supply Program , 517-284-6512	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
18) Does the project involve the drilling or deepening of wells for waste disposal? Oil, Gas and Minerals Division (OGMD), 517-284-6841	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
22) Does the project involve the on-site treatment, storage, or disposal of hazardous waste? MMD, Hazardous and Liquid Waste , 517-284-6562	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>

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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
What Sector-Specific Permits May be Relevant to My Business?		
Transporters	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
27) Does the project involve the <i>transport</i> of some other facility's non-hazardous liquid waste? MMD, Transporter Program , 517-284-6562	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
28) Does the project involve the <i>transport</i> of hazardous waste? MMD, Transporter Program , 517-284-6562	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
30) Does the project involve <i>transport</i> 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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
31) Do you store, haul, shred or process <i>scrap tires</i> ? MMD, Scrap Tire Program , 517-284-6586	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
Sectors	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
32) Is the project a <i>dry cleaning</i> establishment utilizing perchloroethylene or a flammable solvent in the cleaning process? AQD, Dry Cleaning Program , 517-284-6780	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
33) Does your <i>laboratory</i> test potable water as required for compliance and monitoring purposes of the Safe Drinking Water Act? Laboratory Services Certifications , 517-284-5424	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
34) Does the project involve the operation of a <i>public swimming pool</i> ? DWEHD, Public Swimming Pools Program , 517-284-6529	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
35) Does the project involve the operation of a <i>campground</i> ? Union Township and DWEHD, Campgrounds , 517-284-6529	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	N <input checked="" type="checkbox"/>

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 <input type="checkbox"/> N <input checked="" type="checkbox"/>
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 <input type="checkbox"/> N <input checked="" type="checkbox"/>
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 <input type="checkbox"/> N <input checked="" type="checkbox"/>
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 <input type="checkbox"/> N <input checked="" type="checkbox"/>
42) Does the project involve the surface or open-pit mining of metallic mineral deposits?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
43) Does the project involve the mining of nonferrous mineral deposits at the surface or in underground mines?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
44) Does the project involve mining coal?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
45) Does the project involve changing the status or plugging of a mineral well?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>
46) Does the project involve the drilling or deepening of wells for brine production, solution mining, storage, or as test wells?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>

Contact **Union Township** and [EGLE Permits & Bonding](#), OGMD, 517-284-6841

Planning Commission– Detailed Use Statement-Site Plan
Krist Oil Company, Inc.
Proposed Krist Food Mart
4972 E. Pickard Road, Union Township, Michigan

Krist Oil Company independently owns and operates 73 Convenience Stores across Michigan, Wisconsin, and Minnesota. Krist Oil Company, Inc. (Krist Oil) is intent on purchasing six (6) parcels of property at the corner of E. Pickard Road and S. Isabella Road for development of a Krist Food Mart. All six parcels are owned by Michigan Reserves Inc., totaling approximately 3.28 acres. Three parcels are located along E. Pickard Road and three parcels are located along S. Isabella Road. The three parcels along E. Pickard Road are residential properties, while the three parcels along S. Isabella Road are commercial. N&B Floor Coverings were the tenants of the commercial properties but have since vacated the lots. The existing buildings and site features on the Michigan Reserves Inc. properties are to be demolished for the proposed Krist Food Mart development per the attached Site Plan. The features abutting the site include: trees and residential properties to the south and an open yard/commercial property to the west. During construction, silt fence will be installed and maintained along the west and south sides of the property. Sedimentation control measures will also be installed around existing catch basins bordering the site. The existing grade varies between 763' and 764' within one hundred feet of the west property line. It varies between 762' and 763' along the south property line.

The Krist Food Mart will consist of two (2) canopies, one (1) for gasoline and the other for diesel fuel. Ten (10) pumps will be under the gasoline canopy and four (4) pumps will be under the diesel canopy. The pumps will not have any type or kind of video screen. There will be two (2) electric vehicle charging stations located at the southeast corner of the building. The Food Mart will be 60' x 92' (5,520 SFT) and located in the middle of the parcel. All utilities will be tied in at the street location per the utility plan. The storm water system is proposed to be an underground retention system on the north portion of the site that will discharge to the existing storm sewer(s) at a controlled rate. The southside of the site will discharge to a 18,543 cubic foot retention pond, from there it will be released at a controlled rate. Both will be discharged per Isabella County ordinance and Michigan Department of Transportation (MDOT) rules and regulations. There will be a right in/right out drive entrance on E. Pickard Road and a typical entrance on S. Isabella Road in accordance with the Access Management Plan. A clear vision area will be provided at the corner of Pickard and Isabella.

The filling station will have 43 parking spots available based off the retail square footage (4620 SFT), maximum employee count per shift (3 staff), and number of pump islands (7). Loading and unloading will take place on the south side of the building in the parking lot. A 10' x 10' dumpster enclosure will be located on the westside of the building per the site plan. Landscaping will be planted on all sides of the property as indicated on the site plan. The makeup of the landscaping will be per the Union Township zoning ordinance. All landscaping will go up to the property line or right of way. An eight (8) foot high wall will be constructed four (4) feet off of the west and south property lines. The wall will have a faux stone finish. Mechanical equipment will be located inside the building. An exception to this will be the air conditioning unit, which will be located on the roof of the building. A parapet wall will be constructed on all sides of the building, hence blocking the view of the air conditioning unit to the public. Internal sidewalks access will be maintained year-round, including winter plowing.

Krist Oil has no intention of selling or leasing any portion of the land or building space. Additionally, except for the six parcels mentioned in this Detailed Use Statement, Krist Oil does not have any further interest in owning or acquiring any adjacent land parcels.

Standards for Site Plan Approval (Section 14.2.S)

The applicant is legally authorized to apply for site plan approval, and all required information has been provided.

Yes

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

Yes

The final site plan is consistent with the policies of the Master Plan and other adopted Township planning documents, and with the approved preliminary site plan.

Yes, per the Special Use Permit Report dated June 7, 2021, it conforms and is consistent with the adopted Master Plan. "Based on a review of the elevation drawings provided in the preliminary site plan, the exterior materials used, and appearance of the building façade are consistent with the policy statements on page 31 of the Master Plan for Retail Service area commercial development.

The proposed development will be harmonious with and not harmful, injurious, or objectionable to the environment or land uses in surrounding area.

The development will be a significant improvement to the surrounding properties in that six (6) aged and deteriorated structures will be removed and replaced with a new 5,520 sq. ft Krist Food Mart. It will be harmonious to the surrounding area because residents to the south and west will have access to the site with new sidewalks and exterior landscaping will be planted around the lot lines. Providing buffers to the adjoining properties.

The proposed development respects natural topography, floodways, and floodplains; and minimizes the amount and extent of cutting and filling.

Yes

Organic, wet, or other soils that are not suitable for development will be undisturbed or modified in such fashion as to make development feasible.

N/A

The movement of the vehicular and pedestrian traffic within the site and in relation to access streets and sidewalks will be safe and convenient.

The proposed site will be an improvement to the existing traffic flow and pedestrian/vehicle interaction. The site will reduce the number of driveways along Pickard Rd. from four (4) to one (1) and from three (3) to one (1) on Isabella Rd. The site will move the current entrance off of Isabella approximately 140' further away from the intersection and will move the current entrance off of Pickard 150' further from the intersection.

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

This development will create 10-15 new jobs within the area. Bring a convenience store to area and increase tax revenue in the area.

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.

We are currently coordinating our activities with MDOT's Pickard Rd. project schedule for 2023.

Development phases area in logical sequence so that any phase will not depend upon a subsequent phase for access, utilities, drainage, or erosion control.

Yes

The plan, including all engineering drawings, meets Township standards for fire and police protection, water supply, sewage disposal or treatment, storm drainage, and other public facilities and services.

Yes, see attached permit approvals.

The drainage plan conforms to applicable drainage and stormwater management standards, and any proposed improvements are adequate to handle anticipated stormwater runoff and accommodate upstream drainage without causing undue runoff on to neighboring property or overloading of area watercourses.

Yes, our storm water plans and model were approved by both MDOT and the Isabella County Drain Commission.

Proposed screening, buffering, and landscaping improvements are adequate for the location and intended purpose and conform to the standards of this Ordinance.

Yes, the landscape plan was approved during the preliminary site plan process. It actually exceeds the landscape Ordinance requirements.

Exterior lighting conforms to Ordinance requirements and standards and will not adversely affect adjacent or neighboring properties or traffic on adjacent roads.

Yes

The parking layout and vehicular circulation patterns and access points to the site are adequate to serve the proposed uses and will not adversely affect the flow of traffic on adjacent roads or create pedestrian-vehicle conflicts.

Yes, as stated earlier the proposed site will improve traffic flow by reducing the number of entrances and moving the entrance farther away from the intersection.

Grading or filling will not destroy or adversely affect the character of the property, adjacent properties, or the surrounding area.

No

Erosion will be controlled during and after construction and will not adversely affect adjacent or neighboring property or public facilities or services.

Yes, temporary soil erosion and sedimentation control measures will be put into place during construction. Permanent soil erosion and sedimentation control measures will be put into place at the end of construction per the landscaping plan.

The plan meets applicable standards of governmental agencies with jurisdiction, and necessary outside agency approvals have been obtained or are assured.

Yes, see attached permit approvals.

SurfLite 1

LED surface mounted canopy light
LCG-CP

- Tier 1 LED's for high efficacy and long life
- Die cast aluminum housing for excellent cooling and durability
- Superior optic design for low glare and even light distribution
- Slim design fits more applications with low overhead clearance
- Easy to install with J-Box mounting plate
- Screw out plugs on three sides for conduit wiring
- Threaded boss on back allows for pendant tube mounting
- 1-10 V dimming standard



Specifications

Electrical

Input voltage 100-277 VAC, 50-60 Hz

Wattage	Lumens	Efficacy
45 W [‡]	5,850	130 lm/W
65 W [‡]	8,450	130 lm/W

Data based on 5000 K model.

Power factor >0.95

Lighting

Beam angle 159°

Color temperature (CCT) 3000 K*, 4000 K, 5000 K

Color rendering (CRI) >70

Performance

Operating temperature -30° C to +45° C

Ingress protection IP65

UL location rating Suitable for wet locations

Life rating >50,000 hours
at maximum operating conditions

Dimming 1-10 VDC control on power supply

Construction

Body Die cast aluminum and polycarbonate lens

Finish Bronze and White* powder paint

Dimensions 10.1 in (255.5 mm) square x 3.3 in (83.7 mm)

Documentation

Warranty 5-year limited and Performance+ Service Warranty[§]

Agency listings CE, DesignLights Consortium® Premium (DLC)^{†‡}, cULus, FCC



* Available by special order, please contact SloanLED for lead times.

† DLC Classified as "Parking Garage" distribution.

‡ DLC Classified as "Low Bay" distribution.

§ Performance+ Service Warranty applies to U.S. installations ONLY.

Ordering information

Part number

Example: LCG-CP-45W-U-40K-BZ-D1

LCG-CP - - U - - -D1

Wattage

Code	Desc.
45W	45 W
65W	65 W

Kelvin temp

Code	Desc.
30K	3000 K*
40K	4000 K
50K	5000 K

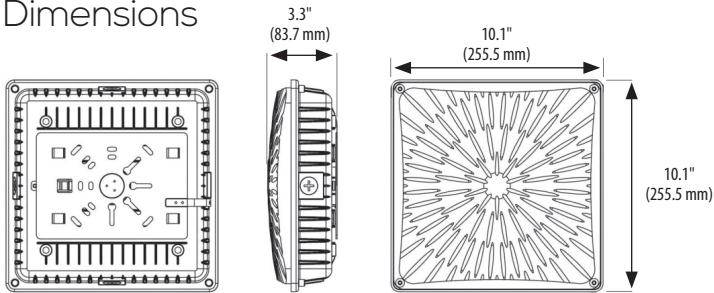
Finish

Code	Desc.
BZ	Bronze
WT	White*

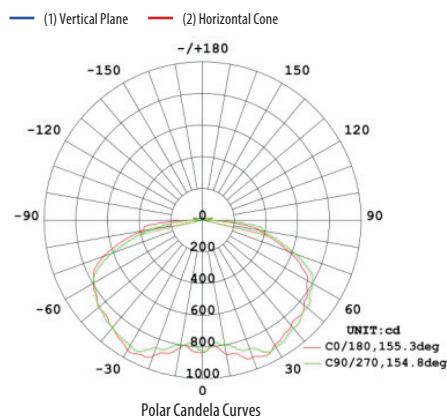
SurfLite 1

LED surface mounted canopy light
LCG-CP

Dimensions



Photometrics



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SloanLED.com

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Visit product page for details.

Specifications subject to change without notice.

SloanLED®
Leaders in LED Technology
060

Portland

LED full cutoff wall pack
LCG-WPFC

- Meets DLC full cut-off criteria for no uplight
- High efficiency LED driver with wide range input voltage 100-277 VAC or 347-480 VAC
- Die cast aluminum provides efficient cooling and durability
- Excellent optics design with zero light above 90°
- Easy to install with hinged base
- Mounts over J-box or wire with conduit by knockouts on three sides of base



Specifications

Electrical

System power 45 W, 70 W
Input voltage 100-277 VAC or 347-480 VAC†
Power factor >0.95

Lighting

Light output‡ 5,946 Lumens (45 W)
 8,463 Lumens (70 W)

Beam angle 62° x 118°
Color temperature (CCT) 3000 K†, 4000 K, 5000 K
Color rendering (CRI) >70

BUG rating§ 45 W B3-U1-G1
 70 W B3-U1-G2

Performance

Operating temperature -32° F to +113° F (-30° C to +45° C)
Ingress protection IP65
UL location rating Suitable for wet locations
Life rating >50,000 hours (L₇₀)*
 at maximum operating conditions
Driver efficiency >90%

Dimming Non-dimming

Construction

Body Die cast aluminum and polycarbonate lens
Finish Bronze or White† polyester powder coat

Documentation

Warranty 5-year limited and Performance+ Service Warranty^Δ

Agency listings CE, DesignLights Consortium® (DLC) Premium, cULus,
 FCC, RCM, SAA



* Based on LED component manufacturer data.
 † Available by special order, please contact SloanLED for lead times.
 ‡ Based on 5000 K data.
 § Order separate from luminaire. Field installed by others. 120-277 V only, not available in 347-480 V.
 ¶ Can be used on Portland and Detroit fixtures when battery is mounted in Dry or Damp location ONLY.
 †† Not compliant for CEC BC use; 120-277 V only, not available in 347-480 V.
 Δ Performance+ Service Warranty applies to U.S. installations ONLY.

Ordering information

Part number

Example: LCG-WPFC-70W-U-50K-BZ

LCG-WPFC- [] - [] - [] - []

Nom. wattage		Voltage		Kelvin temp.		Finish	
Code	Desc.	Code	Desc.	Code	Desc.	Code	Desc.
45W	45 W	U	100-277 VAC	30K	3000 K†	BZ	Bronze
70W	70 W	H	347-480 VAC†	40K	4000 K	WT	White†
				50K	5000 K		

Accessories

Photocontrol

Part number 601120[§]

Rated voltage 120-277 VAC

Power consumption 2 W

Activation level 1.0~1.9 fc (10~20 lx) **ON**
 2.8~7.5 fc (30~80 lx) **OFF**

Ambient temperature -40° F to +158° F (-40° C to +70° C)

Feature 3-10 sec. preset delay from
 incidental ambient flashes



Battery backup¶

Part number	Wattage	Output @ 45 W [‡]	Output @ 70 W [‡]
EM-L0854	8 W	1,057	968
EM-L1654	16 W	2,114	1,936
EM-L2554	25 W	3,300	3,025

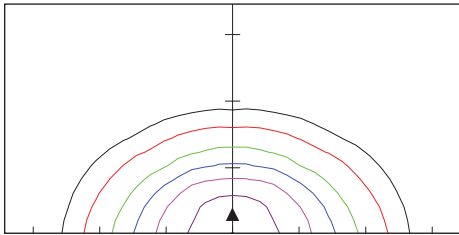


Portland

LED full cutoff wall pack

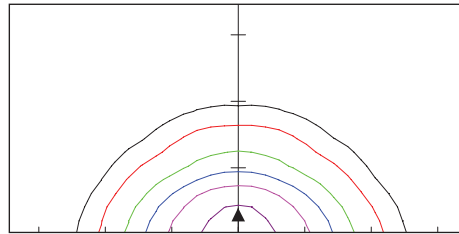
LCG-WPFC

Photometrics



LCG-WPFC-70W-U-50K-XX
LCG-WPFC-70W-U-50K-XX

Horizontal Footcandles
Grid = 20 × 20 ft (6.1 × 6.1 m)
Light loss factor: 1.00
Lumens per lamp: 8,463
Total lamp Lumens: 8,463
Mounting height: 20 ft (6.1 m)
Maximum calculated value: 10.57 Fc
Arrangement: Single



LCG-WPFC-45W-U-50K-XX
LCG-WPFC-45W-U-50K-XX

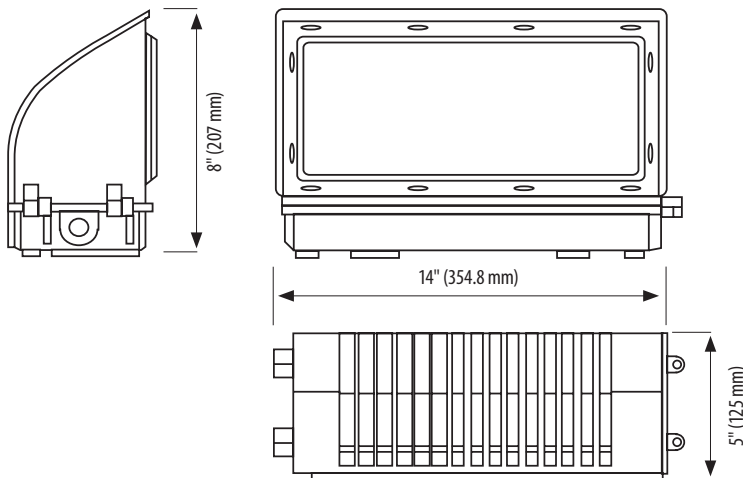
Horizontal Footcandles
Grid = 20 × 20 ft (6.1 × 6.1 m)
Light loss factor: 1.00
Lumens per lamp: 5,946
Total lamp Lumens: 5,946
Mounting height: 20 ft (6.1 m)
Maximum calculated value: 8.30 Fc
Arrangement: Single

Legend

Isoline values



Dimensions



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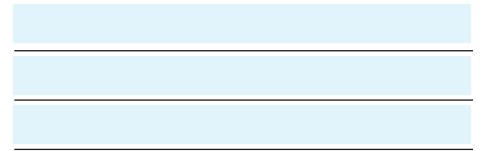
Visit product page for details.

Specifications subject to change without notice.

SloanLED[®]
Leaders in LED Technology
062

PDL3 MODUS

LED lighting system
701948



Ordering information Luminaire

Example: 701948-5WTWT3-M150

701948-	T	3-		
Product	Color temp. (CCT)	Body color	Power* (Low, Med, High power settings)	Factory preset power settings
	4W 4000 K 5W 5000 K	BZ Bronze (MH200 only) WT White	M75 75 W power (36, 50, 64 W output) M150 150 W power (76, 98, 119 W output) MH200 200 W high output power (123, 141, 164 W output)	(blank) High power setting (default) P1 Medium power setting P2 Low power setting

Product description

PDL3 MODUS sets a new standard in canopy/soffit lighting with its slim, lightweight, 1" (25 mm) design, optimized Type V symmetric distribution, included driver, and IP68 rating offering the industries best protection from dust and water intrusion.

- Standard power supply module includes three field-selectable lumen output power settings: High (default), Medium, and Low
- Faster ROI, industry-leading 10-year warranty, and virtually maintenance-free
- Energy savings up to 250% over typical HID fixtures

Driver enclosure

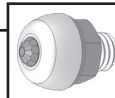
Part number	Description
601106†	Canopy/soffit applications
601022-M	Surface mount applications

Accessories

Part number	Description
401397	Shoebox mounting plate
401397-BZ	Shoebox mounting plate (Bronze)
402540	Mounting plate, 32" × 26" (813 × 660 mm)
401219	Blank plate (de-lamping / removing)
401219-BZ	Blank plate, Bronze (de-lamping/removing)
401398	Install template
410168	1-10 V dimming connector cable

Dimming accessories

Part number	Description
601092§	Dimming controller for 75 W power supply
601093§	Dimming controller for 150 W power supply
601094§	Dimming controller for 200 W power supply
701953	Occupancy sensor



Replacement parts

Part number	Description
601071	75 W power supply
601072	150 W power supply
601073	200 W power supply

Performance summary

Model	M75			M150			MH200		
	Low (36 W) P2	Med (50 W) P1	High (64 W) DF [‡]	Low (76 W) P2	Med (98 W) P1 [‡]	High (119 W) DF	Low (123 W) P2	Med (141 W) P1	High (164 W) DF [‡]
Efficacy [¶] (lm/W)	159.3	157.9	155.0	152.7	146.9	142.5	169.6	167.8	165.5
Delivered lumens [¶]	5,670	7,869	9,951	11,540	14,800	16,880	20,700	23,210	26,040



* Driver and power controller included. Standard configuration: All models are shipped at the highest system power setting unless ordered with factory preset options P1 or P2.

† 601106 required by NEC code in North America.

‡ 601022-M required where fixture will not be mounted directly to surface.

§ Dimming controller replaces the Power Module.

¶ Dimming controller box fits inside of all driver housings or mounting enclosures.

¶ Based on 5000 K CCT data.

Δ All models are shipped at the highest system power setting unless ordered with factory preset options P1 or P2.



PDL3 MODUS

LED lighting system
701948

Product specifications

Electrical

Input voltage 100-277 VAC, 50-60 Hz

Product	Power setting	Lumens [§]	Efficacy [§]
M75	P2 – Low (36 W)	5,670	159.3 lm/W
	P1 – Med. (50 W)	7,869	157.9 lm/W
	DF – High (64 W) [†]	9,951	155.0 lm/W
M150	P2 – Low (76 W)	11,540	152.7 lm/W
	P1 – Med. (98 W) [†]	14,800	146.9 lm/W
	DF – High (119 W)	16,880	142.5 lm/W
MH200	P2 – Low (123 W)	20,700	169.6 lm/W
	P1 – Med. (141 W)	23,210	167.8 lm/W
	DF – High (164 W) [†]	26,040	165.5 lm/W

Lighting

Light distribution Symmetric (Type 5)

Color (CCT) 4000 K, 5000 K

Color rendering 70 CRI

Performance

Operating temperature

Product	Low	Med	High
M75		-40° C to 55° C	-40° C to 50° C
M150	-40° C to 60° C		
MH200		-40° C to 50° C	-40° C to 40° C

Ingress protection IP68

UL location rating Suitable for wet locations

Explosion proof[†] ATEX zone 2 rated
DEMKO 18 ATEX 2033x II 3 G ec IIC T4 Gc

Life rating **M75 & M150**
Reported: $L_{70} > 60,000$ hours
Calculated: $L_{70} > 150,000$ hours
MH200
Reported: $L_{70} > 60,000$ hours
Calculated: $L_{70} > 175,000$ hours

Dimming 1-10 VDC control on power supply*

Construction

Frame Die cast aluminum

Heat plate Aluminum

Finish **M75 & M150** White
MH200 Bronze or White
Powder coated for extreme conditions

Lens Tempered frosted lens

Mounting

Fixture 4 self-drilling sheet metal screws

Documentation

Warranty 10-year limited

Agency listings cULus, CE, DesignLights Consortium® (DLC) Premium,
ENEC, ATEX[†], RoHS, Title 24 Compliant

Files available LM-79, LM-80, IES

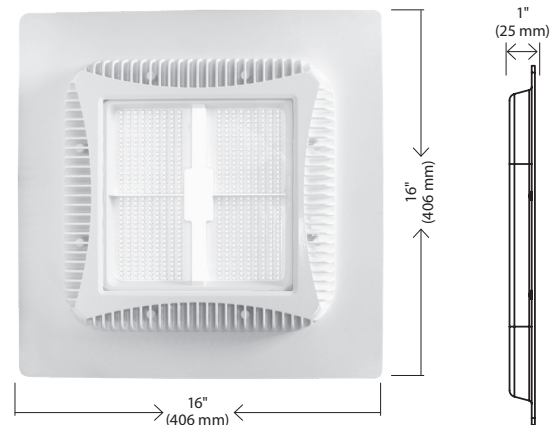
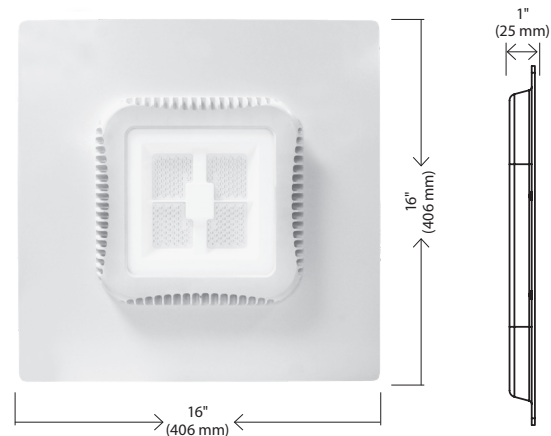
* Requires 1-10 V connector cable (P/N 410168).

† ATEX certification for luminaire at 5000 K CCT only.

‡ All models are shipped at the highest system power setting unless ordered with factory preset options P1 or P2.

§ Based on 5000 K CCT data.

Product dimensions



PDL3 MODUS

LED lighting system

701948

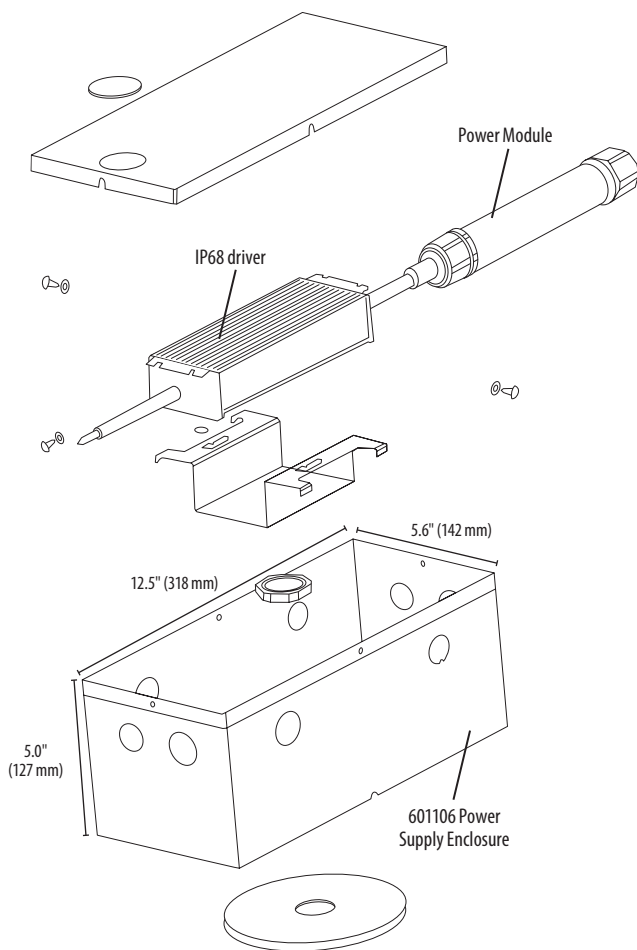
Canopy/Soffit Applications

Driver enclosure

Order number: 601106

Included in kit: Power supply enclosure, gasket, and mounting hardware.†

- Power supply enclosure allows water to pass through and out
- Gasket seals against canopy – Eliminates need to seal installation with tar/roofing material



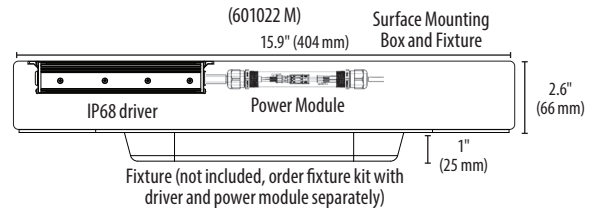
Surface Mounted Applications

Surface mounting enclosure

Order number: 601022-M

Included in kit: SloanLED surface mounting box.†

- Mounts to: Solid flat surface, reinforced J-box

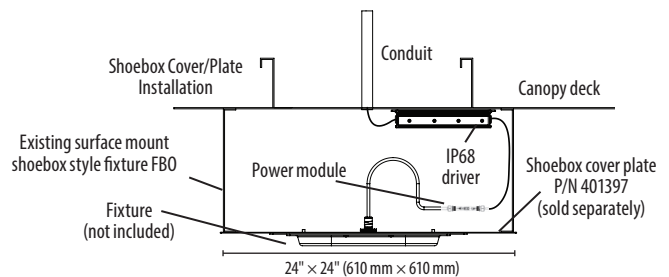


Shoebox Retrofit Applications

Shoebox mounting plate

Order number: 401397 (White), 401397-BZ (Bronze)

401397 (shoebox plate – **ordered separately**) combined with any PDL3 luminaire will complete typical 24 × 24 shoebox housing retrofits.†



* Driver and power controller included. Standard configuration: All models are shipped at the highest system power setting unless ordered with factory preset options P1 or P2.

† Fixture kit with driver and power module not included. Order separately.

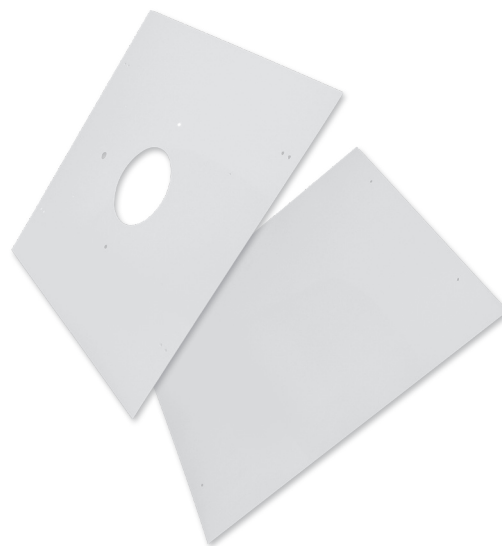
PDL3 MODUS

LED lighting system

701948

Cover Plates

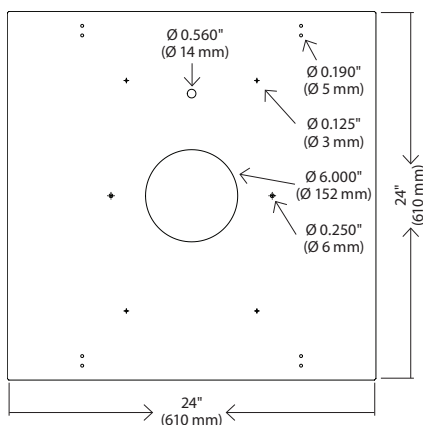
- Shoebox Mounting Plate – Required for mounting directly to an existing 2' x 2' (610 mm x 610 mm) shoebox. Option to cover footprint/stain when replacing a 2' x 2' (610 mm x 610 mm) shoebox.
- Large Mounting Plate – Allows for mounting over an existing hole, up to 26.5" x 32" (673 mm x 813 mm). Also allows for the MODUS fixture to be mounted behind the mounting plate for a cleaner look. The plate has no mounting holes, allowing installers to choose hole size and quantity for screws or rivets.
- Blank Plate – Covers the silhouette/stain and hole when removing a 2' x 2' (610 mm x 610 mm) shoebox fixture.



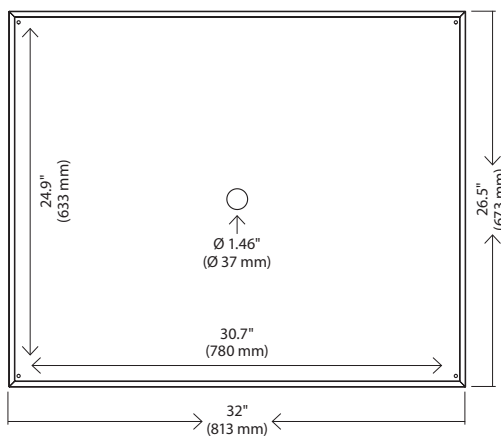
Product specifications

Part number	Shoebox mounting plate
White	401397
Bronze	401397-BZ
	Large mounting plate
White	402540
	Blank plate
White	401219
Bronze	401219-BZ
Material	Aluminum
Finish	Bronze or White powder paint
Dimensions	Mounting and 24" (610 mm) square shoebox retrofit plate
	Mounting plate..... 32" x 26.5" (813 x 673 mm)
	Blank plate..... 24" (610 mm) square

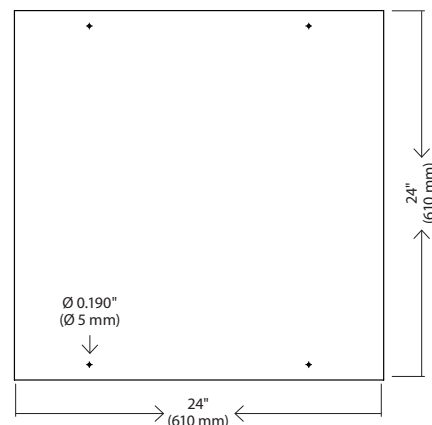
401397 – Mounting & Shoebox Retrofit Plate



402540 – Large Mounting Plate



401219 – Blank Plate



SloanLED Headquarters
5725 Olivas Park Drive, Ventura, CA, USA
805.676.3200 • info@SloanLED.com

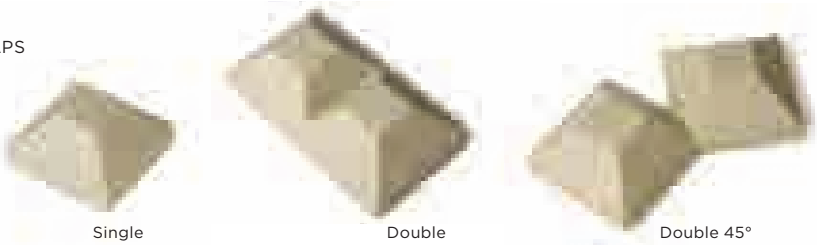
SloanLED Europe b.v.
Argonstraat 110, 2718 SN Zoetermeer, NL
+31 88 12 44 900 • europe@SloanLED.com

SloanLED.com

 **SloanLED**
Leaders in LED Technology
066



CAPS



Single

Double

Double 45°

SKIRTS



Corner Post

Line Post

End/Gate Post

Caps and Skirts

Bufftech molded Sherwood and Allegheny fence have matching caps and skirts.

Part II: 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
Unleaded Gasoline		LiQ	37,000 gallons	UGT
Diesel fuel		LiQ	27,000 gallons	UGT
	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

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: Krist Oil Company, Inc.

Name of business owner(s): Krist Oil Company, Inc.
Krist Atanasoff
Stanley Atanasoff


Street and mailing address: 303 Selden Road
Iron River, MI 49935

Telephone: 906.265.6144

Fax: 906.265.4495

Email: krist@kristoil.com

I affirm that the information submitted is accurate.

Owner(s) signature and date: 
December 30th, 2021
Krist C Atanasoff, Owner

Information compiled by: Heath Revels, Project Manager
METCO
102 Enterprise Drive, Hillsboro, WI 54634

Part 1: Management of Hazardous Substances and Polluting Materials

1. Y N Will the proposed facility store, use or generate hazardous substances or polluting materials (including petroleum-based products) now or in the future? **If yes**, please complete this form and submit with your site plan. A catalogue and map of natural resources on and near the site, including an assessment of groundwater vulnerability is required to be submitted with your plan.
2. Y N Will the hazardous substances or polluting materials be reused or recycle on-site?
3. Y N Will any hazardous substances or polluting materials be stored on-site? **If yes**, identify the storage location on the site plan. Describe the size and type of secondary containment structure here or on an attached page. Submit a map and/or diagram of facilities on the site related to groundwater protection, including secondary containment structures, loading/unloading areas, drinking water wells, septic systems, underground storage tanks and storm drain inlets.
4. Y N Will the new underground storage tanks be located less than 2000 feet from a drinking water well serving more than a single household?
5. Y N Are existing underground storage tanks on-site less than 200 feet from a drinking water well serving more than a single household?

If the answer to questions 4 or 5 are yes, you may be in violation of the State of Michigan underground storage tank regulations . For specific requirements, please contact the MDEQ Underground Storage Tank Division. District Office Telephone: 989-894-6200 (Saginaw Bay District Office)

6. Y N Will the interior of the facility have general purpose floor drains? (general purpose floor drains should not be connected to a sanitary sewer system, stormwater drainage system, dry well or septic system). If yes, will the floor drain connect to: (circle one)
- a. on-site holding tank
- b. on-site system
- Floor drains are on tiled floors for mopping of the Food Mart building. There is no manufacturing of hazardous materials in the facility. The floor drains and building plumbing will be constructed per State of Michigan Building Code.

The on-site system must be approved by the MDEQ.
Contact: MDEQ Waste Management Division.
District Office telephone: 989-894-6200 (Saginaw Bay District Office)

7. Y N Will hazardous substances or polluting materials be stored, used, or handled out-of doors near storm drains which discharge to lakes, streams, or wetlands? If yes, describe the type of catch basin or spill containment facilities which will be used (use an attached sheet with diagram if appropriate).

cc: Charter Township of Union Department of Public Works

**Planning Commission– Application Attachment Information
Krist Oil Company, Inc.
Proposed Krist Food Mart
4972 E. Pickard Road, Union Township, Michigan**

Firm or Individual Who Prepared Site Plan Email: crichardson@geiconsultants.com

Tax Parcel ID Numbers: 14-014-20-002-00, 14-014-20-003-00, 14-014-20-004-00, 14-014-20-007-00, 14-014-20-008-00, 14-014-20-009-00

KRIST GAS STATION TRAFFIC IMPACT STUDY

UNION TOWNSHIP, MICHIGAN

SEPTEMBER 10, 2021

DRAFT

PREPARED BY:



2125 RIDGEWOOD DRIVE, SUITE 101
MIDLAND, MI 48642

Notice and Disclaimer

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Agency Review	Date	Comments

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- D. WARRANT SUMMARY

REFERENCES

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO). (2018). *A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS*. WASHINGTON DC.

FEDERAL HIGHWAY ADMINISTRATION, MICHIGAN DEPARTMENT OF TRANSPORTATION, MICHIGAN STATE POLICE. (2011). *MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES*.

INSTITUTE OF TRANSPORTATION ENGINEERS. (2017). *TRIP GENERATION MANUAL, 10TH EDITION*. WASHINGTON DC.

NATIONAL RESEARCH COUNCIL (U.S.) TRANSPORTATION RESEARCH BOARD. (2016). *HIGHWAY CAPACITY MANUAL, 6TH EDITION (HCM6)*. WASHINGTON, D.C.: TRANSPORTATION RESEARCH BOARD.

PAPACOSTAS, & PREVEDOUROS. (2001). *TRANSPORTATION ENGINEERING AND PLANNING*.

STOVER, V. G., & KOEPKE, F. J. (2006). *TRANSPORTATION AND LAND DEVELOPMENT (VOL. 2ND EDITION)*. WASHINGTON DC: INSTITUTE OF TRANSPORTATION ENGINEERS (ITE).



EXECUTIVE SUMMARY

This report presents the results of a Traffic Impact Study (TIS) for the proposed commercial development in Union Township, Michigan. The project site is located in the southwest quadrant of the Isabella Road and Pickard Road (M-20) intersection, as shown on **Figure E1**. The proposed development includes the construction of a gas station and a convenience store. Access to the site is proposed via two driveways; right-in/right-out only access on Pickard Road (M-20) and full access on Isabella Road. As part of the site plan approval process, Union Township has required the completion of a Traffic Impact Study (TIS).

FIGURE E1: SITE LOCATION



The scope of this study was developed based on information provided by the developer, review of the study road network, and Fleis & VandenBrink's (F&V) knowledge of the study area, understanding of the development program, accepted traffic engineering practice and information published by the Institute of Transportation Engineers (ITE).

BACKGROUND DATA

F&V subconsultant Gewalt Hamilton Associates, Inc. (GHA) performed weekday 24-hour turning movement counts at the study intersection of Pickard Road (M-20) & Isabella Road on Tuesday, August 24, 2021. However, due to the impact of COVID-19, current traffic volume data is not representative of "typical" operations.

Therefore, pre-COVID (2018) historical traffic volume data were reviewed and adjustment factors were calculated in order to establish an adjusted existing 2021 baseline traffic volume for use in the study.

Table E1: COVID Traffic Volume Adjustment Factors

Roadway Approach	AM Peak Hour	PM Peak Hour
Pickard Road/M-20 (EB)	+30.3%	+15.4%
Pickard Road/M-20 (WB)	+10.3%	+5.9%
Isabella Road (NB)	+2.6%	+4.9%
Isabella Road (SB) ¹	-	-

Collected 2021 traffic volume at the southbound approach of Isabella Road were found to be higher than expected traffic volume. Therefore, no adjustment factor was applied for that approach.¹

TRIP GENERATION

The number of peak hour (AM and PM) and daily vehicle trips that would be generated by the proposed development was forecast based on data published by ITE in the *Trip Generation Manual, 10th Edition*. The proposed development project includes a gas station with 14 fueling positions and a 5,520 SF convenience store. The trip generation used in the analysis is summarized in **Table E2**.

Table E2: Site Trip Generation

Land Use	ITE Code	Amount	Units	Average Daily Traffic (vpd)	AM Peak Hour (vph)			PM Peak Hour (vph)		
					In	Out	Total	In	Out	Total
Gas Station with Convenience Market	945	14	Fueling Positions	2,875	89	86	175	100	96	196
Pass-By	62% AM, 56% PM			1,783	55	54	109	55	55	110
Total New Trips				1,092	33	33	66	43	43	86

Typical of retail or commercial activities, a portion of the site-generated trips are already present on the adjacent road network and are interrupted to visit the site. These trips are known as “pass-by” trips. These trips are therefore reduced from the total external trips generated by a study site. The percentage of pass-by trips used in this analysis was determined based on the rates published by ITE in the *Trip Generation Handbook, 3rd Edition*.

SITE TRIP DISTRIBUTION

The vehicular trips that would be generated by the proposed development were assigned to the study roads based on the proposed site access plan, the existing peak hour traffic patterns in the adjacent roadway network, and the methodologies published by ITE. The adjacent street traffic volumes were used to develop the trip distribution. It is assumed that the traffic in the AM are home-to-work based trips and PM are work-to-home based trips. The ITE trip distribution methodology also assumes that new trips will return to their direction of origin, whereas pass-by trips will enter and exit the development in their original direction of travel. The site trip distributions used in the analysis are summarized in **Table E3**.

Table E3: Site Trip Distribution

New Trips				Pass-By Trips		
AM	PM	To/From	Via	Direction	AM	PM
12%	11%	North	Isabella Road (M-20)	Northbound	18%	19%
15%	17%	South	Isabella Road (M-20)	Southbound	14%	16%
40%	41%	East	Pickard Road	Eastbound	32%	35%
33%	31%	West	Pickard Road	Westbound	36%	30%
100%	100%	Total			100%	100%

ANALYSIS SUMMARY

The conclusions of this TIS are as follows:

1. Existing Conditions

- The results of the existing conditions analysis indicate that all approaches and movements at the study intersections are currently operating at LOS D or better during the AM peak period.
- During the PM peak hour, the intersection of Pickard Road (M-20) & Isabella Road is currently operating at LOS F. A review of SimTraffic microsimulations indicate that the vehicle queues are adequately processed during each cycle, with no residual queuing.

2. Future Conditions

The results of the future conditions analysis indicate that, with the addition of the site generated traffic, all approaches and movements at both site driveway intersections will operate well at LOS C or better during the AM and PM peak periods.

- In addition, all approaches and movements at the study intersection of Pickard Road (M-20) & Isabella Road will continue to operate in a manner similar to existing condition with minor increases in delays. The overall intersection delay is expected to increase by 0.3 to 3.8 seconds with the addition of site generated traffic volume, which will be indiscernible from daily fluctuations in intersection operations.
 - The review of SimTraffic simulations shows that the 95th percentile queue length on the eastbound approach of the signalized intersection is expected to be 239 feet during the PM peak period which extends past the W. Site Drive. However, the upstream blockage at the W. Site Drive is projected at 3% of the PM peak hour, or less than 2 minutes, which is not significant.
3. **Auxiliary Lane Analysis:** The results of auxiliary turn lane analysis indicate that, a right turn taper is recommended at both site driveways on Pickard Road (M-20) and Isabella Road.

RECOMMENDATIONS

1. Provide right-turn lane tapers at both site driveways.

1 INTRODUCTION

This report presents the results of a Traffic Impact Study (TIS) for the proposed commercial development in Union Township, Michigan. The project site is located in the southwest quadrant of the Isabella Road and Pickard Road (M-20) intersection, as shown on **Figure 1**. The proposed development includes the construction of a gas station and convenience store. Access to the site is provided via two driveways; right-in/right-out only access on Pickard Road (M-20) and full access on Isabella Road. Pickard Road (M-20) is under the jurisdiction of the Michigan Department of Transportation (MDOT) and Isabella Road is under the jurisdiction of the Isabella County Road Commission (ICRC). As part of the site plan approval process, Union Township has required the completion of a Traffic Impact Study (TIS).

The purpose of this study is to identify the traffic related impacts, if any, of the proposed development project on the adjacent road network. Specific tasks undertaken for this study include the following:

1. Study Area

- a. Conduct a site visit and collect a field inventory of the existing geometries, lane use, and traffic control at the study intersections.
- b. Provide a description of the study area including: intersection and roadway geometries, speed limits, functional classifications and traffic volume data (where available). In addition, a study area site map showing the site location and the study intersections will also be provided.

2. Proposed Land Use

- a. Obtain and review the proposed site plan which includes the proposed land uses, densities, and desired site access locations. A description of the current and proposed land use, gross and leasable floor area will be accompanied with a complete project site plan (with buildings identified as to proposed use).

3. Existing Conditions

- a. Provide an analysis of the traffic-related impacts of the proposed development at the following study intersections:
 - Isabella Road & Pickard Road (M-20)
 - Isabella Road & Proposed Site Drive
 - Pickard Road (M-20) & Proposed Site Drive
- b. Due to the impact of COVID-19, current traffic volume data is not representative of “typical” operations. Therefore, the data collection necessary for this study is proposed as follows:
 - Collect 24-hour turning movement counts at the Isabella Road & Pickard Road (M-20) study intersection.
 - Obtain existing available traffic count data from the Isabella County Road Commission (ICRC), and Michigan Department of Transportation (MDOT) Traffic Data Management System (TDMS).
 - Review available historical traffic count data at the study intersections and adjacent roadways previously performed by MDOT, ICRC, and others.
 - Compare the existing turning movement count data to historical traffic volumes collected in the area to determine the adjusted 2021 turning movement counts at the study intersection.
- c. Calculate the **Existing** vehicle delays, LOS, and vehicle queues at the study intersections during the AM and PM. The analysis will be performed at each of the study intersections. Intersection analysis shall include LOS determination for all approaches and movements. The LOS will be based on the procedures outlined in the HCM 6th Edition, the latest edition of Transportation Research Board’s Highway Capacity Manual.

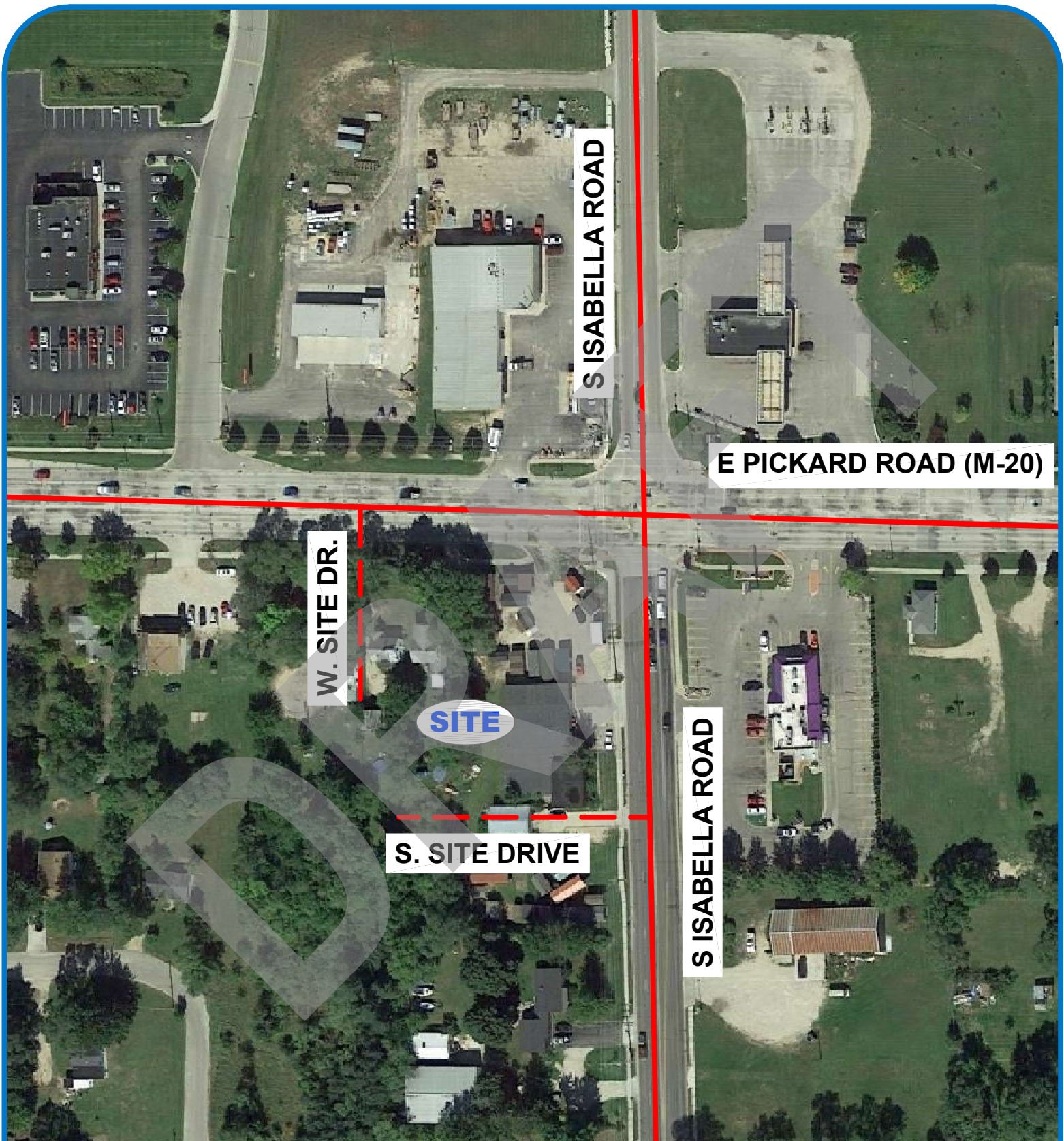


FIGURE 1 SITE LOCATION MAP

KRIST - GAS STATION TIS - UNION CHARTER TOWNSHIP, MI

LEGEND

 SITE LOCATION



NORTH
SCALE: NOT TO SCALE
080

4. Trip Generation

- a. Forecast the number of weekday, daily, AM and PM peak hour vehicle trips that would be generated by the proposed development for the proposed development based on data published by the Institute of Transportation Engineers (ITE) in Trip Generation, 10th Edition and/or local development data as approved for use in the study by the ICRC and MDOT.
- b. A table will be provided in the report outlining the categories and quantities of land uses, with the corresponding trip generation rates or equations, and the resulting number of trips.

5. Trip Distribution and Traffic Assignment

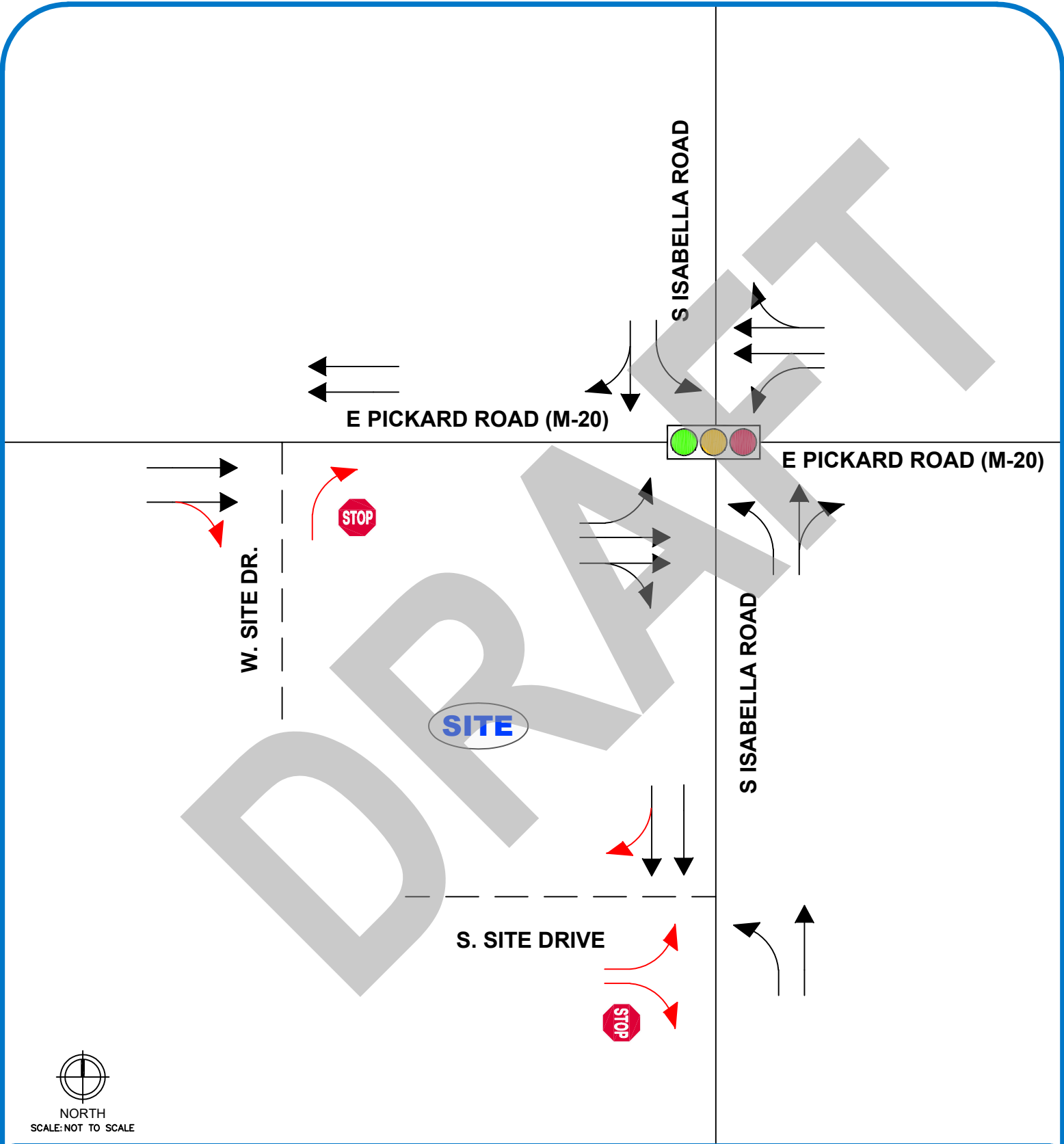
- a. Assign the trips that would be generated by the proposed development to the adjacent road network based on existing traffic patterns. The distribution of the estimated trip generation to the adjacent street network shall be included in the report and the basis will be explained. The distribution percentages with the corresponding volumes will be provided in a graphical format.
- b. Combine the site-generated traffic assignments with the background traffic forecasts to establish the Future weekday AM, and PM hour traffic volumes.

6. Future Conditions

- a. Calculate the Future (with development) vehicle delays, LOS, and vehicle queues at the study intersections during the peak hours (AM and PM) of the adjacent street. Intersection analysis shall include LOS determination for all approaches and movements. The LOS will be based on the procedures outlined in the HCM 6th Edition, the latest edition of Transportation Research Board's Highway Capacity Manual.
- b. Intersection analysis shall include LOS determination for all approaches and movements. The LOS will be based on the procedures outlined in the HCM 6th Edition, the latest edition of Transportation Research Board's Highway Capacity Manual.
- c. Identify improvements (if any) for the study road network that would be required to accommodate the site-generated traffic volumes.

7. Access Management

- a. Evaluate the MDOT and ICRC auxiliary lane standards for the determination of need for right-turn lanes at the Site Driveway intersections.



NORTH
SCALE: NOT TO SCALE



FIGURE 2
LANE USE AND TRAFFIC CONTROL

KRIST - GAS STATION TIS - UNION CHARTER TOWNSHIP, MI

LEGEND

	ROADS		PROPOSED ROADS
	LANE USE		PROPOSED LANE USE
	SIGNALIZED INTERSECTION		
	UNSIGNALIZED INTERSECTION		

2 BACKGROUND DATA

2.1 EXISTING ROAD NETWORK

The lane use and traffic control at the study intersections are shown on **Figure 2** and the study roadways are further described below. For the purpose of this study, all minor streets and driveways are assumed to have an operating speed of 25 miles per hour (mph), unless otherwise noted.

Pickard Road (M-20) runs in the east and west directions adjacent to the north side of the site. The study section of Pickard Road (M-20) is classified as a *Major Arterial* and is under the jurisdiction of MDOT. The roadway, in the vicinity of the development, has a typical five-lane cross-section, with two lanes in each direction and a center left-turn lane and has a posted speed limit of 45 mph. Pickard Road adjacent to the project site has an Average Annual Daily Traffic (AADT) of approximately 17,650 vehicles per day (MDOT 2018).

Isabella Road runs in the north and south directions adjacent to the east side of the site. The Isabella Road is under jurisdiction of ICRC and classified as a *Minor Arterial* with a posted speed limit of 45 mph. The study section of Isabella Road has a typical four-lane cross-section, with two lanes in each direction. At the intersection with Pickard Road a left-turn lane, and a shared through-right turn lane is provided. Isabella Road adjacent to the project site has an AADT of approximately 11,500 vehicles per day (MDOT 2018).

2.2 EXISTING TRAFFIC VOLUMES

F&V subconsultant Gewalt Hamilton Associates, Inc. (GHA) performed weekday 24-hour turning movement counts at the study intersection of Pickard Road (M-20) & Isabella Road on Tuesday, August 24, 2021. Due to the impact of COVID-19, current traffic volume data is not representative of “typical” operations. Therefore, the following methodologies were followed to establish an adjusted baseline traffic volume.

- Pre-COVID (2018) historical traffic volume data were collected from the MDOT Transportation Data Management System.
- An annual background growth rate of 0.5% was applied to the 2018 data collected to determine the expected 2021 traffic volumes.
- A COVID adjustment factor was calculated by comparing the expected 2021 traffic volumes to the actual 2021 traffic volumes.

The calculated COVID adjustment factors are summarized in **Table 1**.

Table 1: COVID Traffic Volume Adjustment Factors

Roadway Approach	AM Peak Hour	PM Peak Hour
Pickard Road/M-20 (EB)	+30.3%	+15.4%
Pickard Road/M-20 (WB)	+10.3%	+5.9%
Isabella Road (NB)	+2.6%	+4.9%
Isabella Road (SB) ¹	-	-

F&V also collected an inventory of existing lane use and traffic controls at the study intersections, as shown in the attached **Figure 2**. Additionally, F&V obtained the current traffic signal timing information from MDOT. The peak periods for the adjacent streets were observed to generally occur between 7:45 AM to 8:45 AM and 3:45 PM to 4:45 PM. The traffic volume data are attached in **Appendix A**, and the existing peak hour traffic volumes are shown on the attached **Figure 3**.

¹ Collected 2021 traffic volume at the southbound approach of Isabella Road were found to be higher than expected 2021 traffic volume. Therefore, no adjustment factor was applied for that approach.

3 EXISTING CONDITIONS

3.1 EXISTING OPERATIONS

The existing AM and PM peak hour vehicle delays and Levels of Service (LOS) were calculated at the study intersection using Synchro traffic analysis software. The results of the analysis of existing conditions were based on the existing lane use and traffic control shown on **Figure 2**, the existing traffic volumes shown on **Figure 3**, and the methodologies presented in the Highway Capacity Manual (HCM) 6th Edition.

Descriptions of LOS “A” through “F”, as defined in the HCM, are provided in **Appendix B** for signalized and unsignalized intersections. Typically, LOS D is considered acceptable, with LOS A representing minimal delay, and LOS F indicating failing conditions. Microsimulations were also conducted at the study intersections using SimTraffic to further evaluate the network performance. The results of the analysis of existing conditions are presented in **Appendix B** and are summarized in **Table 2**. Microsimulations were also conducted at the study intersections using SimTraffic to further evaluate the network performance.

Table 2: Existing Intersection Operations

Intersection	Control	Approach	Existing Conditions			
			AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS
1 Pickard Road (M-20) & Isabella Road	Signalized	EBL	25.1	C	38.1	D
		EBT	41.6	D	114.7	F
		EBR	41.8	D	114.6	F
		WBL	27.8	C	40.7	D
		WBT	41.8	D	52.1	D
		WBR	41.7	D	51.9	D
		NBL	46.7	D	75.3	E
		NBTR	52.1	D	159.5	F
		SBL	49.6	D	89.7	F
		SBTR	47.5	D	100.6	F
		Overall	42.3	D	95.7	F

The results of the existing conditions analysis indicate that all approaches and movements at the study intersection are currently operating at LOS D or better during the AM peak period.

During the PM peak hour, the overall intersection of Pickard Road (M-20) & Isabella Road is currently operating at LOS F with multiple approaches and movements operating at LOS F. A review of the microsimulations indicate queuing on all approaches, however, these were observed to dissipate and were not present throughout the peak periods.

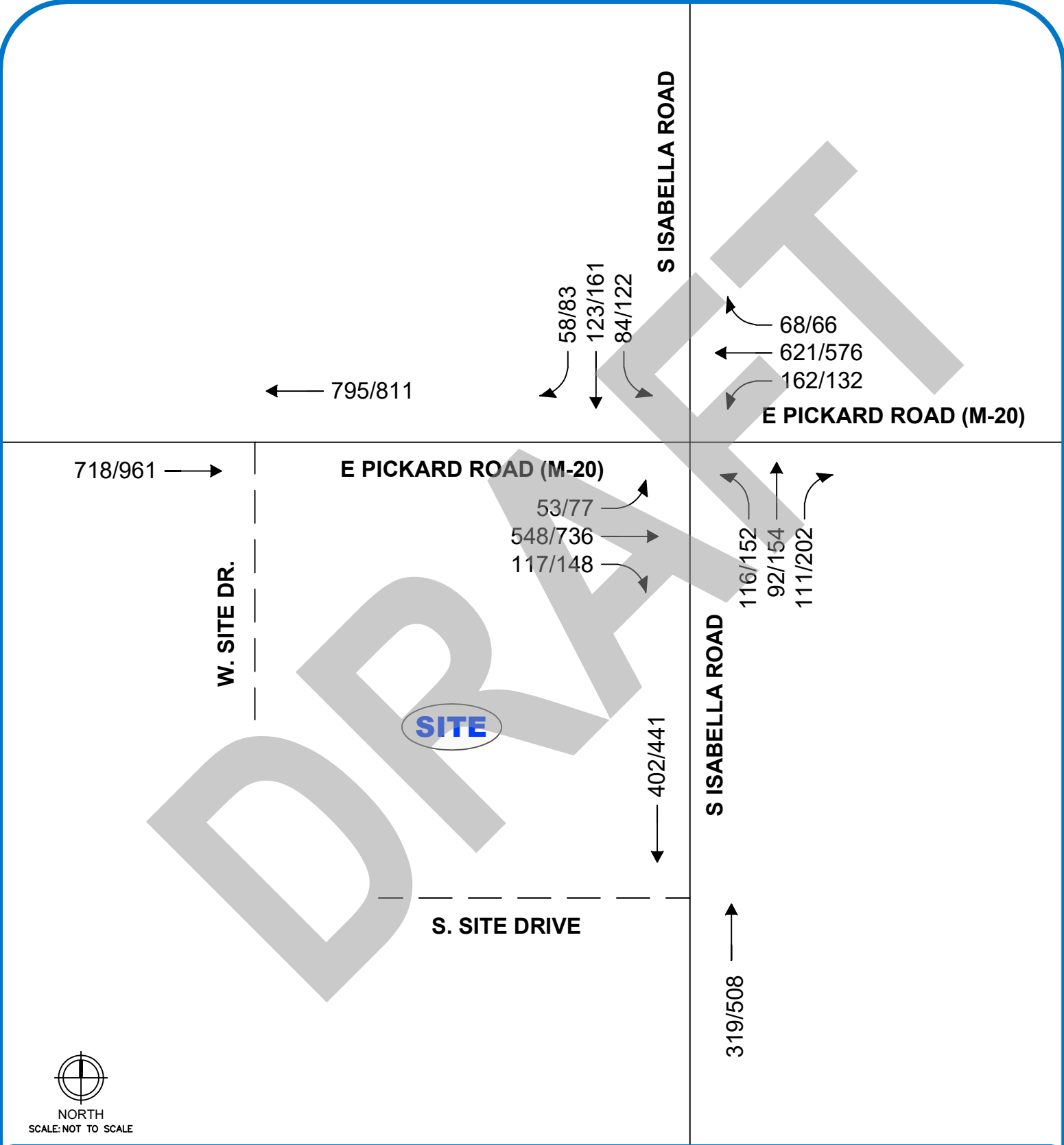


FIGURE 3
EXISTING TRAFFIC
VOLUMES



KRIST - GAS STATION TIS - UNION CHARTER TOWNSHIP, MI

LEGEND

	ROADS
	PROPOSED ROADS
	TRAFFIC VOLUMES (AM/PM)

4 SITE TRIP GENERATION

The number of peak hour (AM and PM) and daily vehicle trips that would be generated by the proposed development was forecast based on data published by ITE in the *Trip Generation Manual, 10th Edition*. The proposed development project includes a gas station with 14 fueling positions with four semi-trailer diesel fueling area, and an approximately 5,520 SF convenience store. The trip generation used in the analysis is summarized in **Table 3**.

Table 3: Site Trip Generation

Land Use	ITE Code	Amount	Units	Average Daily Traffic (vpd)	AM Peak Hour (vph)			PM Peak Hour (vph)		
					In	Out	Total	In	Out	Total
Gas Station with Convenience Market	945	14	VFP	2,875	89	86	175	100	96	196
<i>Pass-By</i>	62% AM, 56% PM			1,783	55	54	109	55	55	110
Total New Trips				1,092	33	33	66	43	43	86

As is typical of commercial developments, a portion of the trips generated are from vehicles on the adjacent roadway and will pass the site on the way from an origin to an ultimate destination. Therefore, not all traffic at the site driveways are necessarily new traffic added to the street system. This percentage of the trips generated by the development are considered “pass-by” trips and do not add new traffic to the adjacent street system. These trips are therefore reduced from the total external trips generated by a study site. The percentage of pass-by trips used in this analysis was determined based on the rates published by ITE in the *Trip Generation Handbook, 3rd Edition*.

5 SITE TRIP DISTRIBUTION

The vehicular trips that would be generated by the proposed development were assigned to the study roads based on the proposed site access plan, the existing peak hour traffic patterns in the adjacent roadway network, and the methodologies published by ITE. The adjacent street traffic volumes were used to develop the trip distribution. It is assumed that the traffic in the AM are home-to-work based trips and PM are work-to-home based trips. The ITE trip distribution methodology also assumes that new trips will return to their direction of origin, whereas pass-by trips will enter and exit the development in their original direction of travel. The site trip distributions used in the analysis are summarized in **Table 4**.

Table 4: Site Trip Distribution

New Trips				Pass-By Trips		
AM	PM	To/From	Via	Direction	AM	PM
12%	11%	North	Isabella Road (M-20)	Northbound	18%	19%
15%	17%	South	Isabella Road (M-20)	Southbound	14%	16%
40%	41%	East	Pickard Road	Eastbound	32%	35%
33%	31%	West	Pickard Road	Westbound	36%	30%
100%	100%	Total			100%	100%

The vehicular traffic volumes shown in **Table 3** were distributed to the roadway network according to the distribution shown in **Table 4**. The proposed development is anticipated to be completed in 2022, therefore, the existing analysis was assumed equal to the buildout year (2022) conditions, therefore the site generated trips shown on **Figure 4** were added to the existing traffic volumes shown on **Figure 3** to calculate the future peak hour traffic volumes with the proposed development, as shown on **Figure 5**.

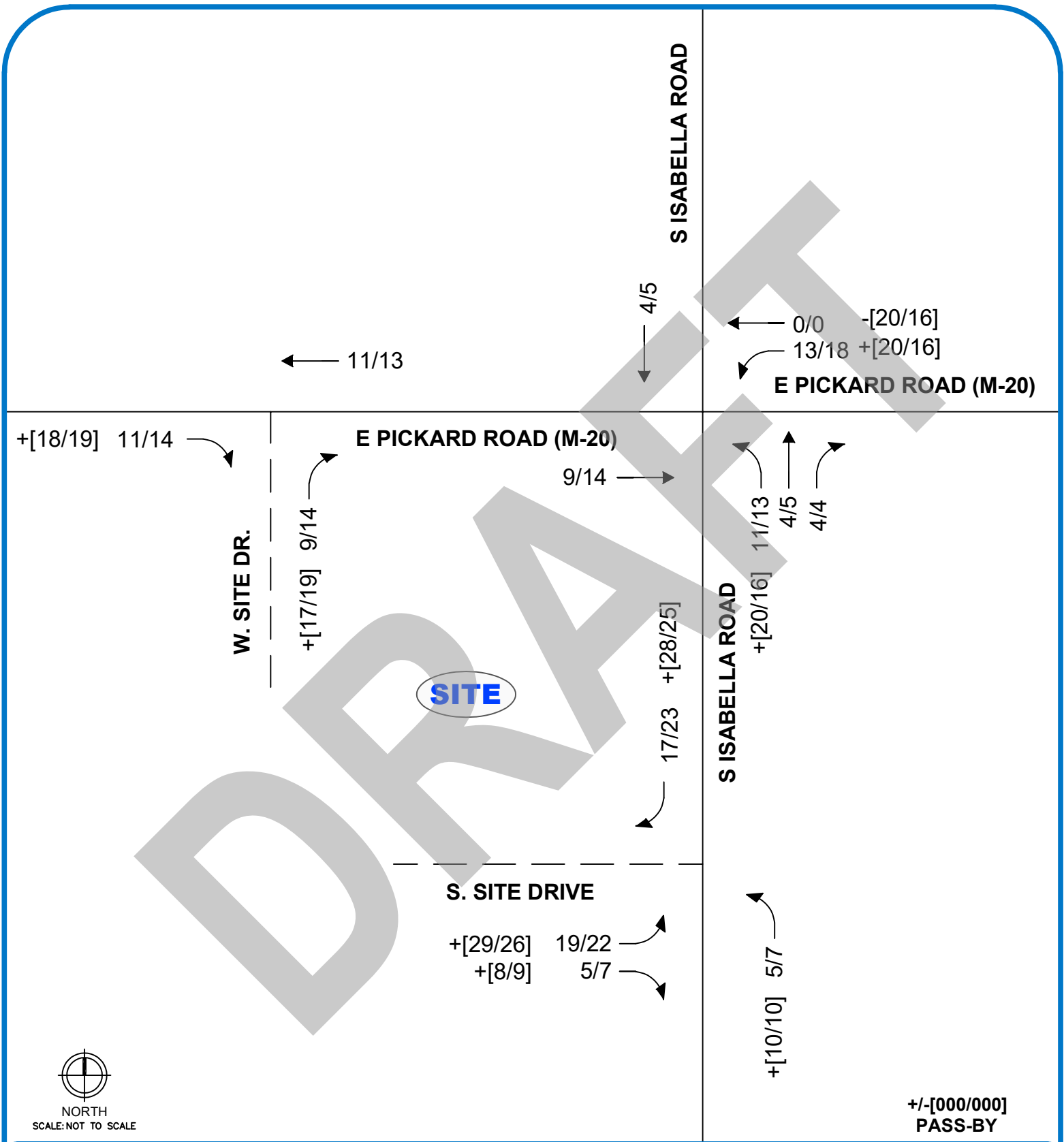
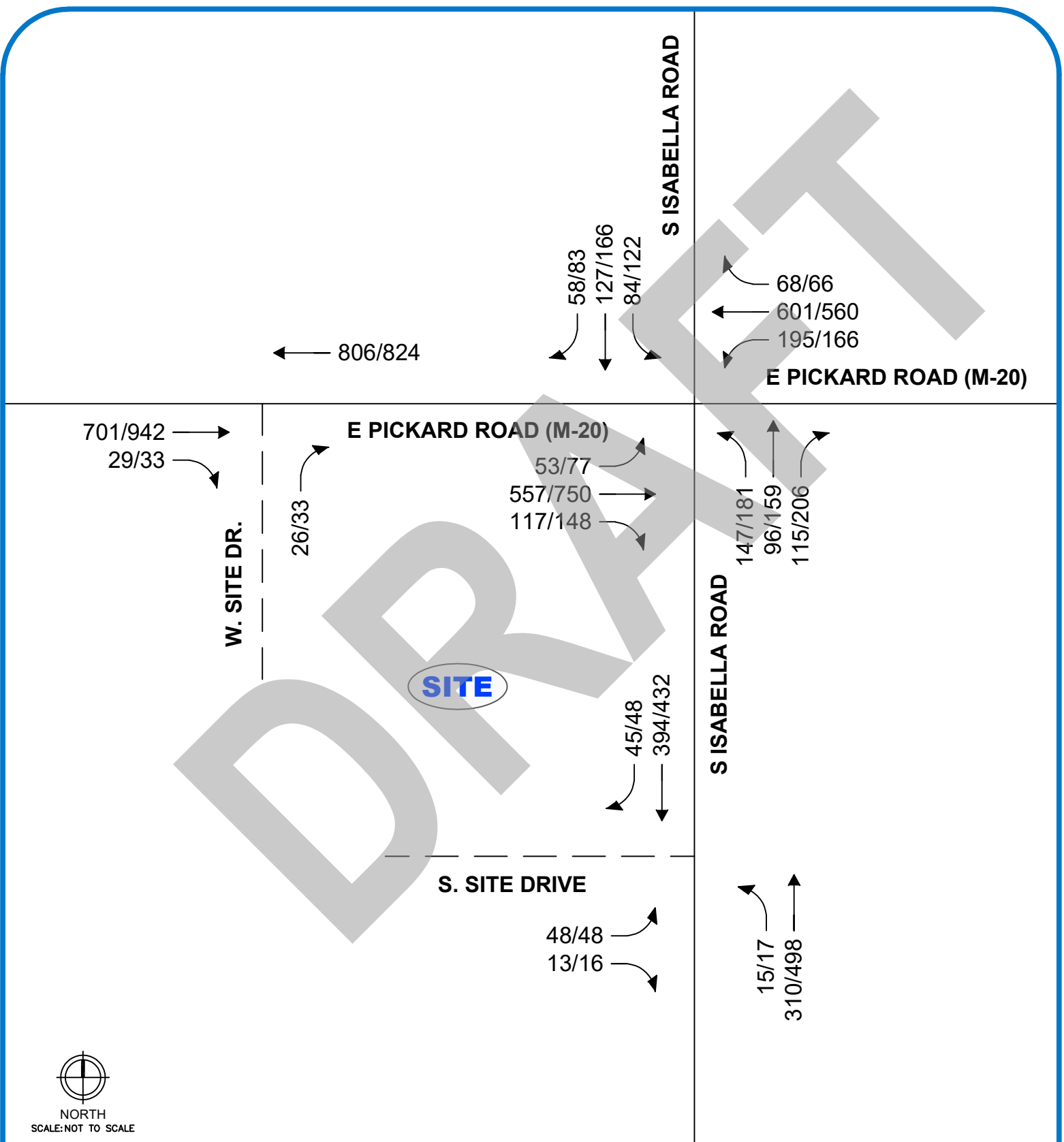


FIGURE 4
SITE-GENERATED
TRAFFIC VOLUMES

KRIST - GAS STATION TIS - UNION CHARTER TOWNSHIP, MI



NORTH
SCALE: NOT TO SCALE



**FIGURE 5
FUTURE TRAFFIC
VOLUMES**

LEGEND

	ROADS
	PROPOSED ROADS
	TRAFFIC VOLUMES (AM/PM)

6 FUTURE CONDITIONS

6.1 FUTURE OPERATIONS

Future peak hour vehicle delays and LOS with the proposed development were calculated based on the future lane use shown on **Figure 2**, the proposed site access plan, the future traffic volumes shown on **Figure 5**, and the methodologies presented in the HCM. The results of the future conditions analysis are presented in **Appendix C** and are summarized in **Table 5**.

Table 5: Future Intersection Operations

Intersection	Control	Approach	Existing Conditions				Future Conditions				Difference			
			AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS	Delay (s/veh)	LOS
1 Pickard Road (M-20) & Isabella Road	Signalized	EBL	25.1	C	38.1	D	24.9	C	39.0	D	-0.2	-	0.9	-
		EBT	41.6	D	114.7	F	42.3	D	120.4	F	0.7	-	5.7	-
		EBR	41.8	D	114.6	F	42.4	D	120.2	F	0.6	-	5.6	-
		WBL	27.8	C	40.7	D	29.1	C	47.3	D	1.3	-	6.6	-
		WBT	41.8	D	52.1	D	40.5	D	50.5	D	-1.3	-	-1.6	-
		WBR	41.7	D	51.9	D	40.4	D	50.3	D	-1.3	-	-1.6	-
		NBL	46.7	D	75.3	E	51.2	D	93.0	F	4.5	-	17.7	E→F
		NBTR	52.1	D	159.5	F	53.3	D	171.5	F	1.2	-	12.0	-
		SBL	49.6	D	89.7	F	50.1	D	67.8	E	0.5	-	-21.9	F→E
		SBTR	47.5	D	100.6	F	48.1	D	106.7	F	0.6	-	6.1	-
		Overall	42.3	D	95.7	F	42.6	D	99.5	F	0.3	-	3.8	-
2 Pickard Road (M-20) & W. Site Dr.	Stop (Minor)	WBR	N/A				Free				N/A			
		NBR	N/A				11.9	B	12.7	B	N/A			
3 Isabella Road & S. Site Dr.	Stop (Minor)	EBL	N/A				15.5	C	9.5	A	N/A			
		EBR	N/A				10.1	B	21.2	C	N/A			
		NBL	N/A				8.6	A	11.1	B	N/A			

The results of the future conditions analysis indicate that, with the addition of the site generated traffic, all approaches and movements at both site driveway intersections will operate well at LOS C or better during AM and PM peak periods.

In addition, all approaches and movements at the study intersection of Pickard Road (M-20) & Isabella Road will continue to operate in a manner similar to existing conditions with minor increases in delays. The overall intersection delay is expected to increase by 0.3 to 3.8 seconds with the addition of site generated traffic volumes, which will be indiscernible from daily fluctuations in traffic operations. Review of SimTraffic network simulations also indicates that the intersection is expected to operate in a manner similar to existing conditions.

The W. Site Drive is located approximately 225 feet west of the signalized intersection of Pickard Road (M-20) & Isabella Road. The review of SimTraffic simulations shows that the 95th percentile queue length on the eastbound approach is expected to be 239 feet during the PM peak period which extends past the W. Site Drive. The upstream blockage at the W. Site Drive is projected at 3% of the PM peak hour, or less than 2 minutes, which is not significant.

7 ACCESS MANAGEMENT

7.1 AUXILIARY LANE ANALYSIS

The MDOT Geometric Design Guidance Section 1.1.4 was utilized in order to determine where right-turn lanes and tapers shall be required. Isabella Road has a left-turn lane at the S. Site Drive and the Pickard Road (M-20) site drive intersection is a proposed right-in/right-out only driveway. Therefore, the left-turn lane warrants

were not evaluated. The results of the analysis are summarized in **Table 6** and the standards used in this analysis are included in **Appendix D**.

Table 6: Turn Lane Warrant Analysis Summary

Intersection	Right-Turn Lane	Right-turn Taper	Recommendation
Isabella Road & S. Site Drive	No	Yes	Right-Turn Taper
Pickard Road (M20) & W. Site Drive	No	Yes	Right-Turn Taper

8 CONCLUSIONS

The conclusions of this TIS are as follows:

4. Existing Conditions

- The results of the existing conditions analysis indicate that all approaches and movements at the study intersections are currently operating at LOS D or better during the AM peak period.
- During the PM peak hour, the intersection of Pickard Road (M-20) & Isabella Road is currently operating at LOS F. A review of SimTraffic microsimulations indicate that the vehicle queues are adequately processed during each cycle, with no residual queuing.

5. Future Conditions

The results of the future conditions analysis indicate that, with the addition of the site generated traffic, all approaches and movements at both site driveway intersections will operate well at LOS C or better during the AM and PM peak periods.

- In addition, all approaches and movements at the study intersection of Pickard Road (M-20) & Isabella Road will continue to operate in a manner similar to existing condition with minor increases in delays. The overall intersection delay is expected to increase by 0.3 to 3.8 seconds with the addition of site generated traffic volume, which will be indiscernible from daily fluctuations in intersection operations.
- The review of SimTraffic simulations shows that the 95th percentile queue length on the eastbound approach of the signalized intersection is expected to be 239 feet during the PM peak period which extends past the W. Site Drive. However, the upstream blockage at the W. Site Drive is projected at 3% of the PM peak hour, or less than 2 minutes, which is not significant.

6. **Auxiliary Lane Analysis:** The results of auxiliary turn lane analysis indicate that, a right turn taper is recommended at both site driveways on Pickard Road (M-20) and Isabella Road.

9 RECOMMENDATIONS

1. Provide right-turn lane tapers at both site driveways.

Appendix A

BACKGROUND INFORMATION

DRAFT

Appendix B

EXISTING TRAFFIC CONDITIONS

Appendix C

FUTURE TRAFFIC CONDITIONS

Appendix D

WARRANTS SUMMARY

KRIST OIL COMPANIES

KRIST FOOD MART

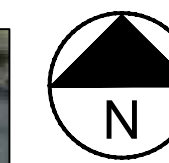
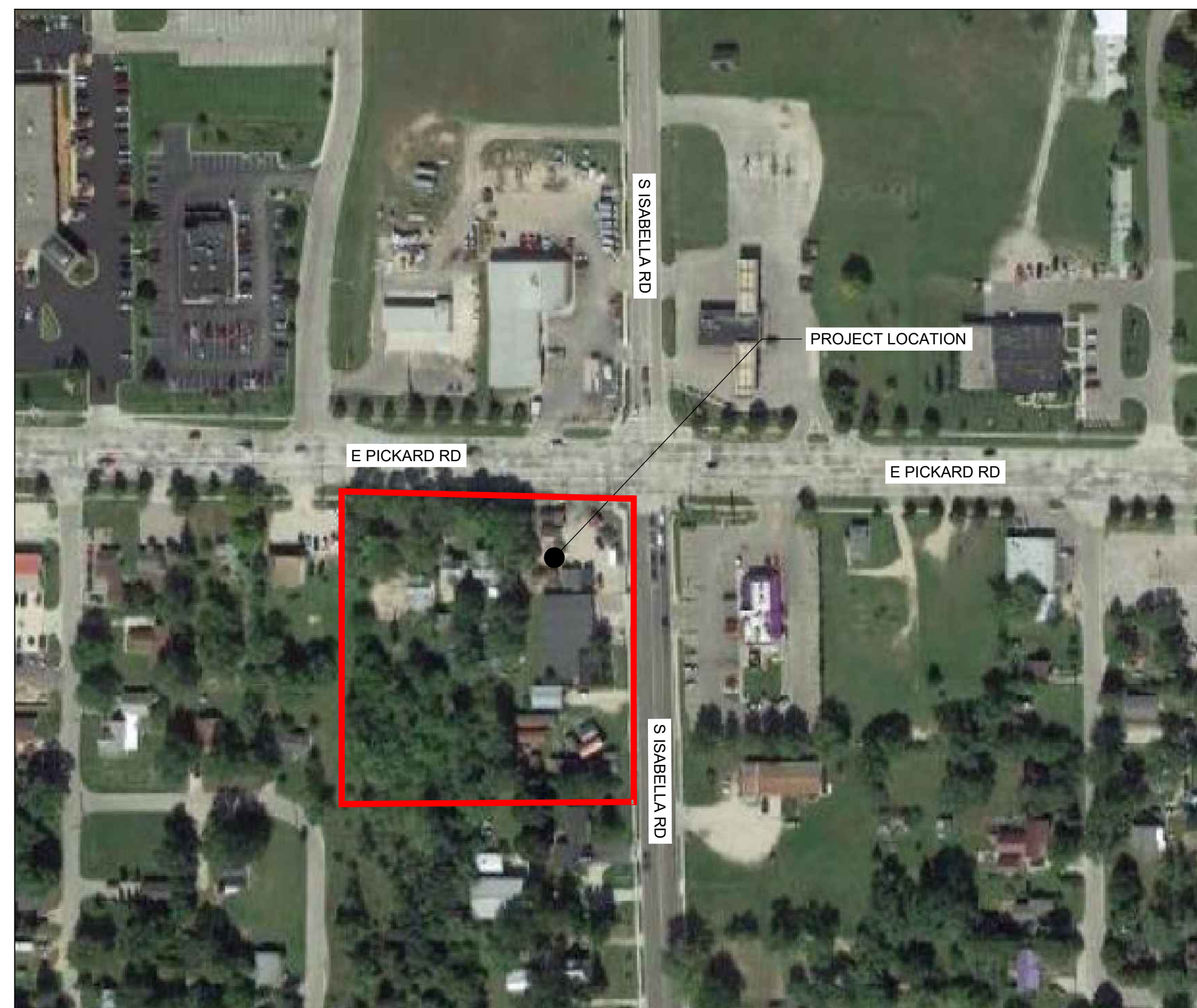
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14-014-20-002-00, 14-014-20-003-00, 14-014-20-004-00

14-014-20-007-00, 14-014-20-008-00, 14-014-20-009-00

UNION TOWNSHIP, MICHIGAN

GEI PROJECT NO.: 1509480



Sheet No.	Drawing No.	Description
1	01-G-01	COVER SHEET
2	02-C-01	EROSION CONTROL PLAN
3	02-C-02	EXISTING CONDITIONS AND REMOVAL PLAN
4	02-C-03	SITE PLAN
5	02-C-04	GRADING PLAN
6	02-C-05	UTILITY AND STORM WATER MANAGEMENT PLAN
7	02-C-06	DRAIN TILE / SANITARY SEWER PROFILE VIEW
8	02-C-07	DETENTION POND DETAILS
9	02-C-08	STORM WATER CALCULATIONS - DETENTION POND
10	02-C-09	ADJACENT PROPERTY OWNER INFORMATION
11	02-C-10	PHOTOMETRIC PLAN
12	02-L-01	LANDSCAPE PLAN
13	02-L-02	PLANT LISTS & DETAILS
14	02-A-01	BUILDING ELEVATIONS
15	02-A-02	CANOPY ELEVATIONS AND SIGN DETAILS
16	02-A-03	FLOOR PLAN
17	99-D-01	STANDARD DETAILS
18	99-D-02	STANDARD DETAILS
19	99-D-03	STANDARD DETAILS
Appendix		
		EXISTING TOPOGRAPHY
		EASEMENT SHEET

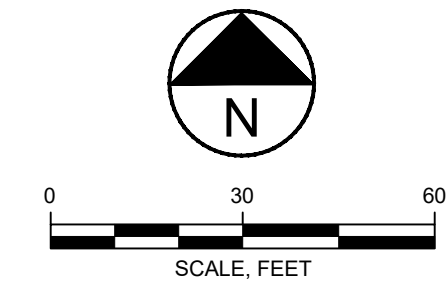
KRIST OIL COMPANIES
KRIST ATANASOFF
303 SELDEN ROAD
IRON RIVER, MI 49935
906.265.6144

GEI CONSULTANTS OF MICHIGAN, P.C.
CRAIG A. RICHARDSON, P.E.
990 LALLEY ROAD
IRON RIVER, MI 49935
906.214.4151

DESCRIPTION PREPARED:
 A PARCEL OF LAND IN THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 14, T.14 N.-R.4 W., UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION; THENCE S.01°-23'-34"E., ON AND ALONG THE EAST LINE OF SAID SECTION, 396.51 FEET; THENCE N.88°-26'-02"W., PARALLEL WITH THE NORTH LINE OF SAID SECTION, 368.78 FEET; THENCE N.01°-01'-58"E., ON A PREVIOUSLY SURVEYED AND DESCRIBED LINE, 396.00 FEET; THENCE S.88°-26'-02"E., ON AND ALONG SAID NORTH SECTION LINE, 352.00 FEET BACK TO THE POINT OF BEGINNING, CONTAINING 3.28 ACRES OF LAND AND BEING SUBJECT TO HIGHWAY USE OF THE NORTHERLY 60.00 FEET AND THE EASTERLY 33.00 FEET THEREOF AND ALSO BEING SUBJECT TO AND TOGETHER WITH ANY OTHER EASEMENTS, RESTRICTIONS OR RIGHTS OF WAY RECORD.

		DWG. NO.
		01-G-01
02/14/2022	FINAL SITE PLAN REVIEW	
05/17/2021	PRELIMINARY SITE PLAN REVIEW	

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Krist Food Mart
 4972 E. Pickard Rd.
 Union Township, MI
 Krist Oil Company Inc.
 303 Seiden Road
 Iron River, MI 49935

EROSION CONTROL PLAN

Attention: 1" = 100'
 If this scale bar does not measure 1" then drawing is not original scale.

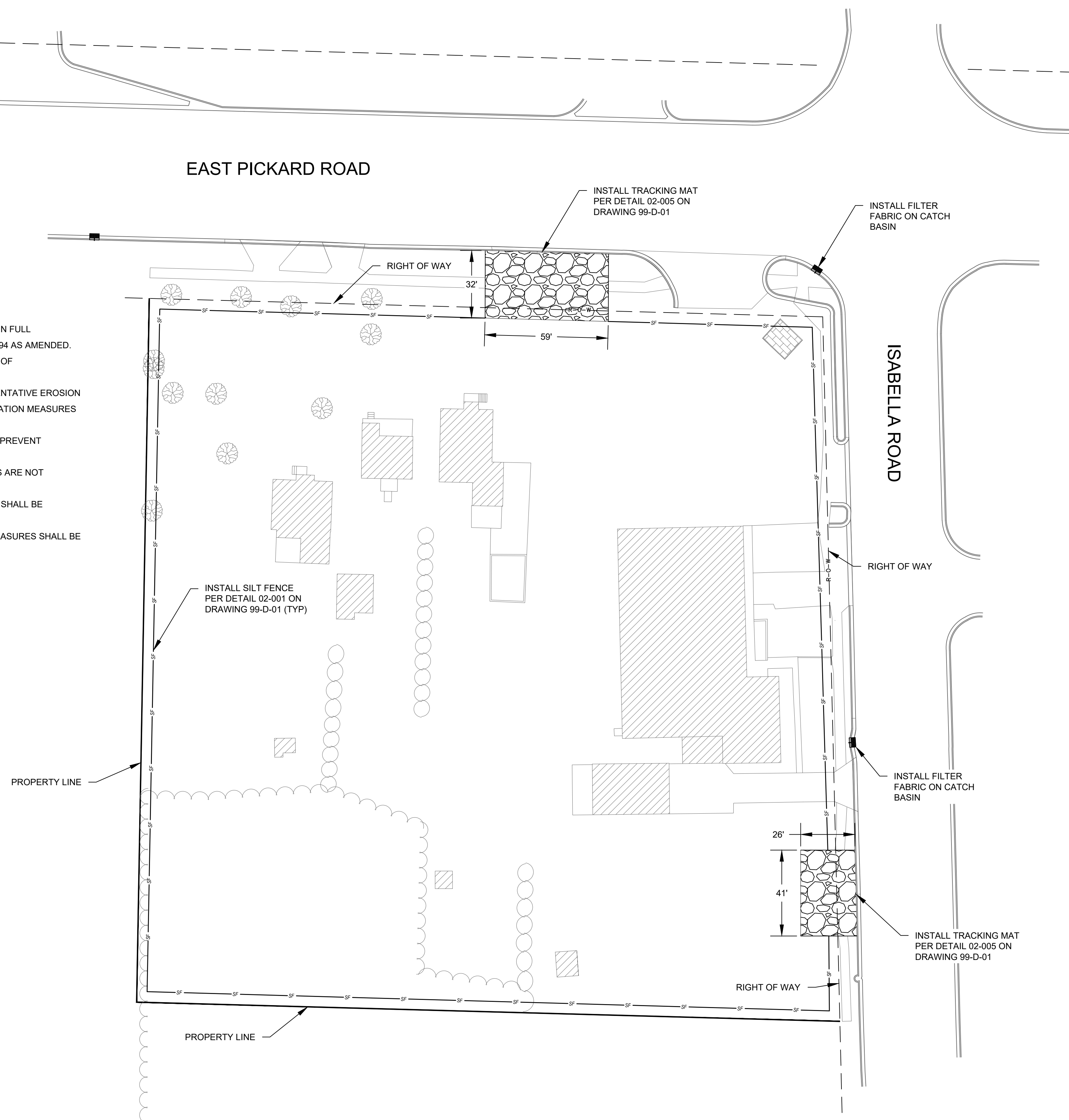
05/17/2021
PRELIMINARY SITE PLAN REVIEW
02/14/2022
FINAL SITE PLAN REVIEW

Designed By: JRR
 Checked By: CAR
 Drawn By: JRR
 Approved By: CAR

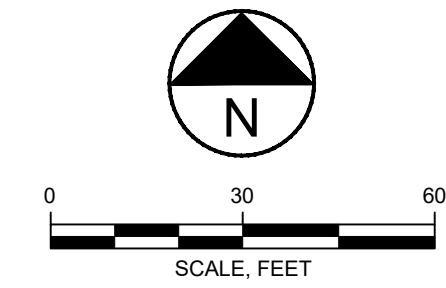
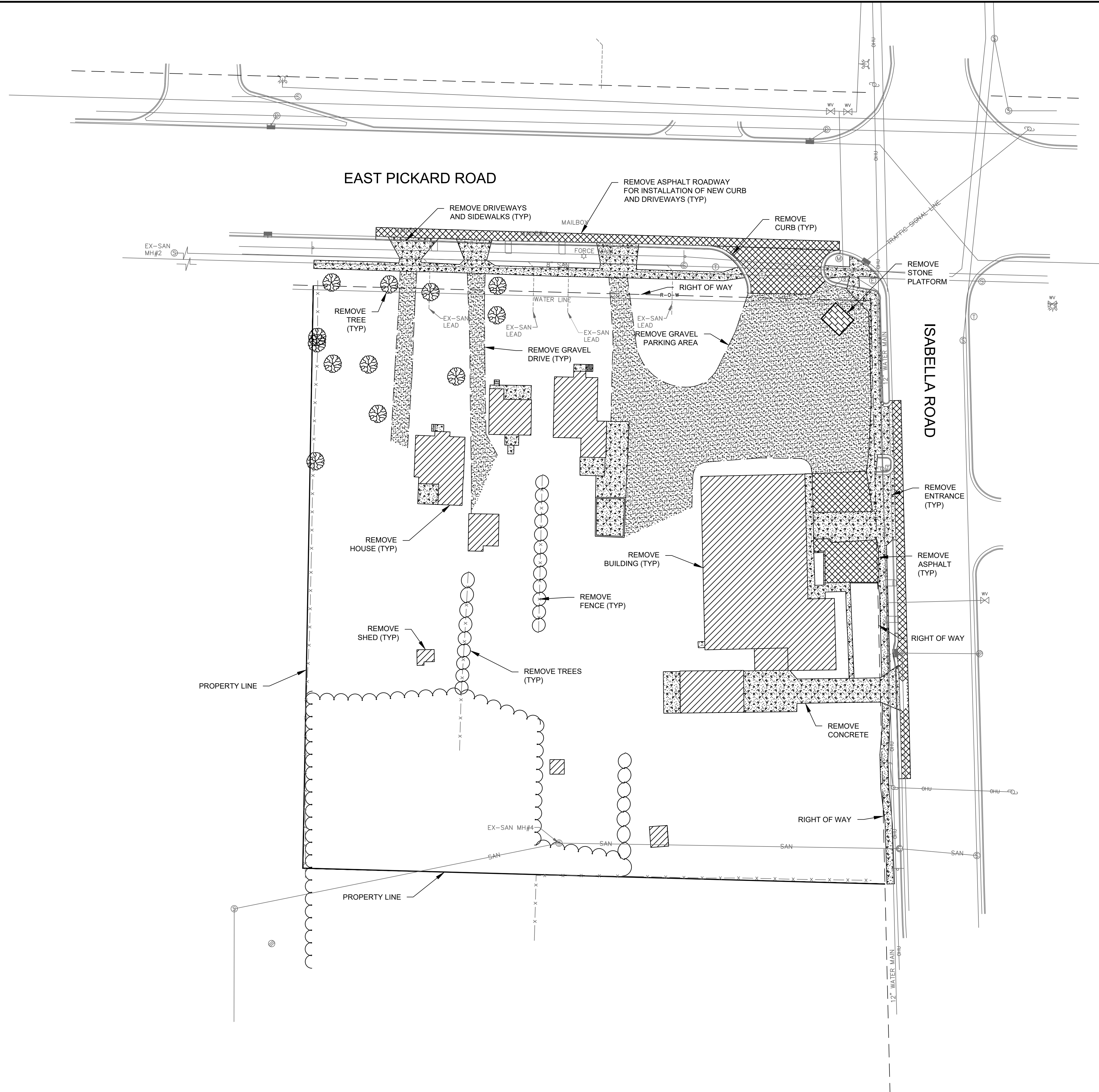
GEI PROJECT: 1509480

DWG. NO.
02-C-01
 SHEET 2

- SOIL EROSION AND CONTROL NOTES:**
1. ALL SOIL AND SEDIMENT CONTROL MEASURE PLACED BY THE CONTRACTOR SHALL BE IN FULL COMPLIANCE WITH PART 91, SOIL EROSION AND SEDIMENTATION ACT, OF PA 451, OF 1994 AS AMENDED.
 2. ALL MEASURES SHALL FOLLOW THE LATEST REVISION OF THE MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) SPECIFICATIONS FOR CONSTRUCTION 2020.
 3. CONSTRUCTION OPERATIONS SHALL BE SCHEDULED AND PERFORMED SO THAT PREVENTATIVE EROSION CONTROL MEASURES ARE IN PLACE PRIOR TO EXCAVATION AND TEMPORARY STABILIZATION MEASURES ARE IN PLACE IMMEDIATELY FOLLOWING BACKFILLING AND/OR GRADING OPERATIONS.
 4. SPECIAL PRECAUTIONS WILL BE TAKEN IN THE USE OF CONSTRUCTION EQUIPMENT TO PREVENT SITUATIONS THAT PROMOTE EROSION.
 5. CLEANUP WILL BE DONE IN A MANNER TO ENSURE THAT EROSION CONTROL MEASURES ARE NOT DISTURBED.
 6. DEFICIENCIES IDENTIFIED IN SOIL EROSION CONTROL AND SEDIMENTATION MEASURES SHALL BE CORRECTED BY THE CONTRACTOR WITHIN 24 HOURS OF NOTICE.
 7. BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE USED ON THIS PROJECT AS SHOWN ON THE PLANS.



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Krist Food Mart
 4972 E. Pickard Rd.
 Union Township, MI
 Krist Oil Company Inc.
 303 Selden Road
 Iron River, MI 49935

**EXISTING CONDITIONS
 AND REMOVAL PLAN**

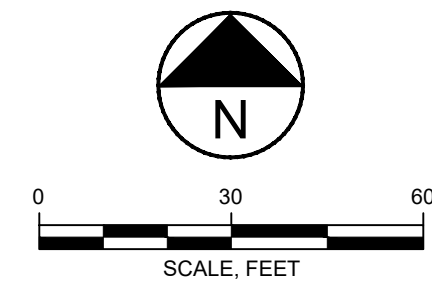
Attention:
 1" = 100'
 If this scale bar does not
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 not original scale.

05/17/2021
PRELIMINARY SITE PLAN REVIEW
02/14/2022
FINAL SITE PLAN REVIEW

Designed By: JRR
 Checked By: CAR
 Drawn By: JRR
 Approved By: CAR

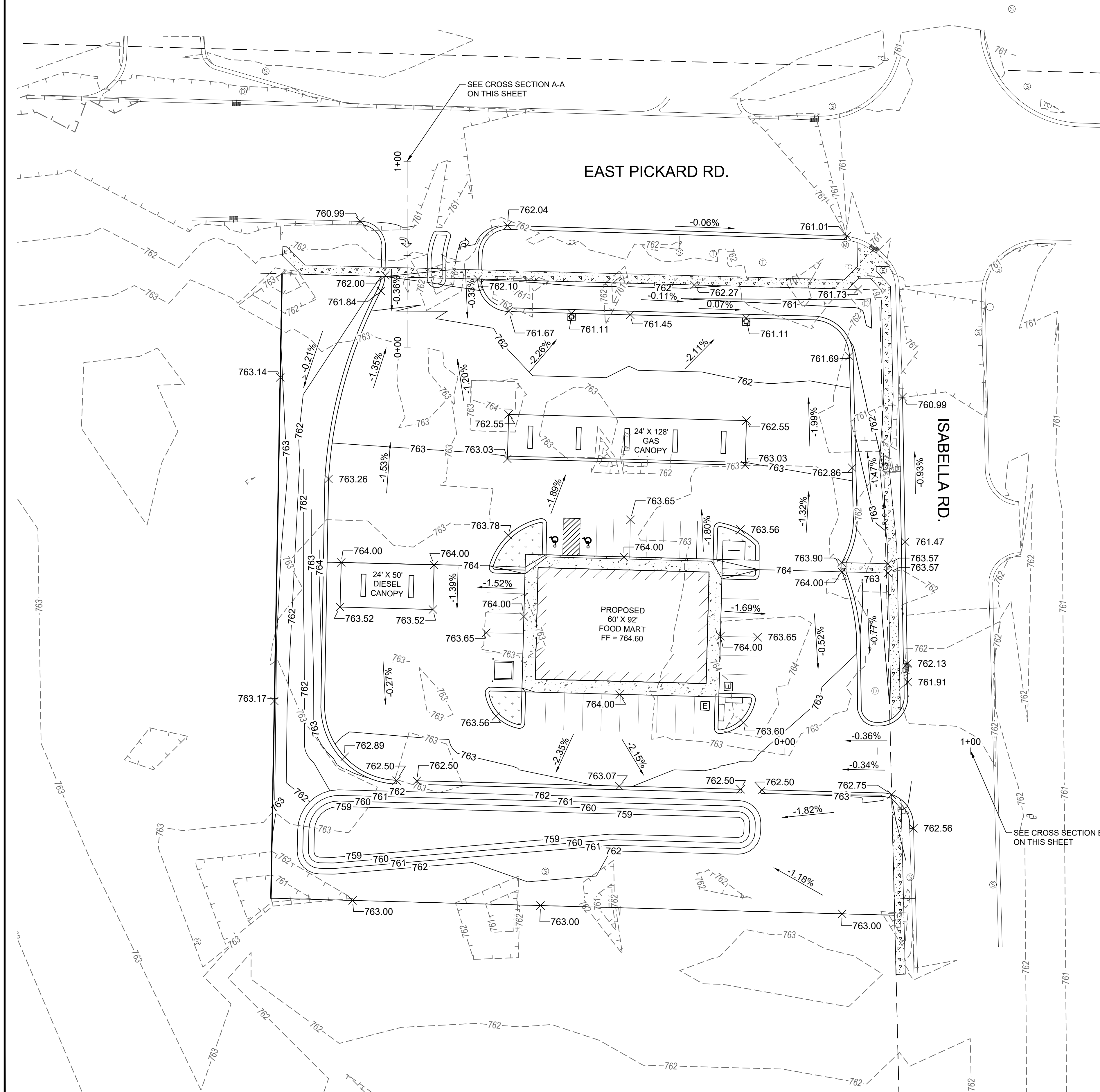
GEI PROJECT: 1509480

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02-C-02
 SHEET 3

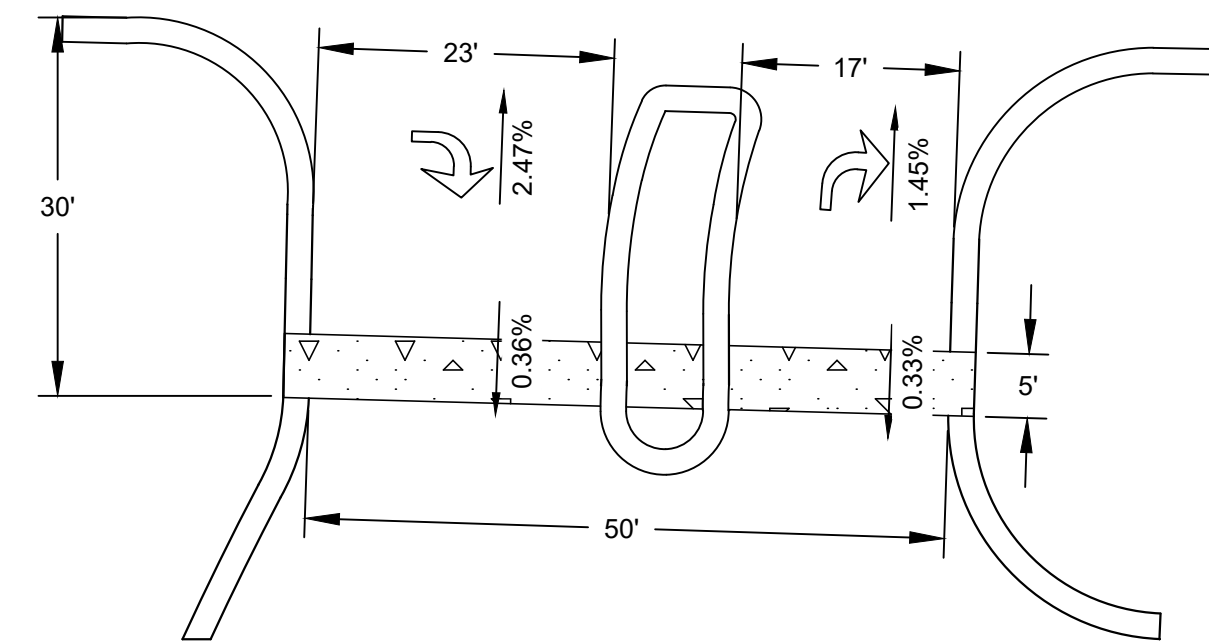


Krist Food Mart
 4972 E. Pickard Rd.
 Union Township, MI
 Krist Oil Company Inc.
 303 Selden Road
 Iron River, MI 49935

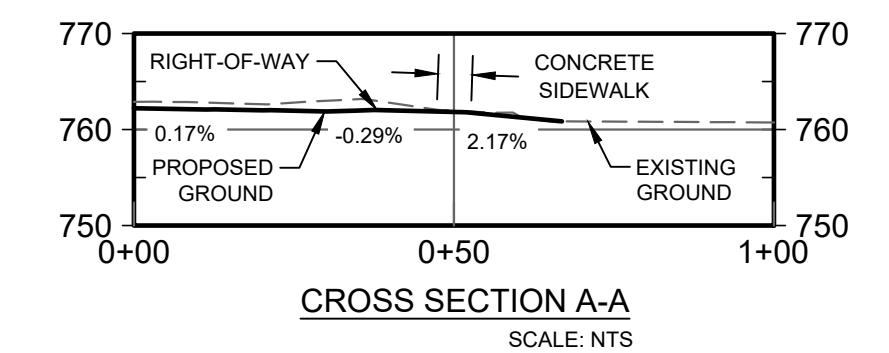
EAST PICKARD RD.



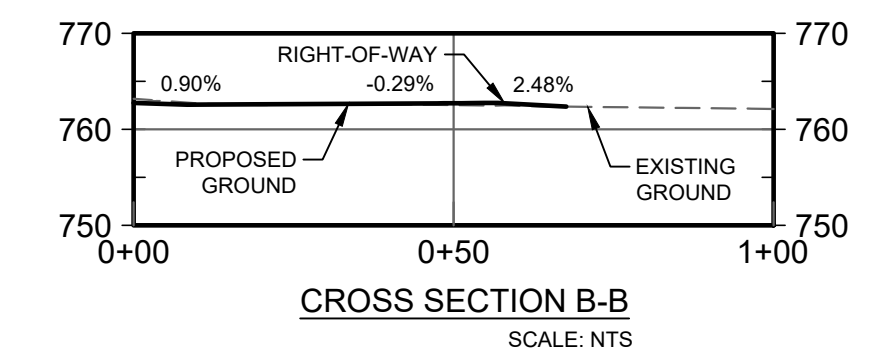
EAST PICKARD RD. ENTRANCE
 PLAN VIEW



EAST PICKARD RD. ENTRANCE



ISABELLA RD. ENTRANCE



GRADING PLAN

Attention: 1"

If this scale bar does not measure 1" then drawing is not original scale.

05/17/2021
PRELIMINARY SITE PLAN REVIEW
02/14/2022
FINAL SITE PLAN REVIEW

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GEI PROJECT: 1509480

DWG. NO.
02-C-04
 SHEET 5

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STORM WATER MANAGEMENT PLAN:

TOTAL SITE DRAINAGE AREA = 2.55 ACRES
 NORTH PARKING AREA DRAINING TO MDOT = 1.02 ACRES
 SOUTH PARKING AREA DRAINING TO COUNTY = 1.53 ACRES

NORTH PARKING AREA - MDOT PERMIT

- TOTAL RUNOFF VOLUME FROM 10-YEAR, 24-HOUR STORM = 10,934 CFT
- TOTAL RUNOFF VOLUME INFILTRATED DURING 10-YEAR, 24-HOUR STORM = 6,534 CFT
- TOTAL STORAGE VOLUME REQUIRED = 4,007 CFT
- TOTAL STORAGE PROVIDED = 6,952 CFT

SOUTH PARKING AREA - ISABELLA COUNTY DRAIN OFFICE PERMIT

- TOTAL RUNOFF VOLUME FROM 25-YEAR, 24-HOUR STORM = 12,960 CFT
- TOTAL STORAGE PROVIDED = 18,543 CFT

ISABELLA COUNTY DRAIN OFFICE PERMIT:

DESIGN CRITERIA AND SITE INFORMATION

- UNION TOWNSHIP STORM WATER ALLOWABLE DISCHARGE: 0.10 CFS/ACRE

REQUIRED DETENTION, 25 YEAR/24 HOUR STORM EVENT:

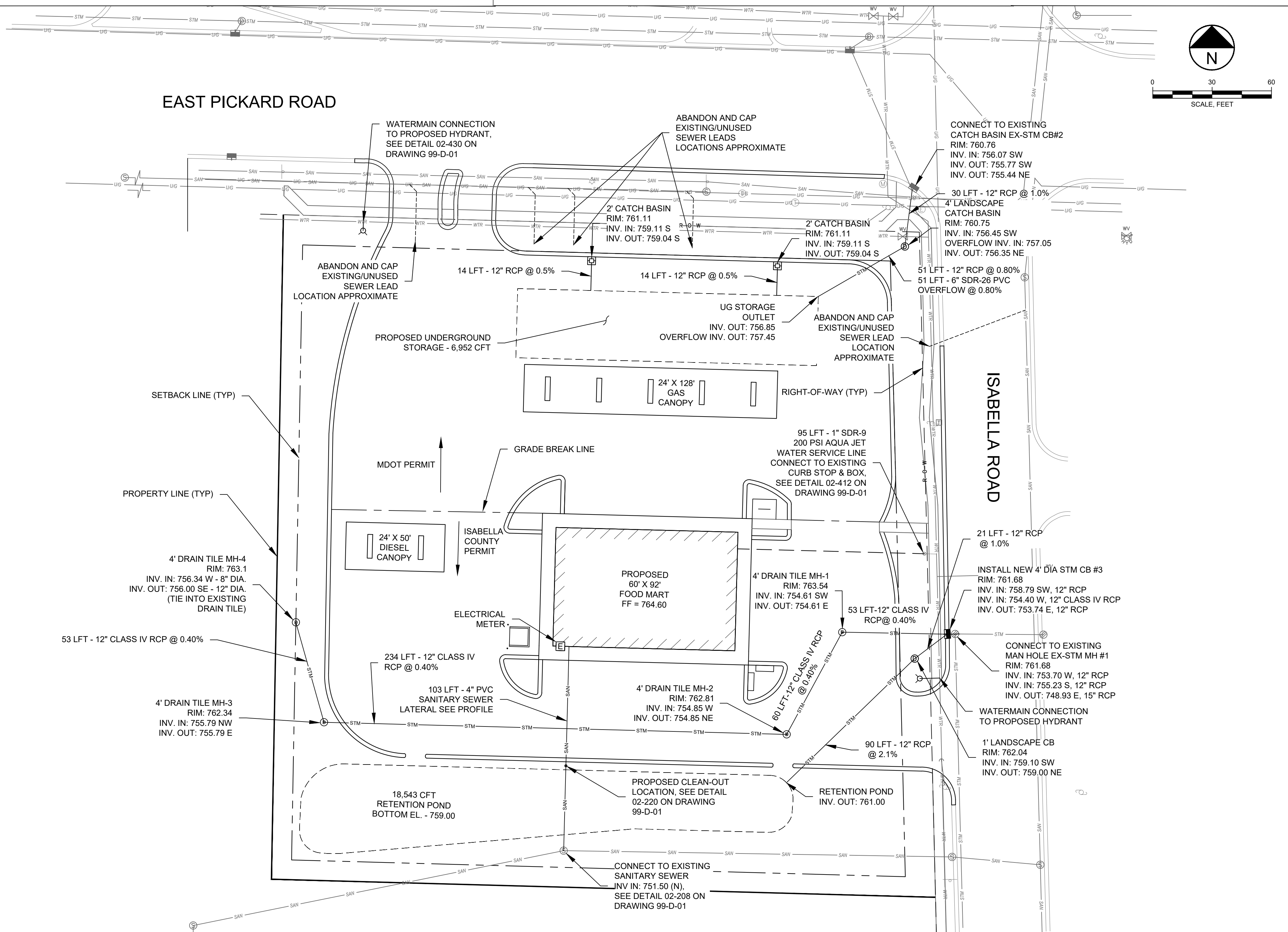
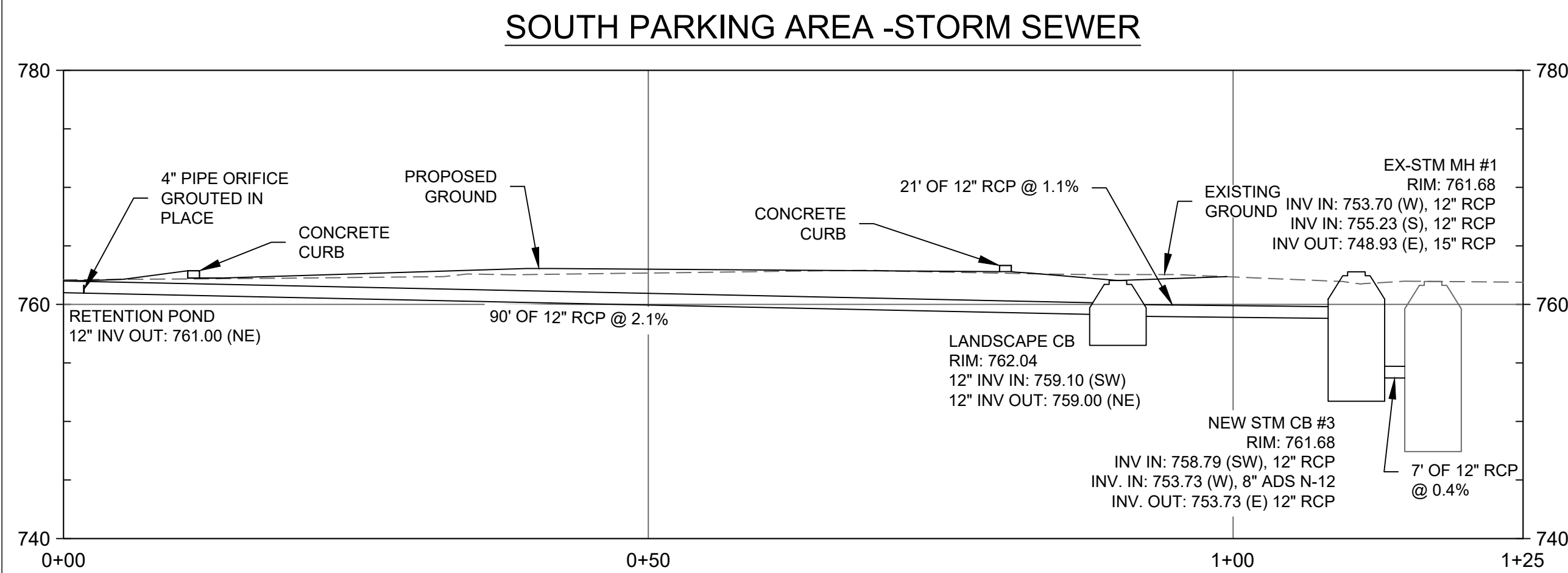
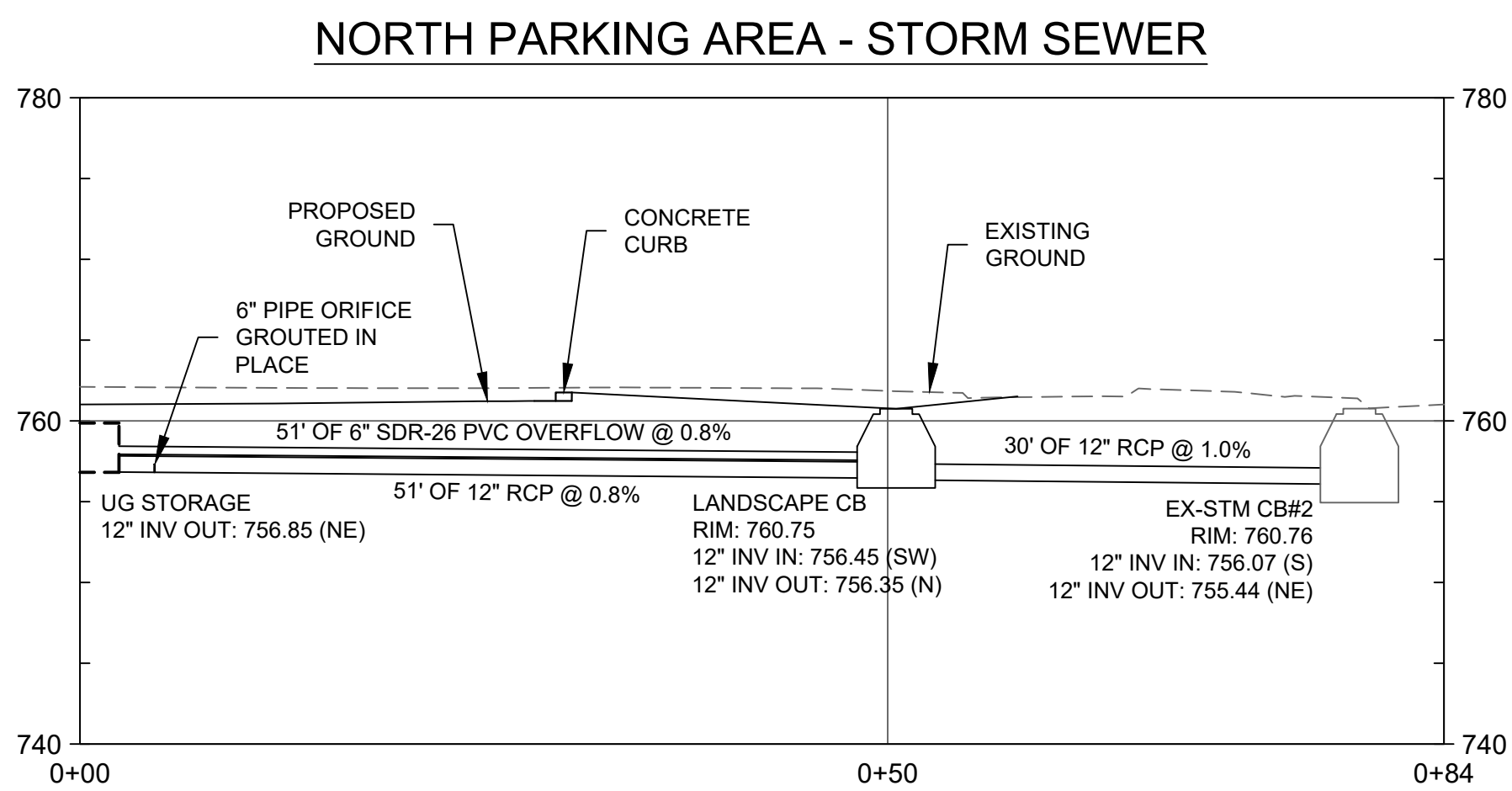
- IMPERVIOUS ACREAGE = 1.01 ACRE
- PERVIOUS ACREAGE = 0.52 ACRE
- VOLUME OF DETENTION BELOW 25 YEAR PONDING = 9,180 CFT
- VOLUME OF DETENTION BELOW 100 YEAR PONDING = 10,837 CFT

DETENTION POND DETAILS:

- AREA OF CONTOURS
 - 759 = 3,878 SFT
 - 760 = 5,382 SFT
 - 761 = 6,942 SFT
 - 762 = 9,926 SFT
 - 763 = 29,552 SFT
- VOLUME OF CONTOURS
 - 760 = 4,630 CFT
 - 761 = 6,162 CFT
 - 762 = 8,434 CFT
 - 763 = 19,739 CFT
- 25 YEAR/24 HOUR STORAGE OCCURS AT = 760.8
- 100 YEAR/24 HOUR STORAGE OCCURS AT = 761.1

GENERAL NOTES:

- ALL WATER, SEWER, AND APPURTENANCES MUST BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE CHARTER TOWNSHIP OF UNION REQUIREMENTS, DESIGN SPECIFICATIONS AND ORDINANCES, TEN STATE STANDARDS, ALL STATE AND FEDERAL STANDARDS AND REGULATIONS, AND ACCEPTED ENGINEERING PRACTICES FOR THE AREA.
- ALL UNUSED SANITARY SEWER LEADS WILL BE ABANDONED AND CAPPED.
- SEWER LEADS AND WYES SHALL BE SCHEDULE 40 POLYVINYL CHLORIDE (PVC) WITH SOLVENT WELDED JOINTS AS DEFINED IN ASTM D-3034.
- EXTRA STRENGTH SOLID WALL, SDR 23.5 ABS AS DEFINED IN ASTM D-1788 SHALL WITH PRESSURE RATED GASKETS TO BE USED UNDER THE PROPOSED DETENTION POND CROSSING DUE TO DANGER OF SANITARY SEWER OVERFLOW (SSO) INTO STORM WATER SYSTEM.
- CLEAN-OUTS SHALL CONSIST OF PIPE AND FITTINGS OF THE SAME TYPE AS THE SEWER MAIN MATERIALS THEY CONNECT TO AS REQUIRED TO PROVIDE A CLEAN-OUT INSTALLATION AND SHOWN IN THE DETAILS AND PROFILES. THE MAXIMUM DISTANCE BETWEEN CLEAN-OUTS ON LEADS IS 75 LINEAL FEET.



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Krist Food Mart
 4972 E. Pickard Rd.
 Union Township, MI
 Krist Oil Company Inc.
 303 Selden Road
 Iron River, MI 49935

UTILITY AND STORM WATER
 MANAGEMENT PLAN

Attention:
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 If this scale bar does not measure 1" then drawing is not original scale.

05/17/2021
PRELIMINARY SITE PLAN REVIEW
02/14/2022
FINAL SITE PLAN REVIEW

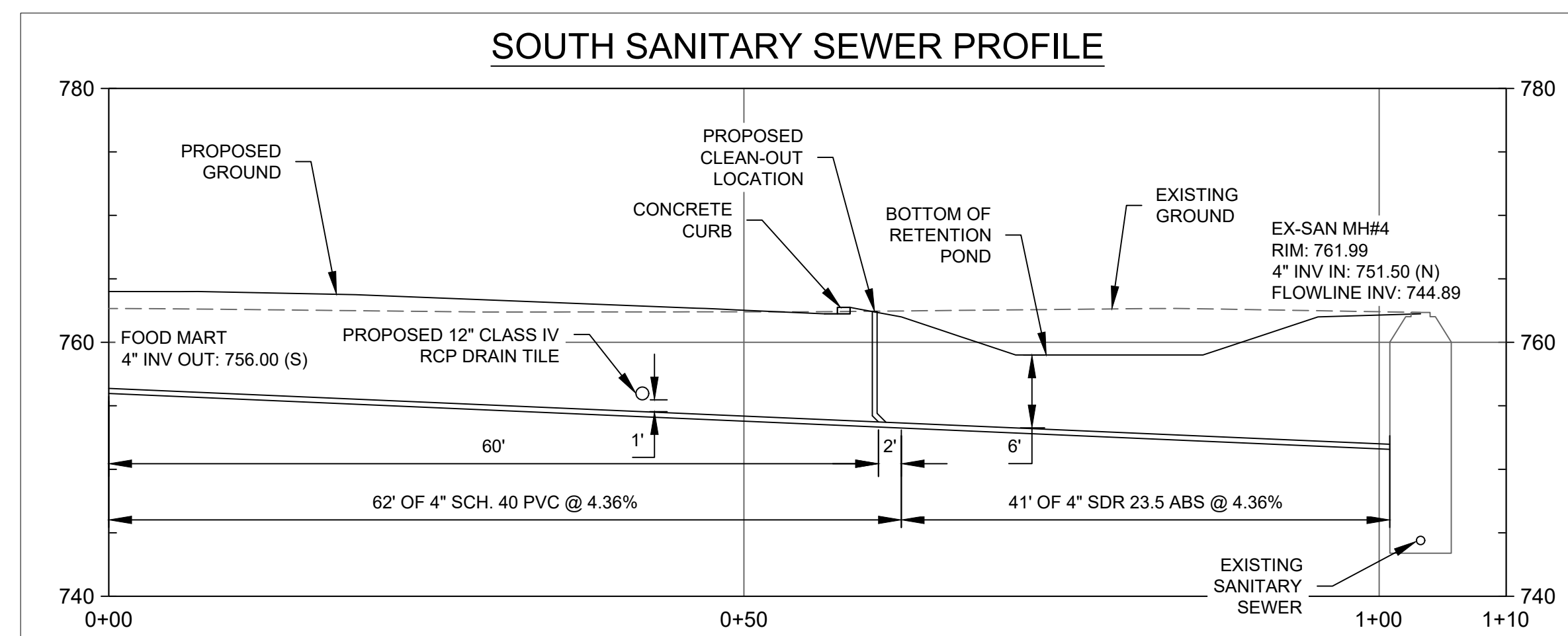
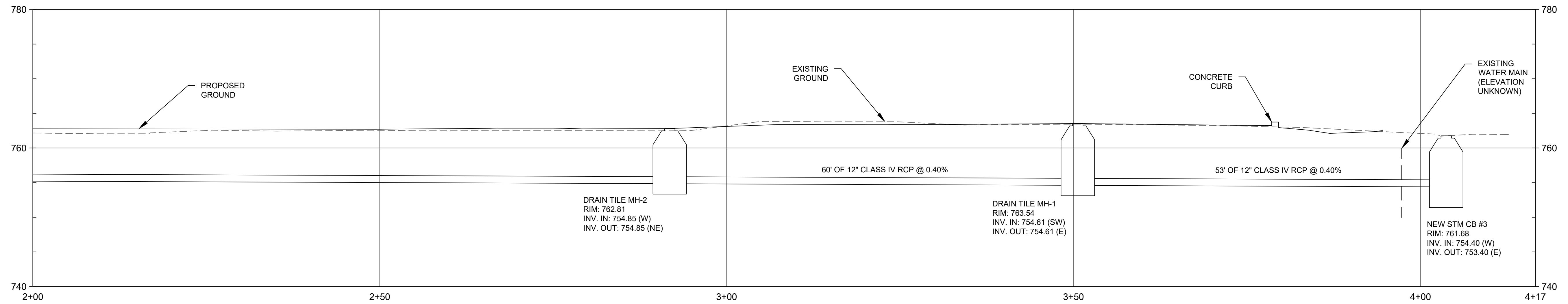
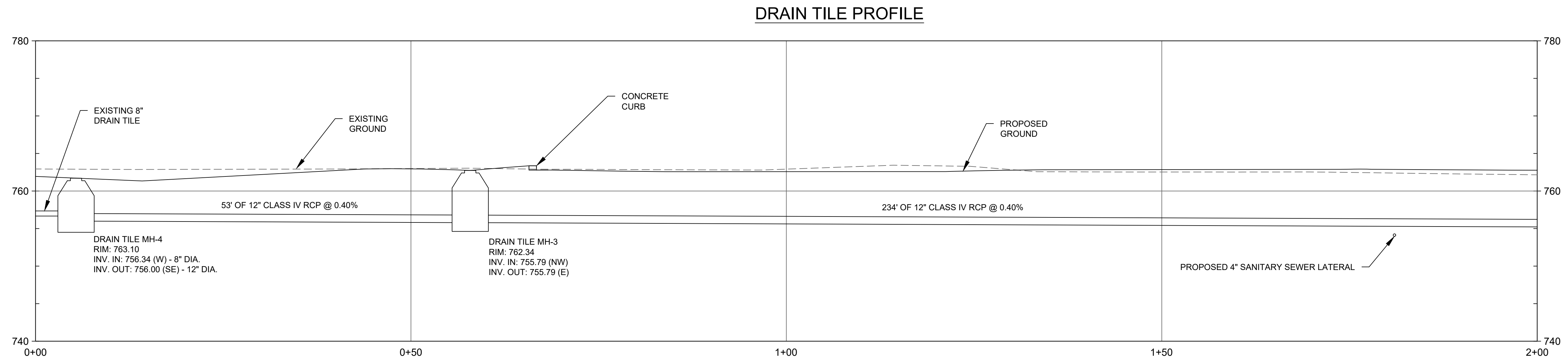
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 Drawn By: JRR
 Approved By: CAR

GEI PROJECT: 1509480

DWG. NO.
02-C-05
 SHEET 6

Krist Food Mart
 4972 E. Pickard Rd.
 Union Township, MI
 Krist Oil Company Inc.
 303 Selden Road
 Iron River, MI 49935

DRAIN TILE / SANITARY SEWER
 PROFILE VIEW



Attention: 1"
 0 1"
 If this scale bar does not measure 1" then drawing is not original scale.

05/17/2021
PRELIMINARY SITE PLAN REVIEW
02/14/2022
FINAL SITE PLAN REVIEW

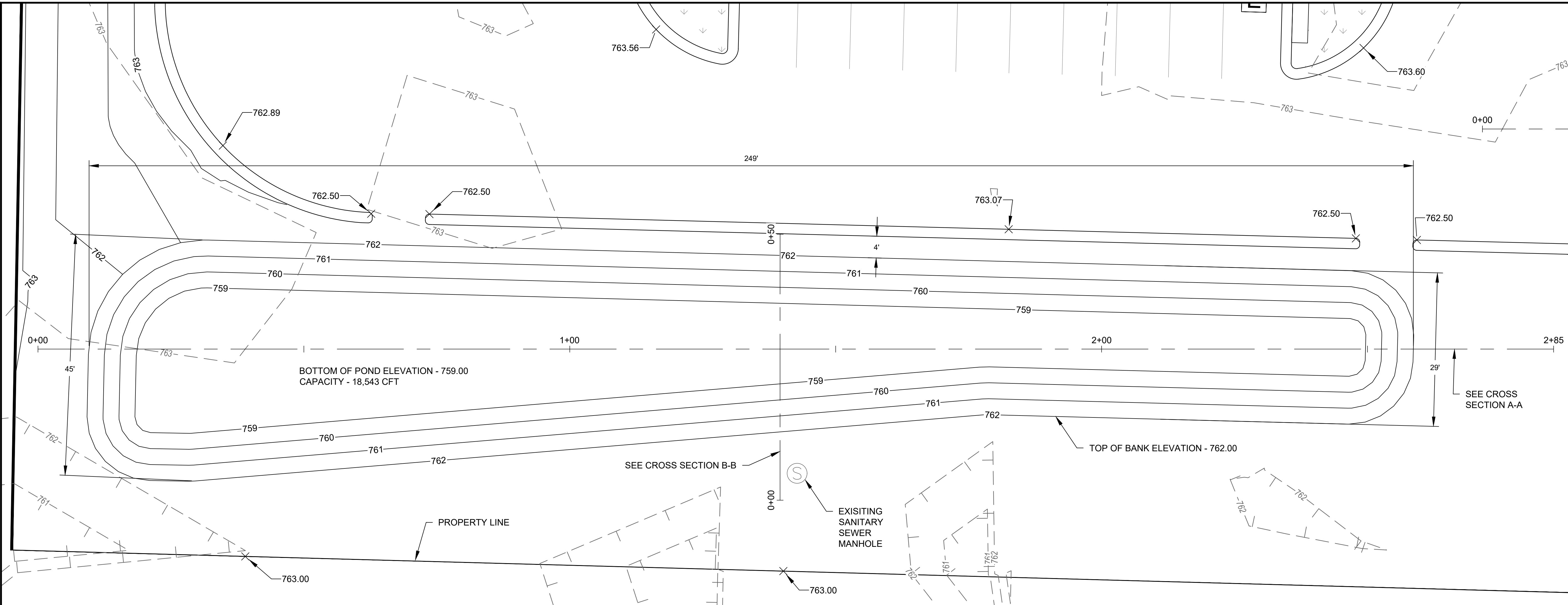
Designed By: JRR
 Checked By: CAR
 Drawn By: JRR
 Approved By: CAR

GEI PROJECT: 1509480

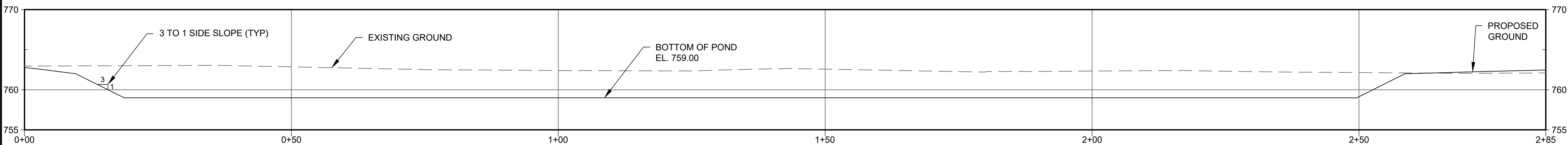
DWG. NO.
02-C-06
 SHEET 7

Krist Food Mart
 4972 E. Pickard Rd.
 Union Township, MI
 Krist Oil Company Inc.
 303 Selden Road
 Iron River, MI 49935

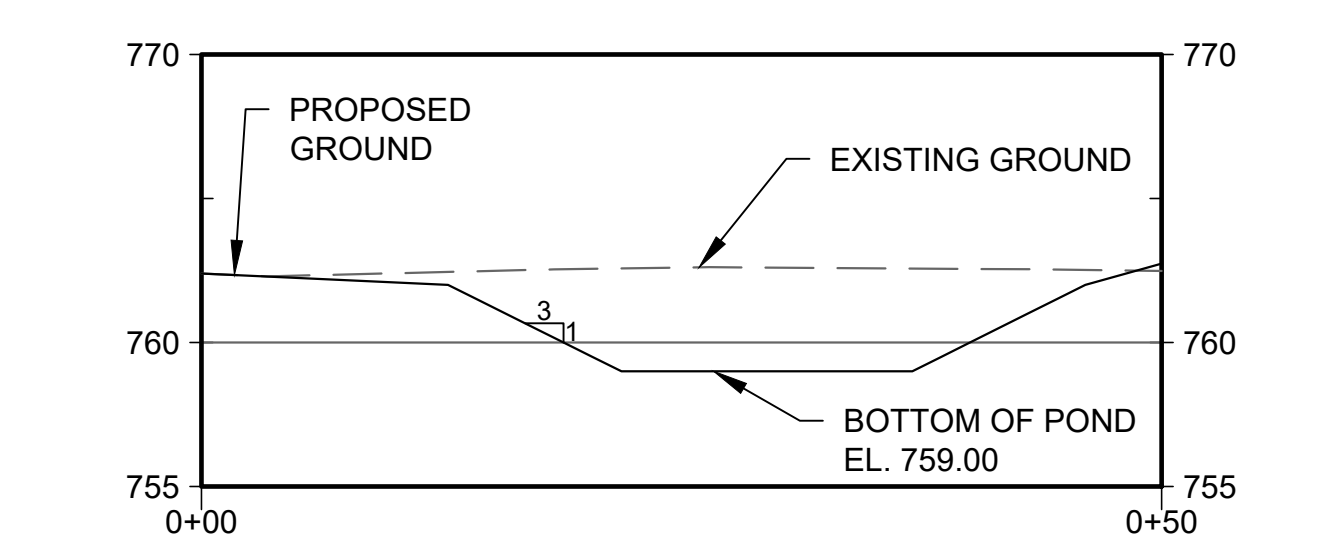
DETENTION POND DETAILS



SOUTH DETENTION POND - CROSS SECTION A-A



SOUTH DETENTION POND - CROSS SECTION B-B



Attention:

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05/17/2021
PRELIMINARY SITE PLAN REVIEW
02/14/2022
FINAL SITE PLAN REVIEW

Designed By: JRR
 Checked By: CAR
 Drawn By: JRR
 Approved By: CAR

GEI PROJECT: 1509480
 DWG. NO. 02-C-07
 SHEET 8

K:\Vind_C01\1509480-Master_Services_Agreement\1015_ML_Pleasant_East\CAD\DESIGN\Site Plan Package\1509480 - 1015_MPLEASANT_EAST_DETENTION_POND_PROFILE.dwg - 3/14/2022 8:05:17 AM, RECK, JOHN, GEI, RB

25 YEAR STORM EVENT CALCULATION

	Area (Acres)	C			
Hard Surface/Imperv. Area	1.01	0.95			
Gravel	0.00	0.75	Proposed Runoff "C" Value	0.73	(I)
Green Space/Lawn	0.52	0.30	Maximum Allowable Outflow (CFS)	0.15	(G)
Cont. Drainage Area (Acres)	1.53 (J)		Storm Recurrence Interval (Yrs)	25	

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	25-Year Total Rainfall (Inches)	25-Year Rainfall Intensity (Inch/Hr)	Proposed Runoff Flow Rate (CFS)	Proposed Runoff Volume (CFT)	Maximum Allowable Outflow (CFS)	Required Detention Storage (CFT)
5	0.08	0.50	6.00	6.69	2,006	0.15	1,960
10	0.17	0.87	5.22	5.82	3,490	0.15	3,398
15	0.25	1.12	4.48	4.99	4,493	0.15	4,356
20	0.33	1.30	3.90	4.35	5,215	0.15	5,032
30	0.50	1.54	3.08	3.43	6,178	0.15	5,903
40	0.67	1.75	2.63	2.93	7,020	0.15	6,654
50	0.83	1.89	2.27	2.53	7,582	0.15	7,124
60	1.00	1.95	1.95	2.17	7,822	0.15	7,273
90	1.50	2.27	1.51	1.69	9,106	0.15	8,282
120	2.00	2.41	1.21	1.34	9,668	0.15	8,569
180	3.00	2.66	0.89	0.99	10,671	0.15	9,022
360	6.00	3.11	0.52	0.58	12,476	0.15	9,180
720	12.00	3.61	0.30	0.34	14,481	0.15	7,889
1080	18.00	3.90	0.22	0.24	15,645	0.15	5,756
1440	24.00	4.15	0.17	0.19	16,648	0.15	3,463

Maximum: **9,180**

100 YEAR STORM EVENT CALCULATION

	Area (Acres)	C			
Hard Surface/Imperv. Area	0.81	0.95	Maximum Storage Volume	18,543.00	
Impervious - Retention Pond	0.20	0.95	Proposed Runoff "C" Value	0.68	
Green Space/Lawn	0.52	0.30	Maximum Allowable Outflow (CFS)	0.15	
Cont. Drainage Area (Acres)	1.53		Storm Recurrence Interval (Yrs)	100	

A	B	C	D	E	F	G	H
Duration (Minutes)	Duration (Hours)	Design Storm Intensity (Inch/Hr)	CxA (ac)	Design Storm Discharge (CFS)	Control Discharge (CFS)	Basin Volume (CF)	Basin Volume (Ac-ft)
10	0.17	7.19	1.04	7.51	0.15	4,415.97	0.10
20	0.33	5.06	1.04	5.29	0.15	6,162.20	0.14
30	0.50	3.94	1.04	4.12	0.15	7,137.59	0.16
40	0.67	3.26	1.04	3.41	0.15	7,812.17	0.18
50	0.83	2.8	1.04	2.92	0.15	8,323.80	0.19
60	1.00	2.46	1.04	2.57	0.15	8,710.09	0.20
120	2.00	1.47	1.04	1.54	0.15	9,974.99	0.23
180	3.00	1.08	1.04	1.13	0.15	10,563.05	0.24
240	4.00	0.86	1.04	0.90	0.15	10,775.09	0.25
300	5.00	0.72	1.04	0.75	0.15	10,836.72	0.25
360	6.00	0.62	1.04	0.65	0.15	10,747.94	0.25
480	8.00	0.49	1.04	0.51	0.15	10,419.98	0.24
600	10.00	0.41	1.04	0.43	0.15	10,016.82	0.23
720	12.00	0.35	1.04	0.37	0.15	9,312.84	0.21
1080	18.00	0.25	1.04	0.26	0.15	7,200.90	0.17
1440	24.00	0.20	1.04	0.21	0.15	5,088.96	0.12

Maximum: **10,837**
Safety Factor: **1.71**

RESTRICTION CALCULATIONS

Volume	Invert	Avail. Storage	Storage Description
#1	759.00'	38,965 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
759.00	3,878	0	0
760.00	5,382	4,630	4,630
761.00	6,942	6,162	10,792
762.00	9,926	8,434	19,226
763.00	29,552	19,739	38,965

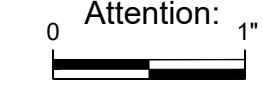
Device	Routing	Invert	Outlet Devices
#1	Primary	761.00'	12.0" Round Culvert L= 90.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 761.00' / 759.10' S= 0.0211 1/8' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Device 1	761.00'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Secondary	762.50'	10.0' long x 5.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=0.15 cfs @ 15.86 hrs HW=761.29' TW=759.23' (Dynamic Tailwater)
 1=Culvert (Passes 0.15 cfs of 0.28 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.15 cfs @ 1.85 fps)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	759.00	0.00	0.00	0.00
1.00	0.00	0	759.00	0.00	0.00	0.00
2.00	0.02	32	759.01	0.00	0.00	0.00
3.00	0.03	108	759.03	0.00	0.00	0.00
4.00	0.03	218	759.06	0.00	0.00	0.00
5.00	0.04	360	759.09	0.00	0.00	0.00
6.00	0.05	536	759.13	0.00	0.00	0.00
7.00	0.06	745	759.19	0.00	0.00	0.00
8.00	0.07	986	759.24	0.00	0.00	0.00
9.00	0.10	1,300	759.32	0.00	0.00	0.00
10.00	0.13	1,709	759.41	0.00	0.00	0.00
11.00	0.26	2,381	759.55	0.00	0.00	0.00
12.00	3.58	7,577	760.51	0.00	0.00	0.00
13.00	0.61	11,508	761.10	0.02	0.02	0.00
14.00	0.26	12,612	761.25	0.12	0.12	0.00
15.00	0.19	12,902	761.29	0.15	0.15	0.00
16.00	0.14	12,958	761.29	0.15	0.15	0.00
17.00	0.12	12,903	761.29	0.15	0.15	0.00
18.00	0.11	12,812	761.27	0.14	0.14	0.00
19.00	0.09	12,702	761.26	0.13	0.13	0.00
20.00	0.08	12,580	761.24	0.12	0.12	0.00
21.00	0.07	12,461	761.23	0.10	0.10	0.00
22.00	0.07	12,365	761.22	0.10	0.10	0.00
23.00	0.07	12,288	761.21	0.09	0.09	0.00
24.00	0.07	12,225	761.20	0.08	0.08	0.00
25.00	0.00	12,030	761.17	0.06	0.06	0.00
26.00	0.00	11,835	761.15	0.05	0.05	0.00
27.00	0.00	11,686	761.13	0.04	0.04	0.00
28.00	0.00	11,571	761.11	0.03	0.03	0.00
29.00	0.00	11,480	761.10	0.02	0.02	0.00
30.00	0.00	11,407	761.09	0.02	0.02	0.00
31.00	0.00	11,348	761.08	0.02	0.02	0.00
32.00	0.00	11,298	761.07	0.01	0.01	0.00
33.00	0.00	11,256	761.07	0.01	0.01	0.00
34.00	0.00	11,221	761.06	0.01	0.01	0.00
35.00	0.00	11,190	761.06	0.01	0.01	0.00
36.00	0.00	11,163	761.05	0.01	0.01	0.00

Krist Food Mart
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 Krist Oil Company Inc.
 303 Selden Road
 Iron River, MI 49935

STORM WATER CALCULATIONS -
DETENTION POND

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05/17/2021
PRELIMINARY SITE PLAN REVIEW
02/14/2022
FINAL SITE PLAN REVIEW

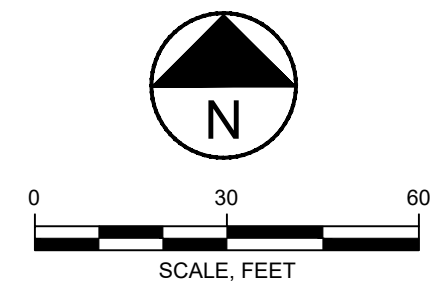
Designed By: JRR
 Checked By: CAR
 Drawn By: JRR
 Approved By: CAR
 GEI PROJECT: 1509480

APPLE LP MILLER
5084 EXCHANGE DR.
FLINT, MI 48507
B-5 HIGHWAY BUSINESS
DISTRICT

LIBREN MANAGEMENT LLC
4995 E PICKARD ST.
MOUNT PLEASANT, MI 48858
B-6 AUTO-RELATED HIGHWAY
BUSINESS DISTRICT

LIBREN MANAGEMENT LLC
5560 S SHEPHERD RD.
SHEPHERD, MI 48883
B-6 AUTO-RELATED HIGHWAY
BUSINESS DISTRICT

RI CS4
11995 EL CAMINO REAL
SAN DIEGO, CA 92130
B-7 RETAIL AND SERVICE
HIGHWAY BUSINESS DISTRICT



JACK LOEKS THEATRES INC.
2121 CELEBRATION DR. NE
GRAND RAPIDS, MI 49525
B-5 HIGHWAY BUSINESS
DISTRICT

EAST PICKARD ROAD

Krist Food Mart
4972 E. Pickard Rd.
Union Township, MI
Krist Oil Company Inc.
303 Selden Road
Iron River, MI 49935

RICHARD ANDERSON
5065 DAKOTA DR.
WEIDMAN, MI 48893
B-7 RETAIL AND SERVICE
HIGHWAY BUSINESS DISTRICT

JEDS PROPERTIES INC.
471 CEDAR DR.
MOUNT PLEASANT, MI 48858
B-7 RETAIL AND SERVICE
HIGHWAY BUSINESS DISTRICT

ADJACENT PROPERTY
OWNER INFORMATION

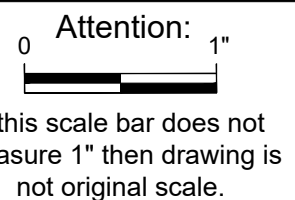
ROXANNE POLLARD
2095 YATS DR.
MOUNT PLEASANT, MI 48858
R-2B ONE AND TWO FAMILY
DISTRICT

ISABELLA ROAD

MICHIGAN RESERVES INC.
PO BOX 329
MOUNT PLEASANT, MI 48804
B-7 RETAIL AND SERVICE
HIGHWAY BUSINESS DISTRICT

JOE FOLTZ
2094 S. ISABELLA RD.
MOUNT PLEASANT, MI 48858
B-7 RETAIL AND SERVICE
HIGHWAY BUSINESS DISTRICT

A&G FLOORS INC.
1970 AIRWAY DR.
MOUNT PLEASANT, MI 48858
B-7 RETAIL AND SERVICE
HIGHWAY BUSINESS DISTRICT

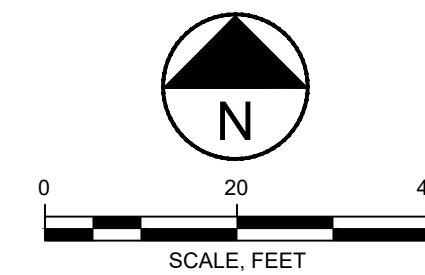


05/17/2021
PRELIMINARY SITE PLAN REVIEW
02/14/2022
FINAL SITE PLAN REVIEW

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Checked By: CAR
Drawn By: JRR
Approved By: CAR
GEI PROJECT: 1509480

DWG. NO.
02-C-09
SHEET 10

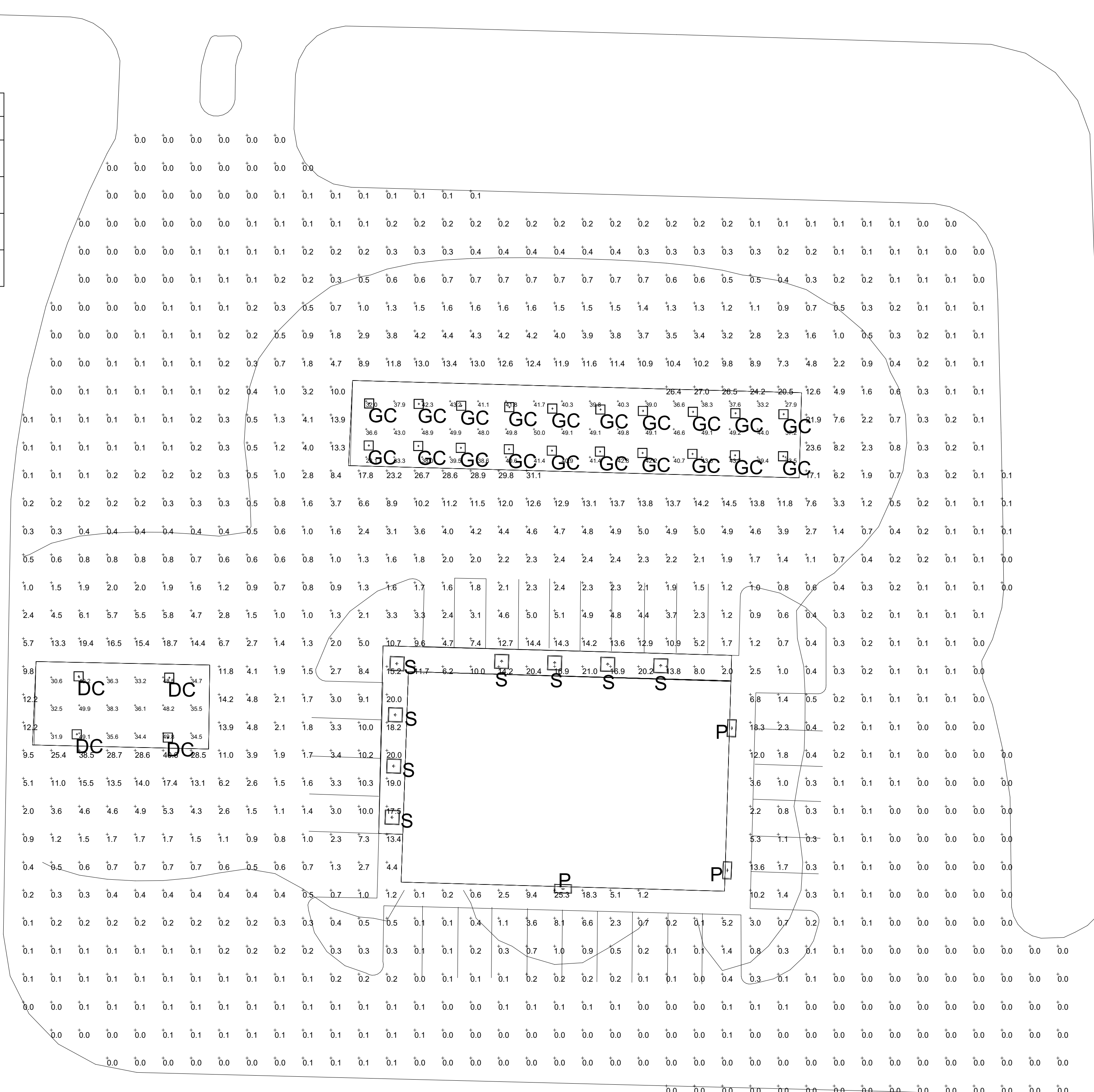
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Luminaire Schedule					
Symbol	Qty	Tag	Label	LLF	MH
☐	20	GC	701948-5WTWT3-M150P2	0.900	15'
☐	4	DC	701948-5WTWT3-MH200	0.900	15'
☐	3	P	LCG-WPFC-70W-U-50K-XX	0.900	12'
☐	8	S	LCG-CP-65W-U-50K-XX-D1	0.900	10'

Calculation Summary					
Label	Avg	Max	Min	Avg/Min	Max/Min
Diesel Canopy	39.35	49.9	30.6	1.29	1.63
Gas Canopy	41.46	50.0	27.9	1.49	1.79
Pavement	2.66	40.6	0.0	N.A.	N.A.

* Area that falls below 0.5fc highlighted in blue.



Krist Food Mart
 4972 E. Pickard Rd.
 Union Township, MI
 Krist Oil Company Inc.
 303 Selden Road
 Iron River, MI 49935

PHOTOMETRIC PLAN

Attention:
 0 1"
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05/17/2021
PRELIMINARY SITE PLAN REVIEW
02/14/2022
FINAL SITE PLAN REVIEW

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GEI PROJECT: 1509480

DWG. NO.
02-C-10
 SHEET 11

TREES & SHRUBS					
Qty.	Key	Scientific Name	Common Name	Size & Condition	Spacing
23	AB	<i>Abies balsamea</i>	Balsam Fir	8' Ht., B&B	10' O.C.
4	AR	<i>Acer rubrum</i>	Red Maple	2.5" Cal., B&B	20' O.C.
6	AS	<i>Acer saccharum</i>	Sugar Maple	2.5" Cal., B&B	20' O.C.
8	AL	<i>Amelanchier grandiflora</i> 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2" Cal., B&B	10' O.C.
57	AC	<i>Amorpha canescens</i>	Leadplant	36" Ht., Cont.	3' O.C.
28	CS	<i>Cornus sericea</i> 'Arctic Fire'	Arctic Fire Red Osier Dogwood	36" Ht., Cont.	3' O.C.
51	HP	<i>Hypericum prolificum</i>	Shrubby St. John's Wort	36" Ht., Cont.	4' O.C.
3	NS	<i>Nyssa sylvatica</i>	Black Gum	2.5" Cal., B&B	16' O.C.
21	PG	<i>Picea glauca</i>	White Spruce	8' Ht., B&B	12' O.C.
20	PS	<i>Pinus strobus</i>	Eastern White Pine	8' Ht., B&B	10' O.C.
9	QB	<i>Quercus bicolor</i>	Swamp White Oak	2.5" Cal., B&B	20' O.C.

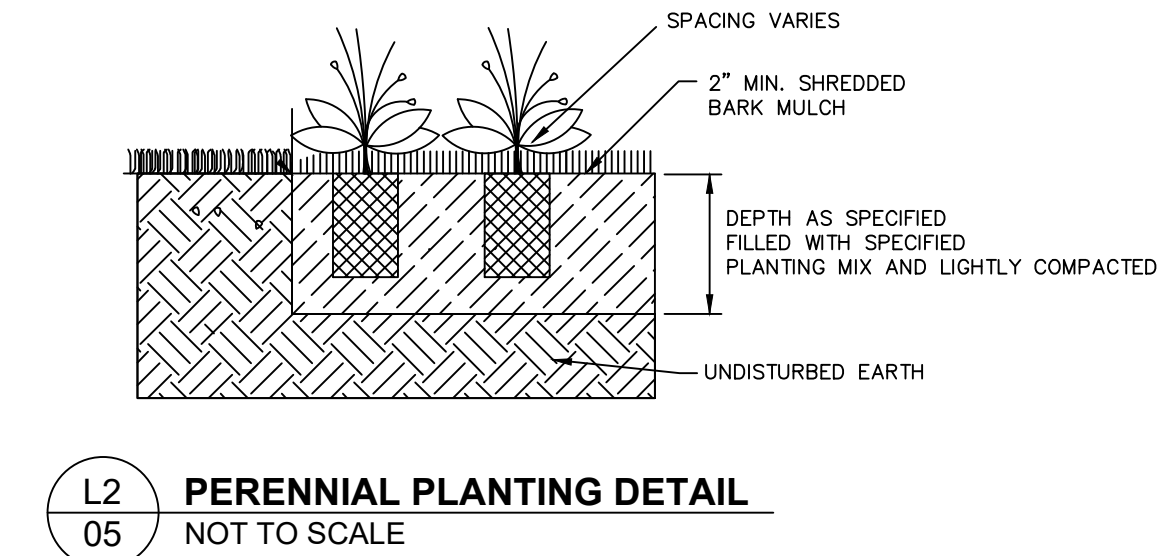
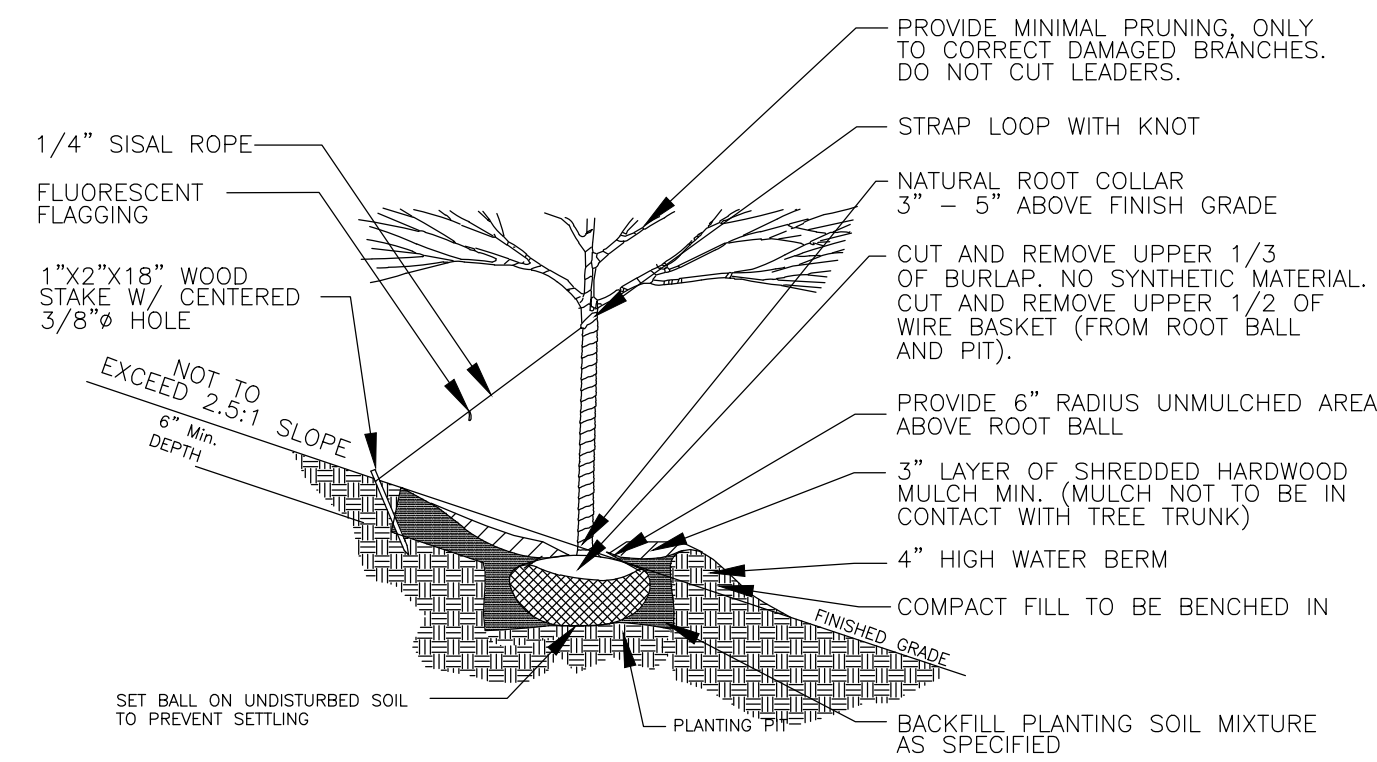
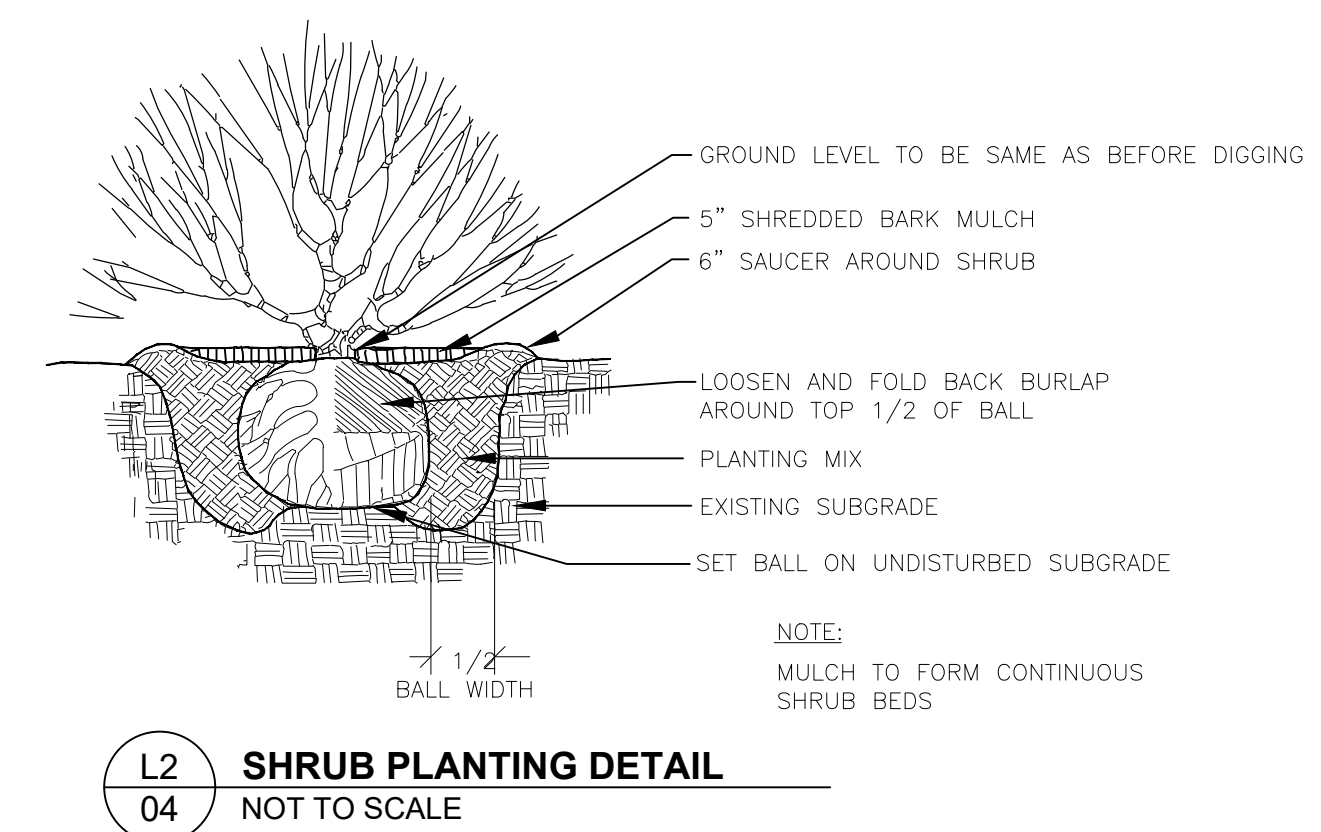
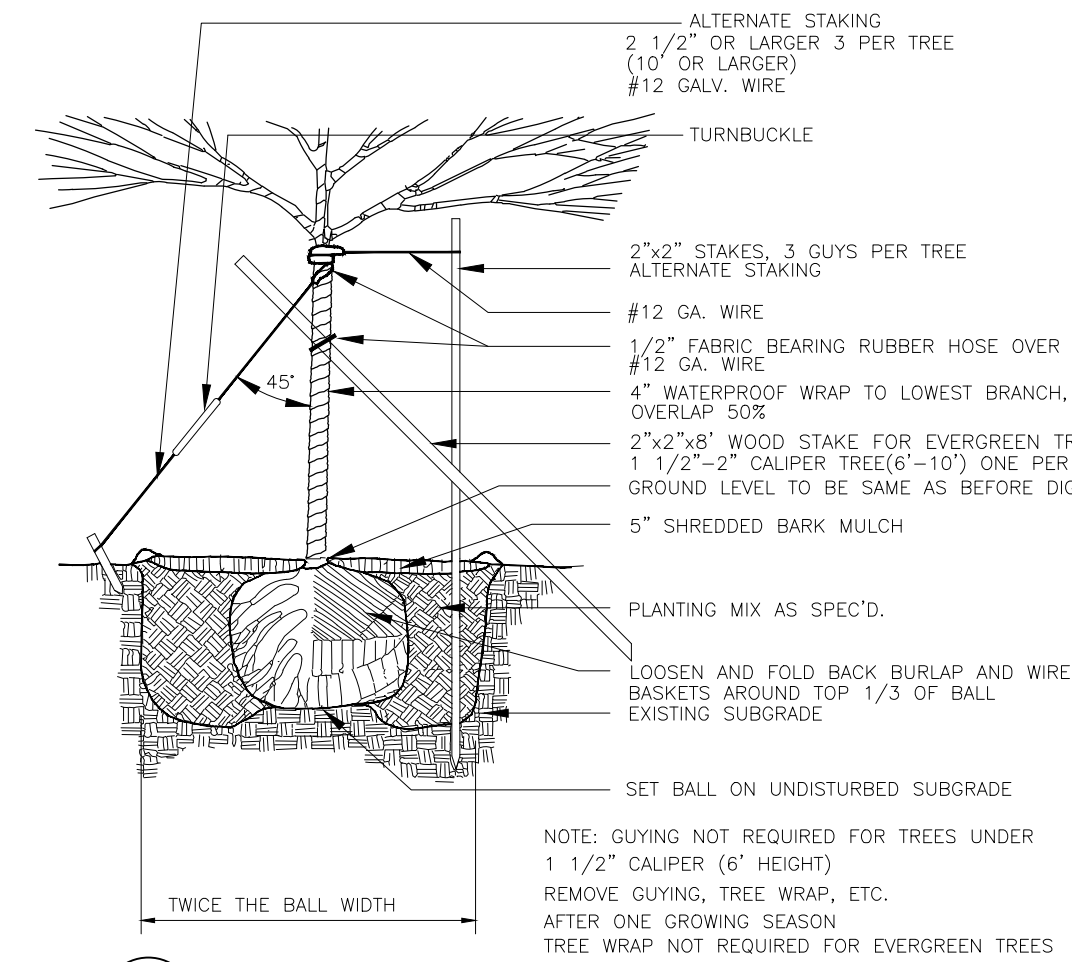
Bioswale Seed Mix - PA.A 15,085 sf		
Scientific Name	Common Name	% of Area
<i>Carex bebbii</i>	Sedge	6
<i>Carex breviar</i>	Plains Oval Sedge	10
<i>Carex muskingumensis</i>	Palm Sedge	15
<i>Carex vulpinoidea</i>	Fox Sedge	40
<i>Deschampsia cespitosa</i>	Tufted Hairgrass	7
<i>Panicum virgatum</i>	Switchgrass	10
<i>Schizachyrium scoparium</i>	Little Bluestem	6
<i>Sporobolus heterolepis</i>	Prairie Dropseed	6

Dry Prairie Seed Mix - PA.B 23,868 sf		
Scientific Name	Common Name	% of Area
<i>Bouteloua curtipendula</i>	Sideoats Grama	20
<i>Schizachyrium scoparium</i>	Little Bluestem	40
<i>Sporobolus heterolepis</i>	Prairie Dropseed	40

SEED MIX NOTES

- % OF AREA indicates the visual percentage of the proposed planting area that a given species shall represent. The native seed mix supplier will determine the correct seed quantities per mix on a basis of 'pure live seed' ounces per acre based on this percentage.
- To facilitate proper installation and weed management, only grasses are proposed for the seed mix installation and establishment phase. This is to allow the treatment of broadleaf weeds in the project area while the grasses are establishing. After year one, native flowering plugs can be planted throughout the seed mix area, assuming no additional chemical weed treatments are required.
- Contractor is to follow the provided seed mix establishment guide, and information provided by the seed mix supplier, to ensure proper native seed mix establishment. The establishment guide can also be found at this web address: <https://www.prairienursery.com/media/pdf/seed-mix-establishment-guide.pdf>

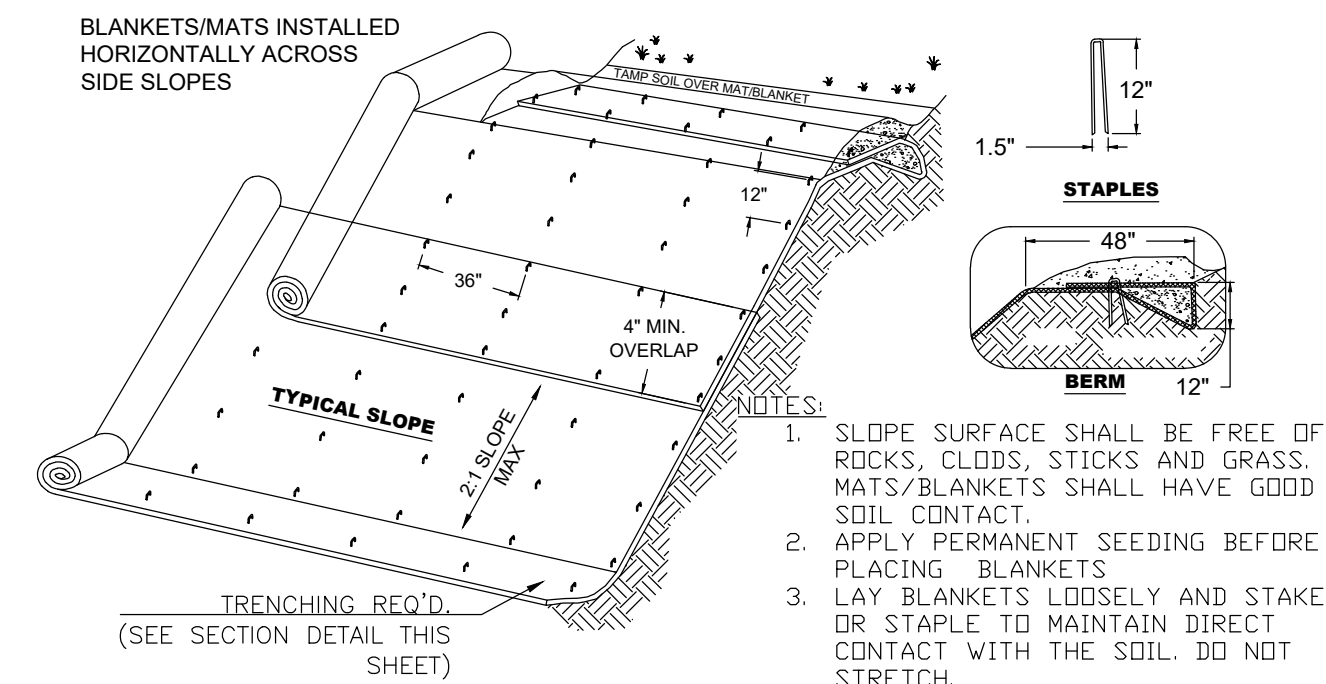
Plug Planting Area - PA.C 900 SF						
Scientific Name	Common Name	Qty.	Spacing	Grouping	Condition	
<i>Allium cernuum</i>	Nodding Wild Onion	54	10"	5-7	Deep Cell Plug	
<i>Asclepias tuberosa</i>	Butterflyweed	27	10"	3	Deep Cell Plug	
<i>Coreopsis lanceolata</i>	Sand Tickseed	27	12"	3	Deep Cell Plug	
<i>Echinacea pallida</i>	Pale Purple Coneflower	45	10"	5-7	Deep Cell Plug	
<i>Penstemon digitalis</i>	Smooth Penstemon	45	10"	5-7	Deep Cell Plug	
<i>Pycnanthemum virginianum</i>	Mountain Mint	36	12"	3	Deep Cell Plug	
<i>Rudbeckia fulgida</i>	Orange Coneflower	72	12"	3	Deep Cell Plug	
<i>Ruellia humilis</i>	Wild Petunia	54	10"	5	Deep Cell Plug	
<i>Schizachyrium scoparium</i>	Little Bluestem	360	12"	5-7	Deep Cell Plug	
<i>Sporobolus heterolepis</i>	Prairie Dropseed	180	12"	5-7	Deep Cell Plug	



TREE AND SHRUB PLANTING NOTE

- Trees and shrubs planted within the bottom footprint of bioswals or other drainage basins to be set a minimum of 8" above surrounding grade. Crown of tree, or shrub, to be set 8" above surrounding grade and soil is to be graded outside of planting hole on a 3(H):1(V) grade down to the proposed adjacent grading. The area immediately surrounding the tree or shrub shall be level with the crown elevation on a 4' diameter for shrubs and 6' diameter for trees before tapering to the adjacent elevations.

L2 02 TREE ON SLOPE PLANTING DETAIL
NOT TO SCALE



L2 03 EROSION CONTROL BLANKET
NOT TO SCALE

Krist Food Mart
East Pickard Rd. and South Isabella Rd.
Union Township, MI
Krist Oil Companies
303 Selden Road
Iron River, MI 49935

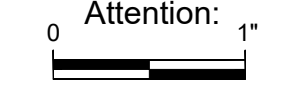
PLANT LISTS & DETAILS

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05/17/2021	PRELIMINARY SITE PLAN REVIEW
02/14/2022	FINAL SITE PLAN REVIEW

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Checked By: CAR
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Approved By: CAR
GEI PROJECT: 1509480

DWG. NO.
02-L-02
SHEET 13

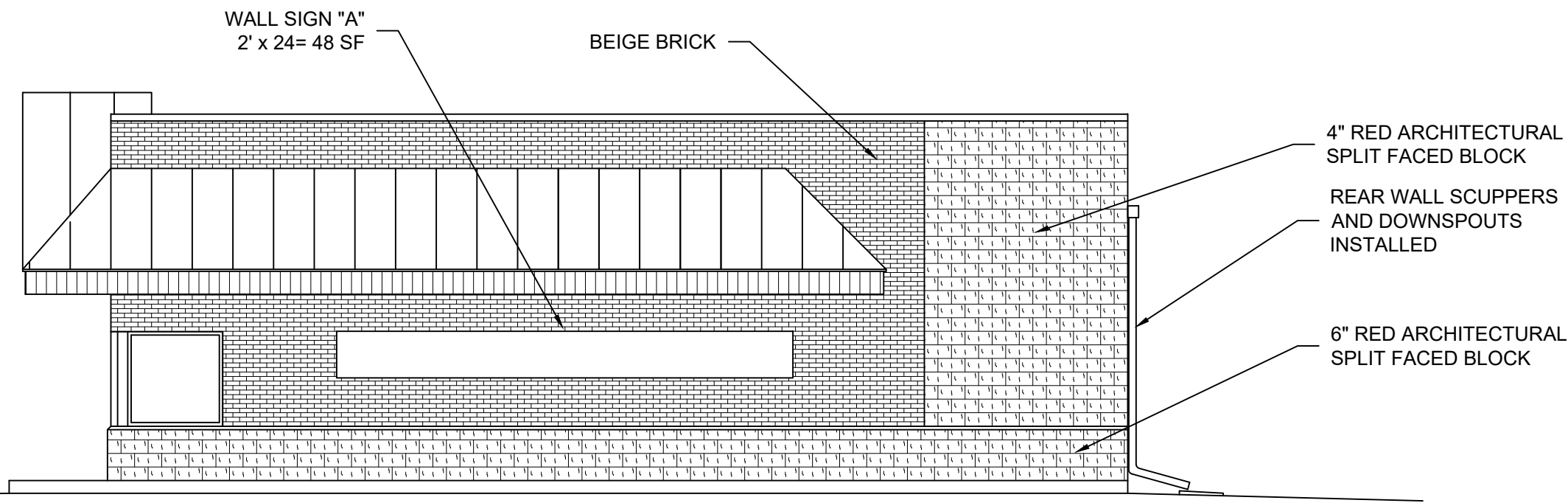
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05/17/2021
 PRELIMINARY SITE PLAN REVIEW
 02/14/2022
 FINAL SITE PLAN REVIEW

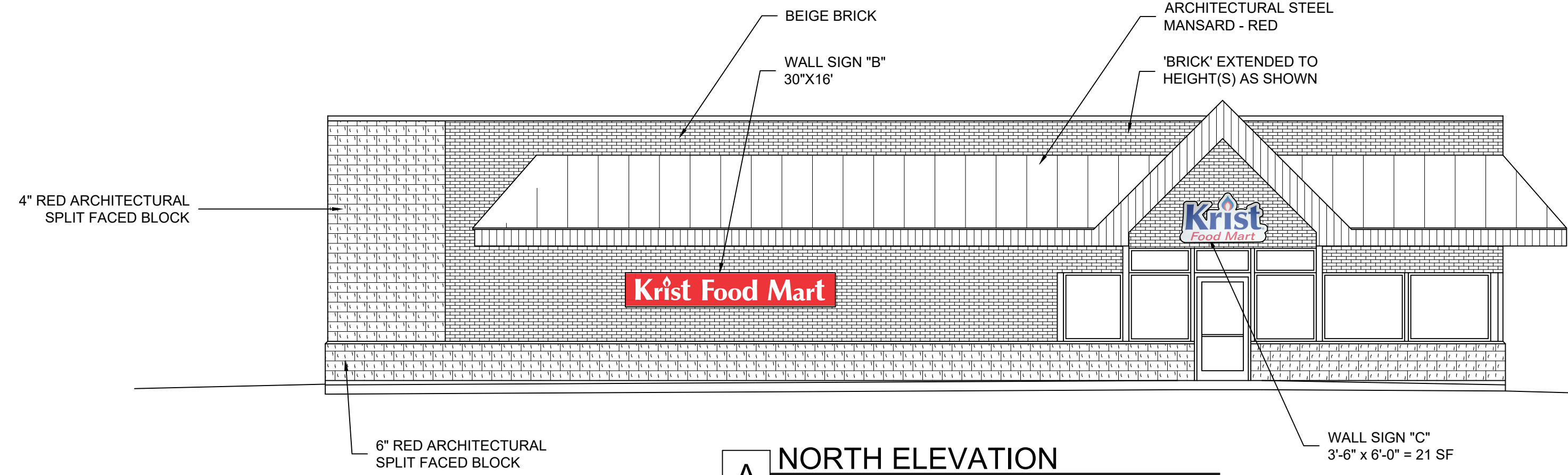
Designed By: JRR
 Checked By: CAR
 Drawn By: JRR
 Approved By: CAR

GEI PROJECT: 1509480

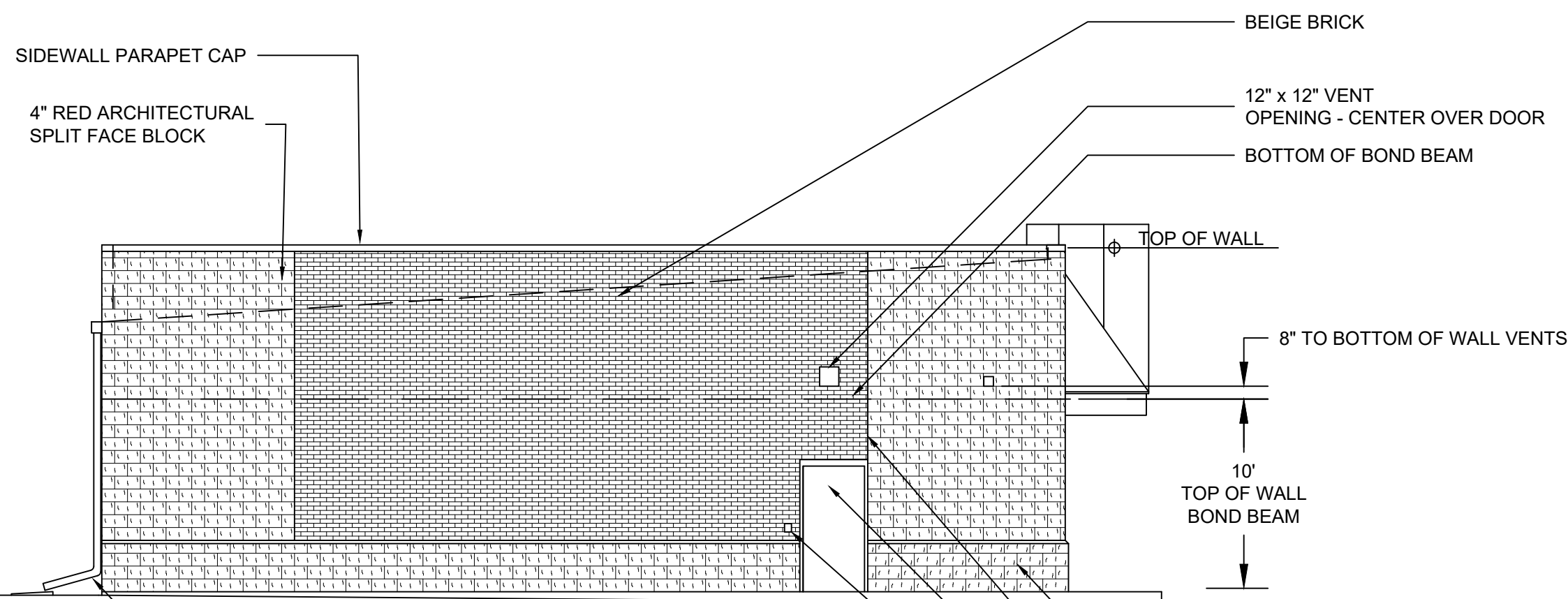
DWG. NO.
02-A-01
 SHEET 14



B WEST ELEVATION
 SCALE 1/8" = 1'-0"



A NORTH ELEVATION
 SCALE 1/8" = 1'-0"



D EAST ELEVATION
 SCALE 1/8" = 1'-0"

'SCREENED' ROOFTOP AIR HANDLING UNITS (ACTUAL LOCATION ON ROOF MAY VARY), SHOWN 'HIDDEN' - NOTE THAT ALL EQUIPMENT IS CONCEALED / SCREENED FROM VIEW AS REQUIRED PER ZONING

'LOW' SLOPE OF ROOF (OPP SIDE OF WALL)

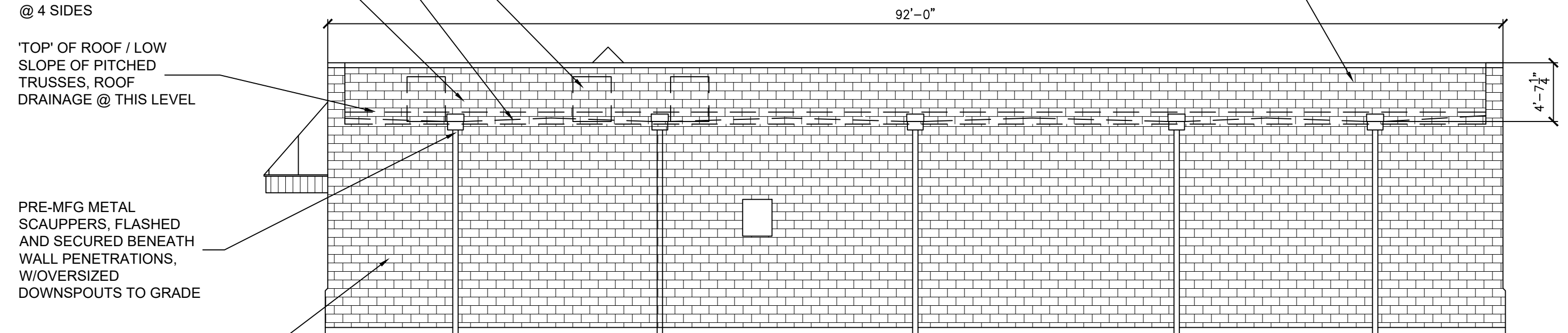
NOTE: EXTEND 'REAR' WALL UP TO FORM 'PARAPET' W/8"x16" 'LEAVE-OUT' PENETRATIONS AS SHOWN, THRU WALL FOR ROOF DRAINAGE, MEMBRANE FLASH @ 4 SIDES

'TOP' OF ROOF / 'LOW' SLOPE OF PITCHED TRUSSES, ROOF DRAINAGE @ THIS LEVEL

PRE-MFG METAL SCAUPPERS, FLASHED AND SECURED BENEATH WALL PENETRATIONS, W/OVER SIZED DOWNSPOUTS TO GRADE

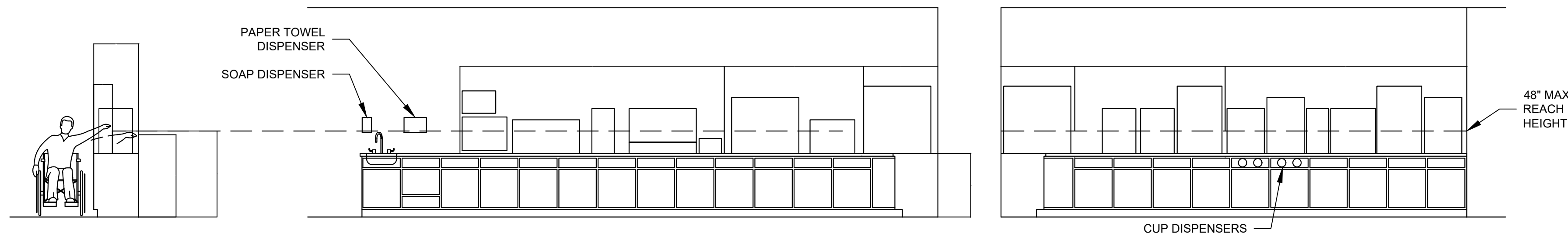
SPLIT FACE BLOCK (FILLED AND CORES INSULATED) ON BACK WALL

NOTE TO ROOFING SUBCONTRACTOR TO INSTALL 4X4 TREATED WD CANT STRIP AT 'INSIDE' OF REAR PARAPET WALL. MEMBRANE FINISH / FLASH UP REAR PARAPET WALL AND THRU OPENINGS, TO ALLOW FOR UNOBSTRUCTED WATER FLOW OFF OF ROOF



C SOUTH ELEVATION
 SCALE 1/8" = 1'-0"

'REAR' WALL, SIDE PROFILE OF SCAUPPERS AND DOWNSPOUTS W/LEADERS, INSTALL SPLASHBLOCKS @ EA



E CASEWORK ELEVATIONS / ACCESSIBILITY
 NO SCALE

WINDOW SCHEDULE

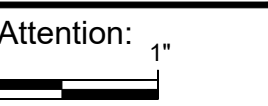
ID	GLAZING	COLOR	UNIT SIZE	TYPE	MANUF.	NOTES
A	INSUL. LOW E II	RED	5'-9 1/2" x 4'-8"	451T ALUM FRAME	KAWNEER OR EQ.	ASS'Y U-VALUE OF .32 OR BETTER
B	INSUL. LOW E II	RED	4'-3" x 4'-8"	451T ALUM FRAME	KAWNEER OR EQ.	
C	INSUL. LOW E II	RED	4'-3" x 1'-8"	451T ALUM FRAME	KAWNEER OR EQ.	
D	INSUL. LOW E II	RED	3'-10" x 1'-8"	451T ALUM FRAME	KAWNEER OR EQ.	
E	INSUL. LOW E II	RED	4'-3" x 4'-8"	451T ALUM FRAME	KAWNEER OR EQ.	
F	INSUL. LOW E II	RED	4'-8" x 4'-8"	451T ALUM FRAME	KAWNEER OR EQ.	

GENERAL WINDOW NOTES

- FINAL WINDOW SIZES TO BE DETERMINED BY THE CONTRACTOR OR SUPPLIER FROM FIELD MEASUREMENTS.
- WINDOW AND DOOR FRAMES TO MATCH AND BE SUPPLIED BY SAME MANUFACTURER.
- INSTALLATION SHALL INCLUDE MATCHING PREFINISHED ALUM. TRIM FOR FLASHINGS AND TO WRAP STRUCTURAL COLUMNS.

Krist Food Mart
 4972 E. Pickard Rd.
 Union Township, MI
 Krist Oil Company Inc.
 303 Selden Road
 Iron River, MI 49935

CANOPY ELEVATIONS AND
 SIGN DETAILS

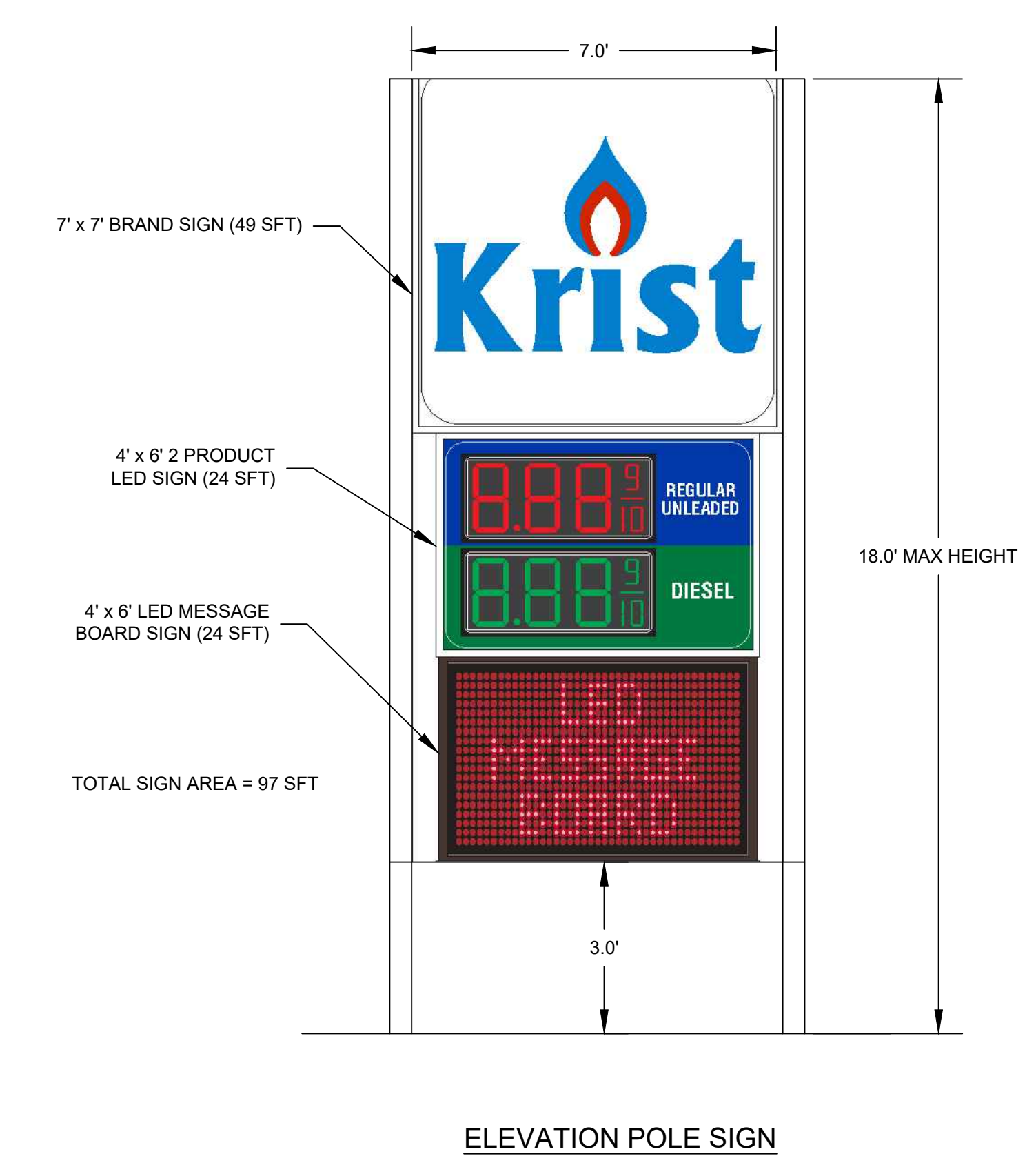
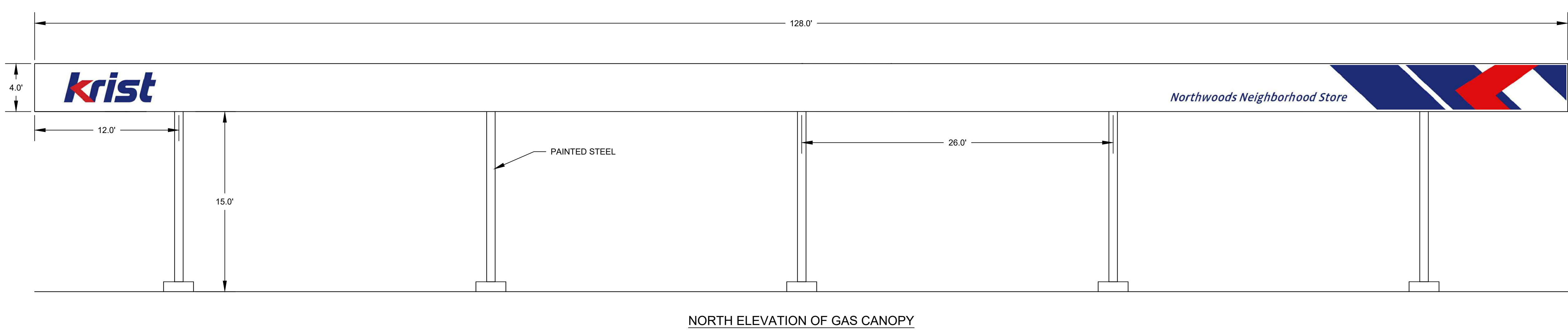
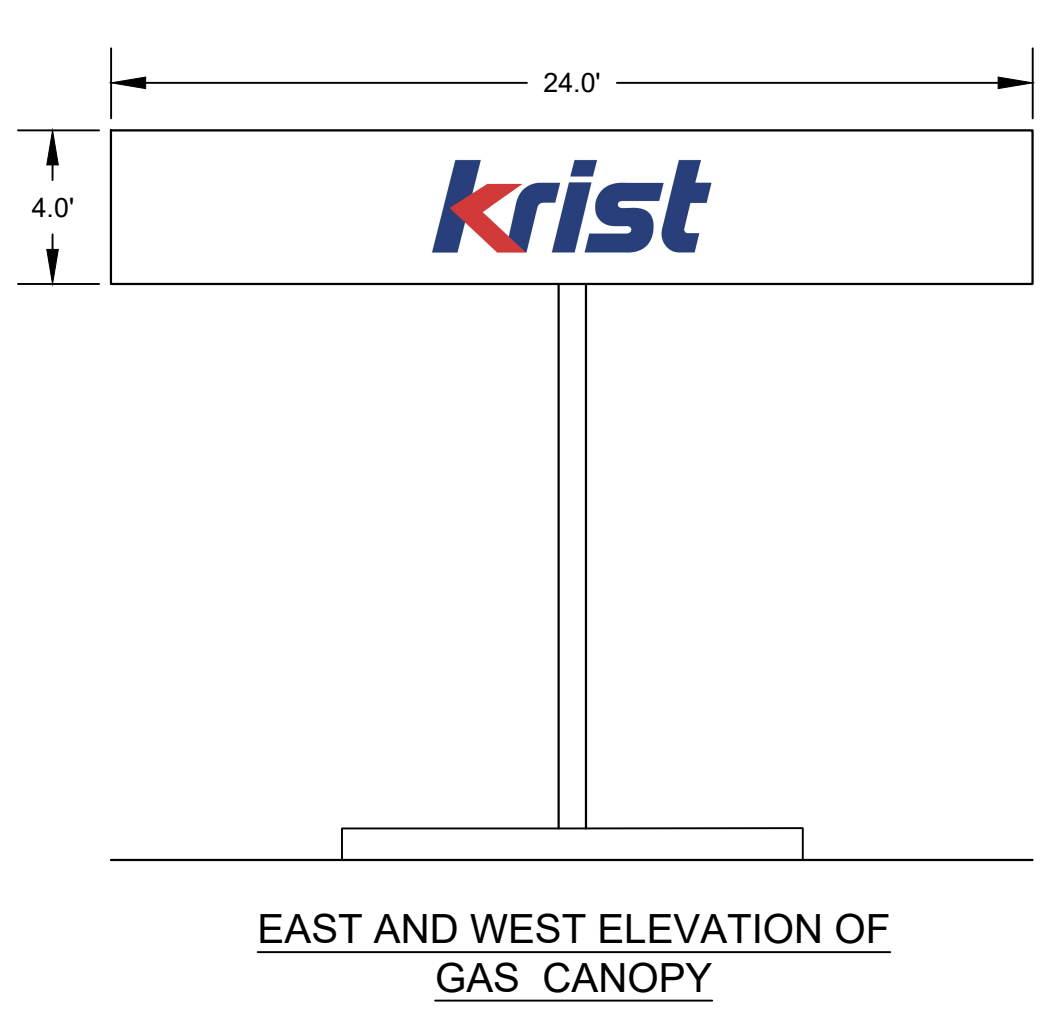
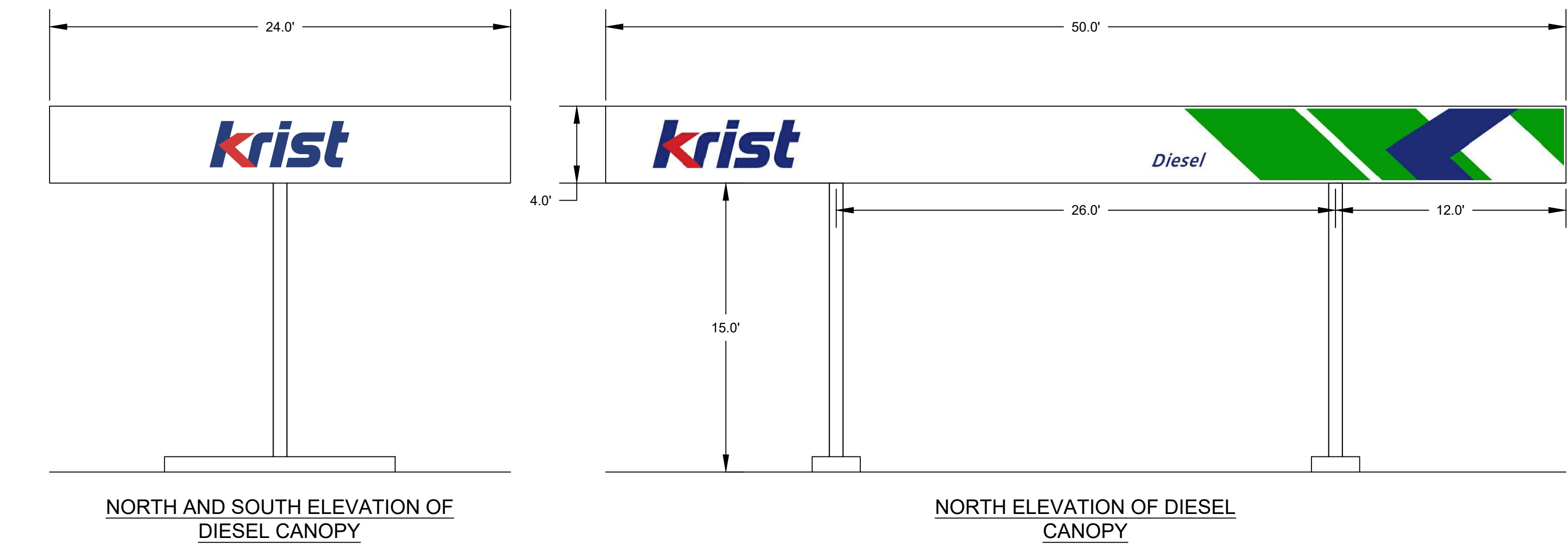
Attention:

 If this scale bar does not
 measure 1" then drawing is
 not original scale.

05/17/2021
PRELIMINARY SITE PLAN REVIEW
02/14/2022
FINAL SITE PLAN REVIEW

Designed By: JRR
 Checked By: CAR
 Drawn By: JRR
 Approved By: CAR

GEI PROJECT: 1509480

DWG. NO.
02-A-02
 SHEET 15
 ARCHIVE



K:\Vial_GIT\1509480-Master_Services_Signage\CAD\SHEETS\1509480-1015-20-A-04-CANOPY_ELEVATIONS.dwg, 3/14/2022, 9:50:10 AM, RECK, JOHN, SELab

FLOOR PLAN

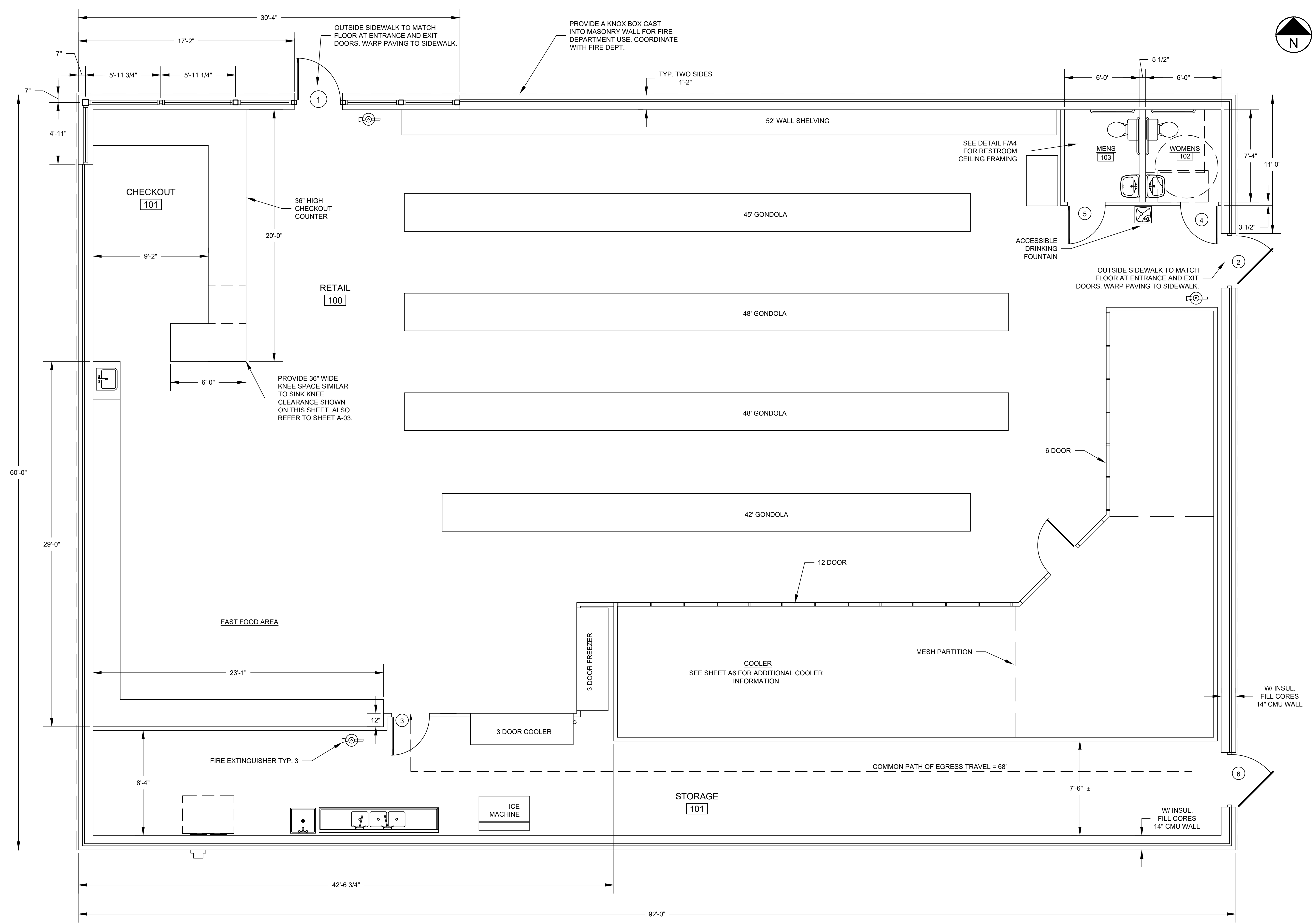
Attention:
 0 1"
 If this scale bar does not measure 1" then drawing is not original scale.

05/17/2021
PRELIMINARY SITE PLAN REVIEW
02/14/2022
FINAL SITE PLAN REVIEW

Designed By: JRR
 Checked By: CAR
 Drawn By: JRR
 Approved By: CAR

GEI PROJECT: 1509480

DWG. NO.
02-A-03
 SHEET 16

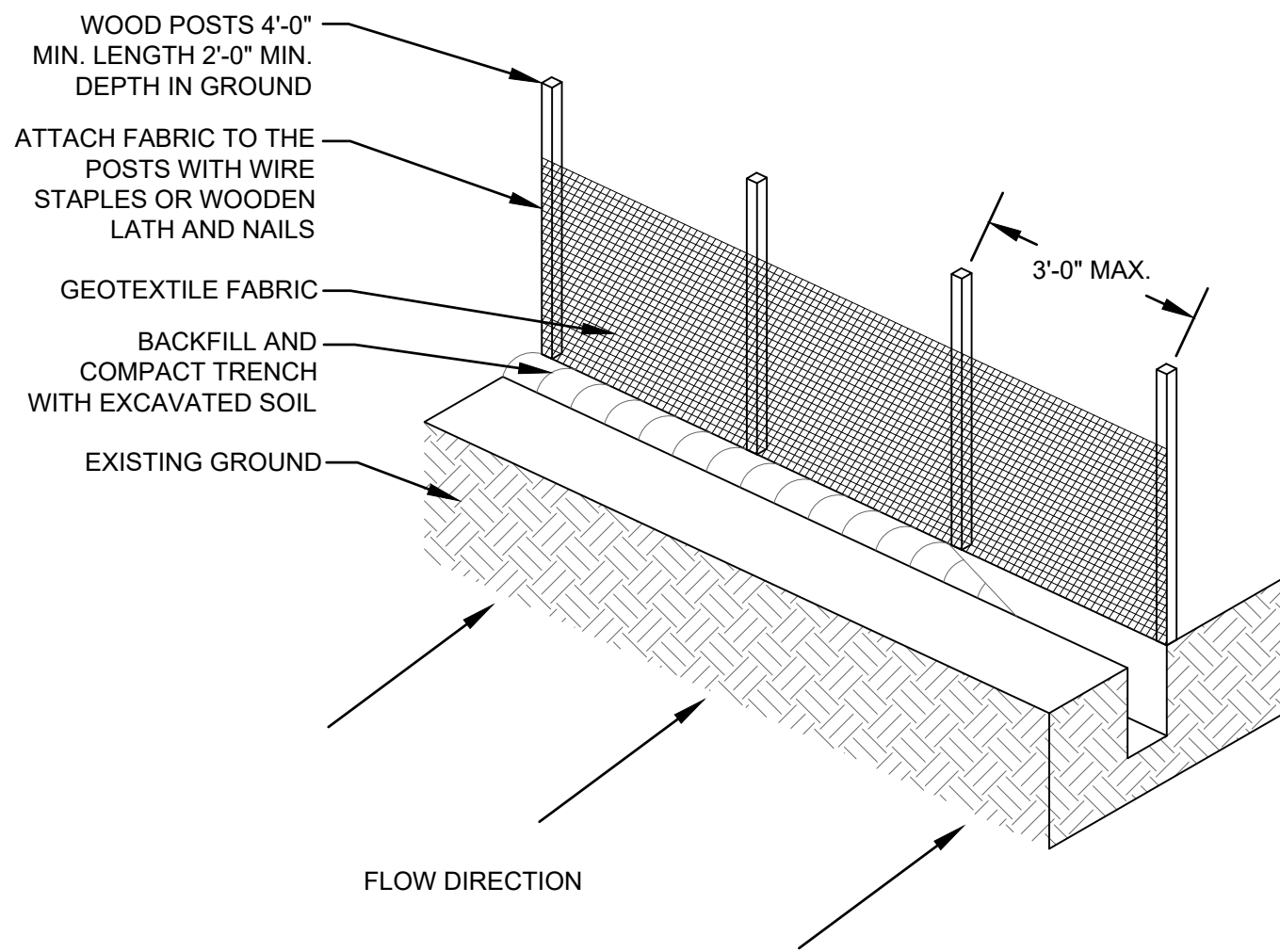


FLOOR PLAN
 SCALE: 1/4" = 1'-0"

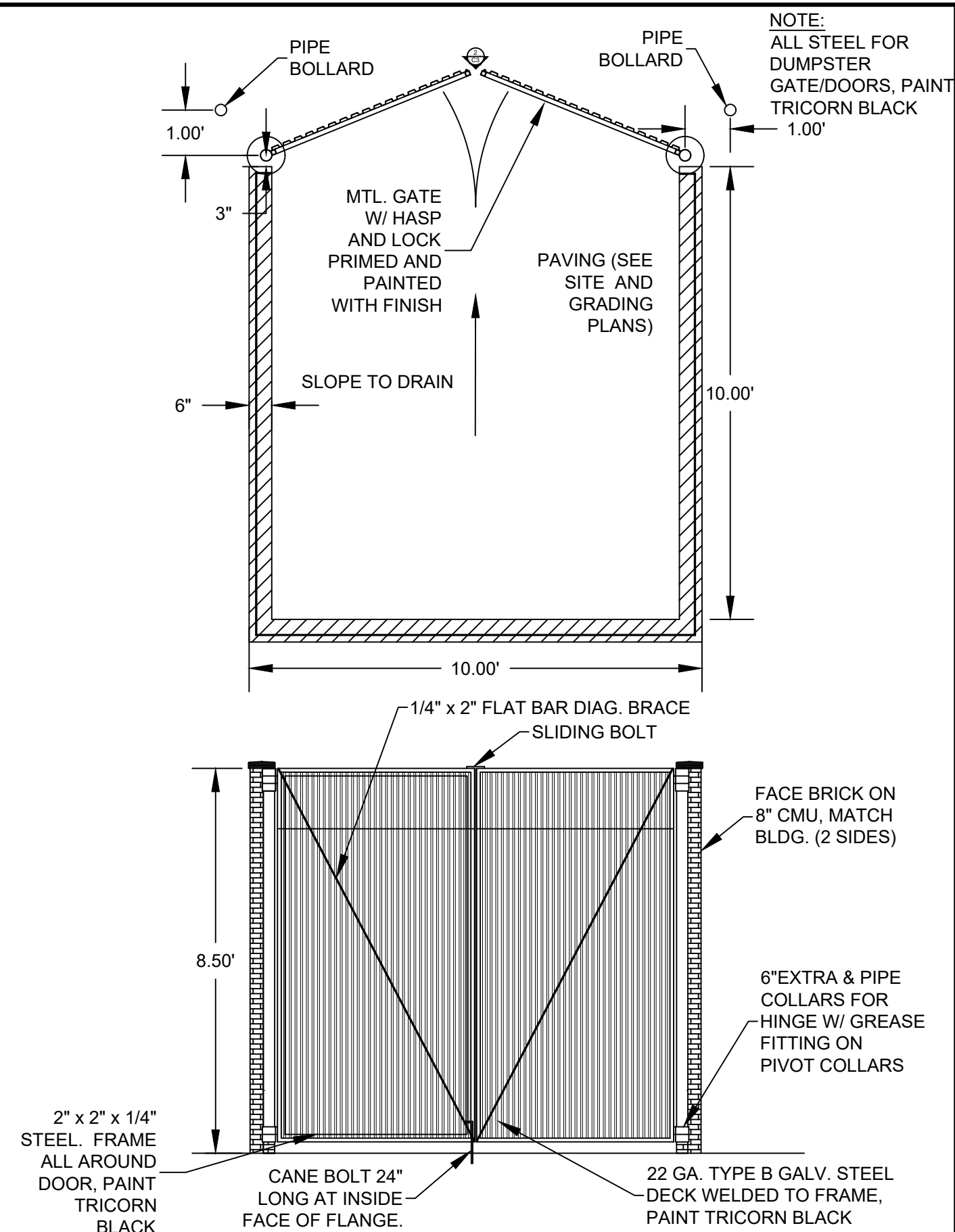
K:\Vital_GIT\1509480-Master_Services_Support\Cart\CAD\SHEETS\1509480-1015-20-A-1-FLOOR_PLAN.dwg: 3/14/2022 9:54:49 AM; RECK, JOHN; GEI.dwg

NOTES:

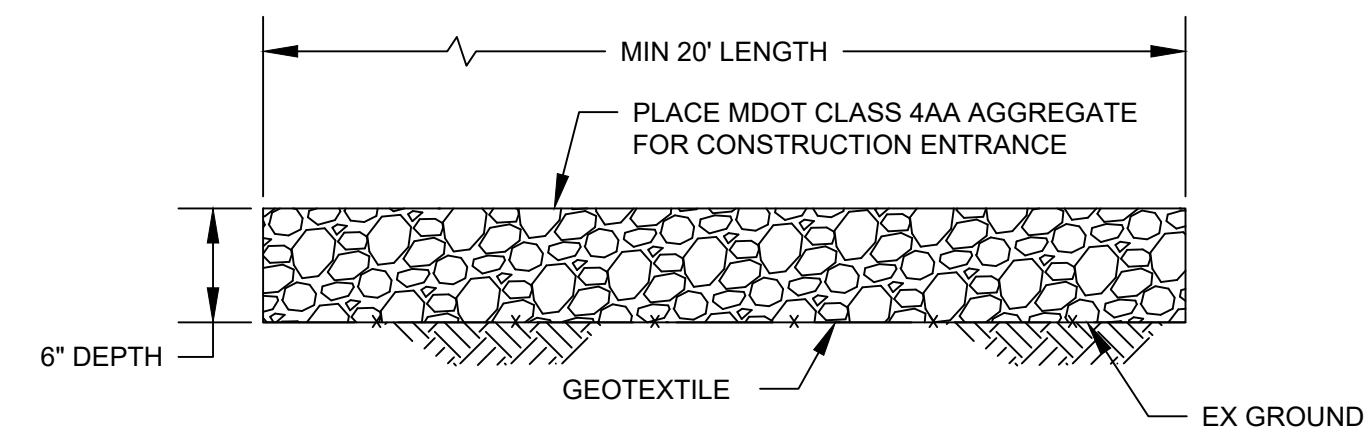
- TRENCH SHALL BE MINIMUM OF 4" WIDE AND 6" DEEP TO BURY AND ANCHOR GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" x 1 1/8" OAK OR HICKORY.
- THE SOIL EROSION AND SEDIMENTATION CONTROL PERMIT OBTAINED BY THE CONTRACTOR FROM THE LOCAL GOVERNING AGENCY SUPERCEDES THIS DETAIL.



02-001 TYPICAL SILT FENCE DETAIL
NO SCALE



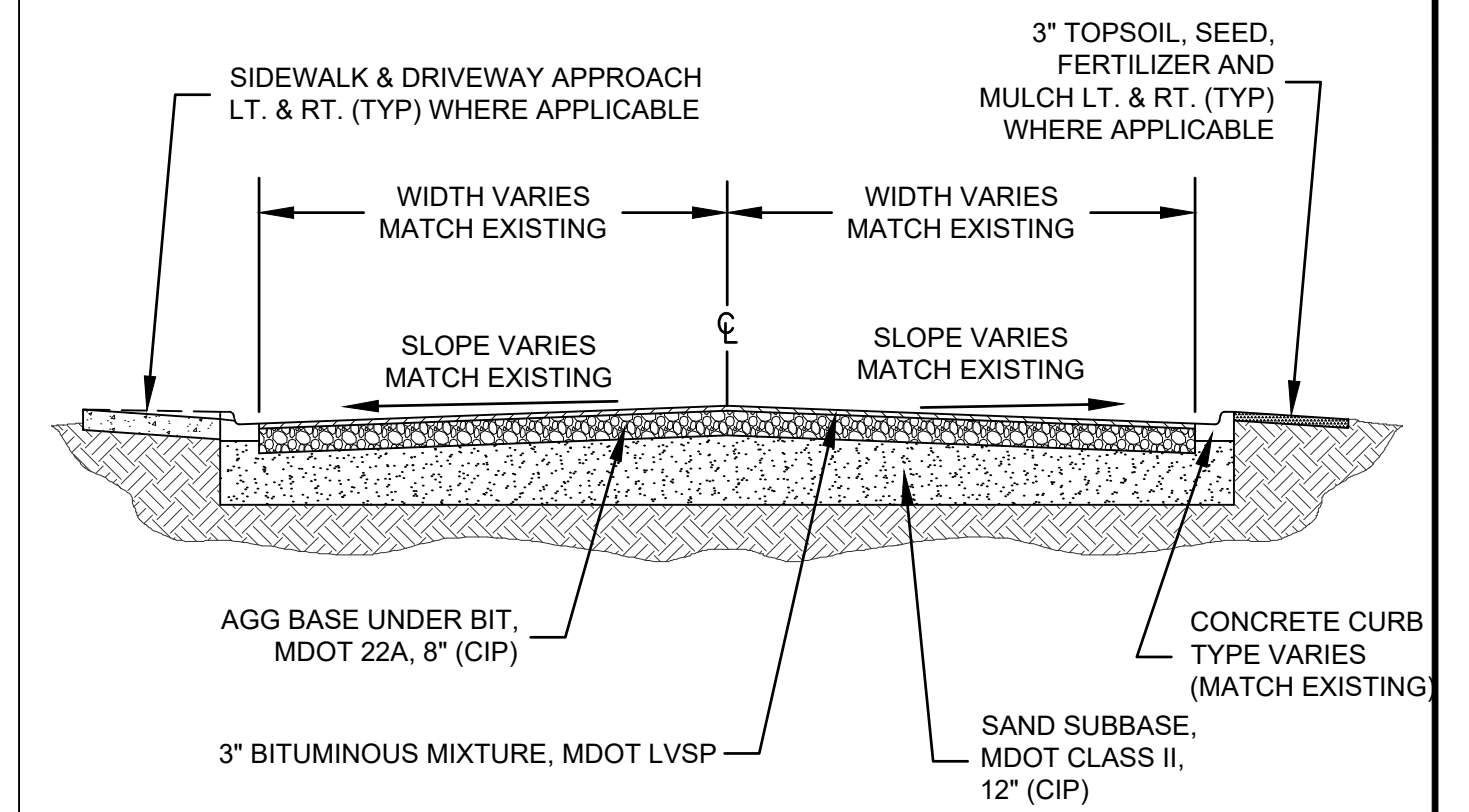
02-002 DUMPSTER ENCLOSURE
NO SCALE



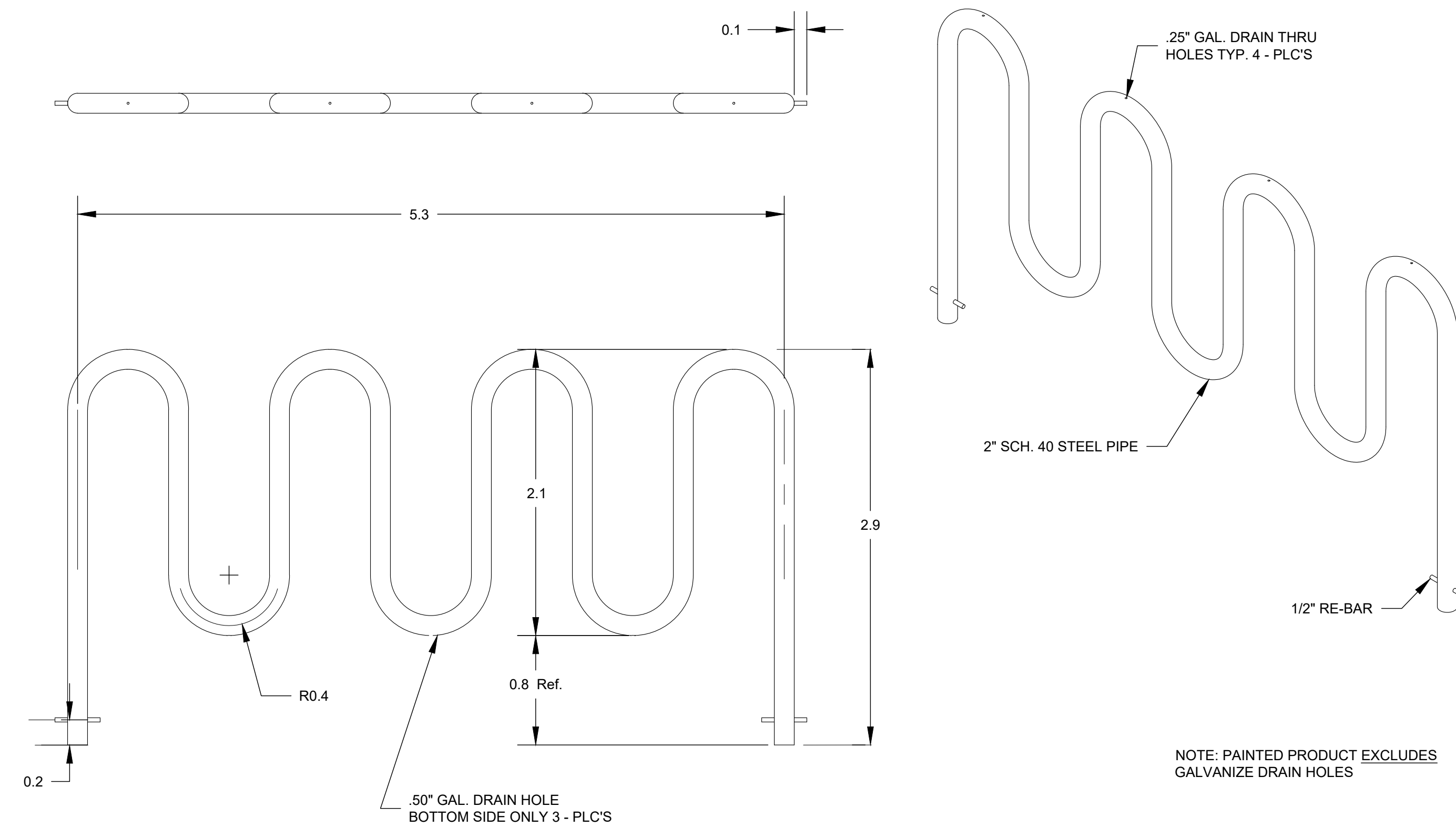
02-005 TRACKING MAT DETAIL
NO SCALE

ROAD RECONSTRUCTION REQUIREMENTS:

- TYPICAL CROSS SECTIONS ARE SHOWN FOR REFERENCE PURPOSES, AND REPRESENT REQUIREMENTS FOR STREET REPAIR OR RECONSTRUCTION.

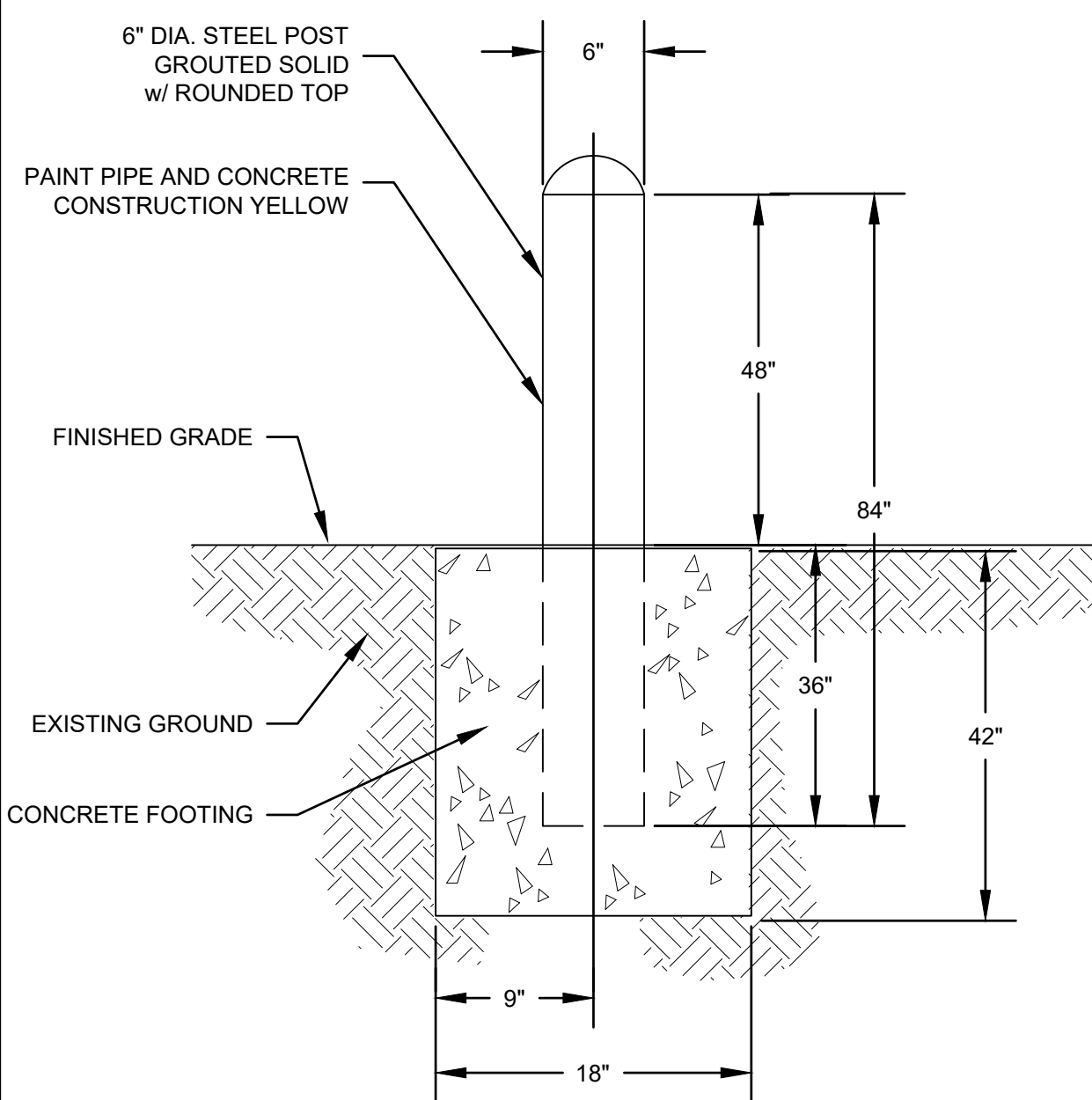


02-022 TYPICAL ROADWAY X-SECTION WITH CURB
NO SCALE

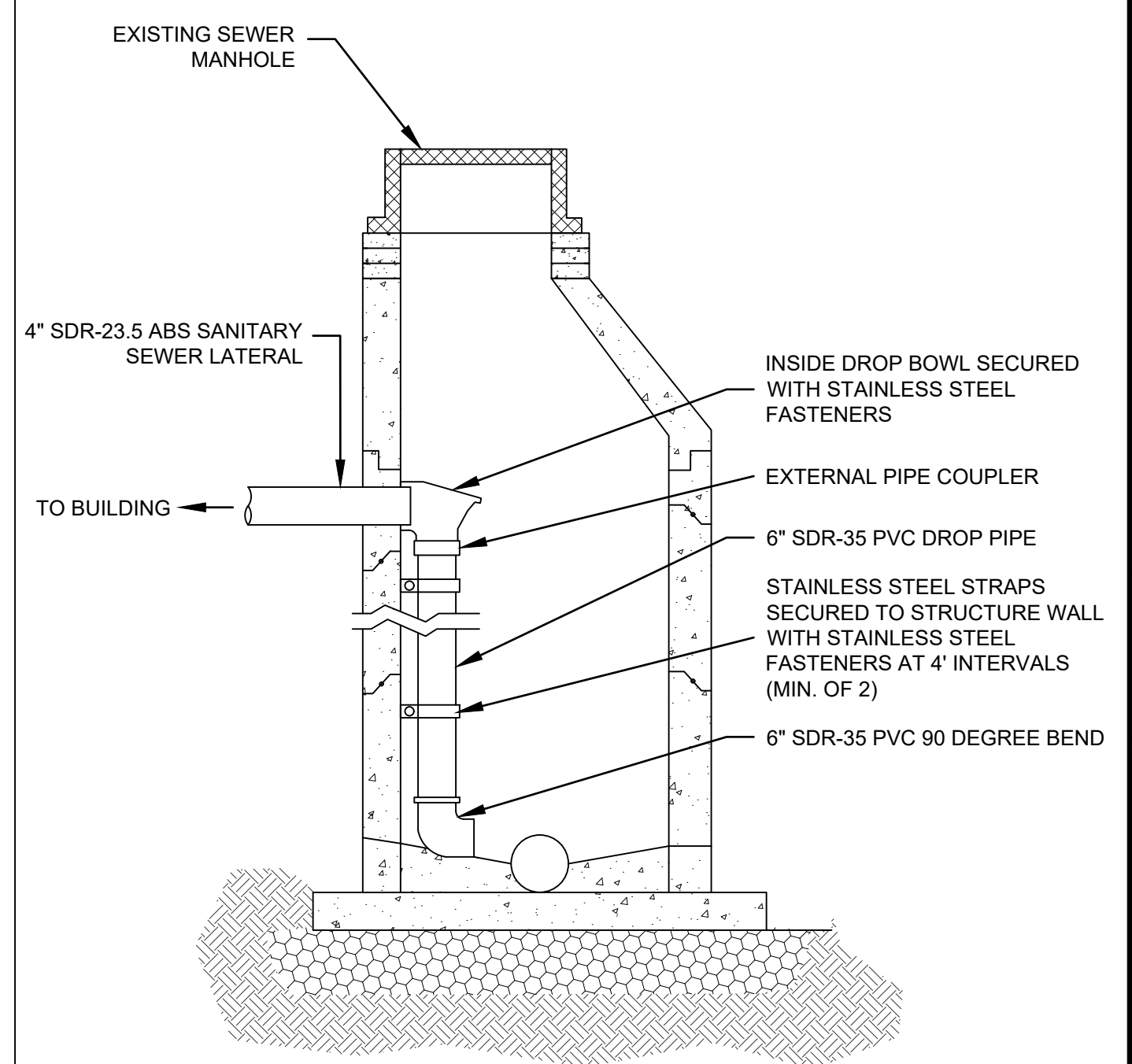


02-015 BIKE RACK DETAIL
NO SCALE

- NOTE:**
- POST LOCATIONS TO BE DETERMINED BY THE ENGINEER.



02-185 TYPICAL BOLLARD POST
NO SCALE



02-204 STANDARD CONCRETE MANHOLE W / INSIDE DROP CONNECTION
NO SCALE

Attention: 1"
If this scale bar does not measure 1" then drawing is not original scale.

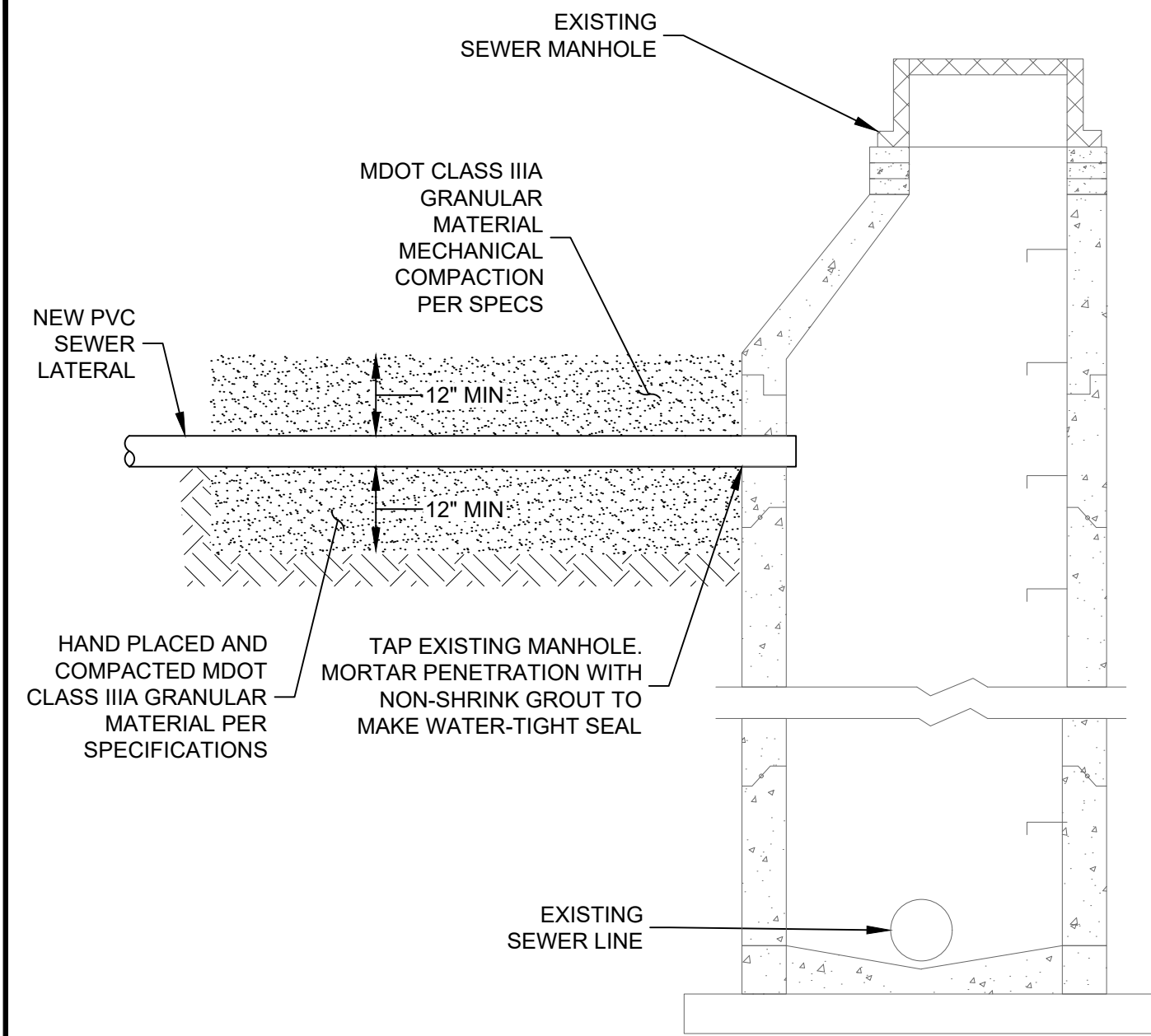
05/17/2021
PRELIMINARY SITE PLAN REVIEW
02/14/2022
FINAL SITE PLAN REVIEW

Designed By: JRR
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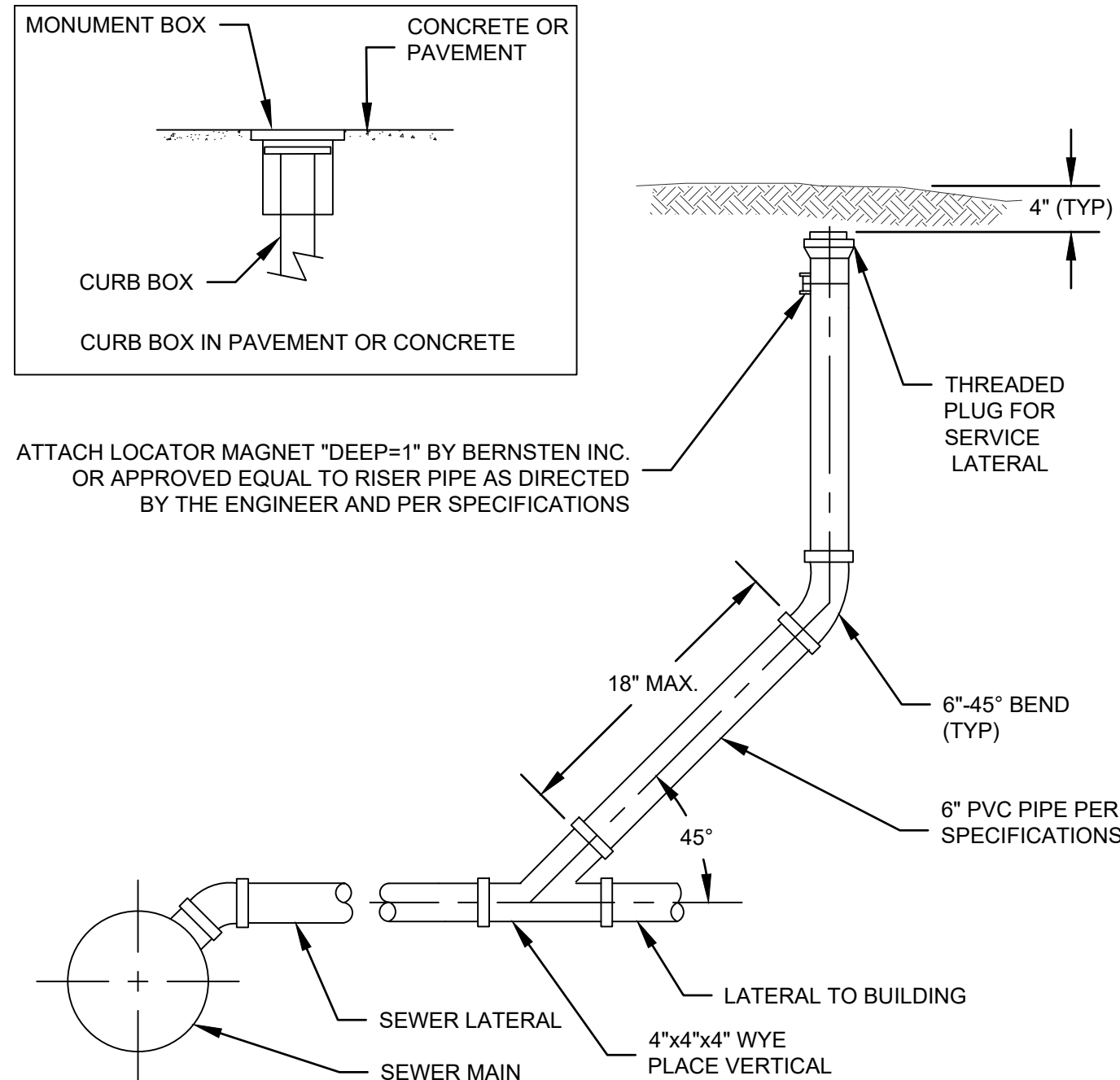
GEI PROJECT: 1509480

DWG. NO.
99-D-01
SHEET 17

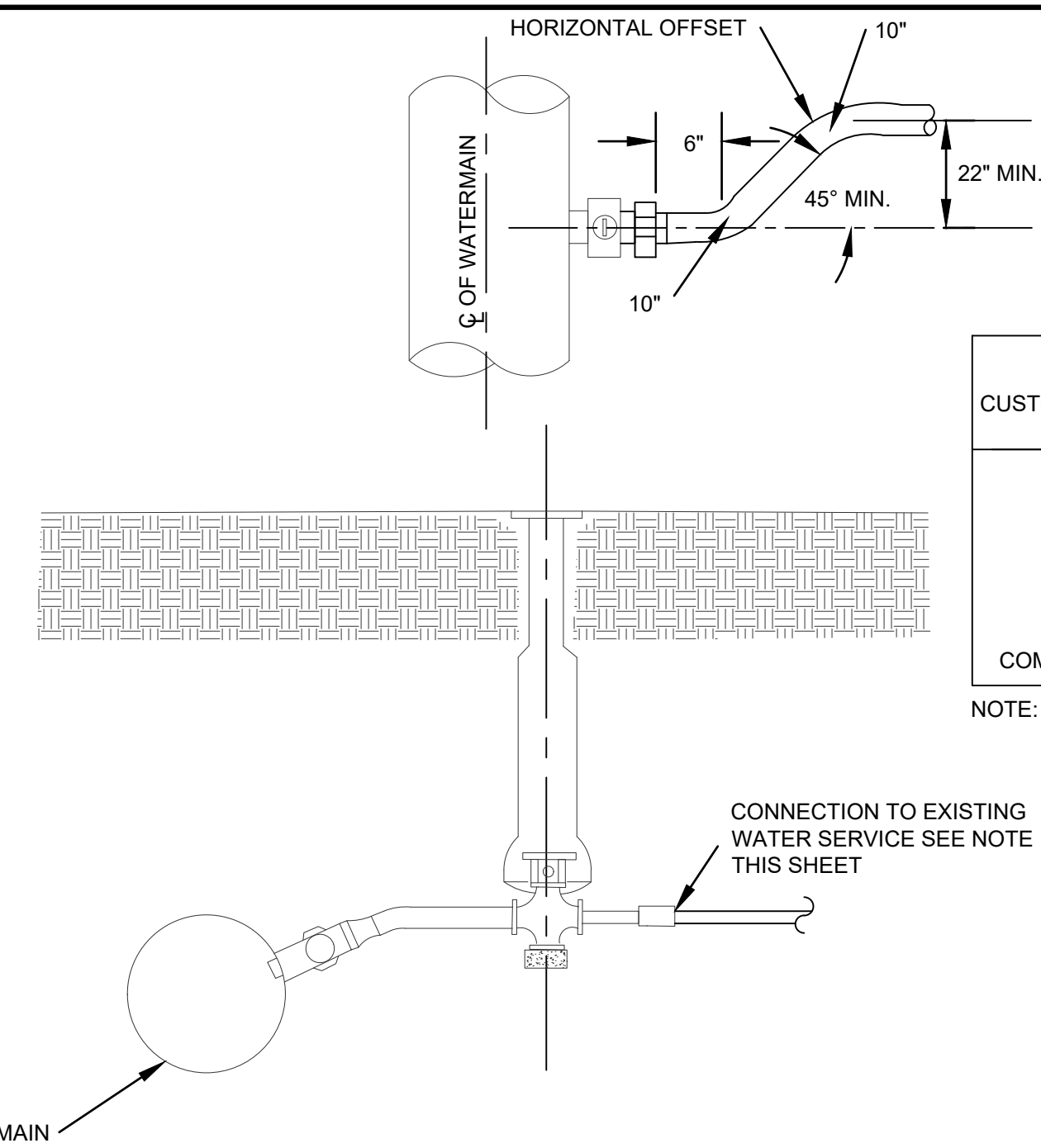
NOTES:
1. THE BACKFILL MATERIALS AND METHODS SHALL CONFORM TO THE SPECIFICATIONS



02-208 SANITARY SEWER LATERAL CONNECTION TO EXISTING MANHOLE
NO SCALE



02-220 SANITARY SEWER CLEAN-OUT
NO SCALE



SERVICE SIZE RECOMMENDATION TABLE

CUSTOMER DESCRIPTION / METER SIZE	APPROXIMATE MAXIMUM DEMAND (GPM)	SUGGESTED MAXIMUM ALLOWABLE SERVICE LENGTHS FOR WATER SERVICE SIZE SHOWN BASED ON METER SIZE SHOWN AND A MAXIMUM PRESSURE DROP OF 8 PSI.			
		1" SERVICE	1 1/4" SERVICE	1 1/2" SERVICE	2" SERVICE
RESIDENTIAL SINGLE FAMILY / 5/8" METER	10 GPM	90 FEET	280 FEET	680 FEET	2700 FEET
RESIDENTIAL HOBBY FARM / 1" METER	15 GPM	70 FEET	200 FEET	500 FEET	2000 FEET
SMALL FARM OR COMMERCIAL / 1" METER	20 GPM	35 FEET	100 FEET	250 FEET	1000 FEET

NOTE: REVIEW METER AND SERVICE LINE SIZE AND LENGTHS FOR OTHER CONDITIONS SUCH AS SPRINKLER REQUIREMENTS AND HIGH USE, CONSTANT PRESSURE CONDITION.

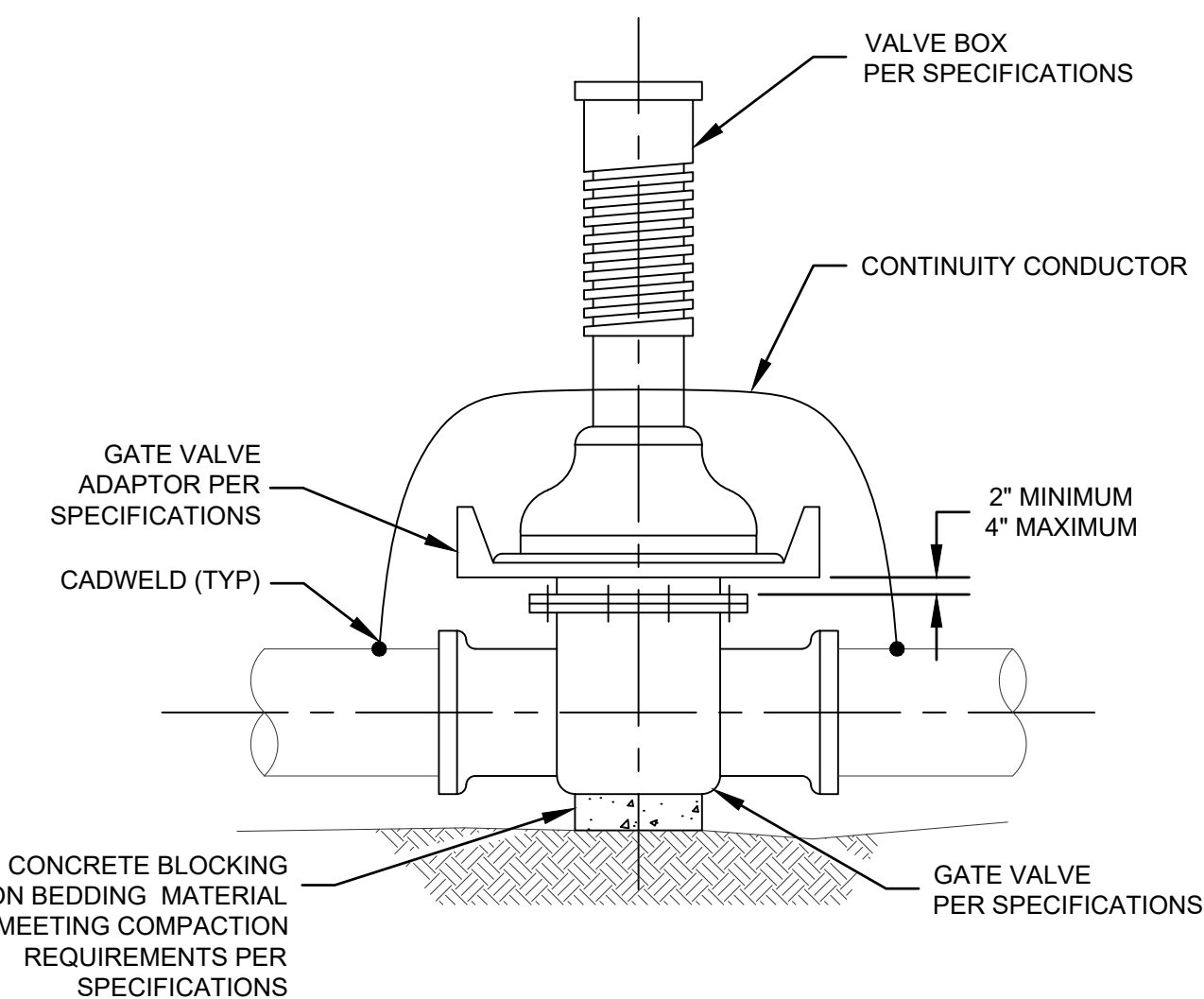
NOTES:

- SERVICE LINES SHALL BE CONTINUOUS WITHOUT JOINTS FROM THE CORPORATION STOP TO THE CURB STOP UNLESS APPROVED BY THE ENGINEER OR OWNER.
- BEDDING FOR WATER SERVICE LATERAL PIPE SHALL BE THE SAME AS FOR WATERMAIN PIPING AND IN ACCORDANCE WITH THE SPECIFICATIONS AND DRAWINGS.
- SERVICE LINES INSTALLED BENEATH THE ROADWAY SURFACE SHALL BE INSTALLED INSIDE OWNER SUPPLIED CASING PIPE IN ACCORDANCE WITH THE SPECIFICATIONS.

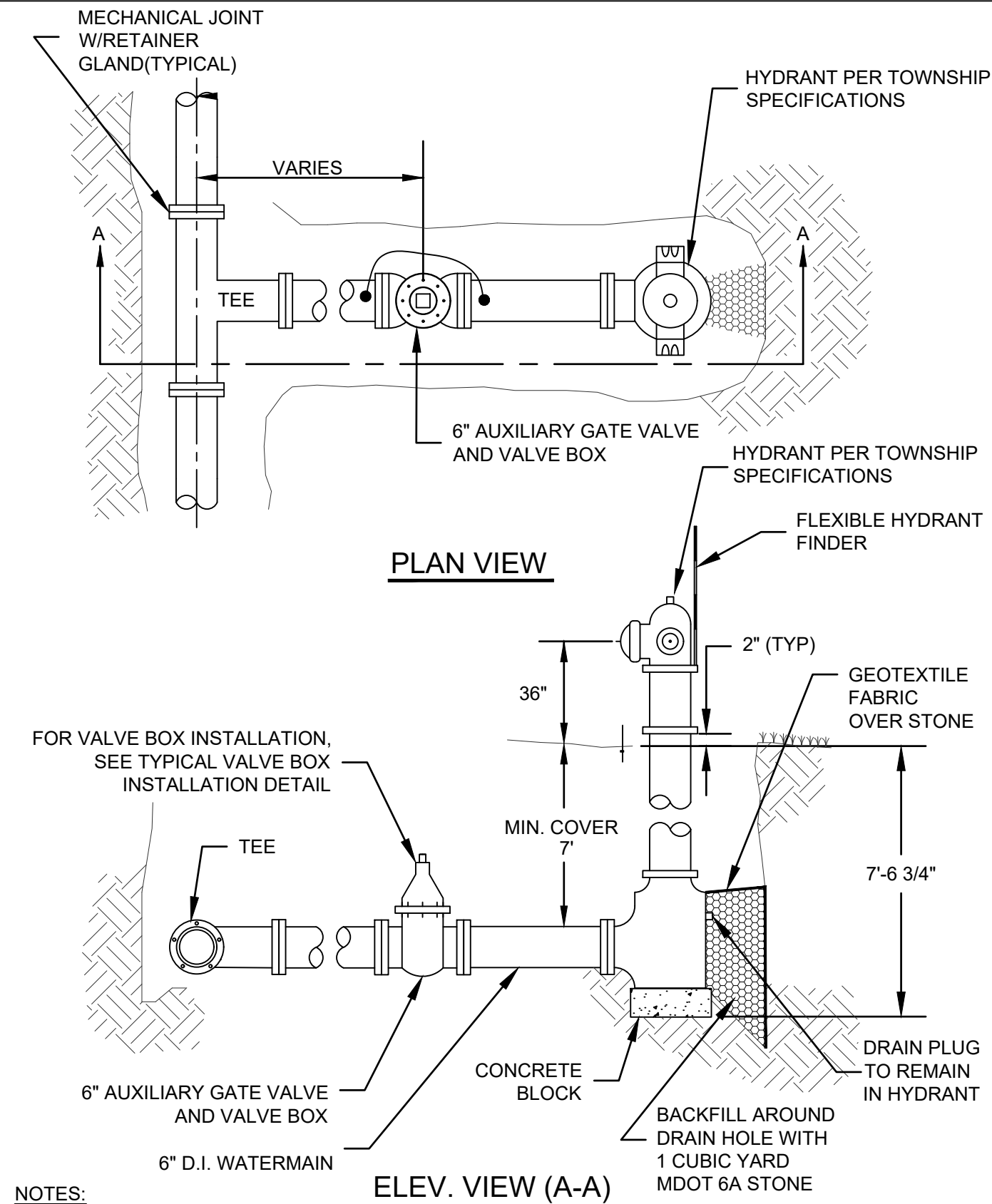
CONNECTION TO EXISTING WATER SERVICE SHALL BE AS FOLLOWS:

- COPPER TO COPPER SHALL HAVE CONDUCTIVE COMPRESSION COUPLING.
- COPPER TO STEEL PIPE SHALL HAVE CONDUCTIVE COMPRESSION COUPLING TO THREADED COUPLING.

02-412 TYPICAL WATER SERVICE CONNECTION AND SERVICE SIZE RECOMMENDATIONS
NO SCALE



02-420 TYPICAL VALVE BOX INSTALLATION
NO SCALE



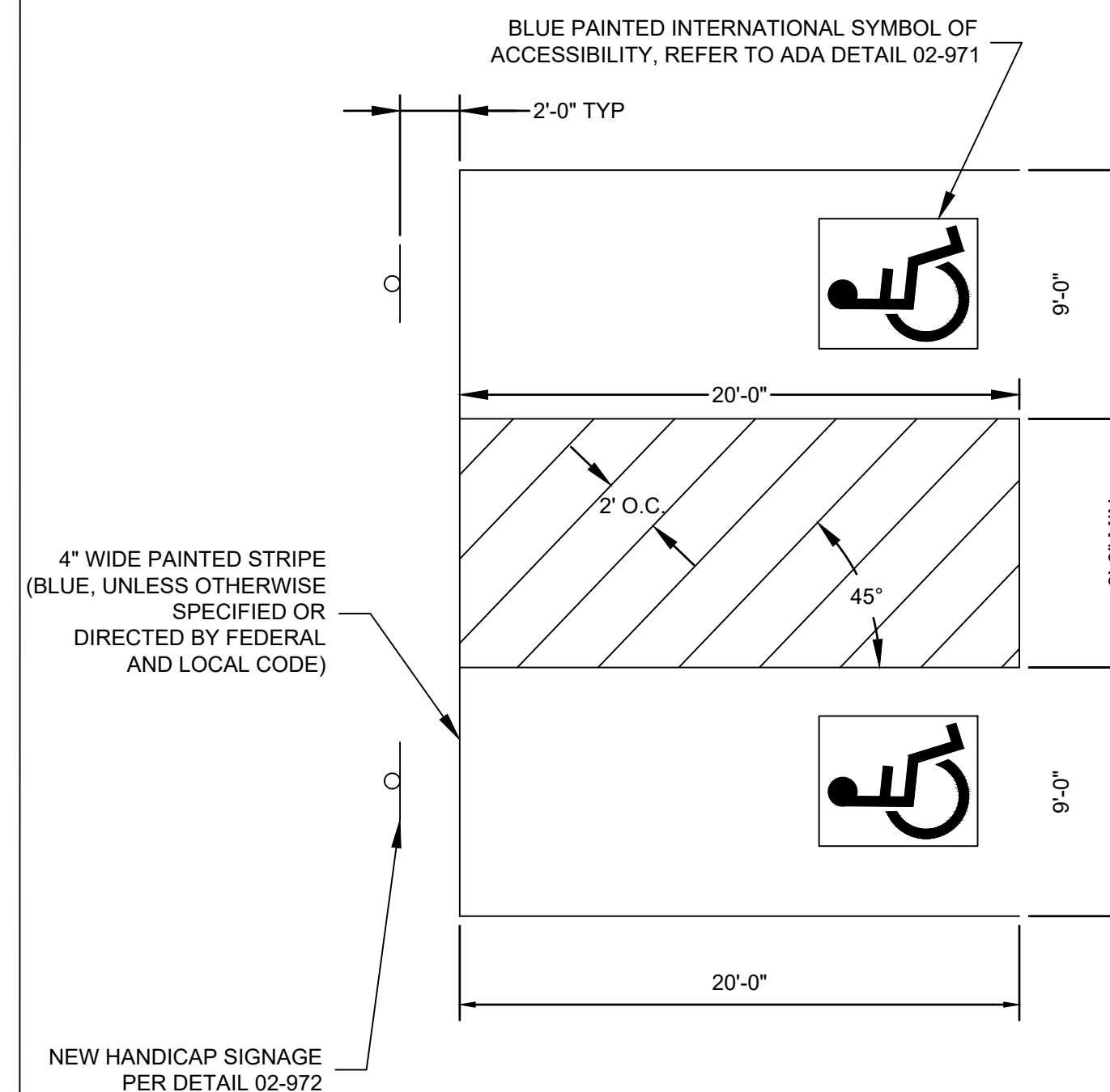
NOTES:

- ALL HYDRANT LEAD FITTINGS, INCLUDING ALL THREE SIDES OF THE TEE, SHALL BE MECHANICAL JOINT WITH RETAINER GLANDS.
- ALL HYDRANTS INSTALLED SHALL BE PER CHARTER TOWNSHIP OF UNION REQUIREMENTS, DESIGN SPECIFICATIONS, AND ORDINANCES.

02-430 TYPICAL HYDRANT CONNECTION
NO SCALE

NOTES:

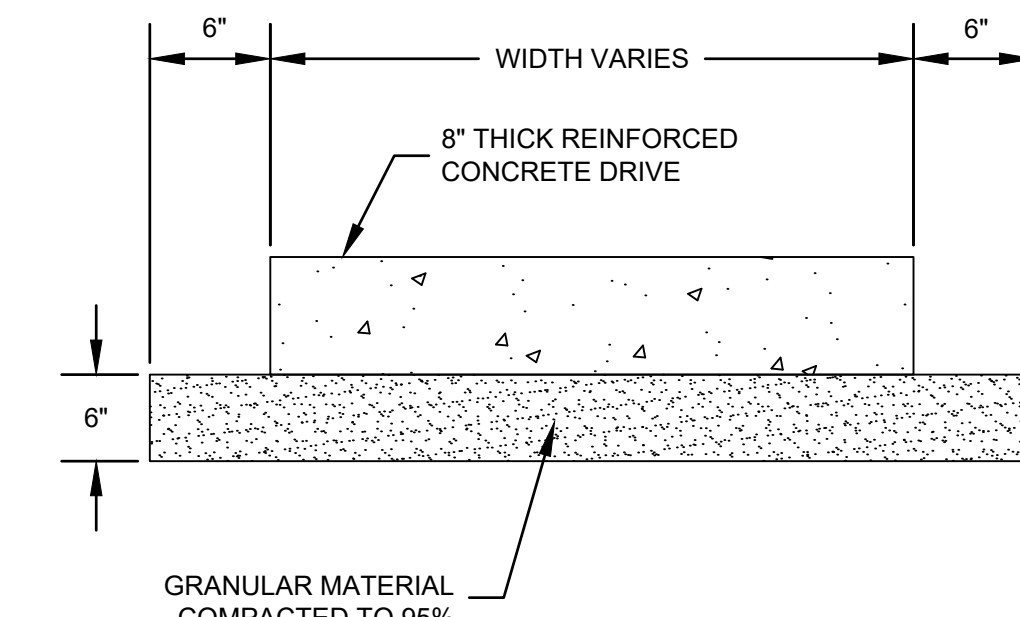
- ACCESS AISLES SHALL EXTEND THE FULL LENGTH OF THE PARKING SPACES THEY SERVE.
- DIMENSIONS INDICATED BELOW ARE TO THE CENTER OF THE STRIPED LINE.



02-970 HANDICAP STALL LAYOUT
NO SCALE

NOTES:

- CONCRETE DRIVEWAYS SHALL BE SAWCUT FULL DEPTH TO A NEAT AND TRIM LINE PRIOR TO REPLACEMENT.
- CONCRETE DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH WisDOT STANDARD PLANS.
- ANY EXISTING DRIVEWAY WHICH BECOMES UNDERCUT DURING CONSTRUCTION SHALL BE REMOVED AND REPLACED.
- PROVIDE CONTROL JOINTS IN ACCORDANCE WITH WisDOT STANDARD PLANS.



03-010 CONCRETE DRIVEWAY
NO SCALE

Attention: 1"

If this scale bar does not measure 1" then drawing is not original scale.

05/17/2021

PRELIMINARY SITE PLAN REVIEW

02/14/2022

FINAL SITE PLAN REVIEW

Designed By: JRR

Checked By: CAR

Drawn By: JRR

Approved By: CAR

GEI PROJECT: 1509480

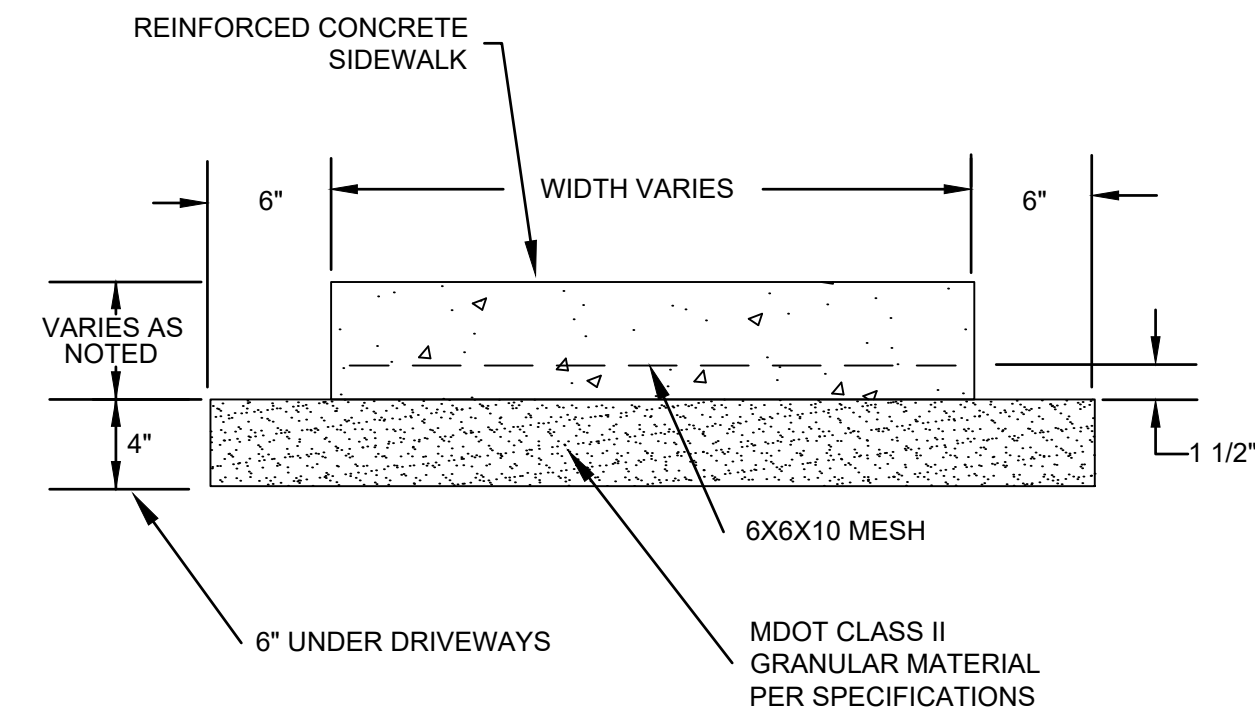
DWG. NO.

99-D-02

SHEET 18

NOTES:

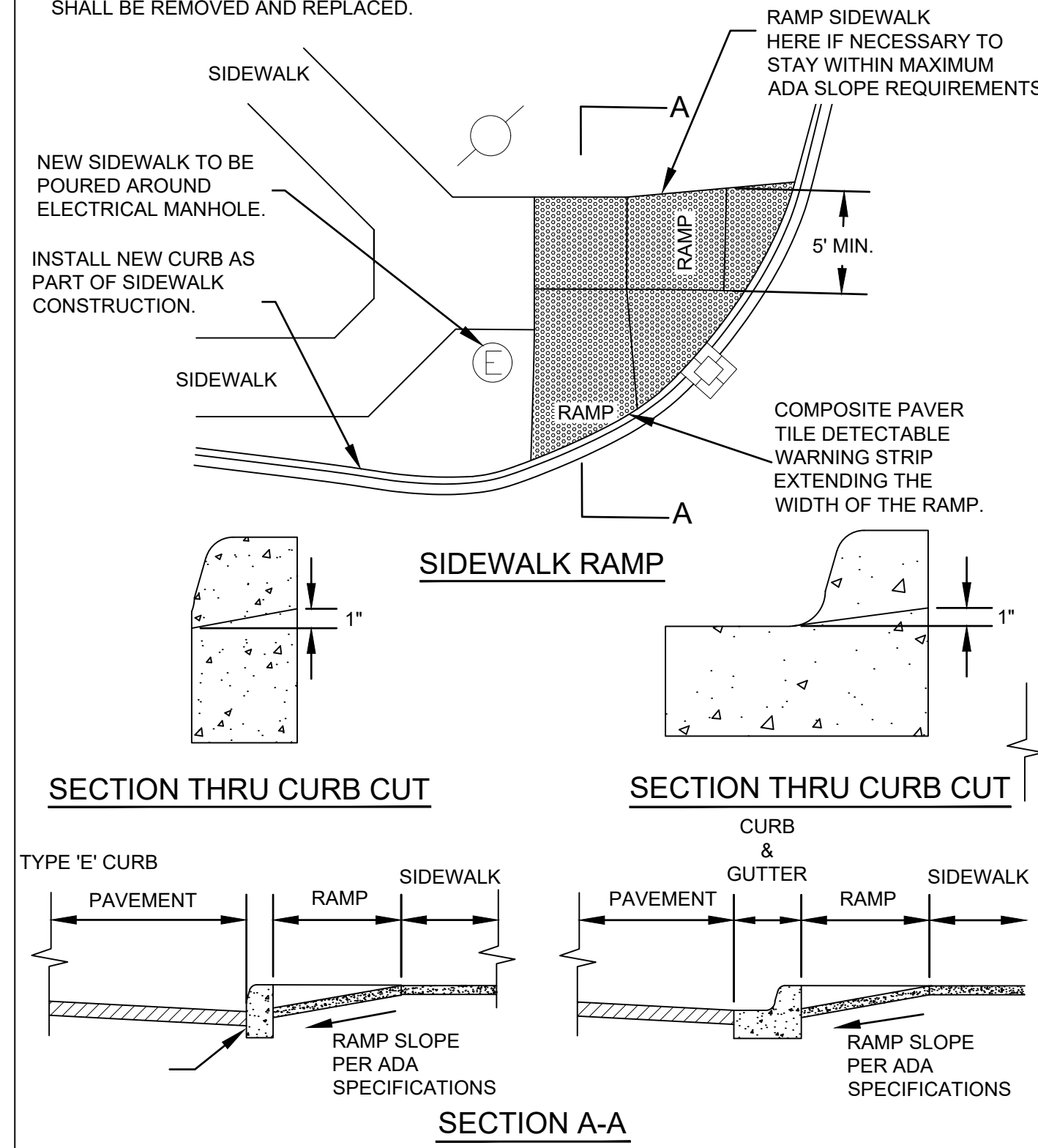
1. CONCRETE SIDEWALK SHALL BE SAWCUT FULL DEPTH TO A NEAT AND TRIM LINE PRIOR TO REPLACEMENT.
2. CONCRETE SIDEWALK SHALL BE CONSTRUCTED IN ACCORDANCE WITH MDOT STANDARD PLAN R-29-I.
3. ANY EXISTING SIDEWALK WHICH BECOMES UNDERCUT DURING CONSTRUCTION SHALL BE REMOVED AND REPLACED.
4. CONCRETE SIDEWALK SHALL BE 4" FOR PEDESTRIAN TRAFFIC AND 6" FOR VEHICULAR TRAFFIC. PROVIDE CONTROL JOINTS IN ACCORDANCE WITH MDOT STANDARD PLAN R-29-I.



03-020 CONCRETE SIDEWALK
NO SCALE

NOTES:

1. CONCRETE SIDEWALK RAMP SHALL BE SAWCUT TO FULL DEPTH TO A NEAT AND TRIM LINE PRIOR TO REPLACEMENT.
2. CONCRETE SIDEWALK RAMP SHALL BE CONSTRUCTED IN ACCORDANCE WITH ADA SPECIFICATIONS.
3. ANY EXISTING CONCRETE SIDEWALK RAMP WHICH BECOMES UNDERCUT DURING CONSTRUCTION SHALL BE REMOVED AND REPLACED.

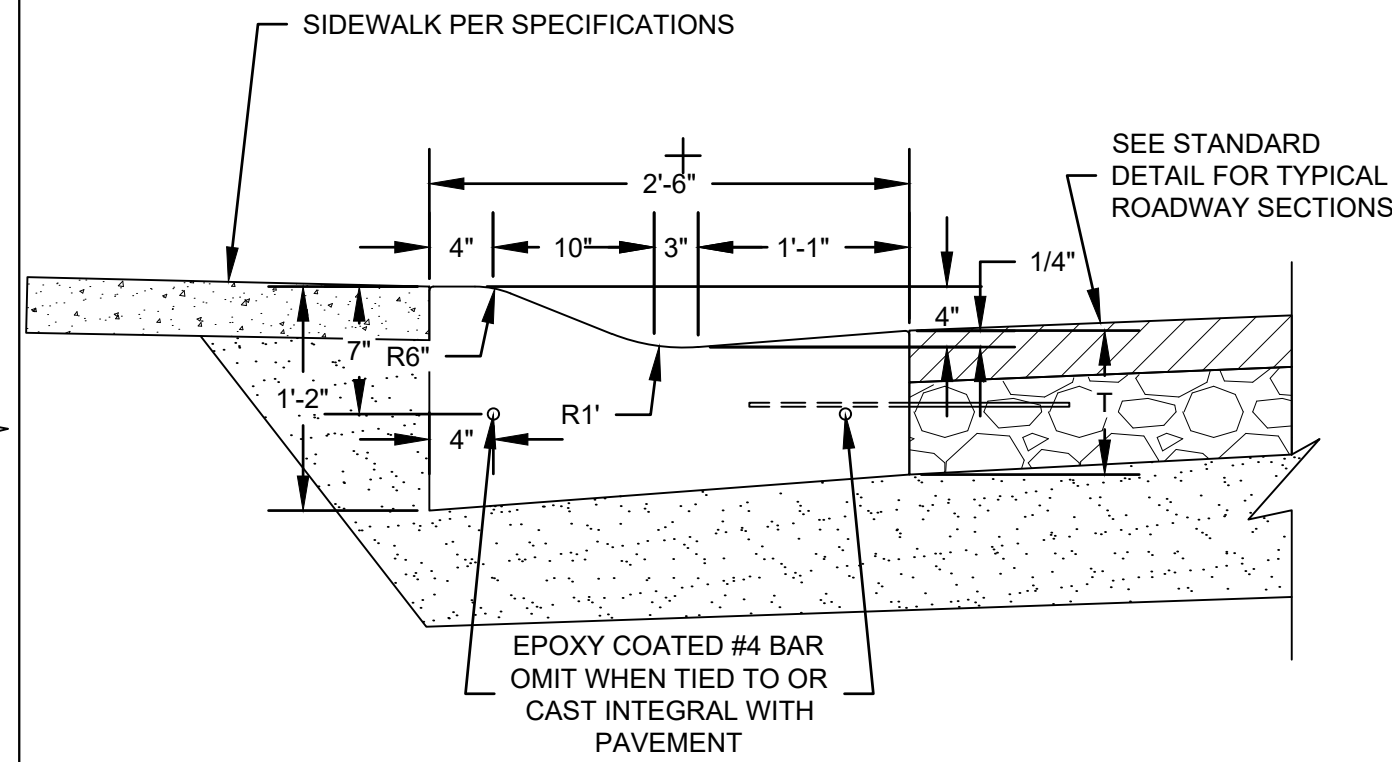


03-022 SIDEWALK RAMP DETAILS
NO SCALE

NOTES:

1. CONCRETE CURB AND/OR GUTTER SHALL BE CONSTRUCTED IN ACCORDANCE WITH MDOT STANDARD PLAN R-30-G.

DETAIL	DIMENSION T	LANE TIES	CONCRETE CYD / LFT
D1	9"	AS SHOWN	0.0788
D2	9"	OMITTED	0.0788
D3	10"	AS SHOWN	0.0826



03-042 TYPE D CONCRETE CURB AND GUTTER DETAIL
NO SCALE

Attention:
0 1"
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02/14/2022
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Designed By: JRR
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GEI PROJECT: 1509480

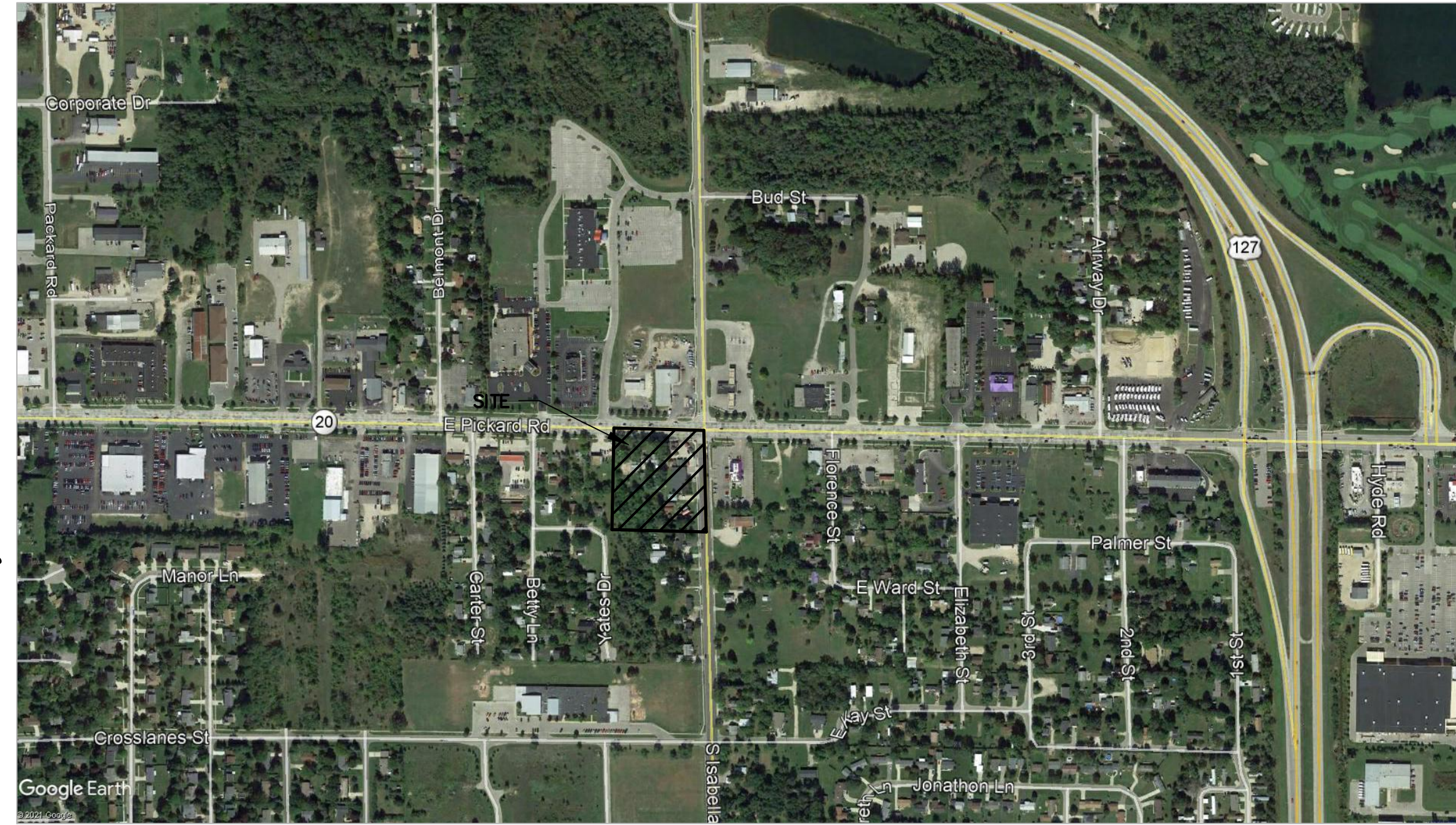
DWG. NO.
99-D-03
SHEET 19

EXISTING TOPOGRAPHY SURVEY

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



COVER SHEET
GEI 50
PART OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4
SECTION 14, T14N-R4W
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN



LOCATION MAP
NOT TO SCALE

B-7 RETAIL AND HIGHWAY	
MINIMUM FRONT YARD SETBACK	15 FT(E)
MINIMUM SINGLE SIDE SETBACK	10 FT(E)
TOTAL TWO SIDES SETBACK	NONE
MINIMUM REAR YARD SETBACK	10 FT(E)
MINIMUM LOT FRONTAGE	130 FT(D)
MINIMUM LOT AREA	20,000 SQ. FT.
MAXIMUM BUILDING HEIGHT	35 FT
MAXIMUM LOT COVERAGE (%)	30%(D)

- D. SCREENING FROM RESIDENTIAL USES: ALL PERMITTED USES IN THE B-6 AND B-7 DISTRICTS, INCLUDING PARKING, LOADING, AND OUTDOOR STORAGE AREAS, THAT ARE ADJACENT TO A LOT LINE IN AN R-1 OR R-2 DISTRICT AND LOCATED WITHIN ONE HUNDRED (100) FEET OF A PRINCIPAL RESIDENTIAL STRUCTURE SHALL PROVIDE A WALL FOR SCREENING PURPOSES. SUCH WALLS SHALL HAVE NO OPENINGS FOR VEHICULAR TRAFFIC OR OTHER PURPOSES EXCEPT AS NECESSARY FOR PUBLIC SAFETY. ALL REQUIRED WALLS SHALL BE CONSTRUCTED OF COMMON OR FACE BRICK, POURED OR PRECAST MASONRY, OR DECORATIVE BLOCK. REQUIRED WALLS SHALL NOT BE LESS THAN FIVE (5) FEET IN HEIGHT OR MORE THAN EIGHT (8) FEET IN HEIGHT.
- E. SITE ACCESS ALTERNATIVES: IF ONE (1) OF THE FOLLOWING SITE ACCESS ALTERNATIVES IS PROVIDED, THE MINIMUM LOT FRONTAGE REQUIREMENT SHALL BE REDUCED TO ONE HUNDRED (100) LINEAR FEET AND THE MAXIMUM PERCENT OF LOT AREA PERMITTED TO BE COVERED BY BUILDINGS SHALL BE INCREASED TO FIFTY (50) PERCENT:
1. A SERVICE ROAD PARALLELING M-20 IS PROVIDED ACROSS THE ENTIRE PARCEL AND PRIMARY INGRESS AND EGRESS TO THE PARCEL IS VIA SUCH SERVICE ROAD.
 2. ALTERNATIVE INGRESS AND EGRESS TO THE PARCEL IS AVAILABLE SUCH AS A REAR ACCESS ROAD OR ACCESS TO A STREET INTERSECTING M-20.
 3. INGRESS AND EGRESS TO THE PARCEL FROM M-20 IS VIA COMMON DRIVEWAY(S) SHARED WITH ADJOINING PROPERTY(IES).
 4. INGRESS AND EGRESS TO THE PARCEL IS THROUGH INTER-CONNECTED PARKING AREAS WITH ADJACENT PROPERTY(IES) IF APPROVED BY THE PLANNING COMMISSION IN CONSIDERATION OF SAFE AND EFFICIENT VEHICLE AND PEDESTRIAN CIRCULATION.

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" (1-800-482-7171) 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	
	CATCH BASIN (CURB INLET)	
	CATCH BASIN (ROUND)	
	CATCH BASIN (SQUARE)	
	CLEAN OUT	
	DRAINAGE FLOW	
	ELECTRICAL BOX	
	FOUND CONC. MONUMENT	
	FOUND IRON	
	GAS MAIN VALVE	
	SOIL BORING	
	TELEPHONE RISER	
	TREE - DECIDUOUS	
	WATER MAIN VALVE	
	WATER WELL	

LINETYPES	
	BURIED ELECTRICAL CABLE
	BURIED TELEPHONE CABLE
	CENTERLINE OF DITCH
	FORCE MAIN
	GAS MAIN
	ROAD CENTERLINE
	SANITARY SEWER
	STORM SEWER
	TOE OF SLOPE
	TOP OF BANK
	UTILITIES - OVERHEAD
	UTILITIES - UNDERGROUND
	WATER MAIN

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

DESCRIPTION PREPARED:
A PARCEL OF LAND IN THE NORTHEAST 1/4 OF THE NORTHEAST 1/4 OF SECTION 14, T.14 N.-R.4 W., UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHEAST CORNER OF SAID SECTION; THENCE S01°-23'-34"E., ON AND ALONG THE EAST LINE OF SAID SECTION, 396.51 FEET; THENCE N.88°26'-02"W., PARALLEL WITH THE NORTH LINE OF SAID SECTION, 368.78 FEET; THENCE N.01°-01'-58"E., ON A PREVIOUSLY SURVEYED AND DESCRIBED LINE, 396.00 FEET; THENCE S.88°-26'-02"E., ON AND ALONG SAID NORTH SECTION LINE, 352.00 FEET BACK TO THE POINT OF BEGINNING, CONTAINING 3.28 ACRES OF LAND AND BEING SUBJECT TO HIGHWAY USE OF THE NORTHERLY 60.00 FEET AND THE EASTERLY 33.00 FEET THEREOF AND ALSO BEING SUBJECT TO AND TOGETHER WITH ANY OTHER EASEMENTS, RESTRICTIONS OR RIGHTS OF WAY OF RECORD.

SHEET INDEX	
1	COVER SHEET
2	EXISTING TOPOGRAPHY
3	EASEMENT SHEET

BEARING BASIS:
BEARING BASIS PER MICHIGAN STATE PLAN SOUTH THE BEARING BETWEEN THE NORTH 1/4 CORNER AND THE NORTHEAST CORNER WAS DETERMINED TO BE S.88°-26'-02"E.

SITE:	SOUTHWEST CORNER ISABELLA ROAD AND PICKARD ROAD (M-20)
CLIENT:	GEI 50 990 LALLEY ROAD IRON RIVER, MI 49935 CONTACT: CRAIG A. RICHARDSON, P.E. PHONE: (906) 214-4151
CONSULTANT:	CENTRAL MICHIGAN SURVEYING & DEVELOPMENT CO., INC. 2257 EAST BROOMFIELD ROAD MT. PLEASANT, MI 48858 CONTACT PERSON: TIMOTHY E BEEBE PHONE: (989) 775-0756 FAX: (989) 775-5012 EMAIL: info@cms-d.com

<p>CHARTER COMMUNICATIONS 915 E. BROOMFIELD ROAD MT. PLEASANT, MI 48858 (989) 621-4932 RANDY BUNKER rbunker@chartercom.com</p>	<p>CHARTER TOWNSHIP OF UNION PUBLIC WATER/PUBLIC SEWER 2010 N. LINCOLN ROAD MT. PLEASANT, MI 48858 (989) 772-4600 EXT 24 KIM SMITH ksmith@uniontownshipmi.com</p>
<p>CONSUMERS ENERGY 1325 WRIGHT AVENUE ALMA, MI 48801 (989) 466-4282 KIM STUDDT kimberly.studdt@cmsenergy.com</p>	<p>CHARTER TOWNSHIP OF UNION PLANNING & ZONING 2010 NORTH LINCOLN ROAD MT. PLEASANT, MI 48858 (989) 772-4600 EXT 241 PETER GALLINAT pgallinat@uniontownshipmi.com</p>
<p>FRONTIER 345 PINE STREET ALMA, MI 48801 (989) 463-0392 MARK A. MARSHALL Mark.Marshall@ftr.com</p>	<p>DRAIN COMMISSIONERS OFFICE ISABELLA COUNTY BUILDING 200 NORTH MAIN STREET ROOM 140 MT. PLEASANT, MI 48858 (989) 772-0911 RICK JAKUBIEC drain@isabellacounty.org</p>
<p>DTE ENERGY 4420 44TH ST., S.E., SUITE B KENTWOOD, MI 49512 (616) 954-4623 MARY JO MCKERSEIE mckerseie@dteenergy.com</p>	<p>ISABELLA COUNTY ROAD COMMISSION 2261 EAST REMUS ROAD MT. PLEASANT, MI 48858 (989) 773-7131 EXT 115 PATRICK GAFFNEY Pgaffney@isabellaroads.com</p>
<p>MT. PLEASANT FIRE DEPARTMENT 804 EAST HIGH STREET MT. PLEASANT, MI 48858 (989) 779-5100 EXT 5122 LT. RANDY KEELER rkeeler@mt-pleasant.org</p>	

REVISIONS:

NO.	DATE	DESCRIPTION
1	2-10-21	SUBMITTAL TO CLIENT
2	3-18-21	SUBMITTAL TO CLIENT

JOB NUMBER: 2101-004
DRAWN BY: BTM
DESIGNED BY: N/A
CHECKED BY: TELB

SCALE: N/A
SHEET NUMBER: 1 OF 3

EXISTING TOPOGRAPHY SURVEY



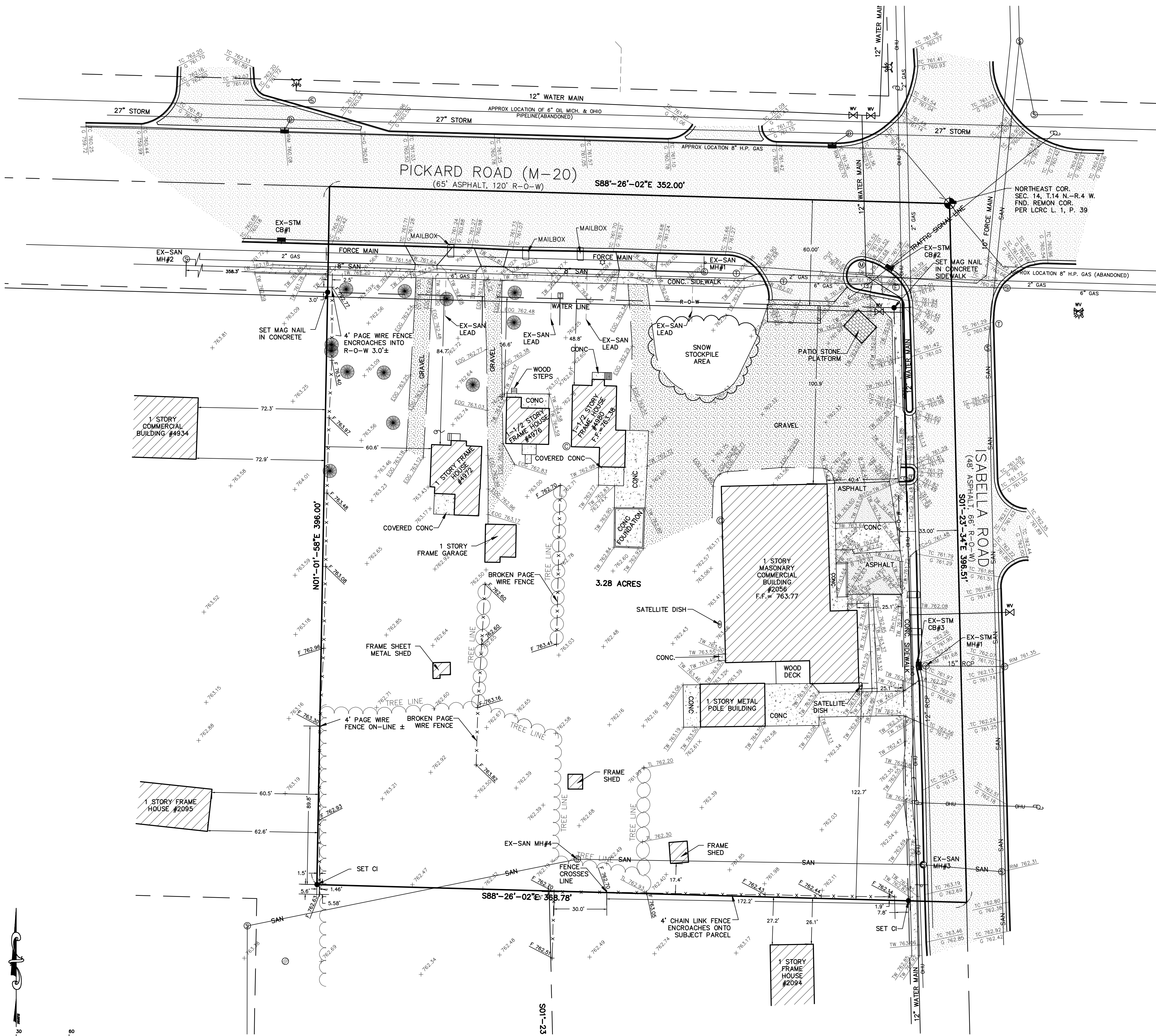
EXISTING TOPOGRAPHY
 GEI 50
 PART OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4
 SECTION 14, T14N-R4W
 UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:

SUBMITTALS:
 SUBMITTAL TO CLIENT 2-10-21
 SUBMITTAL TO CLIENT 318-21

JOB NUMBER:
 2101-004
 DRAWN BY:
 WRE/BTM
 DESIGNED BY:
 N/A
 CHECKED BY:
 TELB

SCALE
 1" = 30'
 SHEET NUMBER
 2 OF 3



SANITARY SEWER STRUCTURES

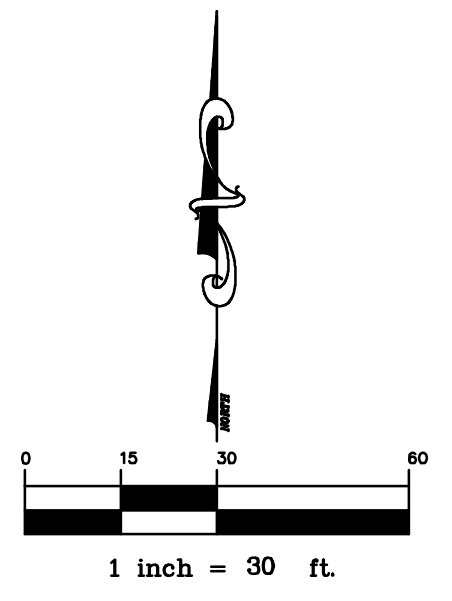
EX-SAN MH#1	RIM= 761.91 WEST INV= 755.15
EX-SAN MH#2	RIM= 761.07 FLOWLINE INV= 749.25
EX-SAN MH#3	RIM= 762.57 FLOWLINE INV= 744.25
EX-SAN MH#4	RIM= 761.99 FLOWLINE INV= 744.89

STORM SEWER STRUCTURES

EX-STM CB#1	RIM= 760.25 NORTHEAST INV= 755.40 NORTHWEST INV= 755.42 SOUTHWEST INV= 755.29
EX-STM CB#2	RIM= 760.76 NORTHEAST INV= 755.44 SOUTHWEST INV= 755.77
EX-STM CB#3	RIM= 761.68 STRUCTURE ELBOWS DIRECTLY INTO EX-STM MH#1
EX-STM MH#1	WEST INV= 755.73 WEST INV FROM EX-STM MH#3= 759.00 SOUTH INV= 755.23 EAST INV= 748.93

NOTE: DUE TO SNOW COVER ALL FLAT WORK IS NOT SHOWN.

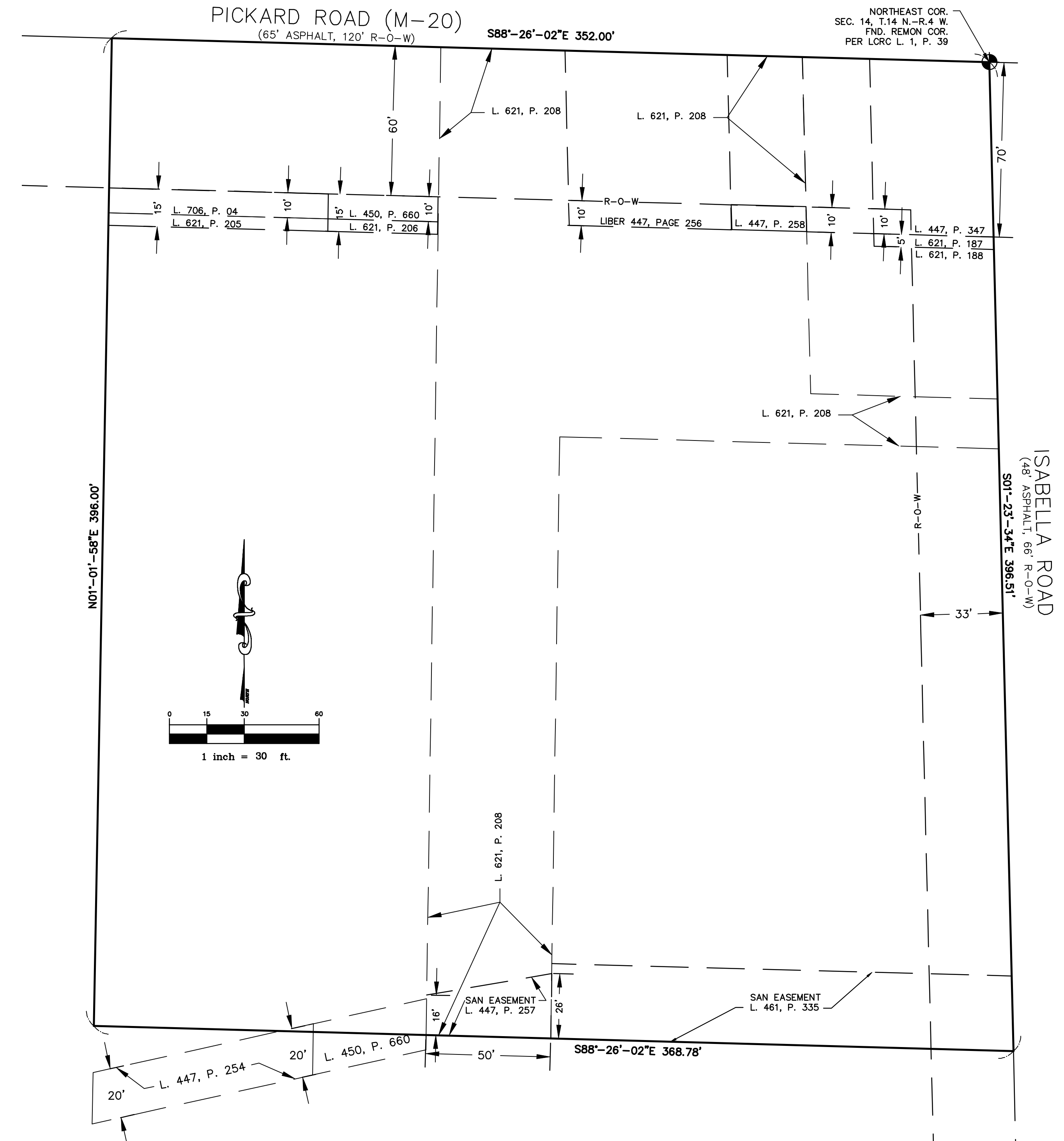
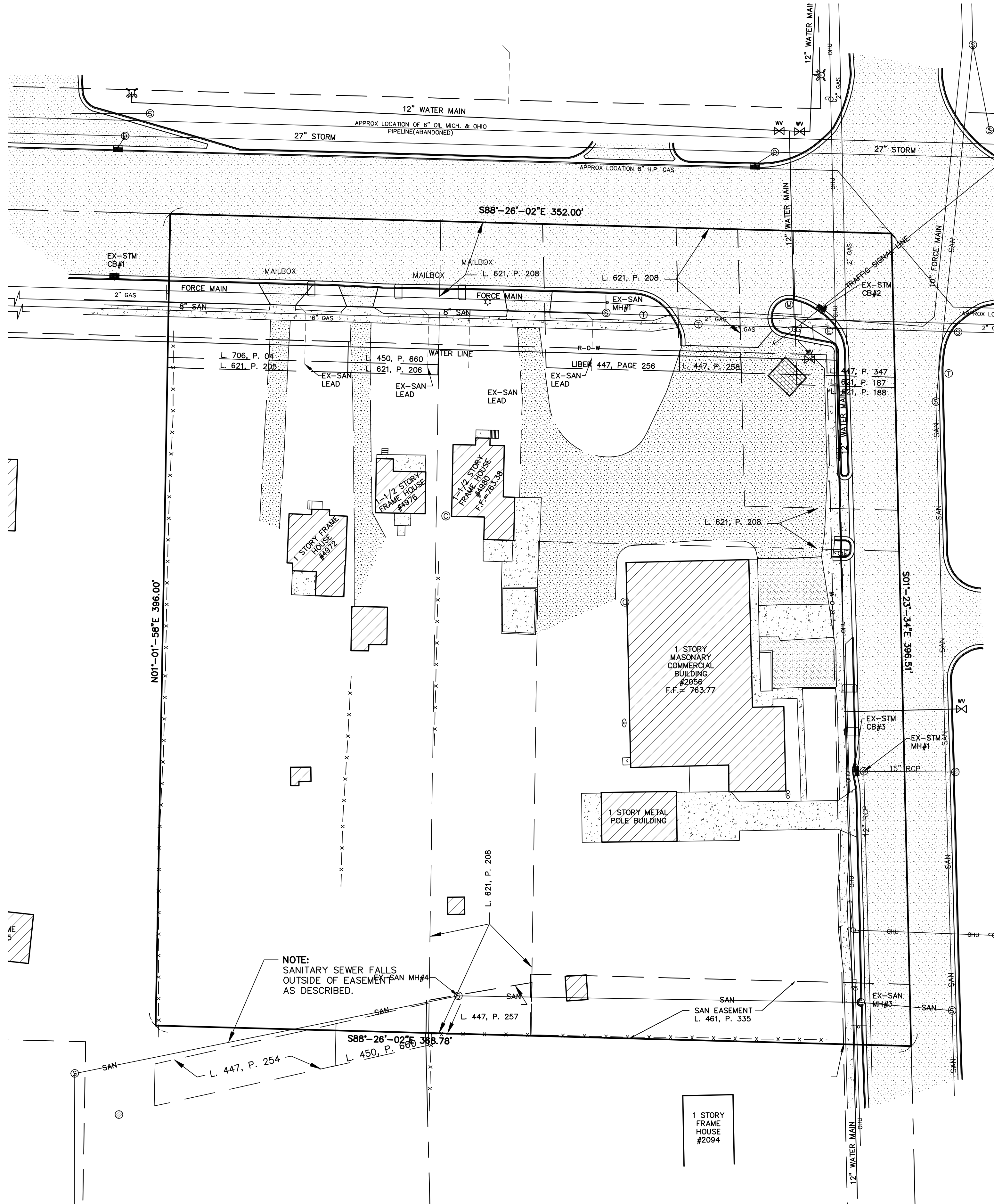
NOTE: INFORMATION ABOUT EXISTING BURIED UTILITIES WAS OBTAINED BY REVIEWING INFORMATION PROVIDED BY THE MUNICIPALITY.



EASEMENT SHEET

SCHEDULE B II EXCEPTIONS:

11. EASEMENT GRANTED TO UNION TOWNSHIP FOR SANITARY SEWER DATED MARCH 3, 1979 AND RECORDED APRIL 6, 1979 IN LIBER 447, PAGE 254
12. EASEMENT GRANTED TO UNION TOWNSHIP FOR SANITARY SEWER DATED MARCH 27, 1979 AND RECORDED APRIL 6, 1979 IN LIBER 447, PAGE 256 AND ALSO RECORDED IN LIBER 447, PAGE 257
13. EASEMENT GRANTED TO UNION TOWNSHIP FOR SANITARY SEWER DATED MARCH 27, 1979 AND RECORDED APRIL 6, 1979 IN LIBER 447, PAGE 258 AND ANOTHER DATED APRIL 3, 1979 AND RECORDED APRIL 10, 1979 IN LIBER 447, PAGE 347.
14. EASEMENT GRANTED TO UNION TOWNSHIP FOR SANITARY SEWER DATED JUNE 5, 1979 AND RECORDED JUNE 29, 1979 IN LIBER 450, PAGE 660 AND ANOTHER DATED MARCH 25, 1980 AND RECORDED APRIL 10, 1980 IN LIBER 461, PAGE 335.
15. EASEMENT GRANTED TO UNION TOWNSHIP FOR WATER PIPELINE DATED JANUARY 16, 1987 AND RECORDED OCTOBER 7, 1987 IN LIBER 621, PAGE 187 AND ANOTHER DATED FEBRUARY 19, 1987 AND RECORDED OCTOBER 7, 1987 IN LIBER 621, PAGE 188.
16. EASEMENT GRANTED TO UNION TOWNSHIP FOR WATER PIPELINE DATED JANUARY 13, 1987 AND RECORDED OCTOBER 7, 1987 IN LIBER 621, PAGE 205 AND ANOTHER DATED FEBRUARY 19, 1987 AND RECORDED OCTOBER 7, 1987 IN LIBER 621, PAGE 206.
17. EASEMENT GRANTED TO UNION TOWNSHIP FOR WATER PIPELINE DATED JULY 13, 1987 AND RECORDED OCTOBER 7, 1987 IN LIBER 621, PAGE 208.
18. EASEMENT FOR ELECTRIC FACILITIES GRANTED TO CONSUMERS POWER COMPANY DATED MARCH 20, 1990 AND RECORDED DECEMBER 21, 1990 IN LIBER 706, PAGE 4.



CMS & D
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 2257 EAST BROOMFIELD ROAD
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 EMAIL: info@cms-d.com



EASEMENT SHEET
 GEI 50
 PART OF THE NORTHEAST 1/4 OF THE NORTHEAST 1/4
 SECTION 14, T14N-R4W
 UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:

SUBMITTALS:
 SUBMITTAL TO CLIENT 2-10-21
 SUBMITTAL TO CLIENT 318-21

JOB NUMBER:
 2101-004
 DRAWN BY:
 WRE/BTM
 DESIGNED BY:
 N/A
 CHECKED BY:
 TELB

SCALE
 1" = 30'
 SHEET NUMBER
 3 OF 3

FINAL SITE PLAN REPORT

TO:	Planning Commission	DATE:	April 12, 2022
FROM:	Peter Gallinat, Zoning Administrator	ZONING:	B-7 Retail and Service Highway Business District
PROJECT:	PSPR22-04 Final Site Plan Approval application - Krist Oil Filling Station (Gas Station)		
PARCEL(S):	PID 14-014-20-002-00, 14-014-20-003-00, 14-014-20-004-00, 14-014-20-007-00, 14-014-20-008-00, 14-014-20-009-00, and 14-014-20-011-01 (Yats Dr., vacant).		
OWNER(S):	Michigan Reserves Inc.		
LOCATION:	Approximately 2.6 acres located at the SW corner of E. Pickard Road and S. Isabella Road in the NE 1/4 of Section 14.		
EXISTING USE:	One family residential dwellings and commercial building	ADJACENT ZONING:	B-7, B-5
FUTURE LAND USE DESIGNATION:	<i>Retail Service:</i> 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 REQUESTED:	To review and take action to approve, deny, or approve with conditions the PSPR22-04 final site plan dated 02-14-2021 for Krist Filling station (Gas Station) located on the SW corner of E. Pickard Road and S. Isabella Road in the NE 1/4 of Section 14 and in the B-7 (Retail and Service Highway Business) 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.

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 4 (Yard Setback Requirements).** The setbacks used for the plan are 15-foot front yard and 10-foot side/rear yard. This is consistent with what the setbacks were when this project was given preliminary site plan approval and special use permit approval. Since that time, the setback requirements have changed to 10-foot side yard and 20-foot front/rear yard. The project conforms to the new requirements. However, staff sees no reason to require the new setbacks to be depicted on the plan, since the preliminary site plan was approved prior to the change. Any changes proposed in future site plans for this site will need to meet the new setback requirements. **CONFORMS**

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

3. **Section 9 (Off-Street Parking).** Parking calculations have been provided on the site plan and are consistent with Section 9 standards for the proposed uses. The dimensions of the 90-degree parking spots comply with the size requirements of Section 9. Total required parking spaces are 37 and the plan proposes 43 spaces.

4. **Section 7.10 (Sidewalks and Pathways).** The applicant has proposed to provide a new internal sidewalk connection into the site to the public building entrance. The following sidewalk detail will need to be addressed by the applicant on a revised final site plan:
 - Confirm that all internal sidewalks abutting parking spaces are at least seven (7) feet in unobstructed width to allow for vehicle overlap by adding a dimension to the plan. If outside displays or sales areas are proposed adjacent to the building, they must be located outside of this unobstructed width. Sidewalk is 7-feet wide. The sidewalk on the north side of the building needs to be widened to 10-feet to account for the 3-foot-wide sales area on the sidewalk. Sidewalk can remain 7-feet wide if the dedicated sales area is removed.

5. **Section 6.18 (Filing Stations for the Sale of Gasoline, Oil, Propane, and Vehicle Accessories).** The applicant has demonstrated compliance with the standards of this Section for access, minimum lot size, and setbacks for buildings, but not the standard for exterior lighting under the filling station canopies. The following details will need to be addressed by the applicant on a revised final site plan:
 - Exterior illumination levels under the diesel and gas filling station canopies cannot exceed a maximum of 20.0 foot-candles. Current plans show 30 to 40+ foot-candles in this area.

6. **Section 8.2 (Exterior Lighting).** With the exceptions of the under-canopy lighting noted in #5 above and lighting around the immediate perimeter of the building, exterior

illumination levels elsewhere on the site conform to Section 8.2 standards. The following detail will need to be addressed by the applicant on a revised final site plan:

- Exterior illumination levels around the building cannot exceed a maximum of 10.0 foot-candles. Current plans show 10.2 to 25+ foot-candles in this area.
- The LCG-CP lights identified as S on the photometric plan do not appear to be down-shielded like the LCG-WPFC lights identified as P on the photometric plan. All exterior lighting fixtures must be fully-shielded and directed straight downward, with updated details and specifications provided on the exterior lighting plan.

7. **Building Form and Composition.** The proposed building design is consistent with applicable building form and composition standards of the Zoning Ordinance, and has been updated to adequately screen all rooftop HVAC equipment with parapet walls on all four sides of the building. **CONFORMS**
8. **Section 9.5 (Loading Space Requirements).** The applicant has provided one (1) loading space that is in a location staff has determined to be acceptable per Section 9.5 standards as applied to this site and use. A note has been added to the site plan to confirm that all deliveries will take place when the facility is not open to the public. **CONFORMS**
9. **Section 7.14 (Trash Removal and Collection).** The applicant has provided on the plan an 8.5-foot-high decorative masonry dumpster enclosure, which has been moved from the south to the west side of the building and is 12 feet from the building. The gate will be a steel frame painted tricorn black (see sheet 17). **CONFORMS**
10. **Section 10 (Landscaping and Screening)** The applicant has not requested any waiver from the requirements of section 10 as was indicated in the preliminary plan. As noted on sheet 12, the plan now meets or exceeds applicable landscaping and screening requirements. The applicant has addressed all of the preliminary site plan comments and requested changes on the updated landscape plan. **CONFORMS**
11. **Section 11 (Signs).** The applicant has proposed conceptual sign details on the final site plan, which appear to be consistent with applicable Ordinance standards. Administrative approval of sign permit applications for the building-mounted and freestanding signage will be necessary prior to any sign installations.
12. **Land Division/Land Combination Required.** The proposed development is located on parts of or otherwise impacts a total of seven (7) separate parcels of land, as noted at the top of this report. Prior to the issuance of any building permit for this project, the applicant and landowner shall provide documentation to the Zoning Administrator of:
 - Township Assessor approval of a land division/land combination application for division and re-combination of the subject parcels to establish:
 - One (1) new parcel for the Krist Oil Filling Station site that is fully consistent with the approved final site plan; and
 - One (1) remainder parcel (vacant) with direct frontage on and access to the

Yats Dr. right-of-way consistent with Section 7.17.B. (Public Access Required/Minimum Frontage) requirements.

13. **Outside agency approvals.** The following approvals have been obtained: Mt. Pleasant Fire Department, Isabella County Road Commission, and Storm Water approval from the Isabella County Drain office Isabella County Transportation Commission, and the Township Public Services Department. **CONFORMS**

Special Use Permit – Conditions of Approval

With approval of the final site plan the applicant will have fully satisfied all of the following conditions of the special use permit approval granted in 2021: **CONFORMS**

1. *Preliminary and Final site plan approved by Planning Commission.*
2. *Hours of operation shall be limited to from 6am to midnight with no loudspeakers or amplified music will be used outside of the building*
3. *A decorative masonry wall shall be provided along the south and west sides of the paved area along with required greenbelt buffer or evergreen screen plantings adjacent to the lot boundaries to adequately buffer adjacent residences from visual and noise impacts*
4. *The pursuit of a traffic study.*

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 proposed use and site plan satisfy the conditions of the approved special use permit.
2. The internal sidewalk on the north side of building either needs to be widened for the proposed sales area or the sales area must be removed. With this adjustment, the final site plan can fully conform to Section 14.2.P. (Required Site Plan Information).
3. Lighting under the diesel and gas filling station canopy must be reduced to a maximum of 20.0 foot-candles. Lighting around the convenience store must be reduced to a maximum of 10.0 foot-candles and all exterior light fixtures must be fully-shielded and directed straight downward.
4. A land division and re-combination of the subject parcels will be required to establish one (1) new Krist Oil Filling Station parcel and one (1) remainder parcel (vacant) on Yats Dr.

Recommendations

Based on the above findings, I would recommend that the Planning Commission approve the PSPR22-04 final site plan dated 02-14-2021 for Krist Filling station (Gas Station) located on the SW corner of E. Pickard Road and S. Isabella Road in the NE 1/4 of Section 14 and in the B-7 (Retail and Service Highway Business) zoning district, subject to the following conditions:

1. Widen the internal sidewalk on the north side of building to at least ten (10) feet to accommodate the proposed sales area, or remove the sales area from the site plan.
2. Reduce exterior illumination levels under the diesel and gas filling station canopies to a maximum of 20.0 foot-candles and everywhere else on the site to a maximum of 10.0 foot-candles, and update exterior light fixtures as needed to be fully-shielded and directed straight downward with details and fixture specifications provided on an updated exterior lighting plan sheet submitted to the Zoning Administrator for review and approval prior to issuance of a building permit for this project.
3. Township Assessor approval of a land division/land combination application for division and re-combination of the seven (7) subject parcels [PID 14-014-20-002-00, -003-00, -004-00, -007-00, -008-00, -009-00, and -011-01 (Yats Dr., vacant)] to establish one (1) new parcel for the Krist Oil Filling Station site that is fully consistent with the approved final site plan, and one (1) remainder parcel with direct frontage on and access to the Yats Dr. right-of-way consistent with Section 7.17.B. (Public Access Required/Minimum Frontage) requirements.

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 22-04 Krist Oil Filling Station Final Site Plan Review Application

MOTION TO APPROVE:

Motion by _____, supported by _____, to approve the PSPR22-04 final site plan dated 02-14-2021 for the new Krist Oil Filling Station on approximately 2.6 acres of land on the southwest corner of E. Pickard Road and S. Isabella Road in the northeast quarter of Section 14 and in the B-7 (Retail and Service Highway Business) zoning district, finding that the February 14, 2022 site plan 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 WITH CONDITIONS:

Motion by _____, supported by _____, to approve the PSPR22-04 final site plan dated 02-14-2021 for the new Krist Oil Filling Station on approximately 2.6 acres of land on the southwest corner of E. Pickard Road and S. Isabella Road in the northeast quarter of Section 14 and in the B-7 (Retail and Service Highway Business) zoning district, finding that the February 14, 2022 site plan 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 condition(s):

1. Prior to issuance of any building permit for this project, Township Assessor approval of a land division/land combination application for division and re-combination of the seven (7) subject parcels [PID 14-014-20-002-00, -003-00, -004-00, -007-00, -008-00, -009-00, and -011-01 (Yats Dr., vacant)] to establish one (1) new parcel for the Krist Oil Filling Station site that is fully consistent with the approved final site plan, and one (1) remainder parcel with direct frontage on and access to the Yats Dr. right-of-way consistent with Section 7.17.B. (Public Access Required/Minimum Frontage) requirements.
2. Widen the internal sidewalk on the north side of building to at least ten (10) feet to accommodate the proposed sales area, or remove the sales area from the site plan.
3. Reduce exterior illumination levels under the diesel and gas filling station canopies to a maximum of 20.0 foot-candles and elsewhere on the site to a maximum of 10.0 foot-candles, and update exterior light fixtures as needed to be fully-shielded and directed straight downward with details and fixture specifications provided on an updated exterior lighting plan sheet.
4. The updated final site plan shall be subject to Zoning Administrator review and approval prior to issuance of a building permit for this project.

Draft Motions: PSPR 22-04 Krist Oil Filling Station Final Site Plan Review Application

MOTION TO POSTPONE ACTION:

Motion by _____, supported by _____, to postpone action on the PSPR22-04 final site plan dated February 14, 2022 for the new Krist Oil Filling Station on approximately 2.6 acres of land on the southwest corner of E. Pickard Road and S. Isabella Road until _____, 2022 for the following reasons:

MOTION TO DENY:

Motion by _____, supported by _____, to deny the PSPR22-04 final site plan dated 02-14-2021 for the new Krist Oil Filling Station on approximately 2.6 acres of land on the southwest corner of E. Pickard Road and S. Isabella Road in the northeast quarter of Section 14 and in the B-7 (Retail and Service Highway Business) zoning district, finding that the February 14, 2022 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:
