CHARTER TOWNSHIP OF VAN BUREN PLANNING COMMISSION AGENDA Wednesday, May 10th, 2023 – 5:30 PM Van Buren Township Hall 46425 Tyler Road

Per guidance provided by the Wayne County Local Public Health Department for meetings of governmental bodies held under public act 228 of 2020, effective January 1, 2022, the following Zoom link is provided to enable remote participation in a meeting of the public body by the general public:

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Webinar ID: 823 5180 0002

International numbers available: https://us06web.zoom.us/u/kdkrDpQZUf

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PLEDGE OF ALLEGIANCE:

ROLL CALL:

APPROVAL OF AGENDA:

MINUTES: Approval of minutes from the regular meeting of April 26, 2023.

CORRESPONDENCE / ANNOUNCEMENTS:

PUBLIC HEARING:

OLD BUSINESS:

ITEM # 1: Discussion – Residential Zoning Ordinance Text Amendment

INFO: The Planning Commission will be requested to continue consideration of a Zoning

Ordinance Text Amendment to allow building height to be limited to the more restrictive of the following standards in zoning districts containing single family residential dwellings, including sections 3.106, 3.107 and 3.109 of the Van Buren

Township Zoning Ordinance:

35 feet, as amended from the current limit of 30 feet in height

• 2.5 stories, as amended from the current limit of 2 stories.

ACTION ITEMS: A. Presentation from Staff

B. Planning Commission discussion

C. Planning Commission considers recommendation to schedule a public hearing

for the proposed zoning ordinance text amendments.

NEW BUSINESS:

ITEM # 1 Case 23-020- Van Buren Charter Township Accessory Gasoline Filling Station

TITLE: The applicant, Van Buren Charter Township, seeks preliminary and final site plan

approval to construct an accessory filling station to their existing water tower site on Tyler Road. The site is located at the southeast corner of Tyler and Quirk Road and is a 41.58-acre parcel. The proposal also includes adding an accessory above ground fuel tank, pump station, improvements to the traffic circulation and parking, as well as lighting and landscaping. The site is zoned M-1 — Light

Industrial District.

LOCATION: 46805 Tyler Road (Tax Parcel ID Number 83 062 99 0001 701). This site is located

on the south side of Tyler Road, between Quirk Road and Beck Road.

ACTION ITEMS: A. Presentation from Township Staff

- B. Presentation from the applicant
- C. Planning Commission discussion
- D. Public comment

E. Planning Commission considers approval of the Preliminary and Final Site

Plan

ITEM # 2 Case 23-025 – French Landing Park Boardwalk / Dock Improvements

TITLE: Applicant Van Buren Charter Township seeks site plan approval to remove an

existing elevated boardwalk and dock structure and replace it with a new boardwalk and dock structure. The structure will be approximately 202 feet in length, will extend approximately 23.5 feet from the shore, and will have a total combined area of approximately 2,691 square feet. The proposed improvements require site plan review by the Van Buren Township Planning Commission per

Section 3.120(C)(2)(b)(i) of the Van Buren Township Zoning Ordinance.

LOCATION: 12090-12100 Haggerty Road (Tax Parcel ID Numbers 83 094 01 0216 000 and 83

095 01 0221 300). This site is located on the west side of Haggerty Road, between

Alden Road and South I-94 Service Drive.

ACTION ITEMS: A. Presentation from Township Staff

- B. Presentation from the applicant
- C. Planning Commission discussion
- D. Public comment
- E. Planning Commission considers approval of the Preliminary and Final Site

Plan

GENERAL DISCUSSION AND UPDATES

ADJOURNMENT:

CHARTER TOWNSHIP OF VAN BUREN PLANNING COMMISSION April 26, 2023 MINUTES - DRAFT

Chairperson Cullin called the meeting to order at 5:30 p.m.

ROLL CALL:

Present: Pahle, Atchinson, Grant, Budd, Jahr and Cullin.

Excused: None.

Staff: Director Power and Secretary Harman.

Planning Representatives: Vidya Krishnan, McKenna Associates and Mike Leppek, Fishbeck

Associates.

Applicant(s) in Attendance: Case 017 – Phantom Fireworks: Richard Tapper. Case 22-060 – W & W Real Property, Inc.: Dylan Stefanko and Jason Krieger of Krieger Klatt Architects, Michael Gold of Stonefield Engineering, Inc., Dan Newman, Dylan Schickel and William Newman (remote) of TYC Americas, Inc.

Audience: Nine (9) and one (1) remote.

APPROVAL OF AGENDA:

Motion Jahr, Budd second to approve the agenda of April 26, 2023 as presented. Motion Carried.

APPROVAL OF MINUTES:

Motion Budd, Grant second to approve the regular meeting minutes of April 12, 2023 as presented. **Motion Carried.**

NEW BUSINESS:

ITEM #1: 23-017 – PHANTOM FIREWORKS (MENARDS SITE) – TEMPORARY LAND USE.

TITLE: THE APPLICANT, PHANTOM FIREWORKS, IS REQUESTING A TEMPORARY LAND USE PERMIT TO CONDUCT A TEMPORARY OUTDOOR FIREWORKS TENT SALE.

10010 BELLEVILLE ROAD. THIS SITE IS LOCATED IN THE MENARDS PARKING LOT, WHICH IS ON THE WEST SIDE OF BELLEVILLE ROAD, SOUTH OF TYLER ROAD.

Director Power gave a brief presentation. Phantom Fireworks is requesting a temporary land use permit for an outdoor fireworks tent sale located in the Menards parking lot from 6-22-23 through 7-4-23. Per the zoning ordinance, temporary uses that operate for more than seven (7) consecutive days require Planning Commission approval. Director Power presented his staff review letter date 4-20-23. This will be the 5th year that Phantom Fireworks has operated at this location and staff is not aware of any complaints or issues that have taken place at this location or Phantom Fireworks' other location in the Township (Lakewood Shopping Center) in previous years. Director Power recommends approval of this application subject to one condition:

• The applicant should clarify what the proposed 32' and 27' setbacks indicate and shall ensure the tent will not block any required parking lot driving aisle.

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Richard Tapper of Phantom Fireworks gave a brief presentation. This is Phantom Fireworks 5th year of operation at the Menards site and there have been no problems the previous 4 years. Mr. Tapper clarified, the 27 feet shown on the plan is the distance between the tent and the storage unit and the storage unit is located out of the way of the driving aisle.

Commissioners had the following questions and comments:

- Commissioner asked for clarification of the Township staff letter stating during nonoperational hours all products will be returned to the fire proof storage unit, there is nothing to say that the unit is fire proof. Richard Tapper informed this is his 13th season overall in Michigan and he has not had any problems with the storage units.
- Commissioner inquired if the unit is required to be fire proof? Director Power informed no it is not required and he will make a correction to the language in the letter moving forward.
- Commissioner asked if there was limit to how much can be stored in the unit. Richard
 Tapper informed no and the fireworks cannot be left unattended or he could face a
 \$10,000 fine.
- Commissioner commented that in previous applications, the distinction to the storage container itself is that you can't hold a match to it and light a fire. Vidya Krishnan also commented that the intent isn't to require the storage unit to be fire proof.
- Commissioner inquired if there are any other tent sales or food trucks to run during the same time frame and at the location. Director Power informed no. Richard Tapper informed he can only sell fireworks at his tent.

No comments from the audience or remote viewers.

Motion Jahr, Grant second to grant the applicant, Phantom Fireworks, a temporary land use permit to conduct a temporary outdoor fireworks tent sale from 6-22-23 through 7-4-23, located at 10010 Belleville Road in the Menards parking lot based on the analysis and subject to the conditions in Director Power's staff review letter dated 4-20-23.

Roll Call:

Yeas: Budd, Grant, Atchinson, Pahle, Jahr and Cullin.

Nays: None. Excused: None.

Motion Carried. (Letter Attached)

ITEM #2: 22-060 – W & W REAL PROPERTY, INC. – 44168 VAN BORN ROAD.

TITLE: APPLICANT, S. E. GRAHAM ASSOCIATES, INC. ON BEHALF OF OWNER WILLIAM NEWMAN; W & W REAL PROPERTY, INC., HAS APPLIED SEEKING APPROVAL OF

A PROPOSED MULTI-PHASE DEVELOPMENT WITH A BUILDING INCLUSIVE OF A ROUGHLY 15,766 SQUARE FOOT ENGINEERING R&D OFFICE AREA AND ROUGHLY 40,157 SQUARE FOOT MANUFACTURING AREA IN THE FIRST PHASE OF CONSTRUCTION ALONG WITH ASSOCIATED PARKING AND UNDERGROUND

UTILITY/STORMWATER INFRASTRUCTURE AND A FUTURE EXPANSION INCLUDING A ROUGHLY 78,845 SQUARE FOOT MANUFACTURING BUILDING.

PARCEL NUMBER V-125-83-009-99-0005-000; ADDRESS: 44168 VAN BORN ROAD. THE PROPOSED DEVELOPMENT IS LOCATED ON THE NORTH SIDE OF VAN BORN ROAD, JUST EAST OF SHELDON ROAD. THE SITE IS ZONE M-2, GENERAL INDUSTRIAL DISTRICT.

Director Power gave a brief presentation. The applicant, S. E. Graham Associates, Inc. on behalf of the prospective owner William Newman, W & W Real Property, Inc. has applied seeking approval of a multi-phase development (TYC Americas, Inc.) that will have a mix of research and development and manufacturing of small auto parts. Director Power deferred to Principal Planner Vidya Krishnan for presentation of her review.

Vidya Krishnan of McKenna Associates presented her review letter dated 4-19-23. Many of the required site plan items have been addressed; however, some issues remain that need to be addressed or corrected. Any items that are either missing or require additional information can be included for the final site plan review. McKenna Associates recommends the Planning Commission grant preliminary site plan approval for TYC Americas to locate its new automotive parts office, design, engineering, research and manufacturing facility at 44168 Van Born Road, subject to the following conditions:

- 1. Planning Commission determination on a performance guarantee for the proposed phasing plan involving 3 distinct phases of site construction.
- 2. Corrections to the notations on the traffic impact study (TIS) and Wayne County approval of the proposed improvements to Van Born Road.
- 3. Wayne County review of the need for any improvements at the intersection of Van Born and Sheldon Roads.
- 4. Clarification regarding the number of employees.
- 5. Installation of all landscaping as part of Phase 1, with the exception of parking lot area landscaping for Phases 2 and 3.
- 6. Maintaining the footprint area of future phases as seeded lawn.
- 7. Planning Commission approval of light pole height.
- 8. Adjustment to maximum illumination standards for the parking lot and entrance areas, or obtaining a variance for the same.
- 9. Detailed elevations of east façade of the building upon completion of Phases 1 and 2 and floor plan for the entire building.
- 10. Approval of building material and color samples by the Planning Commission.
- 11. Approval of the proposed spike-design on the fence by the Planning Commission.
- 12. Approval of the proposed stormwater detention system by the Township Engineer and Wayne County and approval of detention basin plantings by the County.

Mike Leppek of Fishbeck Associates presented his review letter dated 4-20-23. Fishbeck Associates recommends the Planning Commission grant TYC Americas Michigan Mobility Center preliminary site plan approval for engineering feasibility, subject to the comments listed in the review letter and in accordance with the Township's Engineering Standards manual. The

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Township will request to see Wayne County review comments regarding the stormwater design and the proposed retention pond.

Director Power provided an overall procedural statement in regard to the traffic impact study. The project will not significantly increase the existing issue, however there is an existing issue that appears to be at Belleville and Van Born Road. It is not anticipated that the project layout within the boundaries of the site will change based upon the conditions of the traffic study. There will need to be a final traffic impact study, with the scope and content to be reviewed and approved by Wayne County prior to final approval. Staff will continue to work closely with the County and applicant to see what needs to be done to address the existing issues. There is a possibility of improvements that may be required, staff will be looking at this more closely during the final engineering review.

Director Power presented the Fire Department review letter dated 4-5-23. The Fire Marshal has no issue with the plan proceeding through the preliminary stage.

Dylan Schickel of TYC Americas, Inc. gave the presentation, displaying a PowerPoint presentation with color renderings of the site. TYC Americas, Inc. is a designer and manufacturer of auto parts with 2,800 employees globally, they are proposing to add a Michigan Mobility Center, it will be the first center outside of Asia. This is a long-term investment for TYC Americas, Inc. The focus will be on the design and manufacturing of vehicle lighting products. Products will be available to OEM Tier I and Tier II suppliers. The project will provide high tech jobs in the community.

Michael Gold of Stonefield Engineering, Inc. displayed the overall site plan rendering. The development is approximately 138,000 square feet total, with each phase of building proposed separately. The applicant is providing extensive landscaping, all part of Phase 1 along with curb cuts. The applicant will provide and work with Township staff on compliant lighting and stormwater plans. The total site development will create the 134 trips, Phase 1 will create less than 100 trips. The applicant will update the traffic impact study accordingly, resubmit it and work with Township staff and Wayne County.

Jason Krieger and Dylan Stefanko of Kreiger Klatt Architects displayed an exterior façade materials board. The exterior façade materials will wrap the entire building of each phase. The building has a blue roof and blue stripe that wraps the building, the rooftop mechanical units will be screened by the roof, the exterior façade material are CMU block and prefinished metal siding with clear anodized windows. The color renderings displayed the front office and EV charging stations. Mr. Stefanko displayed a rendering of Phase 1 to show the completed eastern wall to confirm that each phase will be completely finished and when they ready to construct the next phase, the eastern wall will be punched out.

Commissioners had the following questions and comments:

 Commissioner inquired on the manufacturing side of the building, what are the proposed mechanical systems. The applicant informed the mechanicals will be rooftop, forced air units and the company has strict environmental control standards.

- Commissioner inquired if there is a screening requirement for the mechanicals? Due to the large space available, the applicant would strategically locate them and is willing to look into screening. Vidya Krishnan informed that if the applicant is willing to put them towards the back, they will be out of the line of sight.
- Commissioner inquired if the screening needs to be on the final plan? The applicant will add it to the plan if necessary. Vidya Krishan confirmed a detail can be added for mechanical screening.
- Commissioner commented he didn't see the detail of the sidewalks going along Sheldon and Van Born Roads on the plan. Vidya Krishnan, pointed out where the detail of the sidewalks is on the plan.
- Commissioner inquired if the spiked detail on the fence is to be provided? Vidya Krishnan
 informed that it is included on the site plan and the spike fencing will have bent tops.
 Commissioner inquired if the bent tops were acceptable. Vidya Krishnan confirmed, yes.
- Commissioner didn't understand the comments on the retention pond on the north, is it not allowed? Michael Gold informed the infiltration was zero, therefore they have to provide a detention pond to release stormwater from the site. Mr. Gold doesn't believe that it will affect the site plan that much, just shrinks the footprint slightly.
- Commissioner asked the applicant to explain the EV charging station usage more. The EV
 charging stations are for employees while at work and there is no intention for outside
 use. The applicant is open to recommendations from the Township.
- Commissioner inquired about lighting and photometrics and the light poles being at 30 feet, not 25 feet. The applicant will take a look at the illumination levels to meet the Township standards. Commissioner inquired if that is with the poles at 30 feet or 25 feet. The applicant is adjusting the illumination and keeping the poles at 30 feet. Vidya Krishnan informed typically 25 feet is enforced when abutting residential properties, this site is located in an industrial district, there will be fewer poles and the illumination levels are being reduced.
- Commissioner commented on the plans saying Belleville. The applicant does know its Van Buren Township and will correct them.
- Commissioner inquired about the applicants plans for future EV parking spaces. The applicant has spaces proposed in Phase 1, they will gather data to see what the usage is by the employees of Phase 1 and come back with changes for the future phases.
- Commissioner inquired if the applicant has any thoughts on how long the employee can
 park in the EV spaces? Only while working. Commissioner inquired if the applicant is
 charging or if it is free? The applicant will work with employee benefits to coordinate, if
 they can affordably offer to provide it at no cost to the employee, they will do so. Vidya
 Krishnan commented that she heard of another place that after so many hours the
 machine shuts off and sends a message to move the vehicle.
- Commissioner inquired if there have been other facilities with a traffic study already rating F and what the County might do? The applicant informed it would be hard to say, they will update the traffic study and resubmit it to the Township Engineer and Wayne County. Phase 1 will have no adverse effect.
- Commissioner inquired if the EV vendor Charge Point is a managed service provider? The applicant is unsure.

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> Commissioner inquired if there is any problem with the suggestion of a performance bond? The applicant doesn't see any problem with a performance bond. Commissioner inquired if Director Power could come up with a proper performance bond. Director Power confirmed, yes.

No comments from the audience or remote viewers.

Motion Jahr, Grant second to grant the applicant S. E. Graham Associates, Inc. on behalf of prospective owner William Newman; W & W Real Property, Inc., preliminary site plan approval to construct a roughly 15,766 square foot engineering R&D office area and roughly 40,157 square foot manufacturing area in the first phase of construction along with associated parking and underground utility/stormwater infrastructure and a future expansion including a roughly 78,845 square foot manufacturing building, site located at parcel #V-125-83-009-99-0005-000, address of 44168 Van Born Road, based on the analysis and subject to the conditions in Director Power's staff review letter dated 4-20-23, McKenna Associates review letter dated 4-19-23, Fishbeck Associates review letter dated 4-20-23 and Fire Department review letter dated 4-5-23, with the additional condition a performance bond is required, the Planning Commission approves the 30 foot light poles and the design of the bent top spiked detail on the fence.

Roll Call:

Yeas: Atchinson, Pahle, Jahr, Grant, Budd and Cullin.

Nays: None. Excused: None.

Motion Carried. (Letters Attached)

GENERAL DISCUSSION:

Director Power informed that the next meeting is scheduled for May 10, 2023. Additionally, the Agricultural Tourism and Electric Vehicle (EV) sub-committees have met and have future meetings scheduled.

ADJOURNMENT:

Motion Budd, Atchinson second to adjourn the meeting at 6:55 p.m. Motion Carried.

Respectfully submitted,

Christina Harman Recording Secretary



MEMO

TO: Van Buren Township Planning Commission

FROM: Dan Power– Director of Planning and Economic Development

RE: Residential Height Interpretation / Appeal Request

DATE: May 3, 2023

Planning Commission Members:

The Planning Commission is requested to consider reviewing a potential Zoning Ordinance text amendment to clarify section 3.106(D) of the Van Buren Township Zoning Ordinance, R-1A, R-2A, R-1B, and R-1C, Single-Family Residential Districts – Dimensional Regulations. Under Section 3.106(D), the maximum building height in feet is 30, and the maximum building height in stories is 2. A request for review of this ordinance was referred to the Planning Commission by the Board of Zoning Appeals (BZA) at their regular meeting on March 14th, 2023. This direction is the basis of the request before the Planning Commission in this packet. This discussion was first held at the regular Planning Commission meeting of March 22nd, 2023, was continued in the meeting on April 12th, 2023. Following the April 12th meeting, the Township's Planning Consultants Vidya Krishnan and Gage Belko of McKenna provided analysis of this issue including findings from comparison communities. Their letter, dated May 1st, 2023, is attached to this packet. This packet also includes excerpts from the April 12th, 2023 Planning Commission meeting minutes.

The Planning Commission may advise staff to return with further information for their consideration before moving forward with a potential Zoning Ordinance text amendment, or may move forward with posting a public hearing notice for public review of the draft Zoning Ordinance text amendment.

Thank you for allowing me to comment on this request.

Sincerely,

Dan Power, AICP

Planning and Economic Development Director

Public Services Department

Charter Township of Van Buren

MCKENNA



Memorandum

TO: Planning Commission

FROM: Vidya Krishnan, Senior Principal Planner

Gage Belko, Associate Planner

SUBJECT: Single-Family Detached Building Height Standards

DATE: May 1, 2023

SUMMARY

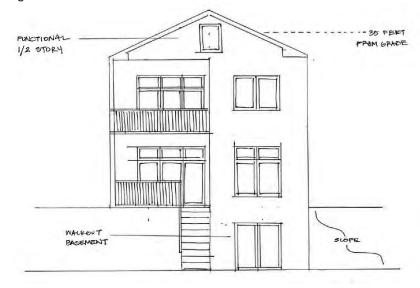
Amendment to Section 3.106 R-1A, R-2A, R-1B, and R-1C, Single Family Residential Districts

- Amendment to Section 5.107 RM, Multiple Dwelling Residential District
- Amendment to Section 3.109 AG, Agricultural and Estate District
- Amendment to Section 4.102 Schedule of Regulations

Text derived from the Van Buren Township Zoning Ordinance is shown in black. Additions are shown in red, and omissions are shown in red, strikethrough italics.

PRECEDENT IMAGE

The following is a sketch of a 2.5-story home with a walkout basement. Basements are not considered a story provided at least one half of its floor-ceiling height is below the average finished grade. We have provided images of some 2.5 story dwellings as an addendum.





PROPOSED CHANGES

Section 3.106 R-1A, R-2A, R-1B, and R-1C, Single Family Residential Districts

(D) Dimension Regulations

Lot Standards	R-1A	R-2A	R-1B	R-1C
Max. Building Height (ft.)	30 35	30 35	30 35	30 35
Max. Building Height (stories)	2 2.5	2 2.5	2 2.5	2 2.5

Section 3.107 RM, Multiple Dwelling Residential District

(E) Dimension Regulations

Lot and Dimensional Standards	Single-Family Detached in RM District		
Max. Building Height (ft.)	30 35		
Max. Building Height (stories)	2 2.5		

Section 3.109 AG, Agricultural and Estate District

(E) Dimension Regulations

Lot Standards	
Max. Building Height (ft.)	30 35
Max. Building Height (stories)	2 2.5

Section 4.102 Schedule of Regulations

Table 2. Schedule of Regulations

	Maximum Build	ding Height
Zoning District	Feet	Stories
AG, Agricultural and Estates	30 35	2 2.5
R-1A, Single-Family Residential	30 35	2 2.5
R-1A, Single-Family Residential	30 35	2 2.5
R-1A, Single-Family Residential	30 35	2 2.5
R-1A, Single-Family Residential	30 35	2 2.5
RM Detached Single-Family	30 35	2 2.5 (Y)
Residential, Edge Dwelling	30 33	₹ 2.5 (1)
RM Detached Single-Family	30 35	2 2.5 (Y),
Residential, Interior Dwelling	30 33	(Z), (AA)

Should you have any questions, please do not hesitate to contact us. We will be present at the Planning Commission meeting to discuss the ordinance.

Attachment: 2.5 story dwelling images



Examples of 2.5 story tall single family dwellings with elevations





Source: America's Best House Plans





Source: America's Best House Plans

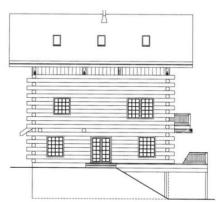




Source: America's Best House Plans

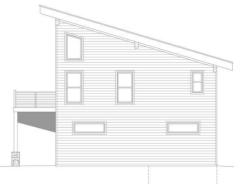






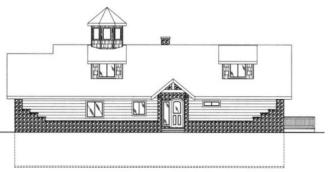
Source: America's Best House Plans





Source: America's Best House Plans





Source: America's Best House Plans







Source: Buy Home Designs



Source: The House Plan Company

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go back to their original plan. The fire suppression design has been reviewed by the Fire Department, there are only minor amendments to the original plan. All stormwater detention is already installed. Director Power advised Camping World representatives they did not need to be present to present their changes.

Vidya Krishnan of McKenna Associates presented her review letter dated 4-5-23. The applicant has been through the planning process numerous times and the site plan submitted at this time is compliant with all of the ordinance requirements. Therefore, McKenna Associates recommends the Planning Commission grant preliminary and final site plan approval for Camping World located at 43646 N. I-94 Service Drive, subject to the following conditions:

- 1. Approval of stormwater detention system by Township Engineer and Wayne County.
- 2. Compliance with light fixture locations, design, pole height and style with the originally approved plan for the site.
- 3. Approval of all wall signage by the Township prior to installation.

Paul Kammer of Fishbeck Associates presented his review letter dated 4-6-23. Fishbeck Associates recommend the Planning Commission grant the Camping World project engineering and final site plan approval for their updated site plans dated 3/15/23, subject to the comments listed above and in accordance with the Township's Engineering Standards manual. The applicant will be required to address the comments in an updated issued for construction set prior to moving forward with construction.

Director Power presented the Fire Departments review letter dated 2-21-23. All listed concerns have been addressed in the latest submittal.

No comments from the Commission, audience or remote viewers.

Motion Jahr, Budd second to grant the applicant, Camping World, preliminary and final site plan approval to demolish the east wing of their existing building and creat new R.V. parking and storage on the site, located at 43646 N. I-94 Service drive, based on the analysis and subject to the conditions in the McKenna Associates review letter dated 4-5-23, Fishbeck Associates review letter dated 4-6-23, Fire Department review letter dated 2-21-23 and Director Power's staff letter dated 4-6-23.

Roll Call:

Yeas: Atchinson, Grant, Budd, Pahle, Jahr and Cullin.

Nays: None. Excused: None.

Motion Carried. (Letters Attached)

ITEM #3: DISCUSSION – RESIDENTIAL ZONING ORDINANCE TEXT AMENDMENT

INFO: THE PLANNING COMMISSION WILL BE REQUESTED TO BEGIN CONSIDERATION

OF A ZONING ORDINANCE TEXT AMENDMENT TO ALLOW BUILDING HEIGHT TO

BE LIMITED TO THE MORE RESTRICTIVE OF THE FOLLOWING STANDARDS UNDER SECTION 3.106(D) OF THE VAN BUREN TOWNSHIP ZONING ORDINANCE:

- 30 FEET IN HEIGHT
- 2.5 STORIES, AS AMENDED FROM THE CURRENT LIMIT OF 2 STORIES.

Director Power gave the presentation. The process of reviewing the zoning ordinance was initiated after a request was received for a home to be built with 2.5 stories. The case that prompted the review received at variance from the BZA at their 4-11-23 meeting. The chairman of the BZA has asked the Planning Commission to consider a 2.5 story, to apply to additions and new homes and consider raising the overall height up to 35 feet. At the last Planning Commission meeting, the Commission asked Vidya Krishnan of McKenna Associates to provide feedback. Director Power deferred to Vidya Krishnan for her presentation and displayed images of existing non-conforming 2.5 story homes in Van Buren Township.

Vidya Krishnan of McKenna Associates informed that based on the ordinance right now, you cannot convert an attic into living space. Mrs. Krishnan displayed comparisons from Northville, Plymouth, Pittsfield, Ypsilanti and Superior Township and presented an analysis of the comparable communities. Mrs. Krishan is looking for feedback from the Planning Commission, based on the Commissions thoughts, she will draft up an ordinance.

Commissioners had the following questions and comments:

- Commissioner really likes that we are looking at other communities to see what they are doing.
- Commissioner inquired how the BZA came up with 35 feet for the overall height. The BZA was provided a copy of the McKenna letter.
- Commissioner inquired how do we currently figure the height? Director Power informed we measure from the average grade at the front of the house to the halfway point between the eave and the peak of the roof. Vidya Krishnan informed that we do have a definition for walkout basements. Commissioner inquired if the height was still measured from the front of the house on walkouts? Vidya Krishnan informed yes and other ordinances say if you build a walkout on the lakeside, it can be 10 feet taller.
- Commissioner inquired if the comparison communities are calculating height the same way? Vidya Krishnan informed yes, typically.
- Commission asked Mrs. Krishnan if she was able to find any other communities that came from a 2 story to higher? Mrs. Krishan commented no, she wasn't able to find any.
- Commissioner commented that maybe you only want to build to 30 feet, can you still do
 that with a 35-foot maximum. Vidya Krishnan informed that you can build anything less
 than the maximum.
- Commissioner commented that there are some developments that you cannot put a really tall home next to a 1 story. Vidya Krishnan informed that those challenges come more in very old historical neighborhoods. Commissioner commented that the ordinance already has safeguards.
- Commissioner agreed to look at a height of 35 feet and 2.5 stories. Vidya Krishnan will get more pictures of 2.5 story homes and homes at 35 feet.

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• Director Power asked if the Commission is interested in looking at Agricultural and Estates zoning as well. Vidya Krishnan informed that she thinks the Planning Commission is looking at single family homes in general. The Commission would like to see draft language.

No comments from the audience or remote viewers.

GENERAL DISCUSSION:

Commissioner inquired if the Meijer sign package was administratively approved? Director Power confirmed, yes.

Commissioners discussed beginning ordinance review discussions starting with commercial zoning, revisiting temporary land use and going back to look at the BROD to figure out a plan moving forward. Vidya Krishnan suggested visiting the section of the ordinance that allows a special land use as a temporary land use. Commissioners agreed, when looking at the BROD there are a lot of aesthetic requirements, want to make sure that the overlay district is providing all that we want. Director Power commented that the special land use and temporary land use distinction is very important.

Director Power also informed that he agrees with all the positive comments from the Planning Consultant.

ADJOURNMENT:

Motion Jahr, Atchinson second to adjourn the meeting at 8:52 p.m. Motion Carried.

Respectfully submitted,

Christina Harman Recording Secretary



DEPARTMENT OF PLANNING & ECONOMIC DEVELOPMENT

46425 TYLER ROAD, VAN BUREN TOWNSHIP, MI 48111 PHONE (734) 699-8913 FAX (734) 699-8958

PLANNING & ZONING APPLICATION

DATE SUBMITTED:

CASE INFORMATION

ADDITION INTERPRETARION

23-020

CASE NUMBER:

ALLFICAIAI HALOMAINOIA			
NAME: Van Buren Township	PHONE: 734 - 699 - 8913		
ADDRESS: 46425 Tyler RD.	CELL PHONE:		
CITY, STATE & ZIP BURY TUP, MI 481	FAX:		
EMAIL: rakerse vanburen - mi. or			
ROPERTY OWNER INFORMATION (If different than the			
NAME:	PHONE:		
ADDRESS:	CELL PHONE:		
CITY, STATE & ZIP	FAX:		
EMAIL:			
BILLING CONTACT	A572103		
NAME: Ron AKES	PHONE: 734 - 699 - 8913		
ADDRESS: 4642S Tyler Rd.	CELL PHONE:		
CITY, STATE & ZIP Buren Tup, ME 48111	FAX:		
EMAIL: Pakers@venburen-Mi. Or			
ITE/PROJECT INFORMATION			
NAME OF PROJECT:	loc ITOO		
VBT Fuel Tank Re PARCEL ID NO: V125-83- 062-99-0001-702	PROJECT ADDRESS: 46805 Tyler RO.		
*APPLICANT MUST ATTACH LEGAL DESCRIPTION OF PROPERTY			
PROPERTY LOCATION: On the South Side of Tyles	Road; Between Beck Road and Owick Road.		
SIZE OF LOT WIDTH: SIZE OF LOT DEPTH:	ACREAGE OF SITE: TOTAL ACRES OF SITE TO REVIEW:		
CURRENT ZONING: IS A REZONING OF THIS PARCE	EL BEING REQUESTED & Y / N REQUESTED ZONING:		
PROJECT DESCRIPTION: Installation of a f	reling Station on the Townswips programments to the orderly, curb cut,		
land scoping, and electrical in more	to the order of our city,		

DOES THE PROPOSED USE REQUIRE SPECIAL APPROVAL? Y / N	
IF YES, SECTION OF ZONING ORDINANCE FOR WHICH YOU ARE AF	PLYING FOR SPECIAL APPROVAL:
IS THERE AN OFFICIAL WOODLAND WITHIN THE PARCEL? Y / N	IF YES, WOODLAND ACREAGE:
TOTAL NUMBER OF REGULATED TREES OUTSIDE THE WOODLAND AREA:	TOTAL NUMBER OF TREES:
tree protection provisions.	ercres are exapt From woodland
IF APPLICABLE, APPLICATION MUST BE ACCOMPANIED WITH A TREE S REQUIREMENTS LISTED IN SECTION 4.45 OF THE TOWNSHIP'S ZONII	SURVEY OR STATEMENT OF NO TREES, WHICH INCORPORATES ALL THE NG ORDINANCE 6-2-92, AS AMENDED.
OWNER'S AFFIDAVIT	
Romald A. Akas	
RINT PROPERTY OWNER'S NAME	
Honny Ce. Com	4/17/2023
SIGNATURE OF PROPERTY OWNER	DATE
STATE OF MICHIGAN COUNTY OF WAYNE	
The undersigned, being duly sworn, deposes and says that the foregoing st date are in all respects true and correct.	atements and answers herein contained and accompanied information and
Subscribed and sworn before me this day of	20 .

_County, Michigan

My Commission expires_____, 20_

Notary Public,



Kevin McNamara | Supervisor · Sharry A. Budd | Treasurer · Leon Wright | Clerk

Bryon Kelley | Trustee · Kevin Martin | Trustee · Sherry Frazier | Trustee · Donald Boynton Jr. | Trustee

File No.: 20-020

Review: Site Plan Review #2
Plans Dated: April 24, 2023
Review Date: May 4, 2023

Van Buren Township proposes to construct an accessory filling station to their existing water tower site on Tyler Road. The site is located at the southeast corner of Tyler and Quirk Road and is a 41.58 acre parcel. The proposal also includes adding an accessory above ground fuel tank, pump station, improvements to the traffic circulation and parking, as well as lighting and landscaping.

Comments. We have reviewed the site plan based on Zoning Ordinance standards and planning & design principles. The Township comments are as follows:

1. Zoning and Use. The site is zoned M-1 Light Industrial District. The site is currently used by the Township for our water tower which also has some storage space within it. The proposed plans look to add a filling station on the property which will be used to fuel Township Police, Fire, Public Works, and Community Services vehicles. The existing fuel station at the Township hall property will be removed as a part of the project. The main reason behind the removal is the Community Center project and the building addition which limits the vehicle circulation on the site. We are proposing to move the fuel tank to the water tower property to allow for Township vehicles to safely navigate and access the property. Per the Township's Zoning Ordinance "public utility buildings" are a permitted use in the M-1 zoning district and "accessory structures and uses incidental to permitted uses" are also listed as a permitted use in the M-1 zoning district. Due to this the fueling station is considered an accessory use to the water tower and allowable as a permitted use in the M-1 district.

The submitted site plan contains a use statement as well as information about the properties zoning.

- **2. Required Information**. Section 12.203 of the Zoning Ordinance includes requirements for information on a site plan. The following items must be included on the site plan:
 - a. Height of the water tower.
 - **b.** A note needs to be added to "Pick up debris within property limits weekly or as needed."
 - c. A note specifying, "Paved surfaces, walkways, signs, lighting and other structures and surfaces shall be maintained in a safe, attractive condition as originally designed and constructed. Parking lot striping and markings shall be maintained in a clearly visible condition."
- **3.** Lot. The site plan includes a legal description of the parcel and the tax ID number.
- **4. Dimension Requirements.** The M-1 district requires a minimum front yard setback of 50 feet, a minimum side yard setback of 40 feet, and a minimum rear yard setback of 40 feet. The fuel tank and proposed screening are within the setback requirements of the zoning ordinance.
- 5. Access and Circulation.
 - **a.** Location of Curb Cuts. As a part of the scope of work the plan is to remove and replace the existing curb cut with a larger access drive to accommodate the traffic from the fire trucks and other larger vehicles.

The existing curb cut is approximately 16' wide and the new curb cut will be 25' wide which is in compliance with Fire Code requirements and the standards of the zoning ordinance with regards to non-residential access drives.

- b. Driveway. The driveway will be widened to be 24' wide and the width will increase further to 30' where the driveway loops around to the fuel pump location. Traffic will be able to circulate through the site and loop around back to the main driveway due to the circular drive. There will be enough distance between the vehicles fueling and those that may need to pass around them. The engineer has provided a turning radius diagram which depicts that there will be no issues with regards to turning trucks on site.
- c. Sidewalks. The addition of the fueling station on the Township property is accessory to the primary utility use and the improved area is far removed from other sidewalk connections near Tyler and Quirk Roads. There is a conceptual plan which evaluates the location of a future Water & Sewer building on the site and the Township and is in the process of looking at the portion of the property on Tyler Road for the potential for a park use. At this time the Township is requesting a deferment of the installation of a sidewalk along the public rights of way until a time where the property is developed for the intended future use. At that time, we will look at the sidewalk installation.

6. Parking and Loading.

- **a. Space Dimensions.** The parking spaces are dimensioned on the site plan and are compliant with the dimensional standards of 9.5′ x 20′. The parking areas also show them double striped with 4″ wide yellow lines.
- b. Number of Parking Spaces. The current use of the building is a water tower and there is no staff assigned to the building on a permanent basis. There are storage areas within the building that the Township uses for a variety of items. Township staff does regularly go to the building to provide maintenance on the Township systems and address any concerns that arise. The closest requirement in the zoning ordinance to the use of the building is for fueling stations and warehousing. The requirements are as follows:

Wholesale/Warehouse Storage Establishments (Non-Retail Warehouse): Five (5) plus one (1) per 1,750 square feet of gross floor area plus one (1) per 350 useable square feet of office, sales or similar space. There is approximately 6,800 square feet of storage area within the tower which would equate to approximately 3.89 or 4 parking spaces. Minimum parking from this measurement would be nine (9) spaces.

Gasoline Service Station and Vehicle Service: One (1) per gas pump, two (2) per service area or stall, and one (1) per employee on peak shift in addition to any other on-site uses such as retail. In no instance shall a required parking space or its maneuvering area conflict with vehicles being fueled or serviced or awaiting to be fueled or serviced. There are two (2) fuel pumps and based on this measurement two (2) spaces are required.

Based on this calculation the minimum parking requirement would be 11. Based on the use of the building the Township is proposing five (5) spaces with an additional barrier free space and space at the proposed fuel pump. Based on our maintenance requirements it is unlikely there will be more than three (3) vehicles on site at any one time. We are requesting the Planning Commission consider a modification to the minimum parking requirements based on the use of the property.

c. Barrier Free Spaces. There is one (1) proposed barrier free space which is compliant with the zoning ordinance.

- **d. Loading.** The zoning ordinance requires that for a commercial or industrial use under 1,400 square feet a 10' x 25' loading zone is required. There is one dimensioned on the site plan.
- **7.** Landscaping and Screening. We have submitted a landscaping plan and our comments regarding these requirements are as follows:
 - a. Frontage Landscaping. Section 10.103(A) of the zoning ordinance requires a sites public road frontage (exclusive of driveway openings to be landscaped with 1 deciduous or evergreen tree per 40 linear fee of frontage + 1 ornamental tree per 100 linear feet of frontage + 8 shrubs per 40 linear feet of frontage. The frontage of the west half of the parcel is 516' and due to this being the location where the work is primarily focused we will be using this area for our frontage requirements. The tree requirements are as follows:

Required Deciduous or Evergreen Trees: 516' / 40' = 12.9 or 13 treesRequired Ornamental Trees: 516' / 100' = 5.16 or 5 trees

Trees Provided: 4 existing trees + 9 proposed deciduous + 5 ornamental

It should be noted that the 516' measurement on the site plan does not exclude the driveway width which is 25'. This would decrease the frontage from 516' to 491'. While this would decrease the frontage measurement the required tree calculations would be the same.

The Township will be requesting a modification from the requirement to plant shrubs along the frontage due to the limited scope of the project. The future use of the site is still under consideration and due to this we would like to request a modification to defer the planting of shrubs along the frontage until a future date. From an aesthetic standpoint we would like to be able to plant shrubs consistently across the frontage for a more uniform look rather than do half at a time. The current scope of this project is limited in nature and due to this we would look to install these plantings at a later date when we complete a larger project on the site so we can plant the entire frontage of the site at the same time and thus promote consistency in plant size and grouping.

- b. Parking Lot Landscaping. Section 10.103(B)(1) requires all parking lots to be landscaped and screened from adjoining public or private rights-of-way. The Zoning Ordinance recommends a combination of landscaping, berm, and/or screen wall to achieve this goal. The site plan proposes a five (5) foot in width landscaped area with evergreen shrubs to accomplish this goal. Based on this this requirement has been met. Regarding the interior area parking requirements, the calculations appear to meet the ordinance requirements and one (1) additional tree has been provided to comply.
- c. Loading Area Landscaping. Section 10.103(c) of the Zoning Ordinance requires screening of a loading area form the adjacent rights of way "except for necessary access." The loading area is located immediately to the west of the water tower and is setback ~320' form the road. The access to the loading area is from the access drive which sit between the parking areas north of the loading area and the loading area. Due to this the loading area meets the screening requirement.
- **d. Greenbelt Buffering.** Section 10.103(E) of the zoning ordinance requires a ten (10) foot wide buffer with one (1) tree per thirty (30) linear feet along the west property line abutting another M-1 parcel. This requirement applies only along the west property line. Of the 451' of developed area there are seven (7) existing trees and an additional eight (8) proposed to meet the ordinance requirements. Based on this the proposed plan is compliant with this requirement.
- e. Open Space Landscaping. The zoning ordinance requires one (1) tree per 3,000 square feet of open space not occupied by buildings or parking. The property is ~41 acres in size and only a small portion of

the property is under development. The remaining property with the exception of the front portion is heavily wooded and would easily meet the requirements of this section of the ordinance.

f. Other Requirements. The following are a few notes and items to be addressed.

The plant schedule lists the size of the evergreen white pine trees as a 3" caliper incorrectly. This should list the height of the evergreen tree (8' minimum). It will also need to be noted that the evergreen shrubs will be a minimum 30" in height at the time of planting.

The Township is also requesting a waiver from the Planning Commission regarding the installation of an irrigation system. The future development of the entire site is still under consideration and the Township would request that the installation of an irrigation system be deferred until that time. The Township does have a company under contract that maintains our landscaping areas and their services would extend to these areas as well.

- **8. Tree Removal Permit.** Public utilities & agencies are exempt from the requirements of Section 8.106 of the Township's zoning ordinance. That being said only two (2) trees are being removed on the site to accommodate the improvements.
- **9. Stormwater Pond.** A detention pond is not proposed with this project. In the grass area in the middle of the loop there is a catch basin which connects to a drain line which is not owned by Wayne County. Due to the limited addition of the impervious surface the drainage will be handled by small swales and the proposed catch basins.
- **10. Lighting.** Per section 8.105(F) of the zoning ordinance light fixtures placed by a government agency on public property is exempt from the standards of the Township zoning ordinance. Page E001 lists the height of the light at 25' on the Luminaire schedule and page E401 depicts the fixture as a cut off down shielded fixture. The photometric drawings will need to depict that the illumination does not exceed 0.5 footcandles at the property line for all fixtures. This revision will be recommended.
- **11. Architecture and Building Details.** There are no building improvements proposed with this project. The improvements are the improvements to the access drives and the installation of the fueling station equipment and lighting.
- **12. Dumpster.** There is no dumpster proposed on site as the water tower is not a staffed building. Any trash that is generated from maintenance operations is removed and disposed of at the dumpsters at Township hall.
- **13. Signs.** There are no signs proposed with this project. Any required fuel station warning & safety signage are considered "incidental signs" in the zoning ordinance and are exempt under section 11.106 of the Township zoning ordinance.
- 14. Fencing and Walls. Per section 10.103(J), the fuel storage tank and related incidental equipment are required to be totally enclosed or screened from view off site. The site plan depicts an 8' tall screening fence around the fuel tank to accomplish this. Section 7.205(B)(2) specifies that the height of the fence is allowable up to eight (8) feet with Planning Commission authorization. The height of the fence will need to be approved to eight (8) feet to allow for maximum screening of the fuel tank. The fence material is proposed as a fully screened fence with vinyl posts and horizontal composite boards. This was recommended as an alternative by our Planning Consultant and meets the ordinance requirements for decorative fencing. The colors will be selected to be similar to the color of the water tower.

The height of the fuel tank will be approximately ten (10) feet with the required equipment and there is an

existing evergreen planting to the west within the greenbelt buffer. The Township will request that these evergreen trees be ten (10) feet tall to accomplish the required screening. This will need to be updated on the site plan.

Within the enclosure there is a proposed chain link security fence around the fuel tank which is required for securing reasons. The proposed height of the fence is 8' and it is currently proposed as a black vinyl coated chain link to match the color of the existing securing fence around the water tower. Section 7.205(B)(2) does allow the Planning Commission to approve non-decorative fences in the side of rear yards provided that they are not directly visible from the public ROW. As this fence will be fully enclosed on three sides and visually obstructed from the water tower the Township is requesting this allowance.

Recommendation:

The Township is seeking both preliminary and final site plan review at this time. Based on the above review and the review of the Fire Marshal dated May 3, 2023 Township staff is recommending that the Planning Commission grant preliminary and final site plan approval for the Fuel Tank Relocation project, subject to the following:

- 1. The following information be added to the site plan:
 - a. Height of the water tower.
 - b. A note needs to be added to "Pick up debris within property limits weekly or as needed."
 - c. A note specifying, "Paved surfaces, walkways, signs, lighting and other structures and surfaces shall be maintained in a safe, attractive condition as originally designed and constructed. Parking lot striping and markings shall be maintained in a clearly visible condition."
- 2. The Planning Commission authorizes a deferment of the requirements to install a sidewalk along the frontage of the property until such a time that the full development of the property occurs.
- 3. The Planning Commission authorizes a deviation from the minimum parking standards to allow seven (7) approved parking spaces as opposed to the eleven (11) required under the Zoning Ordinance.
- 4. The Planning Commission authorizes a modification to defer the planting of shrubs along the Tyler Road frontage until a future date to allow the Township the ability to plant shrubs consistently across the frontage for a more uniform look when the site is fully developed at a later time.
- 5. The Landscape plan be amended to revise the size of the white pine trees from a 3" caliper tree to a ten (10) foot tall tree.
- 6. The Planning Commission authorizes a waiver from the installation of an irrigation system and acknowledges that the Township has a contractor which provides landscape maintenance for our properties which would include watering.
- 7. The photometric plan will need to be amended to show the lighting levels from both lighted areas to the property line and that the lighting shall not exceed 0.5 foot candles per the Zoning Ordinance.
- 8. The Planning Commission authorizes an eight (8) foot tall screening fence around the fuel tank to screen the tank from the road and adjacent properties.
- 9. The Planning Commission allows the 8' black vinyl coated chain link security fencing around the fuel tank.



VAN BUREN TOWNSHIP FIRE DEPARTMENT

46425 Tyler Road, Van Buren Township, MI 48111

David C. McInally II, Fire Chief: (734) 699-8900 x 8916

Andrew Lenaghan, Deputy Chief/Fire Marshal: (734) 699-8900 x 9416

May 4, 2023

Director of Building and Planning 46425 Tyler Road Van Buren Township, MI 48111

RE: Van Buren Township Fuel Tank Relocation

I have reviewed the plans submitted on May 3rd 2023. The plans were reviewed for compliance with the Van Buren Township adopted fire code (**IFC 2021**)

The plans are **Approved** with the following exceptions:

Specific Comments:

- 1. Approved Emergency Controls shall be provided IFC 2304.3.3
- 2. Dispenser operating instructions shall be conspicuously posted in an approved location and shall indicate the location of the emergency controls IFC 2021 2304.3.4
- **3**.An approved emergency procedures sign, shall be posted in a conspicuous location and shall Read:

IN CASE OF FIRE, SPILL OR RELEASE

USE EMERGENCY PUMP SHUTOFF
 REPORT THE ACCIDENT

FIRE DEPARTMENT TELEPHONE NUMBER FACILITY ADDRESS

- **4**. Approved Fire Extinguishers with a minimum rating of 2-A:20-B:C shall be provided and located not more than 75 feet from the pumps **IFC 2021 2305.5**
- 5. Warning signs shall be conspicuously posted and shall state the following: IFC 2021 2305.6
 - 1. No Smoking
 - 2. Shut off Motor
 - 3. Discharge static electricity before fueling by touching a metal surface away from the nozzle
 - 4. To prevent static charge, do not reenter your vehicle while gasoline is pumping
 - 5. If a fire starts, do not remove the nozzle-back away immediately.
 - 6. It is unlawful and dangerous to dispense gasoline into unapproved containers.
 - 7. No filling of portable containers in or on a motor vehicle. Place container on the ground before filling.

6.	It is further understood a Diesel Exhaust Fluid Tank (DEF tank) will be installed at the
	location.

If you have any questions regarding this review, please contact me at alenaghan@vanburen-mi.org

Respectfully Submitted,

Andrew Lenaghan

Deputy Fire Chief/Fire Marshal

Charter Township of Van Buren Water Tower Fuel Tank Relocation

Van Buren Water Tower Van Buren Township, Michigan

> Issued for Bids April 24, 2023 Project Number 211407

800.456.3824

Novi, Michigan

GENERAL

G101 COVER

CIVIL

GENERAL NOTES AND LEGEND

SURVEY, REMOVAL AND SESC PLAN

SITE LAYOUT PLAN

C202 TURCK TURN DIAGRAM

SITE GRADING PLAN

C302 FUEL TANK PAD DETAIL GRADING PLAN FUTURE DPW BUILDING CONCEPTUAL LAYOUT PLAN

C501 WAYNE COUNTY DETAILS

TOWNSHIP STANDARD DETAIL SHEETS

ELECTRICAL

E001 ELECTRICAL GENERAL NOTES AND LEGEND

E101 ELECTRICAL SITE PLAN

E101P ELECTRICAL SITE PLAN - PHOTOMETRICS

E401 ONE LINE DIAGRAM AND ELECTRICAL DETAILS

LANDSCAPE

L101 LANDSCAPE PLAN

FUEL TANK

CS-0 FUEL TANK COVER SHEET

SITE PLAN

MATERIALS LIST TANK INSTALLATION DETAILS

TANK LAYOUT

GASOLINE TANK EQUIPMENT DETAILS DIESEL TANK EQUIPMENT DETAILS

DIESEL DISPENSER DETAILS

DEF TANK DETAILS

FUEL TANK CONT.

GASOLINE DISPENSER DETAILS

CONCRETE AND MISCELLANEOUS SITE DETAILS

SIGNAGE DETAILS

SECURITY FENCE DETAILS

CONCRETE DETAILS

CONDUIT AND HAZARDOUS AREA LAYOUT

AST ELECTRICAL DETAILS

PROPERTY DESCRIPTION

PARCEL ID: 83 062 99 0001 701

PROPERTY ADDRESS: 46805 TYLER RD.

LEGAL DESCRIPTION: PT OF THE NW 1/4 SEC 16 T3S R 8E DESC AS BEG S88 51 06E 1028.37 FT FROM THE NW COR OF SEC 16 - - TH S88 51 06E 1028.37 FT- TH S08 41 06E 1309.8 FT- TH S05 55 02E 430.12 FT- TH N87 42 50W 1154.91 FT- TH N03 55 12W 1701.13 FT TO POB - EXC THE N 60 FT - 41.58 AC

ZONING DISTRICT: M-1 LIGHT INDUSTRIAL

PARCEL SIZE: 41.58 ACRES

USE STATEMENT: THE SITE CONTAINS THE TOWNSHIP'S WATER TOWER AND CORRESPONDING PUBLIC UTILITY. THE PROPOSAL INCLUDES ADDING AN ACCESSORY FUEL TANK. THE SITE IS ZONED M-1LIGHT INDUSTRIAL AND A PUBLIC UTILITY BUILDING IS A PERMITTED USE ON THE PROPERTY. THE FUEL PUMPS ARE AN ACCESSORY USE TO THE TOWNSHIP'S PUBLIC UTILITY.



VICINITY MAP WAYNE COUNTY, MICHIGAN

UTILITY INFORMATION

ROW PERMIT

VAN BUREN TOWNSHIP, MI 48111

PERMITS REQUIRED WAYNE COUNTY

Van Buren **Township**

0

REVISIONS

4/24/2023 BIDS 4/6/2023 PERMITS 3/29/2023 OWNER REVIEW

1/5/2023 OWNER REVIEW Drawn By Designer

Reviewer

ENGINEER

6201067425

Manager PK2 Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may

> PROJECT NO. 211407

not be accurate for any other size

SHEET NO.

G101

©Copyright 2023

PROPOSED HIGH POINT ELEVATION

PROPOSED LOW POINT ELEVATION

855.00 LP

- 1. PICK UP DEBRIS WITHIN PROPERTY LIMITS WEEKLY OR AS NEEDED.
- 2. PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES AND SURFACES SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED. PARKING LOT STRIPING AND MARKINGS SHALL BE MAINTAINED IN A CLEARLY VISIBLE CONDITION
- 3. OWNER AGREES TO SEASONAL MAINTENANCE PROGRAM AND WILL REPLACE ALL DISEASED, DEAD OR DAMAGED PLANTS, REPLENISH MULCH, CONTROL WEEDS, FERTILIZE AND PRUNE BEGINNING UPON COMPLETION OF CONSTRUCTION OF LANDSCAPING.

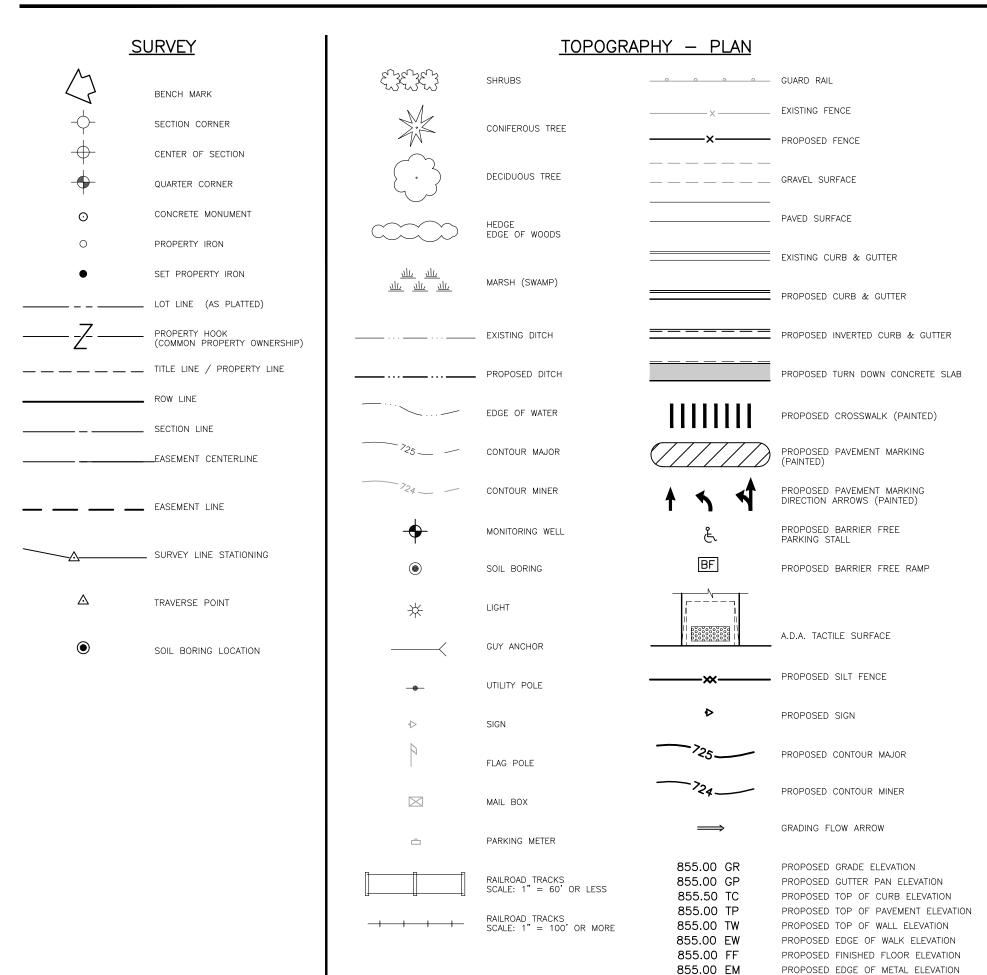
SESC NOTES

- 1. MAINTAIN A COPY OF THE SOIL EROSION AND SEDIMENTATION CONTROL PERMIT ON THE SITE FOR THE DURATION OF CONSTRUCTION, IF REQUIRED.
- 2. MAINTAIN AND REPAIR ALL SESC BEST MANAGEMENT PRACTICES BMPS DURING CONSTRUCTION UNTIL ALL VEGETATION IS ESTABLISHED, (ALL DISTURBED SOIL SURFACES ARE UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR AS DEFINED BY PERMIT.)
- PERFORM ALL EARTH-DISTURBING CONSTRUCTION ACTIVITIES WITHIN THE LIMITS OF DISTURBANCE AS INDICATED ON THE DRAWINGS.
- 4. REVIEW THE LIMITS OF DISTURBANCE SHOWN ON THE DRAWINGS AND FIELD—STAKING THE LIMIT OF DISTURBANCE LINE PRIOR TO THE START OF CONSTRUCTION AND/OR CONTRACTORS OPERATIONS AT NO ADDITIONAL COST TO OWNER.
- 5. INSTALL PERIMETER EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN PRIOR TO THE START OF ANY LAND CLEARING OR GRADING ACTIVITIES.
- 6. APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS SHOWN ON THE DRAWINGS AND/OR AS REQUIRED BY SESC PERMIT AND IMPLEMENT ADDITIONAL MEASURES AS DICTATED BY SITE CONDITIONS.
- 7. ENSURE THAT ANY SEDIMENTATION RESULTING FROM WORK ON THIS SITE IS CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON ANY OFF—SITE AREAS OR IN WATERWAYS.
- 8. LEAVE SLOPES IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- 9. LOCATE LAY DOWN, STAGING AND STOCKPILE AREAS WITHIN THE PERMITTED LIMITS OF DISTURBANCE.
- 10. INSTALL SILT FENCE AROUND THE PERIMETER OF ON—SITE SOIL STOCKPILE AREAS IF RUNOFF CAN IMPACT A STABILIZED PART OF THE SITE, OR LEAVE THE SITE. ADDITIONALLY, INACTIVE PORTIONS OF THE STOCKPILE AREAS ARE TO BE STABILIZED AS REQUIRED BY PERMIT.
- 11. IMPLEMENT TEMPORARY STABILIZATION MEASURES ON ANY DISTURBED AREAS WHERE CONSTRUCTION ACTIVITIES WILL NOT RESUME FOR 14 DAYS OR MORE. IMPLEMENTATION OF TEMPORARY STABILIZATION MEASURES MUST BE INITIATED IMMEDIATELY AND COMPLETED WITHIN SEVEN (7) DAYS FROM WHEN CONSTRUCTION ACTIVITIES TEMPORARILY CEASED ON ANY PORTION OF THE SITE. APPLY 3-5 LBS/1000 SFT. TEMPORARY SEED AND STRAW MULCH OVER DISTURBED AREA.
- 12. TOPSOIL AND SEED ALL EXPOSED AREAS WITHIN SEVEN (7) CALENDAR DAYS FOLLOWING THE CONCLUSION OF FINAL GRADING IN THAT AREA.
- 13. REGULARLY CHECK SEEDED AREAS TO SEE THAT A GOOD STAND OF VEGETATION IS "ESTABLISHED". VEGETATION WILL NOT BE CONSIDERED "ESTABLISHED" UNTIL 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED WITH PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER. FERTILIZE, WATER, RESEED AS MULCH AS NEEDED.
- 14. MINIMIZE TRACKING OF SOIL AND SEDIMENT ONTO OFF-SITE ROADWAYS THROUGH THE USE OF APPROPRIATE MEASURES. IMMEDIATELY REMOVE ANY SOIL OR SEDIMENT TRACKED ONTO THE ROADWAYS.
- 15. NO VEHICLES AND EQUIPMENT CLEANING IS ALLOWED AT LOCATIONS WHERE RUNOFF COULD FLOW DIRECTLY INTO A WATER COURSE OR DOWNSTREAM STORM SEWER.
- 16. SOIL INFORMATION:
- BnB BOYER LOAMY SAND, 0 TO 6 PERCENT SLOPES
- 17. AREA OF DISTURBANCE: 0.67 ACRES

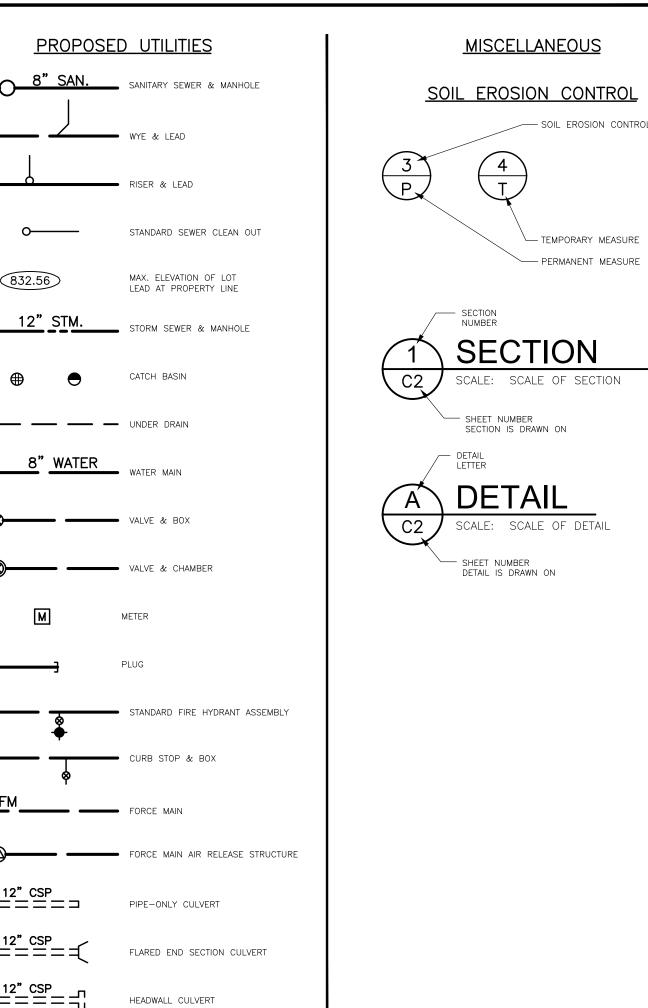
GENERAL NOTES

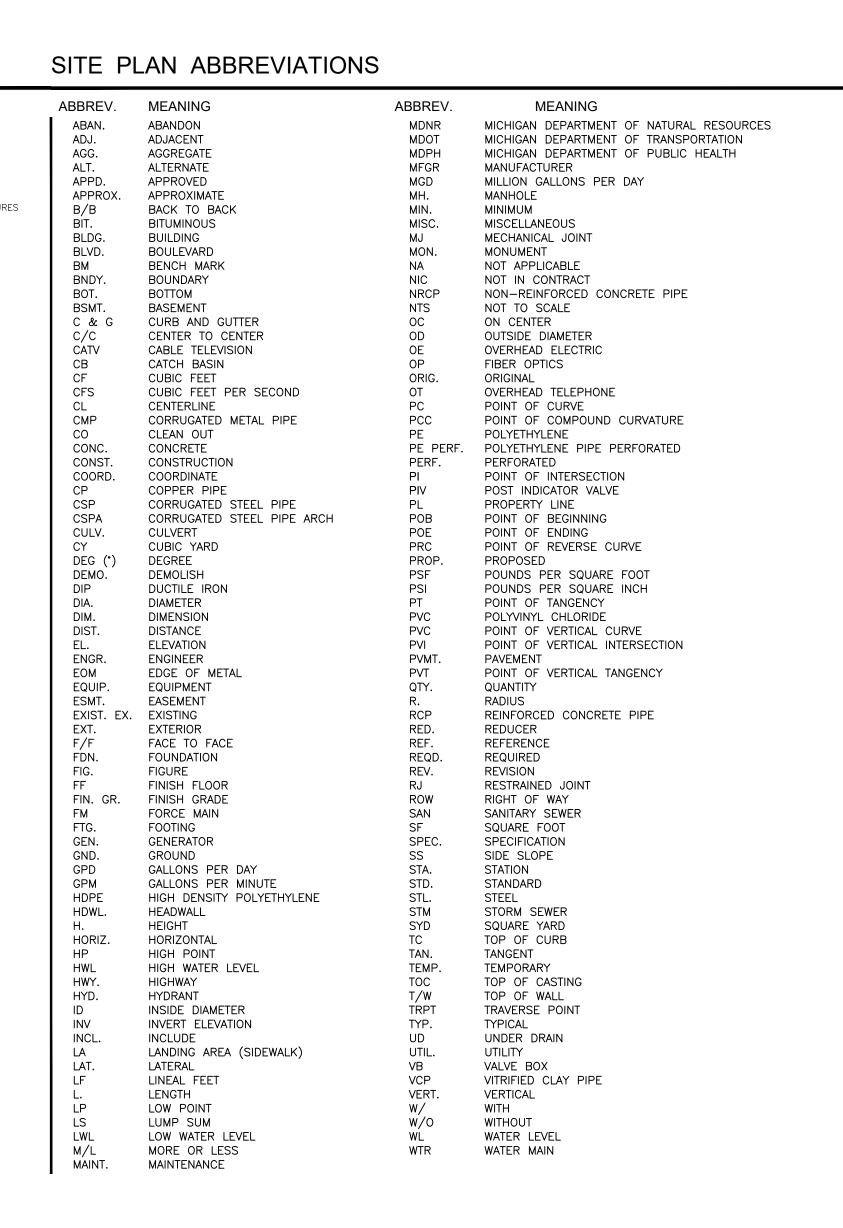
- 1. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL CODES, RULES AND REGULATIONS. OBTAIN ALL NECESSARY LOCAL, STATE AND FEDERAL PERMITS AND PAY PERMIT FEES FOR THE WORK OR CONFIRM REQUIRED PERMITS HAVE BEEN OBTAINED BY OTHERS PRIOR TO COMMENCING CONSTRUCTION.
- 2. BE RESPONSIBLE AT ALL TIMES FOR SITE SAFETY IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY AUTHORITY HAVING JURISDICTION.
- 3. CALL MISS DIG @ 1-800-482-7171 AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO CONFIRM THE LOCATIONS OF EXISTING BURIED UTILITIES. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE PART OF THE "MISS DIG" ALERT SYSTEM. COORDINATE THE RELOCATION OF EXISTING UTILITIES WITH THE UTILITY OWNER. BE RESPONSIBLE FOR PROTECTING EXISTING UTILITIES AND REPAIRING DAMAGE TO EXISTING UTILITIES RESULTING FROM THE WORK. BE RESPONSIBLE FOR THE COSTS OF REPAIRING OR REPLACING ANY DAMAGED UTILITIES AT NO EXPENSE TO THE OWNER.
- 4. PROVIDE TRAFFIC CONTROL BARRICADES, SIGNS, LIGHTS, ETC. IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AS NECESSARY FOR THE PROTECTION AND SAFETY OF THE PUBLIC MAINTAIN THESE DEVICES AT ALL TIMES DURING CONSTRUCTION.
- 5. MAINTAIN A CLEAN WORK AREA. THOROUGHLY CLEAN AND/OR SWEEP STREETS AND ROADWAYS AS REQUIRED BY THE GOVERNING AUTHORITY.
- 6. MAINTAIN ACCESS TO EXISTING DRIVEWAYS AND MAIL BOXES DURING CONSTRUCTION.
 COORDINATE WITH THE AUTHORITIES HAVING JURISDICTION. CONDUCT OPERATIONS TO ENSURE
 MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT OCCUPIED OR
 USED FACILITIES. ANY CLOSURE REQUIRES PERMISSION FROM THE AUTHORITIES HAVING
- 7. RESTORE ALL DISTURBED AREAS NOT COVERED BY OTHER SURFACE TREATMENT WITH 4" TOPSOIL, SEED, FERTILIZER, MULCH OR MULCH BLANKET.
- 8. PROTECT EXISTING SITE IMPROVEMENTS TO REMAIN FROM DAMAGE. RESTORE/REPLACE DAMAGED IMPROVEMENTS TO ORIGINAL CONDITION ACCEPTABLE TO PARTIES HAVING JURISDICTION.
- 9. KEEP THE APPROVED SET OF PROJECT DRAWINGS ON SITE AT ALL TIMES. REDLINE THE ACTUAL LOCATIONS AND DIMENSION (VERTICAL AND HORIZONTAL) OF CONSTRUCTED OR EXISTING ITEMS WHICH DIFFER FROM OR ARE NOT SHOWN ON THE ORIGINAL DRAWINGS. SUBMIT THESE RECORD DRAWINGS TO THE ENGINEER AT THE COMPLETION OF THE WORK.
- 10. PROTECT TREES TO REMAIN FROM DAMAGE DURING CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 11. HIRE A LICENSED LAND SURVEYOR TO WITNESS AND REPLACE ALL PROPERTY IRONS/SURVEY MONUMENTS WHICH WILL BE ALTERED IN ANY WAY DURING CONSTRUCTION.
- 12. DO NOT SCALE DRAWINGS TO DETERMINE DIMENSIONS. REFER DISCREPANCIES TO THE ENGINEER FOR CLARIFICATION.
- 13. THE INFORMATION CONTAINED ON THESE DRAWINGS PERTAINING TO EXISTING CONDITIONS, SUCH AS BUT NOT LIMITED TO, UTILITIES, TOPOGRAPHY, SUBSURFACE CONDITIONS, IS FURNISHED SOLELY AS THE BEST INFORMATION AVAILABLE AND ITS ACCURACY IS NOT GUARANTEED. THE USE OF THIS INFORMATION DOES NOT PROVIDE RELIEF FOR ANY RESPONSIBILITY FOR DAMAGES DUE TO ANY INACCURACIES.
- 14. ALL REMOVED MATERIALS ARE THE PROPERTY OF THE CONTRACTOR. CLEANUP AND DISPOSE OF ALL EXCESS MATERIALS OFF SITE AT A LOCATION DESIGNATED FOR THIS USE AND IN ACCORDANCE WITH LOCAL REGULATIONS OR AT AN ON SITE LOCATIONS DESIGNATED BY THE
- 15. USE (2) TWO BENCH MARKS FOR VERIFICATION OF ALL CONSTRUCTION ELEVATIONS. SET ADDITIONAL BENCH MARKS TO COMPLY WITH THIS REQUIREMENT.
- 16. RESTORE ALL STREET SURFACES, DRIVEWAYS, CULVERTS, ROADSIDE DRAINAGE DITCHES, AND OTHER PUBLIC OR PRIVATE STRUCTURES THAT ARE DISTURBED OR DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES TO A CONDITION EQUAL TO OR BETTER THAN EXISTING CONDITIONS AND TO THE SATISFACTION OF THOSE HAVING JURISDICTION, UNLESS NOTED OTHERWISE IN THE PLANS.

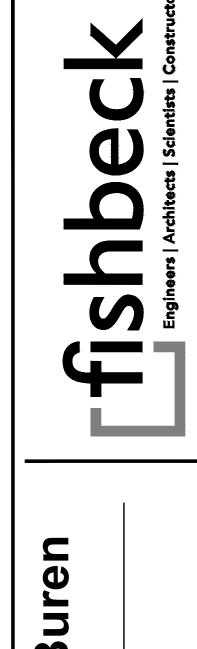
SITE SYMBOL LEGEND



<u>EXISTIN</u>	<u>G UTILITIES</u>	PROPOSE	ED UTILIT
3" SAN.	SANITARY SEWER & MANHOLE		SANITARY SE
2" STM	STORM SEWER & MANHOLE		
\blacksquare	CATCH BASIN CURB TYPE		→ WYE & LEAD
\oplus	CATCH BASIN LAWN TYPE		RISER & LEA
	— VALVE		
<u> </u>	HYDRANT	0	STANDARD S
	PLUG		MAN, ELEVAT
6" \	WTR. WATER MAIN	832.56	MAX. ELEVAT LEAD AT PRO
4"	FM FORCE MAIN	12" STM.	STORM SEWE
2"	GAS GAS MAIN		
ELI	EC. UNDERGROUND ELECTRIC	⊕ •	CATCH BASIN
OP.	— FIBER OPTICS		UNDER DRAI
	UNDERGROUND TELEPHONE		
	OIL OIL TRANSMISSION LINE	8" WATER	- WATER MAIN
6" STE	UNDERGROUND STEAM		
2" SPF	RK. UNDERGROUND SPRINKLER		➡ VALVE & BC
CAT\	CABLE TELEVISION	- ⊗	➡ VALVE & CH
9	TELEPHONE PEDESTAL	м	METER
	PIPE-ONLY CULVERT	[M]	WEIER
	FLARED END SECTION CULVERT HEADWALL CULVERT		PLUG
		<u> </u>	➡ STANDARD F
			- CURB STOP
		<u>6" FM</u>	FORCE MAIN
			FORCE MAIN
		12" CSP = = = = =	PIPE-ONLY







Charter Township of Van B

REVISIONS

4/24/2023 BIDS 4/6/2023 PERMITS 3/29/2023 OWNER REVIEW

1/5/2023 OWNER REVIEW

Drawn By
Designer
Reviewer

Manager PK2

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Designer Reviewer

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EGLE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

KEY	DETAIL	CHARACTERISTICS
6	Seeding with Mulch and/or Matting	Facilitates establishment of vegetative cover Effective for drainageways with low velocity Easily placed in small quantities by inexperienced personnel Should include prepared topsoil bed
54	Geotextile Silt Fence	Use geotextile and posts or poles May be constructed or prepackaged Easy to construct and locate as necessary
56	Catch Basin, Filter Bag	Manufactured filter bag inserted under casting. Collects sediment at catch basin inlet.
57	Stabilized Construction Access	Used at every point where construction traffic enters or leaves a construction site.

XX TEMPORARY T MEASURE



ESTIMATED CONSTRUCTION QUANTITIES TINU | YTITNAUG DESCRIPTION SYD REMOVE PAVEMENT, FULL DEPTH 120 1,300 SYD COLD MILLING HMA PAVEMENT, 1.5 INCH REMOVE TREE EΑ HYDRANT ASSEMBLY, RELOCATE EΑ

-PROTECT WATER TOWER FENCE, SIDEWALK

AND ALL ELECTRICAL EQUIPMENT

NSTRUCTION MEETING.

* DATES ARE	APPROXIMATE AND	WILL B	E REV	ISED A	T PRE-	-CON
SESC SCHEDUI	SESC SCHEDULE AND SEQUENCING			JUL 2023	AUG 2015	SEP 2023
STABILIZE CONSTR	UCTION ENTRANCE					
INSTALL BMP'S	INSTALL BMP'S					
REMOVE AND MILL EXISTING PAVEMENT						
SITE UTILITIES						
FUEL TANK INSTALLATION						
SITE GRADING						
SITE PAVING						
LANDSCAPE & FIN	IAL RESTORATION					

SURVEY, REMOVAL AND SESC PLAN

-REMOVE PAVEMENT, FULL DEPTH

50' FRONT YARD SETBACK

-COLD MILLING HMA PAVEMENT, 1.5 INCH

-LIMITS OF DISTURBANCE

83 062 99 0001 701 46805 TYLER RD.

VAN BUREN CHARTER TOWNSHIP, MI 48111 ZONING: M-1

WATER TOWER

ELEC BOX

-REMOVE PAVEMENT, FULL DEPTH

-REMOVE TREE

TYLER ROAD

16" WTR

CLOSE SHOULDER FOR DRIVEWAY WORK PER MDOT DETAIL 122-NFW-SHL-(R) SHOWN ON SHEET C501-

83 062 99 0002 000

TYLER RD. VAN BUREN CHARTER TOWNSHIP, MI 48111 ZONING: M-1

PROTECT ALL TREES ALONG ENTRANCE

DRIVE UNLESS LABELED OTHERWISE-

STM 20022 RIM 695.95 18" INV. E = 688.35 18" INV. S = 688.15 15" INV. W = 691.85

WTR 20021 RIM 698.39 T/P 692.19-

SAN 20018 RIM 698.29 12" INV. E = 684.79 12" INV. W = 684.69

STM 20079 RIM 698.13

REMOVE TREE-

18" INV. N = 689.03 18" INV. S = 688.83 —

STM 60098 RIM 695.331 18" INV. N = 688.51 18" INV. S = 688.31—

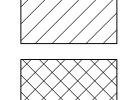
29

-REMOVE, SALVAGE AND STORE HYDRANT. TO BE INCLUDED

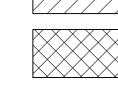
IN THE COST FOR "HYDRANT ASSEMBLY, RELOCATE"

BENCH MARKS BENCH MARK A ELEVATION: 697.46 TOP OF W HYDRANT BOLT UNDER "DI" AT END OF ASPHALT DRIVE TO VAN BUREN TOWNSHIP WATER TOWER.

SYMBOL LEGEND



COLD MILLING HMA PAVEMENT, 1.5 INCH



REMOVE PAVEMENT, FULL DEPTH

SESC NOTES

- 1. MAINTAIN AND REPAIR ALL SESC BEST MANAGEMENT PRACTICES BMPS DURING CONSTRUCTION UNTIL ALL VEGETATION IS ESTABLISHED, (ALL DISTURBED SOIL SURFACES ARE UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER, OR AS DEFINED BY PERMIT.)
- 2. APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS SHOWN ON THE DRAWINGS AND/OR AS REQUIRED BY SESC PERMIT AND IMPLEMENT ADDITIONAL MEASURES AS DICTATED BY SITE CONDITIONS. 3. ENSURE THAT ANY SEDIMENTATION RESULTING FROM WORK ON THIS SITE IS CONTAINED ON THE SITE AND NOT ALLOWED TO
- COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. 4. LEAVE SLOPES IN A ROUGHENED CONDITION DURING THE
- GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND 5. TOPSOIL AND SEED ALL EXPOSED AREAS WITHIN SEVEN (7)

CALENDAR DAYS FOLLOWING THE CONCLUSION OF FINAL

- 6. MINIMIZE TRACKING OF SOIL AND SEDIMENT ONTO OFF-SITE ROADWAYS THROUGH THE USE OF APPROPRIATE MEASURES. IMMEDIATELY REMOVE ANY SOIL OR SEDIMENT TRACKED ONTO THE ROADWAYS.
- 7. NO VEHICLES AND EQUIPMENT CLEANING IS ALLOWED AT LOCATIONS WHERE RUNOFF COULD FLOW DIRECTLY INTO A WATER COURSE OR DOWNSTREAM STORM SEWER.
- 8. AREA OF DISTURBANCE = 0.86 ACRES

GRADING IN THAT AREA.

- 9. SITE SOILS:
- THETFORD LOAMY SAND, 0 TO 2 PERCENT SLOPES

REMOVAL NOTES

- 1. THE EXTENT OF REMOVALS AND DEMOLITION SHALL BE FIELD VERIFIED BY CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DEVIATIONS FROM INFORMATION SHOWN.
- 2. UNLESS SPECIFICALLY NOTED FOR REMOVAL ON THE PLANS, ALL SIDEWALKS, DRIVES, CULVERTS, DRAINAGE STRUCTURES, AND ABOVE AS WELL AS BELOW GRADE UTILITIES SHALL BE PROTECTED. ALL SUCH ITEMS DAMAGED OR DESTROYED DURING CONSTRUCTION SHALL BE REMOVED AND REPLACED WITH NEW AT NO ADDITIONAL COST TO THE OWNER.
- 3. PROTECT EXISTING TREES TO REMAIN WITH TEMPORARY FENCING AT THE DRIP LINE. NO GROUND DISTURBANCE OR STORAGE OF MATERIAL/EQUIPMENT SHALL OCCUR WITHIN THE DRIP LINE LIMITS.
- 4. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THIS DRAWING HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. VERIFY CRITICAL INVERT INFORMATION PRIOR TO BEGINNING CONSTRUCTION.
- 5. DAMAGE CAUSED TO SURROUNDING AREA PAVEMENT OUTSIDE THE CONSTRUCTION LIMITS SHALL BE SAWCUT AND REPLACED AT NO ADDITIONAL COST TO THE OWNER.

4/24/2023 BIDS

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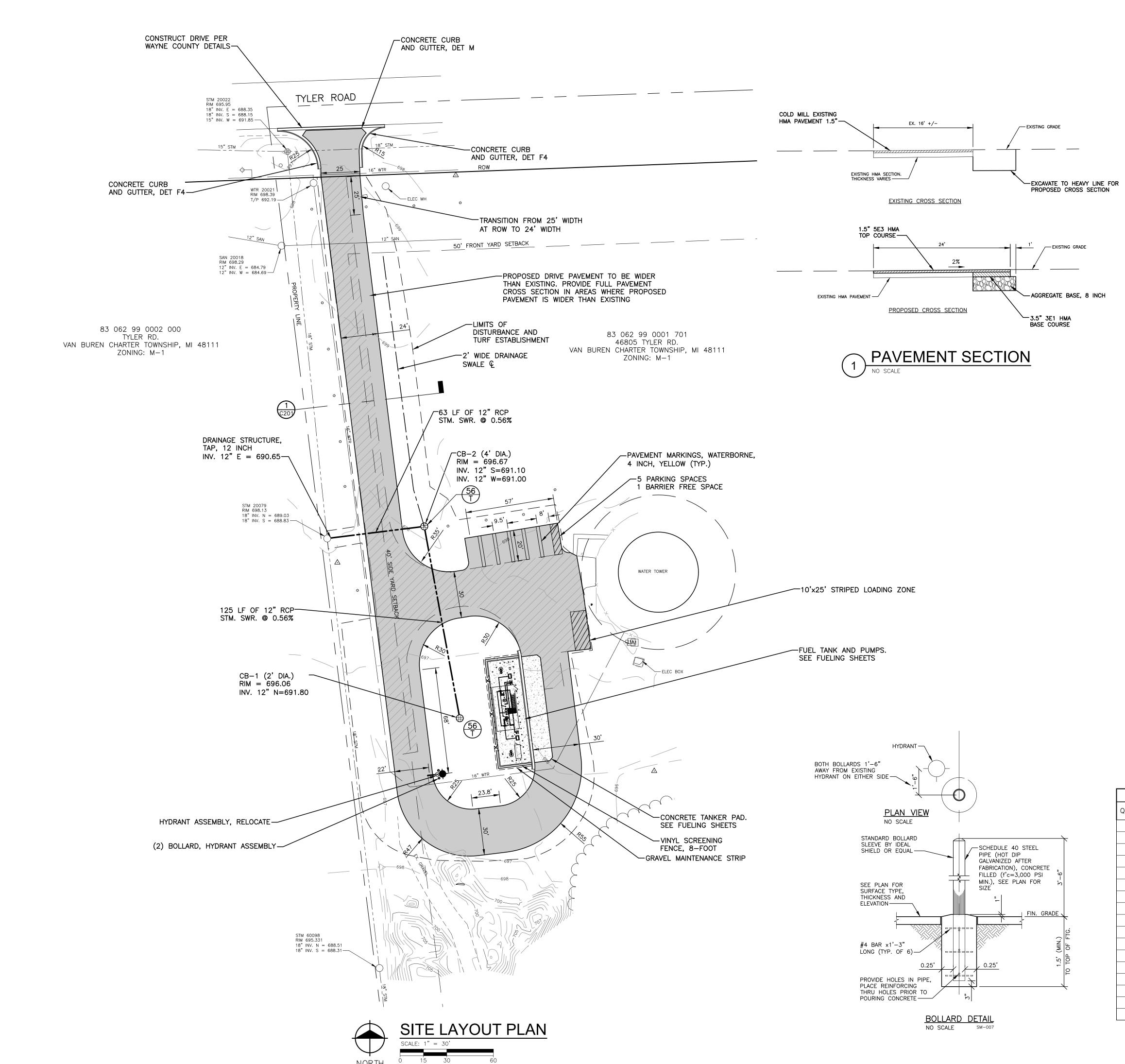
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BENCH MARKS

BENCH MARK A ELEVATION: 697.46 TOP OF W HYDRANT BOLT UNDER "DI" AT END OF ASPHALT DRIVE TO VAN BUREN TOWNSHIP WATER TOWER.

SYMBOL LEGEND

5" HMA PAVEMENT OVER 8" MDOT 21AA AGGREGATE BASE

1.5" HMA TOP COURSE OVER EXISTING MILLED SECTION

9" NON-REINFORCED CONCRETE PAVEMENT OVER 8" MDOT 21AA AGGREGATE BASE

NOTES

- 1. DIMENSIONS ARE TO BACK OF CURB, OUTSIDE FACE OF BUILDING, AND EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.
- 2. KEEP THE APPROVED AND/OR MOST CURRENT SET OF PROJECT DRAWINGS ON SITE AT ALL TIMES. CONTRACTOR TO CONFIRM THEY ARE IN POSSESSION OF THE MOST CURRENT DRAWING FILES.

ZONING

ZONING DISTRICT: M-1 LIGHT INDUSTRIAL SETBACKS: FRONT YARD SIDE YARD (ONE)

REAR YARD

SIDE YARD (TOTÁL OF 2)

PARKING

WHOLESALE/WAREHOUSE STORAGE ESTABLISHMENTS (NON-RETAIL WAREHOUSÉ):

5 PLUS 1 PER 1,750 SFT GROSS FLOOR AREA PLUS 1 PER 350 USEABLE SFT

6,800 SFT / 350 = 3.89 => 4 4 + 5 = 9 SPACES

GASOLINE SERVICE STATION AND VEHICLE SERVICE: 1 PER GAS PUMP, 2 PER SERVICE AREA OR STALL AND 1

PER EMPLOYEE ON PEAK SHIFT

1 SPACE PER 2 GAS PUMPS = 2 SPACES

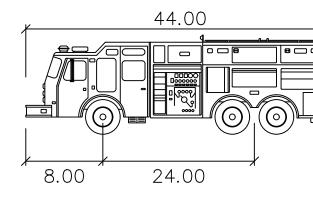
TOTAL PARKING SPACES REQUIRED:

9 + 2 = 11 SPACES

TOTAL PARKING PROVIDED:

5 SPACES 1 BARRIER FREE SPACE 1 GAS PUMP SPACE 7 TOTAL SPACES

ESTIMATED CONSTRUCTION QUANTITIES			
QUANTITY	UNIT	DESCRIPTION	
1	EA	DRAINAGE STRUCTURE, 24-INCH DIA	
1	EA	DRAINAGE STRUCTURE, 48-INCH DIA	
190	FT	STORM SEWER, 12-INCH	
2	EA	DRAINAGE STRUCTURE, COVER, BEEHIVE	
1	EA	DRAINAGE STRUCTURE, TAP, 12-INCH	
2	EA	BOLLARD, HYDRANT ASSEMBLY	
1,270	SYD	AGGREGATE BASE, 8-INCH	
150	SYD	AGGREGATE BASE, 9-INCH	
230	TON	BITUMINOUS PAVEMENT, 5E3	
250	TON	BITUMINOUS PAVEMENT, 3E1	
75	FT	CONCRETE CURB AND GUTTER, DET F4	
70	FT	CONCRETE CURB AND GUTTER, DET M	
25	SYD	GRAVEL MAINTENANCE STRIP	
459	FT	PAVEMENT MARKING, WATERBORNE, 4—INCH, YELLOW	
459	FT	PAVEMENT MARKING, WATERBORNE, 4-INCH, YELLOW, 2ND APPLICATION	
115	FT	VINYL FENCE, 8-FEET	
1,740	SYD	TURF ESTABLISHMENT	



	reet
Width Track Lock to Lock Time Steering Angle	: 8.50 : 8.50 : 6.0 : 37.8

Pumper Fire Truck

of **Township** Charte

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REVISIONS

4/24/2023 BIDS 4/6/2023 PERMITS 3/29/2023 OWNER REVIEW 1/5/2023 OWNER REVIEW

Drawn By Designer

Reviewer

Manager PK2

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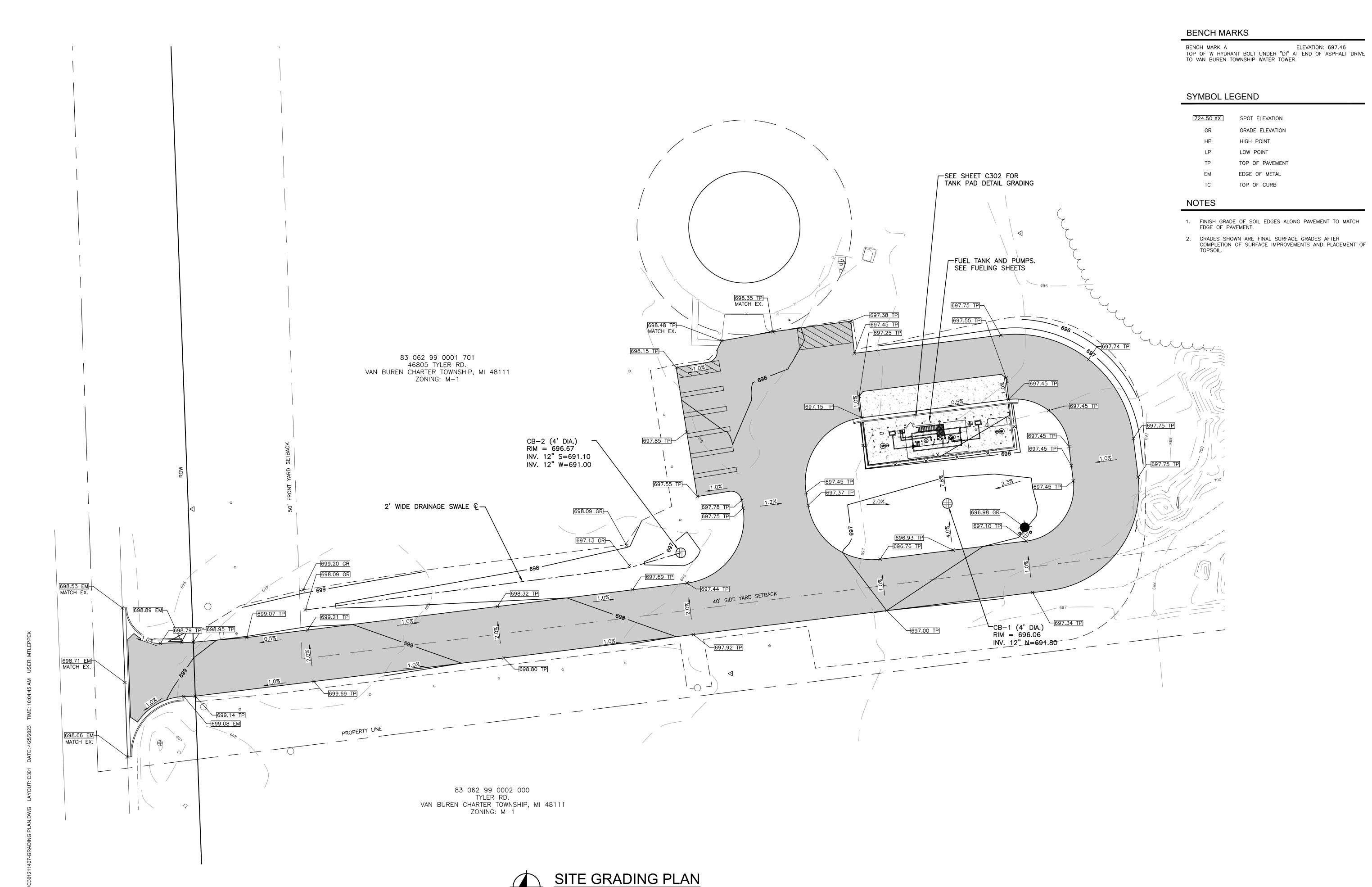
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-CREATE POSITIVE DRAINAGE AROUND FUEL TANK PAD TO CB-1

—SEE DETAIL THIS SHEET FOR FUEL TANK PAD CROSS SECTION

FINISH GRADE OF SOIL EDGES ALONG PAVEMENT TO MATCH EDGE OF PAVEMENT.

EDGE OF METAL TOP OF CURB

GRADES SHOWN ARE FINAL SURFACE GRADES AFTER COMPLETION OF SURFACE IMPROVEMENTS AND PLACEMENT OF TOPSOIL.

FENCE PER LANDSCAPE PLANS— FENCE PER LANDSCAPE PLANS CONCRETE PAD PER FUEL TANK SHEETS -2' WIDE GRAVEL MAINTENANCE STRIP 2' WIDE GRAVEL MAINTENANCE STRIP-6"X6" CONCRETE CURB HEAD PER FUEL TANK SHEETS ∕1 ON 4 SLOPE 1 ON 4 SLOPE-

FUEL TANK PAD CROSS SECTION

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Drawn By Designer Reviewer

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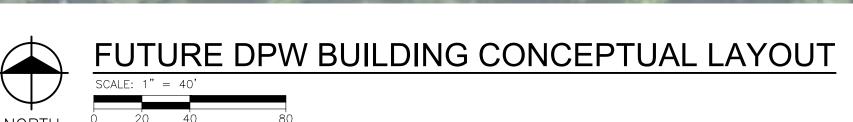
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697.18 TP CREATE POSITIVE DRAINAGE AROUND FUEL TANK PAD TO CB-1----697.65 TC 697.45 TP 698.15 TC 697.60 GR 698.10 GR 697.45 TP 697.85 TP 698.35 TC <u>698.65 TC</u> 697.95 GR 698.47 GR 697.45 GR 697.45 TP 2.0% 696.98 GR CB-1 (4' DIA.) RIM = 696.06 INV. 12" N=691.80 696.93 TP FUEL TANK DETAIL GRADING PLAN ►RELOCATED HYDRANT





Buren OWD Charte

REVISIONS

 4/24/2023
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Designer ML2

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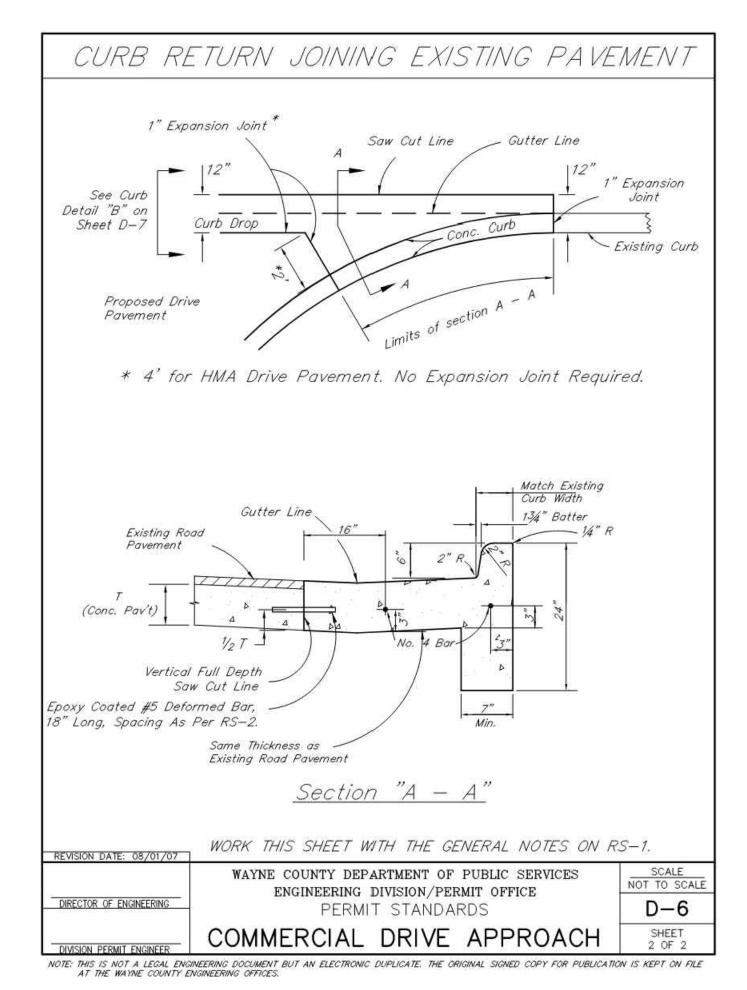
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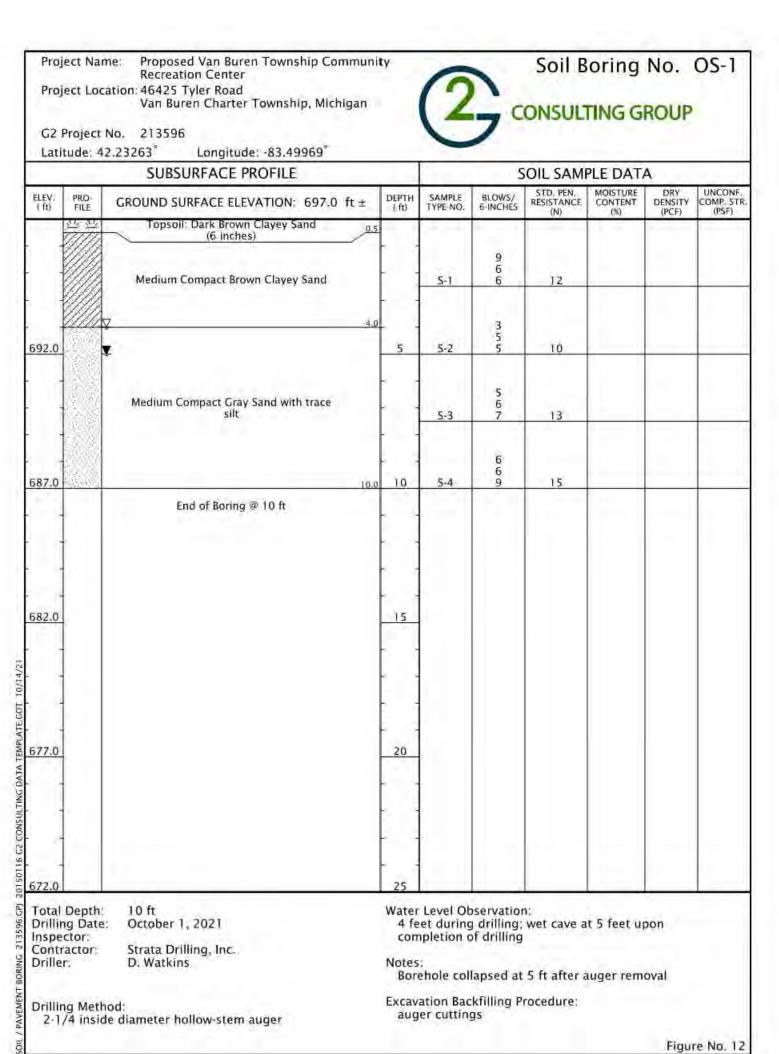
16' MIN., 20' MAX. ONE WAY TRAFFIC

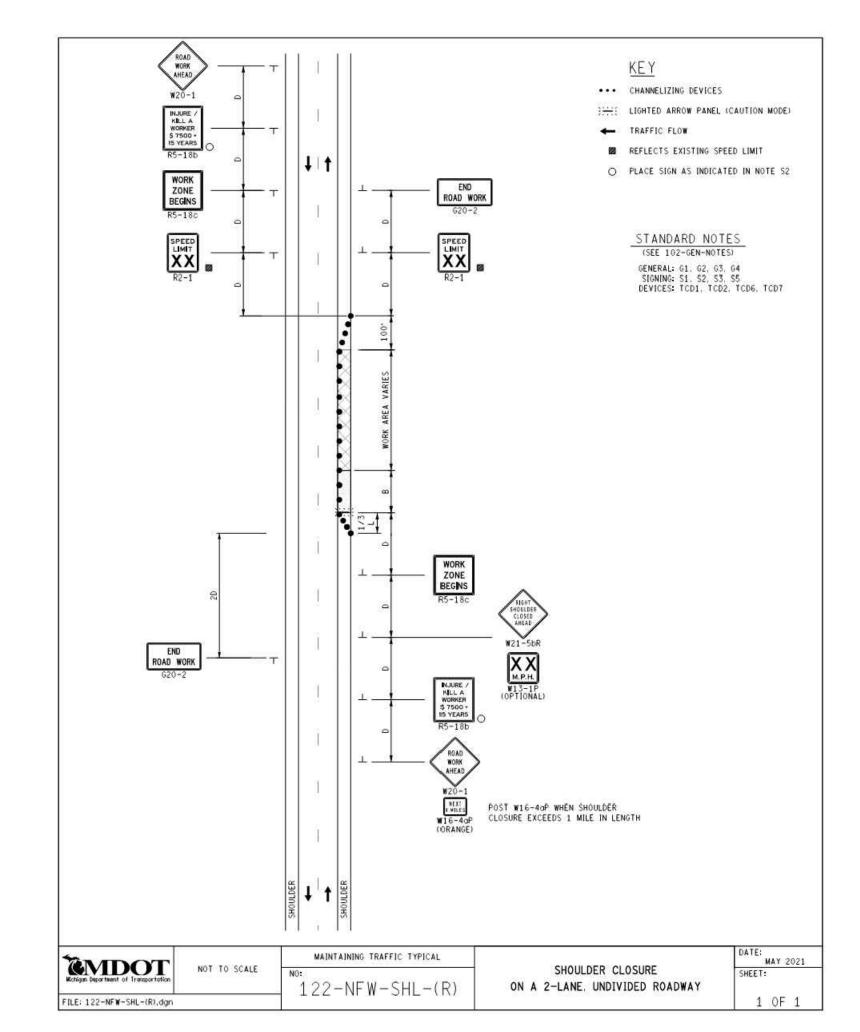


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1/5/2023 OWNER REVIEW Drawn By ML2

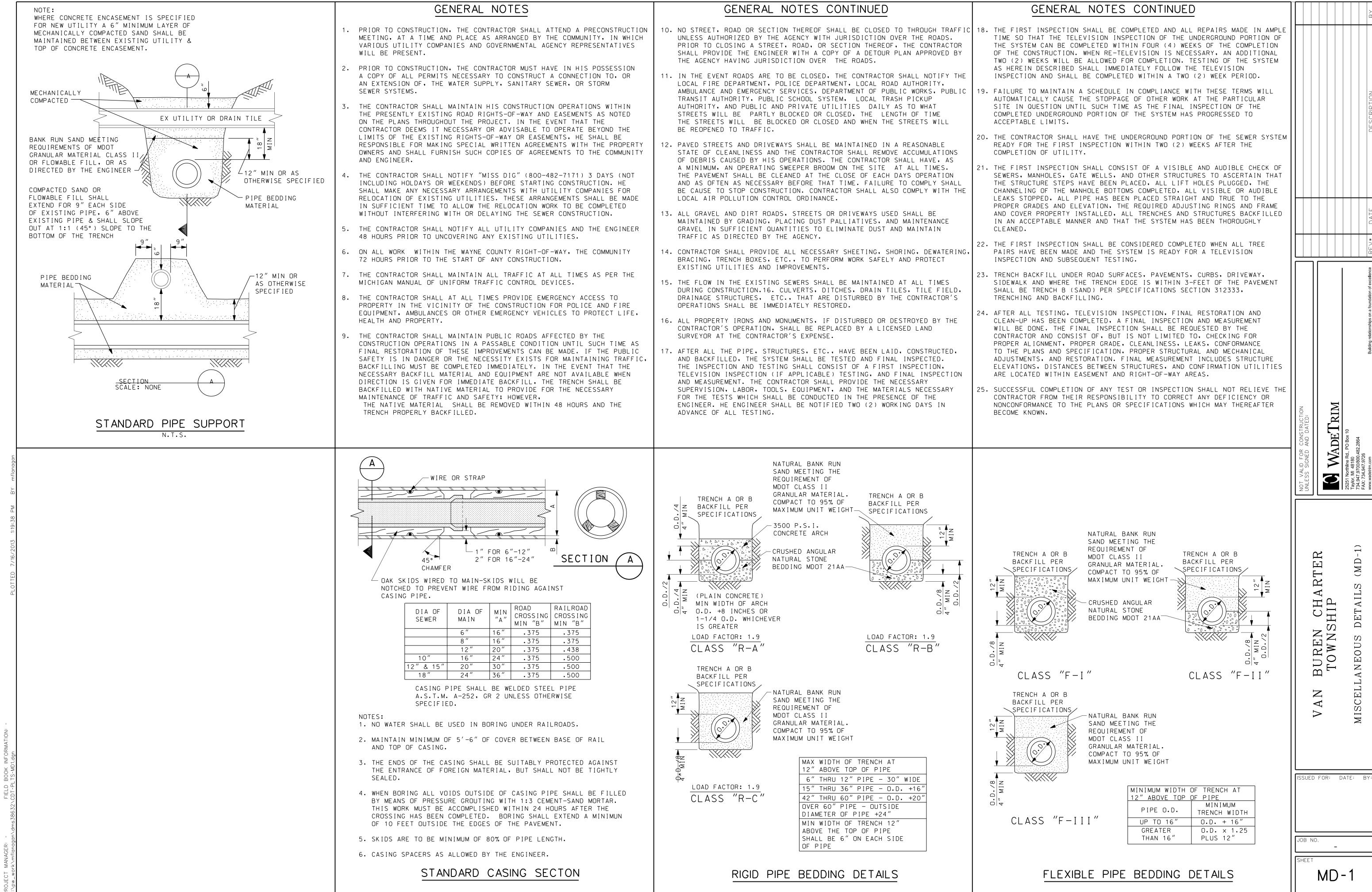
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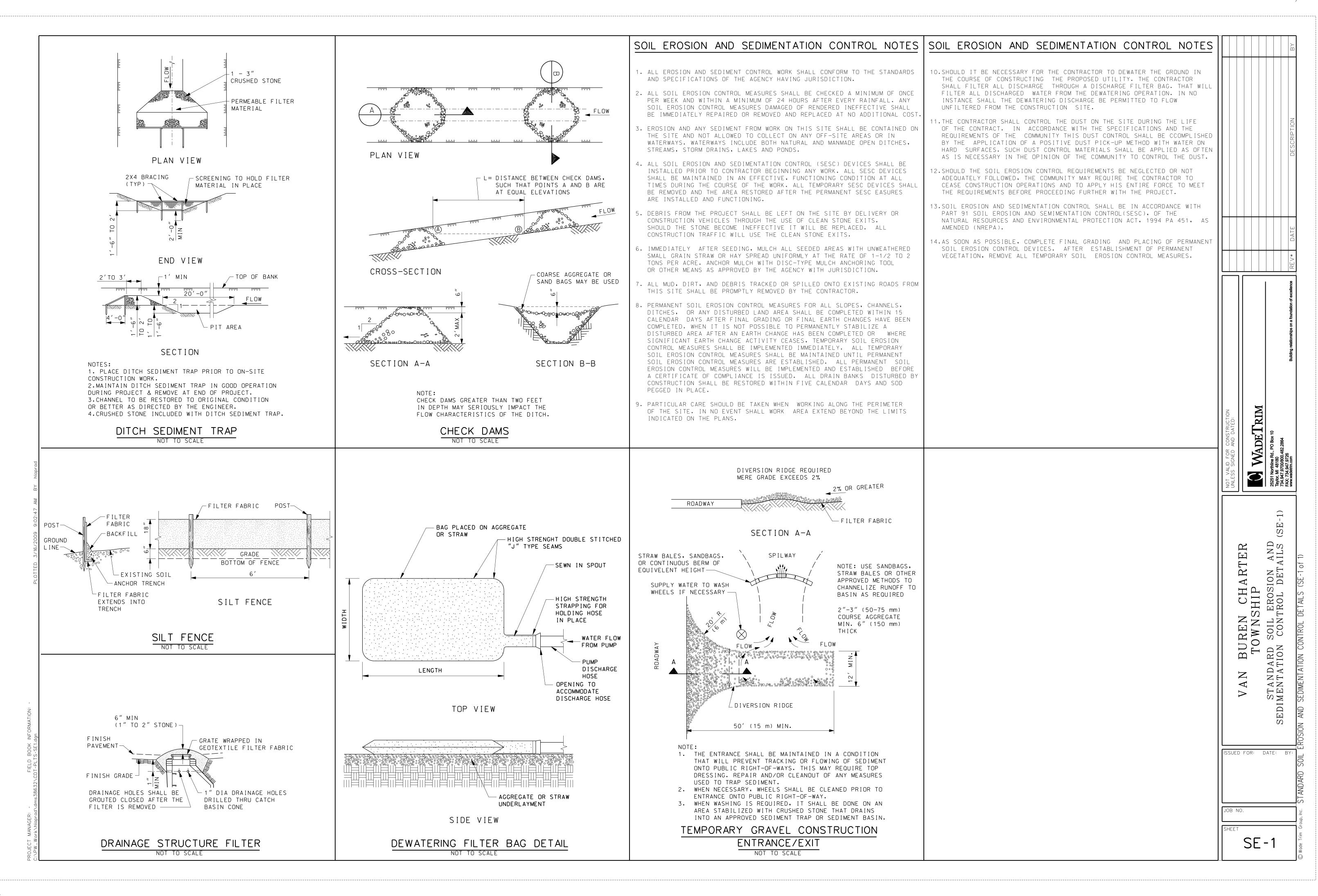
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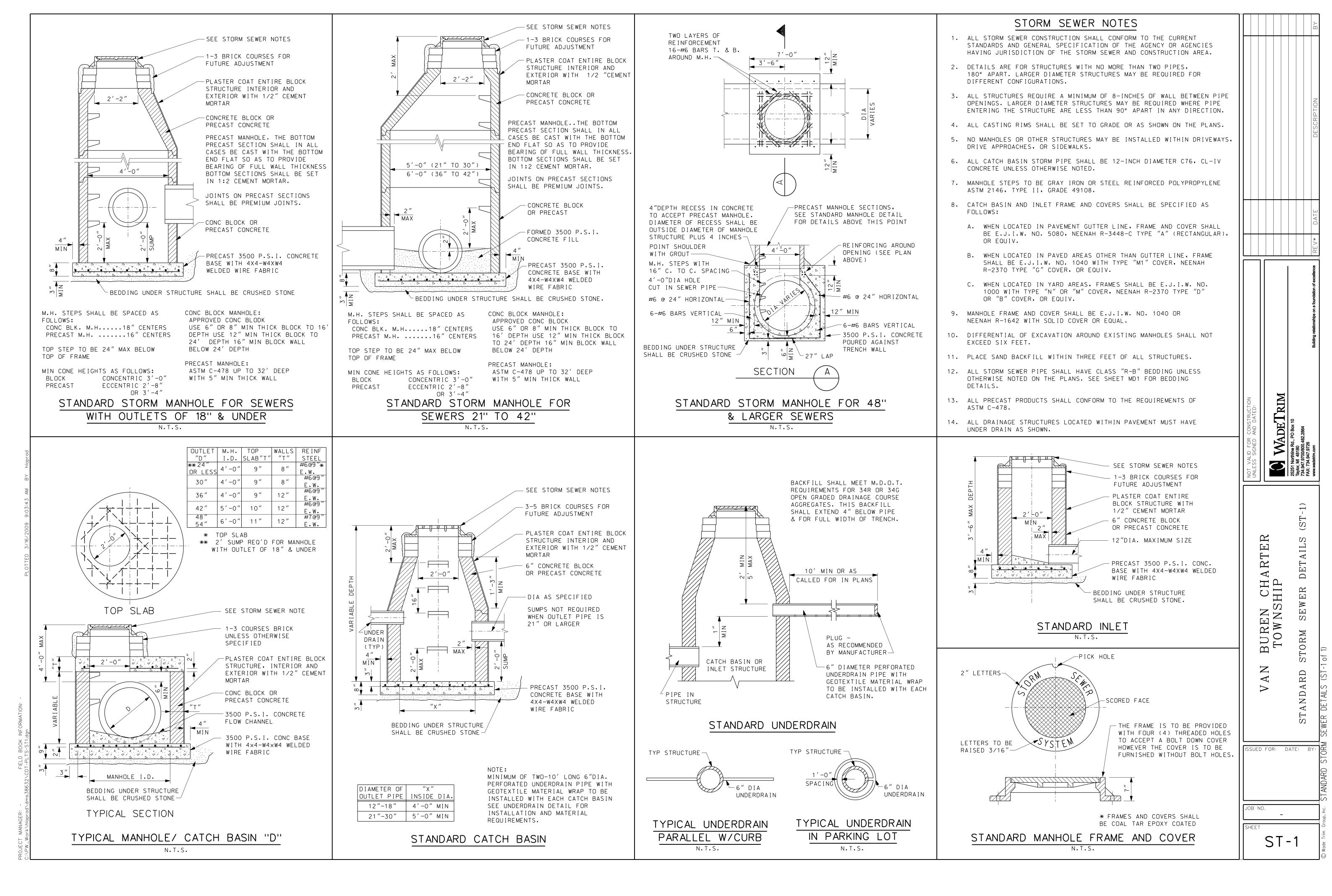
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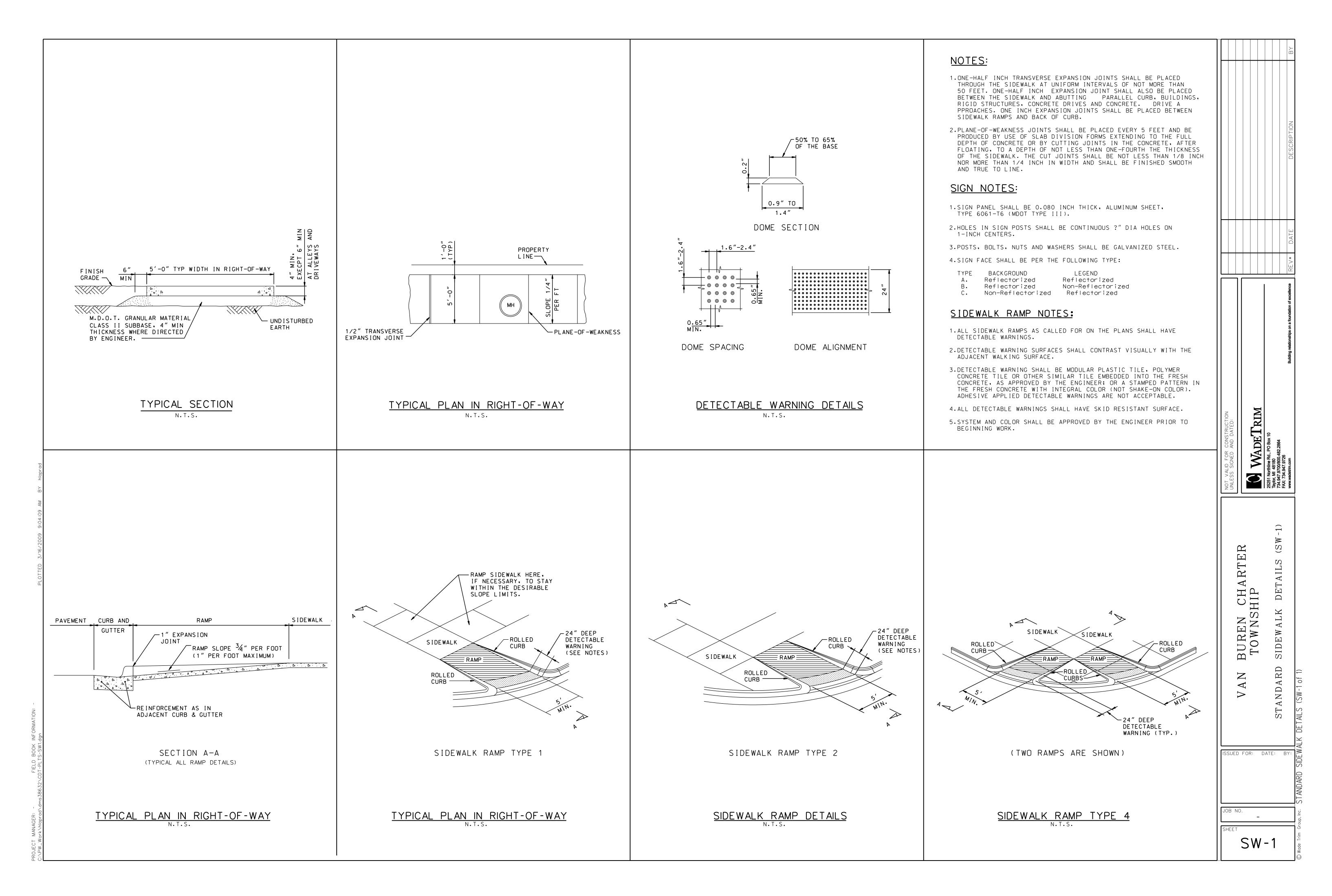
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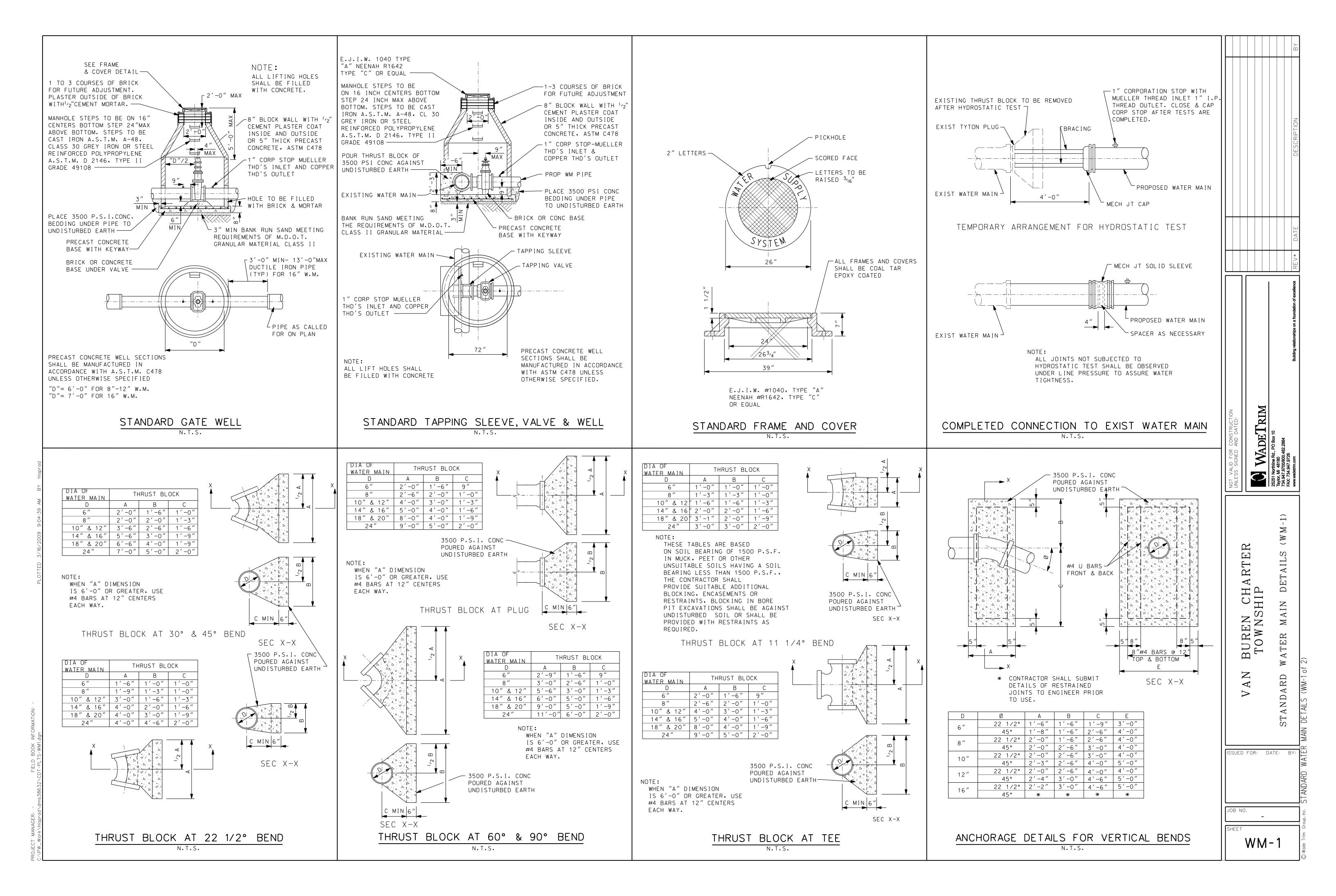
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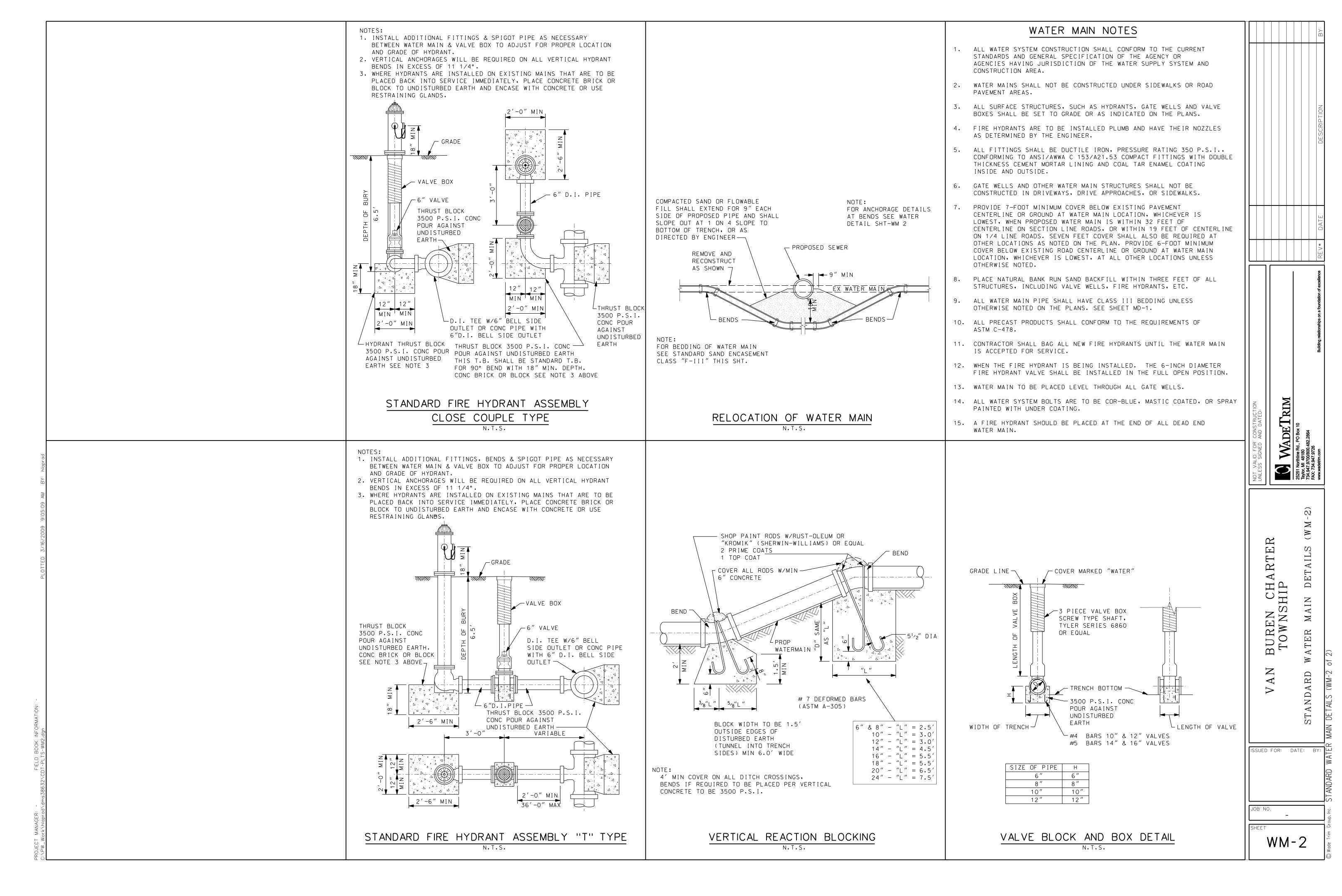












	ELECTRICAL SYMBOL LEGEND									
SYMBOL	DESCRIPTION	MANUFACTURER / CATALOG NO.	REMARKS							
■—○	NEW ROADWAY LUMINAIRE AND POLE NONFUSIBLE DISCONNECT SWITCH FUSIBLE DISCONNECT SWITCH PANELBOARD (208Y/120V) CONDUIT UNDERGROUND CONDUIT ABOVE FLOOR	SEE LUMINAIRE SCHEDULE SEE SPECIFICATIONS SEE SPECIFICATIONS SEE PANELBOARD SCHEDULE	- SIZE AS NOTED Z=No. POLES; X=SWITCH SIZE; Y=FUSE SIZE; MOUNT AT 5'-0" AFF, UNO							

SSP = STAINLESS STEEL PLATE

	LUMINAIRE SCHEDULE										
MARK	DESCRIPTION	MANUF./ CATALOG NO.	OR EQUAL BY	LAMPS	VOLTAGE	REMARKS					
FI MI LU W. CF RO	IEW LED SITE LIGHT IXTURE TYPE 3 IEDIUM, 8640 UMENS, 70 INPUT IATTS, 4000K, 70 IRI, ON 25 FT OUND TAPERED ARK BRONZE POLE	FIXTURE: LITHONIA DSX1-LED P2-40K-T3M-MVOLT-RPA- PIR-DDBXD, LITHONIA POLE: RTA-25-8G-DM19AS-DDBXD	MCGRAW EDISON, CREE	LED	120V	DUSK TO DAWN OPERATION, OCCUPIED FULL BRIGHTNESS, UNOCCUPIED 30% BRIGHTNESS					

GENERAL NOTES

- 1. SYMBOLS AND GENERAL DESCRIPTIONS IN SYMBOL LEGENDS ARE INDICATED FOR GENERAL REFERENCE ONLY. NOT ALL SYMBOLS ARE USED ON THIS PROJECT. SEE SCHEDULES, SPECIFICATIONS AND PLANS FOR ADDITIONAL INFORMATION, INCLUDING MOUNTING HEIGHTS.
- 2. THESE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC AND REPRESENT THE ELECTRICAL DESIGN INTENT. PROVIDE ALL WORK AND MATERIALS THAT ARE REQUIRED FOR COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEMS THAT FULLY MEET THE ELECTRICAL DESIGN INTENT. ALL ELECTRICAL WORK SHALL CONFORM TO THE LATEST VERSION OF THE NATIONAL ELECTRICAL CODE (NEC) AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION. SEE SPECIFICATIONS FOR ADDITIONAL INSTALLATION REQUIREMENTS AND ITEMS THAT MAY BE REQUIRED ABOVE AND BEYOND THE MINIMUM REQUIREMENTS THAT ARE OUTLINED
- 3. THOROUGHLY AND CAREFULLY REVIEW ALL DRAWINGS, SPECIFICATIONS, AND WORK SCOPES IN CONTRACT DOCUMENTS PRIOR TO BIDS AND CONSTRUCTION. WHERE THERE ARE CONFLICTS AMONG THE DRAWINGS, SPECIFICATIONS AND WORK SCOPES, THE MORE STRINGENT OR GREATER QUANTITY REQUIREMENTS SHALL APPLY.
- 4. ALL ELECTRICAL EQUIPMENT SHALL BE UL LISTED.
- 5. SEE INDIVIDUAL SPECIFICATION SECTIONS FOR SPECIFIC REQUIREMENTS RELATED TO TESTING, MANUFACTURER STARTUP, TRAINING, ETC. ALL APPLICABLE TESTING AND MANUFACTURER STARTUP REPORTS SHALL BE SUBMITTED AND APPROVED PRIOR TO THE DEVELOPMENT OF ELECTRICAL PUNCH LISTS.
- 6. ALL CONDUCTORS, INCLUDING THE GROUNDED CONDUCTORS (NEUTRALS), SHALL BE LABELED AT ALL ENDS AND JOINTS, WITH THE CORRESPONDING PANELBOARD NAME AND CIRCUIT NUMBER OR OTHERWISE IDENTIFIED TO CORRESPOND WITH THE ASSOCIATED EQUIPMENT MANUFACTURER'S IDENTIFICATION SYSTEM.
- 7. AT A MINIMUM, PROVIDE #8 WIRING FOR SITE LIGHTING. FROM HANDHOLE FUSING TO FIXTURE ON POLE USE #12 WIRING MINIMUM, UNO. MINIMUM CONDUIT SIZE SHALL BE 3/4", UNO. NO MORE THAN (6) CURRENT CARRYING CONDUCTORS SHALL BE ALLOWED IN A RACEWAY, UNO. EQUIPMENT GROUNDED CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH THE NEC AND MAY BE SHARED. ALL GROUNDED CONDUCTORS (NEUTRALS) SHALL BE TREATED AS CURRENT CARRYING
- 8. PROVIDE A DEDICATED GROUNDED CONDUCTOR (NEUTRAL) FOR EACH BRANCH CIRCUIT. SHARED NEUTRALS ARE NOT
- 9. INSTALL GREEN, INSULATED, COPPER EQUIPMENT GROUNDING CONDUCTORS IN ALL RACEWAYS INCLUDING ALL FLEXIBLE METAL CONDUITS AND NON-METALLIC RACEWAYS. GREEN INSULATED, EQUIPMENT GROUNDING CONDUCTORS SHALL BE INSTALLED WITH ALL FEEDERS AND BRANCH CIRCUITS.
- 10. PROVIDE FIRE STOPPING FOR ALL CONDUIT AND OTHER ELECTRICAL EQUIPMENT PENETRATIONS THROUGH FLOORS, WALLS AND CEILINGS TO MAINTAIN FIRE RATINGS. SEE ARCHITECTURAL FOR THE SPECIFIED FIRE RATINGS OF FLOORS, WALLS, AND
- 11. LIMIT VOLTAGE DROP IN CONDUCTORS TO 2% FOR FEEDERS AND 3% FOR BRANCH CIRCUITS, ASSUMING FULL LOAD CONDITIONS. VOLTAGE DROP SHALL NOT EXCEED 5% FROM THE ELECTRICAL SERVICE TO THE FURTHEST ELECTRICAL DEVICE.
- 12. CALCULATE AND APPLY THE APPROPRIATE NEC DERATING FACTOR FOR CONDUCTORS INSTALLED IN ROOF MOUNTED
- 13. PROVIDE THERMAL SEALS IN ALL CONDUITS THAT RUN FROM CONDITIONED SPACES TO UNCONDITIONED SPACES.
- 14. UNLESS NOTED OTHERWISE, ALL CONDUIT AND WIRING SHALL BE CONCEALED. ELECTRICAL CONNECTIONS SHOWN ON DRAWINGS ARE DIAGRAMMATIC AND ARE USED TO ILLUSTRATE CIRCUITING AND WIRING REQUIREMENTS ONLY.
- 15. ALL JUNCTION BOXES SERVING BRANCH CIRCUIT WIRING SHALL BE LABELED TO IDENTIFY THE CIRCUIT(S) ROUTED THROUGH EACH RESPECTIVE JUNCTION BOX BY UTILIZING BRADY LABELS. 16. ELECTRICAL EQUIPMENT INSTALLED ABOVE CEILINGS SHALL BE INSTALLED IN READILY ACCESSIBLE LOCATIONS, SUCH AS, BUT
- NOT LIMITED TO, ABOVE DOORWAYS TO ROOMS. COORDINATE ALL LOCATIONS WITH OTHER TRADES TO AVOID CONFLICTS WITH OTHER EQUIPMENT AND THE NEED FOR EXCESSIVELY LONG LADDER REQUIREMENTS TO ACCESS EQUIPMENT AND DIFFICULT AND AWKWARD CLIMBING AND/OR UNNECESSARY BENDING DURING SERVICING OF EQUIPMENT. 17. CONDUCTORS INSTALLED IN WIREWAYS THAT CONTAIN MORE THAN 30 CURRENT CARRYING CONDUCTORS SHALL BE DERATED
- IN ACCORDANCE WITH THE NEC. 18. DO NOT USE LOAD CENTERS, PANELBOARDS, SWITCHBOARDS, MOTOR CONTROL CENTERS AND OTHER POWER DISTRIBUTION
- EQUIPMENT AS RACEWAYS. 19. SEE SPECIFICATION SECTION 26 05 34, RACEWAYS FOR ELECTRICAL SYSTEMS, FOR PROJECT SPECIFIC RACEWAY
- INSTALLATION REQUIREMENTS. 20. SEE SPECIFICATION SECTION 26 05 53, IDENTIFICATION FOR ELECTRICAL SYSTEMS, FOR PROJECT SPECIFIC IDENTIFICATION
- 21. EXISTING ELECTRICAL ITEMS INDICATED IN THE CONTRACT DRAWINGS ARE BASED ON THE OWNER'S LIMITED RECORD
- DRAWINGS AND THE ENGINEER'S LIMITED FIELD OBSERVATIONS. CONTRACTOR AND ALL APPLICABLE SUB-CONTRACTORS SHALL VISIT THE SITE TO UNDERSTAND COMPLETELY THE CONDITIONS UNDER WHICH THE WORK SHALL BE PERFORMED. PERFORM ALL INCIDENTAL ELECTRICAL DEMOLITION AND/OR RELOCATION OF DEVICES AND EQUIPMENT REQUIRED TO FACILITATE THE DEMOLITION WORK OF OTHER TRADES AT NO ADDITIONAL COST TO THE OWNER.
- 22. DRAWINGS DO NOT INDICATE ALL ELECTRICAL EQUIPMENT AND DEVICES INTENDED TO BE REMOVED. DRAWINGS INDICATE MAJOR ELECTRICAL EQUIPMENT, FIXTURES AND DEVICES THAT ARE REQUIRED TO BE REMOVED. CONTRACTOR SHALL REMOVE OR RELOCATE ELECTRICAL EQUIPMENT, FIXTURES AND DEVICES AS NECESSARY FOR A COMPLETE AND PROFESSIONAL INSTALLATION. SEE CIVIL PLANS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
- 23. UNLESS NOTED OTHERWISE, DISPOSE OF ALL REMOVED MATERIALS OFF SITE AND INCLUDE ALL COSTS FOR DISPOSAL IN BID. THE DISPOSAL OF MATERIALS SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS INCLUDING
- 24. EXISTING POLES AND FIXTURES TO BE TURNED OVER TO WMU IF DESIRED. WMU RESERVES RIGHT TO REFUSAL DISPOSAL
- 25. CIRCUIT CONDUCTORS SHALL HAVE CONTINUOUS COLOR INDENTIFICATION ON ALL CONDUCTORS, ALL SIZES.



Charte

REVISIONS

4/24/2023 BIDS 4/6/2023 PERMITS 3/29/2023 OWNER REVIEW

1/5/2023 OWNER REVIEW Drawn By GAC

Designer GAC Reviewer RMM

Manager PK2

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> PROJECT NO. 211407

> > SHEET NO.

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Charte

2. EXISTING MDP, 400A, 120/208V, 3PH, 4W.

1. EXISTING 150KVA 4.8/13.2-120/208V, 3PH, 4W.

4. EXISTING PANEL A.

ADDITIONAL INFORMATION.

8. REMOTE EMERGENCY STOP BOLLARD. COORDINATE EXACT LOCATION WITH OWNER.

1. REFER TO CIVIL PLANS FOR ADDITIONAL INFORMATION.

2. THIS DRAWING IS DIAGRAMMATIC FOR CIRCUIT GROUPING, IT IS NOT INTENDED TO SHOW EXACT CONDUIT ROUTING. CONDUIT ROUTING SHALL BE ROUTED PARALLEL TO

6. NEW 120V NEMA 3R WIREWAY

10. APPROXIMATE LOCATION OF FUEL MONITORING AND CONTROLS.

GENERAL NOTES

ROADWAYS AND SIDEWALKS.

REFER TO THE FUEL CONTRACTOR DOCUMENTS FOR FURTHER REQUIREMENTS.

4. "HIGH VOLTAGE" IS DEFINED AS 120V TO GROUND.

3. EXISTING PANEL EM, 1PH.

5. NEW PANEL C. SEE ONE LINE DIAGRAM ON E401, FOR

7. NEW LOW VOLTAGE NEMA 3R WIREWAY.

9. EXTEND LOW VOLTAGE CONDUITS TO LOCATIONS INDICATED BY THE FUEL CONTRACTOR.

NOTE:
ALL VEEDER ROOT CABLING MUST BE BELDEN 88760 AND WILL TERMINATE AT NEW CONSOLE

ELECTRICAL CONTRACTOR TO TERMINATE ALL NEW FUEL POWER CONDUCTORS INTO NEW FUEL CONTROL PANEL

NOTE: ALL CONDUITS WILL HAVE SEAL OFFS AS THE FIRST FITTING

NO IMC ALLOWED. THE FIRST AND LAST STICK OF EACH CONDUIT WILL BE ROB ROY PVC COATED RIGID METALLIC CONDUIT BELOW GRADE. ALL CONDUIT WILL TRANSITION TO SCHEDULE 40 PVC UNDERGROUND BETWEEN THE FIRST AND LAST STICKS OF ROB ROY PVC COATED RIGID METALLIC CONDUIT

N.E.C. HAZARDOUS AREA NOTES

B. TYPICAL N.E.C. ARTICLE 514 CLASS 1 LOCATION (UNDERGROUND TANK - FILL OPENING)

C. TYPICAL N.E.C. ARTICLE 514 CLASS 1 LOCATION

VENT, EXTENDING IN ALL DIRECTIONS.

501.5(A)

LOCATION.

FILL CONNECTION.

CLASSIFIED LOCATION.

PRODUCTS.

COMPONENTS.

OF ENCLOSURE.

DIRECTIONS.

SL1 🔾 🖷

A. ALL CONDUIT ENTERING AND LEAVING THE CLASSIFIED/

HAZARDOUS AREAS SHALL HAVE SEAL-OFFS PER N.E.C.

EXTENT OF CLASS 1, GROUP D, DIVISION 1 LOCATION: ANY PIT, BOX, OR SPACE BELOW GRADE LEVEL, ANY PART

OF WHICH IS WITHIN THE DIVISION 1 OR 2 CLASSIFIED

(UNDERGROUND TANK - VENT DISCHARGING UPWARD) EXTENT OF CLASS 1, GROUP D, DIVISION 1 LOCATION: WITHIN 5 FEET OF OPEN END OF VENT, EXTENDING IN ALL

EXTENT OF CLASS 1, GROUP D, DIVISION 2 LOCATION:

D. TYPICAL N.E.C. ARTICLE 514 CLASS 1 LOCATION (REMOTE

PUMP - OUTDOORS) EXTENT OF CLASS 1, GROUP D,

DIVISION 1 LOCATION: ANY PIT, BOX, OR SPACE BELOW

GRADE LEVEL IF ANY PART IS WITHIN A HORIZONTAL DISTANCE OF 10 FEET FROM ANY EDGE OF PUMP.EXTENT

DIRECTIONS. ALSO UP TO 18 INCHES ABOVE GRADE LEVEL

WITHIN 10 FEET HORIZONTALLY FROM ANY EDGE OF PUMP.

LOCATION: ANY PIT, BOX, OR SPACE BELOW GRADE LEVEL,

OF CLASS 1, GROUP D, DIVISION 2 LOCATION: WITHIN 3 FEET OR ANY EDGE OF PUMP, EXTENDING IN ALL

E. TYPICAL N.E.C. ARTICLE 514 CLASS 1 LOCATION (DISPENSING DEVICE -PITS) EXTENT OF CLASS 1, GROUP D, DIVISION 1

ANY PART OF WHICH IS WITHIN THE DIVISION 1 OR 2

F. TYPICAL N.E.C. ARTICLE 514 CLASS 1 LOCATION (DISPENSING

DEVICE - DISPENSER) EXTENT OF CLASS 1, GROUP D, DIVISION 1 LOCATION: SPACE CLASSIFICATION INSIDE THE

G. TYPICAL N.E.C. ARTICLE 514 CLASS 1 LOCATION (DISPENSING DEVICE — DISPENSER) EXTENT OF CLASS 1, GROUP D,

OPERATED DISPENSING DEVICES FOR PETROLEUM

H. TYPICAL N.E.C. ARTICLE 514 CLASS 1 LOCATION (DISPENSING DEVICE — OUTDOOR) EXTENT OF CLASS 1,

DISPENSER ENCLOSURE IS COVERED IN ANSI/UL 87, "POWER

DIVISION 2 LOCATION: WITHIN 18 INCHES HORIZONTALLY IN ALL DIRECTIONS EXTENDING TO GRADE FROM (1) THE DISPENSER ENCLOSURE OR (2) THAT PORTION OF THE DISPENSER ENCLOSURE CONTAINING LIQUID HANDLING

GROUP D, DIVISION 2 LOCATION: UP TO 18 INCHES ABOVE GRADE LEVEL WITHIN 20 FEET HORIZONTALLY OF ANY EDGE

SPACE BETWEEN 5 FEET AND 10 FEET OF OPEN END OF

EXTENT OF CLASS 1, GROUP D, DIVISION 2 LOCATION: UP TO 18 INCHES ABOVE GRADE LEVEL WITHIN A HORIZONTAL

RADIUS OF 10 FEET FROM A LOOSE FILL CONNECTION AND WITHIN A HORIZONTAL RADIUS OF 5 FEET FROM A TIGHT

ABOVE GRADE

CONDUIT	SIZE	WIRE	ТҮРЕ	SOURCE	DESTINATION	PURPOSE
1	1"		INTRINSICALLY SAFE	WATER TOWER MECHANICAL ROOM	AST GASOLINE END J-BOX	AST PROBES AND INTERSTITIAL SENSOR
2	3/4"		INTRINSICALLY SAFE	AST GASOLINE END J-BOX	INTERSTITIAL RISER ON TANK	INTERSTITIAL SENSOR
3	3/4"		INTRINSICALLY SAFE	AST GASOLINE END J-BOX	GASOLINE TANK ATG RISER J-BOX	GASOLINE AST PROBE AND DIESEL AST PROBE
4	3/4"		INTRINSICALLY SAFE	GASOLINE TANK ATG RISER J-BOX	DIESEL TANK ATG RISER J-BOX	DIESEL AST PROBE
5	3/4"		INTRINSICALLY SAFE	WATER TOWER MECHANICAL ROOM	DEF AST	INVENTORY PROBE
11	3/4"		LOW VOLTAGE	WATER TOWER MECHANICAL ROOM	PETRO VEND PEDESTAL	DATA COMMUNICATION
12	1"		LOW VOLTAGE	WATER TOWER MECHANICAL ROOM	GASOLINE END LIGHT POLE	FUTURE CAMERAS
13	1"		LOW VOLTAGE	WATER TOWER MECHANICAL ROOM	DIESEL END LIGHT POLE	FUTURE CAMERAS
14	3/4"		LOW VOLTAGE	PETRO VEND PEDESTAL	GASOLINE DISPENSER	DATA COMMUNICATION
15	3/4"		LOW VOLTAGE	PETRO VEND PEDESTAL	DIESEL DISPENSER	DATA COMMUNICATION
16	1"		LOW VOLTAGE	WATER TOWER MECHANICAL ROOM	REMOTE EMERGENCY STOP BOLLARD	SPARE (PULL STRING ONLY WITH SEAL OFF)
21	3/4"	2#12, #12	HIGH VOLTAGE	WATER TOWER MECHANICAL ROOM	GASOLINE END POWER J-BOX	GASOLINE STP MOTOR POWER
22	3/4"	2#12, #12	HIGH VOLTAGE	WATER TOWER MECHANICAL ROOM	DIESEL END POWER J-BOX	DIESEL STP MOTOR POWER
23	3/4"	2#12, #12	HIGH VOLTAGE	GASOLINE END POWER J-BOX	GASOLINE STP MOTOR	GASOLINE STP MOTOR POWER
24	3/4"	2#12, #12	HIGH VOLTAGE	DIESEL END POWER J-BOX	DIESEL STP MOTOR	DIESEL STP MOTOR POWER
25	3/4"	2#10, #10G	HIGH VOLTAGE	WATER TOWER MECHANICAL ROOM	GASOLINE DISPENSER	DISPENSER POWER
26	3/4"	2#10, #10G	HIGH VOLTAGE	WATER TOWER MECHANICAL ROOM	DIESEL DISPENSER	DISPENSER POWER
27	3/4"	2#12, #12	HIGH VOLTAGE	WATER TOWER MECHANICAL ROOM	PETRO VEND PEDESTAL	PETRO VEND PEDESTAL POWER
28	1"	2#12, #12	HIGH VOLTAGE	WATER TOWER MECHANICAL ROOM	GASOLINE END LIGHT POLE	AREA LIGHT POWER
29	1"	2#12, #12	HIGH VOLTAGE	WATER TOWER MECHANICAL ROOM	DIESEL END LIGHT POLE	AREA LIGHT POWER
30	3/4"	2#12, #12	HIGH VOLTAGE	WATER TOWER MECHANICAL ROOM	REMOTE EMERGENCY STOP BOLLARD	EMERGENCY STOP POWER
31	3/4"	2#12, #12	HIGH VOLTAGE	WATER TOWER MECHANICAL ROOM	AST DIESEL END POWER J-BOX	OVERFILL ALARM POWER
32	3/4"	2#12, #12	HIGH VOLTAGE	AST DIESEL END POWER J-BOX	OVERFILL ALARM OVERFILL	ALARM POWER
33	1"	2#12, #12	HIGH VOLTAGE	WATER TOWER MECHANICAL ROOM	DEF AST	DEF STP MOTOR AND HEATER POWER
34	1"	2#10,#10G	HIGH VOLTAGE	DIESEL END LIGHT POLE	PARKING LOT LIGHT POLE	AREA LIGHT POWER

4/24/2023 BIDS 4/6/2023 PERMITS 3/29/2023 OWNER REVIEW 1/5/2023 OWNER REVIEW

REVISIONS

Drawn By GAC Designer GAC Reviewer RMM

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> 211407 SHEET NO.

E101

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ELECTRICAL SITE PLAN

SCALE: 1" = 10'

LOW VOLTAGE WIREWAY (7) SEE PLANS FOR ACTUAL CONDUIT QUANTITY (A) WIREWAY ELEVATION NO SCALE

DIESEL DISPENSER

DIESEL FILL BOX—

PETROVEND PEDESTAL

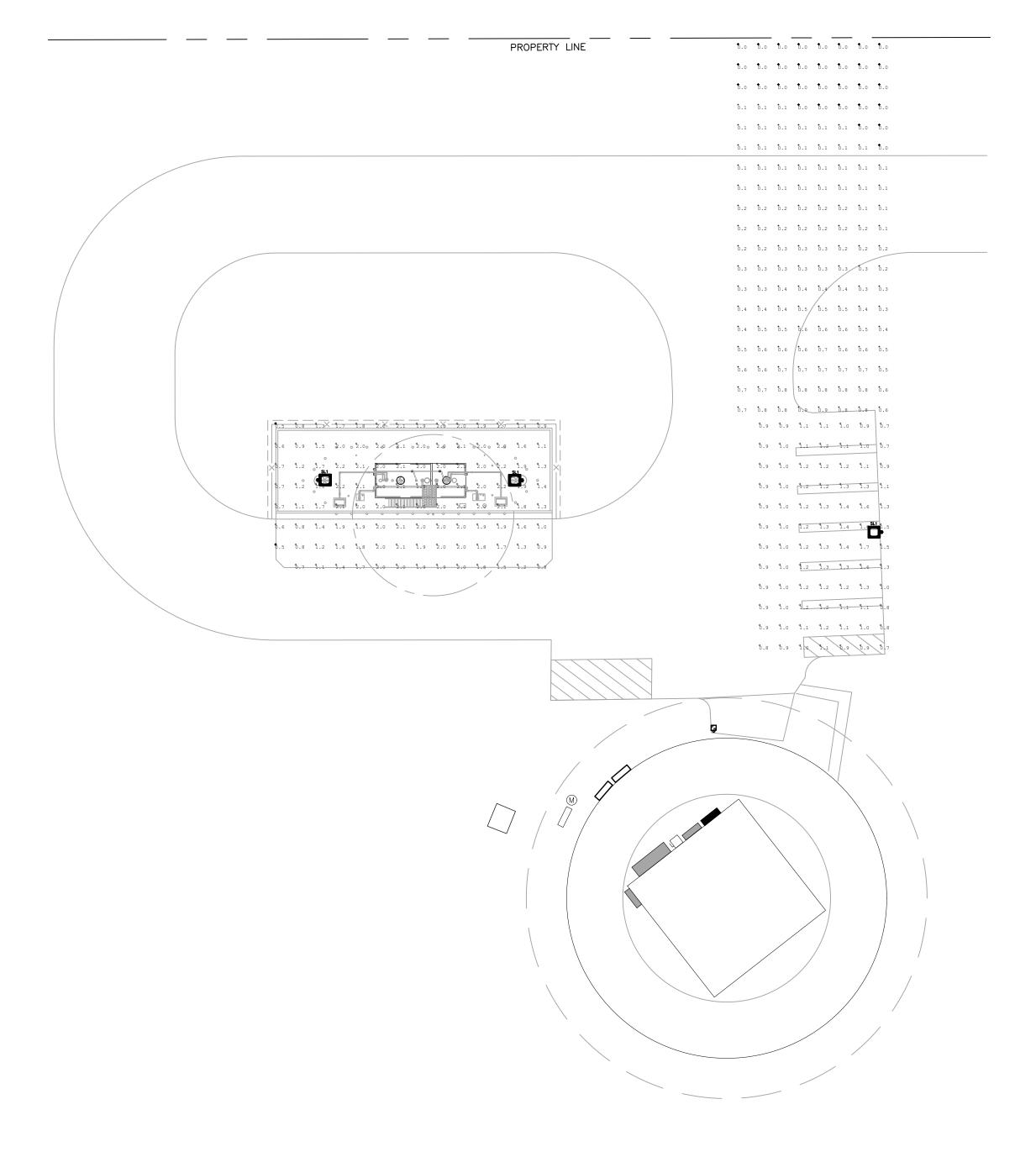
GASOLINE DISPENSER

120V WIREWAY 6

SEE PLANS FOR ACTUAL CONDUIT QUANTITY

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0 0 0





Luminaire Sc	Luminaire Schedule									
Symbol	Qty	Label	Arrangement	Description	Tag	LLF	Luminaire	Luminaire		
							Lumens	Watts		
4	3	DSX1_LED_P2_40K_T3M_MVOLT	Single	DSX1 LED P2 40K T3M MVOLT	SL1	0.850	8640	70		

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Property Line_1	Illuminance	Fc	0.28	0.9	0.0	N.A.	N.A.
Site Plan	Illuminance	FC	1.43	2.2	0.5	2.86	4.40

FSDDGGCK
Engineers | Architects | Scientists | Constr

Charter Township of Van Buren

REVISIONS

4/24/2023 BIDS 4/6/2023 PERMITS 3/29/2023 OWNER REVIEW 1/5/2023 OWNER REVIEW

1/5/2023 OWNER RE

Drawn By GAC

Designer GAC

Designer GAC
Reviewer RMM
Manager PK2

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PROJECT NO. **211407**

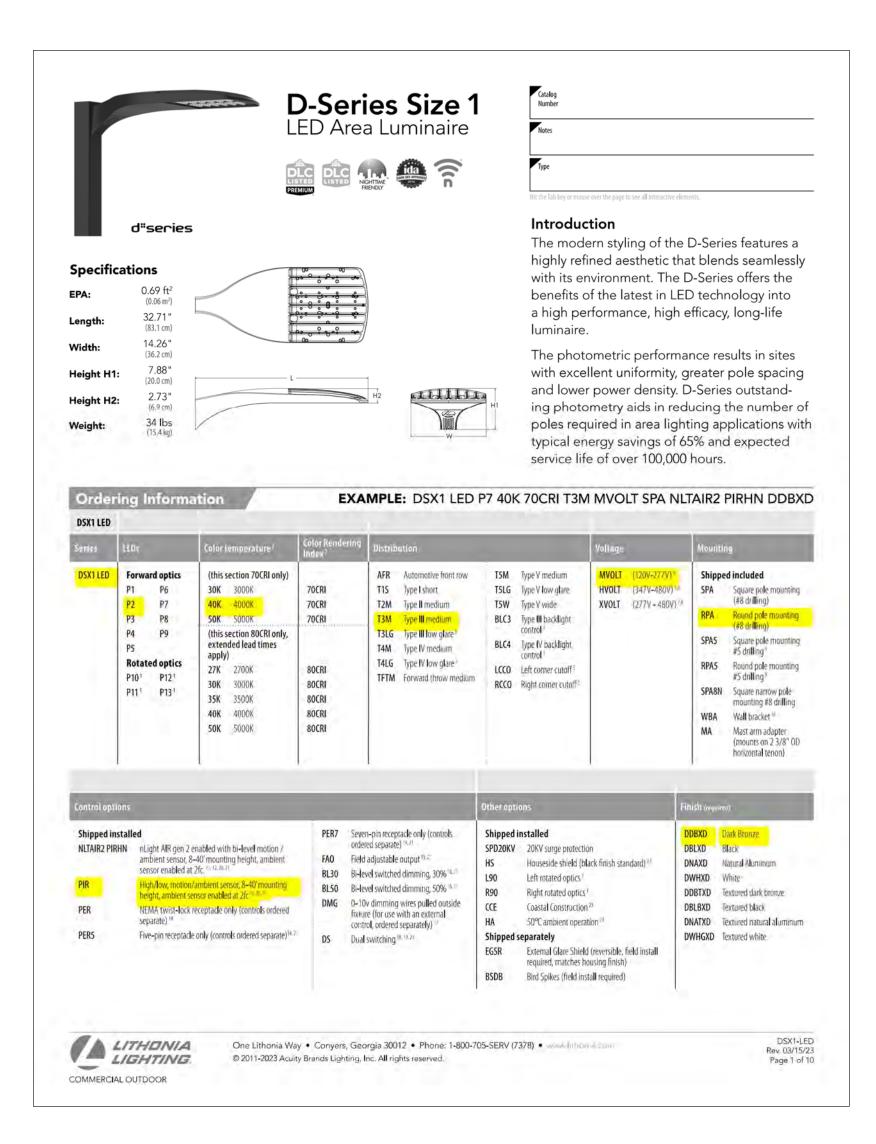
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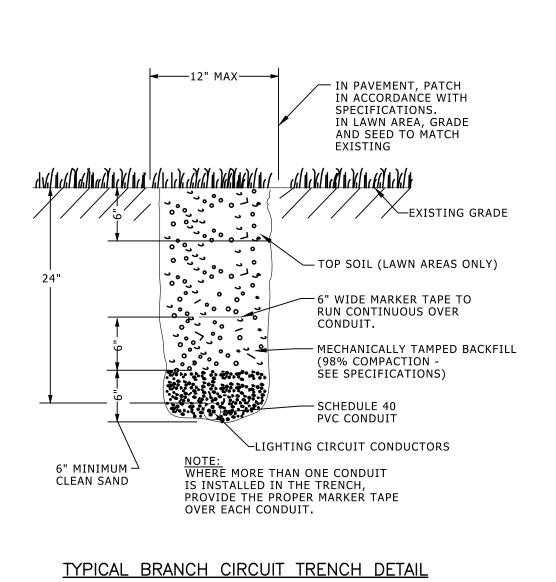
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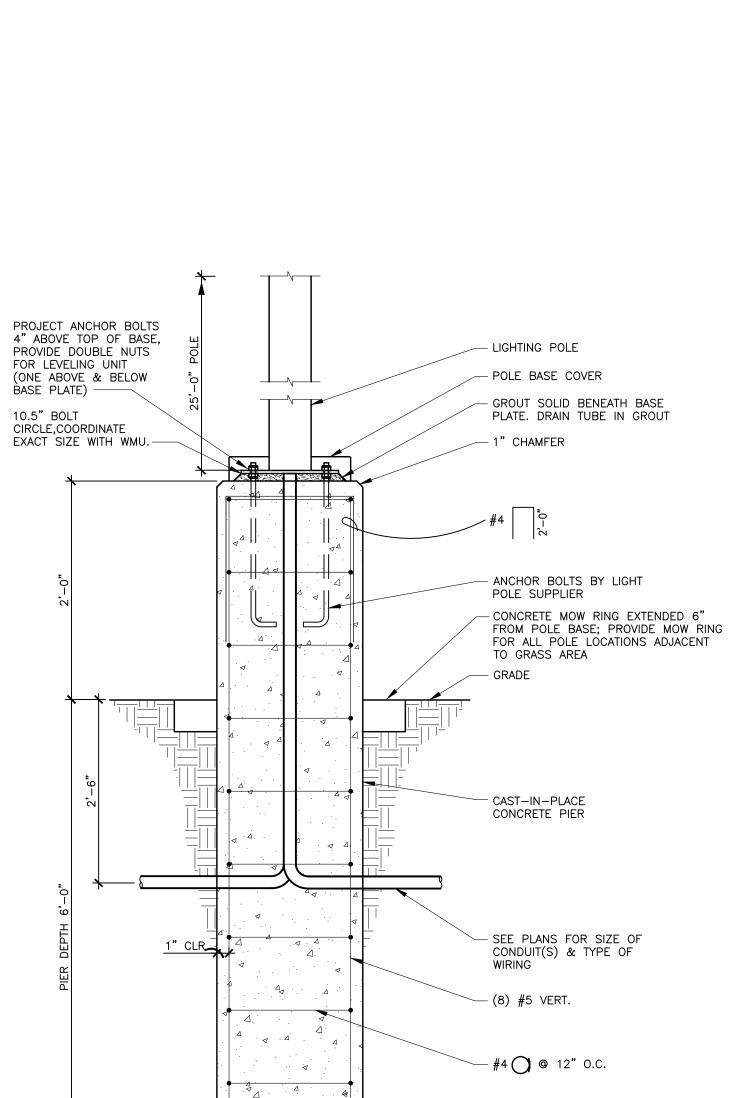
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NOT TO SCALE







PANELBOARD ID

- 1. SEE GENERAL NOTES ON SHEET E001, FOR ADDITIONAL REQUIREMENTS.
- 2. SEE CIVIL DRAWINGS FOR ADDITIONAL UTILITY INFORMATION. COORDINATE ALL WORK WITH SITE TRADES.

KEY NOTES

- 1. PROVIDE 3#6, #10G, 1"C.
- 2. INSTALL NEW CIRCUIT BREAKER TO MATCH EXISTING.

ONE LINE DIAGRAM KEY EXISTING TO REMAIN EXISTING TO BE REMOVED PROVIDE NEW

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REVISIONS

4/24/2023 BIDS 4/6/2023 PERMITS

3/29/2023 OWNER REVIEW 1/5/2023 OWNER REVIEW Drawn By GAC Designer GAC

Reviewer RMM

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> PROJECT NO. 211407

SHEET NO.

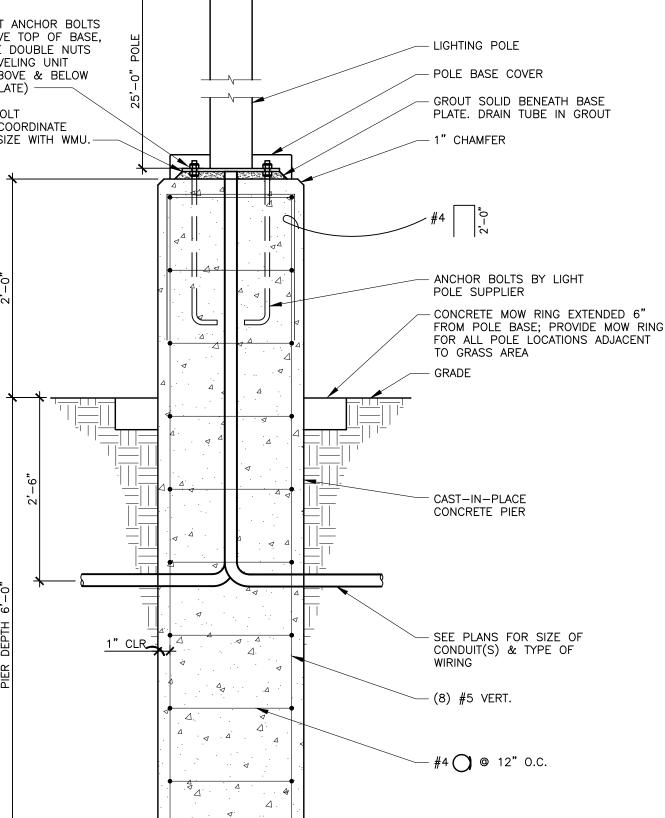
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THREE PHASE PANELBOARD Panel C 1 OF 1 FILE NO: 211407
PROJECT: Van Buren Township Fuel Tank DATE: March 29, 2023 VOLT AMPS **VOLT AMPS** DESCRIPTION DESCRIPTION CKT BKR F CKT BKR CKT NO NOTE LTG MTRS REC OTHER LTG MTRS REC OTHER NOTE CKT NO 1P20 A 1P20 DIESEL STP DISP POWER N B N SWITCHED NEUTRAL 180 E-STOP POWER 1P20 A 1P20 OVERFILL ALARM POWER 1P20 B 1P20 ALARM POWER AREA LIGHTING C 1P20 1P20 A 1P20 360 PETRO VEND PEDESTAL POWER 1P20 B 2P20 A 2P20 STP PUMP GASOLINE 1050 1050 - B 1P20 A 1P20 CONTROLS 360 TLS-350 360 SITE CONTROLLER 1P20 B 1P20 ALARMS NOT A SPACE 38 NOT A SPACE NOT A SPACE NOT A SPACE NOT A SPACE 40 41 42 NOT A SPACE NOT A SPACE 210 2,280
 LTG
 MTRS
 REC
 OTHER

 0
 2,460
 0
 900
 900 PHASE A VOLTAGE: 208 360 PHASE B CIRCUIT CAPACITY: 0 PHASE C MAIN BREAKER: 60 AMPERES 6,030 TOT LOAD (VA) 210 4,560 0 1,260 LOAD (VA) MOUNTING:
 100%
 100%
 Note 1
 100%
 DEMAND FACTOR
 6,030 TOT DEMAND LOAD (VA) AIC RATING: 10K AMPERES 0 1,260 DEMAND LOAD (VA) 16.7 TOT DEMAND AMPS NEUTRAL (%): 20.9 TOT DEMAND AMPS X 1.25 LOCATION: 1. DEMAND FACTOR BASED ON NEC TABLE 220.44 - DEMAND FACTORS FOR NON-DWELLING RECEPTACLES 2. SEE ONE LINE DIAGRAM FOR OVERCURRENT DEVICE SIZE AND FEEDER SIZE 3. P = THIS CIRCUIT REQUIRES A POWER INTEGRITY MODEL #ZTAS-03-15-1, SURGE SUPPRESSION Panel C 4. E = THIS CIRCUIT IS DISCONNECTED WITH E-STOP CONTROLS 5. L = THIS CIRCUIT BREAKER IS PROVIDED WITH A PADLOCKABLE DEVICE. NOTES

PANELBOARD DESCRIPTION



LIGHT POLE BASE DETAIL NO SCALE

30" DIAMETER

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C

-RUBBER HOSE

2/3 UP TREE

TURNBUCKLE OR #12
DOUBLE WIRE TWISTED

GUYING CABLE, FOR

TREES OVER 2 1/2"

AWAY FROM BALL

—EARTH SAUCER

-PLANTING SOIL

PLAN VIEW

-UNDISTURBED SUBGRADE

-SCARIFY 4" DEEP, RECOMPACT

CALIPER (3 PER TREE)

TURN BACK UPPER 1/3

OF BURLAP & CUT ROPE

RESOLUTION.

3. FURNISH AND INSTALL 4" OF FURNISHED MODIFIED TOPSOIL

4. EXTRA CARE SHOULD BE TAKEN TO PREVENT TURF SEED OR NATURAL AREA SEED FROM GETTING INTO PLANT BEDS AND

MULCH TO ALL PLANT BEDS AND TREE INSTALLATIONS. 6. LANDSCAPE CONTRACTOR SHALL COORDINATE ALL IRRIGATION

INSTALLATION. 7. ALL TREES SHOULD HAVE A STRONG CENTRAL LEADER UNLESS NOTED OTHERWISE.

IN EXCELLENT HEALTH, THE LANDSCAPE ARCHITECT HAS THE RIGHT TO REJECT ALL MATERIALS THAT DO NOT MEET THE REQUIREMENTS OF THE PLANS AND SPECIFICATIONS.

REQUIREMENTS OF THE SPECIFICATIONS. 10. MAINTAIN 5' CLEARANCE FOR ALL TREES FROM MAJOR

DISCREPANCIES WITH THE CONSTRUCTION MANAGER. 11. ANY LANDSCAPE MATERIAL THAT FAILS WITHIN ONE YEAR FROM THE BUILDING OPENING SHALL BE REMOVED AND REPLACED.

KEY NOTES

1. ALUMINUM LANDSCAPE EDGING

ZONING DISTRICT: M-1 LIGHT INDUSTRIAL SETBACKS: FRONT YARD

-1/2" CRUSHED STONE (25A) MIN 4" DEEP SEE PLAN — ALUMINUM EDGER GEOTEXTILE FABRIC

GRAVEL MAINTENANCE

1. REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND THE ACTUAL CONDITIONS TO THE CONSTRUCTION MANAGER FOR

2. FURNISH AND INSTALL 8" OF FURNISHED MODIFIED TOPSOIL FOR ALL PLANT BEDS, UNLESS OTHERWISE NOTED ON THE DETAILS, WITH A PH 7.0 THAT CONTAINS ALL THE MICROORGANISMS NECESSARY FOR HEALTHY PLANT GROWTH. THE CONTRACTOR SHALL PROVIDE SOIL SAMPLE AND SUPPLIER TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO DELIVERY.

FOR ALL TURF SEEDED OR SODDED AREAS FOR FINE GRADING, UNLESS OTHERWISE NOTED.

ADJACENT NATURAL AREAS. 5. FURNISH AND INSTALL 2-3" OF SHREDDED HARDWOOD

8. ALL NURSERY STOCK SHALL BE FIRST CLASS QUALITY AND

9. ALL NURSERY STOCK MATERIAL SHALL MEET ALL

WATER, ELECTRIC, GAS, AND SEWER LINES. REPORT

LAWN AREA- SEED MIX

COMMON NAME	PROPT BY WT	PURITY %	GERMINAT
KENTUCKY BLUEGRASS IMPROVED TURF—TYPE TALL FESQUE	20% 70%	95% 95%	85% 85%
PERENNIAL RYEGRASS	10%	95%	85%

ZONING

SIDE YARD (ONE) SIDE YARD (TOTAL OF 2) 40 FT 80 FT REAR YARD

MAINTENANCE NOTES

1. OWNER AGREES TO SEASONAL MAINTENANCE PROGRAM AND WILL REPLACE ALL DISEASED, DEAD, OR DAMAGED PLANTS AFTER THE AGREED UPON WARRANTY PERIOD. THE OWNER AGREES TO REPLENISH MULCH, CONTROL WEEDS, FERTILIZE, AND PRUNE UPON COMPLETION OF CONSTRUCTION AND AFTER THE AGREED UPON WARRANTY

AREA STONE BED

NO SCALE LS-011

ALUMINUM EDGER-

PLANT SCHEDULE

TYLER ROAD

50' FRONT YARD SETBACK

WIDE DRAINAGE

-EDGE OF MANICURED

LAWN RESTORATION

CD 9

SCREENING FENCE

BLUE PRINCE AND PRINCESS HOLLY

CENTERED IN 2' WIDTH

GRAVEL MAINTENANCE

SWALE Q

-EXISTING TREES TO REMAIN,

PLACE 5' DIA MULCHED TREE RING AROUND EXISTING TREES

> FUEL TANK AND PUMPS. SEE FUELING

FENCE, SEE THIS SHEET FOR DETAIL

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SHEETS-

<u>CAL</u> 3"CAL BOTANICAL / COMMON NAME <u>REMARKS</u> ACER RUBRUM 'FRANKSRED' / RED SUNSET® MAPLE B & B 3"CAL PINUS STROBUS / WHITE PINE В & В PLATANUS X ACERIFOLIA 'MORTON CIRCLE' / EXCLAMATION!TM LONDON PLANE TREE B & B 3"CAL 3"CAL QUERCUS ELLIPSOIDALIS / NORTHERN PIN OAK В & В TILIA TOMENTOSA 'STERLING' / STERLING SILVER LINDEN B & B 3"CAL ORNAMENTAL TREES QTY BOTANICAL / COMMON NAME <u>CONT</u> **REMARKS** MATCHED. 3 OR 5 STEM CLUMP CERCIS CANADENSIS / EASTERN REDBUD MULTI-TRUNK В & В <u>SIZE</u> BOTANICAL / COMMON NAME <u>REMARKS</u> CHAMAECYPARIS PISIFERA 'DOW WHITING' / SOFT SERVE® SAWARA CYPRESS 5 GAL ILEX X MESERVEAE 'BLUE PRINCE' & 'BLUE PRINCESS' / 1 MALE, 5 FEMALE SHRUBS 5 GAL

-EXISTING TREE LINE

/ PM`

-EXISTING FENCE TO

-WATER TOWER OVERHANG

REMAIN

WATER TOWER

-PLACE 5' DIA TREE RING

AROUND PROPOSED TREES

LANDSCAPE PLAN SCALE: 1" = 30'

2" MIN. LAYER

OF MULCH-

EARTH SAUCER

ON LOW SIDE —

MERCURY STAGGERED COMPOSITE INFILL - VINYL POST TYPICAL PANEL



TYPICAL FENCE PANEL ELEVATION NO SCALE

COLOR TO BE DETERMINED

CONCRETE POST

FOUNDATION —



GRADE

ZONING CALCULATIONS

REQUIRED: 15.03 TREES

PRUNE AND THIN AS NECESSARY DO NOT

REMOVE LEADER -

4" MIN. LAYER

2"x2"x30"

HARDWOOD STAKE

NO SCALE

ENDECK DECKING

WOODLAND/FOREST SERIES
1" X 5 1/2" INFILL SLATS
(COLOR TBD BY DESIGNER)

– 5"X3/16" VINYL SQ. TUBE POST

DRIVEN FLUSH

WITH GRADE-

SHREDDED MULCH-

-ORIGINAL SLOPE

-MODIFIED SLOPE

PLANTING SOIL MIX

WITH 1/3 PEAT

-UNDISTURBED SUBGRADE

TURN BACK UPPER 1/3

ROPE AWAY FROM BALL

<u>PLAN VIEW</u>

4'-3" ON CENTER MAX. POST SPACING

OF BURLAP & CUT

SUBGRADE TO INHIBIT

-MOUND EXISTING

SETTLING & AID

DRAINAGE

TREE AND SHRUB

SLOPE PLANTING DETAIL

FRONTAGE LANDSCAPING: 1 TREE PER 40' LF OF FRONTAGE

1 ORN. TREE PER 100' LF 8 SHRUBS PER 40' LF

4 EXISTING TREES + 9 TREES + 5 ORN. TREES *SHRUBS REQUIREMENT WAIVED BY VARIANCE

*451' LF OF DEVELOPED FRONTAGE

REQUIRED: 12.9 TREES + 5.16 ORN. TREES + 103.2 SHRUBS

PARKING LOT SCREENING: LANDSCAPE HEDGE OR VISUAL SCREEN FROM ROAD

GREEN BELT BUFFER: BUFFER TYPE A= 10' WIDE AND 1 TREE PER 30'

INTERIOR PARKING LOT LANDSCAPING:
5% OF OF ALL PAVED PARKING LOT AREA TO BE GREEN SPACE

* CALCULATION: 6478.6 FT² PARKING LOT AREA * .05 = 323.9 FT² /360 FT² * 1 TREE

TREE PLANTING DETAIL: 2 1/2" cal. +

1-1/16" X -

5-9/16" HOLE

CUTÓUT OF POST

FOR 1" X 5-1/2" COMPOSITE SLÁT,

5"X3/16" VINYL— SQ. TUBE POST (COLOR TBD)

CONCRETE POST FOUNDATION ———

MERCURY STAGGERED

COMPOSITE INFILL - VINYL POST

TYPICAL PANEL

COLOR TO BE DETERMINED

GRADE

PROPOSED: 7 EXISTING TREES + 8 PROPOSED TREES

1 TREE PER 360 FT2 OF PARKING LOT GREEN SPACE

REQUIRED: 324 FT2 LANDSCAPE AREA + 1 TREE

PROPOSED: 583 FT² LANDSCAPE AREA + 1 TREE

* LANDSCAPING ONLY REQUIRED FOR WEST HALF OF DEVELOPED PROPERTY FRONTAGE = 516' LF

TYPICAL POST ELEVATION ~ A-A NO SCALE

PHONE: 531-329-4406

4/24/2023 BIDS 4/6/2023 PERMITS 3/29/2023 OWNER REVIEW 1/5/2023 OWNER REVIEW Drawn By

REVISIONS

Designer Reviewer MV Manager PK2

Hard copy is intended to be 24"x36" when plotted. Scale(s) indicated and graphic quality may not be accurate for any other size.

PROJECT NO. 211407

SHEET NO.

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CONTACT INFORMATION

CONSTRUCTION MANAGER

FUEL SYSTEM DESIGNER

DIAMOND Z ENGINEERING, INC.

5670 STATE ROAD CLEVELAND, OH 44134 P: 440.842.6501

GENERAL NOTES

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND RULES. FUEL SYSTEM CONTRACTOR SHALL ENSURE A SAFE WORK ENVIRONMENT EXISTS
- 2. FUEL SYSTEM CONTRACTOR SHALL OBSERVE ANY OVERHEAD OBSTRUCTIONS THAT MAY BE IMPACTED AS PART OF THE WORK.
- 3. FUEL SYSTEM CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL UNDERGROUND UTILITIES ARE LOCATED AND MARKED. ANY DAMAGE TO UTILITIES AS PART OF THE WORK SHALL BE BORNE BY THE FUEL SYSTEM CONTRACTOR.
- 4. FUEL SYSTEM CONTRACTOR SHALL TAKE DELIVERY OF AND UNLOAD ALL EQUIPMENT UPON ARRIVAL AS NEEDED. FUEL SYSTEM CONTRACTOR IS OTHERWISE RESPONSIBLE FOR ALL EQUIPMENT UNTIL SITE ACCEPTANCE AND TURN-OVER TO VAN BUREN TOWNSHIP.
- HAZARDOUS AREAS ARE DEFINED PURSUANT TO THE NATIONAL ELECTRIC CODE. THESE MUST BE OBSERVED WHEN INSTALLING SPARK GENERATING EQUIPMENT.
- FUEL SYSTEM CONTRACTOR SHALL SCHEDULE AND COORDINATE CRITICAL PHASE FIELD INSPECTIONS WITH THE FUEL SYSTEM DESIGNER. THE FUEL SYSTEM CONTRACTOR WILL PROVIDE AT LEAST 48 HOURS NOTICE BEFORE EACH INSPECTION. ANY ADDITIONAL COSTS ASSOCIATED WITH EXTENDED STAYS OR RETURN INSPECTIONS SHALL BE CHARGED BACK TO THE FUEL SYSTEM CONTRACTOR. CRITICAL PATH INSPECTIONS INCLUDE:
- A. FINAL INSPECTION, TESTING, AND COMMISSIONING.

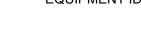
NOTE:

ANY DEVIATION FROM THE SPECIFIED **EQUIPMENT & MATERIALS MUST BE APPROVED** PRIOR TO INSTALLATION BY THE DESIGNATED CONSTRUCTION MANAGER.

LEGEND



EQUIPMENT IDENTIFIER





DETAIL IDENTIFIER

FUEL SYSTEM CONTRACTOR



UNDISTURBED SOIL

PEA GRAVEL

CONCRETE

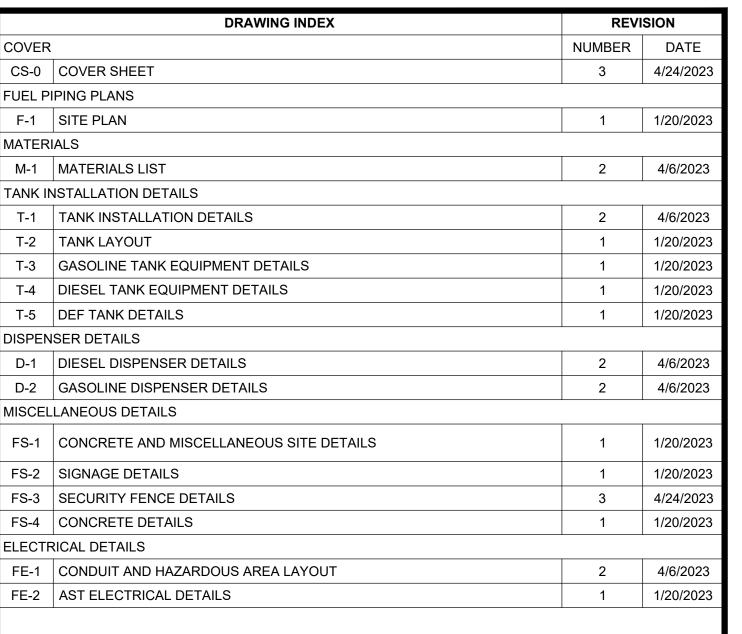


LIGHT POLE

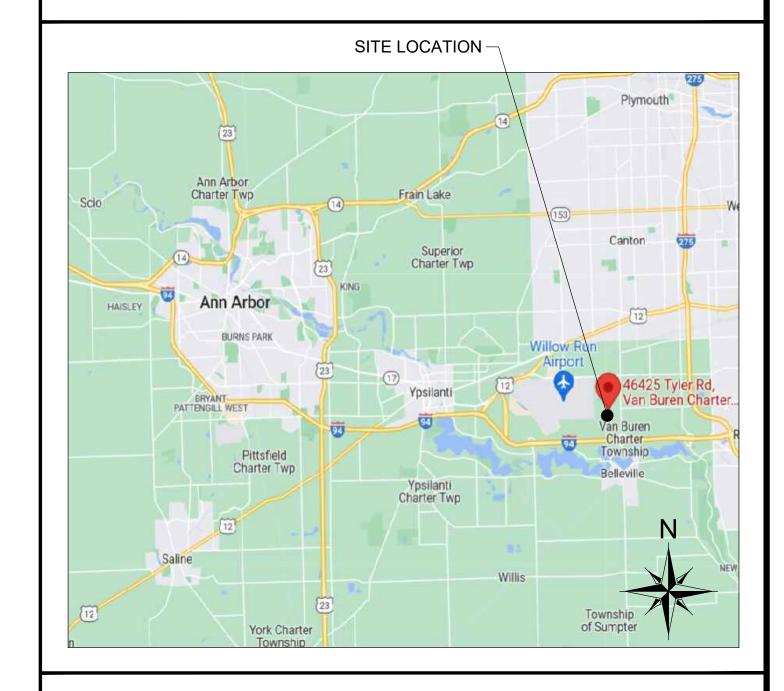
CATCH BASIN MANHOLE

VAN BUREN TOWNSHIP AST PROJECT

46425 TYLER ROAD VAN BUREN, MI 48111



LOCATION MAP



ONE CALL



48 HOURS BEFORE YOU DIG, CALL 1.800.482.7171 OR 811

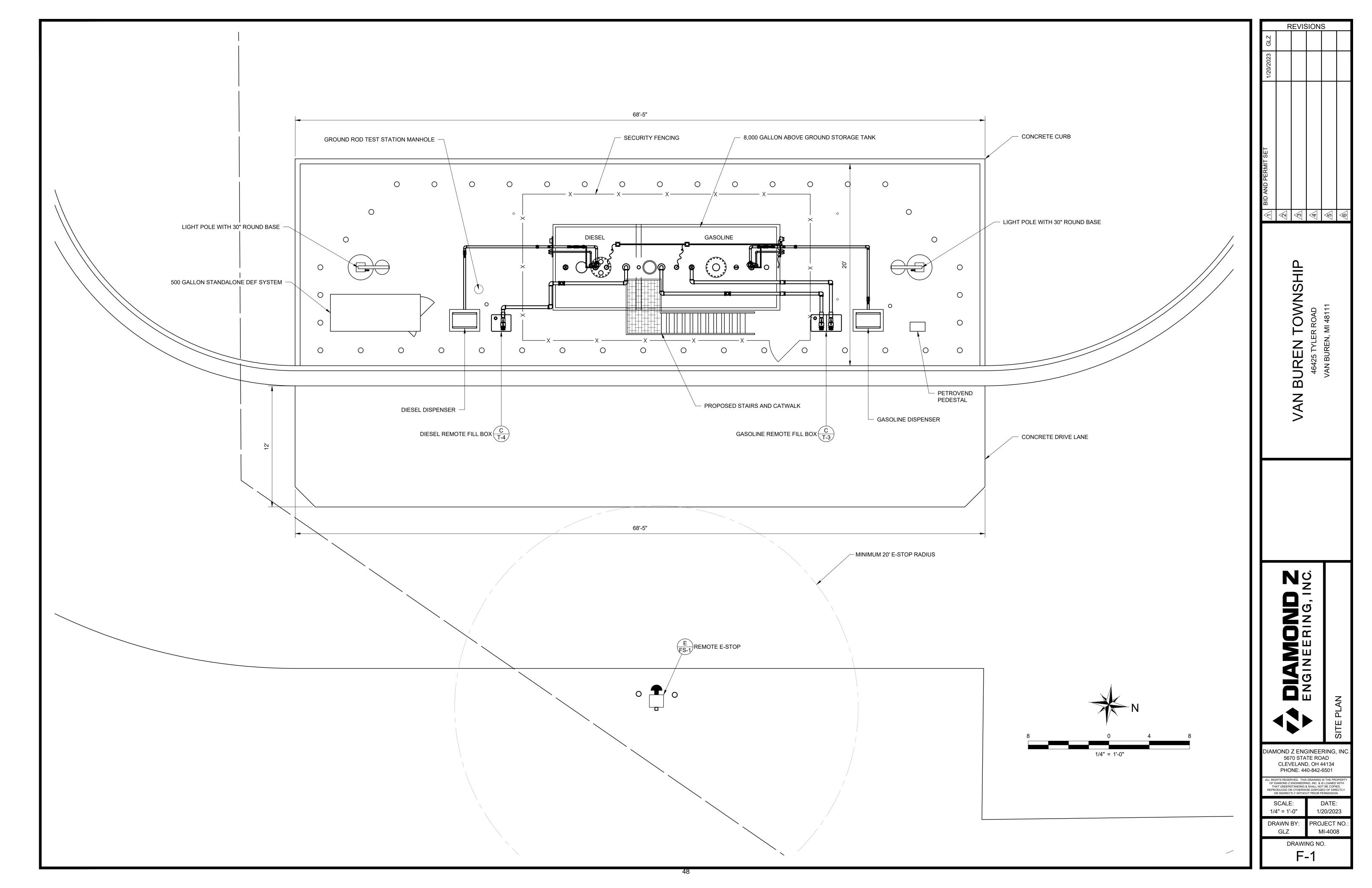
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CLZ	ERK	ZT9			
1/20/2023 GLZ	4/6/2023	4/24/2023			
BID AND PERMIT SET	REVISED BID AND PERMIT SET	REVISED BID AND PERMIT SET			
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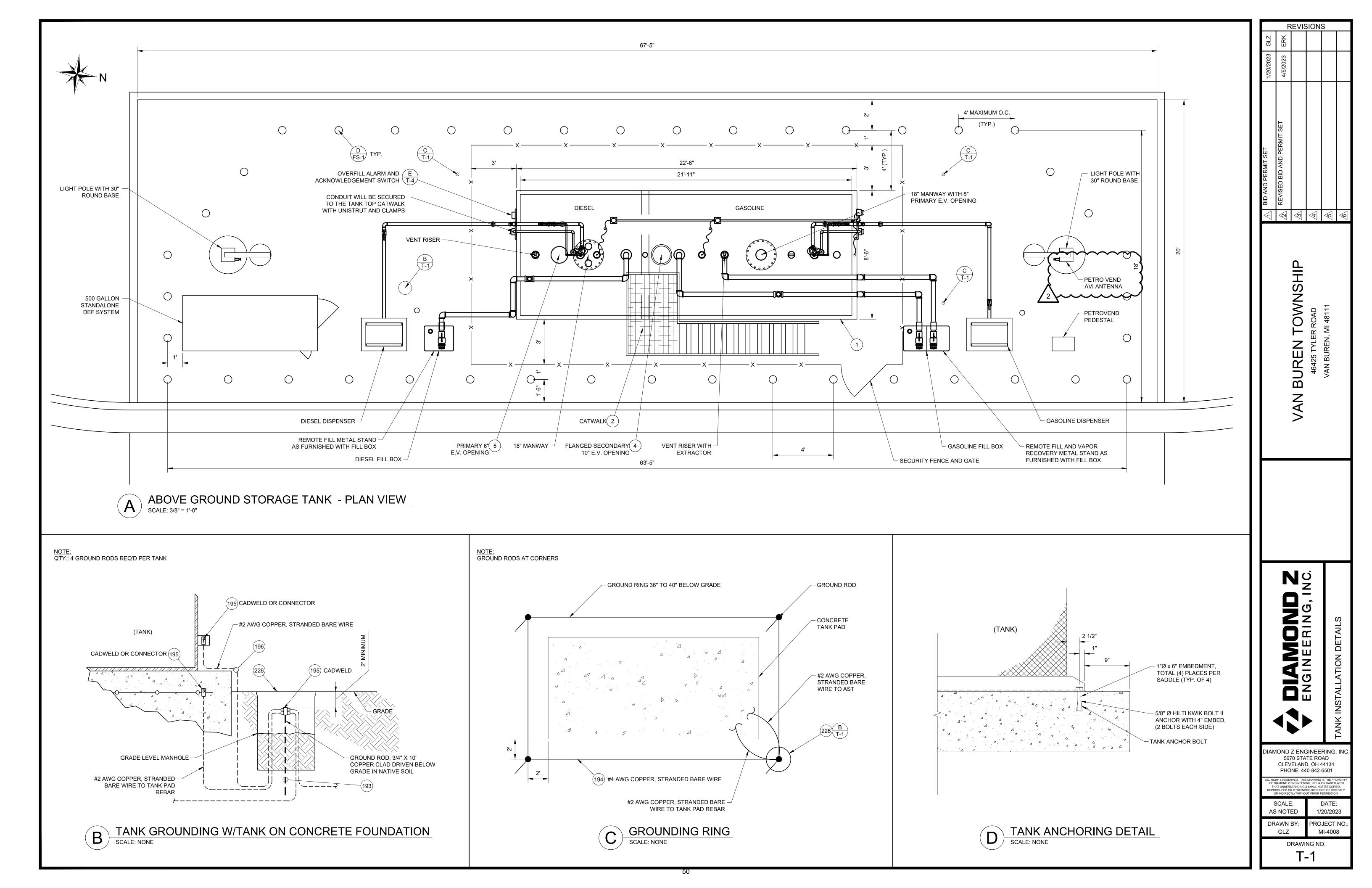
DIAMOND Z ENGINEERING, IN 5670 STATE ROAD CLEVELAND, OH 44134

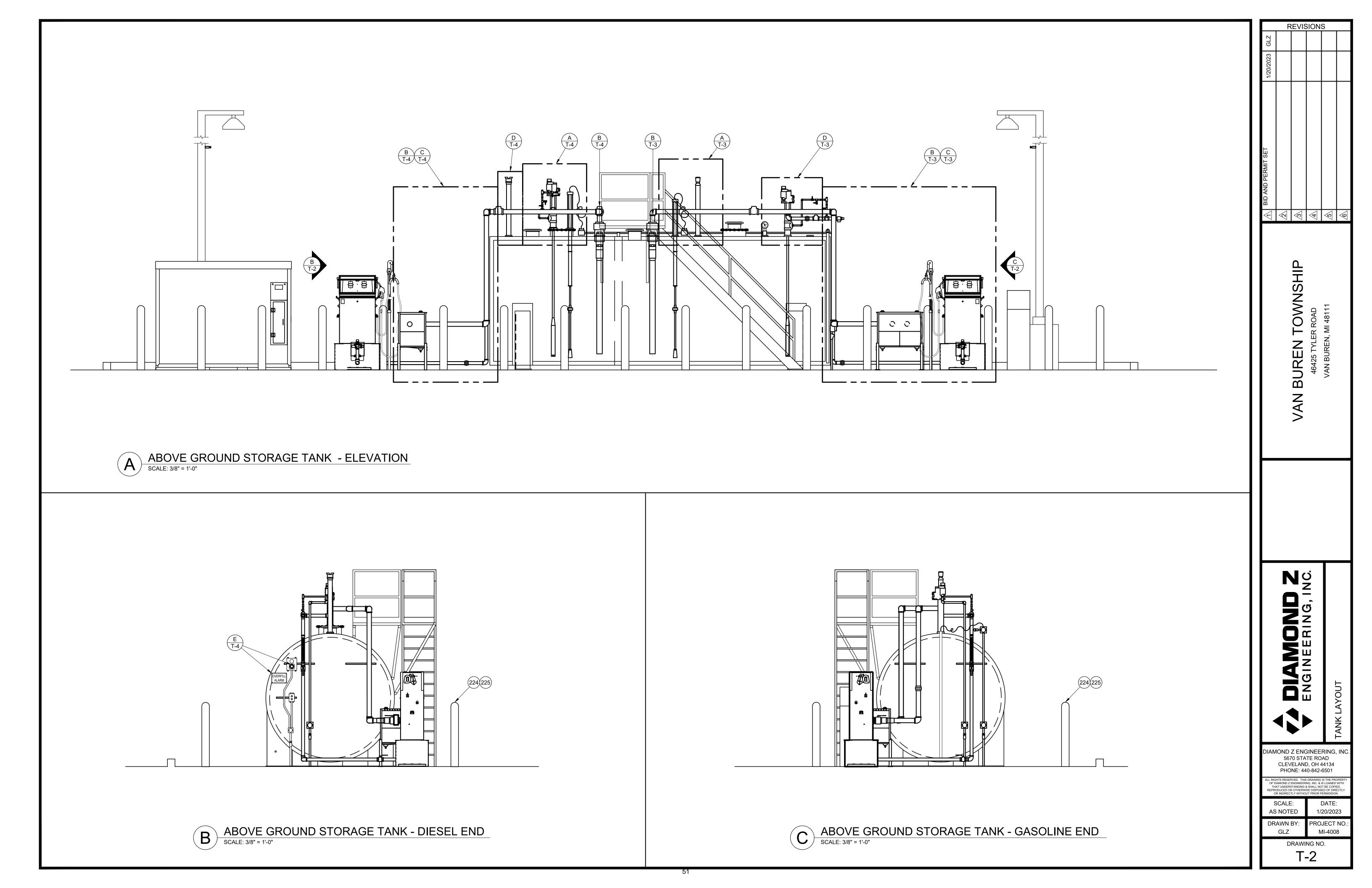
PROJECT NO DRAWING NO.

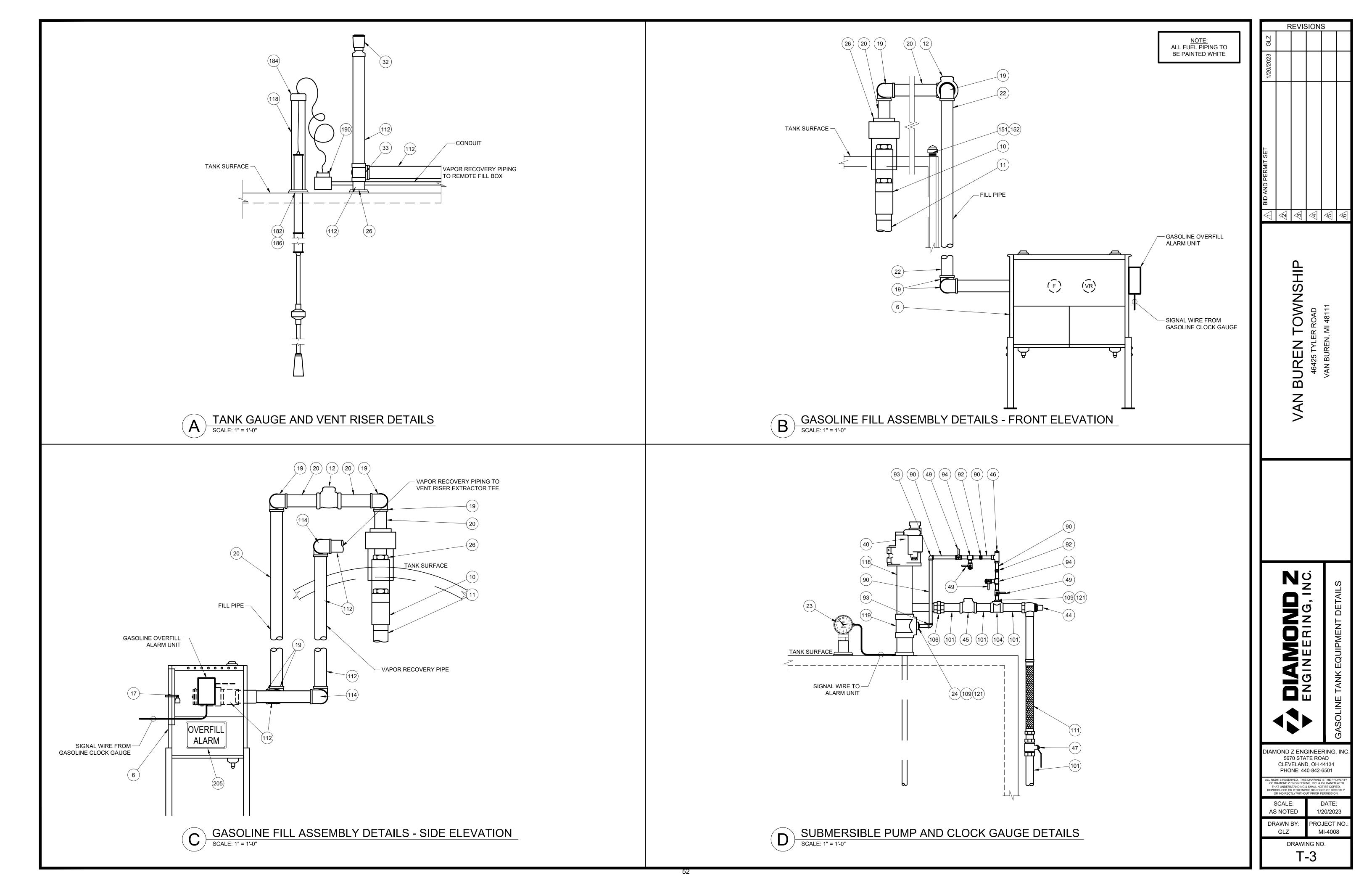
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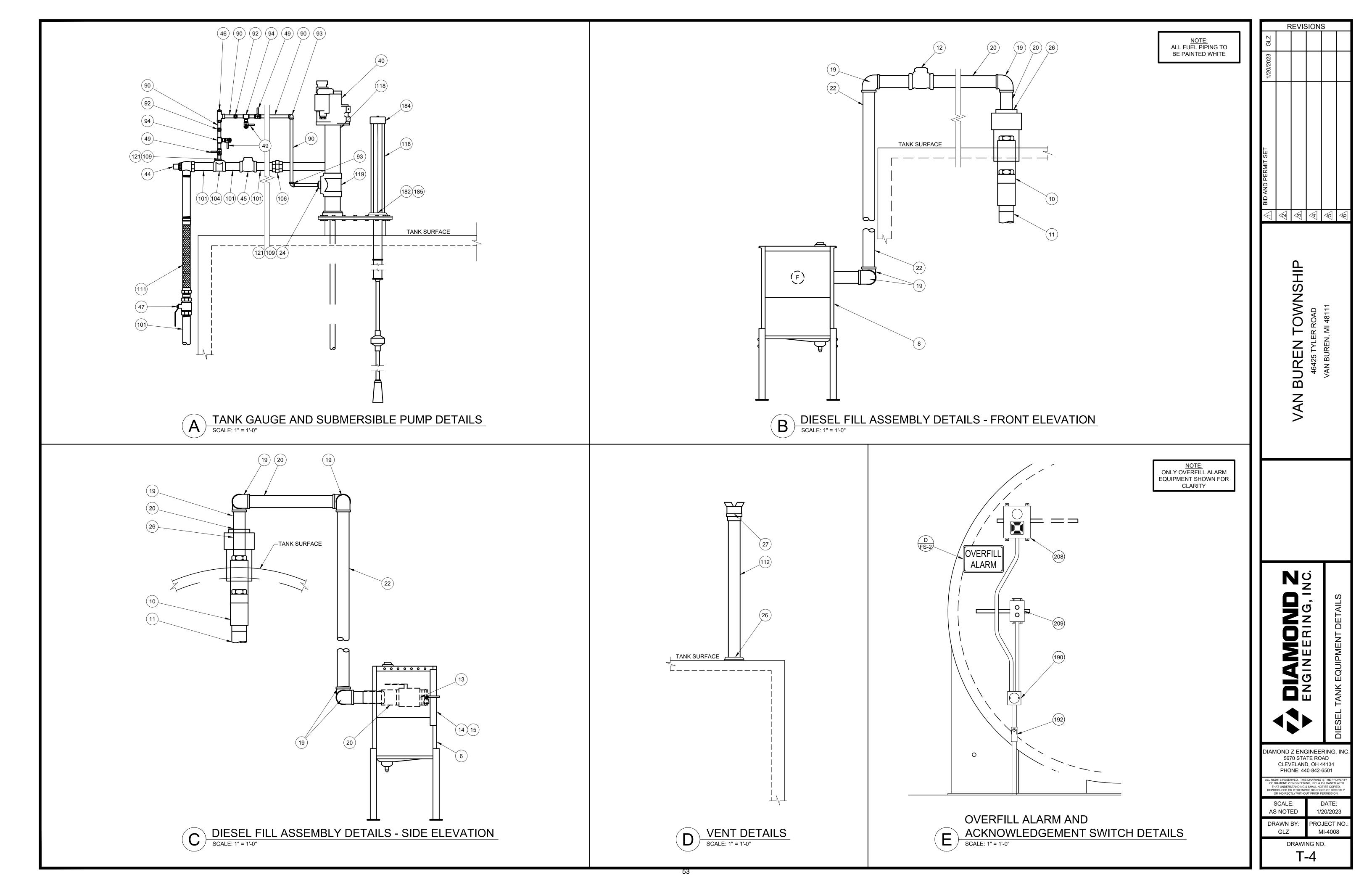


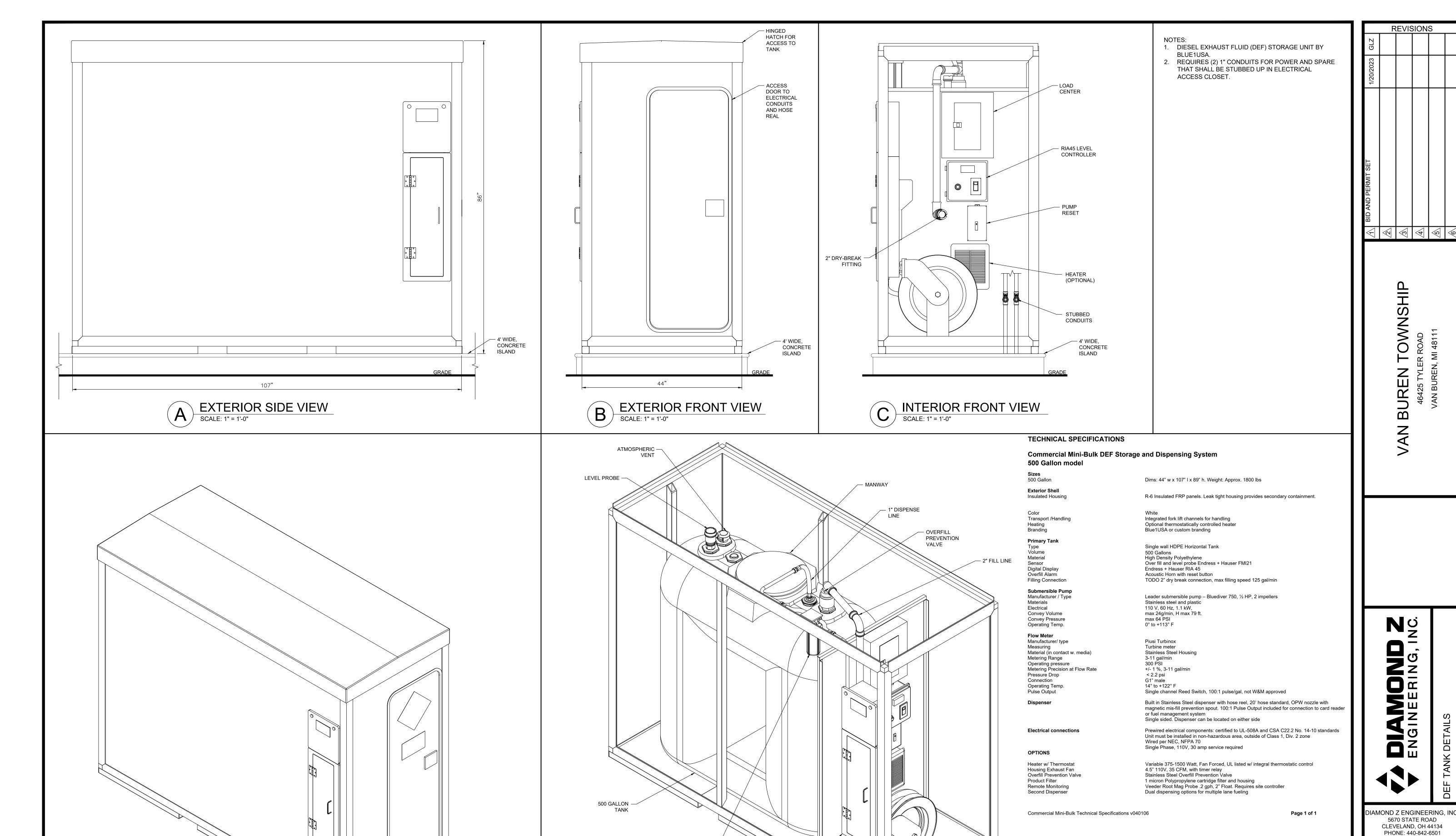
	TANK AND TANK TOP EQ	NUIDMENT					DISPENSING EQUIF	DMENT						ELECTRICAL						DEVIOLONIC	
ITEM DESCRIPTION			ОТУ	SUPPLIED	INSTALLED	JTEM DECORIDATION			OTV	SUPPLIED	INSTALLED	ITEM	DECORIDEION	ELECTRICAL	MODEL	OTV	SUPPLIED	INSTALLED	N.	REVISIONS	<u>'</u>
8.000 GALLON FIRE GUARD TANK 96" DIAMETER	MAKE	MODEL	QTY	ВҮ	ВҮ	ITEM DESCRIPTION REMOTE DISPENSER, 1-PRODUCT, 1-HOSE;	MAKE	MODEL	QTY	ВҮ	BY	IIEW	2-INCH INTERSTITIAL SENSOR RISER CAP AND	MAKE	MODEL	QIY	RV	RV	GLZ		
W/ WHITE URETHANE. 5,000 GALLON BASE	CTANDA/ADE	75-8000FGC-96	1	FSC	FSC	LOW HOSE; 2-SIDED; SIDE LOAD. INCLUDES: (1)	DENNETT	2744CND 47 D 1 CO CD				151	ADAPTER KIT	VEEDER ROOT	312020-928	1	FSC	FSC	023	23	
TANK (REGULAR GASOLINE) AND 3,000 GALLON END TANK (DIESEL)						P 4-CHANNEL PULSE OUTPUT, (1) LOWER J-BOX, (1) SO INTERNAL SPIN ON FILTER, (1) SD	BENNETT	3711SNR-17-P-J-SO-SD				152	NON-DISCRIMINATING INTERSTITIAL MICROSENSOR FOR STEEL TANKS	VEEDER ROOT	794380-344	1	FSC	FSC	,20/2	/6/20	
OSHA STAIRS & FULL CATWALK PAINTED SAFETY YELLOW. (STAIRS INSTALLED ON THE	STANWADE	75-8000FGC-96	INCL	FSC	FSC	60 STAINLESS STEEL LOWER DOORS WAYNE SELECT SERIES ELECTRONIC			1 1	FSC	FSC	179	FACTORY INSTALLED BIR / ACCUCHART SOFTWARE	VEEDER ROOT	333149-001		FSC	FSC	+	4	
SIDE)	STANWADE	75-6000FGC-90	INCL	F3C	F3C	DISPENSER, SINGLE HOSE, ISLAND LAYOUT WITH PULSE OUTPUT INTERFACE, INTERNAL	WAYNE	3/G7201D/2GJK-H//S2					TLS-450 PLUS WITH INTEGRAL PRINTER AND DISPLAY, INCLUDES 3.0-GPH LINE TEST CABILITY, 3 ETHERNET		1		1				
3 UNISTRUT-BOTH ENDS OF TANK	STANWADE	75-8000FGC-96	INCL	FSC	FSC	FILTER AND STAINLESS STEEL DOORS (REGULAR GASOLINE)	WATNE	3/G1201D/2G3N-11//32				180	PORTS, 2 USB PORTS, AND 1 HIGH VOLTAGE OUTPUT	VEEDER ROOT	860091-301	1	FSC	FSC			
4 10" FLANGE E.V. W/ O-RING 5 6" FLANGE E.V. W/ O-RING	MORRISON MORRISON	244OF-0400 AV 244OF-0050 AV	INCL	FSC	FSC	GASBOY 9800K COMMERCIAL ELECTRONIC						181	TLS-450 PLUS APPLICATION SOFTWARE	VEEDER ROOT	333545-001	1	FSC	FSC		_	
2- 3" 15 GALLON AST REMOTE SPILL	MORRISON		INCL	FSC	FSC	SERIES DISPENSER, ONE HOSE, SIDE LOAD WITH INTERNAL FILTER ADAPTER, STANDARD						182	TANK GAUGE MAG PLUS PROBE - 8'-0" (GASOLINE AND	VEEDER ROOT	846396-107	2	FSC	FSC			
6 CONTAINER DUAL PORTS - FEMALE THREADED		515-2300 AC	INCL	FSC	FSC	INTERNAL 30 MICRON FILTER (PART # R18189-30) PULSE OUTPUT, ELECTRIC	GASBOY ATLAS	9852KX-D-F-SSA				184	TANK PROBE ADAPTER AND CAP - NICKEL PLATED	OPW	62M-MA	2	FSC	FSC			
7 8" FLANGE E.V. W/ O-RING 3" 15 GALLON AST REMOTE SPILL CONTAINER -	MORRISON	244OF-0600 AV	INCL	FSC	FSC	TOTALIZER AND STAINLESS STEEL DOORS (FRONT & BACK) (DIESEL)			1	FSC	FSC		MAG PLUS FLOAT KIT, 4" WITH 10' CABLE (DIESEL)	VEEDER ROOT	846400-011	1	FSC	FSC	SET		
FEMALE THREAD	MORRISON	515-0300 AC	INCL	FSC	FSC	WAYNE SELECT SERIES ELECTRONIC			_				MAG PLUS PROBE ETHANOL BLENDED GASOLINE						ZMIT		
9 6" X 4" HEX HEAD REDUCER BUSHING 10 3" X 6" OVERFILL VALVE. FEMALE NPT	MORRISON MORRISON	1842900 1B	INCL	FSC	FSC	DISPENSER, ONE HOSE, ISLAND LAYOUT WITH PULSE OUTPUT INTERFACE, INTERNAL FILTER	WAYNE	3/G7201D/2GJK-H//S2				186	FLOAT KIT WITH PHASE SEPARATION DETECTION, 4" WITH 10' CABLE	VEEDER ROOT	886100-010	1	FSC	FSC	PEF		
11 3" X 10' DROP TUBE	MORRISON	9095A-3300AV 419-0200 1T	INCL	FSC FSC	FSC FSC	AND STAINLESS STEEL DOORS (DIESEL)						187	UNIVERSAL SENSOR/PROBE INTERFACE MODULE	VEEDER ROOT	332812-001	1	FSC	FSC	AND		
12 3" SWING CHECK VALVE THR. DUCT IRON	MORRISON	246ADI-0600AV	INCL	FSC	FSC	62 DISPENSER PEDESTAL	OPW	PPT-2136	2	FSC	FSC	188	UNIVERSAL INPUT/OUTPUT INTERFACE MODULE RISK MANAGEMENT SOFTWARE FOR .2-GPH LINE	VEEDER ROOT	332813-001	1	FSC	FSC	Ola Li	~	
13 3" BALL VALVE, DUCTILE IRON			INCL	FSC	FSC	63 DISPENSER PEDESTAL TOP (FOR BENNETT) DISPENSER PEDESTAL TOP (FOR WAYNE)	OPW	PPT-1120 PPT-1630	2	FSC	FSC	189	TEST ON-DEMAND, MONTHLY OR REPETITIVE AND	VEEDER ROOT	332972-009	1	FSC	FSC		<a><a><a><a><a><a><a><a><a><a><a><a><a><a><a><a><a><a><a><a><a><a><a><a><a><a><a><a>	2
14 3", PART F - MALE X MALE, THREADED-ALUMINUM	MORRISON	800F-A0600 IC	INCL	FSC	FSC	64 STABILIZER BAR KIT	OPW	SBK-1100J	2	FSC	FSC	190	.1-GPH LINE TEST ON-DEMAND OR AUTO EXPLOSION PROOF JUNCTION BOX			AS REQ'D	FSC	FSC		· [· ·]	
15 3" LOCKING DUST CAP	MORRISON	800DCA0600 IC	INCL	FSC	FSC	1-1/2" PRODUCT SHEAR VALVE,	FRANKLIN FUELING	662-501-902					EXPLOSION PROOF CAP ELBOW			AS REQ'D	FSC	FSC			
17 3" VAPOR RECOVERY CAP - CARB EVR APPROVED	MORRISON	323C-0100ACEVR	INCL	FSC	FSC	SINGLE POPPET, FEMALE TOP	OPW	10P-0150) 2	FSC	FSC	192	SEAL OFF			AS REQ'D	FSC	FSC			
18 3" 150# BLACK UNION	STANWADE	66-300	INCL	FSC	FSC	66 14' LONG, 3/4" HOSE, MALE X MALE, FOR GASOLINE AND DIESEL	GOODYEAR / CONTINENTAL	GY20021913	2	FSC	FSC	193	3/4" DIAMETER X 10' LONG COPPER BONDED GROUND ROD			4	FSC	FSC		ட	
19 3" 90D BLACK ELBOW	STANWADE	50-300	INCL	FSC	FSC	67 3/4" SWIVEL FOR GASOLINE AND DIESEL	HUSKY	350	2	FSC	FSC	194	#4 AWG BARE COPPER GROUND WIRE			AS REQ'D	FSC	FSC		₹	
20 3" X 3" BLACK NIPPLE	STANWADE	58-300X0300	INCL	FSC	FSC	68 8" LONG, 3/4" WHIP HOSE, MALE X MALE (GASOLINE AND DIESEL)	GOODYEAR / CONTINENTAL	20021965	2	FSC	FSC	195	GROUND ROD THERMAL CADWELD FOR UNDERGROUND USE			6	FSC	FSC		S	
21 3" X 4" BLACK NIPPLE	STANWADE	58-300X0400	INCL	FSC	FSC	3/4" MAGNETIC RECONNECTABLE BREAKAWAY	CONTINUENTAL					196	#2 AWG BARE COPPER GROUND WIRE			AS REQ'D	FSC	FSC		Z	
22 3" BLACK PIPE 22 2" CLOCK GAUGE W/ STAND FLOAT, MALE	STANWADE	10-300	INCL	FSC	FSC	69 WITH BLACK SCUFF HOUSING (GASOLINE AND DIESEL)	HUSKY	8330	2	FSC	FSC	197	FUEL CONTROL 3-PHASE PANEL WITH ASSOCIATED	FRANKLIN FUELING	CPS-0222X5ABMB		FSC	FSC		≥ 9	111
THREADS	MORRISON	918-0000 AG	INCL	FSC	FSC	70 NOZZLE, 10S (UNLEADED)	HUSKY	159579-04	1	FSC	FSC	- 107	RELAYS AND BREAKERS, 120/208 VAC EMERGENCY STOP WITH ALARMING COVER								l 48
24 4" X 2" BLACK HEX BUSHING	STANWADE	41-400X200	INCL	FSC	FSC	71 NOZZLE, XS 3/4" STANDARD LIGHT DUTY DIESEL	HUSKY	159597-03	1	FSC	FSC	198	(EXTERIOR)	FRANKLIN FUELING	IA-ESOCA	1	FSC	FSC		⊢	Z Ž
26 4" X 3" BLACK HEX BUSHING 27 3" VENT UPDRAFT	STANWADE MORRISON	41-400X300 354-0300 AV	INCL 1	FSC FSC	FSC FSC	74 HOSE RETRIEVER ASSEMBLY, WITH WEIGHT	MORRISON	610-0100 AR	2	FSC	FSC	/ _N	PETRO VEND PV-ENT-DX - INCLUDES ONE PV200 ISLAND TERMINAL WITH PEDESTAL (PART #		1				6 1	Z	REJ
28 4" BLACK PLUG	STANWADE	334-0300 AV	INCL	FSC	FSC	75 HOSE BUN, 1.25" (FOR RETRACTOR ASSEMBLY)	MORRISON	610BUN0125 1B	2	FSC	FSC	100	20-4359-40), MOUNTING BRACKET (PART # 20-4428) NUMERIC KEY PAD (PART # 20-4444-YES), PROXIMITY	OPW	PV-ENT-DX	1	FSC	FSC		7	BD
HI-WAY LOW SULFUR DIESEL DECAL KIT,					7	76 NOZZLE READER ASSEMBLY FOR GASOLINE	OPW	20-4458	1	FSC	FSC	199	READER, MAG STRIPE READER, AND INTERNAL FUEL SITE CONTROLLER (FSC3000) FOR ELECTRONIC	OF W	V-LN1-DX	1)	JR 4642	ΑĀ
29 #2-(RED), #0-(BLUE), #0-(YELLOW), (WHITE)-BLANK	STANWADE	99-DDLSD	INCL	FSC	FSC	NOZZLE NOZZLE READER ASSEMBLY FOR DIESEL	OPW	20-4459	1	FSC	FSC	₹ }	DISPENSER CONTROL		<u> </u>			<u> </u>	? I	Bl	_
GASOLINE DECAL KIT, #3-(RED), #1-(BLUE), #0-(YELLOW), (WHITE)- BLANK	STANWADE	99-DG	INCL	OWNER	FSC	NOZZLE						200	PETROVEND FUEL SITE CONTROLLER SOFTWARE	OPW	SF-DFS	1	FSC	FSC	K I	7	
3" PRESSURE VACUUM VENT, THREADED (2"	MODDIOON	740 4400 414	4	500					QTY	SUPPLIED		201	PUMP CONTROL MODULE (MASTER - 2 HOSE) AND PUMP CONTROL MODULE (CLIENT - 2 HOSE)	OPW	20-4404-09 AND 20-4405	1	FSC	FSC	5	4	
W/3" REDUCER INSTALLED)	MORRISON	749-1100 AV	1	FSC	FSC	ITEM DESCRIPTION	MAKE	MODEL		ВҮ	ВҮ	202	DX FLEET ANNUAL SOFTWARE SUBSCRIPTION (INTERNAL FSC CONFIGURATION)	OPW	65-0011	1	FSC	FSC		>	
33 EXTRACTOR FITTING 4" X 4" X 3" WITHOUT CAGE, EVR APPROVED	MORRISON	563-0101 MBE	1	FSC	FSC	80 2" SCHEDULE 40 GALVANIZED PIPE 81 2" SCHEDULE 40 GALVANIZED COUPLER			AS REQ'D AS REQ'D	FSC FSC	FSC FSC	 	VIS ASSEMBLY (INTERNAL TO PV200) WITH VIS		<u> </u>)		
34 GASKET, 8" FLANGE	MORRISON	244F-01102G	INCL	FSC	FSC	82 2" SCHEDULE 40 GALVANIZED UNION			AS REQ'D	FSC	FSC	203	ANTENNA - OMNI-DIRECTIONAL WHIP W/ MOUNTING BRACKET AND VIS ANTENNA - DIRECTIONAL PANEL	OPW	20-4456	1	FSC	FSC	?		
35 NUT & BOLT SET, 8"	MORRISON	244F-0107AN	INCL	FSC	FSC	83 2" SCHEDULE 40 GALVANIZED 90-DEGREE			AS REQ'D	FSC	FSC	(MOUNT		 			<u> </u>	, L		
500 GALLON MINI-BULK DEF STORAGE AND DISPENSING SYSTEM WITH HEATER AND	BLUE1USA	COMMERCIAL PLATINUM	1	FSC	FSC	84 2" SCHEDULE 40 GALVANIZED TEE			AS REQ'D	FSC	FSC	204	STAND-ALONE PROGRAMMING PACKAGE (INCLUDES TAG PROGRAMMER, TAGWRITER SOFTWARE, RFN	OPW	20-4454	1	FSC	FSC			
REMOTE MONITORING VEEDER-ROOT PROBE	SUBMERSIBLE PUMP & ACC	CESSODIES				90 1/2" SCHEDULE 40 BLACK PIPE			AS REQ'D	FSC	FSC	205	TEST UNIT, AND PUSH BUTTON RFN) PCM HANDLE SENSE BOARD (ONE PER DISPENSER)	ODW	20.0250		F00	F00			
ITEM DESCRIPTION	MAKE	MODEL	QTY	SUPPLIED	INSTALLED	91 1/2" SCHEDULE 40 BLACK COUPLER			AS REQ'D	FSC	FSC	—	SAMPLE TAG KIT (CONTAINS 12 TAGS FOR SIZING)	OPW OPW	20-8259 20-4496	1	FSC FSC	FSC FSC	}		
1.5 HP, FIXED SPEED, VARIABLE LENGTH,	WARE	WODEL	QII	ВҮ	BY	92 1/2" SCHEDULE 40 BLACK UNION			AS REQ'D	FSC	FSC	—	TAG ONLY PACKAGE	OPW		100	FSC	FSC	7		
SINGLE-PHASE SUBMERSIBLE PUMP WITH	FRANKLIN FUELING	STP-150-VL2-18		FSC	FSC	93 1/2" SCHEDULE 40 BLACK 90-DEGREE ELBOW 94 1/2" SCHEDULE 40 BLACK TEE			AS REQ'D AS REQ'D	FSC FSC	FSC FSC	208	OVERFILL ALARM	VEEDER ROOT	790091-001		FSC	FSC			
40 18-INCH RISER 1.5 HP, FIXED SPEED, VARIABLE LENGTH,			2			95 1 1/2" SCHEDULE 40 BLACK PIPE			AS REQ'D	FSC	FSC	209	OVERFILL ALARM ACKNOWLEDGEMENT SWITCH	VEEDER ROOT	790095-001	1	FSC	FSC			
SINGLE-PHASE, SUBMERSIBLE PUMP MODEL #P150U1-RJ1	RED JACKET	410141-001		FSC	FSC	96 1 1/2" SCHEDULE 40 BLACK COUPLER			AS REQ'D	FSC	FSC	_		MISCELLANEOUS			SUPPLIED	INSTALLED			
STP-CBSSINGLE-PHASE CONTROL BOX WITH	FRANKLIN FUELING	400818921				97 1 1/2" SCHEDULE 40 BLACK UNION, 250 LB			AS REQ'D	FSC	FSC	ITEM	DESCRIPTION	MAKE	MODEL	QTY	BY	BY			
SWITCH AND LOCKOUT, 120V COIL SINGLE-PHASE STANDARD CONTROL BOX	RED JACKET	880-041-5	2	FSC	FSC	98 1 1/2" SCHEDULE 40 BLACK 90-DEGREE ELBOW			AS REQ'D	FSC	FSC	210	EMERGENCY STOP SIGNAGE	MAY ADVERTISING	M-53* (OR EQUAL)	1	FSC	FSC			
	FRANKLIN FUELING	403170901				99 1 1/2" SCHEDULE 40 BLACK TEE			AS REQ'D	FSC	FSC	211	CLASSIC SERIES SURFACED MOUNTED FIRE EXTINGUISHER CABINET (24.25"X10.5"X6.5")	CSMC-10		2	FSC	FSC		Νġ	
42 MECHANICAL LINE LEAK DETECTOR (DIESEL)	RED JACKET	FX1DV		FSC	FSC	100 1 1/2" SCHEDULE 40 BLACK 45-DEGREE ELBOW 101 2" SCHEDULE 40 BLACK PIPE			AS REQ'D AS REQ'D	FSC FSC	FSC FSC	212	10LBS ABC FIRE EXTINGUISHERS (SEE PRINT FOR PROPER QUANTITY)			2	FSC	FSC		Z	
44 2-INCH ANTI-SIPHON VALVE 10-15 FEET W.C.	MORRISON	910-2200AV	2	FSC	FSC	102 2" SCHEDULE 40 BLACK COUPLER			AS REQ'D	FSC	FSC		SL1 SELF-LEVELING JOINT SEALANT-LIMESTONE			10.0500					
	OPW	199-ASV-3200				103 2" SCHEDULE 40 BLACK 90 DEGREE ELBOW			AS REQ'D	FSC	FSC	213	COLOR (FOR FILLING ALL JOINTS)			AS REQ'D	FSC	FSC			
45 2-INCH SWING CHECK VALVE	MORRISON OPW	246A-0200AV 175B-1544	_ 2	FSC	FSC	104 2" SCHEDULE 40 BLACK TEE			AS REQ'D	FSC	FSC	214	SpecChem CURE & SEAL 25 CONCRETE SEALANT (FOR ALL CONCRETE FLATWORK)			AS REQ'D	FSC	FSC			
46 1/2-INCH EXPANSION RELIEF VALVE (50-PSI)	MORRISON A	076DI-0200AV	2	FSC	FSC	105 2" X 4" SCHEDULE 40 BLACK DOUBLE TAP BUSHING			AS REQ'D	FSC	FSC	215	OVERFILL ALARM 12" X 8" ALUMINUM SIGN WITH RED	MAY ADVERTISING	M-58 (OR EQUAL)	1	FSC	FSC			
47 2" STAINLESS STEEL FULL PORT BALL VALVE	IOMAR	T-SS-1001-N	4	FSC	FSC	106 2" SCHEDULE 40 BLACK PIPE UNION, 250 LB			AS REQ'D	FSC	FSC	216	DANGER-NO SMOKING 18" X 24" DECAL			2	FSC	FSC			
49 1/2" FULL PORT BRASS BALL VALVE	OPW	21BV-0050)	FSC	FSC	107 2" SCHEDULE 40 BLACK 45-DEGREE ELBOW			AS REQ'D	FSC	FSC		DANGER- DIESEL FUEL 18" X 24" DECAL			2	FSC	FSC			
	JOMAR	100-703		. 55	. 55	108 2" BY 1" SCHEDULE 40 BLACK REDUCER BELL			AS REQ'D	FSC	FSC	218	DANGER- GASOLINE 18" X 24 " DECAL			2	FSC	FSC		Y E	
						109 1" MNPT BY 1/2" FNPT BLACK HEX BUSHING 2" STAINLESS STEEL FLEXIBLE CONNECTOR,	HOSE MASTER	FSQM-150200-ACQM	AS REQ'D	FSC	FSC		NO SMOKING-STOP ENGINE 10" X 16" ALUMINUM SIGN	MAY ADVERTISING	D-8 (OR EQUAL)	2	FSC	FSC			2
						111 15" LONG, MALE NPT BY EZ-FIT MALE NPT	FLEX-ING	FF20X15EZMXM346	2	FSC	FSC		5,000 GALLONSVOLUME DECAL			2	FSC	FSC			O
						112 3" SCHEDULE 40 BLACK PIPE			AS REQ'D	FSC	FSC		3,000 GALLONSVOLUME DECAL GASOLINE DECALS 3" X 12"	MAY ADVERTISING	D-12-18-R	<u>2</u>	FSC FSC	FSC FSC		_	<u> </u>
						113 3" SCHEDULE 40 BLACK COUPLER			AS REQ'D	FSC	FSC		DIESEL DECALS 3" X 12"	MAY ADVERTISING	D-12-72	4	FSC	FSC	╽╽┪		
						114 3" SCHEDULE 40 BLACK 90 DEGREE ELBOW			AS REQ'D	FSC	FSC	224	6" ROUND X 84" TALL STRAIGHT CARBON STEEL PIPE		PC-PG6X84	43	FSC	FSC			\ \{
						115 3" SCHEDULE 40 BLACK TEE 116 3" SCHEDULE 40 BLACK 45-DEGREE ELBOW			AS REQ'D AS REQ'D	FSC	FSC FSC	225	6" IDEAL SHIELD BOLLARD COVERYELLOW	IDEAL SHIELD	IS-BPD-Y-6-52S	43	FSC	FSC			
						116 3 SCHEDULE 40 BLACK 45-DEGREE ELBOW 117 3" SCHEDULE 40 BLACK PIPE UNION, 250 LB			AS REQ'D	FSC	FSC	226	12" MANHOLE WITH 11-1/4" SKIRT WITH CAST IRON LID	OPW	104A-1200	1	FSC	FSC	DIAMO	OND Z ENGINEEF 5670 STATE ROA	
						118 4" SCHEDULE 40 BLACK PIPE			AS REQ'D	FSC	FSC		(GROUND ROD) PAINTED BLACK	OF VV		1				CLEVELAND, OH 4- PHONE: 440-842-6	4134
						119 4" SCHEDULE 40 BLACK TEE			AS REQ'D	FSC	FSC	227	ULTRA-LOW SULFUR HIGHWAY DIESEL FUEL-5"x5"DECAL	COMPLIANCE SIGN	NHE-13330	1	FSC	FSC	ALL RIGHT OF DIAM	'S RESERVED. THIS DRAWING IS MOND Z ENGINEERING, INC. & IS	S THE PRO
						120 4" SCHEDULE 40 BLACK SQUARE PIPE BOLLARD-7' LONG			1	FSC	FSC	228	DANGER DIESEL FUEL-NO SMOKING-NO OPEN FLAMES-7"x5"DECAL	COMPLIANCE SIGN	ODE-2110	1	FSC	FSC	THAT REPROD	UNDERSTANDING & SHALL NOT UCED OR OTHERWISE DISPOSE INDIRECTLY WITHOUT PRIOR PE	BE COPIE
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						121 REDUCER BUSHING 1 1/2" ENPT BY 2" MNPT SCHEDULE 40 BLACK							NUMBER 1-DECAL -5"			1	FSC FSC				20/2023
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54

DISPENSER -

CABINET

- HOSE REEL

PRODUCT — FILTER

INTERIOR

SCALE: 1" = 1'-0"

ISOMETRIC VIEW

EXTERIOR

SCALE: 1" = 1'-0"

ISOMETRIC VIEW

ILL RIGHTS RESERVEU. THIS DRAWNING IS THE FROFFE OF DIAMOND Z ENGINEERING, INC. & IS LOANED WITH THAT UNDERSTANDING & SHALL NOT BE COPIED, REPRODUCED OR OTHERWISE DISPOSED OF DIRECTL' OR INDIRECTLY WITHOUT PRIOR PERMISSION.

DRAWING NO.

T-5

DATE: 1/20/2023

PROJECT NO

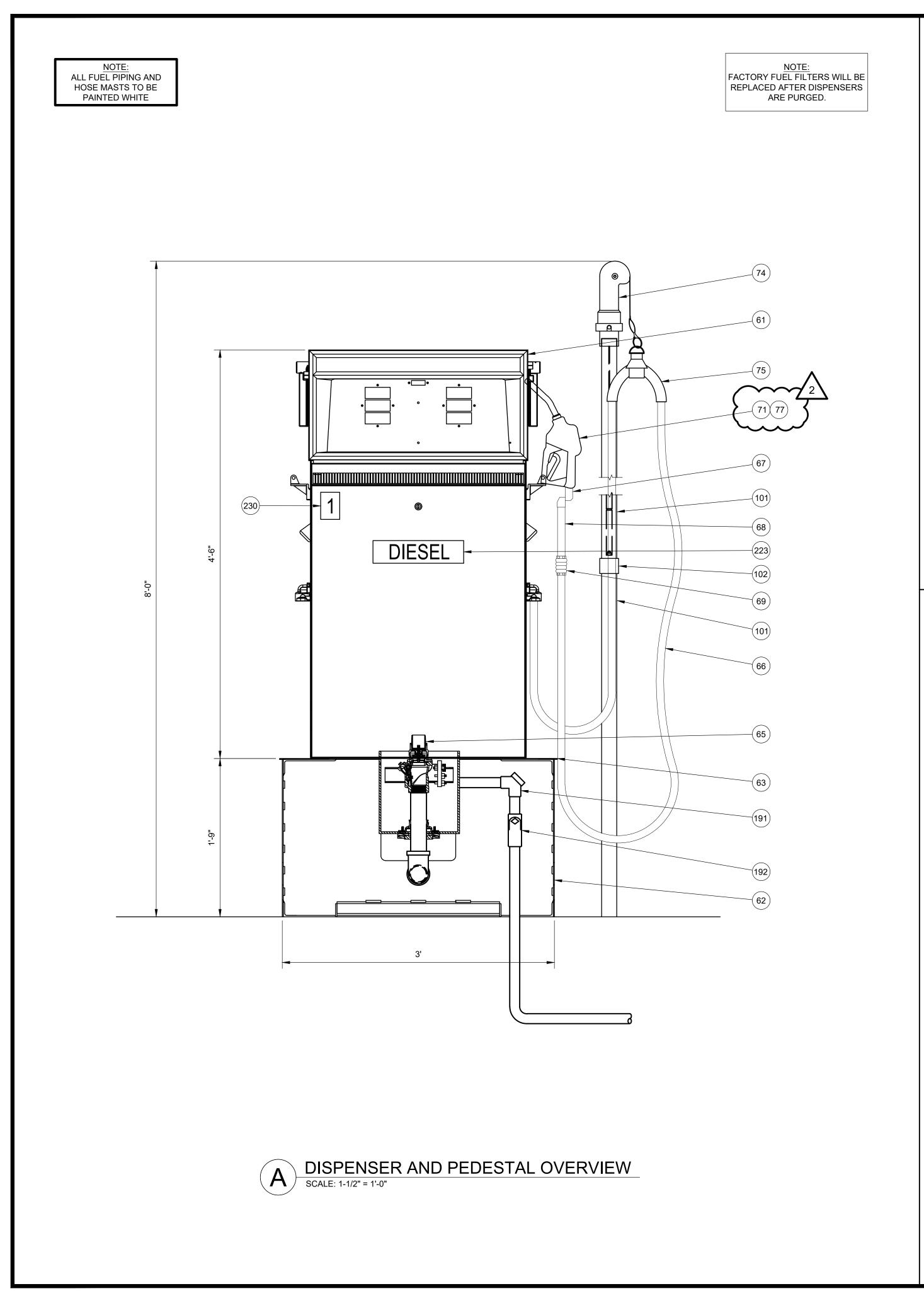
MI-4008

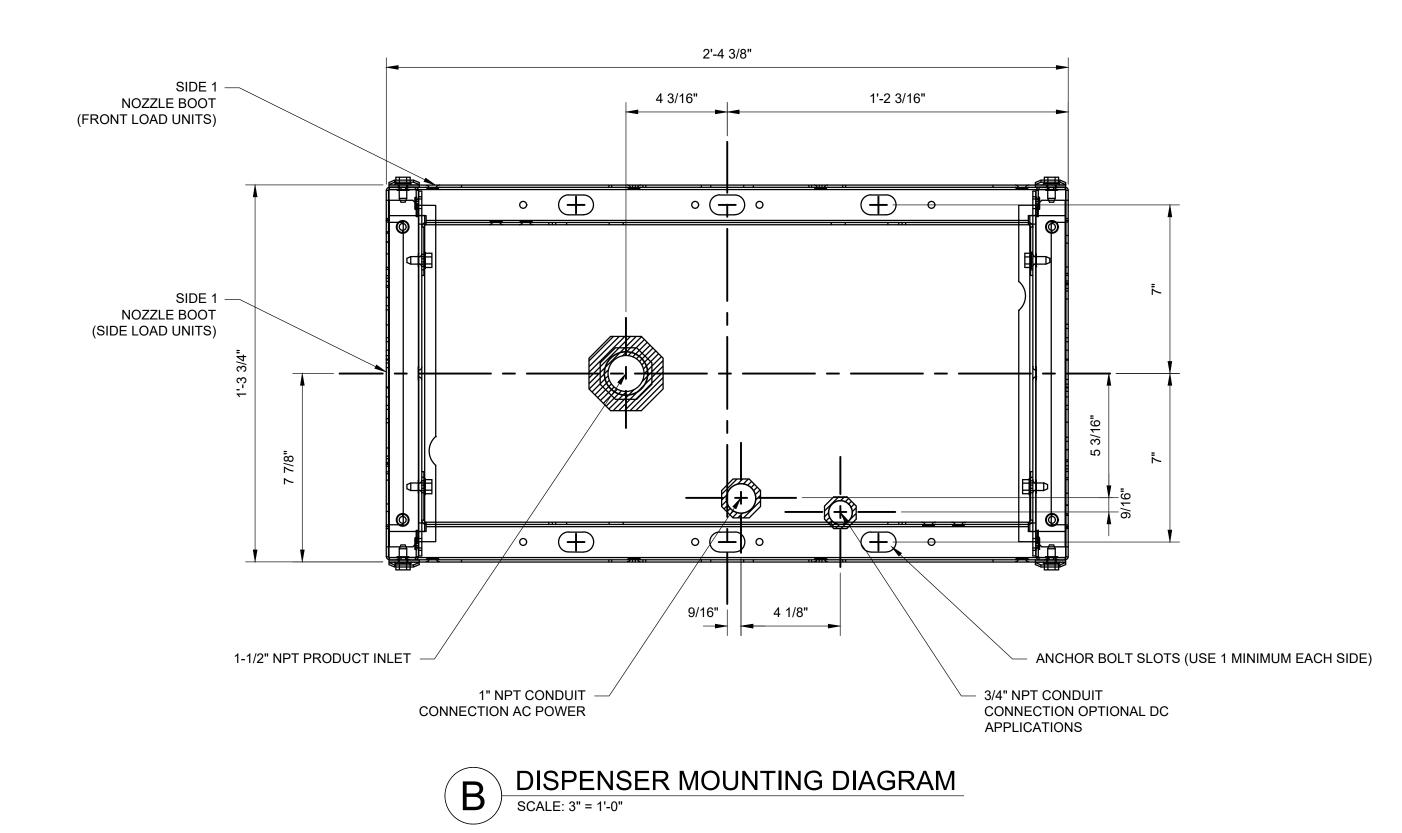
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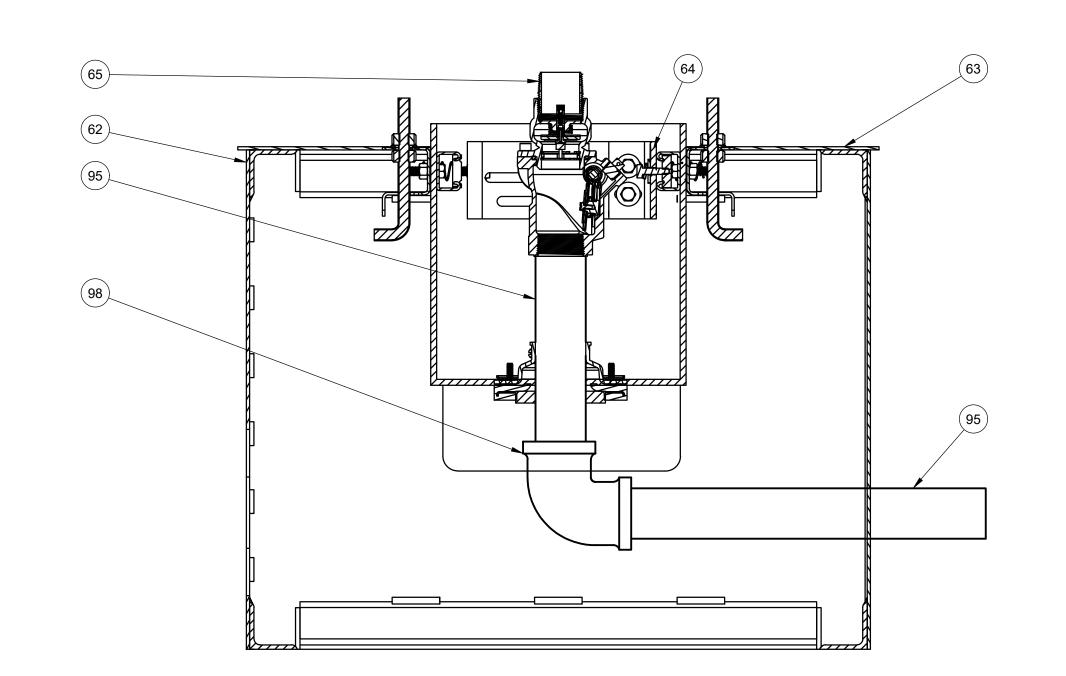
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GLZ









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VAN BUREN TOWNSHII
46425 TYLER ROAD
VAN BUREN, MI 48111

DIAMOND A ENGINEERING, INC

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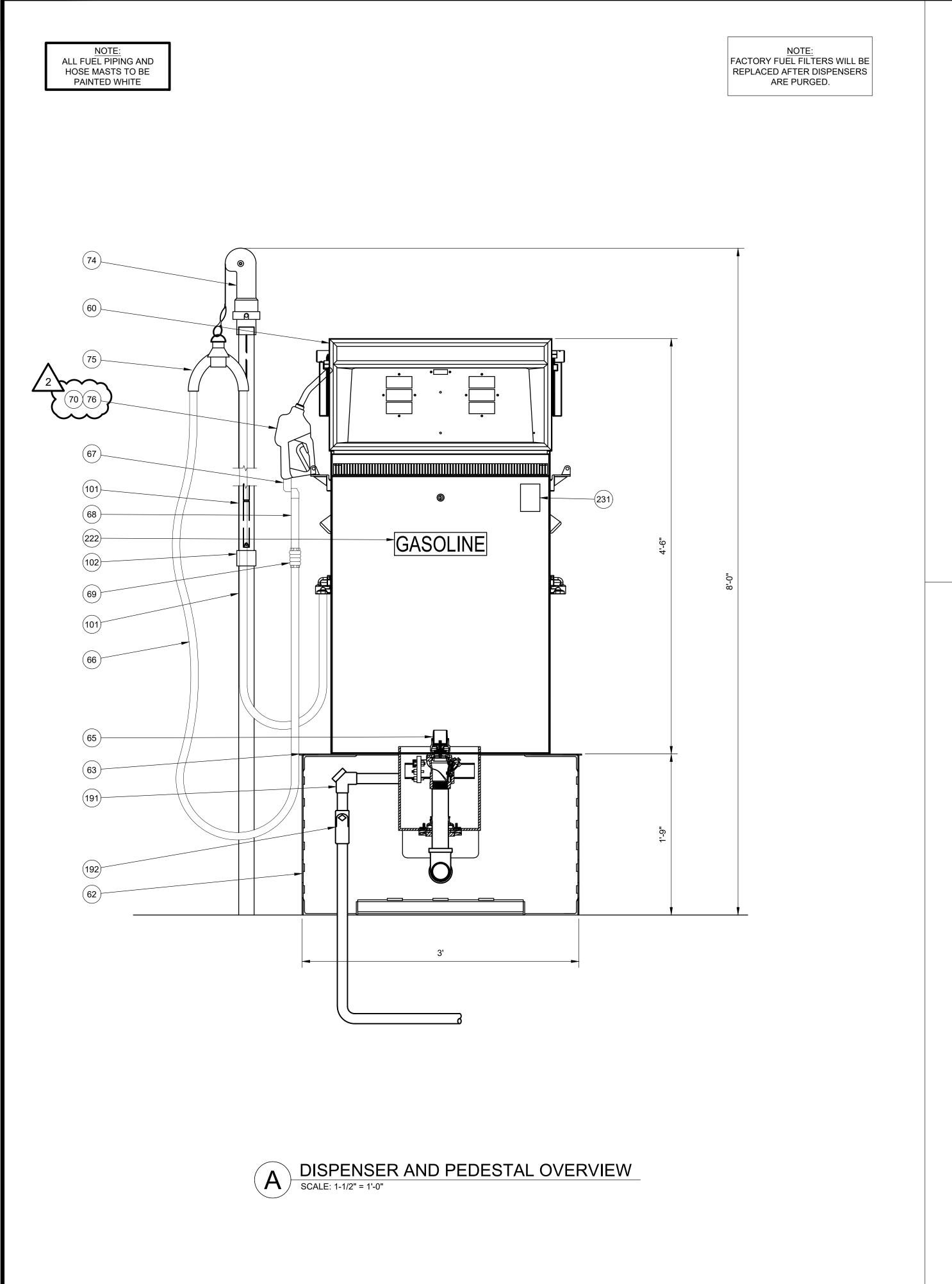
DIAMOND Z ENGINEERING, INC 5670 STATE ROAD CLEVELAND, OH 44134 PHONE: 440-842-6501

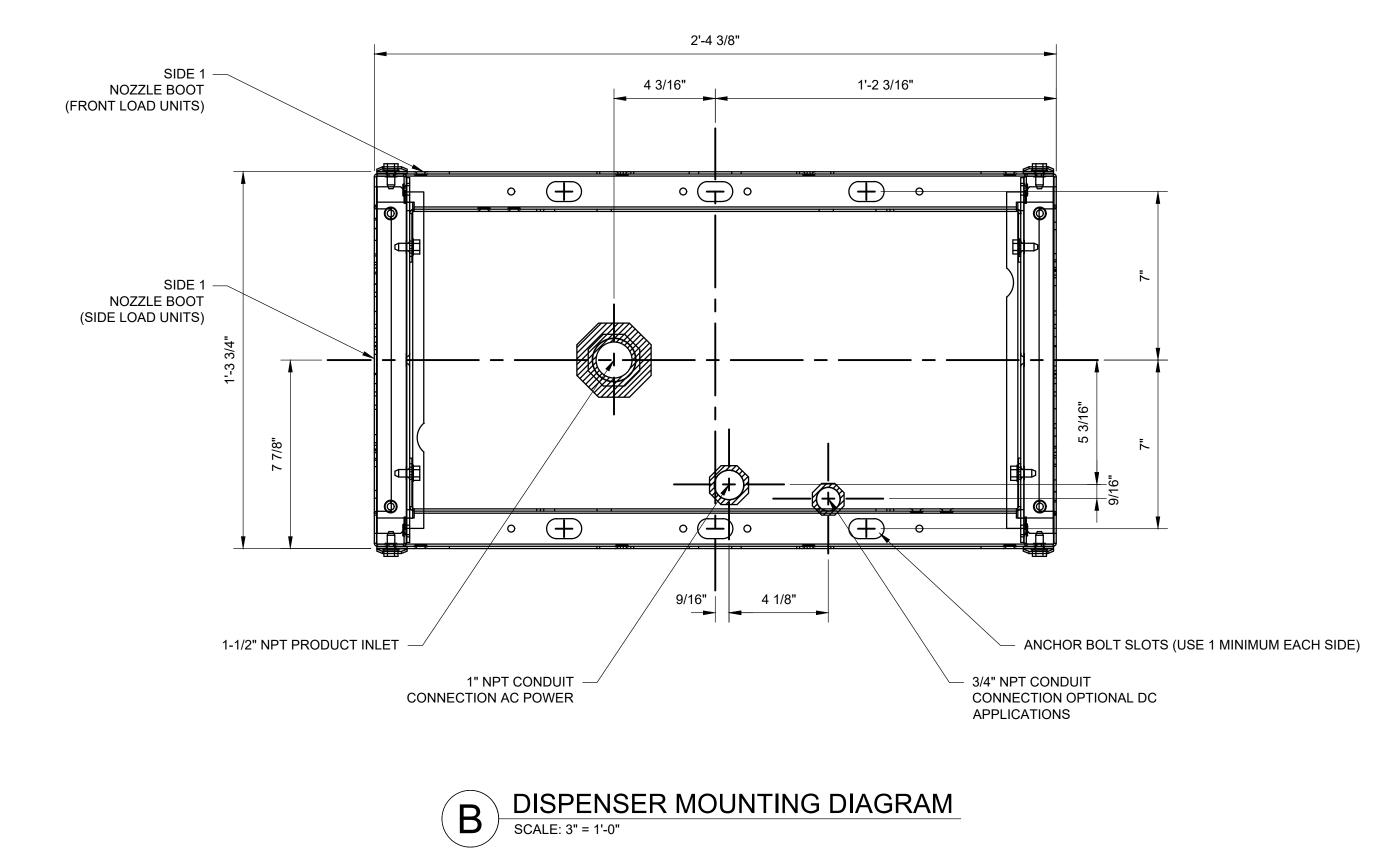
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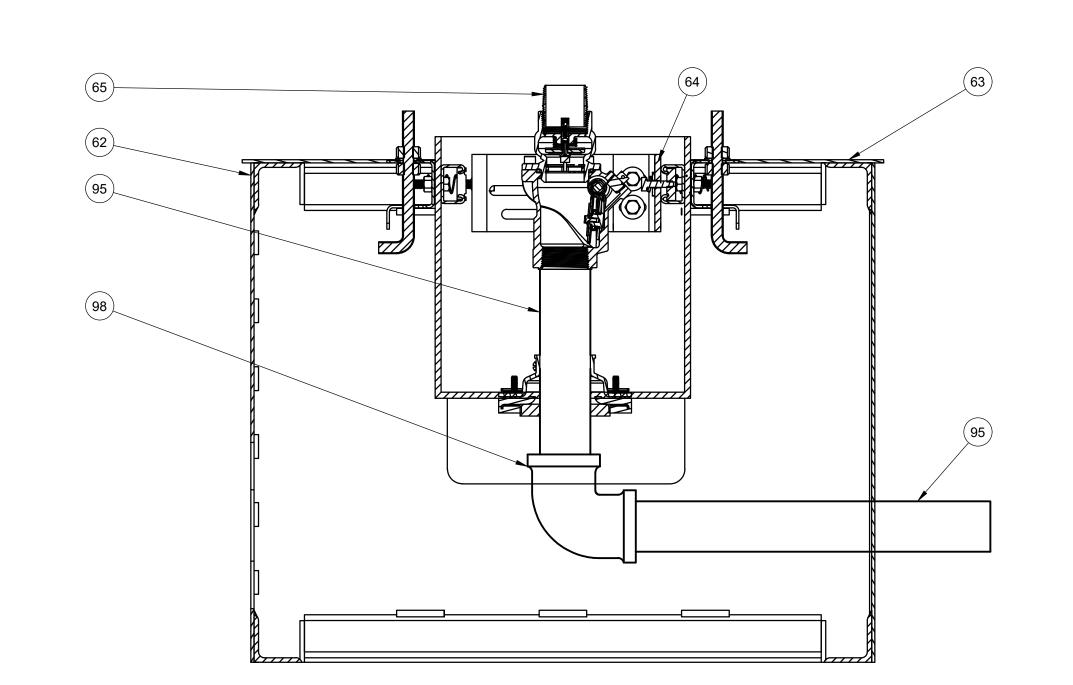
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GLZ MI-4008

DRAWING NO.









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BID AND PERMIT SET	REVISED BID AND PERMIT SET				1
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VAN BUREN TOWNSHIF
46425 TYLER ROAD
VAN BUREN, MI 48111

DIAMOND X ENGINEERING, INC.

DIAMOND Z ENGINEERING, INC 5670 STATE ROAD CLEVELAND, OH 44134

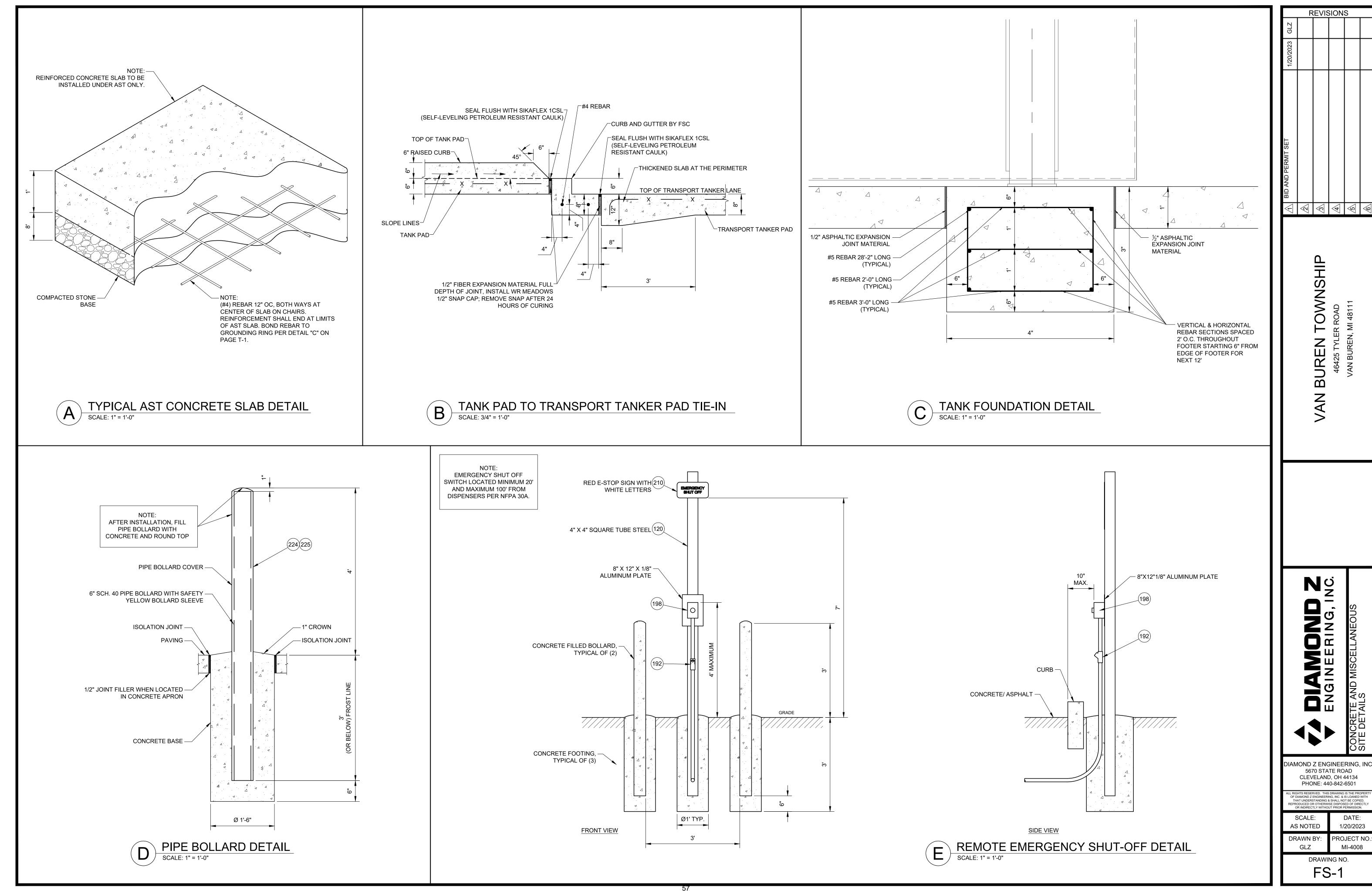
5670 STATE ROAD CLEVELAND, OH 44134 PHONE: 440-842-6501

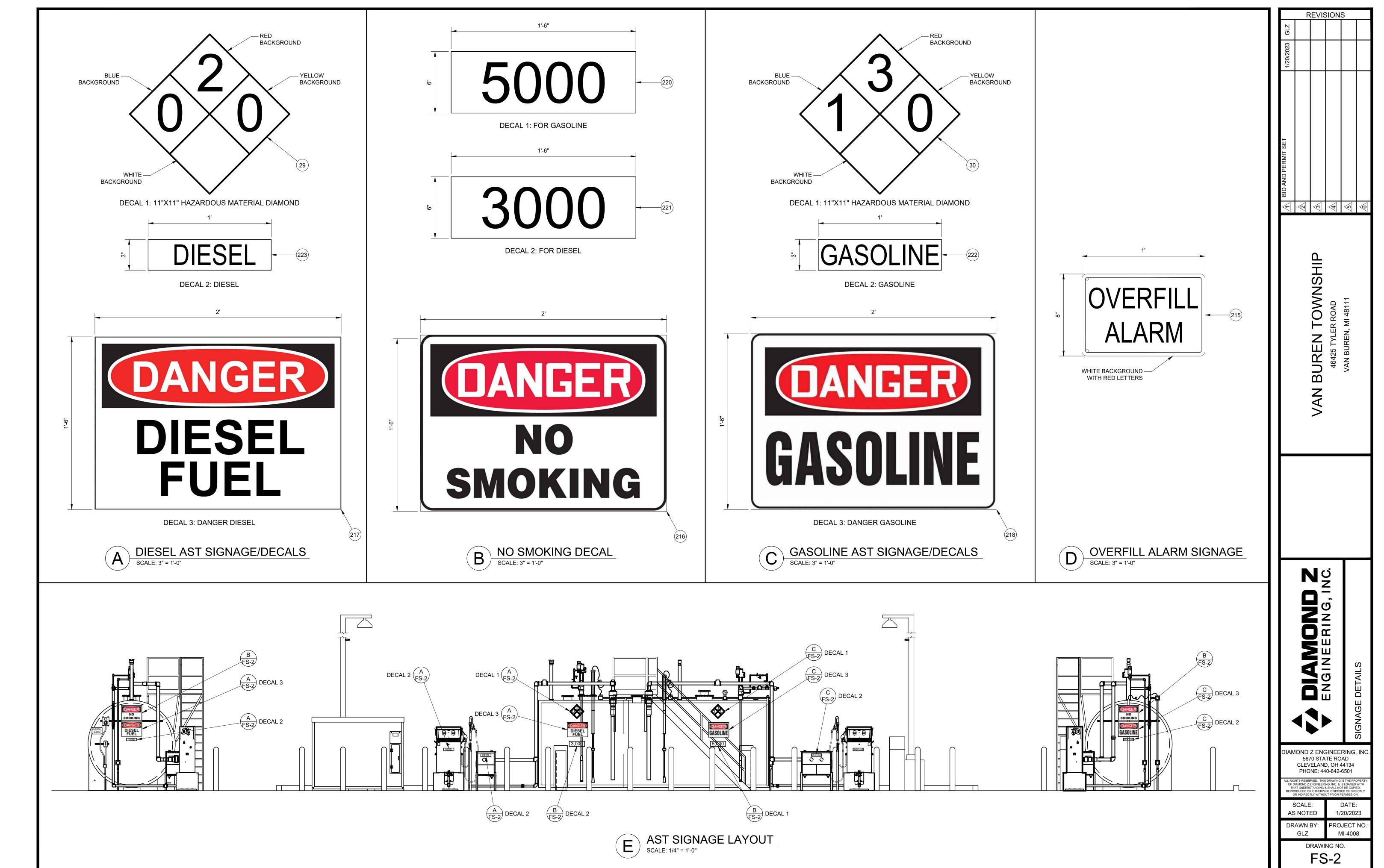
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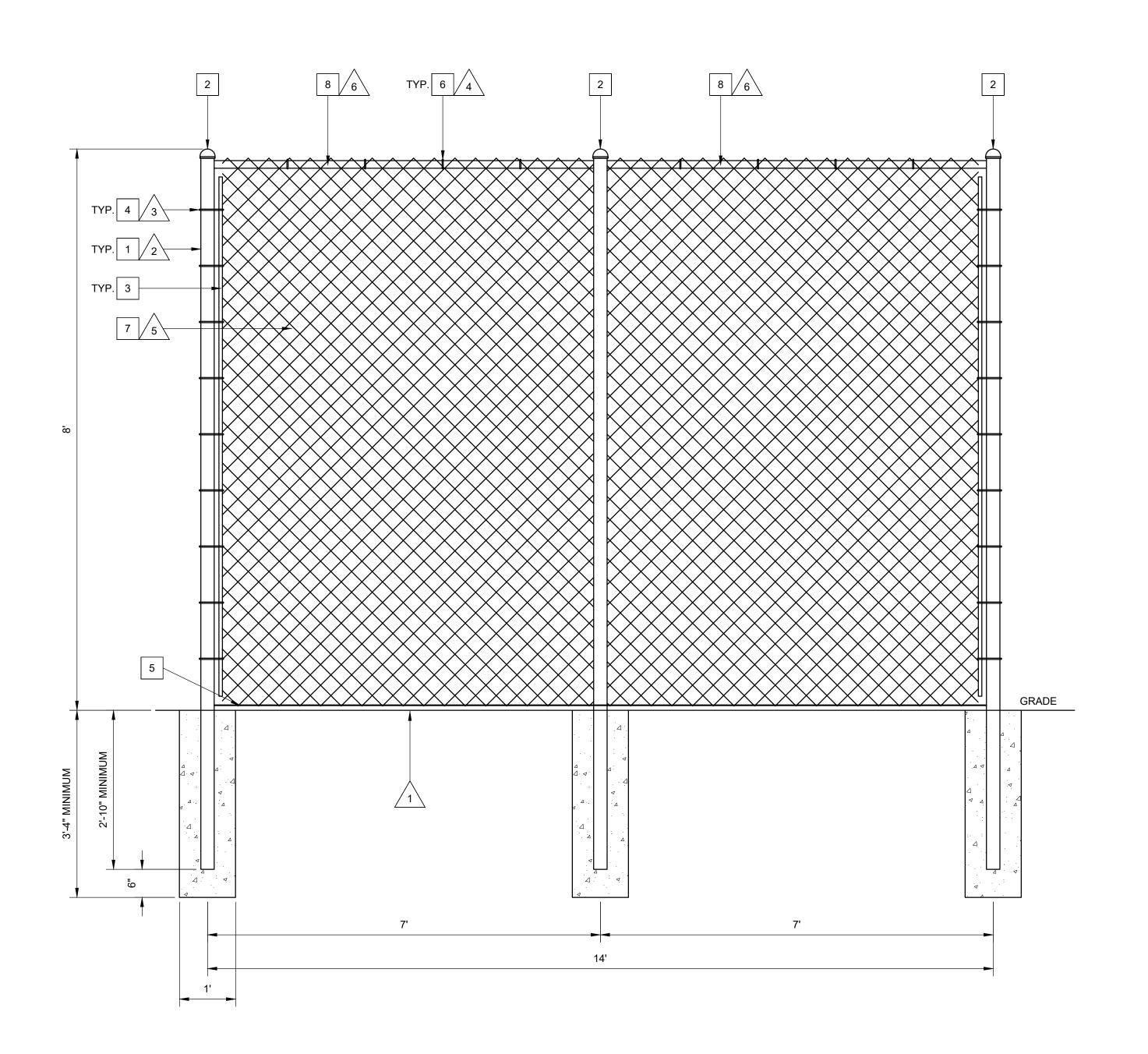
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AS NOTED 1/20/2023

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MI 4008

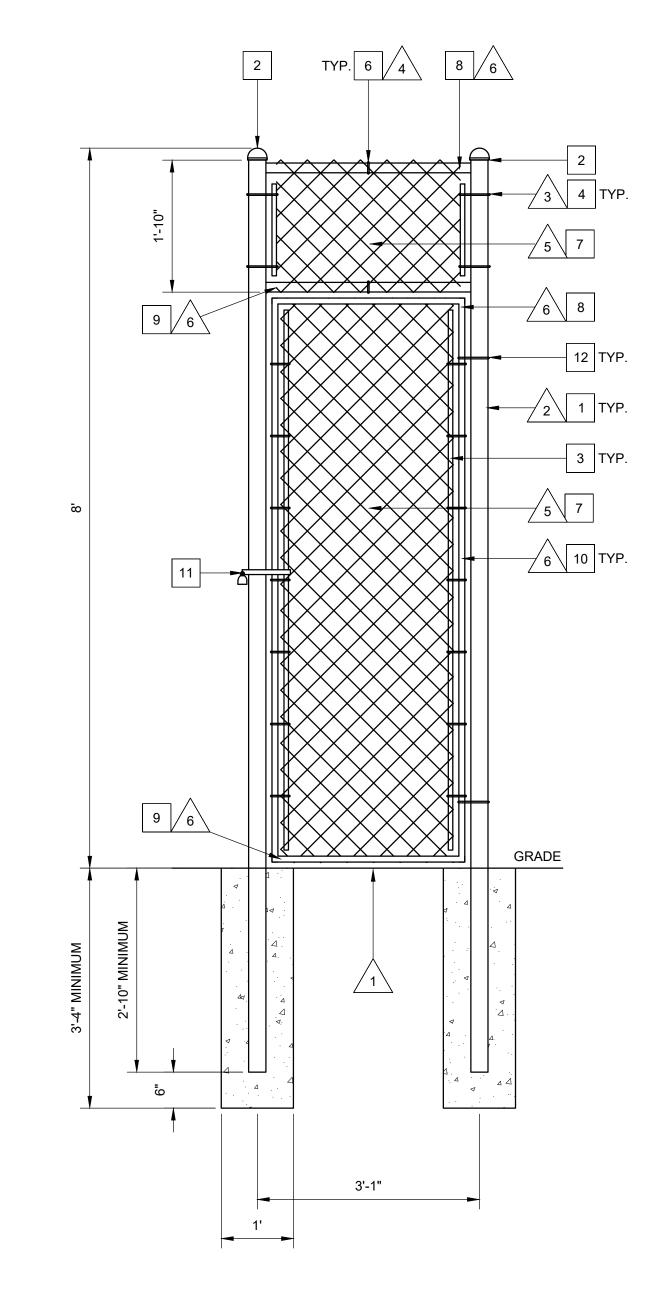
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B GATE ELEVATION

SCALE: 3/4" = 1'-0"

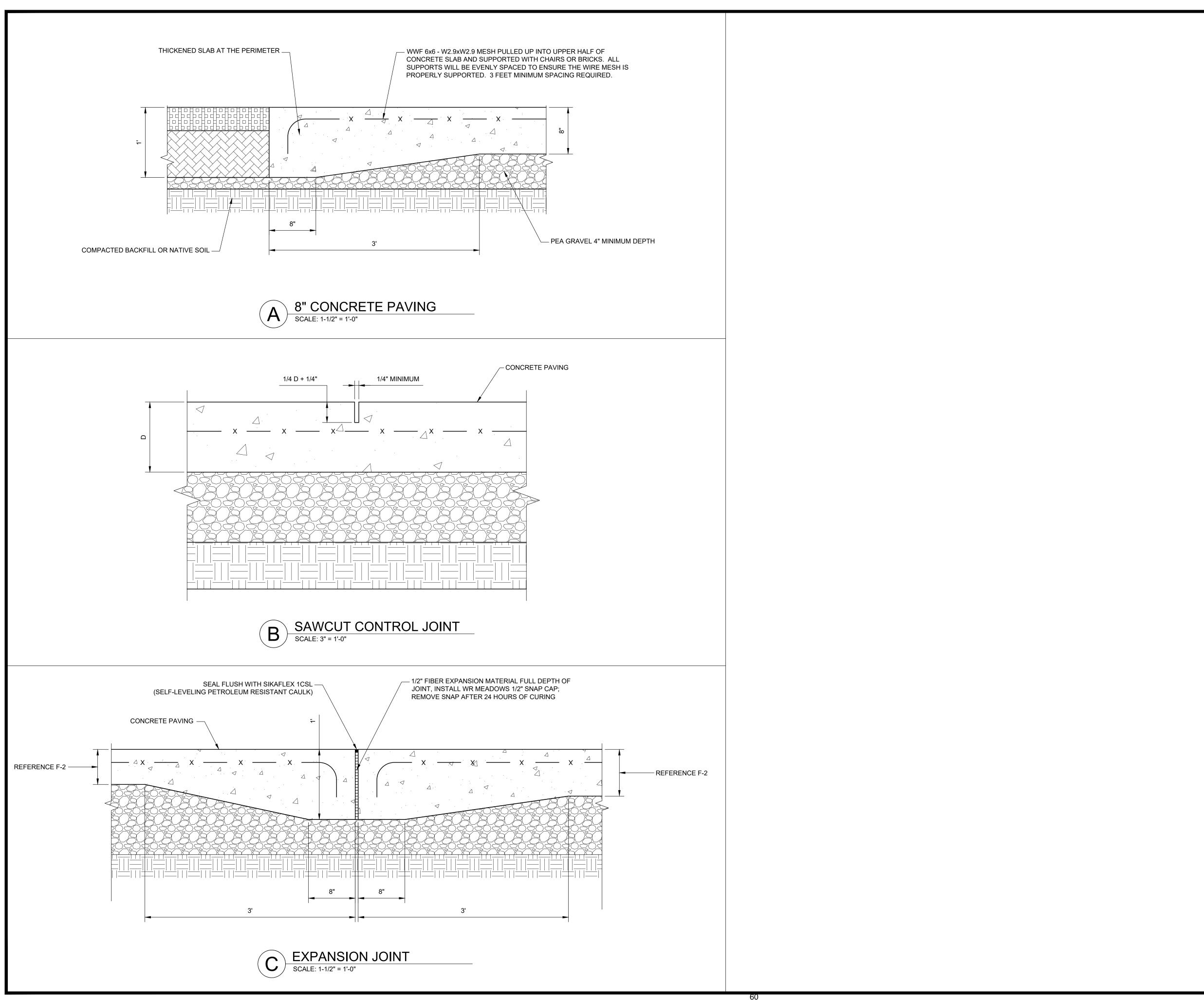
	SECURITY FENCE MATERIALS		
ITEM	DESCRIPTION	QTY.	SUPPLIED BY
1	TERMINAL POST	15	FSC
2	TERMINAL POST CAP	15	FSC
3	TENSION BAR	AS REQ'D	FSC
4	TENSION BANDS	AS REQ'D	FSC
5	BOTTOM TENSION WIRE	AS REQ'D	FSC
6	WIRE FABRIC TIES	AS REQ'D	FSC
7	WIRE FABRIC (CHAIN LINK)	AS REQ'D	FSC
8	TOP RAIL	AS REQ'D	FSC
9	BOTTOM RAIL	AS REQ'D	FSC
10	SIDE RAIL (GATE ONLY)	2	FSC
11	LOCKABLE FORK LATCH	1	FSC
12	HINGES (GATE ONLY)	2	ESC

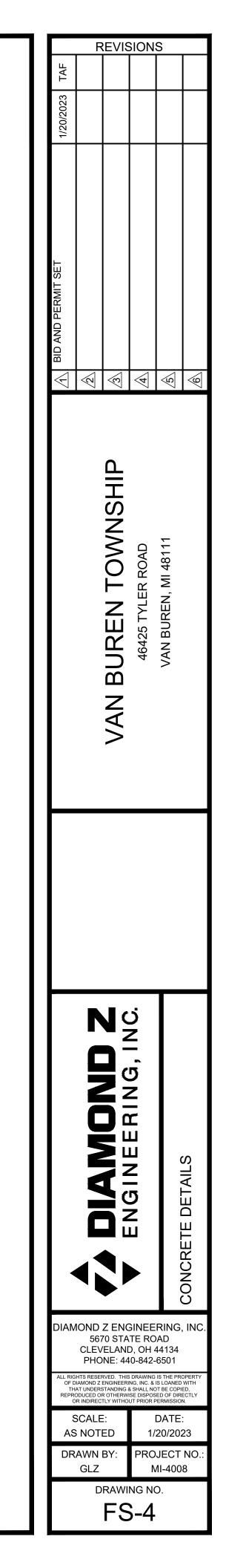
GENERAL NOTES

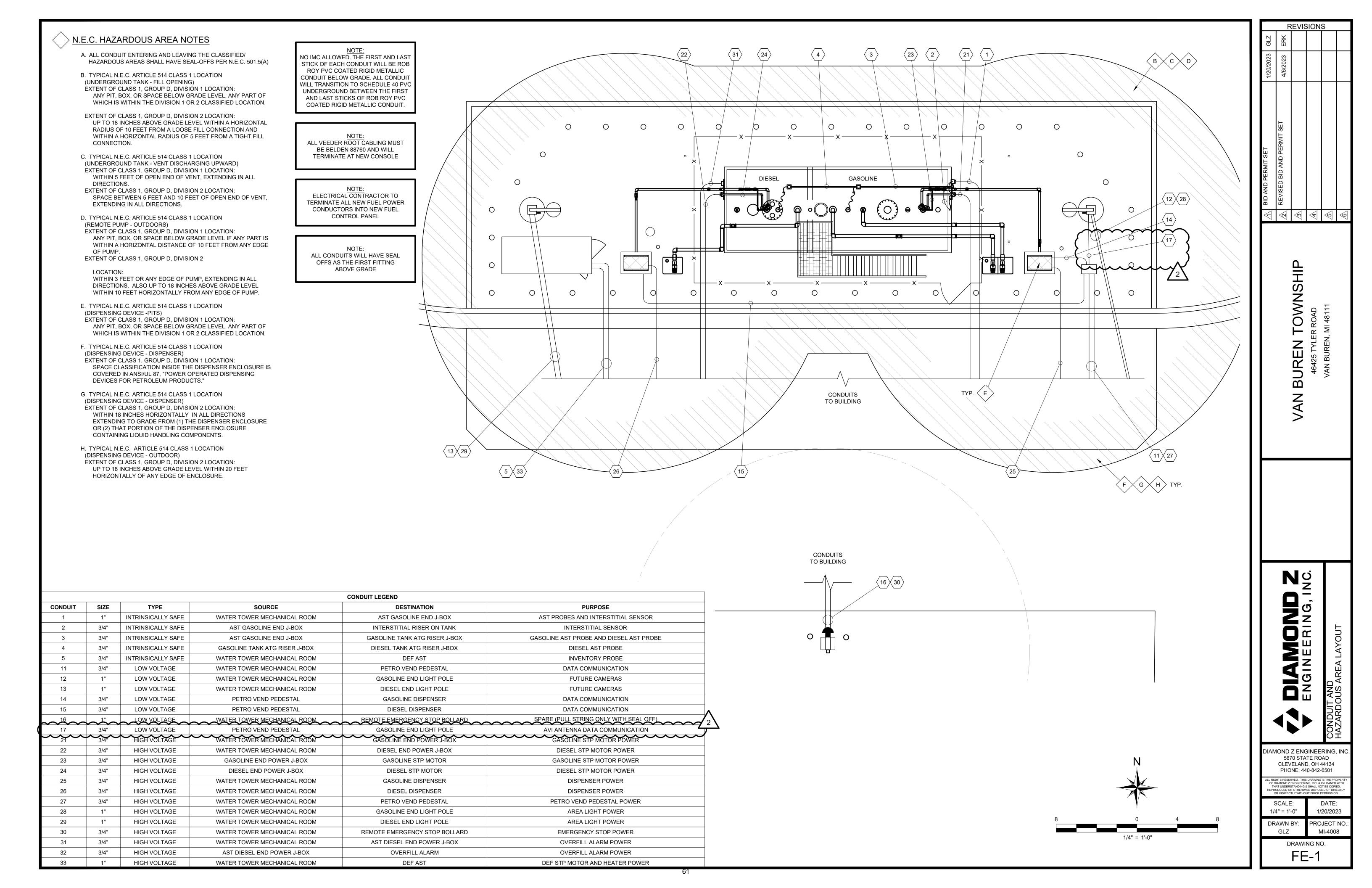
- 1. MAXIMUM SPACING OF 2" FROM BOTTOM OF FENCING TO GRADE.
- 2. TERMINAL POSTS ARE TO BE A MINIMUM OF 12' 10" WITH AN OUTER DIAMETER OF 2-7/8" AND A WALL THICKNESS OF 0.110".
- 3. MAXIMUM SPACING FOR TENSION BANDS IS 12".
- 4. MAXIMUM SPACING FOR WIRE FABRIC TIES IS 2'.
- 5. THE CHAIN LINK WIRE FABRIC IS TO BE A MINIMUM OF 12-1/2 GAUGE.
- 6. THE TOP, BOTTOM AND SIDE RAILS ARE TO HAVE AN OUTER DIAMETER OF 1-5/8" AND A WALL THICKNESS OF 0.047".

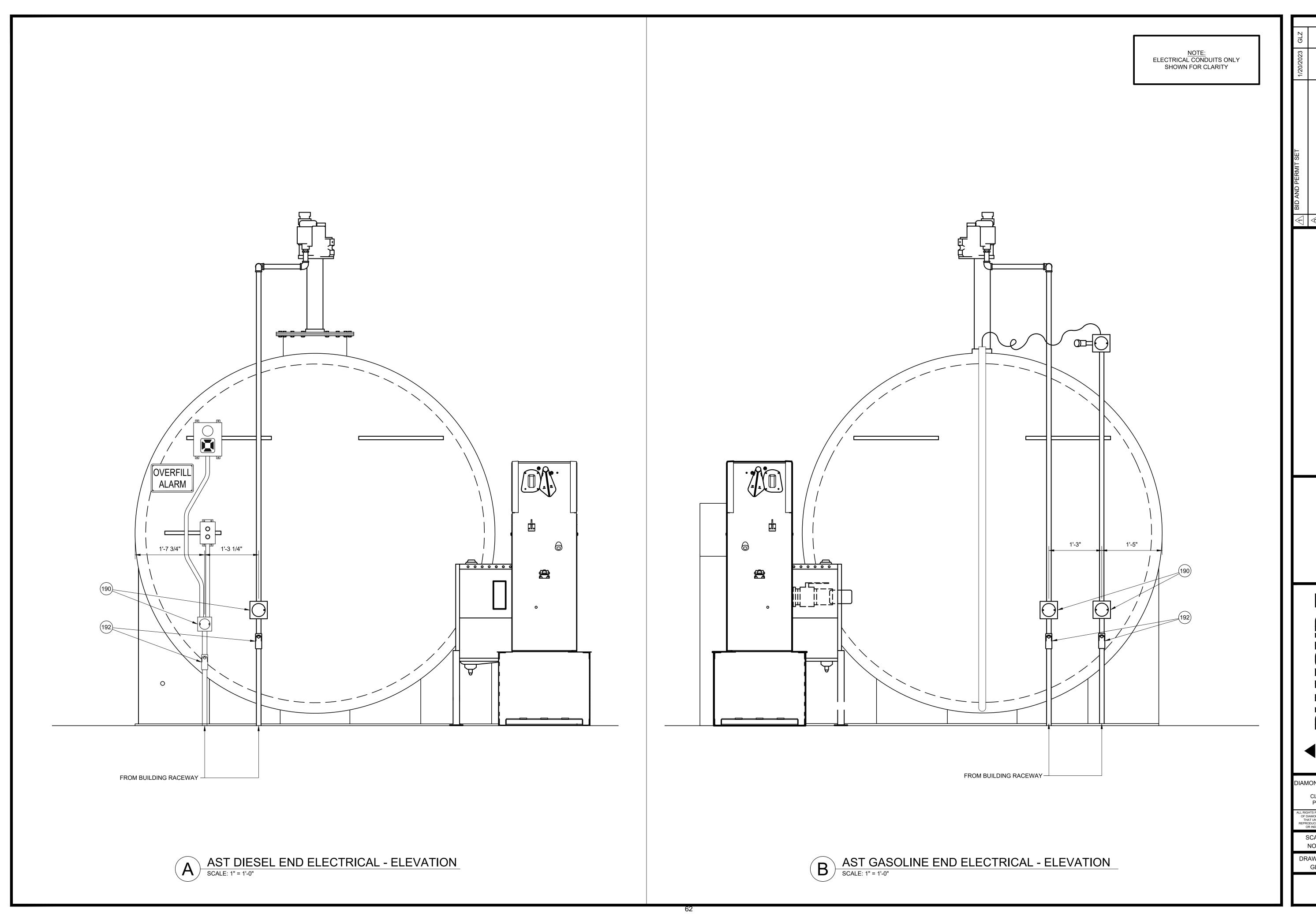
7. ALL FENCING TO BE BLACK VINYL COATED.

DIAMOND Z ENGINEERING, INC 5670 STATE ROAD CLEVELAND, OH 44134 PHONE: 440-842-6501 3/4" = 1'-0" 1/20/2023 DRAWN BY: PROJECT NO. MI-4008 DRAWING NO. FS-3









DIAMOND Z ENGINEERING, INC. 5670 STATE ROAD CLEVELAND, OH 44134 PHONE: 440-842-6501 1/20/2023 DRAWN BY: PROJECT NO. MI-4008 DRAWING NO. FE-2



DEPARTMENT OF PLANNING & ECONOMIC DEVELOPMENT

46425 TYLER ROAD, VAN BUREN TOWNSHIP, MI 48111 PHONE (734) 699-8913 FAX (734) 699-8958

PLANNING & ZONING APPLICATION

DATE SUBMITTED:

CASE INFORMATION

23-025

CASE NUMBER:

APPLICANT INFORMA	ATION							
NAME: Kevin McNamara		PHONE: 734-699-8900						
ADDRESS: 46425 Tyler Rd		CELL PHONE:	AL .					
CITY, STATE & ZIP Van Buren Township		FAX:						
EMAIL: address any email questions	to erenaud@vanburen-mi.org							
PROPERTY OWNER IN	NFORMATION (If different the	an the applicant)						
NAME:		PHONE:						
ADDRESS:		CELL PHONE:						
CITY, STATE & ZIP		FAX:						
EMAIL:								
NAME:		PHONE:						
Elizabeth Renaud		734-699-8926						
ADDRESS: 46425 Tyler Rd		CELL PHONE:	CELL PHONE:					
CITY, STATE & ZIP Van Buren Township		FAX:	FAX:					
EMAIL: erenaud@vanburen-mi.org								
SITE/PROJECT INFOR	MATION							
NAME OF PROJECT: French Landing Docks	MATION							
PARCELID NO: V125-83-	095-01-0221-300	PROJECT ADDRESS: 12090 -12100 Haggerty	Rd VRT					
	GAL DESCRIPTION OF PROPERTY	12000 12100 Haggerty	114, 101					
PROPERTY LOCATION: On the	west Side of Haggerty	Road; Between Alden Ro	dRoad and South I-94 Service Dr					
SIZE OF LOT WIDTH:	SIZE OF LOT DEPTH:	ACREAGE OF SITE:	TOTAL ACRES OF SITE TO REVIEW:					
CURRENT ZONING:	IS A REZONING OF THIS PAR	RCEL BEING REQUESTED? Y / N	REQUESTED ZONING:					
PROJECT DESCRIPTION:		Transfer of the first of						
t with a new boardwalk and d	ock structure. THe structure will	be approx. 200ft in length, will e	pardwalk and dock structure and replace xtend approx 18.4 ft from the shore, and will w by the VBT Planning commission per sec					

SPECIAL PERMIT INFORMATION

DOES THE PROPOSED USE REQUIRE SPECIAL APPROVAL? Y / N	
IF YES, SECTION OF ZONING ORDINANCE FOR WHICH YOU ARE A	PPLYING FOR SPECIAL APPROVAL:
IS THERE AN OFFICIAL WOODLAND WITHIN THE PARCEL? Y / N	IF YES, WOODLAND ACREAGE:
TOTAL NUMBER OF REGULATED TREES OUTSIDE THE WOODLAND AREA:	TOTAL NUMBER OF TREES:
DETAILED DESCRIPTION FOR CUTTING TREES:	
IF APPLICABLE, APPLICATION MUST BE ACCOMPANIED WITH A TREE REQUIREMENTS LISTED IN SECTION 4.45 OF THE TOWNSHIP'S ZON	SURVEY OR STATEMENT OF NO TREES, WHICH INCORPORATES ALL THE ING ORDINANCE 6-2-92. AS AMENDED.

OWNER'S AFFIDAVIT

Kevin McNamara	Supervisor	
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PRINT PROPERTY OWNER'S NAME

SIGNATURE OF PROPERTY OWNER

STATE OF MICHIGAN COUNTY OF WAYNE

The undersigned, being duly sworn, deposes and says that the foregoing statements and answers herein contained and accompanied information and

Subscribed and sworn before me this 13th day of May 2023.

Hannah Radigatt Notary Public, Wayne County, Michigan My Commission expires 02-08,2026.

HANNAH RODRIGUEZ NOTARY PUBLIC, STATE OF MI COUNTY OF WAYNE MY COMMISSION EXPIRES Feb 8, 2026 ACTING IN COUNTY OF Wayne

Legal Description

24B216 LOT 216 ALSO VAC ST 66 FT WIDE ADJ TO THE SLY 67.39 FT OF SAID LOT ALSO THE SWLY 1/2 ADJ VAC STREET SUPERVISORS VAN BUREN PLAT NO. 6 T3S R8E L73 P47 WCR



MEMO

TO: Van Buren Township Planning Commission

FROM: Dan Power - Director of Planning and Economic

Development

RE: Site Plan Review #13-025 – French Landing Park Site Plan

DATE: May 3, 2023

Project Summary

Applicant Van Buren Charter Township seeks site plan approval to remove an existing elevated boardwalk and dock structure and replace it with a new boardwalk and dock structure. The structure will be approximately 202 feet in length, will extend approximately 23.5 feet from the shore, and will have a total combined area of approximately 2,691 square feet. The proposed improvements require site plan review by the Van Buren Township Planning Commission per Section 3.120(C)(2)(b)(i) of the Van Buren Township Zoning Ordinance. The proposed replacement boardwalk and dock structure is also subject to review and permitting by the State of Michigan Department of Environment, Great Lakes and Energy (EGLE). The proposed use will not involve dockage of any watercraft.

The project is proposed to be located in Belleville Lake Property (referred to herein as "Township Lake Property") adjacent to French Landing Park, which is located at 12090-12100 Haggerty Road (Tax Parcel ID Numbers 83 094 01 0216 000 and 83 095 01 0221 300). The site is located on the west side of Haggerty Road, between Alden Road and South I-94 Service Drive.

12090 – 12100 Haggerty Road are zoned R-1C – Single Family Residential District. Despite the single-family zoning designation of the upland parcel, the parcel is used as a public park. Because of the upland parcel's institutional or nonresidential use, the site is zoned Belleville Lake Shoreline District B - Non-Single Family Residential (BLB).

The proposed use will fall under the following definition from Section 3.120(C)(2)(b)(i) of the Van Buren Township Zoning Ordinance:

• Docks, piers, landings, boardwalks, catwalks or similar features that can accommodate no more than 6 watercraft in total at one time on a single parcel. Such features shall serve an abutting upland parcel used for permitted commercial, office, public or institutional purposes, including but not limited to restaurants, public parks, private clubs, transient dockage under public ownership and control, and other uses determined similar in the discretion of the Planning Commission and not otherwise specifically provided for in this Article.

The proposed roughly 2,691 square foot structure will replace an existing boardwalk and dock structure with a total area of roughly 1,691 square feet. On Sheet A-101 submitted with this application, a dashed line indicates the extent of the existing boardwalk/dock structure.

The Van Buren Township Zoning Ordinance was amended to include a comprehensive lake ordinance for uses in Township Lake Property, which became Section 3.120 of the currently adopted Township Zoning Ordinance (Belleville Lake Shoreline Districts). Dock / boardwalk structures are a use that require Planning Commission site plan approval per Section 3.120(C)(2)(b).

My report will review the submittals by the applicant including a completed application form and a seven-page set of civil and architectural plan drawings. Throughout this report, recommended conditions or requests for revisions are **underlined**.

Application Requirements

Certain specific application submittals are required uses in the Belleville Lake Shoreline Districts. The following relevant submittals required under Section 3.120(F)(2) of the Van Buren Township Zoning Ordinance have been reviewed:

- ✓ A completed application form has been provided.
- ✓ A site plan dated October 30, 2022 was provided. For reference, this packet also includes plans from a separate project that is underway at French Landing Park involving the addition of a structure, pavement upgrades, and landscaping. This separate plan sheet, labeled "L-3", shows the location of the existing dock in relation to existing and proposed improvements on the upland site. A separate sheet that expands upon the view frame found on sheet A-101 which shows the boundaries of the abutting upland lots and the location of any existing structures within 50 feet of the proposed installation should be provided with the final issued-for-construction plan set. This sheet should also list the lakeshore property's zoning as BL-B and the upland property's zoning as R-1C.
- ✓ A copy of any existing survey from the abutting upland lot and photographs of the existing conditions: An existing survey has previously been provided. Photographs of the site have also been taken by staff.
- ✓ Plans, elevations and sections, with dimensions, showing the height, length, width, distance to the lot lines and configuration of the proposed installation. Sheet A101 shows the total length (202'), depth (23.5' maximum extent) of the structure. Sheets A101 and A102 also provide various details indicating the height of the structure. From the top of the water to the top elevation of the proposed boardwalk posts including a 3.5' tall railing, the proposed height varies from roughly 9.5 10 feet. As mentioned above, an expanded site plan specific to this project should be provided that shows the location of the proposed structure in relation to the lot lines.
- ✓ Materials and aesthetics must also be considered. The structure's surface will be 1" x 6" Trex decking, and the primary post and frame materials of the railing will also be Trex. The proposed railing will also have a transparent 4x4 woven steel barrier, which will be zinc primed and powder coated matte black. The materials appear to be consistent with the character of the surrounding site and are aesthetically appropriate. If available, the a sample of the Trex decking surface materials shall be provided for the Planning Commission's review.
- ✓ Additional dock length beyond the 40-foot length that is typically required under Section 3.120(D)(15) is not requested.

- ✓ A description of the existing shoreline features and uses has been provided on the submitted site plan.
- ✓ The proposed site plan does not include shoreline stabilization. The applicant has applied separately to EGLE for 400 cubic yards of rip rap shoreline stabilization, approximately 200 feet in length, along with wooden habitat structures. This type of shoreline stabilization is subject to administrative review by staff under Section 3.120(C)(2)(a)(1) of the Van Buren Township Zoning Ordinance.
- ✓ The applicant has obtained a permit from EGLE for the proposed work on May 3, 2023.

 The proposed work must be completed in accordance with any applicable EGLE and FERC requirements.

Additionally, per Section 3.120(F)(3)(b), certain uses in the BLB district, including marinas, are subject to site plan approval by the Planning Commission. For purposes of the Belleville Lake Shoreline Districts, the information required for a site plan shall contain all information required by this Zoning Ordinance, Section 12.203. The scope of applicability of Section 12.203 is guided in part by the fact that the use will only occur in the Township Lake Property and is not subject to certain stormwater management, utility, landscaping / buffering, architectural, or other requirements typically considered for land-based development. Relevant requirements of Section 12.203 have been provided as mentioned below:

- An adequate site plan has been provided which includes basic formatting, applicant and design professional contact information, existing and proposed topography, and existing architectural details including a detailed plan view of the structure, elevation drawings, and detailed section drawings showing the structure's construction and connection to the adjacent shoreline have been provided.
- Prior to construction, a plan set which includes the design professional's seal must be provided.
- While the proposed use has been clarified in various correspondences regarding the project, for clarity, a description of the proposed use should be added to the site plan.
- There appear to be two small areas with gaps between the edge of concrete and the beginning of the dock/boardwalk structure, at the north end of the site and in the center of the site. These gaps appear to be less than one (1) foot in width. Additional details shall be shown on Sheet A101 to demonstrate accessible approaches in these two small gap areas.
- The proposed Lake Lite solar deck lights listed shall meet all standards of Section 8.105 of the Van Buren Township Zoning Ordinance.

Belleville Lake Shoreline District Approval Process - Review Criteria (General):

Per Section 3.120(F)(4) of the Van Buren Township Zoning Ordinance, I find the following:

(a) The application can demonstrate compliance with all of the requirements of Section 3.120(D) of the Zoning Ordinance (Belleville Lake Shoreline Districts – Development Standards), and all other applicable requirements of this Zoning Ordinance, subject to the notes and conditions in my analysis in my "Development Standards" discussion below.

- (b) The structure(s) shall not unreasonably interfere with the adjacent property owners' or public's use and enjoyment of the waters of Belleville Lake. The facilities are so designed as to protect the neighboring property owners from negative off-site impacts.
- (c) The structure(s) will not create a risk to the health, safety and welfare of persons who use Belleville Lake for recreational purposes, and will not interfere with safe navigation on the Lake.
- (d) The structure(s) must be constructed of materials which will not impair the water quality, water flow or water levels of Belleville Lake. This will be evaluated in the EGLE permitting process.
- (e) To the extent feasible, the structures(s) shall protect and enhance the scenic, recreational and environmental quality of Belleville Lake. The location of the facilities shall be such that they will not create a negative visual impact for the general public.
- (f) Marinas and non-commercial multi-docking facilities shall be separated from one another to avoid overcrowding and excessive boat traffic on the Lake. The proposed improvement is not a docking facility and will not add boat traffic to the Lake.
- (g) Consideration shall be given to maintaining consistency with the upland zoning and land use. The proposed boardwalk/dock structure will be an amenity that is consistent with the upland public park use.
- (h) Uses approved shall be consistent with the primary goal of permitting reasonable use by Lake residents and land owners. The enhanced fishing and passive recreation activities at the structure will be consistent with this goal.

Belleville Lake Shoreline District Development Regulations - 3.120(D)

Certain applicable development regulations from Section 3.120(D) of the Van Buren Township Zoning Ordinance are listed below:

- ✓ The boardwalk / dock structure is permitted to extend to each of the site's side lot lines under Section 3.120(D)(4)(d). The boardwalk / dock structure will not extend beyond the site's lot lines.
- ✓ The use will not involve overnight anchorage, rentals of watercraft, or fences on Township lake property, consistent with the requirements of Section 3.120(D)(16)-(18).

Recommendation

The items included in this report are minor in nature and can be addressed with final site plan adjustments as the project proceeds through engineering and final site plan review and through the creation of "Issued for Construction" drawings. I **recommend conditional approval** of the Plan dated October 30, 2022, subject to the following conditions:

- ✓ A description of the proposed use should be added to the site plan.
- ✓ <u>If available, a sample of the Trex decking surface materials shall be provided for the Planning Commission's review.</u>
- ✓ Prior to construction, a plan set which includes the design professional's seal must be provided.

- ✓ Additional details shall be shown on Sheet A101 to demonstrate accessible approaches in two noted small gaps between the edge of concrete and the proposed structure on the north end of the site and in the center of the site.
- ✓ The proposed Lake Lite solar deck lights listed on sheet E101 shall meet all standards of Section 8.105 of the Van Buren Township Zoning Ordinance. The proposed work must be completed in accordance with any applicable EGLE and FERC requirements.

If the Planning Commission conditionally approves this request, final "Issued for Construction" drawings will be requested to address the conditions above and be filed with the Van Buren Township Department of Planning and Economic Development prior to final authorization and construction.

Thank you for allowing me to assist with this review.

Sincerely,

Dan Power

Director of Planning and Economic Development, Van Buren Charter Township

CC: Elizabeth Renaud, CPRP and Tammy Dohring, CPRP - Director and Deputy

Director of Community Services, Van Buren Charter Township

Ron Akers, AICP - Municipal Services Director, Van Buren Charter Township

Section 3.120 Belleville Lake Shoreline Districts

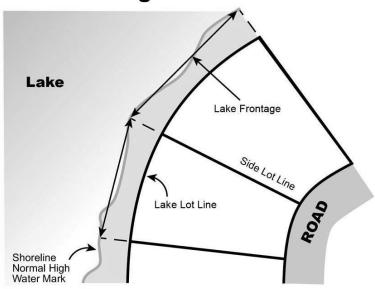
- (A) Purpose. The Charter Township of Van Buren recognizes and concludes that the proper and safe use of Belleville Lake is desirable to retain and maintain the physical, ecological, cultural and aesthetic characteristics of the Lake in the Township, to preserve and protect the quality and safety of the Lake and shorelines and the rights of adjacent owners and users as well as the Township as a whole, to promote the public health, safety and welfare of all persons making use of the Lake within the Township and properties adjacent to the Lake in the Township, and to ensure compliance with federal and state laws in light of the Township's ownership of the land in and adjacent to Belleville Lake, as well as with the terms of the Federal Energy Regulatory Commission (FERC) license to operate the French Landing Dam. Accordingly, it is the intent and purpose of the Township Board to adopt reasonable regulations for the number and placement of docks, installation of sea walls, earth excavation or grading, and other matters with respect to Belleville Lake in the Township. It is further the intent of the Township Board to restrict the private use of Township-owned Lake property to those water-based uses and structures customarily accessory to a waterfront lot, and to affirm that abutting property owners are responsible for maintaining both their property at the periphery of the Lake and the Township- owned Lake property abutting to their property clear of fallen trees that impede lake access, reasonably protected from erosion, and otherwise maintained as required under the terms of the FERC license.
- **(B) Definitions.** For the purposes of this section:
 - (1) "Boardwalk" means a walkway made of planking.
 - (2) "Boat" means every description of watercraft used or capable of being used as a means of transportation on water as defined under Part 801 of the Natural Resources and Environmental Protection Act, 1994 P.A. 451, MCL 324.80101.
 - (3) "Boat cradle", "shore station", "boat hoist" and "boat lift" means a device for the purpose of mooring, anchoring or holding a watercraft in, on or above the water in the Lake.
 - (4) "Bottomland" means the land area that lies below the normal high water mark.
 - (5) "Catwalk" means a narrow footway along the edge of a seawall or similar feature raised above the shoreline.
 - (6) "Common use lot" means any private site, platted lot or other parcel held in common by a subdivision, association, or similar agency or group of individuals, or held in common by virtue of the terms of a plat of record; which provides common use Lake access to non-Lakefront lots or land owners.
 - (7) "Director" means the Director of Planning and Economic Development of the Charter Township of Van Buren, or successor charged with enforcing this Ordinance.
 - (8) "Dock" means a structure, platform or fixture extending from the shore or bottomlands into a Lake.

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- (9) "Dock Stem" means that portion of a dock or mooring structure that extends perpendicular to the shore.
- (10) "Docked" or "docking" means the anchoring, tethering, or mooring of a watercraft directly to a pier, structure, platform, pole, anchor or dock; and also means the placement of a watercraft in an off-shore boat cradle or shore station, or anchoring or tethering to the bottomlands of a Lake.
- (11) "Lake" or "Belleville Lake" means that portion of Belleville Lake within Wayne County.
- (12) "Lake Frontage" or "Frontage" means the distance between the side lot lines of a lot or parcel as extended to the Belleville Lake shoreline, measured between their points of intersection with the shoreline at the normal high water mark (Figure 5).

Figure 5. Lake Frontage

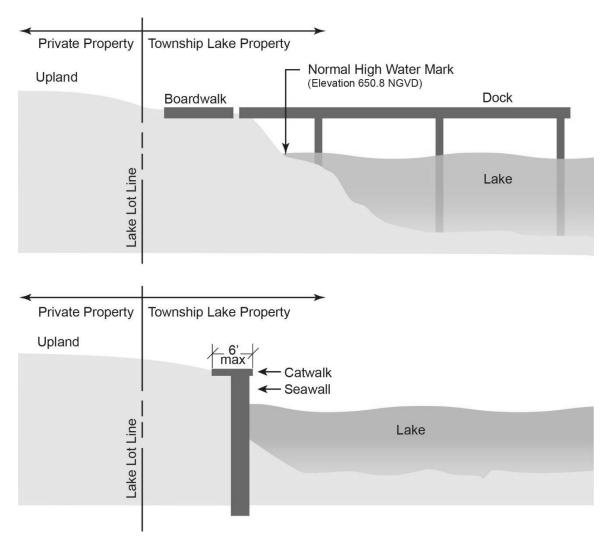
Lake Frontage



- (13) "Lake Lot Line" means the boundary line of a lot or parcel of land, lawfully existing on documentation recorded with the Wayne County Register of Deeds, which abuts the Township Lake property.
- (14) "Lake Structures" means improvements constructed upon Township Lake property, as may be permitted by this <u>Section 3.120</u>. (<u>Figure 6</u>)

Figure 6. Lake Structures Example

Lake Structures Example



- (15) "Marina" means a facility that is owned or operated by an entity, extends into or over an inland Lake or stream, and offers service to the public or members of the marina for docking, loading, or other servicing of recreational watercraft.
- (16) "Moor" or "Mooring" means the anchoring, tethering or docking of a boat directly to a pier, structure, platform, pole, anchor or dock, and also means the placement of a boat in a boat cradle or shore station, the regular or overnight beaching of a boat, or overnight anchoring or tethering to the bottomlands of the Lake.
- (17) "Non-Commercial Multi-Docking Facility" means a facility used for docking or mooring from one or more Lake Frontage properties to serve more than one single family dwelling and limited to use by the residents of the property, such as at outlots (common use lots), mobile home parks, condominium and apartment developments, and other commonly owned or controlled points of access.

- (18) "Normal high water mark" means the normal high water mark of the Lake as determined by the Federal Energy Regulatory Commission from time to time. Presently on Belleville Lake, "normal high water mark" means six hundred and fifty and eight-tenths (650.8) feet National Geodetic Vertical Datum (NGVD), 1929.
- (19) "Ramp" or "Launch" means a short, hardened slope extending from the shoreline into the Lake for the purpose of launching or retrieving boats.
- (20) "Seawall" or "Bulkhead" means a linear, rigid structure built along the shoreline to resist the erosion of the land caused by the Lake and which can also be used to moor boats and as a structure to receive and discharge a boat's passengers and cargo.
- (21) "Separate frontage" means that portion of a lot or parcel of land lawfully existing on documentation recorded with the Wayne County Register of Deeds, which abuts or intersects with the normal high water mark of the Lake, whether such lot or parcel is owned by one or more persons, is commonly owned by several persons or combinations of persons, or occupied by a multiple-unit residential development.
- (22) "Township Lake property" means land owned by the Township at Belleville Lake, whether or not it is above the normal high water mark and is the property that exists below the Lake Lot Line and extends into Belleville Lake and is generally recognized as the property below the 655 ft. contour line (1929 NGVD) or brow of the hill.
- (23) "Upland" means that the land area that lies adjacent to and above the Township Lake property.
- (24) "Watercraft" means any boat, pontoon boat, hydrofoil, hovercraft, sailboat, Jet Ski, personal watercraft, jet boat, or similar vessel.
- **(C) Belleville Lake Shoreline Districts.** Two Belleville Lake Shoreline Districts are established in this section: the Belleville Lake Shoreline District A Single Family Residential (BLA), and the Belleville Lake Shoreline District B Non-Single Family Residential (BLB). These zoning districts regulate the use of the Township- owned Belleville Lake property.

The BLA District shall generally abut Lake Frontage upland zoned R-1A, R-2A, R-1B, R-1C Single Family Residential districts, and AG or AG-A Agricultural and Estates districts. The BLB District shall generally abut Lake Frontage upland zoned or used for more intensive uses that are not accessory to a single dwelling on a single family lot, including but not limited to common use lots, multiple family, commercial, office, public, institutional and similar uses.

Accordingly, no improvements, modifications, alterations, or structures of any kind shall be constructed, installed or made on Township Lake property within the BLA and BLB districts (other than seasonal structures as defined by the MDEQ) unless those actions comply with the regulations of the respective district, obtain the approval of the Township as provided herein, and the approval of all other agencies with jurisdiction.

- (1) Belleville Lake Shoreline District A Single Family Residential (BLA). The BLA District is intended to provide for the use of the Township-owned Belleville Lake property for water-related uses that are customarily accessory to an abutting single family dwelling on a separate lot with Lake Frontage.
 - (a) Uses Subject to Administrative Approval. In the BLA District, the following water-based uses and structures customarily accessory to one single family dwelling on a single family lakefront lot shall be permitted. All such uses shall be subject to Township administrative approval as described in Section 3.120(F), herein.
 - (i) Docks, piers, landings, boardwalks and catwalks that can accommodate no more than 10 watercraft in total at one time on a single parcel.
 - (ii) Boat hoists, cradles and lifts.
 - (iii) Stairs and walkways located on Township Lake property.
 - **a.** Shall only be permitted if reasonably necessary to access the permitted uses
 - **b.** Shall be subject to the maximum Lake Frontage coverage and other standards applicable to the use.
 - (iv) Embankments, bulkheads, gabion baskets, retaining walls and similar structures for erosion control to protect the existing shoreline.
 - (v) Minor excavation, grading or earth modifications, defined as those that do not exceed 5 cubic yards or disturb an area of 800 square feet or less within 100 feet of the normal high water mark of the Lake.
 - (vi) Navigational markers or buoys.
 - (vii) Any other use of the same nature or class of water-based uses listed in this district which, in the determination of the Township is consistent with the purpose of this district and which will not impair the present or potential use of the Lake and adjacent properties. Any such use shall be limited to the use of the lakefront by a single family residential dwelling on an individual lot.

At the discretion of the Director, any BLA use may be referred to the Planning Commission for public hearing, recommendation to and special approval by the Township Board, and/or site plan review and approval in accordance with the provisions of this Ordinance.

- **(b) General Restrictions on all BLA Uses.** All uses permitted in the BLA District shall be subject to the following restrictions:
 - (i) All uses and structures shall comply with the standards and requirements of <u>Section 3.120(D)</u>, herein.
 - (ii) No use or structure shall be permitted if there is not a single family dwelling on the abutting frontage lot.
 - (iii) Private ramps, launches or docks intended to provide access to the Lake for multiple non-abutting or back lots of a subdivision, site condominium or other development are prohibited.
 - (iv) No use or structure or combination thereof shall be permitted that can accommodate more than 10 watercraft at one time on a single parcel.
 - (v) All watercraft, docks, boats, watercraft storage facilities including boat cradles, shore stations and boat lifts and other structures and facilities permitted in this BLA District are limited solely for the use and quiet enjoyment of the abutting

frontage lot owners and their invited guests. No such facilities as listed above shall be rented or leased or by any other persons. For purposes of this section, persons shall mean an individual, partnership, corporation, association and any other entity to which the law provides or imposes rights and responsibilities.

- (2) Belleville Lake Shoreline District B Non-Single Family Residential (BLB). The BLB District is intended to provide for the use of the Township-owned Belleville Lake property for water-related uses customarily accessory to land zoned or used for more intensive uses than a single family dwelling on a separate lot with Lake Frontage. Such more intensive uses include, but are not limited to common use lots, multiple family, commercial, office, public, institutional and similar uses.
 - (a) Uses Subject to Administrative Approval. In the BLB District, the following water-based uses and structures shall be permitted subject to Township administrative approval as described in Section 3.120(F), herein.
 - (i) Embankments, bulkheads, retaining walls and similar structures for erosion control, to protect the existing shoreline.
 - (ii) Minor excavation, grading or earth modifications, defined as those that do not exceed 5 cubic yards or disturb an area of 800 square feet or less within 100 feet of the normal high water mark of the Lake.
 - (iii) Navigational markers or buoys.

At the discretion of the Director, any BLB use may be referred to the Planning Commission for public hearing, recommendation to and special approval by the Township Board, and/or site plan review and approval in accordance with the provisions of this Ordinance.

- **(b)** Uses Subject to Planning Commission Approval. In the BLB district, the following water-based uses and structures may be permitted, subject to Planning Commission site plan approval.
 - (i) Docks, piers, landings, boardwalks, catwalks or similar features that can accommodate no more than 6 watercraft in total at one time on a single parcel. Such features shall serve an abutting upland parcel used for permitted commercial, office, public or institutional purposes, including but not limited to restaurants, public parks, private clubs, transient dockage under public ownership and control, and other uses determined similar in the discretion of the Planning Commission and not otherwise specifically provided for in this Article.
 - (ii) Non-commercial multi-docking facilities that can accommodate no more than 6 watercraft in total at one time on a single parcel.
 - (iii) Decks, stairs, and walkways located on Township Lake property.
 - **a.** Shall only be permitted if determined necessary by the Township to access the permitted uses.

- **b.** Shall be subject to the maximum lot frontage coverage and the other standards of <u>Section 3.120(D)</u>.
- (c) Uses Subject to Special Approval. The following water-based uses and structures shall be permitted subject to special approval in accordance with the requirements

- of <u>Article 12, Chapter 3</u> of this Ordinance. These uses shall require public hearing by the Planning Commission, recommendation to and special approval by the Township Board, and Planning Commission site plan review and approval.
- (i) Non-commercial multi-docking facilities with docks, piers, landings, boardwalks, catwalks or similar features that can accommodate more than 6 watercraft in total, at one time on a single parcel.
- (ii) Boat hoists, cradles and lifts as part of a non-commercial multi-docking facility permitted under <u>Section 3.120(C)(2)(c)(i)</u> that are under common ownership and are all of the same style.
- (iii) Docks, piers, landings, boardwalks, catwalks or similar features that can accommodate more than 6 watercraft in total at one time on a single parcel. Such features shall serve an abutting upland parcel used for permitted commercial, office, public or institutional purposes, including but not limited to restaurants, public parks, private clubs, transient dockage under public ownership and control, and other uses determined similar in the discretion of the Planning Commission and not otherwise specifically provided for in this Article.
- (iv) Marinas.
- (v) Watercraft minor service uses, including sale of gasoline, only permitted as part of a marina.
- (vi) Boat launches and ramps, for public access only.
- (vii) Any other use of the same nature or class of water-based uses listed in this district as either a principal use permitted or a use subject to special approval which, in the determination of the Township is consistent with the purpose of this district and which will not impair the present or potential use of the Lake and adjacent properties.
- (viii) Major excavation, grading or earth modifications, defined as those greater than 5 cubic yards or that disturb an area of more than 800 square feet within 100 feet of the normal high water mark of the Lake.
- (d) General Restrictions on BLB Uses. All uses permitted by right or by special approval in the BLB District shall be subject to the following restrictions:
 - (i) No boat lifts, cradles or hoists shall be permitted at marinas.
 - (ii) No buildings or covered structures shall be permitted on the water or on Township Lake property.
 - (iii) All uses and structures shall comply with the standards and requirements of *Section 3.120(D)*, herein.
 - (iv) Private ramps or launches intended to provide access to the Lake for multiple non-abutting or back lots of a subdivision, site condominium, multiple family development or other non-frontage uses shall be prohibited.
 - (v) No signs shall be permitted other than those approved by the Township and necessary for public safety.
 - (vi) All watercraft, docks, boats, watercraft storage facilities including boat cradles, shore stations and boat lifts and other structures and facilities permitted in this BLB District are limited solely for the non-commercial use and quiet enjoyment of the abutting frontage lot owners, lessees, renters, and their invited guests. No such facilities as listed above shall be rented, leased or allowed to be used by any other persons unless approved by the Township in conjunction with a

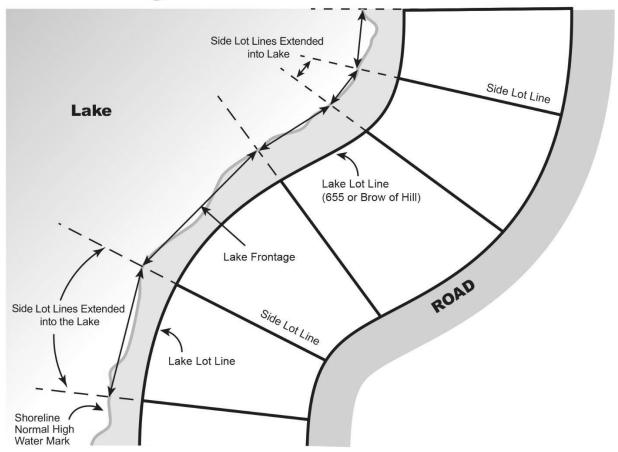
marina. For purposes of this section, persons shall mean an individual, partnership, corporation, association and any other entity to which the law provides or imposes rights and responsibilities. For purposes of this section, commercial use shall mean the rental, lease or allowed use of docks, boat cradles, shore stations and boat lifts by persons who are not abutting frontage owners, lessees, or renters, excluding those facilities that are open to the public and operated by the Township, City or State of Michigan.

(D) Development Regulations.

- (1) General. The presence of structures on Township Lake property does not convey any legal or equitable right, title or interest whatsoever in the Township Lake property other than as expressly set forth herein. It is understood that any facilities installed hereunder are subject to the terms of the FERC license.
- (2) Dock Location. No dock shall be placed or maintained in a location where it can present a hazard to navigation, or create a risk that boats will run aground while attempting to moor at the dock. No person shall install or maintain a dock except on shoreline or bottomlands abutting a frontage in which they have an ownership interest. All docks shall be positioned perpendicular to the shore, and in a manner that does not unreasonably encroach on the use and enjoyment of the Lake by neighboring lots.
- (3) Measurement of Lake Frontage. Each side lot line of the abutting upland lot shall be extended as a straight line from its point of intersection with the boundary of the Township Lake property (Lake Lot Line) to its intersection with the Lake Frontage line at the normal high water mark. A lot's total Lake Frontage shall be measured as a straight line connecting the points of intersection of the extended side lot lines with the normal high water mark. For purposes of measuring setbacks for docks, boat lifts and similar structures, the side lot lines shall be extended to the Lake Frontage line and then extended on the same line, straight into the Lake from the shoreline. (Figure 7)

Figure 7. Lake Frontage Measurement

Lake Frontage Measurement



- (4) **Setback Requirements.** Side setbacks shall be measured from the side lot lines of the abutting upland lot as extended into the water, as defined in <u>Section 3.120(D)(3)</u>.
 - (a) **Docks.** No dock shall be constructed, installed or placed within 10 feet of the side lot lines of the abutting upland lot as extended into the water.
 - **(b) Boat Lifts and Boat Cradles.** No boat lift or boat cradle shall be located within five feet of a side lot line of an abutting upland lot as extended into the water.
 - (c) Launching, Storing, Mooring or Docking. No boat or portion thereof shall be launched, stored, moored or docked within five feet of the side lot lines of an abutting upland lot as extended into the water.
 - (d) Boardwalks and Catwalks. Boardwalks, catwalks and other walkways located on Township Lake property shall be permitted to extend to the side lot line as extended.

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(5) **Dock Length and Width.** No dock or any other structure or appurtenance shall extend more than 40 feet into the Lake, measured perpendicularly from the shoreline, unless

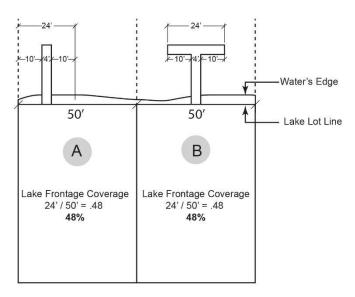
greater length is necessary to reach water with a depth of three feet, and then no further than necessary to reach such depth.

(6) Size and Extent Restrictions. (See *Figure 8*)

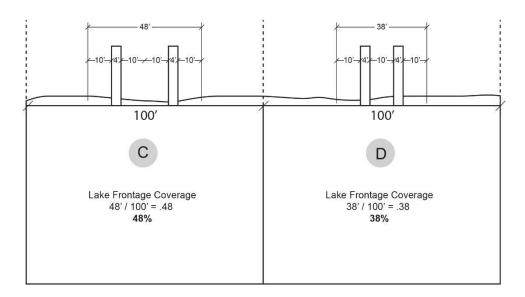
- (a) In the BLA District, docks, other mooring structures, boat cradles, boat hoists, similar structures and watercraft shall extend across no more than 60% of the Lake Frontage of the single family lot to which they abut.
- (b) In the BLB District, docks, other mooring structures, boat cradles, boat hoists, similar structures and watercraft for non-commercial multi-boat docking facilities shall extend across no more than 60% of the Lake Frontage of the lot which they abut. Such watercraft and structures shall be clustered along the parcel frontage into no more than four groupings. For marinas, public uses, or abutting commercial sites, the Township may authorize docks, other permitted structures and watercraft to extend across up to 100% of the Lake Frontage, as deemed appropriate and subject to special approval.
- (c) The extent of frontage coverage shall include the coverage by docks, other mooring structures, projections including boat hoists, boat cradles, lifts and similar, and watercraft. Permitted boardwalks, catwalks upon retaining walls, and shoreline protection structures that parallel the shore shall be excluded from the computation of frontage coverage.
- (d) Distance across a lot's Lake Frontage shall be measured along the Lake Frontage line determined in accordance with <u>Section 3.120(D)(3)</u>. The extent of structures across the Lake Frontage shall be the width of those structures measured parallel to the abutting lot's Lake Frontage line plus 10 feet of additional width for boat dockage on any side of the structure that can accommodate dockage, divided by the total length of the lot's Lake Frontage. The width of a "T" or "L" dock shall be measured at its widest point generally parallel to the Lake Frontage, and shall include a minimum of 10 feet of additional width parallel and adjacent to the "stem" for boat dockage.
- (e) No docks, other mooring structures or combination thereof on a single site that accommodate more than 10 watercraft shall be permitted, except as provided in the BLB District under <u>Section 3.120(C)(2)</u>, above. Further, no such docks, other mooring structures or combination thereof that accommodate more than 10 watercraft shall be permitted unless it is approved by FERC, all other agencies with jurisdiction, and receives special approval of the Township as provided herein.

Figure 8. Extent Coverage Examples

Extent Coverage Examples



NOTES: 10' minimum side setback. Boat must be 5' from side lot line.



- (7) Dock and Raft Ownership and Repair. All docks, boat lifts, boat cradles and rafts shall be kept in good repair. Good repair means free from defects which might cause a hazard to persons or boats and free from defects which may result in interference with navigation of boats in the Lake.
- (8) Boat Storage Devices. Each boat cradle, hoist or boat lift used in conjunction with the Lake shall meet all of the following requirements, in addition to the other requirements of this Ordinance.
 - (a) No part of the structure may be used as living space.

- **(b)** It shall be designed with not more than three attached docks. Boat lifts with seating on three or more sides shall be prohibited.
- **(9) Excavations, Grade Changes, and Earth Modifications.** All earth modifications, excavations and grade changes, shall meet the following criteria:
 - (a) Minimize changes to the contour of the shoreline.
 - **(b)** Maintain lateral earth support to prevent slope failures and to avoid potential negative impacts to adjacent lots.
 - (c) Rip-rap and gabion baskets are the preferred methods of erosion control and bank stabilization, where practicable.
 - (d) A Soil Erosion permit must be obtained from Wayne County, if required by the Soil Erosion and Sedimentation Control Act, P.A. 451 of 1994. Any earth disturbance greater than one acre or within 500 feet of the Lake requires a Soil Erosion and Sedimentation Control permit from Wayne County. The County may grant a waiver from permitting for gardening and very limited earth disturbances, but the abutting upland owner remains responsible for making the application.
 - (e) All major excavations and grade changes (greater than 5 cubic yards or 800 sq. ft. area disturbed) under this Ordinance are subject to the approval of the Township Engineer.
- (10) Channels and Canals. No new channels or canals shall be created or expanded along the Belleville Lake shoreline for the purpose of creating additional Lake Frontage or for the mooring of boats.
- (11) Seawalls and Bulkheads. Gabion baskets and rip-rap are generally preferred means for shoreline stabilization. All existing seawalls, bulkheads and other erosion protection devices shall be kept in good repair to prevent soil erosion and sedimentation into the Lake. As new erosion protection devices are required, seawalls and bulkheads shall only be permitted where gabion baskets and rip-rap are not feasible. New or replacement seawalls or bulkheads shall have at least one egress ladder or steps per 70 linear feet. Further, variation in seawall height may be required to accommodate emergency exit from the water.
- (12) Markers or Buoys. No marker or buoy shall be placed or maintained in a location where it may present a hazard to navigation, or create a risk that boats will become entangled while navigating the Lake. Township approval is required to place any markers or buoys, except that temporary markers or buoys placed for a special event for a period of less than 12 hours shall be permitted without Township approval.
- (13) Floating Rafts. Floating rafts, swimming platforms, trampolines, slalom buoys, ski jumps or floats shall be located in the Lake so as to not impede navigation or present a safety hazard to boats; and shall be located on bottomlands immediately adjacent to a Lake

- Frontage in which the owner of the raft, platform, trampoline, buoy, jump or float has an ownership interest, unless otherwise approved by the Township.
- (14) Stairs. Stairs, walkways, and landings for access from the abutting upland lot to the shoreline may be permitted on Township Lake property only if the Township determines that it is necessary for reasonable access.
 - (a) To minimize visual and physical impacts on the frontage, such structures shall be limited to no more than one per Lake Frontage lot, or the number of dock clusters, or the number reasonably necessary to access the lake frontage, whichever is greater. Stairs, walkways and landings shall be included in the calculation of, and subject to the limitations on maximum lot frontage coverage, and the other standards of *Section 3.120(D)*.
 - **(b)** Stairs, walkways and landings must be placed entirely above the normal high water mark, except in cases where such structures are required to access the water due to a seawall or bulkhead.
- (15) Marinas and Non-Commercial Multi-Docking Facilities. Marinas and non-commercial multi-docking facilities must meet all the requirements that apply to their component docks, seawalls, and other facilities, as well as the following:
 - (a) Dry docks and dry land storage of watercraft are not permitted on Township Lake property.
 - **(b)** Suitable fire extinguishers, grounding cables, and other safety devices are required at any fueling stations. Fueling stations are not permitted at a non-commercial multidocking facility.
 - (c) Such uses shall comply with all applicable construction standards and permit requirements of the MDEQ.
 - (d) All docks, hoists and similar structures installed shall be under common ownership and of a common design so as to create a unified appearance at the site. Hoists and similar structures shall not be permitted at a marina.
 - (e) All such uses shall be located so as to protect the neighboring property owners from potential off-site impacts of the use and so as to protect navigation on the Lake.
 - (f) When reviewing a proposed new or changes to an existing marina or non-commercial multi-docking facility, the Township shall consider factors including, but not limited to the location of the facility on the Lake, its visibility and potential impacts on the aesthetic and recreational quality of the Lake, the separation from other marinas, and other considerations for the public health, safety and general welfare.

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(16) Overnight Anchorage. There shall be no overnight watercraft anchorage in open water permitted.

- (17) Rental Prohibited. There shall be no rental of watercraft dockage or storage space except at a marina.
- (18) Fences Prohibited. There shall be no fences permitted on Township Lake property.
- **(E) Exemptions.** A Lake Frontage property owner who does or causes the following activities to be conducted on Belleville Lake, his or her frontage, or on abutting Township Lake property is not required to obtain Township approval under this <u>Section 3.120(D)</u>. Exemptions under this Section does not alleviate the responsibility of a property owner to obtain all other permits and approvals required by the Township and other entities with jurisdiction.
 - (1) Routine maintenance and repair of docks, seawalls, bulkheads, boat cradles, boat lifts, hoists, ramps or launches due to normal wear and tear.
 - (2) A minor earth change, 5 cubic yards or less, that impacts less than 800 square feet and that is stabilized within 24 hours of the initial disturbance.
 - (3) Earth changes necessitated by the installation, repair, or maintenance work performed in a public utility easement or approved private easement for public utilities.
 - (4) Gardening, if the natural elevation of the area is not changed.
 - (5) Planting of trees, shrubs, and other vegetation.
 - (6) Removal of trees, shrubs, and other vegetation, in a manner that does not cause erosion.
 - (7) Normal and customary residential landscaping. Native and natural plantings are preferred.
 - (8) Temporary stockpiling of soil, sand, or gravel not greater than 5 cubic yards, as part of a construction project on the Lake, provided that the loose material is protected to prevent wash or erosion.
- (F) Belleville Lake Shoreline District Approval Process.
 - (1) Approval Required. Except as otherwise provided in this Section, no person shall do or cause any one of the following on Belleville Lake, on his or her frontage, or on abutting Township Lake property without first having obtained Township approval in accordance with the provisions of this Ordinance:
 - (a) Install, construct or expand a dock, boat cradle, boat lift, boat hoist, ramp, or launch.
 - **(b)** Install, construct or expand a seawall, bulkhead, dike, levee or other erosion control device.
 - (c) Install, place or maintain a ski jump or other rigid platform.

- (d) Install, place or maintain a navigational marker or buoy.
- **(e)** Excavate, grade, or make earth modifications other than those exempted under this Ordinance.
- (2) Application Requirements. Only the property owner or authorized designee may apply for approval under this Section. Each applicant shall submit the following documents and drawings. If determined necessary and required by the Township, the drawings and documents shall be signed by licensed professional(s).
 - (a) A completed application form, including a description of the proposed improvements and modifications and description of any other required permits.
 - **(b)** A plan that shows the boundaries of the abutting upland lot, the location of the proposed installation and the location of the shoreline, and location of any existing structures within 50 feet of the proposed installation.
 - (c) A copy of any existing survey from the abutting upland lot and photographs of the existing conditions.
 - (d) Plans, elevations and sections, with dimensions, showing the height, length, width, distance to the lot lines and configuration of the proposed installation.
 - (e) Specification of the materials to be used in construction or installation.
 - **(f)** Water depth at the farthest point of projection, when additional dock length is requested.
 - (g) Distance from the farthest point of projection to the opposite shore (if less than 250 ft.).
 - **(h)** A description of the existing shoreline features and uses.
 - (i) A description of any shoreline erosion control or shoreline stabilization (seawalls, bulkheads and similar) proposed as part of the project.
 - (j) Other information as determined necessary by the Township to protect the public health, safety and welfare of the Township's residents, those who use Belleville Lake and the shoreline habitat.
 - (k) The application fee established by the Township Board.
 - (I) Completed application for review by Michigan Department of Environmental Quality, and if required, by FERC.
 - (m) Any other applicable elements of Site Plan and/or Special Approval applications, as required by this Ordinance.

- (3) Review Process. All plans and applications for approval under these Belleville Lake Shoreline Districts shall be submitted to the Director of Planning and Economic Development or other designated Township official for Township review. The plans and applications shall be reviewed to ensure compliance with the submittal requirements of this Ordinance, and consistency with Belleville Lake Shoreline District zoning and development regulations. Review shall be by one of the following processes: Administrative, Site Plan, and/or Special Approval, as further specified below.
 - (a) Administrative Approval. Uses listed under the Belleville Lake Shoreline District A Single Family Residential (BLA), Section 3.120(C)(1), and those uses in the Belleville Lake Shoreline District B – Non-Single Family Residential (BLB), Section 3.120(C)(2)(a), above, are subject to administrative approval by the Director of Planning and Economic Development. The Director shall review the plan for compliance with the requirements of this Ordinance.
 - The Director of Planning and Economic Development may forward any (i) application for a use under this Section to the Planning Commission for its site plan review and/or public hearing, recommendation and special approval by the Township Board upon finding that unique characteristics of the site or the application warrant such consideration.
 - (ii) Every application submitted for review shall be in accordance with the requirements of this Ordinance. Administrative review procedures are not intended to modify any ordinance, regulation or development standard. Approval by all other agencies with jurisdiction, including FERC is also required.
 - (b) Site Plan Approval by the Planning Commission. The uses permitted under the Belleville Lake Shoreline District B – Non-Single Family Residential (BLB), Section 3.120(C)(2)(b) above, are subject to site plan approval by the Planning Commission. For purposes of the Belleville Lake Shoreline Districts, the information required for a site plan shall contain all information required by this Zoning Ordinance, Section 12.203, and also that information specified under Section 3.120(F)(2) above. The Planning Commission shall review the plan for compliance with along with compliance with all applicable requirements of this Zoning Ordinance. Approval by FERC may be required for such uses, along with the approval of other agencies with jurisdiction.
 - (c) Special Approval by the Township Board. The uses permitted in the Belleville Lake Shoreline District B – Non-Single Family Residential (BLB), Section 3.120(C)(2)(c) above, are subject to special approval by the Township Board. All such uses shall be subject to the standards, criteria, procedures and requirements of Article 12, Chapter 3 of this Zoning Ordinance, including public hearing and recommendation by the Planning Commission and approval of the Township Board. All special approval uses also require submission and approval of a site plan, along with compliance with all other applicable requirements of this Zoning Ordinance. Approval by FERC and other agencies with jurisdiction is also required for all special approval uses.

- (4) Approval Criteria. The Township shall find that the following criteria are met prior to granting approval for any use of Township Lake property in the Belleville Lake Shoreline District. In addition, for those uses that required special approval of the Township Board, the criteria of <u>Section 12.306</u> must also be met.
 - (a) The application shall demonstrate compliance with all of the requirements of <u>Section</u> 3.120(D) above, and all other applicable requirements of this Zoning Ordinance.
 - (b) The structure(s) shall not unreasonably interfere with the adjacent property owners' or public's use and enjoyment of the waters of Belleville Lake. The facilities are so designed as to protect the neighboring property owners from negative off site impacts.
 - (c) The structure(s) will not create a risk to the health, safety and welfare of persons who use Belleville Lake for recreational purposes, and will not interfere with safe navigation on the Lake.
 - (d) The structure(s) will be constructed of materials which will not impair the water quality, water flow or water levels of Belleville Lake.
 - (e) To the extent feasible, the structures(s) shall protect and enhance the scenic, recreational and environmental quality of Belleville Lake. The location of the facilities shall be such that they will not create a negative visual impact for the general public.
 - **(f)** Marinas and non-commercial multi-docking facilities shall be separated from one another to avoid overcrowding and excessive boat traffic on the Lake.
 - (g) Consideration shall be given to maintaining consistency with the upland zoning and land use.
 - **(h)** Uses approved shall be consistent with the primary goal of permitting reasonable use by Lake residents and land owners.
- (5) Approval Issuance. The Director of Planning and Economic Development shall authorize the issuance of a Township approval letter if, following review in accordance with the procedures of this Ordinance, all conditions and standards of the Ordinance and the approving body are met. Approvals from FERC, MDEQ and any other agency with jurisdiction that cannot be obtained until the Township's approval is issued, shall be required before any construction, earthwork or site changes begin, and a copy of all such other approvals must be submitted to the Township Director of Planning and Economic Development. If an application is denied by the Township, a written record shall be provided to the applicant listing the reasons for the denial. In addition:
 - (a) No structure within the BLA or BLB districts shall be considered an accessory structure for purposes of this Ordinance.

(b) Any other activities conducted on the land or water shall comply with all applicable federal, state and local laws.

(6) Existing Boat Docks, Structures and Uses.

- (a) General. The presence of structures on Township Lake property does not convey any legal or equitable right, title or interest whatsoever in the Township Lake property other than as expressly set forth herein. It is understood that any facilities installed hereunder are subject to the terms of the FERC license.
- **(b) Easements.** The mooring, docking, or launching of boats or installation and usage of docks, boat lifts, boat cradles, or platforms on or from a Lake access easement recorded prior to the date of adoption of this Section shall be permitted to continue. However, any easement recorded after the date of adoption of this Section shall not permit the mooring, docking, or launching of boats or installation and usage of docks, boat lifts, boat cradles, platforms or rafts on the Lake.

(c) Continuation of Existing Uses.

- (i) Any structures, other than secondary living spaces on Township Lake Property or blight, existing prior to the adoption date of this ordinance are considered grandfathered and shall not be subject to Township action under this ordinance.
- (ii) The mooring, docking, or launching of boats or usage of docks, boat lifts, boat cradles, piers, platforms or rafts on or from a particular lot, parcel, or frontage occurring prior to the date of adoption of this Section shall be permitted to continue without change, unless such activities are in violation of the prohibition against renting or leasing of facilities contained in $\underline{Section}$ 3.120(C)(1)(b)(v).
- (iii) Maintenance and repair of docks, seawalls, and bulkheads due to normal wear and tear shall not be deemed a change, alteration, or expansion of prior usage.
- (iv) Whether a Lake use or structure is approved by the Township or not, it is the obligation of all property owners to maintain both their property at the periphery of the Lake and the Township Lake property abutting to their property clear of fallen trees that impede lake access, reasonably protected from erosion, and otherwise maintained as required under the terms of the FERC license. The abutting property owner from which the tree originated shall be responsible for its removal.
- (v) The burden of proof in asserting and establishing a defense under this Section is on the property owner who asserts a lawful existing use. The Board of Zoning Appeals may hear and decide appeals regarding the existence or expansion of any lawful existing uses under this Section. The Board of Zoning Appeals shall not decide any such appeal until after it has held a public hearing pursuant to Article 12, Chapter 6 of this Ordinance.

- (7) Exceptions, Modifications and Appeals.
 - (a) Board of Zoning Appeals. For the purposes of this <u>Section 3.120</u>, the Board of Zoning Appeals ("BZA") as established and regulated in <u>Section 13.104</u> of this Ordinance shall be the reviewing body. All provisions of said <u>Article 12, Chapter 4</u> shall apply except as specifically modified in this <u>Section 3.120(F)(7)</u>.
 - **(b) Powers.** The BZA may interpret the provisions of this <u>Section 3.120</u> if questions arise and may approve modifications to particular provisions of this Section, and grant special exceptions for a given case. In exercising its powers, the BZA shall have the primary goal of reaching an equitable conclusion and allocation of use of the Township Lake property for the purposes stated in <u>Section 3.120(A)</u> of this Ordinance.
 - (c) Standards for Special Exceptions. The BZA shall not grant a special exception to any provision of this <u>Section 3.120</u> unless it first makes all of the following findings:
 - (i) Enforcement of the provision(s) requested for special exception would unnecessarily prevent the reasonable use of the land or boats involved without resulting benefit to the public health, safety and welfare of persons or property;
 - (ii) The special exception would not unduly prevent the realization of the purposes of this Ordinance;
 - (iii) The special exception would not cause substantial harm or detriment to adjacent or nearby lands or boats or the public interest or safety, nor be contrary to the intent or purposes of this Ordinance;
 - (iv) Unusual circumstances or conditions are involved; and
 - (v) The special exception is consistent with the goal of providing reasonable, equitable access to all abutting lake owners.
 - (d) No Precedent. Granting a specific special exception does not set a precedent for consideration of future special exception requests, as each request is to be decided on a case by case basis.
 - **(e) Special Exception.** Upon making the findings above, the BZA may grant a special exception to provisions of this <u>Section 3.120</u> subject to complying with all other requirements of this Ordinance. The BZA may also attach reasonable conditions to the granting of an exception.
 - (f) Public Hearing. Appeals and requests for special exceptions to this Article shall be considered only at a duly held public hearing and meeting of the BZA. Notice of the hearing shall be given in accordance with <u>Article 12, Chapter 6</u>. In addition, the Township shall give at least fifteen (15) days prior written notice of such hearing to any Lake or property owners association if the association has provided its address to the Township beforehand.
- (8) Indemnification. By accepting any Township approval, the applicant agrees to execute an agreement to defend, indemnify and hold harmless the Township and its elected and appointed officials, agents, representatives, employees, boards and commissions against and with respect to any and all actions, suits, proceedings, claims, demands, judgments,

costs and expenses resulting from the erection or usage of a structure or facility pursuant to this <u>Section 3.120</u>. By virtue of any approval under this Article, the applicant further agrees to permit the Township to take access to the property at reasonable times for inspections and for purposes of public safety.

(9) Obligations. Abutting property owners shall be responsible for maintaining both their property at the periphery of the Lake and the Township Lake property abutting to their property clear of fallen trees that impede lake access, reasonably protected from erosion, and otherwise maintained as required under the terms of the FERC license. The abutting property owner from which the tree originated shall be responsible for its removal.

(10) Penalties and Enforcement.

- (a) Penalty. Violation of this Article is a civil infraction, for which fines shall be not less than One Hundred Dollars (\$100) or more than Five Hundred Dollars (\$500) for the first offense and not less than Two Hundred Dollars (\$200) nor more than Two Thousand Five Hundred Dollars (\$2,500) for subsequent offenses, in the discretion of the court, and in addition to all of the costs, damages and expenses provided by law. For purposes of this Article, "subsequent offense" means a violation of this Article committed by the same person within twelve (12) months of a previous violation of the Article for which said person admitted responsibility or was adjudicated to be responsible, provided however, that offenses committed on subsequent days within a period of one (1) week following issuance of a citation for a first offense shall all be considered separate first offenses. Each day that such violation occurs shall constitute a separate offense.
- (b) Injunction. Any violation of this Article is hereby declared to be a nuisance per se. In addition to, or in lieu of, seeking to enforce this Article by proceeding under <u>Section 3.120(F)(10)(a)</u> above, the Township or any Township resident may institute an appropriate action in a court of competent jurisdiction seeking injunctive or equitable relief.
- (c) Enforcement and Administration. This Article shall be enforced and administered by the Township Director of Planning and Economic Development, or such other Township official as may be designated from time to time by resolution by the Township Board.

Solar Deck Lite MODEL: LL-SDL-DECK LIGHT CHARACTERISTICS Lyft Source Lumens Output Available LED Colors Light Mode Options Constant Visible Range 300m-1000m+ Varies at Viewing Angles

Solar Deck Lite

LL-SDL-DECK-W (WHITE)

LL-SDL-DECK-B (BLUE)

The Marine Grade Solar Deck Lite is an industrial strength solar powered dock light made from anodized aluminum for superior protection in harsh marine environments. Will not rot from harsh sun exposure! IP 68 Water-Proof design.

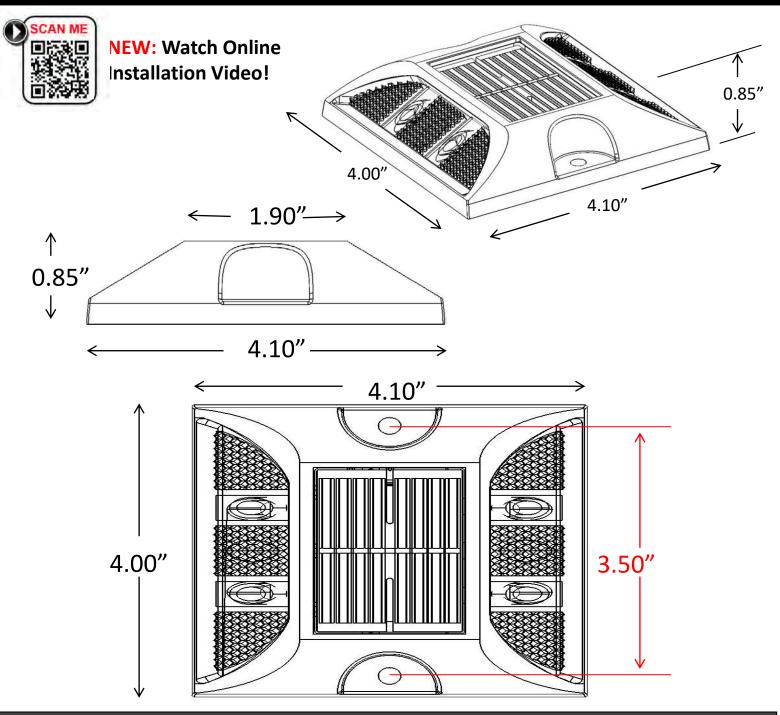
Super bright LED's and powerful solar panel provide all night illumination. Low profile design makes it perfect for docks and marina applications needing to provide ambient pathway & dock lighting. Added built in reflector provides extra safety for passing boaters as well makes them ideal for marking swim rafts. Easy hassle free mounting, no wires, no mess, no electrical cost!

LIGHT CHARACTERISTICS		
Light Source	4-Ultra-High Intensity LED's	
Lumens Output	8 Lumens	
Available LED Colors	White or Blue	
Light Mode Options	Constant	
Visible Range	300m-1000m+ Varies at Viewing Angles	
Horizontal Output (degrees)	180° Forward & Backwards	
Vertical Divergence (degrees)	+ 45° Degrees	
LED Life Expectancy (hours)	> 100,000 hrs	
ELECTRICAL CHARACTERISTICS		
Circuit Protection	Integrated	
Nominal Voltage (v)	2.4v	
Autonomy (hours)	16-20 hrs *On Full Charge*	
Temperature Range	14-158° Fahrenheit	
SOLAR CHARACTERISTICS		
Solar Module Type	Multicrystalline or Monocrystalline	
Power (watts)	.40 watts	
Solar Module Efficiency (%)	16-17%	
POWER SUPPLY		
Battery Type	High Grade NiCd or NiMh – ECO Friendly	
Battery Size	2 X AAA	
Battery Capacity (mAhr)	400 mAhr (Suggested: Larger)	
Nominal Voltage (v)	1.2V/ Battery X 2pcsv	
Battery Service Life	1-3 years (Varies With Environment)	
Battery Service Access	Yes: User Changeable / Replaceable	
PHYSICAL CHARACTERISTICS		
Body Material	Anodized Marine Aluminum	
Lens Material	UV Stabilized Polycarbonate	
External Lens Design	Reflector	
Water Proof Rating	IP 68	
Mounting	Any Flat Surface	
Height	.85"	
Width / Diameter	4" X 4.10"	
Weight	0.75lbs	
OPTIONS		
Custom Options, Sizes & Colors	Please Contact	
Custom Hardware & Mounting	Please Contact	
* Information subject to change without notice		



Lake Lite Inc. PO Box 414 LaOtto, IN 46763 Phone: 260-918-2758 Fax: 260-918-3540 E-mail sales@lakelite.com

Solar Deck Lite MODEL: LL-SDL-DECK



Storage Tips (Harsh Winters)



Extreme winter weather can reduce the life expectancy of your Solar Dock Lite

- 1. Extreme Cold weather can dramatically reduce the life expectancy of your rechargeable Ni-Cd or Ni-Mh battery.
- 2. Store your Solar Deck Lite inside during cold months when your dock is not in use.



CAUTION: CONTAINS NICKEL-CADMIUM BATTERIES. BATTERY MUST BE RECYCLED OR DISPOSED OF PROPERLY.



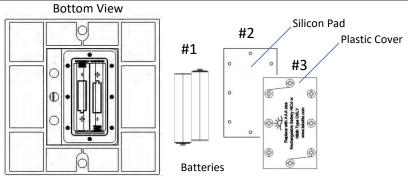
Lake Lite Inc. PO Box 414 LaOtto, IN 46763

Phone: 260-918-2758
Fax: 260-918-3540
E-mail sales@lakelite.com

Solar Deck Lite MODEL: LL-SDL-DECK

Installing Batteries

- 1. Install Batteries in correct position
- 2. Install silicon pad over batteries
- 3. Install plastic cover over silicon pad
- 4. Use provided screw to secure plastic cover



(Replace with 1.2v NiCd or NiMh type rechargeable batteries ONLY)

Mounting to Surface

- Purchase desired mounting screws or bolts
- 2. Place/Space Deck Lites in desired locations on surface
- 3. Use pencil to mark mounting holes
- 4. Use electric drill with small drill bit to make pilot holes
- 5. Use screw driver or electric screw driver to mount unit



Recommended screw size #10 or #12 size 1" or longer

Owner Registration Card

Please fill out and affix proper postage and return this owner registration card **within 10 days** to insure that your new Solar Deck Lite is covered by the limited warranty.

Purchaser's Name
Address
State Zip
Purchase Date: Number of Lights:
Where Purchased (Store Name):

Model No. SDL-DECK UPC No. 718122548286

Lake Lite Inc.

2301 Fairfield Ave, Suite 107, Fort Wayne, IN 46807 www.lakelite.com sales@lakelite.com

Lake Lite Inc. 1-Year Limited Warranty

The retailer warrants the Solar Lites to be free from defects in workmanship and material present at time of shipment from the factory for a period of one year after the date of purchase by the original purchaser. We agree to correct such defects without charge or at our option replace with a comparable or superior model if the product is returned to the retailer. To obtain warranty service, you must present a copy of the receipt as proof of purchase. All costs of removing and reinstalling the product are you responsibility. Damage to any part such as by accident or misuse or improper installation or by affixing any accessories, is not covered by this warranty. There is no other express warranty. The retailer hereby disclaims any and all warranties, including but not limited to, those of merchantability and fitness for a particular purpose to the extent permitted by law. The duration of any implied warranty, which cannot be disclaimed, is limited to the time period as specified in the express warranty. Some states do no allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you. The retailer shall not be liable for incidental, consequential, or special damages arising out of or in connection with product use or performance except as may otherwise be accorded by law. Some states do not allow the exclusion of incidental or consequential damage, so the above exclusion or limitation may apply to you. This warranty gives specific legal rights, and you may also have other rights, which vary from state to state. This warranty supersedes all prior warranties.



Lake Lite Inc. PO Box 414 LaOtto, IN 46763

Phone: 260-918-2758

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E-mail sales@lakelite.com

Solar Light Performance & Run Times Yearly Monthly (Averages)

The following information illustrates the significant impact weather, time of year and geographic location have on solar lighting products. Actual performance and run times can vary SIGNFICANTLY based on these factors. The following information should be used as a general reference for solar light performance.

12-Month HIGH'S

Very Bright & Long Sunny Days

Battery capacity will reduce during the course of the battery life cycle. Replacing batteries when necessary will boost performance. Replacing batteries with a higher capacity battery will increase run times when fully charged, however, higher capacity batteries take longer to recharge.









BATTERY

CHARGE



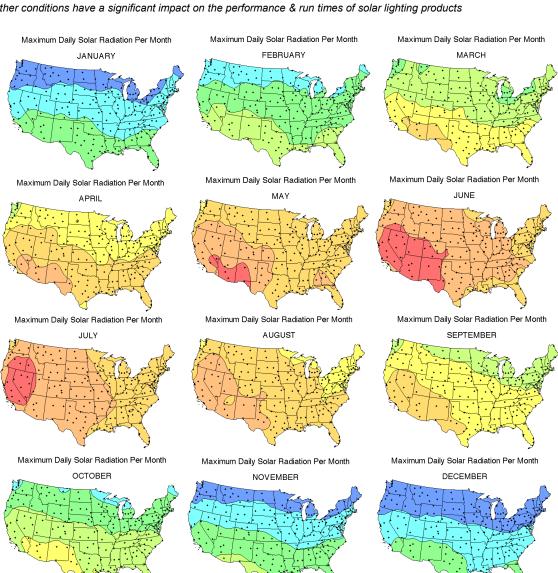


18+ Hrs
16+ Hrs
14+ Hrs
12+ Hrs

8+ Hrs

6+ Hrs 4+ Hrs 2+ Hrs 1+ Hrs





NOTE:

The following are estimated run times and vary significantly with actual conditions, lighting product, battery capacity, battery condition and numerous other factors.



Lake Lite Inc. PO Box 414 LaOtto, IN 46763 Phone: 260-918-2758 Fax: 260-918-3540 E-mail sales@lakelite.com

FRENCH LANDING DOCK RENOVATION 12090 HAGGERTY RD. BELLEVILLE, MI 48111

ARCHITECT HOPPE DESIGN 47032 McBRIDE BELLEVILLE, MI 48111 734-218-2492

DIRECTORY

APPLICANT AND OWNER

VAN BUREN TOWNSHIP

SURVEYOR ALPINE ENGINEERING 46982 WEST ROAD, SUITE 109 NOVI, MI 48377

TITLE SHEET

DRAWING INDEX

SURVEY TOPOGRAPHIC SURVEY (FOR REFERENCE ONLY)

CIVIL

STRUCTURAL NOTES

PARTIAL SITE PLAN, ELEVATIONS AND DETAILS PARTIAL SITE PLAN AND DETAILS PARTIAL SITE PLAN AND DETAILS

LIGHTING PLAN

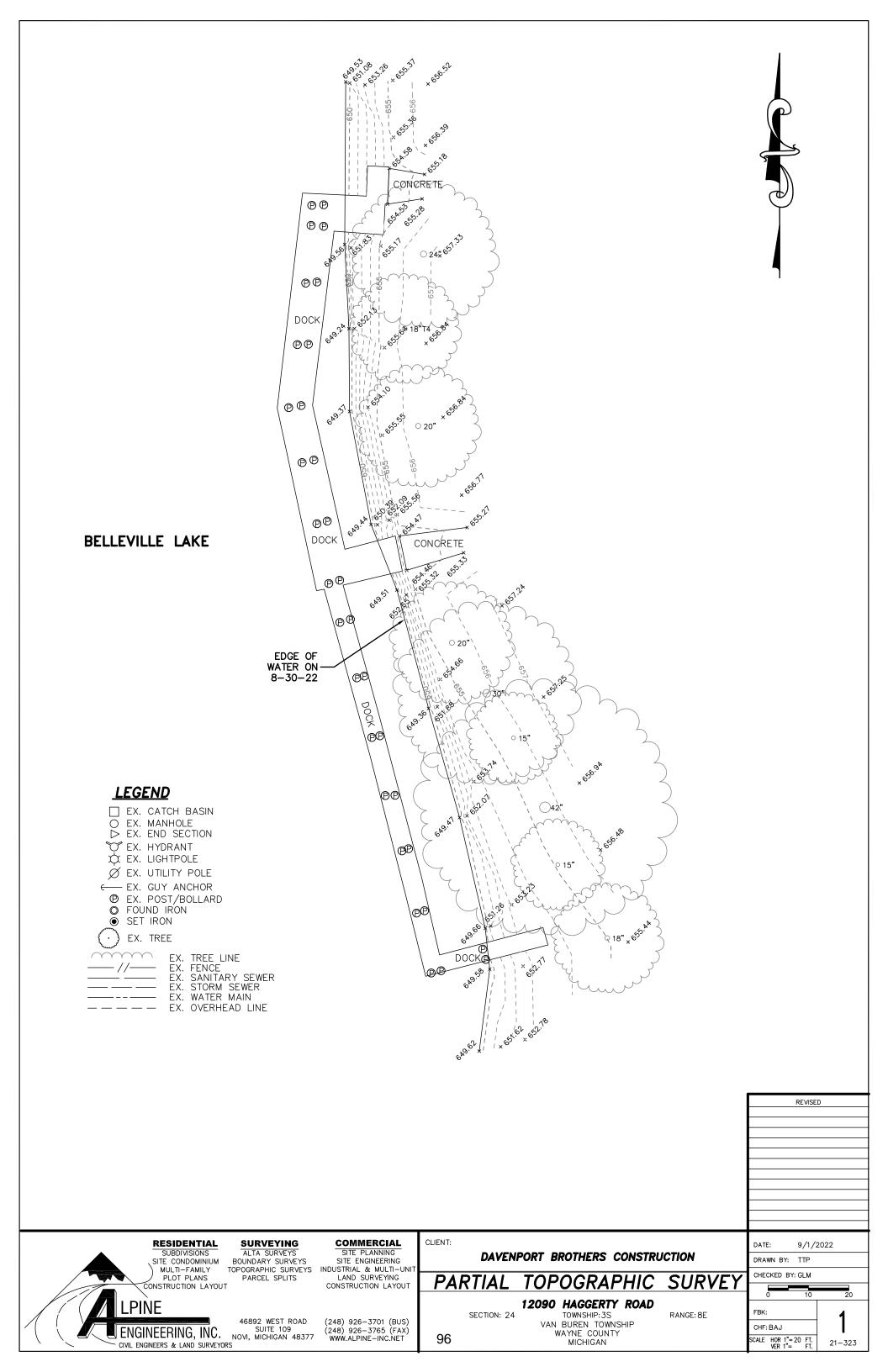


TABLE 1604.5		DESIGN LOADS OCCUPANCY CATEGORY	II
TABLE 1604.5		OCCUPANCY CATEGORY	"
		WIND	
FIGURE 1609.3.1	V	BASIC WIND SPEED (MPH)	115
SECTION 1609.4.3		EXPOSURE CATEGORY	В
	lw	IMPORTANCE FACTOR	1
		ADJUSTMENT FACTOR	1.12
		SNOW	
FIGURE 1608.2	Pg	GROUND SNOW (PSF)	25.00
	ls	IMPORTANCE FACTOR	1.00
	Се	EXPOSURE FACTOR	1.00
	Ct	THERMAL FACTOR	1.00
		ROOF DEAD LOAD (PSF)	20.00
		CEILING DEAD LOAD (PSF)	5.00
		TOTAL UNFACTORED DESIGN ROOF	
		LOAD (PSF)	
		25 + 20 + 5 =	50
•		REFERENCES	
		REFERENCES	
STRUCTURAL LOADS		ASCE-7	2010
CONCRETE		ACI 301	2010
CONCRETE		ACI 318 BUILDING CODE	2010
		REQUIREMENTS FOR REINFORCED	2010
		CONCRETE	
		ACI SP 66	
		PORTLAND CEMENT ASSOCIATION	2011
		"DESIGN AND CONTROL OF	
		CONCRETE MIXTURE"	
MASONRY		ACI 530/ASCE 5	2013
		ACI 530.1/ASCE 6	
		NCMA TEK 3-4B " BRACING CONCRETE	2005
		MASONRY WALLS DURING	
		CONSTRUCTION"	
BRICK		BIA "TECHNICAL NOTES ON BRICK	
		CONSTRUCTION"	
STEEL		AISC "SPECIFICATION FOR	13TH
		STRUCTURAL STEEL BUILDINGS"	EDITIC
WELDING		AMERICAN WELDING SOCIETY AWS	2015
		D1.1/D1.1M	0017
STEEL JOISTS		STEEL JOISTS INSTITUTE "STANDARD SPECIFICATION"	2015
METAL DECK			4007
METAL DECK		STEEK DECK INSTITUTE "NATIONAL DESIGN SPECIFICATION	1987
WOOD		FOR WOOD CONSTRUCTION"	2015
WOOD		ANSI/AF&PANDS	
WOOD			
SOILS REPORT		TO BE PROMDED BY DEVELOPER	

LOADS AND REFERENCES

ARC SPOT WELDS (PUDDLE WELDS) TO SUPPORTS SHALL HAVE A DIAMETER OF %" MINIMUM OR AN ELONGATED WELD OF %" MINIMUM WIDTH AND 3/4" MINIMUM LENGTH. WELD METAL SHALL PENETRATE ALL LAYERS OF DECK MATERIAL AT END LAPS AND HAVE ADEQUATE FUSION TO THE SUPPORTING MEMBERS. WELDING SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY STANDARD "SPECIFICATION FOR WELDING SHEET STEEL IN STRUCTURES" AWS D1.3.

UNITS SHALL BE FASTENED TO THE STEEL SUPPORTS AT THE END OF THE UNITS AND AT INTERMEDIATE SUPPORTS AND TO THE STEEL SUPPORTS AT THE SIDE BOUNDARIES BY ₹ DIAMETER PUDDLE WELDS AT 12 OC. SHEAR STUDS WELDED THROUGH DECK MAY BE USED IN PLACE OF ¾" DIAMETER PUDDLE WELDS.

THE SIDE LAPS OF ADJACENT UNITS SHALL BE FASTENED BETWEEN SUPPORTS BY BUTTON PUNCHING AT 24" OC UNO.

UNLESS OTHERWISE NOTED, ALL BEAMS AND LINTELS BEARING ON MASONRY SHALL HAVE A MINIMUM BEARING LENGTH OF 7 ½" AND SHALL HAVE A MINIMUM OF TWO BLOCK COURSES AT 32" LONG OF SOLID MASONRY UNDER THE BEARING SURFACE.

WHERE STEEL CONNECTIONS ARE NOT FULLY DETAILED ON THE DESIGN DRAWINGS (WITH ALL REQUIREMENTS FOR BOLTS, PLATES, WELDS, DIMENSIONS, ETC SHOWN) CONNECTIONS SHALL BE DESIGNED BY THE STEEL CONTRACTOR UNDER THE SUPERVISION OF A P.E. LICENSED IN THE STATE THAT HAS JURISDICTION OVER THE PROJECT.

WHERE TYPICAL OR INCOMPLETE CONNECTIONS ARE SHOWN ON THE DESIGN DRAWINGS, THOSE DETAILS SHALL BE USED AS A BASIS FOR CONNECTION DESIGN TO BE COMPLETED BY THE CONTRACTOR. ALTERNATE CONNECTIONS DESIGNED BY THE STEEL CONTRACTOR WILL BE

PROVIDED IF REQUIRED DESIGN FORCES CANNOT BE ACHIEVED BY THE TYPICAL OR EXAMPLE CONNECTION, OR IF AUTHORIZATION TO ALTER THE DETAIL IS PROVIDED BY THE DESIGN ENGINEER.

WHERE CONNECTION FORCES ARE INDICATED ON THE DRAWINGS, PROVIDE CONNECTIONS DESIGNED TO RESIST THE FORCE SHOWN.

WHERE CONNECTION FORCES ARE NOT INDICATED ON THE DRAWINGS, PROVIDE CONNECTIONS DESIGNED TO RESIST FORCES AS FOLLOWS: FOR SHEAR CONNECTIONS IN NON-COMPOSITE MEMBERS, DESIGN CONNECTIONS TO RESIST 50% OF THE TOTAL ALLOWABLE UNIFORM LOAD SHOWN IN THE TABLES IN PART 3 OF THE AISC MANUAL OF STEEL CONSTRUCTION. FOR SHEAR CONNECTIONS IN COMPOSITE MEMBERS, DESIGN CONNECTIONS TO RESIST 75% OF THE TOTAL ALLOWABLE UNIFORM LOAD SHOWN IN THE TABLES IN PART 3 OF THE AISC MANUAL OF STEEL CONSTRUCTION. FOR MOMENT CONNECTIONS, DESIGN CONNECTIONS TO RESIST 100% OF MOMENT CAPACITY OF THE MEMBER.

ALL FULLY TENSIONED A490 BOLTS SHALL HAVE WASHERS BENEATH BOTH NUT AND HEAD. PROVIDE TEMPLATES TO LOCATE ANCHOR BOLTS AND BASE PLATES.

SHOP AND FIELD CONNECTIONS SHALL BE MADE BY WELDING OR HIGH STRENGTH BOLTING. BOLTED CONNECTIONS SHALL CONFORM TO ASTM A325-X USING LOAD INDICATOR WASHERS (LIW) OR LOAD INDICATOR BOLTS (LIB). BEAM CONNECTIONS SHALL PROVIDE SHEAR CAPACITY TO SUPPORT A REACTION R EQUAL TO HALF THE SHEAR CAPACITY OF BEAM. USE 🖁 DIA BOLTS, E70XX 🛂 WELD AND & ANGLE THICKNESS.

ELECTRODES CONFORMING TO AWS A5.1 OR A5.5 SHALL BE USED FOR SHIELDED METAL ARC METHOD AND FX7-ECXX ELECTRODE CONFORMING

MIM FILLET WELD SIZE (PROVIDE LARGER WELD IF REQUIRED FOR STRESS)

ALL WELDS SHALL BE PROVIDED AS SHOWN IN THE STRUCTURAL DETAILS UNLESS THICKER WELD IS REQUIRED DUE TO MATERIAL THICKNESSES. WHERE WELD IN NOT DETAILED, WELD SHALL BE DESIGNED BY A LICENSED ENGINEER RETAINED BY THE CONTRACTOR TO MEET CONNECTION CAPACITY REQUIREMENTS LISTED ABOVE. WELD SIZES SHALL BE INCREASED AS NEEDED TO MEET THE FOLLOWING MINIMUM WELD SIZE REQUIREMENTS BASED ON THE SMALLER MATERIAL THICKNESS OF THE PIECES OF STEEL BEING WELDED TOGETHER:

ALL WELDING SHALL BE PERFORMED USING THE ELECTRIC ARC METHOD IN ACCORDANCE WITH THE LATEST REVISION OF THE AWS D1.1. E70XX

MATERIAL THICKNESS ¼" AND UNDER OVER ¼" TO ½" OVER ½" TO ¾"

IF PENETRATIONS THROUGH WEBS OF STEEL BEAMS WILL BE REQUIRED, CONTRACTOR TO NOTIFY ENGINEER OF RECORD. SEE ARCHITECTURAL DRAWINGS FOR MISCELLANEOUS AND NON-STRUCTURAL STEEL.

STEEL JOISTS
PROVIDE AND INSTALL BRIDGING IN ACCORDANCE WITH STEEL JOISTS INSTITUTE STANDARDS. ALL ENDS OF BRIDGING LINES TERMINATING AT MASONRY WALLS SHALL BE ANCHORED THERETO IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHERE BRIDGING DOES NOT TERMINATE AT A MASONRY WALL, THE FIRST AND SECOND BAYS FROM THE END OF THE BRIDGING IS TO BE DIAGONAL X-BRIDGING. MANUFACTURER TO PROVIDE ADDITIONAL BRIDGING AS REQUIRED TO SATISFY SJI UPLIFT REQUIREMENTS.

WHERE STEEL JOISTS SUPPORT MOVEABLE PARTITIONS, JOIST MANUFACTURER SHALL DESIGN JOIST FOR A MAXIMUM LIVE/SNOW LOAD DEFLECTION OF THE SMALLER OF 1/2" AND L/360.

JOIST MANUFACTURER SHALL LIMIT JOIST DEFLECTION DUE TO LIVE/SNOW LOAD TO L/360.

THE ENDS OF STEEL JOIST SHALL BEAR A MINIMUM DISTANCE OF 2½ INCHES OVER STEEL SUPPORTS AND 4 INCHES OVER ALL OTHER SUPPORTS. THE ENDS SHALL BE FASTENED BY BOLTING AND OR WELDING.

ERECTION OF JOISTS AND JOIST BRIDCING SHALL CONFORM TO ALL REQUIREMENTS OF OSHA AND JOIST MANUFACTURER.

ALL LUMBER IN CONTACT WITH MASONRY OR STEEL TO BE PRESERVATIVE TREATED.

ALL FLUSH FRAMED CONNECTIONS ARE TO MADE USING JOIST HANGERS DESIGNED FOR THE SPECIFIC CONDITION UNLESS OTHER CONNECTIONS ARE PROVIDED.

SHOP DRAWINGS SHALL BE PROVIDED FOR ALL ENGINEERED WOOD MATERIAL INDICATING PRODUCTS, DETAILS, CONNECTIONS AND ACCESSORIES AS REQUIRED BY THE MANUFACTURE TO MEET PROJECT LOADING REQUIREMENTS.

OBSERVE ALL CODE REQUIREMENTS FOR BRIDGING, BORING, AND NOTCHING OF STUDS AND JOISTS. FOR BRIDGING, BORING AND NOTCHING OF ENGINEERED WOOD PRODUCTS OBSERVE ALL MANUFACTURER REQUIREMENTS.

BRIDGING SHALL BE PROVIDED FOR ALL ROOF RAFTERS.

ALL ROOF RAFTERS ARE TO BE 24" ON CENTER UNLESS OTHERWISE NOTED.

A. VERTICAL WEB MEMBERS FOR ALL GABLE END TRUSSES SHALL BE DESIGNED TO RESIST A HORIZONTAL WIND LOAD RESULTING FROM THE

DESIGNED WIND SPEED WITHOUT EXCEEDING THE DEFLECTION LIMIT OF L/600 OF THEIR RESPECTIVE VERTICAL SPANS. BRIDGING FOR BOTTOM CHORDS SHALL BE DESIGNED TO DISTRIBUTE THE HORIZONTAL WIND LOAD PROPOSED ON THE COMPLETE BUILDING TO THE SHEAR WALLS AND SHALL BE DESIGNED FOR A TOTAL IMPOSED WIND LOAD ON BUILDING INCLUDING WINDWARD AND LEEWARD PRESSURE FROM THE DESIGNED WIND SPEEDS.

STRENGTH SERIES SPECIFIC ATIONS GALVANIZIN GREP AWPAUC4A 80% RETENTION; AMONIA FREE TREATED LIMBER AWPA UC3B 80% RETENTION; AMONIA FREE TREATED LUMBER HOT DIPPED GALVANIZED OR STAIN LESS STEEL TREATED LUMBER 80% RETENTION; AMONIA FREE BOLTS FOR WOOD IJOISTS AND LVLS Fv= 285 PSI ACA FOR DOUGLAS FIR OR CCA FOR PRESERVATIVE DECKINGBOARDS SELECTION BY

STRUCTURAL STEEL

HANNELS, ANGLES,

HSS RECTANGULA

STRUCTURAL

BOLT WASHERS

STEEL LINTELS

ELECTRODES

BELOW GRADE

ABOVE GRADE

CONTACT WITH

COMPOSITE

RESPONSIBILITY

ASTM A500

ASTM A-325-N HIGH 3/4" UNO; PROVIDE WASHERS

ASTM F-436; A-36 HARD EN ED; HOT DIPPED

STRENGTH; F 1554 BENEATH TURNED ELEMENTS

ALL EXTERIOR LINTELS TO BE

INTERIOR LINTELS TO BE DAINTED

MASONRY WALLS ARE TO BE ADEQUATELY BRACED DURING CONSTRUCTION. SEE "STANDARD PRACTICE FOR BRACING MASONRY WALLS UNDER CONSTRUCTION" BY THE COUNCIL FOR MASONRY WALL BRACING AND ALSO NCMA TEK 304B "BRACING CONCRETE MASONRY WALLS DURING CONSTRUCTION" FOR RECOMMENDATIONS REGARDING BRACING.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SHORING AND BRACING DURING CONSTRUCTION TO ACCOUNT FOR ALL FORCES,

SPECIFICATIONS. STRUCTURAL MEMBERS ARE NOT SELF BRACING AND SHALL BE SHORED AND/OR BRACED BY THE CONTRACTOR AS NECESSARY

ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL, HAVING A MINIMUM SAFE BEARING CAPACITY. THE TESTING AND INSPECTION AGENCY SHALL VERIFY SOIL BEARING CAPACITY AT EACH FOOTING PRIOR TO INSTALLATION OF FOOTING. NOTIFY ENGINEER OF ANY VARIATION FROM

THE BOTTOMS OF ALL EXTERIOR FOOTINGS SHALL BE 3'-6" MINIMUM BELOW FINISHED GRADE. IF THE BUILDING WILL BE UNDER CONSTRUCTION

BRACING OR UNDERPINNING AS REQUIRED OR LEAVE FOOTING ELEVATION AS DESIGNED AND PROVIDE CONTINUED PROTECTION AND HEAT TO

OF ALL SHORING, BRACING, AND DEWATERING THAT IS REQUIRED TO PROPERLY CONSTRUCT THE FOUNDATIONS AND PROTECT ADJACENT

TEMPORARY BRACING MUST BE PROVIDED TO RESIST ALL LATERAL FORCES UNTIL STRUCTURAL SYSTEM IS SELF SUPPORTING.

<u>OUT ONE TO SUITOR</u>

PLUMBING AND ELECTRICAL CONTRACTORS ARE TO PROVIDE ALL REQUIRED UNDERSLAB WORK PRIOR TO POURING THE FLOOR SLAB.

PROVIDE ¾ CONCRETE COVER MINIMUM FROM TOP OF SLAB TO SLAB REINFORCING AND LAP ALL STEEL FABRIC SPLICES 6" MIN. REINFORCING

COLUMNS, BEAMS AND FORMED SURFACES IN DIRECT CONTACT WITH SOIL OR EXPOSED TO THE WEATHER, EXCEPT SLABS.

DURING FREEZING WEATHER, ALL INTERIOR FOUNDATIONS SHALL BE DEPRESSED 3'-6" BELOW CONSTRUCTION GRADE FOR FROST PROTECTION. IF

SUCH ADDITIONAL FOOTING DEPTH WILL CAUSE UNDERMINING OF ADJACENT EXISTING FOOTINGS OR STRUCTURES, PROVIDE APPROPRIATE SHORING,

THE CONTRACTOR SHALL SAFEGUARD AND PROTECT ALL EXCAVATIONS AND ADJACENT STRUCTURES, PAVEMENTS, AND UTILITIES. ALL EXCAVATIONS SHALL BE KEPT FREE OF WATER. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN, INSTALLATION, MAINTENANCE AND REMOVAL

INCLUDING BUT NOT LIMITED TO FORCES FROM GRAVITY, EARTH, WIND AND UNBALANCED FORCES DUE TO CONSTRUCTION SEQUENCES.

THE STRUCTURAL INTEGRITY OF THE BUILDING SHOWN ON THESE PLANS IS DEPENDENT UPON COMPLETION ACCORDING TO PLANS AND

PLACE LADDER TYPE HORIZONTAL JOINT REINFORCING WITH PREFORMED LAPPED CORNER REINFORCING.

GRANULAR BASE TO BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY UNDER ALL SLABS ON GRADE.

THE DISCONTINUOUS ENDS OF ALL MASONRY WALLS SHALL BE SOLIDLY GROUTED A MINIMUM OF 8" OR ONE BLOCK CELL AND REINFORCED FOR THEIR FULL HEIGHT WITH ONE #5 BAR UNO.

AT GROUTED CELLS LIFTS OF GROUT SHALL BE KEYED 4" INTO THE COURSE OF MASONRY BELOW.

ALL CMU BOND BEAMS TO HAVE (2) #4 BARS CONTINUOUS. PROVIDE (2) #4 L BARS AT EVERY CORNER LAPPED 3'-0" WITH CONTINUOUS

VERTICAL CONTROL JOINTS IN CMU WALLS TO HAVE A MINIMUM ¾" GAP AND SHALL BE LOCATED BY THE ARCHITECT, BUT NOT MOVE THAN

BRICK TIES SHALL BE GALVANIZED ADJUSTABLE 2-PIECE WIRE TIES OF NOT LESS THAN 9 GAGE AND SHALL BE SPACED AT 16" OC VERTICALLY

WHERE MASONRY MEETS STRUCTURAL MEMBERS SUBJECT TO VERTICAL DEFLECTION, PROVIDE ALLOWANCE FOR VERITICAL MOVEMENT OF L/240 OF STRUCTURAL MEMBER.

BOND BEAM REINFORCING TO BE CONTINUOUS ACROSS CONTROL JOINTS.

UNTIL STABILIZED BY VIRTUE OF COMPLETED CONNECTIONS.

INSPECT ALL REINFORCING BEFORE POURING CONCRETE.

MINIMUM CONCRETE COVERING SHALL BE:

" FOOTING BOTTOM

INTERIOR SLABS

FIELD MEASURE AND VERIFY ALL DIMENSIONS AND ELEVATIONS BEFORE FABRICATION.

PREVENT FORMATION OF FROST BELOW FOOTING AND ADJACENT TO FOOTING.

SLOPE SLABS TO FLOOR DRAINS. VERIFY DEPRESSIONS AND FLOOR FINISHES.

INTERIOR FACES OF WALLS AND SLABS NOT EXPOSED TO WEATHER

ANTICIPATED BEARING CAPACITY FOR APPROPRIATE RE-DESIGN OR LOWERING OF FOOTING.

PRETREAT EXCAVATIONS WITH TERMITICIDE AND INSPECT EXCAVATIONS PRIOR TO POURING CONCRETE.

PROVIDE A 24" LAP AT FOUNDATION DOWELS. AIR TEMPERATURE AT TIME OF MASONRY INSTALLATION SHALL BE 40<T<90 DEGREES F.

UNLESS OTHERWISE NOTED, ALL METAL DECK HAS BEEN DESIGNED TO BE CONTINUOUS OVER 3 SPANS MINIMUM AND SHALL BEAR AT LEAST 2" ON STEEL SUPPORTS. FOR ONE OR TWO SPAN CONDITIONS, THE CONTRACTOR SHALL PROVIDE SHORING AS REQUIRED OR FURNISH HIGHER GAGE DECK AS REQUIRED TO SUPPORT ALL THE APPLICABLE LOADS. CONTRACTOR SHALL SUBMIT ALTERNATE FOR APPROVAL.

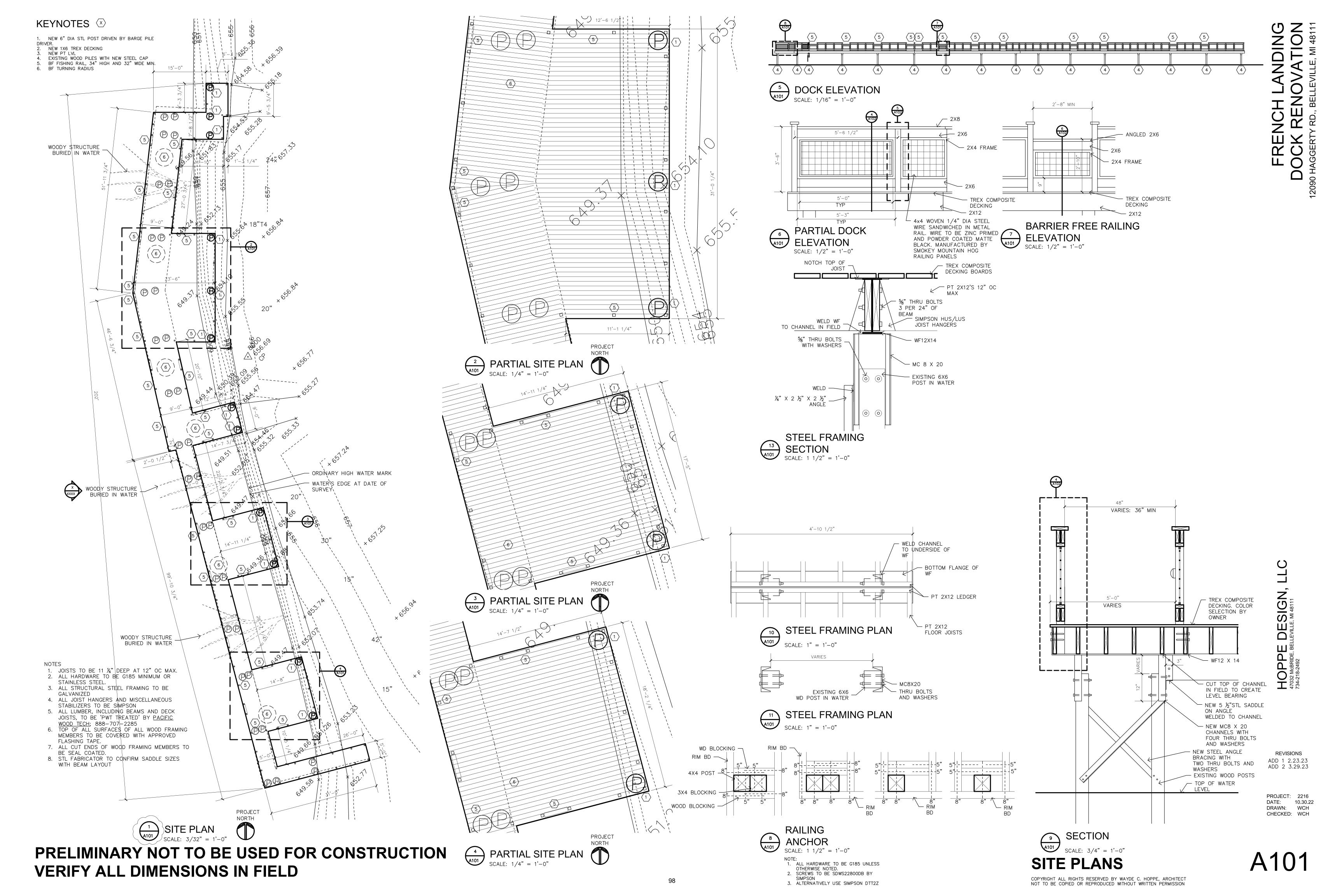
PROVIDE REINFORCING CHANNELS, STANDARD CLOSURES, CANT STRIPS, SUMP PANS, FINISH STRIPS, POUR STOPS, AND OTHER ACCESSORIES AS REQUIRED FOR PROPERLY FINISHED JOB, EVEN IF NOT SPECIFICALLY SHOWN ON THE DRAWINGS. PROVIDE BEARING ANGLES WELDED TO COLUMNS TO SUPPORT METAL DECKS AS REQUIRED.

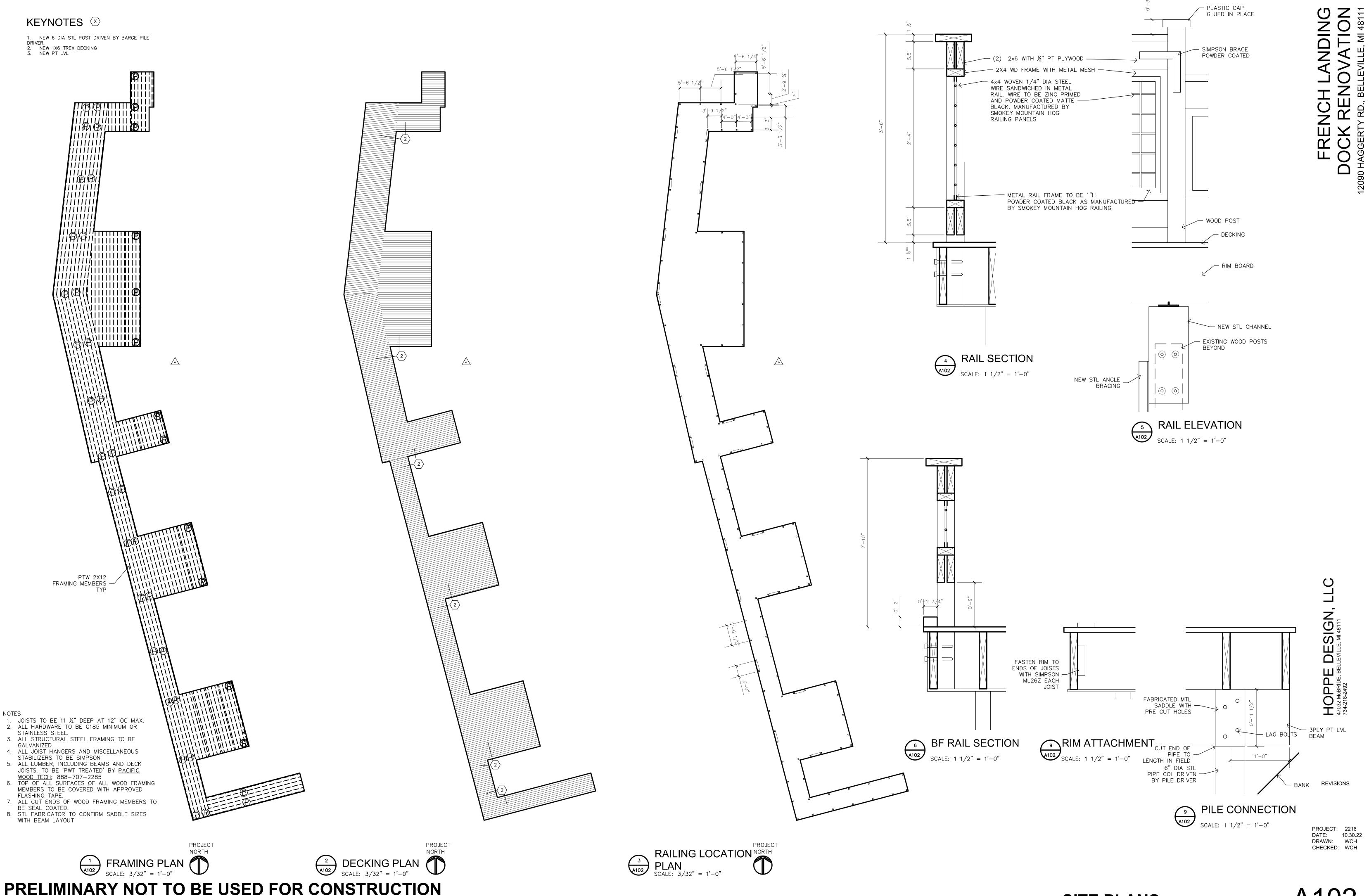
FASTEN STEEL DECK UNITS TO STRUCTURAL SUPPORTS USING HEX WASHER HEAD TEK SCREWS OR ARC SPOT WELDS ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND IN CONFORMANCE WITH THE STEEL DECK INSTITUTES SPECIFICATION SECTION 4.4.

REVISIONS

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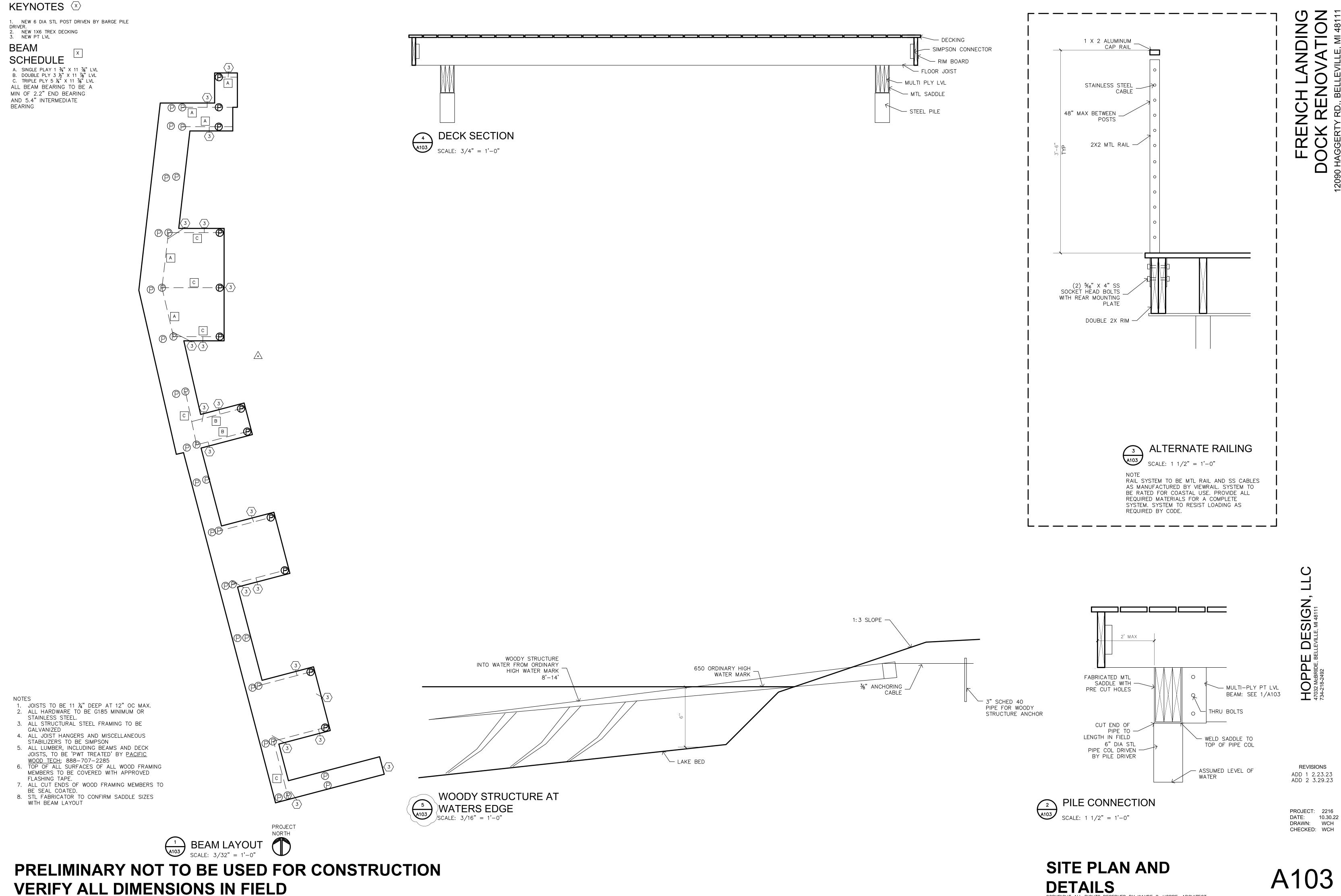
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VERIFY ALL DIMENSIONS IN FIELD

SITE PLANS



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LEGEND

SD SWITCH ON RHEOSTAT

S THREE WAY SWITCH

SWITCH WITH PILOT **S** switch

DUPLEX OUTLET

₩EATHERPROOF OUTLET

GROUND FAULT INTERUPTER

TELEPHONE/ COMPUTER

SMOKE DETECTOR

TELEVISION/ CABLE

CEILING MOUNTED LIGHT FIXTURE

CEILING MOUNTED LIGHT FIXTURE RECESSED

- WALL MOUNTED LIGHT FIXTURE

CEILING FAN/ LIGHT SCONCE

MOTOR, ONE PHASE

GROUND MNTD EXT. LIGHTING

2x4 LAY IN LIGHT FIXTURE

1 X 4 LIGHT FIXTURE

PENDANT MOUNTED OVERSIZED FIXTURE

EXIT SIGN

EXIT SIGN/ EMERGENCY LIGHT

FIRE ALARM
PS PULL STATION

HORN/ STROBE

RATE OF RISE HEAT DETECTOR

COMPUTER JACK

DISCONNECT SWITCH

DISCONNECT SWITCH WITH

AUDIO JUNCTION BOX-PRE-WIRE PER DIRECTION OF OWNER

ELECTRICAL NOTES

1. ALL ELECTRICAL WORK SHALL COMPLY WITH THE N.E.C., COUNTY AND LOCAL CODES, ORDINANCES, AND REGULATIONS INCLUDING MIOSHA.

2. COORDINATE ALL UNDERGROUND WORK WITH NEW AND EXISTING UNDERGROUND UTILITES BEFORE INSTALLATIONS.

3. THE SECONDARY UNDERGROUND CONDUIT AND WIRE SHALL MEET THE REQUIREMENTS OF THE ELECTRIC UTILITY COMPANY.

4. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A 1/4" DIA. POLYPROPYLENE FISH

5. ALL UNDERGROUND CONDUITS SHALL BE INSTALLED 24" MINIMUM BELOW GRADE

(UNLESS OTHERWISE SHOWN ON PLAN). 6. ALL EXPOSED CONDUIT SHALL BE RIGID GALVANIZED STEEL, INSTALLED WITH WATERTIGHT CONDUIT FITTINGS. EXPANSION FITTINGS SHALL BE PROVIDED AT ALL TRANSITIONS FROM UNDERGROUND TO EXPOSED CONDUIT.

QUAD OUTLET

8. ALL THREADED ELECTRICAL EQUIPMENT (CONDUIT, FITTINGS, BOLTS, SCREWS, ETC.)
INSTALLED AT EXTERIOR SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO

9. ALL WEATHERPROOF (W.P.) DUPLEX RECEPTACLES SHALL BE INSTALLED SUCH THAT COVER DOORS OPEN UPWARD.

10. HAND DIG WHERE REQUIRED TO LOCATE EXISTING UTILITES PRIOR TO INSTALLATION OF NEW UNDERGROUND CONDUITS FOR POWER AND LIGHTING.

11. PROVIDE A GREEN GROUND CONDUCTOR IN ALL SYSTEM CONDUITS, EXCEPT INSTRUMENT SIGNAL AND ALARM CONDUITS, INCLUDING BRANCH CIRCUIT CONDUITS FOR LIGHTING AND RECEPTACES. GROUND CONDUCTOR SIZING SHALL BE PER N.E.C. TABLE 250.122 (MINIMUM) WHERE NOT SIZED ON THE DRAWINGS.

12. WIRE SIZE SHALL BE #12 (MINIMUM) AND CONDUIT SIZE SHALL BE 3/4" (MINIMUM) FOR ALL POWER AND LIGHTING CIRCUITS WHERE NOT SIZED ON THE DRAWINGS.

13. INSTALL SEPARATE GROUNDING CONDUCTOR TO ALL ISOLATED GROUND

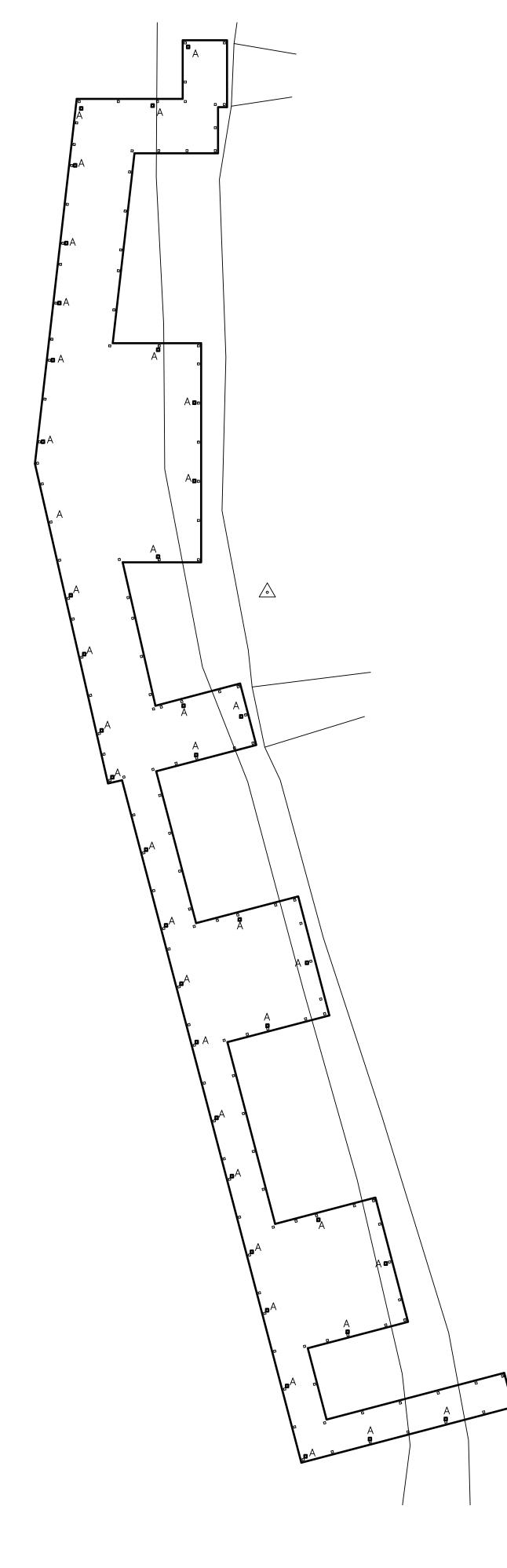
14. LOCATE JUNCTION BOXES PER MANUFACTURER'S REQUIREMENTS.

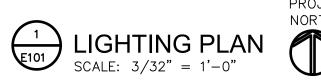
16. VERIFY LOCATION OF ALL POWER, PHONE, AND DATA JUNCTION BOXES WITH THE

21. ELECTRICAL CONTRACTOR TO COMPLY WITH NEC SECTION 110-C(A) AND (B) AND ALL TERMINATION CODE REQUIREMENTS.

22. EC TO SIZE ALL WIRING, CIRCUITING, JB'S, BREAKERS, SUB PANELS, ETC., TO PROVIDE A COMPLETE SYSTEM.

23. ELECTRICAL DRAWINGS ARE SCHEMATIC ONLY. EC IS RESPONSIBLE TO DETERMINE THE FINAL CONDUIT AND WIRING LAYOUT.





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