

The City of Forest Acres is requesting bids for:

Construction of City Entryway Sign

5115 Forest Drive, Columbia SC 29206

Direct Inquiries to: Kendall Adams, Assistant City Administrator, in writing via email to kadams@forestacres.net

The City of Forest Acres is requesting sealed bids for the following scope of work.

SPECIFICATIONS:

I. Mobilization of equipment, materials, and tools

II. Construction of a City of Forest Acres Sign.

Location: Forest Acres, South Carolina.

Address: 5115 Forest Drive, Columbia, SC 29206

Scope of work/Contractor Requirements

General Scope of Work Description:

The descriptions of the work outlined below are intended to provide a general overview and convey the minimal intent of the contract/construction documents. The specific responsibilities of the awarded contractor are specifically outlined in the project plans, construction details, both general and technical specifications sections, and permit provisions. In the event of any conflict between these contract documents and the scope of work description, the contract/construction documents shall prevail.

- Contractor and employees must abide by all City of Forest Acres rules and regulations.
- Contractor is responsible for acquiring all required licenses and permits.
- All incidents or damage must be reported immediately to the City of Forest Acres
- Bid must include all fees, freight, taxes, and materials
- Coordinate all work through Assistant City Administrator, Kendall Adams

Pre-Demolition Requirements:

- **Site Photography:** Prior to demolition, the contractor shall photograph the existing conditions around the entrance sign site and the surrounding Lexington Medical property. These photographs shall be submitted to the Owner at the Pre-Construction meeting.

Restoration of Site Conditions:

- The contractor shall be responsible for restoring the site to its pre-construction condition prior to substantial completion.

Sediment and Erosion Control:

- The contractor shall implement all necessary sediment and erosion protection measures in accordance with state and local regulations. These measures shall be maintained as required by the SC Department of Environmental Services and local erosion control regulations.

Permits and Approvals:

- The contractor shall comply with all SCDOT permit requirements and provisions. No work shall commence until all necessary permits have been approved by the relevant authorities. The contractor shall be responsible for all traffic control measures as required by SCDOT.

Demolition Work:

- The contractor shall be responsible for all demolition work as shown on the Sheet D1, latest edition. This includes the removal of the existing asphalt driveway, adjacent vegetation, and three arborvitae shrubs within the right-of-way (R/W). Any area disturbed by these activities shall be stabilized with sod as specified.

Field Staking and Layout:

- The contractor is responsible for field staking all construction elements and reviewing the layout with the Owner before any work begins. If discrepancies are discovered between scaled dimensions and the layout, the contractor must stop work and immediately notify the Owner's representative.

Site Grading and Compaction:

- The contractor shall provide their own line and grade. The site must be graded as directed within the limits of disturbance shown on Sheet G1. The contractor is also responsible for compacting the subgrade as specified.

Signage Installation:

- The contractor shall be responsible for the installation and fabrication of all signage elements as detailed on Sheet DT1, latest edition. The contractor must submit shop drawings for all fabricated pieces to the Owner for approval prior to fabrication.

Electrical Work:

- The contractor shall install and coordinate all electrical work as specified on Sheets E001 and E002, latest edition. Any disturbances occurring during the installation of electrical work shall be sodded as specified. Trenches shall be properly compacted to prevent settling.

Landscaping and Irrigation:

- The contractor shall install landscaping as specified. All plant materials shall be irrigated using a drip irrigation system. The contractor is responsible for tying into the provided irrigation system for the installation of the drip irrigation system.

Restoration of Undisturbed Areas:

Any area disturbed or damaged, but not specified for new construction or landscaping, shall be restored to its pre-construction condition.

Terms and Conditions:

Contractor must have licensed, experienced and qualified personnel performing and overseeing the work.

All work is to be performed according to all applicable Federal, state, and local regulations.

Pricing should be valid for 30 Days.

Vendor shall not outsource to another vendor without written permission from The City of Forest Acres.

Indemnification and Insurance - The successful vendor(s) shall indemnify and hold the City of Forest Acres and its officers, agents, employees and assigns, harmless from any liability imposed for injury whether arising before or after completion of work hereunder, or in any manner directly or indirectly caused, occasioned or contributed to, or claimed to be caused, occasioned or contributed to, in whole or in part, by reason of any act or omission, including strict liability or negligence of vendor, or of anyone acting under vendor's direction or control or on its behalf, in connection with or incident to, or arising out of the performance of this contract. The successful vendor shall maintain and shall require all of its subcontractors to maintain general insurance. Proof of this insurance must list the City of Forest Acres as additionally insured. Proof of Workers Compensation insurance is also required prior to the vendor or any subcontractors commencing work on City property.

SUBMISSION OF PROPOSALS

Sealed bids received after **5 p.m. local time, July 2, 2025**, will be considered late and will not be accepted. The City of Forest Acres will not pay costs incurred in the bid preparation, including the costs for printing, demonstration, negotiation process, etc. All costs for the preparation of the bid shall be borne by the respondent. The deadline for receipt of proposals is **5 p.m. local time, July 2, 2025**, to the attention of

Kendall Adams
Assistant City Administrator
5209 N. Trenholm Rd
Columbia, SC 29206

Addendums for this project will be posted no later than **June 30, 2025, at 5pm** on the City's website <https://www.forestacres.net/bids-and-quotes>

Proposals must arrive no later than the time listed above. Proposals arriving after that time will be rejected. Each proposal must be enclosed in a sealed envelope and labeled: **Bid # 25-001 Construction of Sign Structure.**

The City will conduct a bid opening on **July 3, 2025, at 9 am** in Council Chamber located at 5205 N Trenholm Rd, Columbia SC 29206.

RIGHT TO REJECT BIDS

The City of Forest Acres reserves the right to reject any and all bids or any part of any proposals, to waive minor defects or technicalities, or to solicit new bids on the same project or on a modified project which may include portions of the originally proposed project as the City of Forest Acres may deem necessary in its best interest. The City also reserves the right to negotiate with any respondent, all or part of any bids that is in the best interest of the City. The City of Forest Acres shall reserve the right to select the proposal that is most advantageous to the City.

INTERPRETATIONS AND ADDENDA

No interpretation made to any respondent as to the meaning of the bid request shall be binding on the City of Forest Acres unless repeated in writing and distributed as an addendum by the City of Forest Acres. Interpretations and/or clarification shall be requested in writing from the City of Forest Acres, Kendall Adams, Assistant City Administrator kadams@forestacres.net.

CONFIDENTIALITY OF DOCUMENTS

All responses to the bid request submitted by vendors shall be deemed public documents at the time opened by City of Forest Acres. The bid request is intended to be worded in a manner so as not to elicit proprietary information from the vendor. If proprietary information is submitted as part of the bid, such information is to be labeled proprietary and be accompanied with a request that the information is to be returned by the City of Forest Acres to the respondent.

FOREST ACRES PROJECT

PRICING:

Total cost for project \$ _____

CONTACT INFORMATION:

Vendor Name: _____

Vendor Address: _____

City/State/Zip: _____

Website: _____

Phone: _____

Contact Person: _____

E-Mail: _____

Authorized Signature: _____

Printed Name: _____

CONTRACT DOCUMENTS
AND
CONSTRUCTION SPECIFICATIONS

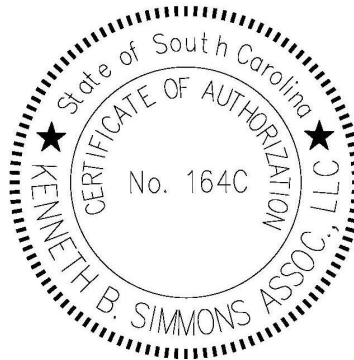
For The
Construction Of

Forest Acres Entrance Sign

The Owner Is

CITY OF FOREST ACRES, SC
RICHLAND COUNTY, FOREST ACRES, SC

SEALS:



JUNE 3, 2025

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NOTICE OF AWARD

TO:

**PROJECT DESCRIPTION: Forest Acres Entrance Sign
Forest Acres, South Carolina**

The OWNER has considered the BID submitted by you on ____th, **2025**, for the above-described WORK in response to its Advertisement for Bids and Information for Bidders.

You are hereby notified that your BID has been accepted for items in the amount of \$_____.

You are required by the information for Bidders to execute the Agreement and furnish the required CONTRACTOR'S Performance BOND, Payment BOND and certificates of insurance within ten (10) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said BONDS within ten (10) days from the date of this Notice, said OWNER will be entitled to consider all your rights arising out to the OWNER'S acceptance of your BID as abandoned and as forfeiture of your BID BOND. The OWNER will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of the NOTICE OF AWARD to the OWNER.

Dated this ____th day of ____ 2025.

Signature

Print Name: _____

Title: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by _____

This the ____ day of _____, 20 ____.

BY _____

Title _____

NOTICE TO PROCEED

TO:

Date: _____

PROJECT DESCRIPTION: **Forest Acres Entrance Sign**
Forest Acres, South Carolina

You are hereby notified to commence WORK in accordance with the Agreement dated _____th, **2025**, on or before _____th, **2025**, and you are to complete the WORK within **180** consecutive calendar days thereafter.

The date of completion of all WORK is therefore _____, _____rd, **2025**.

City of Forest Acres, SC
Owner

By _____

Title _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by _____

This the _____ day of _____, 20 _____

By _____

Title _____

1. RECEIPT AND OPENING OF BIDS: Bids will be received at the time and place as specified in the Advertisement for Bids, and then at said office publicly opened and read aloud.

2. LICENSES:

2.1. The attention of Bidders is directed to the provisions of the acts for licensing of General Contractors for the State of South Carolina and all requirements of such acts which have bearing upon this work shall be deemed a part of the Specifications as if written therein in full. The showing by the Contractor of his license number shall be deemed as the Contractor's representation that he is legally qualified to enter into the prescribed Contract for any/or all portions of the work included in his Bid.

2.2. All Bidders submitting a Bid shall have a currently valid "Contractor's License" and a "Bidder's License" for the State of South Carolina. These license numbers shall be shown on the bid form immediately below the signature identification and on the face of the sealed envelope containing the submitted Bid.

2.3. Subcontractors who will be engaged by the General Contractor shall also hold the required licenses.

3. EXECUTION OF CONTRACT: The Owner, within ten (10) calendar days of receipt of acceptable Agreement signed by the party to whom the Agreement was awarded, shall sign the Agreement and return to such party an executed duplicate of the Agreement. Should the Owner not execute the Agreement within such period, the Bidder may by written notice withdraw his signed Agreement. Such notice of withdrawal shall be effective upon receipt of the notice by the Owner.

4. LIQUIDATED DAMAGES FOR FAILURE TO ENTER INTO CONTRACT: The successful Bidder, upon his failure or refusal to execute and deliver the Contract required within ten (10) calendar days after he has received notice of the acceptance of his Bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal and in addition to any other remedies available to the Owner, the security deposited with his bid.

5. LAWS AND REGULATIONS: All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the project shall apply to the contract throughout, and they will be deemed to be included as though herein written out in full.

6. NON-RESIDENT CONTRACTORS:

6.1. A Bidder, who is a non-resident contractor, shall be aware of S.C. Code Ann. Section 12-8-550, which requires the Owner entering into a contract with a non-resident taxpayer, where such contract exceeds ten thousand dollars (\$ 10,000), to withhold two percent (2%) of each payment made to the non-resident.

6.2. The funds deducted from the payment made to the non-resident contractor are funds deemed to be held in trust for the State of South Carolina and will be reported by the Owner to

the South Carolina Tax Commission. This Deduction is in addition to the retainage deductions specified in the General Conditions.

6.3. Section 12-8-550 provides that if the Owner hiring, contracting, or having a contract with a nonresident obtains an affidavit from the nonresident stating that the nonresident is registered with the Department of Revenue or with the Secretary of State, the Owner is not responsible for the withholding. The non-resident contractor must complete a “Nonresident Taxpayer Registration Affidavit Income Tax Withholding” (Form I-312) (available at www.dor.sc.gov).

7. EXAMINATION OF DRAWINGS AND SPECIFICATIONS: Each Bidder shall carefully examine Drawings and Specifications and all Addenda or other revisions thereto and thoroughly familiarize himself with the detailed requirements thereof prior to submitting a Bid. If any Bidder is in doubt as to the true meaning of any part of the Drawings, Specifications, or other Documents, or if any error, discrepancy, conflict, or omission is noted, the Bidder should immediately contact the Landscape Architect in writing and request clarification. The Landscape Architect will clarify the intent of the Documents and/or correct such error, discrepancy, conflict, or omission, and will notify all Bidders by Addendum in cases where the extent of work or the cost thereof will be appreciably affected. No allowance will be made after Bids are received for oversight by a Bidder.

8. EXAMINATION OF SITE: Each Bidder shall visit the site of proposed work and fully acquaint himself with conditions relating to construction and labor so he may fully understand facilities, difficulties, and restrictions attending execution of work under contract. By executing the Agreement, the Contractor represents that he has visited the site, familiarized himself with the local conditions under which the work is to be performed, and correlated his observations with the requirements of the Contract Documents.

9. INFORMATION NOT GUARANTEED:

9.1. All information given on the Drawings or in the Contract Documents relating to subsurface conditions, existing structures, location of utilities, sewer inverts, or other information on existing facilities, is from the best sources at present available to the Owner. All such information is furnished only for the information and convenience of the Bidders.

9.2. It is agreed and understood that the Owner does not warrant or guarantee that the conditions, pipes, or other structures encountered during construction will be the same as those indicated on the Drawings or in the Contract Documents. The Bidder must satisfy himself regarding the character, quantities, and conditions of the various materials and the work to be done.

9.3. It further is agreed and understood that the Bidder or the Contractor will not use any of the information made available to him or obtained in any examination made by him in any manner as a basis or ground of claim or demand of any nature, against the Owner or the Landscape Architect, arising from or by reason of any variance which may exist between the information offered by the actual materials or structures encountered during the construction work, except as may otherwise be provided for in the Contract Documents.

9.4. If any work is performed by the Contractor, or any subcontractor, prior to adequate verification of applicable data, any resultant extra cost for adjustment of work necessary to

conform to existing conditions, or damage to existing facilities, shall be assumed by the Contractor without reimbursement or compensation by the Owner.

10. COMPLETE WORK REQUIRED:

10.1. The Drawings, Specifications, and all supplementary documents are essential parts of the Contract, and requirements occurring in one are as binding as though occurring in all. They are intended to be cooperative, to describe and provide for a complete work. In case of discrepancy on the Drawings, figured dimensions shall govern. In case of omissions from the Specifications as to items of equipment and materials or quantities therefor, the Drawings shall govern.

10.2. It shall be the responsibility of the Bidder to call to the attention of the Landscape Architect obvious omissions of such magnitude as to affect the strength, adequacy, function, completeness, or cost of any part of the work in ample time for amendment by Addendum prior to letting date.

11. ADDENDA AND INTERPRETATIONS:

11.1. No interpretation of the meaning of the Drawings, Specifications, or other Bid Documents will be made orally to any Bidder by the Landscape Architect prior to award of the contract.

11.2. Every request for such interpretation should be via email to dcheatham@kbsala.com addressed to Drew Cheatham. To be given consideration, such request must be received at least ten (10) days prior to the date fixed for the opening of Bids. Any and all such interpretation and any supplemental instruction will be made in the form of written Addenda to the Specifications which, if issued, will be emailed with return receipt requested to all prospective Bidders (at the respective addresses furnished for such purposes), not later than five (5) days prior to the date fixed for the opening of Bids. Failure of any Bidder to receive any such Addendum or interpretation shall not relieve such Bidder from any obligation under his Bid as submitted. All addenda so issued shall become part the Contract Documents.

12. ABILITY AND EXPERIENCE OF BIDDER:

12.1. It is the purpose of the Owner not to award this Contract to any Bidder who does not furnish satisfactory evidence that he has the experience of successfully completing projects of this type and magnitude and that he has sufficient capital, equipment, plant, and personnel to enable him to prosecute the work successfully and to complete it in the time named.

12.2. The Owner may make such investigation as it deems necessary to determine the ability of the Bidder to perform the work, and the Bidder shall furnish to the Owner, under oath if so required, all such information and data for this purpose as the Owner may request.

12.3. The successful Bidder will be required to construct the work with his own directly employed personnel to an extent not less than fifty percent (50%) of the Contract Amount.

13. TIME FOR COMPLETION: The Bidder must agree to commence work within the time stipulated in the Agreement. The Bidder also must agree to fully complete the project within the time stipulated in the Agreement.

14. LIQUIDATED DAMAGES: The Bidder must agree to pay as liquidated damages the amount set forth in the Agreement for each consecutive calendar day that the work is incomplete after the date of completion.

15. MODIFICATION OF BIDS: Bids may be modified in writing, executed (in the manner that a bid must be executed) and delivered to the place where bids are to be submitted at any time prior to the opening of bids. Telegraphic modifications of the BID will not be allowed.

16. WITHDRAWAL OF BIDS:

16.1. Any Bidder may withdraw his Bid, either personally or by written request, at any time prior to the scheduled time for opening of Bids or authorized postponement thereof.

16.2. No Bidder may withdraw his Bid for a period of ninety (60) calendar days after the date set for the opening thereof, and all Bids shall be subject to acceptance by the Owner during this period.

17. IRREGULAR BIDS: A Bid will be considered irregular and may be rejected for any one of the following reasons:

17.1. If the Bid is on a form other than that furnished by the Owner; or if the form is altered or any part detached.

17.2. If there are unauthorized additions, conditional or alternate bids, or irregularities of any kind which may tend to make the Bid incomplete, indefinite, or ambiguous as to its meaning.

17.3. If the Bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.

17.4. If the Bid does not contain a price for each item listed.

17.5. If the Bid does not contain the aggregate of the Bid, obtained by adding the extended amounts of the various items, if applicable.

17.6. If the Bid contains obviously unbalanced bid prices.

17.7. If there is reason to believe that any Bidder is interested in more than one Bid on the same project or that there has been collusion among the Bidders.

18. DISQUALIFICATION OF BIDDERS: More than one Bid from an individual, a firm or partnership, a corporation or any association, under the same or different names, will not be considered. Reasonable grounds for believing that any Bidder is interested as a principal in more than one Bid for the work contemplated will cause the rejection of all Bids in which such Bidder is believed to be interested. Any or all Bids will be rejected if there is reason to believe that collusion exists among the Bidders. Contracts will be awarded only to responsible Bidders capable of performing the class of work contemplated within the time specified, and having sufficient resources and finances to carry on the work properly.

19. ACCEPTANCE OR REJECTION OF BIDS: The Owner reserves the right to reject any and all Bids when such rejection is in the interest of the Owner; to reject the Bid of a Bidder who has previously failed to perform properly or complete on time contracts of a similar nature; and to reject the Bid of a Bidder who is not, in the opinion of the Landscape Architect, in a position to perform the Contract. The Owner also reserves the right to waive any informalities and technicalities in bidding. The Owner may also accept or reject any of the alternates that may be set forth on the Bid.

20. METHOD OF AWARD: Unless all Bids are rejected, the Contract will be awarded to the lowest responsive, responsible Bidder. A responsive Bidder is defined as one whose Bid is complete and submitted in accordance with the Contract Documents without excisions, exceptions, special conditions or alternate bids (unless specifically requested in the bid form). A responsible Bidder is defined as one who is legally licensed to bid and perform work in the State of South Carolina, maintains a permanent place of business, has adequate plant equipment to complete the work properly and within the established time limit, has adequate financial status to meet his obligations contingent to the work, and is considered by the Owner and Landscape Architect to be capable of performing the work in accordance with the Contract Documents.

21. NOTICE TO PROCEED: The Notice to Proceed will be issued within ten (10) calendar days of the execution of the Agreement by the Owner. Should there be reasons why the Notice to Proceed cannot be issued within such period, the time may be extended by mutual agreement between the Owner and Contractor. If the Notice to Proceed has not been issued within the ten (10) calendar day period or within the period mutually agreed upon, the Contractor may terminate the Agreement without further liability on the part of either party.

22. ESTIMATED QUANTITIES: Bidders must satisfy themselves of the accuracy of the estimated quantities in the Bid Schedule by examination of the site and a review of the Drawings and Specifications, including Addenda. After Bids have been submitted, the Bidder shall not assert that there was a misunderstanding concerning the quantities of work or of the nature of the work to be done.

23. COMPARISON OF BIDS: Bids will be compared on the basis of the prices stated in the Bid. In the event there is a discrepancy between the unit price and/or the computed total amount, the unit price shall govern.

24. EASEMENTS: The Owner has obtained, or will obtain, permanent easements and temporary construction easements through private property. The temporary construction easements entitle the Contractor to the occupancy and use of the designated area near or adjacent to the work for purposes related to the work. The Contractor will not encroach on any property unless it has been established that easements have been obtained. On all other land, the Contractor has no rights unless he obtains permission from the proper parties.

25. WORK IN STATE AND COUNTY RIGHTS-OF-WAY: The Owner will obtain the necessary easements and permits for construction across both County and State Highway rights-of-way. The Contractor shall abide by all rules, regulations, and requirements of these agencies in regard to construction under this contract, including the giving of notices, provisions for inspections, and employment of such methods of construction as may be required. Wherever these Specifications may be in conflict with the regulations or requirements of these agencies, such regulations shall govern and these Specifications shall be modified to such extent as

necessary to conform with the said rules, regulations, and requirements. Wherever additional costs are incurred due to requirements of these agencies, such additional periods of maintenance, special features of construction, etc., all such costs shall be included in the prices bid. No additional compensation will be allowed for such costs after award of the Contract.

26. ITEMS AND INDETERMINATE ITEMS: The work to be done under this contract has been divided into items, and items having sub items to enable each Bidder to bid on the different portions of the work in accordance with his unit price estimate of their cost, and so that the actual quantity of work executed under each item, or subitem, may be paid for at the unit price bid for the particular item, or subitem, even though such quantity is greater or less than the estimated quantity stated in the Bid.

27. RIGHT TO INCREASE OR DECREASE THE AMOUNT OF WORK:

27.1. The work comprises approximately the quantities shown in the bid form which will be used as a basis for comparison of Bids and not for final estimate. The Owner does not, by expression or by implication, agree that the actual amount of work shall correspond with the estimated quantities or bid items.

27.2. The Owner reserves the right to increase or decrease the amount of work under the Contract of the work contemplated, at the unit prices quoted in the Bid.

28. FORM OF BID:

28.1. All Bids must be submitted on the blank bid form provided therefore and must state the total price for which the Bidder will complete the work in accordance with the terms of the Contract Documents. All blank spaces must be filled in and there shall be no interlineations, alterations, or erasures.

28.2. The Bid must be signed manually by a principal, or an officer duly authorized to make contracts. The Bidder's legal name must be fully stated and the name and title of the person signing must be typed below his signature.

29. SUBMITTING BIDS:

29.1. Each Bid must be submitted on the prescribed bid form. All blank spaces for bid prices must be filled in, in ink or typewritten, and the Bid must be fully completed and executed when submitted. Only one copy of the bid form is required.

29.2. Bidders are cautioned that it is the responsibility of each individual Bidder to assure that his Bid is in the possession of the responsible official or his designated alternate prior to the stated time and at the stated place of the bid opening. Owner is not responsible for Bids delayed by mail and/ or delivery services of any nature.

29.3. Each Bid must be submitted in an opaque sealed envelope, plainly marked on the outside, addressed, and delivered as shown below. If forwarded by mail, the sealed envelope containing the Bid must be enclosed in another envelope addressed to the Owner at:

Upper Left-Hand Corner:

Bidder's Name

BID DELIVERY ADDRESSES:

HAND-DELIVERY:

Attn: Shaun Greenwood
(City Hall)
5209 N. Trenholm Road
Columbia, SC 29206

MAIL SERVICE:

Attn: Shaun Greenwood
(City Hall)
5209 N. Trenholm Road
Columbia, SC 29206

Lower Left-Hand Corner:

Bid for Construction of: **Forest Acres Entrance Sign**
Forest Acres, South Carolina

South Carolina General Contractor's License No. _____

Classification _____

Expiration Date _____

(End of Section 01110)

SECTION 01140**BID (UNIT PRICE)**

TO: City of Forest Acres, SC (hereinafter called "Owner")

FROM:

Phone -

of the City of _____, County of _____,
and State of _____, hereinafter called "Bidder".

**PROJECT: Forest Acres Entrance Sign
Forest Acres, South Carolina**

The Bidder, in compliance with your Advertisement for Bids for the construction of above referenced project, having examined the Drawings and Specifications with related documents and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of materials and labor, hereby proposed to furnish all labor, materials, and supplies, and to construct the project in accordance with the Contract Documents, within the time set forth therein, and the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this proposal is a part.

The Bidder declares that he has carefully examined the site of the Work proposed and fully informed and satisfied himself as to the conditions there existing, the character and requirements of the proposed Work, and the difficulties attendant upon its execution, and that he has carefully read and examined the Drawings, the annexed proposed Agreement, and the Specifications and other Contract Documents therein referred to and knows and understands the terms and provisions thereof.

Bidder understands that information relative to existing structures, apparent and latent conditions, and natural phenomena, as furnished to him on the Drawings, in the Contract Documents, or by the Owner or the Landscape Architect, carries no guarantee expressed or implied as to its completeness or accuracy, and he has made do allowance thereof.

He further understands that the quantities of work tabulated in the Bid are only approximate and are subject to increase or decrease as deemed necessary to the performance of the work by the Landscape Architect; and that these quantities shown will be used in arriving at the total Contract Price and determination of the lowest Bidder.

ADDENDA: Bidder acknowledges receipt of the following Addenda:

Addendum No. _____ Date

Addendum No. _____ Date

Addendum No. _____ Date

Addendum No. _____ Date

Addendum No. _____ Date

Addendum No. _____ Date

TIME FOR COMPLETION AND LIQUIDATION DAMAGES: Bidder hereby agrees to commence work under this contract within 15 days of receipt of the Notice to Proceed and to fully complete the project within **180** consecutive calendar days thereafter.

Bidder also agrees to pay **\$ 250.00/day** as liquidated damages for each consecutive calendar day thereafter as hereinafter provided in the General Conditions.

SCHEDULE OF PRICES-Base Bid

The owner reserves the right to increase and/or decrease the size of the project. The bidders are required to furnish installed prices for the items of work shown on the unit price schedule. Installed prices shall include all labor, materials, installation, overhead, profit, insurance, taxes, fees, etc. (i.e. complete installed price). The total of all items listed below shall be the same as the Base Bid. The below unit prices shall be used for reducing or increasing the scope of the installed items. Final payment is based on the exact quantity and unit prices of all items constructed.

PLACE BID FORM HERE

Forest Acres Entrance Sign
KBS #2437
6/3/2025
Bid Form



The owner reserves the right to increase and/or decrease the size of the project. The bidders are required to furnish installed prices for the items of work shown on the unit price schedule. Installed prices shall include all labor, materials, installations, overhead, profit, insurance, taxes, fees, etc. (i.e. complete installed price). The total of all items listed below shall be the same as the Base Bid. The below unit prices shall be used for reducing or increasing the scope of the installed items. Final payment is based on the exact quantity and unit prices of all items constructed.

Item Number	Item Description	Estimated Quantity	Unit	Unit Price	Total Cost
1	General Conditions (Mobilization, Bonding, etc.)	1	LS.		\$ -
2	Sediment and Erosion Control (i.e. Silt Fence)	154	LF.		\$ -
3	Grading	1	LS.		\$ -
4	Entrance Sign (Columns, Wall, Signage)	1	LS.		\$ -
5	Irrigation	1	LS.		\$ -
6	Landscaping	1	LS.		\$ -
7	Electrical / Lighting	1	LS.		\$ -
8	SCDOT Traffic Control	1	LS.		\$ -
				Total (Items 1-8)	\$ -
				Base Estimate	\$ -

Additions to work and deletions from work shall be paid in accordance with these units prices.

The unit price times the quantity must equal the low bid price.

Bidder understands that the Owner reserves the right to reject any or all bids and to waive any informalities in the bidding.

The Bidder agrees that this Bid shall be good and may not be withdrawn for a period of **60 calendar days** after the scheduled closed time for receiving bids.

Upon receipt of written notice of the acceptance of this Bid, Bidder will execute the formal Agreement attached within 10 days and deliver Surety bonds as required by the General Conditions. The bid security attached in the sum of *****5% Bid Bond***** (\$) is to become the property of the Owner in the event the Agreement and Bond are not executed within the time above set forth as liquidated damages for the delay and additional expense to the Owner caused thereby.

The contractor is required to provide a list of all subcontractors to be utilized on this project to be provided at time of bid opening. A subcontractor other than one listed may not be used unless a letter of release is provided by the subcontractor to be released.

The undersigned declares that his firm is (delete those not applicable):

A corporation organized and existing under the laws of the State of:

SOUTH CAROLINA

A partnership consisting of:

The undersigned declares that the person signing these proposals is fully authorized to sign the proposal on behalf of the firm listed and to fully bind the firm listed to all the conditions and provisions thereof.

It is agreed that no person or persons or company other than the firm listed below or as otherwise indicated hereinafter has any interest whatsoever in this proposal or the contract that may be entered into as a result thereof, and that in all respects the proposal is legal and fair, submitted in good faith, without collusion or fraud.

Respectfully Submitted:

Contractor

By:

(Type/Print Name)

Title

City, State, Zip

S.C. Bidder's License No.

S.C. General Contractor's License No.

NON-COLLUSION AFFIDAVIT OF SUBCONTRACTOR

State of _____)

County of _____)

_____, being first duly sworn, deposes and says that:

- (1) He is _____ of _____ hereinafter referred to as the "Subcontractor":
- (2) He is fully informed respecting the preparation and contents of the subcontractor's Proposal submitted by the subcontractor to _____, the Contractor for certain work in connection with the _____, Contract pertaining to the Project in _____:
- (3) Such subcontractor's Proposal is genuine and is not a collusive or sham proposal.
- (4) Neither the subcontractor nor any of its officers, partners, owners, agents, representatives, employee or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agree directly or indirectly, with any Bidder, firm or person to submit a collusive or sham Proposal in connection with such Contract or to refrain from submitting a Proposal in connection with such Contract, or has in any manner, directly or indirectly, sought by unlawful agreement or connivance with any other Bidder, firm or person to fix the price or prices in said subcontractor's Proposal, or to secure through collusion, conspiracy, connivance or unlawful agreement any advantage against the _____ or any person interest in the proposed Contract; and
- (5) The price or prices quoted in the subcontractor's Proposal are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

(Title)

Subscribed and sworn to before me

This the _____ day of _____, 20__.

Notary Public for _____

My Commission Expires: _____

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of _____)

County of _____)

_____, being first duly sworn, deposes and says that:

- (1) He is _____ of _____, the Bidder that has submitted the attached Bid:
- (2) He is fully informed respecting the preparation and contents of the attached Bid and of all pertinent circumstances respecting such Bid:
- (3) Such Bid is genuine and is not a collusive or sham Bid:
- (4) Neither the subcontractor nor any of its officers, partners, owners, agents, representatives, employee or parties in interest, including this affiant, has in any way colluded, conspired, connived, or agree directly or indirectly, with any other Bidder, firm or person to submit a collusive or sham Bid in connection with the Contract for which the attached Bid has been submitted or refrain from bidding in connection with such Contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other bidder, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other Bidder, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the _____ or any person interested in the proposed Contract; and
- (5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance, or unlawful agreement on the part of the Bidder or any of its agents, representatives, owners, employees, or parties in interest, including this affiant.

(Signed) _____

(Title)

Subscribed and sworn to before me

This the _____ day of _____, 20__.

(Title)

My Commission Expires: _____

CERTIFICATION OF NONSEGREGATED FACILITIES

The Bidder certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under this control where segregated facilities are maintained. The Bidder certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments, and that he will not permit or provide for his employees to perform their services at any location under his control where segregated facilities are maintained. The Bidder agrees that a breach of this certification will be a violation of the Equal Opportunity clause in any contract resulting from acceptance of this Bid. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants, and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. The Bidder agrees that (except where he has obtained identical certification from proposed subcontractors for specific time periods) he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000.00 which are not exempt from the provisions of the Equal Opportunity Clause, and that he will retain such certifications in this files.

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 100.1.

By: _____

Title: _____

Date _____, 20 __,

Official Address (including Zip Code).

(End of Section 01140)

KNOW ALL MEN BY THESE PRESENTS: that we, the undersigned _____
_____, as Principal, and _____, as Surety, are hereby held and
firmly bound unto _____, as OWNER, in the penal sum of
_____ for the payment of which, well and truly to be made, we hereby jointly and severally
bind ourselves, our heirs, executors, administrators, successors and assigns.

Signed this _____ day of _____, 20_____.

The Condition of the above obligation is such that whereas the Principal has submitted to
_____ a certain BID, attached hereto and hereby made a part hereof, to enter
into a contract in writing, for the construction of:

Forest Acres Entrance Sign

Forest Acres, South Carolina

NOW, THEREFORE,

- (a) If the said BID shall be rejected, or in the alternate,
- (b) If said BID shall be accepted and the Principal shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID,

then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated. The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____(L.S.)
Principal

Surety

By: _____

(SEAL)

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the project is located.

(End of Section 01142)

SECTION 01210**AGREEMENT**

THIS AGREEMENT, made this _____ day of _____, 20____,

by and between _____ City of Forest Acres, SC _____,

acting herein through its City Administrator – Shaun Greenwood _____,
(Title of Authorized Official)

hereinafter called "OWNER" and _____,
(Name of Contractor)

doing business as _____
(an Individual), (a Partnership) or (a Corporation)

in the City of _____, County of _____, and

State of _____, hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR hereby agrees with the OWNER to commence and complete the construction described as follows:

**Forest Acres Entrance Sign
Forest Acres, South Carolina**

hereinafter called the PROJECT.

2. The CONTRACTOR will furnish all of the materials, supplies, tools, equipment, labor, and other services necessary for the construction and completion of the PROJECT described herein.
3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS within 10 calendar days after the date of the NOTICE TO PROCEED and will fully complete the PROJECT within **180** consecutive calendar days unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS. The CONTRACTOR further agrees to pay, as liquidated damages, the sum of **\$250.00** for each consecutive calendar day thereafter as hereinafter provided in the GENERAL CONDITIONS.

4. The CONTRACTOR agrees to perform all the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum as shown in the Bid Form.

5. The term "CONTRACT DOCUMENTS" means and includes the following:

- A. Advertisement for Bids
- B. Information for Bidders
- C. Bid
- D. Agreement
- E. General Conditions
- F. Technical Conditions
- G. Other Conditions
- H. Notice of Award
- I. Notice to Proceed
- J. Change Orders
- K. Drawings prepared by Kenneth B. Simmons Associates LLC and listed in the Supplemental Conditions.
- L. Specifications prepared by Kenneth B. Simmons Associates LLC.
- M. Addenda

No. _____ Dated _____

No. _____ Dated _____

No. _____ Dated _____

No. _____ Dated _____

No. _____ Dated _____

No. _____ Dated _____

6. The OWNER agrees to pay the CONTRACTOR in the manner and at such times as set forth in the General Conditions such amounts as required by the CONTRACT DOCUMENTS.

7. This Agreement shall be binding on all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed or caused to be executed by their duly authorized officials, this Agreement in six counterparts, each of which shall be deemed an original, in the year and day first above written.

City of Forest Acres, SC

OWNER

(SEAL)

By:_____

Shaun Greenwood

(Type or Print Name)

ATTEST:

City Administrator

(Title of Authorized Official)

(Secretary)

(Witness)

CONTRACTOR

(SEAL)

By:_____

(Type or Print Name)

(Title)

ATTEST:

(Secretary)

(Witness)

(End of Section 01210)

SECTION 01212

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called Principal and
(Corporation, Partnership or Individual)

(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

City of Forest Acres, SC

(Name of Owner)

5209 North Trenholm Road, Forest Acres, SC 29206

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____ Dollars,
(\$ _____) in lawful money of the United States, for the payment of which sum well and
truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by
these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas the Principal entered into a
certain contract with the OWNER, dated the _____ day of _____, 20____, a
copy of which is hereto attached and made a part hereof for the construction of:

Forest Acres Entrance Sign

Forest Acres, South Carolina

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform its duties, all the
undertakings, covenants, terms, conditions, and agreements of said contract during the original
term thereof, and any extensions thereof which may be granted by the OWNER, with or without
notice to the Surety and during the one year guaranty period, and if he shall satisfy all claims and
demands incurred under such contract, and shall fully indemnify and save harmless the OWNER
from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse

and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS. PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder whose claim may be unsatisfied. IN WITNESS WHEREOF, this instrument is executed in six (6) counterparts, each one of which shall be deemed an original, this the _____ day of _____, 20_____.

ATTEST:

(Principal) Secretary

(SEAL)

Witness as to Principal

(Street Address)

(City, State, Zip)

ATTEST:

(Surety) Secretary

(SEAL)

Witness as to Surety

(Street Address)

(City, State, Zip)

Principal

By: _____ (S)

(Street Address)

(City, State, Zip)

Surety

Attorney-in-Fact

(Street Address)

(City, State, Zip)

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is a Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

(End of Section 01212)

SECTION 01214**PAYMENT BOND**

KNOW ALL MEN BY THESE PRESENTS: that

(Name of Contractor)

(Address of Contractor)

_____, hereinafter called
(an Individual, (a Partnership), or (a Corporation)

Principal, and _____
(Name of Surety)

(Address of Surety)

hereinafter called Surety, are held and firmly bound unto _____

City of Forest Acres, SC

(Name of Owner)

5209 North Trenholm Road, Forest Acres, SC 29206 _____

(Address of Owner)

hereinafter called OWNER, in the penal sum of _____
_____ Dollars, (\$ _____) in lawful money of the United States, for the
payment of which sum well and truly to be made, we bind ourselves, successors, and assigns,
jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the Principal entered into a
certain contract with the Owner, dated the _____ day of _____ 20____, a copy of
which is hereto attached and made a part hereof for the construction of:

Forest Acres Entrance Sign
Forest Acres, South Carolina

NOW, THEREFORE, if the Principal shall promptly make payment to all persons, firms,
SUBCONTRACTORS, and corporations furnishing materials for or performing labor in the
prosecution of the WORK provided for in such contract, and any authorized extension or
modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and

coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said Surety for value received hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the contract or to the WORK to be performed thereunder or the SPECIFICATIONS accompanying the same shall in any wise affect its obligation on this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK or to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, this instrument is executed in six (6) counterparts, each one of which shall be deemed an original, this the ____ day of _____, 20____.

ATTEST:

Principal

(Principal) Secretary

(SEAL)

By: _____ (S)

(Street Address)

Witness as to Principal

(City, State, Zip)

(Street Address)

(City, State, Zip)

ATTEST:

Surety

(Surety) Secretary

By: _____

Attorney-in-Fact

PAYMENT BOND

01214-2

(SEAL)

(Street Address)

(City, State, Zip)

Witness as to Surety

(Street Address)

(City, State, Zip)

NOTE: Date of BOND must not be prior to date of Contract. If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State where the PROJECT is located.

(End of Section 01214)

SECTION 01219 CERTIFICATE OF OWNER'S ATTORNEY

I, the undersigned, _____, the
duly authorized and acting legal representative of **City of Forest Acres, SC** do hereby certify as
follows:

I have examined the attached contract(s) and the manner of execution thereof, and I am of the
opinion that each of the aforesaid agreements has been duly executed by the proper parties
thereto acting through their duly authorized representatives; that said representatives have full
power and authority to execute said agreements on behalf of the respective parties named
thereon; and that the foregoing agreements constitute valid and legally binding obligations upon
the parties executing the same in accordance with terms, conditions and provisions thereof.

(Signed)

Date: _____

(End of Section 01219)

1. GENERAL

1.0. Contractor to verify installation and location of utilities prior to construction. If utilities are not installed, contractor shall work with utility companies to avoid conflict.

1.1. THE CONTRACT DOCUMENTS: The Contract Documents consist of the Advertisement/Invitation for Bids, Information for Bidders, Bid, Agreement, Conditions of the Contract (General, Supplemental and Other Conditions), Drawings, Specifications, Addenda, Notice of Award, Notice to Proceed, and Change Orders.

1.2. CORRELATION AND INTENT OF DOCUMENTS:

1.2.1. The Contract Documents are complementary, and what is required by anyone shall be as binding as if required by all.

1.2.2. The intent of the Drawings and Specifications is that the Contractor shall furnish all labor, supplies and materials, tools, machinery, equipment, transportation, supervision, temporary construction of any nature, and all other services, facilities and means necessary for the proper execution and completion of the Work in accordance with the Contract Documents and all incidental work necessary to complete the Project in an acceptable manner, and fully complete the work or improvement ready for use, occupancy and operation by the Owner.

1.2.3. Any mention in the Specifications or indication on the Drawings of articles, materials, methods or operations shall require the Contractor to furnish such item or service as if it was fully specified unless it is noted or specified as not in the contract. It is intended that all materials shall be new and best quality in every respect unless otherwise noted or specified. All workmanship, methods of assembly, and erection shall be first class in every respect.

1.3. CONFLICT OR INCONSISTENCY:

1.3.1. If there is any conflict or inconsistency between the provisions of the Supplemental Conditions and the provisions of the other Contract Documents, the provisions of the Supplemental Conditions shall prevail. If there is any conflict or inconsistency between the provisions of the General Conditions and the provisions of any of the Contract Documents other than the Supplemental Conditions, the provisions of the General Conditions shall prevail.

1.3.2. In case of conflict between the Drawings and Specifications, the Specifications shall govern. Figure dimensions on Drawings shall govern over scale dimensions, and detailed Drawings shall govern over general Drawings.

1.3.3. In case of difference between small-scale and large-scale drawings, the large scale drawings shall govern. On any of the drawings where a portion of the work is detailed or drawn out and the remainder is shown in outline, the parts detailed or drawn out shall apply also to all other like portions of the work. Where the word "similar" occurs on the drawings, it shall have a general meaning and not be interpreted as being identical, and all details shall be worked out in relation to their location and their connection with other parts of the work.

1.3.4. Any discrepancies found between the Drawings and Specifications and site conditions or any inconsistencies or ambiguities in the Drawings or Specifications shall be immediately reported to the Landscape Architect, in writing, who shall promptly correct such inconsistencies

or ambiguities in writing. Work done by the Contractor after his discovery of such discrepancies, inconsistencies or ambiguities shall be done at the Contractor's risk.

1.3.5. Should a conflict be discovered within the Contract Documents, the Contractor shall be deemed to have estimated the higher quality way of doing the Work unless he shall have asked for and obtained a decision in writing from the Landscape Architect before entering into this Contract.

1.4. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS: The Contractor may be furnished additional instructions and detail drawings, by the Landscape Architect, as necessary to carry out the Work required by the Contract Documents. The additional drawings and instructions thus supplied will become a part of the Contract Documents. The Contractor shall carry out the Work in accordance with the additional detail drawings and instructions.

1.4.1 If a conflict or inconsistency is found between the Drawings and the Specifications and the geotechnical report, the recommendations of the geotechnical report shall prevail.

1.5. SPECIFICATION HEADINGS:

1.5.1. For convenience of reference, these Specifications are divided into various Divisions, Sections, Subsections and Paragraphs. The titles of these headings shall not be taken as a correct or complete segregation of the various types of material and labor nor as an attempt to outline jurisdictional procedures. The headings shall not be deemed to limit or restrict the content, meaning or effect of such section, subsection, paragraph, provision or part.

1.5.2. The organization of the Specifications into the various headings, and the arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade. Each subcontract shall be dependent upon its own definite confines, regardless of Divisions of these Specifications. No responsibility, either direct or implied, is assumed by the Owner for omissions or duplications by the Contractor or by any of his subcontractors due to real or alleged errors in arrangement of matter in Contract Documents.

1.6. DRAWINGS AND SPECIFICATIONS FOR CONSTRUCTION PURPOSES: The Contractor will be furnished a flash drive with a complete set of PDF plans and specifications.

1.7. DEFINITIONS: Wherever the words hereinafter defined or pronouns used in their stead occur in the Contract Documents, they shall have the following meanings:

1.7.1. ADDENDA: Written or graphic instruments issued prior to the execution of the Agreement which modify or interpret the Contract Document, Drawings and Specifications by additions, deletions, clarifications or corrections. Such addenda or addenda will take precedent over the position of the general drawings and specifications concerned and will be considered as part of the Contract Documents.

1.7.2. AGREEMENT: The Agreement represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations or agreements, either written or oral, including the bidding documents. The Agreement may be amended or modified by a Change Order.

1.7.3. LANDSCAPE ARCHITECT: The person, firm or corporation named as such in the Contract Documents and duly appointed by the Owner to undertake the duties and powers

herein assigned to the Landscape Architect and/or Architect, acting either directly or through duly authorized representatives.

1.7.4. BID: The written offer or proposal of the Bidder, submitted on the prescribed form, properly signed and guaranteed, to perform the work at the prices quoted by the Bidder.

1.7.5. BIDDER: Any individual, firm or corporation or combination of same submitting a bid for the work contemplated, acting directly or through a duly authorized representative.

1.7.6. CALENDAR DAY: Every day shown on the calendar, Sundays and holidays included.

1.7.7. CHANGE ORDER: A written order to the Contractor authorizing an addition, deletion or revision in the Work within the general scope of the Contract Documents, or authorizing an adjustment in the Contract Price or Contract Time.

1.7.8. CONTRACT: The Contract Documents form the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations or agreements, either written or oral, including the bidding documents. The Contract may be amended or modified by a Change Order.

1.7.9. CONTRACT DOCUMENTS: The Contract Documents consist of the Advertisement for Bids, Information for Bidders, Bid, Agreement, the Conditions of the Contract (General, Supplemental, and other Conditions), the Drawings, the Specifications, Addenda issued prior to execution of the Contract, Notice of Award, Notice to Proceed and Change Orders.

1.7.10. CONTRACT PRICE: The total monies payable to the Contractor under the terms and conditions of the Contract Documents.

1.7.11. CONTRACTOR:

1.7.11.a. The individual, firm or corporation with whom the Owner has executed the Agreement by which the Contractor is obligated directly, or through Subcontractors, to perform work in connection with the Project.

1.7.11.b. The Contractor is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number and masculine in gender. The term Contractor means the Contractor or his authorized representative.

1.7.12. CONTRACT TIME: The number of calendar days stated in the Contract Documents for the completion of the Work.

1.7.13. DRAWINGS: The part of the Contract Documents which show the characteristics and scope of the Work to be performed and which have been prepared or approved by the Landscape Architect.

1.7.14. EARTH: An excavated material or material to be excavated; all kinds of material other than rock.

1.7.15. ELEVATION: The figures given on the Drawings or in the other Contract Documents after the word "elevation" or abbreviation of it shall mean the distance in feet above the datum adopted by the Landscape Architect.

1.7.16. EQUIPMENT: All machinery, together with the necessary supplies for upkeep and maintenance, and all tools and apparatus necessary for the proper construction and acceptable completion of the work.

1.7.17. FIELD ORDER: A written order effecting a change in the Work not involving an adjustment in the Contract Price or an extension of the Contract Time, issued by the Landscape Architect to the Contractor during construction.

1.7.18. FURNISH: Furnish and install complete, in place, and ready for use.

1.7.19. INFORMATION FOR BIDDERS: The Notice to Contractors containing all necessary information as to provisions, requirements, date, place, and time of submitting bids.

1.7.20. LATEST EDITION: The current printed document issued eight weeks or more prior to date of receipt of bids.

1.7.21. MATERIALS: Any substance specified for use in the construction of the Project and its appurtenances.

1.7.22. NET COST: The cost to the Contractor after application of all credits and discounts (excepting only cash discounts) and without the addition of any factor for burden, overhead or indirect cost or profit.

1.7.23. NOTICE OF AWARD: The written notice of the acceptance of the Bid from the Owner to the successful Bidder.

1.7.24. NOTICE TO PROCEED: Written communication issued by the Owner to the Contractor authorizing him to proceed with the Work and establishing the date of commencement of the Work.

1.7.25. OPTIMUM MOISTURE CONTENT FOR COMPACTION: The moisture content of a soil calculated on the basis of dry weight of soil at which the soil can be compacted to the approximate maximum density under a specified standard method of compaction.

1.7.26. OWNER: A public or quasi-public body or authority, corporation, association, partnership, or individual for whom the Work is to be performed.

1.7.27. PRE-CONSTRUCTION CONFERENCE: A conference following award and prior to start of construction to be attended by a duly authorized representative of the Landscape Architect and by the responsible officials of the Contractor and other affected parties.

1.7.28. PROJECT: The undertaking to be performed as provided in the Contract Documents.

1.7.29. PROPOSAL: The written offer of the Bidder, submitted on the prescribed form, properly signed and guaranteed, to perform the work at the prices quoted by the Bidder.

1.7.30. PROPOSAL FORM: The approved form on which the Owner requires formal bids to be prepared and submitted for the work.

1.7.31. PROPOSAL GUARANTY: The security furnished by the Bidder with his proposal for a Project, as guaranty he will enter into a contract for the work if his proposal is accepted.

1.7.32. PROVIDE: Furnish and install complete, in place, and ready for use.

1.7.33. **RESIDENT PROJECT REPRESENTATIVE:** The authorized representative of the Owner who is assigned to the Project site or any part thereof.

1.7.34. **ROCK:** An excavated material or material to be excavated; only boulders and pieces of concrete or masonry exceeding 1/2 cu. yd. in volume, or solid ledge rock which, in the opinion of the Landscape Architect, requires, for its removal, drilling and blasting, wedging, sledging, barring, or breaking up with a power-operated tool. No soft or disintegrated rock which can be removed with hand pick or power-operated excavator or shovel, no loose shaken, or previously blasted rock or broken stone in rock fillings or elsewhere, and no rock exterior to the maximum limits of measurement allowed, which may fall into the excavation will be classified as rock.

1.7.35. **SHOP DRAWINGS:** All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, a Subcontractor, manufacturer, Supplier or distributor, which illustrate how specific portions of the Work shall be fabricated or installed.

1.7.36. **SPECIALIST:** An individual or firm of established reputation which is regularly engaged in, and which maintains a regular force of workmen skilled in either manufacturing or fabricating items required by the contract, installing items required by the contract, or otherwise performing work required by the contract. Where the contract specifications require installation by a specialist, that term shall also be deemed to mean either the manufacturer of the item, an individual or firm licensed by the manufacturer, or an individual or firm who will perform the work under the manufacturer's direct supervision.

1.7.37. **SPECIFICATIONS:** A part of the Contract Documents consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.

1.7.38. **STRUCTURES:** Bridges, culverts, catch basins, drop inlets, manholes, retaining walls, cribbing, endwalls, buildings, sewers, service pipes, underdrains, foundation drains, and other miscellaneous items which may be encountered in the work, and which are not otherwise classified herein.

1.7.39. **SUBBASE:** The layer or layers of specified or selected material of designated thickness or rate of application placed on a subgrade to comprise a component of the pavement structure to support the base course, pavement or subsequent layer of the construction.

1.7.40. **SUBCONTRACTOR:** An individual, firm or corporation having a direct contract with the Contractor or with any other Subcontractor for the performance of a part of the Work at the site. The term Subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Subcontractor or his authorized representative.

1.7.41. **SUB-SUBCONTRACTOR:** An individual, firm or corporation having a direct or indirect contract with a Subcontractor to perform any of the Work at the site. The term Sub-subcontractor is referred to throughout the Contract Documents as if singular in number and masculine in gender and means a Sub- subcontractor or an authorized representative thereof.

1.7.42. **SUBGRADE:** The top surface of a roadbed upon which the pavement structure and shoulders are constructed.

1.7.43. **SUBSTANTIAL COMPLETION:** That date as certified by the Landscape Architect when the construction of the Project or a specified part thereof is sufficiently completed, in

accordance with the Contract Documents, so that the Project or specified part can be utilized for the purposes for which it is intended.

1.7.44. SUPPLEMENTAL CONDITIONS: Conditions of the Contract other than the General Conditions.

1.7.45. SUPERINTENDENT: The Contractor's authorized representative in responsible charge of the work.

1.7.46. SUPPLIER: Any person or organization who supplies materials or equipment for the Work, including that fabricated to a special design, but who does not perform labor at the site.

1.7.47. SURETY: The corporation, partnership or individual bound with and for the Contractor for the full and complete performance of the contract, and for the payment of all debts pertaining to the work.

1.7.48. TITLES (OR HEADINGS): The titles or headings of the sections and subsections herein are intended for convenience of reference and shall not be considered as having any bearing on their interpretation.

1.7.49. WORK: All labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to be incorporated in the Project.

1.7.50. WRITTEN NOTICE: Any notice to any part of the Agreement relative to any part of this Agreement in writing and considered delivered and the service thereof completed, when posted by certified or registered mail to the said party at his last given address, or delivered in person to said party or his authorized representative on the Work.

1.7.51. ADDITIONAL DEFINITIONS:

1.7.51.a. Wherever in the Specifications or on the Drawings, the words "as designated", "as detailed", "as directed", "as ordered", "as permitted", "as prescribed", "as provided", "as requested", "as required", or words of like import are used, it shall be understood that the designation, detail, direction, order, permission, prescribed, provision, request or requirement of the Landscape Architect is intended.

1.7.51.b. Similarly, the words "approved", "acceptable", "satisfactory", and words of like import shall mean approved by, acceptable to, or satisfactory to the Landscape Architect.

1.8. ABBREVIATIONS: Where any other following abbreviations are used in the Specifications, they shall have the meaning set forth opposite each.

AA	Aluminum Association
AAMA	Architectural Aluminum Manufacturers Association
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
AED	American Equipment Dealers
AFI	American Filter Institute
AGA	American Gas Association
AGC	Associated General Contractors of America, Inc.
AHDGA	American Hot Dip Galvanizers Association

AIA	American Institute of Architects
AIEE	American Institute of Electrical Engineers
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMA	Acoustical Materials Association
AMCA	Air Moving and Conditioning Association
ANS	American Nuclear Society
ANSI	American National Standards Institute
APA	American Plywood Association
ARI	Air Conditioning and Refrigeration Institute
ASA	Acoustical Society of America
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASQC	American Society for Quality Control
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers' Association
AWPI	American Wood Preservers' Institute
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
CGA	Compressed Gas Association
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards, U. S. Department of Commerce
CSI	Construction Specification Institute
EIA	Electronic Industries Association
FS	Federal Specification
FSPT	Federation of Societies for Paint Technology
FSS	Federal Specifications, General Services Administration
FHWA	Federal Highway Administration
GA	Gypsum Association
IBI	Insulation Board Institute
IBR	Institute of Boiler and Radiator Manufacturers
IEEE	Institute of Electric and Electronics Engineers
IES	Illuminating Engineering Society
ISA	Instrument Society of America
ISO	International Organization for Standardization
ITE	Institute of Traffic Engineers
LIA	Lead Industries Association
MBMA	Metal Building Manufacturers Association
MIA	Marble Institute of America
MPTA	Mechanical Power Transmission Association
MS	Military Specification
MSTD	Military Standard
NAAMM	National Association of Architectural Metal Manufacturers
NAFM	National Association of Fan Manufacturers
NBFU	National Board of Fire Underwriters
NBS	National Bureau of Standards
NCMA	National Concrete Masonry Association

NEC	National Electrical Code
NECA	National Electrical Contractors Association, Inc.
NEMA	National Electrical Manufacturers Association
NFC	National Fire Code
NFPA	National Fire Protection Association
NHLA	National Hardware Lumber Association
NLMA	National Lumber Manufacturers Association
NPC	National Plumbing Code
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association
NSF	National Sanitation Foundation
NTMA	The National Terrazzo and Mosaic Association
NWMA	National Woodwork Manufacturers Association
OSHA	Occupational Safety and Health Act
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PEI	Porcelain Enamel Institute
RTI	Resilient Tile Institute
RWMA	Resistance Welder Manufacturers Association
SBI	Steel Boiler Institute
SCDOT	South Carolina Department of Transportation
SCPI	Structural Clay Products Institute
SDI	Steel Deck Institute
SJI	Steel Joist Institute
SMA	Screen Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SSBC	Southern Standard Building Code
SSGC	Southern Standard Gas Code
SSPC	Steel Structures Painting Council
TAPPI	Technical Association of the Pulp and Paper Industry
TCA	Tile Council of America
TRB	Transportation Research Board
UL	Underwriters' Laboratories, Inc.

2. OWNER'S RIGHTS AND RESPONSIBILITIES

2.1. CHANGES IN THE WORK:

2.1.1. The Owner, without invalidating the Contract, may make changes in the Work and in the Drawings and Specifications therefor by making alterations therein, additions thereto, or omissions therefrom.

2.1.2. All work resulting from such changes shall be performed and furnished under and pursuant to the terms and conditions of the Contract. If such changes result in an increase or decrease in the work to be done hereunder, or increase or decrease the quantities thereof, adjustment in compensation shall be made therefor as provided in Subsection 7.12 entitled PAYMENT FOR EXTRA WORK.

2.1.3. Except in an emergency endangering life or property, no change shall be made unless in pursuance of a written order from the Landscape Architect authorizing the change, and no claim for additional compensation shall be valid unless the change is so ordered.

2.1.4. The Contractor agrees that he shall neither have nor assert any claim for, or be entitled to, any additional compensation for damages or for loss of anticipated profits on work that is eliminated.

2.2. PROJECT Landscape Architect: As Landscape Architect for this project the Owner has retained:

**Kenneth B. Simmons Associates
2711 Middleburg Drive, Suite 210
Columbia, SC 29204**

2.3. LANDSCAPE ARCHITECT'S AUTHORITY:

2.3.1. The Landscape Architect will be the Owner's representative during the construction period and he will observe the work in progress on behalf of the Owner. The Landscape Architect will have the authority to act on behalf of the Owner in the following matters consistent with Owner's rights and obligations as set forth in these Contract Documents:

- 2.3.1.a. Interpretation of Contract Documents.
- 2.3.1.b. Approval of samples and shop drawings.
- 2.3.1.c. Preparation of supplementary details and instructions.
- 2.3.1.d. Inspection and approval of construction work.
- 2.3.1.e. Preliminary approval of progress payment applications.

2.3.2. Any instructions which the Landscape Architect may issue the Contractor shall be adjudged an interpretation of the Contract requirements and not an act of supervision. The Landscape Architect has no authority, nor accepts any responsibility, either direct or implied, to direct and superintend the construction operations.

2.3.3. The Contractor shall proceed without delay to perform the work as directed, instructed, determined, or decided by the Landscape Architect and shall comply promptly with such directions, instructions, determinations, or decisions. If the Contractor has any objection thereto, he may require that any such direction, instruction, determination, or decision be put in writing and within 10 days after receipt of any such writing, he may file a written protest with the

Owner stating clearly and in detail his objections, the reasons therefor, and the nature and amount of additional compensation, if any, to which he claims he will be entitled thereby. A copy of such protest shall be filed with the Landscape Architect at the same time it is filed with the Owner. Unless the Contractor files such written protest with the Owner and Landscape Architect within such 10 day period, he shall be deemed to have waived all grounds for protest of such direction, instruction, determination, or decision and all claims for additional compensation or damages occasioned thereby, and shall further be deemed to have accepted such direction, instructions, determination, or decision as being fair, reasonable, and finally determinative of his obligations and rights under the Contract.

2.4. **LIABILITY OF OWNER:** No person, firm or corporation, other than the Contractor, who signed this Contract as such, shall have any interest herein or right hereunder. No claim shall be made or be valid either against the Owner or any agent of the Owner and neither the Owner nor any agent of the Owner shall be liable for or be held to pay any money, except as herein provided. The acceptance by the Contractor of the payment as fixed in the final estimate shall operate as and shall be a full and complete release of the Owner and of every agent of the Owner of and from any and all claims, demands, damages and liabilities of, by or to the Contractor for anything done or furnished for or arising out of or relating to or by reason of the work or for or on account of any act or neglect of the Owner or of any agent of the Owner or of any other person, arising out of, relating to or by reason of the work, except the claim against the Owner for the unpaid balance, if any there be, of the amounts retained as herein provided.

2.5. **RIGHTS-OF-WAY AND SUSPENSION OF WORK:** The Owner shall furnish all land and rights-of-way necessary for the carrying out of this contract and the completion of the Work herein contemplated and will use due diligence in acquiring said land and rights-of-way as speedily as possible. But it is possible that all lands and rights-of-way may not be obtained as herein contemplated before construction begins, in which event the Contractor shall begin his work upon such land and rights-of-way as the Owner may have previously acquired and no claim for damages whatsoever will be allowed by reason of the delay in obtaining the remaining lands and rights-of-way. Should the Owner be prevented or enjoined from proceeding with the work, or from authorizing its prosecution, either before or after the commencement, by reason of any litigation, or by reason of its inability to procure any lands or rights-of-way for the said work, the Contractor shall not be entitled to make or assert claim for damage by reason of said delay or to withdraw from the contract except by consent of the Owner; but time for completion of the work will be extended to such time as the Owner determines will compensate for the time lost by such delay, such determination to be set forth in writing.

2.6. **SURVEYS, PERMITS AND REGULATIONS:**

2.6.1. The Owner will furnish all boundary surveys and establish all base lines for locating the principal component parts of the Work together with a suitable number of bench marks adjacent to the Work as shown in the Contract Documents. From the information provided by the Owner, unless otherwise specified in the Contract Documents, the Contractor shall develop and make all detail surveys needed for construction such as slope stakes, batter boards, stakes for pile locations and other working points, lines, elevations and cut sheets.

2.6.2. The Contractor shall carefully preserve bench marks, reference points and stakes and, in case of willful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their unnecessary loss or disturbance.

2.6.3. Permits and licenses of a temporary nature necessary for the prosecution of the Work shall be secured and paid for by the Contractor unless otherwise stated in the Supplemental Conditions. Encroachment permits, easements for permanent structures and permits for permanent changes in existing facilities shall be secured and paid for by the Owner, unless otherwise specified. The Contractor shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn and specified. If the Contractor observes that the Contract Documents are at variance therewith, he shall promptly notify the Landscape Architect in writing, and any necessary changes shall be adjusted as provided in Subsection 2.1 entitled CHANGES IN THE WORK.

2.7. LINES, GRADES AND MEASUREMENTS:

2.7.1. The Owner's Landscape Architect will set sufficient base lines and elevations as shown on the Drawings for location of the Work. The Contractor shall employ a registered civil engineer, or land surveyor and shall require said engineer or surveyor to establish all lines, elevations, reference marks, batter boards, etc., needed by the Contractor during the progress of the work, and from time to time to verify such marks by instrument or other appropriate means. All surveys shall be submitted to the Owner for his records.

2.7.2. The Owner's Landscape Architect shall be permitted at all times to check the lines, elevations, reference marks, batter boards, etc., set by the Contractor, who shall correct any errors in lines, elevations, reference marks, batter boards, etc., disclosed by such check. Such check shall not be construed to be an approval of the Contractor's work and shall not relieve or diminish in any way the responsibility of the Contractor for the accurate and satisfactory construction and completion of the work.

2.7.3. The Contractor shall make, check and be responsible for all measurements and dimensions necessary for the proper construction of, and the prevention of misfittings in, the work.

2.8. OWNER'S RIGHT OF AUDIT: In case the Owner agrees that a Contractor perform work on a cost plus basis, the Owner is to have a full and complete right to audit and make copies of Contractor's or Subcontractor's records with respect to any payment to Owner may be requested to make, or may make, for any work done on a cost plus basis.

2.9. OWNER'S RIGHT TO SEPARATE CONTRACTS:

2.9.1. The Owner reserves the right to let other contracts in connection with the Work under similar General Conditions. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly connect and coordinate his work with theirs.

2.9.2. The Owner may perform additional Work related to the Project by himself, or he may let other contracts containing provisions similar to these. The Contractor will afford the other contractors who are parties to such Contracts (or the Owner, if he is performing the additional Work himself), reasonable opportunity for the introduction and storage of materials and equipment and the execution of Work and shall properly connect and coordinate his Work with theirs.

2.10. OWNER'S RIGHT TO DO WORK:

2.10.1. If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this contract, the Owner, after three days' written notice to the Contractor may, without prejudice to any other remedy he may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor. If such expense shall exceed the unpaid balance, the Contractor shall pay the difference to the Owner on demand.

2.10.2. The Landscape Architect's certificate setting forth the fair and reasonable cost of repairing, replacing, rebuilding or restoring any damaged or defective work or equipment when performed by one other than the Contractor shall be binding and conclusive as to the amount thereof upon the Contractor.

2.11. OWNER'S RIGHT TO TERMINATE CONTRACT: If the Contractor should be adjudged a bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver or trustee should be appointed on account of his insolvency, or if he should persistently or repeatedly refuse or should fail, except in cases for which extension of time is provided, to supply enough properly skilled workmen or proper materials, or if he should fail to make prompt payment to Subcontractors or for material or labor, or persistently disregard laws, ordinances or the instructions of the Owner and his representatives, or otherwise be guilty of substantial violation of any provision of the Contract, then the Owner, may, without prejudice to any other right or remedy and after giving the Contractor, and his surety, if any, seven days' written notice, terminate the employment of the Contractor and take possession of the premises and of all materials, as it may deem expedient. In such case, the Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price shall exceed the expense of finishing the work including compensation for additional engineering, managerial and administrative services, such excess shall be paid to the Contractor. If such expense shall exceed such unpaid balance, the Contractor shall pay the difference to the Owner.

2.12. SUSPENSION OF WORK, TERMINATION AND DELAY: The Owner may suspend the Work or any portion thereof for a period of not more than 90 days or such further time as agreed upon by the Contractor, by written notice to the Contractor and the Landscape Architect, which notice shall fix the date on which Work shall be resumed. The Contractor will resume that Work on the date so fixed. The Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to any suspension.

2.13. INSPECTIONS AND TESTING: If the Contract Documents, Owner's instructions, laws, ordinances or any public authority having jurisdiction require any work to be specially tested or approved, the Contractor shall give the Owner timely notice of its readiness for observation by the Owner or inspection by another authority, and if the inspection is by another authority rather than the Owner, of the date fixed for such inspection. The required certificates of such inspection shall be secured by the Contractor. Observations by the Owner shall be promptly made, and where practicable, at the source of supply. If any work should be covered up without approval or consent of the Owner, it must, if required by the Owner, be uncovered for examination, at the Contractor's expense.

2.14. INSPECTION OF WORK AWAY FROM THE SITE: If the work to be done away from the construction site is to be inspected on behalf of the Owner during its fabrication, manufacture, or testing, or before shipment, the Contractor shall give notice to the Landscape Architect of the place and time where such fabrication, manufacture, testing, or shipping is to be done. Such notice shall be in writing and delivered to the Landscape Architect in ample time so that the necessary arrangements for the inspection can be made.

2.15. PIPE LOCATION: Exterior pipelines will be located substantially as indicated on the Drawings, but the right is reserved to the Owner acting through the Landscape Architect, to make such modifications in location as may be found desirable to avoid interference with structures or for other reasons. Where fittings, etc., are noted on the Drawings such notation is for the Contractor's convenience and does not relieve him from laying and jointing different or additional items where required.

2.16. PRIOR USE OR OCCUPANCY: The Owner reserves the right to use or occupy the Work or portion thereof, and to use equipment installed under the Contract, prior to final acceptance. Such use or occupancy will not constitute acceptance of the Work or any part thereof. Despite such use or occupancy, guarantee periods will not begin until the completion of all work under the Contract, unless agreement to the contrary is made in writing between the parties.

2.17. WEATHER CONDITIONS: In the event of temporary suspension of work, or during inclement weather, or whenever the Landscape Architect shall direct, the Contractor will, and will cause his subcontractors to, protect carefully his and their work and materials against damage or injury from the weather. If, in the opinion of the Landscape Architect, any work or materials shall have been damaged or injured by reason of failure on the part of the Contractor or any of his subcontractors so to protect its work, such materials shall be removed and replaced at the expense of the Contractor.

2.18. OWNER'S RIGHT TO CLEAN UP: If a dispute arises between the separate contractors as to their responsibility for cleaning up, the Owner may clean up and charge the cost thereof to the Contractor as the Landscape Architect shall determine to be just.

3. CONTRACTOR'S RIGHTS AND RESPONSIBILITIES

3.1. ACCESS TO WORK: The Owner, the Landscape Architect, and their officers, agents, servants, and employees plus representatives of the various participating Federal or State agencies may at any and all times and for any and all purposes, enter upon the work and site thereof and the premises used by the Contractor, and the Contractor shall at all times provide safe and proper facilities therefor.

3.2. ACCIDENT PREVENTION: In the performance of the contract the Contractor shall comply with the applicable provisions of the regulations issued by the Secretary of Labor pursuant to section 107 of the Contract Work Hours and Safety Standards Act entitled "Safety and Health Regulations for Construction" (29 CFR 1518, renumbered as Part 1926). Occupational Safety and Health Standards (29 CFR Part 1910) issued by the Secretary of Labor pursuant to the Williams-Steiger Occupational Safety and Health Act of 1970 are applicable to work performed by the contractor subject to the provisions of the Act.

3.3. STATED ALLOWANCES: The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. These allowances shall cover the net cost of the materials and equipment delivered and unloaded at the site, and all applicable taxes. The Contractor's handling costs on the site, labor, installation costs, overhead, profit and other expenses contemplated for the original allowance shall be included in the Contract Sum and not in the allowance. If the cost, when determined, is more than or less than the allowance, the Contract Sum shall be adjusted accordingly by Change Order which will include additional handling costs on the site, labor, installation costs, overhead, profit and other expenses resulting to the Contractor from any increase over the original allowance.

3.4. ARCHAEOLOGICAL RIGHTS: There is a possibility that items of archaeological significance may be found during the excavation of the site. In such event, the Contractor shall stop excavation in the vicinity of the find and notify the Landscape Architect immediately; subsequent excavation work shall proceed as directed by the Landscape Architect. All items found which are considered to have archaeological significance are the property of the Owner.

3.5. AS-BUILT DRAWINGS: The Contractor shall designate one set of Drawings for "As-Built Drawings". The Contractor shall indicate on these drawings all field changes affecting various mechanical, electrical, piping and other items as well as locations as actually installed. The "As-Built Drawings" shall be kept current by the Contractor. The "As-Built Drawings" shall be delivered to the Landscape Architect upon completion and acceptance of the work. Final payment for the work will not be made until the "As-Built Drawings" have been completed and delivered as indicated above.

3.6. OBLIGATIONS OF CONTRACTOR:

3.6.1. The Contractor shall and will, in good workmanlike manner, do and perform all work and furnish all supplies and materials, tools, machinery, equipment, transportation, supervision, temporary construction of any nature, and all other services, means and facilities except as herein otherwise expressly specified, necessary or proper to perform and complete all work required by this Contract, within the time herein specified, in accordance with the provisions of this Contract and in accordance with the Drawings and Specifications and in accordance with the direction of the Landscape Architect as given from time to time during the progress of the work. He shall furnish, erect, maintain and remove such construction plant and such temporary works as may be required.

3.6.2. The Contractor shall observe, comply with, and be subject to all terms, conditions, requirements, and limitations of the Contract and Specifications, and shall do, carry on, and complete the entire work to the satisfaction of the Landscape Architect and the Owner.

3.6.3. The Contractor shall check all dimensions, elevations, quantities and instructions shown on the Drawings or given in the Specifications and shall notify the Landscape Architect should any discrepancy of any kind be found in the Drawings, Specifications or conditions at the site. He will not be allowed to take advantage of any discrepancy, error or omission in the Contract Documents. If any discrepancy is discovered, the Landscape Architect will issue full instructions pertaining thereto and the Contractor shall carry out these instructions as if originally specified.

3.7. CLAIMS FOR ADDITIONAL COST: If the Contractor wishes to make a claim for an increase in the Contract Sum, he shall give written notice thereof within twenty days after the occurrence of the event giving rise to such claim. This notice shall be given by the Contractor before proceeding to execute the Work, except in an emergency endangering life or property, in which case the Contractor shall proceed in accordance with Subsection 3.27 entitled PROTECTION OF WORK, PROPERTY AND PERSONS IN AN EMERGENCY. No such claim shall be valid unless so made. If the Owner and the Contractor cannot agree on the amount of the adjustment in the Contract Sum, it shall be determined by the Landscape Architect. Any change in the Contract Sum resulting from such claim shall be authorized by Change Order.

3.8. CLAIMS FOR DAMAGE:

3.8.1. If the Contractor makes claim for any damages alleged to have been sustained by breach of contract or otherwise, he shall, within 10 days after occurrence of the alleged breach or within 10 days after such damages are alleged to have been sustained, whichever date is the earlier, file with the Landscape Architect a written, itemized statement in triplicate of the details of the alleged breach and the details and amount of the alleged damages. The Contractor agrees that unless such statement is made and filed as so required, his claim for damages shall be deemed waived, invalid and unenforceable, and that he shall not be entitled to any compensation for any such alleged damages. Within 10 days after the timely filing of such statement, the Landscape Architect shall file with the Owner one copy of the statement together with his recommendations for action by the Owner.

3.8.2. The Contractor shall not be entitled to claim any additional compensation for damages by reason of any direction, instruction, determination or decision of the Landscape Architect, nor shall any such claims be considered, unless the Contractor shall have complied in all respects with the last paragraph of Subsection 2.a entitled LANDSCAPE ARCHITECT'S AUTHORITY, including, but not limited to, the filing of written protest in the manner and within the time therein provided.

3.9. CUTTING AND PATCHING:

3.9.1. The Contractor shall leave all chases or openings for the installation of his own or any other contractor's subcontractor's work, or shall cut the same in existing work, and shall see that all sleeves or forms are at the work and properly set in ample time to prevent delays. He shall see that all such chases, openings, and sleeves are located accurately and are of proper size and shape and shall consult with the Landscape Architect and the contractors and subcontractors concerned in reference to this work.

3.9.2. In case of his failure to leave or cut all such openings or have all such sleeves provided and set in proper time, he shall cut them or set them afterwards at his own expense, but in so

doing he shall confine the cutting to the smallest extent possible consistent with the work to be done. In no case shall piers or structural members be cut without the written consent and approval of the Landscape Architect.

3.9.3. The Contractor shall carefully fit around, close up, repair, patch, and point around the work specified herein to the satisfaction of the Landscape Architect.

3.9.4. All of this work shall be done by careful workmen competent to do such work and with the proper small hand tools. Power tools shall not be used except where, in the opinion of the Landscape Architect, the type of tool proposed can be used without damage to any work or structure and without inconvenience or interference with the operation of any facility. The Landscape Architect's approval of the type of tool shall not in any way relieve or diminish the responsibility of the Contractor for such damage, inconvenience or interference resulting from the use of such tools.

3.9.5. The Contractor shall not cut or alter the work of any subcontractor or any other contractor, nor permit any of his subcontractors to cut or alter the work of any other contractor or subcontractor except with the written consent of the contractor or subcontractor whose work is to be cut or altered or with the written consent of the Landscape Architect. All cutting and patching or repairing made necessary by the negligence, carelessness, or incompetence of the Contractor or any of his subcontractors shall be done by or at the expense of the Contractor and shall be the responsibility of the Contractor.

3.10. CLEANING UP:

3.10.1. The Contractor at all times shall keep the site of the work free from rubbish and debris caused by his operation under the Contract. When the work has been completed, the Contractor shall remove from the site of the work all of his plant, machinery, tools, construction equipment, temporary work and surplus materials so as to leave the work and the site clean and ready for use.

3.10.2. All public streets adjacent to the site and all private ways at the site shall be kept clean of debris, spilled materials, and wet and dry earth at all times and shall be cleaned at the end of each working day. When wet earth is encountered, it shall be cleaned from the vehicles before they leave the site and enter streets and private ways.

3.11. NON-COMPLIANCE WITH CONTRACT REQUIREMENTS: In the event the Contractor, after receiving written notice from the Owner of non-compliance with any requirement of this Contract, fails to initiate promptly such action as may be appropriate to comply with the specified requirement within a reasonable period of time, the Owner shall have the right to order the Contractor to stop any or all work under the Contract until the Contractor has complied or has initiated such action as may be appropriate to comply within a reasonable period of time. The Contractor will not be entitled to any extension of contract time or payment for any costs incurred as a result of being ordered to stop work for such cause.

3.12. OVERALL PROJECT COORDINATION: The Contractor shall coordinate all Work of his Contract to produce the required finished Project in accordance with the Contract Documents. Special attention shall be given to the submission of shop drawings, samples, color charts, and requests for substitution within the specified time; furnishing the proper shop drawings to Subcontractors and material suppliers, whose work and equipment is affected by and related thereto; and the furnishing of all information concerning location, type, and size of built-in equipment and materials and equipment utilities. This coordination is in addition to all other coordination requirements called for in the technical sections of the Specifications.

3.13. **COMMUNICATIONS:** The Contractor shall forward all communications to the Owner through the Landscape Architect.

3.14. **NO DISCRIMINATION IN EMPLOYMENT:** In connection with the performance of work under this Contract, the Contractor agrees not to discriminate against any employee or applicant for employment because of race, religion, color, or national origin. The aforesaid provision shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

3.15. **DRAWINGS AND SPECIFICATIONS AT THE SITE:** The Contractor shall maintain at the site one complete set of all Drawings, Specifications, Addenda, approved Shop Drawings, Change Orders and other Modifications, in good and readable condition and marked to record all changes made during construction. These shall be available to the Landscape Architect. The Drawings, marked to record all changes made during construction, shall be delivered to the Landscape Architect for the Owner upon completion of the work.

3.16. **EMPLOY COMPETENT PERSONS:** The Contractor shall endeavor to employ only competent persons on the Work. Whenever the Landscape Architect notifies the Contractor in writing that in his opinion any person on the Work is incompetent, unfaithful, disorderly, or otherwise unsatisfactory, or not employed in accordance with the provisions of the Contract, such person shall be discharged from the Work and shall not again be employed on it, except with the written consent of the Landscape Architect. Provided, however, that the failure of the Owner or Landscape Architect to object to an employee is not to be considered acknowledgment or approval of the employee's competence by the Landscape Architect or Owner.

3.17. **EMPLOY SUFFICIENT LABOR AND EQUIPMENT:** If, in the judgement of the Landscape Architect, the Contractor is not employing sufficient labor, plant, equipment or other means to complete the work within the time specified, the Landscape Architect may, after giving written notice, require the Contractor to employ such additional labor, plant, equipment and other means as the Landscape Architect may deem necessary to enable the work to progress properly.

3.18. **EXISTING STRUCTURES:** Where the dimensions and locations of existing structures are of importance in the installation or connection of any part of the Work, the Contractor shall verify such dimensions and locations in the field before the fabrication of any material or equipment which is dependent on the correctness of such information.

3.19. **INDEMNIFICATION:**

3.19.1. The Contractor will indemnify and hold harmless the Owner and the Landscape Architect and their agents and employees ("Indemnified Parties") from and against all claims, damages, losses and expenses, including attorneys' fees, arising out of or resulting from the performance of the Work, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom; and is caused in whole or in part by any negligent or willful act or omission of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable. The Contractor's indemnification obligation shall arise regardless of whether or not such claim, damage, injury, loss or expense is caused in part by an Indemnified Party; provided, however,

the Contractor shall not be required to indemnify any one Indemnified Party for damages proximately caused by or resulting from the sole negligence of that Indemnified Party.

3.19.2. In any and all claims against the Owner or the Landscape Architect, or any of their agents or employees, by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them, or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by an limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefits acts.

3.20. INTOXICATING LIQUORS: The Contractor shall not sell and shall neither permit nor suffer the introduction or use of intoxicating liquors upon or about the work.

3.21. LEGAL ADDRESS OF CONTRACTOR: The Contractor's business address and his office at or near the site of the work are both hereby designated as places to which communications may be delivered. The depositing of any letter, notice, or other communication in a postpaid wrapper directed to the Contractor's business address in a post office box regularly maintained by the U. S. Postal Service or the delivery at either designated address of any letter, notice, or other communication by mail or otherwise shall be deemed sufficient service thereof upon the Contractor, and the date of such service shall be the date of receipt. The first-named address may be changed at any time by an instrument in writing, executed and acknowledged by the Contractor and delivered to the Landscape Architect. Service of any notice, letter or other communication upon the Contractor personally shall likewise be deemed sufficient service.

3.22. MUTUAL RESPONSIBILITY OF CONTRACTORS:

3.22.1. The Contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and equipment and the execution of their work, and shall properly connect and coordinate his Work with theirs.

3.22.2. If any part of the Contractor's Work depends for proper execution or results upon the work of any other separate contractor, the Contractor shall inspect and promptly report to the Owner any apparent discrepancies or defects in such work that render it unsuitable for such proper execution and results. Failure of the Contractor so to inspect and report shall constitute an acceptance of the other contractor's work as fit and proper to receive his Work, except as to defects which may develop in the other separate contractor's work after the execution of the Contractor's Work. To ensure proper execution of the subsequent work, the Contractor shall measure work already in place and shall at once report to the Owner any discrepancy between the executed work and the Contract Documents.

3.22.3. Should the Contractor cause damage to any separate contractor on the work, the Contractor agrees, upon due notice, to settle with such contractor by agreement or arbitration, if he will so settle. If such separate contractor sues the Owner on account of any damage alleged to have been so sustained, the Owner shall notify the Contractor, who shall defend such proceedings at the Contractor's expense, and if any judgement against the Owner arises therefrom, the Contractor shall pay or satisfy it and pay all costs incurred by the Owner.

3.23. NIGHT AND SUNDAY WORK:

3.23.1. No work shall be done at night or on Sunday except:

3.23.1.a. Usual protective work, such as pumping and the tending of lights and fires;

3.23.1.b. Work done in case of emergency threatening injury to persons or property;
3.23.1.c. When provided for under Supplemental Conditions as herein specified;
3.23.1.d. If all of the conditions set forth in the next paragraph below are met.

3.23.2. No work other than that included in (3.23.1.a), (3.23.1.b), and (3.23.1.c) above, shall be done at night except when:

3.23.2.a. In the judgement of the Landscape Architect, the work will be of advantage to the Owner and can be performed satisfactorily at night;
3.23.2.b. The work will be done by a crew organized for regular and continuous night work;
3.23.2.c. The Landscape Architect has given written permission for such night work.

3.23.3. Any work necessary to be performed after regular hours, on Sundays, or Legal Holidays, shall be performed without additional expense to the Owner.

3.24. OCCUPYING PRIVATE LAND: The Contractor shall not (except after written consent from the proper parties) enter or occupy with men, tools, materials, or equipment, any land outside the rights-of-way or property of the Owner. A copy of the written consent shall be given to the Landscape Architect prior to occupation of private land.

3.25. PERMITS AND RESPONSIBILITIES: The Contractor shall, without additional expense to the Owner, be responsible for obtaining any necessary licenses and permits, and for complying with any applicable Federal, State and municipal laws, codes, and regulations, in connection with the prosecution of the work. He shall be similarly responsible for all damages to persons or property that occur as a result of his fault or negligence. He shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire construction work, except for any completed unit of construction thereof which theretofore may have been accepted.

3.26. PRECAUTIONS DURING ADVERSE WEATHER:

3.26.1. During adverse weather and against the possibility thereof, the Contractor shall take all necessary precautions so that the Work may be properly done and satisfactory in all respects. When required, protection shall be provided by use of tarpaulins, wood and building-paper shelters, or other approved means.

3.26.2. During cold weather, materials shall be preheated, if required, and the materials and adjacent structure into which they are to be incorporated shall be made and kept sufficiently warm so that a proper bond will take place and a proper curing, aging, or drying will result. Protected spaces shall be artificially heated by approved means which will result in a moist or a dry atmosphere according to the particular requirements of the work being protected. Ingredients for concrete and mortar shall be sufficiently heated so that the mixture will warm throughout when used.

3.26.3. The Landscape Architect may suspend construction operations at any time when, in his judgement, the conditions are unsuitable or the proper precautions are not being taken, whatever the weather may be, in any season. The Contractor agrees that he shall not have or assert any claim for or be entitled to any additional compensation or damages on account of any such suspension.

3.27. PROTECTION OF WORK, PROPERTY AND PERSONS:

3.27.1. The Contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. He will take all necessary precautions

for the safety of, and will provide the necessary protection to prevent damage, injury or loss to all employees on the Work and other persons who may be affected thereby, all the Work and all materials or equipment to be incorporated therein, whether in storage on or off the site, and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

3.27.2. The Contractor will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He will erect and maintain as required by the conditions and progress of the Work, all necessary safeguards for safety and protection. He will notify owners of adjacent utilities when prosecution of the Work may affect them. The Contractor will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except damage or loss attributable to the fault of the Contract Documents or to the acts or omissions of the Owner or the Landscape Architect or anyone employed by either of them or anyone for whose acts either of them may be liable and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of the Contractor.

3.28. PROTECTION OF WORK, PROPERTY AND PERSONS IN AN EMERGENCY: In emergencies affecting the safety of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the Landscape Architect or Owner, shall act to prevent threatened damage, injury or loss. He will give the Landscape Architect prompt Written Notice of any significant changes in the Work or deviations from the Contract Documents caused thereby, and a Change Order shall thereupon be issued covering the changes and deviations involved.

3.29. PROTECTION AGAINST WATER AND STORM: The Contractor shall take all precautions necessary to prevent damage to the Work by storms or by water entering the site of the Work directly or through the ground. In case of damage by storm or water, the Contractor shall at his own cost and expense make such repairs or replacements or rebuild such parts of the Work as the Landscape Architect may require in order that the finished work may be completed as required by the Contractor.

3.30. PROTECTION OF EXISTING VEGETATION, STRUCTURES, UTILITIES AND IMPROVEMENTS:

3.30.1. The Contractor will preserve and protect all existing vegetation such as trees, shrubs, and grass on or adjacent to the site of the work which is not to be removed and which does not reasonably interfere with the construction work. Care shall be taken in removing trees authorized for removal to avoid damage to vegetation to remain in place. Any limbs or branches of trees broken during such operations or by the careless operation of equipment or by workmen, shall be trimmed with a clean cut and painted with an approved tree pruning compound as approved by the Landscape Architect.

3.30.2. The Contractor will protect from damage all existing improvements or utilities at or near the site of the work, the location of which is made known to him, and will repair or restore any damage to such facilities resulting from failure to comply with the requirements of this Contract or the failure to exercise reasonable care in the performance of the Work. If the Contractor fails or refuses to repair any such damage promptly, the Owner may have the necessary work performed and charge the cost thereof to the Contractor.

3.30.3. The Contractor shall enclose the trunks of trees adjacent to his work and not to be cut, with substantial wooden boxes of such height as may be necessary to protect them from injury from piled material, from equipment, from his operation, or otherwise due to his work. Excavating machinery and cranes shall be of suitable type and shall be operated with care to prevent injury to trees not to be cut and particularly to overhanging branches and limbs.

3.30.4. On paved surfaces, the Contractor shall not use or operate tractors, bulldozers or other power-operated equipment, the treads or wheels of which are so shaped as to cut or otherwise injure such surfaces.

3.31. RESTORATION OF PROPERTY: All existing surfaces, including lawns, grassed and planted areas which have been injured by the Contractor's operations, shall be restored to a condition at least equal to that in which they were found immediately before work was begun. Suitable materials and methods shall be used for such restoration. All restored plantings shall be maintained by cutting, trimming, fertilizing, etc., until acceptance. The restoration of existing property or structures shall be done as promptly as practicable and shall not be left until the end of construction period.

3.32. INTERFERENCE WITH AND PROTECTION OF STREETS:

3.32.1. The Contractor shall not close or obstruct any portion of a street, road, or private way without obtaining permits therefor from the proper authorities. If any street, road or private way shall be rendered unsafe by the Contractor's operations, he shall make such repairs or provide such temporary ways or guards as shall be acceptable to the proper authorities.

3.32.2. Streets, roads, private ways, and walks not closed shall be maintained passable and safe by the Contractor, who shall assume and have full responsibility for the adequacy and safety of provisions made therefor.

3.32.3. The Contractor shall, at least 24 hours in advance, notify the highway, police and fire departments in writing, with a copy to the Landscape Architect, if the closure of a street or road is necessary. He shall cooperate with the police department in the establishment of alternate routes and shall provide adequate detour signs, plainly marked and well lighted, in order to minimize confusion.

3.33. TRAFFIC CONTROL: Where control of traffic is required for public safety, the Contractor shall provide an adequate number of flagmen employed at his own expense.

3.34. CONSTRUCTION DRAINAGE:

3.34.1. The Contractor shall furnish all labor, materials and necessary equipment for the temporary control of surface water and seepage water during construction and keep all excavations, pits and trenches free from water at all times.

3.34.2. The Contractor shall furnish and operate pumps and other equipment required. Dikes and ditches shall be constructed around excavations and elsewhere as necessary to prevent surface water from flooding the excavations or standing in areas adjacent to excavations, in work areas or in material storage areas. The Contractor shall take all necessary precautions to protect adjacent areas and properties at points other than that which would be considered the natural flow, prior to construction, without the expressed consent of the Owner in writing with a copy to the Landscape Architect. He shall take steps to prevent the erosion of soil, earth and other material and the conduction of the eroded materials onto adjacent properties and shall be

responsible for the removal of such materials and the restoration of adjacent areas to their original condition.

3.35. RETURN OF DRAWINGS: All copies of Drawings, Specifications and other Documents furnished by the Owner or the Landscape Architect to the Contractor may be used only in connection with the prosecution of the Work and shall be returned by the Contractor upon completion of the Work.

3.36. SITE INVESTIGATION: The Contractor acknowledges that he has investigated and satisfied himself as to the conditions affecting the Work, including but not restricted to those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power, roads and uncertainties of weather, river stages, water table, tides or similar physical conditions at the site, the confirmation and conditions of the ground, the character of equipment and facilities needed preliminary to and during prosecution of the Work. The Contractor further acknowledges that he has satisfied himself as to character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by the Owner, as well as from information presented by the Drawings and Specifications made a part of this Contract. Any failure by the Contractor to acquaint himself with the available information will not relieve him from responsibility for estimating properly the difficulty or cost of successfully performing the work. The Owner assumes no responsibility for any conclusions or interpretations made by the Contractor on the basis of the information made available by the Owner.

3.37. SOIL EROSION AND SEDIMENT CONTROL: The Contractors attention is directed to the fact that unless exposed earth areas are properly cared for during construction, they may result in substantial sedimentation damage downstream from the construction area. The Contractor shall be responsible for conducting his site grading and drainage operations in such manner as to prevent excessive soil erosion of the construction site work areas. He shall at all times provide satisfactory means to prevent the movement and washing of soil onto pavements or into adjacent ditches, swales, inlets, and drainage pipes, to avoid the possibility of these structures becoming clogged with soil. He shall promptly repair all areas which may become eroded and shall clear drainage ditches, swales, and structures of siltation. The Contractor will indemnify and save harmless the Owner and Landscape Architect from and against any and all claims, demands, fines, or assessments, including attorneys' fees and cost of defense arising out of or caused by the Contractor's failure to provide soil erosion and sediment control.

3.38. SUBSURFACE CONDITIONS: The Contractor shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the Owner by Written Notice of:

3.38.1.a. Subsurface or latent physical conditions of the site differing materially from those indicated in the Contract Documents.

3.38.1.b. Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents.

3.38.2. The Owner shall promptly investigate the conditions, and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the Work, an equitable adjustment shall be made and the Contract Documents shall be modified by Change Order. Any claim of the Contractor for adjustment hereunder shall not be allowed unless he has given the required Written Notice; provided that

the Owner may, if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

3.39. SUBCONTRACTING:

3.39.1. The Contractor may utilize the services of specialty Subcontractors on those parts of the Work which, under normal contracting practices, are performed by specialty Subcontractors. The Contractor shall, without additional expense to the Owner, utilize the services of specialty subcontractors on those parts of the work which are specified to be performed by specialty subcontractors.

3.39.2. The Contractor shall not award any work to any subcontractor without prior written approval of the Owner, which approval will not be given until the Contractor submits to the Owner a written statement concerning the proposed award to the subcontractor, which statement shall contain such information as the Owner may require. No request for payment will be approved before this list has been received and reviewed by the Owner.

3.39.3. The Contractor shall not award Work to Subcontractor(s), in excess of 50 percent of the Contract Price, without prior written approval of the Owner.

3.39.4. The Contractor shall be fully responsible to the Owner for the acts and omissions of his Subcontractors, and of persons either directly or indirectly employed by them, as he is for the acts or omissions of persons directly employed by him.

3.39.5. The Contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the Work to bind Subcontractors to the Contractor by the terms of the Contract Documents insofar as applicable to the Work of Subcontractors and to give the Contractor the same power as regards terminating any subcontract that the Owner may exercise over the Contractor under any provisions of the Contract Documents.

3.39.6. If any other contractor or any subcontractor of any such other contractor shall suffer or claim to have suffered loss, damage or delay by reason of the acts or omissions of the Contractor or of any of his subcontractors, the Contractor agrees to assume the defense against any such claim and to reimburse such other contractor or subcontractor for such loss or damage. The Contractor agrees to and does hereby indemnify and save harmless the Owner from and against any and all claims by such other contractors or subcontractors alleging such loss, damage or delay and from and against any and all claims, demands, costs and expenses, including attorneys' fees, arising out of, relating to or resulting from such claims.

3.39.7. The Contractor shall be responsible for the coordination of the trades, subcontractors, and material men engaged upon his work. The Owner or Landscape Architect will not undertake to settle any differences between the Contractor and his subcontractors or between subcontractors. If any Subcontractor on the project, in the opinion of the Landscape Architect, proves to be incompetent or otherwise unsatisfactory, he shall be replaced if and when directed in writing.

3.40. SUPERVISION:

3.40.1. The Contractor shall keep on his work, during its progress, a competent superintendent and any necessary assistants, all satisfactory to the Owner. The superintendent shall not be changed except with the consent of the Owner, unless the superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ. The superintendent shall represent the Contractor in his absence and all directions given to him shall be as binding as if given to the Contractor. Important directions shall be confirmed in writing to the Contractor.

Other directions shall be so confirmed on written request in each case. The Owner shall not be responsible for the acts or omissions of the superintendent or his assistants.

3.40.2. The Contractor shall give efficient supervision to the Work, using his best skill and attention. He shall carefully study and compare all Drawings, Specifications and other instructions and shall at once report to the Owner any error, inconsistency or omission which he may discover.

3.41. TAXES: The Contractor shall promptly pay federal, state and local taxes which may be assessed against him in connection with the work or his operations under the Agreement and/or the other Contract Documents, including, but not limited to, taxes attributable to the purchase of materials and equipment, to the performance of services, and the employment of persons in the prosecution of the work.

3.42. TEMPORARY HEAT:

3.42.1. The Contractor shall provide temporary heat whenever necessary to protect all Work and materials against injury from dampness and cold and to dry out moisture from the building. Fuel, equipment and method of heating shall be satisfactory to the Owner's Insurer and the Landscape Architect.

3.42.2. Temporary heating apparatus shall be installed and operated in such a manner that finished work will not be damaged thereby.

3.43. SANITARY FACILITIES: The Contractor shall provide adequate sanitary facilities for the use of those employed on the Work. Such facilities shall be made available when the first employees arrive on the site of the Work, shall be properly secluded from public observations, and shall be constructed and maintained during the progress of the Work in suitable numbers and at such points and in such manner as may be required or approved. The Contractor shall maintain the sanitary facilities in a satisfactory and sanitary condition at all times and shall enforce their use. He shall rigorously prohibit the committing of nuisances on the site of the work, on the lands of the Owner, or on adjacent property. The Owner and the Landscape Architect shall have the right to inspect such facilities at all times to determine whether or not they are being properly and adequately maintained.

3.44. TEMPORARY UTILITIES:

3.44.1. The Contractor shall make arrangements for and furnish as a part of the Contract, all electricity, water, lighting and other utilities needed to do the Work called for by the Contract. Any separate contractors having a contract with the Owner shall make arrangements for and share the cost with the Contractor for the use of the required utilities on a pro rated schedule based on an agreed basis. All Electrical Work shall comply with the National Electrical Code.

3.44.2. The Contractor shall provide and pay for all temporary wiring, switches, connections and meters.

3.44.3. The Contractor shall provide sufficient electric lighting so that all work may be done in a workmanlike manner when there is not sufficient daylight.

3.45. UNCOVERING AND CORRECTION OF WORK:

3.45.1. The Landscape Architect shall be furnished by the Contractor with every reasonable facility for examining and inspecting the work and for ascertaining that the work is being

performed in accordance with the requirements and intent of the Contract, even to the extent of requiring the uncovering or taking down of portions of finished work by the Contractor.

3.45.2. Should the work thus uncovered or taken down prove satisfactory, the cost of uncovering or taking down and the replacement thereof shall be considered as extra work unless the original work was done in violation of the Contract in point of time or in the absence of the Landscape Architect or his inspector and without his written authorization, in which case said cost shall be borne by the Contractor. Should the work uncovered or taken down prove unsatisfactory, said cost shall likewise be borne by the Contractor.

3.45.3. The inspection of the work shall not relieve the Contractor of any of his obligations to perform and complete the work as required by the Contract. Defective work shall be corrected and unsuitable materials, equipment, apparatus and other items shall be replaced by the Contractor, notwithstanding that such work, materials, equipment, apparatus and other items may have been previously overlooked or accepted or estimated for payment. If the work or any part thereof shall be found defective at any time before the final acceptance of the work, the Contractor shall forthwith make good such defect in a manner satisfactory to the Landscape Architect; if any materials, equipment, apparatus or other items brought upon the site for use or incorporation in the work, or selected from the same, are condemned by the Landscape Architect as unsuitable or not in conformity with the Specifications or any of the other Contract Documents, the Contractor shall forthwith remove such materials, equipment, apparatus and other items from the site of the work and shall at his own cost and expense make good and replace the same and any material furnished by the Owner which shall be damaged or rendered defective by the handling or improper installation by the Contractor, his agents, servants, employees or subcontractors.

3.45.4. If the Owner deems it inexpedient to correct work injured or done not in accordance with the Contract, an equitable deduction from the Contract Price shall be made therefor.

3.46. COOPERATION WITH UTILITIES:

3.46.1. The Owner will notify all utility companies, all pipe line owners, or other parties affected, and endeavor to have all necessary adjustments of the public or private utility fixtures, pipe lines, and other appurtenances within or adjacent to the limits of construction, made as soon as practicable.

3.46.2. Water lines, gas lines, wire lines, sewer lines, water and gas meter boxes, water and gas valve boxes, manholes, light standards, cableways, signals, and all other utility appurtenances within the limits of the proposed construction which are to be relocated or adjusted are to be moved by the Owners under separate agreement, except as otherwise provided for in the Supplemental Conditions or as noted on the Drawings.

3.46.3. The Drawings will show all known utilities located within the limits of the contract according to information obtained. The accuracy of the Drawings in this respect is not guaranteed by the Owner. The Contractor shall have considered in his bid all of the permanent and temporary utility appurtenances in their present or relocated position. No additional compensation will be allowed for any delays, inconveniences, or damages sustained by him due to any interference from the said utility appurtenances or the operation of moving them.

3.46.4. Unless otherwise provided, the cost of temporary rearrangement of utilities made only in order to facilitate the construction of the work will be borne by the Contractor.

3.47. VERIFICATION OF DIMENSIONS AND ELEVATIONS:

3.47.1. Dimensions and elevations indicated on the Drawings in reference to existing structures, location of utilities, sewer inverts, or other information on existing facilities, are the best available data obtainable but are not guaranteed by the Landscape Architect. The Landscape Architect will not be responsible for their accuracy. Before proceeding with any work dependent upon the data involved, the Contractor shall field check and verify all dimensions, grades, inverts, lines, elevations, or other conditions of limitations at the site of the work to avoid construction errors or damage to existing facilities. If any work is performed by the Contractor, or any subcontractors, prior to adequate verification of applicable data, any resultant extra cost for adjustment of work necessary to conform to existing facilities, shall be assumed by the Contractor without reimbursement or compensation by the Owner.

3.47.2. If the Contractor, in the course of the work, finds any discrepancy between the Drawings and the physical conditions of the locality, or any errors or omissions in the Drawings or in the layout as given by survey points and instructions, he shall immediately inform the Landscape Architect, in writing. The Landscape Architect will promptly investigate the reported conditions and issue such instructions as may be necessary for the proper execution of the work. Any work done after such discovery and prior to receipt of such instructions shall be at the risk of the Contractor.

4. MATERIALS, EQUIPMENT AND WORKMANSHIP

4.1. CHEMICAL USAGE: All chemicals used during project construction or furnished for project operation, whether herbicide, pesticide, disinfectant, polymer, reactant or of other classification, shall show approval of either EPA or U.S.D.A. The use of all such chemicals and disposal of residues shall be in strict conformance with manufacturer and U.S.D.A. instructions.

4.2. TITLE TO MATERIALS: No materials or supplies for the Work shall be purchased by the Contractor or by any subcontractor subject to any chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. The Contractor warrants that he has good title to all materials and supplies used by him, in the Work, free from all liens, claims or encumbrances.

4.3. CORRECTION OF WORK BEFORE COMPLETION:

4.3.1. The Contractor shall promptly remove from the premises all work condemned by the Owner as failing to conform to the Contract Documents, whether incorporated or not and the Contractor shall promptly replace and re-execute his own work in accordance with the Contract and without expense to the Owner and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement. The fact that the Landscape Architect may have previously overlooked such defective work shall not constitute an acceptance of any part of it.

4.3.2. If the Contractor does not remove such condemned work within a reasonable time, fixed by written notice, the Owner may remove it, and after storing it at the job site for 30 days, due written notice thereof being given the Contractor, the Owner may offer the material for sale and removal from the premises. Net proceeds from such sale shall be for the Contractor's credit against the "Owner's Right to Do Work". If the material has no sale value, the Owner may remove it from the premises and/or otherwise dispose of it. The costs of such disposition shall be deducted from payments to the Contractor as provided in Subsection 2.10 entitled OWNER'S RIGHT TO DO WORK.

4.4. CORRECTION OF WORK AFTER COMPLETION: The Contractor shall remedy any defects due to faulty materials or workmanship and pay for any damage to other work resulting therefrom which shall appear within a period of one year from the date of final acceptance of the work except where longer periods are specified and in accordance with the terms of any special guarantees provided in the Contract.

4.5. CORRECTIONS OF WORK AFTER GUARANTEE PERIOD: It shall be the responsibility of the Contractor to permanently correct all defective items called to his attention within the guarantee period, whether such correction be made within the guarantee period or not. The Contract shall not be fully performed until such permanent corrections are made.

4.6. GENERAL GUARANTY:

4.6.1. The Contractor warrants to the Owner that all materials and equipment furnished under this Contract will be new unless otherwise specified, and that all Work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All Work not so conforming to these standards may be considered defective. If required by the Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

4.6.2. Neither the final certificate of payment nor any provision in the Contract Documents nor partial or entire occupancy of the premises by the Owner shall constitute an acceptance of work not done in accordance with the Contract Documents or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall remedy any defects in the work and pay for any damage to other work resulting therefrom, which shall appear within a period of one year from the date of final acceptance of the work, except where longer periods are specified. If the Contractor shall fail to repair, replace, rebuild or restore such defective or damaged work or equipment promptly after receiving notice, the Owner shall have the right to have the work done by others in the same manner as is provided for in Subsection 2.10, OWNER'S RIGHT TO DO WORK.

4.6.3. The Contractor shall further guarantee for a period of 24 months that any building or buildings, constructed under this Project, shall be watertight and leak proof at every point and in every area, except where leaks can be attributed to damage to the building by external forces other than storm or foundation settlement. He shall, immediately upon notification by the Owner of water penetration, determine the source of water penetration and, at his own expense, do any work necessary to make the building watertight. He shall also, at his own expense, repair or replace any other damaged material to return the building or buildings to the original accepted condition.

4.6.4. In addition to the foregoing stipulations, the Contractor shall comply with all other guarantees and warranties referred to in any portions of the Contract Documents, the more stringent requirement governing. Unless otherwise specifically stated elsewhere in these Specifications, the date of beginning of all guarantee or warranty periods shall be the date of acceptance of the project.

4.6.5. If for any reason, the Contractor cannot guarantee any part of his work using material or construction methods which have been specified, or shown, he shall notify the Landscape Architect in writing before Contracts are signed, giving reasons together with the name of product and data on substitutions he can guarantee. Should the Contractor fail to so notify the Landscape Architect prior to the signing of Contracts, he will be held to have agreed to guarantee all Work specified or shown.

4.7. HANDLING AND DISTRIBUTION:

4.7.1. The Contractor shall handle, haul and distribute all materials and all surplus materials on the different portions of the work as necessary or required; shall provide suitable and adequate storage room for materials and equipment during the progress of the work, and be responsible for the protection, loss of, or damage to materials and equipment furnished by him, until the final completion and acceptance of the work.

4.7.2. Storage and demurrage charges by transportation companies and vendors shall be borne by the Contractor.

4.8. MANUFACTURER'S DIRECTIONS:

4.8.1. All manufactured articles, material and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned as directed by the manufacturers, unless herein specified to the contrary.

4.8.2. If the specifications or plans are contrary to the manufacturer's directions, the manufacturer shall be contacted by the Contractor before proceeding with the work and the Landscape Architect advised if the manufacturer has any objections to the specified application.

4.9. MATERIALS, SERVICES AND FACILITIES:

4.9.1. It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor shall provide and pay for all labor, supplies and materials, tools, machinery, equipment, transportation, supervision, temporary construction of any nature, and all other services, means and facilities of any nature whatsoever necessary to execute, complete, and deliver the Work within the specified time.

4.9.2. Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the Work. Stored materials and equipment to be incorporated in the Work shall be located so as to facilitate prompt inspection.

4.9.3. Materials, supplies and equipment shall be in accordance with samples submitted by the Contractor and approved by the Landscape Architect.

4.10. MISCELLANEOUS ITEMS:

4.10.1. The work to be done by the Contractor, specified and enumerated under this Contract, shall include any minor details of the Work not specifically mentioned in the Specifications or shown on the Drawings, but obviously necessary for the proper completion of the Work, which shall be considered incidental and as being a part of and included with the Work for which prices are given in the Bid. The Contractor will not be entitled to any additional compensation therefor.

4.10.2. Miscellaneous items and accessories which are not specifically mentioned, but which are essential to produce a complete and properly operating installation or usable structure or plant, providing the indicated function, shall be furnished and installed without change in the contract price. Such miscellaneous items and accessories shall be of the same quality standards, including material, style, finish, strength, class, weight and other applicable characteristics as specified for the major component of which the miscellaneous item or accessory is an essential part, and shall be approved by the Landscape Architect before

installation. The above requirement is not intended to include major components not covered by or inferable from the Drawings and Specifications.

4.10.3. MISTAKES OF CONTRACTOR: The Contractor shall promptly correct and make good any and all defects, damages, omissions, or mistakes, for which he and/or his agents, servants, employees or subcontractors are responsible, and he shall pay to the Owner all costs, expenses, losses, and damages resulting therefrom or by reason thereof as determined by the Landscape Architect.

4.11. PROTECTION AGAINST ELECTROLYSIS: Where dissimilar metals are used in conjunction with each other, or against concrete surfaces, suitable insulation shall be provided between adjoining surfaces so as to eliminate direct contact and any resultant electrolysis. The insulation shall be bituminous impregnated felt, heavy bituminous coatings, nonmetallic separators or washers, or other approved materials.

4.12. RIGHT TO MATERIALS: Nothing in the Contract shall be construed as vesting in the Contractor any right of property in the materials, equipment, apparatus and other items furnished after they have been installed or incorporated in or attached or affixed to the work or the site, but all such materials, equipment, apparatus and other items shall, upon being so installed, incorporated, attached or affixed, become the property of the Owner.

4.13. ROYALTIES AND PATENTS: The Contractor shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and shall save the Owner harmless from loss on account thereof, except that the Owner shall be responsible for all such loss when a particular process or the product of a particular manufacturer or manufacturers is specified, but if the Contractor has information that the process or article specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Owner in writing.

4.14. SAMPLES:

4.14.1. Samples are physical examples furnished by the Contractor to illustrate materials, equipment or workmanship, and to establish standards by which the Work will be judged. It shall be the Contractor's responsibility to furnish samples as required by the technical specifications or as required by the Landscape Architect. These samples must be submitted no later than is required by the Submittal Schedule.

4.14.2. Each sample shall have a label indicating:

- (1) Project Title
- (2) Name of project building or facility
- (3) Name of Contractor
- (4) Name of Subcontractor (if applicable)
- (5) Identification of material with specification section
- (6) Name of producer and brand (if any)

4.14.3. Samples shall be submitted in duplicate unless otherwise noted in the technical specifications and shall be accompanied by a copy of a transmittal letter containing Project Name, Contractor's Name, number of samples, specification section and other pertinent data.

4.14.4. If the Landscape Architect so requires, either prior to or after commencement of the work, the Contractor shall submit samples of materials for such special tests as the Landscape Architect deems necessary to demonstrate that they conform to the Specifications. Such samples shall be furnished, taken, stored, packed and shipped by the Contractor as directed. Except as otherwise expressly specified, the Contractor shall make arrangements for, and pay for, the tests.

4.14.5. All samples shall be packed so as to reach their destination in good condition. To insure consideration of samples, the Contractor shall notify the Landscape Architect by letter that the samples have been shipped and shall properly describe the samples in the letter. The letter of notification shall be sent separate from and should not be enclosed with the samples.

4.14.6. The Contractor shall submit data and samples, or place his orders, sufficiently early to provide ample time for consideration, inspection, testing, and approval before the materials and equipment are needed for incorporation in the work. The consequences of his failure to do so shall be the Contractor's sole responsibility.

4.14.7. In order to demonstrate the proficiency of workmen, or to facilitate the choice among several textures, types, finishes, surfaces, etc., the Contractor shall provide such samples of workmanship of wall, floor, finish, etc., as may be required.

4.14.8. When required, the Contractor shall furnish to the Landscape Architect triplicate sworn copies of manufacturer's shop or mill tests (or reports from independent testing laboratories) relative to materials, equipment performance ratings, and concrete data.

4.15. STORAGE OF MATERIALS AND EQUIPMENT: All excavated materials, construction equipment, and materials and equipment to be incorporated in the Work shall be placed so as not to injure any part of the Work or existing facilities and so that free access can be had at all times to all parts of the Work and to all public utility installations in the vicinity of the Work. Materials and equipment shall be kept neatly piled and compactly stored in such locations as will cause a minimum of inconvenience to public travel and adjoining owners, tenants and occupants.

4.16. INSPECTION AND TESTING:

4.16.1. All materials and equipment used in the construction of the Project shall be subject to adequate inspection and testing in accordance with generally accepted standards, as required and defined in the Contract Documents.

4.16.2. The Owner shall provide all inspection and testing services not required by the Contract Documents.

4.16.3. The Contractor shall provide at his expense the testing and inspection services required by the Contract Documents.

4.16.4. If the Contract Documents, laws, ordinance, rules, regulations or orders of any public authority having jurisdiction require any Work to specifically be inspected, tested, or approved by someone other than the Contractor, the Contractor will give the Landscape Architect timely notice of readiness. The Contractor will then furnish the Landscape Architect the required certificates of inspection, testing or approval.

4.16.5. Inspections, tests, or approvals by the Landscape Architect or others shall not relieve the Contractor from his obligations to perform the Work in accordance with the requirements of the Contract Documents.

4.16.6. The Landscape Architect and his representatives will at all times have access to the Work. In addition, authorized representatives and agents of any participating Federal or State agency shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and other relevant data and records. The Contractor will provide proper facilities for such access and observation of the Work and also for any inspection or testing thereof.

4.16.7. If any Work is covered contrary to the written instructions of the Landscape Architect it must, if requested by the Landscape Architect, be uncovered for his observation and replaced at the Contractor's expense.

4.16.8. If the Landscape Architect considers it necessary or advisable that covered Work be inspected or tested by others, the Contractor, at the Landscape Architect's request, will uncover, expose or otherwise make available for observation, inspection or testing as the Landscape Architect may require, that portion of the Work in question, furnishing all necessary labor, materials, tools, and equipment. If it is found that such Work is defective, the Contractor will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such Work is not found to be defective, the Contractor will be allowed an increase in the Contract Price or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate Change Order shall be issued.

4.17. SUBSTITUTIONS:

4.17.1. The Contractor may recommend the substitution of a material, article, or piece of equipment of equal function for those referred to in the Contract Documents by reference to brand name or catalogue number, and if, in the opinion of the Landscape Architect, such material, article, or piece of equipment is of equal function to that specified, the Landscape Architect may approve its substitution and use by the Contractor. Any cost differential shall be deductible from the Contract Price and the Contract Documents shall be appropriately modified by Change Order.

4.17.2. The Contractor warrants that if substitutes are approved, no major changes in the function or general design of the Project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the Contractor without a change in the Contract Price or Contract Time.

4.18. "OR EQUAL" CLAUSE:

4.18.1. The phrase "or equal" shall be construed to mean that material or equipment will be acceptable only when in the judgement of the Landscape Architect they are composed of parts of equal quality, or equal workmanship and finish, designed and constructed to perform or accomplish the desired result as efficiently as the indicated brand, pattern, grade, class, make or model.

4.18.2. Whenever a material, article or piece of equipment is identified on the Drawings or in the Specifications by reference to manufacturers' or vendors' names, trade names, catalogue numbers, etc., it is intended merely to establish a standard of quality and function; and, any material, article, or equipment of other manufacturers and vendors which will perform adequately the duties imposed by the general design will be considered equally acceptable

provided the material, article, or equipment so proposed, is, in the opinion of the Landscape Architect, of equal substance and function. It shall not be purchased or installed by the Contractor without the Landscape Architect's written approval.

4.19. **WAGES AND OVERTIME COMPENSATION:** The Contractor and each of his subcontractors shall comply with all applicable State and local laws or ordinances with respect to the hours worked by laborers and mechanics engaged in work on the project and with respect to compensation for overtime.

4.20. **NO WAIVER:** Neither the inspection by the Owner or the Landscape Architect, nor any order, measurement, approval, determination, decision or certificate by the Landscape Architect, nor any order by the Owner for the payment of money, nor any payment for or use, occupancy, possession or acceptance of the whole or any part of the work by the Owner, nor the extension of time, nor any other act or omission of the Owner or of the Landscape Architect shall constitute or be deemed to be an acceptance of any defective or improper work, materials, or equipment nor operate as a waiver of any requirement or provision of the Contract, or of any remedy, power or right of or herein reserved to the Owner, nor of any right to damages for breach of contract. Any and all rights and/or remedies provided for in the Contract are intended and shall be construed to be cumulative; and, in addition to each and every other right and remedy provided for herein or by law, the Owner shall be entitled as of right to a writ of injunction against any breach or threatened breach of the Contract by the Contractor, by his Subcontractors or by any other person or persons.

4.21. **WORK TO CONFORM:** During its progress and on its completion, the work shall conform truly to the lines, levels, and grades indicated on the Drawings or given by the Landscape Architect and shall be built in a thoroughly substantial and workmanlike manner, in strict accordance with the Drawings, Specifications, and other Contract Documents and the directions given from time to time by the Landscape Architect. All work done without instruction having been given therefor by the Landscape Architect, without prior lines or levels, or performed during the absence of the Landscape Architect, will not be estimated or paid for except when such work is authorized by the Landscape Architect in writing. Work so done may be ordered uncovered or taken down, removed, and replaced at the Contractor's expense.

4.22. **WORKING HOURS:**

4.22.1. It is contemplated that all work will be performed during the customary working hours of the trades involved unless otherwise specified in this Contract. Work performed by the Contractor at his own volition outside such customary working hours shall be at no additional expense to the Owner.

4.22.2. Any requests received by the Contractor from occupants of existing buildings to change the hours of work shall be referred to the Owner for determination.

5. INSURANCE, LEGAL RESPONSIBILITY AND SAFETY

5.1. **LITIGATION OF DISPUTES; JURISDICTION:** The Owner and Contractor agree that this Contract shall be interpreted according to the Laws of the State of South Carolina, and that the appropriate forum and jurisdiction for resolving any disputes and claims shall be a court of appropriate jurisdiction in Clarendon County, South Carolina.

5.2. **ASSIGNMENTS:** The Contractor shall not assign the whole or any part of this Contract or any monies due or to become due hereunder without written consent of the Owner. In case

the Contractor assigns all or any part of any monies due or to become due under this Contract, the instrument of assignment shall contain a clause substantially to the effect that it is agreed that the right of the assignee in and to any monies due or to become due to the Contractor shall be subject to prior claims of all persons, firms, and corporations for services rendered or materials supplied for the performance of the work called for in this contract.

5.3. COMPLIANCE WITH LAWS:

5.3.1. The law of the place where the Project is located shall govern the Contract. The Contractor shall abide by all local and State Laws or ordinances to the extent that such requirements do not conflict with Federal laws or regulations. The Contractor shall keep himself fully informed of all existing and future Federal, State and local laws, ordinances, rules and regulations affecting those engaged or employed on the work, the materials and equipment used in the work or the conduct of the work, and of all orders, decrees and other requirements of bodies or tribunals having any jurisdiction or authority over the same, including, but not limited to the U. S. Department of Labor and Bureau of Standards Safety and Health Regulations for Construction and its amendments as set up under the Williams-Steiger Occupational Safety and Health Act of 1970. If any discrepancy or inconsistency is discovered in the Drawings, Specifications or other Contract Documents in relation to any such law, ordinance, rule, regulation, order, decree or other requirement, the Contractor shall forthwith report the same to the Landscape Architect in writing.

5.3.2. The Contractor shall at all times observe and comply with, and cause all his agents, servants, employees, and subcontractors to observe and comply with all such existing requirements, and he shall protect, indemnify and save harmless the Owner, its officers, agents, servants, and employees, from and against any and all claims, demands, suits, proceedings, liabilities, judgements, penalties, losses, damages, costs and expenses, including attorney's fees, arising from or based upon any violation or claimed violation of any such law, ordinance, rule, regulations, order, decree, or other requirement, whether committed by the Contractor or any of his agents, servants employees, or subcontractors.

5.4. REQUIRED PROVISIONS DEEMED INSERTED: Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein. If through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party the Contract shall forthwith be physically amended to make such insertion or correction.

5.5. LIENS: If at any time any notice of liens are filed for labor performed or materials or equipment manufactured, furnished, or delivered to or for the Work, the Contractor shall, at its own cost and expense, promptly discharge, remove or otherwise dispose of the same, and until such discharge, removal or disposition, the Owner shall have the right to retain from any monies payable hereunder an amount which, in its sole judgement, it deems necessary to satisfy such liens and pay the costs and expenses, including attorney's fees, of defending any actions brought to enforce the same, or incurred in connection therewith or by reason thereof.

5.6. CLAIMS: If at any time there be any evidence of any claims for which the Contractor is or may be liable or responsible hereunder, the Contractor shall promptly settle or otherwise dispose of the same, and until such claims are settled or disposed of, the Owner may retain from any monies which would otherwise be payable hereunder so much thereof as, in its judgement, it may deem necessary to settle or otherwise dispose of such claims and to pay the costs and expenses, including attorneys' fees, of defending any actions brought to enforce such claims, or incurred in connection therewith or by reason thereof.

5.7. INSURANCE:

5.7.1. The Contractor shall not commence any work until he obtains, at his own expense, all required insurance. Such insurance must have the approval of the Owner as to limit, form, and amount. The Contractor will not permit any Subcontractor to commence work on this project until such Subcontractor has complied with the same insurance requirements.

5.7.2. WORKMEN'S COMPENSATION INSURANCE

As required by applicable State or territorial law for all of his employees to be engaged in work at the site of the project under this Contract and, in case of any such work sublet, the Contractor shall require the subcontractor similarly to provide Workmen's Compensation Insurance for all of the latter's employees to be engaged in such work unless such employees are covered by the protection afforded by the Contractor's Workmen's Compensation Insurance. In case any class of employees engaged in hazardous work on the project under this Contract is not protected under the Workmen's Compensation Statute, the Contractor shall provide and shall cause each subcontractor to provide adequate employer's liability insurance for the protection of such of his employees as are not otherwise protected.

5.8. ORAL AGREEMENTS: No oral order, objection, claim or notice by any party to the others shall affect or modify any of the terms or obligations contained in any of the Contract Documents, and none of the provisions of the Contract Documents shall be held to be waived or modified by reason of any act whatsoever, other than by a definitely agreed waiver or modification thereof in writing, and no evidence shall be introduced in any proceeding of any other waiver or modification.

5.9. SAFETY: In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for conditions of the job site, including safety of all persons and property affected directly or indirectly by his operations during the performance of the work. This requirement will apply continuously 24 hours per day until acceptance of the work by the Owner and shall not be limited to normal working hours.

5.10. The Contractor shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:

5.10.1. All employees on the Work and all other persons who may be affected thereby;

5.10.2. All the Work and all materials and equipment to be incorporated therein, whether in storage on or off the site, under the care, custody or control of the Contractor or any of Subcontractors or Sub-subcontractors; and

5.10.3. Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

5.11. The Contractor shall comply with all applicable laws, ordinances, rules, regulations and lawful orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect and maintain, as required by existing conditions and progress of the Work, all reasonable safeguards for safety and protection,

including posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities.

5.12. When the use or storage of explosives or other hazardous materials or equipment is necessary for the execution of the Work, the Contractor shall exercise the utmost care and shall carry on such activities under the supervision of properly qualified personnel. The Contractor shall designate a responsible member of his organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the Owner and the Landscape Architect.

5.13. The Contractor shall not load or permit any part of the Work to be loaded so as to endanger its safety.

6. PROGRESS AND COMPLETION OF WORK

6.1. NOTICE TO PROCEED: Following the execution of the Agreement by the Owner and the Contractor, written Notice to Proceed with the work shall be given by the Owner to the Contractor. The Contractor shall begin and shall prosecute the work regularly and uninterruptedly thereafter (except as provided for herein) with such force as to secure the completion of the work within the Contract Time.

6.2. CONTRACT TIME: The Contractor shall complete, in an acceptable manner, all of the work contracted for in the time stated in the Agreement. Computation of Contract Time shall commence the day to be specified in the Notice to Proceed and every calendar day following, except as herein provided, shall be counted as Contract Time.

6.3. SCHEDULE OF COMPLETION: The Contractor shall submit, at such times as may reasonably be requested by the Landscape Architect, schedules showing the order in which the Contractor proposes to carry on the work, with dates at which the Contractor will start the various parts of the work, and estimated date of completion of each part.

6.4. WORK CHANGES: The Owner may, as the need arises, order changes in the work through additions, deletions, or modifications without invalidating the Contract. Compensation and time of completion affected by the change shall be adjusted at the time of ordering such change, but in any event shall be based upon the unit prices included in Contractor's bid.

6.5. EXTRA WORK: New and unforeseen items of work found to be necessary, and which cannot be covered by an item or combination of items for which there is a Contract Price, shall be classed as Extra Work. The Contractor shall do such Extra Work and furnish such materials as may be required for the proper completion or construction of the whole work contemplated, upon written order from the Owner as approved by the Landscape Architect. In the absence of such written order, no claim for Extra Work shall be considered. Extra Work shall be performed in accordance with these Contract Documents where applicable and work not covered by such shall be done in accordance with the best construction practice and in a workmanlike manner. Extra Work required in an emergency to protect life and property shall be performed by the Contractor as required.

6.6. EXTENSION OF CONTRACT TIME:

6.6.1. A delay beyond the Contractor's control occasioned by an Act of God, by act or omission on the part of the Owner or by strikes, lockouts, fire, etc., may entitle the Contractor to an extension of time in which to complete the work as agreed by the Owner, provided, however,

that the Contractor shall immediately give written notice to the Owner of the cause of such delay.

6.6.2. Act of God shall mean an earthquake, flood, cyclone or other cataclysmic phenomenon of nature. Rain, wind, flood, or other natural phenomenon of normal intensity for the locality shall not be construed as an Act of God and no reparation shall be made to the Contractor damages to the work resulting therefrom.

6.6.3. All claims for extension of time shall be made in writing to the Landscape Architect no more than 20 days after the occurrence of the delay; otherwise they shall be waived. In the case of continuing cause of delay only one claim is necessary. Any claim should include complete justification for the extent of the delay claimed.

6.6.4. This Subsection does not exclude the recovery of damages for delay for either party under other provisions of the Contract Documents.

6.7. LANDSCAPE ARCHITECTS' CERTIFICATE OF SUBSTANTIAL COMPLETION: When the work to be performed under this Contract is substantially completed in accordance with the Contract Documents, the Landscape Architect shall prepare an Landscape Architect's Certificate of Substantial Completion to be acknowledged and accepted by the Owner and the Contractor. The Certificate may list items to be completed or corrected but such Certificate shall not relieve the Contractor of his obligation to complete all work, whether listed or not, in accordance with the Contract Documents nor will it preclude any right the Owner may have for recourse in accordance with the Contract Documents.

6.8. TERMINATION OF CONTRACTOR'S RESPONSIBILITY: The Contract will be considered complete when all work has been finished, the final review made up by the Landscape Architect, and the project accepted in writing by the Owner. The Contractor's responsibility shall then cease, except as set forth in his Performance Bond, as provided in Subsection 4.6 entitled GENERAL GUARANTY, and as provided in Subsection 6.9 entitled CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT. However, the termination of the Contractor's responsibility under this provision shall not terminate, waive, or otherwise bar Owner's right to subsequently assert claims against Contractor, its subcontractors, and/or its performance bond surety arising out of or related to the performance of work on the subject project, and such rights shall continue notwithstanding any other provision of this contract.

6.9. CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT: The making of the final payment by the Owner to the Contractor shall not relieve the Contractor of responsibility for faulty materials or workmanship. The Contractor shall promptly replace any such defects discovered within one year, except where longer periods are specified, from the date of written acceptance of the work. However, the termination of the Contractor's duty to replace defects under this provision shall not terminate, waive, or otherwise bar Owner's right to subsequently assert claims against Contractor, its subcontractors, and/or its performance bond surety arising out of or related to the performance of work on the subject project, including for any defects, faulty workmanship, or faulty materials discovered more than one year after written acceptance of work, and such rights shall continue notwithstanding any other provision of this contract.

6.10. PROGRESS SCHEDULE:

6.10.1. Within 20 days after execution and delivery of the Agreement and not less than 10 days prior to making an application for partial payment, the Contractor shall prepare and deliver to the Landscape Architect a Progress Schedule on forms approved by the Landscape Architect.

6.10.2. The schedule shall be set up in a Critical Path format and shall show the proposed dates of commencement and completion of the various subdivisions of work required under the Contract Documents.

6.10.3. The schedule shall show the dates of commencement and completion of the various subdivisions of work required by the Contract Documents and all activities required to accomplish the work. No activity included in the schedule shall have a duration greater than fifteen (15) days. After approval of the Submit Schedule, the Contractor shall incorporate this schedule into the CPM schedule.

6.10.4. The schedule shall be updated monthly. No progress payments will be made unless application is accompanied by the updated schedule.

6.11. SCHEDULES, REPORTS AND RECORDS:

6.11.1. The Contractor shall submit to the Owner such schedules of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable as are required by the Contract Documents for the Work to be performed.

6.11.2. The Contractor shall also submit, in a format as approved by the Landscape Architect, a schedule of payments that he anticipates he will earn during the course of the Work.

6.12. ABANDONMENT OF WORK OR OTHER DEFAULT:

6.12.1. If the work shall be abandoned, or any part thereof shall be sublet without previous written consent of the Owner, or the Contract or any monies payable hereunder shall be assigned otherwise than as herein specified, or if at any time the Landscape Architect shall be of the opinion, and shall so certify in writing, that the conditions herein specified as to rate of progress are not being complied with, or that the work or any part thereof is being unnecessarily or unreasonably delayed, or that the Contractor has violated or is in default under any of the provisions of the Contract, or if the Contractor becomes bankrupt or insolvent or goes or is put into liquidation or dissolution, either voluntarily or involuntarily, or petitions for an arrangement or reorganization under the Bankruptcy Act, or makes a general assignment for the benefit of creditors or otherwise acknowledges insolvency, the happening of any of which shall be and constitute a default under the Contract, the Owner may notify the Contractor in writing, with a copy of such notice mailed to the Surety, to discontinue such work or any part thereof; thereupon the Contractor shall discontinue such work or such part thereof as the Owner may designate; and the Owner may, upon giving notice, by contract or otherwise as it may determine, complete the work or such part thereof and charge the entire cost and expense of so completing the work or such part thereof to the Contractor. In addition to the said entire cost and expense of completing the work, the Owner shall be entitled to reimbursement from the Contractor and the Contractor agrees to pay the Owner any losses, damages, costs and expenses, including attorney's fees, sustained or incurred by the Owner by reasons of any of the foregoing causes. For the purposes of such completion the Owner may for itself or for any contractors employed by the Owner take possession of any and use or cause to be used any and all materials, equipment, plant, machinery, appliances, tools, supplies and such other items of every description that may be found or located at the site of the Work. No equipment or materials may be removed from the Work without the written consent of the Owner.

6.12.2. All costs, expenses, losses, damages, attorney's fees and any and all other charges incurred by the Owner under this Subsection shall be charged against the Contractor and deducted and/or paid by the Owner out of any monies due or payable or to become due or

payable under the Contract to the Contractor; in computing the amounts chargeable to the Contractor, the Owner shall not be held to a basis of the lowest prices for which the completion of the work or any part thereof might have been accomplished, but all sums actually paid or obligated therefor to effect its prompt completion shall be charged to and against the account of the Contractor. In case the costs, expense, losses, damages, attorney's fees and other charges together with all payments theretofore made to or for the account of the Contractor are less than the sum which would have been payable under the Contract if the work had been properly performed and completed by the Contractor, the Contractor shall be entitled to receive the difference and, in case such costs, expenses, losses, damages, attorney's fees and other charges, together with all payments theretofore made to or for the account of the Contractor, shall exceed the said sum, the Contractor shall pay the amount of the excess to the Owner.

7. PAYMENTS TO THE CONTRACTOR

7.1. PRICES FOR WORK: The Owner shall pay and the Contractor shall receive the prices stipulated in the Bid made a part hereof as full compensation for everything performed and furnished and for all risks and obligations undertaken by the Contractor under and as required by the Contract.

7.2. SCHEDULE OF VALUES: Except in cases where unit prices form the basis for payment under the Contract, the Contractor shall, within 20 days of the execution of the Contract and not less than 10 days prior to making an application for partial payment, submit to the Owner in a form approved by the Owner a schedule of values showing a breakdown of the Contract Sum itemized by trade and/or specification sections or as otherwise directed by the Owner and for each item shall show the total value including the Contractor's overhead and profit. Upon approval by the Owner, this schedule will be used in determining the value of the work done for the purpose of partial payments. The costs employed in making up any of these schedules will be used only for determining the basis of partial payments and will not be considered as fixing a basis for additions to or deductions from the Contract Price.

7.3. APPLICATIONS FOR PARTIAL PAYMENT:

7.3.1. Before the first day of each month, or as otherwise directed by the Owner, the Contractor shall make applications for the value of the work done and the materials installed and/or delivered to the site for installation in the project during the previous month. Such applications shall show the breakdown of the project into the same items as the schedule of values specified in Subsection 7.2 entitled SCHEDULE OF VALUES and showing for each item the total value, the value previously reported as complete, the value completed during the month, the cumulative value completed and the value remaining to be done. The application shall also show the value of materials delivered to the site which have not been incorporated into the work and whose value is not included in the amount shown for the work of which they are a part. The value of such materials shall be established by attaching copies of invoices covering the materials to the application. The application shall include a summary of value of the work performed during the previous month, plus the value of the material delivered to the job site but not incorporated in the work, and minus the amount of the retainage indicated in Subsection 7.4 entitled RETAINAGE.

7.3.2. The Landscape Architect will, within 10 days after receipt of each partial payment estimate, either indicate in writing his approval of payment and present the partial payment estimate to the Owner, or return the partial payment estimate to the Contractor indicating in writing his reasons for refusing to approve payment. In the latter case, the Contractor may make the necessary corrections and resubmit the partial payment estimate.

7.4. RETAINAGE: The Owner shall retain 10 percent of the amount of each payment until final completion and acceptance of all work covered by the Contract Documents. The Owner at any time, however, after 50 percent of the work has been completed, if he finds that satisfactory progress is being made, will make further partial payments in full on the current and remaining estimates, but amounts previously retained shall not be paid to the Contractor at 50 percent completion or any time thereafter when, in the opinion of the Landscape Architect, the progress of the Work is not satisfactory, additional amounts may be retained but in no event shall the total retainage be more than 10 percent of the value of the work completed. Upon substantial completion of the work, any amount retained may be paid to the Contractor. When the Work has been substantially completed except for Work which cannot be completed because of weather conditions, lack of materials or other reasons which in the judgement of the Owner are valid reasons for non- completion, the Owner may make additional payments, retaining at all times an amount sufficient to cover the estimated cost of the Work still to be completed.

7.5. PAYMENTS WITHHELD:

7.5.1. The Owner may withhold payment or, on account of subsequently discovered evidence, nullify the whole or part of any application to the extent necessary to protect himself from loss on account of:

7.5.1.a. Defective work not remedied.

7.5.1.b. Claims filed or reasonable evidence indicating the probably filing of claims.

7.5.1.c. Failure of the Contractor to make payments to Subcontractors, material suppliers, or employees.

7.5.1.d. A reasonable doubt that the Contract work can be completed for the balance unpaid.

7.5.1.e. Damage to another Contractor.

7.5.2. When the above grounds are removed, payment will be made for the amounts withheld because of them.

7.6. PAYMENT OF APPLICATIONS FOR PARTIAL PAYMENT: Upon verification and approval of the application for partial payment made as specified, the Owner will make payment of the amount found properly due. No payment made to the Contractor nor partial or entire use or occupancy of the Work by the Owner shall be an acceptance of any work or materials not in accordance with this Contract.

7.7. FINAL INSPECTION: Upon receipt of written notice from the Contractor that the work has been completed and finished in accordance with the Contract, the Owner shall cause an inspection to be made of the work by his authorized representatives. A list shall be made of all deviations from the Contract requirements (commonly termed "punch list") and a copy of such list furnished to the Contractor. The Contractor shall with reasonable haste remedy all defects so noted and shall notify the Owner upon the completion of such work. When inspection by the Owner's authorized representatives shows the work to be complete in accordance with the Contract, application for final payment may be made.

7.8. RELEASE OF LIENS: Neither the final payment nor any part of the retained percentage shall become due until the Contractor shall deliver to the Owner a complete and notarized release of all liens arising out of this Contract, or receipts in full in lieu thereof, and if required in either case, an affidavit that so far as he had knowledge of information the releases and receipts

include all the labor and material for which a lien could be filed; but the Contractor may, if any Subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the Owner, to indemnify him against any lien. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to the Owner all monies that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

7.9. USE OR PARTIAL PAYMENT NOT ACCEPTANCE: It is agreed that this is an entire contract for one whole and complete work or result and that neither the Owner's entrance upon or use of the Work or any part thereof nor any partial payments by the Owner shall constitute an acceptance of the Work or any part thereof before its entire completion and final acceptance.

7.10. PAYMENT FOR UNCORRECTED WORK: Should the Owner direct the Contractor not to correct work that has been damaged or that was not performed in accordance with the Contract Documents, an equitable deduction from the Contract Amount shall be made to compensate the Owner for the Uncorrected Work.

7.11. PAYMENT FOR REMOVAL OF REJECTED WORK AND MATERIALS:

7.11.1. The removal of work and materials rejected in accordance with Subsection 4.3 entitled CORRECTION OF WORK BEFORE COMPLETION and the re-execution of acceptable work by the Contractor shall be at the expense of the Contractor, and he shall pay the cost of replacing the work of other contractors destroyed or damaged by the removal of the rejected work or materials and the subsequent replacement of acceptable work.

7.11.2. Removal of rejected work or materials and storage of materials by the Owner, in accordance with Subsection 4.3 entitled CORRECTION OF WORK BEFORE COMPLETION, shall be paid by the Contractor within 30 days after written notice to pay is given by the Owner. If the Contractor does not pay the expenses of such removal and after 10 days' written notice being given by the Owner of his intent to sell the materials, the Owner may sell the materials at auction or at private sale and will pay the Contractor the net proceeds therefrom after deducting all the costs and expense that should have been borne by the Contractor.

7.12. PAYMENT FOR EXTRA WORK: Written notice of claims for payment for Extra Work shall be given by the Contractor within ten days after receipt of instructions from the Owner to proceed with the Extra Work and also before any work is commenced, except in emergency endangering life or property. No claim shall be valid unless so made. In all cases, the Contractor's itemized estimate sheets showing all labor and material shall be submitted to the Owner. The Owner's order for Extra Work shall specify any extension of the Contract Time and one of the following methods of payment:

7.12.1. Unit price or combinations of unit prices which form the basis of the original Contract.

7.12.2. A lump sum based on the Contractor's estimate and accepted by the Owner.

7.12.3. Net cost plus a fixed fee. Net costs are defined as follows:

7.12.3.a. Labor costs, including time of foreman while engaged directly upon extra work at rates not greater than the scale of rates for each respective classification of labor customary in the area where the work is performed for each respective job classification.

7.12.3.b. Labor insurance taxes including amounts paid on a percent of such labor rates or on a cents per hour basis for Workmen's Compensation, Public Liability, Contractor's Contingent Liability and Contractual Liability Insurance and all Federal Old Age and Unemployment Taxes and any other taxes applicable as well as fringe benefits as may be approved by the Engineer.

7.12.3.c. Materials and supplies actually used on the work.

7.12.3.d. Rental charges for necessary equipment, as agreed upon by the Owner and Contractor. Rental charges shall not exceed those published in Rental Rates for Construction Equipment issued by the American Equipment Distributor. Equipment and tools having a value of \$100.00 or less are considered to be "small tools" and, as such, are considered to be part of overhead.

7.13. To the cost under Subparagraph 7.12.3 there shall be added a fixed fee to be agreed upon but not to exceed 15 percent of the estimated cost of the work. The fee shall be compensation to cover the cost of supervision, overhead, bond, profit and any other general expenses. On work performed by subcontractors, the fixed fee shall not exceed five percent of the cost of the work.

7.14. PAYMENT FOR WORK SUSPENDED BY THE OWNER: If the work or any part thereof shall be suspended by the Owner and abandoned by the Contractor as provided in Subsection 2.12 entitled SUSPENSION OF WORK, TERMINATION AND DELAY, the Contractor will then be entitled to payment for all work done on the portions so abandoned, plus 15 percent of the value of the abandoned work to compensate for overhead, plant expense, and anticipated profit.

7.15. PAYMENT FOR WORK BY THE OWNER: The cost of the work performed by the Owner, in accordance with Subsection 2.10 entitled OWNER'S RIGHT TO DO WORK, shall be paid by the Contractor.

7.16. PAYMENT FOR WORK BY THE OWNER FOLLOWING TERMINATION OF CONTRACT BY OWNER: Upon termination of the Contract by the Owner in accordance with Subsection 2.11 entitled OWNER'S RIGHT TO TERMINATE CONTRACT, no further payment shall be due the Contractor until the work is completed. If the unpaid balance of the Contract Amount shall exceed the cost of completing the work including all overhead costs, the excess shall be paid to the Contractor. If the cost of completing the work shall exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The cost incurred by the Owner, as herein provided, and the damage incurred through the Contractor's default, shall be certified by the Owner.

7.17. PAYMENT FOR SAMPLES AND TESTING OF MATERIALS:

7.17.1. Samples furnished in accordance with Subsection 4.17 entitled SAMPLES, shall be furnished by the Contractor at his expense.

7.17.2. Testing of samples and materials furnished in accordance with Subsection 4.17 entitled SAMPLES, shall be arranged and paid for by the Owner.

7.18. ACCEPTANCE AND FINAL PAYMENT:

7.18.1. When the Contractor shall have completed the work in accordance with the terms of the Contract Documents, he shall certify completion of the work to the Owner and submit a final Request for Payment, which shall be the Contract Amount plus all approved additions, less all approved deductions and less previous payments made. The Contractor shall furnish evidence that he has fully paid all debts for labor, materials, and equipment incurred in connection with the work, and, upon acceptance by the Owner, the Owner will release the Contractor except as to the conditions of the Performance Bond and the Payment Bond, any legal rights of the Owner (including the right to subsequently assert claims against Contractor, its subcontractors, and/or

its performance bond surety arising out of or related to the performance of work on the subject project), required guaranties, and Correction of Faulty Work after Final Payment, and will pay the Contractor's final Request for Payment. The Contractor shall allow sufficient time between the time of completion of the work and approval of the final Request for Payment for the Landscape Architect to assemble and check the necessary data.

7.18.2. The Contractor shall deliver to the Owner a complete release of all liens arising out of this Contract before the retained percentage or before the final Request for Payment is paid.

7.19. ACCEPTANCE OF FINAL PAYMENT AS RELEASE: The acceptance by the Contractor of final payment shall be and shall operate as a release to the Owner of all claims and all liability to the Contractor other than claims in stated amounts as may be specifically excepted by the Contractor for all things done or furnished in connection with this Work and for every act and neglect of the Owner and others relating to or arising out of this Work. Any payment, however, final or otherwise, shall not release the Contractor or his sureties from any obligations under the Contract Documents or the Performance Bond and the Payment Bond.

7.20. DELAYS AND DAMAGES:

7.20.1. The date of beginning and the time for completion of the Work are essential conditions of the Contract Documents and the Work embraced shall be commenced on a date specified in the Notice to Proceed.

7.20.2. The Contractor will proceed with the Work at such rate of progress to insure full completion within the Contract Time. It is expressly understood and agreed by and between the Contractor and the Owner that the Contract Time for the completion of the Work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the Work. If the Contractor refuses or fails to prosecute the Work, or any separable part thereof, with such diligence as will insure its completion within the time specified in the Contract, or any extension thereof, or fails to complete said Work within such time, the Owner may, by written notice to the Contractor and his Surety, terminate his right to proceed with the Work or such part of the work as to which there has been delay. In such event the Owner may take over the Work and prosecute the same to completion, by contract or otherwise, and may take possession of and utilize in completing the work such materials, appliances, and plant as may be on the site of the work and necessary therefor. Whether or not the Contractor's right to proceed with the Work is terminated, he and his sureties shall be liable for any damage to the Owner resulting from his refusal or failure to complete the Work within the specified time.

7.20.3. If fixed and agreed liquidated damages are provided in the Contract and if the Owner so terminates the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until such reasonable time as may be required for final completion of the Work together with any increased costs occasioned the Owner in completing the Work.

7.20.4. If fixed and agreed liquidated damages are provided in the Contract, and if the Owner does not so terminate the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until the Work is completed or accepted.

7.20.5. The Contractor's right to proceed shall not be so terminated nor the Contractor charged with resulting damage if:

7.20.5.a. The delay in the completion of the Work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including but not restricted to, Acts

of God, acts of the public enemy, acts of the Government in either its sovereign or contractual capacity, acts of another contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of both the Contractor and such subcontractors or suppliers; and

7.20.5.b. The Contractor, within 10 days from the beginning of any such delay (unless the Owner grants a further period of time before the date of final payment under the Contract), notifies the Owner in writing of the causes of delay.

7.20.6. As used in subparagraph 1, above, the term "subcontractors or suppliers" means subcontractors or suppliers at any time.

7.20.7. The Landscape Architect shall ascertain the facts and the extent of the delay and extend the time for completing the Work when, in his judgement, the findings of fact justify such an extension, and his findings of fact shall be final and conclusive on the parties, subject only to appeal as provided in these General Conditions. The rights and remedies of the Owner provided in this clause are in addition to any other rights and remedies provided by law or under this Contract.

8. INSURANCE AND BONDS

8.1. INSURANCE: The Contractor shall purchase and maintain, through a company or companies acceptable to the Owner, such insurance as will protect Owner from claims which may arise out of or result from the Contractor's operations under the contract. Owner and the South Carolina Department of Transportation shall be named as Additional Insureds under all such policies. Certificates of insurance shall contain a provision that coverages under the policies will not be cancelled until at least thirty (30) days prior written notice has been given to the Owner. Minimum limits of liability for the following types of insurance are required:

Workmen's Compensation, including Workmen's Compensation Insurance in the South Carolina statutory limit and Employer's Liability Insurance (not less than \$100,000 per occurrence);

Commercial general liability insurance (in an amount not less than \$1,000,000 per occurrence, \$2,000,000 general aggregate, including coverage for products-completed operations hazard, and \$250,000 per claim for property damage); and

Comprehensive automobile liability insurance covering vehicles owned, and non-owned vehicles used, by the Contractor, with coverage for bodily injury, death of any person, and property damage arising out of the ownership, maintenance, and use of those motor vehicles (in an amount not less than \$1,000,000 per accident).

8.2. PAYMENT BOND: The Contractor shall provide a labor and material payment bond in the full amount of the Contract Price, for the protection of all persons supplying labor and materials in the prosecution of work provided for in the contract for the use of each such person. The bond must be issued in a form and by a surety satisfactory to Owner, and in any event by a surety company licensed in the State of South Carolina with an "A" minimum rating of performance as stated in the most current publication of "Best Key Rating Guide, Property Liability". In the event of any increase in the amount of work, the amount of the bond shall be increased or supplemented to the extent of any resulting increase in the Contract Price.

8.3. PERFORMANCE BOND: The Contractor shall provide a performance and indemnity bond in the full amount of the Contract Price, for the protection of the Owner and the South Carolina Department of Transportation. The bond must be issued in a form and by a surety satisfactory to Owner, and in any event by a surety company licensed in the State of South Carolina with an "A" minimum rating of performance as stated in the most current publication of "Best Key Rating Guide, Property Liability". In the event of any increase in the amount of work, the amount of the bond shall be increased or supplemented to the extent of any resulting increase in the Contract Price.

8.4. PROPERTY INSURANCE: The Contractor shall purchase and maintain, from an insurance company or insurance companies lawfully authorized to issue insurance in the State of South Carolina, property insurance on a builder's risk "all risks" completed value or equivalent policy form and sufficient to cover the total value of the entire project on a replacement cost basis, and which shall include coverage for direct physical loss or damage and include the risks of fire (with extended coverage), explosion, theft, vandalism, malicious mischief, collapse, earthquake, flood, or windstorm. The Contractor's property insurance coverage shall be no less than the initial contract price, plus the value of subsequent modifications and labor performed and materials or equipment supplied by others. The property insurance shall be maintained until substantial completion of the project. This insurance shall include the interests of the Owner, Contractor, and subcontractors in the project as insureds.

ENVIRONMENTAL GUIDELINES

SC History & Archives- SHPO

If archaeological materials are encountered during construction, the procedures codified at 36 CFR 800.139 (b) will apply. Archaeological materials consist of any items, fifty years old or older, which were made or used by man. These items include, but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, metal and glass objects, and human skeletal materials. SC History & Archives should be notified immediately if any archaeological materials are found.

Catawba Indian Nation & Eastern Band of Cherokee Indians - THPO

Appropriate THPO's must be notified if Native American artifacts and/or human remains are located during the ground disturbance phase of this project.

SCDHEC Bureau of Land and Waste Management

Existing monitoring wells should not be abandoned, removed, or damaged without receiving prior approval from the SCDHEC Division of UST Management. If damage occurs during construction activities SCDHEC division of UST Management must also be notified.

(End of Section 01230)

1. CONFLICT OR INCONSISTENCY: If there is any conflict or inconsistency between the provisions of the SUPPLEMENTAL CONDITIONS and the GENERAL CONDITIONS, the provisions of the SUPPLEMENTAL CONDITIONS shall prevail. If there is conflict between the provisions of the GENERAL CONDITIONS and any of the Contract Documents other than the SUPPLEMENTAL CONDITIONS, the provisions of the GENERAL CONDITIONS shall prevail.

2. CONFLICT OF INTEREST: No official of the Owner who is authorized in such capacity and on behalf of the Owner to negotiate, make, accept or approve, or to take part in negotiation, making, accepting, or approving any architectural, engineering, inspecting, construction, or material supply contract, or any subcontract in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part thereof. No officer, employee, Landscape Architect, attorney, engineer, or inspector of or for the Owner who is authorized in such capacity and on behalf of the Owner who is in any legislative, executive, supervisory, or other similar functions in connection with the construction of the project, shall become directly or indirectly interested personally in this Contract or in any part thereof, any material supply contract, subcontract, insurance contract, or any other contract pertaining to the project.

3. CONTRACT MODIFICATION: All changes which affect the cost of the construction of the project must be authorized by means of a contract change order. All change orders and contract modifications must be approved by the Owner prior to becoming effective. The contract change order will include extra work, work for which quantities have been altered from those shown in the bidding schedule as well as decreases or increases in the quantities of installed units which are different from those shown in the bidding schedule because of final measurements. All changes should be recorded on a contract change order as they occur so that they may be included in the partial payment estimate.

4. COMPUTATION OF QUANTITIES: For estimating quantities in which the computation of areas by geometric methods would be comparatively laborious, it is agreed that the planimeter shall be considered an instrument of precision adapted to the measurement of such areas.

5. LIMITS OF NORMAL EXCAVATION: In determining the quantities of excavation to which unit prices shall apply, the limits of normal width and depth of excavation shall be as described below, unless other limits are indicated on the Drawings or specified.

5.1 For concrete placed directly against undisturbed earth, the normal width and depth of the excavation for such concrete shall be measured to the neat lines of the concrete as indicated on the Drawings or as ordered.

5.2 For other structures, except manholes as noted below, the normal width shall be measured between vertical planes one foot outside the neat lines of the several parts of the structure, except that the width at any elevation shall be measured as not less than the width at a lower elevation. The normal depth shall be measured to the underside of that part of the structure for which the excavation is made.

6. FEDERAL SAFE DRINKING WATER ACT: In accordance with Section 1417 of this Act, any pipe, solder, or flux used in the installation or repair of public water systems and plumbing used for drinking water, must be lead free. Lead free is defined as less than 0.2 percent lead in solder and flux and less than 8.0 percent lead in pipes and fittings. Leaded joints for the repair of cast iron pipes are not included. Lead shot and lead packers in well construction are no longer allowed.

7. WATER SUPPLY: It shall be the Contractor's responsibility to purchase and convey the necessary water to any location at which it is required on the project.

8. STATE AND LOCAL PERMITS, LICENSES, INSPECTIONS, CERTIFICATES: The Contractor shall obtain such required documents and pay the fees assessed for each division of work for which such permits, licenses, and inspections are required. The Contractor shall also obtain and pay the fees for general permits such as Building Permits and Certificate of Occupancy.

8.1 The Contractor shall submit to the Owner for approval a scale drawing or sketch of the proposed sign showing size, type of material, painting, and proposed location. All submittal data shall be in triplicate.

8.2 The size of the individual sign shall be not greater than 24 inches wide by 12 inches high.

8.3 Signs shall be neatly painted on weather-resistant materials.

8.4 The signs will be removed upon completion of the job.

8.5 No sign shall be erected prior to approval by the Owner.

9. OWNER'S INSURANCE AUTHORITY: During all phases of construction, the Contractor will be required to perform his operations so as to comply expeditiously with the recommendations of the Owner's Insurance Authority.

10. PUBLICITY: All prime contractors and their subcontractors shall submit to the Owner for approval all publicity items, including photographs, relating to the work of this project. Owner shall approve any and all material prior to release for publication.

11. PROTECTION OF WORK: The Contractor shall at all times, until final acceptance of the work, provide protection of the work, either new or previously existing, from all hazards involved in his operations. All damage suffered by any item of work, including, but not limited to, drains, curbs, doors, equipment, and structures, shall be repaired or the item shall be replaced prior to final acceptance.

12. ELEVATION DATUM: The datum adopted by the Landscape Architect is mean sea level plus 100 feet. All elevations shown on the Drawings or referred to in these specifications refer to this datum.

13. EASEMENTS: The Owner has obtained, or will obtain, permanent easements and temporary construction easements through private property. The temporary construction easements entitle the

Contractor to the occupancy and use of the designated area near or adjacent to the work for purposes related to the work.

- 13.1 The Contractor will not encroach on any property unless it has been established that easements have been obtained. On all other land, the Contractor has no rights unless he obtains permission from the proper parties.

14. OCCUPYING PRIVATE LAND: The Contractor shall not (except after written consent from the proper parties) enter or occupy with men, tools, or materials, any land outside the rights-of-way of property of the Owner. A copy of the written consent shall be given to the Landscape Architect.

15. WORK BEING PERFORMED NEAR WATER LINES: The Contractor will inform the Commissioners of Public Works as to the areas where work is being performed. It is required of a Contractor to obtain permission from the Commissioners of Public Works where alterations to their system are required.

16. LINES, GRADES AND MEASUREMENTS: The Contractor shall employ, at his own expense, a competent civil engineer or land surveyor who shall be registered in South Carolina and who shall be thoroughly experienced in field layout work. Said Engineer shall establish all lines, elevations, reference marks, etc., needed by the Contractor during the progress of the work, and from time to time he shall verify such marks by instrument or by other appropriate means. The Owner's Engineer may waive the requirement for the Engineer to be registered in South Carolina upon a presentation of a resume which is satisfactory. The waiving of this requirement may be revoked at any time by the Owner's Landscape Architect.

16.1 The Owner's Landscape Architect shall be permitted at any time to check the lines, elevations, reference marks, lasers, etc., set by the Engineer employed by the Contractor, and the Contractor shall correct any errors in lines, elevations, reference marks, lasers, etc., disclosed by such check. Such a check shall not be construed to be an approval of the Contractor's work and shall not relieve the Contractor of the responsibility for the accurate construction of the entire work.

16.2 The Contractor shall make all measurements and check all dimensions necessary for the proper construction of the work called for by the Drawings and Specifications. During the prosecution of the work, he shall make all necessary measurements to prevent misfitting in said work, and he shall be responsible therefore, and for the accurate construction of the entire work.

17. BUSINESS LICENSE: **The successful Bidder and all subcontractors will be required to obtain a business license from City of Forest Acres prior to beginning work, if said Bidder does not have a current license.**

18. UTILITY LOCATIONS: Prior to beginning any excavation, the Contractor shall notify all public utility companies and have their lines located and marked.

19. DANGER SIGNALS AND SAFETY DEVICES: The Contractor shall make all necessary precautions to guard against damages to property and injury to persons. He shall put up and maintain

in good condition, sufficient red or warning lights at night, suitable barricades and other devices necessary to protect the public. In case the Contractor fails or neglects to take such precautions, the Owner may have such lights and barricades installed and charged the cost of this work to the Contractor. Such action by the Owner does not relieve the Contractor of any liability incurred under this Specifications or contract.

20. PAVEMENT GUARANTEE: The Contractor warrants to the Owner that all materials and workmanship furnished on state roadways are guaranteed in accordance with the terms of the General Conditions, Section 4, General Guaranty, for a period of two years. The Contractor will remedy any settlements or deficiencies of the pavement surface within this period.

21. CLEAN-UP FOLLOWING CROSSWALK/HANDICAP RAMP INSTALLATION: Contractor will expedite clean-up and restoration work as required by the Contract Drawings and Specifications. To the maximum extent possible, roadways, drives, drainage ditches, and structures will be restored immediately after the crosswalk/handicap ramp installation. The restoration or replacement of public or private property should be scheduled as a top priority work item in the execution of this project.

22. SEQUENCE OF CONSTRUCTION: The Contractor's proposed order of construction shall be presented in a construction schedule as provided for in the General Conditions and shall incorporate the following order of activities, milestone completions, and conditions in the performance of the work.

23. PRE-CONSTRUCTION CONFERENCE: Prior to construction, a pre-construction conference will be held with representatives of the Owner, Contractor, and the Landscape Architect.

24. SPECIFICATIONS AND DRAWINGS: The following Drawings and Specifications form a part of this Contract as set forth in Paragraph 1.1, Section 01230, GENERAL CONDITIONS. The Drawings bear the general designation:

A. THE DRAWINGS ARE LISTED AS FOLLOWS

A complete listing of sheet names is listed on the Sheet C1 – Cover Page of the Drawings.

B. THE SPECIFICATIONS ARE LISTED AS FOLLOWS:

GENERAL REQUIREMENTS

SECTION TITLE

	Notice of Award
	Notice to Proceed
01105	Advertisement for Bids
01110	Information for Bidders
01140	Bid
01142	Bid Bond
01210	Agreement
01212	Performance Bond
01214	Payment Bond

01219	Certificate of Owners Attorney
01230	General Conditions
01232	Supplemental Conditions
01300	Submittals

TECHNICAL REQUIREMENTS

<u>SECTION</u>	<u>TITLE</u>
01400	Quality Control Service
02050	Demolition & Removal
02201	Sediment & Erosion Control
02485	Grassing
02614	Brick Work
02830	Planting
02995	Clean Up
03100	Concrete Form Work
03200	Concrete Reinforcement
03300	Cast In Place Concrete

25. CONTRACTOR CERTIFICATIONS: By execution of the Contract, Contractor does hereby certify that:

- A. Contractor will comply with the requirements of Chapter 14 of Title 8 of the S.C. Code of Laws regarding Unauthorized Aliens and Public Employment; will provide Owner with any documents required to establish such compliance upon request; and will register and participate and require agreements from sub-contractors and sub-consultants to register and participate in the federal work authorization program to verify the employment authorization of all new employees, or to employ only workers who supply the documents required pursuant to S.C. Code § 8-14-20(B)(2).
- B. Contractor and all of its consultants, sub-consultants, contractors, employees, and agents will comply with all applicable provisions of the Drug-Free Workplace Act, Title 44, Chapter 107 of the South Carolina Code of Laws, as amended.
- C. Contractor and all of its consultants, sub-consultants, contractors, and employees will comply with South Carolina's Ethics, Government Accountability, and Campaign Reform Act of 1991, as amended. The following statutes require special attention: (a) Offering, giving, soliciting, or receiving anything of value to influence action of public employee - §8-13-705, (b) Recovery of kickbacks - §8-13-790, (c) Offering, soliciting, or receiving money for advice or assistance of public official - §8-13-720, (d) Use or disclosure of confidential information - §8-13-725, (e) Persons hired to assist in the preparation of specifications or evaluation of bids - §8-13-1150, (f) Solicitation of state employees - §8-13-755, §8-13-760 and §8-13-725.
- D. Contractor and all of its consultants, sub-consultants, contractors, sub-contractors, and employees will comply with all applicable provisions of the Iran Divestment Act, Title 11, Chapter 57 of the South Carolina Code of Laws, as amended.

(End of Section 01232)

SECTION 01300 – SUBMITTALS

PART ONE – GENERAL:

1.01 – RELATED DOCUMENTS

Drawings and general provisions of the contract, including General and Supplementary Conditions and Division – 1 Specification sections, apply to work of this section. The schedule of values submittal is included in Section 00100 “Instructions to Bidders” and Section 01027 “Application for Payment”. Inspection and test reports are included in Section 01400 “Quality Control Services”.

1.02 – SUMMARY

A. Submittal Requirements

This section specifies administrative and procedural requirements for submittals for performance of the work, including:

1. Contractor’s Construction Schedule
2. Submittal Schedule
3. Daily Construction Reports
4. Shop Drawings
5. Product Data
6. Samples

B. Administrative Submittals

Refer to other Division – 1 sections and other contract documents for requirements of administrative submittals. Such submittals include, but are not limited to:

1. Permits
2. Application for Payment
3. Performance Bond and Payment Bond
4. Insurance Certificates
5. List of Subcontractors

1.03 – SUBMITTAL PROCEDURES

A. Coordination

Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and

related activities that require sequential activity. Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delay by the need to review submittals concurrently for coordination.

1. The architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

B. Processing

Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for re-submittals.

1. Allow 2 weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The architect will promptly advise the contractor when a submittal being processed must be delayed for coordination.
2. If an intermediate submittal is necessary, process the same as the initial submittal.
3. Allow 2 weeks for reprocessing of each submittal.
4. No extension of contract time will be authorized because of failure to transmit submittals to the architect sufficiently in advance of the work to permit processing.

C. Submittal Preparation

Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

1. Provide a space approximately 4" x 5" on the label or beside the title block on shop drawings to record the contractor's review and approval markings and the action taken.
2. Include the following information on the label for processing and recording action taken:
 - a. Project Name
 - b. Date
 - c. Name and Address of Architect
 - d. Name and Address of Contractor
 - e. Name and Address of Subcontractor
 - f. Name and Address of Supplier
 - g. Name of Manufacturer

- h. Number and title of appropriate specification section
- i. Drawing number and detail references, as appropriate.

D. Submittal Transmittal

Package each submittal appropriately for transmitting and handling. Transmit each submittal from contractor to architect using a transmittal form. Submittals received from sources other than the contractor will be returned without action.

1. On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from contract document requirements, including minor variations and limitations. Include contractor's certification that information complies with contract document requirements.

1.04 – CONTRACTOR'S CONSTRUCTION SCHEDULE

A. Bar Chart Schedule

Prepare a fully developed, horizontal bar chart type contractor's construction schedule.

1. Provide a separate time bar for each significant construction activity. Provide a continuous vertical line to identify the first working day of each week. Use the same breakdown of units of the work as indicated in the "Schedule of Values".
2. Within each time bar indicate estimated completion percentage in 10% increments. As work progresses, place a contrasting mark in each bar to indicate actual completion.
3. Secure time commitments for performing critical elements of the work from parties involved. Coordinate each element of the schedule with other construction activities; include minor elements involved in the sequence of the work. Show each activity in proper sequence. Graphically indicate sequences necessary for completion of related portion of the work.
4. Coordinate the contractor's construction schedule with the schedule of values, list of subcontractors, submittal schedule, progress reports, payment requests and other schedules. Indicate completion in advance of the date established for substantial completion. Indicate substantial completion on the schedule to allow time for the architect's procedures necessary for certification of substantial completion.

B. Phasing

Provide notations on the schedule to show how the sequence of the work is affected by requirements for phased completion to permit work by separate contractors, and partial occupancy by the owner prior to substantial completion.

C. Distribution

Following response to the initial submittal, print and distribute copies to the architect, owner, subcontractors, and other parties required to comply with scheduled dates. Post copies in the project meeting room and temporary field office.

1. When revisions are made, distribute to the same parties and post in the same location. Delete parties from distribution when they have completed their assigned portion of the work and are no longer involved in construction activities.

D. Schedule Updating

Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

1.05 – SUBMITTAL SCHEDULE

After development and acceptance of the contractor's construction schedule, prepare a complete schedule of submittals. Coordinate submittal schedule with the list of subcontracts, schedule of values and the list of products, as well as the contractor's construction schedule.

A. Distribution

Following response to initial submittal, print and distribute copies to the architect, owner, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the project meeting room and field office.

1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the work and are no longer involved in construction activities.

B. Schedule Updating

Revise the schedule after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

1.06 – DAILY CONSTRUCTION REPORTS

Prepare a daily construction report and submit duplicate copies to the architect at weekly intervals. Record the following information concerning events at the site:

- A. List of Subcontractors at the site.
- B. Approximate count of personnel at site.
- C. High and low temperatures, general weather conditions.
- D. Accidents and unusual events.
- E. Meeting and significant decisions.
- F. Stoppages, delays, shortages, and losses.
- G. Orders and request of governing authorities.
- H. Change orders received, implemented.
- I. Services connected, disconnected.
- J. Equipment or system tests and start ups.
- K. Partial completions.
- L. Partial occupancies.
- M. Substantial completion authorized.

1.07 – SHOP DRAWINGS

Submit newly prepared information, drawn to accurate scale. Highlight, encircle or otherwise indicate deviations from the contract documents. Do not reproduce contract documents or copy standard information as the basis of shop drawings. Standard information prepared without specific reference to the project is not considered shop drawings. Shop drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:

Dimensions

Identification of products and materials include:

- 1. Compliance with specified standards
- 2. Notation of coordination requirements
- 3. Notation of dimensions established by field measurement

A. Sheet Size

Except for templates, patterns and similar full-size drawings, submit shop drawings on sheets at least 8-1/2" x 11", but no larger than 30" x 42".

B. Initial Submittal

Submit 5 blue line or black line prints for the architect's review. The architect will retain 2 and will return the others marked with action taken and corrections or modifications required.

C. Subsequent and Final Submittal(s), (if required)

Submit 5 blue line or black line prints for the architect's review. The architect will retain 2 and will return the others marked with action taken and corrections or modifications required. Do not use shop drawings without an appropriate final stamp indicating action taken in connection with construction.

D. Record Document

One of the prints returned by the architect to the contractor shall be marked-up and maintained as a "Record Document".

1.08– PRODUCT DATA

Collect product data into a single submittal for each element of construction or system. Product data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where product data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings". Mark each copy to show applicable choices and options. Where printed product data includes information on several products, some of which are not required, mark copies to indicate applicable information. Include the following information:

- Manufacturer's printed recommendations
- Compliance with recognized trade association standards
- Compliance with recognized testing agency standards
- Application of testing agency labels and seals
- Notation of dimensions verified by field measurements
- Notation of coordination requirements

Do not submit product data until compliance with requirements of the contract documents has been confirmed.

A. Preliminary Submittal

Submit a preliminary single-copy of product data where selection of options is required.

B. Submit 5 copies of each required submittal. The architect will retain 2 and will return the others marked with action taken and corrections or modifications required.

C. Distribution

Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.

1. Do not proceed with installation until all applicable copy of product data is in the installer's possession.
2. Do not permit the use of unmarked copies of product data in connection with construction.

1.09 – SAMPLES

Submit full-size, fully fabricated samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern. Mount, display, or package samples in the manner specified to facilitate review or qualities indicated. Prepare samples to match the architect's sample. Include the following:

Generic description of the sample
Source of the sample
Product name or name of manufacturer
Compliance with recognized standards
Availability and delivery time

Submit samples for review of kind, color, pattern, and texture for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed. Where variation in color, pattern, texture or other characteristics are inherent in the material or product represented, submit multiple units not less than 3, that show approximate limits of the variations.

A. Preliminary Submittals

Where samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product. Preliminary submittals will be reviewed and returned with the architect's mark indicating selection and other action.

B. Submittals

Unless otherwise noted in these specifications, submit 1 sample which will be kept by the architect.

C. Distribution of Samples

Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the work. Show distribution on transmittal forms. Field samples specified in individual sections are special types of samples. Field samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the work will be judged. Field samples include:

Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

1.10 – ARCHITECT’S ACTION

Except for submittals for record, information or similar purposes, where action and return is required or requested, the architect will review each submittal, mark to indicate action taken, and return promptly. Compliance with specified characteristics is the contractors responsibility.

A. Action Stamp

The architect will stamp each submittal with a uniform, self explanatory action stamp. The stamp will be appropriately marked, as follows, to indicate the action taken:

1. Final Unrestricted Release

Where submittals are marked “approved”, that part of the work covered by the submittal may proceed provided it complies with requirements of the contract documents; final acceptance will depend upon that compliance.

2. Final-But-Restricted Release

When submittals are marked “approved as noted”, that part of the work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the contract documents; final acceptance will depend on that compliance.

3. Returned for Subsequent Submittal

When submittal is marked “revise and resubmit” or “not approved”, do not proceed with that part of the work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit with delay. Repeat if necessary to obtain a different action mark.

a. Do not permit submittals marked “revise and resubmit” or “not approved” to be used at the project site, or elsewhere where work is in progress.

4. Other Action

Where a submittal is primarily for information or record purposes, special processing or other activity, the submittal will be returned, marked “Action Not Required”.

PART TWO - PRODUCTS: (This section not applicable)

PART THREE – EXECUTION: (This section not applicable)

END OF SECTION

SECTION 01400 - QUALITY CONTROL SERVICES

PART ONE - GENERAL:

1.01 - RELATED DOCUMENTS

Drawings and general provisions of the contract, including General and Supplementary Conditions and other Division-1 Specification sections, apply to work of this section.

A. Earthwork Testing

Reference section 02200 - "Earthwork" for quality control testing.

B. Concrete Testing

Reference section 03300, "Concrete Work", for quality control testing for concrete work.

1.02 - SUMMARY

This section specifies administrative and procedural requirements for quality control services. Quality control services include inspections and tests and related actions including reports, performed by independent agencies, governing authorities, and the contractor. They do not include contract enforcement activities performed by the architect. Inspection and testing services are required to verify compliance with requirements specified or indicated. These services do not relieve the contractor of responsibility for compliance with contract document requirements. Requirements of this section relate to customized fabrication and installation procedures, not production of standard products.

Specific quality control requirements for individual construction activities are specified in the sections that specify those activities. Those requirements, including inspections and tests, cover production of standard products as well as customized fabrication and installation procedures. Inspections, test and related actions specified are not intended to limit the contractor's quality control procedures that facilitate compliance with contract document requirements. Requirements for the contractor to provide quality control services required by the architect, owner, or authorities having jurisdiction are not limited by provisions of this section.

1.03 - RESPONSIBILITIES

A. Contractor Responsibilities

The contractor shall provide inspections, tests and similar quality control services, specified in individual specification sections and required by governing authorities,

except where they are specifically indicated to be the owner's responsibility. Costs for these services shall be included in the contract sum.

1. The contractor shall employ and pay an independent agency, to perform specified quality control services.
2. Where the owner has engaged a testing agency or other entity for testing and inspection of a part of the work, and the contractor is also required to engage an entity for the same or related element, the contractor shall not employ the entity engaged by the owner, unless otherwise agreed in writing with the owner.

B. Retesting

The contractor is responsible for retesting where results of required inspections, tests or similar services prove unsatisfactory and do not indicate compliance with contract document requirements, regardless of whether the original test was the contractor's responsibility.

1. Cost of retesting construction revised or replaced by the contractor is the contractor's responsibility where required tests were performed on original construction.

C. Associates Services

The contractor shall cooperate with agencies performing required inspections, tests and similar services and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required but are not limited to:

1. Providing access to the work and furnishing labor and facilities necessary for inspections tests.
2. Taking adequate quantities of representative samples of materials that require testing or assisting the agency in taking samples.
3. Providing facilities for storage and curing of test samples, and delivery of samples to testing laboratories.
4. Providing the agency with a preliminary design mix proposed for use for materials mixes that require control by the testing agency.
5. Security and protection of samples and test equipment at the project site.

D. Owner Responsibilities

The owner will provide inspections, test and similar quality control services specified to be performed by the owner and not by the contractor, except where they are specifically indicated as the contractor's responsibility or are provided by another identified entity. Costs for these services are not included in the contract sum.

1. The owner will employ and pay for the services of an independent agency, testing laboratory or other qualified firm to perform services which are the owner's responsibility.

E. Duties of the Testing Agency

The independent testing agency engaged to perform inspections, sampling and testing of materials and construction specified in individual specification sections shall cooperate with the architect and contractor in performance of its duties, and shall provide qualified personnel to perform required inspections and tests.

1. The agency shall notify the architect and contractor promptly of irregularities or deficiencies observed in the work during performance of its services.
2. The agency is not authorized to release, revoke, alter or enlarge requirements of the contract documents, or approve or accept any portion of the work.
3. The agency shall not perform any duties of the contractor.

F. Coordination

The contractor and each agency engaged to perform inspections, tests and similar services shall coordinate the sequence of activities to accommodate required services with a minimum of delay. In addition the contractor and each agency shall coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

1. The contractor is responsible for scheduling times for inspections, tests, taking samples and similar activities.

1.04 - SUBMITTALS

The independent testing agency shall submit a certified written report of each inspection, test or similar service, to the architect, in duplicate, unless the contractor is responsible for the service. If the contractor is responsible for the service, submit a certified written report of each inspection, test or similar service through the contractor, in duplicate. Submit additional copies of each written report directly to the governing authority, when the authority so directs.

A. Report Data

Written reports of each inspection, test or similar service shall include, but not be limited to:

Date of issue

Project title and number

Name, address and telephone number

Dates and locations of samples and tests or inspections

Names of individuals making the inspection or test

Designation of the work and test method

Identification of product and specification section

Complete inspection or test data

Test results and an interpretations of test results

Ambient conditions at the time of sample-taking and testing

Comments or professional opinion as to whether inspected or tested work complies with contract documents requirements

Name and signature of laboratory inspector

Recommendations on retesting

1.05 - QUALITY ASSURANCE

A. Qualification for Service Agencies

Engage inspection and testing service agencies, including independent testing laboratories, which have been previously qualified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories, and which specializes in the types of inspections and tests to be performed. Each independent inspection and testing agency engaged on the project shall be authorized by authorities having jurisdiction to operate in the State in which the project is located.

PART TWO - PRODUCTS: (This section not applicable).

PART THREE - EXECUTION:

3.01 - REPAIR AND EXECUTION

A. General

Upon completion of inspection, testing, sample-taking and similar services, repair damaged construction and restore substrates and finishes to eliminate deficiencies, including deficiencies in visual qualities of exposed finishes. Protect construction exposed by or for quality control service activities and protect repaired construction. Repair and protection is the contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.

END OF SECTION

SECTION 02050 - DEMOLITION AND REMOVAL

PART ONE - GENERAL:

1.01 - SCOPE

This work includes the demolition and removal of all items necessary for the completion of the work as shown on the contract documents, including but not limited to, asphalt roadways, concrete base with asphalt overlaid roadways, and concrete curb. Included also is the removal of all signs and poles which are to be salvaged and delivered to the owner's designated storage area

1.02 - QUALITY ASSURANCE

A. Referenced Standards

Unless otherwise indicated, all referenced standards shall be the latest edition available at the time of bidding. Any requirements of these specifications shall in no way invalidate the minimum requirements of the referenced standards. South Carolina Highway Department Standard Specifications for Highway Construction, Latest Edition.

PART TWO - PRODUCTS: (This section not applicable).

PART THREE - EXECUTION:

3.01 - REQUIREMENTS

The work includes demolition or removal of all existing materials indicated, specified or required. All materials resulting from demolition work, except as indicated or specified otherwise, shall become the property of the contractor and shall be removed from the limits of the owner's property. Remove all rubbish and debris from the site daily, unless otherwise directed.

A. Dust Control

Take appropriate action to check the spread of dust to avoid the creation of a nuisance in the surrounding area. Comply with all dust regulations imposed by local air pollution agencies.

B. Personnel

Where pedestrian and driver safety is endangered in the area of removal work, use traffic barricades with flashing lights.

3.02 - EXISTING FACILITIES TO BE REMOVED

A. Roadways

Remove asphalt concrete, concrete and base materials completely within the limits specified for the new work. Exercise extreme care in the demolition procedures to avoid damage to private and public property. The existing roadway materials are indicated on the drawings. This information is not presented as a guarantee of the material to be encountered. Contractors are to make their own determinations as to the work involved.

B. Miscellaneous Removals

Remove completely all lawn and gravel within the limits specified for the new work. Exercise extreme care in the removal procedures to avoid damage to private and public property.

C. Concrete

Where concrete work to be removed abuts concrete to remain, saw concrete along straight lines to a depth of not less than two inches (2"). The remainder of the concrete shall be broken out, provided that the broken area is concealed in the finished work, and the remaining is sound. At locations where the broken face cannot be concealed, it shall be ground smooth or the saw cut shall be made entirely through the concrete.

D. Salvaged Materials

Items to be salvaged and delivered to the City include, but are not necessarily limited to, all traffic and directional signage light, poles, and store signs.

3.03 - CLEAN UP

Remove and transport all debris and rubbish in a manner that will prevent spillage on streets or adjacent areas. Clean up spillage from streets and adjacent areas.

3.04 - REGULATIONS

Comply with all Federal, State and local hauling and disposal regulations.

ENVIRONMENTAL GUIDELINES

SC History & Archives- SHPO

If archaeological materials are encountered during construction, the procedures codified at 36 CFR 800.139 (b) will apply. Archaeological materials consist of any items, fifty years old or older, which were made or used by man. These items include, but are not limited to, stone projectile points (arrowheads), ceramic sherds, bricks, worked wood, bone and stone, metal and glass objects, and human skeletal materials. SC History & Archives should be notified immediately if any archaeological materials are found.

Catawba Indian Nation & Eastern Band of Cherokee Indians - THPO

Appropriate THPO's must be notified if Native American artifacts and/or human remains are located during the ground disturbance phase of this project.

SCDHEC Bureau of Land and Waste Management

Existing monitoring wells should not be abandoned, removed, or damaged without receiving prior approval from the SCDHEC Division of UST Management. If damage occurs during construction activities SCDHEC division of UST Management must also be notified.

END OF SECTION

SECTION 02201 - SEDIMENT AND EROSION CONTROL

PART ONE - GENERAL:

1.01 - SCOPE

This section covers the establishment of procedures, products and the work necessary to keep wind and water sediment erosion to a minimum for all work associated with this job, on and off site. This includes, but is not limited to, the installation of silt fences.

A. Compliance

The contractor shall comply with all portions of the South Carolina Stormwater Management and Sediment Reduction Regulations.

B. Responsibility

The work under this section is the responsibility of the contractor. The work is subject to inspection by the owner and the Erosion and Sediment Control Authorities. The contractor shall comply with all local, state and federal requirements and laws. The contractor shall prevent erosion and/or sediment from leaving the site. Since the exact contractor's construction schedule and techniques are not known, the sediment and erosion controls shown on the plans, and noted below, reflect the minimum requirements of the regulations and the reviewing agencies. Where necessary, the contractor shall supplement controls to conform with the intent of this section at no additional cost to the owner.

C. Maintenance

The maintenance, replacement, cleaning and repair of all erosion and sediment control devices, until the affected areas are stabilized, are a part of this work.

1.02 - LINES AND GRADES

The contractor shall provide his own lines and grades for the work.

1.03 - SITE CONDITIONS

The contractor shall visit the site and the area around it and become familiar with the existing site conditions.

1.04 - STANDARDS AND SPECIFICATIONS

Except as indicated or specified otherwise herein, materials and methods shall conform to the South Carolina Highway Department Standard Specifications for Highway Construction, Latest Edition, Section 815 and, the South Carolina Stormwater Management and Sediment Reduction Regulations, South Carolina Department of Health and Environmental Control, Final Regulations, Document No. 1416, Chapter 72 (72-300), Latest Edition and as referenced hereinafter.

PART TWO - PRODUCTS:

2.01 - SILT FENCES

Erosion control silt fences can be any of the following or any substitute acceptable to the owner and the Sediment and Erosion Control Authorities.

- A. Trevira Spunbond Engineering Fabric by Hoechst Fibers Industries, Spartanburg, South Carolina.
- B. Terratex Fibers by Webtec, Inc., Charlotte, North Carolina.
- C. Mirafi Construction Fibers by Celanese Fibers, Charlotte, North Carolina.
- D. Geofab Erosion Control Systems by American Title Development Co., Westport, Connecticut.
- E. Poly-Filter Cloth by Carthage Mills, Cincinnati, Ohio.
- F. Supac by Phillips Fibers, Greenville, South Carolina.

2.02 - ENKAMAT (Erosion Control Mat)

Enkamat erosion control matting, No. 7020 by AKZO Industrial Systems Co., Post Office Box 7249, Asheville, North Carolina, 28802, (704) 665-5050 or it's equivalent.

PART THREE - EXECUTION:

3.01 - LOCATIONS OF SEDIMENT AND EROSION CONTROL DEVICES

See plans for the locations of all sediment and erosion control devices. The contractor shall inspect all sediment and erosion control devices after each rain and replace, repair and remove excess silt from them.

3.02 - SILT FENCES

See plans for details for installation methods. Silt fences shall be installed around all inlets and basins prior to the installation of curbs and gutters and paving. Silt fences shall be installed around all depressed open pipes and boxes.

3.03 - DUST CONTROL

The contractor shall control dust on the site and all disturbed areas. Water and any other available methods to control dust shall be used. All property damaged by wind blown dust shall be repaired and/or restored at no additional cost to the owner.

3.04 - ENKAMAT

Install Enkamat Matting in the locations shown on the plans, as directed and according to the manufacturer's recommendations.

3.05 - CLEAN UP

After a vegetative cover has been established and approved by the owner, the contractor shall remove all sediment control devices, clean the areas and seed the disturbed areas as directed.

END OF SECTION

SECTION 02485 - GRASSING

PART ONE - GENERAL:

1.01 - LIMITS OF WORK

All workmanship and material in this project are to conform to the Standard Specifications for Highway Construction, Latest edition, and the following Special Provisions.

All areas disturbed by grading and construction operations except as covered by surface construction or where noted on the plans, including the areas where surplus material is stockpiled, shall be put into perennial vegetation by hydroseeding and planting as directed on the plans. If not directly noted on the plans then revegetation shall be by hydroseeding.

1.02 - SCOPE

The type of work required includes the following: Fine grading and preparation of grass areas, seeding, planting and/or hydroseeding.

1.03 - LINES AND GRADES

The contractor shall provide his own lines and grades for the work required.

1.04 - STANDARDS AND SPECIFICATIONS

Generally, materials and methods shall conform to the South Carolina Department of Transportation Standard Specifications for Highway Construction, Latest Edition, Section 810, and as specified herein.

1.05 - SUBMITTALS

Submit five (5) copies of type written instructions recommending procedures to be followed by the owner for proper maintenance and care of grasses. Submit proof that all materials meet the requirements of this section. Bag tag figures will be evidence of purity and germination of seed. No seed will be accepted with a date of test of more than nine (9) months prior to date of use. Where fertilizer is furnished from bulk storage, the contractor shall furnish a supplier's certification of weight and analysis.

PART TWO - PRODUCTS:

2.01 - GRASS SEED

Provide fresh, clean, new crop seed complying with the tolerance for purity and germination established by the Official Seed Analysis of North America and certified by the Seed

Certification Department of Clemson University, as follows:

- A. PENNISETUM GLAUCUM (Browntop Millet)
Testing ninety-eight percent (98%) purity and eighty-five percent (85%) germination.
- B. CYNODON DACTYLON (Bermudagrass)
Testing ninety-eight percent (98%) purity and eighty-five percent (85%) germination.
- C. LOLIUM MULTIFLORUM (Domestic Italian Rye)
Testing ninety-eight percent (98%) purity and ninety percent (90%) germination.
- D. ERAGROSTIS CURVULA AND LEHMANNIANA (Lovegrass)
Testing ninety-nine percent (99%) purity and eighty-five percent (85%) germination.
- E. EREMUCHLOA OPHIUROIDES (Centipede)
Germination varies.
- F. EREMUCHLOA OPHIUROIDES (Centipede Sprigs and Sod)
Centipede sprigs and sod shall be weed free, moist, freshly dug and actively growing.
- G. LESPEDEZA CUNEATA (Serena Lespedeza – Variety Interstate)
Scarified, testing ninety-eight percent (98%) purity and seventy-five percent (75%) germination. Unscarified, testing ninety-eight percent (98%) purity and thirty-five percent (35%) germination.
- H. PASPALUM NOTATUM (Bahia)
Testing ninety-six percent (96%) purity and sixty-seven percent (67%) germination.
- I. TRIFOLIUM INCARNATUM (Crimson Clover)
Germination varies.
- J. FESTUCA ELATIOR (Tall Fescue)
Germination varies.

2.02 – OTHER PLANTING MATERIALS

Provide the following materials, all meeting or exceeding regulations of the South Carolina State Department of Agriculture, as follows:

- A. Fertilizer: 15-15-15 (50% slow release N₂) with trace elements.
- B. Agricultural Lime: Standard Grade.
- C. Agricultural Sulfur: Standard Grade.

2.03 - SPECIAL REQUIREMENTS

Where construction activities are stopped in an area for over fourteen (14) days, the entire area must be vegetated within seven (7) days from ceasing construction activities. This shall be in accordance with the requirements as outlined in the "NPDES General Permit for Stormwater Discharge From Construction Activities that are Classified as Associates with Industrial Activity" by EPA Regulations Permit No. SCR100000. This is in addition to the requirements for a permanent grass cover and shall be at no additional cost to the owner. The contractor shall make every effort to complete permanent grassing operations at the earliest practical date in order to complete a grass cover sufficient to protect the site from wind and water erosion.

PART THREE - EXECUTION:

3.01 - GENERAL REQUIREMENTS

- A. Equipment

Equipment required for proper execution of these operations shall be present on the job site and in good working order.

- B. Maintain Grades

Maintain grades in a true and even condition, including necessary repairs to previous grades and topsoiled areas.

3.02 - SOIL PREPARATION

Limit preparation to areas which will be planted in the near future.

- A. Fine Grading

Fine grade all areas to receive grassing. Care shall be taken not to disturb existing

trees. Perform this work only during period of favorable weather.

B. After Fine Grading

After fine grading, clean surface of all stones and other objects larger than one inch (1") in any direction. Also, remove roots, sticks, grade stakes and other extraneous matter.

C. Scarify and Disc or Rototill/Rotorate

Scarify and disc or Rototill/Rotorate to a depth of three inches (3") to four inches (4") to promote acceptance and germination of seeds.

3.03 - pH READING

Test pH reading. If reading is below 6.0, adjust to that level with an application of lime; if reading is above 6.5, adjust to that level with an application of sulfur. The testing laboratory shall be by Clemson University Soil Testing Laboratory or a laboratory approved by the Extension Service. Centipede should be 5.5 to 6.0.

3.04 - INITIAL APPLICATION OF FERTILIZER

A. Flat Areas

Apply at rate of eight pounds (8 lbs.) per 1,000 square feet. Distribute fertilizer and slag or sulphur uniformly over areas incorporating into soil to a depth of two inches (2") by means of hand raking, harrowing, or other approved method. At the contractor's option, this operation may be combined with topsoil spreading specified above. NOTE: No pure nitrogen shall be applied.

B. Slopes and Swales

Combine with grassing operations as specified below. Correct any surface irregularities resulting from this operation by hand raking if necessary, and perform any other required "clean up" work before planting is begun.

3.06 - PLANTING

A. Temporary Lawn Seed (per 1,000 square feet)

Eight pounds (8 lbs.) of fertilizer, 15-15-15; five pounds (5 lbs.) rye grass seed in winter and five pounds (5 lbs.) brown top millet in summer; thirty-five pounds (35 lbs) of wood fiber, one gallon (1 gal.) tac material mixed with water.

B. Permanent Lawn Seed (per 1,000 square feet)

1. Centipede Seed Mix

Summer

6 – 8 oz. Commercial Centipede
½ lb. Hulled and Unhulled Bermuda
6 oz. Browntop Mullet
8 lbs. Fertilizer

Winter

10-12 oz. Commercial Centipede
½ lb. Unhulled Bermuda
3 lbs. Common Rye
8 lbs. Fertilizer

2. Bermuda Seed Mix

Summer

1-½ lb. Hulled and Unhulled Bermuda
6 oz. Browntop Mullet
8 lbs. Fertilizer

Winter

1-½ lb. Unhulled Bermuda
3 lbs. Common Rye
8 lbs. Fertilizer

3. Bahia Seed Mix

Summer

1-½ lbs. Bahia
½ lb. Hulled and Unhulled Bermuda
6 oz. Browntop Mullet
8 lbs. Fertilizer

Winter

1-½ lbs. Bahia
½ lb. Unhulled Bermuda
3 lbs. Common Rye
8 lbs. Fertilizer

4. Lehman Upright and Weeping Lovegrass Seed Mix

Summer

6 – 8 oz. Weeping Lovegrass
½ lb. Hulled & unhulled Bermuda
6 oz. Browntop Millet
8 lbs. Fertilizer

Winter

10 – 12 oz. Weeping Lovegrass
½ lb. Unhulled Bermuda
3 lbs. Common Rye
8 lbs. Fertilizer

5. Serecia Lespedeza Seed Mix

Summer

1 lb. Scarified Serecia
½ lb. Unscarified Serecia
½ lb. Hulled & unhulled Bermuda
6 oz. Browntop Millet
8 lbs. Fertilizer

Winter

2 lbs. Unscarified Serecia
½ lb. Unhulled Bermuda
3 lbs. Common Rye
6 oz. Oats
8 lbs. Fertilizer

6. Tall Fescue Seed Mix (Planting dates are Labor Day to Thanksgiving)

Summer

Winter

10 lbs. Tall Fescue
½ lb. Hulled & unhulled Bermuda
6 oz. Browntop Millet
8 lbs. Fertilizer

10 lbs. Tall Fescue
½ lb. Unhulled Bermuda
8 lbs. Fertilizer

7. Crimson Clover Seed Mix (Planting dates are 9/1 to 11/1)

¾ lb. Crimson Clover
½ lb. Common Rye
15 lbs. 0-10-20 Fertilizer

C. Sprigging

The method for planting sprigs shall be at the direction of the contractor. Sprigs shall be planted six inches (6") on center and no sprig shall be more than three inches (3") for adjoining sprigs. The contractor is responsible for the establishment of a uniform lawn without bare spots.

D. Sodding

Sod shall be viable, weed free and recently harvested. Sod shall be placed on the prepared topsoil. The surface on which the sod is to be laid shall be firm and free of footprints. Begin by placing sod along a straight edge and work outward. Sod of the next course shall be matched against the edge of the first line in such a way that the joints between the individual sod pieces do not coincide. Successive courses are matched against the last line laid, in the same manner. The joints shall be closely laid, filled with topsoil and rolled lightly. Surface of sod shall be smooth and free of depressions.

E. Establish Lawns

It is the responsibility of the contractor to establish a complete vegetative cover with viable healthy plants.

F. Hydroseeding (Temporary or Permanent Lawn per 1,000 square feet)

To the mixtures stated above, add thirty-five pounds (35 lbs.) of wood fiber, one gallon (1 gal.) tac material or equivalent mixed with the manufacturer's recommended rate of water.

G. Seeding for Temporary Erosion Control Only (per 1,000 square feet)

August 15 to March 15: Three pounds (3lbs.) of crimson clover and four pounds (4lbs.) of fertilizer.

March 15 to August 15: One-half pound (1/2lb.) browntop millet seed and four pounds (4lbs.) of fertilizer.

3.07 - MAINTENANCE

- A. Begin maintenance immediately after any lawn, grass or wildflower meadow area is planted.

- B. Maintain Lawns

Maintain lawns by weeding, cultivating, mowing, trimming, hydroseeding, seeding, or re-sodding and other operations such as re-grading and re-planting as required to establish an acceptable stand of grass.

- C. Provide Adequate Protection

Provide adequate protection at all times for all grass areas. Lay or place planks over grass for the movement of heavy materials or equipment.

- D. Repair or Replace

Repair or replace, at no additional cost to the owner, any portion of grassed areas or wildflower/grass meadows not in good viable condition if so determined by the owner before or on the date of completion for work done prior to that time.

3.08 - ACCEPTANCE

Lawns will be acceptable provided all requirements, including maintenance, have been complied with, and a healthy, uniform stand of specified cover is established, free of weeds, bare spots and surface irregularities. A full stand of grass is not required where irrigation has not been installed.

END OF SECTION

SECTION 02614 – BRICK WORK

PART ONE – GENERAL:

1.01 – SCOPE

The work includes all labor, equipment, materials, and performing all the operations required for the installation of all brick columns and walls on a prepared subgrade and concrete foundation as indicated on the drawings. All brick work shall be constructed to the lines, grades and cross-sections indicated on the drawings.

1.02 – (NOT APPLICABLE)

1.03 – QUALITY ASSURANCE

A. Installer

The contractor or subcontractor performing the masonry paving work must have at least five (5) years of successful experience in the required types of paving application.

B. Product Handling

Protect brick paving materials during storage and construction against wetting by rain, snow, or ground water, and against soilage or intermixture with earth or other types of materials.

C. Grout and Mortar

Protect grout and mortar materials from deterioration by moisture and temperature. Store in a dry location or in a waterproof container.

D. Hot Weather Requirements

Protect brick work in hot weather to prevent excessive evaporation of setting beds and grout. Provide artificial shade, wind breaks and use cooled materials as required.

1.04 – SUBMITTALS

A. Samples

The contractor shall submit all samples of brick color, sizes, and shapes for the owner's approval prior to purchasing materials. The contractor shall furnish not less than five (5) bricks and sample of all granite pieces specified to be used on the project showing variations in color and texture before the start of work.

PART TWO – PRODUCTS:

2.01 – BRICK

The brick for this project shall match the brick used at Gills Creek Memorial Park. The following brick types are needed:

A. Brick Columns and Walls

“Old Williamsburg” by Watson town Brick (Columbia, SC Architectural Series)
Supply a cored brick that is 3-5/8” x 7-5/8” x 2-1/4” in size

B. All brick shall be supplied by the same manufacturer. The brick shall conform to ASTM 216 and/or ASTM C-902, as applicable.

2.02 – MORTAR

Mortar shall conform to Section 719 of the South Carolina Department of Transportation Standard Specifications, Latest Edition.

2.04 – JOINT FILLER

Pre-formed expansion joint fillers shall be non-extruding resilient, non-bituminous type conforming to AASHTO M-153, Type II and South Carolina State Highway Department Standard Specifications, Section 501.07. Unless otherwise indicated on the drawings, joint filler shall be one-half inch (1/2”).

PART THREE – EXECUTION:

3.01 – BRICK COLUMNS AND WALLS

Unless otherwise noted, lay brick in running bond pattern with vertical joints in each course centered on units in courses above and below. Bond and interlock each course at corners, except for rowlock courses; miter cut and rowlock courses at corners. In normal courses, do not use with less than four inches (4”) horizontal face dimensions at corners and jambs.

3.02 – MORTAR

A. Measurement

Measure mortar materials in approved containers which will insure that the specified proportions of materials will be controlled and accurately maintained during the progress of the work. Measuring materials with shovels will not be permitted. Unless specified otherwise, mix mortar in proportions by volume.

B. Grout

Grout consists of a mixture of cementation materials and aggregate as specified hereinbelow; add water in sufficient quantity to produce a fluid mixture with a slump of eight to ten inches (8" to 10"). Verify slump by at least one (1) slump test for each truck load of grout delivered by truck mixer, and at least one (1) test each day for all grout placed that day, if mixed at the project site. Provide fine grout in grout spaces less than two inches (2") in any horizontal dimension or in which clearance between reinforcing and masonry is less than three-fourths inch (3/4"). Provide course grout in grout spaces two inches (2") or greater in all horizontal dimensions and in which clearance between reinforcing and masonry is at least three-fourths inch (3/4").

C. Fine Grout

Mix fine grout in proportions of one (1) part cement, one-fourth (1/4) part hydrated lime or lime paste and three (3) parts sand.

D. Course Grout

Mix course grout in proportions of one (1) part cement, one-fourth (1/4) part hydrated lime or lime paste, three (3) parts sand, and three (3) parts pea gravel passing a three-eighths inch (3/8") sieve.

E. Cutting Masonry Units

Cut masonry units with motor driven saw designed to cut masonry with clean, un-chipped edges. Cut units as required to provide patterns shown and to fit adjoining work neatly. Use full units without cutting wherever possible.

F. Exposed Work

Do not use masonry units with chips, cracks, voids, discoloration's or other defects which might be visible or cause staining in the finished work.

G. Brick Work

Where mortar joints are used, fill all joints between bricks completely with mortar; form bed joints of a thick layer of mortar which is smoothed or furrowed lightly. Form head joints by applying to the brick to be laid, a full coat of mortar on the entire end, or on the side of the brick tightly and accurately against the brick laid previously; the practice of buttering at the corners of brick and then throwing mortar or scrapings into the empty joints will not be permitted. Lay close brick with a bed joint and with head joints, and place the brick carefully without disturbing the brick previously laid.

3.03 – REPAIR, POINTING AND CLEANING

A. Removal of Units

Remove necessary units which are loose, chipped, broken, stained or otherwise damaged, or if units do not match adjoining units and install in fresh mortar, pointed to eliminate evidence or replacement.

B. Pointing

During the tooling of joints, enlarge any voids or holes, except weep holes, and completely fill with mortar. Point-up all joints at corners, openings and adjacent work to provide a neat, uniform appearance properly prepared for application of sealant compounds.

1. At completion of masonry work, point holes in exposed masonry and cut out defective joints and tuck point solidly with mortar which has been re-tempered one (1) or two (2) hours after original mixing.

C. Cleaning

During construction, keep the exposed faces clean of mortar and other stains. When mortar joints reach thumbprint hardness and are tooled, brush the exposed work with a soft fiber brush to remove adhering bases of walls from splash stains by covering the adjacent ground with sand, sawdust, or polyethylene.

D. Clean exposed brick masonry surfaces as recommended by BIA Technical Note 20, “Cleaning Clay Products Masonry”.

E. Protection

Advise the owner of proper procedures required to protect the masonry work from deterioration, discoloration, or damage during subsequent construction operations.

END OF SECTION

SECTION 02830 - PLANTING

PART ONE - GENERAL:

1.01 - SCOPE

This section includes furnishing all materials, equipment, and labor necessary for the installation of trees and shrubs; protection, maintenance, guarantee and replacement of plants; and all related items required to complete the work shown on the drawings and as specified.

PART TWO - PRODUCTS:

2.01 - TOPSOIL

Topsoil shall be tested for the pH and corrected, if necessary, before planting operations are started. Test results shall be submitted to the Owner/Landscape Architect prior to beginning planting operations.

2.02 - TOPSOIL TO BE FURNISHED

The contractor shall furnish, at his expense, additional topsoil to properly install all work as specified and as shown on the drawings. The contractor shall provide a soil analysis and report for any area which topsoil is to be stripped and used for this project. Topsoil shall have a "high" rating in each of the basic nutrients tested and a pH ranging from 6.0 to 6.5. Necessary additives shall be incorporated in a proper quantity as recommended in the soil analysis or as necessary to bring the soil supplied up to standards specified. Topsoil shall be from naturally well drained areas. It shall be classified as a loam, silt loam, clay loam or a combination thereof, as determined from the Bureau of Plant Industry, Soils and Agricultural Engineering, USDA triangular soil texture chart. Topsoil shall be without admixture of subsoil and shall be clean.

2.03 - BASIC SLAG AND AGRICULTURE SULPHUR

Basic slag and agricultural sulfur (for correcting soil pH) shall be standard grade.

2.04 - COW MANURE OR SLUDGE

Cow manure shall be heat treated, weed seed free, and commercially bagged.

ALTERNATE: Sludge from the Municipal Sewer Treatment Plant may be used in lieu of cow manure only if properly processed and marketed for this specific purpose.

2.05 - COMMERCIAL FERTILIZER

Commercial fertilizer shall be 15-15-15 (50% organic) formula with trace elements and shall conform to the applicable State Fertilizer Laws. It shall be uniform in composition, dry and free flowing and shall be delivered to the site in the original, unopened containers, each bearing the manufacturer's guaranteed analysis. Any fertilizer which becomes caked or otherwise damaged, making it unsuitable for use, will not be accepted.

2.06 - PEAT

Peat shall be a domestic product consisting of partially decomposed vegetable matter of natural occurrence. It shall be brown, clean, low in content of mineral and woody material, mildly acidic and granulated or shredded.

2.07 – DOUBLE HAMMERED SHREDDED HARDWOOD MULCH

Mulch shall be organic material, free from deleterious materials and shall be stored as to prevent inclusion of foreign material.

2.08 - WATER

The contractor may use the owner's water if it is available. The contractor shall insure that an adequate supply of water is available for the planting. The contractor shall furnish all necessary hoses, equipment, attachments and accessories for the adequate irrigation of planted areas.

2.09 - PLANT MATERIALS

A. Plants

Plants are shown on the drawings with sizes and spacing.

B. Nomenclature

The names of plants required under this contract conform to those given in Standard Plant Names, latest edition, prepared by American Joint Committee on Horticultural Nomenclature. Names of varieties not included therein conform generally with names accepted in the nursery trade.

C. Quantities

Quantities are shown for information only. The contractor is responsible for calculating his own quantities. If there is a conflict between quantities and spacing, spacing shall prevail.

D. Quality and Size

Plants shall have a habit of growth that is normal for the species and shall be sound, healthy and free from insect pests, plant diseases and injuries. All plants shall equal or exceed the measurements specified in the plant list, which are minimum acceptable sizes. They shall be measured before pruning, with branches in normal position. Any necessary pruning shall be done at time of planting; however, no plants supplied under this contract shall be pruned back to such extent that it no longer meets specifications. Requirements for the measurement, branching, grading, quality, balling and burlapping of plants in the plant list generally follow the code of standard currently recommended by the American Association of Nurserymen, Inc., in the latest edition of the American Standard for Nursery Stock.

E. Substitution

Substitution will be permitted only upon submission of proof that any plant is not obtainable within four hundred (400) miles of the site and authorized by the owner of a changed order providing the use of the nearest equivalent obtainable size or variety of plant having the same essential characteristics with an equitable adjustment of contract price.

2.10 - TYPE OF PROTECTION TO ROOTS

A. Balled and Burlapped Plants

Plants designated "B & B" in the plant list shall be balled and burlapped. They shall be dug with firm, natural balls of earth of sufficient diameter and depth to encompass the fibrous and feeding root system necessary over all be firmly wrapped with burlap or similar material and bound with twine, cord or wire mesh. Where necessary to prevent breaking or cracking of the ball during the process of planting, the ball may be secured to a platform.

The balls of "B & B" plants which cannot be planted immediately on delivery shall be covered with moist soil or mulch, or other protection from drying winds and sun.

B. Container Plants

Container grown plants in cans or pots or equal quality as balled and burlapped plants may be substituted in lieu thereof. The plants in the containers shall be delivered to the site and remain in the containers until planted. Plants in containers that are severely root bound shall not be acceptable. All plants shall be carefully removed from their containers in such a manner not to injure the roots.

2.11 - SAMPLES, TESTS AND INSPECTIONS

A. Notice of Sources

Within ten (10) days following acceptance of the bid, the owner shall be notified of the sources of the materials required or desired to be inspected or tested.

B. Topsoil to be Furnished

The owner reserves the right to inspect the topsoil to be furnished, to determine whether or not it meets the requirements specified, and approve the depth to which it may be stripped. At the time of inspection, the contractor shall be required to take representative soil samples from several locations in the area under consideration. Tests will be made by a State or Commercial Soil Testing Laboratory using methods approved by the Association of Official Agricultural Chemists or the State Agricultural Experimental Station. Delivery of topsoil may begin after approval of the sample. Soil test results shall be submitted to the Owner/Landscape Architect prior to beginning planting operations.

C. Plants

The contractor shall be responsible for all certificates of inspection of plant materials that may be required by Federal, State or other authorities to accompany shipments of plants. Inspection of plants to be balled and burlapped may be made at the place of growth. All plants must be inspected and approved before they are planted. Inspection and approval by the owner of plants at the place of growth or upon delivery shall be for quality, size and variety only and shall not in any way impair the right of rejection for failure to meet other requirements during progress of this work.

PART THREE - EXECUTION:

3.01 - TIME OF PLANTING

PLANTING

It is the responsibility of the contractor to coordinate all phases of the planting. Planting operations shall be conducted under favorable weather conditions during the next season or seasons which are normal for such work. At the option and on the full responsibility of the contractor, planting operations may be conducted under unseasonable conditions without additional compensation.

3.02 - SPRAYING

Plant material shall be sprayed, as may be necessary to control diseases and insects and to prevent their spread to other plantings. Materials and methods employed shall be as are commonly used to control the diseases and pests found present and shall not be injurious to person or structures.

3.03 - PRUNING AND REPAIR

Upon completion of the work under this contract, all trees and shrubs shall be pruned and any injuries repaired. The amount of pruning shall be limited to the minimum necessary to remove dead or injured twigs and branches and to compensate for the loss of roots as a result of transplanting operations. Pruning shall be done in such a manner as not to change the natural habit or shape of the plant, however, no plants applied under this contract shall be pruned back to such extent that it no longer meets specifications. All cuts shall be made flush, leaving no stubs. On all cuts over three-fourths inch (3/4") in diameter and bruises or scars on the bark, the injured cambium shall be traced back to living tissue and removed; wounds shall be smoothed and shaped so as not to retain water and the treated area shall be coated with an acceptable tree wound paint.

3.04 - OBSTRUCTION BELOW GROUND OR OVERHEAD

- A. It is not contemplated that planting shall be done where the depth of soil over underground construction and obstructions is insufficient to accommodate the roots or where pockets of impervious soil will require drainage. Where such conditions are encountered in excavation of planted areas and where the obstruction cannot be removed by hand methods in the course of digging plant pits of the usual size, and where trees to be planted are found to be under overhead wires, other locations for the plant material may be designated by the owner.
- B. Removal of underground obstructions, relocation of construction and provision of drainage for planting areas shall be done only as directed by the owner.
- C. If changes in the location of the work, or if the removal of obstructions involves additional work, the contractor shall not proceed until authorized in writing by the

owner.

3.05 - NEW PLANTING

A. Layout

New plantings shall be located where shown on the plans except where obstructions below ground or overhead are encountered or where changes have been made in the construction. Necessary adjustments shall be made only after approval by the owner.

No planting shall be placed closer than two feet (2') to pavements or structures except where indicated.

B. Planting Pits

Reasonable care shall be exercised to have pits dug and soil prepared prior to moving plants to their respective locations for planting to insure that they will not be unnecessarily exposed to drying elements or physical damage. Circular pits with vertical sides shall be excavated for all plants, except for hedge and plants specifically designated on the plans to be planted in beds. Diameter of pits for plant material, trees, and shrubs shall be at least twice the width of the diameter of the ball or spread roots. The depth of pits for trees and shrubs shall be enough to accommodate the ball or roots when the plant is set to finish grade allowing for compacted, prepared soil in the bottom of the pit.

C. Percolation Tests

Subsurface drains have not been included as part of the project, therefore, the contractor shall make such percolation tests as may be necessary to determine if subsurface drainage conditions in landscape areas are so poor as to support moisture conditions potentially fatal to plantings. The following procedure is recommended:

1. Wait at least twenty-four (24) hours after rain and dig test pit twelve inches (12") square or twelve and one-half inches (12-1/2") in diameter to depth of bottom of plant trench or pit; remove all loose soil (if standing water is visible, notify the owner).
2. Quickly fill bottom with six inches (6"), approximately three and one-fourth gallons (3-1/4 gal.) of water.
3. Record length of time from filling until disappearance of water and divide

number of minutes by six (6) to give average time of one inch (1") fall.

4. Compare one inch (1") fall time with the following table:
 - a. One inch (1") in zero to three (0 - 3) minutes indicates rapid absorption.
 - b. One inch (1") in three to five (3 - 5) minutes indicates medium absorption.
 - c. One inch (1") in five to thirty (5 - 30) minutes indicates slow absorption.
 - d. One inch (1") in over sixty (60) minutes indicates impervious soil.
5. If test indicates soil to be semi-impervious or impervious, or if water is initially found in test pit, notify the owner in writing before proceeding further.
6. If the contractor does not make tests at representative locations and file records or results with the owner, or if he plants in areas shown to have poor drainage without a written release from the owner, he shall be liable for any further guaranteed replacements due to subsurface water damage.
7. If the contractor makes proper tests and files complete records indicating semi-impervious soil or worse conditions, he will not be held responsible for future subsurface water damage to work of this contract. The owner may observe the testing at any time, and shall be informed in advance of the time and place of testing.

D. Planting Mixture

Soil used in planting shall be topsoil, as herein before specified, or suitable existing soil, either of which shall be thoroughly mixed with one (1) part peat and one (1) part manure to five (5) parts soil. Very poor soils, grave, hardpan or other soil injurious to plants shall not be used. Except for ericaceous plants, very acidic or sour soil (having a pH of less than six {6}) shall be thoroughly mixed with sufficient slag to produce a slightly acid reaction (a pH of 6.0 to 6.5). Soil used in planting shall be thoroughly mixed with five pounds (5 lbs.) of 16-4-12 (50% organic) formula commercial fertilizer per cubic yard.

E. Excess Soil

Excess excavated soil from planting operations shall be disposed off the site or as directed by the owner.

F. Setting Plants

Unless otherwise specified, all plants shall be planted in pits, centered, and set on compacted planting mixture to such a depth that the finished grade level at the plant after settlement will be the same as that at which the plant was grown. They shall be planted upright and faced to give the best appearance or relationship to adjacent structures. No burlap shall be pulled from under the balls. Platform wire and surplus binding from top and sides of the balls shall be removed. Roots shall be spread in their normal position. All broken or frayed roots shall be cut off evenly. Planting mixture shall be placed and compacted carefully to avoid injury to roots and to fill all voids. When the hole is nearly filled, add water as necessary and allow it to soak away. Fill the holes to finished grade and form a shallow saucer around each plant by placing settles, additional soil shall be filled in to the level of the finished grade.

G. Mulching

All plants shall be mulched with a three inch (3") layer of double hammered shredded hardwood within two (2) days after planting. This mulch shall entirely cover the area of the planting pit, bed, or saucer around each plant.

3.06 - MAINTENANCE

Maintenance shall begin immediately following the last operation of installation for each plant and shall continue in accordance with the following requirements: New planting shall be protected and maintained until installation of all planting is completed plus a minimum of ninety (90) days. Maintenance shall include watering, weeding, cultivating, mulching, removal of dead material, re-inserting plants to proper grades or upright position and restoration of the planting saucer, re-staking or additional staking and other necessary operations. If planting is done after lawn preparation, proper protection to lawn areas shall be provided and any damage resulting from planting operations repaired promptly.

3.07 - INSPECTION FOR ACCEPTANCE

A. Substantial Completion

Substantial completion is determined when installed material is alive and in a healthy condition.

B. Inspection

Inspection of the work of planting to determine completion of contract work will be made by the owner at the conclusion of the maintenance period upon written notice requesting such inspection submitted to the owner at least ten (10) days prior to the anticipated date.

C. Acceptance

After inspection, the contractor will be notified by the owner of acceptance of all work of this section, or, if there are any deficiencies, of the requirements for completion of the work. Maintenance or other work remaining to be done shall be subject to re-inspection before acceptance. Maintenance of all work will be required by the contractor until the entire plantings have been accepted by the owner.

D. Acceptance In Part

The work of planting may be accepted in part by the owner upon written acceptance by the owner clearly stating the portion accepted and the conditions of the acceptance. This in no way voids the replacement on plants under "Plant Guarantee and Replacement".

3.08 - PLANT GUARANTEE AND REPLACEMENT

A. Guarantee

Ten percent (10%) of the total landscape costs shall be withheld for a period of twelve (12) months from acceptance to ensure replacement of plant material not meeting the guarantee. Provided that plants are maintained in accordance with the contractor's maintenance schedule, plants shall be guaranteed for one (1) year and shall be alive and in satisfactory growth at the end of the guarantee period.

B. The contractor shall provide the owner with a written detailed outline for maintenance for the first year. This shall cover all plant requirements needed to assure healthy material at the conclusion of the guarantee period.

C. Replacement

At the end of the guarantee period, inspection will be made by the owner upon written notice requesting such inspection submitted by the contractor at least ten (10) days before the requested date. Any plant required under this contract that is dead or not in satisfactory growth, as determined by the owner, shall be removed from the site; these and any plants missing due to the contractor's negligence, shall be replaced

as soon as conditions permit, but during the normal planting season. At the successful completion of this work the ten percent (10%) retention shall be released.

D. Materials and Operations

All replacements shall be plants of the same kind and size as specified in the plant list. They shall be furnished and planted as specified under "New Planting". The cost of such replacements shall be borne by the contractor.

E. The contractor shall visit the site on his own schedule during the one (1) year guarantee period to determine if proper maintenance is being conducted. If the contractor determines that the owner is not performing proper maintenance, then he shall outline in writing, in detail, his concerns.

3.09 - SUBMITTALS

The contractor shall submit results of pH tests and his plans for correcting the pH to the owner and the results of the percolation tests prior to beginning planting operations. Contractor shall submit a 5lb sample of the mulch for approval by the owner prior to installation.

END OF SECTION

SECTION 02995 – CLEAN UP

PART ONE – GENERAL:

1.01 – RELATED DOCUMENTS

Provide all labor, materials, equipment and services indicated on the drawings, or specified herein, or reasonably necessary for, or incidental to a complete job.

PART TWO – PRODUCTS: (This section not applicable.)

PART THREE – EXECUTION:

3.01 – CLEAN UP

- A. During the progress of the work, keep the site and affected adjacent areas in a neat and clean condition at all times. Remove all rubbish, surplus materials, and unneeded construction equipment from the site. Repair all damages so that the public and property owners will be inconvenienced as little as possible.
- B. Where materials or debris has washed or flowed into, or has been placed in, existing water-courses, ditches, gutters, drains, pipes, and/or structures by work performed under this contract, or elsewhere during the course of the contractor's operations, remove and satisfactorily dispose of such material or debris during the progress of the work. Upon completion of the work, leave all ditches, channels, drains, pipes, and/or structures and work, etc., in a clean and neat condition.
- C. On or before completion of the work, unless otherwise directed or permitted in writing, tear down all temporary buildings and structures built by the contractor for his own use. Remove all temporary works, tools, and machinery or other construction equipment furnished by the contractor. Remove all rubbish from any grounds which have been occupied by the contractor; leave all roads and all parts of the premises and adjacent property affected by the contractor's operations in a neat and satisfactory condition.
- D. Remove, acceptably disinfect and cover all organic matter and materials containing organic matter in, under, and around all privies, houses, and other buildings used.
- E. Restore or replace, when and as directed, any public or private property damaged by contractor's work, equipment or employees to a condition at least equal to that existing immediately prior to the beginning of the operations. Perform, as required, all necessary highway or driveway reshaping of shoulders and ditches, walks and landscaping work. Use suitable materials, equipment and methods for

such restoration. The contractor shall be responsible for obtaining releases from the various property owners, stating that all restoration work is satisfactory.

END OF SECTION

SECTION 03100- CONCRETE FORMWORK
PART ONE - GENERAL:

1.01 - DESCRIPTION

- A. Form cast-in-place concrete indicated on drawings and subsequently remove such forms except earth forms.
- B. Related Work Described Elsewhere
 - 1. Concrete Reinforcement, Section 03200
 - 2. Cast-In-Place Concrete, Section 03300

1.02 - QUALITY ASSURANCE

- A. Qualifications of Workmen

Provide superintendent or foreman who will be present during this portion of work, who shall be thoroughly familiar with materials being installed, referenced standards and requirements of this work, and who shall direct work performed under this section.
- B. Codes and Standards
 - 1. In addition to complying with pertinent codes and regulations, comply with pertinent recommendations contained in publication ACI 347 of the American Concrete Institute, "Recommended Practice for Concrete Formwork".
 - 2. Where provisions of pertinent codes and standards conflict with this specification, the more stringent provisions shall govern.

1.03 - SUBMITTALS

- A. Manufacturer's Data

Submit two (2) copies manufacturer's data and installation instructions for proprietary materials, including form coatings, manufactured form systems, ties and accessories to the owner for approval.

1.04 - PRODUCT HANDLING

A. Protection

Use means necessary to protect formwork materials before, during and after installation and to protect installed work and materials of other trades.

B. Replacements

In the event of damage, immediately make repairs and replacements necessary at no additional cost to the owner.

PART TWO - PRODUCTS:

2.01 - MATERIALS

A. Forms for Smooth Finished Exposed Concrete

Plywood, metal, metal-framed plywood faced, or other acceptable panel type materials providing continuous, straight surfaces.

1. Plywood shall comply with U.S. Product Standard PS-1, "B-B High Density Overlaid Concrete Form", Class I.
2. Furnish in largest practicable sizes to minimize joints.
3. Furnish in thickness sufficient to withstand pressure of newly placed concrete without bow or deflection.

B. Forms for Other Unexposed Concrete

Plywood, lumber, metal or other material acceptable to the owner; lumber shall be dressed on at least two (2) edges and one (1) side for tight fit.

2.02 - ACCESSORIES

A. Form Ties

1. Factory fabricated, adjustable length, removable or snap off metal ties, designed to prevent deflection and to prevent spilling upon removal.
2. Do not use form ties fabricated on job site or wire ties.

B. Form Coatings

Commercially formulated compounds that will not bond with, stain or adversely affect concrete surfaces, and will not impede wetting of surfaces to be cured with water or curing compounds.

2.03 - FORMWORK DESIGN

A. Safety

Design, erect, support, brace and maintain formwork to safely support vertical and lateral loads until such loads can be supported by structure.

1. Construct formwork so that concrete members and structures are of correct size, shape, alignment, elevation and position.

B. Removable

Design formwork to be readily removable without impact, shock or damage to cast-in-place concrete or adjacent materials.

C. Tighten

Tighten formwork to prevent leakage of wet concrete. Solidly butt joints and provide backup material at joints to prevent leakage and fins.

D. Side Forms

Side forms of footings may be omitted and concrete placed directly against excavation.

PART THREE - EXECUTION:

3.01 - SURFACE CONDITIONS

A. Inspection

1. Before work of this section, inspect installed work of other trades and verify that such work is complete to the point where this installation may properly begin.
2. Verify that forms may be constructed in accordance with pertinent codes and regulations, referenced standards and original design.

B. Discrepancies

1. In the event of discrepancy, immediately notify the owner.
2. Do not proceed with installation in areas of discrepancy until such discrepancies have been fully resolved.

3.02 - FORM CONSTRUCTION

A. General

1. Construct to dimensions shown, level, plumb and alignment.
2. Fabricate for easy removal without hammering or prying against concrete surfaces.
3. Examine drawings and specifications and consult with other trades relative to provision for openings.
4. Set required time to be embedded in concrete.
5. Keep form sufficiently wetted to prevent joints opening before concrete placement.
6. Brace and tie forms so as to maintain position and shape. Space forms apart and securely tie together, using metal spreader ties that give positive tying and accurate spreading.
7. Exercise care in form layout to avoid necessity for cutting in-place concrete.

B. Footing Forms

Footing side forms may be of earth, provided soil will stand without caving and sides are made with neat cuts to minimum dimensions shown on drawings. Make necessary provisions to prevent cave-ins during concrete placement.

C. Forms for Exposed Construction

Provide sharp, clean corners at intersecting planes, without visible edges or offsets.

D. Form Coatings

Coat form surfaces before reinforcement is placed. Do not allow excess coating material to accumulate in forms or to come into contact with surfaces to be bonded

to fresh concrete.

3.03 - FORM REMOVAL

A. General

Do not remove forms until concrete is twenty-four (24) hours old.

B. Non-Supporting Formwork

1. Formwork not supporting concrete, such as walls and similar parts of the work, may be removed after cumulatively curing at not less than fifty degrees Fahrenheit (50 F) for twenty-four (24) hours after concrete placement, provided that:

- a. Concrete is sufficiently hard to not be damaged by removal.
- b. Curing and protection operations are maintained.

3.04 - FORM RE-USE

A. Form re-use shall be subject to advance approval by the owner.

B. Unless specifically approved in advance by the owner, form re-use shall in no way delay or change schedule for concrete placement from schedule obtainable if all forms were new.

END OF SECTION

SECTION 03200 – CONCRETE REINFORCEMENT

PART ONE – GENERAL:

1.01 – DESCRIPTION

A. Work Included

Concrete reinforcement and associated items required for this work as shown on the drawings.

B. Related Work Described Elsewhere

1. Placement of other embedded items

Concrete Formwork, Section 03100
Cast-In-Place Concrete, Section 03300

1.02 – QUALITY ASSURANCE

A. Qualifications of Workmen

Provide the superintendent or foreman who will be present during this portion of the work, who shall be thoroughly familiar with materials being installed and the best methods for installation and who shall direct work performed under this section.

B. Codes and Standards

1. In addition to complying with pertinent codes and regulations, comply with pertinent recommendations contained in publication ACI 315 of the American Concrete Institute, “Manual of Standard Practice for Detailing Reinforcing Concrete Structures” and ACI 318 (latest edition) “Building Code Requirements for Reinforced Concrete”.
2. Where provisions of pertinent codes and standards conflict with this specification, the more stringent provisions shall govern.

1.03 – SUBMITTALS

A. Shop Drawings

1. Submit shop drawings to the owner for review.
2. Do not deliver concrete reinforcement to job site until receipt of reviewed shop drawings from the owner.

1.04 – PRODUCT HANDLING

A. Protection

1. Use means necessary to protect concrete reinforcement before, during, and after installation and to protect installed work and materials of other trades.
2. Store in a manner to prevent excessive rusting and fouling with dirt, grease, and other bond breaking coatings.
3. Use necessary precautions to maintain to maintain identification after bundles are broken.

B. Replacements

In the event of damage, immediately make repairs and replacements necessary, at no additional cost to the owner.

PART TWO – PRODUCTS:

2.01 – CONCRETE REINFORCEMENT

Concrete reinforcement materials shall be new, free from loose rust and scale and complying with the following referenced standards:

A. Reinforcement Bars

ASTM A-615, Grade 60. All reinforcing bars, except No. 2 shall be deformed in accordance with ASTM A-305, latest edition.

B. Welded Wire Fabric

Welded wire fabric shall conform to ASTM A-185, latest edition.

2.02 – OTHER MATERIALS

Other materials not specifically described, but required for complete and proper installation of concrete reinforcement, shall be selected by the contractor and subject to approval by the owner.

PART THREE – EXECUTION:

3.01 – SURFACE CONDITIONS

A. Inspection

1. Before installation of work of this section, inspect installed work of other trades and verify that such work is complete to the point where this installation may properly begin.
2. Verify that concrete reinforcement may be installed in strict accordance with pertinent codes and regulations, shop drawings and original design.

B. Discrepancies

1. In the event of discrepancy, immediately notify the owner.
2. Do not start installation until discrepancies and unsatisfactory conditions are corrected.

3.02 – BENDING

A. General

1. Fabricate reinforcement in accordance with shop drawing.
2. Do not use bars with kinks or bends not shown on drawing or shop drawing.
3. Do not bend or straighten steel in a manner that will damage material.

B. Design

1. Bend all bars cold unless approved by the owner.
2. Make bends for ties around pins having diameter not less than two (2) times minimum bar thickness.
3. Make bends for other bars, including hooks, around pins having diameter not less than six (6) times minimum bar thickness.

3.03 – PLACEMENT

A. General

Before start of concrete placement, accurately place concrete reinforcement, positively securing and supporting by metal chairs or spacers, or by metal hangers.

B. Inspection

Prior to placement of concrete, the owner shall be notified in ample time to inspect placement of reinforcement. Inspection of reinforcement will be made only after the placement of each section to be poured. The owner shall always be notified of pouring schedule well in advance.

C. Clearance

1. Preserve clear space between bars of not less than the normal diameter of round bars.
2. In no case allow clear distance of less than three-quarter inch (3/4") or less than one and one-third (1-1/3) times maximum aggregate size.
3. Minimum clearance for reinforcing shall be two and one-half inches (2-1/2") when in contact with the ground, two inches (2") in concrete walls and three-quarters inch (3/4") in concrete not exposed to weather or in contact with the ground.

D. Dowels

Place required steel dowels securely anchored into position before concrete is placed.

E. Obstructions

In the event conduits, piping, inserts, sleeves or other items interfere with placing reinforcement as indicated on drawings or as otherwise required, immediately consult the owner and obtain approval of new procedures before placing concrete.

F. Splicing

1. Splices shall conform to ACI 238, Chapter 12. Splices shall be Class C unless otherwise indicated.
2. Welded wire fabric shall lap one (1) full mesh and shall be securely wired at each end and side.

3.04 – CLEANING REINFORCEMENT

Concrete reinforcement, at the time concrete is placed, shall be free from rust scale, loose mill scale, oil paint and other coatings which will destroy or reduce bond between steel and concrete.

END OF SECTION

SECTION- 03300 - CAST-IN-PLACE CONCRETE
PART ONE - GENERAL:

1.01 - SCOPE

A. Work Included

Cast-In-Place concrete required for this work as indicated on drawings and includes, but is not necessarily limited to:

1. Footings and Foundations
2. Slabs on Grade
3. Portland Cement Concrete Paving
4. Concrete Retaining Wall
5. Curbs and Gutters
6. Concrete Headwall

B. Related Work Described Elsewhere:

1. Concrete Formwork, Section 03100
2. Concrete Reinforcement, Section 02300

1.02 - STANDARDS AND SPECIFICATIONS

A. Qualifications

1. Provide superintendent or foreman who will be present at all times during execution of this portion of work, who shall be thoroughly trained and experienced in placing types of concrete specified and who shall direct work performed under this section.
2. For finishing exposed concrete surfaces, use thoroughly trained and experienced journeymen concrete finishers.

B. Codes and Standards

1. In addition to complying with pertinent codes and regulations, comply with pertinent recommendations of publication ACI 301 of the American

Concrete Institute, "Structural Concrete for Buildings".

2. Where provisions of pertinent codes and standards conflict with this specification, the more stringent provisions shall govern.

1.03 - SUBMITTALS

A. Materials List

Within ten (10) days after contract award and before any concrete is delivered to job site, submit to the owner a complete list of materials proposed to be provided under this portion of the work, showing manufacturer's name and catalog number of all items such as admixtures, curing compounds and chemical floor hardener, and names and addresses of transit-mix concrete supplier.

B. Transit-Mix Delivery Slips

1. Keep record at job site showing time and place of each concrete placement together with transit-mix delivery slip certifying contents of delivery.
2. Make record available to the owner upon request.
3. Upon completion of this portion of work, deliver record and delivery slips to the owner.

1.04 - PRODUCT HANDLING

A. Protection

Use means necessary to protect cast-in-place concrete materials before, during and after installation and to protect installed work of other trades.

B. Replacements

In the event of damage, immediately make repairs and replacements necessary at no additional cost to the owner.

PART TWO - PRODUCTS:

2.01 - CONCRETE

A. General

1. Concrete shall be transit-mixed in accordance with ASTM C-94, unless otherwise specifically permitted by the owner.
2. Control of concrete production shall be under supervision of an independent laboratory who shall design mixes, train contractor's technician to make concrete cylinder and test concrete cylinders for compression strength. The testing agency shall furnish the owner with certified copies of test results. Cost of all testing shall be borne by the contractor.
 - a. Strength Test: One (1) test consisting of four (4) specimens (cylinders) shall be made for each seventy-five cubic yards (75 c.y.) of each type concrete placed, but not less than one (1) test shall be made for each type concrete for each days work. Procedure for obtaining samples of fresh concrete for preparing test specimens shall be in accordance with ASTM C-172. Specimens for strength tests shall be made and cured in accordance with ASTM C-31. Strength tests of concrete specimens shall be made in accordance with ASTM C-39. One (1) specimen of each set shall be reported by the following day to the owner.

B. Quality

1. Concrete shall have the following minimum compressive strengths at twenty-eight (28) days and proportioned within the following limits:

<u>Concrete Location</u>	<u>Compressive Strengths</u>	<u>Maximum Size Aggregate</u>	<u>Minimum Cement/ Cubic Yard</u>	<u>Maximum Slump</u>
Footings and Retaining Walls	3,000	1-1/2"	5.25 Sacks	4"
Exterior Slabs, Walks and Curbs & Gutters	3,000	3/4"	5.75 Sacks	4"
All Other Work Not Indicated On Details Or Geotech Report	5,000	1"	5.25 Sacks	3"

2. Concrete shall have water-cement ratio not exceeding six gallons (6 gal.) per sack.

3. Air-entraining admixture complying with ASTM C-260 shall be added at manufacturer's prescribed rate to result in concrete at point of placement having maximum air content as follows:
 - a. 4% for maximum 1-1/2" aggregate.
 - b. 6% for maximum 3/4" aggregate.
- C. Portland Cement

ASTM C-150, Type I, unless otherwise indicated.
- D. Aggregates

ASTM C-33, unless otherwise indicated.
- E. Water

Potable
- F. Admixtures
 1. Air-entraining admixture - ASTM C-260.
 2. Calcium Chloride - Do not use calcium chloride.
 3. Other - As specifically authorized in writing by the owner.

2.02 - ACCESSORIES

- A. Expansion Joint Material

Self expanding cork, ASTM D-1752, Type III, W.R. Grace/Servicised "4324". W.R. Meadows "Sealtight", or other product specifically approved by the owner.
- B. Curing Compounds

Membrane forming type complying with ASTM C-309, Type I, unless otherwise approved by the owner.
- C. Other Materials

Other materials not specifically described, but required for proper completion of the

work of this section, shall be selected by the contractor and subject to the owner's approval.

PART THREE - EXECUTION:

3.01 - SURFACE CONDITIONS

A. Inspection

1. Before work of this section, inspect installed work of other trades and verify that such work is complete to the point where this installation may properly begin.
2. Verify the items to be embedded in concrete are in place.
3. Verify that concrete may be placed to lines and elevations indicated on drawings or details, with required clearances for reinforcement.

B. Discrepancies

In the event of discrepancy, immediately notify the owner. Do not proceed with installation in areas of discrepancy until such discrepancies have been fully resolved.

3.02 - PREPARATION

A. General

1. Preparation for placement shall be in accordance with ACI 318 and as specified herein. Concrete shall not be placed until reinforcement, anchor bolts, pipes, conduits or other set-in items have been inspected and approved by the owner. Concrete shall not be placed on soft or water-soaked ground, in water, on frozen ground or on surfaces covered with frost. Wood forms shall be thoroughly wetted or oiled before concrete is placed.
2. Remove debris from areas in which concrete will be placed.
3. Thoroughly clean areas to ensure proper placement and bonding of concrete.
4. Thoroughly clean transporting and handling equipment.
5. Notify the owner at least forty-eight (48) hours before placing concrete.

B. Joints

Locate construction joints in slabs where indicated on plans.

3.03 - TESTING

A. General

1. Test concrete as follows:
 - a. Three (3) concrete cylinders for each concrete quality for each days pour.
 - b. Make and cure cylinders in accordance with ASTM C-31.
 - c. Test for compression in accordance with ASTM C-39 and C-192.
 - d. Test for compression in accordance with ASTM C-143 when directed by the owner.
2. Have available on the job at all times, four (4) six inch by twelve inch (6" x 12") steel cardboard test cylinders and one (1) standard slump cone.
3. Payment for testing of concrete shall be made by the contractor.

3.04 - PLACING CONCRETE

A. Method

1. Convey concrete from mixer to place of deposit by methods that will prevent separation and loss of material. Method of conveying concrete shall be reviewed with the owner prior to placement of concrete.
2. For chuting, pumping and pneumatically conveying concrete, use equipment of size and design as to ensure a practically continuous concrete flow at delivery end without loss or separation of materials.
3. Deposit concrete as nearly as possible in its final position to avoid segregation due to handling and flowing.
4. Place concrete as dry as possible consistent with good workmanship, never exceeding maximum specified slump.
5. Place concrete continuously or in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause formation of seams or planes of weakness. If a section cannot be placed

continuously, provide construction joint as herein specified.

6. Concrete shall be placed and protected as specified for temperature conditions:
 - a. Cold weather in accordance with ACI 604.
 - b. Hot weather in accordance with ACI 605.

B. Rate of Placement

1. Place concrete at such a rate that concrete is at all times plastic and flows readily between bare reinforcing bars.
2. Once placement is started, carry it on as a continuous operation until placement of section is complete.
3. do not place a greater area at one (1) time than can be properly finished, particularly during hot or dry weather.
4. Do not in any case place a slab or any other member greater than forty feet (40') in length without expansion joints as shown on the drawings.
5. Place concrete in form in horizontal layers not deeper than twenty-four inches (24") and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.
6. Arrangement of construction joint bulkheads shall allow for concrete between construction joints to be placed in a continuous operation, with not more than one (1) hour of elapsed time between pours or not more than two (2) hours when retarders are used. Before placing new concrete on or against hardened concrete, forms shall be re-tightened, hardened surfaces roughened and cleaned of foreign matter and latency and moistened with water. Hardened concrete shall be given a brush coat of neat cement grout, broomed into the surface immediately before placing new concrete.

C. Consolidation

1. Thoroughly consolidate concrete in accordance with recommended practices of ACI 309 to suit concrete type and project conditions.
2. Consolidate concrete placed in forms by mechanical vibrating equipment supplemented by hand-spading, rodding or tamping.

- a. Do not use vibrators to transport concrete within forms.
- b. Do not vibrate forms or reinforcing.
- 3. Place vibrators to rapidly penetrate concrete layer and at least six inches (6") into preceding layer; do not vibrate lower layers that have begun to set.
- 4. Limit vibration to the time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing segregation of mix.

D. Curbs and Gutters

Construct in accordance with locations, line, grade and details shown on the drawings in accordance with the applicable requirements of the South Carolina Department of Transportation Standard Specifications for Highway Construction, Latest Edition, Sections 701, 702 and 721. Match except no extruded curb and gutter will be allowed.

3.05 - FINISHING CONCRETE

A. Formed Surfaces

- 1. Provide as-cast rough form finish where concealed in finish work, unless otherwise specified.
- 2. Smooth-finished exposed concrete shall have forms stripped as soon as possible; after any necessary repairs are made, wet surface thoroughly and rub with No. 16 grit carborundum stone to remove fins and roughness. Spread paste resulting from rubbing uniformly over surface and allow to set; moisten and rub with No. 30 stone until smooth and uniform.
- 3. Broom finish for all sidewalks/walking surfaces.

B. Slabs

- 1. Wood float finish slabs after concrete has sufficiently set with no coarse aggregate visible. Sufficient pressure shall be used on wood floats to bring moisture to the surface. After the surface moisture has disappeared, surfaces shall be steel troweled to a smooth, even, dense finish, free from blemishes including trowel marks. Concrete which has been poured against forms shall have voids filled with grout and the surface troweled.

3.06 - CURING

A. General

1. Protect fresh concrete from premature drying and excessive cold or hot temperatures, mechanical injury or injury from rain or flowing water.
2. Maintain concrete without drying at relatively constant temperature for period of time necessary for cement hydration and proper concrete hardening.
3. Start initial curing as soon as free water has disappeared from surface after finishing. Keep continuously moist for not less than seventy-two (72) hours.
4. Start final curing procedures immediately following initial curing before concrete has dried. Continue final curing for at least seven (7) days in accordance with ACI 301, ACI 604 procedures. Avoid rapid drying at end of final curing period.

B. Formed Surfaces

Wet forms at least twice daily for at least ten (10) days after concrete placement.

C. Unformed surfaces

Initially cure unformed surfaces, such as slabs, by moisture curing as specified hereinafter, wherever possible.

D. Curing Methods

1. Moisture curing shall consist of any of the following methods:
 - a. Keeping concrete surface continuously wet by covering with water.
 - b. Continuous water-fog spray.
 - c. Cover concrete surface with waterproof paper, polyethylene film or white burlap-polyethylene sheet, thoroughly saturating and keeping continuously wet. Place cover over entire surface and around edges with four inch (4") laps over adjacent covers.
2. Moisture-cover curing shall consist of covering concrete surfaces with waterproof paper, polyethylene film or white burlap polyethylene sheet, lapping sides and edges three inches (3") minimum and sealing with

waterproof tape or adhesive. Immediately repair holes or tears during curing period.

3. Apply curing compound to horizontal surfaces when concrete is dry to the touch using power spray in two (2) coat continuous operation in accordance with manufacturer's directions.
4. Maintain concrete temperature between fifty and sixty degrees Fahrenheit (50 F to 60 F).
5. When atmospheric temperature is at eighty degrees Fahrenheit (80 F) or above, or during other climatic conditions which would cause rapid drying, make arrangements before concrete placement for installation of wind breaks or shading, and for fog spraying, wet sprinkling or moisture retaining covering, and provide other hot weather protection to complying with ACI 306.
6. During curing period, maintain concrete temperature as uniform as possible and protect from rapid atmospheric temperature changes. Avoid concrete temperature changes exceeding five degrees Fahrenheit (5 F) in any one (1) hour or twenty degrees Fahrenheit (20 F) in a twenty-four (24) hour period.

3.07 - DEFECTIVE WORK

A. Inspection

Immediately after forms and curing membranes are removed, inspect concrete surfaces and patch voids, rock pockets, form tie holes and other imperfections.

B. Patching

1. Minor Defective Areas

- a. Chip away to about one inch (1") leaving edges perpendicular to surface; wet area to be patched and at least six inches (6") adjacent to prevent water absorption.
- b. Patching compound shall be L&M Construction Chemicals, Inc. "Everbond", or other product approved by the owner; mixed and applied according to manufacturer. Apply patching mortar immediately.

- c. Patching mortar shall be of as dry consistency as possible within handling and placing requirements; thoroughly compact mortar by ramming into place.
- d. Screed off to leave patch slightly higher than surrounding surfaces; leave undisturbed for one to two (1-2) hours to permit initial shrinkage, then perform final finishing.
- e. Finish patch to match adjacent surfaces and keep wet for at least seven (7) days; provide required protective covering.

2. Major Defective Areas

If defects are serious or affect strength of structure or if patching does not satisfactorily restore quality and appearance of surface, the owner may require that concrete be removed and replaced in accordance with provisions of this section at no additional cost to the owner.

END OF SECTION

FOREST ACRES ENTRANCE SIGN

Construction Documents Prepared For CITY OF FOREST ACRES, SC

SHEET INDEX

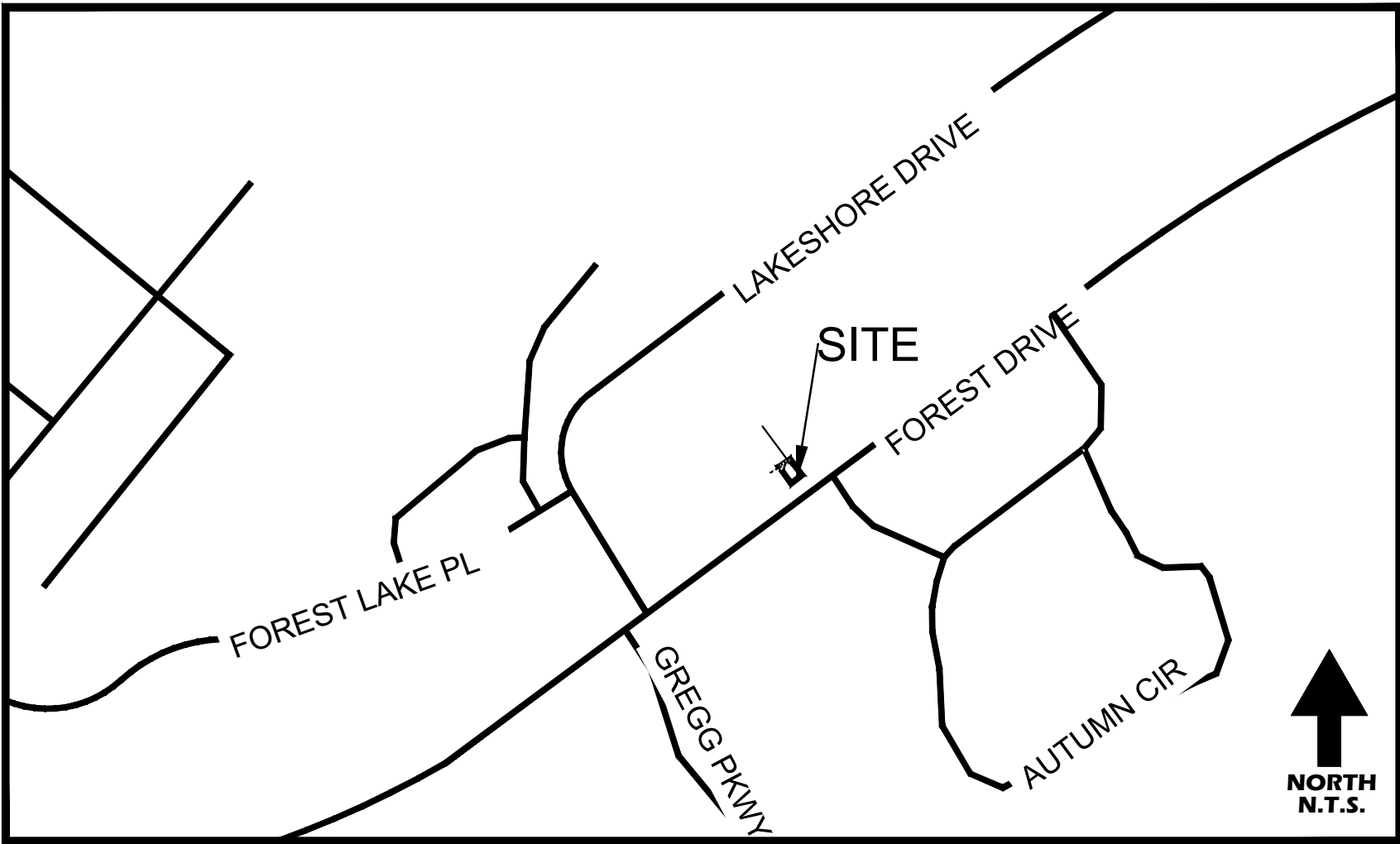
SITE WORK

- C1 COVER SHEET
- N1 GENERAL NOTES
- D1 EXISTING CONDITIONS / DEMOLITION PLAN
- L1 LAYOUT / GRADING PLAN
- LS1 LANDSCAPE PLAN
- DT1-DT2 SITE DETAILS

ELECTRICAL WORK

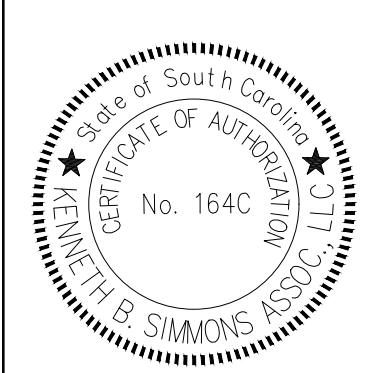
- E001 ELECTRICAL SYM. SCHEDULES, AND DETAILS
- E002 ELECTRICAL PLAN

LOCATION MAP



SITE ADDRESS: 5115 FOREST DR COLUMBIA SC, 29206
COORDINATES: 34° 01' 14.4"N -80° 57' 37.2"W
OWNER: CITY OF FOREST ACRES, SC
CONTACT: SHAUN GREENWOOD
EMAIL: SGREENWOOD@FORESTACRES.NET
PHONE: 803-782-9475

LANDSCAPE ARCHITECT/PROJECT MANAGER:
ANDREW M. CHEATHAM, PLA
KENNETH B. SIMMONS ASSOCIATES, LLC
EMAIL: DCHEATHAM@KBSALA.COM
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REVISIONS	NO.	DATE	COMMENT
	1	03/11/2025	SCDOT COMMENTS
	2		
	3		
	4	06/03/2025	ADD SET
	5		
	6		
	7		
	8		
	9		
	10		

DATE	03/03/2025
PROJ. NO.	2437
SCALE	
DRAWN	MCF
CHECKED	AMC

COVER SHEET
FOREST ACRES ENTRANCE SIGN
5115 FOREST DRIVE
COLUMBIA, SC 29206

SHEET NO.

C1

BIDDING NOTES:

- ALL PRODUCT SUBSTITUTION REQUESTS SHALL BE MADE PRIOR TO THE BID OPENING. IF APPROVED, SUBSTITUTION PRODUCT WILL BE MADE KNOWN TO ALL PLAN HOLDERS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY FOR SECURING CONSTRUCTION EQUIPMENT.

DEMOLITION NOTES:

- PRIOR TO DEMOLITION, THE CONTRACTOR SHALL PHOTOGRAPH THE EXISTING CONDITIONS OF ENTRANCE SIGN SITE AND BORDERING LEXINGTON MEDICAL PROPERTY.. THESE PHOTOGRAPHS SHALL BE SUBMITTED TO THE OWNER AT THE PRE-CONSTRUCTION MEETING. THE CONTRACTOR WILL BE RESPONSIBLE FOR RESTORING THESE AREAS TO PRE-CONSTRUCTION CONDITION PRIOR TO SUBSTANTIAL COMPLETION.

GENERAL NOTES:

- THESE DRAWINGS ARE BASED ON A SURVEY PROVIDED BY ALLIANCE ENGINEERING - DATED 12/19/2024, 1201 MAIN ST #2020, COLUMBIA, SC 29201, PHONE: 803-779-2078.
- THE CONTRACTOR SHALL PROVIDE THEIR OWN LINE AND GRADE.
- THE CONTRACTOR IS RESPONSIBLE FOR FIELD STAKING ALL CONSTRUCTION ELEMENTS AND REVIEWING THIS LAYOUT WITH THE OWNER PRIOR TO BEGINNING ANY WORK OF ANY KIND.
- ALL AREAS DISTURBED BY CONSTRUCTION NOT COVERED BY CONSTRUCTION/PAVING OR OTHERWISE NOTED SHALL BE GRASSED AS SPECIFIED OR RESTORED TO ORIGINAL CONDITIONS AS SPECIFIED AT NO ADDITIONAL COST TO THE OWNER.
- THE TERM TYPICAL (TYP.) INDICATES THE NUMBER OF PLACES A FEATURE OR DIMENSION APPEARS ON A DRAWING. THIS IS USED WHEN SIMILAR FEATURES ARE AVAILABLE AND TO AVOID UNNECESSARY DIMENSIONING AND NOTES. THE TERM "TYPICAL" WHEN ASSOCIATED WITH A DIMENSION OR FEATURE, MEANS THAT THIS DIMENSION OR FEATURE APPLIES TO THE LOCATIONS THAT APPEAR TO BE IDENTICAL IN SIZE AND CONFIGURATION.
- THE CONTRACTOR SHALL CLEAN CONSTRUCTION MATERIAL AND DEBRIS FROM ENTIRE SITE DAILY.

LAYOUT NOTES:

- IF IT IS DISCOVERED THAT THERE IS A DIFFERENCE BETWEEN SCALED DIMENSION AND LAYOUT, AND IF LAYOUT IS AFFECTED, THE CONTRACTOR SHALL STOP WORK AND NOTIFY THE OWNER'S REPRESENTATIVE IMMEDIATELY.
- IF IT IS DISCOVERED THAT THERE IS A CONFLICT BETWEEN THE LAYOUT SHEETS AND OTHER DISCIPLINES WORK, LAYOUT SHEETS SHALL PREVAIL.

SIGNAGE NOTES:

- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL FABRICATED SIGNAGE AND LETTERING PRIOR TO CONSTRUCTION FOR APPROVAL.
- CONTRACTOR SHALL SUBMIT SAMPLE OF ALL MATERIAL FOR OWNER'S REVIEW AND APPROVAL.
- ALL REBAR SHALL BE EMBEDDED AT LEAST 3" EACH WAY.

DOMINION UTILITY PROVIDER CONTACT:

MICHAEL KRAMER, EIT
ENGINEER I
METRO COLUMBIA CREW QUARTERS
DOMINION ENERGY SOUTH CAROLINA
803-217-7756

LEXINGTON MEDICAL CENTER CONTRACTOR CONTACT:

LAWRENCE GRESSETTE
BUCHANAN CONSTRUCTION - PROJECT MANAGER
803-609-9809
lgressette@buchananconstructionservices.com

GRADING AND DRAINAGE NOTES:

- THE CONTRACTOR SHALL PROVIDE ANY AND ALL SILTATION PROTECTION IN ACCORDANCE WITH THE STATE'S SEDIMENT AND EROSION CONTROL RULES AND REGULATIONS. THESE STRUCTURES SHALL BE MAINTAINED AS REQUIRED BY SC AND LOCAL EROSION & CONTROL RULES AND REGULATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPACTION IN ACCORDANCE WITH THE SPECIFICATIONS. THERE IS NO SEPARATE PAY ITEM FOR THIS WORK.
- THE CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE IN ALL AREAS AFTER CONSTRUCTION.

SCDOT NOTES:

- CONTRACTOR SHALL COMPLY WITH ALL SCDOT PERMIT REQUIREMENTS AND PROVISIONS. COPY OF APPROVED SCDOT PERMIT IS LOCATED IN CONTRACTOR SPECIFICATION BOOKLET.
- CONTRACTOR SHALL BE RESPONSIBLE FOR UTILIZING ALL APPLICABLE AND CURRENT SCDOT STANDARD DRAWINGS INCLUDING, BUT NOT LIMITED TO, THE DRAWINGS REFERENCED WITHIN THESE PLANS AND THE APPROVED PERMIT PACKAGE.
- CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AS REQUIRED BY SCDOT FOR ANY WORK PERFORMED IN RIGHT-OF-WAY.
- LIST OF REFERENCED SCDOT DRAWINGS AND RESOURCES:
 - 610-025-00 LANE CLOSURE - DAYTIME MULTILANE ROUTES
- TO ACCESS SCDOT DRAWINGS AT FULL SIZE, VISIT THE FOLLOWING WEBSITES:
SCDOT STANDARD DRAWINGS: <https://www.scdot.org/business/standard-drawings.aspx>

SEDIMENT AND EROSION CONTROL NOTES:

- SILT FENCES AND SEDIMENT CONTROL STRUCTURES SHALL BE INSTALLED BEFORE ANY CONSTRUCTION IS TO BEGIN AS DIRECTED BY SCDES RULES AND REGULATIONS.
- INSTALL PERMANENT VEGETATIVE COVER AND LONG-TERM EROSION CONTROL PROTECTION MEASURES AND STRUCTURES AS SOON AS PRACTICAL IN THE DEVELOPMENT PROCESS.
- IN ANY AREAS DISTURBED BY CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING SEDIMENT & EROSION ACCORDING TO STATE LAW. SILT BARRIERS SHALL BE MAINTAINED IN PLACE AND IN GOOD CONDITION UNTIL GROUND COVER IS ESTABLISHED AND AS NEEDED TO COMPLY WITH STATE LAW.
- EROSION CONTROL MAT SHALL BE INSTALLED ON ALL SLOPES 3:1 OR GREATER.
- GRASSING AND STABILIZATION SCHEDULE CAN BE FOUND IN THE SPECIFICATIONS.

SCDES NOTES:

(THESE NOTES ARE A REQUIREMENT OF THE SC DEPARTMENT OF ENVIRONMENTAL SERVICES FOR STORM WATER PERMITTING)

- IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
- STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAY AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW.
 - WHERE STABILIZATION BY THE 14TH DAY IS PRECLUDED BY SNOW COVER OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE.
 - WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK. IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BMP HAS BEEN INAPPROPRIATELY OR INCORRECTLY INSTALLED, THE PERMITTEE MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BMP WITHIN 48 HOURS OF IDENTIFICATION.
- PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
- RESIDENTIAL SUBDIVISIONS REQUIRE EROSION CONTROL FEATURES FOR INFRASTRUCTURE AS WELL AS FOR INDIVIDUAL LOT CONSTRUCTION. INDIVIDUAL PROPERTY OWNERS SHALL FOLLOW THESE PLANS DURING CONSTRUCTION OR OBTAIN APPROVAL OF AN INDIVIDUAL PLAN IN ACCORDANCE WITH S.C REG. 72-300 ET SEQ. AND SCR100000.
- TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
- ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
- LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
- A COPY OF THE SWPPP, INSPECTIONS RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED. STANDARD NOTES
- INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
- MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING. WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE;
- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGES ARE TO BE ROUTED THROUGH APPROPRIATE BMPS (SEDIMENT BASIN, FILTER BAG, ETC.).
- THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
 - WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL;
 - WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
 - FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
 - SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING.
- AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- IF EXISTING BMPS NEED TO BE MODIFIED OR IF ADDITIONAL BMPS ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATION MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE. IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPS MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
- A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.



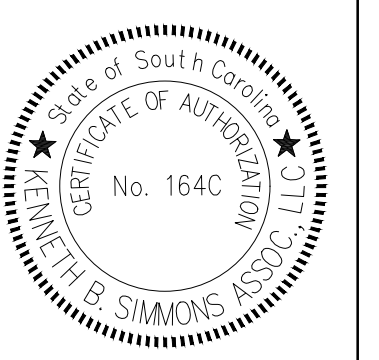
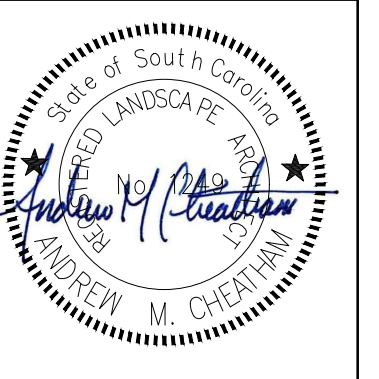
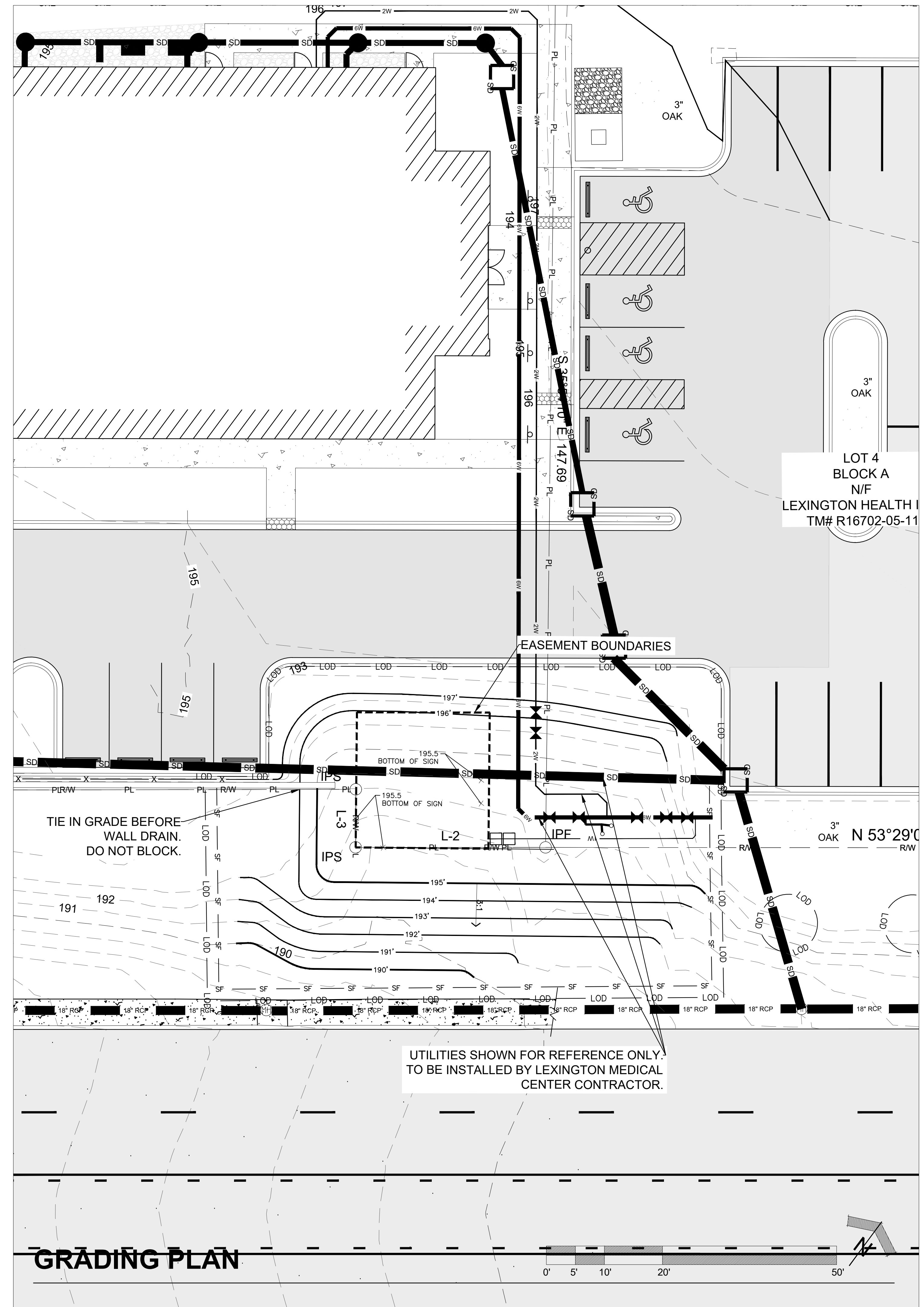
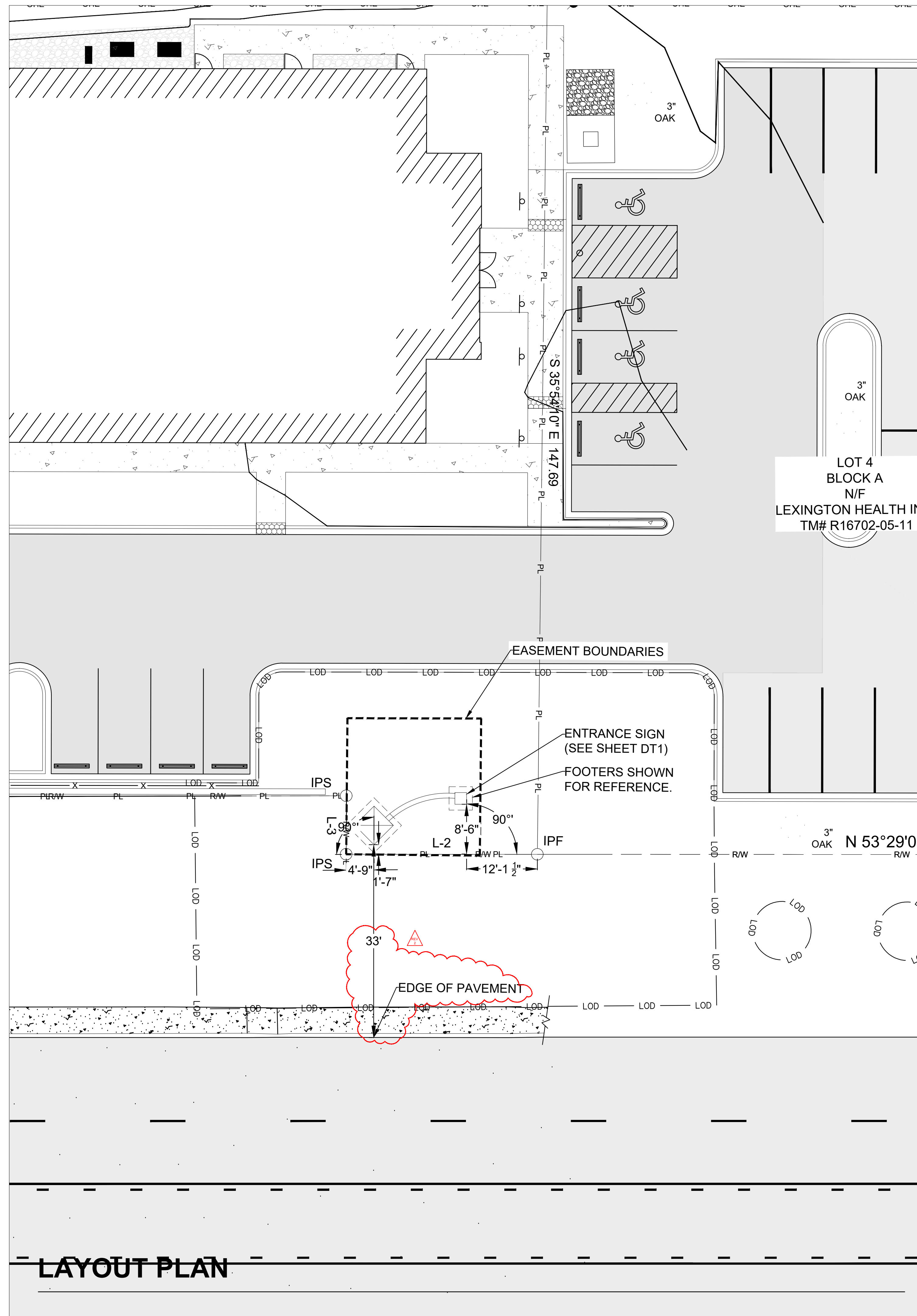
K&S
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Columbia, South Carolina 29204
(803) 234-3797
www.kbsa.com

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REVISIONS		DATE	
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1	SCDOT COMMENTS	03/11/2025	
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SCALE			
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GENERAL NOTES
FOREST ACRES ENTRANCE SIGN
5115 FOREST DRIVE
COLUMBIA, SC 29206

SHEET NO.
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LINE NUMBER	NO.	COMMENT	DATE
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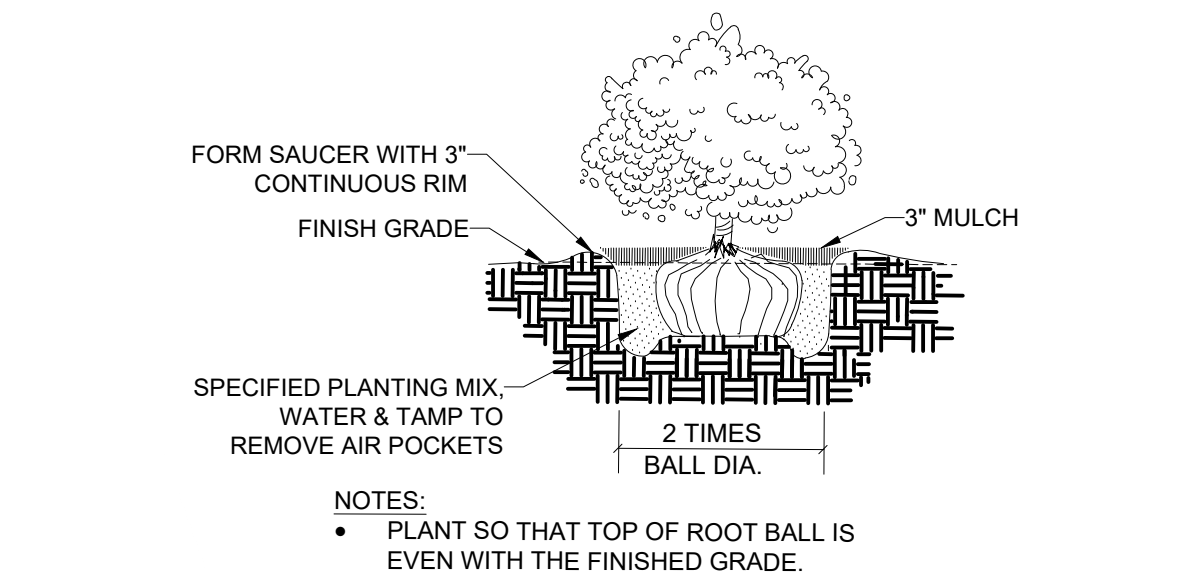
DATE	03/03/2025
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LAYOUT AND GRADING PLANS
FOREST ACRES ENTRANCE SIGN
5115 FOREST DRIVE
COLUMBIA, SC 29206

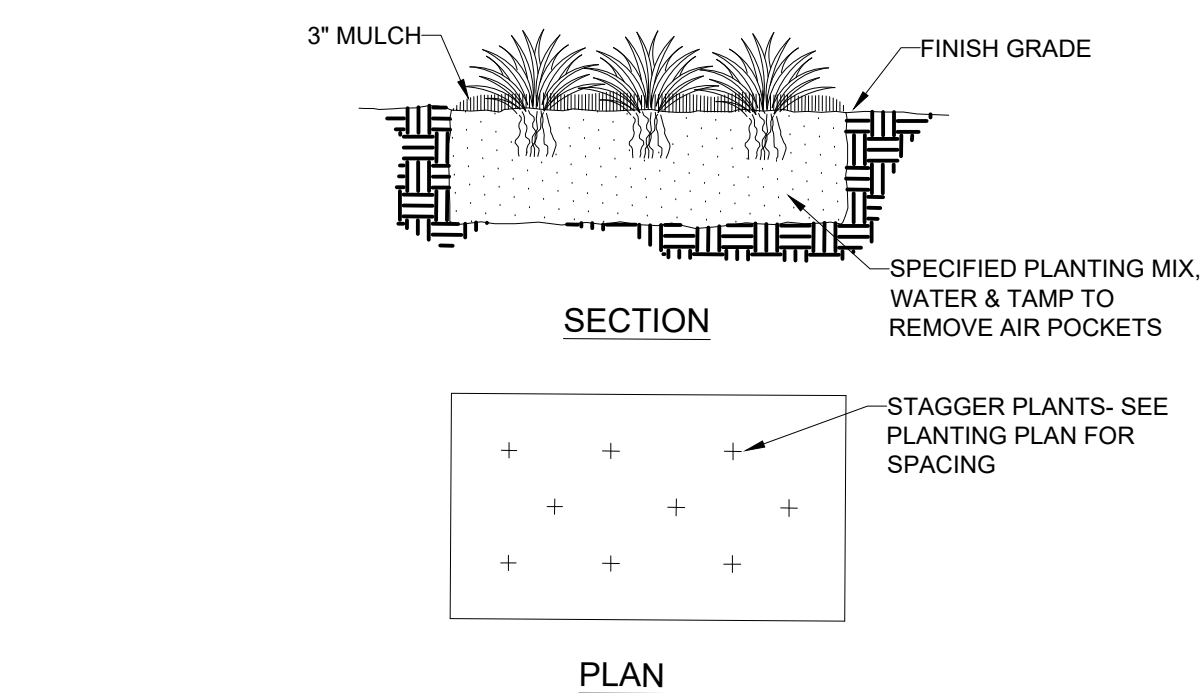
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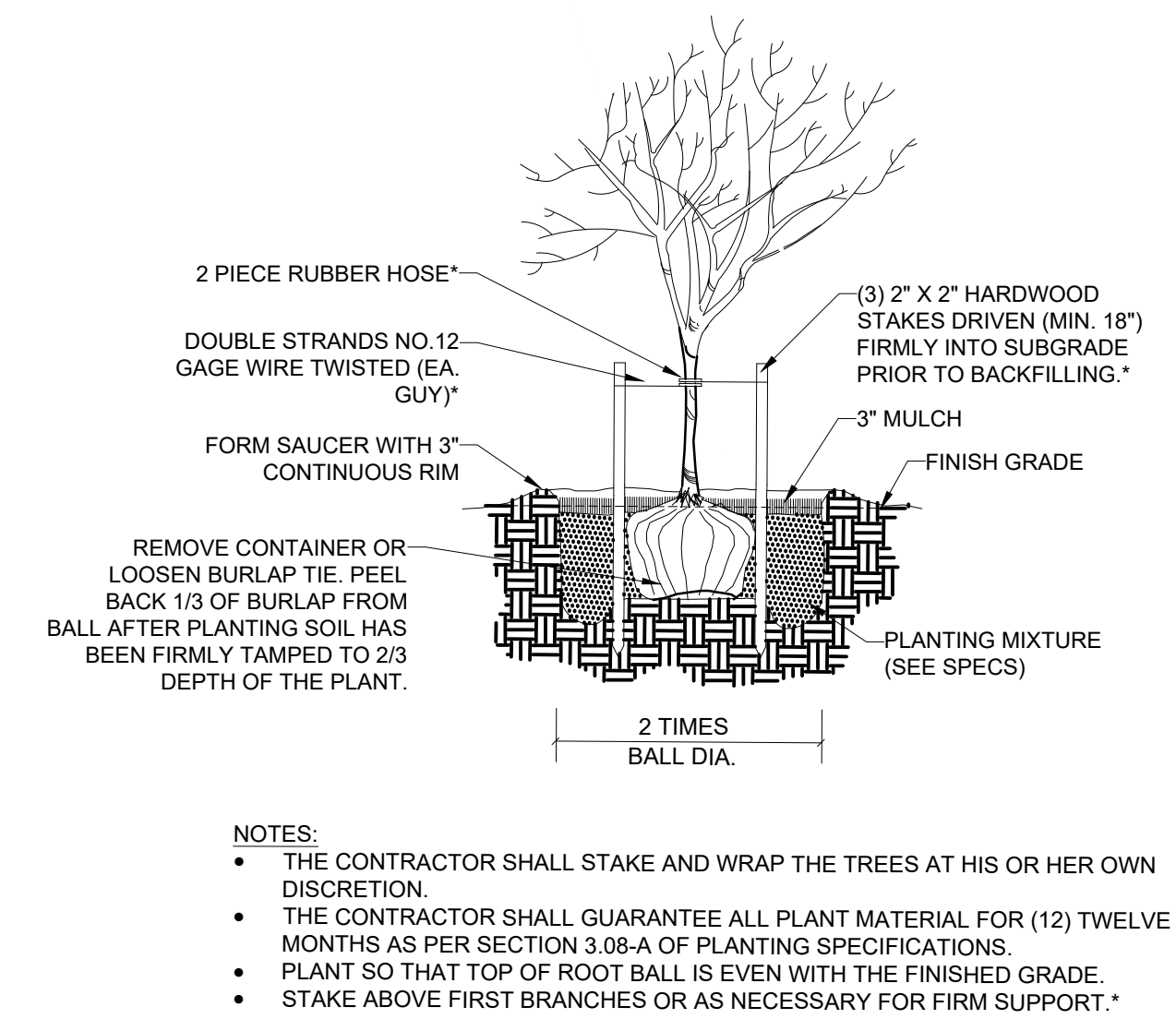
**NOTE: REFER TO PLANT LIST FOR PROPER DETAIL OF EACH PLANT MATERIAL.



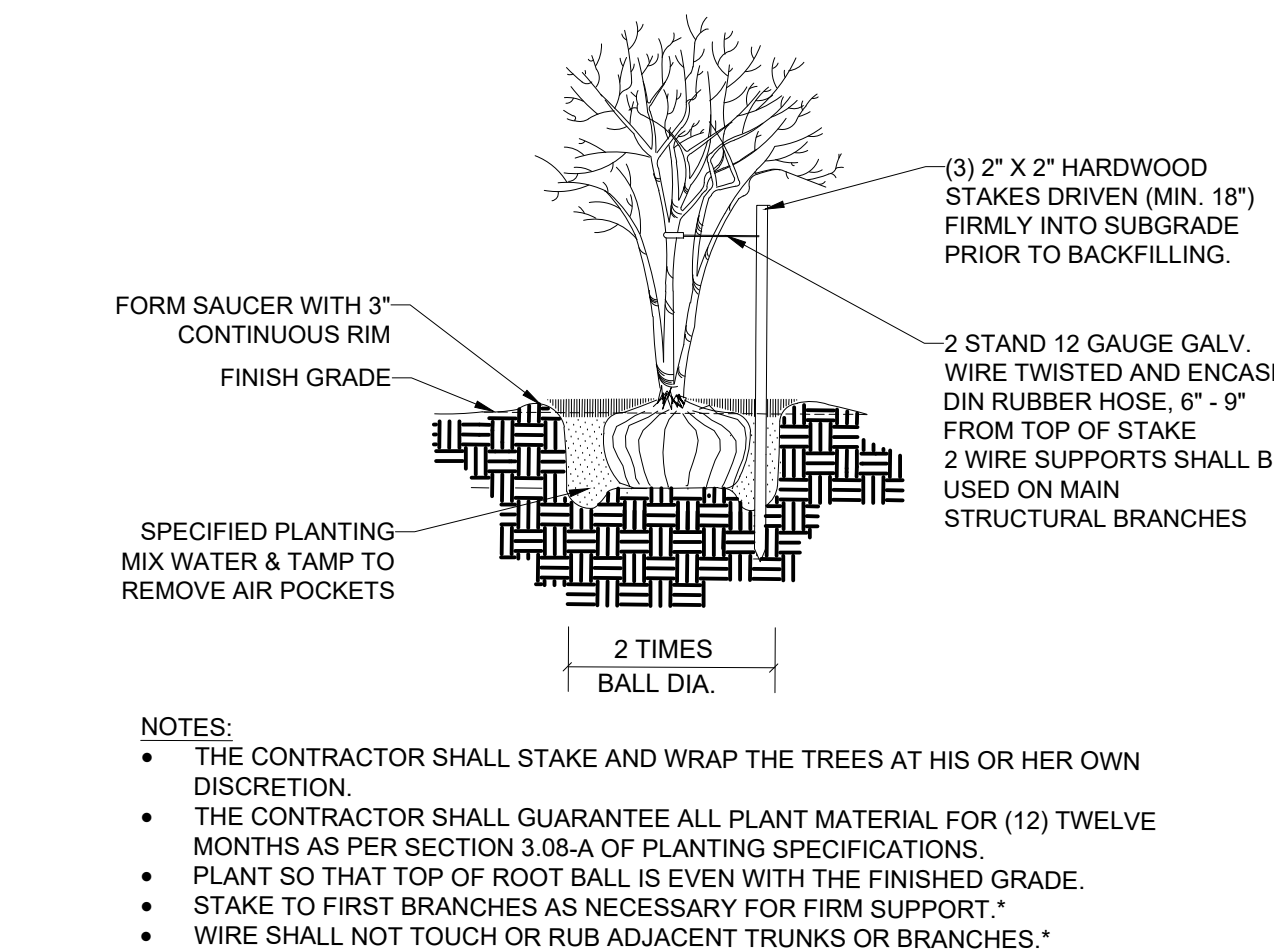
SHRUB PLANTING DETAIL
NOT TO SCALE



PLANTING BED DETAIL
NOT TO SCALE



LARGE TREE PLANTING AND STAKING DETAIL
NOT TO SCALE



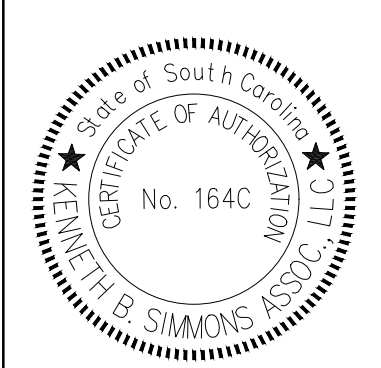
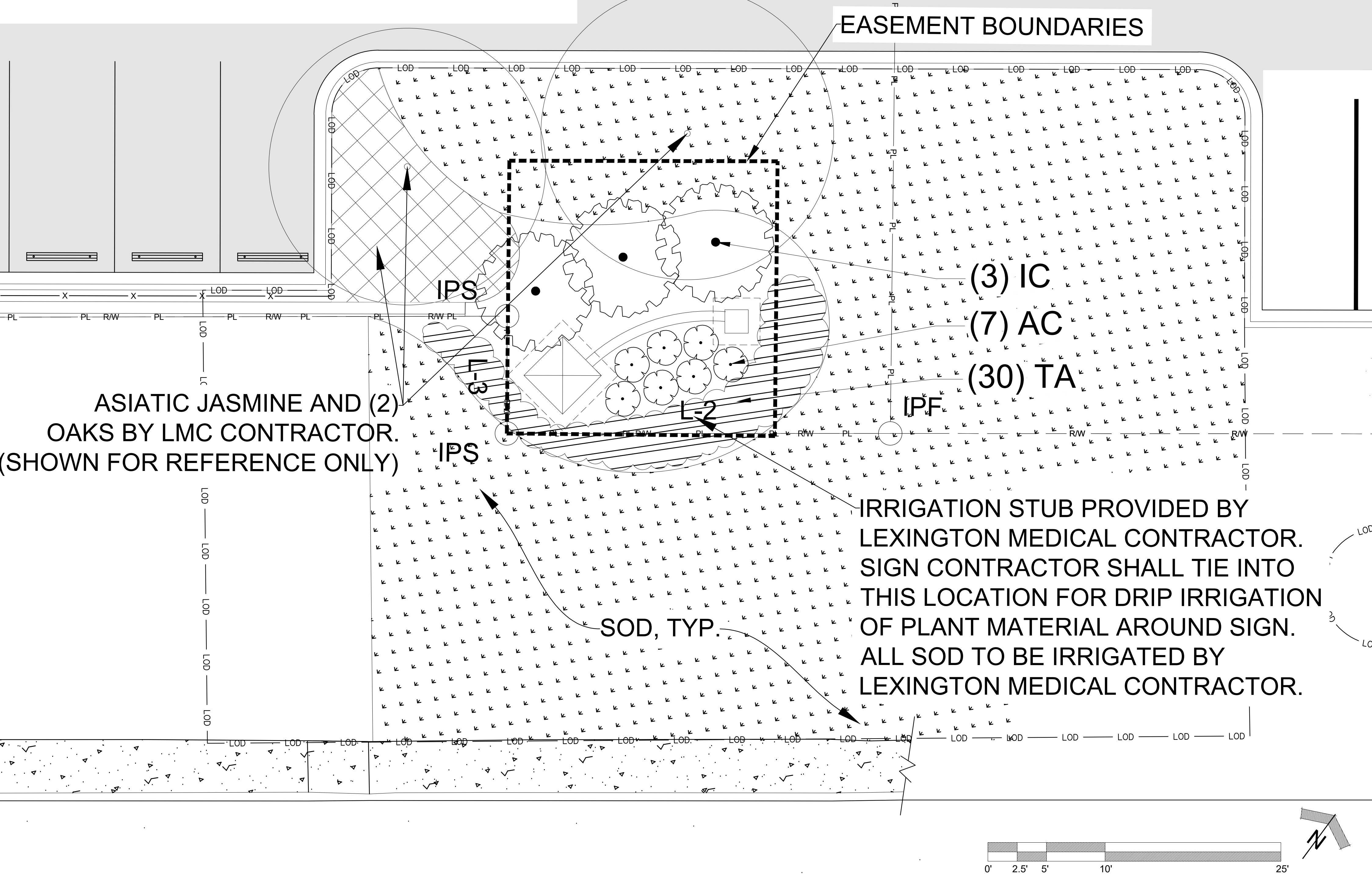
SMALL & MULTI-TRUNK TREE PLANTING & STAKING DETAIL
NOT TO SCALE

PLANTING NOTES

1. THE DRAWING IS BASED ON A SITE PLAN PROVIDED BY ALLIANCE ENGINEERING, DATED 12/19/2024.
2. QUANTITIES ARE SHOWN FOR INFORMATION ONLY. THE CONTRACTOR IS RESPONSIBLE FOR HIS OR HER OWN QUANTITIES. IF THERE IS A CONFLICT BETWEEN QUANTITIES AND SPACING, SPACING SHALL PREVAIL.
3. ALL NEW TREES, SHRUBS, LAWN, AND GROUNDCOVER SHALL BE MECHANICALLY IRRIGATED.
4. ALL TREES AND SHRUBS SHALL BE MULCHED WITHIN TWO DAYS AFTER PLANTING. MULCH SHALL COVER THE AREA OF THE PLANTING PIT, BED, OR SAUCER AROUND EACH PLANT.
5. ANY AREA DISTURBED DURING CONSTRUCTION NOT COVERED BY NEW CONSTRUCTION, SODDING, AND OR PLANT BEDS SHALL BE PLACED IN SOD, AS SPECIFIED AT NO ADDITIONAL COST TO THE OWNER.
6. ALL PLANTS SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE AMERICAN STANDARD FOR NURSERY STOCK, LATEST EDITION. PLANT SIZE (HEIGHT/SPREAD/CALIPER) TAKES PRECEDENCE OVER CONTAINER SIZE AS THE MOST DESCRIPTIVE SPECIFICATION.
7. THE TERM "TYPICAL" (TYP.) WHEN ASSOCIATED WITH A DIMENSION OR FEATURE, MEANS THAT THIS DIMENSION OR FEATURE APPLIES TO THE LOCATIONS THAT APPEAR TO BE IDENTICAL IN SIZE AND CONFIGURATION.

PLANT SCHEDULE

	CODE	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPACING	QTY	REMARKS
SHRUBS	AC	ABELIA X 'RADIANCE'	'RADIANCE' ABELIA	#7	24" HT	36" O.C.	7	
	IC	ILEX LATIFOLIA 'ILDG'	COOL FENCES™ LUSTERLEAF HOLLY	-	10'-12' HT	10' O.C.	3	
SYMBOL	CODE	BOTANICAL NAME	COMMON NAME	CONT	SPACING		QTY	REMARKS
GROUND COVERS								
	EO	EREMOCHLOA OPHIUROIDES	CENTPEDE SOD	SOD			3,097 SF	
	TA	TRACHELOSPERMUM ASIATICUM	ASIATIC JASMINE	#1	30" O.C.		30	



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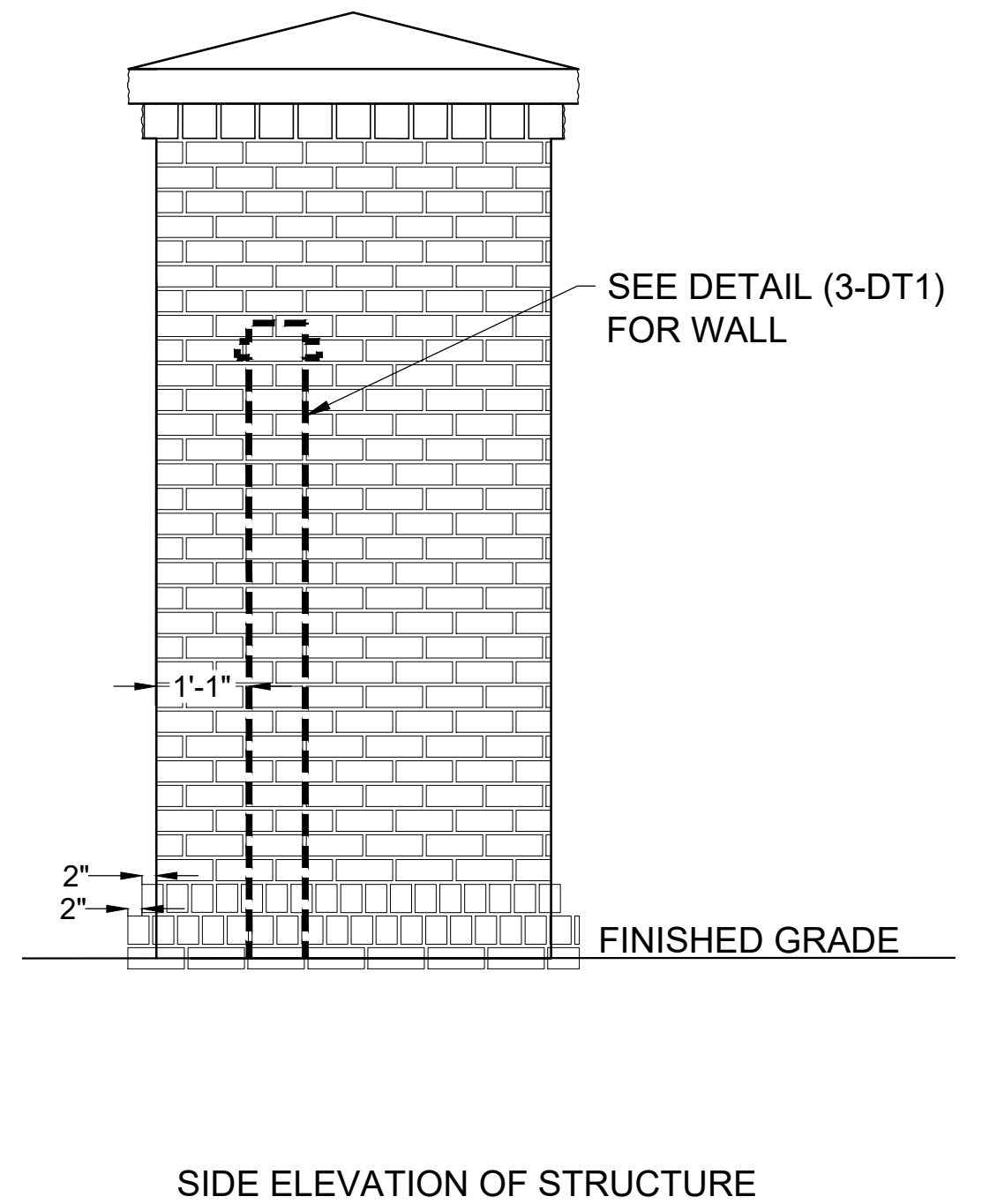
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LANDSCAPE PLAN
FOREST ACRES ENTRANCE SIGN
5115 FOREST DRIVE
COLUMBIA, SC 29206

SHEET NO.

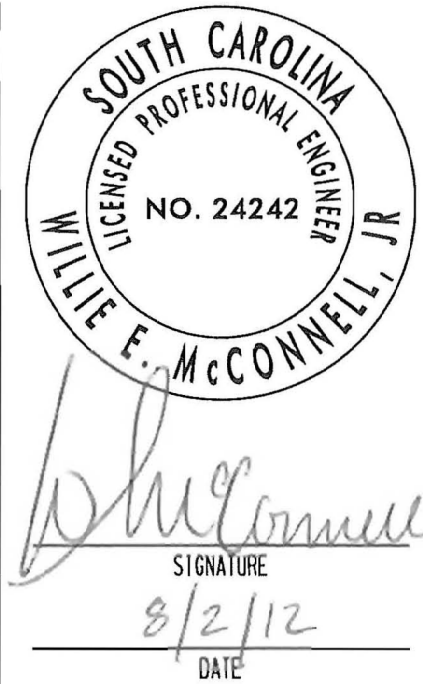
LS1

1. EVERY THIRD COURSE, INSTALL $\frac{1}{2}$ " MASONRY WIRE.
2. LOGO / LINEWORK WILL BE PROVIDED IN CAD TO SELECTED CONTRACTOR.
3. STEEL PLATE SHALL BE $\frac{1}{4}$ " THICK, BLACK POWDER COATED. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR STEEL PLATE ATTACHMENT PRIOR TO CONSTRUCTION. DETAIL 2-DT1 SHOWN FOR INFORMATIONAL PURPOSES ONLY.
4. CAST ALUMINUM DIMENSIONAL LETTERS. COLOR AND FONT TO BE SELECTED FROM MANUFACTURER'S STANDARD LIST. CONTRACTOR SHALL SUBMIT SHOP DRAWING OF ATTACHMENT TO WALL.
5. ALL BRICK SHALL BE WATSONTOWN #630 OLD WILLIAMSBURG MODULAR WITH HOLCIM DESERT BUFF COLORED, TYPE N, MORTAR.
6. STUCCO SHALL BE StoPowerwall STUCCO OR APPROVED EQUAL. COLOR TO BE CHOSEN FROM MANUFACTURER'S LIST. INSTALL PER MANUFACTURERS RECOMMENDATIONS.



REFERENCES

WORK ZONE TRAFFIC CONTROL ENGINEER



#	DATE	CHK	DESCRIPTION
6			
5			
4			
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2			
1	2-15-11	JCS	GENERAL UPDATE
0	8-22-07	JCS	DRAWING NO. UPDATE

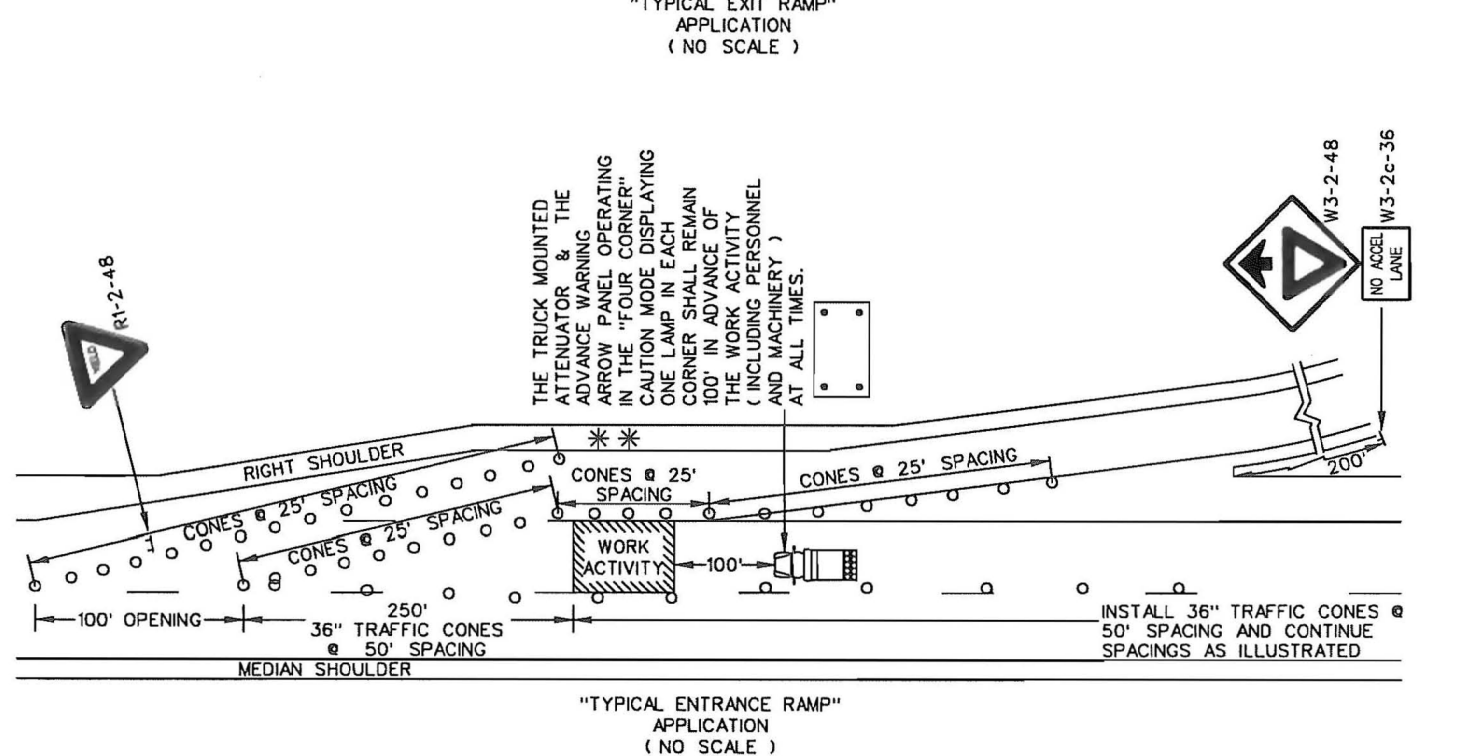
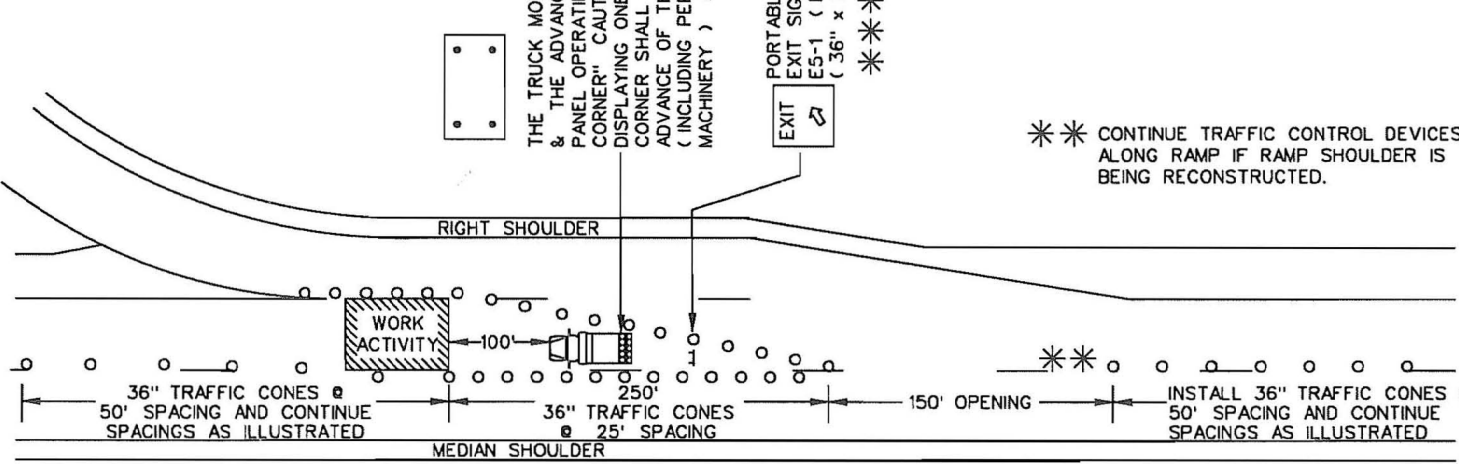
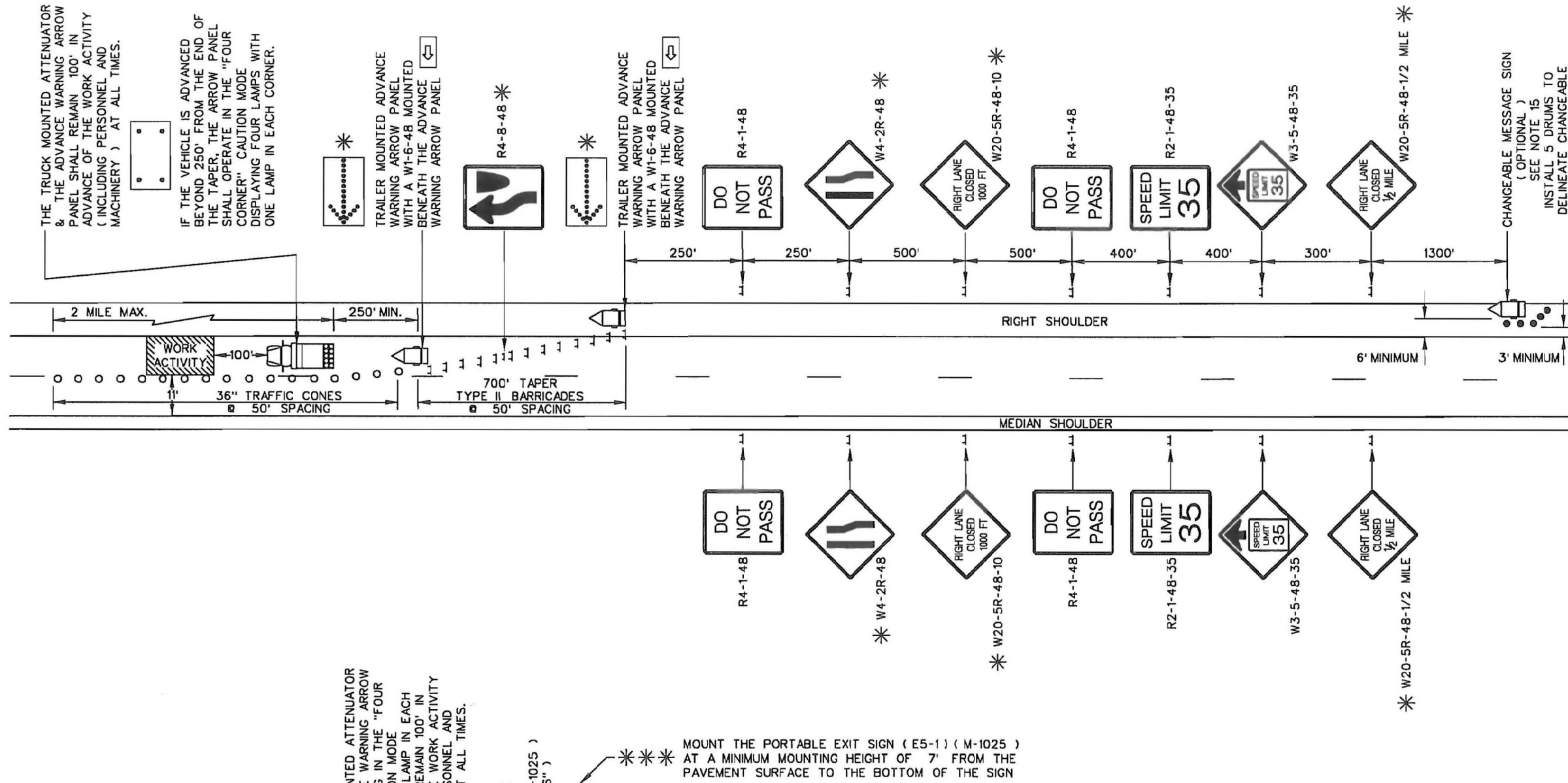
SCDOT
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
DESIGN STANDARDS OFFICE
955 PARK STREET
ROOM 405
COLUMBIA, SC 29201

STANDARD DRAWING

LANE CLOSURE DAYTIME MULTILANE PRIMARY ROUTES

610-025-00

EFFECTIVE LETTING DATE: JAN, 2013 THIS DRAWING IS NOT TO SCALE



LEFT LANE CLOSURE

1. SIGNS ILLUSTRATED ARE FOR A RIGHT LANE CLOSURE.
2. WHEN CLOSING THE LEFT TRAVEL LANE, USE THE FOLLOWING:
2 - W20-5L-48-10 2 - W20-5L-48-1/2 MILE
1 - W4-2L-48 1 - R4-7-48
3. THE STRIPES ON THE BARRICADES TO THE LEFT OF TRAFFIC SHALL SLOPE DOWNWARD FROM THE UPPER LEFT TO THE LOWER RIGHT.
4. THE FLASHING ARROW AND THE "LARGE ARROW" SIGN (W1-6-48) SHALL POINT TO THE RIGHT.
5. THE CHANGEABLE MESSAGE SIGN SHALL FLASH ALTERNATELY TO READ "LEFT LANE CLOSED", "MERGE RIGHT".

PORTABLE TRUCK MOUNTED ATTENUATOR

1. UTILIZE A TRUCK MOUNTED ATTENUATOR ATTACHED TO THE REAR OF A TRUCK WITH A MINIMUM GROSS VEHICLE WEIGHT (GVW) OF 15,000 POUNDS (ACTUAL WEIGHT). IF THE ADDITION OF SUPPLEMENTAL WEIGHT TO THE VEHICLE AS BALLAST IS NECESSARY, CONTAIN THE MATERIAL WITHIN A STRUCTURE CONSTRUCTED OF STEEL. CONSTRUCT THIS STEEL STRUCTURE TO HAVE A MINIMUM OF FOUR SIDES AND A BOTTOM. A TOP IS OPTIONAL. BOLT THIS STRUCTURE TO THE FRAME OF THE TRUCK. UTILIZE A SUFFICIENT NUMBER OF FASTENERS FOR ATTACHMENT OF THE STEEL STRUCTURE TO THE FRAME OF THE TRUCK TO ENSURE THE STRUCTURE WILL NOT SEPARATE FROM THE FRAME OF THE TRUCK DURING AN IMPACT UPON THE ATTACHED TRUCK MOUNTED ATTENUATOR. UTILIZE EITHER DRY LOOSE SAND OR STEEL REINFORCED CONCRETE FOR BALLAST MATERIAL WITHIN THE STEEL STRUCTURE TO ACHIEVE THE NECESSARY WEIGHT. THE BALLAST MATERIAL SHALL REMAIN CONTAINED WITHIN THE CONFINES OF THE STEEL STRUCTURE AND SHALL NOT PROTRUDE FROM THE STEEL STRUCTURE IN ANY MANNER.
2. LOCATE THE TRUCK MOUNTED ATTENUATOR 100 FEET IN ADVANCE OF THE WORK AREA UNLESS OTHERWISE SPECIFIED.
3. PROVIDE, INSTALL AND MAINTAIN THE TRUCK MOUNTED ATTENUATOR AS SPECIFIED BY THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.
4. DUE TO THE WEIGHT OF A TRUCK MOUNTED ATTENUATOR, THE TRUCK MOUNTED ATTENUATOR SUPPLEMENTED WITH AN ADVANCE WARNING ARROW PANEL MAY BE REPLACED WITH A TRAILER MOUNTED ADVANCE WARNING ARROW PANEL WHEN THIS TRAFFIC CONTROL SETUP IS UTILIZED FOR ASPHALT CONCRETE PAVEMENT OPERATIONS. REPLACEMENT WITH A TRAILER MOUNTED ADVANCE WARNING ARROW PANEL SHALL REQUIRE THE ENGINEER'S APPROVAL.

GENERAL NOTES

1. ALL SIGN LOCATIONS ARE TO BE MEASURED FROM THE WORK AREA. WORK UNITS FOR THE PROJECT WILL BE DETERMINED BY THE ENGINEER AND AS INDICATED IN THE CONTRACT.
2. INSTALL ADVANCE WARNING SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS NO LESS THAN 4 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH EARTH SHOULDERS AND NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE SIGN TO THE NEAR EDGE OF AN ADJACENT TRAVEL LANE ON ROADWAYS WITH PAVED SHOULDERS. WHEN CURB & GUTTER IS PRESENT, INSTALL THE SIGN NO LESS THAN 2 FEET FROM THE NEAR EDGE OF THE SIGN TO THE FACE OF THE CURB.
3. SPACINGS INDICATED ARE FOR NORMAL CONDITIONS. ADJUSTMENTS MAY BE REQUIRED DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENTS OR OTHER SIGHT DISTANCE RESTRICTIONS.
4. ALL SIGNS MOUNTED ON PORTABLE SIGN SUPPORTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 5 FEET FROM THE GROUND TO THE BOTTOM OF THE SIGN. ALL SIGNS MOUNTED ON GROUND MOUNTED U-CHANNEL POSTS OR SQUARE STEEL TUBE POSTS SHALL HAVE A MINIMUM MOUNTING HEIGHT OF 7 FEET FROM THE GRADE ELEVATION OF THE NEAR EDGE OF THE ADJACENT TRAVEL LANE TO THE BOTTOM OF THE SIGN UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT. MOUNT ALL SIGNS STRAIGHT AND LEVEL AND WITH THE FACE OF THE SIGNS PERPENDICULAR TO THE SURFACE OF THE ROADWAY.
5. REFLECTORIZE ORANGE ADVANCE WARNING SIGNS AND ANY ORANGE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A FLUORESCENT ORANGE COLORED PRISMATIC RETROREFLECTIVE SHEETING. REFLECTORIZE WHITE REGULATORY SIGNS AND ANY WHITE AREAS OF A MULTI-COLORED ADVANCE WARNING SIGN WITH A WHITE COLORED PRISMATIC RETROREFLECTIVE SHEETING.
6. ALL TRAFFIC CONTROL DEVICES SHALL COMPLY WITH ALL NCHRP REPORT 350 REQUIREMENTS AND SHALL REQUIRE APPROVAL BY THE DEPARTMENT. ONLY THOSE TRAFFIC CONTROL DEVICES INCLUDED ON THE "APPROVED PRODUCTS LIST FOR TRAFFIC CONTROL DEVICES IN WORK ZONES" ARE CONSIDERED ACCEPTABLE FOR USE. THIS LIST MAY BE ACCESSED ON THE DEPARTMENT'S WEB SITE AT: www.scdot.org.
7. THE CONTRACTOR SHALL PROVIDE AND UTILIZE ANY SPECIAL SIGN MOUNTING ASSEMBLIES AND HARDWARE THAT MAY BE NECESSARY FOR INSTALLING AND MOUNTING SIGNS IN AREAS OF CONCRETE MEDIAN BARRIER, BRIDGE PARAPET WALLS OR DOUBLETACED GUARDRAIL.
8. REFLECTORIZATION OF 36" TRAFFIC CONES USED DURING DAYLIGHT HOURS IS NOT REQUIRED. IF THIS TRAFFIC CONTROL SETUP EXTENDS INTO THE NIGHTTIME HOURS, REPLACE ALL 36" TRAFFIC CONES WITH EITHER PORTABLE PLASTIC DRUMS OR 42" OVERSIZED TRAFFIC CONES. REFLECTORIZE ALL PORTABLE PLASTIC DRUMS AND 42" OVERSIZED TRAFFIC CONES WITH TYPE III FLEXIBLE PRISMATIC RETROREFLECTIVE SHEETING UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
9. REFLECTORIZE ALL BARRICADES WITH A TYPE VII OR IX PRISMATIC RETROREFLECTIVE SHEETING ON ALL PROJECTS LET TO CONTRACT AFTER MAY 1, 2012 UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
10. TYPE II BARRICADES SHALL HAVE A MINIMUM WIDTH OF 3 FEET UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT.
11. CONDUCT THE WORK IN SUCH A MANNER THAT WILL MINIMIZE ENCRoACHMENT OF TRAFFIC CONTROL DEVICES, EQUIPMENT, PERSONNEL, MATERIALS OR ANY WORK RELATED VEHICLES ONTO AN ADJACENT TRAVEL LANE OPEN TO TRAFFIC. INSTALL, MAINTAIN AND ADJUST THE TRAFFIC CONTROL DEVICES AS NECESSARY TO ENSURE PROPER DELINEATION OF THE WORK AREA.
12. LANE CLOSURES ARE RESTRICTED TO MAXIMUM LENGTHS OF 2 MILES UNLESS OTHERWISE DIRECTED BY THE SPECIAL PROVISIONS AND/OR THE DEPARTMENT.
13. IF WORK IS BEING CONDUCTED SIMULTANEOUSLY AT TWO DIFFERENT LOCATIONS WITHIN THE SAME TRAVEL LANE UNDER TWO SEPARATE LANE CLOSURES ON A PRIMARY ROADWAY WITH A POSTED REGULATORY SPEED LIMIT OF 40 MPH OR GREATER, SEPARATE THE TWO LANE CLOSURES BY NO LESS THAN 2 MILES FROM THE END OF THE FIRST CLOSURE THAT A MOTORIST WILL ENCOUNTER TO THE BEGINNING OF THE TAPER OF THE SECOND CLOSURE.
14. IF WORK IS BEING CONDUCTED SIMULTANEOUSLY AT TWO DIFFERENT LOCATIONS IN THE SAME DIRECTION BUT WITHIN DIFFERENT TRAVEL LANES UNDER TWO SEPARATE LANE CLOSURES ON A PRIMARY ROADWAY WITH A POSTED REGULATORY SPEED LIMIT OF 40 MPH OR GREATER, SEPARATE THE TWO LANE CLOSURES BY NO LESS THAN 4 MILES FROM THE END OF THE FIRST CLOSURE THAT A MOTORIST WILL ENCOUNTER TO THE BEGINNING OF THE TAPER OF THE SECOND CLOSURE.
15. UTILIZATION OF A CHANGEABLE MESSAGE SIGN IS OPTIONAL. WITH THIS TRAFFIC CONTROL SETUP, HOWEVER, WHEN A CHANGEABLE MESSAGE SIGN IS UTILIZED, INSTALL THE SIGN AS ILLUSTRATED ON THIS STANDARD DRAWING UNLESS OTHERWISE DIRECTED BY THE SPECIAL PROVISIONS, THE PLANS AND/OR THE ENGINEER. INSTALL THE CHANGEABLE MESSAGE SIGN NO LESS THAN 6 FEET FROM THE NEAR EDGE OF THE ADJACENT TRAVEL LANE AND SUPPLEMENT THE SIGN LOCATION WITH NO LESS THAN 5 PORTABLE PLASTIC DRUMS FOR DELINEATION AS ILLUSTRATED. 35" STANDARD TRAFFIC CONES OR 42" OVERSIZED TRAFFIC CONES ARE PROHIBITED AS SUBSTITUTES FOR THE PORTABLE PLASTIC DRUMS IN THIS APPLICATION. DURING A RIGHT LANE CLOSURE, THE SIGN SHOULD FLASH ALTERNATELY TO READ "RIGHT LANE CLOSED", "MERGE LEFT" AT A RATE THAT WILL PERMIT MOTORISTS TO READ BOTH MESSAGES AT LEAST ONCE.
16. THE DEPARTMENT RESERVES THE RIGHT TO RESTRICT WORK OPERATIONS AND/OR WITHHOLD THE MONTHLY ESTIMATE IF THE TRAFFIC CONTROL IS NOT PROPERLY INSTALLED AND MAINTAINED AS DIRECTED BY THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, THE STANDARD DRAWINGS, THE PLANS AND/OR THE ENGINEER.
17. THIS TYPICAL TRAFFIC CONTROL SETUP APPLIES TO THE INSTALLATION OF A LANE CLOSURE ON A PRIMARY ROADWAY WITH A POSTED REGULATORY SPEED LIMIT OF 40 MPH OR GREATER.

ADVANCE WARNING ARROW PANEL

ALL ADVANCE WARNING ARROW PANELS SHALL BE 48" x 96" WITH A MINIMUM LEGIBILITY DISTANCE OF 1 MILE. PLACEMENT OF AN ADVANCE WARNING ARROW PANEL MAY REQUIRE ADJUSTMENTS DUE TO HORIZONTAL AND/OR VERTICAL ALIGNMENT OR OTHER SIGHT DISTANCE RESTRICTIONS. THE PANEL FACE SHALL BE NONREFLECTIVE BLACK. ALL ADVANCE WARNING ARROW PANELS SHALL COMPLY WITH THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, LATEST EDITION.

WHEN AN ADVANCE WARNING ARROW PANEL IS REQUIRED TO OPERATE IN THE CAUTION MODE, THE ADVANCE WARNING ARROW PANEL SHALL DISPLAY THE "FOUR CORNERS" CAUTION MODE WITH ONE LAMP IN EACH CORNER. DISPLAY OF ANY OTHER TYPE OF CAUTION MODE OTHER THAN THE "FOUR CORNERS" CAUTION MODE SUCH AS THE "FLASHING BAR" OR THE "ALTERNATING DIAMOND" CAUTION MODES ARE UNACCEPTABLE AND PROHIBITED.

LEGEND

○ 36" TRAFFIC CONES

1 LANE CLOSURE - DAYTIME MULTILANE PRIMARY ROUTES (SCDOT 610-025-00) DT2 NOT TO SCALE



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REVISIONS	DATE	NO.	COMMENT
1	03/11/2025	1	SCDOT COMMENTS
2		2	
3		3	
4		4	RED SET
5		5	
6		6	
7		7	
8		8	
9		9	
10		10	


















DATE	03/03/2025
PROJ. NO.	2437
SCALE	
DRAWN	MCF
CHECKED	AMC

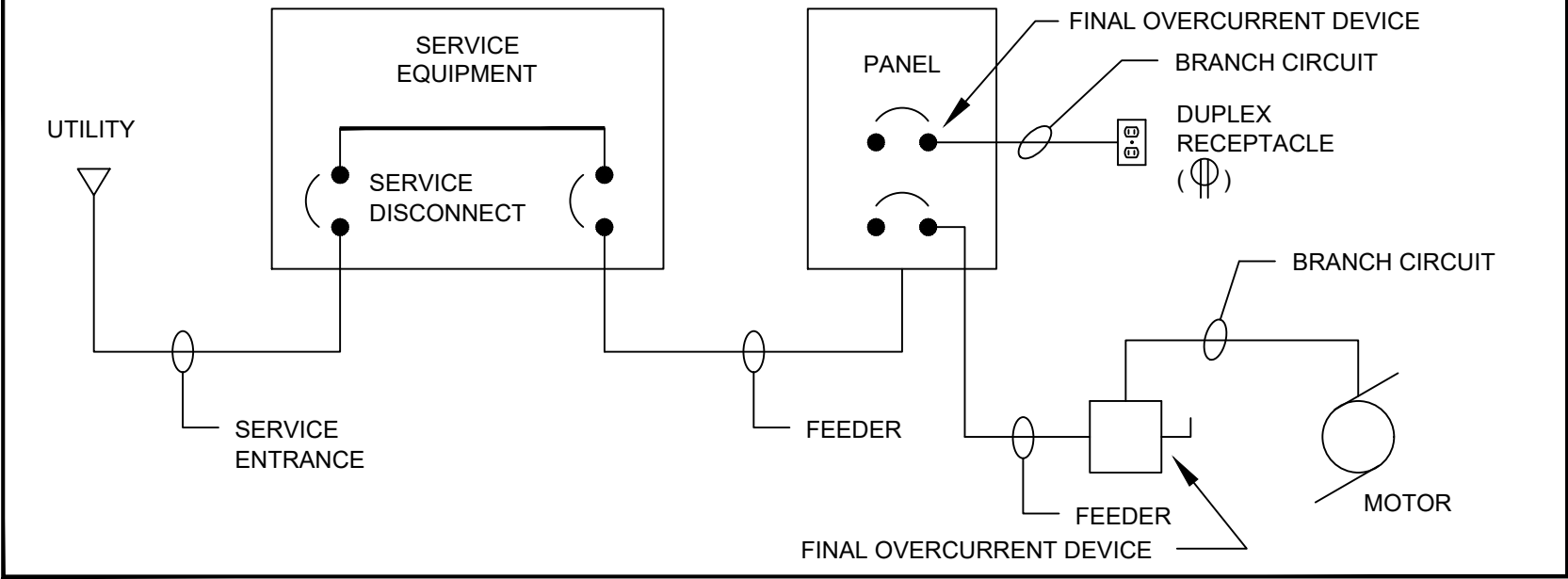
SCDOT DETAILS
FOREST ACRES ENTRANCE SIGN
5115 FOREST DRIVE
COLUMBIA, SC 29206

SHEET NO.

DT2

RACEWAY MATERIAL USE TABLE

APPLICATION		EMT	IMC	GRS	RAC	ENT	SCH. 40 PVC	HDPE	AC/MC CABLE	MFD WIRING
CONTRACTOR MAY USE ANY MATERIAL MARKED  FOR APPLICATION LISTED. IF MATERIAL IS NOT MARKED FOR AN APPLICATION, IT SHALL NOT BE USED FOR THAT APPLICATION.										
BRANCH CIRCUITS	CONCEALED ABOVE CEILING									
	CONCEALED IN WALLS									
	EXPOSED FROM FLOOR TO 7'-0" A.F.F. (INTERIOR)									
	EXPOSED FROM 7'-0" A.F.F. AND ABOVE (INTERIOR)									
	IN OR UNDER CONCRETE FLOORS		(1)	(1)						
	OUTDOORS - BELOW GRADE		(1)	(1)						
FEEDER CONDUITS	OUTDOORS - EXPOSED									
	STUB-UPS BELOW PANELS & ENCLOSURES					(3)	(3)			
	SERVICE ENTRANCE					(2)				
(1) WITH BITUMINOUS COATING. SEE SPEC.		(3) WITH PANEL "SKIRT" ONLY.								
(2) OUTDOORS - BELOW GRADE.										



- ELECTRICAL SPECIFICATIONS**
- PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND OPERATIONS AS REQUIRED FOR A COMPLETE, SAFE AND QUIETLY-OPERATING ELECTRICAL SYSTEM, FULLY ADJUSTED AND READY FOR USE.
 - PRIOR TO BIDDING, THIS CONTRACTOR SHALL VISIT THE JOBSITE AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED AND SHALL INCLUDE IN HIS BID ALL LABOR, MATERIAL AND OPERATIONS REQUIRED FOR A COMPLETE JOB.
 - ELECTRICAL CONTRACTOR SHALL PROVIDE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS, PAY ALL TAXES AND FEES, UTILITY COMPANY CHARGES FOR SERVICE, INSPECTION FEES AND THE LIKE AS REQUIRED FOR THE SCOPE OF WORK INDICATED.
 - ALL WORK SHALL COMPLY WITH THE LATEST EDITIONS OF NEC, NFPA, IBC, AND ALL APPLICABLE STATE AND LOCAL CODES, REGULATIONS AND ORDINANCES.
 - WORKMANSHIP SHALL BE IN ACCORDANCE WITH BEST PRACTICE. COMPLY WITH NECA STANDARD OF INSTALLATION.
 - ALL MATERIALS INSTALLED SHALL BE NEW, CLEAN, IN GOOD CONDITION AND SHALL MEET THE REQUIREMENTS OF THE UNDERWRITERS' LABORATORIES, INC. WHERE UL STANDARDS ARE ESTABLISHED FOR THOSE ITEMS. MATERIALS SHALL BE CLASSIFIED AND DESIGNED FOR THE PURPOSE USED. ALL MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND GUIDELINES.
 - ALL WORK, MATERIALS, EQUIPMENT AND INSTALLATION SHALL BE WARRANTED BY THE CONTRACTOR FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION. THIS DOES NOT SUPERCEDE MANUFACTURER'S WARRANTIES WHICH MAY EXTEND BEYOND ONE YEAR.
 - PROVIDE ALL CUTTING, PATCHING, TRENCHING, BACKFILLING, PENETRATIONS, FLASHING, GROUTING AND SIMILAR OPERATIONS AS REQUIRED FOR NEW WORK. RELOCATION OF EXISTING CONDUIT, EQUIPMENT, WIRING, ETC. AS REQUIRED FOR INSTALLATION OF NEW SYSTEM IS INCLUDED IN THIS WORK.
 - THE CONTRACTOR IS CAUTIONED THAT THE PROJECT MAY BE CONSTRUCTED IN STAGES TO ACCOMMODATE OWNER'S USE OF THE FACILITY. VERIFY PHASING REQUIREMENTS PRIOR TO BIDDING AND COOPERATE IN ALL RESPECTS WITH OTHER CONTRACTORS AND TRADES ON THE JOB TO CARRY OUT THE WORK WITH MINIMAL DISRUPTION OF BOTH THE OWNER'S REQUIREMENTS AND CONSTRUCTION OF THE PROJECT.
 - COORDINATE ALL WORK WITH OTHER TRADES TO AVOID CONFLICTS, CONCEAL ELECTRICAL WORK AND PROVIDE ELECTRICAL WORK IN CORRECT LOCATIONS FOR EACH PIECE OF EQUIPMENT CONNECTED.
 - PROVIDE SEISMIC RESTRAINT OF NEW ELECTRICAL SYSTEMS AND EQUIPMENT IN ACCORDANCE WITH IBC.
 - ALL PENETRATIONS THROUGH WALLS, FLOORS, BARRIERS, PARTITIONS AND THE LIKE SHALL BE SEALED TIGHT. WHERE PENETRATIONS ARE THRU FIRE OR SMOKE RATED WALLS, FLOORS AND CEILINGS, PROVIDE A UL-LISTED THROUGH-PENETRATION ASSEMBLY WITH RATING EQUAL TO THAT BEING PENETRATED.
 - PROVIDE RACEWAYS FOR ALL CONDUCTORS AND CABLES.
 - PROVIDE FLEXIBLE METAL CONDUIT FOR CONNECTION TO ROTATING OR VIBRATING EQUIPMENT.
 - CONTRACTOR SHALL SIZE AND PROVIDE ALL REQUIRED PULL AND JUNCTION BOXES.
 - RACEWAYS SHALL BE CONTINUOUS BETWEEN OUTLETS/EQUIPMENT AND ENCLOSURES. BOND RACEWAY SYSTEM IN ACCORDANCE WITH NEC AND NECA INSTALLATION STANDARDS.
 - ALL DEVICES SHALL BE HEAVY DUTY, SPECIFICATION GRADE.
 - PROVIDE A COMPLETE SET OF FUSES FOR EACH FUSIBLE DEVICE PROVIDED. FUSES SHALL BE SIZED FOR LOAD SERVED AND PROVIDED WITH TIME-CURRENT CHARACTERISTICS CURVES AS REQUIRED FOR PROPER COORDINATION.
 - AIC RATING FOR ALL EQUIPMENT SHALL EXCEED AVAILABLE SHORT CIRCUIT CURRENT PRESENT AT EQUIPMENT LOCATION.
 - INSTALL IN EACH PANELBOARD A SINGLE-SIDED, PLASTIC-COVERED, TYPEWRITTEN CIRCUIT DIRECTORY LISTING THE LOAD SERVED, INCLUDING LOCATION, FOR EACH BREAKER.
 - ON ALL PANELBOARDS, DISCONNECT SWITCHES, TRANSFORMERS AND ENCLOSURES, PROVIDE AN ENGRAVED PLASTIC LAMINATE NAMEPLATE, MINIMUM 1/16" THICKNESS WITH 1/4" HIGH LETTERS. ATTACH WITH EPOXY CEMENT OR SCREWS. ON SWITCHGEAR AND FEEDER DISTRIBUTION PANELBOARDS, PROVIDE NAMEPLATE FOR EACH CIRCUIT BREAKER.
 - ELECTRICAL SUBCONTRACTOR SHALL SUBMIT FOR REVIEW BY THE ENGINEER DETAILED SHOP DRAWINGS OF ALL EQUIPMENT AND ALL MATERIAL LISTED BELOW. ALL SUBMITTAL DATA SHALL BE SUBMITTED AT ONE TIME. PARTIAL SUBMITTALS WILL NOT BE REVIEWED BY THE ENGINEER. NO MATERIAL OR EQUIPMENT FOR WHICH ENGINEER'S REVIEW IS REQUIRED SHALL BE DELIVERED TO THE JOB SITE OR INSTALLED UNTIL THIS CONTRACTOR HAS IN HIS POSSESSION THE REVIEWED SHOP DRAWINGS FOR THE PARTICULAR MATERIAL OR EQUIPMENT. THE SHOP DRAWINGS SHALL BE COMPLETE AS DESCRIBED HEREIN.
 - PRIOR TO SUBMITTAL OF SHOP DRAWINGS TO THE ENGINEER, THE GENERAL CONTRACTOR AND THE ELECTRICAL SUBCONTRACTOR SHALL REVIEW AND APPROVE SHOP DRAWINGS. SHOP DRAWINGS WHICH HAVE NOT BEEN REVIEWED AND APPROVED IN WRITING BY THE ELECTRICAL SUBCONTRACTOR WILL NOT BE REVIEWED BY THE ENGINEER. ELECTRICAL SUBCONTRACTOR SHALL STATE IN WRITING ON SHOP DRAWINGS, ANY PROPOSED DEVIATIONS FROM CONTRACT DOCUMENTS, SUCH DEVIATIONS, IF NOT STATED IN SHOP DRAWINGS SUBMITTAL, SHALL BE THE SOLE RESPONSIBILITY OF THE ELECTRICAL SUBCONTRACTOR. THIS CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AS DIRECTED BY ARCHITECT OR, IF NO PROCEDURE IS SPECIFIED BY THE ARCHITECT, SUBMIT ONE ELECTRONIC, PDF COPY TO gwa@gwainc.net.
 - REVIEW RENDERED ON SHOP DRAWINGS SHALL NOT BE CONSIDERED AS A GUARANTEE OF MEASUREMENTS OF BUILDING CONDITIONS. WHERE DRAWINGS ARE REVIEWED, SAID REVIEW DOES NOT MEAN THAT DRAWINGS HAVE BEEN CHECKED IN DETAIL; SAID REVIEW DOES NOT IN ANY WAY RELIEVE THIS CONTRACTOR FROM HIS RESPONSIBILITY OR NECESSITY OF FURNISHING MATERIAL OR PERFORMING WORK AS REQUIRED BY THE CONTRACT DRAWINGS AND SPECIFICATIONS.
 - FAILURE OF CONTRACTOR TO SUBMIT SHOP DRAWINGS IN TIME FOR REVIEW BY ENGINEER WITH REASONABLE PROMPTNESS CONSISTENT WITH SOUND PROFESSIONAL PRACTICE SHALL NOT ENTITLE HIM TO AN EXTENSION OF CONTRACT TIME, AND NO CLAIM FOR EXTENSION BY REASON OF SUCH DEFAULT WILL BE ALLOWED.
 - THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR THE FOLLOWING MATERIALS AND EQUIPMENT FOR REVIEW BY ENGINEER: PANELBOARDS, CIRCUIT BREAKERS, WIRING DEVICES, BASIC MATERIALS (WIRE, CONDUIT, FITTINGS, CONNECTORS, GROUNDING COMPONENTS)
 - UPON COMPLETION OF WORK, PROVIDE FINAL CLEANING; REMOVE DEBRIS, WASTE, SURPLUS MATERIALS, RUBBISH AND CONSTRUCTION FACILITIES FROM THE SITE.
 - PROVIDE OWNER WITH TWO(2) COMPLETE SETS OF RECORD DRAWINGS AND OPERATION AND MAINTENANCE (O&M) MANUALS INCLUDING SHOP DRAWINGS, MAINTENANCE INSTRUCTIONS, SETTINGS AND WARRANTIES.
 - UPON COMPLETION OF WORK, THE SYSTEM SHALL BE FREE OF FAULTS, INCLUDING SHORT CIRCUITS, GROUNDS AND OPEN CIRCUITS AND LOADS SHALL BE BALANCED ACROSS PHASES TO MINIMIZE NEUTRAL CURRENT IN ALL FEEDERS AND BRANCH CIRCUITS.
 - UPON COMPLETION OF INSTALLATION AND TESTING, THIS CONTRACTOR SHALL INSTRUCT THE OWNER FULLY IN THE OPERATIONS, ADJUSTMENTS AND MAINTENANCE OF ELECTRICAL SYSTEM.

ABBREVIATIONS

THE FOLLOWING STANDARD ABBREVIATIONS ARE USED IN THESE PLANS AND SPECIFICATIONS. CONTRACTOR IS CAUTIONED THAT ALL ABBREVIATIONS LISTED MAY NOT BE USED; CONSULT PLANS AND SPECIFICATIONS FOR ABBREVIATIONS APPLICABLE TO THIS PROJECT.

A.F.F.
B.F.F.
A.F.G.
B.F.G.
U.N.O.
CKT.
C.
E.C.
FLX.
WFLX





ABOVE FINISHED FLOOR
BELOW FINISHED FLOOR
ABOVE FINISHED GRADE
BELOW FINISHED GRADE
UNLESS NOTED OTHERWISE
CIRCUIT
CONDUIT
EMPTY CONDUIT
FLEXIBLE CONDUIT
WEATHERPROOF FLEXIBLE CONDUIT

BRANCH CIRCUIT WIRING - HASHMARK CODE

NO SCALE

BRANCH CIRCUITS SHOWN ON THESE DRAWINGS MAY INCLUDE HASHMARKS WHICH INDICATE THE NUMBER OF WIRES TO BE PROVIDED IN A CONDUIT RUN BETWEEN OUTLETS OR JUNCTION BOXES. WIRE SIZES SHALL BE AS TABULATED IN PANELBOARD SCHEDULES UNLESS OTHERWISE INDICATED ON PLAN. SEE SYMBOL SCHEDULE FOR CONDUIT ROUTING NOTATION. HASHMARK CODE IS AS FOLLOWS:

EACH PHASE AND NEUTRAL WIRE IN A CONDUIT RUN IS REPRESENTED BY A HASHMARK. FOR EXAMPLE -

-  TWO WIRES (NO HASHMARKS)
-  THREE WIRES (3 HASHMARKS)
-  FOUR WIRES (4 HASHMARKS)
-  FIVE WIRES (5 HASHMARKS)
- ... AND SO FORTH.

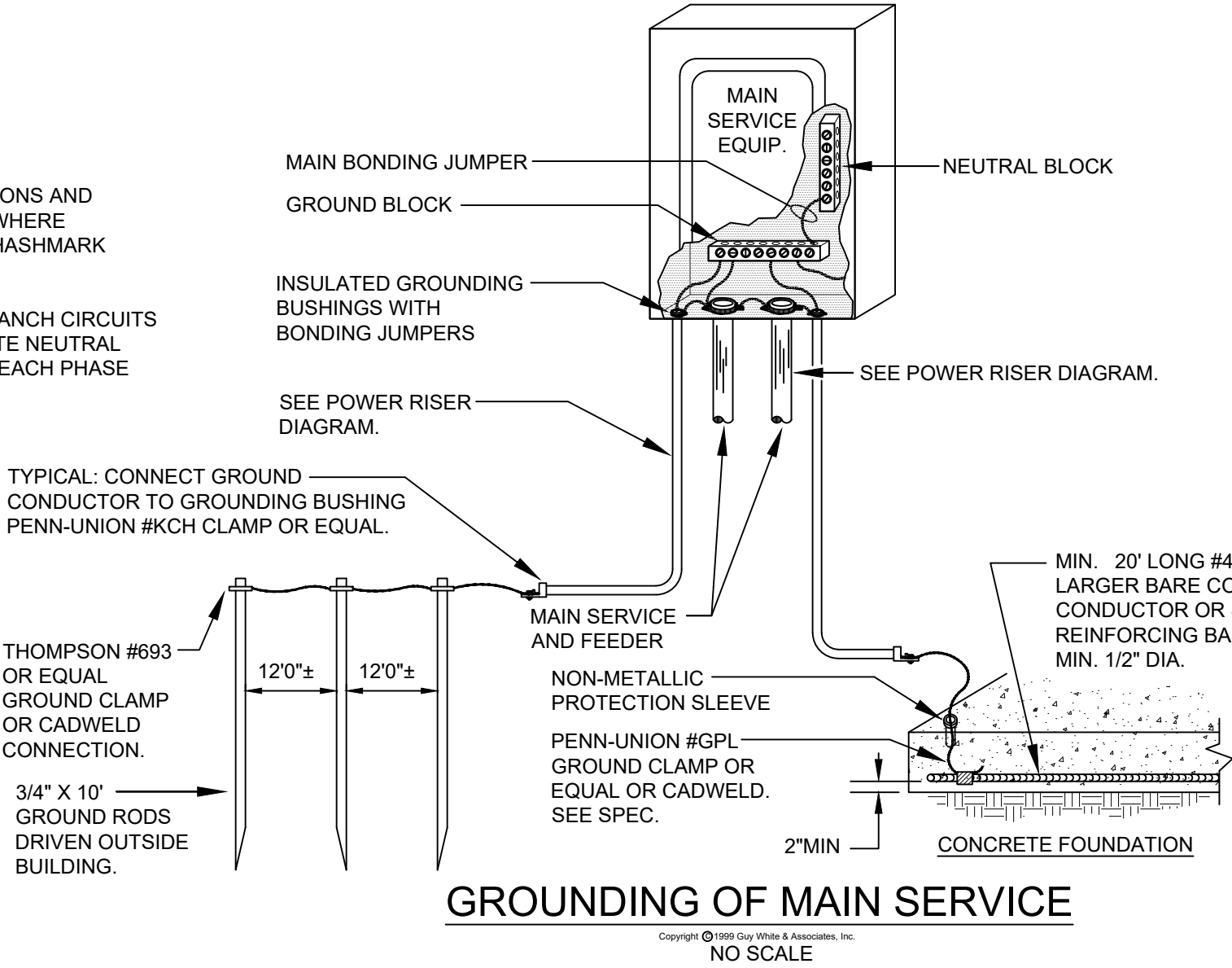
NOTE: GROUND WIRES ARE NOT GENERALLY SHOWN. EXAMINE SPECIFICATIONS AND GENERAL NOTES TO DETERMINE REQUIREMENTS FOR GROUND WIRES AND WHERE SPECIFIED, PROVIDE IN ADDITION TO THE NUMBER OF WIRES INDICATED BY HASHMARK CODE.

NOTE: CONTRACTOR IS CAUTIONED THAT MULTIWIRE (LINE-TO-NEUTRAL) BRANCH CIRCUITS DO NOT INDICATE ALL REQUIRED NEUTRAL CONDUCTORS. PROVIDE SEPARATE NEUTRAL CONDUCTORS (WITH COLORED STRIPE TO MATCH PHASE CONDUCTOR) FOR EACH PHASE CONDUCTOR.

EMPTY CONDUITS ARE NOTED BY "EC" WITH TRADE SIZE.

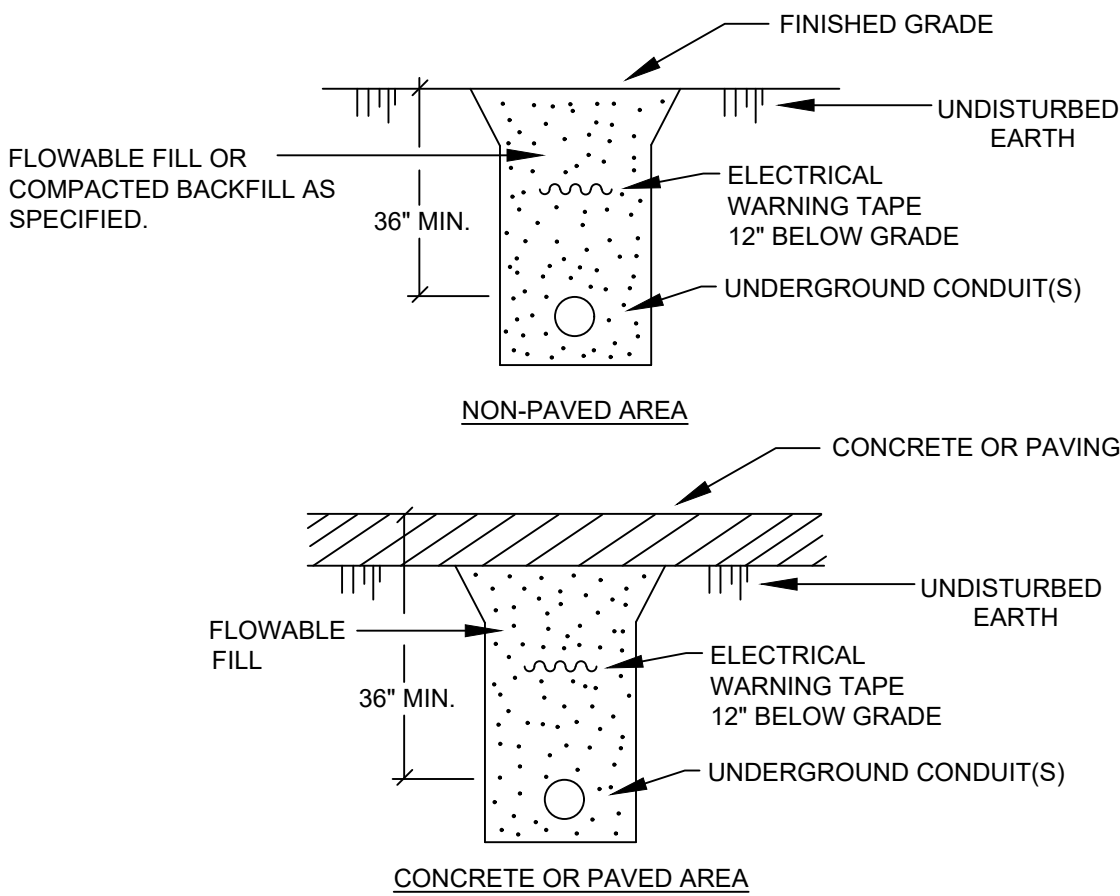
GENERAL NOTES

- DO NOT SCALE DRAWINGS UNLESS DIMENSIONS ARE SHOWN. LOCATE LIGHTING FIXTURES AND EQUIPMENT AS OBVIOUSLY INDICATED AND COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS. SEE CIVIL PLANS.
- MINIMUM SIZE CONDUCTOR FOR POWER SHALL BE NO. 12 AWG. ALL CONDUCTORS SHALL BE COPPER.
- ALL FUSES SHALL BE DUAL-ELEMENT TYPE, "FUSETRON" BY BUSSMAN, OR "ECON" BY ECONOMY.
- BRANCH CIRCUIT SIZES ARE AWG 12-3/4" C. UNLESS OTHERWISE NOTED IN PANELBOARD SCHEDULES.
- ALL BRANCH CIRCUIT LOADS SHALL BE BALANCED ACROSS PANELBOARD BUSES TO OBTAIN MINIMUM NEUTRAL CURRENT.
- ALL FLEXIBLE CONDUIT SHALL CONTAIN A GREEN WIRE BONDED TO RIGID RACEWAY, BOX OR FIXTURE AT EACH END OF FLEX. SIZE GROUND WIRE PER N.E.C. TABLE 250-122.
- CONTRACTOR IS CAUTIONED THAT WORK SHALL BE COMPLETED IN PHASES AS REQUIRED TO MAINTAIN USE OF STREETS, SIDEWALKS, BUSINESSES AND THE LIKE. REFER TO LANDSCAPE ARCHITECT AND CIVIL PLANS FOR PHASING OF WORK.
- SEE CIVIL AND UTILITY PLANS FOR UTILITIES. VERIFY EXACT LOCATIONS OF HANDHOLES, RISER POLES, AND THE LIKE WITH UTILITIES.
- CONDUIT ROUTING SHOWN DOES NOT INDICATE PATH OF ROUTING-SHOWN FOR CLARITY ONLY. ROUTE CONDUITS IN R.O.W. SEE CIVIL PLANS.
- COORDINATE ALL NEW METER AND SERVICE LOCATIONS WITH DOMINION PRIOR TO BIDDING.
- ALL CONDUIT ELBOWS BELOW GRADE SHALL BE BITUMINOUS COATED GRS.
- MINIMUM COVER FOR LIGHTING, AND IRRIGATION POWER CIRCUITS SHALL BE 30".



GROUNDING OF MAIN SERVICE


















NO SCALE



UNDERGROUND CONDUIT NOT IN A DUCTBANK

NO SCALE

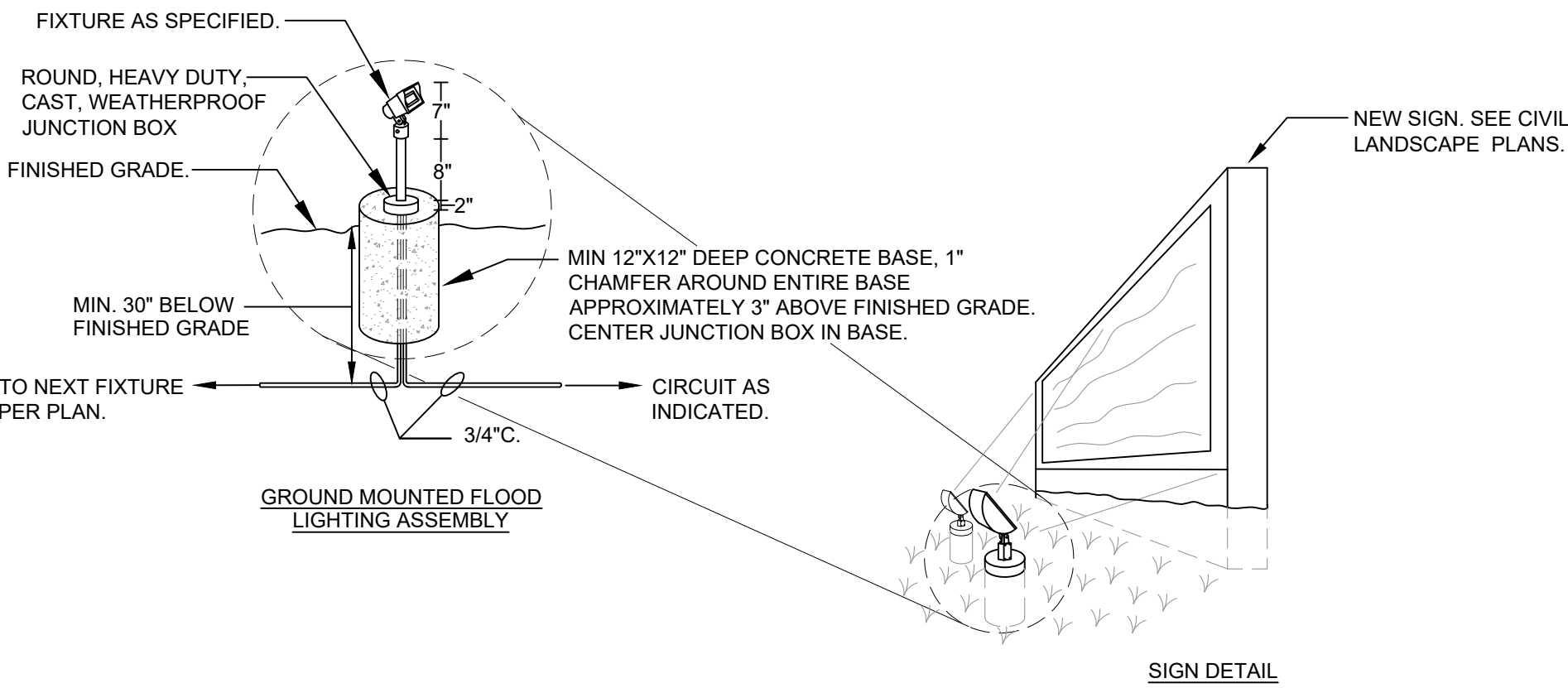
ELECTRICAL SYMBOLS

	OUTDOOR LIGHTING STANDARD & FIXTURE		WEATHERPROOF TOGGLE SWITCH
	PANELBOARD		BRANCH CIRCUIT RACEWAY - CONCEALED IN WALL OR CEILING
	SAFETY SWITCH		BRANCH CIRCUIT RACEWAY - CONCEALED IN FLOOR OR UNDERGROUND
	ENCLOSED, MOLDED CASE CIRCUIT BREAKER		BRANCH CIRCUIT RACEWAY - EXPOSED
	FLUSH JUNCTION BOX CEILING ( WALL)		
	PULL BOX OR JUNCTION BOX IN FLOOR		
	PHOTOCELL, 1800VA U.N.O., AIM NORTH.		
	ELECTRIC HANDHOLE		
	METER ENCLOSURE OR ABOVE GRADE ELECTRICAL ENCLOSURE		
	CONDUIT STUB		
	WEATHERPROOF DUPLEX RECEPTACLE. 16" UP		
	GROUND FAULT INTERRUPTER RECEPTACLE		

NOTE: ALL DEVICES SHOWN ON THIS SCHEDULE ARE SYMBOLIC ONLY. SEE ELECTRICAL SPECIFICATIONS FOR EXACT DEVICE REQUIREMENTS AND PERFORMANCE CHARACTERISTICS.

NOTES TO UNDERGROUND ELECTRICAL WORK

- ALL WORK SHALL COMPLY WITH NFPA, ADA, NEC, AASHTO, NESC, CITY OF COLUMBIA, RICHLAND COUNTY, FOREST ACRES, AND ALL OTHER APPLICABLE CODES AND STANDARDS.
- CONTRACTOR SHALL CONTACT UNDERGROUND UTILITY LOCATOR SERVICE MINIMUM OF 96 HOURS PRIOR TO WORK. CONTACT SC811 AT 811 OR (888) 721-7877.
- BEFORE DIGGING IN THE VICINITY OF UTILITY LINES (OVERHEAD AND UNDERGROUND), NOTIFY UTILITY AND COMPLY WITH INSTRUCTIONS AND PRECAUTIONS FOR EXCAVATION AND PROTECTION OF SUCH LINES.
- BEFORE DIGGING IN THE VICINITY OF PRIVATELY OWNED UTILITIES, THE CONTRACTOR SHALL NOTIFY THE OWNER OF THE SCHEDULE AND EXTENT OF PLANNED EXCAVATIONS.
- CONTRACTOR IS CAUTIONED THAT THE WORK MAY BE COMPLETED IN PHASES AS REQUIRED TO MAINTAIN THE USE OF STREETS, SIDEWALKS, PUBLIC SPACES AND THE LIKE.
- CONTRACTOR IS CAUTIONED THAT THESE PLANS ARE DIAGRAMMATIC ONLY AND THAT EXACT LOCATIONS OF HANDHOLES, LIGHTING FIXTURES, ENCLOSURES AND THE LIKE SHALL BE AS OBVIOUSLY INDICATED AND AS DIRECTED BY CIVIL OR LANDSCAPE ARCHITECT. CONDUIT ROUTINGS ARE SCHEMATIC AND DO NOT INDICATE ACTUAL PATH OF ROUTING UNLESS NOTED OTHERWISE. ROUTE RACEWAYS IN LOGICAL, EFFICIENT MANNER AND AS REQUIRED TO AVOID CONFLICT WITH OTHER UTILITIES. CONTRACTOR SHALL REVIEW ALL PLANS AND SPECIFICATIONS FOR ALL TRADES AND FIELD VERIFY EXISTING CONDITIONS WITH NEW WORK, TO INCLUDE FIELD MODIFICATIONS AS REQUIRED FOR A COMPLETE PROJECT.
- REFER TO CIVIL FOR LOCATIONS OF ALL PRIMARY COMPONENTS. COORDINATE AND REQUEST CLARIFICATION FOR ANY CONFLICTS WITH CIVIL ENGINEER PRIOR TO PROCEEDING WITH WORK.
- CONTRACTOR IS CAUTIONED THAT NOT ALL EXISTING UNDERGROUND UTILITY LOCATIONS ARE KNOWN. SEE CIVIL FOR KNOWN EXISTING AND NEW UNDERGROUND UTILITY LOCATIONS.
- MAINTAIN SEPARATION BETWEEN POWER AND COMMUNICATION RACEWAYS/DUCTS AS REQUIRED BE NEC AND IN ACCORDANCE WITH EIA/TIA STANDARDS.
- CONDUIT ROUTINGS ARE SCHEMATIC AND MAY BE ALTERED BY THE CONTRACTOR FOR PURPOSES OF MORE LOGICAL, EFFICIENT ROUTING, OR TO AVOID CONFLICT WITH OTHER UTILITIES. SUCH MODIFICATIONS SHALL BE PERFORMED WITH NO ADDITIONAL COST TO THE OWNER.
- ALL UTILITY INFRASTRUCTURE REQUIRED AS PART OF THIS CONTRACTOR'S WORK SHALL COMPLY WITH THE RESPECTIVE UTILITY CONSTRUCTION STANDARDS AND REQUIREMENTS. COORDINATE ALL SERVICE POINTS, RISER POLES, PEDESTALS, HANDHOLES AND THE LIKE WITH RESPECTIVE UTILITY PRIOR TO PERFORMING WORK.
- INSTALL ALL HANDHOLES IN MINIMUM 6" GRAVEL BASE AND IN ACCORDANCE WITH MANUFACTURER GUIDELINES. ADJUST HANDHOLE FRAME AND COVERS AS REQUIRED TO SUIT FINAL GRADE AND FINISH.
- ALL UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC, EXCEPT FOR 45 DEGREE AND GREATER BENDS OR ELBOWS, WHICH SHALL BE ACCOMPLISHED USING BITUMINOUS COATED RIGID GALVANIZED CONDUIT (RMC). ALL TURNS FOR COMMUNICATION AND PRIMARY POWER RACEWAYS SHALL BE WIDE-RADIUS SWEEP TYPE.
- IF REQUIRED TO SUIT LUGS, PROVIDE HYDRAULIC CRIMP TYPE WIRE REDUCERS AS REQUIRED TO CONNECT TERMINATE CONDUCTORS.
- MINIMUM COVER FOR ALL RACEWAYS SHALL BE 30" B.F.G. PROVIDE MAGNETIC ELECTRICAL LOCATOR/WARNING TAPE FOR ALL UNDERGROUND RACEWAYS - INSTALL 12" BELOW FINISHED GRADE.
- PROVIDE PULL CORDS IN ALL EMPTY RACEWAYS. CAP BOTH ENDS AND PROVIDE BRASS MARKER TAGS.
- CONTRACTOR SHALL DOCUMENT ALL FINAL ROUTINGS, LOCATIONS OF SLEEVES/CAPPED RACEWAY AND LOCATIONS OF MAJOR SITE ELECTRICAL EQUIPMENT ON RECORD DRAWINGS. INCLUDE DIMENSIONS FROM A PERMANENT SITE STRUCTURE(S) FOR ALL UNDERGROUND SLEEVES/CAPPED RACEWAY TO ALLOW FOR FUTURE USE.



NOTES TO SIGN LIGHTING

- PROVIDE HORIZONTAL DISTRIBUTION FLOODLIGHT AS SPECIFIED. PROVIDE WITH MOUNTING SUITABLE FOR IN-GROUND CONCRETE MOUNTING.
- SUBMIT FULL PHOTOMETRIC DATA FOR REVIEW BY ENGINEER FOR FIXTURE FURNISHED. PROVIDE ACTUAL CALCULATIONS FOR SIGN BEING FURNISHED, INCLUDING PROPER SETBACK, AVG. F.C., MAX. F.C. AND MAX TO MIN UNIFORMITY.
- PROVIDE QUANTITY OF FIXTURES AS INDICATED ON PLANS. LOCATIONS INDICATED ARE SCHEMATIC - LOCATE AND PROVIDE SETBACK BASED ON PHOTOMETRIC DATA.
- ADJUST FIXTURE AIMING, ANGLE AND ORIENTATION TO EVENLY LIGHT SIGN AND MINIMIZE GLARE AS APPROVED BY OWNER AND LANDSCAPE ARCHITECT.

TYPICAL SIGN LIGHTING

NO SCALE

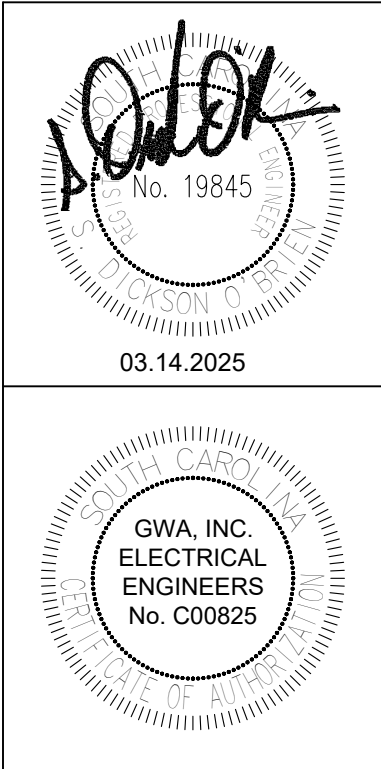
GWA: 25102.01



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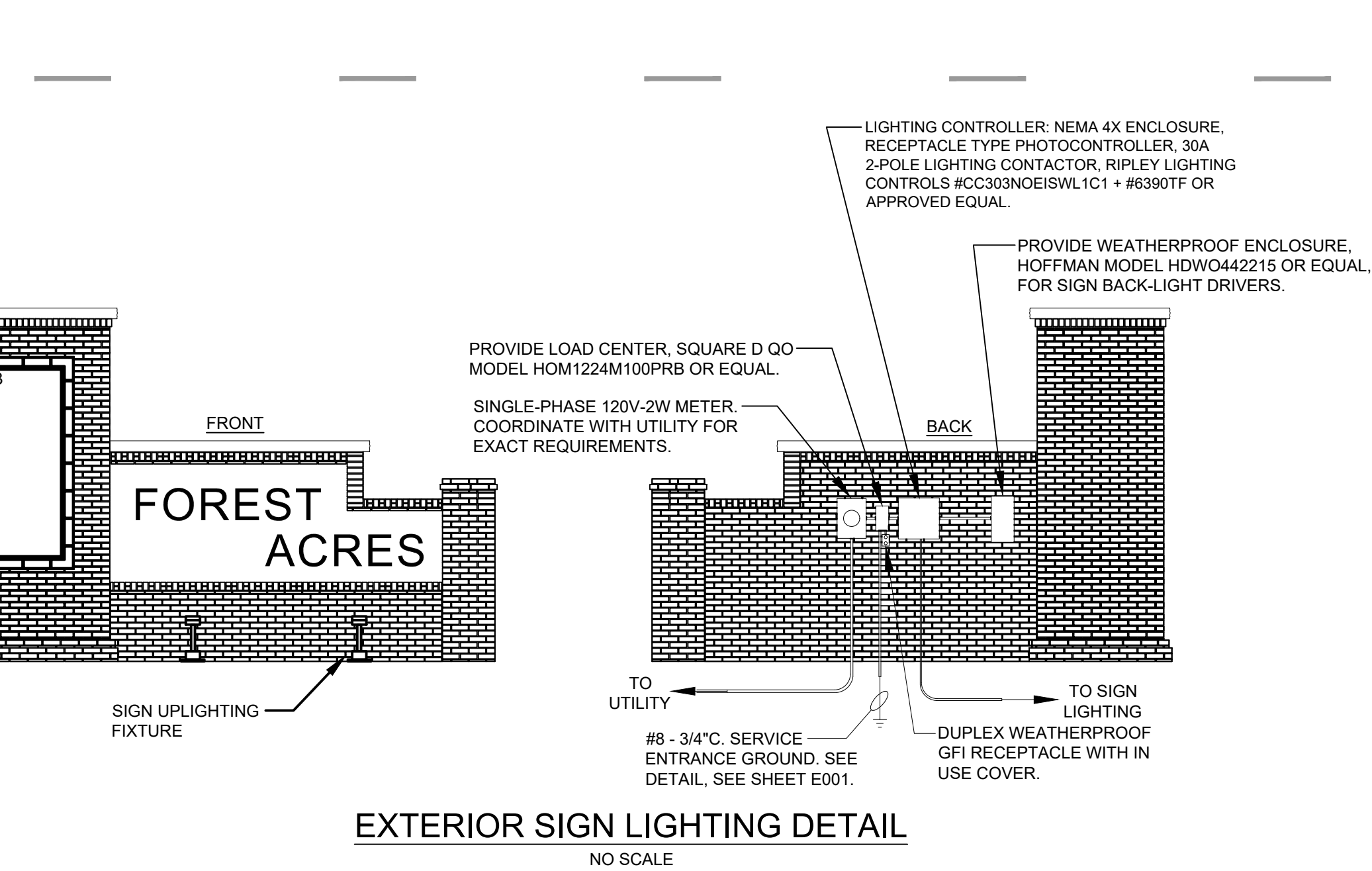
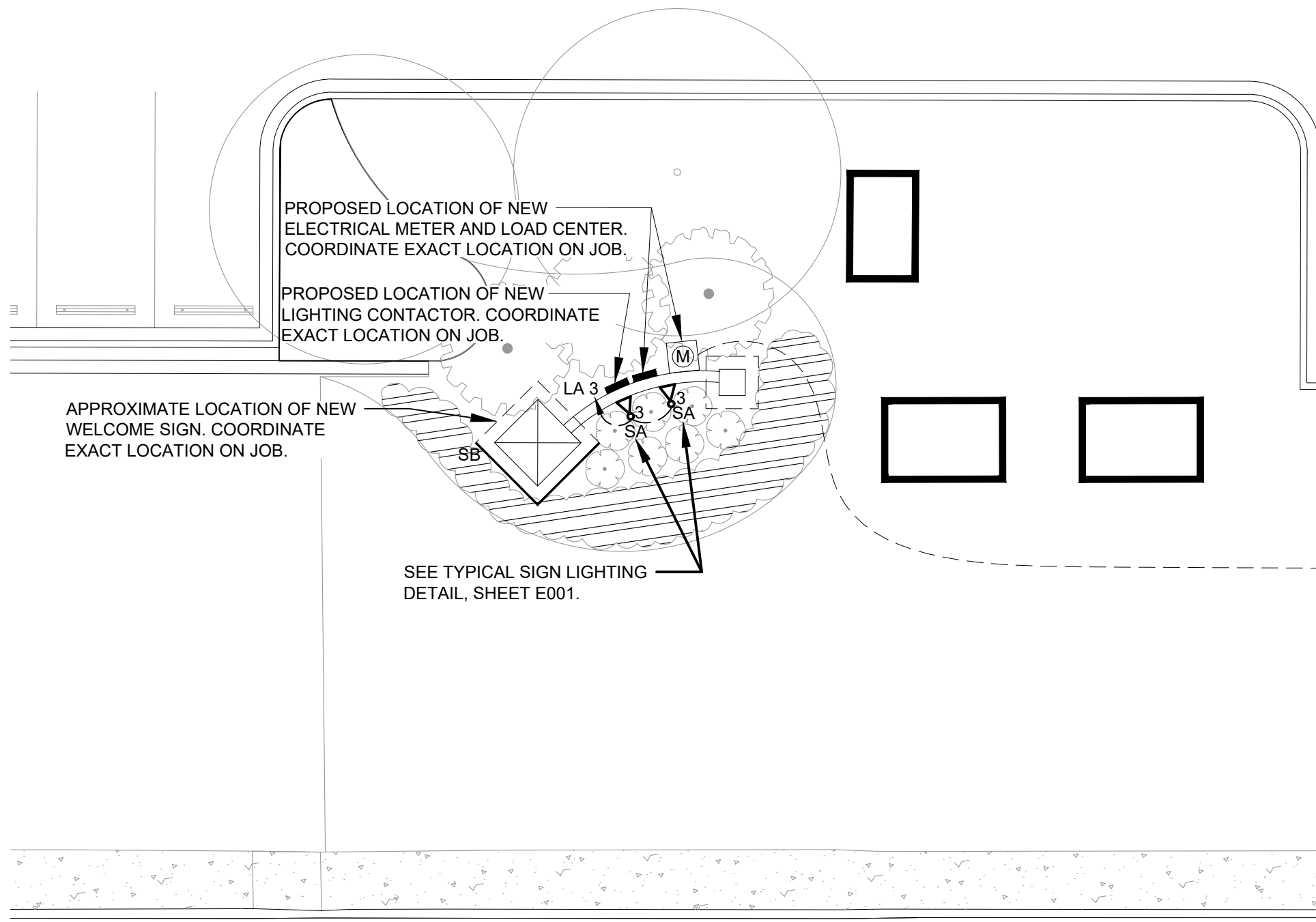


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REVISIONS		DATE	NO.	COMMENT
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PROJ. NO	2437			
SCALE	AS SHOWN			
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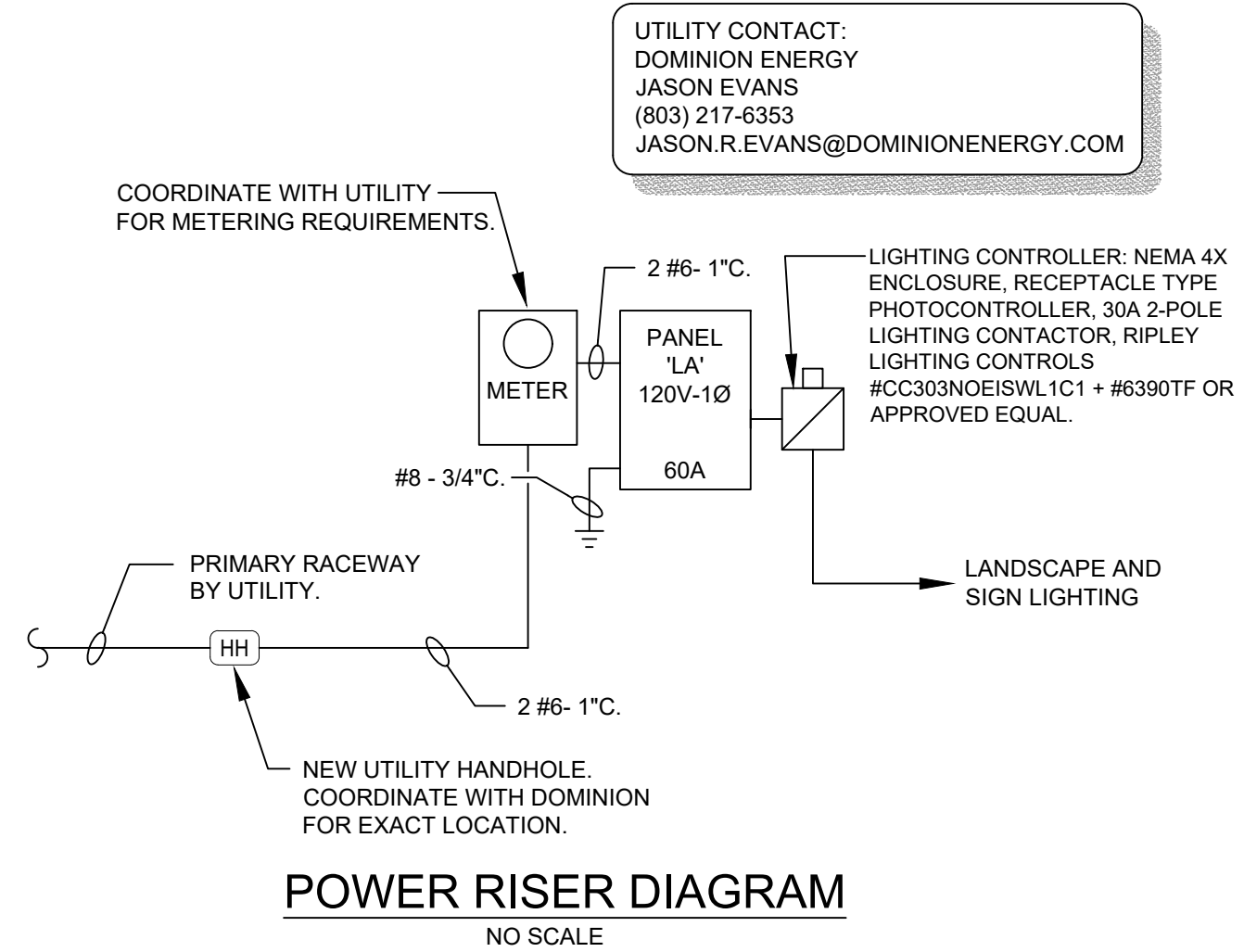
FOREST DRIVE

LIGHTING FIXTURE SCHEDULE						
SYMBOL	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	VOLTAGE	FIXTURE WATTAGE	NOTES
SA	SIGN UPLIGHTING FIXTURE	WAC	5222-30"+5000-SCP-BK+5000-X08	120V.	25W	PROVIDE WITH CONCRETE BASE PER DETAIL. PROVIDE WITH ROUND SURFACE MOUNT FLANGE, 8" EXTENSION ROD AND HEAVY DUTY, ROUND WEATHERPROOF JUNCTION, RAB MODEL VXJ2 OR EQUAL. AIM LIGHT TO EVENLY ILLUMINATE SIGN.
SB	PERIMETER SIGN LIGHTING	LED LINEAR	ADONIS-EXL-SW-06-W940-**-OL-DC-* + D-REM-030W-NDN-UNV-IP65	120V.	38W	PERIMETER LIGHTING MOUNTED TO EXTERIOR SIGNAGE TO ILLUMINATE BACKLIT PANEL. COORDINATE EXACT DIMENSIONS WITH LANDSCAPE ARCHITECT ON JOB. PROVIDE FIXTURE LENGTH AS REQUIRED FOR COMPLETE PERIMETER COVERAGE AND PROVIDE WITH ALL POWER SUPPLIES, MOUNTING HARDWARE, CABLE CONNECTORS, AND THE LIKE AS REQUIRED TO EVENLY ILLUMINATE SIGN.

NOTES TO LIGHTING FIXTURE SCHEDULE

- LOCATE ALL FIXTURES IN STRICT ACCORDANCE WITH LANDSCAPE ARCHITECTS PLAN.

SCHEDULE - PANELBOARD LA TYPE: <input type="checkbox"/> NQOD <input type="checkbox"/> I-LINE VOLTAGE <input checked="" type="checkbox"/> 240/120V, 1Ø, 2W <input type="checkbox"/> 208/120V, 1Ø, 3W MOUNTING: <input type="checkbox"/> FLUSH <input checked="" type="checkbox"/> SURFACE A/C RATING 10k											
60 AMP <input type="checkbox"/> MLO <input checked="" type="checkbox"/> MCB <input checked="" type="checkbox"/> LDCTR ACCESSORY: <input type="checkbox"/> FEED-THRU LUGS TOTAL SPACES 12											
NO.	LOAD DESCRIPTION	REMARK	BRKR AMP	CIRCUIT Ø WIRE COND	LOAD KVA A C	BUSING A C	LOAD KVA A C	CIRCUIT Ø WIRE COND	BRKR Ø AMP	REMARK	LOAD DESCRIPTION
1	MAIN CIRCUIT BREAKER		60	1 6 1"	0.5						
3	SIGN LIGHTING		20	1 12 1/2	0.5						
5	MONUMENT LIGHTING		20	1 12 1/2	0.5						
7	RECEPTACLE		20	1 12 1/2	0.5						
9	SPARE		20	1 12							
11	SPARE		20	1 12							
CONNECTED LOAD, KVA:			A 1.5 C			NTRL			CONNECTED LOAD, KVA:		
NEMA 3R NOTE: PANELBOARD TO BE FED VIA TWO-WIRE SERVICE. HATCHED AREA DENOTES UNAVAILABLE SPACES.			KVA THIS PANEL: A 1.5 C			REMARK ABBREVIATION LEGEND: STB = SHUNT TRIP BRKR. SFB = SUB-FEED BRKR. GFI = GFI BRKR. VFY = VERIFY LOAD					



FOR REVIEW AND COORDINATION ONLY

ELECTRICAL PLAN

FOREST ACRES WELCOME SIGN
FOREST ACERS FAMILY PRACTICE
51115 FOREST DRIVE

SHEET NO.

E001

2 OF 2

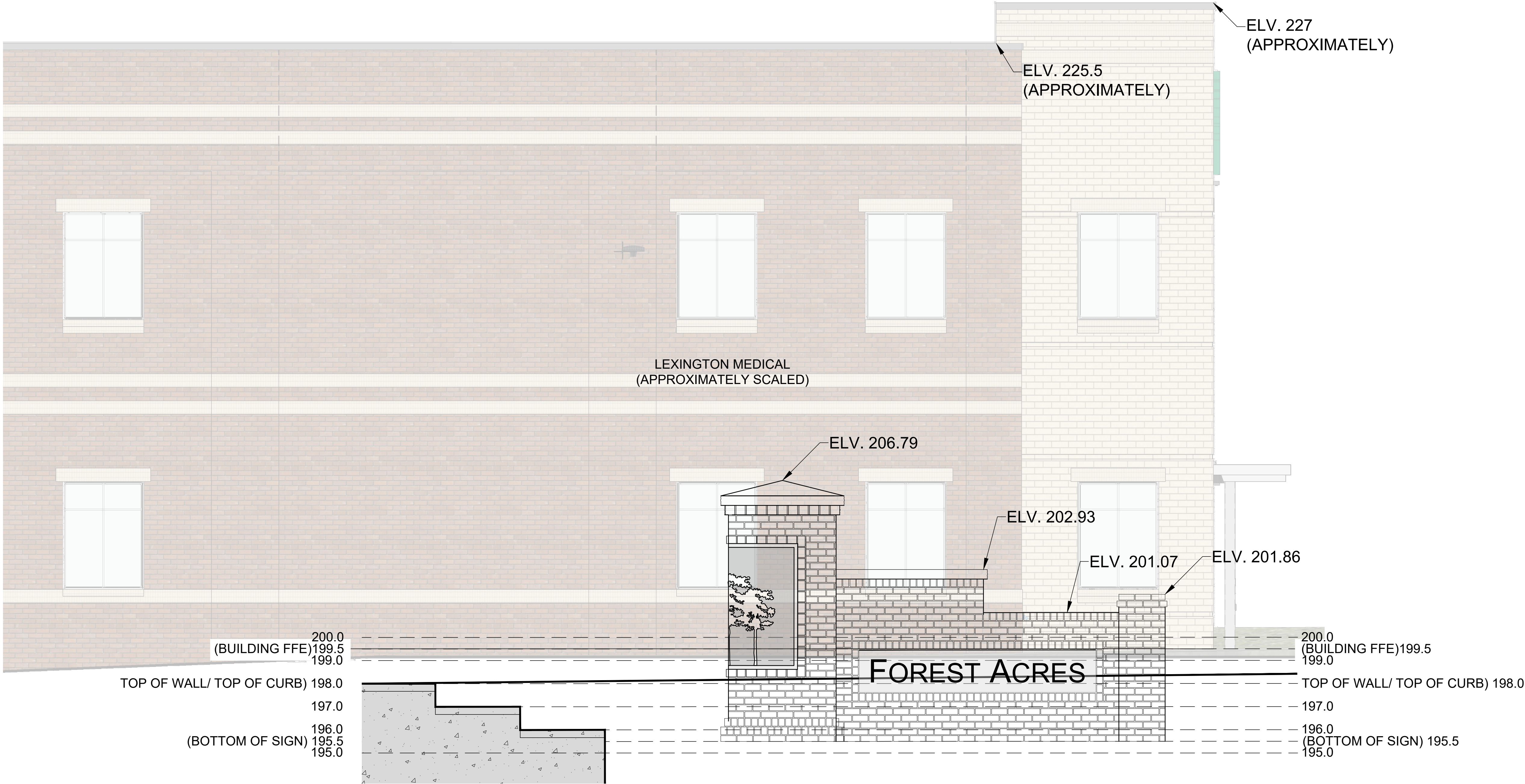
GWA: 25102.01

GWA inc.
Electrical Engineers

168 Laurelhurst Avenue
Columbia, SC 29210
(803)252-6919
Fax (803)799-5494

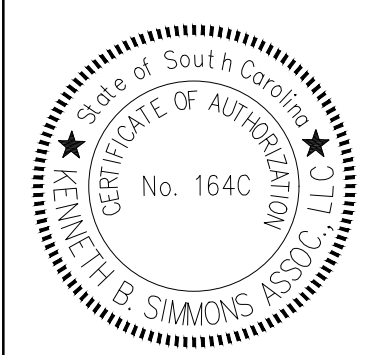
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1
EX1

ENTRANCE SIGN ELEVATION
NOT TO SCALE



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DATE	05/20/2025
PROJ. NO.	2437
SCALE	
DRAWN	MCF
CHECKED	AMC

ELEVATION EXHIBIT
FOREST ACRES ENTRANCE SIGN
5115 FOREST DRIVE
COLUMBIA, SC 29206

SHEET NO.

EX1