

TCEP No.: 530-017-11

ADDENDUM NO. 2

The Architect/ Engineer issues this addendum, applicable to the above named project, to all known Contractors before receipt of proposal.

This addendum includes Items Number 2-1 to 2-17. This addendum item shall be fully incorporated into the Bidding/Contract Documents and have the same force and effect as though originally included.

GENERAL

Specification

Item 2-1: Notice to Bidders

Remove the first two paragraphs under Scope of Notice and replace with, "Sealed proposals will be received by Concordia University at the office of Buildings and Grounds, 700 E. Lincoln Street, Seward, Nebraska 68434, up to the hour of **5:00 p.m. local time, on the 18th of June, 2014**, for the furnishing of all labor, materials, equipment and services for the Concordia Plaza & Heartfelt Memorial Project located at Concordia University in Seward, Nebraska."

Item 2-2: 004200 – Proposal Form

This section has been reissued in its entirety.

Item 2-3: 012100 – Allowances

Remove this section in its entirety from the construction documents.

Item 2-4: 012300 – Alternates

Add this section in its entirety to the construction documents.

LANDSCAPE ARCHITECTURE

Drawings

Item 2-5: L1.03, L2.01, L3.01, L4.01 and L5.01 – Concordia Plaza Plans: Areas A & B

Reference SDL-002 included in this addendum. Add the site work detailed on this sheet in its entirety to the construction documents as Alternate L-2.

TCEP No.: 530-017-11

Item 2-6: L2.01 – Concordia Plaza Site Layout Plans: Areas A & B

Refer to the Concordia Plaza Site Layout Plan: Area A. Remove the note regarding the fountain allowance and replace with the following, “Concordia Plaza Fountain, reference Detail 7 on Sheet L6.02 and mechanical and electrical sheets for additional information.”

Refer to the Concordia Plaza Site Layout Plan: Area A. Add the following to the relocate existing sign note, “Refinish wall damaged due to demolition from the earthwork package as well as any damage sustained during this contract. Match the finish to the existing wall finish.”

Item 2-7: L2.02 – Heartfelt Memorial Site Layout Plan

Add the following General Notes:

“The following are Owner provided, Contractor installed materials for the area within the Heartfelt Memorial Site Limits:

- 1) Face Bricks for the three Donor Walls and the Lifetile Wall.
- 2) Benches
- 3) Concrete for the 5” thick concrete walks”

Item 2-8: L4.01 & L4.02 –Site Planting Plans

Refer to Detail 2, Planting Installation Details. Remove the following note, “Prepared planting soil to be provided under separate contract.”

Item 2-9: L6.01 – Site Details

This sheet is reissued.

Item 2-10: L6.02 – Site Details

This sheet is reissued.

Item 2-11: L6.03 – Site Details

Reference SDL-001 included in this addendum. Add Detail 4, “Alt L-1: Asphalt Pavement” in its entirety to the construction documents.

Specification

Item 2-12: 321216 – Hot Mix Asphalt Paving

This section is reissued in its entirety to the construction documents

Item 2-13: 131200- Fountains

This section is reissued its entirety to the construction documents

TCEP No.: 530-017-11

ELECTRICAL

Drawings

Item 2-14: E1.00 – Concordia Plaza Electrical Site Plans

This sheet is reissued in its entirety.

Item 2-15: E1.01 – Heartfelt Memorial Electrical Site Plans

Add this sheet in its entirety to the construction documents.

MECHANICAL

Drawings

Item 2-16: M0.00 – Mechanical Abbreviations, Symbols Legend & Notes

Add this sheet in its entirety to the construction documents.

Item 2-17: M1.00 – Mechanical Site Plan

Add this sheet in its entirety to the construction documents.

END OF ADDENDUM NO. 2

TCEP No.: 530-017-11

SECTION 004200 – BID PROPOSAL FORM

PROPOSAL FOR CONTRACT FOR
CONCORDIA UNIVERSITY
CONCORDIA PLAZA & HEARTFELT MEMORIAL
GENERAL CONSTRUCTION PACKAGE
SEWARD, NEBRASKA

Date: _____

Submitted To:

Submitted By: _____

Addenda Received: _____

The undersigned, having examined the plans, project manual and related documents, and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of labor, hereby proposes to furnish all labor, materials and supplies to do the work in accordance with the Contract Documents and terms and condition described below:

Recognizing that time will be of the essence, the undersigned proposes, upon execution of the Agreement Between Owner and Contractor or upon receipt of notice to proceed from the Owner (whichever comes first), to immediately start the Work of the Contract. The undersigned proposes to bring the work associated with the Concordia plaza pavement located between Janzow Campus Center and the Thom Leadership Education Center; and all pavement located between the Thom Leadership Education Center and the Football Stadium to a state of Substantial Completion by **September 22 , 2014**. The plaza pavement located in these areas must be available for use by the Owner on or before September 22, 2014 in order to accommodate Homecoming activities held on October 3, 4 and 5, 2014. Other project components such as Concordia plaza landscape, lighting, furnishings, etc. and all work associated with the Heartfelt Memorial site (including new parking) must be brought to a state of Substantial Completion by **November 21, 2014**.

BASE BID: The undersigned proposes to perform the Work shown/described in the bidding documents, for all work associated with the Concordia Plaza and the new parking lot located to the west of the Heartfelt Memorial site for the sum of: Dollars (\$ _____).

The undersigned proposes to perform the Work shown/described in the bidding documents for all work associated with the Heartfelt Memorial site (refer to the Heartfelt Memorial site limits of construction indicated on Sheet L1.04) for the sum of Dollars (\$ _____).

ALTERNATES:



TCEP No.: 530-017-11

ALTERNATE L-1: Refer to sheet L2.02, construct all areas noted as 6" Concrete Drive pavement with 6" thick Asphalt pavement in lieu of the 6" Concrete Drive pavement. Reference detail 4, Sheet L6.03. This does not include the 6" Concrete Drive pavement on sheet L2.01.

Add/Deduct: _____
Dollars (\$ _____).

ALTERNATE L-2: Refer to sheet Supplemental Drawing L-002, construct additional plaza area, including demolition, pavement, landscape, irrigation, etc., as shown to the east of the east Thom Leadership Education Center entrance.

Add: _____
Dollars (\$ _____).

Respectfully Submitted,

(Signature)

(Company)

(Business Address)

(Telephone Number)

(Seal, if by a Corporation)

TCEP No.: 530-017-11

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the Bidding Requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
 - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
 - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

- A. Coordination: Modify or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
 - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Execute accepted alternates under the same conditions as other work of the Contract.
- C. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.
- D. Award of Alternates: The Owner reserves the right to award any, all or none of the alternates at the time of award of the base bid. The Owner reserves the right to award any alternate not originally awarded with the base bid within a period of 60 days past the initial project award date and the Contractor shall guarantee the original bid amounts for all alternates during this period.

TCEP No.: 530-017-11

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. Alternate L-1: Refer to sheet L2.02, construct all areas noted as 6" Concrete Drive pavement with 6" thick Asphalt pavement in lieu of the 6" Concrete Drive pavement. Reference detail 4, Sheet L6.03. This does not include the 6" Concrete Drive pavement on sheet L2.01.
- B. Alternate L-2: Refer to sheet Supplemental Drawing L-002, construct additional plaza area, including pavement, landscape, irrigation, etc., as shown to the east of the east Thom Leadership Education Center entrance.

END OF SECTION 012300

TCEP No.: 530-017-11

SECTION 321216 - HOT-MIX ASPHALT PAVING

1. GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes:
 - 1. Hot-mix asphalt paving.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. See Section 310000 "Earthwork" for aggregate sub-base and base courses and aggregate pavement shoulders.
 - 2. See Section 321313 "Portland Cement Concrete Paving" for placement of concrete curbs.
 - 3. See Section 079200 "Joint Sealants" for joint sealants and fillers at paving terminations.

1.3 SYSTEM DESCRIPTION

- A. Provide hot-mix asphalt pavement and/or overlay according to the materials, workmanship, and other applicable requirements of the standard specifications of the state or of authorities having jurisdiction.
 - 1. Standard Specification: As indicated.

1.4 SUBMITTALS

- A. Product Data: For each product specified. Include technical data and tested physical and performance properties.
- B. Job-Mix Designs: Certification, by authorities having jurisdiction, of approval of each job mix proposed for the Work.
- C. Shop Drawings: Indicate pavement markings, lane separations, and defined parking spaces. Indicate dedicated handicapped spaces with international graphics symbol.
- D. Qualification Data: For firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.
- E. Material Test Reports: Indicate and interpret test results for compliance of materials with requirements indicated.

TCEP No.: 530-017-11

- F. **Material Certificates:** Certificates signed by manufacturers certifying that each material complies with requirements.

1.5 QUALITY ASSURANCE

- A. **Installer Qualifications:** Engage an experienced installer who has completed hot-mix asphalt paving similar in material, design, and extent to that indicated for this Project and with a record of successful in-service performance.
- B. **Manufacturer Qualifications:** Engage a firm experienced in manufacturing hot-mix asphalt similar to that indicated for this Project and with a record of successful in-service performance.
 - 1. Firm shall be a registered and approved paving mix manufacturer with authorities having jurisdiction or with the DOT of the state in which Project is located.
- C. **Testing Agency Qualifications:** Demonstrate to Architect's satisfaction, based on Architect's evaluation of criteria conforming to ASTM D 3666, that the independent testing agency has the experience and capability to satisfactorily conduct the testing indicated without delaying the Work.
- D. **Regulatory Requirements:** Conform to applicable standards of authorities having jurisdiction for asphalt paving work on public property.
- E. **Asphalt-Paving Publication:** Comply with AI's "The Asphalt Handbook," except where more stringent requirements are indicated.

1.6 PROJECT CONDITIONS

- A. **Environmental Limitations:** Do not apply asphalt materials if substrate is wet or excessively damp or if the following conditions are not met:
 - 1. **Tack Coats:** Minimum surface temperature of 60 deg F (15.5 deg C).
 - 2. **Asphalt Base Course:** Minimum surface temperature of 40 deg F (4 deg C) and rising at time of placement unless otherwise required by the Nebraska Department of Roads (NDOR) specification as listed herein.
 - 3. **Asphalt Surface Course:** Minimum surface temperature of 60 deg F (15.5 deg C) at time of placement unless otherwise required by the Nebraska Department of Roads (NDOR) specification as listed herein.

2. PRODUCTS

2.1 AGGREGATES

- A. **General:** Use materials and gradations that have performed satisfactorily in previous installations.
- B. **Coarse Aggregate:** Sound; angular crushed stone; crushed gravel; or properly cured, crushed blast-furnace slag; complying with ASTM D 692 and or the Nebraska Department of Roads (NDOR) specification as listed herein.

TCEP No.: 530-017-11

- C. Fine Aggregate: Sharp-edged natural sand or sand prepared from stone; gravel, properly cured blast-furnace slag, or combinations thereof; complying with ASTM D 1073 and or the Nebraska Department of Roads (NDOR) specification as listed herein.
 - 1. For hot-mix asphalt, limit natural sand to percent by weight of the total aggregate mass specified by the Nebraska Department of Roads (NDOR) specification as listed herein.

2.2 ASPHALT MATERIALS

- A. Asphaltic Cement: ASTM D 3381 for viscosity-graded material; ASTM D 946 for penetration-graded material and or Nebraska Department of Roads (NDOR) specification as listed herein.
- B. Undersealing Asphalt: ASTM D 3141, pumping consistency and or Nebraska Department of Roads (NDOR) specification as listed herein.
- C. Tack Coat: ASTM D 977, emulsified asphalt or ASTM D 2397, cationic emulsified asphalt, slow setting, factory diluted in water, of suitable grade and consistency for application. Tack coat shall conform to Nebraska Department of Roads (NDOR) specification as listed herein.
- D. Water: Potable.

2.3 AUXILIARY MATERIALS

- A. Herbicide: Commercial chemical for weed control, registered by Environmental Protection Agency (EPA). Provide granular, liquid, or wettable powder form.
- B. Sand: ASTM D 1073, Grade Nos. 2 or 3.

2.4 MIXES

- A. Hot-Mix Asphalt: Provide dense, hot-laid, hot-mix asphalt plant mixes approved by the Nebraska Department of Roads and as listed below. See drawings and details for locations, thickness and number of lifts required.
 - 1. Parking Lots: NDOR Mix Type- SPR
 - 2. Provide mixes complying with the composition, gradation and tolerance requirements of designs listed above. Deviations are not allowed unless previously approved by the Architect.

3. EXECUTION

3.1 EXAMINATION

- A. Verify that subgrade is dry and in suitable condition to support paving and imposed loads.
- B. Proof-roll subbase using heavy, pneumatic-tired rollers to locate areas that are unstable or that require further compaction.
- C. Notify Architect in writing of any unsatisfactory conditions. Do not begin paving installation until these conditions have been satisfactorily corrected.

TCEP No.: 530-017-11

3.2 SURFACE PREPARATION

- A. General: Immediately before placing asphalt materials, remove loose and deleterious material from substrate surfaces. Ensure that prepared subgrade is ready to receive paving.
 - 1. Sweep loose granular particles from surface of unbound-aggregate base course. Do not dislodge or disturb aggregate embedded in compacted surface of base course.
- B. Herbicide Treatment: Apply herbicide according to manufacturer's recommended rates and written application instructions. Apply to dry, prepared subgrade or surface of compacted-aggregate base before applying paving materials.

3.3 HOT-MIX ASPHALT PLACING

- A. Machine place hot-mix asphalt mix on prepared surface, spread uniformly, and strike off. Place asphalt mix by hand to areas inaccessible to equipment in a manner that prevents segregation of mix. Place each course to required grade, cross section, and thickness, when compacted.
 - 1. Place hot-mix asphalt base course in number of lifts and thicknesses indicated.
 - 2. Place hot-mix asphalt surface course in single lift.
 - 3. Spread mix at minimum temperature of 250 deg F (121 deg C).
 - 4. Begin applying mix along centerline of crown for crowned sections and on high side of one-way slopes, unless otherwise indicated.
 - 5. Regulate paver machine speed to obtain smooth, continuous surface free of pulls and tears in asphalt-paving mat.
- B. Place paving in consecutive strips not less than 10 feet (3 m) wide, except where infill edge strips of a lesser width are required.
 - 1. After first strip has been placed and rolled, place succeeding strips and extend rolling to overlap previous strips. Complete asphalt base course for a section before placing asphalt surface course.
- C. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot-mix asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.4 JOINTS

- A. Construct joints to ensure continuous bond between adjoining paving sections. Construct joints free of depressions with same texture and smoothness as other sections of hot-mix asphalt course.
 - 1. Clean contact surfaces and apply tack coat.
 - 2. Offset longitudinal joints in successive courses a minimum of 6 inches (150 mm).
 - 3. Offset transverse joints in successive courses a minimum of 24 inches (600 mm).
 - 4. Construct transverse joints by bulkhead method or sawed vertical face method as described in Asphalt Institute's "The Asphalt Handbook."
 - 5. Compact joints as soon as hot-mix asphalt will bear roller weight without excessive displacement.
 - 6. Compact asphalt at joints to a density within 2 percent of specified course density.

TCEP No.: 530-017-11

3.5 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact hot-mix paving with hot, hand tampers or vibratory-plate compactors in areas inaccessible to rollers.
 - 1. Complete compaction before mix temperature cools to 185 deg F (85 deg C).
- B. Breakdown Rolling: Accomplish breakdown or initial rolling immediately after rolling joints and outside edge. Examine surface immediately after breakdown rolling for indicated crown, grade, and smoothness. Repair surfaces by loosening displaced material, filling with hot-mix asphalt, and rerolling to required elevations.
- C. Intermediate Rolling: Begin intermediate rolling immediately after breakdown rolling, while hot-mix asphalt is still hot enough to achieve specified density. Continue rolling until hot-mix asphalt course has been uniformly compacted to the following density:
 - 1. Average Density: As recommended by Nebraska Department of Roads (NDOR) for specifications as listed herein.
- D. Finish Rolling: Finish roll paved surfaces to remove roller marks while hot-mix asphalt is still warm.
- E. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while still hot, with back of rake or smooth iron. Compact thoroughly using tamper or other satisfactory method.
- F. Repairs: Remove paved areas that are defective or contaminated with foreign materials. Remove paving course over area affected and replace with fresh, hot-mix asphalt. Compact by rolling to specified density and surface smoothness.
- G. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened.
- H. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

TCEP No.: 530-017-11

3.6 INSTALLATION TOLERANCES

- A. Thickness: Compact each course to produce the thickness indicated within the following tolerances:
 - 1. Base Course: Plus or minus 1/2 inch (13 mm).
 - 2. Surface Course: Plus 1/4 inch (6 mm), no minus.

- B. Surface Smoothness: Compact each course to produce a surface smoothness within the following tolerances as determined by using a 10-foot (3-m) straightedge applied transversely or longitudinally to paved areas:
 - 1. Base Course: 1/4 inch (6 mm).
 - 2. Surface Course: 1/8 inch (3 mm).
 - 3. Crowned Surfaces: Test with crowned template centered and at right angle to crown. Maximum allowable variance from template is 1/4 inch (6 mm).

3.7 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing agency to perform field inspections and tests and to prepare test reports.
 - 1. Testing agency will conduct and interpret tests and state in each report whether tested Work complies with or deviates from specified requirements.

- B. Additional testing, at Contractor's expense, will be performed to determine compliance of corrected Work with specified requirements.

- C. Thickness: In-place compacted thickness of hot-mix asphalt courses will be determined according to ASTM D 3549.

- D. Surface Smoothness: Finished surface of each hot-mix asphalt course will be tested for compliance with smoothness tolerances.

- E. In-Place Density: Samples of uncompacted paving mixtures and compacted pavement will be secured by testing agency according to ASTM D 979.
 - 1. Reference laboratory density will be determined by averaging results from 4 samples of hot-mix asphalt-paving mixture delivered daily to site, prepared according to ASTM D 1559, and compacted according to job-mix specifications.
 - 2. Reference maximum theoretical density will be determined by averaging results from 4 samples of hot-mix asphalt-paving mixture delivered daily to site, prepared according to ASTM D 2041, and compacted according to job-mix specifications.

TCEP No.: 530-017-11

3. In-place density of compacted pavement will be determined by testing core samples according to ASTM D 1188 or ASTM D 2726.
 - a. One core sample will be taken for every 1000 sq. yd. (836 sq. m) or less of installed pavement, but in no case will fewer than 3 cores be taken.
 - b. Field density of in-place compacted pavement may also be determined by nuclear method according to ASTM D 2950 and correlated with ASTM D 1188 or ASTM D 2726.

- F. Remove and replace or install additional hot-mix asphalt where test results or measurements indicate that it does not comply with specified requirements.

END OF SECTION 321216

TCEP No.: 530-017-11

SECTION 131200 - FOUNTAINS

1. GENERAL

1.1 DESCRIPTION

- A. Work included - Provide and install fountain equipment mechanical and electrical package in accordance with the Contract Documents. Furnish all labor, materials, apparatus, tools, equipment, transportation, temporary construction, and special or occasional services as required to make a complete working fountain installation, as shown on the drawings or described in these specifications. The work of this Section shall include, but not be limited to the following:

1. Fountain Display System including pumps, valves, and specialties (nozzles, pool fittings, etc.) as hereinafter described, listed and shown on the drawings.
2. Fountain Electrical Control System including control panel, water level and PLC controller, time switches, relays, motor starters, grounding system, PLC if required, and other circuits and accessories as required, U.L. 508 Listed.
3. Fountain Submersible Lighting System accessories and controls.
4. Filtration and Water Treatment System, media, accessories, and controls.
5. Drain, water makeup and overflow equipment, and controls.
6. All special tools for proper operation and maintenance of equipment provided under this section.

1.2 REFERENCE STANDARDS

- A. This installation shall comply with all applicable and the most stringent provisions of the latest edition of the following codes.
- BOCA - National Building Code
- UPC - Uniform Plumbing Code
- NEC- National Electrical Code
- B. Materials furnished hereunder shall, where applicable, comply with the latest edition of applicable standard specifications published by the following organizations:
- ASTM - American Society for Testing and Material
- ANSI - American National Standards Institute
- IEEE - Institute of Electrical & Electrical Eng.
- IPCEA - Insulated Power Cable Engineers Assoc.
- NEMA - National Electrical Manufacturers Assoc.
- ASME - American Society of Mechanical Engineer

TCEP No.: 530-017-11

UL - Underwriters Laboratories, Inc.

NSF - National Sanitation Foundation

ASSE - American Society of Sanitary Engineers

AWWA - American Water Works Association

CS - Commercial Standards

1.3 QUALITY ASSURANCE

- A. All workmanship and materials shall conform and comply with the requirements of building ordinances, codes, rules and regulations of all departments of Federal, State, county, and city having lawful jurisdiction over the work in this section.
- B. When these specifications and/or drawings call for or describe materials, workmanship, or construction of a better quality, higher standard, or larger size than is required by the above mentioned rules and regulations, the provisions of these specifications and/or drawings shall take precedence over the requirements of said rules and regulations.
- C. The Contractor shall furnish, without extra charge, any additional material and/or labor required for compliance with these rules and regulations although not mentioned in these specifications or indicated on the drawings.
- D. All materials shall be new and shall conform in accordance with applicable standards in every case where such standards have been established for the particular material in question.
- E. All work shall be executed by workmen skilled in the craft to which they are assigned.
- F. Adequate supervision shall be provided to maintain high quality workmanship.
- G. The Roman Fountains name and catalog numbers are used to establish a high standard of quality and utility for the specified items and to provide a dimensional reference for installation plans that are drawn to scale.

Roman Fountains Corporation

P.O. Drawer 10190

Albuquerque, New Mexico 87184 U.S.A.

Phone: (800)794-1801 FAX: (505)343-8086

www.romanfountains.com

E-mail: jonm@romanfountains.com

- H. Any proposal for substitution of materials or equipment shall be submitted to the architect prior to the final bid date; otherwise, no substitutions will be permitted. Submittal for equivalent items shall, where applicable, include the following data which are not necessarily required for specified items:
 - 1. Performance Characteristics and hydraulic and electrical load data.
 - 2. Materials of construction, fabrication, and manufacture.

TCEP No.: 530-017-11

3. Certification of Conformance with specific codes, standards, and specifications.
 4. Submittal of substituted equipment may be rejected if the component alters the design in a manner that affects other trades or if it impairs accessibility or critical clearances.
- I. No substitutions shall be made unless authorized in writing by the Architect/Engineer. Should a substitution be accepted, and should the substitute material prove defective or otherwise unsatisfactory for the service intended within the guarantee period, the Contractor shall replace this material or equipment with material or equipment specified, at its own expense, and to the satisfaction of the Architect/Engineer/Owner.
 - J. Contractors submitting bids on substitute materials and equipment must also submit a bid on the "as specified" materials and equipment.
 - K. Contractors submitting bids on substitute materials and equipment must also provide a written performance guarantee certifying that the substitute materials and equipment will produce the specified water effects.
- 1.4 MATERIAL SUPPLIER'S RESPONSIBILITY
- A. Design Responsibility: The Equipment Supplier shall accept complete design responsibility for the hydraulic and electrical system, provided that all equipment required for the fountain installation is procured from the specified equipment Manufacturer as itemized in its proposals and materials list on the final, approved installation drawings.
 - B. The Contractor shall be responsible for installation of all equipment required for the fountain installation in accordance with fountain supplier's drawings and instructions.
 - C. Performance Guarantee: The Equipment Supplier shall guarantee the fountain to perform to the designed water heights and spray patterns, provided that installation of the equipment is in strict accordance with the supplier's recommendations, instructions, details, and approved drawings.
 - D. Warranty: All materials and component parts, excluding lamps, supplied by the Manufacturer, shall be guaranteed to be free from defects of materials and/or workmanship for a period of one year from date of substantial completion or 18 months from shipment, whichever comes first. (Complete warranty form available from material supplier on request.)
- 1.5 SUBMITTALS AND DRAWINGS
- A. The Contractor shall submit complete shop drawings to the Architect for approval, in quantities required for proper distribution and in accordance with the requirements of the General Conditions.
 - B. Shop drawings shall include or incorporate those final drawings furnished by the Equipment Supplier, as specified herein, together with all additional information and drawings required to show the proper installation of fountain equipment. "Preliminary" or "schematic" drawings provided by the Equipment Supplier shall not be used for installation purposes.
 - C. The Contractor shall deliver drawings for approval, after the signing of the contract, so as not to delay the construction required under other sections.
Submittals shall include the following:
 1. Materials list for all materials and equipment furnished.
 2. Shop drawings and product data for all materials and equipment furnished.

TCEP No.: 530-017-11

3. Shop drawing of the equipment space layout showing all mechanical and electrical equipment in addition to all piping and conduit. Include pipe elevations and dimensions between pipe centerlines where relevant. Provide layout drawings of all pipe runs and pool fitting locations.
4. Shop drawings shall include outline dimensions, operating and maintenance clearances required, and sufficient technical data to indicate compliance with the Specification.
5. Shop drawings may not include details reproduced from the Contract Documents except when submitting "as specified" materials and equipment.
6. Submittals may be rejected if they are difficult to read due to insufficient scale, poor image quality, or poor drafting quality; or if the required information is not included.
7. Work shall not proceed until submittals have been approved by the Architect.
8. The Contractor shall provide labeled equipment certifying approval, as hereinafter specified, by Underwriters Laboratories (UL) whenever available.

1.6 COORDINATION

- A. The Contractor shall coordinate the work with all trades and appropriate sections of the construction specifications as necessary to ensure proper provisions for the work of this section.
- B. The Contractor shall be responsible for the protection of the Owner's property from injury or loss due to its work. All damage to existing property (building, utilities, pavement, etc.) or planting (trees, shrubs, lawn or ground cover) caused by the Contractor during its operation or as a result of malfunction of installed work during the guarantee period shall be repaired at the Contractors expense.
- C. The Contractor shall fully inform itself regarding any available space limitations and unusual requirements, for the installation of all materials and work furnished under this section. Although the location of equipment may be shown on the drawings in certain positions, the Contractor shall also be guided by the Architectural details and conditions at the job, correlating its work with that of the other sections and other trades, with discrepancies and interferences being brought to the attention of the Architect for resolution prior to proceeding with the work.

1.7 PERMITS AND FEES

- A. Permits: The Contractor shall secure and pay for all permits, inspections, and certificates of inspection of any governmental and inspection body having jurisdiction over all or any part of the work included under this section and/or such inspections etc., required by these specifications.
- B. Fees: The Contractor shall secure and pay for all fees and assessments in connection with the work under this contract and shall include this cost in its bid and contract price.

1.8 CONTRACTOR GUARANTEE AND EQUIPMENT WARRANTY

- A. In entering into a contract covering this work, the Contractor accepts the specifications and drawings and guarantees that the work will be performed in accordance with the requirements of the specifications and drawings, as may be made in the contract documents.
- B. The Contractor further guarantees that the workmanship and material will be of the best quality procurable and that only experienced workers, familiar with each particular class of work, will be employed.

TCEP No.: 530-017-11

- C. The Contractor further agrees to hold itself responsible for any defects which may develop in any part of the entire system, including equipment as provided for under this specification, due to faulty workmanship, design or material and to replace and make good, without cost to the Owner, any such faulty parts or construction which may develop at any time within one (1) year from the date of the final acceptance. Any repairs or replacements required because of defects, as outlined in this clause, are to be made promptly and approved in writing by the Architect.
- D. Contractor shall warrant all material found defective within one (1) year of final acceptance and shall be replaced at no cost to the Owner including labor to remove and re-install any defective materials.
- E. The warranty shall not extend to damage incurred through incorrect or improper operation and maintenance by the Owner. The Owner shall assume full responsibility for proper operation and maintenance upon final acceptance of installation from Contractor.
- F. In the case of Manufacturer's guarantees being limited, or expiring within the specified guarantee period, the Contractor shall be responsible for purchasing and providing service contracts and additional warranty coverage to extend through the warranty period as may be required by Owner.

1.9 MAINTENANCE MANUAL

- A. The Equipment Supplier shall deliver to the Owner three (3) copies of the Operations and Maintenance Manual, together with any additional information or manuals which would assist in the proper operation and maintenance of equipment.
- B. The Contractor shall, at its expense, arrange and provide for the technical instruction of the Owner's maintenance personnel, by the Equipment Supplier's personnel, for such time as is reasonably required to acquaint them with the operation and maintenance of all equipment furnished and installed under this section.

2. PRODUCTS

2.1 GENERAL

- A. Prime Contractor shall be responsible for purchasing all specialized fountain mechanical and electrical materials and tools for the fountain and shall then furnish electrical fountain components to the electrical contractor for installation and connection.
- B. Materials not listed within these specifications or on drawings as furnished by the Equipment Supplier, but required for the complete installation of the fountain mechanical and/or electrical systems, shall be furnished by the Contractor.
- C. Materials shown on the drawings, but not specified herein, shall be provided in accordance with information shown on the drawings and the general provisions of this part of the specification.
- D. Substitutions in the list of equipment included in this section may be made by the Equipment Supplier only if the equipment is of better quality and more effective than that listed, improves system design and performance or delivery times, and only if the changes are thoroughly documented and approved in writing by the Architect.

TCEP No.: 530-017-11

2.2 SPECIALIZED FOUNTAIN MATERIAL MANUFACTURER/SUPPLIER

- A. Approved Manufacturer - Subject to compliance with requirements, the following is the approved Manufacturer/Supplier for specialized fountain system equipment listed in this specification:
 - a. Roman Fountain Corporation, Albuquerque, NM, USA. Ph. (800) 794 – 1801, Fax (505) 343-8086. www.romanfountains.com
 - b. Or equal, if and as specifically approved by Architect by Addendum during bidding period.
- B. All fountain equipment specified and supplied to the Contractor shall be supplied by a single fountain Equipment Supplier/Manufacturer.
- C. The equipment Supplier must currently be in the business of supplying fountain equipment for a minimum of twenty (20) years and shall have previously supplied fountain system design, drawing and equipment, similar in size and complexity to the specified project that can be verified and confirmed.
- D. The equipment supplier shall have minimum assets of \$2,000,000 and be able to furnish "CPA" audited verification of asset strength at the request of the Project Architect.
- E. The equipment supplier shall have shall carry broad form commercial business insurance, including Design Liability Coverage, and shall furnish a current insurance certificate directly from the insurance underwriter verifying all required coverage is current and in effect.

2.3 MATERIAL MANUFACTURER/SUPPLIER'S RESPONSIBILITY

- A. Warranty: All materials and component parts, excluding lamps supplied by the Equipment Supplier, shall be guaranteed to be free from defects of materials and/or workmanship for a period of one (1) year from date of official start-up or 18 months, whichever is sooner.
- B. Design Responsibility: The Equipment Supplier shall accept complete design responsibility for the hydraulic and electrical system, provided that all equipment is supplied by it as indicated. This does not include responsibility for the actual installation of the equipment except where the equipment is installed by the Equipment Supplier.
- C. Performance Guarantee: The Equipment Supplier shall provide a written performance guarantee certifying that the fountain system will perform to the designed water heights and patterns and will create the designed water heights and patterns, and will create the designed lighting effects, providing the equipment is supplied by a single Equipment Supplier and the installation is in accordance with the Supplier's recommendations and drawings.

2.4 FOUNTAIN COMPONENTS

Roman fountain system equipment, components and systems and services shall be furnished for the project. Requests for product substitutions shall be submitted prior to bid date for architect approval. Substitution approval documents shall include complete drawings, submittals, hydraulic data, electrical diagrams, piping diagrams, flow calculations and installation details.

TCEP No.: 530-017-11

3. EXECUTION

3.1 GENERAL

- A. Install and connect all equipment in accordance with Manufacturers' instructions and recommendations. Provide all piping, valves, and connections recommended by the Manufacturer for proper operation.
- B. Protect all pipes, equipment, and other parts of the work against injury by exposure to the weather during construction while stored or installed in place.
- C. Make all adjustments required for the proper operation of the mechanical system. Use Manufacturer's factory technicians where adjustments cannot be accomplished by the Contractor's personnel at Contractors' expense.

3.2 ALIGNMENT AND LUBRICATION OF ROTATING EQUIPMENT

- A. After installation, align all pumps connected to motors by means of flexible couplings, if necessary, to within the tolerance limits recommended by the equipment and coupling manufacturers.
- B. Before any rotating equipment is put in operation for testing purposes, properly lubricate with lubricants recommended by the Manufacturer. Further lubricate before final acceptance. Provide a complete schedule of lubrication of all rotating equipment within the equipment literature binder.

3.3 VALVE INSTALLATION

- A. Supply all piping systems with valves arranged to provide necessary isolation and give regulating control throughout the system.
- B. Butterfly valves used to isolate equipment or accessories shall be lug-type installed in a manner to allow servicing without draining the system.
- C. Check valves shall close against pressure.
- D. Do not install valve stems below horizontal line.

3.4 PIPE INSTALLATION

- A. General
 - 1. Provide flanges or unions as indicated and as necessary, to allow removal and reinstallation of any item, or equipment, or accessory without cutting, welding, or soldering.
 - 2. Provide discharge piping of proper size for all air vent, solenoid and relief valves. Extend to nearest drain.
 - 3. Provide a readily accessible 1-1/2" hose angle valve with hose connection and hose, at all low points in the system and immediately downstream of check valves as necessary to allow the system to be completely drained.
 - 4. Cut pipe to measurements established at the site. Work into place without springing or forcing.
 - 5. Protect all openings in piping during construction to prevent entrance of foreign matter.
 - 6. Cut pipe and tubing ends square. Remove rough edges and burrs so that a smooth and unobstructed flow will be obtained.

TCEP No.: 530-017-11

7. Close or short nipples should be used only where shown on the Drawings, or absolutely necessary to satisfy dimensional constraints.
8. Make changes in pipe size using reduced fittings. Use bushings only if shown on the drawings.
9. Unless otherwise noted, connections to equipment or accessories shall be threaded for sizes 3" and smaller, flanged for sizes 4" and larger.
10. Arrange exposed piping straight, parallel and perpendicular to the walls of the structure unless otherwise shown on the drawings.
11. Wherever two or more pipes are installed in parallel, allow sufficient space for required gluing, welding, soldering, painting, and/or the application of insulation.

B. Pipe Joints

1. Grooved Pipe: Grooves for mechanical coupling shall be cut using tools, methods, and dimensional criteria specified by the manufacturer of the coupling.
2. Welded Pipe: Perform all welding in accordance with the requirements of ASME Boiler Pressure Piping Code or ANSI B31.1.
3. Threaded Pipe: Cut all threads accurately, axis of thread coinciding with axis of pipe. No more than two threads shall show beyond fitting. Make up joints with Teflon tape. Remake leaky joints with new materials.
4. Copper Tubing Soldered Joints
 - a. Use drawn temper tubing.
 - b. Surfaces to be joined must be cleaned of all oil, grease, rust, and oxides. After cleaning, and before assembly or heating, apply an appropriate flux to each joint surface and spread evenly. Apply heat with an oxyacetylene torch.
 - c. Apply an appropriate flux to each joint surface and spread evenly. Apply heat with an oxyacetylene torch.
 - d. Make up all joints using non-corrosive flux and 95-5 solder, ATSM B32 Grade A.
 - e. Provide each valve with unions for removal of valve without cutting or torching.
 - f. Provide dielectric unions at points of connection to ferrous piping.
 - g. Where threaded connections are used in copper systems, all nipples shall be standard weight red brass.
5. Flared joints:
 - a. Use annealed tubing.
 - b. Cut end using tubing cutter. Ream and clean.
 - c. Slide fitting over end. Flare tubing using standard flaring tool.

TCEP No.: 530-017-11

6. PVC Pipe

- a. Bevel all pipe ends with a coarse file or beveling tool.
- b. Clean surfaces to be joined of all loose dirt and moisture from the I.D. and O.D. of the pipe end and the I.D. of the fitting socket.
- c. Apply a coating of purple primer to the entire I.D. surface of the fitting socket and to an equivalent area on the O.D. of the pipe end.
- d. Apply heavy body gray solvent cement using an appropriate natural bristle brush as follows: Apply a liberal coating of cement around the entire perimeter of the pipe end to a width slightly more than the equivalent socket depth of the fitting. Apply a light but complete coating once around the entire depth of the socket surface, avoiding excessive cement application. Apply a second liberal coating onto the pipe end.
- e. Immediately after cementing, insert the pipe into the fitting to the full socket depth while rotating the pipe or fitting one-quarter turn. Hold joint for at least 15 seconds after joining to make sure pipe does not back out of the socket.
- f. Do not disturb or move the joint for at least one hour after joining.
- g. Do not solvent weld pipe if ambient air temperature is below 40 degrees F. or above 90 degrees F., or if it is raining.
- h. Discard cement when an appreciable change in viscosity takes place or if cement is lumpy or stringy. Do not thin. Cement must be used before expiration date shown on the container.

C. Pipe Protection

1. Copper or brass piping, encased in concrete: Exterior shall be wrapped with one layer of pipe wrap at half lap.
- D. Copper or brass piping, underground: Exterior shall be coated with two coats of coal tar mastic to a total thickness of 8 to 10 mils. Allow 12 hours drying time between applications. Clean and prepare pipe exterior in accordance with manufacturer's recommendations.
- E. Welded steel piping assemblies: Galvanize after fabrication.
- F. Galvanized steel piping, underground, submerged, or encased in concrete: Exterior shall be coated with two coats of coal tar mastic to a total thickness of 8 to 10 mil. Allow 12 hours drying time between applications. Clean and prepare pipe exterior in accordance with manufacturer's recommendations.
- ## G. Penetrations
1. Core drilling for pipe penetrations shall be accomplished only at locations and in a manner approved by the Architect.
- H. Provide a metal or approved plastic sleeve or core-drilled hole for every pipe passing through a concrete wall or floor.

TCEP No.: 530-017-11

- I. Provide a water stop or membrane clamp for every pipe or sleeve penetrating an exterior concrete wall or floor or the fountain wall or floor, whichever is appropriate to the waterproofing method and/or as shown on the Drawings.
 - J. Seal sleeves passing through interior walls with foam sealant, unless otherwise indicated on the Drawings.
 - K. Seal sleeves passing through exterior walls with resilient seal and foam sealant, unless otherwise indicated on the Drawings.

 - L. Piping Tests
 - 1. Provide all temporary piping, pumps, and gauges necessary to conduct the specified tests.
 - M. Conduct all tests before concealment of work and before any coating, wrap, or insulation is applied.
 - N. Replace or repair any part that leaks. Repeat test until criteria are met.
 - O. Do not subject any item to a test pressure greater than the pressure rating of the item.
 - P. Vent air from all piping being tested.
 - Q. Underground piping shall be tested as follows:
 - R. In accordance with pipe manufacturers' recommendations and procedures, pressurize all underground piping (except for drain system) to 75 psi prior to backfilling (spot backfilling to anchor piping may be done prior to pressurizing). Piping shall remain pressurized until all backfilling, grading, planting, and concrete work in the area of the piping is completed.
 - S. In accordance with pipe manufacturers' recommendations and procedures, pressurize all underground drain piping beneath the equipment space to 15 psi until all backfilling and concrete work in the area is completed.
 - T. The completed piping system shall be tested as follows:
 - U. Conduct each test for a minimum continuous duration of eight hours.
 - V. Hydrostatically pressure test all storm and sanitary drain piping at 15 psi.
 - W. Hydrostatically pressure test all other piping and equipment at 75 psi.
 - X. Strike all solder joints with a soft-face hammer while under pressure.
 - Y. Log pressure readings for all tests required above at the beginning and end of each test and on every working day between. Note the location and cause of any failures and method of repair on the daily log. Submit copy of the log to the Architect weekly.
 - Z. Testing of the completed system, as specified above, shall be witnessed by the Architect.
- AA. Flushing
- 1. Before the fountain system is placed in operation, flush all fountain system piping with water to remove foreign matter and debris in piping.
- BB. Completely drain all piping and equipment. Re-flush as necessary until water runs clean.
- CC. Fill the system to the required capacity with clean water.
- DD. Circulate the water throughout the system for one hour, using the display pump. Install start-up screens as necessary to prevent equipment clogging and damage.
- EE. Drain, fill, and circulate (repeat previous three steps above) until the water remains clear.

TCEP No.: 530-017-11

3.5 HOUSEKEEPING PADS

- A. All floor-mounted equipment shall be erected on reinforced concrete housekeeping pads. Pads shall be 4" high with chamfered edges except where otherwise indicated or required on Architects' drawings.

3.6 SUPPORTING DEVICES

- A. Furnish and install all required fasteners, rods, hangers, supports, bolts, nuts, washers, and steel plates and shapes.
- B. Furnish and arrange for the installation of all required inserts and anchor bolts. Provide templates where appropriate.
- C. Provide additional hangers or supports at all valves, strainers, and elsewhere where required to properly support any additional pipe loadings.
- D. Where several pipes occur at the same elevation, trapeze type hangers
- E. Provide copper plated hangers where hangers are in direct contact with copper piping.
- F. Strap hangers are not permitted in any piping work.
- G. Equipment may not support any of the pipe loading, nor may equipment, except valves and strainers, be supported by any of the piping.
- H. Basket strainers larger than 3" shall be independently supported.
- I. Piping shall not be supported by another pipe or duct.

3.7 EQUIPMENT IDENTIFICATION

- A. Provide a securely attached permanently engraved metal nameplate for each piece of equipment containing all data required to properly identify the equipment (i.e. manufacturer, type, size, capacity, horsepower, etc.).
- B. Provide a valve tag for each valve to provide information to correlate the valve with the outlet or fitting served.
- C. Provide a half-size copy of the "As-built" Schematic Diagram, permanently encased in plastic, to provide the Owner's operating personnel ready correlation of each valve identified with each outlet or fitting served.
- D. Install nameplates for gauge/control device panels as shown on the Drawings. Attach using stainless steel machine screws.
- E. Provide flow direction arrow pipe bands on all system piping. (Seton or equal)

3.8 ADJUSTMENTS

- A. Make temporary and final adjustments for each system and equipment apparatus installed, using factory-trained technicians when appropriate. Refer to the Drawings and operation and maintenance manuals for system start-up and adjustment details. Contact Manufacturer/Supplier for additional assistance as necessary.

3.9 PAINTING AND CLEANING

- A. Clean all exposed equipment and piping to remove rust, scale, concrete, etc. before painting.
- B. Mask off all bright metal parts and nameplates.

FOUNTAINS

131200 - 11

TCEP No.: 530-017-11

- C. Paint all exposed equipment and piping (including galvanized) within the equipment space as follows:
- D. Pretreatment, bare ferrous parts: Sand blast or treat with oil penetrant.
- E. Primer: Previously painted or retreated equipment and piping shall receive one coat of rust inhibiting primer.
- F. Finish: Apply two coats of white epoxy enamel.
- G. Thoroughly clean and wipe down all equipment and piping, sweep floor and remove all debris and remaining tools and equipment from pump room, and any other loose or abandoned items which may create an operation or maintenance hazard.

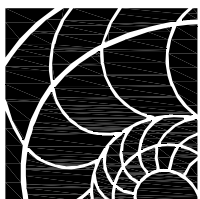
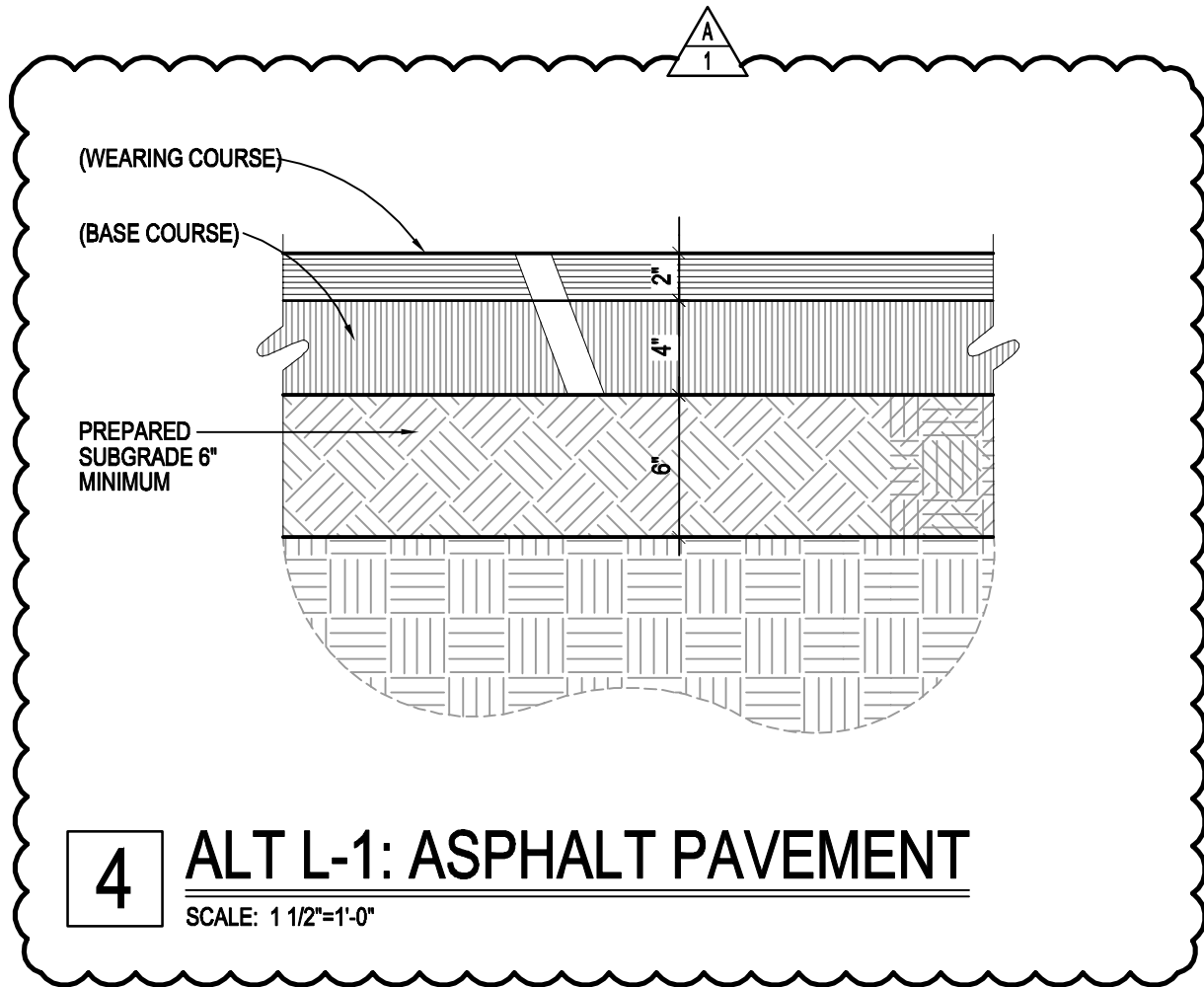
3.10 OPERATING INSTRUCTIONS

- A. At the time of completion, a period of not less than eight hours shall be allotted by the Contractor for instruction of operating and maintenance personnel in the use of all systems. All personnel shall be instructed at one time, the Contractor making at its expense, all necessary arrangements with Manufacturer's technicians to provide instruction, product literature, and application guides for the user's reference.

3.11 THIRTY-DAY OPERATION PERIOD

- A. Prior to acceptance of the installation by the Owner, demonstrate a thirty day, fully automated, uninterrupted daily operation of not less than eight hours, nor more than sixteen hours, for all systems provided under this Section.
- B. Supervise the operation of the equipment and be responsible for the proper operation thereof and make no claim against the Owner for any damage to the equipment during such operation. Make such changes, adjustments, or replacement of equipment as may be required to ensure installation complies with the Specifications, and replace any defective or non-conforming parts or materials.
- C. The costs of labor, electricity, water, and operational tools, equipment and supplies during the thirty-day operation period shall be paid by the Contractor.
- D. Coordinate the thirty-day operation period with all trades related to the fountain work.

END OF SECTION 131200

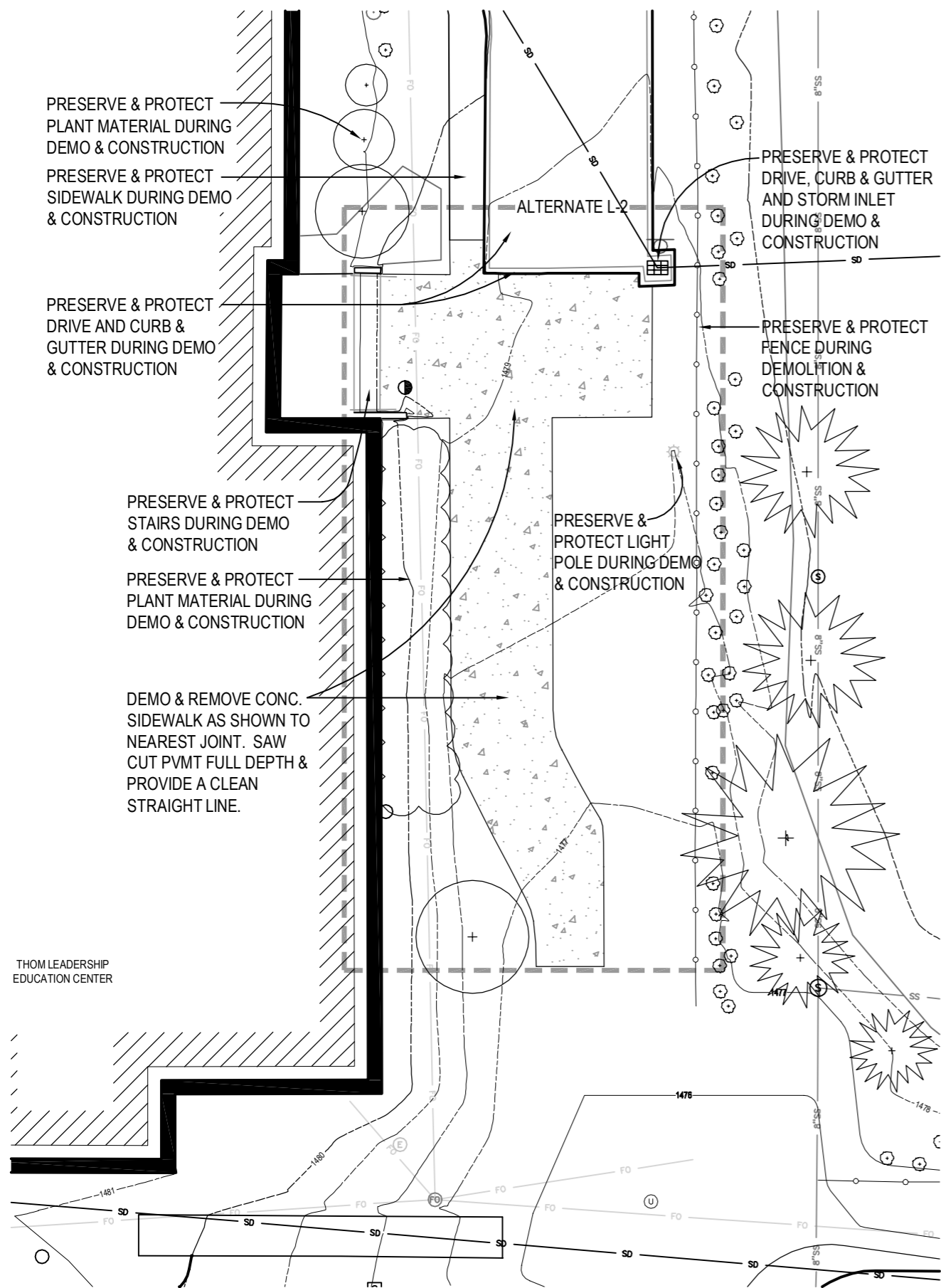



The
Clark
Enersen
Partners

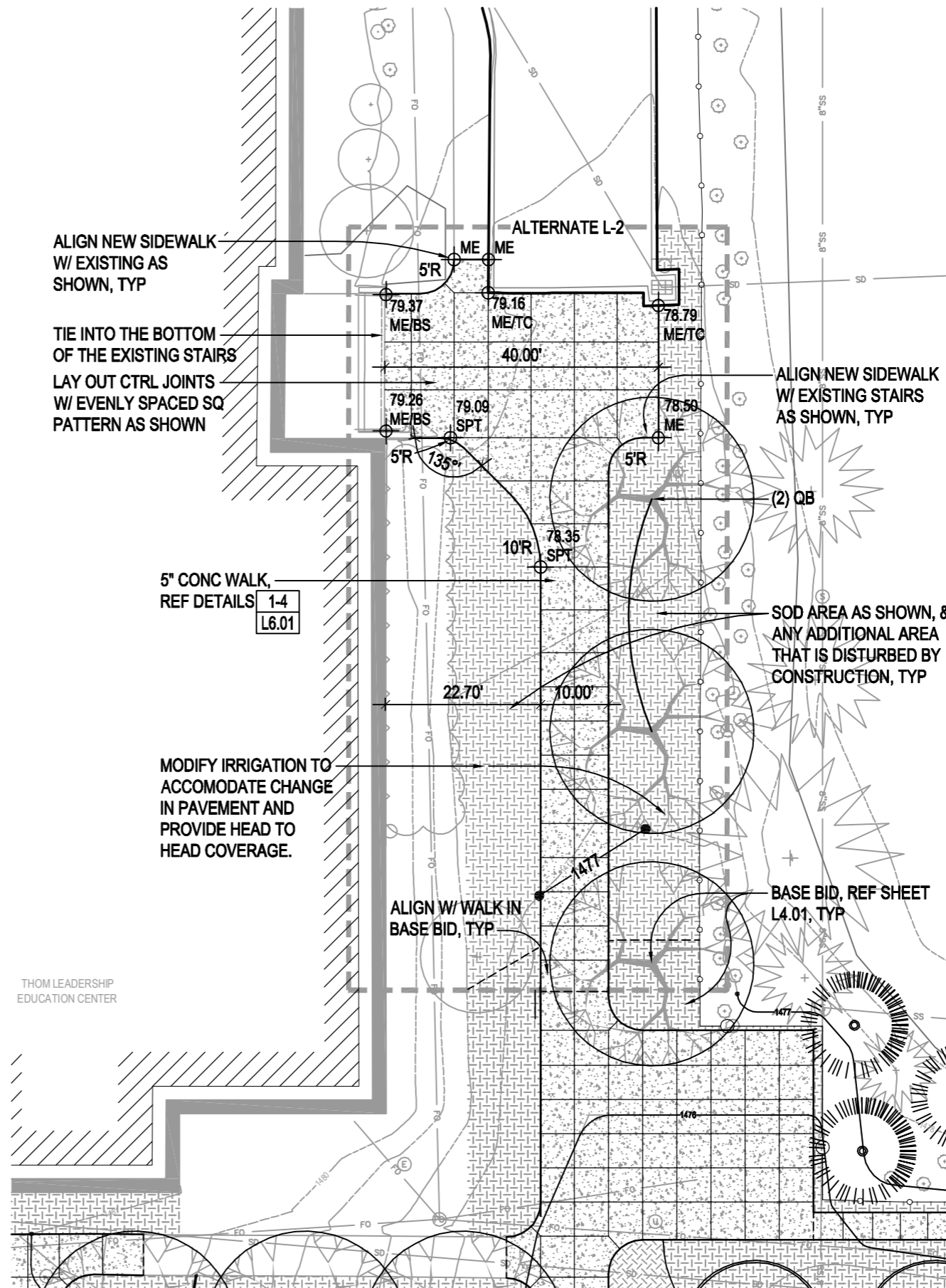
Architecture + Landscape Architecture + Engineering + Interiors
1010 Lincoln Mall, Suite 200 Lincoln, NE 68508-2883
402 477.9291 Fax 402 477.6542
Kansas City, MO Fairway, KS www.clarkenersen.com


Concordia University
Seward, Nebraska
TCEP Project No.: 530-017-11

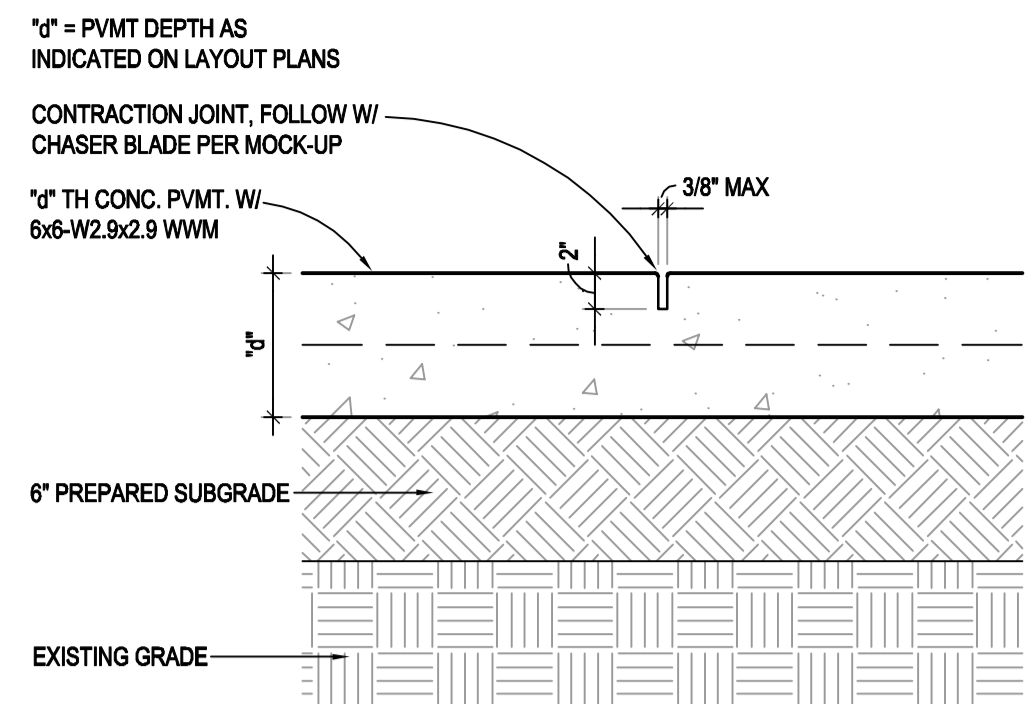
Addendum #01
Supplemental Drawing: SDL-001
Revision of Sheet: L6.03
Date: June, 4, 2014



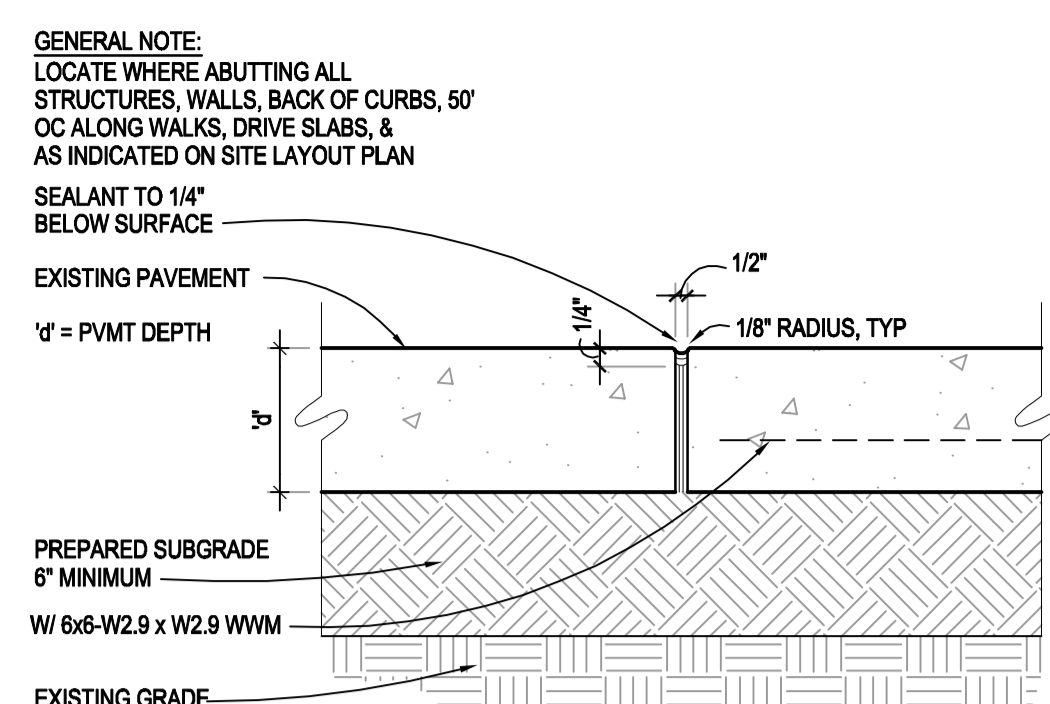
 **ALTERNATE L-2: TLEC DEMO PLAN**
SCALE: 1"=20'-0"



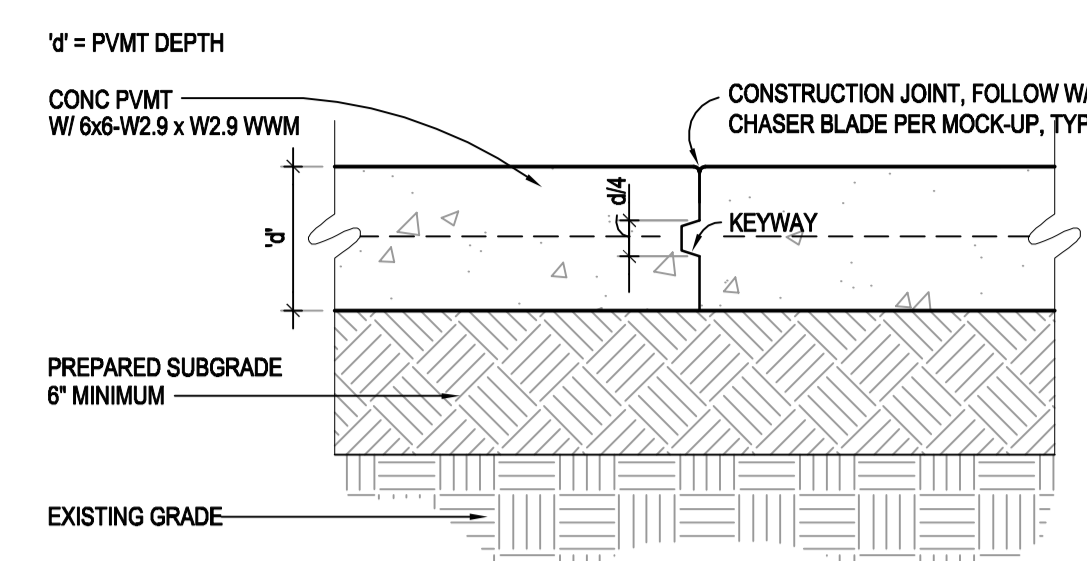
 **ALTERNATE L-2: TLEC SITE PLAN**
SCALE: 1"=20'-0"



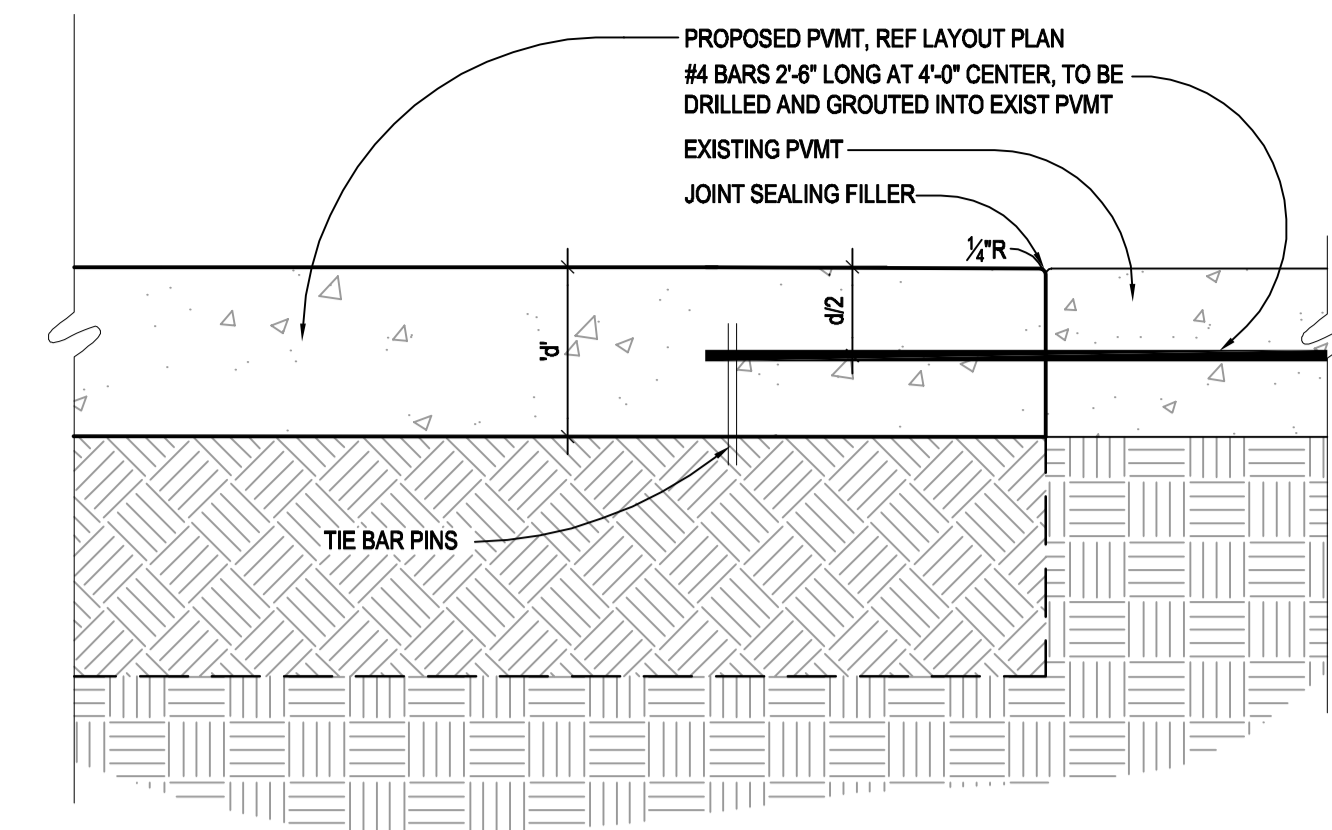
1 CONCRETE CONTRACTION JOINT
 SCALE: 1/2" = 1'-0" (INDICATED CJ ON LAYOUT PLAN)



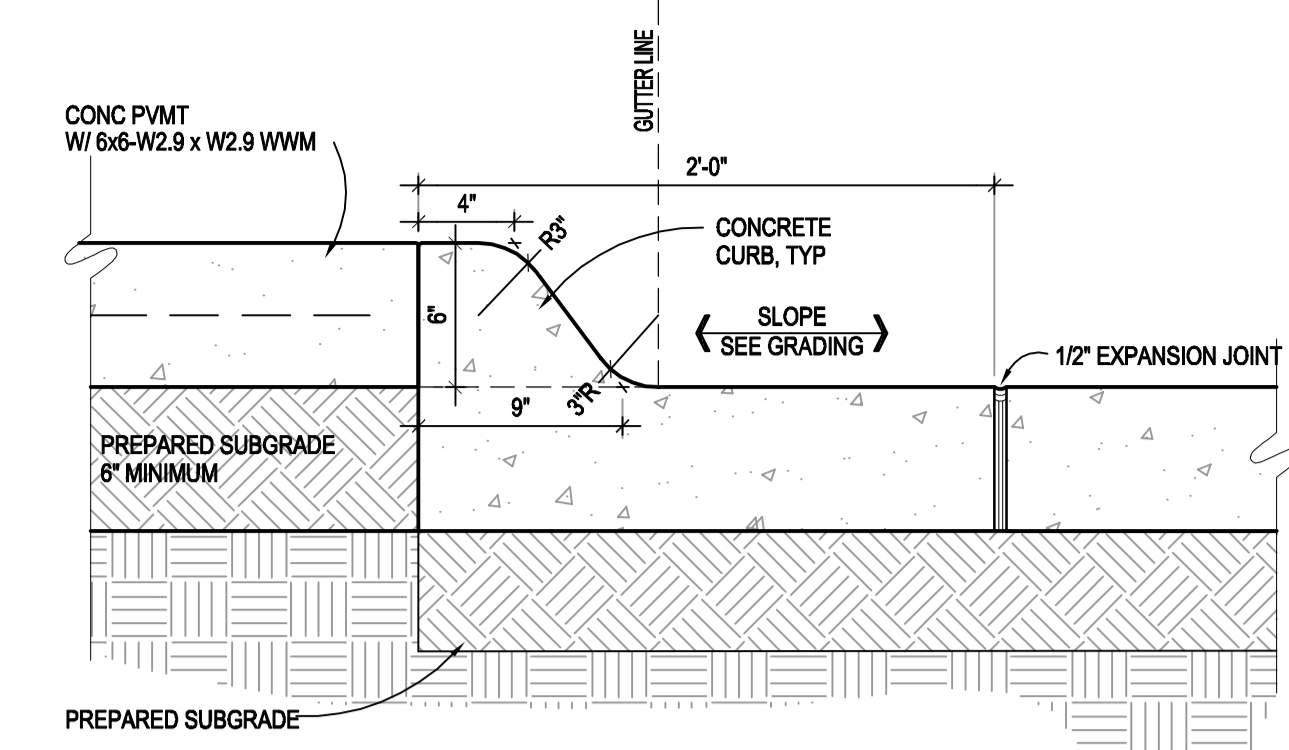
2 CONCRETE EXPANSION JOINT
 SCALE: 1/2" = 1'-0" (INDICATED EJ ON LAYOUT PLAN)



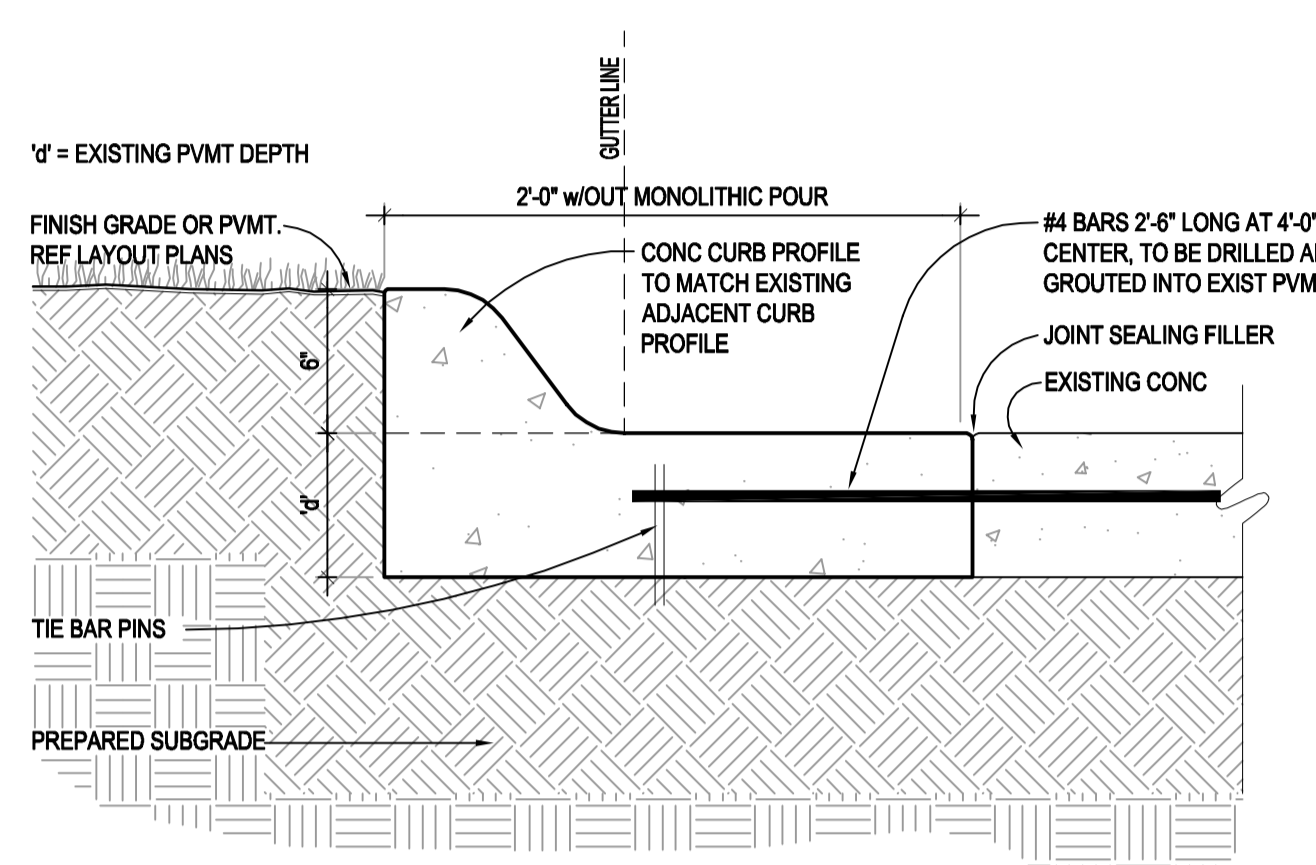
3 CONCRETE CONSTRUCTION JOINT
 SCALE: 1/2" = 1'-0" (INDICATED KJ ON LAYOUT PLAN)



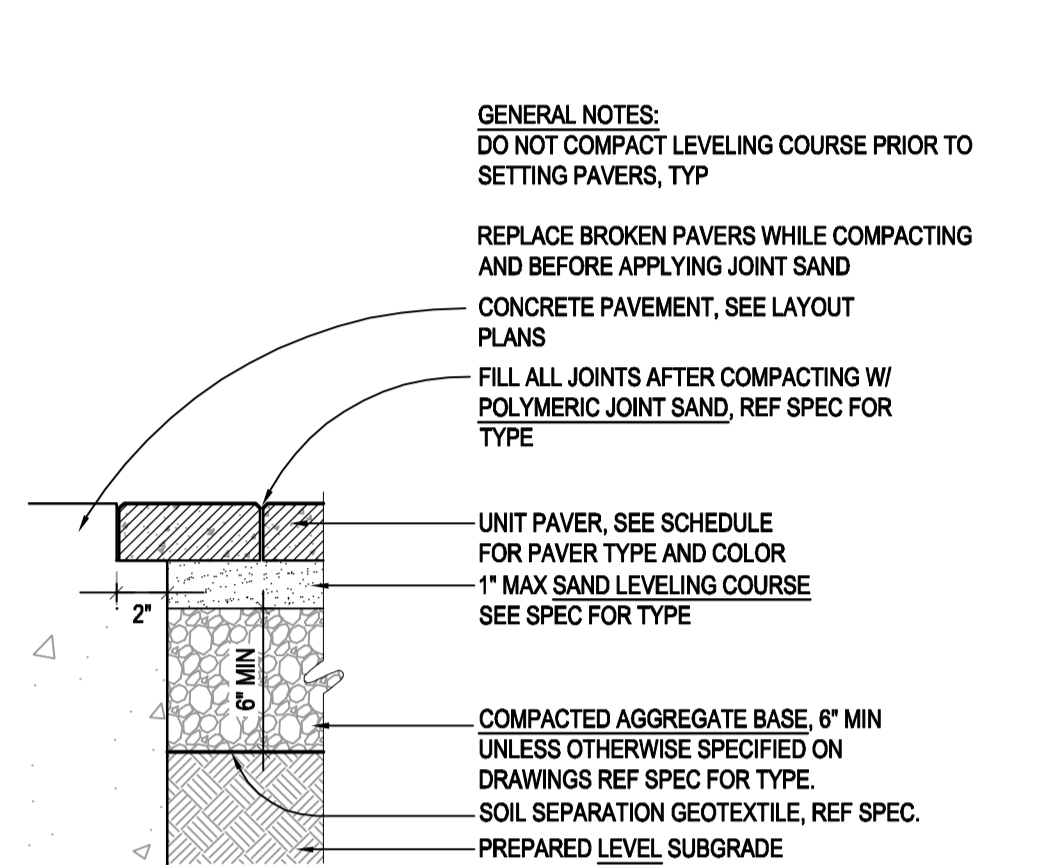
4 CONCRETE CONSTRUCTION JOINT: PROPOSED TO EXISTING PVMT
 SCALE: 1/2" = 1'-0" (INDICATED DJ ON LAYOUT PLAN)



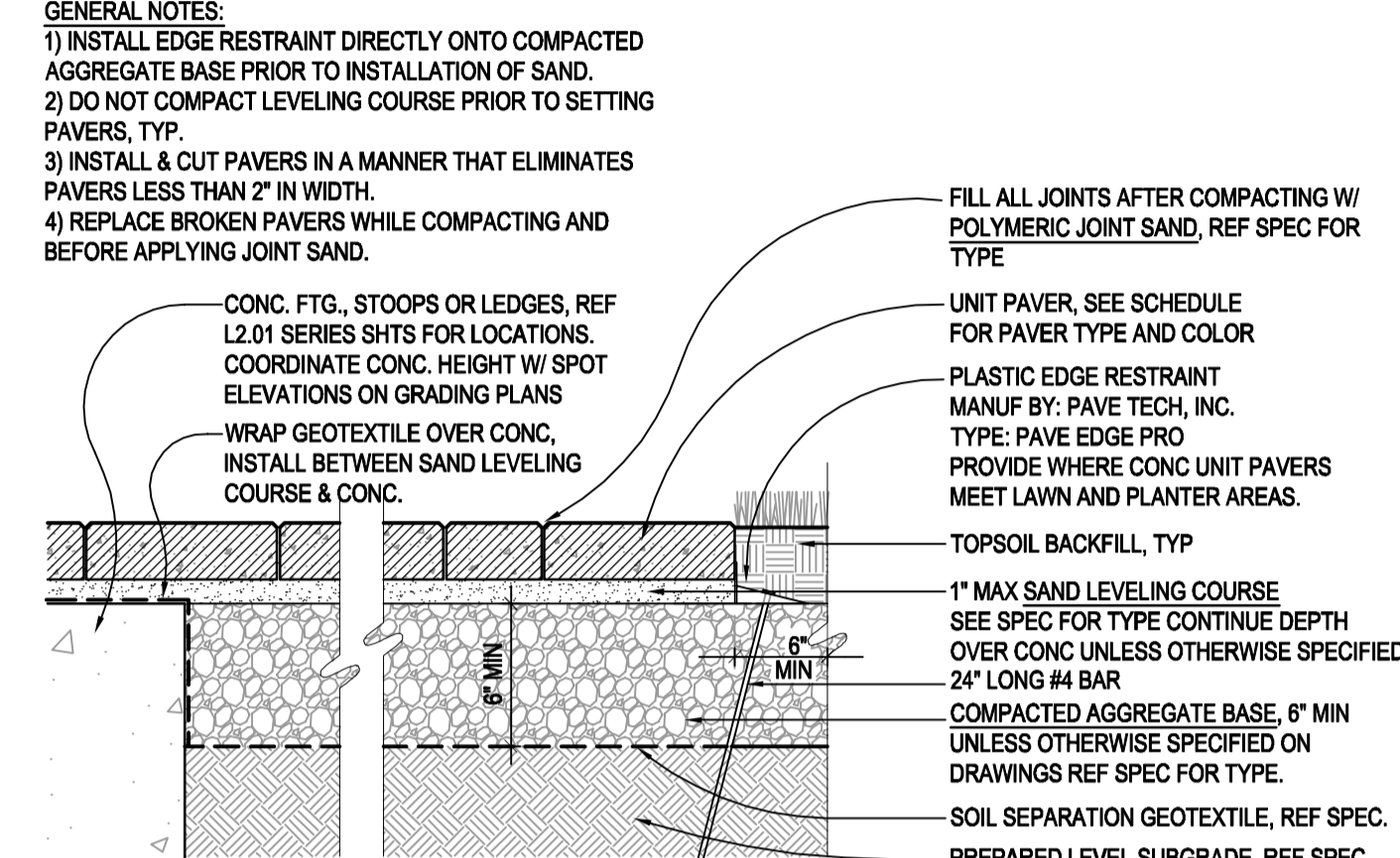
5 CONCRETE CURB & GUTTER
 SCALE: 1/2" = 1'-0"



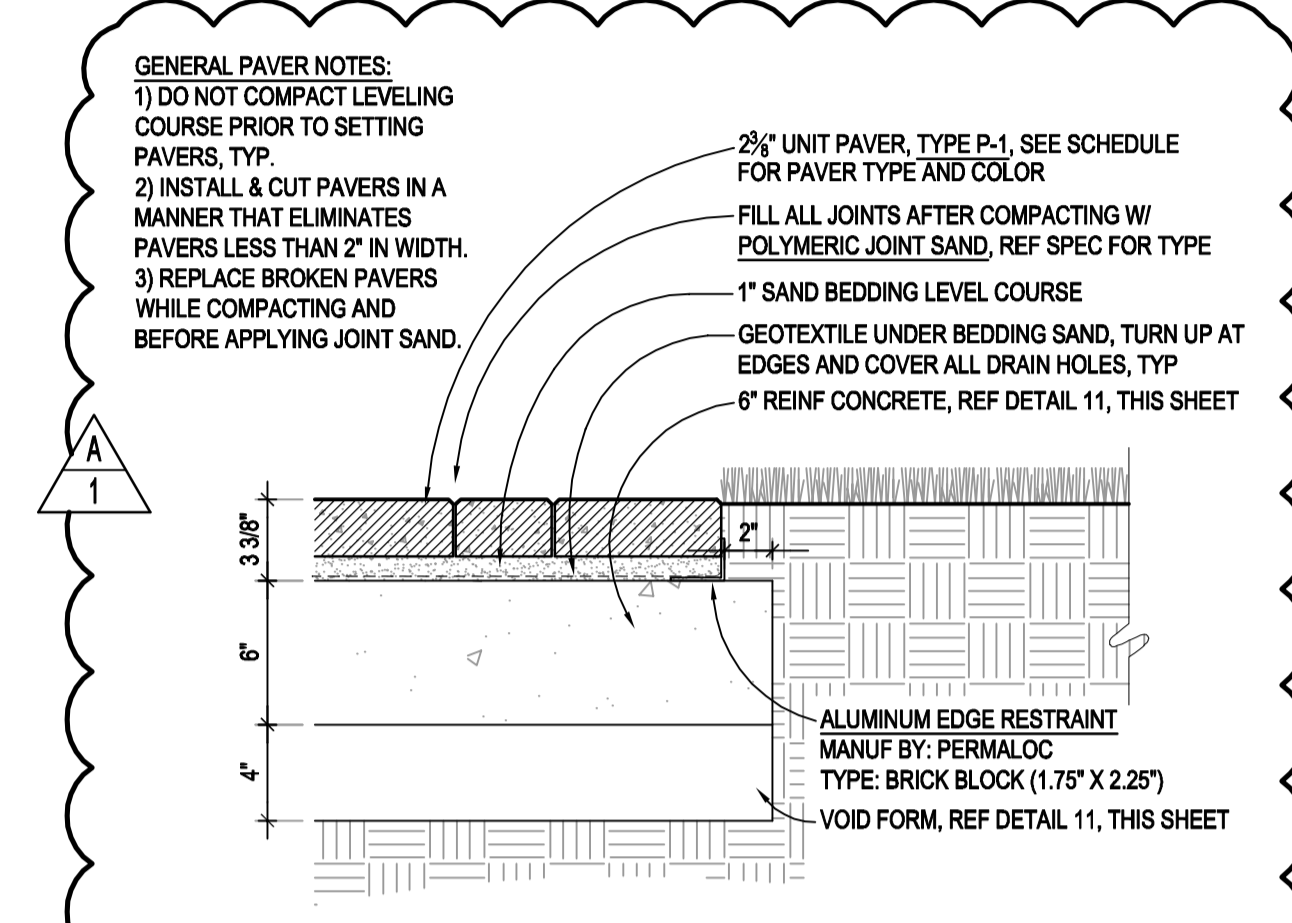
6 CONCRETE CURB & GUTTER @ EXST PVMT
 SCALE: 1/2" = 1'-0"



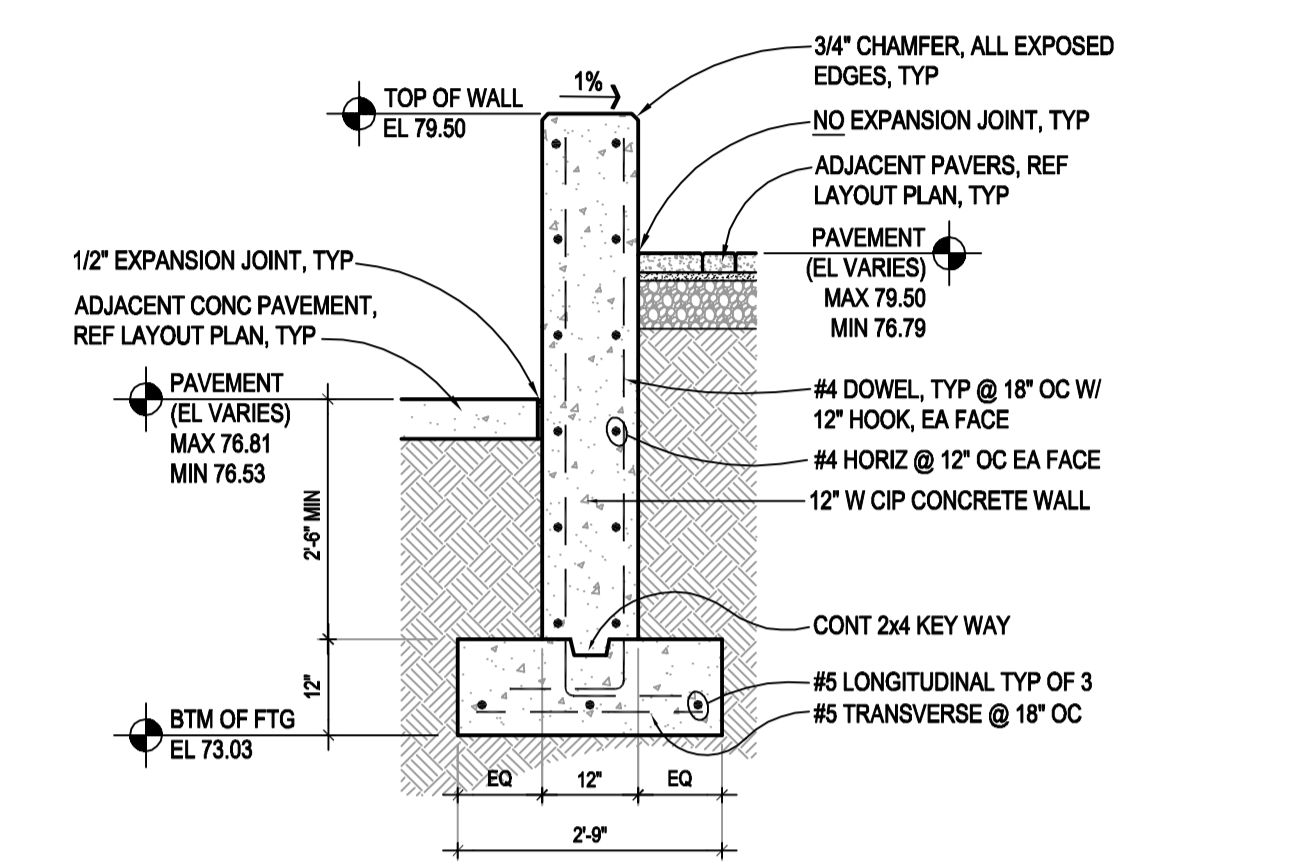
7 SUPPORT LEDGE AT PAVERS
 SCALE: 1/2" = 1'-0"



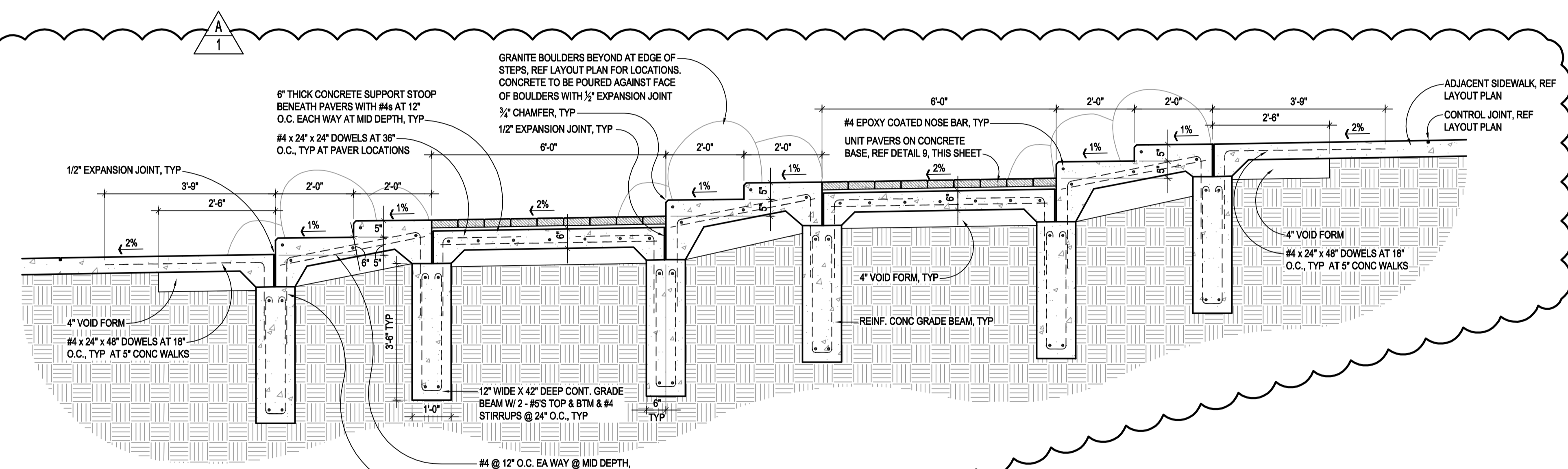
8 UNIT PAVER & PLASTIC EDGE RESTRAINT
 SCALE: 1/2" = 1'-0"



9 UNIT PAVER W/ CONC BASE
 SCALE: 1/2" = 1'-0"

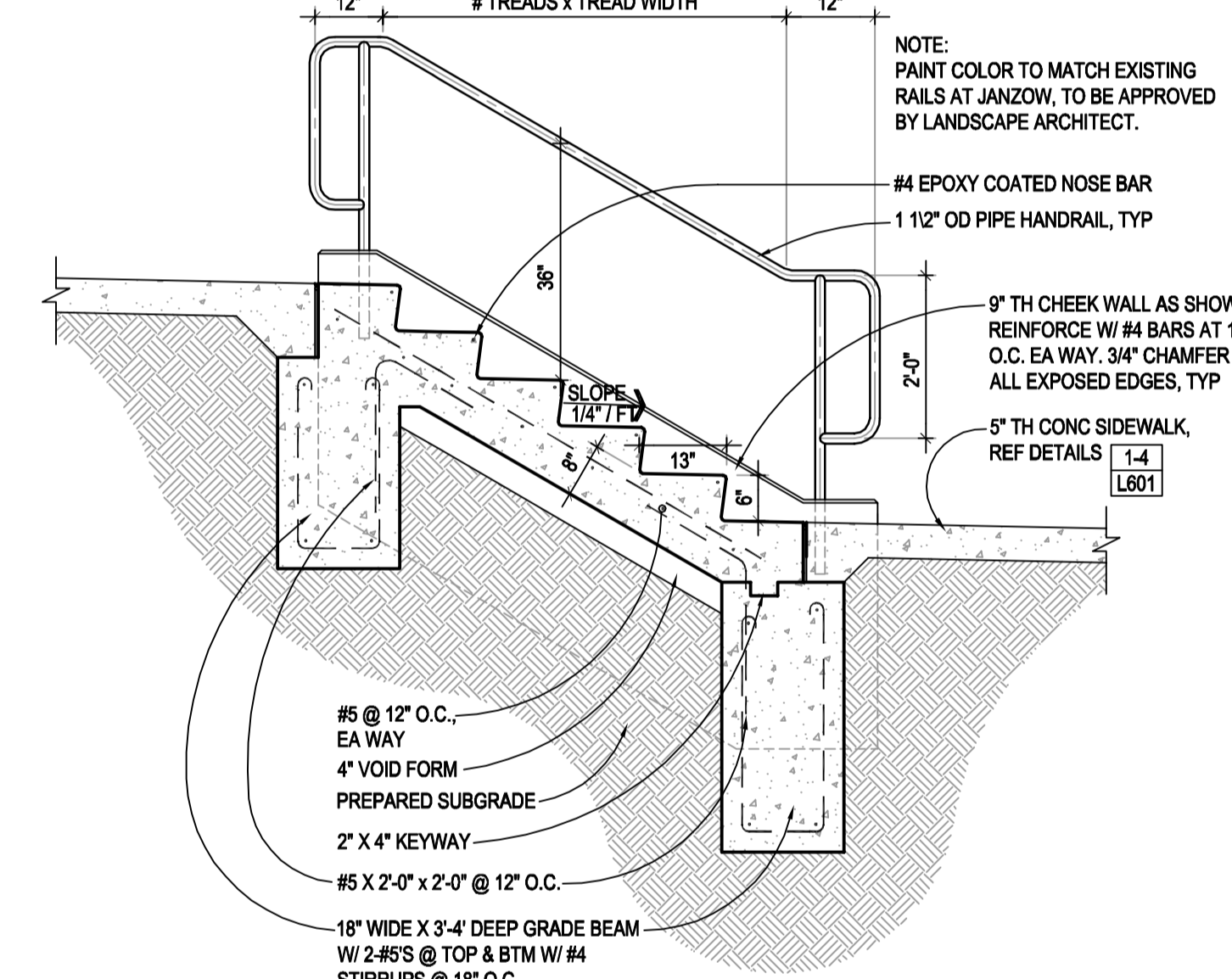


10 C.I.P. CONC WALL
 SCALE: 1/2" = 1'-0"

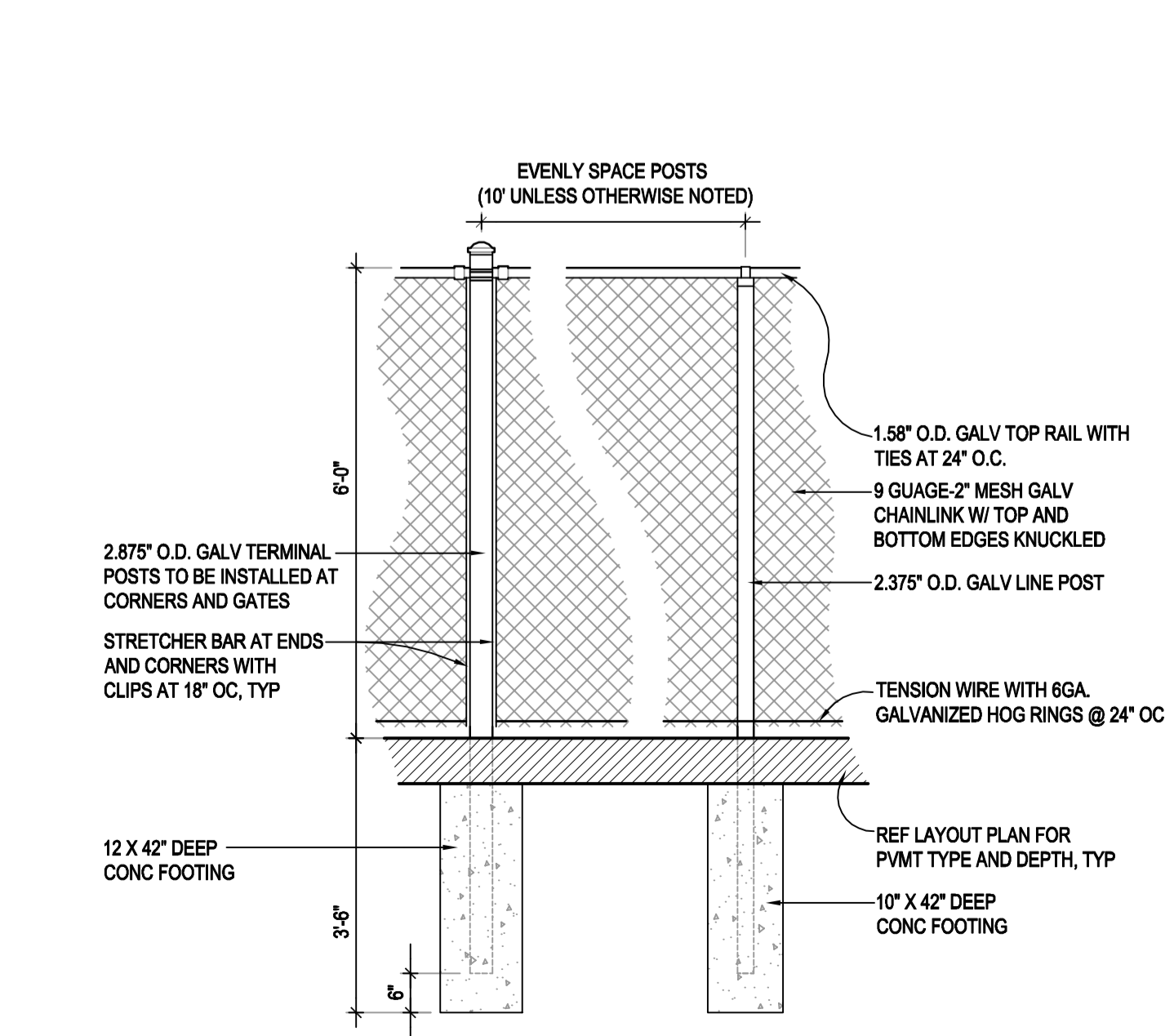


11 PLAZA STEPS
 SCALE: 1/2" = 1'-0"

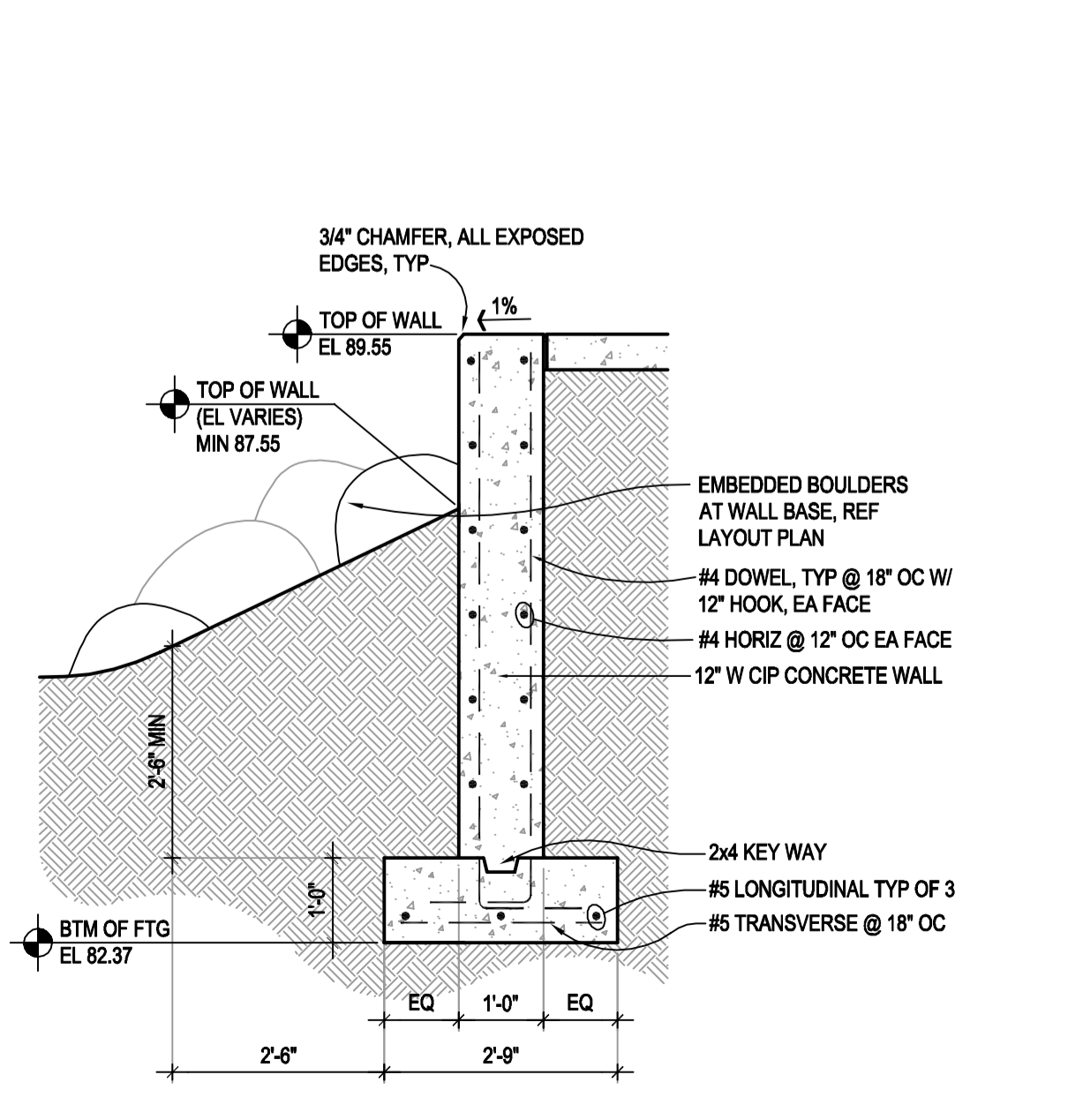
12 NOT IN USE
 SCALE: 1/2" = 1'-0"



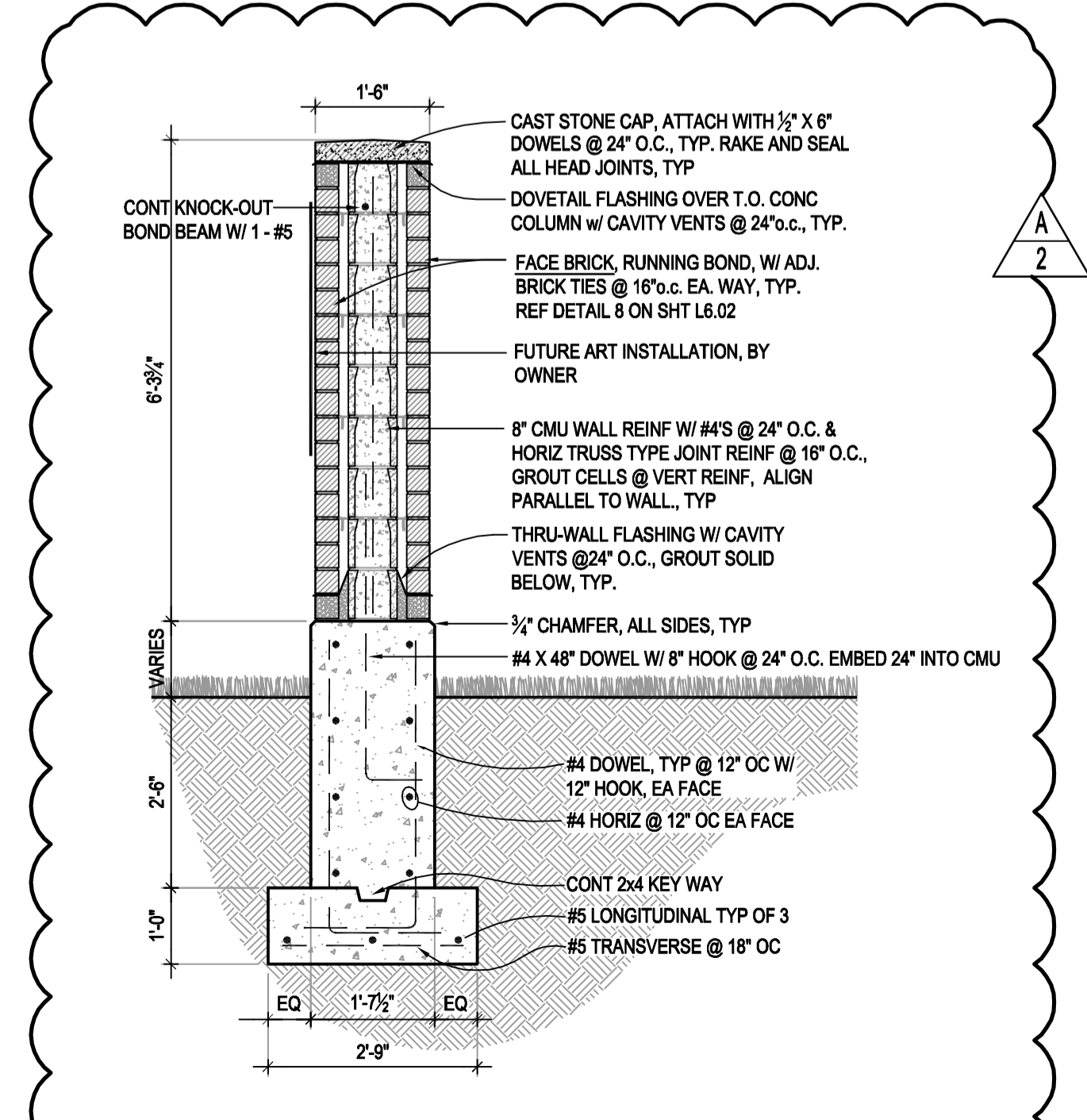
13 STAIR SECTION (5 RISERS)
 SCALE: 1/2" = 1'-0"



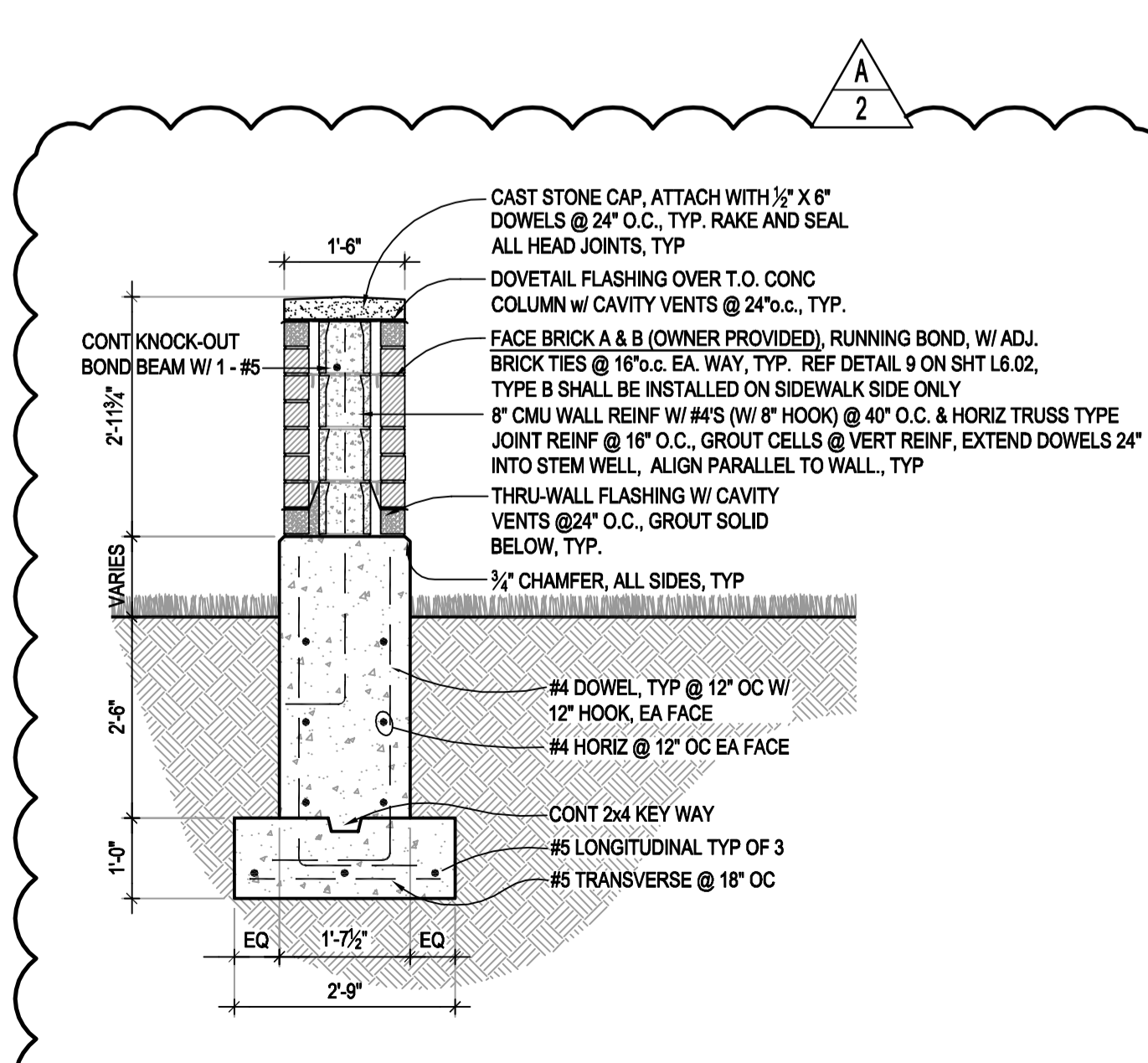
14 6'H CHAIN LINK FENCE, TYP
 SCALE: 1/2" = 1'-0"



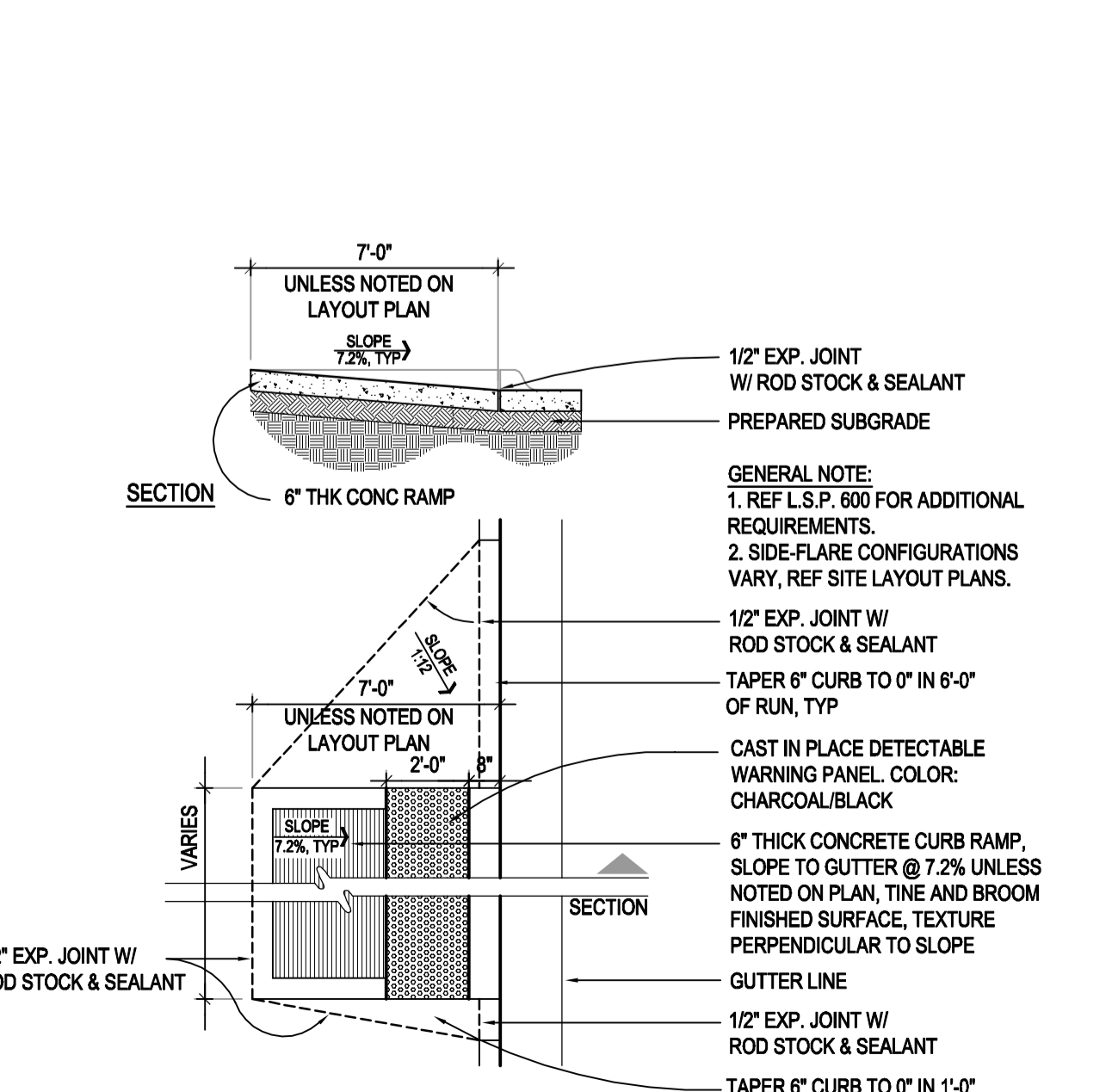
15 STONE RETAINING WALL
 SCALE: 1/2" = 1'-0"



16 LIFETILE WALL SECTION
 SCALE: 1/2" = 1'-0"



17 DONOR WALL SECTION
 SCALE: 1/2" = 1'-0"



18 TYP CURB RAMP PLAN & SECTION
 SCALE: NTS

SHEET HISTORY:
 ISSUED 05/23/2014 AS PER CONSTR. DOCUMENTS
 A-2 06/11/2014 AS PER ADDENDUM #2, TO INCLUDE MODIFICATIONS TO DETAILS 16 AND 17.

Concordia University
 Concordia Plaza & Heartfelt Memorial
 Construction Documents
 Concordia University
 Seward, Nebraska

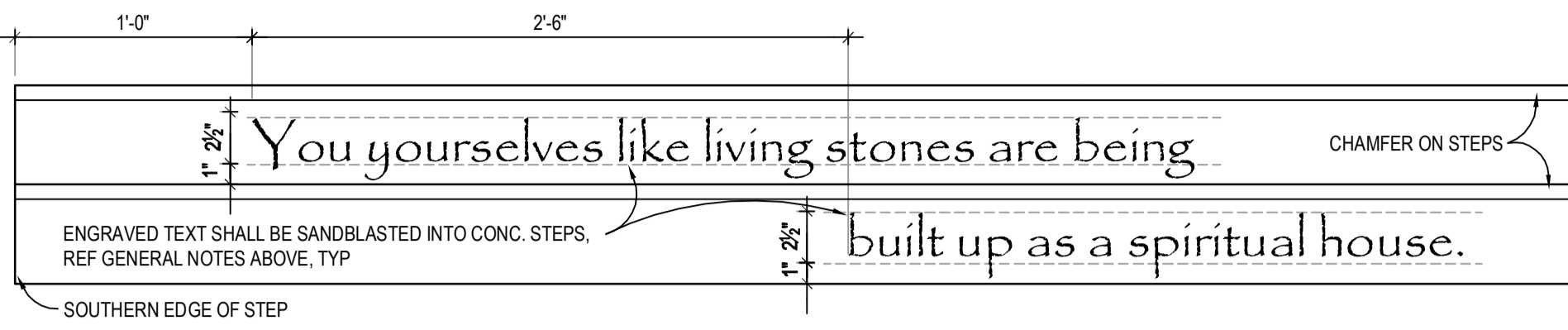
TCEP No.: 530-017-11

May 23, 2014



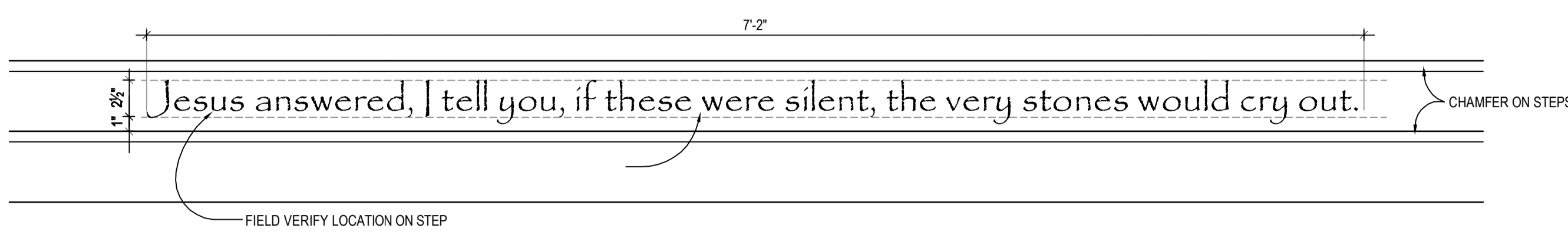
Site Details
L6.01

GENERAL NOTES:
 1. TEXT IS FOR DIAGRAMMATIC PURPOSES. FINAL TEXT IS SUBJECT TO CHANGE AND WILL BE PROVIDED BY THE OWNER, PRIOR TO FABRICATION. ALLOW FOR A TWO WEEK LEAD TIME.
 2. DIGITAL TEMPLATE WILL BE AVAILABLE UPON REQUEST. ALLOW FOR AN ADDITIONAL TWO WEEKS LEAD TIME.
 3. REFERENCE SHEET L2.01 FOR LOCATION.
 4. TEXT INFORMATION:
 FONT: PAPRUS (SOLID)
 DEPTH: 1/2" SANDBLAST
 COLOR: BLACK LITHACHROME
 5. REFERENCE DESCRIPTIVE PHOTOGRAPHS IN ACI 303R
 6. PROVIDE CRISP LINE OF DELINEATION AT EDGE OF SANDBLASTING



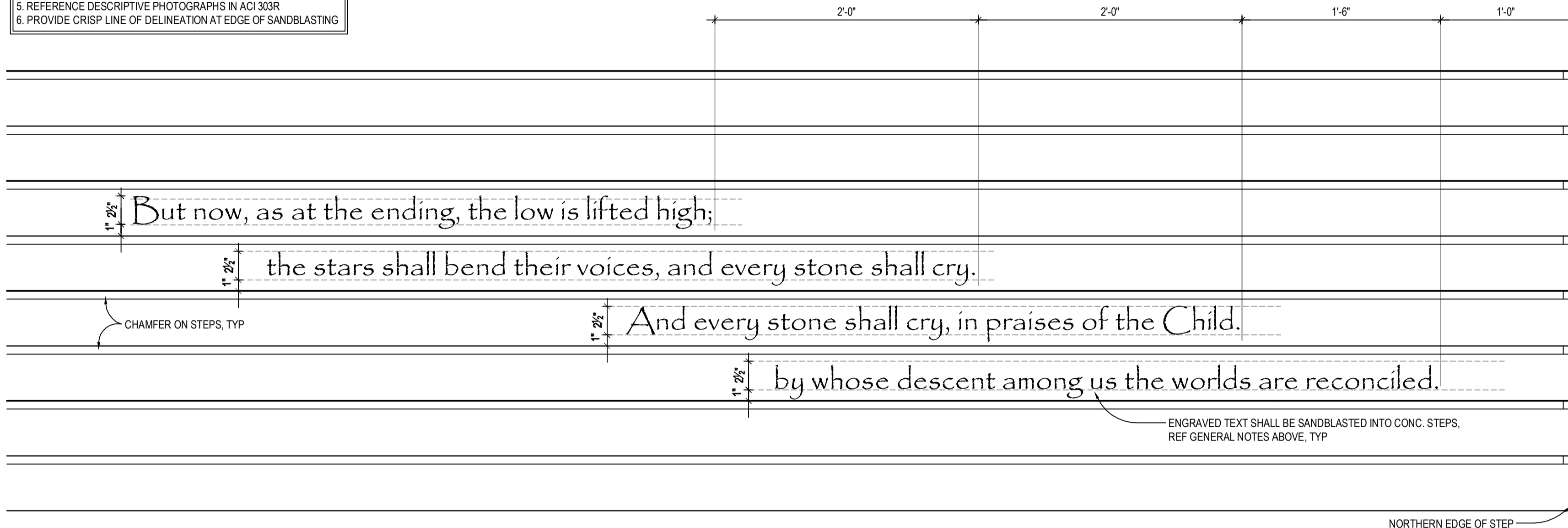
1 ENGRAVED STEP 'A'
 SCALE: 1 1/2"=1'-0"

GENERAL NOTES:
 1. TEXT IS FOR DIAGRAMMATIC PURPOSES. FINAL TEXT IS SUBJECT TO CHANGE AND WILL BE PROVIDED BY THE OWNER, PRIOR TO FABRICATION. ALLOW FOR A TWO WEEK LEAD TIME.
 2. DIGITAL TEMPLATE WILL BE AVAILABLE UPON REQUEST. ALLOW FOR AN ADDITIONAL TWO WEEKS LEAD TIME.
 3. REFERENCE SHEET L2.01 FOR LOCATION.
 4. TEXT INFORMATION:
 FONT: PAPRUS (SOLID)
 DEPTH: 1/2" SANDBLAST
 COLOR: BLACK LITHACHROME
 5. REFERENCE DESCRIPTIVE PHOTOGRAPHS IN ACI 303R
 6. PROVIDE CRISP LINE OF DELINEATION AT EDGE OF SANDBLASTING



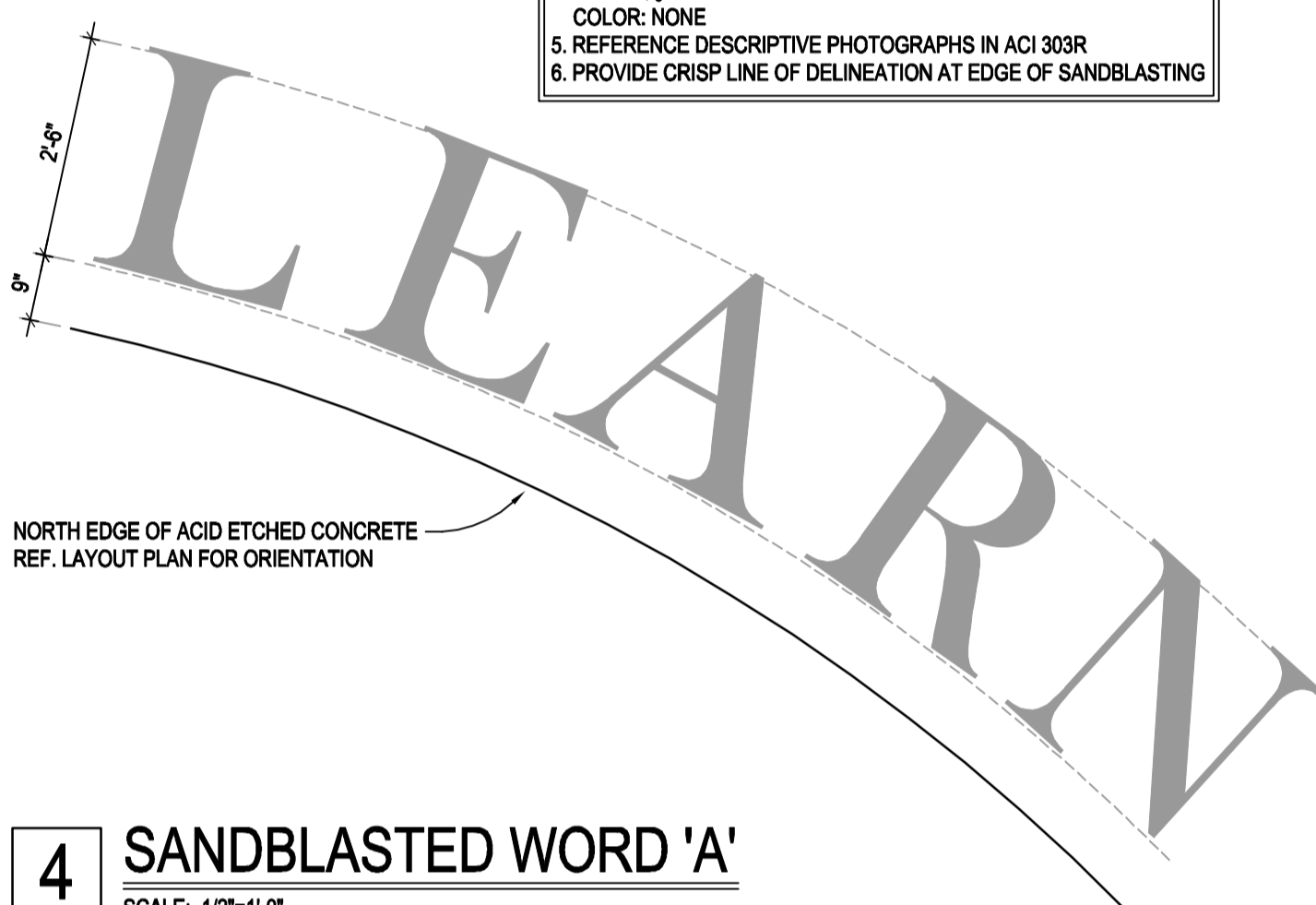
2 ENGRAVED STEP 'B'
 SCALE: 1 1/2"=1'-0"

GENERAL NOTES:
 1. TEXT IS FOR DIAGRAMMATIC PURPOSES. FINAL TEXT IS SUBJECT TO CHANGE AND WILL BE PROVIDED BY THE OWNER, PRIOR TO FABRICATION. ALLOW FOR A TWO WEEK LEAD TIME.
 2. DIGITAL TEMPLATE WILL BE AVAILABLE UPON REQUEST. ALLOW FOR AN ADDITIONAL TWO WEEKS LEAD TIME.
 3. REFERENCE SHEET L2.01 FOR LOCATION.
 4. TEXT INFORMATION:
 FONT: PAPRUS (SOLID)
 DEPTH: 1/2" SANDBLAST
 COLOR: BLACK LITHACHROME
 5. REFERENCE DESCRIPTIVE PHOTOGRAPHS IN ACI 303R
 6. PROVIDE CRISP LINE OF DELINEATION AT EDGE OF SANDBLASTING



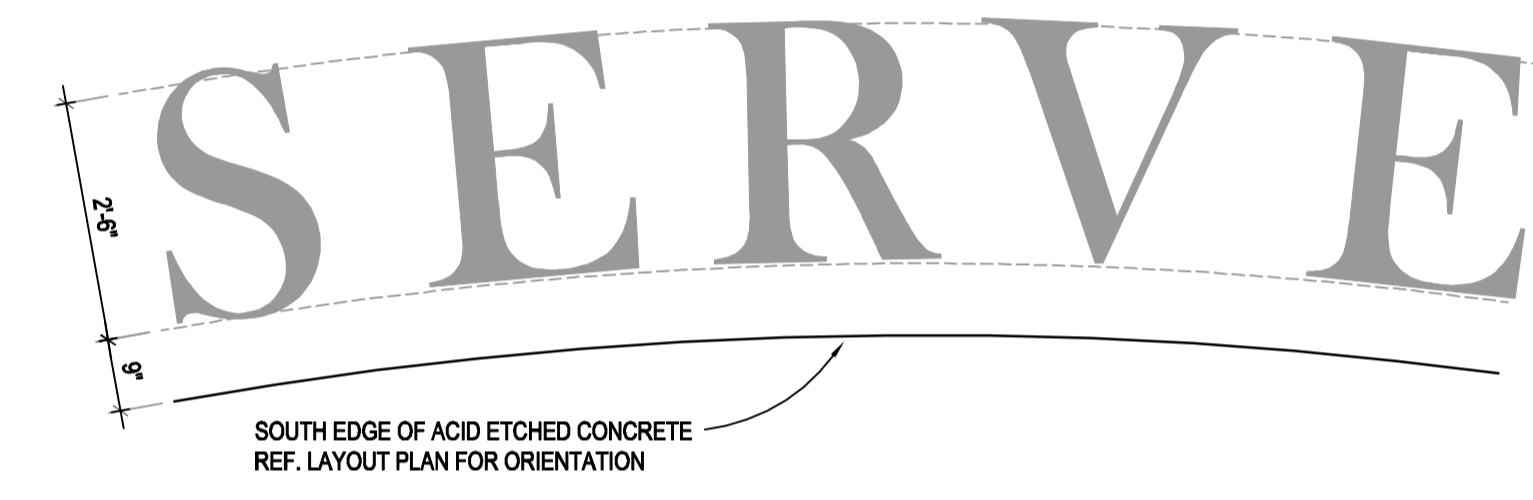
3 ENGRAVED STEP 'C'
 SCALE: 1 1/2"=1'-0"

GENERAL NOTES:
 1. TEXT AND FONT IS FOR DIAGRAMMATIC PURPOSES. FINAL TEXT IS SUBJECT TO CHANGE AND WILL BE PROVIDED BY THE OWNER, PRIOR TO FABRICATION. ALLOW FOR A TWO WEEK LEAD TIME.
 2. DIGITAL TEMPLATE WILL BE AVAILABLE UPON REQUEST. ALLOW FOR AN ADDITIONAL TWO WEEKS LEAD TIME.
 3. REFERENCE SHEET L2.01 FOR LOCATION.
 4. TEXT INFORMATION:
 FONT: TO BE DETERMINED
 DEPTH: 1/2" SANDBLAST
 COLOR: NONE
 5. REFERENCE DESCRIPTIVE PHOTOGRAPHS IN ACI 303R
 6. PROVIDE CRISP LINE OF DELINEATION AT EDGE OF SANDBLASTING

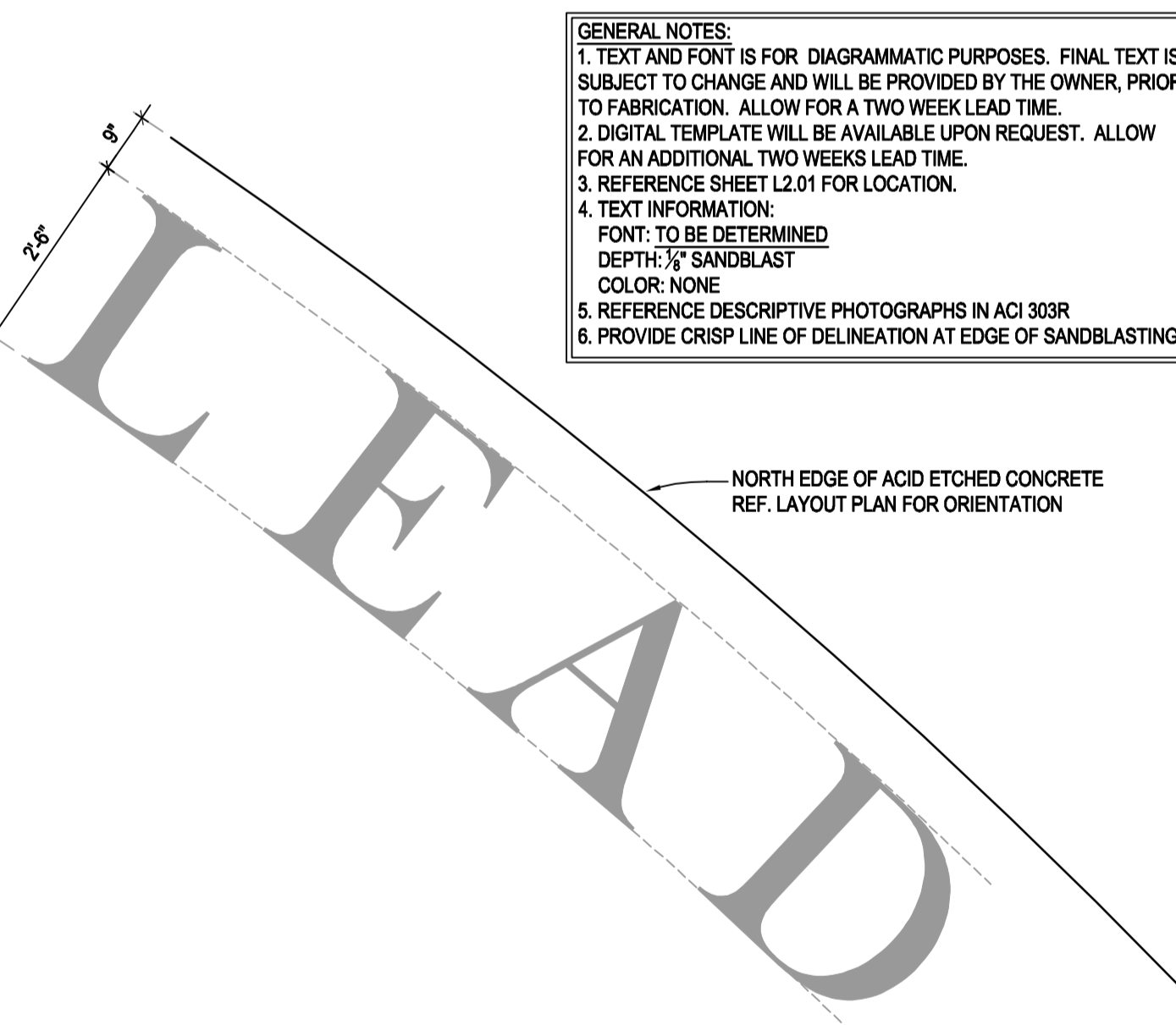


4 SANDBLASTED WORD 'A'
 SCALE: 1/2"=1'-0"

GENERAL NOTES:
 1. TEXT AND FONT IS FOR DIAGRAMMATIC PURPOSES. FINAL TEXT IS SUBJECT TO CHANGE AND WILL BE PROVIDED BY THE OWNER, PRIOR TO FABRICATION. ALLOW FOR A TWO WEEK LEAD TIME.
 2. DIGITAL TEMPLATE WILL BE AVAILABLE UPON REQUEST. ALLOW FOR AN ADDITIONAL TWO WEEKS LEAD TIME.
 3. REFERENCE SHEET L2.01 FOR LOCATION.
 4. TEXT INFORMATION:
 FONT: TO BE DETERMINED
 DEPTH: 1/2" SANDBLAST
 COLOR: NONE
 5. REFERENCE DESCRIPTIVE PHOTOGRAPHS IN ACI 303R
 6. PROVIDE CRISP LINE OF DELINEATION AT EDGE OF SANDBLASTING



5 SANDBLASTED WORD 'B'
 SCALE: 1/2"=1'-0"



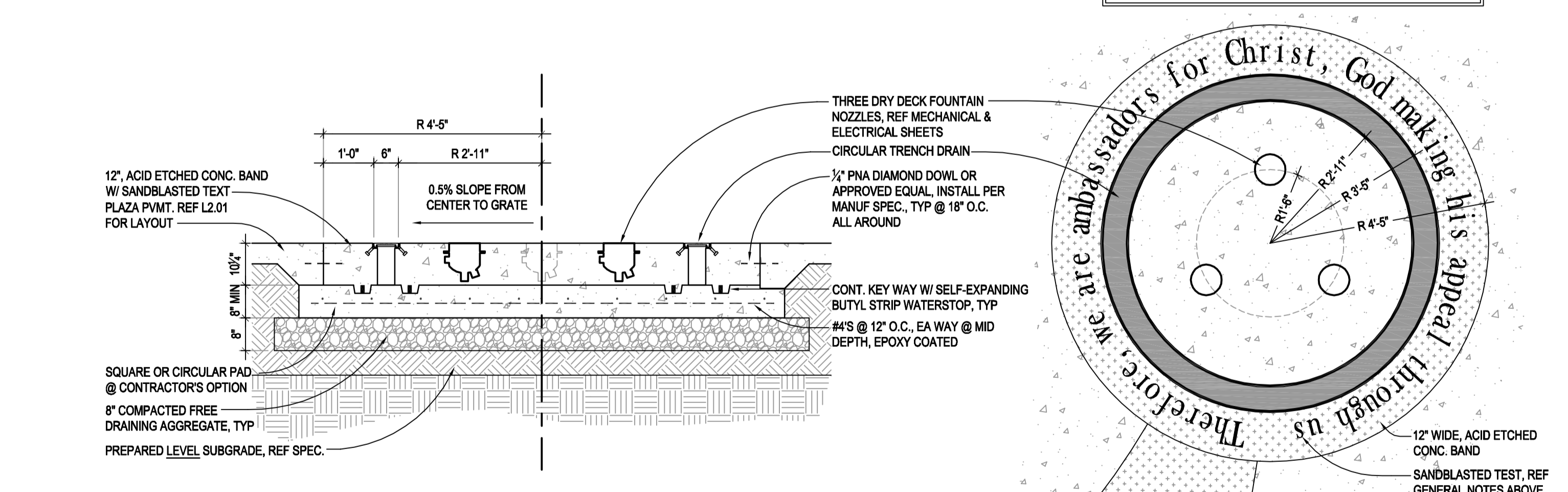
6 SANDBLASTED WORD 'C'
 SCALE: 1/2"=1'-0"

GENERAL FOUNTAIN NOTES:
 1) BOND ALL METAL PARTS OF THE FOUNTAIN W/ #8 ANG CONDUCTOR IN THE SAME MANNER SPECIFIED FOR SWIMMING POOLS IN SECTION 080-22 OF THE NATIONAL ELECTRICAL CODE.
 2) PROVIDE MOCKUP OF THE ETCHED CONC AND SANDBLASTED TEXT FOR APPROVAL BY LANDSCAPE ARCHITECT BEFORE INSTALLATION.
 3) COORDINATE ALL MECHANICAL & ELECTRICAL WORK FOR FOUNTAIN INSTALLATION

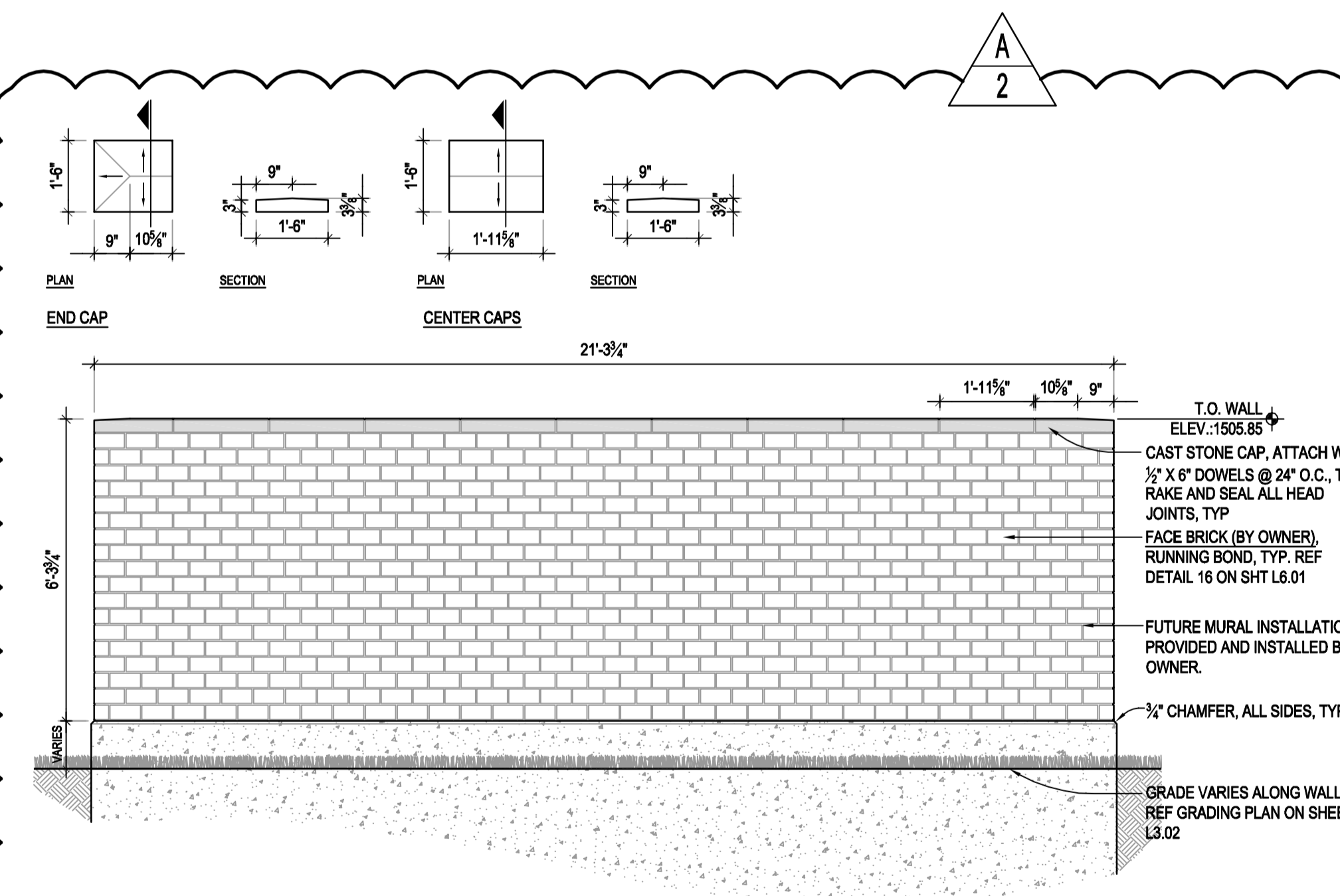
WATER STOP NOTES:
 1) WATER STOP SHALL BE MANUFACTURED RECTANGULAR OR TRAPEZOIDAL STRIP, BUTYL RUBBER W/ SODIUM BENZONITE OR OTHER HYDROPHILIC POLYMER, FOR ADHESIVE BONDING TO CONCRETE, 1/2" BY 1" NON-TAPERED.
 2) CARBIDE COATINGS - MIRA STOP, CETCO - VOLCLAY WATERSTOP RX OR EQUAL IF AND AS SPECIFICALLY APPROVED BY ARCHITECT DURING THE BIDDING PERIOD.
 3) WATERSTOP SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.

TRENCH GRATE & FRAME NOTES:
 1) MANUF: IRON AGE MODEL: INTERLAKEN 6" RADIUS TRENCH DRAIN I.R. 2-11"
 MATERIAL: CAST BRONZE
 FINISH: NATURAL
 FRAME: STAINLESS STEEL 6" WIDE E-FRAME
 2) OR EQUAL IF AND AS SPECIFICALLY APPROVED BY ARCHITECT DURING THE BIDDING PERIOD.
 3) ATTACH GRATE WITH WANDAL-PROOF SCREWS
 4) TRENCH DRAIN SYSTEM SHALL BE INSTALLED PER THE MANUF'S SPECIFICATIONS AND RECOMMENDATIONS.

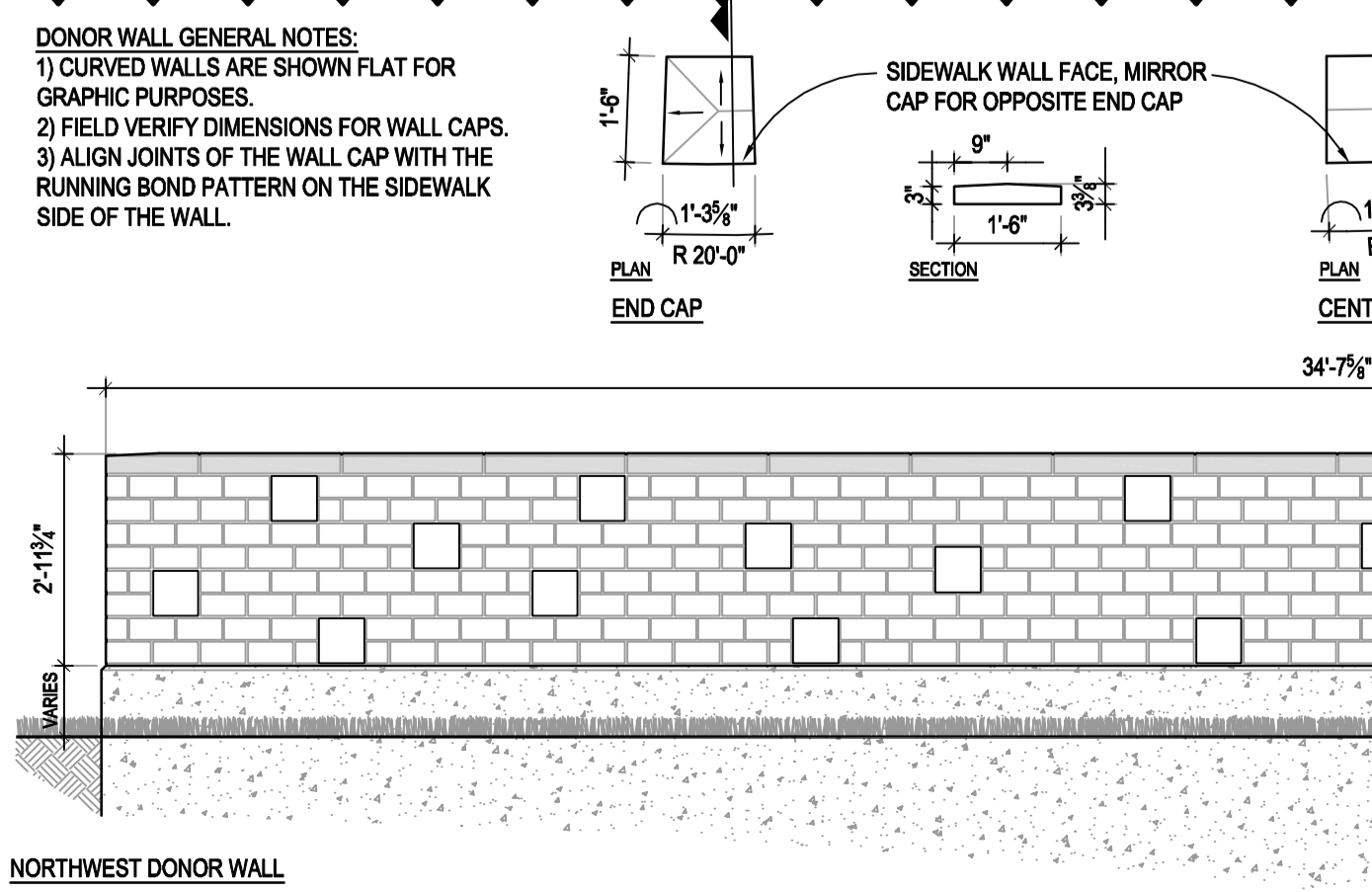
SANDBLASTING NOTES:
 1. TEXT IS FOR DIAGRAMMATIC PURPOSES. FINAL TEXT IS SUBJECT TO CHANGE AND WILL BE PROVIDED BY THE OWNER, PRIOR TO FABRICATION. ALLOW FOR A TWO WEEK LEAD TIME.
 2. DIGITAL TEMPLATE WILL BE AVAILABLE UPON REQUEST. ALLOW FOR AN ADDITIONAL TWO WEEKS LEAD TIME.
 3. TEXT INFORMATION:
 FONT: TO BE DETERMINED
 DEPTH: 1/2" SANDBLAST
 COLOR: BLACK LITHACHROME
 5. REFERENCE DESCRIPTIVE PHOTOGRAPHS IN ACI 303R
 6. PROVIDE CRISP LINE OF DELINEATION AT EDGE OF SANDBLASTING



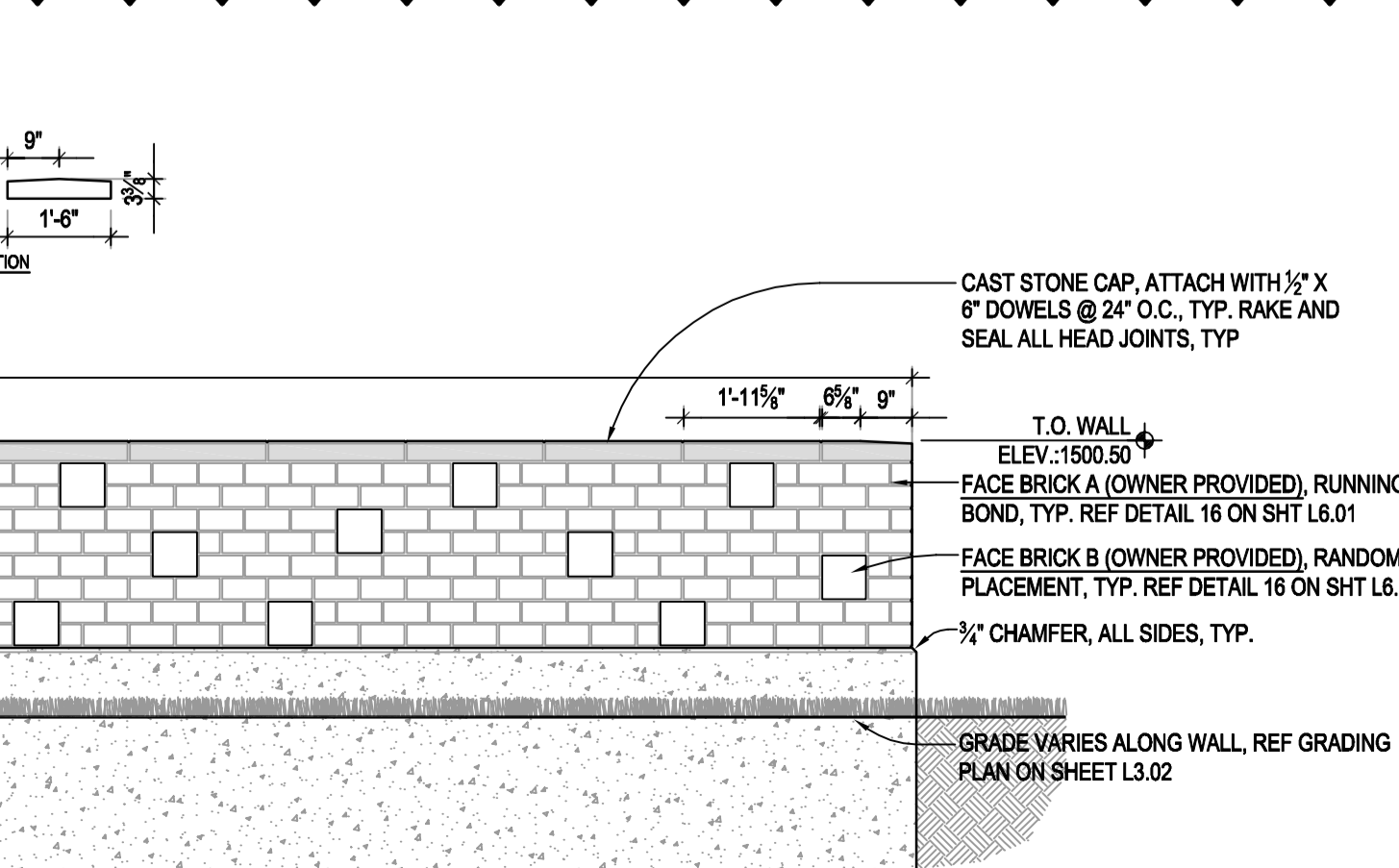
7 CONCORDIA PLAZA FOUNTAIN
 SCALE: 1/2"=1'-0"



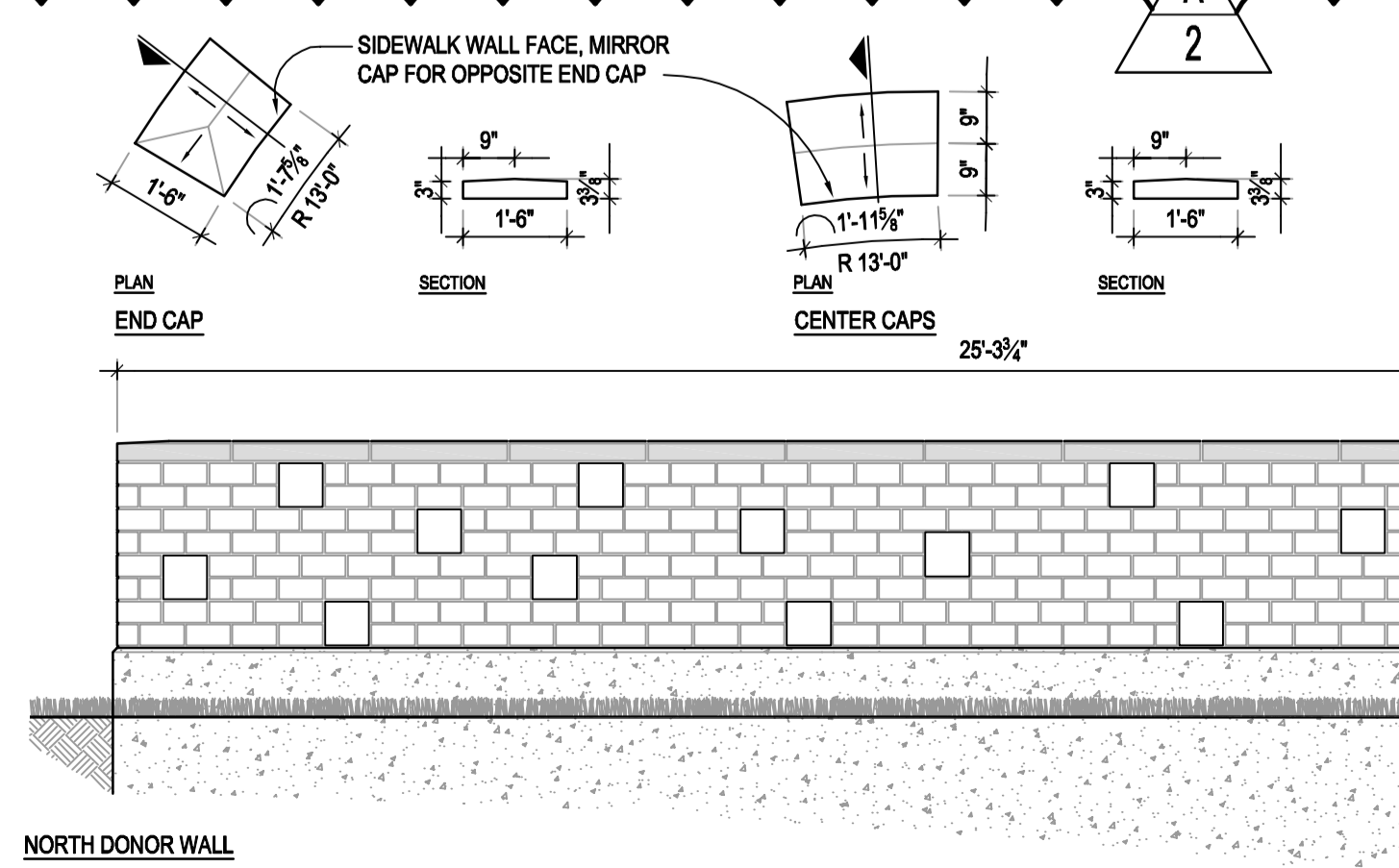
8 LIFETILE WALL ELEVATION & CAP DETAILS
 SCALE: 3/8"=1'-0"



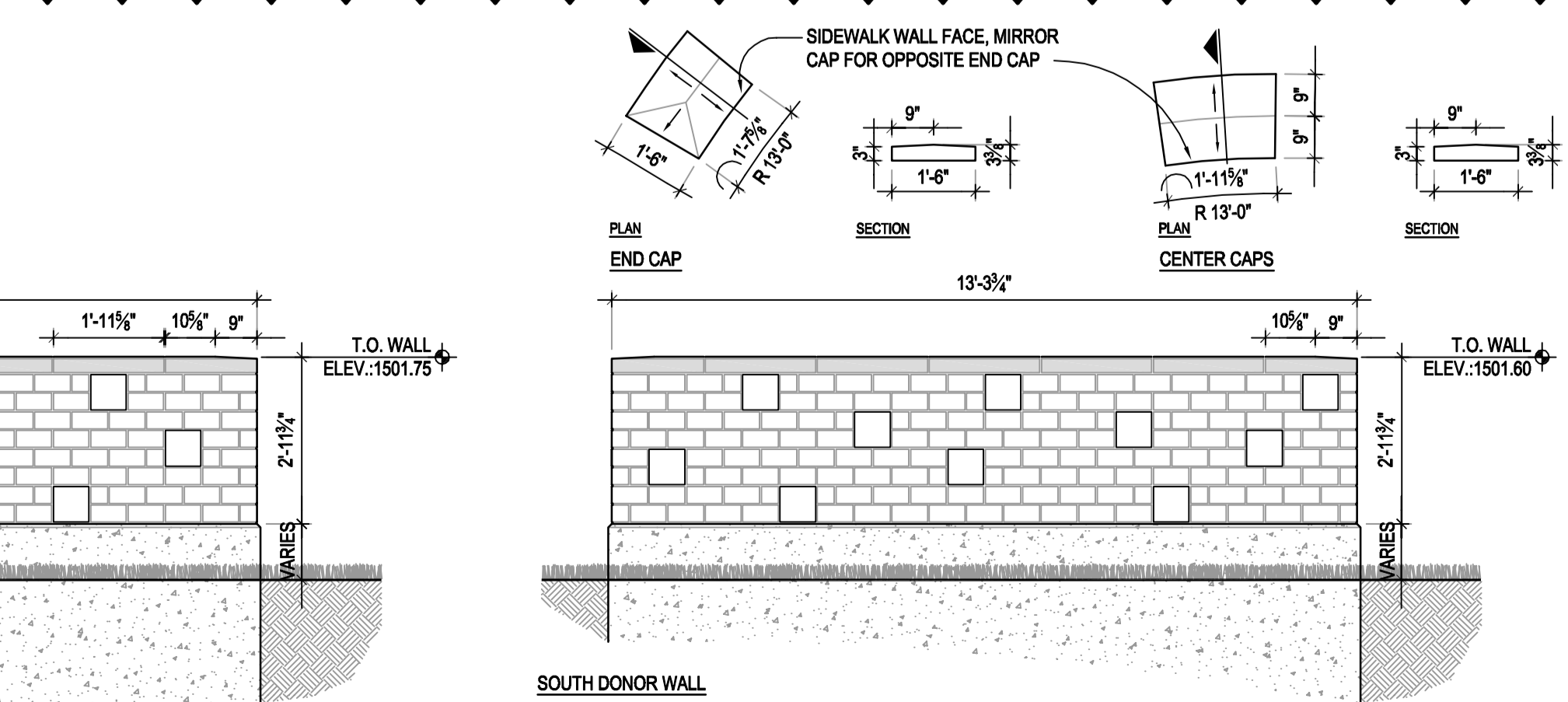
9 DONOR WALL ELEVATION & CAP DETAILS
 SCALE: 3/8"=1'-0"



NORTH DONOR WALL



SOUTH DONOR WALL



SOUTHWEST DONOR WALL

REVISION HISTORY:

ISSUED	DATE	DESCRIPTION
A-2	06/11/2014	AS PER ADDENDUM #2 TO INCLUDE MODIFICATIONS TO DETAILS 7.8 AND 9.

Concordia University
 Concordia Plaza &
 Heartfelt Memorial
 Construction Documents
 Concordia University
 Seward, Nebraska

TCEP No.: 530-017-11

May 23, 2014

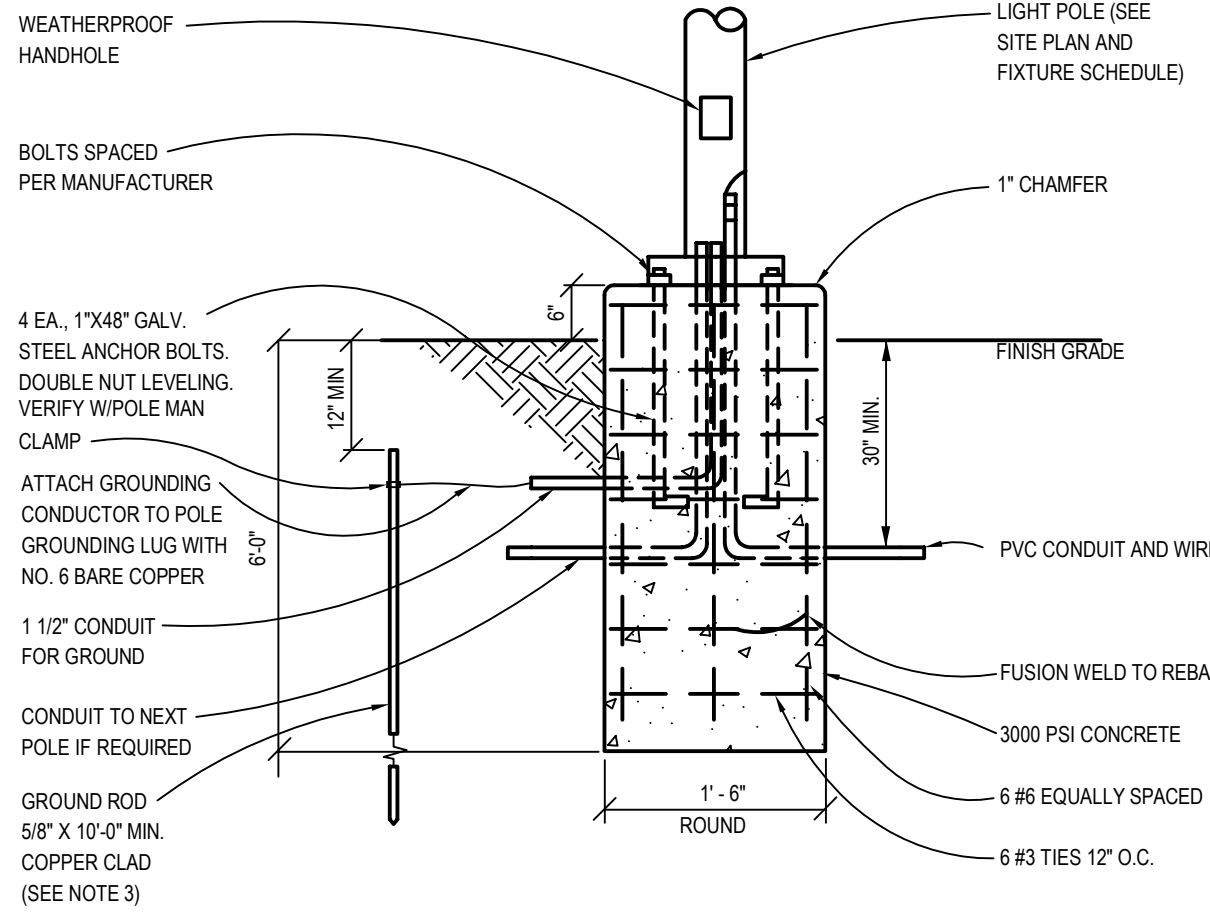


ELECTRICAL ABBREVIATIONS AND SYMBOLS LEGEND

ABBREVIATIONS	LIGHTING	ELECTRICAL DISTRIBUTION EQUIPMENT
AFG ABOVE FINISH GRADE	○ P	— LIGHTING AND APPLIANCE PANEL
B.O.C. BACK OF CURB	○ R	— LIGHTING RELAY PANEL
CATV CABLE TELEVISION	○ S	— TRANSFORMER
CG CIRCUIT GROUND	○ T	— CIRCUIT BREAKER
E SUBSCRIPT 'E' ADJACENT TO ANY DEVICE INDICATES EXISTING.	○ U	— FUSEIBLE SWITCH
(ER) SUBSCRIPT 'ER' ADJACENT TO ANY DEVICE INDICATES EXISTING TO BE RELOCATED.	○ V	— POTENTIAL TRANSFORMER
GF GROUND FAULT INTERRUPTER	○ W	— CURRENT TRANSFORMER
NF NON-FUSED	○ X	— GROUND
NIC NOT IN CONTRACT	○ Y	— METER
NO NUMBER	○ Z	— FUSED DISCONNECT SWITCH, FUSE SIZE AS NOTED ON DRAWINGS, ASSUME 30A/3P UNLESS OTHERWISE NOTED.
ONE OVERHEAD ELECTRICAL	○ 1	— FUSED DISCONNECT SWITCH, FUSE SIZE AS NOTED ON DRAWINGS, ASSUME 30A/3P UNLESS OTHERWISE NOTED.
OHT OVERHEAD TELEPHONE	○ 2	—
PVC POLYVINYL CHLORIDE	○ 3	—
(R) SUBSCRIPT 'R' ADJACENT TO ANY DEVICE INDICATES THE RELOCATED POSITION OF AN EXISTING DEVICE.	○ 4	—
RC RECEPTACLE CIRCUIT	○ 5	—
RGS RIGID GALVANIZED STEEL	○ 6	—
SL STREET LIGHT CIRCUIT	○ 7	—
T CONDUIT TRENCHED	○ 8	—
UGE UNDERGROUND ELECTRICAL	○ 9	—
UGT UNDERGROUND TELEPHONE	○ 10	—
WG WIRE GUARD	○ 11	—
WP WEATHERPROOF	○ 12	—
/// CROSS-HATCHING INDICATES REMOVAL	○ 13	—

PROJECT GENERAL ELECTRICAL NOTES

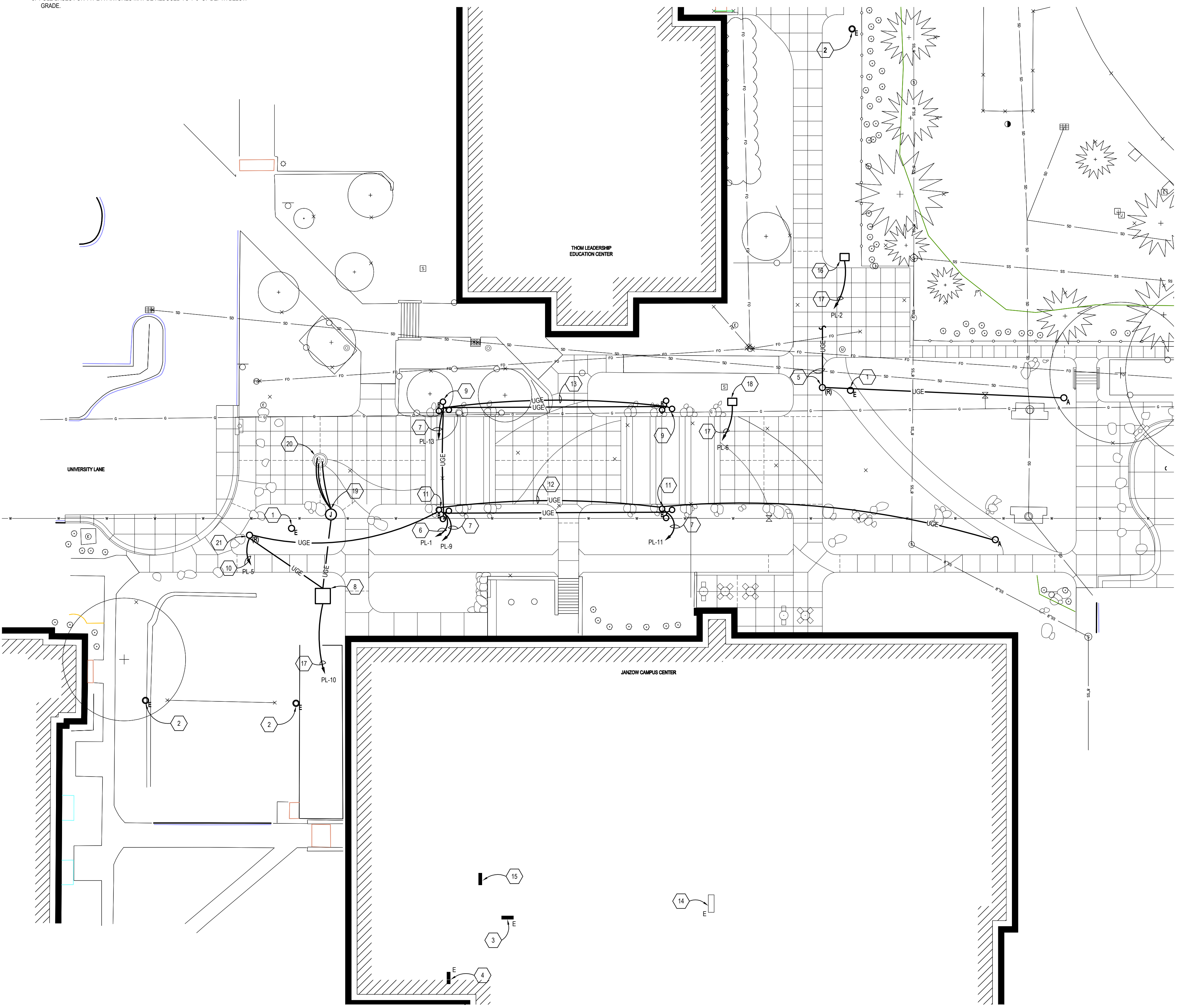
- ROUTE ALL CONDUCTORS THROUGHOUT ALL CIRCUITS UNLESS NOTED OTHERWISE. ROUTE ALL CONDUCTORS IN A MINIMUM OF 1" SCHEDULE 40 PVC CONDUIT BURIED A MINIMUM OF 30" BELOW FINISHED GRADE. BURY A COLLORED FIBER IN THE CONDUIT TRENCH WHERE TRENCHES ARE UTILIZED. SEE THE PROJECT SPECIFICATION FOR ADDITIONAL INFORMATION.
- THE LOCATIONS OF EXISTING EQUIPMENT SHOWN ON THE PLANS WERE OBTAINED FROM PREVIOUS DRAWINGS AND SITE VISITS. THE LOCATIONS OF EXISTING EQUIPMENT IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR. ACCURACY OF THE INFORMATION SHOWN IS NOT GUARANTEED. THE CONTRACTOR IS RESPONSIBLE FOR THE VERIFICATION OF ALL EXISTING CONDITIONS PRIOR TO SUBMITTING THE PROJECT BID.
- THE CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED THROUGH THE OWNER AND THE ONE CALL SYSTEM.
- THE OWNER HAS THE RIGHT TO RETAIN ALL SALVAGEABLE MATERIAL. ANY MATERIAL THE OWNER CHOOSES NOT TO ACCEPT SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR.
- ACTUAL CIRCUIT ROUTING MUST BE DETERMINED IN THE FIELD. ALL BIDS SHOULD INCORPORATE THIS REQUIREMENT. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR CHANGES WHICH OCCUR AS A RESULT OF EXISTING CIRCUITING. CONTINUITY OF CIRCUITING SHALL BE MAINTAINED FOR ALL EXISTING CIRCUITS AS REQUIRED. CONTRACTOR SHALL PROVIDE ALL NECESSARY WIRE, CONDUIT, DEVICES AND CONNECTIONS TO ENSURE CIRCUIT CONTINUITY TO ALL NEW AND EXISTING EQUIPMENT.
- THE CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED THROUGH THE OWNER AND THE ONE CALL SYSTEM.
- COORDINATE THE INSTALLATION OF LIGHTING FIXTURES WITH OTHER TRADES. ALL LIGHT FIXTURES SHALL BE INSTALLED AS PER THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFER TO THE LIGHTING FIXTURE SCHEDULE FOR ADDITIONAL INFORMATION.



LIGHT FIXTURE TYPE 'A' AND 'B' POLE BASE DETAIL

- NO SCALE
- POLE BASE DETAIL NOTES:
- FULLY COORDINATE INSTALLATION DETAILS WITH POLE MANUFACTURER.
 - COORDINATE INSTALLATION OF BASE WITH SIDEWALK CURB INSTALLER.
 - GROUND ROD MAY BE PROVIDED IN TWO 3' SECTIONS AND CONNECTED DURING INSTALLATION TO FORM ONE CONTINUOUS ROD.
 - FOR THE TYPE 'A' POLE BASE, REDUCE THE AMOUNT OF EXPOSED CONCRETE ABOVE GRADE TO 2" SIMILAR TO EXISTING POLE BASE INSTALLATIONS ON CAMPUS.
 - POLE BASES FOR TYPE 'A' FIXTURES MAY BE REDUCED TO 4-6" OF DEPTH BELOW GRADE.

LIGHTING FIXTURE SCHEDULE									
Fixture Type	Manufacturers	Catalog Numbers	Description	No. of Lamps	Lamp Type	Volt	VA	Mounting	Remarks
A	KIM	FM C22SP6 250W/208 0a FM FRA20-4188 BZ	AREA LIGHT POLE TO MATCH EXISTING CAMPUS POLES	1	250W FMH	208	300	POLE	EXISTING AREA LIGHT POLE SIMILAR TO THIS STYLE FIXTURE. REFER TO THE POLE BASE DETAIL FOR ADDITIONAL INFORMATION.
B	SELUX	DLGL-R3-C3L11-635-BZ-208 O-AT524 16 BZ B33 WIRECEPT	AREA LIGHTS ON 18" POLE W/BASE COVER		LED	208	240	POLE	PROVIDE A SURFACE MOUNTED GF RECEPTACLE NEAR THE BASE OF POLE AT A MINIMUM OF 12" AFG. PROVIDE RECEPTACLE WITH A TAYMAC M.4500 NUSE COVER.

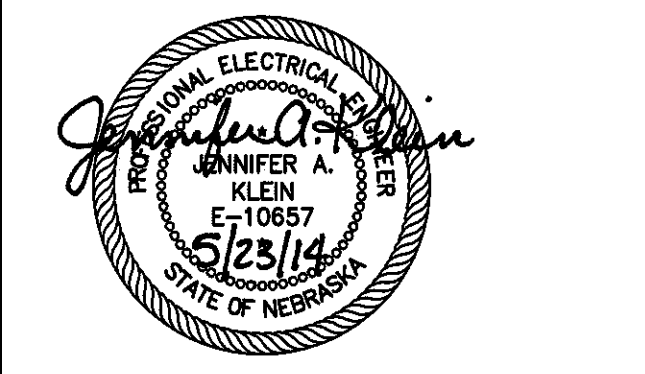


CONCORDIA PLAZA ELECTRICAL SITE PLAN

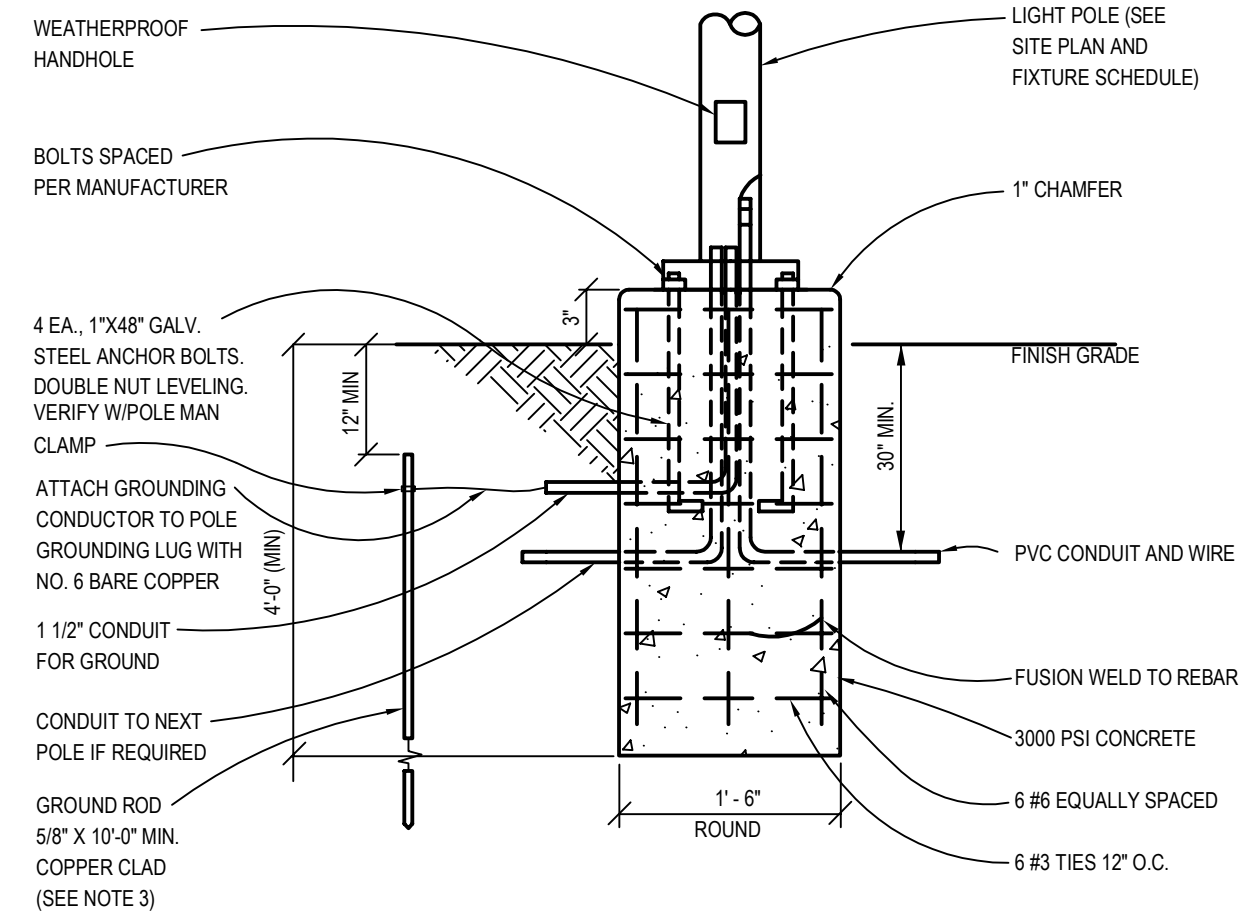
SCALE: 1"=20'-0"

- CONCORDIA PLAZA ELECTRICAL SITE PLAN NOTES:
- EXISTING LIGHT POLE AND BASE TO BE REMOVED DURING THE DEMOLITION PHASE OF THE PROJECT. COORDINATE ACCESS TO THE POLE AND RELOCATION OF POLE WITH THE OWNER.
 - EXISTING LIGHT POLE TO REMAIN. MAINTAIN CIRCUIT CONTINUITY THROUGHOUT THE PROJECT.
 - APPROXIMATE LOCATION OF EXISTING PANELBOARD ON THE LOWER LEVEL OF JANZOW. SIEMENS 208Y120V, 3PH, 4W, MAIN LUG ONLY, SURFACE MOUNTED PANELBOARD LOCATED IN THE MECHANICAL ROOM.
 - EXISTING BUILDING SYSTEMS MANAGEMENT PANEL LOCATED IN THE LOWER LEVEL MECHANICAL ROOM OF JANZOW.
 - RELOCATE EXISTING LIGHT POLE TO NEW LOCATION. RECONNECT TO EXISTING LIGHTING CIRCUIT. CIRCUIT ORIGINATES FROM THE EDUCATION BUILDING TO THE NORTHWEST.
 - PROVIDE CONTROL FOR THE LIGHTING VIA THE EXISTING BUILDING MANAGEMENT SYSTEM IN JANZOW. PROVIDE ALL NECESSARY CONTACTS AND CONNECTIONS TO THE BMS PANEL AS COORDINATED WITH THE OWNER.
 - CIRCUIT TO SERVE THE NEW RECEPTACLE LOAD IN THE POLE.
 - APPROXIMATE LOCATION OF FOUNTAIN DIRECT BURIAL PUMP VAULT. VAULT IS PRE-WIRED WITH CONNECTIONS TO THE FOUNTAIN FEATURE PUMP LIGHTING CONTROLS, WATER TREATMENT AND ADDITIONAL ACCESSORIES. COORDINATE CONNECTION TO THE VAULT CONTROL PANEL AND EXACT POWER REQUIREMENT WITH THE FOUNTAIN INSTALLER.
 - CIRCUIT THE RECEPTACLES IN THE TWO NORTH POLES ON THE SAME CIRCUIT.
 - PROVIDE CONTROL FOR THE LIGHTING VIA THE EXISTING BUILDING MANAGEMENT SYSTEM IN JANZOW. PROVIDE ALL NECESSARY CONTACTS AND CONNECTIONS TO THE BMS PANEL AS COORDINATED WITH THE OWNER. CIRCUIT TO INCLUDE ONE FIXTURE ON EACH OF THE SOUTH POLES.
 - CIRCUIT THIS FIXTURE SEPARATELY FROM THE OTHER TWO FIXTURES ON THE POLE.
 - THE LIGHTING CIRCUIT FOR THE SINGLE FIXTURE ON EACH POLE MAY BE ROUTED IN THE SAME CONDUIT AS THE OTHER LIGHTING CIRCUIT. IT IS SHOWN HERE FOR CLARITY OF CONCEPT.
 - ROUTE RECEPTACLE CIRCUIT IN A SEPARATE CONDUIT IN THE SAME TRENCH OR BORE.
 - EXISTING MAIN SWITCHBOARD LOCATED IN THE LOWER LEVEL ELECTRICAL ROOM. GE 200A, 208Y120V, 3PH, 4W/RE SWITCHBOARD HAS EXISTING SPACE. PROVIDE A NEW 200A/3P CIRCUIT BREAKER IN THE EXISTING SWITCHBOARD TO SERVE THE NEW PLAZA ELECTRICAL LOADS AS NOTED IN THE PANELBOARD SCHEDULE. THE CIRCUIT BREAKER SHALL BE FULLY COMPATIBLE WITH THE EXISTING PANELBOARD AND SHALL MAINTAIN THE FAULT CURRENT RATING AND UL LISTING OF THE PANEL. CLEARLY LABEL THE BREAKER TO REFLECT THE ADDITIONAL CIRCUIT AND LOAD SERVED.
 - NEW PANELBOARD 'PL'. COORDINATE EXACT LOCATION ON THE LOWER LEVEL WITH THE OWNER. SEE THE PANELBOARD SCHEDULE FOR ADDITIONAL INFORMATION.
 - PROVIDE AN EARTH MOUNT POWER OUTLET PANEL OF MINIMAL HEIGHT (DEVICES 12" AFG) NEAR THE EXISTING FENCE. ENCLOSURE TO BE RAINPROOF WITH PADLOCK PROVISIONS AND REMOVABLE DOORS AND KNOCKOUT PANELS. PROVIDE A MINIMUM OF THREE (3) GF RECEPTACLES WITH LOCAL CIRCUIT PROTECTION. BUS BARS TO BE PLATED COPPER. PROVIDE ALL NECESSARY MOUNTING HARDWARE FOR A COMPLETE AND CODE COMPLIANT INSTALLATION.
 - ROUTE 3 #6 AND 1 #8 GRND IN 1" CONDUIT THROUGHOUT CIRCUIT. IF THE CIRCUIT LENGTH EXCEEDS 400' UPSIDE CONDUCTORS FOR VOLTAGE DROP.
 - PROVIDE AN EARTH MOUNT POWER OUTLET PANEL OF MINIMAL HEIGHT (DEVICES 12" AFG) IN TURF AREA. ENCLOSURE TO BE RAINPROOF WITH PADLOCK PROVISIONS AND REMOVABLE DOORS AND KNOCKOUT PANELS. PROVIDE A MINIMUM OF THREE (3) 20A GF RECEPTACLES WITH LOCAL CIRCUIT PROTECTION. BUS BARS TO BE PLATED COPPER. PROVIDE ALL NECESSARY MOUNTING HARDWARE FOR A COMPLETE AND CODE COMPLIANT INSTALLATION.
 - SUBSERRIBLE JUNCTION BOX PROVIDED BY THE FOUNTAIN INSTALLER. ELECTRICAL CONTRACTOR TO PROVIDE ROUTING AND CONNECTIONS OF THE FOUNTAIN LIGHT FIXTURE CORDS TO THIS BOX AND 4#14 FROM THE BOX TO THE PUMP VAULT. LIGHTING CONTROLLER/POWER SUPPLY (PROVIDED WITH PUMP VAULT) BY OTHERS. ROUTE CABLING FROM THE BOX TO THE VAULT IN CONDUIT.
 - THREE LED LIGHT NOZZLE ASSEMBLIES IN FOUNTAIN PROVIDED BY THE FOUNTAIN INSTALLER. COORDINATE CONNECTION DETAILS WITH THE FOUNTAIN INSTALLER.
 - ANEMOMETER ASSOCIATED WITH THE FOUNTAIN MOUNTED ON THE POLE. COORDINATE THE ROUTING OF CONTROL CABLING FROM THE ANEMOMETER TO THE PUMP VAULT WITH THE FOUNTAIN INSTALLER. ROUTE CABLING INSIDE THE POLE.

PANELBOARD 'PL' SCHEDULE																
MAIN BUS: 200A		LOAD (VA)								LOCATION: JANZOW LOWER LEVEL						
VOLTAGE: 208Y120 V, 3PH, 4W		LOAD (VA)				LOAD (VA)				MOUNTING: SURFACE						
PANEL TYPE: LIGHTING AND APPLIANCE		LOAD (VA)				LOAD (VA)				MINIMUM IAC: 42,000AIC						
C	A	P	LOAD SERVED	LTG.	RECP.	MECH.	SPARE	PHASE	LTG.	RECP.	MECH.	SPARE	LOAD SERVED	P	A	C
1	20	2	PLAZA LIGHTING		320			A		1800			PLAZA POWER PEDESTAL	2	40	2
3					320			B		1800						4
5	20	2	PLAZA LIGHTING		160			C		1800			PLAZA POWER PEDESTAL	2	40	6
7					160			A		1800						8
9	20	1	RECEPTACLE IN PLAZA LT POLE		500			B		2600			FOUNTAIN VAULT	2	40	10
11	20	1	RECEPTACLE IN PLAZA LT POLE		500			C		2600						12
13	20	1	RECEPTACLE IN PLAZA LT POLE		1000			A		1000		1000	SPARE	1	20	14
15	20	1	SPARE				1000	B		1000		1000	SPARE	1	20	16
17	20	1	SPARE				1000	C		1000		1000	SPARE	1	20	18
19	20	1	SPARE				1000	A		1000		1000	SPARE	1	20	20
21	20	1	SPARE				1000	B		1000		1000	SPARE	1	20	22
23	20	1	SPARE				1000	C		1000		1000	SPARE	1	20	24
25			SPACE					A					SPACE			26
27			SPACE					B					SPACE			28
29			SPACE					C					SPACE			30
31			SPACE					A					SPACE			32
33			SPACE					B					SPACE			34
35			SPACE					C					SPACE			36
37			SPACE					A					SPACE			38
39			SPACE					B					SPACE			40
41			SPACE					C					SPACE			42
CONNECTED LOAD		960	2000	-	5000			-	12400	-	6000	CONNECTED LOAD				
% DF		100	85	80	50			-	100	85	80	50	%DF			
EMD		960	1694	-	2500			-	10508	-	3000	EMD				
EMD X 1.25 =		18660 X 1.25 = 65 A										MAN BREAKER SIZE: 200A/3P				
SYS. VOL.T.		208 X 1.73										OR MAIN LUG ONLY (MLO)				



LIGHTING FIXTURE SCHEDULE									
Fixture Type	Manufacturers	Catalog Numbers	Description	No. of Lamps	Lamp Type	Volt	VA	Mounting	Remarks
C	KM	1A-C021A2 250PMH DB PRA-16-4188 A BZ	PARKING AREA LIGHT POLE TO MATCH EXISTING CAMPUS POLES	1	250W PMH	240	300	POLE	REFER TO THE POLE BASE DETAIL FOR ADDITIONAL INFORMATION. PROVIDE THE C2 TYPE FIXTURES WITH HOUSE SIDE SHIELDS.
D	HUBBELL	ALF-6LU-5K-BZ	GROUND MOUNTED FLOOD LIGHT		LED	120-277	12	GROUND	PROVIDE ALL ADDITIONAL ACCESSORIES FOR A GROUND MOUNTING OF MINIMAL HEIGHT. LOCATE FIXTURE 2'-0" FROM WALL.
F	ECOSENSE	BUL-S-LSD-60-40-120-KC-BZ-90	GROUND MOUNTED FLOOD LIGHT		LED	120	12	GROUND	PROVIDE ALL ADDITIONAL ACCESSORIES FOR A GROUND MOUNTING OF MINIMAL HEIGHT. LOCATE FIXTURE AT LEAST 2'-10" FROM WALL.

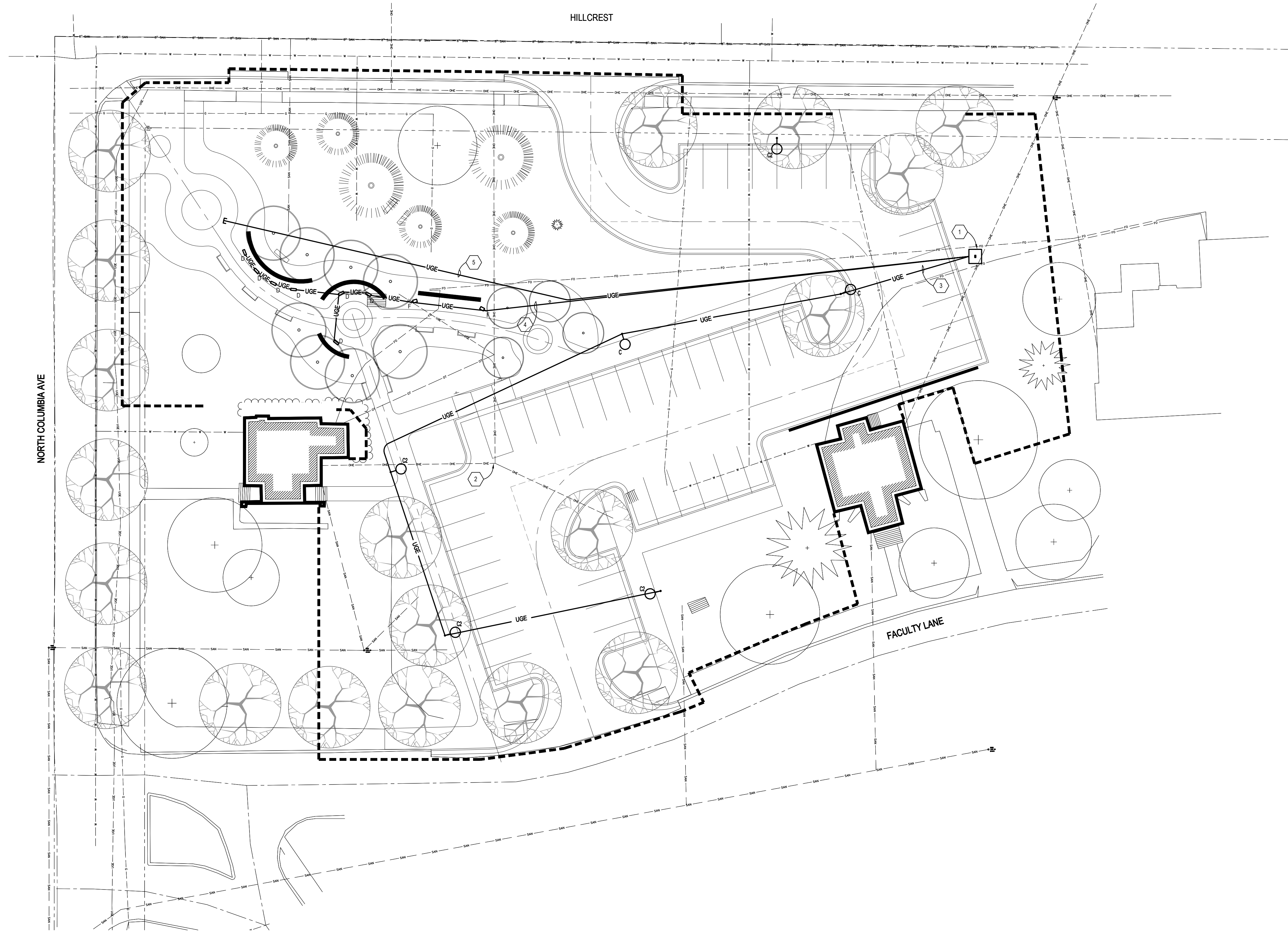


LIGHT FIXTURE TYPE 'C' AND 'C2' POLE BASE DETAIL

NO SCALE

POLE BASE DETAIL NOTES:

- FULLY COORDINATE INSTALLATION DETAILS WITH POLE MANUFACTURER.
- COORDINATE INSTALLATION OF BASE WITH SIDEWALK/CURB INSTALLER.
- GROUND ROD MAY BE PROVIDED IN TWO 3' SECTIONS AND CONNECTED DURING INSTALLATION TO FORM ONE CONTINUOUS ROD.
- WHERE ADJACENT TO A CURB, LOCATE POLE BASE AT LEAST 2'-0" FROM BACK OF CURB. WHERE ADJACENT TO THE SIDEWALK, LOCATE NEAR SIDEWALK TO MINIMIZE GRASS GROWTH BETWEEN SIDEWALK EDGE AND POLE BASE.



HEARTFELT MEMORIAL ELECTRICAL SITE PLAN

SCALE: 1/4"=20'-0"

HEARTFELT MEMORIAL ELECTRICAL SITE PLAN NOTES:

- NEW COMBINATION METER SOCKET DISTRIBUTION PEDESTAL. LOCATE PEDESTAL WITHIN THE CONSTRUCTION LIMITS OF THE PROJECT. PEDESTAL TO BE SIMILAR TO MILBANK COMMERCIAL OPERA BULBINE SERIES WITH METER SOCKET, 100A MINIMUM RATING, 120/240V, 1PH, 3W, MAIN DISCONNECT AND MINIMUM EIGHT CIRCUIT LOAD CENTER, ONE 20A CP BREAKER AND THREE 20A CP BREAKERS IN ONE ENCLOSURE. PEDESTAL TO BE FINISHED MONSELL GREEN #9037291 S. PROVIDE ALL NECESSARY COMPONENTS FOR A COMPLETE INSTALLATION INCLUDING BUT NOT LIMITED TO A PEDESTAL MOUNTING BASE, ANCHOR BOLT KIT AND SOCKET TERMINAL KITS AS COORDINATED WITH THE LOCAL UTILITY. MOUNT THE PEDESTAL ON A CONCRETE PAD EXTENDING A MINIMUM OF 6" ON EACH SIDE OF THE PEDESTAL WITH MANUFACTURER RECOMMENDED OPENING FOR UTILITY AND CUSTOMER CABLING ACCESS AND A MINIMUM OF 2" IN DEPTH. FROM THE PEDESTAL, ROUTE ONE 2" SCHEDULE 40 PVC CONDUIT WITH PULL STRING TO AN EXISTING UTILITY POLE ON HILLCREST AS COORDINATED WITH THE LOCAL UTILITY.
- VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO WORK. SOME EXISTING UTILITIES SHOWN ON THE SURVEY HAVE BEEN REMOVED DURING THE DEMOLITION OF EXISTING SITE STRUCTURES.
- ROUTE 2#6 AND 1#8 GRND IN 3/4" (MIN) SCHEDULE 40 PVC CONDUIT THROUGHOUT CIRCUIT. BURY CONDUIT A MINIMUM OF 30" BELOW FINISHED GRADE. CONNECT LIGHTING CIRCUIT TO ONE 20A CP BREAKER IN DISTRIBUTION PEDESTAL.
- ROUTE 2#10 AND 1#10 GRND IN 3/4" (MIN) SCHEDULE 40 PVC CONDUIT THROUGHOUT CIRCUIT. BURY CONDUIT A MINIMUM OF 30" BELOW FINISHED GRADE. CONNECT LIGHTING CIRCUIT TO ONE 20A CP BREAKER IN DISTRIBUTION PEDESTAL.
- STUB OUT ONE 2" SCHEDULE 40 PVC CONDUIT WITH PULL STRINGS FROM WITHIN THE PEDESTAL BASE BELOW GRADE INTO A NEARBY PLANTING AREA FOR FUTURE CONNECTIONS TO AREA LIGHTING CIRCUITS. CAP CONDUIT ENDS AND CLEARLY MARK LOCATION ON THE AS-BUILT DOCUMENTS.

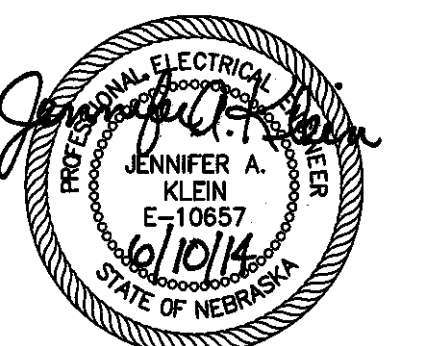
ISSUED 6/11/2014 ADDENDUM #002

Concordia University
Concordia Plaza &
Heartfelt Memorial Documents
Construction Documents

Concordia University
Seward, Nebraska

TCEP No.: 530-017-11

May 23, 2014



Heartfelt Memorial
Electrical Site Plan

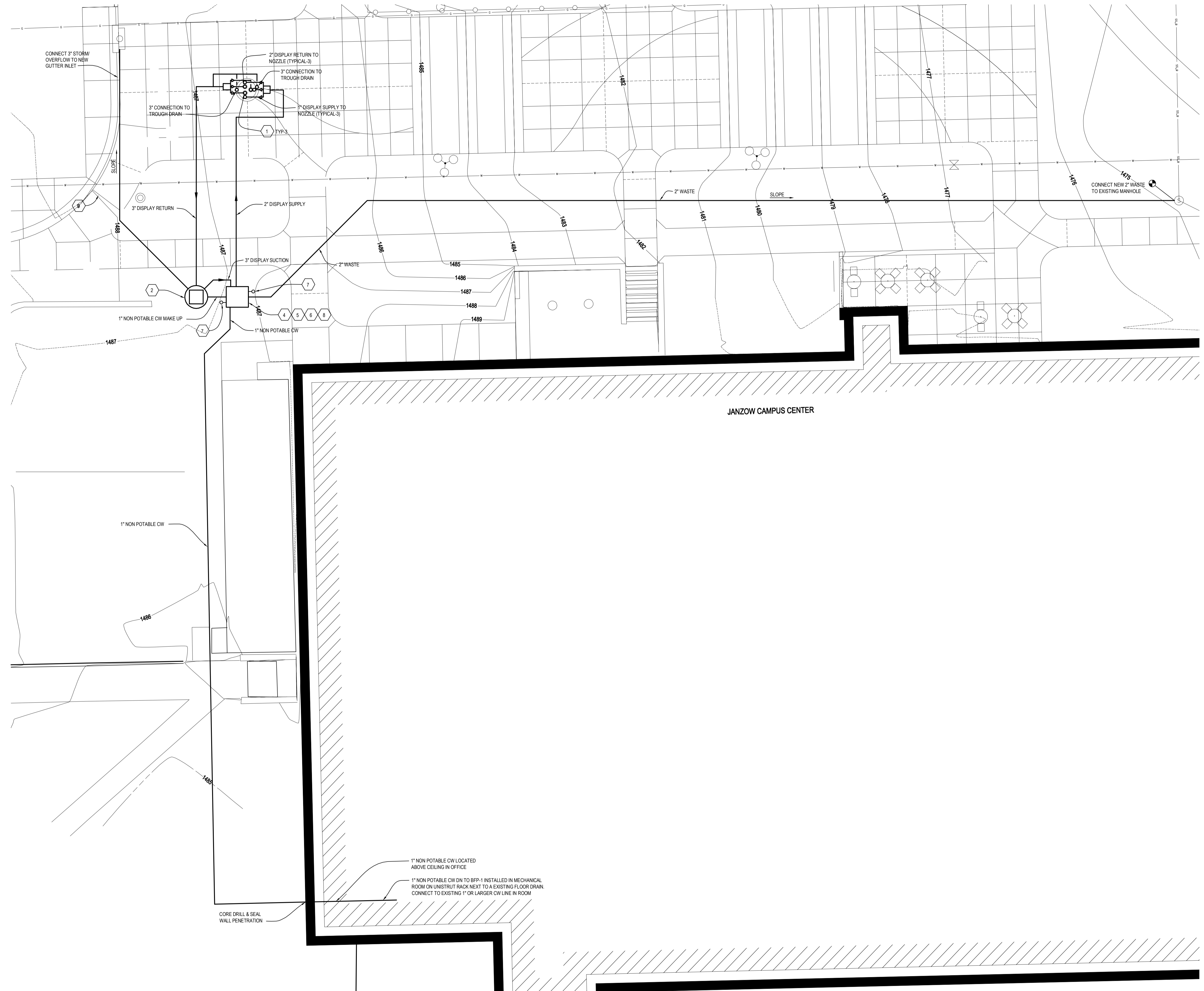
E1.01

MECHANICAL ABBREVIATIONS AND SYMBOLS LEGEND

ABBREVIATIONS		ABBREVIATIONS		PIPING		PIPING		SHEET METAL		TEMPERATURE CONTROL	
A	COMPRESSED AIR	OA	OUTSIDE AIR		SANITARY STORM DRAIN BELOW GRADE OR BELOW FLOOR		SAFETY RELIEF VALVE - EQUIP. MARK		RECTANGULAR DUCT - FIRST NUMBER INDICATES SIZE SHOWN		WALL AND CEILING MOUNTED TEMPERATURE SENSOR - PROVIDE SET POINT DIAL WHERE SPECIFIED
AD	AREA DRAIN	OAT	OUTSIDE AIR TEMPERATURE		MANUAL OPPOSED BLADE BALANCING DAMPER		FLEXIBLE CONNECTION		OVAL DUCT - FIRST NUMBER INDICATES SIZE SHOWN		WALL AND CEILING MOUNTED HUMIDISTAT
AF	ABOVE FINISHED FLOOR	OSD	OUTSIDE AIR SUPPLY		VENT PIPING		EXPANSION JOINT - EQUIPMENT MARK		FLEX DUCT		PRESSURE OR TEMPERATURE SENSOR/TRANSMITTERS
AI	ANALOG INPUT	PC	PLUMBING CONTRACTOR		VENTED PIPING		PIPE GUIDE		TURNING VANES		DUCT STATIC PRESSURE SENSOR/TRANSMITTER
AO	ANALOG OUTPUT	PIV	POST INDICATOR VALVE		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		PIPE ANCHOR		POSITIVE PRESSURE DUCT UP		DUCT STATIC PRESSURE SENSOR
APD	AIR PRESSURE DROP	PVC	POLY VINYL CHLORIDE		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		THERMOMETER		NEGATIVE PRESSURE DUCT DOWN		TEMPERATURE SENSOR WITH AVERAGING ELEMENT
AV	ACID VENT	RA	RETURN AIR		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		THERMOMETER WITH ADJUSTABLE BASE		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		SINGLE POINT TEMPERATURE SENSOR (DUCT MOUNTED OR THERMOWELL SENSOR)
AW	ACID WASTE	RCP	REINFORCED CONCRETE PIPE		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		PRESSURE GAGE		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		RELATIVE HUMIDITY SENSOR
BFP	BACK FLOW PREVENTER	RELA	RELIEF AIR		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		SIGHT GLASS		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		LOW LIMIT THERMOSTAT (FREEZE STAT)
BHP	BRAKE HORSEPOWER	RL	REFRIGERANT HOT GAS		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		STEAM TRAP		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		DAMPER WITH PNEUMATIC ACTUATOR
BTU	BRITISH THERMAL UNIT	RL	REFRIGERANT LIQUID		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		ELBOW DOWN		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		DAMPER WITH ELECTRIC ACTUATOR
CA	COMBUSTION AIR	RS	REFRIGERANT SUCTION		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		ELBOW UP		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		CONTROL VALVE WITH PNEUMATIC ACTUATOR
CD	CONDENSATE DRAIN	S	STORM		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		TEE DOWN		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		CONTROL VALVE WITH ELECTRIC ACTUATOR
CHWR	CHILLED OR HOT WATER RETURN	SA	SUPPLY AIR		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		TEE UP		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		AIR FLOW MEASUREMENT STATION INSTALLED IN INLET BELL OF CENTRIFUGAL FAN
CHWS	CHILLED OR HOT WATER SUPPLY	SAN	SANITARY WASTE PIPING (OUTSIDE BUILDING)		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		VALVE IN VERTICAL PIPE		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		ENERGY MANAGEMENT AND CONTROL SYSTEM POINT
CI	CAST IRON	SD	SMOKE DAMPER		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		CONCENTRIC REDUCER		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		POINT NAME
CO	CLEAN OUT	SP	STATIC PRESSURE		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		ECCENTRIC REDUCER (TOP)		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		POINT TYPE
CPD	CONDENSATE PUMP DISCHARGE	SP	SUMP PUMP		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		ECCENTRIC REDUCER (BOTTOM)		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		POINT LOCATION
CPVC	CHLORINATED POLY VINYL CHLORIDE	SS	SUB SOIL DRAIN		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		VARIABLE AIR VOLUME BOX WITH REHEAT - EQUIP. MARK, FLOW RATE		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		20 PSIG MAN AIR
CR	CONDENSER WATER RETURN	TAB	TEST, ADJUST AND BALANCE		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		SIDE WALL REGISTER - EQUIP. MARK, SIZE, CFM, HEIGHT, AFF		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		STARTER (REMOTE OR LOCATED IN MOTOR CONTROL CENTER) - VOLTAGE, PHASE, HERTZ
CS	CONDENSER WATER SUPPLY	TC	TEMPERATURE CONTROL CONTRACTOR		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		VARIABLE FREQUENCY DRIVE - VOLTAGE, PHASE, HERTZ		TEMPERATURE SENSOR WITH AVERAGING ELEMENT		PIPING TEMPERATURE WELL
CW	DOMESTIC COLD WATER	TD	TRANSFER DUCT		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		VARIABLE AIR VOLUME BOX - EQUIP. MARK, CFM		TEMPERATURE SENSOR WITH SHUT-OFF COCKS AND PRESSURE TAPS (PET'S PLUGS) FOR CALIBRATION AND SERVICING		AIRFLOW MEASUREMENT STATION (PLAN VIEW) EQUIPMENT MARK
CHR	CHILLED WATER SUPPLY	TD	TOP OF DUCT		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE		FAN POWERED VARIABLE AIR VOLUME BOX - EQUIP. MARK, CFM		VARIABLE FREQUENCY DRIVE (PLAN VIEW) EQUIPMENT MARK		
CWS	CHILLED WATER SUPPLY	TP	TEMPERATURE/PRESSURE		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
DB	DRY BULB	TSP	TOTAL STATIC PRESSURE		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
DCI	DUCTILE CAST IRON	TTP	TEMPERATURE TEMPERED WATER		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
DI	DIGITAL INPUT	TWC	TEMPERATURE TEMPERED WATER CIRCULATING		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
DO	DIGITAL OUTPUT	V	VENT		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
DW	DOMESTIC WATER	VTR	VENT THROUGH ROOF		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
DWV	DRAIN/WASTE/VENT	VUF	VENT UNDER FLOOR		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
EA	EXHAUST AIR	W	SANITARY WASTE PIPING (INSIDE BUILDING)		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
EAT	ENTERING AIR TEMPERATURE	W	WATER SERVICE PIPING (OUTSIDE BUILDING)		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
EC	ELECTRICAL CONTRACTOR	WB	WET BULB		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
EMCS	ENERGY MANAGEMENT AND CONTROL SYSTEM	WCD	WALL CLEAN OUT		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
ESP	EXTERNAL STATIC PRESSURE	WPD	WATER PRESSURE DROP		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
EWT	ENTERING WATER TEMPERATURE	XE	RELOCATED EQUIPMENT, DEVICE, ETC.		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
F	FIRE SUPPRESSION PIPING	XFR	TRANSFER		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
FCO	FLOOR CLEAN OUT	XFRM	TRANSFORMER		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
FD	FIRE DAMPER	XN	NEW EQUIPMENT, DEVICE, ETC.		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
FD	FLOOR DRAIN	XN	EXISTING CONDITION TO BE REMOVED OR RELOCATED		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
F.E.A.	FUME HOOD EXHAUST AIR	XXX	EQUIPMENT MARK - SEE MECHANICAL OR PLUMBING EQUIP. SCHEDULES		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
TH	FIRE HYDRANT	XXX	EQUIPMENT MARK - SEE MECHANICAL OR PLUMBING EQUIP. SCHEDULES (E.G. APL-1 - AIR HANDLING UNIT)		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
FL	FLOW LINE	VB	VARIABLE AIR VOLUME BOX		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
FOR	FUEL OIL RETURN	VBR	VARIABLE AIR VOLUME BOX WITH REHEAT		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
FOS	FUEL OIL SUPPLY	VBF	FAN POWERED VARIABLE AIR VOLUME BOX		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
FOV	FUEL OIL VENT	VBRF	FAN POWERED VARIABLE AIR VOLUME BOX WITH REHEAT		VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
FSD	FRESHWATER DAMPER				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
G	GAS				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
GBD	GRAVITY BACKDRAFT DAMPER				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
GC	GENERAL CONTRACTOR				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
GCO	GRADE CLEANOUT				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
GEA	GENERAL EXHAUST AIR				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
GPM	GALLONS PER MINUTE				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
HP	HORSEPOWER				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
HPR	HIGH PRESSURE STEAM RETURN				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
HPS	HIGH PRESSURE STEAM SUPPLY				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
HR	HOUR				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
HW	DOMESTIC HOT WATER				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
HW 180	DOMESTIC HOT WATER, 180 DEG. F. SERVICE				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
HWIC	DOMESTIC HOT WATER CIRCULATION				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
HWIC 180	DOMESTIC HOT WATER CIRCULATION 180 DEG. F. SERVICE				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
HWR	HOT WATER RETURN				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
HWS	HOT WATER SUPPLY				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
E	ELEVATOR				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
KS	KITCHEN SUPPLIER				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
KW	KILOWATT				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
LA	LABORATORY AIR				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
LAT	LEAVING AIR TEMPERATURE				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
LAT	LAY IN TILE				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
LFC	LOOP FIELD CONTRACTOR				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
LFR	LOOP FIELD RETURN				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
LFS	LOOP FIELD SUPPLY				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
LG	LABORATORY GAS				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
LPR	LOW PRESSURE STEAM RETURN				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
LPS	LOW PRESSURE STEAM SUPPLY				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
LV	LABORATORY VACUUM				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
LWF	LEAVING WATER TEMPERATURE				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
MA	MIXED AIR				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
MB	MIXING BOX				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
MBH	100 BTUHR				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
MC	MECHANICAL CONTRACTOR				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
MCC	MOTOR CONTROL CENTER				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
MD	MOTORIZED DAMPER				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
MH	MAN HOLE				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
MPR	MEDIUM PRESSURE STEAM RETURN				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
MPS	MEDIUM PRESSURE STEAM SUPPLY				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						
NC	NOT IN CONTRACT				VENTED PIPING - SEE ABBREVIATION LEGEND FOR TYPE OF SERVICE						

MECHANICAL SPECIFICATIONS

- GENERAL
 - DATA GIVEN ON THE DRAWING IS EXACT AS COULD BE SECURED. THE CONTRACTOR SHALL OBTAIN EXACT LOCATION, MEASUREMENTS, LEVEL, ETC., AT THE SITE AND SHALL SATISFACTORILY ADAPT HIS WORK TO THE ACTUAL CONDITIONS AT THE BUILDING. ALL WORK SHALL BE PERFORMED AS INDICATED ON DRAWINGS UNLESS FIELD CONDITIONS REQUIRE MINOR CHANGES TO BE MADE. ACTUAL LOCATION OF ALL EXISTING DUCTING, PIPING, ETC. MUST BE FIELD VERIFIED. MINOR CHANGES TO CONFORM TO EXACT LOCATIONS SHALL BE MADE AT NO ADDITIONAL COST TO THE OWNER.
 - THE COMPLETED INSTALLATION SHALL BE IN ACCORDANCE WITH:
 - ALL ENGINEERING REQUIREMENTS
 - FEDERAL, STATE, AND LOCAL CODES LAWS, ACTS, AND ORDINANCES
 - UTILITY COMPANY REQUIREMENTS
 - APPLICABLE INDUSTRY STANDARDS OF GOOD PRACTICE AND SAFETY
 - THE MANUFACTURER'S MOST STRICT RECOMMENDATIONS FOR EQUIPMENT AND PRODUCT APPLICATION AND INSTALLATION
 - ALL NECESSARY LOCAL BUILDING PERMITS REQUIRED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ANY TAPPING FEES OR PERMIT FEES SHALL ALSO BE THE RESPONSIBILITY OF THE CONTRACTOR.
 - ALL WORK AND EQUIPMENT SHALL BE GUARANTEED FOR ONE YEAR AFTER ACCEPTANCE OF WORK BY THE OWNER.
 - MANUFACTURER'S NAMES ON WHICH THIS SPECIFICATION AND OR EQUIPMENT SCHEDULES ARE BASED INDICATE THE MINIMUM QUALITY OF PRODUCT REQUIRED BY ARCHITECT/ENGINEER. SUBSTITUTIONS MAY BE MADE TO THOSE SPECIFIED IF EQUIVALENT BY THE ARCHITECT/ENGINEER.
 - SUBMIT SHOP DRAWINGS OF ALL MAJOR EQUIPMENT FOR APPROVAL. SUBMITTALS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:
 - BACKGROUND PREVENTER
 - WATER FEATURE EQUIPMENT
 - PIPING MATERIALS AND METHODS
 - ALL OTHER SCHEDULED ITEMS PLUMBING FIXTURE
 - ALL NEW DUCTWORK, PIPING, EQUIPMENT, ETC. IS SHOWN IN BOLD. ALL EXISTING DUCTWORK, PIPING, EQUIPMENT IS SHOWN LIGHT AND/OR IS INDICATED AS 'E'.
 - CONTRACTOR MUST VISIT THE JOB SITE PRIOR TO SUBMITTING A BID. ACTUAL LOCATION OF ALL EXISTING DUCTING,



ROMAN FOUNTAINS EQUIPMENT SCHEDULE (OR APPROVED EQUIVALENT MANUFACTURER)		
ITEM #	MODEL #	EQUIPMENT DESCRIPTION
1	RBJ-JC-04-LED-RGB	FLOOR MOUNTED NOZZLED LIGHT ASSEMBLY, CONSISTING OF A HIGH-STRENGTH POLYCARBONATE HOUSING WITH INTEGRAL WATERSTOP KEY FLANGE, THREADED INSERTS TO ACCEPT EYE BOLTS AND JAMB NUTS (INCLUDED) FOR INSTALLATION, IN CONJUNCTION WITH INSTALLER PROVIDED 3/8" THREADED ROD, FLAT WASHERS AND NUTS, STAINLESS STEEL GRATE AND NOZZLE, 2" (Ø) N.P.T. THREADED RETURN CONNECTION, 1" (Ø) N.P.T. THREADED SUPPLY CONNECTION, 3/4" (Ø) N.P.T. CONDUIT CONNECTION AND (1) HIGH OUTPUT "EIGHT BALL" 800 KILM, LED LIGHT FIXTURE WITH 20' CORD, RIGID COILS, RECESSED INTO NICHE BODY.
2	RWT-600	WATER STORAGE SURGE TANK, 600 GALLON WITH BROWN GEL-COAT EXTERIOR AND 30" SQUARE HATCH OPENING WITH FIBERGLASS REINFORCED PLASTIC LID WITH STAINLESS STEEL PANO HINGE ATTACHMENT, LOCK HARDWARE, FIBERGLASS CONSTRUCTION, WITH VARIOUS ALL REQUIRED FITTINGS PER SHOP DRAWINGS & ROOM R/W LEVEL SENSOR INSTALLED.
3	RJB-3-100-F	SUBMERSIBLE JUNCTION BOX, FLUSH MOUNT, ETL LISTED, CAST BRONZE CONSTRUCTION, WITH NEOPRENE GASKET, STAINLESS STEEL FASTENERS, (1) 1" (Ø) N.P.T. POWER CONDUIT CONNECTION, AND THREE 3/4" N.P.T. SIDE TAPPIINGS WITH 3/4"x1/2" BRASS STRAIN RELIEF FITTING (SHIPPED LOOSE, INSTALLED IN FIELD). JUNCTION BOX HAS A VOLUME OF 41.0 CUBIC INCHES AND INCLUDES INTERNAL GROUNDING LUG.
4	RBP-2.075	SERIES 2 DIRECT BURIAL PUMP VAULT, CONSISTING OF A 4'0" X 4'0" X 3'2" DEEP HEAVY DUTY FRP VAULT WITH WHITE GEL-COAT INTERIOR AND BROWN GEL-COAT EXTERIOR, FURNISHED WITH FIBERGLASS REINFORCED PLASTIC LID WITH STAINLESS STEEL PANO HINGE ATTACHMENT, LOCK HARDWARE, CONTAINING A RWS-075, 3/4 HP SELF-PRIMING DISPLAY PUMP WITH INTEGRAL SUCTION STRAINER, RCOF-100 75 SQ. FT. CARTIDGE FILTER UNIT, ULTRAVIOLET SANITIZER, THE WET CHAMBER SHALL BE 4"Ø UNINHIBITED PVC HOUSING WITH FOUR MOUNTING FEET AND PVC ELECTRICAL ENCLOSURE BONNET. THE UV UNIT SHALL INCLUDE A PRESSURE SWITCH TO PREVENT OPERATION WHEN WATER IS NOT FLOWING, A PRESSURE GAUGE AND A CLEAR VIEWING TAIL PIECE TO VERIFY LAMP ON CONDITION. THE UV LAMP SHALL BE RATED FOR 8,000 HOURS OF CONTINUOUS USE AND SHALL BE FULLY REPLACEABLE WITHOUT REQUIRING SPECIAL TOOLS. RBJ-300-L IN LINE CHEMICAL FEEDER (RBS-33-F 1/2 HP SUMP PUMP, INTEGRAL FLOOR SUMP WITH 2" FLOOR DRAIN, 4" VENT CONNECTIONS WITH 250 CFM VENT FAN, RBS-075-NS 3/4" FILL MANIFOLD ASSEMBLY, 3 HP VARIABLE FREQUENCY DRIVE, LED POWER SUPPLY, DMS DRIVER, SMART RELAY, SHIPMENT LUG, W/ LED CONTROL PANEL, IN A NEMA 4 ENCLOSURE CONTAINING MAIN DISCONNECT, PUMP STARTER WITH CIRCUIT BREAKER, CONTACTOR & ADJUSTABLE, SOLID STATE OVERLOAD, SINGLE CHANNEL PROGRAMMABLE TIME SWITCHES FOR PUMP AND LIGHTS, H.O.A. SWITCHES PLUS LIGHTING CONTACTORS, G.F.C.I. BREAKERS AND WATER LEVEL/LOW LEVEL OFF CONTROL CIRCUIT. UNIT IS PRE-WIRED, PRE-PLUMBED WITH SCHEDULE 40 PVC AND FACTORY TESTED PRIOR TO SHIPMENT. POWER REQUIREMENTS: 120/208 VOLT, 1 PHASE.
5	RBP-EX	DIRECT BURIAL VAULT HATCH EXTENSION, CONSISTS OF 4'0" X 4'0" X 3'2" DEEP FRP VAULT HATCH EXTENSION WITH WHITE GEL-COAT INTERIOR AND BROWN GEL-COAT EXTERIOR. HATCH EXTENSION COMPLETE WITH FLANGE GASKET, S.S. FLANGE FASTENERS AND CALUX SEALANT.
6	RPVC-300	3" PVC VENT CAP, SCHEDULE 40 PVC CONSTRUCTION AND 1/4" STAINLESS STEEL FASTENERS, LOW PROFILE CORROSION RESISTANT DESIGN. STANDARD BROWN COLOR.
7	RPVC-400	4" PVC VENT CAP, SCHEDULE 40 PVC CONSTRUCTION AND 1/4" STAINLESS STEEL FASTENERS, LOW PROFILE CORROSION RESISTANT DESIGN. STANDARD BROWN COLOR.
8	RWC-SM-DXL	UL LISTED WIND CONTROL, NEMA 4 POLYCARBONATE WITH CLEAR LEXAN COVER ENCLOSURE, SOLID STATE CIRCUITRY, 0-25 MPH ADJUSTABLE WIND VELOCITY CONTROL, 3 DIGIT LED DISPLAY, PILOT LIGHTS AND TIME DELAYS, TWO STAGE DESIGN, 120/240 VOLT SINGLE PHASE.
9	RWC-A-DXL	MOLDED 3 QUART UV PROTECTED POLYCARBONATE ANEMOMETER, ROTOR SHATT IS SUPPORTED BY A BERYLLIUM COPPER SHAFT RING IN TEFLON BEARINGS, CONTROL WIRE IS BY INSTALLER.

NOTE: ALL FOUNTAIN EQUIPMENT IS TO BE INSTALLED PER MANUFACTURER RECOMMENDATIONS. THIS INCLUDES ALL PIPING, ELECTRICAL AND CONCRETE FOUNDATIONS.

BACKFLOW PREVENTER SCHEDULE		OPERATING CONDITIONS												
MARK	SERIES	TYPE	PEAK FLOW		WPD	PRESSURE	SIZE	BODY	INLET VALVE	OUTLET VALVE	STANDARD APPROVAL	MFR OR EQUIVALENT	MODEL	REMARKS
			GPM	PSI										
BFP-1	FOUNTAIN WATER	REDUCED PRESSURE	20	10 PSIG	175 PSIG	1-1/2"	CAST BRONZE	BALL	BALL	ASSE STD 101, AWWA C511-92	WATTS	000	1, 2	

REMARKS:
 1. BACKFLOW PREVENTER IS TO BE APPROVED BY CITY OF SEWARD'S WATER DEPARTMENT
 2. PROVIDE WITH APPROPRIATE AIR GAP FITTING AND PIPE TO NEAREST FLOOR DRAIN

CONCORDIA PLAZA MECHANICAL SITE PLAN
 SCALE: 1"=10'-0"

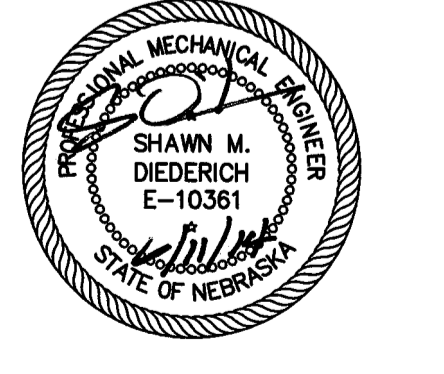
SHEET HISTORY:
 ISSUED 06/11/2014 ADDENDUM #02

**Concordia University
 Concordia Plaza &
 Heartfelt Memorial
 Construction Documents**

Concordia University
 Seward, Nebraska

TCEP No.: 530-017-11

May 23, 2014



Mechanical Site Plan
M1.00