

CITY OF UMATILLA, OREGON

**BID PROPOSAL AND CONTRACT DOCUMENTS
FOR THE CONSTRUCTION OF**

UMATILLA FALLS ENTRY MONUMENT AND FOUNTAIN

Contract Administrator:

City of Umatilla
Umatilla, Oregon
David Stockdale, City Manager
Phone: 541-922-3226
Email: david@umatilla-city.com



SEPTEMBER 2022

Engineer:

J-U-B ENGINEERS, Inc.
3611 South Zintel Way
Kennewick, WA 99337
(509) 783-2144



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City of Umatilla –Umatilla Falls
Entry Monument and Fountain

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SECTION 2 - SPECIFICATIONS

CONTRACT SPECIFICATIONS AND STANDARD SPECIFICATIONS

SPECIFICATIONS

Specifications in decreasing order of precedence shall consist of the following:

1. Supplemental Technical Specifications – Contained Herein

<u>Section</u>	<u>Name</u>
01025	Measurement and Payment
01300	Submittal Procedures
01700	Contract Closeout

2. Special Provisions – Contained Herein

3. City of Umatilla – Design & Construction Standards & Specifications For Public Works Improvements - Incorporated by Reference

4. 2021 Oregon Standard Specifications for Construction (American Public Works Association, Oregon Chapter and Oregon Department of Transportation) - Incorporated by Reference

Contract Addenda and Change orders shall take precedence over these items.

SUPPLEMENTAL TECHNICAL SPECIFICATIONS

**SECTION 01025
MEASUREMENT AND PAYMENT**

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. General Description of Measurement and Payment.

1.2 RELATED SECTIONS

- A. Bid Proposal.
- B. Special Provisions.

1.3 GENERAL DESCRIPTION OF MEASUREMENT AND PAYMENT

- A. This Section describes Measurement and Payment for items in the Bid Proposal.
- B. Measurement and Payment for the bid items listed in the Bid Proposal shall be on the basis of the description in the Special Provisions, Oregon Standard Specifications for Construction, Technical Specifications and Drawings. Unless the work to be done is specifically called out to be measured and paid for in the Bid Proposal, payment for such work shall be included in other applicable items, and there shall be no separate measurement and payment for the work. All other measurement and payment shall be in accordance with this Section.
- C. Items listed in the Bid Proposal - Unit Price Schedule(s) as lump sum (LS) shall include all work for the complete installation as generally described in the Drawings and the Special Provisions, Oregon Standard Specifications for Construction, and Technical Specifications.
- D. Payment shall be made at the contract bid price listed in the Bid Proposal.
- E. Partial payment for unit price bid items and lump sum bid items only partially completed at the end of monthly pay periods shall be made based upon the Engineers interpretation of the percentage of work completed. Partial payment for materials delivered to the project site and properly stored will be considered if said materials have been submitted to the Engineer for review per Section 01300 and supporting invoices and documentation have been provided.
- F. Quantities indicated in the Bid Proposal, if any, are for bidding and contract purposes only, unless specified otherwise in the Special Provisions, Oregon Standard Specifications for Construction or Technical Specifications.
- G. If the actual work requires more or fewer quantities than those quantities indicated in the Bid Proposal, the Contractor shall provide the required quantities.
- H. Full compensation for all required labor, products, tools, equipment, materials, transportation, services and incidentals, erection, application or installation of an item of the work, including mobilization, demobilization, supervision, overhead and profit.

- I. Final payment for work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the Engineer multiplied by the unit price for work which is incorporated in or made necessary by the work, unless specified otherwise.

1.4 BASE BID ITEMS:

A. MOBILIZATION

1. Measurement for “Mobilization” will be on a lump sum basis in accordance with Section 00210 of the Oregon Standard Specifications.
2. Payment will be made at the contract lump sum price for “Mobilization” and shall be in accordance with Section 00210 of the Oregon Standard Specifications and Section 00210 in the Revisions to the Oregon Standard Specifications.

B. CONSTRUCTION MATERIAL TESTING

1. Measurement for the “Construction Material Testing” will be on a lump sum basis in accordance with Section 00221 of the Oregon Standard Specifications.
2. Payment will be made at the contract lump sum price for “Construction Material Testing” and shall be in accordance with the Plans, Section 00165 of the Oregon Standard Specifications and meet the testing type and frequencies in the Schedule of Material Testing of Section 00221 in the Revisions to the Oregon Standard Specifications.

C. TEMPORARY WORK ZONE TRAFFIC CONTROL, COMPLETE

1. Measurement for the “Temporary Work Zone Traffic Control, Complete” will be on a lump sum basis in accordance with Section 00221, Measurement Method “B” of the Oregon Standard Specifications.
2. Payment will be made at the contract lump sum price for “Temporary Work Zone Traffic Control, Complete”, Payment Method “B” and shall be in accordance with the Plans, Section 00221 of the Oregon Standard Specifications and Section 00221 in the Revisions to the Oregon Standard Specifications. Payment shall include but not be limited to providing all traffic control personnel, traffic control devices, notifications, and coordination with the Owner and Oregon Department of Transportation.

D. POLLUTION CONTROL PLAN

1. Measurement for the “Pollution Control Plan” will be on a lump sum basis in accordance with Section 00290.80 of the Oregon Standard Specifications.
2. Payment will be made at the contract lump sum price for “Pollution Control Plan” and shall be in accordance with Section 00290.90 of the Oregon Standard Specifications.

E. SITE DEMOLITION

1. Measurement for the “Site Demolition” will be made on a lump sum basis in accordance with Section 00190 of the Oregon Standard Specifications.
2. Payment will be made at the contract lump sum price for “Site Demolition” for all work conforming to the Plans, Section 00310 and Section 00320 of the Oregon Standard Specifications.

F. SITE EARTHWORK

1. Measurement for the “Site Earthwork” will be on a lump sum basis in accordance with Section 00190 of the Oregon Standard Specifications.
2. Payment will be made at the contract lump sum price for “Site Earthwork” for all work conforming to the Plans, Section 00330, Section 00335, and Section 00510 of the Oregon Standard Specifications.

G. ENTRY FOUNTAIN

1. Measurement for “Entry Fountain” will be made on a lump sum basis in accordance with Section 00190 of the Oregon Standard Specifications.
2. Payment will be made at the contract lump sum price for “Entry Fountain” and shall be for all work to complete the entry fountain in accordance with the Plans and all other work not specifically measured for payment in Section 01025. Payment shall include but not be limited to all excavation, backfill, structure aggregate bases, forming, cement concrete placing and finishing, vaults, pumps, valves, piping, fittings, nozzles, filters, heaters, tanks, sensors, meters, lighting systems, controls, and all other accessories or appurtenances required for a complete and operable system.

H. SITE IRRIGATION AND LANDSCAPING

1. Measurement for “Site Irrigation and Landscaping” will be made on a lump sum basis in accordance with Section 00190 of the Oregon Standard Specifications.
2. Payment will be made at the contract lump sum price for “Site Irrigation and Landscaping” and shall be for work conforming to the Plans, Section 01040 and Section 01120 in accordance of the Oregon Standard Specifications the Revisions to the Oregon Standard Specifications.

I. SITE POTABLE WATER IMPROVEMENTS

1. Measurement for “Site Potable Water Improvements” will be made on a lump sum basis in accordance with Section 00190 of the Oregon Standard Specifications.
2. Payment will be made at the contract lump sum price for “Site Potable Water Improvements” and shall be for work conforming to the Plans and Specifications. Payment shall include but is not limited to all trench excavation, backfill and compaction, pipe bedding, waterline pipe and fittings, valves,

enclosures, vaults, compacted aggregate bases, appurtenances, disinfecting, and testing to complete the work.

J. SITE ELECTRICAL

1. Measurement for “Site Electrical” will be made on a lump sum basis in accordance with Section 00190 of the Oregon Standard Specifications.
2. Payment will be made at the contract lump sum price for “Site Electrical” and shall be for work conforming to the Plans. Payment includes but is not limited to removal of existing electrical systems where required, new electrical service (primary and secondary), panels, trench excavation, bedding, and backfill, conduits, wiring, and connections to provide electrical service to the fountain, vaults, and backflow assembly box.

K. OPERATIONAL ACCEPTANCE TESTING AND TRAINING

1. Measurement for “Operational Acceptance Testing and Training” will be made on a lump sum basis in accordance with Section 00190 of the Oregon Standard Specifications.
2. Payment will be made at the contract lump sum price for “Operational Acceptance Testing and Training” and shall be for meeting the requirements of the Plans and Section 01700.

L. PROJECT CLOSEOUT DOCUMENTATION

1. Measurement for “Project Close Out Documentation” will be made on a per foot basis in accordance with section 00190 of the Oregon Standard Specifications.
2. Payment will be made at the contract lump sum price for “Project Closeout Documentation” and shall be for meeting the requirements of Section 01700.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

**SECTION 01300
SUBMITTAL PROCEDURES**

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Submittal Procedures and Requirements.
- B. Construction Progress Schedules.
- C. Proposed Products List.
- D. Product Data.
- E. Shop Drawings.
- F. Certificates.
- G. American Iron and Steel.
- H. Manufacturer's Instructions.
- I. Samples.
- J. Submittal Limits.

1.2 SUBMITTAL PROCEDURES AND REQUIREMENTS

- A. Submittals not following these procedures or requirements will be returned to the Contractor without being reviewed.
- B. Transmit each submittal with a submittal form identifying the Project Name, Contractor, Subcontractor or supplier, corresponding plan sheets or specification section, submittal name and number. A copy of the submittal transmittal follows this section.
- C. Sequentially number the transmittal forms. Resubmittals shall have original number with an alphabetic suffix.
- D. Provide Contractor's stamp on cover letter, signed or initialed, certifying that review, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents. **SUBMITTALS WILL BE RETURNED IF NOT CERTIFIED.**
- E. Schedule submittals to expedite the Project and send via e-mail to the Engineer. Coordinate submission of related items. Except for samples or previously agreed upon submittals, **ALL SUBMITTALS SHALL BE SUBMITTED ELECTRONICALLY, EACH AS A SINGLE FILE IN PORTABLE DOCUMENT FORMAT (PDF).**

- F. The Contractor shall coordinate submittals with the work so that work will not be delayed. The Contractor shall coordinate and schedule different categories of submittals, so that one will not be delayed for lack of coordination with another. No extension of time will be allowed because of failure to properly schedule submittals. The Contractor shall not proceed with work related to a submittal until the submittal process is complete.
- G. Provide sufficient information together with technical cuts and technical data to allow an evaluation to be made to determine that the item submitted is in compliance with Contract Documents.
- H. When specified, or as requested by the Engineer, the Contractor shall submit a copy of the technical specification with each subsection clearly marked for conformance or nonconformance with the subsection. Where the proposed equipment deviates from the specification, all necessary information and supporting calculations to evaluate the deviation shall be attached. The City retains its right to reject without justification the proposed deviation in favor of the specification, as written. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work. Identify requests for “or equal” and “or equivalent” items. Justify the said deviation or “substitution” in detail in a separate letter immediately following the transmittal sheet (written requests through Contractor only):
1. If justification is not given, shop drawing can be rejected and returned without further action.
 2. If justification is not given, deviation is not approved even if shop drawing is approved.
- I. In making request for “or equal” and “or equivalent” items, Contractor represents: (Note: This section does not address substitutions for major equipment during the bidding period.)
1. They have personally investigated proposed item, has determined that it is adequate or superior in all respects to that specified, and that it will perform the function for which it is intended.
 2. They will provide same guarantee for “or equal”/“or equivalent” item as for item specified.
 3. They will coordinate installation of accepted “or equal”/“or equivalent” item into work, to include building modifications if necessary, making such changes as may be required for work to be complete in all respects.
 4. They waive all claims for additional costs and/or time related to “or equal”/“or equivalent” item which subsequently arise.
- J. For previously agreed upon submittals where hard copies will be allowed, submit the number of copies which the Contractor requires to be returned, plus three (3) copies which will be retained by the Engineer. Submit at least 2 samples when sample submittals are required unless otherwise specified. Special operation and maintenance submittal requirements are discussed below.

- K. The Contractor shall be responsible for submitting complete and accurate information in accordance with the Contract Documents. All submittals requiring a third review by the Engineer shall be considered unresponsive and the Owner will charge the Contractor on a time and materials basis for all subsequent reviews and all related administrative costs.
- L. Submittal review comments will be distributed to affected parties. Parties shall promptly report any inability to comply with provisions. A copy of the submittal review comments form is attached at the end of this section.
- M. Revise and resubmit submittals as required, identify all changes made since previous submittal in the transmittal sheet or in a cover letter.
- N. The Engineer's review of Contractor submittals shall not relieve the Contractor of the entire responsibility for the correctness of details and dimensions. The Contractor shall assume all responsibility and risk for any misfits due to any errors in Contractor-submitted submittals. Any fabrications or other work performed in advance of the receipt of approved submittals shall be entirely at the Contractor's risk and expense. The Contractor shall be responsible for the dimensions and the design of adequate connections and details.
- O. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.

1.3 CONSTRUCTION PROGRESS SCHEDULES

- A. Submit initial schedules within seven (7) days after date established in Notice of Award for Engineer review. Submit progress schedule no later than Preconstruction Conference.
- B. Revise and resubmit as required.
- C. Submit revised Progress Schedules at each progress meeting, identifying changes since previous version.
- D. Distribute copies of reviewed schedules to Project site file, subcontractors, suppliers, and other concerned parties.
- E. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.
- F. Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate early and late start, early and late finish, float dates, and duration.
- G. Indicate estimated percentage of completion for each item of Work at each submission.
- H. Revisions to Schedules:

1. Indicate progress of each activity to date and projected completion date of each activity.
2. Identify activities modified since previous submittal, major changes in scope, and other identifiable changes.
3. Prepare narrative report to define problem areas, anticipated delays, and impact on Schedule. Report corrective action taken, or proposed, and its effect.

1.4 PROPOSED PRODUCTS LIST

- A. Within seven (7) days after date of Owner-Contractor Agreement, submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product. Products list as a minimum shall include:
 1. Fountain fittings and nozzles
 2. Valves, each type
 3. Filters
 4. Pumps, each type
 5. Pump strainers
 6. Chemical controller and sensors
 7. Chemical feeders & storage tanks
 8. Instrumentation, controls, & sensors
 9. Veneer, Stones, Tiles, Finishes with color options
 10. Water level controls
 11. Cleaning and Testing Equipment
 12. Flow meters
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.5 PRODUCT DATA

- A. Submit to Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- C. After review, distribute in accordance with Section 1.2 of this technical specification and for record documents described in Technical Specification 01700.

1.6 SHOP DRAWINGS

- A. Submit to Engineer for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents.
- B. After review, distribute in accordance with Section 1.2 of this technical specification and for record documents described in Technical Specification 01700.

1.7 CERTIFICATES

- A. When specified in individual specification sections, submit certification by manufacturer, installation/application subcontractor, or Contractor to Engineer, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or Product but must be acceptable to the Engineer.

1.8 MANUFACTURER'S INSTRUCTIONS

- A. Submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to Engineer for delivery to Owner. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.9 SAMPLES

- A. Submit samples in accordance with the following requirements when requested in individual sections or as requested by the Engineer.
- B. Submit samples to illustrate functional and aesthetic characteristics of the Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- C. Submit samples of finishes from the full range of manufacturers' standard colors, textures, and patterns for Owner's selection.
- D. Include identification on each sample, with full Project information.
- E. Submit the number or samples specified in individual specification Sections or as requested by the Engineer.

1.10 SUBMITTAL LIMITS

- A. Two submittals will be permitted for each item in this section at no cost to the Contractor. The two submittals include one initial submittal and one resubmittal.
- B. All submittals requiring a third review by the Engineer shall be considered unresponsive and the Owner will charge the Contractor on a Time and Materials basis for the third and all subsequent reviews and all related administrative costs not to exceed \$1,000.00 for each resubmittal.
- C. All submittals, unless noted otherwise in the Contract Documents, shall be submitted within fourteen (14) calendar days from Notice to Proceed. Those items requiring resubmittal shall be submitted within fourteen (14) calendar days from date of return to Contractor.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION**3.1 REVIEW PROCEDURE**

- A. Submittals for Review and Comment, unless otherwise specified, will be reviewed by the Engineer within thirty (30) days after receipt of the submittal. The returned submittal will indicate one of the following actions:
1. If the review indicates that the material, equipment or work method is in general conformance with the contract drawings/specifications, the submittal copies shall be marked "Reviewed". In this event the Contractor may begin to incorporate the material/ equipment/work method covered in the submittal, subject to the full requirements of the Contract Documents.
 2. If the review indicates that the material, equipment, or work method is not in general conformance with the design concept or in compliance with the contract drawings/specifications, or if the submittal is incomplete, the submittal copies shall be marked "Rejected". Submittals containing deviations from contract drawings/specifications that have not been clearly identified and that have not been noted previously in correspondence also shall be considered rejected, even if the Engineer fails to note the deviation. No deviation will be accepted unless clearly marked on the submittal. In this case, except at its own risk, the Contractor shall not undertake work covered by this submittal until the attached comments have been confirmed by a separate written communication or the submittal has been revised, resubmitted, and returned to the Contractor.
 3. If the review indicates that the submittal is insufficient or that pertinent information is required, the submittal copies shall be marked "Submit Specific Item." In this case, except at its own risk, the Contractor shall not undertake work covered by this submittal until the requested additional information has been submitted to the Engineer for review, reviewed by the Engineer, and returned to the Contractor.
 4. If the review indicates that the submittal is insufficient or that limited corrections are required, the submittal copies shall be marked "Furnish as Corrected". The Contractor may begin to implement the work methods or incorporate materials/equipment covered in the submittal, in accordance with the corrections/comments noted.
 5. If the review reveals that the submittal is insufficient or contains incorrect data and that the comments require revision and resubmittal, the submittal copies shall be marked "Revise and Resubmit". In this case, except at its own risk, the Contractor shall not undertake work covered by this submittal until the attached comments have been confirmed by a separate written communication of the submittal that has been revised, resubmitted, and returned to the Contractor.

3.2 EFFECT OF REVIEW OF CONTRACTOR’S SUBMITTALS

- A. Review of drawings, methods of work, or information regarding materials or equipment the Contractor proposes to provide, shall not relieve the Contractor of its responsibility for errors therein and shall not be regarded as an assumption of risks or liability by the Engineer on behalf of the City, or by any officer or employee of the City, and the Contractor shall have no claim under the Contract on account of the failure, or partial failure, of the method of work, material, or equipment so reviewed.

3.3 SUPPLEMENTS

- A. Supplements listed below, following “END OF SECTION,” are a part of this specification and provided for Contractor’s reference:
 - 1. Transmittal of Contractor’s Submittal.
 - 2. Submittal Review Comments Form.

END OF SECTION

TRANSMITTAL OF CONTRACTOR'S SUBMITTAL
(Attach to Each Submittal)

TO: City of Umatilla
700 6th St; PO Box 130
Umatilla, OR 97882

FROM: _____
(Contractor)

Date: _____

Submittal No.: _____ --
(Sequential No.)

New Submittal Resubmittal

Previous Submittal No(s): _____

Project: Umatilla Falls Entry Monument & Fountain

Project No.: _____

SUBMITTAL TYPE: Shop Drawings Administrative Sample
 Quality Control Contract Closeout Or-Equal/Substitute

The following items are hereby submitted:

Number of Copies	Description of Item Submitted (Type, Size, Model Number, Etc.)	Spec. Para. No.	Drawing or Brochure Number	Contains Variation to Contract	
				No	Yes

CONTRACTOR hereby certifies that (i) CONTRACTOR has complied with the requirements of Contract Documents in preparation, review, and submission of designated Submittal and (ii) the Submittal is complete and in accordance with the Contract Documents and requirements of laws and regulations and governing agencies.

By: _____
CONTRACTOR (Authorized Signature)

SUBMITTAL REVIEW COMMENTS



DATE: _____	PROJECT: City of Umatilla Umatilla Falls Entry Monument and Fountain	
SUBMITTAL NO.: _____	PROJECT NO.: _____	
SPEC SECTION: _____	REVIEWER'S NAME: _____	
DESCRIPTION: _____	PAGE: _____	
SUBMITTAL TYPE: <input type="checkbox"/> SHOP DRAWING <input type="checkbox"/> SAMPLE <input type="checkbox"/> INFORMATION		
1. REVIEWED	4. FURNISH AS CORRECTED	
2. REJECTED	5. REVISE AND RESUBMIT	
3. SUBMIT SPECIFIC ITEM		
NO.	COMMENT	RELATED SPEC PARA./ DRAWING #

This review is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Corrections or comments made on the shop drawings during this review do not relieve contractor from compliance with the requirements of the plans and specifications. Approval of a specific item shall not include approval of an assembly of which the item is a component. Contractor is responsible for: dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and the procedures of construction; coordination of his or her work with that of all other trades; and for performing all work in a safe and satisfactory manner.

J-U-B ENGINEERS, INC.

Date: _____	By: _____
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**SECTION 01700
CONTRACT CLOSEOUT**

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Progress Cleaning
- B. Final Cleaning
- C. Adjusting
- D. Acceptance Testing and Training
- E. Project Record Documents
- F. Operation and Maintenance Data
- G. Closeout Procedures

1.2 PROGRESS CLEANING

- A. As work progresses through the project area, those areas that have been substantially completed shall be cleaned.
- B. Storm drain system, culverts, and catch basins adjacent to the site and affected by tracked dirt shall be cleaned after the project.

1.3 FINAL CLEANING

- A. Execute final cleaning prior to final review.
- B. Clean equipment and fixtures to a sanitary condition.
- C. Clean debris from drainage systems.
- D. Clean site and paved surfaces.
- E. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.4 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

1.5 ACCEPTANCE TESTING AND TRAINING

- A. Contractor to provide and pay all costs relative to start up and or training of Owner's designated operator in the correct use of equipment required for fountain function and operation as recommended by the Manufacturers. Contractor shall supply a qualified field technician for this purpose.

- B. Acceptance Testing (startup and commissioning) shall include all work following equipment and piping installation such as equipment testing, wet testing, dry testing, system testing, and anything required to put the Fountain and Irrigation System (Facilities) in use.
 - 1. Submit Contractor proposed Acceptance Testing Plan, with preliminary O&M manuals for Owner approval.
 - 2. Schedule Acceptance Testing with Owner.
 - 3. Owner's operations staff, J-U-B, etc. shall be present during startup and commissioning activities at Owner's discretion.
 - 4. Contractor, controls integrator, and major equipment representative's personnel assigned to startup and commissioning shall be present and qualified by experience in design, construction, start-up, and operation of similar systems.
 - 5. Contractor to provide chemicals for fountain operation at time of start-up. Provide Chlorine, CO₂, acid, and balancing chemicals as aids in maintaining chemical balance. The Contractor is responsible to maintain proper fountain water chemistry and keep the fountains swept and vacuumed clean until the fountains are turned over to the Owner.
 - 6. Contractor shall operate the systems during startup and commissioning and will be in sole control of its operation.

- C. Following Acceptance Testing, Contractor shall provide operational training to Owner's staff of the Facilities.
 - 1. Submit Contractor proposed Training Plan with Preliminary O&M manuals for Owner approval.
 - 2. Schedule training with Owner.
 - 3. The Contractor shall provide the Owner a training period to acquaint the operators in the use of the Facilities. Training subject matter, at a minimum, shall include:

- a. Precise directions for operation of the filters, chemical control system, including complete chemical treatment, water balance as well as circulation rate and filtration rate of filters and related equipment.
 - b. Landscape irrigation system general operating instructions to include control system.
 - c. Precise directions for draining and/or winterizing of all equipment including fountain components and irrigation systems.
 - d. Parameters to be monitored and controlled, instrument and equipment operations, control strategies, maintenance, and safety of all facilities.
4. Training shall be conducted by Owner-approved individual(s) including fountain Contractor, major equipment suppliers, and controls integrator.
 5. A minimum combined total of 8 hours of training shall be provided by Contractor to Owner's staff. This training period shall consist of 1 session from 8:00 A.M. 5:00 P.M. Training session days shall be on a day that falls Monday through Friday.
- D. Following final completion of the project, fountain Contractor's operations instructor shall be available for follow-on troubleshooting and questions from Owner staff for up to 12 months. A total of 20 hours of follow-on instructor time shall be allowed for by Contractor.

1.6 PROJECT RECORD DOCUMENTS

- A. Maintain on site, one set of the following record documents; record actual revisions to the Work:
1. Plans
 2. Specifications
 3. Addenda
 4. Permits
 5. Change Orders and other Modifications to the Contract
 6. Reviewed shop drawings, product data, and samples
 7. Schematic layout of conduits, circuits, piping, ducts and other similar items, as appropriate.
- B. Store Record Documents separate from documents used for construction.
- C. Record information concurrent with construction progress and make available to Engineer for review.

- D. Specifications: Legibly mark and record at each Product section description of actual Products installed for submittal to Engineer at project completion. Including the following as a minimum:
1. Manufacturer's name and product model and number.
 2. Product substitutions or alternates utilized.
 3. Changes made by Addenda and Modifications.
- E. Record Documents and Shop Drawings: Legibly mark each item to record actual construction including:
1. Measured horizontal and vertical locations of all underground utilities and appurtenances discovered in the course of the Work, referenced to permanent surface improvements.
 2. Measured locations of utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 3. Field changes of dimension and detail.
 4. Details not on original Plans.
- F. Delete Engineer title block and seal from all documents.
- G. Submit documents to Engineer with claim for final Application for Payment.

1.7 OPERATION AND MAINTENANCE DATA

- A. Operation and Maintenance (O&M) Manuals shall be provided to the Owner for all major equipment items as shown by the Plans and Specifications including but not limited to:
1. All pipe and fittings, including fountain inlet and outlet fittings and diverter plates.
 2. All valves, each type.
 3. Fountain equipment, including but not limited to, pumps/motors, strainers, filters, heaters, chemical feed & storage tanks, sensors, meters, and accessories.
 4. Fountain fittings/nozzles.
 5. Fountain lighting system components.
 6. Fountain electrical, instrumentation, and control equipment.
 - a. Recirculation.
 - b. Chemical controls.

- c. Water level controls.
 - d. Lighting controls.
- 7. Cleaning and testing equipment
- 8. Irrigation system components.
- B. Provide PRELIMINARY, and FINAL O&M Manuals for use by the Owner: See “Submittals” below for submittal schedules.
- C. The term "Operation and Maintenance Manual" includes all product-related information and documents that are required for preparation of the Contractor's O&M Manual, and data that is required for inclusion by current regulations of any participating government agency or as a provision of a system warranty.
- D. The term component equipment supplier is used to describe a manufacturer's goods purchased by the Contractor and incorporated into the project.
- E. The O&M Manual shall include, but is not be limited to, the following:
 - 1. Equipment description, equipment function, operating characteristics, limiting operating conditions (minimum, average and, maximum input, temperatures, speeds, production; etc.), operating instructions and procedures for startup, normal and emergency conditions, shutdown, and storage. Photos of equipment shall identify each component identification associated with equipment description and function information.
 - 2. These instructions shall also include precise directions for operation of the filters, chemical control system, including complete chemical treatment, water balance as well as circulation rate and filtration rate of filters and related equipment. They should include precise directions for draining of all equipment and fountain components.
 - 3. Equipment safety considerations relating to installation, operation and maintenance procedures.
 - 4. Installation procedures.
 - 5. Calibration procedures.
 - 6. Routine and preventive maintenance instructions: include all information and instructions required to keep equipment properly lubricated, adjusted, and maintained so that the item functions as intended throughout its full design life.
 - 7. Procedures for disassembly, reassembly, alignment, adjustment, and inspection instructions.
 - 8. Recommended spare parts list to maintain equipment in service.

9. Special Tools required.
 10. For component equipment provide name, address, and telephone number for local sources of equipment and/or replacement parts.
 11. Operational log sheets and maintenance schedules.
 12. Safety Data Sheets (SDSs) for any applicable item (chemicals, oils, lubricants, etc.) provided by the supplier.
 - a. Furnish lubricants of the type and grade necessary to meet the requirements of the equipment.
 13. Warranty Information, Bond(s), and Service contract(s), if applicable.
 14. Equipment Specific and Factory Test Report information shall include:
 - a. Tag name, model, and serial number of the equipment provided
 - b. Name, address, and phone number of manufacturer and manufacturer's local service representative
 - c. Factory Test Reports where applicable
 - d. Approved Shop Drawings (including equipment drawings, schematics, circuit diagrams)
- F. Coordination: The Contractor shall coordinate the delivery and incorporation of O&M Manuals prepared for this project from his component equipment suppliers.
- G. SUBMITTALS
1. Required Delivery for O&M Manuals is as follows:
 - a. PRELIMINARY O&M Manuals are due for Owner review and approval no later than 4 weeks before the time of Acceptance Testing of the system and Training. Acceptance Testing of any process or piece of equipment shall not be permitted until the respective PRELIMINARY O&M Manuals have been received and approved by the Owner's Representative as being sufficient in content to allow the completion of the work.
 - b. FINAL O&M Manuals are due 30 days after the completion of Acceptance Testing of the system. Final payment will not be made until all O&M Manuals are complete and approved.
 2. O&M Manuals shall be submitted in three ring binders with a table of contents and index tabs to identify the various items.

3. O&M Manuals shall use 8½-inch by 11-inch acid free paper of high rag content and quality (20 pound minimum). All text must be legible, type-written or machine printed originals or high quality copies.
4. Each page shall have a binding margin of approximately 1½ inches and be punched for placement in a three-ring “D” style loose-leaf binder, which shall be provided by the Contractor along with the submittal. Thickness of each binder shall be no more than 3 inches.
5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.
 - a. If oversize drawings are necessary, fold drawings to the same size as text pages and use as foldouts.
 - b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind the envelopes in the rear of the manual. At appropriate locations in the manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.
6. Electronic File Format:
 - a. All Contractor O&M Manual information shall be supplied to the Owner in electronic file format that it was originally developed and in condensed portable document format (PDF format).
 - b. Create a bookmark in the navigation frame for each entry in the table of contents.
7. The Contractor shall submit one copy marked “PRELIMINARY” of the O&M Manual with Contractor’s proposed Acceptance Testing Plan and Training Plan. The manual shall include an electronic PDF on thumb drive containing the information contained in the manual.
8. After Acceptance Testing of the system and Training has been completed and substantial completion achieved, the Contractor shall revise and resubmit the FINAL O&M Manuals for the project.
 - a. Three copies of the FINAL O&M Manuals shall be submitted. The Contractor shall submit copies marked “FINAL” of the O&M Manual(s). The manual(s) shall contain an electronic PDF on thumb drive containing the information contained in the manual.
 - (1) The FINAL O&M Manual(s) shall include Acceptance Testing, Test Reports including Results of all installation inspection, field calibration, and field testing reports prepared during the Acceptance Testing of the facility.
 - (2) Warranty Certificates: Copies of all Warranty Certificates shall be included with the FINAL O&M Manual

1.8 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been reviewed, and that Work is complete in accordance with Contract Documents and ready for Engineer's review.
- B. Provide submittals to Engineer that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- D. Submit lien waivers of all materials suppliers and subcontractors.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SPECIAL PROVISIONS

SPECIAL PROVISIONS

REVISIONS TO THE STANDARD SPECIFICATIONS

The Contractor's attention is directed to the **2021 Oregon Standard Specification for Construction and City of Umatilla – Design & Construction Standards & Specifications for Public Works Improvements** which are the Standard Specifications for this Project, containing other directions pertinent to the project.

The bidder shall incorporate all applicable provisions of the **2021 Oregon Standard Specifications for Construction and City of Umatilla – Design & Construction Standards & Specifications for Public Works Improvements**, into this bid proposal. All work performed, materials used in the project, and the legal relations between the parties and the Contractor's requirements shall be as set forth in said Standard Specifications, except as specially and specifically modified or deleted by these Special Provisions.

If conflicting information is noted by the Contractor, it shall be brought to the immediate attention of the Owner for interpretation. In cases of conflicting specifications, the most restrictive requirement will govern.

SECTION 00110 - ORGANIZATION, CONVENTIONS, ABBREVIATIONS AND DEFINITIONS

Comply with Section 00110 of the Standard Specifications modified as follows:

00110.05(e) Reference to Websites - Add the following bullet list to the end of this subsection:

- American Traffic Safety Services Association (ATSSA)
www.atssa.com
- ODOT Construction Section - Qualified Products List (QPL)
www.oregon.gov/ODOT/Construction/Pages/Qualified-Products.aspx
- ODOT Construction Surveying Manual for Contractors
www.oregon.gov/ODOT/ETA/Documents_Geometronics/Construction-Survey-Manual-Contractors.pdf
- ODOT Traffic Control Plans Unit
www.oregon.gov/ODOT/Engineering/Pages/Work-Zone.aspx
- ODOT Traffic Standards
www.oregon.gov/ODOT/Engineering/Pages/Signals.aspx
- QuestCDN
www.questcdn.com

00110.20 Definitions – Add to the end of the section:

Agency – Refers to the City of Umatilla and/or its representatives.

Construction Drawings – The term Construction Drawings and Plans are considered to be the same.

Contracting Agency – Refers to the City of Umatilla and/or its representatives.

Engineer – Is represented by J-U-B Engineers, Inc.

Owner – Is represented by the City of Umatilla.

Special Conditions – The term Special Conditions and Special Provisions are considered to be the same.

SECTION 00120 - BIDDING REQUIREMENTS AND PROCEDURES

Comply with Section 00120 of the Standard Specifications modified as follows:

00120.05 Request for Plans, Special Provisions, and Bid Booklets - Delete this section and replace with the following:

00120.05 Bidding Requirements - Comply with the bid instructions in the contract documents. Bid procedures will be completed per OAR 137-049. Bids are to be submitted as outlined in the Invitation to Bid.

Bidding Procedures

To be considered responsive the Bidder shall submit a price on each and every Bid item included in the Base Bid and all Additive Alternate(s) if listed.

The Owner reserves the right to only award the Base Bid or to award the Base Bid in any combination with the Additive Alternate Bids, if any. The lowest responsible bidder will be the Bidder who submits the lowest bid for the combination of Bid Schedules the Owner elects to award.

00120.15 Examination of Work Site and Solicitation Documents; Consideration of Conditions to be Encountered - Add the following to the end of this subsection:

The Agency will hold a Prebid Meeting for all holders of Solicitation Documents at City Hall, located at 700 6th Street in Umatilla, Oregon at **2:30 P.M.** on **September 21, 2022.**

All prospective Bidders are encouraged to attend this meeting.

Prospective Bidders will be given the opportunity to ask questions relating to any details involved in the performance of the Work under the Contract.

Information distributed, statements made or responses given to questions, by the Agency's representatives at the Prebid Meeting will not in any way alter or affect any of the provisions

contained in the Solicitation Documents or Contract requirements and will not be binding upon the Agency unless confirmed by Addenda.

A site visit will be conducted at the conclusion of the Prebid Meeting.

00120.25 Subsurface Investigations - Add the following to the end of this subsection:

The Summary of the Geotechnical Exploration dated February 1, 2022 performed by GeoProfessional Innovation is provided as an Appendix to these documents. The summary is being provided for informational purposes only.

SECTION 00130 - AWARD AND EXECUTION OF CONTRACT

Comply with Section 00130 of the Standard Specifications modified as follows:

00130.10 Award of Contract – Replace the paragraph that begins with “The Agency will provide Notice ...” with:

The Agency will provide the Notice of Intent to Award electronically.

00130.15 Right to Protest Award - Delete all references to ODOT Procurement Office – Construction Contracts Unit and replace with Agency.

00130.50 Execution of Contract and Bonds - Replace the first sentence of (a) with the following:

- (a) **By the Bidder** – The successful Bidder shall deliver the required number of Contract booklets with the properly executed Contract, Performance Bond, Payment Bond, certification of workers’ compensation coverage, and the required certificated of insurance, to the City of Umatilla, 700 6th Street / PO Box 130 Umatilla OR, 97882 within 15 Calendar Days after the date on which the Contract booklets are sent or otherwise conveyed to the Bidder under 00130.10.

SECTION 00140 - SCOPE OF WORK

Comply with Section 00140 of the Standard Specifications.

00140.00 Purpose of Contract - At the end of the Section, add the following:

00140.01 Bid Items Not Included in the Proposal

All labor, equipment, and materials required for the manufacturing and installation of this project shall be incorporated into the bid items as provided in the bid proposal. Payment for general construction items that are not listed in the Bid Proposal, but are shown or required by the Contract Documents, are indicative of the fact that the items of work not listed are considered as incidental to the bid items listed in the Bid Proposal. Unless the work to be performed is specifically called out in the Bid Proposal, measurement and payment for such work shall be included in other applicable items of the Bid Proposal.

00140.02 Contractor Use of Site and Premises

- (a) Construction activities shall take place between 7:00 a.m. and 7:00 p.m. from Monday through Friday. Construction activities shall not be allowed during any other time periods without approval from the Engineer and Owner.
- (b) Any damage to areas outside the work area shall be repaired to the satisfaction of the Owner to a condition equal to or better than pre-project conditions at no additional cost to the Owner, including areas disturbed during temporary stockpiling of materials and equipment, and construction staging activities.
- (c) Any underground pipe or other facility that is damaged by the Contractor shall be repaired to pre-project conditions and to the satisfaction of the Owner at no additional cost to the Owner.

00140.03 Work Sequence

- (a) The Contractor is responsible to submit Plans to the local Building Department for approval. Plans shall be reviewed, approved, and stamped by the Building Department before the Contractor may begin construction.
- (b) Contractor shall be solely responsible for sequencing all construction activities to meet the requirements of the Contract Documents.
- (c) Coordinate Work with other trades (Fountain, Electrical, Mechanical, Plumbing, Structural, Geotechnical, etc.).
- (d) Coordinate with the independent soil-testing firm to assure proper grading, soil properties, compaction requirements, and if applicable, sub drain locations and installation before commencing Work.
- (e) The Contractor shall place, before commencing the concrete work, all piping, fittings, nozzles, all special fountain equipment, anchors, receptacles, etc., that are to be embedded in concrete and shall be responsible for their positioning in accordance with the Plans.
- (f) After placing fountain reinforcing, but before placing concrete surfaces, the Contractor shall install all the bonding and grounding circuits required for fittings, nozzles, and all other metal items in or around the fountain. The Contractor shall extend the bonding wires to the equipment room in accordance with the requirements of the National Electrical Code, Article 680. All required bonding and grounding circuits shall be provided for and tested for continuity. No concrete shall be applied until this requirement is complied with and the proper electrical inspection has been made and approval received.
- (g) Construct Work to allow for review of all trenching, excavation, and material installation prior to backfilling or other work that would prevent a complete visual inspection of the Work by the Owners representative.
- (h) All fountain, filter, and water lines shall be pressure tested. No backfilling of pipe trenches shall be made until the piping has met the proper pressure test.

- (i) All pressure piping leading to the fountain shall be flushed clean of oil, pipe cuttings, and other foreign matter before interior finish is placed in the fountain. Any stain on the fountain finish due to foreign material from the piping is not acceptable and any stained surfaces shall be cleaned at the Contractor's expense.
- (j) Construct Work in an orderly and timely manner and minimize disruption to vehicular and pedestrian traffic and the surrounding environment. During construction period, coordinate construction schedule and operations with the Owner.
- (k) Any historical or archeological site discovered in the course of Work shall be immediately reported to the Owner, and Work shall cease in the area of the site.

00140.35 Variation in Estimated Quantities - Add the following section:

Payment to the Contractor will be made only for the actual quantities of Work performed and accepted in conformance with the Contract. When the accepted quantity of Work performed under a unit item varies from the original Proposal quantity, payment will be at the unit Contract price for all Work unless the total accepted quantity of any Contract item, adjusted to exclude added or deleted amounts included in change orders accepted by both parties, increases or decreases by more than 25 percent from the original Proposal quantity. In that case, payment for Contract Work may be adjusted as described herein.

The adjusted final quantity shall be determined by starting with the final accepted quantity measured after all Work under an item has been completed. From this amount, subtract any quantities included in additive change orders accepted by both parties. Then, to the resulting amount, add any quantities included in deductive change orders accepted by both parties. The final result of this calculation shall become the adjusted final quantity and the basis for comparison to the original Proposal quantity.

1. Increased Quantities – Either party to the Contract will be entitled to renegotiate the price for that portion of the adjusted final quantity in excess of 1.25 times the original Proposal quantity. The price for excessive increased quantities will be determined by agreement of the parties, or, where the parties cannot agree, the price will be determined by the Engineer based upon the actual costs to perform the Work, including reasonable markup for overhead and profit.
2. Decreased Quantities – Either party to the Contract will be entitled to an equitable adjustment if the adjusted final quantity of Work performed is less than 75 percent of the original Bid quantity. The equitable adjustment shall be based upon and limited to three factors:
 - a. Any increase or decrease in unit costs of labor, materials or equipment, utilized for Work actually performed, resulting solely from the reduction in quantity;
 - b. Changes in production rates or methods of performing Work actually done to the extent that the nature of the Work actually performed differs from the nature of the Work included in the original plan; and
 - c. An adjustment for the anticipated contribution to unavoidable fixed cost and overhead from the units representing the difference between the adjusted final quantity and 75 percent of the original Plan quantity.

The following limitations shall apply to renegotiated prices for increases and/or equitable adjustments for decreases:

1. The equipment rates shall be actual cost but shall not exceed the rates set forth in the Rental Rates Blue Book that is in effect at the time the Work is performed.
2. No payment will be made for extended or unabsorbed home office overhead and field overhead expenses to the extent that there is an unbalanced allocation of such expenses among the Contract Bid items.
3. No payment for consequential damages or loss of anticipated profits will be allowed because of any variance in quantities from those originally shown in the Proposal form, Contract Provisions, and Contract Plans.
4. The total payment (including the adjustment amount and unit prices for Work performed) for any item that experiences an equitable adjustment for decreased quantity shall not exceed 75 percent of the amount originally Bid for the item.

If the adjusted final quantity of any item does not vary from the quantity shown in the Proposal by more than 25 percent, then the Contractor and the Contracting Agency agree that all Work under that item will be performed at the original Contract unit price.

When ordered by the Engineer or Owner, the Contractor shall proceed with the Work pending determination of the cost or time adjustment for the variation in quantities.

The Contractor and the Contracting Agency agree that there will be no cost adjustment for decreases if the Contracting Agency has entered the amount for the item in the Proposal form only to provide a common Proposal for Bidders.

00140.40 Differing Site Conditions - Replace the first sentence of the third paragraph with the following:

The party discovering such a condition shall, within 24-hours of discovery, notify the other party, in writing, of the specific differing conditions before they are disturbed and before the affected Work is performed.

SECTION 00150 - CONTROL OF WORK

Comply with Section 00150 of the Standard Specifications modified as follows:

00150.10 Coordination of Contract Documents – Delete the first paragraph and Part (a) in 00150.10 and replace it with the following:

The complete contract includes these parts: The contract form, bidder's completed form, contract plans, contract provisions, standard specifications, special provisions, standard plans, addenda, various certifications and affidavits, supplemental agreements, addenda, change orders and other various documents attached hereto. These parts complement each other in describing a complete work. Any requirement in one-part binds as if stated in all parts.

(a) Order of Precedence – In the case of discrepancy or conflict in the plans, standard specifications, and/or special provisions, they shall be resolved in the following order in decreasing precedence:

- Contract Change Orders;
- Addenda;
- Contract Forms including the Performance Bond, Payment Bond, and General Conditions;
- Supplemental Technical Specifications;
- Special Provisions
- Bid Proposal;
- Stamped Engineer prepared Plans specifically applicable to the project and bearing the project title;
- Reviewed and accepted, stamped Working Drawings;
- 3D Engineered Models and supplemental Engineer prepared line, grade, and cross section data applicable to the project;
- Standard Drawings;
- Approved unstamped Working Drawings and 3D Construction Models;
- City of Umatilla Design and Construction Standards and Specifications for Public Works Improvements.
- 2021 Oregon Standard Specification for Construction.
- Information to Bidders; and
- All other Contract Documents not listed above.

Supplemental agreements, and approved revisions to Plans and Specifications will take precedence over the documents listed above.

On the Plans, working drawings, and standard plans, written dimensions shall take precedence over scaled dimensions.

This order of precedence shall not apply when work is required by one part of the Contract but omitted from another part or parts of the Contract. The required in one part must be furnished even if it is not mentioned in other parts of the Contract.

Supplements of the 2021 Oregon Standard Specification for Construction by the City of Umatilla Design and Construction Standards and Specifications for Public Works Improvements shall prevail.

00150.15 Construction Stakes, Lines, and Grades – Add the following to Part (a) in 00150.15. Replace Part (b) and Part (c) with the following in:

(a) General – Contractor shall protect permanent and temporary benchmarks within the project boundary.

(b) Agency Responsibilities - Replace this subsection, except for the subsection number and title, with the following:

The Owner will:

- Provide copies of Plans and Specifications; and,
- Provide horizontal and vertical alignment control data used to create the Plans

(c) Contractor Responsibilities - Replace this subsection, except for the subsection number and title, with the following:

The Contractor shall:

- Provide that all survey work shall be completed under the direction and review of a Professional Land Surveyor registered in the State of Oregon.
- Lay out and set construction stakes and marks to establish the lines, grades, slopes, cross sections, and curves, required to complete the Work.
- Set benchmarks and stakes as necessary.
- Calculate and provide finish grades.
- Accurately measure detailed dimensions, elevations, and slopes from the construction stakes and marks.
- Perform the Work in such a manner as to preserve the stakes and marks.
- Set any reference lines for automatic control from the control stakes. Construction Staking is the sole responsibility of the Contractor.
- Maintain, relocate, or replace existing survey monuments, control points, and stakes within the project area. Perform the work to produce the same level of accuracy as the original monuments in a timely manner, at no additional cost to the Agency.
- Preserve survey monuments according to section 00170.82(c), ORS 209.140, and ORS 209.150. If such monuments are to be disturbed or destroyed, comply with requirements of these ORS at no additional cost to the Agency.
- Perform the Contractor responsibilities described in the Construction Surveying Manual for Contractors, Chapter 1.6 (see Section 00305).
- The Contractor shall perform slope staking including intersections and set stakes defining limits for clearing which approximate right-of-way and easements.

00150.37 Equipment Lists and Other Submittals - Add the following to the end of this section:

Two submittals will be permitted for each item at no cost to the Contractor. The two submittals include one initial submittal and one resubmittal.

All submittals requiring a third review by the Engineer or Owner shall be considered unresponsive and the Owner will charge the Contractor on a Time and Materials basis for the third and all subsequent reviews and all related administrative costs not to exceed \$1,000.00 for each resubmittal.

All submittals, unless noted otherwise in the Contract Documents, shall be submitted within fourteen (14) calendar days from Notice to Proceed. Those items requiring resubmittal shall be submitted within fourteen (14) calendar days from date of return to Contractor.

00150.50 Cooperation with Utilities:

Add the following subsection:

00150.50(f) Utility Information - The Contractor is responsible to verify the location of all existing utilities prior to construction. All excavators performing work on this project must comply with all the provisions of ORS 757.541 to 757.571, including notification of all

owners of underground facilities at least 48 business day hours, but not more than 10 business days before commencing an excavation.

In the event of damage to water, gas, telephone or any other underground or overhead utility system, the Contractor shall immediately notify the affected utility of the damage and coordinate the repair work. The Contractor shall make available to the utility company any manpower or equipment that will facilitate the repair and the continuation of the scheduled work. All cost of repairs shall be the responsibility of the Contractor.

The Contractor shall immediately repair any damages or breaks to unmarked existing sewer service pipes, sewer mains, or storm drainage pipes by connecting a section of pipe across the break. Permanent repair of the damaged lines shall be with approved materials and inspected by the Owner's representative.

Client:

City of Umatilla	Scott Coleman, Public Works Director	(541) 922-3226 Ext. 101
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Engineer:

J-U-B Engineers, Inc.	Lee Unterwegner, P.E.	(509) 783-2144
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Utility Location:

OneCall		811
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Power:

Umatilla Electric Cooperative	Angela Richman	(541) 564-4367
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Fiber Optics/Telephone:

Zayo		(360) 558-4215
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LS Networks		(503) 294-5300
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Wind Wave		(541) 561-3862
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Water/Sewer/Storm:

City of Umatilla	Leon Scheel Operations Manager, Public Works	(541) 922-3226
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Gas:

Cascade Natural Gas		(800) 522-1130
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The Contractor shall coordinate all work with the utility companies for marking, removal, and/or relocation of utilities including those shown in the Plans. Unless prior approval is obtained from the Owner, the Contractor is expected to maintain access to all adjoining properties at all times. When access must be temporarily interrupted, the Contractor will be responsible for providing a minimum of 72 hours' notice to affected landowners.

The Contractor shall notify the Fiber Optic Utility in writing, with a copy to the Engineer, at least 14 Calendar Days before beginning Work within 10 feet of the Telecommunication Utility facilities.

Contractor shall:

- Comply with all Federal, State and local laws, regulations and ordinances applicable to work.
- Reference in Contract Documents to local codes shall mean the codes in effect in Umatilla County, City of Umatilla and Oregon.
- Apply for and execute all permits applicable to the work.
- Other standards and codes that apply to the work are designated in the Specifications.

The Gas Utility may operate a high pressure gas pipeline within the Project limits and may require an On-Site safety watcher, at no cost to the Contractor.

In the event of an emergency, and in addition to the calls required by the Utilities notification system, the Contractor shall call:

- Marathon Petroleum Corporation / Andeavor 1-800-725-1514; or
- Avista Corporation 1-800-227-9187; or
- Cascade Natural Gas Corporation 1-888-522-1130; or
- Kinder-Morgan Energy 503-224-3390; or
- Northwest Natural Gas 1-800-882-3377; or
- Ruby Pipeline (LNG) 1-877-712-2288; or
- TransCanada GTN 1-800-447-8066; or
- Williams Pipeline 1-801-584-6948.

The Contractor may need to schedule a “safety watch” and possible “cover up” if any crane work will be taking place during construction. Call Umatilla Electric Cooperative, Operations Department at (541) 564-4358 or (541) 564-4360 to schedule.

Energized power lines overhang portions of the Work with a minimum vertical clearance of approximately 18 feet. The Contractor shall maintain at least 10 feet of safety clearance. Exceptions require written approval from the Umatilla Electric Cooperative and may require an On-Site safety watcher, at no cost to the Owner. The Contractor shall provide the Engineer a copy of the written approval of exception before beginning Work.

An energized below ground transmission power line extend beneath portions of the Work with a minimum vertical clearance of approximately 4 feet. Umatilla Electric Cooperative has agreed to allow the installation of the fountain on-top of their 548 foot run of 1000 J3PH220 underground primary cable that runs west from Switch Cabinet 5N28E151609 on the SE corner of Hwy 395 & Hwy 730 to Vault 5N28E160615 on the SE corner of Lind Rd and Hwy 395. The Contractor may need to schedule a “safety watch” during construction, especially excavations. Call Umatilla Electric Cooperative, Operations Department at (541) 564-4358 or (541) 564-4360 to schedule.

The Contractor shall maintain a safety clearance of at least 50 feet horizontally between construction equipment or vehicles and the point where steel lattice tower legs, wood poles, steel poles, concrete poles, concrete foundation and guy wires enter the earth.

The Contractor shall obtain written approval from the Telecommunication Utility for excavating within 10 feet of a buried fiber optic communications cable. The Telecommunication Utility may require an On-Site safety watcher at no cost to the Contractor for monitoring purposes. The Contractor shall provide the Engineer a copy of the written approval before beginning work.

The Contractor shall notify the Water Utility in writing, with a copy to the Engineer, at least 14 Calendar Days before beginning Work within 10 feet of the Water Utility facilities.

SECTION 00160 - SOURCE OF MATERIALS

Comply with Section 00160 of the Standard Specifications:

SECTION 00165 - QUALITY OF MATERIALS

Comply with Section 00165 of the Standard Specifications modified as follows:

00165.05 Material and Compaction Testing - Add the following new Section:

The Contractor shall be responsible for scheduling and paying for all material and compaction testing required by these Specifications. All testing services shall be performed by an independent, certified testing firm and/or laboratory hired by the Contractor and approved by the Engineer. The Contractor shall submit information relating to the qualifications of the proposed testing firm to the Engineer for review and approval prior to the preconstruction conference. The testing service shall provide copies of all test results to the Engineer immediately after completion. All costs associated with the testing outline below will be the Contractor’s responsibility. The Contractor will be required to provide all excavation and trench safety equipment necessary to conduct compaction testing at all depths in the pipe trench or structural excavation. This requirement shall include furnishing and placing trench boxes and ladders as required to access the trench.

The testing frequencies listed below may be modified to assure compliance with the Specifications. The Contractor will be responsible for completion of the following minimum testing:

Schedule of Material Testing	
Material	Test Type and Frequency
Concrete (for each submitted mix design)	One (1) slump, one (1) air entrainment and four (4) cylinders meeting the following frequencies: 1. At least once a day. 2. At least once for every 150 cubic yards. 3. At least once for each 5000 square feet of surface area for slabs or walls.

Schedule of Material Testing	
Material	Test Type and Frequency
Subgrade Compaction	<p>Copies of the moisture density curves and gradation for each type of material and copies of all test results.</p> <p>Maintenance Access Road: 3 random compaction tests. Fountain Concrete Slab Area: 4 random compaction tests. All Vaults: 1 compaction test per each vault.</p>
Crushed Aggregate Compaction	<p>Copies of the moisture density curves and gradation for each type of material and copies of all test results.</p> <p>Maintenance Access Road: 3 random compaction tests. Fountain Concrete Slab Area: 3 random compaction tests. All Vaults: 1 compaction test per each vault.</p>
Trench Backfill Compaction	<p>Copies of moisture-density curves for each type of material encountered and copies of all test results.</p> <p>Water Service Pipe and Electrical Conduits: A minimum of one (1) compaction test shall be taken for each 25 linear feet of or portion there of trench line as follows: One (1) compaction test shall be taken at the initial 2-foot of cover over the pipe, one (1) compaction test at every 2 feet of cover thereafter, and one (1) compaction test at subgrade.</p>
Structure Backfill	<p>Copies of the moisture density curves for each type of material encountered and copies of all test results.</p> <p>Concrete Structures and Pe-Cast Concrete Vaults: One (1) random compaction test shall be taken on opposite sides of each structure at mid-point of backfill and at finished subgrade.</p>
Potable Water Mains	Hydrostatic test in accordance with Section 01140.51 of the City of Umatilla

Schedule of Material Testing	
Material	Test Type and Frequency
	Design and Construction Standards and Specifications for Public Works Improvements.
Irrigation Main Line and Lateral Lines	Hydrostatic test in accordance with Section 01120.47 of the Oregon State Department of Transportation Standards Specifications for Construction, 2021.

If any test fails, additional testing will be undertaken to identify the limits of the failure. Failed material or material that does not meet the required compaction level shall be removed and replaced with materials that meet the specifications and compaction requirements. Additional testing of quality assurance required because of non-conformance to specified requirements shall be performed at no cost to the Owner. Contractor shall be responsible for payments due to retesting.

The Owner reserves the right to conduct additional testing throughout the course of the project. Should an additional test fail the Contractor will be responsible for all costs associated with the initial test and all subsequent testing required to establish the limits of the failure, testing to establish replaced and recompacted material meets the compaction requirements and testing necessary to determine if the replacement material meets the requirements of the specifications.

Should the Owner perform additional testing and the test passes, the Owner will be responsible for the testing costs. The responsibility for the cost of additional testing shall be limited to the actual cost of the independent testing company.

00165.91 Fabrication Inspection Expense.

Delete this Section in its entirety.

SECTION 00170 - LEGAL RELATIONS AND RESPONSIBILITIES

Comply with Section 00170 of the Standard Specifications modified as follows:

00170.70 Insurance - Replace this subsection with the following:

00170.70 Insurance:

(a) Insurance Coverages -

The following insurance coverages and dollar amounts are required pursuant to this subsection:

Insurance Coverages	Combined Single Limit per Occurrence	Annual Aggregate Limit
Commercial General Liability	\$2,000,000	\$2,000,000
Commercial Automobile Liability	\$1,000,000	Combined single limit each accident

(d) Additional Insured - Add the following as Additional Insureds under the Contract:

- The City of Umatilla and its officers, agents, and employees
- The City of Umatilla City Council
- Oregon State Department of Transportation
- J-U-B Engineers, Inc.
- BNA Consulting
- Water Design Inc.
- GeoProfessional Innovation
- Umatilla Electric Cooperative

(e) Excess/Umbrella Liability - Add the following for Excess/Umbrella Liability

\$1,000,000 Stop Gap / Employers' Liability each accident

00170.72 Indemnity/Hold Harmless - Add the following paragraph and bullet(s) to the end of this subsection:

Extend indemnity, defense and hold harmless to the Agency and the following:

- The City of Umatilla and its officers, agents, and employees
- City of Umatilla City Council
- Oregon State Department of Transportation
- J-U-B Engineers, Inc., and its subconsultants
- Umatilla Electric Cooperative

00170.80 Responsibility for Damage to Work:

(c) Responsibility for Damage to Work Caused by Public Traffic - Replace the sentence that begins "The Contractor may apply for relief of responsibility..." with the following sentence:

The Contractor may apply for relief of responsibility for damage to Work caused by Public Traffic by submitting a signed Contractor's Request for Relief of Responsibility, form 734-2768, to the Engineer by mail, personal delivery, courier, scanned and submitted via email, or other agreed-upon method.

00170.89 Protection of Utility, Fire-control, and Railroad Property and Services; Repair; Roadway Restoration:

(b) Restoration of Roadway after Repair Work - Replace the paragraph that begins " The Contractor shall restore the Roadway ..." with the following paragraph:

The Contractor shall restore the Roadway to a condition at least equal to that which existed before the repair work addressed under this Subsection was performed, as directed by the Engineer, at no additional cost to the Agency.

SECTION 00180 - PROSECUTION AND PROGRESS

Comply with Section 00180 of the Standard Specifications modified as follows:

00180.40 Limitation of Operations – Add the following subsection listed below.
Add the following subsection:

00180.40(c) Specific Limitations - Limitations of operations specified in these Special Provisions include, but are not limited to, the following:

Limitations	Subsection
Cooperation with Utilities	00150.50
Cooperation with Other Contractors	00150.55
Railways	00170.01(e)
On-Site Work	00180.40(b)
Contract Time	00180.50(h)
Right-of-Way and Access Delays	00180.65
Closed Lanes	00220.40(e)(1)
Special Events	00220.40(e)(2)(b)
Limited Duration Road Closure	00220.40(f)
Road Closure Using Rolling Slowdown Method	00220.40(g)
Regulated Work Areas	00290.34(a)
Noise Control	00290.32
Maintenance Under Traffic	00620.43
Opening Sections to Traffic	00744.51
Opening Sections to Traffic	00745.51

Highway 395 and 730 shall not be closed for any length of time without written approval from the Oregon Department of Transportation. Contact Paul Howland, District 12 Assistant District Manager, (541) 278-6044 at the Oregon State Department of Transportation.

The Contractor shall be aware of and subject to schedule limitations in the Standard Specifications that are not listed in this subsection.

00180.41 Project Work Schedules - After the paragraph that begins "One of the following Type..." add the following paragraph:

In addition to the "look ahead" Project Work schedule, a Type C schedule as detailed in the Standard Specifications is required on this Contract.

00180.41(a)(1) Schedule - Replace the paragraph that begins "10 Calendar Days prior to the preconstruction..." with the following:

At least 5 Calendar Days prior to the preconstruction conference, the Contractor shall provide to the Engineer four copies of a Project Work schedule, including a time-scaled bar chart and narrative, showing:

00180.43 Commencement and Performance of Work - Replace the bulleted list with the following:

- The Owner anticipates significant risks due to long-lead materials including but not limited to concrete, precast vaults, fountain central spray nozzle, fountain pumps, underwater lighting systems, piping, fittings, 600A 240/120V stainless steel panel board, and other electrical and control components. The Contractor shall plan an aggressive submittal and procurement schedule as needed to ensure the schedule will be met. This also may include significant out of sequence construction activities to ensure construction can be sequenced appropriately based on material lead-times and the procurement schedules.
- Provide adequate Materials, Equipment, labor, and supervision to perform and complete the Work within the Contract Time or the adjusted Contract Time;
- Perform the Work as vigorously and as continuously as conditions permit, and according to a Project Work schedule that ensures completion within the Contract Time or the adjusted Contract Time;
- Not voluntarily suspend or slow down operations without prior written approval from the Engineer, and if approved submit an updated Project Work schedule according to 00180.41 that ensures completion within the Contract Time or the adjusted Contract Time;
- Not resume suspended Work without the Engineer's written authorization; and
- Not proceed with work resulting in an adjustment of contract time or compensation without written authorization from the Owner. This shall include work under any pending Change Order.

00180.85 (b) Liquidated Damages - Remove and replace (1) and (2) from (b) with the following:

The Contractor shall pay Owner \$1500 per day for each and every calendar day that the work remains uncompleted beyond the contract time set for all work awarded under the contract until the work is finished as provided by the Contract Documents.

SECTION 00190 - MEASUREMENT OF PAY QUANTITIES

Comply with Section 00190 of the Standard Specifications modify and Section 01025 of the Supplemental Technical Specifications.

SECTION 00195 - PAYMENT

Comply with Section 01025 of the Supplemental Technical Specifications and Section 00195 of the Standard Specifications modified as follows:

00195.50(b) Retainage – Replace this Subsection, except for the Subsection number and title, with the following:

The Agency reserves the right in its sole discretion to not withhold retainage from progress payments or to begin withholding retainage at any time. If the Agency withholds retainage from progress payments, the amount to be retained from progress payments will be 5% of the value of Work accomplished and will be retained in one of the forms specified in Subsection (c) below. No retainage will be withheld from Work performed as Force Account Work, escalation/de-escalation, bonuses, or other items decided by the Agency.

00195.90 Final Payment - At the end of the Section add the following:

No Waiver of Rights. Neither the inspection by the Owner, through the Engineer or any of his employees, nor any order by the Owner for payment of money, nor any payment for, or acceptance of, the whole or any part of the work by the Owner or Engineer, nor any extension of time, nor any possession taken by the Owner or Engineer, nor any extension of time, nor any possession taken by the Owner or its employees, shall operate as a waiver of any provision of this Contract, or any power herein reserved to the Owner, or any right to damages herein provided; nor shall any waiver of any breach in this Contract be held to be a waiver of any other subsequent breach.

SECTION 00280 – EROSION AND SEDIMENT CONTROL

Comply with Section 00195 of the Standard Specifications modified as follows:

00280.00 Scope - At the end of the Section add the following:

The Contractor shall be responsible for all the alleviation or prevention of any dust or mud nuisances arising from the work on this project by use of water or dust control measures, as required and as directed by the Owner and Oregon Department of Environmental Quality by cleaning areas of any mud, caused directly or indirectly by the Contractor's operations, after every day's operations have ceased.

00335 – BLASTING METHODS AND PROTECTION OF EXCAVATION BACKSLOPES

Construction

Delete this Section in its entirety. No blasting will be permitted on the Project.

00405 – TRENCH EXCAVATION, BEDDING, AND BACKFILL

Construction

00405.40 General - At the end of the Section add the following:

The Contractor shall be responsible for locating and protecting existing utilities as per Section 00150.50. The Contractor shall make any advance explorations as necessary (even though not specifically identified on the drawings) in order to verify location, verify connection requirements, properly plan the installation of the pipe to the design line and grade, and achieve a uniform grade and horizontal alignment.

Some omissions and inaccuracies should be expected. Critical locations shall be field located ahead of time and Call-Before-You-Dig procedures should be implemented in all cases. Any discrepancies shall be reported to the Engineer prior to commencing with the work.

The Contractor should anticipate undercrossing and excavating adjacent to multiple private and public utilities. The Contractor shall provide support of the utilities at the locations where the utilities are exposed.

The Contractor is being advised that due to potential conflicts with existing public and private utilities not specifically shown in the plans may require field adjustments in the alignment of buried piping and/or electrical conduits shown in the Plans.

The Plans may identify locations requiring to “Dig and Verify.” Where specially called for on the Plans or as directed by the Engineer, the Contractor shall “Dig and Verify” existing utilities. A “Dig and Verify” shall occur prior to all Contractor activities that may be impacted or be affected by the findings of the verification. Unless otherwise directed by the Engineer, the Contractor shall backfill and compact location where the dig and verifying was conducted. The Contractor shall report the top of pipe elevation at the location of the Dig and Verify to the Engineer.

00405.41 Trench Excavation:

(f) Trench Protection - At the end of the Section add the following:

For excavation over 20 feet, the Contractor shall prepare and submit a shoring and trench safety plan in accordance with 29 CFR Section 1926.652(c). The design of the system shall be stamped by a professional engineer licensed in the State or Oregon.

00405.43 Rock Excavation - At the end of the Section add the following:

A geotechnical investigation encountered subsurface solid rock within the project boundaries. The Contractor should anticipate rock excavation for trenching for potable water piping.

00470 – MANHOLES, CATCH BASINS , AND INLETS

Description

00470.00 Scope - Add the following to the end of the first paragraph:

The work shall also include providing an installing pre-cast concrete vaults of type and size shown in the Plans.

Materials

Add the following new Section:

00470.17 Precast Concrete Vaults – Precast Utility vaults shall comply with the Standard Specifications, ASTM C858 (except as modified herein), and the following:

1. Reinforcing steel shall be Grade 60 for deformed bars or comply with ASTM A497/A497M if welded wire fabric.
2. Dimensions shall be as shown on.
3. Rigid type construction and behave monolithically. Panel-type vaults are not permitted.
4. Design loads shall be as determined by ASTM C857 with a AASHTO HS20-44 truck loading plus impact live load.
5. Design shall accommodate additional stresses or loads imposed during factory precasting, transporting, erection, and placement.
6. Block outs for penetrations shall be as shown on the Plans. Provide watertight pipe penetrations where shown on the Plans using connection between vault and pipe by a flexible manhole connector: A-Lok, Kor-N-Seal, or approved equivalent
7. Sealants shall be nonswelling preformed joint sealants to provide lasting, watertight bond. Manufactures and product shall be Henry Company; Ram-NEK.
8. Mortar shall comply with ASTM C387/387M, Type S or use Type I grout.
9. All joints shall be grouted smooth.

All Precast Accessories shall be as follows:

1. Access doors to be manufactured by Halliday, Bilco or approved equivalent.
2. Access Door Cover: Nominal open size 36" X 36". Minimum ¼ inch thick aluminum with diamond surface pattern reinforced for H20 live load. Cover shall be equipped with all stainless-steel hinges, fasteners, lockable tamperproof hardware, and automatic "Hold Open" arms to prevent accidental closing per OSHA requirements. Doors shall open at 90 degrees to structure roof slab and shall include a stainless-steel pneumatic spring-assist, Type 316 stainless steel slam lock with fixed interior handle, and removable exterior turn/life handle. Latch release protected by a flush, gasketed, removable screw plug.
3. Access Door Frame: ¼ inch thick (minimum) extruded aluminum with shaped drainage channel. Frame shall be capable of being precast in roof slab. EPDM gasket mechanically attached to the frame.
4. Ladder: Extend full depth of vault, galvanized or made of corrosion resistant materials and comply with OSHA requirements.

All Quick Setting Grout shall comply with the following:

1. Grout shall be high strength and non-staining.
2. Grout shall reach initial set within 90 minutes at 70 degrees F and minimum compressive strength of 2,500 psi within 24 hours.
3. Shrinkage of the grout shall be less than 0.01 percent when tested in accordance with ASTM C596.

00510 – STRUCTURE EXCAVATION AND BACKFILL

Description

00510.00 Scope - Add the following to the end of the first paragraph:

The work shall also include all excavation for all pre-cast vaults and entry fountain construction.

Construction

00510.41 Structure Excavation - Add the following to the end of the fifth paragraph:

A geotechnical investigation encountered subsurface solid rock within the project boundaries. The Contractor should anticipate rock excavation for pre-cast utility vault and fountain construction.

SECTION 01120 – IRRIGATION SYSTEMS

01120.42 Excavation – Add the following to this section:

Where solid rock is encountered which will not allow irrigation piping to be buried to a depth of 30 inches, the Contractor will be allowed to lay the pipe on top of the solid rock with 4 inches of underlying bedding. Bedding shall be commercially available $\frac{3}{4}$ " - 0 aggregate.

SECTION 01140 – PORTABLE WATER PIPE AND FITTINGS

Materials

01140.47 Connection to Existing Mains – Add the following to this section:

The City of Umatilla will perform water taps using Contractor provide materials including tapping saddle and corporation stop. Connection to the water main shall be in accordance with Section 01140.47 of the City of Umatilla Standard Specification.

01140.51 Hydrostatic Testing – Delete this section and replace it as follows:

Hydrostatic testing shall be performed in accordance with Section 01140 of the City of Umatilla Standard Specifications.

SECTION 01150 – PORTABLE WATER VALVES

Materials

01150.10 Material – Add the following to this section:

In addition to meeting the requirements of this Section, materials shall be the model and make as set forth in Section 01150.10 Materials, in the City of Umatilla Standard Specifications. except the Backflow Assembly Box shall be a Hydrocowl, Inc., Safety-Cover® Insulated Enclosure, Model 200D-AL or approved equal.

Concrete for the Backflow Preventer insulated enclosure pad shall met the requirements of Section 00440 – Commercial Grade Concrete.

SECTION 01170 – PORTABLE WATER SERVICE CONNECTIONS, 2 INCH AND SMALLER

Materials

01170.10 Material – Delete the section in entirety and replace with the following:

All materials for water services 2 inch and smaller shall meet the requirements of Section 01170.10 Materials, in the City of Umatilla Standard Specifications.

Construction

01170.40 General

011740.40 (b) Installation – Add the following to this section:

Pavement damaged or undercut at the water service connect shall be restored in accordance with Oregon State Department – Attachment A T-Cut Typical Section CLSM Backfill Option.

00960 – COMMON PROVISIONS FOR ELECTRICAL SYSTEMS

Construction

00960.40 Excavation - At the end of the Section add the following:

A geotechnical investigation encountered subsurface solid rock within the project boundaries. The Contractor should anticipate rock excavation for trenching for electrical conduits.

01000 – RIGHT OF WAY DEVELOPMENT AND CONTROL

Add the following:

01095 Fountain

01095.10 Scope:

“Fountain” or “Pool” or “Feature” means any Reflecting Pool, Fountain, Fountain Feature, etc. shown as part of this Project. The Fountain Contractor shall furnish and install the Fountains including but not limited to the fountain piping, fittings, circulation and filtration equipment, fountain finishes, fountain stones, edge finishes, waterproofing, sealant & caulking, etc. shown on the Fountain drawings and as specified herein. See Fountain

Plans, Structural Plans, Electrical Plans, and other Contract Documents. Coordinate with the General Contractor for complete scope and scope limits.

01095.20 Patented Materials:

The Fountain Supplier/Contractor shall pay all royalties and license fees. The Contractor shall defend all suits or claims for infringement of any patent rights and shall save the Owner, and Owner's Engineers harmless from the loss on account thereof, except that the Contractor shall not be responsible for all such loss when a particular manufacturer or manufacturers is specified. But, if the Contractor has reason to believe that the design, process, or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Owner and Owner's Engineer.

01095.30 Codes and Standards:

Comply with the provision of the codes, specifications and standards of the ANSI/NSPI standard, Building Department standards, and other applicable codes and regulations and as shown on the Plans and/or hereinafter specified.

In addition to those standards referenced above, conform work in this Section to requirements of the following reference standards, as applicable, unless otherwise required herein or on the Plans. Unless otherwise indicated on the Plans, or specified, furnish the highest or best grade of material specified in referenced standards.

1. American National Standards Institute (ANSI):
 - a. A13.1-81 Scheme for the identification of Piping Systems
2. American Society for Testing and Materials (ASTM):
 - a. A36-81A Structural Steel
 - b. A120-83 Pipe, Steel, Black and Hot-Dipped Zinc-Coated Welded and Seamless, for Ordinary Uses
 - c. A123-78 Zinc (Hot Galvanized) Coatings on Products Fabricated from Rolled, Pressed, and Forged Steel Shapes
 - d. A153-82 Zinc Coating (Hot-Dip) on Iron and Steel Hardware
 - e. A386-78 Zinc Coating (Hot-Dip) on Assembled Steel Products
 - f. D1785-81 Rigid Polyvinyl Chloride (PVC) Compounds and Chlorinated Polyvinyl Chloride (CPVC) Compounds
 - g. D1785-83 Polyvinyl Chloride (PVC) Plastic Pipe, Schedules 40, 80, and 120
 - h. D2464-76 Threaded Polyvinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 80
 - i. D2467-76A Socket-Type Polyvinyl Chloride (PVC) Plastic Pipe Fittings, Schedule 80
 - j. D2564-80 Solvent Cements for Polyvinyl Chloride (PVC) Plastic Pipe and Fittings
 - k. D2774-04 Underground Installation of Thermoplastic Pressure Piping
 - l. F1668-96 Construction Procedures for Buried Plastic Pipe

3. Manufacturers Standardization Society of Valves and Fittings Industry (MSS):
 - a. SP-58-1983 Pipe Hangers and Supports - Materials and Design
 - b. SP-69-1983 Pipe Hangers and Supports - Selection and Application
4. National Fire Protection Association (NFPA):
 - a. 2005 National Electric Code (NEC)
5. Other Codes:
 - a. NSF - Standard 50 & Standard 61
 - b. U.S. EPA - Clean Water Act
 - c. UFC - Article 80
 - d. WWA - Construction for Operating Safely
 - e. OSHA 29 CRF - Hazard Communication Standard
 - f. US EPA - SARA Title III
 - g. UFC - Standard No. 79-3
 - h. NFPA - Standard No. 704
 - i. FIFRA - Worker Safety Regulations
 - j. 2008 National Electrical Code (NEC) - Article 680: Swimming Pools, Fountains, and Similar Installations
 - k. US EPA - 40 CFR 122.26
 - l. OSHA - CFR 1910.146
 - m. UL - Green Book
 - n. UL - Yellow Book
 - o. The Chlorine Institute - Safety at Nonresidential Pools
 - p. International Building Code (IBC)
 - q. ANSI - Standard 14.3 for Ladders and Safety Equipment

SECTION 3
GEOTECHNICAL EXPLORATION

February 1, 2022
File: MO21235A

Mr. Troy Green, PE
J-U-B Engineers, Inc.
3611 S. Zintel Way
Kennewick, WA 99337

RE: **Geotechnical Exploration Summary**
Geotechnical Exploration
Kiwanis Falls Fountain
US Highways 395 & 730
Umatilla, Oregon

Good Day, Troy.

GeoProfessional Innovation Corporation (GPI) appreciates the opportunity to assist you in evaluating the planned Kiwanis Fall Fountain project located at the southwest corner of the US Highways 395 and 730 intersection in Umatilla, Oregon. The planned improvement area is shown on Plate 1, *Exploration Map*. The following sections summarize our project understanding, scope of services, and exploration findings for your use.

PROJECT UNDERSTANDING

J-U-B Engineers, Inc. (J-U-B) is performing engineering design for the City of Umatilla regarding the planned Kiwanis Falls Fountain project. To aid J-U-B's design, we performed subsurface exploration in 4 locations within and around the planned improvement area to assess depth to bedrock and other notable geotechnical conditions.

SCOPE OF SERVICES

GPI has accomplished the following scope of services, referencing our proposal dated November 8, 2021.

1. Coordinated exploration with the Oregon Utility Notification Center, the Oregon Department of Transportation (ODOT), and J-U-B.
2. Subcontracted traffic control services to facilitate safe traffic flow and to protect our crews during exploration.
3. Subcontracted drilling equipment to explore subsurface conditions within the improvement area. Our approximate exploration locations are shown on Plate 1.
4. Provide this summary of our exploration results, including a site map showing approximate exploration locations, graphical logs of subsurface conditions, and a brief written summary of our exploration methods and findings.

FIELD EXPLORATION

Exploration was accomplished on January 19, 2022, advancing a total of 4 soil borings extending 0.5 to 2.8 feet below the existing ground surface via a G2400 drill equipped with hollow stem augers and standard penetration test (SPT) sampling equipment. Rock coring equipment was not utilized to penetrate bedrock. Approximate

exploration locations are illustrated on Plate 1. During exploration, our geologist visually classified, described, and logged the soil encountered according to the Unified Soil Classification System (USCS). Use the USCS summary provided in Appendix A to interpret the soil descriptions in this document and on the individual exploration logs. Borings were backfilled with site soil immediately upon completing exploration.

SUBSURFACE CONDITIONS

The ground surface conditions within the fountain improvement area consisted of granular fill and exhibits sparse weeds. Topsoil containing vegetation and organics was encountered in boring B-21235A-4 to the north of Highway 730. Topsoil comprised of silt that was brown, loose, and moist and was 0.2 feet thick. The following describes the subsurface conditions encountered beneath the ground surface in each boring.

Fill: Poorly-Graded Gravel (GP). Dark gray, medium dense to dense, and moist. Fill was encountered in borings B-21235A-1, B-21235A-2, and B-21235A-3, extending from ground surface to depths ranging from 2.0 to 2.5 feet.

Bedrock: Basalt (RX). Dark gray with orange staining, moderately weathered to weathered, moderately fractured, hard. Basalt bedrock was encountered in each boring at depths ranging from 0.2 to 2.0 feet below the ground surface. Our drilling and SPT sampling equipment was refused after penetrating bedrock 0.2 to 0.5 feet.

Groundwater was not encountered within the depth or locations explored. We expect consistent, static groundwater tables will not be encountered within the planned excavation depths for the project (i.e., less than 10 feet). However perched water tables can be encountered atop bedrock or within fractured rock zones, depending on seasonal variations in precipitation, irrigation and infiltration.

EVALUATION LIMITATIONS

This exploration summary and the services we provided to date do not comprise a geotechnical engineering evaluation for the Kiwanis Falls Fountain Project, or any other planned site improvements. Soil borings reveal only a small portion of the subsurface conditions across the planned improvement area. Subsurface conditions, including soil, bedrock, and groundwater conditions can change between or beyond exploration locations. Project designers must apply appropriate judgment to the exploration findings herein to facilitate prudent design development. This acknowledgment is in lieu of any express or implied warranties.

Please contact us if you have any questions or comments so that we may address them in a proactive and timely fashion.

Sincerely,
GPI



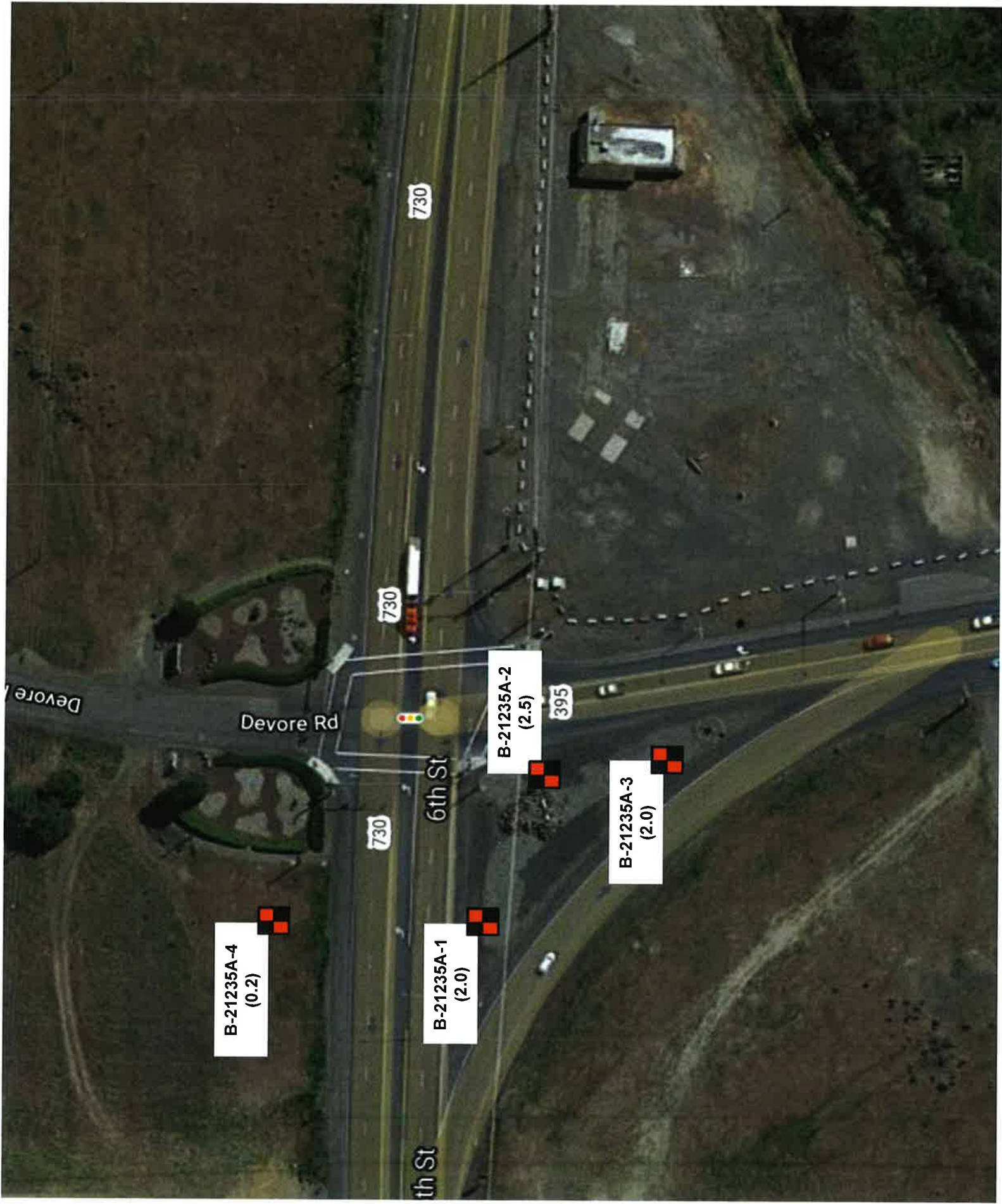
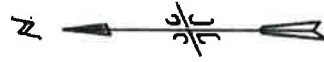
Bryce Carver, E.I.
Staff Engineer



Andy Abrams, P.E.
Senior Engineer

AJA/mg

Attachments: Plate 1, Exploration Map
Appendix A, USCS and Exploration Logs



B-21235A-4
(0.2)

B-21235A-1
(2.0)

B-21235A-2
(2.5)

B-21235A-3
(2.0)

Devore Rd

Devore Rd

6th St

730

730

730

395

th St

APPENDIX A

Unified Soil Classification System (USCS) and Exploration Logs

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GRAPHIC SYMBOL	GROUP SYMBOL	TYPICAL NAMES	
COARSE GRAINED SOIL	GRAVEL	CLEAN GRAVEL		GW	WELL-GRADED GRAVEL, GRAVEL-SAND MIXTURES.	
		GRAVEL WITH FINES		GP	POORLY-GRADED GRAVEL, GRAVEL-SAND MIXTURES.	
		SAND	CLEAN SAND		SW	WELL-GRADED SAND, GRAVELLY SAND.
			SAND WITH FINES		SP	POORLY-GRADED SAND, GRAVELLY SAND.
	FINE GRAINED SOIL	SILT AND CLAY LIQUID LIMIT LESS THAN 50%			ML	INORGANIC SILT, SANDY OR CLAYEY SILT.
					CL	INORGANIC CLAY OF LOW TO MEDIUM PLASTICITY, SANDY OR SILTY CLAY.
					CL-ML	INORGANIC MIXED CLAY AND SILT.
					OL	ORGANIC SILT AND CLAY OF LOW PLASTICITY.
SILT AND CLAY LIQUID LIMIT GREATER THAN 50%				MH	INORGANIC SILT, MICA-CEOUS SILT, PLASTIC SILT.	
				CH	INORGANIC CLAY OF HIGH PLASTICITY, FAT CLAY.	
				OH	ORGANIC CLAY OF MEDIUM TO HIGH PLASTICITY.	
				PT	PEAT, MUCK AND OTHER HIGHLY ORGANIC SOILS.	

BORING LOG SYMBOLS

STANDARD 2 INCH OD SPLIT SPOON SAMPLE



CALIFORNIA MODIFIED 3 INCH OD SPLIT SPOON SAMPLE



ROCK CORE



SHELBY TUBE 3 INCH OD UNDISTURBED SAMPLE



TEST PIT LOG SYMBOLS

GRAB BAG SAMPLE



BULK SAMPLE



RING SAMPLE



GROUNDWATER SYMBOLS

GROUNDWATER AFTER 24 HOURS



GROUNDWATER AT TIME OF EXPLORATION



GROUNDWATER AT THE END OF EXPLORATION



**GeoProfessional
Innovation**

USCS Description	Depth (ft)	Symbol	Sample Type	SPT Blows Per 6 Inches	SPT N	Dry Density (pcf)	TEST RESULTS			Remarks
							Pocket Penetrometer, TSF ▲ 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5			
							SPT, N-Value ●			
							% Passing No. 200 Sieve ★ PL MC LL 20 40 60 80			
FILL - POORLY-GRADED GRAVEL, (GP) dark gray, medium dense, moist	0.0			6 7 17	24				No vegetation and organics at ground surface	
(RX) BEDROCK - BASALT, moderately weathered to weathered, moderately fractured, dark gray with orange staining	2.5			50/2.0"	50+				Heavy drill chatter from 2.0 to 2.5 feet BGS	
Borehole Terminated at 2.5 Feet.									Boring terminated at 2.5 feet BGS due to auger and split-spoon refusal due to dense bedrock. Loosely backfilled upon completion	

GPI BORING - STRATA GDT - 1/31/22 19:45 - V:\ENGINEERING\GINT FILES\2022\220128 MO21235A KIWANIS FALLS GPJ

Client: J-U-B Engineers	Boring Number: B-21235A-1
Project: MO21235A	Date Drilled: 01-19-2022
Drill Rig: G-2400	Borehole Diameter: 8"
Depth to Groundwater: N.E.	Logged By: JTK




EXPLORATORY BORING LOG

Sheet 1 Of 1

GPI BORING - STRATA.GDT - 1/31/22 19:45 - V:\ENGINEERING\GINT FILES\2022\20128 MO21235A KIWANIS FALLS.GPJ

USCS Description	Depth (ft)	Symbol	Sample Type	SPT Blows Per 6 Inches	SPT N	Dry Density (pcf)	TEST RESULTS			Remarks
							Pocket Penetrometer, TSF ▲ 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5			
							SPT, N-Value ●			
							% Passing No. 200 Sieve ★ PL MC LL			
							20 40 60 80			
FILL - POORLY-GRADED GRAVEL, (GP) dark gray, medium dense to dense, moist	0.0			7 9 32	41				No vegetation and organics at ground surface	
(RX) BEDROCK - BASALT, moderately weathered to weathered, moderately fractured, dark gray with orange staining Borehole Terminated at 2.8 Feet.	2.5			50/1.0"	50+				Heavy drill chatter from 2.5 to 2.8 feet BGS Boring terminated at 2.8 feet BGS due to auger and split-spoon refusal due to dense bedrock. Loosely backfilled upon completion	

Client: J-U-B Engineers	Boring Number: B-21235A-2		EXPLORATORY BORING LOG
Project: MO21235A	Date Drilled: 01-19-2022		
Drill Rig: G-2400	Borehole Diameter: 8"		
Depth to Groundwater: N.E.	Logged By: JTK		Sheet 1 Of 1

GPI BORING - STRATA GDT - 1/31/22 19:45 - V\ENGINEERING\GINT FILES\2022\220128 MO21235A KIWANIS FALLS GPJ

USCS Description	Depth (ft)	Symbol	Sample Type	SPT Blows Per 6 inches	SPT N	Dry Density (pcf)	TEST RESULTS			Remarks
							Pocket Penetrometer, TSF ▲ 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5			
							SPT, N-Value ●			
							% Passing No. 200 Sieve ★			
							PL	MC	LL	
20	40	60	80							
FILL - POORLY-GRADED GRAVEL, (GP) dark gray, medium dense, moist	0.0			4 6 12	18				No vegetation and organics at ground surface	
(RX) BEDROCK - BASALT, moderately weathered to weathered, moderately fractured, dark gray with orange staining Borehole Terminated at 2.2 Feet.				17 50/2.0"	50+				Heavy drill chatter from 2.0 to 2.2 feet BGS	
									Boring terminated at 2.5 feet BGS due to auger and split-spoon refusal due to dense bedrock. Loosely backfilled upon completion	


Client: J-U-B Engineers	Boring Number: B-21235A-3
Project: MO21235A	Date Drilled: 01-19-2022
Drill Rig: G-2400	Borehole Diameter: 8"
Depth to Groundwater: N.E.	Logged By: JTK



EXPLORATORY BORING LOG

Sheet 1 Of 1

USCS Description	Depth (ft)	Symbol	Sample Type	SPT Blows Per 6 Inches	SPT N	Dry Density (pcf)	TEST RESULTS				Remarks
							Pocket Penetrometer, TSF ▲ 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5				
							SPT, N-Value ●				
							% Passing No. 200 Sieve ★				
							PL	MC	LL		
20	40	60	80								
(TOPSOIL) - SILT, (ML) brown, loose, moist	0.0	ML								Vegetation and organics to 0.2 feet BGS Heavy drill chatter from 0.2 to 0.4 feet BGS Boring terminated at 0.5 feet BGS due to auger and split-spoon refusal due to dense bedrock. Loosely backfilled upon completion	
(RX) BEDROCK - BASALT, moderately weathered to weathered, moderately fractured, dark gray with orange staining Borehole Terminated at 0.5 Feet.		RX		50/1.0"	50+						

Client: J-U-B Engineers	Boring Number: B-21235A-4		EXPLORATORY BORING LOG
Project: MO21235A	Date Drilled: 01-19-2022		
Drill Rig: G-2400	Borehole Diameter: 8"		
Depth to Groundwater: N.E.	Logged By: JTK		Sheet 1 Of 1

SECTION 4 - PLANS



Know what's below.
Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE
YOU DIG, GRADE, OR EXCAVATE FOR THE
MARKING OF UNDERGROUND MEMBER
UTILITIES



OWNER

CITY OF UMATILLA
UMATILLA, OREGON

MAYOR:
MARY DEURKK

CITY COUNCIL:
CORINNE FUNDERBURK
MICHAEL ROXBURY
LESLIE SMITH
ASHLEY WHEELER
JOSY CHAVEZ
ROAK TENEYCK

CITY MANAGER:
DAVE STOCKDALE

AGENCY AND ENTITY CONTACTS:

CITY OF UMATILLA WATER, SEWER, STORM DRAIN	(541) 922-3226
POLICE	911
AMBULANCE	911
DIG LINE	1-800-332-2344
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY	1-800-452-4011
UTILITY LOCATES	811
POWER BY UMATILLA ELECTRIC COOPERATIVE	1-800-452-2273
GAS BY CASCADE NATURAL GAS	1-888-522-1130
FIBER OPTICS BY ZAYO	(360)558-4215
FIBER OPTICS BY LS NETWORKS	(503) 294-5300
FIBER OPTICS BY WINDWAVE	(541) 561-3862
OREGON DEPARTMENT OF TRANSPORTATION	(541) 278-6044

ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-221-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER AT WWW.DIGSAFELYOREGON.COM. ONE OF THE REQUIREMENTS OF THESE RULES IS THAT EXCAVATORS MUST NOTIFY THE CENTER AT LEAST 2 BUSINESS DAYS, BUT NOT MORE THAN 10 BUSINESS DAYS, BEFORE COMMENCING AN EXCAVATION. TO COMPLY TO THIS REQUIREMENT, CALL 811.

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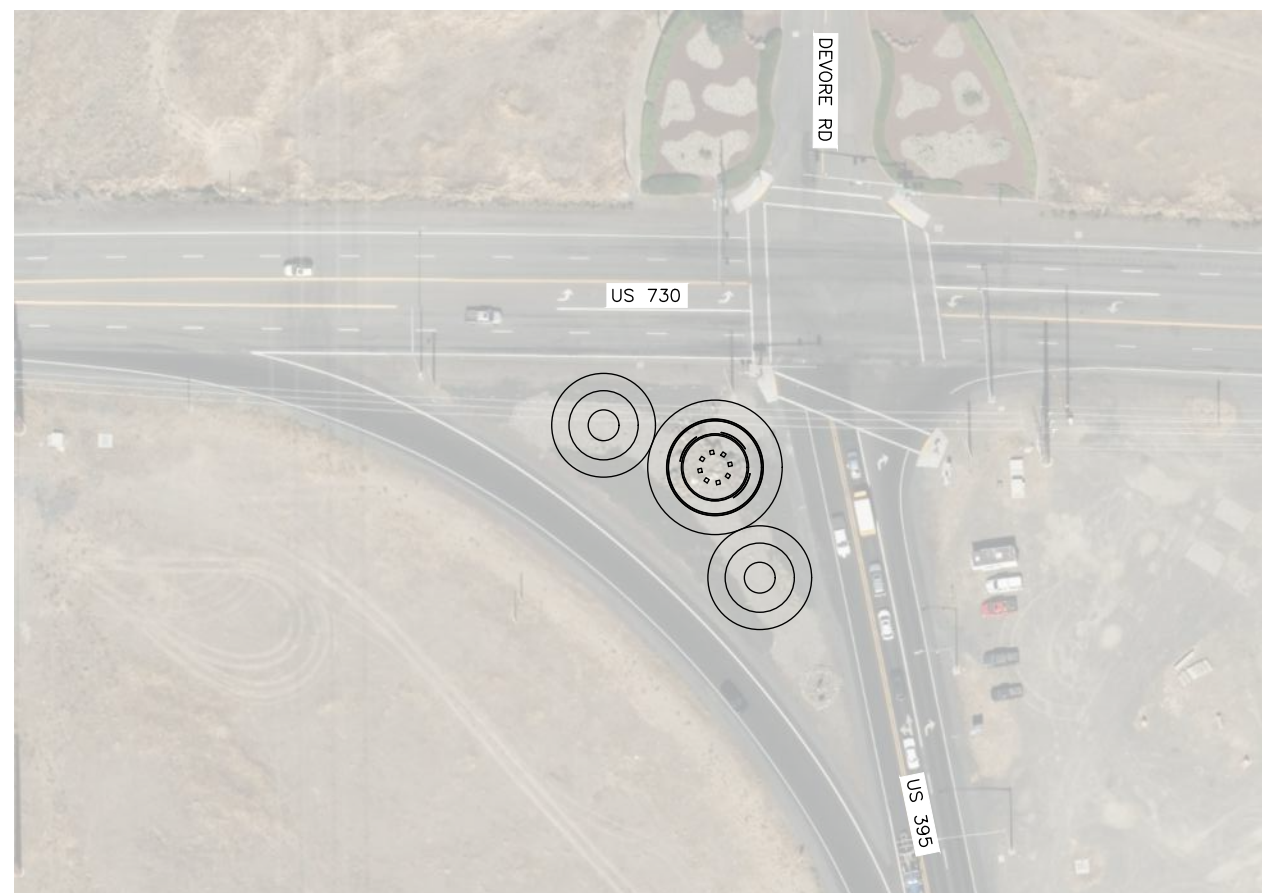
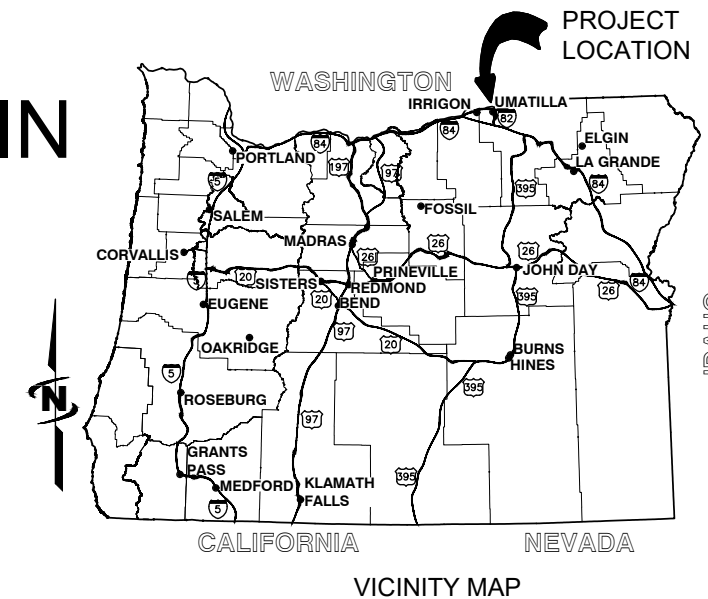
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CITY OF UMATILLA

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN UMATILLA, OREGON



UMATILLA FALLS ENTRY MONUMENT PERSPECTIVE VIEW

SEPTEMBER 2022
PROJECT NO: 33-21-003



J-U-B ENGINEERS, INC.

INDEX OF SHEETS

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- G-002 LEGEND, LINETYPES AND ABBREVIATIONS

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- V-101 GEOMETRIC CONTROL

CIVIL

- C-001 GENERAL NOTES
- C-101 SITE DEMOLITION PLAN
- C-102 SITE LAYOUT AND DIMENSION
- C-103 GRADING AND DRAINAGE
- C-104 WATER SYSTEM IMPROVEMENTS
- C-105 TRAFFIC CONTROL PLAN
- C-106 TRAFFIC CONTROL PLAN
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PROCESS

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- E-002 SCHEDULE AND NOTES
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LANDSCAPING AND IRRIGATION

- L-001 LANDSCAPE IRRIGATION NOTES
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- L-101 LANDSCAPE IRRIGATION PLAN
- L-102 LANDSCAPE PLANTING PLAN
- L-501 LANDSCAPE IRRIGATION DETAILS
- L-502 LANDSCAPE IRRIGATION DETAILS
- L-503 LANDSCAPE PLANTING AND SIGN DETAILS
- L-504 BASALT COLUMN DETAILS

LAST UPDATED: 9/6/2022

SHEET NUMBER:

G-001

Plot Date: 9/7/2022 \\JUB-COM\CENTRAL\CLIENTS\OR\UMATILLA\ACTIVITY\PROJECTS\33-21-003_KIWANIS FALLS\SCONCEPT\DESIGN\CAD\SHIET\33-21-003_G-001.DWG

LINE LEGEND

LINE DESCRIPTION	PROPOSED LINE	EXISTING LINE
POWER / COMMUNICATIONS		
OVERHEAD POWER	— OHP —	— OHP —
UNDERGROUND POWER	— UP —	--- UP ---
FIBER OPTIC	— FO —	--- FO ---
UNDERGROUND TELEPHONE	— UT —	--- UT ---
STORM DRAIN		
STORM DRAIN (GENERAL)	— SD —	--- SD ---
STORM DRAIN	— X*SD —	--- X*SD ---
WASTEWATER		
PROCESS WASTEWATER	— PW —	--- PW ---
SANITARY SEWER (GENERAL)	— SS —	--- SS ---
SANITARY SEWER	— X*SS —	--- X*SS ---
SANITARY SEWER SERVICE	— SS — SS —	--- SS --- SS ---
SEWER FORCE MAIN	— FM —	--- FM ---
WATER		
WATER (GENERAL)	— W —	--- W ---
WATER (SPECIFIED SIZE)	— X*W —	--- X*W ---
WATER SERVICE	— WS — WS —	--- WS --- WS ---
GAS		
NATURAL GAS	— G —	--- G ---
NATURAL GAS SERVICE	— G — G —	--- G --- G ---
SITE		
FENCE	— X —	--- X ---
MAJOR CONTOUR	— 2521 —	---
MINOR CONTOUR	---	---
GRADE BREAK	---	— GB —
TOP OF BANK	---	— TOB —
TOE OF SLOPE	---	— TOE —
CUT LIMITS	---	---
FILL LIMITS
DITCH	---	---
ROADWAY		
ROAD SHOULDER	---	---
ROAD CENTERLINE	---	---
ROAD ASPHALT	---	--- EP ---
ROAD GRAVEL	---	--- EG ---
TOP BACK OF CURB	---	---
LIP OF GUTTER	---	---
LANDSCAPING LIMITS	— LS —	--- LS ---
BOUNDARY		
PROPERTY LINE	— P/L —	— P/L —
PROPERTY LINE	---	---
RIGHT OF WAY	— R/W —	— R/W —
TEMPORARY EASEMENT	— T/E —	— T/E —
PERMANENT EASEMENT	— P/E —	— P/E —

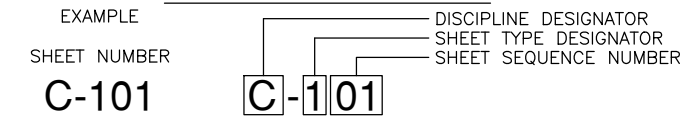
NOTE:
NOT ALL OF THESE LINETYPES MAY APPEAR ON THE PLAN SET

ABBREVIATIONS	
ASSY	ASSEMBLY
>	ANGLE
@	AT (MEASUREMENTS)
BLDG	BUILDING
BM	BENCH MARK
BSC	BITUMINOUS SURFACE COURSE
BSW	BACK OF SIDEWALK
BW	BOTH WAYS
C	CHANNEL (STRUCTURAL)
CDF	CONTROLLED DENSITY FILL
C/L	CENTER LINE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CONT	CONTINUOUS
CPLG	COUPLING
CSBC	CRUSHED SURFACING BASE COURSE
CSTC	CRUSHED SURFACING TOP COURSE
CU FT	CUBIC FEET
CU YD	CUBIC YARD
DEG OR °	DEGREE
DET	DETAIL
DIA OR Ø	DIAMETER
DIP	DUCTILE IRON PIPE
DIST	DISTRIBUTION
DWG	DRAWING
EA	EACH
ELB	ELBOW
ELEC	ELECTRICAL
ELEV	ELEVATION
EW	EACH WAY
EXIST	EXISTING
FG	FINISH GRADE
FH	FIRE HYDRANT
FLG	FLANGE
FM	FORCEMAIN
FT OR '	FEET
GALV	GALVANIZED
GV	GATE VALVE
HORIZ	HORIZONTAL
ID	INSIDE DIAMETER
IN OR "	INCH
LB OR #	POUND
LF	LINEAL FEET
LN	LINEAL
MAX	MAXIMUM
MIN	MINIMUM
MJ	MECHANICAL JOINT
NO OR #	NUMBER
PE	PLAIN END
PL	PLATE
PL	PROPERTY LINE
PVC	POLYVINYL-CHLORIDE
R	RADIUS
RP	RADIUS POINT
R&R	REMOVE & REPLACE
REM	REMOVE
REQ'D	REQUIRED
REV	REVISION
R/W	RIGHT-OF-WAY
S	SLOPE
SPEC	SPECIFICATION
SS	SANITARY SEWER

STA	STATION
STD	STANDARD
STL	STEEL
ST STL	STAINLESS STEEL
TBC	TOP BACK OF CURB
TOS	TOP OF SLAB
TYP	TYPICAL
TFC	TOP FACE OF CONCRETE
W/	WITH
W/O	WITHOUT
W/REQ'D	WHERE REQUIRED

STANDARD SYMBOLS		
SYMBOL DESCRIPTION	EXISTING SYMBOL & BLOCK NAME	PROPOSED SYMBOL & BLOCK NAME
CTRL PT TEMPORARY BENCH MARK	△ TBM	
BOLLARD	⊠	⊠
SPOT ELEVATION	⊗	⊗
TELE. PEDESTAL	⊕	⊕
FIRE HYDRANT	⊕	⊕
VALVE	⊗	⊗
SS MANHOLE	⊙	●
ELEC. METER	⊕	⊕
ELEC. TRANS.	⊗	⊗
GUY WIRE	↓	↓
JUNCTION BOX	⊠	⊠
POWER POLE	⊕	⊕
STREET/SITE LIGHT	⊙	⊙
STREET SIGN	⊕	⊕
TEST HOLE	⊕	⊕
REFLECTIVE ROADWAY DELINEATOR	•	•

SHEET NUMBERING

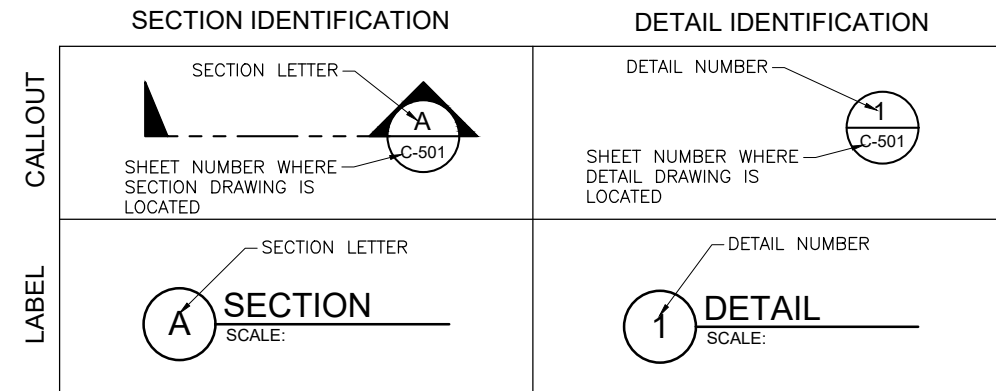


DISCIPLINE DESIGNATORS		
DISCIPLINE	DESIGNATOR	DESCRIPTION
GENERAL	G	ALL GENERAL
SURVEY/MAPPING	V	ALL SURVEY
CIVIL	C	ALL CIVIL
LANDSCAPE	L	ALL LANDSCAPE
PROCESS	P	ALL PROCESS
STRUCTURAL	S	ALL STRUCTURAL
ELECTRICAL	E	ALL ELECTRICAL

SHEET TYPE DESIGNATORS	
DESIGNATOR	SHEET TYPE
0	GENERAL (SYMBOLS, LEGENDS, NOTES, ETC.)
1	PLANS (HORIZONTAL VIEWS)
2	ELEVATIONS, PROFILES, COMBINED PLAN AND PROFILES
3	SECTIONS (SECTIONAL VIEWS)
4	LARGE-SCALE VIEWS (PLANS, ELEVATIONS, ECT.)
5	DETAILS OR COMBINED DETAILS AND SECTIONS
6	SCHEDULES OR DIAGRAMS

SECTION AND DETAIL IDENTIFIERS

NOTE:
A DASH MAY BE PLACED IN THE LOWER PORTION OF THE IDENTIFIER IF THE DETAIL DRAWING OR SECTION VIEW IS LOCATED ON THE SAME SHEET.



J-U-B ENGINEERS, INC.
3611 S. Zintel Way
Kennewick, WA 99037
Phone: 509.783.2144
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NO.	REVISION	DESCRIPTION	DATE
1	PROCESS WASTEWATER LINE TYPE	GER	4/19/2021

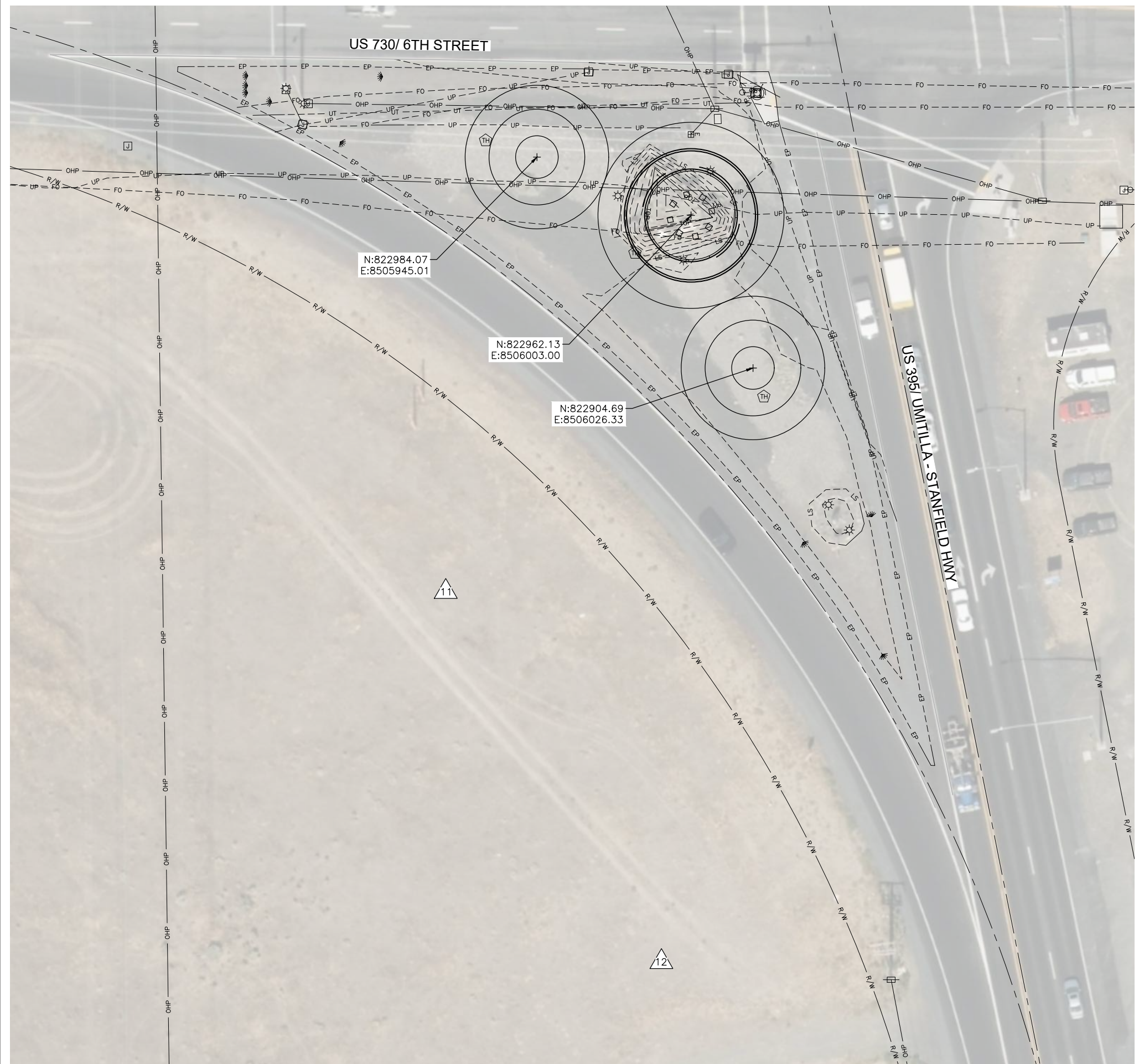
UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON

LEGEND, LINETYPES AND ABBREVIATIONS

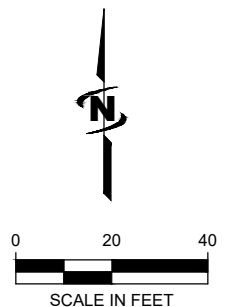
FILE: 33-21-003_G-002
JUB PROJ #: 33-21-003
DRAWN BY: MCH
DESIGN BY: GER
CHECKED BY: TMG

LAST UPDATED: 9/6/2022
SHEET NUMBER:
G-002

Plot Date: 07/20/22 11:42 AM Plotted By: Michael Harvey
 Date Created: 07/20/22 JUB:COM:CENTRAL:CLIENTS:OR:UMATILLA:ACTIVITY:PROJECT:SS:21:003_KIWANSIS:AL:LICENSEE:DESIGN:ROADSHEET:SS:21:003_V-101.DWG



PLAN - US 395, US 730 INTERSECTION



BASIS OF BEARING

THE BASIS OF BEARINGS FOR THIS PROJECT IS A LOCAL SITE PROJECTION ORIGINATING FROM THE 2011 ADJUSTMENT OF THE NORTH AMERICAN DATUM OF 1983 (NAD 83/2011), OREGON STATE PLANE COORDINATE SYSTEM, NORTH ZONE (3601) BASED UPON STATIC GPS OBSERVATIONS PROCESSED THROUGH THE NATIONAL GEODETIC SURVEY (NGS) ONLINE POSITIONING USER SYSTEM (OPUS). THE PROJECT DATA HAS BEEN PROJECTED TO GROUND AT CONTROL POINT NO. 1; LOCAL LATITUDE N45°54'14.59711", LOCAL LONGITUDE W119°18'08.24868" USING A GROUND SCALE FACTOR OF 1.0000406083. ALL BEARINGS ARE GRID, ALL DISTANCES ARE GROUND EXPRESSED IN INTERNATIONAL FEET

VERTICAL DATUM

VERTICAL DATUM IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) BASED UPON STATIC GPS OBSERVATIONS PROCESSED THROUGH THE NATIONAL GEODETIC SURVEY (NGS) ONLINE POSITIONING USER SYSTEM (OPUS) USING GEOID MODEL 12B. THE PROJECT BENCH MARK IS A CONTROL POINT NO. 1. A HUB AND TACK, ELEVATION BEING 440.26 FEET

SURVEY CONTROL				
NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
1*	817976.93	8506998.55	440.26	*CP-HUB & TACK
11	822820.48	8505910.67	464.79	RB5 JUB CAP
12	822681.21	8505991.85	463.11	SCRIBE
231*	822143.09	8505626.98	456.89	2.5-INCH ALUMINUM CAP

* POINT NOT SHOWN IN THIS VIEW


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NO.	REVISION	DESCRIPTION	BY	APPR.	DATE

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON
 GEOMETRIC CONTROL

FILE: 33-21-003_V-101
 JUB PROJ. #: 33-21-003
 DRAWN BY: MCH
 DESIGN BY: JJS
 CHECKED BY: TMG
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 7/6/2022
 SHEET NUMBER:
V-101

GENERAL NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE PLANS, THE CITY OF UMATILLA DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS FOR PUBLIC WORKS IMPROVEMENTS, 2021 EDITION OF THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, AND SPECIAL PROVISIONS.
- A PRECONSTRUCTION CONFERENCE SHALL BE HELD A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO START OF WORK. ALL CONTRACTORS, SUBCONTRACTORS AND/OR UTILITY CONTRACTORS SHALL BE PRESENT.
- THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION STAKING FOR VERTICAL AND HORIZONTAL CONTROL. ALL CONSTRUCTION STAKING SHALL BE COMPLETED UNDER THE SUPERVISION OF A P.L.S. LICENSED IN THE STATE OF OREGON. CONSTRUCTION STAKING SHALL BE INCIDENTAL TO THE PROJECT.
- THE CONTRACTOR AND ALL SUB-CONTRACTORS SHALL BE LICENSED BY THE STATE OF OREGON AND BONDED TO DO WORK IN THE PUBLIC RIGHT-OF-WAY.
- THE CONTRACTOR IS REQUIRED TO PROVIDE THE OWNER WITH A 24 HOUR, SEVEN DAY A WEEK, EMERGENCY CONTACT PERSON FOR THE PROJECT. THE EMERGENCY CONTACT SHALL HAVE A MAXIMUM ONE HOUR RESPONSE TIME AND SHALL HAVE THE AUTHORITY TO MOBILIZE EQUIPMENT AND MANPOWER AS REQUIRED.
- ALL CONTRACTORS WORKING WITHIN THE PROJECT BOUNDARIES ARE RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE SAFETY LAWS OF ANY JURISDICTIONAL BODY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BARRICADES, SAFETY DEVICES AND CONTROL OF TRAFFIC WITHIN AND AROUND THE CONSTRUCTION AREA.
- ALL MATERIALS FURNISHED ON OR FOR THE PROJECT MUST MEET THE MINIMUM REQUIREMENTS IN THE PLANS AND SPECIFICATIONS AND CONTRACTORS MUST FURNISH PROOF THAT ALL MATERIALS INSTALLED ON THIS PROJECT MEET THE REQUIREMENTS OF THE SPECIFICATIONS WHERE A SUBMITTAL IS REQUIRED OR REQUESTED BY THE ENGINEER.
- WORK SUBJECT TO APPROVAL PRIOR TO (A) BACKFILLING TRENCHES FOR PIPE; (B) PLACING OF AGGREGATE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH OWNER. WORK DONE WITHOUT SUCH APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF PERFORMING THE WORK IN AN ACCEPTABLE MANNER.
- THE CONTRACTOR SHALL OBTAIN AND HAVE AVAILABLE COPIES OF THE APPLICABLE STANDARDS AT THE JOB SITE FOR THE DURATION OF THE RELATED CONSTRUCTION OPERATIONS.
- PROTECT EXISTING SIGNS, STREET LIGHTS, UTILITIES, AND ANY OTHER ADJACENT FACILITIES. ANY DAMAGE TO EXISTING FACILITIES BY THE CONTRACTOR SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO ADDITIONAL COMPENSATION SHALL BE PROVIDED TO REPAIR THE DAMAGE. REPAIRS SHALL BE TO THE SATISFACTION OF THE OWNER.
- INSPECTION OF WORK WITHIN THE RIGHT-OF-WAYS SHALL BE BY THE THE OWNER'S REPRESENTATIVE.
- EQUIPMENT MAINTENANCE LOG TO BE KEPT ON SITE AT ALL TIMES AND AVAILABLE UPON REQUEST. LOG MUST DOCUMENT INSPECTIONS AND ACTIONS IN ACCORDANCE WITH THE ODEQ MAO.
- ALL DIMENSIONS SHOWN ON THESE PLANS AND ANY EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL WARRANT IMMEDIATE ATTENTION OF THE ENGINEER TO RESOLVE ALL PROBLEMS PRIOR TO PROCEEDING WITH CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE MATERIAL TESTING BY A CERTIFIED TESTING LABORATORY. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE MATERIAL TESTING. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND CONTACT THE INSPECTOR 24 BUSINESS HOURS IN ADVANCE OF CONSTRUCTION WORK REQUIRING TESTING. A COPY OF THE MATERIAL TESTS SHALL BE PROVIDED TO THE OWNER AND/OR THE OWNER'S REPRESENTATIVE. ALL MATERIAL TESTING IS INCIDENTAL TO THE PROJECT.
- CONTRACTOR'S HOURS OF OPERATION SHALL BE: WORKING HOURS ARE MONDAY-FRIDAY 7 AM TO 7 PM. NO WORK IS ALLOWED ON WEEKENDS OR NATIONAL HOLIDAYS EXCEPT FOR INSPECTION AND MAINTENANCE OF TRAFFIC CONTROL AND/OR EROSION AND SEDIMENT CONTROL BMP'S.
- AT COMPLETION OF PROJECT, CONTRACTOR SHALL NOTIFY OWNER AND/OR OWNER'S REPRESENTATIVE FOR FINAL PUNCH LIST WALK THROUGH. FINAL PUNCH LIST ITEMS SHALL BE COMPLETED NO LATER THAN TWO (2) WEEKS AFTER FINAL PUNCH LIST WALK THROUGH.
- THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE TELECOMMUNICATION UTILITY FOR EXCAVATING WITHIN 10 FEET OF A BURIED FIBER OPTIC COMMUNICATIONS CABLE.

- CITY WILL SUPPLY WATER FOR COMPACTION AND DUST CONTROL. CITY WILL SUPPLY A METER TO QUANTIFY WATER USE.
- GROUNDWATER WAS NOT OBSERVED DURING THE GEOTECHNICAL EXPLORATION, HOWEVER, CONTRACTOR MAY ENCOUNTER SHALLOW GROUNDWATER PERCHED ON TOP OF BEDROCK. DE-WATERING ACTIVITIES ARE INCIDENTAL TO THE PROJECT.
- PRIOR TO FINAL PROJECT ACCEPTANCE, CONTRACTOR SHALL CLEAN ALL STRUCTURES, INCLUDING BUT NOT LIMITED TO ENCLOSURES, VAULTS, INTERIOR OF FOUNTAIN, ETC. CONTRACTOR SHALL POWER SWEEP ROADWAY TO REMOVE ALL DEBRIS, SEDIMENT, STAINS, SPILLS, AND OTHER FOREIGN DEPOSITS.

EXISTING UTILITIES/EROSION CONTROL NOTES:

- ALL EXISTING UTILITIES DEPICTED IN THESE PLANS ARE AN APPROXIMATION ONLY AND ARE BASED ON PAINTED LOCATE MARKS AND SUPPLEMENTED WITH DRAWINGS WHEN PROVIDED BY UTILITIES. THE CONTRACTOR SHALL CALL FOR LOCATES AND PROTECT ALL EXISTING UTILITIES. DIG AND VERIFY EFFORTS ARE INCIDENTAL.
- APPROXIMATE LOCATIONS OF UTILITIES ARE SHOWN ON THE PLANS. THEY ARE TO BE USED FOR GENERAL INFORMATION ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE APPROPRIATE UTILITY COMPANIES WHEN CONSTRUCTION MIGHT INTERFERE WITH NORMAL OPERATION OF ANY UTILITIES. IT SHALL ALSO BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE THE APPROPRIATE UTILITY COMPANY FIELD-LOCATE ANY UTILITY INSTALLATIONS WHICH MIGHT BE AFFECTED BY CONSTRUCTION PRIOR TO BEGINNING WORK IN THAT AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SERVICE OF EXISTING UTILITIES AND FOR RESTORING ANY UTILITIES DAMAGED DUE TO CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER. DEPTHS AND ELEVATIONS OF UTILITIES ARE UNKNOWN UNLESS OTHERWISE SHOWN. CONTRACTOR SHALL FIELD VERIFY UTILITY DEPTHS, ELEVATIONS, ANY DISCREPANCIES AND/OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
- THE CONTRACTOR SHALL SUBMIT A COMPLETE EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION. THE SUBMITTAL IS REQUIRED 7 DAYS IN ADVANCE OF CONSTRUCTION START. EROSION CONTROL PLAN TO FOLLOW/COMPLY WITH ACCEPTED BMP'S AND INCLUDE NARRATIVE FOR MAINTENANCE OF EROSION CONTROL DEVICES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY PERMITS REQUIRED FOR EROSION CONTROL.
- THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL THE FINAL DRAINAGE IMPROVEMENTS ARE IN PLACE AND FUNCTIONING.

WATER IMPROVEMENTS NOTES:

- THE MINIMUM COVERAGE FOR ALL WATER LINES SHALL BE 3.5' (4' PREF) UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- ALL MATERIAL PLACED AS FILL OR BACKFILL SHALL BE PLACED, COMPACTED, AND TESTED IN ACCORDANCE WITH THE SPECIFICATIONS AND THE PLANS.
- NO CONNECTIONS TO EXISTING WATER PIPES SHALL BE MADE UNTIL THE NEW PIPE HAS BEEN INSTALLED, PRESSURE TESTED, DISINFECTED AND APPROVED BY THE CITY.
- COORDINATE ALL WATER WORK WITH THE CITY OF UMATILLA, AND PROVIDE MINIMUM 48 HOURS NOTICE TO CITY WHEN THEIR ASSISTANCE AND/OR APPROVAL IS REQUIRED.
- ALL WATERLINES SHALL BE CONSTRUCTED TO MEET OAR 333-061-0050 AND PART 01100 OF THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION. ALL WATERLINES MUST PASS HYDROSTATIC AND DISINFECTION TESTING PRIOR TO CONNECTION TO EXISTING WATERLINES. FILLING AND FLUSHING OF WATERLINES SHALL MEET 01140.50 OF THE STANDARD SPECIFICATIONS, UTILIZING TEMPORARY BLOWOFF ASSEMBLIES WITH RESTRAINED JOINTS PER THE PLANS AND SPECIFICATIONS. FILLING AND FLUSHING FROM THE EXISTING DISTRIBUTION SYSTEM IS NOT ALLOWED. UPON THE SUCCESSFUL HYDROSTATIC AND DISINFECTION TESTING PER 01140.51 AND 01140.52 OF THE STANDARD SPECIFICATIONS, THE CONNECTION TO THE EXISTING MAINS SHALL BE COMPLETED PER 01140.47 TO PROVIDE UNINTERRUPTED SERVICE. ALL CONNECTIONS TO THE EXISTING MAINLINE SHALL BE MADE WITHIN 5 FEET OF THE SUCCESSFULLY TESTED WATERLINE. THE CONNECTION SPOOL, VALVES, AND APPURTENANCES SHALL BE CHLORINATED AND THOROUGHLY FLUSHED PER 01140.52(g) OF THE STANDARD SPECIFICATIONS.
- ALL EXISTING UTILITIES THAT CROSS THE PROPOSED UTILITY TRENCHES SHALL BE PROTECTED DURING EXCAVATION UNLESS THE CONTRACTOR IS GRANTED PERMISSION FROM THE OWNER OF THE UTILITY TO TEMPORARILY CUT AND REPAIR THE LINE.

Plot Date: 9/7/2022 1:42 AM Plotted By: Michael Harvey
 Date Created: 8/22/2022 J:\B.COM\CENTRAL\CLIENTS\OR\UMATILLA\ACTIVITY\PROJECT\SS3-27-003_KIWANIS\ALL\SCONCEPT\DESIGN\CAD\SHEET\03-21-003_C-001.DWG



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CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES



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NO.	REVISION
1	PROCESS WASTEWATER LINE TYPE GER BBH 4/19/2021
	BY: APRIL DATE

**UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON**

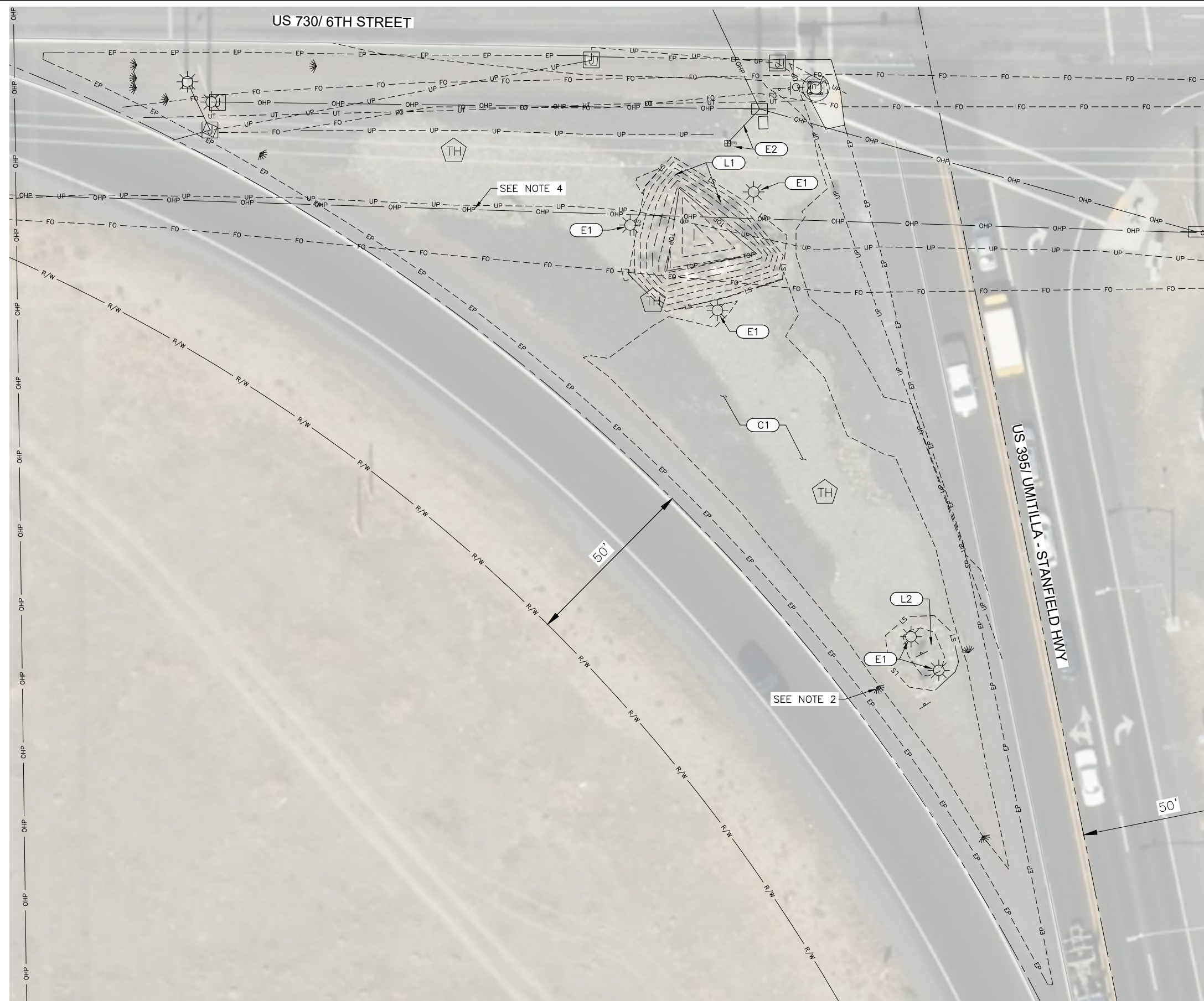
CIVIL GENERAL NOTES

FILE: 33-21-003_C-001
 JUB PROJ #: 33-21-003
 DRAWN BY: MCH
 DESIGN BY: GER
 CHECKED BY: TMG

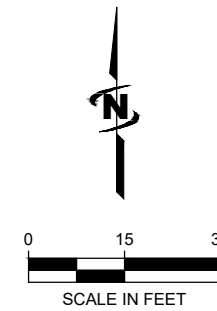
LAST UPDATED: 9/6/2022
 SHEET NUMBER:

C-001

Plot Date: 07/20/22 11:42 AM Plotted By: Michael Harvey
 Date Created: 02/22/22 JUB:COM/CENTRAL/CLIENTS/DR/UMATILLA/ACTIVITY/PROJECT/33-21-003-KIWANIS/AL/SCONCEPT/DESIGN/CAD/SHEET/33-21-003-C-101.DWG



PLAN - US 395, US 730 INTERSECTION



KEYED NOTES

CONSTRUCTION

- (C1) RETAIN AND PROTECT EXISTING ROAD SHOULDERS FROM DAMAGE OR CONTAMINATION. REMOVE ALL LANDSCAPING ROCK AND GRAVEL SURFACING BETWEEN ROAD SHOULDERS. SEPARATE AND STOCKPILE BROWN BASALT ROCK 1 1/2 INCH AND SMALLER FOR REUSE IN FINAL LANDSCAPING. SEE SHEET L-102 FOR LOCATIONS.

LANDSCAPE

- (L1) REMOVE EXISTING ROCK FOUNTAIN.
- (L2) REMOVE EXISTING SIGN AND LANDSCAPING ROCKS.

ELECTRICAL

- (E1) REMOVE EXISTING SITE LIGHTING. SEE NOTE 6, THIS SHEET.
- (E2) REMOVE EXISTING ELECTRICAL SERVICE, METER AND PANEL - COORDINATE WITH UMATILLA ELECTRIC COOPERATIVE.

NOTES:

1. CONTRACTOR SHALL PROVIDE A METHOD OF CONSTRUCTION THAT WILL ALLOW MINIMAL DISTURBANCE TO TRAFFIC FLOWS DURING DEMOLITION WORK.
2. PROTECT EXISTING UTILITIES, STREET SIGNS, STREETLIGHTS, POWER POLES, ETC. FROM DAMAGE DURING CONSTRUCTION. DAMAGE BY THE CONTRACTOR'S OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
3. CONTRACTOR IS REQUIRED TO MAINTAIN A DISTANCE NO LESS THAN 10 FEET (SAFETY WORK ZONE) FROM THE OVERHEAD POWER LINES AT ANY TIME DURING DEMOLITION OR CONSTRUCTION OF IMPROVEMENTS.
4. THE CONTRACTOR MAY NEED TO SCHEDULE A "SAFETY WATCH" AND POSSIBLE "COVER UP" WITH UMATILLA ELECTRIC IF ANY CRANE WORK WILL BE TAKING PLACE. THE CREW CAN CALL THE OPERATIONS DEPARTMENT AT (541) 564-4358 OR (541) 564-4360 FOR SCHEDULING.
5. ENSURE ALL ELECTRICAL IS DE-ENERGIZED PRIOR TO PERFORMING DEMOLITION ACTIVITIES.
6. ABANDON IN PLACE EXISTING CONDUITS AND ELECTRICAL CIRCUITS TO EXISTING DECORATIVE SITE LIGHTING BEING REMOVED.
7. REMOVE ALL EXISTING PIPING OR CONDUITS TO BE ABANDONED WHEN ENCOUNTERED IN TRENCHES OR STRUCTURAL EXCAVATIONS. ALL PIPES, CONDUITS, OR OTHER OPENING WHICH ARE CUT OR OPENED DURING CONSTRUCTION SHALL BE CAPPED OR CONCRETE PLUGGED PRIOR TO BACKFILLING.
8. CONTRACTOR SHALL PROVIDE A DISPOSAL SITE AND MEET ALL REQUIREMENTS OF FEDERAL, STATE, AND LOCAL RULES AND REGULATIONS REGARDING HEALTH, SAFETY, AND PUBLIC WELFARE IN THE DISPOSAL OF ALL DEBRIS.



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UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON

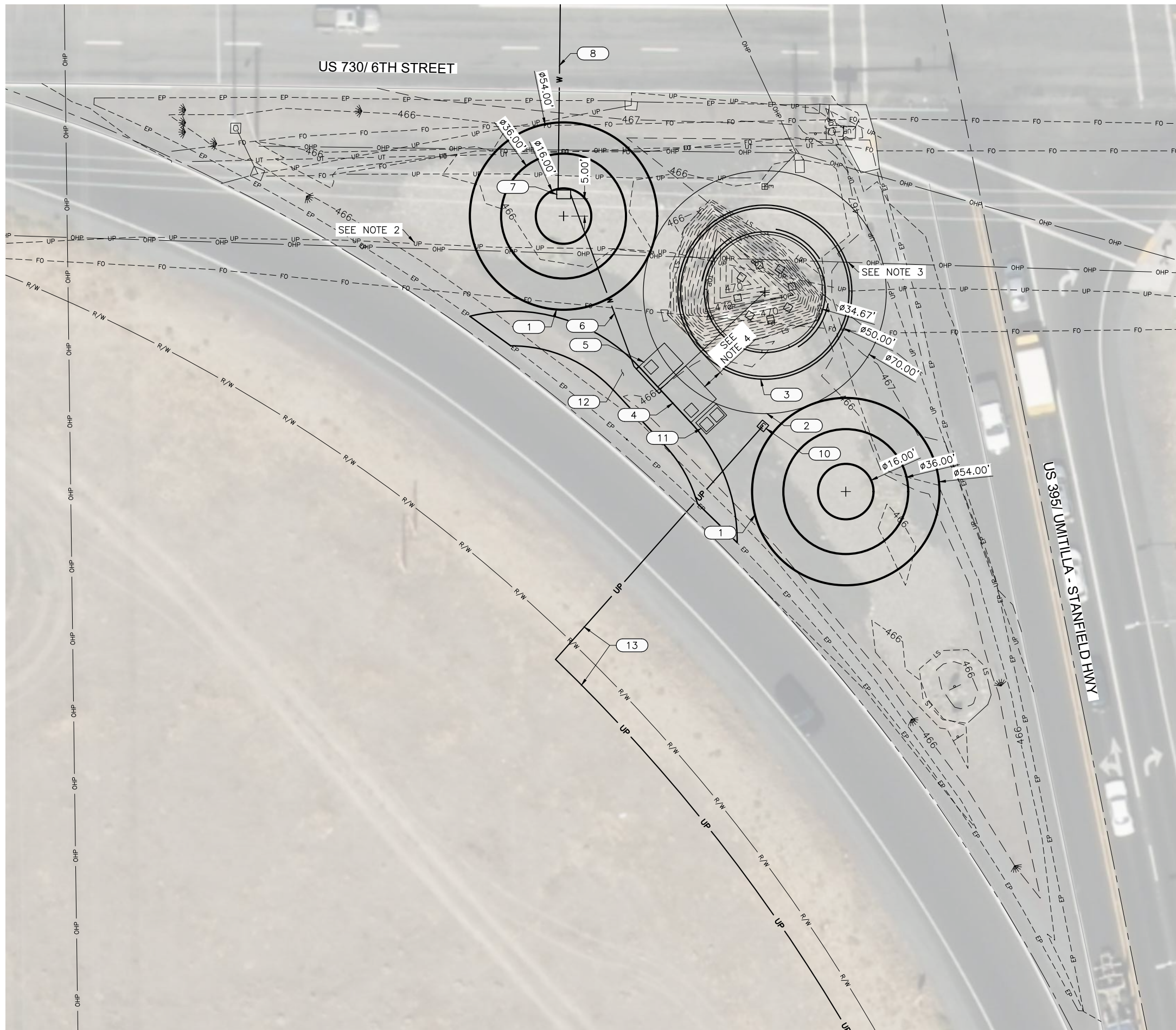
SITE DEMOLITION PLAN

FILE: 33-21-003-C-101
 JUB PROJ #: 33-21-003
 DRAWN BY: MCG
 DESIGN BY: GER
 CHECKED BY: TMG
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 06/2022

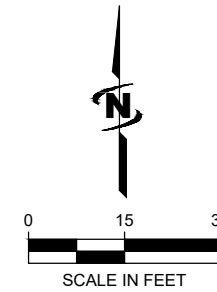
SHEET NUMBER:

C-101

Plot Date: 9/7/2022 11:42 AM Plotted By: Michael Harvey
 Date Created: 8/22/2022 JUB.COM\CENTRAL\CLIENTS\OR\UMATILLA\ACTIVITY\PROJECT\33-21-003_KIWANSIS\ALSCONCEPT\DESIGN\CAD\SHEET\33-21-003_C-102.DWG



PLAN - US 395, US 730 INTERSECTION



KEYED NOTES

- 1 ORNAMENTAL LANDSCAPE RINGS (TYPICAL OF 2).
- 2 FOUNTAIN LANDSCAPE RING.
- 3 FOUNTAIN.
- 4 PRECAST 10'x13'x8' (MINIMUM) EQUIPMENT VAULT.
- 5 PRECAST 10'x8'x8' (MINIMUM) ELECTRICAL VAULT.
- 6 2" WATER LINE.
- 7 REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) STATION.
- 8 2" WATER SERVICE INSIDE BORED 4" CARRIER PIPE.
- 9 2" WATER SERVICE CONNECTION.
- 10 ELECTRICAL SERVICE TRANSFORMER AND SERVICE METER.
- 11 PRECAST 8'x4.5'x6' CHEMICAL VAULT.
- 12 GRAVEL ACCESS ROAD.
- 13 PRIMARY ELECTRICAL SERVICE.

NOTES:

1. SEE SHEET V-101 FOR COORDINATES OF PROJECT IMPROVEMENTS.
2. RETAIN AND PROTECT EXISTING UNDERGROUND POWER ACROSS SITE. DIG AND VERIFY AT ALL CROSSINGS.
3. MAINTAIN A MINIMUM VERTICAL SEPARATION OF 11 FEET BETWEEN OVERHEAD POWER AND FOUNTAIN.
4. VAULT SHOWN IN APPROXIMATE WAY ONLY. LOCATE VAULTS PER SHEET P-102.
5. RETAIN AND PROTECT EXISTING ROAD SHOULDERS FROM DAMAGE OR CONTAMINATION.
6. PROTECT EXISTING UTILITIES, STREET SIGNS, STREET LIGHTS, POWER POLES, ETC. FROM DAMAGE DURING CONSTRUCTION. DAMAGE BY THE CONTRACTOR'S OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
7. REMOVE ALL EXISTING PIPING OR CONDUITS TO BE ABANDONED WHEN ENCOUNTERED IN TRENCHES OR STRUCTURAL EXCAVATIONS. ALL PIPES, CONDUITS, OR OTHER OPENING WHICH ARE CUT OR OPENED DURING CONSTRUCTION SHALL BE CAPPED OR CONCRETE PLUGGED PRIOR TO BACKFILLING.
8. FOUNTAIN PIPING AND ELECTRICAL TO/FROM VAULTS NOT SHOWN - SEE ELECTRICAL AND FOUNTAIN PLANS.



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UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON

SITE LAYOUT AND DIMENSION

FILE: 33-21-003_C-102
 JUB PROJ. #: 33-21-003
 DRAWN BY: MCH
 DESIGN BY: GER
 CHECKED BY: TMG

ONE INCH
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 INCH SCALE ACCORDINGLY
 LAST UPDATED: 9/5/2022

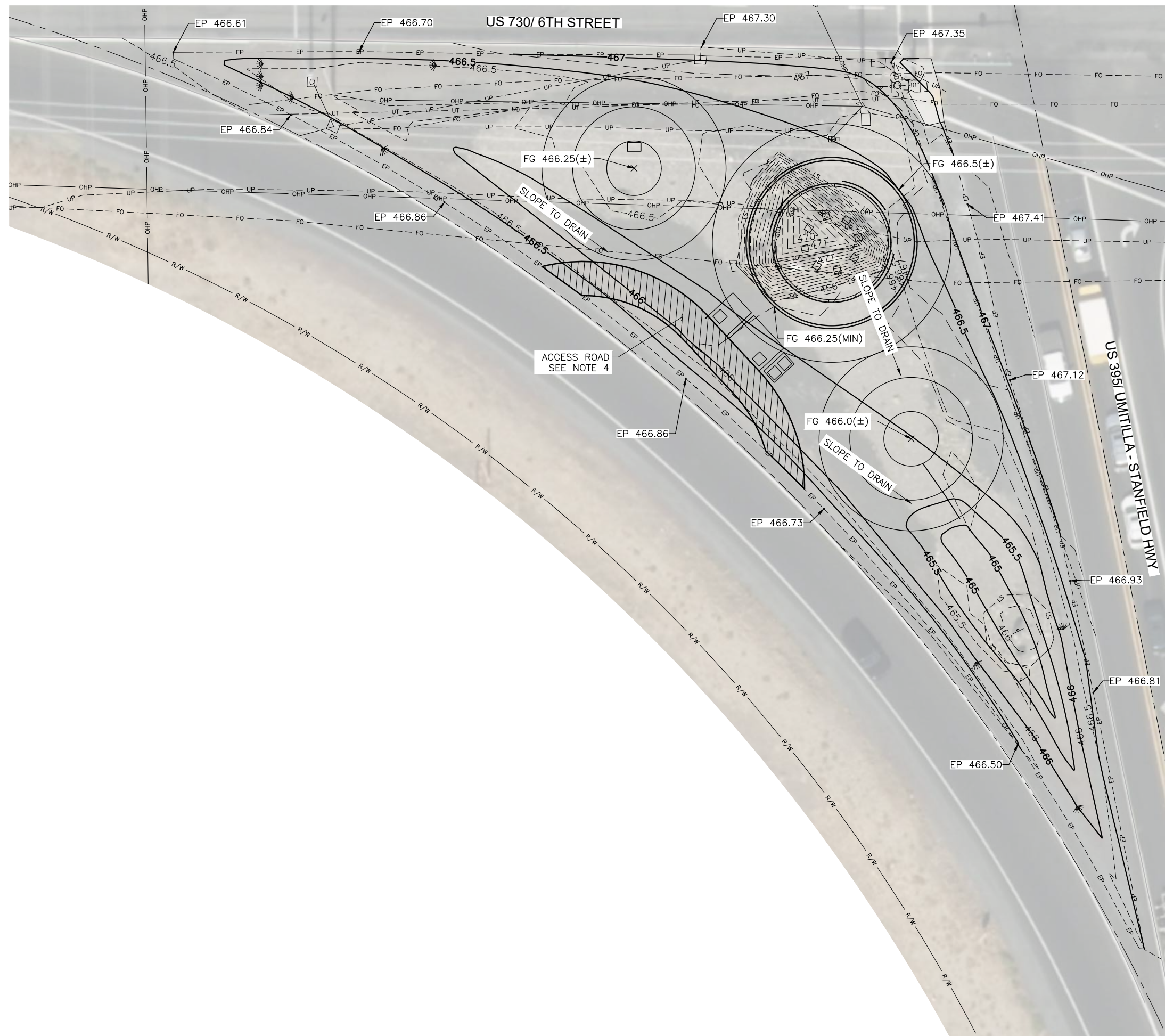
SHEET NUMBER:

C-102

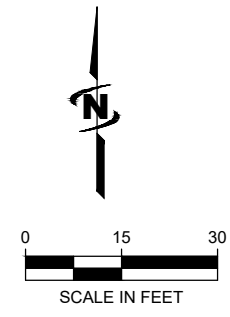


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PLAN - US 395, US 730 INTERSECTION



NOTES:

1. ALL SPOT ELEVATIONS SHOWN ARE TO FINISHED GRADE (F.G.). F.G. IS TO TOP OF LANDSCAPE ROCK, SEE LANDSCAPE PLANS.
2. RETAIN AND PROTECT EXISTING ROAD SHOULDERS FROM DAMAGE OR CONTAMINATION.
3. GRADE ENTIRE SITE TO THE APPROXIMATE FINAL CONTOURS SHOWN. INTENT OF SITE GRADING IS TO SLOPE UNIFORMLY, AS MUCH AS PRACTICAL, TO PROVIDE POSITIVE DRAINAGE AWAY FROM THE FOUNTAIN AND TO THE LOW STORMWATER COLLECTION BASIN LOCATED IN THE SOUTHERN CORNER OF THE SITE.
4. CONSTRUCT A 10 FOOT WIDE ACCESS ROAD FOR FOUNTAIN MAINTENANCE AS SHOWN. ROAD SHALL INCLUDE 6" MINIMUM DEPTH OF BASE COURSE BENEATH THE LANDSCAPE ROCK COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED PER ASTM D1557. FINISH GRADE SHALL BE AT THE TOP OF LANDSCAPE ROCK, SEE LANDSCAPE PLANS.
5. PROTECT EXISTING UTILITIES, STREET SIGNS, STREETLIGHTS, POWER POLES, ETC. FROM DAMAGE DURING CONSTRUCTION. DAMAGE BY THE CONTRACTOR'S OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. CONTRACTOR IS REQUIRED TO MAINTAIN A DISTANCE NO LESS THAN 10 FEET (SAFETY WORK ZONE) FROM THE OVERHEAD POWER LINES AT ANY TIME DURING DEMOLITION OR CONSTRUCTION OF IMPROVEMENTS.
7. THE CONTRACTOR MAY NEED TO SCHEDULE A "SAFETY WATCH" AND POSSIBLE "COVER UP" WITH UMATILLA ELECTRIC IF ANY CRANE WORK WILL BE TAKING PLACE. THE CREW CAN CALL THE OPERATIONS DEPARTMENT AT (541) 564-4358 OR (541) 564-4360 FOR SCHEDULING.

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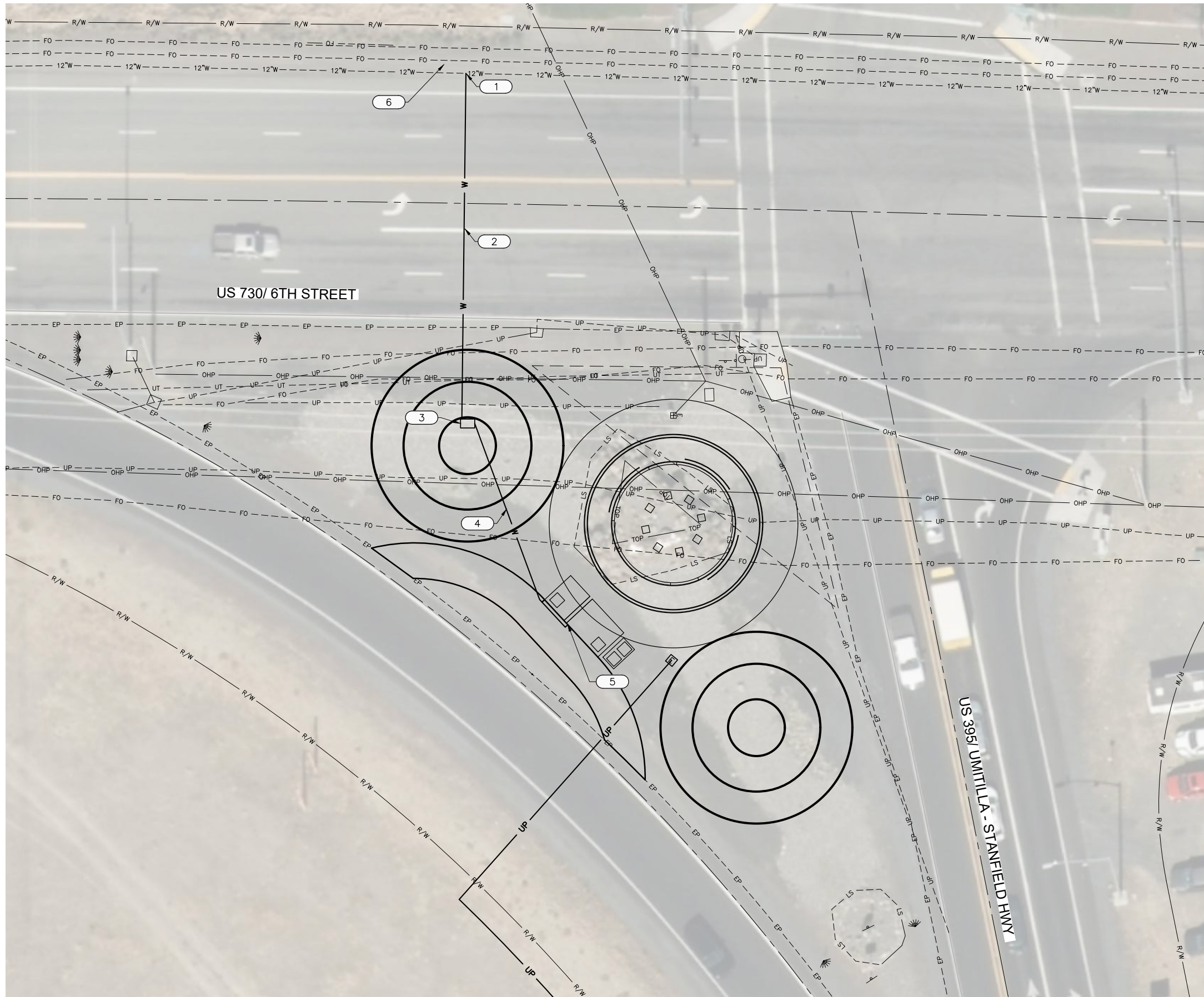
REGISTERED PROFESSIONAL
 ENGINEER
 75581 PE
 OREGON
 TROY M. GREEN
 11-2005
 EXPIRES: 6/30/23

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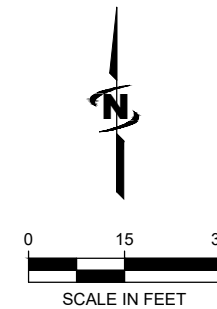
UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON
 GRADING AND DRAINAGE

FILE: 33-21-003_C-103
 JUB PROJ #: 33-21-003
 DRAWN BY: MCH
 DESIGN BY: GER
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 LAST UPDATED: 9/6/2022
 SHEET NUMBER:
C-103





PLAN - US 395, US 730 INTERSECTION



KEYED NOTES

- 1 2" WATER SERVICE CONNECTION AND METER. TIE TO EXISTING 12" WATER LINE. SEE CITY STD. DETAIL W-3, SHEET C-501.
- 2 98LF ± 2" HDPE SDR 9 WATER LINE INSIDE BORED 4" HDPE SDR 13.5 CARRIER PIPE - SEE NOTE 3.
- 3 REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) STATION. SEE CITY STD. DETAIL W-17, SHEET C-502. SEE NOTE 2.
- 4 70LF ± 2" HDPE SDR 9 WATER LINE. SEE CITY STD. DETAIL W-20, SHEET C-502 FOR TYPICAL WATER TRENCH SECTION.
- 5 EXTEND 2" WATER INTO FOUNTAIN EQUIPMENT VAULT. SEE FOUNTAIN PLANS.
- 6 RESTORE SHOULDER -3" COMPACTED DEPTH SHOULDER AGGREGATE MEETING SECTION 02640.

NOTES:

- 1. SEE SHEET C-102 FOR SITE LAYOUT AND DIMENSIONS TO IMPROVEMENTS.
- 2. RPBA ASSEMBLY SHALL BE LOCATED IN A HEATED ENCLOSURE. SEE SPECIFICATIONS FOR REQUIREMENTS.
- 3. CONTRACTOR SHALL DIG AND VERIFY ALL UTILITY CROSSINGS AND CONNECTION POINTS BEFORE BEGINNING BORING. BORING DEPTH SHALL BE ESTABLISHED TO PROVIDE 1 FOOT MINIMUM CLEARANCE BELOW LOWEST UTILITY CROSSING.



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UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON
 WATER SYSTEM IMPROVEMENTS

FILE: 33-21-003_C-104
 JUB PROJ. #: 33-21-003
 DRAWN BY: MCH
 DESIGN BY: GER
 CHECKED BY: TMG
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 LAST UPDATED: 9/5/2022
 SHEET NUMBER:
C-104

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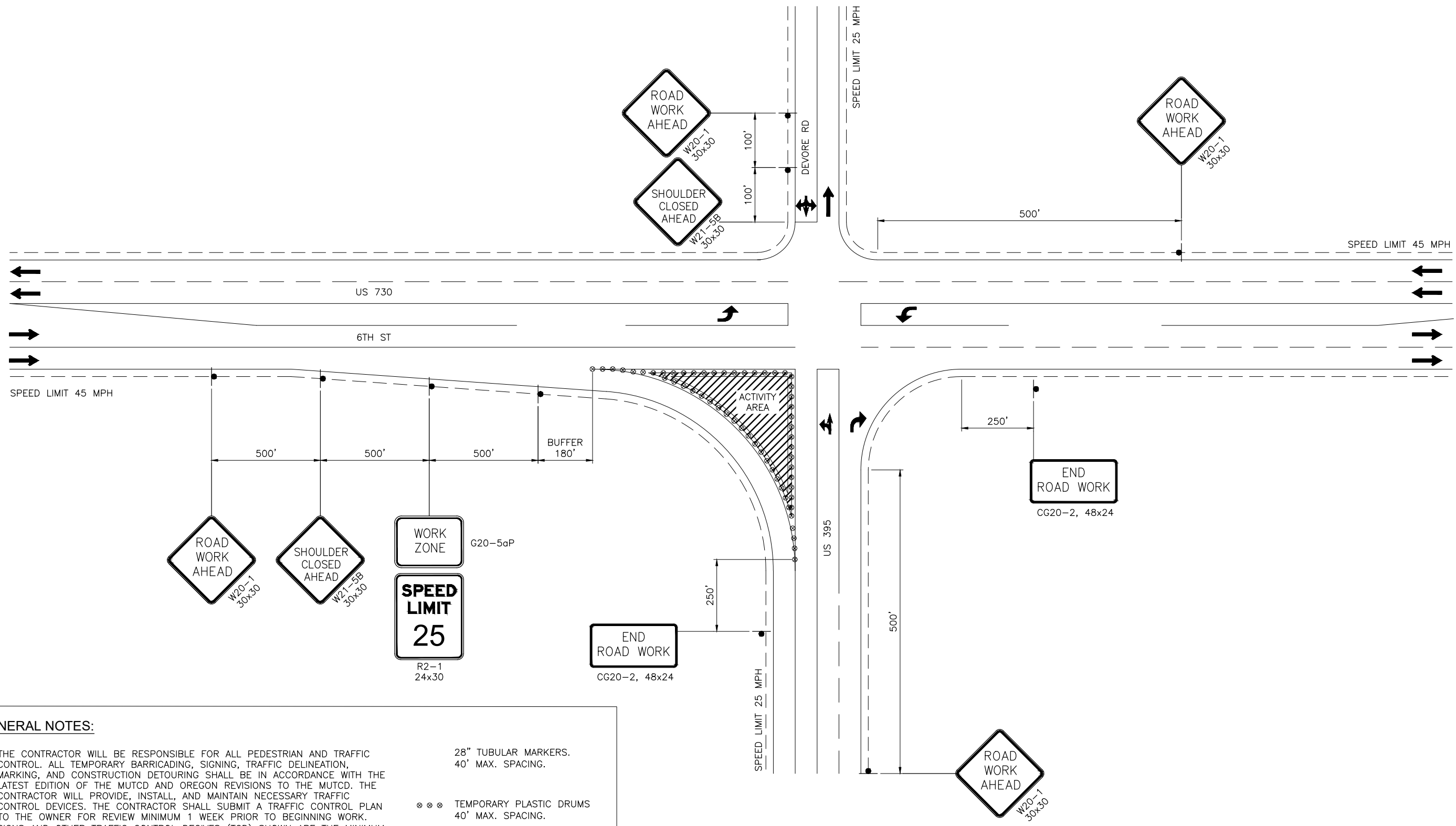
UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON

TRAFFIC CONTROL PLAN
 TYPICAL FOUNTAIN WORK ZONE

FILE: 33-21-003_C-105
 JUB PROJ. #: 33-21-003
 DRAWN BY: MCH
 DESIGN BY: WG
 CHECKED BY: TM
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 LAST UPDATED: 9/9/2022

SHEET NUMBER:

C-105



SHOULDER CLOSURE - TYPICAL FOUNTAIN WORK ZONE
 SCALE: NOT TO SCALE

GENERAL NOTES:

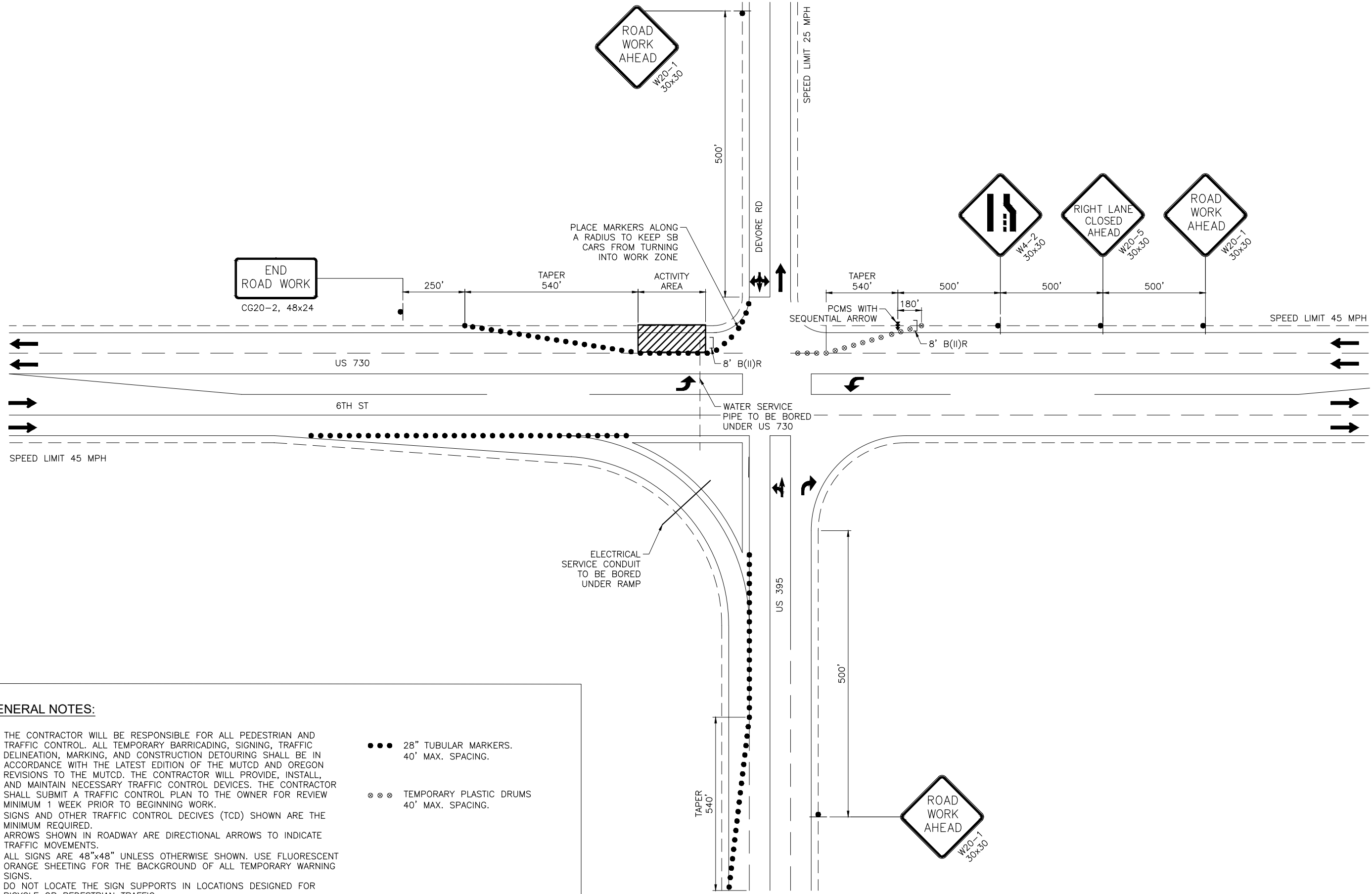
1. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL PEDESTRIAN AND TRAFFIC CONTROL. ALL TEMPORARY BARRICADING, SIGNING, TRAFFIC DELINEATION, MARKING, AND CONSTRUCTION DETOURING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD AND OREGON REVISIONS TO THE MUTCD. THE CONTRACTOR WILL PROVIDE, INSTALL, AND MAINTAIN NECESSARY TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE OWNER FOR REVIEW MINIMUM 1 WEEK PRIOR TO BEGINNING WORK.
2. SIGNS AND OTHER TRAFFIC CONTROL DEVICES (TCD) SHOWN ARE THE MINIMUM REQUIRED.
3. ARROWS SHOWN IN ROADWAY ARE DIRECTIONAL ARROWS TO INDICATE TRAFFIC MOVEMENTS.
4. ALL SIGNS ARE 48"x48" UNLESS OTHERWISE SHOWN. USE FLUORESCENT ORANGE SHEETING FOR THE BACKGROUND OF ALL TEMPORARY WARNING SIGNS. DO NOT LOCATE THE SIGN SUPPORTS IN LOCATIONS DESIGNED FOR BICYCLE OR PEDESTRIAN TRAFFIC.
5. ADDITIONAL TRAFFIC CONTROL MEASURES (TCM) MAY BE REQUIRED FOR ALL LEGS OF THE INTERSECTION.
6. PLACE CHANNELIZING DEVICES AROUND INTERSECTION RADII, BUSINESS ACCESSES AND DRIVEWAYS AT 10' SPACING.

- 28" TUBULAR MARKERS.
40' MAX. SPACING.
- TEMPORARY PLASTIC DRUMS
40' MAX. SPACING.

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UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON
 TRAFFIC CONTROL PLAN
 WATER SERVICE CONNECTION



GENERAL NOTES:

1. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL PEDESTRIAN AND TRAFFIC CONTROL. ALL TEMPORARY BARRICADING, SIGNING, TRAFFIC DELINEATION, MARKING, AND CONSTRUCTION DETOURING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD AND OREGON REVISIONS TO THE MUTCD. THE CONTRACTOR WILL PROVIDE, INSTALL, AND MAINTAIN NECESSARY TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE OWNER FOR REVIEW MINIMUM 1 WEEK PRIOR TO BEGINNING WORK.
2. SIGNS AND OTHER TRAFFIC CONTROL DEVICES (TCD) SHOWN ARE THE MINIMUM REQUIRED.
3. ARROWS SHOWN IN ROADWAY ARE DIRECTIONAL ARROWS TO INDICATE TRAFFIC MOVEMENTS.
4. ALL SIGNS ARE 48"x48" UNLESS OTHERWISE SHOWN. USE FLUORESCENT ORANGE SHEETING FOR THE BACKGROUND OF ALL TEMPORARY WARNING SIGNS.
5. DO NOT LOCATE THE SIGN SUPPORTS IN LOCATIONS DESIGNED FOR BICYCLE OR PEDESTRIAN TRAFFIC.
6. ADDITIONAL TRAFFIC CONTROL MEASURES (TCM) MAY BE REQUIRED FOR ALL LEGS OF THE INTERSECTION.
7. PLACE CHANNELIZING DEVICES AROUND INTERSECTION RADII, BUSINESS ACCESSES AND DRIVEWAYS AT 10' SPACING.

- ● ● 28" TUBULAR MARKERS.
40' MAX. SPACING.
- ⊗ ⊗ ⊗ TEMPORARY PLASTIC DRUMS
40' MAX. SPACING.

WESTBOUND LANE CLOSURE - WATER SERVICE CONNECTION
 SCALE: NOT TO SCALE

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 Date Created: 9/7/2022 JUB.COM\CENTRAL\CLIENTS\OR\UMATILLA\ACTIVITY\PROJECT\33-21-003_KIWANIS\FINAL\CONCEPT DESIGN\CAD\SHEET\33-21-003_C-106.DWG



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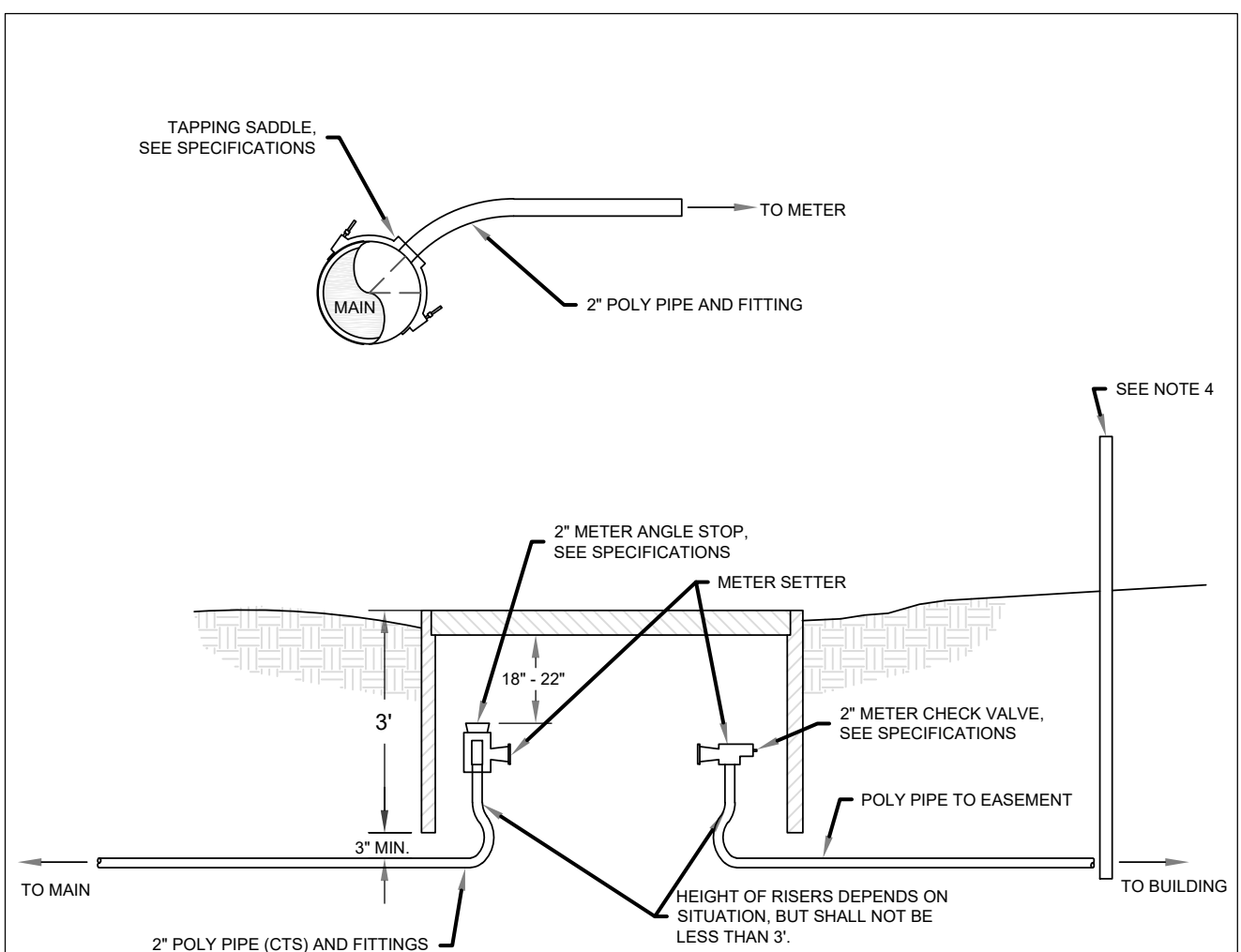
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UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON
CITY STANDARD DETAILS

FILE: 33-21-003_C-501
JUB PROJ. #: 33-21-003
DRAWN BY: MCH
DESIGN BY: GER
CHECKED BY: TM
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 9/9/2022
SHEET NUMBER:
C-501



- NOTES:
1. IF METER NOT INSTALLED, A POLY PIPE JUMPER CUT TO THE SIZE AND THREAD OF THE APPROPRIATE SERVICE SHALL BE PLACED BETWEEN THE ANGLE METER STOP AND METER CHECK VALVE. DRILL TWO 3/16" HOLES IN JUMPER.
 2. SMALLER METER SIZES REDUCED IN BETWEEN ANGLE METER STOP AND METER.
 3. DO NOT BURY METER ANGLE STOP BEFORE INSTALLING METER BOX.
 4. WATER SERVICE TAIL PIECE SHALL BE EXTENDED TO THE PROPERTY LINE OR EASEMENT LINE, WHICHEVER IS FURTHER, AND MARKED WITH AN 8' TREATED 2x4 INSIDE AN 8' STEEL STUD, PAINTED BLUE, EXTENDING 36-48" ABOVE FINISHED GROUND SURFACE. MARKER BOARD TO BE CUT OFF FLUSH WITH THE GROUND IN ALREADY ESTABLISHED AREAS.
 5. WATER METER BOX TO HAVE 18" CLEARANCE FROM ANY CONCRETE OR ASPHALT DRIVEWAY, SIDEWALK, ETC. THE ISOLATION VALVE SHALL BE NO LESS THAN 36" FROM THE METER BOX.
 6. WATER METER BOX SHALL HAVE A WHITE RESIN INTERNAL LINER.
 7. BOXES ARE TO BE SET PERPENDICULAR TO THE STREET.
 8. TRACER WIRE SHALL BE WRAPPED AROUND PIPE FOR LENGTH OF SERVICE TO MARKER POST.

2" SERVICE INSTALLATION		PUBLIC WORKS ENGINEERING	
		DATE: TBD	
		DWG: W-3	

W-3 2" SERVICE INSTALLATION
SCALE: NTS



Plot Date: 9/7/2022 1:14:41 AM Plotted By: Michael Harvey
Date Created: 8/12/2022 JUB.COM\CENTRAL\CLIENTS\OR\UMATILLA\CITY\PROJECT\33-21-003_KIWANIS\ALUSCONCEPT\DESIGN\CAD\SHEET\33-21-003_C-501.DWG

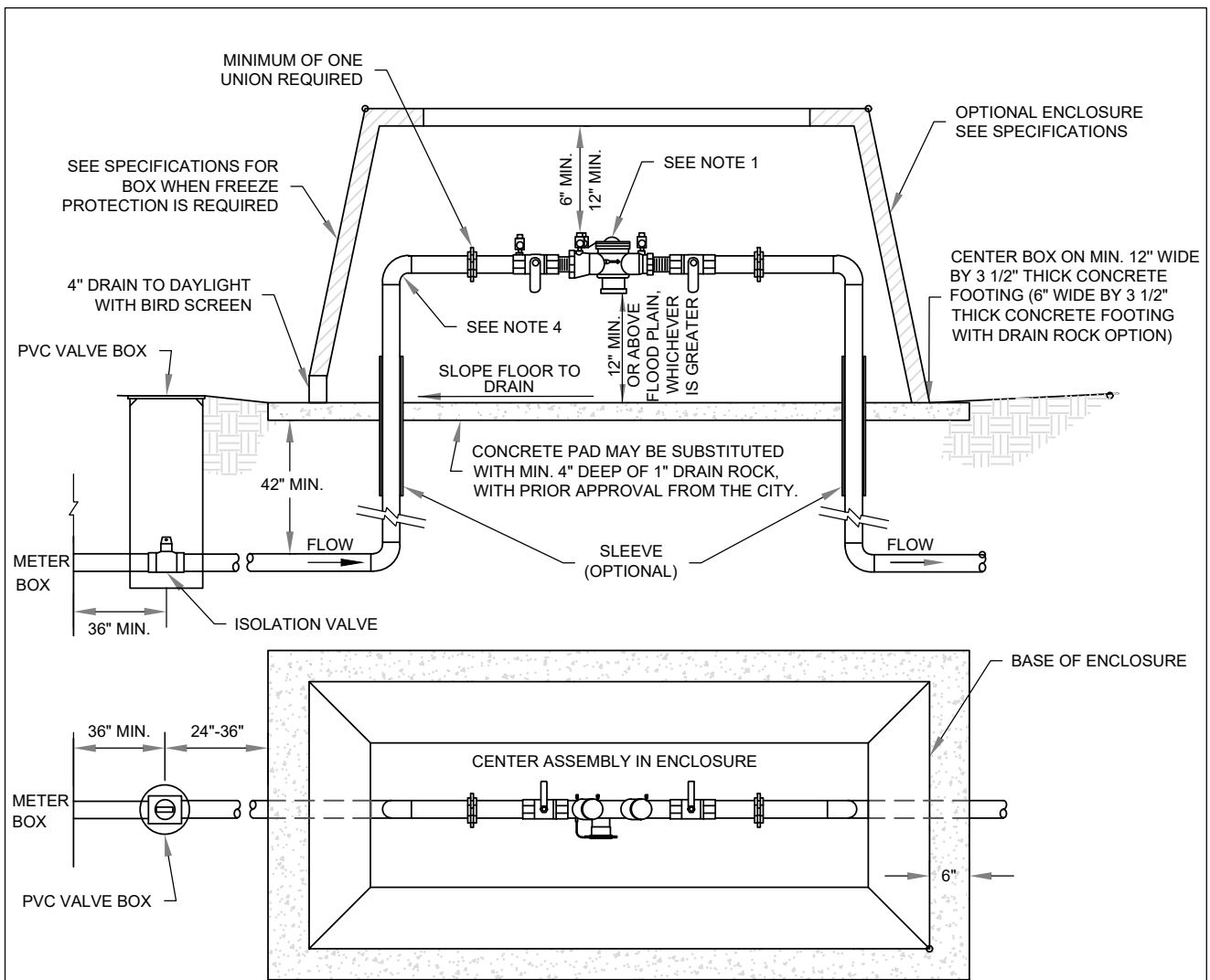
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NO.	REVISION	DESCRIPTION	DATE

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON

CITY STANDARD DETAILS

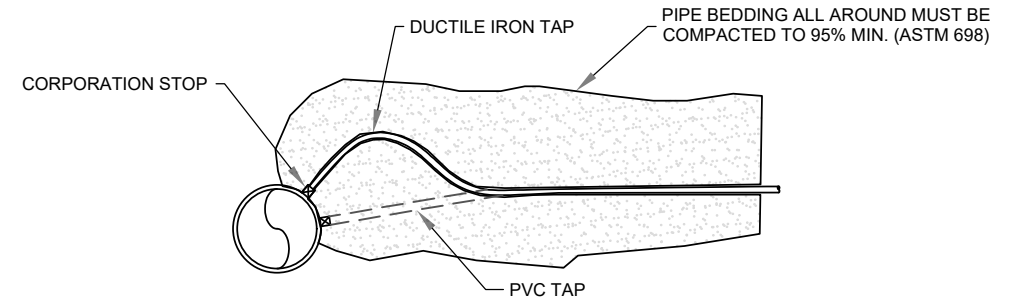
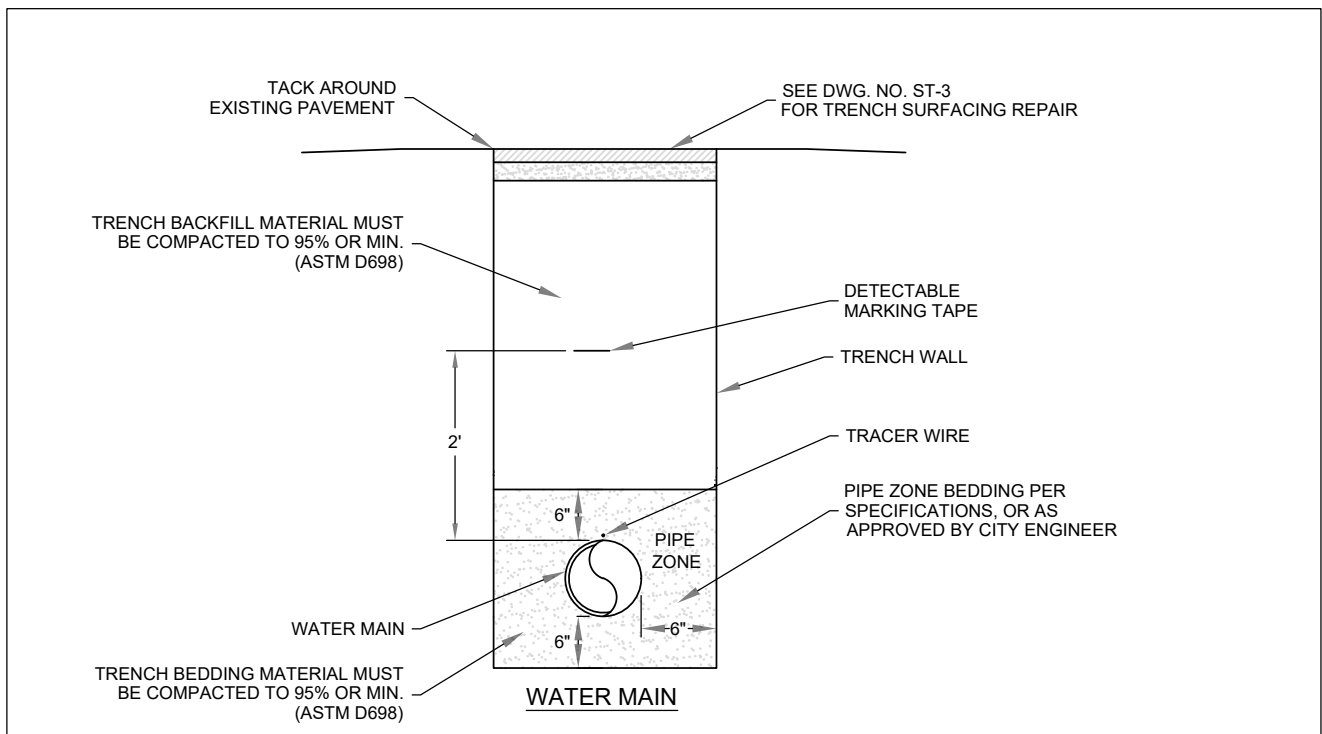


RPBA INSTALLATION
 FOR REDUCED PRESSURE BACKFLOW ASSEMBLY
 FOR ASSEMBLIES 3/4" TO 2"

- NOTES:**
- MUST BE ON THE LATEST USFCCHR LIST OF APPROVED BACKFLOW PREVENTION ASSEMBLIES.
 - MUST BE INSTALLED ABOVE GROUND, MINIMUM 12" CLEARANCE ABOVE THE FLOOD PLAIN AND IN THE ORIENTATION AS APPROVED BY USC TESTING LAB AND ACCEPTED BY DEPT OF HEALTH. THE ENCLOSURE MUST ALLOW FOR ROUTINE MAINTENANCE AND TESTING (REMOVABLE ENCLOSURE OR OPENS ON THE SIDE FOR ACCESS TO TEST COCKS).
 - ASSEMBLY INSTALLATIONS ABOVE GROUND REQUIRE COPPER OR GALVANIZED PIPE WITH AT LEAST ONE UNION. OPTIONAL PVC SLEEVE TO EXTEND 6" ABOVE AND 12" BELOW CONCRETE PAD TO ALLOW FOR SETTLEMENT OF PAD.
 - FREEZE PROTECTION IS THE RESPONSIBILITY OF THE OWNER.
 - THE BACKFLOW ASSEMBLY IS TO BE TESTED AT THE TIME OF INSTALLATION BY A CERTIFIED TESTER APPROVED BY THE CITY UNLESS PRE-APPROVED BY THE CROSS CONNECTION SPECIALIST.
 - FOR PREMISES ISOLATION, THE ENCLOSURE MUST HAVE A MINIMUM 3 1/2" CONCRETE PAD.
 - THESE BACKFLOW PREVENTION ASSEMBLY INSTALLATION STANDARDS REFLECT MINIMUM REQUIREMENTS TO COMPLY WITH OREGON HEALTH AUTHORITY REGULATIONS AND UNIFORM PLUMBING CODE. UNAPPROVED DEVIATION MAY RESULT IN THE CITY REJECTING THE INSTALLATION AND THE CERTIFICATE OF OCCUPANCY AS WELL. ALL REQUESTS FOR DEVIATION TO THESE STANDARDS MUST BE SUBMITTED IN WRITING AND APPROVED BY THE CITY'S CROSS-CONNECTION SPECIALIST.

RPBA INSTALLATION 3/4" TO 2"

PUBLIC WORKS ENGINEERING	
DATE:	TBD
DWG:	W-17



WATER SERVICE

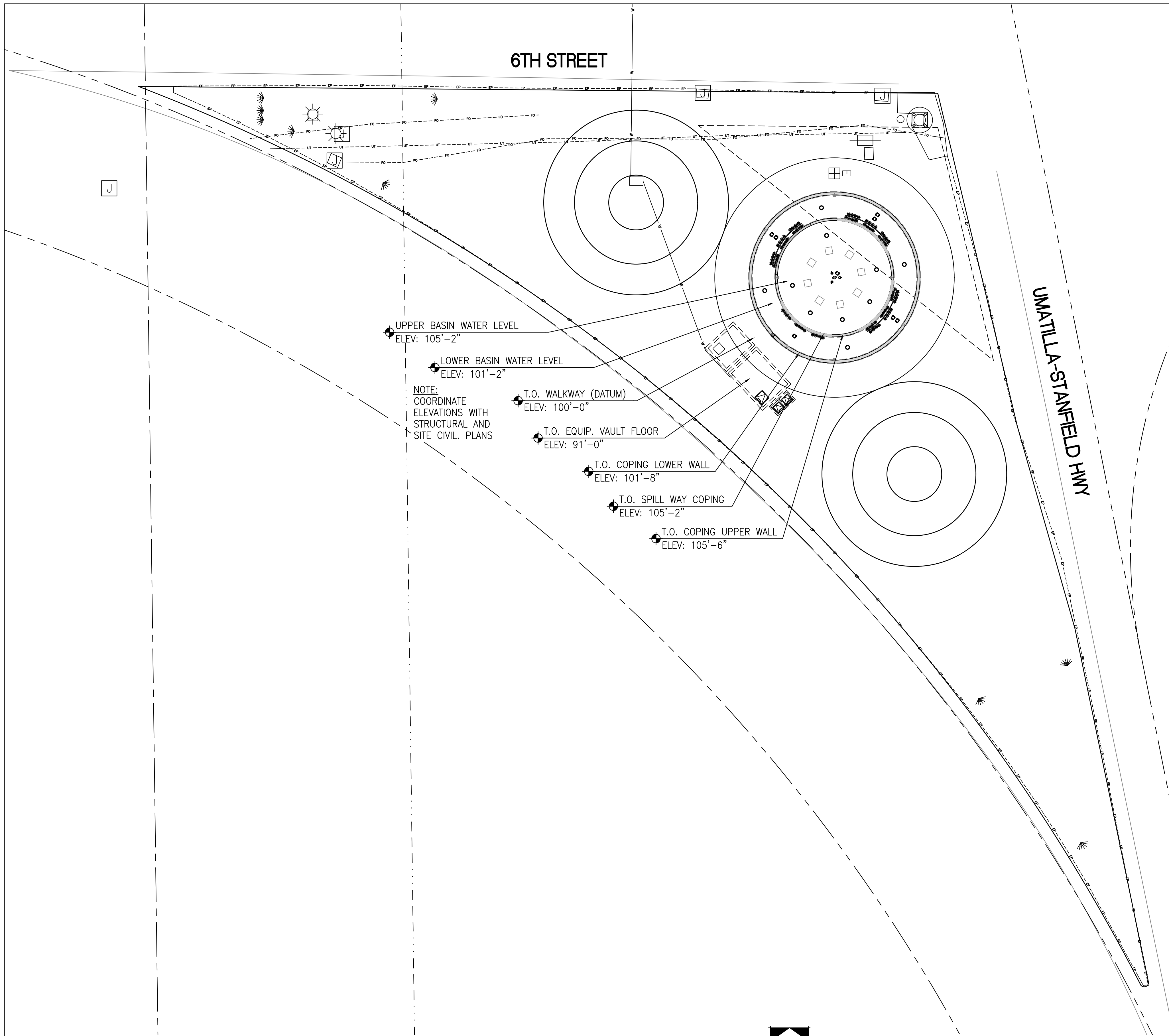
- NOTES:**
- THIS STANDARD IS ACCEPTABLE FOR DEPTHS UP TO 14 FEET. PIPES THAT EXCEED 14 FEET SHALL CONFORM TO MANUFACTURER'S RECOMMENDATIONS FOR BEDDING.
 - TRENCH SHALL BE EXCAVATED TO ACCOMMODATE PIPE BELL.

TYPICAL WATER TRENCH SECTION

PUBLIC WORKS ENGINEERING	
DATE:	TBD
DWG:	W-20



Plot Date: 9/7/2022 1:44 AM Plotted By: Michael Harvey
 Date Created: 9/12/2022 JUB.COM/CENTRAL/Clients/SR/UMATILLA/CITY/PROJECT/33-21-003_KIWANIS/AL/SCONCEPT/DESIGN/CAD/SHEET/33-21-003_C-502.DWG



OVERALL WATER FEATURE LAYOUT
SCALE: 1/16"=1'-0"



FOUNTAIN GENERAL ITEMS:

1. THE CONTRACTOR SHALL VERIFY THE LOCATION OF CABLES, CONDUITS, PIPES, SEWERS AND OTHER UNDERGROUND UTILITIES AND SHALL TAKE PROPER PRECAUTIONS TO AVOID DAMAGE TO SUCH UTILITIES. IN THE EVENT OF A CONFLICT OR DISCREPANCIES, THE GENERAL CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER AND REQUEST FOR NECESSARY RELOCATION. FAILURE TO FOLLOW THIS PROCEDURE PLACES UPON THE GENERAL CONTRACTOR THE RESPONSIBILITY OF MAKING REPAIR OR REPLACE SUCH DAMAGE AT HIS OWN EXPENSE.
2. CONTRACTOR TO PROVIDE NECESSARY ELECTRICAL AND MECHANICAL WORK IN FOUNTAIN AREAS AND EQUIPMENT ROOM INCLUDING: AREA LIGHTING, VENTILATION, DRAINAGE, ETC. ACCORDING TO LOCAL CODES.
3. ALL SURFACE WATER SHALL DRAIN AWAY FROM THE FOUNTAIN.
4. CONTRACTOR IS RESPONSIBLE FOR FILLING THE FOUNTAIN WITH WATER.
5. VAULT SYSTEMS USED FOR THE WATER FEATURE EQUIPMENT SHALL BE DESIGNED TO PREVENT CONDENSATION AND MOISTURE BUILD-UP. DESIGN WITH AIR CIRCULATION VENTS AND/OR FANS AS NEEDED.
6. CONTRACTOR SHALL PROVIDE THE OWNER WITH LITERATURE ON ALL EQUIPMENT AND FITTINGS AS PART OF THE REQUIRED O. & M. MANUAL. THIS INCLUDES PUMPS, LIGHTS, ETC.
7. CONTRACTOR SHALL PROVIDE INSTRUCTION ON OPERATION AND MAINTENANCE (O. & M.) AS PART OF THE CLOSEOUT REQUIREMENTS.
8. CONTRACTOR SHALL INSURE THAT THE FOUNTAIN CONSTRUCTION COMPLIES WITH ALL LOCAL AND STATE CODES.
9. CONTRACTOR SHALL PROVIDE ACCURATE, DIMENSIONED, AND COLOR CODED AS-BUILT DRAWINGS AS PART OF SUBSTANTIAL COMPLETION.

FOUNTAIN MECHANICAL AND PLUMBING ITEMS:

ITEMS PROVIDED AND INSTALLED BY MECHANICAL/PLUMBING CONTRACTOR:

1. VAULTS CONTAINING EQUIPMENT ROOMS MUST BE VENTILATED IN ACCORDANCE WITH AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS STANDARD 62.1-2004.
2. PROVIDE REQUIRED AIR FOR VENTILATION AND AIR FOR COMBUSTION IN EQUIPMENT ROOM AT MINIMUM ONE SQUARE INCH PER 1000 INPUT BTU HIGH AND ONE SQUARE INCH LOW PER HEATER MANUFACTURERS SPECIFICATION AND LOCAL CODES.
3. PROVIDE REQUIRED FUEL CONNECTIONS, REGULATORS, GAS VALVES, AND GAS LINE VENTS FOR HEATER PER MANUFACTURERS SPECIFICATIONS AND LOCAL CODES.
4. PROVIDE REQUIRED DUCT WORK AND/OR VENT PIPING AND CONNECTIONS FOR HEATER PER MANUFACTURERS SPECIFICATIONS AND LOCAL CODES.
5. PROVIDE FLOOR DRAINS AND SEWER CONNECTIONS AS REQUIRED BY LOCAL CODES AND AS SHOWN ON DRAWINGS (I.E. IN BOTTOM OF BACKWASH SLUMP, OTHER PITS).
6. PROVIDE CULINARY WATER LINE WITH SHUT-OFF VALVES TO LOCATIONS SHOWN ON DRAWINGS OR AS DIRECTED BY THE ENGINEER.

FOUNTAIN ELECTRICAL ITEMS:

GENERAL:

1. "N.E.C." IN THESE NOTES AND ON THESE PLANS REFERS TO 2020 NATIONAL ELECTRIC CODE (NFPA 70), ARTICLE 680. WATER DESIGN INC. TAKES NO EXCEPTION TO THE USE OF CURRENT ADOPTED ELECTRICAL CODE, IF PERMITTED BY LOCAL BUILDING AUTHORITY, OR AS SPECIFIED BY ELECTRICAL ENGINEER. ALL INSTALLATION OF THE ELECTRICAL EQUIPMENT SHALL COMPLY WITH THE APPLICABLE PROVISIONS SET FORTH IN THE LOCAL CURRENT ADOPTED ELECTRICAL CODE.

ITEMS PROVIDED BY ELECTRICAL CONTRACTOR:

(THE FOLLOWING ITEMS SHALL BE ENGINEERED AND SPECIFIED BY AN ELECTRICAL ENGINEER LICENSED IN THE STATE OF OREGON AND PROVIDED BY A LICENSED ELECTRICAL CONTRACTOR. THE ELECTRICAL TRADES' RESPONSIBILITIES ARE NOT LIMITED TO THESE ITEMS.)

2. PROVIDE ELECTRICAL SERVICE AND CONNECTIONS TO ALL PUMP MOTORS, CIRCUIT BREAKERS, DISCONNECTS, PANELS, RELAYS, CONTROLLERS, J-BOXES, LIGHTS, AND OTHER FOUNTAIN EQUIPMENT IN EQUIPMENT ROOM.
3. PROVIDE BONDING AND GROUNDING OF FOUNTAIN MOTORS AND OTHER EQUIPMENT IN THE EQUIPMENT ROOM (INCLUDING G.F.C.I. PROTECTION ON ALL FOUNTAIN EQUIPMENT). IN ADDITION TO THE G.F.C.I. A FUSE SYSTEM IS REQUIRED ON THE CIRCUITS.
4. FOUNTAIN EQUIPMENT INTERLOCKING: INTERLOCK THE CIRCULATION PUMP WITH ALL CHEMICAL FEEDERS.
5. NO OUTLETS WITHIN 6 FT. OF FOUNTAIN. ALL OUTLETS 6 FT. TO 20 FT. FROM FOUNTAIN TO BE G.F.C.I. PROTECTED. G.F.C.I. PROTECTION MUST BE PROVIDED IN ACCORDANCE WITH THE CURRENT ADOPTED EDITION OF THE NATIONAL ELECTRIC CODE (N.E.C.). IN ADDITION, ENTIRE INSTALLATION SHALL BE IN COMPLIANCE WITH LOCAL CODES FOR LIGHTING CIRCUITS, MOTORS, OUTLETS, AND ELECTRICAL CIRCUITS IN AND AROUND THE FOUNTAIN AREA OR SERVING THE FOUNTAIN.
6. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT AND WIRE FROM PANEL TO LIGHTS' J-BOX AND SHALL MAKE CONNECTIONS. SEE UNDERWATER LIGHT AND J-BOX DETAILS. SEE ELECTRICAL PLAN. ALL ELECTRICAL WORK, GROUNDING, AND BONDING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (N.E.C.) ARTICLE 680.
7. IF APPLICABLE, PROVIDE LIGHT SWITCHES FOR UNDERWATER LIGHTS IN A LOCATION WHERE THEY ARE NOT ACCESSIBLE BY THE PUBLIC. (SWITCH LOCATION DETERMINED BY OWNER/ARCHITECT).
8. ELECTRICAL WIRE SHALL BE SIZED APPROPRIATELY FOR VOLTAGE DROP OVER ITS LENGTH. USE ONLY WATER RESISTANT, STRANDED COPPER WIRE.
9. ELECTRICAL SYSTEMS SHALL COMPLY WITH NEC ARTICLE 680 WHERE POSSIBLE AND MEET LOCAL CODES TO INSURE A SAFE ELECTRICAL INSTALLATION.

ITEMS PROVIDED AND INSTALLED BY FOUNTAIN CONTRACTOR:

10. FOUNTAIN CONTRACTOR SHALL BE RESPONSIBLE FOR BONDING OF ALL EQUIPMENT AND METAL ITEMS IN OR NEAR THE FOUNTAIN, INCLUDING: LIGHTS, NICHES, J-BOXES, METAL FITTINGS, METAL PIPING, ETC. WITH A #8 BARE GROUND WIRE. ALL BONDING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ARTICLE 680.
11. FOUNTAIN CONTRACTOR TO PROVIDE UNDERWATER LIGHTS WITH SUFFICIENT LENGTH OF CORD TO REACH FROM EACH UNDERWATER LIGHT TO ITS J-BOX AND TO ALLOW FOR LIGHT TO SAFELY REMOVED FOR RE-LAMPING. SEE JUNCTION BOX DETAIL. SEE ELECTRICAL PLANS FOR J-BOX LOCATIONS.
12. PROTECT FIXTURES WITH APPROPRIATE LENS GUARDS. PROVIDE SUPPORT FOR FREESTANDING FIXTURES WHERE WATER MOVEMENT OCCURS.
13. IF LIGHTS ARE LINE VOLTAGE, PROVIDE LIGHTS WITH THERMAL OVERLOAD PROTECTION AND LOW-WATER SHUT-OFF.

CLEANING EQUIPMENT

CONTRACTOR TO FURNISH THE FOLLOWING TO THE OWNER:

- ONE - 24" VACUUM HEAD
- ONE - VACUUM HOSE 1 1/2" (LENGTH AS REQ'D.)
- ONE - 12' VACUUM EXTENSION HANDLE
- ONE - WALL BRUSH
- ONE - LEAF SKIMMER
- ONE - 16" HANDLE EXTENSION
- ONE - TEST KIT - (WHICH INCLUDES A TEST KIT FOR CYANURIC ACID)

EVACUATION NOTE:

FOUNTAIN EVACUATION (EMPTY FOUNTAIN) BY CITY USING A TANK TRUCK.



J-U-B ENGINEERS, INC.



6740 S. 1300 E. Suite 110
Salt Lake City, UT 84121
Phone: (801) 261-4039
Fax: (801) 261-4089



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NO.	DESCRIPTION	BY	DATE

KIWANIS FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON
FOUNTAIN OVERALL LAYOUT

FILE: UMATILLA - SP100
WDI PROJ. #: 22-705FS
DRAWN BY: BH
DESIGN BY: BA
CHECKED BY: BA

ONE INCH
AT FULL SIZE, IF NOT ONE
HIGH, SCALE ACCORDINGLY.
PRINTED 2022-09-06

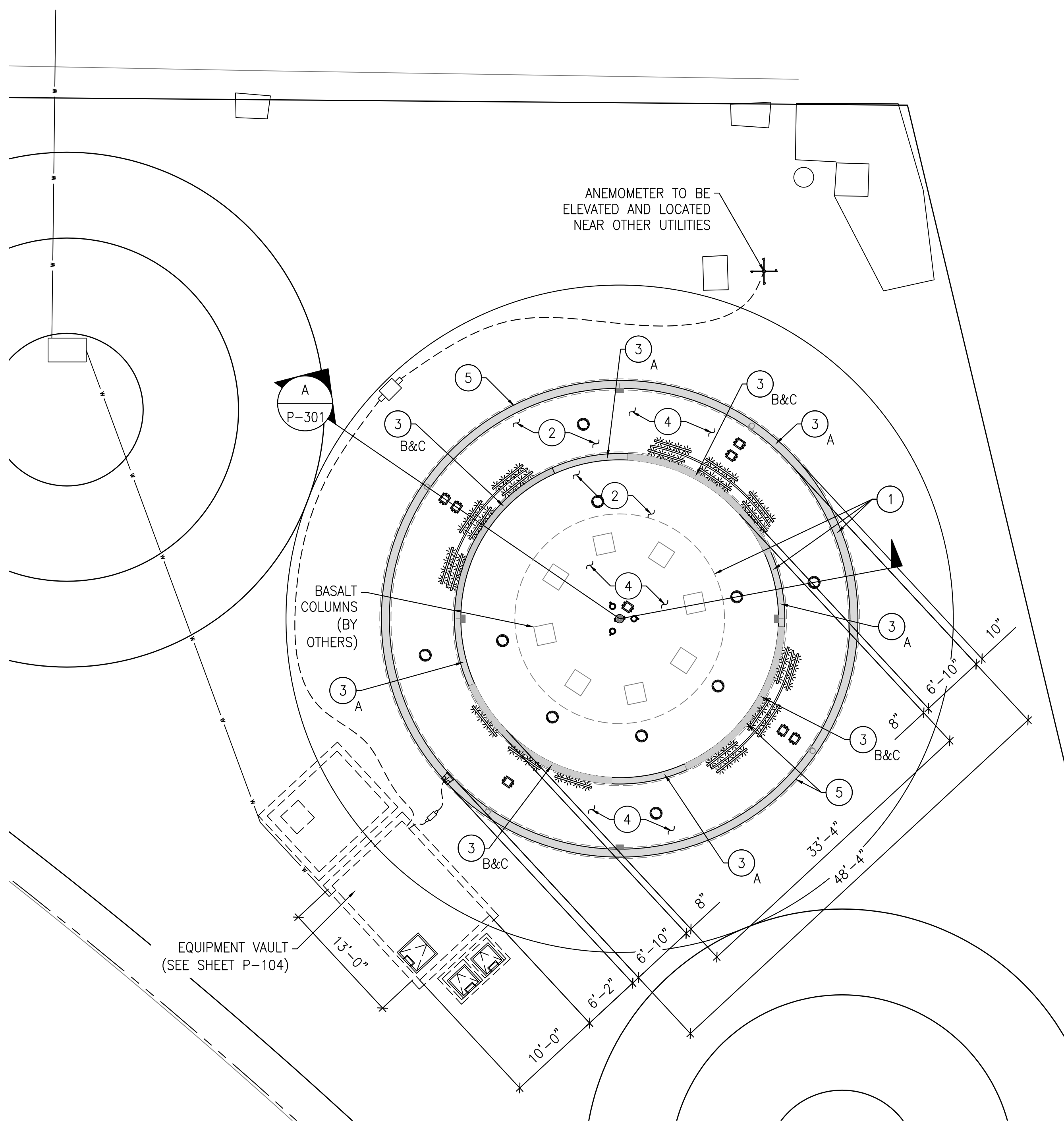
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WATER FEATURE PLAN
SCALE: 1/8"=1'-0"

MATERIAL SCHEDULE

MARK	DESCRIPTION	QUANTITY	DETAIL	REQUIREMENT
1	STRUCTURE (SEE STRUCTURAL PLANS)	BY OTHERS	(A) P-301	POURED-IN-PLACE REINFORCED CONCRETE WITH XYPEX REMARKS: CONCRETE SHALL CONTAIN XYPEX CRYSTALLINE WATERPROOFING ADMIXTURE (OR EQUAL). SEE STRUCTURAL PLANS AND LANDSCAPE ARCHITECT PLANS.
2	SURFACE-APPLIED WATERPROOFING	ENTIRE FOUNTAIN INTERIOR	(A) P-301	MAPEI MAPELASTIC AQUADEFENSE REMARKS: APPLY TO ALL FOUNTAIN INTERIOR CONCRETE. PER MANUFACTURER'S RECOMMENDATIONS OVER PROPERLY PREPARED CONCRETE INCLUDING JOINT REINFORCING AS REQUIRED AT CORNERS AND JOINTS. SEE ITEM #1 ABOVE FOR CONCRETE WATERPROOFING ADMIXTURE REQUIREMENTS.
3	COPING (DRY)	FOUNTAIN PERIMETER	(A) P-301	NATURAL STONE REMARKS: SEE J-U-B PLANS FOR REQUIREMENTS. FINISH SHALL BE FROST PROOF, WITH LOW ABSORPTION.
3	COPING (WET)	AT SPILL WAYS	(A) P-301	NATURAL STONE REMARKS: SEE J-U-B PLANS FOR REQUIREMENTS. FINISH SHALL BE FROST PROOF, WITH LOW ABSORPTION.
3	MORTAR AND GROUT	PER PLAN	N/A	MAPEI KERAPoxy MORTAR AND ULTRACOLOR PLUS MAX GROUT, WITH AQUORON MGS ADDITIVE REMARKS: PROVIDE AQUORON MGS ADDITIVE PER MANUFACTURER'S REQUIREMENTS TO MORTAR AND GROUT. MORTAR AND GROUT SHALL BE COMPATIBLE WITH WATERPROOFING SYSTEM.
4	INTERIOR FINISH	ENTIRE INTERIOR	(A) P-301	TILE REMARKS: PROVIDE FROST-PROOF CERAMIC TILE FINISH. FINISH SHALL BE WATERPROOF AND FREE FROM DEFECTS. TILE AT WATERLINE SHALL BE GLAZED. ALL OTHER INTERIOR TILE SHALL BE NON-SLIP UNGLAZED. FINISH COLOR SHALL BE BLACK OR DARK IN COLOR.
5	EXTERIOR FINISH	FOUNTAIN EXTERIOR WALL	(A) P-301	STACKED STONE REMARKS: SEE J-U-B PLANS FOR REQUIREMENTS. FINISH SHALL BE FROST PROOF, WITH LOW ABSORPTION.

FITTING LEGEND

SEE FITTING SCHEDULES SHEETS SP300

◆	DYNAMITE BLAST NOZZLE	○	FLOOR INLET
○	SUCTION OUTLET	◻	SKIMMER
■	VACUUM FITTING		

WATER FEATURE DATA

OVERALL SIZE:	48'-4" DIAMETER
WATER DEPTH (UPPER):	1'-6"
WATER DEPTH (LOWER):	2'-2"
SHAPE:	ROUND
CONST. TYPE:	CONCRETE WITH ADMIX
UPPER BASIN AREA:	873 SQ.FT.
LOWER BASIN AREA:	890 SQ.FT.
TOTAL AREA:	1,763 SQ.FT.
WEIR LENGTH: (TYP OF 3)	19'-1"
TOTAL WEIR LENGTH:	76'-4"
VOLUME:	24,200 GALLONS
MIN. CIRC. FLOW:	68 GPM
MAX. CIRC. FLOW:	100 GPM
TURNOVER:	6 HOURS 0 MIN.
SPILL WAY FLOW:	~800 GPM

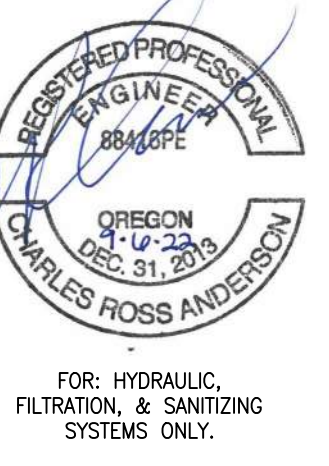
COMPONENT SCHEDULE

MARK	DESCRIPTION	QUANTITY	DETAIL	REQUIREMENT
*****	UNDERWATER COLOR LED LIGHTS	9	(1) P-507	CRYSTAL FOUNTAIN LINEAR LIGHT 4' #NL300006 RBGACL REMARKS: LED STAND MOUNT WET/DRY LED LIGHT FIXTURE WITH CUSTOM STAINLESS STEEL STAND. LOW VOLTAGE PROVIDE 115-25 VDC, 15 WATT PER LINEAR FOOT. PROVIDE TUNABLE WHITE LED LIGHTS. FIXTURE SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR WITH A GROUND FAULT INTERRUPTER. PROVIDE LIGHT WITH 9 FEET OF 18-55TW TYPE SUBMERSIBLE CORD, VERIFY REQUIRED LENGTH BEFORE ORDERING. SEE UNDERWATER LIGHT JUNCTION BOX REMARKS BELOW. PROVIDE DMX/RDM CONTROLLER (SEE WF400).
*****	UNDERWATER COLOR LED LIGHTS BEHIND SIGNS	4 PER SIGN 12 TOTAL	(1) P-507	CRYSTAL FOUNTAIN LINEAR LIGHT 4' #NL300006 RBGACL REMARKS: PROVIDE ADDITIONAL LIGHTS BEHIND SIGNS WITH ALL APPURTENANCES (J-BOX, STUB-UPS, CORD SEALS, POTTING, CONTROLS, ETC...).
○	LIGHTS AT DYNAMITE BLAST	3	(1) P-507	CRYSTAL FOUNTAINS LED360 SERIES #LED360006 REMARKS: UNDERWATER FLOOR MOUNTED LIGHT FIXTURE. FURNISH WITH R.B.G.A.C.L. LED (12-24VDC/68W) LIGHT. CAST BRONZE FIXTURE. PROVIDE WITH 18 DEGREE SPOT OPTIC. PROVIDE 9' LENGTH OF SUBMERSIBLE 16/5 STW TYPE CABLE WITH QUICK DISCONNECT. ALSO SEE UNDERWATER LIGHT JUNCTION BOX REMARKS BELOW. INSTALL WITH ALL TAMPERPROOF SCREWS AND FASTENERS.
□	CONDUIT-MOUNTED UNDERWATER LIGHT JUNCTION BOX	1 BY DYNAMITE BLAST 1 EA. AT SIGNS 1 EA. AT WATERFALLS 8 TOTAL	(2) P-507	CRYSTAL FOUNTAINS #EBJ-208 REMARKS: CONDUIT MOUNTED JUNCTION BOX PROVIDED BY FOUNTAIN CONTRACTOR. PROVIDE COMPLETE WITH ALL NECESSARY SEALS, STUB-UP FITTINGS, ETC. FOUNTAIN CONTRACTOR SHALL PROVIDE AND USE BRASS COMPRESSION CORD SEALS, CRYSTAL FOUNTAIN EGS SERIES. CONDUIT, WIRING AND CONNECTIONS BY ELECTRICAL CONTRACTOR PER NEC ARTICLE 680. JUNCTION BOXES SHALL BE FILLED WITH AN APPROVED RE-ENTERABLE ENCAPSULANT POTTING COMPOUND TO PREVENT MOISTURE FROM ENTERING OR PASSING THROUGH THE BOX. ALL WIRE AND CONDUIT FROM POWER SUPPLY/TRANSFORMERS TO J-BOXES AND LIGHTS BY ELECTRICAL CONTRACTOR.
□	WATER LEVEL SENSOR HOUSING	1	(6) P-507	CRYSTAL FOUNTAIN ESP-200 REMARKS: FOUNTAIN CONTRACTOR SHALL PROVIDE AND INSTALL HOUSING IN FOUNTAIN WALL. EXTEND SENSOR CONDUIT AND WIRE TO INTERMEDIATE JUNCTION BOX (SEE INTERMEDIATE JUNCTION BOX BELOW).
□	WATER LEVEL SENSOR DECK MOUNTED INTERMEDIATE JUNCTION BOX		(6) P-507	CRYSTAL FOUNTAIN #EBJ202 REMARKS: FOUNTAIN CONTRACTOR SHALL PROVIDE JUNCTION BOX FOR INSTALLATION IN PLANTER OR WALKWAY. FIELD LOCATE J-BOX TO ACCOMMODATE THE LENGTH OF THE WIRING IN A LOCATION PER THE DIRECTION OF LANDSCAPE ARCHITECT. CONDUIT, WIRING AND CONNECTIONS BY ELECTRICAL CONTRACTOR PER NEC ARTICLE 680. VERIFY LOCATION OF J-BOX WITH LANDSCAPE ARCHITECT. JUNCTION BOX SHALL BE FILLED WITH AN APPROVED RE-ENTERABLE ENCAPSULANT POTTING COMPOUND TO PREVENT MOISTURE FROM ENTERING OR PASSING THROUGH THE BOX. SENSOR COMES INTEGRAL WITH A 30 FOOT LONG CABLE. INTERMEDIATE JUNCTION BOX SHALL BE PLACED TO ACCOMMODATE THIS DISTANCE.
+	WIND SPEED SENSOR	1	(2) P-507	CRYSTAL FOUNTAINS #FCW-A20 REMARKS: WIND SPEED SENSOR COMES WITH AN INTEGRAL 300 FOOT CABLE. LOCATE IN AN AREA THAT EXPERIENCES THE SAME WIND CONDITIONS AS THE WATER FEATURE. VERIFY WITH LANDSCAPE ARCHITECT FOR LOCATION. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL CONDUIT AND WIRING TO INTERMEDIATE JUNCTION BOX AND TO EQUIPMENT ROOM FOR INTERLOCKING WITH THE FOUNTAIN CONTROL PANEL. SEE FOUNTAIN CONTROLLER REMARKS ON SHEET WF400.
□	WIND SPEED SENSOR INTERMEDIATE JUNCTION BOX		(P-507)	CRYSTAL FOUNTAINS #EBN-208 REMARKS: PROVIDE JUNCTION BOX WITH CONDUIT ENTRY FOR WIND SENSOR SENSOR WIRING. INSTALL PER NEC ARTICLE 680. VERIFY LOCATION OF J-BOX WITH ARCHITECT. JUNCTION BOX SHALL BE FILLED WITH AN APPROVED RE-ENTERABLE POTTING COMPOUND.



J-U-B ENGINEERS, INC.

Water Design Inc
6740 S. 1300 E. Suite 10
Salt Lake City, UT 84121
Phone: (801) 261-4009
Fax: (801) 261-4089



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NO.	DESCRIPTION	DATE

KIWANIS FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON
FOUNTAIN PLAN

FILE: UMATILLA - SP200
WDI PROJ. #: 22-705FS
DRAWN BY: BH
DESIGN BY: BA
CHECKED BY: BA



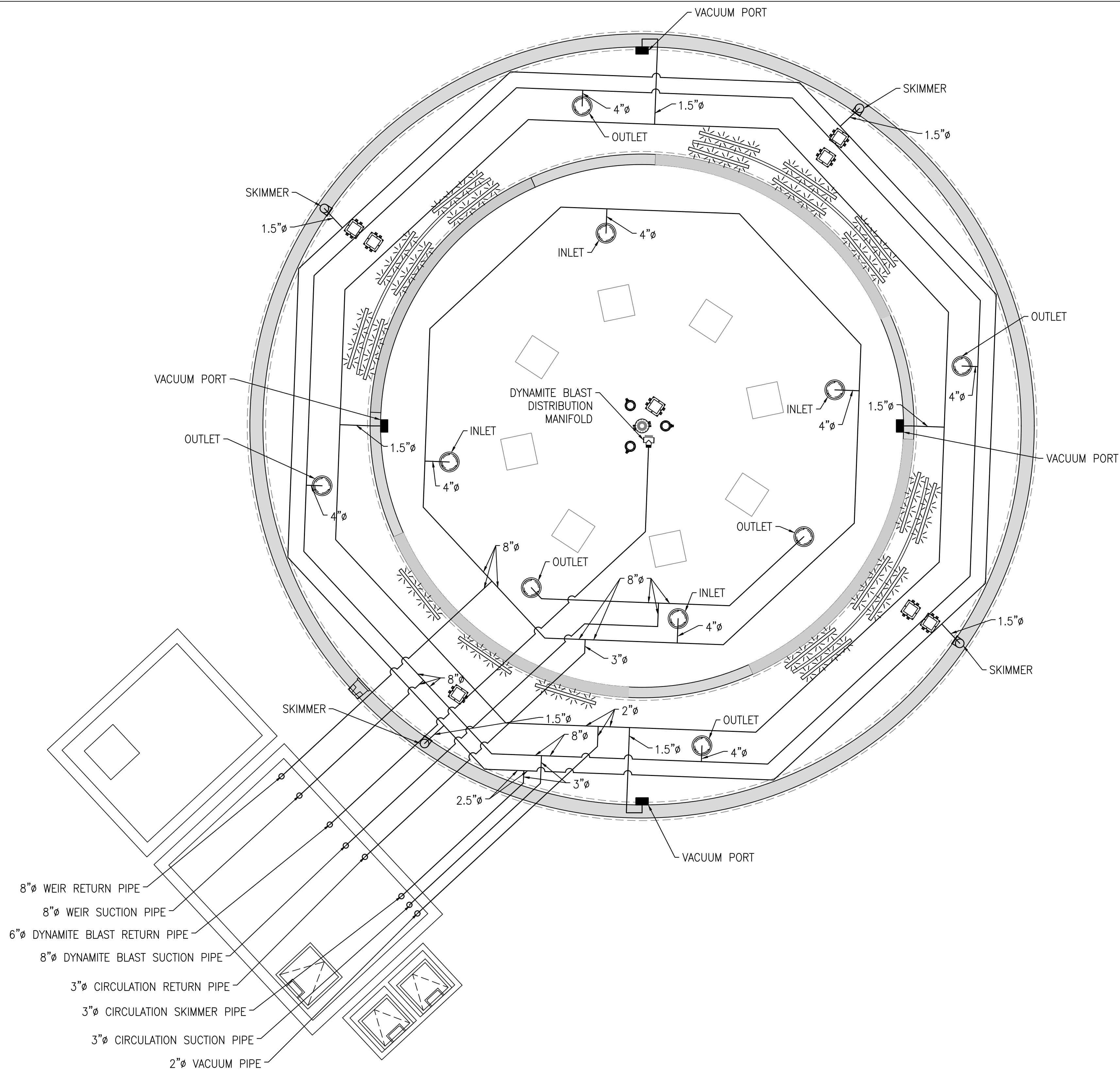
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FEATURE PIPING PLAN
SCALE: 1/4"=1'-0"

FITTING SCHEDULE				
MARK	DESCRIPTION	QUANTITY	DETAIL	REQUIREMENT
○	SUCTION OUTLET FITTING ASSEMBLY	2 UPPER BASIN 4 LOWER BASIN 6 TOTAL	4 P-307	CRYSTAL FOUNTAIN DSS130150
REMARKS: STAINLESS STEEL SUMP WITH 4" DIA N.P.T. 13" DIA. DIVERTER PLATE AND FASTENERS TO BE STAINLESS STEEL. THICKEN FLOOR AT INLET SUMP AS NECESSARY. BOND FITTING PER N.E.C. ARTICLE 680.				
○	RETURN INLET SUMP AND PLATE	4 UPPER BASIN	3 P-307	CRYSTAL FOUNTAIN DSS130150
REMARKS: STAINLESS STEEL SUMP WITH 4" DIA N.P.T. 13" DIA. DIVERTER PLATE AND FASTENERS TO BE STAINLESS STEEL. THICKEN FLOOR AT INLET SUMP AS NECESSARY. BOND FITTING PER N.E.C. ARTICLE 680.				
□	FRONT ACCESS SKIMMER	4	5 P-307	CRYSTAL FOUNTAINS AWS151 PROVIDE BLACK BODY
REMARKS: EXTRUDED PLASTIC BODY WITH 1.5"ø N.P.T. CONNECTION. PROVIDE WATER STOP ON PIPE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.				
■	VACUUM FITTING	4	3 P-307	CRYSTAL FOUNTAINS #AWC150
REMARKS: 1 1/2"ø WALL FITTING WITH BRONZE PLUG.				
⊙	DYNAMITE BLAST FEATURE	1	1 P-307	CRYSTAL FOUNTAINS DYNAMITE BLAST STAND MOUNTED #NXC103
REMARKS: NOZZLE PROVIDED COMPLETE WITH STAINLESS STEEL LEGS, AND INLET MANIFOLD. PROGRAM PUMP FOR DISPLAY MODE WITH A FLOW NOT EXCEEDING 230 GPM. INSTALL FEATURE PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE BONDING AS REQUIRED PER NEC 680.				

- FOUNTAIN PIPING NOTES:**
- ALL PIPING SHALL BE NSF APPROVED (ANSI/NSF 14), SCHEDULE 40 PVC (UNLESS OTHERWISE NOTED). FLEX PIPING AND HEAT BENDING RIGID PIPING IS NOT ALLOWED AS PART OF THIS DESIGN.
 - ALL PIPING SHALL BE IN ACCORDANCE WITH THE OREGON STATE PLUMBING CODE, THE A.S.T.M. DESIGNATION NUMBER D-1785, AND THE NSF SEAL FOR POTABLE WATER.
 - ALL BURIED PIPING SHALL BE PROPERLY SUPPORTED, PROTECTED AND INSTALLED IN ACCORDANCE WITH THE 2018 INTERNATIONAL PLUMBING CODE (IPC) SECTION 306 (TRENCHING, EXCAVATION AND BACKFILL), ASTM D2774-12 (UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPING), AND ASTM F1668-16 (CONSTRUCTION PROCEDURES FOR BURIED PLASTIC PIPE). ALSO SEE PROJECT SPECIFICATIONS FOR ADDITIONAL PIPE TRENCHING, EXCAVATION AND BACKFILL REQUIREMENTS.
 - FOUNTAIN CONTRACTOR SHALL MAKE EVERY EFFORT TO CURTAIL THE USE OF FITTINGS TO REDUCE HEAD.
 - PIPING SHALL BE INSTALLED WITHOUT AIR ENTRAPPING HIGH POINTS OR REVERSE SLOPES, I.E. ON DISCHARGE LINES, NO DESCENDING RUNS BEYOND HORIZONTAL OR ASCENDING RUNS; ON SUCTION LINES, NO DESCENDING RUNS BEYOND ASCENDING RUNS.
 - ALL UNDERGROUND PRESSURE AND SUCTION PIPING SHALL SLOPE A MINIMUM OF 1%.
 - THE TEE FEEDING FROM THE COMMON LINE BETWEEN THE SUCTION OUTLETS, TO THE PUMP(S) SHALL BE LOCATED APPROXIMATELY MIDWAY BETWEEN THE OUTLETS (ANSI/APSP-7).
 - PIPING SHALL BE INSTALLED TO PREVENT FREEZING. WINTERIZE PIPING DURING WINTER MONTHS WHEN WATER FEATURE IS NOT IN OPERATION.
 - ALL PIPING SHALL BE TESTED WITH AN INDUCED STATIC HYDRAULIC PRESSURE TEST AT: SYSTEM OPERATING PRESSURE (PER LOCAL CODES) OR MINIMUM 25 PSI FOR 24 HOURS, OR PER WRITTEN SPECIFICATIONS IF PROVIDED.
 - ALL DRAIN FITTINGS FLOW SHALL NOT EXCEED MANUFACTURER'S SPECIFIED CAPACITY (WITH REGARD TO ORIENTATION I.E. WALL OR FLOOR) WHEN 100% OF CIRCULATION AND/OR FEATURE FLOW RATE OF ASSOCIATED PIPING IS DIRECTED THROUGH SINGLE DRAIN FITTING.
 - MAIN DRAIN PIPING SHALL CARRY 100% OF ASSOCIATED FLOW RATE AT A VELOCITY NOT TO EXCEED 6' PER SECOND.
 - ALL PIPING DESIGNED FOR 6' PER SECOND MAXIMUM SUCTION, 10' PER SECOND MAXIMUM PRESSURE, AND 3' PER SECOND MAXIMUM GRAVITY.
 - VERIFY PIPE SIZES WITH THE EQUIPMENT ROOM PLAN AND SCHEMATIC. IF THERE ARE ANY DISCREPANCIES, REPORT THEM TO THE ARCHITECT/ENGINEER IMMEDIATELY.
 - FOUNTAIN CONTRACTOR SHALL COORDINATE ALL WORK WITH CIVIL, ELECTRICAL, AND STRUCTURAL DRAWINGS.
 - OVERALL PIPING IS SHOWN IN DIAGRAMMATIC FORM TO INDICATE WORK TO BE DONE RATHER THAN TO SHOW EXACT ROUTING & LOCATION. MAKE USE OF ALL DATA IN CONTRACT DOCUMENTS, VERIFY AGAINST DEVELOPED FIELD CONDITIONS, & INSTALL WORK IN AN ORDERLY ARRANGEMENT IN A MANNER TO OVERCOME STRUCTURAL, MECHANICAL & ELECTRICAL INTERFERENCE.

JUB
J-U-B ENGINEERS, INC.

Water Design Inc

6740 S. 1300 E. Suite 110
Salt Lake City, UT 84121
Phone: (801) 261-4009
Fax: (801) 261-4089

REGISTERED PROFESSIONAL ENGINEER
#88482PE
OREGON
DEC. 31, 2015
CHARLES ROSS ANDERSON

FOR: HYDRAULIC, FILTRATION, & SANITIZING SYSTEMS ONLY.

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KIWANIS FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON

FOUNTAIN PIPING PLAN

FILE: UMATILLA - SP300
WDI PROJ. #: 22-705FS
DRAWN BY: BH
DESIGN BY: BA
CHECKED BY: BA

ONE INCH
AT FULL SIZE, IF NOT ONE
HIGH, SCALE ACCORDINGLY.

PRINTED 2022-09-06

SHEET NUMBER:
P-103



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UTILITIES AND ITEMS PROVIDED BY OTHERS
(ITEMS TO BE DESIGNED, ENGINEERED, AND SPECIFIED BY OTHER CONSULTANTS)

MARK	DESCRIPTION	QUANTITY	DETAIL	REQUIREMENT
21	CHLORINE STORAGE VAULT	1	3 P-302	3' x 3' PRECAST
REMARKS: CHEMICAL VAULTS SHALL BE CONSTRUCTED OF CORROSIVE RESISTANT MATERIALS. PROVIDE A 30" x 30" ALUMINUM ACCESS HATCHES WITH STAINLESS STEEL HARDWARE. THE VAULT SHALL NOT HAVE A FLOOR DRAIN. PROVIDE IDENTIFICATION PLACARDS ON THE ENTRY DOOR TO THE STORAGE AREA AS REQUIRED BY THE NFPA 704.				
22	ACID STORAGE VAULT	1	3 P-302	3' x 3' PRECAST
REMARKS: CHEMICAL VAULTS SHALL BE CONSTRUCTED OF CORROSIVE RESISTANT MATERIALS. PROVIDE A 30" x 30" ALUMINUM ACCESS HATCH WITH STAINLESS STEEL HARDWARE. THE VAULT SHALL NOT HAVE A FLOOR DRAIN. PROVIDE IDENTIFICATION PLACARDS ON THE ENTRY DOOR TO THE STORAGE AREA AS REQUIRED BY THE NFPA 704.				
23	POTABLE WATER PIPING AND VALVES TO EQUIPMENT ROOM		SEE CIRC. EQUIP. SCHEMATIC P-501	POTABLE WATER LINE (SEE CIVIL DRAWINGS)
REMARKS: POTABLE WATER LINE NOT SHOWN ON PLANS. POTABLE WATER LINE, APPROVED BACKFLOW PREVENTION DEVICE, AND SHUT OFF VALVE TO EQUIPMENT ROOM BY PLUMBING CONTRACTOR. PROVIDE 20 GPM AT MAXIMUM 40 TO 50 PSI. PLUMBING CONTRACTOR TO PROVIDE STUB-IN TO POOL EQUIPMENT ROOM. POOL CONTRACTOR TO PROVIDE SOLENOID VALVE, MANUAL FILL VALVE AND EXTEND PIPING TO SUCTION SIDE OF CIRCULATION PUMP. SEE WATER LEVEL CONTROLLER REMARKS ABOVE.				
24	ELECTRICAL PANEL		BY OTHERS	SEE ELECTRICAL DRAWINGS
REMARKS: PANEL AND STARTERS TO BE PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR AND SHALL INCLUDE WIRING AND CONDUIT. ELECTRICAL CONTRACTOR SHALL MAKE ALL CONNECTIONS TO EQUIPMENT. PROVIDE CONTROL WIRING AS DIRECTED BY POOL CONTRACTOR. SEE ELECTRICAL INTERLOCK NOTES. ELECTRICAL PANELS INSTALLED IN THE POOL EQUIPMENT ROOM, SHALL MEET CORROSION RESISTANCE REQUIREMENTS OF NEC 2020 ARTICLE 680.14, I.E. BE NEMA-4X RATED.				
25	EQUIPMENT VAULT & HATCH	1	1 P-302, 2 P-302	10' x 13'-6" x 8' MINIMUM INSIDE DIMENSIONS PRECAST VAULT DURACRETE, AMCOR OR EQUAL, OR CIP
REMARKS: SEE EQUIPMENT VAULT PLAN, SECTIONS, AND SPECIFICATION FOR EQUIPMENT VAULT SIZE. PROVIDE WITH FLOOR DRAIN. STRUCTURAL DESIGN BY TANK MANUFACTURER. PROVIDE VAULT COMPLETE WITH A 36" SQUARE LOCKING ALUMINUM ACCESS HATCH WITH STAINLESS STEEL HARDWARE AND GALVANIZED LADDER WITH TOP-SIDE EXTENSIONS FOR ACCESS. PROVIDE A KEYPAD LOCKING MECHANISM. PROVIDE VENTILATION AT A MINIMUM OF 100 CFM. SEAL ALL AROUND ALL PIPE PENETRATIONS.				
26	FLOOR DRAIN		BY OTHERS	WITH GRATING AND DRAIN TO SANITARY SEWER

EQUIPMENT ROOM NOTES:

- FILTRATION AND CHEMICAL EQUIPMENT SHALL BE NATIONAL SANITATION FOUNDATION (NSF) APPROVED.
- EQUIPMENT SHALL BE INSTALLED ON SLABS WITH MINIMUM 4" THICKNESS AND AS REQUIRED TO WITHSTAND THE LOADS ASSOCIATED WITH THE POOL EQUIPMENT AND PIPING.
- COORDINATE WITH ALL OTHER TRADES & VERIFY EXACT LOCATION OF POOL EQUIPMENT.
- SEE OVERALL PIPING PLAN TO VERIFY PIPE SIZES AND FOR CONTINUATION OF PIPING. IF THERE ARE ANY DISCREPANCIES, REPORT THEM IMMEDIATELY TO THE ARCHITECT/ENGINEER.
- FOUNTAIN CONTRACTOR SHALL IDENTIFY ALL PIPING AND VALVES BY COLOR CODING OR LABELS AND DIRECTION OF FLOW ARROWS IN ACCORDANCE WITH LOCAL HEALTH CODE.
- REDUCER FITTINGS SHALL BE USED WHERE PIPE SIZES CHANGE.
- NO COMMON PIPING OR FITTING ON THE SUCTION SIDE OF THE PUMP IS TO BE SMALLER THAN THE LARGEST SINGLE ELEMENT CONNECTED. DOWNSIZING AND UPSIZING IS TO BE DONE AT THE THROATS OF THE PUMP PORTS.
- ALL VALVES SHALL HAVE A MINIMUM PRESSURE RATING OF 125 PSI.
- ALL TRADES SHALL KEEP SPACE ABOVE THE FILTRATION AND CHEMICAL EQUIPMENT CLEAR FOR SERVICING.
- HAIR AND LINT STRAINER OPENINGS SHALL BE NO MORE THAN 1/8". THE HAIR AND LINT STRAINER MUST PROVIDE A FREE FLOW CAPACITY OF AT LEAST FOUR TIMES THE AREA OF THE PUMP SUCTION LINE.
- FILTER SHALL BE PROVIDED WITH THE FOLLOWING APPROPRIATELY LOCATED ACCESSORIES: PRESSURE GAUGES, AIR RELIEF VALVE AT THE HIGH POINT OF THE FILTER SYSTEM, AND A VALVED TANK DRAIN.
- FLOWMETER SHALL BE PROVIDED IN THE INLET RETURN LINE AFTER FILTER AND BEFORE CHEMICAL INJECTION. INSTALL ON A STRAIGHT LENGTH OF PIPE AT A DISTANCE OF AT LEAST 10 PIPE DIAMETERS DOWNSTREAM AND 5 PIPE DIAMETERS UPSTREAM FROM ANY VALVE, ELBOW OR OTHER SOURCE OF TURBULENCE OR PER MANUFACTURER'S SPECIFICATIONS.
- PROVIDE AT LEAST THE MIN. REQUIRED SPACE AROUND THE HEATER PER MFG. SPECS AND LOCAL CODES.
- PROVIDE HEAT SINK OR CPVC PIPING IF RECOMMENDED BY HEATER MANUFACTURER. INSTALL PER MANUFACTURER RECOMMENDATIONS.
- FOUNTAIN CONTRACTOR SHALL PROVIDE HEATER BYPASS PIPING AND VALVE.
- INSTALL A THERMOMETER ON HEATER INFLUENT AND EFFLUENT PIPES AND IN THE RETURN LINE A MINIMUM OF 5'-0" AFTER HEATER BYPASS (WHEN A BYPASS VALVE IS PROVIDED).
- PROVIDE A COMBINATION VACUUM/PRESSURE GAUGE ON THE SUCTION SIDE ALL PUMPS.
- PROVIDE A PRESSURE GAUGE ON THE DISCHARGE SIDE OF ALL PUMPS.
- OWNER TO PROVIDE EYE WASH PER OSHA AND ANSI STANDARDS.

FREEZE PROTECTION NOTES:

- WHEN PIPING IS LOCATED IN (OR ROUTED THROUGH) UN-HEATED SPACES, CONTRACTOR SHALL PROVIDE FREEZE PROTECTION SUCH AS INSULATION, HEAT TRACING, HEATED CHASES, OR OTHER METHOD TO PREVENT PIPES FROM FREEZING.
- IF THE FOUNTAIN WILL NOT BE HEATED FOR A PERIOD OF TIME (OR WHENEVER THERE MAY BE A RISK OF FREEZING) FOUNTAIN PIPING SHALL BE PLUGGED, DRAINED, BLOW-OUT, AND OTHERWISE WINTERIZED.
- ADD DRAIN VALVE TO LOWEST POINT IN ALL PIPING SYSTEMS.
- CONTRACTOR SHALL INSTRUCT AND TRAIN OWNER IN FREEZE PROTECTION.

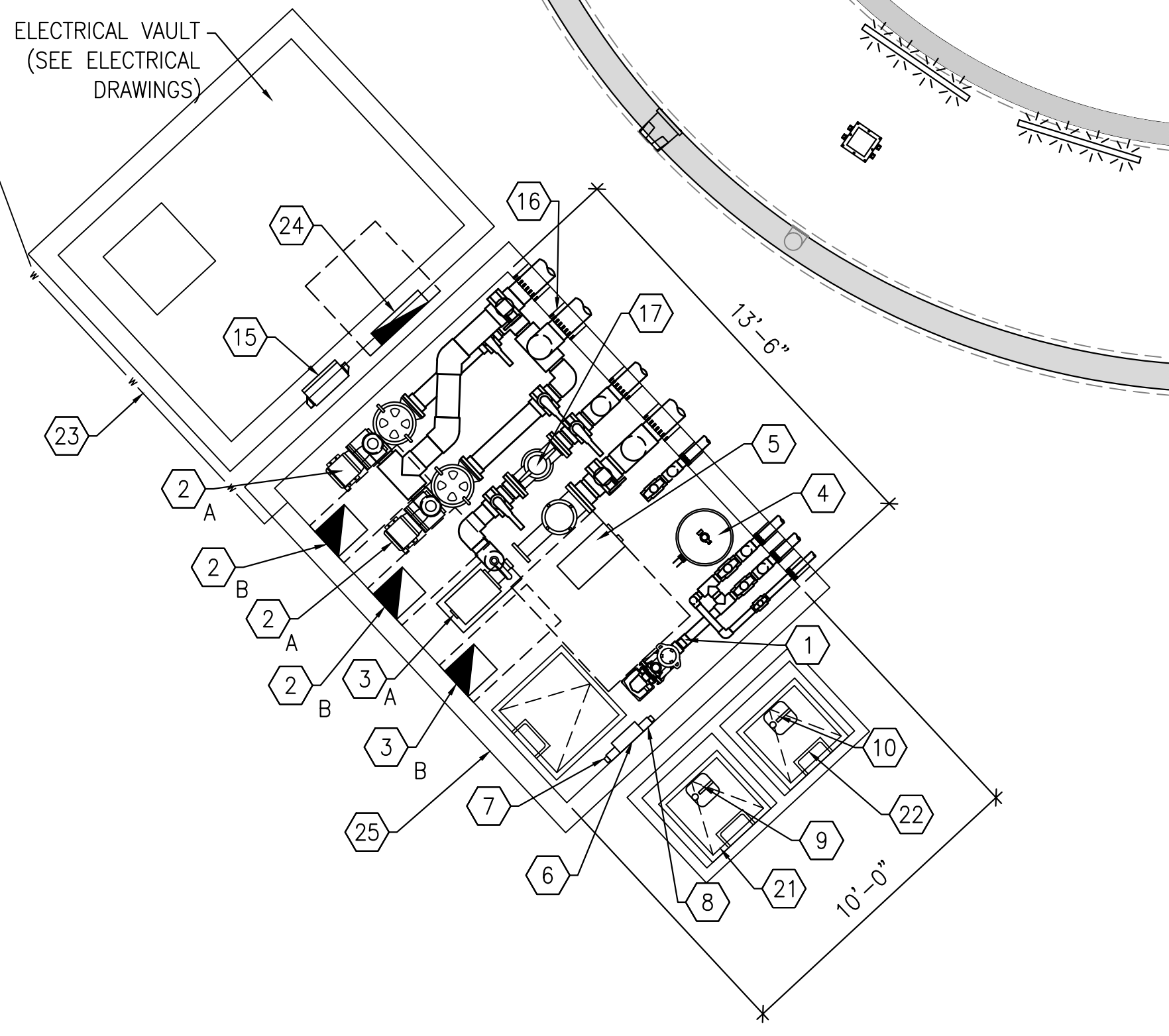
WATER FEATURE CIRCULATION EQUIPMENT SCHEDULE
(VERIFY ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONSULTANT/CONTRACTOR)

MARK	DESCRIPTION	QUANTITY	DETAIL	REQUIREMENT	MARK	DESCRIPTION	QUANTITY	DETAIL	REQUIREMENT
1	PUMP FOR CIRCULATION WITH HAIR AND LINT STRAINER	1	SEE CIRC. EQUIP. SCHEMATIC P-501	PENTAIR INTELLIFLO VSF (UP TO 3 HP)	9	STORAGE CONTAINER FOR LIQUID CHLORINE	1	SEE CIRC. EQUIP. SCHEMATIC P-501	5 GALLON CARBOY
REMARKS: PUMP COMES WITH INTEGRAL VARIABLE FREQUENCY DRIVE. AT 92 GPM, 83 FEET TDH AVAILABLE. ELECTRICAL REQUIREMENTS: 230 V, 60 Hz, SINGLE PHASE. SEE ELECTRICAL INTERLOCK NOTES. VERIFY WITH ELECTRICAL CONTRACTOR/ENGINEER FOR EXACT ELECTRICAL REQUIREMENTS. CONTRACTOR MUST PROVIDE AN EASILY READABLE PERMANENT SIGN AT THE PUMP. FLOW RANGE FOR PUMP IS 92 GPM TO 122 GPM. OWNER/OPERATOR IS RESPONSIBLE FOR NOT EXCEEDING THE MAXIMUM FLOW OF 122 GPM					REMARKS: START UP CHEMICALS PROVIDED BY FOUNTAIN CONTRACTOR. VERIFY STORAGE CAPACITY REQUIRED. PROVIDE VAPOR SHIELD BARREL ASSEMBLY (VAPOR CHECK VALVE) AS MFG BY AQUATIC COMMERCIAL INDUSTRIES OR EQUAL. PROVIDE CONTAINER RESTRAINTS. WATER FEATURE CONTRACTOR SHALL PROVIDE START UP CHEMICALS. STORAGE DRUMS SHALL BE MARKED WITH THE APPROPRIATE HAZARD IDENTIFICATION SIGNS PER REQUIREMENTS OF THE NFPA 704. CONTAINERS ARE TO BE 'REPLACEABLE' COMMODITY-TYPE POOL-CHEMICAL CONTAINERS. FOUNTAIN OWNER'S CHEMICAL SUPPLY SYSTEM SHOULD REMOVE 'EMPTIES' AND REPLACE WITH FULL CONTAINERS. THESE SHALL NOT BE PERMANENT CONTAINERS THAT WOULD REQUIRE THE FOUNTAIN OPERATOR TO POUR CHEMICALS BETWEEN CONTAINERS. CHEMICAL FEEDERS SHALL NOT BE MOUNTED ON CONTAINERS.				
2	PUMP FOR WEIR FLOW WITH STRAINER	2	N/A	PENTAIR EQ SERIES EQWK-500 (5 HP)	10	STORAGE CONTAINER FOR ACID	1	SEE CIRC. EQUIP. SCHEMATIC P-501	5 GALLON CARBOY
REMARKS: AT 500 GPM, 25 FEET TDH AVAILABLE. PUMP SPEED TO BE CONTROLLED BY VFD (SEE ITEM 2B BELOW) ELECTRICAL REQUIREMENTS: 208-230 V, 60 Hz, THREE PHASE (SEE VFD REQUIREMENTS BELOW). SEE ELECTRICAL INTERLOCK NOTES. VERIFY WITH ELECTRICAL CONTRACTOR/ENGINEER FOR EXACT ELECTRICAL REQUIREMENTS.					REMARKS: START UP CHEMICALS PROVIDED BY FOUNTAIN CONTRACTOR. VERIFY STORAGE CAPACITY REQUIRED. PROVIDE VAPOR SHIELD BARREL ASSEMBLY (VAPOR CHECK VALVE) AS MFG BY AQUATIC COMMERCIAL INDUSTRIES OR EQUAL. PROVIDE CONTAINER RESTRAINTS. WATER FEATURE CONTRACTOR SHALL PROVIDE START UP CHEMICALS. STORAGE DRUMS SHALL BE MARKED WITH THE APPROPRIATE HAZARD IDENTIFICATION SIGNS PER REQUIREMENTS OF THE NFPA 704. CONTAINERS ARE TO BE 'REPLACEABLE' COMMODITY-TYPE POOL-CHEMICAL CONTAINERS. FOUNTAIN OWNER'S CHEMICAL SUPPLY SYSTEM SHOULD REMOVE 'EMPTIES' AND REPLACE WITH FULL CONTAINERS. THESE SHALL NOT BE PERMANENT CONTAINERS THAT WOULD REQUIRE THE FOUNTAIN OPERATOR TO POUR CHEMICALS BETWEEN CONTAINERS. CHEMICAL FEEDERS SHALL NOT BE MOUNTED ON CONTAINERS.				
2	VFD FOR WEIR PUMP	2	N/A	PENTAIR ACUDRIVE XS A2000-2301-N12 WITH FUSED BY-PASS KIT	11	CIRCULATION EQUIPMENT INTERCONNECTING PIPING		SEE PLAN AND CIRC. EQUIP. SCHEMATIC	PVC SCHEDULE 40
REMARKS: FOUNTAIN CONTRACTOR SHALL PROVIDE PAIRED VFD'S TO CONVERT SINGLE PHASE TO 3 PHASE FOR OPERATION OF THE 5 HP FEATURE PUMPS. PROVIDE FUSED BYPASS. ELECTRICAL CONTRACTOR SHALL PROVIDE THE POWER AND MAKE ALL CONNECTIONS TO EQUIPMENT. CONTROL WIRING BY FOUNTAIN CONTRACTOR.					REMARKS: 3" PIPE.				
3	PUMP FOR DYNAMITE BLAST FEATURE	1	N/A	PACO LC SERIES LC-20709 (20 HP)	12	FLOWMETER	1	SEE CIRC. EQUIP. SCHEMATIC P-501	BLUE WHITE #F-30300P
REMARKS: NSF LISTED, PREMIUM EFFICIENCY, INVERTER-READY, END SUCTION, CLOSE COUPLED, TFC, EPOXY COATED, TYPE LC PUMP. IMPELLER SIZE: 6.32 INCH (VERIFY). MINIMUM DESIGN FLOW: 280 GPM AT 150 FEET TDH. ELECTRICAL REQUIREMENTS: VFD TO CONVERT 240 V SINGLE PHASE TO 230 V, 60 Hz, THREE PHASE AT PUMP. SEE ELECTRICAL INTERLOCK NOTES. VERIFY WITH ELECTRICAL CONTRACTOR/ENGINEER FOR EXACT ELECTRICAL REQUIREMENTS.					REMARKS: METER RANGE: 45-240 GPM. MOUNT FLOWMETER IN EASILY READABLE LOCATION. FLOWMETER SHALL BE INSTALLED WITH PROPER RUN OF PIPE UPSTREAM AND DOWNSTREAM OF FLOWMETER PER MANUFACTURER'S RECOMMENDATIONS.				
3	VFD FOR DYNAMITE BLAST PUMP	1	N/A	PENTAIR ACUDRIVE XS A2000-2301-N12 WITH FUSED BY-PASS KIT	13	PRESSURE GAUGES AND VACUUM GAUGE	2	SEE CIRC. EQUIP. SCHEMATIC P-501	0-60 PSI 0-30 Hg
REMARKS: FOUNTAIN CONTRACTOR SHALL PROVIDE A PAIRED VFD TO CONVERT SINGLE PHASE TO 3 PHASE FOR OPERATION OF THE 20 HP FEATURE PUMP. PROVIDE FUSED BYPASS. ELECTRICAL CONTRACTOR SHALL PROVIDE THE POWER AND MAKE ALL CONNECTIONS TO EQUIPMENT. CONTROL WIRING BY FOUNTAIN CONTRACTOR.					REMARKS: NOT SHOWN ON PLAN. INTEGRATE TO SHOW FILTER INFLUENT AND EFFLUENT PRESSURES. PROVIDE A COMBINATION PRESSURE/VACUUM GAUGE ON SUCTION SIDE OF EACH PUMP AND A PRESSURE GAUGE ON THE DISCHARGE SIDE OF EACH PUMP.				
3	HAIR AND LINT STRAINER	1	N/A	MERMADE FO SERIES ECCENTRIC REDUCING STRAINER (8" x 3")	14	THERMOMETER	3	SEE CIRC. EQUIP. SCHEMATIC P-501	LETRO
REMARKS: ECCENTRIC REDUCING BASKET. FIBERGLASS REINFORCED PLASTIC WITH TRANSPARENT LID AND STAINLESS STEEL BASKET. VERIFY SIZE WITH PIPE SUCTION SIZE AND PUMP INLET SIZE.					REMARKS: 30' TO 130'. NOT SHOWN ON PLANS. SEE EQUIPMENT SCHEMATIC. PROVIDE THERMOMETERS ON INFLUENT AND EFFLUENT LINES OF HEATER. INSTALL ONE THERMOMETER IN AN EASILY READABLE LOCATION MINIMUM 10 PIPE DIAMETERS DOWN STREAM FROM THE BYPASS VALVE.				
4	CARTRIDGE FILTER	1	SEE CIRC. EQUIP. SCHEMATIC P-501	PENTAIR CLEAN & CLEAR PLUS #CCP-520	15	CONTROL PANEL AND POWER SUPPLY FOR UNDERWATER LIGHTS	1		CRYSTAL FOUNTAINS CUSTOM CONTROLLER
REMARKS: 21.5" FILTER. 520 SF FILTER AREA.					REMARKS: ELECTRICAL CONTRACTOR SHALL PROVIDE ALL ELECTRICAL CONNECTIONS, WIRING, AND HOOK-UPS. SUBMIT DESIGN BUILD SHOP DRAWINGS.				
5	HEATER	1	SEE CIRC. EQUIP. SCHEMATIC P-501	COATES PHS SERIES 57 KW		WATER LEVEL CONTROLLER		INTEGRAL WITH CONTROL PANEL	
REMARKS: ELECTRICAL REQUIREMENTS: 240 V, 238 AMPS, SINGLE PHASE. ELECTRICAL CONNECTIONS BY ELECTRICAL CONTRACTOR. HEATER PIPING CPVC SCHEDULE 80. INSTALL AND BOND PER NEC 680. USE WHEN RISK OF FREEZING. SET POINT TO 40F.					REMARKS: PROVIDE AOV 24VAC SOLENOID VALVE ON POTABLE WATER LINE. EXTEND PIPE TO SUCTION SIDE OF PUMP. SENSORS LOCATED IN HOUSING AT WATER FEATURE. PROVIDE ONE SENSOR FOR FILL AND ONE SENSOR FOR LOW WATER CUT-OFF. SEE POTABLE WATER PIPING REMARKS BELOW.				
6	CHEMICAL CONTROLLER	1	SEE CIRC. EQUIP. SCHEMATIC P-501	PENTAIR INTELLICHEM, IPS, PROMINENT, BECS OR EQUAL		WIND CONTROL		INTEGRAL WITH CONTROL PANEL	
REMARKS: CONTROLS ORP/PH. 110-120 VAC, <1 AMP. ELECTRICAL INTERLOCKING BY ELECTRICAL CONTRACTOR. SEE ELECTRICAL INTERLOCKING NOTES. PROVIDE POWER FOR THE CONTROLLER ON A SEPARATE CIRCUIT FROM THE POWER FOR THE CHEMICAL FEEDER RELAYS.					REMARKS: PROVIDE ECWA20 ANEMOMETER WITH UP TO 300' CABLE. LOCATION OF WIND SENSOR TO BE COORDINATED WITH LANDSCAPE ARCHITECT. PLACE WIND SENSOR IN A LOCATION THAT EXPERIENCES SAME WIND CONDITIONS AS THE WATER FEATURE. EXTEND CABLE IN CONDUIT TO CONTROL PANEL.				
7	FEEDER FOR LIQUID CHLORINE	1	SEE CIRC. EQUIP. SCHEMATIC P-501	STENNER #45-MS	16	PIPE WALL CORE WITH MODULAR SEAL	1	SEE CIRC. EQUIP. SCHEMATIC P-501	THUNDERSEAL LINK-SEAL MODEL "S-316"
REMARKS: 120 VAC, 60 Hz, 1.7 AMP, 1/30 FRACTIONAL HP.					REMARKS: PROVIDE CORES AT ALL EQUIPMENT VAULT PENETRATIONS PER MANUFACTURER'S REQUIREMENTS. FOUNTAIN CONTRACTOR SHALL PROVIDE SLEEVES. GENERAL CONTRACTOR SHALL COORDINATE LOCATION OF SLEEVES WITH FOUNTAIN CONTRACTOR AND SHALL INSTALL. PROVIDE SEALS WITH STAINLESS STEEL FASTENERS.				
8	FEEDER FOR ACID	1	SEE CIRC. EQUIP. SCHEMATIC P-501	STENNER #45-MS	17	BASKET STRAINER FOR DYNAMITE BLAST FEATURE	1 WITH ADDITIONAL STRAINER BASKET	N/A	HAYWARD SB SERIES SIMPLEX STRAINER: 8" PVC
REMARKS: 120 VAC, 60 Hz, 1.7 AMP, 1/30 FRACTIONAL HP.					REMARKS: PROVIDE 20 MESH STAINLESS STEEL BASKET. PROVIDE SPARE 20 MESH STAINLESS STEEL BASKET FOR SWITCH OUT TO FACILITATE CLEANING PROCEDURE. PROVIDE WITH ISOLATION VALVES ON BOTH SIDES OF STRAINER. PROVIDE CONCRETE HOUSEKEEPING PAD SUPPORT TO HEIGHT AS REQUIRED ON VAULT FLOOR.				

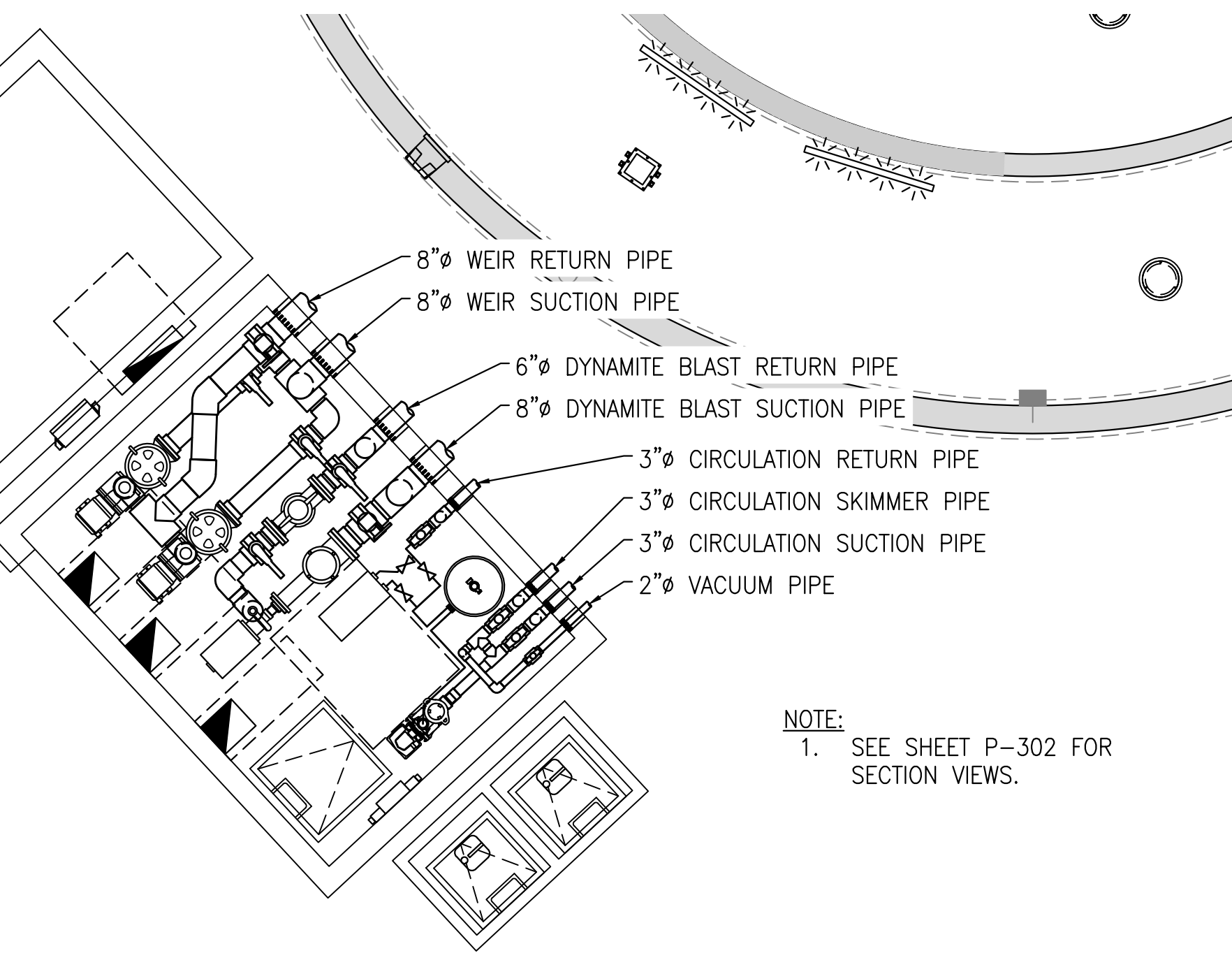
PIPE HANGER AND SUPPORT NOTES:

- PIPE HANGERS: THE PIPE HANGERS SHALL BE ADJUSTABLE B-LINE FIGURE B3105 STAINLESS STEEL OR EQUAL.
- SUPPORT SADDLES: PIPE SUPPORTS SHALL BE ADJUSTABLE B-LINE FIGURE B3092 STAINLESS STEEL SADDLE SUPPORT WITH FIGURE B3087 STAINLESS STEEL STAND OR APPROVED EQUAL.
- UNI-STRUT: PIPES SHALL BE MOUNTED TO VERTICAL WALLS USING UNISTRUT AND PIPE CLAMPS.
- PROVIDE FLEXIBLE GASKETS BETWEEN PIPE SUPPORTS/CLAMPS AND PIPES AS NEEDED FOR VIBRATION ISOLATION AND/OR SOUND ISOLATION.
- PIPE HANGERS AND SUPPORTS SHALL BE CONSTRUCTED OF STAINLESS STEEL AND SHALL BE LOCATED AS NEEDED TO ADEQUATELY SUPPORT ALL PIPING AND COMPONENTS.
- PVC PIPING SHALL NOT BE UNSUPPORTED FOR LENGTHS IN EXCESS OF SIX FEET. PROVIDE ADEQUATE SUPPORTS AND SPACING AS TO AVOID PIPE SAGGING BETWEEN SUPPORTS AND TO SUPPORT AGAINST THE EFFECTS OF WATER HAMMER.

- DEFERRED SUBMITTAL:**
- ALL POOL PIPING LARGER THAN 3" MUST BE SUPPORTED FOR SEISMIC LOADS IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. THE INSTALLING CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF ALL SEISMIC BRACING.
 - IF NEEDED, PROVIDE THE DETAILS AND ENGINEERING CALCULATIONS (WET STAMPED AND SIGNED) FOR ALL NON-STRUCTURAL COMPONENTS PERMANENTLY ATTACHED TO STRUCTURES AND THEIR SUPPORTS & ATTACHMENTS. DESIGNED TO RESIST THE EFFECTS OF EARTHQUAKE MOTIONS IN ACCORDANCE WITH ASCE 7-05. SUBMIT TO THE BUILDING DEPARTMENT AS A DEFERRED SUBMITTAL (IF REQUIRED BY BUILDING INSPECTOR).



EQUIPMENT ROOM LAYOUT
SCALE: 1/4"=1'-0"



EQUIPMENT ROOM PIPING PLAN
SCALE: 1/4"=1'-0"

PIPE VALVE NOTES:

- ALL VALVES FOR PIPING 3" AND SMALLER SHALL BE PVC BALL VALVES, ASAHI/ AMERICAN OMNI OR EQUAL.
- ALL VALVES 4" AND LARGER SHALL BE BUTTERFLY VALVES ASAHI/ AMERICAN FOUNTAIN COMPATIBLE VALVES ("POOL PRO" OR EQUAL). BUTTERFLY VALVES ARE TO BE MANUFACTURED OF PVC WITH REINFORCED DISKS BUBBLE-TITE WITH STAINLESS STEEL SHAFTS.
- VALVES 4" AND 6" SHALL BE LEVER OPERATED. VALVES 8" AND ABOVE SHALL BE GEAR OPERATED.
- ALL CHECK VALVES SHALL BE THERMOPLASTIC (PVC OR CPVC), BUTTERFLY- OR FULL PORT SWING-TYPE, FLANGED ENDS OR WAFER STYLE CHECK VALVES, WITH PARTS INTENDED FOR TREATED, SWIMMING-POOL WATER. SIZE AS REQUIRED.



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NO.	DESCRIPTION	BY	DATE

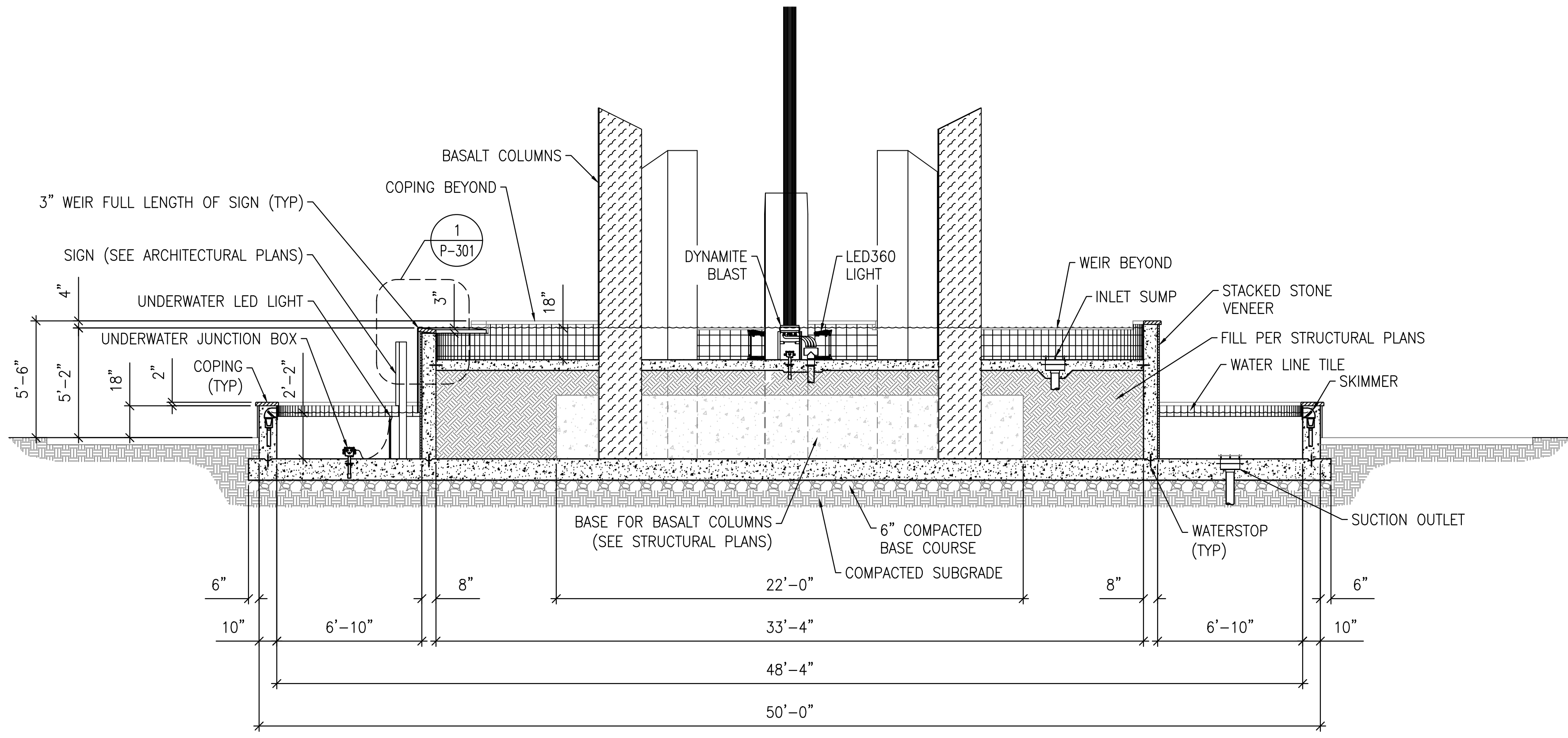
KIWANIS FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON

FOUNTAIN SECTIONS

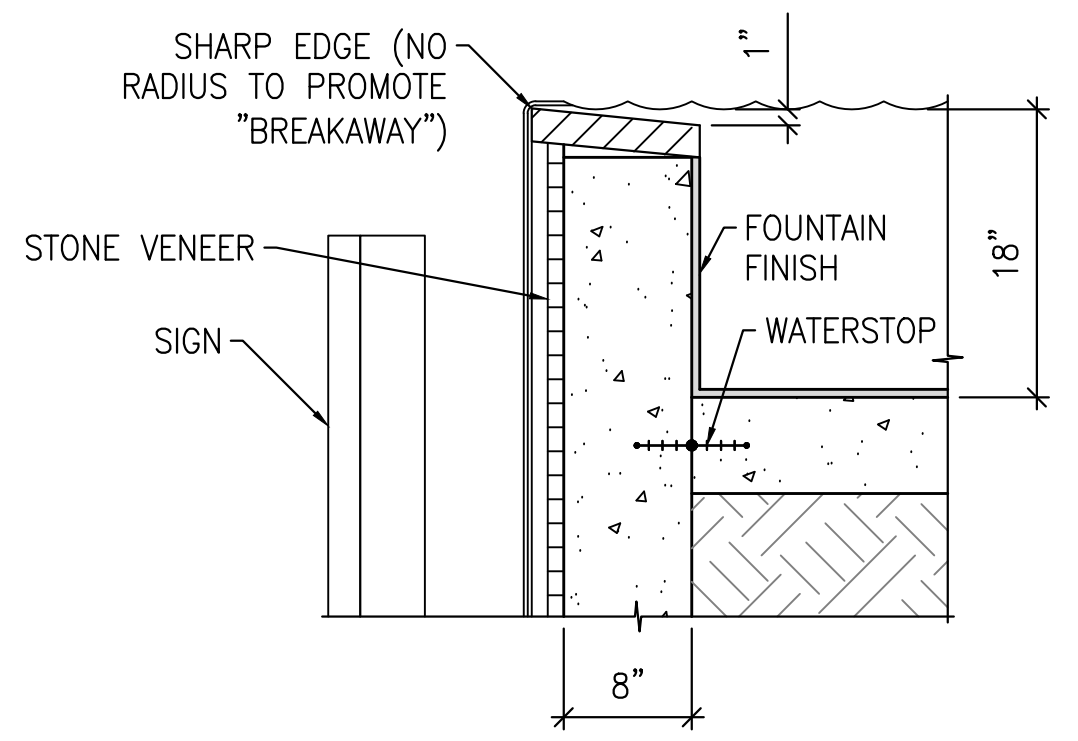
FILE: UMATILLA - SP500
 WDI PROJ. #: 22-705FS
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 DESIGN BY: BA
 CHECKED BY: BA

AT FULL SIZE, IF NOT ONE
 HIGH SCALE ACCORDINGLY
 PRINTED 2022-09-06

SHEET NUMBER:
P-301



A WATER FEATURE SECTION
 SCALE: 1/4"=1'-0"



1 WEIR DETAIL
 SCALE: 1"=1'-0"

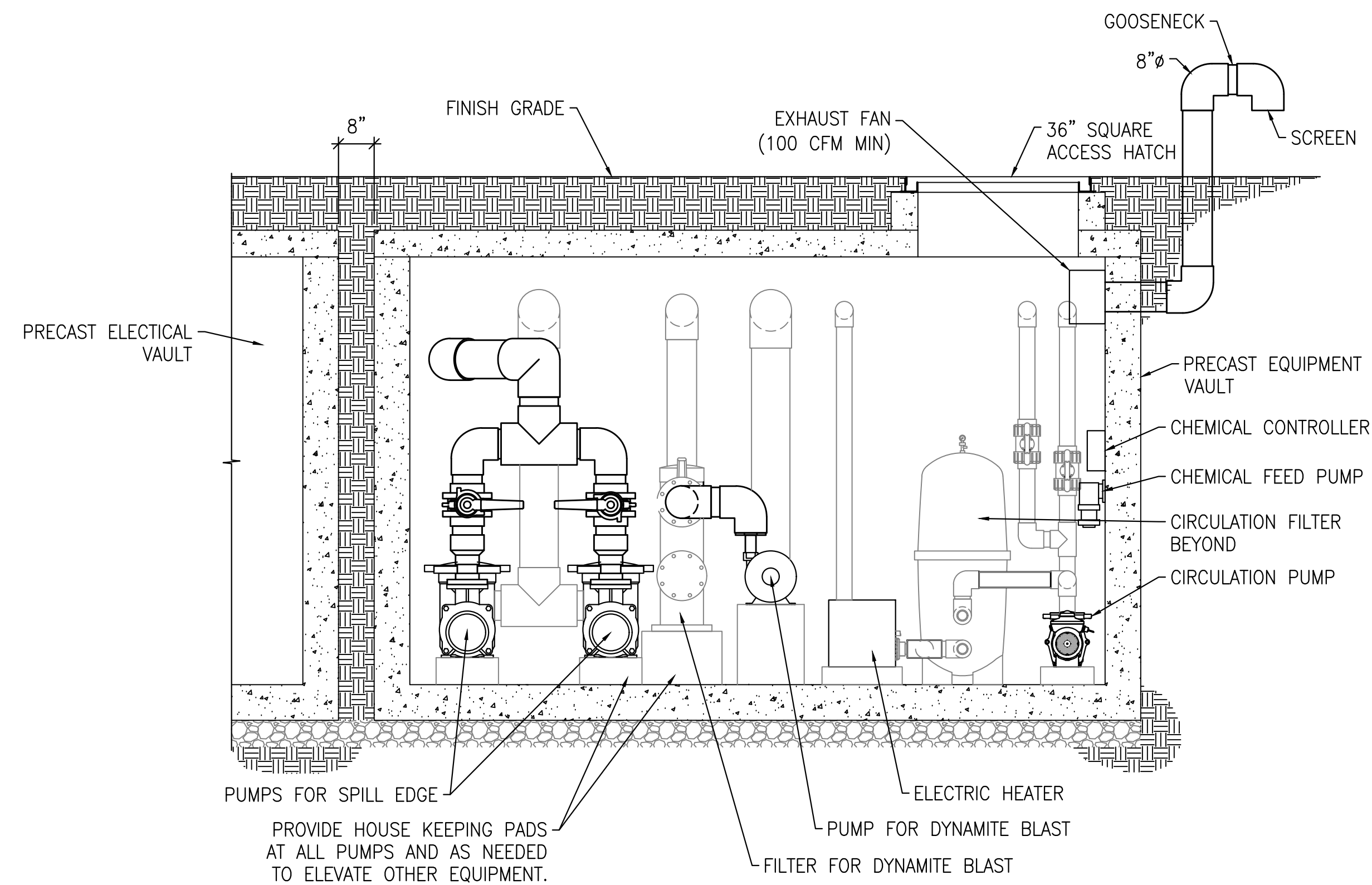


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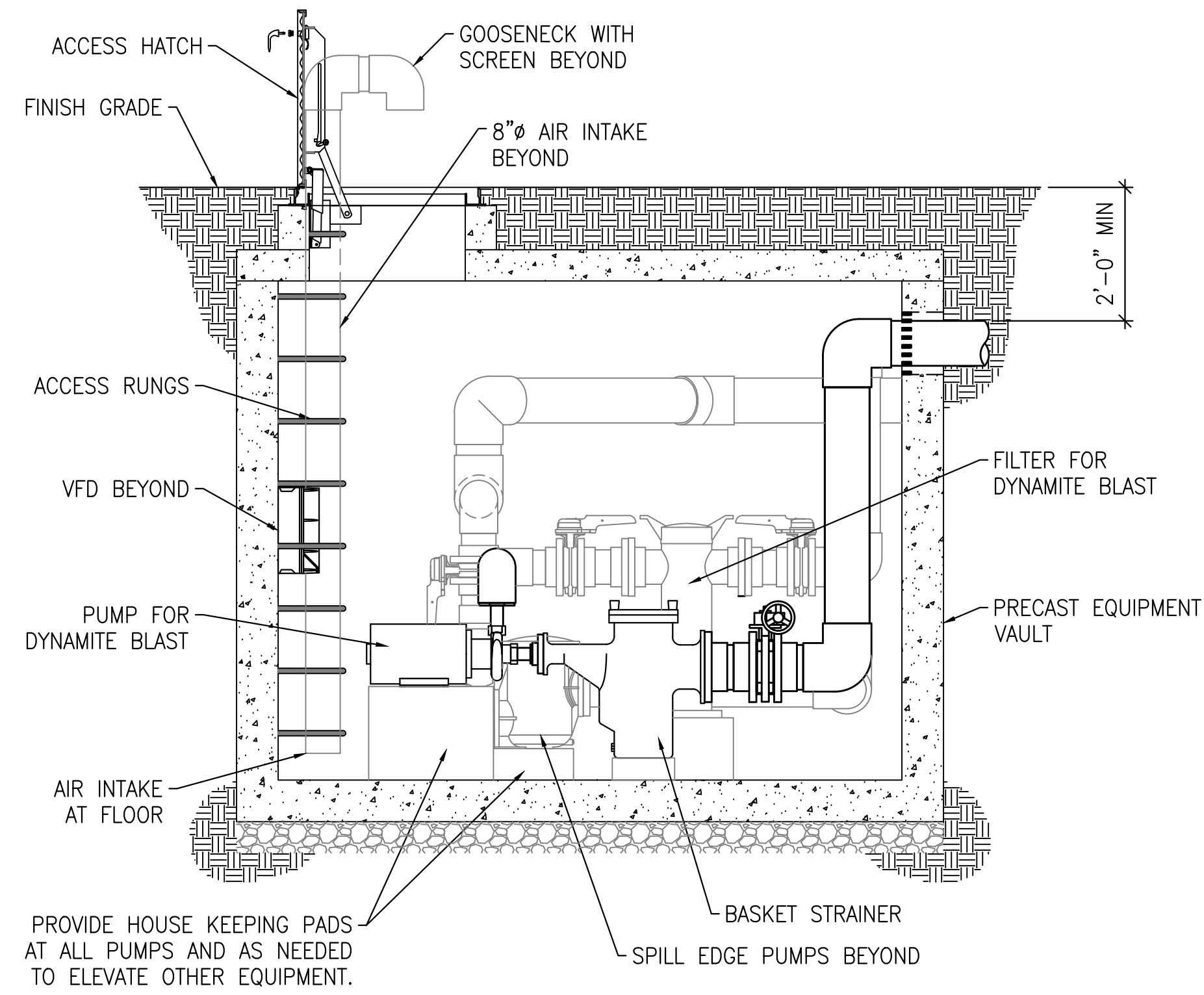
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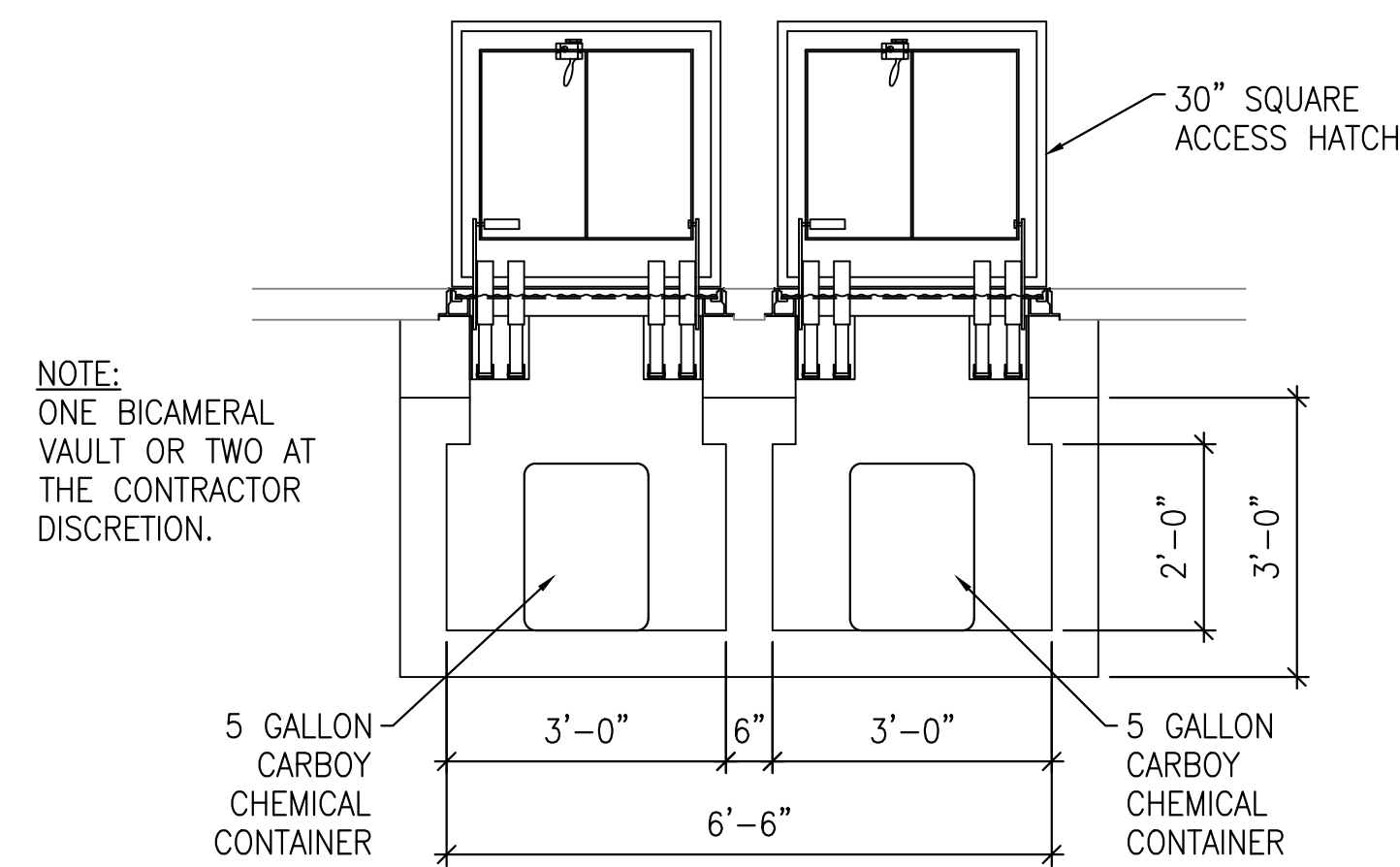
NO.	DESCRIPTION	BY	DATE



1 EQUIPMENT VAULT LONGITUDINAL SECTION
SCALE: 1/2"=1'-0"



2 EQUIPMENT VAULT CROSS SECTION
SCALE: 1/2"=1'-0"



3 CHEMICAL VAULTS SECTION
SCALE: 1/2"=1'-0"

KIWANIS FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON

FOUNTAIN
EQUIPMENT ROOM SECTIONS

FILE: UMATILLA - SP410
WDI PROJ. #: 22-705FS
DRAWN BY: BH
DESIGN BY: BA
CHECKED BY: BA

ONE INCH
AT FULL SIZE, IF NOT ONE
HIGH SCALE ACCORDINGLY.

PRINTED 2022-09-06

SHEET NUMBER:

P-302



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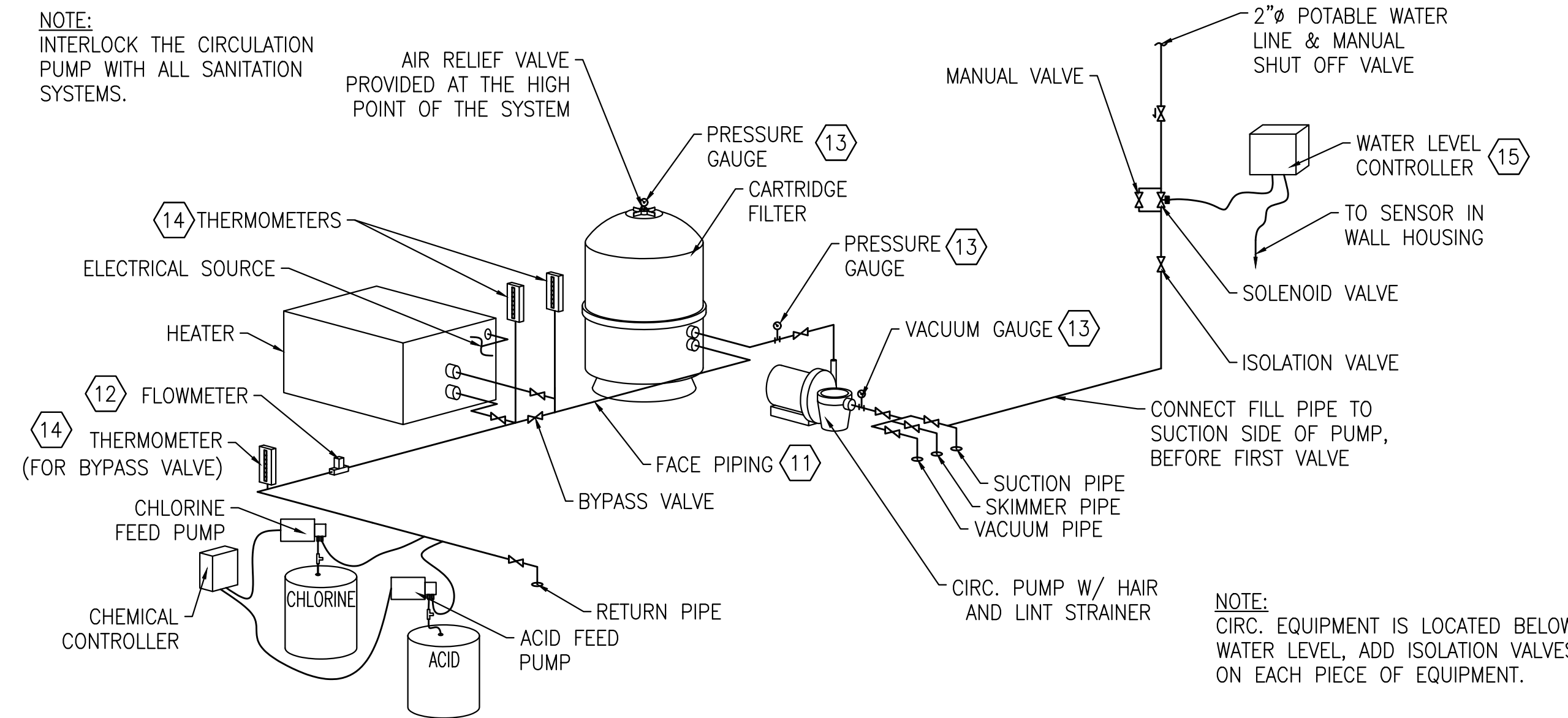
KIWANIS FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON
FOUNTAIN EQUIPMENT ROOM SCHEMATICS

FILE: UMATILLA - SP401
WDI PROJ. #: 22-705FS
DRAWN BY: BH
DESIGN BY: BA
CHECKED BY: BA

ONE INCH
AT FULL SIZE, IF NOT ONE
HIGHER SCALE ACCORDINGLY
PRINTED 2022-09-06

SHEET NUMBER:
P-501

NOTE:
INTERLOCK THE CIRCULATION PUMP WITH ALL SANITATION SYSTEMS.

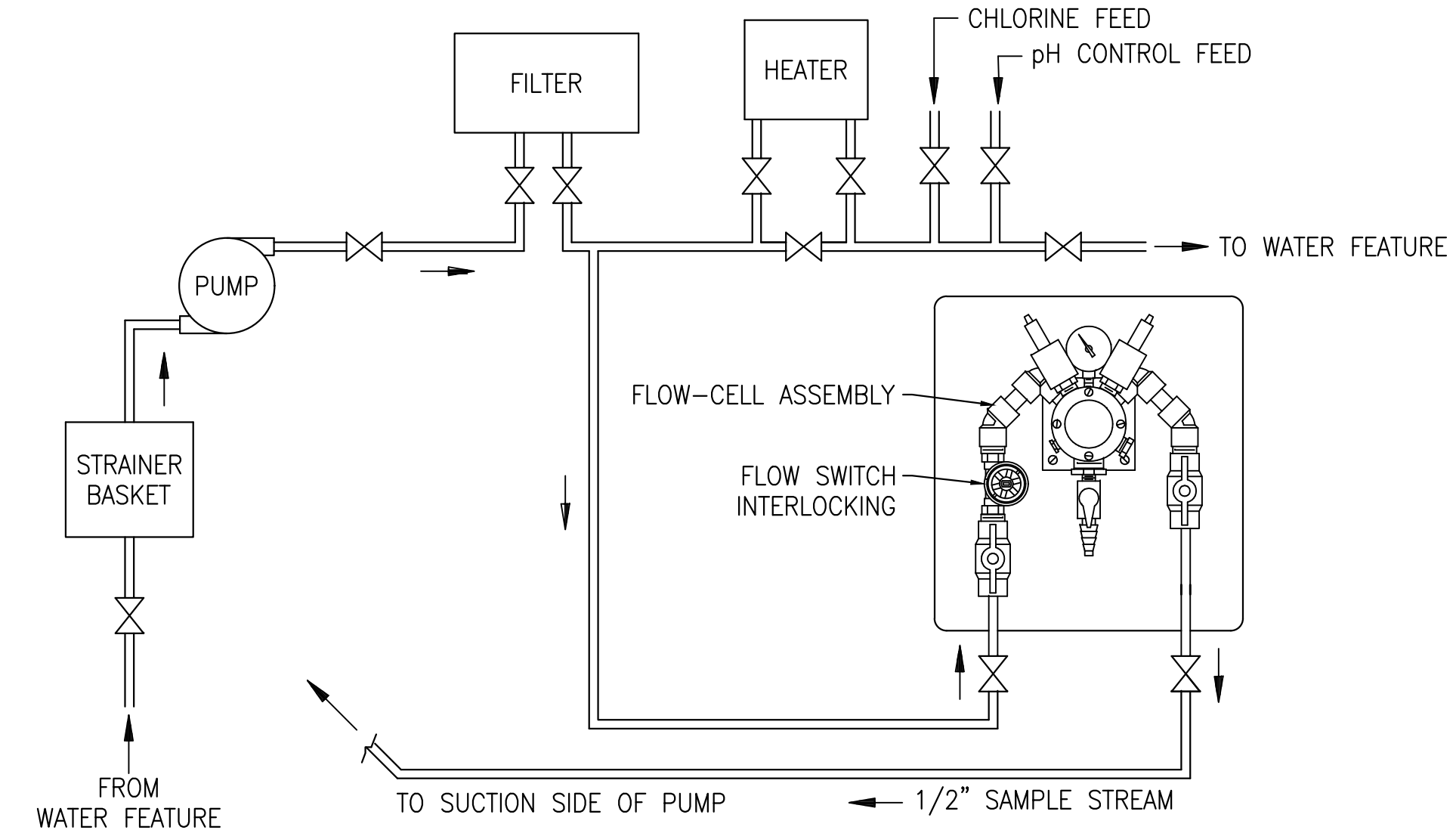


NOTE: FEED LINE(S) INSERTED IN THE CHEMICAL STORAGE DRUM(S) SHALL UTILIZE A VAPOR SHIELD/CHECK VALVE TEE ASSEMBLY TO PROVIDE AIR TO THE TANK. DRUM PLUGS LEFT OFF FOR AIR SUPPLY NOT ACCEPTABLE.

NOTE: INSTALL FLOWMETER WITH 10 X PIPE DIAMETERS OF STRAIGHT PIPE UPSTREAM AND 5 X PIPE DIAMETERS OF STRAIGHT PIPE DOWNSTREAM. (OR PER MANUFACTURER'S RECOMMENDATIONS)

NOTE: ALL PLUMBING MUST BE IDENTIFIED BY A COLOR CODE OR LABELS ON ALL PIPING AND VALVES. INCLUDE FLOW DIRECTION ARROWS.

1 CIRC EQUIPMENT SCHEMATIC
SCALE: NONE



2 FLOW CELL SCHEMATIC
SCALE: NONE

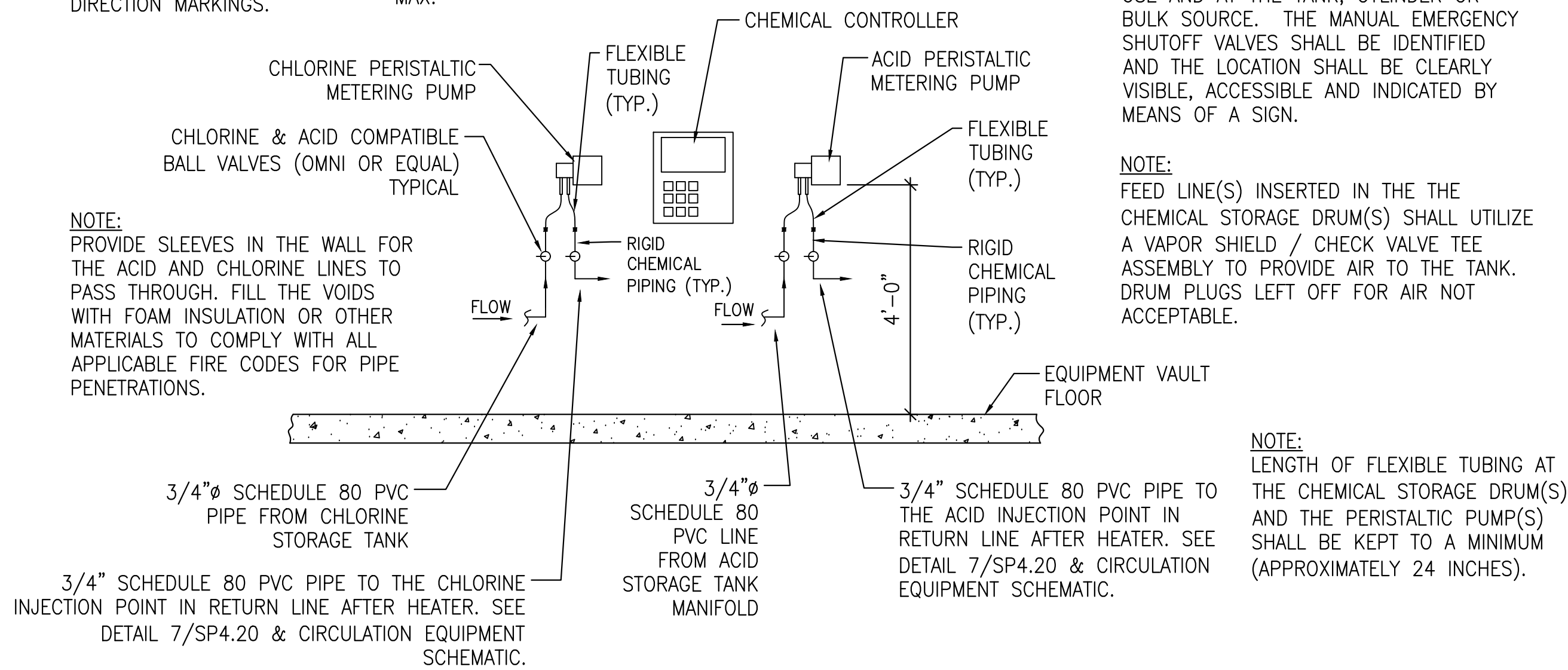
NOTE:
PROVIDE CHEMICAL PIPING/TUBING CONTENT IDENTIFICATION AND FLOW DIRECTION MARKINGS.

NOTE:
ANCHOR CHLORINE AND ACID FEED LINES TO WALL AND/OR CEILING. PROVIDE ANCHORS AT 3'-0" C.C. MAX.

NOTE:
MOUNT FEED PUMPS ON WALL (TYPICAL).

NOTE:
READILY ACCESSIBLE MANUAL VALVES SHALL BE INSTALLED ON THE SUPPLY PIPING AND TUBING AT THE POINT OF USE AND AT THE TANK, CYLINDER OR BULK SOURCE. THE MANUAL EMERGENCY SHUTOFF VALVES SHALL BE IDENTIFIED AND THE LOCATION SHALL BE CLEARLY VISIBLE, ACCESSIBLE AND INDICATED BY MEANS OF A SIGN.

NOTE:
FEED LINE(S) INSERTED IN THE CHEMICAL STORAGE DRUM(S) SHALL UTILIZE A VAPOR SHIELD / CHECK VALVE TEE ASSEMBLY TO PROVIDE AIR TO THE TANK. DRUM PLUGS LEFT OFF FOR AIR NOT ACCEPTABLE.



NOTE:
PROVIDE SLEEVES IN THE WALL FOR THE ACID AND CHLORINE LINES TO PASS THROUGH. FILL THE VOIDS WITH FOAM INSULATION OR OTHER MATERIALS TO COMPLY WITH ALL APPLICABLE FIRE CODES FOR PIPE PENETRATIONS.

NOTE:
LENGTH OF FLEXIBLE TUBING AT THE CHEMICAL STORAGE DRUM(S) AND THE PERISTALTIC PUMP(S) SHALL BE KEPT TO A MINIMUM (APPROXIMATELY 24 INCHES).

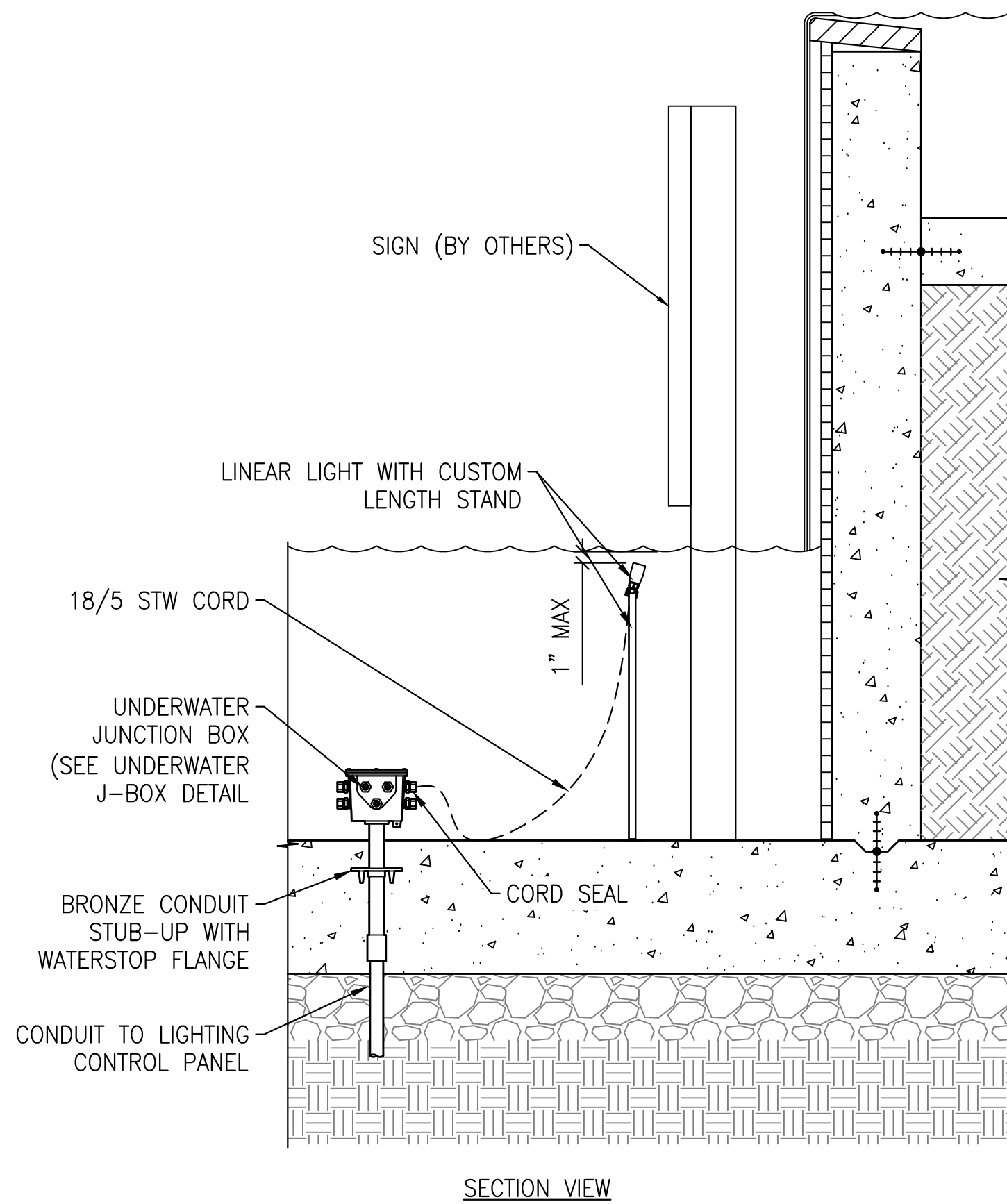
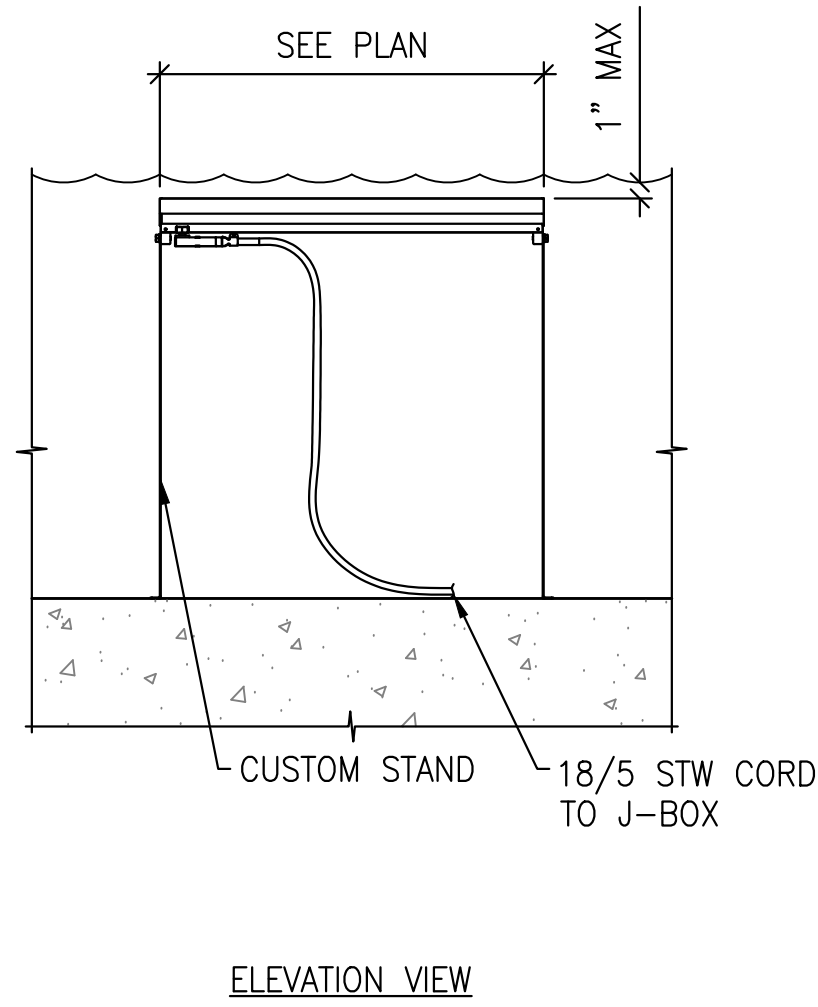
3 CHEMICAL FEEDER DETAIL
SCALE: NONE



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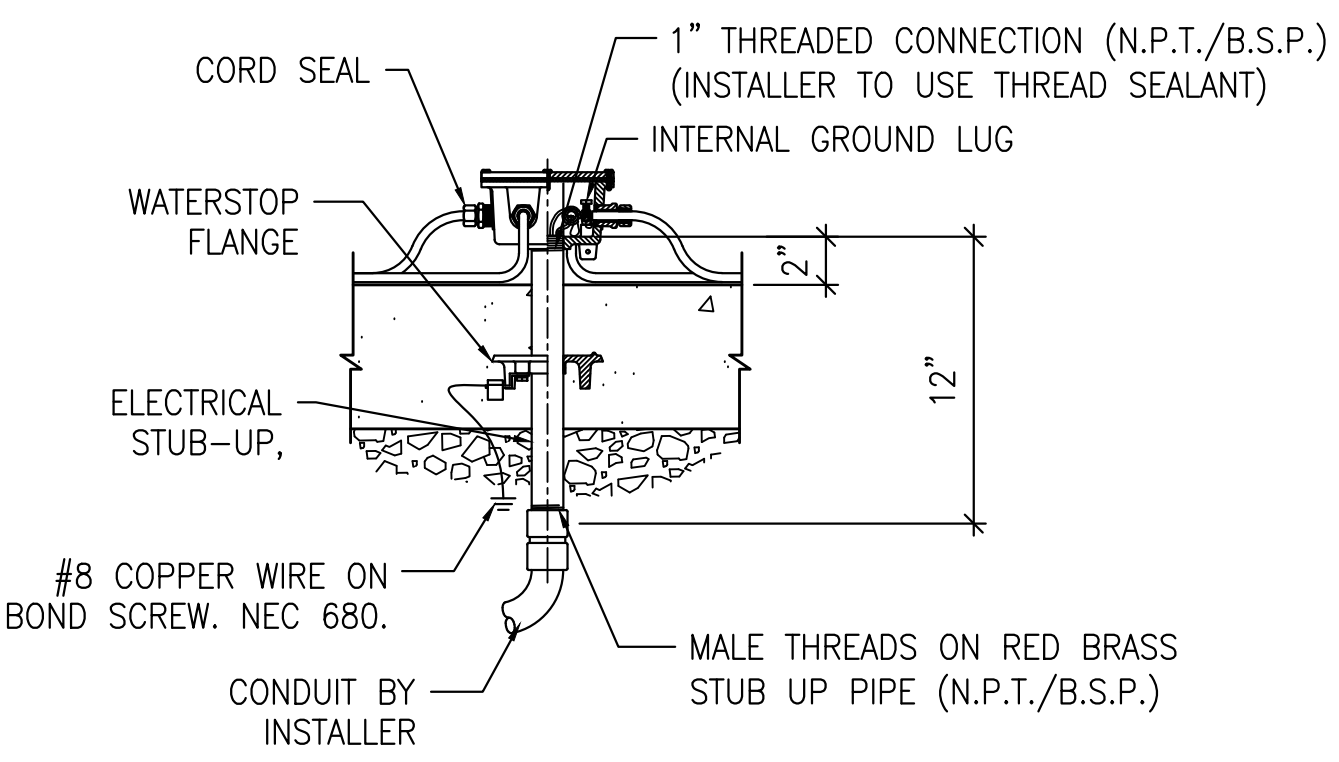
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NOTE:
BOND ALL METAL COMPONENTS
PER 2017 NEC – ARTICLE 680
OR CURRENT ADOPTED
ELECTRICAL CODE.



1 UNDERWATER LIGHT DETAIL
SCALE: 1"=1'-0"

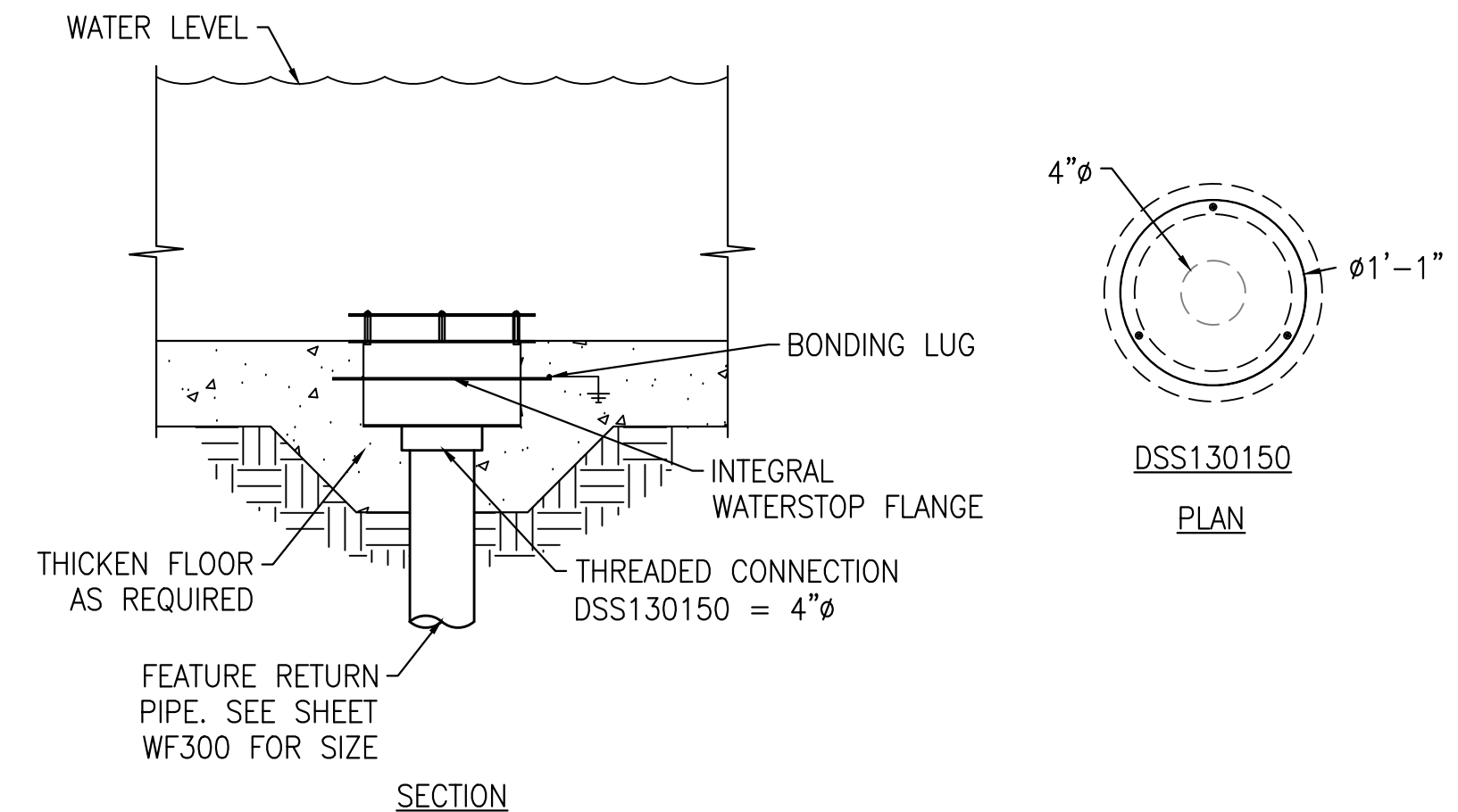
NOTES:
- REFER TO INSTALLATION INSTRUCTIONS SHIPPED WITH PRODUCT.
- REFER TO CORD SEAL FOR INSTALLATION/REPLACEMENT INFORMATION.
- JUNCTION BOX IS UL AND CSA CERTIFIED.
- FOR PROPER AND EVEN GASKET SEALING, STAGGER THE FASTENER TIGHTENING PROCESS.
- PREVENT THREADED HOLES FROM BEING FILLED WITH DEBRIS.
- MATERIALS: BRASS, BRONZE, COPPER, S.S. FASTENERS, NEOPRENE COVER GASKET.
- NO. OF CORD SEALS : 4
- INSTALLER TO POT BOX WITH APPROVED ENCAPSULANT TYPE 3M-4441 OR EQUIVALENT POTTING COMPOUND TO PREVENT WATER FROM ENTERING J-BOX.
- DO NOT SCALE DRAWING.



2 UNDERWATER JUNCTION BOX DETAIL
SCALE: 1-1/2"=1'-0"

NOTE:
BOND ALL METAL COMPONENTS PER 2020 NEC – ARTICLE 680 OR CURRENT ADOPTED ELECTRICAL CODE.

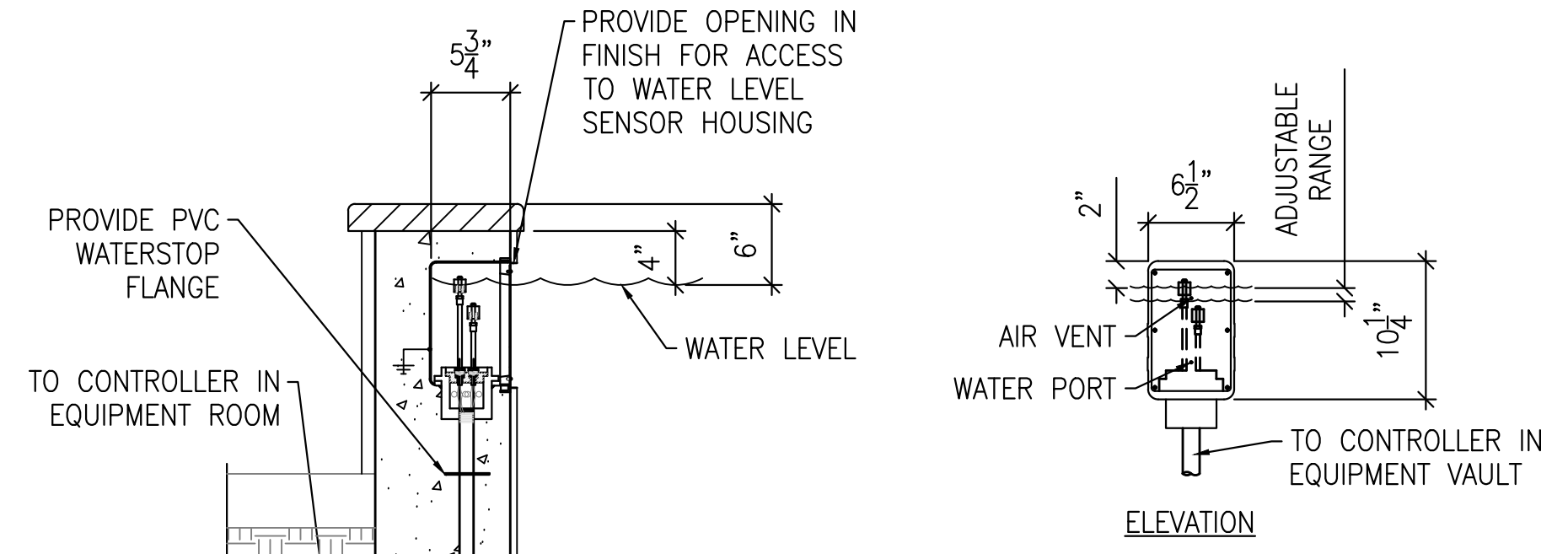
- STAINLESS STEEL PLATE
- DEEP DRAWN STAINLESS STEEL SUMP WITH INTEGRAL WATERSTOP AND GROUNDING SCREW
- STAINLESS STEEL FASTENERS



3 INLET SUMP WITH DIVERTER PLATE DETAIL
SCALE: 1"=1'-0"

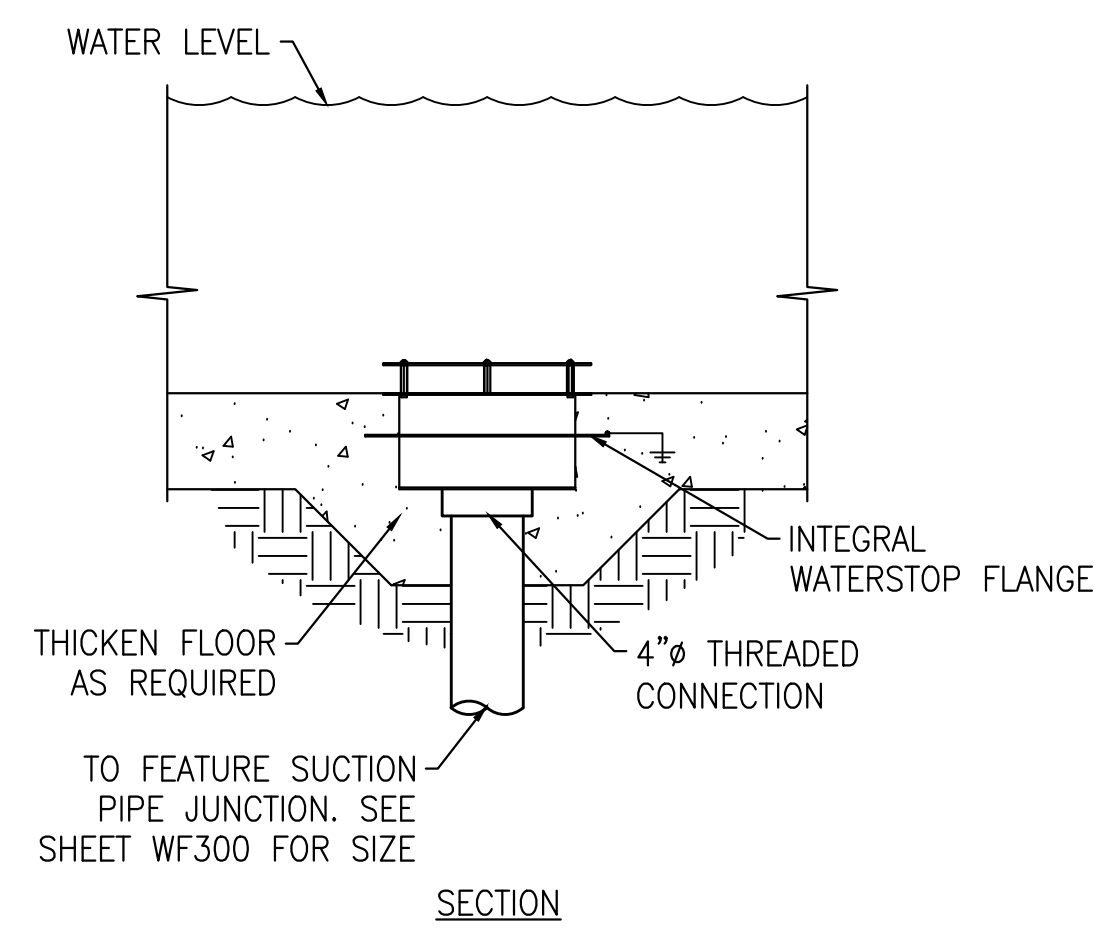
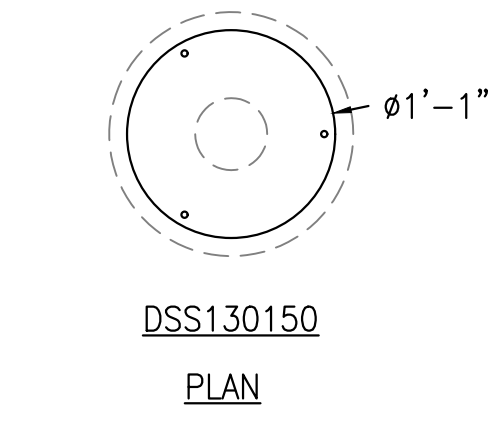
NOTE:
BOND ALL METAL COMPONENTS PER 2020 NEC – ARTICLE 680 OR CURRENT ADOPTED ELECTRICAL CODE.

WALL MOUNTED SENSOR HOUSING:
• CAST BRONZE HOUSING WITH CONDUIT CONNECTION
• SENSOR ADJUSTMENT FOR SINGLE FUNCTION PROBES.



CONTROL NOTES:
1. INSTALL AN INTERMEDIATE JUNCTION BOX BETWEEN THE SENSOR HOUSING AND THE CONTROL PANEL IF DISTANCE REQUIRES. THE JUNCTION BOX SHOULD BE SEALED AND POTTED TO PREVENT MOISTURE MIGRATION FROM THE POOL TO THE CONTROL PANEL.
2. SENSOR HOUSINGS SHOULD BE SITUATED AWAY FROM NOZZLES AND WATERFALLS. EXCESSIVE WATER SURFACE TURBULENCE AND WAVE ACTION MAY IMPAIR THE OPERATION OF THE PROBES.

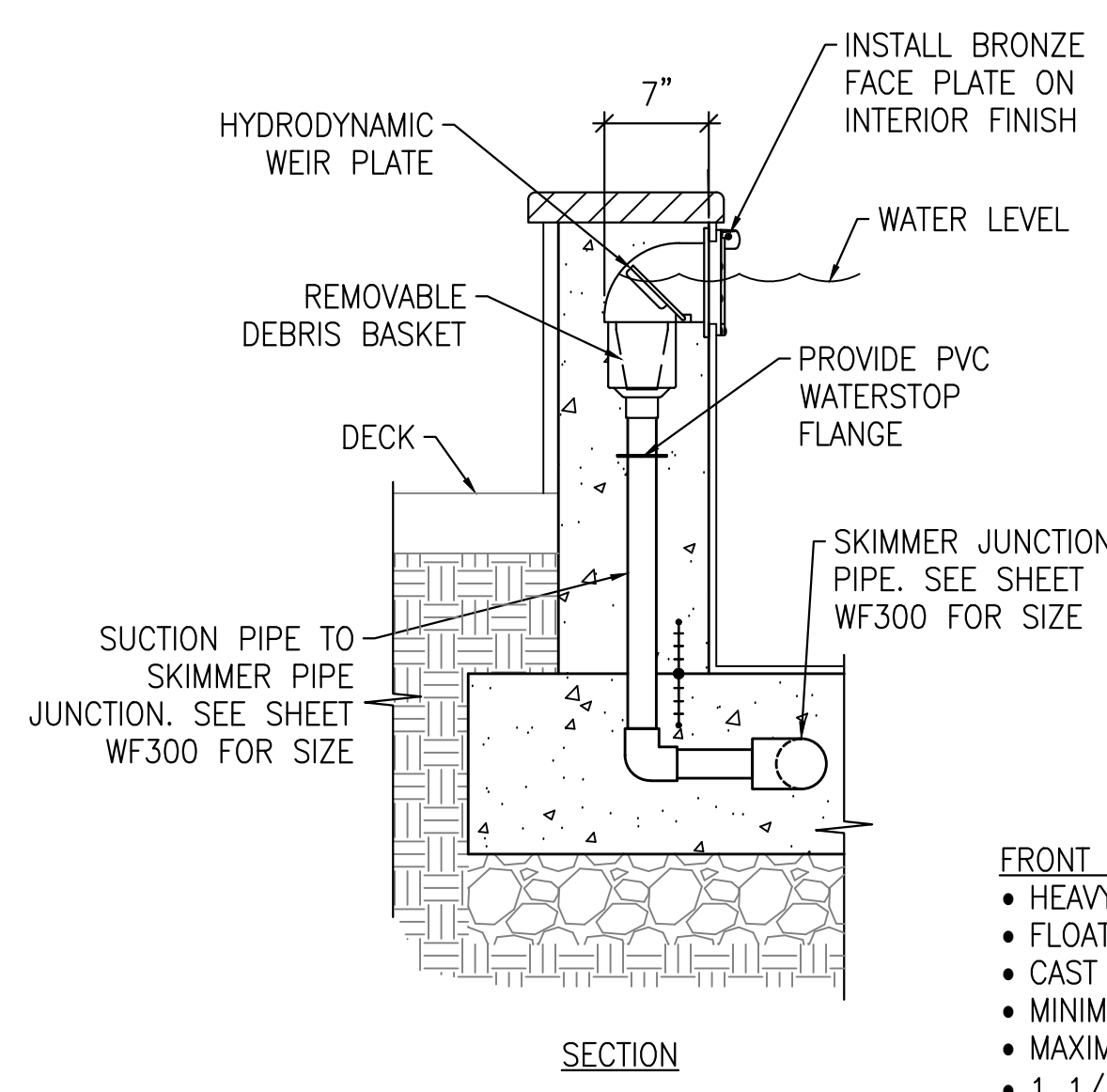
6 WATER LEVEL SENSOR HOUSING DETAIL
SCALE: 1"=1'-0"



- STAINLESS STEEL PLATE
- DEEP DRAWN STAINLESS STEEL SUMP WITH INTEGRAL WATERSTOP AND GROUNDING SCREW
- STAINLESS STEEL FASTENERS

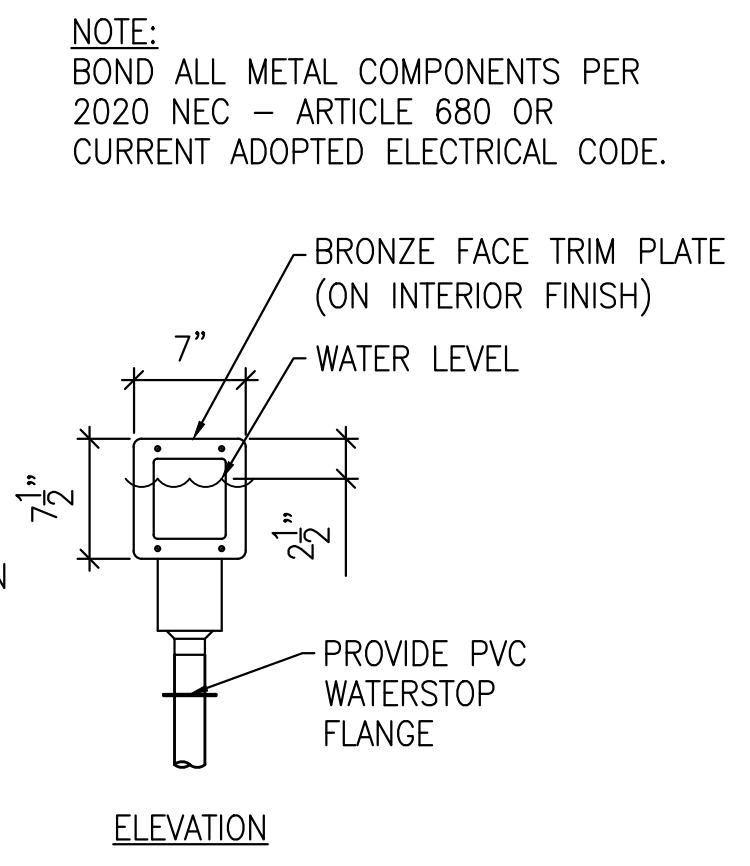
NOTE:
BOND ALL METAL COMPONENTS PER 2020 NEC – ARTICLE 680 OR CURRENT ADOPTED ELECTRICAL CODE.

4 SUCTION OUTLET FITTING ASSEMBLY DETAIL
SCALE: 1"=1'-0"



FRONT ACCESS SKIMMER
• HEAVY-DUTY ABS CONSTRUCTION
• FLOATING WEIR AND REMOVABLE TRASH BASKET
• CAST BRONZE FACE PLATE WITH NATURAL FINISH
• MINIMUM RECOMMENDED FLOW RATE: 10 GPM
• MAXIMUM RECOMMENDED FLOW RATE: 30 GPM
• 1 1/2" SLIP FIT CONNECTION

5 SKIMMER FITTING DETAIL
SCALE: 1"=1'-0"



NO.	REVISION	DESCRIPTION	DATE

KIWANIS FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON
FOUNTAIN DETAILS

FILE: UMATILLA - SP600
WDI PROJ. #: 22-705FS
DRAWN BY: BH
DESIGN BY: BA
CHECKED BY: BA



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ONE INCH
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INCH, SCALE ACCORDINGLY.
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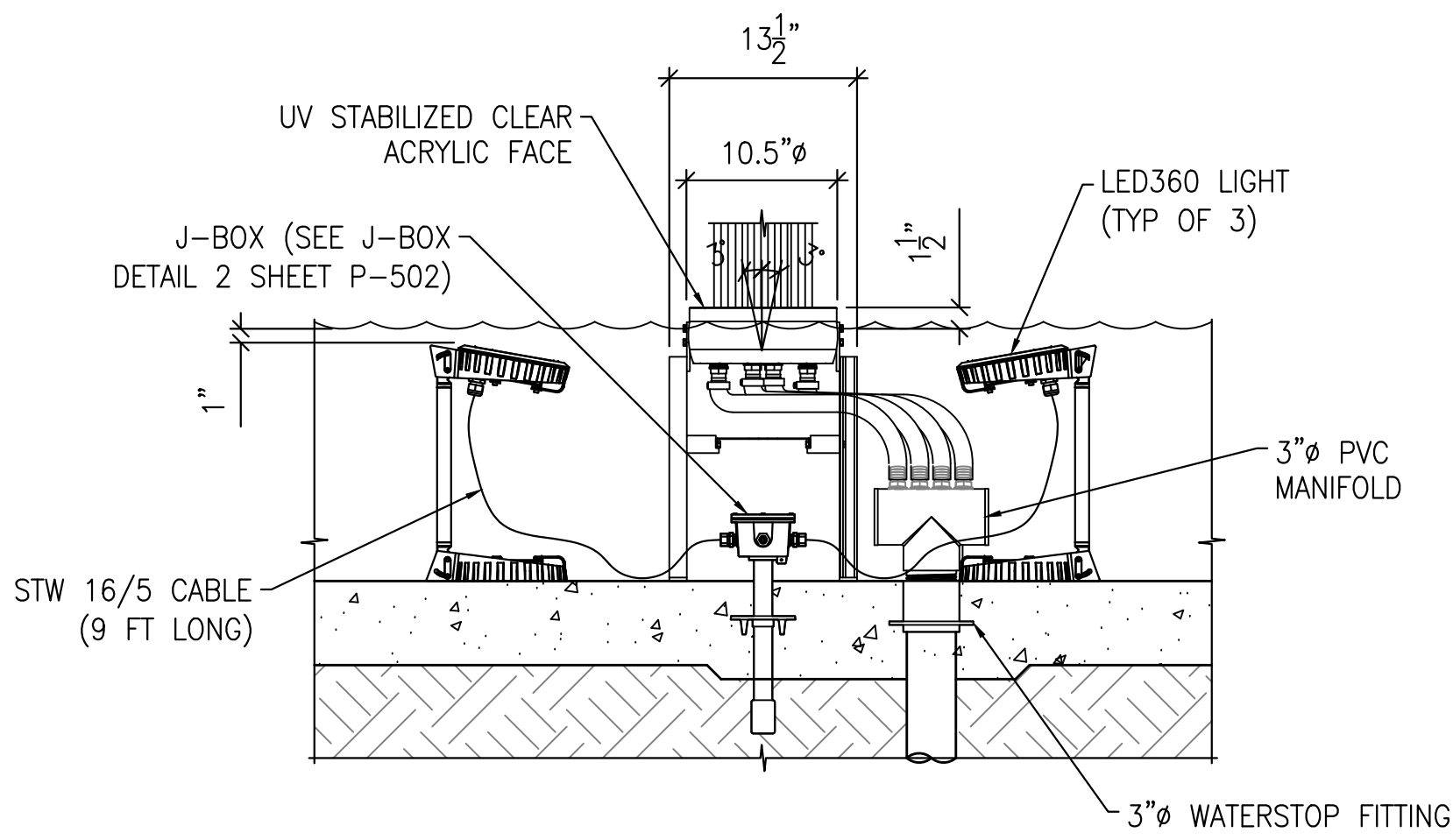
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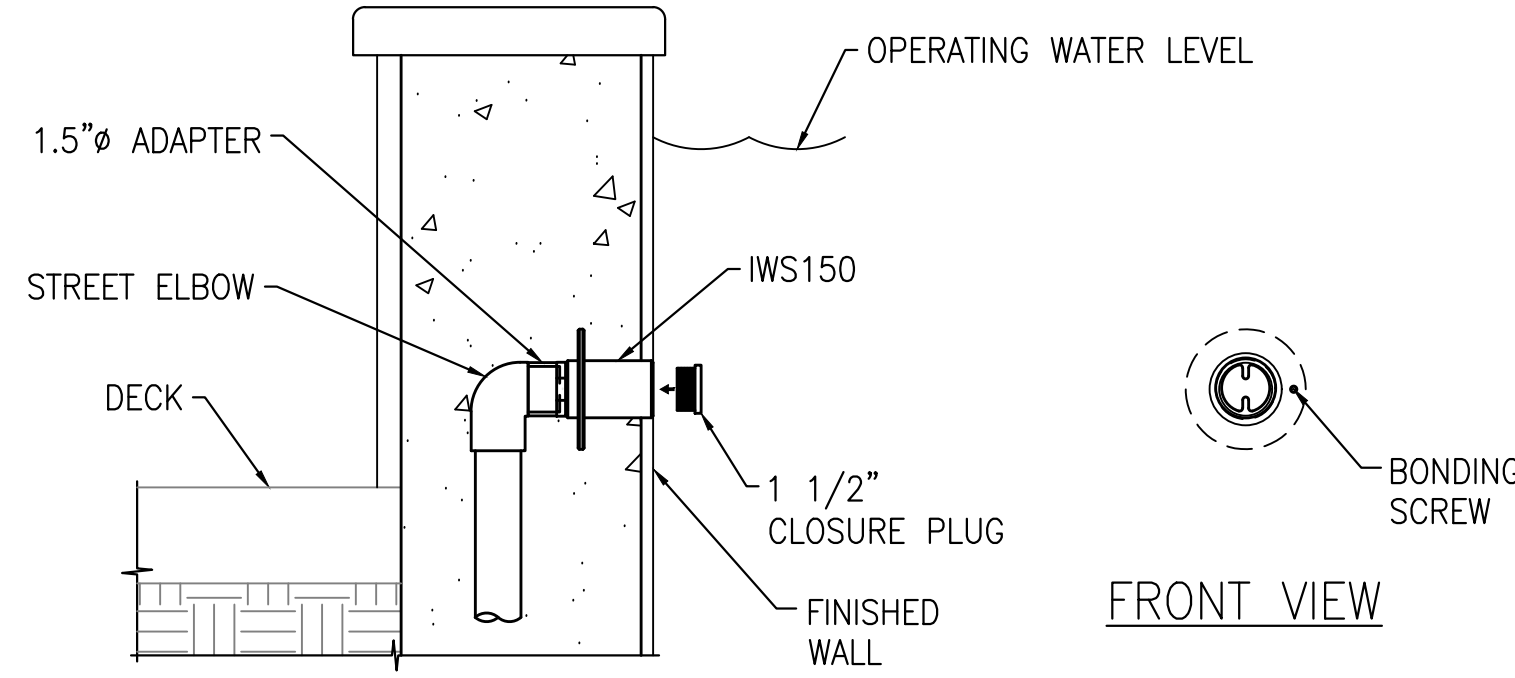
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NO.	REVISION	DESCRIPTION	DATE	BY	DATE



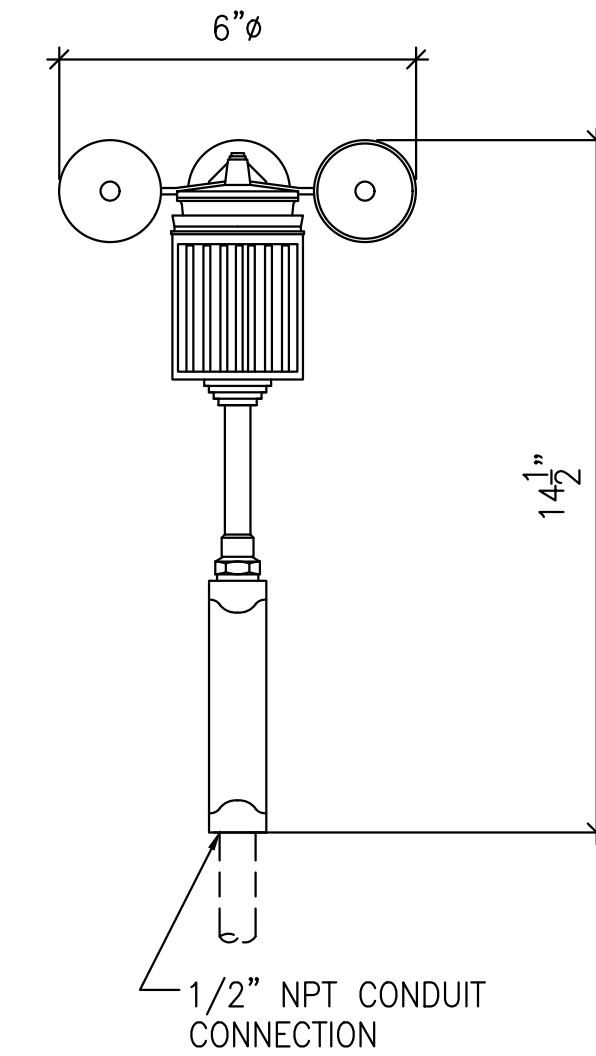
- NOTES:
1. FILTERED WATER SUPPLY (500 MICRON) REQUIRED.
 2. CORE HOLE DIAMETER 15.5".
 3. NOZZLE IS PEDESTRIAN WALK OVER ONLY.
 5. CONTACT CRYSTAL FOUNTAINS FOR DETAILED SPECIFICATIONS, AND OPERATION DETAILS.
 6. DO NOT SCALE DRAWING.
 7. VANDAL RESISTANT FASTENERS.
 8. 3 DEGREE ADJUSTABLE NOZZLE TO ENSURE A VERTICAL PLUME OF WATER.

1 DYNAMITE BLAST DETAIL
SCALE: 1"-1'-0"



- FLOOR DRAIN WITH PLUG:
- STAINLESS STEEL BODY WITH GROUNDING LUG
 - REMOVABLE THREADED PLUG
 - THREADED PIPE CONNECTION

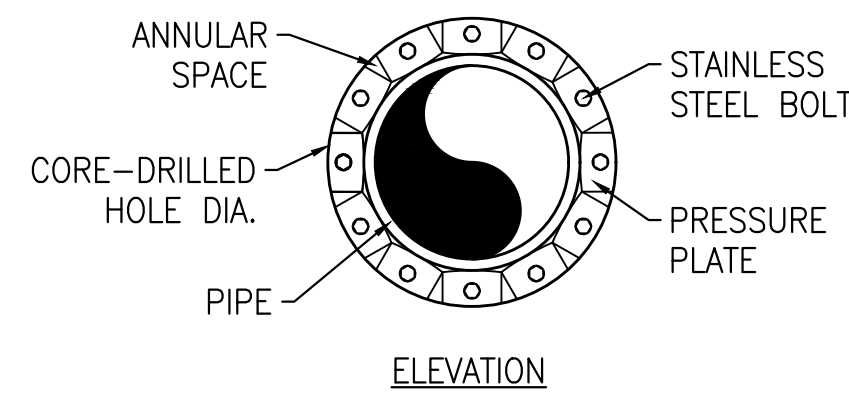
2 VACUUM FITTING DETAIL
SCALE: 1-1/2"-1'-0"



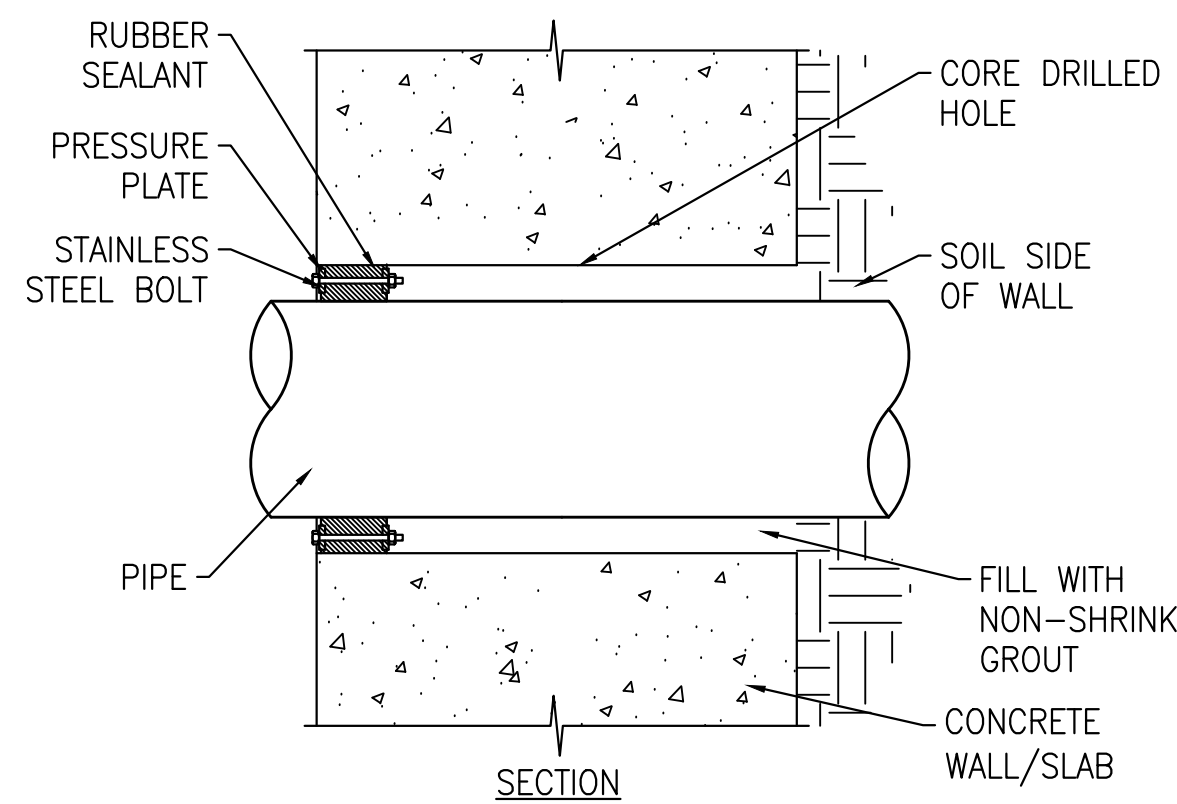
- WIND SPEED SENSOR:
- ROTATING CUP TYPE ANEMOMETER
 - ALUMINUM AND COPPER CONSTRUCTION WITH AN INTEGRAL 300 FOOT CABLE
 - ADAPTS TO 1/2" CONDUIT

- CONTROL NOTES:
1. ALL ELECTRICAL EQUIPMENT IN A FOUNTAIN MUST BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND ANY APPLICABLE LOCAL CODES.
 2. PROVIDE INTERMEDIATE JUNCTION BOX(ES) AS NEEDED TO EXTEND THE 300 FOOT INTEGRAL SENSOR CABLE TO CONTROLLER LOCATION.

3 WIND SENSOR DETAIL
SCALE: 3"-1'-0"



PIPE SIZE (IN.)	HOLE I.D. (IN.)
1.5	4
2	4
2.5	4
3	5
4	6
6	10
8	12



4 PIPE MODULAR SEAL DETAIL
SCALE: 3"-1'-0"



Know what's below.
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GENERAL REQUIREMENTS

A. THESE GENERAL STRUCTURAL NOTES AND SPECIFICATIONS SUPPLEMENT THE PROJECT WRITTEN TECHNICAL SPECIFICATIONS AND THE PROJECT STRUCTURAL DRAWINGS.

B. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION BRACING, TEMPORARY SHORING, AND OTHER SITE SAFETY CONTROLS REQUIRED DURING CONSTRUCTION IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS, TO ENSURE THE STABILITY AND SAFETY OF ALL CONSTRUCTION UNTIL IT IS COMPLETED AND SELF-SUPPORTING.

C. THE CONTRACTOR IS RESPONSIBLE FOR ALL WATER, BOTH ABOVE AND BELOW GROUND, RUNOFF AND OTHER ENVIRONMENTAL CONTROLS REQUIRED DURING CONSTRUCTION TO ENSURE THE SITE IS MAINTAINED IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. DETAILS ON THESE PLANS ARE INTENDED TO DEPICT THE GENERAL CONSTRUCTION DETAILS AND METHODS FOR THIS STRUCTURE. CONNECTION DETAILS AND CONDITIONS NOT SPECIFICALLY SHOWN THAT ARE SIMILAR IN NATURE TO THOSE THAT ARE SPECIFIED SHALL BE ASSUMED ONE AND THE SAME. IF QUESTIONS REGARDING THE APPLICATION OF DETAILS ARE ENCOUNTERED, NOTIFY THE ARCHITECT/ENGINEER FOR CLARIFICATION OR INSTRUCTION.

D. PRIOR TO IMPLEMENTING ANY CHANGES TO THESE PLANS, THE ARCHITECT/ENGINEER SHALL BE NOTIFIED IN WRITING FOR THEIR WRITTEN APPROVAL. CHANGES IMPLEMENTED WITHOUT THE ARCHITECT/ENGINEERS WRITTEN APPROVAL SHALL RELIEVE THE ARCHITECT/ENGINEER OF ANY CLAIM OR LIABILITY RESULTING FROM THAT PORTION OF THE STRUCTURE CHANGED OR AFFECTED BY THE CHANGE.

CONTRACTOR RESPONSIBILITY FOR COORDINATION

A. IT IS THE CONTRACTORS PRIME RESPONSIBILITY TO COORDINATE THE WORK SHOWN ON ALL OF THE PROJECT DRAWINGS, GENERAL, SPECIAL AND TECHNICAL SPECIFICATIONS.

B. THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING CONSTRUCTION MATERIAL TYPES DIMENSIONS, ELEVATIONS AND CONDITIONS.

C. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE DIMENSIONS AMONG ALL DRAWINGS AND IN THE FIELD PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION, ANY DISCREPANCY SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER.

D. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CAREFULLY STUDY AND COORDINATE THE CONSTRUCTION REQUIREMENTS SHOWN ON BOTH THE ARCHITECTURAL AND THE STRUCTURAL DRAWINGS. WHEN CONFLICTS OR DISCREPANCIES ARE FOUND BETWEEN THESE PLAN SETS AND/OR WITHIN THESE DRAWINGS, THE CONTRACTOR SHALL REPORT THEM IMMEDIATELY TO THE PROJECT ARCHITECT/ENGINEER FOR DIRECTION AND/OR CLARIFICATION.

E. ANY CONSTRUCTION WORK DONE BY THE CONTRACTOR BEFORE OBTAINING SUCH CLARIFICATION FROM THE PROJECT ARCHITECT/ENGINEER SHALL BE AT THE CONTRACTORS OWN RISK AND COST. FURTHERMORE, ANY WORK REQUIRED TO CORRECT, REPLACE AND/OR RESTORE THE WORK AS DIRECTED BY THE ARCHITECT/ENGINEER SHALL BE AT THE CONTRACTORS OWN RISK AND COST.

CODES

A. INTERNATIONAL BUILDING CODE, IBC 2018 EDITION.

B. MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-16.

C. AMERICAN CONCRETE INSTITUTE, ACI 318-14: BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.

D. AMERICAN CONCRETE INSTITUTE, ACI 301-10: SPECIFICATIONS FOR STRUCTURAL CONCRETE.

E. AMERICAN INSTITUTE OF STEEL CONSTRUCTION, AISC 360-16: SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS.

SUBMITTALS

SUBMIT PRODUCT OR MATERIAL INFORMATION TO THE ARCHITECT/ENGINEER FOR REVIEW FOR THE FOLLOWING ITEMS:

A. CONCRETE MIX DESIGNS AND ADMIXTURES.

B. NON-SHRINK GROUT.

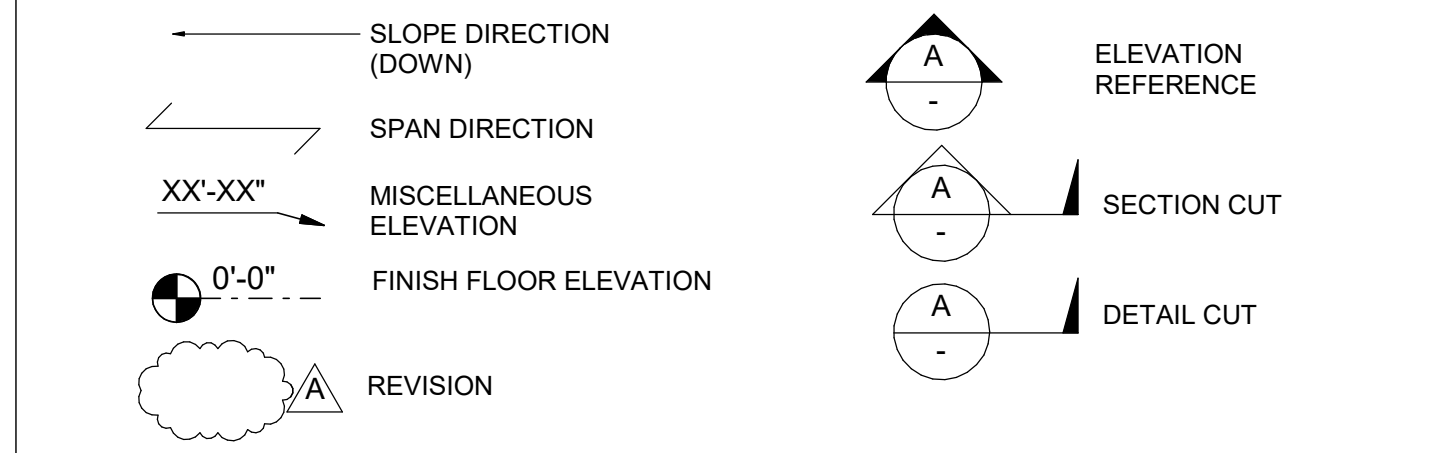
SHOP DRAWINGS

SUBMIT SHOP DRAWINGS TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO FABRICATION OF THE FOLLOWING ITEMS:

A. REINFORCING STEEL FOR ALL CONCRETE.

B. STRUCTURAL STEEL.

GENERAL SYMBOL LEGEND



SPECIAL INSPECTIONS

SPECIAL INSPECTIONS PER IBC CHAPTER 17 ARE REQUIRED FOR THE FOLLOWING ITEMS:
C INDICATES CONTINUOUS, P INDICATES PERIODIC.

	FREQUENCY
A. SOILS, BY GEOTECHNICAL ENGINEER.	
1. SITE PREPARATION:	P
2. FILL MATERIAL VERIFICATION:	C
3. FILL PLACEMENT AND COMPACTION:	C
4. LIFT THICKNESS:	C
B. CONCRETE	
1. REINFORCEMENT PLACEMENT:	P
2. REINFORCING WELDING: REFER TO STEEL WELDING REQUIREMENTS	P
3. PLACEMENT OF CAST-IN-PLACE ANCHORS:	P
4. VERIFICATION OF USE OF REQUIRED MIX:	P
5. CONCRETE PLACEMENT:	C
C. ALL SPECIAL INSPECTION SHALL BE PERFORMED BY ICC CERTIFIED INSPECTORS.	
D. SHRINKAGE COMPENSATING OR REDUCING CONCRETE MIXES:	
1. TO DOCUMENT AND VERIFY SHRINKAGE CHARACTERISTICS OF SHRINKAGE COMPENSATING OR REDUCED CONCRETE MIX DESIGNS, PROVIDE (3) RECORD SHRINKAGE TESTS FOR EACH SUCH MIX. TEST EACH SAMPLE PER ASTM C-157	

DESIGN CRITERIA

A. OCCUPANCY OR USE
1. RISK CATEGORY; ASCE TABLE 1.5-2: II

B. WIND:
1. ULTIMATE DESIGN WIND SPEED, V_{ult} : 100 MPH
2. NOMINAL DESIGN WIND SPEED, V_{des} : 78 MPH
3. SITE WIND EXPOSURE: C

C. EARTHQUAKE:
1. SEISMIC IMPORTANCE FACTOR, I_s : 1.00
2. MAPPED SPECTRAL RESPONSE ACCELERATION:
a. SHORT PERIOD, S_s : 0.399g
b. 1-SECOND, S_1 : 0.153g
3. SOIL SITE CLASS: D (DEFAULT)
4. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETERS:
a. SHORT PERIOD, S_{ps} : 0.394g
b. 1-SECOND, S_{p1} : 0.234g
5. SEISMIC DESIGN CATEGORY: D

D. SOIL DESIGN PARAMETERS:
1. NET ALLOWABLE SOIL BEARING PRESSURES; Q_u = 4,000 PSF (BEDROCK)
2. NATIVE SOIL UNIT WEIGHT, W_u = 110 PCF (ASSUMED)
3. COEFFICIENT OF FRICTION, SOIL TO CONCRETE; F = 0.35
4. FROST DEPTH; D_f = 2.0 FT

FOUNDATIONS

A. ALL FOOTINGS TO BE PLACED ON FIRM UNDISTURBED, INORGANIC MATERIAL. PROOF ROLL SUB-GRADE PRIOR TO PLACING 6" BASE COURSE AND CONCRETE WHERE THE MATERIAL HAS BEEN DISTURBED BY THE EXCAVATING EQUIPMENT. BASE COURSE SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED PER ASTM D1557.

B. ALL PIERS AND FOOTINGS OUTSIDE OR AT THE PERIMETER OF THE STRUCTURE, OR IN OTHER UNHEATED AREAS SHALL BE SET TO A DEPTH OF AT LEAST 24-IN. BELOW FINISH GRADE, UNLESS OTHERWISE NOTED ON THE PLANS.

C. ALL FOUNDATIONS AND RETAINING WALLS BELOW FINISH GRADE SHALL RECEIVE AN APPROVED DAMP-PROOF COATING. FOUNDATION WALLS BELOW MAXIMUM ANTICIPATED GROUND WATER LEVELS SHALL RECEIVE AN APPROVED WATER-PROOF COATING; EXTEND WATER-PROOFING TO A MINIMUM OF 1'-0" ABOVE THE MAXIMUM ANTICIPATED GROUND WATER LEVEL.

D. ALLOWABLE BEARING PRESSURE FOR ALL FOOTINGS Q_u = 1,500 PSF

E. LOCAL AREAS OF SOFT AND/OR UNACCEPTABLE MATERIAL ENCOUNTERED AT BOTTOM OF FOOTING ELEVATIONS INDICATED ON THE PLANS MUST BE OVER-EXCAVATED AND BROUGHT UP TO DESIGN GRADE WITH COMPACTED STRUCTURAL FILL OR LEAN CONCRETE FILL.

F. ALL STRUCTURAL FILL AND/OR BACKFILL SHALL BE GRANULAR, FREE DRAINING, MATERIAL; UNIFIED SOILS CLASSIFICATION GW, GP, GM OR SW; MAXIMUM AGGREGATE SIZE OF 3-IN. AND NO MORE THAN 7% PASSING A NUMBER 200 SIEVE. MATERIAL SHALL BE PLACED IN LIFTS NO GREATER THAN 6-IN. IN DEPTH AND COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED PER ASTM D1557. DESIGN FOR THE MITIGATION OF SUBSURFACE WATER FLOW AND/OR PERCHED WATER TABLES SHALL BE THE RESPONSIBILITY OF OTHERS.

G. AS INDICATED ON THE PLANS AND ALL EXCAVATED AREAS UNDERNEATH CONCRETE STRUCTURES SHALL BE BACKFILLED WITH CONTROLLED DENSITY FILL (CDF) OTHERWISE CALLED CONTROLLED LOW STRENGTH MATERIAL (CLSM). CDF SHALL BE A MIXTURE OF CEMENT, FINE AND COURSE AGGREGATE, FLY ASH AND ADMIXTURES FORMULATED TO BE FLOWABLE AND SELF-CONSOLIDATING WITH A NET 28 DAY COMPRESSIVE STRENGTH OF 200 TO 300 PSI.

H. THE ENGINEER SHALL BE NOTIFIED IN WRITING IF ANY GROUND WATER, CLAY TYPE SOILS, DEBRIS OR UNCONSOLIDATED MATERIALS ARE ENCOUNTERED DURING EXCAVATIONS FOR FOUNDATIONS.

FOUNTAIN SPECIFIC NOTES

A. THE FOUNTAIN CONTRACTOR SHALL PLACE, BEFORE COMMENCING THE CONCRETE WORK, ALL PIPING, FITTINGS, NOZZLES, ALL SPECIAL FOUNTAIN EQUIPMENT, ANCHORS, RECEPTACLES, ETC., THAT ARE TO BE EMBEDDED IN THE CONCRETE AND SHALL BE RESPONSIBLE FOR THEIR POSITIONING IN ACCORDANCE WITH THE PLANS.

B. AFTER PLACING FOUNTAIN REINFORCING, BUT BEFORE PLACING CONCRETE SURFACES, THE CONTRACTOR SHALL INSTALL ALL THE BONDING AND GROUNDING CIRCUITS REQUIRED FOR FITTINGS, NOZZLES, AND OTHER METAL ITEMS IN OR AROUND THE FOUNTAIN. THE CONTRACTOR SHALL EXTEND THE BONDING WIRES TO THE EQUIPMENT ROOM IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, ARTICLE 680. ALL REQUIRED BONDING AND GROUNDING CIRCUITS SHALL BE PROVIDED FOR AND TESTED FOR CONTINUITY. NO CONCRETE SHALL BE APPLIED UNTIL THIS REQUIREMENT IS COMPLIED WITH AND THE PROPER ELECTRICAL INSPECTION HAS BEEN MADE AND APPROVAL RECEIVED.

C. THE FOUNTAIN SHALL HAVE FOUNTAIN-WALL-TO-FOUNTAIN WALL DIMENSION TOLERANCES OF WITHIN $\pm 1/2"$ OF THOSE SPECIFIED ON THE PLANS. TOLERANCES SHALL BE CONSISTENT FOR EACH DIMENSION OF THE FOUNTAIN FOR THE ENTIRE LENGTH OR WIDTH OF THE FOUNTAIN.

D. FOUNTAIN SHALL BE FREE FROM CRACKS, HONEYCOMBING, SPILLS, VOIDS, AND OTHER DEFECTS. ANY CRACKS APPEARING IN THE CONCRETE SHALL BE ROUTED AND FILLED WITH AN EPOXY SEALANT PRIOR TO APPLICATION OF FOUNTAIN WATERPROOFING AND FINISH WHERE APPLICABLE.

CAST-IN-PLACE CONCRETE

1. PROJECT CONCRETE MIX TYPES: CONCRETE SHALL BE PROPORTIONED AND FURNISHED FOR THE VARIOUS PROJECT USES AS INDICATED ON THE PLANS AND AS FOLLOWS:

TABLE OF CONCRETE MIX DESIGN REQUIREMENTS

MIX ID #	MEMBER TYPE/LOCATION	MIN. 28 DAY STRENGTH f_c (PSI)	ABS. MAX RATIO BY WEIGHT W/C	AIR CONTENT (%) (+/- 1.5%)	MAX AGGR.	COMMENTS
M4500-SPS	SLABS, WALLS, COLUMNS, FOOTINGS, FOUNDATION, EXTERIOR MIX	4,500	0.40	6%	3/4"	-

TABLE OF MIX DESIGN REQUIREMENTS NOTES:

a. W/C RATIO: WATER-CEMENTITIOUS MATERIAL RATIOS SHALL BE BASED ON THE TOTAL WEIGHT OF CEMENTITIOUS MATERIALS. MAXIMUM RATIOS ARE CONTROLLED BY STRENGTH NOTED IN THE TABLE OF MIX DESIGN REQUIREMENTS AND DURABILITY REQUIREMENTS GIVEN IN ACI 318 SECTION 19.3.2.

b. AIR CONTENT: CONFORM TO ACI 318 SECTION 19.3.3.1. MINIMUM STANDARDS FOR EXPOSURE CLASS. AIR CONTENT SHALL BE MEASURED AT POINT OF PLACEMENT.

c. SLUMP: CONFORM TO ACI 301 SECTION 4.2.2.2. SLUMP SHALL BE DETERMINED AT POINT OF DELIVERY.

d. CHLORIDE CONTENT: CONFORM TO ACI 318 SECTION 19.3.2.1 AND TABLE 19.3.2.1.

e. NON-CHLORIDE ACCELERATOR: NON-CHLORIDE ACCELERATING ADMIXTURE MAY BE USED IN CONCRETE PLACED AT AMBIENT TEMPERATURES BELOW 50°F AT THE CONTRACTOR'S OPTION. SUBMIT ASTM 1260, C1567, C1293 TESTING FOR ALL ALKALI-SILICA REACTION (ASR) FROM THE AGGREGATE SUPPLIER FOR BOTH THE COARSE AND FINE AGGREGATES. IN LIEU OF TESTING, A 10-YEAR SERVICE HISTORY FOR THE AGGREGATES MAY BE SUBMITTED.

2. CONCRETE MIX COMPONENTS

A. A WATER-REDUCING ADMIXTURE CONFORMING TO ASTM C494, USED IN STRICT CONFORMANCE WITH THE MANUFACTURERS INSTRUCTIONS, SHALL BE INCORPORATED IN ALL CONCRETE MIX DESIGNS.

B. HIGHER WATER-CEMENT RATIOS THAN SHOWN ABOVE MAY BE USED IF SUBSTANTIATED IN ACCORDANCE WITH ACI 318-14.

C. FLY-ASH CONFORMING TO ASTM C618 TYPE F OR C, MAY REPLACE UP TO 20% OF THE CEMENT CONTENT, PROVIDED THAT THE MIX STRENGTH IS SUBSTANTIATED BY TEST DATA.

D. CEMENT: ASTM C150 TYPE I OR II.

E. WATER: CLEAN & POTABLE.

F. AIR ENTRAINING AGENT: ASTM C260. EXCEPT WHERE NOTED NON-AIR ENTRAINED.

G. AGGREGATE: 0.75-INCH MAXIMUM AGGREGATE PER ASTM C33. UNLESS NOTED OTHERWISE.

H. MIX PROPORTIONING: ACI 211.1 AND 350R.

3. CONCRETE ACCESSORIES:

A. REINFORCING STEEL: REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60; #3 BARS MAY BE GRADE 40.

B. REINFORCING STEEL TO BE WELDED: ALL REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A706 GRADE 60, LOW-ALLOY, DEFORMED REINFORCING STEEL.

C. WELDED WIRE FABRIC: ASTM A185 OR A497.

D. JOINTING MATERIALS: IN ACCORDANCE WITH ACI 350 SECTION 4.5.2. ALL JOINTING MATERIALS INCLUDING WATER-STOPS, EXPANSION JOINTS AND SEALANTS, SHALL BE RESISTANT TO CHEMICAL ATTACK FOR THE DESIGN LIFE OF THE FACILITY. SEALANTS SHALL CONFORM TO ASTM C 920 AND FEDERAL SPECIFICATION TT-S-00277E AND PVC WATER-STOP SHALL CONFORM TO ASTM D 570, ASTM D 746, STM D 1149 AND CRD-C572.

4. CONCRETE QUALITY AND DETAILS

A. GENERAL: CONCRETE SHALL BE PROPORTIONED TO PROVIDE AN AVERAGE COMPRESSIVE STRENGTH, f_c , AS PRESCRIBED IN ACI 318-14 AND SHALL SATISFY THE DURABILITY CRITERIA OF ACI 318/350.

B. CONCRETE PROPORTIONS.

1. CONCRETE MIX PROPORTIONING SHALL BE IN ACCORDANCE WITH ACI 211.1; STANDARD PRACTICE FOR SELECTING PROPORTIONS FOR NORMAL, HEAVYWEIGHT, AND MASS CONCRETE.

C. CONCRETE MIX VERIFICATION: CONCRETE MIX DESIGNS SHALL BE VERIFIED BY STANDARD 28-DAY CYLINDER TESTS PER ASTM C39.

D. EVALUATION AND ACCEPTANCE OF CONCRETE. CONCRETE SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318/350.

E. MIXING & PLACING CONCRETE. CONCRETE SHALL BE PREPARED, MIXED, PLACED AND CONSOLIDATED IN ACCORDANCE WITH ACI 318/350 AS FOLLOWS:

1. ACI 304; GUIDE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE.

2. ACI 309; GUIDE FOR CONSOLIDATION OF CONCRETE.

F. MINIMUM TIME BETWEEN ADJACENT PLACEMENTS:

1. NON-LIQUID RETAINING STRUCTURES:

a. CONSTRUCTION JOINTS: FIVE (5) DAYS WET CURE, OR SEVEN (7) DAYS DRY CURE.

b. CONTROL JOINTS: TWO (2) DAYS.

c. EXPANSION JOINTS: ONE (1) DAY.

2. FLOOR SLABS:

a. CONSTRUCTION JOINTS: SEVEN (7) DAYS WET CURE, OR TEN (10) DAYS DRY CURE.

b. CONTROL JOINTS: FOUR (4) DAYS.

G. EXPANSION JOINTS: ONE (1) DAY COLD WEATHER REQUIREMENTS. ADEQUATE EQUIPMENT SHALL BE PROVIDED FOR HEATING CONCRETE MATERIALS AND PROTECTING CONCRETE DURING FREEZING OR NEAR-FREEZING WEATHER. THE RECOMMENDED PROCEDURES LISTED IN ACI 306: COLD WEATHER CONCRETING SHALL BE FOLLOWED.

1. COLD WEATHER IS DEFINED AS A PERIOD WHEN, FOR MORE THAN 3 CONSECUTIVE DAYS, THE FOLLOWING CONDITIONS EXIST:

a. THE AVERAGE DAILY AIR TEMPERATURE IS LESS THAN 40-DEGREES F AND THE AIR TEMPERATURE IS NOT GREATER THAN 50-DEGREES F FOR MORE THAN ONE-HALF OF ANY 24-HOUR PERIOD.

H. HOT WEATHER REQUIREMENTS. DURING HOT WEATHER, PROPER ATTENTION SHALL BE GIVEN TO INGREDIENTS, PRODUCTION METHODS, HANDLING, PLACING, PROTECTION, AND CURING TO PREVENT EXCESSIVE CONCRETE TEMPERATURES OR WATER EVAPORATION THAT COULD IMPAIR REQUIRED STRENGTH OR SERVICEABILITY OF THE MEMBER OR STRUCTURE. THE RECOMMENDED PROCEDURES LISTED IN ACI 305; HOT WEATHER CONCRETING SHALL BE FOLLOWED.

1. HOT WEATHER IS ANY COMBINATION OF THE FOLLOWING CONDITIONS THAT TENDS TO IMPAIR THE QUALITY OF FRESHLY MIXED OR HARDENED CONCRETE BY ACCELERATING THE RATE OF MOISTURE LOSS AND RATE OF CEMENT HYDRATION, OR OTHERWISE CAUSING DETRIMENTAL RESULTS:

a. HIGH AMBIENT TEMPERATURE.

b. HIGH CONCRETE TEMPERATURE.

c. LOW RELATIVE HUMIDITY.

d. WIND SPEED.

e. SOLAR RADIATION.

CAST-IN-PLACE CONCRETE (CONTINUED)

5. FORMWORK

A. FORMS SHALL RESULT IN A FINAL STRUCTURE THAT CONFORMS TO SHAPES, LINES, AND DIMENSIONS OF THE MEMBERS AS REQUIRED BY THE DESIGN DRAWINGS AND SPECIFICATIONS.

1. DESIGN OF FORMWORK SHALL BE IN ACCORDANCE WITH ACI 318/350.

2. FORMWORK SHALL BE IN ACCORDANCE WITH ACI 347; GUIDE TO FORMWORK FOR CONCRETE.

B. SPECIAL FORMWORK DESIGN: FORMWORK AS LISTED IN THIS SECTION SHALL BE DESIGNED PER CHAPTER 2 OF ACI 347 BY A PROFESSIONAL STRUCTURAL ENGINEER CURRENTLY REGISTERED IN THE STATE OF OREGON. DESIGN CALCULATIONS AND FORMWORK PLANS AND DETAILS, SEALED AND SIGNED BY THE FORMWORK ENGINEER OF RECORD SHALL BE SUBMITTED UNDER THE DEFERRED SUBMITTAL SECTION OF THE PROJECT SPECIFICATIONS. SUBMIT SPECIAL FORMWORK DESIGNS FOR THE FOLLOWING ITEMS:

C. TOLERANCES FOR FINISHED CONCRETE SURFACES SHALL MEET THE FOLLOWING REQUIREMENTS, CLASS OF SURFACE IS PER TABLE 5.3.1:

1. FOOTINGS: CLASS C

2. FOUNDATION WALLS: CLASS B

3. ABOVE GRADE CONCRETE NOT VISIBLE TO SIGHT: CLASS B

4. ABOVE-GRADE CONCRETE VISIBLE TO SIGHT: CLASS A

D. REMOVAL OF FORMS.

1. CONCRETE FORMS SHALL NOT BE REMOVED UNTIL THE RETAINED CONCRETE HAS REACHED THE FOLLOWING MINIMUM PERCENTAGE OF THE REQUIRED 28 DAY COMPRESSIVE STRENGTH:

a. FOOTINGS AND BASE SLABS ON GRADE: 50% OF f_c .

b. FOUNDATION WALLS AND COLUMNS: 67% OF f_c .

2. WHERE CONCRETE CYLINDER TESTS ARE NOT AVAILABLE FOR STRENGTH VERIFICATION THE FOLLOWING GUIDE MAY BE USED WHEN PERMITTED BY THE PROJECT ENGINEER:

a. FOOTINGS AND BASE SLABS ON GRADE: 12 HOURS.

b. FOUNDATION WALLS AND COLUMNS: 24 HOURS.

E. EMBEDMENTS IN CONCRETE.

1. CONDUITS, PIPES, AND SLEEVES OF ANY MATERIAL NOT HARMFUL TO CONCRETE AND WITHIN LIMITATIONS OF ACI 318/350 SHALL BE PERMITTED TO BE EMBEDDED IN CONCRETE WITH APPROVAL OF THE PROJECT ENGINEER, PROVIDED THEY ARE NOT CONSIDERED TO REPLACE STRUCTURALLY THE DISPLACED CONCRETE, EXCEPT AS PROVIDED IN ACI 318-14.

2. CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE UNLESS EFFECTIVELY COATED OR COVERED TO PREVENT ALUMINUM-CONCRETE REACTION OR ELECTROLYTIC ACTION BETWEEN ALUMINUM AND STEEL.

F. CONSTRUCTION JOINTS.

1. CONSTRUCTION JOINTS SHALL ONLY BE PLACED WHERE INDICATED ON THE PROJECT DRAWINGS OR AS APPROVED BY THE PROJECT ENGINEER.

2. CONSTRUCTION JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ACI 318/350.

6. DETAILS OF REINFORCEMENT

A. PLACEMENT OF ALL REINFORCING STEEL WITHIN CONCRETE STRUCTURES SHALL BE IN CONFORMANCE WITH ACI 318/350.

B. REINFORCING STEEL HOOKS, BENDS, TIES, SPLICES AND OTHER REINFORCEMENT DETAILS SHALL BE IN ACCORDANCE WITH ACI 315; DETAILS AND DETAILING OF CONCRETE REINFORCEMENT.

C. SPACING LIMITS FOR REINFORCEMENT SHALL BE IN CONFORMANCE WITH ACI 318/350. CONCRETE PROTECTION FOR REINFORCEMENT UNLESS NOTED ELSEWHERE ON THE DRAWINGS, ALL REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE COVER:

1. FOR NON-LIQUID CONTAINING CONCRETE STRUCTURES; PER ACI 318:

a. CONCRETE CAST AGAINST EARTH: 3.00 INCH

b. CONCRETE EXPOSED TO EARTH OR WEATHER:

- NO. 5 OR SMALLER BARS: 1.50-INCH
- NO. 6 OR LARGER BARS: 2.00-INCH

c. CONCRETE NOT EXPOSED TO EARTH OR WEATHER:

- NO. 11 OR SMALLER BARS: 0.75-INCH
- NO. 14 OR LARGER BARS: 1.50-INCH

d. BEAMS AND COLUMNS;

PRIMARY REINFORCEMENT, TIES, STIRRUPS OR SPIRALS: 1.50-INCH

E. CONCRETE BLOCKS OR PLASTIC-COATED BAR CHAIRS SHALL BE PROVIDED FOR SUPPORT OF ALL SLAB REINFORCING STEEL SUFFICIENT IN NUMBER TO PREVENT SETTLEMENT OR SAGGING, BUT IN NO CASE SHALL SUCH SUPPORT BE CONTINUOUS. METAL CLIPS OR SUPPORTS SHALL NOT BE PLACED IN CONTACT WITH THE FORMS OR THE SUB-GRADE.

F. DOWELS AND ANCHOR BOLTS SHALL BE WIRED OR OTHERWISE HELD IN CORRECT POSITION PRIOR TO PLACING CONCRETE. CARE SHALL BE TAKEN TO INSURE THAT DOWELS AND ANCHOR BOLTS REMAIN PLUM AFTER CONCRETE IS POURED AND VIBRATED. IN NO CASE SHALL DOWELS OR ANCHOR BOLTS BE STABBED INTO FRESHLY POURED CONCRETE!

G. PROVIDE DOWELS IN FOOTINGS AND AT CONSTRUCTION JOINTS TO MATCH VERTICAL REINFORCING BAR SIZE AND SPACING, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

H. WHERE DRILLED IN ANCHORS ARE TO BE POST-INSTALLED INTO CONCRETE SURFACES TAKE CARE TO LOCATE REINFORCING STEEL SO THAT IT WILL NOT INTERFERE WITH THE DRILLING OPERATIONS. MOVE BARS PLUS OR MINUS 1 TO 2 INCHES IN ORDER TO AVOID DRILLING CONFLICTS.

I. ALL BAR BENDS, HOOKS, SPLICES AND OTHER REINFORCING STEEL DETAILS SHALL CONFORM TO THE REQUIREMENTS OF ACI 315.

J. UNLESS OTHERWISE NOTED ON THE PLANS ALL BARS SHALL BE SPLICED WITH A MINIMUM CLASS B LAP SPlice; LAP SPLICES OF DEFORMED BARS AND DEFORMED WIRE IN COMPRESSION ZONES MAY BE CLASS A SPLICES.

K. AT ALL CORNERS AND WALL INTERSECTIONS PROVIDE BENT BARS TO MATCH THE HORIZONTAL REINFORCING STEEL AND IN ACCORDANCE WITH THE TYPICAL CORNER REINFORCING DETAILS.

L. CHAMFER ALL EXPOSED CORNERS AND FILLET ENTRANT ANGLES 3/4" UNLESS OTHERWISE NOTED ON THE DRAWINGS.

M. AT SLAB AND WALL OPENINGS PROVIDE A MINIMUM OF (4) #5 BARS; OVER, UNDER AND AT EITHER SIDE OF THE OPENINGS. EXTEND THESE BARS A MINIMUM OF 24" PAST THE OPENING EDGE. PROVIDE (1) MATT OF (4) #5 BARS FOR WALLS OR SLABS WITH SINGLE-LAYER REINFORCING AND (2) MATS OF (4) #5 BARS FOR DOUBLE-LAYER REINFORCING WALLS OR SLABS. PROVIDE #4, 4'-0" LONG DIAGONAL BARS AT EACH RE-ENTRANT CORNER IN SLABS; (1) BAR FOR SLABS WITH SINGLE LAYER REINFORCING AND (2) BARS FOR SLABS WITH DOUBLE LAYER REINFORCING.

7. CONCRETE FINISHING. ALL CONCRETE SURFACES SHALL BE FINISHED IN ACCORDANCE WITH ACI 301.

A. FORMED CONCRETE SURFACES. AFTER REMOVAL OF FORMS, GIVE EACH FORMED SURFACE ONE OR MORE OF THE FOLLOWING FINISHES IN CONFORMANCE WITH ACI 301 SECTION 5.3.3 FINISHING FORMED SURFACES.

1. NON-LIQUID RETAINING CONCRETE STRUCTURES:

a. CONCRETE FOOTINGS AND FOUNDATIONS NOT EXPOSED TO VIEW. PROVIDE AN AS-CAST FINISH.

b. FOUNDATION WALL AND OTHER SURFACES BELOW GRADE AND NOT EXPOSED TO VIEW. PROVIDE A SURFACE FINISH TYPE SF-1.0.

c. INTERIOR, EXTERIOR AND TOP SURFACES EXPOSED TO VIEW TO 6-INCHES BELOW GRADE. PROVIDE A SURFACE FINISH TYPE SF-2.0.

d. COLUMN, BEAM AND JOIST SURFACES THAT ARE EXPOSED TO VIEW. PROVIDE A SURFACE FINISH TYPE SF-2.0.

B. UNFORMED CONCRETE SURFACES. UNFORMED CONCRETE SURFACES INCLUDING THE TOP SURFACE OF ALL CONCRETE ROOF AND FLOOR SLABS SHALL BE FINISHED IN ACCORDANCE WITH ACI 301 SECTION 5.3.4 AND ACI 302 CHAPTER 8.

a. FOR THE TOP SURFACES OF WALLS, PROVIDE A SCRATCHED FINISH.

b. INTERIOR GARAGE, INDUSTRIAL OR WORK AREAS SUBJECT TO EQUIPMENT OR TRAFFIC LOADS SHALL RECEIVE A BROOM FINISH.

C. SAWED CONTRACTION JOINTS. CONFORM TO ACI 301 SECTION 5.3.5.

J-U-B ENGINEERS, INC.

3611 S. Zintel Way
Kennewick, WA 99037

Phone: 509.783.2144
www.jub.com

EXPIRATION DATE: 6-30-24

9-6-2022

REUSE OF DRAWINGS

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NO.	DESCRIPTION	BY	APPR.	DATE

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON

GENERAL STRUCTURAL NOTES

FILE: JUB PROJ. # : 33-21-003
DRAWN BY: RAC
DESIGN BY: RAC
CHECKED BY: RSM

ONE INCH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY

LAST UPDATED: 9/6/22

SHEET NUMBER:
S-001



EXPIRATION DATE: 6-30-24
 9-6-2022

REUSE OF DRAWINGS
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NO.	DESCRIPTION	BY	DATE

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON
 STRUCTURAL PLANS

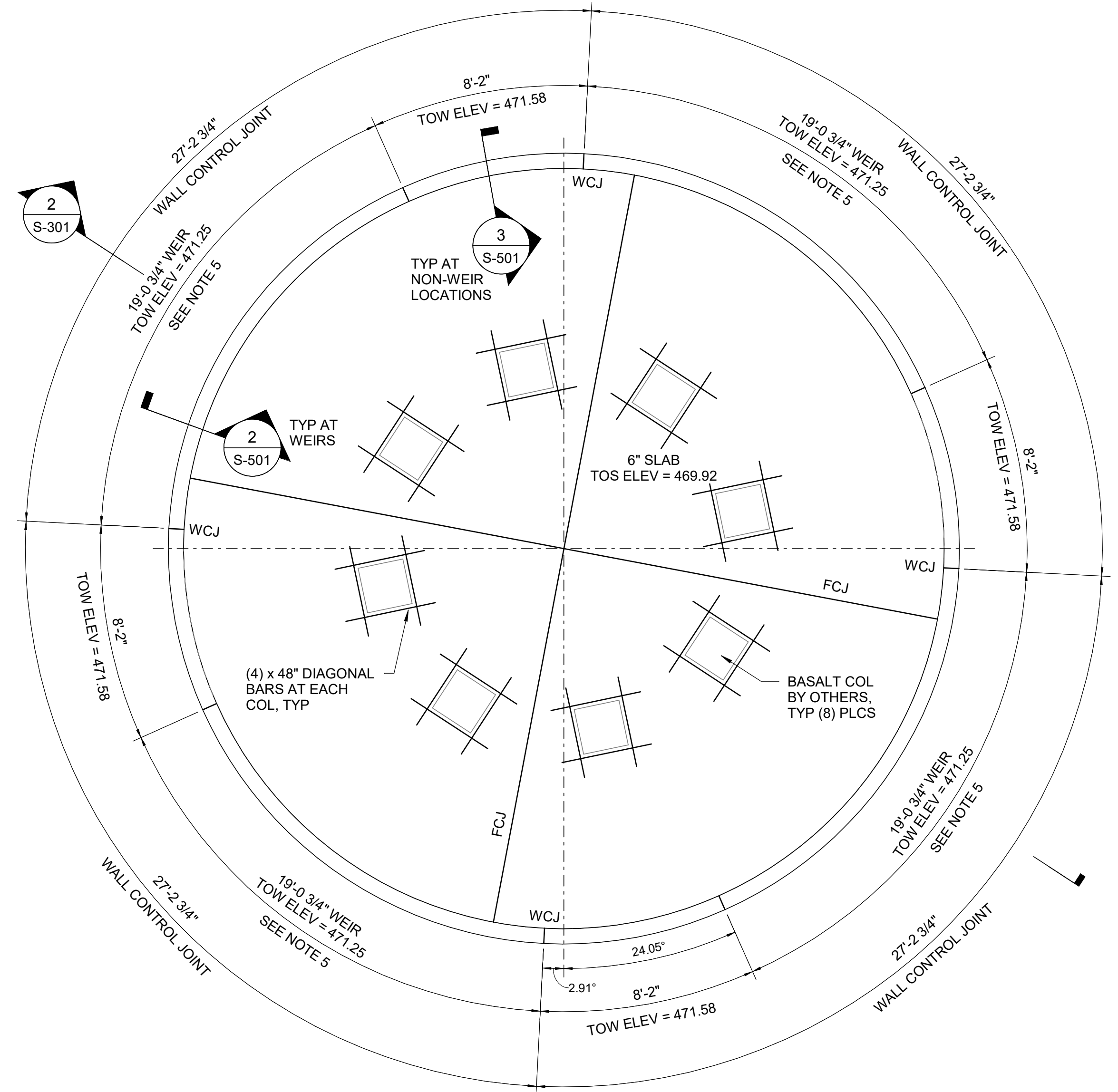
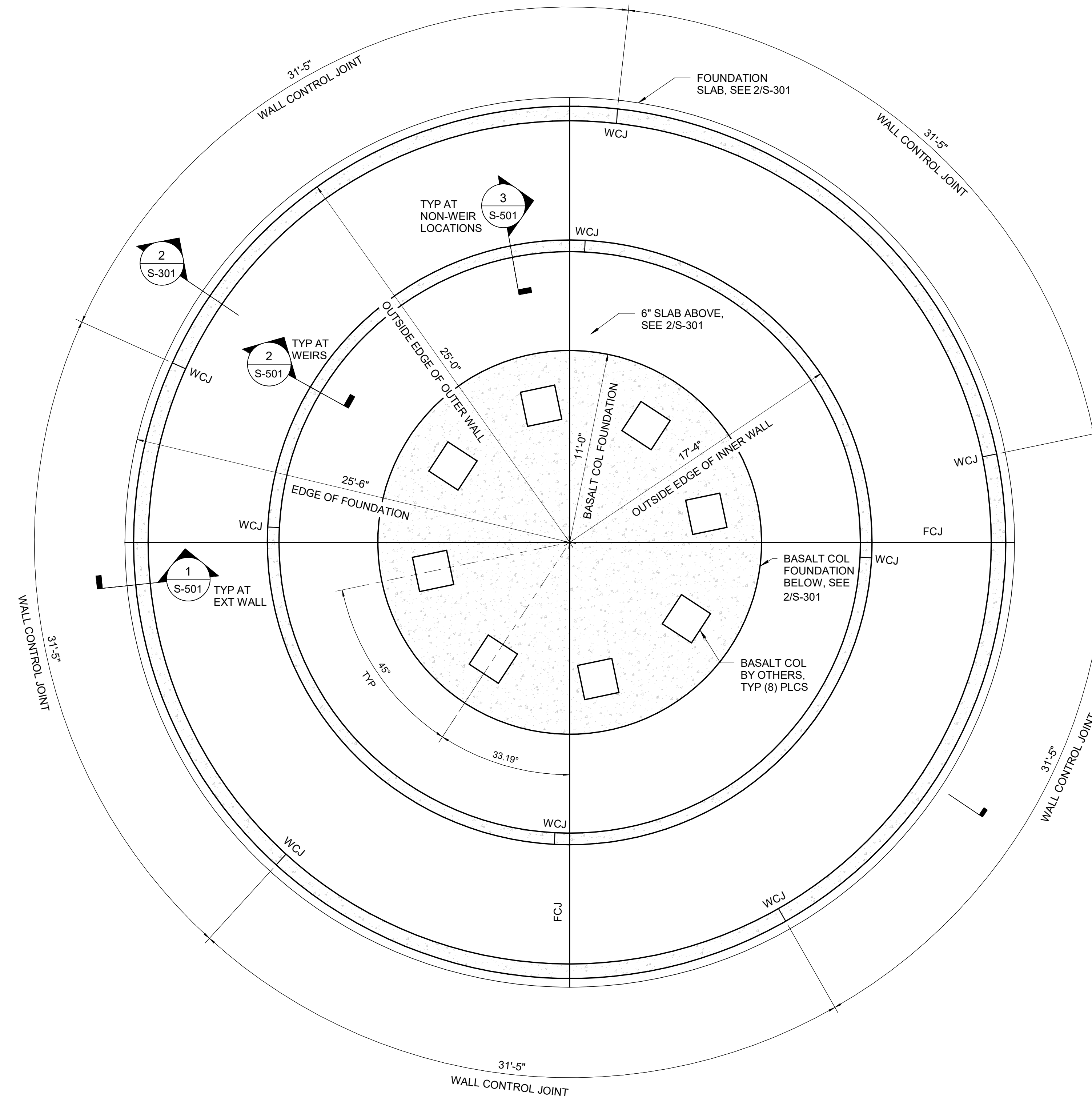
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 JUB PROJ. #: 33-21-003
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 DESIGN BY: RAC
 CHECKED BY: RSM
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 9/6/22

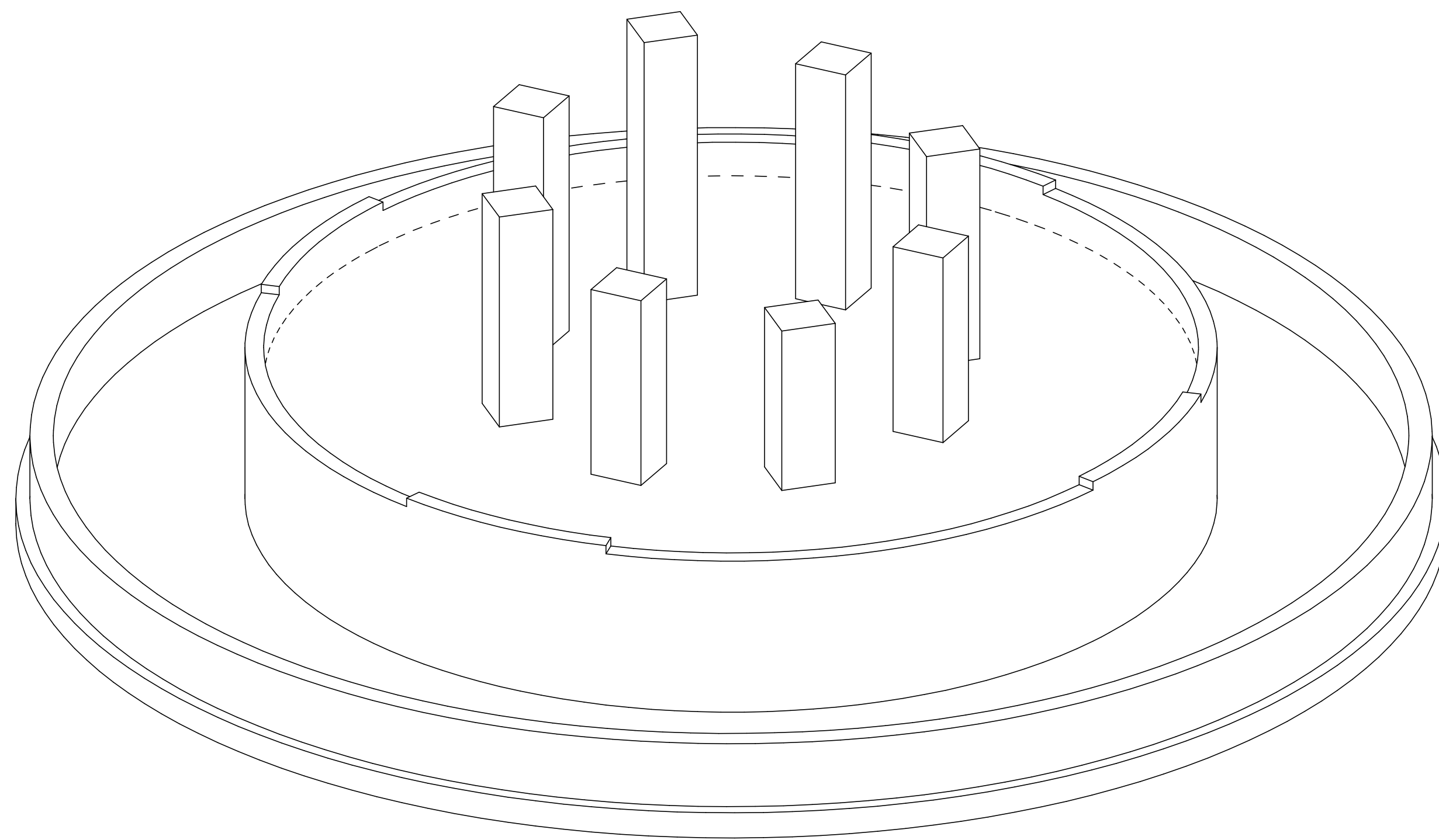
SHEET NUMBER:

S-101

SHEET NOTES

- SEE SHEET S-001 FOR GENERAL STRUCTURAL NOTES
- SEE SHEET S-501 AND S-502 FOR CONCRETE DETAILS.
- PROVIDE WATERSTOP AT ALL CONCRETE JOINTS. SEE SHEET S-503 FOR TYPICAL WATERSTOP DETAILS.
- SEE LANDSCAPE ARCH DRAWINGS FOR FOUNTAIN SIGNAGE LOCATIONS AND INFORMATION. FOR SIGNAGE ANCHORAGE, SEE DETAIL 5/S-501.
- CENTER WEIRS ON SIGN LOCATIONS. CONFIRM SIGN AND WEIR LOCATIONS WITH FOUNTAIN DRAWINGS BEFORE PLACING CONCRETE.
- ALL ARC LENGTH DIMENSIONS SHOWN ARE MEASURED ALONG OUTSIDE EDGE OF WALL.
- FCJ = FLOOR CONTROL JOINT
 WCJ = WALL CONTROL JOINT





1 3D ISOMETRIC
SCALE:

SHEET NOTES

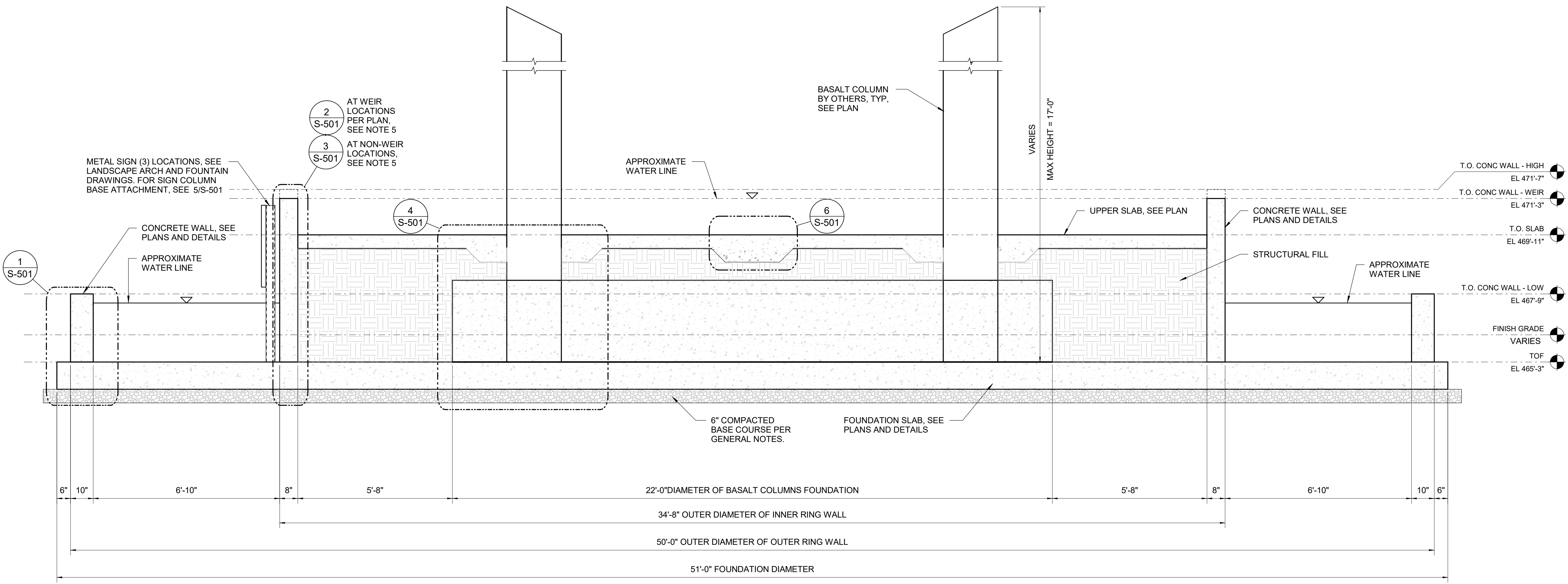
1. SEE SHEET S-001 FOR GENERAL STRUCTURAL NOTES
2. SEE SHEET S-501 AND S-502 FOR CONCRETE DETAILS.
3. PROVIDE WATERSTOP AT ALL CONCRETE JOINTS. SEE SHEET S-503 FOR TYPICAL WATERSTOP DETAILS.
4. SEE LANDSCAPE ARCH DRAWINGS FOR FOUNTAIN SIGNAGE LOCATIONS AND INFORMATION. FOR SIGNAGE ANCHORAGE, SEE DETAIL 5/S-501.
5. CENTER WEIRS ON SIGN LOCATIONS. CONFIRM SIGN AND WEIR LOCATIONS WITH FOUNTAIN DRAWINGS BEFORE PLACING CONCRETE.

JUB
J-U-B ENGINEERS, INC.
3611 S. Zintel Way
Kennewick, WA 99337
Phone: 509.783.2144
www.jub.com

REGISTERED PROFESSIONAL ENGINEER
No. 14890 PE
OREGON
ROBERT F. ST. MICHEL
EXPIRATION DATE: 6-30-24
9-6-2022

REUSE OF DRAWINGS
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NO.	REVISION	DESCRIPTION	BY	APPR.	DATE



2 STRUCTURAL SECTION
SCALE: 1/2" = 1'-0"

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON
ISOMETRIC AND STRUCTURAL SECTIONS

FILE:
JUB PROJ. #: 33-21-003
DRAWN BY: RAC
DESIGN BY: RAC
CHECKED BY: RSM
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AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 9/6/22

SHEET NUMBER:
S-301

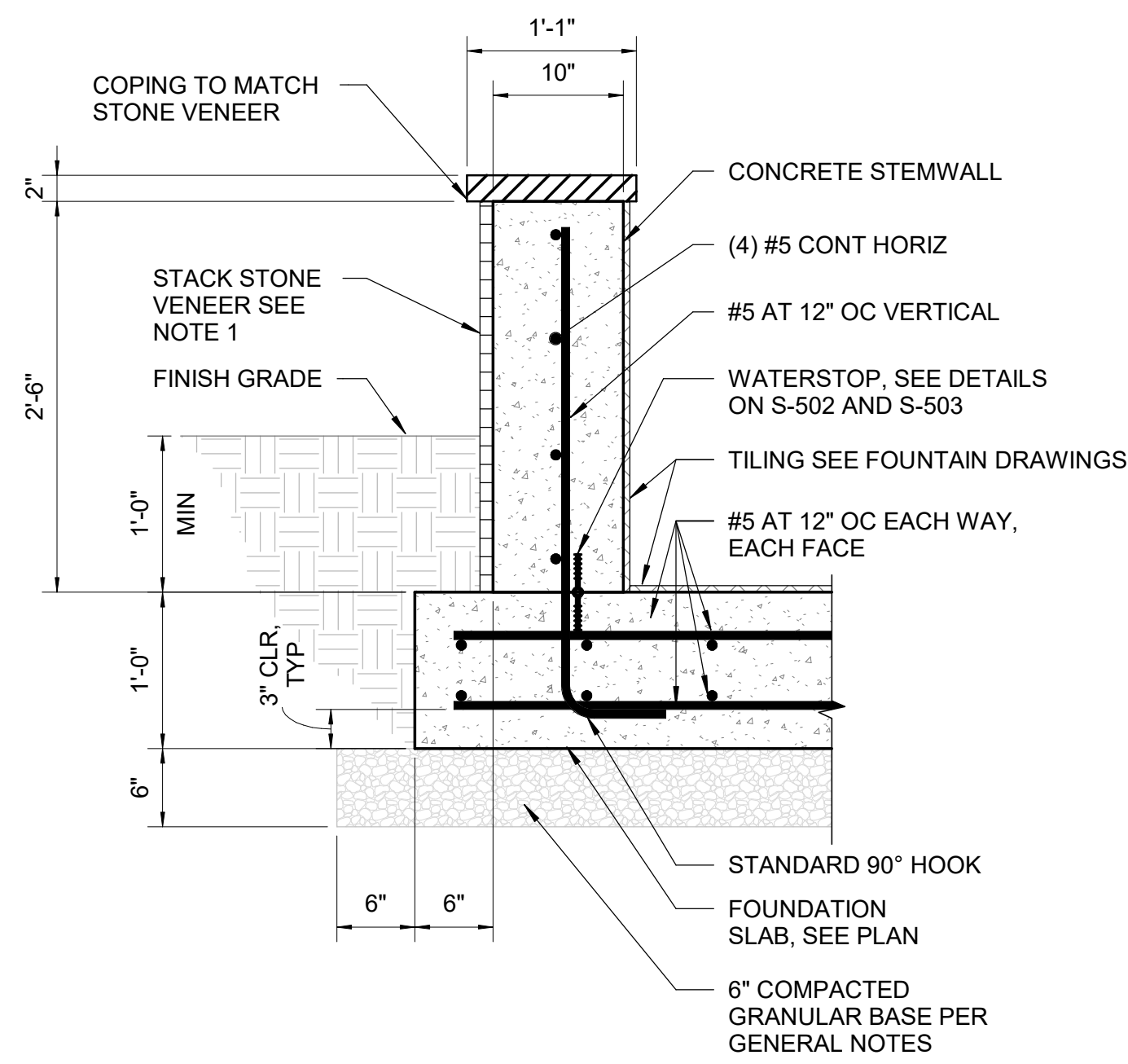
NO.	DESCRIPTION	BY	DATE

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON
 STRUCTURAL DETAILS

FILE:
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 DRAWN BY: RAC
 DESIGN BY: RAC
 CHECKED BY: RSM
 ONE INCH
 AT FULL SIZE, IF NOT ONE
 INCH SCALE ACCORDINGLY
 LAST UPDATED: 9/6/22

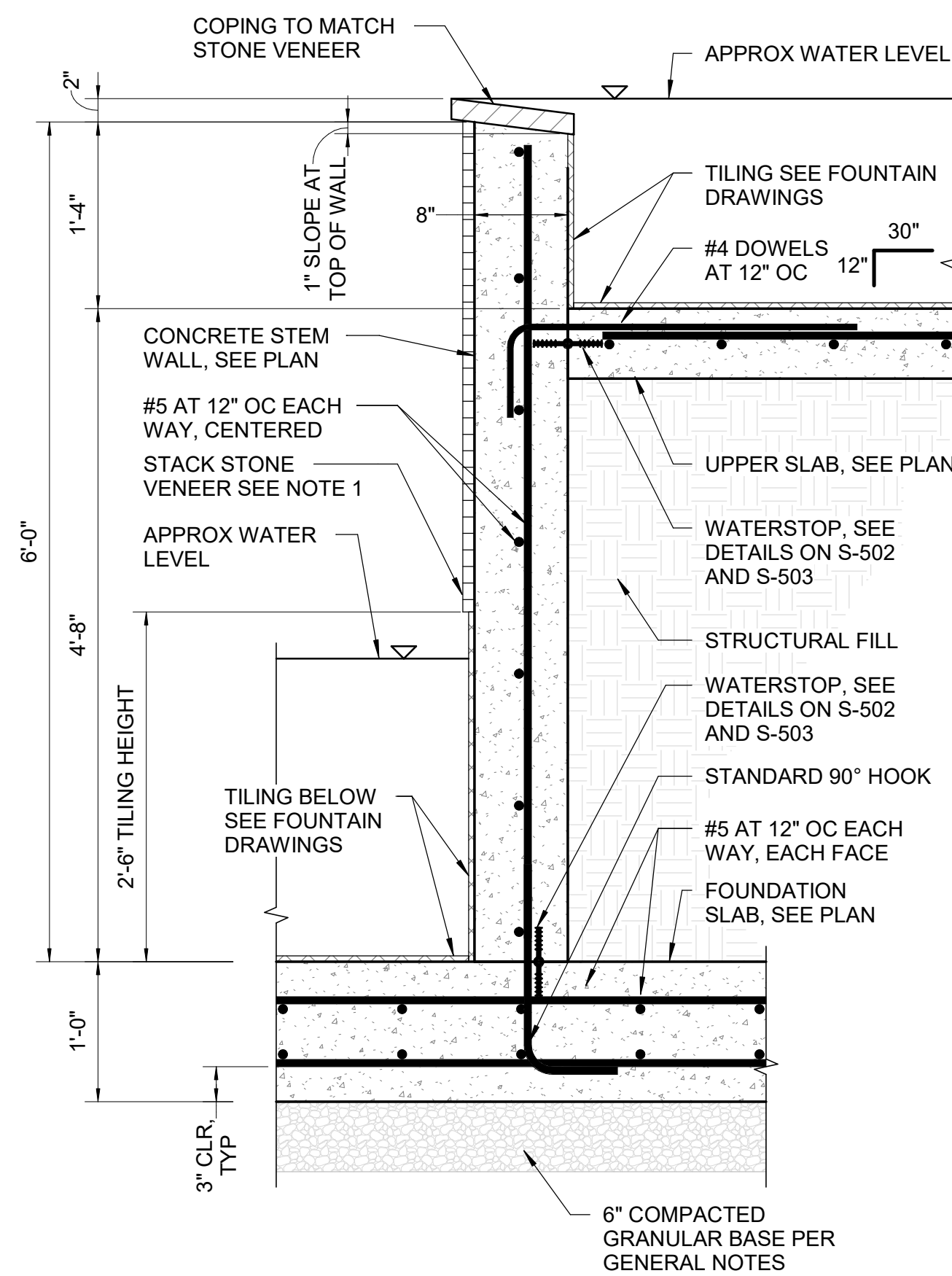
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S-501



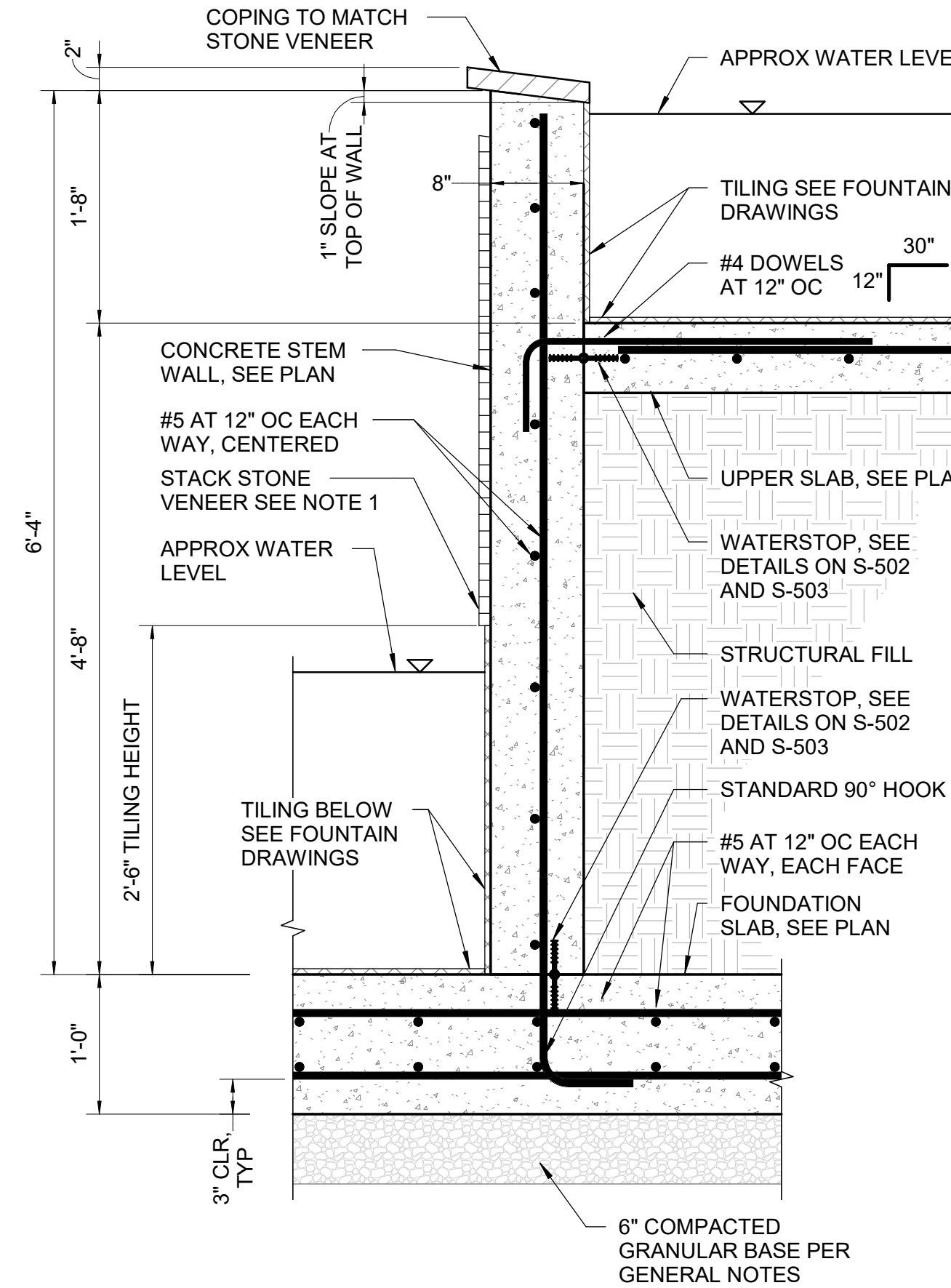
- NOTES:
 1. STACKED STONE TO BE MUTUAL MATERIALS - PRO-FIT ALPINE LEDGESTONE (PHEASANT COLOR). INSTALL PER MFR INSTRUCTIONS.
 2. LOCATE SKIMMERS IN WALL SUCH THAT REINFORCING IS NOT INTERRUPTED. IF REQUIRED, BEND HORIZONTAL REINFORCING AROUND SKIMMERS.

1 OUTER FOUNTAIN WALL
 S-101 SCALE: 1" = 1'-0"



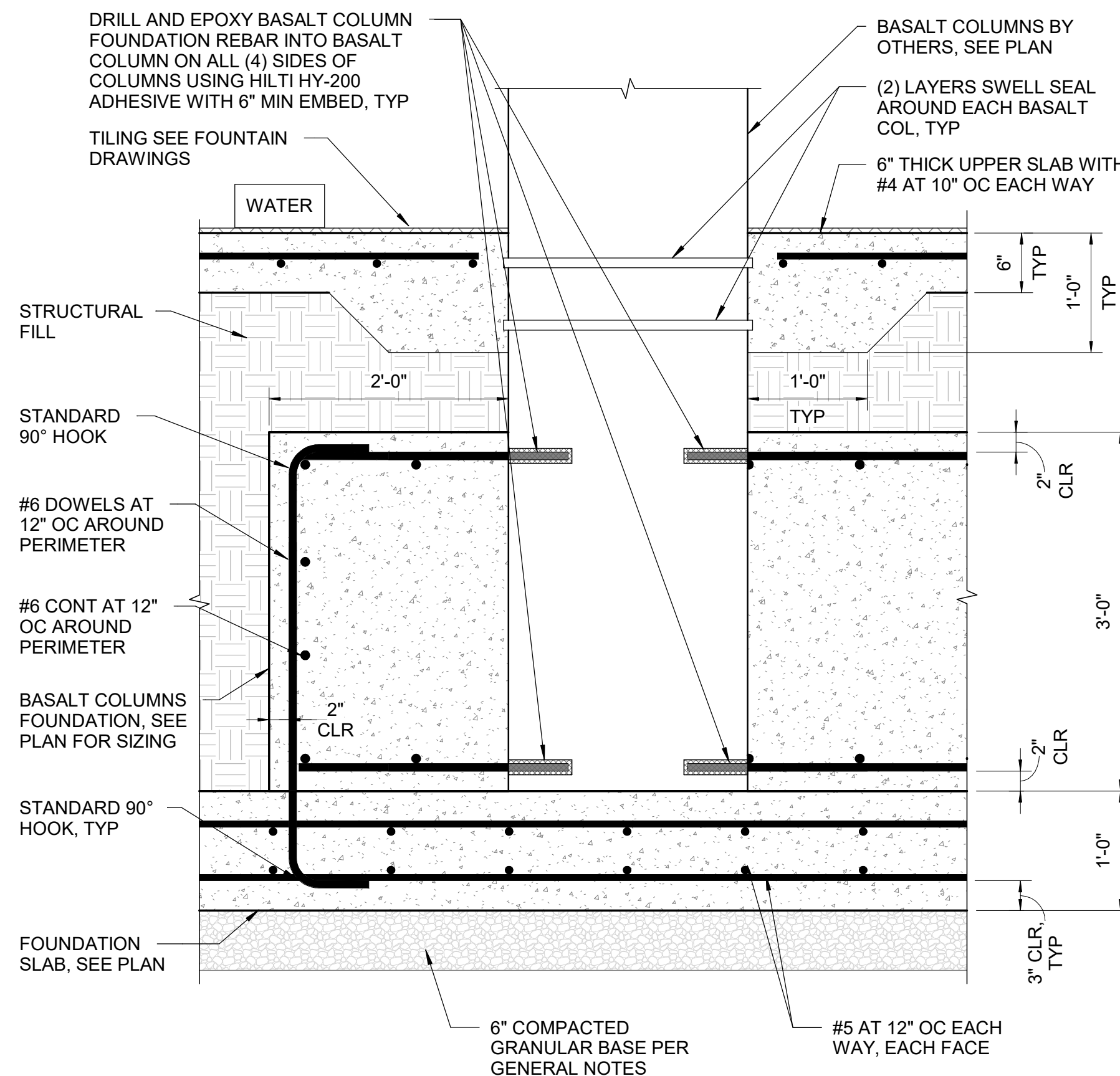
- NOTES:
 1. STACKED STONE TO BE MUTUAL MATERIALS - PRO-FIT ALPINE LEDGESTONE (PHEASANT COLOR). INSTALL PER MFR INSTRUCTIONS.

2 INNER FOUNTAIN WALL - WEIR
 S-101 SCALE: 1" = 1'-0"

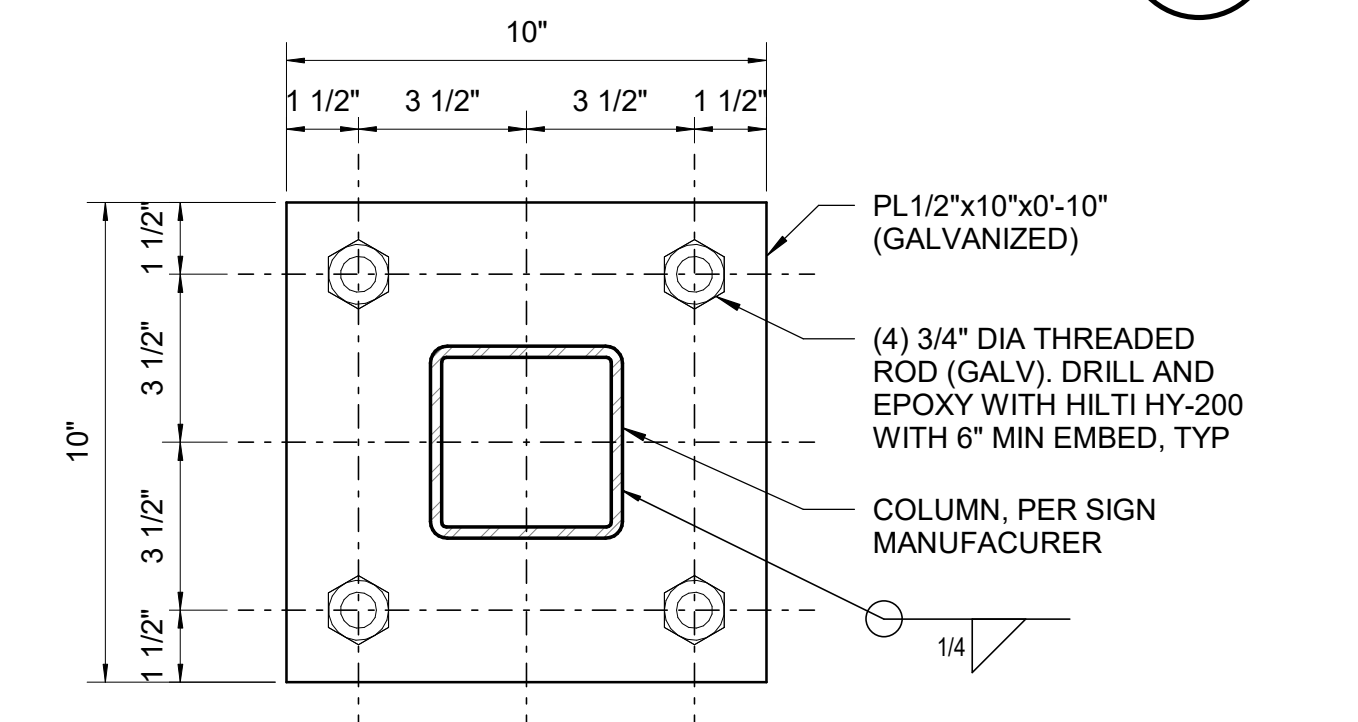


- NOTES:
 1. STACKED STONE TO BE MUTUAL MATERIALS - PRO-FIT ALPINE LEDGESTONE (PHEASANT COLOR). INSTALL PER MFR INSTRUCTIONS.

3 INNER FOUNTAIN WALL - NO WEIR
 S-101 SCALE: 1" = 1'-0"

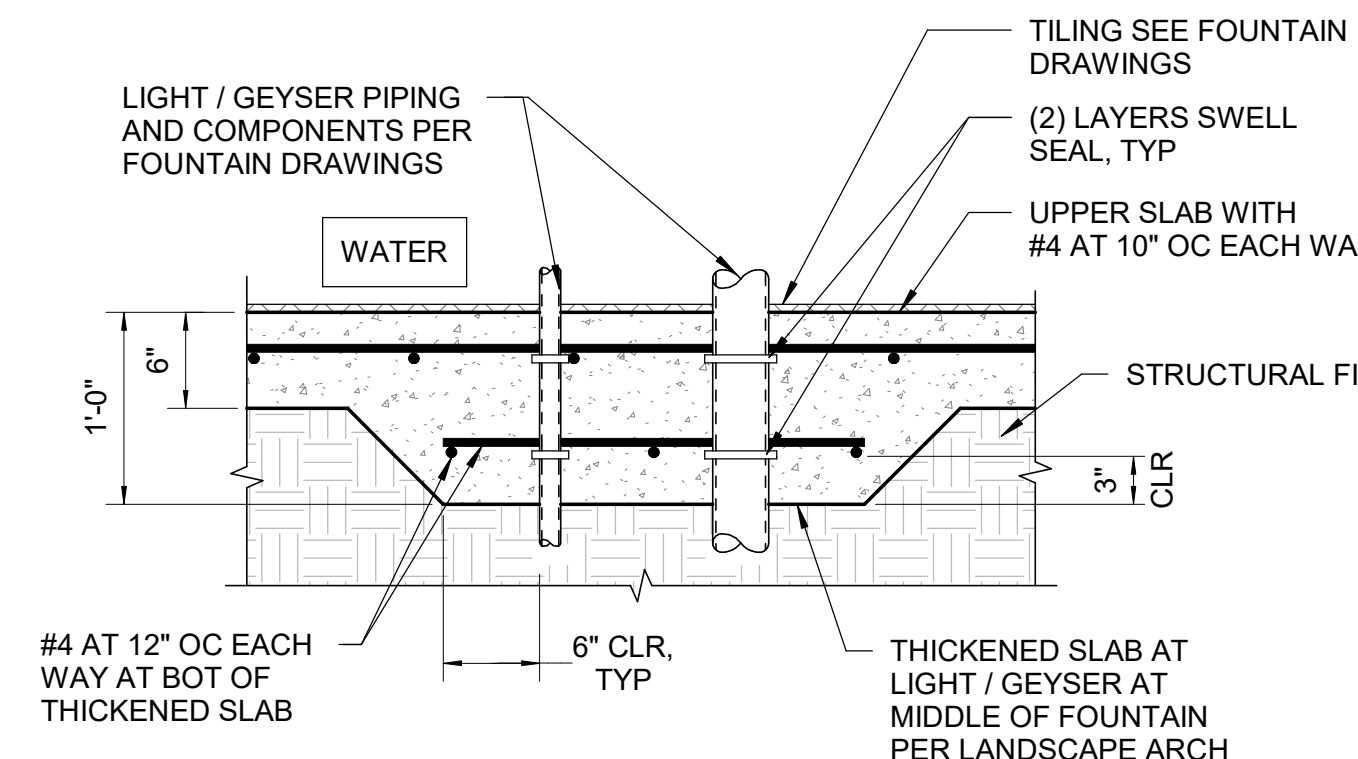


4 BASALT COLUMN ANCHORAGE
 S-301 SCALE: 1" = 1'-0"

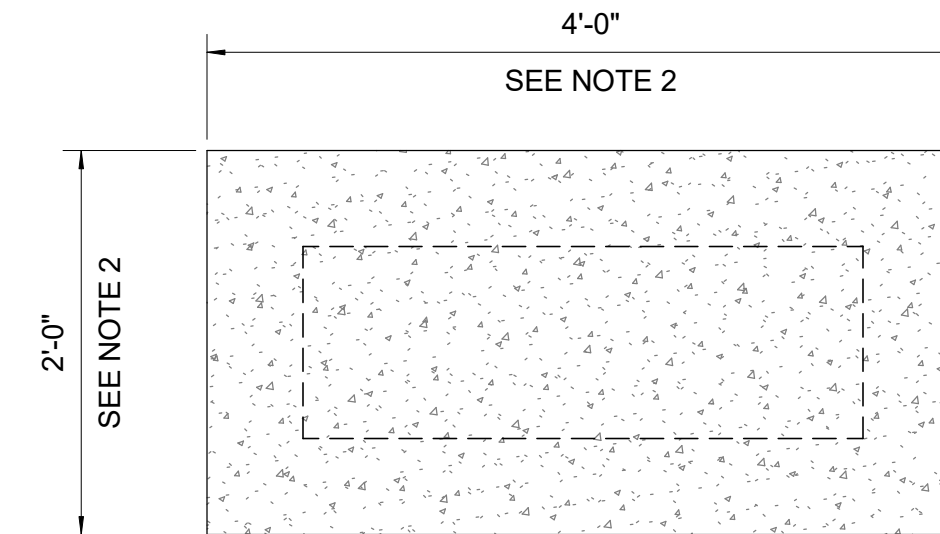


- NOTES:
 1. INSTALL SIGN BASEPLATES BEFORE TILE IS INSTALLED.

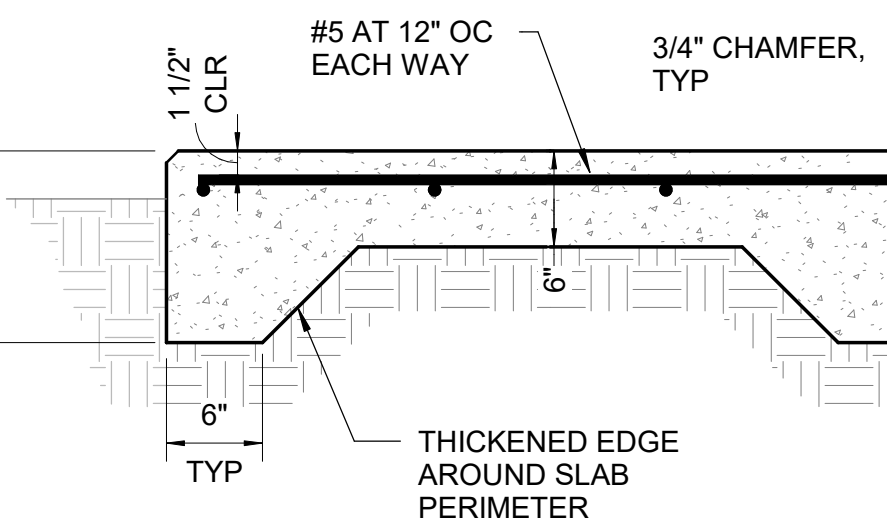
5 SIGN COLUMN BASE
 SCALE: 3" = 1'-0"



6 SLAB AT CENTER LIGHT / GEYSER
 S-301 SCALE: 1" = 1'-0"



- NOTES:
 1. REFER TO ELECTRICAL DRAWINGS FOR PAD LOCATION.
 2. CONFIRM SIZE OF PAD WITH ELECTRICAL CONTRACTOR AND ELECTRICAL ENGINEER BEFORE PLACING EQUIPMENT PAD. PAD SHALL BE A MINIMUM OF 6" LARGER THAN EQUIPMENT ON ALL SIDES.
 3. EQUIPMENT PADS SHALL BE INSTALLED LEVEL UNLESS INDICATED OTHERWISE.
 4. THE SIZE, NUMBER, TYPE, LOCATION, AND THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER. ANCHOR BOLTS SHALL BE HELD IN POSITION WITH A TEMPLATE OR OTHER ACCEPTABLE MEANS.
 5. AT CONTRACTOR'S OPTION, POST INSTALLED ANCHORS MAY BE USED IN LIEU OF CAST-IN-PLACE ANCHORS WHEN DIAMETER IS LESS THAN 3/4" DIAMETER AND WHEN APPROVED BY THE EQUIPMENT MANUFACTURER AND CONTRACTOR'S REPRESENTATIVE.
 6. PROVIDE BITUMASTIC, EPDM ROOFING MATERIAL OR ASPHALTIC FELT BETWEEN ELECTRICAL PANELS AND THE CONCRETE SLAB.



7 CT CABINET PAD
 SCALE: 1" = 1'-0"

NO.	REVISION	DESCRIPTION	BY	DATE

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON
 TYPICAL STRUCTURAL DETAILS

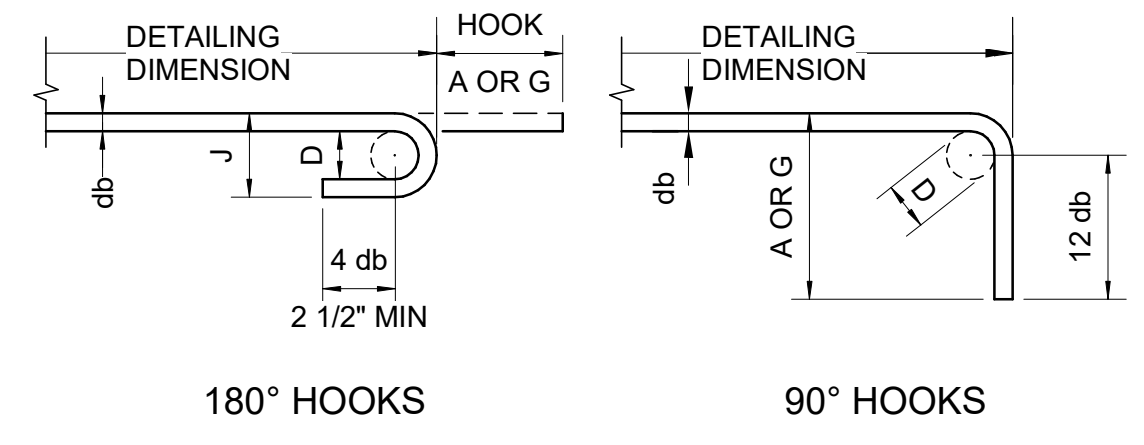
FILE:
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 DRAWN BY: RAC
 DESIGN BY: RAC
 CHECKED BY: RSM
 AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 9/6/22

SHEET NUMBER:

S-502

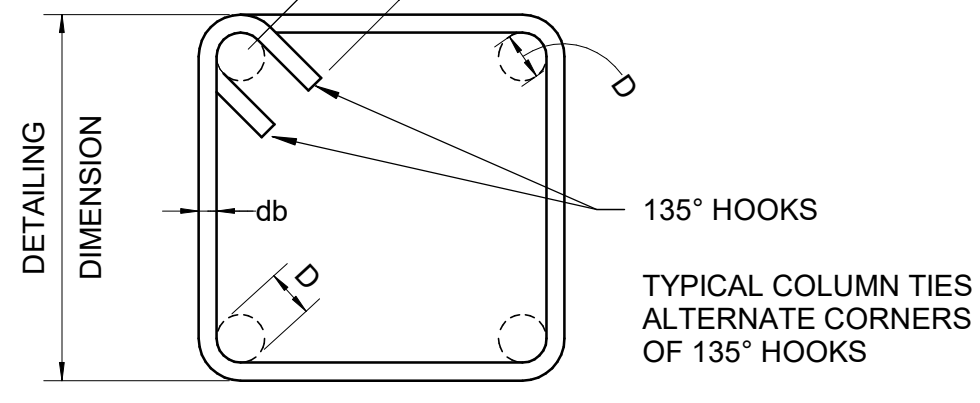
BAR SIZE	LAP CLASS	f _c =3,000 psi		f _c =4,000 psi		f _c =4,500 psi		f _c =5,000 psi	
		CAT.1	CAT.2	CAT.1	CAT.2	CAT.1	CAT.2	CAT.1	CAT.2
#3	A	16	25	14	21	14	20	13	19
	B	21	32	19	28	18	27	17	25
#4	A	22	33	19	28	18	27	17	25
	B	28	43	25	37	24	35	22	33
#5	A	27	41	24	36	23	34	21	32
	B	36	53	31	46	30	44	28	41
#6	A	33	49	28	43	27	41	25	38
	B	43	64	37	55	36	53	33	50
#7	A	48	72	42	62	40	59	37	56
	B	62	93	54	81	51	77	48	72
#8	A	55	82	47	71	45	68	42	64
	B	71	106	61	92	58	88	55	83
#9	A	62	92	53	80	51	76	48	72
	B	80	120	69	104	66	99	62	93

- NOTES:
- FOR GRADE 60 REINFORCING STEEL BARS.
 - ALL LAP SPLICES SHALL BE CLASS B, UNLESS NOTED OTHERWISE.
 - CATEGORY 1: CLEAR COVER ≥ db AND CLR SPACING ≥ db AND STIRRUPS OR TIES THROUGHOUT Ld ARE PROVIDED.
 CATEGORY 1: CLEAR COVER ≥ db AND CLR SPACING ≥ 2db
 CATEGORY 2: CLEAR COVER < db OR CLR SPACING < 2db
 - FOR TOP BARS, MULTIPLY LAP LENGTH LISTED BY 1.30. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW THE BARS.



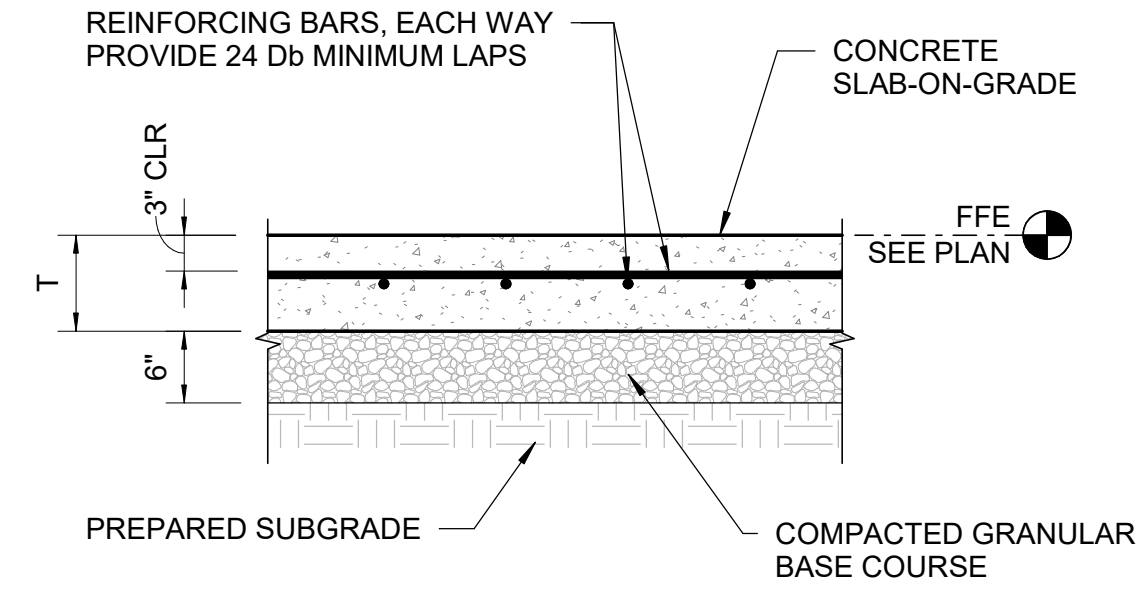
BAR SIZE	D	180° HOOKS		90° HOOKS
		A or G	J	A or G
#3	2-1/4"	5"	3"	6"
#4	3"	6"	4"	8"
#5	3-3/4"	7"	5"	10"
#6	4-1/2"	8"	6"	1'-0"
#7	5-1/4"	10"	7"	1'-2"
#8	6"	11"	8"	1'-4"

- NOTES:
- db = NOMINAL BAR DIAMETER
 - D = FINISHED INSIDE BEND DIAMETER
 - MINIMUM D = 6 x db FOR #3 TO #8 BARS
 - MINIMUM D = 8 x db FOR #9 TO #11 BARS
 - MINIMUM D = 10 x db FOR #14 AND #18 BARS
 - TYPICAL MINIMUM END HOOKS, ALL GRADES OF STEEL



BAR SIZE	D	135° HOOKS	
		A or G	H **
#3	1-1/2"	4-1/4"	3"
#4	2"	4-1/2"	3"

- NOTES:
- db = NOMINAL BAR DIAMETER
 - D = FINISHED INSIDE BEND DIAMETER
 - TYPICAL MINIMUM END HOOKS, ALL GRADES OF STEEL



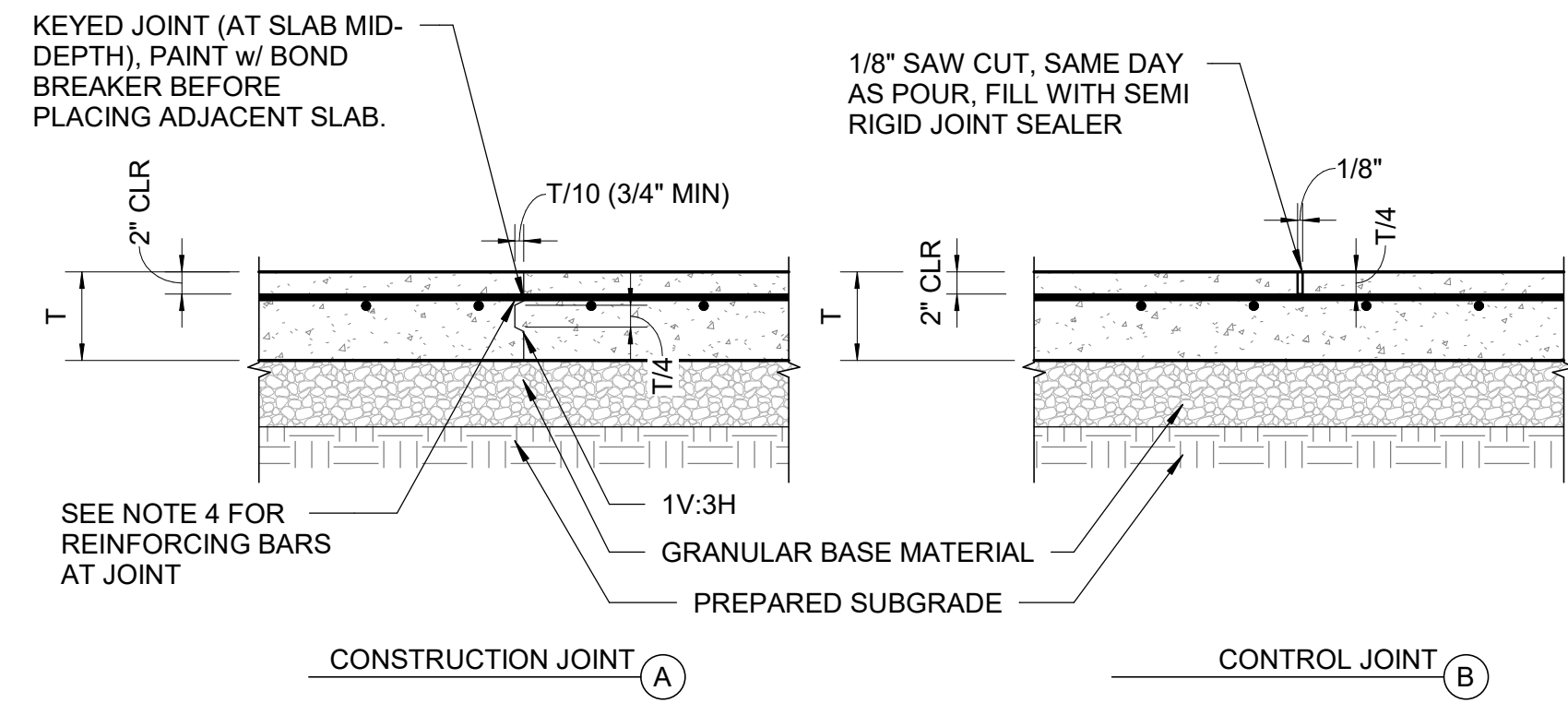
- NOTES:
- SEE GENERAL NOTES FOR SUBGRADE AND COMPACTED GRANULAR FILL FOR REQUIREMENTS.
 - REFER TO FOUNDATION PLANS AND DETAILS FOR SLAB THICKNESS "T".

1 TYPICAL CONCRETE REBAR LAP SPLICE SCH
 NO SCALE

2 TYPICAL REBAR HOOKS DETAIL
 NO SCALE

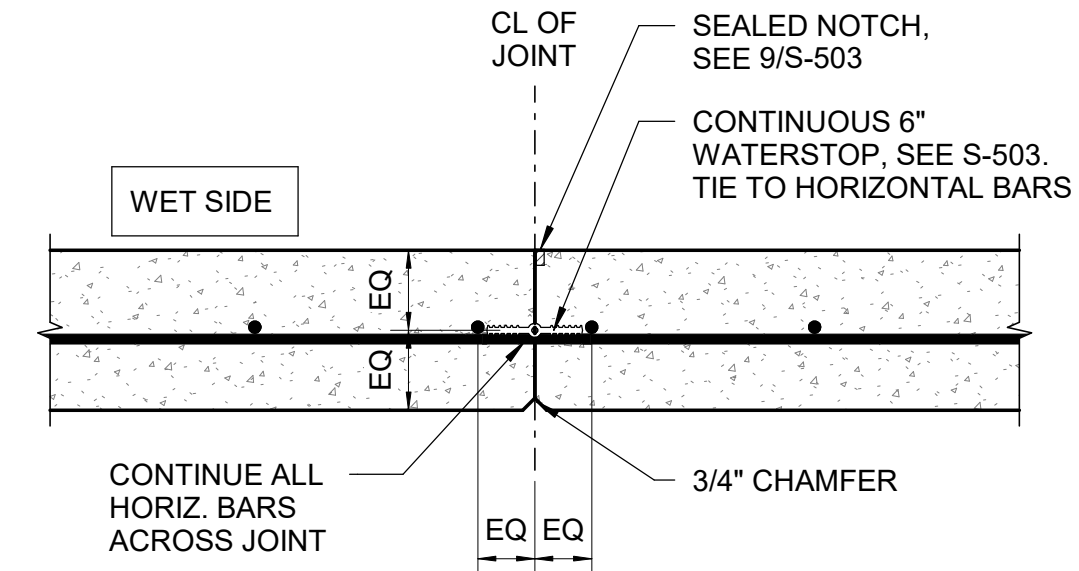
3 TYPICAL REBAR TIES DETAIL
 NO SCALE

4 TYPICAL CONCRETE SLAB ON GRADE DETAIL
 NO SCALE

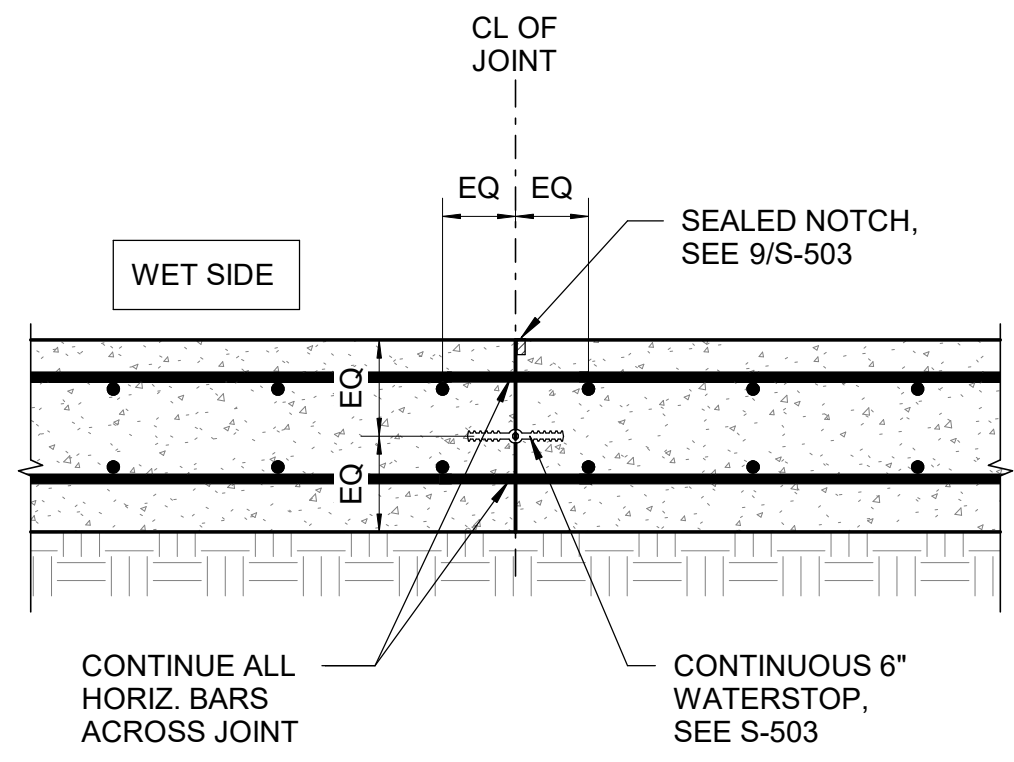


- NOTES:
- FOR INFORMATION NOT SHOWN, SEE 4/S-502.
 - CONTROL JOINTS TO BE 20'-0" ON CENTER, MAXIMUM, UNLESS NOTED OTHERWISE.
 - JOINT TYPE USED IS OPTIONAL, UNLESS NOTED OTHERWISE.
 - CUT EVERY OTHER BAR CROSSING CONTROL JOINTS.
 - CONTROL JOINT, SAW CUT 1/8" WIDE x 1/4 SLAB THICKNESS DEEP MIN SAWING MUST OCCUR AS SOON AS CONCRETE SURFACE IS FIRM ENOUGH SO CONCRETE WILL NOT BE DAMAGED, BUT NO LATER THAN 12 HOURS AFTER CONCRETE HAS BEEN PLACED.

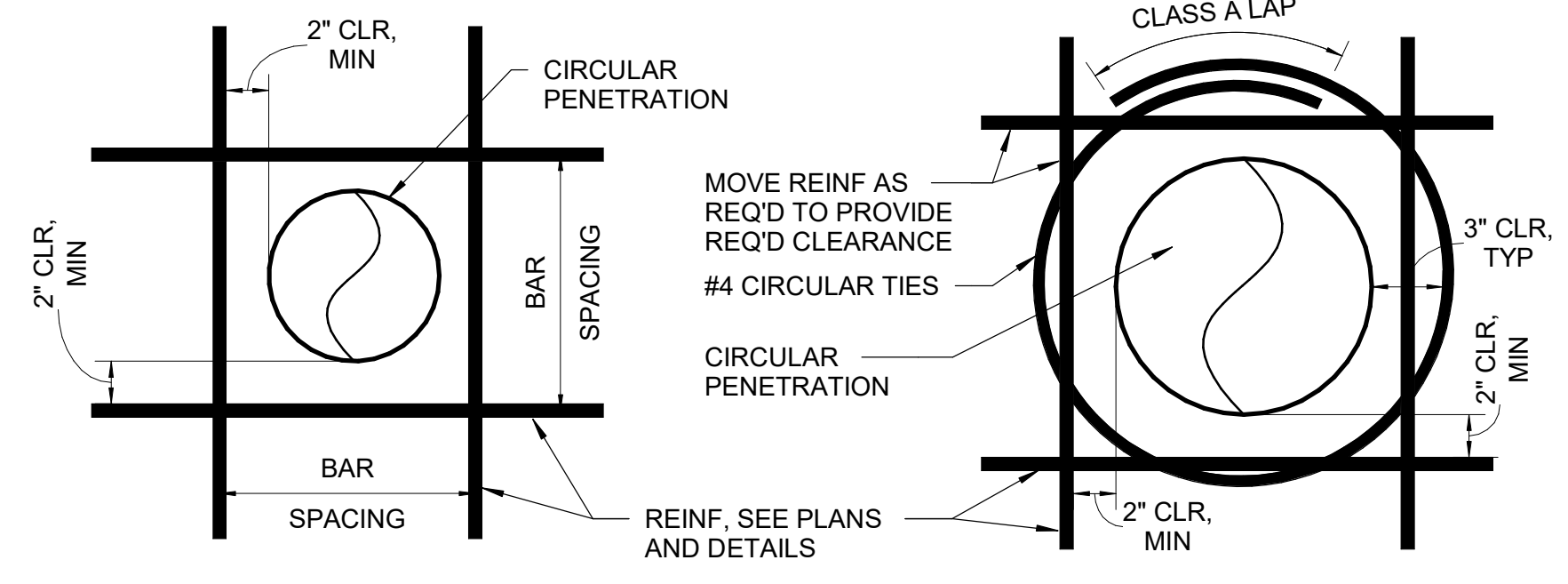
5 TYPICAL CONCRETE SLAB ON GRADE CONTROL JOINT DETAIL
 NO SCALE



6 TYPICAL CONCRETE WALL CONTROL JOINT DETAIL - PLAN VIEW
 NO SCALE

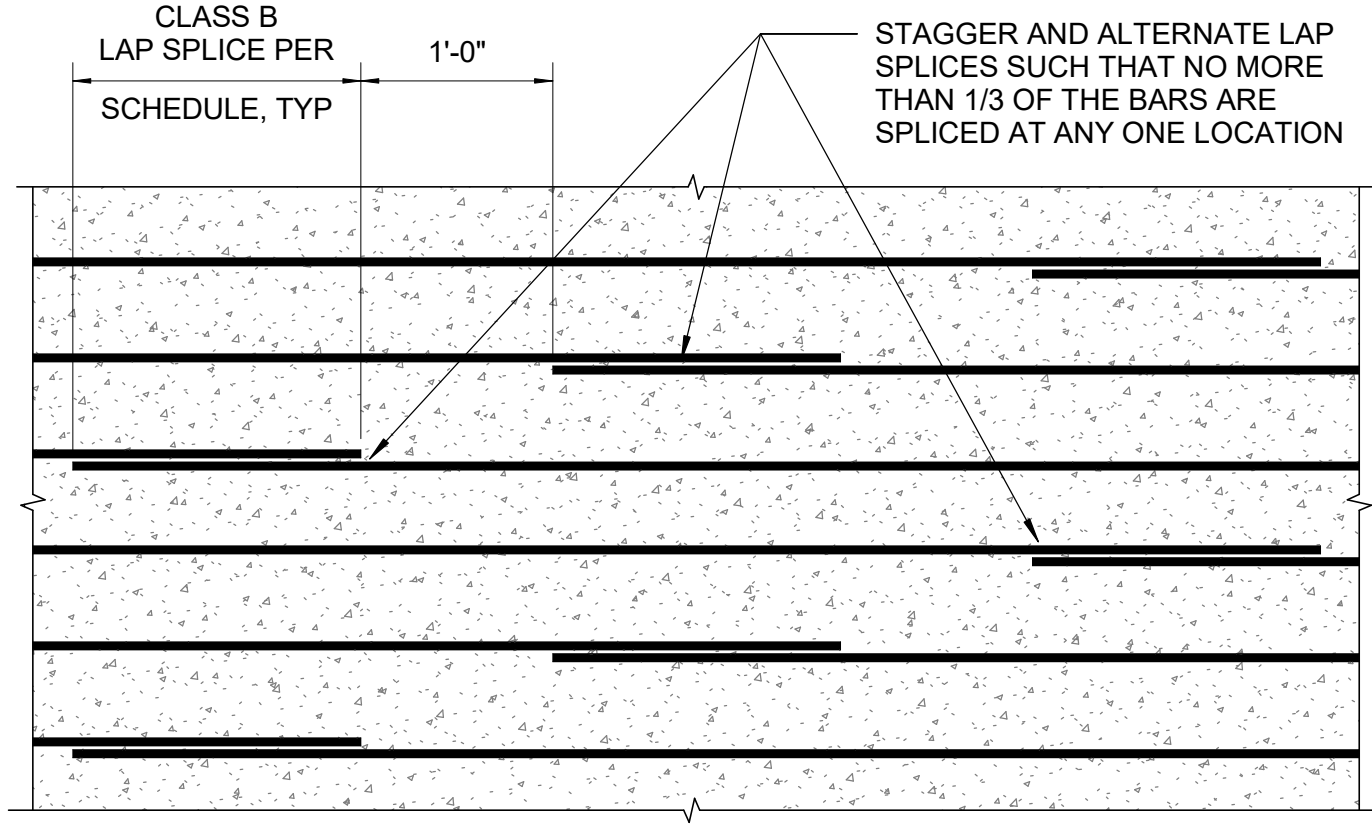


7 TYPICAL CONCRETE SLAB CONTROL JOINT DETAIL
 NO SCALE



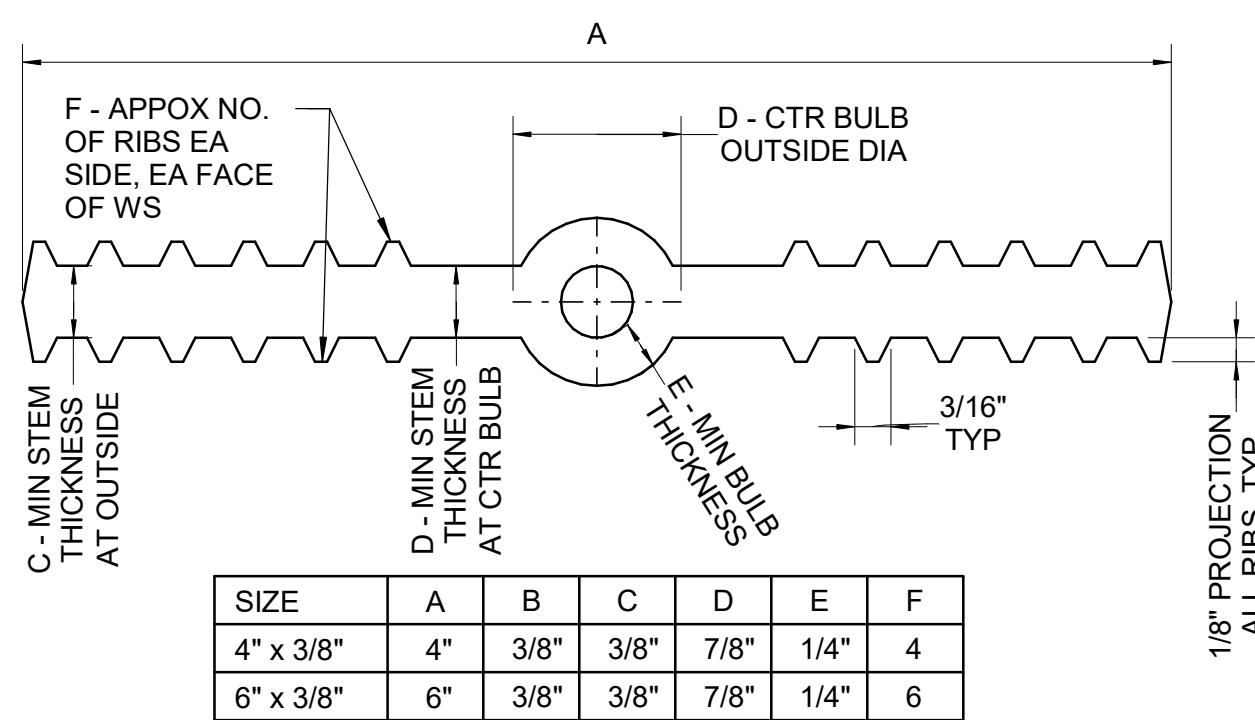
- NOTE: NO SPECIAL REIN IS REQ'D AROUND THE PENETRATION.
- NOTE: PROVIDE (1) CIRCULAR TIE FOR WALLS OR SLABS WITH ONE MAT OF REIN AND (2) TIES FOR WALLS WITH TWO MATS OF REIN.
- NOTE:
- REFER TO GENERAL NOTES FOR REBAR CLEARANCE REQUIREMENTS.
 - REFER TO OTHER DETAILS FOR WALL/SLAB REIN SIZE AND SPACING.
 - BAR SPACING REFERS TO THE LESSER OF THE VERT OR HORIZ BAR SPACING.
 - DETAILS IS SIMILAR FOR EITHER VERTICAL WALL OR HORIZONTAL SLAB LOCATIONS.

8 TYPICAL CIRCULAR HOLE IN CONCRETE SLAB ON GRADE OR WALL
 NO SCALE



- NOTES:
- VERTICAL WALL REINFORCEMENT NOT SHOWN FOR CLARITY.
 - DO NOT PLACE LAP SPLICES ACROSS A VERTICAL WALL JOINT.
 - REFER TO OTHER VIEWS AND SECTIONS FOR BAR SIZE AND SPACING.
 - REFER TO TYPICAL LAP SPLICE SCHEDULE FOR LAP LENGTHS.

9 TYPICAL CONCRETE WALL HORIZONTAL REBAR LAP SPLICE
 NO SCALE

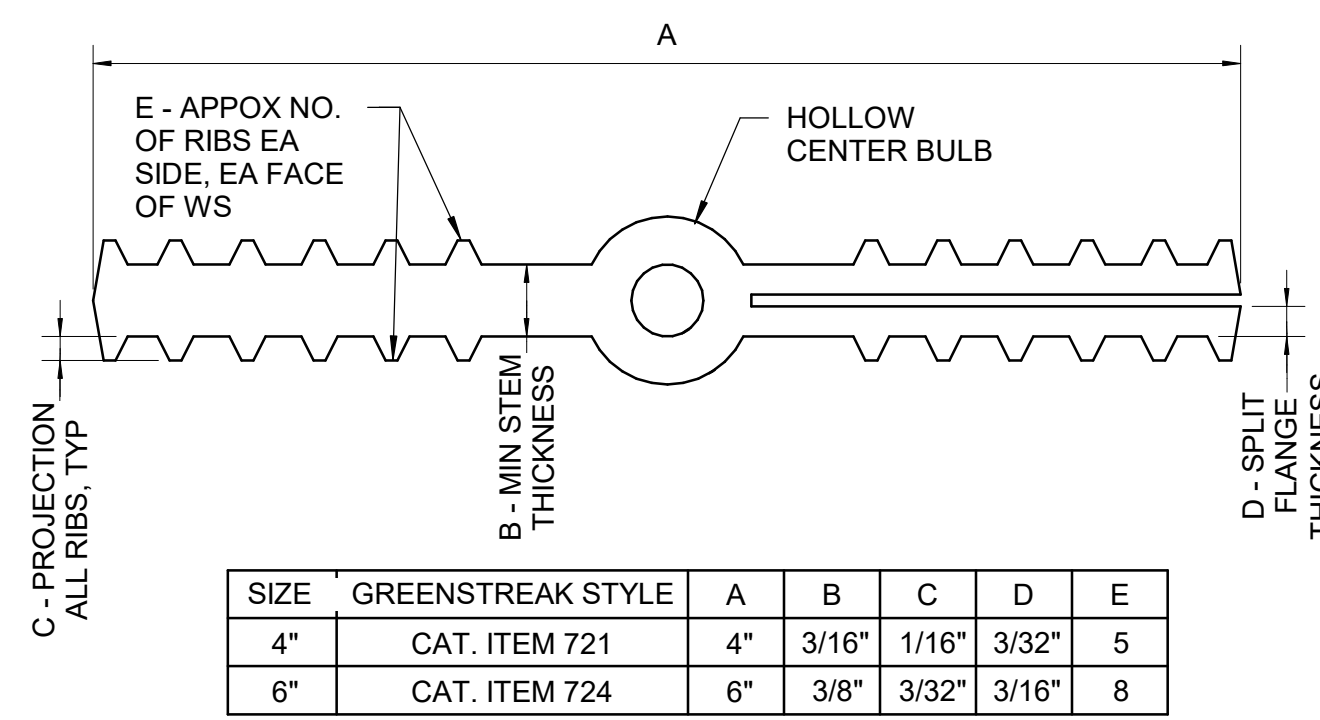


SIZE	A	B	C	D	E	F
4" x 3/8"	4"	3/8"	3/8"	7/8"	1/4"	4
6" x 3/8"	6"	3/8"	3/8"	7/8"	1/4"	6

- NOTES:
1. WATERSTOP SHALL BE PVC AND SHALL CONFORM TO ASTM D570, ASTM D746, ASTM D1149, AND CRD-C572.
 2. WHEN AVAILABLE, PROVIDE PRE-FABRICATED INTERSECTION SECTIONS AT ALL WATER STOP INTERSECTIONS.

1 TYPICAL WATERSTOP TYPE

NO SCALE

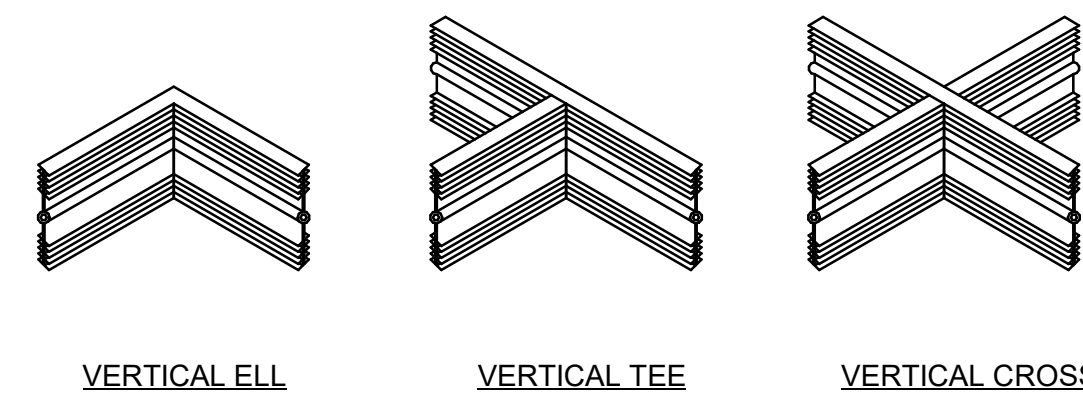


SIZE	GREENSTREAK STYLE	A	B	C	D	E
4"	CAT. ITEM 721	4"	3/16"	1/16"	3/32"	5
6"	CAT. ITEM 724	6"	3/8"	3/32"	3/16"	8

- NOTES:
1. WATERSTOP SHALL BE PVC AND SHALL CONFORM TO ASTM D570, ASTM D746, ASTM D1149, AND CRD-C572.
 2. WHEN AVAILABLE, PROVIDE PRE-FABRICATED INTERSECTION SECTIONS AT ALL WATER STOP INTERSECTIONS.

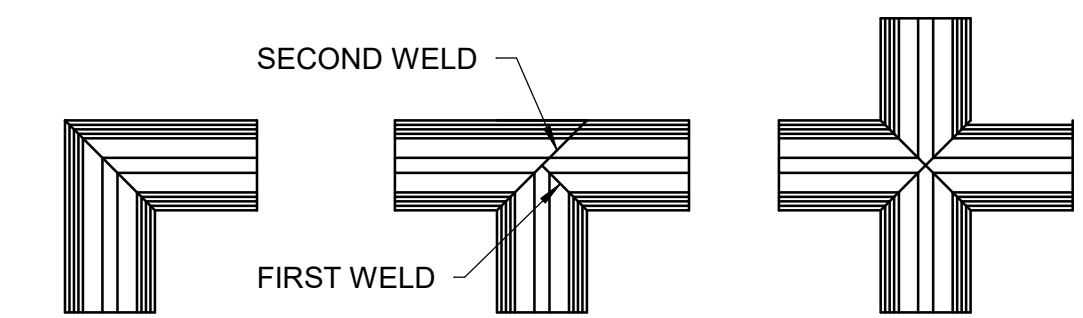
2 TYPICAL SPLIT WATERSTOP TYPE

NO SCALE



VERTICAL ELL VERTICAL TEE VERTICAL CROSS

- NOTES:
1. PROVIDE FACTORY MADE WATERSTOP FABRICATIONS FOR ALL VERTICAL INTERSECTIONS AND CORNERS.
 2. INSTALL AND SEAL FABRICATIONS IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
 3. FABRICATIONS SHALL BE MADE FROM THE SAME MATERIAL AS THE WATERSTOP CONNECTED.

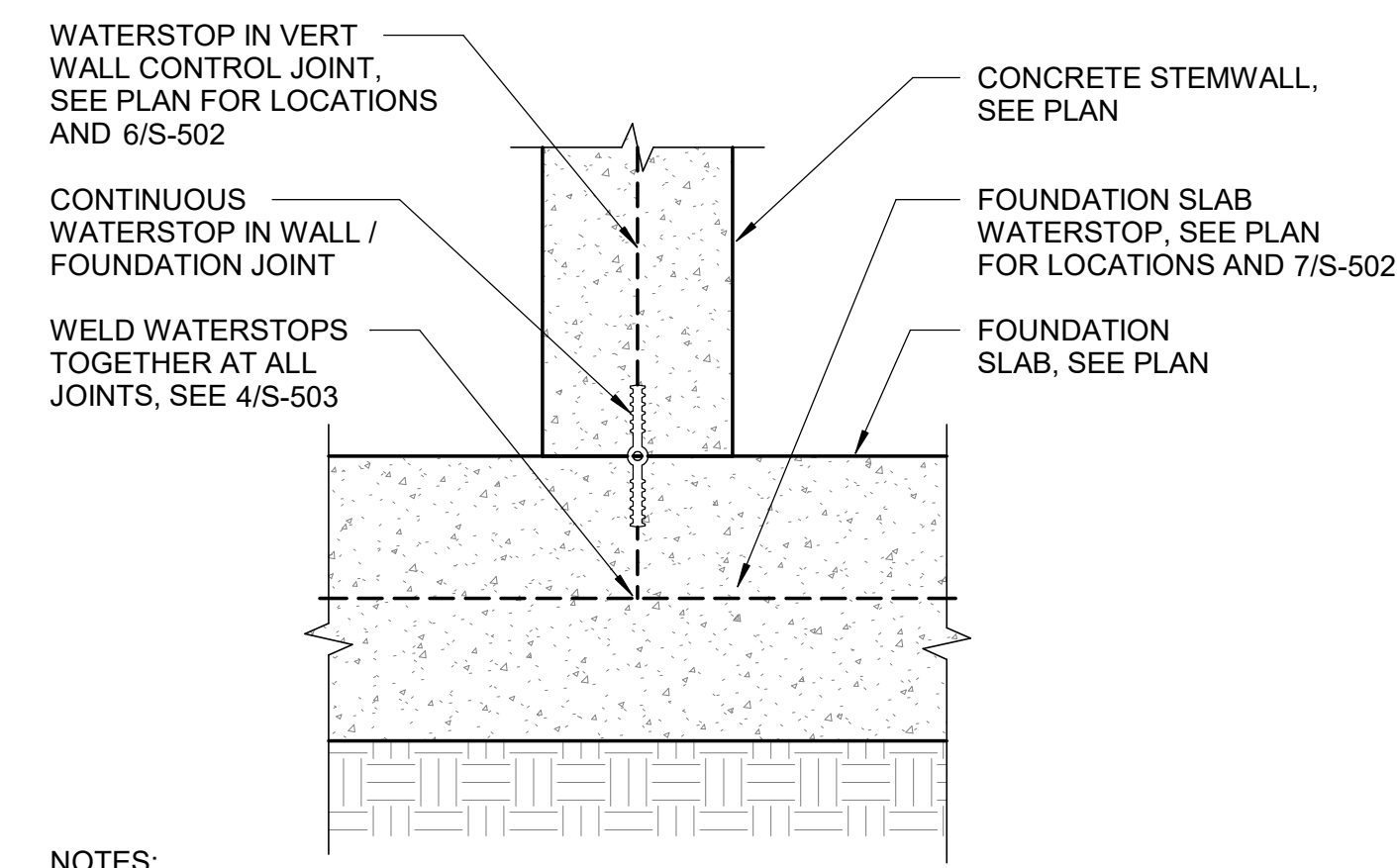


FLAT ELL FLAT TEE FLAT CROSS

- NOTES:
1. PROVIDE TEFLON COATED THERMOSTATICALLY CONTROLLED WATERSTOP SPLICING IRONS FOR ALL FIELD BUTT SPLICED.
 2. FIELD BUTT SPLICES SHALL BE FULLY HEAT FUSED FOLLOWING THE MANUFACTURER'S RECOMMENDATIONS.
 3. LAPPING OF WATERSTOP, USE OF ADHESIVES, OR SOLVENTS SHALL NOT BE ALLOWED.

4 TYPICAL WELDED WATERSTOP INTERSECTIONS

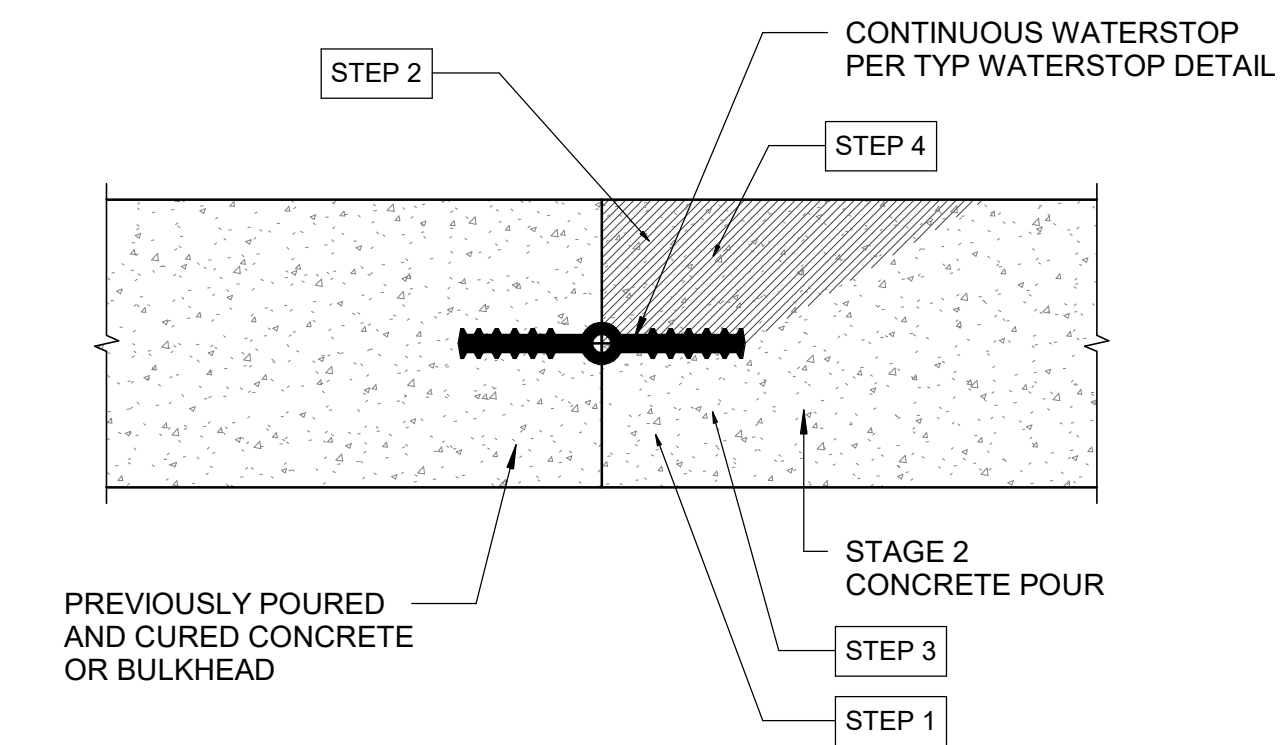
NO SCALE



- NOTES:
1. SLAB AND WALL REINFORCING NOT SHOWN FOR CLARITY. FOR CONCRETE FOR REINFORCING INFORMATION, SEE 1/S-501 AND 2/S-501.

8 TYPICAL WATERSTOP INTERSECTION DETAIL

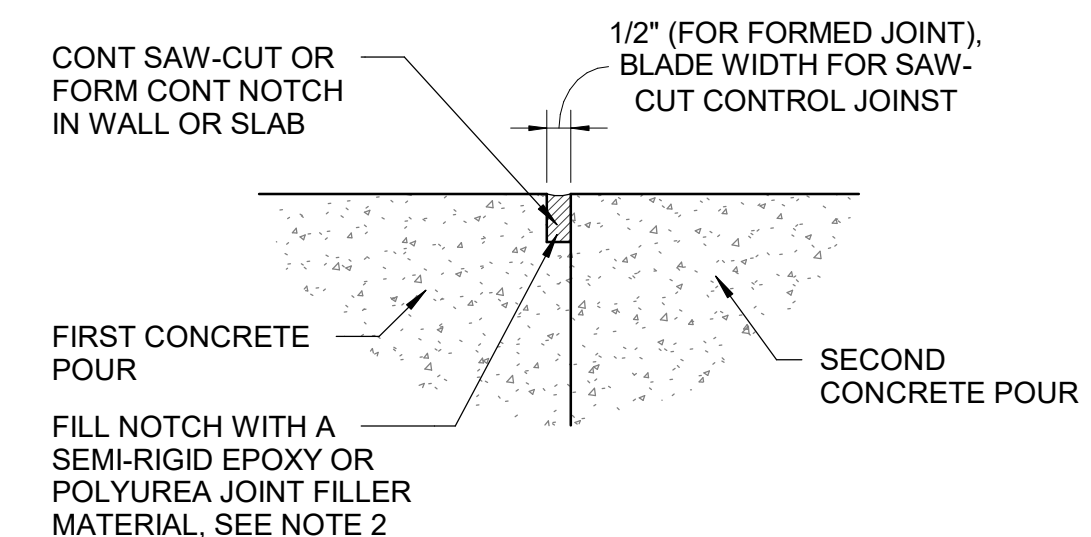
NO SCALE



- STEP 1 PLACE CONCRETE BELOW WATERSTOP FIRST. REMOVE ALL AIR VOIDS BY VIBRATING THOROUGHLY.
- STEP 2 TO CONFIRM THERE ARE NO AIR VOIDS, LIFT WATERSTOP. A CONTINUOUS IMPRESSION OF THE WATERSTOP, INCLUDING THE EDGE OF THE BULB, SHOULD BE VISIBLE IN THE FRESH CONCRETE. CONTINUE THIS PROCEDURE ALONG THE ENTIRE POURED JOINT, END TO END. IF CONTINUOUS IMPRESSION IS CONFIRMED, PROCEED WITH STEP 4. IF VOID LARGER THAN 1/4" IN DIAMETER IS PRESENT ANYWHERE IN THE WATERSTOP IMPRESSION, PROCEED WITH STEP 3.
- STEP 3 IF A VOID LARGER THAN 1/4" IN DIAMETER IS PRESENT IN THE WATERSTOP IMPRESSION, ADDITIONAL CONCRETE SHALL BE PLACED UNDER THE WATERSTOP, VIBRATED, AND STEP 2 REPEATED.
- STEP 4 FINISH PLACING CONCRETE ABOVE THE WATERSTOP TO TOP OF SLAB.

5 TYPICAL SLAB WATERSTOP INSTALLATION

NO SCALE



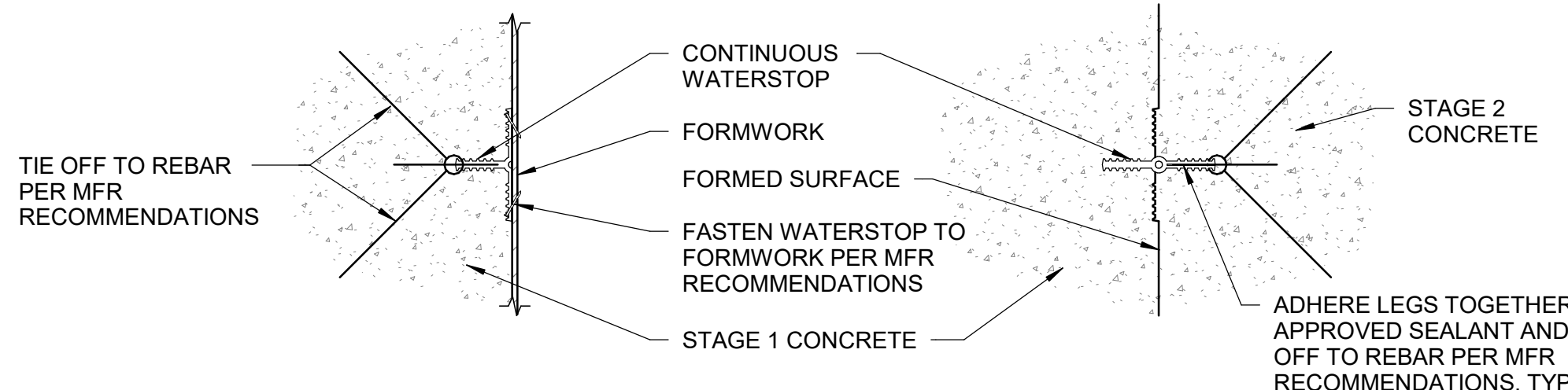
- NOTES:
1. SEE OTHER DETAILS FOR SLAB / WALL REINFORCING REQUIREMENTS.
 2. PROVIDE METZGER / McQUIRE MM-80 SEMI-RIGID EPOXY JOINT FILLER OR REZI-WELD FLEX, SEMI-RIGID EPOXY JOINT FILLER.

9 TYPICAL SEALED NOTCH DETAIL

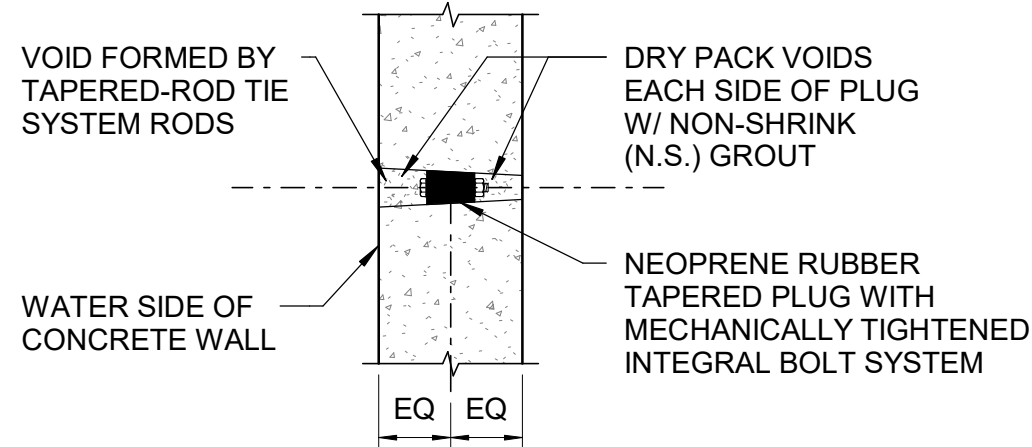
NO SCALE

3 TYPICAL SPLIT WATERSTOP INSTALLATION

NO SCALE



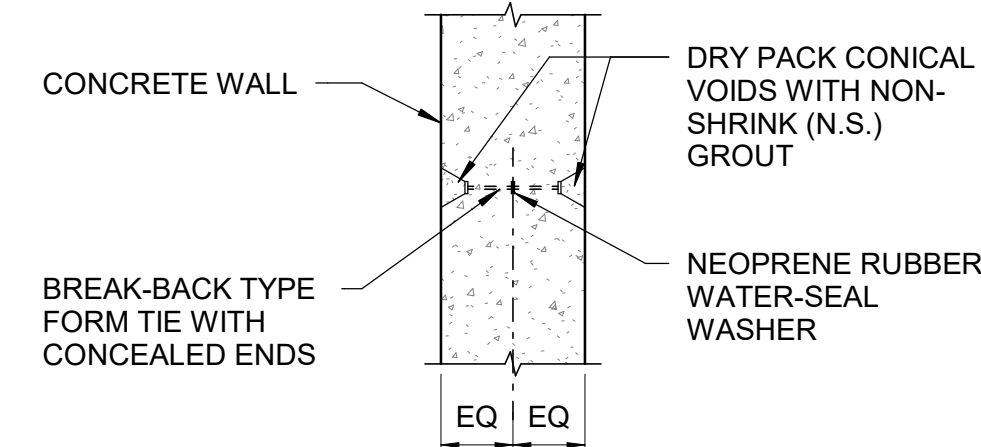
- NOTES:
1. SECURE WATERSTOP FIRMLY IN PLACE BEFORE PLACING CONCRETE.
 2. THOROUGHLY CONSOLIDATE CONCRETE AROUND ALL WATERSTOP.
 3. FOLLOW ALL MANUFACTURER RECOMMENDATIONS FOR WATERSTOP INSTALLATION.
 4. SPLICE WATERSTOP ONLY AS PROVIDED IN THE MANUFACTURER'S WRITTEN INSTRUCTIONS.



- NOTES:
1. CLEAN VOIDS WITH WIRE BRUSH PRIOR TO PLACING PLUG AND N.S. GROUT.
 2. STRIK OFF N.S. GROUT WITH STEEL TOOLS FOR SMOOTH UNIFORM FINISH.
 3. FORM TIES SHALL BE UNIFORMLY SPACED IN BOTH DIRECTIONS.
 4. INSTALL PLUG AND TIGHTEN BOLT PER MFG'S WRITTEN INSTRUCTIONS.
 5. PROVIDE X-PLUG MECHANICAL PLUG BY GREENSTREAK OR APPROVED EQUAL.

6 TYPICAL WATER-TIGHT FORM TIE DETAIL

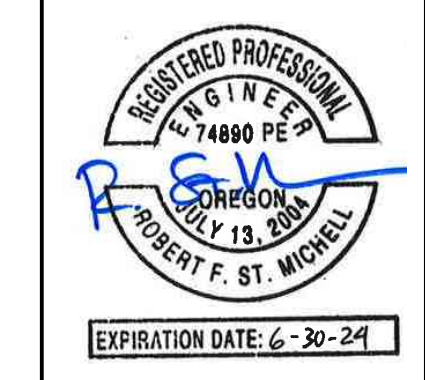
NO SCALE



- NOTES:
1. CLEAN CONICAL VOIDS PRIOR TO PLACING N.S. GROUT.
 2. STRIP OFF N.S. GROUT WITH STEEL TOOLS FOR SMOOTH UNIFORM FINISH.
 3. FORM TIES SHALL BE UNIFORMLY SPACED IN BOTH DIRECTIONS.
 4. INSTALL TIES PER MFG'S WRITTEN INSTRUCTIONS.

7 TYPICAL WATER-TIGHT FORM TIE DETAIL

NO SCALE



NO.	DESCRIPTION	DATE

C:\Users\rcason\Documents\33-21-003_Kivertis Fountain (Template)_rosent.zshp.rvt

GENERAL NOTES

- CONSULT ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF ALL LIGHTING FIXTURES.
- VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGH IN. CONSULT ALL APPLICABLE CONTRACT DRAWINGS AND SHOP DRAWINGS TO INSURE NEC CODE CLEARANCES REQUIRED AROUND ALL ELECTRICAL EQUIPMENT.
- CONTRACTOR SHALL VERIFY ALL ELECTRICAL LOADS (VOLTAGE, PHASE, CONNECTION REQUIREMENTS, ETC.) OF ALL EQUIPMENT FURNISHED UNDER ALL DIVISIONS, INCLUDING ALL EXISTING EQUIPMENT TO BE RE-USED. REVIEW ALL SHOP DRAWINGS AND EXISTING EQUIPMENT BEFORE BEGINNING ROUGH IN.
- SEE SECTION 265100 (16510) OF THE SPECIFICATION REQUIRED COORDINATION MEETINGS WITH MECHANICAL AND CEILING CONTRACTORS.
- SEE APPLICABLE SHOP DRAWINGS FOR ROUGH IN LOCATION OF ALL EQUIPMENT, WIRING DEVICES, ETC. WHERE APPLICABLE MOUNT ALL WIRING DEVICES ABOVE BACK SPLASH EXCEPT THOSE SERVING UNDER COUNTER EQUIPMENT.
- SEE SPECIFICATION FOR ENERGY SAVING LAMP AND BALLAST REQUIREMENTS.
- FINISHES OF ALL LIGHT FIXTURES SHALL BE AS SELECTED BY ARCHITECT.
- THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR SUCH THAT NO PIPING, DUCTS, OR EQUIPMENT FOREIGN TO THE OPERATION OF THE ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE INSTALLED IN, ENTER OR PASS THRU ELECTRICAL ROOMS OR SPACES, OR ABOVE OR BELOW ELECTRICAL EQUIPMENT IN OTHER AREAS.
- ELECTRICAL BOXES SHALL NOT BE LOCATED IN MASONRY COLUMNS IN BRICK WALLS OR IN GROUDED CELLS ADJACENT TO OPENINGS. COORDINATE LOCATION OF BOXES WITH MASONRY CONTRACTOR.
- ALL PENETRATIONS OF FIRE RATED FLOORS, WALLS, AND CEILINGS SHALL BE SEALED WITH APPROVED MATERIAL TO MAINTAIN FIRE RATING OF SURFACE PENETRATED.
- CONTRACTOR SHALL VERIFY FURNITURE LAYOUT PRIOR TO ANY FLOORBOX OR POKE-THRU INSTALLATION. COORDINATE EXACT LOCATION OF FLOOR BOX OR POKE-THRU WITH OWNER AND FURNITURE PROVIDER PRIOR TO ROUGH-IN.
- CIRCUITS EXTENDING OVER 70' FOR 120 VOLT AND 115' FOR 277 VOLT 20 AMP CIRCUITS SHALL BE RUN WITH CONDUCTORS PER TABLE BELOW.

20 AMP MINIMUM BRANCH CIRCUIT CONDUCTOR SIZING		
MAXIMUM LENGTH	BRANCH CIRCUIT VOLTAGE	
CONDUCTOR LENGTH (FT)	120 VOLT	277 VOLT
<70	MIN. #12 AWG	MIN. #12 AWG
70 - 115	MIN. #10 AWG	MIN. #12 AWG
115 - 170	MIN. #8 AWG	MIN. #10 AWG
170 - 270	MIN. #6 AWG	MIN. #8 AWG
271 - 380	NOTE B	MIN. #8 AWG
>380	NOTE B	NOTE B

- THESE ARE BASED ON MAXIMUM LENGTH OF CIRCUIT.
- PERFORM VOLTAGE DROP CALCULATIONS AND PROVIDE CONDUCTOR SIZE TO KEEP BRANCH CIRCUIT VOLTAGE DROP LESS THAN 3% WITH A 15 AMP LOAD.
- CONTRACTOR SHALL ENSURE THAT THE INSTALLATION OF EACH BRANCH CIRCUIT STAYS WITHIN 3% VOLTAGE DROP FOR A 15 AMP LOAD. IF NECESSARY, CONTRACTOR SHALL INCREASE WIRE AND CONDUIT SIZE TO MEET THE STANDARD AT NO ADDITIONAL COST TO OWNER.

INDEX OF ELECTRICAL DRAWINGS

- E-001 SYMBOL SCHEDULE
- E-002 SCHEDULE AND NOTES
- E-003 SPECIFICATIONS
- E-101 ELECTRICAL SITE PLAN
- E-601 ELECTRICAL DIAGRAMS

SYMBOL SCHEDULE

NOTES:

- SEE FIXTURE SCHEDULE FOR TYPE, MOUNTING AND WATTAGE.
- HEIGHT MEASURED TO CENTER LINE OF THE BOX FROM THE FINISHED FLOOR.
- REFER TO DRAWINGS FOR DIRECTIONAL ARROWS.
- SUBSCRIPT INDICATES FIXTURES TO BE CONTROLLED.
- NEMA TYPE 'ND' NON-FUSED UNLESS NOTED 'F' (FUSED). USE 'HD' 480V.
- HEIGHT MEASURED TO TOP OF THE BOX FROM FINISHED FLOOR.
- PROVIDE H.O.A. AND S.S. PUSHBUTTONS AS REQUIRED.
- DOUBLE ARROWS INDICATE A DOUBLE FACE UNIT.
- DEVICES NOTED WITH AN 'A' ADJACENT TO IT INDICATES TO COORDINATE WITH MILLWORK SHOP DRAWINGS AND ELEVATIONS FOR HEIGHT.
- SUBSCRIPT INDICATES NEMA CONFIGURATION.
- SOLID BOX AROUND DEVICE INDICATES INSTALLED IN FLOOR, DASHED BOX AROUND DEVICE INDICATES INSTALLED IN CEILING.
- COORDINATE WITH DOOR HARDWARE SUPPLIER.
- FOR WATER COOLER LOCATION, SEE DIAGRAM R002. FOR ALL OTHER LOCATIONS MOUNT AT +16" TO BOTTOM OF THE BOX FROM FINISHED FLOOR, OR AS NOTED.
- ARROWS SHOWN ON DEVICE INDICATE THE SENSOR AIMING LOCATION.
- CAMERA NUMBERS ARE SHOWN INSIDE THE CAMERA SYMBOL. CAMERA TYPES ARE SHOWN IN CAMERA TAGS.
- MOUNT ON TRACK OF OVERHEAD DOOR 6" FROM TOP OF DOOR UNLESS OVERHEAD DOOR IS ROLL UP DOOR, THEN MOUNT PER MANUFACTURER'S INSTRUCTIONS.
- INSTALL DEVICES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- DASHED LINE INDICATES EQUIPMENT CLEARANCES, ARROW DENOTES FRONT OF RANK.
- SPEAKER TO BE MOUNTED IN HORIZONTAL POSITION.
- MOUNTING HEIGHTS IS TO BOTTOM OF DISPLAY.
- * TYPICAL SYMBOL SCHEDULE. SOME SYMBOLS MAY NOT BE USED IN THIS SET OF DRAWINGS.

STANDARD MOUNTING HEIGHT UNLESS OTHERWISE NOTED ON PLANS

GENERAL							
SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES	SYMBOL	DESCRIPTION	MOUNTING HEIGHT	NOTES
	ONE CIRCUIT, HOME RUN TO PANEL				CONDUIT RUN CONCEALED IN FLOOR OR GROUND		
	TWO CIRCUIT, HOME RUN TO PANEL				CONDUIT UP		
	THREE CIRCUIT, HOME RUN TO PANEL				CONDUIT DOWN		
	CONDUIT RUN CONCEALED IN WALL OR CEILING				CONDUIT STUB LOCATION	CAP CONDUIT	
					CONDUIT/CIRCUIT CONTINUATION		
LIGHTING							
	LIGHT FIXTURE	AS NOTED	1.		SINGLE POLE SWITCH	+46"	2. 4.
	EGRESS LIGHT FIXTURE	AS NOTED	1.				
POWER							
	DUPLEX RECEPTACLE	+18" OR AS NOTED	2. 9. 11.		MAGNETIC STARTER / DISCONNECT COMBINATION	+60"	6. 7.
	DUPLEX RECEPTACLE		9.		VARIABLE FREQUENCY DRIVE	+66"	6.
	5mA GFCI CIRCUIT BREAKER PROTECTED RECEPTACLE		13.		PANEL BOARD	+72"	6.
	WEATHERPROOF RECEPTACLE	+24" OR AS NOTED	2. 9.		MAIN DISTRIBUTION PANEL		
	FOURPLEX RECEPTACLE	+18" OR AS NOTED	2. 9. 11.		UTILITY METER	+72"	6.
	GROUND FAULT INTERRUPTER FOURPLEX RECEPTACLE	+18" OR AS NOTED	2. 9.				

LIGHT FIXTURE SCHEDULE NOTES

LIGHT FIXTURE ABBREVIATION SCHEDULE			
A.F.F.	ABOVE FINISH FLOOR	SCBA	STANDARD PAINTED COLOR AS SELECTED BY THE ARCHITECT
WALL@CLG	WALL MOUNT AT CORNER OF WALL AND CEILING	CFBA	CUSTOM FINISH AS SELECTED BY THE ARCHITECT
CCBA	CUSTOM PAINTED COLOR AS SELECTED BY THE ARCHITECT	SFBA	STANDARD FINISH AS SELECTED BY THE ARCHITECT

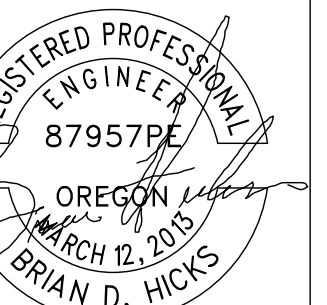
- ### LIGHT FIXTURE GENERAL NOTES
- REFER TO THE ARCHITECTURAL REFLECTED CEILING PLANS FOR LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPANCIES OF LOCATIONS AND QUANTITIES TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO BIDDING.
 - REFER TO ARCHITECTURAL ELEVATIONS FOR MOUNTING HEIGHTS AND LOCATIONS OF LIGHT FIXTURES. BRING ALL DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT PRIOR TO BIDDING.
 - REFER TO THE SPECIFICATIONS FOR OTHER LIGHT FIXTURE, FUSING, BALLAST, AND LAMP REQUIREMENTS AND ACCEPTABLE MANUFACTURERS.
 - CONFIRM AVAILABLE MOUNTING DEPTHS OF ALL LIGHT FIXTURES AND COMPARE WITH DEPTHS SHOWN ON SHOP DRAWINGS. BRING ALL POTENTIAL CONFLICT AREAS TO THE ATTENTION OF THE ARCHITECT AND ELECTRICAL ENGINEER PRIOR TO RELEASE.
 - REFER TO LIGHTING PLANS FOR ALL LINEAR FIXTURE LENGTHS. THE CATALOG NUMBER IS BASED ON THE FIXTURE SPECIFIED AND MAY NOT REFLECT THE QUANTITY OR OVERALL LENGTH OF LINEAR FIXTURES REQUIRED. CONTRACTOR TO NOTE THAT VARIOUS FIXTURE LENGTHS MAY BE REQUIRED TO ACHIEVE THE OVERALL RUN LENGTH.
 - REFER TO LIGHTING PLANS FOR ALL UNDERCABINET FIXTURE LENGTHS. THE CATALOG NUMBER IS BASED ON THE FIXTURE SPECIFIED AND MAY NOT REFLECT THE QUANTITY OR OVERALL LENGTH OF UNDERCABINET FIXTURES REQUIRED. CONTRACTOR TO NOTE THAT VARIOUS FIXTURE LENGTHS MAY BE REQUIRED TO ACHIEVE THE OVERALL RUN LENGTH OR TO FIT WITHIN THE MILLWORK. COORDINATE FIXTURE LAYOUT WITH MILLWORK SHOP DRAWINGS PRIOR TO LIGHTING SUBMITTALS.
 - WHEN A CONTRADICTION EXISTS BETWEEN A SPECIFIC MODEL NUMBER AND THE DESCRIPTION, THE DESCRIPTION SHALL GOVERN.
 - PRIOR APPROVALS SHALL BE SUBMITTED TO THE ELECTRICAL ENGINEER'S OFFICE AT LEAST (8) EIGHT WORKING DAYS BEFORE THE BID. PRIOR APPROVALS RECEIVED AFTER THIS TIME PERIOD SHALL BE REJECTED.
 - REFER TO SPECIFICATIONS 265050, 265100 & 265600 (16001, 16510 & 16551).
 - VALUE ENGINEERING CONDUCTED WITHOUT THE DESIGN TEAM IE: ARCHITECT, OWNER, ENGINEER & LIGHTING CONSULTANT/DESIGNER WILL NOT BE ALLOWED, REVIEWED OR APPROVED.

FIXTURE SCHEDULE						Project Manager: Rich Bradley	
TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLTS	TOTAL WATTS	LAMPS	
S1E	4' ENCLOSED & GASKETED NARROW BODY VAPOR TIGHT FIXTURE WITH STAINLESS STEEL LATCHES. PROVIDE EM 10 WATT FACTORY INSTALLED BATTERY BACKUP. WET LOCATION RATED. CEILING MOUNTED	ILP	VVT4-4L-U-40-FRL-EM10	120V	32W	4000K,4524LUMENS,80CR	



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
3611 S. Zintel Way
Kennewick, WA 99337
Phone: 509.783.2144
www.jub.com



EXPIRES: 06/30/2023

NO.	REVISION	DESCRIPTION	BY	DATE

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON
SYMBOL SCHEDULE

FILE : 22015 E-001
JUB PROJ. # : 30-21-003
DRAWN BY: BNA
DESIGN BY: JUAN ORTIZ
CHECKED BY: BRIAN HICKS

ONE INCH
AT FULL SIZE. IF NOT ONE
INCH, SCALE ACCORDINGLY
LAST UPDATED: 09/08/2022

SHEET NUMBER:

E-001



4225 Lake Park Blvd Ste 275
West Valley City, Utah 84120

P:801.532.2196

www.bnaconsulting.com

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SHEET KEYNOTES

- S1 CONTRACTOR TO VERIFY IF FUSED DISCONNECTS ARE REQUIRED. THE VFD'S COULD BE USED AS THE DISCONNECTING MEANS IF THEY ARE LOCKABLE. COORDINATE WITH POOL CONTRACTOR BEFORE PURCHASING DISCONNECTS. PROVIDE CREDIT TO OWNER IF THESE ARE NOT NEEDED.
- S1 COORDINATE ALL FOUNTAIN CONTROL POWER CIRCUITS WITH THE POOL SUPPLIER. CONTRACTOR TO PROVIDE CONDUIT, WIRE, JUNCTION BOXES AS NEEDED. REFER TO POOL SUPPLIER WIRING SCHEMATIC PLAN.

GENERAL NOTES

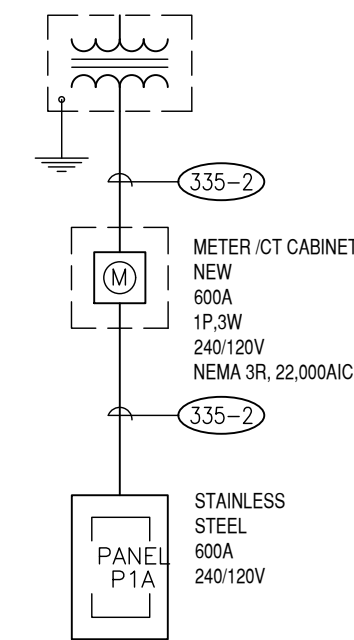
1. ALL INSTALLATION OF CONDUIT, WIRE, BORING, TRANSFORMER AND CONCRETE PAD FOR THE NEW UTILITY TRANSFORMER UPSTREAM OF THE CT/METER CABINET WILL BE PROVIDED AND INSTALLED BY UMATILLA UTILITY POWER.

EQUIPMENT SCHEDULE

UNIT#	FUNCTION	LOAD	VOLT	PHASE	FULL LOAD AMPS	CONDUIT SIZE	WIRES			OCPD TYPE	AMPS	STARTER/DISCVED (SEE NOTES)	REMARKS	
							NO. SETS	NO.	SIZE					
P-1	CIRCULATION PUMP	3 HP	240	1	17.00	3/4"	1	2	12	12	CB	35	9C	CONTRACTOR TO PROVIDE BUCK BOOST TRANSFORMER. CONTRACTOR TO PROVIDE FUSED DISCONNECT.
P-2A	WER FLOW PUMP	5 HP	240	1	28.00	3/4"	1	2	8	10	CB	50	9C	CONTRACTOR TO PROVIDE FUSED DISCONNECT.
P-2B	WER FLOW PUMP	5 HP	240	1	28.00	3/4"	1	2	8	10	CB	50	9C	CONTRACTOR TO PROVIDE FUSED DISCONNECT.
P-4	WATER FEATURE PUMP	20 HP	240	3	54.00	1-1/4"	1	3	4	8	CB	90	9C	POOL CONTRACTOR WILL PROVIDE CONTROL PANEL. CONTRACTOR TO PROVIDE FUSED DISCONNECT.
P-6	WATER FALL HEATER	57000 VA	240	1	237.50	2-1/2"	1	2	350	4	CB	300	2A	CONTRACTOR TO PROVIDE FUSED DISCONNECT.

NOTES:

<p>1. NON-FUSED DISCONNECT SWITCH</p> <p>2. FUSED DISCONNECT SWITCH</p> <p>3. BREAKER IN ENCLOSURE</p> <p>4. MANUAL STARTER WITH THERMAL OVERLOAD</p> <p>5. MAGNETIC STARTER</p> <p>6. MAGNETIC STARTER/NON-FUSED DISCONNECT COMBINATION</p> <p>7. MAGNETIC STARTER/FUSED DISCONNECT COMBINATION</p> <p>8. MAGNETIC STARTER/BREAKER COMBINATION</p> <p>9. VARIABLE FREQUENCY DRIVE</p> <p>10. REDUCED VOLTAGE STARTER</p> <p>11. DIRECT CONNECTION</p> <p>12. RECEPTACLE/SPECIAL PURPOSE OUTLET/ETC.</p> <p>13. TWO-SPEED STARTER, COORDINATE WITH MOTOR TYPE</p> <p>14. SOLID STATE SOFT STARTER</p>	<p>A. FURNISHED, INSTALLED, AND CONNECTED UNDER DIVISION 26</p> <p>B. FURNISHED AND INSTALLED UNDER ANOTHER DIVISION REQUIRING CONNECTION UNDER DIVISION 26.</p> <p>C. FURNISHED UNDER ANOTHER DIVISION BUT INSTALLED AND CONNECTED UNDER DIVISION 26.</p> <p>D. FURNISHED, INSTALLED AND CONNECTED UNDER ANOTHER DIVISION.</p> <p style="text-align: center;">CB = CIRCUIT BREAKER - THERMAL MAGNETIC</p> <p>NOTE 1: PER 250.122(A), EQUIPMENT GROUND IS NOT REQUIRED TO BE LARGER THAN PHASE CONDUCTOR.</p> <p>NOTE 2: OVERCURRENT PROTECTION DEVICE (OCPD) SHOWN IS LOCATED AT POWER PANEL. ALL FUSING TO BE SIZED IN ACCORDANCE WITH FUSE MFR RECOMMENDATION FOR MOTOR NAME PLATE RATING. SEE SECTION 26 2815.</p> <p>NOTE 3: ALL EQUIPMENT TO BE RATED FOR THE ENVIRONMENT FOR WHICH IT IS INSTALLED.</p>
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① ONE-LINE DIAGRAM
NO SCALE

PANELBOARD SCHEDULE

PANEL	P1A	TYPE	STAINLESS STEEL	VOLTS	240/120V	PH	1	W	3
MOUNTING	FLUSH SURFACE	DIMENSIONS	40 W 10 D (in.) 60 H	LOCATION	FOUNTAIN VAULT	MAINS	X	LUGS	BREAKER
				AMP	600A			SUBFEED LUGS	
								ISO GROUND	
								200% NEUTRAL	
								SPD	

ITEM	AMPS	WIRE SIZE	L. PHASE LOAD		R. PHASE LOAD		NO.	WIRE SIZE	ITEM
			A	B	A	B			
P-1	35	2 10	2040	1500	2	20	12	ELECTRICAL VAULT LIGHTING	
P-2A	50	2 8	3360	1500	6	20	12	ELECTRICAL VAULT OUTLETS	
P-2B	50	2 8	3360	1500	8	20	12	PUMP CONTROL PANEL POWER	
					10	20	12	FOUNTAIN CONTROL PANEL	
					12	20	12	PUMP VAULT LIGHTING	
					14	20	12	PUMP VAULT OUTLETS	
					16	20	12	HOT BOX	
					18	20	12	IRRIGATION CONTROL PANEL	
					20	20	12	FOUNTAIN CONTROL POWER	
P-4	90	2 4	7482	1500	22	20	12	FOUNTAIN CONTROL POWER	
					24	20	12	FOUNTAIN CONTROL POWER	
					26	20	12	FOUNTAIN CONTROL POWER	
					28			SPACE ONLY	
H-1	300	2 350	28500		30			SPACE ONLY	
					32			SPACE ONLY	
CHEMICAL CONTROLLER	20	1 12	1500		34			SPACE ONLY	
CHLORINE FEEDER	20	1 12	1500		36			SPACE ONLY	
ACID FEEDER	20	1 12	1500		38			SPACE ONLY	
SPACE ONLY					40			SPACE ONLY	
SPACE ONLY					42			SPACE ONLY	
			47742	46242	10500	9000			
			58242	55242	TOTAL			CONNECTED LOAD TOTAL	
			485	460	AMPS/PHASE			113484 W	
								EQUIP RATING 22,000 AMPS RMS SYM.	

* Provide 5 mA GFCI Circuit Breaker

COPPER CONDUCTOR & CONDUIT SCHEDULE

TYPE	AMP.	COND. SIZE	CONDUCTOR		INSULATION	EQ. GND. COND.
			QUAN.	SIZE		
20	30	3/4"	2	10	THHN	10
30	30	3/4"	3	10	THHN	10
40	30	3/4"	4	10	THHN	10
28	40	1"	2	8	THHN	10
38	40	1"	3	8	THHN	10
48	40	1"	4	8	THHN	10
26	55	1"	2	6	THHN	8
36	55	1"	3	6	THHN	8
46	55	1"	4	6	THHN	8
24	70	1"	2	4	THHN	8
34	70	1-1/4"	3	4	THHN	8
44	70	1-1/4"	4	4	THHN	8
23	85	1-1/4"	2	3	THHN	8
33	85	1-1/4"	3	3	THHN	8
43	85	1-1/2"	4	3	THHN	8
32	95	1-1/2"	3	2	THHN	6
42	95	1-1/2"	4	2	THHN	6
31	110	1-1/2"	3	1	THHN	6
41	110	2"	4	1	THHN	6
51	88	2"	5*	1	THHN	6
31X	150	2"	3	1/0	THHN	6
41X	150	2"	4	1/0	THHN	6
51X	120	2"	5*	1/0	THHN	6
32X	175	2"	3	2/0	THHN	6
42X	175	2"	4	2/0	THHN	6
52X	140	2"	5*	2/0	THHN	6
33X	200	2"	3	3/0	THHN	6
43X	200	2"	4	3/0	THHN	6
53X	160	2-1/2"	5*	3/0	THHN	6
34X	230	2-1/2"	3	4/0	THHN	4
44X	230	2-1/2"	4	4/0	THHN	4
54X	184	2-1/2"	5*	4/0	THHN	4
325	255	3"	3	250	THHN	4
425	255	3"	4	250	THHN	4
525	204	3"	5*	250	THHN	4
335	310	3"	3	350	THHN	3
435	310	3"	4	350	THHN	3
535	248	3"	5*	350	THHN	3
350	380	4"	3	500	XHHW	3
450	380	4"	4	500	XHHW	3
550	304	4"	5*	500	XHHW	3

COPPER CONDUCTOR & CONDUIT SCHEDULE FOR PARALLEL RUNS

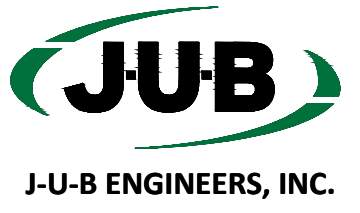
TYPE	MAX. O.C. PROT.	COND. AMPS	SETS	CONDUCTOR		EQ. GND. COND.	
				QUAN.	SIZE		
44X-2	400	460	2	4	4/0	2-1/2"	3
54X-2	400	368	2	5*	4/0	3"	3
335-2	600	620	2	3	350	3"	1
435-2	600	620	2	4	350	3"	1
550-2	600	608	2	5*	500	3"	1
350-2	800	760	2	3	500	4"	1/0
450-2	800	760	2	4	500	4"	1/0
535-3	800	744	3	5*	350	4"	1/0
350-3	1000	1140	3	3	500	4"	2/0
450-3	1000	1140	3	4	500	4"	2/0
550-4	1000	1216	4	5*	500	4"	2/0
335-4	1200	1240	4	3	350	3"	3/0
435-4	1200	1240	4	4	350	3"	3/0
550-4	1200	1216	4	5*	350	3"	3/0
340-5	1600	1675	5	3	400	3"	4/0
440-5	1600	1675	5	4	400	3"	4/0
540-6	1600	1675	6	5*	400	4"	4/0
440-6	2000	2010	6	4	400	4"	250
450-7	2500	2665	7	4	500	4"	350
450-8	3000	3040	8	4	500	4"	400
450-11	4000	4180	11	4	500	4"	500

- NOTES:**
- IN PARALLEL RUNS SIZE GND. COND. IN ACCORDANCE WITH NEC PARA. 250-122.
- GND. CONDUCTOR MAY BE DELETED ON SERVICE ENTRANCE CONDUCTORS
- * 200% NEUTRAL, DERATED TO 80% BASED ON NEC 310.15(B)(5)(C)



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www.bnaconsulting.com



J-U-B ENGINEERS, INC.
3611 S. Zintel Way
Kennewick, WA 99337
Phone: 509.783.2144
www.jub.com



REVISION	DESCRIPTION	BY	DATE

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN UMATILLA, OREGON

SCHEDULE AND NOTES

FILE : 22015 E-002
JUB PROJ. # : 30-21-003
DRAWN BY : BNA
DESIGN BY : JUAN ORTIZ
CHECKED BY : BRIAN HICKS

ONE INCH AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 09/08/2022

SHEET NUMBER:
E-002

ELECTRICAL SPECIFICATIONS

ELECTRICAL GENERAL PROVISIONS

DESCRIPTION OF WORK : EXTENT OF ELECTRICAL WORK IS INDICATED ON DRAWINGS. PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, SUPERVISION AND SERVICE NECESSARY FOR A COMPLETE ELECTRICAL SYSTEM. WORK INCLUDES, BUT IS NOT NECESSARILY LIMITED TO THE FOLLOWING ITEMS:

- ELECTRICAL CONNECTIONS FOR EQUIPMENT
- GROUNDING
- CONDUIT RACEWAY
- CONDUCTORS AND CABLES
- ELECTRICAL BOXES AND FITTINGS
- SUPPORTING DEVICES
- WIRING DEVICES
- PANELBOARDS AND SWITCHBOARDS
- OVERCURRENT PROTECTIVE DEVICES
- MOTOR STARTERS
- MOTOR AND CIRCUIT DISCONNECTS
- LIGHT FIXTURES
- ELECTRICAL IDENTIFICATION

VISIT THE SITE DURING THE BIDDING PERIOD TO DETERMINE EXISTING CONDITIONS AFFECTING ELECTRICAL AND OTHER WORK. ALL COSTS ARISING FROM SITE CONDITIONS AND/OR PREPARATION SHALL BE INCLUDED IN THE BASE BID. NO ADDITIONAL CHARGES WILL BE ALLOWED DUE TO INADEQUATE SITE INSPECTION.

QUALITY ASSURANCE: PERFORM WORK IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC). COMPLY WITH REQUIREMENTS OF STATE AND LOCAL ORDINANCES. OBTAIN ALL PERMITS, INSPECTIONS, ETC. FROM AUTHORITY HAVING JURISDICTION (A/H). EMPLOY ONLY QUALIFIED CRAFTSMEN WITH AT LEAST THREE YEARS OF EXPERIENCE. WORKMANSHIP SHALL BE NEAT, HAVE A GOOD MECHANICAL APPEARANCE AND CONFORM TO BEST ELECTRICAL STATE CONTRACTING LICENSE. PROVIDE EQUIPMENT AND MATERIAL THAT ARE UNDERWRITERS LABORATORIES INC. (UL) LISTED AND LABELED.

SUBMITTALS : AFTER THE CONTRACT IS AWARDED BUT PRIOR TO MANUFACTURE OR INSTALLATION OF ANY EQUIPMENT, PREPARE COMPLETE SHOP DRAWINGS.

- PROVIDE SUBMITTALS IN PORTABLE DOCUMENT FORMAT (PDF).
- DOCUMENTS MUST BE ELECTRONICALLY BOOKMARKED AND KEYWORD SEARCHABLE USING ADOBE ACROBAT (HTTP://WWW.ADOBE.COM/ACROBAT) OR BLUEBEAM REVU (HTTP://WWW.BLUEBEAM.COM) FOR EACH RELEVANT SECTION. (I.E. INCLUDE ELECTRONIC BOOKMARKS SEPARATING "LIGHT FIXTURES" FROM "PANELBOARDS")
- ELECTRONICALLY HIGHLIGHT ALL OPTIONS FOR LIGHT FIXTURES, ELECTRICAL EQUIPMENT, ETC. MANUAL HIGHLIGHTING AND SCANNING OF THE DOCUMENTS IS NOT ACCEPTABLE AND WILL NOT BE REVIEWED.
- PROVIDE ONLY COMPLETED CUTSHEETS FOR ALL FIXTURE AND EQUIPMENT TYPES. BLANK CUTSHEETS SUBMITTED WITH A SCHEDULE ARE NOT ACCEPTABLE AND WILL NOT BE REVIEWED.
- A MAXIMUM OF ONE SUBMITTAL PER SPECIFICATION SECTION IS ALLOWED. IT IS NOT ACCEPTABLE TO PROVIDE A PRODUCT BY PRODUCT SUBMITTAL. SINGLE PRODUCT BY PRODUCT SUBMITTALS WILL NOT BE REVIEWED.

- WIRING DEVICES
- PANELBOARDS AND SWITCHBOARDS
- OVERCURRENT PROTECTIVE DEVICES
- MOTOR STARTERS
- MOTOR AND CIRCUIT DISCONNECTS
- ELECTRICAL IDENTIFICATION

RECORD DRAWINGS: MAINTAIN ON A DAILY BASIS, A COMPLETE SET OF RECORD DRAWINGS, REFLECTING AN ACCURATE DIMENSIONAL RECORD OF ALL BURIED OR CONCEALED WORK. MARK RECORD DRAWINGS TO SHOW THE PRECISE LOCATION OF CONCEALED WORK AND EQUIPMENT, INCLUDING CONCEALED OR EMBEDDED CONDUIT AND JUNCTION BOXES AND ALL CHANGES AND DEVIATIONS IN THE WORK FROM THAT SHOWN ON THE CONTRACT DOCUMENTS.

OPERATION AND MAINTENANCE MANUALS: PROVIDE OPERATING INSTRUCTION AND MAINTENANCE DATA BOOKS FOR ALL EQUIPMENT AND MATERIALS FURNISHED UNDER THIS DIVISION.

GUARANTEE: ENSURE THAT ELECTRICAL SYSTEMS INSTALLED UNDER THIS CONTRACT IS IN PROPER WIRING ORDER AND IN COMPLIANCE WITH DRAWINGS, SPECIFICATIONS, AND/OR AUTHORIZED CHANGES. WITHOUT ADDITIONAL CHARGE, REPLACE ANY WORK OR MATERIALS WHICH DEVELOP DEFECTS, EXCEPT FROM ORDINARY WEAR AND TEAR, WITHIN ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.

FIRE PROTECTION SEALS: SEAL ALL PENETRATIONS FOR WORK OF THIS SECTION THROUGH FIRE RATED FLOORS, WALLS, AND CEILINGS TO PREVENT THE SPREAD OF SMOKE, FIRE, TOXIC GAS, OR WATER THROUGH THE PENETRATION EITHER BEFORE, DURING AND AFTER FIRE.

POWER OUTAGES: ALL POWER OUTAGES REQUIRED FOR EXECUTION OF THIS WORK SHALL OCCUR DURING THE NON-STANDARD WORKING HOURS AND AT THE CONVENIENCE OF THE OWNER. INCLUDE ALL COSTS FOR OVERTIME WORK IN BID.

ELECTRICAL CONNECTION FOR EQUIPMENT

VERIFY EXACT LOAD AND LOCATION OF ALL EQUIPMENT BEFORE ROUGH-IN FOR EACH ELECTRICAL CONNECTION. PROVIDE COMPLETE ASSEMBLY OF MATERIAL, INCLUDING BUT NOT NECESSARILY LIMITED TO, RACEWAYS, CONDUCTORS, CORDS, CORD CAPS, PLUGS, WIRING DEVICES, PRESSURE CONNECTORS, TERMINALS (LUGS), ELECTRICAL INSULATING TAPE, HEAT-SHRINKABLE INSULATING TUBING, CABLE TIES, SOLDERLESS WIRE NUTS, AND OTHER ITEMS AND ACCESSORIES AS NEEDED TO COMPLETE SPLICES, TERMINATIONS, AND CONNECTIONS AS REQUIRED. FOR PERMANENTLY INSTALLED FIXED EQUIPMENT, PROVIDE FLEXIBLE SEAL-TITE CONNECTION. FOR MOVABLE AND/OR PORTABLE EQUIPMENT, PROVIDE WIRING DEVICE, CORD CAP, AND MULTI-CONDUCTOR CORD.

GROUNDING

PROVIDE GROUNDING AND BONDING OF ALL ELECTRICAL AND COMMUNICATION APPARATUS, MACHINERY, APPLIANCES, BUILDING COMPONENTS, AND ITEMS REQUIRED BY THE NEC TO PROVIDE A PERMANENT, CONTINUOUS LOW IMPEDANCE, GROUNDING SYSTEM. PROVIDE AN NEC BONDING/GROUNDING CONDUCTOR IN ALL RACEWAYS USED FOR POWER DISTRIBUTION.

CONDUIT RACEWAYS

PROVIDE METAL CONDUIT, TUBING, AND FITTINGS OF TYPES, GRADES, SIZES, AND WEIGHTS (WALL THICKNESS) AS REQUIRED; WITH MINIMUM TRADE SIZE OF 3/4". INSTALL ELECTRICAL RACEWAY SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND APPLICABLE REQUIREMENTS OF NEC AND NECA "STANDARD OF INSTALLATION" IN ACCORDANCE WITH THE FOLLOWING:

- FEEDERS: INSTALL FEEDERS RATED 100 AMPS AND GREATER, IN ELECTRICAL METALLIC CONDUIT (EMT); WHERE BURIED BELOW GRADE, INSTALL IN CONCRETE ENCASED NON-METALLIC CONDUIT OR DUCT (SCHEDULE 40 PVC). BRANCH CIRCUITS, AND INDIVIDUAL EQUIPMENT CIRCUITS RATED LESS THAN 100 AMPS; INSTALL IN ELECTRICAL METALLIC TUBING (EMT) WHERE LOCATED IN POURED WALLS, BELOW CONCRETE SLAB-ON-GRADE, OR IN EARTH FILL. INSTALL IN NON-METALLIC PLASTIC DUCT (SCHEDULE 40 PVC). ENCASE NON-METALLIC/PLASTIC DUCT 1-1/4" AND LARGER IN CONCRETE.
- PROVIDE RIGID METAL CONDUIT (RMC) FOR ALL BENDS IN BURIED CONDUIT GREATER THAN 30 DEGREES. PROVIDE PROTECTIVE COATING FOR RIGID METAL CONDUIT BENDS. INSTALL FLEXIBLE CONDUIT FOR CONNECTIONS OF MOTORS, TRANSFORMERS, AND OTHER ELECTRICAL EQUIPMENT WHERE SUBJECT TO MOVEMENT AND VIBRATIONS. PROVIDE OZ. EXPANSION FITTINGS ON ALL CONDUITS CROSSING BUILDING EXPANSION JOINTS, BOTH IN SLAB AND SUSPENDED.
- PROVIDE SURFACE RACEWAYS OF SIZES AND CHANNELS INDICATED. PROVIDE FITTINGS THAT MATCH AND MATE WITH RACEWAY.

CONDUCTORS AND CABLES

PROVIDE FACTORY-FABRICATED CONDUCTORS FOR SIZED, RATINGS, MATERIAL, AND TYPES INDICATED FOR EACH SERVICE. PROVIDE COPPER CONDUCTORS, WITH THHN/THWN INSULATION. SIZE ALL CONDUCTORS IN ACCORDANCE WITH NEC; MINIMUM SIZE TO BE #12 AWG. PROVIDE STRANDED CONDUCTORS FOR #8 AWG AND LARGER.

ELECTRICAL BOXES AND FITTINGS

PROVIDE ONE PIECE GALVANIZED FLAT ROLLED SHEET STEEL INTERIOR OUTLET WIRING BOXES, CORROSION-RESISTANT CAST-METAL WEATHERPROOF OUTLET WIRING BOXES, CODE-GAGE SHEET STEEL JUNCTIONS AND PULL BOXES, CAST-IRON WATERPROOF ADJUSTABLE FLOOR BOXES, GALVANIZED CAST-METAL CONDUIT BODIES, CORROSION-RESISTANT PUNCHED-STEEL BOX KNOCKOUT CLOSURES, CONDUIT LOCKOUTS AND MALLEABLE STEEL CONDUIT BUSHINGS AND OFFSET CONNECTORS, AND ALL ACCESSORIES AS REQUIRED TO SUIT EACH RESPECTIVE LOCATION AND INSTALLATION. FASTEN BOXES RIGIDLY TO SUBSTRATES OR STRUCTURAL SURFACES TO WHICH ATTACHED, OR SOLIDLY EMBED

ELECTRICAL BOXES IN CONCRETE OR MASONRY. USE BAR HANGERS FOR STUD CONSTRUCTION.

SUPPORTING DEVICES

PROVIDE SUPPORTS, ANCHORS, SLEEVES AND SEALS AS REQUIRED FOR A COMPLETE RACEWAY SUPPORT SYSTEM, INCLUDING BUT NOT LIMITED TO: CLEVIS HANGERS, RISER CLAMPS, C-CLAMPS, BEAM CLAMPS, ONE AND TWO HOLE CONDUIT STRAPS, OFFSET CONDUIT CLAMPS, EXPANSION ANCHORS, TOGGLE BOLTS, THREADED RODS, U-CHANNEL STRUT SYSTEM, AND ALL ASSOCIATED ACCESSORIES. INSTALL IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND WITH RECOGNIZED INDUSTRY PRACTICES TO INSURE SUPPORTING DEVICES COMPLY WITH REQUIREMENTS. PROVIDE RIGID ATTACHMENT OF ALL FLOOR MOUNTED EQUIPMENT TO THE FLOOR SLAB OR STRUCTURAL SYSTEM.

WIRING DEVICES

PROVIDE GRADE FACTORY-FABRICATED WIRING DEVICES, IN TYPES, AND ELECTRICAL RATINGS FOR APPLICATIONS INDICATED AND COMPLYING WITH NEMA STDS PUB NO. WD-1. PROVIDE HEAVY DUTY SPECIFICATION GRADE, 20-AMPERES RATED, GROUNDING TYPE CONVENIENCE OUTLETS. PROVIDE 20-AMPERES RATED TOGGLE SWITCHES. CONSTRUCT WIRING DEVICE OF HEAVY DUTY HIGH IMPACT NYLON AND PROVIDE COVER PLATES TO MATCH. PROVIDE DEVICES IN COLORS SELECTED BY ARCHITECT.

PANELBOARD AND SWITCHBOARDS

PROVIDE GALVANIZED SHEET STEEL CABINET TYPE ENCLOSURES, IN SIZES AND NEMA TYPES AS INDICATED, CODE-GAGE MINIMUM 16-GAUGE THICKNESS. PROVIDE DEAD FRONT SAFETY TYPE PANELBOARDS WITH DOOR-IN-DOOR HINGED FRONTS. EQUIP WITH COPPER BUS BARS. FULL-SIZED NEUTRAL AND GROUND BUS. PROVIDE ENCLOSURES FABRICATED BY SAME MANUFACTURER AS OVERCURRENT DEVICES. BOLT ENGRAVED PLASTIC LAMINATE LABELS INDICATING PANEL NAME AND VOLTAGE ON THE INTERIOR AND EXTERIOR OF PANELBOARD OR SWITCHBOARD.

OVERCURRENT PROTECTIVE DEVICES

PROVIDE OVERCURRENT PROTECTIVE DEVICES OF THE SAME MANUFACTURER AS THE SWITCHBOARD AND/OR PANELBOARD MANUFACTURER. PROVIDE FACTORY-ASSEMBLED DEVICES OF AMPERAGE, VOLTAGE, AND RMS INTERRUPTING RATING SHOWN. PROVIDE DEVICES AS FOLLOWS:

- MOLDED CASE THERMAL TRIP CIRCUIT BREAKERS:
 - PROVIDE FACTORY-ASSEMBLED BOLT-ON MOLDED CASE CIRCUIT BREAKERS WITH PERMANENT THERMAL TRIP AND ADJUSTABLE INSTANTANEOUS MAGNETIC TRIP IN EACH POLE. SERIES RATING IS NOT ACCEPTABLE. CONSTRUCT BREAKERS FOR MOUNTING AND OPERATING IN ANY PHYSICAL POSITION AND IN AN AMBIENT TEMPERATURE OF 40 DEGREES C.
 - CIRCUIT BREAKERS 15 AMPS THROUGH 599 AMPS SHALL BE MOLDED CASE SOLID-STATE CIRCUIT BREAKERS
- MOLDED CASE SOLID-STATE CIRCUIT BREAKERS
 - PROVIDE FACTORY ASSEMBLED BOLT-ON MOLDED CASE CIRCUIT BREAKERS UL LISTED FOR APPLICATION AT 100% OF THEIR CONTINUOUS AMPERE RATING.
 - CIRCUIT BREAKERS 600 AMPS THROUGH 1200 AMPS SHALL BE MOLDED CASE SOLID-STATE CIRCUIT BREAKERS.
 - SOLID-STATE TRIP MECHANISMS SHALL HAVE THE FOLLOWING FUNCTIONS: ADJUSTABLE LONG TIME AMPERE RATING; ADJUSTABLE LONG TIME DELAY; SHORT TIME PICK UP; ADJUSTABLE SHORT TIME DELAY; ADJUSTABLE INSTANTANEOUS PICK UP.
- INSULATED CASE CIRCUIT BREAKERS
 - PROVIDE FACTORY ASSEMBLED BOLT-ON INSULATED CASE CIRCUIT BREAKERS WITH SOLID-STATE TRIP MECHANISMS AND MANUAL SPRING CHARGING MECHANISM. BREAKERS SHALL BE UL LISTED FOR APPLICATION AT 100% OF THEIR CONTINUOUS AMPERE RATING.
 - CIRCUIT BREAKERS 1201 AMPERES AND LARGER SHALL BE INSULATED CASE CIRCUIT BREAKERS.
- ON SERVICE DISCONNECT BREAKERS WHERE PHASE TO GROUND VOLTAGE EXCEEDS 150-VOLTS, THE SOLID STATE TRIP MECHANISM SHALL INCLUDE ADJUSTABLE GROUND FAULT PICK UP AND ADJUSTABLE GROUND FAULT TIME DELAY WITH GROUND FAULT TEST BUTTON;
- FOR ALL CIRCUIT BREAKERS 1200 AMPERES OR HIGHER, PROVIDE AN ENERGY-REDUCING MAINTENANCE SWITCH WITH LOCAL, LIT STATUS INDICATOR TO ALLOW FOR A REDUCTION FO THE INSTANTANEOUS PICKUP AND INSTANTANEOUS DELAY SETTINGS. DEVICE SHALL MOUNT IN FACE OF DEAD-FRONT.

MOTOR STARTERS

PROVIDE FACTORY ASSEMBLED, AC-NON-REVERSING MAGNETIC STARTERS RATED AT 600V WITH THERMAL OVERLOAD PROTECTION IN ALL PHASES. MOUNT HAND-OFF-AUTO SWITCH, RED PILOT LIGHT, AND RESET BUTTON IN FACE OF ENCLOSURE. PROVIDE NEMA ENCLOSURE RATINGS BASED ON LOCATION OF INSTALLATION.

MOTOR AND CIRCUIT DISCONNECTS

PROVIDE HEAVY-DUTY TYPE SAFETY SWITCHES; FUSIBLE OR NON-FUSIBLE AS INDICATED. PROVIDE SWITCHES RATED AT 600 VOLTS, 60 HZ; INCORPORATING QUICK-MAKE, QUICK-BREAK TYPE MECHANISMS. EQUIP WITH OPERATING HANDLE THAT IS CAPABLE OF BEING PADLOCKED IN THE OFF POSITION. PROVIDE NEMA ENCLOSURE RATINGS BASED ON LOCATION OF INSTALLATION.

LIGHTING FIXTURES

PROVIDE LIGHTING FIXTURES COMPLETE WITH ALL COMPONENTS FOR EACH SIZE, TYPE, AND RATING INDICATED. THIS INCLUDES, BUT NOT LIMITED TO HOUSING, DRIVER, REFLECTORS, AND WIRING. SIZE FUSES PER BALLAST MANUFACTURER'S RECOMMENDATION. PROVIDE ALL NECESSARY SUPPORTS, BRACKETS, AND MISCELLANEOUS EQUIPMENT FOR MOUNTING OF FIXTURES. SUPPORT ALL GRID MOUNTED FIXTURES FROM THE BUILDING STRUCTURE WITH #12 GA. STEEL WIRE ATTACHED TO EACH CORNER; INDEPENDENT OF THE CEILING SYSTEM. PROVIDE BACKING SUPPORTS. PROVIDE GYPSUM BOARD PROTECTION AS REQUIRED TO MAINTAIN FIRE RATING OF EACH CEILING IN WHICH FIXTURES ARE INSTALLED. PROVIDE ALL EXTERIOR FIXTURES WITH DAMP OR WET LOCATION LABEL AS REQUIRED BY APPLICATION. PROVIDE CLASS 2 WIRING FOR ALL FIXTURES INDICATED TO HAVE 0-10V DIMMING.

ELECTRICAL IDENTIFICATION

PROVIDE ELECTRICAL IDENTIFICATION PRODUCTS FOR BURIED ELECTRICAL LINES, ARC-FLASH HAZARD LABELS (ANSI Z535.4), SOURCE OF SUPPLY LABELS, AVAILABLE FAULT CURRENT LABELS AND EMERGENCY OPERATING SIGNS TO EQUIPMENT INSTALLED AS PART OF THIS PROJECT.

- PROVIDE NYLON TYPE COVERPLATES THAT MATCH DEVICES. PROVIDE METAL COVERS FOR ALL DEVICES IN UNFINISHED SPACES
- PROVIDE LABELS ON COVERPLATES INDICATING SOURCE OF POWER (I.E. PANEL - CIRCUIT #).



J-U-B ENGINEERS, INC.

J-U-B ENGINEERS, INC.
3611 S. Zintel Way
Kennewick, WA 99337
Phone: 509.783.2144
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NO.	DESCRIPTION	BY	APPR.	DATE

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON

SPECIFICATIONS

FILE : 22015 E-003
JUB PROJ. # : 30-21-003
DRAWN BY: BNA
DESIGN BY: JUAN ORTIZ
CHECKED BY: BRIAN HICKS

ONE INCH
AT FULL SIZE. IF NOT ONE INCH, SCALE ACCORDINGLY
LAST UPDATED: 09/08/2022

SHEET NUMBER:

E-003

Plot Date: 07/20/22 1:08 PM Plotted By: Kody Schwaneveldt
Date Created: 06/20/22 C:\USERS\KODY\APPDATA\LOCAL\TEMP\2015\KJW\JUB FALLS ELEC_VT\CAD\DWG\PROJECT FILES\DRAWING\22015 E-003.DWG



4225 Lake Park Blvd Ste 275
West Valley City, Utah 84120
P: 801.532.2196

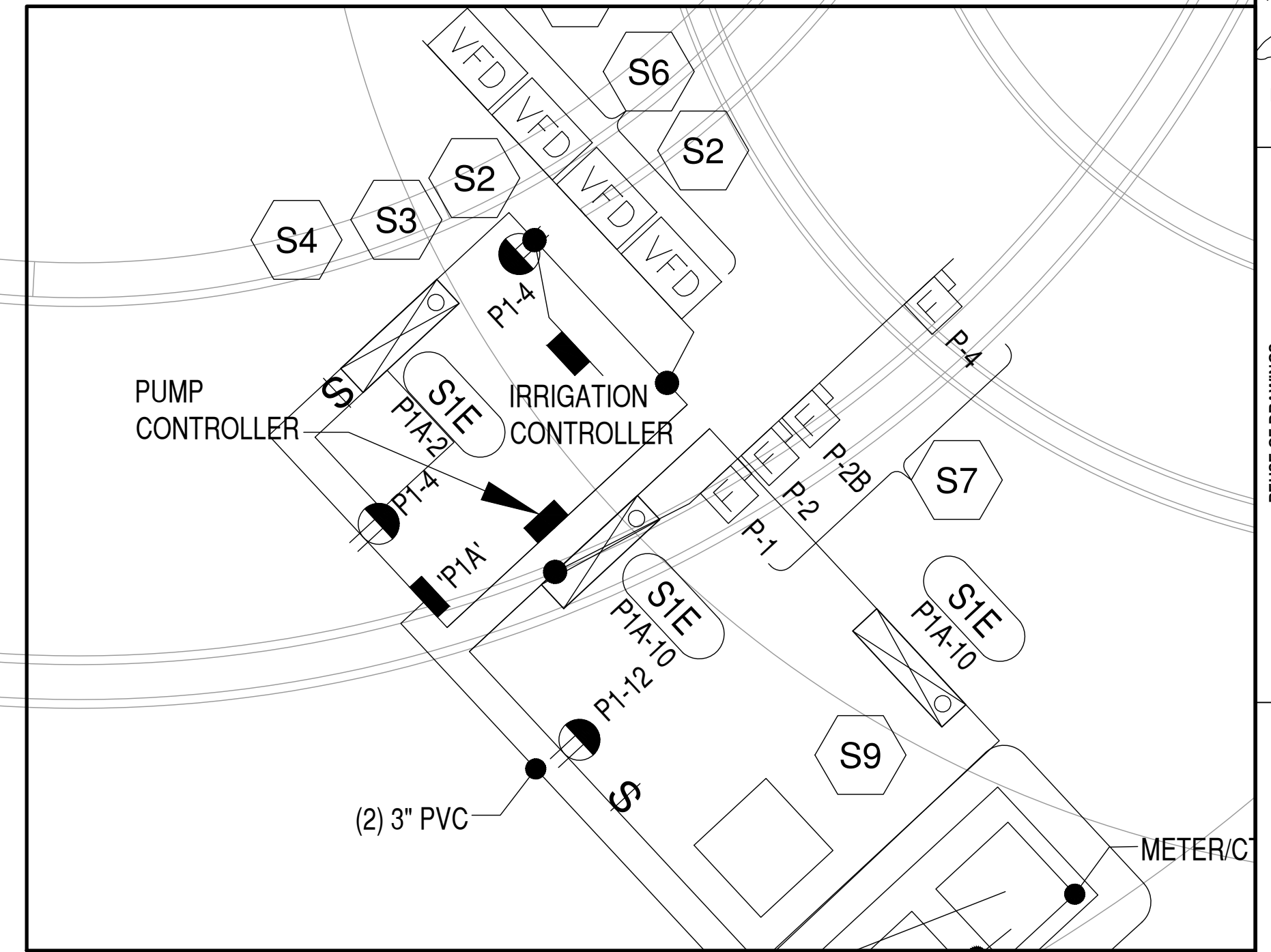
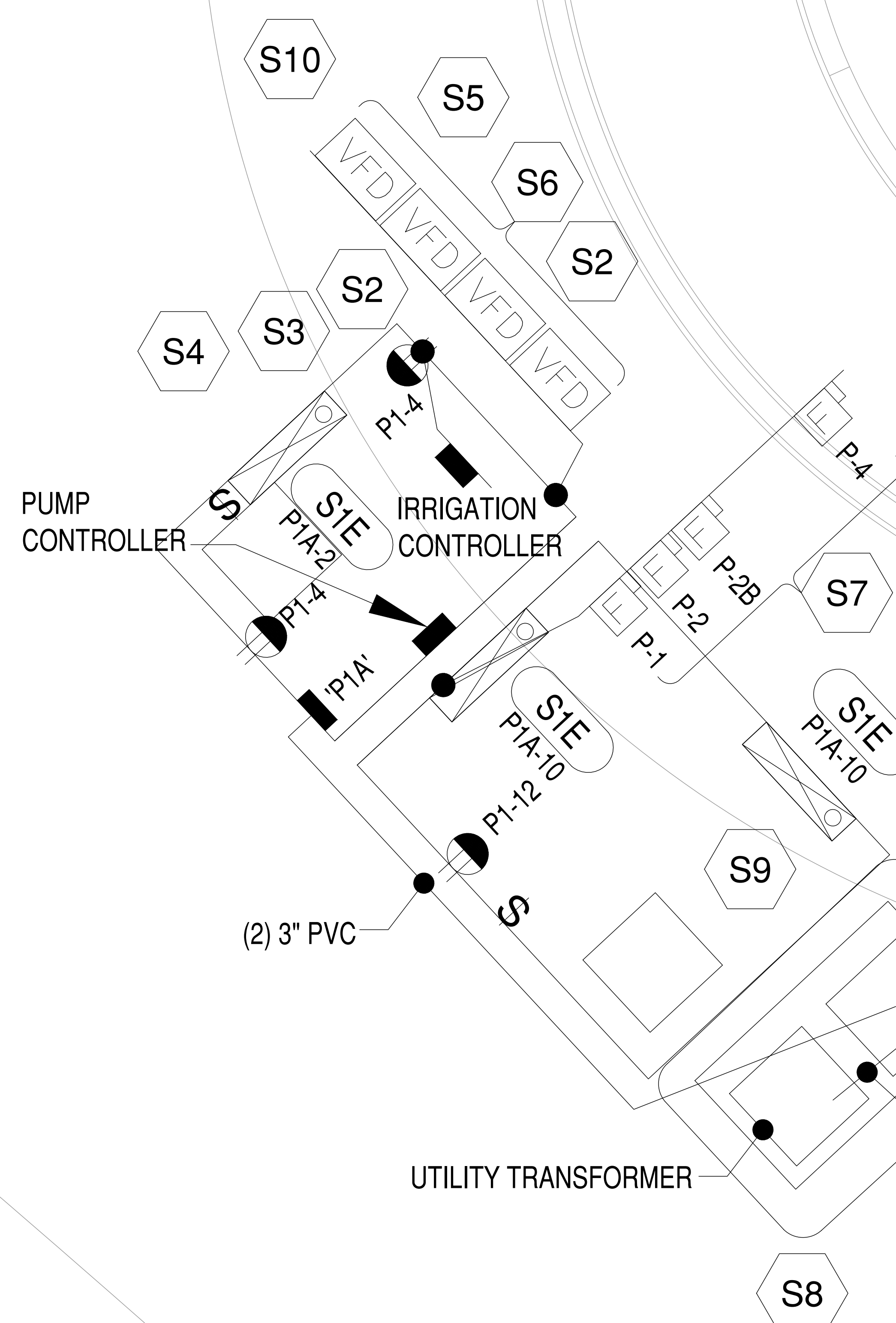
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DATE PLOTTED: 07/20/22

SHEET KEYNOTES

- S1 COORDINATE ALL PUMP DISCONNECTS AND VFD LOCATIONS WITH FOUNTAIN POOL SUPPLIER
- S2 COORDINATE EXACT PANEL LOCATIONS WITH FOUNTAIN POOL SUPPLIER
- S3 MOUNT FIXTURES TO THE VAULT CEILING.
- S4 PROVIDE RIGID CONDUIT STUB AND MOUNT WEATHER RESISTANT BOX AND OUTLET PROVIDE BUBBLE COVER.
- S5 VFD'S PROVIDED BY POOL FOUNTAIN CONTRACTOR
- S6 ELECTRICAL CONTRACTOR TO PROVIDE FUSED DISCONNECTS FOR 4 PUMPS COORDINATE WITH POOL FOUNTAIN SUPPLIER TO VERIFY THESE ARE NEEDED OR IF THE VFD'S WILL BE LOCKABLE AND SERVE AS A MEANS OF DISCONNECTS.
- S7 CONTRACTOR TO COORDINATE WITH UMATILLA POWER TO DEMO EXISTING 200A METER/PANELBOARD. DEMOLISH PANELBOARD CONDUIT AND WIRE AS NEEDED CONTRACTOR TO PROVIDE A 4' BY 2' 6" DEEP CONCRETE PAD FOR THE NEW 600A CT METER CABINET AT THE NEW LOCATION. REFER TO STRUCTURAL DETAIL.
- S8 CONTRACTOR WILL PROVIDE TRENCHING AND BACKFILL FOR THE UTILITY POWER SERVICE. THIS WILL BE 285' PROVIDE 4' DEEP BY 2' WIDE TRENCH. UMATILLA POWER WILL PROVIDE CONDUIT WIRE, UTILITY TRANSFORMER AND CONCRETE PAD FOR UTILITY TRANSFORMER, UMATILLA POWER WILL ALSO PROVIDE BORING.
- S9 COORDINATE WATER HEATER EXACT LOCATION WITH THE POOL SUPPLIER, REFER TO THE ELECTRICAL PANEL SCHEDULE AND EQUIPMENT SCHEDULE FOR ELECTRICAL REQUIREMENTS.
- S10 POOL SUPPLIER SHALL PROVIDE ALL LOW VOLTAGE WIRING. THIS WILL ALSO INCLUDE ALL 120V REQUIREMENTS FOR THE FOUNTAIN POOL LIGHTING, POWER, TRENCHING AND BACK FILL.
- S11 COORDINATE ALL FOUNTAIN CONTROL POWER 120V CIRCUITS WITH THE POOL SUPPLIER. CONTRACTOR TO PROVIDE CONDUIT, WIRE, JUNCTION BOXES AS NEEDED, REFER TO POOL SUPPLIER WIRING SCHEMATIC PLAN.



PLAN NORTH

ELECTRICAL ENLARGED SITE PLAN
 1/4" = 1'-0"

PLAN NORTH

ELECTRICAL SITE PLAN
 1" = 30'-0"

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NO.	REVISION	DESCRIPTION	BY	APPR.	DATE

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON

ELECTRICAL SITE PLAN

FILE : 22015 E-101
 JUB PROJ. # : 30-21-003
 DRAWN BY : BNA
 DESIGN BY : JUAN ORTIZ
 CHECKED BY : BRIAN HICKS

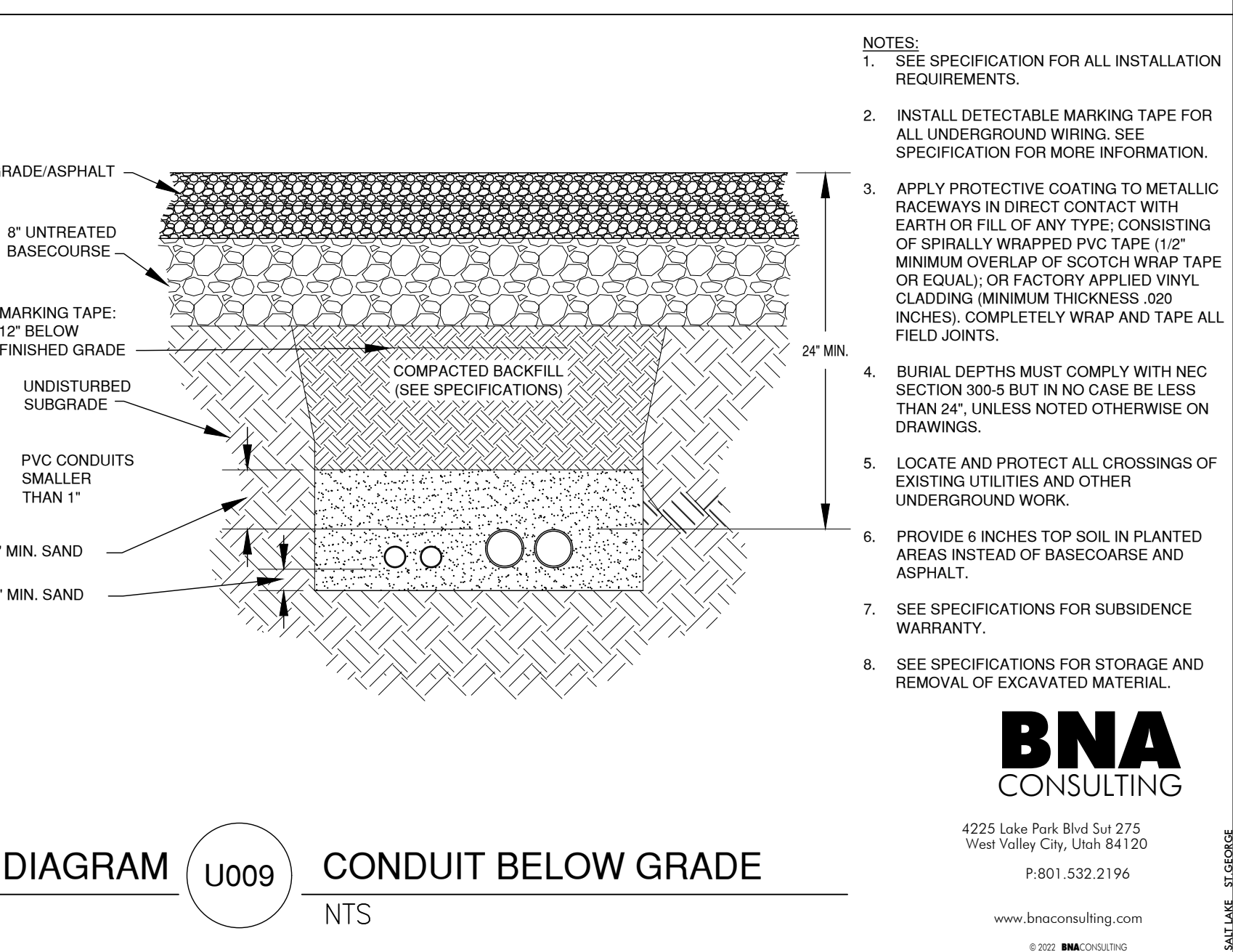
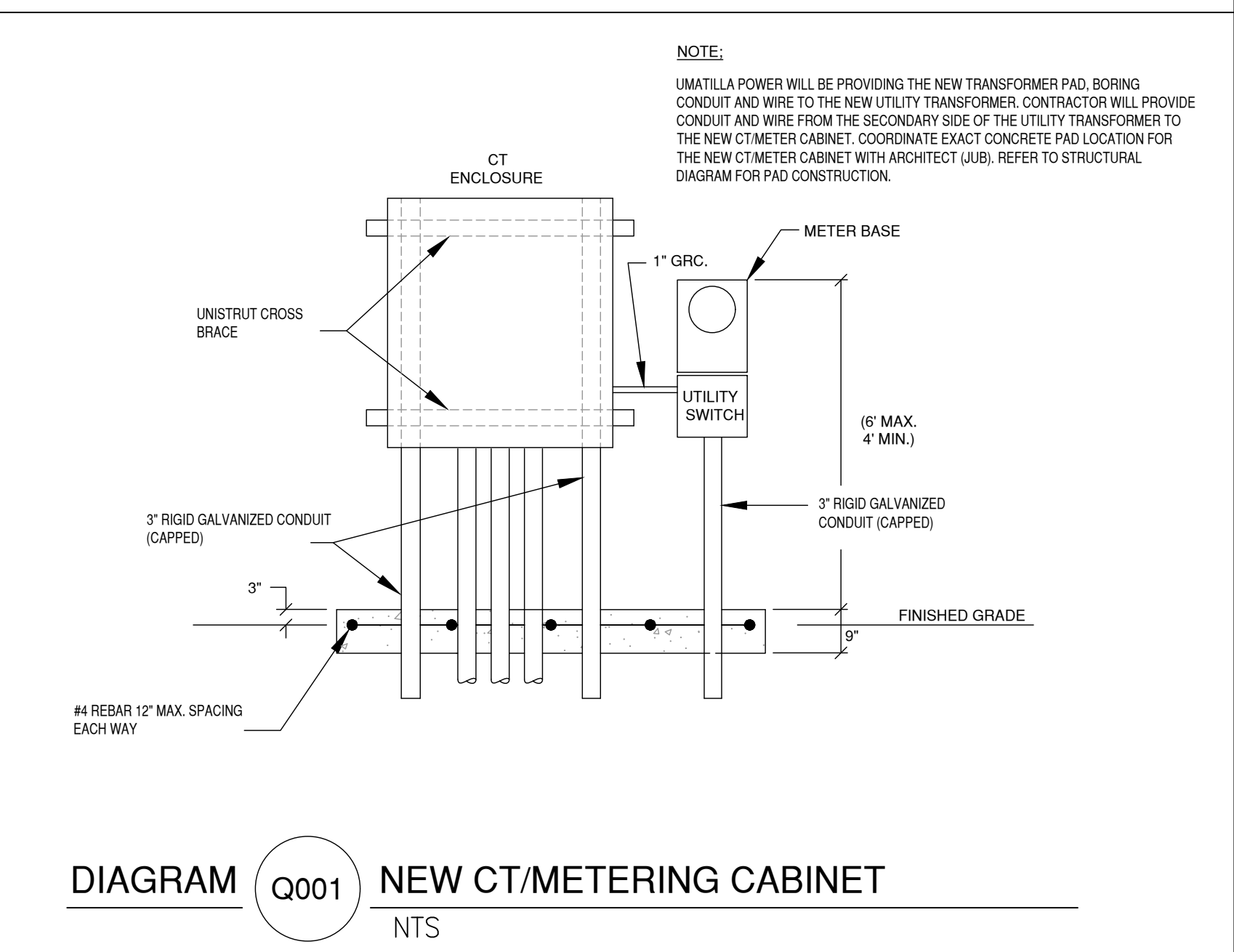
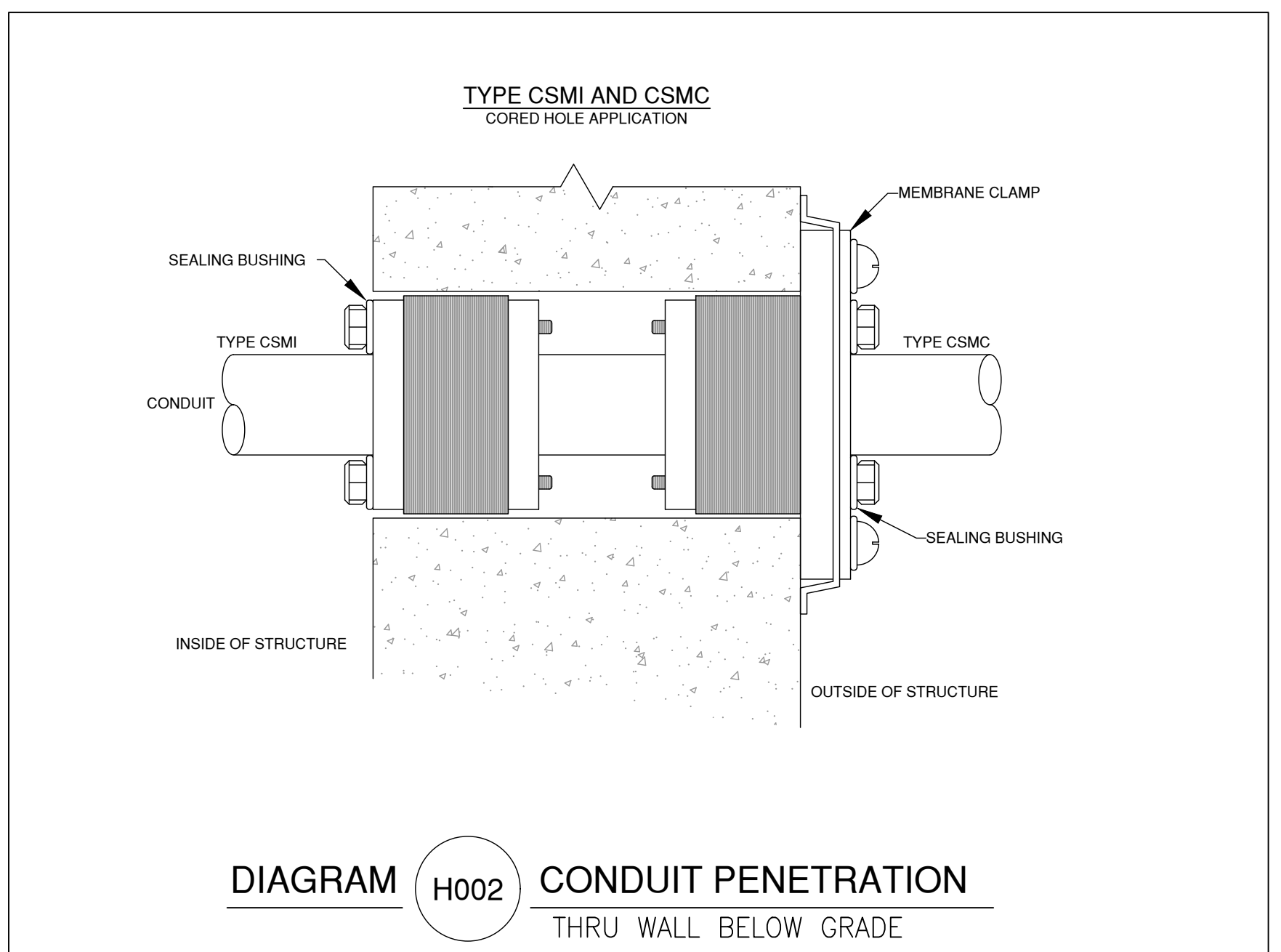
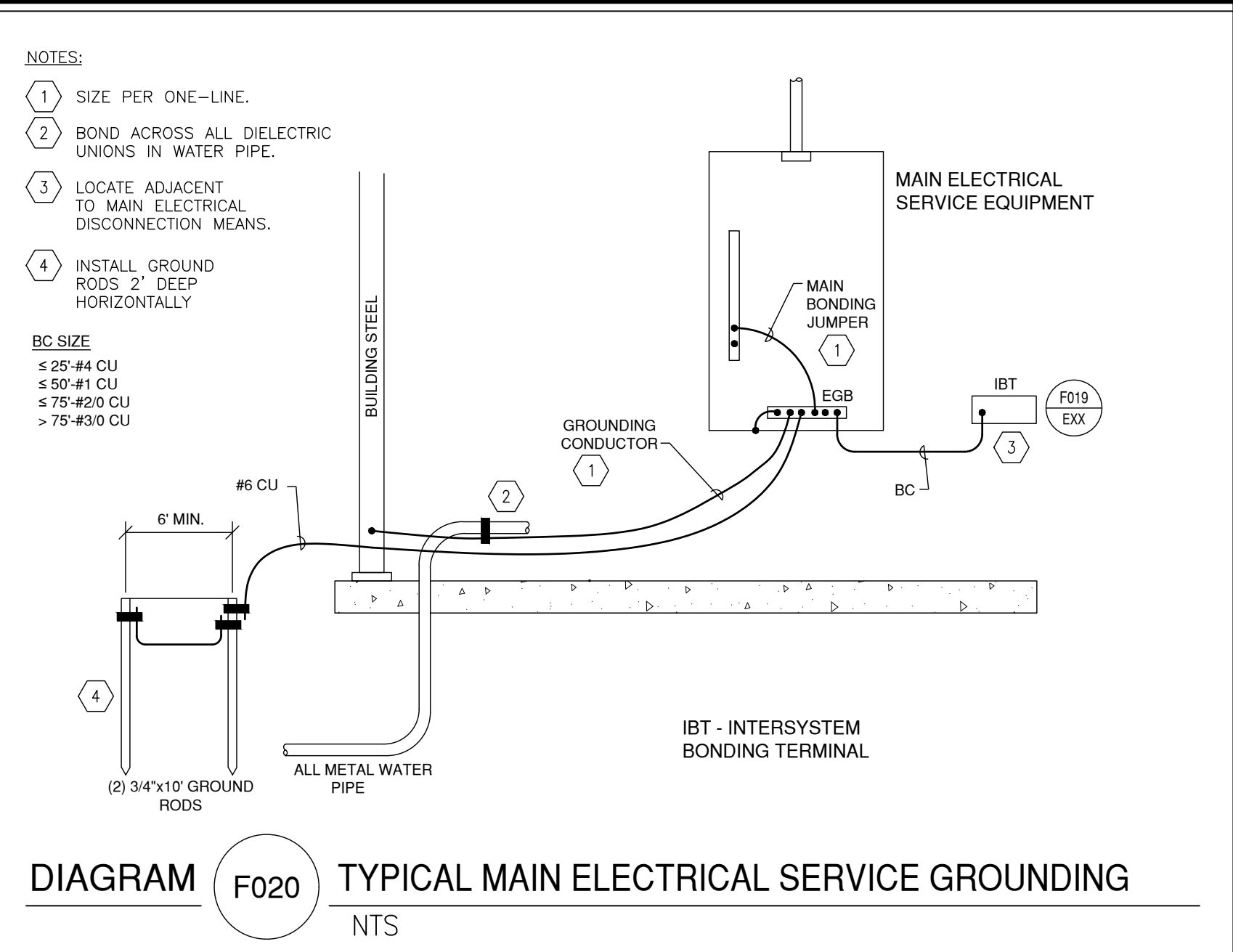
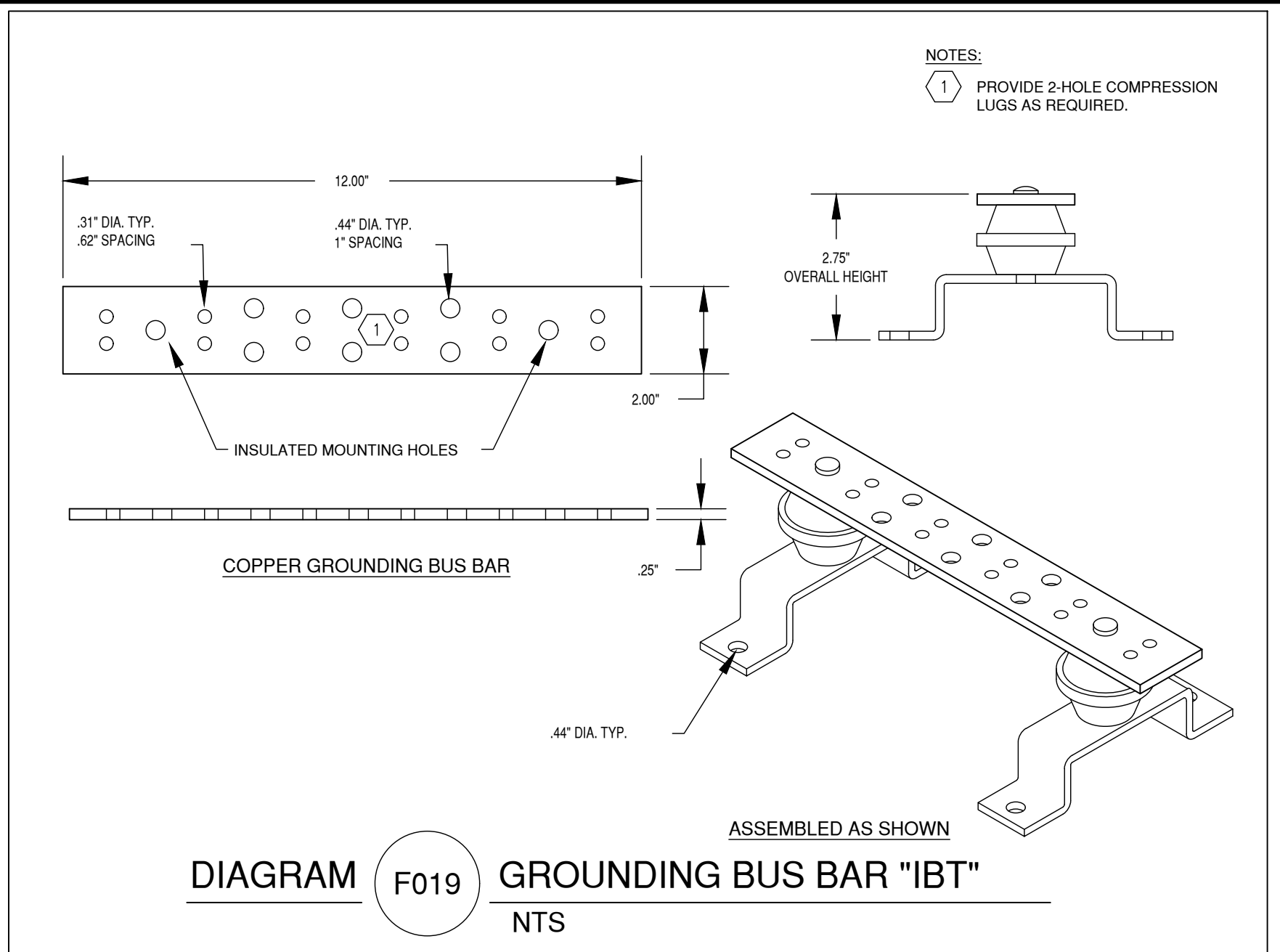
ONE INCH
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 INCH, SCALE ACCORDINGLY
 LAST UPDATED: 09/08/2022

SHEET NUMBER:
E-101

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4225 Lake Park Blvd Ste 275
 West Valley City, Utah 84120
 P: 801.532.2196
 www.bnacconsulting.com

Plot Date: 9/27/2022 1:08 PM Plotted By: Kody Schwaneveld
 Date Created: 9/20/2022 C:\USERS\KODY\APPDATA\LOCAL\CONSULTING\2015\UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN\PROJECT FILES\DRAWING\22015 E-101.DWG



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NO.	REVISION	DESCRIPTION	BY	APPR.	DATE

IRRIGATION NOTES

- 1. The Contractor shall be familiar with the irrigation technical specifications for this project. Failure to do so shall not relieve him of meeting all of the requirements contained therein.
2. The irrigation plan is diagrammatic in nature, and some drafting liberties have been taken to maintain the graphic clarity of the drawings. All irrigation equipment shall be located in planting areas only, unless noted otherwise.
3. The Contractor shall use only the equipment and products specified in the construction drawings. No substitution of materials will be allowed on the irrigation system without prior authorization from the Landscape Architect and the Owner.
4. The Contractor shall visit and inspect the project site. He shall take into consideration known and reasonably inferable conditions affecting the proposed work.
5. If the water point of connection is located other than as shown on the drawings, or if the water pressure is different than indicated on the plans, or appears to be unusually high or low, the Contractor shall immediately notify the Landscape Architect prior to proceeding with any irrigation work.
6. Design spacing for each sprinkler head and/or dripline is listed in the Irrigation Equipment Schedule. Contractor shall lay out the heads as shown in the plans. While doing so, Contractor shall note that the spacing matches both the plans and the intended design spacing as listed.
7. The Contractor shall keep the premises clean and free of excess equipment, materials, and rubbish incidental to work of this project.
8. Pipe fittings shall conform to the following standards unless otherwise noted:
A. All main line fittings four (4) inches or larger shall be either M.J. or deep bell push-on, gasketed, and constructed of ductile iron material.
B. All main line fittings three (3) inches and smaller shall be solvent weld Schedule 80 PVC.
C. M.J. tees, Schedule 80 tees with SxT Schedule 80 bushings, or Harco ductile iron service tees are approved on PVC main lines for automatic control valve installation. M.J. fittings shall be greased and wrapped.
D. All lateral line fittings shall be solvent weld Schedule 40 PVC.
E. All risers and exposed fittings shall be solvent weld Schedule 80 PVC, including conversions to metal pipe and fixtures, unless otherwise noted on the plans.
F. All main line fittings four (4) inches and larger, whether ductile iron or solvent weld, shall be thrust blocked.
8. Backflow prevention devices shall be a reduced pressure principle backflow preventer. Installation shall comply with local, state, and national codes and regulations, and per manufacturer's recommendations (whichever is most restrictive).
9. Irrigation wire shall conform to the following:
A. All irrigation control wire shall bear approval as U.L. listed type of underground feeder (direct burial) and each conductor shall be of electrical conductivity grade solid copper in accordance with ASTM 30.
B. No aluminum wire shall be used on this project.
C. Wire size shall be #14 gauge minimum.
D. Two spare wires shall be run from each controller to the farthest valve under its control in all directions and any valve which is on a dead-end line.
E. All wire crossing water, attached to bridges, going under paving, or where conditions require protection, shall be housed in conduit or sleeves. All out-of-ground conduits shall be rigid metal. All buried conduit may be PVC.
F. All splices shall be water-tight. All connections made inside the box to connect wires to the valve shall be made using a 3M DBR/Y dry-splice connector or pre-approved equal. Each connector shall be completely sealed and water-proofed.
G. All other splices in control wire shall be housed in a separate valve box.
H. The pigment or color of the wires shall be integrated into the covering, rather than painted on. All common or ground wires shall be white in color. Where more than one controller is required, a different colored hot wire shall be used for each controller. A separate color shall be used for all spare wires.
10. Run a single fourteen (14) gauge wire along the top of the main line to be used for tracking the location of the main line. The color of the tracing wire shall be different than any other wire color used.
11. All pressure main lines shall have between twenty-four (24) and thirty (30) inches of cover, while all lateral lines shall have between twelve (12) and fourteen (14) inches of cover. Trench bedding and backfill material shall consist of existing site soil free of rocks larger than one (1) inch in diameter and any other debris.

- 12. Manual drain valves shall be required at all low points in the main lines. All trenches shall be sloped so the pipes will gravity-drain back to the main connection point or to the nearest manual drain.
13. Check valves shall be used where indicated and where necessary to prevent water flow from lower elevation heads when the irrigation system is turned off.
14. All control valves shall be located within shrub areas where possible and installed per the details shown on the plans. Each control valve shall have its own separate shut-off valve, and only one (1) control valve and gate valve per valve box. No valve manifolds shall be allowed. The bottom of the remote control valve shall be a minimum of four (4) inches above the gravel. Isolation gate valves on the main line shall be located in separate valve boxes.
15. All main lines and lateral lines shall be sleeved where they pass under any paved areas. The size of the sleeve shall be twice the size of the pipe being sleeved, unless otherwise specified on the drawings.
16. The automatic controller shall be of the type and manufacturer specified, and located as shown on the plans. The Contractor shall be responsible for providing 120 volt electrical service to the controller. Coordinate this work with other trades on this project.
17. Prior to backfilling any trenches or irrigation lines:
A. All main lines shall be capped and pressure tested at 120 psi for a period of 4 hours. Any leaks found shall be corrected by removing the leaking pipe or fittings and installing new material in its place. Repeat the pressure test to insure the absence of leaks.
B. The Contractor shall not allow nor cause any of his work to be covered until it has been inspected, tested, and approved by the Landscape Architect.
C. Where a main line has been allowed to sit in the trench uncovered for any length of time prior to testing, the line may be shaded with a thin layer of soil to minimize weather related expansion or contraction of the pipe.
18. The Contractor shall adjust all irrigation heads to provide a uniform coverage and to keep spray off of buildings, walkways, and paved surfaces.
19. When the sprinkler system has been completed, the Contractor shall, in the presence of the Landscape Architect, conduct a coverage test of the water afforded to the planting areas to insure that it is consistent and uniform.
20. The Contractor shall keep on site a current and accurate as-built record of his work. It shall include exact dimensioned locations, grades, elevations, and the size of all exterior and interior underground piping, valves, and drains.
21. The irrigation contractor shall maintain the system for the duration of the contract period, including the maintenance period.
22. Upon final acceptance of the sprinkler irrigation system as being operational and properly installed, the Contractor shall guarantee the workmanship, materials, fixtures, and equipment to be free from defects for a period of one (1) year after that date.
23. In-line Drippers
A. In-line drip tubing shall be spaced approximately equal to the in-line emitter spacing. In-line drip tubing spacing may be adjusted to be slightly less than the emitter spacing in order to achieve uniform spacing.
B. Weed barrier fabric shall be installed directly on top of finished grade soil, with in-line dripper tubing on top of fabric.
C. All drip tubing shall be held in place by soil staples and shall conform to the following:
I. Sandy Soil - One staple per every three (3) feet and two (2) staples on each change of direction (tee, elbow, or cross)
II. Loam Soil - One staple every four (4) feet and two (2) staples on each change of direction (tee, elbow, or cross)
III. Clay Soil - One staple every five (5) feet and two (2) staples on each change of direction (tee, elbow, or cross)
D. Installation of in-line drip circuits shall generally conform to the following steps:
I. Assemble and install ball valve, filter, remote control valve, and in-line pressure regulator assembly in accordance with installation details.
II. Assemble and install supply header(s) in accordance with installation details.
III. Install lateral drip lines in accordance with details and relevant specifications and manufacturer's recommendations.
IV. Assemble and install exhaust header(s) in accordance with installation details.
V. Install air/vacuum relief valve(s) at the zone's highest point(s) in accordance with installation details.
VI. Thoroughly flush supply header(s) and connect drip lateral lines while flushing.
VII. Thoroughly flush drip lateral lines and connect to exhaust header(s) and any interconnecting lateral lines while flushing.
VIII. Thoroughly flush exhaust header(s) and install line flushing valves in accordance with details.



J-U-B ENGINEERS, INC.
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Kennewick, WA 99337
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Table with columns: NO., DESCRIPTION, REVISION, DATE. Includes a note about reuse of drawings and liability.

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON
LANDSCAPE IRRIGATION NOTES

FILE: 33-21-003_L1-001
JUB PROJ. #: 33-21-003
DRAWN BY: #
DESIGN BY: JD
CHECKED BY: LLS
ONE INCH
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 9/9/2022

SHEET NUMBER: L-001

Plot Date: 9/9/2022 3:28 PM, Plotted By: Jenna Meyers, Date Created: 9/12/2022, JUB: C:\CENTRAL\CLIENTS\SR\UMATILLA\CAD\PROJECTS\33-21-003_KIWANIS\ALSCONCEPT\DESIGN\CAD\SHEET\33-21-003_L1-001.DWG

PLANTING NOTES

- 1. The Contractor shall be familiar with the planting and irrigation technical specifications -- failure to do so will not relieve the contractor of his responsibility to fulfill all requirements in said specifications.
2. Prior to any planting operations, the irrigation system shall be fully operational and all planting areas shall be thoroughly moistened.
3. The planting plan is diagrammatic, and all plant locations are approximate. Plant symbols and mulch hatches on the plans take precedence over quantities shown in the Plant Material Schedule.
4. No substitution of size, grade, variety or any species shall be permitted except by written permission of the Landscape Architect.
5. Final Grade Preparation
A. The subgrade Material Shall be rough graded to plus or minus one tenth (+0.1) foot of the final rough grade, which will allow the Contractor to achieve final finished grade through the placement of the topsoil.
B. Protect existing trees, shrubs, lawns, existing structures, fences, roads, sidewalks, paving, curb and gutter and other features during Construction.
C. Protect above or below grade utilities. Contact utility companies to repair damage to utilities. Contractor shall pay all cost of repairs which he causes.
D. Maintain all benchmarks, control monuments and stakes, whether newly established by surveyor or previously existing. Protect from damage and dislocation.
E. Grading Intent: Spot elevations and contours indicated are based on the best available data. The intent is to maintain constant slopes between spot elevations.
F. Conduct work in an orderly manner. Do not create a nuisance. Do not permit soil accumulation on streets or sidewalks. Do not allow soil to be washed into sewers and storm drains.
G. Grade slopes to provide adequate drainage after compaction. Do not create water pockets or ridges. Use all means necessary to prevent erosion of freshly graded areas during construction until surfaces have been constructed and landscaping areas have taken hold.
H. Grades shall be smooth, even, and maintain a consistent uniform slope. Grades with undulating surfaces will be rejected and require re-grading.
I. The Contractor shall maintain a minimum of two (2) percent drainage away from all buildings, structures, and walls. Finished grades shall be smoothed to eliminate puddling or standing water.
J. All finished grades shall be approved by the Landscape Architect prior to installation of any plant materials.
6. All planting areas shall receive a minimum of four (4) inches of imported topsoil in turf areas and twelve (12) inches in planting beds. All topsoil used on this project shall meet the following criteria:
A. pH:.....5.5 - 8.0
B. EC (electrical conductivity):.....<2.0 mmhos per centimeter
C. SAR (sodium absorption ratio):.....<3.0
D. % OM (percent organic matter):.....2%
E. Texture (particle size per USDA classification):
I. Sand:.....<70%
II. Silt:.....<70%
III. Clay:.....<30%
IV. Stone Fragments (gravels or any soil particle Greater than two (2) mm in size):..... <5% (by volume)
V. Rocks > 1.5":..... None
In addition, the topsoil shall be fertile, friable, natural loam and shall be capable of sustaining vigorous plant growth. It shall be free of stones, lumps, clods of hard earth, plants or their roots, sticks, and other extraneous matter. The topsoil shall contain neither noxious weeds nor their seeds. It shall not be used for planting operations while in a frozen or muddy condition. An appropriate fertilizer may be used to provide needed nutrients for healthy and vigorous plant growth. Follow recommendation of topsoil report.
7. The following procedure shall be followed in placing all topsoil:
A. All areas to receive topsoil which have a slope of less than ten (10) percent shall be cross-rippled to a depth of four (4) to six (6) inches.
B. The surface of the subgrade shall be scarified to a depth of two (2) inches to provide a transition zone between the subgrade and the topsoil. Place the topsoil on the subgrade and fine grade to the final finished grade and topsoil depths as indicated on the drawings and in these notes.
C. Any required soil amendments (i.e. organic matter, fertilizer, gypsum, etc.) shall be thoroughly blended with imported or screened topsoil prior to placement. (Do not place amendments on top of topsoil and then blend.) Where only a dry, granular fertilizer is to be added, it may be applied to the surface and raked in during the fine grading process.
8. The Contractor shall obtain a soil analysis from any authorized soil testing agency of any existing stockpiled or imported topsoil to be used on the project to verify that it conforms to the topsoil specifications. Test results shall include horticultural nutrient recommendations. The soil samples shall be obtained per the testing agency directions. Allow ten (10) working days to obtain test results. The costs for such testing shall be the responsibility of the Contractor. Prior to delivery of the imported topsoil to the site, the Contractor shall provide to the Landscape Architect the name and location of the topsoil source, along with the certified soil analysis of the topsoil to be used. The analysis shall verify that the proposed topsoil meets the topsoil specifications, and is capable of supporting healthy plant growth.
9. After imported top soil has been delivered to the site, a second soils test may be required to verify that it is indeed the same soil as previously tested and designated for

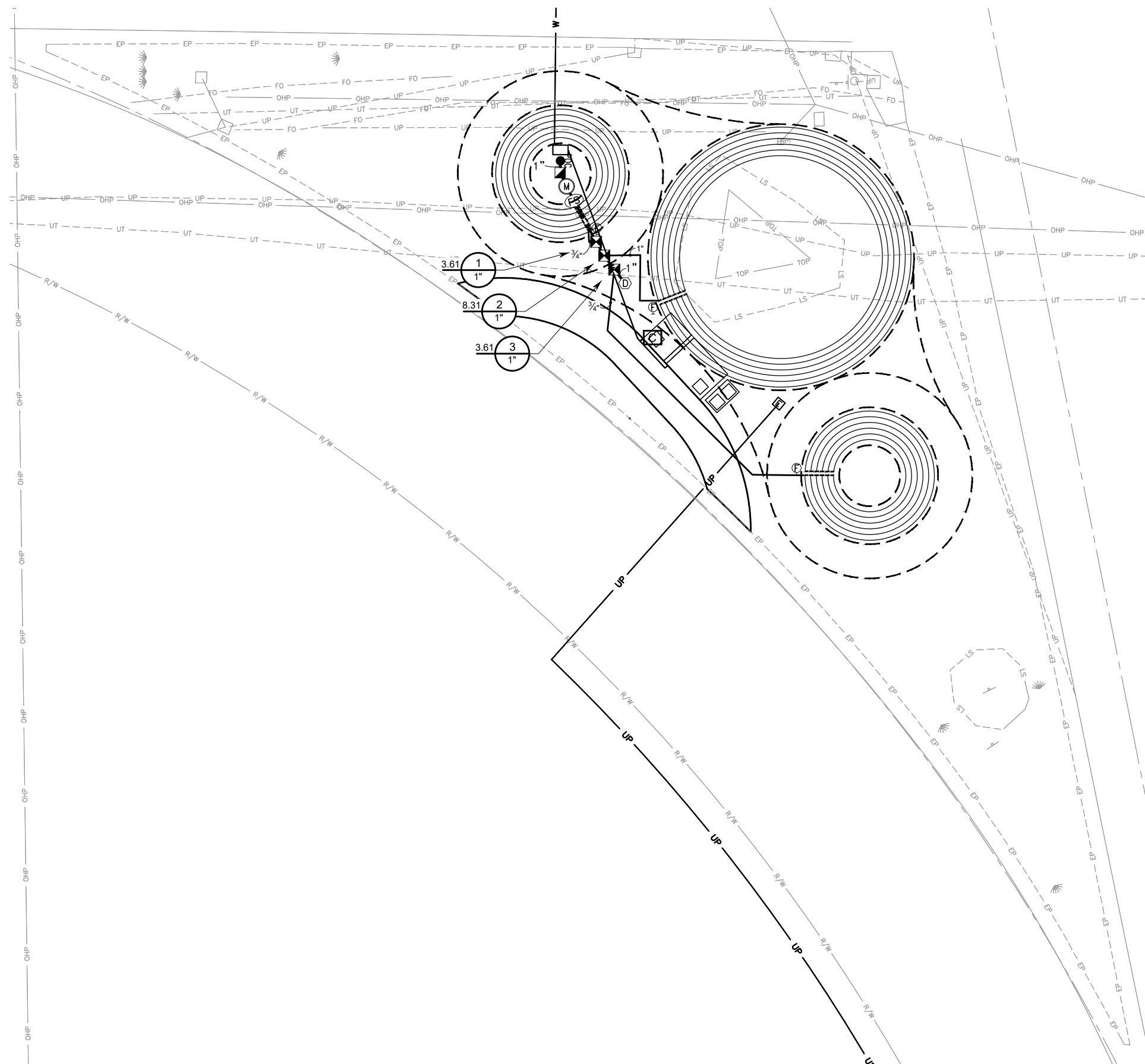
- use in this project. No substitution of top soil shall be allowed without prior written authorization from the Landscape Architect.
10.All plants used for this project shall conform to the following:
A. Any inspection certificates required by law shall accompany each delivery of plants and such certificate shall be filed with the Landscape Architect. All plants shall be subject to inspection and approval at the place of growth or upon delivery to the site for their quality, size, species, and variety. Such approval shall not impair the right of inspection and rejection at the site or during progress of work for size and condition of the plants, latent defects, or injuries. Any and all rejected plants shall be removed immediately from the premises by the Contractor. The Contractor shall make all replacements at his expense should he fail to comply in full with any of the specifications. Necessary replacements will be made as soon as weather conditions permit and all such plants replaced shall conform to all specifications herein.
B. Plants shall be fresh and vigorous, of normal habit and growth, and free of disease, insects and insect eggs and insect larvae, weeds and weed seed. No heeled-in plants from cold storage shall be accepted except on approval by the Landscape Architect prior to installation.
11.All plants shall be installed using the following procedures:
A. Plants shall be generally located as indicated by the drawing. The Contractor shall stake out the location of all plants and planting areas, and no excavation or installation shall commence until such locations have been approved by the Landscape Architect.
B. All trees and shrubs shall be planted in pits as detailed in the planting details contained herein or as noted on the drawings. Tree and shrub pits shall be circular in outline, with 45° angled sides and the base diameter of the plant pit at least two (2) times the diameter of the rootball of each plant to be installed. They shall be one to two and one half (1 - 2 1/2) inches shallower than the rootball depth. When the plant is properly placed in the plant pit, the root collar shall be at or approximately one (1) inch above finished grade. The sides of the plant pit shall be roughened, and not smooth or sculpted.
C. All plant and tree pits shall be backfilled with imported topsoil mix and required amendments. See Notes 6 and 7.
D. For container grown plants, remove the container and place the plant vertically in the plant pit, directly on undisturbed soil. The root crown or collar shall be at or approximately one (1) inch above the finished grade. Perennial plants and ornamental grasses shall be planted with root collar at finished grade.
E. For balled and burlapped plants, place the plant vertically in the center of the pit, with the rootball resting on undisturbed soil. Cut and remove the wire basket and burlap or other wrapping material from the rootball. This may be done with the rootball in the pit. Any burlap or wire pieces underneath the rootball may be left in place if they cannot be removed. Do not fold the burlap over, but cut away as much as possible without disturbing the rootball. No burlap shall be pulled from under the rootball. Backfill the bottom one third (1/3) of the pit as the wire and burlap are removed. In all cases, maintain the integrity of the rootball.
F. Specified backfill material shall be carefully and firmly worked and tamped under and around the rootball to fill all voids. When backfilled and compacted to two thirds (2/3) the depth of the pit, thoroughly water with a hose to completely soak the roots and remove any air pockets.
G. The plant pit shall then be completely backfilled with the specified backfill mix and tamped well. A shallow watering basin or rain cup shall be formed around each plant. This basin will be equal in diameter to that of the original planting pit.
H. After planting, the following operations shall be performed:
I. Stake and mulch all trees per installation details.
II. Remove all nursery stakes ties, and tags from all plants. Prune and remove any dead, damaged, or broken branches. Maintain side growth on all trees.
12.All plants shall be thoroughly watered immediately after planting. This shall mean full and thorough saturation of all backfill in the pits and beds during the same day of planting. Water shall be applied only by open end hose at very low pressure to avoid air pockets, injury to the plant, or washing away of backfill. When installed, watered, and fully settled, the plants shall be vertical. Subsequent watering shall be provided by the site's irrigation system. The Contractor shall ensure that all plants, especially trees, receive sufficient water to maintain healthy growth and vigor. Over-watering shall be avoided, and prolonged saturation of the soil around the trees shall be eliminated by appropriately controlling the irrigation circuit which provides water to that area.
13.A weed barrier fabric shall be placed in all planting beds to receive stone mulch to prevent the growth and spread of unwanted vegetation. The fabric shall be Typar #3301B or approved equal. Do not install weed barrier fabric under bark mulch.
14.Mulch (see plant materials schedule and specifications for size requirements) shall be placed to a depth of three (3) inches on top of the topsoil in all planting beds and over tree planting pits. The finished grade of the mulch shall be as follows:
A. Two (2) inches below the surface or finished grade of any paving, mowstrips, or walks adjacent to the planting area.
B. One (1) inch below top of metal edging.
C. At adjacent finished grade of the turf surrounding tree planting pits.
D. In tree pits, the mulch shall be kept six (6) inches away from the base of the tree.
E. Just prior to placement of the mulch, the Contractor shall treat the mulched areas with a pre-emergent herbicide according to the manufacturer's recommendations.
15.Throughout the course of planting, excess and waste materials as well as excavated subsoil shall be continuously and promptly removed. All areas shall be kept clear and all reasonable precautions taken to avoid damage to existing structures, plants, and grass. When planting has been completed in an area, it shall be thoroughly cleaned of all debris, rubbish, subsoil, and waste materials. These shall be removed from the property and disposed of legally. All planting tools shall also be put away.
16.Substantial Completion shall be defined as the complete installation of all plant materials, staking, mulching, and other work on the project in its entirety. Substantial completion shall not be given on designated portions of a project.
A. At substantial completion of all planting work outlined in these plans, the Contractor shall contact the Landscape Architect to arrange for a walk through to verify that all aspects of the work have been completed. Work must be fully completed (except for final clean-up) according to all plans, notes, and specifications and exhibit professional

- workmanship.
B. Notice by the Contractor shall be given, in writing, at least three (3) days in advance to the Owner's Representative and Landscape Architect so that proper scheduling can be made for those who are to attend.
C. At the appointed time, an inspection of all plant materials, including staking and mulching, shall be made.
D. A list of uncompleted items (punch list) shall be generated by the Landscape Architect and distributed to the Contractor and other involved parties within three (3) days of the substantial completion inspection. Each item on the punch list shall be corrected before the project will be approved and accepted by the Owner's representative. The Contractor will be back charged for time spent by the Owner and any consultants who have been brought to the site for a final inspection when the project is not ready for said inspection.
17.The maintenance/establishment period shall begin one (1) day after the substantial completion inspection. The Contractor shall complete all punch list items during this period, as well as maintain and operate the entire irrigation system. The Contractor shall maintain all plantings until the turf is fully established. The turf shall be considered fully established when turf grass stands come in uniform and thick, with no bare or thin spots, and roots have begun to spread and knit together. No weeds shall be allowed in the grass areas. The maintenance and establishment shall be a minimum period of sixty (60) days (or greater if so identified in the technical specifications), and shall take place during the growing season defined as April 15th through October 15th. Should the maintenance and establishment period not be fully complete prior to October 15th, the balance of the time shall be carried over and start up again on April 15th. Should mild winter weather allow the continuance of work beyond October 15th, the contractor, owner, and landscape architect may mutually agree if these dates can be adjusted along with specific requirements to do so. The maintenance work required shall include but not be limited to the following:
A. Appropriate watering of all plant materials.
B. Weeding and removal of all weeds from groundcover and planting areas.
C. Replacement of any dead, dying, or damaged trees, shrubs, perennials, or groundcover.
D. Filling and replanting of any low areas which may cause standing water.
E. Adjusting of sprinkler head heights and watering patterns.
F. Filling and re-compaction of eroded areas, along with any required re-seeding and/or replanting.
G. The turf grass shall be mowed when the blades reach three (3) inches tall and maintained to a minimum height of two (2) inches. No more than one third (1/3) of the blade shall be removed per cutting. The cutting frequency shall be once every five (5) to seven (7) days depending upon turf grass height and growth rate.
H. Weekly removal of all trash, litter, clippings, and all foreign debris.
I. At thirty (30) days after planting, a balanced fertilizer (16-16-16) shall be applied to the turf grass areas at a rate of one half (1/2) pound of nitrogen per one thousand (1,000) square feet.
J. At intervals of thirty (30) days after the first application of fertilizer to the turf grass, apply a balanced fertilizer (16-16-16) at a rate of one half (1/2) pound of nitrogen per one thousand (1,000) square feet until the turf grass is established.
18.A final inspection shall be held prior to the end of the maintenance period to ensure that all punch list items have been completed and the entire project is ready for acceptance by the Owner. Upon satisfaction that the Contractor has completed all punch list items, the irrigation system is fully and completely functional, and the required As-Built drawings and maintenance manuals have been submitted, the Owner shall accept the project. An official letter of final acceptance shall be prepared and issued to the Contractor, Landscape Architect, and the Owner's representative. Upon final acceptance of the project by the Owner's representative, the Owner shall assume full responsibility for the project, and the guarantee period shall begin.
19.Upon final acceptance of the project as being properly installed, the Contractor shall guarantee the plant materials as follows:
A. All shrubs and groundcovers shall be guaranteed by the Contractor as to growth and health for a period of sixty (60) days after completion of the maintenance period and final acceptance.
B. All trees shall be guaranteed by the Contractor to live and grow in an acceptable upright position for a period of one (1) year after completion of the maintenance period and final acceptance.
C. Any tree with 30% dead or missing canopy, shall be replaced as part of this plant guarantee.
20.The Contractor shall, within fifteen (15) days after receiving written notification by Owner's representative, remove and replace all guaranteed plant materials which die or become unhealthy or appear to be in a badly impaired condition at any time during the guarantee period. Any plants that settle below or rise above the desired finished grade shall also be reset to the proper grade.
A. All replacements shall be plants of the same kind, size, and quality as originally specified in the "plant list" and they shall be furnished, planted, staked, and maintained as specified herein at no additional cost to the owner.
B. The Contractor will not be responsible for plants destroyed or lost due to occupancy of the project, vandalism on the part of others, or improper maintenance or lack thereof.

JUB ENGINEERS, INC. 3611 S. Zintel Way Kennewick, WA 99337 Phone: 509.783.2144 www.jub.com
REGISTERED LANDSCAPE ARCHITECT JONATHAN P. RUEDAS OREGON 03/30/2022
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REVISION: NO. DESCRIPTION: BY: DATE:
UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN UMATILLA, OREGON
LANDSCAPE PLANTING NOTES
FILE: 33-21-003_LP-001
JUB PROJ. #: 33-21-003
DRAWN BY: #
DESIGN BY: JD
CHECKED BY: LLS
ONE INCH AT FULL SIZE. IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 9/8/2022
SHEET NUMBER: L-002

Plot Date: 9/8/2022 3:28 PM. Plotted By: Jenna Meyers. Date Created: 9/12/2022. JUB.COM\CENTRAL\CLIENTS\DR\UMATILLA\LAYOUT\PROJECT\33-21-003_KIWANISFALLS\CONCEPT\DESIGN\LANDSCAPE\33-21-003_LP-001.DWG

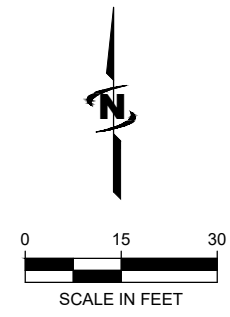
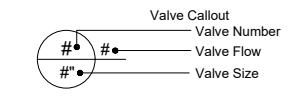
Plot Date: 9/19/2022 3:28 PM Plotted By: Jenna Meyers
 Date Created: 11/22/22 JUB:COM:CENTRAL:CLIENTS:GR:UMATILLA:ACTIVITY:PROJECT:SS:21:003_KIWANSIS:ALL:SCONCEPT:DESIGN:CAD:SHEET:13:2:003_L1-101.DWG



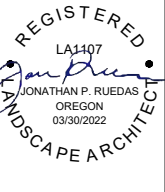
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
☒	Drip Control Zone Kit Hunter PCZ-101. Professional Drip Control Zone Kit 1" PGV globe valve w/1" HY100 filter system (150 mesh) with 25psi regulator.
⊕	Manual Drip Line Flush Valve PVC Ball Valve 1 1/2" (Drain Valves plumbed to exhaust header and placed at low point of a zone as needed)
	Area to Receive Dripline Netafim Dripline Netafim TLCV-04-12. Techline Pressure Compensating Landscape Dripline with Check Valve. 0.4 GPH emitters at 12" O.C. Dripline laterals spaced at 18" apart. 17mm.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
☑	Quick Coupler Valve Assembly Hunter HQ-44LRC quick coupler valve, yellow locking rubber cover, red brass and stainless steel, with 1" NPT inlet, 2-piece body. Also furnish an HK-44A key with a hose swivel (HS-1).
Ⓜ	Master Valve 1" Hunter ICV-G 1", 1-1/2", 2", and 3" Plastic Electric Master Valve, Globe Configuration, with NPT Threaded Inlet/Outlet, for Commercial/Municipal Use.
Ⓧ	Manual Drain Valve Assembly Apollo Bronze ball valve with weld top (78-621-01) 3/4" or approved equal.
ⓐ	Hunter PC-400 Light Commercial & Residential Controller, 4-station base module controller, 120 VAC, Outdoor model
ⓕ	Flow Sensor Hunter FLOW-CLIK-100. Flow Sensor SOV with Interface Panel, 1" Schedule 40 Sensor Body, 24 VAC, 2 amp, install Interface Panel as required.
ⓐ	Point of Connection 2" Connect downline of Backflow Preventor. See Civil drawings for details on Backflow Prevention Device.
—	Irrigation Lateral Line: PVC Schedule 40
- - -	Irrigation Mainline: PVC Schedule 40



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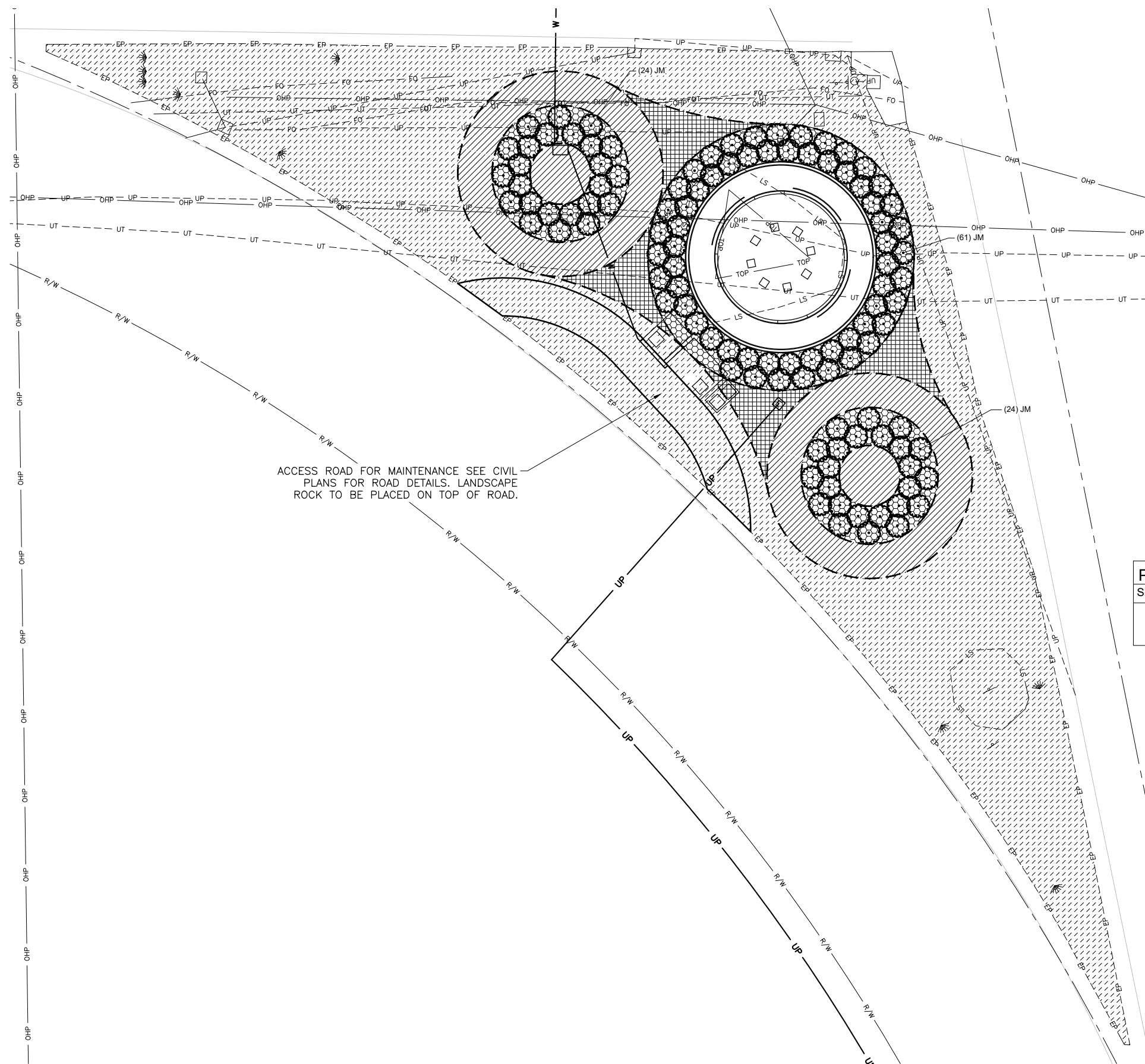
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NO.	REVISION	DESCRIPTION	BY	APPR.	DATE

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
UMATILLA, OREGON
 LANDSCAPE IRRIGATION PLAN

FILE: 33-21-003_L1-101
JUB PROJ. #: 33-21-003
DRAWN BY: #
DESIGN BY: JD
CHECKED BY: LLS
AT FULL SIZE, IF NOT ONE INCH SCALE ACCORDINGLY
LAST UPDATED: 9/9/2022
SHEET NUMBER: L-101

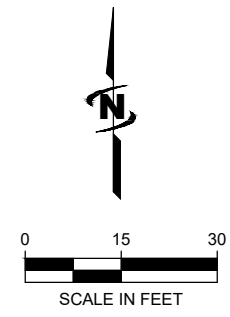
Plot Date: 9/19/2022 3:28 PM Plotted By: Jenna Meyers
 Date Created: 9/12/2022 JUB:COM:CENTRAL:CLIENTS:GR:UMATILLA:ACTIVITY:PROJECT:33-21-003_KIWANIS:AL:SCONCEPT:DESIGN:CAD:SHEET:03-21-003_LP-101.DWG



ACCESS ROAD FOR MAINTENANCE SEE CIVIL PLANS FOR ROAD DETAILS. LANDSCAPE ROCK TO BE PLACED ON TOP OF ROAD.

MATERIALS SCHEDULE		
SYMBOL	DESCRIPTION	QTY
	1 1/2" Rock Mulch - Black and Tan or Approved Equal Source: Clem Matylinski Eagle Rock Kennewick WA 509-627-6675	14 cy
	1 1/2" Rock Mulch - Desert Brown or Approved Equal Source: Clem Matylinski Eagle Rock Kennewick WA 509-627-6675	31 cy
	2"-4" Rock Mulch - Desert Brown or Approved Equal Source: Clem Matylinski Eagle Rock Kennewick WA 509-627-6675	36 cy
	Existing stockpiled rock mulch	
	Corten 8" Metal Edging - 11 Gauge or Approved Equal Source: www.corten.com 855-426-7836	1,100 lf

PLANT SCHEDULE					
SHRUBS	CODE	QTY	BOTANICAL / COMMON NAME	CONT	
	JM	109	Juniperus sabinum 'Monard' TM / Moor-Dense Juniper	5 gal	



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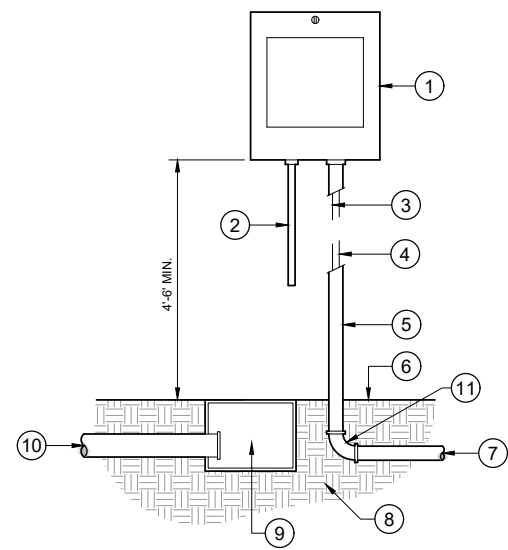
NO.	REVISION	DESCRIPTION	BY	APPR.	DATE

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON
 LANDSCAPE PLANTING PLAN

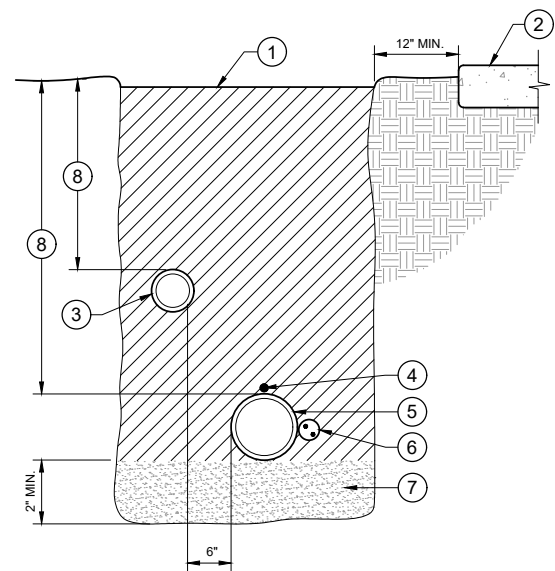
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 DESIGN BY: JD
 CHECKED BY: LLS
 AT FULL SIZE. IF NOT ONE INCH SCALE ACCORDINGLY
 LAST UPDATED: 9/9/2022
 SHEET NUMBER:
L-102

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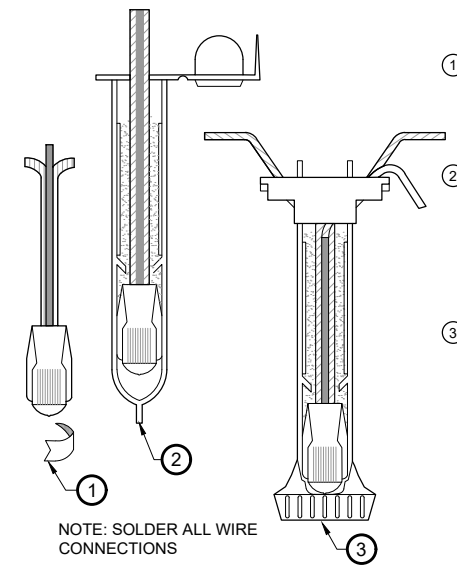


1 WALL-MOUNT CONTROLLER
 NTS



2 TRENCH DETAIL
 NTS

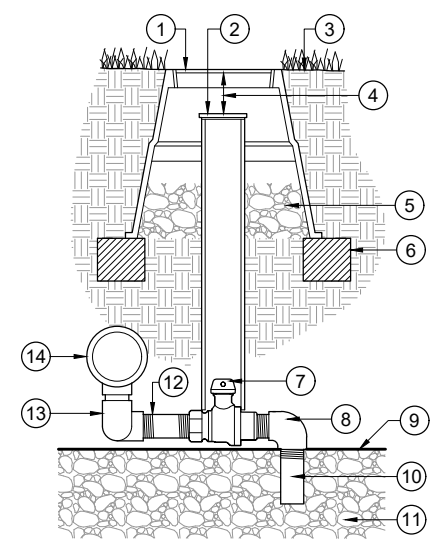
- 1 BACKFILL MATERIAL - SEE NOTES, COMPACT TO 90% MDD
 - 2 ADJACENT HARD SURFACE
 - 3 NON-PRESSURE LATERAL LINE
 - 4 MAIN LINE LOCATOR WIRE; BURIED WITH ALL MAIN LINES
 - 5 PVC MAIN LINE
 - 6 DIRECT BURIAL, LOW VOLTAGE CONTROL WIRES; TO BE BURIED AND TAPED AT 10' INCREMENTS. LOCATE DIRECTLY ADJACENT TO MAIN LINE.
 - 7 BEDDING MATERIAL - SEE NOTES
 - 8 PIPE DEPTHS - SEE NOTES
- NOTE: SEE SLEEVING DETAIL FOR TRENCHING IN PAVED AREAS.



3 3M DBR/Y DIRECT BURY SPLICE KIT
 NTS

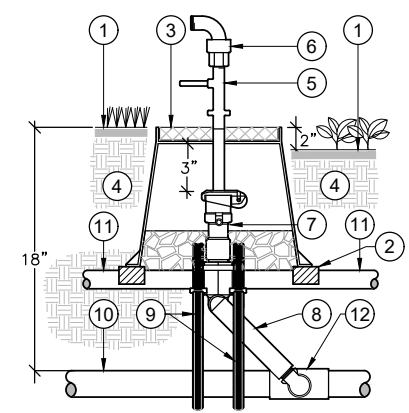
- 1 STRIP WIRE AND APPLY PERFORMANCE PLUS WIRE CONNECTOR R/Y ELECTRICAL CONNECTOR IN A CLOCKWISE DIRECTION.
- 2 INSERT SPLICE TO BOTTOM OF GEL FILLED TUBE. VISUALLY CHECK TO MAKE SURE CONNECTOR HAS BEEN PUSHED PAST THE LOCKING FINGERS AND IS SEATED ON THE BOTTOM OF THE TUBE.
- 3 POSITION WIRES IN WIRE CHANNELS AND CLOSE INSULATOR TUBE COVER.

NOTE: SOLDER ALL WIRE CONNECTIONS



4 MANUAL DRAIN VALVE ASSEMBLY
 NTS

- 1 10" ROUND GREEN PLASTIC VALVE BOX WITH BOLT LOCK (CARSON OR APPROVED EQUAL)
 - 2 4" PVC SCHEDULE 40 PIPE SLEEVE (NOTCH TO FIT PIPE), CAPPED BY YELLOW CAM LOCK SNUG CAP
 - 3 FINISHED GRADE
 - 4 3" MIN. 6" MAX. CLEARANCE
 - 5 4" MIN. PEA GRAVEL
 - 6 4 X 4 PRESSURE TREATED WOOD TIMBER FRAME
 - 7 3/4" VALVE - SEE IRRIGATION EQUIPMENT SCHEDULE
 - 8 3/4" 90 DEGREE STREET ELL
 - 9 FILTER FABRIC COVERING SUMP
 - 10 3/4" X 6" PVC SCHEDULE 80 TOE NIPPLE
 - 11 3/4" GRAVEL SUMP - 6 C.F. MIN. SIZE
 - 12 3/4" X 12" PVC SCHEDULE 80 NIPPLE
 - 13 (2) FIPT X FIPT 90 DEGREE ELL, (2) 3/4" X CLOSE PVC NIPPLE
 - 14 PVC MAIN LINE AND SERVICE TEE
- NOTE: MAIN LINE SHALL GRAVITY DRAIN TO MANUAL DRAIN VALVE. MANUAL DRAIN VALVE SHALL BE PLACED IN ALL LOW SPOTS AND WHERE SHOWN ON THE PLAN.

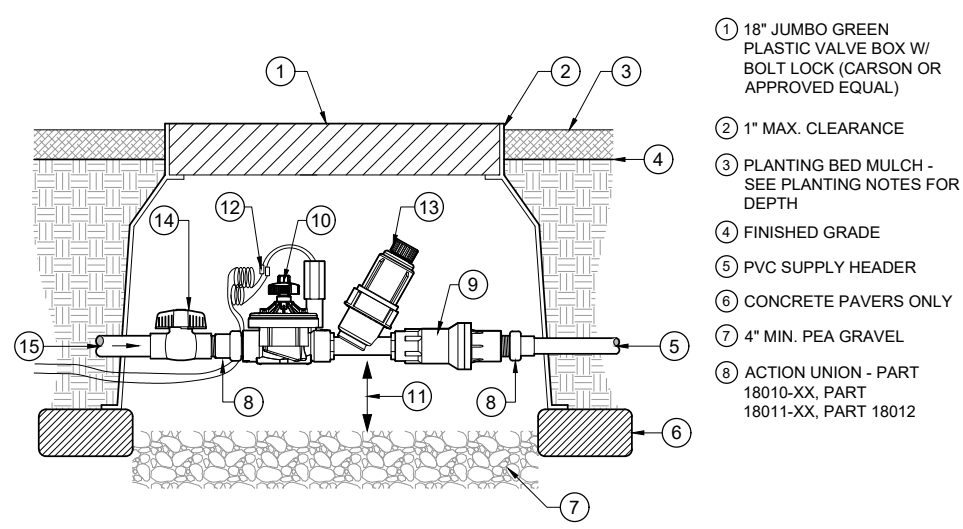


5 QUICK COUPLING VALVE ASSEMBLY
 NTS

- 1 FINISH GRADE
- 2 4 X 4 PRESSURE TREATED WOOD TIMBER FRAME
- 3 10" ROUND GREEN PLASTIC VALVE BOX W/ BOLT LOCK (CARSON OR APPROVED EQUAL)
- 4 APPROVED BACKFILL
- 5 QUICK COUPLER KEY
- 6 QUICK COUPLER HOSE SWIVEL
- 7 QUICK COUPLER VALVE (SEE IRRIGATION EQUIPMENT SCHEDULE)
- 8 LASCO STANDARD UNITIZED SWING JOINT, WITH SNAP-LOK STABILIZER ELBOW OUTLET. NOTE: INLET IS MIPT, OUTLET IS BRASS MIPT W/SNAP LOK
- 9 3/8" OR 1/2" X 24" REBAR (2) REQUIRED
- 10 MAINLINE PIPE, PVC - SEE IRRIGATION PLAN
- 11 1" PVC PIPE STABILIZER (OPTIONAL)
- 12 SERVICE TEE OR ELBOW, SCH40. (SIZE PER PLAN), SIZE TEE/ELBOW FIPT OUTLET BASED ON MIPT INLET SIZE OF THE SWING JOINT

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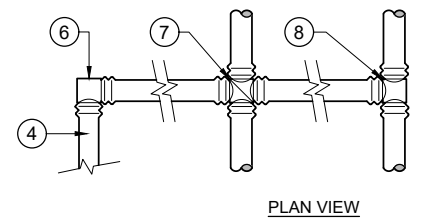
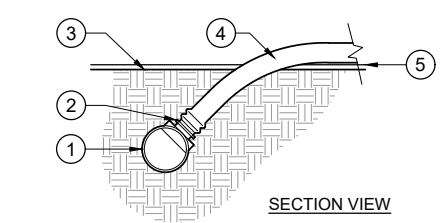
NO.	REVISION	DESCRIPTION	BY	DATE



1 DRIP ZONE KIT REMOTE CONTROL VALVE ASSEMBLY
NTS

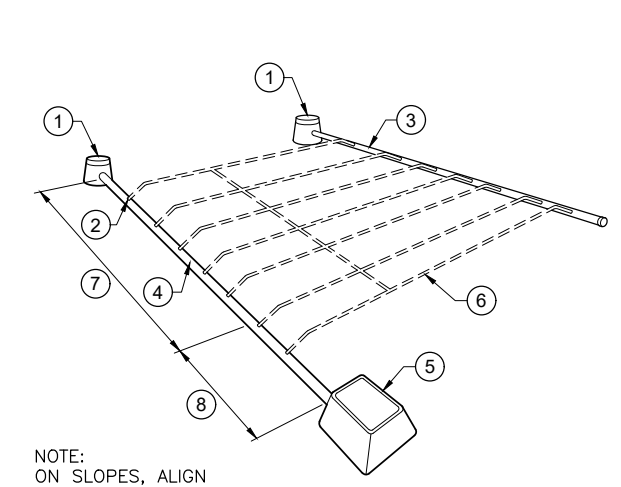
- 1 18" JUMBO GREEN PLASTIC VALVE BOX W/ BOLT LOCK (CARSON OR APPROVED EQUAL)
- 2 1" MAX. CLEARANCE
- 3 PLANTING BED MULCH - SEE PLANTING NOTES FOR DEPTH
- 4 FINISHED GRADE
- 5 PVC SUPPLY HEADER
- 6 CONCRETE PAVERS ONLY
- 7 4" MIN. PEA GRAVEL
- 8 ACTION UNION - PART 18010-XX, PART 18011-XX, PART 18012

- 9 INLINE PRESSURE REGULATOR - SEE IRRIGATION EQUIPMENT SCHEDULE
- 10 ELECTRIC CONTROL VALVE - SEE IRRIGATION EQUIPMENT SCHEDULE
- 11 2" MIN. CLEARANCE
- 12 (2) 3M DBR/Y WATER TIGHT WIRE CONNECTORS
- 13 INLINE FILTER - SEE IRRIGATION EQUIPMENT SCHEDULE
- 14 APOLLO FULL PORT BRASS VALVE
- 15 FLOW FROM PVC MAIN LINE



2 DRIPLINE CONNECTIONS
NTS

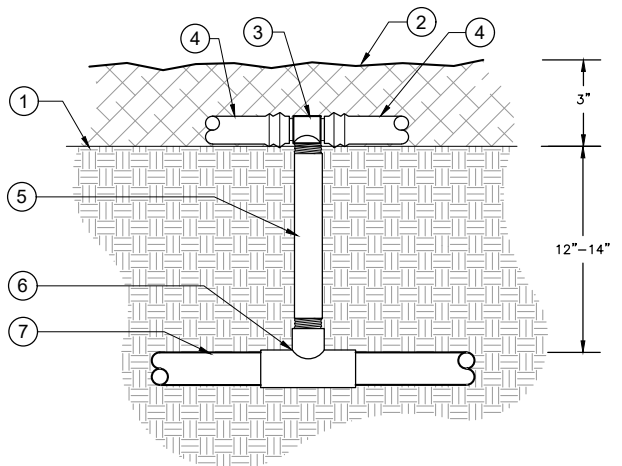
- 1 1 1/2" PVC HEADER
- 2 NETAFIM TLIAPVC CONNECTION
- 3 PLANTING BED FINISHED GRADE
- 4 DRIPLINE / BLANK TUBING
- 5 WEED BARRIER FABRIC
- 6 ELBOW
- 7 CROSS
- 8 TEE



NOTE:
ON SLOPES, ALIGN DRIPLINE PARALLEL TO THE CONTOURS OF THE SLOPE.

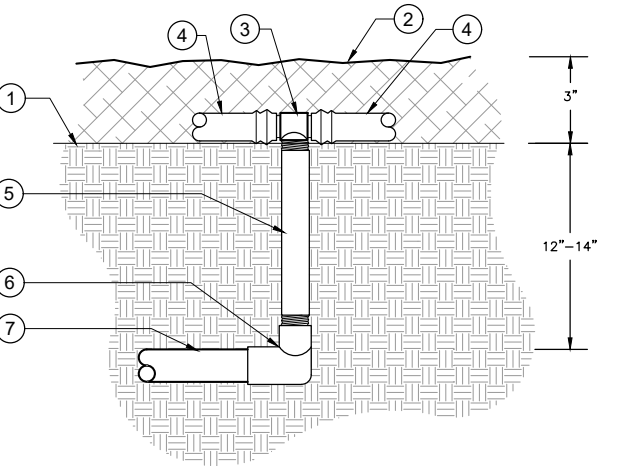
3 DRIPLINE CIRCUIT LAYOUT
NTS

- 1 MANUAL FLUSH VALVE PLUMBED TO PVC IN LOWEST POINT
- 2 NETAFIM TLIAPVC CONNECTOR
- 3 1 1/2" PVC EXHAUST HEADER (SEE NOTES FOR DEPTH)
- 4 1 1/2" PVC SUPPLY HEADER (SEE NOTES FOR DEPTH)
- 5 REMOTE CONTROL VALVE ASSEMBLY
- 6 DRIPLINE TUBING LATERAL - INSTALL AT GRADE UNDER MULCH AND ON TOP OF FABRIC (IF FABRIC IS USED)
- 7 ON SLOPES, USE THE SPECIFIED DRIPLINE SPACING ON THE TOP 2/3 OF THE SLOPE
- 8 ON SLOPES, USE THE SPECIFIED DRIPLINE SPACING PLUS 25% ON THE BOTTOM 1/3 OF SLOPE



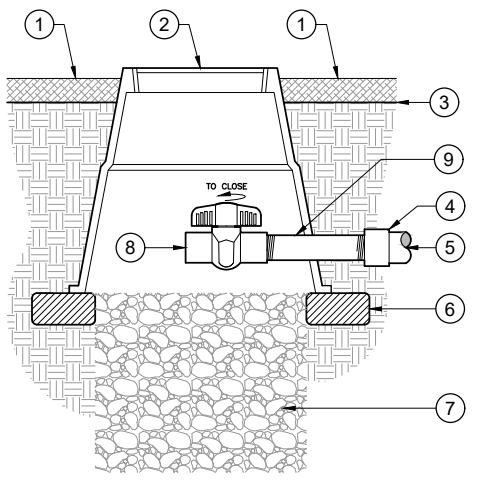
4 DRIP TEE CONNECTION TO PVC RISER AND INSERT TEE
NTS

- 1 FINISHED GRADE
- 2 BARK MULCH 3" DEPTH
- 3 COMBINATION TEE INS X INS X 3/4" FPT MODEL: TL075FTEE
- 4 TECHLINE CV DRIPLINE (SEE PLANS FOR EMMITER SIZE AND SPACING)
- 5 3/4" PVC MPT THREADED TOE NIPPLE RISER
- 6 PVC TEE (SXSXT) SIZED AS NEEDED
- 7 PVC LATERAL LINE (SEE PLANS FOR SIZE AND TYPE)



5 DRIP ELL CONNECTION TO PVC RISER AND INSERT TEE
NTS

- 1 FINISHED GRADE
- 2 BARK MULCH 3" DEPTH
- 3 COMBINATION TEE INS X INS X 3/4" FPT MODEL: TL075FTEE
- 4 TECHLINE CV DRIPLINE (SEE PLANS FOR EMMITER SIZE AND SPACING)
- 5 3/4" PVC MPT THREADED TOE NIPPLE RISER
- 6 PVC TEE (SXSXT) SIZED AS NEEDED
- 7 PVC LATERAL LINE (SEE PLANS FOR SIZE AND TYPE)



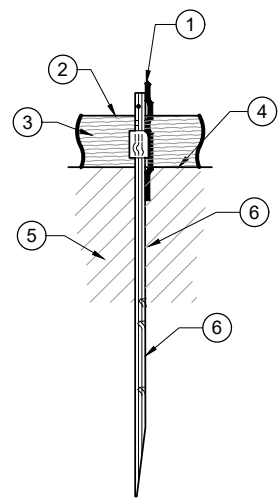
6 DRIP FLUSH VALVE (PLUMBED TO PVC EXHAUST HEADER)
NTS

- 1 PLANTING BED MULCH - SEE PLANTING NOTES FOR DEPTH
- 2 8" ROUND GREEN PLASTIC VALVE BOX (CARSON OR APPROVED EQUAL) FLUSH WITH MULCH GRADE
- 3 FINISHED GRADE
- 4 PVC REDUCER BUSHING (SP X 1/2") FIPT - SIZE AS REQUIRED
- 5 PVC EXHAUST HEADER
- 6 CONCRETE PAVERS ONLY
- 7 1 C.F. WASHED PEA GRAVEL
- 8 1/2" PLASTIC PVC BALL VALVE
- 9 1/2" X 6" (SCH. 80 PVC) NIPPLE TBE

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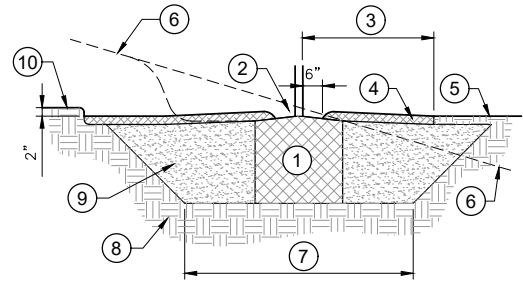
NO.	REVISION	DESCRIPTION	BY	DATE

UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON
 LANDSCAPE PLANTING AND SIGN DETAILS



- ① METAL EDGING - SEE MATERIALS SCHEDULE FOR TYPE AND SIZE
- ② FINISH GRADE OF ROCK MULCH 1" BELOW TOP OF EDGING
- ③ MULCH - SEE PLANT MATERIAL SCHEDULE FOR TYPE AND SIZE
- ④ COMPACT GRADES ADJACENT TO EDGING TO AVOID SETTLING
- ⑤ TOPSOIL - SEE NOTES AND SPECIFICATIONS FOR TYPE AND DEPTH
- ⑥ 12' STAKES @ 4' O.C. (TYP.)

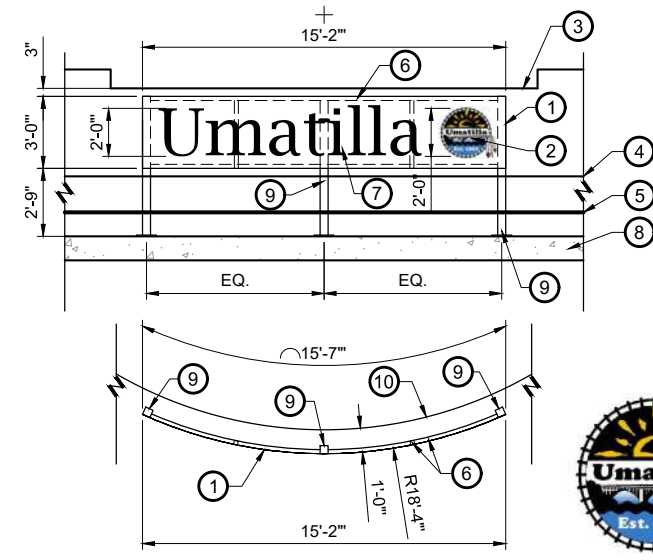
1. THIS DETAIL MAY NOT REFLECT EXACT MANUFACTURER'S INSTALLATION DETAILS DEPENDING ON SPECIFIED METAL EDGING.
2. CALLOUTS 2-5 APPLY REGARDLESS OF SPECIFIED METAL EDGING.
3. IF MANUFACTURER'S INSTALLATION DETAILS DIFFERS FROM THIS DETAIL, CONTRACTOR SHALL SUBMIT MANUFACTURER'S DETAILS FOR LANDSCAPE ARCHITECT'S APPROVAL PRIOR TO INSTALLING METAL EDGING.



- ① ROOTBALL
- ② CROWN - APPROXIMATELY 1" ABOVE FINISH GRADE
- ③ 3' RADIUS CIRCLE OF SHREDDED BARK MULCH WHEN TREE IS LOCATED IN TURF
- ④ 3" LAYER OF MULCH
- ⑤ FINISHED GRADE
- ⑥ FINISHED GRADE AT SLOPE (WHERE SLOPE OCCURS)
- ⑦ 2X ROOTBALL DIA. MIN. W/ 45 DEGREE SIDES
- ⑧ UNDISTURBED SOIL
- ⑨ BACKFILL MIX (SEE PLANTING NOTES)
- ⑩ TOP OF PAVING (WHERE APPLICABLE)

1 LANDSCAPE METAL EDGING-ROCK MULCH
 NTS

2 TREE/SHRUB PLANTING
 NTS



- ① 1/4" THICK POWDER COATED STAINLESS STEEL SIGN - CORTEN COLOR - TO BE APPROVED BY OWNER AND LANDSCAPE ARCHITECT
- ② BRUSHED STAINLESS STEEL CITY OF UMATILLA LOGO SIGN - MOUNT FLUSH TO SIGN
- ③ TOP OF FOUNTAIN WEIR WALL
- ④ TOP OF FOUNTAIN WALL LOWER TIER
- ⑤ FINISHED GRADE
- ⑥ 2"x2" STEEL FRAME - MOUNT SIGN TO FRAME
- ⑦ BRUSHED STAINLESS STEEL LETTERING - MOUNT FLUSH TO SIGN - FONT LUCIDA BRIGHT
- ⑧ FOUNDATION SLAB - SEE STRUCTURAL PLANS AND DETAILS
- ⑨ 4"x4" POWDER COATED STAINLESS TUBE STEEL - MOUNT TO FOUNDATION SLAB - SEE STRUCTURAL SHEET S-501 DETAIL 5 FOR COLUMN BASE DETAILS
- ⑩ UPPER TIER FACE OF WALL

1. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ENGINEER AND LANDSCAPE ARCHITECT FOR FINAL APPROVAL PRIOR TO FABRICATION AND INSTALLATION
2. CITY OF UMATILLA LOGO ON LEFT IS FOR THE CONTRACTOR'S USE TO DEVELOP STAINLESS STEEL CITY LOGO SIGN

3 ENTRY MONUMENT SIGN DETAILS
 NTS

MUN-KI-08

REUSE OF DRAWINGS
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NO.	REVISION	DESCRIPTION	BY	DATE

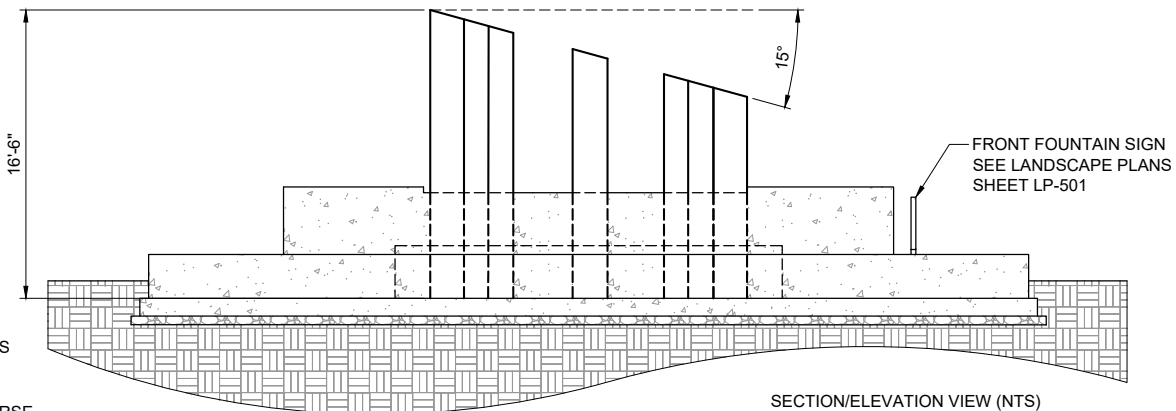
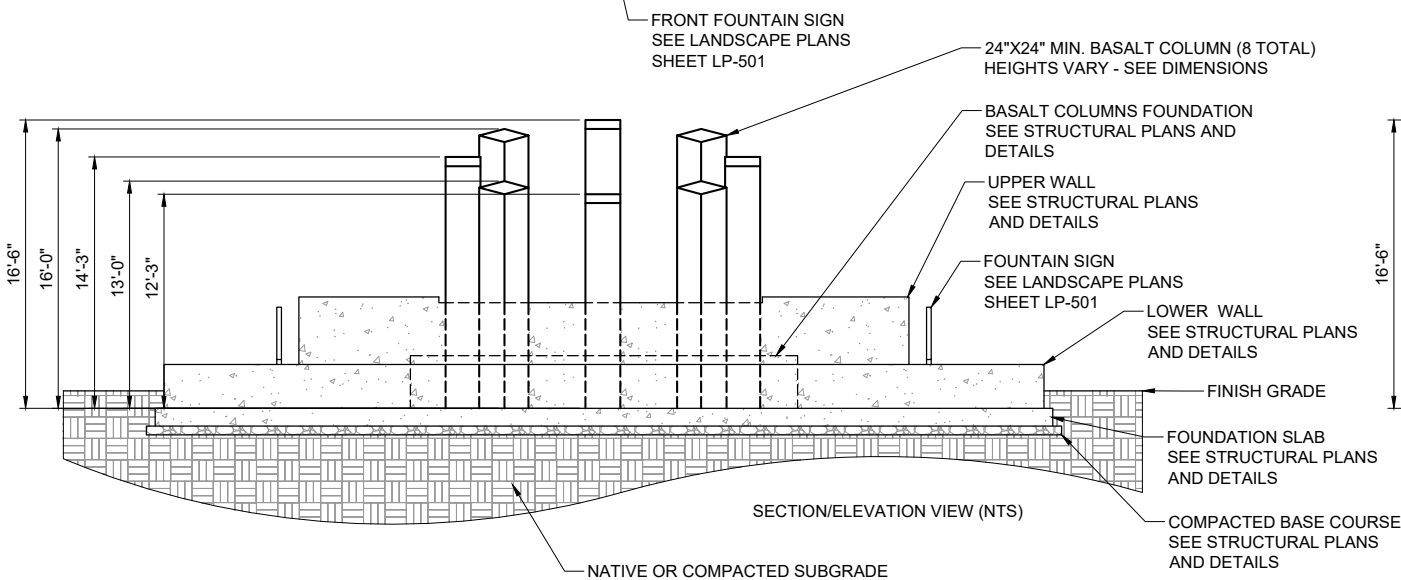
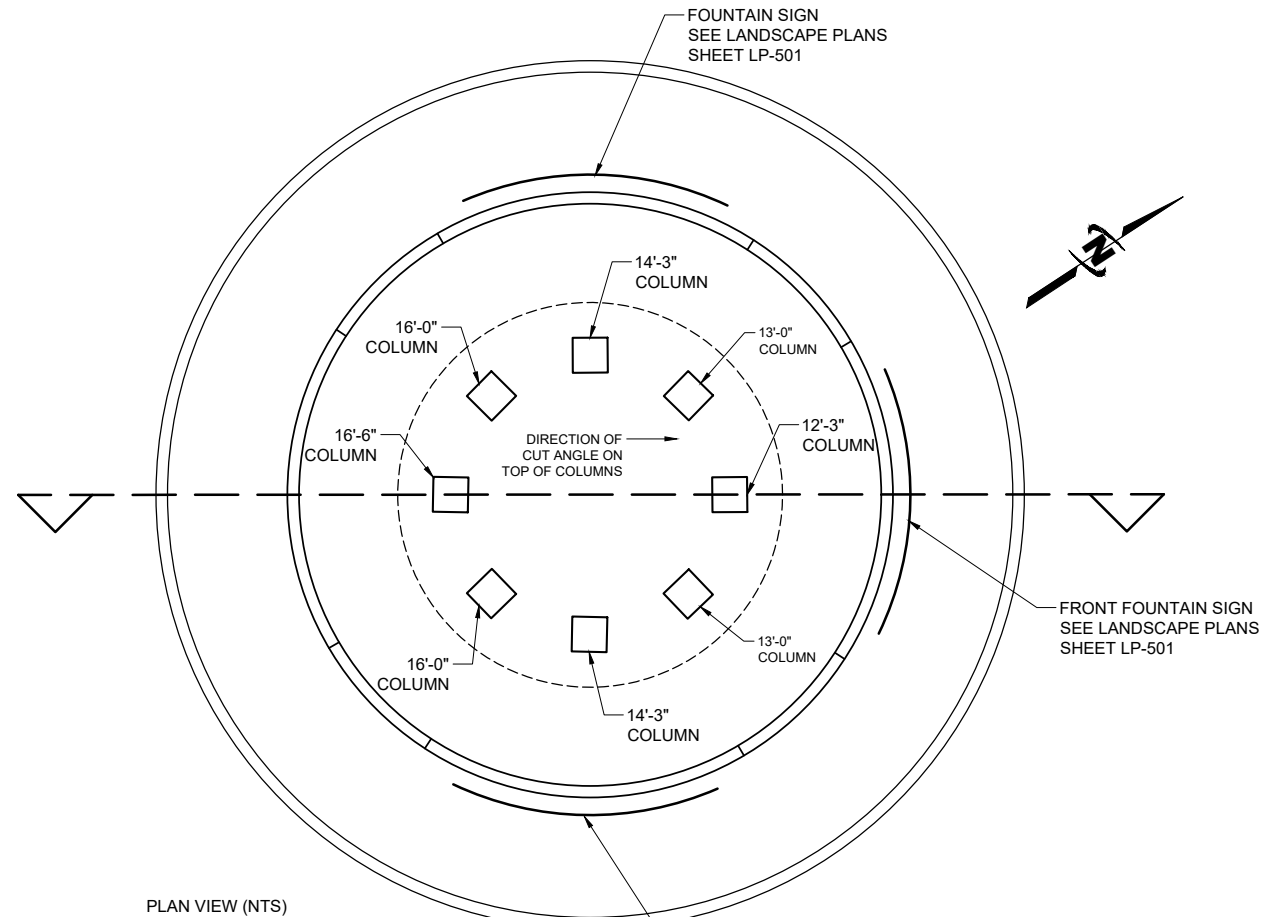
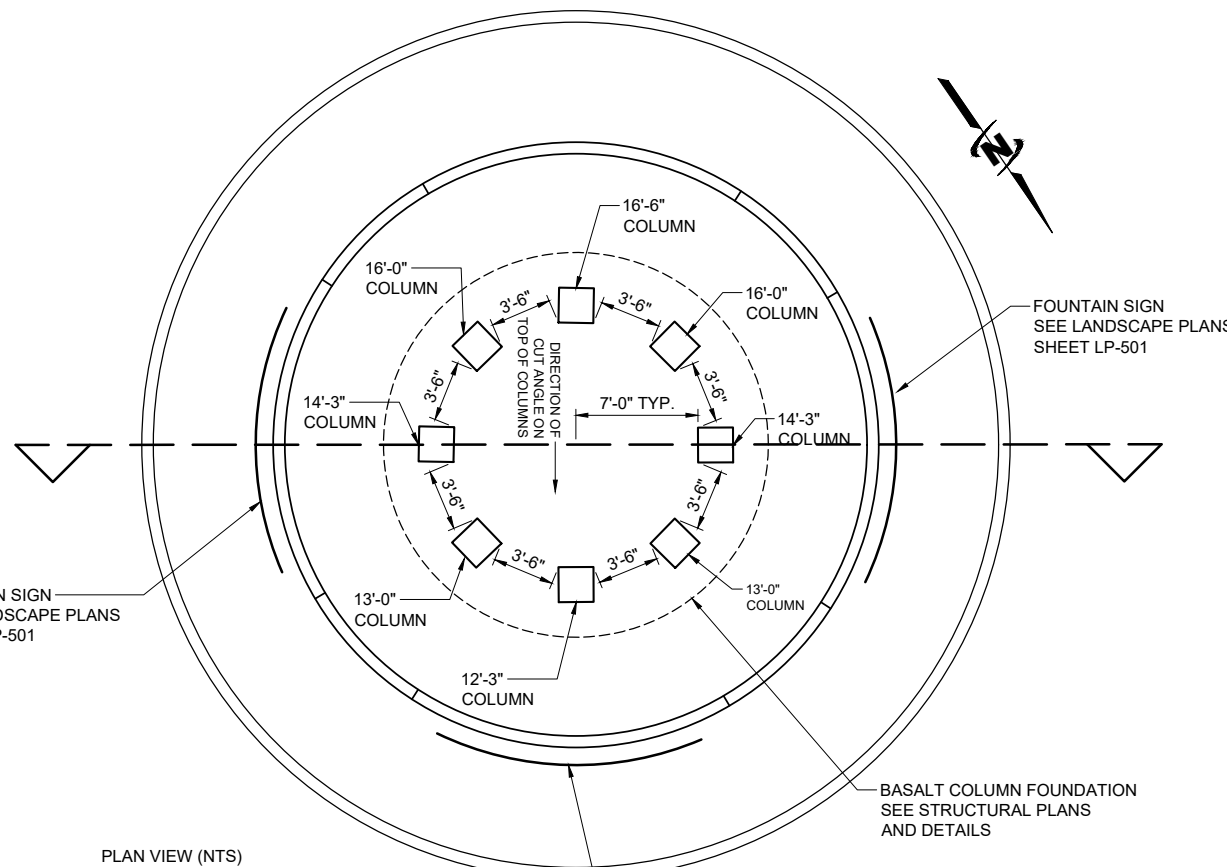
UMATILLA FALLS ENTRY MONUMENT/FOUNTAIN
 UMATILLA, OREGON
 BASALT COLUMN DETAILS

FILE: 33-21-003_LP-502
 JUB PROJ. #: 33-21-003
 DRAWN BY: #
 DESIGN BY: JD
 CHECKED BY: LLS

ONE INCH
 AT FULL SIZE, IF NOT ONE
 INCH, SCALE ACCORDINGLY
 LAST UPDATED: 09/2022

SHEET NUMBER:

L-504



SHEET NOTES

1. TOPS OF BASALT COLUMNS SHALL BE SAW CUT AT A 15° ANGLE PER THE DETAILS ON THIS SHEET. THE TOP SHALL HAVE A FLAME TEXTURE TREATMENT AND SEALED.
2. COORDINATE SELECTION AND FINAL APPROVAL OF ALL BASALT COLUMNS WITH OWNER, ENGINEER, AND LANDSCAPE ARCHITECT.
3. WIDTH OF BASALT COLUMNS ARE CALLED OUT AS 24"X24". COLUMN WIDTHS MAY INCREASE UP TO 30"X30", BUT ONLY IF ALL COLUMNS HAVE THE SAME DIMENSIONS. COLUMN WIDTHS SHOULD BE CONSISTENT.
4. BASALT COLUMN DIMENSIONS ARE MEASURED FROM THE TALLEST POINT OF THE COLUMN TO THE TOP OF THE FOUNDATION SLAB.
5. BASALT COLUMNS ARE DRAWN AS SQUARED IN THE DETAILS WITH THE UNDERSTANDING THAT THERE WILL BE SOME IRREGULARITIES ON THE FACE OF THE COLUMNS.

1 BASALT COLUMNS
 NTS