

HH ARCHITECTURE

## ADDENDUM #2

April 15, 2025

Project Name: **Performing Arts Center Plaza Renovation**  
Owner: City of Raleigh Convention and Performing Arts Complex  
HH Project #: 23-077

From: **HH Architecture**  
Laura Beesmer lbeesmer@hh-arch.com

To: All plan holders (plan holders list is available on planscope.com)

Message: Bidders are hereby informed that the following additions, deletions, changes and clarifications supersede and supplement the Contract Documents for the above referenced project. It forms a part of the previously issued documents dated 3/13/2025.

This addendum may include revised pages and drawings, which shall be inserted before the corresponding page or drawings in the previously issued documents.

### REVISIONS TO SPECIFICATIONS

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1. 00800-Supplementary Conditions: **DELETE** section SC-6.03.B.6: ~~provide for reinstatement of full coverage after payment of any claim.~~
  - Please note, the bidder must meet the insurance requirements for the aggregate of the required policies outlined throughout SC-6.03.
2. 00800-Supplementary Conditions: **REVISE** SC-6.04.G as follows:  
*G. Installation Floater*
  1. Not Required.
3. 00100-Advertisement: **REPLACE** entire section with attached Section 00100.
  - ~~Please note that the bid opening time has been changed to 2:00 pm.~~  
No change to location.

4. 00410-Bid Form: **REPLACE** entire section with attached Section 00410.
  - Alternates #5 and Alternate #6 have been added.
5. 012100-Allowances: **REPLACE** entire section with attached Section 012100.
  - Allowance #4 has been added.
6. 012300-Alternates: **REPLACE** entire section with attached Section 012300.
  - Alternates #5 and Alternate #6 have been added.
7. 015000-Temporary Facilities and Controls: **REPLACE** entire section with attached Section 015000.
8. 034500-Precast Architectural Concrete: **REPLACE** entire section with attached Section 034500.

## **REVISIONS TO DRAWINGS**

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1. Sheet G000
  - a. **REPLACE** with attached revised sheet G100, dated April 15, 2025.
2. Sheet A501
  - a. **REPLACE** with attached revised sheet A501, dated April 15, 2025.
3. Sheet L101
  - a. **REPLACE** with attached revised sheet L101, dated April 15, 2025.
4. Sheet G001
  - a. **REPLACE** with attached revised sheet G001, dated April 15, 2025.
5. Sheet CG100
  - a. **REPLACE** with attached revised sheet CG100, dated April 15, 2025.
6. Sheet C001
  - a. **REPLACE** with attached revised sheet C001, dated April 15, 2025.
7. Sheet C100
  - a. **REPLACE** with attached revised sheet C100, dated April 15, 2025.
8. Sheet C200
  - a. **REPLACE** with attached revised sheet C200, dated April 15, 2025.
9. Sheet C201
  - a. **REPLACE** with attached revised sheet C201, dated April 15, 2025.
10. Sheet C500
  - a. **REPLACE** with attached revised sheet C500, dated April 15, 2025.

11. Sheet C501
  - a. **REPLACE** with attached revised sheet C501, dated April 15, 2025.
12. Sheet C502
  - a. **REPLACE** with attached revised sheet C502, dated April 15, 2025.
13. Sheet C503
  - a. **REPLACE** with attached revised sheet C503, dated April 15, 2025.
14. Sheet C504
  - a. **REPLACE** with attached revised sheet C504, dated April 15, 2025.
15. Sheet C505
  - a. **REPLACE** with attached revised sheet C505, dated April 15, 2025.
16. Sheet C506
  - a. **ADDED** as part of Addendum #2, dated April 15, 2025.
17. Sheet L101
  - a. **REPLACE** with attached revised sheet L101, dated April 15, 2025.
18. Sheet L131.1
  - a. **REPLACE** with attached revised sheet L131.1, dated April 15, 2025.
19. Sheet L131.2
  - a. **REPLACE** with attached revised sheet L131.2, dated April 15, 2025.
20. Sheet L131.3
  - a. **REPLACE** with attached revised sheet L131.3, dated April 15, 2025.
21. Sheet L132
  - a. **REPLACE** with attached revised sheet L132, dated April 15, 2025.
22. Sheet L141
  - a. **REPLACE** with attached revised sheet L141, dated April 15, 2025.
23. Sheet L142
  - a. **REPLACE** with attached revised sheet L142, dated April 15, 2025.
24. Sheet L151
  - a. **REPLACE** with attached revised sheet L151, dated April 15, 2025.
25. Sheet L152
  - a. **REPLACE** with attached revised sheet L152, dated April 15, 2025.
26. Sheet L161
  - a. **REPLACE** with attached revised sheet L161, dated April 15, 2025.
27. Sheet L503
  - a. **REPLACE** with attached revised sheet L503, dated April 15, 2025.

28. Sheet L143

- a. **ADDED** as part of Addendum #2, dated April 15, 2025.

29. Sheet E100

- a. **REPLACE** with attached revised sheet E100, dated April 15, 2025.

30. Sheet E101

- a. **REPLACE** with attached revised sheet E101, dated April 15, 2025.

### **CLARIFICATIONS**

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1. Contactor is responsible for paying all city permitting and tap fees. An allowance for permitting, meter, and tap fees has been added to the bid documents.
2. Project site is not within 50 feet of a railroad.
3. If the contractor chooses to use an unmanned aerial vehicle (drone), then section SC-6.03.P of 00800-Supplementary Conditions will apply.
4. Scope of work is limited to the site, except as noted on electrical drawings for new work on ground floor associated with the new site electrical.

**END OF ADDENDUM #2**

**ADVERTISEMENT FOR BIDS**  
POSTED: MARCH 24, 2025  
CITY BID NUMBER: #274-2025-RCPAC-10

Project: Performing Arts Center Plaza Renovation

Owner: Raleigh Convention and Performing Arts Complex, 2 East South Street, Raleigh, NC 27601  
Contact: Michelle Bradley, michelle.bradley@raleighnc.gov

Architect: HH Architecture, 1100 Dresser Court, Raleigh, NC 27609

Sealed Bids will be received until ~~3:00 PM~~ **2:00 PM, Tuesday, April 22, 2025**, at the Martin Marietta Center for the Performing Arts, 2 E South Street, Memorial Lobby, Raleigh, NC 27601, at which time and place bids will be publicly opened and read aloud for the construction of the Performing Arts Center Plaza Renovation project.

After Bids are opened, the Owner shall evaluate them in accordance with the methods and criteria set forth in the Instructions to Bidders. The Owner/City Council reserves the right to waive any informality or to reject any or all Bids. Unless all Bids are rejected, Award will be made to the lowest responsible and responsive Bidder, taking into consideration quality, performance and the time specified in the Bid Form for the performance of the Contract.

A Mandatory Pre-Bid Meeting will be held at **3:00 PM Tuesday, April 1, 2025** at the Martin Marietta Center for the Performing Arts, 2 E South Street, Memorial Lobby, Raleigh, NC 27601.

Requirements for pre-bid submittals of an "or-equal" are required within 10 days of the issuance of the Advertisement for Bids and in accordance with Section 00200, Instructions to Bidders.

The Project consists generally of the following major items:

Plaza improvements include new driveway and drop-off closer to the building entrance, replacement of plaza hardscape, stormwater conveyance improvements, irrigation improvements, new irrigation service, and electrical modifications to support new electrical service and improve site lighting

Bidding Documents may be examined at Architect's office and at: ConstructConnect, online; McGraw Hill Dodge Company, online; Construction Journal, online; and NC Institute of Minority Economic Development (a.k.a. The Institute), online.

Complete Bidding Documents may be obtained from Accent Imaging, [www.accentimaging.com](http://www.accentimaging.com) or [www.planscope.com](http://www.planscope.com), 8121 Brownleigh Drive, Raleigh, NC 27617, 800-280-0755 phone, 800-477-0755 fax. A refundable plan deposit of one hundred fifty dollars (\$150.00) in cash, check payable to Accent Imaging, or credit card is required for each set. Contractor will be required to pay for all shipping. Electronic documents will be provided at no cost.

With each request for Bidding Documents supply the following information: Company name, contact person, street address, phone number, and email address for Bidding point of contact; N. C. contractor's license with limitation and classification; indicate if the firm will be a Prime bidder, Supplier or Sub-Contractor.

Bidders will be required to show evidence that they are licensed to perform the work in the Bidding Documents as required by North Carolina General Statute, Chapter 87 and the Instruction to Bidders.

Bid Security in the amount of five percent (5%) of the Bid must accompany each Bid and shall be subject to the conditions provided in the Instruction to Bidders.

Pursuant to General Statutes of North Carolina Sections 143-128.2 and 143-131, and in accordance with City policy, the City of Raleigh encourages and provides equal opportunity for certified Minority and Woman-Owned Business Enterprise (MWBE) businesses to participate in all aspects of the City's contracting and procurement programs to include Professional Services; Goods and Other Services; and Construction. The prime contractor will be required to identify participation of MWBE businesses in their Bid, and how that participation will be achieved.

Furthermore, the City's goal is to contract or sub-contract fifteen percent (15%) of the contract amount to certified MWBEs on construction projects over \$300,000, or with contracts that include \$100,000 or more in state funding.

City of Raleigh  
Janet Cowell, Mayor

END OF DOCUMENT

**BID FORM**

PROJECT: Performing Arts Center Plaza Renovation

CITY BID NO.: 274-2025-RCPAC-10

BID FROM: \_\_\_\_\_

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**ARTICLE 1 – BID RECIPIENT**

1.01 This Bid is submitted to:

Michelle Bradley  
 General Manager  
 Martin Marietta Center for the Performing Arts  
 2 East South Street  
 Raleigh, North Carolina 27601

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

**ARTICLE 2 – BIDDER’S ACKNOWLEDGEMENTS**

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 120 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

**ARTICLE 3 – BIDDER’S REPRESENTATIONS**

3.01 In submitting this bid, bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

No. \_\_\_\_\_, dated \_\_\_\_\_

No. \_\_\_\_\_, dated \_\_\_\_\_

No. \_\_\_\_\_, dated \_\_\_\_\_

No. \_\_\_\_\_, dated \_\_\_\_\_

No. \_\_\_\_\_, dated \_\_\_\_\_

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in Supplemental Conditions - 5.02 as containing reliable Technical Data, and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in SC-5.06 as containing reliable Technical Data.

E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific sequences of construction expressly required by the Bidding Documents; and (3) Bidder’s safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

**ARTICLE 4 – BIDDER’S CERTIFICATION**

4.01 Bidder certifies that:

- A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;
  - 1. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
  - 2. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
  - 3. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.A:
    - a. “corrupt practice” means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
    - b. “fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
    - c. “collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
    - d. coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

**ARTICLE 5 – BASIS OF BID**

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

A. For all Work, a Lump Sum of:

\_\_\_\_\_ Dollars  
 (\$ \_\_\_\_\_ )

B. All specified cash allowances are included in the price(s) set forth above and have been computed in accordance with Paragraph 13.02 of the General Conditions.

C. For the following Alternates in priority order as selected by the Owner for inclusion in the Project as follows:

**Alternate No. 1.1. Concrete Unit Pavers** - In lieu of the base bid, install heavy duty unit pavers on 3" asphalt sub-course, at central alley only as noted on L131.2. \$

**Alternate No. 1.2. Concrete Unit Pavers** - In lieu of the base bid, install heavy duty unit pavers on 3" asphalt sub-course in selected area including central alley and both sides in the plaza. Light duty unit pavers on 4" concrete base on west/ east side of plaza as noted on L131.3. \$

**Alternate No. 1.3. Concrete Unit Pavers** - In lieu of the base bid, install heavy duty unit pavers on 7" concrete sub-base in selected area including central alley and both sides in the plaza. Light duty unit pavers on 4" concrete base on west/ east side of plaza as noted on L131.3. \$

**Alternate No. 2. New Handrails at Existing Stair** - In lieu of the base bid, provide new handrails as noted on the drawings. \$

**Alternate No. 3. New Pole Top Light Fixtures** - In addition to the base bid, provide additional pole top fixtures on all existing light poles. \$

**Alternate No. 4. Western Sidewalk** - In addition to the base bid, remove and replace additional light-duty concrete areas at western sidewalk (in front of Meymandi Theater) as shown on the drawings. \$

**Alternate No. 5. Enhancements at Existing Concrete Sculpture Pad** - In addition to the base bid, provide decorative gravel band and additional electrical at the existing concrete sculpture pad as noted on the drawings. \$

**Alternate No. 6. Demo Existing Concrete Sculpture Pad** - In addition to the base bid, demolish the existing concrete sculpture pad as noted on the drawings. \$

**UNIT PRICE BID SCHEDULE**

<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Bid Unit Price</b>
1.	Remove unsuitable soils & Backfill Plaza	CY	
2.	Remove unsuitable soils & Backfill Trenches and Pits	CY	
3.	Concrete Paving (Standard Duty)	SY	
4.	Concrete Paving (Heavy Duty)	SY	
5.	Asphalt Paving (Heavy Duty)	SY	
6.	Concrete Curb & Gutter	LF	
7.	Concrete Pavers (Pedestrian)	SF	
8.	Concrete Pavers (Vehicular) with Asphalt intermediate course	SF	
9.	Concrete Pavers (Vehicular) with Concrete intermediate course	SF	

5.02 Bidders are hereby notified that GS 143-128(d), requires all bidders on single prime projects to identify on their Bid form the contractors they have selected for the subdivisions for branches of work for (1) HVAC, (2) Plumbing, (3) Electrical, and (4) General. Accordingly, bidder shall list below applicable selected contractors for the following branches of work (write "N/A" if not applicable or self-performed).

HVAC _____	_____
Name	License No.
Plumbing _____	_____
Name	License No.
Electrical _____	_____
Name	License No.
General _____	_____
Name	License No.

- A. Unit Prices have been computed in accordance with Paragraph 13.03.B of the General Conditions.
- B. Bidder acknowledges that the rights of the Owner and the recommendations of the Engineer are not to be questioned in the Award of Contracts.
- C. Bidder acknowledges that it is the intention of the Mayor and City Council to let contracts on a basis of the Bids received in accordance with GS 143-129 and in such manner as they deem to be for the best interests of the Owner.
- D. Bidder acknowledges that the Owner reserves the right to accept or reject any or all bids and to waive any informalities in the bidding.

- E. Bidder acknowledges that should the total bid exceed the funds available to construct the project, the Owner reserves the right to reduce the scope of work from the project by deleting certain lump sum or unit price bid items prior to awarding the contract to bring the project within the funds available.
- F. Bidder acknowledges that if this contract is awarded, Bidder must, with every pay request, furnish to the Public Utilities Director of the City of Raleigh an accurate itemized statement of North Carolina Sales Taxes paid on materials, supplies, equipment, and other items charged to this contract, and otherwise fully comply with the "Procedure for Reporting North Carolina Sales Tax Expenditures.". A sales tax form must be submitted even if there is no sales tax incurred.
- G. Bidder agrees to begin work within 10 days from the date of the Notice to Proceed.
- H. Bidder agrees that should the Owner reduce the scope of work by 25% or less of the Total Bid price prior to award of the contract, the lump sum and the unit price on all bid items shall remain unchanged.
- I. Bidder agrees that in the case of failure on his part to execute the said Contract and the Bonds within 15 consecutive calendar days after written notice being given of the award of the Contract, the check, cash or Bid Bond accompanying this Bid shall be paid into the funds of the Owner's Account set aside for this Project, as liquidated damages for such failure; otherwise the check, cash or Bid Bond accompanying this Bid shall be returned to the Bidder.
- J. Bidder agrees to provide all necessary tools, machinery, equipment, apparatus, and all other means necessary to do all the work and will furnish all labor, materials and all else required to complete such Contract as may be entered into, in the manner prescribed in and in accordance with the terms of the Specifications and Contract and in accordance with the true intent and meaning thereof, and in accordance with the Plans and/or Drawings and the requirements of the Engineers under them, in a first class manner.

## **ARTICLE 6 – TIME OF COMPLETION**

- 6.01 Bidder agrees that the Work will be substantially complete within 180 calendar days after the date when the Contract Times commence to run as provided in Paragraph 4.01 of the General Conditions, and will be completed and ready for final payment in accordance with Paragraph 15.06.B of the General Conditions within 210 calendar days after the date when the Contract Times commence to run.
- 6.02 Bidder accepts the provisions of the Agreement as to liquidated damages of \$100/day in the event of failure to complete the Work within the Contract Times. This amount is agreed upon as the proper measure of liquidated damages the Owner will sustain, per day, by the failure of the undersigned to complete the work, within the stipulated time, and it is not to be construed, in any sense, as a penalty.

## **ARTICLE 7 – ATTACHMENTS TO THIS BID**

- 7.01 The following documents are submitted with and made a condition of this Bid:
  - A. Required Bid security in the form of a Bid Bond or Certified Check (Section 00430);
  - B. In accordance with GS 143-128.2(c), Bidder shall identify on its bid the minority businesses that it will use on the project and the total dollar value of the bid that will be performed by the minority businesses and list the good faith efforts (Affidavit A) made to solicit participation. A Bidder that

will perform all of the work with its own workforce may submit an Affidavit B to that effect in lieu of the affidavit A required above.

1. Nondiscrimination Agreement (Section 00440);
  2. Use of MWBE Businesses (Section 00440);
  3. Identification of Minority Business Participation (Section 00440), and;
  4. Affidavit A, Listing of Good Faith Effort, or Affidavit B, Intent to Perform Contract with Own Workforce (Section 00440).
- C. Contractor's Certificates, Affidavit of Organization and Authority of Sworn Statement (Section 00441);
- D. City of Raleigh – Contractor's Poor Performance Policy (Section 00442);
- E. Non-Collusive Affidavit (Section 00443);
- F. Notice to Contractor Regarding Intrusions Beyond Project Limits (Section 00444);
- G. Evidence of authority to do business in the state of the Project (i.e., copy of contractor's license);
- 7.02 Submit the Bidder's Checklist as provided in the bidding documents with the bid submittal. The Checklist shall be completed and included as the first page of the submittal.
- 7.03 After the bid opening the Owner will consider all bids and alternates and determine the lowest responsible, responsive bidder. Upon notification of being the apparent low Bidder, the Bidder shall then file within 72 hours of the notification of being the apparent lowest bidder, the following:
- A. An Affidavit (C) that includes a description of the portion of work to be executed by minority businesses, expressed as a percentage of the total contract price, which is equal to or more than the goal established by the Owner and indicated in the Instruction to Bidders, paragraph Minority Participation Goals. This affidavit shall give rise to the presumption that the bidder has made the required good faith effort; or,
  - B. Affidavit (D) of its good faith effort to meet the goal. The document must include evidence of all good faith efforts that were implemented, including any advertisements, solicitations and other specific actions demonstrating recruitment and selection of minority businesses for participation in the contract.
- 7.04 Bidder understands that if this Bid is accepted by the Owner, Bidder shall not substitute for the subcontractors named in the Bid Documents except as allowed in the Supplementary Conditions.

## **ARTICLE 8 – DEFINED TERMS**

- 8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

## **ARTICLE 9 – BID SUBMITTAL**

- 9.01 Bidder's License

- A. Number: \_\_\_\_\_
- B. Classification: \_\_\_\_\_
- C. Limitation: \_\_\_\_\_
- D. Employer's Tax ID No.: \_\_\_\_\_

E. Business Address: \_\_\_\_\_

F. Phone No.: \_\_\_\_\_ Fax No.: \_\_\_\_\_

G. Contact Person: \_\_\_\_\_ E-mail Address: \_\_\_\_\_

H. Phone No. w/ Ext.: \_\_\_\_\_

9.02 This Bid is submitted by:

If Bidder is:

**An Individual**

Name (typed or printed): \_\_\_\_\_

By: \_\_\_\_\_

(Individual's signature)

Doing business as: \_\_\_\_\_

**A Partnership**

Partnership Name: \_\_\_\_\_

The Organization and Internal Affairs of the Partnership are governed by the laws of the State of: \_\_\_\_\_

By: \_\_\_\_\_

(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

Title (typed or printed): \_\_\_\_\_

Attest: \_\_\_\_\_

(Signature of Corporate Secretary)

**A Corporation**

Corporation Name: \_\_\_\_\_ (SEAL)

State of Incorporation: \_\_\_\_\_

Type (General Business, Professional, Service, Limited Liability): \_\_\_\_\_

By: \_\_\_\_\_

(Signature -- attach evidence of authority to sign)

Name (typed or printed): \_\_\_\_\_

Title (typed or printed): \_\_\_\_\_

(CORPORATE SEAL)

Attest: \_\_\_\_\_

(Signature of Corporate Secretary)

Date of Qualification to do business in North Carolina is \_\_\_\_/\_\_\_\_/\_\_\_\_.

**Limited Liability Company - LLC**

Name of LLC: \_\_\_\_\_

Name of State under whose Laws the Limited Liability Company was formed:

\_\_\_\_\_

By: \_\_\_\_\_

(Signature of Manager)

Name (typed or printed): \_\_\_\_\_

Title (typed or printed): \_\_\_\_\_

## **SECTION 012100 - ALLOWANCES**

### **GENERAL**

#### SUMMARY

- A. Section includes administrative and procedural requirements governing allowances.
- B. Types of allowances include the following:
  - 1. Quantity allowances.
- C. Related Requirements:
  - 1. Section 014000 "Quality Requirements" for procedures governing the use of allowances for testing and inspecting.

#### ACTION SUBMITTALS

- D. Submit proposals for purchase of products or systems included in allowances, in the form specified for Field Orders.

#### INFORMATIONAL SUBMITTALS

- E. Submit quantity verification and documentation from Testing Agency, invoices or delivery slips to show actual quantities of materials delivered to the site for use in fulfillment of each allowance.

#### COORDINATION

- F. Coordinate allowance items with other portions of the Work. Furnish templates as required to coordinate installation.

#### QUANTITY ALLOWANCES

- G. Allowance shall include cost to Contractor of specific products and materials ordered by Owner or selected by Designer under allowance and shall include labor, material, taxes, freight, and delivery to Project site.

#### ADJUSTMENT OF ALLOWANCES

- H. Allowance Adjustment: To adjust allowance amounts, prepare a Field Order proposal based on the difference between purchase amount and the allowance, multiplied by final measurement of work-in-place where applicable. All unused allowances will be credited to the owner at the end of the project.
  - 1. Include installation costs in purchase amount only where indicated as part of the allowance.
  - 2. Submit substantiation of a change in scope of work, if any, claimed in Field Orders related to unit-cost allowances.
  - 3. Owner reserves the right to establish the quantity of work-in-place by independent quantity survey, measure, or count.

- I. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or Contractor's handling, labor, installation, overhead, and profit.
  - 1. Do not include Contractor's or subcontractor's indirect expense in the Field Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in the Contract Documents.
  - 2. No change to Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of the same scope and nature as originally indicated.
  - 3. No change in unit is permitted for over-run or under-run of allowance bid items.

### **PRODUCTS (Not Used)**

### **EXECUTION**

#### EXAMINATION

- J. Examine products covered by an allowance promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

#### PREPARATION

- K. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each allowance item is completely integrated and interfaced with related work.

#### SCHEDULE OF ALLOWANCES

- L. **Allowance No. 1:** Scarifying and recompacting 100% of the soil within the Drop off loop.
  - 1. Description: Includes scarifying and recompacting 100% of the soil within the Drop off loop to a depth of 8 inches.
  - 2. Unit Price includes scarifying and re-compaction requirements per specifications.
  - 3. This allowance includes material cost receiving, handling, and installation and Contractor overhead and profit.
  - 4. Allowance Quantity: 160 cubic yards.
  
- M. **Allowance No. 2:** Removal of unsuitable soil under plaza pavement, disposal off-site and replacement with suitable structural fill or backfill as described in Geotechnical Report dated October 17, 2024, Falcon Engineering.
  - 1. Description: Removal, disposal off-site, and replacement of unsuitable soil and/or debris to a depth of 18" with Structural Fill or Backfill per geotechnical report.
  - 2. Unit Price includes excavation, transportation, re-spread, compaction, and backfill to compaction requirements per specifications.

3. This allowance includes material cost receiving, handling, and installation and Contractor overhead and profit.
  4. Allowance Quantity: 190 cubic yards.
- N. **Allowance No. 3:** Removal of unsuitable soil in trenches and pits, disposal off-site and replacement with suitable structural fill or backfill as described in Geotechnical Report dated October 17, 2024, Falcon Engineering.
1. Description: Removal, disposal off-site, and replacement of unsuitable soil and/or debris with a controlled backfill.
  2. Unit Price includes excavation, transportation, re-spread, compaction, and backfill to compaction requirements per specifications.
  3. This allowance includes material cost receiving, handling, and installation and Contractor overhead and profit.
  4. Allowance Quantity: 710 cubic yards.
- O. **Allowance No. 4: Lump-Sum Allowance: Include the sum of \$14,000 for all AHJ permits, meter, and tap fees.**
1. **Description: This allowance includes material cost, receiving, handling, coordination and overhead and profit.**

**PART 2 - END OF SECTION**

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## **SECTION 012300 - ALTERNATES**

### **PART 1 - GENERAL**

#### SUMMARY

- A. Section includes administrative and procedural requirements for alternates.
- B. Related Sections:
  - 1. Section 012100 "Allowances" for corresponding allowances.

#### DEFINITIONS

- C. 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.

#### PROCEDURES

- D. Coordination: Revise 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.
- E. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- F. Execute accepted alternates under the same conditions as other work of the Contract.
- G. 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.

### **PART 2 - PRODUCTS (Not Used)**

### **PART 3 - EXECUTION**

#### SCHEDULE OF ALTERNATES

- A. Alternate No. 1.1: Concrete Unit Pavers
  - 1. Base Bid: Install concrete paving throughout plaza as shown on L131.1.
  - 2. Alternate: In lieu of the base bid, install heavy duty unit pavers on 3" asphalt sub-course, at central alley only as noted on L131.2.
- B. Alternate No. 1.2: Concrete Unit Pavers
  - 1. Base Bid: Install concrete paving throughout plaza as shown on L131.1.
  - 2. Alternate: In lieu of the base bid, install heavy duty unit pavers on 3" asphalt sub-course in selected area including central alley and both sides in the plaza. Light duty unit pavers on 4" concrete base on west/ east side of plaza as noted on L131.3.

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- C. Alternate No. 1.3: Concrete Unit Pavers
1. Base Bid: Install concrete paving throughout plaza as shown on L131.1.
  2. Alternate: In lieu of the base bid, install heavy duty unit pavers on 7" concrete sub-base in selected area including central alley and both sides in the plaza. Light duty unit pavers on 4" concrete base on west/ east side of plaza as noted on L131.3.
- D. Alternate No. 2: Handrails at Existing Stair
1. Base Bid: Salvage, refinish, and reinstall existing handrails at existing stairs near Wilmington Street as noted on the drawings.
  2. Alternate: In lieu of the base bid, provide new handrails as noted on the drawings.
- E. Alternate No. 3: New pole top fixtures
1. Base Bid: Provide new light fixtures as noted on E100.
  2. Alternate: In addition to the base bid, provide additional pole top fixtures on all existing light poles.
- F. Alternate No. 4: Western sidewalk addition
1. Base Bid: Install paving extents as shown on the drawings.
  2. Alternate: In addition to the base bid, remove and replace additional light-duty concrete areas at western sidewalk (in front of Meymandi Theater) as shown on the drawings.
- G. **Alternate No. 5: Enhancements at Existing Concrete Sculpture Pad**
1. **Base Bid: No work at the existing concrete sculpture pad**
  2. **Alternate: In addition to the base bid, provide decorative gravel band and additional electrical at the existing concrete sculpture pad as noted on the drawings.**
- H. **Alternate No. 6: Western sidewalk addition**
1. **Base Bid: No work at the existing concrete sculpture pad**
  2. **Alternate: In addition to the base bid, demolish the existing concrete sculpture pad as noted on the drawings. Contractor is responsible for backfilling and tamping to grade level.**

END OF SECTION

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## SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
  - 1. Section 011000 "Summary" for work restrictions and limitations on utility interruptions.

#### 1.2 USE CHARGES

- A. **Installation, removal, and use charges for temporary facilities to be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to, Architect, occupants of Project, testing agencies, and authorities having jurisdiction.**
- B. **Water and Sewer Service from Existing System: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.**
- C. **Electric Power Service from Existing System: Electric power from Owner's existing system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.**

#### 1.3 INFORMATIONAL SUBMITTALS

- A. **Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.**
- B. **Implementation and Termination Schedule: Within 15 days of date established for commencement of the Work, submit schedule indicating implementation and termination dates of each temporary utility.**
- C. **Noise and Vibration Control Plan: Identify construction activities that may impact the occupancy and use of existing spaces within the building or adjacent existing buildings, whether occupied by others, or occupied by Owner. Include the following:**
  - 1. **Methods used to meet the goals and requirements of Owner.**
  - 2. **Concrete cutting method(s) to be used.**
  - 3. **Location of construction devices on the site.**

4. **Show compliance with the use and maintenance of quieted construction devices for the duration of the Project.**
5. **Indicate activities that may disturb building occupants and that are planned to be performed during non-standard working hours as coordinated with Owner.**

#### 1.4 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.
- C. Accessible Temporary Egress: Comply with applicable provisions in the DOJ's "2010 ADA Standards for Accessible Design" and ICC A117.1.

#### 1.5 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. **Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top rails.**
- B. **Portable Chain-Link Fencing: Minimum 2-inch (50-mm), 0.148-inch- (3.8-mm-) thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet (1.8 m) high with galvanized-steel pipe posts; minimum 2-3/8-inch- (60-mm-) OD line posts and 2-7/8-inch- (73-mm-) OD corner and pull posts, with 1-5/8-inch- (42-mm-) OD top and bottom rails. Provide [concrete] [galvanized-steel] bases for supporting posts.**
- C. **Fencing Windscreen Privacy Screen: Polyester fabric scrim with grommets for attachment to chain-link fence, sized to height of fence, in color selected by Architect from manufacturer's standard colors.**

### **PART 3 - EXECUTION**

#### **3.1 TEMPORARY FACILITIES, GENERAL**

- A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
  - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

#### **3.2 INSTALLATION, GENERAL**

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
  - 1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.
- C. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.
  - 1. Maintain dust partitions during the Work. Use vacuum collection attachments on dust-producing equipment. Isolate limited work within occupied areas using portable dust-containment devices.
  - 2. Perform daily construction cleanup and final cleanup using approved, HEPA-filter-equipped vacuum equipment.

#### **3.3 TEMPORARY UTILITY INSTALLATION**

- A. General: Install temporary service or connect to existing service.
  - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sanitary Facilities: Provide temporary toilets, wash facilities, safety shower and eyewash facilities, and drinking water for use of construction personnel. Comply with requirements of authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- C. Electric Power Service:

1. Connect to Owner's existing electric power service. Maintain equipment in a condition acceptable to Owner.

**D. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.**

1. **Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.**

3.4 SUPPORT FACILITIES INSTALLATION

**A. Traffic Controls: Comply with requirements of authorities having jurisdiction.**

1. **Protect existing site improvements to remain, including curbs, pavement, and utilities.**
2. **Maintain access for fire-fighting equipment and access to fire hydrants.**

**B. Parking: ~~Use designated parking areas for construction personnel.~~ Contractor is responsible for procuring their own temporary off-site parking.**

**C. Storage and Staging: Use designated areas of Project site for storage and staging needs.**

**D. Project Signs: Provide Project signs as indicated. Unauthorized signs are not permitted.**

1. **Identification Signs: Provide Project identification signs.**
2. **Temporary Signs: Provide other signs as indicated and as required to inform public and individuals seeking entrance to Project.**
  - a. **Provide temporary, directional signs for construction personnel and visitors.**
3. **Maintain and touch up signs, so they are legible at all times.**

**E. Waste Disposal Facilities:**

1. Comply with requirements specified in Section 017419 "Construction Waste Management and Disposal."
2. Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with progress cleaning requirements in Section 017300 "Execution."

**F. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore stairs to condition existing before initial use.**

1. **Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas, so no evidence remains of correction work.**

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- G. **Temporary Use of Permanent Stairs: Use of new stairs for construction traffic will be permitted, provided stairs are protected and finishes restored to new condition at time of Substantial Completion.**

3.5 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
1. Where access to adjacent properties is required in order to affect protection of existing facilities, obtain written permission from adjacent property owner to access property for that purpose.
- B. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction as required to comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
1. Comply with work restrictions specified in Section 011000 "Summary."
- C. **Temporary Erosion and Sedimentation Control:**
1. **Comply with requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent and requirements specified in Section 311000 "Site Clearing."**
  2. **Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, in accordance with erosion- and sedimentation-control Drawings.**
    - a. **Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant-protection zones.**
    - b. **Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.**
    - c. **Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during the course of Project.**
    - d. **Remove erosion and sedimentation controls, and restore and stabilize areas disturbed during removal.**
- D. **Stormwater Control: Comply with requirements of authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.**
- E. **Tree and Plant Protection:**
1. **Comply with requirements specified in Section 015639 "Temporary Tree and Plant Protection."**

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- F. **Site Enclosure Fence: Before construction operations begins, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.**
1. **Extent of Fence: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.**
  2. **Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.**
- G. Security Enclosure and Lockup: Install temporary enclosure around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security. Lock entrances at end of each workday.
- H. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- I. Temporary Egress: Provide temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction. Provide signage directing occupants to temporary egress.

### 3.6 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
  2. Remove temporary roads and paved areas not intended for or acceptable for integration into permanent construction. Where area is intended for landscape development, remove soil and aggregate fill that do not comply with requirements for fill or subsoil. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns. Repair or replace street paving, curbs, and sidewalks at temporary entrances, as required by authorities having jurisdiction.

3. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

**END OF SECTION 015000**

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## **SECTION 03 4500 – PRECAST ARCHITECTURAL CONCRETE**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section includes cast-in-place architectural concrete, including form facings, reinforcement and accessories, concrete materials, concrete mixture design, placement procedures, and finishes.
  - 1. Requirements in Section 033000 "Cast-in-Place Concrete" apply to architectural concrete.
- B. Section Includes:
  - 1. Architectural precast concrete units for exterior use, finished face exposed to view, commercial architectural finish for site wall:
    - a. Monumental site wall and signage.
- C. Related Requirements:
  - 1. Section 033000 "Cast-in-Place Concrete" for installing connection anchors in concrete.
  - 2. Section 047200 "Cast Stone Masonry" for wet- or dry-cast cast-stone wall caps and at Contractor's option, monumental steps and benches may be cast-stone in lieu of architectural precast concrete.

#### 1.3 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Sustainable Design Submittals:
  - 1. Product Data: For recycled content, indicating postconsumer and preconsumer recycled content and cost.

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2. Product Certificates: For regional materials, indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include distance to Project and cost for each regional material.
- C. Design Mixtures: For each precast concrete mixture. Include compressive strength and water-absorption tests.
- D. Shop Drawings:
1. Shop drawings for landscape precast structural concrete are to be signed and sealed by a qualified professional engineer currently licensed to practice in the state of North Carolina.
  2. Detail fabrication and installation of architectural precast concrete units.
  3. Indicate locations, plans, elevations, dimensions, shapes, and cross sections of each unit.
  4. Indicate joints, reveals, drips, chamfers, and extent and location of each surface finish.
  5. Indicate details at corners.
  6. Indicate separate face and backup mixture locations and thicknesses.
  7. Indicate type, size, and length of welded connections by AWS standard symbols. Detail loose and cast-in hardware and connections.
  8. Indicate locations, tolerances, and details of anchorage devices to be embedded in or attached to structure or other construction.
  9. Indicate locations, extent, and treatment of dry joints if two-stage casting is proposed.
  10. Include plans and elevations showing unit location and sequence of erection for special conditions.
  11. Indicate location of each architectural precast concrete unit by same identification mark placed on panel.
  12. Indicate relationship of architectural precast concrete units to adjacent materials.
  13. If design modifications are proposed to meet performance requirements and field conditions, submit design calculations and Shop Drawings. Do not adversely affect the appearance, durability, or strength of units when modifying details or materials and maintain the general design concept.
- E. Samples: Design reference samples for initial verification of design intent, for each type of finish indicated on exposed surfaces of architectural precast concrete units, in sets of three, representative of finish, color, and texture variations expected; approximately 12 by 12 by 6 inches. Sample shall be representative of specified architectural finish, color, and texture on 5 faces with bottom hidden face matching fabricator standard finish and texture.
1. Architectural precast concrete finish shall match finish, color, and texture of cast stone on project, as selected by Architect from full range of cast stone manufacturer's full range. Architectural precast fabricators shall collaborate with cast stone fabricators as necessary to provide finished products of similar likeness to obtain architect approval of both architectural precast and cast stone samples. Contractor is responsible for ensuring sample selections and approved sample ranges are shared between architectural precast and cast-stone manufacturer for continual access to approved sample selections between all parties.

2. Multiple faces of architectural precast concrete units will be exposed to view as indicated in construction drawings. All exposed faces shall have consistent finish, color, and texture.

- F. Delegated-Design Submittal: For architectural precast concrete indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer **licensed in the State of North Carolina** responsible for their preparation.

1. Show governing panel types, connections, types of reinforcement, including special reinforcement, and concrete cover on reinforcement. Indicate location, type, magnitude, and direction of loads imposed on the building structural frame from architectural precast concrete.

#### 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For fabricator.
- B. Professional Engineer Qualifications.
- C. Material Certificates: For the following items:
  1. Cementitious materials.
  2. Reinforcing materials.
  3. Admixtures.
  4. Bearing pads.
  5. Other miscellaneous components as required by delegated-design professional engineer.
- D. Material Test Reports: For aggregates.
- E. Source quality-control test reports.

- F. **Fabricator Qualifications: Firm shall have a minimum of ten (10) years experience in producing units similar to those required for this Project, with sufficient production capacity to produce and deliver required units without causing delay in Work. A firm that assumes responsibility for engineering architectural precast concrete units to comply with performance requirements. This responsibility includes preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer.**

1. **Fabricating Plant shall be certified by the following prior to bid:**
  - a. **Architectural Precast Association (APA).**
  - b. **Precast/prestressed Concrete Institute (PCI) AA designation.**
2. ~~Designated as a PCI certified plant for Group A, Category A1 Architectural Cladding and Load Bearing Units at time of bidding.~~

- G. Source Limitations for Precast Concrete Units: Obtain architectural precast concrete units through single source from single manufacturer.

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- H. Source Limitations for Raw Materials: Obtain raw materials of a uniform quality from one source for each raw material.
- I. Engineering Responsibility: Preparation of Shop Drawings, design calculations, and other structural data by a qualified professional engineer.
- J. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for design and installation of architectural precast concrete units similar to those indicated for this Project in material, design, and extent.
- K. Quality-Control Standard: For manufacturing procedures and testing requirements, quality-control recommendations, and dimensional tolerances for types of units required, comply with PCI MNL 117, "Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products."
- L. Sample Panels: After sample approval and before fabricating architectural precast concrete units, produce a minimum of two sample panels approximately 48 x 12 x 12 inches, for review by Architect. Incorporate full-scale details of architectural features, finishes, textures, and transitions in sample panels.
1. Locate panels where indicated or, if not indicated, as directed by Architect.
  2. Damage part of an exposed-face surface for each finish, color, and texture, and demonstrate adequacy of repair techniques proposed for repair of surface blemishes.
  3. After acceptance of repair technique, maintain one sample panel at manufacturer's plant and one at Project site in an undisturbed condition as a standard for judging the completed Work.
  4. Demolish and remove sample panels when directed.
- M. Range Samples: After sample panel approval and before fabricating architectural precast concrete units, produce a minimum of 3 sets of samples, approximately 24 x 12 x 12 inches, representing anticipated range of each color and texture on Project's units. Maintain one set of range samples at Project site, cast-stone manufacturer plant, and remaining range sample set at manufacturer's plant as color and texture approval reference.
- N. Mockups: After sample panel and range sample approval but before production of architectural precast concrete units, construct full-sized mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and to set quality standards for materials and execution.
1. Build wall mockup approximately 48 inches wide by 18 inches height consisting of 3 six-inch risers. Provide joint for filling with joint fillers for joint color and finishing review and approval.
  2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  3. Approved mockups may NOT become part of the completed Work.

## 1.6 COORDINATION

- A. Furnish loose connection hardware and anchorage items to be embedded in or attached to other construction without delaying the Work. Provide locations, setting diagrams, templates, instructions, and directions, as required, for installation.

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver architectural precast concrete units in such quantities and at such times to limit unloading units temporarily on the ground or other rehandling.
- B. Support units during shipment on nonstaining shock-absorbing material.
- C. Store units with adequate dunnage and bracing and protect units to prevent contact with soil, to prevent staining, and to prevent cracking, distortion, warping or other physical damage.
- D. Place stored units so identification marks are clearly visible, and units can be inspected.
- E. Handle and transport units in a manner that avoids excessive stresses that cause cracking or damage.
- F. Lift and support units only at designated points indicated on Shop Drawings.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. General: Architectural precast concrete manufacturer shall have proven track record working with cast stone manufacturers to provide architectural precast concrete units in similar likeness to cast stone products on the same project. Architectural precast concrete manufacturer shall have capability to work with full range of aggregates, pigments, and finishing procedures to satisfy requirements of Samples.

### 2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in this Section and Section 014000 "Quality Requirements," to design architectural precast concrete units.
- B. Design Standards: Comply with ACI 318 and design recommendations of PCI MNL 120, "PCI Design Handbook - Precast and Prestressed Concrete," applicable to types of architectural precast concrete units indicated.
- C. Structural Performance: Provide architectural precast concrete units and connections capable of withstanding the following design loads within limits and under conditions indicated:

1. Loads: Delegated-design professional engineer shall design loads per current NC Building Code.
2. Design precast concrete units and connections to maintain clearances at openings, to allow for fabrication and construction tolerances, to accommodate live-load deflection, shrinkage and creep of other structures, and other structure movements, and thermal movements as determined by Delegated-design professional engineer.

### 2.3 MOLD MATERIALS

- A. Molds: Rigid, dimensionally stable, non-absorptive material, warp and buckle free, that provides continuous and true precast concrete surfaces within fabrication tolerances indicated; nonreactive with concrete and suitable for producing required finishes.
  1. Mold-Release Agent: Commercially produced form-release agent that does not bond with, stain or adversely affect precast concrete surfaces and does not impair subsequent surface or joint treatments of precast concrete.
- B. Form Liners: Units of face design, texture, arrangement, and configuration as required to satisfy Sample requirements. Use with manufacturer's recommended form-release agent that does not bond with, stain, or adversely affect precast concrete surfaces and does not impair subsequent surface or joint treatments of precast concrete.
- C. Surface Retarder: Chemical set retarder, capable of temporarily delaying final hardening of newly placed concrete mixture to depth of reveal specified.

### 2.4 REINFORCING MATERIALS

- A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.
- B. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.
- C. Low-Alloy-Steel Reinforcing Bars: ASTM A 706/A 706M, deformed.
- D. Use galvanized or epoxy-coated reinforcement when covered with less than 1-1/2 inches precast concrete material:
  1. Galvanized Reinforcing Bars: ASTM A 615/A 615M, Grade 60 or ASTM A 706/A 706M, deformed bars, with ASTM A 767/A 767M, Class II zinc coating and chromate treatment.
  2. Epoxy-Coated Reinforcing Bars: ASTM A 615/A 615M, Grade 60 or ASTM A 706/A 706M, deformed bars, or ASTM A 775/A 775M or ASTM A 934/A 934M epoxy coated.
- E. Plain-Steel Welded Wire Reinforcement: ASTM A 185/A 185M, fabricated from galvanized-steel wire into flat sheets.
- F. Deformed-Steel Welded Wire Reinforcement: ASTM A 497/A 497M, flat sheet.

- G. Epoxy-Coated-Steel Wire: ASTM A 884/A 884M, Class A coated, plain or deformed, flat sheet, Type 1 bendable or Type 2 nonbendable coating.
- H. Supports: Suspend reinforcement from back of mold or use bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place according to PCI MNL 117.

## 2.5 CONCRETE MATERIALS

- A. Regional Materials: Concrete shall be manufactured within 500 miles of Project site from aggregates and cementitious materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
- B. Portland Cement: ASTM C 150/C 150M, Type I or Type III, gray, unless otherwise indicated or required to satisfy Sample requirements.
  - 1. For surfaces exposed to view in finished structure, use gray or white cement, of same type, brand, and mill source.
- C. Supplementary Cementitious Materials: Allowed unless supplementary cementitious materials affect finish, color, or texture and conflict with satisfying Sample requirements.
  - 1. Fly Ash: ASTM C 618, Class C or F, with maximum loss on ignition of 3 percent.
  - 2. Metakaolin: ASTM C 618, Class N.
  - 3. Silica Fume: ASTM C 1240, with optional chemical and physical requirement.
  - 4. Ground Granulated Blast-Furnace Slag: ASTM C 989, Grade 100 or 120.
  - 5. Blended Hydraulic Cement: ASTM C 595, Type IS, portland blast-furnace slag, Type IP, portland-pozzolan, Type I (PM), pozzolan-modified portland, or Type I (SM), slag-modified portland cement.
- D. Normal-Weight Aggregates: Except as modified by PCI MNL 117, ASTM C 33/C 33M, with coarse aggregates complying with Class 5S. Stockpile fine and coarse aggregates for each type of exposed finish from a single source (pit or quarry) for Project.
  - 1. Face-Mixture-Coarse Aggregates: Selected, hard, and durable; free of material that reacts with cement or causes staining; to match selected finish sample.
  - 2. Face-Mixture-Fine Aggregates: Selected, natural or manufactured sand compatible with coarse aggregate; to match approved finish sample.
- E. Coloring Admixture: ASTM C 979/C 979M, synthetic or natural mineral-oxide pigments or colored water-reducing admixtures, temperature stable, and nonfading.
- F. Water: Potable; free from deleterious material that may affect color stability, setting, or strength of concrete and complying with chemical limits of PCI MNL 117.
- G. Air-Entraining Admixture: ASTM C 260, certified by manufacturer to be compatible with other required admixtures.

- 
- H. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures and to not contain calcium chloride, or more than 0.15 percent chloride ions or other salts by weight of admixture.
1. Water-Reducing Admixtures: ASTM C 494/C 494M, Type A.
  2. Retarding Admixture: ASTM C 494/C 494M, Type B.
  3. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
  4. Water-Reducing and Accelerating Admixture: ASTM C 494/C 494M, Type E.
  5. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.
  6. High-Range, Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type G.
  7. Plasticizing Admixture: ASTM C 1017/C 1017M, Type I.
  8. Plasticizing and Retarding Admixture: ASTM C 1017/C 1017M, Type II.
  9. Corrosion Inhibiting Admixture: ASTM C 1582/C 1582M.

## 2.6 ACCESSORIES

- A. Precast Accessories: Provide clips, hangers, high-density plastic or steel shims, and other accessories required to install architectural precast concrete units.

## 2.7 GROUT MATERIALS

- A. Sand-Cement Grout: Portland cement, ASTM C 150/C 150M, Type I, and clean, natural sand, ASTM C 144 or ASTM C 404. Mix at ratio of 1 part cement to 2-1/2 to 3 parts sand, by volume, with minimum water required for placement and hydration. Water-soluble chloride ion content less than 0.06 percent by weight of cement when tested according to ASTM C 1218/C 1218M.

## 2.8 CONCRETE MIXTURES

- A. Prepare design mixtures for each type of precast concrete required.
1. Use a single design mixture for units with more than one major face or edge exposed.
  2. Where only one face of unit is exposed use either a single design mixture or separate mixtures for face and backup.
- B. Limit use of fly ash and ground granulated blast-furnace slag to 20 percent of portland cement by weight; limit metakaolin and silica fume to 10 percent of portland cement by weight.
- C. Design mixtures may be prepared by a qualified independent testing agency or by qualified precast plant personnel at architectural precast concrete fabricator's option.
- D. Limit water-soluble chloride ions to maximum percentage by weight of cement permitted by ACI 318 or PCI MNL 117 when tested according to ASTM C 1218/C 1218M.

- E. Normal-Weight Concrete Mixtures: Proportion face and backup mixtures or full-depth mixtures, at fabricator's option by either laboratory trial batch or field test data methods according to ACI 211.1, with materials to be used on Project, to provide normal-weight concrete with the following properties:
  - 1. Compressive Strength (28 Days): 5000 psi minimum.
  - 2. Maximum Water-Cementitious Materials Ratio: 0.45.
- F. Water Absorption: 6 percent by weight or 14 percent by volume, tested according to ASTM C 642, except for boiling requirement.
- G. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having an air content complying with PCI MNL 117.
- H. When included in design mixtures, add other admixtures to concrete mixtures according to manufacturer's written instructions.

## 2.9 MOLD FABRICATION

- A. Molds: Accurately construct molds, mortar tight, of sufficient strength to withstand pressures due to concrete-placement operations and temperature changes and for prestressing and detensioning operations. Coat contact surfaces of molds with release agent before reinforcement is placed. Avoid contamination of reinforcement and prestressing tendons by release agent.
  - 1. Place form liners accurately to provide finished surface texture indicated. Provide solid backing and supports to maintain stability of liners during concrete placement. Coat form liner with form-release agent.
- B. Maintain molds to provide completed architectural precast concrete units of shapes, lines, and dimensions indicated, within fabrication tolerances specified.
  - 1. Form joints are not permitted on faces exposed to view in the finished work.
  - 2. Edge and Corner Treatment: Uniformly radiused, 1/8 inch radius.

## 2.10 FABRICATION

- A. All cast-in hardware shall be located to be hidden from all exposed views upon final installation of architectural precast concrete units.
- B. All reinforcement shall be designed to not conflict with site-installed handrail posts, location as noted in drawings.
- C. Cast-in Anchors, Inserts, Plates, Angles, and Other Anchorage Hardware: Fabricate anchorage hardware with sufficient anchorage and embedment to comply with design requirements. Accurately position for attachment of loose hardware, and secure in place during precasting operations. Locate anchorage hardware where it does not affect position of main reinforcement or concrete placement.

1. Weld-headed studs and deformed bar anchors used for anchorage according to AWS D1.1/D1.1M and AWS C5.4, "Recommended Practices for Stud Welding."
- D. Furnish loose hardware items including steel plates, clip angles, seat angles, anchors, dowels, cramps, hangers, and other hardware shapes for securing architectural precast concrete units to supporting and adjacent construction.
- E. Cast-in reglets, slots, holes, and other accessories in architectural precast concrete units as indicated on the Contract Drawings.
- F. Cast-in openings larger than 10 inches in any dimension. Do not drill or cut openings or prestressing strand without Architect's approval.
- G. Reinforcement: Comply with recommendations in PCI MNL 117 for fabricating, placing, and supporting reinforcement.
1. Clean reinforcement of loose rust and mill scale, earth, and other materials that reduce or destroy the bond with concrete. When damage to epoxy-coated reinforcing exceeds limits specified in ASTM A 775/A 775M, repair with patching material compatible with coating material and epoxy coat bar ends after cutting.
  2. Accurately position, support, and secure reinforcement against displacement during concrete-placement and consolidation operations. Completely conceal support devices to prevent exposure on finished surfaces.
  3. Place reinforcing steel and prestressing strands to maintain at least 3/4-inch minimum concrete cover. Increase cover requirements for reinforcing steel to 1-1/2 inches when units are exposed to corrosive environment or severe exposure conditions. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position while placing concrete. Direct wire tie ends away from finished, exposed concrete surfaces.
  4. Install welded wire reinforcement in lengths as long as practicable. Lap adjoining pieces at least one full mesh spacing and wire tie laps, where required by design. Offset laps of adjoining widths to prevent continuous laps in either direction.
- H. Reinforce architectural precast concrete units to resist handling, transportation, and erection stresses and specified in-place loads.
- I. Comply with requirements in PCI MNL 117 and requirements in this Section for measuring, mixing, transporting, and placing concrete. After concrete batching, no additional water may be added.
- J. Place face mixture to a minimum thickness after consolidation of the greater of 1 inch or 1.5 times the maximum aggregate size, but not less than the minimum reinforcing cover specified.
- K. Place concrete in a continuous operation to prevent cold joints or planes of weakness from forming in precast concrete units.
1. Place backup concrete mixture to ensure bond with face-mixture concrete.
- L. Thoroughly consolidate placed concrete by internal and external vibration without dislocating or damaging reinforcement and built-in items, and minimize pour lines,

honeycombing, or entrapped air voids on surfaces. Use equipment and procedures complying with PCI MNL 117.

1. Place self-consolidating concrete without vibration according to PCI TR-6, "Interim Guidelines for the Use of Self-Consolidating Concrete in Precast/Prestressed Concrete Institute Member Plants." Ensure adequate bond between face and backup concrete, if used.
- M. Comply with PCI MNL 117 for hot- and cold-weather concrete placement.
- N. Identify pickup points of architectural precast concrete units and orientation in structure with permanent markings, complying with markings indicated on Shop Drawings. Imprint or permanently mark casting date on each architectural precast concrete unit on a surface that does not show in finished structure.
- O. Cure concrete, according to requirements in PCI MNL 117, by moisture retention without heat or by accelerated heat curing using low-pressure live steam or radiant heat and moisture. Cure units until compressive strength is high enough to ensure that stripping does not have an effect on performance or appearance of final product.
- P. Discard and replace architectural precast concrete units that do not comply with requirements, including structural, manufacturing tolerance, and appearance, unless repairs meet requirements in PCI MNL 117 and Architect's approval.

## 2.11 FABRICATION TOLERANCES

- A. Fabricate architectural precast concrete units to shapes, lines, and dimensions indicated so each finished unit complies with PCI MNL 117 product tolerances as well as position tolerances for cast-in items.
- B. Fabricate architectural precast concrete units to shapes, lines, and dimensions indicated so each finished unit complies with the following product tolerances:
1. Overall Height and Width of Units, Measured at the Face Exposed to View: As follows:
    - a. 10 feet or under, plus or minus 1/8 inch.
    - b. 10 to 20 feet, plus 1/8 inch, minus 3/16 inch.
    - c. 20 to 40 feet, plus or minus 1/4 inch.
  2. Overall Height and Width of Units, Measured at the Face Not Exposed to View: As follows:
    - a. 10 feet or under, plus or minus 1/4 inch.
    - b. 10 to 20 feet, plus 1/4 inch, minus 3/8 inch.
    - c. 20 to 40 feet, plus or minus 3/8 inch.
  3. Variation from Square or Designated Skew (Difference in Length of the Two Diagonal Measurements): Plus or minus 1/8 inch/72 inches or 1/2 inch total, whichever is greater.

4. Length and Width of Block-outs and Openings within One Unit: Plus or minus 1/4 inch.
5. Dimensions of Haunches: Plus or minus 1/4 inch.
6. Haunch Bearing Surface Deviation from Specified Plane: Plus or minus 1/8 inch.
7. Difference in Relative Position of Adjacent Haunch Bearing Surfaces from Specified Relative Position: Plus or minus 1/4 inch.
8. Bowing: Plus or minus  $L/360$ , maximum 1 inch.
9. Local Smoothness: 1/4 inch/10 feet.
10. Warping: 1/16 inch/12 inches of distance from nearest adjacent corner.
11. Dimensions of Architectural Features and Rustications: Plus or minus 1/8 inch.

C. Position Tolerances: For cast-in items measured from datum line location, as indicated on Shop Drawings.

1. Reinforcing Steel and Welded Wire Reinforcement: Plus or minus 1/4 inch where position has structural implications or affects concrete cover; otherwise, plus or minus 1/2 inch.
2. Reinforcing Steel Extending out of Member: Plus or minus 1/2 inch of plan dimensions.
3. Location of Rustication Joints: Plus or minus 1/8 inch.
4. Location of Bearing Surface from End of Member: Plus or minus 1/4 inch.

## 2.12 FINISHES

- A. Exposed faces shall be free of joint marks, grain, and other obvious defects. Corners, including false joints shall be uniform, straight, and sharp. Finish exposed-face surfaces of architectural precast concrete units to match approved mockups.
- B. Finish unexposed surfaces of architectural precast concrete units with as cast finish.

## 2.13 SOURCE QUALITY CONTROL

- A. Quality-Control Testing: Test and inspect precast concrete according to PCI MNL 117 requirements. If using self-consolidating concrete, also test and inspect according to PCI TR-6, ASTM C 1610/C 1610M, ASTM C 1611/C 1611M, ASTM C 1621/C 1621M, and ASTM C 1712.
- B. Strength of precast concrete units is considered deficient if units fail to comply with ACI 318 requirements for concrete strength.
- C. Testing: If there is evidence that strength of precast concrete units may be deficient or may not comply with ACI 318 requirements, precaster will employ an independent testing agency to obtain, prepare, and test cores drilled from hardened concrete to determine compressive strength according to ASTM C 42/C 42M and ACI 318.
  1. A minimum of three representative cores shall be taken from units of suspect strength, from locations directed by Architect.
  2. Test cores in an air-dry condition.

3. Strength of concrete for each series of three cores is considered satisfactory if average compressive strength is equal to at least 85 percent of 28-day design compressive strength and no single core is less than 75 percent of 28-day design compressive strength.
  4. Report test results in writing on same day that tests are performed, with copies to Architect, Contractor, and precast concrete fabricator. Test reports include the following:
    - a. Project identification name and number.
    - b. Date when tests were performed.
    - c. Name of precast concrete fabricator.
    - d. Name of concrete testing agency.
    - e. Identification letter, name, and type of precast concrete unit(s) represented by core tests; design compressive strength; type of break; compressive strength at breaks, corrected for length-diameter ratio; and direction of applied load to core in relation to horizontal plane of concrete as placed.
- D. Patching: If core test results are satisfactory and precast concrete units comply with requirements, clean and dampen core holes and solidly fill with precast concrete mixture that has no coarse aggregate, and finish to match adjacent precast concrete surfaces.
- E. Defective Units: Discard and replace recast architectural concrete units that do not comply with acceptability requirements in PCI MNL 117, including concrete strength, manufacturing tolerances, and color and texture range. Chipped, spalled, or cracked units may be repaired, subject to Architect's approval. Architect reserves the right to reject precast units that do not match approved samples, sample panels, and mockups. Replace unacceptable units with precast concrete units that comply with requirements.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine supporting structural frame or foundation and conditions for compliance with requirements for installation tolerances, bearing surface tolerances, and other conditions affecting performance of the Work.
- B. Do not install precast concrete units until supporting cast-in-place concrete has attained minimum allowable design compressive strength and supporting steel or other structure is structurally ready to receive loads from precast concrete units.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### **3.2 INSTALLATION**

- A. Install clips, hangers, bearing pads, and other accessories required for connecting architectural precast concrete units to supporting members and backup materials.

- 
- B. Erect architectural precast concrete level, plumb, and square within specified allowable tolerances. Provide temporary supports and bracing as required to maintain position, stability, and alignment of units until permanent connections are completed.
1. Install temporary steel or plastic spacing shims as precast concrete units are being erected. Tack weld steel shims to each other to prevent shims from separating.
  2. Maintain horizontal and vertical joint alignment and uniform joint width as erection progresses.
  3. Remove projecting lifting devices and grout fill voids within recessed lifting devices flush with surface of adjacent precast surfaces when recess is exposed.
  4. Unless otherwise indicated, maintain uniform joint widths of 3/4 inch.
- C. Connect architectural precast concrete units in position by bolting, welding, grouting, or as otherwise indicated on Shop Drawings. Remove temporary shims, wedges, and spacers as soon as practical after connecting and grouting are completed.
1. Do not permit connections to disrupt continuity of roof flashing.
- D. Welding: Comply with applicable requirements in AWS D1.1/D1.1M and AWS D1.4/D1.4M for welding, welding electrodes, appearance, quality of welds, and methods used in correcting welding work.
1. Protect architectural precast concrete units and bearing pads from damage by field welding or cutting operations, and provide noncombustible shields as required.
  2. Welds not specified shall be continuous fillet welds, using no less than the minimum fillet as specified by AWS.
  3. Clean weld-affected metal surfaces with chipping hammer followed by brushing, and apply a minimum 4.0-mil-thick coat of galvanized repair paint to galvanized surfaces according to ASTM A 780/A 780M.
  4. Visually inspect welds and remove, reweld, or repair incomplete and defective welds.
- E. At bolted connections, use lock washers, tack welding, or other approved means to prevent loosening of nuts after final adjustment.
1. Where slotted connections are used, verify bolt position and tightness. For sliding connections, properly secure bolt but allow bolt to move within connection slot.
  2. For slip-critical connections, use one of the following methods to assure proper bolt pretension:
    - a. Turn-of-Nut: According to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
    - b. Calibrated Wrench: According to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
    - c. Twist-off Tension Control Bolt: ASTM F 1852.
    - d. Direct-Tension Control Bolt: ASTM F 1852.
  3. For slip-critical connections, use method and inspection procedure approved by Architect and coordinated with inspection agency.
- F. Grouting or Dry-Packing Connections and Joints: Grout connections where required or indicated. Retain flowable grout in place until hard enough to support itself. Alternatively,

pack spaces with stiff dry-pack grout material, tamping until voids are completely filled. Place grout and finish smooth, level, and plumb with adjacent concrete surfaces. Promptly remove grout material from exposed surfaces before it affects finishes or hardens. Keep grouted joints damp for not less than 24 hours after initial set.

### 3.3 ERECTION TOLERANCES

- A. Erect architectural precast concrete units level, plumb, square, and in alignment, without exceeding the following noncumulative erection tolerances:
1. Plan Location from Building Grid Datum: Plus or minus 1/8 inch.
  2. Plan Location from Centerline of Steel: Plus or minus 1/8 inch.
  3. Top Elevation from Nominal Top Elevation: Plus or minus 1/8 inch.
  4. Plumb in Any 10 Feet of Element Height: 1/8 inch.
  5. Maximum Jog in Alignment of Matching Edges: 1/8 inch.
  6. Joint Width (Governs over Joint Taper): Plus or minus 1/8 inch.
  7. Maximum Joint Taper: 1/8 inch.
  8. Joint Taper in 10 Feet: 1/8 inch.
  9. Maximum Jog in Alignment of Matching Faces: 1/8 inch.
  10. Differential Bowing or Camber, as Erected, between Adjacent Members of Same Design: 1/8 inch.

### 3.4 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections and prepare test reports.
- B. Visually inspect field welds and test according to ASTM E 165 or to ASTM E 709 and ASTM E 1444. High-strength bolted connections are subject to inspections.
- C. Testing agency will report test results promptly and in writing to Contractor and Architect.
- D. Repair or remove and replace work where tests and inspections indicate that it does not comply with specified requirements.
- E. Additional testing and inspecting, at Contractor's expense, shall be performed to determine compliance of replaced or additional work with specified requirements.

### 3.5 REPAIRS

- A. Repair architectural precast concrete units if permitted by Architect. Architect reserves the right to reject repaired units that do not comply with requirements.
- B. Mix patching materials and repair units so cured patches blend with color, texture, and uniformity of adjacent exposed surfaces and show no apparent line of demarcation between original and repaired work, when viewed in typical daylight illumination from a distance of 5 feet.

- C. Prepare and repair damaged galvanized coatings with galvanizing repair paint according to ASTM A 780/A 780M.
- D. Wire brush, clean, and paint damaged prime-painted components with same type of shop primer.
- E. Remove and replace damaged architectural precast concrete units when repairs do not comply with requirements.

### 3.6 CLEANING

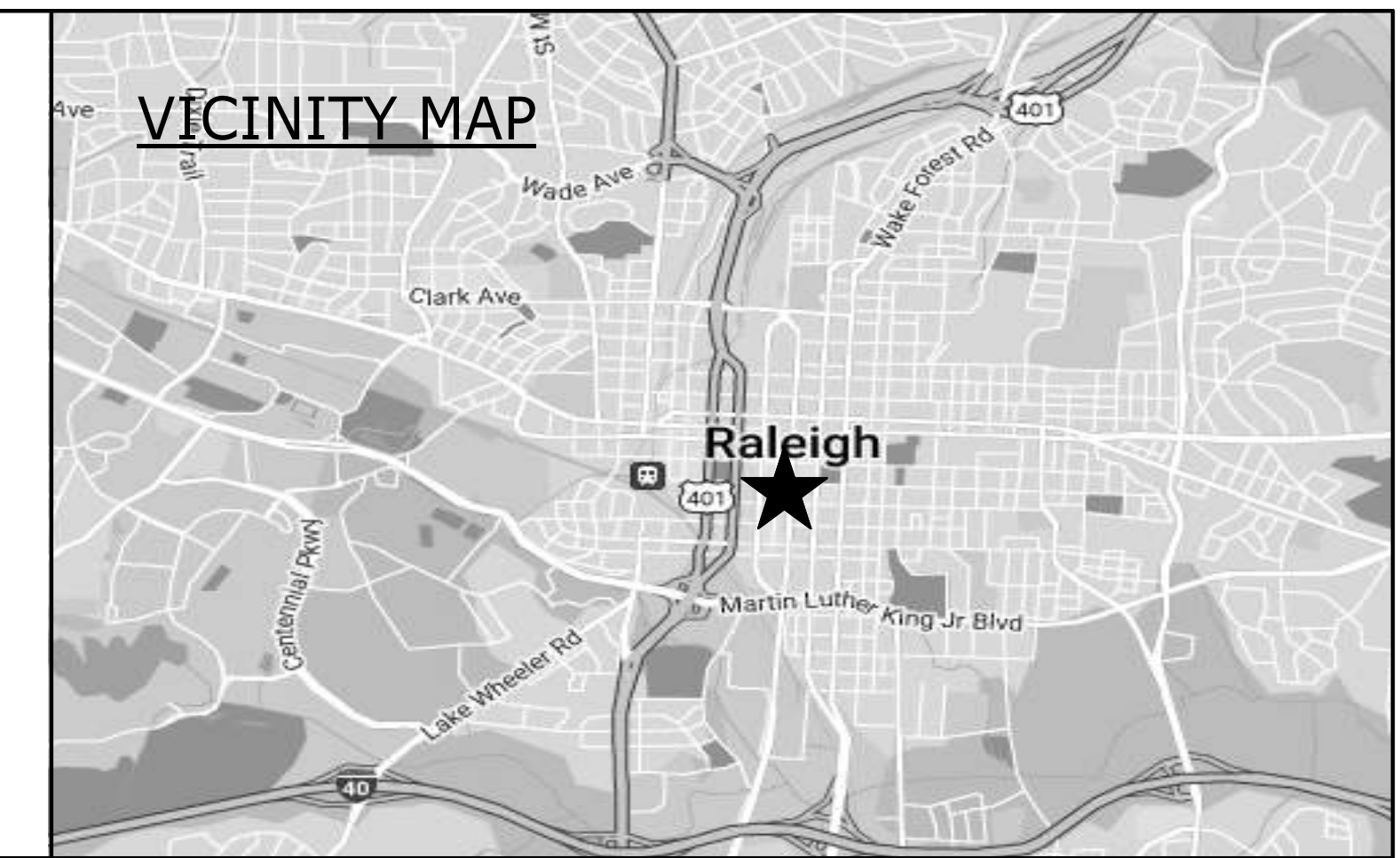
- A. Clean surfaces of precast concrete units exposed to view.
- B. Clean mortar, plaster, weld slag, and other deleterious material from concrete surfaces and adjacent materials immediately.
- C. Clean exposed surfaces of precast concrete units after erection and completion of joint treatment to remove weld marks, other markings, dirt, and stains.
  - 1. Perform cleaning procedures, if necessary, according to precast concrete fabricator's recommendations. Protect other work from staining or damage due to cleaning operations.
  - 2. Do not use cleaning materials or processes that could change the appearance of exposed concrete finishes or damage adjacent materials.

**END OF SECTION 034500**

# PERFORMING ARTS CENTER PLAZA

## CITY OF RALEIGH

2 E SOUTH STREET, RALEIGH, NC 27601



1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com



### DESIGN TEAM

**CLIENT**  
**MARTIN MARIETTA CENTER FOR THE PERFORMING ARTS**  
**CITY OF RALEIGH**  
ADDRESS: 2 E. SOUTH STREET  
RALEIGH, NC 27601  
CONTACT: MICHELLE BRADLEY  
PHONE: 919.830.5373  
EMAIL: michelle.bradley@raleighnc.gov

**ARCHITECT**  
**HH ARCHITECTURE**  
ADDRESS: 1100 DRESSER COURT  
RALEIGH, NC 27609  
CONTACT: KRISTEN M. HESS  
PHONE: 919.828.2301  
EMAIL: khess@hh-arch.com

**LANDSCAPE ARCHITECTURE**  
**SURFACE 678**  
ADDRESS: 215 MORRIS STREET, SUITE 150  
DURHAM, NC 27701  
CONTACT: ERIC DAVIS  
PHONE: 919.282.9122  
EMAIL: edavis@surface678.com

**CIVIL & ELECTRICAL ENGINEERING**  
**DEWBERRY**  
ADDRESS: 2610 WYCLIFF ROAD, SUITE 410  
RALEIGH, NC 27607  
CONTACT: MATTHEW WEST  
PHONE: 919.424.3770  
EMAIL: mwest@dewberry.com

### PROJECT NARRATIVE

REDESIGN OF THE EXISTING "LICHTIN PLAZA" IN FRONT OF THE MARTIN MARIETTA CENTER FOR THE PERFORMING ARTS. PLAZA IMPROVEMENTS INCLUDE A NEW DRIVEWAY AND DROP-OFF CLOSER TO THE BUILDING ENTRANCE, REPLACEMENT OF PLAZA HARDSCAPE, STORMWATER CONVEYANCE IMPROVEMENTS, IRRIGATION IMPROVEMENTS, NEW IRRIGATION SERVICE, AND ELECTRICAL MODIFICATIONS TO SUPPORT NEW ELECTRICAL SERVICE AND IMPROVE SITE LIGHTING.

### SCHEDULE OF ALTERNATES:

- ALT 1.1 -**  
BASE BID: CONCRETE PAVING AS SHOWN ON L131.1.  
ADD ALTERNATE: HEAVY DUTY UNIT PAVERS ON 3" ASPHALT SUB-COURSE, AT CENTRAL ALLEY ONLY AS NOTED ON L131.2.
- ALT 1.2 -**  
BASE BID: CONCRETE PAVING AS SHOWN ON L131.1.  
ADD ALTERNATE: HEAVY DUTY UNIT PAVERS ON 3" ASPHALT SUB-COURSE IN SELECTED AREA INCLUDING CENTRAL ALLEY AND BOTH SIDES IN THE PLAZA. LIGHT DUTY UNIT PAVERS ON 4" CONCRETE BASE ON WEST/ EAST SIDE OF PLAZA AS NOTED ON L131.3.
- ALT 1.3 -**  
BASE BID: CONCRETE PAVING AS SHOWN ON L131.1.  
ADD ALTERNATE: HEAVY DUTY UNIT PAVERS ON 7" CONCRETE SUB-BASE IN SELECTED AREA INCLUDING CENTRAL ALLEY AND BOTH SIDES IN THE PLAZA. LIGHT DUTY UNIT PAVERS ON 4" CONCRETE BASE ON WEST/ EAST SIDE OF PLAZA AS NOTED ON L131.3.
- ALT 2 -**  
BASE BID: SALVAGE, REFINISH, AND REINSTALL EXISTING HANDRAILS AT EXISTING STAIRS NEAR WILMINGTON STREET.  
ADD ALTERNATE: REPLACE HANDRAILS.
- ALT 3 -**  
BASE BID: NEW FIXTURES AS SHOWN ON E100.  
ADD ALTERNATE: INSTALL ADDITIONAL POLE TOP FIXTURES ON ALL EXISTING LIGHT POLES.
- ALT 4 -**  
BASE BID: NEW PAVING EXTENTS AS SHOWN ON L131.1.  
ADD ALTERNATE: INCLUDE ADDITIONAL SIDEWALK AT WEST SIDE OF SITE IN FRONT OF MEYMANDI.
- ALT 5 -**  
BASE BID: NO WORK AT EXISTING SCULPTURE CONCRETE PAD.  
ADD ALTERNATE: INCLUDE SCOPE AT EXISTING SCULPTURE CONCRETE PAD INCLUDING NEW METAL EDGE AND GRAVEL BAND AS WELL AS NEW POWER AND LIGHTING.
- ALT 6 -**  
BASE BID: NO WORK AT EXISTING SCULPTURE CONCRETE PAD.  
ADD ALTERNATE: DEMOLITION OF THE EXISTING SCULPTURE CONCRETE PAD.

### DRAWING LIST

00 - COVER
G000 COVER SHEET
G001 GENERAL ARCHITECTURAL NOTES

01 - CIVIL
G001.A CIVIL COVER
CG100 EXISTING CONDITIONS
C001 STORM UTILITY AND SITE DEMOLITION PLAN
C100 EROSION CONTROL PLAN
C200 STORMWATER UTILITY PLAN
C201 WATER UTILITY PLAN
C500 STORM UTILITY DETAILS
C501 STORM UTILITY DETAILS
C502 WATER UTILITY DETAILS
C503 EROSION AND SEDIMENT CONTROL DETAILS
C504 EROSION AND SEDIMENT CONTROL DETAILS
C505 NCG01 DETAILS 1
C506 NCG01 DETAILS 2

02 - LANDSCAPE
L101 OVERALL PLAN
L131.1 MATERIALS ENLARGEMENT PLAN - BASE BID
L131.2 MATERIALS ENLARGEMENT PLAN - ALT#1.1
L131.3 MATERIALS ENLARGEMENT PLAN - ALT#1.1 & 1.3
L132 MATERIALS/LAYOUT ENLARGEMENT PLAN
L133 MATERIALS/DEMOLITION ENLARGEMENT PLAN - GRANITE CURB AND RAMP
L141 PAVING PATTERN LAYOUT PLAN
L142 GRANITE/PRECAST SEGMENT ENLARGEMENT PLAN
L143 FIRE ACCESS PLAN

L151 GRADING ENLARGEMENT PLAN
L152 GRADING ENLARGEMENT PLAN
L161 SOIL AND IRRIGATION PLAN
L401 ELEVATION/SECTION
L501 DETAILS BASE BID
L502 DETAILS BASE BID
L503 DETAILS BASE BID
L504 DETAILS BASE BID
L505 DETAILS BASE BID
L506 DETAILS
L507 DETAILS
A501 WALL SIGNAGE DETAIL

03 - ELECTRICAL
E001 ELECTRICAL LEGEND, NOTES, AND SCHEDULES
ED100 ELECTRICAL SITE PLAN DEMOLITION
E100 ELECTRICAL SITE PLAN DEMOLITION AND NEW WORK
E101 GROUND FLOOR AND PHOTOMETRICS PLAN
E102 ELECTRICAL DETAILS

**PERFORMING ARTS CENTER PLAZA**  
 CITY OF RALEIGH  
 2 E SOUTH STREET, RALEIGH, NC 27601



NO.	REVISION	DATE
1	ADDENDUM #2	04/15/25

JOB NUMBER  
**23-077**

DATE ISSUED  
**03/13/2025**

PROJECT STATUS  
**BID DOCUMENTS**

SHEET  
**COVER SHEET**

**BID DOCUMENTS**  
**03/13/2025**

**G000**

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**Project Data Sheet**

Planning and Development Customer Service Center • One Exchange Plaza, Suite 400 | Raleigh, NC 27601 | 919-996-2500



This form must be completed and applied to the cover sheet of drawings submitted with a Non-Residential building permit associated with a Site Permit Review, or permits for an apartment, office, and/or commercial uses.

GENERAL INFORMATION			
Development Name: Performing Arts Center Plaza		Proposed Use: Commercial - Indoor & Outdoor Recreation	
Property Address(es): 2 E South St, Raleigh, NC, 27601			
Approved Site Plan or Subdivision case #:			
Wake County Property Identification Number(s) (PIN) for each parcel to which these guidelines will apply:			
PIN #: 1703659814	PIN #: 1703659814	PIN #: 1703659814	PIN #: 1703659814
<input type="checkbox"/> Apartment	<input type="checkbox"/> Frequent Transit Development Option	<input type="checkbox"/> Congregate care	<input type="checkbox"/> Hospital
<input type="checkbox"/> Hotel/Motel	<input type="checkbox"/> Industrial building	<input type="checkbox"/> Mixed residential	<input type="checkbox"/> Non-residential condo
<input type="checkbox"/> Office	<input type="checkbox"/> Religious institution	<input type="checkbox"/> Residential condo	<input type="checkbox"/> Retail
<input type="checkbox"/> School	<input type="checkbox"/> Shopping center	<input type="checkbox"/> Single-family residential	<input type="checkbox"/> Telecommunication tower
<input type="checkbox"/> Townhouse	<input checked="" type="checkbox"/> Civic use: Park, community center, museum or government facility	<input type="checkbox"/> Other	
Scope of work: Redesign of Lichlin Plaza at the Martin Marietta Center for the Performing Arts to provide a driveway loop closer to the entry for an accessible entrance at the front of the site. Scope of work includes site improvements, stormwater conveyance improvements, irrigation improvements, new irrigation service, electrical modifications to support new electrical services and improve site lighting.			

FOR APARTMENTS, CONDOS, AND TOWNHOMES ONLY		
1. Total number of townhouse lots:	Number attached:	Number detached:
2. Total number of apartment or condominium units:		
3. Total number of Congregate Care or Life Care Dwelling units:		
4. Overall total number of dwelling units (from 1-3 above):		
5. Number of bedroom units:	1BR:	2BR: 3BR: 4BR or more:
6. Overall unit(s) per acre densities per zoning district(s):		
DEVELOPMENT TYPE AND SITE DATA TABLE (applicable to all developments)		
Zoning Information	Building Information	
Zoning district(s): DX-5	Proposed use of building(s): N/A	
If more than one district, provide acreage of each: N/A	Proposed sq. ft. of building(s) gross: N/A	
Overlay district(s): N/A	Existing sq. ft. of building(s) gross: N/A	
Total site acreage: 6.27 ac	Total sq. ft. gross (existing and proposed): N/A	
Off street parking: Required: N/A Provided: N/A	Proposed height of building(s): N/A	
COA (Certificate of Appropriateness) case #:	FAR (floor area ratio) %: N/A	
BOA (Board of Adjustment) case # A -	Building lot coverage %: N/A	
CUD (Conditional Use District) case # Z -	Inside City Limits? Yes <input type="checkbox"/> No <input type="checkbox"/>	

PAGE 1 OF 2

REVISION 07.01.24  
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STORMWATER INFORMATION	
Existing impervious surface: 0.98 / 42,650	acres/square feet
Proposed impervious surface: 0.93 / 40,700	acres/square feet
Neuse River buffer: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Wetlands: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Flood Hazard Area: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, Alluvial soils:	
Flood Study: N/A	FEMA Map Panel #: 3720170300K
Total disturbed area: 1.16 / 50,550	acres/square feet

The City of Raleigh consents to the connection and extension of the City's Public Water System as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook. City of Raleigh Public Utilities Department Permit # \_\_\_\_\_

**ATTENTION CONTRACTORS**

The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Infrastructure Inspections Division and schedule a Pre-construction meeting on the Development Portal prior to beginning any construction. Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.

**Public**  
Water Distribution / Extension System

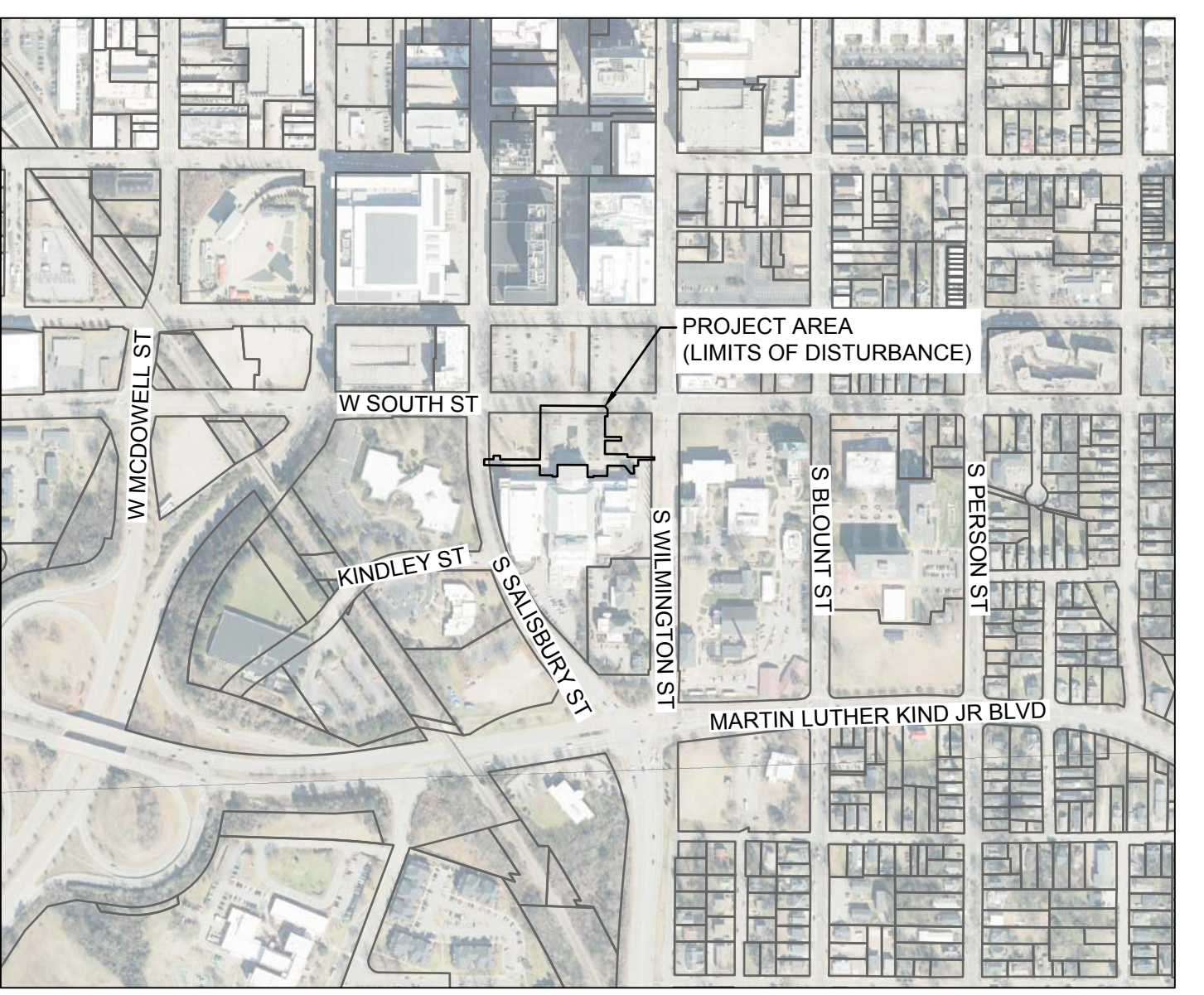
The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.

City of Raleigh  
Public Utilities Department Permit # \_\_\_\_\_  
Authorization to Construct: See digital signature

# PERFORMING ARTS CENTER PLAZA

## RALEIGH, WAKE COUNTY, NC 27601

LATITUDE: 35.772013  
LONGITUDE: -78.639544



VICINITY MAP  
SCALE: 1" = 500'

Sheet List Table	
Sheet Number	Sheet Title
G001	COVER
CG100	EXISTING CONDITIONS
C001	STORM UTILITY AND SITE DEMOLITION PLAN
C100	EROSION CONTROL PLAN
C200	STORMWATER UTILITY PLAN
C201	WATER UTILITY PLAN
C500	STORM UTILITY DETAILS
C501	STORM UTILITY DETAILS
C502	WATER UTILITY DETAILS
C503	EROSION AND SEDIMENT CONTROL DETAILS
C504	NCG01 DETAILS 1
C505	NCG01 DETAILS 2

INFRASTRUCTURE INSPECTIONS QUANTITIES TABLE	
Number of Lot(s)	0
Lot Number(s) by Phase	0
Number of Units	0
Livable Buildings	0
Open Space?	N/A
Number of Open Space Lots	0
Public Water (LF)	5
Private Water* (LF)	0
Public Sewer (LF)	0
Public Force Main (LF)	0
Private Sewer** (LF)	0
Public Street (LF) - FULL	0
Public Street (LF) - PARTIAL	0
Public Sidewalk (LF) - FULL	0
Public Sidewalk (LF) - PARTIAL	0
Multi-Use Path*** (LF)	0
Public Stormdrain (LF)	0
Street Signs (LF)	0
Water Service Stubs	0
Sewer Service Stubs	0
Average Daily Flow (GPD)****	0
* Water mains 4" and larger	
** Sewer mains and manholes as part of a collection system	
*** 10 or 12 ft wide path in lieu of sidewalk or a Multi-Use path as part of a development amenity	
**** Based on 75gpd per bedroom for residential 15A NCAC 02T.0114 Wastewater Design Flow Rates for commercial	

VERSION 12/15/2023

**GENERAL NOTES:**

- EXISTING TOPOGRAPHIC SURVEY AND INFORMATION PROVIDED BY CITY OF RALEIGH.
  - THE UTILITY SURVEY IS BASED ON A SURVEY PERFORMED BY DEWBERRY ENGINEERS INC. ON JULY 31, 2024 & JANUARY 17, 2025.
  - ALL CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL CONFORM TO THE PROJECT DRAWINGS AND SPECIFICATIONS, CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.
  - CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE "MANUAL OF ACCIDENT PREVENTION IN CONSTRUCTION" ISSUED BY AGC OF AMERICA, INC., AND THE SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION ISSUED BY THE U.S. DEPARTMENT OF LABOR.
  - THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND ASSOCIATED COST OF ANY EXISTING PAVEMENT OR EXISTING UTILITIES THAT ARE DAMAGED DUE TO CONSTRUCTION ACTIVITY.
  - DO NOT POUR ANY CONCRETE BEFORE FORMS ARE INSPECTED AND APPROVED BY THE PROJECT ENGINEER. FAILURE TO DO SO MAY CONSTITUTE REMOVAL OF WORK PERFORMED AT CONTRACTOR'S COST UNTIL MADE SATISFACTORY BY THE ENGINEER.
  - CONTRACTOR IS REQUIRED TO REDLINE ANY FIELD CHANGES ON DRAWINGS UPON COMPLETION OF CONSTRUCTION. NOTE ANY DEVIATIONS FROM THE ORIGINAL PLANS. PLANS ARE TO REFLECT THE ACTUAL LOCATION AND MATERIALS.
- EARTHWORK/EROSION:**
- SITE DISTURBANCE IS OVER 1 ACRE. THEREFORE, A NCDEQ EROSION CONTROL PERMIT WILL BE REQUIRED. EROSION CONTROL MEASURES SHALL BE USED AS NEEDED TO REDUCE EROSION. PER NCGS, ARTICLE 4, 113A-56. THE STATE OF NORTH CAROLINA HAS JURISDICTION OVER THE EROSION CONTROL REVIEW.
- ENVIRONMENTAL:**
- THIS PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD ZONE. THE SITE LIES WITHIN AN AREA OF MINIMAL FLOOD HAZARD (ZONE X) AS REFERENCED PER FEMA (PANEL 1703) 3720170300K MAP REVISED DATE: JULY 19, 2022.
- UTILITIES:**
- EXISTING UTILITY LOCATIONS SHOWN, IF ANY, ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING WORK. CONTRACTOR SHALL CONTACT NC ONE CALL CENTER AT 1-800-632-4949 (OR 811) FOR LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING UNDER, AROUND, AND/OR ADJACENT TO EXISTING POWER LINES.

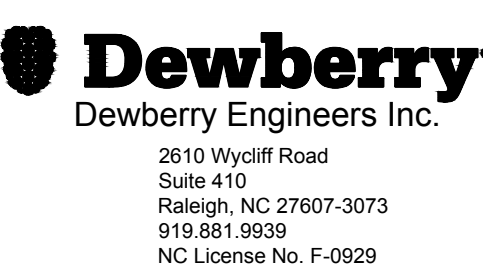
**TRAFFIC CONTROL AND PEDESTRIAN PLAN (TCPED) NOTES:**

- PRIOR TO ANY WORK THAT IMPACTS THE RIGHT-OF-WAY, CLOSING OR DETOURING OF ANY STREET, LANE, OR SIDEWALK, THE CONTRACTOR MUST APPLY FOR A PERMIT WITH RIGHT-OF-WAY SERVICES. PLEASE DIRECT ANY QUESTIONS TO RIGHTOFWAYSERVICES@RALEIGHNC.GOV
- THE STREET, LANE, SIDEWALK, CLOSURE PERMIT IS REQUIRED FOR ANY CLOSURE ON CITY STREETS AND ALL NCDOT STREETS WITHIN RALEIGH'S JURISDICTION
- A PERMIT REQUEST WITH A TCPED PLAN SHALL BE SUBMITTED TO RIGHT-OF-WAY SERVICES THROUGH THE CITY OF RALEIGH PERMIT AND DEVELOPMENT PORTAL
- PRIOR TO THE START OF WORK, THE CLIENT SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH THE ENGINEERING INSPECTIONS COORDINATOR TO REVIEW THE SPECIFIC COMPONENTS OF THE APPROVED PLAN, AND ENSURE ALL PERMITS ARE ISSUED.
- ALL TCPED PLANS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REQUIREMENTS AND STANDARDS, INCLUDING BUT NOT LIMITED TO:
  - MANUAL ON UNIFORM TRAFFIC CONTROL (MUTCD);
  - PUBLIC RIGHTS-OF-WAY ACCESSIBILITY GUIDELINES (PROWAG);
  - AMERICAN DISABILITY ACT (ADA) REQUIREMENTS;
  - RALEIGH STREET DESIGN MANUAL (RSDM)
- ALL PUBLIC SIDEWALKS MUST BE ACCESSIBLE TO PEDESTRIANS WHO ARE VISUALLY IMPAIRED AND/OR PEOPLE WITH MOBILITY CONCERNS. EXISTING AND ALTERNATIVE PEDESTRIAN ROUTES DURING CONSTRUCTION SHALL BE REQUIRED TO BE COMPLIANT WITH THE PUBLIC RIGHTS OF WAY ACCESSIBILITY GUIDELINE (PROWAG), THE ADA STANDARDS FOR ACCESSIBLE DESIGN, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)
- ALL PERMITS MUST BE AVAILABLE AND VISIBLE ON SITE DURING THE OPERATION

PROJECT INFORMATION	
LANDOWNER	CITY OF RALEIGH 2 E SOUTH ST RALEIGH, NC 27601
ENGINEER	DEWBERRY ENGINEERS INC. 2610 WYCLIFF ROAD, SUITE 410 RALEIGH, NC 27607 PH: 919.881.9939
SURVEYOR	THE CITY OF RALEIGH 400 WEST PEACE STREET RALEIGH, NC 27603 PH: 919.996.4119
PARCEL ID	1703659814
PROPERTY ADDRESS(ES)	2 E SOUTH ST, RALEIGH, NC, 27601
DEED BOOK AND PAGE NUMBER	D.B. 002367, PG. 00158
SITE ZONING	DOWNTOWN MIXED USE - DX-5
TOTAL ACREAGE OF PARCEL AREA	6.27 AC
ACREAGE OF LAND TO BE DISTURBED	1.16 AC
RIVER BASIN	NEUSE
SUBWATERSHED	WALNUT CREEK



1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com



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Suite 410  
Raleigh, NC 27607-3073  
919.881.9939  
NC License No. F-0929

**PERFORMING ARTS CENTER PLAZA**  
 CITY OF RALEIGH  
 2 E SOUTH STREET, RALEIGH, NC 27601



NO.	REVISION	DATE
1	ADDENDUM #2	4/15/25

JOB NUMBER  
**23-077**

DATE ISSUED  
**03/13/2025**

PROJECT STATUS  
**BID DOCUMENTS**

SHEET  
**COVER**

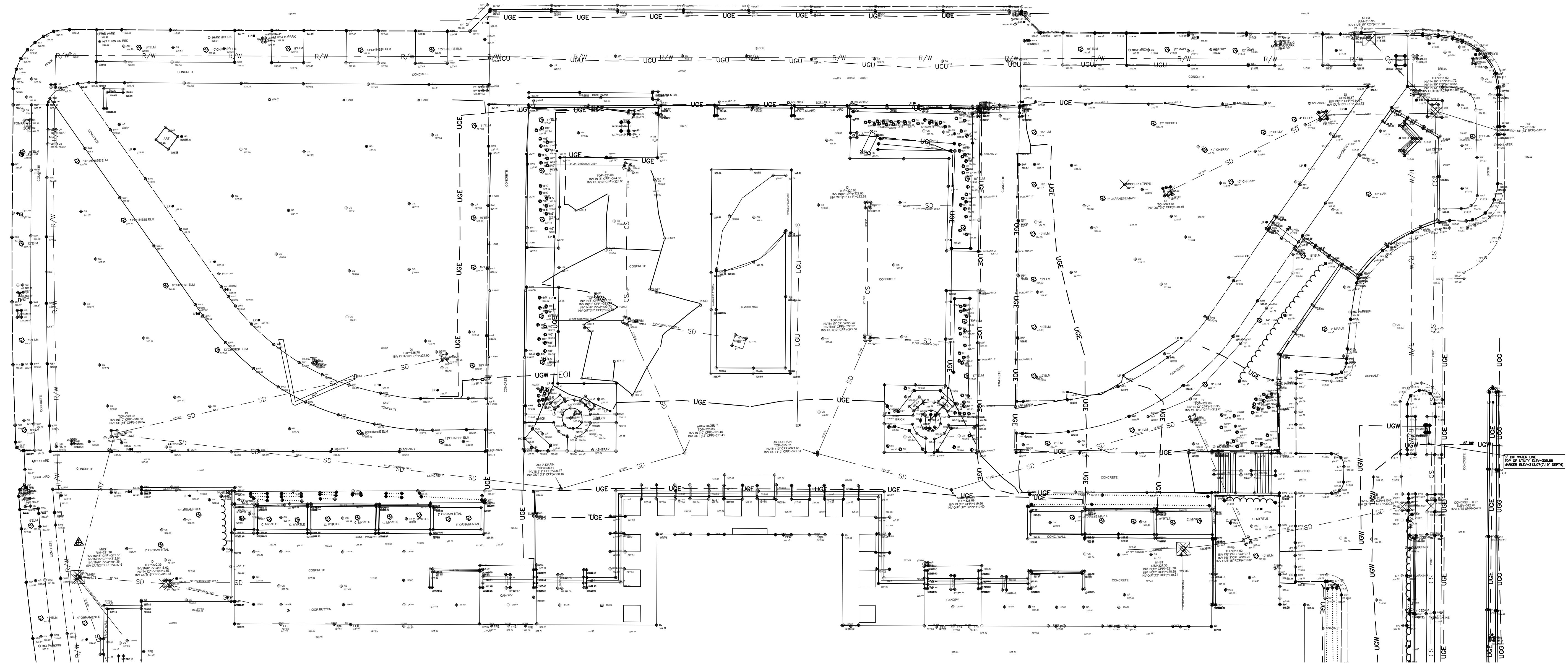
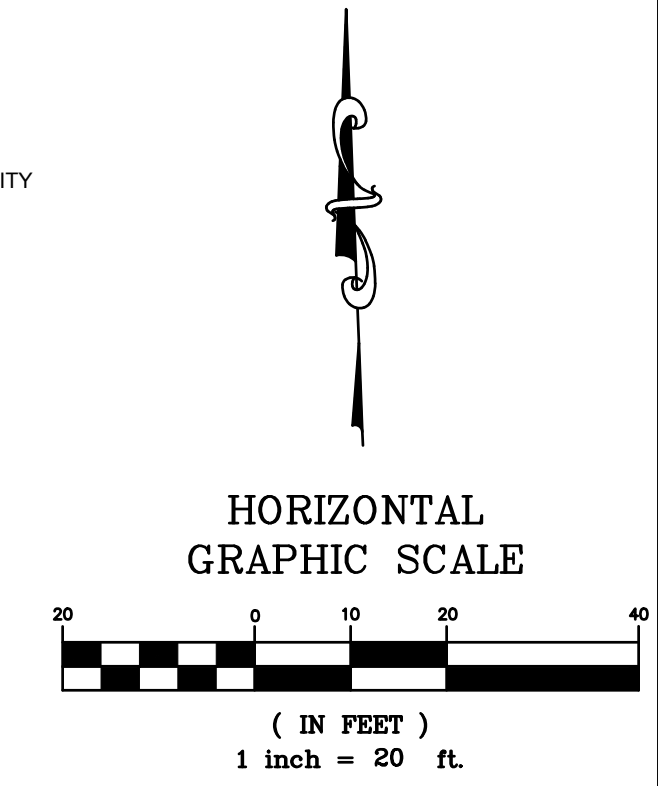
**G001**

**TOPOGRAPHIC SURVEY NOTES:**

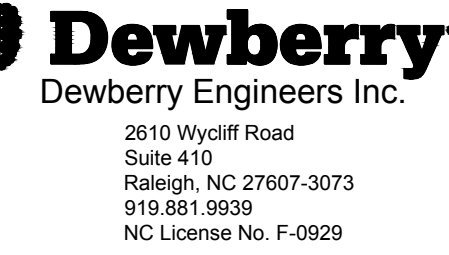
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- THE UTILITY SURVEY IS BASED ON A SURVEY PERFORMED BY DEWBERRY ENGINEERS INC. ON JULY 31, 2024 & JANUARY 17, 2025.
- HORIZONTAL CONTROL AND VERTICAL CONTROL PROVIDED BY THE CITY OF RALEIGH
- LOCATIONS OF UTILITIES SHOWN ON THIS SURVEY WERE DETERMINED BY OBSERVED EVIDENCE, LOCATION OF ABOVE GROUND UTILITY APPURTENANCES, AND UTILITY MARKINGS (PAINT, ETC.) PROVIDED BY DEWBERRY. THESE MARKINGS WERE OBSERVED DURING THE COURSE OF THIS SURVEY, WERE FIELD LOCATED, ARE SHOWN FOR INFORMATIONAL PURPOSES, AND SHOULD BE FIELD VERIFIED IF CRITICAL. UNDERGROUND UTILITIES NOT SHOWN, MAY EXIST. STORM SEWER AND SANITARY SEWER DATA HAS BEEN COLLECTED FROM THE RIM OF THE MANHOLE WITHOUT ENTERING THE STRUCTURE. PIPE SIZES AND TYPES SHOULD BE CONSIDERED APPROXIMATE AND BE FIELD VERIFIED IF CRITICAL. STRUCTURES LABELED "VAULT", IF ANY, INDICATE A SUBSTRUCTURE WITH LIMITED VISUAL ACCESS AND INVERT INFORMATION.

**EXISTING UTILITIES LEGEND**

- UGE — UNDERGROUND ELECTRIC
- SD — STORM DRAIN PIPE
- UGU — UNDERGROUND UNKNOWN UTILITY
- UGW — UNDERGROUND WATER
- UGG — UNDERGROUND GAS
- EOI END OF INFORMATION / SIGNAL



**ARCHITECTURE**  
 1100 Dresser Court  
 Raleigh, NC 27609  
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**23-077**  
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**03/13/2025**  
 PROJECT STATUS  
**BID DOCUMENTS**

SHEET  
**EXISTING CONDITIONS**

**CG100**

**GENERAL NOTES:**

1. ALL UNDERGROUND UTILITIES LOCATED AS APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES TO BE LEFT UNDISTURBED SHALL BE PROTECTED AND REMAIN ACTIVE.
2. ALL CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL CONFORM TO THE PROJECT DRAWINGS AND SPECIFICATIONS, CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT WORK REQUIRED TO PROPERLY CONSTRUCT THE WORK. THIS INCLUDES CONSTRUCTION STAKING.

**DEMOLITION NOTES: (FOR SITE DEMOLITION ONLY)**

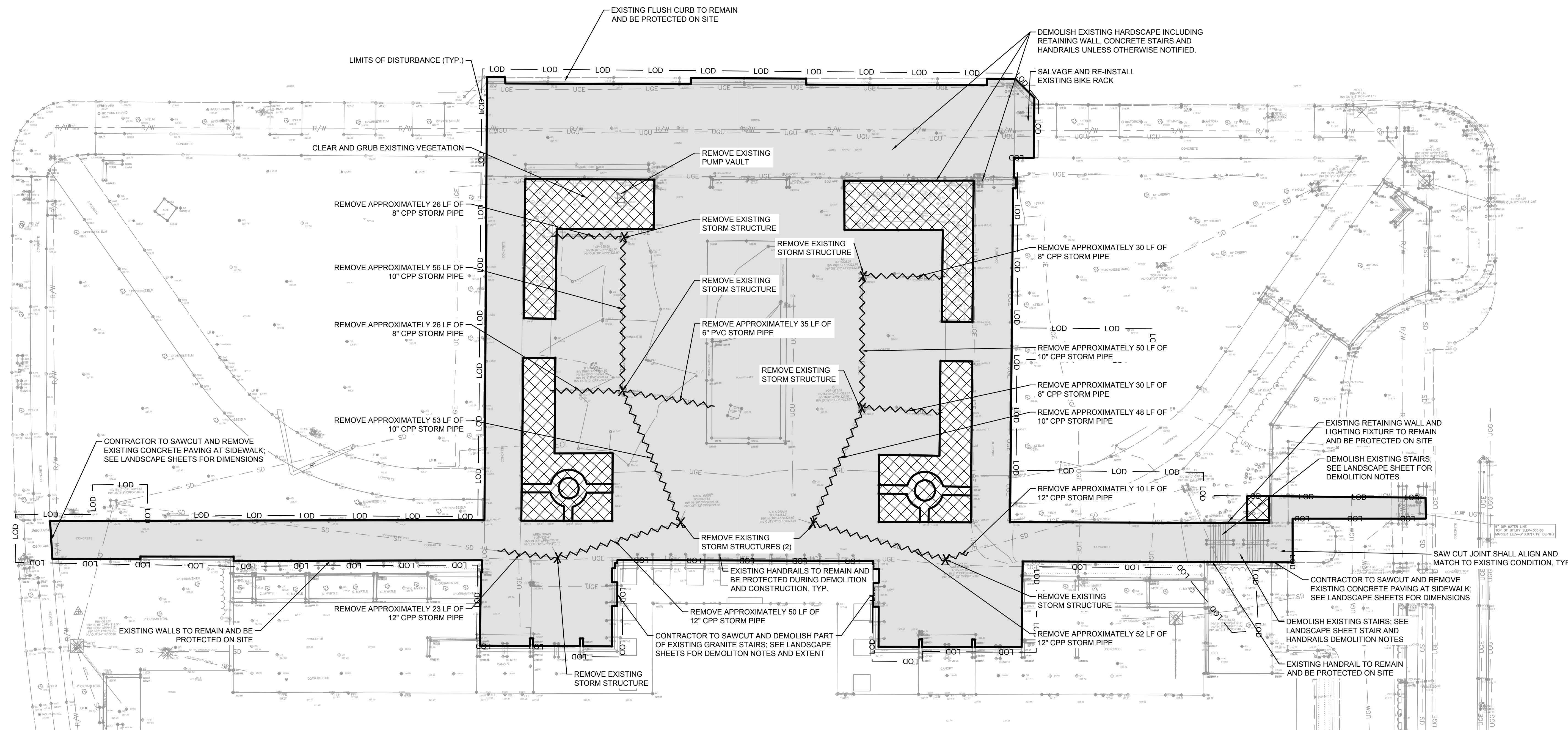
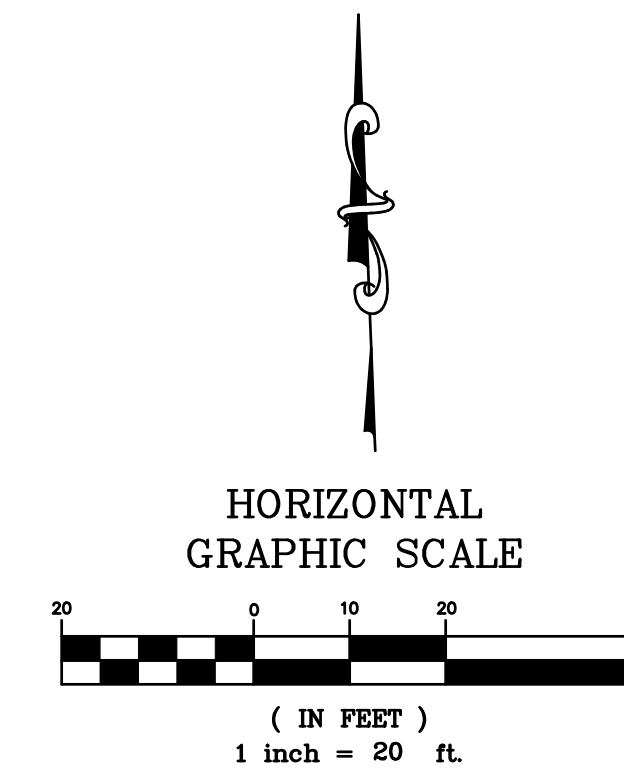
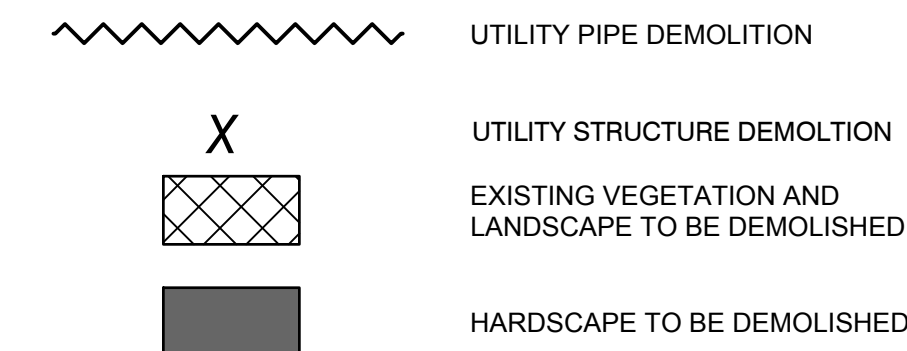
THIS DEMOLITION SHEET COVERS DEMOLITION FOR EXISTING PAVING AND SPECIFIC SURFACE SITE FEATURES AS NOTED

1. **SIGNAGE:** ALL EXISTING SHEET METAL TRAFFIC, DIRECTIONAL, ADA, AND INFORMATIONAL SIGNAGE IN THE NEW CONSTRUCTION AFFECTED AREA SHALL BE REMOVED, PROTECTED, AND STORED FOR FUTURE RE-INSTALLATION BY CONTRACTOR, OR REPLACED BY CONTRACTOR AT THEIR EXPENSE.
2. **EXISTING PAVEMENT:** ASPHALT PAVING AND STONE BASE, CONCRETE CURB & GUTTER, AND CONCRETE WALKS INDICATED FOR DEMOLITION SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE AT AN APPROVED LANDFILL AREA PROPERLY PERMITTED FOR SUCH DISPOSAL. ASPHALT SHOULD BE RECYCLED FOR FUTURE USE IF POSSIBLE. ALL DISTURBED PAVEMENT MARKINGS MUST BE RESTORED TO THEIR ORIGINAL STATE. DURING SAW-CUT AND SURFACE WATER BLASTING, SLURRY SHALL NOT ENTER INTO THE EXISTING DRAINAGE SYSTEM.
3. **GENERAL:** CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. IF AN ITEM IN QUESTION IS BELIEVED TO HAVE BEEN DAMAGED DURING CONSTRUCTION AND THERE IS NO PHOTOGRAPHIC PROOF OF ITS STATE PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING OR REPLACING TO THE SATISFACTION OF THE OWNER AT THE SOLE EXPENSE OF THE CONTRACTOR AND/OR HIS SUB-CONTRACTORS.
4. **811 NOTE:** ALL CONSTRUCTION MUST CONFORM WITH THE UNDERGROUND UTILITY PROTECTION ACT. CONTRACTOR TO COORDINATE WITH NC ONE-CALL CENTER PRIOR TO EXCAVATION.

**LANDSCAPE DEMOLITION NOTES:**

1. INSTALL TEMPORARY TREE PROTECTION FENCING AND INSTALL TEMPORARY EROSION CONTROL PROTECTION PRIOR TO CONSTRUCTION.
2. TREE PROTECTION FENCING TO BE LOCATED PER PLANS.
3. NO GRADING, STAGING, PARKING, STORAGE OR OTHER CONTRACTOR USAGE WITHIN THE TREE PROTECTION FENCE. BARRIERS SHALL BE MAINTAINED THROUGHOUT THE PROJECT AND REMOVED AFTER SUBSTANTIAL COMPLETION.
4. CLEAR AND GRUB ALL SHRUBS AND VEGETATION AS INDICATED IN PLANS. REMOVE ALL DEBRIS FROM SITE.
5. HAND TOOL ONLY WITHIN LIMITS OF TREE PROTECTION FENCING; NO HEAVY EQUIPMENT TO BE USED WITHIN LIMITS OF TREE PROTECTION FENCE.
6. ALL EXISTING SITE FURNISHINGS TO BE SALVAGED AND STORED OFF-SITE PER THE OWNER'S DIRECTION.
7. SEE SPEC 311000 AND 015639 FOR SITE CLEARING AND TEMPORARY TREE AND PLANT PROTECTION.

**DEMOLITION LEGEND**



**HH ARCHITECTURE**  
 1100 Dresser Court  
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 Email office@hh-arch.com

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**SITE DEMO**

**UTILITY DEMO**

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DATE ISSUED  
**03/13/2025**

PROJECT STATUS  
**BID DOCUMENTS**

SHEET  
**SITE UTILITY AND  
 SITE DEMOLITION  
 PLAN**



**C001**

**GENERAL NOTES:**

1. ALL UNDERGROUND UTILITIES LOCATED AS APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES TO BE LEFT UNDISTURBED SHALL BE PROTECTED AND REMAIN ACTIVE.
2. ALL CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL CONFORM TO THE PROJECT DRAWINGS AND SPECIFICATIONS, CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT WORK REQUIRED TO PROPERLY CONSTRUCT THE WORK. THIS INCLUDES CONSTRUCTION STAKING.

**EROSION & SEDIMENT CONTROL NOTES:**

1. CONTRACTOR SHALL INSTALL ALL MEASURES NECESSARY FOR EROSION AND SEDIMENT CONTROL PRIOR TO ANY LAND DISTURBANCE.
2. CONTRACTOR SHALL MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH NCDENR EROSION AND SEDIMENT CONTROL STANDARDS AND SPECIFICATIONS.
3. CONTRACTOR SHALL RESTORE THE DISTURBED AREA TO EXISTING GRADE UNLESS OTHERWISE NOTED ON DRAWINGS. CONTRACTOR SHALL SEED AND MULCH ALL AREAS NOT RECEIVING A HARD SURFACE.
4. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AREAS UNTIL GRASS/SOD IS FULLY ESTABLISHED AND ACCEPTED BY OWNER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR FOR RE-SEEDING/RE-SODDING AND WATERING AS REQUIRED.
5. SEE SHEET C503 FOR EROSION AND SEDIMENT CONTROL SEQUENCE, SEEDING SCHEDULE AND DETAILS.
6. CONTRACTOR TO INSTALL EROSION CONTROL MEASURES AROUND EQUIPMENT STAGING AND MATERIALS LAYDOWN AREAS AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING AREA.


**URBAN FORESTRY NOTES:**

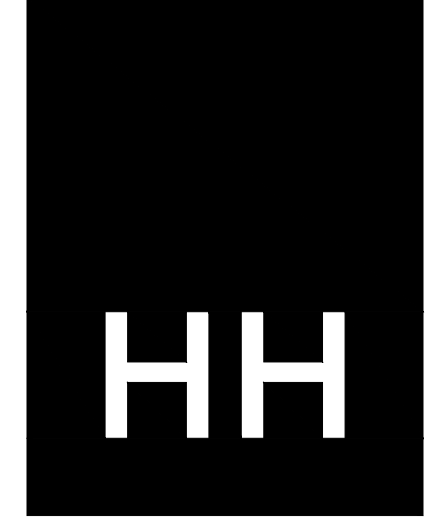
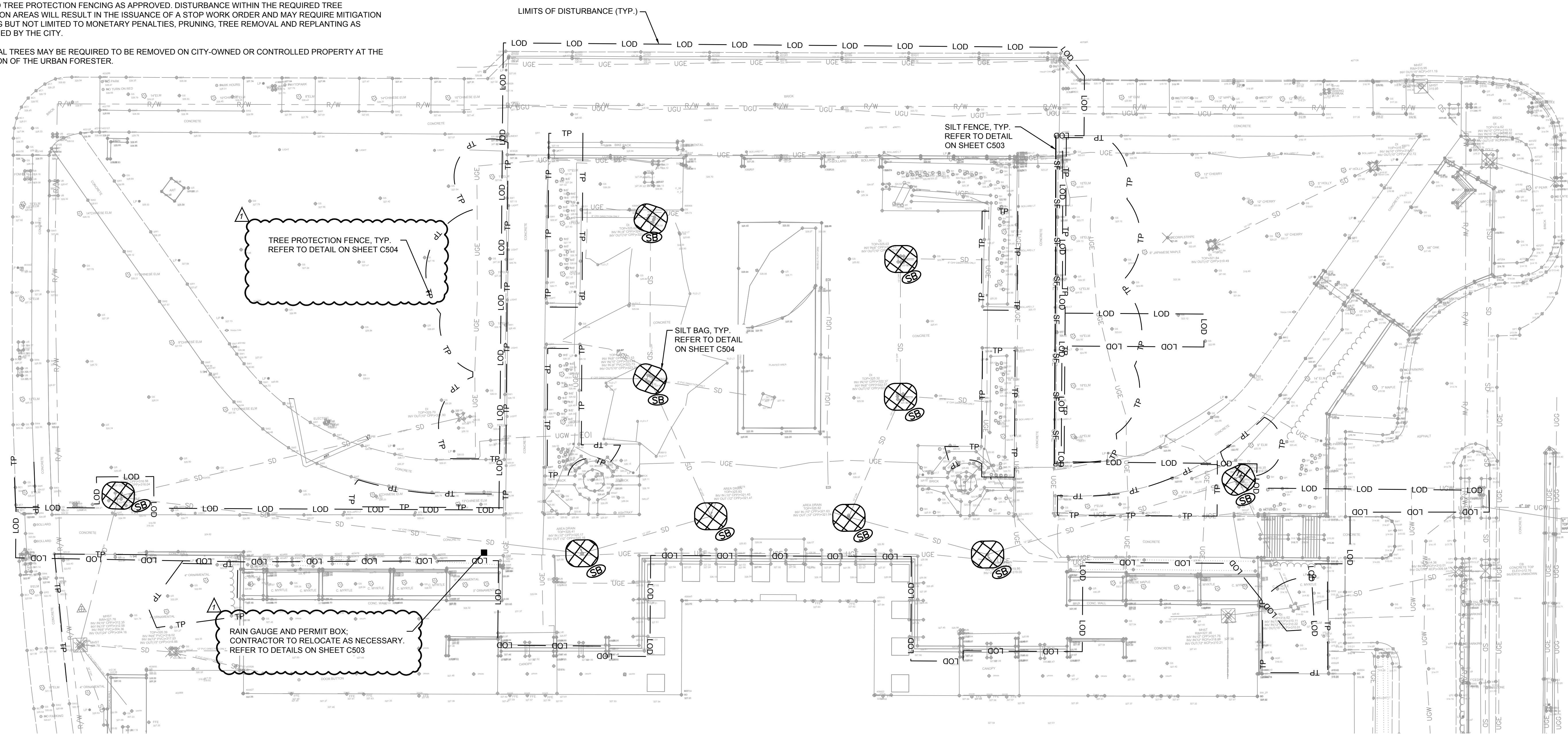
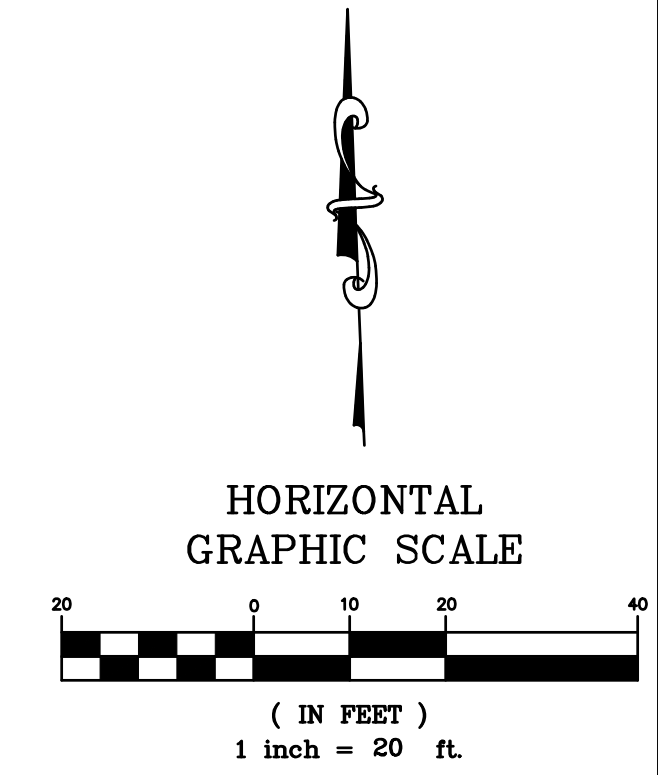
1. CONTRACTOR SHALL INSTALL REQUIRED TREE PROTECTION FENCE AS SHOWN ON THE APPROVED PLAN AND HAVE IT INSPECTED BY CITY STAFF BEFORE PROCEEDING WITH ADDITIONAL WORK.
2. THE CONTRACTOR SHALL REFRAIN FROM ADDITIONAL CONSTRUCTION ACTIVITIES ON CITY-OWNED OR CONTROLLED PROPERTY UNTIL A SATISFACTORY INSPECTION HAS BEEN COMPLETED BY THE CITY OF THE REQUIRED TREE PROTECTION FENCING AS APPROVED. DISTURBANCE WITHIN THE REQUIRED TREE PROTECTION AREAS WILL RESULT IN THE ISSUANCE OF A STOP WORK ORDER AND MAY REQUIRE MITIGATION INCLUDING BUT NOT LIMITED TO MONETARY PENALTIES, PRUNING, TREE REMOVAL AND REPLANTING AS DETERMINED BY THE CITY.
3. ADDITIONAL TREES MAY BE REQUIRED TO BE REMOVED ON CITY-OWNED OR CONTROLLED PROPERTY AT THE DISCRETION OF THE URBAN FORESTER.

**EROSION & SEDIMENT CONTROL NOTES (CONTINUED):**

7. EQUIPMENT STAGING AND MATERIALS LAYDOWN AREAS ARE TO BE LOCATED AT LEAST 50 FEET FROM ANY DRAINAGE STRUCTURE OR WATERCOURSE.
8. ALL CONSTRUCTION VEHICLES LEAVING THE CONSTRUCTION SITE SHALL BE WASHED DOWN AND FREE OF CONSTRUCTION DEBRIS AND SEDIMENT PRIOR TO EXITING THE CONSTRUCTION SITE. WASHOUT AREA STATION SHALL BE LOCATED AT LEAST 50 FEET FROM ANY DRAINAGE STRUCTURE OR WATERCOURSE. CONTRACTOR SHALL COORDINATE LOCATION OF WASH DOWN STATION WITH OWNER.
9. CONTRACTOR SHALL PROVIDE TREE PROTECTION AS NECESSARY TO PROTECT EXISTING TREES AND OTHER VEGETATION WHICH IS TO REMAIN WITHIN WORKING AREA(S). SEE DETAIL ON SHEET C504.
10. CONTRACTOR SHALL PROVIDE CONCRETE WASHOUT AREA. CONCRETE WASHOUT AREA SHALL BE LOCATED AT LEAST 50 FEET FROM ANY DRAINAGE STRUCTURE OR WATERCOURSE. SEE DETAIL ON SHEET C504.
11. SEDIMENT FENCE AND/OR OTHER MEASURES TO BE ADDED BY THE CONTRACTOR FOR ALL NEW WORK IF EVIDENCE OF CONSTRUCTION DEBRIS AND/OR SEDIMENT IS DETECTED ADJACENT TO THE WORK AREA. ALL MEASURES SHALL BE PER NCDENR STANDARDS AND REQUIREMENTS. SEE DETAIL ON SHEET C503 FOR SEDIMENT/SILT FENCE DETAIL.
12. CONTRACTOR TO PROVIDE PIPE INLET PROTECTION AS NECESSARY WHILE INSTALLATION OF NEW PIPES AND/OR STORM STRUCTURES IN ORDER TO PREVENT SEDIMENT FROM ENTERING THE STORM DRAIN SYSTEM. SEE DETAILS ON SHEETS C503 AND C504.
13. REFER TO SHEETS C505 & C506 FOR ADDITIONAL NCG01 NOTES.

**SHEET LEGEND**

- LOD — LIMITS OF DISTURBANCE
- SF — SF — SILT FENCE
- TP — TP — TREE PROTECTION FENCE
-  SILT BAG INLET PROTECTION



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SHEET  
**EROSION CONTROL PLAN**



**C100**

STRUCTURE TABLE		
ID NO.	DETAILS	NORTHING/EASTING
CB - 101	RIM = 325.10' P9 INV IN = 323.00' E P8 INV IN = 321.90' NE P10 INV OUT = 321.80' S	NORTHING:736031.6417 EASTING:2106948.5965'
CB - 102	RIM = 325.37' P10 INV IN = 321.40' N P11 INV OUT = 321.30' SE	NORTHING:736001.6776' EASTING:2106947.4098'
CB - 103	RIM = 325.59' P14 INV IN = 320.60' NW P12 INV IN = 323.30' S P15 INV IN = 323.30' W EX-2 INV OUT = 318.77' E	NORTHING:735967.3984' EASTING:2107004.1054'
CB - 104	RIM = 325.72' P13 INV IN = 323.60' W P14 INV OUT = 323.50' N	NORTHING:735945.9544' EASTING:2107003.2701'
CB - 201	RIM = 325.40' P1 INV IN = 323.10' NW P2 INV OUT = 323.00' S	NORTHING:736033.8046' EASTING:2106894.6476'
CB - 202	RIM = 325.53' P2 INV IN = 322.65' N P3 INV OUT = 322.55' W	NORTHING:735998.8131' EASTING:2106893.2526'
CB - 203	RIM = 325.53' P3 INV IN = 321.80' E P4 INV IN = 323.25' NE P6 INV IN = 323.35' S P7 INV IN = 323.60' E EX-1 INV OUT = 319.73' W	NORTHING:735974.4461' EASTING:2106829.8788'
CB - 204	RIM = 325.54' P5 INV IN = 323.60' E P6 INV OUT = 323.50' N	NORTHING:735958.0044' EASTING:2106829.0118'

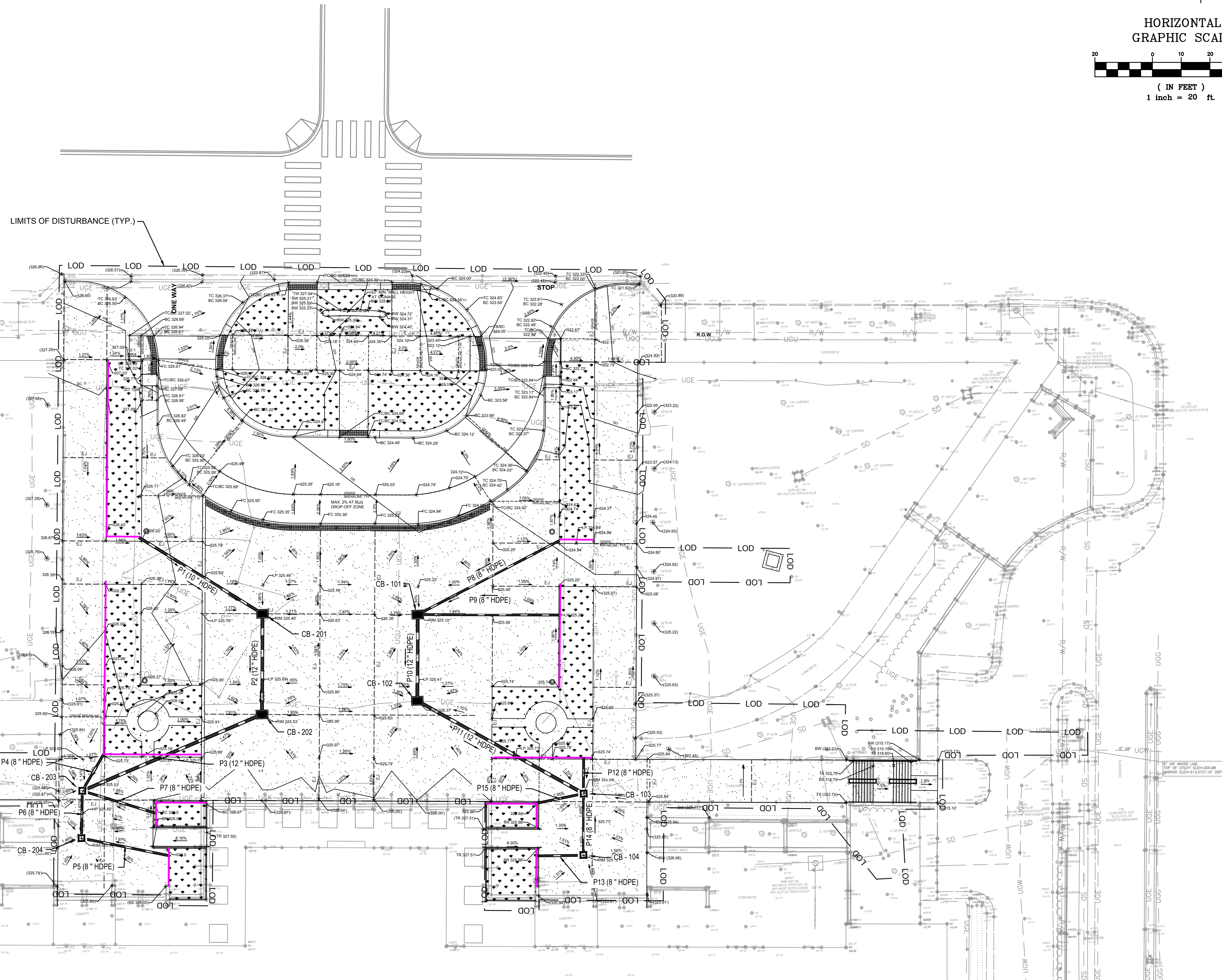
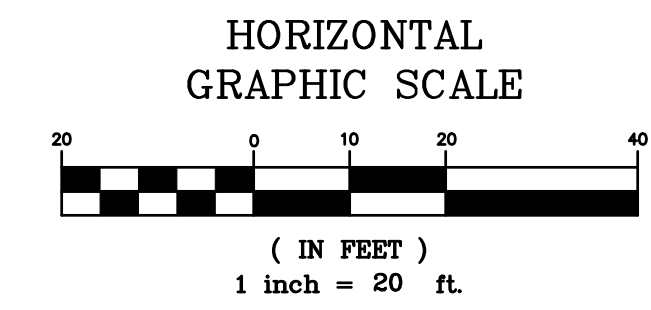
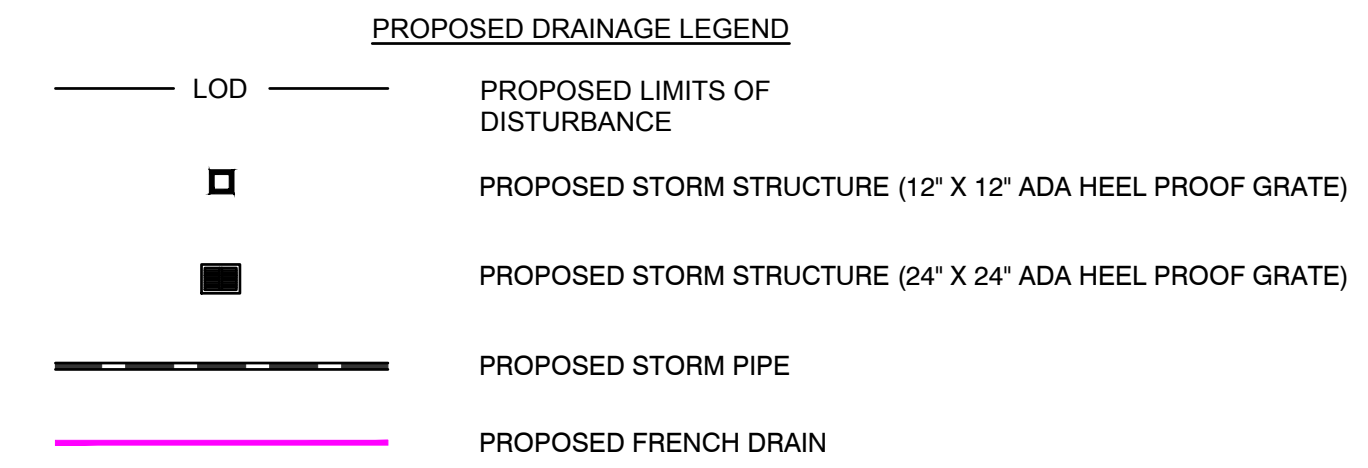
PIPE TABLE				
PIPE NAME	SIZE	MATERIAL	LENGTH	SLOPE
EX-1	12"	CPP	146.16'	2.16%
EX-2	12"	CPP	85.52'	2.83%
P1	10"	DUAL WALL HDPE	50.40'	1.19%
P2	12"	DUAL WALL HDPE	35.02'	1.00%
P3	12"	DUAL WALL HDPE	67.90'	1.10%
P4	8"	DUAL WALL HDPE	14.75'	1.02%
P5	8"	DUAL WALL HDPE	30.87'	0.50%
P6	8"	DUAL WALL HDPE	16.46'	0.91%
P7	8"	DUAL WALL HDPE	26.62'	0.75%
P8	8"	DUAL WALL HDPE	55.60'	1.17%
P9	8"	DUAL WALL HDPE	49.50'	1.11%
P10	12"	DUAL WALL HDPE	29.99'	1.33%
P11	12"	DUAL WALL HDPE	66.25'	1.06%
P12	8"	DUAL WALL HDPE	10.47'	0.95%
P13	8"	DUAL WALL HDPE	16.39'	0.61%
P14	8"	DUAL WALL HDPE	21.46'	0.51%
P15	8"	DUAL WALL HDPE	16.45'	0.61%

**GENERAL NOTES:**

1. ALL UNDERGROUND UTILITIES LOCATED AS APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES TO BE LEFT UNDISTURBED SHALL BE PROTECTED AND REMAIN ACTIVE.
2. ALL CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL CONFORM TO THE PROJECT DRAWINGS AND SPECIFICATIONS, CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT WORK REQUIRED TO PROPERLY CONSTRUCT THE WORK. THIS INCLUDES CONSTRUCTION STAKING.

**GRADING & DRAINAGE NOTES:**

1. REFER TO LANDSCAPE DRAWINGS FOR PROPOSED SITE FEATURES AND GRADING.



**HH ARCHITECTURE**  
1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com

**Dewberry**  
Dewberry Engineers Inc.  
2610 Wycliff Road  
Suite 410  
Raleigh, NC 27607-3073  
919.881.9939  
NC License No. F-0929

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**PERFORMING ARTS CENTER PLAZA**  
CITY OF RALEIGH  
2 E SOUTH STREET, RALEIGH, NC 27601



NO.	REVISION	DATE
1	ADDENDUM #2	4/15/25

JOB NUMBER  
**23-077**

DATE ISSUED  
**03/13/2025**

PROJECT STATUS  
**BID DOCUMENTS**

SHEET  
**STORMWATER UTILITY PLAN**



**C200**

**GENERAL NOTES:**

1. ALL UNDERGROUND UTILITIES LOCATED AS APPROXIMATE. CONTRACTOR TO FIELD VERIFY PRIOR TO CONSTRUCTION. ALL EXISTING UTILITIES TO BE LEFT UNDISTURBED SHALL BE PROTECTED AND REMAIN ACTIVE.
2. ALL CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL CONFORM TO THE PROJECT DRAWINGS AND SPECIFICATIONS, CITY OF RALEIGH STANDARDS AND SPECIFICATIONS.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT WORK REQUIRED TO PROPERLY CONSTRUCT THE WORK. THIS INCLUDES CONSTRUCTION STAKING.

**IRRIGATION NOTES:**

1. REFER TO LANDSCAPE DRAWINGS FOR PROPOSED IRRIGATION DESIGN SUBSEQUENT TO THE PROPOSED RP IRRIGATION BACKFLOW PREVENTER.

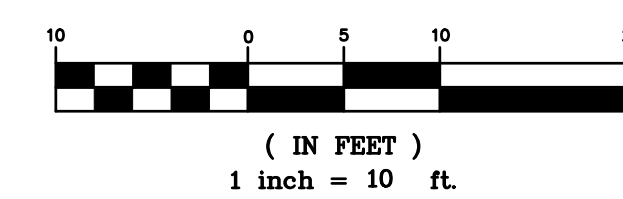
**STANDARD COR UTILITY NOTES:**

1. ALL MATERIALS & CONSTRUCTION METHODS SHALL BE IN ACCORDANCE WITH CITY OF RALEIGH DESIGN STANDARDS, DETAILS & SPECIFICATIONS (REFERENCE: CORPUD HANDBOOK, CURRENT EDITION)
2. UTILITY SEPARATION REQUIREMENTS:
  - A. A DISTANCE OF 100' SHALL BE MAINTAINED BETWEEN SANITARY SEWER & ANY PRIVATE OR PUBLIC WATER SUPPLY SOURCE SUCH AS AN IMPOUNDED RESERVOIR USED AS A SOURCE OF DRINKING WATER. IF ADEQUATE LATERAL SEPARATION CANNOT BE ACHIEVED, FERROUS SANITARY SEWER PIPE SHALL BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS. HOWEVER, THE MINIMUM SEPARATION SHALL NOT BE LESS THAN 25' FROM A PRIVATE WELL OR 50' FROM A PUBLIC WELL.
  - B. WHEN INSTALLING WATER &/OR SEWER MAINS, THE HORIZONTAL SEPARATION BETWEEN UTILITIES SHALL BE 10'. IF THIS SEPARATION CANNOT BE MAINTAINED DUE TO EXISTING CONDITIONS, THE VARIATION ALLOWED IS THE WATER MAIN IN A SEPARATE TRENCH WITH THE ELEVATION OF THE WATER MAIN AT LEAST 18" ABOVE THE TOP OF THE SEWER & MUST BE APPROVED BY THE PUBLIC UTILITIES DIRECTOR. ALL DISTANCES ARE MEASURED FROM OUTSIDE DIAMETER TO OUTSIDE DIAMETER.
  - C. WHERE IT IS IMPOSSIBLE TO OBTAIN PROPER SEPARATION, OR ANYTIME A SANITARY SEWER PASSES OVER A WATERMAIN, DIP MATERIALS OR STEEL ENCASMENT EXTENDED 10" ON EACH SIDE OF CROSSING MUST BE SPECIFIED & INSTALLED TO WATERLINE SPECIFICATIONS.
  - D. 5.0' MINIMUM HORIZONTAL SEPARATION IS REQUIRED BETWEEN ALL SANITARY SEWER & STORM SEWER FACILITIES, UNLESS DIP MATERIAL IS SPECIFIED FOR SANITARY SEWER.
  - E. MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL WATERMAIN & RCP STORM DRAIN CROSSINGS; MAINTAIN 18" MIN. VERTICAL SEPARATION AT ALL SANITARY SEWER & RCP STORM DRAIN CROSSINGS, WHERE ADEQUATE SEPARATIONS CANNOT BE ACHIEVED, SPECIFY DIP MATERIALS & A CONCRETE CRADLE HAVING 8" MIN. CLEARANCE (PER CORPUD DETAILS W-41 & S-49).
  - F. ALL OTHER UNDERGROUND UTILITIES SHALL CROSS WATER & SEWER FACILITIES WITH 18" MIN. VERTICAL SEPARATION REQUIRED.
3. ANY NECESSARY FIELD REVISIONS ARE SUBJECT TO REVIEW & APPROVAL OF AN AMENDED PLAN &/OR PROFILE BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT PRIOR TO CONSTRUCTION.
4. DEVELOPER SHALL PROVIDE 30 DAYS ADVANCE WRITTEN NOTICE TO OWNER FOR ANY WORK REQUIRED WITHIN AN EXISTING CITY OF RALEIGH UTILITY EASEMENT TRAVERSING PRIVATE PROPERTY.
5. CONTRACTOR SHALL MAINTAIN CONTINUOUS WATER & SEWER SERVICE TO EXISTING RESIDENCES & BUSINESSES THROUGHOUT CONSTRUCTION OF PROJECT. ANY NECESSARY SERVICE INTERRUPTIONS SHALL BE PRECEDED BY A 24-HOUR ADVANCE NOTICE TO THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT.
6. SEWER BYPASS PUMPING - A BYPASS PLAN SEALED BY AN NC PROFESSIONAL ENGINEER SHALL BE PROVIDED TO RALEIGH WATER PRIOR TO PUMPING OPERATIONS FOR APPROVAL. THE OPERATIONS AND EQUIPMENT SHALL COMPLY WITH THE PUBLIC UTILITIES HANDBOOK.
7. 3.0' MINIMUM COVER IS REQUIRED ON ALL WATER MAINS & SEWER FORCE MAINS. 4.0' MINIMUM COVER IS REQUIRED ON ALL REE MAINS.

**STANDARD COR UTILITY NOTES (CONT.):**

8. IT IS THE DEVELOPER'S RESPONSIBILITY TO ABANDON OR REMOVE EXISTING WATER & SEWER SERVICES NOT BEING USED IN REDEVELOPMENT OF A SITE UNLESS OTHERWISE DIRECTED BY THE CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT. THIS INCLUDES ABANDONING TAP AT MAIN & REMOVAL OF SERVICE FROM ROW OR EASEMENT PER CORPUD HANDBOOK PROCEDURE.
9. INSTALL 3/4" COPPER WATER SERVICES WITH METERS LOCATED AT ROW OR WITHIN A 2X2' WATERLINE EASEMENT IMMEDIATELY ADJACENT. NOTE: IT IS THE APPLICANT'S RESPONSIBILITY TO PROPERLY SIZE THE WATER SERVICE FOR EACH CONNECTION TO PROVIDE ADEQUATE FLOW & PRESSURE
10. INSTALL 4" PVC SEWER SERVICES @ 1.0% MINIMUM GRADE WITH CLEANOUTS LOCATED AT ROW OR EASEMENT LINE & SPACED EVERY 75 LINEAR FEET MAXIMUM.
11. PRESSURE REDUCING VALVES ARE REQUIRED ON ALL WATER SERVICES EXCEEDING 80 PSI. BACKWATER VALVES ARE REQUIRED ON ALL SANITARY SEWER SERVICES HAVING BUILDING DRAINS LOWER THAN 1.0' ABOVE THE NEXT UPSTREAM MANHOLE.
12. ALL ENVIRONMENTAL PERMITS APPLICABLE TO THE PROJECT MUST BE OBTAINED FROM NCDWQ, USACE &/OR FEMA FOR ANY RIPARIAN BUFFER, WETLAND &/OR FLOODPLAIN IMPACTS (RESPECTIVELY) PRIOR TO CONSTRUCTION.
13. NCDOT / RAILROAD ENCROACHMENT AGREEMENTS ARE REQUIRED FOR ANY UTILITY WORK (INCLUDING MAIN EXTENSIONS & SERVICE TAPS) WITHIN STATE OR RAILROAD ROW PRIOR TO CONSTRUCTION.
14. GREASE INTERCEPTOR / OIL WATER SEPARATOR SIZING CALCULATIONS & INSTALLATION SPECIFICATIONS SHALL BE APPROVED BY THE RW FOG PROGRAM COORDINATOR PRIOR TO ISSUANCE OF A UC AND/OR BUILDING PERMIT. CONTACT (919) 996-4516 OR FOG@RALEIGHNC.GOV FOR MORE INFORMATION.
15. CROSS-CONNECTION CONTROL PROTECTION DEVICES ARE REQUIRED BASED ON THE DEGREE OF HEALTH HAZARD INVOLVED AS LISTED IN APPENDIX B OF THE RULES GOVERNING PUBLIC WATER SYSTEMS IN NORTH CAROLINA.
16. THE DEVICES SHALL MEET THE AMERICAN SOCIETY OF SANITARY ENGINEERING (ASAE) STANDARDS AND BE ON THE UNIVERSITY OF SOUTHERN CALIFORNIA APPROVAL LIST.
17. THE DEVICE AND INSTALLATION SHALL MEET THE GUIDELINES OF APPENDIX A - GUIDELINES AND REQUIREMENTS FOR THE CROSS CONNECTION PROGRAM IN RALEIGH'S SERVICE AREA.
18. THE DEVICES SHALL BE INSTALLED AND TESTED (BOTH, INITIAL AND PERIODIC TESTING THEREAFTER) IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS OR THE LOCAL CROSS CONNECTION CONTROL PROGRAM, WHICHEVER IS MORE STRINGENT. CONTACT CROSS.CONNECTION@RALEIGHNC.GOV FOR MORE INFORMATION.
19. NOTICE FOR PROJECTS THAT INVOLVE AN OVERSIZED MAIN OR URBAN MAIN REPLACEMENT. ANY CITY REIMBURSEMENT GREATER THAN \$250,000.00 MUST UNDERGO THE PUBLIC BIDDING PROCESS.

HORIZONTAL GRAPHIC SCALE



**SHEET LEGEND**

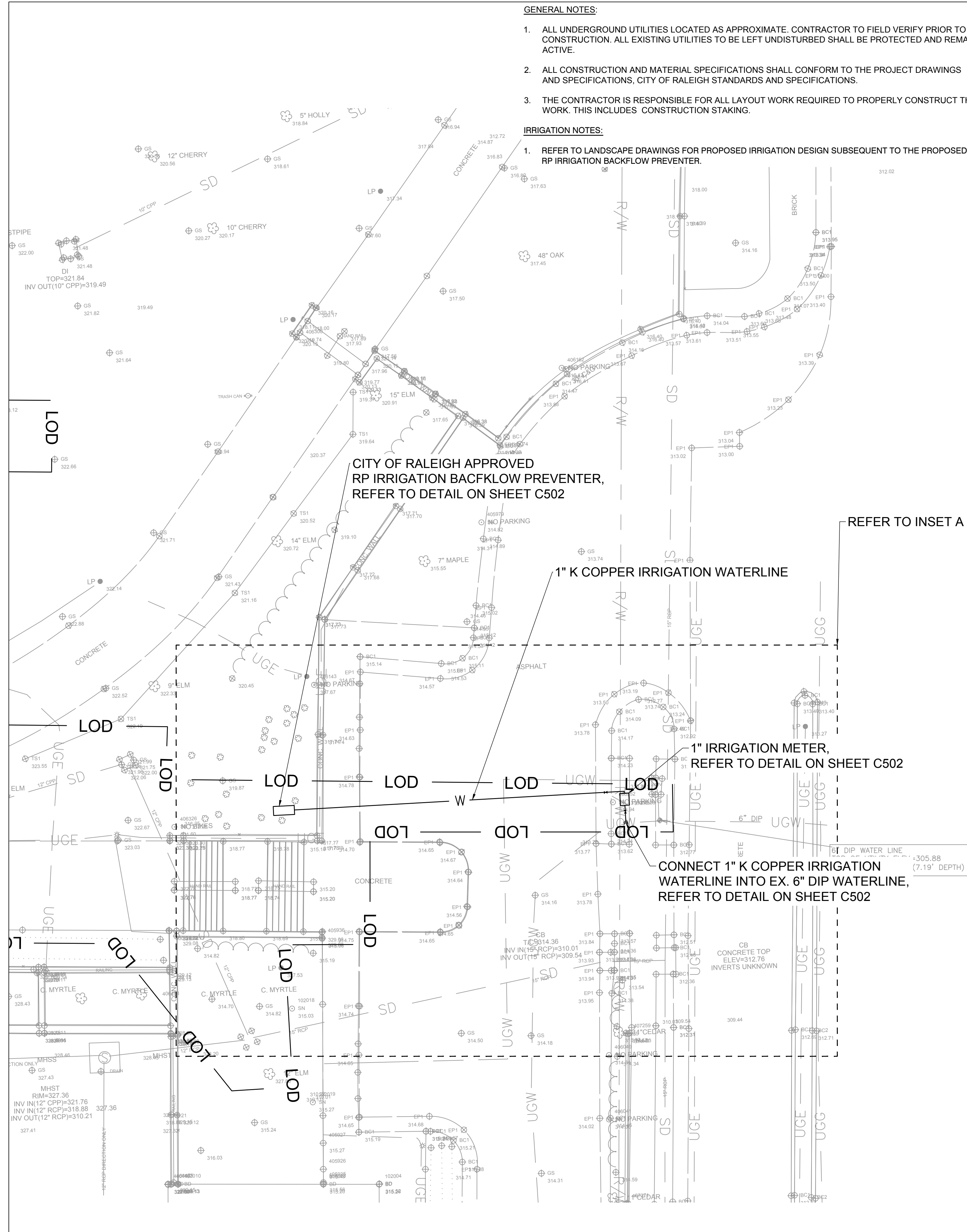
W PROPOSED WATER LINE

**ATTENTION CONTRACTORS**

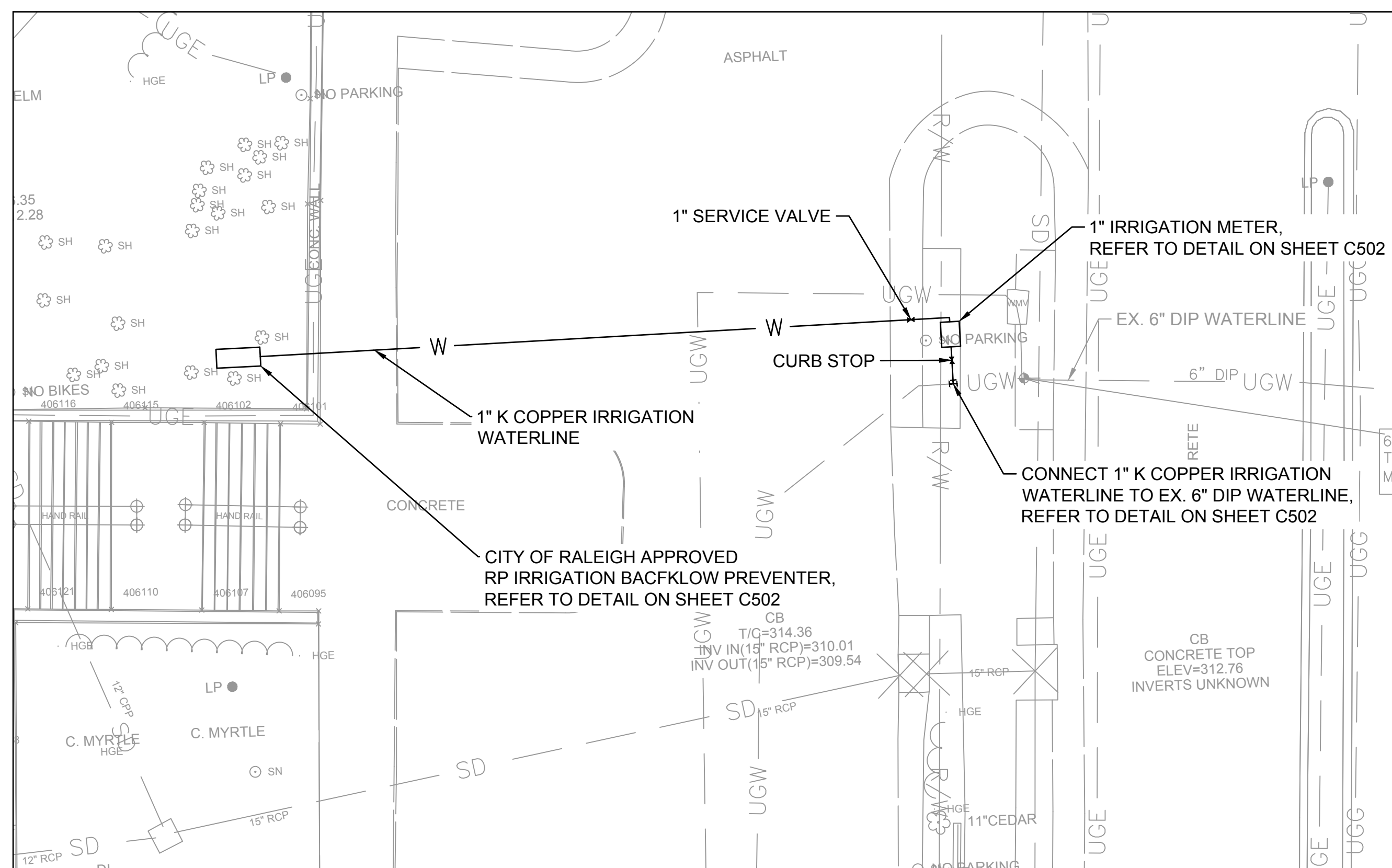
The Contractor responsible for the extension of water, sewer, and/or reuse, as approved in these plans, is responsible for contacting the Infrastructure Inspections Division and schedule a Pre-construction meeting on the Development Portal prior to beginning any construction. Raleigh Water must be contacted at (919) 996-4540 at least twenty-four hours prior to beginning any work activity around critical water and sewer infrastructure.

Failure to notify City Departments in advance of beginning construction, will result in the issuance of monetary fines, and require reinstallation of any water or sewer facilities not inspected as a result of this notification failure.

Failure to call for Inspection, install a downstream plug, have permitted plans on the jobsite, or any other violation of City of Raleigh Standards will result in a fine and possible exclusion from future work in the City of Raleigh.



REFER TO INSET A



**INSET A:  
IRRIGATION LINE TIE-IN**

SCALE: 1"=8'

**Public Water Distribution / Extension System**  
The City of Raleigh consents to the connection and extension of the City's public water system as shown on this plan. The material and Construction methods used for this project shall conform to the standards and specifications of the City's Public Utilities Handbook.  
City of Raleigh  
Public Utilities Department Permit # \_\_\_\_\_  
Authorization to Construct, See digital signature



1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
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Dewberry Engineers Inc.  
2610 Wycliff Road  
Suite 410  
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919.881.9939  
NC License No. F-0929

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CITY OF RALEIGH  
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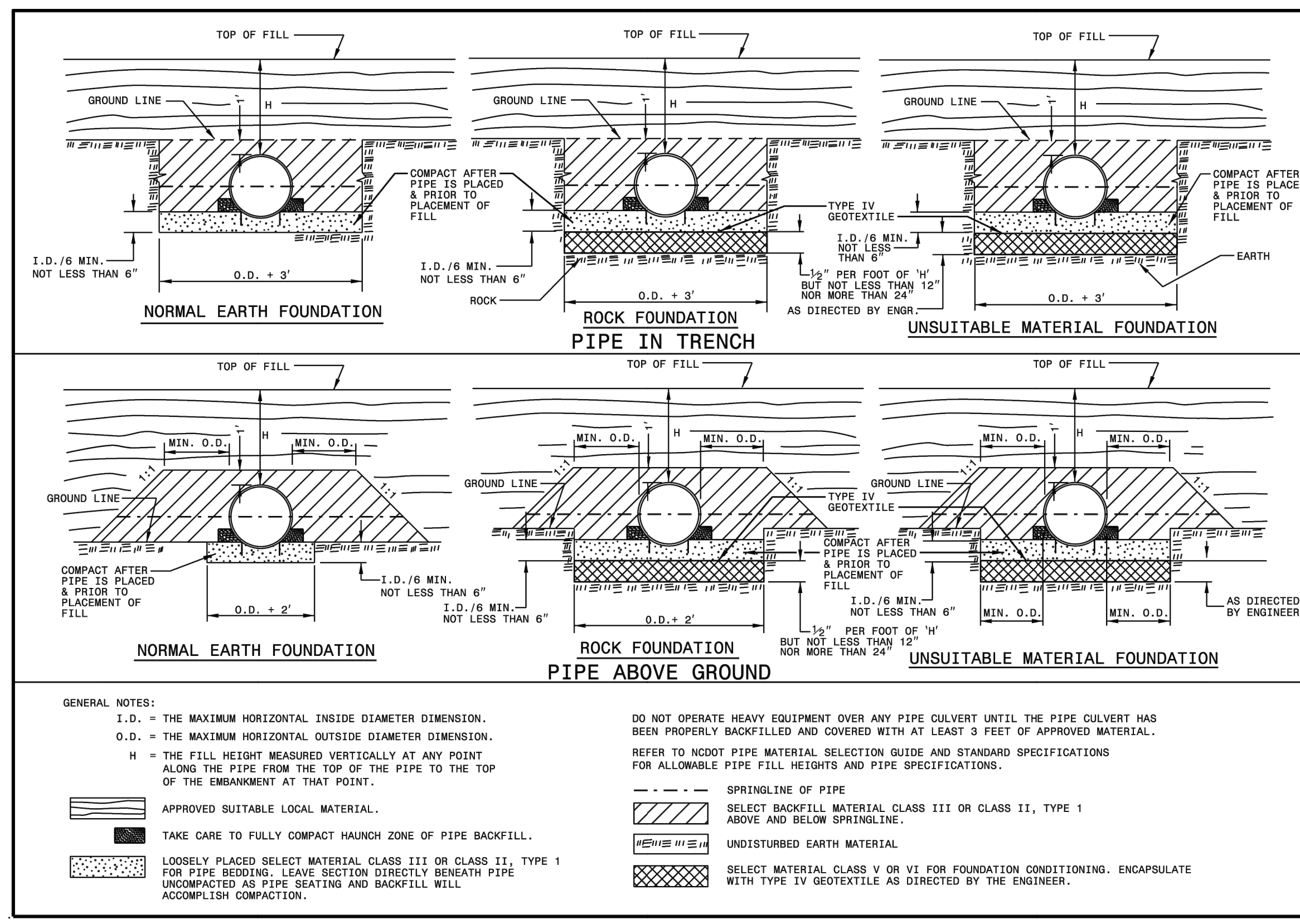


NO.	REVISION	DATE
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JOB NUMBER  
**23-077**  
DATE ISSUED  
**03/13/2025**  
PROJECT STATUS  
**BID DOCUMENTS**

SHEET  
**WATER UTILITY PLAN**

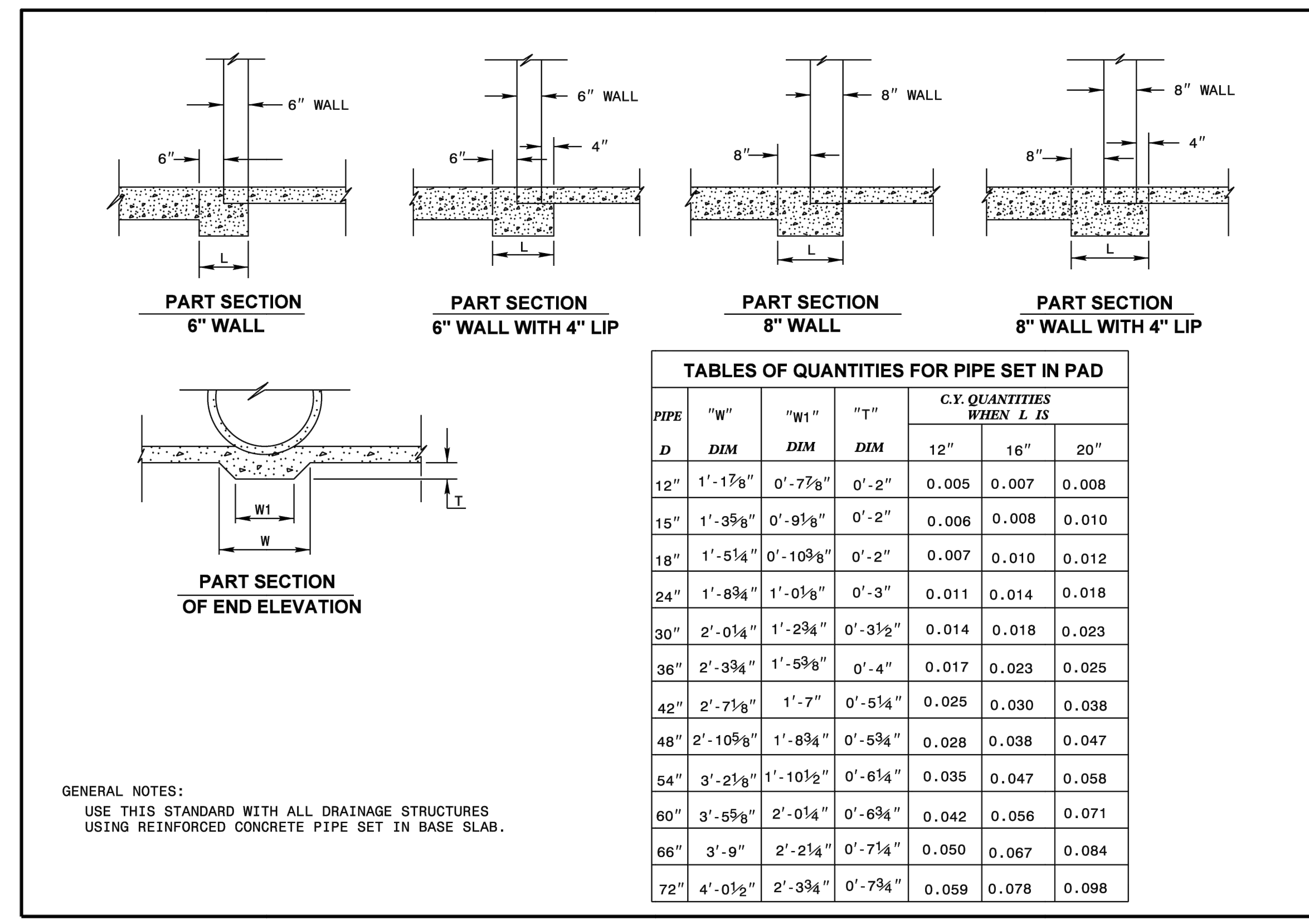
**C201**



STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N. C.

ROADWAY STANDARD DRAWING FOR  
**METHOD OF PIPE INSTALLATION**  
FLEXIBLE PIPE

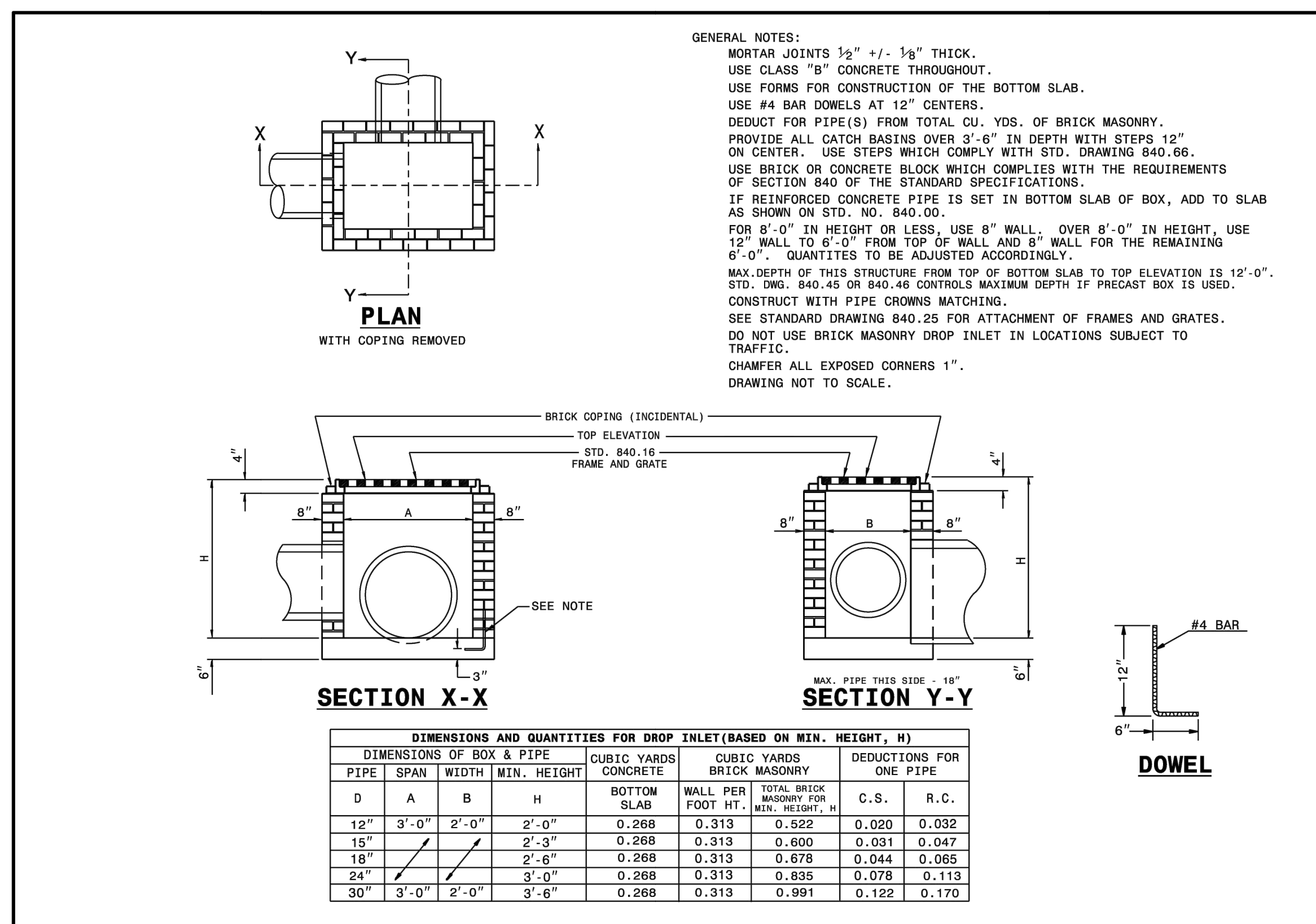
SHEET 1 OF 2  
**300.01**



STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N. C.

ROADWAY STANDARD DRAWING FOR  
**CONCRETE BASE PAD FOR DRAINAGE STRUCTURES**

SHEET 1 OF 1  
**840.00**



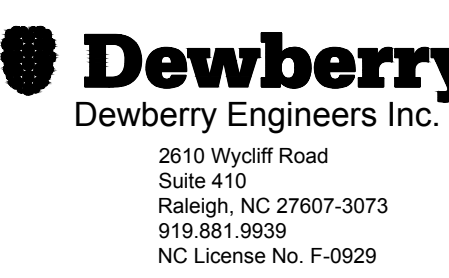
STATE OF NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N. C.

ROADWAY STANDARD DRAWING FOR  
**BRICK DROP INLET**  
12" THRU 30" PIPE

SHEET 1 OF 1  
**840.15**



**ARCHITECTURE**  
1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com



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CITY OF RALEIGH  
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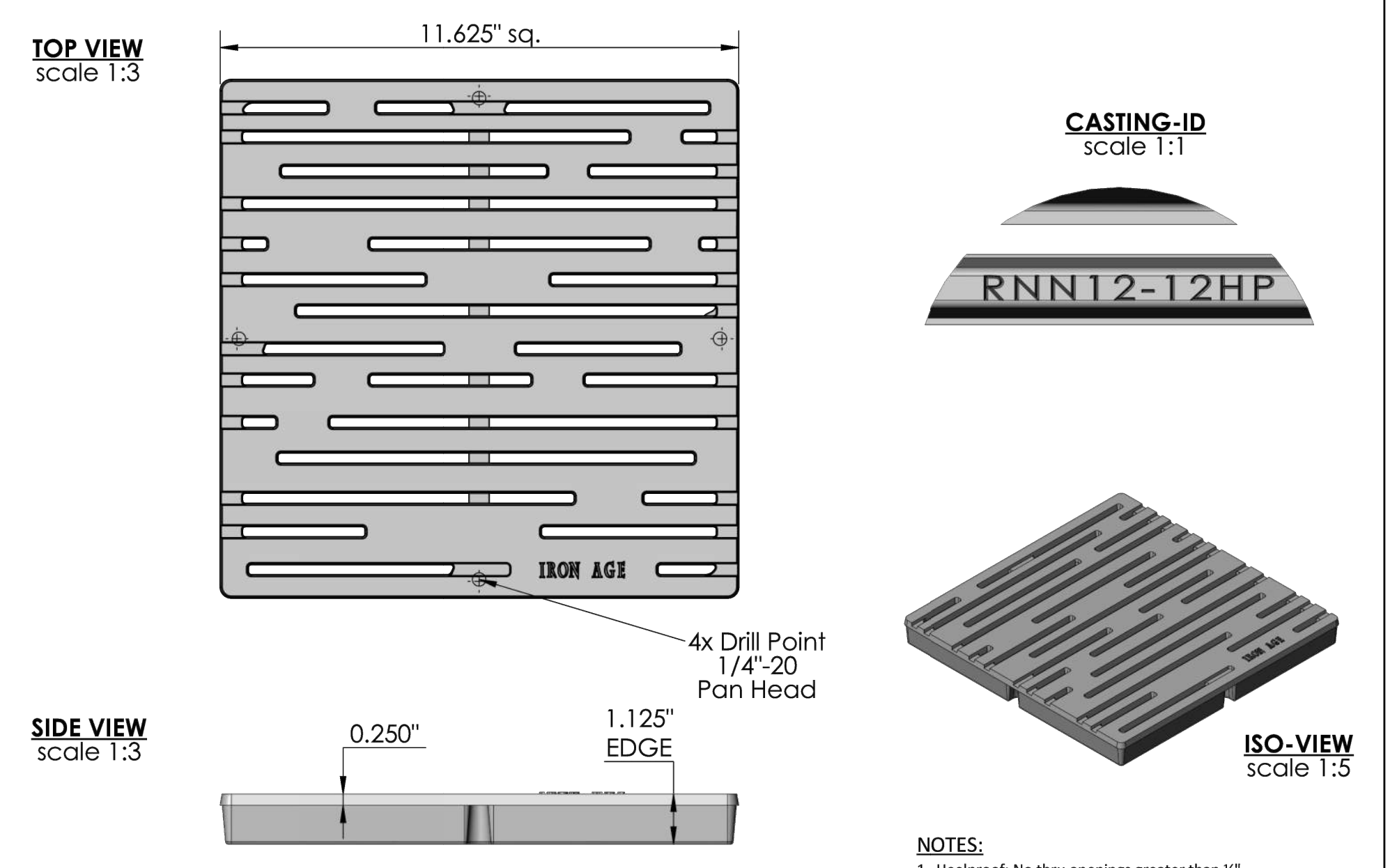


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**BID DOCUMENTS**

SHEET  
**STORM UTILITY DETAILS**

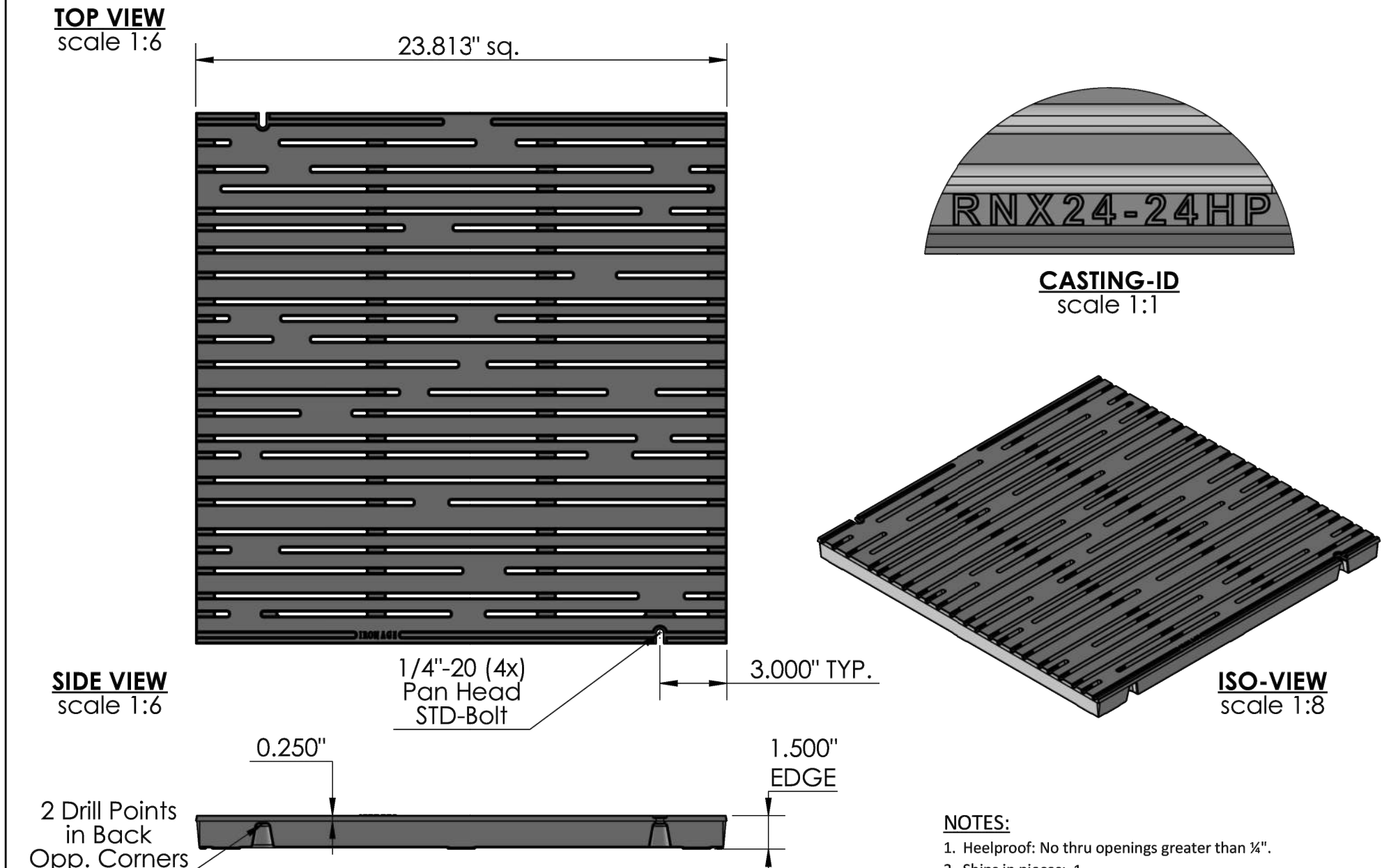
**C500**



**Rain 12" x 12" Catch Basin Grate - Heel Proof**

<b>IRON AGE DESIGNS</b> Telephone 206.276.0925 www.ironagegrates.com	Material: Ductile Iron 65-45-12	Weight: 15.68 lbs.	Free Drain Area: 25.42 in/sq. or 18.81 %	By: MS	Checked: MS	Date: 5-16-23
	Finish: Raw	Edge: 1.125"	Flow Rate: 33.30 GPM or .074 CuFt./sec.	© Registration: VA 2-112-783	Scale: NTS	
	Fits: NDS* 1200 Series	Product ID: RNN12-12HP	Drawing Name: 01_RAI_N_12x12HP_CatchBasin_Iron			

Page 1



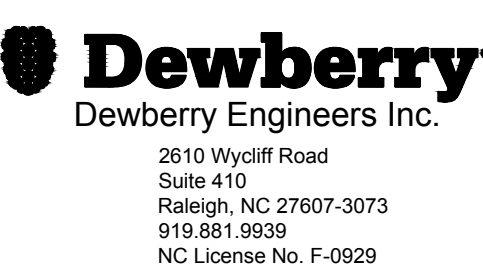
**Rain 24" x 24" Catch Basin Grate - Heel Proof**

<b>IRON AGE DESIGNS</b> Telephone 206.276.0925 www.ironagegrates.com	Material: Ductile Iron 65-45-12	Weight: 63.83 lbs.	Free Drain Area: 74.69 in/sq. or 14.73 %	By: MS	Checked: MS	Date: 12-2-22
	Finish: Raw	Edge: 1.500"	Flow Rate: 97.85 GPM or .217 CuFt./sec.	© Registration: Pending	Scale: NTS	
	Fits: Iron Age Custom Frames SOLD SEPARATELY	Product ID: RN24-24HP	Drawing Name: 01_RAI_I_24x24HP_CatchBasin			

Page 1



**ARCHITECTURE**  
1100 Dresser Court  
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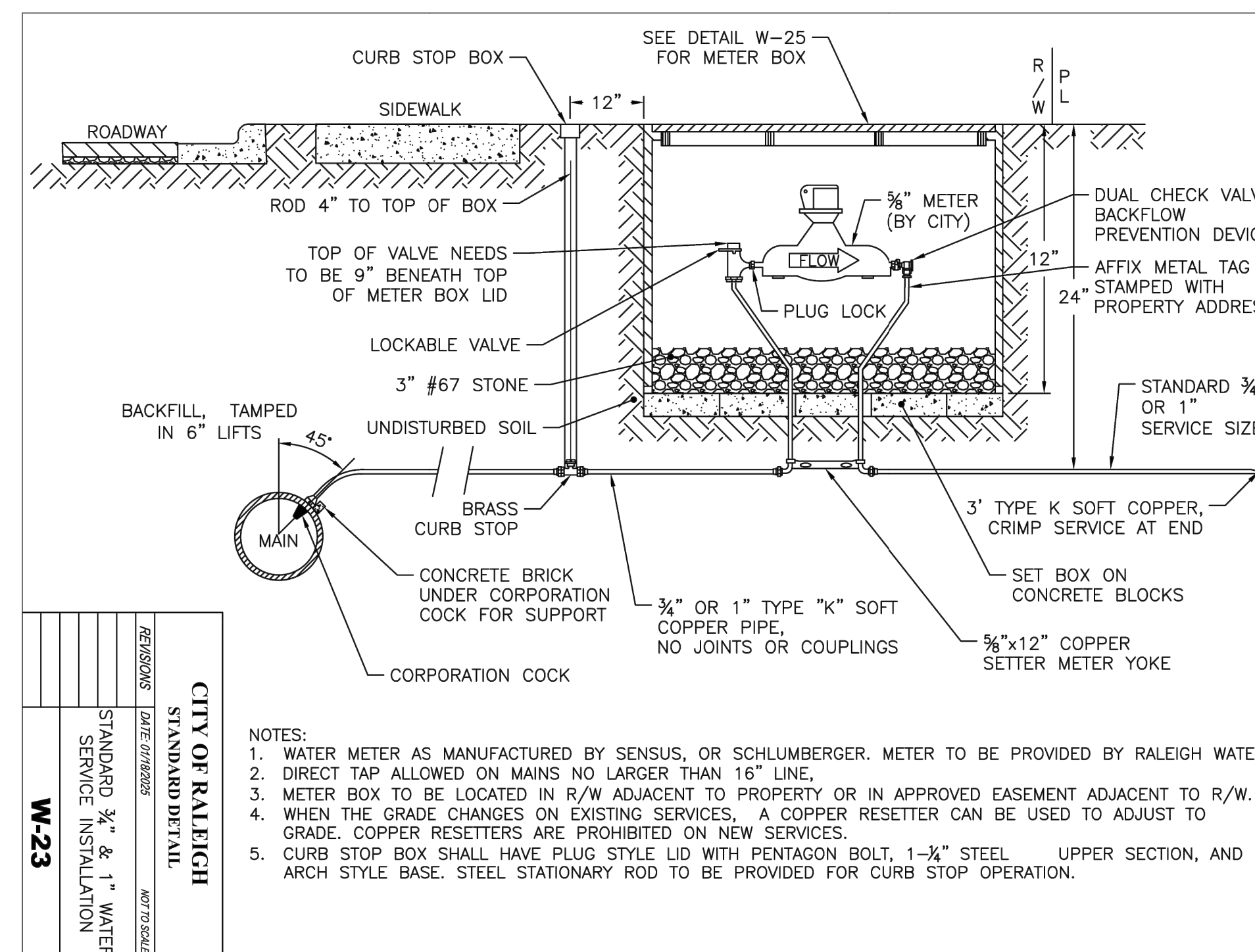
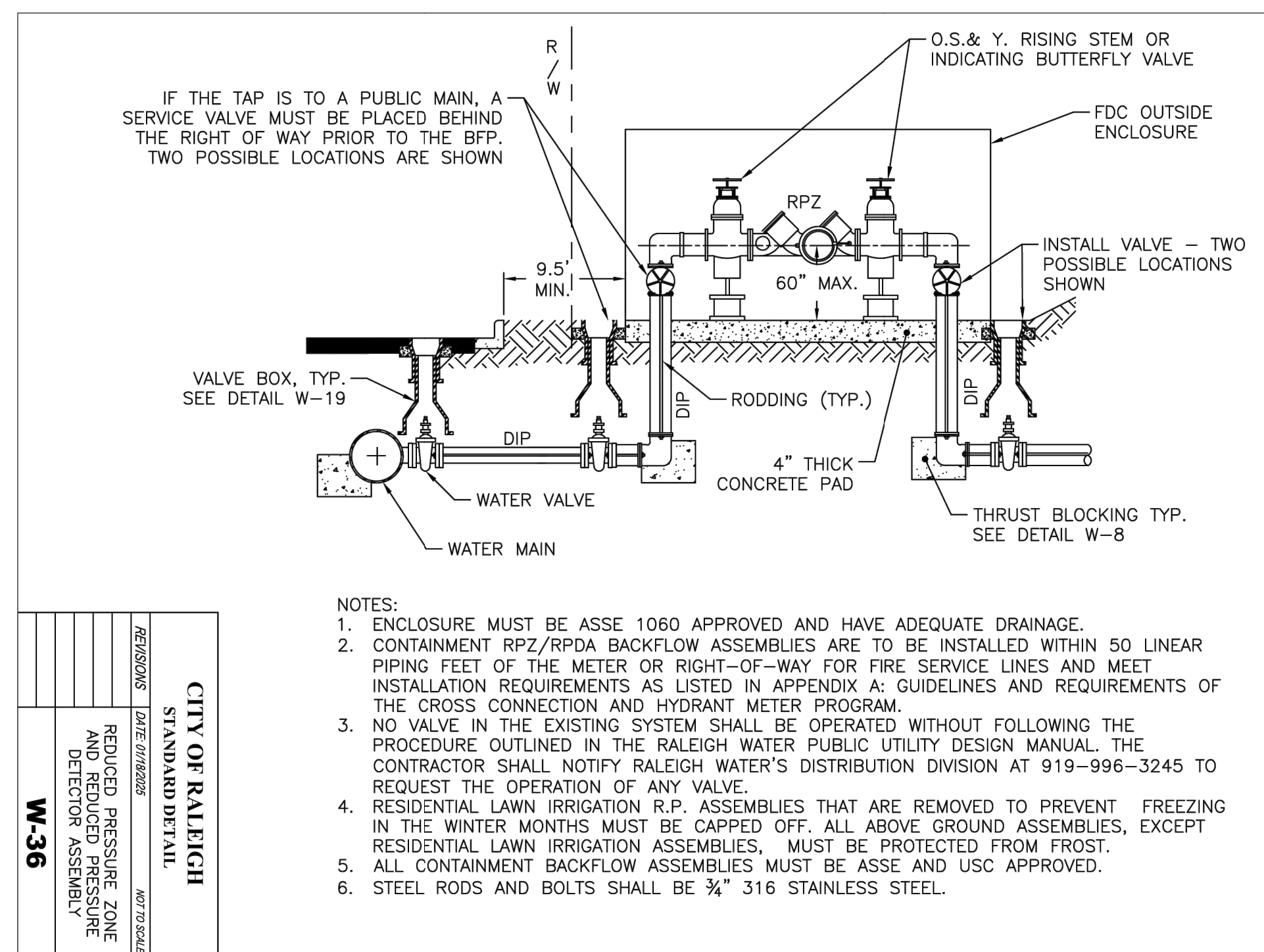
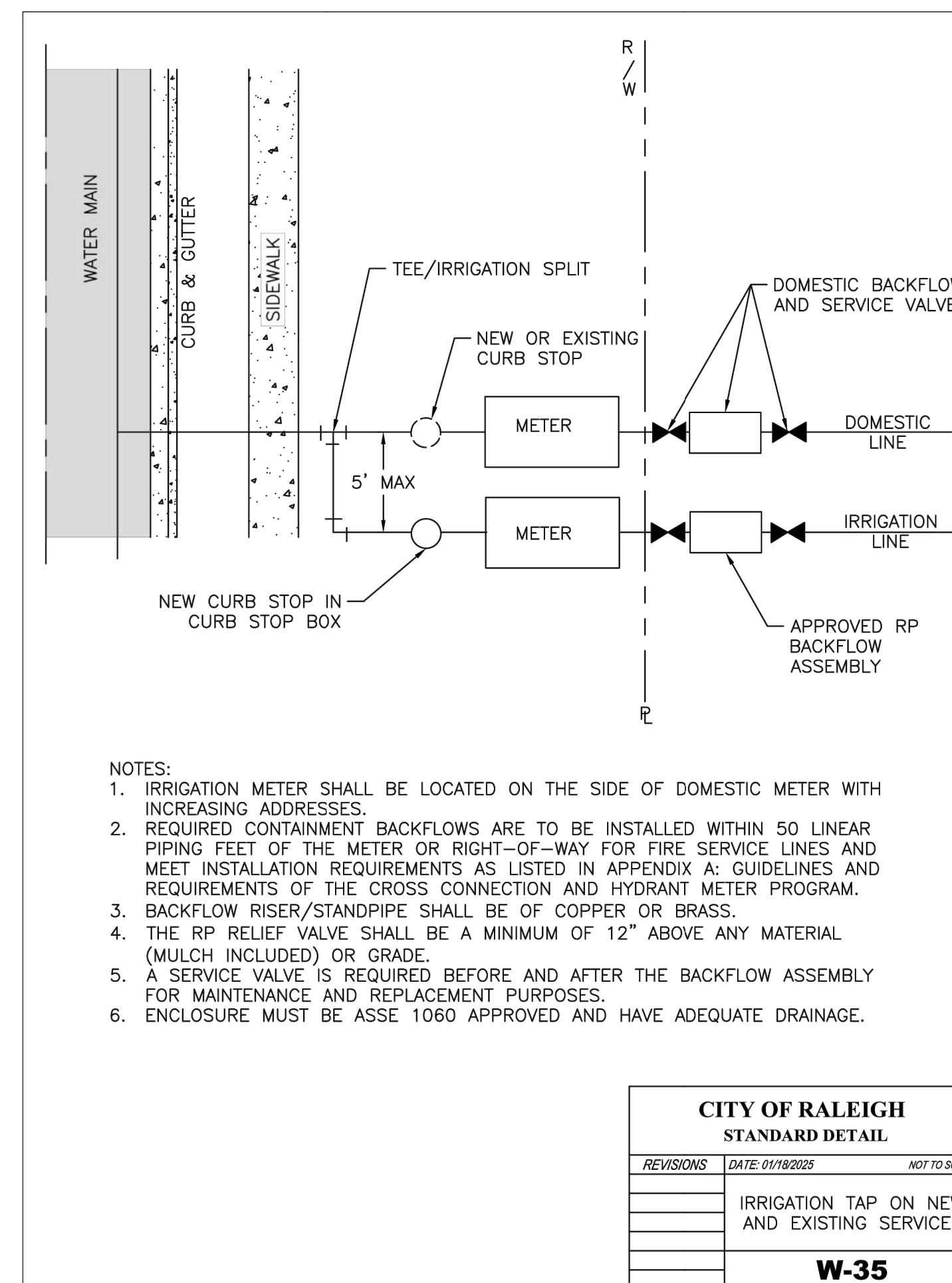
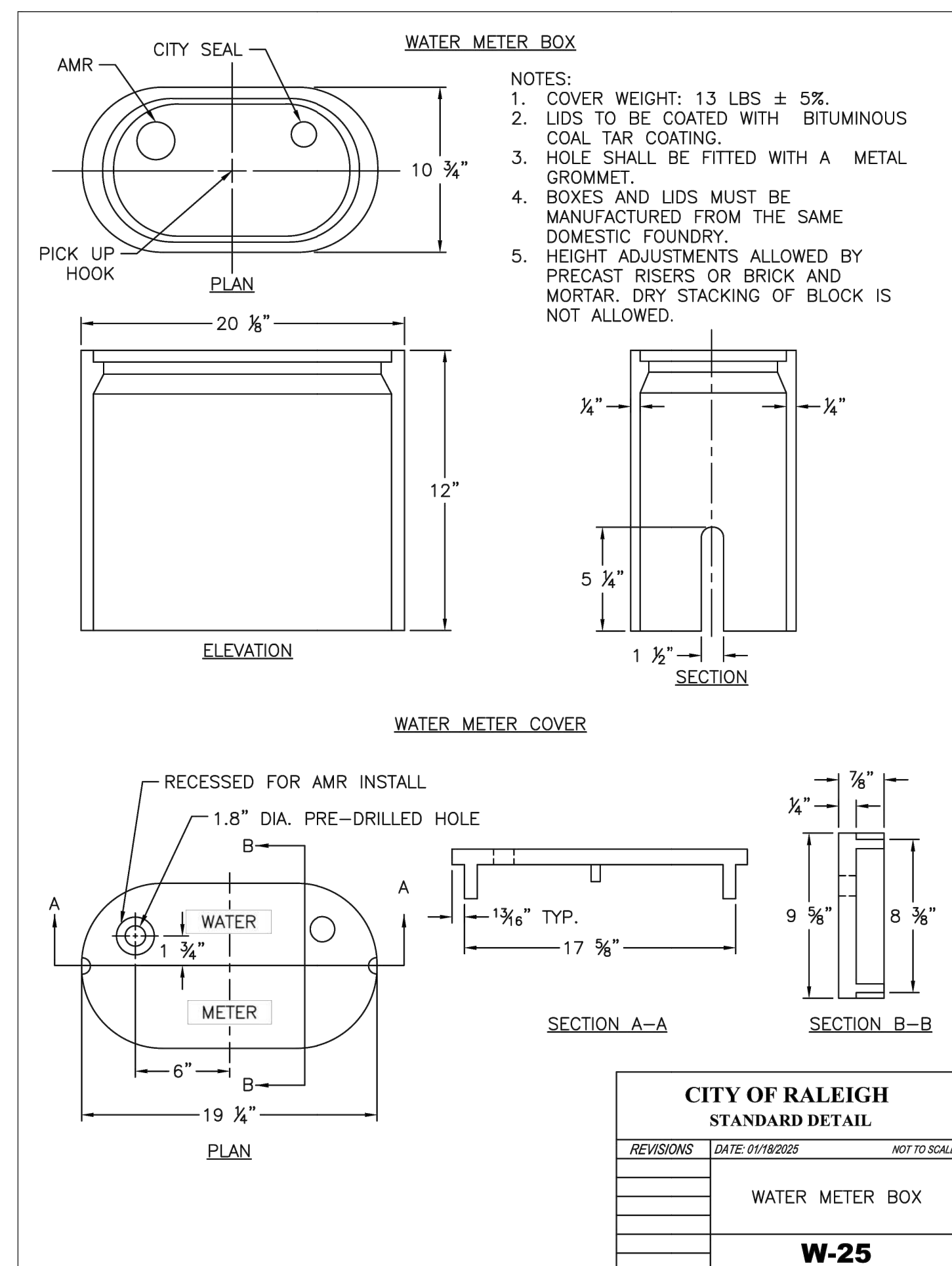


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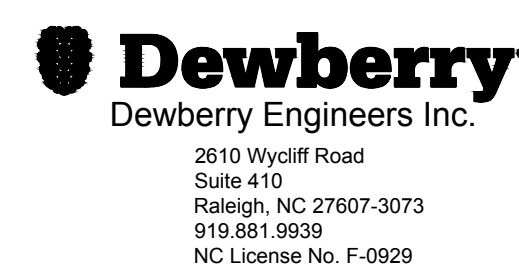
JOB NUMBER  
**23-077**  
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**03/13/2025**  
PROJECT STATUS  
**BID DOCUMENTS**

SHEET  
**STORM UTILITY DETAILS**

**C501**



**ARCHITECTURE**  
1100 Dresser Court  
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Office 919.828.2301  
Email office@hh-arch.com



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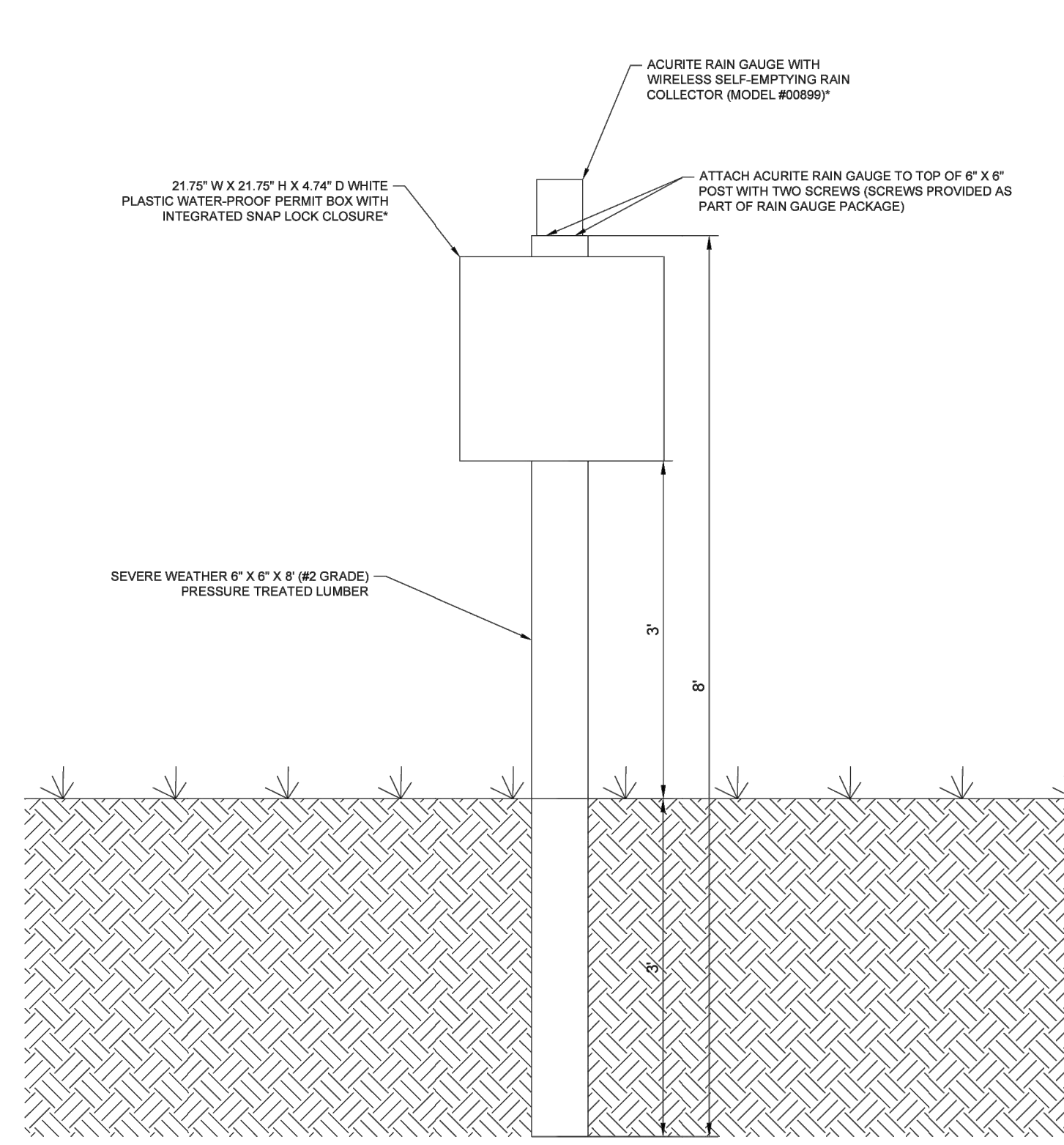
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**23-077**  
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PROJECT STATUS  
**BID DOCUMENTS**

SHEET  
**WATER UTILITY DETAILS**

# EROSION AND SEDIMENTATION CONTROL CONSTRUCTION SEQUENCE NOTES

- ALL APPLICABLE PERMITS MUST BE OBTAINED AND HARD-COPIES MUST BE KEPT ON-SITE IN THE PERMITS BOX OR POST ON SITE. ANY PROJECT REVISIONS THAT RESULT IN ADDITIONAL LAND DISTURBANCE OR CHANGE IN DRAINAGE PATTERNS SHALL BE SUBMITTED TO DEWBERRY FOR APPROVAL AND NCDCEQ FOR PERMIT MODIFICATION.
- NO LAND DISTURBING ACTIVITIES SHALL TAKE PLACE OUTSIDE THE PROJECT LIMITS WITHOUT NCDCEQ AND DEWBERRY SITING, PERMITTING AND ENGAGEMENT APPROVAL.
- NO DEMOLITION, CONSTRUCTION, OR LAND DISTURBANCE ACTIVITIES SHALL BEGIN UNTIL ALL APPLICABLE EROSION CONTROL MEASURES HAVE BEEN INSTALLED. IF CLEARING IS REQUIRED FOR INSTALLATION OF A GIVEN MEASURE, ALL OTHER MEASURES SHALL BE INSTALLED FIRST. THE NECESSARY LAND DISTURBANCE ACTIVITIES REQUIRED FOR INSTALLATION OF THE GIVEN MEASURE MAY THEN PROCEED.
- SUBMIT DOCUMENTATION REQUIRED UNDER THE SITE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY (NCG01) TO STORMWATER INSPECTIONS THROUGHOUT THE PROJECT.
- EROSION AND SEDIMENT CONTROL (E&SC) PERMIT AND A CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE ANY LAND DISTURBING ACTIVITIES OCCUR. THE COC CAN BE OBTAINED BY FILLING OUT THE ELECTRONIC NOTICE OF INTENT (E-NOI) FROM AT DEP.NC.GOV/NCG01. THE E-NOI FORM MAY ONLY BE FILLED OUT ONCE THE PLANS HAVE BEEN APPROVED. A COPY OF THE E&SC PERMIT, THE COC, AND A HARD COPY OF THE PLAN MUST BE KEPT ON SITE, PREFERABLY IN A PERMITS BOX, AND ACCESSIBLE DURING INSPECTION.
- NOTIFY THE STATE DEQ-DEMLR OFFICE AT THE RALEIGH REGIONAL OFFICE AT 919-791-4200 AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.
- UTILITIES SHOWN IN APPROXIMATE MANNER ONLY. CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO BEGINNING DEMOLITION, CONSTRUCTION OR LAND DISTURBING ACTIVITIES.
- LIMITS OF DISTURBANCE/EXISTING RIGHT-OF-WAY SHALL ALSO BE STAKED AND FLAGGED. CONSTRUCTION FENCING SHALL BE INSTALLED AS PERMITTED.
- POST THE SEDIMENTATION "CERTIFICATE OF APPROVAL" AT THE CONSTRUCTION ENTRANCE AND MAINTAIN COPIES OF THE EROSION CONTROL PERMIT ON-SITE. A RAIN GAUGE WILL BE INSTALLED ON SITE AND COPIES OF PLAN APPROVED BY NC DEMLR, PLAN APPROVAL LETTER WITH ANY MODIFICATIONS OR PERFORMANCE RESERVATIONS, ANY 401/404 DOCUMENTATION, AND A MINIMUM OF THE PAST 30 DAYS OF SELF-INSPECTION REPORTS WILL BE KEPT ON SITE UNTIL PROJECT IS CLOSED OUT BY NC DEMLR.
- INSTALL CONSTRUCTION ENTRANCES, WATTLES, AND ANY OTHER NECESSARY EROSION CONTROL MEASURES PER PLAN DETAILS AND NCDCEQ REQUIREMENTS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP ALL DIRT OFF PAVED ROADS.
- BEGIN CLEARING AND SITE DEMOLITION OF THE SITE.
- DEMOLISH EXISTING PLAZA PAVEMENT PER PLANS. EXCAVATE TO PROPOSED SUBGRADE ELEVATIONS. ANY STOCKPILED MATERIAL TO BE STORED WITHIN LIMITS OF DISTURBANCE AND STABILIZED WITHIN 7 CALENDAR DAYS.
- DEMOLISH AND REMOVE STORM STRUCTURES AND STORM PIPE.
- INSTALL NEW STORM PIPE AND STORM STRUCTURES WITH INLET PROTECTION.
- INSTALL NEW IRRIGATION TAP, METER, AND BACKFLOW PREVENTER. COMPLETE IRRIGATION UPGRADES.
- GRADE AND INSTALL PLAZA PAVEMENT AND NEW DRIVEWAY.
- SITE SHOULD BE "STORM READY" AT THE END OF EACH WORK DAY/WEEK.
- PROVIDE TEMPORARY SEEDING TO ALL DENUDEED AREAS AFTER CLEARING OPERATIONS AS SOON AS FEASIBLE BUT NOT LONGER THAN 7 CALENDAR DAYS. PROVIDE PERMANENT GROUND COVER WITHIN 14 CALENDAR DAYS. MULCHING CAN BE USED FOR INSTANT STABILIZATION ON NEW LINE PROJECTS THAT REQUIRE CLEARING. TEMPORARY AND PERMANENT SEEDING WILL BE REQUIRED IN AREAS WHERE MULCHING IS INSUFFICIENT FOR INSTANT STABILIZATION.
- PER THE NPDES PERMIT, GROUND STABILIZATION WILL BE APPLIED WITHIN 14 CALENDAR DAYS FROM LAST LAND DISTURBING ACTIVITY. FOR STEEP SLOPES, THAT AREA MUST BE STABILIZED WITHIN 7 CALENDAR DAYS.
- PER NPDES REQUIREMENTS, A RAIN GAUGE, SELF-INSPECTIONS RECORDS, PERMIT, CERTIFICATE OF COVERAGE, AND E&SC PLAN ARE REQUIRED TO BE MAINTAINED ON SITE AND ACCESSIBLE DURING INSPECTION. IT IS RECOMMENDED THAT THESE ITEMS BE PLACED IN A PERMITS BOX AT THE BEGINNING OR ENTRANCE OF PROJECT.
- THE CONTRACTOR SHALL CONDUCT SELF-INSPECTIONS OF THE EROSION AND SEDIMENTATION CONTROL MEASURES AND COMPLETE THE FOLLOWING COMBINED SELF-INSPECTION FORM FOUND ON THE DEMLR WEBSITE: [HTTPS://DEQ.NC.GOV/ABOUT/DIVISIONS/ENERGY-MINERAL-LAND-RESOURCES/EROSION-SEDIMENT-CONTROL/FORMS](https://deq.nc.gov/about/divisions/energy-mineral-land-resources/erosion-sediment-control/forms). TWELVE MONTHS OF COMPLETE INSPECTION FORMS SHALL BE KEPT ON-SITE AND AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS RECOMMENDED A COPY BE KEPT IN A PERMITS BOX.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF SEDIMENT ON-SITE. IF THE APPROVED EROSION AND SEDIMENTATION CONTROL MEASURES PROVE INSUFFICIENT, THE CONTRACTOR MUST TAKE ADDITIONAL STEPS NECESSARY TO STOP SEDIMENT FROM LEAVING THE SITE WITH PRIOR APPROVAL FROM THE DEWBERRY REPRESENTATIVE.
- ANY BORROW MATERIAL BROUGHT ONTO THIS SITE SHALL BE FROM A LEGALLY OPERATED MINE OR APPROVED SOURCE. A SINGLE USE BORROW SITE OR AN AREA TO WASTE MATERIAL IS ONLY PERMISSIBLE IF IT IS OPERATED UNDER THE TOTAL CONTROL OF THE FINANCIALLY RESPONSIBLE PERSON OR FIRM WHO IS DEVELOPING THE SITE AND HAS BEEN SEPARATELY PERMITTED AND INCORPORATED AS PART OF THIS PLAN MEETING ALL THE REQUIREMENTS OF NC GENERAL STATUTE 74-49(7F).
- CONTACT DEQ LAND QUALITY AT 919-791-4200 TO SCHEDULE A CLOSEOUT INSPECTION.
- CONSTRUCTION ACTIVITIES THAT HAVE AN E&SC PLAN APPROVED ON OR AFTER APRIL 1, 2019 ARE REQUIRED TO FILL OUT AND SUBMIT AN ELECTRONIC NOTICE OF INTENT (E-NOI) FORM. ALL CONSTRUCTION ACTIVITIES ARE REQUIRED TO FOLLOW THE NEW NCG01 PERMIT REGARDLESS OF WHEN THEY WERE APPROVED.
- AFTER SITE IS STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES, AND PROVIDE PERMANENT SEEDING WHERE TEMPORARY MEASURES HAVE BEEN REMOVED AND GROUND COVER IS NOT ADEQUATE.
- WHEN THE PROJECT IS COMPLETE, THE PERMITTEE SHALL CONTACT DEMLR TO CLOSE OUT THE E&SC PLAN. AFTER DEMLR INFORMS THE PERMITTEE OF THE PROJECT CLOSE OUT, VIA INSPECTION REPORT, THE PERMITTEE SHALL VISIT [HTTPS://WWW.DEQ.NC.GOV/NCG01](https://www.deq.nc.gov/ncg01) TO SUBMIT AN ELECTRONIC NOTICE OF TERMINATION (E-NOT). A \$120 ANNUAL GENERAL PERMIT FEE WILL BE CHARGED UNTIL THE E-NOT HAS BEEN FILLED OUT.
- WHERE SUBSURFACE COMPACTION, INCLUDING HARD PANS HAS OCCURRED, ADDITIONAL REPAIR MEASURES BEYOND THOSE LISTED IN TYPICAL SEEDING SCHEDULE DETAIL MAY BE REQUIRED AT THE DIRECTION OF THE CONTRACTOR. ADDITIONAL MEASURES MAY INCLUDE DEEP PLOWING AND/OR SUB-SOILING/RIPPING OF THE COMPACTED SUBSOIL AREAS.



**INSTALLATION NOTES:**

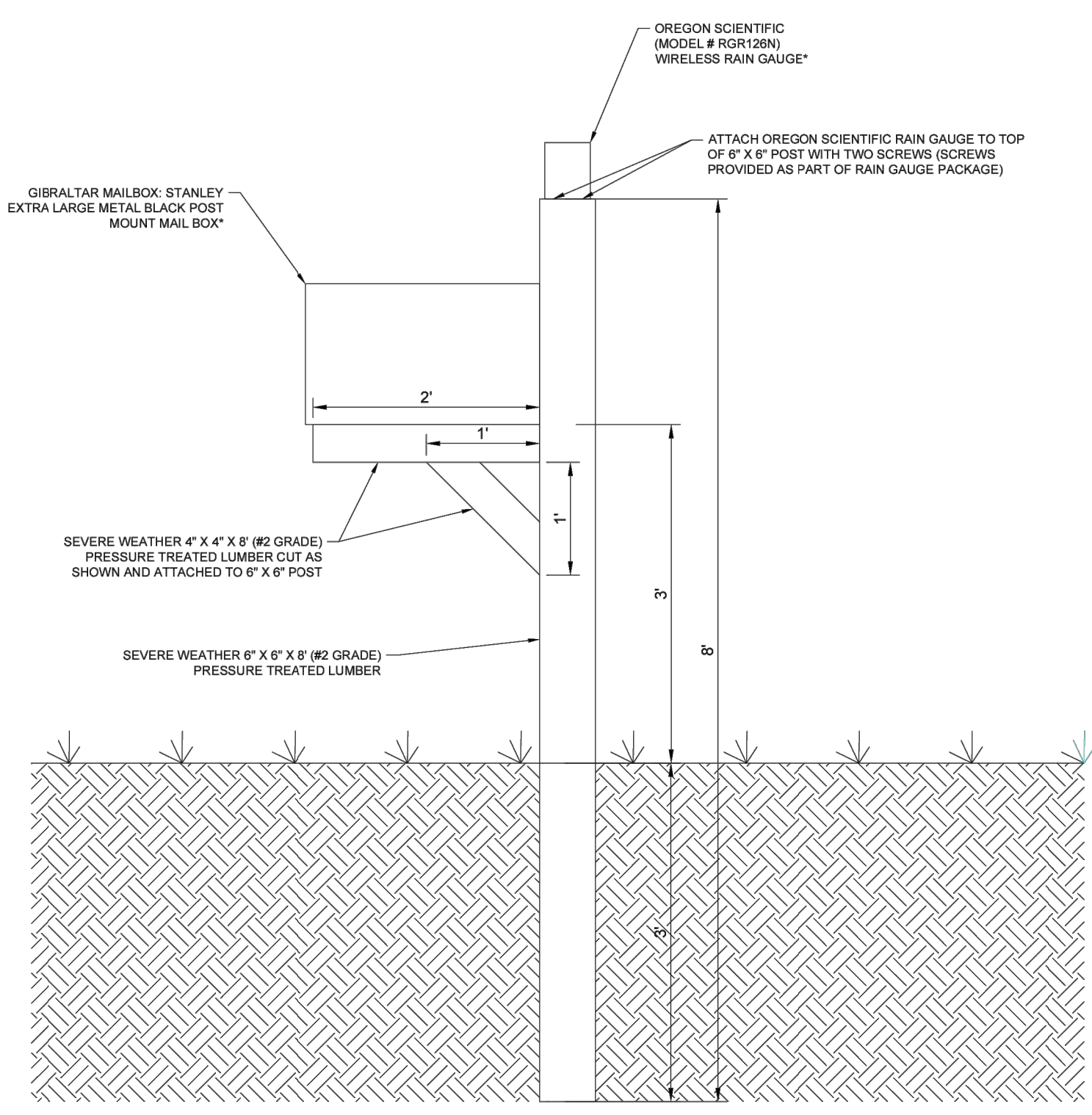
- PRIOR TO INSTALLATION AND/OR ANY DIGGING ACTIVITIES, ALL UNDERGROUND UTILITIES SHALL BE LOCATED AND MARKED.
- PERMIT BOX STRUCTURE SHALL BE INSTALLED WITHIN THE LIMITS OF DISTURBANCE, IN A SAFE LOCATION AWAY FROM PROPOSED CONSTRUCTION.
- 6\"/>

**MAINTENANCE NOTES:**

- IF PERMIT BOX STRUCTURE AND/OR RAIN GAUGE BECOME DAMAGED, THE ASSOCIATED PARTS SHALL BE REPLACED.
- IF THE INTEGRATED SNAP LOCK CLOSURE MECHANISM ON THE PERMIT BOX BREAKS AN ALTERNATE METHOD OF ENSURING THE LID SHALL STAY SECURE AND SHUT SHOULD BE PROVIDED AND UTILIZED.

\*ENGINEERS APPROVED EQUIVALENT OF ITEMS SPECIFIED IS ALLOWABLE

E&SC PERMIT BOX AND RAIN GAUGE STRUCTURE DETAIL



**INSTALLATION NOTES:**

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\*ENGINEERS APPROVED EQUIVALENT OF ITEMS SPECIFIED IS ALLOWABLE

E&SC PERMIT BOX AND RAIN GAUGE STRUCTURE DETAIL

## TYPICAL SEEDING SCHEDULE FOR PIEDMONT AND COASTAL AREAS (EXCEPT BEACH DUNES)

1. LIME, SEED, AND FERTILIZER SHALL BE APPLIED WITH NECESSARY EQUIPMENT TO GIVE UNIFORM DISTRIBUTION OF THESE MATERIALS. THE KINDS OF MATERIALS TO BE APPLIED PER ACRE:

TEMPORARY SEEDING					
DATE	TYPE	PLANTING RATE	FERTILIZER 10-10-10 BLEND	LIMESTONE	STRAW MULCH
MAR. 1 - AUG. 31	GERMAN OR BROWN TOP MILLET	50 LBS/ACRE	800 LBS/ACRE	4000 LBS/ACRE	4000 LBS/ACRE
SEP. 1 - FEB. 28	RYE GRASS	100 LBS/ACRE	800 LBS/ACRE	4000 LBS/ACRE	4000 LBS/ACRE

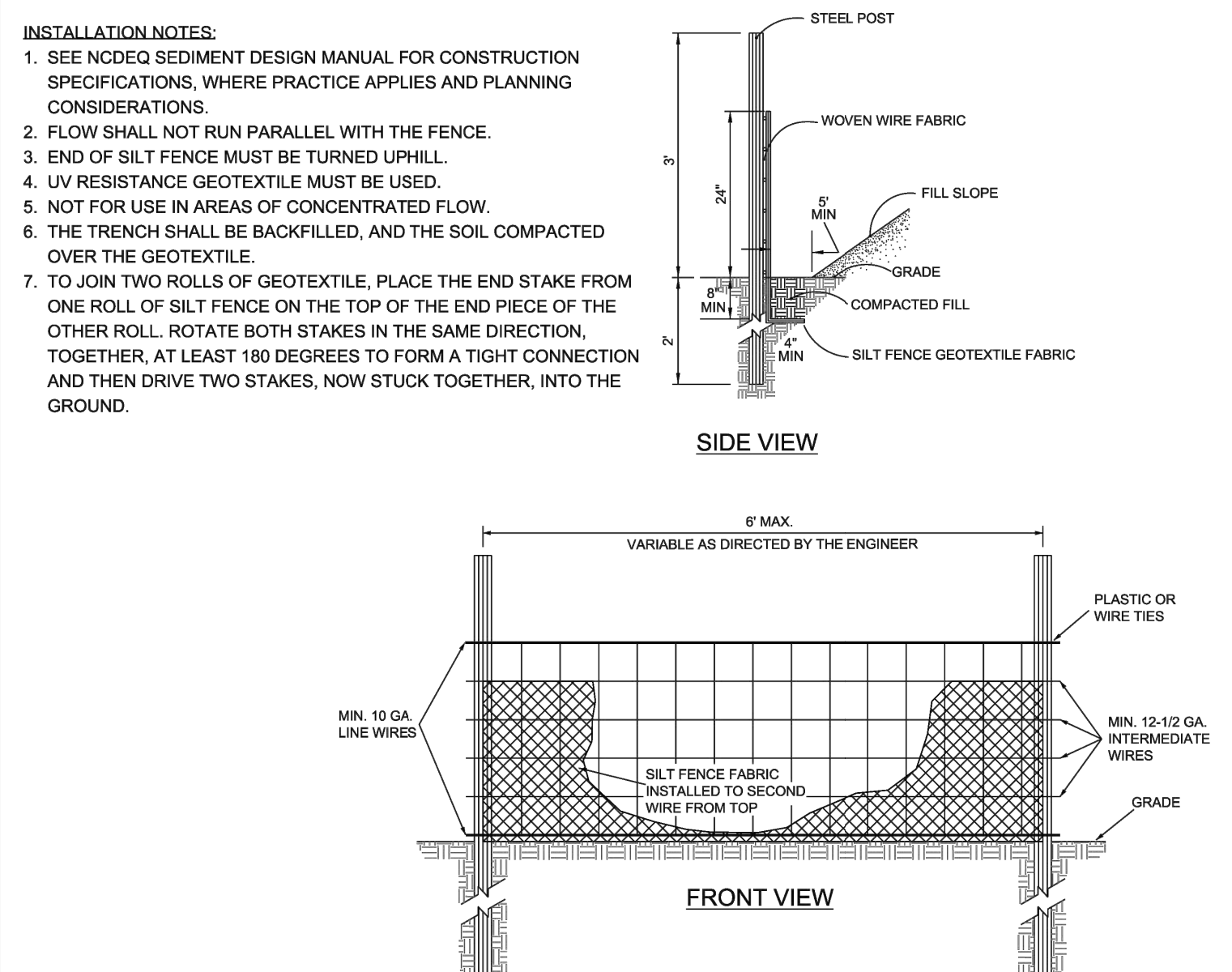
PERMANENT SEEDING					
DATE	TYPE	PLANTING RATE	FERTILIZER 10-10-10 BLEND	LIMESTONE	STRAW MULCH
MAR. 1 - AUG. 31	TALL FESCUE	100 LBS/ACRE	800 LBS/ACRE	4000 LBS/ACRE	4000 LBS/ACRE
	HULLED BERMUDA GRASS	25 LBS/ACRE			
SEP. 1 - FEB. 28	CENTIPEDA	10 LBS/ACRE	800 LBS/ACRE	4000 LBS/ACRE	4000 LBS/ACRE
	UNHULLED BERMUDA GRASS	35 LBS/ACRE			
	RYE GRASS	15 LBS/ACRE			

\*FOR 2:1 SLOPES OR STEEPER, ADD 20 LBS/ACRE SERICEA LESPEDEZA YEAR ROUND.  
AT THE ENVIRONMENTAL OVERSIGHT INSPECTOR'S REQUEST, 50 LBS/ACRE PENSACOLA BAHIA GRASS MAY BE ADDED OR SUBSTITUTED TO THE SEED MIX.

2. THE SURFACE SHALL BE MADE SMOOTH AND TRUE TO GRADE. THE AREAS SHALL BE PREPARED BY MEANS OF DISKING AND CROSS-DISKING, HARROWING, OR OTHER APPROVED METHOD OF PREPARATION SHALL BE CONTINUED UNTIL A FINE AND THOROUGHLY PLUVERIZED FOUR-INCH DEEP SEEDBED IS OBTAINED. CARE SHALL BE EXERCISED IN PREPARATION OF SEEDBEDS ON SLOPES TO KEEP LOOSE SOIL IN PLACE RATHER THAN PERMIT IT TO ACCUMULATE AT THE FOOT OF THE SLOPE. SEEDBED SHALL BE APPROVED PRIOR TO PLANTING THE SEED. PRIOR TO THE LAST TILLAGE OPERATION, LIME AND FERTILIZER SHALL BE BROADCAST WITH AN APPROVED SPREADER OVER THE SEEDBED IN ACCORDANCE WITH THE SCHEDULE.

- AFTER THE SEEDBEDS HAVE BEEN PREPARED AND APPROVED, THE MIXTURE OF GRASS SEED, AS SPECIFIED, SHALL BE SOWN BY MEANS OF AN APPROVED SEEDER AT THE APPROPRIATE RATE, THE SEED WORKED INTO THE SOIL TO A DEPTH APPROXIMATELY 1/2 INCH AND THEN COMPACTED BY MEANS OF A CULTIPACKER ROLLER OR OTHER APPROVED EQUIPMENT.
- GRAIN STRAW SHALL BE APPLIED OVER SEEDED AREAS AS A MULCH WITHIN 24 HOURS OF THE INITIAL SEEDING OPERATION. NO BARE GROUND SHALL BE VISIBLE WHEN RIDING BY A MULCHED AREA IF PROPER APPLICATIONS ARE ACHIEVED. THICK CLUMPS OF STRAW ARE NOT PERMISSIBLE AS A UNIFORM COVERAGE IS EXPECTED.
- STRAW MULCH AREAS SHALL BE TACKED WITH ASPHALT (APPLICATION RATE OF 0.10 GALLON PER SQUARE YARD / 10 GALLONS PER 1000 SQ. FT. / 436 GALLONS PER ACRE), ROVING, OR NETTING. ON STEEP SLOPES, NETTING IS PREFERRED.
- ROLLED EROSION CONTROL PRODUCTS SHALL BE USED AS DITCH TREATMENT OR ON SLOPES AS SPECIFIED ON THE PLANS.
- AT COMPLETION OF ANY PHASE OF GRADING ACTIVITIES OR WHERE CONSTRUCTION WILL TEMPORARILY CEASE, SEEDING SHALL BE COMPLETED IN ALL DISTRIBUTED AREAS AS SPECIFIED IN THE STABILIZATION TIMEFRAME TABLE BELOW AS A MINIMUM.
- QUANTITY OF FERTILIZER AND LIME SHALL BE CONFIRMED BY SOILS TEST. COMPOST OR SOIL TESTING SHALL BE APPLIED AT THE DISCRETION OF THE DEP REPRESENTATIVE.

NO.	REVISION	DATE
1	ADDENDUM #2	4/15/25



**INSTALLATION NOTES:**

- SEE NCDCEQ SEDIMENT DESIGN MANUAL FOR CONSTRUCTION SPECIFICATIONS, WHERE PRACTICE APPLIES AND PLANNING CONSIDERATIONS.
- FLOW SHALL NOT RUN PARALLEL WITH THE FENCE.
- END OF SILT FENCE MUST BE TURNED UPHILL.
- UV RESISTANCE GEOTEXTILE MUST BE USED.
- NOT FOR USE IN AREAS OF CONCENTRATED FLOW.
- THE TRENCH SHALL BE BACKFILLED, AND THE SOIL COMPACTED OVER THE GEOTEXTILE.
- TO JOIN TWO ROLLS OF GEOTEXTILE, PLACE THE END STAKE FROM ONE ROLL OF SILT FENCE ON THE TOP OF THE END PIECE OF THE OTHER ROLL. ROTATE BOTH STAKES IN THE SAME DIRECTION, TOGETHER, AT LEAST 180 DEGREES TO FORM A TIGHT CONNECTION AND THEN DRIVE TWO STAKES, NOW STUCK TOGETHER, INTO THE GROUND.

**MAINTENANCE NOTES:**

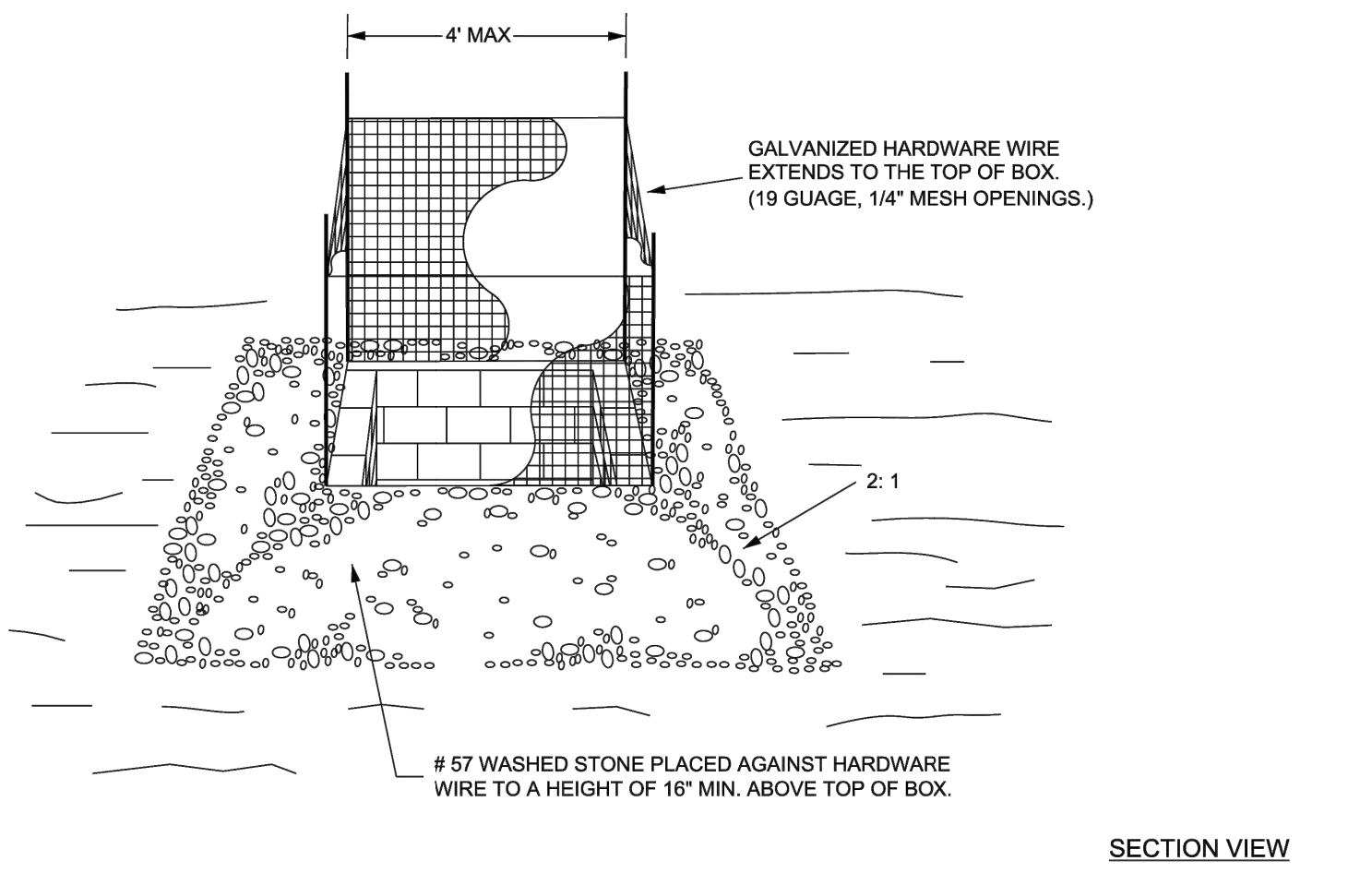
- SILT FENCE SHALL BE INSPECTED AT LEAST ONCE A WEEK, OR IMMEDIATELY AFTER EACH RAINFALL OF 1.0 INCH OR GREATER AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS NEEDED SHALL BE MADE IMMEDIATELY.
- SHOULD THE FABRIC COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
- SHOULD SILT FENCE UNDERMINE, REINSTALL SILT FENCE ENSURING THAT SILT FENCE IS TRENCHED IN, BACKFILLED AND COMPACTED.
- REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. WHEN REMOVING SEDIMENT AVOID UNDERMINING THE SILT FENCE AND ENSURE THAT GEOTEXTILE IS NOT DAMAGED. CLEAN OUT IS REQUIRED WHEN SILT FENCE IS AT 50% CAPACITY.
- ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH EXISTING GRADE, PREPARED AND SEEDED.

**CITY OF RALEIGH**  
STANDARD DETAIL

REVISIONS: \_\_\_\_\_ DATE: 8/20/24 NOT TO SCALE

STANDARD TEMPORARY (SEDIMENT/SILT) FENCE

**SW-20.02**



**INSTALLATION NOTES:**

- MAXIMUM DRAINAGE AREA TO PRACTICE IS 1 ACRE.
- SEE NCDCEQ SEDIMENT DESIGN MANUAL FOR CONSTRUCTION SPECIFICATIONS, WHERE PRACTICE APPLIES AND PLANNING CONSIDERATIONS AND DESIGN CRITERIA.
- UNIFORMITY GRADE A SHALLOW DEPRESSION APPROACHING THE INLET.

**MAINTENANCE NOTES:**

- MEASURES SHALL BE INSPECTED AT LEAST ONCE A WEEK OR IMMEDIATELY AFTER EACH RAINFALL OF 1.0 INCH OR GREATER. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
- CLEAR THE WIRE MESH OF ANY DEBRIS OR OTHER OBJECTS TO PROVIDE ADEQUATE FLOW FOR SUBSEQUENT RAIN EVENTS. SEDIMENT REMOVAL IS REQUIRED WHEN STONE IS 50% FULL. REMOVE SEDIMENT CAREFULLY NOT TO DAMAGE WIRE MESH. REPLACE STONE AS NEEDED TO FACILITATE DE-WATERING.

**CITY OF RALEIGH**  
STANDARD DETAIL

REVISIONS: \_\_\_\_\_ DATE: 8/20/24 NOT TO SCALE

STANDARD CATCH BASIN YARD INLET PROTECTION

**SW-20.19**



1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com

**Dewberry**  
Dewberry Engineers Inc.  
2610 Wycliff Road  
Suite 410  
Raleigh, NC 27607-3073  
919.881.9939  
NC License No. F-0929

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**PERFORMING ARTS CENTER PLAZA**  
CITY OF RALEIGH  
2 E SOUTH STREET, RALEIGH, NC 27601



NO.	REVISION	DATE
1	ADDENDUM #2	4/15/25

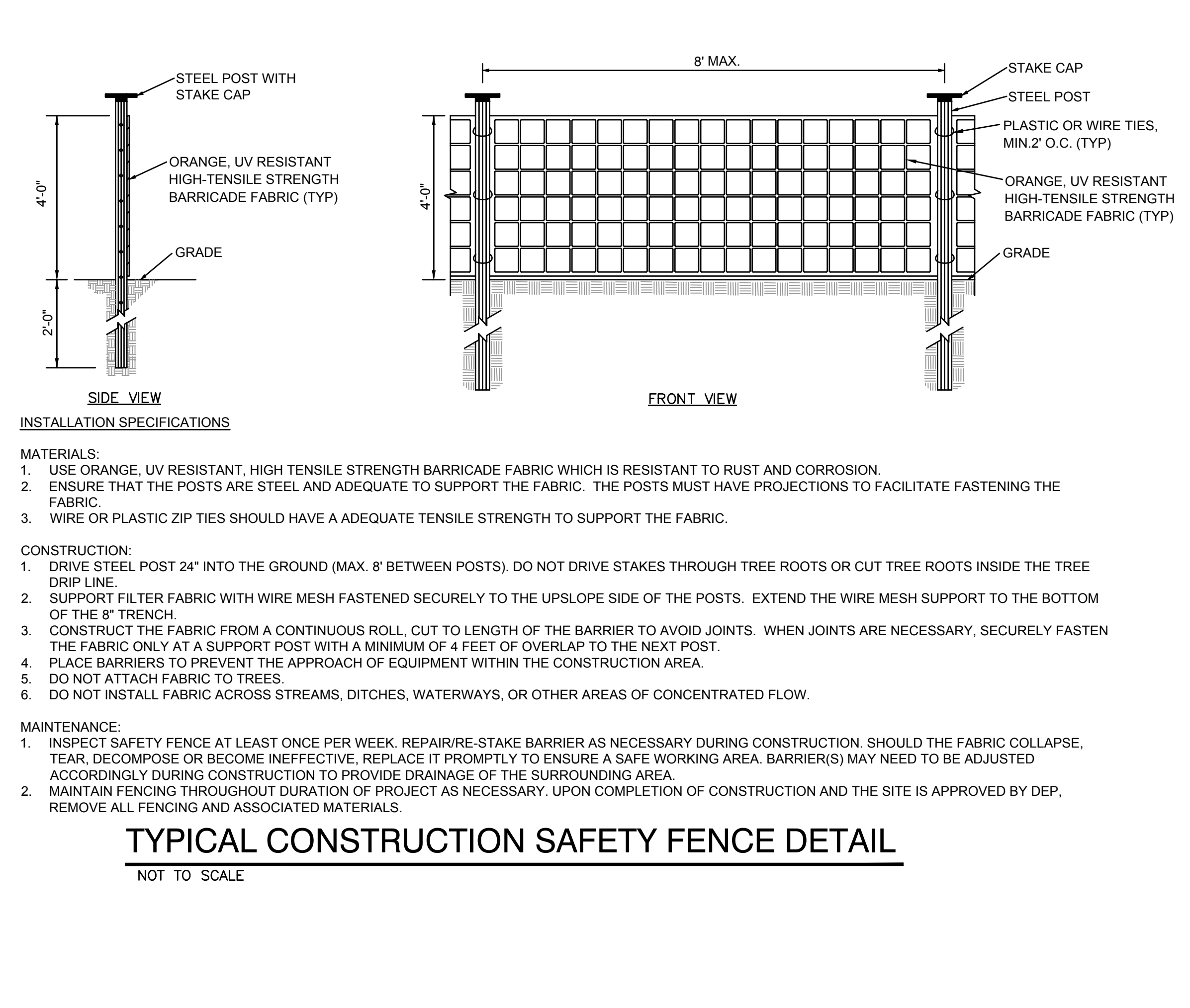
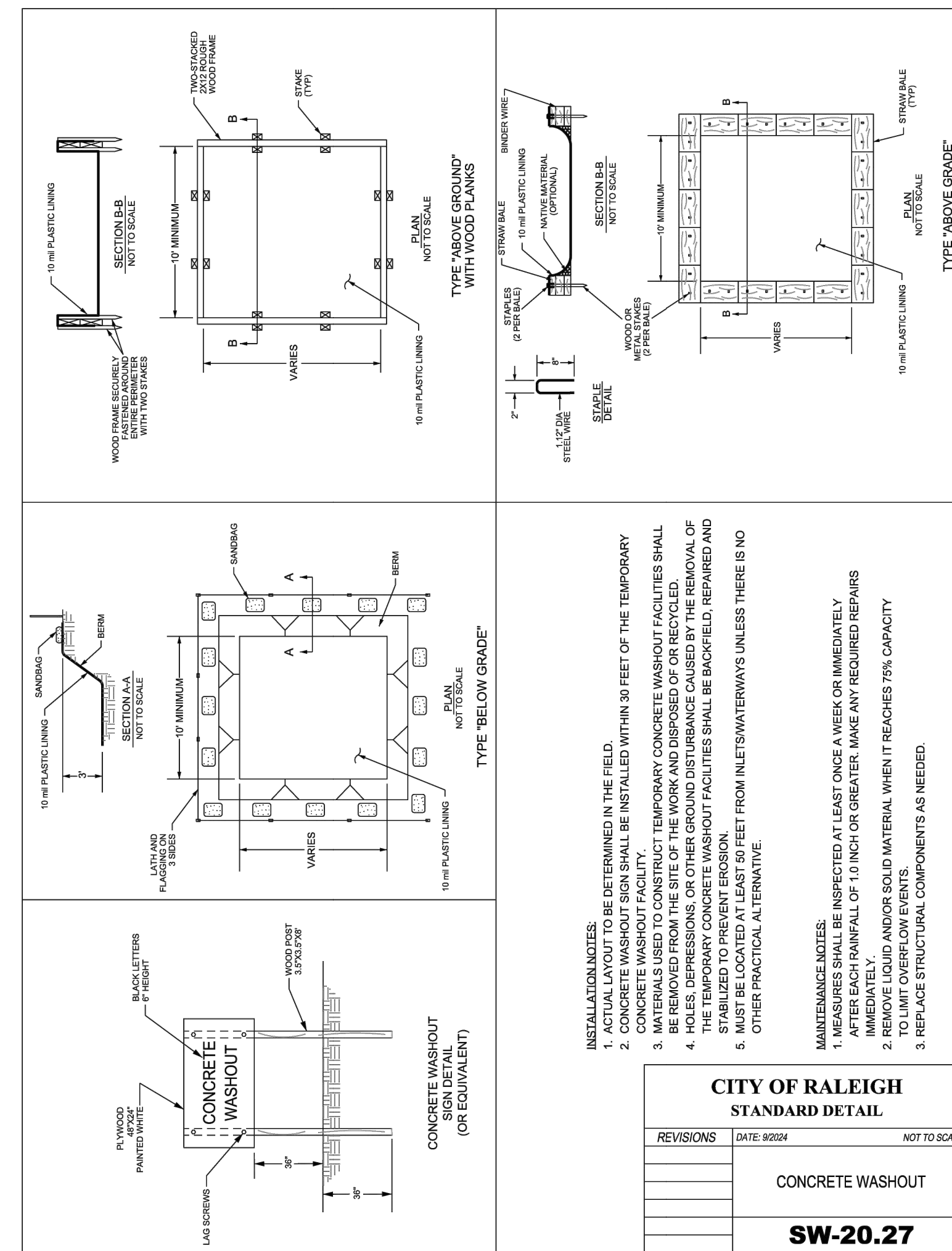
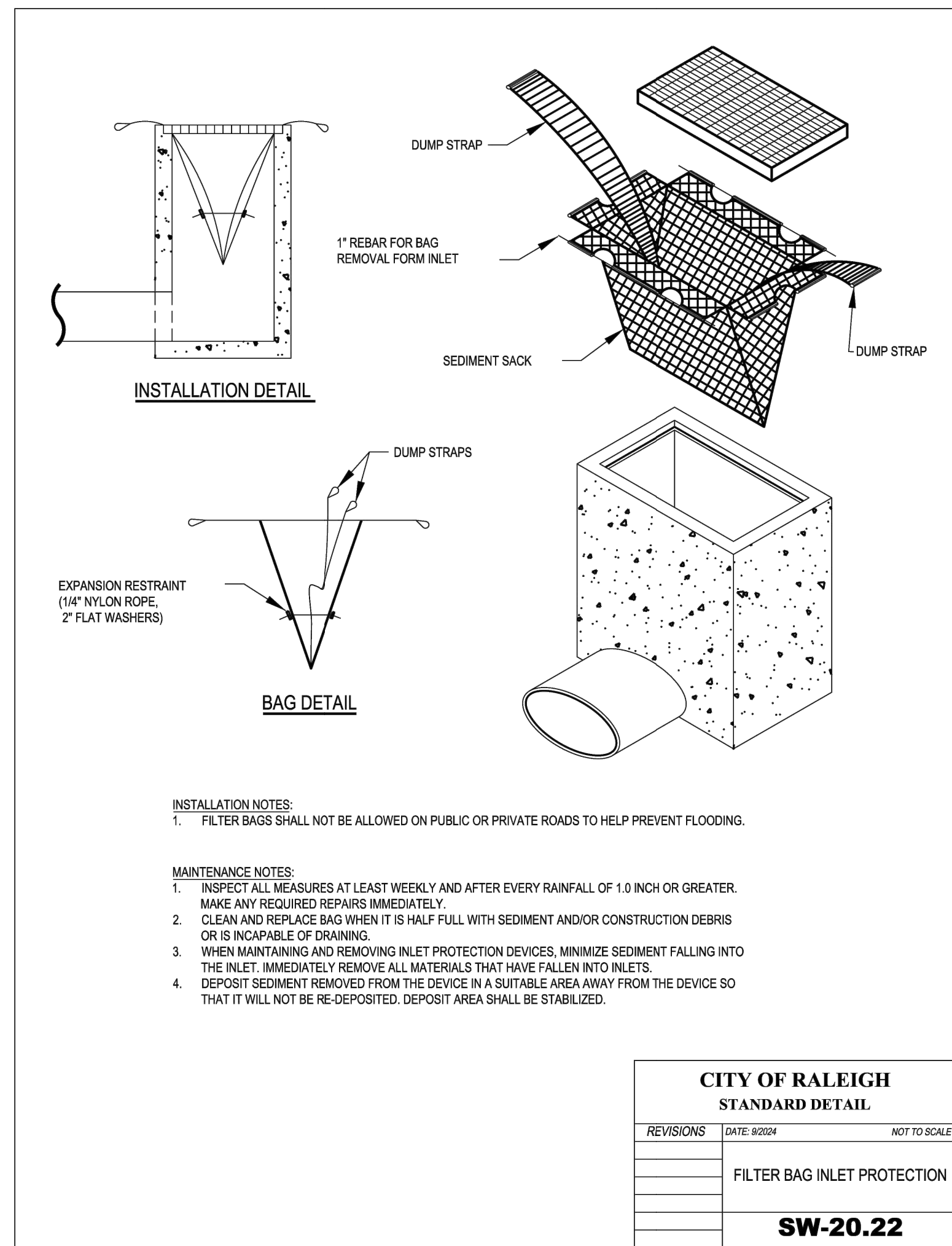
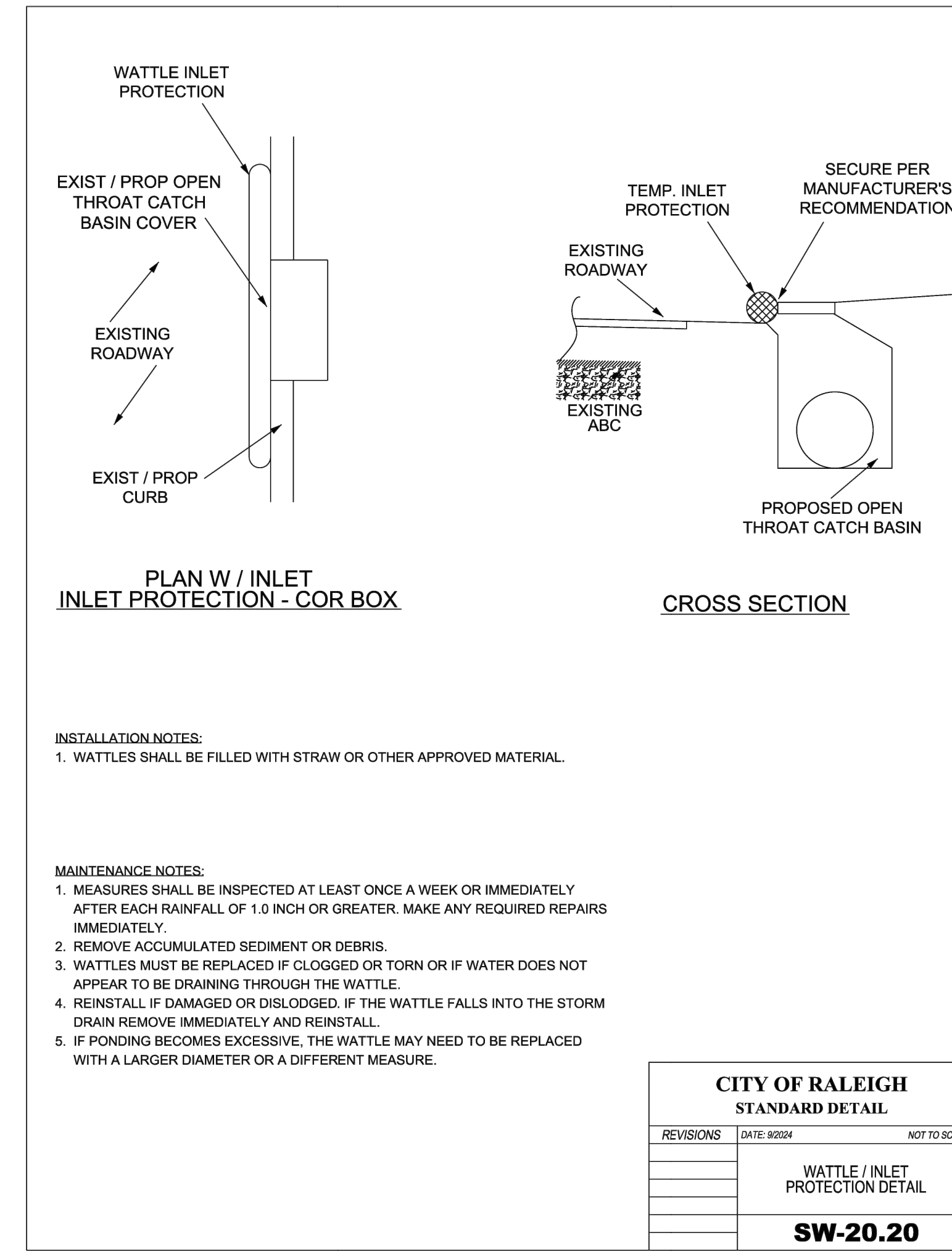
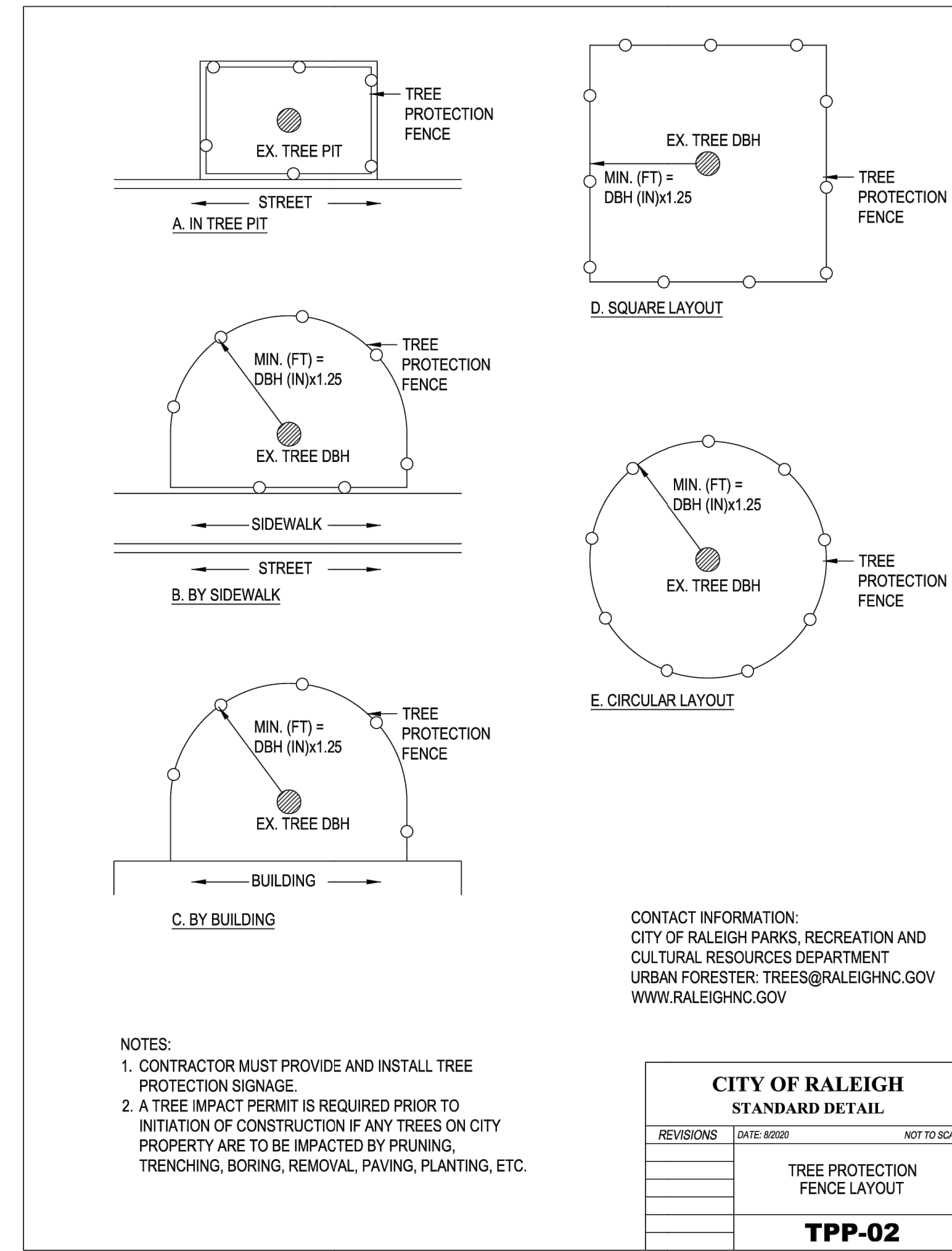
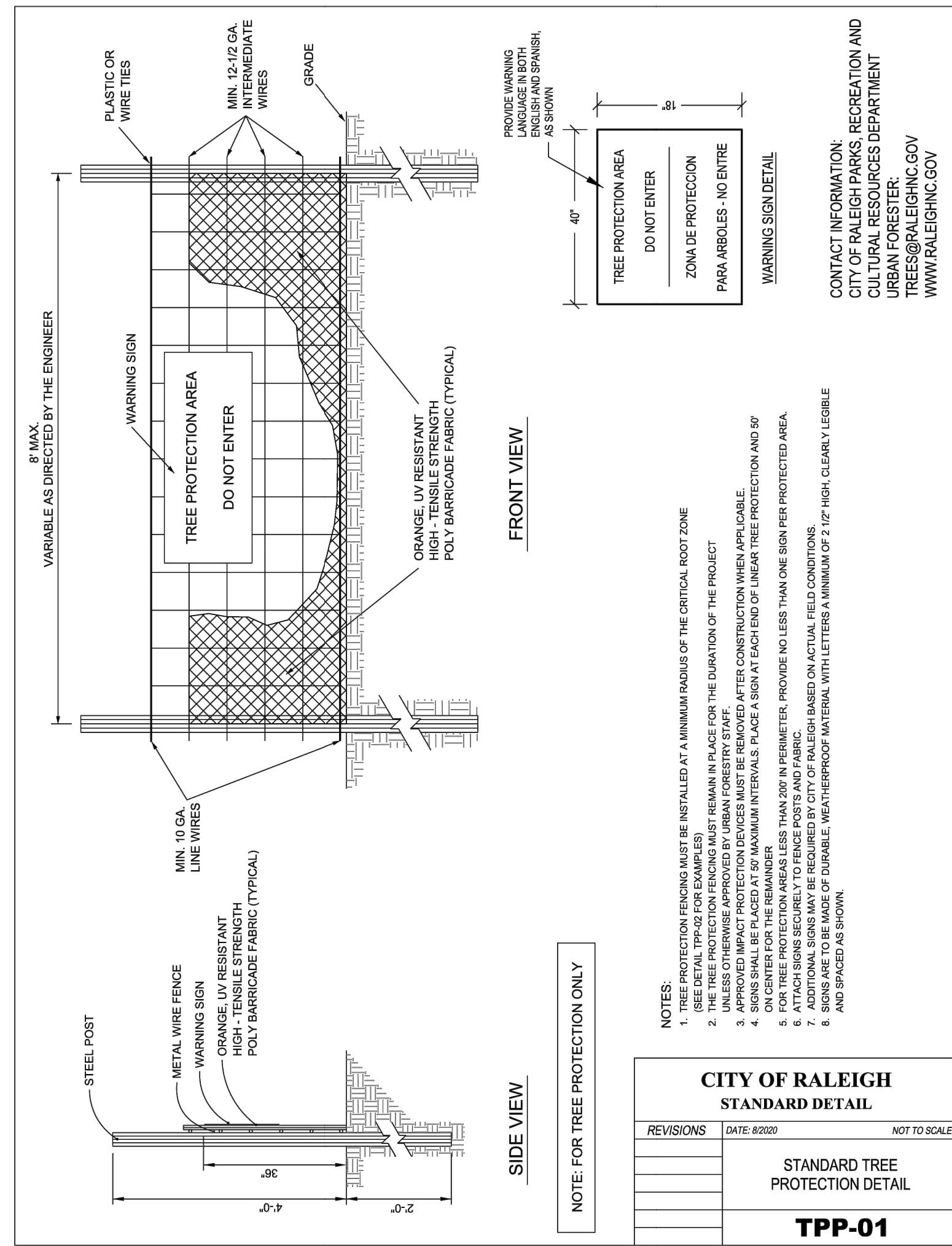
JOB NUMBER  
**23-077**

DATE ISSUED  
**03/13/2025**

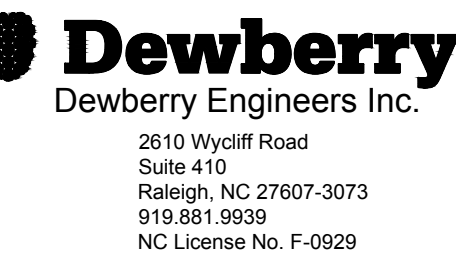
PROJECT STATUS  
**BID DOCUMENTS**

SHEET  
**EROSION AND SEDIMENT CONTROL DETAILS**

**C503**



**ARCHITECTURE**  
1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com



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CITY OF RALEIGH  
2 E SOUTH STREET, RALEIGH, NC 27601



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SHEET  
**EROSION AND  
SEDIMENT CONTROL  
DETAILS**

**C504**

**GROUND STABILIZATION AND MATERIALS HANDLING PRACTICES FOR COMPLIANCE WITH THE NCG01 CONSTRUCTION GENERAL PERMIT**

Implementing the details and specifications on this plan sheet will result in the construction activity being considered compliant with the Ground Stabilization and Materials Handling sections of the NCG01 Construction General Permit (Sections E and F, respectively). The permittee shall comply with the Erosion and Sediment Control plan approved by the delegated authority having jurisdiction. All details and specifications shown on this sheet may not apply depending on site conditions and the delegated authority having jurisdiction.

**SECTION E: GROUND STABILIZATION**

Required Ground Stabilization Timeframes		
Site Area Description	Stabilize within this many calendar days after ceasing land disturbance	Timeframe variations
(a) Perimeter dikes, swales, ditches, and perimeter slopes	7	None
(b) High Quality Water (HQW) Zones	7	None
(c) Slopes steeper than 3:1	7	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed
(d) Slopes 3:1 to 4:1	14	-7 days for slopes greater than 50' in length and with slopes steeper than 4:1 -7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed
(e) Areas with slopes flatter than 4:1	14	-7 days for perimeter dikes, swales, ditches, perimeter slopes and HQW Zones -10 days for Falls Lake Watershed unless there is zero slope

**Note:** After the permanent cessation of construction activities, any areas with temporary ground stabilization shall be converted to permanent ground stabilization as soon as practicable but in no case longer than 90 calendar days after the last land disturbing activity. Temporary ground stabilization shall be maintained in a manner to render the surface stable against accelerated erosion until permanent ground stabilization is achieved.

**GROUND STABILIZATION SPECIFICATION**

Stabilize the ground sufficiently so that rain will not dislodge the soil. Use one of the techniques in the table below:

<ul style="list-style-type: none"> <li>Temporary grass seed covered with straw or other mulches and tackifiers</li> <li>Hydroseeding</li> <li>Rolled erosion control products with or without temporary grass seed</li> <li>Appropriately applied straw or other mulch</li> <li>Plastic sheeting</li> </ul>	<ul style="list-style-type: none"> <li>Permanent grass seed covered with straw or other mulches and tackifiers</li> <li>Geotextile fabrics such as permanent soil reinforcement matting</li> <li>Hydroseeding</li> <li>Shrubs or other permanent plantings covered with mulch</li> <li>Uniform and evenly distributed ground cover sufficient to restrain erosion</li> <li>Structural methods such as concrete, asphalt or retaining walls</li> <li>Rolled erosion control products with grass seed</li> </ul>
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**POLYACRYLAMIDES (PAMS) AND FLOCCULANTS**

- Select flocculants that are appropriate for the soils being exposed during construction, selecting from the *NC DWR List of Approved PAMS/Flocculants*.
- Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
- Apply flocculants at the concentrations specified in the *NC DWR List of Approved PAMS/Flocculants* and in accordance with the manufacturer's instructions.
- Provide ponding area for containment of treated Stormwater before discharging offsite.
- Store flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

**EQUIPMENT AND VEHICLE MAINTENANCE**

- Maintain vehicles and equipment to prevent discharge of fluids.
- Provide drip pans under any stored equipment.
- Identify leaks and repair as soon as feasible, or remove leaking equipment from the project.
- Collect all spent fluids, store in separate containers and properly dispose as hazardous waste (recycle when possible).
- Remove leaking vehicles and construction equipment from service until the problem has been corrected.
- Bring used fuels, lubricants, coolants, hydraulic fluids and other petroleum products to a recycling or disposal center that handles these materials.

**LITTER, BUILDING MATERIAL AND LAND CLEARING WASTE**

- Never bury or burn waste. Place litter and debris in approved waste containers.
- Provide a sufficient number and size of waste containers (e.g dumpster, trash receptacle) on site to contain construction and domestic wastes.
- Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Locate waste containers on areas that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
- Cover waste containers at the end of each workday and before storm events or provide secondary containment. Repair or replace damaged waste containers.
- Anchor all lightweight items in waste containers during times of high winds.
- Empty waste containers as needed to prevent overflow. Clean up immediately if containers overflow.
- Dispose waste off-site at an approved disposal facility.
- On business days, clean up and dispose of waste in designated waste containers.

**PAINT AND OTHER LIQUID WASTE**

- Do not dump paint and other liquid waste into storm drains, streams or wetlands.
- Locate paint washouts at least 50 feet away from storm drain inlets and surface waters unless no other alternatives are reasonably available.
- Contain liquid wastes in a controlled area.
- Containment must be labeled, sized and placed appropriately for the needs of site.
- Prevent the discharge of soaps, solvents, detergents and other liquid wastes from construction sites.

**PORTABLE TOILETS**

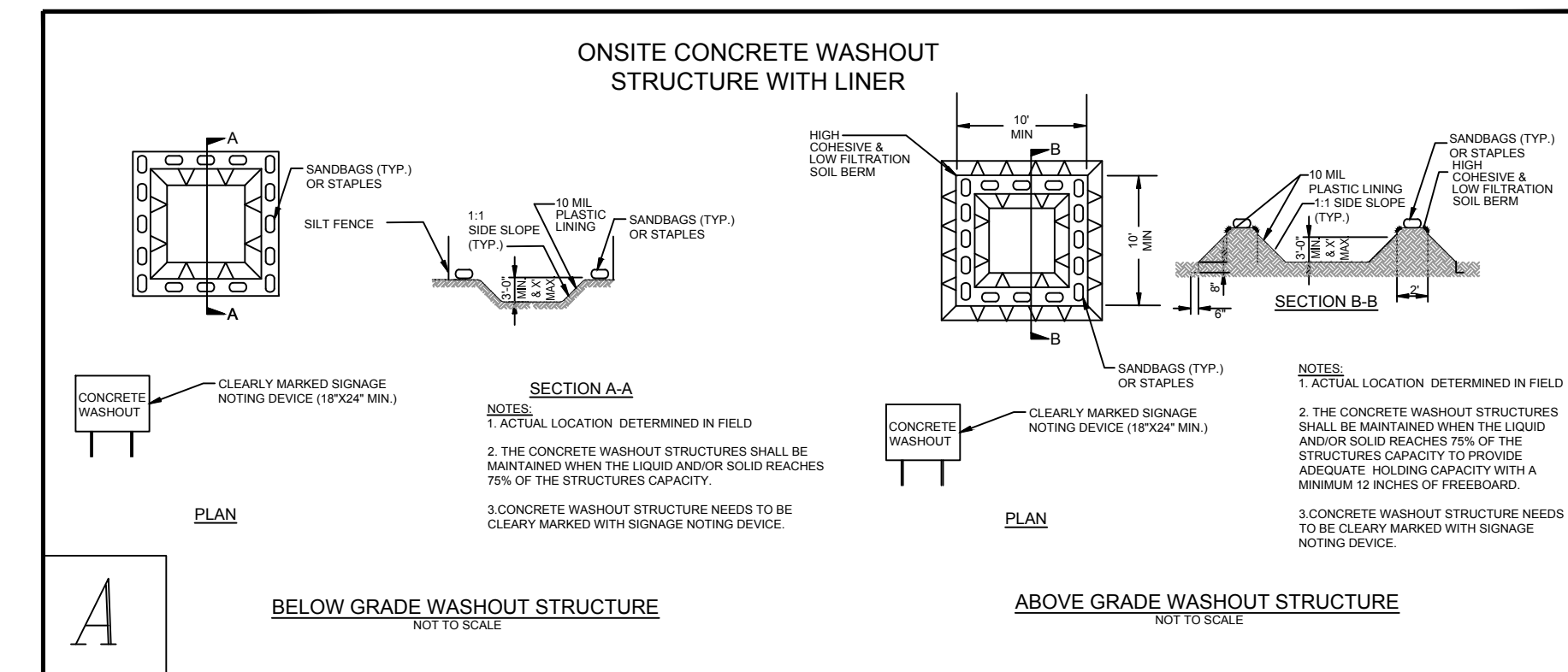
- Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands unless there is no alternative reasonably available. If 50 foot offset is not attainable, provide relocation of portable toilet behind silt fence or place on a gravel pad and surround with sand bags.
- Provide staking or anchoring of portable toilets during periods of high winds or in high foot traffic areas.
- Monitor portable toilets for leaking and properly dispose of any leaked material. Utilize a licensed sanitary waste hauler to remove leaking portable toilets and replace with properly operating unit.

**EARTHEN STOCKPILE MANAGEMENT**

- Show stockpile locations on plans. Locate earthen-material stockpile areas at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown no other alternatives are reasonably available.
- Protect stockpile with silt fence installed along toe of slope with a minimum offset of five feet from the toe of stockpile.
- Provide stable stone access point when feasible.
- Stabilize stockpile within the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as vegetative, physical or chemical coverage techniques that will restrain accelerated erosion on disturbed soils for temporary or permanent control needs.

**HAZARDOUS AND TOXIC WASTE**

- Create designated hazardous waste collection areas on-site.
- Place hazardous waste containers under cover or in secondary containment.
- Do not store hazardous chemicals, drums or bagged materials directly on the ground.



**CONCRETE WASHOUTS**

- Do not discharge concrete or cement slurry from the site.
- Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
- Manage washout from mortar mixers in accordance with the above item and in addition place the mixer and associated materials on impervious barrier and within lot perimeter silt fence.
- Install temporary concrete washouts per local requirements, where applicable. If an alternate method or product is to be used, contact your approval authority for review and approval. If local standard details are not available, use one of the two types of temporary concrete washouts provided on this detail.
- Do not use concrete washouts for dewatering or storing defective curb or sidewalk sections. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface waters. Liquid waste must be pumped out and removed from project.
- Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
- Locate washouts in an easily accessible area, on level ground and install a stone entrance pad in front of the washout. Additional controls may be required by the approving authority.
- Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
- Remove leavings from the washout when at approximately 75% capacity to limit overflow events. Replace the tarp, sand bags or other temporary structural components when no longer functional. When utilizing alternative or proprietary products, follow manufacturer's instructions.
- At the completion of the concrete work, remove remaining leavings and dispose of in an approved disposal facility. Fill pit, if applicable, and stabilize any disturbance caused by removal of washout.

**HERBICIDES, PESTICIDES AND RODENTICIDES**

- Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
- Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
- Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into wells, stormwater drains, ground water or surface water. If a spill occurs, clean area immediately.
- Do not stockpile these materials onsite.

**NCG01 GROUND STABILIZATION AND MATERIALS HANDLING**



**ARCHITECTURE**  
1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com



**Dewberry Engineers Inc.**  
2610 Wyckoff Road  
Suite 410  
Raleigh, NC 27607-3073  
919.881.9939  
NC License No. F-0929

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PROJECT STATUS  
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SHEET  
**NCG01 DETAILS 1**

**PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION A: SELF-INSPECTION**

Self-inspections are required during normal business hours in accordance with the table below. When adverse weather or site conditions would cause the safety of the inspection personnel to be in jeopardy, the inspection may be delayed until the next business day on which it is safe to perform the inspection. In addition, when a storm event of equal to or greater than 1.0 inch occurs outside of normal business hours, the self-inspection shall be performed upon the commencement of the next business day. Any time when inspections were delayed shall be noted in the Inspection Record.

Inspect	Frequency (during normal business hours)	Inspection records must include:
(1) Rain gauge maintained in good working order	Daily	Daily rainfall amounts. If no daily rain gauge observations are made during weekend or holiday periods, and no individual-day rainfall information is available, record the cumulative rain measurement for those unattended days (and this will determine if a site inspection is needed). Days on which no rainfall occurred shall be recorded as "zero." The permittee may use another rain-monitoring device approved by the Division.
(2) E&SC Measures	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the measures inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Indication of whether the measures were operating properly, 5. Description of maintenance needs for the measure, 6. Description, evidence, and date of corrective actions taken.
(3) Stormwater discharge outfalls (SDOs)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	1. Identification of the discharge outfalls inspected, 2. Date and time of the inspection, 3. Name of the person performing the inspection, 4. Evidence of indicators of stormwater pollution such as oil sheen, floating or suspended solids or discoloration, 5. Indication of visible sediment leaving the site, 6. Description, evidence, and date of corrective actions taken.
(4) Perimeter of site	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If visible sedimentation is found outside site limits, then a record of the following shall be made: 1. Actions taken to clean up or stabilize the sediment that has left the site limits, 2. Description, evidence, and date of corrective actions taken, and 3. An explanation as to the actions taken to control future releases.
(5) Streams or wetlands onsite or offsite (where accessible)	At least once per 7 calendar days and within 24 hours of a rain event ≥ 1.0 inch in 24 hours	If the stream or wetland has increased visible sedimentation or a stream has visible increased turbidity from the construction activity, then a record of the following shall be made: 1. Description, evidence and date of corrective actions taken, and 2. Records of the required reports to the appropriate Division Regional Office per Part III, Section C, Item (2)(a) of this permit.
(6) Ground stabilization measures	After each phase of grading	1. The phase of grading (installation of perimeter E&SC measures, clearing and grubbing, installation of storm drainage facilities, completion of all land-disturbing activity, construction or redevelopment, permanent ground cover). 2. Documentation that the required ground stabilization measures have been provided within the required timeframe or an assurance that they will be provided as soon as possible.

NOTE: The rain inspection resets the required 7 calendar day inspection requirement.

**PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION B: RECORDKEEPING**

**1. E&SC Plan Documentation**

The approved E&SC plan as well as any approved deviation shall be kept on the site. The approved E&SC plan must be kept up-to-date throughout the coverage under this permit. The following items pertaining to the E&SC plan shall be kept on site and available for inspection at all times during normal business hours.

Item to Document	Documentation Requirements
(a) Each E&SC measure has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&SC plan.	Initial and date each E&SC measure on a copy of the approved E&SC plan or complete, date and sign an inspection report that lists each E&SC measure shown on the approved E&SC plan. This documentation is required upon the initial installation of the E&SC measures or if the E&SC measures are modified after initial installation.
(b) A phase of grading has been completed.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate completion of the construction phase.
(c) Ground cover is located and installed in accordance with the approved E&SC plan.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate compliance with approved ground cover specifications.
(d) The maintenance and repair requirements for all E&SC measures have been performed.	Complete, date and sign an inspection report.
(e) Corrective actions have been taken to E&SC measures.	Initial and date a copy of the approved E&SC plan or complete, date and sign an inspection report to indicate the completion of the corrective action.

**2. Additional Documentation to be Kept on Site**

In addition to the E&SC plan documents above, the following items shall be kept on the site and available for inspectors at all times during normal business hours, unless the Division provides a site-specific exemption based on unique site conditions that make this requirement not practical:

- (a) This General Permit as well as the Certificate of Coverage, after it is received.
- (b) Records of inspections made during the previous twelve months. The permittee shall record the required observations on the Inspection Record Form provided by the Division or a similar inspection form that includes all the required elements. Use of electronically-available records in lieu of the required paper copies will be allowed if shown to provide equal access and utility as the hard-copy records.

**3. Documentation to be Retained for Three Years**

All data used to complete the e-NOI and all inspection records shall be maintained for a period of three years after project completion and made available upon request. [40 CFR 122.41]

**PART III  
SELF-INSPECTION, RECORDKEEPING AND REPORTING**

**SECTION C: REPORTING**

**1. Occurrences that Must be Reported**

Permittees shall report the following occurrences:

- (a) Visible sediment deposition in a stream or wetland.
- (b) Oil spills if:
  - They are 25 gallons or more,
  - They are less than 25 gallons but cannot be cleaned up within 24 hours,
  - They cause sheen on surface waters (regardless of volume), or
  - They are within 100 feet of surface waters (regardless of volume).
- (c) Releases of hazardous substances in excess of reportable quantities under Section 311 of the Clean Water Act (Ref: 40 CFR 110.3 and 40 CFR 117.3) or Section 102 of CERCLA (Ref: 40 CFR 302.4) or G.S. 143-215.85.
- (d) Anticipated bypasses and unanticipated bypasses.
- (e) Noncompliance with the conditions of this permit that may endanger health or the environment.

**2. Reporting Timeframes and Other Requirements**

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division regional office within the timeframes and in accordance with the other requirements listed below. Occurrences outside normal business hours may also be reported to the Department's Environmental Emergency Center personnel at (800) 858-0368.

Occurrence	Reporting Timeframes (After Discovery) and Other Requirements
(a) Visible sediment deposition in a stream or wetland	<ul style="list-style-type: none"> <li>• <b>Within 24 hours</b>, an oral or electronic notification.</li> <li>• <b>Within 7 calendar days</b>, a report that contains a description of the sediment and actions taken to address the cause of the deposition. Division staff may waive the requirement for a written report on a case-by-case basis.</li> <li>• If the stream is named on the <a href="#">NC 303(d) list</a> as impaired for sediment-related causes, the permittee may be required to perform additional monitoring, inspections or apply more stringent practices if staff determine that additional requirements are needed to assure compliance with the federal or state impaired-waters conditions.</li> </ul>
(b) Oil spills and release of hazardous substances per Item 1(b)-(c) above	<ul style="list-style-type: none"> <li>• <b>Within 24 hours</b>, an oral or electronic notification. The notification shall include information about the date, time, nature, volume and location of the spill or release.</li> </ul>
(c) Anticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> <li>• <b>A report at least ten days before the date of the bypass, if possible.</b> The report shall include an evaluation of the anticipated quality and effect of the bypass.</li> </ul>
(d) Unanticipated bypasses [40 CFR 122.41(m)(3)]	<ul style="list-style-type: none"> <li>• <b>Within 24 hours</b>, an oral or electronic notification.</li> <li>• <b>Within 7 calendar days</b>, a report that includes an evaluation of the quality and effect of the bypass.</li> </ul>
(e) Noncompliance with the conditions of this permit that may endanger health or the environment [40 CFR 122.41(l)(7)]	<ul style="list-style-type: none"> <li>• <b>Within 24 hours</b>, an oral or electronic notification.</li> <li>• <b>Within 7 calendar days</b>, a report that contains a description of the noncompliance, and its causes; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time noncompliance is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. [40 CFR 122.41(l)(6).</li> <li>• Division staff may waive the requirement for a written report on a case-by-case basis.</li> </ul>

**PART II, SECTION G, ITEM (4)  
DRAW DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSE OUT**

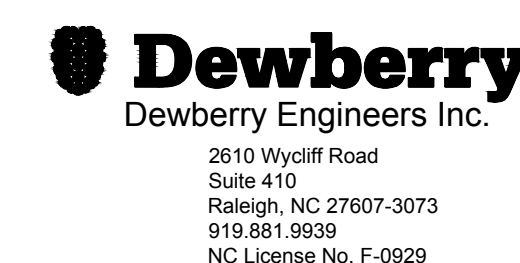
Sediment basins and traps that receive runoff from drainage areas of one acre or more shall use outlet structures that withdraw water from the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather). Non-surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

- (a) The E&SC plan authority has been provided with documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur. The non-surface withdrawal shall not commence until the E&SC plan authority has approved these items,
- (b) The non-surface withdrawal has been reported as an anticipated bypass in accordance with Part III, Section C, Item (2)(c) and (d) of this permit,
- (c) Dewatering discharges are treated with controls to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sited, designed and maintained dewatering tanks, weir tanks, and filtration systems,
- (d) Vegetated, upland areas of the sites or a properly designed stone pad is used to the extent feasible at the outlet of the dewatering treatment devices described in Item (c) above,
- (e) Velocity dissipation devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
- (f) Sediment removed from the dewatering treatment devices described in Item (c) above is disposed of in a manner that does not cause deposition of sediment into waters of the United States.

**NCG01 SELF-INSPECTION, RECORDKEEPING AND REPORTING**



**ARCHITECTURE**  
1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com



**FINAL FOR PERMITTING AND BIDDING**  
DO NOT USE FOR CONSTRUCTION

**PERFORMING ARTS CENTER PLAZA**  
CITY OF RALEIGH  
2 E SOUTH STREET, RALEIGH, NC 27601



NO.	REVISION	DATE
1	ADDENDUM #2	4/15/25

JOB NUMBER  
**23-077**  
DATE ISSUED  
**03/13/2025**  
PROJECT STATUS  
**BID DOCUMENTS**

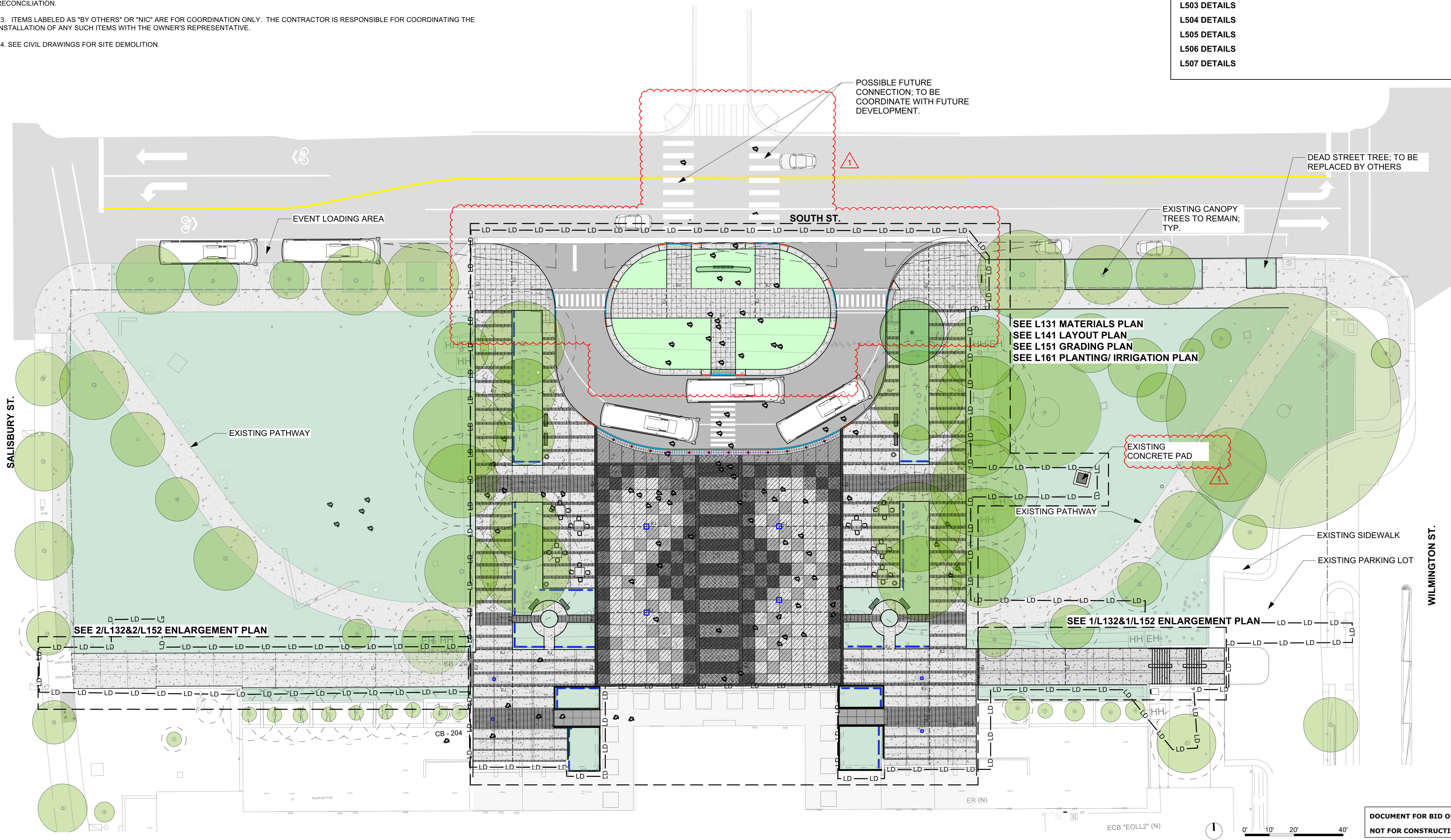
SHEET  
**NCG01 DETAILS 2**

**SITE PLANNING NOTES - APPLY TO ALL L-XXX SERIES**

1. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION AS AMENDED, AND ARE THE CONTRACTOR'S RESPONSIBILITY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE TRAFFIC CONTROL IN OR ADJACENT TO NCDOT OR CITY RIGHT-OF-WAY. ALL METHODS SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND NCDOT STANDARDS.
3. CONTRACTOR SHALL PROVIDE SAW CUTS AT THE UNION BETWEEN EXISTING CONDITIONS AND PROPOSED CONSTRUCTION UNLESS OTHERWISE NOTED. REFER TO PLANS FOR ADDITIONAL INFORMATION.
4. UNLESS NOTED ON THE DRAWINGS ALL BUFFERS, WETLANDS, STREAM CHANNELS, SETBACKS AND TREE PROTECTION AREAS SHALL BE PROTECTED WITH NO CONSTRUCTION ACCESS, STORAGE OR USE OF ANY KIND. THE CONTRACTOR SHALL KEEP CONSTRUCTION ACTIVITIES WITHIN THE "PROJECT LIMITS" SHOWN ON THE DRAWINGS.
5. ALL DIMENSIONS INDICATING "VERIFY" SHALL BE CONFIRMED BY THE CONTRACTOR PRIOR TO STARTING CONSTRUCTION REPORT ANY DISCREPANCIES IMMEDIATELY TO THE LANDSCAPE ARCHITECT.
6. ALL DIMENSIONS LABELED "EQ" ARE TO INDICATE EQUAL MEASUREMENTS BETWEEN THE DIMENSIONS END POINTS ON THE DRAWING.
7. STREET AND PARKING DIMENSIONS ARE FROM FACE OF CURB UNLESS OTHERWISE INDICATED.
8. THE CONTRACTOR SHALL STAKE THE LAYOUT AND ALIGNMENT OF ALL PAVEMENTS, WALLS, AND OTHER SITE FEATURES IN THE FIELD FOR APPROVAL BY THE LANDSCAPE ARCHITECT PRIOR TO START OF CONSTRUCTION.
9. THE CONTRACTOR SHALL PROVIDE SMOOTH LAYOUT ALIGNMENTS BETWEEN EXISTING CONDITIONS AND PROPOSED SITE IMPROVEMENTS.
10. ALL ANGLES ARE 90 DEGREES UNLESS OTHERWISE NOTED ON THE DRAWINGS.
11. UNLESS OTHERWISE NOTED, CONCRETE SCORE AND EXPANSION JOINTS SHALL BE ALIGNED WITH BUILDING FEATURES AND WITH CORNERS OF PAVEMENT. SPACE THE ADDITIONAL JOINTS BETWEEN THESE POINTS EQUALLY.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING ALL EXISTING JOB CONDITIONS. ANY ADVERSE EXISTING CONDITIONS AFFECTING THE WORK SHOWN ON THE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR POSSIBLE CLARIFICATION OR RECONCILIATION.
13. ITEMS LABELED AS "BY OTHERS" OR "NIC" ARE FOR COORDINATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE INSTALLATION OF ANY SUCH ITEMS WITH THE OWNER'S REPRESENTATIVE.
14. SEE CIVIL DRAWINGS FOR SITE DEMOLITION.

**LANDSCAPE SHEET INDEX:**

- L101 - OVERALL PLAN
- L131.1 MATERIALS ENLARGEMENT PLAN - BASE BID
- L131.2 MATERIALS ENLARGEMENT PLAN - ALT#1.1
- L131.2 MATERIALS ENLARGEMENT PLAN - ALT#1.2&1.3
- L132 MATERIALS/ LAYOUT ENLARGEMENT PLAN
- L133 MATERIALS/DEMOLITION ENLARGEMENT PLAN - GRANITE CURB AND RAMP
- L141 PAVING PATTERN LAYOUT PLAN
- L142 GRANITE/ PRECAST SEGMENT ENLARGEMENT PLAN
- L143 FIRE ACCESS PLAN
- L151 GRADING ENLARGEMENT PLAN
- L152 GRADING ENLARGEMENT PLAN
- L161 SOIL AND IRRIGATION PLAN
- L401 ELEVATION AND SECTION
- L501 DETAILS
- L502 DETAILS
- L503 DETAILS
- L504 DETAILS
- L505 DETAILS
- L506 DETAILS
- L507 DETAILS

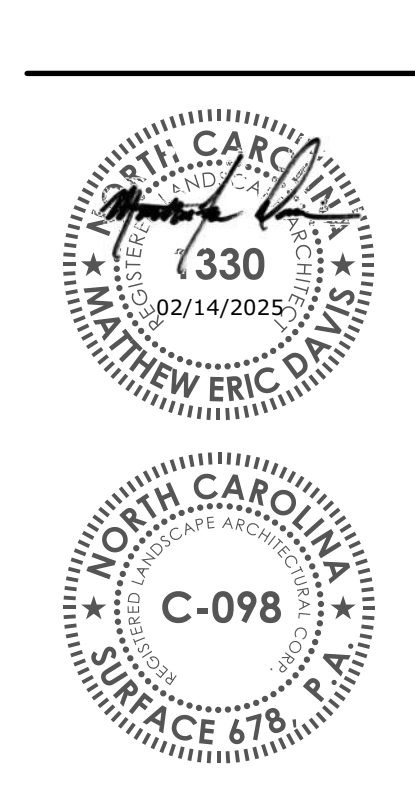


1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com

**Surface**

Surface 678, P.A.  
215 Morris Street, Suite 150  
Durham, NC 27701  
www.surface678.com  
p: 919-419-1199  
f: 919-419-1669

**PERFORMING ARTS CENTER PLAZA**  
CITY OF RALEIGH  
2 E SOUTH STREET, RALEIGH, NC 27601



NO.	REVISION	DATE
1	ADDENDUM# 2	25.04.15

JOB NUMBER  
**23-077**  
DATE ISSUED  
**04/15/2025**  
PROJECT STATUS  
**BID DOCUMENTS**

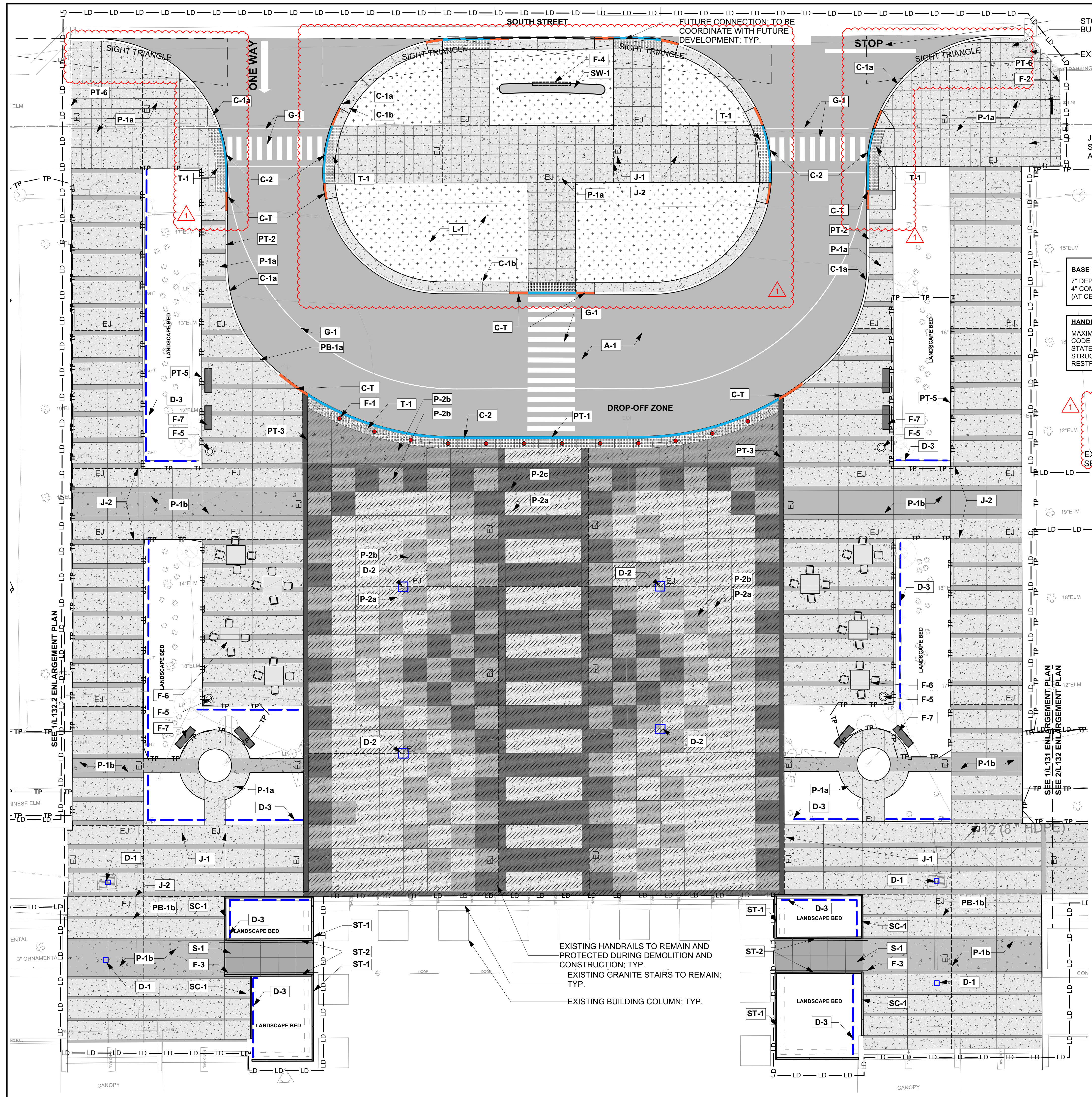
SHEET

OVERALL PLAN

**L101**

Plot: 8/14/2024 12:33:51 PM Time: These drawings are the property of HH Architecture, P.A. They may not be used for any purpose without written permission. Copyright 2022 by HH Architecture, P.A. All rights reserved.

DOCUMENT FOR BID ONLY  
NOT FOR CONSTRUCTION



**LEGEND - PAVING/ LANDSCAPE MATERIALS**

A-1	HEAVY DUTY ASPHALT PAVING	D3 L501
P-1a	LIGHT DUTY CONCRETE - STANDARD FINISH (FINISH A)	
P-1b	LIGHT DUTY CONCRETE - FINISH B	D1 L501
PB-1a	1' WIDE LIGHT DUTY CONCRETE BAND - FINISH B	
PB-1b	6" WIDE LIGHT DUTY CONCRETE BAND - FINISH B	
P-2a	HEAVY DUTY CONCRETE PAVEMENT - STANDARD FINISH (FINISH A)	
P-2b	HEAVY DUTY CONCRETE PAVEMENT - FINISH B	D2 L501
P-2c	HEAVY DUTY CONCRETE PAVEMENT - FINISH C	
S-1	GRANITE PAVED RAMP WITH HANDRAILS	D1 L505
T-1	TRUNCATED DOME PAVERS	B1 L501
P-3	DECORATIVE GRAVEL BAND (ALT # 5, NOT IN BASE BID)	C1 L501
L-1	ACTIVITY LAWN	A4 L507
J-1	SAWCUT CONTROL JOINT; SEE SHEET L141 FOR JOINT PATTERN	D1 L501
J-2	EXPANSION JOINT; SEE SHEET L141 FOR JOINT PATTERN	D4 L501

**LEGEND - PAVING TRANSITION**

PT-1	HEAVY DUTY ASPHALT PAVING/ HEAVY DUTY CONCRETE	C4 L501
PT-2	HEAVY DUTY ASPHALT PAVING/ LIGHT DUTY CONCRETE	B3 L503
PT-3	LIGHT DUTY CONCRETE/ HEAVY DUTY CONCRETE	C2 L501
PT-5	LIGHT DUTY CONCRETE/ LANDSCAPE BED	C3 L501
PT-6	EXISTING CONCRETE/ PROPOSED CONCRETE	A2 L503

**LEGEND - WALL/ CURB/ STAIR**

SW-1	PRECAST SEAT WALL	B2 L503
CS-1	C.I.P CONCRETE STAIRS	A1 L504
SC-1	4" WIDTH GRANITE CURB	A3 L505
C-1a	4" RAISED CONCRETE CURB	B3 L503
C-1b	2' WIDE CONCRETE BAND AT BACK OF CURB	A3 L503
C-2	FLUSH CONCRETE CURB	A1 L503
C-T	CURB TRANSITION	A1 L501

**LEGEND - FURNISHING**

F-1	REMOVABLE STAINLESS STEEL BOLLARD	A1 L506
F-2	RELOCATED BIKE RACK	
F-3	PAINTED HANDRAILS	B1 L506
F-4	PLAZA SIGNAGE SEE ARCH DRAWINGS	
F-5	TRASH RECEPTACLES	
F-6	MOVABLE TABLE AND CHAIRS (SALVAGED)	OWNER FURNISH OWNER INSTALL
F-7	BENCH	

**LEGEND - DRAINAGE**

D-1	12" x 12" AREA DRAIN GRATE	D4 L502 B1 L503
D-2	24" x 24" AREA DRAIN GRATE	D1 L503
D-3	FRENCH DRAIN	C3 L503

**LEGEND - BASE BID**

7" DEPTH HEAVY DUTY CONCRETE WITH SPECIAL FINISH SET ON 4" COMPACTED ABC (AT CENTRAL ALLEY AND ON BOTH SIDES OF ALLEY)

**HANDRAIL DEFLECTION NOTE: APPLY TO ALL HANDRAILS:**  
 MAXIMUM DEFLECTION LIMIT: 0.60 INCHES UNLESS CURRENT CODE REQUIRES MORE STRINGENT LIMIT. LIMIT BASED ON NC STATE BUILDING CODE AND INTERNATIONAL BUILDING CODE FRO STRUCTURAL SYSTEM REQUIREMENTS TO NOT EXCEED MOST RESTRICTIVE DEFLECTION LIMITS.

**TREE PROTECTION FENCE:**  
 SEE CIVIL DRAWINGS; TYP.

**EXISTING CONCRETE PAD:**  
 SEE ALT. NOTES ON 1/L132

**LEGEND - DRAINAGE**

D-1 12" x 12" AREA DRAIN GRATE (D4 L502 B1 L503)  
 D-2 24" x 24" AREA DRAIN GRATE (D1 L503)  
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**LEGEND - WALL/ CURB/ STAIR**

SW-1 PRECAST SEAT WALL (B2 L503)  
 CS-1 C.I.P CONCRETE STAIRS (A1 L504)  
 SC-1 4" WIDTH GRANITE CURB (A3 L505)  
 C-1a 4" RAISED CONCRETE CURB (B3 L503)  
 C-1b 2' WIDE CONCRETE BAND AT BACK OF CURB (A3 L503)  
 C-2 FLUSH CONCRETE CURB (A1 L503)  
 C-T CURB TRANSITION (A1 L501)

**LEGEND - FURNISHING**

F-1 REMOVABLE STAINLESS STEEL BOLLARD (A1 L506)  
 F-2 RELOCATED BIKE RACK  
 F-3 PAINTED HANDRAILS (B1 L506)  
 F-4 PLAZA SIGNAGE SEE ARCH DRAWINGS  
 F-5 TRASH RECEPTACLES  
 F-6 MOVABLE TABLE AND CHAIRS (SALVAGED) OWNER FURNISH OWNER INSTALL  
 F-7 BENCH

**LEGEND - DRAINAGE**

D-1 12" x 12" AREA DRAIN GRATE (D4 L502 B1 L503)  
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 D-3 FRENCH DRAIN (C3 L503)

**LEGEND - BASE BID**

7" DEPTH HEAVY DUTY CONCRETE WITH SPECIAL FINISH SET ON 4" COMPACTED ABC (AT CENTRAL ALLEY AND ON BOTH SIDES OF ALLEY)

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 SEE CIVIL DRAWINGS; TYP.

**EXISTING CONCRETE PAD:**  
 SEE ALT. NOTES ON 1/L132

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PT-2	HEAVY DUTY ASPHALT PAVING/ LIGHT DUTY CONCRETE	B3 L503
PT-3	LIGHT DUTY CONCRETE/ HEAVY DUTY CONCRETE	C2 L501
PT-5	LIGHT DUTY CONCRETE/ LANDSCAPE BED	C3 L501
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C-T	CURB TRANSITION	A1 L501

**LEGEND - FURNISHING**

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F-5	TRASH RECEPTACLES	
F-6	MOVABLE TABLE AND CHAIRS (SALVAGED)	OWNER FURNISH OWNER INSTALL
F-7	BENCH	

**LEGEND - DRAINAGE**

D-1	12" x 12" AREA DRAIN GRATE	D4 L502 B1 L503
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D-3	FRENCH DRAIN	C3 L503

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**TREE PROTECTION FENCE:**  
 SEE CIVIL DRAWINGS; TYP.

**EXISTING CONCRETE PAD:**  
 SEE ALT. NOTES ON 1/L132

**LEGEND - WALL/ CURB/ STAIR**

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 C-1b 2' WIDE CONCRETE BAND AT BACK OF CURB (A3 L503)  
 C-2 FLUSH CONCRETE CURB (A1 L503)  
 C-T CURB TRANSITION (A1 L501)

**LEGEND - FURNISHING**

F-1 REMOVABLE STAINLESS STEEL BOLLARD (A1 L506)  
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 D-3 FRENCH DRAIN (C3 L503)

**LEGEND - BASE BID**

7" DEPTH HEAVY DUTY CONCRETE WITH SPECIAL FINISH SET ON 4" COMPACTED ABC (AT CENTRAL ALLEY AND ON BOTH SIDES OF ALLEY)

**HANDRAIL DEFLECTION NOTE: APPLY TO ALL HANDRAILS:**  
 MAXIMUM DEFLECTION LIMIT: 0.60 INCHES UNLESS CURRENT CODE REQUIRES MORE STRINGENT LIMIT. LIMIT BASED ON NC STATE BUILDING CODE AND INTERNATIONAL BUILDING CODE FRO STRUCTURAL SYSTEM REQUIREMENTS TO NOT EXCEED MOST RESTRICTIVE DEFLECTION LIMITS.

**TREE PROTECTION FENCE:**  
 SEE CIVIL DRAWINGS; TYP.

**EXISTING CONCRETE PAD:**  
 SEE ALT. NOTES ON 1/L132

**HH ARCHITECTURE**  
 1100 Dresser Court  
 Raleigh, NC 27609  
 Office 919.828.2301  
 Email office@hh-arch.com

**Surface**  
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 215 Morris Street, Suite 150  
 Durham, NC 27701  
 www.surface678.com  
 p: 919-419-1199  
 f: 919-419-1669

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 2 E SOUTH STREET, RALEIGH, NC 27601

**NO. 1330**  
 MATHIEW ERIC DAY  
 02/14/2025

**C-098**  
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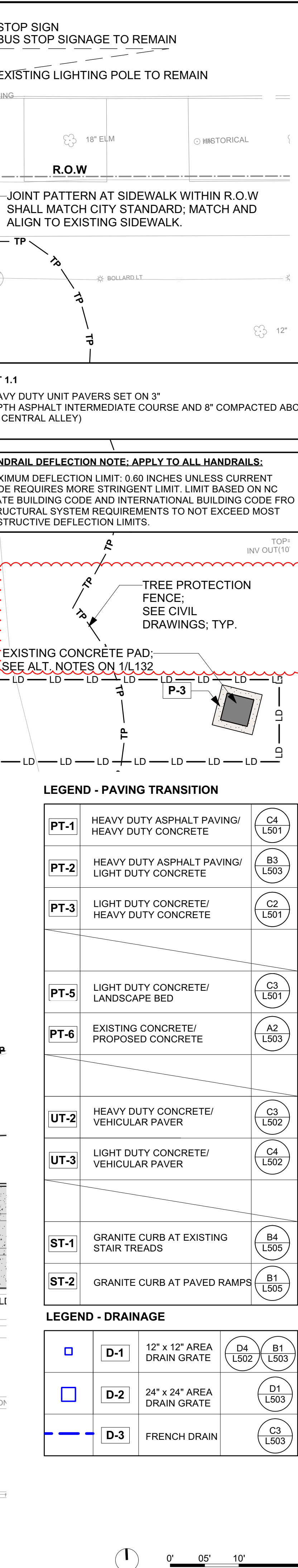
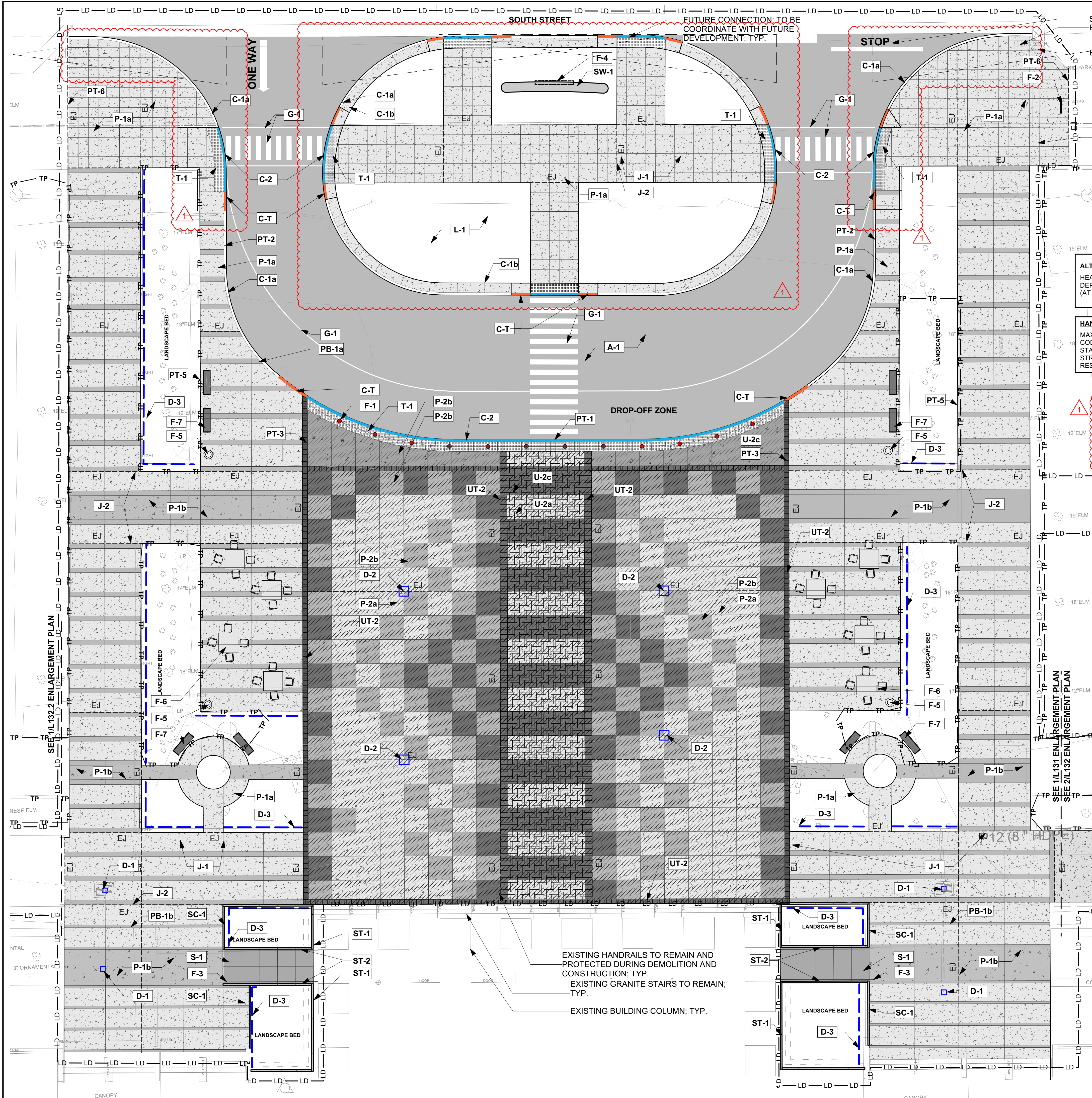
NO.	REVISION	DATE
1	ADDENDUM # 2	25.04.15

JOB NUMBER  
**23-077**  
 DATE ISSUED  
**04/15/2025**  
 PROJECT STATUS  
**BID DOCUMENTS**

SHEET  
**MATERIALS ENLARGEMENT PLAN-BASE BID**  
**L131.1**

**DOCUMENT FOR BID ONLY**  
**NOT FOR CONSTRUCTION**

Plot: 8/14/2024 12:33:51 PM  
 Time: 0' 05" 10" 20"



**LEGEND - PAVING/ LANDSCAPE MATERIALS**

A-1	HEAVY DUTY ASPHALT PAVING	D3 L501
P-1a	LIGHT DUTY CONCRETE - STANDARD FINISH (FINISH A)	
P-1b	LIGHT DUTY CONCRETE - FINISH B	D1 L501
PB-1a	1' WIDE LIGHT DUTY CONCRETE BAND - FINISH B	
PB-1b	6" WIDE LIGHT DUTY CONCRETE BAND - FINISH B	
P-2a	HEAVY DUTY CONCRETE PAVEMENT - STANDARD FINISH (FINISH A)	
P-2b	HEAVY DUTY CONCRETE PAVEMENT - FINISH B	D2 L501
P-2c	HEAVY DUTY CONCRETE PAVEMENT - FINISH C	
U-2a	6X18X4 VEHICULAR UNIT PAVERS (LIGHT GRAY) - TYPE A	
U-2c	6X18X4 VEHICULAR PAVERS (DARK GRAY) - TYPE C	D2 L502
U-3c	6X12X4 VEHICULAR PAVERS (DARK GRAY) - TYPE C	
S-1	GRANITE PAVED RAMP WITH HANDRAILS	D1 L505
T-1	TRUNCATED DOME PAVERS	B1 L501
P-3	DECORATIVE GRAVEL BAND (ALT # 5, NOT IN BASE BID)	C1 L501
L-1	ACTIVITY LAWN	A4 L507
J-1	SAWCUT CONTROL JOINT; SEE SHEET L141 FOR JOINT PATTERN	D1 L501
J-2	EXPANSION JOINT; SEE SHEET L141 FOR JOINT PATTERN	D4 L501

**LEGEND - WALL/ CURB/ STAIR**

SW-1	PRECAST SEAT WALL	B2 L503
CS-1	C.I.P CONCRETE STAIRS	A1 L504
SC-1	4" WIDTH GRANITE CURB	A3 L505
C-1a	4" RAISED CONCRETE CURB	B3 L503
C-1b	2' WIDE CONCRETE BAND AT BACK OF CURB	A3 L503
C-2	FLUSH CONCRETE CURB	A1 L503
C-T	CURB TRANSITION	A1 L501

**LEGEND - FURNISHING**

F-1	REMOVABLE STAINLESS STEEL BOLLARD	A1 L506
F-2	RELOCATED BIKE RACK	
F-3	PAINTED HANDRAILS	B1 L506
F-4	PLAZA SIGNAGE SEE ARCH DRAWINGS	
F-5	TRASH RECEPTACLES	
F-6	MOVABLE TABLE AND CHAIRS (SALVAGED)	OWNER FURNISH OWNER INSTALL
F-7	BENCH	

**LEGEND - PAVING TRANSITION**

PT-1	HEAVY DUTY ASPHALT PAVING/ HEAVY DUTY CONCRETE	C4 L501
PT-2	HEAVY DUTY ASPHALT PAVING/ LIGHT DUTY CONCRETE	B3 L503
PT-3	LIGHT DUTY CONCRETE/ HEAVY DUTY CONCRETE	C2 L501
PT-5	LIGHT DUTY CONCRETE/ LANDSCAPE BED	C3 L501
PT-6	EXISTING CONCRETE/ PROPOSED CONCRETE	A2 L503
UT-2	HEAVY DUTY CONCRETE/ VEHICULAR PAVER	C3 L502
UT-3	LIGHT DUTY CONCRETE/ VEHICULAR PAVER	C4 L502
ST-1	GRANITE CURB AT EXISTING STAIR TREADS	B4 L505
ST-2	GRANITE CURB AT PAVED RAMPS	B1 L505

**LEGEND - DRAINAGE**

D-1	12" x 12" AREA DRAIN GRATE	D4 L502	B1 L503
D-2	24" x 24" AREA DRAIN GRATE	D1 L503	
D-3	FRENCH DRAIN	C3 L503	




**ARCHITECTURE**  
1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com

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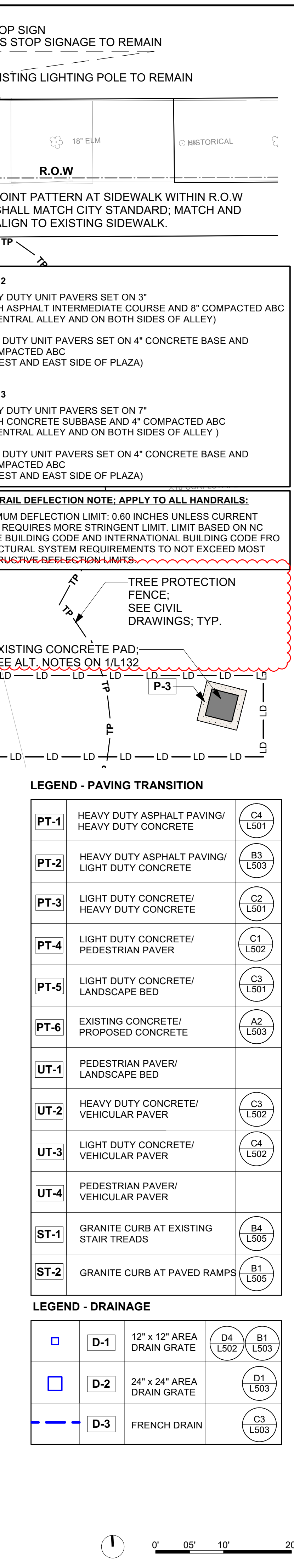
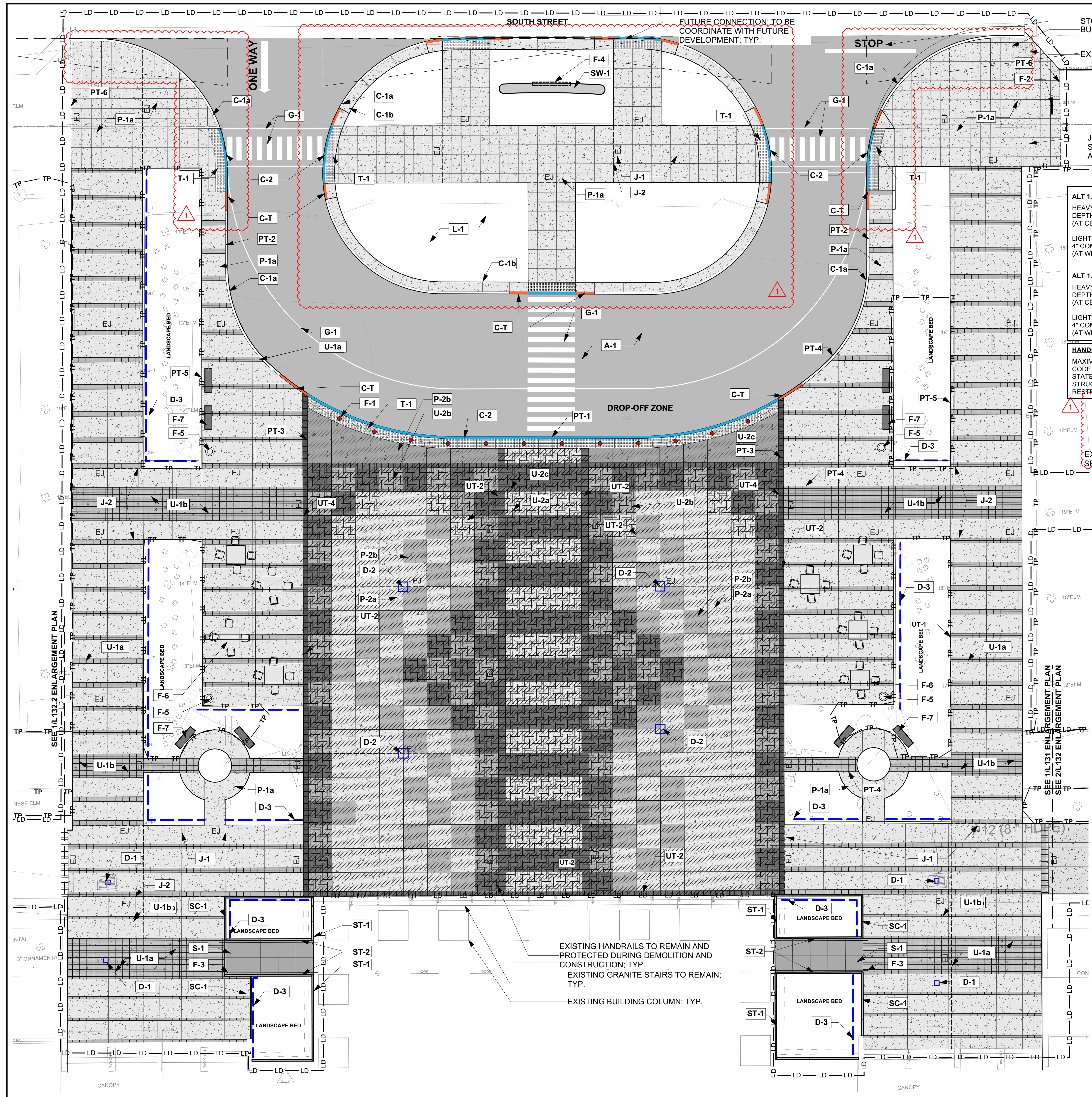



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SHEET  
**MATERIALS ENLARGEMENT PLAN-ALT#1.1**  
**L131.2**

8/14/2024 12:33:51 PM  
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**LEGEND - PAVING/ LANDSCAPE MATERIALS**

A-1	HEAVY DUTY ASPHALT PAVING	D3 L501
P-1a	LIGHT DUTY CONCRETE - STANDARD FINISH (FINISH A)	D1 L501
P-1b	LIGHT DUTY CONCRETE - FINISH B	
U-1a	6X18X2 LIGHT DUTY UNIT PAVER (LIGHT GRAY) - TYPE A	D1 L502
U-1b	6X18X2 LIGHT DUTY UNIT PAVER (LIGHT GRAY) - TYPE B	
P-2a	HEAVY DUTY CONCRETE PAVEMENT - STANDARD FINISH (FINISH A)	
P-2b	HEAVY DUTY CONCRETE PAVEMENT - FINISH B	
P-2c	HEAVY DUTY CONCRETE PAVEMENT - FINISH C	
U-2a	6X18X4 VEHICULAR UNIT PAVERS (LIGHT GRAY) - TYPE A	D3 L502
U-2b	6X18X4 VEHICULAR PAVERS (MEDIUM GRAY) - TYPE B	
U-2c	6X18X4 VEHICULAR PAVERS (DARK GRAY) - TYPE C	
U-3c	6X12X4 VEHICULAR PAVERS (DARK GRAY) - TYPE C	
S-1	GRANITE PAVED RAMP WITH HANDRAILS	D1 L505
T-1	TRUNCATED DOME PAVERS	B1 L501
P-3	DECORATIVE GRAVEL BAND (ALT # 5, NOT IN BASE BID)	C1 L501
L-1	ACTIVITY LAWN	A4 L507
J-1	SAWCUT CONTROL JOINT; SEE SHEET L141 FOR JOINT PATTERN	D1 L501
J-2	EXPANSION JOINT; SEE SHEET L141 FOR JOINT PATTERN	D4 L501

**LEGEND - PAVING TRANSITION**

PT-1	HEAVY DUTY ASPHALT PAVING/ HEAVY DUTY CONCRETE	C4 L501
PT-2	HEAVY DUTY ASPHALT PAVING/ LIGHT DUTY CONCRETE	B3 L503
PT-3	LIGHT DUTY CONCRETE/ HEAVY DUTY CONCRETE	C2 L501
PT-4	LIGHT DUTY CONCRETE/ PEDESTRIAN PAVER	C1 L502
PT-5	LIGHT DUTY CONCRETE/ LANDSCAPE BED	C3 L501
PT-6	EXISTING CONCRETE/ PROPOSED CONCRETE	A2 L503
UT-1	PEDESTRIAN PAVER/ LANDSCAPE BED	
UT-2	HEAVY DUTY CONCRETE/ VEHICULAR PAVER	C3 L502
UT-3	LIGHT DUTY CONCRETE/ VEHICULAR PAVER	C4 L502
UT-4	PEDESTRIAN PAVER/ VEHICULAR PAVER	
ST-1	GRANITE CURB AT EXISTING STAIR TREADS	B4 L505
ST-2	GRANITE CURB AT PAVED RAMPS	B1 L505

**LEGEND - DRAINAGE**

D-1	12" x 12" AREA DRAIN GRATE	D4 L502	B1 L503
D-2	24" x 24" AREA DRAIN GRATE		D1 L503
D-3	FRENCH DRAIN		C3 L503

**LEGEND - WALL/ CURB/ STAIR**

SW-1	PRECAST SEAT WALL	B2 L503
CS-1	C.I.P CONCRETE STAIRS	A1 L504
SC-1	4" WIDTH GRANITE CURB	A3 L505
C-1a	4" RAISED CONCRETE CURB	B3 L503
C-1b	2' WIDE CONCRETE BAND AT BACK OF CURB	A3 L503
C-2	FLUSH CONCRETE CURB	A1 L503
C-T	CURB TRANSITION	A1 L501

**LEGEND - FURNISHING**

F-1	REMOVABLE STAINLESS STEEL BOLLARD	A1 L506
F-2	RELOCATED BIKE RACK	
F-3	PAINTED HANDRAILS	B1 L506
F-4	PLAZA SIGNAGE SEE ARCH DRAWINGS	
F-5	TRASH RECEPTACLES	
F-6	MOVABLE TABLE AND CHAIRS (SALVAGED)	OWNER FURNISH OWNER INSTALL
F-7	BENCH	

**HH ARCHITECTURE**  
 1100 Dresser Court  
 Raleigh, NC 27609  
 Office 919.828.2301  
 Email office@hh-arch.com

**Surface**  
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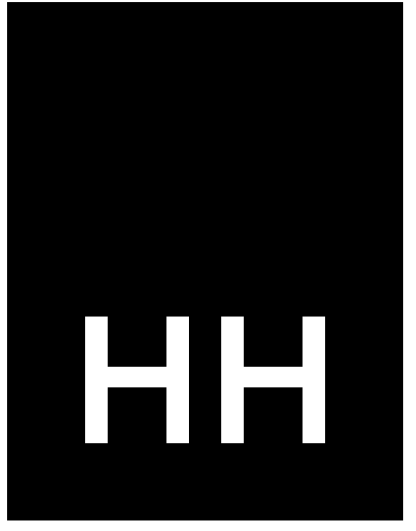
1	ADDENDUM # 2	25.04.15
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**JOB NUMBER 23-077**  
**DATE ISSUED 04/15/2025**  
**PROJECT STATUS BID DOCUMENTS**

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**MATERIALS ENLARGEMENT PLAN-ALT#1.2&1.3**  
**L131.3**

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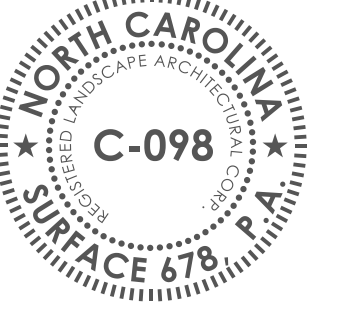
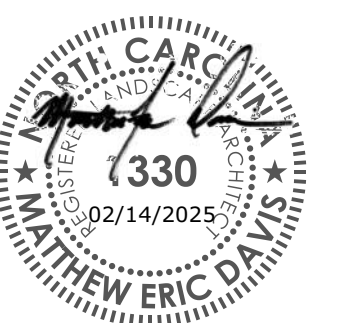


1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com

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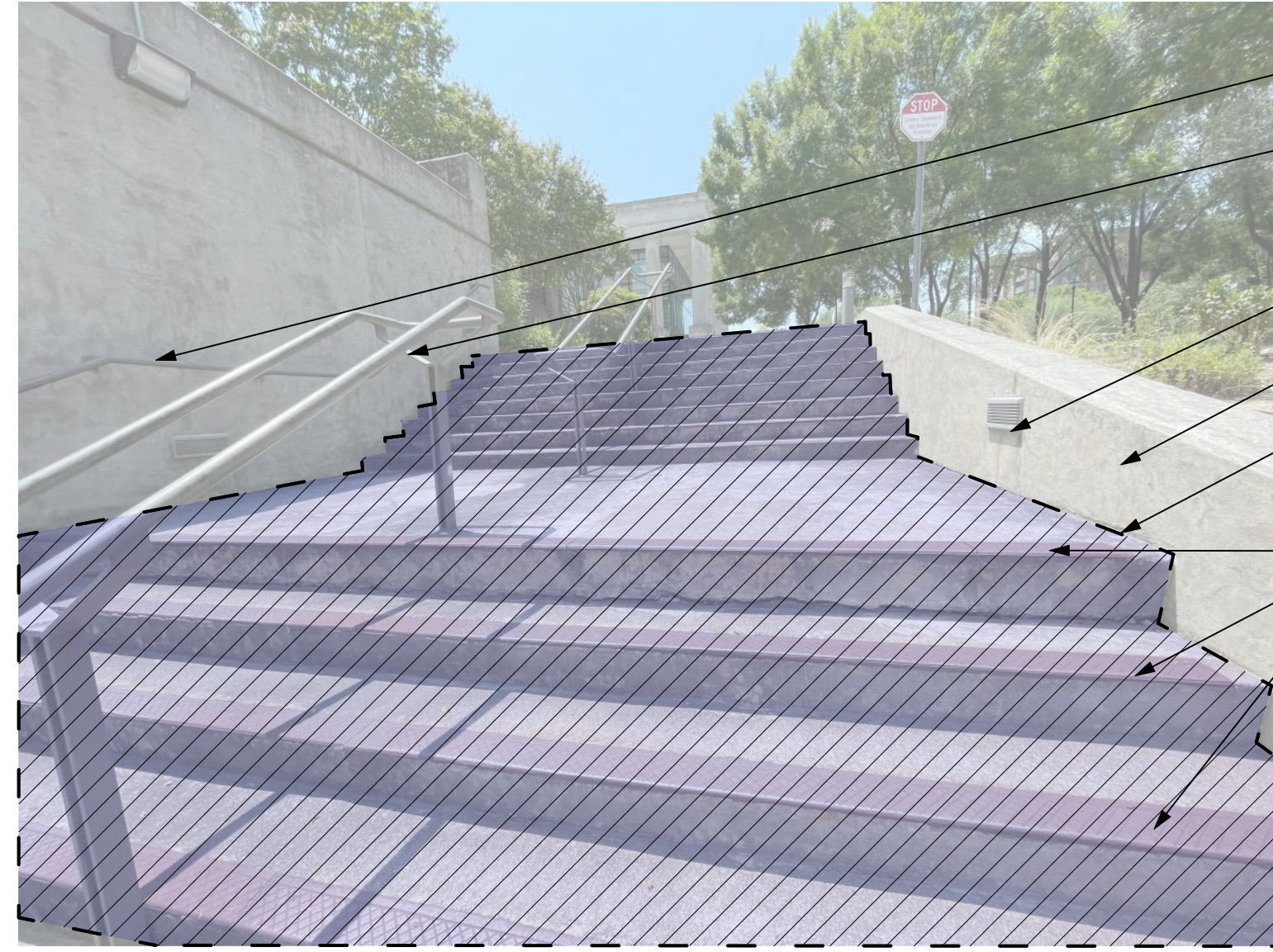
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**23-077**  
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**04/15/2025**  
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### SHEET MATERIALS/ LAYOUT ENLARGEMENT PLAN L132

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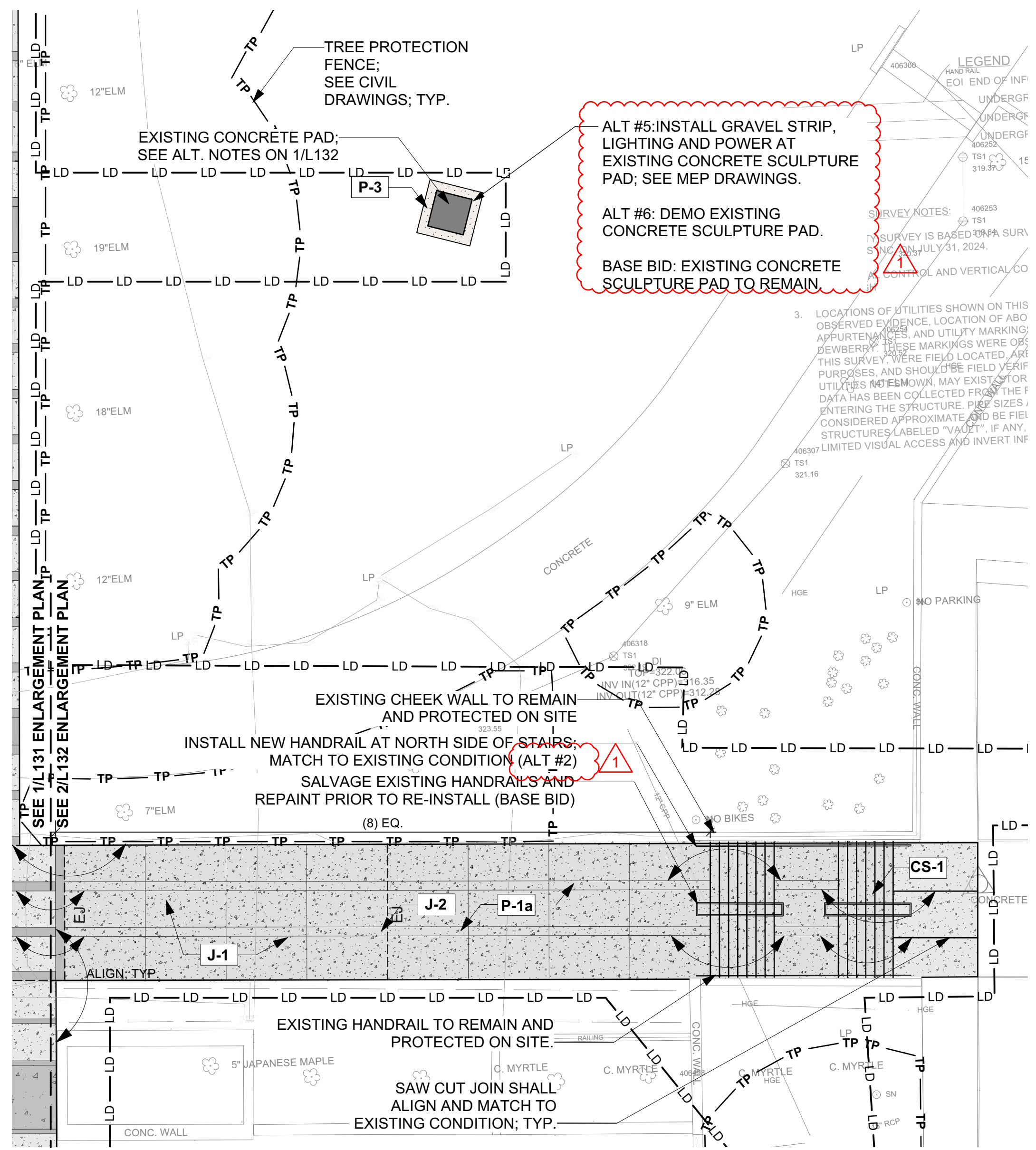
#### GRADING NOTES

- EXISTING UTILITIES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING WORK. CONTRACTOR SHALL CONTACT NC ONE CALL CENTER AT 1-800-632-4949 FOR LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING AROUND EXISTING UTILITIES TO REMAIN.
- MATCH NEW CONSTRUCTION TO SURROUNDING ESTABLISHED GRADES. REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT.
- ALL AREAS ARE TO BE GRADED TO PROVIDE POSITIVE DRAINAGE AND AS SHOWN ON THE PLANS. UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL MAINTAIN A 2.5% SLOPE ON LAWNS, 1.5% ON UNIT PAVEMENT SURFACES, 1% ON CONCRETE FLATWORK AND 1.5% ON ASPHALT SURFACES. ALL STEPS, PRECAST SURFACES, CONSTRUCTED SEATING, WALL TOPS SHALL RECEIVE A MINIMUM OF 1% SLOPE TO PROVIDE WASH.
- LANDINGS OUTSIDE ALL DOORS SHALL BE SIZED PER THE NORTH CAROLINA BUILDING CODE (NCBC), BE AT THE SAME ELEVATION AS THE FFE, AND SHALL HAVE A MAX. 2% SLOPE IN ANY DIRECTION INCLUDING IN THE DIAGONAL.
- ALL STAIRS SHALL HAVE SLIGHTLY SLOPED LANDINGS (MAX. 2% SLOPE IN ANY DIRECTION INCLUDING IN THE DIAGONAL) AT THE TOP AND BOTTOM AND SHALL COMPLY WITH THE NCBC.
- UNLESS OTHERWISE NOTED, SPOT GRADES REFER TO BOTTOM OF CURB AT THE FLOW LINE (ADD 6" FOR THE TOP OF CURB). ALL SPOT GRADES AT THE EDGE OF PAVEMENTS SHALL REPRESENT THE PAVEMENT GRADES, NOT ADJOINING LANDSCAPE. ELEVATIONS SUPPLIED FOR CATCH BASINS OR AREA DRAINS ARE INDICATED FOR TOP OF GRATE AND TOP OF COVER FOR MANHOLES OR JUNCTION BOXES.
- THE FRAMES, GRATES, CLEAN OUTS, VALVE COVERS AND OTHER SURFACE UTILITY FEATURES SHALL BE ADJUSTED TO MEET PROPOSED GRADES WITH APPROPRIATE INSTALLATION DETAILS.
- ALL STORM DRAINAGE GRATES AND COVERS WITHIN ACCESSIBLE ROUTES THAT ARE SHOWN ON THE DRAWINGS SHALL MEET STATE AND FEDERAL ADA REQUIREMENTS.
- ALL DRAINAGE GRATES WITHIN PEDESTRIAN PAVING AND BIKE LANES SHALL BE BICYCLE WHEEL SAFE.
- THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO STORM DRAINAGE THAT PROVIDES ALIGNMENT WITH EXISTING SWALES, PIPES AND STRUCTURES. THE CONTRACTOR SHALL ALIGN THE TOP OF GRATE WITH INTENDED SCORE JOINTS, CURBS OR OTHER SURFACE DESIGN ELEMENTS OR AS SHOWN ON THE DRAWINGS.

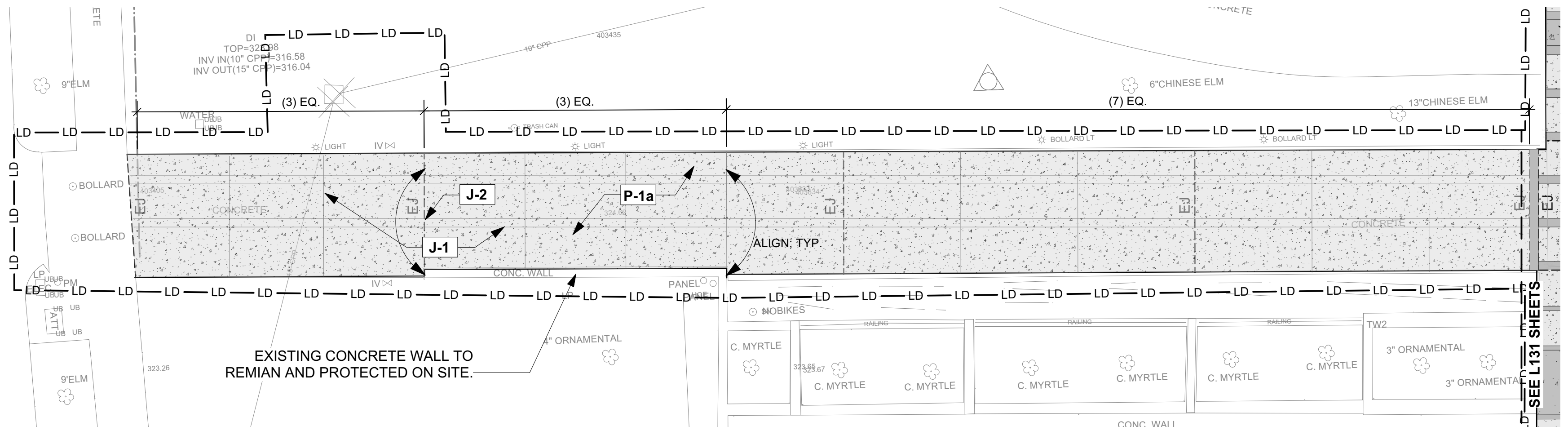


STAIRS DEMOLITION DIAGRAM; NTS

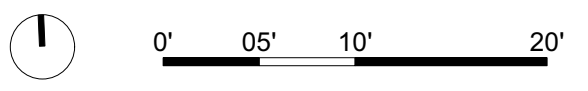
- HANDRAILS ON WALL SURFACE TO REMAIN AND REPAINT
- BASE BID - SALVAGE EXISTING HANDRAILS AND REPAINT PRIOR TO RE-INSTALLATION ALT# 2 - INSTALL NEW HANDRAILS ALONG STAIRS
- EXISTING LIGHTING FIXTURE TO REMAIN
- EXISTING CHEEK WALL TO REMAIN
- SAWCUT AND REMOVE EXISTING CONCRETE STAIR
- SALVAGE EXISTING METAL STAIR NOSINGS AND REINSTALL ONTO THE PROPOSED C.I.P CONCRETE STAIRS; TYP.



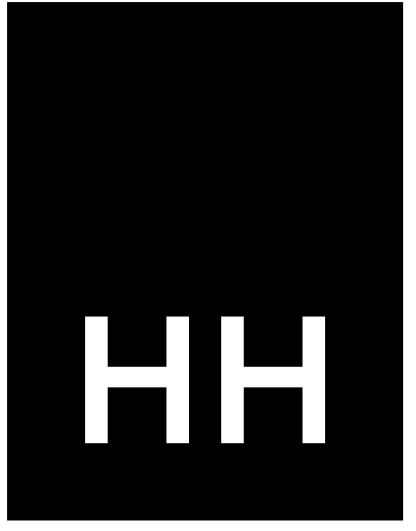
1 MATERIALS/ LAYOUT ENLARGEMENT PLAN - EAST  
Scale: 1" = 10'-0"



2 ALT #4 - MATERIALS/ LAYOUT ENLARGEMENT PLAN  
Scale: 1" = 10'-0"



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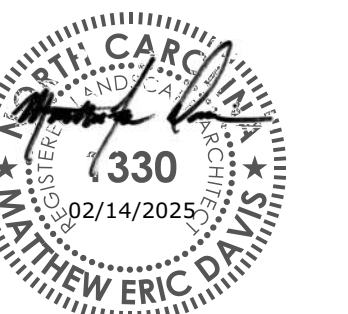
**ARCHITECTURE**  
 1100 Dresser Court  
 Raleigh, NC 27609  
 Office 919.828.2301  
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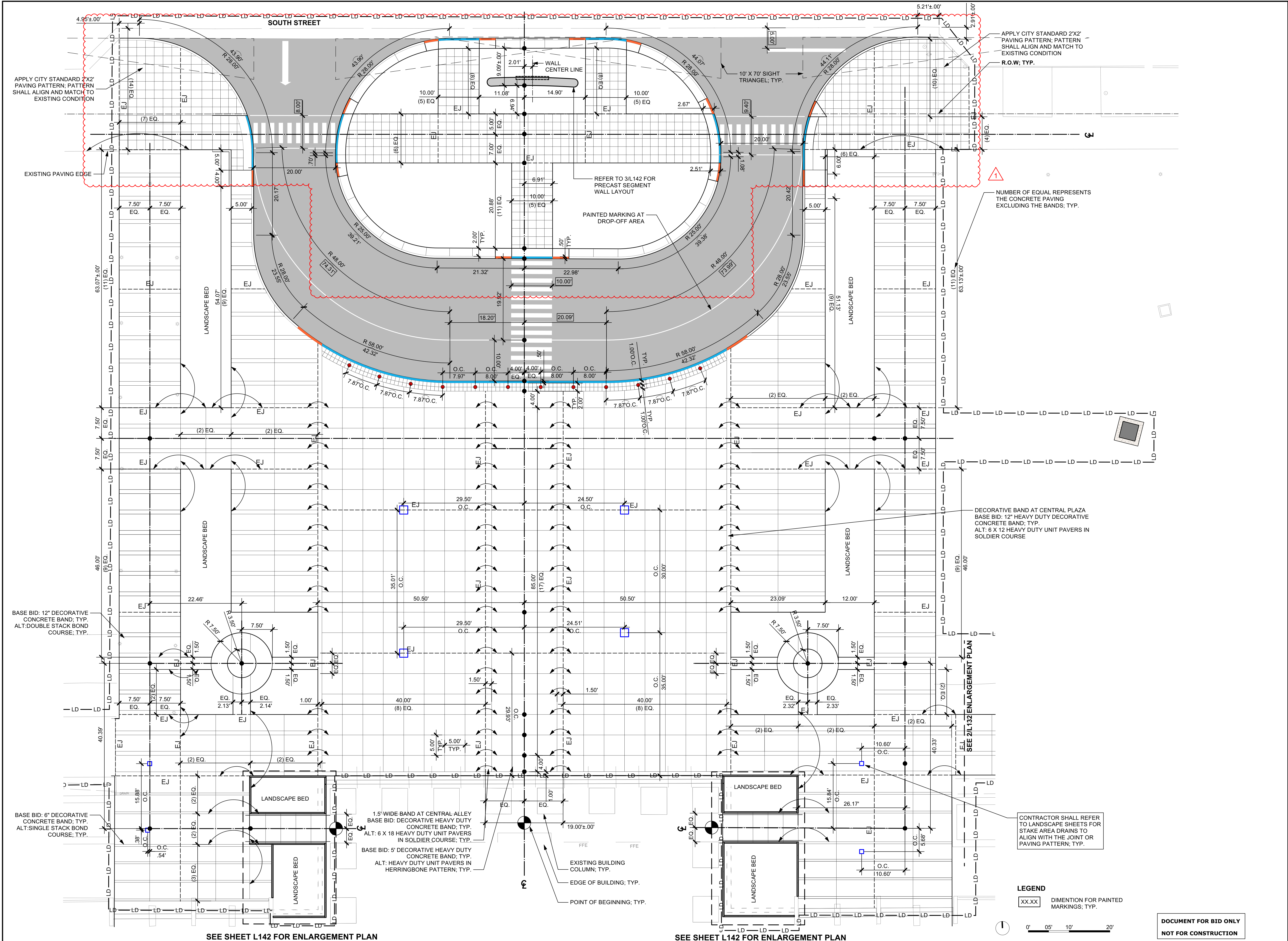
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SHEET

**LAYOUT PLAN**

**L141**



APPLY CITY STANDARD 2'X2' PAVING PATTERN; PATTERN SHALL ALIGN AND MATCH TO EXISTING CONDITION

APPLY CITY STANDARD 2'X2' PAVING PATTERN; PATTERN SHALL ALIGN AND MATCH TO EXISTING CONDITION  
 R.O.W; TYP.

NUMBER OF EQUAL REPRESENTS THE CONCRETE PAVING EXCLUDING THE BANDS; TYP.

DECORATIVE BAND AT CENTRAL PLAZA  
 BASE BID: 12" HEAVY DUTY DECORATIVE CONCRETE BAND; TYP.  
 ALT: 6 X 12 HEAVY DUTY UNIT PAVERS IN SOLDIER COURSE

BASE BID: 12" DECORATIVE CONCRETE BAND; TYP.  
 ALT: DOUBLE STACK BOND COURSE; TYP.

BASE BID: 6" DECORATIVE CONCRETE BAND; TYP.  
 ALT: SINGLE STACK BOND COURSE; TYP.

1.5" WIDE BAND AT CENTRAL ALLEY  
 BASE BID: DECORATIVE HEAVY DUTY CONCRETE BAND; TYP.  
 ALT: 6 X 18 HEAVY DUTY UNIT PAVERS IN SOLDIER COURSE; TYP.  
 BASE BID: 5" DECORATIVE HEAVY DUTY CONCRETE BAND; TYP.  
 ALT: HEAVY DUTY UNIT PAVERS IN HERRINGBONE PATTERN; TYP.

**LEGEND**  
 XX.XX DIMENSION FOR PAINTED MARKINGS; TYP.

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SEE SHEET L142 FOR ENLARGEMENT PLAN

SEE SHEET L142 FOR ENLARGEMENT PLAN

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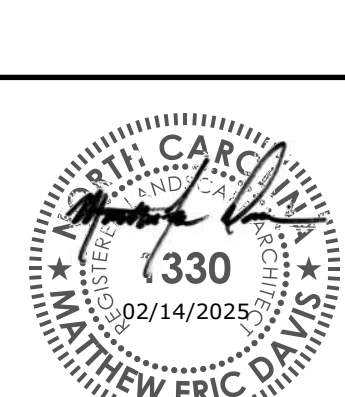


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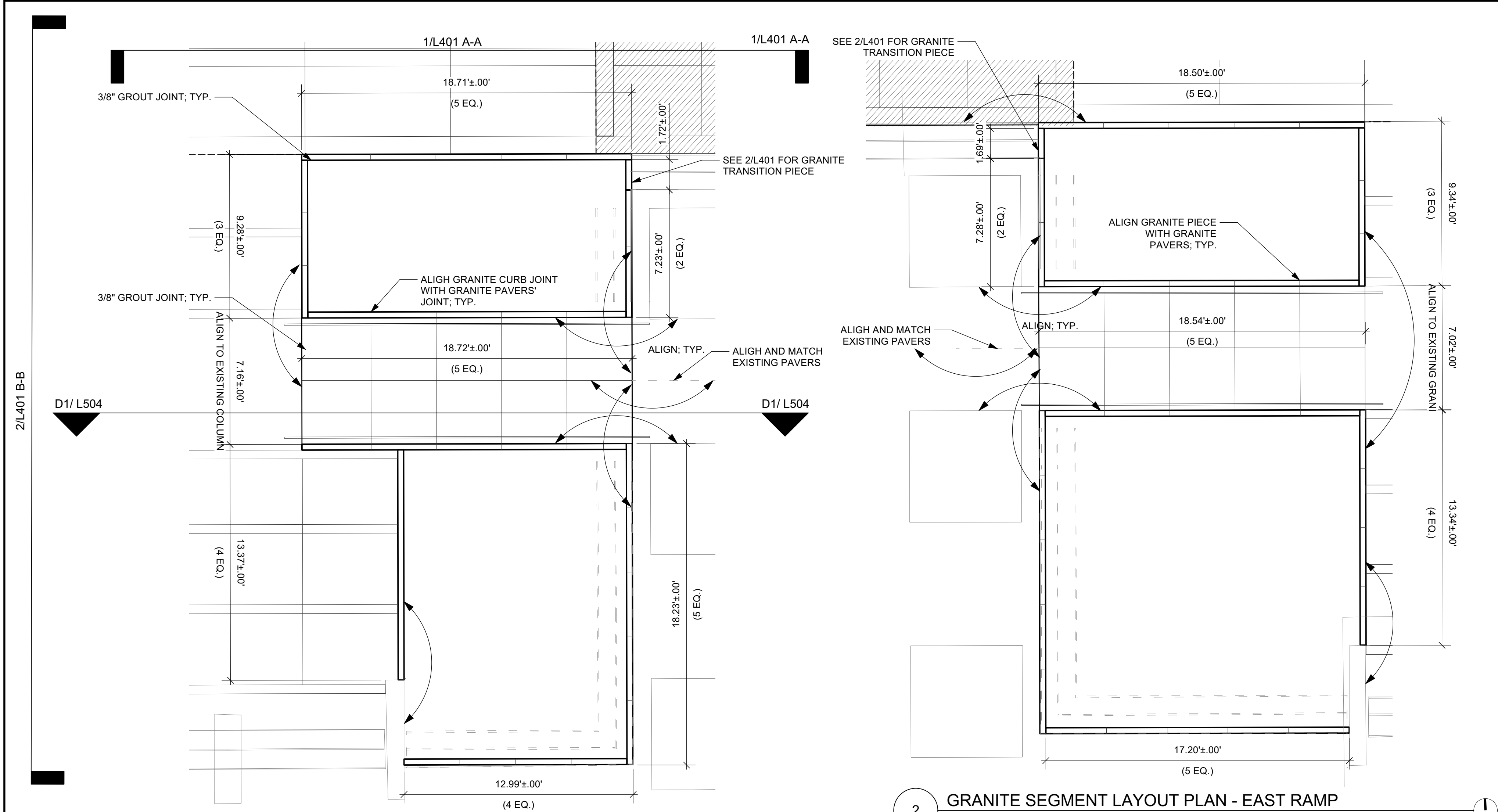
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**BID DOCUMENTS**

SHEET  
**GRANITE/PRECAST  
SEGMENT  
ENLARGEMENT  
PLAN  
L142**

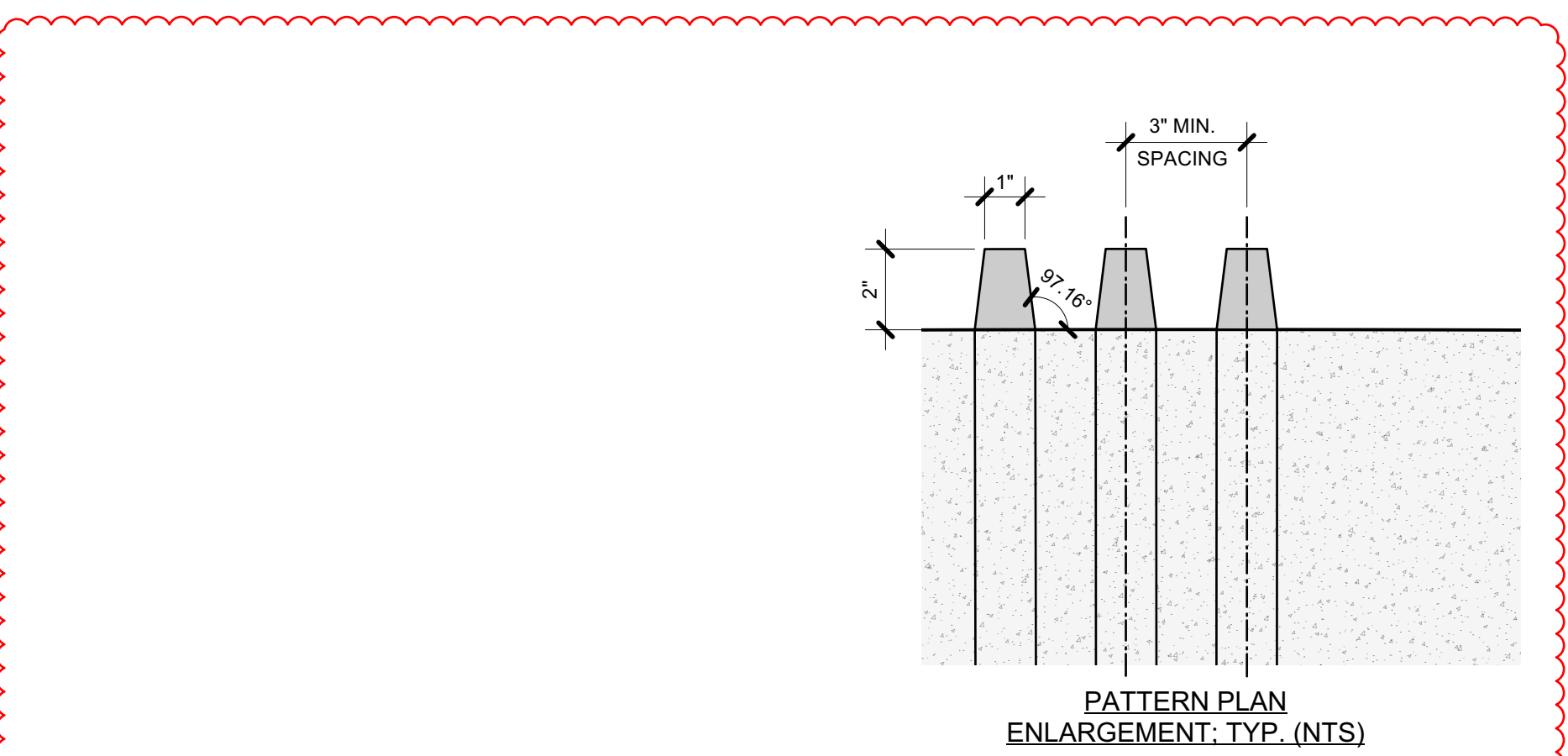


**1 GRANITE SEGMENT LAYOUT PLAN-WEST RAMP**  
Scale: 1/4" = 1'-0"

1. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO LARCH FOR REVIEW AND APPROVAL PRIOR TO FABRICATE.  
2. CONTRACTOR TO VERIFY DIMENSIONS IN FIELD PRIOR TO FABRICATE.

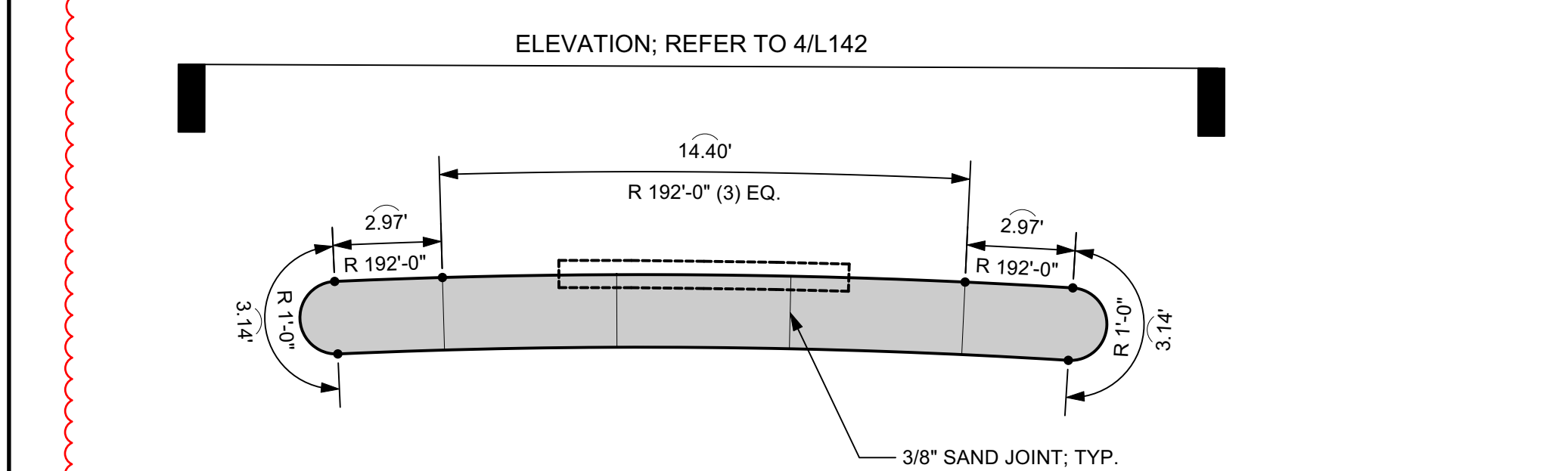
**2 GRANITE SEGMENT LAYOUT PLAN - EAST RAMP**  
Scale: 1/4" = 1'-0"

1. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO LARCH FOR REVIEW AND APPROVAL PRIOR TO FABRICATE.  
2. CONTRACTOR TO VERIFY DIMENSIONS IN FIELD PRIOR TO FABRICATE.



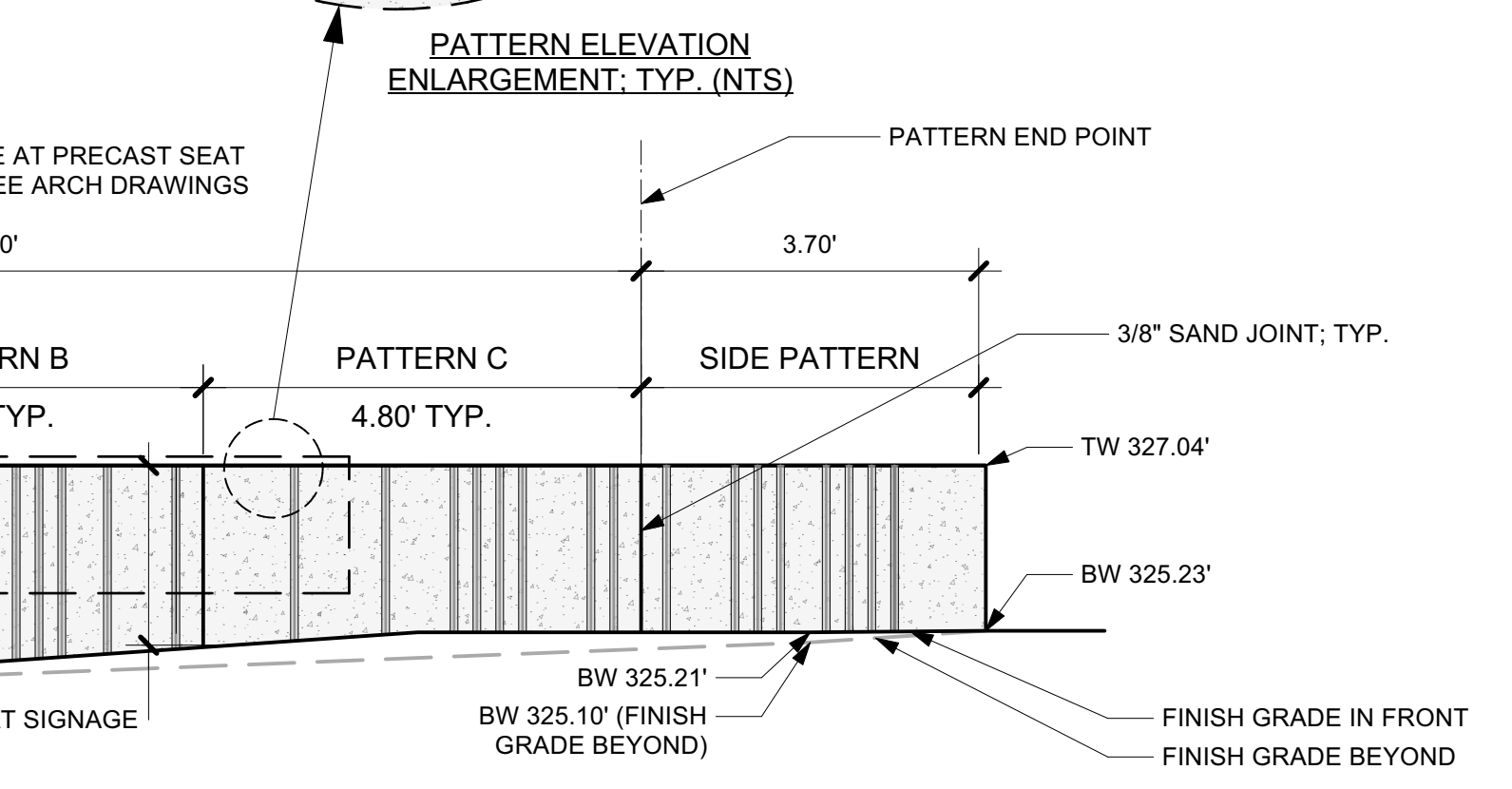
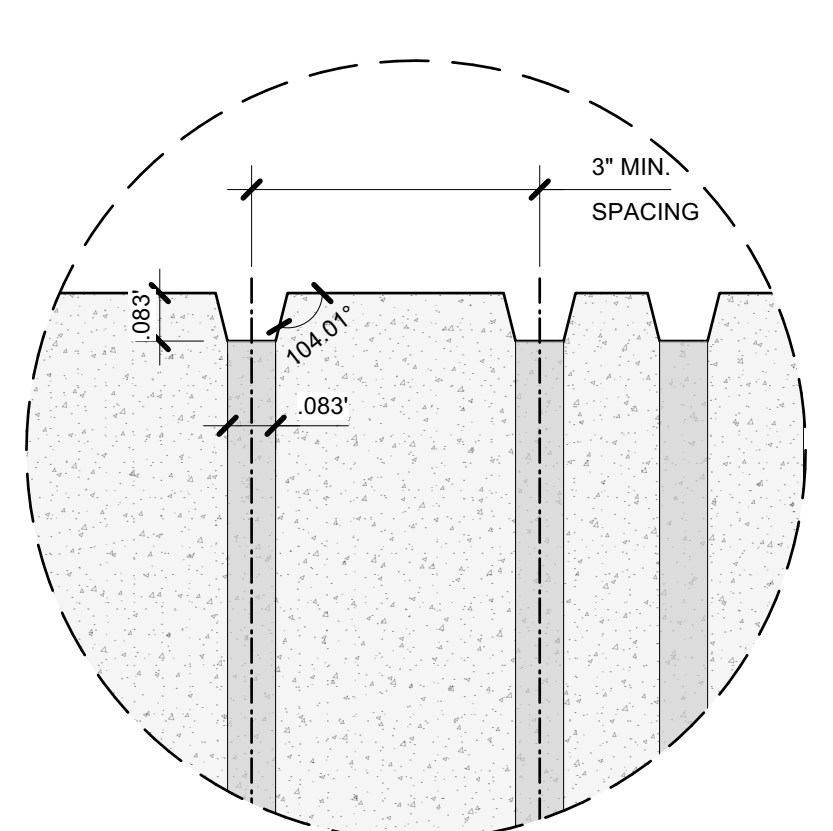
SEGMENT PATTERN SCHEDULE

	ELEVATION	PLAN
PATTERN A		
PATTERN B		
PATTERN C		
PATTERN SIDE SEGMENT		



**3 PRECAST SEGMENT LAYOUT PLAN**  
Scale: 1/4" = 1'-0"

CONTRACTOR TO SUBMIT SHOP DRAWINGS TO LARCH FOR REVIEW AND APPROVAL PRIOR TO FABRICATE.



**4 PRECAST SEGMENT ELEVATION**  
Scale: 1/2" = 1'-0"

CONTRACTOR TO SUBMIT SHOP DRAWINGS TO LARCH FOR REVIEW AND APPROVAL PRIOR TO FABRICATE.

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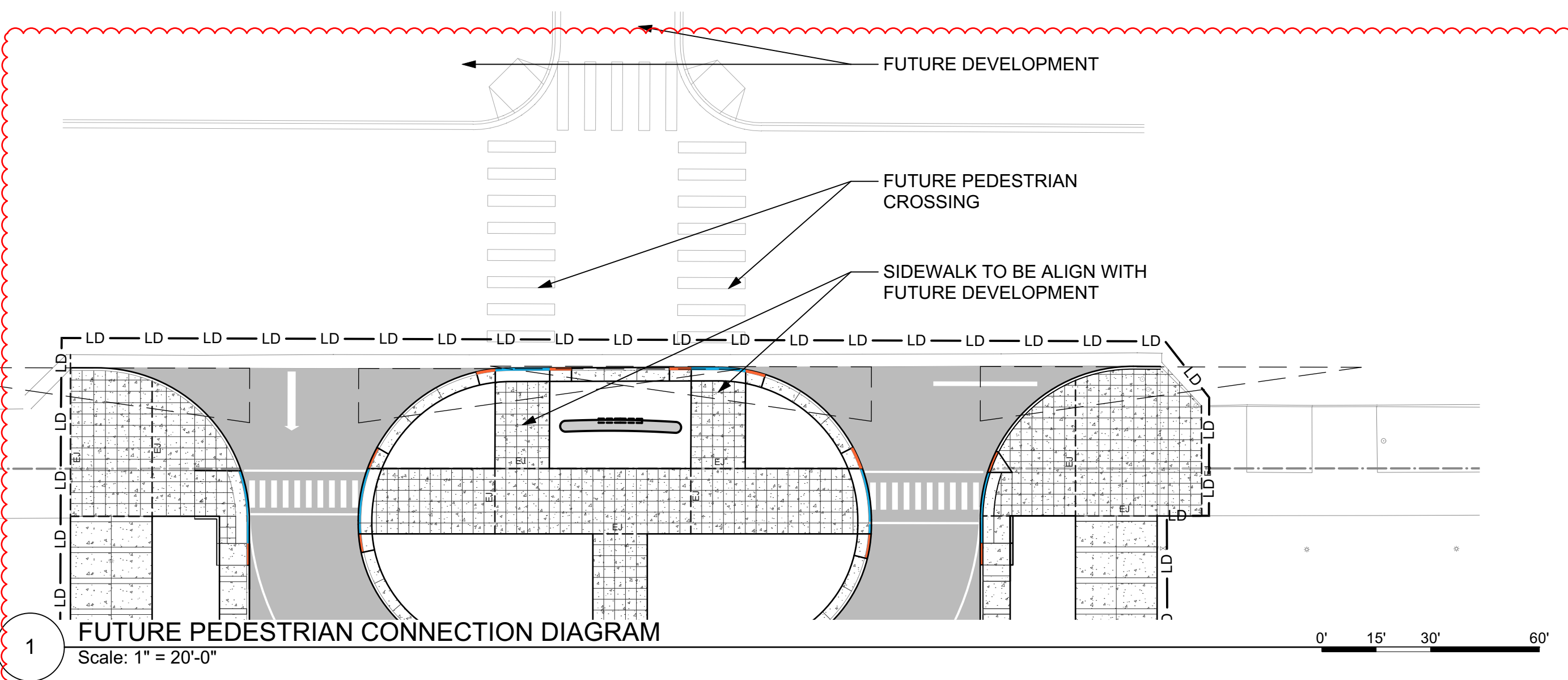
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# Surface

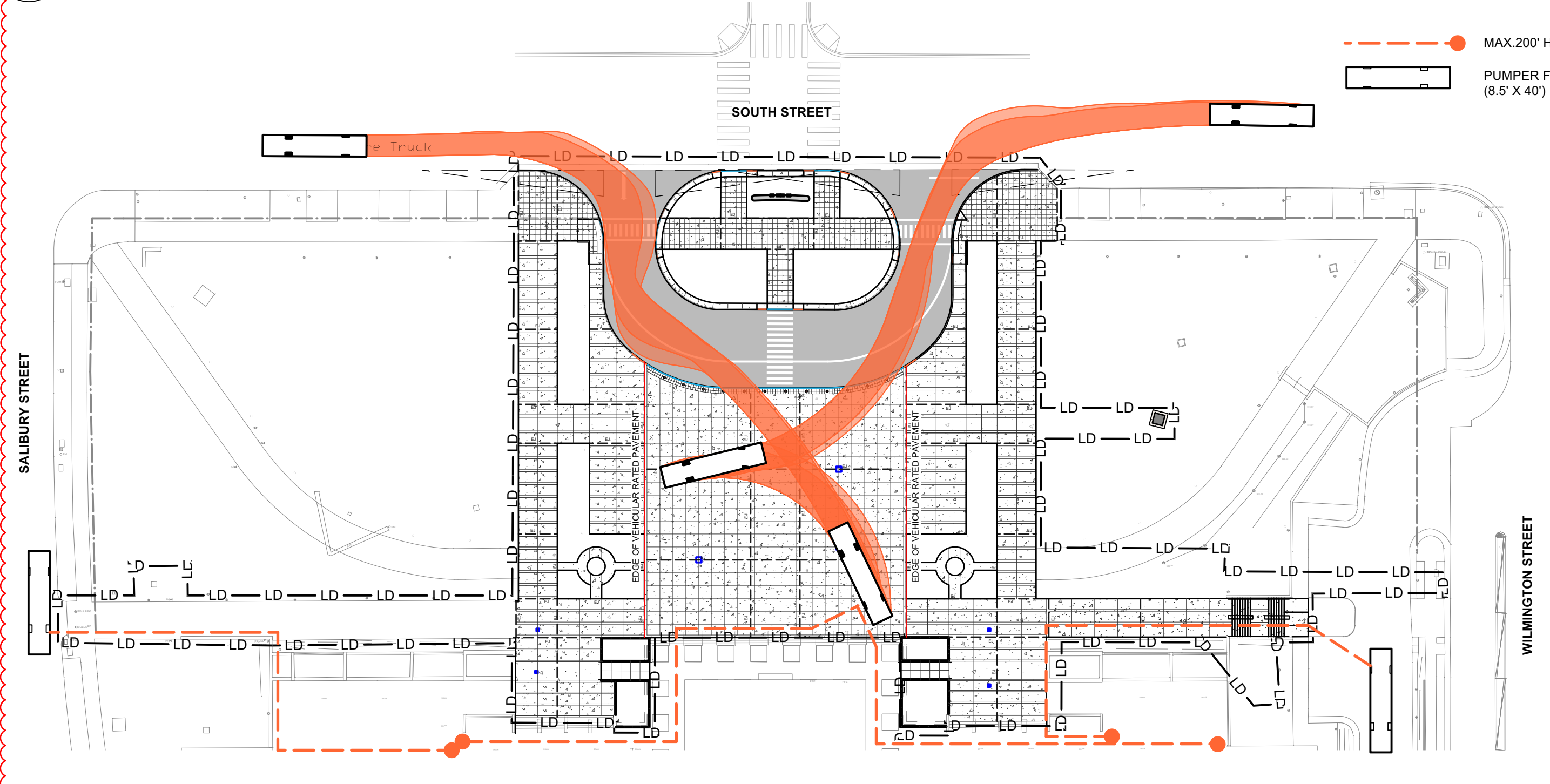
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## PERFORMING ARTS CENTER PLAZA

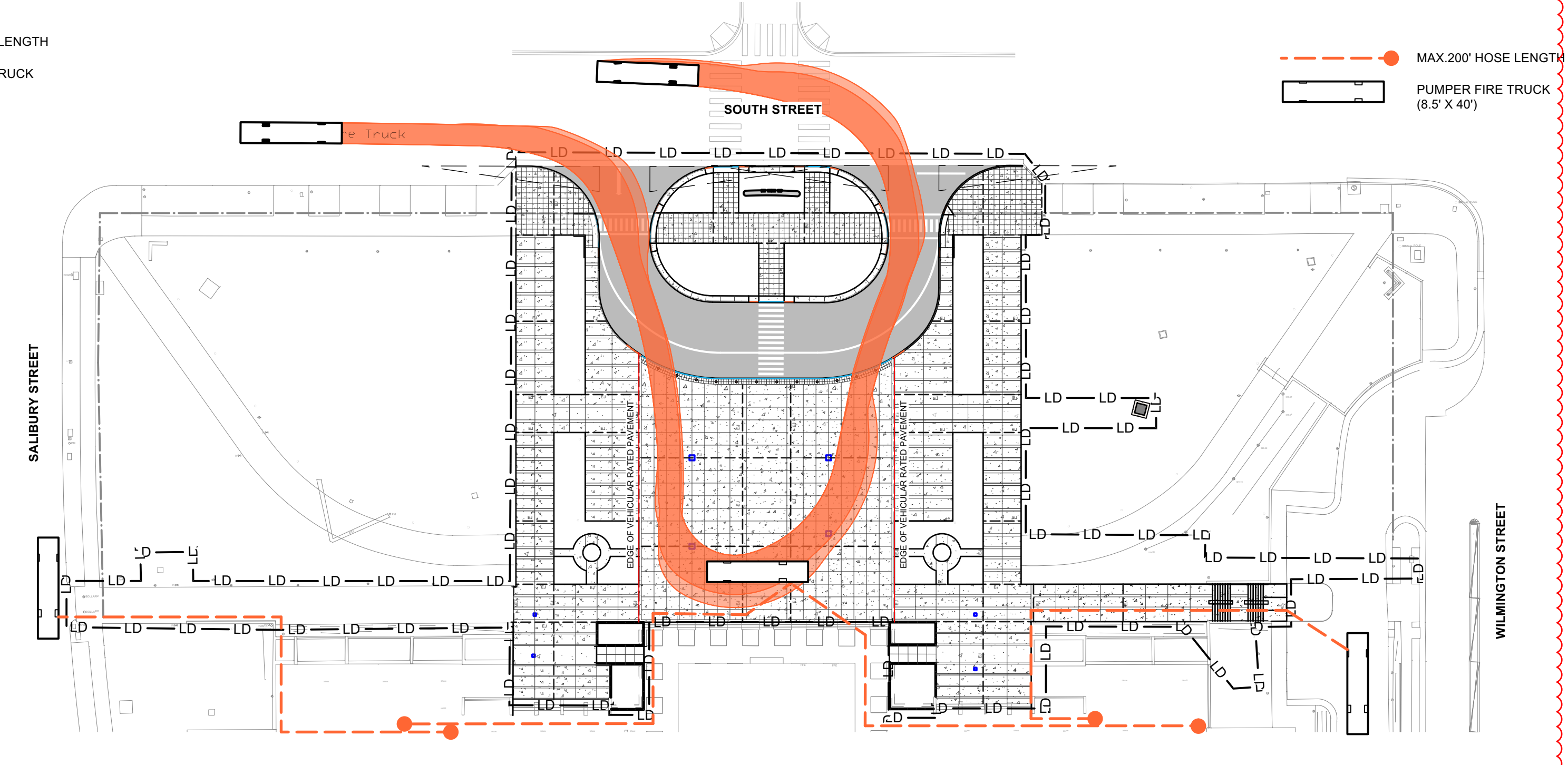
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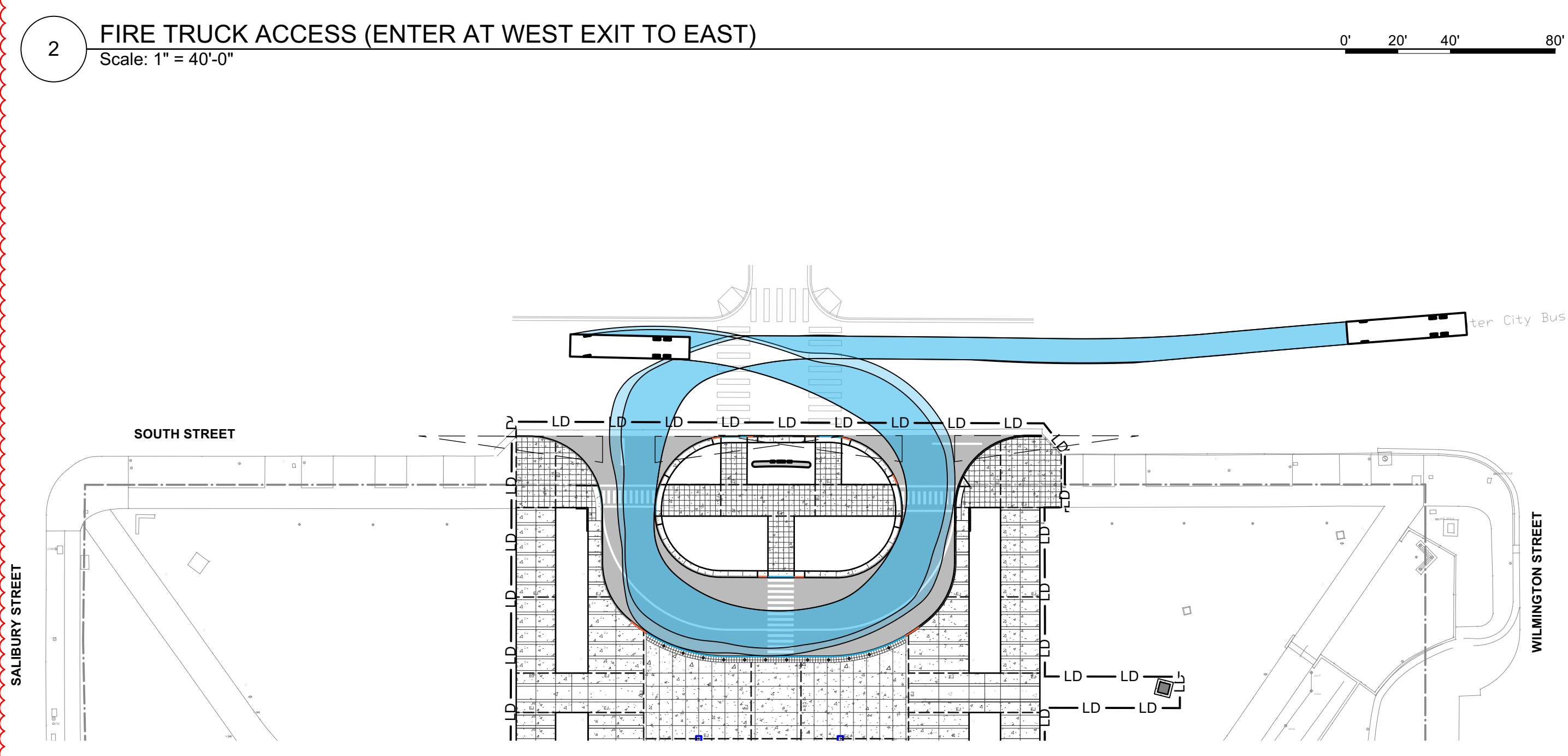
1 FUTURE PEDESTRIAN CONNECTION DIAGRAM  
Scale: 1" = 20'-0"



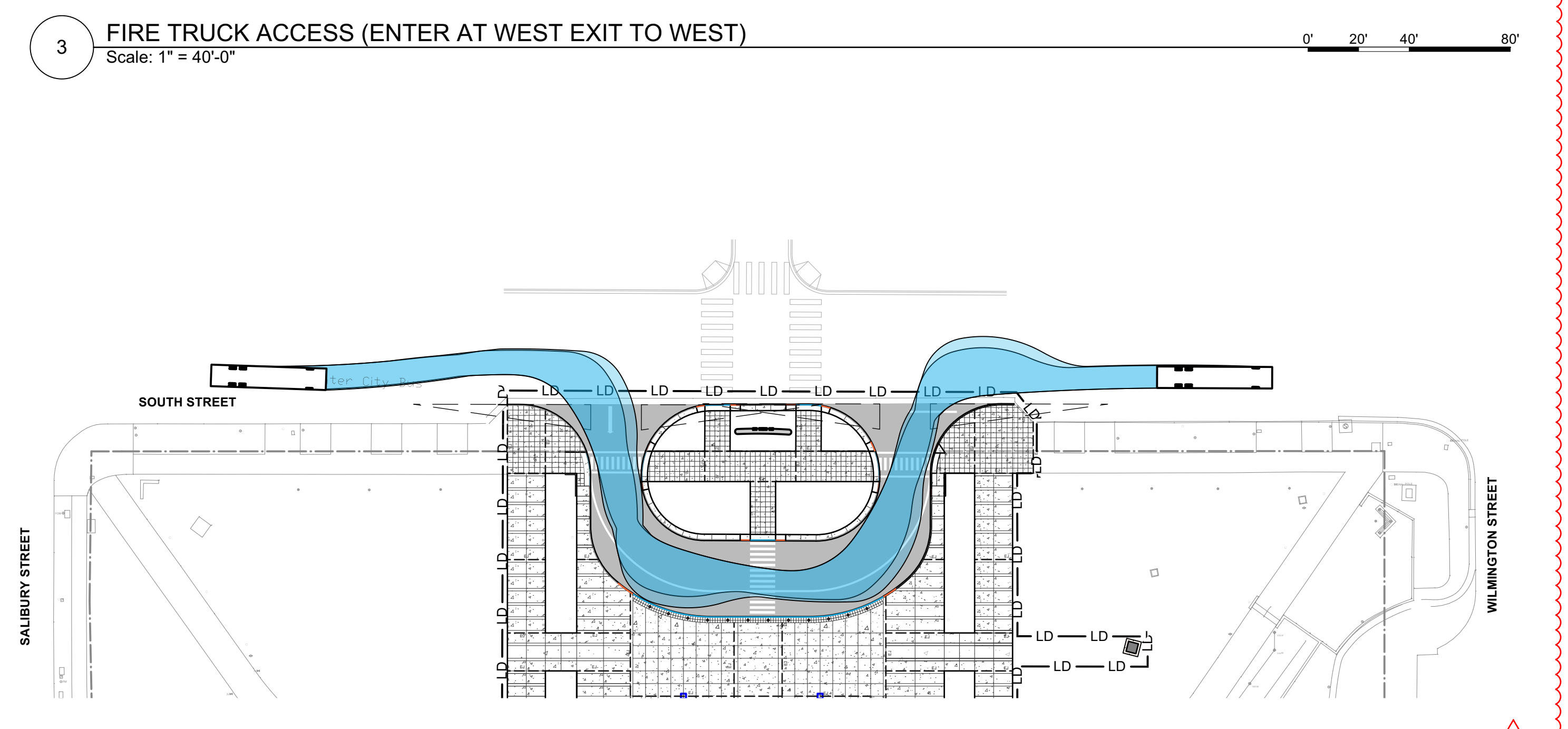
2 FIRE TRUCK ACCESS (ENTER AT WEST EXIT TO EAST)  
Scale: 1" = 40'-0"



3 FIRE TRUCK ACCESS (ENTER AT WEST EXIT TO WEST)  
Scale: 1" = 40'-0"

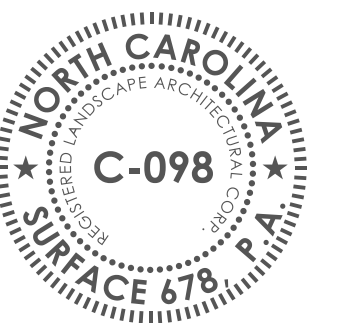
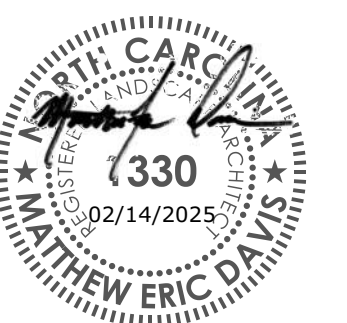


4 PASSENGER BUS ACCESS - ENTER FROM EAST  
Scale: 1" = 40'-0"



5 PASSENGER BUS ACCESS - ENTER FROM WEST  
Scale: 1" = 40'-0"

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### FIRE ACCESS PLAN

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L143

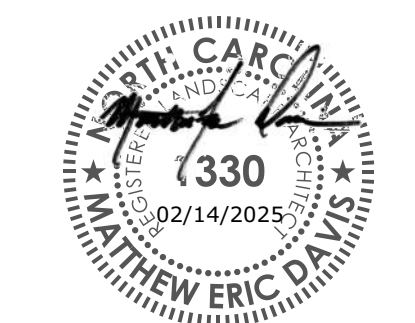


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## PERFORMING ARTS CENTER PLAZA CITY OF RALEIGH 2 E SOUTH STREET, RALEIGH, NC 27601

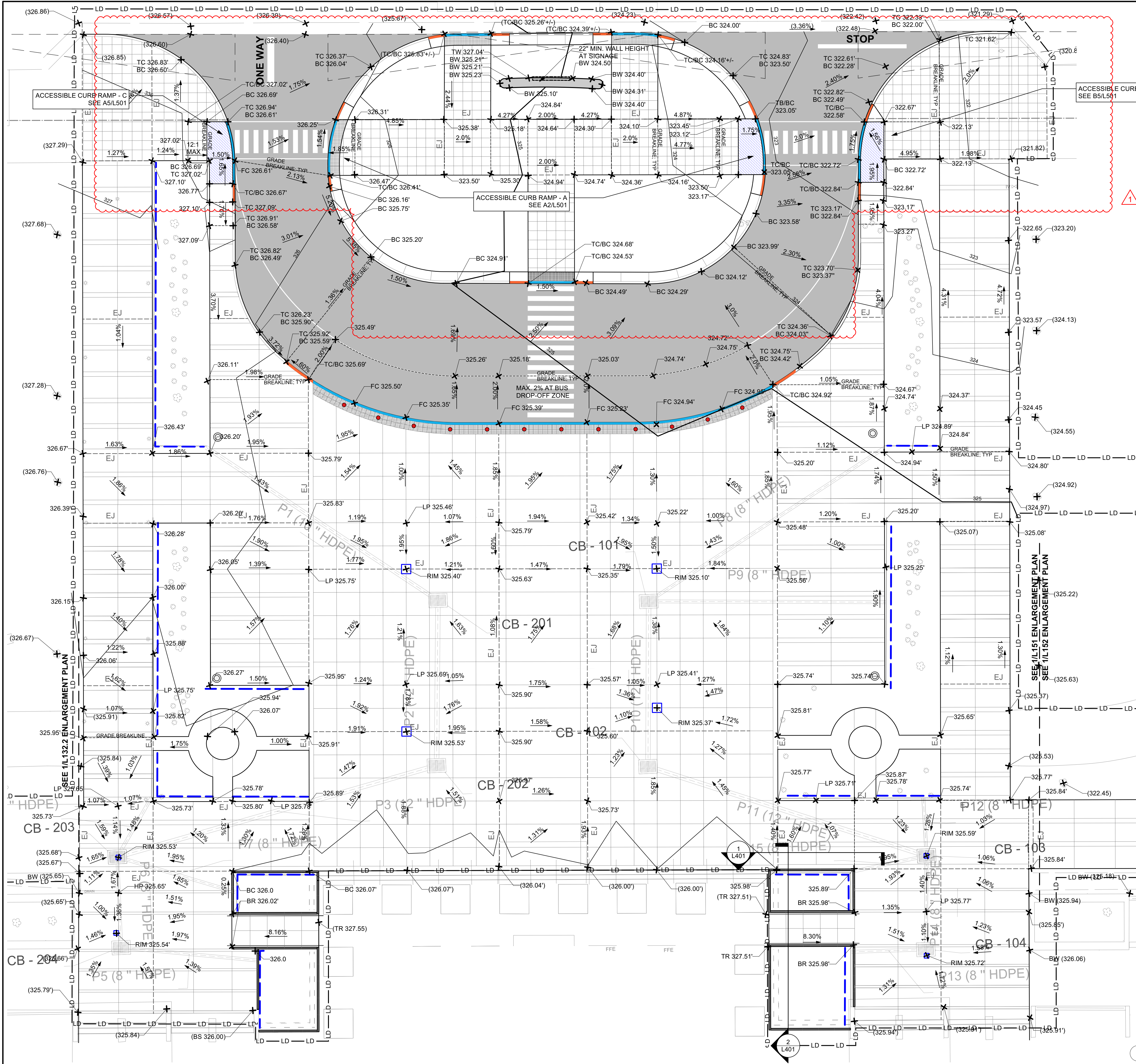


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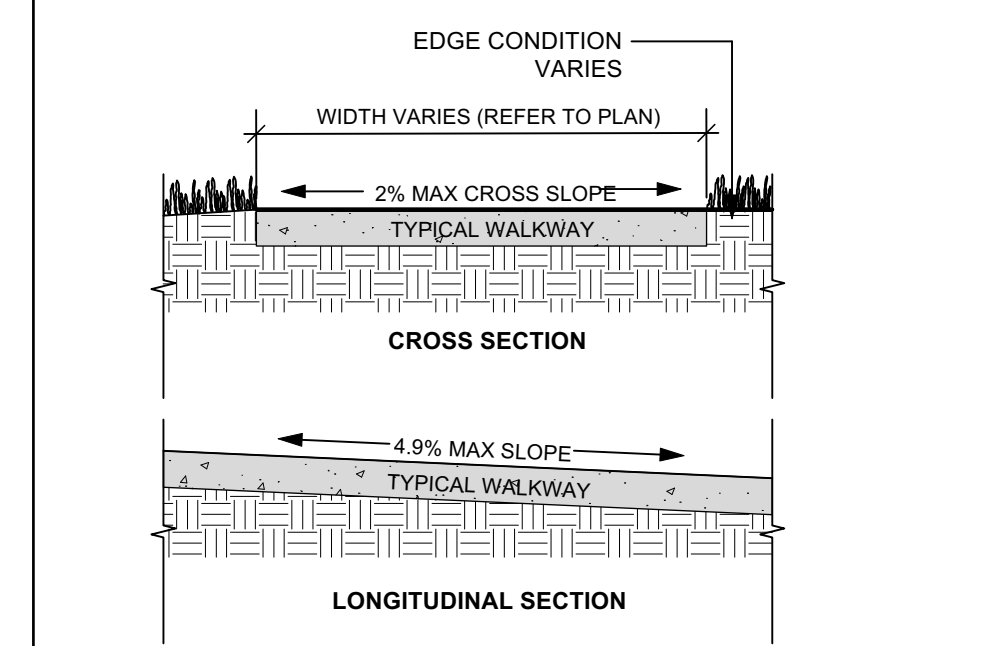
### GRADING ENLARGEMENT PLAN L151



#### GRADING NOTES

- EXISTING UTILITIES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING WORK. CONTRACTOR SHALL CONTACT NC ONE CALL CENTER AT 1-800-632-4949 FOR LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING AROUND EXISTING UTILITIES TO REMAIN.
- MATCH NEW CONSTRUCTION TO SURROUNDING ESTABLISHED GRADES. REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT.
- ALL AREAS ARE TO BE GRADED TO PROVIDE POSITIVE DRAINAGE AND AS SHOWN ON THE PLANS. UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL MAINTAIN A 2.5% SLOPE ON LAWNS, 1.5% ON UNIT PAVEMENT SURFACES, 1% ON CONCRETE FLATWORK AND 1.5% ON ASPHALT SURFACES. ALL STEPS, PRECAST SURFACES, CONSTRUCTED SEATING, WALL TOPS SHALL RECEIVE A MINIMUM OF 1% SLOPE TO PROVIDE WASH.
- LANDINGS OUTSIDE ALL DOORS SHALL BE SIZED PER THE NORTH CAROLINA BUILDING CODE(NCBC), BE AT THE SAME ELEVATION AS THE FFE, AND SHALL HAVE A MAX. 2% SLOPE IN ANY DIRECTION INCLUDING IN THE DIAGONAL.
- ALL STAIRS SHALL HAVE SLIGHTLY SLOPED LANDINGS (MAX. 2% SLOPE IN ANY DIRECTION INCLUDING IN THE DIAGONAL) AT THE TOP AND BOTTOM AND SHALL COMPLY WITH THE NCBC.
- UNLESS OTHERWISE NOTED, SPOT GRADES REFER TO BOTTOM OF CURB AT THE FLOW LINE (ADD 8" FOR THE TOP OF CURB). ALL SPOT GRADES AT THE EDGE OF PAVEMENTS SHALL REPRESENT THE PAVEMENT GRADES, NOT ADJOINING LANDSCAPE. ELEVATIONS SUPPLIED FOR CATCH BASINS OR AREA DRAINS ARE INDICATED FOR TOP OF GRATE AND TOP OF COVER FOR MANHOLES OR JUNCTION BOXES.
- THE FRAMES, GRATES, CLEAN OUTS, VALVE COVERS AND OTHER SURFACE UTILITY FEATURES SHALL BE ADJUSTED TO MEET PROPOSED GRADES WITH APPROPRIATE INSTALLATION DETAILS.
- ALL STORM DRAINAGE GRATES AND COVERS WITHIN ACCESSIBLE ROUTES THAT ARE SHOWN ON THE DRAWINGS SHALL MEET STATE AND FEDERAL ADA REQUIREMENTS.
- ALL DRAINAGE GRATES WITHIN PEDESTRIAN PAVING AND BIKE LANES SHALL BE BICYCLE WHEEL SAFE.
- THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO STORM DRAINAGE THAT PROVIDES ALIGNMENT WITH EXISTING SWALES, PIPES AND STRUCTURES. THE CONTRACTOR SHALL ALIGN THE TOP OF GRATE WITH INTENDED SCORE JOINTS, CURBS OR OTHER SURFACE DESIGN ELEMENTS OR AS SHOWN ON THE DRAWINGS.
- SEE LANDSCAPE SHEETS FOR LOCATIONS OF AREA DRAINS. UNDERGROUND DRAIN CATCH BASIN SHALL BE PLACED ACCORDING TO LANDSCAPE LAYOUT SHEETS.

#### ACCESSIBLE MEANS OF EGRESS NOTE



#### DOOR LANDING NOTE:

- ALL DOORS SHALL HAVE A LANDING WITH A MAXIMUM SLOPE OF 2% AWAY FROM THE DOOR AND SATISFY BUILDING ACCESSIBILITY CODE 404.2.4.1 FOR DIMENSIONAL STANDARDS.

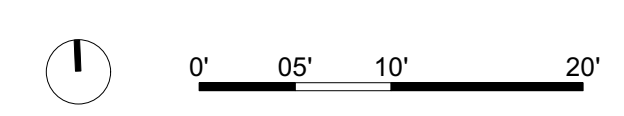
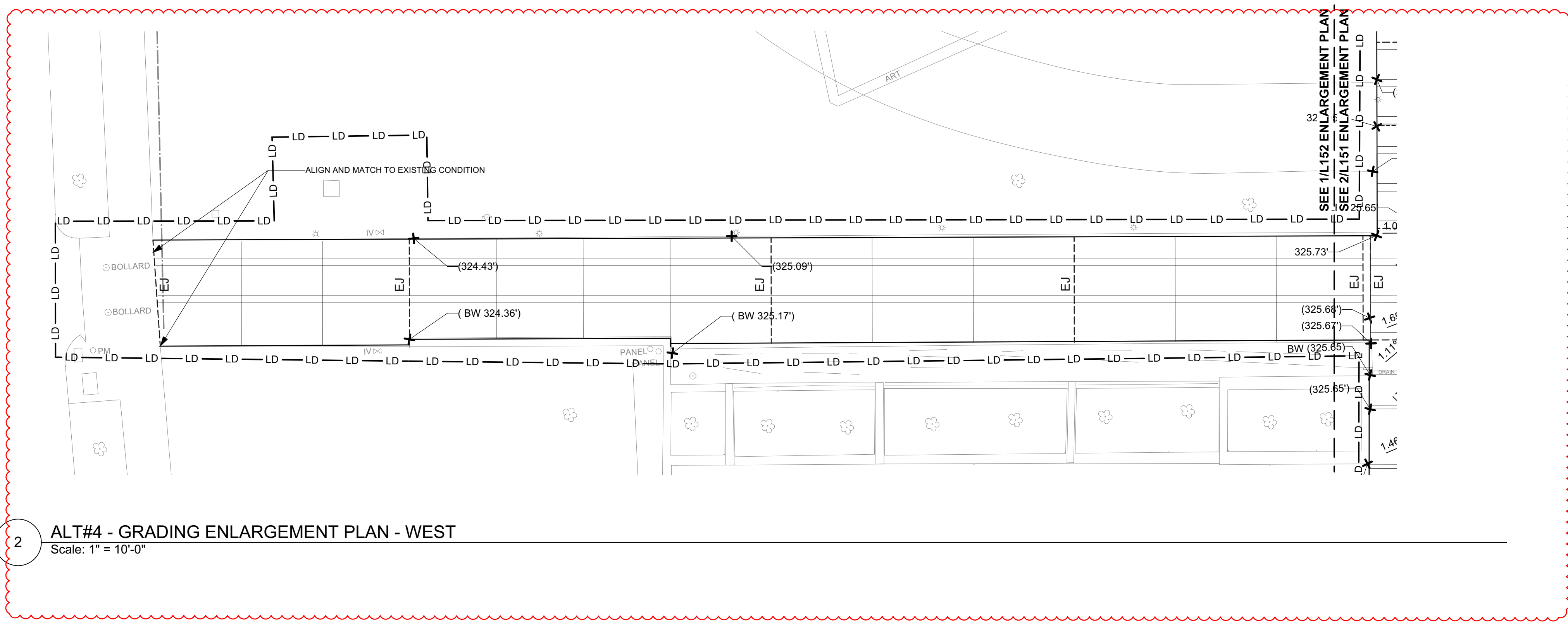
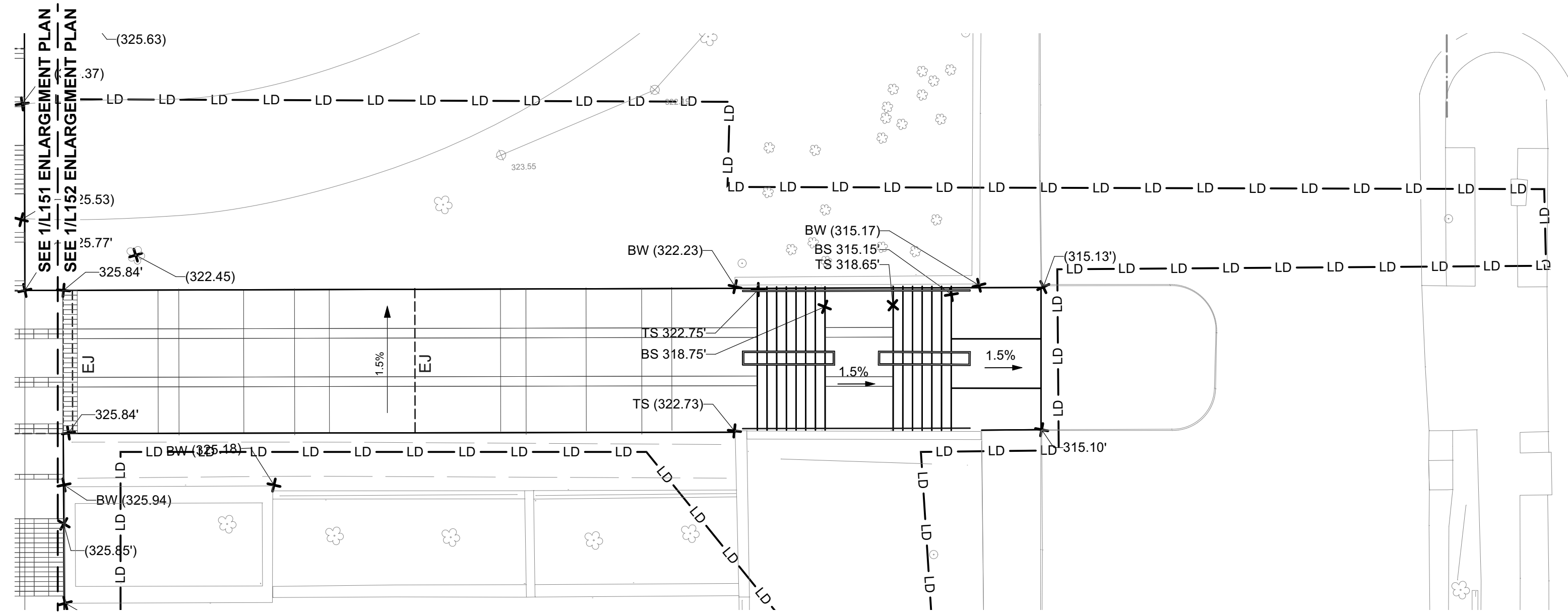
#### GRADING LEGEND

- + 100.00 PROPOSED SPOT ELEVATION
- + 100.00± APPROXIMATE PROPOSED SPOT ELEVATION FOR FLEXIBILITY
- + (100.00) EXISTING SPOT ELEVATION
- + (100.00±) EXTRAPOLATED EXISTING SPOT ELEVATION
- RIM AREA DRAIN RIM ELEVATION
- HP HIGH POINT
- LP LOW POINT
- HP/LP LOW POINT AT RIDGE LINE DRAINAGE DIVIDE
- TC TOP OF CURB
- BC BOTTOM OF CURB
- TC/BC START OF CURB TRANSITION
- FC FLUSH CURB
- TR TOP OF RAMP
- BR BOTTOM OF RAMP
- TS TOP OF STEP
- BS BOTTOM OF STEP
- TW TOP OF WALL
- BW BOTTOM OF WALL
- FFE FINISH FLOOR ELEVATION OF BUILDING INTERIOR

FLUSH CONCRETE CURB	A1 L503
CURB TRANSITION	A1 L501
LANDING (COMPLIANCE WITH CITY STANDARD)	

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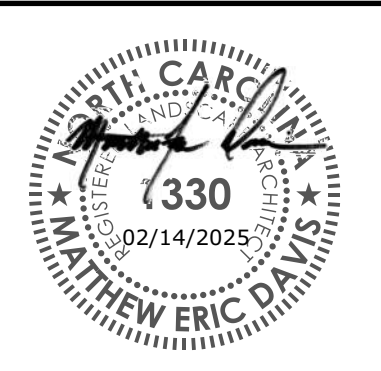


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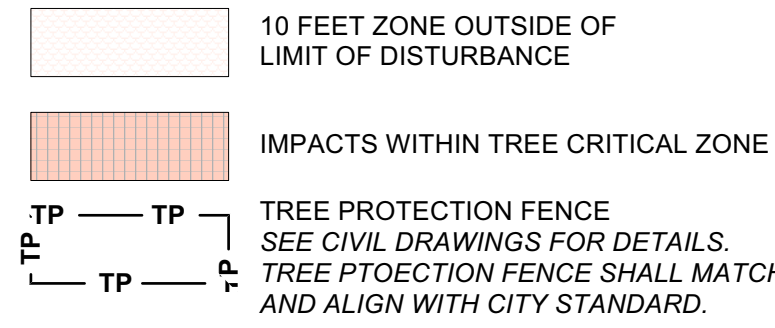
GRADING ENLARGEMENT PLAN  
**L152**

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**PLANTING NOTES**

- EXISTING UTILITIES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED IN THE FIELD PRIOR TO BEGINNING WORK. IDENTIFY THE LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL CONTACT NC ONE CALL CENTER AT 1-800-632-4949 FOR LOCATION OF EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING AROUND EXISTING UTILITIES TO REMAIN.
- CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT AND OWNER OF PLANT SUBSTITUTION IN ANY MEASUREMENT OR SPECIES INDICATED. SEE SPECIFICATIONS FOR FULL NOTIFICATION REQUIREMENTS.
- ALL TREES SHALL BE OBTAINED FROM THE NURSERY WITH EXPOSED ROOT CROWNS. B&B MATERIAL DELIVERED TO SITE WITH BURIED OR RECENTLY BURIED ROOT CROWNS WILL BE REJECTED.
- DO NOT PLANT IN STORM WATER CONVEYANCE SWALES. FO NOT PROVIDE FINE GRADING THAT DISRUPTS FLOW OR CHANGES LONGITUDINAL SLOPES IN A WAY THAT DAMS WATER OR PREVENTS THE FLOW OF WATER TOWARDS PROJECT DESIGNED LOW POINTS.
- PLANT THE OUTER EDGES OF EACH PLANTING GROUP FOLLOWING THE BED OUTLINE ACCORDING TO THE PLAN. ONCE A SATISFACTORY MATCHED OUTER EDGE IS OBTAINED, FILL THE CENTER OF EACH AREA WITH PLANTS ACCORDING TO THE PLAN AND SPACING NOTES. THIS FOLLOWS A NATURAL SPACING PATTERN RATHER THAN STRICT GRID SPACING.
- UNLESS OTHERWISE NOTED IN THE PLANT LIST, CONTRACTOR SHALL OBTAIN AND INSTALL ONLY PLANT MATERIAL THAT IS GROWN ON ITS OWN ROOT. GRAFTED OR BUDDED PLANT MATERIAL WILL BE REJECTED.
- THE PLANTING LAYOUT WITH PLANTING BEDS SHOULD BE SHIFTED TO MINIMIZE CONFLICTS WITH EXISTING TREE ROOTS AND OTHER STRUCTURES OR OBSTRUCTIONS. NOTIFY LANDSCAPE ARCHITECT OF SIGNIFICANT DEVIATIONS FROM PROJECT PROPOSED PLANT LOCATIONS.
- TEMPORARY EROSION CONTROL SEED MUST BE FULLY REMOVED PRIOR TO PREPARATION OF PERMANENT SEED, SOD OR LANDSCAPE BEDS.
- DISTURBED EARTH AREAS BEYOND PROJECT LIMITS THAT ARE DIRECTLY CAUSED BY CONTRACTOR MEANS AND METHODS SHALL BE RESTORED WITH PROJECT SPECIFIED TURF SOD UNLESS APPROVED BY LANDSCAPE ARCHITECT TO RESTORE WITH PROJECT SPECIFIED MULCH WHEN DISTURBED AREAS ARE INTERIOR TO OR BORDER AGAINST EXISTING MULCH AREAS.
- REFER TO SPECIFICATION SECTION 015639 FOR TEMPORARY TREE AND PLANT PROTECTION DURING CONSTRUCTION.
- SEE CIVIL DRAWINGS FOR TREE PROTECTION FENCE DETAIL AND LAYOUT.

**TREE LEGEND**



**URBAN FORESTRY NOTES**

- CONTRACTOR SHALL INSTALL REQUIRED TREE PROTECTION FENCE AS SHOWN ON THE APPROVED PLAN AND HAVE IT INSPECTED BY CITY STAFF BEFORE PROCEEDING WITH ADDITIONAL WORK.
- CONTRACTOR SHALL REFRAIN FROM ADDITIONAL CONSTRUCTION ACTIVITIES ON CITY-OWNED OR CONTROLLED PROPERTY UNTIL A SATISFACTORY INSPECTION HAS BEEN COMPLETED BY THE CITY OF REQUIRED TREE PROTECTION FENCING AS APPROVED. DISTURBANCE WITHIN THE REQUIRED TREE PROTECTION AREAS WILL RESULT IN THE ISSUANCE OF A STOP WORK ORDER AND MAY REQUIRE MITIGATION INCLUDING BUT NOT LIMITED TO MONETARY PENALTIES, PRUNING, TREE REMOVAL, AND REPLANTING AS DETERMINED BY THE CITY.
- ADDITIONAL TREES MAY BE REQUIRED TO BE REMOVED ON CITY-OWNED OR CONTROLLED PROPERTY AT THE DISCRETION OF THE URBAN FORESTER

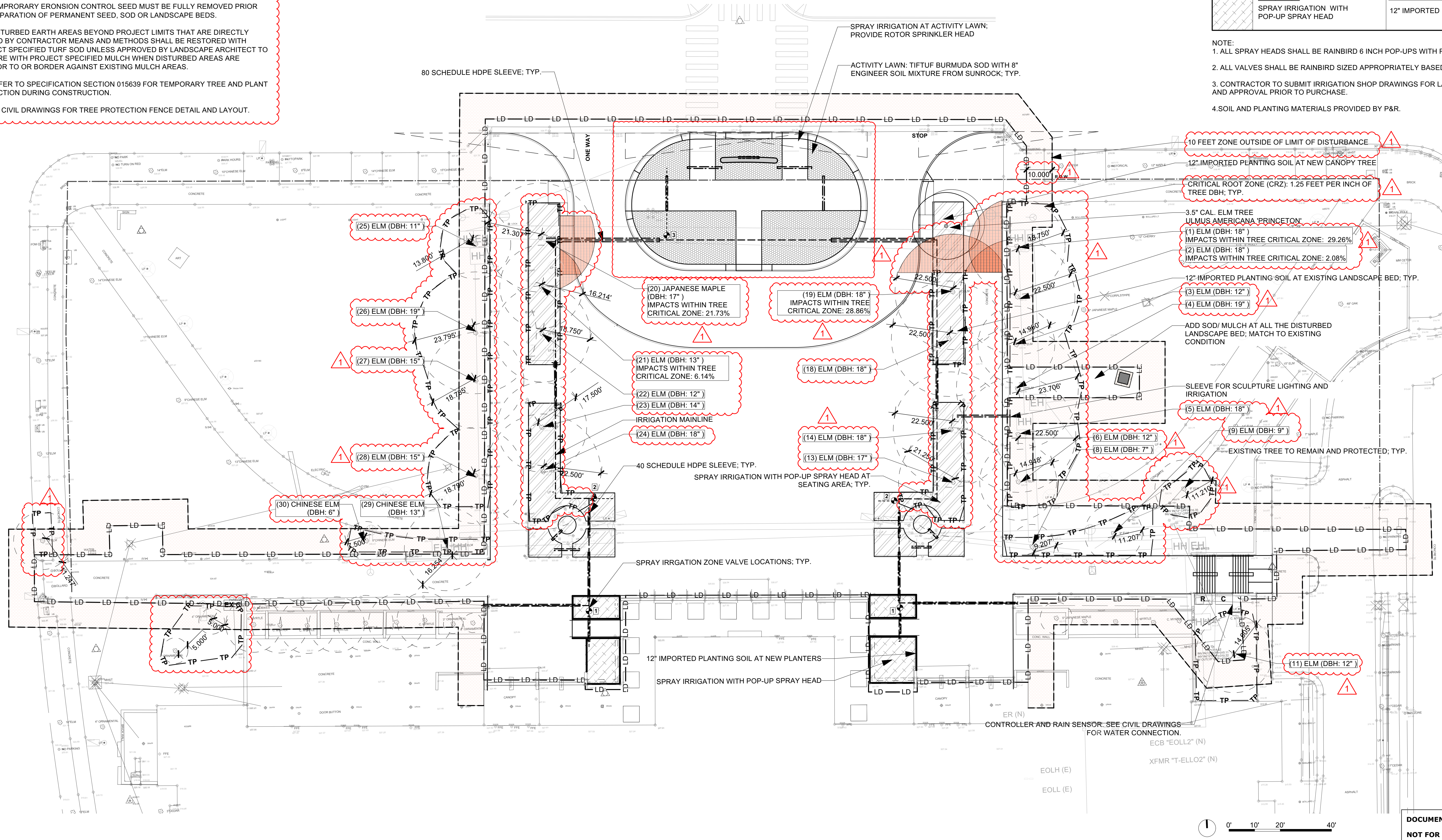
**SOIL NOTES**

- ALL EARTHWORK BELOW LANDSCAPE SOILS WILL BE COMPRISED OF CLEAN AND STRUCTURALLY APPROVED LOCAL RESIDUAL SOILS. RALEIGH PARKS AND RECREATION (P&R) WILL SPECIFY ALL TOP SOILS FOR ALL PLANTED AREAS.
- BACKFILL ALONG STRUCTURES REQUIRE GEOTECHNICAL INSPECTION AND CONFIRMATION TO PREVENT DIFFERENTIAL SETTLEMENT.
- BACKFILL OF DEEP TRENCHES AND UTILITIES OVER DEEP UTILITY INFRASTRUCTURE, NORMAL BACKFILL DESIGN MAY BE INADEQUATE TO PREVENT SETTLEMENT AND DAMAGE TO LANDSCAPE. THE PROJECT SHOULD INCORPORATE BACK FILL MATERIALS, GEOTECHNICAL DESIGN AND OVERSIGHT OR OTHER METHODS TO PREVENT SETTLEMENT.
- RIP SUBSOIL OR HARDPAN TO A DEPTH OF 24" PRIOR TO THE PLACEMENT OF PLANTING SOILS.
- ALL CONSTRUCTION DEBRIS AND TEMPORARY CONSTRUCTION BALLAST PLACED FOR VEHICULAR ACCESS TO BE REMOVED TO ITS FULL DEPTH PRIOR TO PLACEMENT OF PLANTING SOILS.

**SOIL AND IRRIGATION LEGEND**

ACTIVITY LAWN	SOIL AND PLANT
IRRIGATION SPRAY IRRIGATION AT ACTIVITY LAWN; PROVIDE ROTOR SPRINKLER HEAD	8" ENGINEER SOIL WITH TIFTUF BERMUDA SOD
EXISTING PLANTING BED	SOIL AND PLANT
IRRIGATION SPRAY IRRIGATION WITH POP-UP SPRAY HEAD	12" IMPORTED PLANTING SOIL
NEW PLANTING BED	SOIL AND PLANT
IRRIGATION SPRAY IRRIGATION WITH POP-UP SPRAY HEAD	12" IMPORTED PLANTING SOIL

- NOTE:
- ALL SPRAY HEADS SHALL BE RAINBIRD 6 INCH POP-UPS WITH R-VAN NOZZLES.
  - ALL VALVES SHALL BE RAINBIRD SIZED APPROPRIATELY BASED ON FLOW RATES PER ZONE.
  - CONTRACTOR TO SUBMIT IRRIGATION SHOP DRAWINGS FOR LARCH AND OWNER TO REVIEW AND APPROVAL PRIOR TO PURCHASE.
  - SOIL AND PLANTING MATERIALS PROVIDED BY P&R.

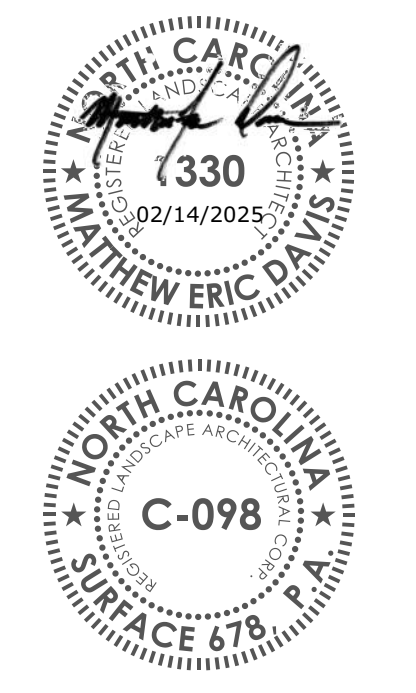


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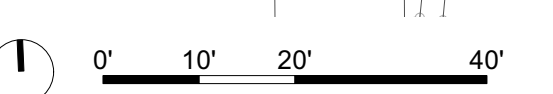
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**SOIL AND IRRIGATION PLAN**

**L161**



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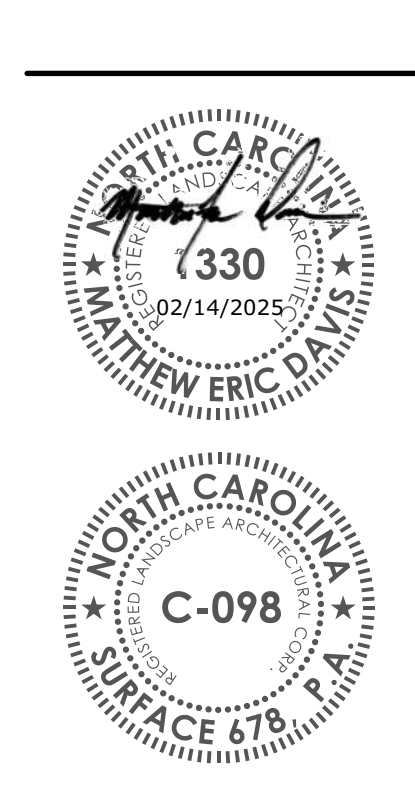


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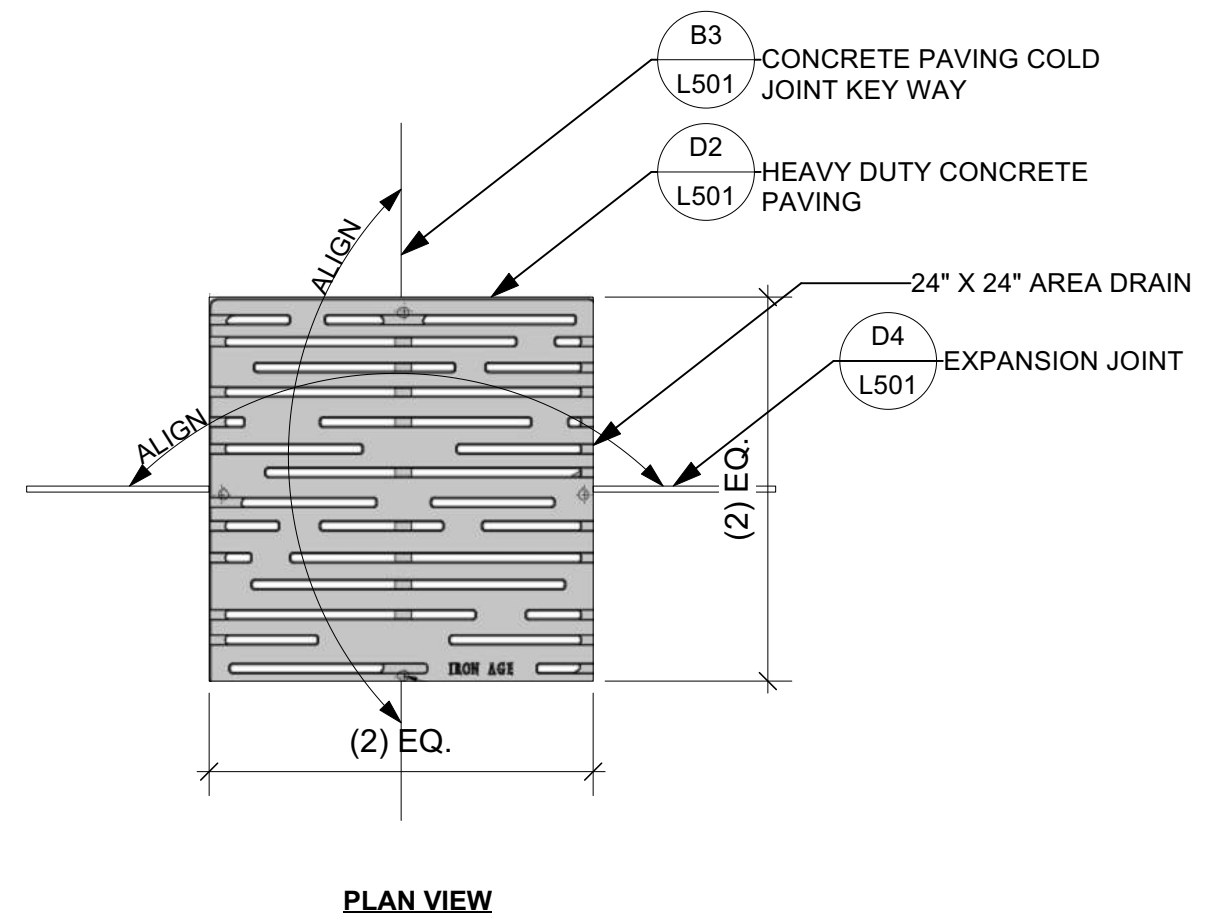
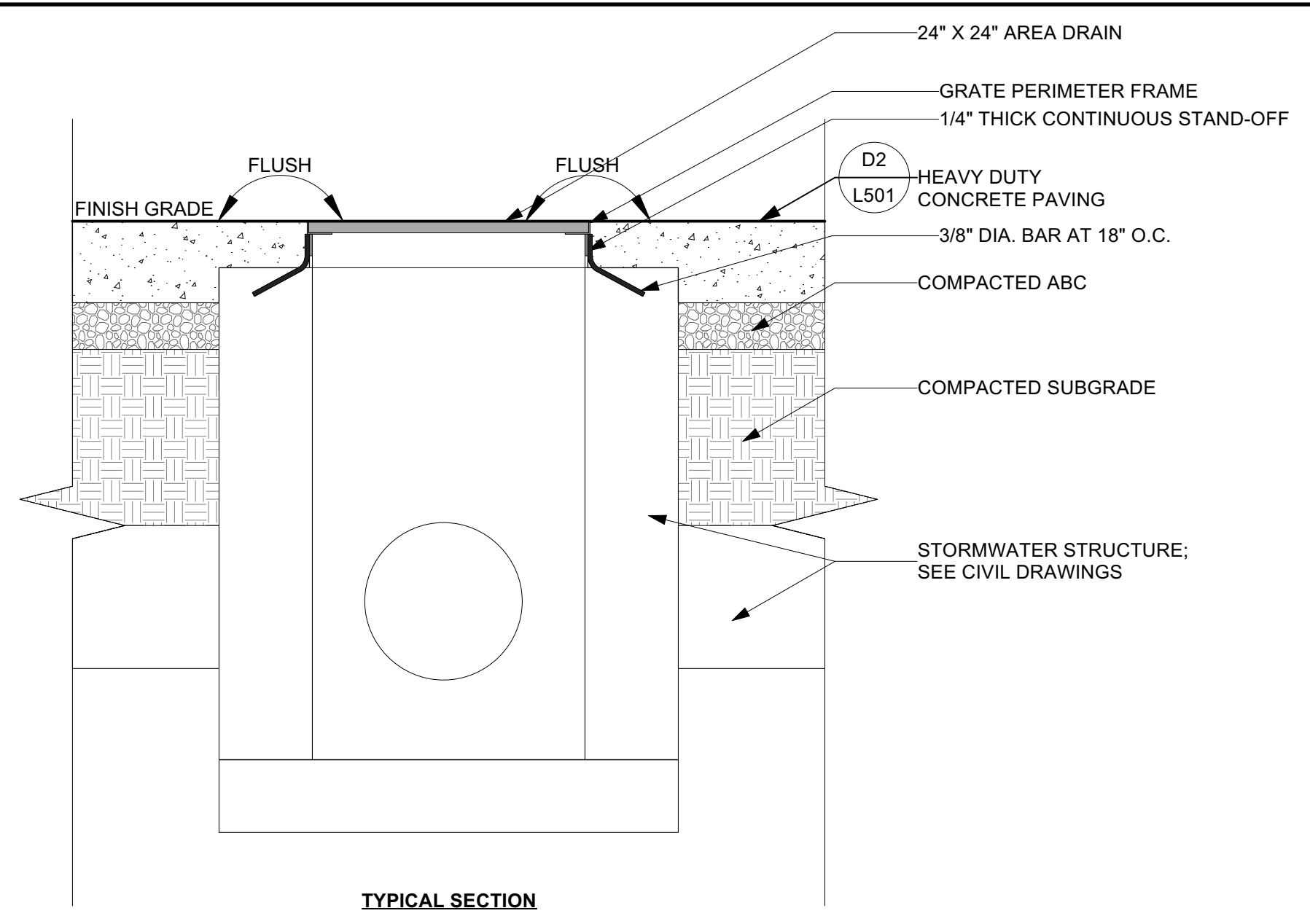
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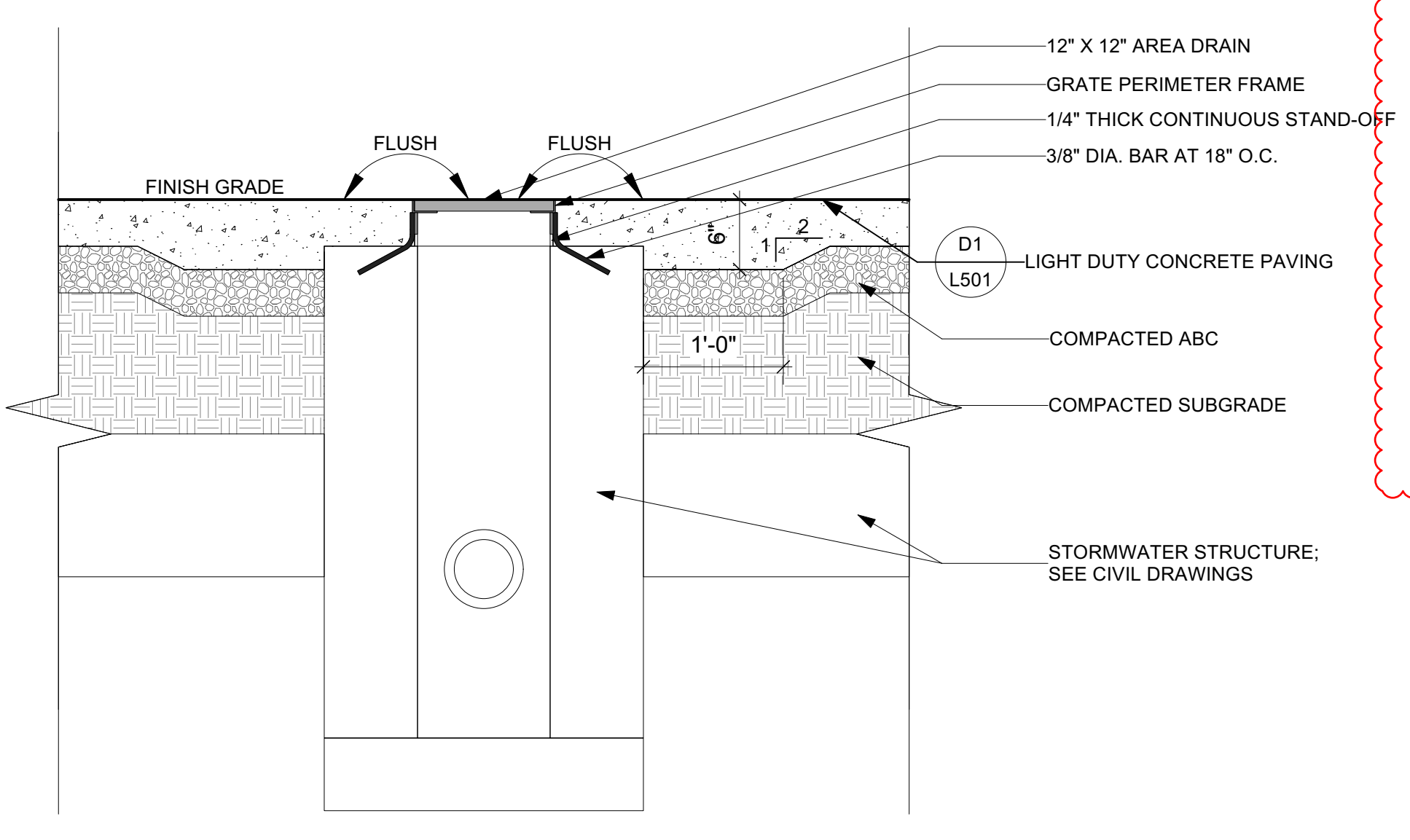


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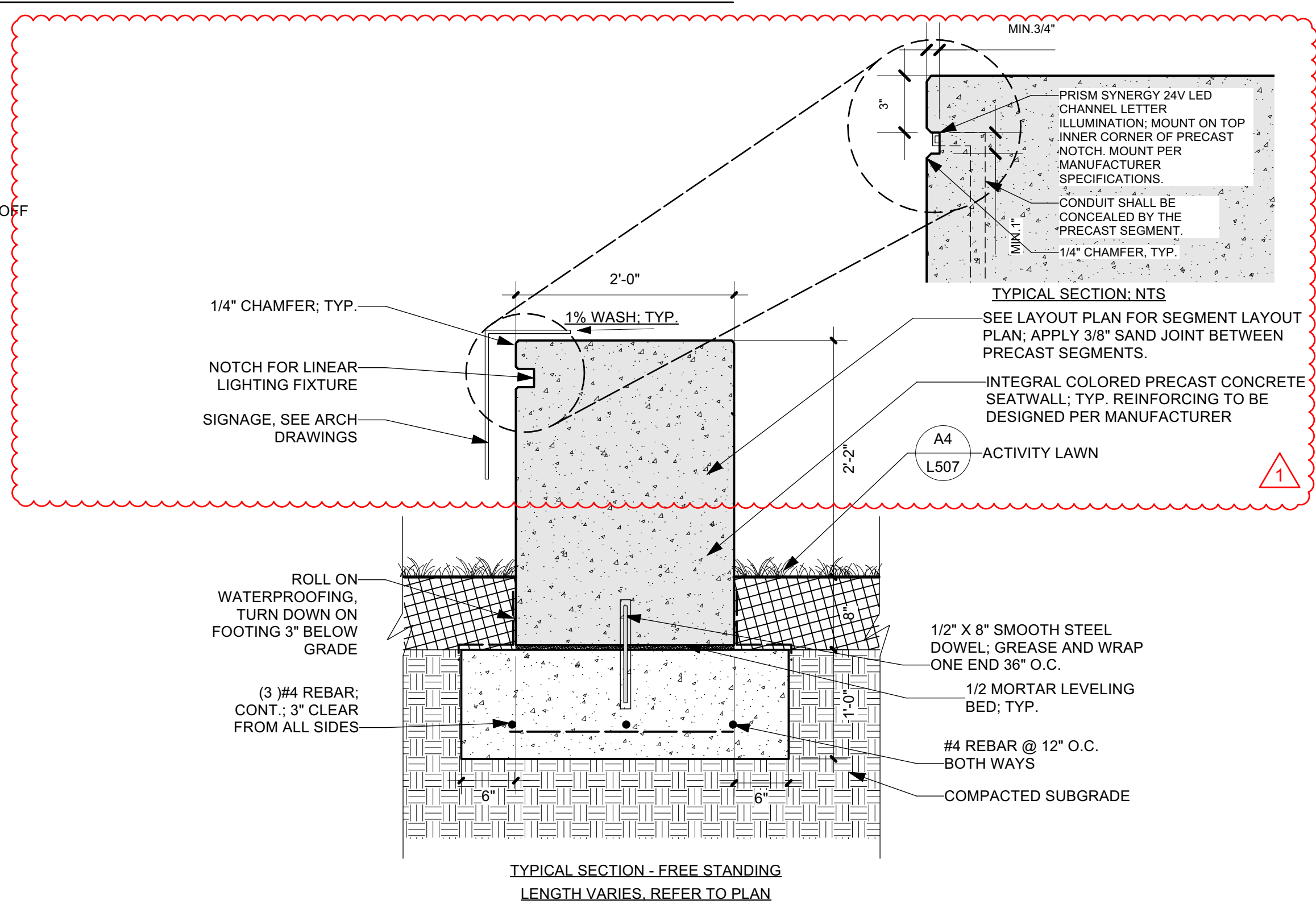
**NOTES**  
1. UNIT PAVER DETAIL IS NOT INCLUDED FOR THE BASE BID.  
2. CONTRACTOR SHALL INSTALL DRAIN GRATE PER MANUFACTURER'S SPECIFICATIONS.

**D1** 24X24 AREA DRAIN IN HEAVY DUTY CONCRETE  
Scale: 1" = 1'-0"

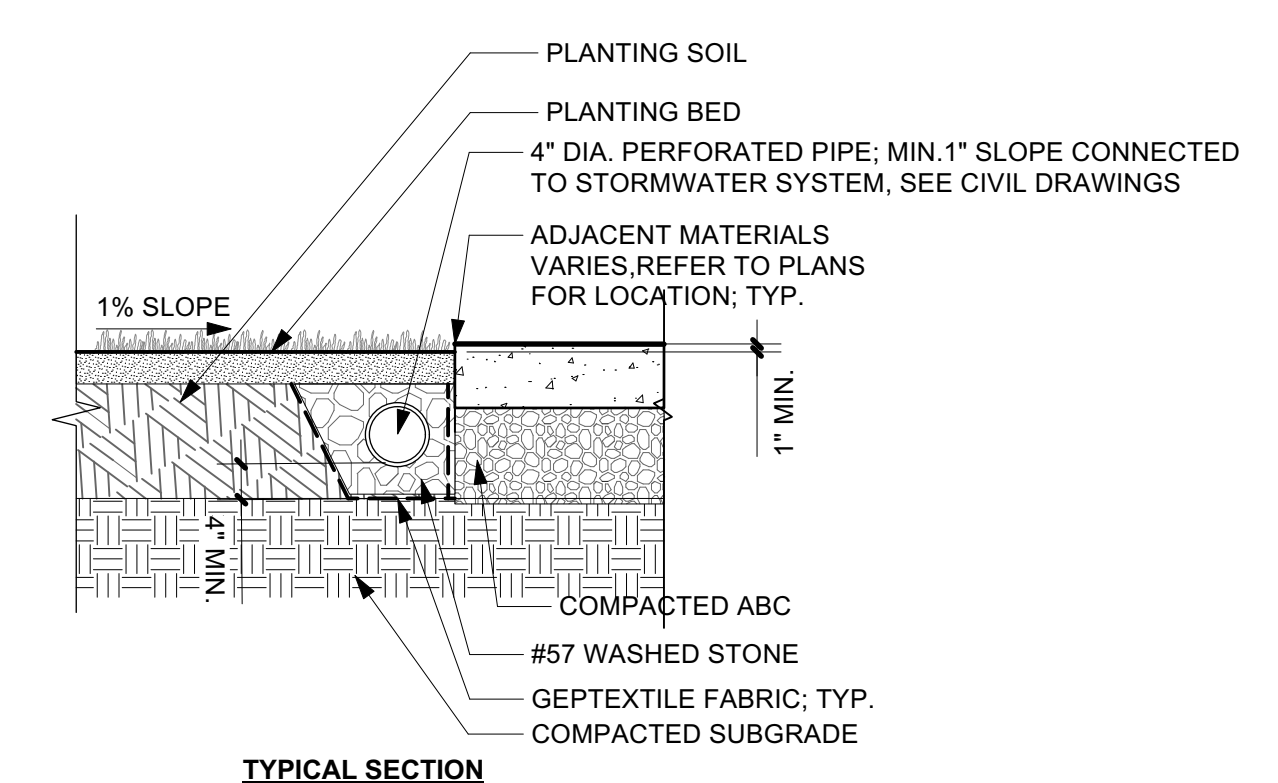


**NOTES**  
1. UNIT PAVER DETAIL IS NOT INCLUDED FOR THE BASE BID.  
2. CONTRACTOR SHALL INSTALL DRAIN GRATE PER MANUFACTURER'S SPECIFICATIONS.

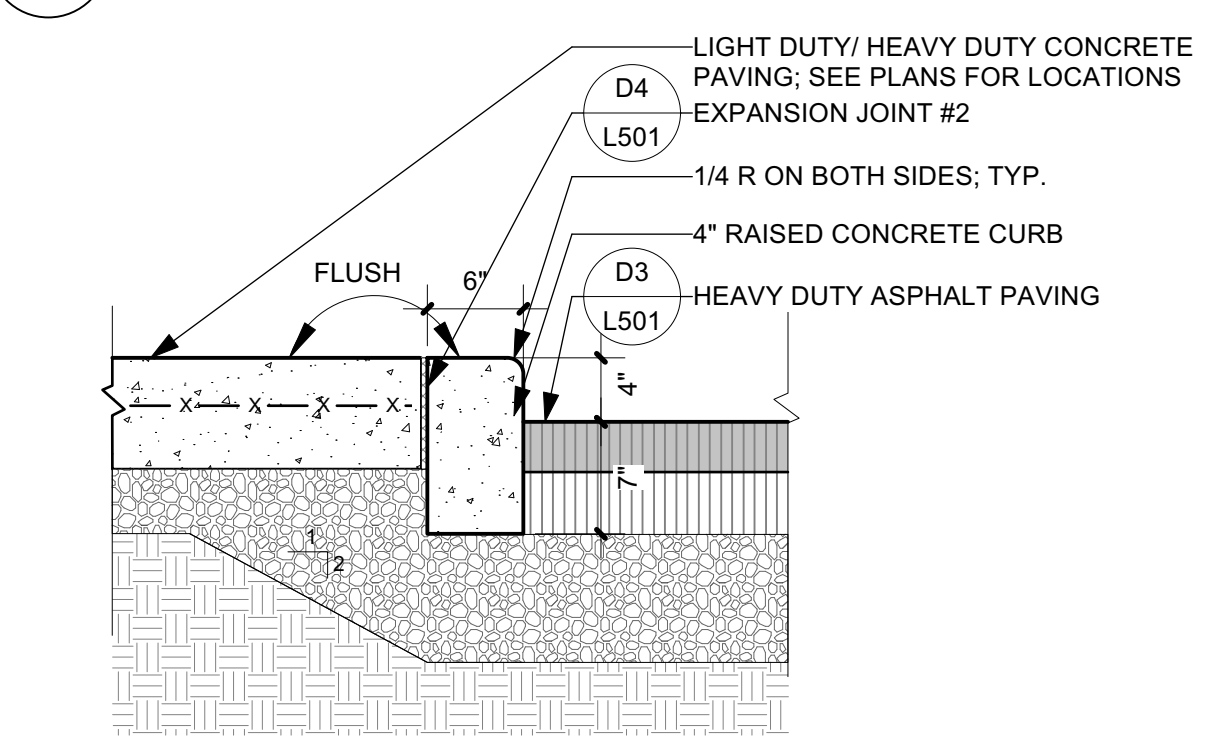
**B1** 12 X 12 AREA DRAIN IN LIGHT DUTY CONCRETE  
Scale: 1" = 1'-0"



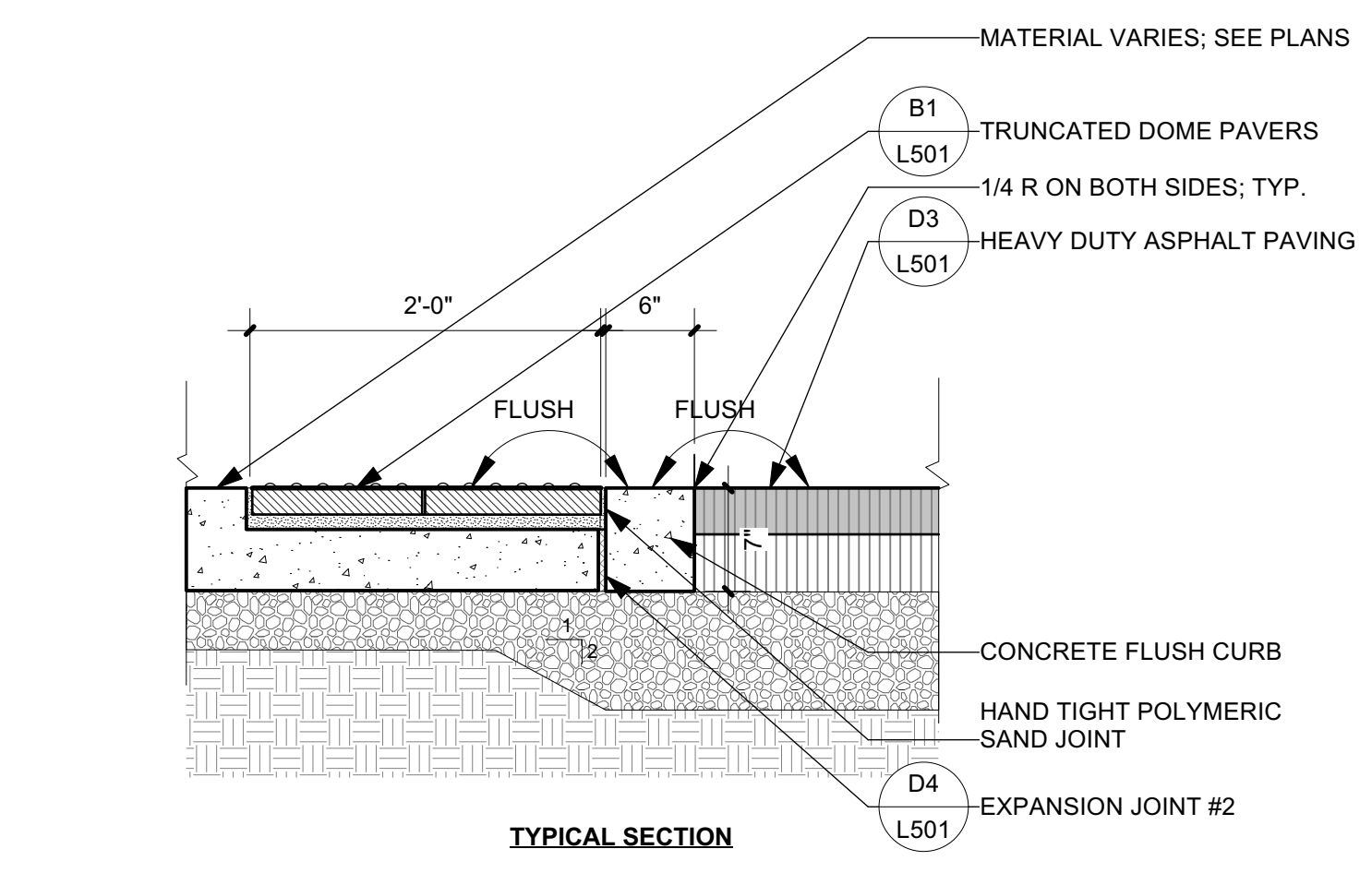
**B2** PRECAST CONCRETE SEATWALL  
Scale: 1" = 1'-0"



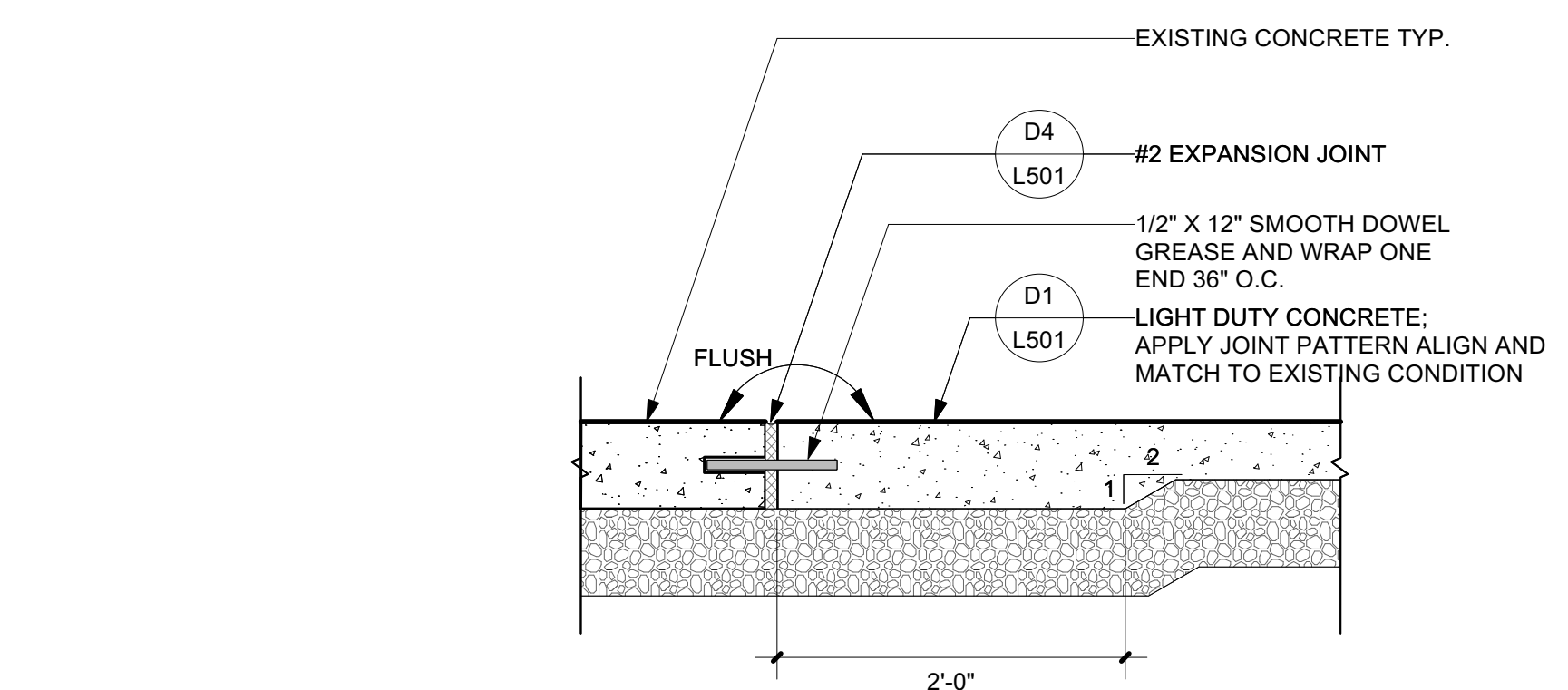
**C3** FRENCH DRAIN  
Scale: 1" = 1'-0"



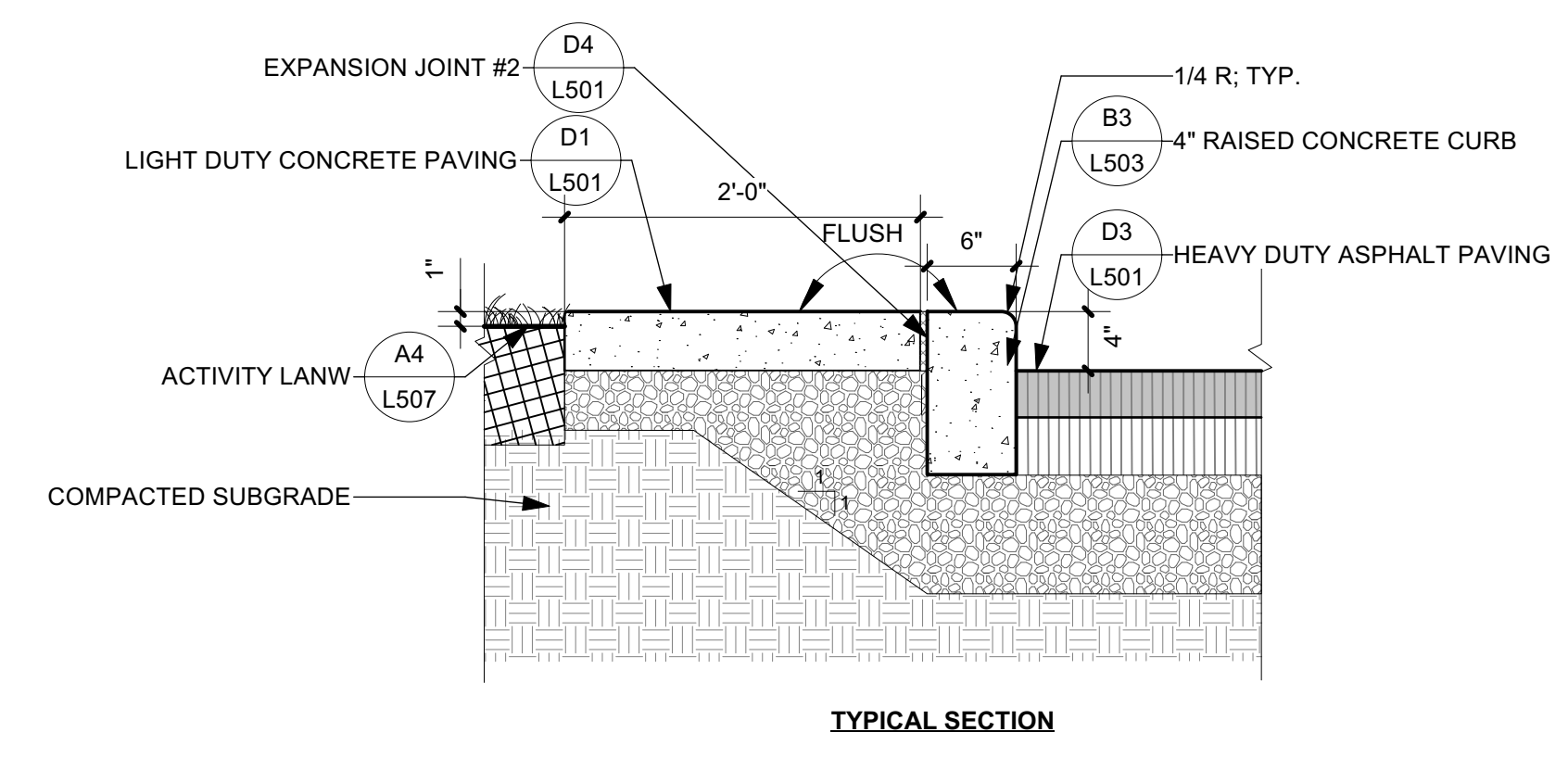
**B3** 4" RAISED CONCRETE CURB  
Scale: 1" = 1'-0"



**A1** FLUSH CONCRETE CURB  
Scale: 1" = 1'-0"



**A2** EXISTING CONCRETE TO PROPOSED LIGHT DUTY CONCRETE PAVING  
Scale: 1" = 1'-0"



**A3** 2" WIDE CONCRETE BAND AT BACK OF CURB  
Scale: 1" = 1'-0"

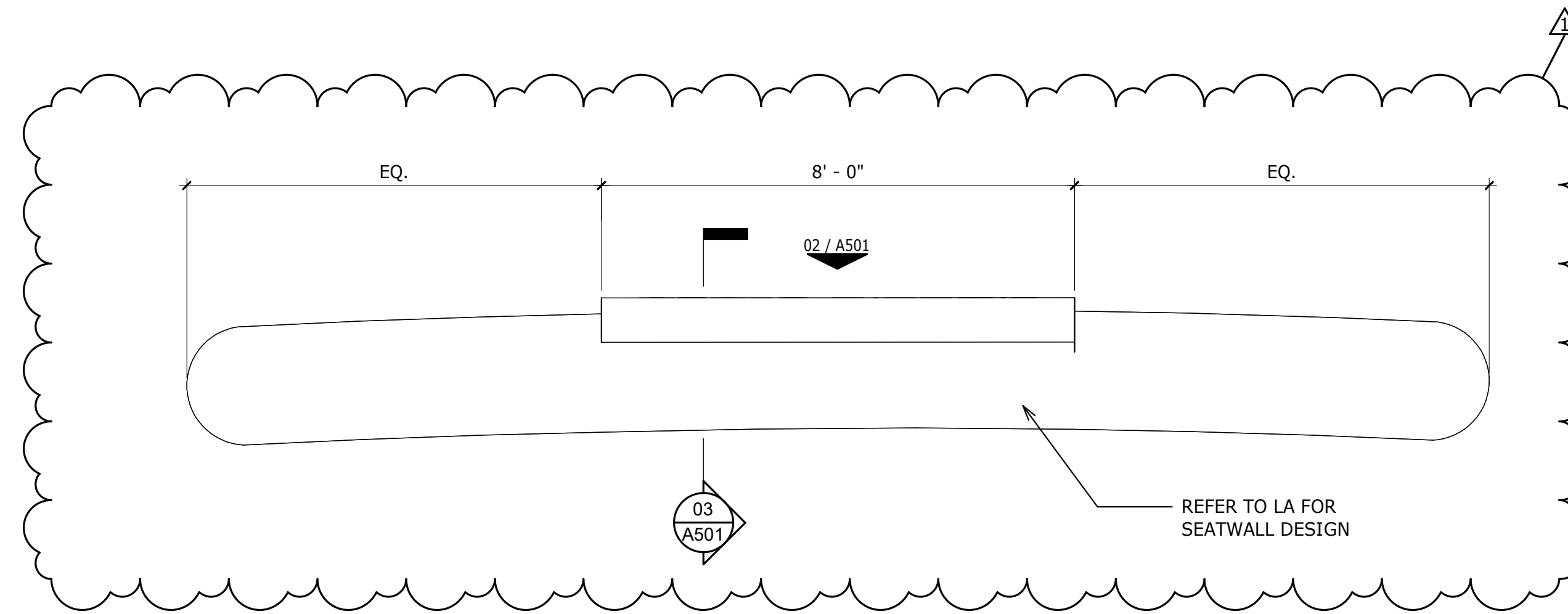
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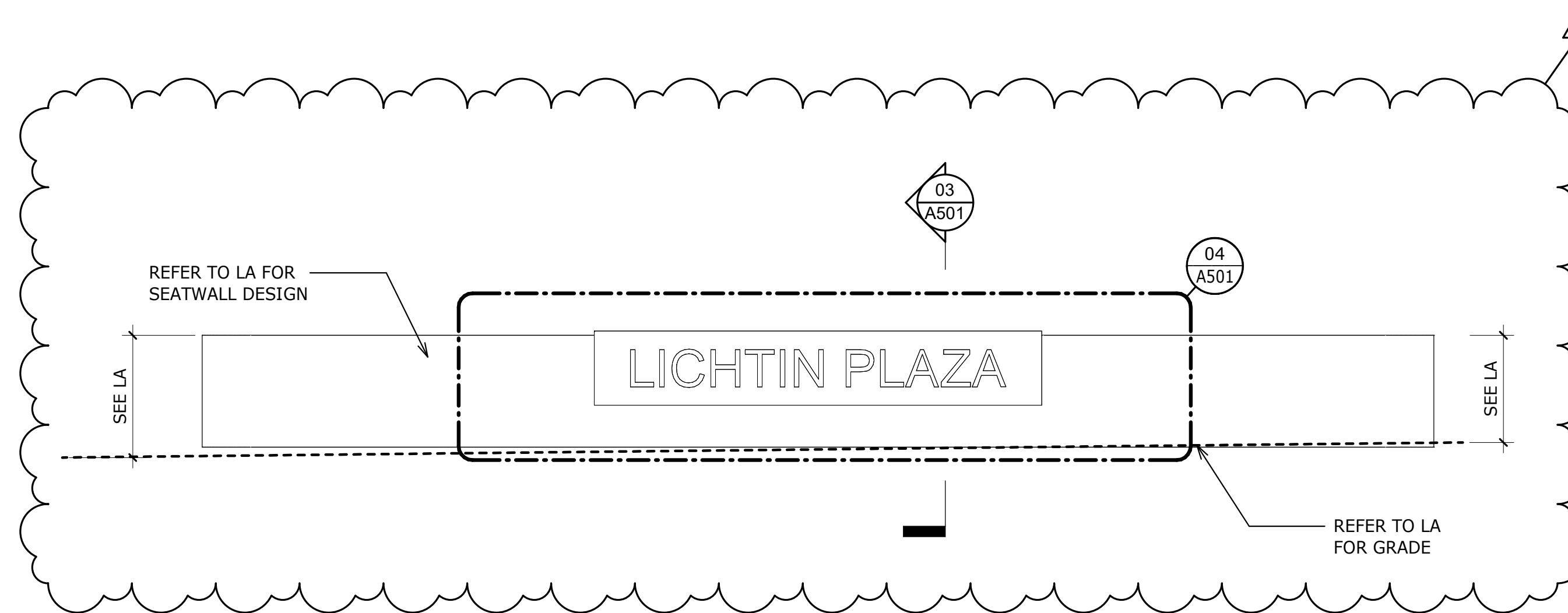
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DETAILS  
BASE BID

**L503**



01 PLAN - SIGNAGE  
A501 1/2" = 1'-0"



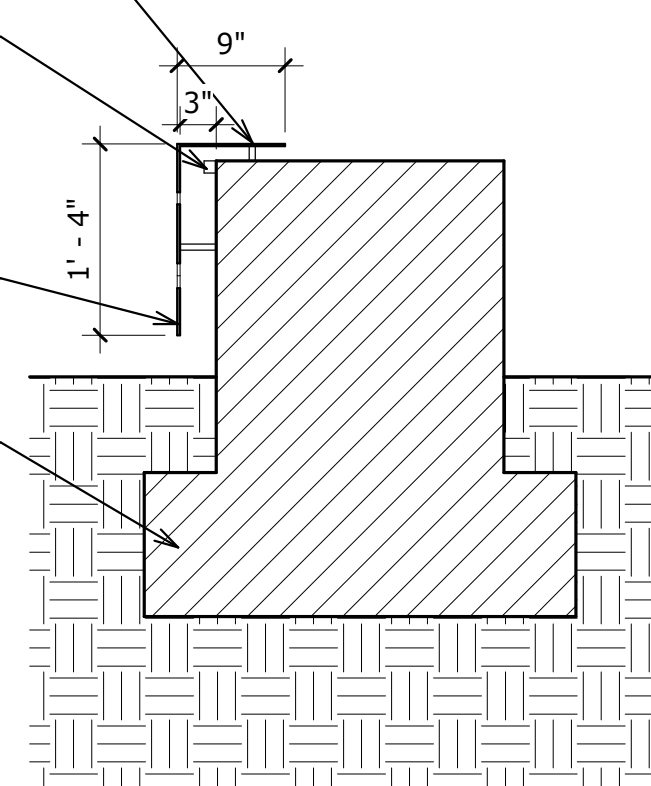
02 ELEVATION  
A501 1/2" = 1'-0"

STANDOFFS ATTACHED TO CONCRETE, SIZE AND SPACING PER MANUFACTURER REQUIREMENTS

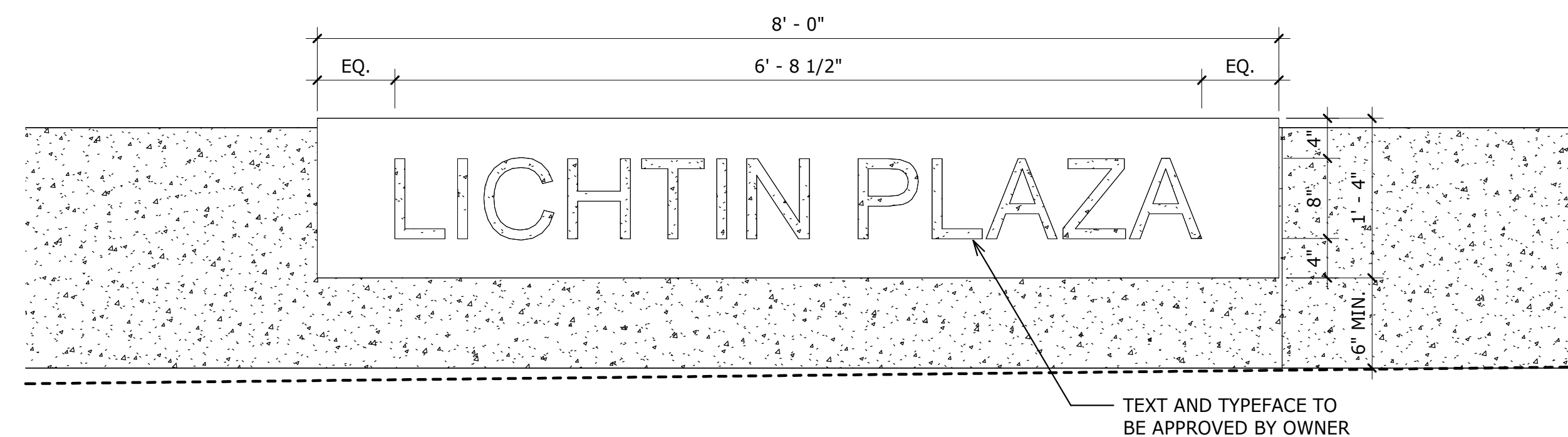
LED FIXTURES, CONDUIT, AND ALL INSTALLATION ELEMENTS TO BE CONCEALED FOR BACKLIT SIGNAGE.

0.25" THICK STAINLESS STEEL PLATE SIGNAGE WITH LASERCUT LETTERS: BRUSHED FINISH

REFER TO LA FOR SEATWALL DESIGN



03 SECTION  
A501 3/4" = 1'-0"



04 ENLARGED ELEVATION  
A501 1" = 1'-0"



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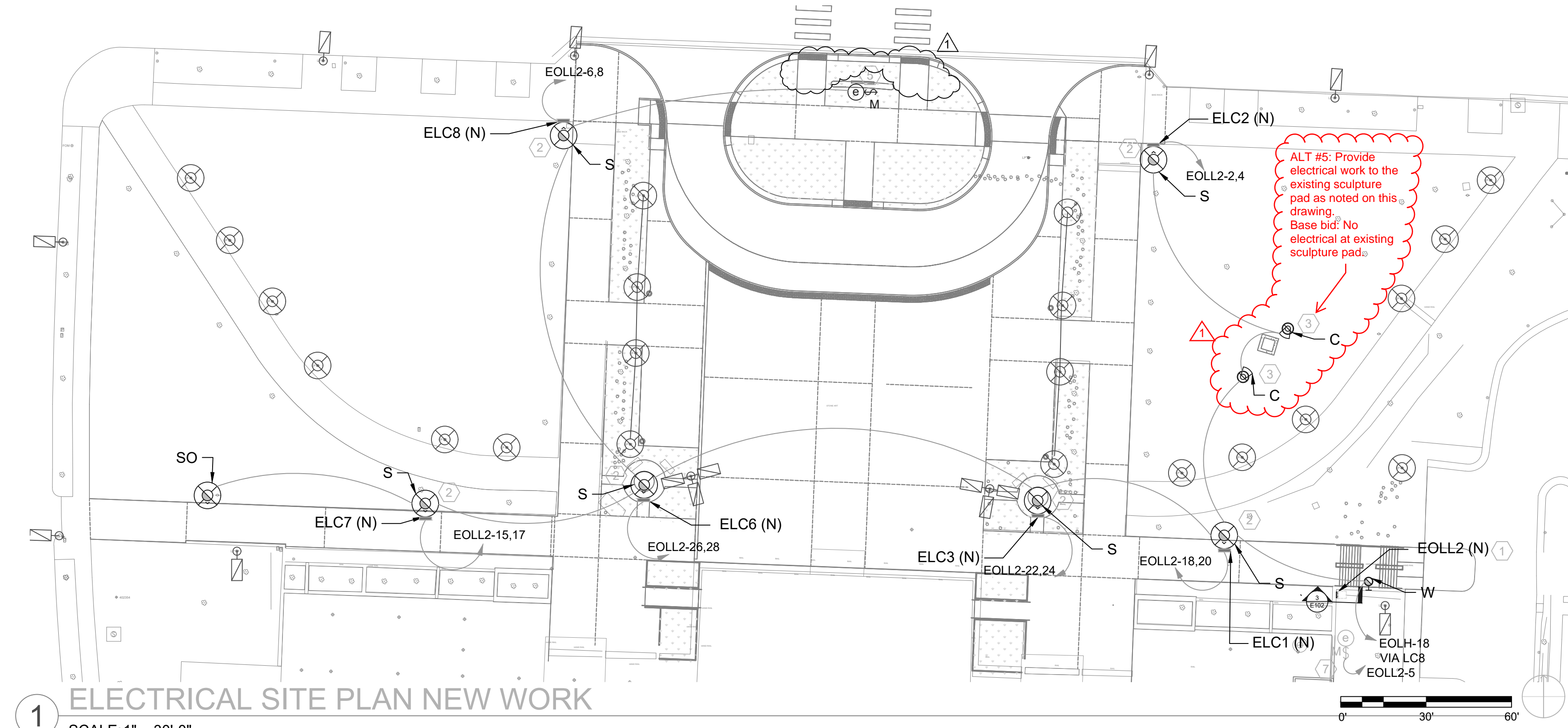
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**WALL SIGNAGE  
DETAIL**

A501

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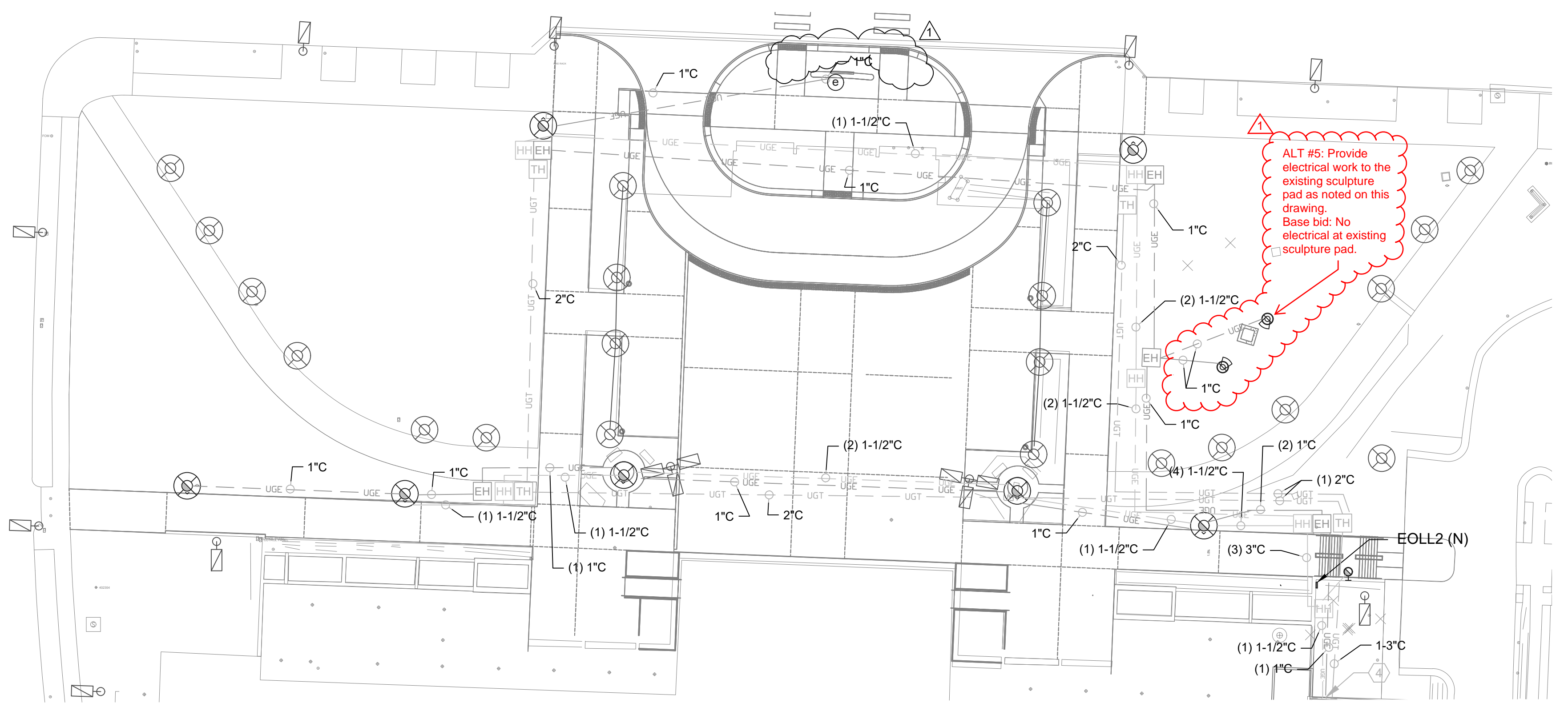
**1 ELECTRICAL SITE PLAN NEW WORK**  
SCALE: 1" = 30'-0"

**GENERAL NOTES:**

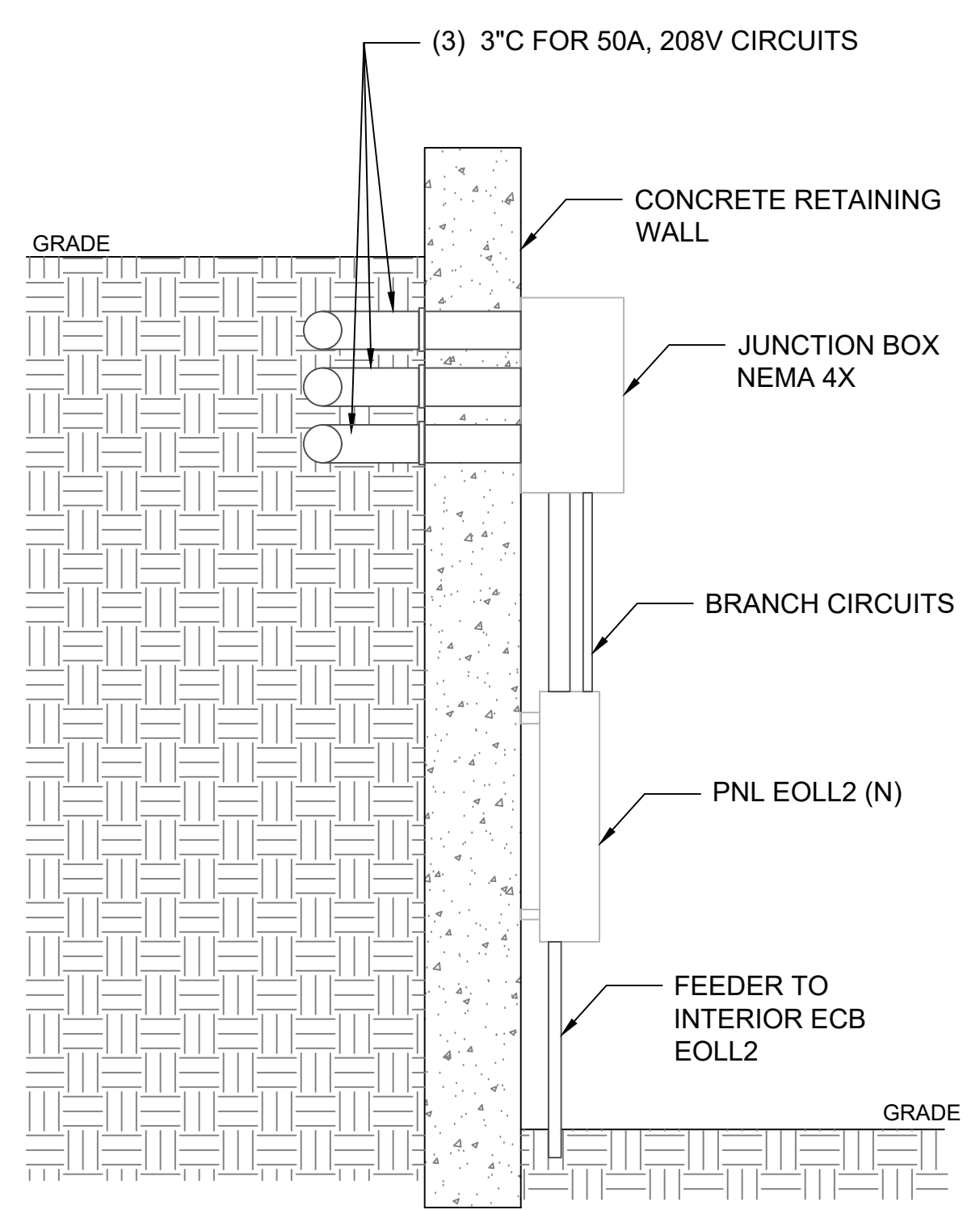
1. REFER TO SHEET E001 FOR SEQUENCE OF CONSTRUCTION AND SCHEDULING.
2. ALL FEEDERS SHALL BE COPPER
3. CONTRACTOR SHALL FIELD VERIFY EXISTING BRANCH CIRCUITS.
4. ALL EXISTING PANELS AND LIGHTING CONTACTORS ARE LOCATED IN THE GROUND FLOOR OF THE FLETCHER BUILDING. REFER TO SHEET E101 FOR THE LOCATION OF THE EXISTING LIGHTING CONTROLS AND PANELBOARD.

**NEW WORK KEYED NOTES:**

1. PROVIDE A NEW 208/120V, 3PH, 4W, MCB, NEMA 4X PANELBOARD. MOUNT PANEL TO EXISTING CONCRETE WALL.
2. PROVIDE NEW FIXTURES, POLES, RECEPTACLES, RV PANELS AND BASES. REFER TO FIXTURE DETAIL FOR ADDITIONAL INFORMATION ON POLE BASES. CONNECT NEW FIXTURE TO NEW BRANCH CIRCUIT. PROVIDE A NEW 208V, 50A LOAD CENTER WITH 30A, 2P, 208V GFCI BREAKER AND 20A, 1P BREAKER. PANELBOARD SHALL ALSO COME WITH LB-30 AND 20A WEATHER RESISTANT GFCI RECEPTACLES. INSTALL PANEL TO EXTERIOR OF POLE IN FRONT OF HAND HOLE. PROVIDE GASKETING TO REDUCE MOISTURE COLLECTION WITHIN POLE. PROVIDE NEW FEEDER FOR PANELS. REFER TO PANEL SCHEDULES AND DETAILS FOR ADDITIONAL INFORMATION.
3. PROVIDE NEW SPOT LIGHT AND CONNECT TO NEW LIGHTING BRANCH CIRCUIT USING 2#8, #10G IN 1" C.
4. CONDUITS CONTINUED ON GROUND FLOOR. CONDUIT SHALL PENETRATE EXISTING BUILDING WALL. REFER TO E-101 FOR ADDITIONAL INFORMATION ON WHERE NEW CIRCUITS SHALL STUB OUT FROM EXISTING BUILDING.
5. PROVIDE CONNECTION TO BACK LIT SIGN ON CONCRETE SEAT WALL. REFER TO LANDSCAPE PLANS FOR ADDITIONAL INFORMATION ON SIGNAGE AND CONDUIT STUB-UP LOCATED IN CONCRETE WALL. PROVIDE TOGGLE SWITCH FOR LOCAL DISCONNECT TO SIGN IF ONE IS NOT PROVIDED BY SIGN MANUFACTURER. INSTALL SWITCH ON BACKSIDE OF SEAT WALL IN LOCKABLE METALLIC IN USE COVER. PROVIDE TRANSFORMER WITH INTEGRAL PRIMARY AND SECONDARY PROTECTION AS REQUIRED BY SIGN MANUFACTURER.
6. PROVIDE BRANCH CIRCUIT AND MOTOR RATED SWITCH FOR IRRIGATION CONTROLLER. COORDINATE FINAL LOCATION OF CONTROLLER WITH GENERAL CONTRACTOR.



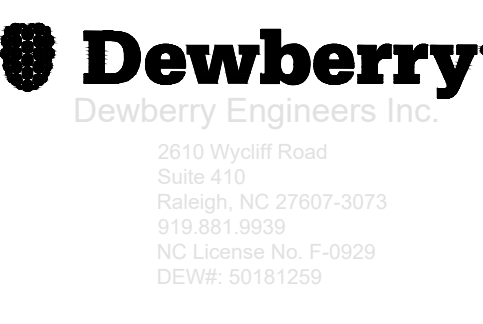
**2 ELECTRICAL SITE PLAN NEW WORK UNDERGROUND CONDUIT**  
SCALE: 1" = 30'-0"



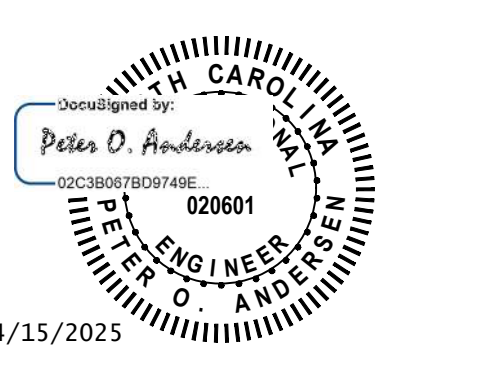
**3 EXTERIOR WALL PENETRATION SECTION**  
SCALE: NTS



**ARCHITECTURE**  
1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com



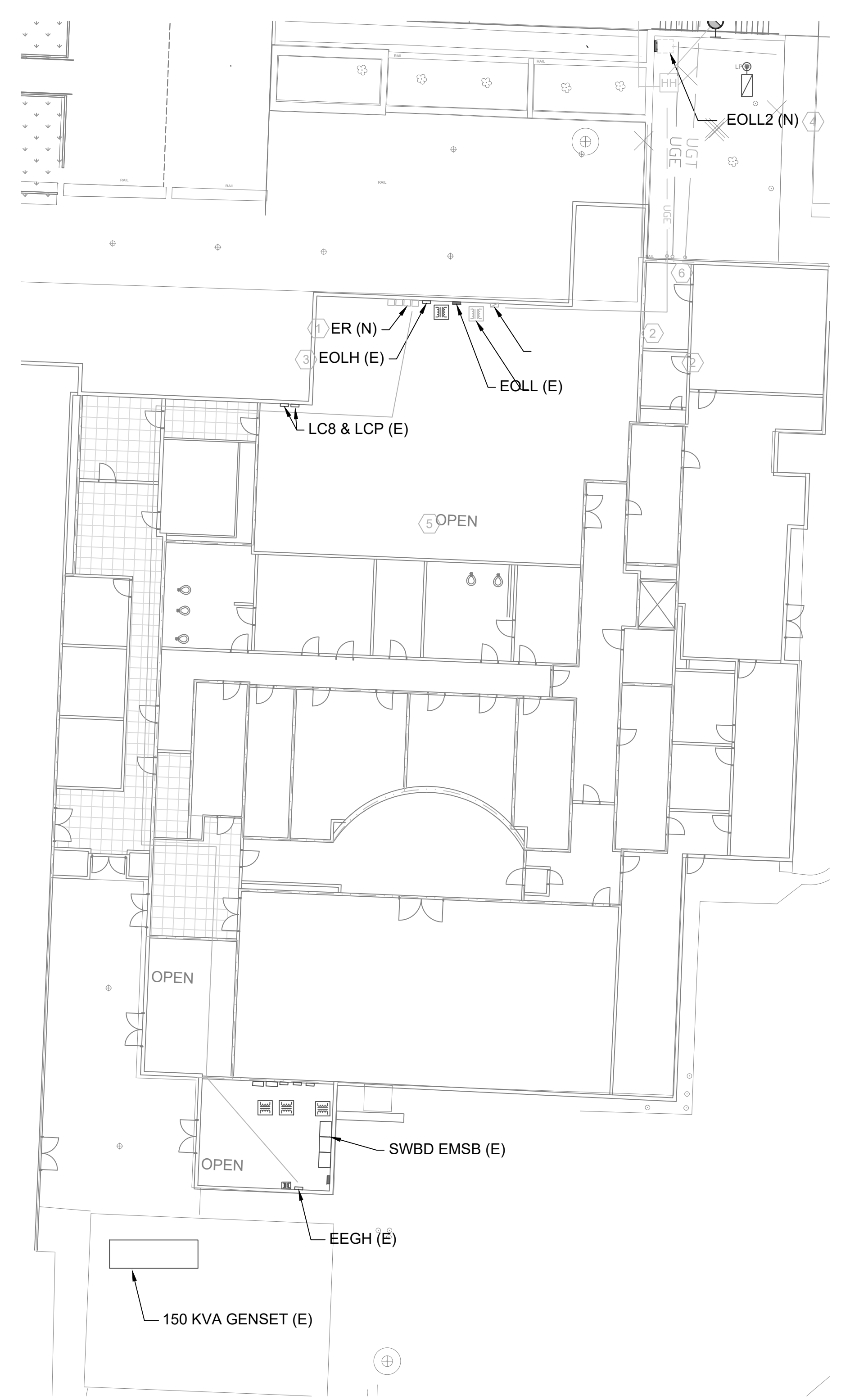
**PERFORMING ARTS CENTER PLAZA**  
CITY OF RALEIGH  
2 E SOUTH STREET, RALEIGH, NC 27601



NO.	REVISION	DATE
1	ADDENDUM #2	4/15/25

JOB NUMBER  
**23-077**  
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**03/13/2025**  
PROJECT STATUS  
**BID DOCUMENTS**

SHEET  
**ELECTRICAL SITE PLAN DEMOLITION AND NEW WORK**



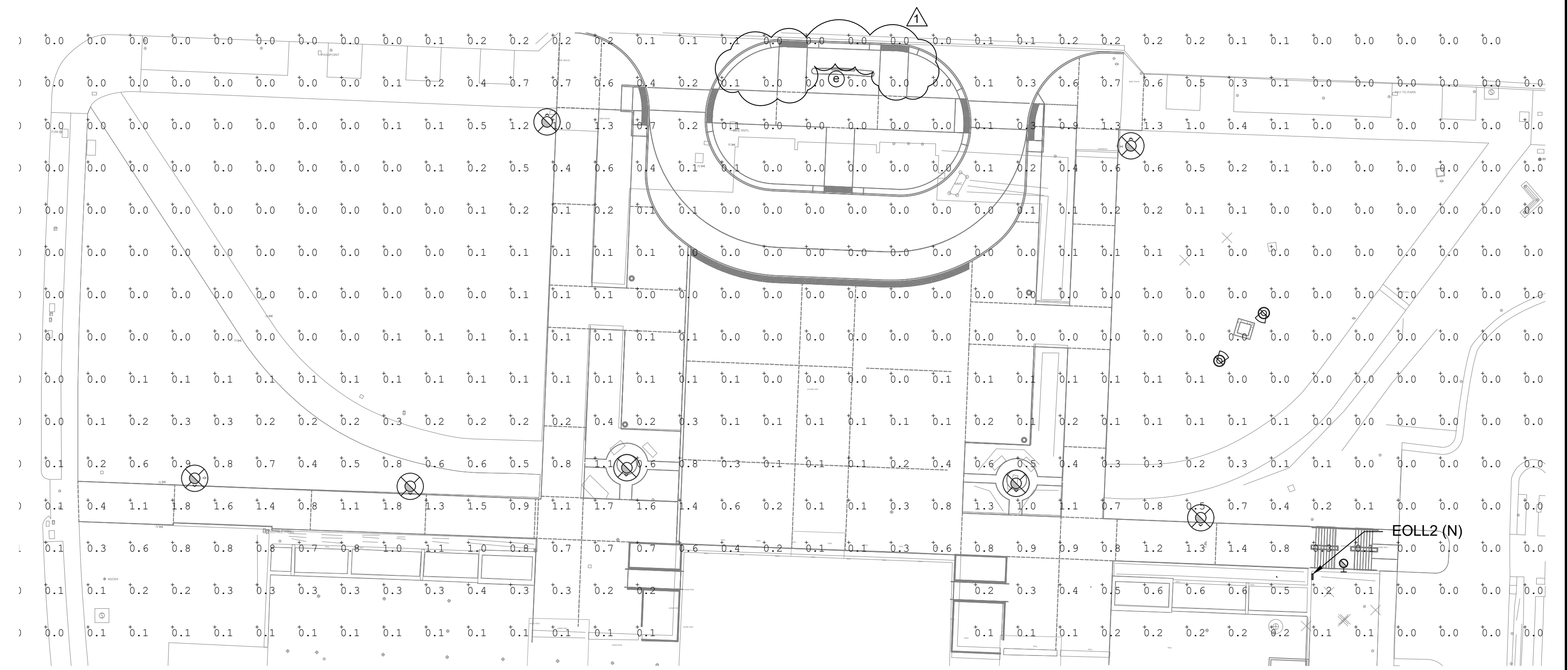
**2 FLETCHER BUILDING GROUND FLOOR NEW WORK PLAN**  
SCALE: 1/16" = 1'-0"

**GENERAL NOTES:**

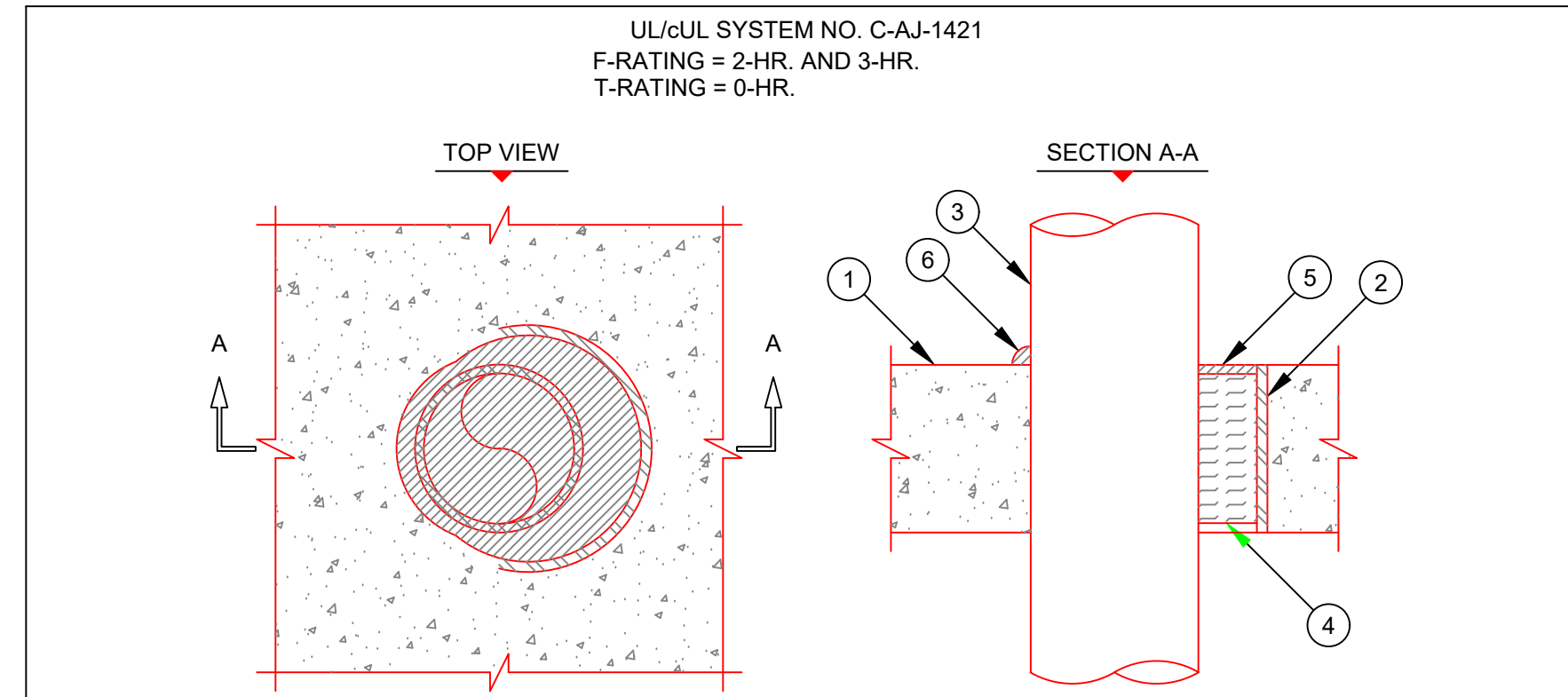
- REFER TO SHEET E001 FOR SEQUENCE OF CONSTRUCTION AND SCHEDULING.
- NOT ALL EQUIPMENT SHOWN ON PLAN. CONTRACTOR SHALL VERIFY NEW EQUIPMENT WILL FIT INTO EXISTING SPACES.
- CONTRACTOR SHALL FIELD VERIFY EXISTING CIRCUITS.
- PHOTOMETRICS ARE FOR NEW FIXTURES ONLY. EXISTING FIXTURES ARE NOT MODELED.

**NEW WORK KEYED NOTES:**

- PROVIDE FOUR (4) NEW EMERGENCY RELAY DEVICES, ONE FOR EACH EXTERIOR LIGHTING CIRCUIT. PROVIDE FOUR (4) NEW EMERGENCY GENERATOR POWERED CIRCUITS FROM EXISTING PANEL "EEGH", TO THE NEW EMERGENCY RELAY DEVICE. INTERCEPT THE EXISTING NORMAL CIRCUIT BETWEEN THE PANELBOARD "EOLH" AND THE CONTACTOR(S). INSTALL THE EMERGENCY RELAY DEVICE AS SHOWN IN DETAIL ON SHEET E102. REWORK EXISTING CIRCUITS ARE REQUIRED TO INSTALL UL924 EMERGENCY RELAY DEVICE.
- PROVIDE NEW WALL MOUNTED TRANSFORMER AND ENCLOSED CIRCUIT BREAKER FOR NEW PANELBOARD "EOLL2". PROVIDE NEW FEEDERS AS NOTED ON RISER DIAGRAM.
- REMOVE EXISTING SPARE BREAKERS IN SPACES 1,3,5 IN PANEL "EOLH". RETURN TO OWNER. PROVIDE ONE NEW 50A, 3P BREAKER IN EXISTING SQUARE D TYPE NF PANELBOARD. CONNECT NEW TRANSFORMER FEEDER TO NEW BREAKER.
- PROVIDE NEW PANELBOARD. REFER TO SITE PLAN FOR ADDITIONAL INFORMATION.
- ROUTING IS SHOWN FOR INFORMATION ONLY. CONTRACTOR SHALL FIELD VERIFY ROUTING. ALL CONDUIT SHALL BE CONCEALED ABOVE CEILING. PATCH, REPAIR, AND PAINT CEILINGS DAMAGED DURING CONDUIT INSTALLATION.
- PENETRATE WALL AND SEAL CONDUITS 24" BELOW EXTERIOR GRADE AND TRANSITION TO UNDERGROUND ELECTRICAL CONDUIT. PROVIDE A JUNCTION BOX FOR 3" TO BE USED FOR DATA IN THE FUTURE. LABEL JUNCTION BOX AS "SPARE CONDUIT FOR FUTURE COMMUNICATIONS INFRASTRUCTURE".

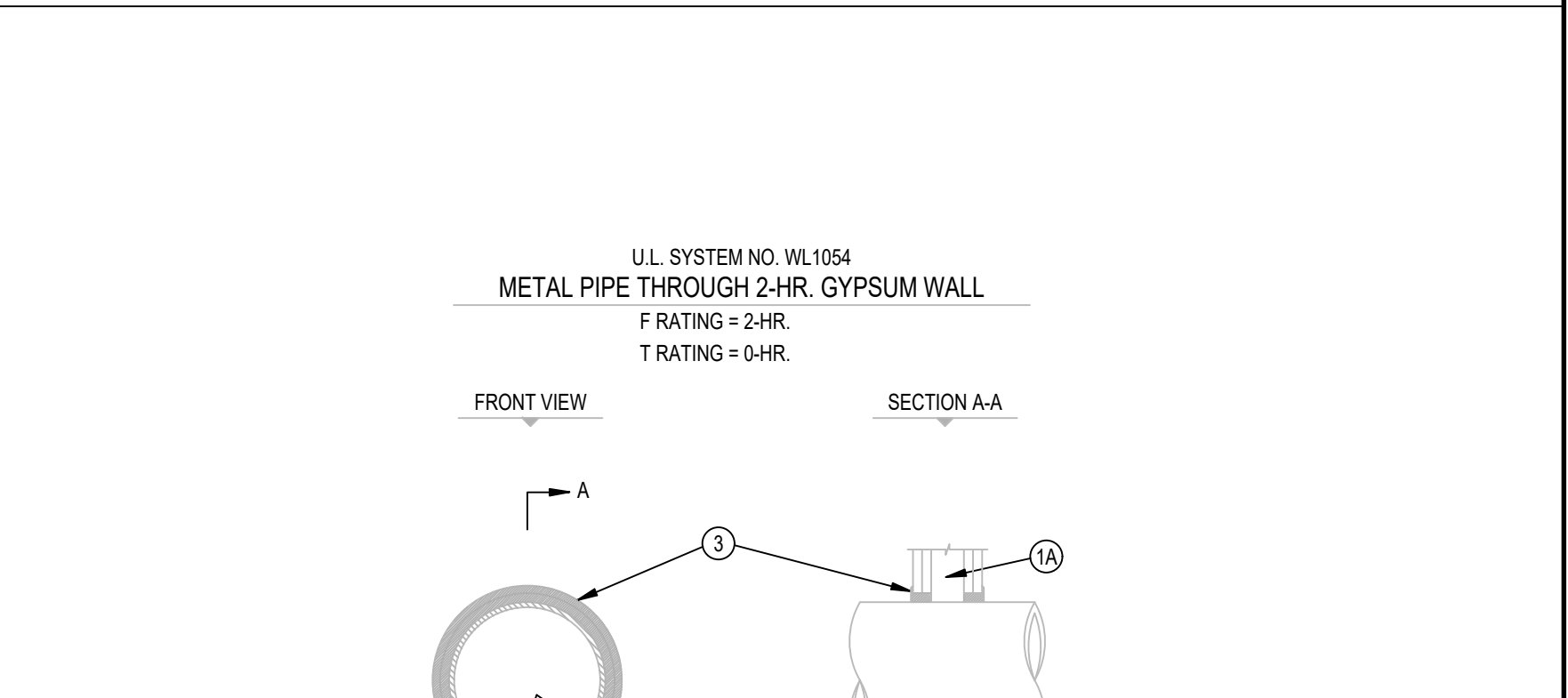


**1 ELECTRICAL SITE PLAN NEW WORK PHOTOMETRICS**  
SCALE: 1" = 30'-0"



- CONCRETE FLOOR OR WALL ASSEMBLY (2-HR. OR 3-HR. FIRE-RATING):  
A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (MINIMUM 4-1/2" THICK).  
B. ANY UL/GUL CLASSIFIED CONCRETE BLOCK WALL.
  - MAXIMUM 6" DIAMETER STEEL PIPE SLEEVE (SCHEDULE 40 OR HEAVIER).
  - PENETRATING ITEM TO BE ONE OF THE FOLLOWING:  
A. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT.  
B. MAXIMUM 4" NOMINAL DIAMETER EMT.
  - MINIMUM 4" THICKNESS MINERAL WOOL (MINIMUM 4 PCF DENSITY) TIGHTLY PACKED.
  - MINIMUM 1/4" DEPTH CP 604 SELF-LEVELING FIRESTOP SEALANT OR HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT.
  - MINIMUM 1/4" BEAD HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT AT POINT OF CONTACT. (NOT REQUIRED WHEN HILTI CP 604 SELF-LEVELING FIRESTOP SEALANT IS USED, ITEM NO. 5).
- NOTES:
- MAXIMUM DIAMETER OF OPENING = 6".
  - ANNULAR SPACE = MINIMUM 0", MAXIMUM 5-3/8".
  - MINIMUM 1/4" DEPTH HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON EACH SIDE OF A WALL ASSEMBLY.
  - F-RATING IS 3-HR. WHEN HILTI FS-ONE INTUMESCENT FIRESTOP SEALANT IS USED, AND 2-HR. WHEN HILTI CP 604 SELF-LEVELING FIRESTOP SEALANT IS USED.

**4 PENETRATION DETAIL** SCALE: NTS



- WALL ASSEMBLY--THE FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE U.L. FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:  
1.1. STUDS WALL FRAMING MAY CONSIST OF EITHER WOOD OR STEEL CHANNEL. STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED 16 IN. O.C. STEEL STUDS TO BE MIN. 2 1/2 IN WIDE AND SPACED AX 24 IN O.C.  
1.2. WALLBOARD, GYPSUM TWO LAYERS OF 5/8 IN THICK GYPSUM WALLBOARD, AS SPECIFIED IN INDIVIDUAL WALL AND PARTITION DESIGN. MAX DIAM. OF OPENING TO BE 12 1/2 IN.
- THROUGH PENETRANTS-- ONE METALLIC PIPE, CONDUIT OR TUBING TO BE INSTALLED WITHIN THE FIRESTOP SYSTEM. AN ANNULAR SPACE OF MIN. 1/4 IN. TO MAX. 1 1/4 IN. IS REQUIRED WITHIN FIRESTOP SYSTEM. PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY. THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES, CONDUITS OR TUBING MAY BE USED:  
2.1. STEEL PIPE NOM 10-IN DIAM OR SMALLER SCHEDULE 10 OR HEAVIER STEEL PIPE.  
2.2. CONDUIT NOM 4 IN DIAM OR SMALLER STEEL ELECTRICAL METALLIC TUBING OR STEEL CONDUIT.  
2.3. COPPER TUBING NOM 4 IN. DIAM OR SMALLER TYPE L OR HEAVIER COPPER TUBING  
2.4. COPPER PIPE NOM 4 IN. DIAM OR SMALLER REGULAR OR HEAVIER COPPER PIPE.
- FILL, VOID OR CAVITY MATERIAL SEALANT MIN 1-1/4" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH BOTH SURFACES OF WALL.  
HILTI CONSTRUCTION CHEMICALS, INC. - FS601 SEALANT \*BEARING THE UL CLASSIFICATION MARKING

**3 PENETRATION DETAIL** SCALE: NTS

**HH**  
**ARCHITECTURE**  
1100 Dresser Court  
Raleigh, NC 27609  
Office 919.828.2301  
Email office@hh-arch.com

**Dewberry**  
Dewberry Engineers Inc.  
2610 Wyckoff Road  
Suite 410  
Raleigh, NC 27607-1073  
919.851.9534  
NC License No. E-0029  
CDMP-00161259

**PERFORMING ARTS CENTER PLAZA**  
CITY OF RALEIGH  
2 E SOUTH STREET, RALEIGH, NC 27601

Seal of Peter O. Andersen, Professional Engineer, License No. 020601, State of North Carolina. Date: 4/15/2025.

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SHEET  
**GROUND FLOOR AND PHOTOMETRICS PLAN**

**E101**