

Krebs Engineering, Inc.
 2100 Riverhaven Drive, Suite 100
 Birmingham, AL 35244
 205-987-7411
 June 15, 2022

ADDENDUM NO. 2

CONTRACT NO.: 21036
 OWNER: City of Fairhope
 PROJECT: Water Treatment Plant No. 3 Expansion

BID DATE: June 30, 2022
 TO: ALL PROSPECTIVE CONTRACTORS AND SUPPLIERS

The changes, modifications, and/or additions covered by and set forth in this Addendum No. 2 shall become part of and be incorporated in the Contract Documents for the above referenced project:

SPECIFICATIONS TO BE REVISED BY ADDENDUM:

AD1.1 PROPOSAL FORM

1. Replace this specification in its entirety with attached.

AD1.2 SECTION 22 05 23 – VALVES

Specification Section 22 05 23 2.1.K: Replace the pump characteristic tables with the following tables:

High Service Pumps - Pump Room									
Pump No.	RPM	HP	Stages	Operating Point No. 1			Operating Point No. 2		
				Flow (gpm)	TDH (ft.)	% Effncy.	Flow (gpm)	TDH (ft.)	% Effncy.
1	1770	200	4	2,778	195	79	3,056	189	78
2	1770	200	4	2,778	195	79	3,056	189	78

Well No. 11 Pump									
Pump No.	RPM	HP	Stages	Operating Point No. 1			Operating Point No. 2		
				Flow (gpm)	TDH (ft.)	% Effncy.	Flow (gpm)	TDH (ft.)	% Effncy.
1	1770	50	5	1000	110	79	1200	100	78

AD1.3 SECTION 27 60 00 – SCADA SYSTEM

Specification Section 27 60 00 Part 1.2.A: Revise this originally-specified paragraph to read as follows:

A. The qualifications and experience of key project personnel shall be acceptable to the Engineer. The System Integrator shall employ competent service personnel to service and troubleshoot the control and instrumentation systems and shall have at least 15 years of experience with similar work. References shall be provided upon request by the Engineer. The System Integrator shall maintain their own UL508 panel shop. The geographic location of a fully staffed office with Engineers, Service Personnel, and programmers shall be within a 300 mile radius of the project site. The System Integrators pre-approved for this project are:

1. Deep South Automation (contact: Mr. Jason Bell; scada@dsa.network; 175 Wicksburg Road, Newton AL 36352)
2. Automation Control Services, LLC (“ACS”) – Pensacola, Florida (contact: Josef Anderson; josef.anderson@autoconserv.com; 850-477-8440)
3. Electric Machine Control, Inc. (“EMC”) – Birmingham, Alabama (contact: Brian Thomason; bthomason@emcinc.com; 205-661-3998)
4. Prime Controls – New Orleans, LA (contact: AJ Gezunterman; a.gezunterman@prime-controls.com, 866-99-SCADA)

Specification Section 27 60 00 Part 3.1.H: Add the following paragraph:

H. SCADA Integrator shall provide integration/programming/etc. as required to continuously monitor (via OPC link) up to five (5) existing Mission RTUs currently in use by this system at remote tank/pump station sites on the proposed VTSCADA HMI system. Any modifications required to the remote Mission RTU’s (such as providing hardware as required to upload OPC link data) are NOT included in this contract. This contract DOES include monitoring this Mission data provided by others via an internet-based network connection.

AD1.4 SECTION 44 42 56.13 – WATER SUPPLY AND TREATMENT PUMPS

2. Replace this specification in its entirety with attached.

DRAWINGS TO BE REVISED BY ADDENDUM:

AD1.5 ADD Sheet C1-02, SITE DEMOLITION PLAN.

DRAWINGS TO BE ADDED BY ADDENDUM:

AD1.6 ADD Sheet DT-04, MISCELLANEOUS DETAILS.

Krebs Engineering, Inc.

By 
Austin Maynard, P.E.
Engineer

THIS IS THE LAST PAGE

Attachments to Addendum No. 2 preceding this page:

PROPOSAL FORM – 2 pages

SECTION 44 42 56.13 – WATER SUPPLY AND TREATMENT PUMPS – 9 pages

C1-02 – SITE DEMOLITION PLAN – 1 page

DT-04 – MISCELLANEOUS DETAILS – 1 page

A total of 17 pages or sheets of drawings (including this page) have been included in Addendum No. 2.

General Contractors are requested to return this page as an acknowledgement that you have received this Addendum by e-mail. This will NOT be mailed. A copy of this Addendum may be picked up at the office of the Engineer.

Return to Return to Alabama Graphics Digital Plan Room.

Received By _____

Contractor _____

Date _____



**PUBLIC WORKS DEPARTMENT
REQUEST FOR COMPETITIVE BIDS
FOR CAPITAL IMPROVEMENTS PROJECT
BID NO. 019-22 WATER TREATMENT
PLANT NO. 3 EXPANSION
PROJECT NO. WA002-22**

PROPOSAL FORM

ITEM NO.	APPROXIMATE QUANTITIES	DESCRIPTION OF ITEM	UNIT PRICE	TOTAL PRICE FOR ITEM
1.	Complete	Water Treatment Plant No. 3 Expansion: Furnish and Install all labor, materials, equipment and appurtenances for the construction of the WTP upgrade/expansion, including demolition, sitework, yard piping, wetwell, FWPS, Treatment Building, and other modifications/improvements. Lump Sum	Lump Sum	\$
2.	Complete	Electrical: Furnish and install all labor, materials, equipment and appurtenances for the electrical work associated with this project. Lump Sum	Lump Sum	\$
3.	Complete	WTP SCADA System: Furnish and install all labor, materials, equipment and appurtenances for the SCADA System work as specified herein. Lump Sum	Lump Sum	\$
4.	200	Undercut (Below Subgrade) Unsuitable Soils, Haul, and Dispose Off-Site, as directed by the Engineer	CY	\$
5.	280	Backfill Undercut Areas w/ Crushed Stone (Including Hauling and Compaction), as directed by the Engineer	Ton	\$
6.	200	Backfill Undercut Areas w/ suitable Soil from On-Site (Including Hauling and Compaction), as directed by the Engineer	CY	\$
Total Amount of Base Bid				\$

BASE BID: For construction complete as shown and specified in table above, the sum of

Dollars \$

SECTION 44 42 56.13 - WATER SUPPLY AND TREATMENT PUMPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following water supply and treatment pumps for use in water and treatment plants and systems:
 - 1. High Service Pumps and Well Pump (Vertical Turbine)
 - 2. Well Pump

1.3 SUBMITTALS

- A. **Certification from Contractor and Manufacturer/Suppliers:** During the bid period and again prior to submitting/ordering and installing materials, products and equipment, the Contractor and all manufacturers and suppliers shall thoroughly review the materials, products and equipment being supplied and shall familiarize themselves with the existing and proposed/new facilities, as well as connections to existing facilities/utilities. This shall include field verification of the location, nature, size/dimensions, current and intended future use, etc. Prior to ordering and installation, the Contractor shall coordinate with all manufacturers and suppliers to provide all needed information including field dimensions, photographs, information on related materials and equipment, etc.). The Contractor and all manufacturers and suppliers shall include written confirmation (with the submittal) of the following:
 - 1. The materials, products, and equipment being supplied are of the correct size, materials and type.
 - 2. The materials, products and equipment being supplied do not conflict with existing or proposed/new facilities.
 - 3. The products/equipment being supplied are intended for use in this application.
 - 4. All manufacturer(s) and supplier(s) shall provide (either with submittals or separately) written concurrence/acknowledgement of their review/coordination and concurrence with the items above.
 - 5. Shop drawings and product data submitted for review by the Engineer shall bear the Contractor's certification that he has reviewed, checked, and approved the submittals, that they comply with the requirements of the project and with the provisions of the Contract Documents, and that he has verified all sizes, dimensions, locations, field measurements, construction criteria, materials, catalog numbers, and similar data. Field dimensions, sizes and other pertinent information shall be clearly shown on the shop drawings/submittals. The Contractor shall also certify that the work represented by the shop drawings is recommended by the Contractor and that the Contractor's warranty and guaranty will fully apply.

B. Product Data:

1. Make, model, weight, and horsepower of each equipment assembly.
2. Complete catalog information, descriptive literature, specifications, and identification of materials of construction.
3. Performance data curves showing head, capacity, horsepower demand, and pump efficiency over the entire operating range of the pump, from shutoff to maximum capacity. Indicate separately the head, capacity, horsepower demand, overall efficiency, and minimum submergence required at the guarantee point.
4. Complete motor nameplate data, as defined by NEMA.
5. Factory finish system.
6. Special shipping, handling, protection, and storage instructions.
7. Manufacturer's printed installation instructions.
8. Suggested spare parts list.
9. List of any special tools, materials, or supplies required for maintenance of pump.
10. Operation and Maintenance Manual

C. Shop Drawings:

1. Detailed mechanical and electrical drawings showing the equipment size, dimensions, and locations of connections and weights of associated equipment.
2. Power and control wiring diagrams.

D. Quality Control Submittals:

1. A factory certified performance test per Hydraulic Institute test standard, ANSI/HI 14.6 Acceptance Grade 1U shall be conducted prior to shipment. Test shall conform to the standards of The Hydraulic Institute and consist of operating the pump over a range of head and capacity conditions so as to establish its performance curve. Copies of the test results shall be submitted to the Owner.
2. Performance tests shall be performed using the bowl assembly only. Job motors, column pipe, and discharge head are not required as part of the test.
3. Manufacturer shall submit documentation identifying the complete pump assembly as meeting the requirements of NSF 372/61 Annex G.
4. Pump shall be a full speed pump verification for flow, head, and efficiency performed in certified lab. The manufacturer shall supply certified pump curves based on this testing. The Owner and Engineer may choose to witness this testing. Travel and lodging will be paid directly by the Owner. Scaled test and affinity law confirmation of pump conditions are not acceptable.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Retain shipping flange protective covers and protective coatings during storage.
- B. Protect bearings and couplings against damage.

1.5 WARRANTY

- A. Warranty Period: One year from the date of Substantial Completion.

PART 2 - PRODUCT

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. High Service Pumps (Vertical Turbine)
 - A. Peerless
 - B. Goulds
 - C. Flowserve

2.2 PUMPS GENERAL

- A. Pumps should be well designed and of rugged construction and especially adapted to secure maximum economy in both power and maintenance under continuous operation and under the service conditions specified.
- B. No consideration will be given to equipment which has not demonstrated its reliability and efficiency through results obtained from operation of similar units of approximately the same capacity and type under similar conditions.
- C. The general design shall be such that the components can be easily disassembled; that replacement parts are of standard design and readily available; and that all components and parts are suitable for the service required.
- D. Coordinate pump requirements with drive manufacturer
- E. The total dynamic heads, given on the attached data sheets, have included approximate losses in the pumps. Exact allowances for such losses shall be made by the pump manufacturer; amounts of such losses shall be stated so the adjustments can be made, if required. The statements of losses in the pump shall be in the form of a written report and such report shall be furnished to the Engineer.
- F. The manufacturer shall make a thorough analysis of the proposed pump installations with respect to physical locations of pumps, configurations of suction and discharge piping, elevations of piping, pump mounting and any other features or factors that might directly or indirectly affect the operation and/or performance of the pumps proposed to be furnished by the particular manufacturer.
- G. The analysis of operating conditions shall be in the form of a written report and such report shall be furnished to the Engineer as part of the pump submittal.
- H. The materials for construction shall be generally as hereinafter specified. It is recognized that the standard metallurgy of a particular pump manufacturer may vary from that specified, but the quality of materials shall, however, equal or exceed that specified; and the assembly of materials shall result in a product equal to or exceeding all the requirements of these Specifications.

- I. Pump base drains shall be copper water tube of size not less than 1", and shall be run through floor slab into adjacent floor drain lines. Tees shall be used at changes in direction in order to facilitate cleanout. Pump shall be equipped with throttle bushing and bleed-off stuffing box where applicable.
- J. The manufacturer shall determine the maximum down thrust for the particular pump offered and shall provide thrust bearing capacity for handling the maximum down thrust with ample safety factor.
 - 1. Safety factor shall be based upon the ratio of anticipated thrust to standard thrust and average life expectancy of five years operation at twenty-four (24) hours per day.
 - 2. The manufacturer shall also determine for the particular pump offered the magnitude of the initial pr momentary up thrust, and shall provide protection to counteract the net positive up thrust.
 - 3. If continuous up thrust protection should be necessary, protection shall be provided by duplex bearings in the thrust location.
- K. Pump Mounting: Pumps shall be mounted on reinforced concrete pads doweled into the floor. Contractor shall confirm size requirements for pad with manufacturer and in no case shall there be less than 2-inches clearance/coverage between edge of anchor bolts and edge of pad. Mounting pads shall be of such heights as will set the centerlines of the pumps discharge ports at the necessary elevations.

2.3 VERTICAL TURBINE PUMPS (Open Lineshaft)

- A. The Contractor shall furnish and install, ready for operation the following pumps in the locations specified:

High Service Pumps - Pump Room									
Pump No.	RPM	HP	Stages	Operating Point No. 1			Operating Point No. 2		
				Flow (gpm)	TDH (ft.)	% Effncy.	Flow (gpm)	TDH (ft.)	% Effncy.
1	1770	200	4	2,778	195	79	3,056	189	78
2	1770	200	4	2,778	195	79	3,056	189	78

Well No. 11 Pump									
Pump No.	RPM	HP	Stages	Operating Point No. 1			Operating Point No. 2		
				Flow (gpm)	TDH (ft.)	% Effncy.	Flow (gpm)	TDH (ft.)	% Effncy.

				Flow (gpm)	TDH (ft.)	% Effncy.	Flow (gpm)	TDH (ft.)	% Effncy.
1	1770	50	5	1000	110	79	1200	100	78

A. Deep-Set, Water Lubricated Vertical Turbine Well Pump

1. Operating Conditions

- a. Pump Bowl Setting ___130___ Feet Below Ground Surface
- b. Well Diameter ___16___ Inches
- c. Static Water Level ___77___ Feet Below Ground Surface
- d. Pumping Level ___117___ Feet Below Ground Surface

B. Discharge Heads:

1. The pump head shall be fabricated of ASTM A6-58T carbon steel and shall include at a minimum four gusset plates.
2. Discharge nozzle shall provide smooth flow transition from the head cavity and shall incorporate vertical vane for minimizing turbulence.
3. Discharge outlet shall be flanged and drilled ANSI B16.5 Class 150 and shall be tapped 1/4" NPT for connection of a pressure gauge to be supplied by Contractor.
4. The head shaft shall be 416 Stainless Steel and shall be turned and ground. The head shaft or top shaft shall not exceed 10 feet in length. The pump manufacturer shall include a method of adjusting the impellers at the top of the head shaft.
5. The stuffing box shall be cast iron and designed for a minimum of 5 rings of packing. It shall have a pressure relief connection. An extra-long bearing constructed of C89835 bronze shall be located below the packing in the stuffing box. A rubber slinger ring shall be secured to the shaft above the packing gland. Packing lubrication leakage through the stuffing box shall be drained back to the sump. The packing gland shall be of a two-piece design and constructed of 316SS secured in place with SS studs and brass nuts.
6. The head shall be bolted to a steel base plate anchored to the concrete foundation pad.
7. Bolts and anchor bolts shall be stainless steel.

B. Column Pipe:

1. The column pipe shall be furnished in sections not exceeding a nominal length of 10' and shall be connected by threaded-sleeve couplings .
2. Top (discharge head) and bottom column (Pump Bowl) sections shall not exceed 5' in length.
3. Column shall be ASSTM A53 grade B steel pipe, the weight shall be not less than schedule 30. Pipe shall be threaded 8 TPI RH with 3/16" tpaer per foot thread. Ends shall be faced parallel to butt against the centering spiders for form accurate alignment.
4. The inside diameter of the pipe shall be such that the head losses shall not be more than 5 feet per 100 feet of pipe based on the rated flow of the pump.

D. Line Shafting and Line Shaft Bearings:

1. The line Lineshaft shall be ASTM A582, type 416 stainless steel ground and polished with surface finish better than 40 RMS.
2. Ends of shafting shall be machined square to axis of shaft for butt fit, threaded, and coupled with 18-8 stainless steel couplings designed with a safety factor of 1.5 times the shaft safety factor.
3. Lineshaft shall be furnished in interchangeable sections not over 10 feet in length.
4. Line shaft bearing spacing shall not exceed 10 feet.
5. Line shaft bearing shall be held securely in place utilizing bearing retainer constructed of 304 SST ASTM# A744M. Retainer shall fit securely in threaded sleeve coupling, the face of the retainer shall be machined parallel at outer ring to maintain column alignment, mating and sealing of column sections
6. Line shaft bearing below pumping level shall be Dog-bone style rubber EPDM ASTM # D3568
7. Line Shaft bearing above pumping level shall be constructed of Vesconite and capable of running dry for up to 60 seconds without damage to the bearing. Bearing should be glued and staked in SS bearing retainer.

F. Pump Bowls:

1. Fine grain gray iron (ANSI/ASTM A48) not less than Class 30. Suction and intermediate bowls shall be fitted with replaceable stainless steel wear rings ANSI/ASTM A276a Type 416 or bronze wear rings ANSI/ASTM B505 Copper Alloy No. 836, or of molded neoprene reinforced by embedded steel core.
2. If wear rings are not used, the bowls shall be cast from gray iron ANSI/ASTM A48 Class 40 or Meehanite, and the manufacturer shall show that he has provided extra thickness of metal in the necks of the bowls and in the skirts of the impellers so that necks can be bored and skirts turned down when running clearances must be adjusted.
3. Bowls shall be fitted with bronze bushings ANSI/ASTM B505 Copper Alloy No. 836, or ANSI/ASTM B584 Copper Alloy No. 836, for support and guidance of shafting.
4. Intermediate bowls shall be interchangeable. Suction bowl shall be fitted with 316 stainless steel strainer.
5. The suction bowl bearing shall be bronze and shall be permanently lubricated with provision for recirculation of lubricant from reservoir in the suction case hub. The bearing housing shall have sufficient opening at the bottom for easy removal of the bearing.
6. Sand collar of rubber or bronze ANSI/ASTM B505 Copper Alloy No. 836 shall be provided for protecting the suction bowl bearing from abrasives in the liquid being pumped.

G. Impellers:

1. Bronze, enclosed type, accurately cast, machined, filed and polished. Impellers shall be statically and dynamically balanced.
2. Bronze castings shall conform to the requirements of ANSI/ASTM B584 Copper Alloy No. 836.

3. The impeller shall be securely fastened to the bowl shaft with stainless steel collets, ANSI/ASTM A582 Type 303 or Type 416.
4. Impeller shafting shall be stainless steel ANSI/ASTM A582 Type 416, and shall be ground and polished with surface finish better than 40 RMS.
5. Impellers shall be fit with replaceable bronze C952 wear rings.

H. Split Rings and Keys, Bolts and Nuts shall be stainless steel ANSI/ASTM A 582 Type 303 or Type 416, or ANSI/ASTM A276 Type 303 or Type 416.

I. Pressure Gauge

1. Provide a discharge pressure gauge with each High Service Pump and Backwash Pump.
2. Pressure gauges shall have a 4" face.
3. Pressure gauges shall be turret style. Case material shall be stainless steel with clear acrylic faces.
4. The gauge shall be bottom connected and accept a 1/4" NPT female thread. Combination pressure gauge range and scale graduations shall be in PSI and feet of water.
5. The gauge shall be complete with both isolating and vent valves, and shall be so arranged as to easily vent air and facilitate gauge removal.
6. Pressure gauge range shall be from 0-250 psi.
7. Pressure gauges shall be NSF-61 certified.

J. Drive Motor:

2. Shall be weather-protected (Type WPI) machines, vertical hollow shaft, heavy duty squirrel cage induction type.
3. All motors shall be inverter-duty rated per NEMA MG 1-2011, Part 31,
4. Temperature rise at maximum load shall not be greater than Class F Limits
5. Insulation shall not be less than Class F with copper magnet wire (Class H minimum).
6. The motor shall be equipped with copper or copper alloy rotor bars and end rings.
7. The motors shall be guaranteed to continuously carry 115% of rated load without development of injurious heating, and shall be capable of operation on 480 V, 3 Ø, 60 Hz.
8. Thrust bearing shall be designed to carry the weight of all rotating parts plus the maximum hydraulic thrust load which may occur.
9. Motor efficiency shall conform to "NEMA Premium" values for horsepower, speed, and enclosure, and motors shall be equipped with anti-backspin couplings.
10. The design and manufacture of the motors shall be in compliance with the General Specifications of the IEEE and with NEMA Standards.
11. Motors for each pump shall be provided with integral 120VAC condensation heaters to prevent corrosion and normally-closed 120VAC thermostats (in each winding) to indicate motor overtemperature/shutdown conditions to the starter.
12. Provide oversized tap box(es) as required for the specified motor circuit/conduit sizes. Provide separate tap boxes for main 480V power and for auxiliary devices (120V heaters and t-stats).
13. Acceptable manufacturers:

- A. G.E.
- B. U.S. Motors
- C. Westinghouse

K. Pump Vibration:

1. The completed installation of pump and driver shall be smooth-running and vibration free.
2. Vibration testing shall be in accordance with HI 2009 standards and measured at the pump/motor interface.
3. The pump manufacturer shall coordinate the vibration testing for attendance by the Engineer and shall provide the Engineer with a complete written summary of the test procedures and results.
4. The Owner will engage a 3rd party firm to perform on-site vibration testing after the pumps are installed. The costs associated with the initial/1st vibration test (on each pump) will be paid by the Owner. The costs associated with any subsequent retesting, if required, will be paid by the Contractor.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install in accordance with manufacturer's printed instructions.
- B. Level base by means of steel wedges. Wedge taper not greater than 1/4 inch per foot. Wedging should be done so that there is no deformation of base plate and base plate assembly should be level upon completion of anchor bolt tightening.
- C. Adjust pump assemblies so that the driving units are properly aligned, plumb, and level with the driven units and all connected shafts and couplings.
- D. Upon completion of leveling of base plate and setting of pump and appurtenances, fill void with grout as specified in these Specifications. After the grout has set, remove steel wedges and fill wedge void with grout.
- E. Suction and discharge piping shall be connected without placing any strain on the pump flanges.

3.2 FIELD FINISHING

- A. Provide sufficient paint to touch up pump as necessary after installation. Paint according to requirements in Section 9 "Painting".

3.3 START-UP ASSISTANCE AND TRAINING

- A. Startup Services: Engage a factory-authorized service representative to perform startup services and to train Owner's maintenance personnel as specified below:
 1. Factory authorized service representatives of the pump manufacturer shall perform all necessary on-site assistance for installation supervision.

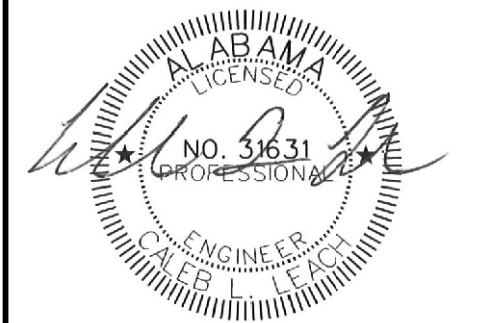
2. Once the pumps have been installed correctly and are operating as intended, the service representatives shall perform eight (8) hours of on-site start-up assistance and operator training.
3. Startup shall be scheduled at a time when the pump manufacturer representative and the variable frequency drive manufacturer's representative can both be available to participate in startup.
4. Train Owner's maintenance personnel on procedures and schedules related to troubleshooting, servicing, and preventive maintenance.
5. Schedule training with Owner with at least seven days' advance notice.

END OF SECTION 44 42 56.13

ALTERNATES: If alternates as set forth in the Contract Documents are accepted, the following adjustments are to be made to the Base Bid.

ITEM NO.	ALTERNATE DESCRIPTION	TOTAL ADD OR DEDUCT PRICE FOR ITEM
A1.	Furnish and Install 900kW (minimum) generator as specified in the plans and specifications Lump Sum	\$
A2.	Install asphalt paving as shown in the Contract Drawings in lieu of gravel. Lump Sum	\$

ADDENDA: The Bidder acknowledges receipt of Addenda Nos. _____ , _____ , _____ , _____ , _____ , _____ , _____ .



05/15/2022

BID SET

CITY OF FAIRHOPE

**WATER TREATMENT PLANT NO. 3
EXPANSION**

FAIRHOPE, ALABAMA

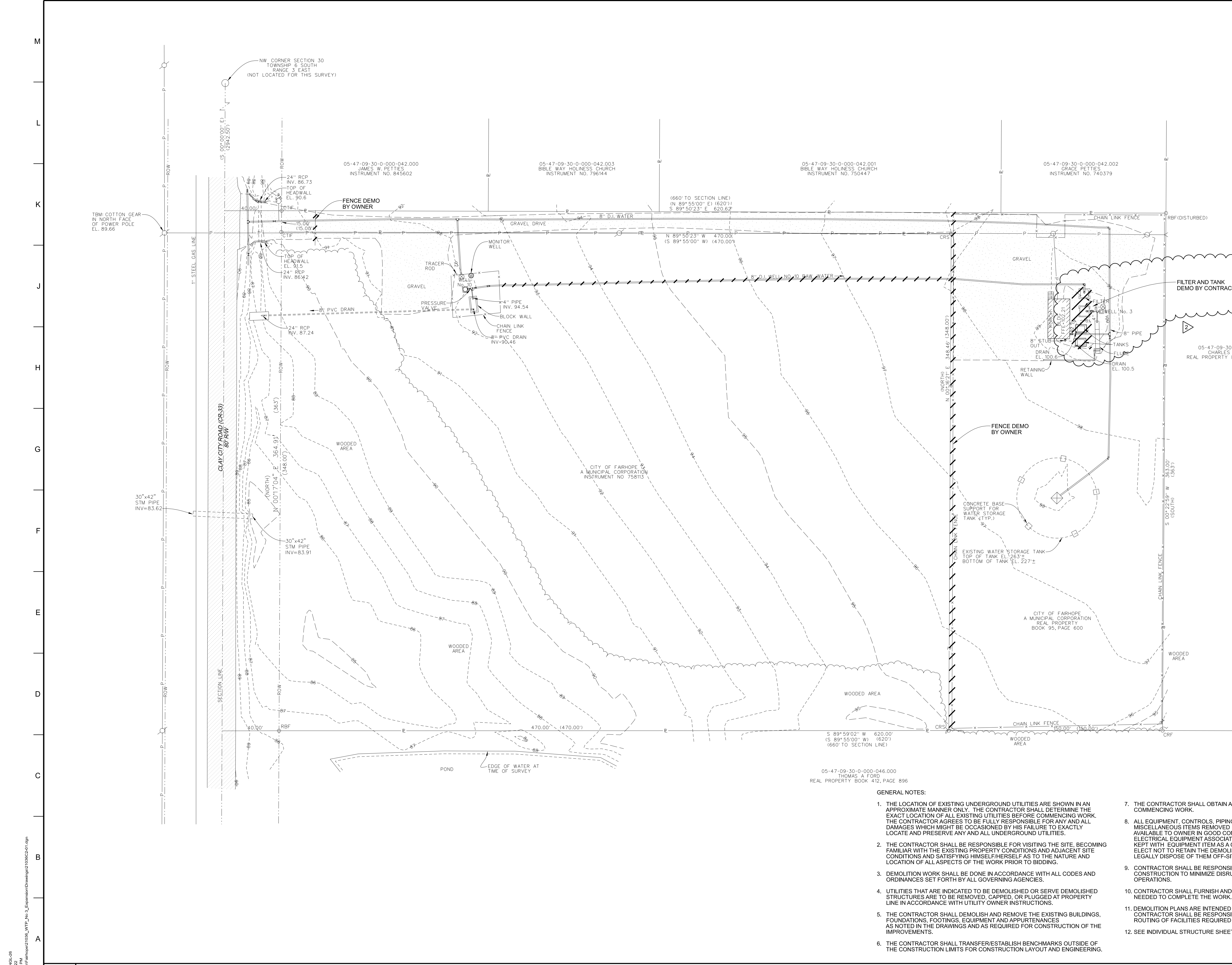
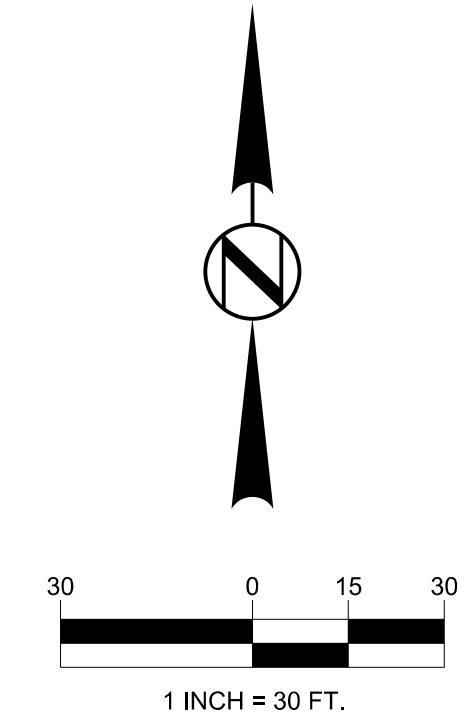


Designed	ADM	Project No.	21036
Drawn	ADM / CLM		
Checked	OLL		

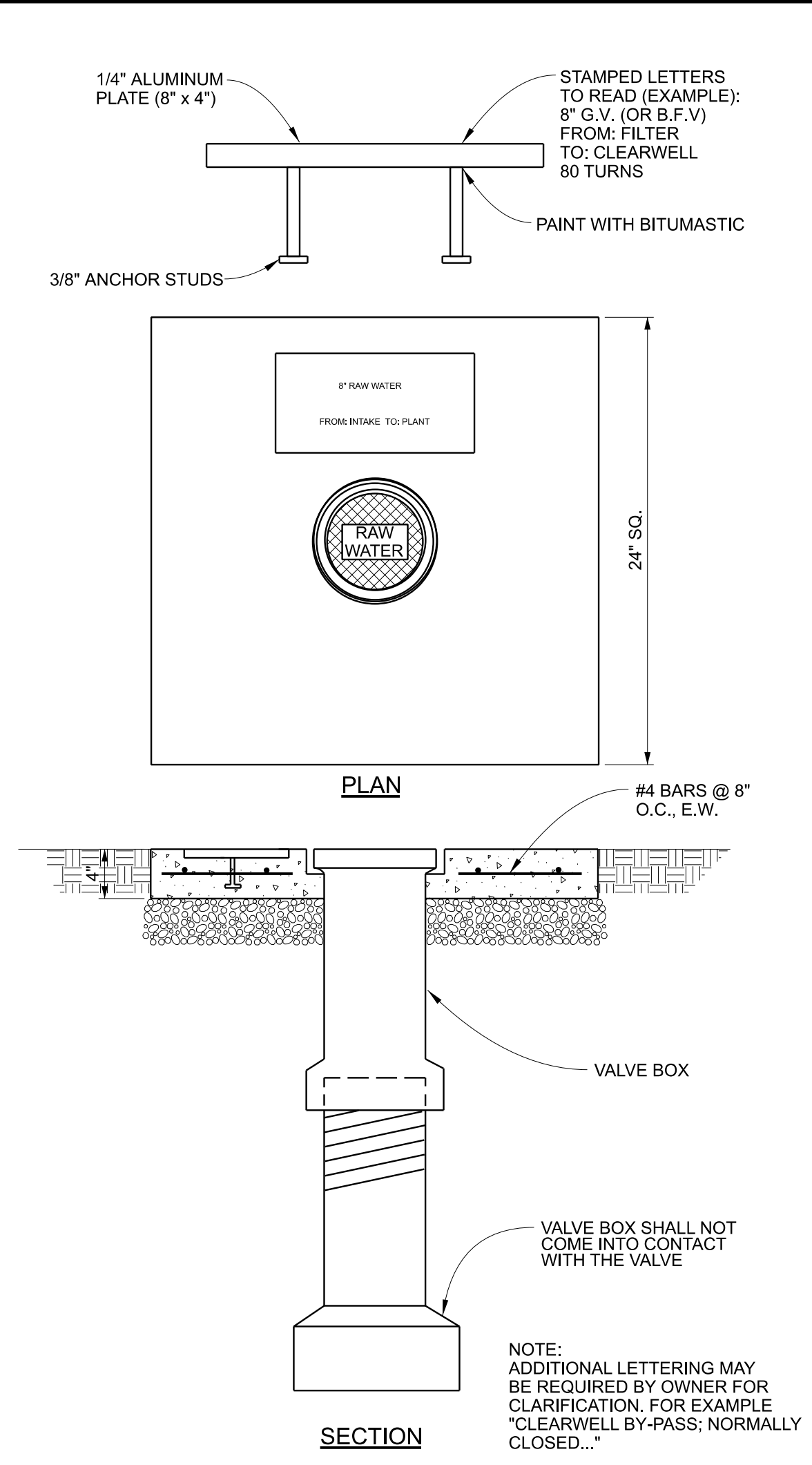
No.	Date	Description
1	6/6/2022	ADDENDUM NO. 1
2	6/15/2022	ADDENDUM NO. 2

Sheet Title
SITE DEMOLITION PLAN

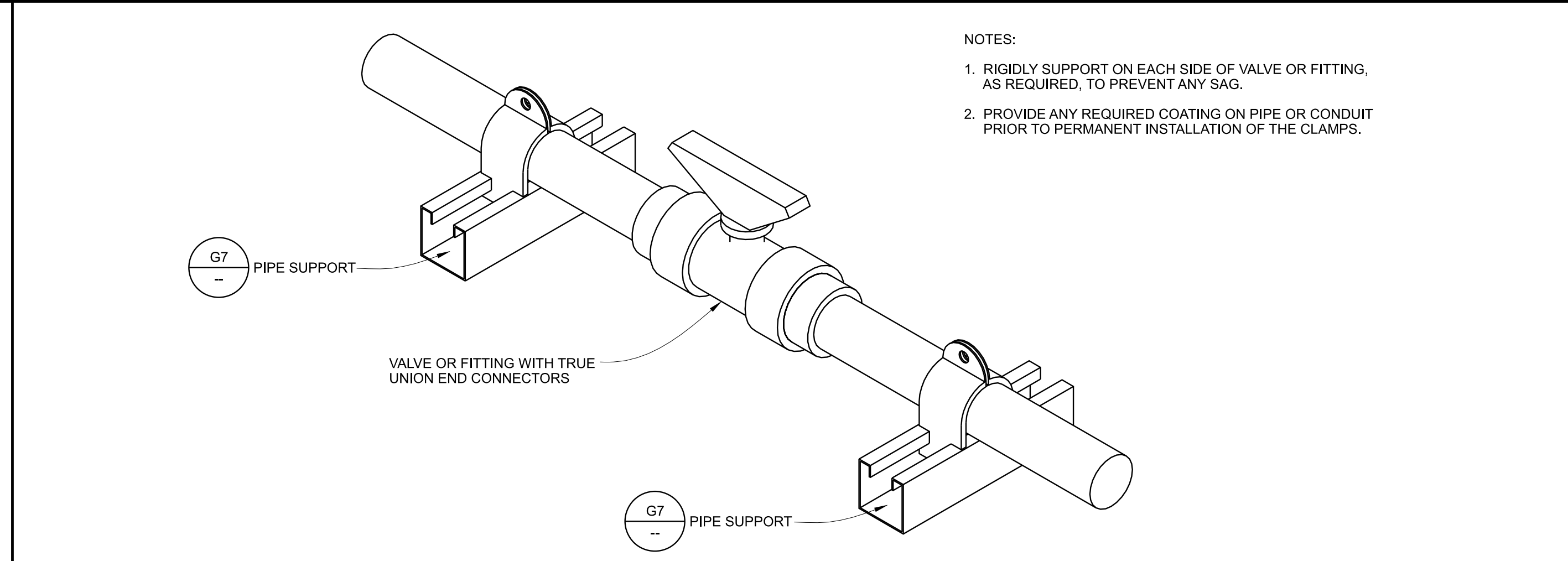
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MAY, 2022	C2-01
Sequence	16 of 92



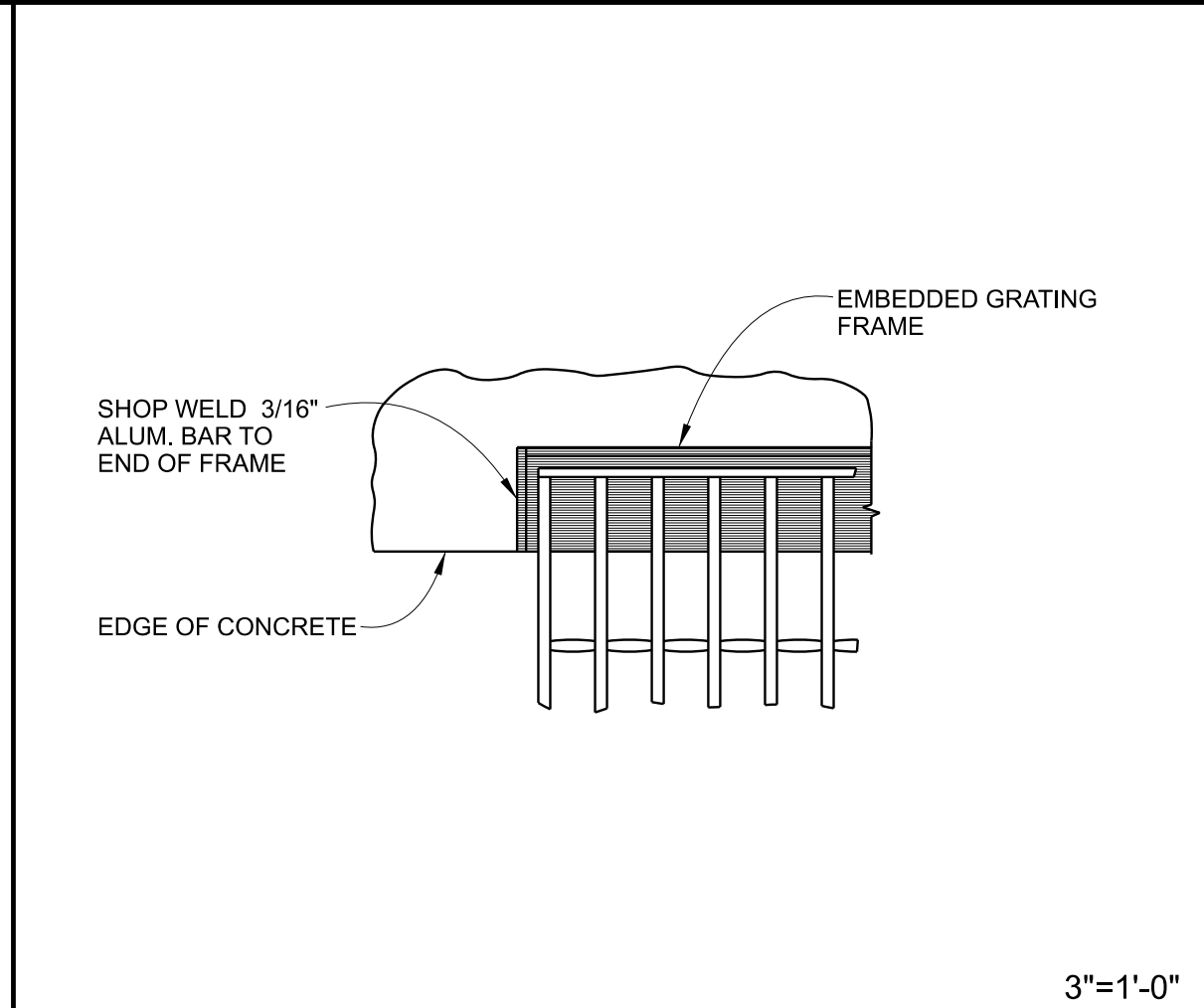
- GENERAL NOTES:**
- THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE MANNER ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE, BECOMING FAMILIAR WITH THE EXISTING PROPERTY CONDITIONS AND ADJACENT SITE CONDITIONS AND SATISFYING HIMSELF/HERSELF AS TO THE NATURE AND LOCATION OF ALL ASPECTS OF THE WORK PRIOR TO BIDDING.
 - DEMOLITION WORK SHALL BE DONE IN ACCORDANCE WITH ALL CODES AND ORDINANCES SET FORTH BY ALL GOVERNING AGENCIES.
 - UTILITIES THAT ARE INDICATED TO BE DEMOLISHED OR SERVE DEMOLISHED STRUCTURES ARE TO BE REMOVED, CAPPED, OR PLUGGED AT PROPERTY LINE IN ACCORDANCE WITH UTILITY OWNER INSTRUCTIONS.
 - THE CONTRACTOR SHALL DEMOLISH AND REMOVE THE EXISTING BUILDINGS, FOUNDATIONS, FOOTINGS, EQUIPMENT AND APPURTENANCES AS NOTED IN THE DRAWINGS AND AS REQUIRED FOR CONSTRUCTION OF THE IMPROVEMENTS.
 - THE CONTRACTOR SHALL TRANSFER/ESTABLISH BENCHMARKS OUTSIDE OF THE CONSTRUCTION LIMITS FOR CONSTRUCTION LAYOUT AND ENGINEERING.
 - THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO COMMENCING WORK.
 - ALL EQUIPMENT, CONTROLS, PIPING, HARDWARE, APPURTENANCES, AND MISCELLANEOUS ITEMS REMOVED UNDER THIS CONTRACT SHALL BE MADE AVAILABLE TO OWNER IN GOOD CONDITION. ALL MECHANICAL, CONTROL, AND ELECTRICAL EQUIPMENT ASSOCIATED WITH AN ITEM OR EQUIPMENT SHALL BE KEPT WITH EQUIPMENT ITEM AS A COMPLETE UNIT. SHOULD THE OWNER ELECT NOT TO RETAIN THE DEMOLISHED ITEMS, THE CONTRACTOR SHALL LEGALLY DISPOSE OF THEM OFF-SITE AT NO ADDITIONAL COST TO THE OWNER.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR SEQUENCING DEMOLITION CONSTRUCTION TO MINIMIZE DISRUPTIONS TO WATER TREATMENT PLANT OPERATIONS.
 - CONTRACTOR SHALL FURNISH AND INSTALL ALL TEMPORARY FACILITIES AS NEEDED TO COMPLETE THE WORK.
 - DEMOLITION PLANS ARE INTENDED TO SHOW ONLY MAJOR DEMOLITION ITEMS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND/OR RE-ROUTING OF FACILITIES REQUIRED TO COMPLETE THE WORK.
 - SEE INDIVIDUAL STRUCTURE SHEETS FOR ADDITIONAL DETAILS.



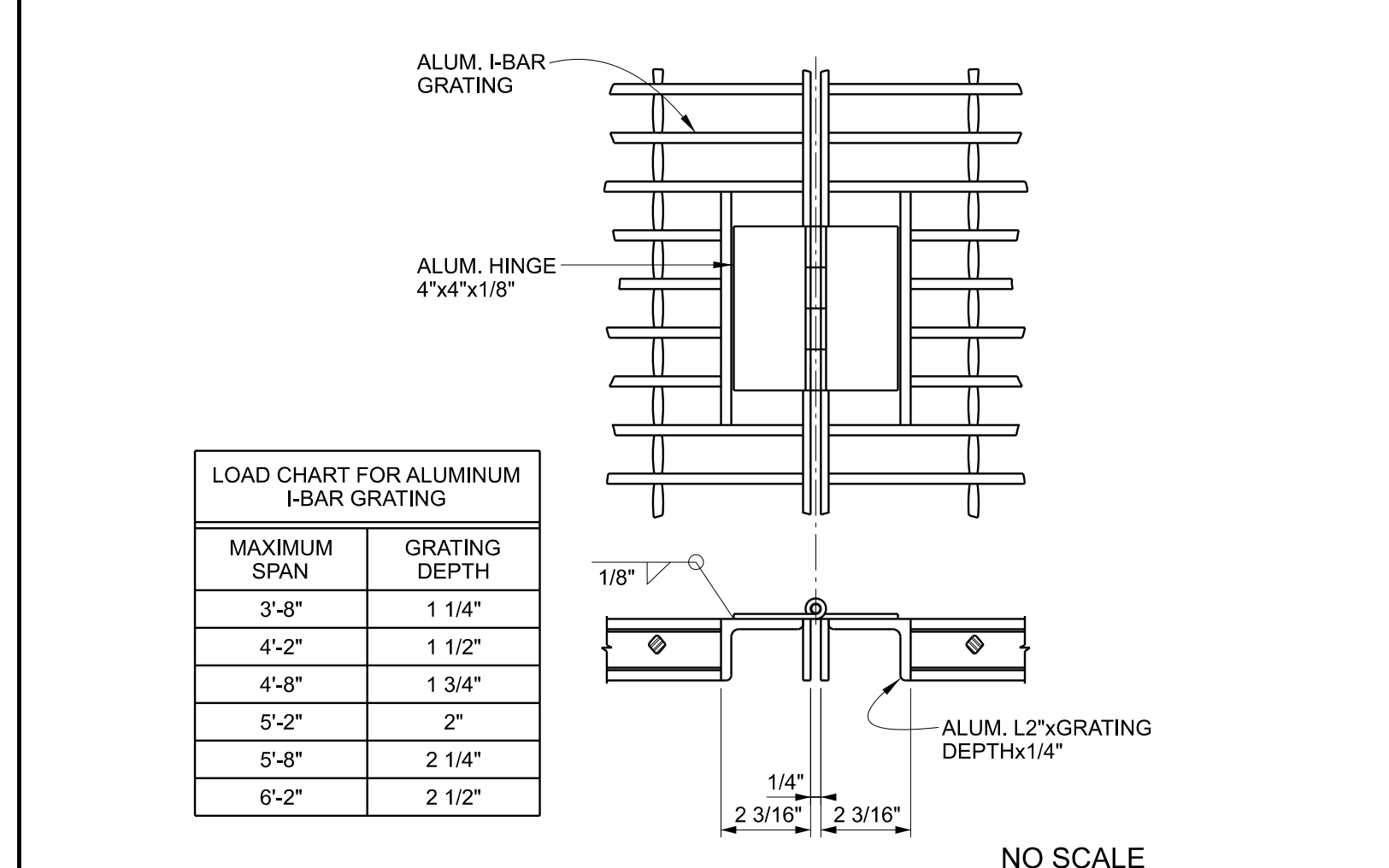
G1 VALVE BOX DETAIL NO SCALE



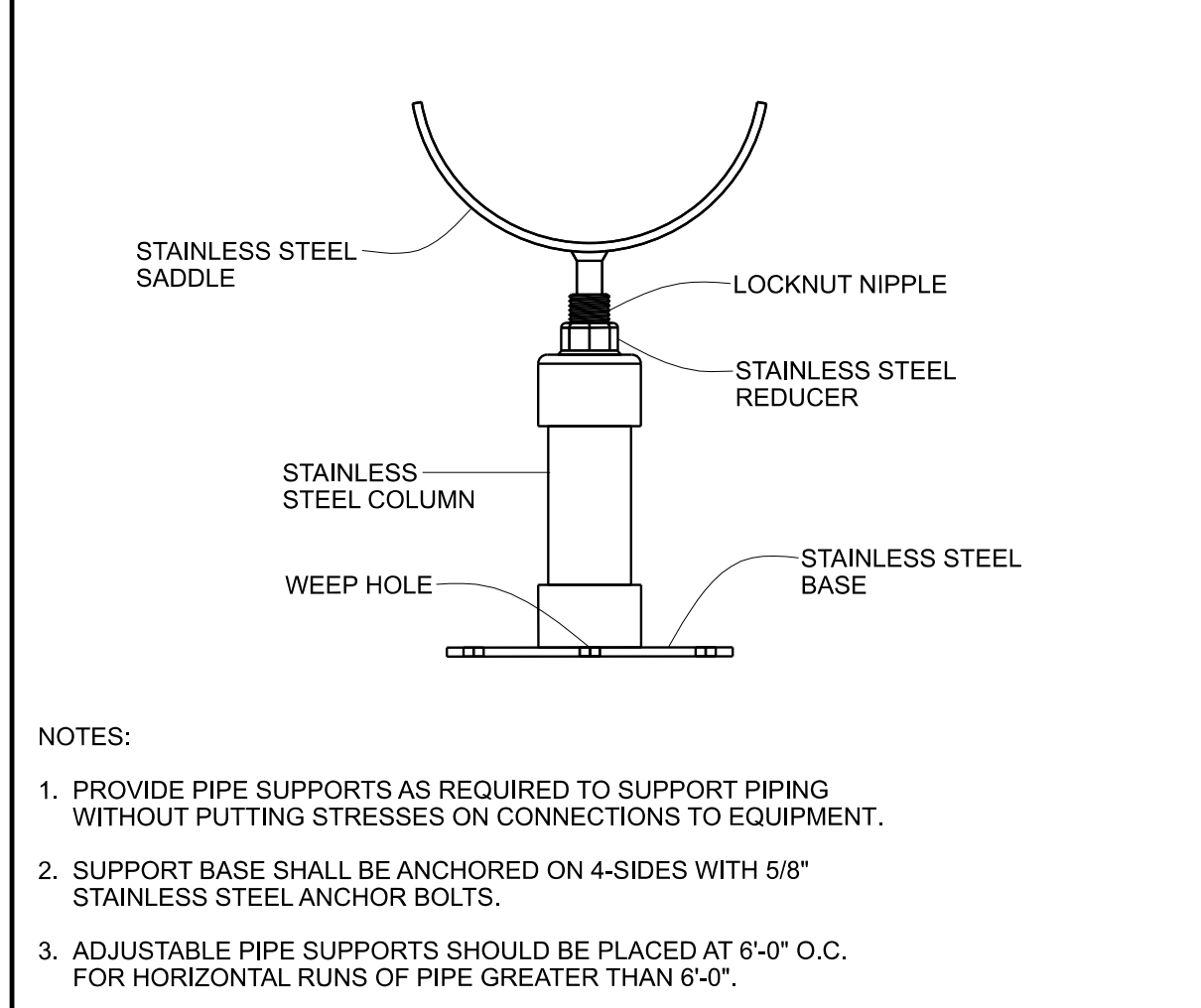
K4 TYPICAL VALVE SUPPORT NO SCALE



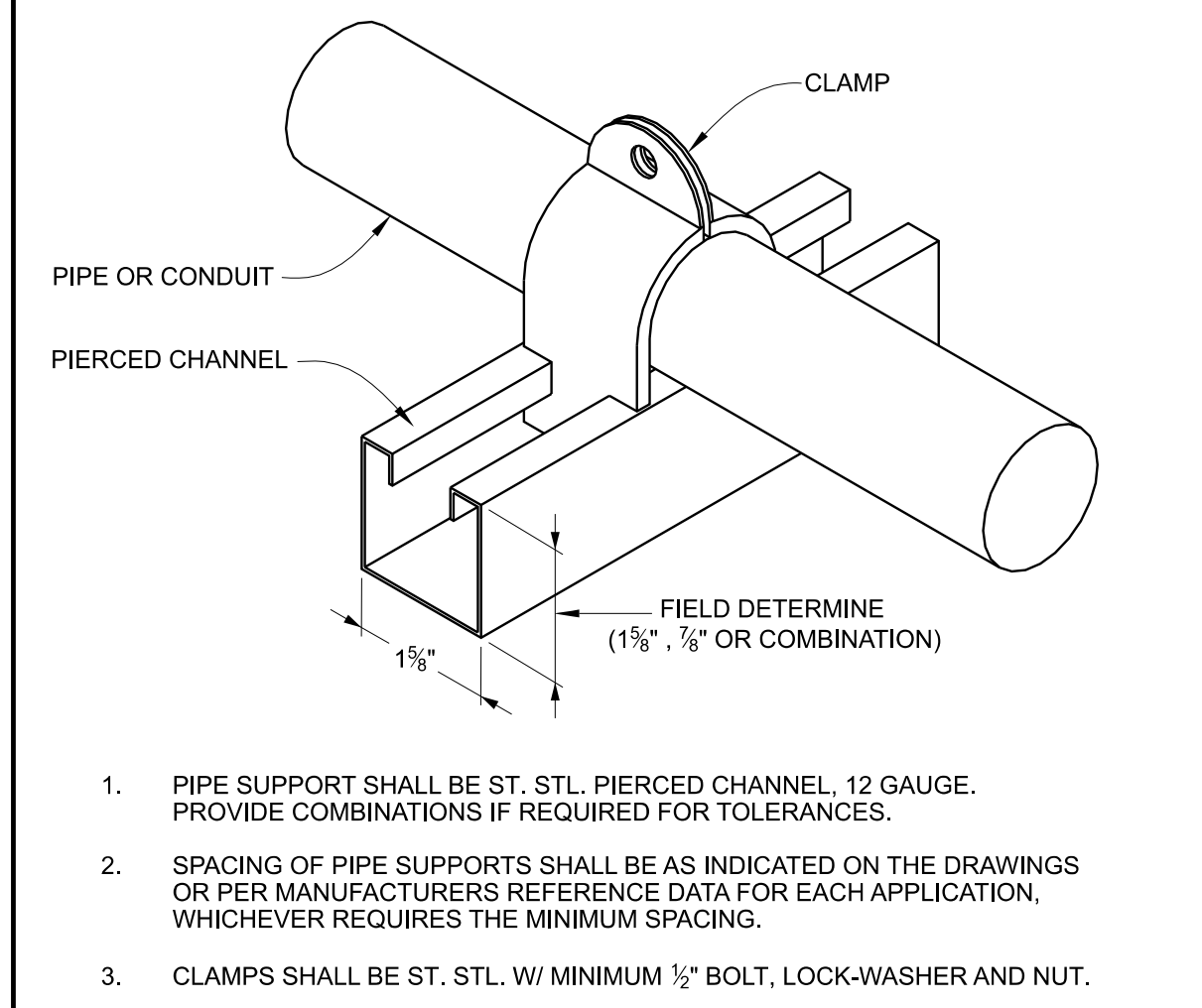
K11 OPEN ENDED GRATING FRAME DETAIL 3\"/>



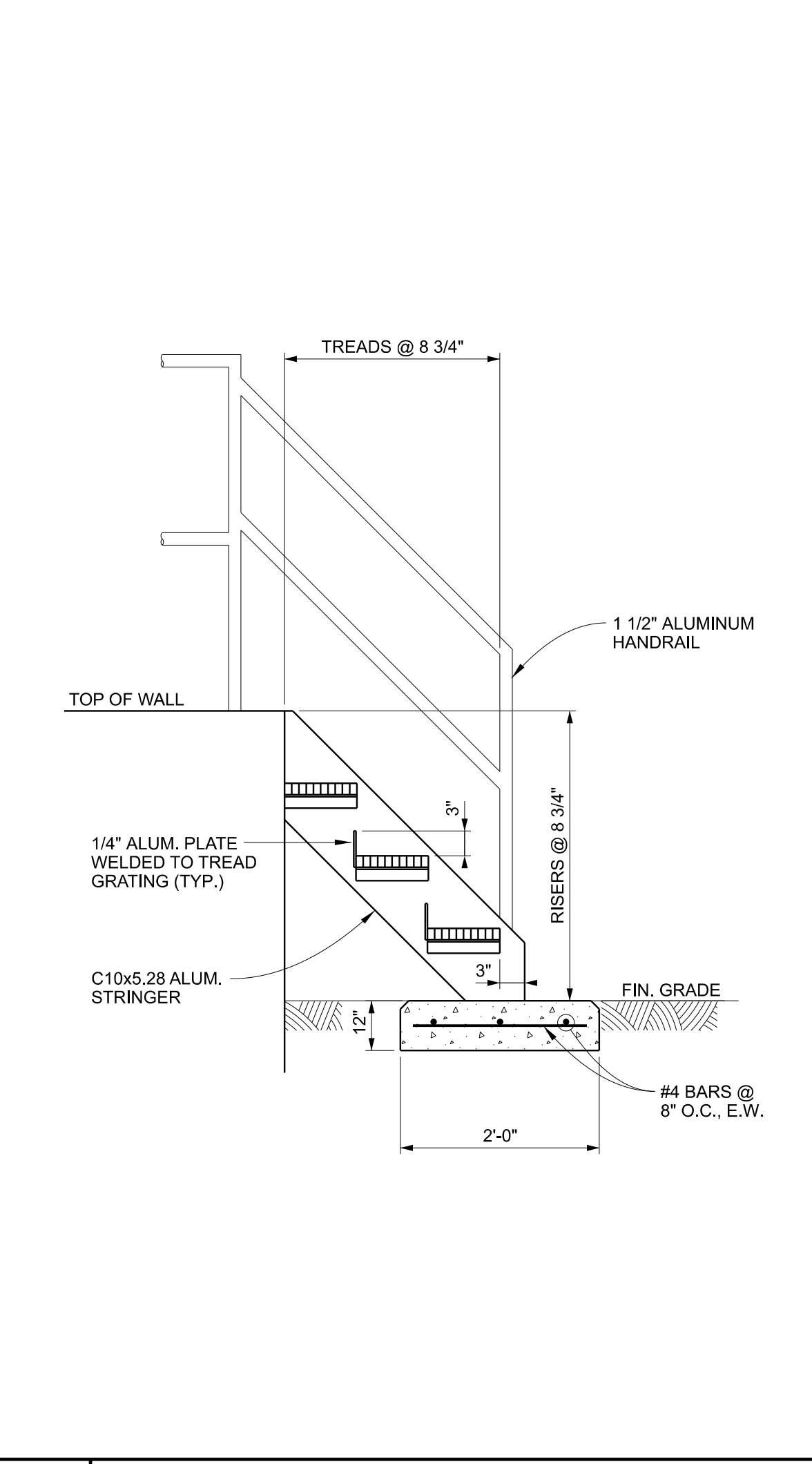
G4 HINGE AT I-BAR GRATING DETAIL NO SCALE



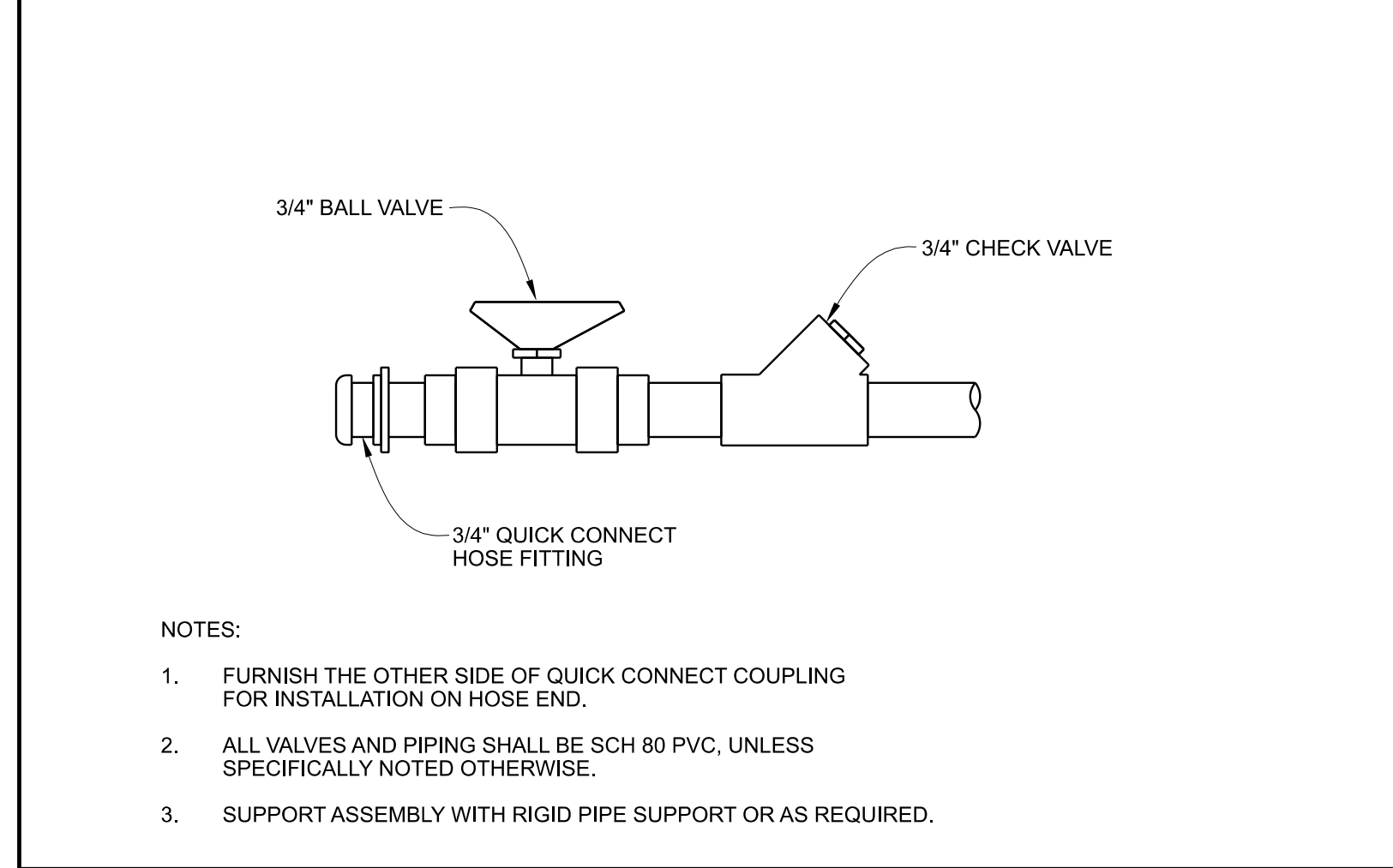
G8 ADJUSTABLE PIPE SUPPORT NO SCALE



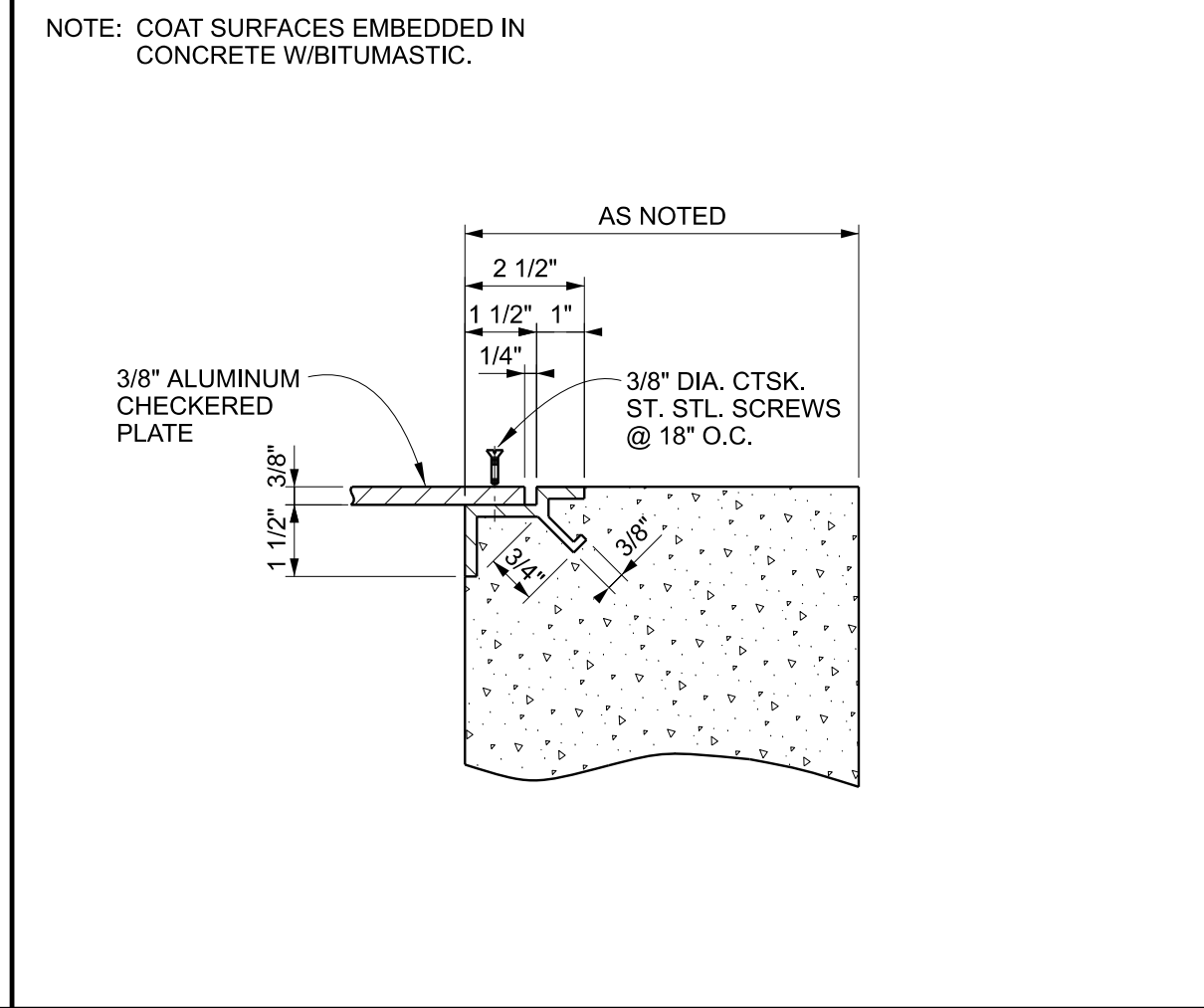
G11 PIPE SUPPORT NO SCALE



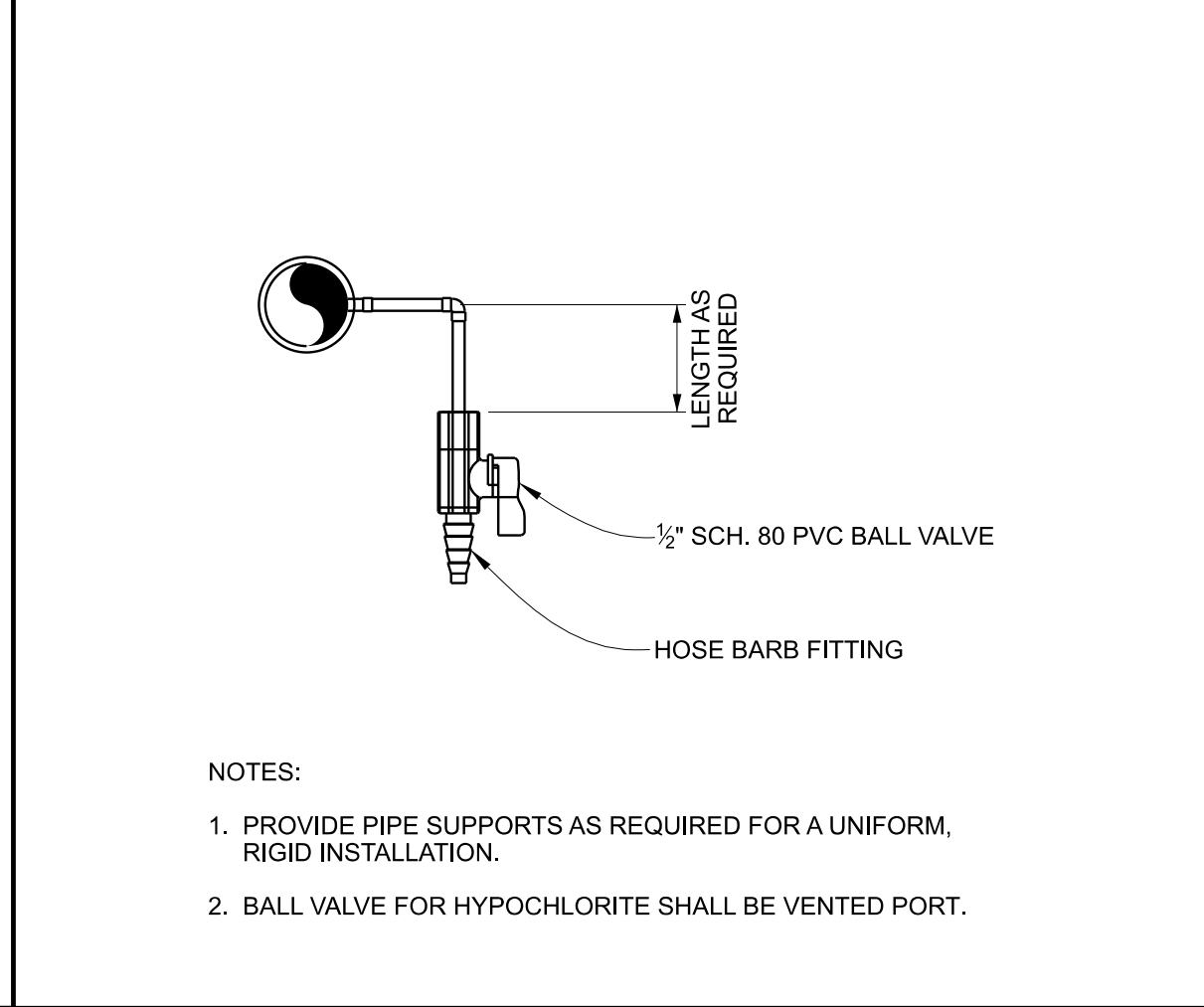
A1 ALUMINUM STAIR DETAIL NO SCALE



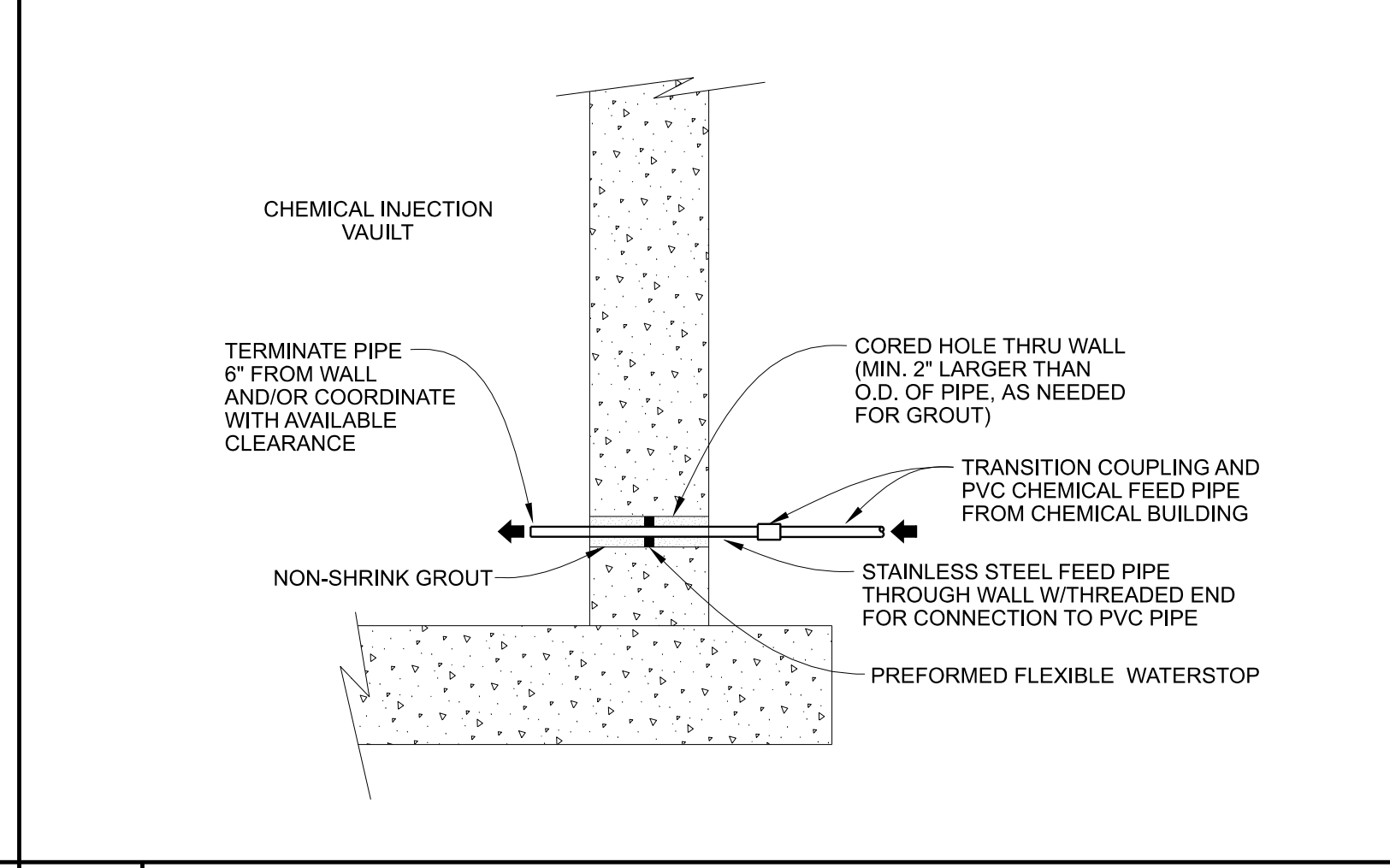
D4 FLUSHING PORT ASSEMBLY NO SCALE



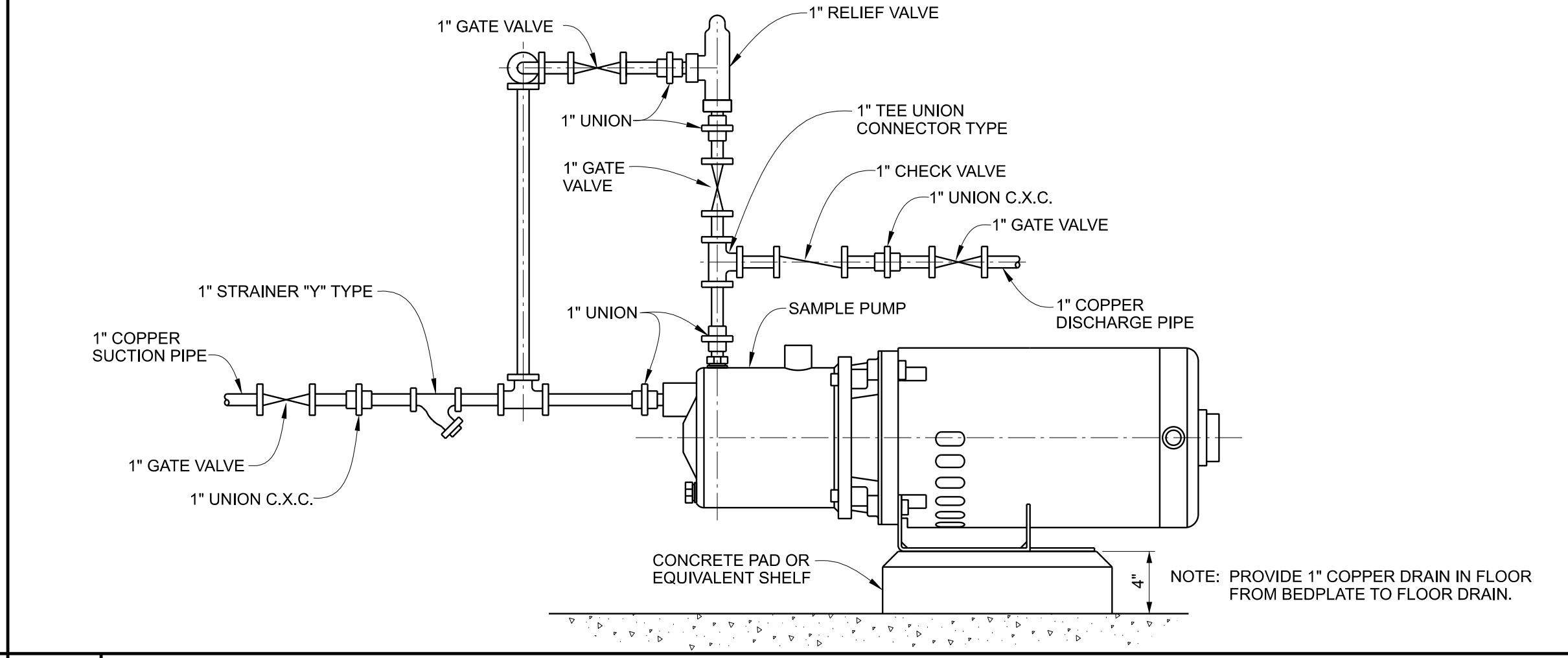
D8 ALUMINUM PLATE DETAIL NO SCALE



D11 SAMPLE TAP NO SCALE



A4 CHEMICAL FEED PIPE PENETRATION DETAIL NO SCALE



A8 SAMPLE PUMP INSTALLATION NO SCALE

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