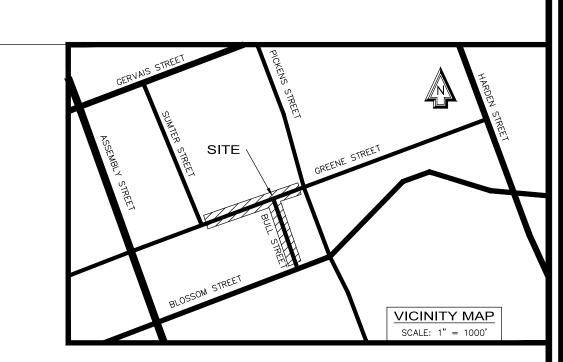


# UNIVERSITY OF SOUTH CAROLINA GREENE / BULL ST. SITE IMPROVEMENTS

COLUMBIA, SOUTH CAROLINA USC PROJECT No. CP00373151 USC CODE No. H27-Z100

# BID SET 24 FEBRUARY 2014



DRAWING SCHEDULE							
SHEET NO.	CONTENTS						
C-1.0	EXISTING CONDITIONS AND DEMOLITION PLAN						
C-2.0	STAKING PLAN						
C-2.1	ENLARGED STAKING PLANS						
C-3.0	GRADING AND UTILITIES PLAN						
C-3.1	ENLARGED GRADING PLANS						
C-4.0	SEDIMENT AND EROSION CONTROL PLAN, NOTES AND DETAILS						
C-5.0	DETAILS						
L-1.0	DETAIL KEY / TREE PROTECTION PLAN						
L-2.0	SITE DETAILS						
L-3.0	SITE DETAILS						
L-4.0	PLANTING PLAN						
L-5.0	PLANTING DETAILS						
I-1.0	IRRIGATION PLAN						
1-2.0	IRRIGATION DETAILS						



GAMMBALL
COTTERILL
LANDSCAPE ARCHITECTS & LAND PLANNERS

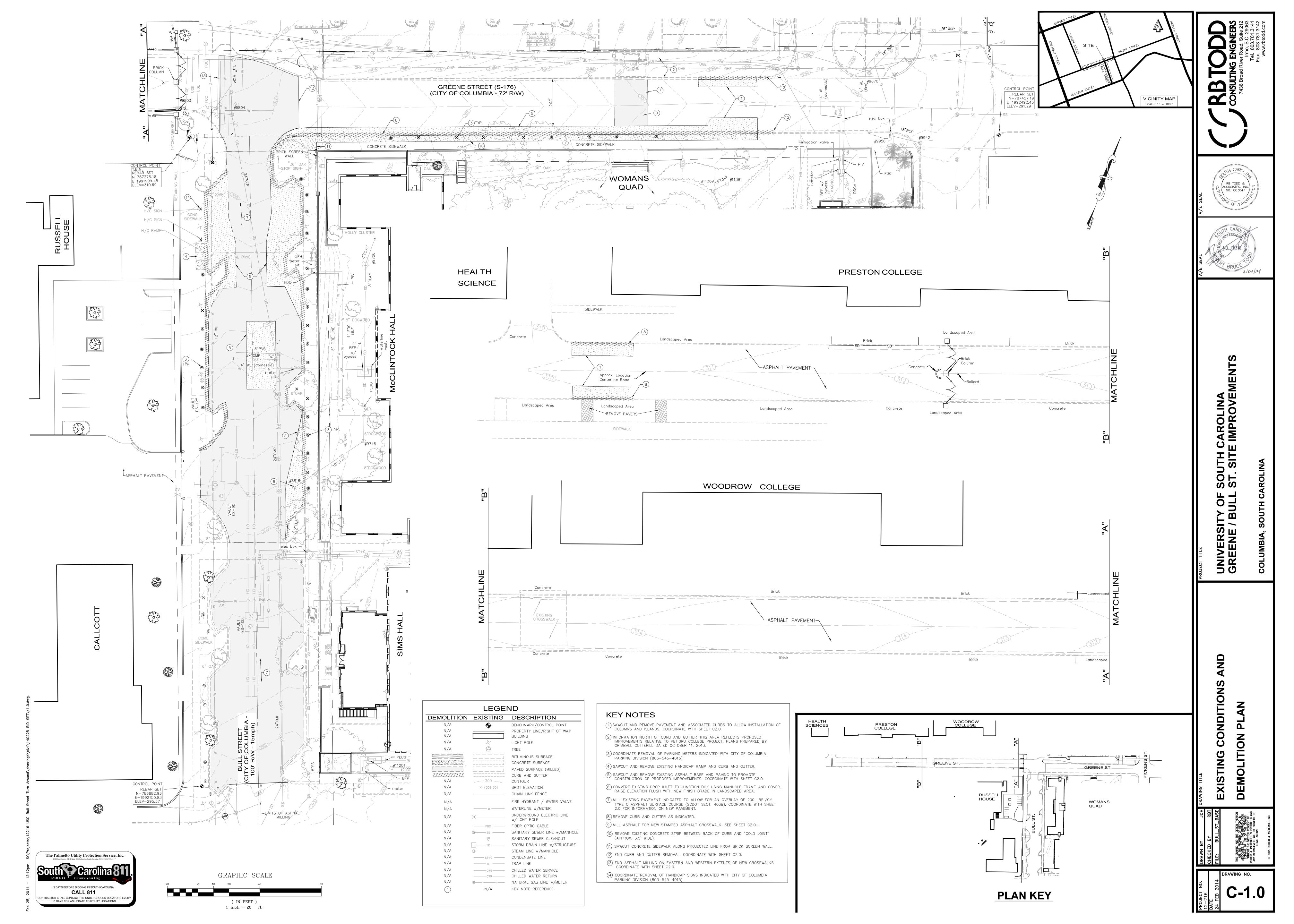
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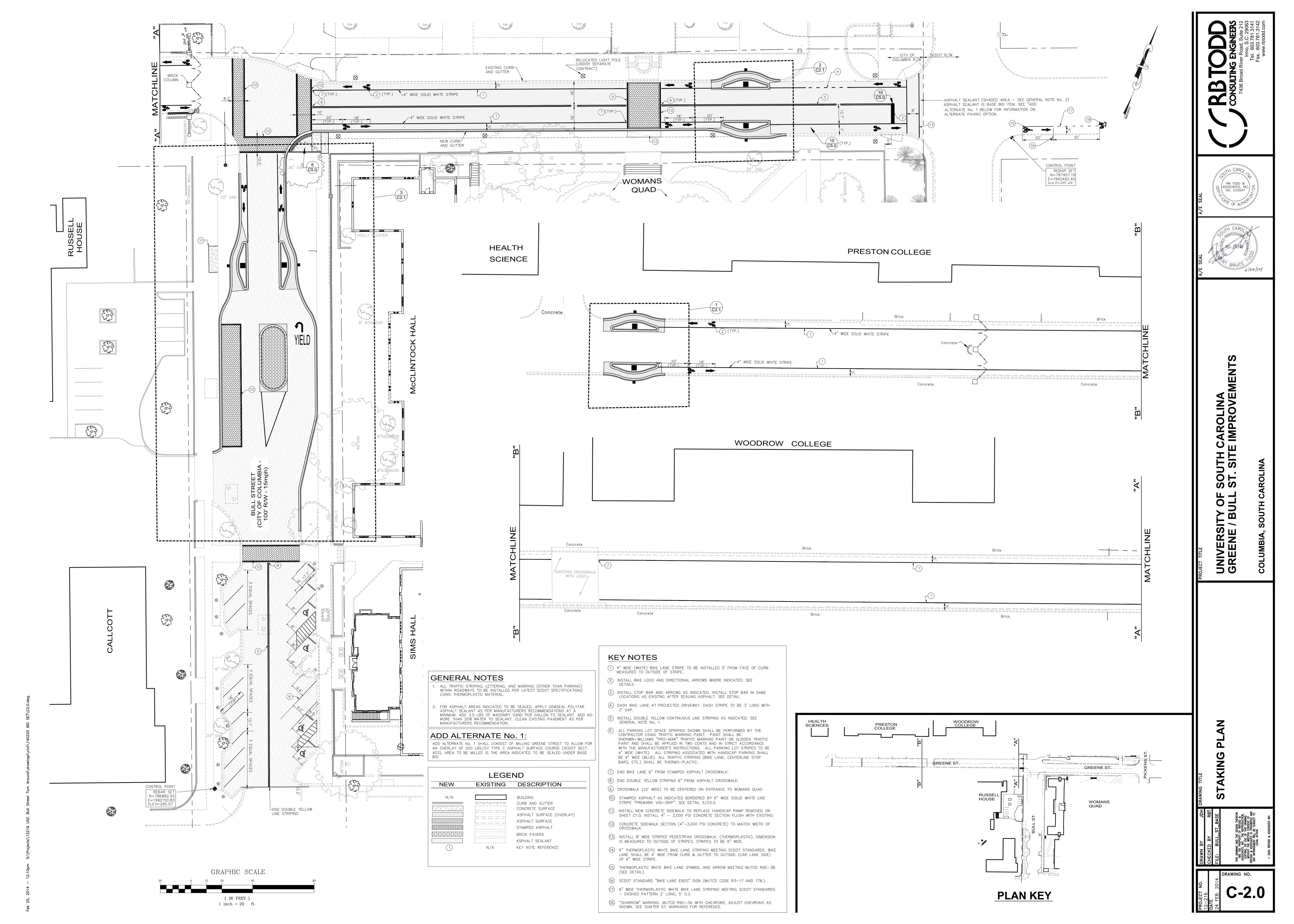
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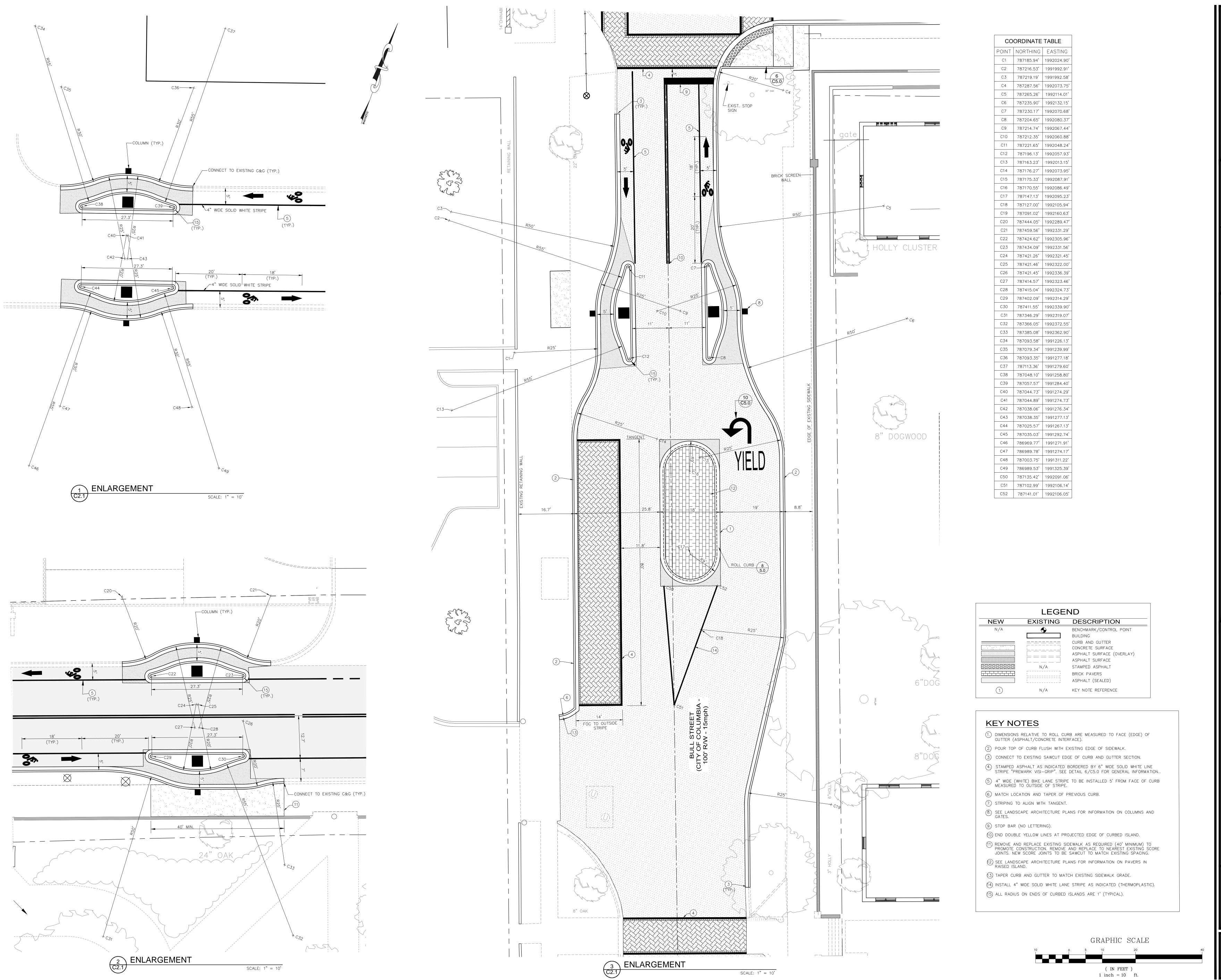
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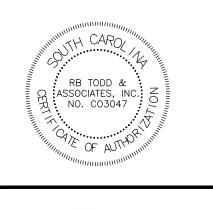
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ARSOCARES, INC. THE REPRODUCTION,
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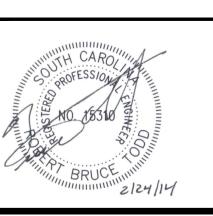
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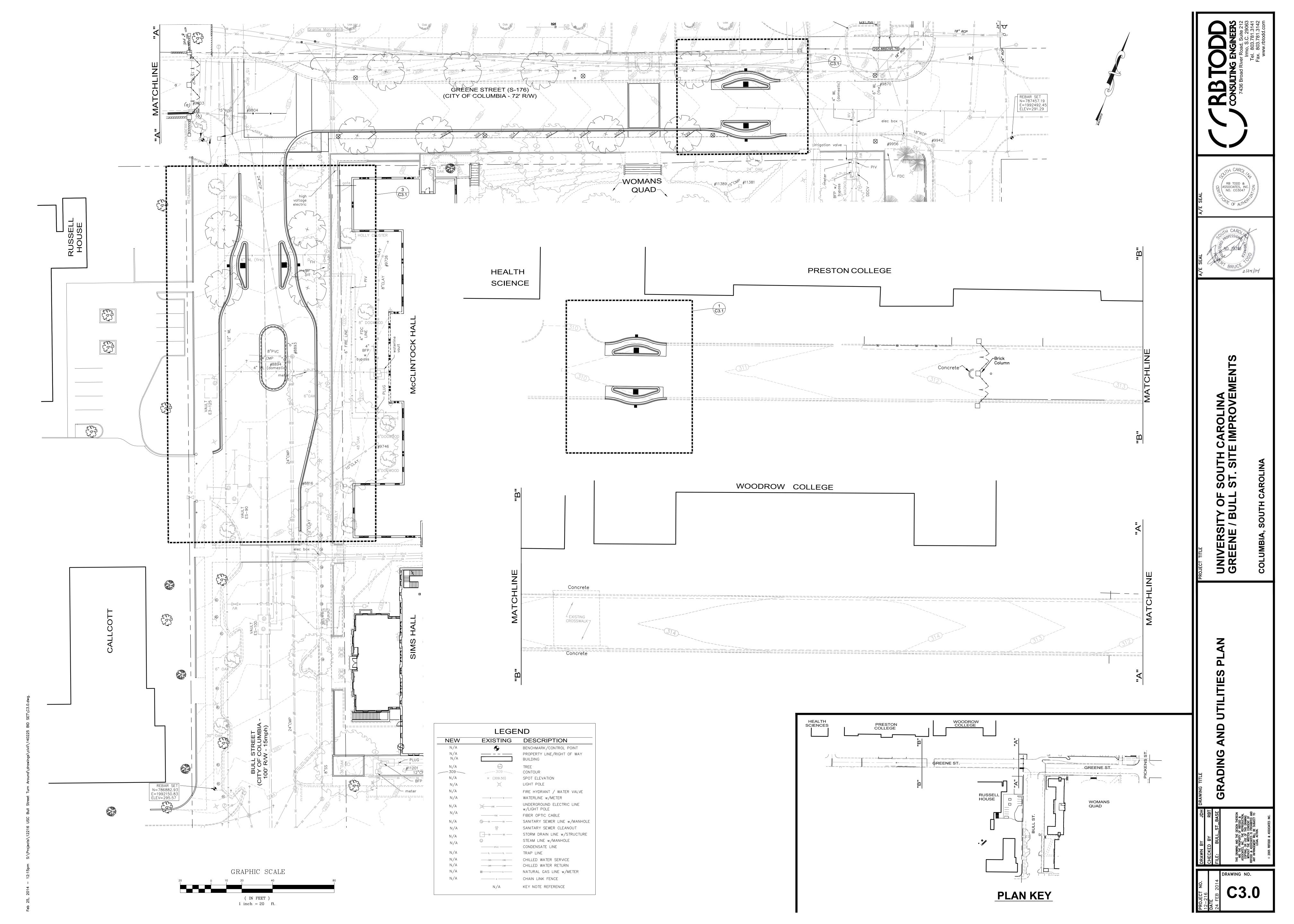


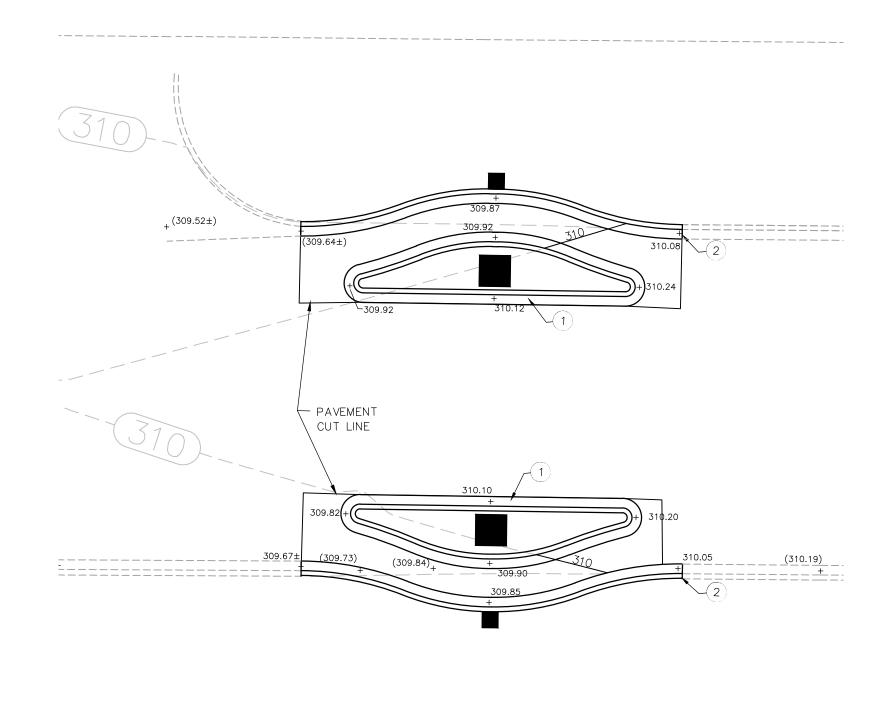






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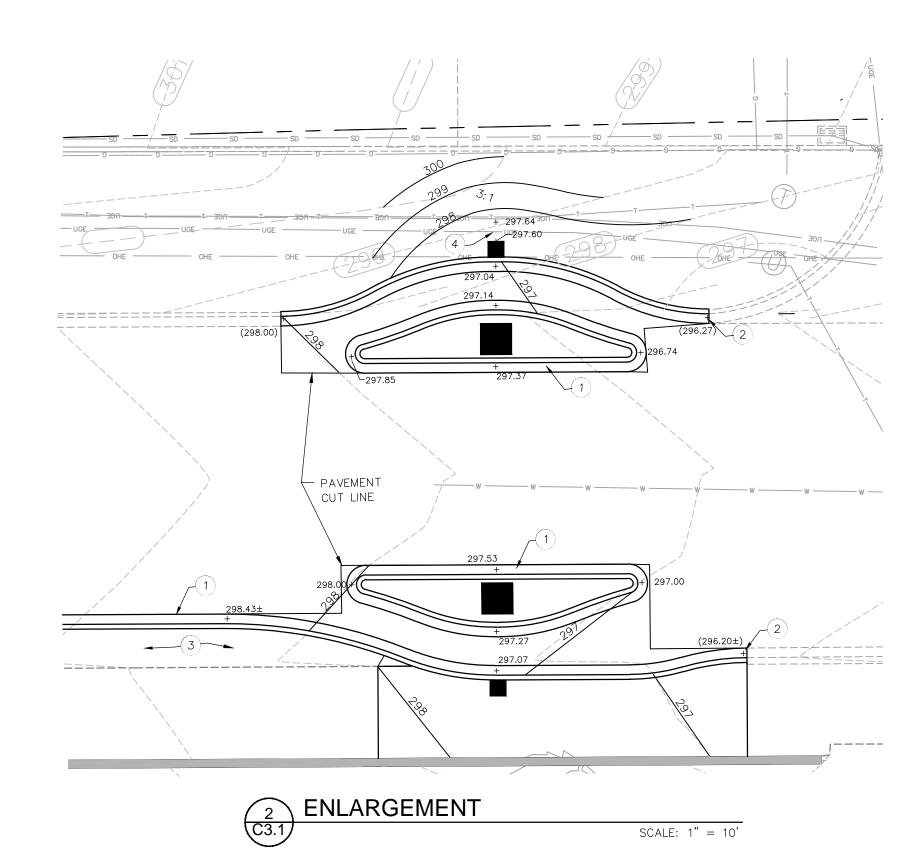
1 ENLARGEMENT

SCALE: 1" = 10'

# **KEY NOTES**

1.) EDGE OF GUTTER TO MATCH EDGE OF ASPHALT SAWCUT.

2. MATCH EXISTING CURB AND GUTTER SECTION.



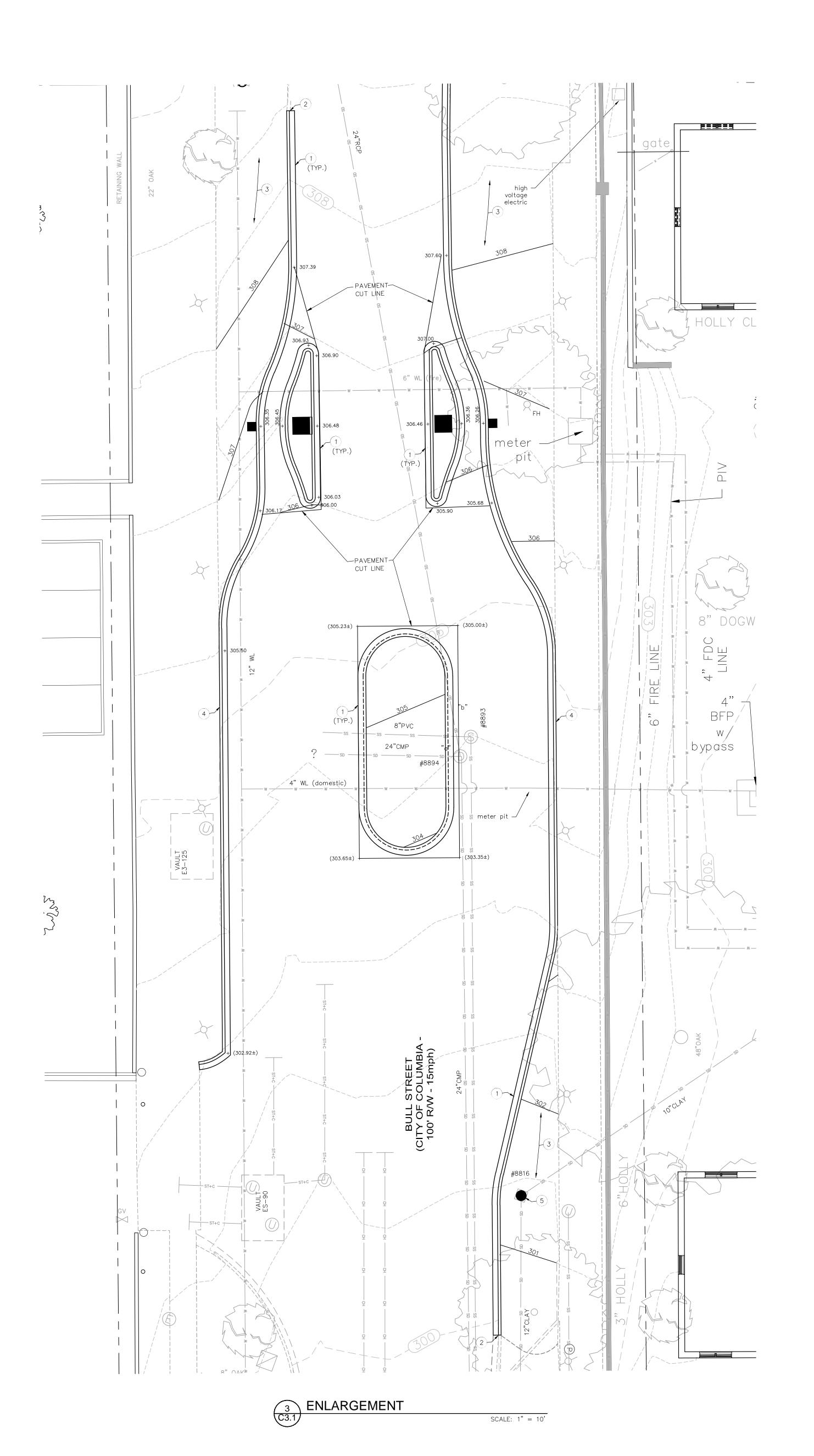
# **KEY NOTES**

1. EDGE OF GUTTER TO MATCH EDGE OF ASPHALT SAWCUT.

2.) MATCH EXISTING CURB AND GUTTER SECTION.

(3.) BACKFILL BETWEEN TOP OF CURB AND EDGE OF SIDEWALK (TYP.). COORDINATE WITH LANDSCAPE ARCHITECTURE PLANS ON PLANTING AND IRRIGATION.

4.) PROVIDE 2' SHOULDER BETWEEN NORTH SIDE OF COLUMN AND TOE OF 3:1 SLOPE.



# **KEY NOTES**

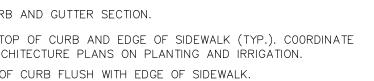
(1.) EDGE OF GUTTER TO MATCH EDGE OF ASPHALT SAWCUT.

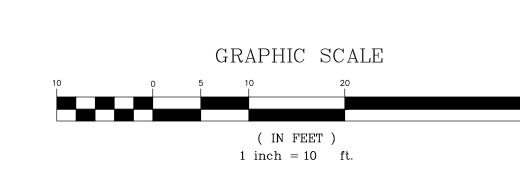
(2.) MATCH EXISTING CURB AND GUTTER SECTION.

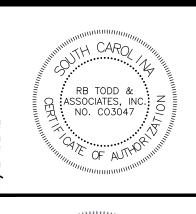
(3.) BACKFILL BETWEEN TOP OF CURB AND EDGE OF SIDEWALK (TYP.). COORDINATE WITH LANDSCAPE ARCHITECTURE PLANS ON PLANTING AND IRRIGATION.

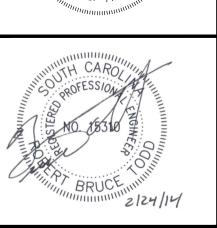
(4.) INSTALL TOP BACK OF CURB FLUSH WITH EDGE OF SIDEWALK.

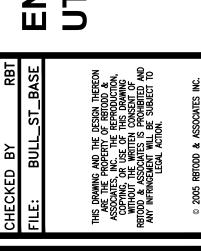
(5.) EXISTING DROP INLET CONVERTED TO JUNCTION BOX. SEE KEY NOTE # 6 ON SHEET C1.0. RIM ELEVATION EQUALS 301.40±.











# CONSTRUCTION SEQUENCE OF ENTIRE CONSTRUCTION

irrigation valve 🗕

- PRE-CONSTRUCTION MEETING (ON-SITE IF MORE THAN 10 DISTURBED AND NON-LINEAR)
  NOTIFY DHEC EQC REGIONAL OFFICE OR OCRM OFFICE 48 HOURS PRIOR TO BEGINNING LAND-DISTURBING ACTIVITIES
- CLEARING & GRUBBING OF SITE OR DEMOLITION (SEDIMENT & EROSION CONTROL MEASURES FOR THESE AREAS MUST ALREADY BE INSTALLED)
- 12. REMOVAL OF TEMPORARY SEDIMENT & EROSION CONTROL MEASURES AFTER ENTIRE AREA DRAINING TO THE STRUCTURE IS FINALLY STABILIZED (THE DEPARTMENT RECOMMENDS THAT THE PROJECT OWNER/OPERATOR HAVE THE SWPPP PREPARER OR REGISTRATION EQUIVALENT APPROVE THE REMOVAL

THE CONTRACTOR IS ADVISED THAT ALL GRADING AND DRAINAGE WORK ON THE PROJECT IS PERMITTED UNDER THE REQUIREMENTS OF THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL, DIVISION OF STORMWATER MANAGEMENT. COMPLIANCE WITH THE PERMITTED CONDITIONS IS MANDATORY. THE CONTRACTOR SHALL RELY ON EXPERIENCE AND CONTROL OF THE WORK TO PROVIDE ADEQUATE AND ORDERLY CONSTRUCTION METHODS TO CONTROL STORMWATER RUNOFF AND PREVENT THE EXCESSIVE MIGRATION OF SEDIMENTS FROM THE SITE. THE CONTRACTOR ALSO SHALL DIRECT INSTALLATION OF NECESSARY TEMPORARY CONSTRUCTION MEASURES TO CONTROL STORMWATER RUNOFF. ALL STORMWATER MANAGEMENT MEASURES SHALL

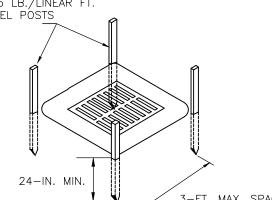
# SILT FENCES OR EQUIVALENT SEDIMENT CONTROL SHALL BE INSTALLED WHERE INDICATED AND MAINTAINED IN ACCORDANCE WITH THIS PLAN.

DISTURBED AREAS SHALL RECEIVE STABILIZING MEASURES WITHIN 14 DAYS AFTER DISTURBANCES, UNLESS CONSTRUCTION WILL RESUME IN THAT AREA WITHIN 21 DAYS FROM WHEN ACTIVITIES CEASED.

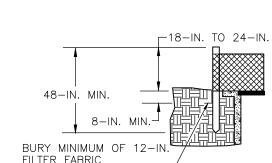
SEDIMENT CONTROL SYSTEMS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER ANY RAINFALL EVENT EXCEEDING 0.5 INCH. ANY NEEDED CORRECTIONS OR MAINTENANCE SHALL BE ACCOMPLISHED IMMEDIATELY THEREAFTER.

TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AFTER EACH AFFECTED AREA HAS BEEN "FINALLY STABILIZED".

TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO PREVENT FLOW OF STORMWATER OVER DISTURBED AREA. TEMPORARY DIVERSION OUTLETS SHALL HAVE ADEQUATE CAPACITY AND TERMINATE INTO DENSE VEGETATION, ROCK RIP RAP, STORM STRUCTURES OR SIMILAR MEASURES TO REDUCE EROSION AT THE OUTLET. TEMPORARY DIVERSION CHANNELS SHALL BE CONSTRUCTED AND MAINTAINED AT A MINIMUM OF 1 PERCENT GRADE AND A MAXIMUM GRADE OF 2 PERCENT. THE CAPACITY OF TEMPORARY DIVERSIONS SHALL BE RESTORED ANYTIME THE EXCAVATED CHANNEL BECOMES FULL OF SEDIMENT AT ANY POINT IN THE LENGTH OF THE DIVERSION. THE RIDGE AND CHANNEL OF THE TEMPORARY DIVERSIONS SHALL BE STABILIZED WITH TEMPORARY VEGETATION IMMEDIATELY AFTER CONSTRUCTION AND RE-STABILIZED AFTER EACH DISTURBANCE.



# POST INSTALLATION DETAIL



TYPE A - FILTER FABIC INLET PROTECTION

Installation
Excavate a trench 6—inches wide and 6—inches deep around the outside perimeter of the inlet unless the fabric is pneumatically installed. Extend the filter fabric a minimum of 12—inches into the trench. Backfill the trench with soil or crushed stone and compact over the filter fabric unless the fabric is pneumatically installed.

Use steel posts with a minimum post length of 60-inches consisting of standard "T" sections with a weight of 1.25 pounds per foot (±8%). Install the filter fabric to a minimum height of 24—inches above grade. Space the steel posts around the perimeter of the inlet a maximum of 3—feet apart and drive them into the ground a minimum of 24—inches. Cut the filter fabric from a continuous roll to the length of the protected area to avoid the use of joints. When joints are necessary, wrap filter fabric together only at a support post with both ends

All sediment and erosion control devices shall be inspected at least once every fourteen (14) calendar days and within 24 hours of the end

of a storm event of 0.5 inches or greater. If the fabric becomes clogged, it should be replaced. Sediment should be removed when it reaches approximately 1/3 the height of the fence. Take care not to damage or undercut fabric when removing sediment. If a sump is used, sediment should be removed when it fills approximately 1/3 the depth of the hole. Maintain the pool area, always providing adequate sediment storage Storm drain inlet protection structures should be removed only after the disturbed areas are permanently stabilized. Remove all construction material and sediment, and dispose of them properly. Grade the disturbed area to the elevation of the drop inlet structure crest. Use appropriate permanent stabilization methods to stabilize bare areas around the inlet.

#### SEDIMENT AND EROSION CONTROL NOTES

- 1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN THROUGHOUT THE LENGTH OF CONSTRUCTION SILT FENCES AT ALL STORM DRAINAGE STRUCTURES AND ALONG THE PERIMETER OF CONSTRUCTION AS NECESSARY TO CONTAIN ALL SEDIMENT RUNOFF WITHIN THE AREAS
- 2. 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) DAYS 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. 3. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED AT LEAST 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 OR IDENTIFICATION.
- 4. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH ONE-THIRD THE HEIGHT OF THE SEDIMENT FENCE. 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STABILIZING ALL SLOPES FROM FINISH GRADE TO NATURAL GROUND AND FOR PREVENTING EXCESSIVE EROSION FROM OCCURRING. IMMEDIATELY AFTER ESTABLISHING THE INTERMEDIATE ROUGH GRADE SLOPES AND AFTER REACHING THE FINAL GRADE SLOPES, THE CONTRACTOR SHALL PROVIDE GRASSING OF THESE SLOPES. WHEN SLOPES ARE DISTURBED BY SUBSEQUENT EXCAVATIONS FOR OTHER ITEMS, THE CONTRACTOR SHALL INSPECT THE REPAIRS AND CORRECT ANY DEFICIENCIES IN THE
- 6. ALL GRADING WORK SHALL CONFORM SUBSTANTIALLY WITH THE GRADING PLANS, WHERE SPOT GRADES ARE INDICATED ON THE PLANS, THEY SHALL BE ESTABLISHED BY SCALING AND SHALL TAKE PRECEDENCE OVER CONTOURS. ALL GRADING BETWEEN SPOT GRADES SHALL BE SMOOTH AND UNIFORM.
- 7. THE CONTRACTOR SHALL ADEQUATELY COORDINATE THE INSTALLATION OF THE STORM DRAINAGE SYSTEM TO ENSURE THAT POSITIVE RUNOFF OF STORMWATER IS EFFECTED BOTH DURING CONSTRUCTION AND AFTER COMPLETION OF THE WORK. 8. IF NECESSARY, SLOPES WHICH EXCEED 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.
- 9. 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.
  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 ANY SEDIMENTS BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE. 10. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE TRACKING OF MUD ONTO PAVED ROADWAY FROM CONSTRUCTION AREAS AND GENERATION OF DUST
- 11. 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 OF TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- 12. TEMPORARY DIVERSION BERMS AND/OR DITCHES SHALL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS. 13. 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 CANNOT BE MAINTAINED BETWEEN THE DISTURBED AREAS AND ALL WoS. A 10—FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WoS.
- 14. LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER), AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORMWATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORMWATER DISCHARGES.
- 15. 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. 16. INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE
- 17. MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL. 18. MINIMIZE 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
- 19. 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.).
- 20. 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, FROM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION
- FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND SOAPS OR SOLVENTS USED IN VEHICLE AND EQUIPMENT WASHING. 21. 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. 22. 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 PRACTICAL. 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. 23. 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. 24. 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.

# SIGNATURES AND CERTIFICATIONS

A. One copy of the SWPP, all specifications and supporting calculations, forms, and reports are herewith submitted and made a part of this application. I have placed my signature and seal on the design documents submitted signifying that I accept responsibility for the design of the system. Further, I certify to the best of my knowledge and belief, that the design is consistent with the requirements of Title 48, Chapter 14 of the Code of Laws of SC, 1976 as amended,

#### pursuant to Regulation 72-300 et seq., and in accordance with the terms and conditions of SCR100000. (This should be the person identified in Section V.A.) Bruce Todal P.E rinted name of SWPPP Preparer

B. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine hereby certify that all land-disturbing construction and associated activity pertaining to this site shall be accomplished pursuant to and in keeping with the terms and conditions of the approved plans and SCR100000. I also certify that a responsible person will be assigned to the the project for day—to—day control. I hereby grant authorization to the Department of Health and Environmental Control and/or the local implementing agency the right of access to the site at all times for the purpose of on site inspections during the course of construction and to perform maintenance inspections following the completion of the land-disturbing activity. (See Segtion / 22.22 of S.C. Reg. 61-9 for signatory

authority information.) Signature of Project Owner/Operator Printed name of Project Owner/Operator

# APPLICANT'S CERTIFICATION STATEMENT

"I (WE) HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION AND OR DEVELOPMENT WILL BE DONE PURSUANT TO

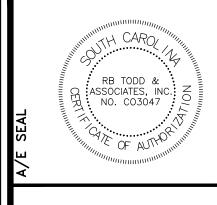
"I HAVE PLACED MY SIGNATURE AND SEAL ON THE DESIGN DOCUMENTS SUBMITTED SIGNIFYING THAT I ACCEPT RESPONSIBILITY FOR THE DESIGN OF THE SYSTEM. FURTHER, I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE DESIGN IS CONSISTENT WITH THE REQUIREMENTS OF TITLE 48, CHAPTER 14 OF THE CODE OF LAWS OF SC. 1976 AS AMENDED, PURSUANT TO REGULATION 72-300 ET SEQ. (IF APPLICABLE), AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF SCR10000."

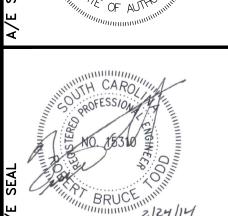
NAME Bruce Tock of
TITLE Project Manager

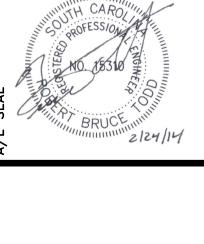
# DESIGN CERTIFICATION STATEMENT

I HEREBY CERTIFY THAT THIS PLAN IS DESIGNED TO MEET STORM DRAINAGE REQUIREMENTS AND TO CONTAIN SILT ON THE PROPERTY CONCERNED TO THE MAXIMUM EXTENT FEASIBLE. PROVISIONS FOR EROSION AND SEDIMENT CONTROL AND STORM DRAINAGE ARE IN ACCORDANCE WITH THE COLUMBIA SEDIMENT AND EROSION CONTROL AND STORM DRAINAGE ORDINANCE.

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER







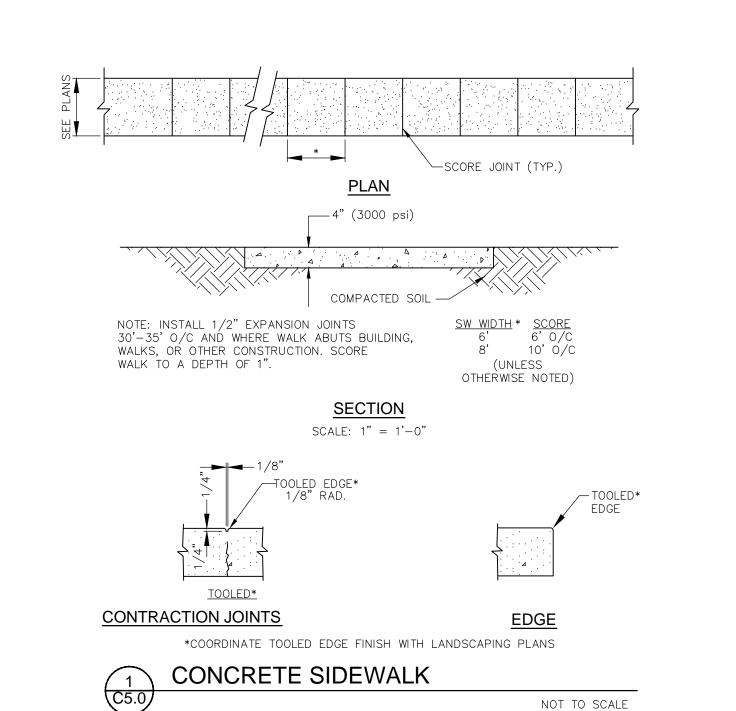
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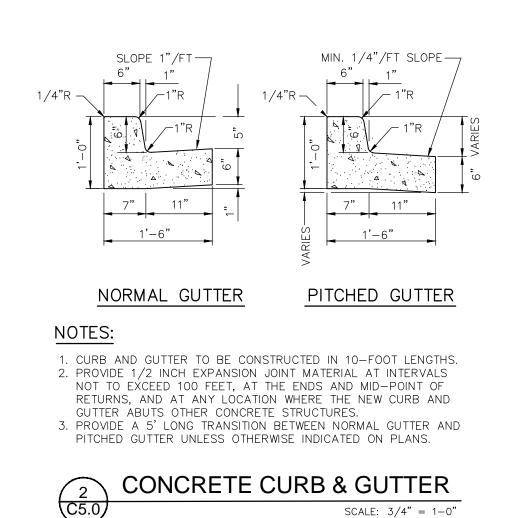
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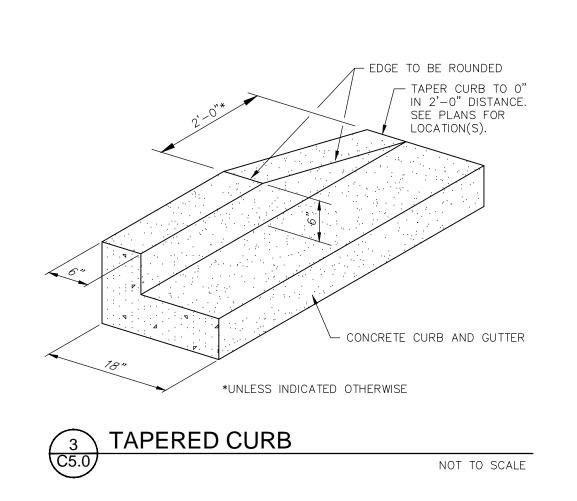
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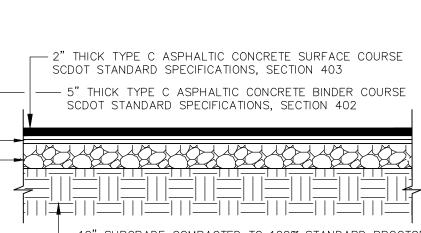
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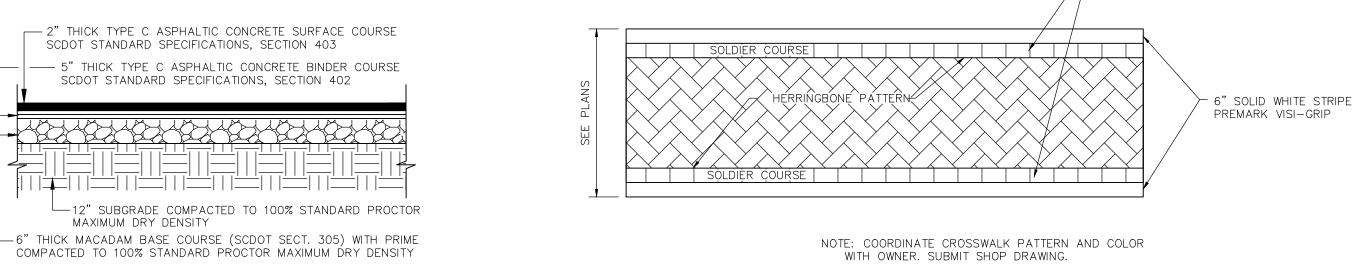






4 BITUMINOUS PAVEMENT IN SCDOT/CITY R/W

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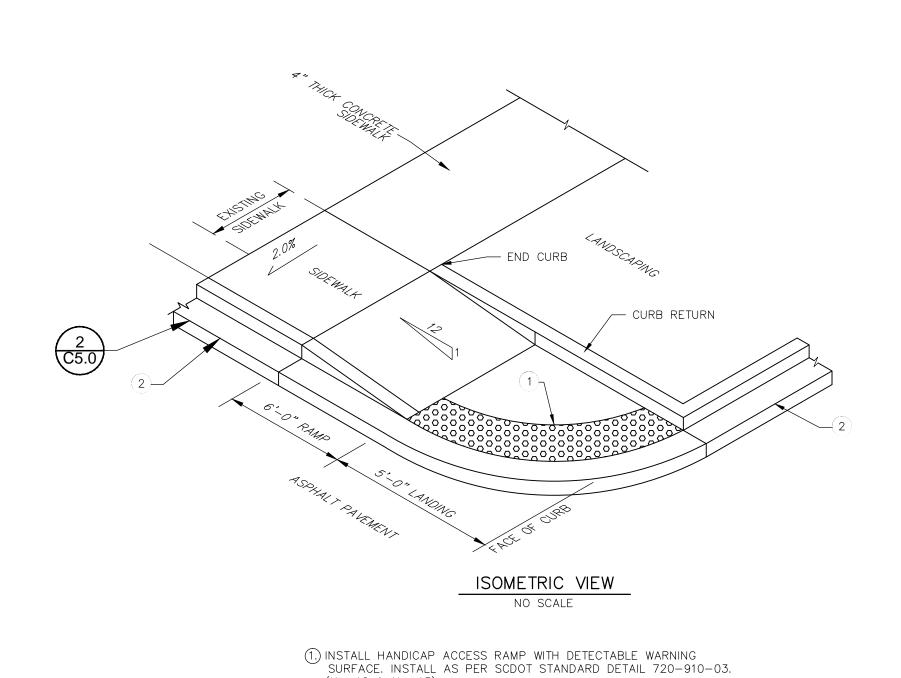
5 STAMPED ASPHALT CROSSWALK

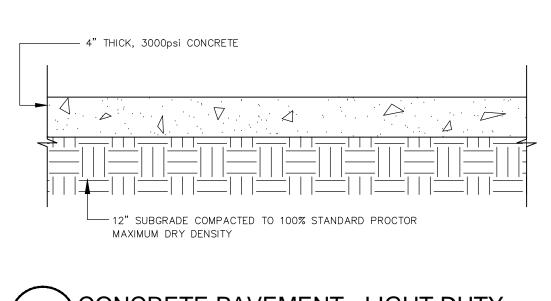
- INSTALL TRAFFIC PATTERNS XD STAMPED ASPHALT

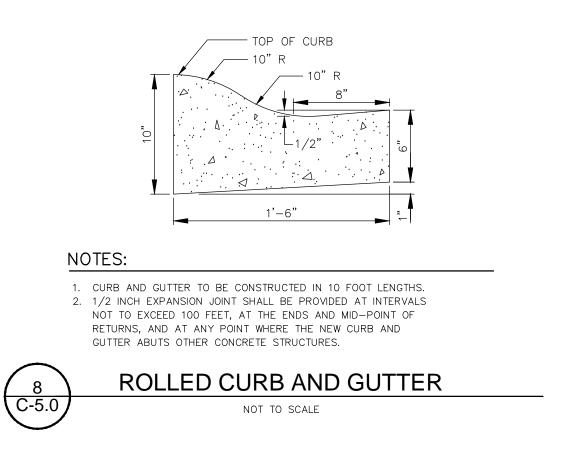
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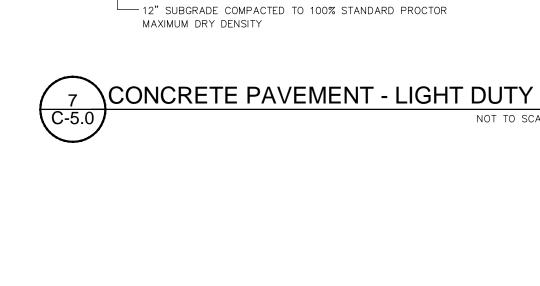


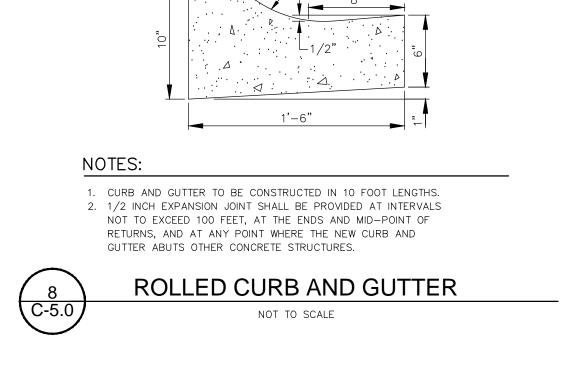


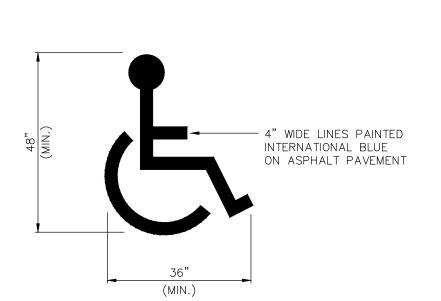


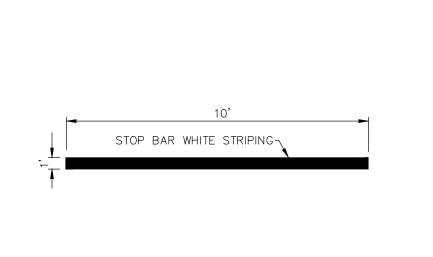


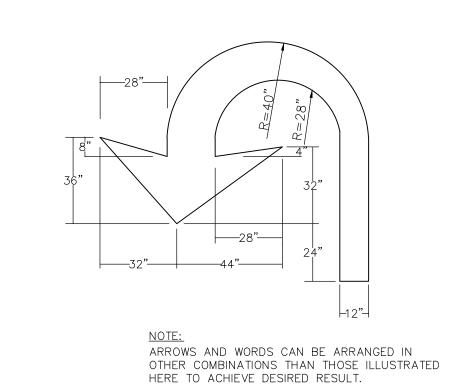
(2) MATCH EXISTING EDGE OF SAWCUT TO ASPHALT PAVEMENT.

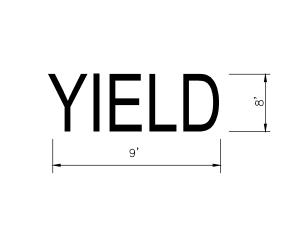


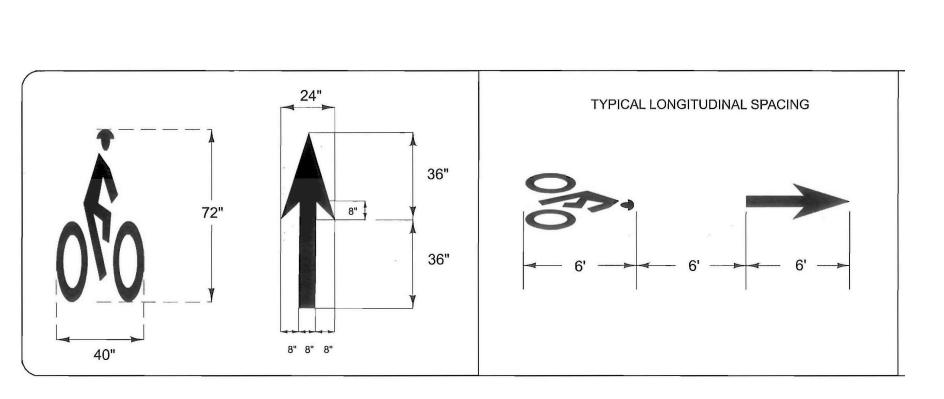




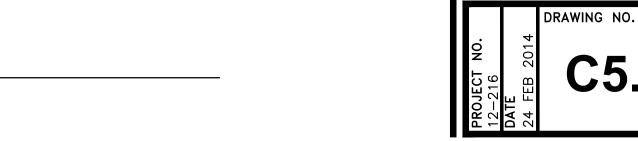


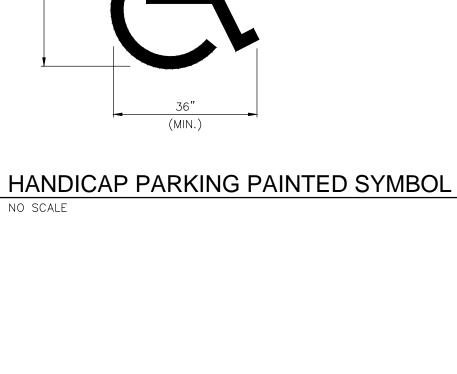




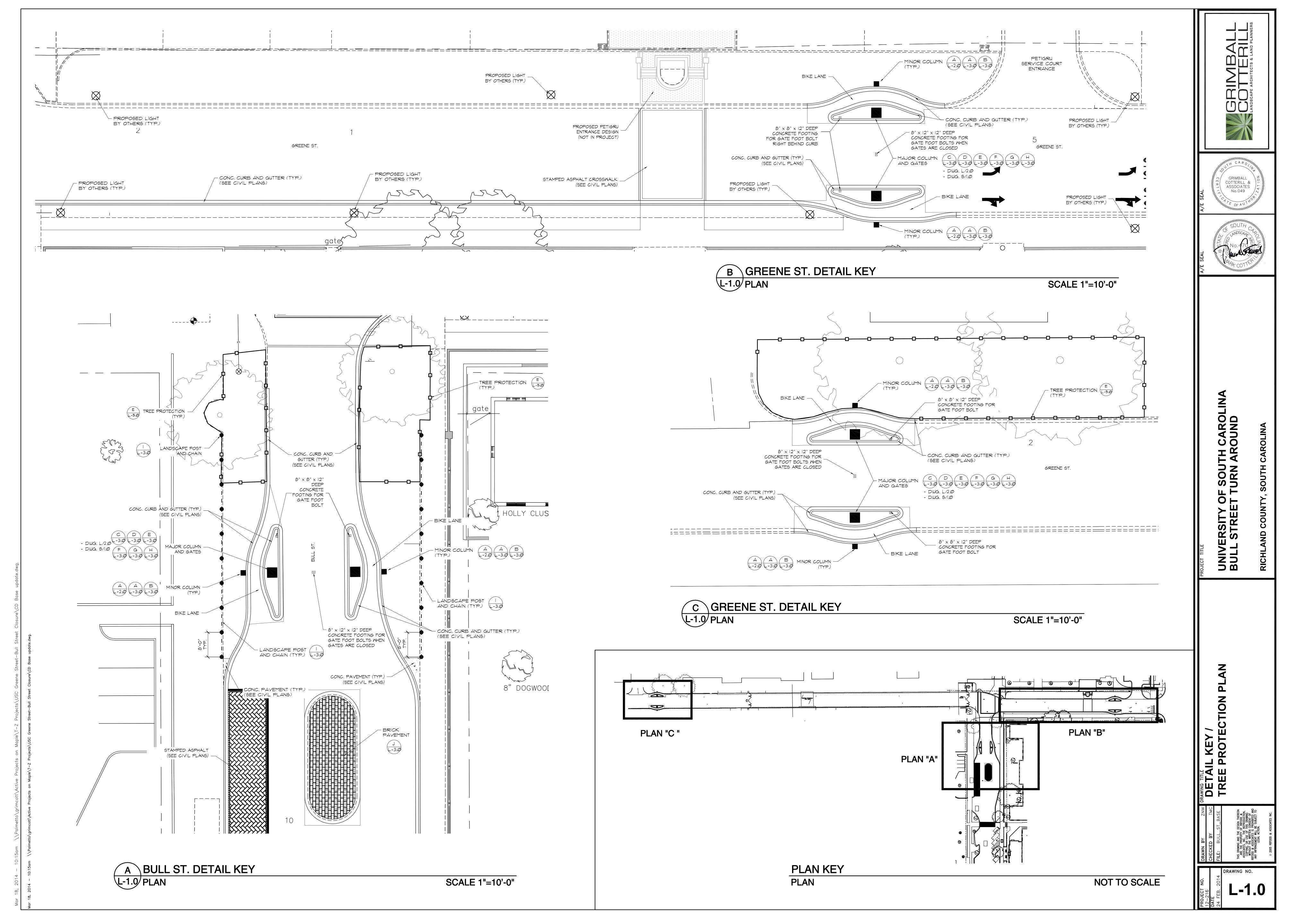


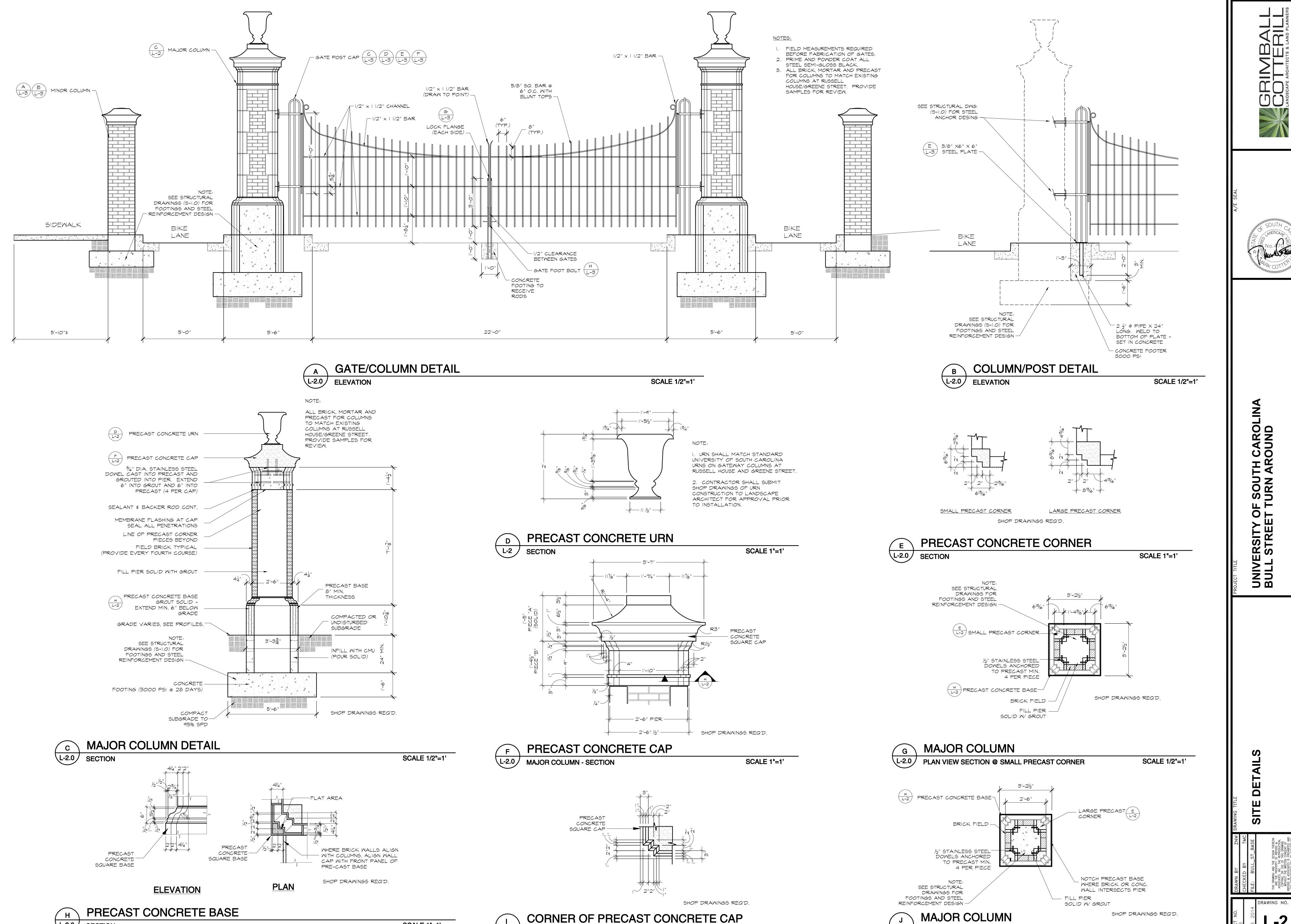






NOTE: ALL STRIPING PER SCDOT MUTCD.



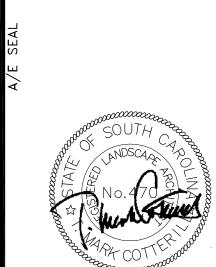


SCALE 1"=1"

SCALE 1"=1"

MAJOR COLUMN - PLAN

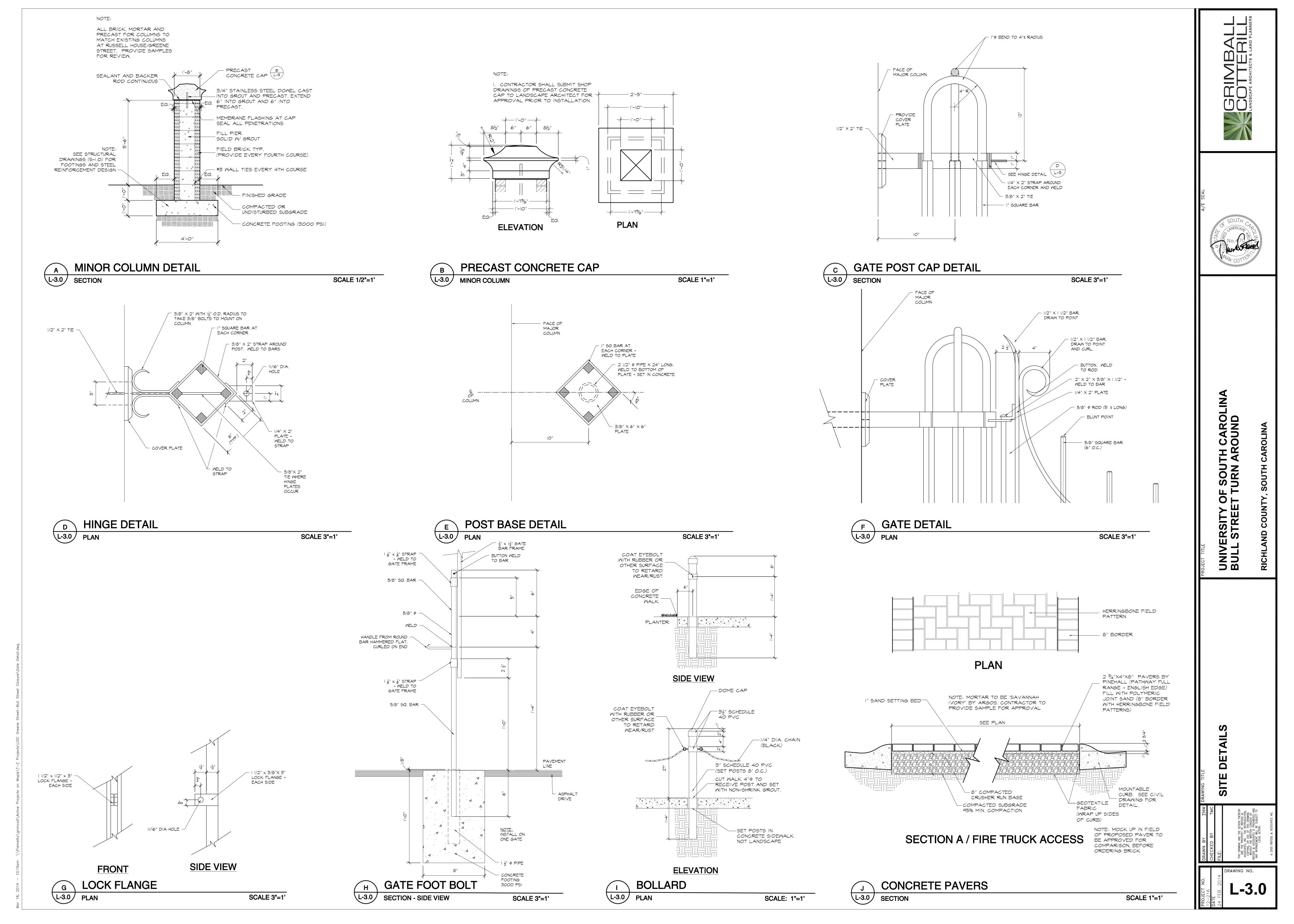
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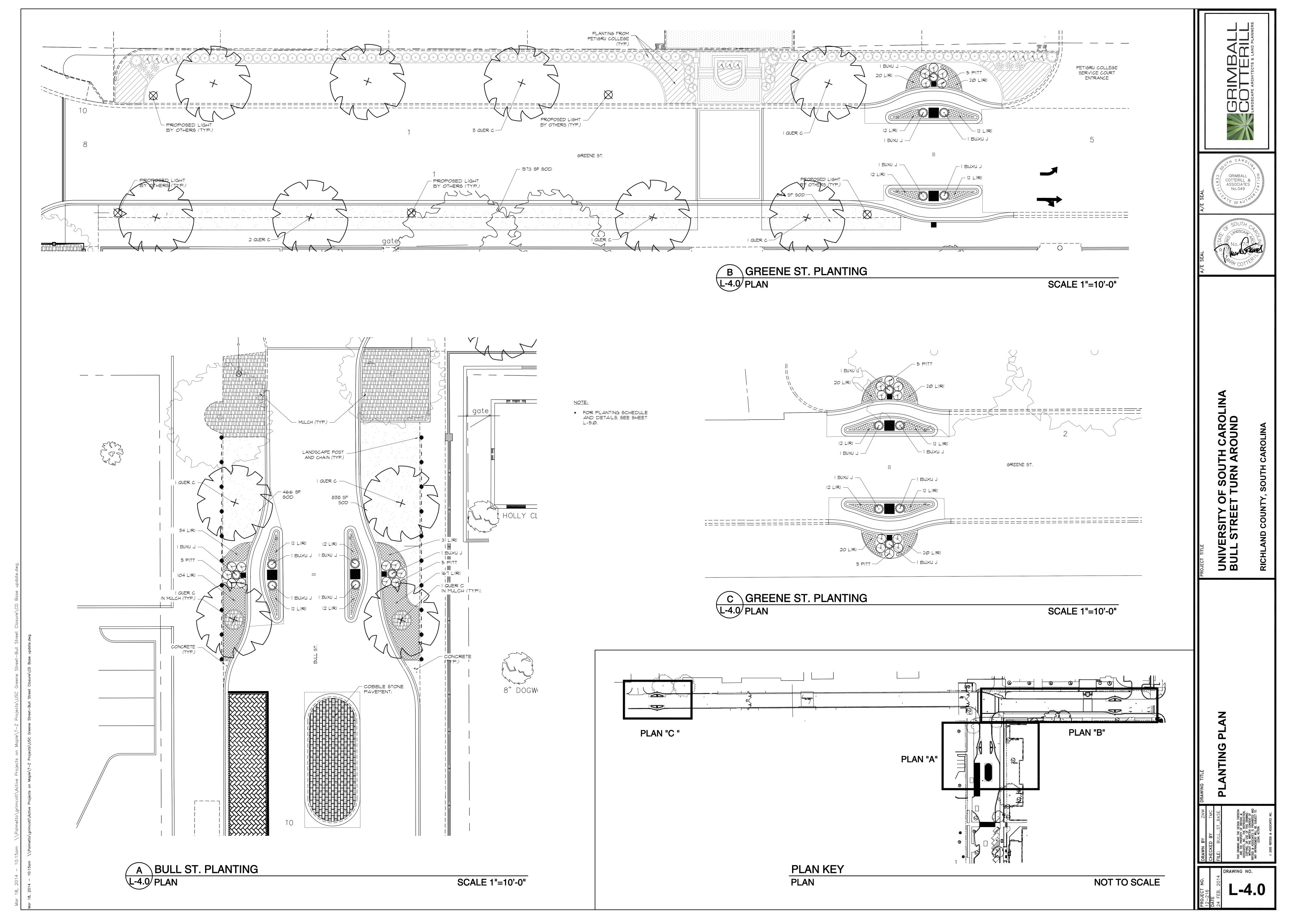


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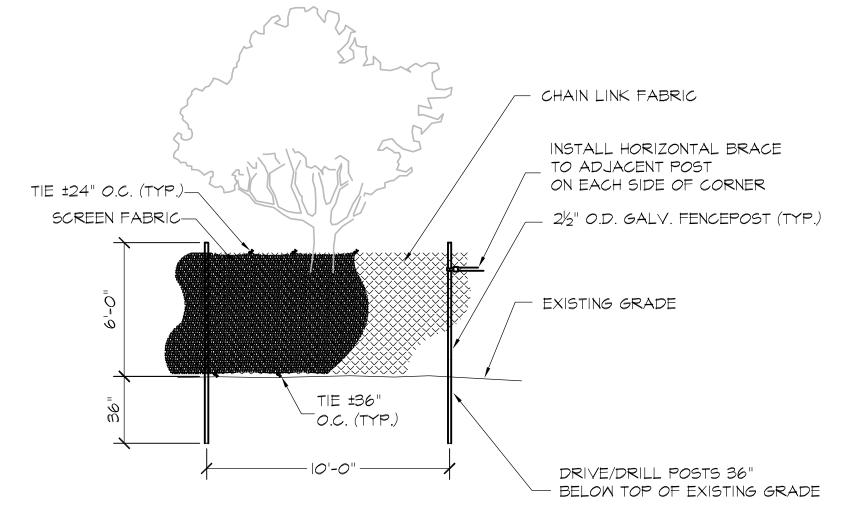
SCALE 1/2"=1"

L-2.0 PLAN VIEW SECTION @ LARGE PRECAST CORNER





ABBR.	POTANICAL NAME	COMMON NAME	MINIMUM					COMMENTS	
ADDR.	BOTANICAL NAME		CALIPER	SPREAD	HEIGHT	BALL DIA.	NO. CANES	COMMENTS	QTY.
QUER C	QUERCUS COCCICENA	SCARLET OAK	3"	6'	2'- 4'	32"		MATCHING, SPECIMEN	12
BUXU J	BUXUS MICROPHYLLA JAPONICUM	JAPANESE BOXWOOD		30"	30"	7 GAL.	3-5	PLANT AS SHOWN	17
PITT	PITTOSPORUM TOBIRA 'WHEELER'S DWARF'	DWARF PITTOSPORUM		15"	12"	3 GAL.	3-5	PLANT 3' O.C.	25
LIRI	LIRIOPE MUSCARII 'BIG BLUE'	'BIG BLUE' LIRIOPE				PINT		PLANT 12" O.C.	600
SOD	CYNODON DACTYLON	BERMUDA GRASS - TIFFWAY 419						WELL ROOTED	3,221 SF

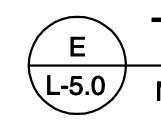


SEE LANDSCAPE PLANS FOR LOCATION OF TREE PROTECTION FENCING.

- 2. SEE "USC SUPPLEMENTAL GENERAL CONDITIONS FOR CONSTRUCTION PROJECTS" FOR ADDITIONAL INFORMATION.
- 3. PROVIDE PROTECTION FENCE FOR ALL TREES TO REMAIN.
- 4. PROTECTION FENCING TO BE PLACED OUTSIDE OF DRIPLINE OF TREE CANOPY UNLESS OTHERWISE INDICATED ON LANDSCAPE PLAN OR APPROVED BY USC PROJECT
- 5. A 4" LAYER OF HARDWOOD MULCH SHALL BE PLACED OVER TREE PROTECTION AREA. 6. PROTECTION FENCING SHALL BE IN PLACE AND HARDWOOD MULCH PLACED PRIOR TO BEGINNING
- 7. REQUESTS FOR PAYMENT SHALL NOT BE APPROVED UNTIL PROTECTION
- FENCING AND MULCH IS IN PLACE. 8. LOCATION OF THE PROTECTION FENCING SHALL BE MARKED BY USC ARBORIST AND APPROVED BY USC PROJECT MANAGER BEFORE INSTALLATION. WHERE CONSTRUCTION IS LIKELY TO OCCUR WITHIN 5' OF PROPOSED LOCATION OF PROTECTION FENCING, CONTRACTOR SHALL HAVE LIMITS OF

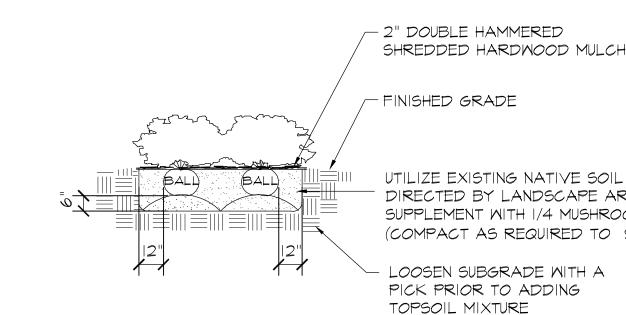
CONSTRUCTION MARKED BY SURVEY BEFORE PROTECTION FENCING IS INSTALLED.

9. SCREEN FABRIC SHALL BE DARK GREEN 85% OPAQUE, POLYETHEYLENE KNIT MESH, UV STABILIZED WITH BURST STRENGTH OF AT LEAST 210 P.S.I



# TREE PROTECTION FENCING

NOT TO SCALE



/ FINISHED GRADE UTILIZE EXISTING NATIVE SOIL UNLESS OTHERWISE DIRECTED BY LANDSCAPE ARCHITECT. SUPPLEMENT WITH 1/4 MUSHROOM COMPOST (COMPACT AS REQUIRED TO SUPPORT BALL.)

LOOSEN SUBGRADE WITH A PICK PRIOR TO ADDING TOPSOIL MIXTURE

- I. TEST FOR PERCOLATION PRIOR TO PLANTING. 2. REMOVE PAPER, PLASTIC OR METAL CONTAINER
- THAT MAY BE AROUND ROOTS 3. WATER AFTER PLANTING
- 4. DO BED PREPARATION ON ALL SHRUB & GROUNDCOVER AREAS

# \L-5.0

# SHRUB PLANTING

NOT TO SCALE

#### 3. DO NOT WRAP TREES 4. REMOVE BURLAP/STRAPPING AND WIRE FROM TOP 1/3 OF ROOT BALL. - EDGE OF PIT 5. DIG TREE PIT WITH BACKHOE OR SIMILAR EQUIPMENT. RESOD AREA NOT MULCHED PLAN DETAIL 6. NO TREE IS TO BE PLANTED IF NOT IN LOWER THAN THE ELEVATION PLANT BED THAT THE TREE WAS GROWN NO SCALE AT THE NURSERY. REMOVE BUILT UP SOIL AS NECESSARY. TRENCH/TILL SOIL OUTWARD FROM TREE PIT SPACE TRENCH PATHS AT ±36" O.C. TRENCH OR TILL TO A DEPTH AND WIDTH OF 8" AND TO A DISTANCE OF 6' FROM TRUNK (TYP.) LOOSEN SOIL AND BACKFILL, AVOID RE-COMPACTING AREA. TRENCH PATHS MAY VARY WITH CONFIGURATION OF PLANTING AREA BUT

PLAN DETAIL: ROOT PATH TRENCHES

NO SCALE

**∖L-5.0** ⁄

**SECTION** 

- 4' MULCH RING

- GUY MIRE

I. TEST FOR PERCOLATION

2. WATER AFTER PLANTING.

PRIOR TO PLANTING.

SHOULD PROVIDE 36" O.C. SPACING

TREE PLANTING AND STAKING

DO NOT PRUNE #10 GAUGE GALVANIZED WIRE WITH RUBBER HOSE OR POLYPROPYLENE WEBBING 3 PER TREE. FLAGGING IF REQUIRED BY L.A. 2" DOUBLE HAMMERED SHREDDED HARDWOOD MULCH LEAVE CLEAR AT TRUNK (2) 7'-8' HARDWOOD STAKE - DRIVE AT ANGLE CLEARING BALL - PULL STRAIGHT EARTH SAUCER 4' MULCH RING, FINISHED GRADE - ROOT PATH TRENCH | Bal'l| UTILIZE EXISTING NATIVE SOIL UNLESS OTHERWISE DIRECTED BY ARCHITECT SUPPLEMENT WITH 1/2 BAG COMPOST PER PIT (COMPACT AS REQUIRED TO SUPPORT BALL.) 8' PIT DIA. TYP. ---- 2:1 SLOPE BALLS SHALL SIT ON UNDISTURBED SOIL TO PREVENT SETTLING

NOT TO SCALE



I. WITH A SHOVEL OR POSTHOLE DIGGER, DIG HOLE 18" TO 24" DEEP. HOLE DIAMETER SHOULD BE A MINIMUM OF 4 INCHES. THE DIAMETER OF THE HOLE SHOULD BE UNIFORM FROM TOP TO BOTTOM WITH THE BOTTOM BEING FLAT.

2. FILL HOLE WITH WATER TO THE TOP AND LET STAND FOR AT LEAST AN HOUR TO PRE-WET THE SOIL.

3. REFILL HOLE TO WITHIN A COUPLE INCHES OF THE TOP. DON'T OVERFLOW THE

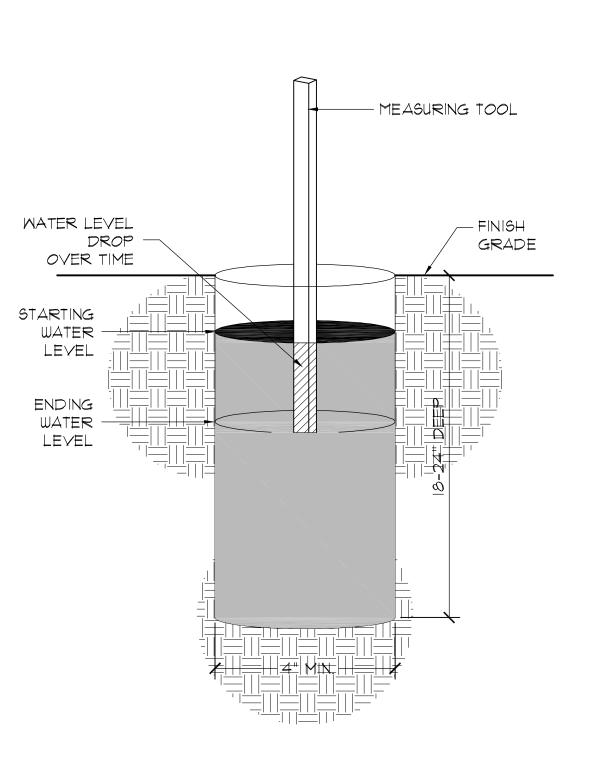
4. TO AID IN MEASUREMENT, PLACE A STICK ACROSS THE TOP OF THE HOLE AND USE A RULER OR MEASURING TAPE TO MARK PERIODIC DROPS IN WATER

5. ALLOW THE HOLE TO DRAIN FOR AT LEAST ONE HOUR. A LONGER PERIOD OF TIME (2 TO 3 HOURS) WILL GIVE A MORE ACCURATE READING OF AVERAGE PERCOLATION RATES.

6. DETERMINE AVERAGE DROP IN WATER LEVEL PER HOUR AND REFER TO THE TABLE BELOW TO INTERPRET RESULTS.

HOW TO INTERPRET RESULTS							
IF WATER LEVEL IN HOLE DROPS	SITE IS						
LESS THAN ONE-HALF INCH PER HOUR	POORLY DRAINED AND SUITED TO WE -SITE SPECIES						
ONE HALF-INCH TO ONE INCH PER HOUR	MODERATELY WELL DRAINED AND ACCEPTABLE FOR MANY SPECIES INCLUDING WET SITE SPECIES						
MORE THAN ONE INCH PER HOUR	WELL DRAINED AND SUITABLE FOR ALL SPECIES INCLUDING SENSITIVE SPECIES						

PERCOLATION TEST HOLE



# **GENERAL NOTES**

I. EXISTING ECOLOGY AND AESTHETICS WILL OFTEN CAUSE ADJUSTMENT OF THESE PLANS TO FIT THE SITE. STAKE-OUT BY THE CONTRACTOR AND ADJUSTMENT BY THE LANDSCAPE ARCHITECT IS ABSOLUTELY NECESSARY.

2. LOCATIONS OF THOSE UTILITIES SHOWN ARE APPROXIMATE AND FOR INFORMATION PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR THE EXACT LOCATION OF ALL UTILITIES WHETHER SHOWN OR NOT SHOWN ON THESE PLANS, AND SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE RESULTING FROM THE FAILURE TO DO SO. CONTACT PALMETTO UTILITY PROTECTION SERVICE AT 1-888-721-7877 AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION.

IN CONFLICT WITH EXISTING OR PROPOSED UTILITIES. CONTRACTOR SHALL COORDINATE WITH LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION TO ADJUST PROPOSED DESIGN OR UTILITIES AS NECESSARY TO RESOLVE CONFLICTS.

4. BASE PLAN DATA DERIVED FROM SITE SURVEY. PROVIDED BY RB TODD DATED OCTOBER II, 2013.

# **PLANTING NOTES**

PLANTINGS RELOCATED.

I. PLANTS LABELED NIC ARE NOT IN CONTRACT AND ARE NOT A PART OF THIS PHASE OF WORK.

2. REQUIREMENTS FOR THE MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING AND BURLAPPING OF PLANTS IN THE PLANT LIST GENERALLY FOLLOWS OR EXCEEDS A CODE OF STANDARDS CURRENTLY RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. IN THE AMERICAN STANDARD FOR NURSERY STOCKS. SEE THE PLANT LIST FOR MORE RESTRICTIVE REQUIREMENTS.

3. ALL PLANTS SHALL HAVE A WELL FORMED HEAD WITH MINIMUM CALIPER, HEIGHT AND SPREAD OF THE SIDE BRANCHES AS SHOWN ON THE PLANT LIST. TRUNKS SHALL BE UNDAMAGED AND SHAPE SHALL BE TYPICAL OF THE SPECIES.

4. MEASUREMENT OF CONIFER HEIGHT SHALL INCLUDE NOT MORE THAN FIFTY (50) PER CENT OF THIS YEARS' VERTICAL GROWTH (TOP CANDLE).

5. THE LANDSCAPE CONTRACTOR IS HEREBY NOTIFIED OF THE EXISTENCE OF UNDERGROUND UTILITIES WITHIN THE LIMITS OF THE PROJECT AREA. THE

CONTRACTOR SHOULD VERIFY THE EXACT LOCATION OF ALL UTILITY LINES PRIOR TO COMMENCEMENT OF DIGGING OPERATIONS. 6. THE CONTRACTOR WILL BE RESPONSIBLE FOR STAKING AND LAYOUT OF PLANTINGS ON THIS PROJECT. THE LANDSCAPE ARCHITECT OR OWNER SHALL BE

ADVISED WHEN STAKES ARE READY FOR INSPECTION ON VARIOUS PLANTING AREAS. ALL LAYOUT WORK SHALL BE INSPECTED AND APPROVED BY THE

LANDSCAPE ARCHITECT AND OWNER PRIOR TO OPENING ANY PLANTING PITS 7. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO VERIFY THAT EACH EXCAVATED TREE OR SHRUB PIT WILL PERCOLATE (DRAIN) PRIOR TO ADDING TOPSOIL AND INSTALLING TREES OR SHRUBS. THE CONTRACTOR SHALL DO PERCOLATION TEST AS DETAILED ON DETAIL H/L-102. THE OWNER OR LANDSCAPE ARCHITECT SHALL VERIFY ACCURACY AND EFFECT OF PERCOLATION TESTING. IF THE SOIL AT GIVEN AREA DOES NOT DRAIN PROPERLY, A PVC DRAIN OR GRAVEL SUMP SHALL BE INSTALLED OR THE

8. SHOULD THE LANDSCAPE CONTRACTOR ENCOUNTER UNSATISFACTORY SURFACE OR SUBSURFACE DRAINAGE CONDITIONS, SOIL DEPTH, LATENT SOILS, HARD PANS, STEAM OR OTHER UTILITY LINES OR OTHER CONDITIONS THAT WILL JEOPARDIZE THE HEALTH AND VIGOR OF THE PLANTS, HE MUST ADVISE THE LANDSCAPE ARCHITECT IN WRITING OF THE CONDITIONS PRIOR TO INSTALLING THE PLANTS. OTHERWISE, THE LANDSCAPE CONTRACTOR WARRANTS THAT THE PLANTING AREAS ARE SUITABLE FOR PROPER GROWTH AND DEVELOPMENT OF THE PLANTS TO BE INSTALLED.

9. PLANTING PITS FOR TREE AND SHRUBS SHALL BE PREPARED AS PER DETAILS.

10. DOUBLE HAMMERED SHREDDED HARDWOOD MULCH SHALL BE APPLIED TO ALL SHRUB BEDS BY THE CONTRACTOR. BEDS SHALL BE TREATED WITH PREEMERGENT HERBICIDE BY THE CONTRACTOR BEFORE MULCH IS APPLIED. SHREDDED HARDWOOD MULCH SHALL BE TWO INCHES DEEP. A SAMPLE OF SHREDDED HARDWOOD MULCH SHALL BE PRESENTED TO THE LANDSCAPE ARCHITECT FOR APPROVAL.

ALL TREES ARE TO BE STAKED IMMEDIATELY AFTER PLANTING AS DETAILED. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF STAKING HOSES, ETC. AT THE END OF THE ONE YEAR GUARANTEE PERIOD.

12. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING UP THE SITE AT THE COMPLETION OF THE PROJECT AND SHALL MAINTAIN THE SITE IN A REASONABLY NEAT AND CLEAN STATE THROUGHOUT THE INSTALLATION PROCESS. STREETS AND PAVED AREAS SHALL BE CLEANED REGULARLY TO REMOVE CONSTRUCTION MATERIALS AND OTHER DEBRIS RESULTING FROM WORK OF THE PROJECT.

13. PLANTS SHALL BE GUARANTEED FOR THE DURATION OF ONE (1) FULL YEAR AFTER THE FINAL ACCEPTANCE OF THE PLANTING BY THE OWNER AND SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE GUARANTEE PERIOD. ANY PLANT NOT IN A HEALTHY AND VIGOROUS STATE AT THE END OF THE GUARANTEE PERIOD SHALL BE REPLACED AT NO COST TO THE OWNER, PLANTS SEVERELY DAMAGED BY VANDALS ARE NOT SUBJECT TO REPLACEMENT BY THE CONTRACTOR DURING THE ONE YEAR GUARANTEE PERIOD

14. REPLACEMENTS OF DEAD OR UNSATISFACTORY MATERIAL SHALL BE MADE AS SPECIFIED IN THE PLANT LIST. THE OWNER OR LANDSCAPE ARCHITECT SHALL INSPECT REPLACED PLANTS WHEN ALL REPLACEMENTS HAVE BEEN MADE. REPLACEMENTS ARE TO BE ALIVE AND IN A HEALTHY CONDITION WHEN THE REPLACEMENTS ARE COMPLETE, AND SHALL BE SUBJECT TO A ONE (I) YEAR GUARANTEE FROM THE DATE OF SATISFACTORY REPLACEMENT.

15. SHOULD THE CONTRACTOR NOT MAKE REPLACEMENTS IN A SATISFACTORY AND TIMELY FASHION IN ACCORD WITH THE PLANTING NOTES, THE OWNER, AFTER PROPER NOTIFICATION TO THE CONTRACTOR MAY UTILIZE THE FUNDS OF THE RETAINAGE TO HAVE THE REPLACEMENTS MADE IN ACCORD WITH THE SPECIFICATIONS BY ANOTHER CONTRACTOR.

16. NO EXCAVATION OR PLANTING PIT SHALL BE LEFT OPEN OR UNATTENDED OVERNIGHT.

17. PLANT MATERIAL QUANTITIES PROVIDED IN THE PLANT LIST ARE FOR REFERENCE ONLY AND THE CONTRACTOR IS RESPONSIBLE FOR THE ACTUAL PLANT MATERIAL COUNTS. DISCREPANCIES BETWEEN QUANTITIES SHOWN ON THE PLANTING PLAN AND THOSE IN THE PLANT LIST SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION. IF CLARIFICATION OF DISCREPANCIES FROM THE LANDSCAPE ARCHITECT IS NOT POSSIBLE, THEN QUANTITIES SHOWN ON THE PLANTING PLAN SHALL TAKE PRECEDENCE.



3. CONTRACTOR SHALL INFORM LANDSCAPE ARCHITECT IF PROPOSED DESIGN IS

TILL COMPOST 6" DEEP. REMOVE ALL STICKS, STONES, ETC RAKE SMOOTH PRIOR TO PLANTING. LAWN AREA OR PLAN PAVEMENT ─ SEE PLAN OR PLANT LIST FINISHED GRADE -FOR SPACING - 2" DOUBLE HAMMERED SHREDDED HARDWOOD MULCH UTILIZE EXISTING NATIVE SOIL UNLESS OTHERWISE DIRECTED BY ARCHITECT. SUPPLEMENT WITH I BAG OF COMPOST FOR EVERY 100 SF OF BED AREA. SUB GRADE (STIR IN PLANTING MIN. 6")

YPICAL GROUNDCOVER PLANTING

NOT TO SCALE

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PERCOLATION TEST

**ISOMETRIC** 

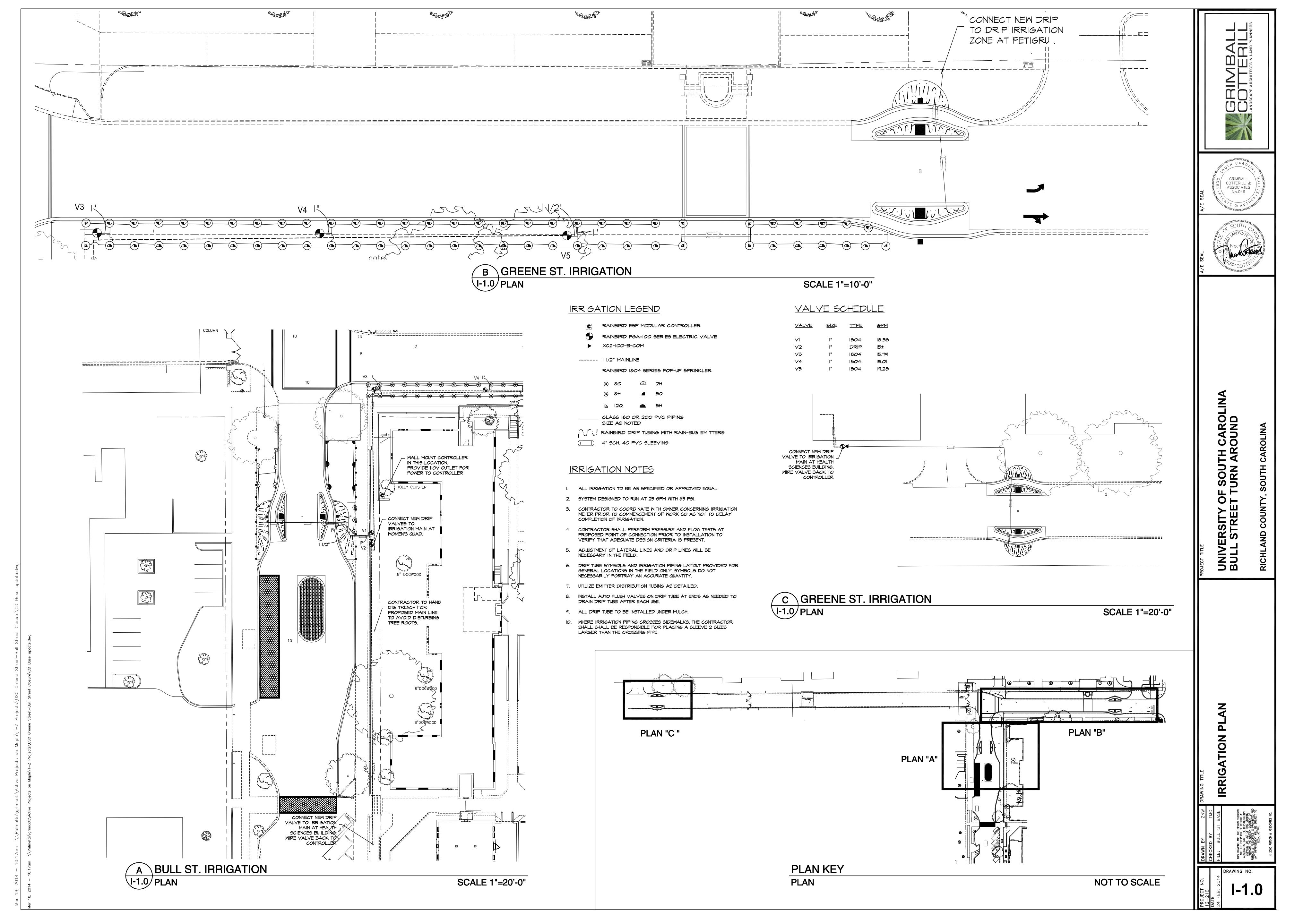
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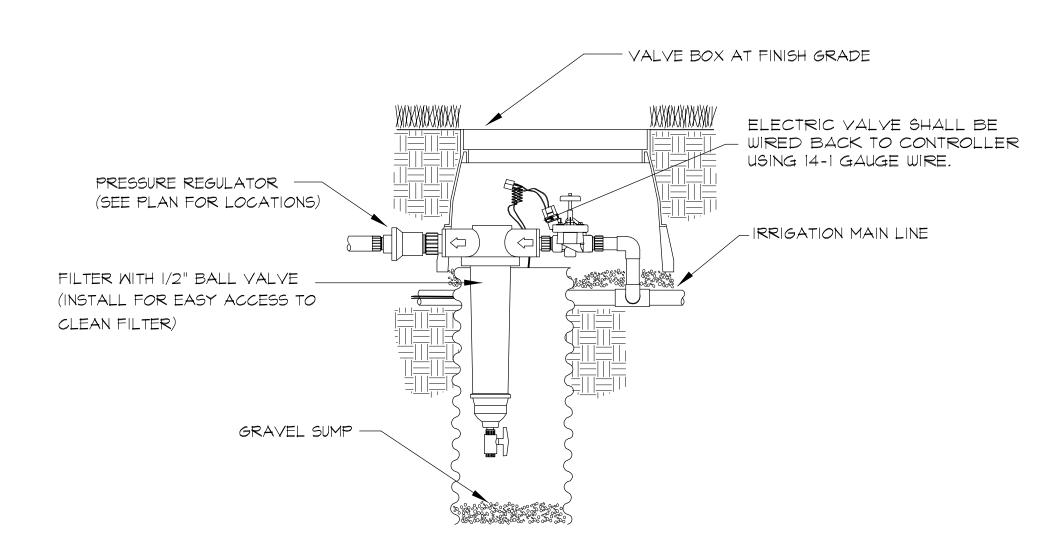
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GRIMBALL COTTERILL & **ASSOCIATES** 

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-----PAVING 4" SCH. 40 PVC SLEEVE DUCT TAPE BOTH ENDS COMPACTED OR UNDISTURBED SUBGRADE —



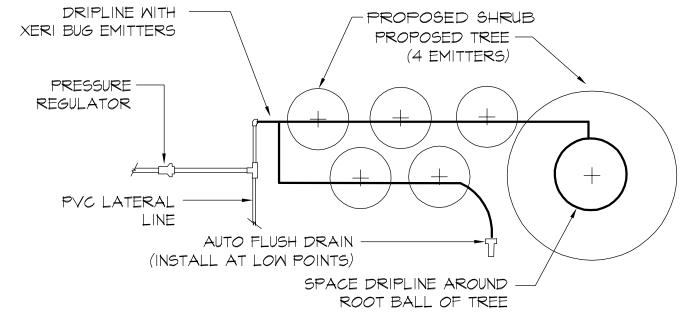
2 X 4 PLACER AT END OF SLEEVE

24" ABOVE GRADE

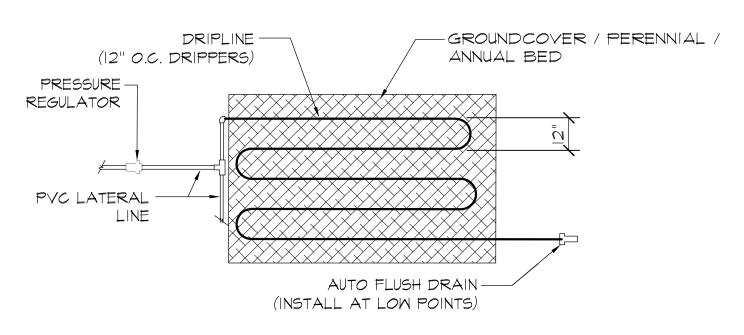
PRIOR TO BACKFILLING. EXTEND TO













# **IRRIGATION NOTES**

- I. ALL PLASTIC PIPE FITTINGS TO BE MINIMUM SCHEDULE 40 PVC.
- 2. ALL MAIN LINES TO BE SCHEDULE 40 PVC OR SCHEDULE 200 PVC.
- 3. ALL LATERAL LINES TO BE SCHEDULE 200 PVC OR SCHEDULE 160 PVC.
- 4. COORDINATE WITH GENERAL CONTRACTOR FOR INSTALLATION OF SCHEDULE 40 PVC PIPE UNDER PAVED SURFACES AS NOTED ON THE DRAWINGS TO BE UTILIZED FOR IRRIGATION SLEEVING. THE LOCATION OF SLEEVING IS MARKED ON THE IRRIGATION PLAN. DEVIATIONS MAY OCCUR DURING CONSTRUCTION.
- 5. TRENCHES FOR PVC PIPE MAINLINES SHALL BE EXCAVATED TO SUFFICIENT DEPTH OF 18" MINIMUM AND AN SUFFICIENT WIDTH TO PERMIT PROPER HANDLING AND INSTALLATION OF PIPE AND FITTINGS. TRENCHES FOR PVC PIPE LATERAL SPRINKLER LINES SHALL BE EXCAVATED TO SUFFICIENT DEPTH OF 12" MINIMUM AND AN SUFFICIENT WIDTH TO PERMIT PROPER HANDLING AND INSTALLATION OF PIPE AND FITTINGS.
- 6. ALL CONTROL VALVES SHALL BE INSTALLED IN A VALVE BOX IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- 7. ALL WIRING TO BE USED FOR CONNECTING THE AUTOMATIC REMOTE CONTROL VALVE TO THE AUTOMATIC CONTROLLERS SHALL BE TYPE "UF", 14-1, STRANDED OR SOLID COPPER, SINGLE CONDUCTION WIRE WITH PVC INSULATION AND BEAR UL APPROVAL FOR DIRECT UNDERGROUND BURIAL FEEDER CABLE. WIRE CONNECTIONS TO REMOTE CONTROL ELECTRIC VALVES AND SPLICES OF WIRE IN THE FIELD SHALL BE PEN-TITE WIRE CONNECTORS OR APPROVED EQUAL AND SCALING CEMENT.
- 8. THE IRRIGATION CONTRACTOR SHALL CONNECT ALL VALVE WIRING TO A SPECIFIED CONTROLLER LOCATED AS NOTED ON THIS PLAN.
- 9. ALL CONTROL VALVE CABLES SHALL BE INSTALLED BY DIRECT BURIAL AT A MINIMUM DEPTH OF 12". WHERE PRACTICAL, THE WIRE SHALL BE INSTALLED IN THE SAME TRENCH AS THE MAINLINE PIPE.
- 10. AFTER COMPLETION OF THE PIPING INSTALLATION, THE CONTRACTOR SHALL FURNISH AN "AS-BUILT" DRAWING SHOWING ALL SPRINKLER HEADS, VALVES, DRAINS AND PIPE LINES TO SCALE WITH DIMENSIONS WHERE REQUIRED. INSTRUCTION SHEETS AND PARTS LISTS COVERING ALL OPERATING EQUIPMENT WILL BE BOUND INTO A FOLDER AND FURNISHED TO THE OWNER IN DUPLICATE.
- II. FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK PERFORMED UNDER THIS CONTRACT, THE CONTRACTOR SHALL PROMPTLY FURNISH, WITHOUT COST TO THE OWNER, ANY AND ALL PARTS AND LABOR WHICH PROVE DEFECTIVE IN MATERIAL OR WORKMANSHIP.
- 12. DURING THE LAST MONTH OF THE GUARANTEE PERIOD, THE LANDSCAPE ARCHITECT AND CONTRACTOR SHALL INSPECT THE INSTALLATION TO DETERMINE THE CONDITION OF THE COMPLETE SYSTEM. A LIST OF DEFECTIVE MATERIALS OR INSTALLATIONS TO BE REPLACED SHALL BE MADE BY THE CONTRACTOR WITHIN THIRTY DAYS OF RECEIVING WRITTEN NOTIFICATION. REPLACED MATERIALS AND INSTALLATION SHALL BE IN ACCORD WITH THESE SPECIFICATIONS, DRAWINGS AND OR SCHEDULES.