



**ADDENDUM NO. 1
TO PLANS AND SPECIFICATIONS FOR THE
ALPENA WATER PRODUCTION PLANT (WPP) CLEARWELL REPLACEMENT
& INFRASTRUCTURE IMPROVEMENTS**

ISSUED: March 1, 2024

HRC Job No. 20220751

This Addendum is issued prior to receipt of bids to provide for certain changes and clarifications to the Drawings and/or Specifications, as herein specified, and is hereby made a part of the Contract Documents and shall be taken into consideration in preparing the Proposal. All other conditions remain the same.

The Bidder shall acknowledge the receipt of this Addendum in the Proposal form.

ADDENDUM:

1. Pre-Bid Meeting - Meeting Minutes: The information in the attached Meeting Minutes shall be incorporated into the Bidding Documents.
2. The following Bidder inquiries have been received so far:
 - a. Q - Would sheet piling be an option for the “low permeability” wall?
 - i. HRC Response – No, provide low permeability wall as specified.
 - b. Q - Is there a reason that you want the existing clearwell walls sawed off at the existing clearwell floor line? From what I can see, the bottom of that well at the low point is about 6' +/- below the floor elevation of the new clearwell floor. This seems like it could turn into a lot of additional dewatering that would not be required if we could just snap the walls off and cut any rebar that was still sticking up.
 - i. HRC Response – Bid the demolition as specified with the sawcutting. The walls are shown as socketed into the rock on the existing reference plans and we want them cut free from the existing tank floor slab.
 - c. Q - Do you have anyone that you could recommend for the “expansive demolition grout”?
 - i. HRC Response – Suggest that you contact material suppliers for recommendations as to who locally buys and utilizes their products.
 - d. Q - I am unclear as to what will be allowed for demolition of the old clearwell top and walls. Are you expecting no hydraulic hammering during demolition or could we get the existing tanks cut loose from the existing building and use a hammer to break the rest of them up?
 - i. HRC Response – Refer to the demolition Key Notes on Sheet S-2. In Notes 11 and 18 for example, we state to cut the tops slab lose and move pieces away from the existing structure before breaking them up. We are not saying that hydraulic hammering is not allowed, you just cannot break up the concrete until you've moved the pieces away from the existing structure. If you use hydraulic hammering (or other means) and those activities cause excessive vibration, exceeding the baseline specified, then you will be required to change your demolition means and methods at no additional cost to the Owner.

SPECIFICATION MANUAL CHANGES:

1. APPENDIX – Insert quotation for scope of services from Tempest Enterprises LLC dated 2/29/24.
2. SECTION 00300 PROPOSAL FORM
 - a. Replace this Section with the attached version.
3. SECTION 01500 CONSTRUCTION FACILITIES
 - a. Replace this Section with the attached version.
4. SECTION 01590 – FIELD OFFICES AND SHEDS
 - a. Under 2.5 FIELD ENGINEER OFFICE, add item E(6), Contractor shall furnish one 11x17 printer/scanner/copier for Field Engineer’s use, for the duration of the project.
5. SECTION 02140 DEWATERING
 - a. Revise item D (2) under 3.1, REMOVAL OF WATER to read as follows:

All stormwater discharge shall flow through filter bags or other means to address solids removal from discharge and filtration shall be maintained by Contractor for the duration of the construction dewatering activities. Discharge outlet point shall be above Lake high water elevation and no sedimentation shall be allowed to enter the Lake.

6. SECTION 03050 CRYSTALLINE WATERPROOFING
 - a. Replace page 4 with the attached page.
7. SECTION 03300 CAST-IN-PLACE CONCRETE
 - a. Add the following as item “I” under 1.5, QUALITY ASSURANCE
 - I. Ready mixed concrete shall be batched, mixed and transported in accordance with "Specifications for Ready-Mixed Concrete," ASTM C-94. Full batch ticket information shall be furnished with each load. Plant equipment and facilities shall conform to the "Check List for Certification of Ready Mixed Concrete Production Facilities" of the National Ready Mixed Concrete Association. Provide proof of current NRMCA certification.
8. SECTION 09900 PAINTING - PART 3 – PAINTING SYSTEMS
 - a. Revise Painting System No. 1 to indicate Product Name: Carboline Hydroplate 1100, Product Type: Hybrid novolac amine epoxy (NSF/ANSI 61 compliant), DFT thickness shall be as shown in System No. 1. Coordinate with paint manufacturer’s field representative for stripe coat requirements as specified.

9. SECTION 15060 PIPE AND PIPE FITTINGS

a. Add the following item C. under 2.9 BOLTS, STUDS, AND HARDWARE

- C. 316 SS bolts and nuts shall be used for joining flanged pipe in wet well, corrosive service, or in contact with potable water.

b. Revise Item 5 under 2.8. A, Modular Seal Rubber Links (Link-Seal) to read as follows.

Provide Link-Seal modular seals as manufactured by Garlock (formerly PSI/Thunderline) with standard bolts for double link seals. Use long bolts for single link seals deeper in the sleeve.

DRAWING CHANGES:

1. SHEET C-3 (Not Issued) – The trees shown to be “removed” have already been cut down to grade by the City. Contractor’s construction operations shall remove the remaining stumps.
2. SHEET S-2 (Issued) - Updated Sheet issued.
3. SHEET S-8 (Not Issued) – Section 1, add note to “Sawcut (or core) east concrete wall (of Filter Gallery) for PRV discharge pipe. Grout and seal opening around pipe.”
4. SHEET S-9 (Issued) - Updated Sheet issued.
5. SHEET S-10 (Issued) - Updated Sheet issued.
6. SHEET M-1 (Issued) - Updated Sheet issued
7. SHEET PD-1 (Issued) - Updated Sheet issued.
8. SHEET P-2 (Issued) - Updated Sheet issued.
9. SHEET P-4 (Issued) - Updated Sheet issued.
10. SHEET P-5 (Issued) - Updated Sheet issued.
11. SHEET P-8 (Issued) - Updated Sheet issued.
12. SHEET P-9 (Not Issued) – Process details (Concrete Pipe Cradle, Conc. Pipe Support, Concrete Support Detail for Pipe Elbow and Tee Bases) already provided in P-8 are removed. Delete these details from Sheet P-9.
13. SHEET E-1 (Issued) – Updated Sheet issued.
14. SHEET E-2 (Issued) – Updated Sheet issued

END OF ADDENDUM



Pre-Bid Meeting Agenda

ALPENA WATER PRODUCTION PLANT (WPP) CLEARWELL REPLACEMENT & INFRASTRUCTURE IMPROVEMENTS

Date: February 23, 2024
Time: 1:00 pm
Meeting Location: Water Production Plant

HRC Job No. 20220751

AGENDA ITEMS

1. Introductions.
2. All present must sign in.
3. Brief overview of project.
4. Job is not DWSRF funded. The City has a MEDC Grant for a portion of the project then anticipates using City funds for the balance of the work. At this time, there are no Davis Bacon, no AIS compliance requirements.
5. Instructions to Bidders – all questions are due to HRC via email, by March 8th at 5 pm.
6. Proposal Form (Section 00300), review allowances and unit costs.
7. Section 01010 – Summary of Work, review anticipated schedule.
8. Section 01950 - Special Project Requirements; detailed planning is required by GC. Key initial activities include:
 - a. Establish vibration monitoring
 - b. Inspect interior of clearwell #2
 - c. GC's Work Plan submittal
 - d. Phasing of Work is critical
9. Section 02140 - Dewatering of the site; low perm wall is required - this element was part of the project approval process from EGLE. Dewater towards Lake with filter bags or other means to address solids removal from the discharge; discharge point to be ABOVE high water level.
10. Section 02200 – Earthwork; use of the adjacent Park site, utilities - review Sheet G-1.
11. Section 03300 - Concrete supplier Plant equipment and facilities shall conform to the "Check List for Certification of Ready Mixed Concrete Production Facilities" of the National Ready Mixed Concrete Association. Plant shall be able to handle batching crystalline waterproofing as specified and the other additives necessary.
12. Overview of Drawings
13. Other items



**PRE-BID MEETING
ALPENA WATER PRODUCTION PLANT (WPP)
CLEARWELL REPLACEMENT
& INFRASTRUCTURE IMPROVEMENTS
Meeting Minutes**

Date: February 23, 2024
Time: 1:00 pm
Meeting Location: Water Production Plant

HRC Job No. 20220751

1. Attendance – See Sign In Sheets attached. This meeting was mandatory in order for a GC to submit a bid for this project.
2. Introductions for City, HRC, Veolia, and Huron Engineering project team members were made.
3. HRC provided a brief overview of the project, including:
 - a. Original tank (clearwell #1) is 100+ years old; the 2nd tank (clearwell #2) is nearing 95 years old. #2 will be taken out of service so that there is space to construct the new tank and piping; #1 must remain in service at all times. This work reduces the plant water storage capacity by approximately 50% which is the minimum acceptable for operation. Sequencing and planning the new work ahead of time will be critical for these reasons.
 - b. Rock excavation is necessary for the construction of the new clearwell and piping installation. Dynamite is not allowed; acceptable removal means include sawcutting and use of expansive mortars/grouts to accomplish the rock excavation.
 - c. Once the new clearwell is on line, tank #1 can be taken out of service and demolished. Tank #1 extends under the Filter Building. This void under the building will be filled with flowable fill.
 - d. Upon project completion, the finish grade will be about 5.5 ft lower than the existing grade. The project scope includes cleaning the old waterproofing materials off the face of the east wall of the Filter Gallery and parging the exterior to improve the appearance of the wall surface that will remain exposed, after final grading is done.
4. Job is not DWSRF funded. The City has a MEDC Grant for a portion of the project, then anticipates using City funds for the balance of the work. At this time, there are no Davis Bacon, no AIS, no Buy American compliance requirements.
5. Instructions to Bidders – all questions are due to HRC via email, by March 8th at 5 pm; also copy the City Engineering Dept. so that they are aware that a question has been asked.
6. Proposal Form:
 - a. This is Lump Sum project; you must include the Allowances and Unit Costs as listed, in the Lump Sum price.
 - b. HRC is awaiting an updated quote and scope of services from Tempest Enterprises. We intend to include this scope in an Addendum.
 - i. Note that Tempest is not doing all the electrical work.
 - ii. Bidders must include having an electrical subcontractor perform the work not covered by Tempest's quotation.

- c. Vibration monitoring is very important to project due to the rock excavation and age of plant. The Contractor shall retain Soils & Structures for this work – they are the Geotechnical Engineer of Record for the project. See Allowance line item for these services.
 - d. Hazardous Materials Testing Allowance - this pertains to the insulation on the outside of the old tank(s), not the mastic covered concrete or the old waterproofing that is visible on the east wall of the Filter Building. (See photos on the A-Sheets for these conditions.) Landfill disposal of the coated tank concrete and removal of the waterproofing on the east wall are to be included in the Lump Sum price.
7. Schedule – (outlined in Section 01010) - The City intends to Award the work in April; mobilization mid to late May; Substantial Completion is written as Aug 1, 2025 and Final Completion is Dec. 31, 2025. If Bidders have concerns with the schedule based on something that comes up during bid preparation, add a notation with explanation in your Proposal.
8. Section 01950 – Detailed planning is required, review this Section closely for an understanding of the work and phasing necessary. The general planning and sequencing concept in Section 01950 is driven by the fact that tank #1 has to remain in service until the new clearwell is on-line. Key initial activities are:
 - a. Establish vibration monitoring
 - b. Inspect interior of tank #2
 - c. GC's Work Plan submittal and review with Owner and Engineer
9. Section 02140 - Dewatering of the excavation needs to be provided and maintained 24/7.
 - a. See the Drawings for the low permeability barrier around the work area. Contractor to install barrier and leave in place once construction is completed. This element was also part of the project approval requirements from EGLE and shall not be omitted.
 - b. Dewater towards Lake with filter bags or other means to address solids removal from discharge; discharge point to be above high water level.
10. Section 02200 – Earthwork and use of the Park site; Sheet G-1 was reviewed in general. If the Contractor needs additional staging and work space, this can be discussed further with City. Limited additional Park area to the southeast of what is shown on G-1 may be available.
 - a. Limited use of water at the Park, is possible.
 - b. Use of electricity – Contractor needs to contact local utility Alpena Power for power to the staging area, construction trailer, etc.
 - c. There is to be no use of the park Pavilion facilities by Contractor. Beach access and Pavilion, public parking, etc. shall be maintained and accessible to the public.
11. Section 03300 - Concrete supplier Plant equipment and facilities shall conform to the "Check List for Certification of Ready Mixed Concrete Production Facilities" of the National Ready Mixed Concrete Association. Plant shall be able to handle batching the crystalline waterproofing and the other additives necessary. Contractor shall verify that the Plant they select can provide the necessary services and understands which additives are acceptable for use. The basis of design for the crystalline waterproofing is Xypex; refer to Section 03050 for additional information.

12. Other items:

- a. The definition of “rock excavation” was questioned in the Meeting. Please refer to the following:
 - i. In Section 02200, Common Excavation and Rock Excavation are defined, refer to page 02200/7 for this criteria.

These minutes are intended to be a general summary of items discussed. Refer to Addendum 1 for additional information.

Respectfully submitted,

HUBBELL, ROTH & CLARK, INC.



Jane M. Graham, R.A.
Sr. Associate – Industrial Facility Design

Attachments: Addendum No. 1
 Sign-In-Sheets from Meeting

Pc; City – Steve Shultz, Shannon Smolinski



HUBBELL, ROTH & CLARK, INC
CONSULTING ENGINEERS SINCE 1915

Meeting Sign-In Sheet (Sheet 1 of 2)

Project Name: Alpena WPP Clearwell Replacement **Date of Meeting:** 2/23/24

Purpose of Meeting: Mandatory Pre-Bid Meeting

Client: City of Alpena

Location of Meeting: Plant

No.	Name	Agency/ Company	Phone Number	Email
1	Steve Shultz	City of Alpena	989-354-1730	stoves@alpena.mi.us
2	✓ Michael Collins	Veolia	989-354-1400	Michael.collins1@veolia.com
3	✓ Rich Kroll	Veolia		richard.kroll@veolia.com
4	✓ Tom Maxwell	HRC	248-720-8612	tmaxwell@hrcengr.com
5	✓ Jane Graham	HRC	248-410-4862	jgraham@hrcengr.com
6	✓ Mike Gatz	HRC	248-535-3362	mgatz@hrcengr.com
7	✓ Becky Rivard	Huron	989-356-6375	becky.rivard@huronesi.com
8	Howard Inman	Sorensen Gross	810-691-3029	hinman@sgcompany.com
9	Alan Simanskey	Fisher Contracting	989-488-9138	ASIMANSKEY@THEFISHER.CO
10	Rod Bauer	RCL Const. Co.	989-280-5745	rod@rclconstruct.com
11	Chris Weber	Grand Traverse Coast	231-649-0969	cweber@grandtraverseconstruction.com
12	Don D'Amore	Spence Bros	989-382-4268	plunder@spencebrothers.com
13	Tom Bennett	Spence Bros	231-241-7924	tom.bennett@spencebrothers.com
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HUBBELL, ROTH & CLARK, INC
CONSULTING ENGINEERS SINCE 1915

Meeting Sign-In Sheet (Sheet 2 of 2)

Project Name: Alpena WPP Clearwell Replacement

Date of Meeting: 2/23/24

Purpose of Meeting: Mandatory Pre-Bid Meeting

Client: City of Alpena

Location of Meeting: Plant

No.	Name	Agency/ Company	Phone Number	Email
1	Todd Britton	MERIDIAN	989 354 4825	todd@mericon.net
2	Joe Kersantzy	COMMERCIAL CON	810-610-5732	Joe@j.kersantzy.com
3	Tyler Lumsden	Clark	989-766-3456	tlumsden@clarkcc.com
4	Rebecca Rivard	Huron Eng	989-350-6375	becky.rivard@huroncsi.com
5	Mark Herman			mark.herman@huroncsi.com
6	Tom Maxwell	HRC	248-720-8612	tommaxwell@HRCENR.com
7	Tim Madroznski	Thunder Bay Electric	989 354 2840	sales@thunderboyelectric.com
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PROPOSAL
FOR
CITY OF ALPENA - WATER PRODUCTION PLANT
CLEARWELL REPLACEMENT
& INFRASTRUCTURE IMPROVEMENTS

City of Alpena
Clerk's Office
208 N. First Ave.
Alpena, MI. 49707

Bids Due: March 18, 2024
On or Before: 2:00 pm, Local Time
HRC Job No. 20220751

To Prospective Bidders:

Name of Bidder: _____

Address: _____

Date: _____ Telephone: _____ Fax: _____

The above, as Bidder, hereby declares this bid is made in good faith without fraud or collusion with any persons bidding, and that the Drawings, Specifications, and all other information referenced in the Instructions to Bidders have been examined. Further, the Bidder is familiar with the location of the work described herein and is fully informed as to the nature of the work and the conditions relating to the performance of the Contract.

The Bidder acknowledges that no representations or warranties of any nature whatsoever have been received, or are relied upon from the City of Alpena, its agents or employees, as to any conditions to be encountered in accomplishing the work and that the bid is based solely upon the Bidder's own independent judgment.

The above, as Bidder, hereby certifies that the Drawings, Specifications, geotechnical data and other information provided by the Owner for bidding purposes have been examined. Further, the undersigned certifies that the proposed construction methods have been reviewed and found acceptable for the conditions which can be anticipated from the information provided for bidding.

The Bidder shall complete the Work under any job or field conditions which were present and/or ascertainable prior to bidding. The Bidder shall also complete the Work under whatever conditions they create by their own sequence of construction, construction methods, or other conditions they may create, at no additional cost to the Owner.

The Bidder hereby affirms that the site of work has been inspected and further declares that no charges in addition to the Lump Sum Price shall be made on account of any job circumstances or field conditions which were present and/or ascertainable prior to the bidding.

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The above, as Bidder, confirms knowledge of the location of the proposed Project and appurtenant construction and the conditions under which it must be constructed; and also declares to have carefully examined the Drawings, Specifications, and Contract Documents which the Bidder understands and accepts as sufficient for the purpose of constructing said Project, and appurtenant work, and agrees to contract with the Owner to furnish all labor, materials, tools, equipment, facilities and supervision necessary to do all the work specified in strict accordance with the full intent of the Drawings and Specifications, prepared by Hubbell, Roth & Clark, Consulting Engineers, and will accept in full payment therefore the Lump Sum of:

LUMP SUM (BASE BID – including the Allowances and Unit Costs listed herein)

_____ Dollars
(use words)

and _____ cents
(use words)

\$ _____
(figures)

ALLOWANCES

Bidders shall INCLUDE the following Allowances IN THE ABOVE LUMP SUM PRICE.

- 1. Building Permit Fees: \$ 65,000.00
- 2. Soil Erosion and Sedimentation Control (SESC) Permit Fee \$ 2,000.00
- 3. SCADA, Equipment Integration (Tempest Enterprises) \$ 65,000.00
- 4. Vibration Monitoring Consultant (Soils & Structures) \$120,000.00
- 5. Hazardous Material Testing and Abatement \$ 15,000.00

The Owner will reimburse the Contractor for City Building Department, Michigan Building Code permit fees, as well as SESC permit fees. Reimbursement will be for the exact amount of the fees, based upon the actual invoice with no Contractor mark-up. Refer to Section 01000 for permit information.

If additional inspections from the Building Department are necessary due to non-conforming work and additional fees are charged by the Building Department for those inspections, Contractor shall pay for the additional fees without reimbursement from the Owner.

Contractor shall maintain SESC measures in satisfactory condition for the duration of the Work. Allowance for SESC permit fee only.

SCADA, Equipment Integration shall be provided by Tempest Enterprises, as described in their proposal included in the Appendix. For the Tempest Allowance item, use amount listed above, not the amount in the quotation. Tempest Enterprises provides these types of services currently to the City of Alpena for their systems and equipment, including work at the Water Production Plant.

Vibration monitoring as specified in Section 02210 shall be provided by Soils & Structures, as described in their proposal scope included in the Appendix. The Contractor shall retain these services and be fully responsible for coordination of and compliance with the monitoring of vibrations, during the construction operations.

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UNIT COSTS

The following unit costs shall be provided by the Bidder and INCLUDED IN THE ABOVE LUMP SUM PRICE. The unit quantities for the work items shown below are estimated and will be field measured to determine actual quantity for payment.

Unit Price Bids:

A. Bidder will perform the following Work at the indicated unit prices:

Item No.	Description	Unit	Quantity	Bid Unit Price	Bid Amount
1	Rock removal and off-site disposal (see Section 02200 for requirements and measurement)	CY	REVISED: 1300		\$
2	Pressure Injection for Crack Repairs in Filter Building Walls/Floors (misc crack repairs not related to item 3.)	LF	100		\$
3	Static crack repair per Sheet S-1 to keep exist. Clearwell #1 in service.)	LF	300		\$
4	Existing 16" FW Connection from Filter Pipe Gallery to Clearwell Cell 1: Unit price includes sawcutting of existing wall, demolition of existing 16" FW piping to existing flange, installation of new 16" FW wall pipe as shown on the Drawings, and all other required work to facilitate the connection of the new 16" FW WW between the former Clearwell Cell 2 to inside the Filter Pipe Gallery, complete.	LS	1		
5	Existing 16" FW Connection from Filter Pipe Gallery to Clearwell Cell 2: Unit price includes sawcutting of existing wall, demolition of existing 16" FW piping to existing flexible coupling, installation of new 16" FW wall pipe as shown on the Drawings, and all other required work to facilitate the connection of the new 16" FW WW between the former Clearwell Cell 2 to inside the Filter Pipe Gallery, complete.	LS	1		
6	Existing 16" WW Connection from Filter Pipe Gallery to Clearwell Cell 2: Unit price includes sawcutting of existing wall, demolition of existing 16" WW piping to existing flange, installation of new 16" WW wall pipe as shown on the Drawings, and all other required work to facilitate the connection of the new 16" WW between the former Clearwell Cell 2 to inside the Filter Pipe Gallery, complete.	LS	1		
TOTAL OF ALL UNIT PRICE BID ITEMS					\$

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B. Bidder acknowledges that:

1. Each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor’s overhead and profit for each separately identified item, and
2. Estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids. Final payment for all Unit Price Work will be based on actual quantities as measured in the field by the Engineer and reviewed mutually by the Engineer, Owner and Contractor.

PROPOSED SUBCONTRACTORS

Bidder proposes to utilize the services of the below listed major subcontractors for this work. This item must be filled in at the time of Proposal Submission. Include self-perform items as applicable:

NOTE: CHANGING OF SUBCONTRACTORS AFTER RECEIPT OF BIDS WILL NOT BE PERMITTED WITHOUT OWNER APPROVAL.

Concrete Subcontractor _____

Excavation Subcontractor _____

Rock Removal Subcontractor _____

Site Restoration Subcontractor _____

Mechanical Subcontractor _____

Electrical Subcontractor _____

SCADA/Integration Subcontractor - Tempest Enterprises, LLC _____

Vibration Monitoring Consultant - Soils and Structures _____

PLAN REVIEW SUBMITTAL AND BUILDING PERMIT APPLICATION, COSTS

On behalf of the Owner, HRC will submit the project for Plan Review to the City Building Department. This is NOT the Building Permit submittal. Once the project is awarded, the Contractor must go to the City and fill out the Building Permit Application, with their information and pay applicable building permit and inspections fees. Trades permits shall also be pulled for mechanical, electrical and plumbing work, as required by the City. (The fees for the Trades permits fall under the “Allowance” listed for Building Permit.)

The Contractor shall include the project demolition work under the Building Permit Application under “Type of Improvement” on the application form.

Building permit fees will be paid as specified under the Allowances work.

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ALTERNATES

Voluntary Alternates proposed by the Bidder will not be considered. The Bidder shall submit a bid based on the information shown on the Drawings and Specifications. Alternates listed below are for the Owner's convenience and shall be priced as indicated by the work description and as shown on the Drawings.

Alternates quoted shall be complete and the price shall include all Bidder mark-ups, taxes, etc.

ALTERNATE No. 1 – FILTER GALLERY VALVE REPLACEMENT

Remove and replace the existing flanged 16" gate valve FW-102 in the Pipe Gallery which isolates Filters 5, 6, and 7. It is understood that this valve is original to the Plant and was part of the 1920's construction. (See Process Drawings for location.)

ALTERNATE No. 1 ADD TO the Lump Sum Price \$ _____

ALTERNATE No. 2 – PRV REPLACEMENT

Remove and replace the existing flanged 8" pressure relief valve (PRV) at the backwash pump. The 8" PRV shall be Ross Model 50 RWR or equal. Installation shall include PRV calibration to match the existing WPP setpoint.

ALTERNATE No. 2 ADD TO the Lump Sum Price \$ _____

The Owner reserves the right to award the Lump Sum Base Bid or the Lump Sum Base Bid plus any or individual Alternate or combination of Alternates, depending upon the availability of funds.

The Owner, at its sole discretion, reserves the right to award to the Bidder who, in the sole determination of the Owner, will best serve the interest of the Owner. The Owner reserves the right to accept any bid, to reject any or all bids, to waive any and all informalities involving price, time, or changes in the work, and to negotiate contract terms with the successful Bidder, and the right to disregard all nonconforming, nonresponsive, unbalanced or conditional bids. However, it is the intention of the Owner to award the low total bid to one Bidder. Also, the Owner reserves the right to reject the bid of any Bidder if the Owner believes that it would not be in the best interest of the Project to make an award to that Bidder, whether because the bid is not responsive or the Bidder is unqualified, of doubtful financial ability, or fails to meet any other pertinent standard or criteria established by the Owner.

Each Bidder agrees to waive any claim it has or may have against the Owner, the Architect/Engineer, and their respective employees, arising out of or in connection with the administration, evaluation, or recommendation of any bid.

Each Proposal must be accompanied by a bid deposit. See Instructions to Bidders – Bid Deposit for more information.

TAXES

The Bidder affirms that all applicable Federal, State and Local taxes of whatever character and description are included in all prices stated in this Form of Proposal.

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ADDENDA

The Bidder acknowledges the following Addenda, covering revisions to the drawings or specifications and the cost, if any, of such revision has been included in the quoted proposal:

Addendum No. _____	Dated _____
Addendum No. _____	Dated _____
Addendum No. _____	Dated _____

FEES

The Bidder shall refer to the General Conditions for allowable Fees for additional work performed, upon Owner’s written authorization, by Bidder’s own forces and/or for additional work, upon Owner’s written authorization, by Bidder’s subcontractors.

TIME OF COMPLETION AND SUBSTANTIAL COMPLETION

Substantial Completion is defined that the new clearwell tank and piping are operational and ready to use for their intended purpose to put into service:

- If awarded the Contract for the Project, we agree to have all work substantially completed by **August 1, 2025.**

Final Completion with all demolition completed, site restoration and clean-up; and final punch-list items addressed; and closeout documents submitted, including Final Pay Request and Consent of Surety to Final Payment:

- Shall be no later than **December 31, 2025.**

The Bidder hereby agrees to furnish the required Bonds, Insurance Certificates, and Policies within ten (10) days after acceptance of this Proposal.

See Section 01010 Summary of Work for key schedule dates. Any exceptions to this schedule shall be noted by the Bidder in his Proposal.

LIQUIDATED DAMAGES

Time is of the essence for completion of this project in order to have the Project ready for the OWNER. The Bidder guarantees that the work will be completed within the time limit stated herein before or within the time as extended as provided elsewhere in the Specifications. Inasmuch as the damage and loss to the Owner which will result from the failure of the Bidder to complete the work within the stipulated time, will be most difficult or impossible to accurately determine, it is mutually agreed that the damages to the Owner for such delay and failure on the part of the Bidder shall be liquidated in the amount of One Thousand Eight Hundred Dollars (\$1,800.00), for each and every calendar day by which the Bidder shall fail to complete the work or any part thereof within the provisions hereof, and such liquidated damages shall not be considered as a penalty.

The Owner will deduct and retain out of any money due or to become due hereunder the amount of the liquidated damages, and in case those amounts are less than the amount of actual liquidated damages, the Bidder shall pay the difference upon demand of the Owner.

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We understand that liquidated damages may be assessed should we fail to meet the stipulated completion dates. Specifically, liquidated damages will be assessed daily **beginning August 2, 2025** until such a time that Substantial Completion is achieved and further if all work is not completed by the Final Completion Date specified.

BIDDER REFERENCES FOR SIMILAR PROJECTS

Bidder shall provide the following information for a minimum of three (3) similar water or waste treatment plant type projects with large, buried, cast-in-place concrete tank structures within the last five (5) years, where Bidder functioned as a General Contractor. (Provide additional sheets if necessary to present project information.)

<u>Project Name</u>	<u>Owner</u>	<u>Date Completed</u>	<u>Const. \$\$ Value</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____

BIDS TO REMAIN FIRM

The price stated in this Proposal shall be guaranteed for a period of not less than **60 days** from the bid due date and if authorized to proceed within that period, the Bidder agrees to complete the work covered by the Proposal at said price.

If this Proposal is accepted by the Owner and the undersigned shall fail to contract as aforesaid and to furnish the required surety bonds within fifteen (15) days after being notified of the acceptance of their bid, then the undersigned shall be considered to have abandoned the Contract, and the Certified Check, Cashier’s Check or Bid Bond accompanying this Proposal shall be forfeited to the City of Alpena.

If the undersigned enters into the Contract in accordance with their proposal, or if their proposal is not accepted, then the accompanying bid guarantee shall be returned to the undersigned.

Company Name: _____

Signature: _____ Title: _____

Address: _____

County: _____ State: _____

Telephone No.: _____ Fax No.: _____

Email Address: _____

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LEGAL STATUS OF BIDDER

This Bid is submittal in the name of:

(Print) _____

The undersigned hereby designates below the business address to which all notices, directions or other communications may be served or mailed:

Street _____

City _____

State _____ Zip Code _____

The undersigned hereby declares the legal status checked below:

- INDIVIDUAL
- INDIVIDUAL DOING BUSINESS UNDER AN ASSUMED NAME
The Assumed Name of the Co-Partnership is registered in the County of _____, Michigan
- CORPORATION INCORPORATED UNDER THE LAWS OF THE STATE OF _____
_____. The Corporation is
- LICENSED TO DO BUSINESS IN MICHIGAN
- NOT NOW LICENSED TO DO BUSINESS IN MICHIGAN

The name, titles, and home addresses of all persons who are officers or partners in the organization are as follows:

A corporation duly organized and doing business under the laws of the State of _____

NAME AND TITLE	HOME ADDRESS
_____	_____
_____	_____
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Signed and Sealed this _____ day of _____, 20__.

By (Signature)

Printed Name of Signer

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BID BOND

We, the undersigned, _____

As Principal, hereinafter called the Principal, and _____

A corporation duly organized under the laws of the State of _____

As surety, hereinafter called the SURETY, are held and firmly bound unto:

The Owner: _____

in the sum of _____ Dollars (\$ _____),

For the payment of which sum well and truly to be made, the said Principal and the said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for _____

NOW, THEREFORE, if the OWNER shall accept the bid of the Principal and the Principal shall enter into a contract with the OWNER in accordance with the terms of such bid, and give such bond or bonds as may be specified in the CONTRACT DOCUMENTS with good and sufficient surety for the faithful performance of such contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such contract and give such bond or bonds, if the Principal shall pay to the OWNER the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the OWNER may in good faith contract with another party to perform the work covered by said bid, then the obligation of the Principal shall be null and void, otherwise to remain in full force and effect.

Signed and sealed this _____ day of _____, 20____

(Witness)

(Principal)

(Seal)

(Title)

(Witness)

(Surety)

(Title)

END OF SECTION

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SECTION 01500
CONSTRUCTION FACILITIES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities: Electricity, lighting, heat, ventilation, water supply, sanitary facilities, internet service .
- B. Temporary Controls: Fire Protection, barriers, protection of the work.
- C. Construction Facilities: First Aid, Traffic Access Roadways; Parking; cleaning.

1.2 RELATED SECTIONS

- A. Section 00700 - General Conditions
- B. Section 01000 – General Specifications – Site Restoration.
- C. Section 01005 - Administrative Provisions
- D. Section 01590 – Field Offices and Sheds
- E. Section 01700 - Contract Closeout: Final cleaning.

1.3 TEMPORARY ELECTRICITY AND LIGHTING

- A. Contractor shall contact local utility and obtain power from overhead in the Park, as shown on Sheet G-1, for the staging area and the construction Office Trailer. Contractor shall pay for installation and usage. All circuits shall be insulated, weatherproof, equipped with an equipment grounding conductor. All enclosures and devices shall be weatherproof.

1.4 TEMPORARY INTERNET SERVICE

- A. Contractor shall provide broadband internet service for the construction trailer, for the duration of the project. Service shall be made available for the Field Engineer's use, in his portion of the construction Office Trailer. Contractor shall pay for installation and usage for services at the trailer.

1.5 TEMPORARY HEAT AND VENTILATION

- A. Within the construction area, Contractor shall provide ventilation of enclosed areas to cure materials; to disperse humidity; and to prevent accumulations of dust, fumes, vapors, or gases. Provide temporary heat as necessary during times that interior of Filter Building, including Pipe Gallery may be open to cold weather conditions.

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1.6 TEMPORARY WATER SERVICE

- A. Municipal water shall be made available for the Contractor's use, at the Park. The discriminate use of the Municipal water for normal purposes of construction shall be at no cost to the Contractor. Excessive or indiscriminate use of water will be cause for the Owner to require the Contractor to pay for the water used.
- B. If connections are made to the hydrants, the Contractor shall obtain authorization from the Fire Department. The Fire Department standard wrench shall be used for opening and closing the fire hydrants.

1.7 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain adequate and required facilities and enclosures during the entire duration of the project. Portable toilets shall be used. Locate near construction Office Trailer, in location approved by the Owner, and locate additional temporary facilities on-site at the Plant, at the construction work location. Contractor personnel shall not use Plant restrooms nor the Park restrooms at the Pavilion.

1.8 TEMPORARY FIRE PROTECTION

- A. The Contractor shall follow the standards of the National Fire Protection Association during torch cutting or welding on the job site.
- B. The Contractor shall provide a suitable number of portable fire extinguishers (non-freeze type in cold weather) distributed about the job site.
- C. The Contractor shall store gasoline and other flammable liquids in U.L. listed safety containers in a location away from the Plant and accessory buildings/structures and distribute the liquids directly from the containers. Storage of flammable liquids shall not be allowed inside the Plant. Refer to avoidance of bringing groundwater contaminants on-site in the General Conditions under STORAGE OF MATERIALS.

1.9 BARRIERS

- A. The Contractor shall provide barricades, and adequate warning flags, signs, and lights in accordance with governing laws and ordinances to protect construction areas and existing facilities.
- B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.
- C. Where off-site areas adjacent to the Plant are used for parking, material storage, staging etc., Contractor shall protect and erect barriers to secure these areas from the public. Contractor staging area shall be fenced as specified in Section 02831.

1.10 PROTECTION OF INSTALLED WORK

- A. Protect installed Work and provide special protection where specified in individual specification sections.

- B. Provide temporary and removable protection for installed Products. Control activity in immediate work area to prevent damage.

1.11 FIRST AID FACILITIES

- A. A completely equipped, readily accessible first-aid kit shall be provided and maintained at the job site at all times.
- B. The telephone numbers for summoning aid from outside sources (e.g., Police, Fire, EMS, physicians) shall be readily available in the work area(s) and posted in the office trailer.

1.12 PARKING

- A. Paved parking areas are limited at the Plant and the existing open spaces inside the fence line shall be maintained for Plant staff and Plant visitors. Coordinate acceptable construction employee parking areas with Plant staff and City Engineering Department (when using off-site parking areas.) Public spaces at adjacent Park areas shall remain available to the public not used by Contractor staff unless designated as such by the City.

1.13 TRAFFIC REGULATION AND ROADWAY ACCESS

- A. The Contractor's trucks and equipment operations shall be governed by all applicable ordinances; the rules and regulations of the Fire, Police, Transportation Departments; and the requirements of any other authority having jurisdiction.

1.14 PROTECTION OF PROPERTY AND SURVEY MONUMENTS

- A. All precautions shall be taken to avoid disturbance of permanent survey monuments of any city, county, state, or federal authority; and when any of these are disturbed or destroyed, the Contractor shall restore them to the satisfaction of such authority and shall pay all costs incurred by such authority in connection therewith.

1.15 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Provide dumpster for construction materials and related debris. Collect and remove waste materials, debris, and rubbish from site and dispose off-site.

1.16 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, at completion of project. Pay for removal fees as incurred by the removal of these items.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing and permanent facilities used during construction to original pre-construction condition. Restore Park areas and Mason Street as specified under FINAL CLEANUP in Section 01000.

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PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

2. Xypex Admix C-1000 – For normal use
3. Xypex Admix C-2000 – For extended retardation

C. Substitutions: The following admixture products may be provided when furnished with manufacturer data and literature showing compliance with basis of specifications. No other substitutions shall be allowed:

1. Kryton Products – “Krystol Internal Membrane (KIM)
2. The Euclid Chemical Company- Eucon VandexAM-10.

D. Source Quality: Obtain proprietary crystalline waterproofing products from a single manufacturer. If more than one ready mix supplier is used for the project due to the volume of concrete needed, both suppliers shall use the same manufacturer additives – no exceptions.

2.2 DOSAGE

- A. General: Xypex Admix must be added to concrete mix at time of batching.
- B. Dosage Rate: Under normal conditions, the crystalline waterproofing powder shall be added to the concrete mix at a rate of 2% - 3% by weight of portland cement content. For enhanced chemical protection or meeting specific project requirements, consult with manufacturer or its authorized representative to determine appropriate dosage rates.

PART 3 EXECUTION

3.1 MANUFACTURER’S INSTRUCTIONS

- A. Compliance: Comply with manufacturer’s product data regarding installation, including technical bulletins, product catalogue, installation instructions and product packaging labels.

3.2 PROJECT CONDITIONS

- A. Reinforcement: All reinforcement shall be rib deformed bar in accordance with applicable standards. Exposed concrete decks (joint free) shall contain sufficient reinforcement to minimize thermal movement and control cracking.
- B. Setting Time and Strength: Some retardation of set may occur when using Xypex Admix. The amount of retardation will depend upon the concrete mix design, the dosage rate of the Admix, temperature of concrete and climatic conditions. Concrete containing Xypex Admix may develop higher ultimate strengths than plain concrete. Conduct trial mixes under project conditions to determine setting time and strength of the concrete. Consult with manufacturer or manufacturer’s representative regarding concrete mix design, project conditions and proper dosage rate.
- C. Weather Conditions: For mixing, transporting and placing concrete under conditions of high temperature or low temperature, follow concrete practices as referred to in ACI 305R-77 (Hot Weather Concreting) and ACI 306R-78 (Cold Weather Concreting). For flatwork being placed in either hot, dry or windy conditions use of monomolecular film (evaporation retardant) is recommended to control loss of bleed water.

TEMPEST

ENTERPRISES, L.L.C.

CONTROLS ENGINEERING

3213 Forest Rd
Gaylord, MI 49735

Engineers: Brian Theriault / Dan Dowling
(989) 390-5008 / (989) 370-1454
Fax: (989) 732-5760

BrianT@TempestEnterprises.com / DanD@TempestEnterprises.com
www.TempestEnterprises.com

Date: 2/29/2024

Company: City Of Alpena

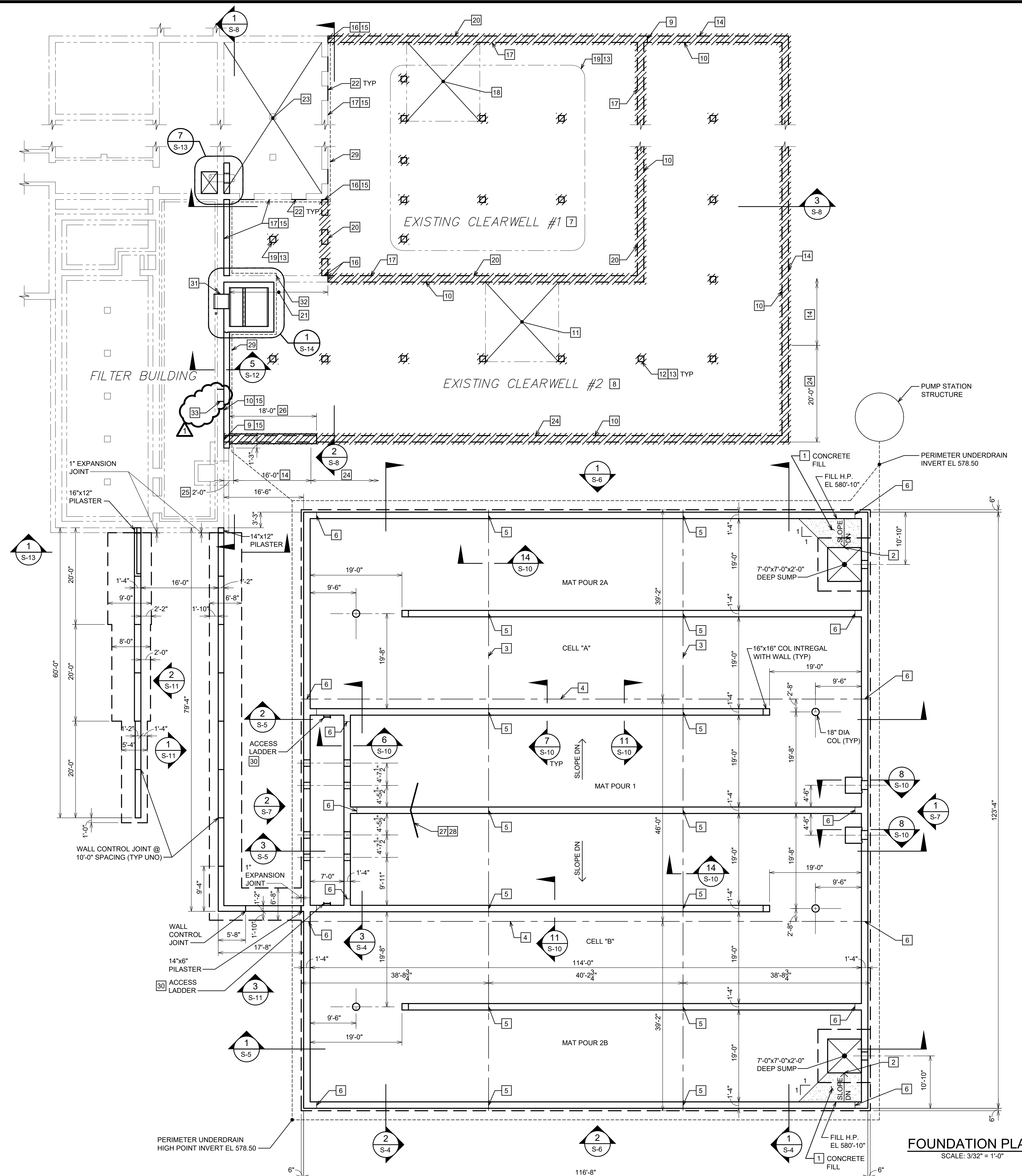
Project: Alpena WTP Clear Well Tank Upgrade Controls

Scope Of Work:	<p>Provide all Electrical & Controls Hardware, Installation of, Programming into the existing Control System, and Operations Training for (2) new 480 VAC Submersible Pumps, up to 5 HP (Pumps, Motors, and Motor Lead Cabling supplied by others), and (1) new 120 VAC Chemical Sample Supply Pump, for the New Clearwell Project at the City Of Alpena Water Treatment Plant.</p> <p>Tempest shall supply and install (1), up to 24" x 24" x 10" NEMA 3R, 4, 12, enclosure to house (2) Motor Starters with Circuit and Overload Protection. This enclosure shall additionally include a 480 Circuit Disconnect, Lockout / Tagout Means, an Internal Heater, Panel Dead Front, Hand-Off-Auto Switches for Manual Pump Control, and Pump Running Indication.</p> <p>Pump Control shall be via new, Tempest supplied and installed, Radar Level Transmitters. Tempest supplied and installed Digital Floats shall be utilized for alarm sensing and backup / supervisory pump control. Pumps shall be programmed in alternating Lead - Lag format. Each new device in both New Clearwell Tanks shall be displayed, trended, and alarming displayed on the current SCADA System.</p> <p>All new control components shall be integrated into the existing Alpena WTP Controls System, programmed in like accordance with current Controls Programming, Documented in accordance with Alpena WTP standards, and added to the SCADA Screens. Level Alarm programming shall be added to the current Callout / Texting Notification Devices.</p> <p>Tempest shall move all required New Sediment Basin Effluent Instrumentation to a location more suitable to accommodate the new exterior door being installed on the basement level of the southwest end of the building.</p> <p>Tempest shall provide and install, one new Allen Bradley MCC Bucket with 30 amp Branch Circuit protection and Disconnecting means.</p> <p>Tempest shall relocate both the old and new Intermediate CL/2 and Turbidity equipment accordingly based on the systems new design. The new system shall utilize (1) CL/2 and (1) Turbidity monitor in the new "Chlorine Contact Chamber". Tempest shall supply all required mounting hardware, electrical hardware, and all required plumbing hardware to connect the Monitoring sensors to process pipe sample points provided by others. All relocated equipment shall be re-utilized or left onsite for spare equipment.</p> <p>Tempest shall make all necessary Chlorine Supply Pump connections within 6 feet of the Intermediate Chlorine Skids. The Chlorine feed line to the Chlorine Contact Chamber shall have (1) electrically isolating solenoid valve installed. Tempest shall cap off, and remove the Chlorine supply piping to the "Old Section" currently being utilized in the split system design. All piping and hardware shall be rated for the chemical being handled. Piping connections beyond 6' of the Chlorine Supply Pump Skids to the process injection point shall be the responsibility of others.</p> <p>Tempest shall make all necessary piping connections in the Chlorine Contact Chamber pertaining to the incoming sample line, from the New Clearwell, to the pump and from the pump to the Lab Sink. Tempest shall also make the connections at the Lab Sink. All piping between the Chlorine Contact Chamber and both the New Clearwell's and the Lab Sink shall be completed by others.</p> <p>Chemical sample pumps shall be programmed and wired to shut off when the plant is in an "Offline" state, same as all other chemical pumps.</p> <p>Tempest shall provide all conduit, conduit fittings, field device cabling (with the exception of submersible pump cabling), required wiring, and installation hardware in association with the work listed above.</p> <p>All work, relating to this scope, shall be coordinated with Tempest Enterprises personal.</p>
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Labor Costs			
Item #	Labor Description	Type	Line Item Total
1.0	Controls / Electrical Engineering	Per Project	\$ 2,880.00
2.0	AutoCAD Design and System Documentation Updates	Per Project	\$ 2,880.00
3.0	Panel Building, Testing, and Debugging	Per Project	\$ 3,600.00
4.0	PLC, FactoryTalk View SE, and Field Device Programming	Per Project	\$ 5,760.00
5.0	Onsite Installation, Commissioning, and Operations Training	Per Project	\$ 26,500.00
Labor Sub-Total:			\$ 41,620.00

Hardware Costs			
Item #	Hardware Description	Type	Line Item Total
1.0	All Hardware Required to Complete Scope Of Work Above	Per Project	\$ 20,119.63
Hardware Sub-Total:			\$ 20,119.63
Project Total:			\$ 61,739.63

This quotation is an offer to sell you the goods and / or supply services described herein set forth above. The reception of a purchase order for any goods or services listed in this quotation constitutes your acceptance of these terms and conditions of sale. Any services, goods, or modifications to the scope of work listed above to complete this project shall be negotiated with you prior to purchasing any goods or the completion of any additional work. Any shipping charges incurred by procurement of these goods shall be invoiced to you at cost. Quoted prices expire on and are subject to change after 30 calendar days from the date listed on this quotation.



- PLAN KEY NOTES**
- CONCRETE FILL SHALL INCLUDE SYNTHETIC MACRO FIBERS AT A DOSAGE RATE OF 5.0 POUNDS PER CUBIC YARD. FINISH CONCRETE FILL TO A SMOOTH TROWEL FINISH, ROUGHEN CONCRETE SUBSTRATE FOR A BONDED INTERFACE WITH THE MAT. MACRO FIBERS TO BE EUCLID CHEMICAL TUF-STRAND SF OR PRE-APPROVED SUBSTITUTE.
 - THE THICKNESS OF THE CONCRETE FILL WILL VARY WITH THE SLOPE OF THE MAT. MAINTAIN A 2 INCH THICK CONCRETE FILL ALONG THIS EDGE.
 - MAT CONTROL JOINT.
 - MAT CONSTRUCTION JOINT.
 - WALL CONTROL JOINT.
 - WALL CONSTRUCTION JOINT. SEE DETAIL 2/S-10 AT CORNER. SEE DETAIL 3/S-10 AT TEE INTERSECTION.
 - EXISTING CLEARWELL #1 TO REMAIN IN SERVICE UNTIL THE NEW CLEARWELL HAS BEEN PLACED IN SERVICE.
 - EXISTING CLEARWELL #2 SHALL BE SCHEDULED FOR DEMOLITION AS REQUIRED TO CONSTRUCT THE NEW CLEARWELL AND PLACE IT IN SERVICE.
 - FULL DEPTH VERTICAL SAWCUT WALL OF EXISTING CLEARWELL #2.
 - FULL DEPTH SAWCUT ROOF STRUCTURE OF EXISTING CLEARWELL #2 ALONG WALLS WHERE SHOWN. SHORE ROOF SLAB FRAMING AS REQUIRED TO PREVENT UNCONTROLLED COLLAPSE.
 - REMOVE EXISTING CLEARWELL #2 ROOF SLAB FRAMING IN SECTIONS AND BREAK UP AWAY FROM EXISTING CLEARWELL #1.
 - DEMOLISH COLUMNS IN EXISTING CLEARWELL #2. 12 COLUMNS TO BE DEMOLISHED.
 - FULL DEPTH SAWCUT COLUMNS AT TOP OF TRAPAZOIDAL COLUMN PEDESTALS. COLUMN PEDESTALS TO BE ABANDONED IN PLACE.
 - DEMOLISH EXISTING CLEARWELL #2 WALL TO 3" ABOVE TANK BASE SLAB. REMAINING WALL SHALL BE TRIMMED WITH A FULL DEPTH HORIZONTAL SAWCUT. NO REINFORCEMENT SHALL PROJECT ABOVE THE SAWCUT.
 - CHIP AND GRIND WALL OR SLAB FLUSH WITH REMAINING EXISTING STRUCTURE.
 - FULL DEPTH VERTICAL SAWCUT WALL OF EXISTING CLEARWELL #1.
 - FULL DEPTH SAWCUT ROOF STRUCTURE OF EXISTING CLEARWELL #1 ALONG WALLS WHERE SHOWN. SHORE ROOF SLAB FRAMING AS REQUIRED TO PREVENT UNCONTROLLED COLLAPSE.
 - REMOVE EXISTING CLEARWELL #1 ROOF SLAB FRAMING IN SECTIONS AND BREAK UP AWAY FROM EXISTING FILTER BUILDING.
 - DEMOLISH COLUMNS IN EXISTING CLEARWELL #1 WHERE INDICATED. 14 COLUMNS TO BE DEMOLISHED.
 - DEMOLISH EXISTING CLEARWELL #1 WALL TO 3" ABOVE TANK BASE SLAB. REMAINING WALL SHALL BE TRIMMED WITH A FULL DEPTH HORIZONTAL SAWCUT. NO REINFORCEMENT SHALL PROJECT ABOVE THE SAWCUT.
 - EXISTING WALL SEGMENT TO REMAIN. SAWCUT TOP OF WALL TO EL. 592.50 AT BUILDING EAST WALL TO 592.25 10' EAST OF BUILDING WALL AND TEMPORARILY SHORE WALL UNTIL BACKFILL IS PLACED ON BOTH SIDES. CORE HOLE THROUGH WALL AS REQUIRED FOR NEW PIPING.
 - BULK HEAD OPENINGS UNTIL FLOWABLE FILL SETS.
 - FLOWABLE FILL PLACED IN 2'-0" MAXIMUM THICKNESS LIFTS. FILL TO UNDERSIDE OF FILTER TANK SLAB.
 - DEMOLISH EXISTING WALL TO ELEVATION 584.00. REMAINING WALL SHALL BE TRIMMED WITH A FULL DEPTH HORIZONTAL SAWCUT AT ELEVATION 584.00. NO REINFORCEMENT SHALL PROJECT ABOVE THE SAWCUT.
 - REMOVE WALL TO TOP OF TANK BASE SLAB.
 - FLOWABLE FILL 4'-0" WIDE INSTALLED IN 2'-0" MAXIMUM LIFTS. PIPE PASSING THROUGH FLOWABLE FILL TO BE CONTAINED IN A SINGLE LIFT. FLOWABLE FILL TO BEAR ON ROCK OR CLEARWELL BASE SLAB AND EXTEND TO ELEVATION 584.00.
 - TOP MAT BENT DOWEL BAR TO HAVE VARYING LENGTHS OF: 6'-9" 6'-9" AND 5'-9" 5'-9" STAGGER DOWEL BARS ALTERNATING SPACING. LAP TOP MAT BARS WITH DOWEL BARS 4'-1" MINIMUM.
 - BOTTOM MAT BENT DOWEL BAR TO HAVE VARYING LENGTHS OF: 5'-1" 5'-1" AND 4'-1" 4'-1" STAGGER DOWEL BARS ALTERNATING SPACING. LAP BOTTOM MAT BARS WITH DOWEL BARS 3'-1" MINIMUM.
 - UNDERDRAIN WITH INVERT AT 0.75' ABOVE EXISTING TANK BASE SLAB. SEE DETAIL 4/S-4. TIE IN TO TANK PERIMETER DRAIN. PROVIDE SLEEVE FOR UNDERDRAIN THROUGH FLOWABLE FILL AT EXISTING TANK SOUTH WALL.
 - MIOSHA COMPLIANT, FS INDUSTRIES STAINLESS STEEL, SERIES F, FIXED LADDER WITH MOUNTING HARDWARE.
 - SAWCUT OPENING THROUGH EXISTING WALL 3'-0" AND 10'-0" HIGH FROM TOP OF TANK BASE SLAB TO 6'-8" ABOVE GALLERY FLOOR (EL 594.75) CENTER 9'-0" OVER EXISTING 16" DIA PIPE.
 - CORE HOLE THROUGH EXISTING WALL FOR UNDERDRAIN.
 - 30" SQUARE FULL DEPTH SAWCUT THROUGH EXISTING WALL TO REMOVE EXISTING 16" DIAMETER FLANGED WALL PIPE. SEE SECTION 1/S-8.

LEGEND

- NEW CONSTRUCTION
- - - NEW CONSTRUCTION FOUNDATION
- - - - NEW CONSTRUCTION UNDERDRAIN
- - - - - EXISTING TO REMAIN
- /// EXISTING TO BE DEMOLISHED

SCALE: 3/32" = 1'-0"

0 2 4 8 16 24

3/32" = 1'-0"

FOUNDATION PLAN

SCALE: 3/32" = 1'-0"



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DATE	ADDITIONS AND/OR REVISIONS
03-01-24	ADDENDUM 1
02-19-24	BIDS
12-29-23	EGLS SUBMITTAL
12-14-23	OWNER REVIEW

DESIGNED	F.S.
DRAWN	G.H.
CHECKED	F.S.
APPROVED	T.G.M.

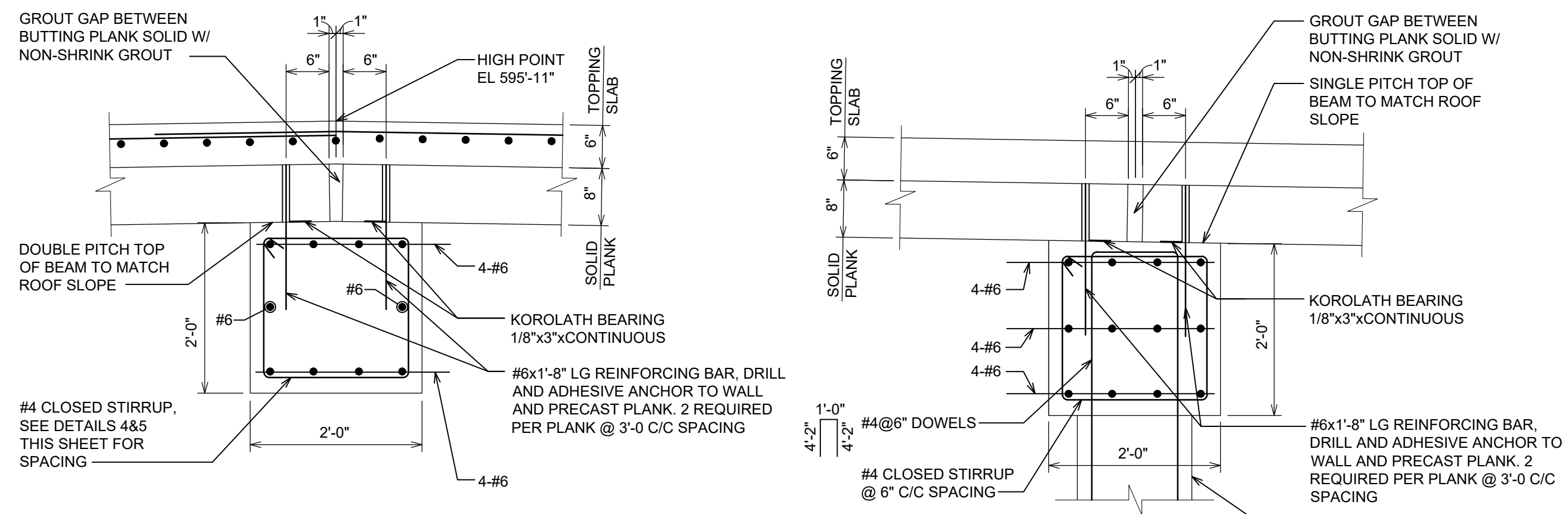
CITY OF ALPENA
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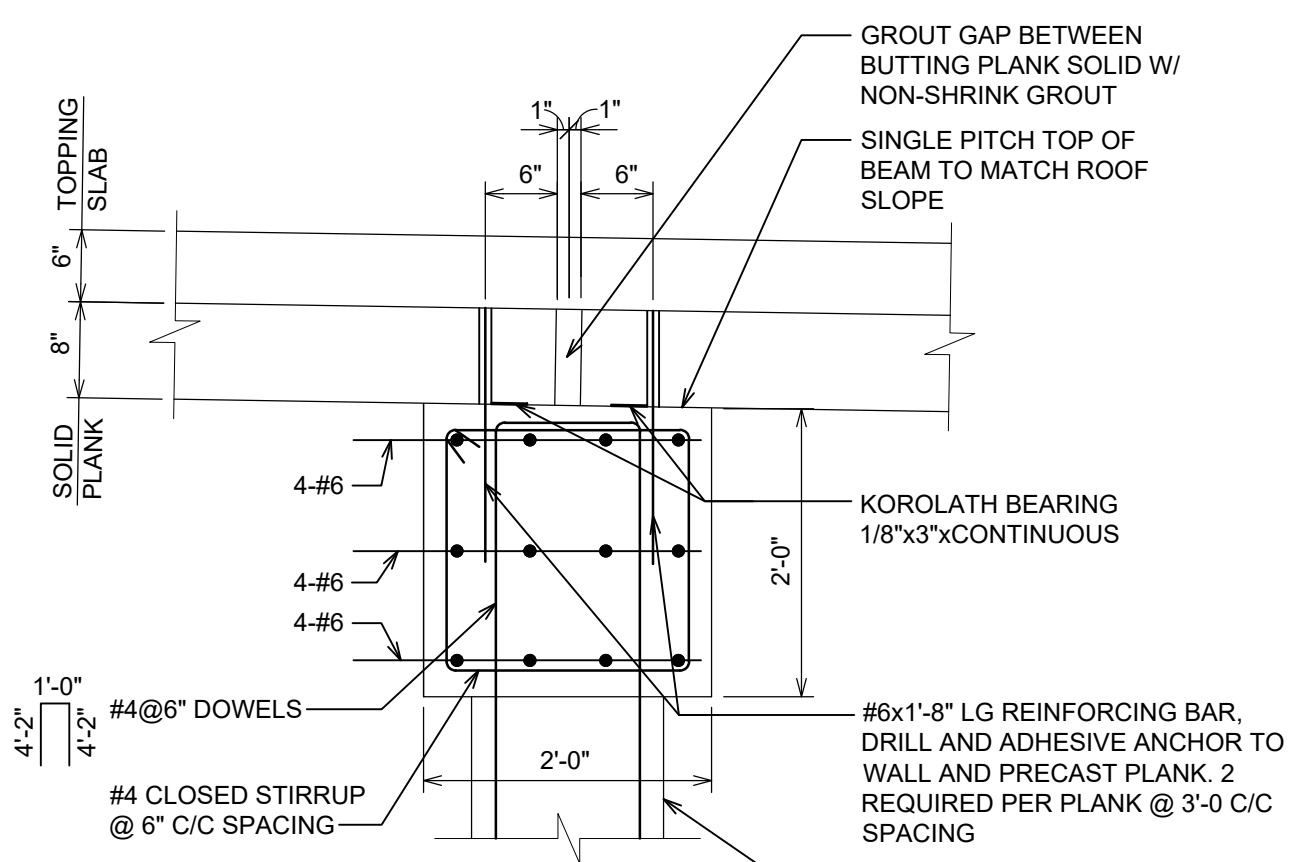
STRUCTURAL FOUNDATION PLAN

HRC JOB NO. 20220751 SCALE AS NOTED
 DATE DECEMBER 2023 SHEET NO. S-2 OF

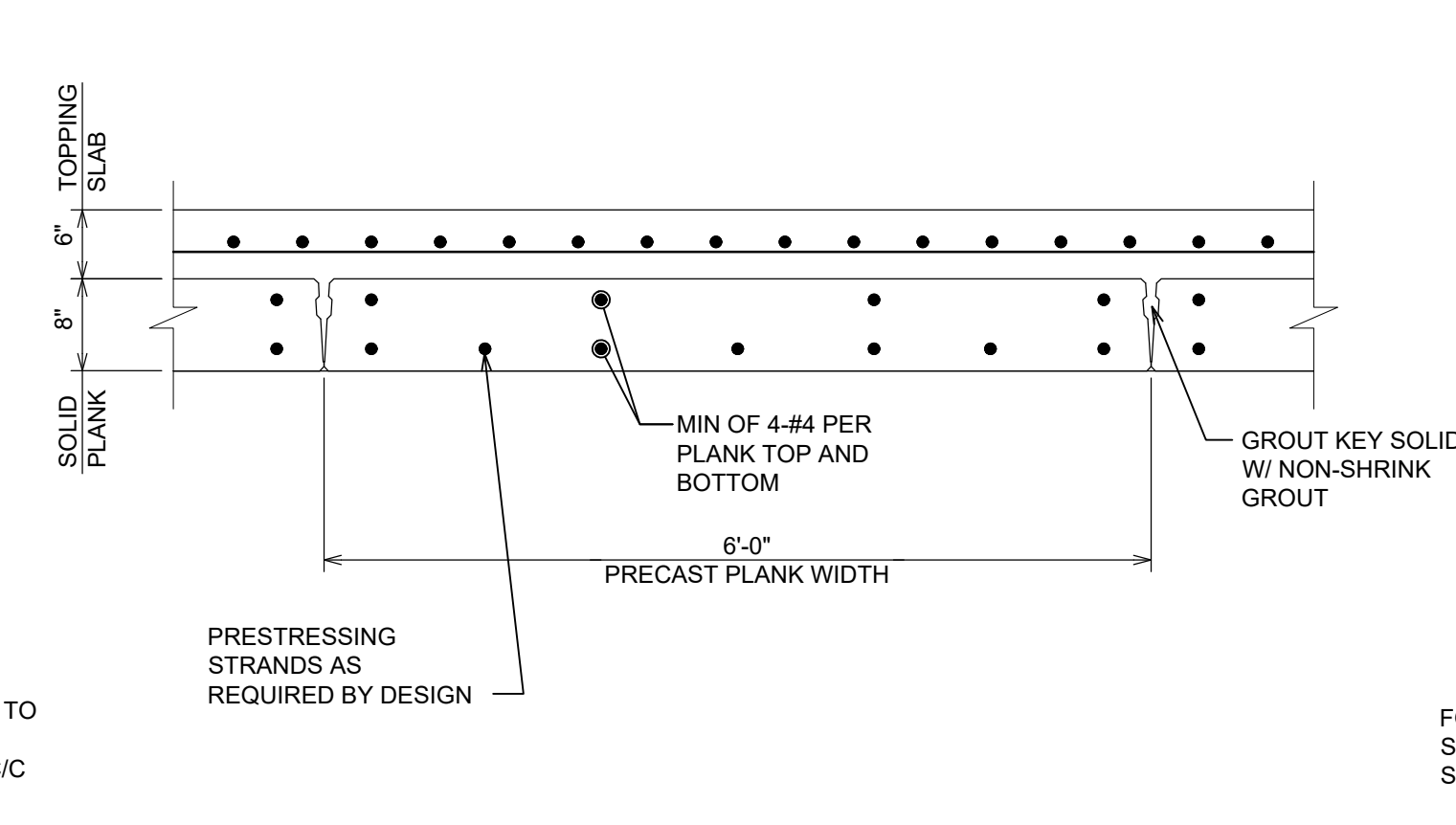
ORIGINAL PLOT SIZE: ARCH D (24.00 X 36.00 INCHES)
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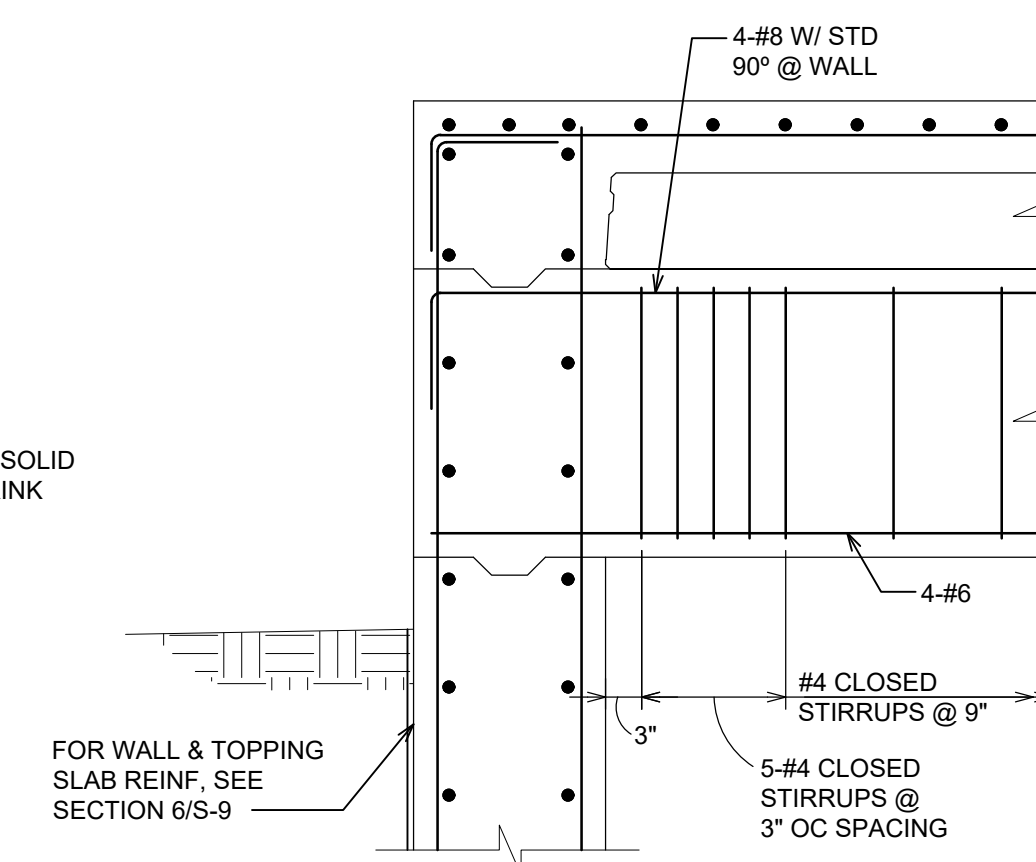
DETAIL/SECTION 1
SCALE: 3/4" = 1'-0"
S-4



DETAIL 2
SCALE: 3/4" = 1'-0"
S-4-S-10

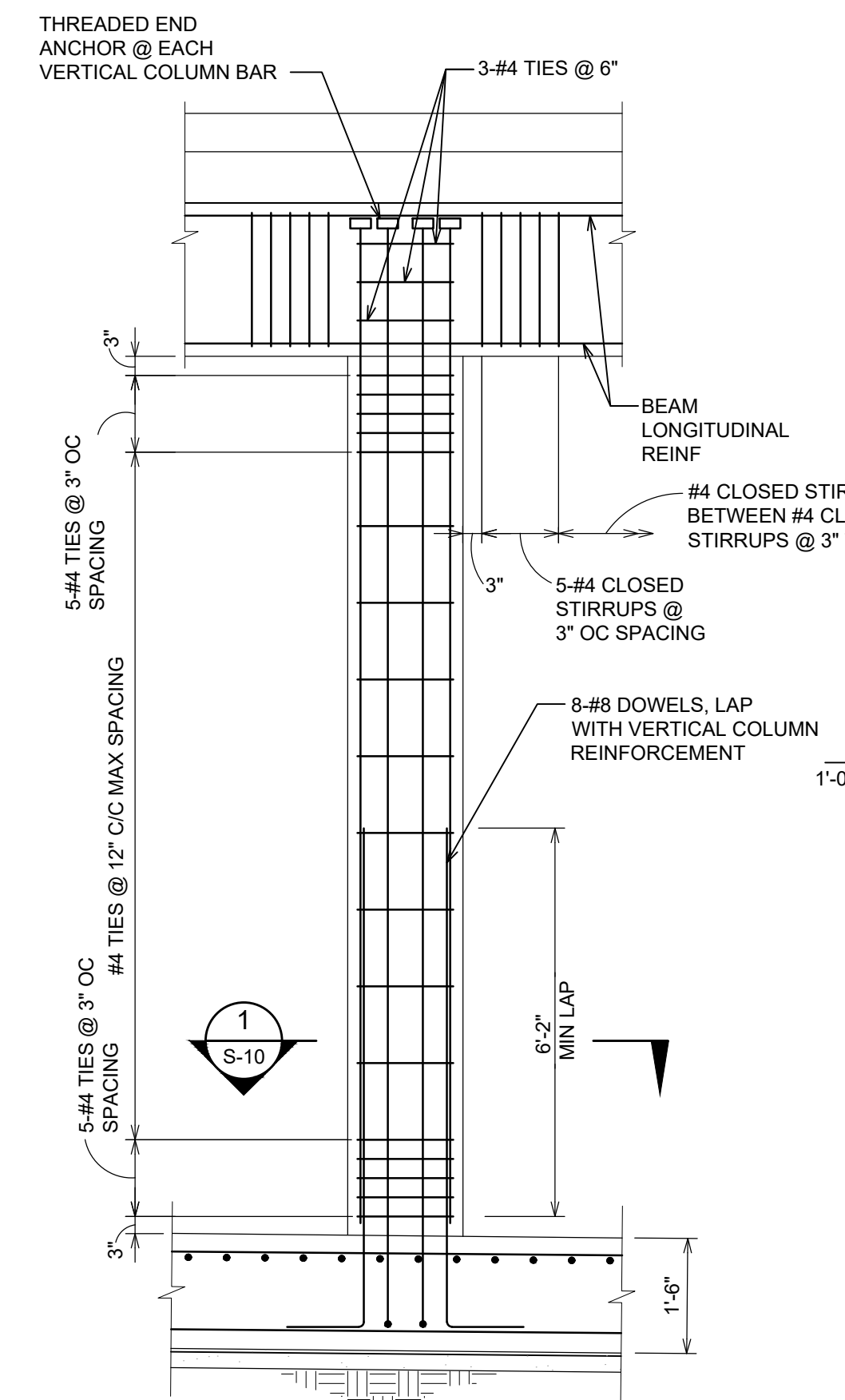


DETAIL 3
SCALE: 3/4" = 1'-0"
S-5

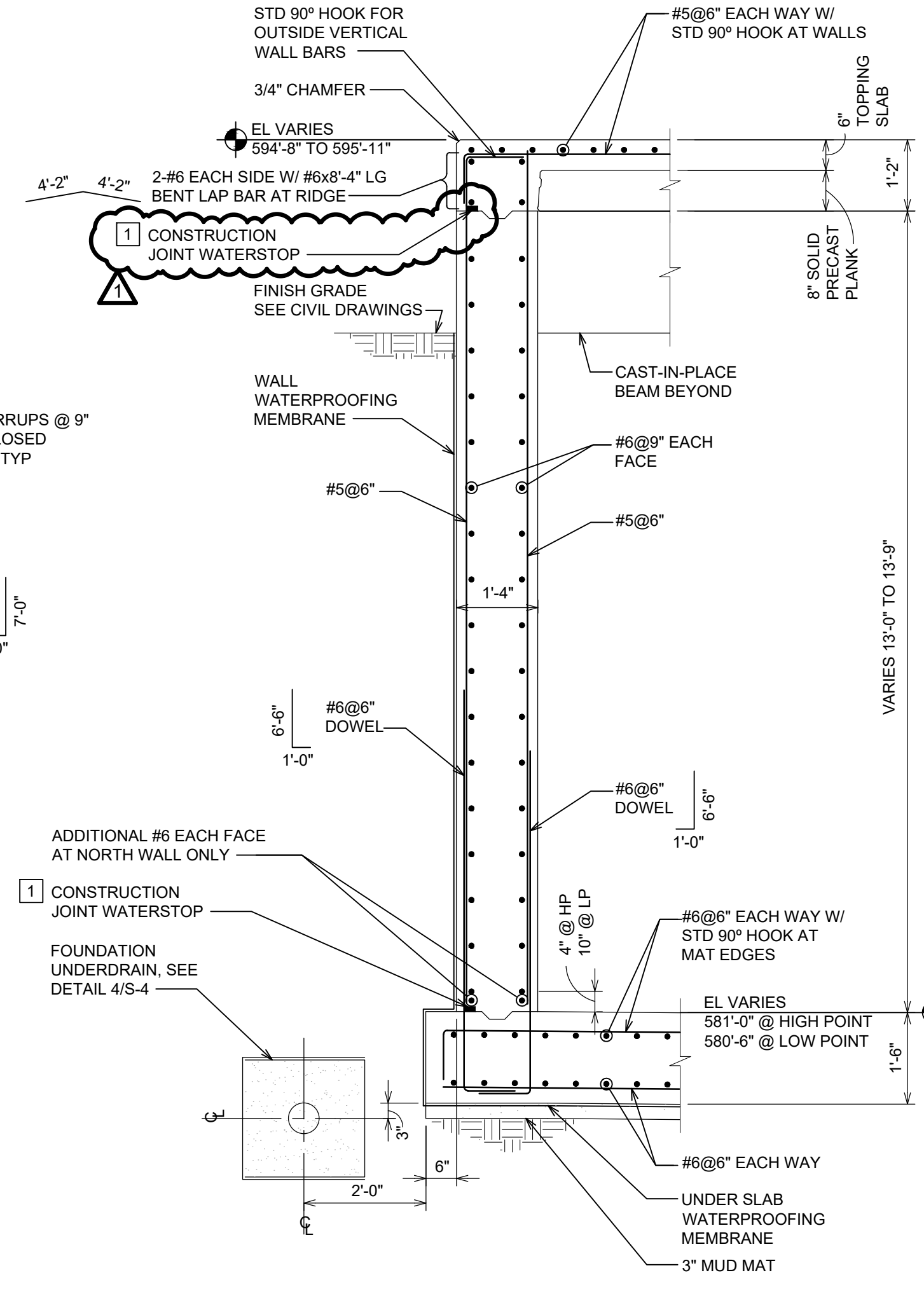


DETAIL 4
SCALE: 3/4" = 1'-0"
S-4

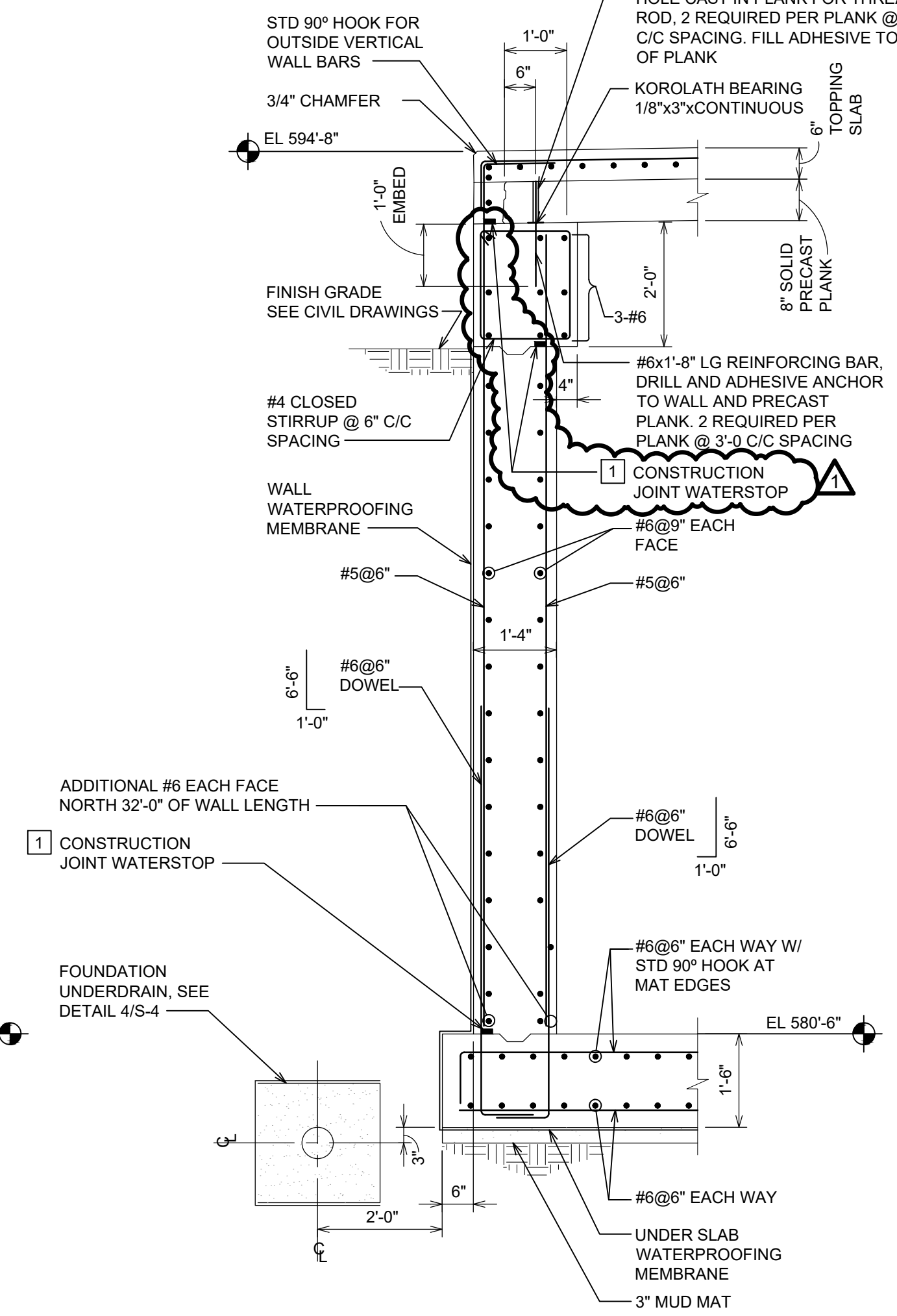
- SECTION AND DETAIL KEY NOTES**
- CONSTRUCTION JOINT WATERSTOP SHALL BE SIKAGREENSTREAK HYDROTITE CJ-1030-M WATERSTOP. INSTALL WATERSTOP IN COMPLIANCE WITH THE MANUFACTURERS REQUIREMENTS.
 - TOPPING SLAB WATERSTOP SHALL BE SIKAGREENSTREAK MODEL 771.
 - ELASTOMERIC JOINT SEALANT SHALL BE SIKAFLEX-1A, LIMESTONE COLOR. INSTALL IN COMPLIANCE WITH MANUFACTURERS APPLICATION INSTRUCTIONS AND LIMITATIONS.



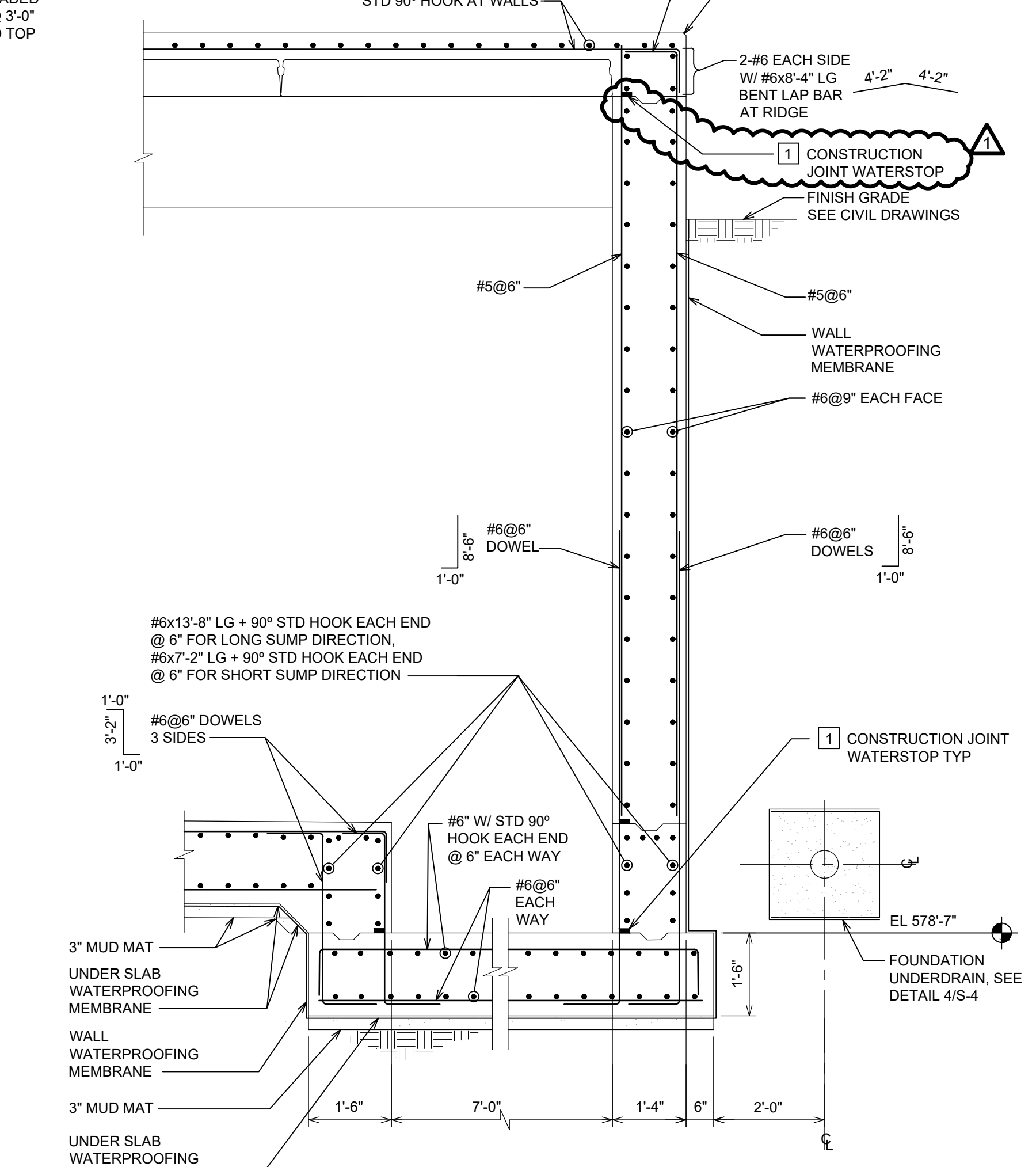
DETAIL 5
SCALE: 1/2" = 1'-0"
S-5



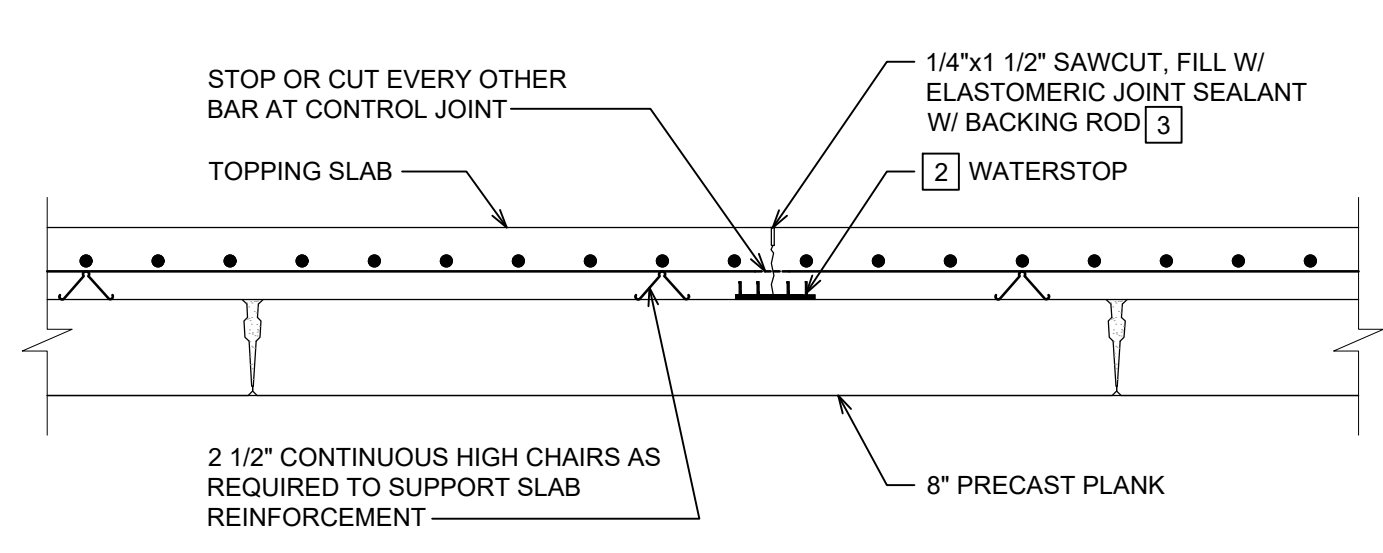
SECTION 6
SCALE: 1/2" = 1'-0"
S-7



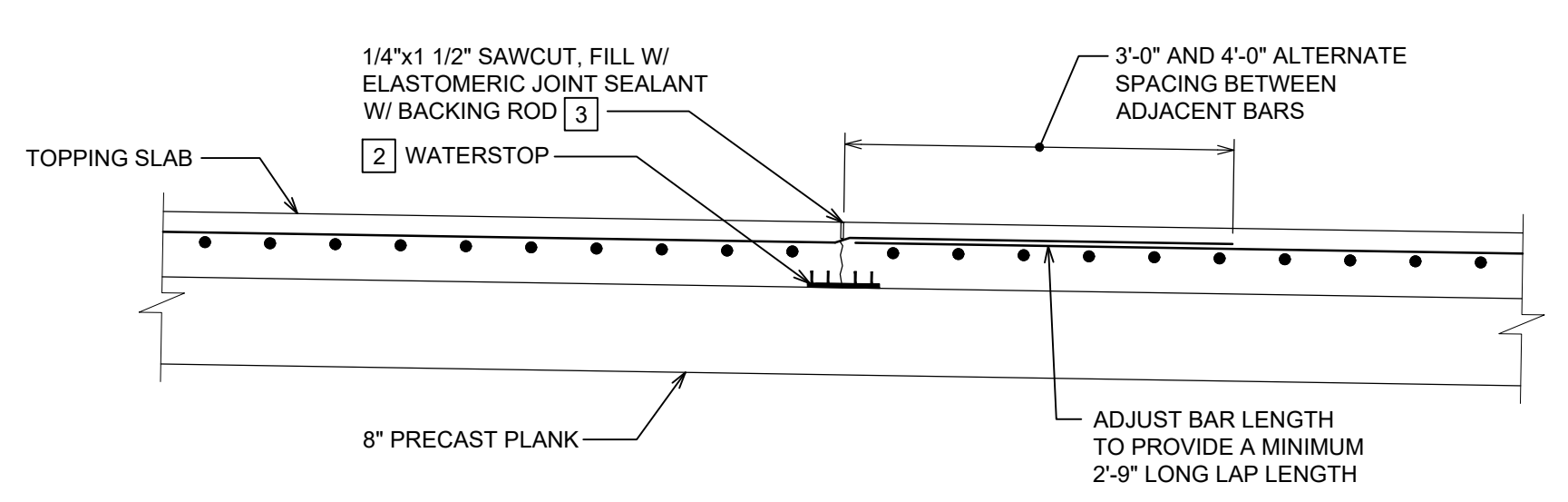
SECTION 7
SCALE: 1/2" = 1'-0"
S-3,S-6



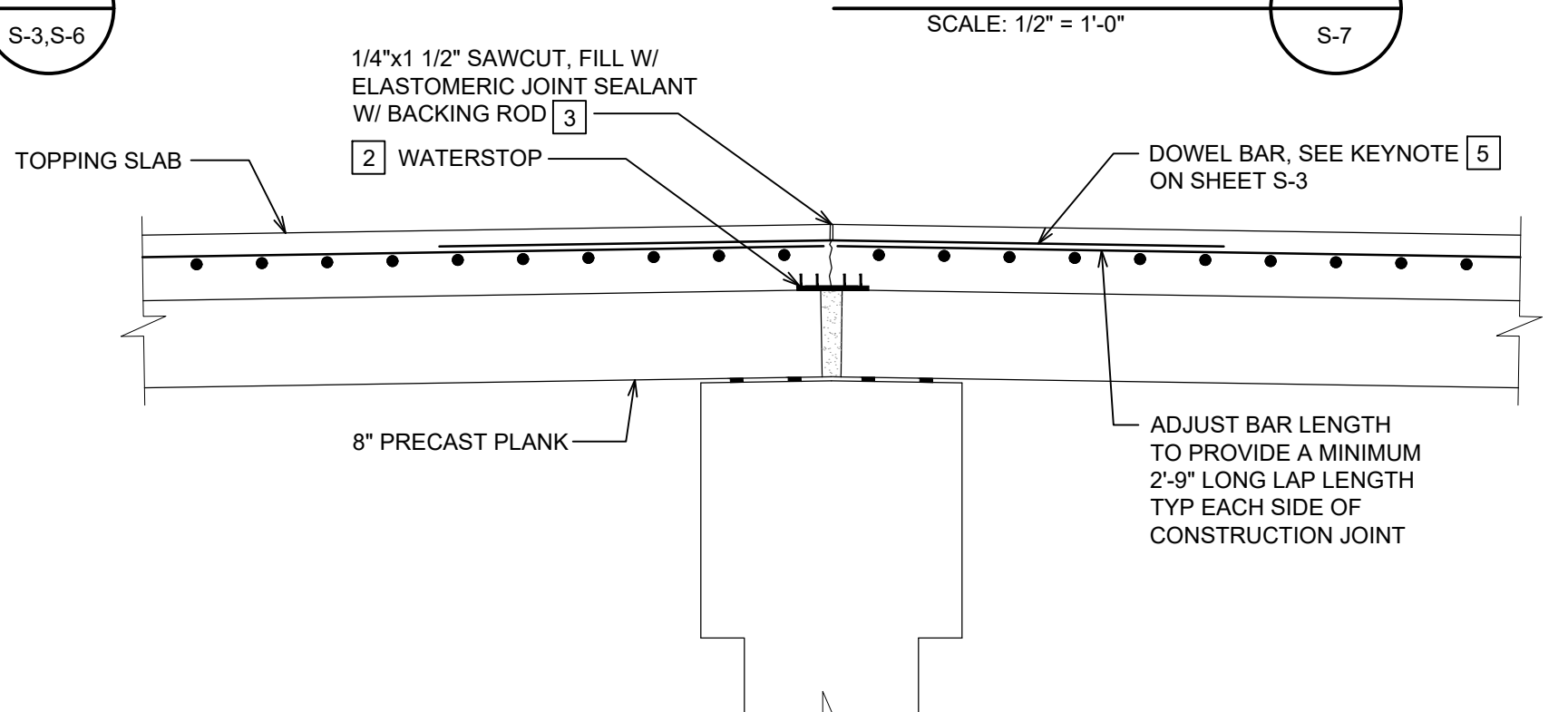
SECTION 8
SCALE: 1/2" = 1'-0"
S-7



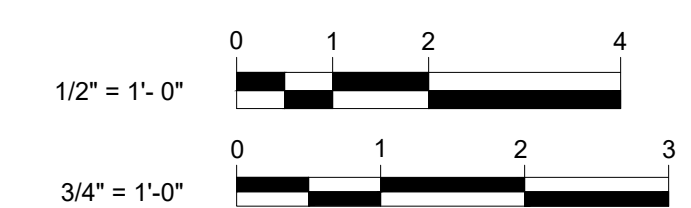
DETAIL 9
SCALE: 3/4" = 1'-0"
S-3



DETAIL 10
SCALE: 3/4" = 1'-0"
S-3



DETAIL 11
SCALE: 3/4" = 1'-0"
S-3



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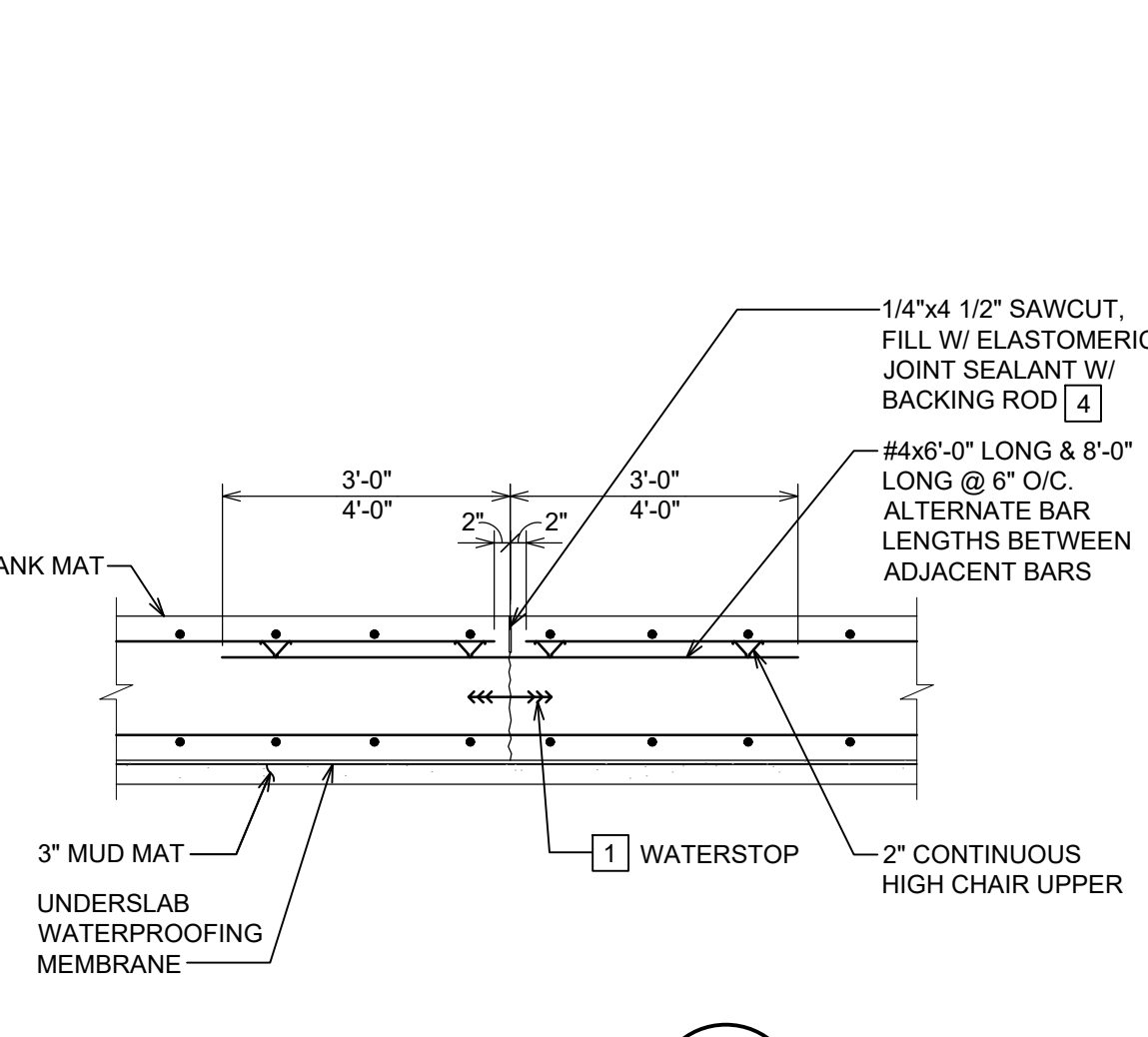
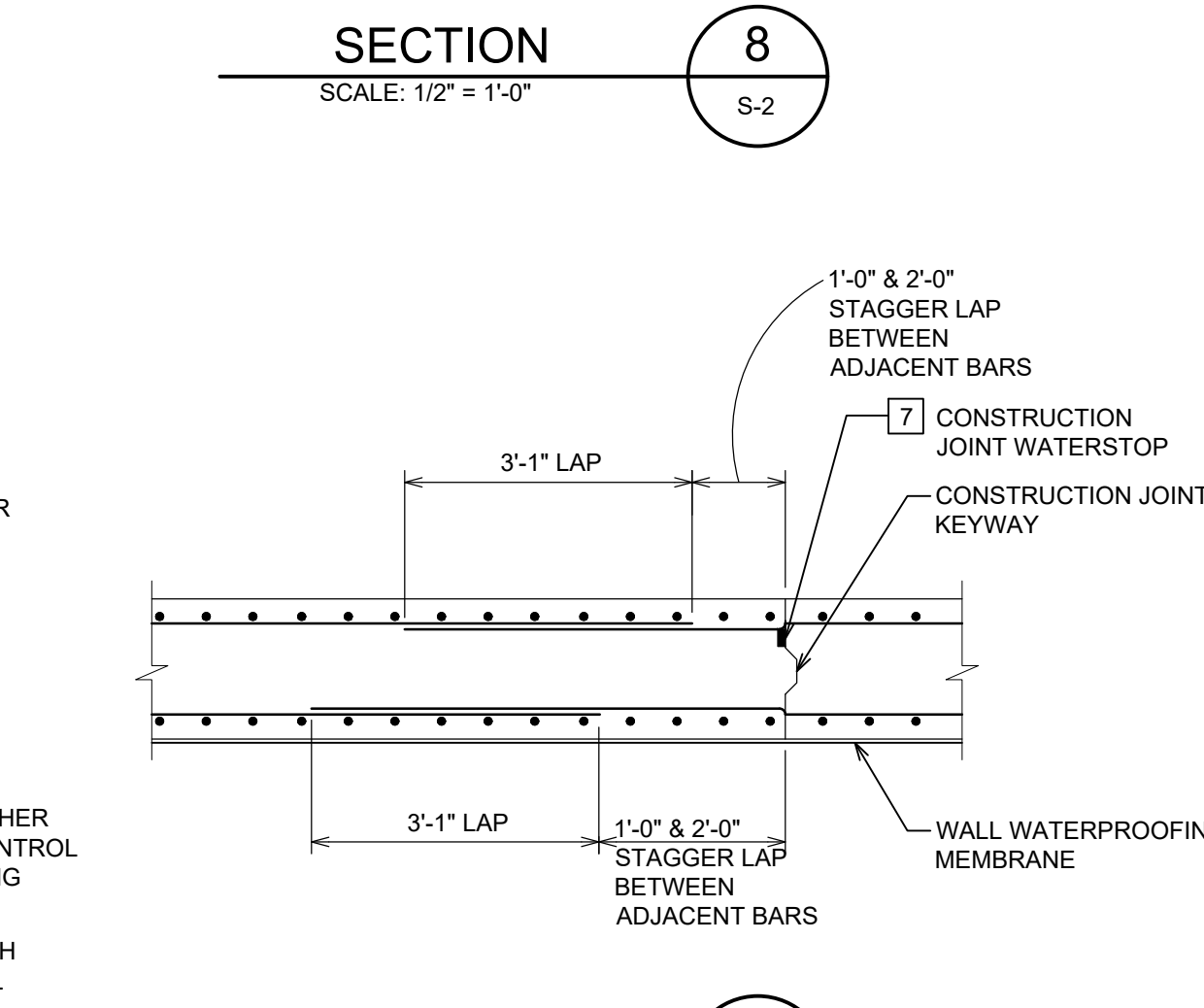
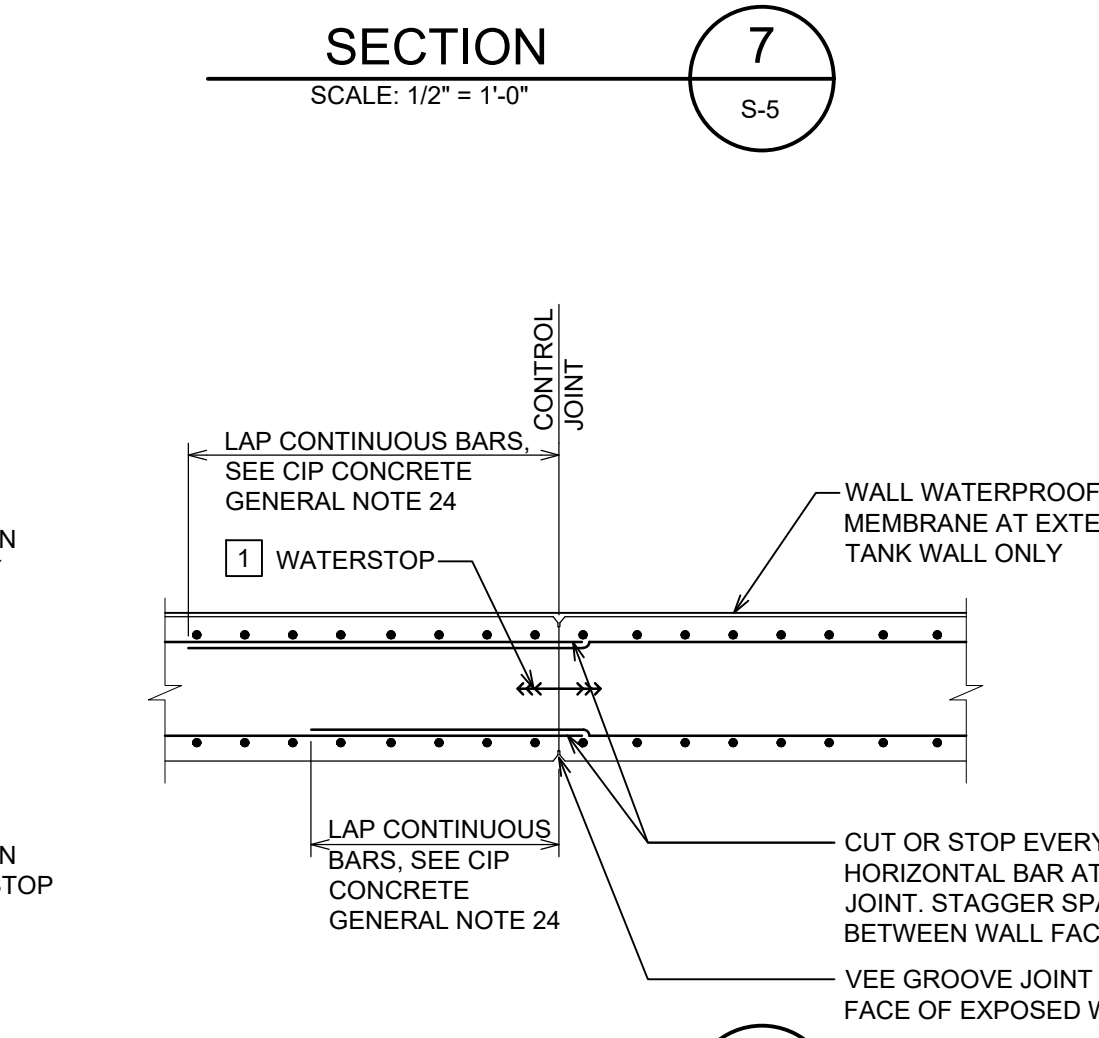
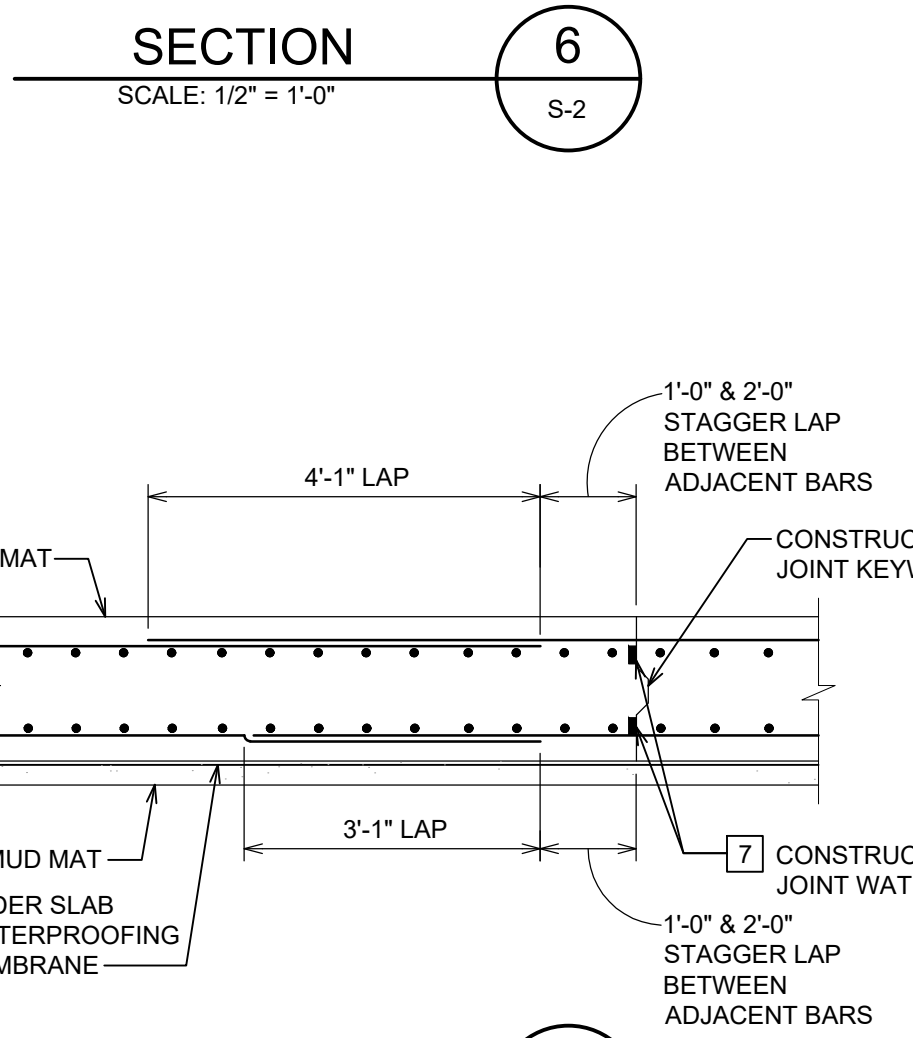
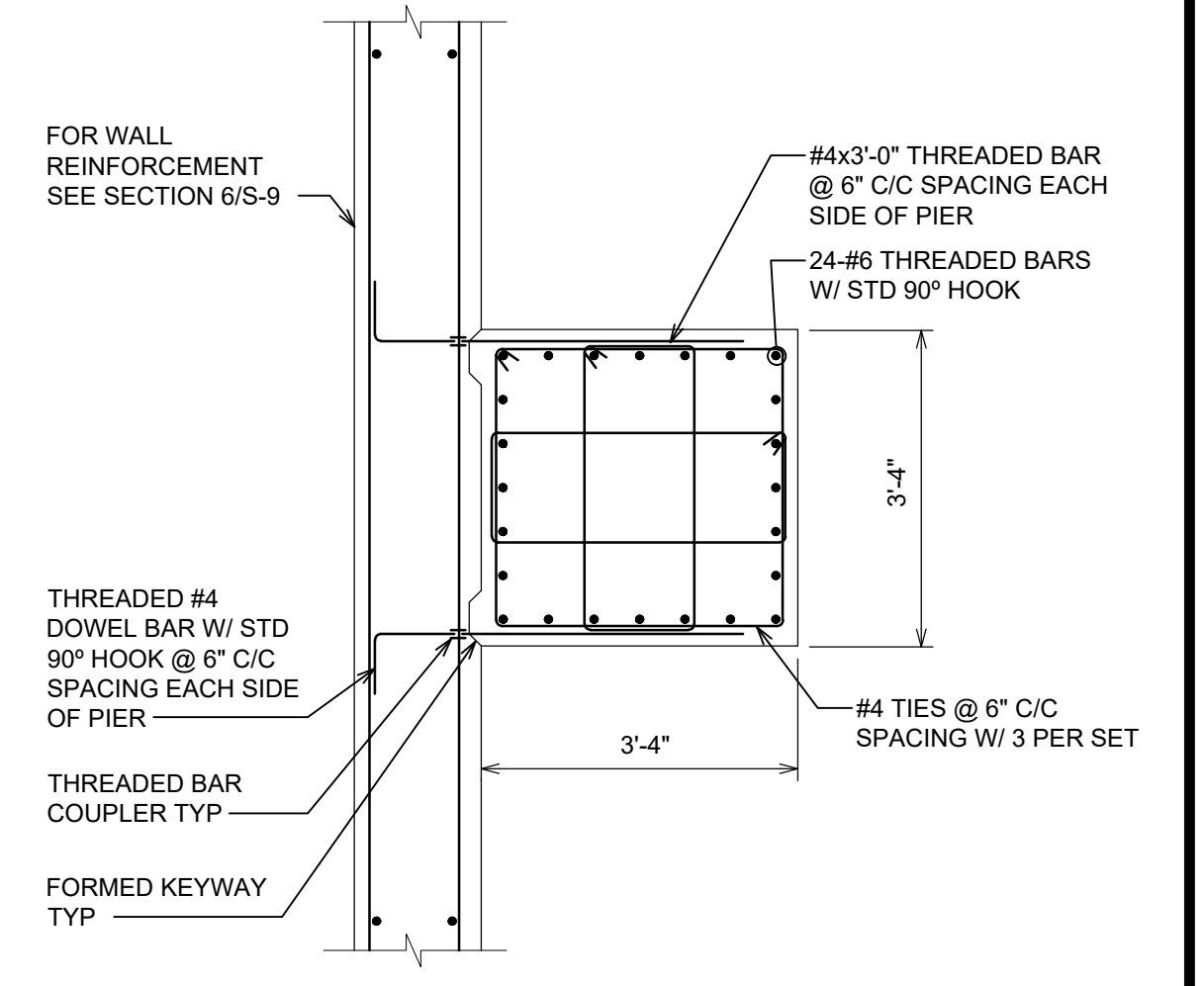
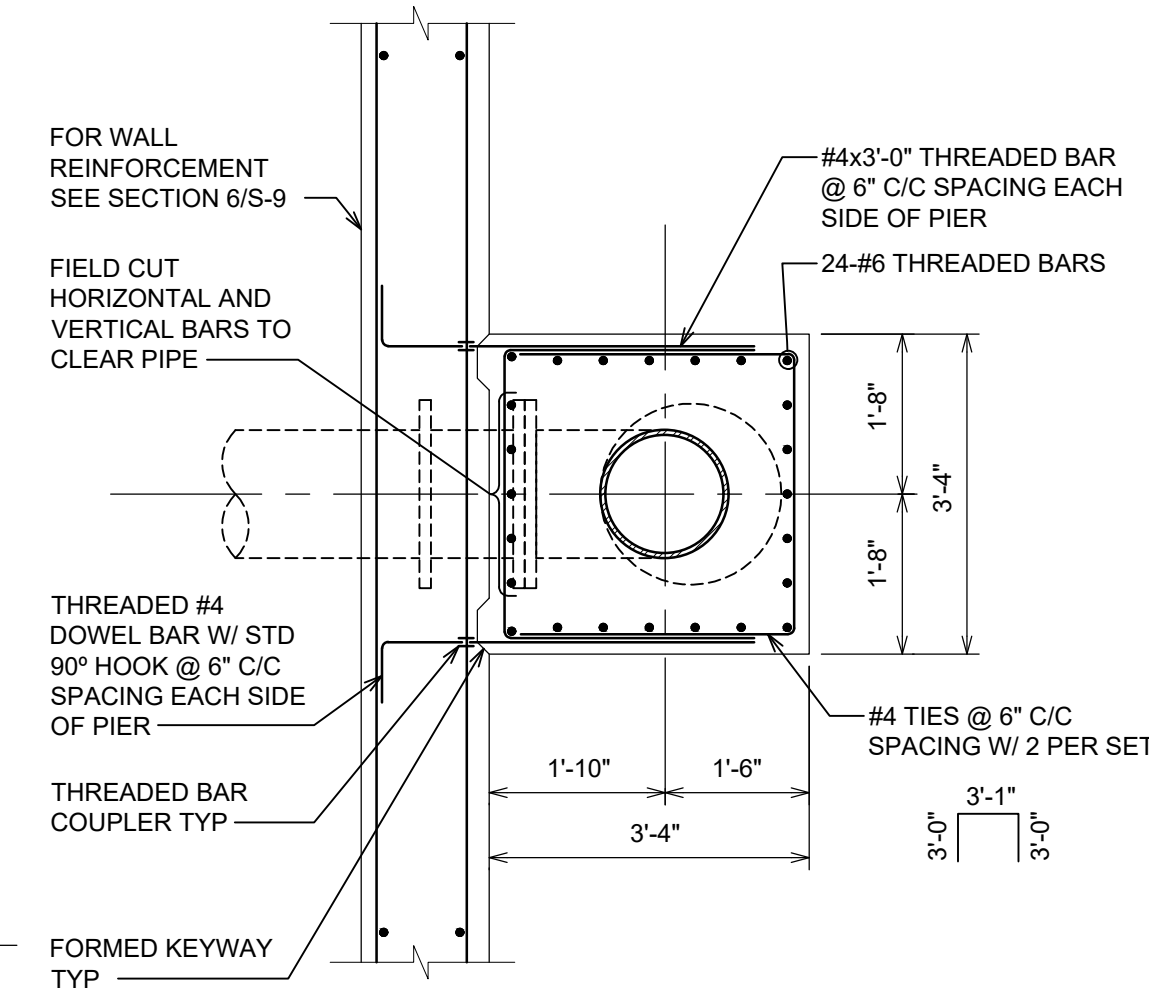
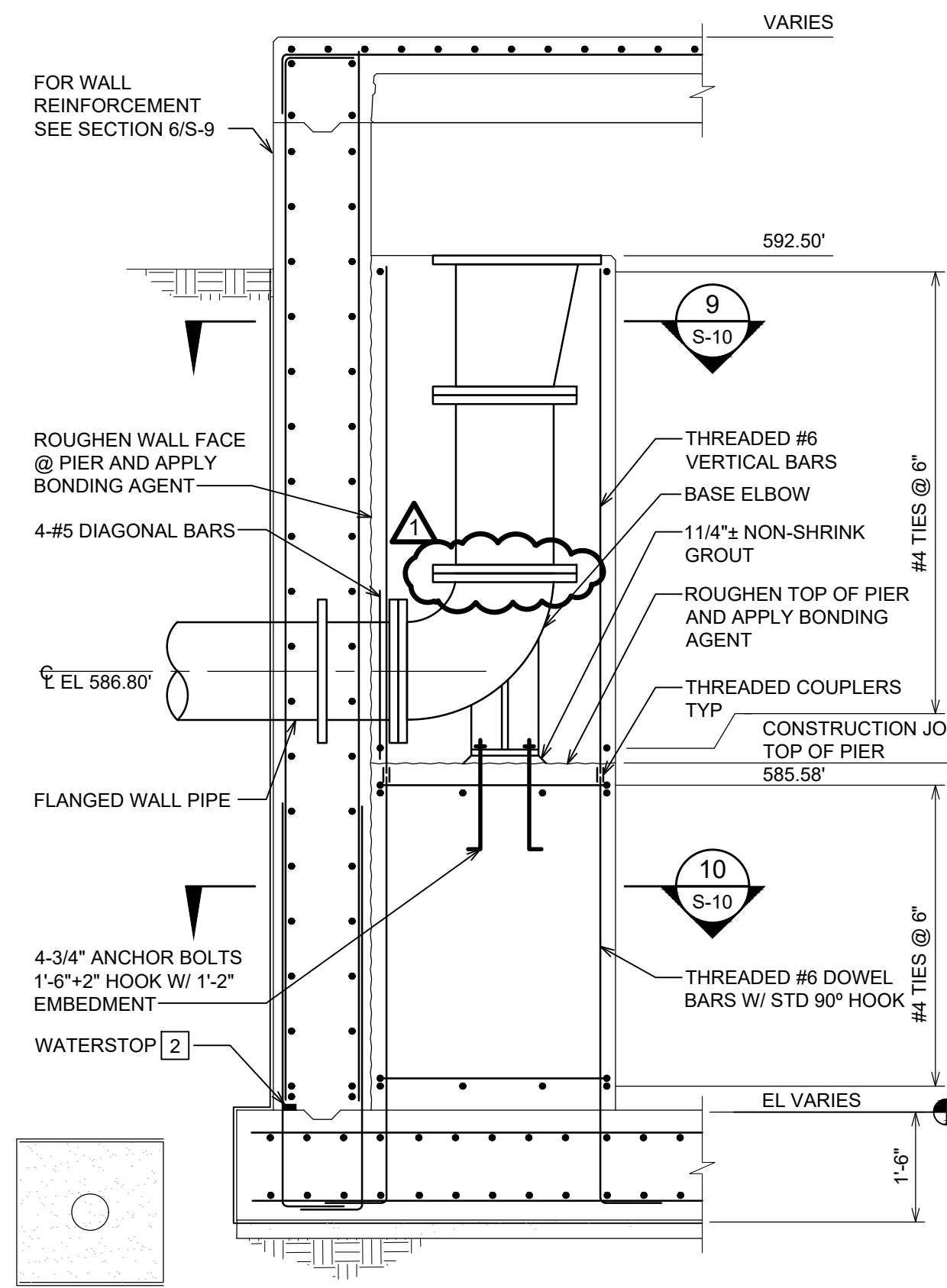
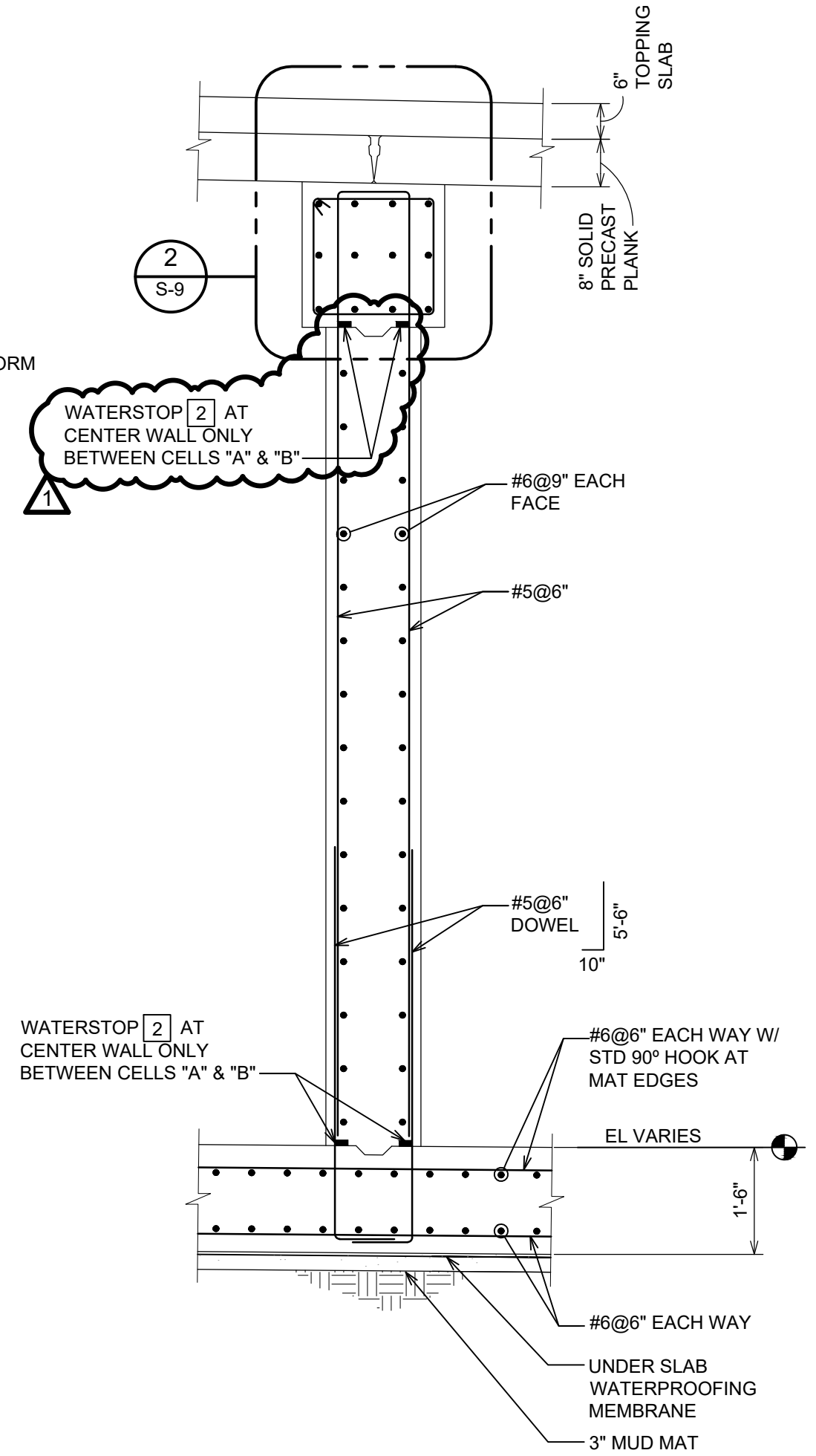
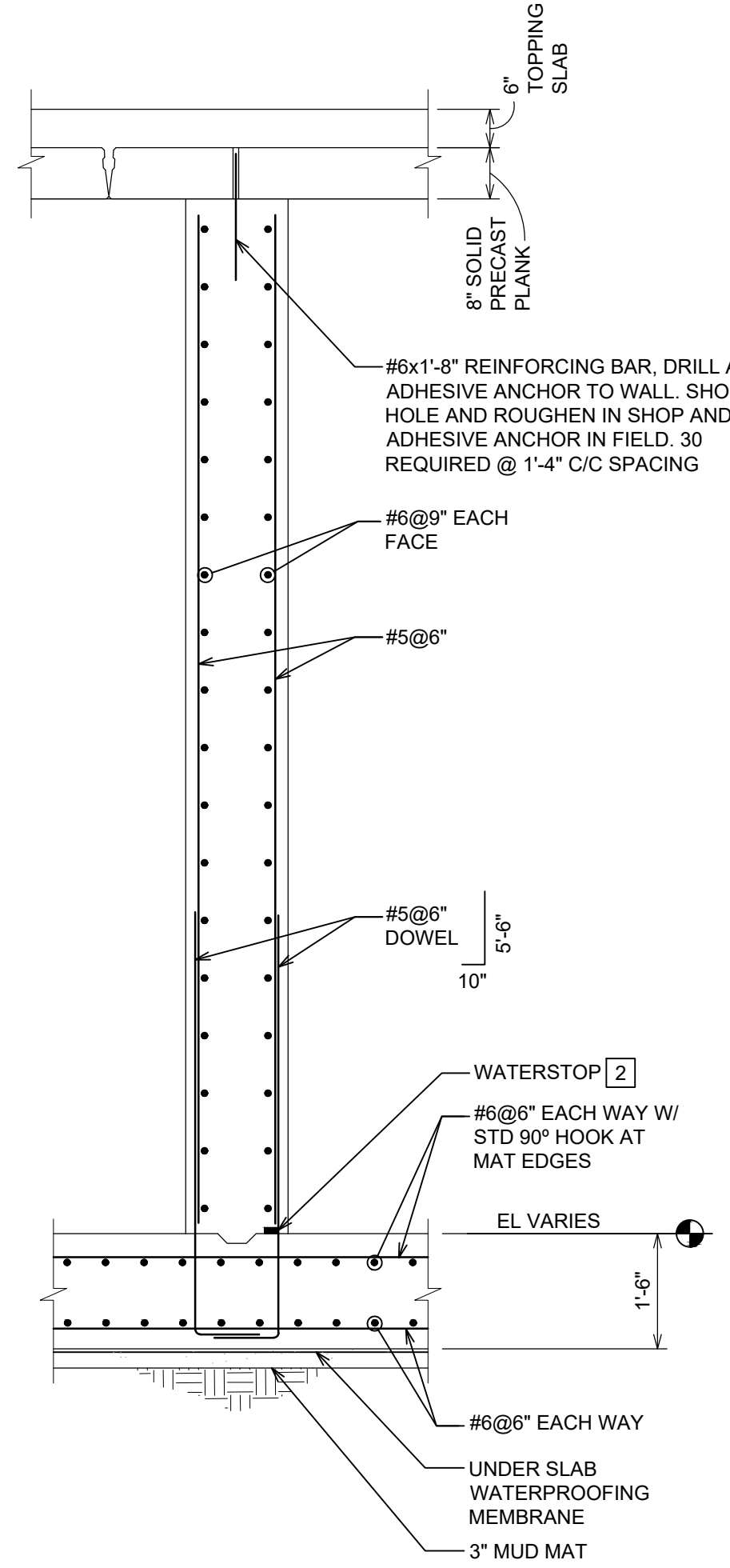
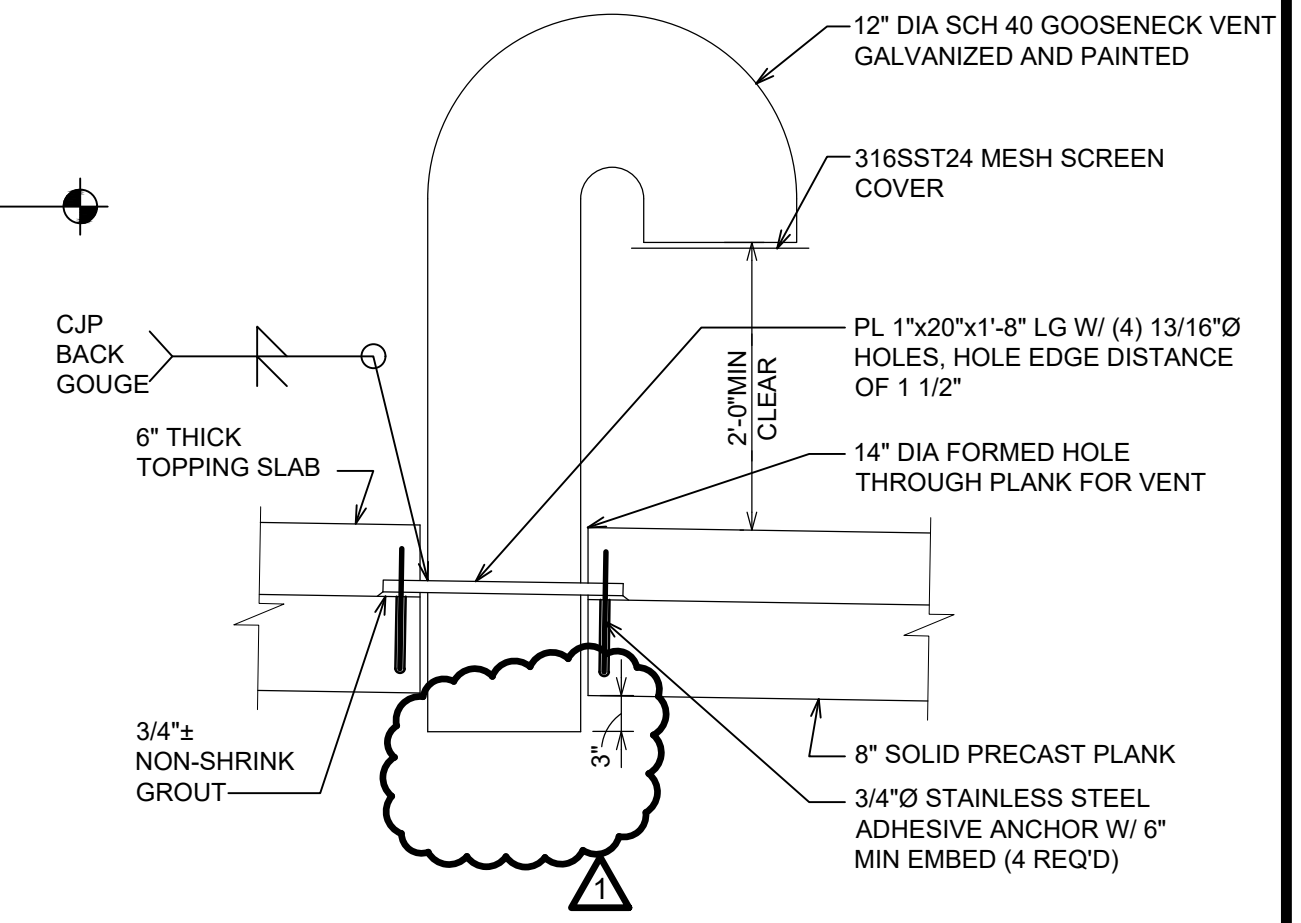
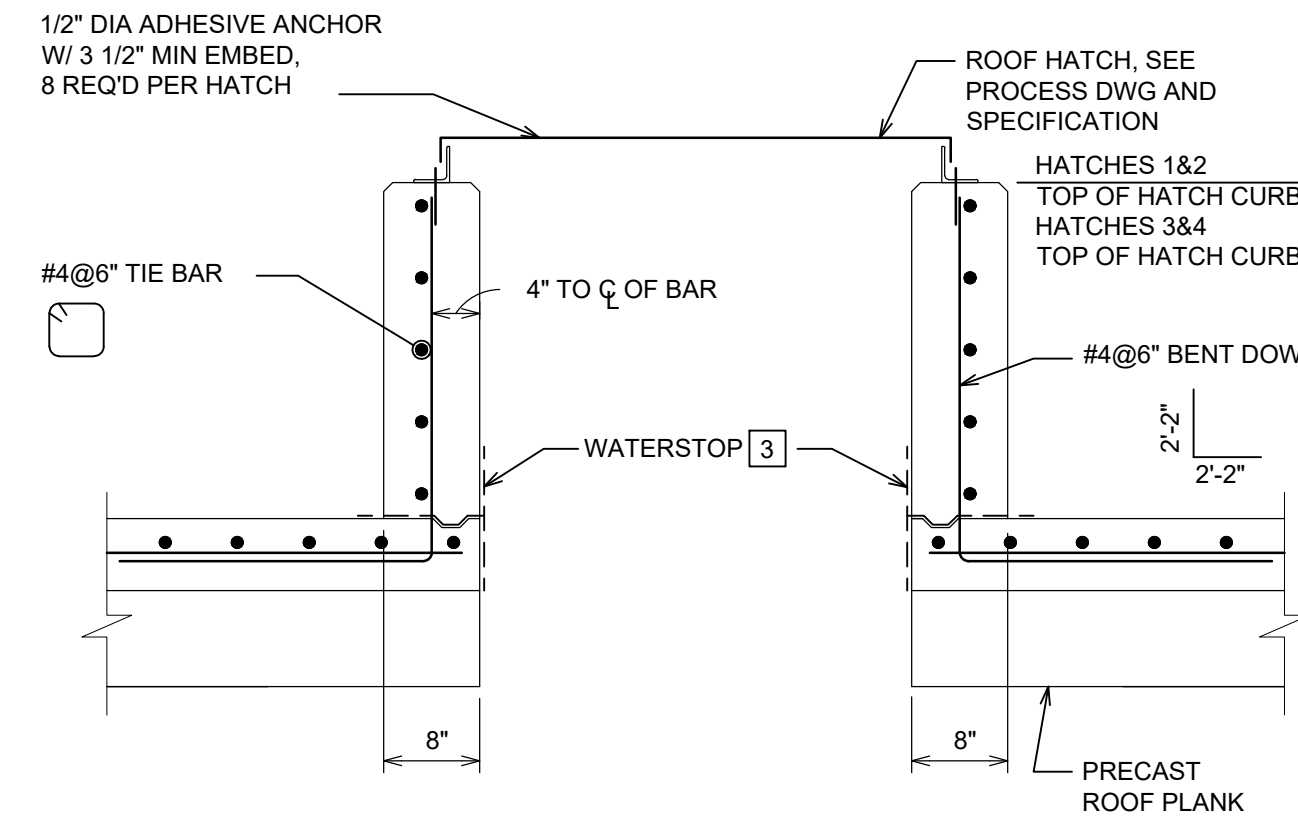
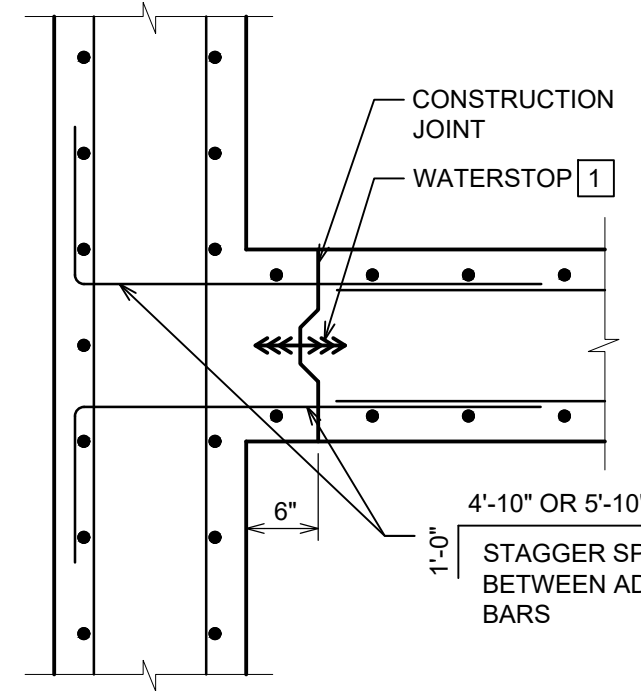
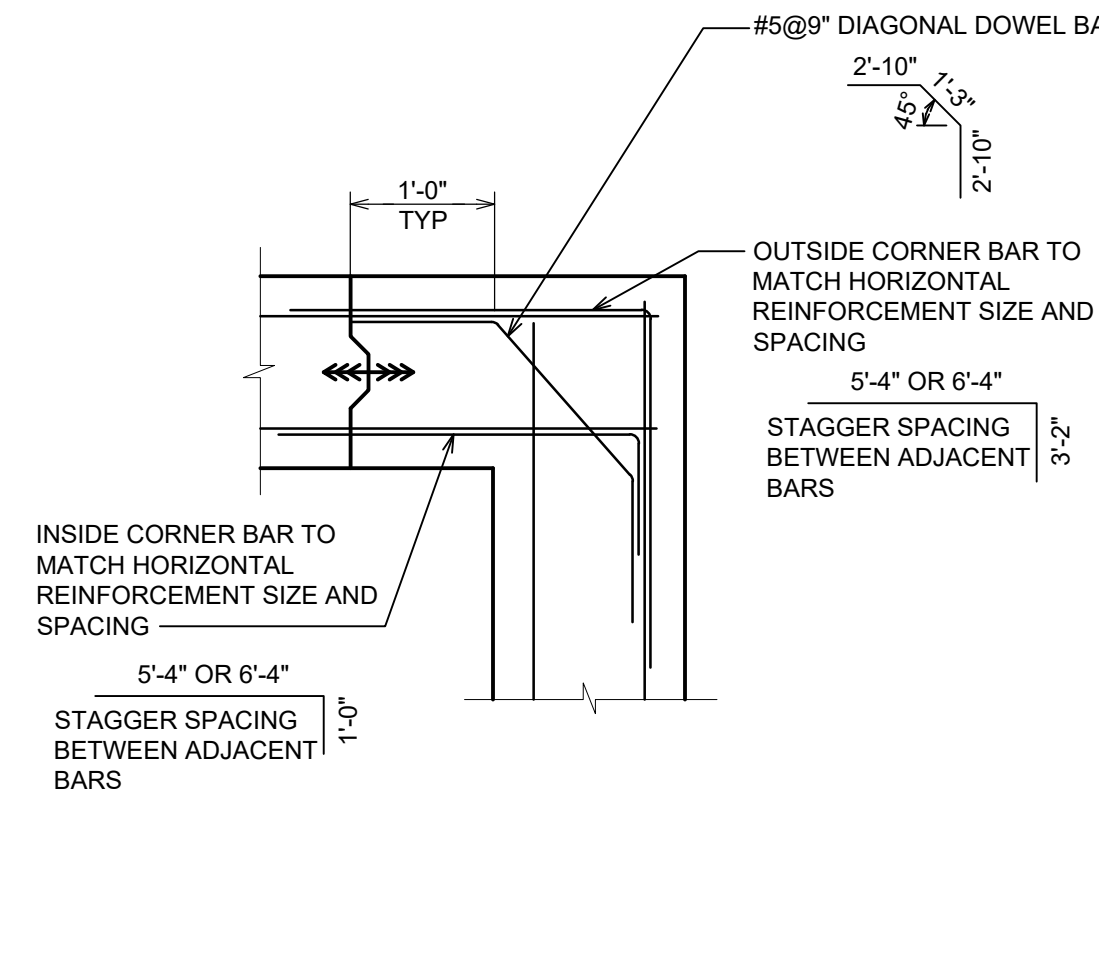
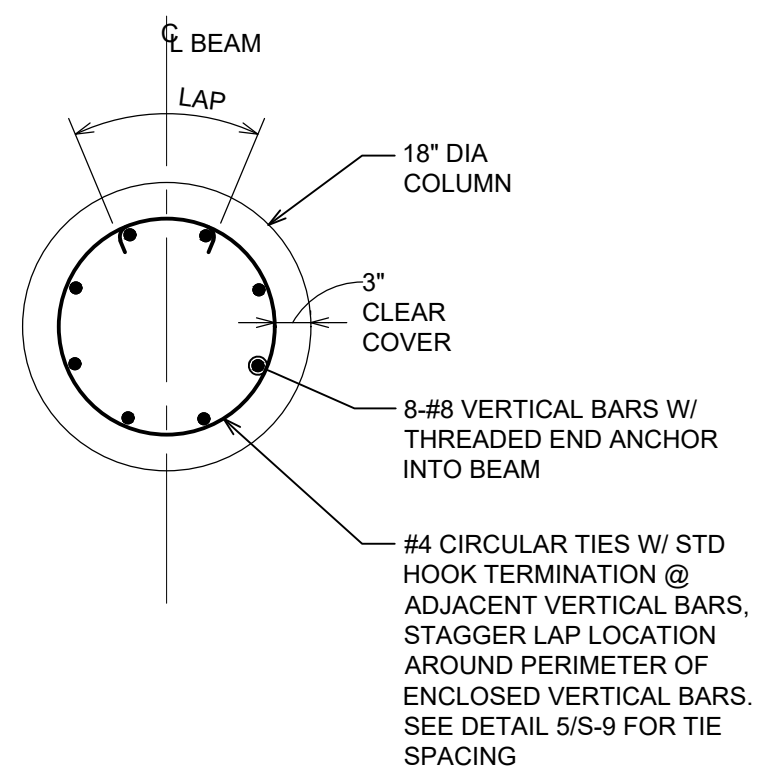
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CITY OF ALPENA
WATER PRODUCTION PLANT
CLEARWELL REPLACEMENT & INFRASTRUCTURE IMPROVEMENTS

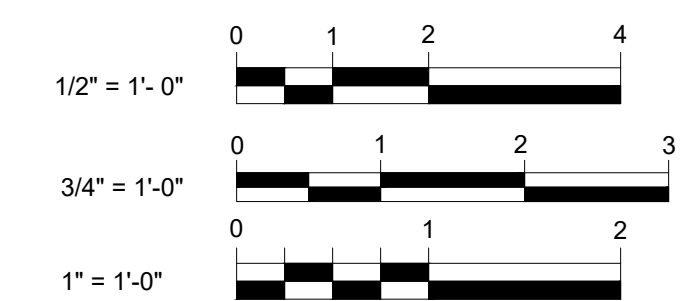
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STRUCTURAL
SECTIONS AND DETAILS

HRC JOB NO.	SCALE
20220751	AS NOTED
DATE	SHEET NO.
DECEMBER 2023	S-9 OF



- SECTIONS AND DETAILS KEY NOTES**
- JOINT WATERSTOP SHALL BE SIKAGREENSTREAK MODEL 786.
 - CONSTRUCTION JOINT WATERSTOP SHALL BE SIKAGREENSTREAK HYDROTITE CJ-1030-M WATERSTOP. INSTALL WATERSTOP IN COMPLIANCE WITH THE MANUFACTURERS REQUIREMENTS.
 - WATERSTOP CONSISTING OF CRYSTALLINE WATERPROOFING SLURRY COAT AT A RATE OF 1.5 LB/SYD OVER THE WIDTH OF THE CONSTRUCTION JOINT BETWEEN THE SLAB AND THE BASE OF THE WALL. AFTER THE WALL IS CAST APPLY A CRYSTALLINE WATERPROOFING SLURRY COAT AT A RATE OF 1.5 LB/SYD ON THE INSIDE FACE OF THE CONSTRUCTION JOINT. EXTENDING 6 INCHES ABOVE AND BELOW THE JOINT. CRYSTALLINE WATERPROOFING SLURRY SHALL BE XYPEX CONCENTRATE OR PRE-APPROVED SUBSTITUTE.
 - ELASTOMERIC JOINT SEALANT SHALL BE SIKAFLEX-1A, LIMESTONE COLOR, INSTALL IN COMPLIANCE WITH MANUFACTURER'S APPLICATION INSTRUCTIONS AND LIMITATIONS.



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1300 S STATE AVE, ALPENA, MI 49707
ALPENA COUNTY MICHIGAN

STRUCTURAL
SECTIONS AND DETAILS

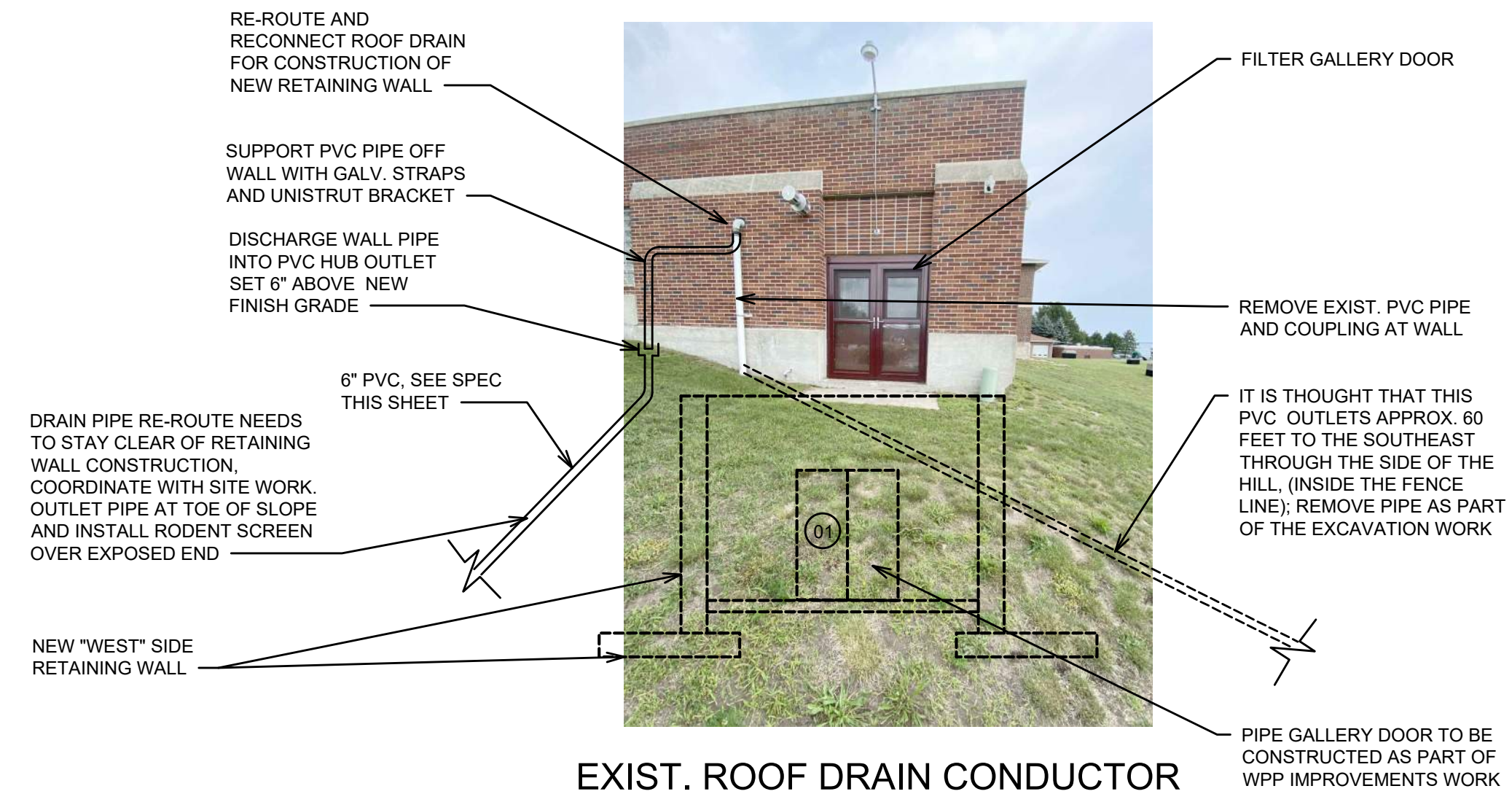
HRC JOB NO.	SCALE
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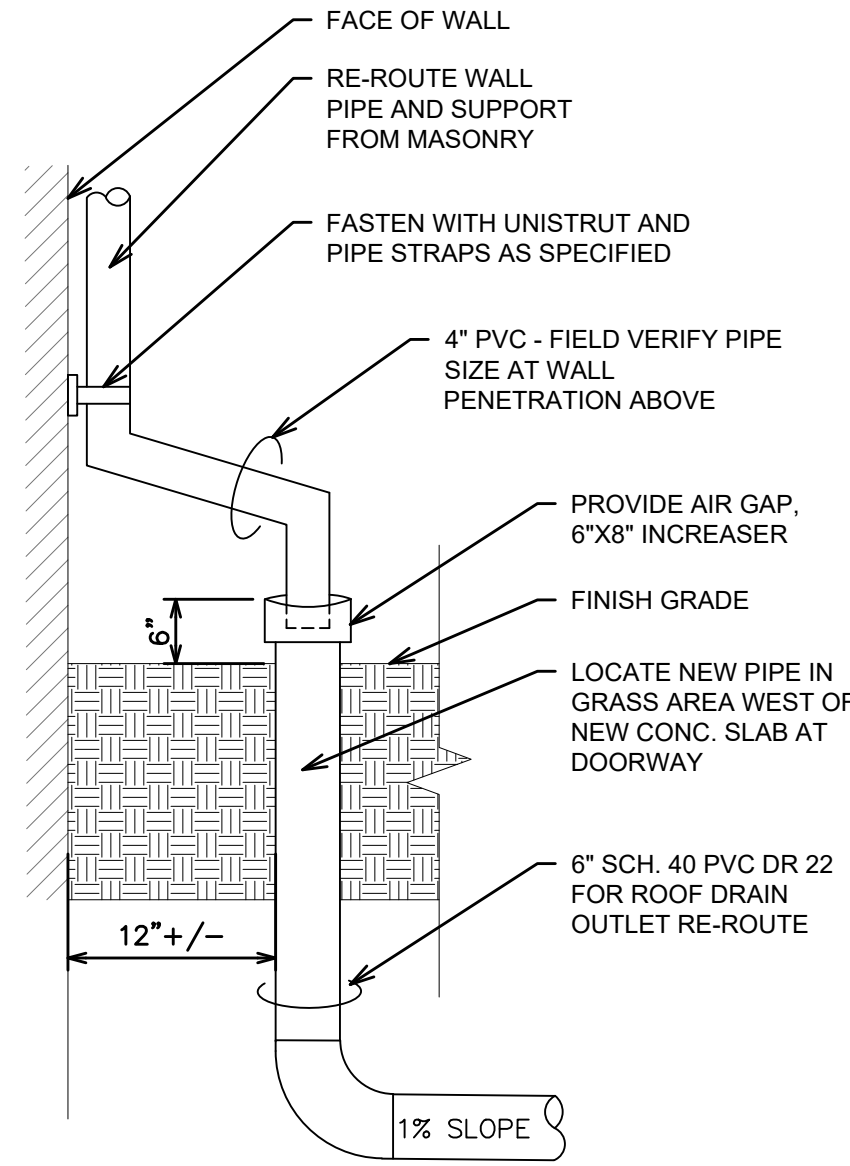
CORE HOLE AND REPIPE THROUGH SOUTH WALL AT SAME ELEVATION, SEE NOTES THIS SHEET; PROVIDE REDUCER FITTINGS AS NECESSARY TO ACCOMMODATE NEW 3/4" PIPING

RELOCATE AND REPIPE EXTERIOR HOSE BIBB FROM EAST WALL TO SOUTH WALL BECAUSE, ONCE GRADING IS COMPLETED AROUND THE NEW CLEARWELL, THE HOSE BIBB WILL BE TOO HIGH ABOVE THE GROUND TO ACCESS

RELOCATE EXTERIOR HOSE BIBB, EAST WALL



EXIST. ROOF DRAIN CONDUCTOR RELOCATION - SOUTH ELEVATION (WITH NEW DRIVE & MANDOOK 01)



EXIST. ROOF CONDUCTOR RE-CONNECTION DETAIL NOT TO SCALE

MISCELLANEOUS PLUMBING WORK:

MISCELLANEOUS PLUMBING WORK IS REQUIRED FOR THE PROJECT AS FOLLOWS:

HOSE BIBB RELOCATION

- 1. THE HOSE BIBB PLUMBING ON THE EAST SIDE OF THE FILTER BUILDING NEEDS TO BE RELOCATED AND A NEW FROST FREE HOSE BIBB INSTALLED. HOSE BIBB SHALL BE ZURN Z1321-CXL OR APPROVED EQUAL WITH ANGLED HOSE CONNECTION AND WALL CLAMP ACCESSORIES. FACE PLATE SHALL BE STAINLESS STEEL HOSE BIBB SHALL BE AUTOMATIC DRAINING AND FEATURE INTEGRAL BACKFLOW PREVENTION WITH ANTI-SIPHON TECHNOLOGY.
2. THE EXACT THICKNESS OF THE EXTERIOR WALL AT THE NEW LOCATION IS NOT KNOWN. SEE 1965 REFERENCE DRAWING SHEETS 3 OF 33 AND 4 OF 33. WALL THICKNESS IS CALLED OUT AS 17.5 INCHES WITH GLAZED CMU ON THE INTERIOR AND CONCRETE ON THE EXTERIOR. THERE IS A CAVITY SPACE BETWEEN THE MATERIALS. MEASURE WALL THICKNESS PRIOR TO ORDERING
3. ON INTERIOR, CUT WALL TO REMOVE SMALL PORTION OF GLAZED CMU UNIT. ON EXTERIOR, SAWCUT CONCRETE WALL TO CREATE RECESS FOR HOSE BIBB HOUSING. DO NOT CUT WALL OPENING LARGER THAN FACE PLATE ON HOSE BIBB. COORDINATE SIZE OF HOLE WITH REVIEWED SHOP DRAWINGS BEFORE CUTTING WALL. CORE / DRILL THE REMAINING THICKNESS OF CONCRETE TO PROVIDE HOLE FOR NEW PIPING THROUGH WALL.
4. NEW PIPE SHALL BE TYPE L COPPER PIPE. PROVIDE REDUCER/FITTINGS AS NECESSARY TO ADAPT EXISTING PIPE TO NEW CONNECTION.
5. ON INTERIOR FACE OF WALL, PROVIDE RIGID METAL WALL ESCUTCHEON TRIM PLATE TO COVER HOLE CUT THROUGH GLAZED CMU.

ROOF DRAIN CONDUCTOR PIPE RELOCATION

THE CURRENT DRAIN PIPE CONNECTION INTERFERES WITH THE CONSTRUCTION OF THE NEW "WEST SIDE" RETAINING WALL AT THE CORNER OF THE FILTER BUILDING.

RE-PIPE THE OUTLET TO THE SOUTHWEST AS SHOWN TO ELIMINATE CONFLICT WITH NEW RETAINING WALL CONSTRUCTION.

USE SAME DIAMETER PIPE TO MATCH EXISTING WHERE LEAVING BUILDING. FIELD VERIFY EXISTING PIPE DIAMETER.

AT GRADE, DISCHARGE WALL PIPE INTO PVC HUB OUTLET AS SHOWN IN DETAIL.

PVC DRAIN PIPE MATERIALS SHALL BE SCH. 40, DR 22 (PS 200) PER MICHIGAN PLUMBING CODE. OFFSET PIPE AND SUPPORT AT WALL WITH GALV. UNISTRUT AND GALV. PIPE STRAPS, MIN. 2 SUPPORTS.

PROVIDE GALV. METAL OR ALUMINUM MESH RODENT SCREEN SCREW FASTENED INTO END OF EXPOSED END OF PVC DRAIN PIPE.

FIELD LOCATE MOST SUITABLE ROUTE FOR PIPING; LOCATE TO MISS NEW CONCRETE SLAB AREA AT EXISTING FILTER GALLERY DOOR.

NEW SAMPLE LINE FROM CHLORINE CONTACT CHAMBER TO LABORATORY SINK
FIELD LOCATE THE MOST SUITABLE ROUTE FOR PIPING; LOCATE EXISTING SINK AT THE LABORATORY AND CONNECT NEW 1/2 INCH DIA. LINE FROM NEW SAMPLE POINT / SAMPLE PUMP TO BE ERECTED IN NEW CHLORINE CONTACT CHAMBER.



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Table with columns for DATE, ADDITIONS AND/OR REVISIONS, DESIGNED, DRAWN, CHECKED, APPROVED.

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MISCELLANEOUS PLUMBING

Table with columns for HRC JOB NO., DATE, SCALE, SHEET NO., OF.



PHOTO P-1

- RELOCATE HACH TURBIDITY SENSORS TU5300SC (AT110) & CHLORINE ANALYZER (AT210) WITH AUXILIARY INSTRUMENTS LOCATED AT THE SOUTH WALL TO EAST WALL OF THE PIPE GALLERY WITH ALL ELECTRICAL & CONDUIT EQUIPMENTS.
- THE NEW WATER LINE ALIGNMENT FOR THESE INSTRUMENTS TO BE COORDINATED WITH THE NEW ACCESS DOOR OPENING.
- RELOCATION AND SCADA PROGRAMMING TO BE COMPLETED BY TEMPEST ENTERPRISES.
- CONTRACTOR TO COMPLETE AND COORDINATE REROUTING OF ELECTRICAL/INSTRUMENTATION CONDUIT AND OTHER ANCILLARY EQUIPMENT.

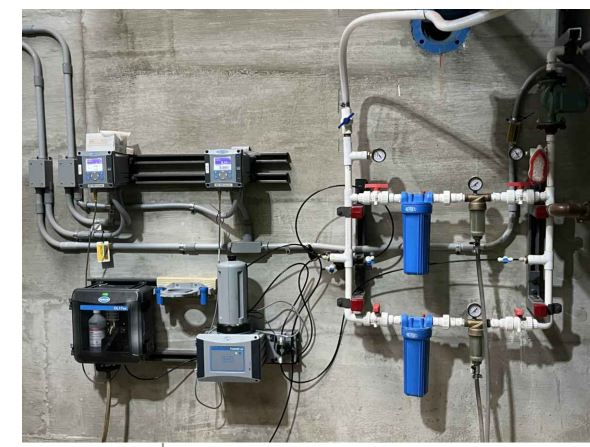


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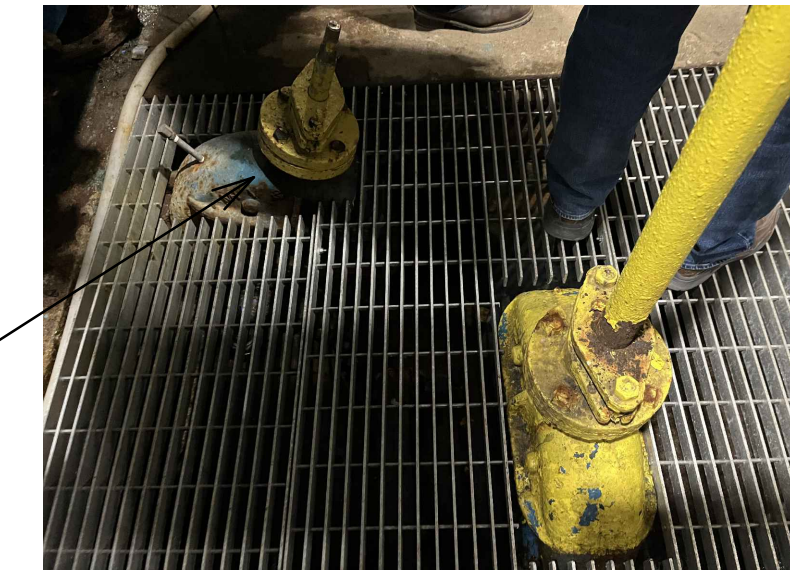


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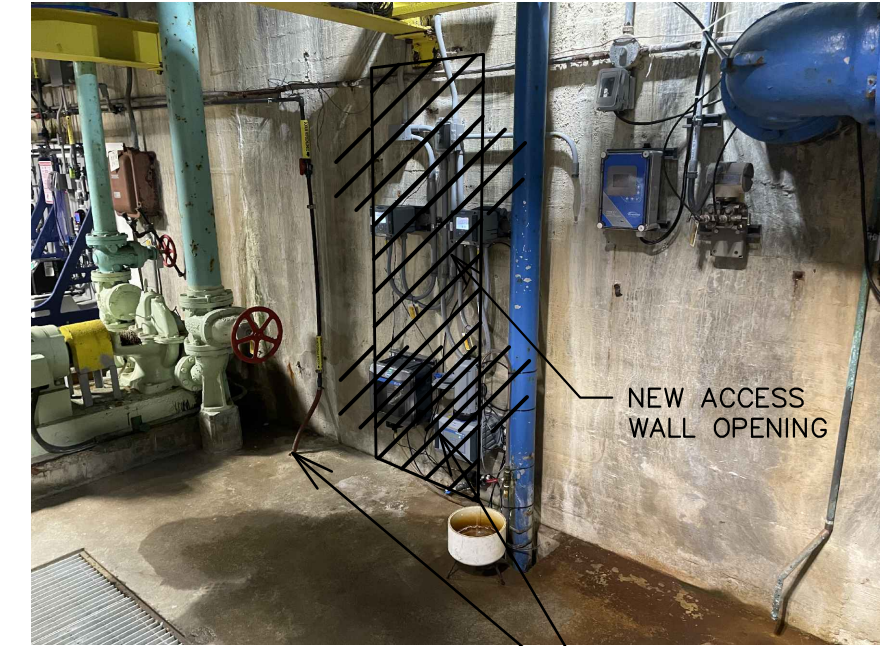
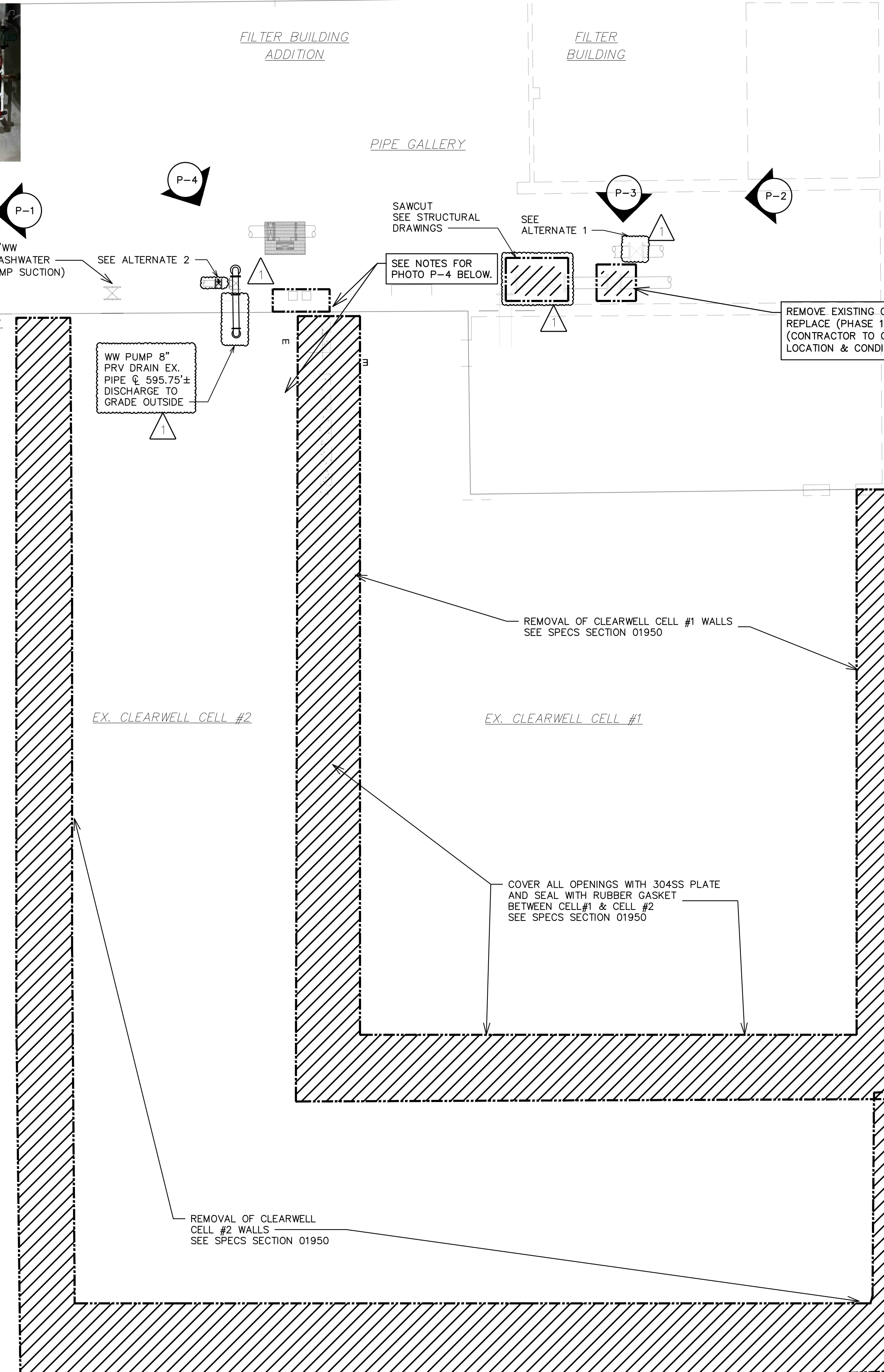
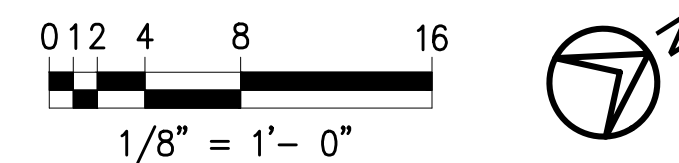


PHOTO P-4

- SEE STRUCTURAL DRAWINGS FOR NEW ACCESS OPENING.
- RELOCATE EXISTING NaOCl INJECTION LINE TO TWO NEW INJECTION POINTS LOCATED ON NEW 24" COMBINED FILTERED WATER LINE.
- RELOCATE HACH TURBIDITY SENSORS TU5300SC (AT100) & CHLORINE ANALYZER (AT200) WITH AUXILIARY INSTRUMENTS LOCATED AT THE EAST WALL TO NEW CHLORINE CONTACT CHAMBER WALL WITH ALL ELECTRICAL & CONDUIT EQUIPMENTS.
- THE NEW WATER LINE ALIGNMENT FOR THESE INSTRUMENTS TO BE COORDINATED WITH THE NEW ACCESS OPENING.
- RELOCATION AND SCADA PROGRAMMING TO BE COMPLETED BY TEMPEST ENTERPRISES.
- CONTRACTOR TO COMPLETE AND COORDINATE REROUTING OF ELECTRICAL/INSTRUMENTATION CONDUIT AND OTHER ANCILLARY EQUIPMENT.



PROCESS REMOVALS, DEMOLITION PHASING LAYOUT



DEMOLITION GENERAL NOTES

1. SEE SECTION 01950 'SEQUENCE AND SPECIAL CONDITIONS' FOR WPP PHASING AND SHUT DOWN REQUIREMENTS
2. EXISTING PIPING, EQUIPMENT, INSTRUMENTATION, AND OTHER APPURTENANCES ARE NOT SHOWN. FIELD VERIFY PRIOR TO THE CONSTRUCTION/DEMOLITION ACTIVITIES.

NOTE:
 BACKGROUND DRAWINGS/DETAILS, EXISTING PIPING AND UTILITIES SHOWN HERE ARE FROM A PRIOR PROJECTS AND DO NOT NECESSARILY DEPICT AS-BUILT CONDITIONS. THESE ARE SHOWN FOR REFERENCE ONLY FOR THE PURPOSE OF DEPICTING NEW WORK. CONTRACTOR IS RESPONSIBLE TO CHECK, CLARIFY & INFORM THE ENGINEER & OWNER AND REPRESENTATIVES BEFORE TAKE ANY ACTION.



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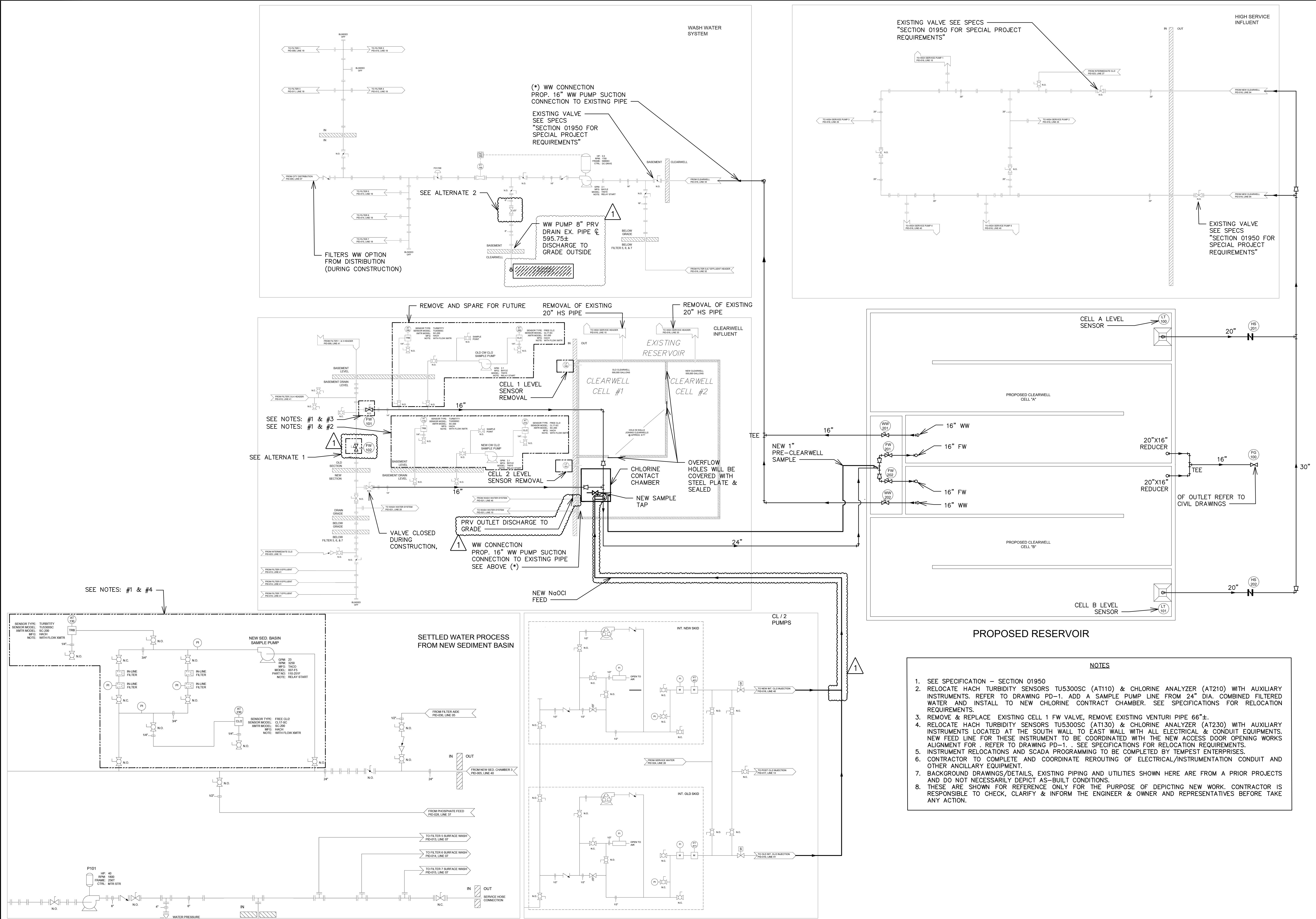
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 ALPENA COUNTY MICHIGAN

PROCESS REMOVALS & PHASING LAYOUT

HRC JOB NO. 20220751	SCALE NTS
DATE DECEMBER 2023	SHEET NO. PD-1



- NOTES**
- SEE SPECIFICATION - SECTION 01950
 - RELOCATE HACH TURBIDITY SENSORS TU5300SC (AT110) & CHLORINE ANALYZER (AT210) WITH AUXILIARY INSTRUMENTS. REFER TO DRAWING PD-1. ADD A SAMPLE PUMP LINE FROM 24" DIA. COMBINED FILTERED WATER AND INSTALL TO NEW CHLORINE CONTRACT CHAMBER. SEE SPECIFICATIONS FOR RELOCATION REQUIREMENTS.
 - REMOVE & REPLACE EXISTING CELL 1 FW VALVE, REMOVE EXISTING VENTURI PIPE 66"±.
 - RELOCATE HACH TURBIDITY SENSORS TU5300SC (AT130) & CHLORINE ANALYZER (AT230) WITH AUXILIARY INSTRUMENTS LOCATED AT THE SOUTH WALL TO EAST WALL WITH ALL ELECTRICAL & CONDUIT EQUIPMENTS. NEW FEED LINE FOR THESE INSTRUMENT TO BE COORDINATED WITH THE NEW ACCESS DOOR OPENING WORKS ALIGNMENT FOR - REFER TO DRAWING PD-1. SEE SPECIFICATIONS FOR RELOCATION REQUIREMENTS.
 - INSTRUMENT RELOCATIONS AND SCADA PROGRAMMING TO BE COMPLETED BY TEMPEST ENTERPRISES.
 - CONTRACTOR TO COMPLETE AND COORDINATE REROUTING OF ELECTRICAL/INSTRUMENTATION CONDUIT AND OTHER ANCILLARY EQUIPMENT.
 - BACKGROUND DRAWINGS/DETAILS, EXISTING PIPING AND UTILITIES SHOWN HERE ARE FROM A PRIOR PROJECTS AND DO NOT NECESSARILY DEPICT AS-BUILT CONDITIONS.
 - THESE ARE SHOWN FOR REFERENCE ONLY FOR THE PURPOSE OF DEPICTING NEW WORK. CONTRACTOR IS RESPONSIBLE TO CHECK, CLARIFY & INFORM THE ENGINEER & OWNER AND REPRESENTATIVES BEFORE TAKE ANY ACTION.



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 WEB SITE: www.hrcengr.com

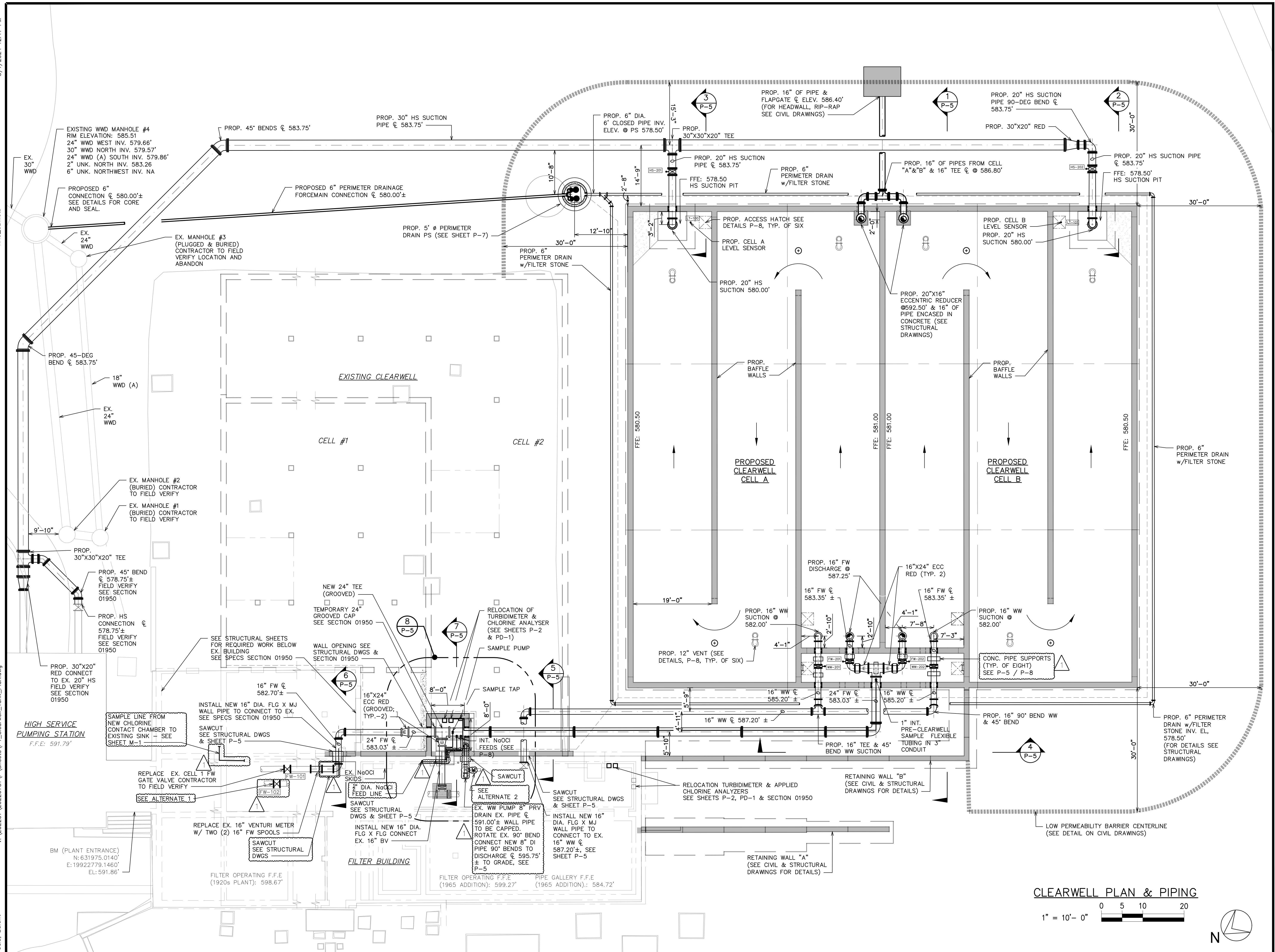
03-01-24	ADDENDUM 1
02-19-24	BIDS
12-29-23	EGL E. SUBMITTAL
12-14-23	OWNER REVIEW
DATE	ADDITIONS AND/OR REVISIONS
DESIGNED	D.I.U./B.U.
DRAWN	B.U.
CHECKED	D.I.U.
APPROVED	T.G.M.

CITY OF ALPENA
WATER PRODUCTION PLANT
CLEARWELL REPLACEMENT & INFRASTRUCTURE IMPROVEMENTS

1300 S STATE AVE., ALPENA, MI 49707
 ALPENA COUNTY MICHIGAN

EXISTING & PROPOSED CLEARWELL PROCESS FLOW DIAGRAM

HRC JOB NO.	SCALE
20220751	NONE
DATE	SHEET NO.
DECEMBER 2023	P-2



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CLEARWELL REPLACEMENT & INFRASTRUCTURE IMPROVEMENTS

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 ALPENA COUNTY MICHIGAN

PROPOSED CLEARWELL PLAN

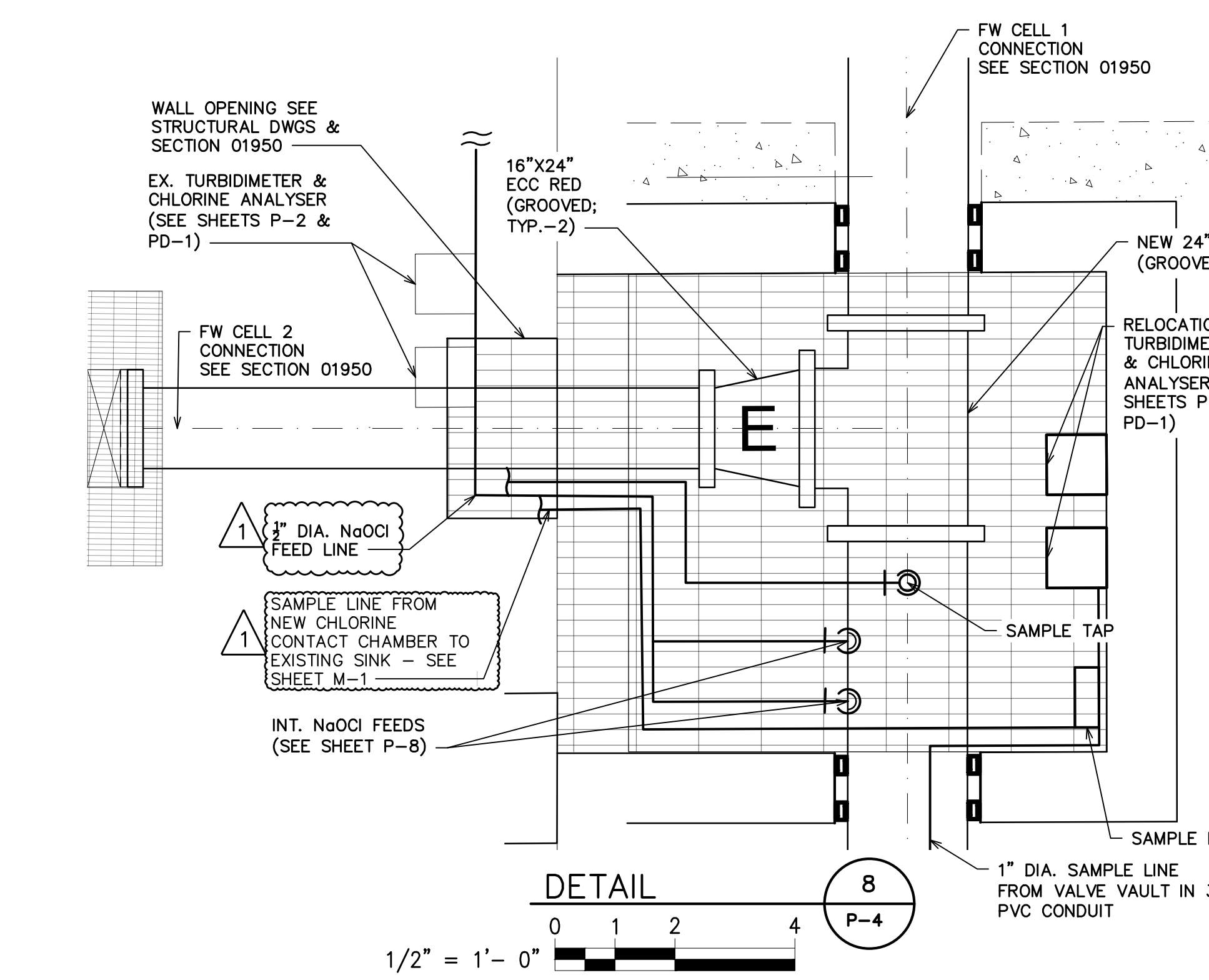
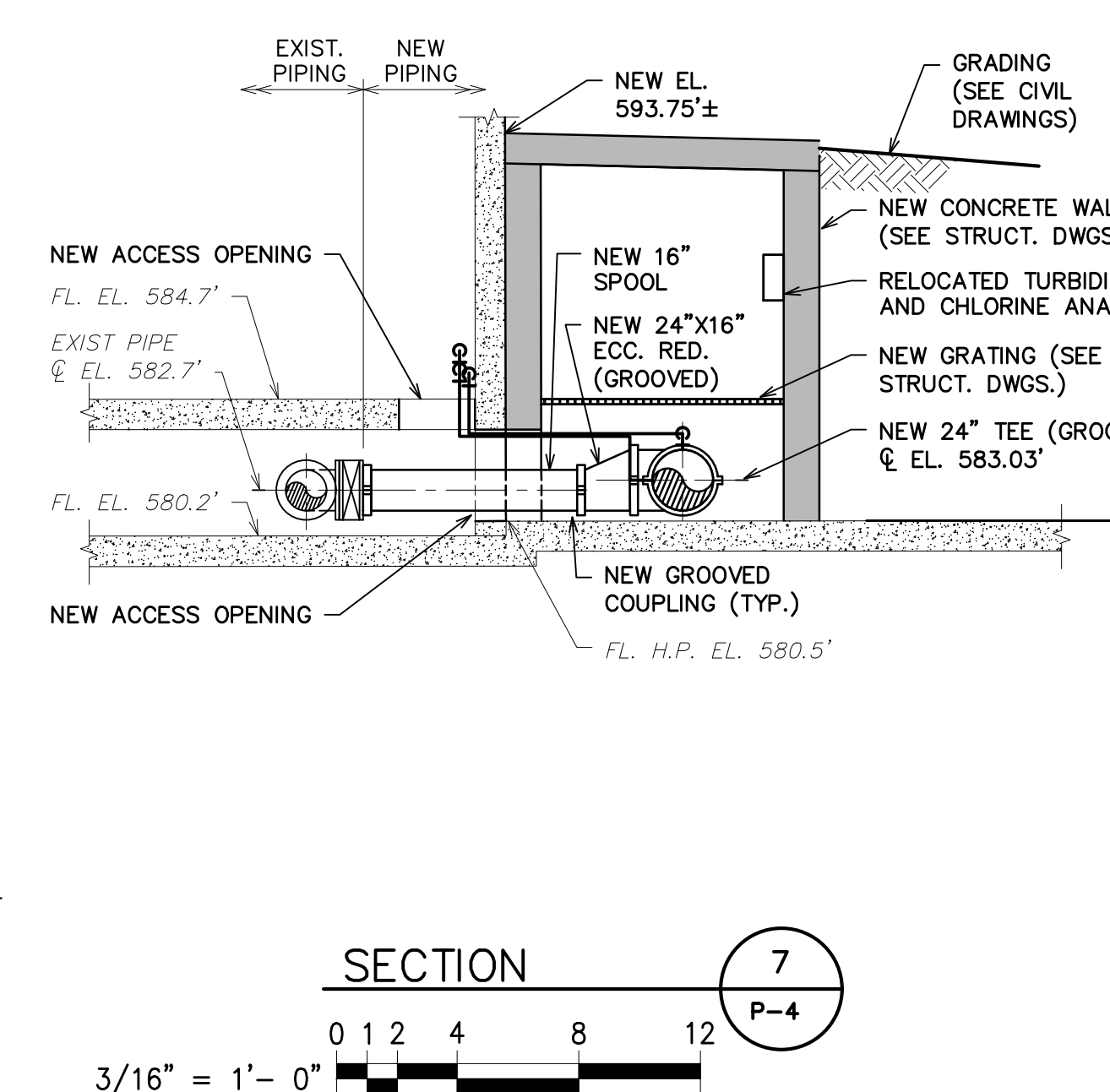
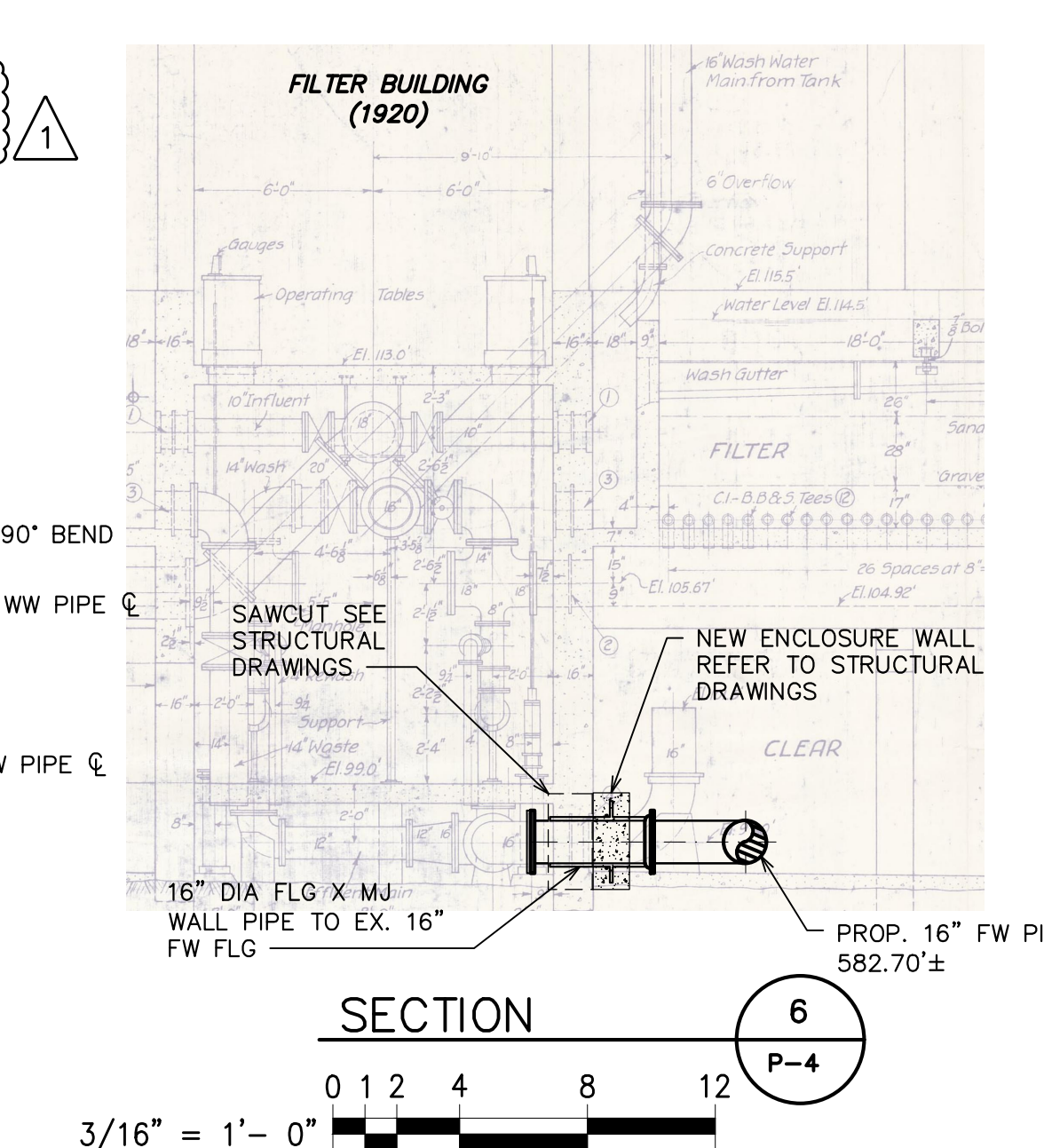
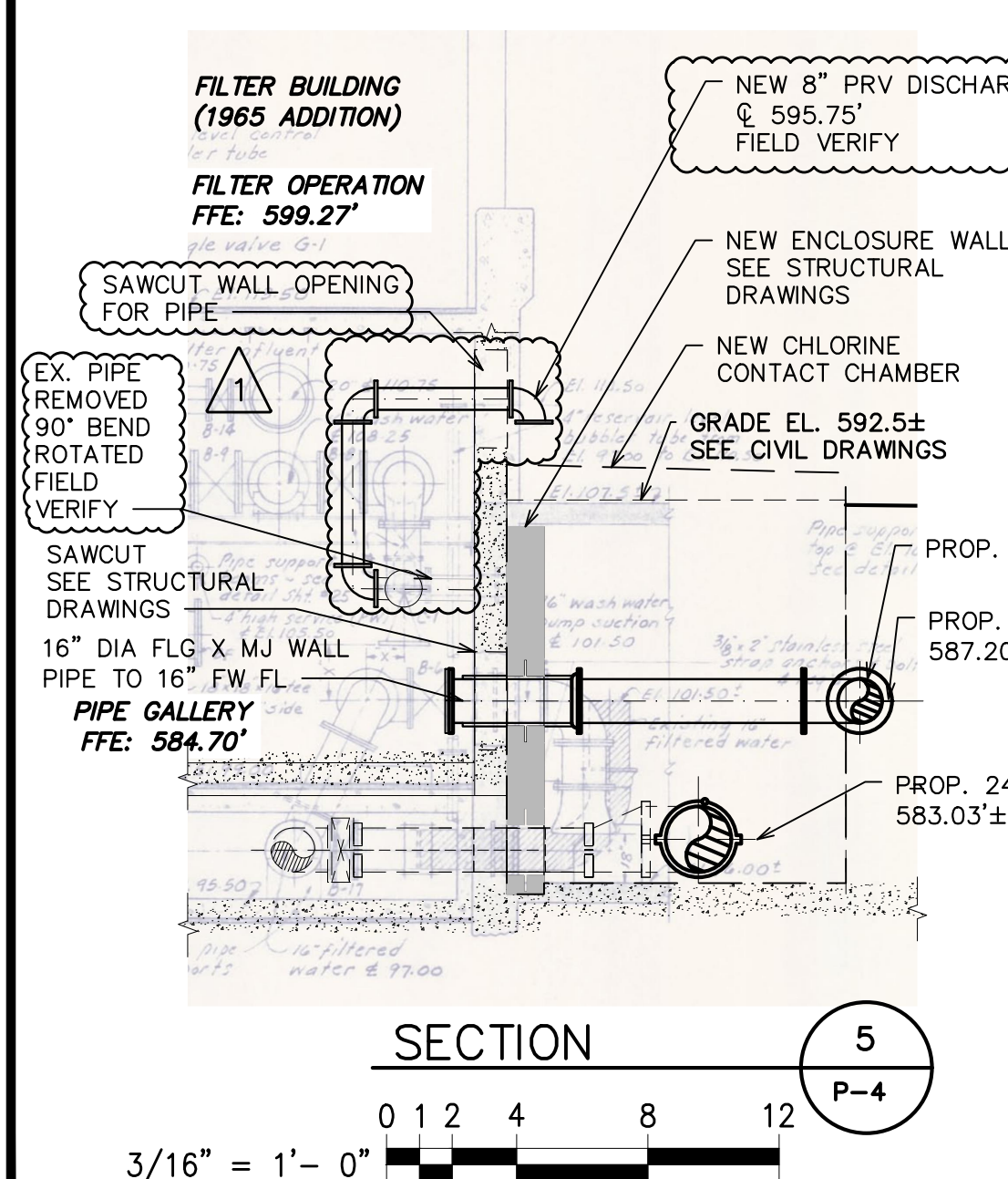
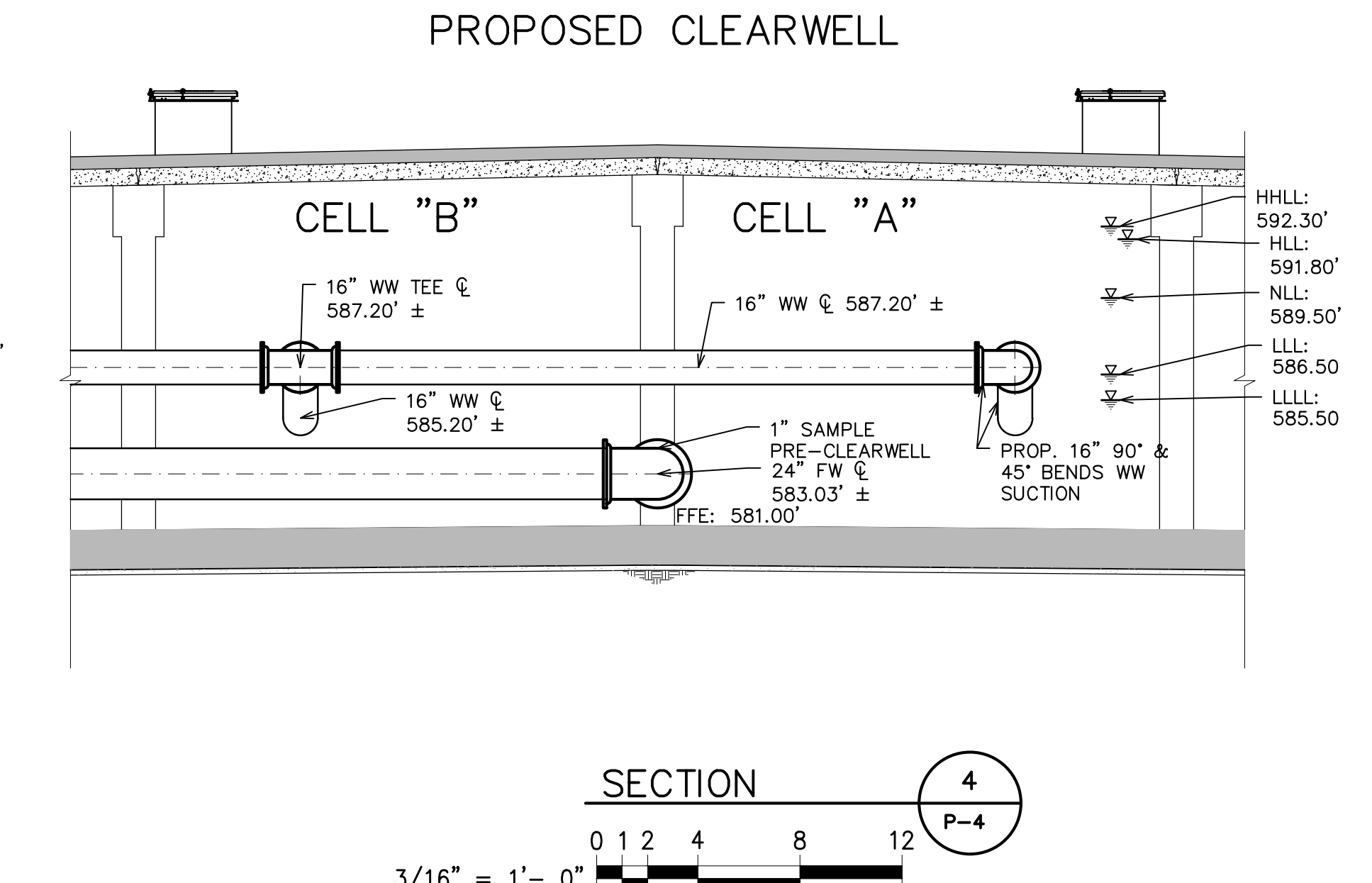
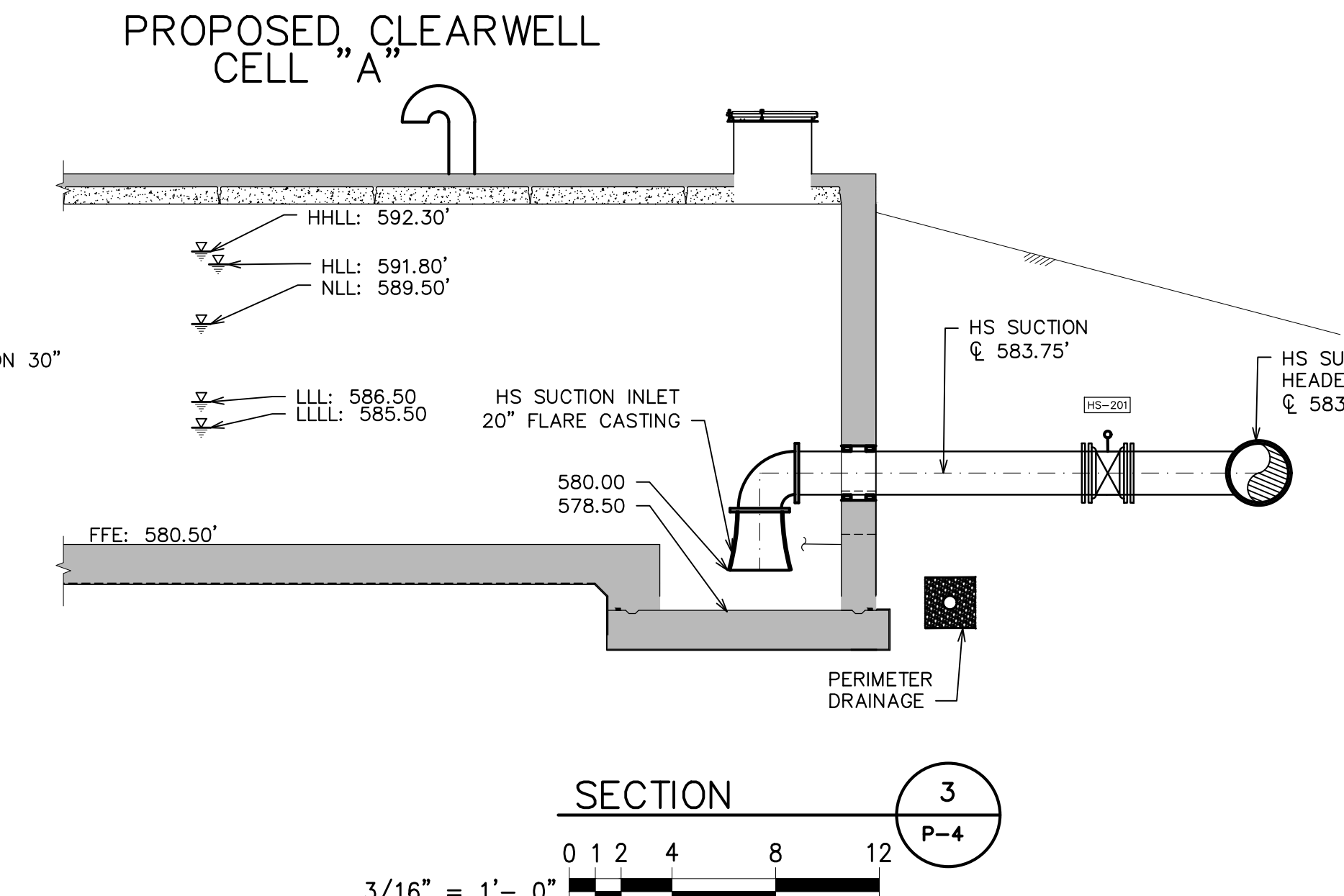
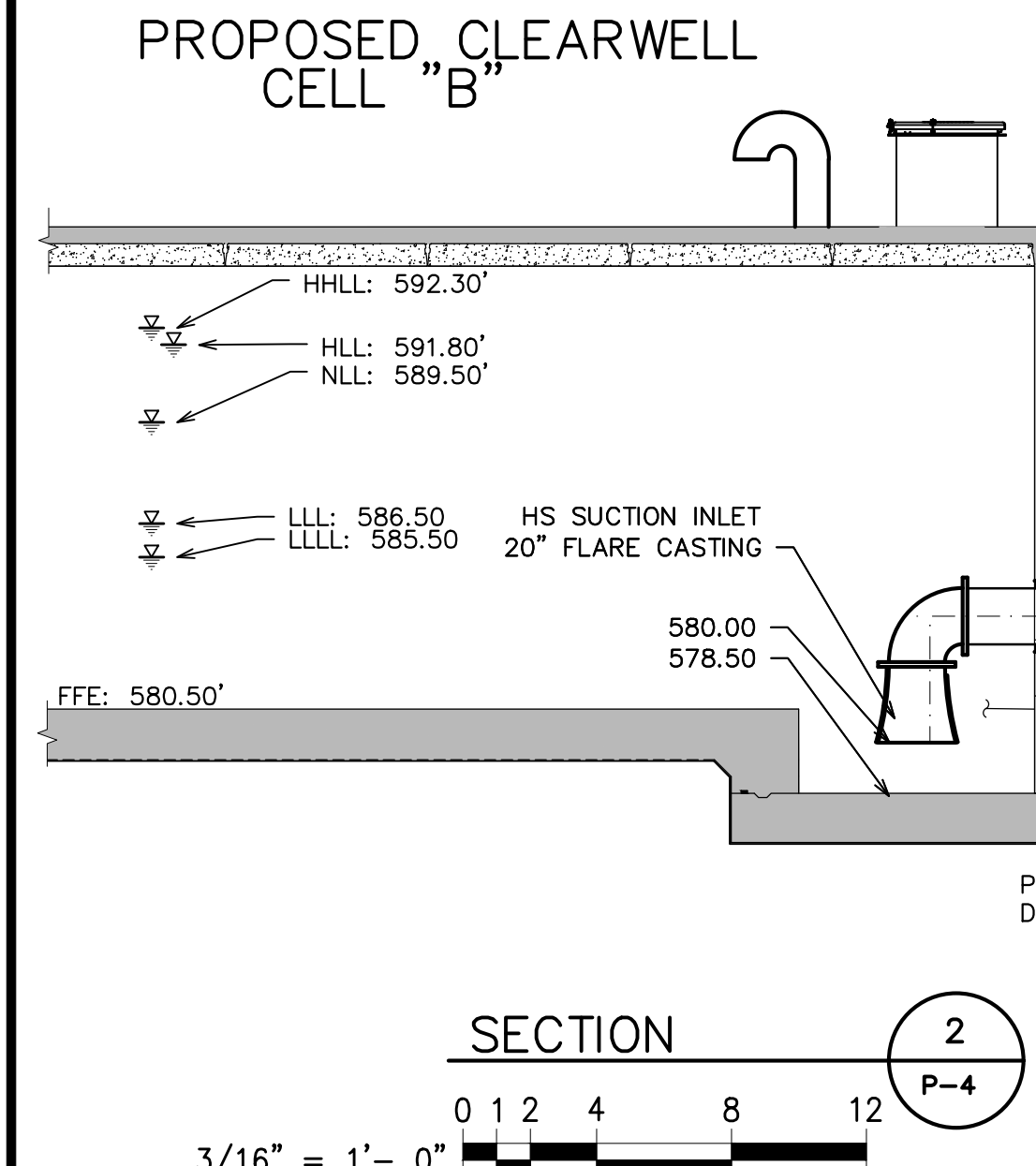
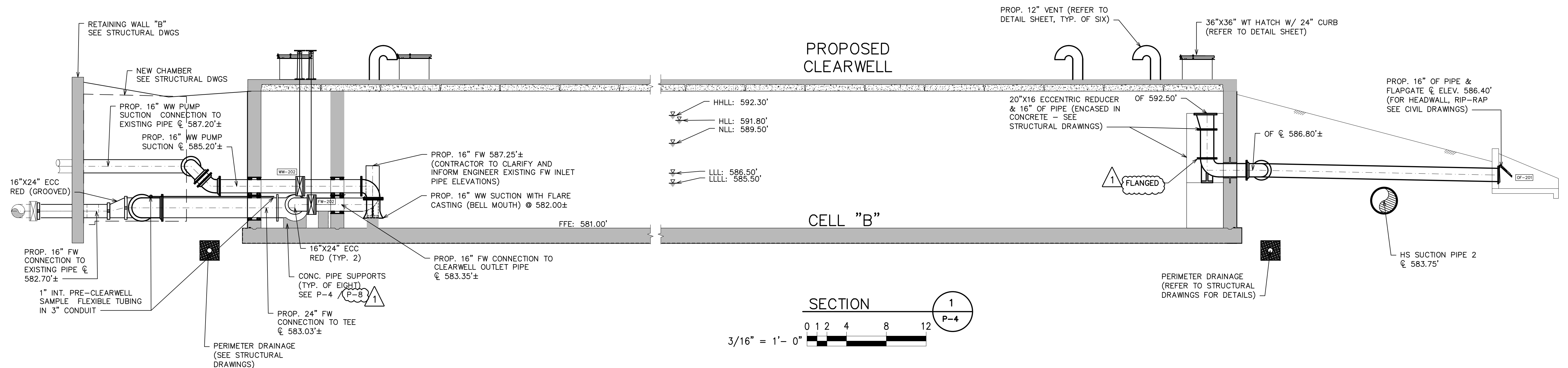
HRC JOB NO. 20220751	SCALE AS NOTED
DATE DECEMBER 2023	SHEET NO. P-4 OF

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Craham, Jane



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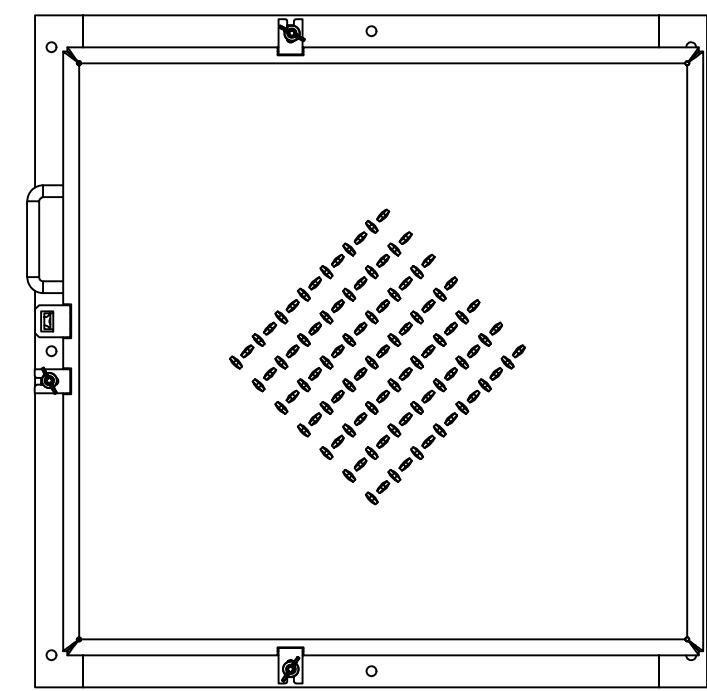
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CITY OF ALPENA
WATER PRODUCTION PLANT CLEARWELL REPLACEMENT & INFRASTRUCTURE IMPROVEMENTS

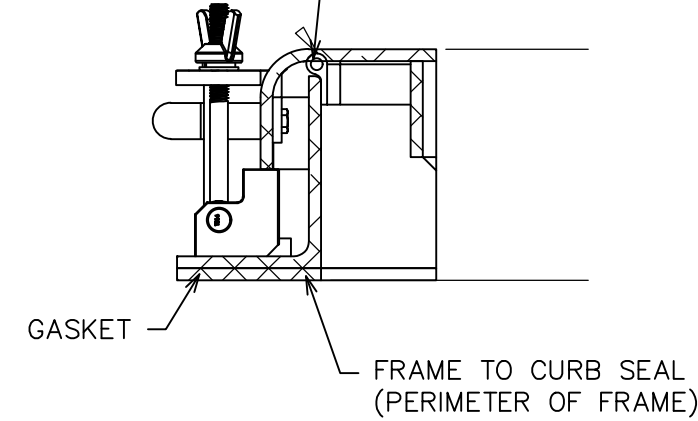
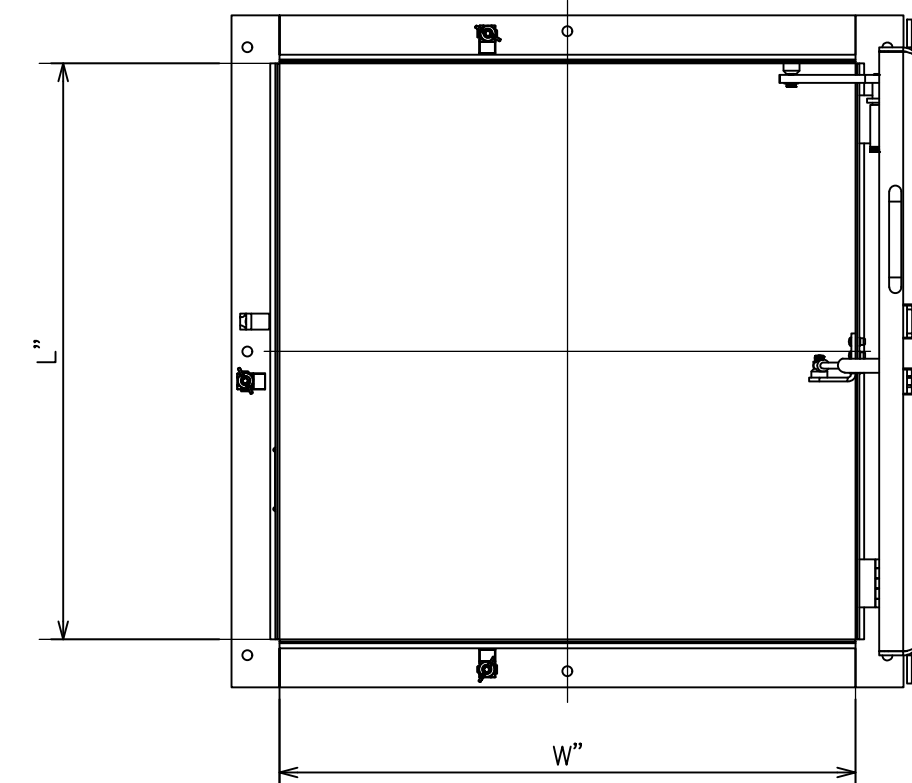
1300 S STATE AVE, ALPENA, MI 49707
ALPENA COUNTY MICHIGAN

PROPOSED CLEARWELL SECTIONS

HRC JOB NO. 20220751	SCALE AS NOTED
DATE DECEMBER 2023	SHEET NO. P-5 OF



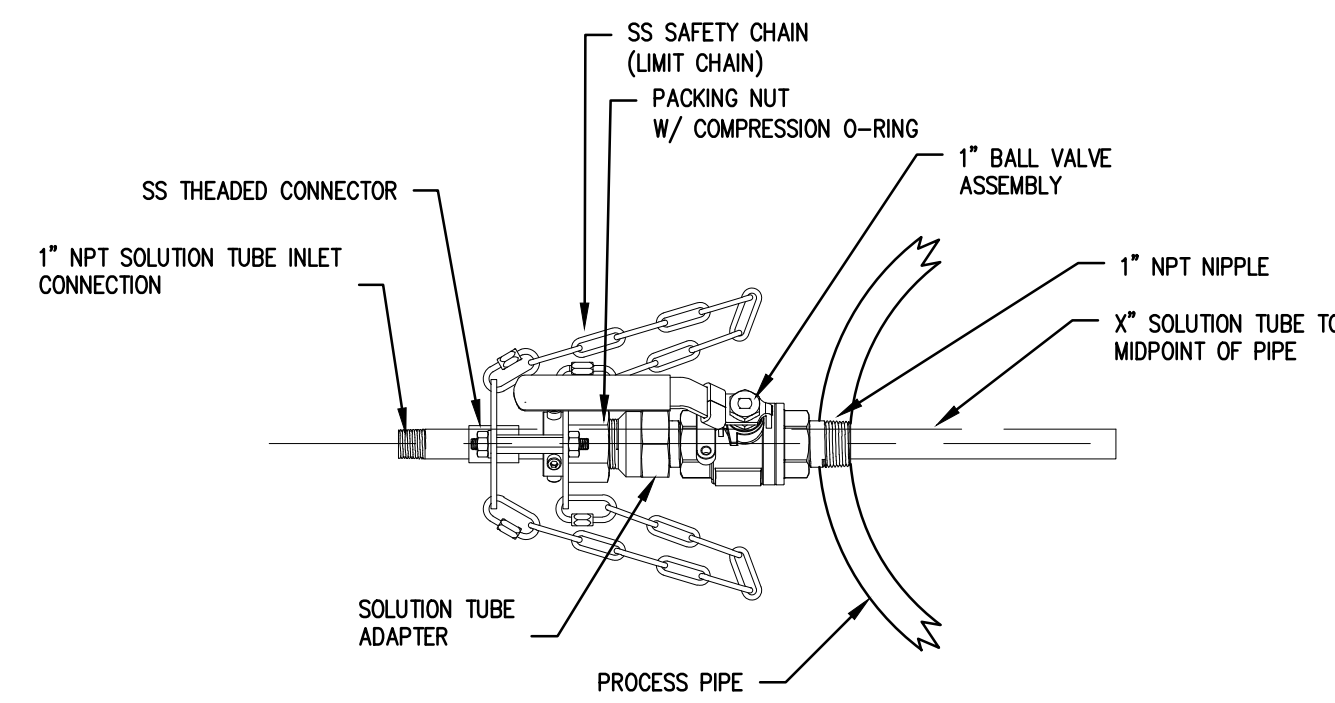
LID SEAL (PERIMETER OF FRAME)



TANK ACCESS HATCH DETAIL

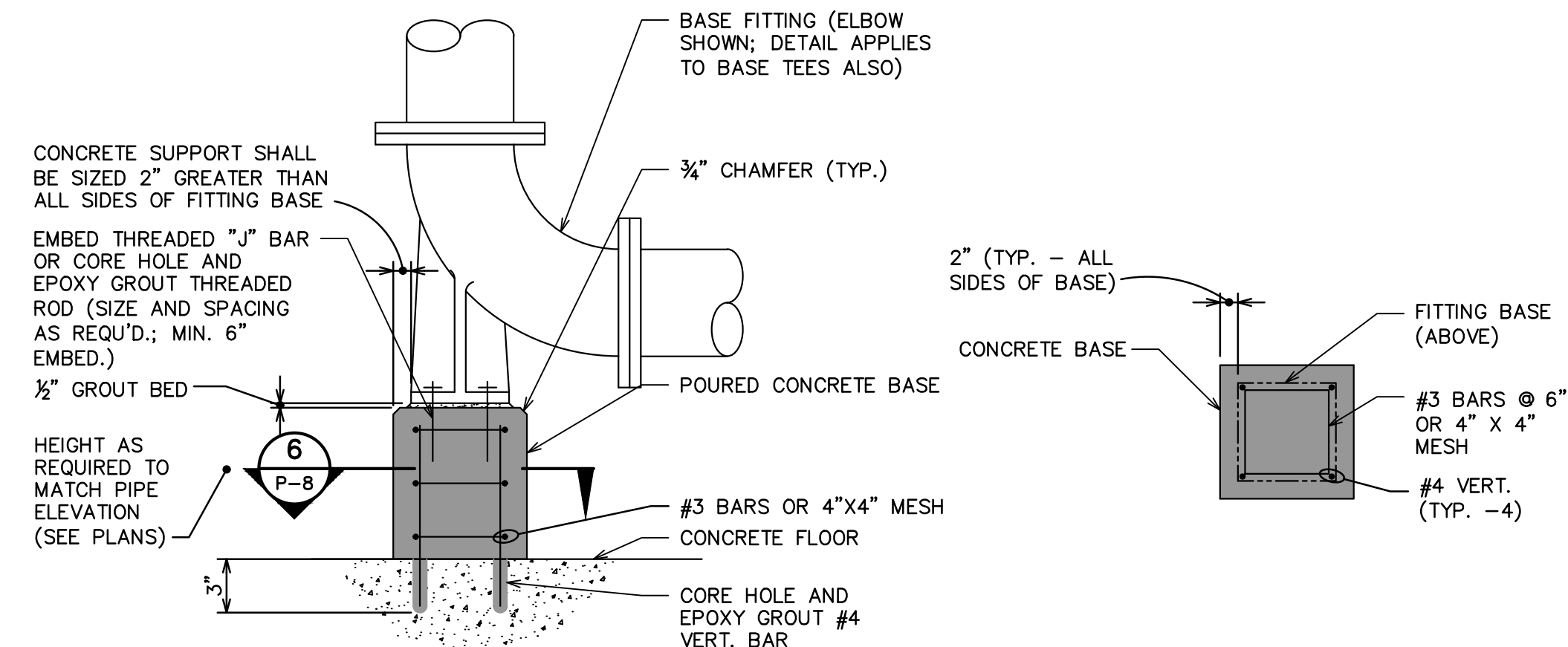
NO SCALE

- NOTES:
- HATCH SHALL BE ALUMINUM VERSA VSH-150 WATER RESERVOIR HATCH OR EQUAL. WEATHER PROOF WITH CONTINUOUS SEAL ON LID TO FRAME NO 1/4" X 3" WIDE FRAME TO CURB SEALS.
 - LID SHALL OVERLAP FRAME A MINIMUM OF 2 INCHES.
 - FRAME SHALL BE A MINIMUM OF 4" ABOVE THE CURB.
 - LID SHALL BE HINGED ON SIDE WITH TAMPER PROOF SCREWS. THERE ARE A MINIMUM OF THREE SWING BOLT HOLD DOWNS TO SECURE THE HATCH FOR WEATHER PROOF SEAL.
 - HATCH SHALL BE DESIGNED FOR 150 PSF LOAD.
 - PROVIDE MIN. EIGHT (8) EXTERIOR ATTACHMENT POINTS FOR 1/2" FASTENER. PROVIDE FULL FACE GASKET OF 3" WIDE CLOSED CELL FOAM EPDM BETWEEN FRAME AND CURB.
 - LID SHALL BE 1/4" 5086 FORMED ALUMINUM TREAD PLATE.
 - ALL FASTENERS AND HARDWARE SHALL BE 316 SS.
 - APPLY MIN. ONE COAT OF BLACK BITUMINOUS PAINT ON THE INSIDE OF FRAME WHERE IT CONTACTS CURBING CONCRETE.



RETRACTABLE INJECTION QUILL DETAIL

NO SCALE



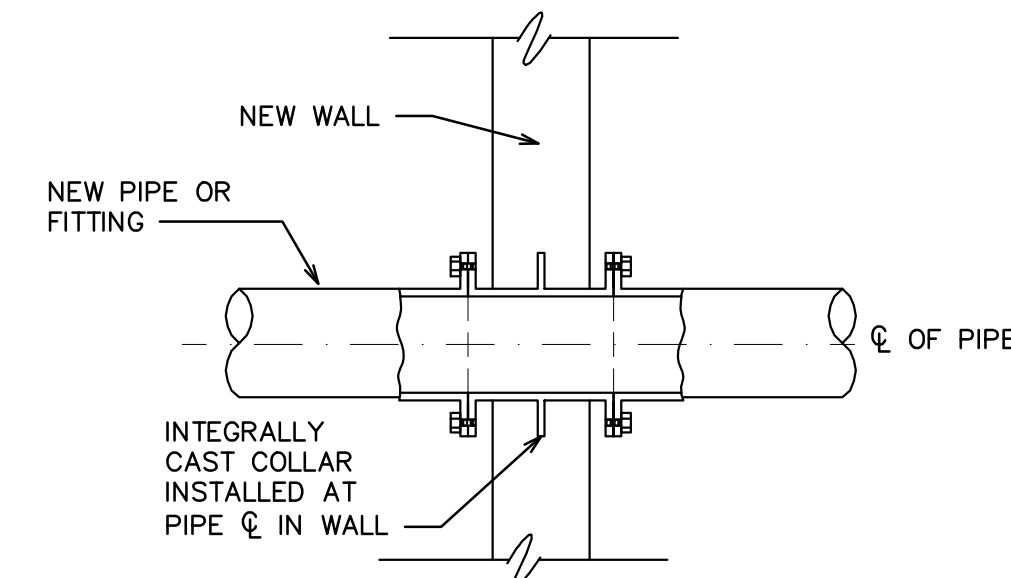
CONCRETE SUPPORT DETAIL FOR PIPE ELBOW AND TEE BASES

NO SCALE

- NOTES:
- SEE STRUCTURAL DRAWINGS FOR OVERFLOW PIPES BASE ELBOW.

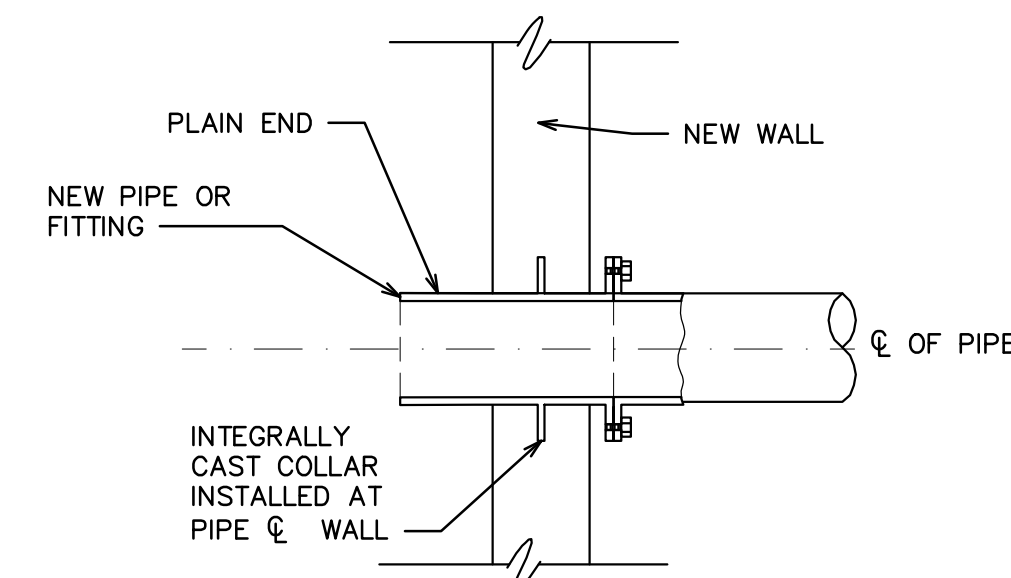
SECTION 1

P-8



FLG X FLG WALL PIPE DETAIL

NO SCALE



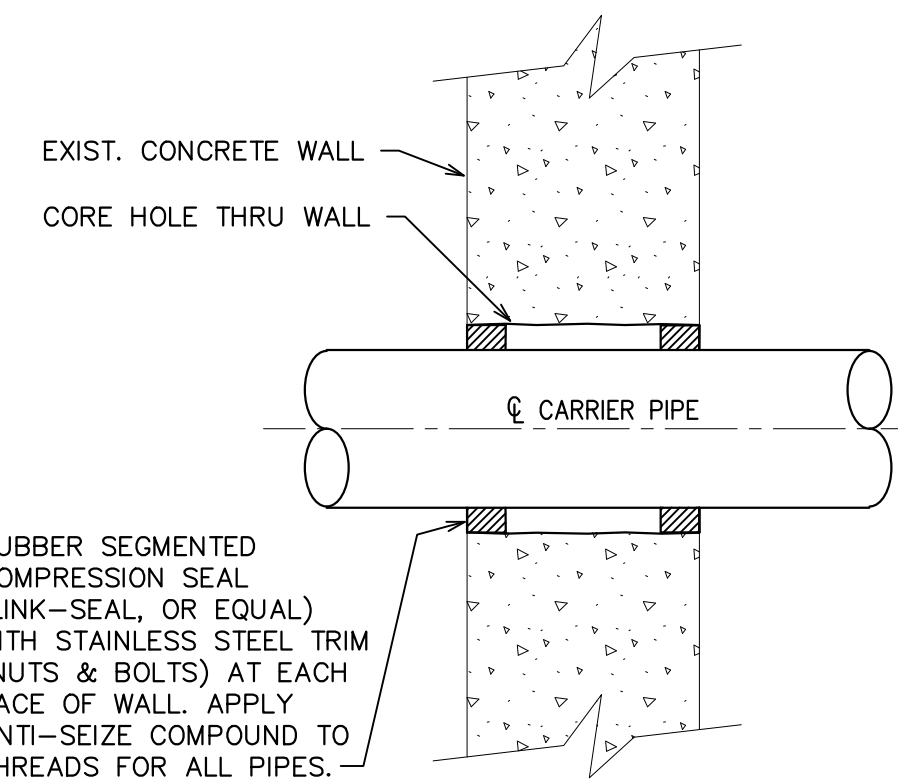
FLG X PE WALL PIPE DETAIL

NO SCALE

NOM. PIPE DIAMETER (IN)	DUCTILE IRON PIPE		STEEL PIPE	
	B DIAMETER (IN)	T _c THICKNESS (IN)	B DIAMETER (IN)	T _c THICKNESS (IN)
4	8.00	0.50	8.75	0.375
6	10.00	0.50	10.81	0.375
8	12.50	0.50	12.88	0.375
10	14.50	0.50	15.75	0.375
12	16.50	0.50	17.19	0.375
14	19.50	0.50	19.25	0.375
16	21.75	0.75	21.38	0.375
18	23.75	0.75	23.38	0.375
20	25.75	0.75	25.50	0.375
24	30.25	0.75	31.63	0.375
30	36.50	1.00	38.00	0.375
36	43.00	1.00	44.19	0.375
42	49.50	1.25	50.50	0.50

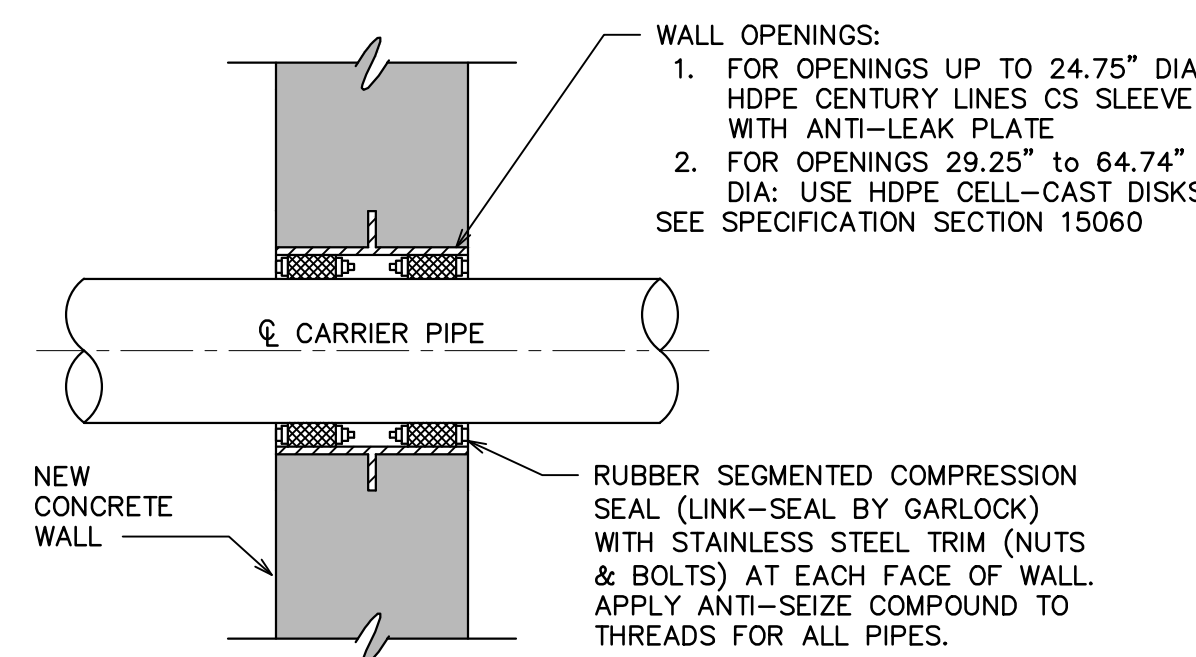
MINIMUM PIPE COLLAR DIMENSIONS

NO SCALE



TYPICAL PIPE/DUCT SLEEVE IN EXISTING CONCRETE WALL

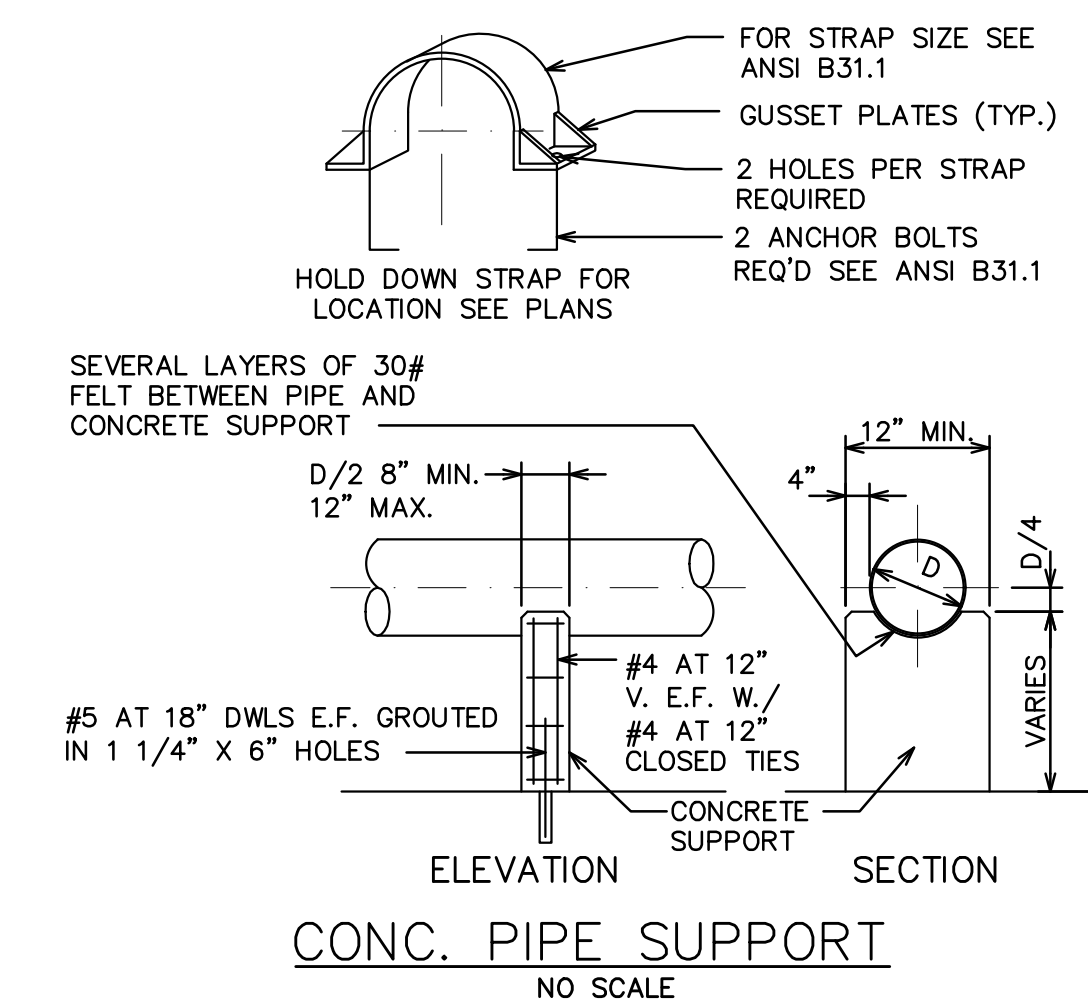
NO SCALE



TYPICAL PIPE/DUCT SLEEVE WITH COMPRESSION SEAL IN NEW CONCRETE WALL

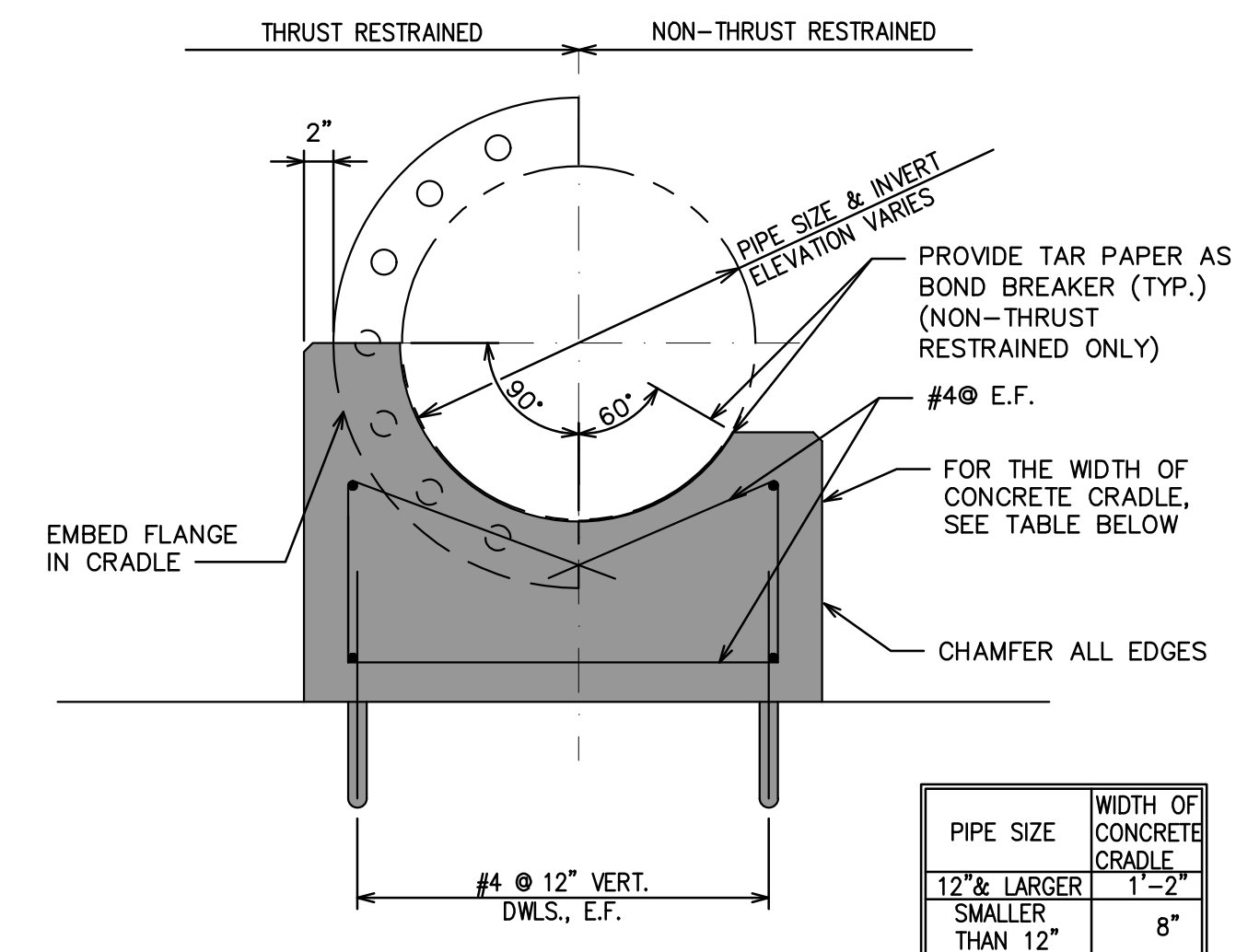
NO SCALE

NOTE: REFERENCE LATEST PUBLISH LINK-SEAL® MODULAR SEAL SELECTION GUIDE



CONC. PIPE SUPPORT

NO SCALE



CONCRETE PIPE CRADLE

NO SCALE

PIPE SIZE	WIDTH OF CONCRETE CRADLE
12" & LARGER	1'-2"
SMALLER THAN 12"	8"

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PHOTO-1

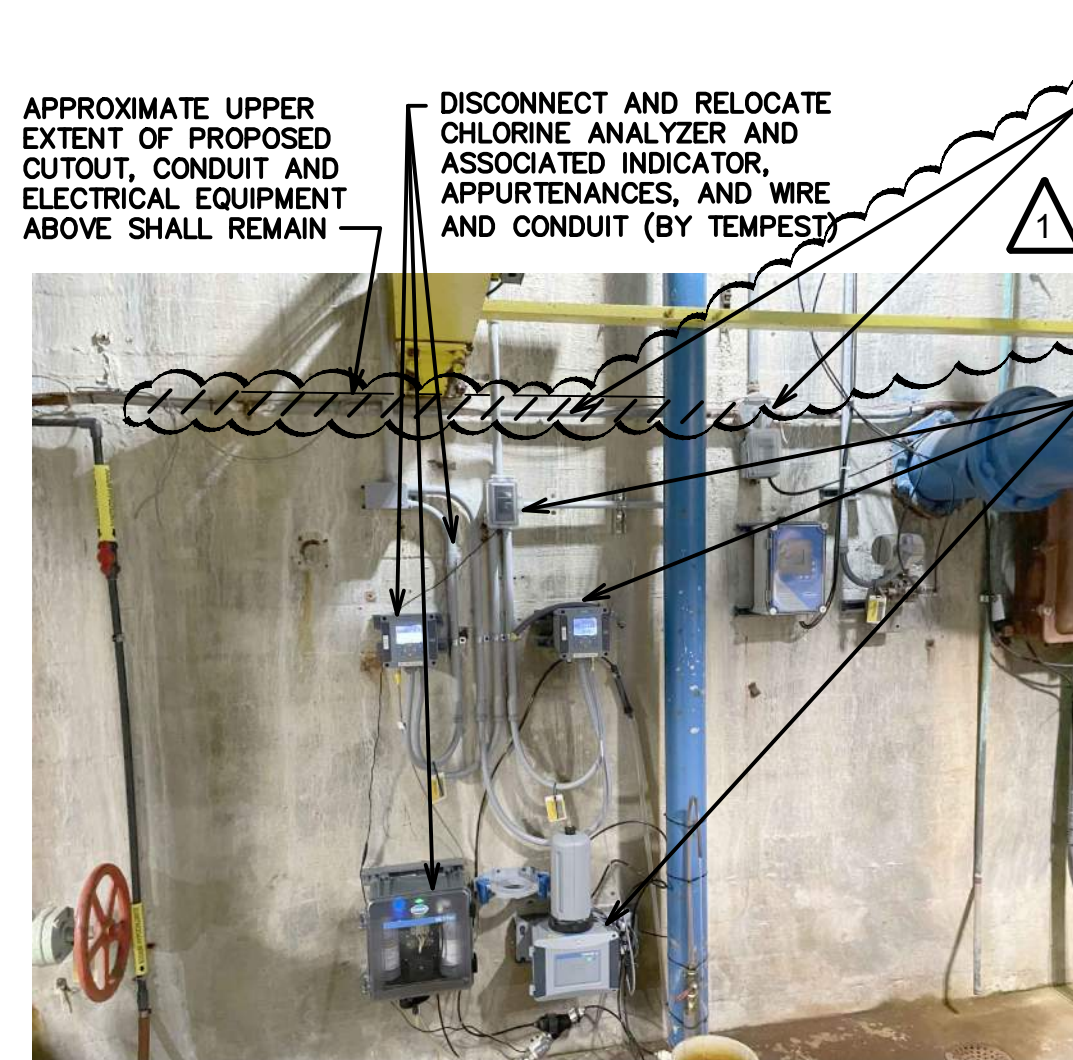


PHOTO-2

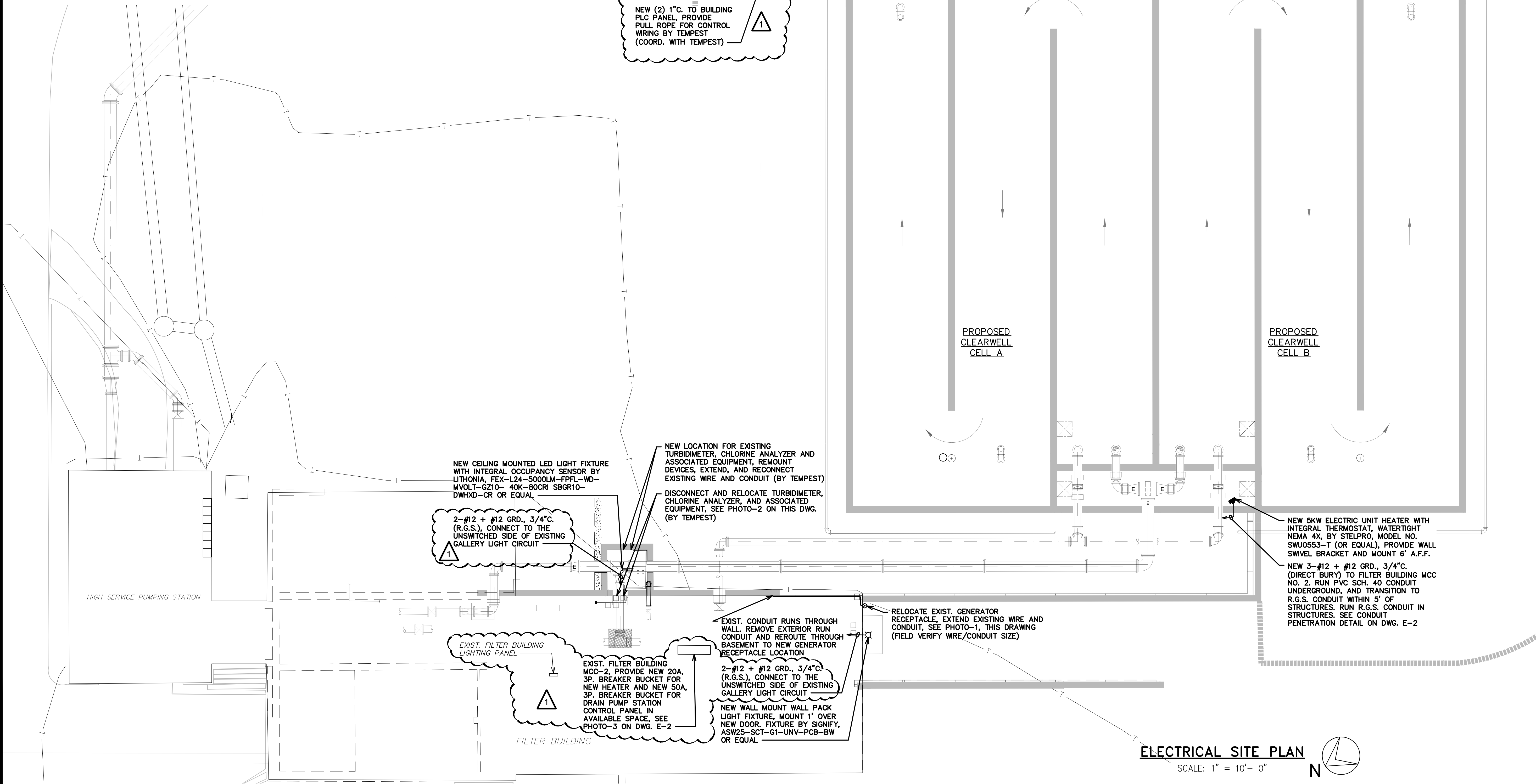
CUT AND REMOVE EXISTING CONDUIT RUNNING BELOW BEAM TO PROVIDE ROOM FOR WALL CUTOUT, RE-ROUTE NEW CONDUIT OVER THE BEAM, EXTEND AND RECONNECT EXISTING CIRCUIT TO EXISTING JUNCTION BOX

DISCONNECT AND RELOCATE CHLORINE ANALYZER AND ASSOCIATED INDICATOR, APPURTENANCES, AND WIRE AND CONDUIT (BY TEMPEST)

NEW PUMP CONTROL PANEL, PANEL, MOUNTING AND WIRE/CONDUIT BY TEMPEST

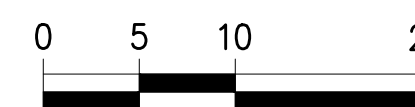
NEW 3-#8 + #10 GRD., 1" C. TO MCC-2

NEW (2) 1" C. TO BUILDING PLC PANEL, PROVIDE PULL ROPE FOR CONTROL WIRING BY TEMPEST (COORD. WITH TEMPEST)



ELECTRICAL SITE PLAN

SCALE: 1" = 10'- 0"



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DRAWN	E.S.M.
CHECKED	M.J.R.
APPROVED	T.G.M.

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ELECTRICAL SITE PLAN

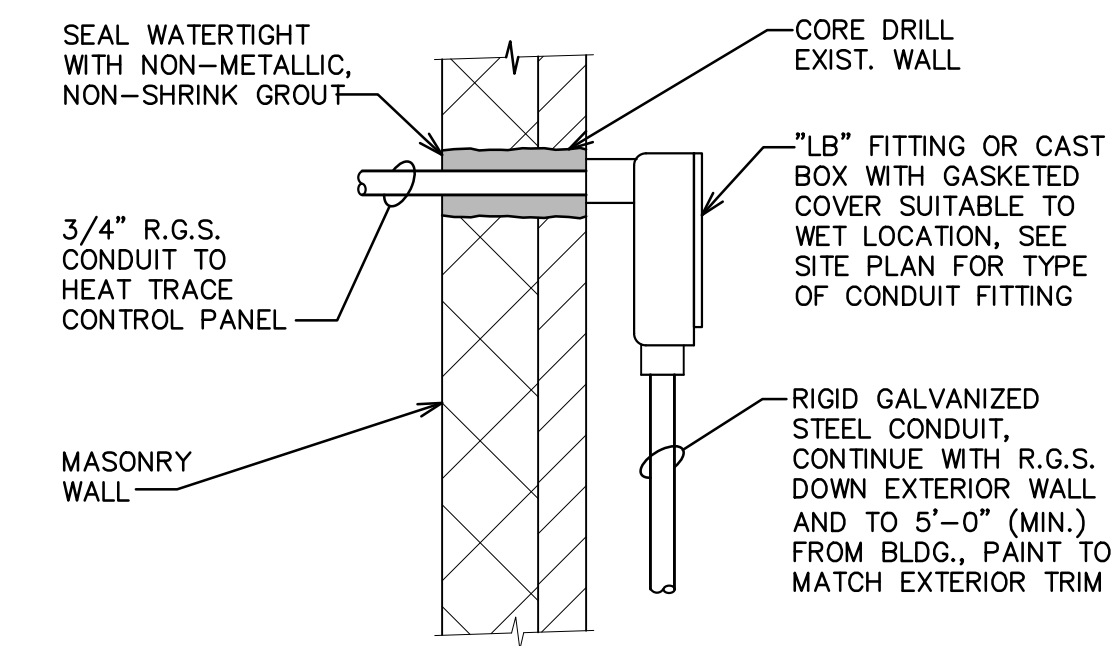
HRC JOB NO. 20220751	SCALE AS NOTED
DATE DECEMBER 2023	SHEET NO. E-1 OF OF

2/29/2024 8:58 AM
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Manser, Evon

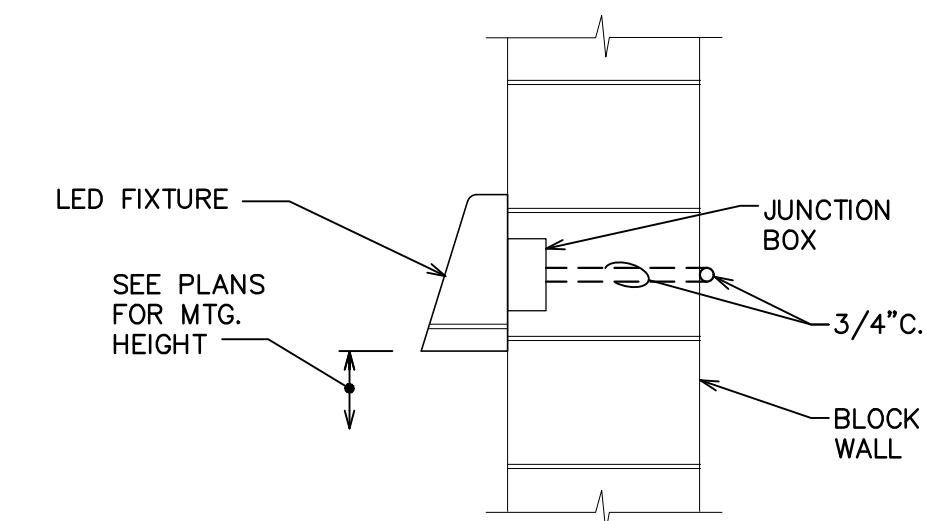


PHOTO-3

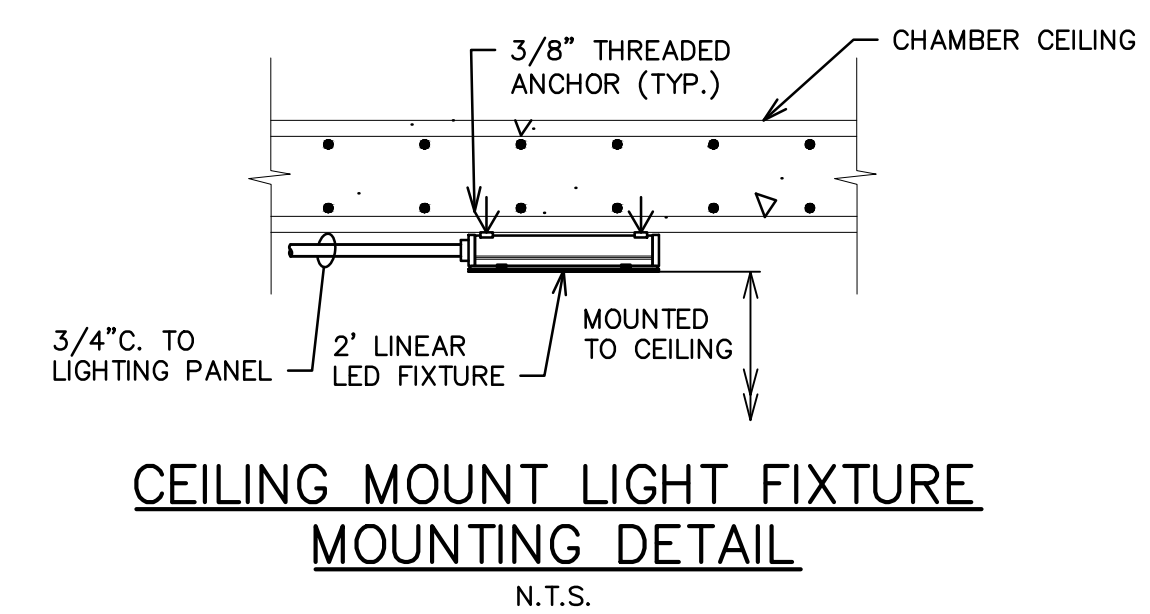
EXISTING FILTER BUILDING
MCC-2, PROVIDE NEW
20A, 3P, BREAKER
BUCKET FOR NEW HEATER
AND NEW 50A, 3P,
BREAKER BUCKET FOR
DRAIN PUMP STATION
CONTROL PANEL IN
AVAILABLE SPACES



WALL PENETRATION DETAIL
N.T.S.



WALL PACK LIGHT FIXTURE
MOUNTING DETAIL
N.T.S.



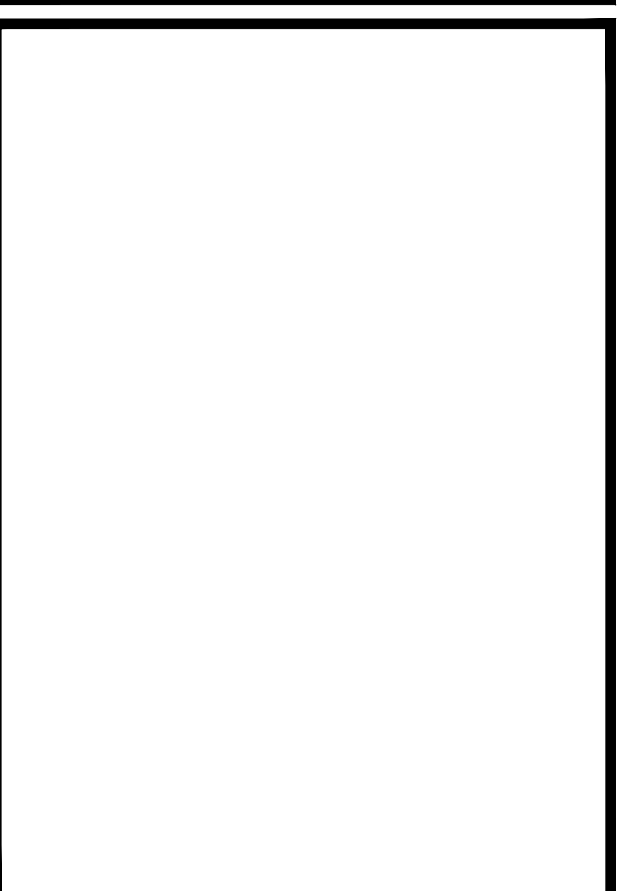
CEILING MOUNT LIGHT FIXTURE
MOUNTING DETAIL
N.T.S.



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ELECTRICAL DETAILS

HRC JOB NO. 20220751	SCALE NO SCALE
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