



**Planning Commission
Regular Meeting
August 20, 2019
7:00 p.m.**

1. CALL MEETING TO ORDER
2. PLEDGE OF ALLEGIANCE
3. ROLL CALL
4. APPROVAL OF MINUTES
- July 16, 2019
5. CORRESPONDENCE / BOARD REPORTS / PRESENTATIONS
 - A. The Den of Broomfield Presentation
6. APPROVAL OF AGENDA
7. PUBLIC COMMENT: Restricted to (3) minutes regarding items not on this agenda
8. NEW BUSINESS
 - A. SPR 2019-07 Renaissance Public School Academy Expansion 2797 S. Isabella Rd.
 - B. SUP 2019-05 Public Hearing A & K Real Estate Holdings LLC South Park Place S. Park Place, Construction of self-storage facility
 - C. SPR 2019-09 Lone Maple Development LLC 5889 Broadway, Solar Energy Systems
 - D. SPR 2019-10 Mid State Electric 5966 Venture Way
 - E. SPR 2019-11 Four Hacks 1425 S Mission (Review Only)
9. OTHER BUSINESS
10. EXTENDED PUBLIC COMMENT: Restricted to 5 minutes regarding any issue
11. FINAL BOARD COMMENT
12. ADJOURNMENT

CHARTER TOWNSHIP OF UNION
Planning Commission
Regular Meeting

A regular meeting of the Charter Township of Union Planning Commission was held on July 16, 2019 at the Township Hall.

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

Roll Call

Present: Buckley, Darin, LaBelle, Shingles, Squattrito, and Webster

Excused: Fuller and Clerk Cody

Late: Mielke

Others Present

Township Planner, Peter Gallinat and Secretary, Jennifer Loveberry

Approval of Minutes

Shingles moved **Webster** supported the approval of the June 18, 2019 regular meeting as amended. **Vote: Ayes: 6 Nays: 0. Motion carried.**

Correspondence / Reports

Webster – Sidewalk Prioritization and Pathway Committee meets August 5, 2019 at 7:00 p.m.

Approval of Agenda

Webster moved **Buckley** supported approval of the agenda as presented. **Vote: Ayes: 6 Nays 0. Motion carried.**

Public Comment – 7:05 p.m.

No comments were offered.

New Business

- A. SUP 2019-04 Public Hearing, Group Day Care located at 5115 S. Stirrup Ln.**
Owner: Julie Recker (Review and recommend approval/denial of special use permit to the Board of Trustees)

Introduction by Township Planner. Stated that the applicant is requesting a special use for a Group Day Care Home. A private home where from seven (7) to twelve (12) children are received for care and supervision. This number shall not include more than two (2) children younger than two (2) years old. Public Hearing Notice was read.

Public Hearing – Open 7:09 p.m.

No comments were offered.

Public Hearing-Closed 7:10 p.m.

Julie Recker, applicant, stated reasons for request and need for special use.

The Planning Commission reviewed section 30.3 (1-10) of the zoning ordinance and 30.4.J Special Uses Permitted – Group Day-Care Homes (1-2a-d).

Webster moved **Shingles** supported to recommend approval SUP 2019-04 to the Township Board of Trustees, stating that the application does comply the General Requirements for special uses section 30.3A (1-10) and section 30.4J. Compliance of obtaining a state license and submitting a site sketch to be approved by Township Staff. **Vote: Ayes: 6 Nays: 0 Motion carried.**

B. REZ 2019-04 Public Hearing, Rezone R3 to OS Medical Facility PID 14-014-20-038-01, located interior ¼ cor. Owner: Rosewood Development Co. LLC (Recommendation to Board of Trustees

Introduction by Township Planner. Stated that the applicant is requesting a rezone of the property for a new medical office facility plus new parking for existing medical office on separate parcel. The parcel is a part of approved Rosewood Development recently amended by the Township in 2016. This request is to rezone two separate portions (3.41 acres, 0.45 acres) of the parcel to OS and leave the remaining 5.39 acres zoned R-3A. Township Planner read the Public Hearing notice.

Public Hearing – Open 7:36 p.m.

Dave Brandt, Rosewood Developer and Builder – In favor of project
James Goodwell, Vice President of Rosewood Condominiums – Shared that the Rosewood Association met for a meeting on 7/15/19 and stated that the group did not oppose the project
Linda Callison, 2430 Rosewood Dr. – Concerned with increased traffic

Written Correspondence

Carol Griffin, 2406 Rosewood N – In favor of project
Ernest Lynn Wolters, 4795 E. Broadway – Concerned with increased traffic
Public Hearing-Closed 7:35 p.m.

Tim Beebe of CMS&D, 2257 E. Broomfield, represented the applicant explaining the rezone request.

8:09 p.m. – Bryan Mielke arrived.

Buckley moved **LaBelle** supported to recommend approval of REZ 2019-04 Rosewood Dr. 14-014-20-03801 to the Board of Trustees after careful consideration of lighting, traffic, screening, and the Township Master Plan the Planning Commission determined the request to be in compliance. **Vote: Ayes: 7 Nays: 0 Motion carried.**

C. SPR 2019-07 Renaissance Public School Academy expansion

Introduction by Township Planner

Tim Beebe of CMS&D 2257 E. Broomfield, representing the applicant, asked for postponement of site plan review to allow for the Township to receive approvals from the outside agencies.

Webster moved **Buckley** supported to postpone SPR 2019-07 Renaissance Public School Academy expansion. **Vote: Ayes: 7 Nays: 0. Motion carried.**

Other Business

Extended Public Comment Open – 8:32 p.m.

No comments were offered.

Final Board Comment

Township Planner updates from the Zoning Board of Appeals.

Adjournment – Chairman Squattrito adjourned the meeting at 8:35 p.m.

APPROVED BY:

Alex Fuller - Secretary
Mike Darin – Vice Secretary

(Recorded by Jennifer Loveberry)

DRAFT

Board Expiration Dates

Planning Commission Board Members (9 Members) 3 year term			
#	F Name	L Name	Expiration Date
1-BOT Representative	Lisa	Cody	11/20/2020
2-Chair	Phil	Squatrito	2/15/2020
3- Vice Chair	Bryan	Mielke	2/15/2021
4-Secretary	Alex	Fuller	2/15/2020
5 - Vice Secretary	Mike	Darin	2/15/2022
6	Stan	Shingles	2/15/2021
7	Ryan	Buckley	2/15/2022
8	Denise	Webster	2/15/2020
9	Doug	LaBelle II	2/15/2022
Zoning Board of Appeals Members (5 Members, 2 Alternates) 3 year term			
#	F Name	L Name	Expiration Date
1-Chair	Tim	Warner	12/31/2019
2-PC Rep / Vice Chair	Bryan	Mielke	2/18/2021
3-Secretary	Jake	Hunter	12/31/2019
4- Vice Secretary	Andy	Theisen	12/31/2019
5	Taylor	Sheahan-Stahl	12/31/2021
Alt. #1	John	Zerbe	12/31/2019
Alt. #2	Liz	Presnell	2/15/2021
Board of Review (3 Members) 2 year term			
#	F Name	L Name	Expiration Date
1	Doug	LaBelle II	12/31/2020
2	James	Thering	12/31/2020
3	Bryan	Neyer	12/31/2020
Alt #1	Randy	Golden	1/25/2021
Citizens Task Force on Sustainability (4 Members) 2 year term			
#	F Name	L Name	Expiration Date
1	Don	Long	12/31/2020
2	Mike	Lyon	12/31/2020
3	vacant seat		12/31/2018
4	Phil	Mikus	11/20/2020
Construction Board of Appeals (3 Members) 2 year term			
#	F Name	L Name	Expiration Date
1	Colin	Herron	12/31/2019
2	Richard	Jakubiec	12/31/2019
3	Andy	Theisen	12/31/2019
Hannah's Bark Park Advisory Board (2 Members from Township) 2 year term			
1	Mark	Stuhldreher	12/31/2020
2	John	Dinse	12/31/2019
Chippewa River District Library Board 4 year term			
1	Ruth	Helwig	12/31/2019
2	Lynn	Laskowsky	12/31/2021



Board Expiration Dates

EDA Board Members (11 Members) 4 year term			
#	F Name	L Name	Expiration Date
1	Thomas	Kequom	4/14/2023
2	James	Zalud	4/14/2023
3	Richard	Barz	2/13/2021
4	Robert	Bacon	1/13/2023
5	Ben	Gunning	11/20/2020
6	Marty	Figg	6/22/2022
7	Sarvjit	Chowdhary	1/20/2022
8	Cheryl	Hunter	6/22/2023
9	Vance	Johnson	2/13/2021
10	Michael	Smith	2/13/2021
11	David	Coyne	3/26/2022
Mid Michigan Area Cable Consortium (2 Members)			
#	F Name	L Name	Expiration Date
1	Kim	Smith	12/31/2020
2	Vacant		
Cultural and Recreational Commission (1 seat from Township) 3 year term			
#	F Name	L Name	Expiration Date
1	Brian	Smith	12/31/2019
Sidewalks and Pathways Prioritization Committee (2 year term)			
#	F Name	L Name	Expiration Date
1 BOT Representative	Phil	Mikus	7/26/2021
2 PC Representative	Denise	Webster	8/15/2020
3 Township Resident	Sherrie	Teall	8/15/2019
4 Township Resident	Jeremy	MacDonald	10/17/2020
5 Member at large	Connie	Bills	8/15/2019

The Den on Broomfield

Date: 08.20.19



The Den on Broomfield Site

Located on the southwest corner of E. Broomfield Rd. and Sweeney St.
Reference information

- Zoned B-5 Highway Business District
- Permitted Multi-use Structures allowed under special use "A combination retail and residential structure"
- 35 ft height restriction

Current guidelines under 30-16 AB

- Two stories max
- Four single-family units max
- 1000 sq ft per unit min
- Parking, provide full parking amount for business/commercial and two additional per residential unit

According to the 2018 Master Plan the proposed project is located in the "Mixed-Use Bluegrass Center Area".

The proposed project named The Den on Broomfield seeks to promote a mixed-use development of two separate structures. The first floor would consist of retail/commercial space along with amenities for the tenants. The upper two floors would be for apartments with ten units per floor per building for a total of forty apartments total. There will be a combination of one and two-bedroom units averaging approximately 1000 sq ft per unit.

The 2018 Master Plan references The Hamptons project located in Meridian Township as a good example of suburban mixed-use development for the Mixed-Use Bluegrass Center Area. The proposed Den on Broomfield seeks to reinforce the Master Plan goals for the area with a similar project. The current zoning ordinance would require a Text Amendment to support the 2018 Master plan Mixed-Use Bluegrass Center Area similar to the proposed Den on Broomfield.

We will request the following Text Amendments to support the proposed Den on Broomfield and the 2018 Master Plan for the Mixed-Use Bluegrass Center Area:

- Allow a three-story structure with a maximum height of 35 feet
- Allow more than four apartment units per building
- Allow an average of 1000 sq ft per apartment
- Review the parking requirements for a mixed-use facility



PART OF THE NORTHEAST 1/4, SECTION 26, T14N-R4W,
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

LOCATION MAP

NOT TO SCALE

The Den on Broomfield Site

Objective 3.3: Re-imagine the Bluegrass Road Subarea as a vibrant destination for community business, social and civic activity.



D. Mixed-Use Bluegrass Center Area

While currently more auto-centric, this area has the potential to transition into a more walkable, vibrant center. Future uses should be integrated to include multi-story, mixed-use buildings; first floor retail and office uses; public use and spaces; entertainment and restaurant venues; and additional attached housing types such as townhouses. Both vehicular and pedestrian cross connections should be promoted between sites, providing for future connections through easements, and should collectively promote a vibrant, livable center to the neighboring university population.

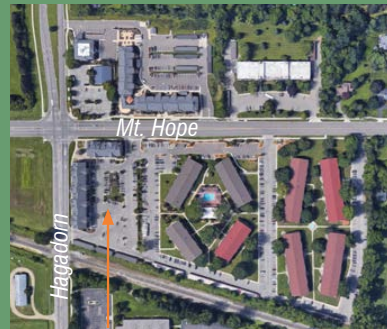
Key gateways into the center at busy intersections should have clearly delineated, safe pedestrian crossings and gateway landscaping and signage to project the "town center" image and branding for the district. This branding can continue through streetscape improvements such as pedestrian scale lighting, banners, street trees, and street furniture, similar to those provided by the EDA on Pickard Road, to build a cohesive center. Working with the Road Commission, Union Township should prioritize right-of-way easements to capture the pedestrian amenity zone in front of street-fronting development.

Mixed-use development promoting walkability should be prioritized along Bluegrass Road and connections made to nearby apartment complexes and big box retailers. New development visible from Highway 127 should be developed with friendly "back doors" as well to ensure the highest quality image for the township is projected to travelers.

This area could benefit from master planning, a form-based code, or planned unit development to ensure that future development is coordinated with roadway improvements. The concept plan depicted on the following page is meant to be the first schematic step at identifying further, more concrete, recommendations during the development of a more detailed subarea analysis.

See the design guidelines recommended for attached housing and commercial development in other sections of this chapter.

Mixed-Use Example

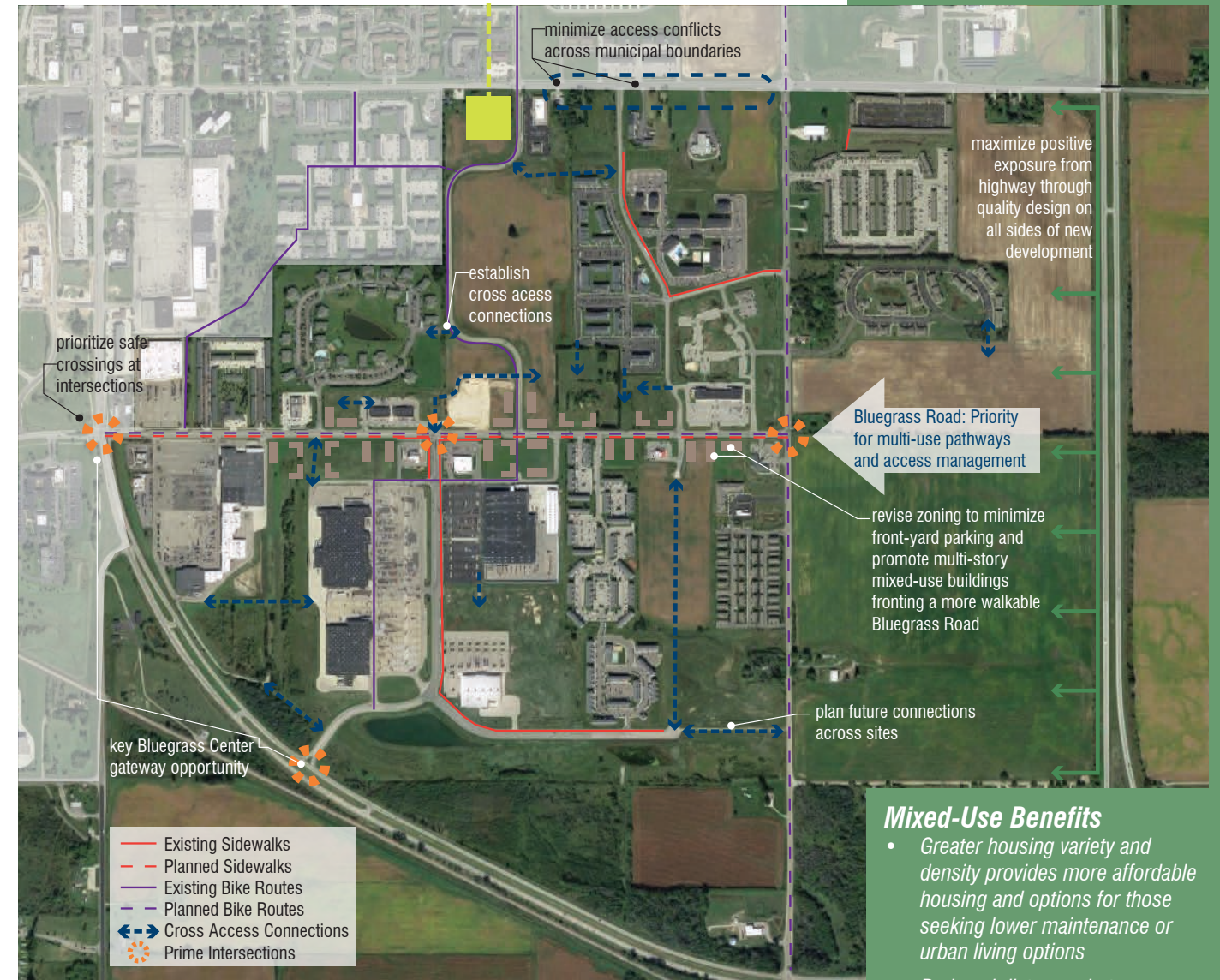


The Hamptons in Meridian Township near Michigan State University is a good example of suburban mixed-use development. Storefronts line the corridor with apartments above and parking in the rear. This planned unit development integrates well with the existing, more traditional apartment buildings.



28 Land Use + Character

Union Charter Township Master Plan



Bluegrass Center Concept Plan

Mixed-Use Development

Mixed-use development is a development or building that blends a combination of residential uses, or that combines residential and non-residential uses, and where those functions are physically and functionally integrated. By locating places where people live, work and shop in close proximity to one another, alternatives to driving, such as walking or biking, become more viable. Mixed-use developments can offer a variety of residential opportunities so that younger and older people, singles and families of varying income levels may find places to live. A more diverse and sizable population and commercial base can also better support public transportation.

Union Charter Township Master Plan

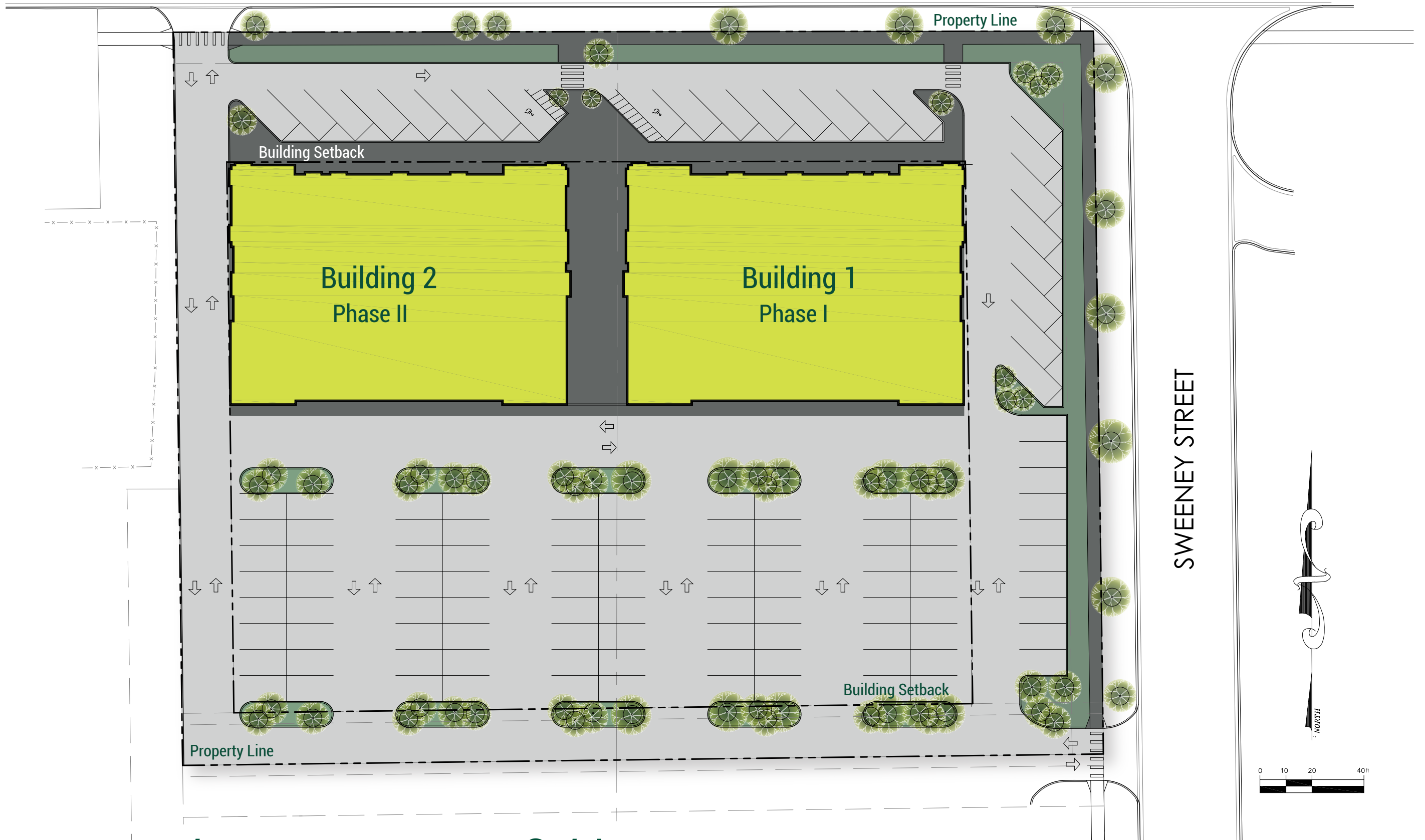
Mixed-Use Benefits

- Greater housing variety and density provides more affordable housing and options for those seeking lower maintenance or urban living options
- Reduced distances between housing, workplaces, retail businesses, and other amenities and destinations reduces travel time and improves convenience
- More compact development makes more efficient use of public services, utilities and infrastructure
- Stronger neighborhood character and sense of place result when citizens and businesses interact
- Walkable, bikeable neighborhoods increase accessibility, which results in improved travel options, reduced transportation costs and improved community health

Land Use + Character 29



EAST BROOMFIELD ROAD



SWEENEY STREET

The Den on Broomfield

Site Plan Sketch

Page 3





The Den on Broomfield

Rendering





Peter Gallinat, Township Planner
pgallinat@uniontownshipmi.com
2010 South Lincoln
Mt. Pleasant, MI 48858
Phone 989-772-4600 Ext. 241
Fax 989-773-1988

TO: Planning Commission
FROM: Township Planner

New Business

SUBJECT: A) SPR 2019-07 Renaissance Public School Academy expansion.

Applicant: Konwinski Construction Inc.

Owner: Renaissance Public School Academy

Location: PID14-013-30-003-04 2797 S. Isabella Rd. MT PLEASANT, MI 48858

Current Zoning: B-4 (General Business District)

Adjacent Zoning: R-3A, B-4, R-2A

Future Land Use/Intent: Recreation/Institutional: This category is designated primarily for indoor/outdoor recreation both private and publicly owned.

Current Use: Renaissance Public School Academy

Reason for Request: Proposed 9,520 SF school addition.

History: A preliminary site plan was approved in October of 1994 and final approval given in December of 1994 for Renaissance Public School Academy. This site has been expanded since that time including a recent Township staff approved parking expansion in 2008. In the past the owner has complied with zoning requirements from the Township. Currently, I have outside agency approvals from the Mt. Pleasant Fire Department and the Isabella County Transportation Commission. Comments from the Township Utilities has been received by approval not yet given. No approval from the Isabella County Road Commission has been received, nor has stormwater management approval from the Isabella County Drain office. Both the Drain office and Road Commission has been informed of the project. Although sidewalks are not shown on the site plan the applicant is aware that projects along Isabella Rd are required with site plan approval and are not eligible for relief.

Objective of board: The Planning Commission shall study the site plan and shall, within sixty days of its submittal to the Zoning Official, either approve or disapprove the proposed site plan. If the site plan is disapproved, the reasons for disapproval shall be stated.

Recommendation from Township Planner

The Commission may choose to hold off approval of site plan until all approvals are obtained and sidewalks shown on the site plan. I would recommend approval of SPR 2019-07 with the following conditions:

- ICRC, Township Utility, and Storm Water approval is obtained
- Sidewalks are shown on plan and installed along Isabella Rd.
- Lighting is down shielded. Lighting plan submitted for staff approval.

Peter Gallinat
Township Planner

Union Township Site Plan Review Application 2015 Revision

FILL OUT THE FOLLOWING

- I. This application is for (circle one) Preliminary Site Plan Review Final Site Plan Review
- II. Applicant Name KONWINSKI CONSTRUCTION INC.
- III. Applicant Address 1900 GOVER PKWY, MT. PLEASANT, MI 48858
- IV. Applicant Phone 989-773-2906 Owner Phone 989-773-9889
- V. Applicant is (circle) Contractor Architect/Engineer Developer Land Owner (skip V& VI)
Other
- VI. Land Owner Name RENAISSANCE PUBLIC SCHOOL ACADEMY
- VII. Land Owner Address 2797 S. ISABELLA RD, MT. PLEASANT, MI 48858
- VIII. Project/Business Name RENAISSANCE PUBLIC SCHOOL ACADEMY
- IX. Fill out check list that follows. You must check off that each item has been included in the drawing. If an item is not going to be included in the construction, note that in the comment area. For the first three items, check off if you have made the required submittals to other reviewing agencies.

SUBMITTALS TO OTHER AGENCIES	Off	
Storm water management plan approval prior to application. Reviewed by the County Engineer	X	Copy of Union Township Storm Water Management Plan available upon request. Submit (2) copies of plan and calculations directly to the Isabella County Engineer, contact Bruce Rohrer at (989) 772 0911, ext. 231. Any review fees are additional.
All curb cuts, acceleration/deceleration lanes, additional drives, and other matters pertaining to roads to be approved by MDOT or Isabella County Road Commission prior to application.	X	MDOT (M 20, BR 127 sites) at (989) 773 7756. Contact Isabella County Road Commission (all other county roads) at (989) 773 7131. Submit (3) copies.
Mt. Pleasant Fire Dept.	X	Sgt Randy Keeler (989) 779-5122, (2) copies
Isabella Co Transportation Commission (ICTC)	X	Rick (989) 773 2913, (2) copies
WELLHEAD PROTECTION REPORTING FORMS (Required for all Site Plans)		
Hazardous Substances Reporting Form Part I and II (Forms included in this packet)	X	Kim Smith (989) 772-4600 ext 224 ksmith@uniontownshipmi.com
PERMIT INFORMATION - DEQ Check List		
SITE PLAN REQUIREMENTS	I Of	Comments - (also indicate any features which will not be included in the development or are not applicable)
Name and addresses of Property Owner	X	
Name and Address of Applicant	X	
Provide Construction Type (per Mi Building Code) and if sprinkled, (assume Type IVb, un-sprinkled if not provided)	X	

RECEIVED

AUG - 6 2019

BY: JL

Union Township Site Plan Review Application 2015 Revision

The date, north arrow and scale. The scale shall be not less than 1"= 20' for property under three (3) acres and not more than 1"=40' for property greater than three acres.	X	
All lot and/or property lines are to be shown and dimensioned, including building setback lines	X	
The location and dimensions of all existing and proposed: fire hydrants (within 400 feet of building) - - - -	X	
drives, -----	X	
sidewalks, (required) -----	X	
curb openings, -----	X	
acceleration/deceleration lanes, -----	X	
signs, -----	X	
exterior lighting on buildings and parking lots, - -	X	
parking areas (Including handicapped parking spaces, barrier-free building access, unloading areas), -----	X	
recreation areas, -----	X	
common use areas, -----	X	
areas to be conveyed for public use and purpose. -	X	
Elevation of building front, side, and back. Include Sign size, height, and design. Canopy heights extending over driveways accommodate Public Transportation	X	
Source of utilities. Public water and sewer approval by Union Township Utility Coordinator prior to application.	X	Note: Union Township policy is to issue sewer and water permits after application for a building permit. Applicant is advised to contact the utility department for availability prior to site plan review. The township does not coordinate other utility matters. Applicant to assure himself that site is suitable for septic systems, contact Central Michigan District Health Department
All dumpsters shall be screened from public view with an opaque fence or wall no less than six feet in height. Show location. (Note most refuse contractors require concrete pad to place dumpsters upon)	X	
The location and right-of-way width of all abutting roads, streets, alleys and easements.	X	
A locational sketch drawn to scale giving the section number and the nearest crossroads.	X	

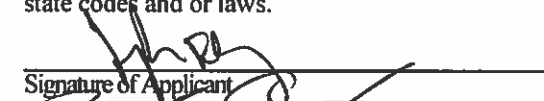
Union Township Site Plan Review Application 2015 Revision

The zoning of the subject property and the abutting properties.	X	
The location, height and type of fences and walls.	X	
The location and detailed description of landscaping.	X	
For multiple family and mobile home parks, contour intervals shall be shown (two foot intervals for average slopes ten percent and under and five foot intervals for slopes over ten percent). Topography, however, is encouraged to be shown on all site plans.	N/A	
The location of all existing and proposed structures on and within one hundred feet of the subject property's boundary.	X	
For apartments, provide a count of bedrooms per building and total count of bedrooms for the project.	X	

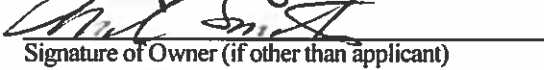
APPLICANT COMMENTS

Union Township Site Plan Review Application 2015 Revision

I submit the site plan and this application as a true representation of existing and proposed conditions. I agree to install all features as shown and to abide by conditions placed upon approval of this plan by the Union Township Planning Commission . 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. Any changes to the Site Plan now or in the future must be approved by the Union Township Planning Commission or Zoning Administrator. Approval of this plan shall not constitute the right to violate any provisions of the Union Township Zoning Ordinance 1991-5, or other applicable building or state codes and or laws.



Signature of Applicant



Signature of Owner (if other than applicant)

8-5-19

Date

8-5-19

Date

PLEASE PLACE OUR REVIEW ON THE AUGUST 20, 2019 (INSERT DATE) PLANNING COMMISSION MEETING. An owners representative WILL / WILL NOT attend. You will not receive a reminder of the scheduled meeting.

Union Township Site Plan Review Application 2015 Revision

<u>Township use</u>	Review Comments
File # _____	_____
Fee Paid initial _____	_____
Receipt # _____	_____
Date received _____	_____
Date review completed by Zoning Administrator _____	
Place on the _____ Planning Commission Agenda	
Planning Commission Decision _____	_____

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: RENAISSANCE PUBLIC SCHOOL ACADEMY

Name of business owner(s): SAME AS ABOVE

Street and mailing address: 2797 S. ISABELLA RD
MT. PLEASANT, MI 48858

Telephone: 989-773-9889

Fax: 989-772-4503

Email: breih@renaissancepsa.com

I affirm that the information submitted is accurate.

Owner(s) signature and date:

 8-5-19

Information compiled by:

SHANEE THAYER, OFFICE MANAGER

CENTRAL MICHIGAN SURVEYING AND DEVELOPMENT, CO.

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 recycled 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
- 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

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
	KEY: LUQ. = 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 OW = wooden or composition container TP = portable tank



PERMIT INFORMATION

www.michigan.gov/deqpermits

The Department of Environmental Quality (DEQ) has prepared a list of key questions to help identify what DEQ 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 the DEQ, 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: <http://www.michigan.gov/ehsguide>. Please call the Environmental Assistance Center at 800-862-9278 to talk with any of the DEQ programs noted below.

KEY QUESTIONS:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	PROGRAM, WEBPAGE AND CONTACTS
MISCELLANEOUS CONSTRUCTION			
<i>Air Quality Permit to Install:</i> 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)?	Y <input type="checkbox"/>	N <input type="checkbox"/>	Air Quality Division (AQD), <u>Permit Section</u>
<i>Asbestos Notification:</i> 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.	Y <input type="checkbox"/>	N <input type="checkbox"/>	AQD, <u>Asbestos Program</u>
<i>Land and Water Featured Programs (Water Resources Division) - USACE Consolidated Permits:</i> Please consult the <u>Land and Water Management Decision Tree</u> 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?).	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Water Resources Division (WRD), <u>Joint Permit Application</u>
<i>Soil Erosion and Sedimentation Control:</i> Does the project involve an earth change activity (including land balancing, demolition involving soil movement, and construction)?	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	<u>Soil Erosion and Construction Storm Water</u> , or Contact your <u>Local Agency</u>
<i>NPDES Storm Water Discharge from Construction Sites Notice of Coverage:</i> 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?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	NPDES <u>Storm Water Permits Program</u> , or appropriate <u>DEQ District Office</u>
<i>Public Swimming Pool Construction (Spas/Hot Tubs) Permits:</i> Will your business involve the construction or modification of a public swimming pool, spa or hot tub?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Public Swimming Pool Program</u> , or appropriate <u>DEQ District Office</u>
<i>Threatened and Endangered Species:</i> Does the project involve activities that would destroy a protected species of plant or animal or disturb a protected animal species?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Endangered Species Assessment, <u>Threatened and Endangered Species Program</u> , 517-373-1552
Does the project involve <i>construction</i> or alteration of any <i>sewage collection or treatment</i> facility?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Appropriate <u>District Office</u> , WRD, Part 41 <u>Construction Permit Program</u>
Does the project involve construction of a facility that landfills, transfers, or processes of any type of <i>solid non-hazardous waste</i> on-site, or places <i>industrial residuals/sludge</i> into or onto the ground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Office of Waste Management and Radiological Protection (OWMRP), <u>Solid Waste</u> , Appropriate <u>DEQ District Office</u>
Does the project involve the construction of an on-site treatment, storage, or disposal facility for <i>hazardous waste</i> ?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, Hazardous Waste Section, <u>Treatment, Storage and Disposal</u>
WATER SUPPLY (More information, see: http://www.michigan.gov/deqwater, select "drinking water")			
I am buying water from my community water supply (i.e. city of Detroit or Grand Rapids)	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	Contact your <u>Local Water Utility</u>
I have a private or other water supply well (Type III)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Contact your (District or County) <u>Local Health Department</u>
I have a Non-Community Water Supply (Type II)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Guide</u> , Contact your (District or County) <u>Local Health Department</u>
I am a community water supply (Type I)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Community Water Supply</u> , <u>DEQ District Office Community Water Supply Program</u>

WASTEWATER MANAGEMENT			
Storm Water Discharge to Wetlands: Will storm water be collected, stored, or treated in a wetland area from a public road, industrial, commercial, or multi-unit residential development?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
Great Lakes: Does the project involve construction, filling, or dredging below the Ordinary High Water Mark of one of the Great Lakes?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
Inland Lakes and Streams: Does the project involve any dredging, filling, placement of structures, or the operation of a marina within an inland waterbody (e.g. lake, river, stream, drain, creek, ditch, or canal), enlargement of a waterbody, or excavation of a pond within 500 feet of a waterbody?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
Storm Water Ponds and Discharges to Inland Lakes/Streams, or Great Lakes: Will storm water from any road or any other part of the development be discharged either directly or ultimately to an inland waterbody, or one of the Great Lakes; or will a storm water pond be constructed within 500 feet of an inland waterbody?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
Does the project involve placement of fill, earth moving, or placement of structures within the 100-year floodplain of a watercourse?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
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"/>	WRD, <u>Shoreland Management</u>
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"/>	WRD, <u>Shoreland Management</u>
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"/>	WRD, <u>Sand Dune Management</u>
Does the project involve construction of a dam, weir or other structure to impound flow?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Dam Safety Program</u>
CONSTRUCTION PERMITS (SECTOR SPECIFIC)			
Does the project involve the construction or alteration of a water supply system or sewage disposal system for a manufactured housing project?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Office of Drinking Water & Municipal Assistance (ODWMA)
Does the project involve a subdivision or site condominium project utilizing individual on-site subsurface disposal systems or individual wells?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA
Does the project involve the construction or modification of a campground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Campgrounds program</u>
Does the project involve the construction or modification of a public swimming pool?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Swimming pools program</u>
OPERATIONAL PERMITS			
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?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	AQD, <u>Permit Section</u>
NPDES: Does the project involve the discharge of any type of wastewater to a storm sewer, drain, lake, stream, or other surface water?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, Appropriate <u>DEQ District Office</u> , or <u>National Pollutant Discharge Elimination (NPDES) Permit Program</u>
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?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Permits Section</u> , or appropriate <u>DEQ District Office</u>
Does the project involve the discharge of wastewaters into or onto the ground (e.g. subsurface disposal or irrigation)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Groundwater Permits Program</u>
Does the project involve the drilling or deepening of wells for waste disposal?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Office of Oil, Gas and Minerals (OOGM)</u>
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?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>OWMRP</u> or Appropriate <u>DEQ District Office</u>

Does the project involve the on-site treatment, storage, or disposal of hazardous waste?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Hazardous and Liquid Waste</u>
Does the project require a site identification number (EPA number) for regulated waste activities (used oil, liquid waste, hazardous waste, universal waste, PCBs)? (<u>Web Site</u>)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, Appropriate <u>DEQ District Office</u>
Does the project involve the receipt, possession, manufacture, use, storage, transport, transfer, release, or disposal of radioactive material in any form?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Radioactive Material and Standards Unit</u>
Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP <u>Radioactive Material and Standards Unit</u>
Do you desire to develop a withdrawal of over 2,000,000 gallons of water per day from any source other than the Great Lakes and their connecting waterways? Or, do you desire to develop a withdrawal of over 5,000,000 gallons of water per day from the Great Lakes or their connecting waterways?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, DWEHS, <u>Source Water Protection Unit</u>
CHEMICAL ADDITION PROJECTS			
Are you using chemicals or materials in, or in contact with, drinking water at any point in the water works system?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, Appropriate <u>DEQ District Office, Public Water Supply Program</u>
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)? (5.	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Aquatic Nuisance Control and Remedial Action Unit</u>
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)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Surface Water Assessment Section</u>
OPERATIONAL PERMITS (SECTOR SPECIFIC)			
Does the project involve the transport of some other facility's non-hazardous liquid waste?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Transporter Program</u>
Does the project involve the transport hazardous waste?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Transporter Program</u>
Does your facility have an electric generating unit that sells electricity to the grid and burns a fossil fuel?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	AQD, <u>Acid Rain Permit Program</u>
Is the project a dry cleaning establishment utilizing perchloroethylene or a flammable solvent in the cleaning process?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DEQ, AQD, <u>Dry Cleaning Program</u>
Does your laboratory test potable water as required for compliance and monitoring purposes of the Safe Drinking Water Act?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DEQ, <u>Laboratory Services Certifications</u>
Does the project involve the generation of medical waste or a facility that treats medical waste prior to its disposal?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Medical Waste Regulatory Program</u>
Does the project involve transport of septic tank, cesspool, or dry well contents or the discharge of septage or sewage sludge into or onto the ground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Septage Program</u>
Do you store, haul, shred or process scrap tires?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Scrap Tire Program</u>
Does the project involve the operation of a public swimming pool?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Public Swimming Pools Program</u>
Does the project involve the operation of a campground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Campgrounds</u>
Do you engage in the business of hauling bulk water for drinking or household purposes (except for your own household use)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Water Hauler Information</u>
PERSONAL LICENSES/CERTIFICATIONS			
Are you designated by your facility to be the Certified Operator to fulfill the requirements of a wastewater discharge permit (NPDES including Storm	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Operator Training, Storm Water Program</u>

Water or Groundwater?		
Are you a drinking water operator in charge of a water treatment or water distribution system, back-up operator, or shift operator?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	WRD, <u>Operator Training</u>
Are you a water-well drilling contractor, pump installer, dewatering well contractor or dewatering well pump installer?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	WRD, <u>Well Construction Unit</u>
OIL, GAS AND MINERALS		
Do you want to operate a central production facility (applies to oil and gas production facilities where products of diverse ownership are commingled)?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, <u>Petroleum Geology and Production Unit</u>
Does the project involve the removal of sand from a sand dune area within two (2) miles of a Great Lakes shoreline?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, Minerals and Mapping Unit, <u>Sand Dune Mining Program</u>
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"/>	OOGM, <u>Minerals and Mapping</u>
Does the project involve the surface or open-pit mining of metallic mineral deposits?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
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"/>	OOGM, <u>Minerals and Mapping</u>
Does the project involve mining coal?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
Do you want to change the status of an oil or gas well (i.e. plug the well)?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, <u>Permits and Bonding Unit</u>
Does the project involve drilling of oil, gas, brine disposal, secondary recovery, or hydrocarbon storage wells?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, <u>Permits and Bonding Unit</u>
Does the project involve plugging or deepening of an oil or gas well, or conveying rights in the well as an owner to another person?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, <u>Permits and Bonding Unit</u>
Does the project involve changing the status or plugging of a mineral well?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
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"/>	OOGM, <u>Minerals and Mapping</u>
Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OWMRP, <u>Radioactive Protection Programs</u>
STORAGE TANKS (CONSTRUCTION AND OPERATION)		
Does the project involve the installation of an aboveground storage tank for a flammable or combustible liquid (under 200 degrees Fahrenheit)?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	Michigan Department of Licensing and Regulatory Affairs (DLARA) - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation of a compressed natural gas dispensing station with storage?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation of a liquefied petroleum gas container filling location or storage location that has a tank with a capacity of more than 2,000 gallons or has two (2) or more tanks with an aggregate capacity of more than 4,000 gallons?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation, removal, or upgrade of an underground storage tank containing a petroleum product or a hazardous substance?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation of a hydrogen system?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>

RENAISSANCE PUBLIC SCHOOL ACADEMY



LOCATION SKETCH
NOT TO SCALE

B-4 ZONE	
MINIMUM LOT FRONTAGE	80 FT
LOT WIDTH (FEET)	80 FT
MINIMUM LOT AREA	12,000 SQFT
MAXIMUM BUILDING HEIGHT	35 FT
MINIMUM FRONT YARD SETBACK	50 FT (A)
MINIMUM SIDE YARD SETBACK	20 FT (B)
MINIMUM REAR YARD SETBACK	25 FT (B)
MAXIMUM LOT COVERAGE	30%
(BY ALL BUILDINGS)	

- A. OFF-STREET PARKING SHALL BE PERMITTED TO OCCUPY A PORTION OF THE REQUIRED FRONT YARD, PROVIDED THAT THERE SHALL BE MAINTAINED A MINIMUM UNOBSTRUCTED AND LANDSCAPED SETBACK OF TEN (10) FEET BETWEEN THE NEAREST POINT OF THE OFF STREET PARKING AREAS, EXCLUSIVE OF ACCESS DRIVEWAYS AND THE NEAREST RIGHT-OF-WAY LINE AS INDICATED ON THE MAJOR THOROUGHFARE PLAN.
- B. A LOT IN THE B-4 AND B-5 DISTRICT WILL PROVIDED A SIDE AND REAR YARD OF AT LEAST FORTY (40) FEET WHEN ABUTTING RESIDENTIAL DISTRICT

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

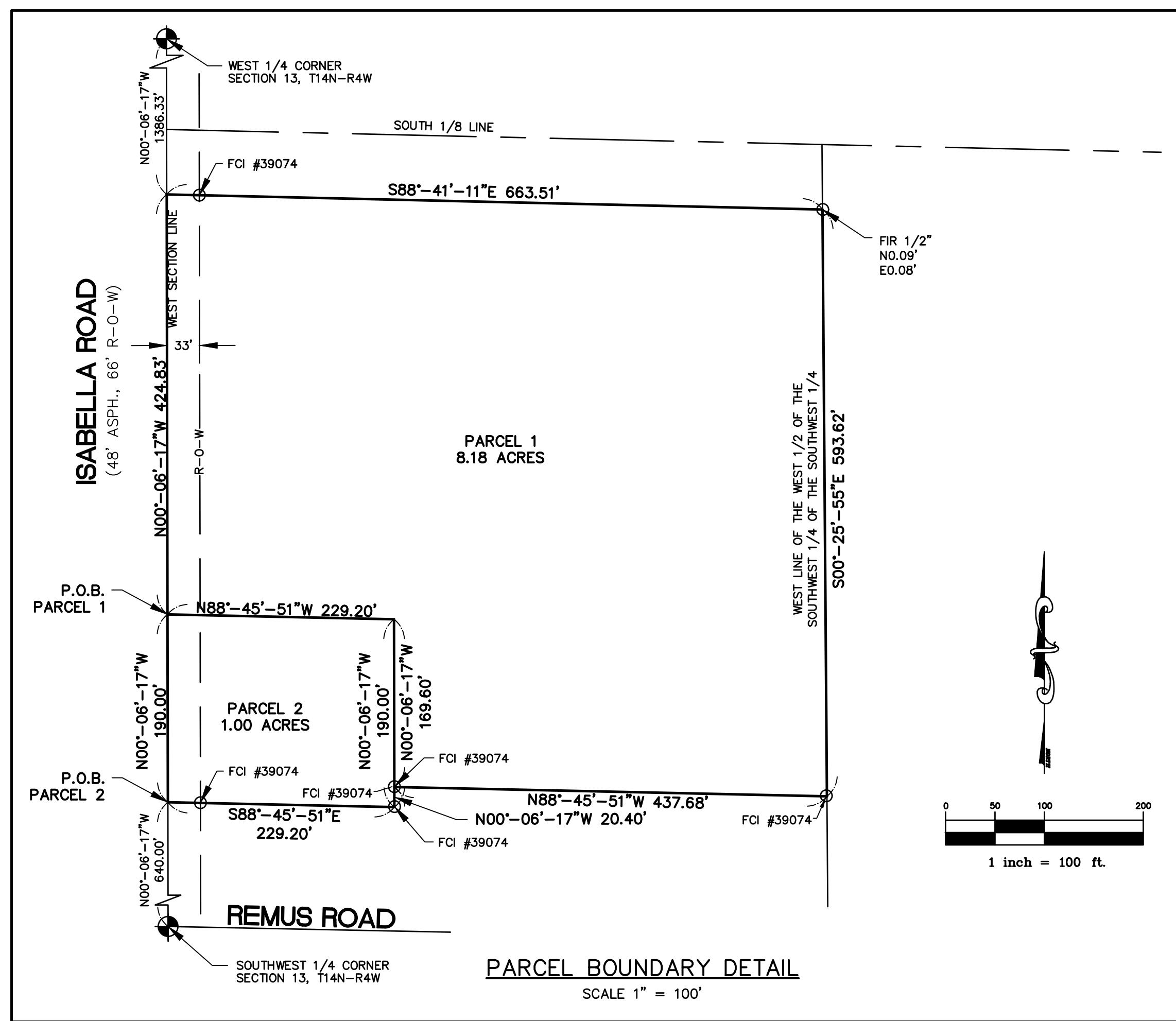
○ BOLLARD	⊕ GAS RISER	⊙ SOIL BORING
⊕ CATCH BASIN (CURB INLET)	⊕ GUY ANCHOR	⊙ STORM SEWER MANHOLE
⊕ CATCH BASIN (ROUND)	⊕ HYDRANT - EXISTING	⊕ TELEPHONE RISER
⊕ CATCH BASIN (SQUARE)	⊕ HYDRANT - PROPOSED	⊕ TREE - CONIFEROUS
⊕ CLEAN OUT	⊕ LIGHT POLE	⊕ TREE - DECIDUOUS
⊕ DRAINAGE FLOW	⊕ MAILBOX	⊕ UTILITY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

LINETYPES

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

HATCH PATTERNS

[Hatched Pattern]	ASPHALT - EXISTING
[Hatched Pattern]	ASPHALT - PROPOSED
[Hatched Pattern]	CONCRETE
[Hatched Pattern]	GRAVEL
[Hatched Pattern]	LANDSCAPING
[Hatched Pattern]	RIP-RAP



PARCEL BOUNDARY DETAIL
SCALE 1" = 100'

DESCRIPTION PROVIDED:

PARCEL 1:
A PARCEL OF LAND BEING PART OF THE SW 1/4 OF SECTION 13, T14N-R4W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN, BEGINNING AT A POINT ON THE WEST SECTION LINE WHICH IS N00°-06'-17"W 830.00 FEET FROM THE SOUTHWEST CORNER OF SECTION 13, THENCE N00°-06'-17"W ALONG THE WEST SECTION LINE 424.83 FEET; THENCE S88°-41'-11"E, 663.51 FEET; THENCE S00°-25'-55"E, 593.62 FEET; THENCE N88°-45'-51"W 437.68 FEET; THENCE N00°-06'-17"W, PARALLEL WITH THE WEST SECTION LINE, 169.59 FEET; THENCE N88°-45'-51"W, 229.20 FEET TO THE POINT OF BEGINNING.

PARCEL 2:
A PARCEL OF LAND COMMENCING 640 FEET NORTH OF THE SW CORNER OF SECTION 13, T14N-R4W, THENCE EAST 229.2 FEET (SOMETIMES RECORDED AS 229.02), NORTH 190 FEET, WEST 229.2 FEET (SOMETIMES RECORDED AS 229.02), SOUTH 190 FEET TO THE POINT OF BEGINNING, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN.

BENCHMARK NOTE:
BM #1. NORTHEAST CORNER OF CONCRETE SLAB AT NORTHEAST CORNER OF MAIN BUILDING.
ELEV. = 770.87
BM #2. NORTHEAST BOLT TOP FLANGE FIRE HYDRANT ±65 FEET NORTH AND ±11 FEET WEST OF THE NORTHWEST CORNER OF THE NEW GYM.
ELEV. 771.55

SHEET INDEX

SHEET 1	COVER SHEET
SHEET 2	EXISTING TOPOGRAPHY
SHEET 3	SITE PLAN
SHEET 4	GRADING PLAN OPTION 1
SHEET 5	GRADING PLAN OPTION 2
SHEET 6	DETAIL SHEET 1
SHEET 7	DETAIL SHEET 2

OWNER: RENAISSANCE PUBLIC SCHOOL ACADEMY
CONTRACTOR: KONWINSKI CONSTRUCTION
CONTACT: JOE FLEMING
1900 GROVER PARKWAY
MT. PLEASANT, MI 48858
PHONE: (989) 773-2906

CONSULTANT: CENTRAL MICHIGAN SURVEYING & DEVELOPMENT CO., INC.
8114 EAST PICKARD ST.
MT. PLEASANT, MICHIGAN 48858
CONTACT PERSON: TIMOTHY E BEBEE
PHONE: (989) 775-0756
FAX: (989) 775-5012

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

CONSUMERS ENERGY
1325 WRIGHT AVENUE
ALMA, MI 48801
(989) 463-0392
MARY JO MCKERSE
mckersiem@teenergy.com

FRONTIER
345 PINE STREET
KENTWOOD, MI 49512
(616) 954-4623
MARY JO MCKERSE
mckersiem@teenergy.com

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

MT. PLEASANT FIRE DEPARTMENT
804 EAST HIGH STREET
MT. PLEASANT, MI 48858
(989) 779-5100 EXT 5122
SGT. RANDY KEELER
rkeeler@mt-pleasant.org

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

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

DRAIN COMMISSIONERS OFFICE
ISABELLA COUNTY BUILDING
200 NORTH MAIN STREET ROOM 140
MT. PLEASANT, MI 48857
(989) 772-0911
RICK JAKUBIEC
drain@isabellacounty.org

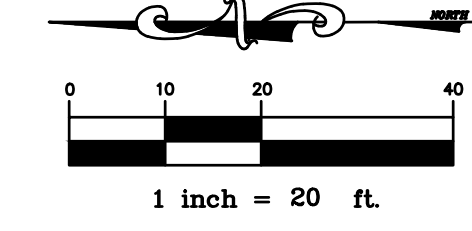
ISABELLA COUNTY ROAD COMMISSION
2261 EAST REMUS ROAD
MT. PLEASANT, MI 48858
(989) 773-7131 EXT 115
PATRICK GAFFNEY
Pgauffney@isabellaroads.com

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
RENAISSANCE PUBLIC SCHOOL ACADEMY
PART OF THE SOUTHWEST 1/4 OF SECTION 13, T14N-R4W
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:	REVISIONS PER CLIENT 5-16-19	REVISIONS PER MT. PLEASANT FIRE 5-13-19	REVISIONS PER MT. PLEASANT FIRE 7-12-19
SUBMITTALS:	SUBMITTAL TO CLIENT 5-6-19	SUBMITTAL TO MT. PLEASANT FIRE 6-6-19	SUBMITTAL TO UNION TWP PLANNING 7-2-19
JOB NUMBER:	1901-005	DESIGNED BY:	N/A
DRAWN BY:	WRE	CHECKED BY:	TELB
SCALE:	N/A	SHEET NUMBER:	1 OF 7



B4 ZONING
 CULTURAL & RECREATION
 COMMUNITY OF ISABELLA COUNTY
 555 N. MAIN ST. MT. PLEASANT MI, 48858
 14-013-30-003-00

B4 ZONING
 RENAISSANCE PUBLIC SCHOOL ACADEMY
 2797 S. ISABELLA ROAD MT. PLEASANT MI, 48858
 14-013-30-003-04

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



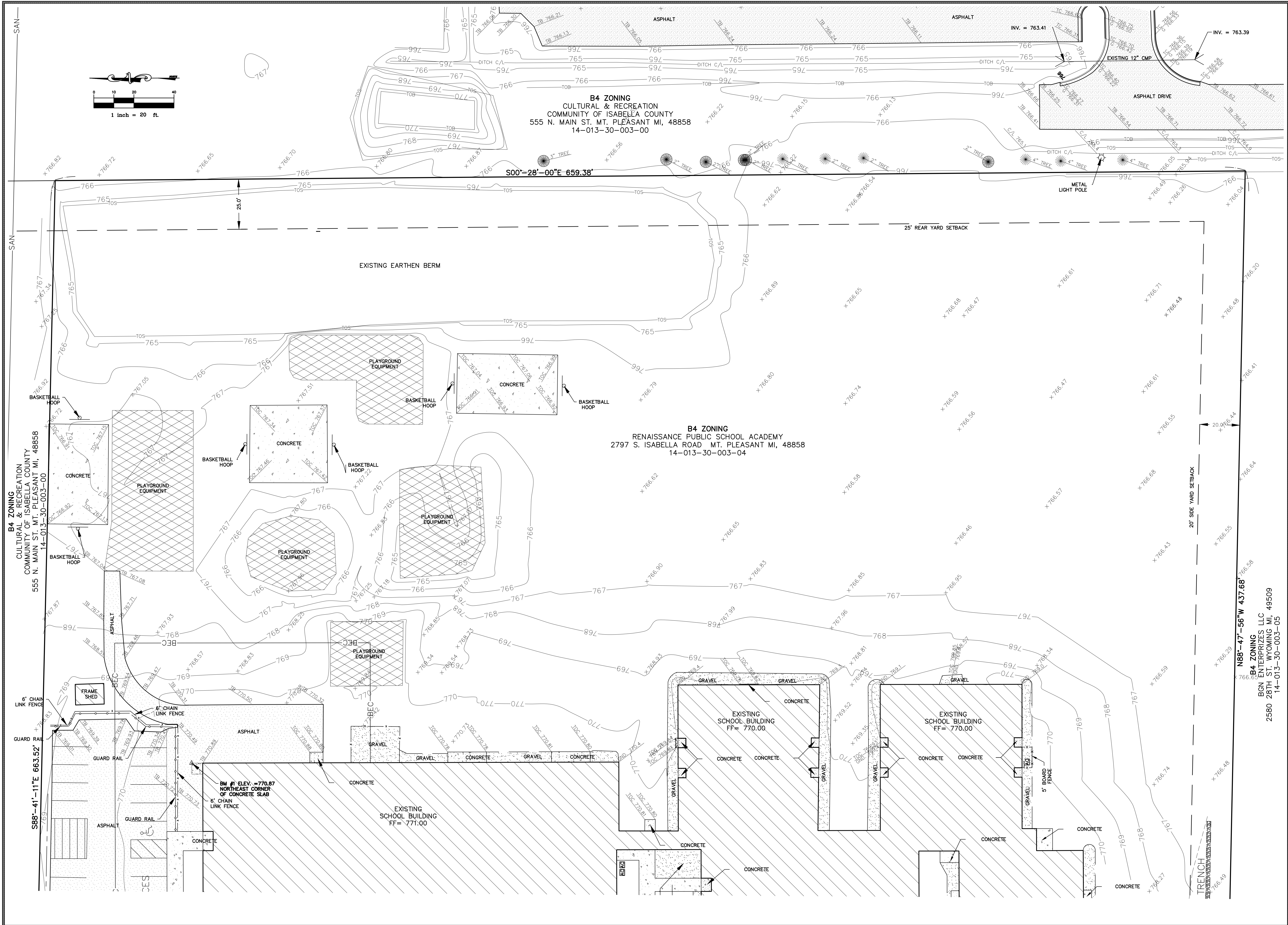
EXISTING TOPOGRAPHY
 RENAISSANCE PUBLIC SCHOOL ACADEMY
 PART OF THE SOUTHWEST 1/4
 SECTION 13, T14N-R4W
 UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:
 REVISIONS PER CLIENT 5-16-19
 REVISIONS PER MT. PLEASANT FIRE 5-13-19
 REVISIONS PER MT. PLEASANT FIRE 7-12-19

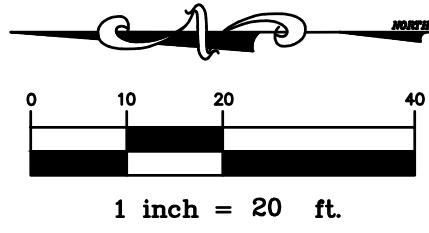
SUBMITTALS:
 SUBMITTAL TO CLIENT 5-6-19
 SUBMITTAL TO MT. PLEASANT FIRE 6-6-19
 SUBMITTAL TO UNION TWP PLANNING 7-2-19
 SUBMITTAL TO UNION TWP PLANNING 8-6-19

JOB NUMBER:
 1901-005
 DRAWN BY:
 WRE
 DESIGNED BY:
 N/A
 CHECKED BY:
 TELB

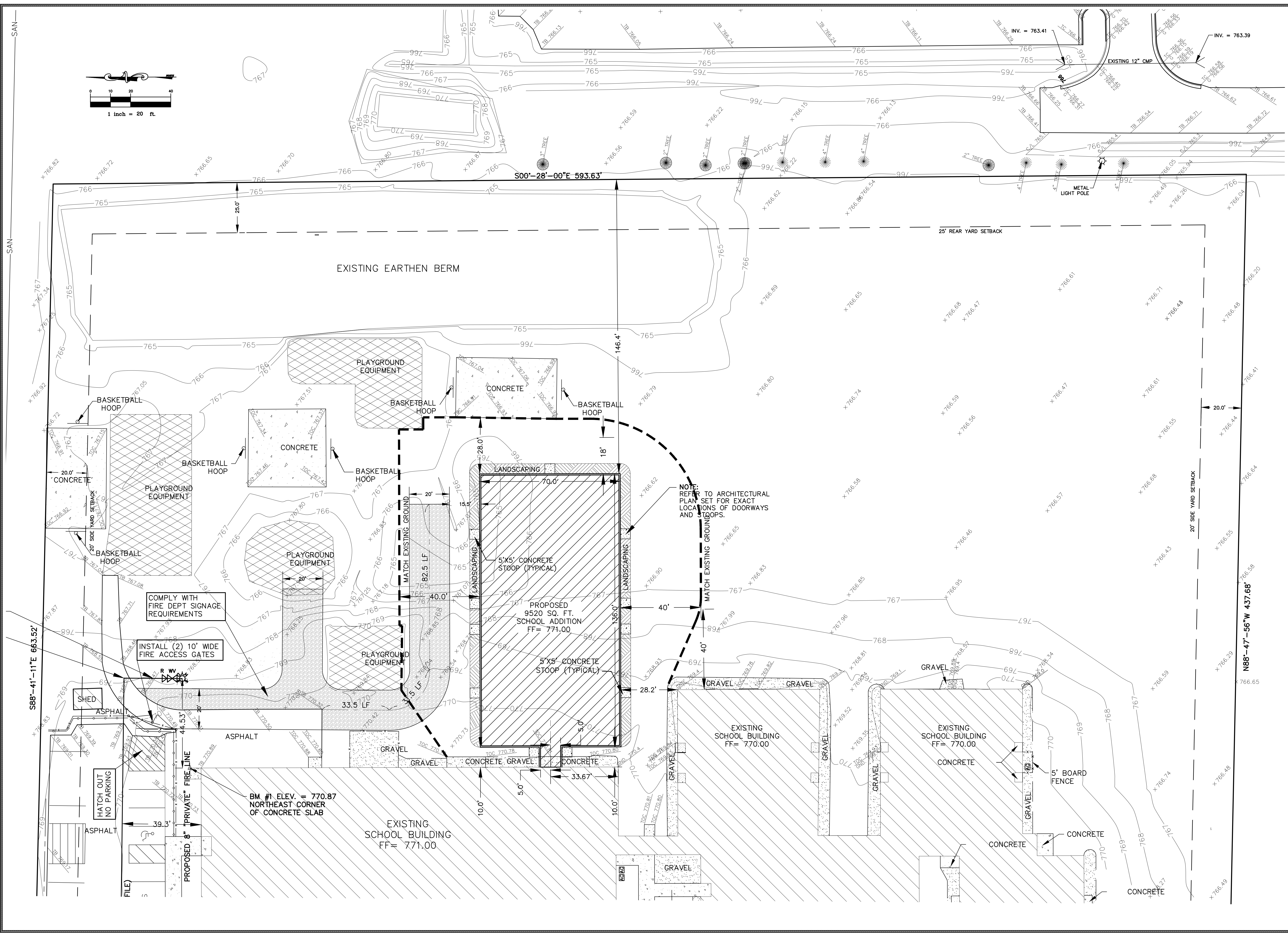
SCALE
 1" = 20'
 SHEET NUMBER
 2 OF 7



B4 ZONING
 BGN ENTERPRIZES LLC
 2580 S. WYOMING MI, 49509
 14-013-30-003-05



SITE PLAN
 RENAISSANCE PUBLIC SCHOOL ACADEMY
 PART OF THE SOUTHWEST 1/4
 SECTION 13, T14N-R4W
 UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN



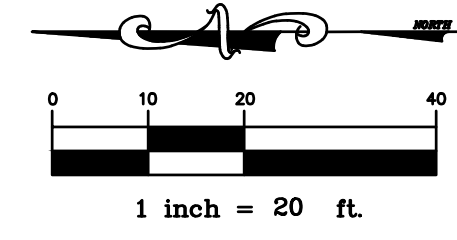
REVISIONS:

REVISIONS PER CLIENT 5-16-19
REVISIONS PER MT. PLEASANT FIRE 5-13-19
REVISIONS PER MT. PLEASANT FIRE 7-12-19

SUBMITTALS:

SUBMITTAL TO CLIENT 5-6-19
SUBMITTAL TO MT. PLEASANT FIRE 6-6-19
SUBMITTAL TO UNION TWP PLANNING 7-2-19
SUBMITTAL TO UNION TWP PLANNING 8-6-19

SCALE	1" = 20'
JOB NUMBER:	1901-005
DRAWN BY:	WRE
DESIGNED BY:	N/A
CHECKED BY:	TELB
SHEET NUMBER	3 OF 7



GRADING/STORM SEWER PLAN OPTION 1
RENAISSANCE PUBLIC SCHOOL ACADEMY
 PART OF THE SOUTHWEST 1/4
 SECTION 13, T14N-R14W
 UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

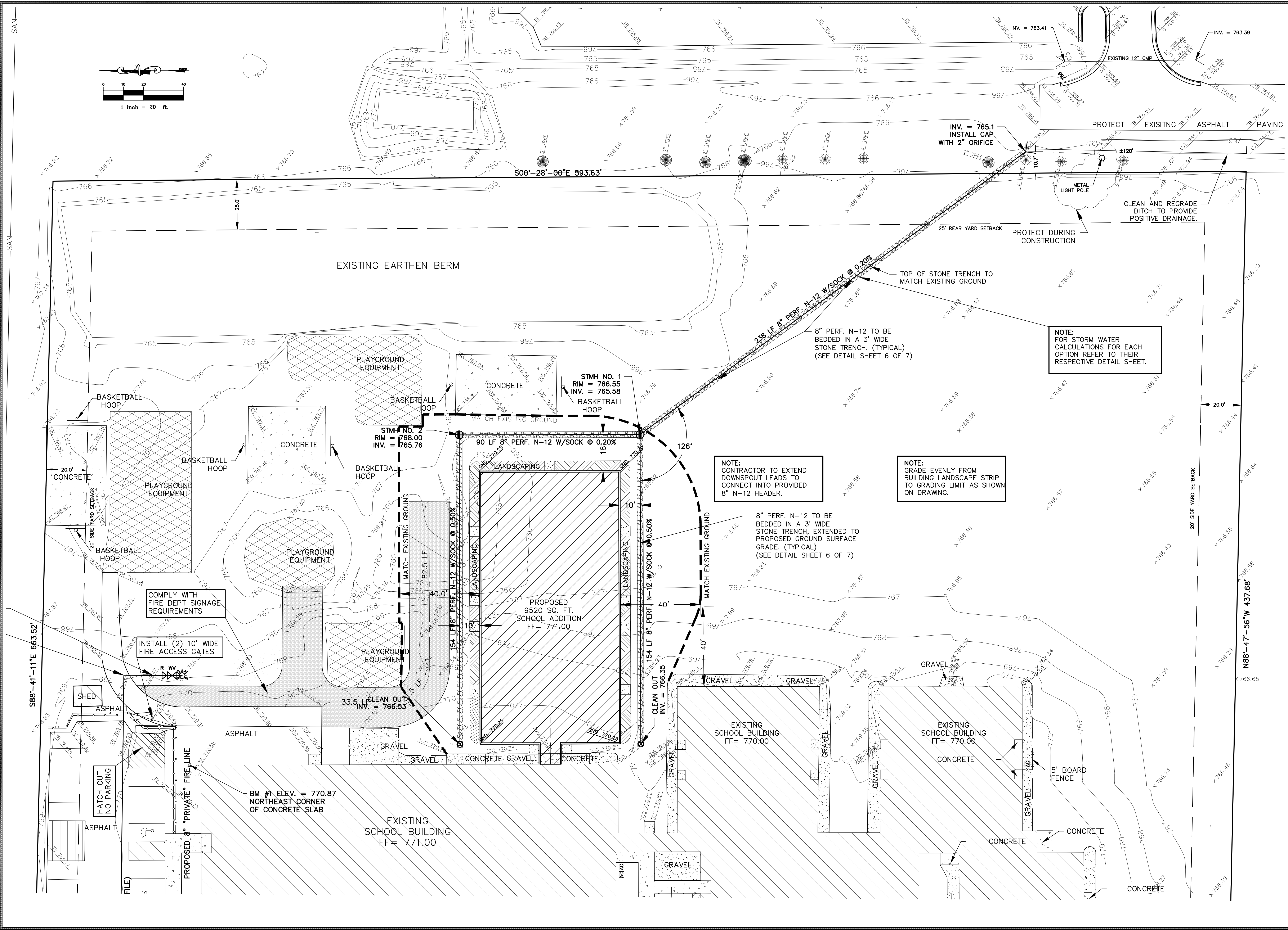
REVISIONS:
 REVISIONS PER CLIENT 5-16-19
 REVISIONS PER MT. PLEASANT FIRE 5-13-19
 REVISIONS PER MT. PLEASANT FIRE 7-12-19

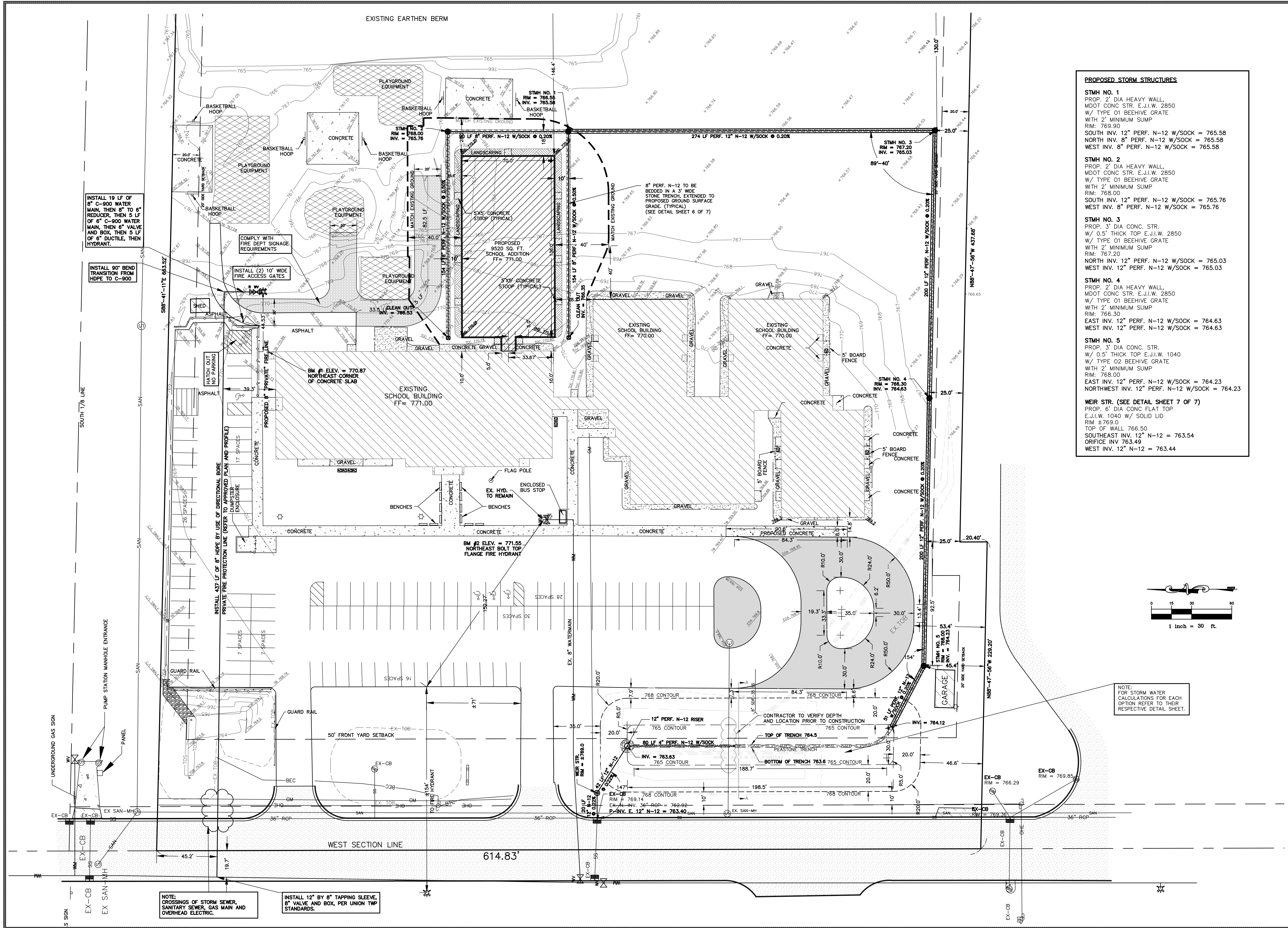
SUBMITTALS:
 SUBMITTAL TO CLIENT 5-6-19
 SUBMITTAL TO MT. PLEASANT FIRE 6-6-19
 SUBMITTAL TO UNION TWP PLANNING 7-2-19
 SUBMITTAL TO UNION TWP PLANNING 8-6-19

JOB NUMBER:
 1901-005
 DRAWN BY:
 WRE
 DESIGNED BY:
 N/A
 CHECKED BY:
 TELB

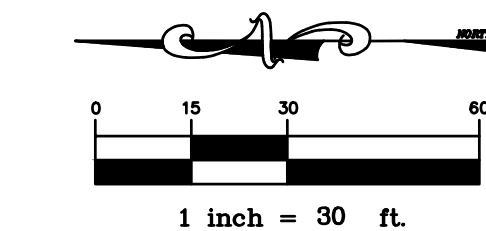
SCALE
 1" = 20'

SHEET NUMBER
 4 OF 7





- PROPOSED STORM STRUCTURES**
- STMH NO. 1**
 PROP. 2' DIA HEAVY WALL,
 MDOT CONC STR. E.J.I.W. 2850
 W/ TYPE 01 BEEHIVE GRATE
 WITH 2' MINIMUM SUMP
 RIM: 769.90
 SOUTH INV. 12" PERF. N-12 W/SOCK = 765.58
 NORTH INV. 8" PERF. N-12 W/SOCK = 765.58
 WEST INV. 8" PERF. N-12 W/SOCK = 765.58
- STMH NO. 2**
 PROP. 2' DIA HEAVY WALL,
 MDOT CONC STR. E.J.I.W. 2850
 W/ TYPE 01 BEEHIVE GRATE
 WITH 2' MINIMUM SUMP
 RIM: 768.00
 SOUTH INV. 12" PERF. N-12 W/SOCK = 765.76
 WEST INV. 8" PERF. N-12 W/SOCK = 765.76
- STMH NO. 3**
 PROP. 3' DIA CONC. STR.
 W/ 0.5" THICK TOP E.J.I.W. 2850
 W/ TYPE 01 BEEHIVE GRATE
 WITH 2' MINIMUM SUMP
 RIM: 767.20
 NORTH INV. 12" PERF. N-12 W/SOCK = 765.03
 WEST INV. 12" PERF. N-12 W/SOCK = 765.03
- STMH NO. 4**
 PROP. 2' DIA HEAVY WALL,
 MDOT CONC STR. E.J.I.W. 2850
 W/ TYPE 01 BEEHIVE GRATE
 WITH 2' MINIMUM SUMP
 RIM: 766.30
 EAST INV. 12" PERF. N-12 W/SOCK = 764.63
 WEST INV. 12" PERF. N-12 W/SOCK = 764.63
- STMH NO. 5**
 PROP. 3' DIA CONC. STR.
 W/ 0.5" THICK TOP E.J.I.W. 1040
 W/ TYPE 02 BEEHIVE GRATE
 WITH 2' MINIMUM SUMP
 RIM: 768.00
 EAST INV. 12" PERF. N-12 W/SOCK = 764.23
 NORTHWEST INV. 12" PERF. N-12 W/SOCK = 764.23
- WEIR STR. (SEE DETAIL SHEET 7 OF 7)**
 PROP. 6' DIA CONC FLAT TOP
 E.J.I.W. 1040 W/ SOLID LID
 RIM ±769.0
 TOP OF WALL 766.50
 SOUTHEAST INV. 12" N-12 = 763.54
 ORIFICE INV 763.49
 WEST INV. 12" N-12 = 763.44



NOTE:
 FOR STORM WATER
 CALCULATIONS FOR EACH
 OPTION REFER TO THEIR
 RESPECTIVE DETAIL SHEET.

INSTALL 19 LF OF
 8" C-900 WATER
 MAIN, THEN 8" TO 6"
 REDUCER, THEN 5 LF
 OF 6" C-900 WATER
 MAIN, THEN 6" VALVE
 AND BOX, THEN 5 LF
 OF 6" DUCTILE, THEN
 HYDRANT.

INSTALL 90° BEND
 TRANSITION FROM
 HDPE TO C-900

COMPLY WITH
 FIRE DEPT SIGNAGE
 REQUIREMENTS

INSTALL (2) 10' WIDE
 FIRE ACCESS GATES

INSTALL 437 LF OF 8" HDPE BY USE OF DIRECTIONAL BORE
 PRIVATE FIRE PROTECTION LINE (REFER TO APPROVED PLAN AND PROFILE)

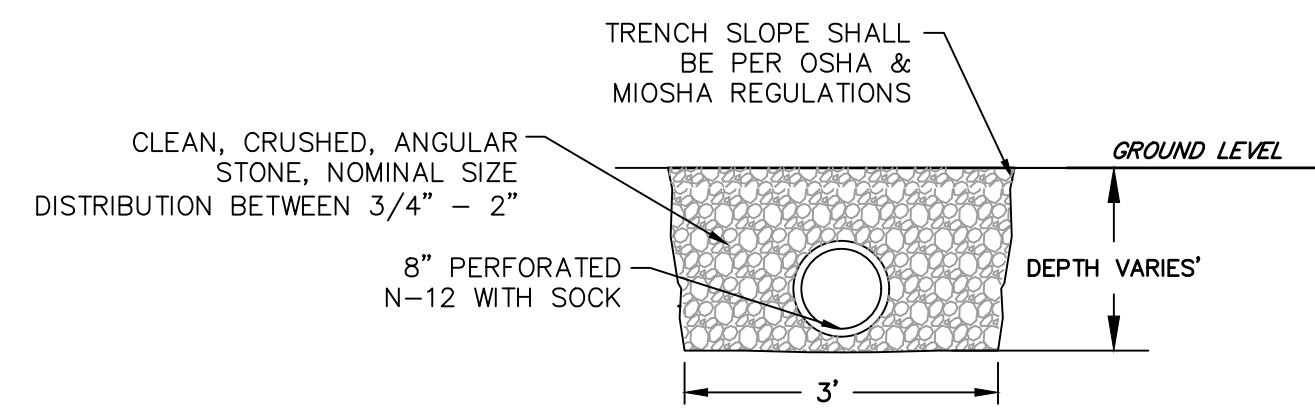
NOTE:
 CROSSINGS OF STORM SEWER,
 SANITARY SEWER, GAS MAIN AND
 OVERHEAD ELECTRIC.

INSTALL 12" BY 8" TAPPING SLEEVE,
 8" VALVE AND BOX, PER UNION TWP
 STANDARDS.

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

GRADING / STORM SEWER PLAN OPTION 2
 RENAISSANCE PUBLIC SCHOOL ACADEMY
 PART OF THE SOUTHWEST 1/4
 SECTION 13, T14N-R4W
 UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

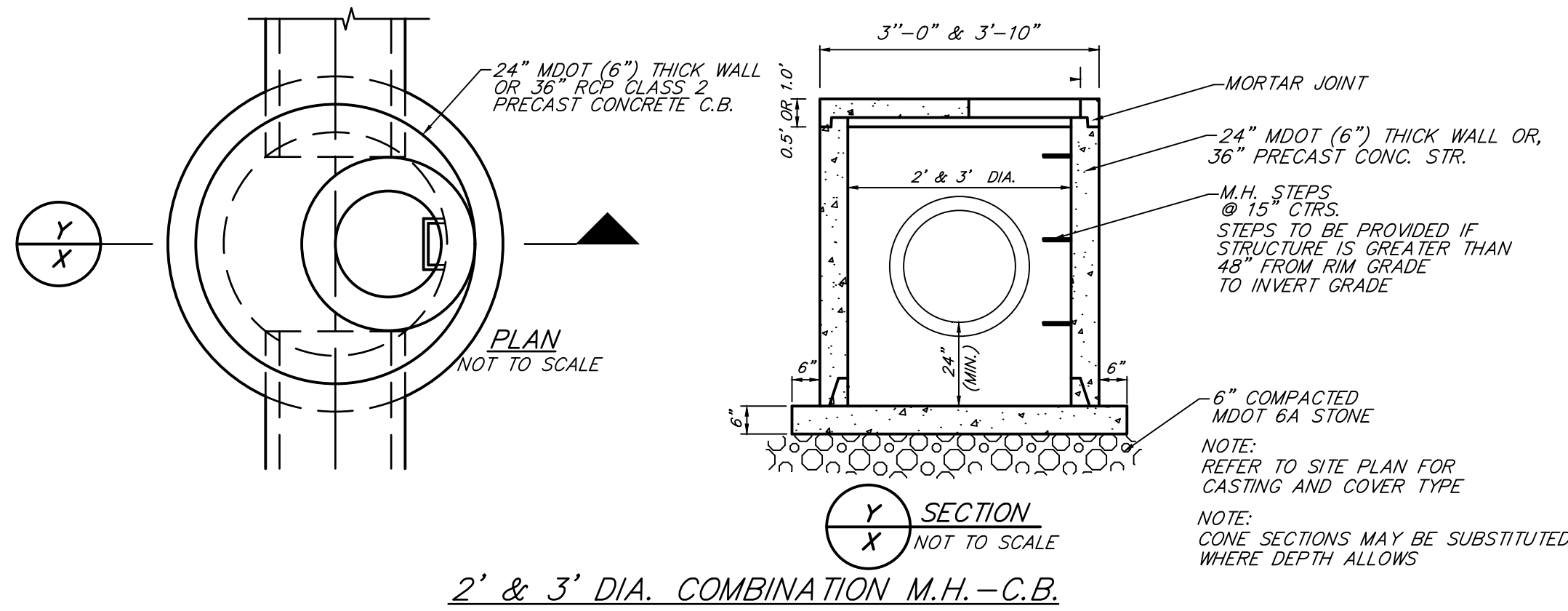
REVISIONS:	REVISIONS PER CLIENT 5-16-19
	REVISIONS PER MT. PLEASANT FIRE 5-13-19
	REVISIONS PER MT. PLEASANT FIRE 7-12-19
SUBMITTALS:	SUBMITTAL TO CLIENT 5-6-19
	SUBMITTAL TO MT. PLEASANT FIRE 6-6-19
	SUBMITTAL TO UNION TWP PLANNING 7-2-19
	SUBMITTAL TO UNION TWP PLANNING 8-6-19
JOB NUMBER:	1901-005
DRAWN BY:	WRE
DESIGNED BY:	N/A
CHECKED BY:	TELB
SCALE:	1" = 30'
SHEET NUMBER:	5 OF 7



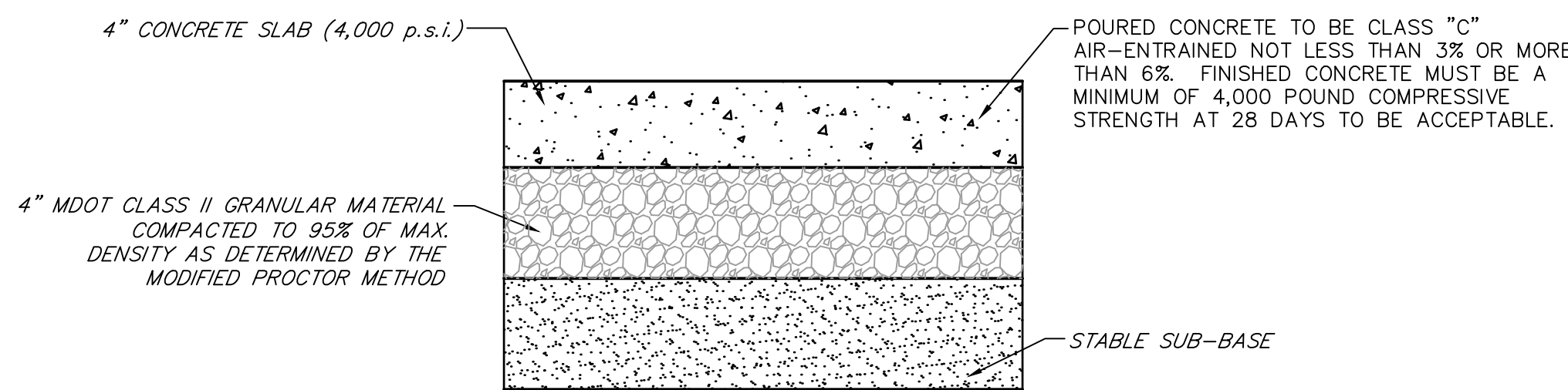
3' WIDE TRENCH DETAIL
NOT TO SCALE

TRENCH WIDTH CHART

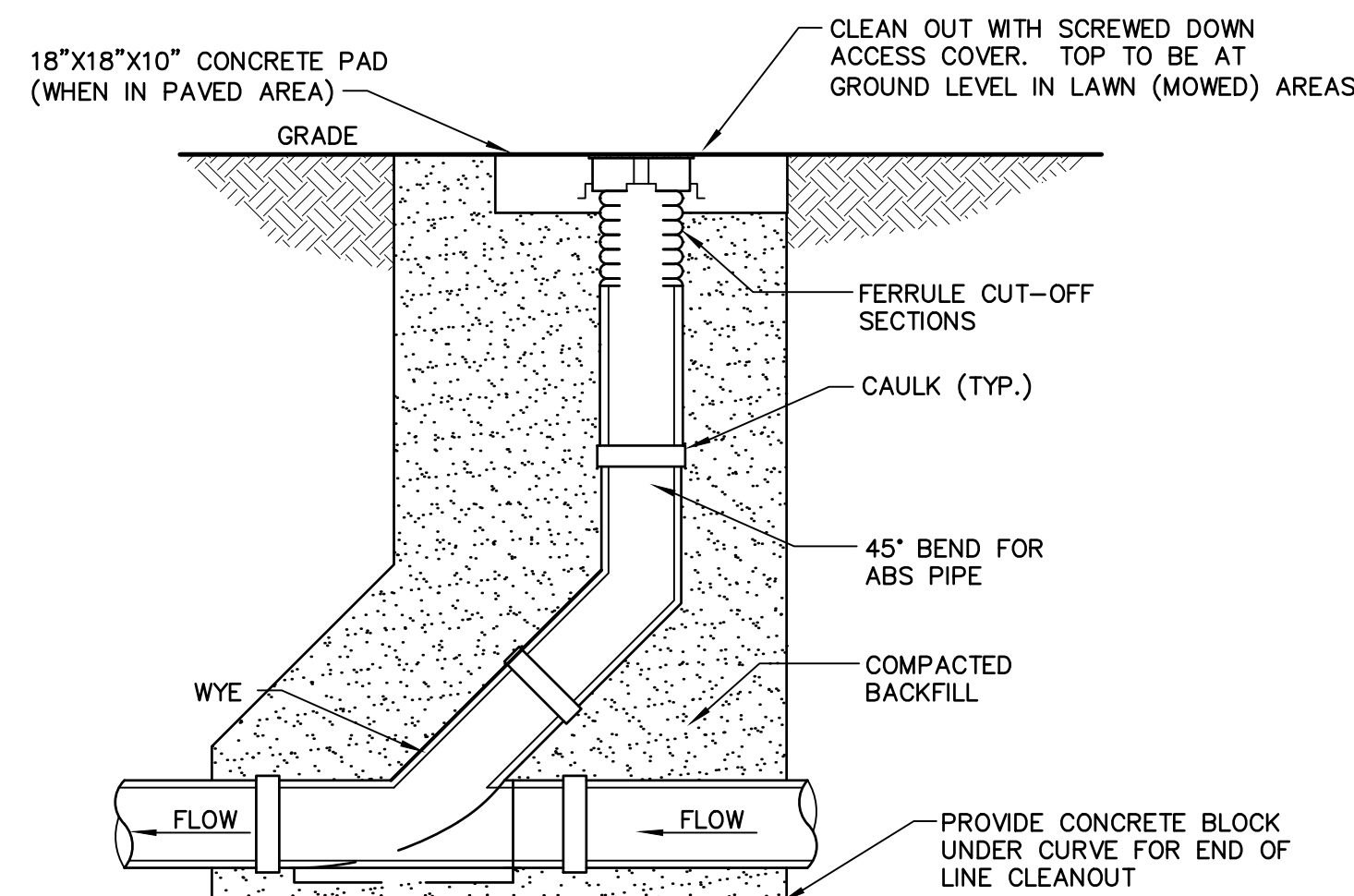
PIPE SIZE	MINIMUM	MAXIMUM
8" & 10"	24"	30"
12" & 15"	30"	36"
18"	36"	40"
21"	42"	42"
24"	42"	46"
27"	45"	49"
30"	49"	53"
36"	56"	60"
LARGER THAN 36"	I.D. +20"	I.D. +24"



2' & 3' DIA. COMBINATION M.H.-C.B.



CONCRETE CROSS-SECTION
NOT TO SCALE



CLEAN OUT DETAIL
NOT TO SCALE

STORM WATER CALCULATIONS:
 Allowable Discharge (0.10 cfs/acre) - 0.33 acres * 0.10 cfs/acre = 0.033 cfs
 Total (NEW) Impervious Area = 9,633 sq. ft. 0.22 acres
 Total (NEW) Semi-Impervious Area = 4,863 sq. ft. 0.11 acres
 Total (NEW) Pervious Area = -14,496 sq. ft. 0.33 acres
 Design Ponding Elevation = 765.50
 Invert of restrictor elevation = 765.10

Restrictor Calculation
 Formula: $a = Qa / 0.62[64.4(h)]^{1/2}$
 $a =$ Area of orifice in sq. ft.
 $Qa =$ Allowable outflow
 $h = (2/3)*(766.50-765.10=1.40) = 0.93$
 $a = 0.033 \text{ cfs} / 0.62 [(64.4)*(0.93)]^{1/2}$
 $a = 0.00688 \text{ sft}$
 $a = (" * D) / 4 = D = 0.0936 \text{ ft} = 1.12 \text{ inches (USE 2" ORIFICE)}$

2" Restrictor Calculation
 Formula: $a = Qa / 0.62[64.4(h)]^{1/2}$
 $a =$ Area of orifice in sq. ft. = $0.0218 = 2" \text{ ORIFICE}$
 $Qa =$ Allowable outflow to be calculated
 $h = (2/3)*(766.50-765.10=1.40) = 0.93'$
 $Qa = (0.0218) * 0.62 [(64.4)*(0.93)]^{1/2}$
 $Qa = 0.105 \text{ cfs FOR 2" ORIFICE}$

PROVIDED STORAGE VOLUME WITHIN PIPING & STONE TRENCH

TOTAL LENGTH OF 8" PIPING = 638 LF
 AREA OF 8" PIPE = $3.14 * (D * D) / 4 = 0.35 \text{ SF}$
 TOTAL VOLUME WITHIN PIPING = 223 CF

TOTAL LENGTH OF STONE TRENCH = 638 LF
 AVG AREA OF STONE TRENCH (1.5' * 3') = 4.5 SF/LF
 TOTAL VOLUME OF STONE = $2,871 \text{ CF (LESS PIPE VOLUME)} = 2,648 \text{ CF}$
 VOLUME OF WATER WITHIN STONE = 40 PERCENT
 STORM WATER VOLUME IN STONE = $2,648 \text{ CF} * 0.40 = 1,059 \text{ CF}$

TOTAL VOLUME WITHIN SYSTEM = $1,282 \text{ CF AT } 766.5$

REQUIRED STORAGE 25 YEAR - 24 HOUR STORM = $1,131 \text{ CF}$

NOTE:

DURING RAINFALL EVENTS WHICH EXCEED TO DESIGN STORM (100 YR/24 HR, THE SYSTEM WILL OVERFLOW AND SPREAD ACROSS THE GRASS FIELD AREA. THE FLOW WILL DIRECT ITSELF TO THE SOUTHEAST AND EVENTUALLY DRAIN TO THE DITCH LINE ALONG THE PRIVATE DRIVE TO THE EAST OF THE PROJECT SITE.

THIS SYSTEM HAS BEEN DESIGNED TO ACCOUNT FOR THE TRANSFER OF 9,633 SF OF GRASS AREA TO ROOF AREA AND THE 4,863 SF OF GRASS TO GRAVEL DRIVE. THE RUNOFF COEFFICIENT CHANGE FROM 0.3 TO 0.9 AND 0.3 TO 0.8.

GENERAL NOTES:(OPTIONS 1 AND 2)

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) A MINIMUM OF 3 WORKING DAYS PRIOR TO ANY CONSTRUCTION OR 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. THE CONTRACTOR SHALL NOTIFY THE ENGINEER/SURVEYOR WHERE POSSIBLE CONFLICTS EXIST PRIOR TO BEGINNING CONSTRUCTION.

THE LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY GROUND CONDITIONS, EXISTING UTILITIES, LOT AND BUILDING DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THE PLANS. ARRANGE TO HAVE UTILITIES IDENTIFIED AND FLAGGED BEFORE STARTING CONSTRUCTION. THE OWNER ASSUMES NO LIABILITY FOR THE LOCATION OF UTILITIES. ALL DAMAGES MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

ALL CONSTRUCTION UNDER EXISTING OR PROPOSED PAVEMENT, EXISTING OR PROPOSED UTILITIES (INCLUDING LEADS), SHALL BE COMPLETELY BACKFILLED WITH SAND IN 12" LAYERS, AND COMPACTED TO NOT LESS THAN 95% OF ITS MAXIMUM UNIT WEIGHT, AS DETERMINED BY THE MODIFIED PROCTOR METHOD. THE COST IS TO BE INCLUDED IN THE UNIT PRICE BID FOR EACH ITEM.

THE CONTRACTOR SHALL CONFORM TO SOIL EROSION AND SEDIMENTATION CONTROL PART 91 OF PUBLIC ACT 451 OF 1994, AS AMENDED.

GEOTEXTILE FILTER BAGS SHALL BE USED AT ALL CATCH BASINS FOR SOIL AND SEDIMENTATION CONTROL. ALL CATCH BASINS SHALL BE CLEANED UPON COMPLETION OF THE PROPOSED PROJECT. COST FOR CLEANING THE CATCH BASINS SHALL BE INCLUDED IN THE COSTS FOR THE DRAINAGE STRUCTURES.

TOPSOIL SHALL BE STOCKPILED ON THE SITE AND USED AS TOPSOIL SURFACES AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. TOPSOIL WILL NEED TO BE SPREAD IN THE BASIN AREA TO A MINIMUM DEPTH OF 6 INCHES. THE BERMS SHOWN ON THE PLANS WILL NEED TO BE TOPSOIL OR TO HAVE A MINIMUM OF 6 INCHES ON TOPSOIL SPREAD OVER THEM. THE CURB ISLANDS WILL BE FILLED AS SPECIFIED WITH TOPSOIL. THE INTENT IS FOR THE CONTRACTOR AND THE LANDSCAPER TO USE THE EXISTING TOPSOIL TO COMPLETE THE PROJECT PRIOR TO HAULING ANY TOPSOIL ONTO THE SITE. UNSUITABLE TOPSOILS MUST BE DISPOSED OF DURING THE CLEANUP. ANY REMAINING STOCKPILES WILL NEED TO BE REMOVED. SOIL EROSION MEASURES MUST BE TAKEN TO ASSURE THAT THESE STOCKPILES ARE STABILIZED.

THE CONTRACTOR SHALL SEED AND FERTILIZE DITCH BANKS, SOILS PILES OR BANKS AND ANY OTHER DISTURBED AREAS AS SHOWN ON THE PLANS AND/OR DESCRIBED IN THE SPECIFICATIONS.

THE CONTRACTOR SHALL BACKFILL, COMPACT AND FINE GRADE ALL AREAS BETWEEN THE CURBS AND PAVEMENT AND THE PROPERTY LINES WITH TOPSOIL SUITABLE FOR LANDSCAPING. THE GRADES IN THESE AREAS WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE UNPAVED AREAS SHALL BE SMOOTHLY GRADED AND THE SURFACE STABILIZED BY SEEDING AS STATED ON THE PLANS. THE MAXIMUM DESIRABLE SLOPE IS 3 HORIZONTAL TO 1 VERTICAL, UNLESS OTHERWISE STATED.

THE CONTRACTOR SHALL FURNISH AND INSTALL PLAIN RIP-RAP BANK PROTECTION IN AREAS WHERE BANK EROSION WILL MOST LIKELY OCCUR OR AS DIRECTED BY THE ENGINEER.

BROKEN CONCRETE AND DEBRIS SHALL BE CONSIDERED WASTE TO BE DISPOSED OF BY THE CONTRACTOR.

ALL DEWATERING REQUIRED FOR CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE BID.

ALL JOINTS AT INTERSECTION APPROACHES AND DRIVEWAYS SHALL BE SAWCUT WITH BUTT-JOINTS. THE COST SHALL BE INCLUDED WITH THE PAYMENT FOR EXCAVATION.

THE CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES ON THE PROJECT. THE COST IS TO BE INCLUDED IN THE LUMP SUM FEE.

ALL WATER VALVE BOXES, ELECTRICAL BOXES, GAS VALVES AND ANY OTHER EXISTING UTILITY STRUCTURES ON THE SITE SHALL BE ADJUSTED TO FINISHED GRADE. THE COST SHALL BE INCLUDED IN THE LUMP SUM FEE.

GENERAL NOTES:(OPTIONS 1 AND 2)

THE SANITARY SEWER AND WATERMAIN MUST CONFORM TO UNION TOWNSHIP STANDARDS AND SPECIFICATIONS. SHOULD THERE BE A CONFLICT BETWEEN THE PLANS, NOTES, DETAILS AND SPECIFICATIONS, THE UNION TOWNSHIP STANDARDS SHALL GOVERN. THE CONTRACTOR WILL NOTIFY THE ENGINEER AS SOON AS A CONFLICT IS FOUND. INSTALLATION OF THESE UTILITIES SHALL BE COORDINATED BY THE CONTRACTOR WITH THE UNION TOWNSHIP DEPARTMENT OF PUBLIC WORKS DIRECTOR.

ELECTRIC SERVICES TO THE BUILDING AND PARKING LOT LIGHTING SHALL BE UNDERGROUND. SITE CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR IN REGARDS TO CONDUIT SLEEVES.

ALL SERVICE LINES ARE SHOWN FOR REFERENCE ONLY. THE EXACT LOCATIONS TO BE DETERMINED BY THE OWNER AND/OR UTILITY COMPANY.

INSTALLATION OF GAS, ELECTRIC AND TELEPHONE SERVICES (INCLUDING TRANSFORMER PAD LOCATIONS) SHALL BE COORDINATED BY THE CONTRACTOR WITH THE RESPECTIVE UTILITY COMPANIES AND THE ARCHITECT/ENGINEER

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION PERMITS REQUIRED FOR WORKING WITHIN THE ROAD RIGHT-OF-WAY PRIOR TO COMMENCING CONSTRUCTION, WITHIN THESE AREAS.

ROOF WATER FROM THE BUILDING SHALL BE DIRECTED TO DRAIN TO THE PROVIDED LEADS. THE PROPOSED ELEVATIONS SHOWN ARE TOP OF WALK, TOP OF CURB, FINISHED ASPHALT SURFACE AND GUTTER PAN ELEVATIONS, UNLESS OTHERWISE NOTED.

ALL DRIVEWAY APPROACHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH ISABELLA COUNTY ROAD COMMISSION STANDARDS.

CONSTRUCTION PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF MICHIGAN, COUNTY OF ISABELLA AND UNION TOWNSHIP.

DIMENSIONS SHOWN ON THE PLANS ARE GIVEN TO THE BACK OF CURB, FACE OR BACK OF WALK OR THE BUILDING OUTSIDE LINES.

STANDARD PARKING SPACES SHALL BE 10 FEET BY 18 FEET. THE SPACES ARE TO BE INDICATED BY 4 INCH WIDE WHITE LINES. THE PAINT LINES ON THE SITE, EXCEPT NEAR THE BUILDING, SHALL CONFORM TO THE ENGINEER'S PLAN.

CONCRETE CURBING SHALL BE 4000 PSI CONCRETE.

ALL ABANDONED CURB STOP BOXES SHALL BE REMOVED AND SALVAGED FOR THE UNION TOWNSHIP DEPARTMENT OF PUBLIC WORKS.

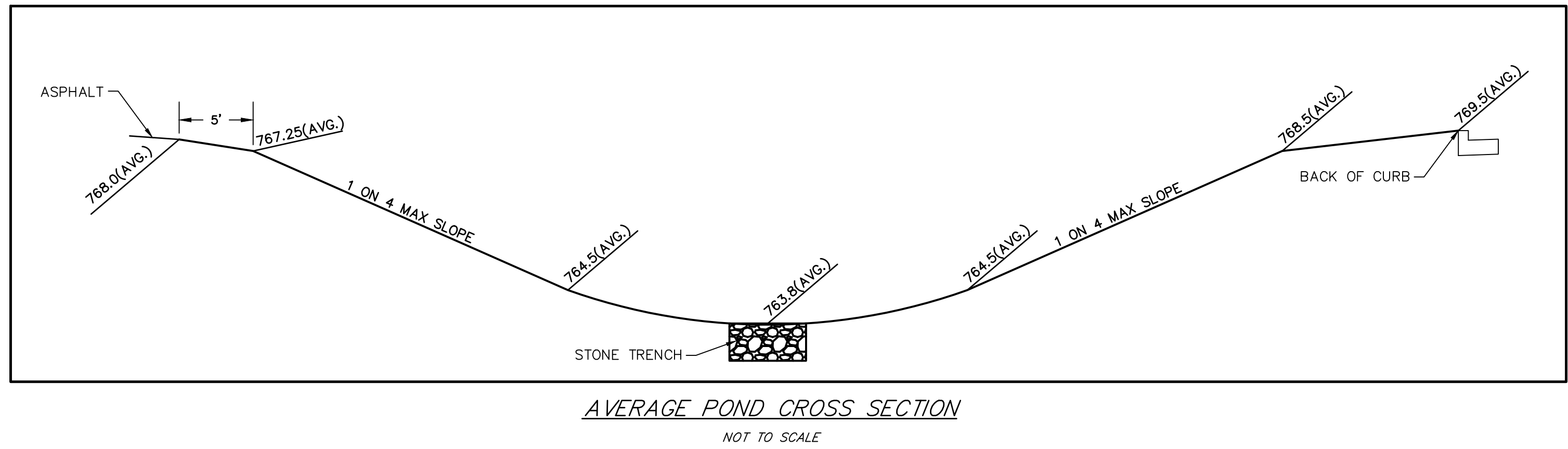
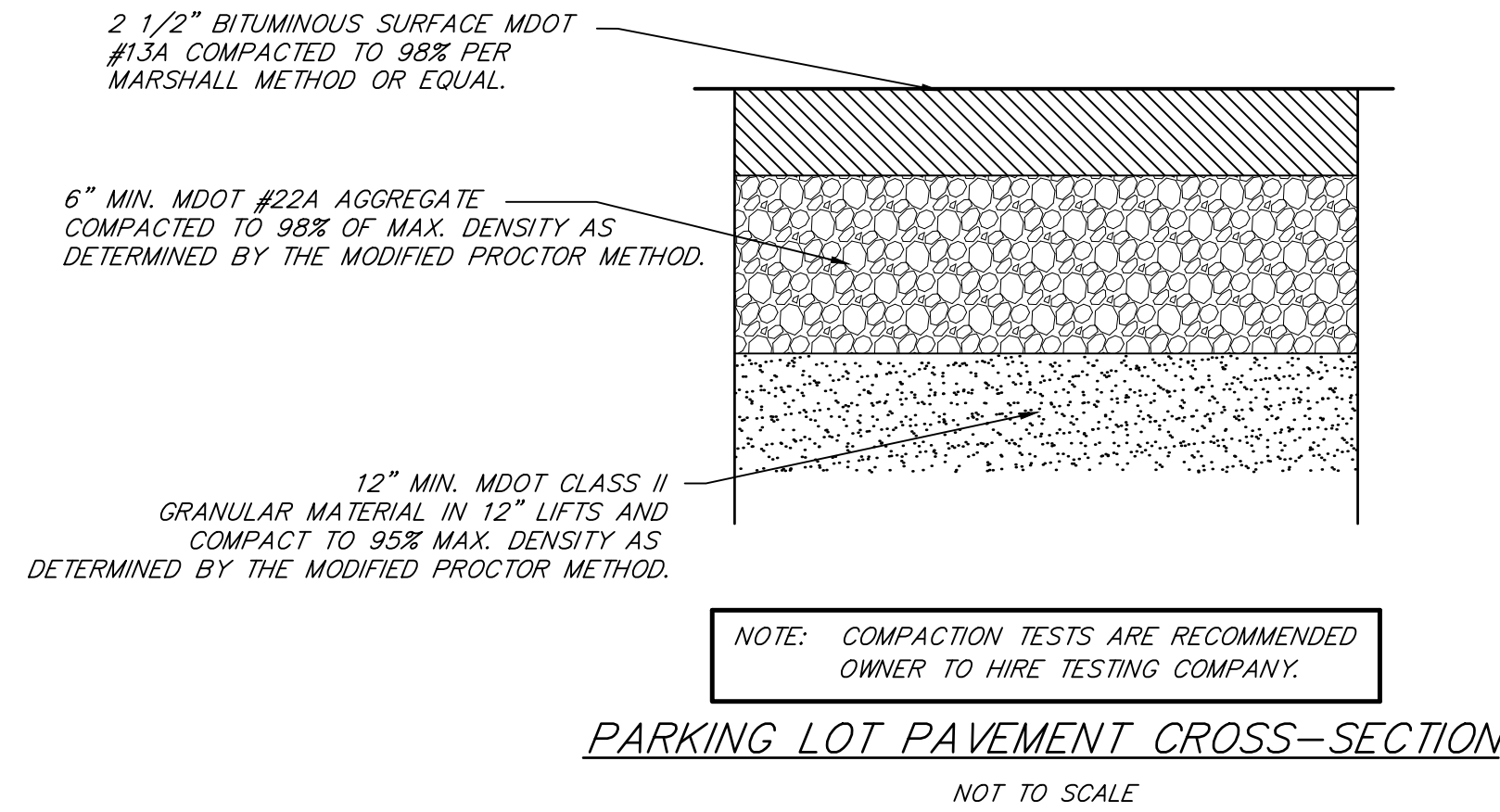
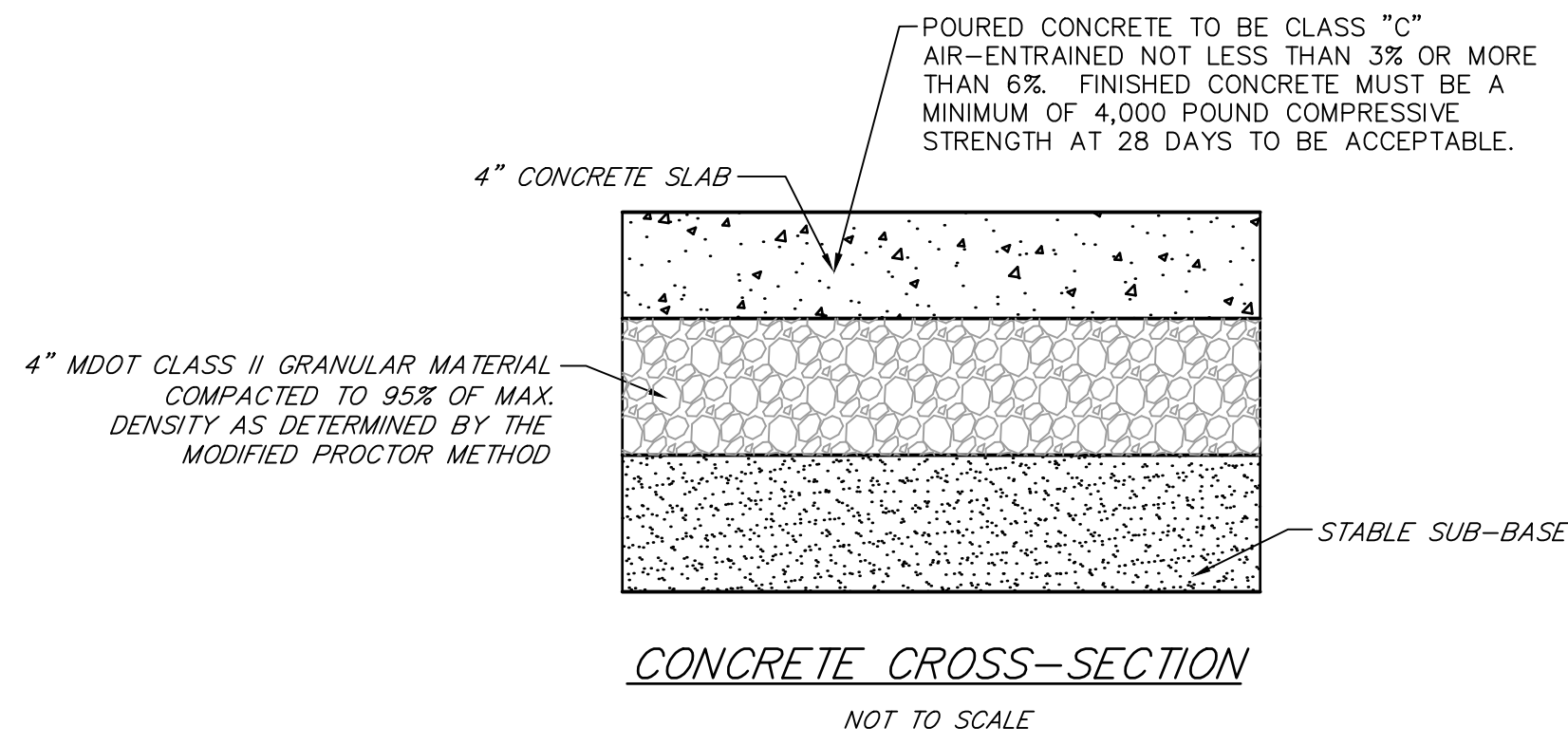


REVISIONS:	REVISIONS PER CLIENT 5-16-19
	REVISIONS PER MT. PLEASANT FIRE 5-13-19
	REVISIONS PER MT. PLEASANT FIRE 7-12-19

SUBMITTALS:	SUBMITTALS TO CLIENT 5-6-19
	SUBMITTAL TO MT. PLEASANT FIRE 6-6-19
	SUBMITTAL TO UNION TWP PLANNING 7-2-19
	SUBMITTAL TO UNION TWP PLANNING 8-6-19

JOB NUMBER:	DESIGNED BY:	CHECKED BY:
1901-005	WRE	N/A
		TELB

SCALE:	SHEET NUMBER:
1" = 20'	6 OF 7



STORM WATER CALCULATIONS.

Allowable Discharge (0.10 cfs/acre) = 0.55 acres * 0.10 cfs/acre = 0.055 cfs
 Total (NEW) Impervious Area = 19,195 sq. ft. 0.44 acres
 Total (NEW) Semi-impervious Area = 4,863 sq. ft. 0.11 acres
 Total (NEW) Pervious Area = -24,058 sq. ft. 0.55 acres
 Design Ponding Elevation = 766.50
 Invert of restrictor elevation = 763.49

Restrictor Calculation

Formula: $a = Qa / 0.62[64.4(h)]^{1/2}$
 $a =$ Area of orifice in sq. ft.
 $Qa =$ Allowable outflow
 $h = (2/3)(766.50 - 763.49) = 3.01 = 2.01$
 $a = 0.055 \text{ cfs} / 0.62 [(64.4)(2.01)]^{1/2}$
 $a = 0.00780 \text{ sft}$
 $a = \pi(D^2) / 4 = D = 0.0997 \text{ ft} = 1.20 \text{ inches (USE 2" ORIFICE)}$

2" Restrictor Calculation

Formula: $a = Qa / 0.62[64.4(h)]^{1/2}$
 $a =$ Area of orifice in sq. ft. = **0.0218 = 2" ORIFICE**
 $Qa =$ Allowable outflow to be calculated
 $h = (2/3)(766.50 - 763.49) = 3.01 = 2.01$
 $Qa = (0.0218) * 0.62 [(64.4)(2.01)]^{1/2}$
 $Qa = 0.154 \text{ cfs FOR 2" ORIFICE}$

PROVIDED STORAGE VOLUME WITHIN PIPING & STONE TRENCH

TOTAL LENGTH OF 8" PIPING = 398 LF
 TOTAL LENGTH OF 12" PIPE = 725
 AREA OF 8" PIPE = $3.14 * (D * D) / 4 = 0.35 \text{ SF}$
 AREA OF 12" PIPE = $3.14 * (D * D) / 4 = 0.785 \text{ SF}$
 TOTAL VOLUME WITHIN PIPING = **708 CF**
 TOTAL LENGTH OF STONE TRENCH = 1123 LF
 AVG AREA OF STONE TRENCH (1.5' * 3') = 4.5 SF/LF
 TOTAL VOLUME OF STONE = 5053 CF (LESS PIPE VOLUME) = 4345 CF
 VOLUME OF WATER WITHIN STONE = 40 PERCENT
 STORM WATER VOLUME IN STONE = 4345 CF * 0.40 = 1,738 CF
 TOTAL VOLUME WITHIN FRENCH DRAIN SYSTEM = **2,446 CF AT 766.5**
 REQUIRED STORAGE 25 YEAR - 24 HOUR STORM = 3,280 CF ADDITIONAL STORAGE REQUIRED
THEREFORE, ADDITIONAL STORAGE MUST BE OBTAINED WITHIN THE DETENTION AREA.

NOTE:

DURING RAINFALL EVENTS WHICH EXCEED TO DESIGN STORM (100 YR/24 HR, THE SYSTEM WILL OVERFLOW AND SPREAD ACROSS THE GRASS FIELD AREA. THE FLOW WILL DIRECT ITSELF TO THE SOUTHEAST AND EVENTUALLY DRAIN TO THE DITCH LINE ALONG THE PRIVATE DRIVE TO THE EAST OF THE PROJECT SITE.
 THIS SYSTEM HAS BEEN DESIGNED TO ACCOUNT FOR THE TRANSFER OF 9,633 SF OF GRASS AREA TO ROOF AREA AND THE 4,863 SF OF GRASS TO GRAVEL DRIVE. THE RUNOFF COEFFICIENT CHANGE FROM 0.3 TO 0.9 AND 0.3 TO 0.8.

STORM WATER SOUTHERN DISTRICT CALCULATIONS.

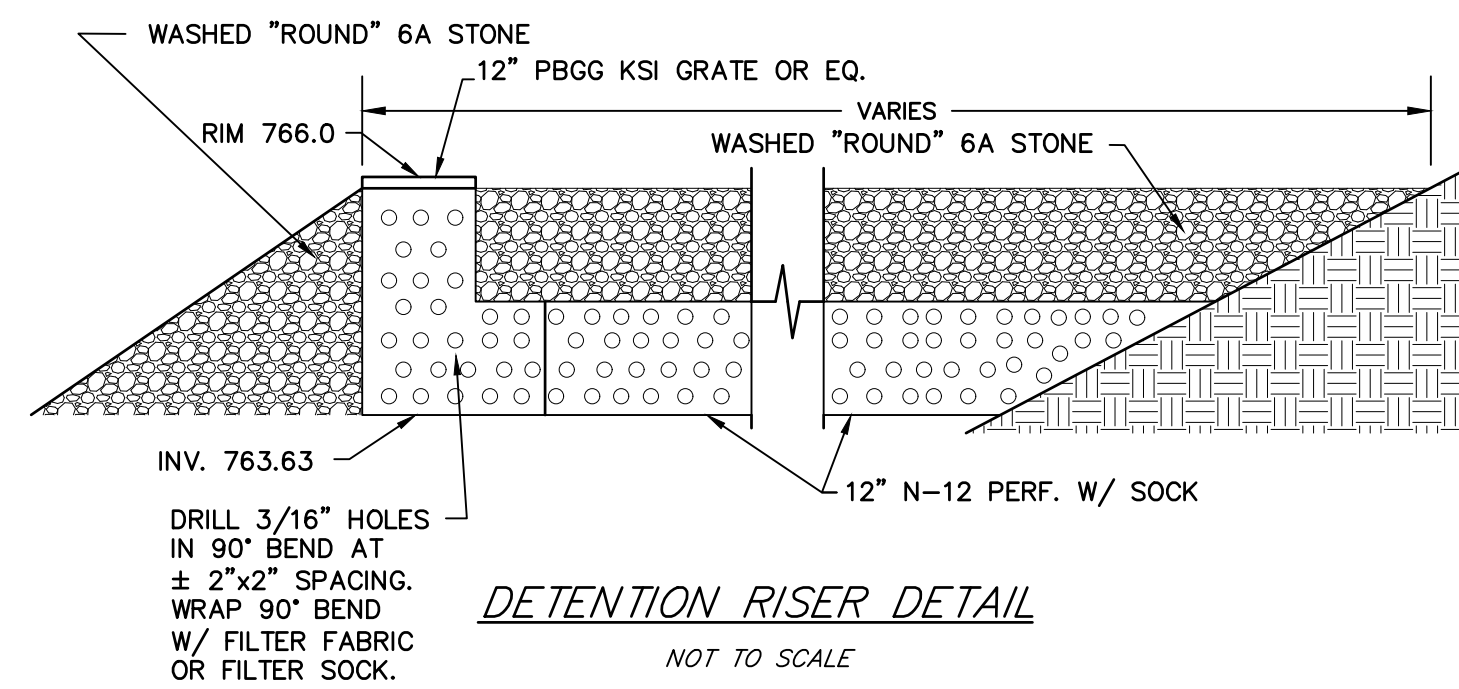
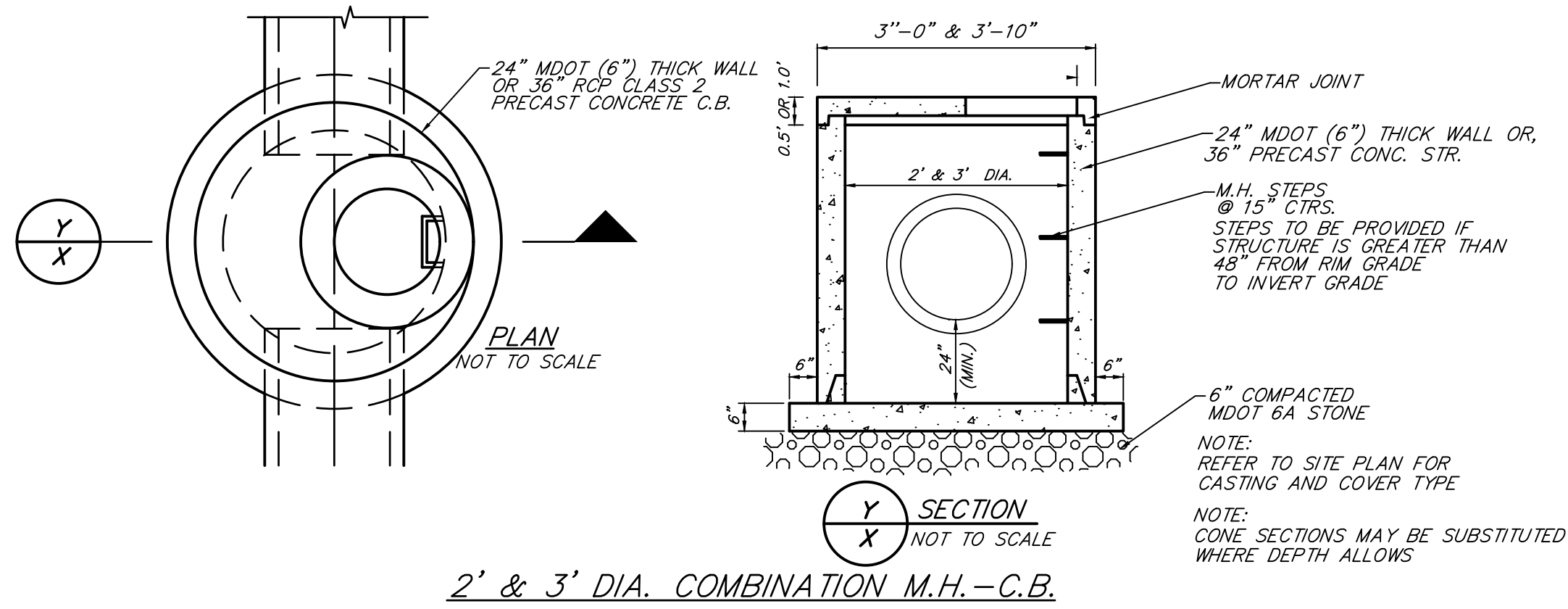
Allowable Discharge (0.10 cfs/acre) = 5.21 acres * 0.10 cfs/acre = 0.521 cfs
 Total Contributing Area = 226,764 sq. ft. 5.21 acres
 Total Impervious Area = 82,760 sq. ft. 1.90 acres
 Total Semi-impervious = 0.11 acres
 Total Pervious Area = 3.20 acres
 Design Ponding Elevation = 766.50
 Invert of restrictor elevation = 763.49

Restrictor Calculation

Formula: $a = Qa / [0.62[64.4(h)]^{1/2}]$
 $a =$ Area of orifice in sq. ft.
 $Qa =$ Allowable outflow
 $h = (2/3)(766.50 - 763.49) = 3.01 = 2.01$
 $a = 0.521 \text{ cfs} / 0.62 [(64.4)(2.01)]^{1/2}$
 $a = 0.0739 \text{ sft}$
 $a = \pi(D^2) / 4 = D = 0.307 \text{ ft} = 3.68 \text{ inches (USE 3-2/3 INCH)}$

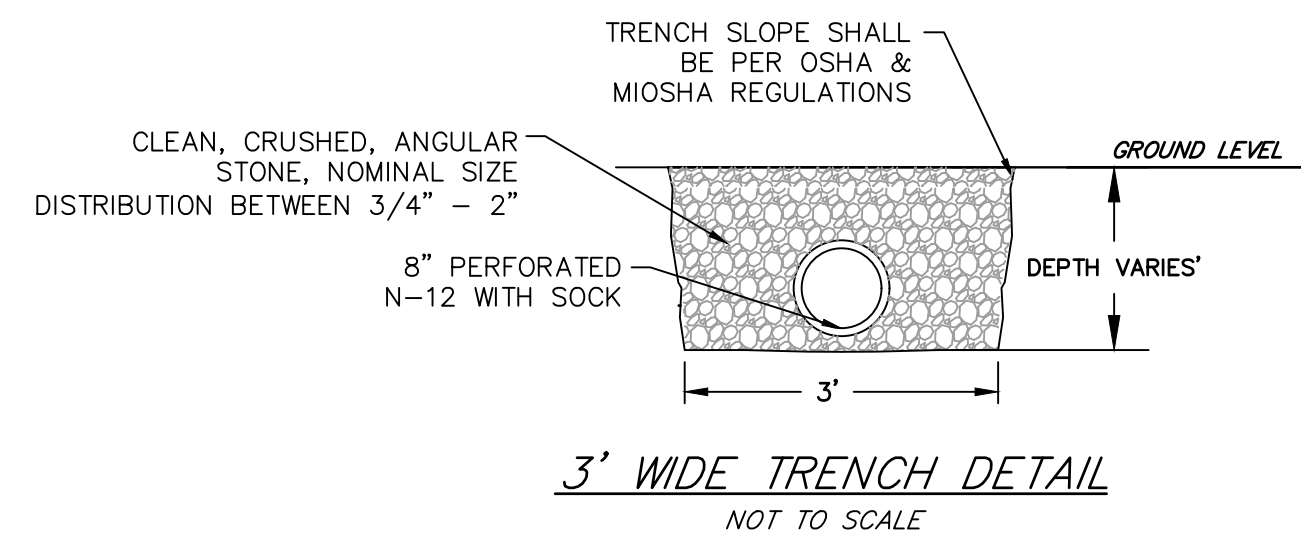
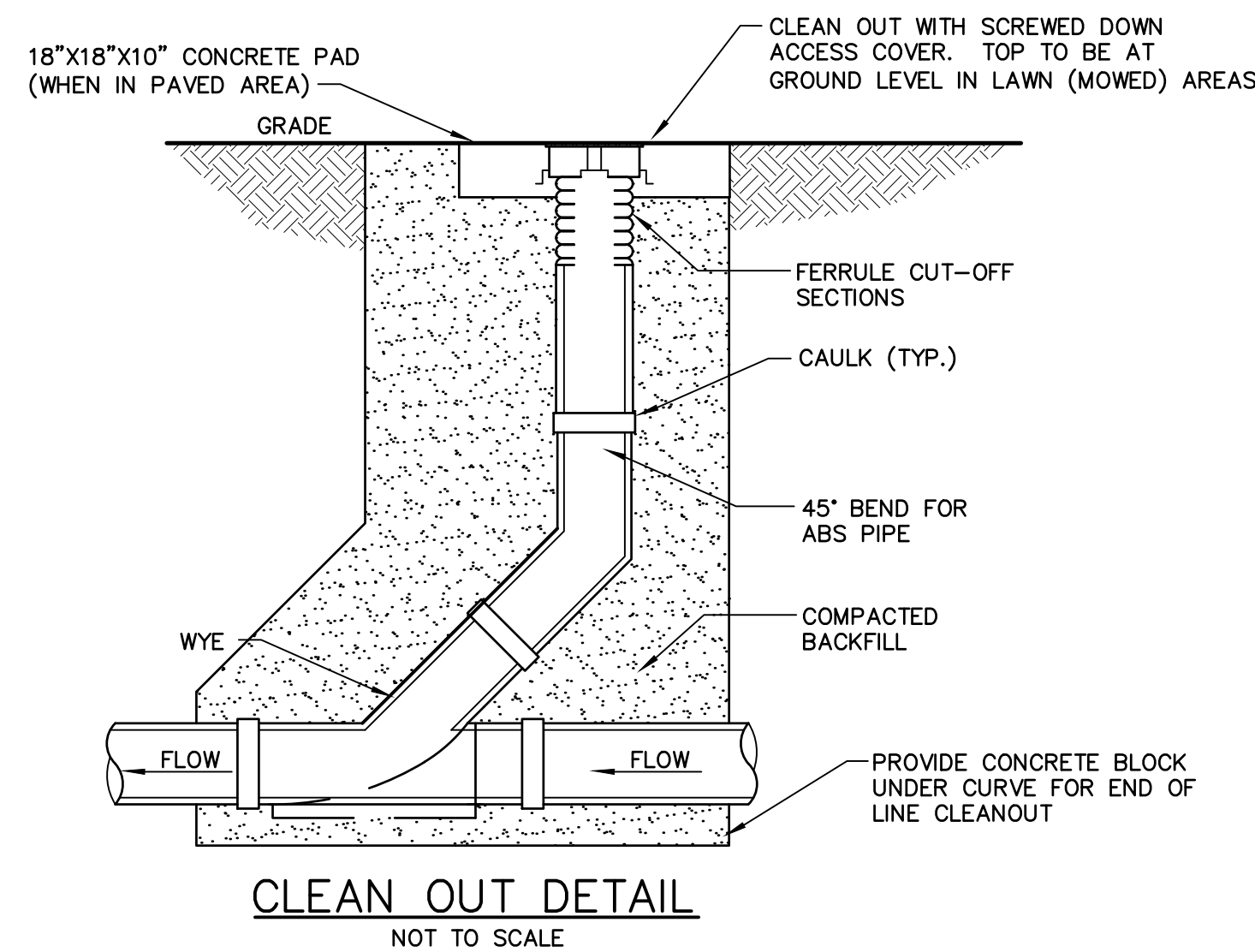
PROVIDED STORAGE VOLUME WITHIN DETENTION AREA

AREA OF CONTOUR 765.0 = 5,946 SF
 AREA OF CONTOUR 766.5 = 11,164 SF
 AREA OF CONTOUR 768.0 = 16,382 SF
REQUIRED 25 YR/24 HR DETENTION VOLUME = 21,641 CF
 PROVIDED WITHIN FRENCH DRAIN SYSTEM = 2,446 CF
 (REMAINING REQUIRED VOLUME) = 19,195 CF
 PROVIDED VOLUME AT 766.5 = 12,832.5 CF
 PROVIDED VOLUME AT 768.0 = 33,492 + 2,446 = 35,938 CF (OVERFLOW)
 25 YR/24 HR STORM STORAGE OCCURS AT 767.0 CONTOUR (1 FT FREEBOARD)



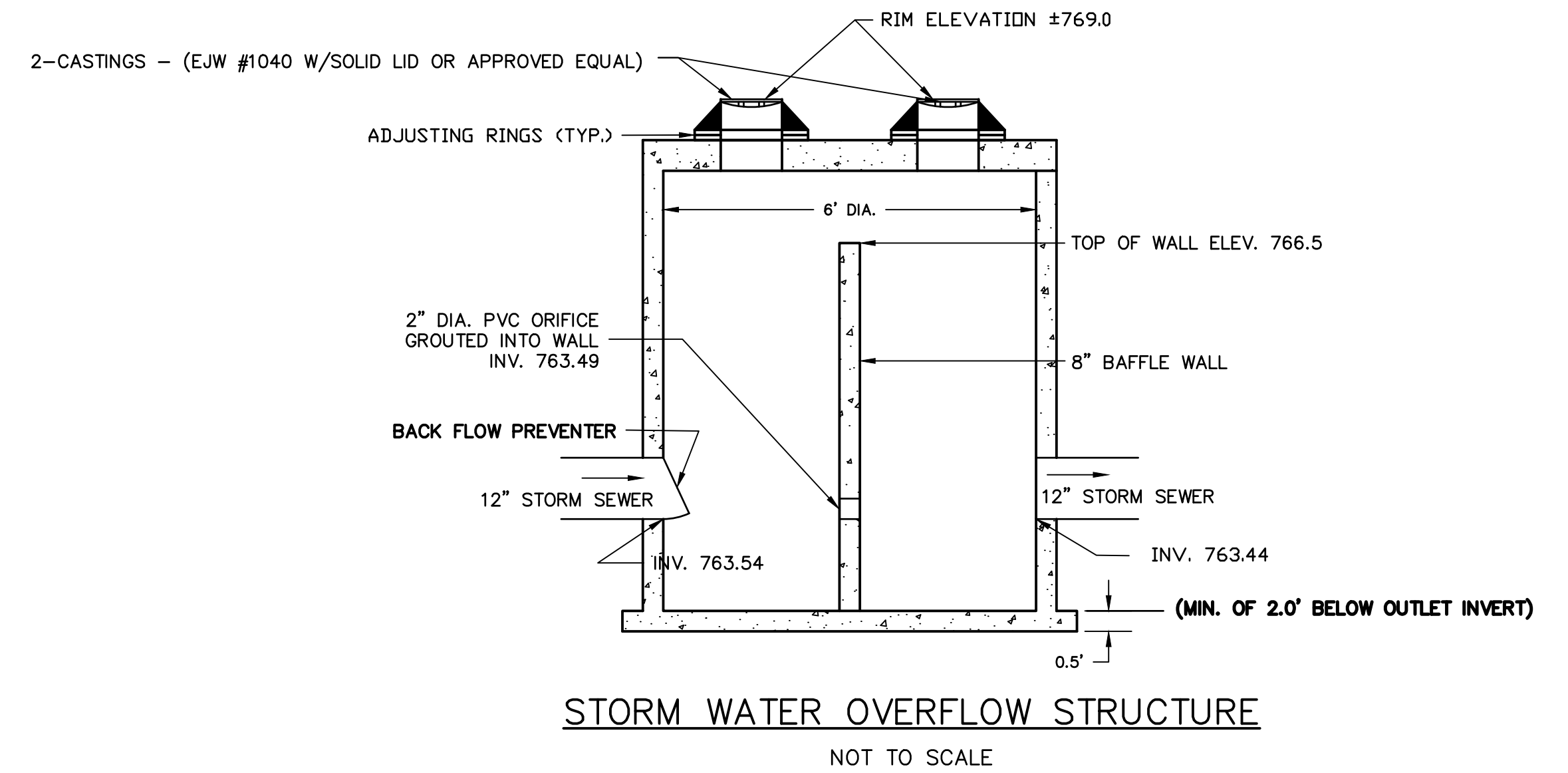
BAFFLE WALL CONSTRUCTION NOTES

- Baffle wall to be constructed of 8" concrete block with smooth-raked joints.
- Epoxy #4 reinforcing bars into the sidewalls and base of the precast structure at 8" spacing. Bars are to extend across the entire width of the structure.
- Place #4 reinforcing bars in the baffle wall vertically at 12" spacings. The vertical bars to horizontal bars.
- Grout-fill all concrete block.
- Coat entire baffle wall with Xypex waterproofing or approved equal.



TRENCH WIDTH CHART

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



REVISIONS:
REVISIONS PER CLIENT 5-16-19
REVISIONS PER MT. PLEASANT FIRE 5-13-19
REVISIONS PER MT. PLEASANT FIRE 7-12-19

SUBMITTALS:
SUBMITTAL TO CLIENT 5-6-19
SUBMITTAL TO MT. PLEASANT FIRE 6-6-19
SUBMITTAL TO UNION TWP PLANNING 7-2-19
SUBMITTAL TO UNION TWP PLANNING 8-6-19

JOB NUMBER:
1901-005
DRAWN BY:
WRE
DESIGNED BY:
N/A
CHECKED BY:
TELB

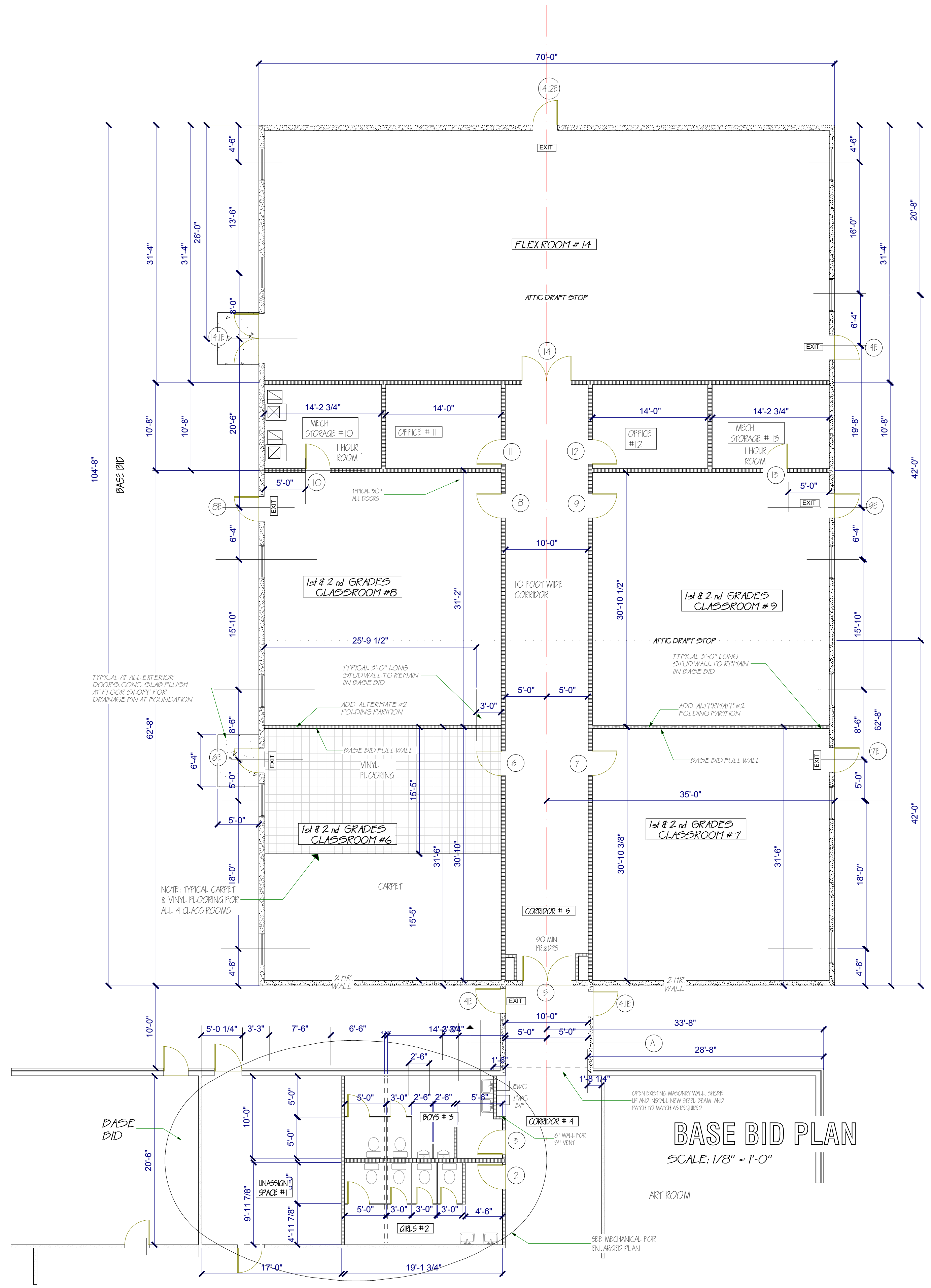
SCALE:
1" = 20'
SHEET NUMBER:
7 OF 7

GENERAL NOTES:

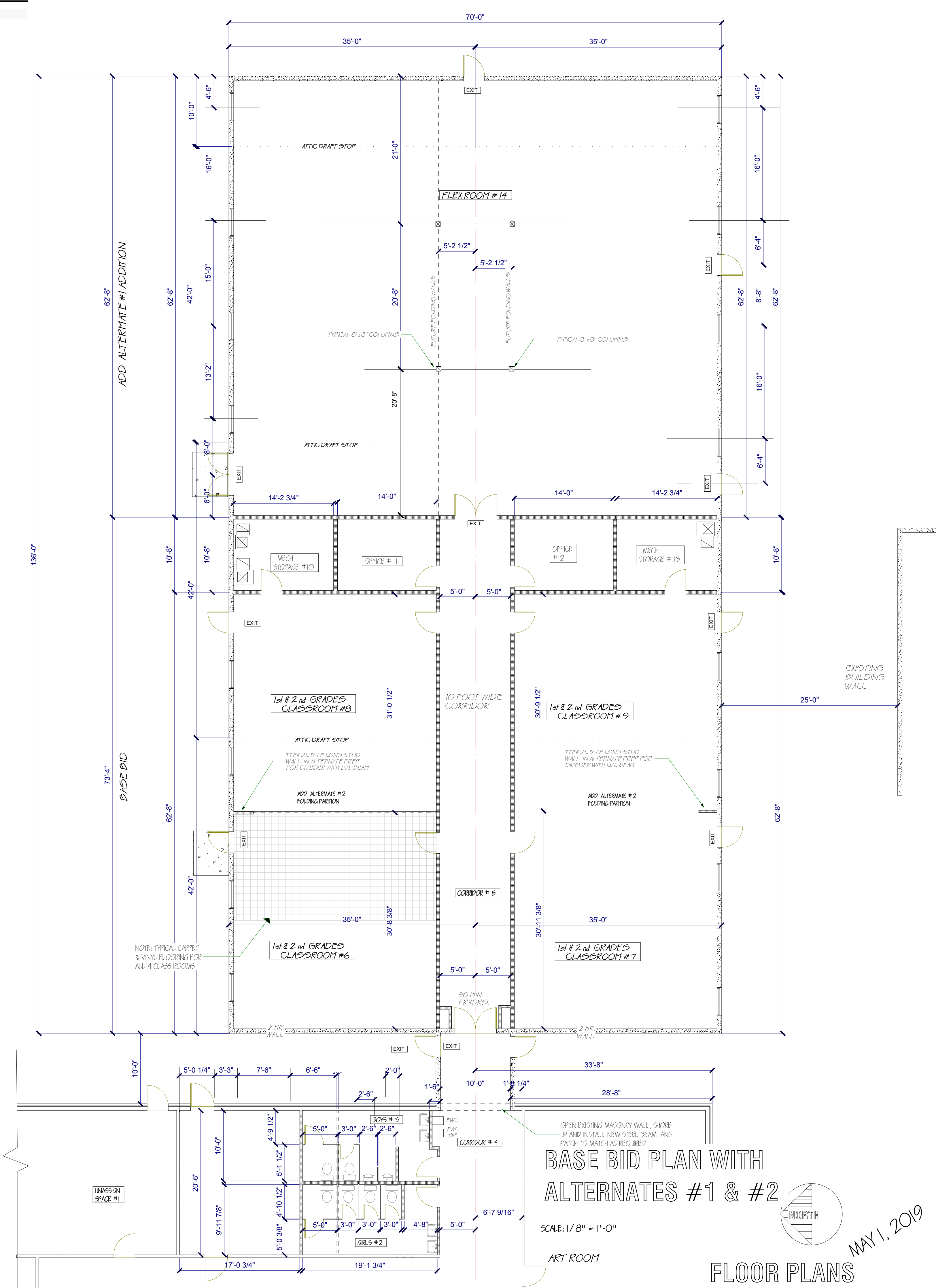
1. ALL EXTERIOR WALLS SHALL BE 2x6 STUDS AT 16" OC WITH HORIZONTAL 2x6 BRACING AT TIEPOINT OF HEIGHT. 4' PERMITTED OF BUILDING.
2. ALL INTERIOR WALLS SHALL BE 2x4 STUDS AT 16" ON CENTER FROM FLOOR TO BOTTOM OF TRUSS WITH 2x8" THK. FIRE RATED GYPBD. EACH SIDE.
3. ALL EXTERIOR DOORS SHALL BE 2'-0" x 7'-0" IN HOLLOW METAL FRAMES WITH FLUSH HOLLOW METAL INSULATED DOORS.
4. FOLDING PARTITIONS SHALL BE BIRK WALL WITH SOUND CONTROL SERIES 2920, TINGED PANEL WITH SERIES 425 TRACK SYSTEM.

Toilet Partition/Accessory Schedule

Item #	Description:	Quantity	Notes:
1	Painted Steel Toilet Partitions	2 Lots	Hadrian brand or equal
2	Painted Steel Urinal Screen	1 each	Continuous wall bracket
3	3 grab bars	2 each	
4	Surface Mount TP disp.	6 each	Double Unit
5	Sanitary Napkin Disp.	4 each	Surface Mount.
6	24"x36" Stainless Steel Mirror	4 each	
7	Paper Towel Disp.	4 each	C-Fold Surface Mount
8	Soap Disp.	4 each	Surface Mount.
9	Coat hook/door stop	6 each	Mount at TP doors.



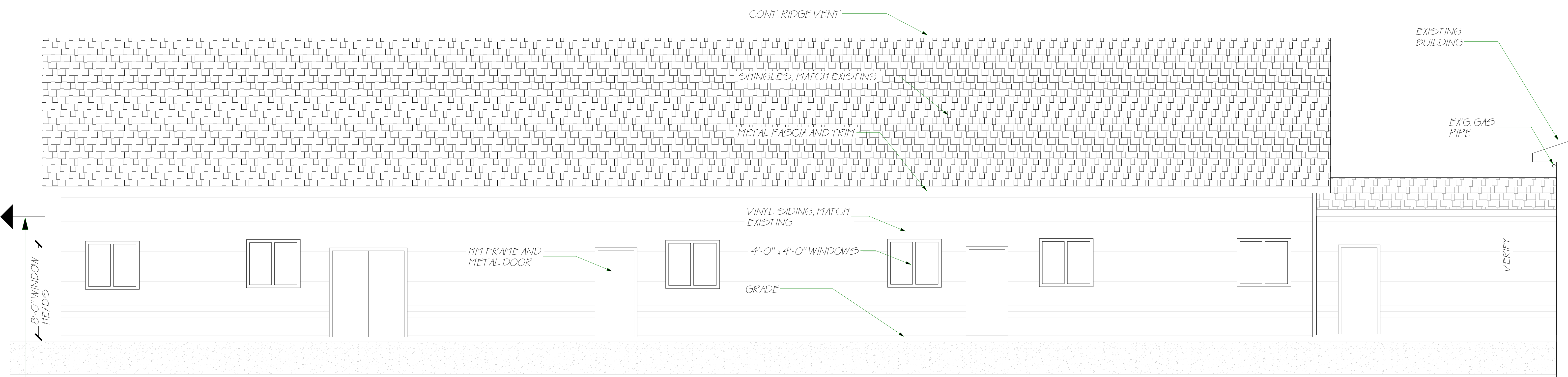
BASE BID PLAN
SCALE: 1/8" = 1'-0"



BASE BID PLAN WITH ALTERNATES #1 & #2
SCALE: 1/8" = 1'-0"

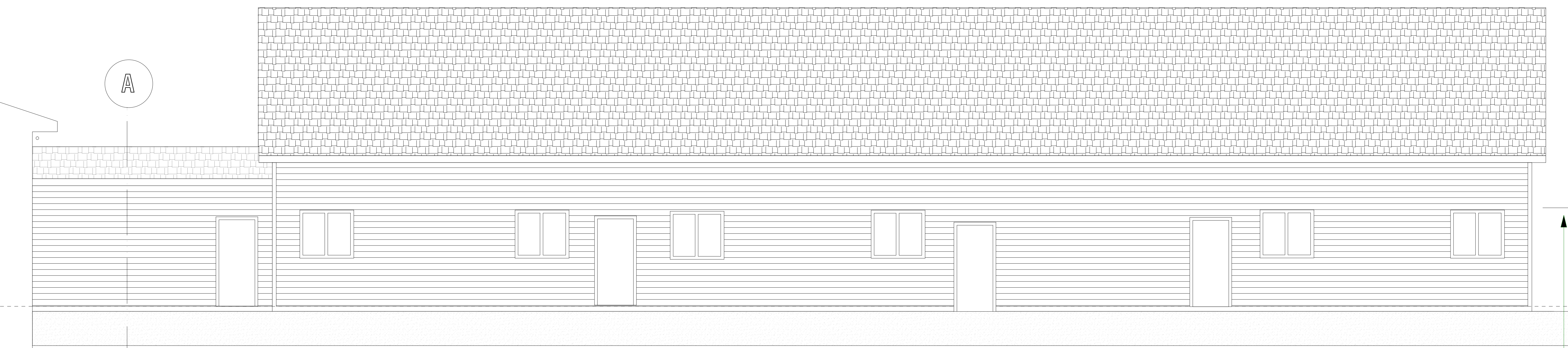
FLOOR PLANS

MAY 1, 2019



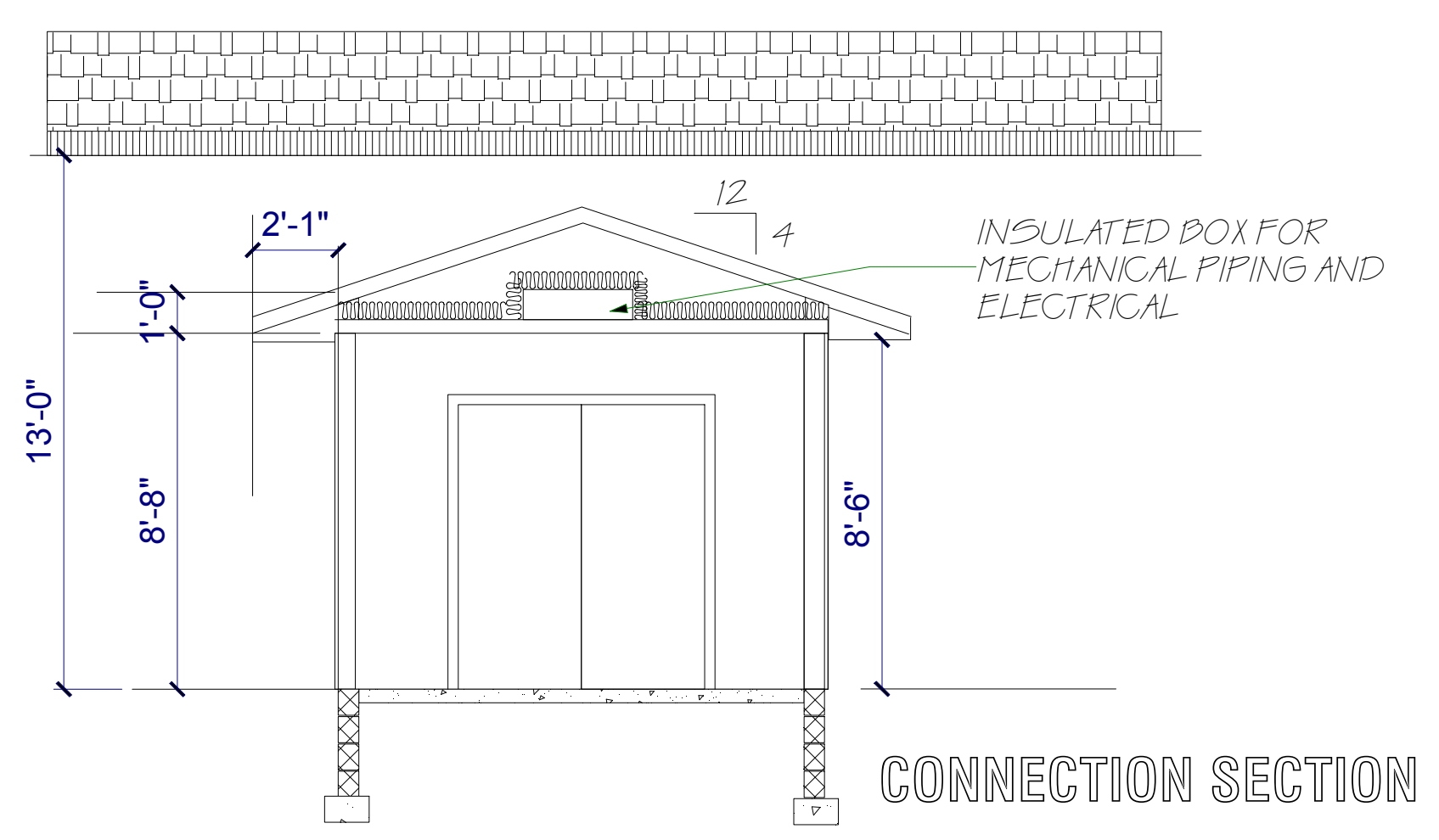
NORTH ELEVATION
BASE BID

NOTE: ADD ALTERNATE IS 31'-4"
EAST OF BUILDING SHOWN, SEE
PLAN FOR DOORS AND WINDOWS



SOUTH ELEVATION
BASE BID

NOTE: ADD ALTERNATE IS 31'-4"
EAST OF BUILDING SHOWN, SEE
PLAN FOR DOORS AND WINDOWS

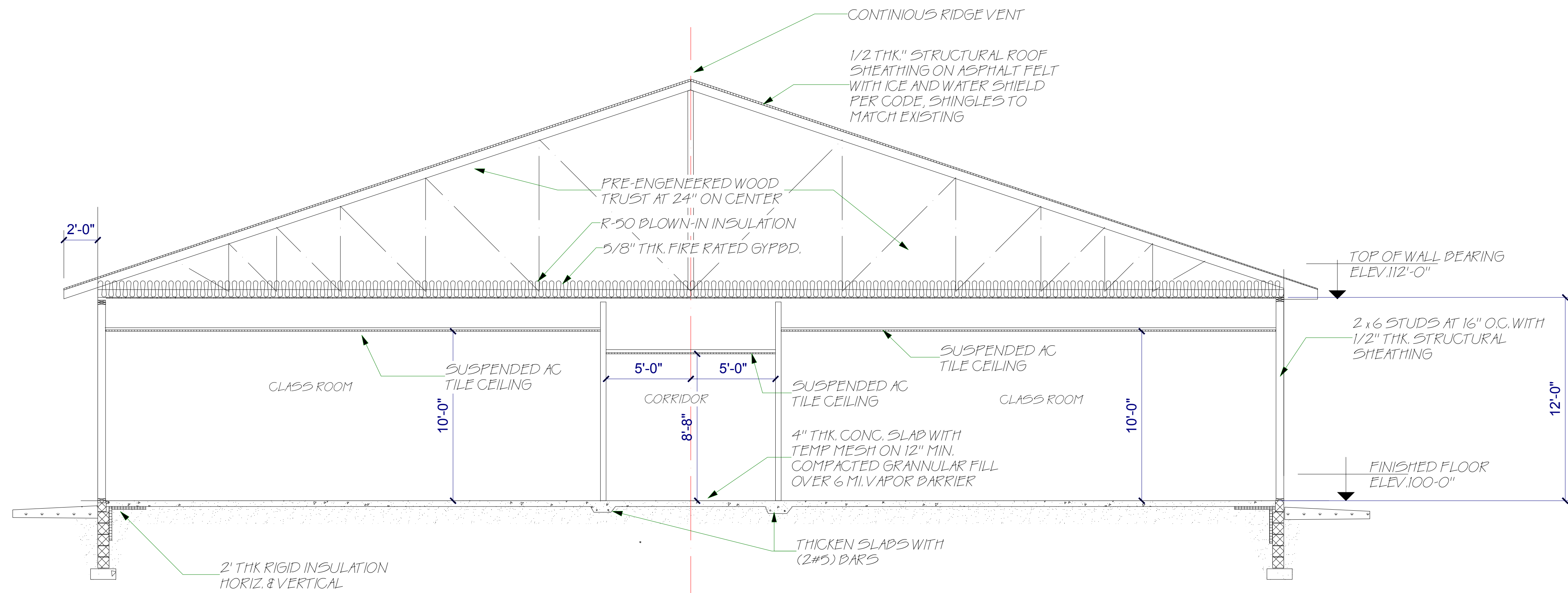


CONNECTION SECTION

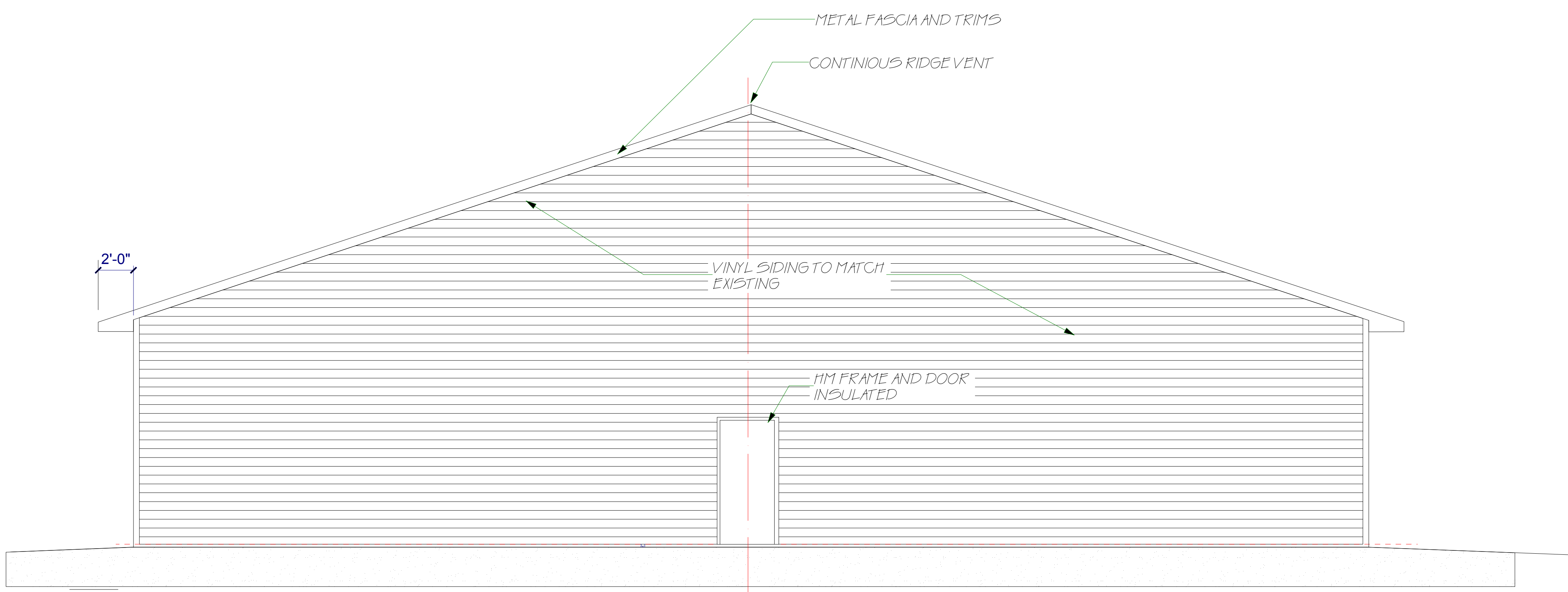
A

NORTH SOUTH ELEVATIONS BASE BID

MAY 1, 2019



BUILDING SECTION
SCALE 1/8" = 1'-0"



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

BUILDING SECTION & EAST ELEVATION

MAY 1, 2019

PROJECT NUMBER
2019126

PROPOSED 2019 ADDITION AND RENOVATIONS TO
RENAISSANCE ACADEMY SCHOOL
2797 ISABELLA ROAD MT. PLEASANT, MICHIGAN 48858

JAMES R. DUFFY ARCHITECTS P.C.
1040 CIRCLE DRIVE
LAKE ISABELLA, MICHIGAN 48893
Ph. 989-644-5767 jrduffy@aol.com

A4

Sam **B**er **E**ngineering

Bruce E. Rohrer, P.E.
1216 E. Gaylord Street
Mt. Pleasant, Michigan 48858
(989) 330-2150

August 14, 2019

Peter Galliant
Charter Township of Union, Planner
2010 South Lincoln Road
Mt. Pleasant, Michigan 48858

Re: Storm Water Management Plan for Renaissance Public School Academy Addition

Dear Mr. Galliant:

I have reviewed the Storm Water Management Plan prepared by Tim Bebee of CMS&D Surveying /Engineering for the above captioned project located in the Southwest 1/4 Section 13, Union Township, located at 2797 S. Isabella Rd. The proposed option #2 plan, dated 8-6-19, is consistent with the Union Township Storm Water Ordinance.

If you have any questions or need any further information, please feel free to contact me in my office.

Sincerely,



Bruce E. Rohrer, P.E.
Consulting Engineer
Isabella County

BER/taw
cc: Tim Bebee, CMS&D

From: [Peter Gallinat](#)
To: [Jennifer Loveberry](#)
Subject: FW: Renaissance School - Site Plan
Date: Wednesday, August 14, 2019 4:50:07 PM
Attachments: [TWP SUBMITTAL 7-2-19 APPROVED 2019-07-31 PJG.pdf](#)

From: Pat Gaffney <PGaffney@isabellaroads.com>
Sent: Wednesday, July 31, 2019 10:59 AM
To: Peter Gallinat <pgallinat@uniontownshipmi.com>
Cc: Timothy Bebee <tbebee@cms-d.com>
Subject: Renaissance School - Site Plan

Peter,

See attached approve site plan.

No work in ROW – No permit required.

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

RENAISSANCE PUBLIC SCHOOL ACADEMY

APPROVED

**No work in ROW
No Permit required**



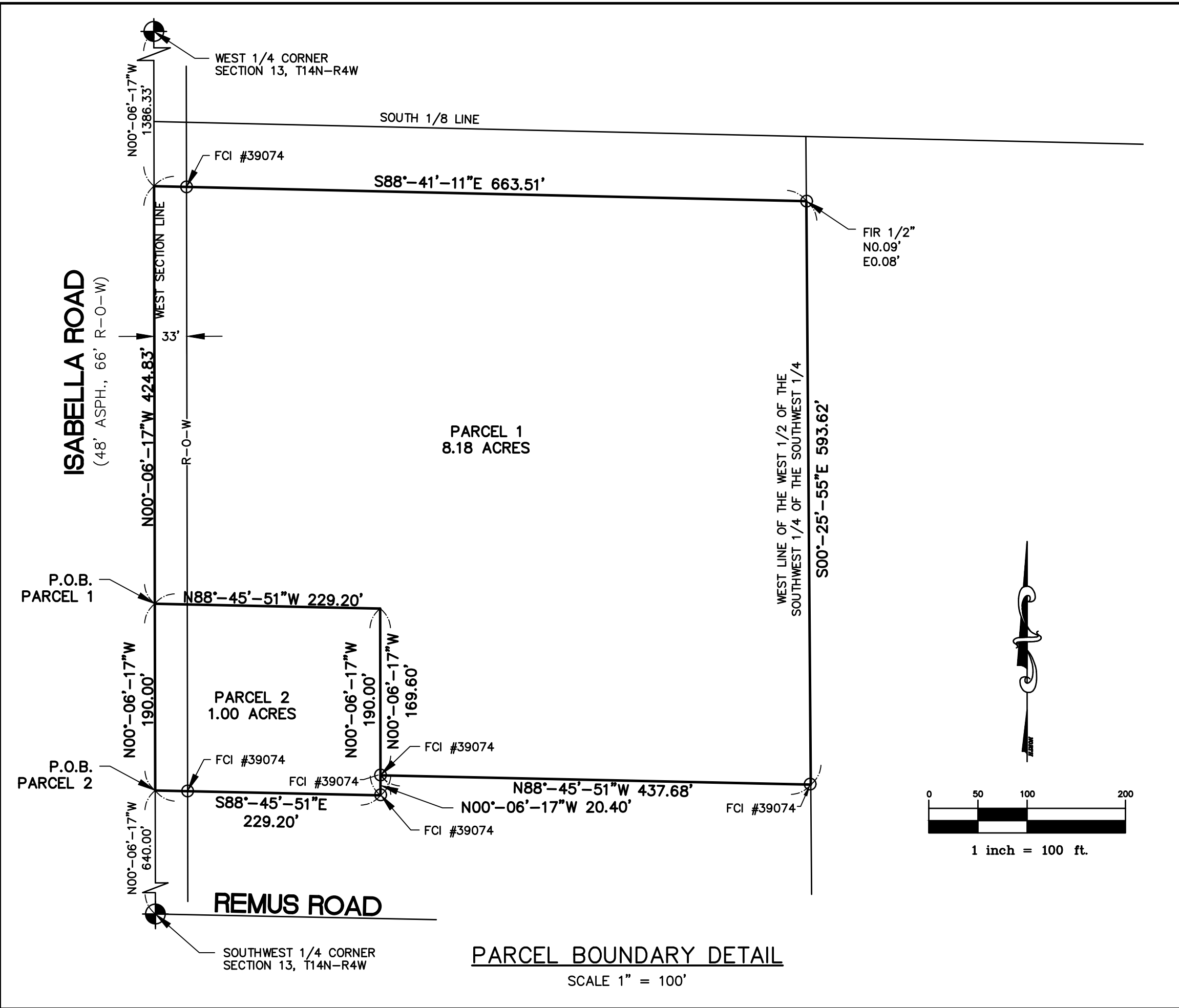
LOCATION SKETCH
NOT TO SCALE

B-4 ZONE	
MINIMUM LOT FRONTAGE	80 FT
LOT WIDTH (FEET)	80 FT
MINIMUM LOT AREA	12,000 SQFT
MAXIMUM BUILDING HEIGHT	35 FT
MINIMUM FRONT YARD SETBACK	50 FT (A)
MINIMUM SIDE YARD SETBACK	20 FT (B)
MINIMUM REAR YARD SETBACK	25 FT (B)
MAXIMUM LOT COVERAGE	30%
(BY ALL BUILDINGS)	

- A. OFF-STREET PARKING SHALL BE PERMITTED TO OCCUPY A PORTION OF THE REQUIRED FRONT YARD, PROVIDED THAT THERE SHALL BE MAINTAINED A MINIMUM UNOBSTRUCTED AND LANDSCAPED SETBACK OF TEN (10) FEET BETWEEN THE NEAREST POINT OF THE OFF STREET PARKING AREAS, EXCLUSIVE OF ACCESS DRIVEWAYS AND THE NEAREST RIGHT-OF-WAY LINE AS INDICATED ON THE MAJOR THOROUGHFARE PLAN.
- B. A LOT IN THE B-4 AND B-5 DISTRICT WILL PROVIDED A SIDE AND REAR YARD OF AT LEAST FORTY (40) FEET WHEN ABUTTING RESIDENTIAL DISTRICT

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.



PARCEL BOUNDARY DETAIL
SCALE 1" = 100'

DESCRIPTION PROVIDED:

PARCEL 1:
A PARCEL OF LAND BEING PART OF THE SW 1/4 OF SECTION 13, T14N-R4W, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN, BEGINNING AT A POINT ON THE WEST SECTION LINE WHICH IS N00°-06'-17"W 830.00 FEET FROM THE SOUTHWEST CORNER OF SECTION 13, THENCE N00°-06'-17"W ALONG THE WEST SECTION LINE 424.83 FEET; THENCE S88°-41'-11"E, 663.51 FEET; THENCE S00°-25'-55"E, 593.62 FEET; THENCE N88°-45'-51"W 437.68 FEET; THENCE N00°-06'-17"W, PARALLEL WITH THE WEST SECTION LINE, 169.59 FEET; THENCE N88°-45'-51"W, 229.20 FEET TO THE POINT OF BEGINNING.

PARCEL 2:
A PARCEL OF LAND COMMENCING 640 FEET NORTH OF THE SW CORNER OF SECTION 13, T14N-R4W, THENCE EAST 229.2 FEET (SOMETIMES RECORDED AS 229.02), NORTH 190 FEET, WEST 229.2 FEET (SOMETIMES RECORDED AS 229.02), SOUTH 190 FEET TO THE POINT OF BEGINNING, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN.

BENCHMARK NOTE:
BM #1. NORTHEAST CORNER OF CONCRETE SLAB AT NORTHEAST CORNER OF MAIN BUILDING.
ELEV. = 770.87
BM #2. NORTHEAST BOLT TOP FLANGE FIRE HYDRANT ±65 FEET NORTH AND ±11 FEET WEST OF THE NORTHWEST CORNER OF THE NEW GYM.
ELEV. 771.55

SHEET INDEX

SHEET 1	COVER SHEET
SHEET 2	EXISTING TOPOGRAPHY
SHEET 3	SITE PLAN
SHEET 4	GRADING PLAN OPTION 1
SHEET 5	GRADING PLAN OPTION 2
SHEET 6	DETAIL SHEET 1
SHEET 7	DETAIL SHEET 2

OWNER: RENAISSANCE PUBLIC SCHOOL ACADEMY
CONTRACTOR: KONWINSKI CONSTRUCTION
CONTACT: JOE FLEMING
1900 GROVER PARKWAY
MT. PLEASANT, MI 48858
PHONE: (989) 773-2906

CONSULTANT: CENTRAL MICHIGAN SURVEYING & DEVELOPMENT CO., INC.
8114 EAST PICKARD ST.
MT. PLEASANT, MICHIGAN 48858
CONTACT PERSON: TIMOTHY E BEBEE
PHONE: (989) 775-0756
FAX: (989) 775-5012

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

CONSUMERS ENERGY
1325 WRIGHT AVENUE
ALMA, MI 48801
(989) 463-0392
MARK A. MARSHALL
Mark.Marshall@ctr.com

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

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

MT. PLEASANT FIRE DEPARTMENT
804 EAST HIGH STREET
MT. PLEASANT, MI 48858
(989) 779-5100 EXT 5122
SGT. RANDY KEELER
rkeeler@mt-pleasant.org

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

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

DRAIN COMMISSIONERS OFFICE
ISABELLA COUNTY BUILDING
200 NORTH MAIN STREET ROOM 140
MT. PLEASANT, MI 48857
(989) 772-0911
RICK JAKUBIEC
drain@isabellacounty.org

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

LEGEND

SYMBOLS

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

LINETYPES

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

HATCH PATTERNS

[Hatch Pattern]	ASPHALT - EXISTING
[Hatch Pattern]	ASPHALT - PROPOSED
[Hatch Pattern]	CONCRETE
[Hatch Pattern]	GRAVEL
[Hatch Pattern]	LANDSCAPING
[Hatch Pattern]	RIP-RAP

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
RENAISSANCE PUBLIC SCHOOL ACADEMY
PART OF THE SOUTHWEST 1/4
SECTION 13, T14N-R4W
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:

REVISIONS PER CLIENT	5-16-19
REVISIONS PER MT. PLEASANT FIRE	5-13-19

SUBMITTALS:

SUBMITTAL TO CLIENT	5-6-19
SUBMITTAL TO MT. PLEASANT FIRE	6-6-19
SUBMITTAL TO UNION TWP PLANNING	7-2-19

JOB NUMBER: 1901-005
SCALE: N/A
DRAWN BY: WRE
DESIGNED BY: N/A
CHECKED BY: TELB
SHEET NUMBER: 1 of 7



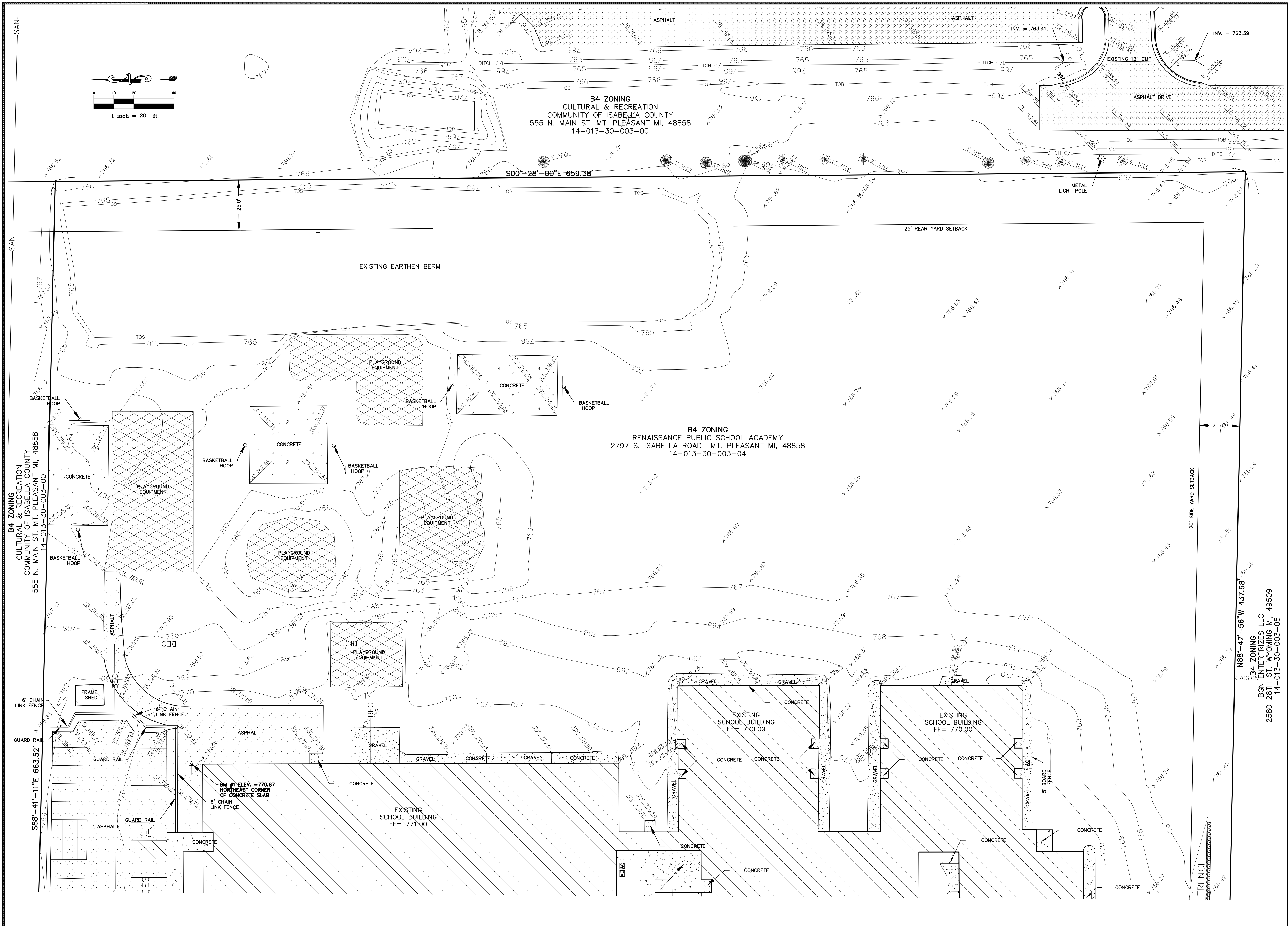
EXISTING TOPOGRAPHY
 RENAISSANCE PUBLIC SCHOOL ACADEMY
 PART OF THE SOUTHWEST 1/4
 SECTION 13, T14N-R4W
 UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

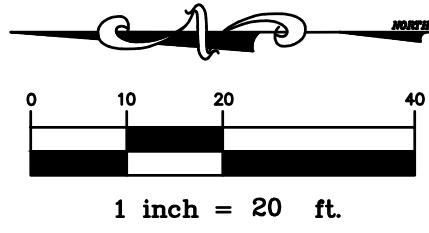
REVISIONS:
 REVISIONS PER CLIENT 5-16-19
 REVISIONS PER MT. PLEASANT FIRE 5-13-19

SUBMITTALS:
 SUBMITTAL TO CLIENT 5-6-19
 SUBMITTAL TO MT. PLEASANT FIRE 6-6-19
 SUBMITTAL TO UNION TWP PLANNING 7-2-19

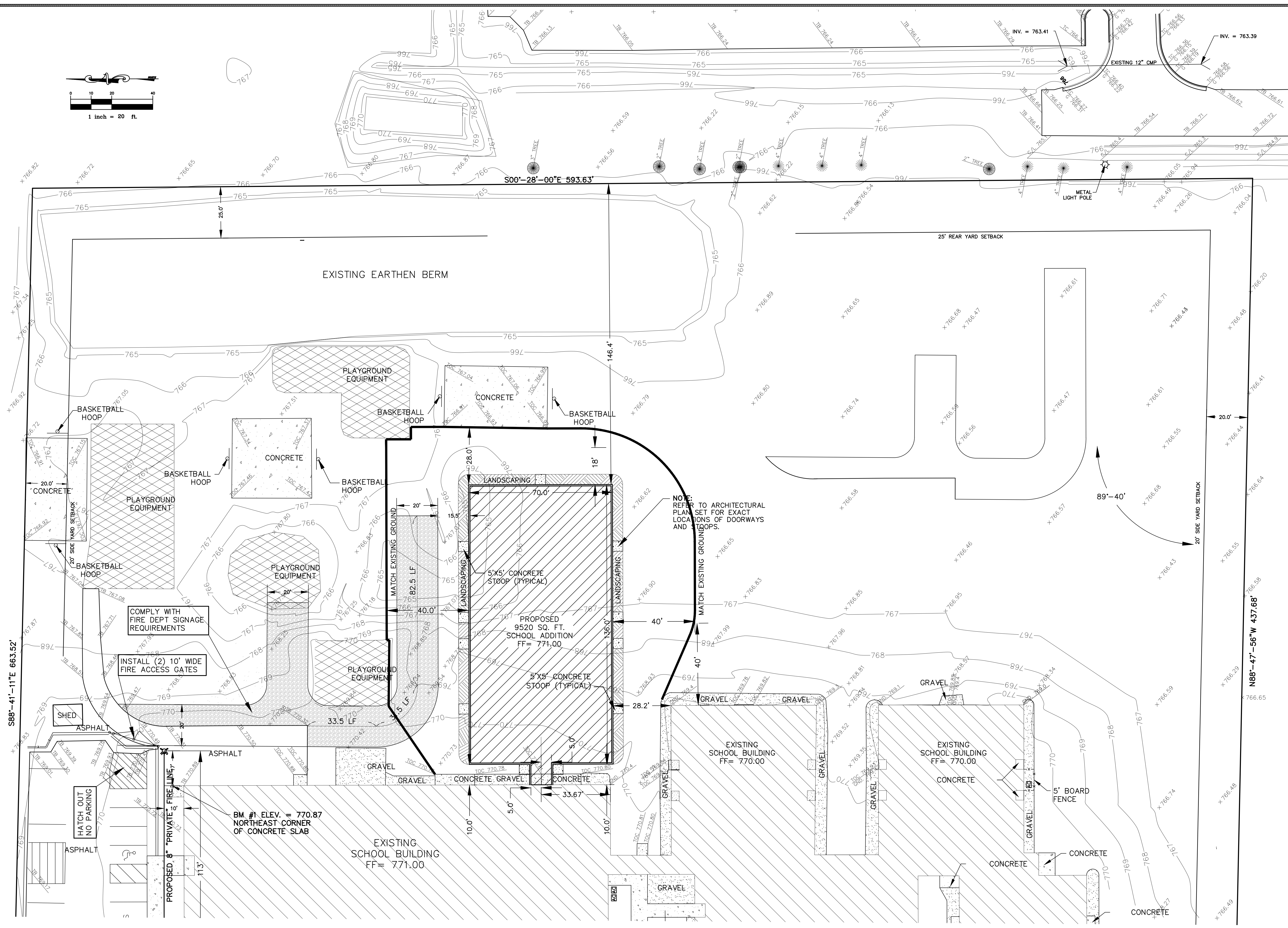
JOB NUMBER:
 1901-005
 DRAWN BY:
 WRE
 DESIGNED BY:
 N/A
 CHECKED BY:
 TELB

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

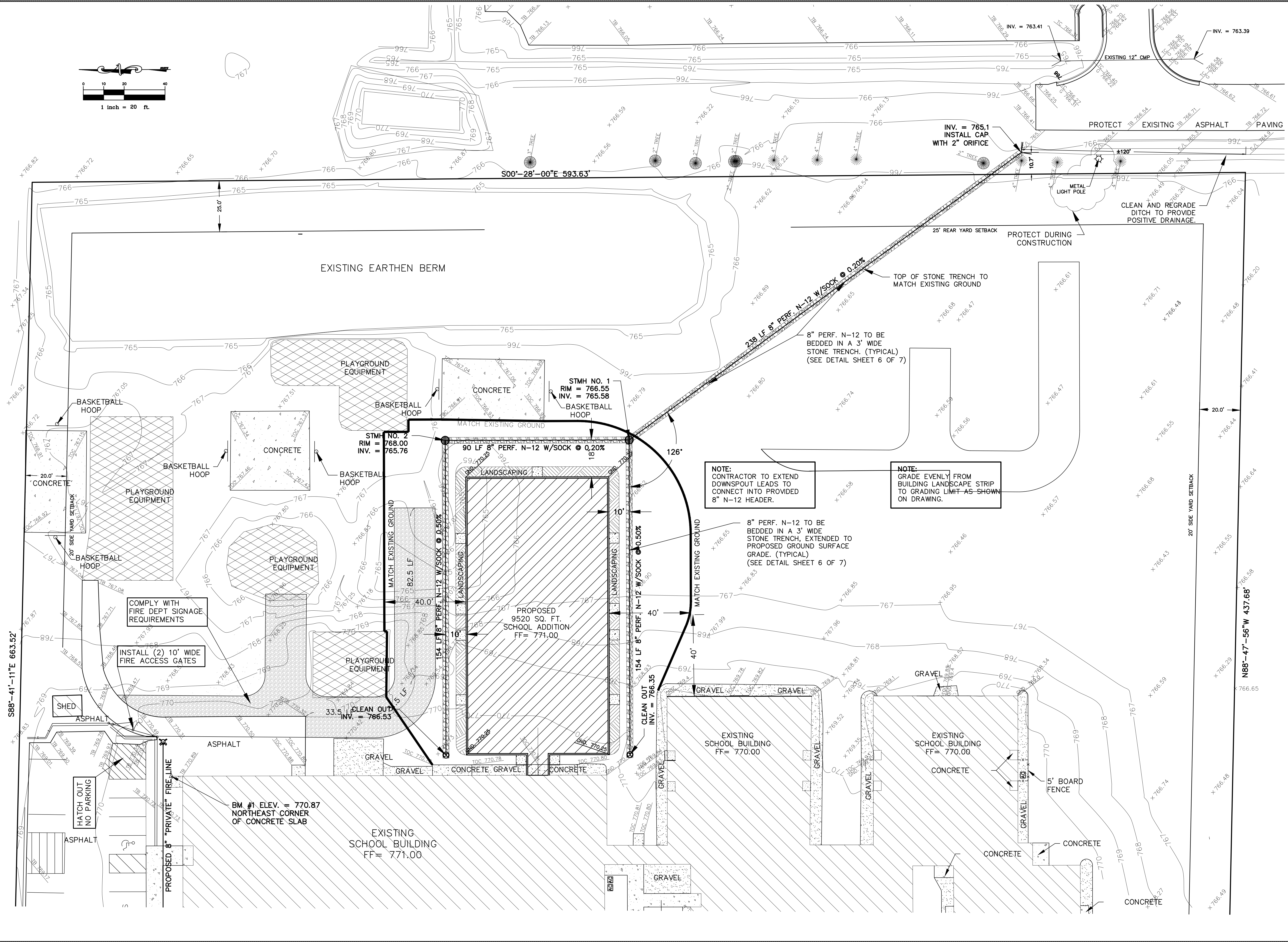
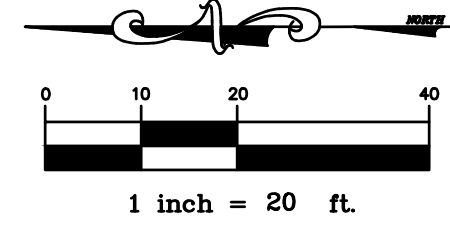




SITE PLAN
 RENAISSANCE PUBLIC SCHOOL ACADEMY
 PART OF THE SOUTHWEST 1/4
 SECTION 13, T14N-R4W
 UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN



SCALE 1" = 20'	JOB NUMBER: 1901-005	REVISIONS:
	DRAWN BY: WRE	REVISIONS PER CLIENT 5-16-19 REVISIONS PER MT. PLEASANT FIRE 5-13-19
SHEET NUMBER 3 of 7	DESIGNED BY: N/A	SUBMITTALS: SUBMITTAL TO CLIENT 5-6-19 SUBMITTAL TO MT. PLEASANT FIRE 6-6-19 SUBMITTAL TO UNION TWP PLANNING 7-2-19
	CHECKED BY: TELB	



S88°-41'-11"E 663.52'

S00°-28'-00"E 593.63'

N88°-47'-56"W 437.68'

EXISTING EARTHEN BERM

EXISTING SCHOOL BUILDING
FF= 771.00

PROPOSED 9520 SQ. FT. SCHOOL ADDITION
FF= 771.00

COMPLY WITH FIRE DEPT SIGNAGE REQUIREMENTS

INSTALL (2) 10' WIDE FIRE ACCESS GATES

HATCH OUT NO PARKING

BM #1 ELEV. = 770.87
NORTHEAST CORNER OF CONCRETE SLAB

STMH NO. 1
RIM = 766.55
INV. = 765.58

STMH NO. 2
RIM = 768.00
INV. = 765.76

INV. = 765.1
INSTALL CAP WITH 2" ORIFICE

NOTE:
CONTRACTOR TO EXTEND DOWNSPOUT LEADS TO CONNECT INTO PROVIDED 8" N-12 HEADER.

NOTE:
GRADE EVENLY FROM BUILDING LANDSCAPE STRIP TO GRADING LIMIT AS SHOWN ON DRAWING.

8" PERF. N-12 TO BE BEDDED IN A 3' WIDE STONE TRENCH, EXTENDED TO PROPOSED GROUND SURFACE GRADE. (TYPICAL) (SEE DETAIL SHEET 6 OF 7)

238 LF 8" PERF. N-12 W/SOCK @ 0.20%
TOP OF STONE TRENCH TO MATCH EXISTING GROUND

154 LF 8" PERF. N-12 W/SOCK @ 0.50%
CLEAN OUT INV. = 766.35

90 LF 8" PERF. N-12 W/SOCK @ 0.20%

PROTECT EXISTING ASPHALT PAVING

PROTECT DURING CONSTRUCTION

CLEAN AND REGRADE DITCH TO PROVIDE POSITIVE DRAINAGE.

25' REAR YARD SETBACK

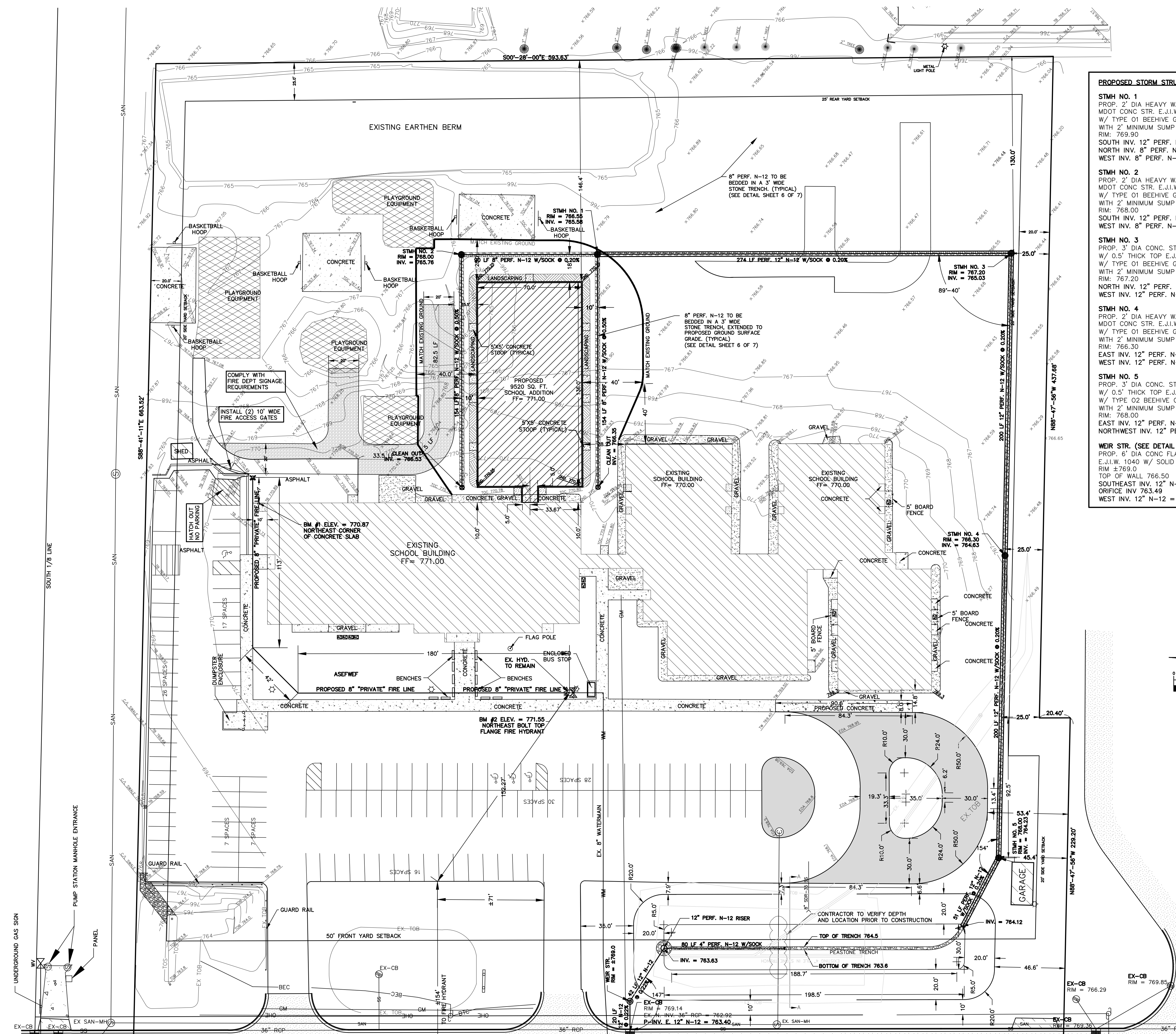
20' SIDE YARD SETBACK

5' BOARD FENCE

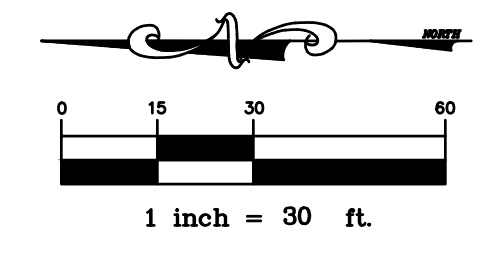


GRADING/STORM SEWER PLAN OPTION 1
RENAISSANCE PUBLIC SCHOOL ACADEMY
PART OF THE SOUTHWEST 1/4
SECTION 13, T14N-R4W
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

SCALE	1" = 20'
SHEET NUMBER	4 OF 7
JOB NUMBER:	1901-005
DRAWN BY:	WRE
DESIGNED BY:	N/A
CHECKED BY:	TELB
SUBMITTALS:	SUBMITTAL TO CLIENT 5-6-19 SUBMITTAL TO MT. PLEASANT FIRE 6-6-19 SUBMITTAL TO UNION TWP PLANNING 7-2-19
REVISIONS:	REVISIONS PER CLIENT 5-16-19 REVISIONS PER MT. PLEASANT FIRE 5-13-19



- PROPOSED STORM STRUCTURES**
- STMH NO. 1**
 PROP. 2' DIA HEAVY WALL,
 MDOT CONC STR. E.J.I.W. 2850
 W/ TYPE 01 BEEHIVE GRATE
 WITH 2' MINIMUM SUMP
 RIM: 769.90
 SOUTH INV. 12" PERF. N-12 W/SOCK = 765.58
 NORTH INV. 8" PERF. N-12 W/SOCK = 765.58
 WEST INV. 8" PERF. N-12 W/SOCK = 765.58
 - STMH NO. 2**
 PROP. 2' DIA HEAVY WALL,
 MDOT CONC STR. E.J.I.W. 2850
 W/ TYPE 01 BEEHIVE GRATE
 WITH 2' MINIMUM SUMP
 RIM: 768.00
 SOUTH INV. 12" PERF. N-12 W/SOCK = 765.76
 WEST INV. 8" PERF. N-12 W/SOCK = 765.76
 - STMH NO. 3**
 PROP. 3' DIA CONC. STR.
 W/ 0.5' THICK TOP E.J.I.W. 2850
 W/ TYPE 01 BEEHIVE GRATE
 WITH 2' MINIMUM SUMP
 RIM: 767.20
 NORTH INV. 12" PERF. N-12 W/SOCK = 765.03
 WEST INV. 12" PERF. N-12 W/SOCK = 765.03
 - STMH NO. 4**
 PROP. 2' DIA HEAVY WALL,
 MDOT CONC STR. E.J.I.W. 2850
 W/ TYPE 01 BEEHIVE GRATE
 WITH 2' MINIMUM SUMP
 RIM: 766.30
 EAST INV. 12" PERF. N-12 W/SOCK = 764.63
 WEST INV. 12" PERF. N-12 W/SOCK = 764.63
 - STMH NO. 5**
 PROP. 3' DIA CONC. STR.
 W/ 0.5' THICK TOP E.J.I.W. 1040
 W/ TYPE 02 BEEHIVE GRATE
 WITH 2' MINIMUM SUMP
 RIM: 768.00
 EAST INV. 12" PERF. N-12 W/SOCK = 764.23
 NORTHWEST INV. 12" PERF. N-12 W/SOCK = 764.23
- WEIR STR. (SEE DETAIL SHEET 7 OF 7)**
 PROP. 6' DIA CONC FLAT TOP
 E.J.I.W. 1040 W/ SOLID LID
 RIM ±769.0
 TOP OF WALL 766.50
 SOUTHEAST INV. 12" N-12 = 763.54
 ORIFICE INV 763.49
 WEST INV. 12" N-12 = 763.44

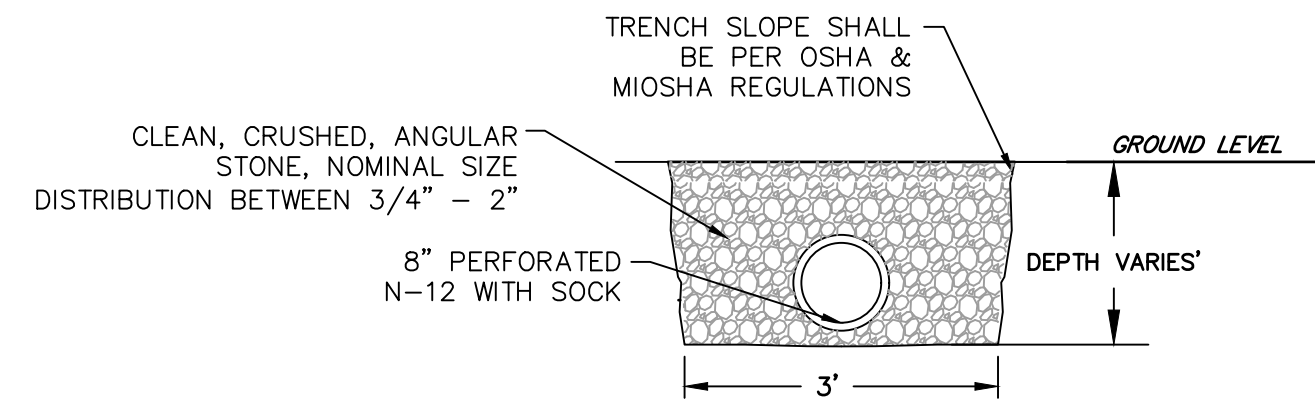


CMS & D
 SURVEYING / ENGINEERING
 2257 EAST BROOMFIELD ROAD
 MT. PLEASANT, MICHIGAN 48858
 PHONE: (989) 775-0756
 FAX: (989) 775-5012
 EMAIL: info@cms-d.com



GRADING / STORM SEWER PLAN OPTION 2
 RENAISSANCE PUBLIC SCHOOL ACADEMY
 PART OF THE SOUTHWEST 1/4
 SECTION 13, T14N-R4W
 UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

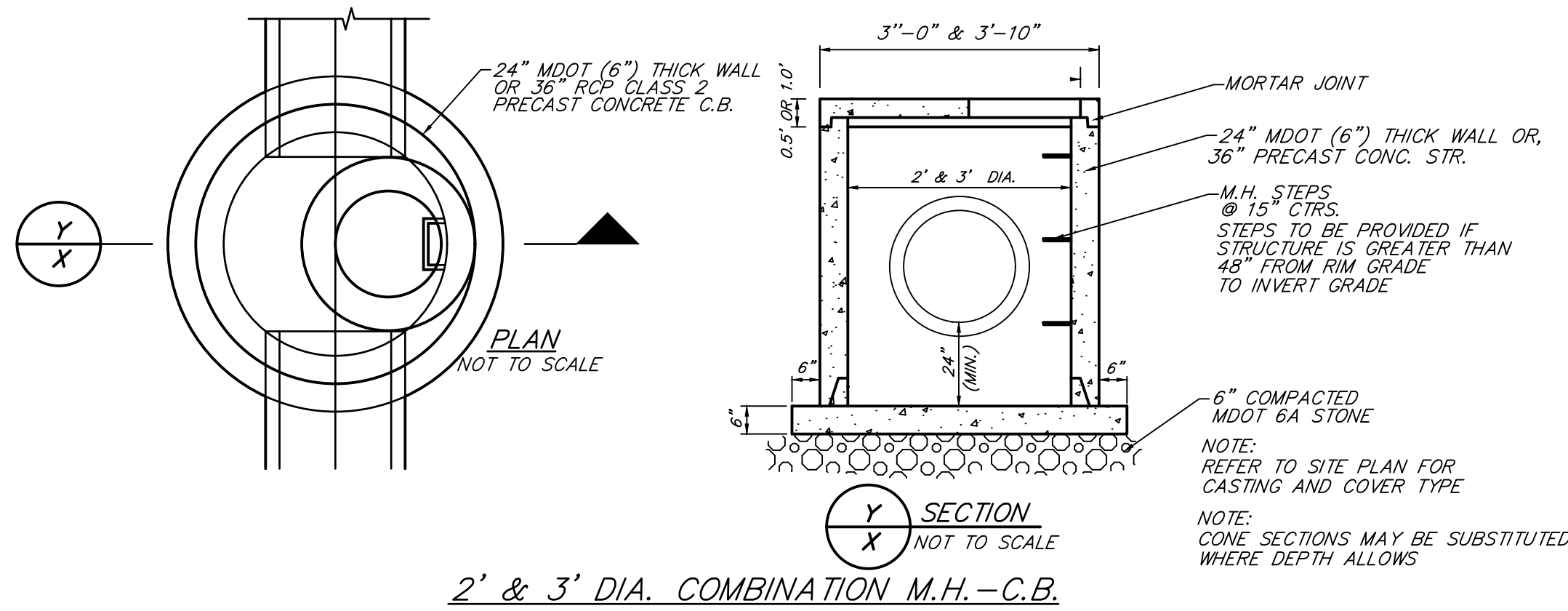
SCALE	1" = 30'
SHEET NUMBER	5 OF 7
JOB NUMBER:	1901-005
DRAWN BY:	WRE
DESIGNED BY:	N/A
CHECKED BY:	TELB
REVISIONS:	SUBMITTALS: SUBMITTAL TO CLIENT 5-6-19 SUBMITTAL TO MT. PLEASANT FIRE 6-6-19 SUBMITTAL TO UNION TWP PLANNING 7-2-19 REVISIONS PER CLIENT 5-16-19 REVISIONS PER MT. PLEASANT FIRE 5-13-19



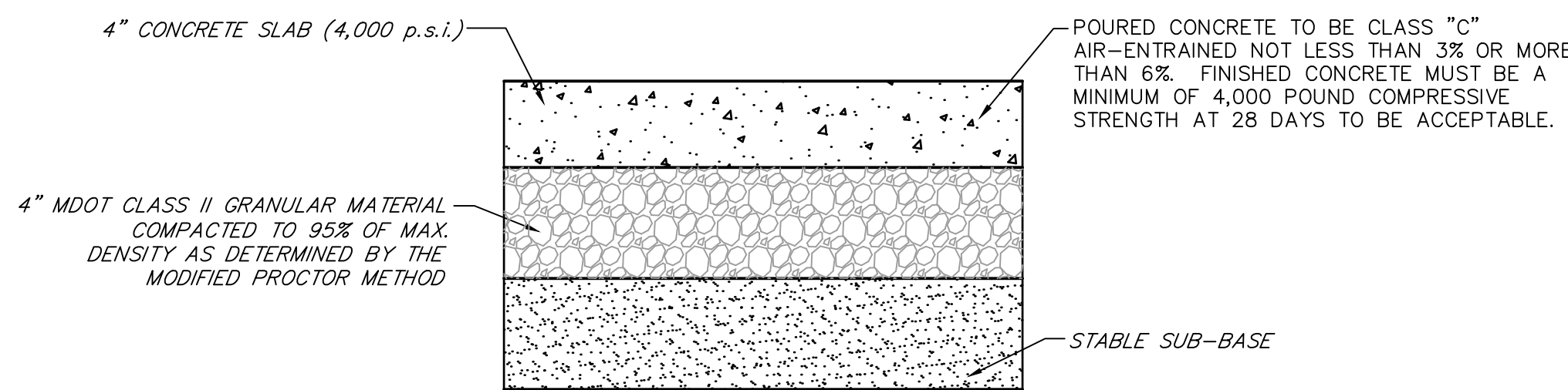
3' WIDE TRENCH DETAIL
NOT TO SCALE

TRENCH WIDTH CHART

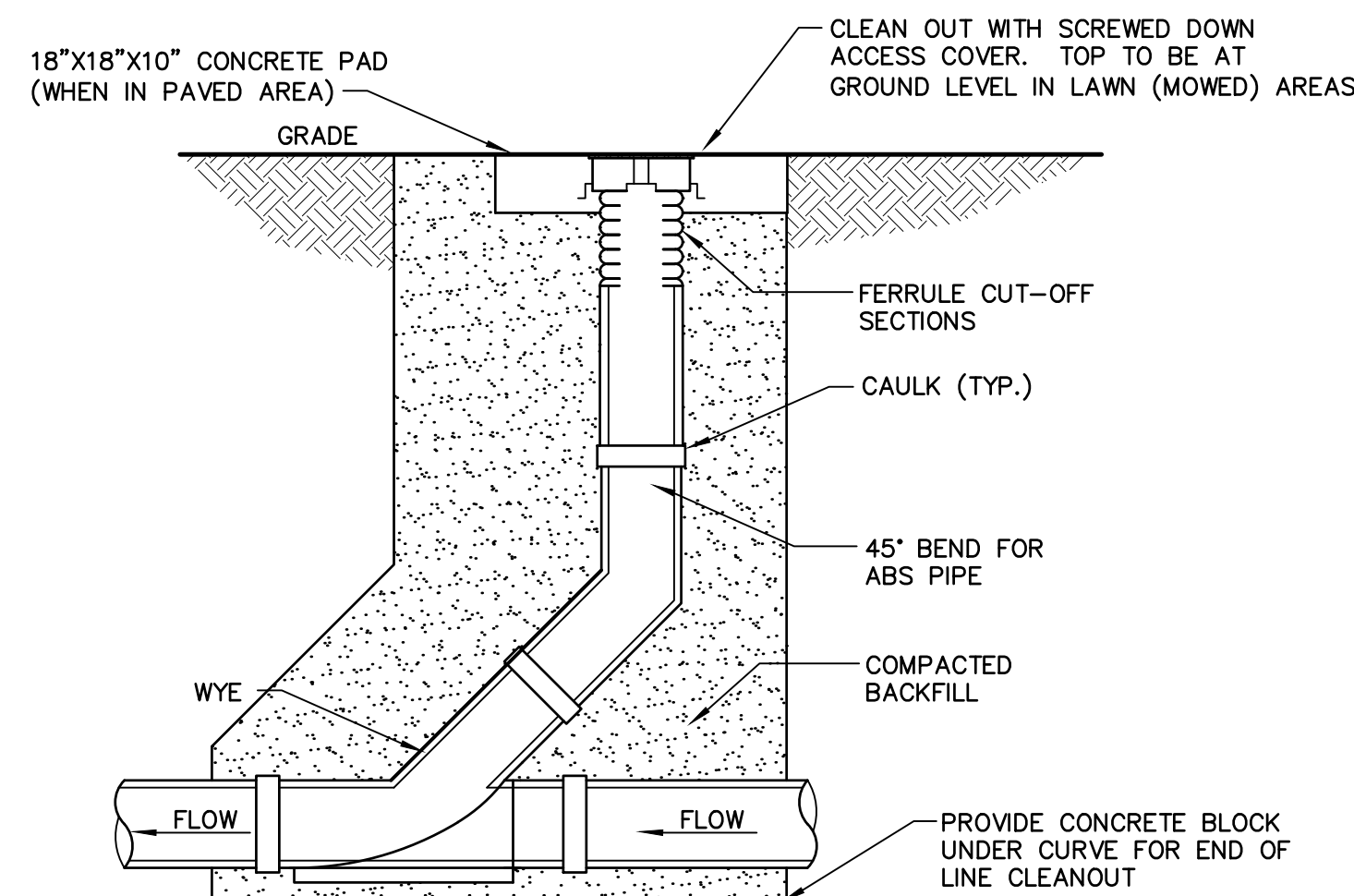
PIPE SIZE	MINIMUM	MAXIMUM
8" & 10"	24"	30"
12" & 15"	30"	36"
18"	36"	40"
21"	42"	42"
24"	42"	46"
27"	45"	49"
30"	49"	53"
36"	59"	60"
LARGER THAN 36"	I.D. +20"	I.D. +24"



2' & 3' DIA. COMBINATION M.H.-C.B.



CONCRETE CROSS-SECTION
NOT TO SCALE



CLEAN OUT DETAIL
NOT TO SCALE

STORM WATER CALCULATIONS:

Allowable Discharge (0.10 cfs/acre) - 0.22 acres * 0.10 cfs/acre = 0.022 cfs
 Total Contributing Area = 9520 sq. ft. 0.22 acres
 Total (NEW) Impervious Area = 9520 sq. ft. 0.22 acres
 Total (NEW) Pervious Area = -9,520 sq. ft. 0.22 acres
 Design Ponding Elevation = 766.50
 Invert of restrictor elevation = 765.10

Restrictor Calculation

Formula: $a = Qa / 0.62[64.4(h)]^{1/2}$
 $a =$ Area of orifice in sq. ft.
 $Qa =$ Allowable outflow
 $h = (2/3)*(766.50-765.10=1.40) = 0.93$
 $a = 0.022 \text{ cfs} / 0.62 [(64.4)*(0.93)]^{1/2}$
 $a = 0.004585 \text{ sq. ft.}$
 $a = (D^2) / 4 = D = 0.0764 \text{ ft} = 0.917 \text{ inches (USE 2\" ORIFICE)}$

2" Restrictor Calculation

Formula: $a = Qa / 0.62[64.4(h)]^{1/2}$
 $a =$ Area of orifice in sq. ft. = $0.0218 = 2" \text{ ORIFICE}$
 $Qa =$ Allowable outflow to be calculated
 $h = (2/3)*(766.50-765.10=1.40) = 0.93'$
 $Qa = (0.0218) * 0.62 [(64.4)*(0.93)]^{1/2}$
 $Qa = 0.105 \text{ cfs FOR 2" ORIFICE}$

PROVIDED STORAGE VOLUME WITHIN PIPING & STONE TRENCH

TOTAL LENGTH OF 8" PIPING = 638 LF
 AREA OF 8" PIPE = $3.14 * (D * D) / 4 = 0.35 \text{ SF}$
 TOTAL VOLUME WITHIN PIPING = 223 CF

TOTAL LENGTH OF STONE TRENCH = 638 LF
 AVG AREA OF STONE TRENCH (1.5' * 3') = 4.5 SF/LF
 TOTAL VOLUME OF STONE = $2,871 \text{ CF (LESS PIPE VOLUME)} = 2,648 \text{ CF}$
 VOLUME OF WATER WITHIN STONE = 40 PERCENT
 STORM WATER VOLUME IN STONE = $2,648 \text{ CF} * 0.40 = 1,059 \text{ CF}$

TOTAL VOLUME WITHIN SYSTEM = $1,282 \text{ CF AT } 766.75$

REQUIRED STORAGE 25 YEAR - 24 HOUR STORM = $1,131 \text{ CF}$

NOTE:

DURING RAINFALL EVENTS WHICH EXCEED TO DESIGN STORM (100 YR/24 HR, THE SYSTEM WILL OVERFLOW AND SPREAD ACROSS THE GRASS FIELD AREA. THE FLOW WILL DIRECT ITSELF TO THE SOUTHEAST AND EVENTUALLY DRAIN TO THE DITCHLINE ALONG THE PRIVATE DRIVE TO THE EAST OF THE PROJECT SITE.

THIS SYSTEM HAS BEEN DESIGNED TO ACCOUNT FOR THE TRANSFER OF 9,520 SF OF GRASS AREA TO ROOF AREA. THE RUNOFF COEFFICIENT CHANGE FROM 0.3 TO 0.9.

GENERAL NOTES:(OPTIONS 1 AND 2)

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) A MINIMUM OF 3 WORKING DAYS PRIOR TO ANY CONSTRUCTION OR 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. THE CONTRACTOR SHALL NOTIFY THE ENGINEER/SURVEYOR WHERE POSSIBLE CONFLICTS EXIST PRIOR TO BEGINNING CONSTRUCTION.

THE LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY GROUND CONDITIONS, EXISTING UTILITIES, LOT AND BUILDING DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THE PLANS. ARRANGE TO HAVE UTILITIES IDENTIFIED AND FLAGGED BEFORE STARTING CONSTRUCTION. THE OWNER ASSUMES NO LIABILITY FOR THE LOCATION OF UTILITIES. ALL DAMAGES MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

ALL CONSTRUCTION UNDER EXISTING OR PROPOSED PAVEMENT, EXISTING OR PROPOSED UTILITIES (INCLUDING LEADS), SHALL BE COMPLETELY BACKFILLED WITH SAND IN 12" LAYERS, AND COMPACTED TO NOT LESS THAN 95% OF ITS MAXIMUM UNIT WEIGHT, AS DETERMINED BY THE MODIFIED PROCTOR METHOD. THE COST IS TO BE INCLUDED IN THE UNIT PRICE BID FOR EACH ITEM.

THE CONTRACTOR SHALL CONFORM TO SOIL EROSION AND SEDIMENTATION CONTROL PART 91 OF PUBLIC ACT 451 OF 1994, AS AMENDED.

GEOTEXTILE FILTER BAGS SHALL BE USED AT ALL CATCH BASINS FOR SOIL AND SEDIMENTATION CONTROL. ALL CATCH BASINS SHALL BE CLEANED UPON COMPLETION OF THE PROPOSED PROJECT. COST FOR CLEANING THE CATCH BASINS SHALL BE INCLUDED IN THE COSTS FOR THE DRAINAGE STRUCTURES.

TOPSOIL SHALL BE STOCKPILED ON THE SITE AND USED AS TOPSOIL SURFACES AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. TOPSOIL WILL NEED TO BE SPREAD IN THE BASIN AREA TO A MINIMUM DEPTH OF 6 INCHES. THE BERMS SHOWN ON THE PLANS WILL NEED TO BE TOPSOIL OR TO HAVE A MINIMUM OF 6 INCHES ON TOPSOIL SPREAD OVER THEM. THE CURB ISLANDS WILL BE FILLED AS SPECIFIED WITH TOPSOIL. THE INTENT IS FOR THE CONTRACTOR AND THE LANDSCAPER TO USE THE EXISTING TOPSOIL TO COMPLETE THE PROJECT PRIOR TO HAULING ANY TOPSOIL ONTO THE SITE. UNSUITABLE TOPSOILS MUST BE DISPOSED OF DURING THE CLEANUP. ANY REMAINING STOCKPILES WILL NEED TO BE REMOVED. SOIL EROSION MEASURES MUST BE TAKEN TO ASSURE THAT THESE STOCKPILES ARE STABILIZED.

THE CONTRACTOR SHALL SEED AND FERTILIZE DITCH BANKS, SOILS PILES OR BANKS AND ANY OTHER DISTURBED AREAS AS SHOWN ON THE PLANS AND/OR DESCRIBED IN THE SPECIFICATIONS.

THE CONTRACTOR SHALL BACKFILL, COMPACT AND FINE GRADE ALL AREAS BETWEEN THE CURBS AND PAVEMENT AND THE PROPERTY LINES WITH TOPSOIL SUITABLE FOR LANDSCAPING. THE GRADES IN THESE AREAS WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE UNPAVED AREAS SHALL BE SMOOTHLY GRADED AND THE SURFACE STABILIZED BY SEEDING AS STATED ON THE PLANS. THE MAXIMUM DESIRABLE SLOPE IS 3 HORIZONTAL TO 1 VERTICAL, UNLESS OTHERWISE STATED.

THE CONTRACTOR SHALL FURNISH AND INSTALL PLAIN RIP-RAP BANK PROTECTION IN AREAS WHERE BANK EROSION WILL MOST LIKELY OCCUR OR AS DIRECTED BY THE ENGINEER.

BROKEN CONCRETE AND DEBRIS SHALL BE CONSIDERED WASTE TO BE DISPOSED OF BY THE CONTRACTOR.

ALL DEWATERING REQUIRED FOR CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE BID.

ALL JOINTS AT INTERSECTION APPROACHES AND DRIVEWAYS SHALL BE SAWCUT WITH BUTT-JOINTS. THE COST SHALL BE INCLUDED WITH THE PAYMENT FOR EXCAVATION.

THE CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES ON THE PROJECT. THE COST IS TO BE INCLUDED IN THE LUMP SUM FEE.

ALL WATER VALVE BOXES, ELECTRICAL BOXES, GAS VALVES AND ANY OTHER EXISTING UTILITY STRUCTURES ON THE SITE SHALL BE ADJUSTED TO FINISHED GRADE. THE COST SHALL BE INCLUDED IN THE LUMP SUM FEE.

GENERAL NOTES:(OPTIONS 1 AND 2)

THE SANITARY SEWER AND WATERMAIN MUST CONFORM TO UNION TOWNSHIP STANDARDS AND SPECIFICATIONS. SHOULD THERE BE A CONFLICT BETWEEN THE PLANS, NOTES, DETAILS AND SPECIFICATIONS, THE UNION TOWNSHIP STANDARDS SHALL GOVERN. THE CONTRACTOR WILL NOTIFY THE ENGINEER AS SOON AS A CONFLICT IS FOUND. INSTALLATION OF THESE UTILITIES SHALL BE COORDINATED BY THE CONTRACTOR WITH THE UNION TOWNSHIP DEPARTMENT OF PUBLIC WORKS DIRECTOR.

ELECTRIC SERVICES TO THE BUILDING AND PARKING LOT LIGHTING SHALL BE UNDERGROUND. SITE CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR IN REGARDS TO CONDUIT SLEEVES.

ALL SERVICE LINES ARE SHOWN FOR REFERENCE ONLY. THE EXACT LOCATIONS TO BE DETERMINED BY THE OWNER AND/OR UTILITY COMPANY.

INSTALLATION OF GAS, ELECTRIC AND TELEPHONE SERVICES (INCLUDING TRANSFORMER PAD LOCATIONS) SHALL BE COORDINATED BY THE CONTRACTOR WITH THE RESPECTIVE UTILITY COMPANIES AND THE ARCHITECT/ENGINEER

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION PERMITS REQUIRED FOR WORKING WITHIN THE ROAD RIGHT-OF-WAY PRIOR TO COMMENCING CONSTRUCTION, WITHIN THESE AREAS.

ROOF WATER FROM THE BUILDING SHALL BE DIRECTED TO DRAIN TO THE PROVIDED LEADS.

THE PROPOSED ELEVATIONS SHOWN ARE TOP OF WALK, TOP OF CURB, FINISHED ASPHALT SURFACE AND GUTTER PAN ELEVATIONS, UNLESS OTHERWISE NOTED.

ALL DRIVEWAY APPROACHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH ISABELLA COUNTY ROAD COMMISSION STANDARDS.

CONSTRUCTION PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF MICHIGAN, COUNTY OF ISABELLA AND UNION TOWNSHIP.

DIMENSIONS SHOWN ON THE PLANS ARE GIVEN TO THE BACK OF CURB, FACE OR BACK OF WALK OR THE BUILDING OUTSIDE LINES.

STANDARD PARKING SPACES SHALL BE 10 FEET BY 18 FEET. THE SPACES ARE TO BE INDICATED BY 4 INCH WIDE WHITE LINES. THE PAINT LINES ON THE SITE, EXCEPT NEAR THE BUILDING, SHALL CONFORM TO THE ENGINEER'S PLAN.

CONCRETE CURBING SHALL BE 4000 PSI CONCRETE.

ALL ABANDONED CURB STOP BOXES SHALL BE REMOVED AND SALVAGED FOR THE UNION TOWNSHIP DEPARTMENT OF PUBLIC WORKS.

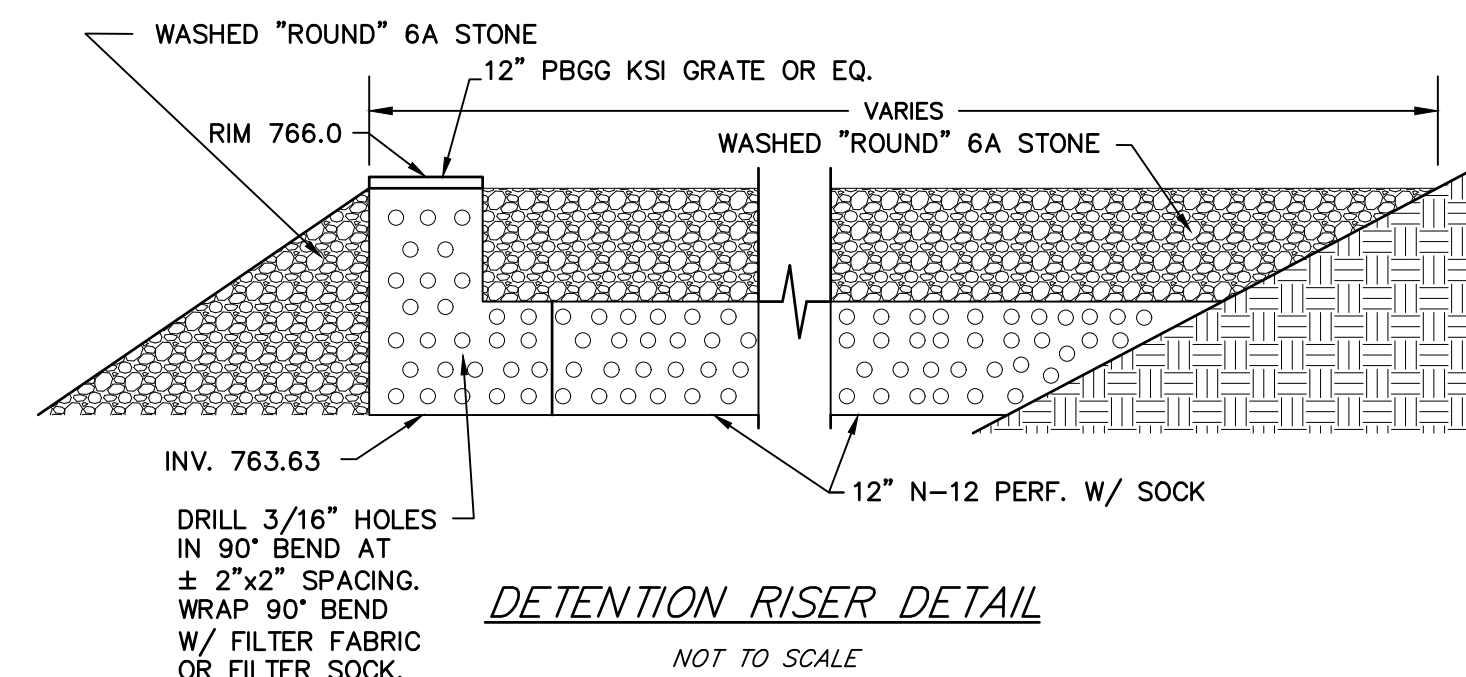
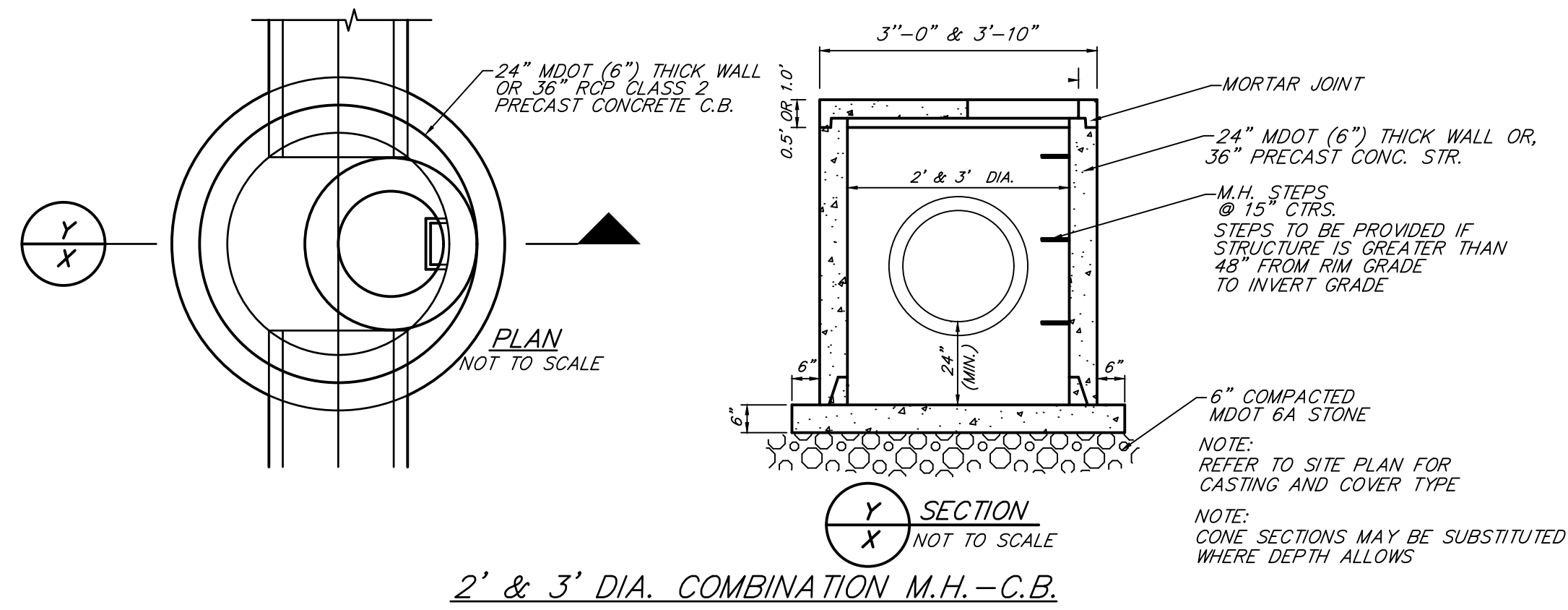
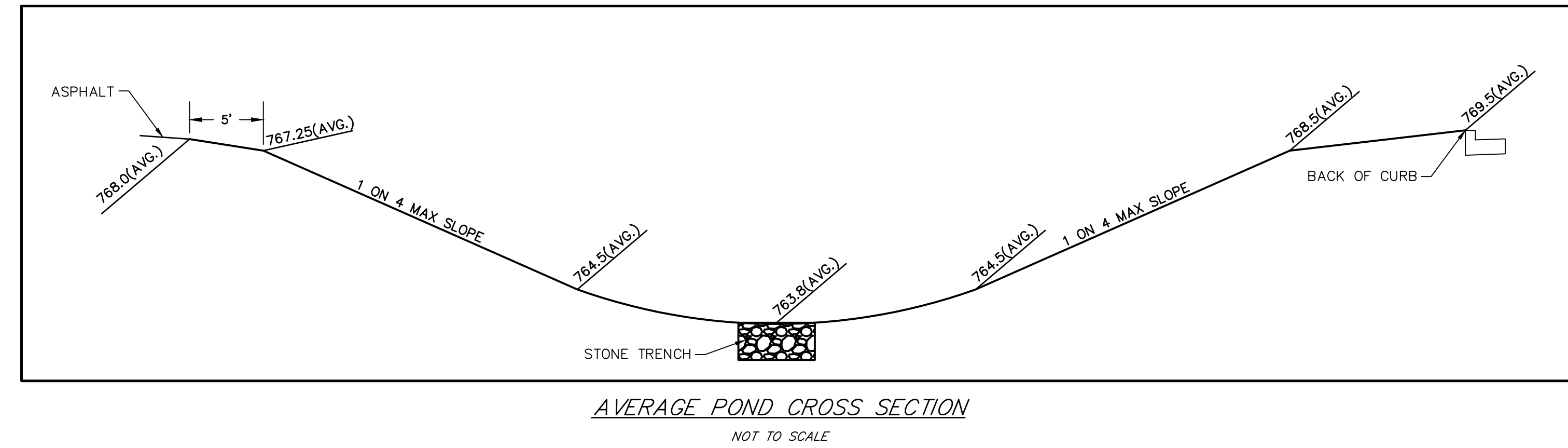
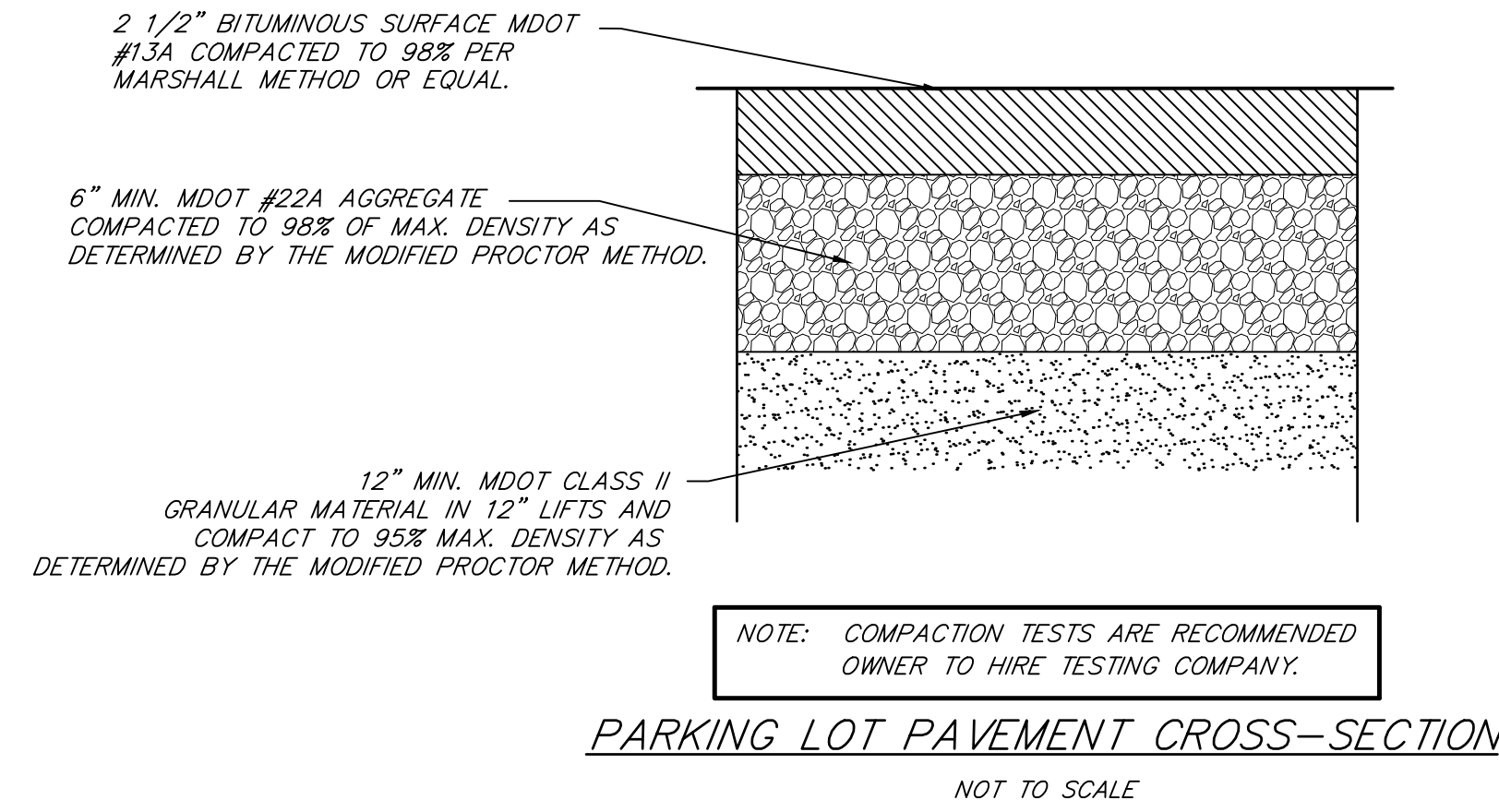
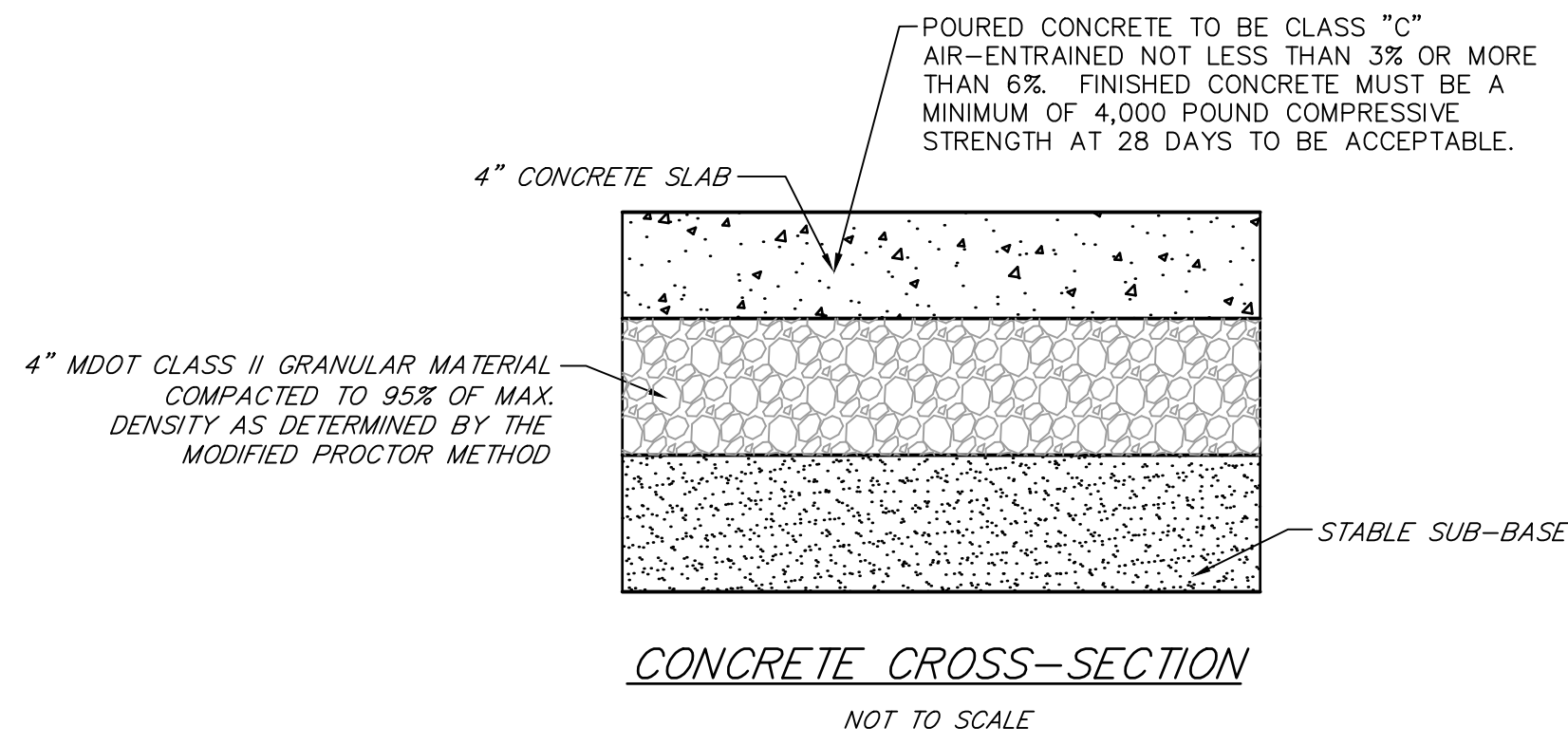


REVISIONS:
 REVISIONS PER CLIENT 5-16-19
 REVISIONS PER MT. PLEASANT FIRE 5-13-19

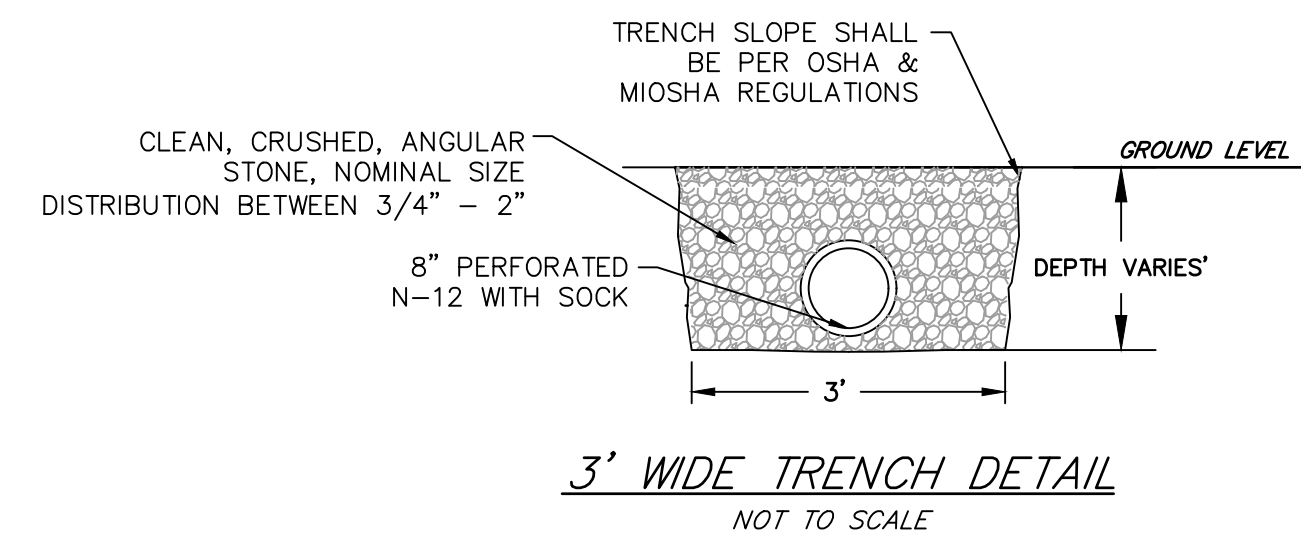
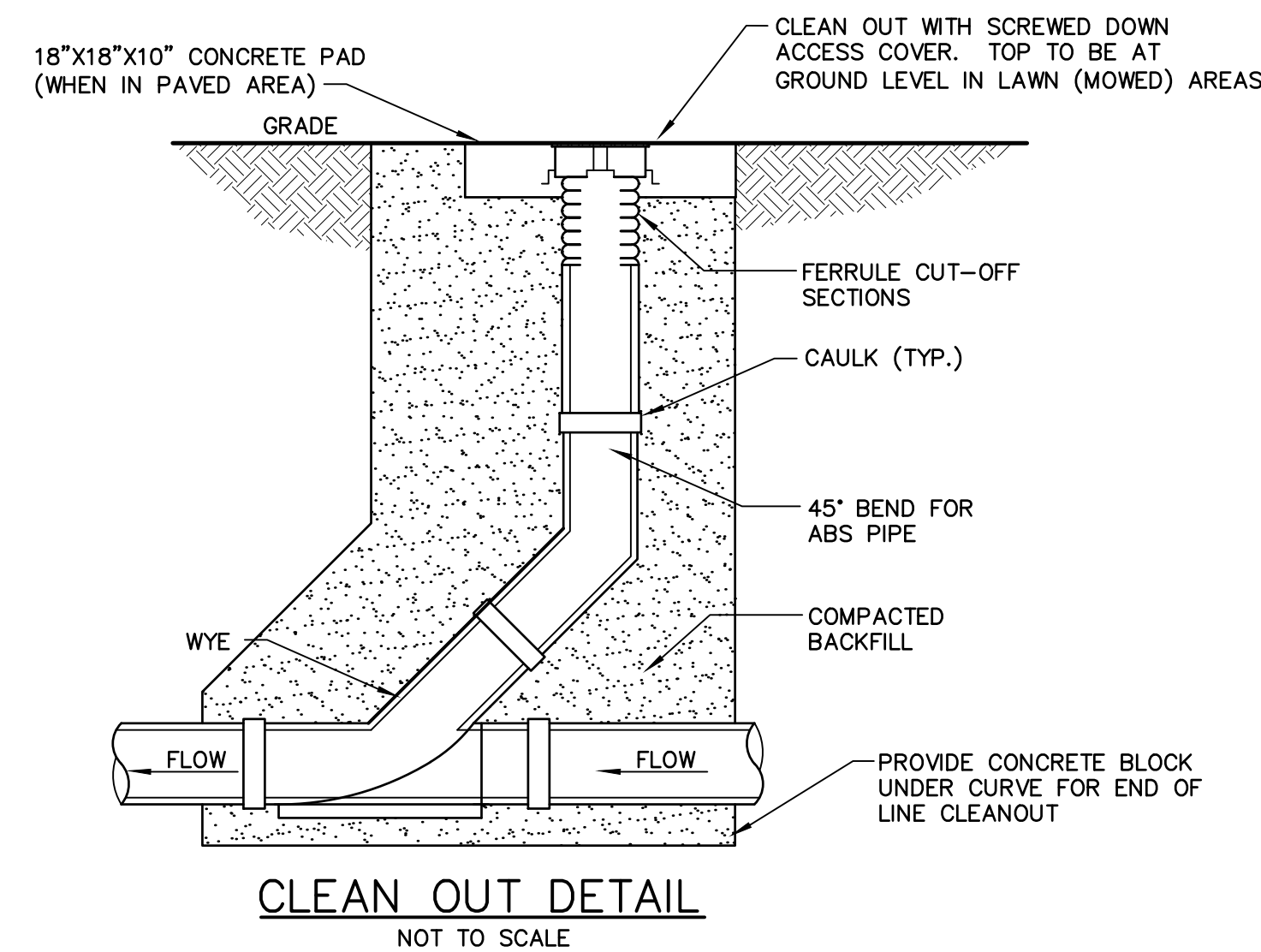
SUBMITTALS:
 SUBMITTAL TO CLIENT 5-6-19
 SUBMITTAL TO MT. PLEASANT FIRE 6-6-19
 SUBMITTAL TO UNION TWP PLANNING 7-2-19

JOB NUMBER:
 1901-005
 DRAWN BY:
 WRE
 DESIGNED BY:
 N/A
 CHECKED BY:
 TELB

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

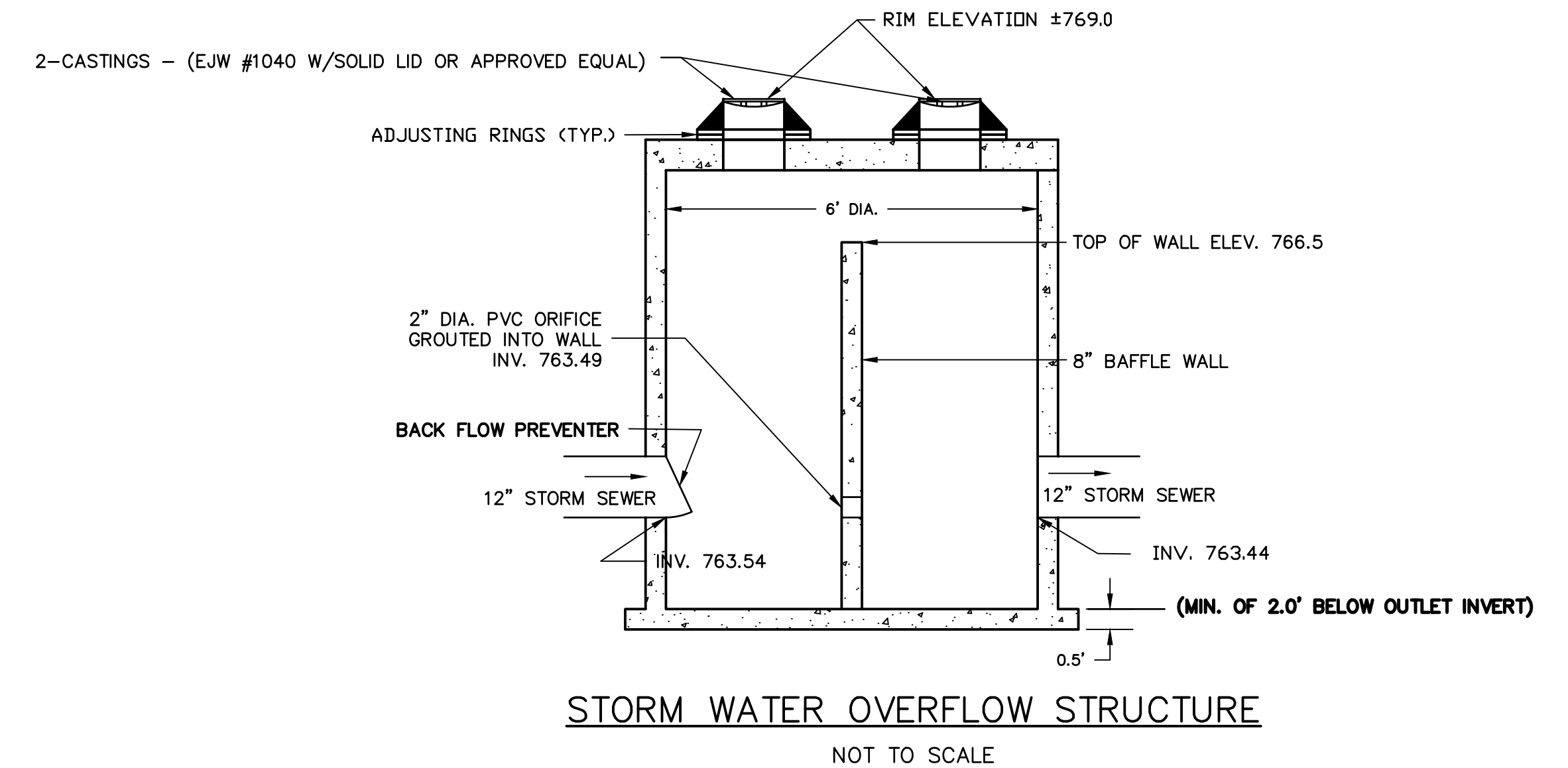


- BAFFLE WALL CONSTRUCTION NOTES**
1. Baffle wall to be constructed of 8" concrete block with smooth-raked joints.
 2. Epoxy #4 reinforcing bars into the sidewalls and base of the precast structure at 8" spacing. Bars are to extend across the entire width of the structure.
 3. Place #4 reinforcing bars in the baffle wall vertically at 12" spacings. The vertical bars to horizontal bars.
 4. Grout-fill all concrete block.
 5. Coat entire baffle wall with Xypex waterproofing or approved equal.



TRENCH WIDTH CHART

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



REVISIONS:
REVISIONS PER CLIENT 5-16-19
REVISIONS PER MT. PLEASANT FIRE 5-13-19

SUBMITTALS:
SUBMITTAL TO CLIENT 5-6-19
SUBMITTAL TO MT. PLEASANT FIRE 6-6-19
SUBMITTAL TO UNION TWP PLANNING 7-2-19

JOB NUMBER: 1901-005
DRAWN BY: WRE
DESIGNED BY: N/A
CHECKED BY: TELB

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



Peter Gallinat, Township Planner
pgallinat@uniontownshipmi.com
2010 South Lincoln
Mt. Pleasant, MI 48858
Phone 989-772-4600 Ext. 241
Fax 989-773-1988

TO: Planning Commission
FROM: Township Planner

New Business

SUBJECT: B) SUP 2019-05 Self Storage buildings at S. Park Pl.

Applicant: A & K Real Estate Holdings LLC (authorized by owner)

Owner: Acoustical Land LLC

Location: S. Park Pl Rd. MT PLEASANT, MI 48858 PID 14-011-30-001-14

Current Zoning: B-4 (General Business District)

Adjacent Zoning: I-1 and B-4

Future Land Use/Intent: 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.

Current Use: Vacant

Reason for Request: Self storage buildings. Expanding business from parcel to the south.

History: The existing self storage located to the south is proposing an expansion. The proposed expansion is for the parcel to the north. The existing self storage buildings are located on a I-1 parcel. The new proposed self storage buildings are located on a B-4 parcel.

Objective of board: Within a reasonable time following the public hearing, the Planning Commission shall review the application for the special use permit, testimony received at the public hearing, and other materials submitted in relation to the request and make a recommendation to the Township Board. Approving or denying the special use application shall be in accord with the criteria for approval stated in Section 30.3 and such other standards contained in this Ordinance that relate to the special uses under consideration.

Recommendation from Township Planner

Following a public hearing the Commission will need to review the SUP request from the requirements listed under sections 30.3.A and 30.4.U of the Zoning Ordinance. A preliminary site plan has been provided for visual purposes only. At this time I would recommend approval on the condition that a site plan is approved.

Peter Gallinat
Township Planner

APPLICATION FOR A SPECIAL USE PERMIT

I (we) A & K Real Estate Holdings LLC OWNERS OF PROPERTY AT
South Park Place LEGAL DESCRIPTION AS FOLLOWS:

See Attached Purchase Agreement

Respectfully request that a determination be made by the Township Board on the following request:

I. Special Use For Construction of self-storage facility

II. Junk Yard Permit

.....
Note: Use one of the sections below as appropriate. If space provided is inadequate, use a separate sheet.

I. Special Use Permit is requested for Construction of self-storage facility

Give reason why you feel permit should be granted: Adjoining parcel is developed with self-storage as well as parcel is master planned for industrial use.

II. Junk Yard Permit requirements are:

Location of property to be used _____

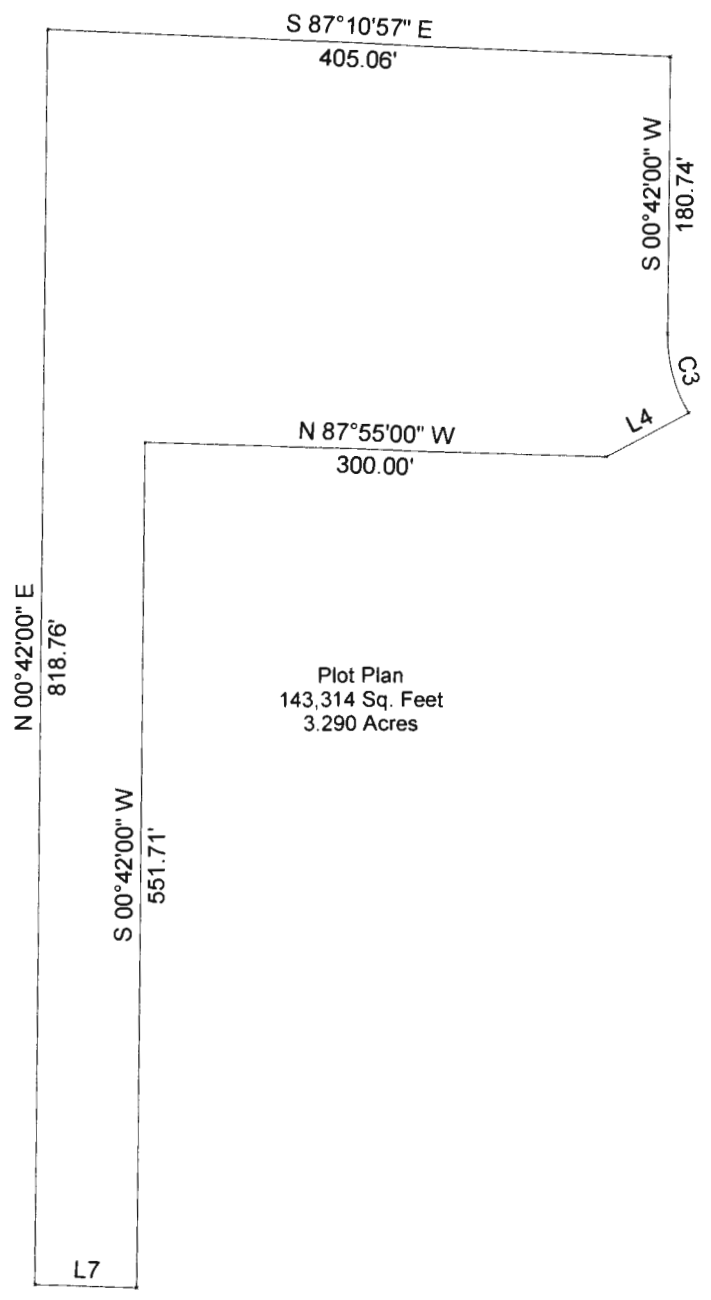
Zoning of the area involved is B-4, General Business District

Zoning of the abutting areas I-1, Industrial & B-4, General Business District

.....
Fees \$350.00 Signature of Applicant _____

Date 7/29/2009

989-775-5050



Plot Plan
143,314 Sq. Feet
3.290 Acres

Plot Plan		
DATE: 5/13/2019	SCALE: 1" = 125'	DRAWN BY: ALJ

PURCHASE AGREEMENT

This Purchase Agreement (the "Agreement") is entered into on May 22, 2019, by and between Acoustical Land, L.L.C., a Michigan limited liability company, of 427 W. Morley Drive, Saginaw, MI 48601 ("Seller"), and A & K Real Estate Holdings, LLC, of 1414 W. High Street, Mt. Pleasant, MI 48858, on behalf of an entity to be formed, ("Buyer"), on the terms and conditions set forth below.

1. **Background.** Seller is the owner of a parcel of real property located in the Charter Township of Union, Isabella County, Michigan, as described in Exhibit A (Legal Description), which Buyer desires to purchase consisting of approximately 3.29 acres of land as described in Exhibit A (the Premises). This Agreement sets forth the terms and conditions on which Buyer agrees to purchase the Premises from Seller.

2. **Purchase and Sale.** Seller agrees to sell the Premises to Buyer, and Buyer agrees to purchase the Premises from Seller, together with all easements, rights, hereditaments, and appurtenances, on the terms and conditions set forth below. If Buyer does not elect to terminate this Agreement during the Due Diligence Period or Approval Period as described below, this Agreement shall become binding on Buyer to purchase the Premises.

3. **Purchase Price.** At closing, Buyer shall pay Seller a purchase price for the Premises of _____ Dollars in immediately available funds ("Purchase Price"), less the Deposit as described below.

4. **Earnest Money Deposit.** Upon signing this Agreement, Buyer shall deposit with Mt. Pleasant Abstract & Title as escrow agent ("Escrow Agent"), Five Thousand 00/100 (\$5,000.00) Dollars in certified funds (the "Initial Deposit"). Escrow Agent will hold and disburse that earnest money as provided below. The Initial Deposit, together with any interest (cumulatively, the "Deposit"), shall constitute a credit against the Purchase Price at closing. The Deposit shall be placed in an interest-bearing account with the interest to accrue and be a part of the Deposit and be returned to Buyer or paid to Seller as part of the Deposit as stated in this Agreement.

5. **Due Diligence and Approval Time Periods.** Buyer shall have the right to conduct a 90 day due diligence review of the Premises. Closing shall be contingent upon the completion and acceptance of Buyer of the following (collectively referred to as the Due Diligence Period):

a. Within 30 day of the execution of this agreement Seller shall provide Buyer with a Title Insurance Commitment, with permitted exceptions an accurate legal description and/or survey of the Premises to the Buyer. Buyer may terminate this Agreement if Title, an accurate description or survey is not provided within 30 days of the effective date of this Agreement. Buyer has the 90 day due diligence period to accept the Title with proposed exceptions, survey and legal description.

b. Buyer shall order an environmental report within 14 days of the effective date of this Agreement, at Buyer's expense, and Buyer shall tender the report to Seller. Buyer may terminate this Agreement if it determines, in its sole discretion that the environmental study is unacceptable for its proposed use or uses. Seller may retain the complete environmental report if the sale is terminated.;

c. Buyer shall obtain site plan approval from the Charter Township of Union for the Premises within 90 days of the effective date of this Agreement. The site plan and applications submitted by Buyer for approval by the city, county, and state regulatory authorities shall be for the use asintended by buyer. If Buyer has not received the land use or site plan approvals required by the Charter Township of Union, Isabella County or the State of Michigan for its development of the Premises by the expiration of the 90-day period, Buyer may seek to extend this Agreement to provide more time to receive those approvals (the Approval Period) by delivering written notice of that election to extend to Seller (the Extension Notice), or it may terminate this Agreement by written notice and the Escrow Agent shall return the Initial Deposit to Buyer; and

d. Buyer shall obtain an acceptable loan within the initial Due Diligence Period. If Buyer is unable to secure acceptable financing within the initial Due Diligence Period, in its sole discretion, it may terminate this Agreement by written notice and the Escrow Agent shall return the Initial Deposit to the Buyer.

e. If, on or before the expiration of the 90 day due diligence period, Buyer gives notice to Seller, with a copy to Escrow Agent, that Buyer elects to terminate this Agreement, this Agreement will automatically terminate, Escrow Agent shall return the Initial Deposit to Buyer, and neither Seller nor Buyer shall have any further rights or obligations under this Agreement. If Buyer fails to give either an Extension Notice or a notice of termination of this Agreement within the Due Diligence period, Buyer shall be obligated to close on the terms stated in this Agreement without further extensions.

6. Buyer's Access to Premises. During the 90 day Due Diligence and Approval Periods, Buyer and its respective employees, agents, contractors, and invitees shall have reasonable access to the Premises for the purpose of inspecting and evaluating the Premises. While Buyer or its employees, agents, contractors, or invitees are on the Premises, (a) they shall not unreasonably interfere with any use of the Premises by Seller; (b) Seller shall not be liable for any damage, loss, or injury they cause; and (c) Buyer shall indemnify and hold Seller harmless from any damage, loss, or injury, including, without limitation, costs and expenses of investigating, defending, and settling or litigating any claim, including reasonable attorney fees, arising out of their presence on the Premises before the closing date. On completion of all such inspections and evaluations, Buyer shall return the Premises substantially to their prior condition.

7. Closing Date and Possession. Buyer and Seller shall close the sale and purchase of the Premises from Seller to Buyer (the Closing) within 30 days after the end of the Due Diligence Period or the Approval Period, if one is elected. The Closing shall take place at the offices of Mt. Pleasant Abstract & Title, 116 Court Street, Mt. Pleasant, MI 48858, or at another location mutually agreeable to Seller and Buyer.

8. Delivery of Documents. On the signing of this Agreement, Seller shall deliver to Buyer a copy of the following documents, if available:

a. a copy of the title insurance commitment for an owner's policy for the Premises prepared by _____ with an effective date after _____.

b. an ALTA/ACSM survey and legal description of the Development Site.

c. a wetland delineation of the Development Site.

9. Taxes and assessments. Current real estate taxes shall be prorated as of the date of Closing between Seller and Buyer based on the due date of the respective taxing authority. However, for purposes of this proration, taxes shall be deemed paid in advance. Seller and Buyer understand and acknowledge that the amount of any past due real estate taxes on the Premises not paid by the date of Closing may be deducted from the Purchase Price paid at Closing and be paid to the respective taxing authority at Closing.

10. Form of conveyance. At Closing, Seller shall grant and convey legal title to the Premises to Buyer pursuant to a warranty deed, subject only to (a) the lien of taxes on the Premises not yet due and payable; (b) the easements, covenants, conditions, and restrictions of record as shown on the title commitment delivered to Buyer as stated above; and (c) those easements, covenants, conditions, and restrictions recorded against the Premises by Seller. The deed shall state the consideration as "for good and valuable consideration," and Seller shall sign and file a transfer valuation affidavit to evidence the Purchase Price.

11. Condemnation. If all or any portion of the Premises are taken by the exercise of eminent domain or condemnation proceedings before Closing, Buyer may, at its option, terminate this Agreement by giving written notice to Seller and a copy to Escrow Agent. In the event of a condemnation proceeding as a result of which Buyer elects to terminate this Agreement, any deposit paid by Buyer shall be returned to Buyer. In the event of such a termination, this Agreement shall be null and void, and the parties shall have no further rights or obligations under this Agreement. If Buyer does not elect to terminate this Agreement in the event of the exercise of eminent domain, the Buyer shall accept title to the Premises without any reduction of the Purchase Price, and Seller shall assign to Buyer at Closing all of Seller's right, title, and interest in and to any resulting condemnation award.

12. Seller's Default. In the event of any default by Seller that continues without cure for 10 days after delivery by Buyer of notice to Seller, Buyer shall have the right (but

not the obligation) to terminate this Agreement by notice to Seller and Escrow Agent within 15 days after the end of the cure period allowed to Seller, or Buyer shall have, as its sole remedy, the right to enforce this Agreement by an action for specific performance. Notwithstanding anything in this Agreement to the contrary, in the event of such a termination, Escrow Agent, if it still holds the Initial Deposit, shall promptly return the Deposit it holds to Buyer.

13. **Buyer's Default.** In the event of any default by Buyer that continues without cure for 10 days after the delivery by Seller of notice to Buyer, Seller shall have the right (but not the obligation) to terminate this Agreement by notice to Buyer and Escrow Agent within 15 days after the end of the cure period allowed to Buyer, or Seller shall have, as its sole remedy, the right to enforce this Agreement by an action for specific performance. Notwithstanding anything in this Agreement to the contrary, in the event of such a termination, Escrow Agent, if it still holds the Initial Deposit, shall promptly deliver the Deposit it holds to Seller.

14. **Closing.** Seller shall prepare the closing documents and deliver them to Buyer for review and approval at least 10 days before closing. At closing, Seller shall be responsible for the payment of the state and county transfer taxes; the title insurance premium to issue a policy pursuant to the title commitment referenced above; the costs of having an land survey with corner staking of the Premises, certified to the Buyer as referenced above; the broker fee as described in Section 15; and the costs of any recording fees to record any documents to clear title. Buyer shall pay the fees necessary to record the deed and any other documents to transfer title. Buyer and Seller shall each pay their own attorney and other professional fees, and each shall pay one-half of any closing costs charged by any closing agent.

15. **Real Estate Broker.** Buyer and Seller represent and warrant to each other that neither party has retained a real estate broker claiming any right to a commission or compensation. Each party shall defend, indemnify and hold the other party harmless from and against any and all claims of brokers, finders or any like third party claiming any right to commissions or compensation by or through acts of such other party in connection herewith. In addition, Alan Johns, a principal of Buyer, is a broker; however, he will not be receiving any broker compensation in connection with this transaction. This Section 15 shall survive the expiration or termination of this Agreement or the Closing.

16. **Escrow terms.**

- a. On receipt by Escrow Agent of notice from Buyer electing to terminate this Agreement before the expiration of the Due Diligence Period or pursuant to Section 11 if it still holds the Deposit, Escrow Agent shall immediately return the Deposit to Buyer. If Escrow Agent has not received a termination notice before the expiration of the Due Diligence Period before any extension, Escrow Agent shall immediately deliver the Deposit to Seller. Notwithstanding the foregoing, on

receipt of a written notice signed by both Seller and Buyer. Escrow Agent shall immediately deliver the Deposit as instructed in that notice.

b. Seller and Buyer agree that Escrow Agent assumes no liability under this Agreement except that of the holder of the Deposit. In the event of any dispute whether Escrow Agent is obligated to deliver the Deposit or whether any given disbursement is to be made to Seller or Buyer, Escrow Agent shall not be obligated to make any disbursements but may hold the Deposit until receipt by Escrow Agent of authorization in writing, signed by both Seller and Buyer, directing the disposition of the Deposit. In the absence of any such authorization, Escrow Agent may hold the Deposit until the final determination of the rights of Seller and Buyer in an appropriate proceeding. If written authorization is not given or proceedings for determination are not begun and diligently continued, Escrow Agent shall have no obligation to bring an appropriate action or proceeding for leave to deposit the Deposit with a court of competent jurisdiction.

c. Seller and Buyer agree to jointly and severally indemnify, save, and hold Escrow Agent harmless from any liability resulting from Escrow Agent's duties, absent any commission or omission by Escrow Agent amounting to willful misconduct or gross negligence. Seller and Buyer agree to each pay one-half of any fee charged by Escrow Agent for its duties under this Agreement.

d. On disbursement of the Deposit in accordance with the Agreement, Escrow Agent shall be released and acquitted from any further liability under this Agreement, it being expressly understood that Escrow Agent's liability is limited by the terms and conditions set forth above.

17. Notices. Except as otherwise provided, all notices required under this Agreement shall be effective only if in writing or facsimile transmission and shall be either personally served, electronically transmitted, or sent with postage prepaid to the appropriate party at its address as set forth in the introductory paragraph of this Agreement. Notices to Escrow Agent shall be delivered to the Escrow Agent at its address provided above. Either party or Escrow Agent may change its address by giving notice of the change or a facsimile transmission number to the other two as provided in this section.

18. Entire Agreement. This Agreement and its exhibits constitute the entire agreement between the parties with respect to the subject matter of this Agreement, and all prior agreements with respect to the Premises between the parties, whether written or oral, shall be of no further force and effect. This Agreement may not be modified except by a written document signed by Seller and Buyer.

19. Applicable Law. This Agreement shall be applied, construed, and enforced in accordance with the laws of the State of Michigan, without giving effect to conflicts of law principles. Venue for any disputes under this Agreement shall lie in Ingham County, Michigan.

20. **Binding Effect.** This Agreement shall be binding on and inure to the benefit of the parties and their respective successors and permitted assigns. Seller and Buyer are permitted to assign this Agreement to affiliated business entities that are owned in total by either Seller or Buyer; but neither party may assign or otherwise transfer its interest under this Agreement to any other third party without the prior approval of the other party to this Agreement, which approval shall not be unreasonably withheld.

21. **Counterparts.** This Agreement may be executed in one or two counterparts, each of which will be an original and all of which together constitute one and the same document.

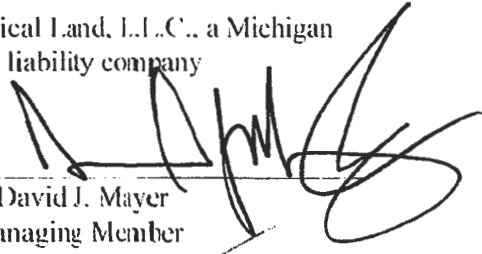
22. **Exhibits.** The following are exhibits to this Agreement:

a. Exhibit A- Legal description and drawing of the Development Site

23. **Effective date.** This Agreement has been signed and is effective as of ~~May~~ June 17, 2019

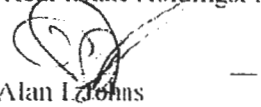
Dated: 6/17/2019

Acoustical Land, L.L.C., a Michigan limited liability company

By /s/ 

David J. Mayer
Its: Managing Member
A & K Real Estate Holdings, L.L.C

Dated: 5/31/2019

By /s/ 

Alan L. Johns
Its: Managing Member
Mt. Pleasant Abstract & Title

Dated: 6/27/19

By /s/ 

Its:

EXHIBIT A
LEGAL DESCRIPTION

Part of the Northeast Quarter (NE ¼) of the Southwest Quarter (SW ¼) of Section Eleven (11), Township Fourteen North (T14N), Range Four West (R4W), Charter Township of Union, Isabella County, Michigan, described as beginning at a point on the West N & S 1/8 line, which is South 01°00' West, 1348.96 feet along the West Section line and South 87°54' East, 1323.46 feet along the South, E & W 1/8 line and North 00°42' East, 551.71 feet along the West, N & S 1/8 line from the West ¼ corner of Section 11; thence North 00°42' East, 265.85 feet along the West N & S 1/8 line; thence South 87°10'57" East, 405.05 feet to the centerline of Park Place; thence South 00°42' West, 180.64 feet along said centerline; thence along said centerline on a curve to the left, having a radius of 100 feet on a chord bearing and distance of South 14°28' East, 52.33 feet; thence South 62°09'52" West, 60.07 feet, thence North 87°54' West, 366.0 feet to the point of beginning, containing 2.45 acres, more or less. Subject to the use of the Easterly 33.0 feet thereof as Park Place and subject to the use of the Westerly 66.00 feet thereof as an ingress-egress easement and subject to the use of 16.5 feet along the line bearing South 62°09'52" West as an ingress-egress easement.

ALSO, to include the 66 foot strip and the West 66 feet of the South 551.71 feet of the NE ¼ of the SW ¼, Section 11, T14N, R4W.

FAX ID: 14-011-30-001-14

A. General Requirements for Special Uses: The applicant shall follow these requirements and recommendations made by the Planning Commission after their review. The general requirements for all special uses are as follows:

1. The special use shall be designed, constructed, operated, and maintained in a manner harmonious with the character of adjacent property and the surrounding area.
2. The special use shall not change the essential character of the surrounding area.
3. The special use shall not interfere with the general enjoyment of adjacent property.
4. The special use shall not be hazardous to adjacent property or involve uses, activities, materials, or equipment that will be detrimental to the health, safety, or welfare of persons or property through the excessive production of traffic, noise, smoke, odor, fumes, or glare.
5. The special use shall be adequately served by essential public facilities and services; or it shall be demonstrated that the person responsible for the proposed special use shall be able to continually provide adequate services and facilities deemed essential to the special use under consideration. The said facilities or services shall be approved by the Central Michigan District Health Department.
6. When deemed necessary by the Township Board or Planning Commission, the use shall be adequately screened by distance and landscaping to protect the rights of all adjoining property.
7. The Township Board or Planning Commission, in connection with approval of any application, may require reasonable undertaking by the applicant to guarantee and assure by agreement, including a performance bond to be posted by the applicant or by some other reasonable surety arrangement at appropriate stages of the planned development, that the development will be executed in accordance with the approved plan.
8. That such use will be an asset to the Township.
9. Requirements and conditions of each individual special use permitted shall be complied with, unless otherwise mentioned within this Section.
10. Any special use permit may be revoked by the Union Township Board upon recommendation of the Union Township Planning Commission whenever the operation fails to comply with any of the required conditions or may be subject to the penalties of this Ordinance.
 - a) Approval of a special use permit shall be valid regardless of change of ownership, provided that all terms and conditions of the permit are met by any subsequent owner.
 - b) In instances where development authorized by a special use permit has not commenced within one (1) year from the date of issuance, the permit maybe reconsidered and/or voided at a regularly called meeting of the Planning Commission.

30.4 SPECIAL USES PERMITTED (X, NEW, 1993-6 ORDINANCE; Y, NEW, 1995-6 ORDINANCE)

The following special uses may be permitted within the specified Districts:

A. Adult Entertainment Activities: (Deleted as Special Use Permit, Ord 2005-03)

B. Airports, Public or Private, Provided:

Union Township
Zoning Ordinance

30-3

Special Use
Permits

8. All truck operations shall be directed away from residential streets, whenever practical.

9. All permit applications for excavations must be co-signed by landowner and operator.

T. Second Living Quarters on a Farm: The use of a second single-family dwelling unit or one (1) two-family dwelling unit as a second living quarters on a farm may be permitted for a member, or members, of the owner's family or for an unrelated family having permanent employment on the farm, provided:

1. Allowed as a special use provided they are located in AG Districts.

2. Lot area requirements of AG District are met.

3. No dwelling permitted under this section may be located in a front yard space of the principal dwelling or closer to the front lot line than fifty (50) feet.

4. A dwelling shall be no closer than thirty (30) feet to the rear or side wall of the principal dwelling on the premises or closer than thirty (30) feet to any barn, accessory farm structure, or to any lot line of adjoining property.

5. Approval from the Central Michigan District Health Department must be obtained for water well and sewage disposal facilities.

U. Self-Storage Buildings (Amended Ord 2000-10) : Facilities used to provide temporary storage needs for business, apartment dwellers, and other individuals on a self-service basis subject to the following:

1. Allowed as a special use provided they are located in B-4 or B-5 Districts.

2. Provided they shall be architecturally designed so as not to have a flat roof, and shall instead have a mansard, gable, hip or gambrel roof design.

3. Provided they meet all required conditions of the B-4 or B-5 zone.

4. All entrances and exits shall be designed in accordance with the Isabella County Road Commission requirements. It is further required that all sites shall provide points of ingress and egress that are located upon a public road. Local traffic movement shall be accommodated within the site so the entering and exiting vehicles will make normal and uncomplicated movements into or out of the public road.

5. Greenbelt planting and screening will be required so as to obscure view from any adjacent residential District. Screening will also be required where property is within two hundred fifty (250) feet of any residentially zoned property. Screening shall consist of non-deciduous trees, not less than three (3) feet in height, planted and maintained in live condition not less than fifteen (15) feet on centers.

6. Maximum length of any self-storage building shall be two hundred fifty (250) feet.

7. No storage of combustible or flammable liquids, combustible fibers, or explosive materials, as defined in the fire prevention code, or toxic materials shall be permitted within the self-storage building or upon the premises.

8. No storage outside of the self-storage buildings shall be permitted.

The use of the premises shall be limited to storage only and shall not be used for operating any other business, for maintaining or repairing of any vehicles, recreational equipment or other items, for any recreational activity, hobby, or purpose other than the storage of personal items and business items as herein be fore set forth.

10. All entries, drives and parking areas shall be hard surfaced and shall provide drainage and grading to move storm water away from the storage units.

V. State-Licensed Residential Facilities:

1. State-licensed residential facilities are only located within Ag Districts.
2. State-licensed residential facilities as defined and properly licensed by Act 218 of the Public Acts of 1979 and Act 116 of the Public Acts of 1973, as amended, which provide resident services for seven (7) or more persons under twenty-four (24) hour supervision, shall only be permitted in AG Districts. Notifications of such proposed special use shall be mailed to all residents within a one thousand five hundred (1,500) foot radius to the property lines of the proposed site as directed by MCLA 125.216(a); MSA 5.2961 (16A).

W. Veterinarian Services:

1. Veterinarian services shall be permitted only in the AG District.
2. All buildings shall be set back a minimum of fifty (50) feet from all lot lines.
3. If animals are housed outdoors, the animals shall be housed at least one hundred (100) feet from all lot lines and at least five hundred (500) feet from any R-1, R-2A, R-2B, R-3, R-4, or R-5 District.

X. Mobile and Modular Home Sales, Provided

1. They shall be located in a B-6 or B-7 district as a Special Use only (Amended Ord. 1998-21).
2. Entrances and exits as specified in Section 30.4.B.2.
3. Driveways and Parking areas as specified in Section 30.4.B.2.
4. They shall meet the standards in Section 24.4.
5. Maximum lot coverage (By All Buildings including display models) shall not exceed 30% of Gross Lot Area unless the conditions and requirements of Section 24.4.E. are complied with.
6. The premises shall not be used for repairing or restoration of any mobile or modular homes, or other items unless such repair or restoration shall be conducted in a fully enclosed building.
7. Service vehicles shall be parked on a paved surface and completely screened from view of adjacent properties.
8. Lighting of outdoor display areas shall be shielded so as to deflect light away from adjacent properties. Such lighting shall also be deflected away from any adjacent properties. Such lighting shall also be deflected away from any adjacent street so as not to interfere with traffic.
9. The distance between display models shall not be less than ten (10) feet.
10. Display units shall be skirted immediately upon placement on the sales lot.

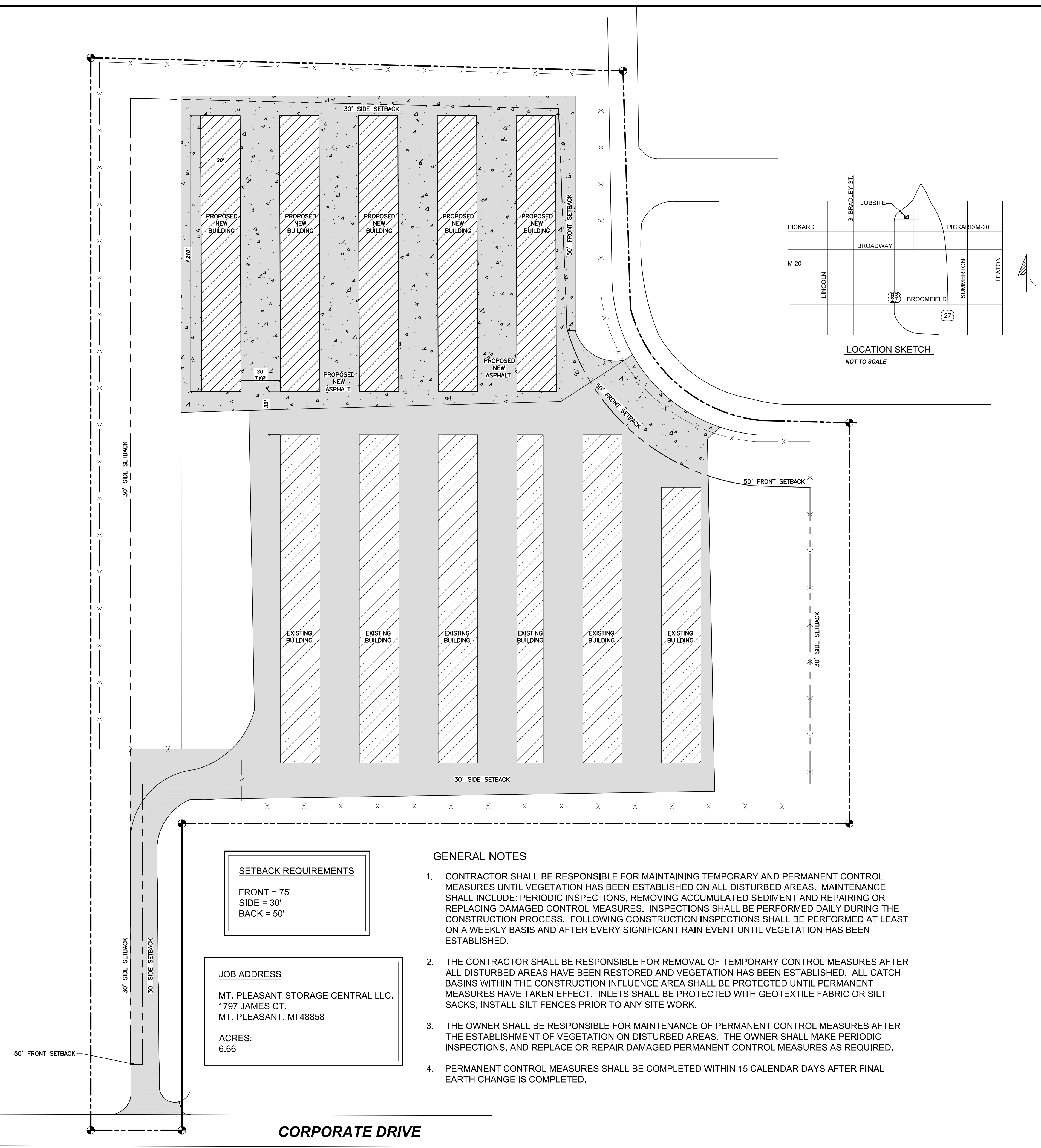
Y. Multiple-Family Dwellings of Five or More Units, Provided: (New, Ord 1995-6)

1. The building(s) are located in a R-3 District.

Union Township
Zoning Ordinance

30-15

Special Use
Permits



SETBACK REQUIREMENTS
 FRONT = 75'
 SIDE = 30'
 BACK = 50'

JOB ADDRESS
 MT. PLEASANT STORAGE CENTRAL LLC.
 1797 JAMES CT.
 MT. PLEASANT, MI 48858
 ACRES:
 6.66

GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TEMPORARY AND PERMANENT CONTROL MEASURES UNTIL VEGETATION HAS BEEN ESTABLISHED ON ALL DISTURBED AREAS. MAINTENANCE SHALL INCLUDE: PERIODIC INSPECTIONS, REMOVING ACCUMULATED SEDIMENT AND REPAIRING OR REPLACING DAMAGED CONTROL MEASURES. INSPECTIONS SHALL BE PERFORMED DAILY DURING THE CONSTRUCTION PROCESS. FOLLOWING CONSTRUCTION INSPECTIONS SHALL BE PERFORMED AT LEAST ON A WEEKLY BASIS AND AFTER EVERY SIGNIFICANT RAIN EVENT UNTIL VEGETATION HAS BEEN ESTABLISHED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF TEMPORARY CONTROL MEASURES AFTER ALL DISTURBED AREAS HAVE BEEN RESTORED AND VEGETATION HAS BEEN ESTABLISHED. ALL CATCH BASINS WITHIN THE CONSTRUCTION INFLUENCE AREA SHALL BE PROTECTED UNTIL PERMANENT MEASURES HAVE TAKEN EFFECT. INLETS SHALL BE PROTECTED WITH GEOTEXTILE FABRIC OR SILT SACKS, INSTALL SILT FENCES PRIOR TO ANY SITE WORK.
3. THE OWNER SHALL BE RESPONSIBLE FOR MAINTENANCE OF PERMANENT CONTROL MEASURES AFTER THE ESTABLISHMENT OF VEGETATION ON DISTURBED AREAS. THE OWNER SHALL MAKE PERIODIC INSPECTIONS, AND REPLACE OR REPAIR DAMAGED PERMANENT CONTROL MEASURES AS REQUIRED.
4. PERMANENT CONTROL MEASURES SHALL BE COMPLETED WITHIN 15 CALENDAR DAYS AFTER FINAL EARTH CHANGE IS COMPLETED.

REVISIONS		
TAG:	DATE:	CHANGE:

SCALE:
 1" = 40'

C1
 MT. PLEASANT STORAGE

JOB NUMBER:
 DRAWING NAME: SITE PLAN
 DRAWN BY: D.J.C.
 REVIEWED BY:
 FIELD SUPERVISOR:
 DATE: 7-29-2019

ENGINEER'S SEAL:

MT. PLEASANT STORAGE
 4263 CORPORATE DRIVE
 MT. PLEASANT, MI 48858

JBS Contracting Inc.
 1680 COVER PARKWAY
 MT. PLEASANT, MI 48858
 PH: (989) 772-9170
 FAX: (989) 772-9272

COMMERCIAL/INDUSTRIAL
 CONSTRUCTION

AFFIDAVIT OF PUBLICATION
2125 Butterfield Dr, Suite 102N • Troy MI 48084

CHARTER TOWNSHIP OF UNION
2010 S Lincoln

Mount Pleasant, MI 48858
Attention: JENNIFER LOVEBERRY

STATE OF MICHIGAN,
COUNTY OF ISABELLA

The undersigned Cyndy Slater Cyndy Slater, being duly sworn the he/she is the principal clerk of Morning Sun, morningstarpublishing.com, published in the English language for the dissemination of local or transmitted news and intelligence of a general character, which are duly qualified newspapers, and the annexed hereto is a copy of certain order, notice, publication or advertisement of:

UNION TOWNSHIP PUBLIC HEARING NOTICE - Special Use Permit

NOTICE is hereby given that a Public Hearing will be held on Tuesday, August 20, 2019, at 7:00 p.m. at the Union Township Hall located at 2010 South Lincoln Road, Mt. Pleasant, Michigan, before the Union Township Planning Commission for hearing any interested persons in the following request for a Special Use Permit as allowed by the Union Township Zoning Ordinance 1991-5 as amended.

Requested by A & K Real Estate holdings LLC (as authorized by Acoustical Land LLC) A special use for Self-Storage Buildings in a B-4 District.

Legal Description of properties: T14N,R4W,SEC 11: COM N 87D 10M 57S W, 1320.20 FT ALG E-W 1/4 LN; TH S 0D 42M W, 510.06 FT ALG W N-S 1/8 LN FROM INT 1/4 COR SEC 11; THS 87D 10M 57S E, 405.06 FT TO C/L PARK PLACE; TH S 0D 42M W, 180.74 FT ALG C/L; TH ALG A CRV TO LT, RAD 100 FT, CEN ANG 30D 52M 44S, CHD BRG & DST S 14D 44M 22S E, 53.24 FT; TH S 62D 9M 52S W, 60.38 FT; TH N 87D 55M W, 300 FT; TH S 0D 42M W, 551.71 FT TO S E-W 1/8 LN; TH N 87D 54M W, 66.02 FT TO SW COR OF NE 1/4 OF SW 1/4; TH N 0D 42M E, 818.76 FT ALG W N-S 1/8 LN TO POB 3.3 AC M/L 8/8/01 SPLIT 14-011-30-001-11 NOW 001-13 AND 001-14 RESIDUAL COMBINED W/ 14-011-30-001-09 4/6/01 SPLIT 14-011-30-001-10 NOW 001-11 AND 001-12

These properties located at: S. Park Place, MOUNT PLEASANT, MI 48858
PID 14-011-30-001-14

All interested persons may submit their views in person, in writing, or by signed proxy prior to the public hearing or at the public hearing.

All materials concerning this request may be seen at the Union Township Hall, located at 2010 S. Lincoln Road, Mt. Pleasant, Michigan, between the hours of 8:30 a.m. and 4:30 p.m., Monday through Friday. Phone (989) 772 4600 extension 241.

Peter Gallinat,
Township Planner
Published August 5, 2019

CHARTER TOWNSHIP OF UNION

Published in the following edition(s):

Morning Sun 08/05/19
morningstarpublishing.com 08/05/19

TINA M CROWN
Notary Public - Michigan
Lapeer County
My Commission Expires Mar 30, 2021
Acting in the County of Oakland

Sworn to the subscribed before me this 5th August 2019
Tina M Crown

Notary Public, State of Michigan
Acting in Oakland County

Advertisement Information

Client Id: 531226 **Ad Id:** 1850720 **PO:** **Sales Person:** 200309

UNION TOWNSHIP PUBLIC HEARING NOTICE –Special Use Permit

NOTICE is hereby given that a Public Hearing will be held on Tuesday, August 20, 2019, at 7:00 p.m. at the Union Township Hall located at 2010 South Lincoln Road, Mt. Pleasant, Michigan, before the Union Township Planning Commission for hearing any interested persons in the following request for a Special Use Permit as allowed by the Union Township Zoning Ordinance 1991-5 as amended.

Requested by **A & K Real Estate holdings LLC (as authorized by Acoustical Land LLC)** A special use for Self-Storage Buildings in a B-4 District.

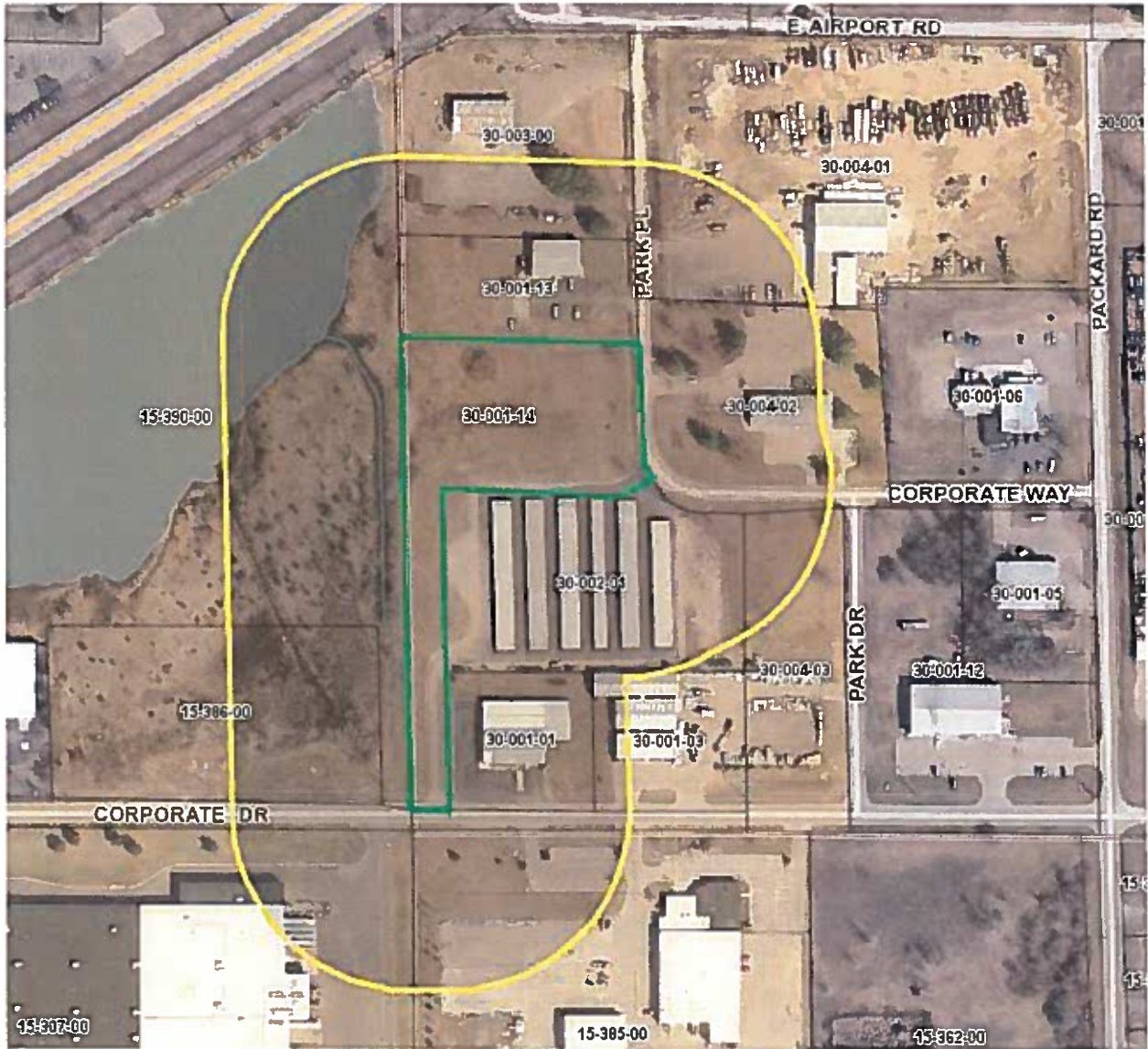
Legal Description of properties: T14N,R4W,SEC 11; COM N 87D 10M 57S W, 1320.20 FT ALG E-W 1/4 LN; TH S 0D 42M W, 510.06 FT ALG W N-S 1/8 LN FROM INT 1/4 COR SEC 11; THS 87D 10M 57S E, 405.06 FT TO C/L PARK PLACE; TH S 0D 42M W, 180.74 FT ALG C/L; TH ALG A CRV TO LT, RAD 100 FT, CEN ANG 30D 52M 44S, CHD BRG & DST S 14D 44M 22S E, 53.24 FT; TH S 62D 9M 52S W, 60.38 FT; TH N 87D 55M W, 300 FT; TH S 0D 42M W, 551.71 FT TO S E-W 1/8 LN; TH N 87D 54M W, 66.02 FT TO SW COR OF NE 1/4 OF SW 1/4; TH N 0D 42M E, 818.76 FT ALG W N-S 1/8 LN TO POB 3.3 AC M/L 8/8/01 SPLIT 14-011-30-001-11 NOW 001-13 AND 001-14 RESIDUAL COMBINED W/ 14-011-30-001-09 4/6/01 SPLIT 14-011-30-001-10 NOW 001-11 AND 001-12

These properties located at: S. Park Place. MOUNT PLEASANT, MI 48858
PID 14-011-30-001-14

All interested persons may submit their views in person, in writing, or by signed proxy prior to the public hearing or at the public hearing.

All materials concerning this request may be seen at the Union Township Hall, located at 2010 S. Lincoln Road, Mt. Pleasant, Michigan, between the hours of 8:30 a.m. and 4:30 p.m., Monday through Friday. Phone (989) 772 4600 extension 241.

Peter Gallinat,
Township Planner



The parcel highlighted in GREEN is the subject parcel seeking the Special Use Permit for Self-Storage Buildings. This would be an expansion of the existing Self-Storage Buildings shown. The YELLOW boarder represents a 300ft radius around the subject parcel. Property Owners within this radius are sent notice of the public hearing.



TRIPLE THREAT INC
4265 CORPORATE DR
MT PLEASANT, MI 48858

KING COURT LLC
PO BOX 2806
GRAND RAPIDS, MI 49501-2806

ST ANDRE REVOCABLE TRUST
1606 E GAYLORD ST
MT PLEASANT, MI 48858

ACOUSTICAL LAND LLC
3725 E WASHINGTON
SAGINAW, MI 48601

CITY OF MT PLEASANT
320 W BROADWAY ST
MT PLEASANT, MI 48858

MT PLEASANT STORAGE CENTRAL LLC
1414 W HIGH ST
MOUNT PLEASANT, MI 48858

PETRO-VEST OPERATING LLC
PO BOX 653
MOUNT PLEASANT, MI 48804-0653

MALLEY BRADLEY & DENISE
1531 N LINCOLN RD
MOUNT PLEASANT, MI 48858

ACOUSTICAL LAND LLC
3725 E WASHINGTON RD
SAGINAW, MI 48601

KING COURT LLC
PO BOX 2806
GRAND RAPIDS, MI 49501-2806

MEIJER INC
2929 WALKER AVE NW
GRAND RAPIDS, MI 49544

MICHIGAN STATE OF (MDOT)
P O BOX 30050
LANSING, MI 48909

MCGUIRK PATRICK JR & NANCY
3695 S LINCOLN RD
MT PLEASANT, MI 48858

MT PLEASANT CITY OF
320 W BROADWAY
MT PLEASANT, MI 48858



Peter Gallinat, Township Planner
pgallinat@uniontownshipmi.com
2010 South Lincoln
Mt. Pleasant, MI 48858
Phone 989-772-4600 Ext. 241
Fax 989-773-1988

TO: Planning Commission
FROM: Township Planner

New Business

SUBJECT: C) SPR 2019-09 Lone Maple Development LLC Solar Energy Systems located at 5889 E. Broadway.

Applicant: Harvest Energy Solutions

Owner: Ryan Smith (Lone Maple Development LLC)

Location: 5889 E. Broadway MT PLEASANT, MI 48858

Current Zoning: B-4 (General Business District)

Adjacent Zoning: B-4, I-2, and SCIT.

Future Land Use/Intent: 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.

Reason for Request: Install 3 Direct Solar Energy Facilities ground mounted.

History: Applicant applied back in March for a site plan review. I determined the project to not a permitted use in the current zoning ordinance. At the time the Township was developing a solar energy ordinance for the new Zoning Ordinance. The applicant requested a text amendment for solar energy use. The proposed text was the exact draft ordinance the Township had been working on. The text amendment was approved by the Planning Commission in May 2019 and adopted by the Board of Trustees in July 2019.

Objective of board: The Planning Commission shall study the site plan and shall, within sixty days of its submittal to the Zoning Official, either approve or disapprove the proposed site plan. If the site plan is disapproved, the reasons for disapproval shall be stated.

Recommendation from Township Planner

Outside agency approvals have been received from all but the Road Commission and Drain office for storm water management. Applicant is working with both agencies. Although, I don't recommend approving plans with outstanding approvals needed the PC could consider approving the site plan on the condition that these two approvals are obtained.

Peter Gallinat
Township Planner

\$ 225.00

Union Township Site Plan Review Application 2015 Revision

FILL OUT THE FOLLOWING

- I. This application is for (circle one) Preliminary Site Plan Review ~~Final Site Plan Review~~
- II. Applicant Name Harvest Energy Solutions
- III. Applicant Address 2218 E High Street Jackson, MI 49203
- IV. Applicant Phone 517 888 0000 Owner Phone 989 708 6850
- V. Applicant is (circle) Contractor ~~Architect~~ ~~Engineer~~ ~~Developer~~ ~~Land Owner~~ (skip V & VI)
Other
- VI. Land Owner Name Ryan Smith
- VII. Land Owner Address 355 Enterprise Drive Brackendale, MI
- VIII. Project/Business Name Lone Maple
- IX. Fill out check list that follows. You must check off that each item has been included in the drawing. If an item is not going to be included in the construction, note that in the comment area. For the first three items, check off if you have made the required submittals to other reviewing agencies.

SUBMITTALS TO OTHER AGENCIES		Off
Storm water management plan approval prior to application. Reviewed by the County Engineer <i>75 sq. ft. of soil disturbance</i>	<i>n/a</i>	Copy of Union Township Storm Water Management Plan available upon request. Submit (2) copies of plan and calculations directly to the Isabella County Engineer, contact Bruce Rohrer at (989) 772 0911, ext. 231. Any review fees are additional.
All curb cuts, acceleration/deceleration lanes, additional drives, and other matters pertaining to roads to be approved by MDOT or Isabella County Road Commission prior to application.	<i>n/a</i>	MDOT (M 20, BR 127 sites) at (989) 773 7756. Contact Isabella County Road Commission (all other county roads) at (989) 773 7131. Submit (3) copies.
Mt. Pleasant Fire Dept.		Sgt Randy Keeler (989) 779-5122, (2) copies
Isabella Co Transportation Commission (ICTC)		Rick (989) 773 2913, (2) copies
WELLHEAD PROTECTION REPORTING FORMS (Required for all Site Plans)		
Hazardous Substances Reporting Form Part I and II (Forms included in this packet)	<i>n/a</i>	Kim Smith (989) 772-4600 ext 224 ksmith@uniontownshipmi.com
PERMIT INFORMATION - DEQ Check List	<i>n/a</i>	
SITE PLAN REQUIREMENTS		I
		Of
Name and addresses of Property Owner Name and Address of Applicant		<i>Harvest Energy Solutions Robert Miller 2218 E. High St. Jackson, MI 49203</i>
Provide Construction Type (per Mi Building Code) and if sprinkled, (assume Type IVb, un-sprinkled if not provided)		

RECEIVED
MAR 18 2019
 BY: J

Union Township Site Plan Review Application 2015 Revision

<p>The date, north arrow and scale. The scale shall be not less than 1"= 20' for property under three (3) acres and not more than 1"=40' for property greater than three acres.</p>		<p><i>See Attached site plan</i></p>
<p>All lot and/or property lines are to be shown and dimensioned, including building setback lines</p>		
<p>The location and dimensions of all existing and proposed: fire hydrants (within 400 feet of building) - - - - drives, ----- sidewalks, (required) ----- curb openings, ----- acceleration/deceleration lanes, ----- signs, ----- exterior lighting on buildings and parking lots, - - parking areas (Including handicapped parking spaces, barrier-free building access, unloading areas), ----- recreation areas, ----- common use areas, ----- areas to be conveyed for public use and purpose. -</p>		
<p>Elevation of building front, side, and back. Include Sign size, height, and design. Canopy heights extending over driveways accommodate Public Transportation</p>		
<p>Source of utilities. Public water and sewer approval by Union Township Utility Coordinator prior to application.</p>		<p>Note: Union Township policy is to issue sewer and water permits after application for a building permit. Applicant is advised to contact the utility department for availability prior to site plan review. The township does not coordinate other utility matters. Applicant to assure himself that site is suitable for septic systems, contact Central Michigan District Health Department</p>
<p>All dumpsters shall be screened from public view with an opaque fence or wall no less than six feet in height. Show location. (Note most refuse contractors require concrete pad to place dumpsters upon)</p>		<p><i>No Dumpsters</i></p>
<p>The location and right-of-way width of all abutting roads, streets, alleys and easements.</p>		<p><i>no work near right of way</i></p>
<p>A locational sketch drawn to scale giving the section number and the nearest crossroads.</p>		

Union Township Site Plan Review Application 2015 Revision

The zoning of the subject property and the abutting properties.		
The location, height and type of fences and walls.		N/A
The location and detailed description of landscaping.		N/A
For multiple family and mobile home parks, contour intervals shall be shown (two foot intervals for average slopes ten percent and under and five foot intervals for slopes over ten percent). Topography, however, is encouraged to be shown on all site plans.		N/A
The location of all existing and proposed structures on and within one hundred feet of the subject property's boundary.		
For apartments, provide a count of bedrooms per building and total count of bedrooms for the project.		N/A

APPLICANT COMMENTS

Total project build timing is 3-4 days
The I-Beams are pounded - no soil disturbance
Electrical trench is 4" wide opened and closed same day.

Union Township Site Plan Review Application 2015 Revision

I submit the site plan and this application as a true representation of existing and proposed conditions. I agree to install all features as shown and to abide by conditions placed upon approval of this plan by the Union Township Planning Commission . 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. Any changes to the Site Plan now or in the future must be approved by the Union Township Planning Commission or Zoning Administrator. Approval of this plan shall not constitute the right to violate any provisions of the Union Township Zoning Ordinance 1991-5, or other applicable building or state codes and or laws.

Robert J. Nello - Harvest Energy 3-15-19
Signature of Applicant Date

Signature of Owner (if other than applicant) Date

PLEASE PLACE OUR REVIEW ON THE _____ (INSERT DATE)
PLANNING COMMISSION MEETING. An owners representative WILL / WILL NOT attend. You will not receive a reminder of the scheduled meeting.

Union Township Site Plan Review Application 2015 Revision

<u>Township use</u>	Review Comments
File # _____	_____
Fee Paid initial _____	_____
Receipt # _____	_____
Date received _____	_____
Date review completed by Zoning Administrator _____	_____
Place on the _____ Planning Commission Agenda	
Planning Commission Decision _____	_____

Union Township Site Plan Review Application 2015 Revision

INSTRUCTIONS

- All items in this list must be included in the drawing unless exempted by ordinance or specifically noted as not included. Incomplete submissions may not be forwarded to the Planning Commission for review. All features of the plan must conform to the Union Township Zoning Ordinance 1991-5 and other state and local ordinances and laws as applicable. Union Township Well Head Protection documents are a part of Site Plan Review and required with your Site Plan submission.
- To expedite this process you should make Storm Water Management and Road Permit Applications as soon as possible, and submit a copy of the site plan to the Mt. Pleasant Fire Department. Site plans received prior to these outside approvals may be reviewed as Preliminary Site Plan Reviews and may require a Final Site Plan Review submission after receiving outside agency approvals. You may elect to receive a Preliminary Review by the Planning Commission prior to other submittals. Contact the appropriate agency for their submission requirements and any required forms.
- **Special Use Permits:** Uses requiring a Special Use Permit have both a special use permit approval process and a site plan review. The fee for a Special Use Permit is in addition to the site plan review fee*. This form and a Special Use Permit Application must accompany application for a Special Use Permit. The Planning Commission will make a recommendation to the Charter Township of Union Board who has approval authority, thus requiring two meetings, one of the commission and one of the board. If desired, the applicant may elect to have the Public hearing with a preliminary plan showing sufficient detail to determine the impact on the surrounding properties, and address other issues of concern, and then proceed to final Site Plan Review. In this approach the commission will make its finding subject to final site plan approval at the first meeting, and the applicant will return with a detailed drawing meeting all the elements of site plan review, including submission to outside agencies.
- **SUBMISSION DEADLINE:** Ten copies of the site plan and this completed check list must be submitted no less than 14 days prior to the Planning Commission meeting. The Planning Commission meets at 7:00 PM on the third Tuesday of each month. A Site Plan Review fee* must accompany each submission. You will not receive any notification prior to your scheduled meeting; it is your responsibility to show up at the meeting. If you are uncertain, call the Zoning administrator at (989) 772 4600 ext 41
- Applicants may submit a single copy of the plan and check list prior to the submission deadline to the zoning administrator for review and comment.
- Land Owner (or his / her agent) is responsible to apply for all permits, including Building, Grading and Zoning permit, Sign Permit, Water and Sewer, and Land Divisions (if applicable) AFTER Planning Commission review and approval. The proposed use shall be constructed per the submitted plan including any conditions of approval. Minor revisions maybe approved by the zoning administrator. Consult with the township before implementing any changes to the approved site plan.

Union Township Site Plan Review Application 2015 Revision

Storm Water Management Plan

Submit (2) copies of Storm Water Management Plan directly to county engineer prior to Site Plan Review Code - Union Township Ord. 1992-9 Storm Water Management

Isabella County Building

Resource Management
ATTN: Bruce Rohrer PE
200 N. Main St.
Mt. Pleasant, MI 48858

(989) 772 0911 Ext. 231 (FAX) 773 7431

Plumbing, Electrical, Mechanical Permits

Isabella County Building

Inspections

ATTN: (SEE FOLLOWING LIST)

200 N. Main St.

Mt. Pleasant, MI 48858

(989) 772 0911 Ext. (SEE FOLLOWING) (FAX) 773 7431

Electrical Inspector
Tim Wardwell - Ext. 230

Plumbing and Mechanical Inspector
Doug Elias - Ext. 228

Fire Department Review

Sgt. Randy Keeler

804 E. High St.

Mt. Pleasant, MI 48858

((989) 779-5122 (FAX) 773 4020

rkeeler@mt-pleasant.org

Addressing

Isabella County Building Official (989) 772 0911, Ext 228

Miscellaneous

Phone - GTE (800) 483 5600, Verizon (800) 483 4000

Gas/Electric - Consumer Energy (800) 572 4788, MichCon (800) 477 4747 Central MI Dist. Health Dept. (989) 773 5921

Miss Dig (800) 482 7171

Union Township Site Plan Review Application 2015 Revision

UNION TOWNSHIP CONSTRUCTION CONTACTS

**Building & Zoning Permits
Sign Permit
Water and Sewer review
Site Plan Review**

Charter Township of Union
2010 S. Lincoln Rd
Mt. Pleasant, MI 48858

(989) 772 4600 (switchboard)
(989) 773 1988 (FAX)

Building Official
Randy Robinson - Ext. 227
rrobinson@uniontownshipmi.com

Zoning Administrator
Peter Gallinat - Ext. 241
pgallinat@uniontownshipmi.com

Public Works Coordinator
Kim Smith - Ext. 224
ksmith@uniontownshipmi.com

Road Permits
(submit (2) copies of site plan directly to proper authority prior to Site Plan Review)

State Highways M 20 and US 127 (portions of E. Pickard Rd, E Remus Rd, and Mission Rd)

MDOT
1212 Corporate Drive
Mt. Pleasant, MI 48858
(989) 773-7756 FAX 775 6329

All other roads

Isabella County Road Commission
2261 E. Remus Rd
Mt. Pleasant, MI 48858
(989) 773 7131 (FAX) 772 2371

ICTC
2100 E Transportation Dr
Mt. Pleasant, MI 48858
(989)772-9441

Arrays of 72 Modules
216 Modules at 340W
73,440 W or 73.44 kW

120'

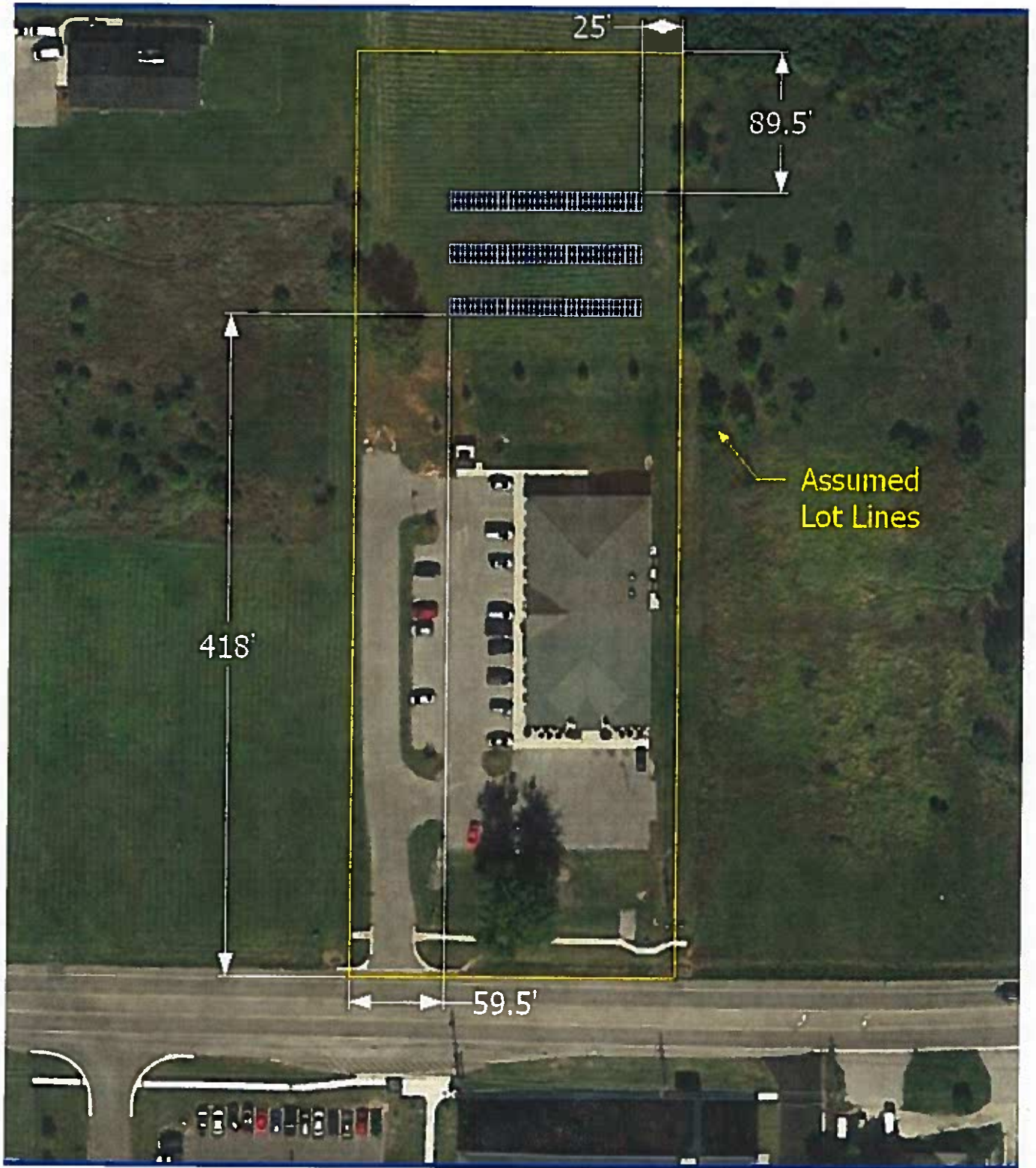
78'

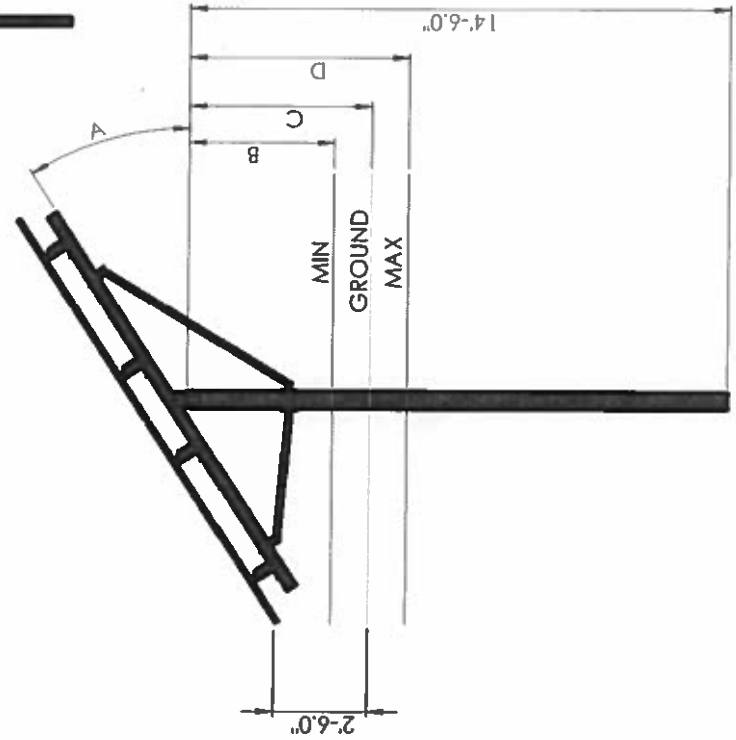
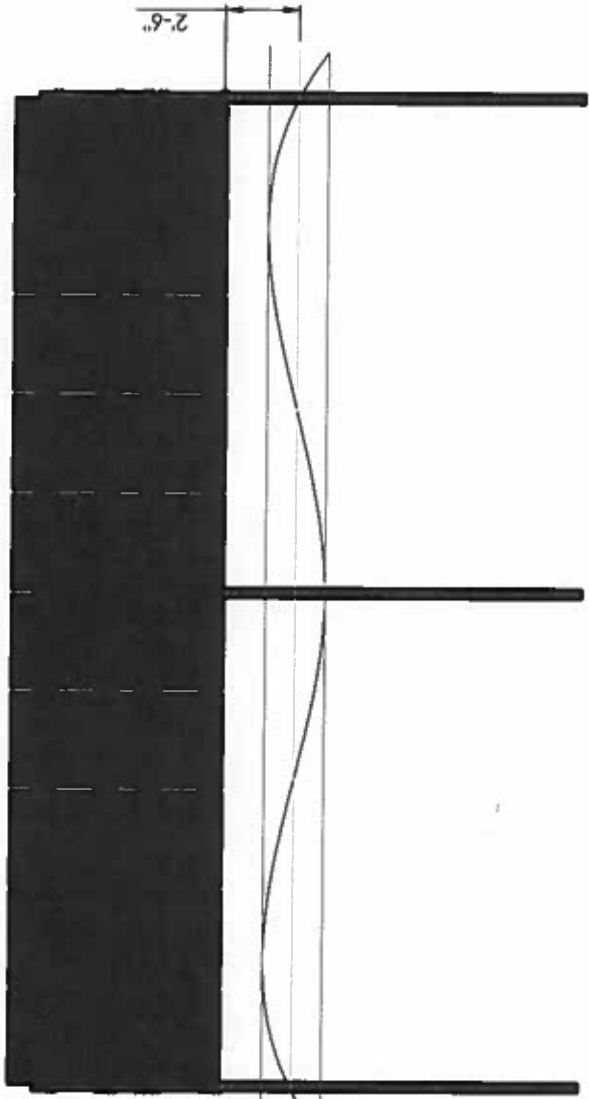
Inverters and pv sub Panel
Located at the Array

250' of Pipe, Wire and Trench

Billing Meter, AC DG Disconnect
Tap Box, Service Panel and
Interconnection Location

2





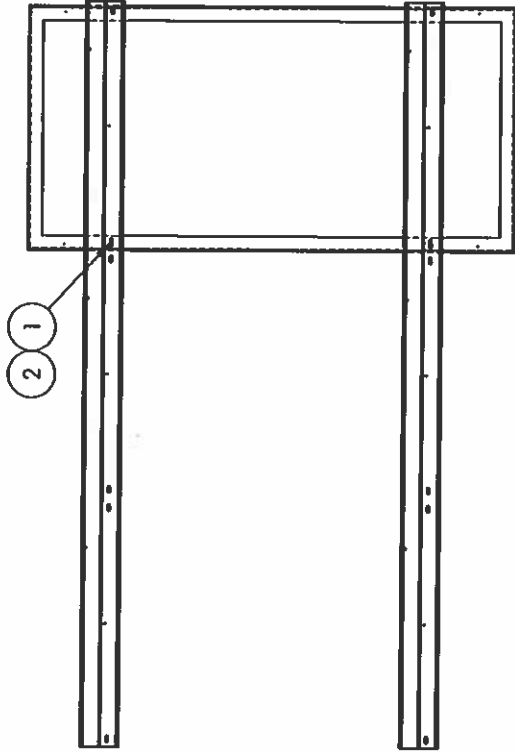
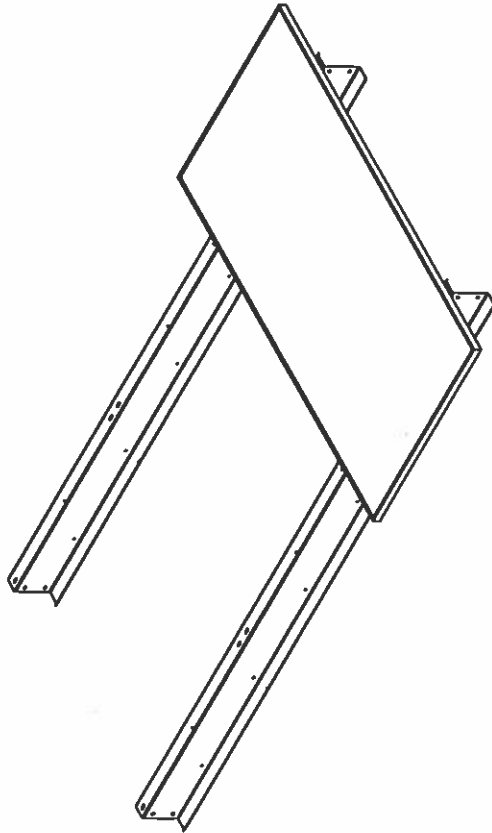
ARRAY TILT (A)	MIN HEIGHT (B)	AVERAGE HEIGHT (C)	MAX HEIGHT (D)
30	3' 7"	4' 7"	5' 7"
33	3' 10"	4' 10"	5' 10"
35	4' 1"	5' 1"	6' 1"
37	4' 4"	5' 4"	6' 4"

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES: ANGLES: ±0.2 degrees		DO NOT SCALE DRAWING		REVISION	Original
DATE	SIGNATURE	TITLE		P-RACK - VIBRATED I-BEAMS 72 CELL PANELS LAYOUT	
4/13/2014	RTS	DIBBLE AND BREAKHARP		harvest energy solutions	
		DWG NO.		348005D	
		SCALE		1:100	
		SHEET		1 OF 1	

PROPERTY AND CONFIDENTIAL INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF HARVEST ENERGY SOLUTIONS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF HARVEST ENERGY SOLUTIONS IS PROHIBITED.

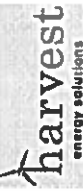
ITEM NO.	PART NUMBER	DESCRIPTION	QTY. PER	QTY. TOTAL
1	.3125 x .75	Bolt, 5/16" x 3/4"	4	864
2	.3125 Serrated	Nut, 5/16 Serrated	4	864
3	.6875 x .375 Flat	Washer, flat	4	864

Notes:
All fasteners should be JS500 Salt Spray equivalent or Stainless Steel.



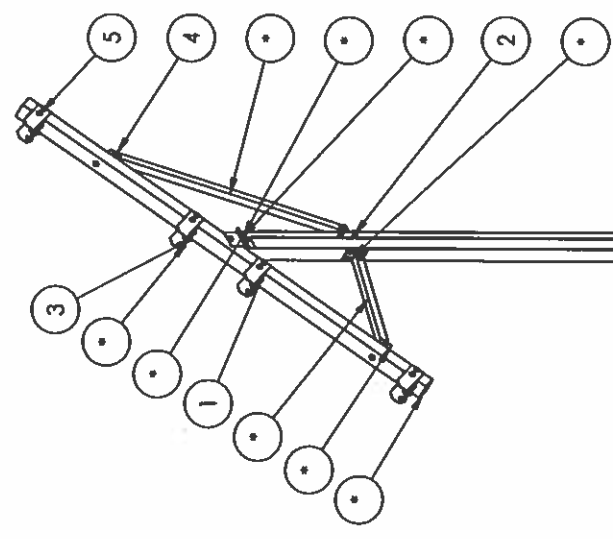
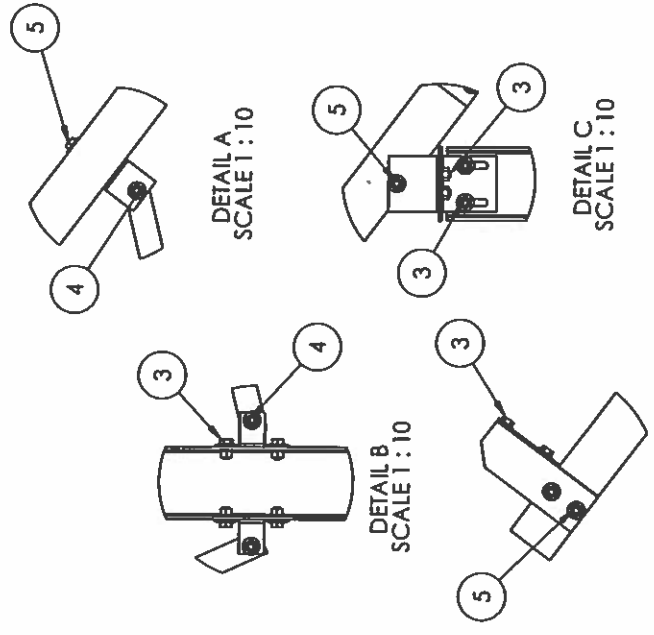
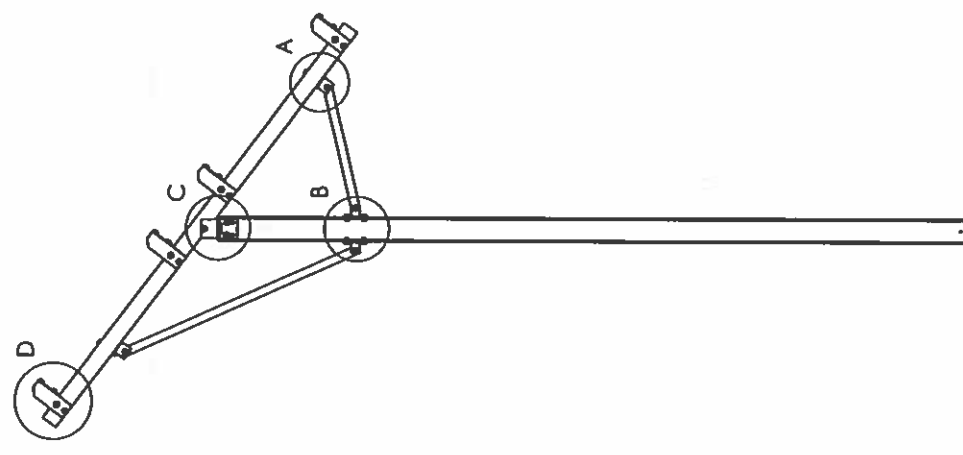
Optimizer and Microinverters Attachment(Use as Needed)

ITEM NO.	PART NUMBER	DESCRIPTION	QTY. PER	QTY TOTAL
1	.25 x .75	Bolt, Hex Head - 1/4"-20 x 3/4"	1	
2	.25 Serrated	Nut, 1/4"-20 serrated	1	
3	.25 x .5 Flat	Washer, flat	1	
4	.25 x .5 Star	Washer, Star	1	

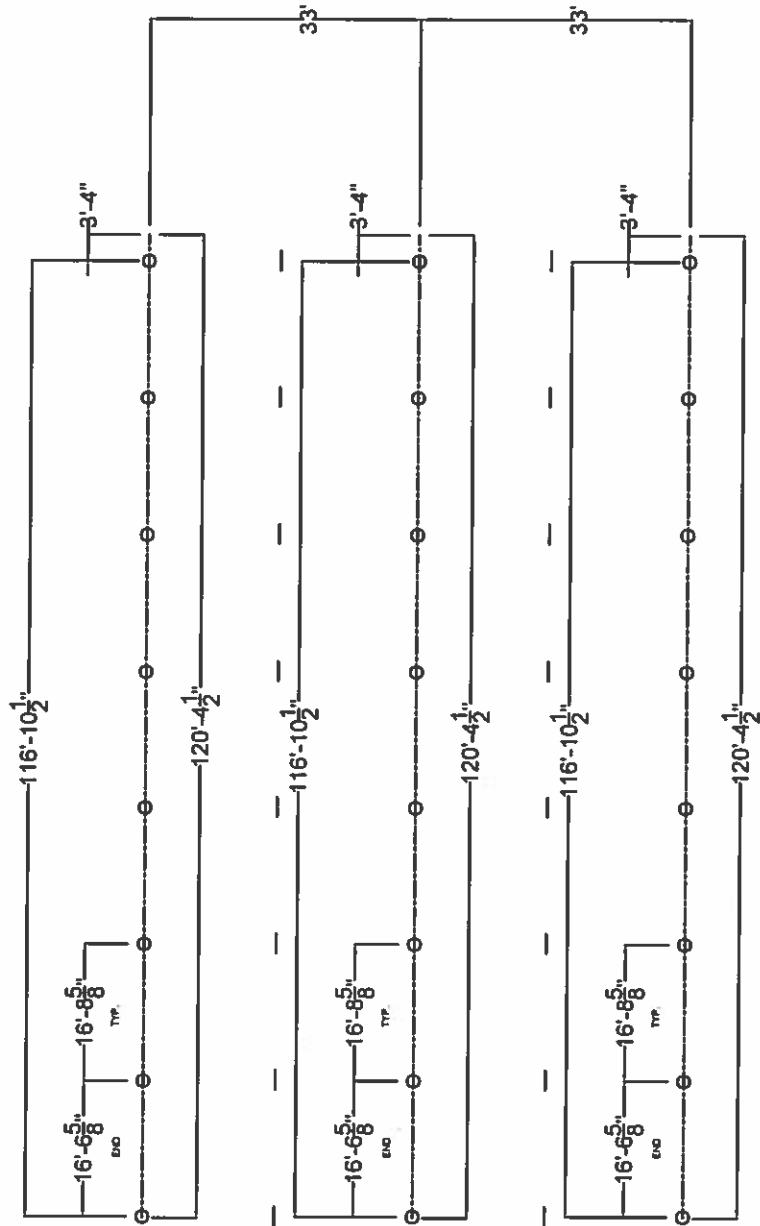
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONS: ±.005 DECIMALS: ±.0012 ANGLES: ±.1 degree		DO NOT SCALE DRAWING		REVISION
DRAWN: RTS		DATE: 1/17/2011		Original
CHECKED:				PER PANEL FASTENERS
APPROVED:				HANWHA Q-CELL, HELIENE
NAME: _____		SIGNATURE: _____		
MATERIAL:				
DWG NO.:		326394		
SCALE:		1:1		SHEET 1 OF 1

PROPERTY AND CONFIDENTIAL INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF HARVEST ENERGY SOLUTIONS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF HARVEST ENERGY SOLUTIONS IS PROHIBITED.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY. PER	QTY. TOTAL
1	0.5 Flat Washer	WASHER (HDG)	90	2160
2	0.5-13 Hex Nut	NUT, 1/2"-13 UNC (HDG)	45	1080
3	0.5-13x1.25 Hex Bolt	BOLT, 1/2"-13 UNC X 1 1/4" (G5 HDG)	30	720
4	0.5-13x3 Hex Bolt	BOLT, 1/2"-13 UNC X 3" (G5 HDG)	4	96
5	0.5-13x5 Hex Bolt	BOLT, 1/2"-13 UNC X 5" (G5 HDG)	11	264



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONS DECIMALS ANGULAR: 1/2 degrees		DATE		REVISION	
NAME	SIGNATURE	DATE	TITLE		Original
RTS		10/28/2011	PER POST BRACKETS AND FASTENERS		
DRAWN	CHKD	APPRD	DESIGN AND DETAIL SHARP EDGES		
ENG					
QA					
MATERIAL:			DWG NO.		326387
PROPERTY AND CONFIDENTIALITY NOTICE: THIS DRAWING IS THE PROPERTY OF HARVEST ENERGY SOLUTIONS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF HARVEST ENERGY SOLUTIONS IS PROHIBITED.			SCALE: 1:10		SHEET 1 OF 1



OVERALL MEASURED GRADE VARIANCE (TO BE MEASURED BEFORE POST INSTALLATION)

MEASURED POST LOCATION GRADE (AFTER INSTALLATION)

OVERALL MEASURED GRADE VARIANCE (TO BE MEASURED BEFORE POST INSTALLATION)

MEASURED POST LOCATION GRADE (AFTER INSTALLATION)

OVERALL MEASURED GRADE VARIANCE (TO BE MEASURED BEFORE POST INSTALLATION)

MEASURED POST LOCATION GRADE (AFTER INSTALLATION)

DATE	REVISED	BY	DATE
HARVEST ENERGY SOLUTIONS			
JACKSON, MICHIGAN			
PROJECT: LONE MAPLE DEVELOPMENT			
SITE: LONE MAPLE DEVELOPMENT			
POST LOCATIONS			
			1 1 V3525-AA

/ Perfect Welding / Solar Energy / Perfect Charging



SHIFTING THE LIMITS

FRONIUS PRIMO

/ The future of residential solar is here - Introducing the new Fronius Primo.



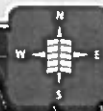
/ PC board replacement process



/ SnapINverter mounting system



/ Wi-Fi* interface



/ SolarFlex Design



/ Smart Grid Ready



/ Arc Fault Circuit Interruption

/ With power categories ranging from 3.8 kW to 15.0 kW, the transformerless Fronius Primo is the ideal compact single-phase inverter for residential applications. The sleek design is equipped with the SnapINverter hinge mounting system which allows for lightweight, secure and convenient installation and service. The Fronius Primo has several integrated features that set it apart from competitors including dual powerpoint trackers, high system voltage, a wide input voltage range, Wi-Fi* and SunSpec Modbus interface for seamless monitoring and datalogging, Arc Fault Circuit Interruption (AFCI), and Fronius' online and mobile platform Fronius Solar.web. The Fronius Primo is designed to adjust to future standards, offering a complete solution to code restrictions and technical innovations of tomorrow. It also works seamlessly with the Fronius Rapid Shutdown Box for a reliable NEC 2014 solution.

TECHNICAL DATA FRONIUS PRIMO

GENERAL DATA	FRONIUS PRIMO 3.8 - 8.2	FRONIUS PRIMO 10.0-15.0
Dimensions (width x height x depth)	16.9 x 24.7 x 8.1 in.	20.1 x 28.5 x 8.9 in.
Weight	47.29 lb.	82.5 lbs.
Degree of protection	NEMA 4X	
Night time consumption	< 1 W	
Inverter topology	Transformerless	
Cooling	Variable speed fan	
Installation	Indoor and outdoor installation	
Ambient operating temperature range	-40 - 131°F (-40 - 55°C)	-40 - 140°F (-40 - 60°C)
Permitted humidity	0 - 100 %	
DC connection terminals	4x DC+ and 4x DC- screw terminals for copper (solid / stranded / fine stranded) or aluminum (solid / stranded)	4x DC+1, 2x DC+2 and 6x DC- screw terminals for copper (solid / stranded / fine stranded) or aluminum (solid / stranded)
AC connection terminals	Screw terminals 12 - 6 AWG	
Revenue Grade Metering	Optional (ANSI C12.1 accuracy)	
Certificates and compliance with standards	UL 1741-2010, UL1998 (for functions: AFCI and isolation monitoring), IEEE 1547-2003, IEEE 1547.1-2003, ANSI/IEEE C62.41, FCC Part 15 A & B, NEC Article 690, C22, 2 No. 107.1-01 (September 2001), UL1699B Issue 2 -2013, CSA TIL M-07 Issue 1 -2013	UL 1741-2015, UL1998 (for functions: AFCI, RCMU and isolation monitoring), IEEE 1547-2003, IEEE 1547.1-2003, ANSI/IEEE C62.41, FCC Part 15 A & B, NEC Article 690-2014, C22, 2 No. 107.1-01 (September 2001), UL1699B Issue 2 -2013, CSA TIL M-07 Issue 1 -2013

PROTECTIVE DEVICES

STANDARD WITH ALL PRIMO MODELS

AFCI & 2014 NEC Ready	Yes
Ground Fault Protection with Isolation Monitor Interrupter	Yes
DC disconnect	Yes
DC reverse polarity protection	Yes

INTERFACES

STANDARD WITH ALL PRIMO MODELS

Wi-Fi*/Ethernet/Serial	Wireless standard 802.11 b/g/n / Fronius Solar.web, SunSpec Modbus TCP, JSON / SunSpec Modbus RTU
6 Inputs or 4 digital inputs/outputs	External relay controls
USB (A socket)	Datalogging and/or updating via USB
2x RS-422 (B)45 socket)	Fronius Solar Net, interface protocol
Datalogger and Webserver	Included

*The term Wi-Fi® is a registered trademark of the Wi-Fi Alliance.

TECHNICAL DATA FRONIUS PRIMO

INPUT DATA	PRIMO 3.8-1	PRIMO 5.0-1	PRIMO 6.0-1	PRIMO 7.6-1	PRIMO 8.2-1
Recommended PV power (kWp)	3.0 - 6.0 kW	4.0 - 7.8 kW	4.8 - 9.3 kW	6.1 - 11.7 kW	6.6 - 12.7 kW
Max. usable input current (MPPT 1/MPPT 2)	18 A / 18 A	18 A / 18 A	18 A / 18 A	18 A / 18 A	18 A / 18 A
Total max. DC current	36 A				
Max. array short circuit current (1.25 I _{max}) (MPPT 1/MPPT 2)	22.5 A / 22.5 A				
Operating voltage range	80 V - 600 V				
Max. input voltage	600 V				
Nominal input voltage	410 V	420 V	420 V	420 V	420 V
Admissible conductor size DC	AWG 14 - AWG 6				
MPP Voltage Range	200 - 480 V	240 - 480 V	240 - 480 V	250 - 480 V	270 - 480 V
Number of MPPT	2				

OUTPUT DATA	PRIMO 3.8-1	PRIMO 5.0-1	PRIMO 6.0-1	PRIMO 7.6-1	PRIMO 8.2-1
Max. output power	240 V 3800 W	5000 W	6000 W	7600 W	8200 W
	208 V 3800 W	5000 W	6000 W	7600 W	7900 W
Max. continuous output current	240 V 15.8 A	20.8 A	25.0 A	31.7 A	34.2 A
	208 V 18.3 A	24.0 A	28.8 A	36.5 A	38.0 A
Recommended OCPD/AC breaker size	240 V 20 A	30 A	35 A	40 A	45 A
	208 V 25 A	30 A	40 A	50 A	50 A
Max. Efficiency	96.7 %				
CEC Efficiency	240 V 95.0 %	95.5 %	96.0 %	96.0 %	96.5 %
Admissible conductor size AC	AWG 14 - AWG 6				
Grid connection	208 / 240 V				
Frequency	60 Hz				
Total harmonic distortion	< 5.0 %				
Power factor (cos φ _{ac})	0.85-1 int./cap				

INPUT DATA	PRIMO 10.0-1	PRIMO 11.4-1	PRIMO 12.5-1	PRIMO 15.0-1
Recommended PV power (kWp)	8.0 - 12.0 kW	9.1 - 13.7 kW	10.0 - 15.0 kW	12.0 - 18.0 kW
Max. usable input current (MPPT 1/MPPT 2)	33.0 A / 18.0 A			
Total max. DC current	51 A			
Max. array short circuit current (1.25 I _{max}) (MPPT 1/MPPT 2)	41.3 A / 22.5 A			
Operating voltage range	80 V - 600 V			
Max. input voltage	600 V			
Nominal input voltage	415 V	420 V	425 V	440 V
Admissible conductor size DC	AWG 14 - AWG 6 copper direct, AWG 6 aluminum direct (AWG 10 copper or AWG 8 aluminum for overcurrent protective devices up to 60A, from 61 to 100A minimum AWG 8 for copper or AWG 6 aluminum has to be used), AWG 4 - AWG 2 copper or aluminum with optional input combiner			
MPP Voltage Range	220 - 480 V	240 - 480 V	260 - 480 V	320 - 480 V
Integrated DC string fuse holders	+ and ++ for MPPT 1 / no fusing required on MPPT 2			
Number of MPPT	2			

OUTPUT DATA	PRIMO 10.0-1	PRIMO 11.4-1	PRIMO 12.5-1	PRIMO 15.0-1
Max. output power	240 V 9995 W	11400 W	12500 W	15000 W
	208 V 9995 W	11400 W	12500 W	13750 W
Max. continuous output current	240 V 41.6 A	47.5 A	52.1 A	62.5 A
	208 V 48.1 A	54.8 A	60.1 A	66.1 A
Recommended OCPD/AC breaker size	240 V 60 A	60 A	70 A	80 A
	208 V 70 A	70 A	80 A	90 A
Max. Efficiency	96.7 %			
CEC Efficiency	96.0 %			
Admissible conductor size AC	AWG 10 - AWG 2 copper (solid / stranded / fine stranded)(AWG 10 copper or AWG 8 aluminum for overcurrent protective devices up to 60A, from 61 to 100A minimum AWG 8 for copper or AWG 6 aluminum has to be used) , AWG 6 - AWG 2 copper(solid / stranded) MultiContactWiringable with AWG 12			
Grid connection	208 / 240 V			
Frequency	60 Hz			
Total harmonic distortion	< 2.5 %			
Power factor (cos φ _{ac})	0-1 int./cap.			

/ Perfect Welding / Solar Energy / Perfect Charging

WE HAVE THREE DIVISIONS AND ONE PASSION: SHIFTING THE LIMITS OF POSSIBILITY.

/ Whether welding technology, photovoltaics or battery charging technology – our goal is clearly defined: to be the innovation leader. With around 3,300 employees worldwide, we shift the limits of what's possible - our record of over 900 granted patents is testimony to this. While others progress step by step, we innovate in leaps and bounds. Just as we've always done. The responsible use of our resources forms the basis of our corporate policy.

Further information about all Fronius products and our global sales partners and representatives can be found at www.fronius.com

v05 May 2015 EN

Fronius USA LLC
6797 Fronius Drive
Portage, IN 46368
USA
pv-support-usa@fronius.com
www.fronius-usa.com

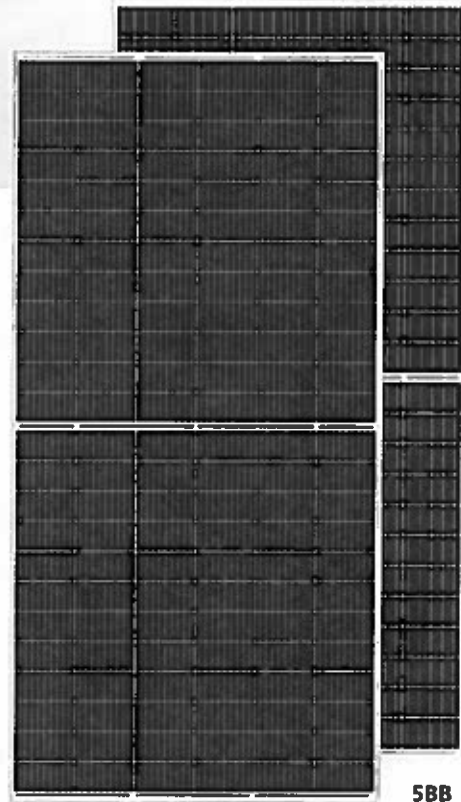


KuMax

CS3U-335 | 340 | 345P
(1000 V / 1500 V)

With Canadian Solar's poly cell technology and the industry leading innovative LIC (Low Internal Current) module technology, we are now able to offer our global customers high power poly modules up to 345 W.

The KuMax poly modules with a dimension of 2000 x 992 mm, close to our 72 cell MaxPower modules, have the following features:



MORE POWER



Low power loss in cell connection



Low NMOT: $42 \pm 3 \text{ }^\circ\text{C}$
Low temperature coefficient (Pmax): $-0.38 \text{ } \%/ \text{ }^\circ\text{C}$



Better shading tolerance



High PTC
High PTC rating of up to: 92.52 %

MORE RELIABLE



Lower hot spot temperature



Minimizes micro-cracks



Heavy snow load up to 5400 Pa,
wind load up to 3600 Pa*



linear power output warranty



product warranty on materials and workmanship

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2008 / Quality management system
ISO 14001:2004 / Standards for environmental management system
OHSAS 18001:2007 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730: VDE / CE
UL 1703: CSA



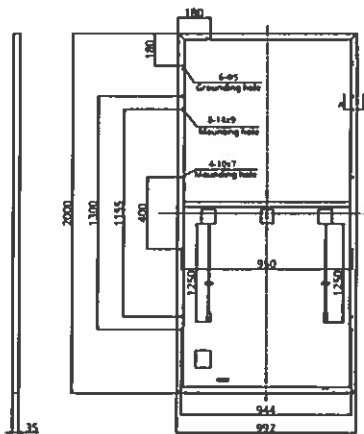
* If you need specific product certificates, and if module installations are to deviate from our guidance specified in our installation manual, please contact your local Canadian Solar sales and technical representatives.

CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. As a leading PV project developer and manufacturer of solar modules with over 25 GW deployed around the world since 2001, Canadian Solar Inc. is one of the most bankable solar companies worldwide.

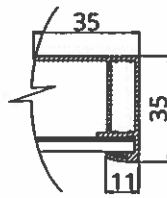
* For detailed information, please refer to Installation Manual.

ENGINEERING DRAWING (mm)

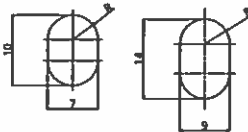
Rear View



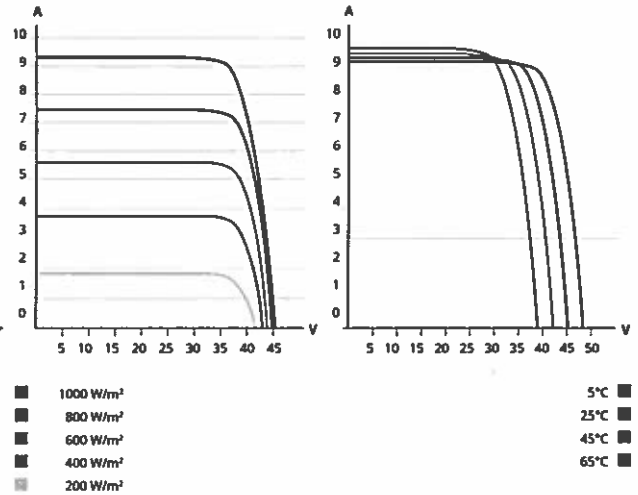
Frame Cross Section A-A



Mounting Hole



CS3U-340P / I-V CURVES



ELECTRICAL DATA | STC*

CS3U	335P	340P	345P
Nominal Max. Power (Pmax)	335 W	340 W	345 W
Opt. Operating Voltage (Vmp)	38.2 V	38.4 V	38.6 V
Opt. Operating Current (Imp)	8.77 A	8.86 A	8.94 A
Open Circuit Voltage (Voc)	45.7 V	45.9 V	46.1 V
Short Circuit Current (Isc)	9.28 A	9.36 A	9.44 A
Module Efficiency	16.89%	17.14%	17.39%
Operating Temperature	-40°C ~ +85°C		
Max. System Voltage	1500V (IEC/UL) or 1000V (IEC/UL)		
Module Fire Performance	TYPE 1 (UL 1703) or CLASS C (IEC 61730)		
Max. Series Fuse Rating	30 A		
Application Classification	Class A		
Power Tolerance	0 ~ + 5 W		

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL DATA | NMOT*

CS3U	335P	340P	345P
Nominal Max. Power (Pmax)	249 W	252 W	256 W
Opt. Operating Voltage (Vmp)	35.3 V	35.5 V	35.7 V
Opt. Operating Current (Imp)	7.04 A	7.11 A	7.18 A
Open Circuit Voltage (Voc)	42.7 V	42.9 V	43.1 V
Short Circuit Current (Isc)	7.49 A	7.55 A	7.62 A

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

MECHANICAL DATA

Specification	Data
Cell Type	Poly-crystalline, 156.75 X 78.38 mm
Cell Arrangement	144 [2 X (12 X 6)]
Dimensions	2000 X 992 X 35 mm (78.7 X 39.1 X 1.38 in)
Weight	22.5 kg (49.6 lbs)
Front Cover	3.2 mm tempered glass
Frame	Anodized aluminium alloy, crossbar enhanced
J-Box	IP68, 3 bypass diodes
Cable	4 mm ² (IEC), 12 AWG (UL) 1250 mm (49.2 in), 1670 mm (65.7 in)
Cable Length	is optional for single tracking system with leap-frog connection
Connector	T4 series
Per Pallet	30 pieces
Per Container (40' HQ)	660 pieces

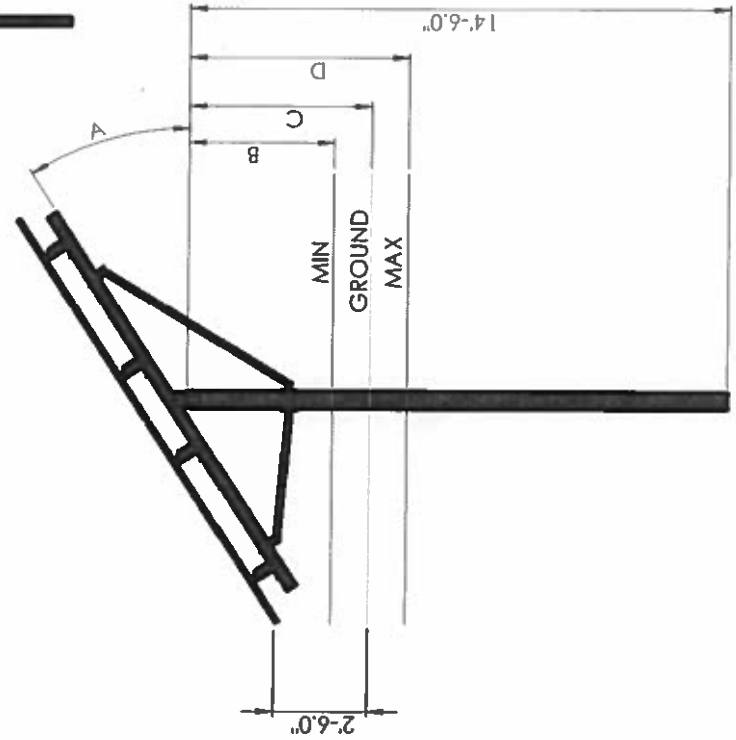
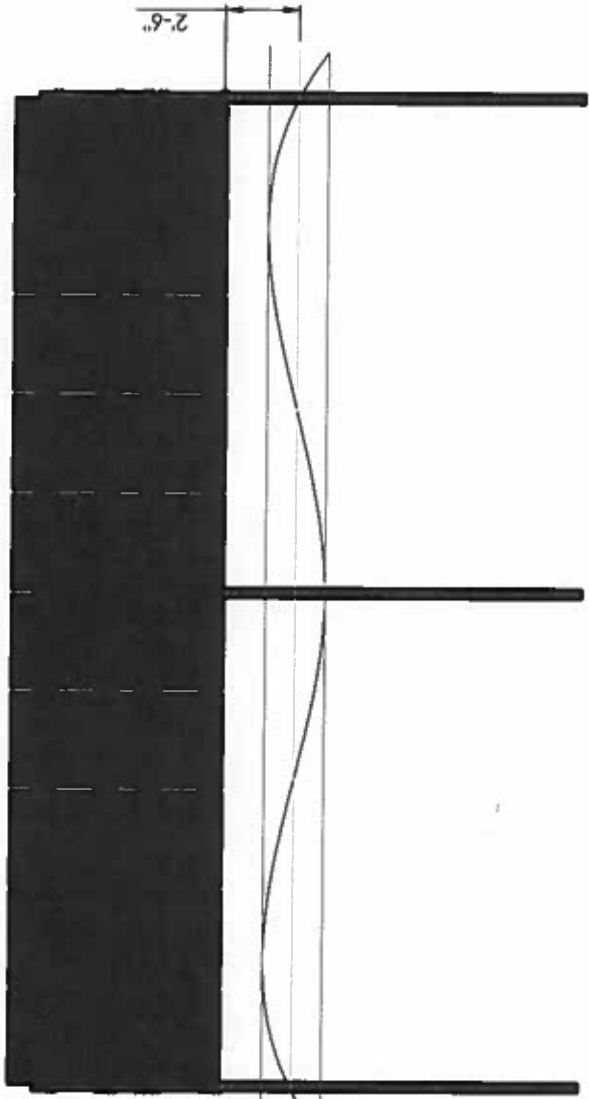
TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.38 % / °C
Temperature Coefficient (Voc)	-0.31 % / °C
Temperature Coefficient (Isc)	0.05 % / °C
Nominal Module Operating Temperature	42 ± 3°C

PARTNER SECTION



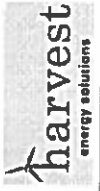
* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Canadian Solar Inc. reserves the right to make necessary adjustment to the information described herein at any time without further notice.



ARRAY TILT (A)	MIN HEIGHT (B)	AVERAGE HEIGHT (C)	MAX HEIGHT (D)
30	3' 7"	4' 7"	5' 7"
33	3' 10"	4' 10"	5' 10"
35	4' 1"	5' 1"	6' 1"
37	4' 4"	5' 4"	6' 4"

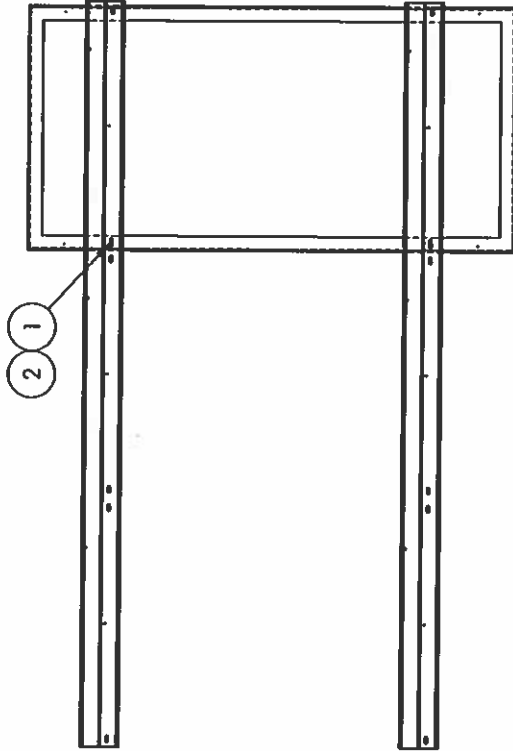
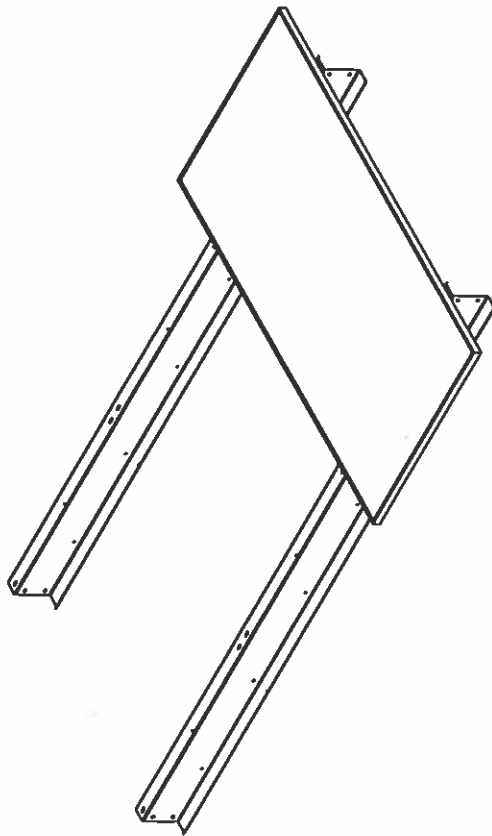
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES: ANGLES: ±0.2 degrees		DO NOT SCALE DRAWING		REVISION	Original
DATE	SIGNATURE	TITLE		P-RACK - VIBRATED I-BEAMS 72 CELL PANELS LAYOUT	
4/13/2014	RTS	DRAWN		DIBBLE AND BREAKHARP IDORS	
		CHECKED			
		JPPYD			
		MHO			
		D.A.			
		MATERIAL			
		DWG NO.		348005D	
		SCALE: 1/8" = 1'-0"		SHEET 1 OF 1	

PROPERTY AND CONFIDENTIAL INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF HARVEST ENERGY SOLUTIONS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF HARVEST ENERGY SOLUTIONS IS PROHIBITED.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY. PER	QTY. TOTAL
1	.3125 x .75	Bolt, 5/16" x 3/4"	4	864
2	.3125 Serrated	Nut, 5/16 Serrated	4	864
3	.6875 x .375 Flat	Washer, flat	4	864

Notes:
All fasteners should be JS500 Salt Spray equivalent or Stainless Steel.



Optimizer and Microinverters Attachment(Use as Needed)

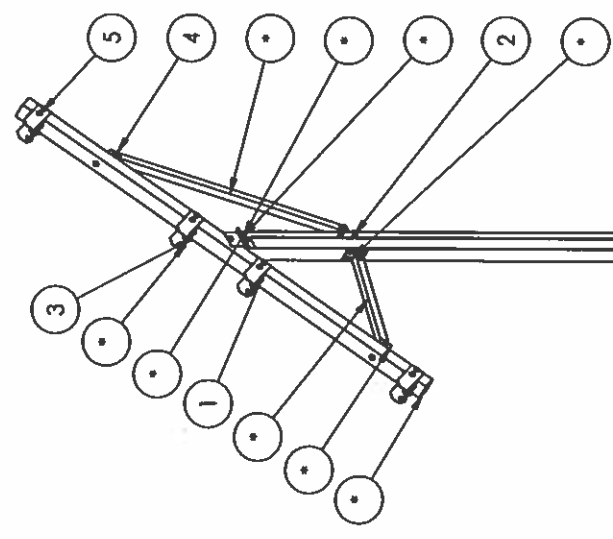
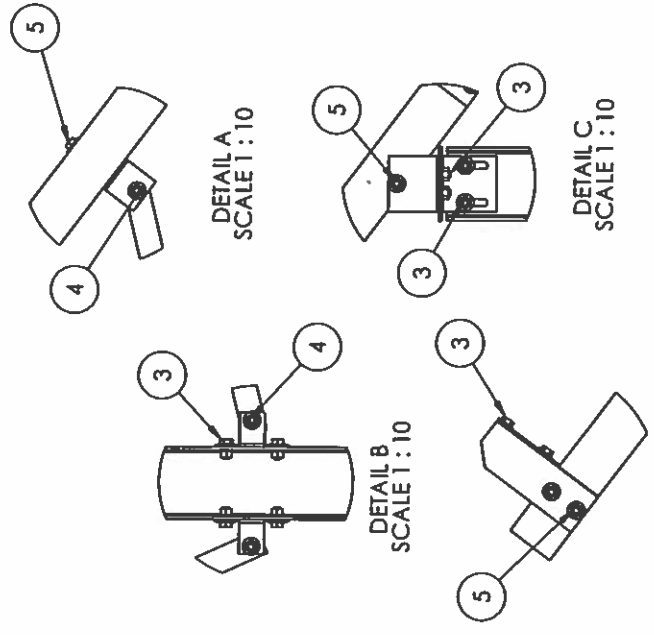
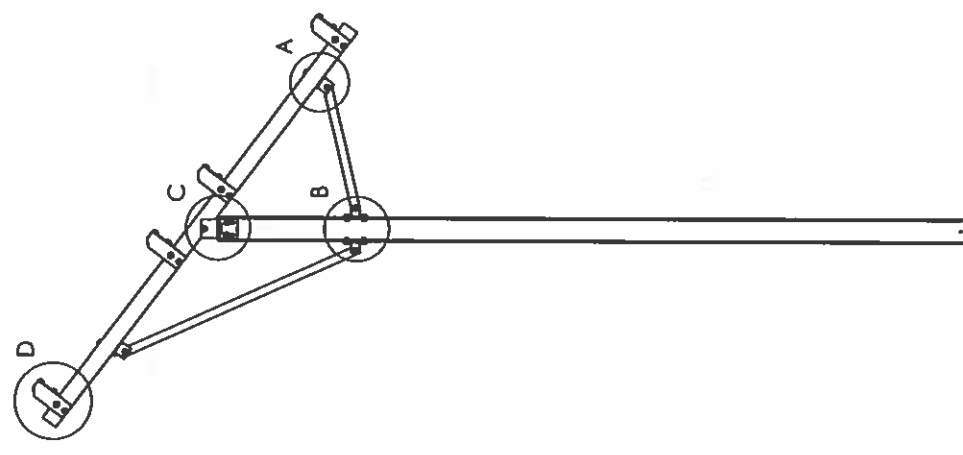
ITEM NO.	PART NUMBER	DESCRIPTION	QTY. PER	QTY TOTAL
1	.25 x .75	Bolt, Hex Head - 1/4"-20 x 3/4"	1	
2	.25 Serrated	Nut, 1/4"-20 serrated	1	
3	.25 x .5 Flat	Washer, flat	1	
4	.25 x .5 Star	Washer, Star	1	

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONS: ±.005 DECIMALS: ±.0012 ANGLES: ±.1 degree		DATE: 1/17/2011	REVISION: Original
DRANK	NAME: RTS	SIGNATURE	TITLE: PER PANEL FASTENERS HANWHA Q-CELL, HELIENE
CRKD	DATE		
APY/D			
APD			
CA			
MATERIAL:			
DWG NO. 326394			
SCALE: 1:1			

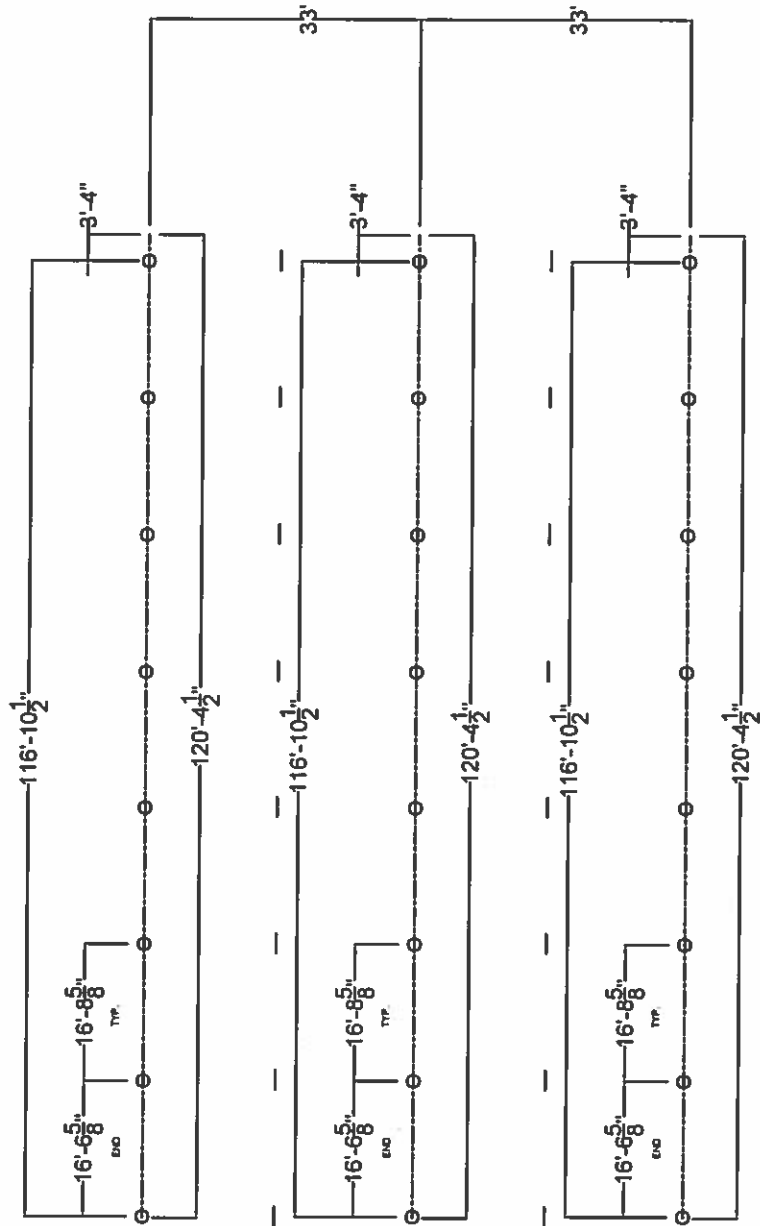
PROPERTY AND CONFIDENTIAL INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF HARVEST ENERGY SOLUTIONS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF HARVEST ENERGY SOLUTIONS IS PROHIBITED.



ITEM NO.	PART NUMBER	DESCRIPTION	QTY. PER	QTY. TOTAL
1	0.5 Flat Washer	WASHER (HDG)	90	2160
2	0.5-13 Hex Nut	NUT, 1/2"-13 UNC (HDG)	45	1080
3	0.5-13x1.25 Hex Bolt	BOLT, 1/2"-13 UNC X 1 1/4" (G5 HDG)	30	720
4	0.5-13x3 Hex Bolt	BOLT, 1/2"-13 UNC X 3" (G5 HDG)	4	96
5	0.5-13x5 Hex Bolt	BOLT, 1/2"-13 UNC X 5" (G5 HDG)	11	264



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONS DECIMALS ANGULAR: ±.2 degrees		DATE		REVISION	
NAME	SIGNATURE	DATE	DATE	DESCRIPTION	ORIGINAL
RTS		10/28/2011		PER POST BRACKETS AND FASTENERS	
DRAWN					
CHECKED					
APPROVED					
MFG					
QA					
MATERIAL:			DWG NO. 326387		
PROPERTY AND CONFIDENTIALITY NOTICE: THIS DRAWING IS THE PROPERTY OF HARVEST ENERGY SOLUTIONS. IT IS TO BE USED ONLY FOR THE PROJECT AND LOCATION SPECIFICALLY IDENTIFIED IN THE DRAWING. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF HARVEST ENERGY SOLUTIONS IS PROHIBITED.			SCALE: 1:10		
SHEET 1 OF 1					



OVERALL MEASURED GRADE VARIANCE (TO BE MEASURED BEFORE POST INSTALLATION)

MEASURED POST MEASURED GRADE (AFTER INSTALLATION)

OVERALL MEASURED GRADE VARIANCE (TO BE MEASURED BEFORE POST INSTALLATION)

MEASURED POST MEASURED GRADE (AFTER INSTALLATION)

OVERALL MEASURED GRADE VARIANCE (TO BE MEASURED BEFORE POST INSTALLATION)

MEASURED POST MEASURED GRADE (AFTER INSTALLATION)

DATE	REVISED	BY	DATE
HARVEST ENERGY SOLUTIONS			
JACKSON, MICHIGAN			
LONE MAPLE DEVELOPMENT			
LONE MAPLE DEVELOPMENT			
POST LOCATIONS			
			1 1 V3525-AA

/ Perfect Welding / Solar Energy / Perfect Charging



SHIFTING THE LIMITS

FRONIUS PRIMO

/ The future of residential solar is here - Introducing the new Fronius Primo.



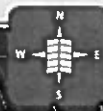
/ PC board replacement process



/ SnapINverter mounting system



/ Wi-Fi* interface



/ SolarFlex Design



/ Smart Grid Ready



/ Arc Fault Circuit Interruption

/ With power categories ranging from 3.8 kW to 15.0 kW, the transformerless Fronius Primo is the ideal compact single-phase inverter for residential applications. The sleek design is equipped with the SnapINverter hinge mounting system which allows for lightweight, secure and convenient installation and service. The Fronius Primo has several integrated features that set it apart from competitors including dual powerpoint trackers, high system voltage, a wide input voltage range, Wi-Fi* and SunSpec Modbus interface for seamless monitoring and datalogging, Arc Fault Circuit Interruption (AFCI), and Fronius' online and mobile platform Fronius Solar.web. The Fronius Primo is designed to adjust to future standards, offering a complete solution to code restrictions and technical innovations of tomorrow. It also works seamlessly with the Fronius Rapid Shutdown Box for a reliable NEC 2014 solution.

TECHNICAL DATA FRONIUS PRIMO

GENERAL DATA	FRONIUS PRIMO 3.8 - 8.2	FRONIUS PRIMO 10.0-15.0
Dimensions (width x height x depth)	16.9 x 24.7 x 8.1 in.	20.1 x 28.5 x 8.9 in.
Weight	47.29 lb.	82.5 lbs.
Degree of protection	NEMA 4X	
Night time consumption	< 1 W	
Inverter topology	Transformerless	
Cooling	Variable speed fan	
Installation	Indoor and outdoor installation	
Ambient operating temperature range	-40 - 131°F (-40 - 55°C)	-40 - 140°F (-40 - 60°C)
Permitted humidity	0 - 100 %	
DC connection terminals	4x DC+ and 4x DC- screw terminals for copper (solid / stranded / fine stranded) or aluminum (solid / stranded)	4x DC+1, 2x DC+2 and 6x DC- screw terminals for copper (solid / stranded / fine stranded) or aluminum (solid / stranded)
AC connection terminals	Screw terminals 12 - 6 AWG	
Revenue Grade Metering	Optional (ANSI C12.1 accuracy)	
Certificates and compliance with standards	UL 1741-2010, UL1998 (for functions: AFCI and isolation monitoring), IEEE 1547-2003, IEEE 1547.1-2003, ANSI/IEEE C62.41, FCC Part 15 A & B, NEC Article 690, C22, 2 No. 107.1-01 (September 2001), UL1699B Issue 2 -2013, CSA TIL M-07 Issue 1 -2013	UL 1741-2015, UL1998 (for functions: AFCI, RCMU and isolation monitoring), IEEE 1547-2003, IEEE 1547.1-2003, ANSI/IEEE C62.41, FCC Part 15 A & B, NEC Article 690-2014, C22, 2 No. 107.1-01 (September 2001), UL1699B Issue 2 -2013, CSA TIL M-07 Issue 1 -2013

PROTECTIVE DEVICES

STANDARD WITH ALL PRIMO MODELS

AFCI & 2014 NEC Ready	Yes
Ground Fault Protection with Isolation Monitor Interrupter	Yes
DC disconnect	Yes
DC reverse polarity protection	Yes

INTERFACES

STANDARD WITH ALL PRIMO MODELS

Wi-Fi*/Ethernet/Serial	Wireless standard 802.11 b/g/n / Fronius Solar.web, SunSpec Modbus TCP, JSON / SunSpec Modbus RTU
6 Inputs or 4 digital inputs/outputs	External relay controls
USB (A socket)	Datalogging and/or updating via USB
2x RS-422 (B)45 socket)	Fronius Solar Net, interface protocol
Datalogger and Webserver	Included

*The term Wi-Fi® is a registered trademark of the Wi-Fi Alliance.

TECHNICAL DATA FRONIUS PRIMO

INPUT DATA	PRIMO 3.8-1	PRIMO 5.0-1	PRIMO 6.0-1	PRIMO 7.6-1	PRIMO 8.2-1
Recommended PV power (kWp)	3.0 - 6.0 kW	4.0 - 7.8 kW	4.8 - 9.3 kW	6.1 - 11.7 kW	6.6 - 12.7 kW
Max. usable input current (MPPT 1/MPPT 2)	18 A / 18 A	18 A / 18 A	18 A / 18 A	18 A / 18 A	18 A / 18 A
Total max. DC current	36 A				
Max. array short circuit current (1.25 Imax) (MPPT 1/MPPT 2)	22.5 A / 22.5 A				
Operating voltage range	80 V - 600 V				
Max. input voltage	600 V				
Nominal input voltage	410 V	420 V	420 V	420 V	420 V
Admissible conductor size DC	AWG 14 - AWG 6				
MPP Voltage Range	200 - 480 V	240 - 480 V	240 - 480 V	250 - 480 V	270 - 480 V
Number of MPPT	2				

OUTPUT DATA	PRIMO 3.8-1	PRIMO 5.0-1	PRIMO 6.0-1	PRIMO 7.6-1	PRIMO 8.2-1
Max. output power	240 V	3800 W	5000 W	6000 W	8200 W
	208 V	3800 W	5000 W	6000 W	7900 W
Max. continuous output current	240 V	15.8 A	20.8 A	25.0 A	34.2 A
	208 V	18.3 A	24.0 A	28.8 A	38.0 A
Recommended OCPD/AC breaker size	240 V	20 A	30 A	35 A	45 A
	208 V	25 A	30 A	40 A	50 A
Max. Efficiency	96.7 %				
CEC Efficiency	240 V	95.0 %	95.5 %	96.0 %	96.5 %
Admissible conductor size AC	AWG 14 - AWG 6				
Grid connection	208 / 240 V				
Frequency	60 Hz				
Total harmonic distortion	< 5.0 %				
Power factor (cos φ _{ac})	0.85-1 int./cap				

INPUT DATA	PRIMO 10.0-1	PRIMO 11.4-1	PRIMO 12.5-1	PRIMO 15.0-1
Recommended PV power (kWp)	8.0 - 12.0 kW	9.1 - 13.7 kW	10.0 - 15.0 kW	12.0 - 18.0 kW
Max. usable input current (MPPT 1/MPPT 2)	33.0 A / 18.0 A			
Total max. DC current	51 A			
Max. array short circuit current (1.25 Imax) (MPPT 1/MPPT 2)	41.3 A / 22.5 A			
Operating voltage range	80 V - 600 V			
Max. input voltage	600 V			
Nominal input voltage	415 V	420 V	425 V	440 V
Admissible conductor size DC	AWG 14 - AWG 6 copper direct, AWG 6 aluminum direct (AWG 10 copper or AWG 8 aluminum for overcurrent protective devices up to 60A, from 61 to 100A minimum AWG 8 for copper or AWG 6 aluminum has to be used), AWG 4 - AWG 2 copper or aluminum with optional input combiner			
MPP Voltage Range	220 - 480 V	240 - 480 V	260 - 480 V	320 - 480 V
Integrated DC string fuse holders	+ and ++ for MPPT 1 / no fusing required on MPPT 2			
Number of MPPT	2			

OUTPUT DATA	PRIMO 10.0-1	PRIMO 11.4-1	PRIMO 12.5-1	PRIMO 15.0-1
Max. output power	240 V	9995 W	11400 W	12500 W
	208 V	9995 W	11400 W	12500 W
Max. continuous output current	240 V	41.6 A	47.5 A	52.1 A
	208 V	48.1 A	54.8 A	60.1 A
Recommended OCPD/AC breaker size	240 V	60 A	60 A	70 A
	208 V	70 A	70 A	80 A
Max. Efficiency	96.7 %			
CEC Efficiency	96.0 %		96.5 %	
Admissible conductor size AC	AWG 10 - AWG 2 copper (solid / stranded / fine stranded)(AWG 10 copper or AWG 8 aluminum for overcurrent protective devices up to 60A, from 61 to 100A minimum AWG 8 for copper or AWG 6 aluminum has to be used) , AWG 6 - AWG 2 copper(solid / stranded) MultiContactWiringable with AWG 12			
Grid connection	208 / 240 V			
Frequency	60 Hz			
Total harmonic distortion	< 2.5 %			
Power factor (cos φ _{ac})	0-1 int./cap.			

/ Perfect Welding / Solar Energy / Perfect Charging

WE HAVE THREE DIVISIONS AND ONE PASSION: SHIFTING THE LIMITS OF POSSIBILITY.

/ Whether welding technology, photovoltaics or battery charging technology – our goal is clearly defined: to be the innovation leader. With around 3,300 employees worldwide, we shift the limits of what's possible - our record of over 900 granted patents is testimony to this. While others progress step by step, we innovate in leaps and bounds. Just as we've always done. The responsible use of our resources forms the basis of our corporate policy.

Further information about all Fronius products and our global sales partners and representatives can be found at www.fronius.com

v05 May 2015 EN

Fronius USA LLC
6797 Fronius Drive
Portage, IN 46368
USA
pv-support-usa@fronius.com
www.fronius-usa.com

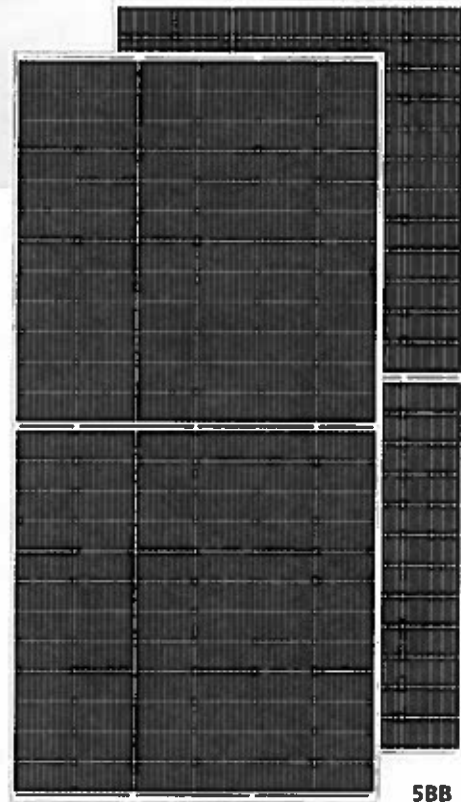


KuMax

CS3U-335 | 340 | 345P
(1000 V / 1500 V)

With Canadian Solar's poly cell technology and the industry leading innovative LIC (Low Internal Current) module technology, we are now able to offer our global customers high power poly modules up to 345 W.

The KuMax poly modules with a dimension of 2000 x 992 mm, close to our 72 cell MaxPower modules, have the following features:



MORE POWER



Low power loss in cell connection



Low NMOT: $42 \pm 3 \text{ }^\circ\text{C}$
Low temperature coefficient (Pmax): $-0.38 \text{ } \%/ \text{ }^\circ\text{C}$



Better shading tolerance



High PTC rating of up to: 92.52 %

MORE RELIABLE



Lower hot spot temperature



Minimizes micro-cracks



Heavy snow load up to 5400 Pa,
wind load up to 3600 Pa*



25 years linear power output warranty



10 years product warranty on materials and workmanship

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2008 / Quality management system
ISO 14001:2004 / Standards for environmental management system
OHSAS 18001:2007 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730: VDE / CE
UL 1703: CSA



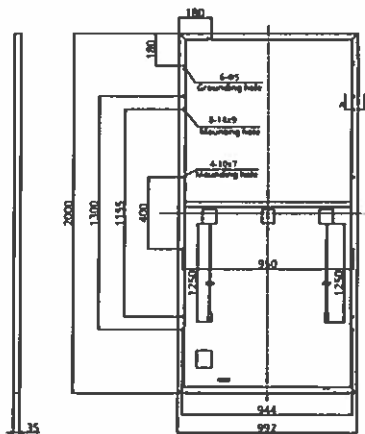
* If you need specific product certificates, and if module installations are to deviate from our guidance specified in our installation manual, please contact your local Canadian Solar sales and technical representatives.

CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. As a leading PV project developer and manufacturer of solar modules with over 25 GW deployed around the world since 2001, Canadian Solar Inc. is one of the most bankable solar companies worldwide.

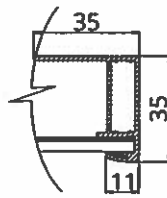
* For detailed information, please refer to Installation Manual.

ENGINEERING DRAWING (mm)

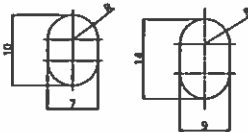
Rear View



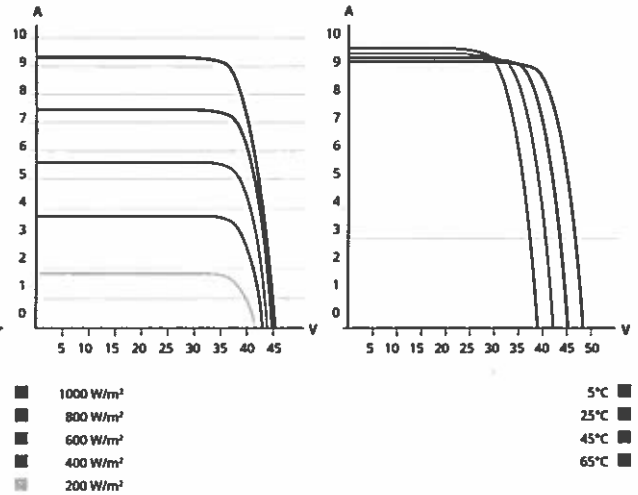
Frame Cross Section A-A



Mounting Hole



CS3U-340P / I-V CURVES



ELECTRICAL DATA | STC*

CS3U	335P	340P	345P
Nominal Max. Power (Pmax)	335 W	340 W	345 W
Opt. Operating Voltage (Vmp)	38.2 V	38.4 V	38.6 V
Opt. Operating Current (Imp)	8.77 A	8.86 A	8.94 A
Open Circuit Voltage (Voc)	45.7 V	45.9 V	46.1 V
Short Circuit Current (Isc)	9.28 A	9.36 A	9.44 A
Module Efficiency	16.89%	17.14%	17.39%
Operating Temperature	-40°C ~ +85°C		
Max. System Voltage	1500V (IEC/UL) or 1000V (IEC/UL)		
Module Fire Performance	TYPE 1 (UL 1703) or CLASS C (IEC 61730)		
Max. Series Fuse Rating	30 A		
Application Classification	Class A		
Power Tolerance	0 ~ + 5 W		

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL DATA | NMOT*

CS3U	335P	340P	345P
Nominal Max. Power (Pmax)	249 W	252 W	256 W
Opt. Operating Voltage (Vmp)	35.3 V	35.5 V	35.7 V
Opt. Operating Current (Imp)	7.04 A	7.11 A	7.18 A
Open Circuit Voltage (Voc)	42.7 V	42.9 V	43.1 V
Short Circuit Current (Isc)	7.49 A	7.55 A	7.62 A

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

MECHANICAL DATA

Specification	Data
Cell Type	Poly-crystalline, 156.75 X 78.38 mm
Cell Arrangement	144 [2 X (12 X 6)]
Dimensions	2000 X 992 X 35 mm (78.7 X 39.1 X 1.38 in)
Weight	22.5 kg (49.6 lbs)
Front Cover	3.2 mm tempered glass
Frame	Anodized aluminium alloy, crossbar enhanced
J-Box	IP68, 3 bypass diodes
Cable	4 mm ² (IEC), 12 AWG (UL) 1250 mm (49.2 in), 1670 mm (65.7 in)
Cable Length	is optional for single tracking system with leap-frog connection
Connector	T4 series
Per Pallet	30 pieces
Per Container (40' HQ)	660 pieces

TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.38 % / °C
Temperature Coefficient (Voc)	-0.31 % / °C
Temperature Coefficient (Isc)	0.05 % / °C
Nominal Module Operating Temperature	42 ± 3°C

PARTNER SECTION



* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Canadian Solar Inc. reserves the right to make necessary adjustment to the information described herein at any time without further notice.

Arrays of 72 Modules
216 Modules at 340W
73,440 W or 73.44 kW



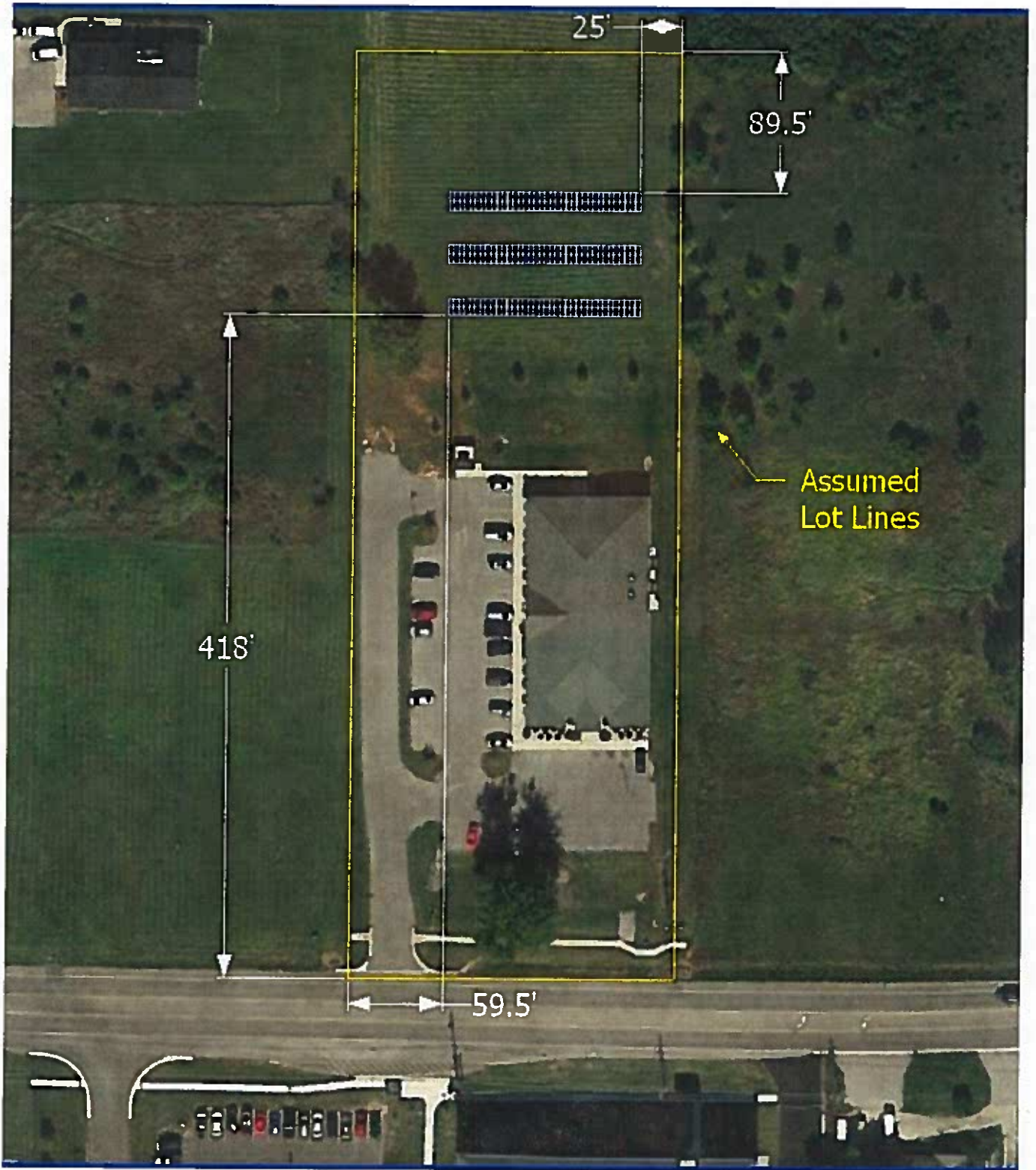
Inverters and pv sub Panel
Located at the Array

250' of Pipe, Wire and Trench

Billing Meter, AC DG Disconnect
Tap Box, Service Panel and
Interconnection Location



2





**Mount Pleasant Fire Department
804 E. High Street
Mount Pleasant, Mi 48858**

Correction Notice

Wednesday July 3, 2019

Michigan Works

**5889 E Broadway RD
Mt. Pleasant, MI 48858**

An inspection of your facility on, Wednesday July 3, 2019 revealed the code violations/recommendations listed below.

ORDER TO COMPLY: You must correct the following conditions prior to the re-inspection date. A re-inspection to determine compliance with this notice will be conducted on

at / / :

Failure to comply with this notice may result in enforcement and penalties provided for by law for such violations.

Violation Code	Article	Division	Page	Count
1 PROPERTY Identification Michigan Works 5589 E. Broadway Mt. Pleasant MI 48858			0	0
Scope of work: Array of solar panels north side of building.				
NO COMMENTS/CONCERNS No Code Violations			0	0
In review of the subject property, I have no comments or concerns.				

**Keeler, Randy
Lieutenant
Mount Pleasant Fire Department**

From: [Peter Gallinat](#)
To: [Jennifer Loveberry](#)
Subject: FW: Site Plan Review - 5889 E. Broadway - Lone Maple Development
Date: Wednesday, August 14, 2019 12:39:00 PM

Storm Water for Lone Maple Solar Energy.

Peter Gallinat
Township Planner
Charter Twp of Union
2010 S. Lincoln Rd.
Mt Pleasant, MI 48858
989-772-4600 x 241
pgallinat@uniontownshipmi.com

From: Tim Warner <twarner@isabellacounty.org>
Sent: Tuesday, August 13, 2019 11:56 AM
To: 'Ryan Smith' <ryan@geminicapitalmgt.com>
Cc: Peter Gallinat <pgallinat@uniontownshipmi.com>; 'Kalina' <kalina@geminicapitalmgt.com>
Subject: RE: Site Plan Review - 5889 E. Broadway - Lone Maple Development

Mr. Smith

A discussion with your staff states that the solar panels are 3' x 6' with a solid surface material. This solid surface generates water runoff in any given rain event. Therefore, that water runoff has to meet the Union Township Storm Water Ordinance requirements. This would include a hydraulics analyses to be ran to calculate an appropriate size detention pond for the additional water runoff for the site to comply with the storm water requirements for this project.

You may want to consult with the Engineer who developed the previous storm water plan.

If you have any questions please contact me.

Thank you.

Timothy A. Warner
Project Manager
Isabella County Drain Office
Rm 140, 200 N. Main Street
Mt. Pleasant, MI 48858
Ph# (989) 772-0911, ext. 222
Fax# (989) 779-8785

From: Ryan Smith <ryan@gemini-capitalmgt.com>
Sent: Monday, August 05, 2019 8:48 AM
To: Tim Warner <twarner@isabellacounty.org>
Cc: Peter Gallinat <pgallinat@uniontownshipmi.com>
Subject: Re: Site Plan Review - 5889 E. Broadway - Lone Maple Development

Mr. Warner -

Please find attached the requested application and supporting documents for our solar project request. We just used the original storm water plan and updated to show the new panels.

A check will be mailed to your attention this morning.

Please let me know if you have any questions. And again thank you for your time and attention to this matter.

Ryan Smith
Gemini Capital Management, LLC
989-708-6850
www.gemini-capitalmgt.com

On Mon, Jul 29, 2019 at 1:19 PM Ryan Smith <ryan@gemini-capitalmgt.com> wrote:

Thanks. I'll get you the requested info ASAP.

Ryan Smith
Gemini Capital Management, LLC
989-708-6850
www.gemini-capitalmgt.com

On Mon, Jul 29, 2019 at 12:50 PM Tim Warner <twarner@isabellacounty.org> wrote:

Dear Mr. Smith;

The Drain Commissioners Office reviews Union Township Site plans Storm Water Plans for the Individual Site Plans to determine whether or not the Storm Water plan meets the Union Township Storm Water Ordinance. The Township has stated it needs to know if the proposed

additional development and existing property complies with their Storm Water Ordinance.

We are requesting a Storm Water Review Application be completed (see attached form). A fee for our review, must be submitted with a storm water plan for the parcel in question. A completed storm water plan shall accommodate the existing and new construction runoff from the site. If you have a copy of a Storm water plan that was completed when the building and parking lot was constructed you could possibly expand that storm water plan to pick up the additional runoff for the new development on the parcel.

The Drain Office will then review the completed storm water plan to see if it meets the Union Township's Storm Water Ordinance.

If you have any questions please contact me.

Sincerely

Timothy A. Warner

Project Manager

Isabella County Drain Office

Rm 140, 200 N. Main Street

Mt. Pleasant, MI 48858

Ph# (989) 772-0911, ext. 222

Fax# (989) 779-8785

From: Ryan Smith <ryan@geminicapitalmgt.com>

Sent: Tuesday, July 23, 2019 9:44 AM

To: drain@isabellacounty.org

Cc: Peter Gallinat <pgallinat@uniontownshipmi.com>

Subject: Re: Site Plan Review - 5889 E.Broadway - Lone Maple Development

Dear Drain Commission -

I am following up on this request from June 27, 2019 regarding a site plan application/review and SES Text Amendment application with Union Township. As such Peter Gallinat from Union Township stated that the drain commission needs to review and approve the requested site plan as part of the Union Township site plan application and approval process.

Can you please review the request and comment back to Peter and myself?

I appreciate your attention to this matter.

Ryan Smith
Gemini Capital Management, LLC
989-708-6850
www.gemini-capital-mgt.com

On Thu, Jun 27, 2019 at 1:47 PM Ryan Smith <ryan@gemini-capital-mgt.com> wrote:

Dear Local Government Agency -

As part of a site plan application/review and SES Text Amendment application with Union Township I am formally requesting that you review the attached site plan as required.

Please contact myself or Peter at Union Township should you have any questions.

Ryan Smith
Gemini Capital Management, LLC
989-708-6850
www.gemini-capital-mgt.com

From: [Peter Gallinat](#)
To: [Jennifer Loveberry](#)
Subject: FW: Site Plan Review - 5889 E.Broadway - Lone Maple Development
Date: Wednesday, August 14, 2019 12:39:45 PM

From: Rick Collins <rcollins@ictcbus.com>
Sent: Monday, July 1, 2019 9:08 AM
To: Info from ICTC <info@ictcbus.com>
Cc: Peter Gallinat <pgallinat@uniontownshipmi.com>
Subject: RE: Site Plan Review - 5889 E.Broadway - Lone Maple Development

I have no issue with the attached plans.



Rick Collins | Executive Director
2100 E. Transportation Dr | Mt. Pleasant, MI 48858
Phone 989.773.6766 | Fax 989.773.1873
rcollins@ictcbus.com
Visit our website at ictcbus.com

From: Info from ICTC
Sent: Thursday, June 27, 2019 2:45 PM
To: Rick Collins <rcollins@ictcbus.com>
Subject: FW: Site Plan Review - 5889 E.Broadway - Lone Maple Development

From: Ryan Smith <ryan@geminicapitalmgt.com>
Sent: Thursday, June 27, 2019 1:48 PM
To: Info from ICTC <info@ictcbus.com>; drain@isabellacounty.org; pgaffney@isabellaroads.com;
fire@mt-pleasant.org; ksmith@uniontownshipmi.com
Cc: Peter Gallinat <pgallinat@uniontownshipmi.com>
Subject: Site Plan Review - 5889 E.Broadway - Lone Maple Development

Dear Local Government Agency -

As part of a site plan application/review and SES Text Amendment application with Union Township I am formally requesting that you review the attached site plan as required.

Please contact myself or Peter at Union Township should you have any questions.

Ryan Smith
Gemini Capital Management, LLC
989-708-6850
www.gemini-capital.com

|

From: [Peter Gallinat](#)
To: [Jennifer Loveberry](#)
Subject: FW: Site Plan Review - 5889 E.Broadway - Lone Maple Development
Date: Wednesday, August 14, 2019 12:39:20 PM
Attachments: [image001.png](#)

From: Kim Smith <ksmith@uniontownshipmi.com>
Sent: Monday, July 29, 2019 8:44 AM
To: Peter Gallinat <pgallinat@uniontownshipmi.com>
Cc: Ryan Smith <ryan@geminicapitalmgt.com>
Subject: RE: Site Plan Review - 5889 E.Broadway - Lone Maple Development

Peter,

Good morning, I have reviewed the site plan for the addition of solar panels at 5889 E Broadway. These comments pertain to site plan approval only.

The parcel/building is currently serviced by Township water and sewer. The site plan does not indicate any changes to the onsite water and sewer. At this time the Public Service Department has no issues with the site plan or the installation of the solar panels being proposed.

Kim Smith



Department of Public Services
Charter Township of Union
5228 South Isabella Road
Mt. Pleasant, MI 48858
Phone (989) 772-4600 ext. 224
Fax (989) 773-1988
Visit us on the Web at
<http://www.uniontownshipmi.com>

"This institution is an equal opportunity provider, and employer."

From: Ryan Smith <ryan@geminicapitalmgt.com>
Sent: Tuesday, July 23, 2019 9:53 AM
To: Kim Smith <ksmith@uniontownshipmi.com>

Cc: Peter Gallinat <pgallinat@uniontownshipmi.com>

Subject: Re: Site Plan Review - 5889 E.Broadway - Lone Maple Development

Kim -

I am following up on this request from June 27, 2019 regarding a site plan application/review and SES Text Amendment application with Union Township. As such Peter Gallinat stated that you need to review and approve the requested site plan as part of the Union Township site plan application and approval process.

Can you please review the request and comment back to Peter and myself?

I appreciate your attention to this matter.

Ryan Smith
Gemini Capital Management, LLC
989-708-6850
www.gemini-capitalmgt.com

On Thu, Jun 27, 2019 at 1:47 PM Ryan Smith <ryan@gemini-capitalmgt.com> wrote:

Dear Local Government Agency -

As part of a site plan application/review and SES Text Amendment application with Union Township I am formally requesting that you review the attached site plan as required.

Please contact myself or Peter at Union Township should you have any questions.

Ryan Smith
Gemini Capital Management, LLC
989-708-6850
www.gemini-capitalmgt.com



Peter Gallinat, Township Planner
pgallinat@uniontownshipmi.com
2010 South Lincoln
Mt. Pleasant, MI 48858
Phone 989-772-4600 Ext. 241
Fax 989-773-1988

TO: Planning Commission
FROM: Township Planner

New Business

SUBJECT: D) SPR 2019-10 Mid State Electric located at 5966 Venture Way

Applicant: Venture Way MTP LLC

Owner: Venture Way MTP LLC

Location: 5966 Venture Way MT PLEASANT, MI 48858

Current Zoning: I-2 (General Industrial District)

Adjacent Zoning: I-2, SCIT.

Future Land Use/Intent: 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.

Reason for Request: Pave existing gravel drives and parking on east side of buildings, isle between buildings, and regrade and pave existing paved parking in North.

History: No new structures on the property are being proposed. Site will be paved and lighting on existing buildings updates to reflect down shielded lighting. At this time outside agency approvals from ICTC, Mt. Pleasant Fire Department, and Isabella County Drain Office for Stormwater Management. At this time no approval from ICRC or Township Utilities have been received. Applicant has requested provisional relief for sidewalks as the property is zoned I-1.

Objective of board: The Planning Commission shall study the site plan and shall, within sixty days of its submittal to the Zoning Official, either approve or disapprove the proposed site plan. If the site plan is disapproved, the reasons for disapproval shall be stated.

Recommendation from Township Planner

Although, I don't recommend approving plans with outstanding approvals needed the PC could consider approving the site plan on the condition that these two approvals are obtained.

Peter Gallinat
Township Planner

Union Township Site Plan Review Application 2015 Revision

FILL OUT THE FOLLOWING

- I. This application is for (circle one) Preliminary Site Plan Review Final Site Plan Review
- II. Applicant Name VENTURE WAY MTP, LLC
- III. Applicant Address P.O. BOX 219 MT PLEASANT MI 48804-0219
- IV. Applicant Phone 989-773-4462 Owner Phone SAME
- V. Applicant is (circle) Contractor Architect/Engineer Developer Land Owner (skip V & VI)
Other
- VI. Land Owner Name SAME AS ABOVE
- VII. Land Owner Address _____
- VIII. Project/Business Name VENTURE WAY MTP, LLC
- IX. Fill out check list that follows. You must check off that each item has been included in the drawing. If an item is not going to be included in the construction, note that in the comment area. For the first three items, check off if you have made the required submittals to other reviewing agencies.

SUBMITTALS TO OTHER AGENCIES	Off	
Storm water management plan approval prior to application. Reviewed by the County Engineer	X	Copy of Union Township Storm Water Management Plan available upon request. Submit (2) copies of plan and calculations directly to the Isabella County Engineer, contact Bruce Rohrer at (989) 772 0911, ext. 231. Any review fees are additional.
All curb cuts, acceleration/deceleration lanes, additional drives, and other matters pertaining to roads to be approved by MDOT or Isabella County Road Commission prior to application.	X	MDOT (M 20, BR 127 sites) at (989) 773 7756. Contact Isabella County Road Commission (all other county roads) at (989) 773 7131. Submit (3) copies.
Mt. Pleasant Fire Dept.	X	Sgt Randy Keeler (989) 779-5122. (2) copies
Isabella Co Transportation Commission (ICTC)	X	Rick (989) 773 2913. (2) copies
WELLHEAD PROTECTION REPORTING FORMS (Required for all Site Plans)		
Hazardous Substances Reporting Form Part I and II (Forms included in this packet)	X	Kim Smith (989) 772-4600 ext 224 ksmith@uniontownshipmi.com
PERMIT INFORMATION - DEQ Check List		
SITE PLAN REQUIREMENTS	I Of	Comments - (also indicate any features which will not be included in the development or are not applicable)
Name and addresses of Property Owner	X	
Name and Address of Applicant	X	
Provide Construction Type (per Mi Building Code) and if sprinkled. (assume Type IVb, un-sprinkled if not provided)	X	

Union Township Site Plan Review Application 2015 Revision

The date, north arrow and scale. The scale shall be not less than 1"= 20' for property under three (3) acres and not more than 1"=40' for property greater than three acres.	X	
All lot and/or property lines are to be shown and dimensioned, including building setback lines	X	
The location and dimensions of all existing and proposed: fire hydrants (within 400 feet of building) - - -	X	
drives, -----	X	
sidewalks. (required) -----	X	
curb openings, -----	X	
acceleration/deceleration lanes, -----	X	
signs, -----	X	
exterior lighting on buildings and parking lots, - -	X	
parking areas (Including handicapped parking spaces, barrier-free building access, unloading areas), -----	X	
recreation areas, -----	N/A	
common use areas, -----	N/A	
areas to be conveyed for public use and purpose. -	N/A	
Elevation of building front, side, and back. Include Sign size, height, and design. Canopy heights extending over driveways accommodate Public Transportation	X	
Source of utilities. Public water and sewer approval by Union Township Utility Coordinator prior to application.	X	Note: Union Township policy is to issue sewer and water permits after application for a building permit. Applicant is advised to contact the utility department for availability prior to site plan review. The township does not coordinate other utility matters. Applicant to assure himself that site is suitable for septic systems, contact Central Michigan District Health Department
All dumpsters shall be screened from public view with an opaque fence or wall no less than six feet in height. Show location. (Note most refuse contractors require concrete pad to place dumpsters upon)	X	
The location and right-of-way width of all abutting roads, streets, alleys and easements.	X	
A locational sketch drawn to scale giving the section number and the nearest crossroads.	X	

Union Township Site Plan Review Application 2015 Revision

The zoning of the subject property and the abutting properties.	X	
The location, height and type of fences and walls.	X	
The location and detailed description of landscaping.	X	
For multiple family and mobile home parks, contour intervals shall be shown (two foot intervals for average slopes ten percent and under and five foot intervals for slopes over ten percent). Topography, however, is encouraged to be shown on all site plans.	X	
The location of all existing and proposed structures on and within one hundred feet of the subject property's boundary.	X	
For apartments, provide a count of bedrooms per building and total count of bedrooms for the project.	X	

APPLICANT COMMENTS

Union Township Site Plan Review Application 2015 Revision

I submit the site plan and this application as a true representation of existing and proposed conditions. I agree to install all features as shown and to abide by conditions placed upon approval of this plan by the Union Township Planning Commission . 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. Any changes to the Site Plan now or in the future must be approved by the Union Township Planning Commission or Zoning Administrator. Approval of this plan shall not constitute the right to violate any provisions of the Union Township Zoning Ordinance 1991-5, or other applicable building or state codes and or laws.


Signature of Applicant

8-6-19
Date

Signature of Owner (if other than applicant)

Date

PLEASE PLACE OUR REVIEW ON THE AUGUST 20, 2019 (INSERT DATE)
PLANNING COMMISSION MEETING. An owners representative WILL / WILL NOT attend. You will not receive a reminder of the scheduled meeting.

Union Township Site Plan Review Application 2015 Revision

<u>Township use</u>	Review Comments
File # _____	_____
Fee Paid initial _____	_____
Receipt # _____	_____
Date received _____	_____
Date review completed by Zoning Administrator _____	
Place on the _____ Planning Commission Agenda	
Planning Commission Decision _____	_____

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: VENTURE WAY MTP LLC

Name of business owner(s): AARON LISCOMB

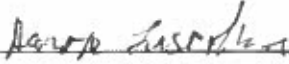
Street and mailing address: P.O. BOX 219
MT. PLEASANT, MI 48804-0219

Telephone: 989-773-4462

Fax: 989-773-2705

Email: aaron@mid-stateelectric.com

I affirm that the information submitted is accurate.

Owner(s) signature and date: 

Information compiled by: SHANEE THAYER, OFFICE MANAGER
CENTRAL MICHIGAN SURVEYING & DEVELOPMENT

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 recycled 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
- 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

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
	KEY: LQ. = liquid P,LQ = pressurized liquid S = solids G = gas PG = pressurized gas			KEY: AGT = above ground tank DM = drums UGT = underground tank Cy = cylinders CM = metal cylinders CW = wooden or composition container TP = portable tank



PERMIT INFORMATION

www.michigan.gov/deqpermits

The Department of Environmental Quality (DEQ) has prepared a list of key questions to help identify what DEQ 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 the DEQ, 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: <http://www.michigan.gov/ehsguide>. Please call the Environmental Assistance Center at 800-662-9278 to talk with any of the DEQ programs noted below.

KEY QUESTIONS:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	PROGRAM WEBPAGE AND CONTACTS
MISCELLANEOUS CONSTRUCTION			
<i>Air Quality Permit to Install:</i> 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)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Air Quality Division (AQD), <u>Permit Section</u>
<i>Asbestos Notification:</i> 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.	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	AQD, <u>Asbestos Program</u>
<i>Land and Water Featured Programs (Water Resources Division) - USACE Consolidated Permits:</i> Please consult the <u>Land and Water Management Decision Tree</u> 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?).	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Water Resources Division (WRD), <u>Joint Permit Application</u>
<i>Soil Erosion and Sedimentation Control:</i> Does the project involve an earth change activity (including land balancing, demolition involving soil movement, and construction)?	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	<u>Soil Erosion and Construction Storm Water</u> , or Contact your <u>Local Agency</u>
<i>NPDES Storm Water Discharge from Construction Sites Notice of Coverage:</i> 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?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	NPDES <u>Storm Water Permits Program</u> , or appropriate <u>DEQ District Office</u>
<i>Public Swimming Pool Construction (Spas/Hot Tubs) Permits:</i> Will your business involve the construction or modification of a public swimming pool, spa or hot tub?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Public Swimming Pool Program</u> , or appropriate <u>DEQ District Office</u>
<i>Threatened and Endangered Species:</i> Does the project involve activities that would destroy a protected species of plant or animal or disturb a protected animal species?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Endangered Species Assessment, <u>Threatened and Endangered Species Program</u> , 517-373-1552
Does the project involve <i>construction</i> or alteration of any <i>sewage collection or treatment</i> facility?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Appropriate <u>District Office</u> , WRD, Part 41 <u>Construction Permit Program</u>
Does the project involve construction of a facility that landfills, transfers, or processes of any type of <i>solid non-hazardous waste</i> on-site, or places <i>industrial residuals/sludge</i> into or onto the ground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Office of Waste Management and Radiological Protection (OWMRP), <u>Solid Waste</u> , Appropriate <u>DEQ District Office</u>
Does the project involve the construction of an on-site treatment, storage, or disposal facility for <i>hazardous waste</i> ?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, Hazardous Waste Section, <u>Treatment, Storage and Disposal</u>
WATER SUPPLY (More information, see: http://www.michigan.gov/deqwater, select "drinking water")			
I am buying water from my community water supply (i.e. city of Detroit or Grand Rapids)	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	Contact your <u>Local Water Utility</u>
I have a private or other water supply well (Type III)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Contact your (District or County) <u>Local Health Department</u>
I have a Non-Community Water Supply (Type II)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Guide</u> , Contact your (District or County) <u>Local Health Department</u>
I am a community water supply (Type I)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Community Water Supply</u> , <u>DEQ District Office Community Water Supply Program</u>

WASTEWATER MANAGEMENT			
<i>Storm Water Discharge to Wetlands:</i> Will storm water be collected, stored, or treated in a wetland area from a public road, industrial, commercial, or multi-unit residential development?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
<i>Great Lakes:</i> Does the project involve construction, filling, or dredging below the Ordinary High Water Mark of one of the Great Lakes?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
<i>Inland Lakes and Streams:</i> Does the project involve any dredging, filling, placement of structures, or the operation of a marina within an inland waterbody (e.g. lake, river, stream, drain, creek, ditch, or canal), enlargement of a waterbody, or excavation of a pond within 500 feet of a waterbody?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
<i>Storm Water Ponds and Discharges to Inland Lakes/Streams, or Great Lakes:</i> Will storm water from any road or any other part of the development be discharged either directly or ultimately to an inland waterbody, or one of the Great Lakes; or will a storm water pond be constructed within 500 feet of an inland waterbody?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
Does the project involve placement of fill, earth moving, or placement of structures within the 100-year <i>floodplain</i> of a watercourse?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
Does the project involve construction of a building or septic system in a designated Great Lakes <i>high risk erosion area</i> ?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Shoreland Management</u>
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 <i>environmental area</i> ?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Shoreland Management</u>
Does the project propose any development, construction, silvicultural activities or contour alterations within a designated <i>critical dune area</i> ?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Sand Dune Management</u>
Does the project involve construction of a <i>dam</i> , weir or other structure to impound flow?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Dam Safety Program</u>
CONSTRUCTION PERMITS (SECTOR SPECIFIC)			
Does the project involve the construction or alteration of a water supply system or sewage disposal system for a manufactured housing project?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Office of Drinking Water & Municipal Assistance (ODWMA)
Does the project involve a subdivision or site condominium project utilizing individual on-site subsurface disposal systems or individual wells?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA
Does the project involve the construction or modification of a campground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Campgrounds program</u>
Does the project involve the construction or modification of a public swimming pool?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Swimming pools program</u>
OPERATIONAL PERMITS			
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?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	AQD, <u>Permit Section</u>
NPDES: Does the project involve the discharge of any type of wastewater to a storm sewer, drain, lake, stream, or other surface water?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, Appropriate <u>DEQ District Office</u> , or <u>National Pollutant Discharge Elimination (NPDES) Permit Program</u>
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?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Permits Section</u> , or appropriate <u>DEQ District Office</u>
Does the project involve the discharge of wastewaters into or onto the ground (e.g. subsurface disposal or irrigation)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Groundwater Permits Program</u>
Does the project involve the drilling or deepening of wells for waste disposal?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Office of Oil, Gas and Minerals (OOGM)</u>
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?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>OWMRP</u> or Appropriate <u>DEQ District Office</u>

Does the project involve the on-site treatment, storage, or disposal of hazardous waste?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Hazardous and Liquid Waste</u>
Does the project require a site identification number (EPA number) for regulated waste activities (used oil, liquid waste, hazardous waste, universal waste, PCBs)? (<u>Web Site</u>)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, Appropriate <u>DEQ District Office</u>
Does the project involve the receipt, possession, manufacture, use, storage, transport, transfer, release, or disposal of radioactive material in any form?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Radioactive Material and Standards Unit</u>
Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP <u>Radioactive Material and Standards Unit</u>
Do you desire to develop a withdrawal of over 2,000,000 gallons of water per day from any source other than the Great Lakes and their connecting waterways? Or, do you desire to develop a withdrawal of over 5,000,000 gallons of water per day from the Great Lakes or their connecting waterways?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, DWEHS, <u>Source Water Protection Unit</u>
CHEMICAL ADDITION PROJECTS			
Are you using chemicals or materials in, or in contact with, drinking water at any point in the water works system?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, Appropriate <u>DEQ District Office, Public Water Supply Program</u>
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)? (5.	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Aquatic Nuisance Control and Remedial Action Unit</u>
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)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Surface Water Assessment Section</u>
OPERATIONAL PERMITS (SECTOR SPECIFIC)			
Does the project involve the transport of some other facility's non-hazardous liquid waste?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Transporter Program</u>
Does the project involve the transport hazardous waste?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Transporter Program</u>
Does your facility have an electric generating unit that sells electricity to the grid and burns a fossil fuel?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	AQD, <u>Acid Rain Permit Program</u>
Is the project a dry cleaning establishment utilizing perchloroethylene or a flammable solvent in the cleaning process?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DEQ, AQD, <u>Dry Cleaning Program</u>
Does your laboratory test potable water as required for compliance and monitoring purposes of the Safe Drinking Water Act?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DEQ, <u>Laboratory Services Certifications</u>
Does the project involve the generation of medical waste or a facility that treats medical waste prior to its disposal?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Medical Waste Regulatory Program</u>
Does the project involve transport of septic tank, cesspool, or dry well contents or the discharge of septage or sewage sludge into or onto the ground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Septage Program</u>
Do you store, haul, shred or process scrap tires?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Scrap Tire Program</u>
Does the project involve the operation of a public swimming pool?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Public Swimming Pools Program</u>
Does the project involve the operation of a campground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Campgrounds</u>
Do you engage in the business of hauling bulk water for drinking or household purposes (except for your own household use)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Water Hauler Information</u>
PERSONAL LICENSES/CERTIFICATIONS			
Are you designated by your facility to be the Certified Operator to fulfill the requirements of a wastewater discharge permit (NPDES including Storm	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Operator Training, Storm Water Program</u>

Water or Groundwater)?			
Are you a drinking water operator in charge of a water treatment or water distribution system, back-up operator, or shift operator?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Operator Training</u>
Are you a water-well drilling contractor, pump installer, dewatering well contractor or dewatering well pump installer?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Well Construction Unit</u>
OIL, GAS AND MINERALS			
Do you want to operate a central production facility (applies to oil and gas production facilities where products of diverse ownership are commingled)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Petroleum Geology and Production Unit</u>
Does the project involve the removal of sand from a sand dune area within two (2) miles of a Great Lakes shoreline?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, Minerals and Mapping Unit, <u>Sand Dune Mining Program</u>
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"/>	OOGM, <u>Minerals and Mapping</u>
Does the project involve the surface or open-pit mining of metallic mineral deposits?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
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"/>	OOGM, <u>Minerals and Mapping</u>
Does the project involve mining coal?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
Do you want to change the status of an oil or gas well (i.e. plug the well)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Permits and Bonding Unit</u>
Does the project involve drilling of oil, gas, brine disposal, secondary recovery, or hydrocarbon storage wells?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Permits and Bonding Unit</u>
Does the project involve plugging or deepening of an oil or gas well, or conveying rights in the well as an owner to another person?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Permits and Bonding Unit</u>
Does the project involve changing the status or plugging of a mineral well?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
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"/>	OOGM, <u>Minerals and Mapping</u>
Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OOWMRP, <u>Radioactive Protection Programs</u>
STORAGE TANKS (CONSTRUCTION AND OPERATION)			
Does the project involve the installation of an aboveground storage tank for a flammable or combustible liquid (under 200 degrees Fahrenheit)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Michigan Department of Licensing and Regulatory Affairs (DLARA) - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation of a compressed natural gas dispensing station with storage?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation of a liquefied petroleum gas container filling location or storage location that has a tank with a capacity of more than 2,000 gallons or has two (2) or more tanks with an aggregate capacity of more than 4,000 gallons?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation, removal, or upgrade of an underground storage tank containing a petroleum product or a hazardous substance?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation of a hydrogen system?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>

MIDSTATE ELECTRIC

5966 VENTURE WAY



LOCATION MAP
NOT TO SCALE

I-2 GENERAL INDUSTRIAL	
MINIMUM FRONT YARD SETBACK	75 FT
MINIMUM SINGLE SIDE SETBACK	20 FT
TOTAL TWO SIDES SETBACK	NONE
MINIMUM REAR YARD SETBACK	50 FT
MINIMUM LOT FRONTAGE	100 FT
MINIMUM LOT AREA	50,000 SQ. FT.
MAXIMUM BUILDING HEIGHT	35 FT
MAXIMUM LOT COVERAGE (%)	NONE

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

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

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

LINTYPES		HATCH PATTERNS	
—ELEC—	BURIED ELECTRICAL CABLE	[Hatch]	ASPHALT - EXISTING
—PHONE—	BURIED TELEPHONE CABLE	[Hatch]	ASPHALT - PROPOSED
—DITCH-CL—	CENTERLINE OF DITCH	[Hatch]	CONCRETE
—FM—	FORCE MAIN	[Hatch]	GRAVEL
—GAS—	GAS MAIN	[Hatch]	LANDSCAPING
—RD-CL—	ROAD CENTERLINE	[Hatch]	RIP-RAP
—8" SAN—	SANITARY SEWER		
—12" SS—	STORM SEWER		
—EX-10S—	TOE OF SLOPE		
—EX-10B—	TOP OF BANK		
—OHE—	UTILITIES - OVERHEAD		
—UTIL—	UTILITIES - UNDERGROUND		
—12" WM—	WATER MAIN		

DESCRIPTION PROVIDED:
LOT 18 OF ENTERPRISE PARK AS RECORDED IN LIBER 10 OF PLATS ON PAGE 589, ISABELLA COUNTY RECORDS, UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN, BEING SUBJECT TO AND TOGETHER WITH ANY EASEMENTS, RESTRICTIONS, OR RIGHTS OF WAY OF RECORD.

SHEET INDEX	
1	COVER SHEET
2	EXISTING TOPOGRAPHY
3	SITE AND STORM PLAN
4	DETAIL SHEET

BENCHMARKS:
"X" IN NORTHEAST FLANGE BOLT OF HYDRANT, SET IN NORTHWEST CORNER OF INTERSECTION OF SUMMERTON RD AND VENTURE WAY. ELEVATION = 100.00

BEARING BASIS:
PER GEODETIC OBSERVATION WGS-84 THE BEARING BETWEEN THE NORTHEAST CORNER AND THE NORTH 1/4 CORNER OF SECTION 13, T14N-R04W WAS DETERMINED TO BE N00°-23'-50"W

SITE: 5966 VENTURE WAY
MT. PLEASANT, MI 48858

CLIENT: VENTURE WAY MTP LLC
P.O. BOX 219 MT. PLEASANT, MICHIGAN
CONTACT: AARON LISCOMB
PHONE: (989) 733-4462

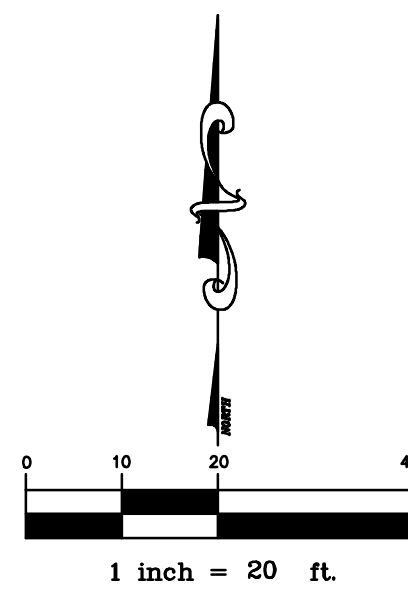
CONSULTANT: CENTRAL MICHIGAN SURVEYING & DEVELOPMENT CO., INC.
2257 EAST BROOMFIELD ROAD
MT. PLEASANT, MI 48858
CONTACT PERSON: TIMOTHY E BEBEE
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

<p>CHARTER COMMUNICATIONS 915 E. BROOMFIELD ROAD MT. PLEASANT, MI 48858 (989) 621-4932 RANDY BUNKER rbunker@chartercom.com</p> <p>CONSUMERS ENERGY 1325 WRIGHT AVENUE ALMA, MI 48801 (989) 466-4282 KIM STUDD kimberly.studd@cmsenergy.com</p> <p>FRONTIER 345 PINE STREET ALMA, MI 48801 (989) 463-0392 MARK A. MARSHALL Mark.Marshall@ftr.com</p> <p>DTE ENERGY 4420 44TH ST., S.E., SUITE B KENTWOOD, MI 49512 (616) 954-4623 MARY JO MCKERSIE mckersiem@dteenergy.com</p> <p>MT. PLEASANT FIRE DEPARTMENT 804 EAST HIGH STREET MT. PLEASANT, MI 48858 (989) 779-5100 EXT 5122 SGT. RANDY KEELER rkeeler@mt-pleasant.org</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>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>DRAIN COMMISSIONERS OFFICE ISABELLA COUNTY BUILDING 200 NORTH MAIN STREET ROOM 140 MT. PLEASANT, MI 48857 (989) 773-0911 RICK JAKUBIEC drain@isabellacounty.org</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>
--	---

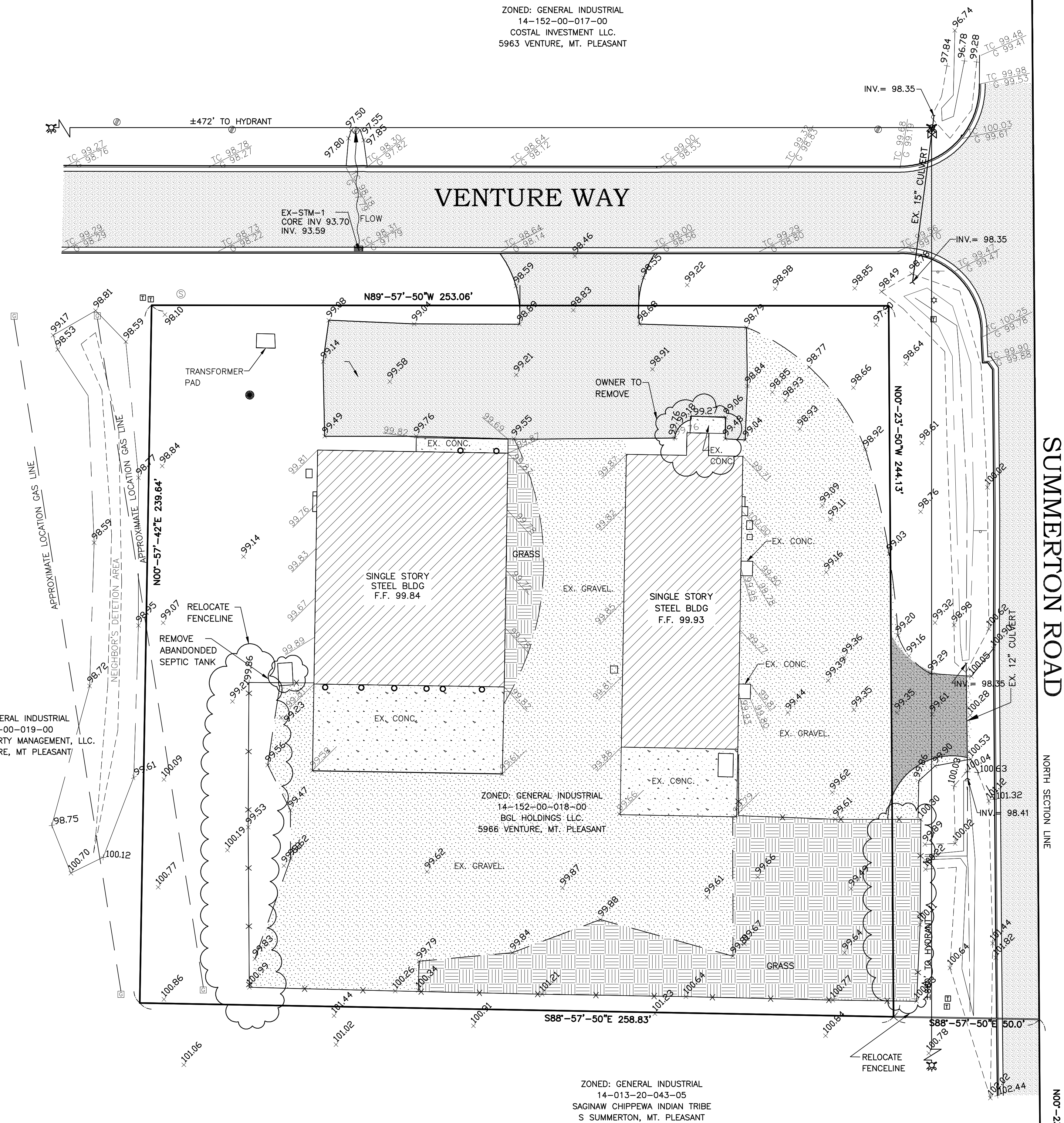
CMS & D
SURVEYING / ENGINEERING
2057 E. BROOMFIELD ROAD
MT. PLEASANT, MICHIGAN 48858
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

COVER SHEET
MIDSTATE ELECTRIC
ENTERPRISE PARK LOT 18,
SECTION 13, T14N-R04W,
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:			
1	FOR OWNERS REVIEW 7-1-19		
2	SUBMITTAL TO UNION TOWNSHIP PLANNING 8-6-19		
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60			
61			
62			
63			
64			
65			
66			
67			
68			
69			
70			
71			
72			
73			
74			
75			
76			
77			
78			
79			
80			
81			
82			
83			
84			
85			
86			
87			
88			
89			
90			
91			
92			
93			
94			
95			
96			
97			
98			
99			
100			



ZONED: GENERAL INDUSTRIAL
14-152-00-019-00
MUSTANGE PROPERTY MANAGEMENT, LLC.
5902 VENTURE, MT PLEASANT



ZONED: GENERAL INDUSTRIAL
14-152-00-017-00
COSTAL INVESTMENT LLC.
5963 VENTURE, MT. PLEASANT

ZONED: TRIBAL LAND
02-018-10-008-04
SAGINAW CHIPPEWA INDIAN TRIBE
S SUMMERTON, MT. PLEASANT

ZONED: GENERAL INDUSTRIAL
14-152-00-018-00
BGL HOLDINGS LLC.
5966 VENTURE, MT. PLEASANT

ZONED: GENERAL INDUSTRIAL
14-013-20-043-05
SAGINAW CHIPPEWA INDIAN TRIBE
S SUMMERTON, MT. PLEASANT

CMS & D
SURVEYING / ENGINEERING
2957 E BROOKFIELD ROAD
MT. PLEASANT, MICHIGAN 48858
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com



TOPOGRAPHY
MIDSTATE ELECTRIC
ENTERPRISE PARK LOT 18,
SECTION 13, T14N-R04W,
UNION TOWNSHIP, ISABELLA COUNTY, MICHIGAN

REVISIONS:

SUBMITTALS:

1905-057	SUBMITTAL FOR OWNERS REVIEW 7-1-19
BTM	SUBMITTAL TO UNION TOWNSHIP PLANNING 8-2-19

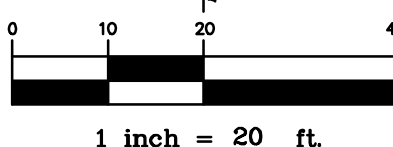
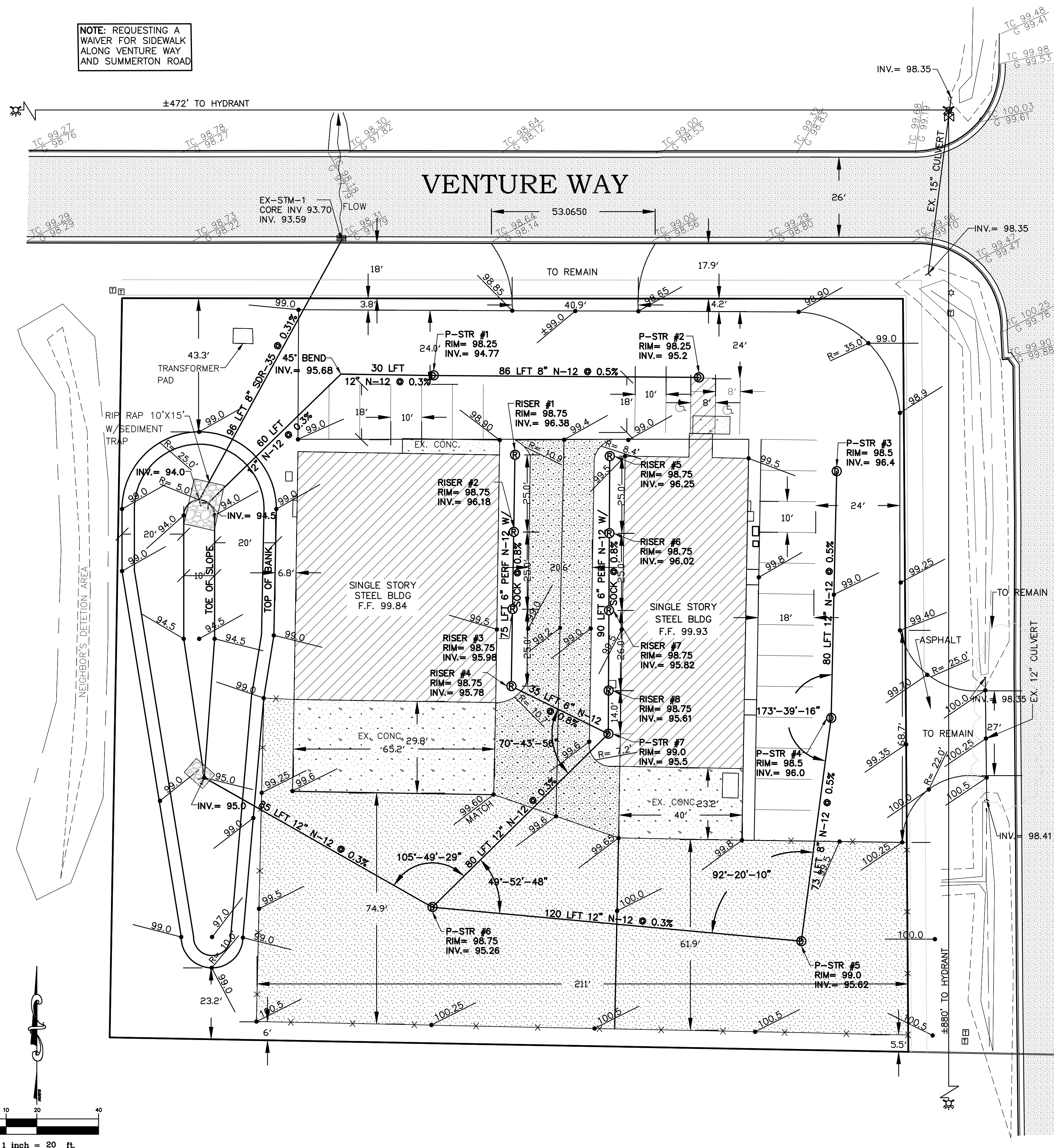
SCALE	1" = 20'
JOB NUMBER:	1905-057
DRAWN BY:	BTM
DESIGNED BY:	TELB
CHECKED BY:	TELB
SHEET NUMBER	2 of 4

SUMMERTOWN ROAD

NORTH SECTION LINE

N00°-23'-50"W 660.00'

NOTE: REQUESTING A WAIVER FOR SIDEWALK ALONG VENTURE WAY AND SUMMERTON ROAD



STORM WATER CALCULATIONS:

Allowable Discharge (0.10 cfs/acre) - 1.42 acres * 0.10 cfs/acre = 0.142 cfs
 Total Impervious Area = 0.73 acres
 Total Semi-impervious Area = 0.33 acres
 Total Pervious Area = 0.36 acres
 Design Ponding Elevation = 97.0
 Invert of restrictor elevation = 94.0

Restrictor Formula: $a = Q_a / 0.62[64.4(h)]^{1/2}$
 $a = \text{Area of Orifice}$ $Q_a = \text{Allowable outflow}$ $h = \text{Max Ht (2/3)}$
 $a = \pi(D^2) / 4 =$

$a = Q_a / 0.62[64.4(97-94)^{2/3}]^{1/2} = 0.0202 \text{ SF}$
 $a = \pi(D^2) / 4 = 0.0202 \text{ SF}$ SOLVE FOR D = 0.16 FT = 1.92 INCH USE 2" ORIFICE.

STORAGE VOLUME WITHIN DETENTION SYSTEM

AREA OF CONTOUR 94.0 = 100 SF
 AREA OF CONTOUR 94.5 = 664 SF
 AREA OF CONTOUR 97.0 = 4,394 SF
 AREA OF CONTOUR 98.0 = 6,302 SF

VOLUME PROVIDED AT CONTOUR 97.0 = 6,513.5 CF
 VOLUME PROVIDED AT CONTOUR 98.0 = 11,861.5 CF

REQUIRED 25 YEAR / 24 HOUR STORM DENTENTION = 8,327 CF
 REQUIRED 100 YEAR / 24 HOUR STORM DENTENTION = 11,663 CF

THEREFORE: 25 YEAR STORAGE OCCURS AT 97.35 CONTOUR (0.65 FREEBOARD)
 100 YEAR STORAGE OCCURS AT 98.0 (OVERFLOW)

NOTE:

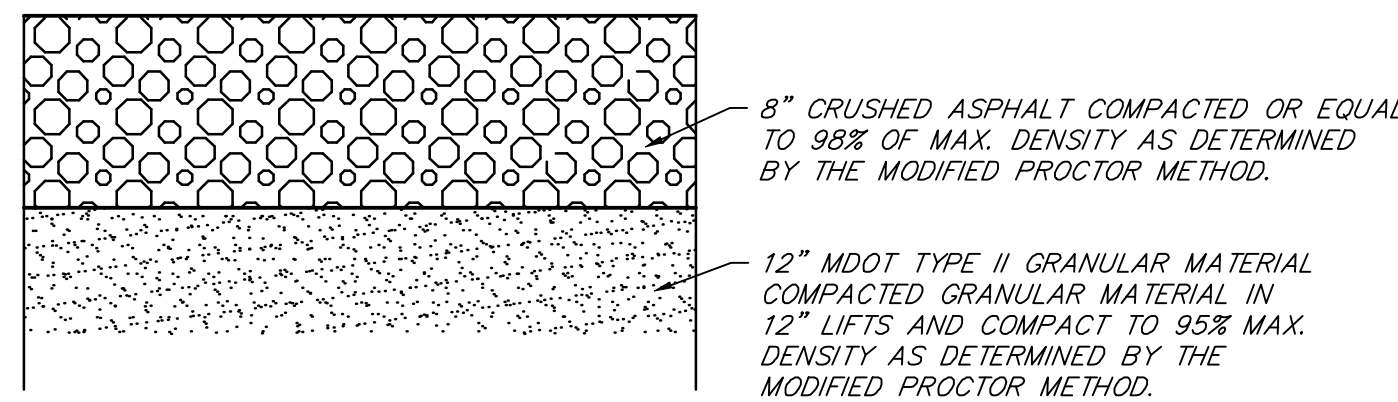
- 1) NO NEW STRUCTURES ARE BEING PROPOSED. THE EXISTING GRAVEL DRIVES AND PARKING ON THE EAST SIDE OF THE BUILDINGS ARE BEING PAVED. THE EXISTING GRAVEL DRIVE ISLE BETWEEN THE BUILDINGS WILL BE PAVED. THE EXISTING PAVED PARKING AREA ACROSS THE NORTH PORTION OF THE SITE WILL BE REGRADED AND REPAVED.
- 2) CURRENTLY THERE IS NO STORM WATER COLLECTION SYSTEM OR DETENTION ON THE SITE. CURRENTLY THE STORM RUNOFF FLOWS TO THE DITCH LINES. THE PROPOSED SITE PLAN SHOWS THE COLLECTION OF STORM RUNOFF BEING COLLECTED IN A NEW STORM WATER SYSTEM AND DETAINED IN A NEW DETENTION AREA.
- 3) CURRENTLY THE WASTE COLLECTION IS AT THE REAR OF THE BUILDING. SCREENING IS PROVIDED BY THE BUILDING AND FENCING.
- 4) SITE LIGHTING WILL BE COMPLETED BY THE USE OF WALL PACKS. THE EXISTING WALL PACKS WILL BE REPLACED WITH DOWN SHIELDED WALL PACKS IN ACCORDANCE WITH UNION TOWNSHIP STANDARDS.

NOTE:
 ALL STRUCTURE TO HAVE A MIN. OF 2' SEDIMENT SUMP.
 ALL STRUCTURE TO HAVE 6" WEEP TILE INV MUST BE A MIN. 2.25' BELOW RIM

PROPOSED STORM STRUCTURES	PROPOSED STORM RISERS
P-STR #1 PROP. 2' DIA CATCH BASIN HEAVY WALL, MDOT CONC STR E.J.I.W. 1040 W/ M-1 GRATE RIM= 98.25 E&W INV.= 94.77	RISER #1 6" PERF. W/SOCK N-12 RIM= 98.75 INV.= 96.38
P-STR #2 PROP. 2' DIA CATCH BASIN HEAVY WALL, MDOT CONC STR E.J.I.W. 1040 W/ M-1 GRATE RIM= 98.25 WEST INV.= 95.2	RISER #2 6" PERF. W/SOCK N-12 RIM= 98.75 INV.= 96.18
P-STR #3 PROP. 2' DIA CATCH BASIN HEAVY WALL, MDOT CONC STR E.J.I.W. 1040 W/ M-1 GRATE RIM= 98.5 SOUTH INV.= 96.4	RISER #3 6" PERF. W/SOCK N-12 RIM= 98.75 INV.= 95.98
P-STR #4 PROP. 2' DIA CATCH BASIN HEAVY WALL, MDOT CONC STR E.J.I.W. 1040 W/ M-1 GRATE RIM= 98.5 N&S INV.= 96.0	RISER #4 6" PERF. W/SOCK N-12 RIM= 98.75 INV.= 95.78
P-STR #5 PROP. 4' DIA CATCH BASIN E.J.I.W. 1040 W/ M-1 GRATE RIM= 99.0 N&W INV.= 95.62	RISER #5 6" PERF. W/SOCK N-12 RIM= 98.75 INV.= 96.25
P-STR #6 PROP. 4' DIA CATCH BASIN E.J.I.W. 1040 W/ M-1 GRATE RIM= 98.75 NE INV.= 95.26 NW INV.= 95.26 EAST INV.= 95.26	RISER #6 6" PERF. W/SOCK N-12 RIM= 98.75 INV.= 96.02
P-STR #7 PROP. 4' DIA CATCH BASIN E.J.I.W. 1040 W/ M-1 GRATE RIM= 99.0 SW INV.= 95.5 NORTH INV.= 95.5 NW INV.= 95.5	RISER #7 6" PERF. W/SOCK N-12 RIM= 98.75 INV.= 95.82
P-STR #8 PROP. 4' DIA CATCH BASIN E.J.I.W. 1040 W/ M-1 GRATE RIM= 99.0 SW INV.= 95.5 NORTH INV.= 95.5 NW INV.= 95.5	RISER #8 6" PERF. W/SOCK N-12 RIM= 98.75 INV.= 95.61



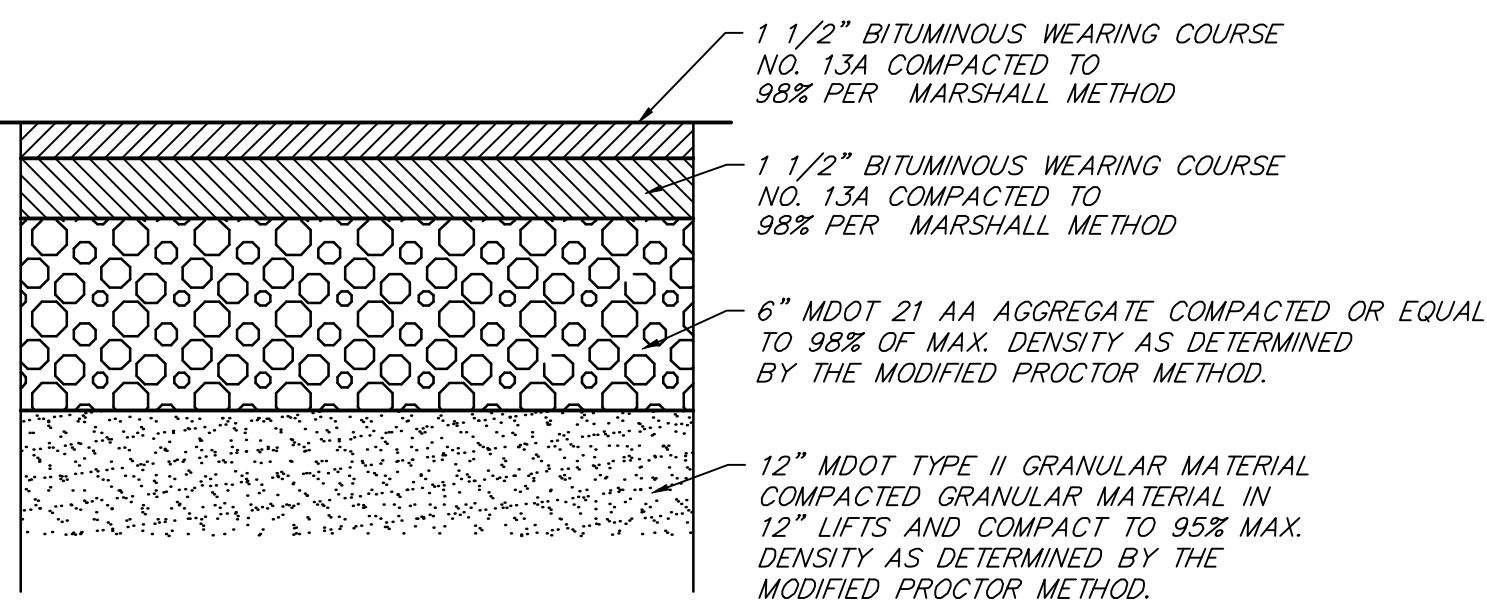
SCALE	1" = 20'
SHEET NUMBER	3 of 4
JOB NUMBER:	1905-057
DRAWN BY:	BTM
DESIGNED BY:	TELB
CHECKED BY:	TELB
REVISIONS:	
SUBMITTALS:	SUBMITTAL FOR OWNERS REVIEW 7-1-19
	SUBMITTAL TO UNION TOWNSHIP PLANNING 8-6-19



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

PARKING LOT GRAVEL CROSS-SECTION

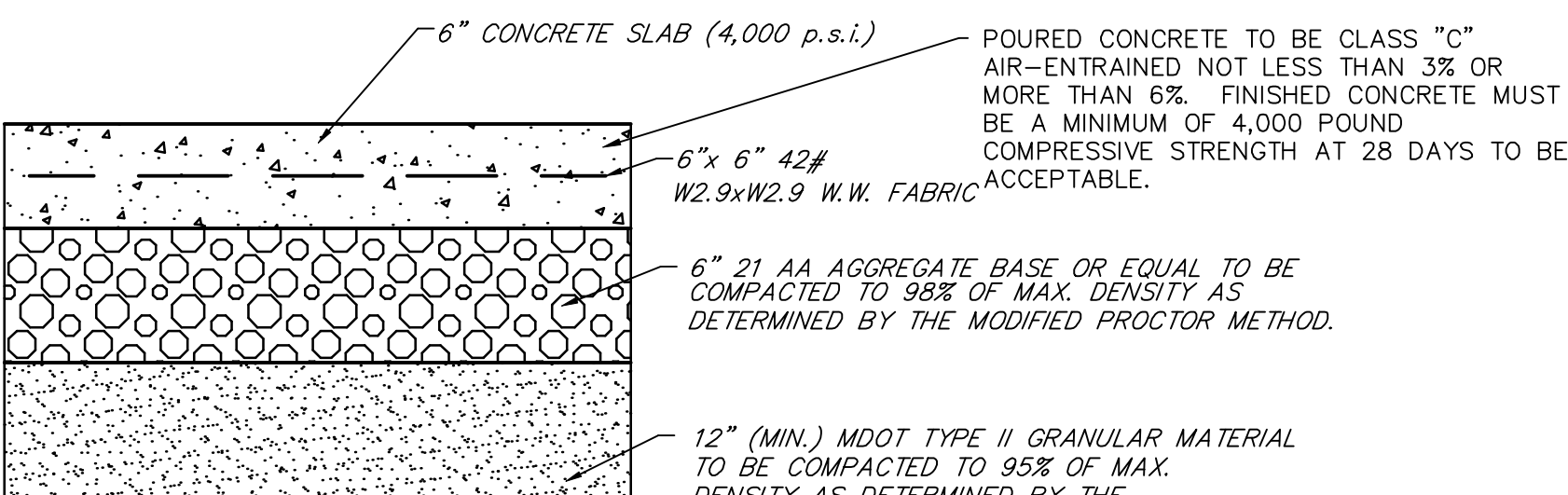
NOT TO SCALE



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

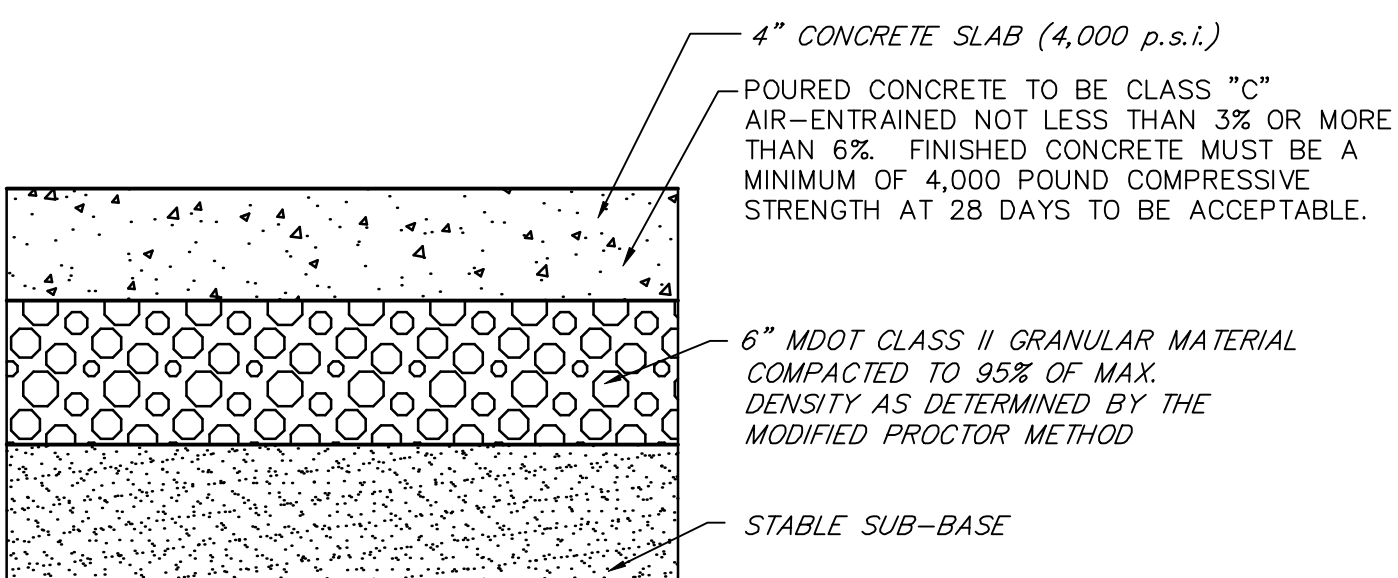
PARKING LOT ASPHALT PAVEMENT CROSS-SECTION

NOT TO SCALE



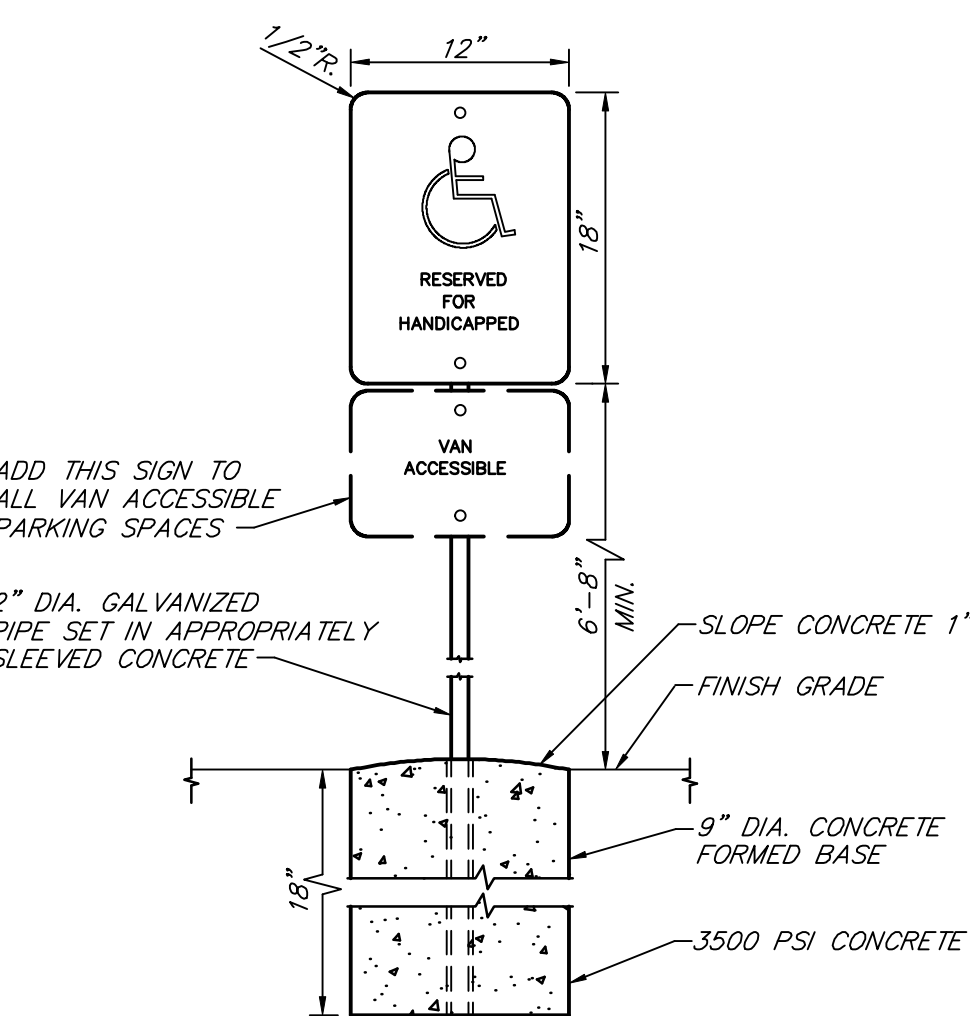
CONCRETE PAD CROSS-SECTION

NOT TO SCALE



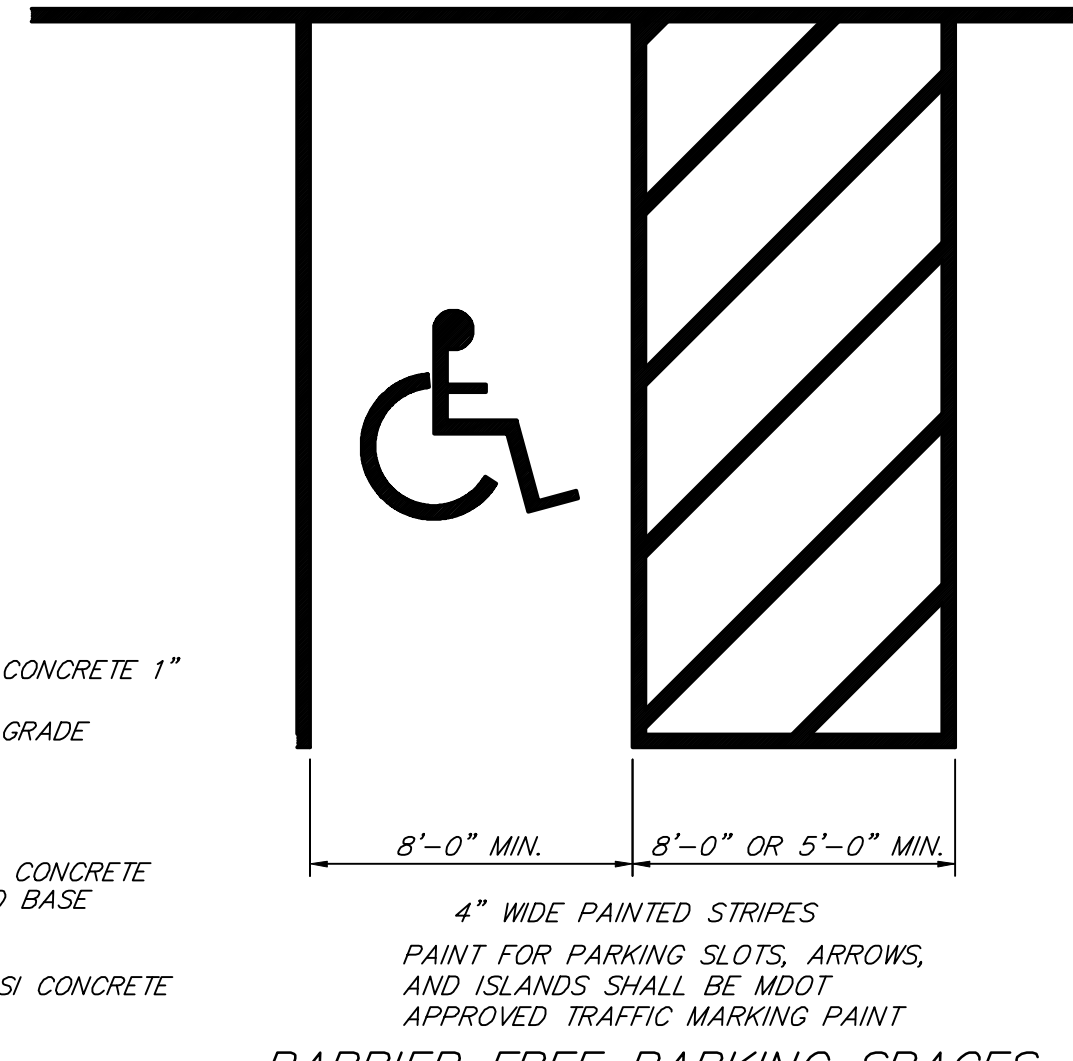
CONCRETE SIDEWALK CROSS-SECTION

NOT TO SCALE



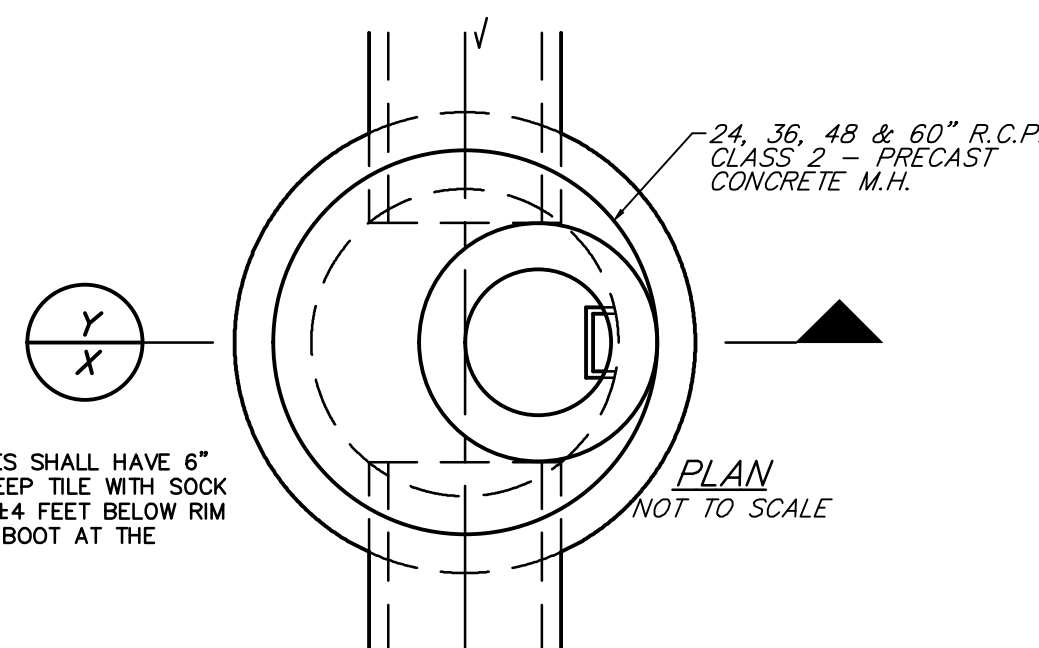
TYP. BARRIER FREE PARKING SIGN

NOT TO SCALE



BARRIER FREE PARKING SPACES

NOT TO SCALE

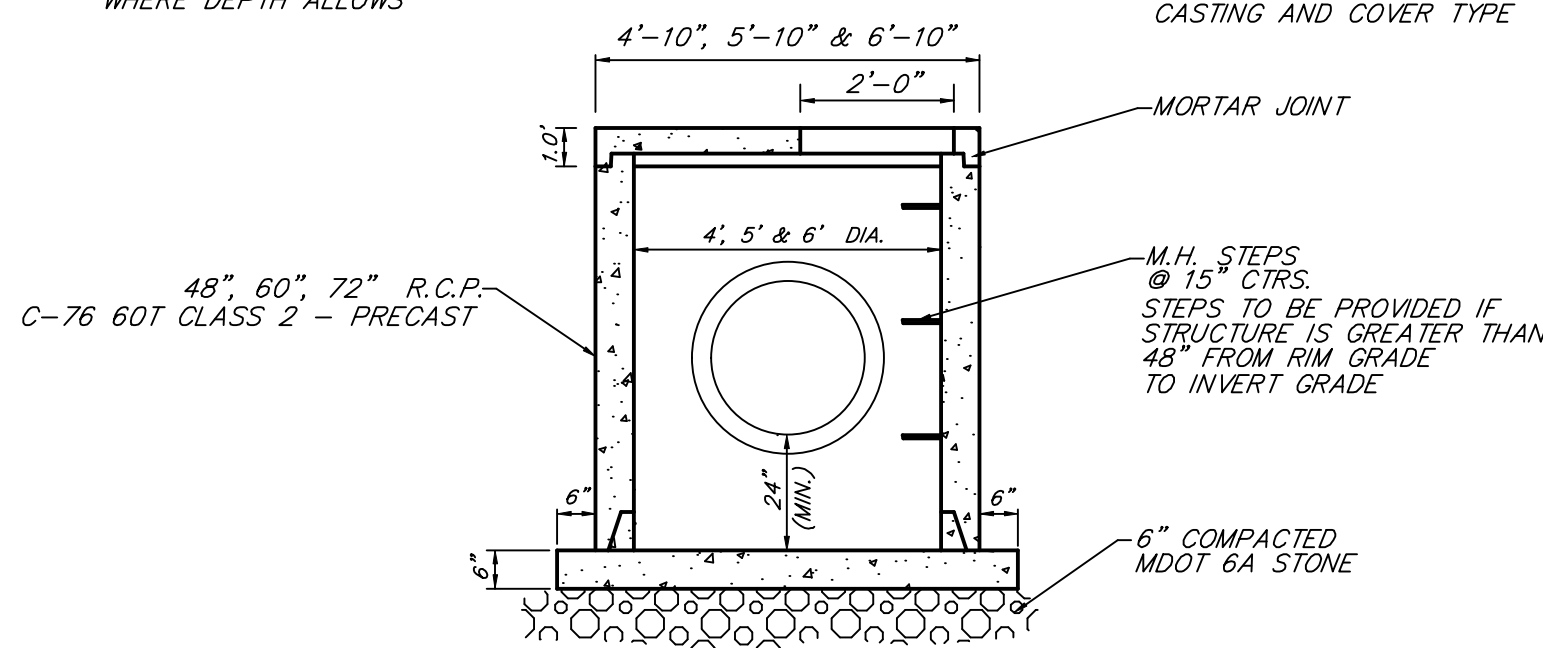


NOTE: ALL STRUCTURES SHALL HAVE 6" PERFORATED WEEP TILE WITH SOCK FINGER DRAIN ± 4 FEET BELOW RIM GRADE WITH A BOOT AT THE STRUCTURE.

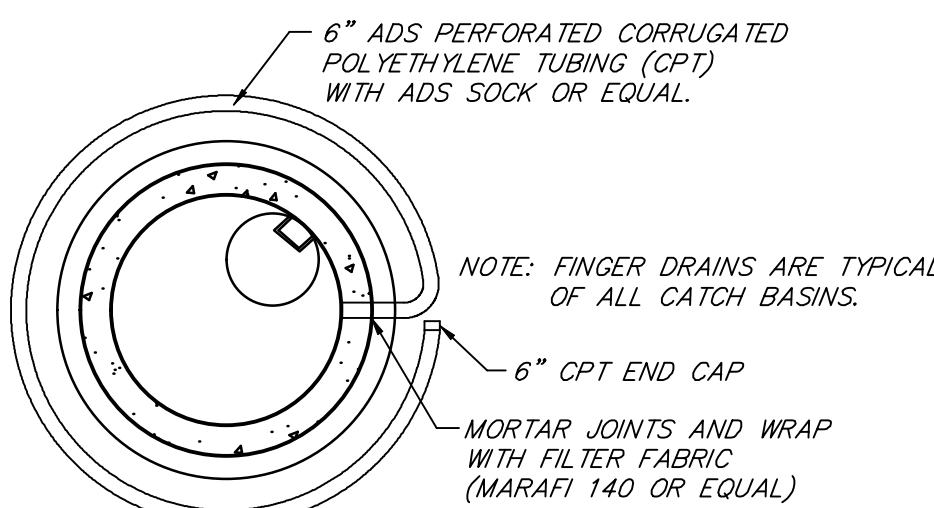
NOTE: CONE SECTIONS MAY BE SUBSTITUTED WHERE DEPTH ALLOWS

PLAN

NOT TO SCALE

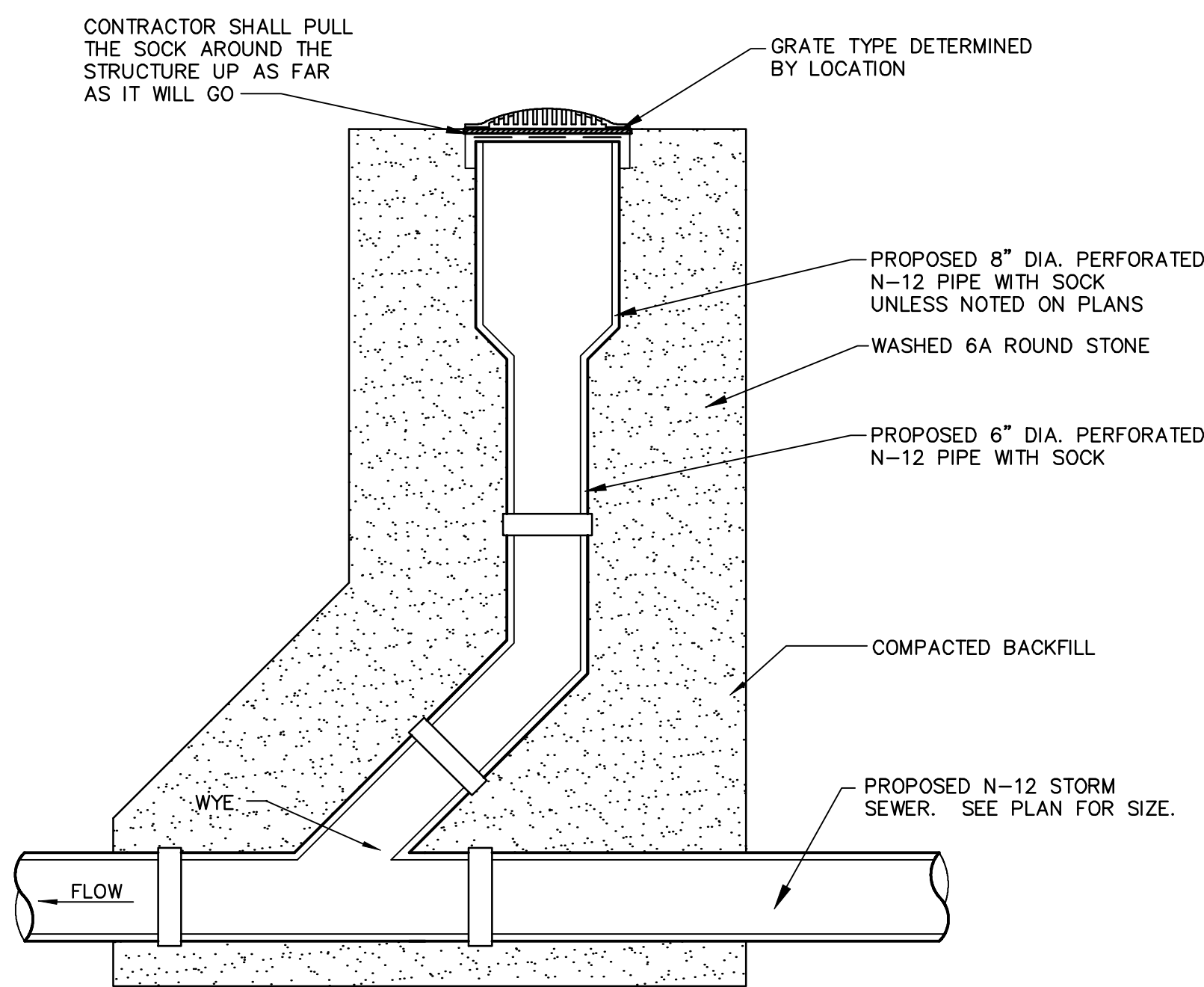


SECTION
4', 5' & 6' DIA. COMBINATION M.H.-C.B.



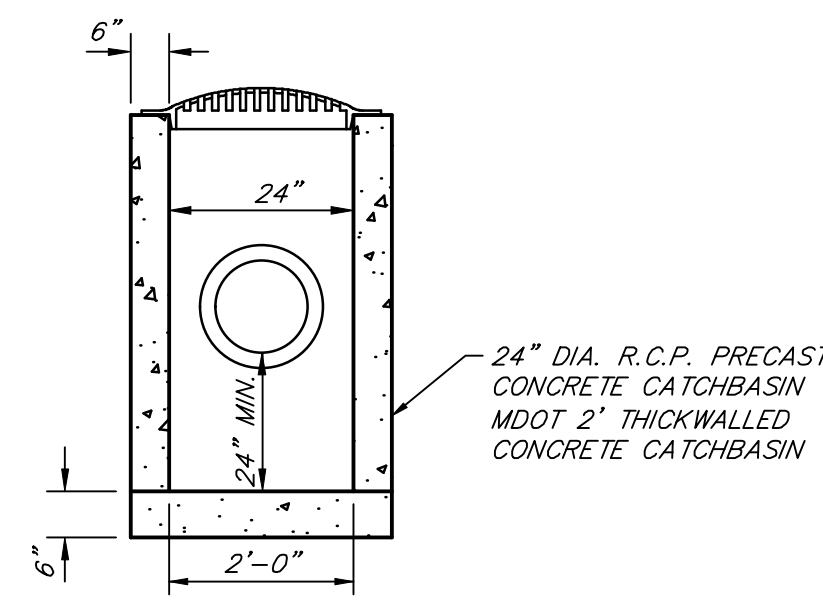
FINGER DRAIN DETAIL

NOT TO SCALE



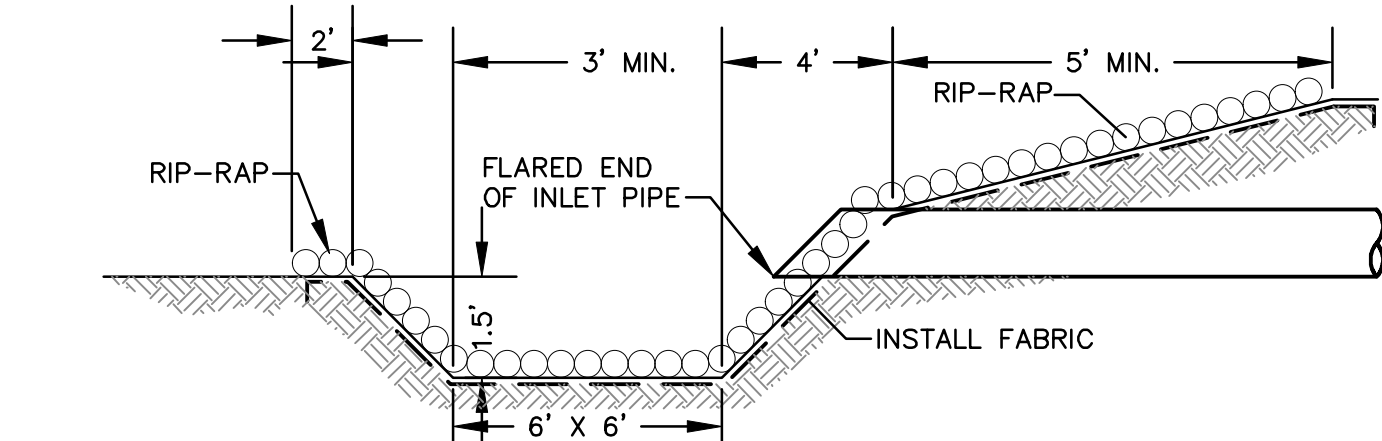
DRAINAGE RISER DETAIL

NOT TO SCALE



2' DIA. CATCH BASIN DETAIL

NOT TO SCALE



RIP-RAP SEDIMENT TRAP DETAIL

NOT TO SCALE

GENERAL NOTES:

THE SANITARY SEWER AND WATERMAIN MUST CONFORM TO THE UNION TOWNSHIP STANDARDS AND SPECIFICATIONS. SHOULD THERE BE A CONFLICT BETWEEN THE PLANS, NOTES, DETAILS AND SPECIFICATIONS, THE UNION TOWNSHIP STANDARDS SHALL GOVERN. THE CONTRACTOR WILL NOTIFY THE ENGINEER AS SOON AS A CONFLICT IS FOUND. INSTALLATION OF THESE UTILITIES SHALL BE COORDINATED BY THE CONTRACTOR WITH THE UNION TOWNSHIP DEPARTMENT OF PUBLIC WORKS.

ELECTRIC SERVICES TO THE BUILDING AND PARKING LOT LIGHTING SHALL BE UNDERGROUND. SITE CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR IN REGARDS TO CONDUIT SLEEVES.

ALL SERVICE LINES ARE SHOWN FOR REFERENCE ONLY. THE EXACT LOCATIONS TO BE DETERMINED BY THE OWNER AND/OR UTILITY COMPANY.

INSTALLATION OF GAS, ELECTRIC AND TELEPHONE SERVICES (INCLUDING TRANSFORMER PAD LOCATIONS) SHALL BE COORDINATED BY THE CONTRACTOR WITH THE RESPECTIVE UTILITY COMPANIES AND THE ARCHITECT/ENGINEER

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION PERMITS REQUIRED FOR WORKING WITHIN THE ROAD RIGHT-OF-WAY PRIOR TO COMMENCING CONSTRUCTION, WITHIN THESE AREAS.

ROOF WATER FROM THE PROPOSED BUILDING SHALL BE COLLECTED AND CONNECTED TO THE PROPOSED HEADERS AND/OR LEADS ALONG THE BUILDING. COORDINATION WITH THE BUILDING CONTRACTOR PRIOR TO INSTALLATION OF THE HEADERS AND/OR LEADS IS REQUIRED.

THE PROPOSED ELEVATIONS SHOWN ARE TOP OF WALK, TOP OF CURB, FINISHED ASPHALT SURFACE AND GUTTER PAN ELEVATIONS, UNLESS OTHERWISE NOTED.

ALL DRIVEWAY APPROACHES SHALL BE CONSTRUCTED IN ACCORDANCE UNION TOWNSHIP STANDARDS.

CONSTRUCTION PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF THE STATE OF MICHIGAN, COUNTY OF ISABELLA AND UNION TOWNSHIP.

SITE CONCRETE PADS SHALL BE 4000 PSI AND REINFORCED WITH 6X6 W2.9 X W2.9. THICKNESS OF CONCRETE SHALL CONFORM TO THE PLANS. THE CONCRETE PADS ADJACENT TO THE BUILDING SHALL BE TAKEN OFF FROM THE ARCHITECTURAL PLANS AND THE CONSTRUCTION OF THE PADS SHALL BE COORDINATED WITH THE BUILDING CONTRACTOR.

DIMENSIONS SHOWN ON THE PLANS ARE GIVEN TO THE BACK OF CURB, FACE OR BACK OF WALK OR THE BUILDING OUTSIDE LINES.

STANDARD PARKING SPACES SHALL BE 10 FEET BY 20 FEET. THE SPACES ARE TO BE INDICATED BY 4 INCH WIDE WHITE LINES. THE PAINT LINES ON THE SITE, EXCEPT NEAR THE BUILDING, SHALL CONFORM TO THE ENGINEER'S PLAN.

CONCRETE CURBING SHALL BE 4000 PSI CONCRETE.

ALL ABANDONED CURB STOP BOXES SHALL BE REMOVED AND SALVAGED.

GENERAL NOTES:

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) A MINIMUM OF 3 WORKING DAYS PRIOR TO ANY CONSTRUCTION OR 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. THE CONTRACTOR SHALL NOTIFY THE ENGINEER/SURVEYOR WHERE POSSIBLE CONFLICTS EXIST PRIOR TO BEGINNING CONSTRUCTION.

THE LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY GROUND CONDITIONS, EXISTING UTILITIES, LOT AND BUILDING DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THE PLANS. ARRANGE TO HAVE UTILITIES IDENTIFIED AND FLAGGED BEFORE STARTING CONSTRUCTION. THE OWNER ASSUMES NO LIABILITY FOR THE LOCATION OF UTILITIES. ALL DAMAGES MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

ALL CONSTRUCTION UNDER EXISTING OR PROPOSED PAVEMENT, EXISTING OR PROPOSED UTILITIES (INCLUDING LEADS), SHALL BE COMPLETELY BACKFILLED WITH SAND IN 12" LAYERS, AND COMPACTED TO NOT LESS THAN 95% OF ITS MAXIMUM UNIT WEIGHT, AS DETERMINED BY THE MODIFIED PROCTOR METHOD. THE COST IS TO BE INCLUDED IN THE UNIT PRICE BID FOR EACH ITEM.

THE CONTRACTOR SHALL CONFORM TO SOIL EROSION AND SEDIMENTATION CONTROL ACT PART 91 OF PUBLIC ACT 451 OF 1994, AS AMENDED.

GEOTEXTILE FILTER BAGS SHALL BE USED AT ALL CATCH BASINS FOR SOIL AND SEDIMENTATION CONTROL. ALL CATCH BASINS SHALL BE CLEANED UPON COMPLETION OF THE PROPOSED PROJECT. COST FOR CLEANING THE CATCH BASINS SHALL BE INCLUDED IN THE COSTS FOR THE DRAINAGE STRUCTURES.

TOPSOIL SHALL BE STOCKPILED ON THE SITE AND USED AS TOPSOIL SURFACES AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. TOPSOIL WILL NEED TO BE SPREAD IN THE BASIN AREA TO A MINIMUM DEPTH OF 8 INCHES. THE BERMS SHOWN ON THE PLANS WILL NEED TO BE TOPSOIL OR TO HAVE A MINIMUM OF 6 INCHES ON TOPSOIL SPREAD OVER THEM. THE CURB ISLANDS WILL BE FILLED AS SPECIFIED WITH TOPSOIL. THE INTENT IS FOR THE CONTRACTOR AND THE LANDSCAPER TO USE THE EXISTING TOPSOIL TO COMPLETE THE PROJECT PRIOR TO HAULING ANY TOPSOIL ONTO THE SITE. UNSUITABLE TOPSOILS MUST BE DISPOSED OF. DURING THE CLEANUP, ANY REMAINING STOCKPILES WILL NEED TO BE REMOVED. SOIL EROSION MEASURES MUST BE TAKEN TO ASSURE THAT THESE STOCKPILES ARE STABILIZED.

THE CONTRACTOR SHALL SEED AND FERTILIZE DITCH BANKS, SOILS PILES OR BANKS AND ANY OTHER DISTURBED AREAS AS SHOWN ON THE PLANS AND/OR DESCRIBED IN THE SPECIFICATIONS.

THE CONTRACTOR SHALL BACKFILL, COMPACT AND FINE GRADE ALL AREAS BETWEEN THE CURBS AND PAVEMENT AND THE PROPERTY LINES WITH TOPSOIL SUITABLE FOR LANDSCAPING. THE GRADES IN THESE AREAS WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE UNPAVED AREAS SHALL BE SMOOTHLY GRADED AND THE SURFACE STABILIZED BY SEEDING AS STATED ON THE PLANS. THE MAXIMUM DESIRABLE SLOPE IS 3 HORIZONTAL TO 1 VERTICAL, UNLESS OTHERWISE STATED.

THE CONTRACTOR SHALL FURNISH AND INSTALL PLAIN RIP-RAP BANK PROTECTION IN AREAS WHERE BANK EROSION WILL MOST LIKELY OCCUR OR AS DIRECTED BY THE ENGINEER.

BROKEN CONCRETE AND DEBRIS SHALL BE CONSIDERED WASTE TO BE DISPOSED OF BY THE CONTRACTOR.

ALL DEWATERING REQUIRED FOR CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE BID.

ALL JOINTS AT INTERSECTION APPROACHES AND DRIVEWAYS SHALL BE SAWCUT WITH BUTT-JOINTS. THE COST SHALL BE INCLUDED WITH THE PAYMENT FOR EXCAVATION.

THE CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES ON THE PROJECT. THE COST IS TO BE INCLUDED IN THE LUMP SUM FEE.

ALL WATER VALVE BOXES, ELECTRICAL BOXES, GAS VALVES AND ANY OTHER EXISTING UTILITY STRUCTURES ON THE SITE SHALL BE ADJUSTED TO FINISHED GRADE. THE COST SHALL BE INCLUDED IN THE LUMP SUM FEE.



REVISIONS:	DATE	DESCRIPTION
1	7-1-19	OWNER REVIEW
2	8-6-19	TOWNSHIP PLANNING

JOB NUMBER:	1905-057
DRAWN BY:	BTM
DESIGNED BY:	TELB
CHECKED BY:	TELB
SCALE:	N/A
SHEET NUMBER:	4 OF 4





From: [Peter Gallinat](#)
To: [Jennifer Loveberry](#)
Subject: FW: Venture Way LLC / Mid State Electric
Date: Wednesday, August 14, 2019 4:51:38 PM

From: Rick Collins <rcollins@ictcbus.com>
Sent: Friday, August 9, 2019 1:00 PM
To: info@cms-d.com
Cc: Peter Gallinat <pgallinat@uniontownshipmi.com>
Subject: RE: Venture Way LLC / Mid State Electric

I have reviewed the plans and have no issues.



Rick Collins | Executive Director
2100 E. Transportation Dr | Mt. Pleasant, MI 48858
Phone 989.773.6766 | Fax 989.773.1873
rcollins@ictcbus.com
Visit our website at ictcbus.com

From: info@cms-d.com [<mailto:info@cms-d.com>]
Sent: Friday, August 09, 2019 11:57 AM
To: Rick Collins <rcollins@ictcbus.com>
Subject: Venture Way LLC / Mid State Electric

Rick,

Attached is a Site Plan for Venture Way LLC / Mid State that we are submitting to Union Township.

Please review and let me know if there are any comments.

Shanee Thayer
Office Manger
 **CMS & D**
SURVEYING/ENGINEERING
2257 East Broomfield Road
Mt. Pleasant, MI 48858
Phone: 989-775-0756
Fax: 989-775-5012
Email: info@cms-d.com



Virus-free. www.avg.com

Sam **B**er **E**ngineering

Bruce E. Rohrer, P.E.
1216 E. Gaylord Street
Mt. Pleasant, Michigan 48858
(989) 330-2150

August 14, 2019

Peter Galliant
Charter Township of Union, Planner
2010 South Lincoln Road
Mt. Pleasant, Michigan 48858

Re: Storm Water Management Plan for the new MIDSTATE ELECTRIC Office.

Dear Mr. Galliant:

I have reviewed the Storm Water Management Plan prepared by Tim Bebee of CMS&D Surveying /Engineering for the above captioned project located in part of the E ½ of the Northeast ¼ of Section 13, Union Township, being Lot #18 of Enterprise Park, located at 5966 Venture Way. The proposed storm water plan, per plans dated 8-6-19, is consistent with the Union Township Storm Water Ordinance.

If you have any questions or need any further information, please feel free to contact me in my office.

Sincerely,



Bruce E. Rohrer, P.E.
Consulting Engineer
Isabella County

BER/taw
cc: Tim Bebee, CMS&D



Peter Gallinat, Township Planner
pgallinat@uniontownshipmi.com
2010 South Lincoln
Mt. Pleasant, MI 48858
Phone 989-772-4600 Ext. 241
Fax 989-773-1988

TO: Planning Commission
FROM: Township Planner

New Business

SUBJECT: E) SPR 2019-11 Four Hacks LLC Located at River PID 14-087-00-002-02

Applicant: Four Hacks LLC

Owner: Four Hacks LLC

Location: PID 14-087-00-002-02 River Rd. MT PLEASANT, MI 48858

Current Zoning: R-2A (One and Two Family Low Density Residential District)

Adjacent Zoning: R-2A, B-5.

Future Land Use/Intent: 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.

Reason for Request: Residential development. A total of four (4) two family dwellings.

History: Previously a petition for the abandonment of certain roads and alleys within the Village of the Isabella plat was process in court. The court ordered plat to amend the Village of Isabella City Plat which was approved by the Planning Commission and Board of Trustees. A residential development of four (4) two family dwellings has now been proposed. This residential development will also be a part of a site condominium subdivision. At this time, I have outside agency approvals from the Mt. Pleasant Fire Department, and ICRC.

Objective of board: The Planning Commission shall study the site plan and shall, within sixty days of its submittal to the Zoning Official, either approve or disapprove the proposed site plan. If the site plan is disapproved, the reasons for disapproval shall be stated.

Recommendation from Township Planner

This project still needs to go through a preliminary and final plat review before complete. At this time the Planning Commission should review and give comment back but not give final approval. A final approval can be given further in the process.

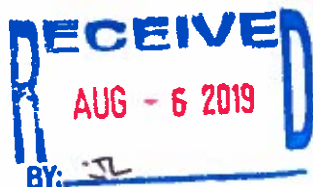
Peter Gallinat
Township Planner

Union Township Site Plan Review Application 2015 Revision

FILL OUT THE FOLLOWING

- I. This application is for (circle one) Preliminary Site Plan Review Final Site Plan Review
- II. Applicant Name FOUR HACKS LLC
- III. Applicant Address 1425 S. MISSION ROAD, MT. PLEASANT, MI 48858
- IV. Applicant Phone 989-775-3891 Owner Phone _____
- V. Applicant is (circle) Contractor Architect/Engineer Developer Land Owner (skip V& VI)
Other
- VI. Land Owner Name SAME AS ABOVE
- VII. Land Owner Address _____
- VIII. Project/Business Name FOUR HACKS LLC
- IX. Fill out check list that follows. You must check off that each item has been included in the drawing. If an item is not going to be included in the construction, note that in the comment area. For the first three items, check off if you have made the required submittals to other reviewing agencies.

SUBMITTALS TO OTHER AGENCIES	Off	
Storm water management plan approval prior to application. Reviewed by the County Engineer	X	Copy of Union Township Storm Water Management Plan available upon request. Submit (2) copies of plan and calculations directly to the Isabella County Engineer, contact Bruce Rohrer at (989) 772 0911, ext. 231. Any review fees are additional.
All curb cuts, acceleration/deceleration lanes, additional drives, and other matters pertaining to roads to be approved by MDOT or Isabella County Road Commission prior to application.	X	MDOT (M 20, BR 127 sites) at (989) 773 7756. Contact Isabella County Road Commission (all other county roads) at (989) 773 7131. Submit (3) copies.
Mt. Pleasant Fire Dept.	X	Sgt Randy Keeler (989) 779-5122, (2) copies
Isabella Co Transportation Commission (ICTC)	X	Rick (989) 773 2913, (2) copies
WELLHEAD PROTECTION REPORTING FORMS (Required for all Site Plans)		
Hazardous Substances Reporting Form Part I and II (Forms included in this packet)	X	Kim Smith (989) 772-4600 ext 224 ksmith@uniontownshipmi.com
PERMIT INFORMATION - DEQ Check List		
SITE PLAN REQUIREMENTS	I Of	Comments - (also indicate any features which will not be included in the development or are not applicable)
Name and addresses of Property Owner	X	
Name and Address of Applicant	X	
Provide Construction Type (per Mi Building Code) and if sprinkled, (assume Type IVb, un-sprinkled if not provided)	X	



Union Township Site Plan Review Application 2015 Revision

The date, north arrow and scale. The scale shall be not less than 1"= 20' for property under three (3) acres and not more than 1"=40' for property greater than three acres.	X	
All lot and/or property lines are to be shown and dimensioned, including building setback lines	X	
The location and dimensions of all existing and proposed: fire hydrants (within 400 feet of building) - - - -	X	
drives, -----	X	
sidewalks, (required) -----	X	
curb openings, -----	X	
acceleration/deceleration lanes, -----	X	
signs, -----	X	
exterior lighting on buildings and parking lots, - -	X	
parking areas (Including handicapped parking spaces, barrier-free building access, unloading areas), -----	X	
recreation areas, -----	X	
common use areas, -----	X	
areas to be conveyed for public use and purpose. -	X	
Elevation of building front, side, and back. Include Sign size, height, and design. Canopy heights extending over driveways accommodate Public Transportation	X	
Source of utilities. Public water and sewer approval by Union Township Utility Coordinator prior to application.	X	Note: Union Township policy is to issue sewer and water permits after application for a building permit. Applicant is advised to contact the utility department for availability prior to site plan review. The township does not coordinate other utility matters. Applicant to assure himself that site is suitable for septic systems, contact Central Michigan District Health Department
All dumpsters shall be screened from public view with an opaque fence or wall no less than six feet in height. Show location. (Note most refuse contractors require concrete pad to place dumpsters upon)	X	
The location and right-of-way width of all abutting roads, streets, alleys and easements.	X	
A locational sketch drawn to scale giving the section number and the nearest crossroads.	X	

Union Township Site Plan Review Application 2015 Revision

I submit the site plan and this application as a true representation of existing and proposed conditions. I agree to install all features as shown and to abide by conditions placed upon approval of this plan by the Union Township Planning Commission . 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. Any changes to the Site Plan now or in the future must be approved by the Union Township Planning Commission or Zoning Administrator. Approval of this plan shall not constitute the right to violate any provisions of the Union Township Zoning Ordinance 1991-5, or other applicable building or state codes and or laws.



Signature of Applicant

8-5-19

Date

Signature of Owner (if other than applicant)

Date

PLEASE PLACE OUR REVIEW ON THE AUGUST 20, 2019 (INSERT DATE)
PLANNING COMMISSION MEETING. An owners representative WILL / WILL NOT attend. You will not receive a reminder of the scheduled meeting.

Union Township Site Plan Review Application 2015 Revision

<u>Township use</u>	Review Comments
File # _____	_____
Fee Paid initial _____	_____
Receipt # _____	_____
Date received _____	_____
Date review completed by Zoning Administrator _____	
Place on the _____ Planning Commission Agenda	
Planning Commission Decision _____	

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: RESIDENTIAL / OWNER: FOUR HACKS LLC

Name of business owner(s): JIM STARK

Street and mailing address: 1425 SOUTH MISSION ROAD , MT. PLEASANT MI 48858

Telephone: 989-775-3891

Fax: _____

Email: jrstark9@gmail.com

I affirm that the information submitted is accurate.

Owner(s) signature and date:

 8-5-19

Information compiled by:

Shanee Thayer, Office Manager
Central Michigan Surveying & Development Co. Inc.

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

KEY:
 LQ = 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

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 any hazardous substances or polluting materials be stored on-site?~~
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
- 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



PERMIT INFORMATION

www.michigan.gov/deqpermits

The Department of Environmental Quality (DEQ) has prepared a list of key questions to help identify what DEQ 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 the DEQ, 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: <http://www.michigan.gov/ehsguide>. Please call the Environmental Assistance Center at 800-862-9278 to talk with any of the DEQ programs noted below.

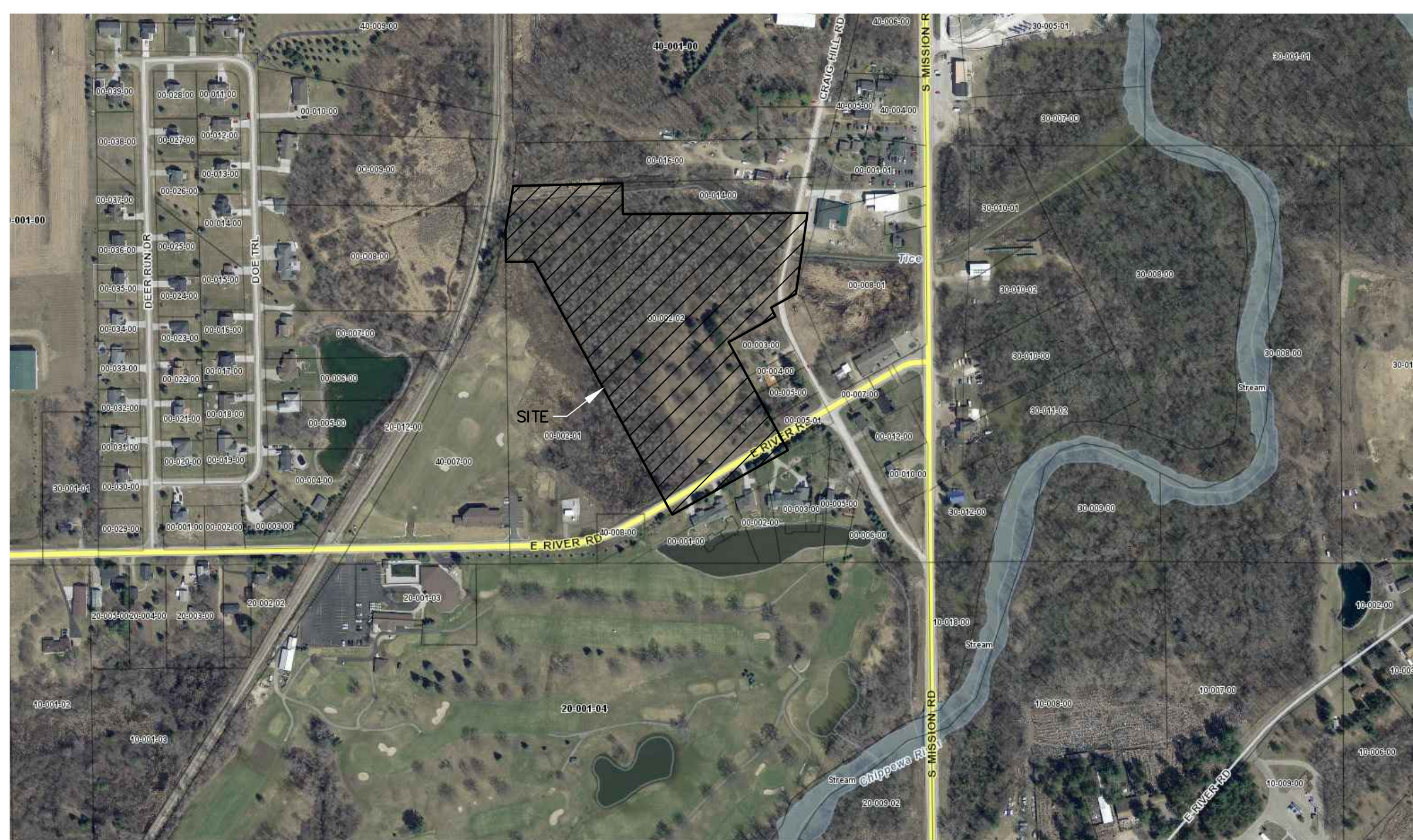
KEY QUESTIONS:	Yes <input type="checkbox"/>	No <input type="checkbox"/>	PROGRAM/WEBPAGE AND CONTACTS
MISCELLANEOUS CONSTRUCTION			
<i>Air Quality Permit to Install:</i> Will your business involve the installation or construction of any process equipment that has the potential to emit air contaminants (e.g. dry sand blasting, boilers, standby generators)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Air Quality Division (AQD), <u>Permit Section</u>
<i>Asbestos Notification:</i> 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.	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	AQD, <u>Asbestos Program</u>
<i>Land and Water Featured Programs (Water Resources Division) - USACE Consolidated Permits:</i> Please consult the <u>Land and Water Management Decision Tree</u> 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?).	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Water Resources Division (WRD), <u>Joint Permit Application</u>
<i>Soil Erosion and Sedimentation Control:</i> Does the project involve an earth change activity (including land balancing, demolition involving soil movement, and construction)?	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	<u>Soil Erosion and Construction Storm Water</u> , or Contact your <u>Local Agency</u>
<i>NPDES Storm Water Discharge from Construction Sites Notice of Coverage:</i> 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?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	NPDES <u>Storm Water Permits Program</u> , or appropriate <u>DEQ District Office</u>
<i>Public Swimming Pool Construction (Spas/Hot Tubs) Permits:</i> Will your business involve the construction or modification of a public swimming pool, spa or hot tub?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Public Swimming Pool Program</u> , or appropriate <u>DEQ District Office</u>
<i>Threatened and Endangered Species:</i> Does the project involve activities that would destroy a protected species of plant or animal or disturb a protected animal species?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Endangered Species Assessment, <u>Threatened and Endangered Species Program</u> , 517-373-1552
Does the project involve <i>construction</i> or alteration of any <i>sewage collection or treatment</i> facility?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Appropriate <u>District Office</u> , WRD, Part 41 <u>Construction Permit Program</u>
Does the project involve construction of a facility that landfills, transfers, or processes of any type of <i>solid non-hazardous waste</i> on-site, or places <i>industrial residuals/sludge</i> into or onto the ground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Office of Waste Management and Radiological Protection (OWMRP), <u>Solid Waste</u> , Appropriate <u>DEQ District Office</u>
Does the project involve the construction of an on-site treatment, storage, or disposal facility for <i>hazardous waste</i> ?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Hazardous Waste Section</u> , <u>Treatment, Storage and Disposal</u>
WATER SUPPLY (More information, see: http://www.michigan.gov/deqwater, select "drinking water")			
I am buying water from my community water supply (i.e. city of Detroit or Grand Rapids)	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	Contact your <u>Local Water Utility</u>
I have a private or other water supply well (Type III)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Contact your (District or County) <u>Local Health Department</u>
I have a Non-Community Water Supply (Type II)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Guide</u> , Contact your (District or County) <u>Local Health Department</u>
I am a community water supply (Type I)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>Community Water Supply</u> , <u>DEQ District Office Community Water Supply Program</u>

WASTEWATER MANAGEMENT			
Storm Water Discharge to Wetlands: Will storm water be collected, stored, or treated in a wetland area from a public road, industrial, commercial, or multi-unit residential development?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
Great Lakes: Does the project involve construction, filling, or dredging below the Ordinary High Water Mark of one of the Great Lakes?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
Inland Lakes and Streams: Does the project involve any dredging, filling, placement of structures, or the operation of a marina within an inland waterbody (e.g. lake, river, stream, drain, creek, ditch, or canal), enlargement of a waterbody, or excavation of a pond within 500 feet of a waterbody?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
Storm Water Ponds and Discharges to Inland Lakes/Streams, or Great Lakes: Will storm water from any road or any other part of the development be discharged either directly or ultimately to an inland waterbody, or one of the Great Lakes; or will a storm water pond be constructed within 500 feet of an inland waterbody?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Joint Permit Application</u>
Does the project involve placement of fill, earth moving, or placement of structures within the 100-year floodplain of a watercourse?	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>	WRD, <u>Joint Permit Application</u>
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"/>	WRD, <u>Shoreland Management</u>
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"/>	WRD, <u>Shoreland Management</u>
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"/>	WRD, <u>Sand Dune Management</u>
Does the project involve construction of a dam, weir or other structure to impound flow?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Dam Safety Program</u>
CONSTRUCTION PERMITS (SECTOR SPECIFIC)			
Does the project involve the construction or alteration of a water supply system or sewage disposal system for a manufactured housing project?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Office of Drinking Water & Municipal Assistance (ODWMA)
Does the project involve a subdivision or site condominium project utilizing individual on-site subsurface disposal systems or individual wells?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA
Does the project involve the construction or modification of a campground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Campgrounds program</u>
Does the project involve the construction or modification of a public swimming pool?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Swimming pools program</u>
OPERATIONAL PERMITS			
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?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	AQD, <u>Permit Section</u>
NPDES: Does the project involve the discharge of any type of wastewater to a storm sewer, drain, lake, stream, or other surface water?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Appropriate DEQ District Office, or National Pollutant Discharge Elimination (NPDES) Permit Program</u>
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?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Permits Section, or appropriate DEQ District Office</u>
Does the project involve the discharge of wastewaters into or onto the ground (e.g. subsurface disposal or irrigation)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Groundwater Permits Program</u>
Does the project involve the drilling or deepening of wells for waste disposal?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	Office of Oil, Gas and Minerals (OOGM)
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?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	<u>OWMRP or Appropriate DEQ District Office</u>

Does the project involve the on-site treatment, storage, or disposal of hazardous waste?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Hazardous and Liquid Waste</u>
Does the project require a site identification number (EPA number) for regulated waste activities (used oil, liquid waste, hazardous waste, universal waste, PCBs)? (<u>Web Site</u>)	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, Appropriate <u>DEQ District Office</u>
Does the project involve the receipt, possession, manufacture, use, storage, transport, transfer, release, or disposal of radioactive material in any form?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Radioactive Material and Standards Unit</u>
Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP <u>Radioactive Material and Standards Unit</u>
Do you desire to develop a withdrawal of over 2,000,000 gallons of water per day from any source other than the Great Lakes and their connecting waterways? Or, do you desire to develop a withdrawal of over 5,000,000 gallons of water per day from the Great Lakes or their connecting waterways?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, DWEHS, <u>Source Water Protection Unit</u>
CHEMICAL ADDITION PROJECTS			
Are you using chemicals or materials in, or in contact with, drinking water at any point in the water works system?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, Appropriate <u>DEQ District Office, Public Water Supply Program</u>
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)? (5.	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Aquatic Nuisance Control and Remedial Action Unit</u>
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)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Surface Water Assessment Section</u>
OPERATIONAL PERMITS (SECTOR SPECIFIC)			
Does the project involve the transport of some other facility's non-hazardous liquid waste?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Transporter Program</u>
Does the project involve the transport hazardous waste?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Transporter Program</u>
Does your facility have an electric generating unit that sells electricity to the grid and burns a fossil fuel?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	AQD, <u>Acid Rain Permit Program</u>
Is the project a dry cleaning establishment utilizing perchloroethylene or a flammable solvent in the cleaning process?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DEQ, AQD, <u>Dry Cleaning Program</u>
Does your laboratory test potable water as required for compliance and monitoring purposes of the Safe Drinking Water Act?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	DEQ, <u>Laboratory Services Certifications</u>
Does the project involve the generation of medical waste or a facility that treats medical waste prior to its disposal?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Medical Waste Regulatory Program</u>
Does the project involve transport of septic tank, cesspool, or dry well contents or the discharge of septage or sewage sludge into or onto the ground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Septage Program</u>
Do you store, haul, shred or process scrap tires?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	OWMRP, <u>Scrap Tire Program</u>
Does the project involve the operation of a public swimming pool?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Public Swimming Pools Program</u>
Does the project involve the operation of a campground?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Campgrounds</u>
Do you engage in the business of hauling bulk water for drinking or household purposes (except for your own household use)?	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	ODWMA, <u>Water Hauler Information</u>
PERSONAL LICENSES/CERTIFICATIONS			
Are you designated by your facility to be the Certified Operator to fulfill the requirements of a wastewater discharge permit (NPDES including Storm	Y <input type="checkbox"/>	N <input checked="" type="checkbox"/>	WRD, <u>Operator Training, Storm Water Program</u>

Water or Groundwater)?		
Are you a drinking water operator in charge of a water treatment or water distribution system, back-up operator, or shift operator?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	WRD, <u>Operator Training</u>
Are you a water-well drilling contractor, pump installer, dewatering well contractor or dewatering well pump installer?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	WRD, <u>Well Construction Unit</u>
OIL, GAS AND MINERALS		
Do you want to operate a central production facility (applies to oil and gas production facilities where products of diverse ownership are commingled)?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, <u>Petroleum Geology and Production Unit</u>
Does the project involve the removal of sand from a sand dune area within two (2) miles of a Great Lakes shoreline?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, Minerals and Mapping Unit, <u>Sand Dune Mining Program</u>
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"/>	OOGM, <u>Minerals and Mapping</u>
Does the project involve the surface or open-pit mining of metallic mineral deposits?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
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"/>	OOGM, <u>Minerals and Mapping</u>
Does the project involve mining coal?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
Do you want to change the status of an oil or gas well (i.e. plug the well)?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, <u>Permits and Bonding Unit</u>
Does the project involve drilling of oil, gas, brine disposal, secondary recovery, or hydrocarbon storage wells?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, <u>Permits and Bonding Unit</u>
Does the project involve plugging or deepening of an oil or gas well, or conveying rights in the well as an owner to another person?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, <u>Permits and Bonding Unit</u>
Does the project involve changing the status or plugging of a mineral well?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OOGM, <u>Minerals and Mapping</u>
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"/>	OOGM, <u>Minerals and Mapping</u>
Does the project involve decommissioning or decontamination of tanks, piping, and/or appurtenances that may have radioactive levels above background?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	OWMRP, <u>Radioactive Protection Programs</u>
STORAGE TANKS (CONSTRUCTION AND OPERATION)		
Does the project involve the installation of an aboveground storage tank for a flammable or combustible liquid (under 200 degrees Fahrenheit)?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	Michigan Department of Licensing and Regulatory Affairs (DLARA) - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation of a compressed natural gas dispensing station with storage?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation of a liquefied petroleum gas container filling location or storage location that has a tank with a capacity of more than 2,000 gallons or has two (2) or more tanks with an aggregate capacity of more than 4,000 gallons?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation, removal, or upgrade of an underground storage tank containing a petroleum product or a hazardous substance?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>
Does the project involve the installation of a hydrogen system?	Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	DLARA - <u>Storage Tank Unit, 517-335-7211</u>

FOUR HACKS LLC



LOCATION SKETCH
NOT TO SCALE

ZONED R-2A	
MINIMUM LOT AREA	14,000 SQ. FT.
MINIMUM LOT WIDTH	100 FT
MAXIMUM STRUCTURE HEIGHT	35 FT
MINIMUM FRONT YARD SETBACK	35 FT (I)
MINIMUM SIDE YARD SETBACK	10 (E)
MINIMUM REAR YARD SETBACK	35 FT

(E) SIDE YARDS ON A STREET SHALL MEET FRONT YARD REQUIREMENTS.

(I) SEE SECTION 8.40, URBAN OVERLAY ZONE FOR AREAS WITH INCREASED SETBACKS.

MISS DIG:

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

UTILITY NOTE:

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

SHEET INDEX	
1.....	COVER SHEET
2.....	BOUNDARY/EXISTING TOPOGRAPHY
3.....	SITE LAYOUT PLAN
4.....	SITE UTILITY PLAN
5.....	SITE GRADING PLAN
6.....	UTILITY DETAILS

SITE:	T14N R4W SEC 3 PART OF SOUTHEAST 1/4 SOUTHEAST 1/4 MT. PLEASANT, MI 48858
CLIENT:	FOUR HACKS LLC 1425 S MISSION RD MT. PLEASANT, MI 48858
CONSULTANT:	CENTRAL MICHIGAN SURVEYING & DEVELOPMENT CO., INC. 2257 E. BROOMFIELD ROAD MT. PLEASANT, MI 48858 CONTACT PERSON: TIMOTHY E BEBEE PHONE: (989) 775-0756 FAX: (989) 775-5012 EMAIL: info@cms-d.com

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

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

HATCH PATTERNS	
[Hatched Pattern]	ASPHALT - EXISTING
[Hatched Pattern]	ASPHALT - PROPOSED
[Hatched Pattern]	CONCRETE
[Hatched Pattern]	GRAVEL
[Hatched Pattern]	LANDSCAPING
[Hatched Pattern]	RIP-RAP
[Hatched Pattern]	EXISTING BUILDING

PROPERTY DESCRIPTION:

T14N R4W SEC 3 PART OF SOUTHEAST 1/4 SOUTHEAST 1/4 COM WEST 1308.64 FT, NORTH 935.47 FEET AND NORTH 60' 47' 54" EAST 55.25 FROM THE SOUTHEAST CORNER TO POINT OF BEGINNING THENCE CONTINUING NORTH 60' 47' 54" EAST 365 FEET; THENCE SOUTH 0' 6' 20" WEST 96.08 FEET; THENCE NORTH 89' 53' 40" EAST 573.33 FEET; THENCE SOUTH 13' 35' 6" WEST 175.81 FEET; THENCE SOUTH 60' 47' 54" WEST 315.30 FEET; THENCE SOUTH 27' 33' 36" EAST 429 FEET; THENCE SOUTH 60' 47' 54" WEST 396 FEET; THENCE NORTH 27' 33' 36" WEST 924 FEET TO POINT OF BEGINNING AND THAT PART OF THE SOUTHEAST 1/4 SOUTHEAST 1/4 LYING EAST OF THE EXISTING RAILROAD RIGHT OF WAY AND WEST OF THE CRAIG HILL ROAD AND NORTHWESTERLY OF THE RECORDED PLAT OF VILLAGE OF ISABELLA CITY AS RECORDED IN LIBER 1 OF PLATS PAGE 156 ISABELLA COUNTY RECORDS 11.79 A M/L . SPLIT FOR 2013 FROM 087-00-002-00 TO 087-00-002-01 & 087-00-002-02 . BOUNDARY ADJUSTMENT FOR 2015 FROM 087-00-002-02 TO 087-00-014-00 AND BOUNDARY ADJUSTMENT FOR 2015 FROM 087-00-00-014-00 TO 087-00-002-02

CMS & D
SURVEYING / ENGINEERING
2957 E. BROOMFIELD ROAD
MT. PLEASANT, MICHIGAN 48858
PHONE: (989) 775-0756
FAX: (989) 775-5012
EMAIL: info@cms-d.com

COVER SHEET
FOUR HACKS LLC
T14N R4W SEC 3 PART OF
SOUTHEAST 1/4 SOUTHEAST 1/4
MT. PLEASANT, MI 48858

REVISIONS:	REVISIONS PER I.C.R.C. AND MT. PLEASANT FIRE
SUBMITTAL FOR PRELIMINARY CONSTRUCTION ESTIMATE 12-21-18	SUBMITTAL TO UNION TOWNSHIP PLANNING 8-2-19
	SUBMITTAL TO UNION TOWNSHIP PLANNING 8-13-19
JOB NUMBER: 1711-144	SCALE: N/A
DRAWN BY: WRE	SHEET NUMBER: 1 OF 6
DESIGNED BY: N/A	
CHECKED BY: TELB	

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

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

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

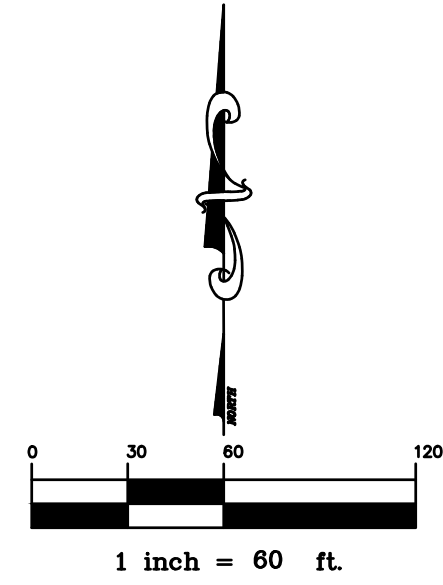
DTE ENERGY
4420 44TH ST., S.E., SUITE B
KENTWOOD, MI 49512
(616) 954-4623
MARY JO MCKERSE
mckersiem@dteenergy.com

MT. PLEASANT FIRE DEPARTMENT
804 EAST HIGH STREET
MT. PLEASANT, MI 48858
(989) 779-5100 EXT 5122
SGT. RANDY KEELER
rkeeler@mt-pleasant.org

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

CHARTER TOWNSHIP OF UNION
PLANNING & ZONING
2010 NORTH LINCOLN ROAD
200 NORTH MAIN STREET ROOM 140
MT. PLEASANT, MI 48857
(989) 772-0911
ROBERT WILLOUGHBY
drain@isabellacounty.org

ISABELLA COUNTY ROAD COMMISSION
2261 EAST REMUS ROAD
MT. PLEASANT, MI 48858
(989) 773-7131 EXT 115
PATRICK GAFFNEY
Pgaffney@isabellacounty.org



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



BOUNDARY/EXISTING TOPOGRAPHY
 FOUR HACKS LLC
 T14N R4W SEC 3 PART OF
 SOUTHEAST 1/4 SOUTHEAST 1/4
 MT. PLEASANT, MI 48858

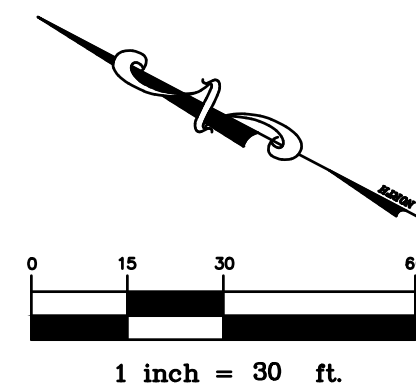
REVISIONS:

REVISIONS PER I.C.R.C. AND MT. PLEASANT FIRE
--

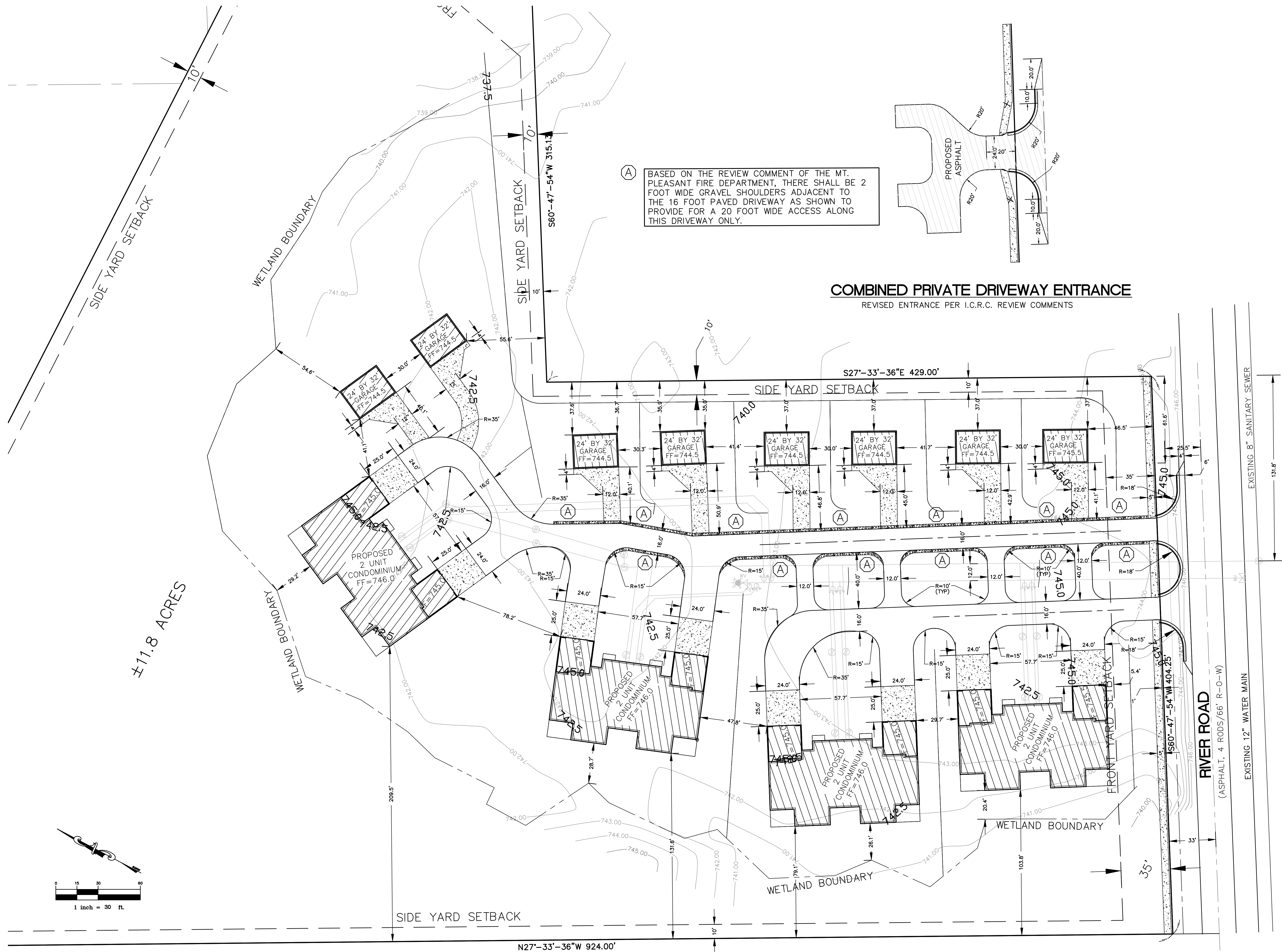
SUBMITTALS: SUBMITTAL FOR PRELIMINARY CONSTRUCTION ESTIMATE 12-21-18
SUBMITTAL TO UNION TOWNSHIP PLANNING 8-2-19
SUBMITTAL TO UNION TOWNSHIP PLANNING 8-13-19

JOB NUMBER: 1711-144
DRAWN BY: WRE
DESIGNED BY: N/A
CHECKED BY: TELB

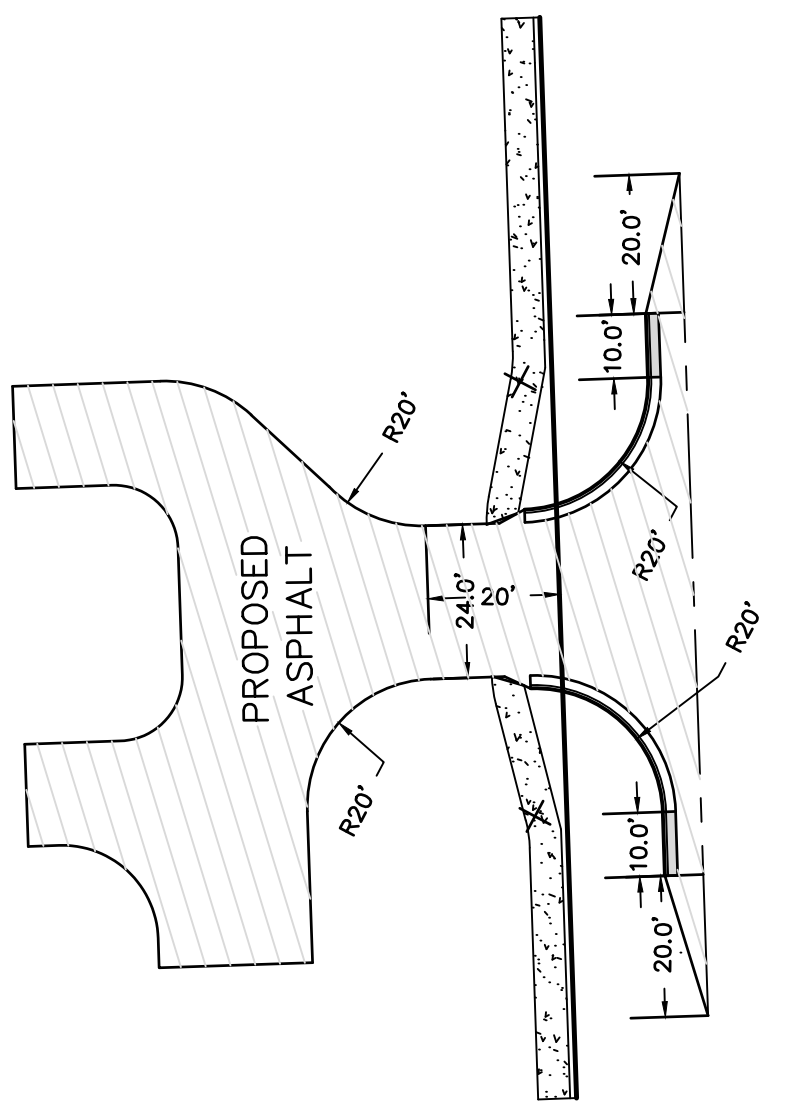
SCALE 1" = 60'
SHEET NUMBER 2 of 6



±11.8 ACRES



(A) BASED ON THE REVIEW COMMENT OF THE MT. PLEASANT FIRE DEPARTMENT, THERE SHALL BE 2 FOOT WIDE GRAVEL SHOULDERS ADJACENT TO THE 16 FOOT PAVED DRIVEWAY AS SHOWN TO PROVIDE FOR A 20 FOOT WIDE ACCESS ALONG THIS DRIVEWAY ONLY.



COMBINED PRIVATE DRIVEWAY ENTRANCE
REVISED ENTRANCE PER I.C.R.C. REVIEW COMMENTS



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

PROPOSED SITE LAYOUT PLAN
FOUR HACKS LLC
T14N R4W SEC 3 PART OF
SOUTHEAST 1/4 SOUTHEAST 1/4
MT. PLEASANT, MI 48858

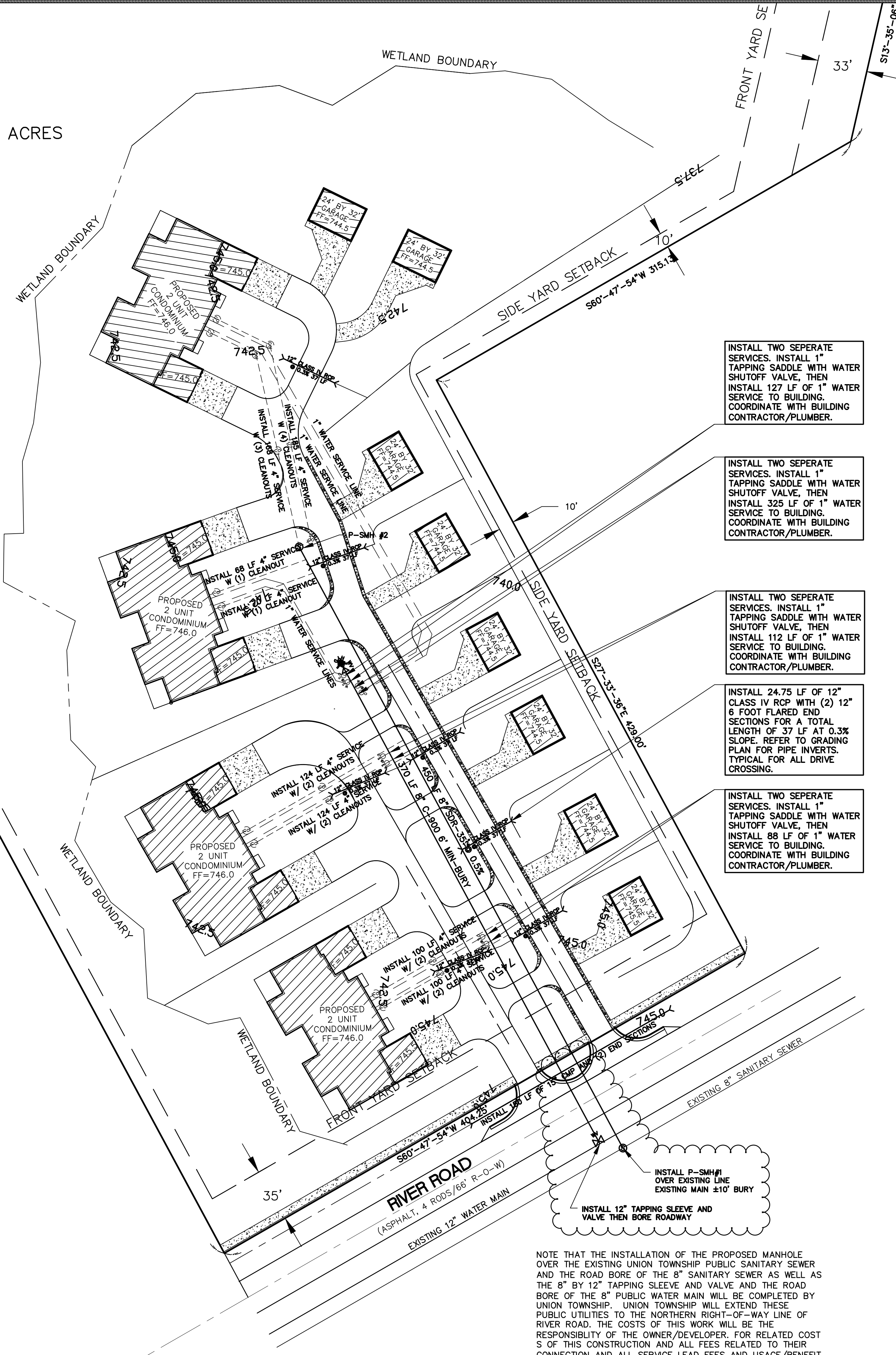
REVISIONS:

REVISIONS PER I.C.R.C. AND MT. PLEASANT FIRE
--

SUBMITTALS TO CLIENT & GENERAL CONTRACTOR FOR CONSTRUCTION ESTIMATE 7-2-19
SUBMITTAL TO UNION TOWNSHIP PLANNING 8-2-19
SUBMITTAL TO UNION TOWNSHIP PLANNING 8-13-19

JOB NUMBER: 1711-144	SCALE: 1" = 30'
DRAWN BY: TELB	SHEET NUMBER: 3 OF 6
DESIGNED BY: TELB	CHECKED BY: TELB

±11.8 ACRES



INSTALL TWO SEPARATE SERVICES. INSTALL 1\"/>

INSTALL TWO SEPARATE SERVICES. INSTALL 1\"/>

INSTALL TWO SEPARATE SERVICES. INSTALL 1\"/>

INSTALL 24.75 LF OF 12\"/>

INSTALL TWO SEPARATE SERVICES. INSTALL 1\"/>

NOTE THAT THE INSTALLATION OF THE PROPOSED MANHOLE OVER THE EXISTING UNION TOWNSHIP PUBLIC SANITARY SEWER AND THE ROAD BORE OF THE 8\"/>

GENERAL NOTES:

THE SANITARY SEWER AND WATERMAIN MUST CONFORM TO UNION TOWNSHIP STANDARDS AND SPECIFICATIONS. SHOULD THERE BE A CONFLICT BETWEEN THE PLANS, NOTES, DETAILS AND SPECIFICATIONS, THE UNION TOWNSHIP STANDARDS SHALL GOVERN. THE CONTRACTOR WILL NOTIFY THE ENGINEER AS SOON AS A CONFLICT IS FOUND. INSTALLATION OF THESE UTILITIES SHALL BE COORDINATED BY THE CONTRACTOR WITH THE UNION TOWNSHIP DEPARTMENT OF PUBLIC WORKS DIRECTOR.

ELECTRIC SERVICES TO THE BUILDINGS AND GARAGES SHALL BE UNDERGROUND. THE SITE CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR IN REGARDS TO CONDUIT SLEEVES. FOR BUDGETTING PURPOSES IT SHALL BE ASSUMED THAT EACH RESIDENTIAL UNIT WILL HAVE ONE 2\"/>

ALL SERVICE LINES ARE SHOWN FOR REFERENCE ONLY. THE EXACT LOCATIONS TO BE DETERMINED BY THE OWNER AND/OR UTILITY COMPANY.

INSTALLATION OF GAS, ELECTRIC AND TELEPHONE SERVICES (INCLUDING TRANSFORMER PAD LOCATIONS) SHALL BE COORDINATED BY THE GENERAL CONTRACTOR WITH THE RESPECTIVE UTILITY COMPANIES AND THE ARCHITECT/ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL CONSTRUCTION PERMITS REQUIRED FOR WORKING WITHIN THE ROAD RIGHT-OF-WAY PRIOR TO COMMENCING CONSTRUCTION, WITHIN THESE AREAS.

THE PROPOSED ELEVATIONS SHOWN ARE TOP OF WALK, TOP OF CURB, FINISHED ASPHALT SURFACE, GUTTER PAN OR GROUND ELEVATIONS, UNLESS OTHERWISE NOTED.

ALL DRIVEWAY APPROACHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH ISABELLA COUNTY ROAD COMMISSION STANDARDS. ONE 15\"/>

GENERAL NOTES:

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) A MINIMUM OF 3 WORKING DAYS PRIOR TO ANY CONSTRUCTION OR 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. THE CONTRACTOR SHALL NOTIFY THE ENGINEER/SURVEYOR WHERE POSSIBLE CONFLICTS EXIST PRIOR TO BEGINNING CONSTRUCTION.

THE LOCATION OF EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY GROUND CONDITIONS, EXISTING UTILITIES, LOT AND BUILDING DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THE PLANS. ARRANGE TO HAVE UTILITIES IDENTIFIED AND FLAGGED BEFORE STARTING CONSTRUCTION. THE OWNER ASSUMES NO LIABILITY FOR THE LOCATION OF UTILITIES. ALL DAMAGES MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

ALL CONSTRUCTION UNDER EXISTING OR PROPOSED PAVEMENT, EXISTING OR PROPOSED UTILITIES (INCLUDING LEADS), SHALL BE COMPLETELY BACKFILLED WITH SAND IN 12\"/>

THE CONTRACTOR SHALL CONFORM TO SOIL EROSION AND SEDIMENTATION CONTROL ACT PART 91 OF PUBLIC ACT 451 OF 1994, AS AMENDED.

TOPSOIL SHALL BE STOCKPILED ON THE SITE AND USED AS TOPSOIL SURFACES AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. UNSUITABLE TOPSOILS MUST BE DISPOSED OF. DURING THE CLEANUP, ANY REMAINING STOCKPILES WILL NEED TO BE REMOVED. SOIL EROSION MEASURES MUST BE TAKEN TO ASSURE THAT THESE STOCKPILES ARE STABILIZED.

THE CONTRACTOR SHALL SEED AND FERTILIZE ALL NONE HARD SURFACE AREAS AND ANY OTHER DISTURBED AREAS AS SHOWN ON THE PLANS AND/OR DESCRIBED IN THE SPECIFICATIONS.

THE CONTRACTOR SHALL BACKFILL, COMPACT AND FINE GRADE ALL AREAS BETWEEN THE CURBS AND PAVEMENT AND THE PROPERTY LINES WITH TOPSOIL SUITABLE FOR LANDSCAPING. THE GRADES IN THESE AREAS WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE UNPAVED AREAS SHALL BE SMOOTHLY GRADED AND THE SURFACE STABILIZED BY SEEDING AS STATED ON THE PLANS. THE MAXIMUM DESIRABLE SLOPE IS 3 HORIZONTAL TO 1 VERTICAL, UNLESS OTHERWISE STATED.

THE CONTRACTOR SHALL FURNISH AND INSTALL PLAIN RIP-RAP BANK PROTECTION IN AREAS WHERE BANK EROSION WILL MOST LIKELY OCCUR OR AS DIRECTED BY THE ENGINEER.

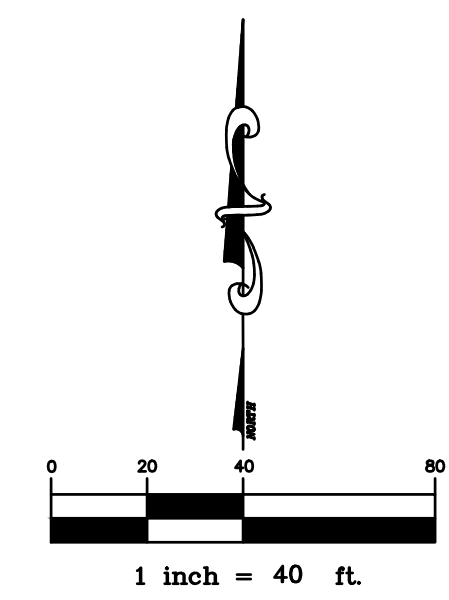
BROKEN CONCRETE AND DEBRIS SHALL BE CONSIDERED WASTE TO BE DISPOSED OF BY THE CONTRACTOR.

ALL DEWATERING REQUIRED FOR CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE BID.

ALL JOINTS AT INTERSECTION APPROACHES AND DRIVEWAYS SHALL BE SAWCUT WITH BUTT-JOINTS. THE COST SHALL BE INCLUDED WITH THE PAYMENT FOR EXCAVATION.

THE CONTRACTOR SHALL MAINTAIN LOCAL TRAFFIC AT ALL TIMES ON THE PROJECT. THE COST IS TO BE INCLUDED IN THE LUMP SUM FEE.

ALL WATER VALVE BOXES, ELECTRICAL BOXES, GAS VALVES AND ANY OTHER EXISTING UTILITY STRUCTURES ON THE SITE SHALL BE ADJUSTED TO FINISHED GRADE. THE COST SHALL BE INCLUDED IN THE LUMP SUM FEE.



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



PROPOSED UTILITY PLAN
 FOUR HACKS LLC
 T14N RAW SEC 3 PART OF
 SOUTHEAST 1/4 SOUTHEAST 1/4
 MT. PLEASANT, MI 48858

REVISIONS:

NO. CLIENT & GENERAL CONTRACTOR FOR CONSTRUCTION ESTIMATE 7-2-19	REVISIONS PER I.C.R.C. AND MT. PLEASANT FIRE
SUBMITTAL TO UNION TOWNSHIP PLANNING 8-2-19	
SUBMITTAL TO UNION TOWNSHIP PLANNING 8-13-19	

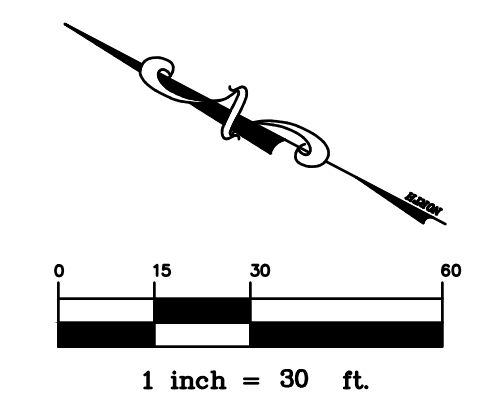
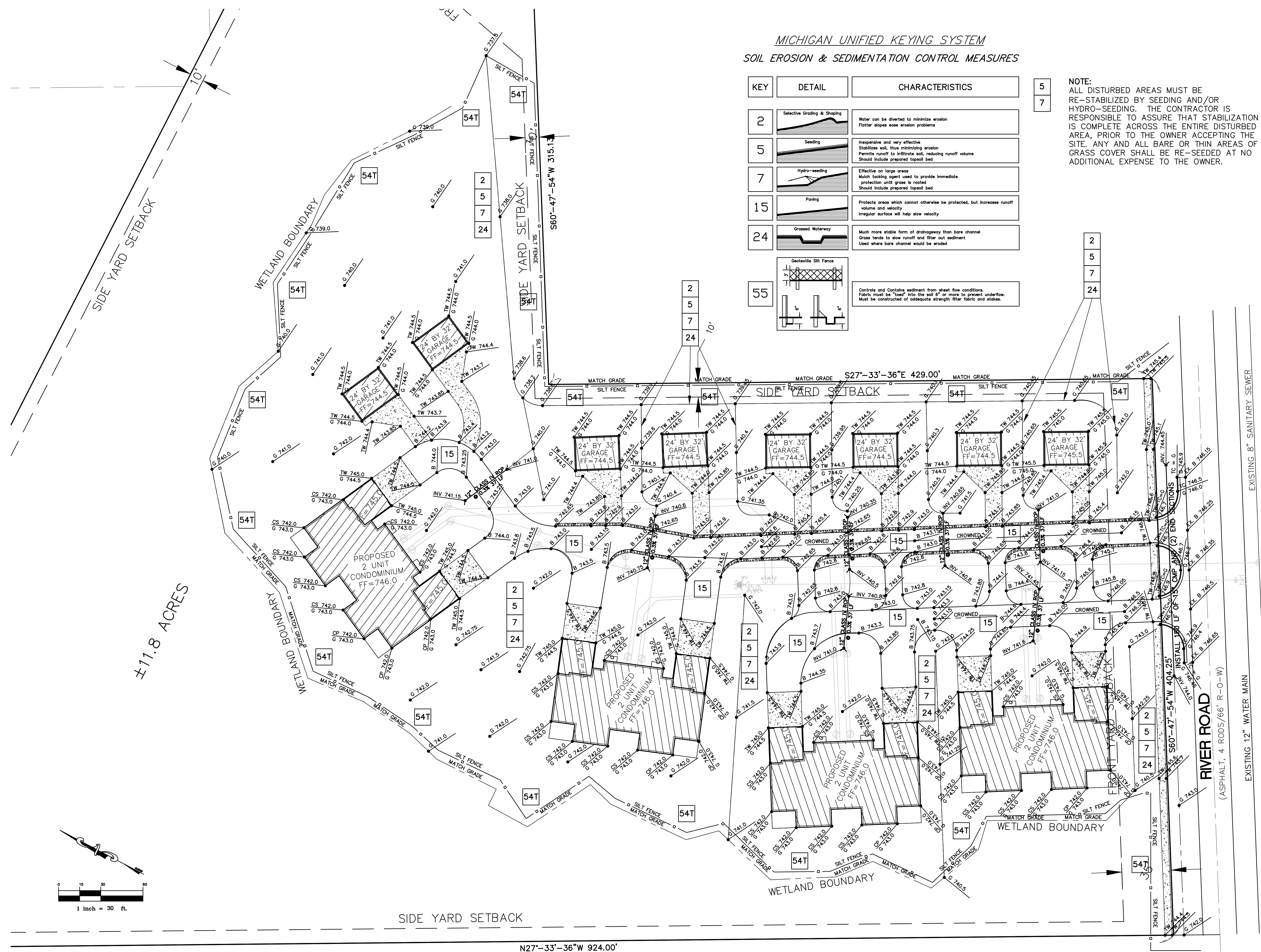
JOB NUMBER: 1711-144	SCALE 1" = 40'
DRAWN BY: TELB	SHEET NUMBER 4 OF 6
DESIGNED BY: TELB	CHECKED BY: TELB



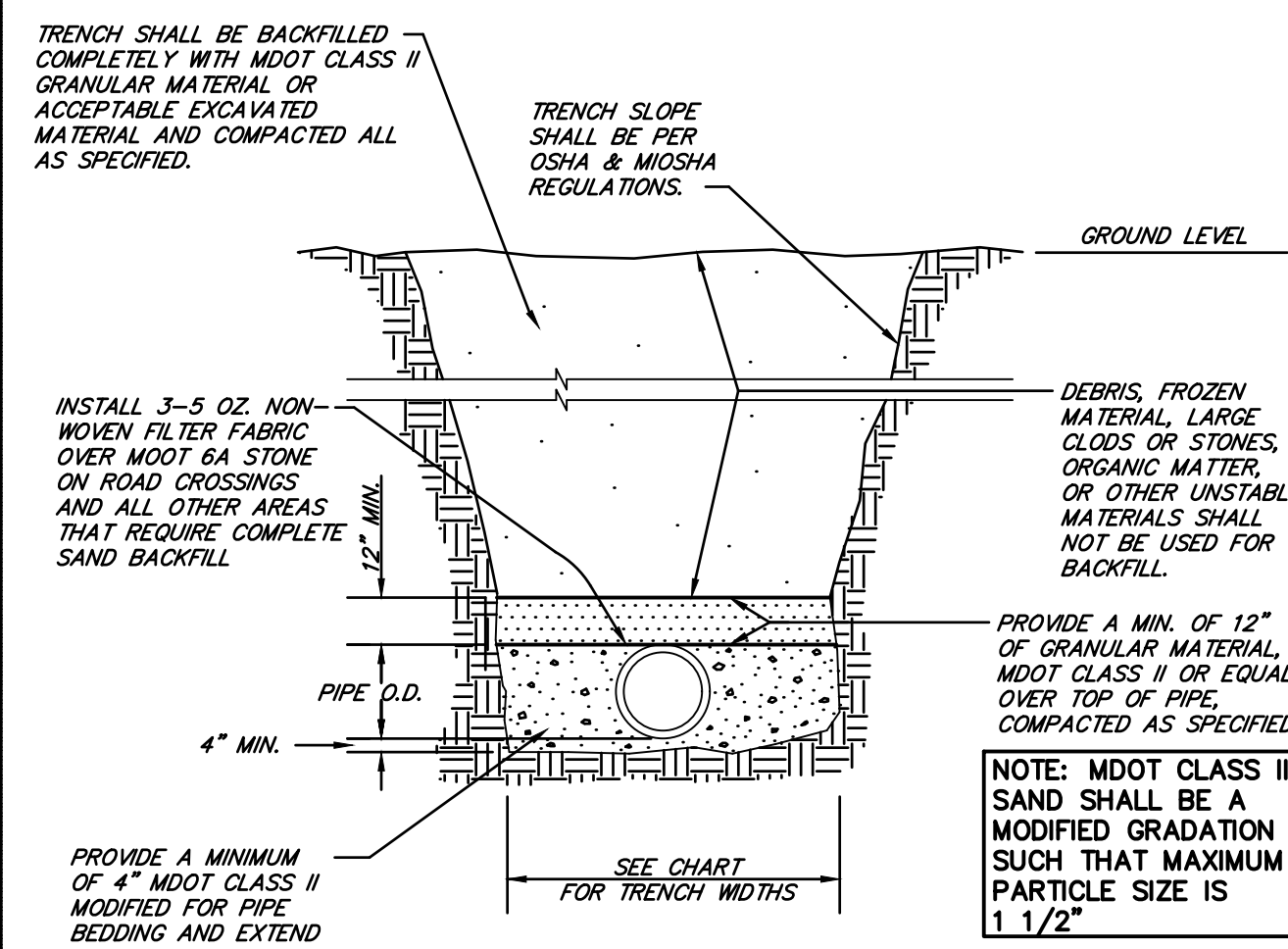
MICHIGAN UNIFIED KEYING SYSTEM
SOIL EROSION & SEDIMENTATION CONTROL MEASURES

KEY	DETAIL	CHARACTERISTICS
2		Water can be diverted to minimize erosion Flatter slopes ease erosion problems
5		Inexpensive and very effective Stabilizes soil, thus minimizing erosion Permits runoff to infiltrate soil, reducing runoff volume Should include prepared topsoil bed
7		Effective on large areas Mulch tackling agent used to provide immediate protection until grass is rooted Should include prepared topsoil bed
15		Protects areas which cannot otherwise be protected, but increases runoff volume and velocity Irregular surface will help slow velocity
24		Much more stable form of drainage way than bare channel Grass tends to slow runoff and filter out sediment Used where bare channel would be eroded
55		Controls and contains sediment from sheet flow conditions. Fabric must be "loose" into the soil 6" or more to prevent underflow. Must be constructed of adequate strength filter fabric and stakes.

NOTE:
 ALL DISTURBED AREAS MUST BE RE-STABILIZED BY SEEDING AND/OR HYDRO-SEEDING. THE CONTRACTOR IS RESPONSIBLE TO ASSURE THAT STABILIZATION IS COMPLETE ACROSS THE ENTIRE DISTURBED AREA, PRIOR TO THE OWNER ACCEPTING THE SITE. ANY AND ALL BARE OR THIN AREAS OF GRASS COVER SHALL BE RE-SEEDED AT NO ADDITIONAL EXPENSE TO THE OWNER.



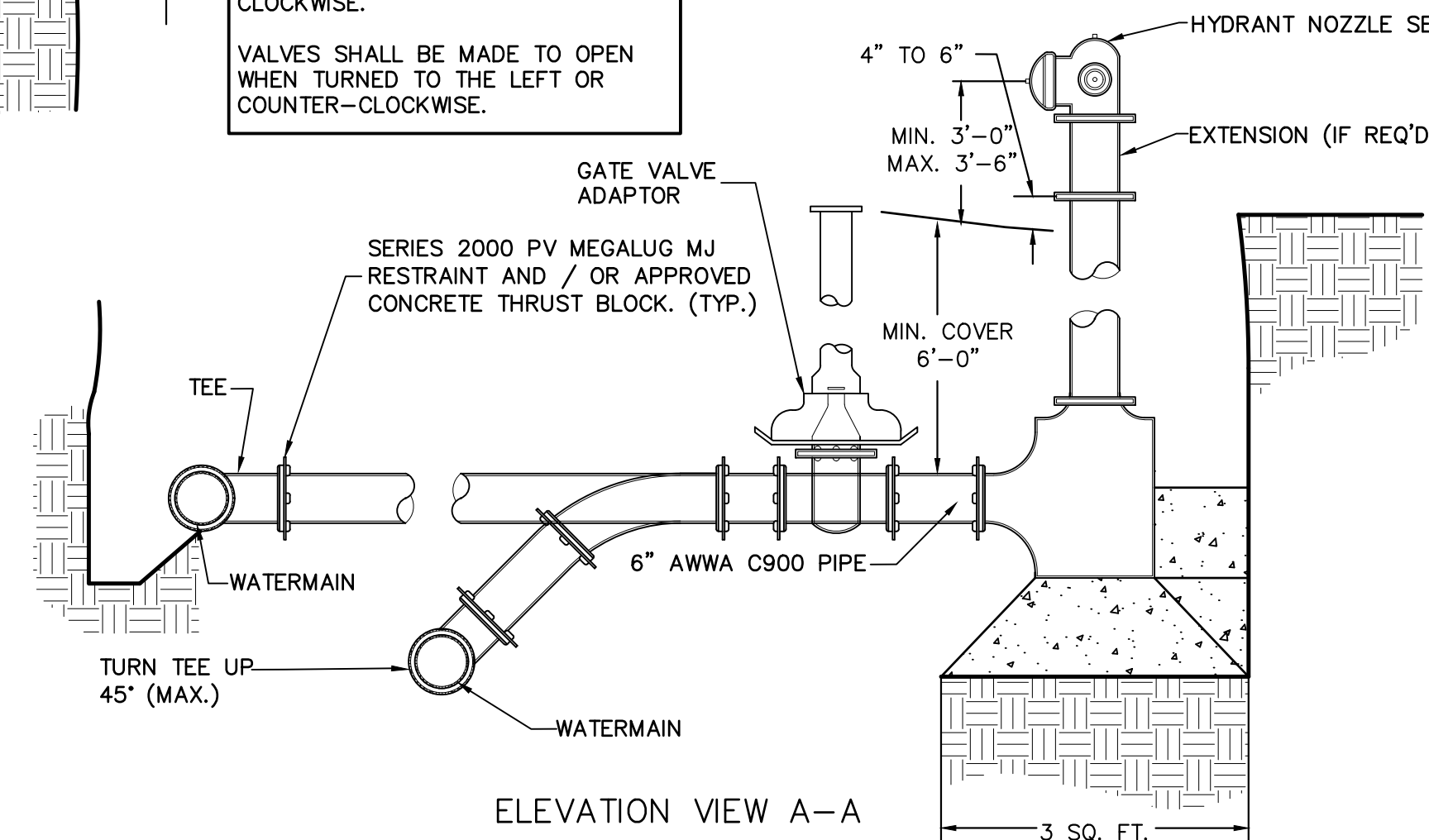
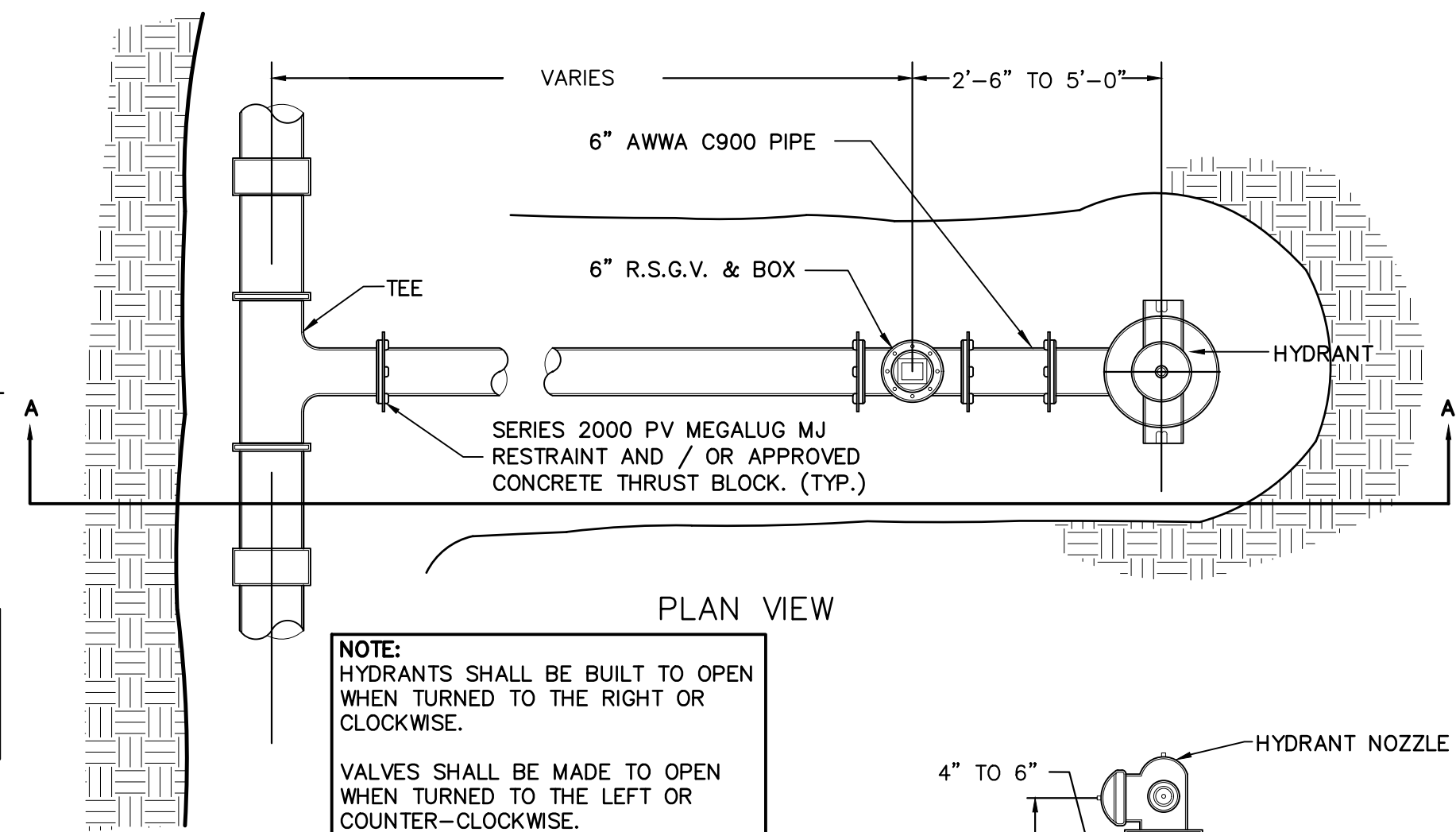
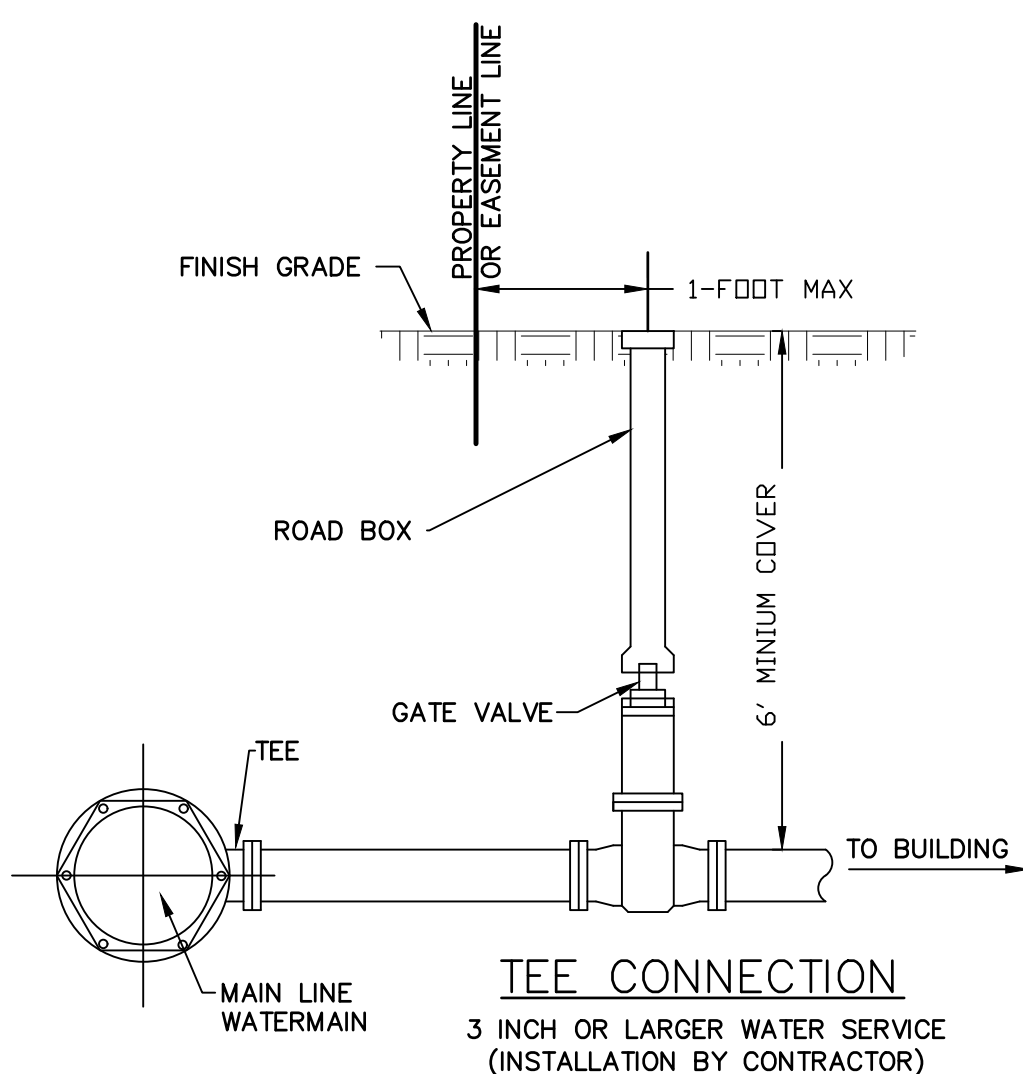
SCALE 1" = 30'	JOB NUMBER: 1711-144	REVISIONS:
	DRAWN BY: TELB	REVISIONS PER I.C.R.C. AND MT. PLEASANT FIRE
SHEET NUMBER 5 OF 6	DESIGNED BY: TELB	SUBMITTALS TO CLIENT & GENERAL CONTRACTOR FOR CONSTRUCTION ESTIMATE 7-2-19
	CHECKED BY: TELB	SUBMITTAL TO UNION TOWNSHIP PLANNING 8-2-19
		SUBMITTAL TO UNION TOWNSHIP PLANNING 8-13-19



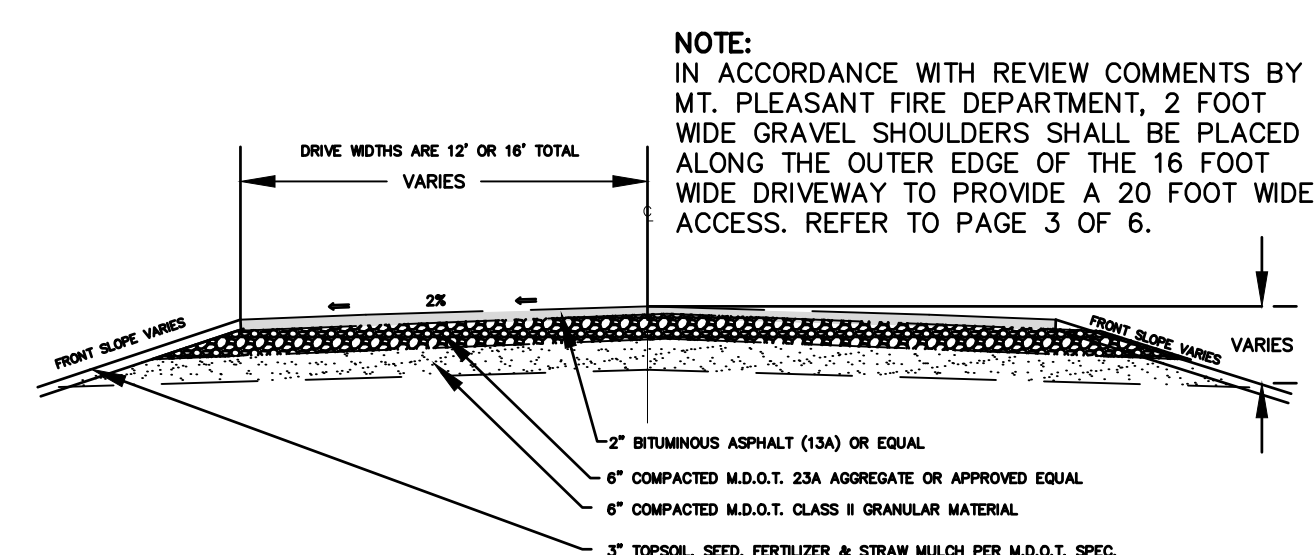
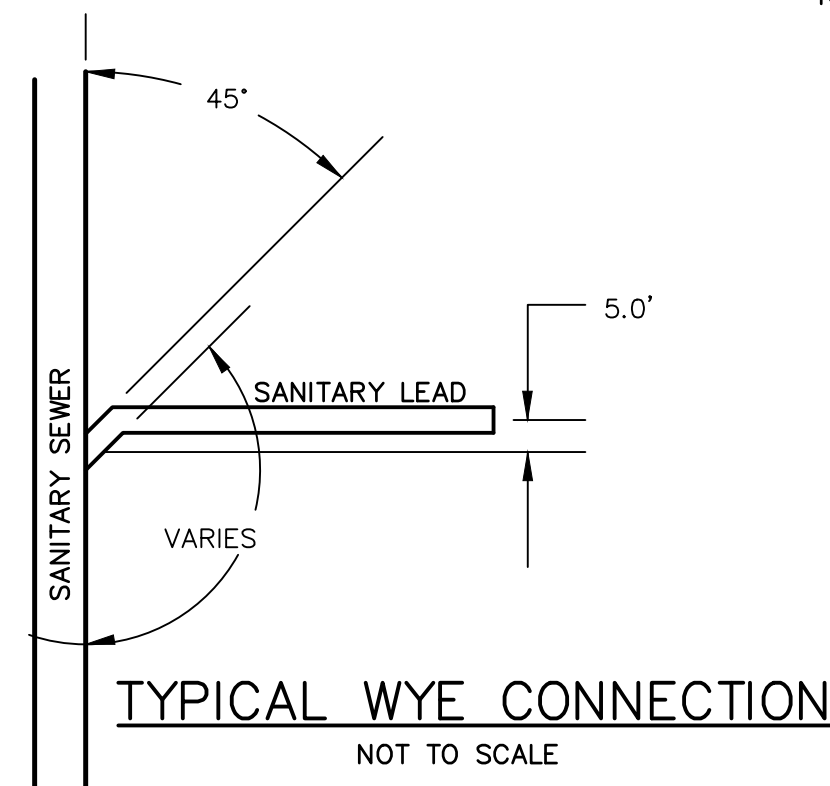
P.V.C. PIPE TRENCH DETAIL
NOT TO SCALE

TRENCH WIDTH CHART

PIPE SIZE	MINIMUM	MAXIMUM
8" & 10"	24"	30"
12" & 15"	30"	36"
18"	36"	42"
21"	38"	44"
24"	42"	46"
27"	45"	49"
30"	48"	53"
36"	58"	60"
LARGER THAN 36"	I.D. +20"	I.D. +24"

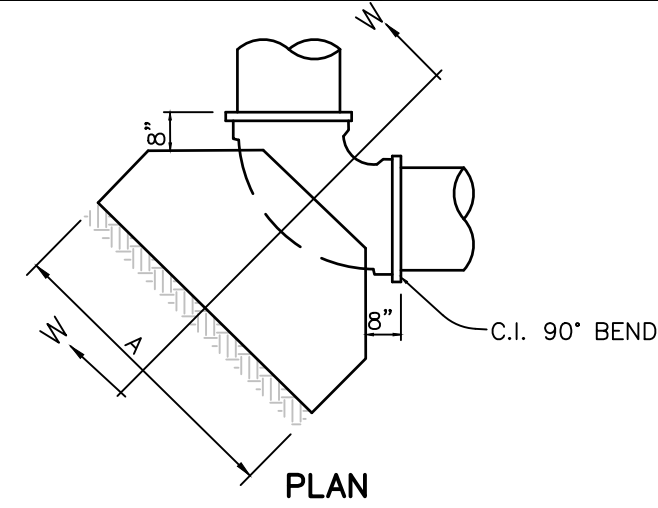


TYPICAL HYDRANT CONNECTION
NOT TO SCALE

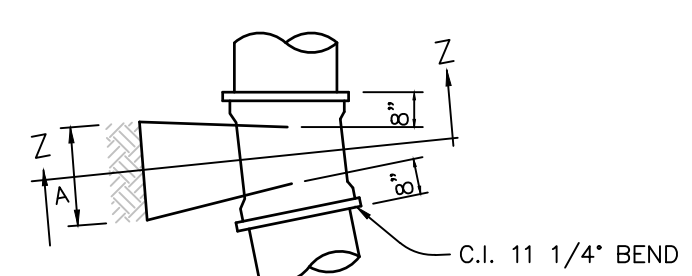


TYPICAL 12' & 16' BITUMINOUS ASPHALT DRIVE CROSS-SECTION
NOT TO SCALE

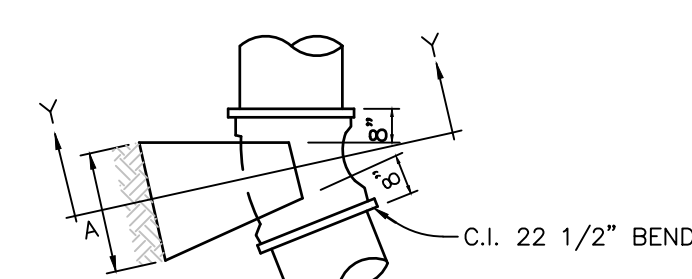
PIPE SIZE	90° BEND OR TEE			45° BEND			22 1/2° BEND			11 1/4° BEND			PLUG							
	A	B	C	Q	A	B	C	Q	A	B	C	Q	A	B	C	Q				
6", 8" & 10"	3'-0"	2'-0"	1'-3"	0.3	2'-0"	1'-6"	1'-3"	0.1	1'-6"	1'-0"	1'-3"	0.1	1'-0"	1'-0"	1'-3"	0.1	2'-0"	2'-0"	1'-6"	0.2
12"	3'-0"	2'-6"	1'-6"	0.4	2'-0"	2'-0"	1'-6"	0.2	2'-0"	1'-0"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



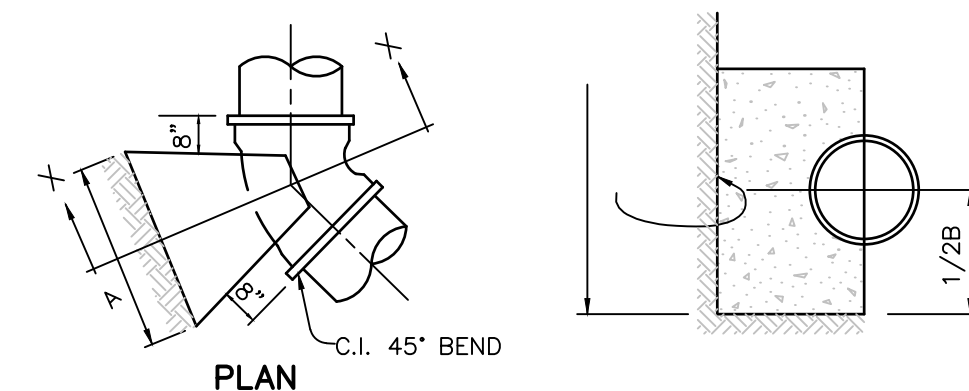
DETAIL OF BLOCK FOR 90° BEND OR TEE
Q - MIN. CU. YD. CONCRETE PER BLOCK NOT TO SCALE



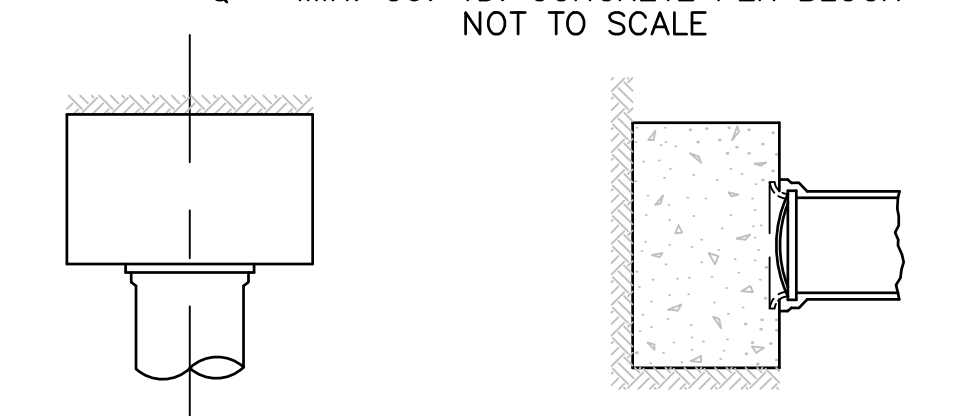
DETAIL OF BLOCK FOR 11 1/4° BEND
Q - MIN. CU. YD. CONCRETE PER BLOCK NOT TO SCALE



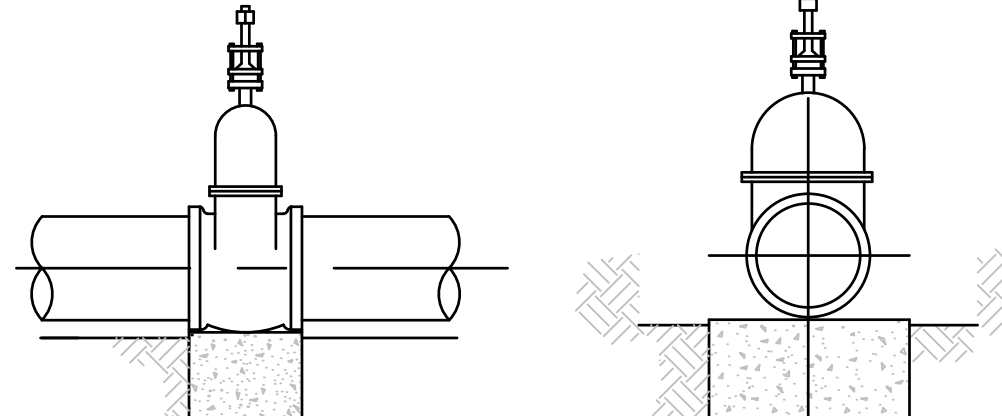
DETAIL OF BLOCK FOR 22 1/2° BEND
Q - MIN. CU. YD. CONCRETE PER BLOCK NOT TO SCALE



DETAIL OF BLOCK FOR 45° BEND
Q - MIN. CU. YD. CONCRETE PER BLOCK NOT TO SCALE



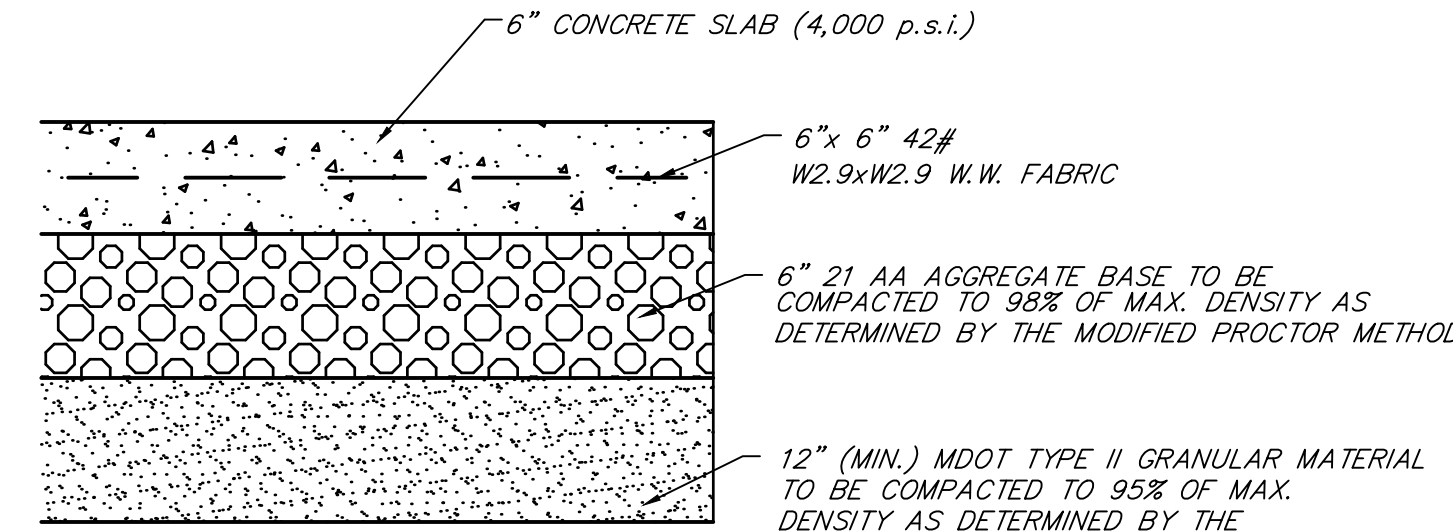
DETAIL OF BLOCK FOR PLUG
Q - MIN. CU. YD. CONCRETE PER BLOCK NOT TO SCALE



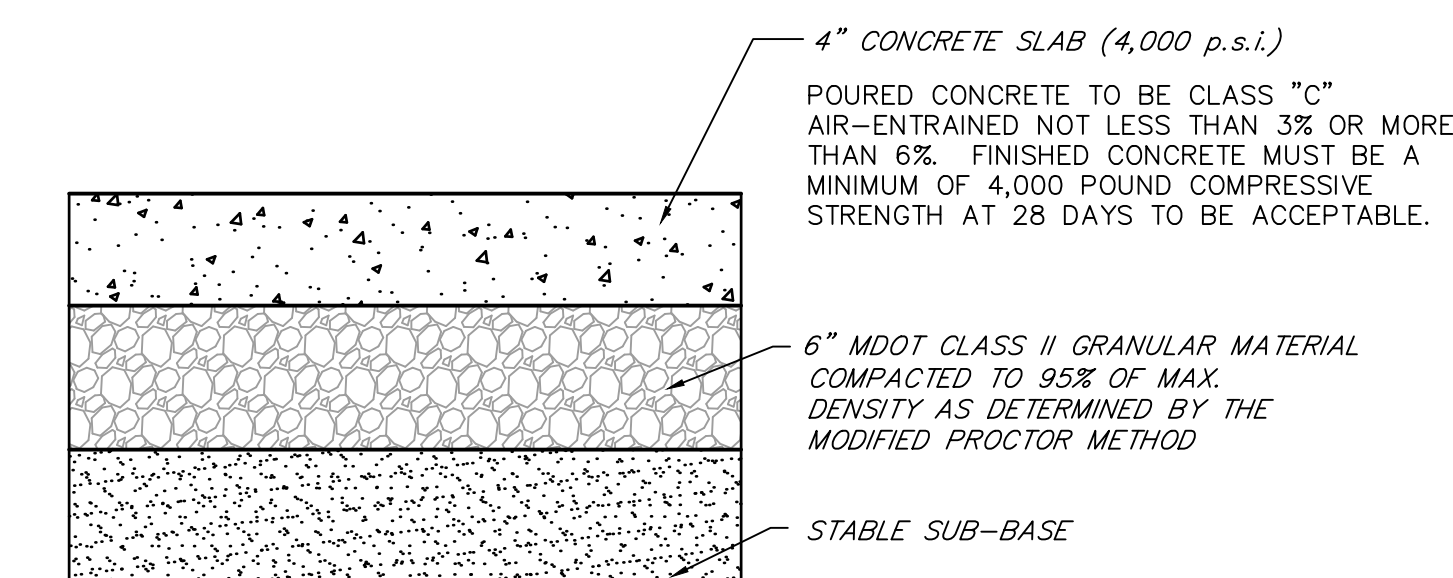
DETAIL OF BLOCK FOR GATE VALVES
NOT TO SCALE

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

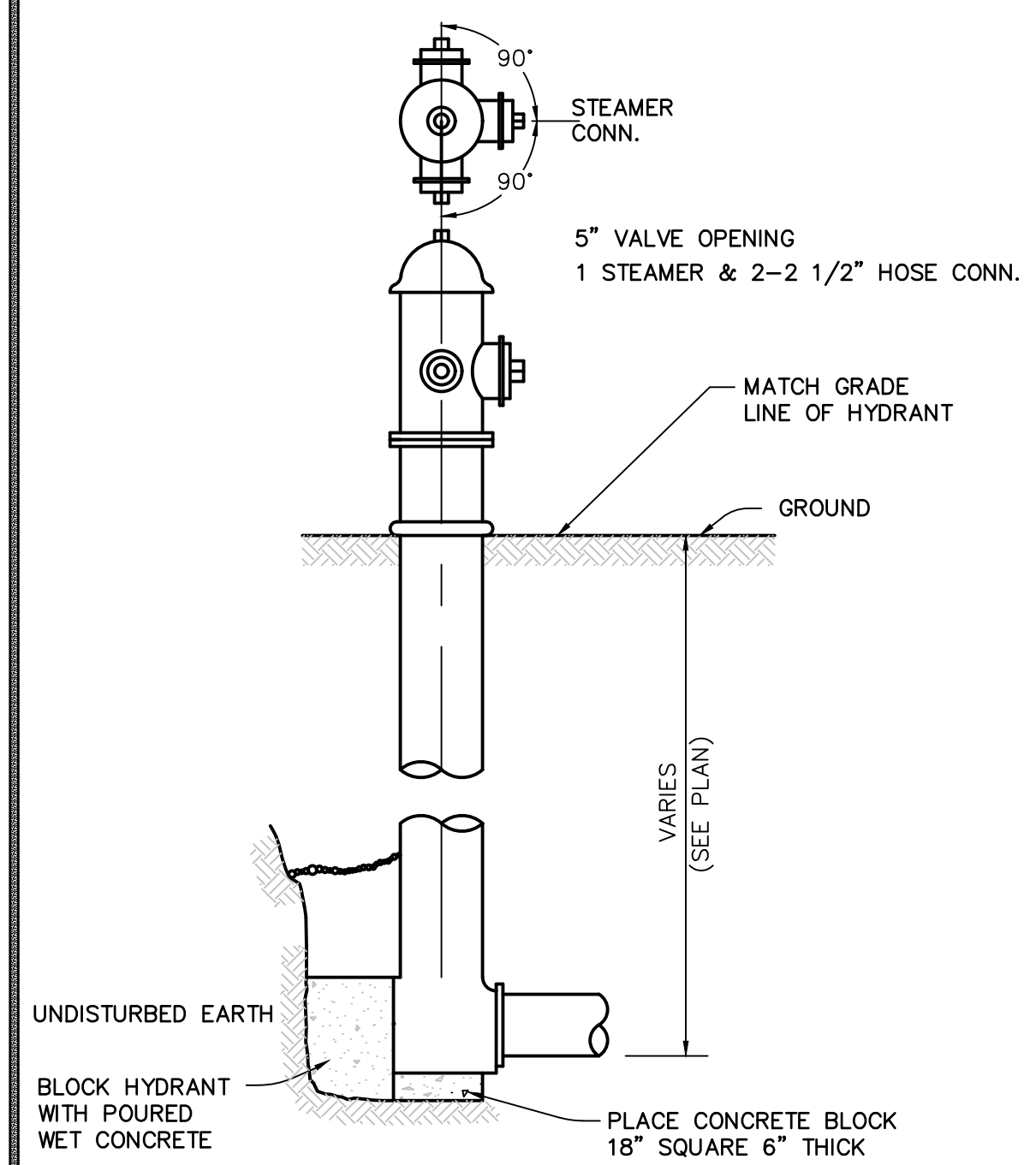
POURED CONCRETE TO BE CLASS "C" AIR-ENTRAINED NOT LESS THAN 3% OR MORE THAN 6%. FINISHED CONCRETE MUST BE A MINIMUM OF 4,000 POUND COMPRESSIVE STRENGTH AT 28 DAYS TO BE ACCEPTABLE.



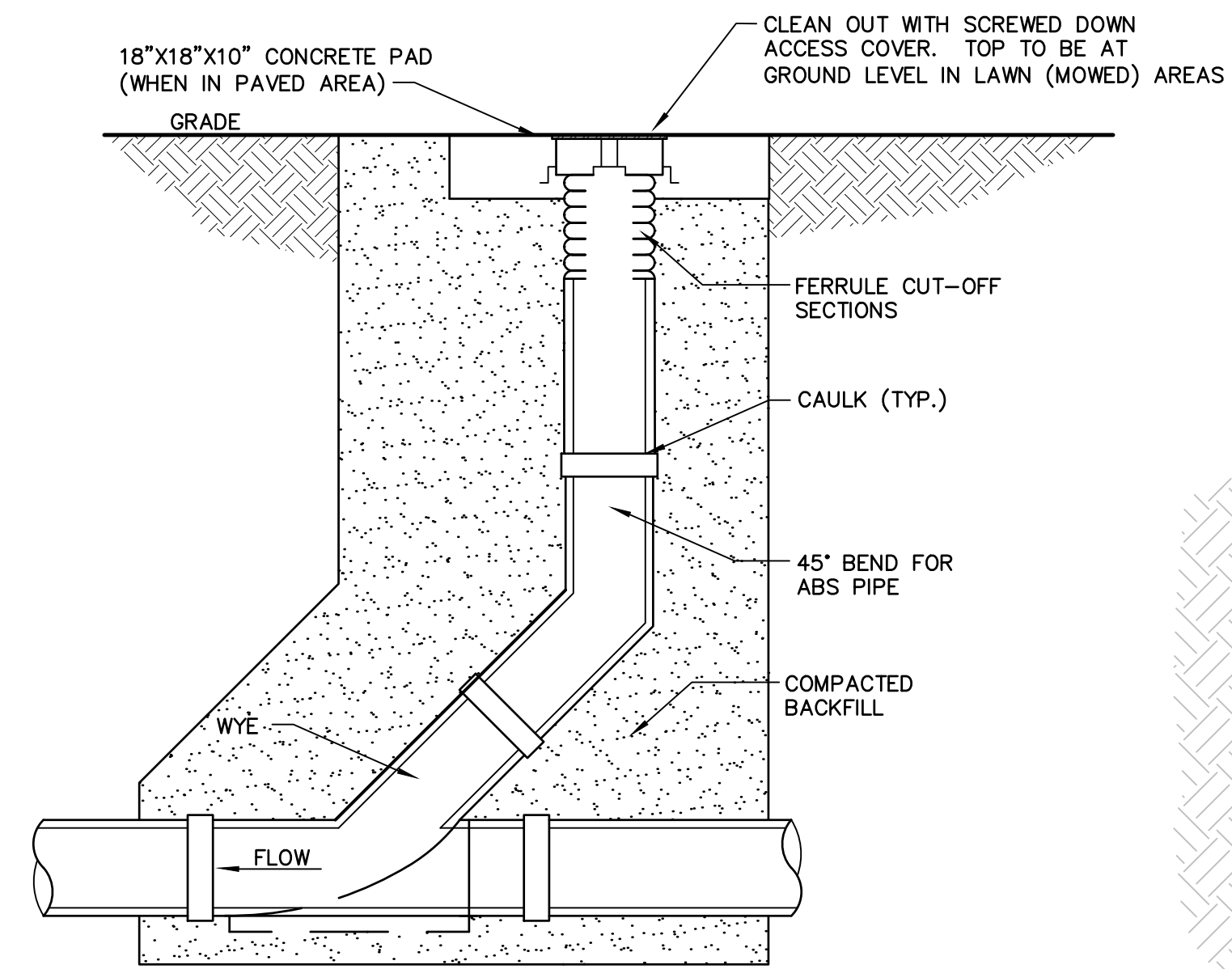
CONCRETE PAD CROSS-SECTION
NOT TO SCALE



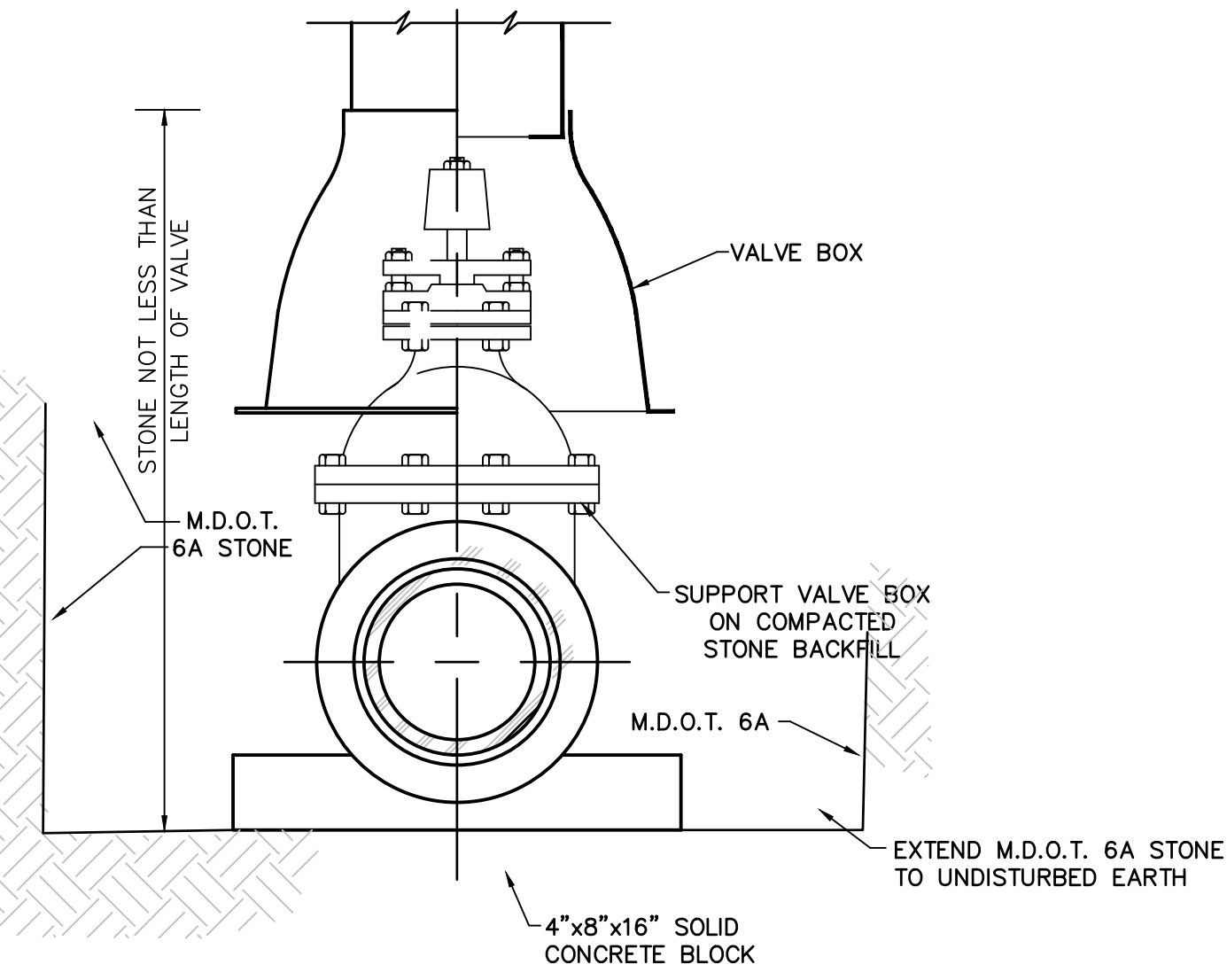
CONCRETE SIDEWALK CROSS-SECTION
NOT TO SCALE



DETAIL OF SETTING HYDRANT
NOT TO SCALE



CLEAN OUT DETAIL
NOT TO SCALE



DETAIL OF SETTING OF VALVE BOXES
NOT TO SCALE



REVISIONS:

NO.	DESCRIPTION
1	REVISIONS PER I.C.R.C. AND MT. PLEASANT FIRE

SUBMITTALS FOR PRELIMINARY CONSTRUCTION ESTIMATE 12-21-18

DATE	DESCRIPTION
8-2-19	SUBMITTAL TO UNION TOWNSHIP PLANNING
8-13-19	SUBMITTAL TO UNION TOWNSHIP PLANNING

JOB NUMBER:	1711-144
DRAWN BY:	WRE
DESIGNED BY:	N/A
CHECKED BY:	TELB

SCALE:	N/A
SHEET NUMBER:	6 OF 6



Mount Pleasant Fire Department
804 E. High Street
Mount Pleasant, Mi 48858

Union Township Site Plan Review

Wednesday July 24, 2019

River Road Condominiums

River RD

Mt. Pleasant, MI 48858

A Site Plan Review was conducted on Wednesday July 24, 2019 and revealed the following requirements listed below.

ORDER TO COMPLY: Since these conditions are contrary to code, you must correct them upon receipt of this notice. Please provide our department the documentation that verifies compliance with the code.

This list shall not be considered all-inclusive, as other requirements may be necessary, additional requirements are located in Chapter 5 and appendixes B, C, and D of the 2012 Edition of the International Fire Code.

If you have any questions regarding this matter, please feel free to contact me at (989) 779-5122.

Violation Code

1 PROPERTY Identification

Four Hacks LLC

Proposed Condominiums

River Rd.

ACCESS AND WATER Road and Water Supply

When fire apparatus access roads or water supply for fire protection is required to be installed, such protection shall be installed and made serviceable prior to and during the time of construction except when approved alternative methods of protection are provided. Temporary street signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles in accordance with Section 505.2 of the 2012 Edition of the International Fire Code.

ACCESS ROAD 150 FT Buildings within 150ft of Access Road

All portions of a building are required to be within 150 feet of an approved Fire Department access road, in accordance with Chapter 5, Section 503.1.1 of the 2012 Edition of the International Fire Code.

Union Township Site Plan Review

ACCESS ROAD LOAD Designed and Maintained to Support the

All fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities in accordance with Chapter 5, Sections 503.2.3 and 503.4 of the 2012 Edition of the International Fire Code.

ACCESS ROAD OBSTRUCTED Dimensions and Clearances

All fire apparatus access roads, including parking lots, shall have an unobstructed width of not less than 20 feet and an unobstructed vertical clearance of not less than 13 feet 6 inches in accordance with Chapter 5, Sections 503.2.1, 503.2.2, 503.3 and 503.4 of the 2012 Edition of the International Fire Code. Fire Prevention Ordinance 93.02(D)

Site plan does not meet the minimum width required for access.

BUILDING IDENTIFICATION Buildings Shall Have Address

Provide address identification numbers in accordance with Chapter 5, Sections 505.1 of the 2012 Edition of the International Fire Code or applicable to the City of Mt. Pleasant code of ordinances 150.01 Land Usage.

HYDRANT DISTANCE Hydrant maximum distance from buildings

Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet (122 m) from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official. Exceptions: 1. For Group R-3 and Group U occupancies, the distance requirement shall be 600 feet (183 m). 2. For buildings equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).

Site plan meets requirements.

WATER SUPPLY (SPACING) Number and Spacing of Hydrants

Provide fire hydrant locations in accordance with Chapter 5, Section 507.5.1 of the 2012 Edition of the International Fire Code. The number and spacing of fire hydrants is based on the construction type and square footage of the building in accordance with Appendix B and C and tables B105.1 and C105.1 of the 2012 Edition of the International Fire Code.

Building requires minimum 2000gpm. Two hydrants are required, print shows new hydrant and the existing hydrant on River Road adjacent to proposed development meets the requirement.

Union Township Site Plan Review

ACCESS ROAD 150 FT Buildings within 150ft of Access Road

All portions of a building are required to be within 150 feet of an approved Fire Department access road, in accordance with Chapter 5, Section 503.1.1 of the 2012 Edition of the International Fire Code.

Site plan meets requirements.

Keeler, Randy
Lieutenant
Mount Pleasant Fire Department