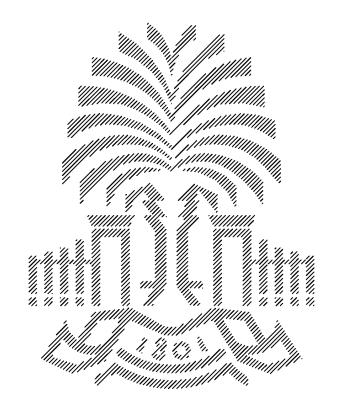
# USC Greene Street Pedestrian Improvements H27-Z346



UNIVERSITY OF SOUTH CAROLINA COLUMBIA, SOUTH CAROLINA

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  3.1 SITE DETAILS
- 1 IRRIGATION PLAN
- -2 IRRIGATION DETAILS 1001 ELECTRICAL NOTES, SCHEDULES, DETA
- ES101 ELECTRICAL SITE PLAN-NEW WORK

OWNER:
USC FACILITIES
743 GREENE STREET
COLUMBIA, SC 29208
(803) 777-7592

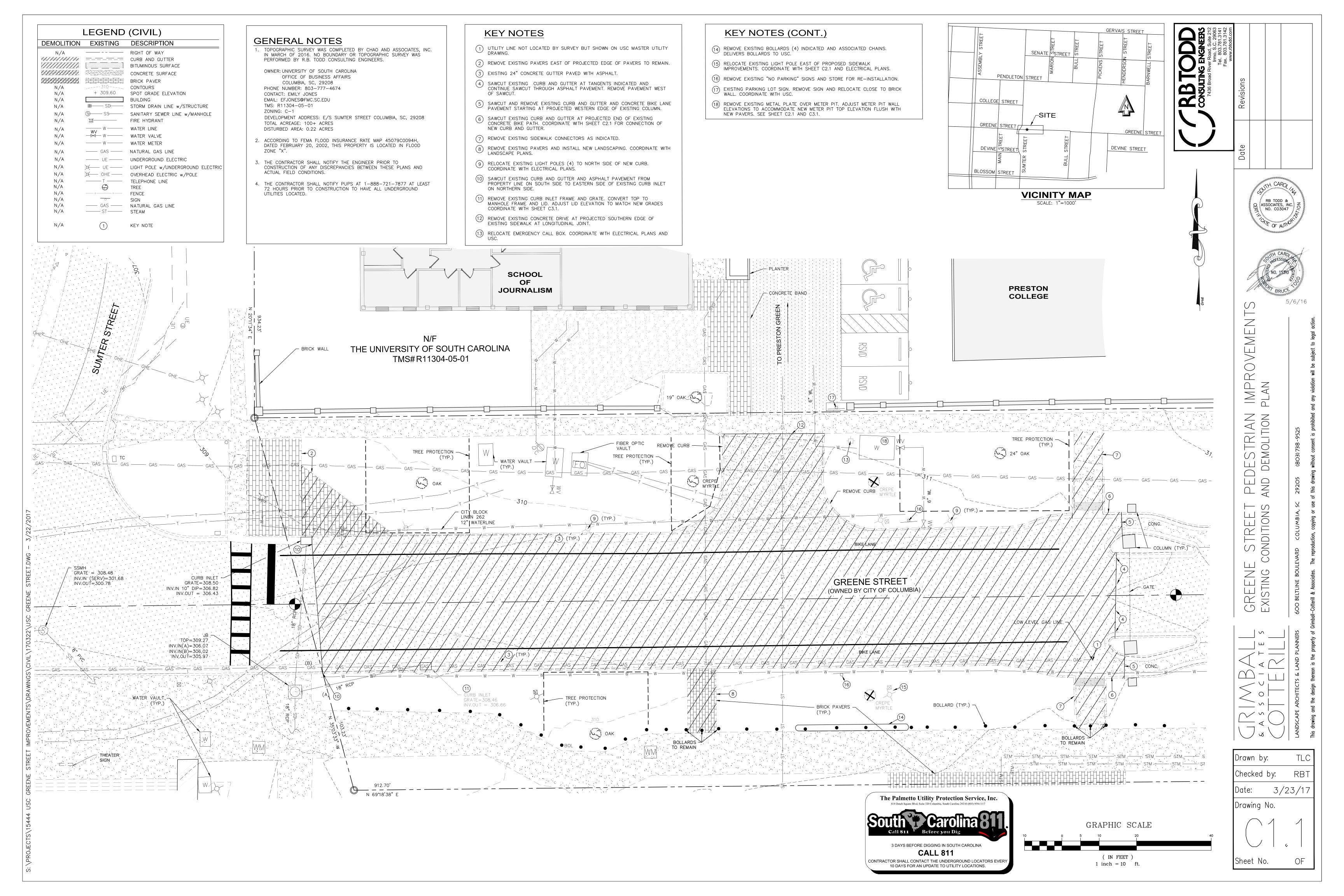
CIVIL ENGINEER:
RB TODD & ASSOCIATES
EET 7436 BROAD RIVER ROAD, STE. 212
9208 IRMO, SC 29063
(803) 781-3141

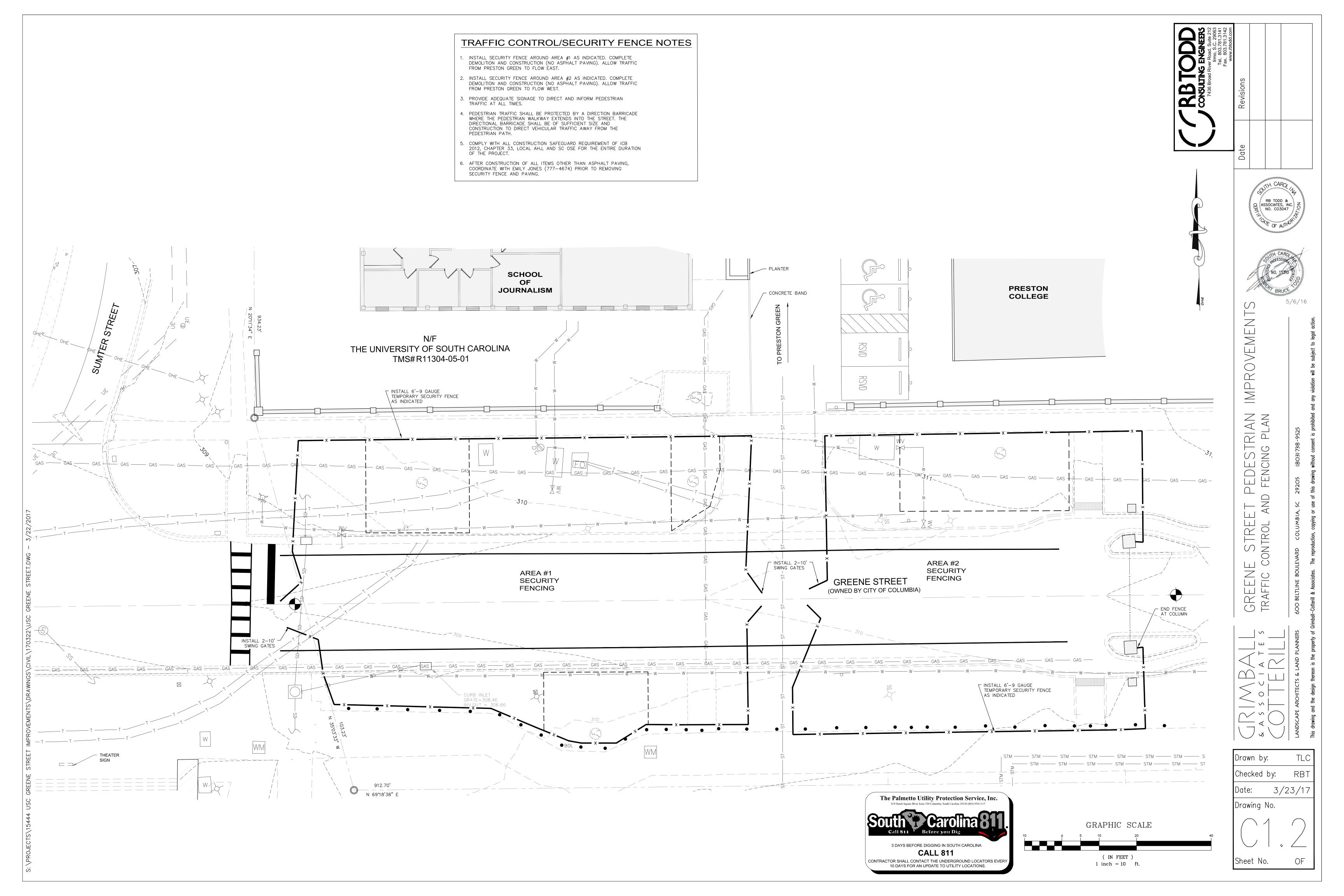
LANDSCAPE ARCHITECT:
GRIMBALL COTTERILL
600 BELTLINE BOULEVARD
COLUMBIA, SC 29205
(803) 738-9525

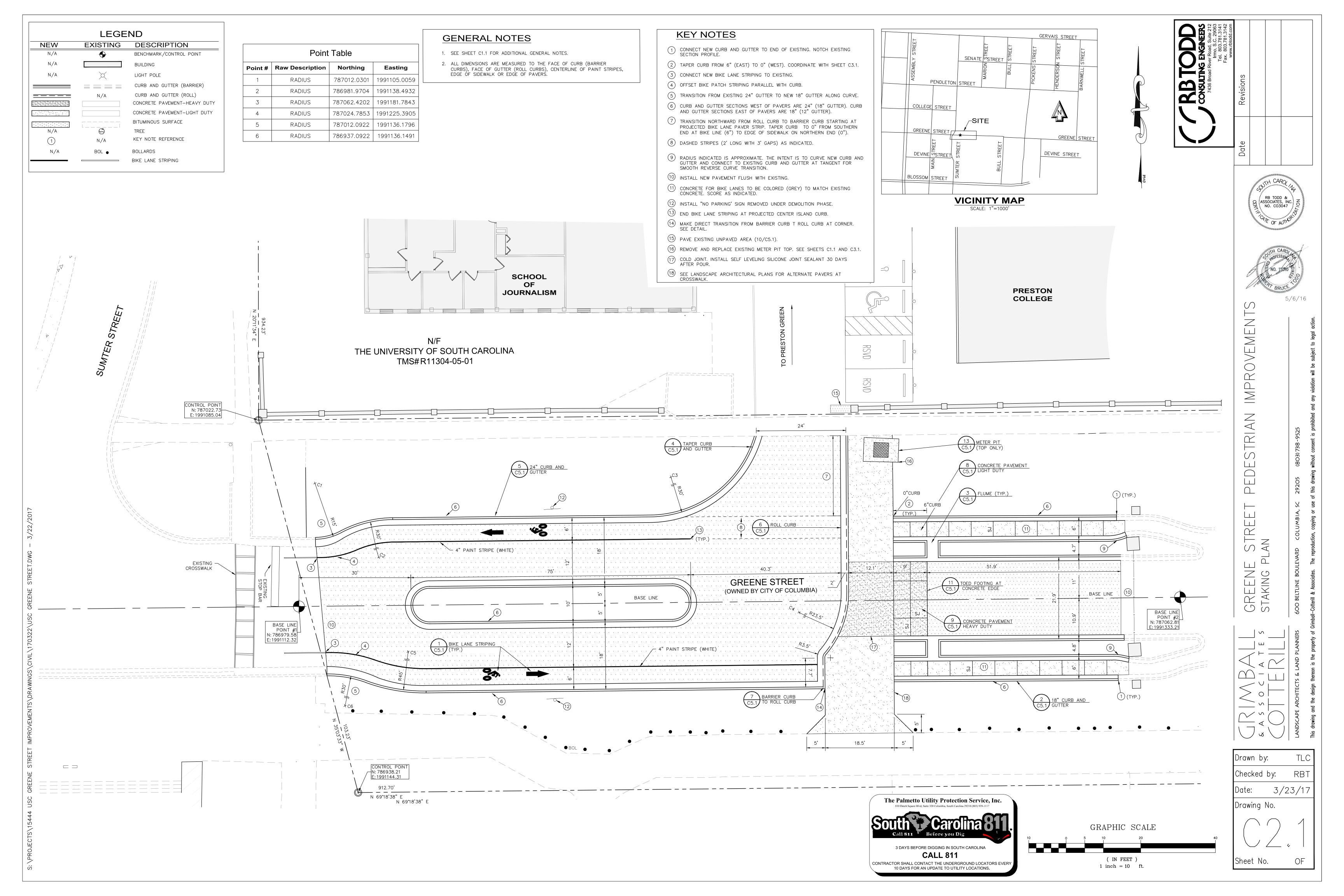
ELECTRICAL ENGINEER:
GWA, INC.
168 LAURELHURST AVE.
COLUMBIA, SC 29210
(803) 252-6919

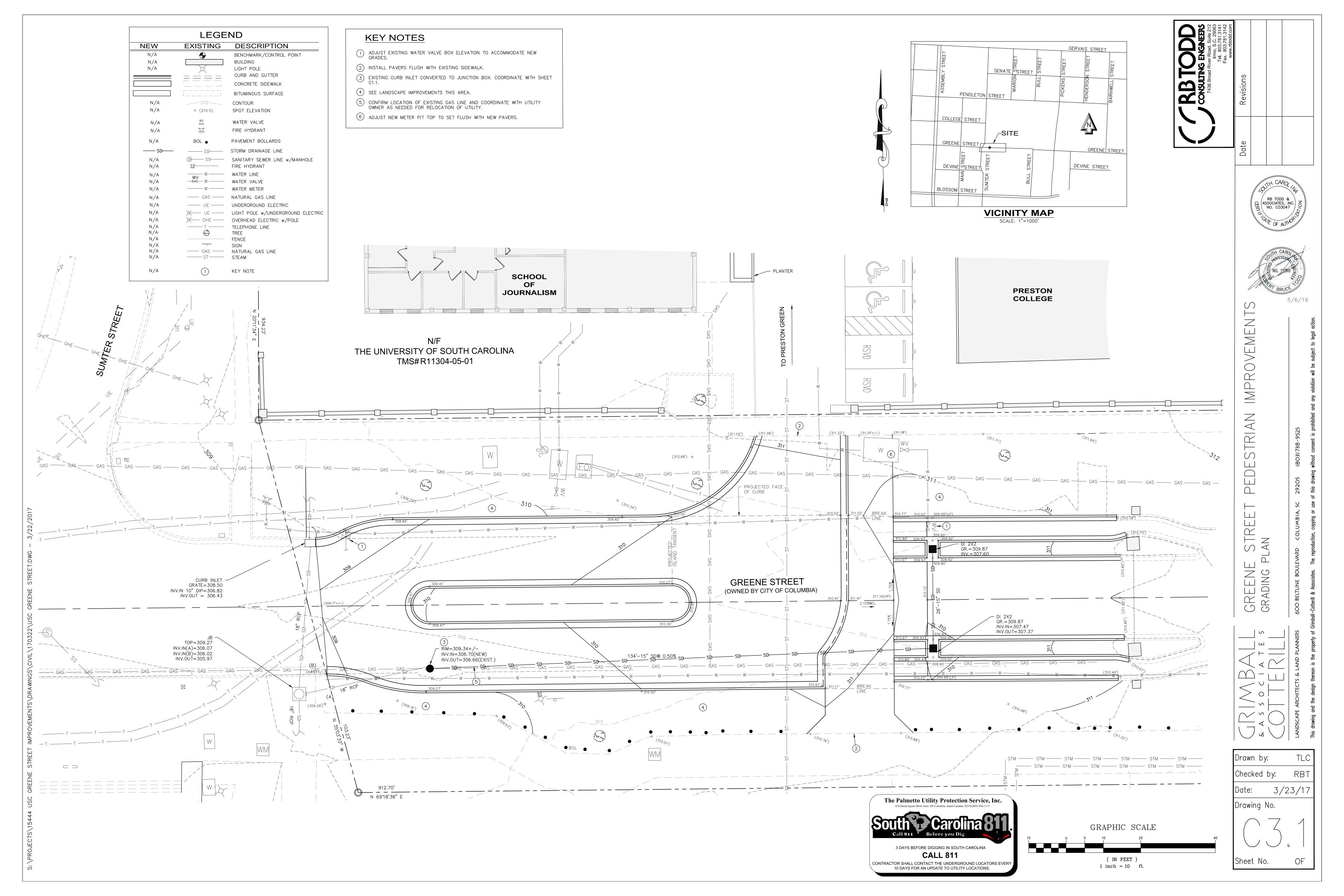
5/6/16 REV. 3/23/17

PLAN SET NO.









USE FILTER FABRIC THAT CONFORMS TO SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (LATEST EDITION). REFER TO THE SILT FENCE GEOTEXTILE FABRICS APPROVAL SHEET

- USE STEEL POSTS THAT MEET THE FOLLOWING MINIMUM PHYSICAL REQUIREMENTS: BE COMPOSED OF HIGH STRENGTH STEEL WITH MINIMUM YIELD STRENGTH OF 50,000 PSI.
- HAVE A STANDARD "T" SECTION WITH A NOMINAL FACE WIDTH OF 1.38—INCHES AND NOMINAL "T" LENGTH OF 1.48-INCHES
- WEIGH 1.25 POUNDS PER FOOT (± 8%) BE PAINTED WITH A WATER BASED BAKED ENAMEL PAINT.

ATTACH FABRIC TO METAL POSTS WITH HEAVY-DUTY PLASTIC TIES.

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 SECURELY FASTENED TO THE POST. WITH A MINIMUM 6-INCH OVERLAP.

ATTACH FABRIC TO STEEL POSTS WITH HEAVY-DUTY PLASTIC TIES.

2-IN. X 2-IN. WOOD POSTS

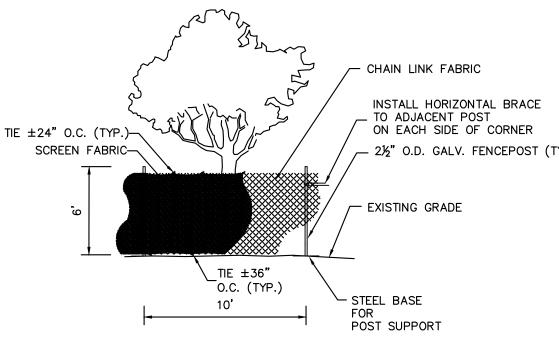
1.25 LB./LINEAR FT.

STEEL POSTS

ATTACH AT LEAST FOUR (4) EVENLY SPACED TIES IN A MANNER TO PREVENT SAGGING OR TEARING OF THE FABRIC. IN ALL CASES, AFFIX TIES IN NO LESS THAN FOUR (4) PLACES.

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 VOLUME FOR THE

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.



PROVIDE PROTECTION FENCE FOR ALL TREES TO REMAIN. PROTECTION FENCING TO BE PLACED OUTSIDE OF DRIPLINE OF TREE CANOPY UNLESS OTHERWISE INDICATED ON LANDSCAPE PLAN OR APPROVED BY PROJECT MANAGER.

- FENCING AND MULCH IS IN PLACE. 7. LOCATION OF THE PROTECTION FENCING SHALL BE MARKED BY ARBORIST AND APPROVED BY 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
- 8. SCREEN FABRIC SHALL BE DARK GREEN 85% OPAQUE, POLYETHEYLENE KNIT MESH, UV STABILIZED WITH BURST STRENGTH OF AT LEAST 210

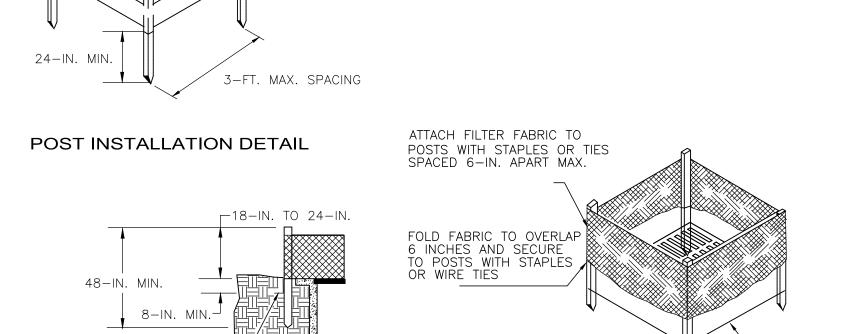
TOEEMOOTEOTIOOMEOOIG

# 2½" O.D. GALV. FENCEPOST (TYP.) LANDSCAPE PLANS FOR LOCATION OF TREE PROTECTION FENCING

4. A 4" LAYER OF HARDWOOD MULCH SHALL BE PLACED OVER TREE

- PROTECTION AREA. 5. PROTECTION FENCING SHALL BE IN PLACE AND HARDWOOD MULCH PLACED PRIOR TO BEGINNING CONSTRUCTION. 6. REQUESTS FOR PAYMENT SHALL NOT BE APPROVED UNTIL PROTECTION
- PROTECTION FENCING IS INSTALLED.

# \_\_\_\_\_\_\_\_\_\_TS SEUTIDD INTS SEDIMENT TUBES CURB CONTAINMENT . . . . . . . . . . . .



FILTER FABRIC BURIAL DETAIL

BURY MINIMUM OF 12-IN

FILTER FABRIC

FILTER FABRIC INSTALLATION

BURY FABRIC

(SEE DETAIL)

TYPE A - FILTER FABIC INLET PROTECTION

#### 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.)

SIGNATURE OF SWPPP PREPARER Bruce Todd P.F.

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 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 AND IMPRISONMENT FOR KNOWING VIOLATIONS.

I 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 SCRIOOOOO. 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 NVIRONMENTAL CONTROL AND/OR THE LOCAL IMPLEMENTING AGENCY THE RIGHT OF ACCESS TO THE SITE AT ALL IMES FOR THE PURPOSE OF ONSITE INSPECTIONS DURING THE COURSE OF CONSTRUCTION AND TO PERFORM MAINTENANCE INSPECTIONS FOLLOWING THE COMPLETION OF THE LAND-DISTURBING ACTIVITY. (SEE SECTION 122.22

OF S.C. REG. 61-9 FOR SIGNATORY AUTHORITY INFORMATION.) Thomas N Opal FE RINTED NAME OF PROJECT OWNER/OPERATOR SIGNATURE OF PROJECT OWNER/OPERATOR

#### APPLICANT'S CERTIFICATION STATEMENT

(WE) HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION AND/OR DEVELOPMENT WILL BE DONE

#### **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

#### **AIRBORNE DUST CONTROL**

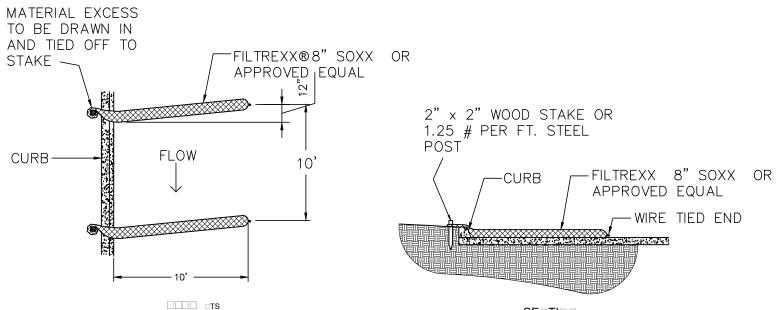
THE CONTRACTOR SHALL IMPLEMENT DUST CONTROL MEASURES AS OUTLINED IN THE SOUTH CAROLINA DHEC STORMWATER MANAGEMENT BMP HANDBOOK AS NEEDED TO CONTROL AIRBORNE DUST DURING CONSTRUCTION. COORDINATE WITH ENGINEER PRIOR TO IMPLEMENTATION OF VARIOUS MEASURES.

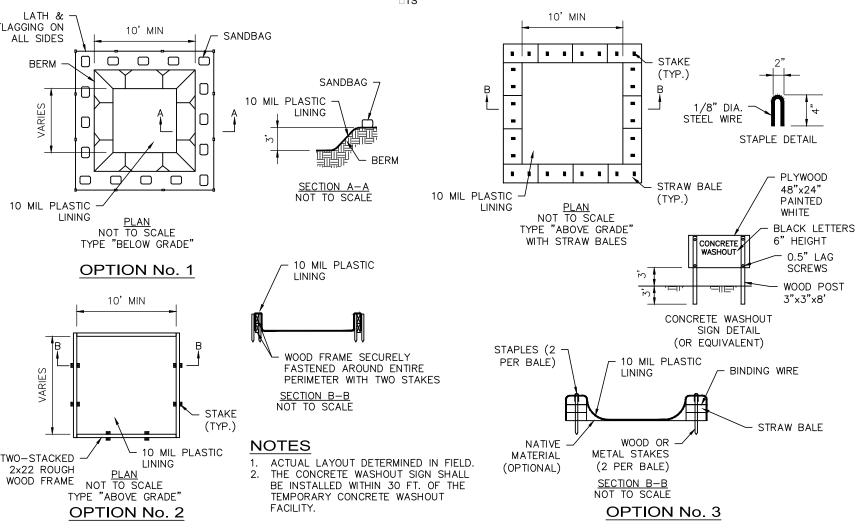
#### PREDOMINANT SOIL TYPE

URBAN LAND Ur

#### **GRASSING PER 1000 SQUARE FEET (TEMPORARY)**

FROM SEPTEMBER 1 TO APRIL 30 FROM MAY 1 TO AUGUST 30 BROWNTOP MILLET GRASS 6 LBS. ANNUAL RYEGRASS 10-10-10 FERTILIZER 15 LBS. 10-10-10 FERTILIZER MAGNESIUM SULFATE MAGNESIUM SULFATE 5 LBS. 5 LBS. 10 LBS. CALCIUM (GYPSUM) 10 LBS. CALCIUM (GYPSUM)





#### CONSTRUCTION SEQUENCE OF ENTIRE CONSTRUCTION AREA FOR EROSION AND SEDIMENT CONTROL

- SEE SWPPP FOR LIMITS OF DISTURBANCE AND FLAG LIMITS FOR CLEARING AS NEEDED.
- INSTALL SILT FENCES AND CONTROL DEVICES AS SHOWN ON PLANS WHERE APPLICABLE FOR INITIAL GRADING CLEAR FLAGGED AREA.
- SCRAPE EXISTING LAYER OF VEGETATION (MIN. 2" DEPTH) FROM CONSTRUCTION AREA AND DISPOSE OF OFFSITE. CONSTRUCT SEDIMENT/DETENTION BASIN. SEE EARTHWORK SPECIFICATIONS FOR POND FILL COMPACTION RATIO.
- 6. CONTRACTOR SHALL INSTALL TEMPORARY BAFFLING AT THE INLET OF THE SEDIMENT POND, TO DIRECT STORMWATER RUNOFF AWAY FROM THE OUTLET UNTILL THE SITE IS STABILIZED
- 7. INSTALL STORM DRAINAGE SYSTEM AND SILT FENCES IN SEQUENCE WITH EARTHWORK OPERATIONS.
- 8. ALL DISTURBED AREAS SHALL RECEIVE STABILIZING MEASURES (TEMPORARY GRASSING) WITHIN 14 DAYS, EXCEPT
- WHERE CONSTRUCTION WILL RESUME WITH 21 DAYS.
- 9. SEE NOTE No. 3 UNDER SEDIMENT AND EROSION CONTROL NOTES FOR INSPECTION INFORMATION. 10. COMPLETE CONSTRUCTION. 11. FINAL GRADING, GRASSING, AND LANDSCAPING,
- 12. EROSION CONTROL MEASURES TO BE REMOVED AFTER ALL DISTURBED AREAS HAVE BEEN STABILIZED. I3. SEDIMENT ACCUMULATIONS SHALL BE REMOVED FROM IMPOUNDED AREAS ONCE THE SITE IS STABILIZED. COORDINATE WITH OWNER/ARCHITECT PRIOR TO COMMENCING OPERATION.

#### **EROSION AND SEDIMENT CONTROL MEASURES**

#### **GENERAL**

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 BE INSPECTED AFTER EACH RAIN EVENT, AND ANY REQUIRED MAINTENANCE SHALL BE PERFORMED. SILT FENCES

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

#### STORM DRAINAGE STRUCTURES

TEMPORARY BARRIERS OF EITHER SILT FENCING OR ROCK RIPRAP SHALL BE INSTALLED AND MAINTAINED AROUND STORM DRAINAGE STRUCTURES UNTIL THEIR DRAINAGE AREA IS STABILIZED. STORM DRAINAGE PIPES, INCLUDING OUTLET PROTECTION, SHALL BE INSTALLED AS SOON AS EARTH GRADING IS ADEQUATE TO ACCEPT PIPE INSTALLATION. INLET STRUCTURES SHALL BE CONSTRUCTED AS THE EARTH FILL IS PLACED, AND CONSTRUCTION SHALL AT ALL TIMES PROVIDE SURFACE DRAINAGE TO THEM. TEMPORARY BARRIERS SHALL BE INSTALLED AND MAINTAINED AT EACH INLET AS THE EARTH FILL RISES.

#### STABILIZATION OF DISTURBED AREAS

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.

#### INSPECTION AND MAINTENANCE

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.

#### REMOVAL OF SEDIMENT CONTROL SYSTEMS

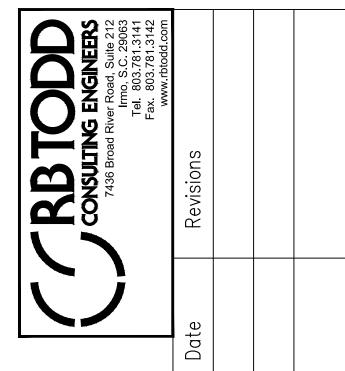
TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED AFTER EACH AFFECTED AREA HAS BEEN "FINALLY STABILIZED".

#### TEMPORARY DIVERSIONS

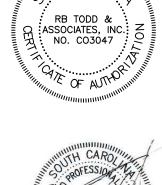
TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR DIVERT SEDIMENT LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO PREVENT FLOW OF STORMWATER OVER DISTURBED AREA. TEMPORARY DIVERSION OUTLETS SHALL HAVE ADEQUATE CAPACITY AND TERMINATE INTO DENSE VEGETATION, ROCK RIPRAP, 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

#### 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 DISTURBED BY CONSTRUCTION.
- 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 > 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
- 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, 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 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. THE CONTRACTOR SHALL REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
- 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 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.
- 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 PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS. 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.









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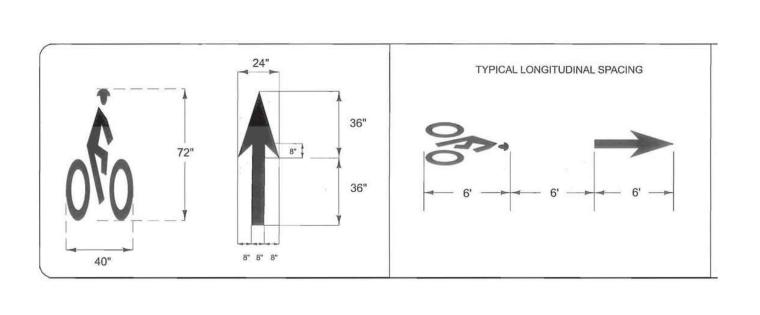
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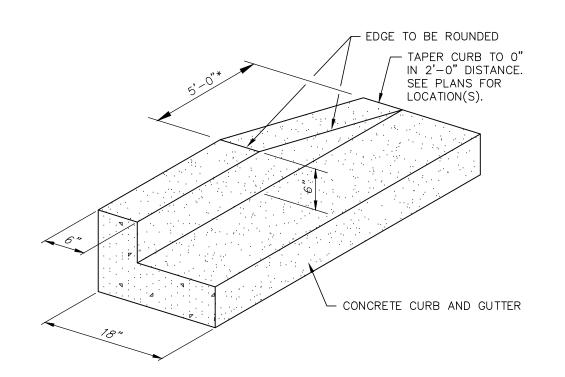
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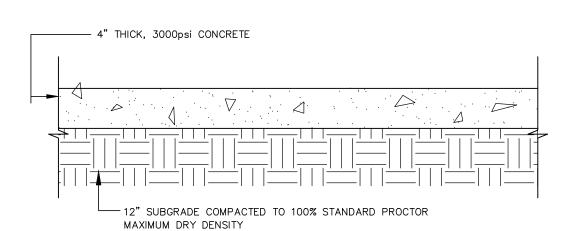


NOT TO SCALE

NOTE: ALL STRIPING PER SCDOT MUTCD.

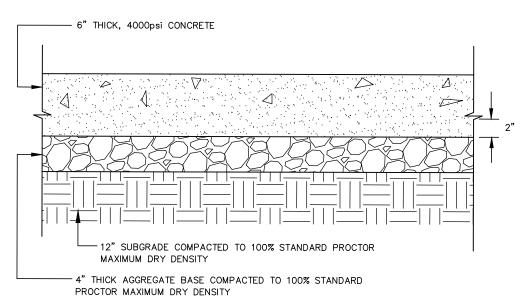


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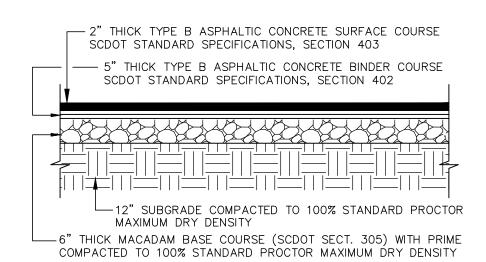


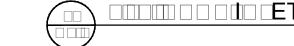
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1. COLOR BIKE LANE CONCRETE GREY TO MATCH EXISTING.

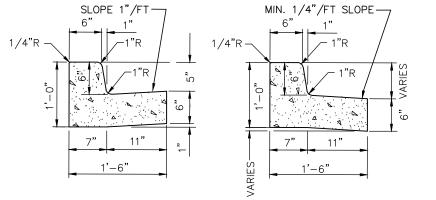








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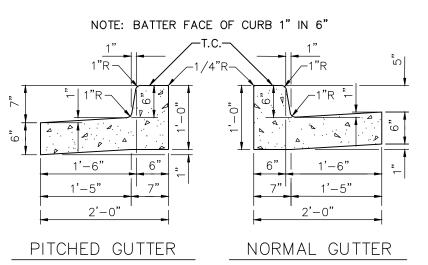


NORMAL GUTTER PITCHED GUTTER

NOTES:

1. CURB AND GUTTER TO BE CONSTRUCTED IN 10-FOOT LENGTHS. 2. PROVIDE 1/2 INCH EXPANSION JOINT MATERIAL AT INTERVALS NOT TO EXCEED 100 FEET, AT THE ENDS AND MID-POINT OF RETURNS, AND AT ANY LOCATION WHERE THE NEW CURB AND GUTTER ABUTS OTHER CONCRETE STRUCTURES. 3. PROVIDE A 5' LONG TRANSITION BETWEEN NORMAL GUTTER AND PITCHED GUTTER UNLESS OTHERWISE INDICATED ON PLANS.

NOT TO SCALE

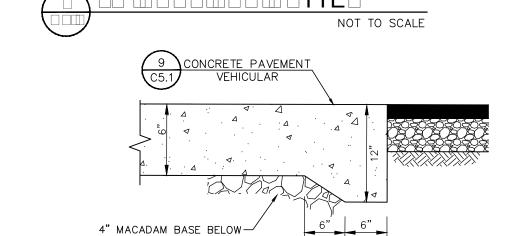


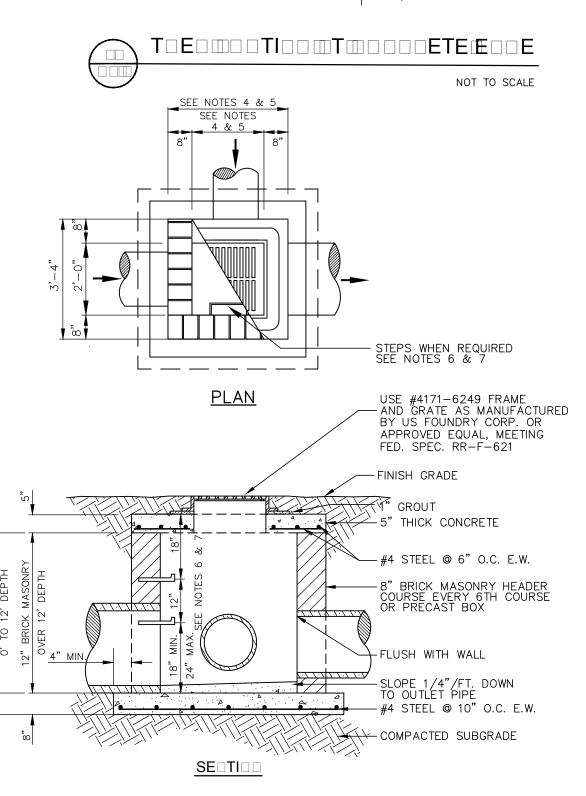
NOTES:

1. CURB AND GUTTER TO BE CONSTRUCTED IN 10-FOOT LENGTHS. 2. 1/2 INCH EXPANSION JOINT SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 100 FEET, AT THE ENDS AND MID-POINT OF RETURNS, AND AT ANY POINT WHERE THE NEW CURB AND GUTTER ABUTS OTHER CONCRETE STRUCTURES.

3. 5-FOOT LONG TRANSITIONS SHALL BE PROVIDED BETWEEN NORMAL GUTTER AND PITCHED GUTTER, UNLESS OTHERWISE

NOTED ON THE PAVING PLANS.



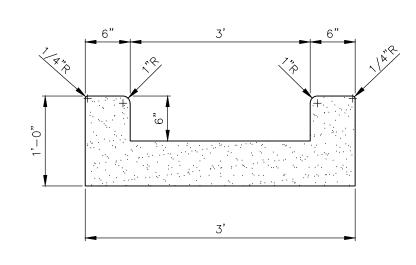


1. ALL CONCRETE SHALL BE 3,000 PSI.
2. ENDS OF ALL PIPES SHALL BE FLUSH WITH INSIDE WALL.
3. ALL STEEL BARS SHALL BE PLACED 1-1/2" CLEAR FROM BOTTOM AND SIDES OF SLAB.
4. FOR 15" - 24" I.D. PIPES USE 3'-0" x 3'-0" BOX.
5. FOR PIPES OVER 24" I.D. BOX INSIDE DIMENSIONS SHALL BE PIPE O.D. + 6" EACH SIDE OF PIPE.
6. STEPS CONFORMING TO ASTM C478 SHALL BE REQUIRED WHEN STRUCTURE DEPTH IS GREATER THAN 4'.
7. ALL STEPS SHALL BE PLACED 12" O/C AND PROTRUDE 4" FROM INSIDE FACE OF STRUCTURE WALL.
8. CONCRETE BRICK WALLS SHALL HAVE A 1/4" MORTAR COAT ON INSIDE SURFACE.
9. WALL THICKNESS IS TO BE 12" IF BOX DEPTH EXCEEDS 12'-0".
10. ALL MATERIALS AND CONSTRUCTION ARE TO COMPLY WITH SECTION 720 OF THE SCDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

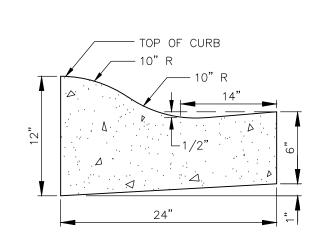
SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

11. REINFORCED CONCRETE MAY BE SUBSTITUTED FOR BRICK WALLS. REINFORCING TO BE #4 BARS @ 12" E.W.



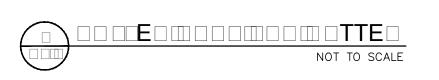


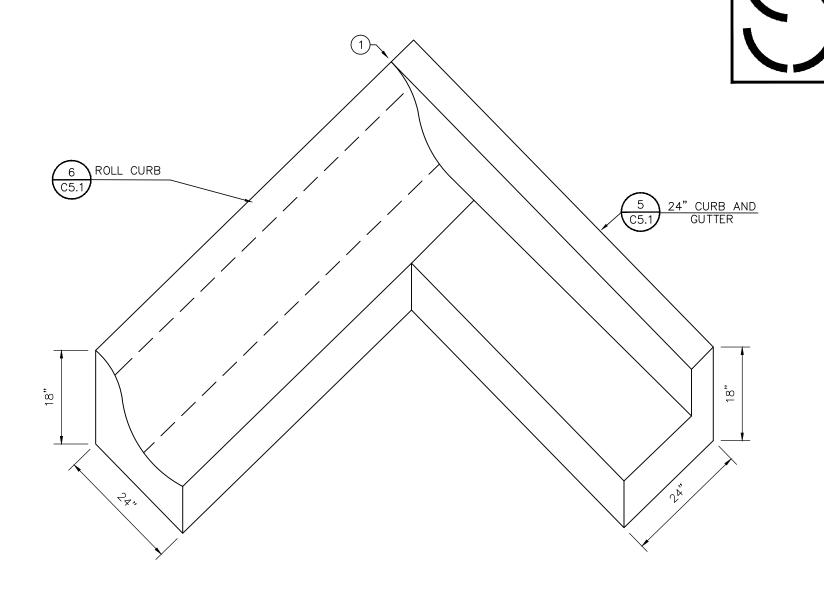
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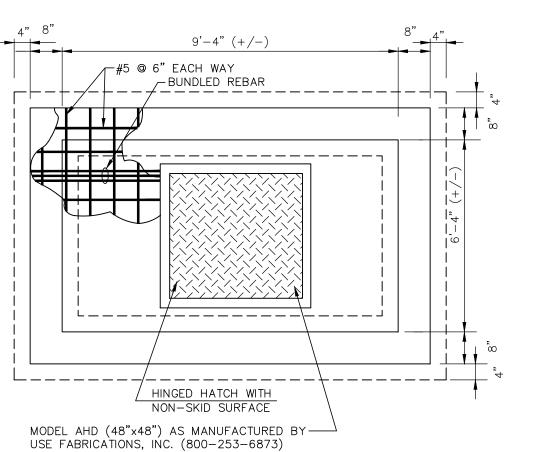
NOTES:

1. CURB AND GUTTER TO BE CONSTRUCTED IN 10 FOOT LENGTHS. 2. 1/2 INCH EXPANSION JOINT SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 100 FEET, AT THE ENDS AND MID-POINT OF RETURNS, AND AT ANY POINT WHERE THE NEW CURB AND GUTTER ABUTS OTHER CONCRETE STRUCTURES.

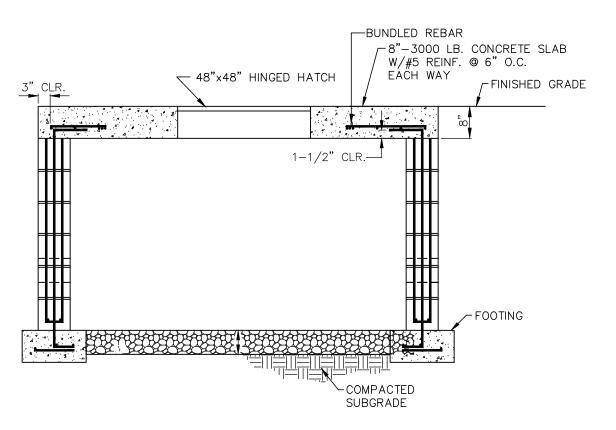




NOT TO SCALE (1) INSTALL FULL ROLL CURB SECTION AT CORNER.



OR APPROVED EQUAL Too\$oomoToomElooooEMEaTmETolo



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**NOTES** 

1. THE BOX COVER SHALL BE FLUSH WITH THE SURROUNDING GROUND SURFACE.



\* REPLACE EXISTING METAL PLATE TOP WITH CONCRETE TOP AND

ALUMINUM HATCH REFLECTED ON THIS DETAIL

NOT TO SCALE

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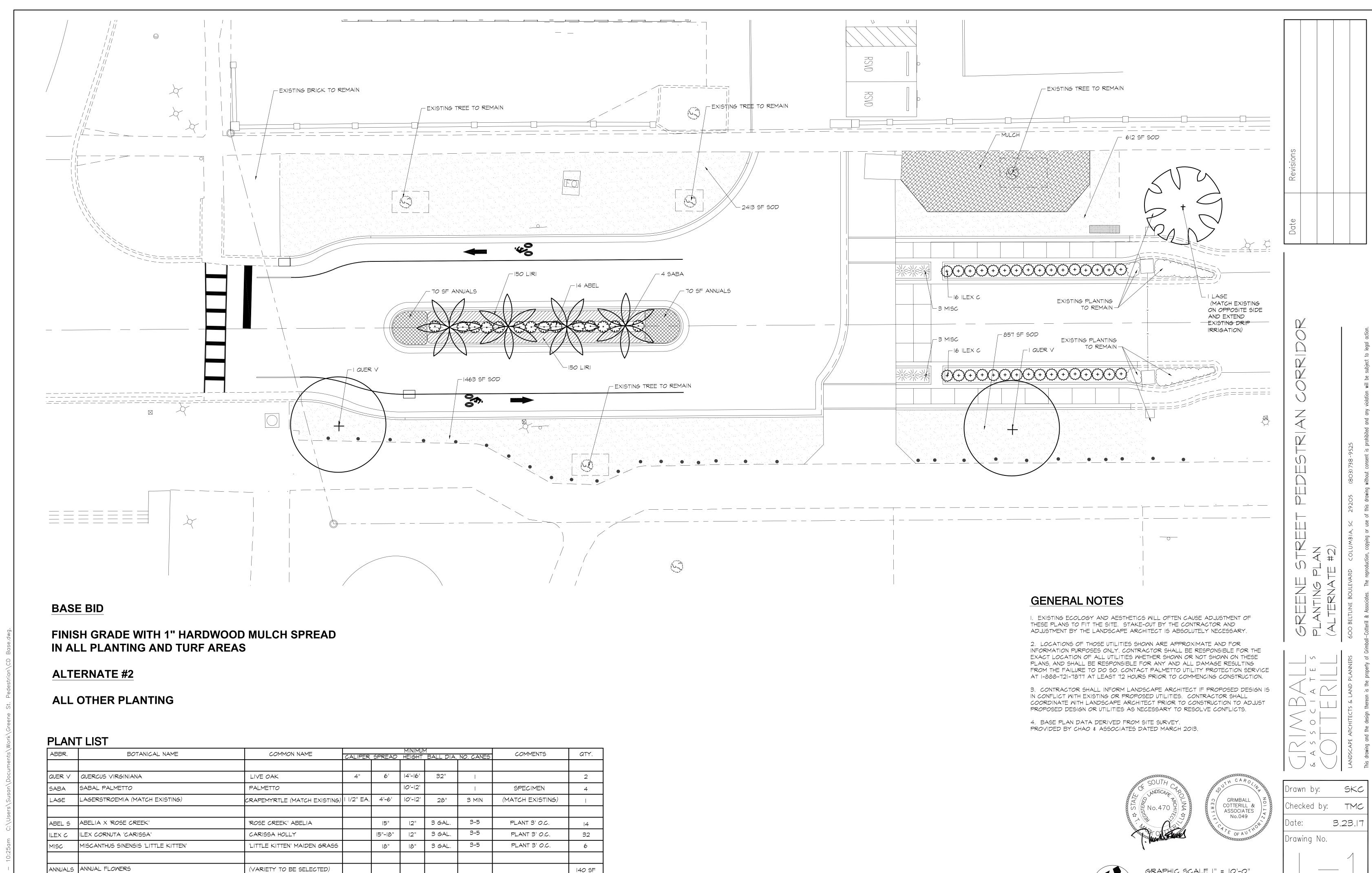
ASSOCIATES, INC. NO. CO3047

5/6/16

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LIRIOPE MUSCARII 'BIG BLUE'

EREMOCHLOA OPHIUROIDES

'BIG BLUE' LIRIOPE

CENTIPEDE GRASS

PINT

PLANT 12" O.C.

WELL ROOTED

300

5,345 SF

HURRICANE CUT- REMOVE ALL FOLIAGE PALM TREE SUPPORTS TO BE MODEL BTB-2A BY BROOKS ADJUSTABLE TREE BRACE SYSTEM, WWW.BROOKSTREEBRACE.COM, 1-877-246-3390, OR APPROVED - UTILIZE EXISTING NATIVE SOIL EQUAL. SEE MANUFACTURER'S UNLESS OTHERWISE DIRECTED BY SPECIFICATIONS AND DETAILS FOR LANDSCAPE ARCHITECT. INSTALLATION SUPPLEMENT WITH 1/4 MUSHROOM COMPOST. (COMPACT AS REQUIRED TO SUPPORT BALL.) 4" SAUCER. FILL WITH 2" -DOUBLE HAMMERED SHREDDED HARDWOOD STAKES PER MANUFACTURES MULCH AND WATER INSTALLATION IMMEDIATELY AFTER PLANTING COMPACTED SOIL. MIX TO REDUCE SETTLEMENT 2x BALL DIA. - PLANT SO THAT TOP OF ROOT BALL IS I 1/2-2" ABOVE FINISHED GRADE

- NAIL SUPPORT TO BRACE. DO NOT NAIL TO TRUNK.

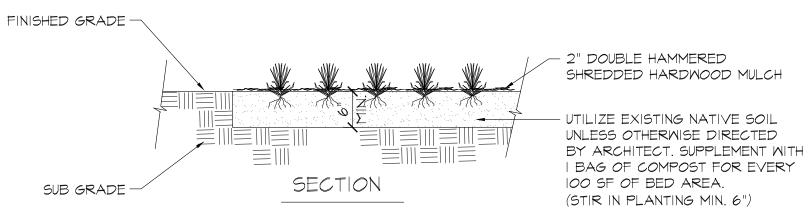
#### PALMETTO PLANTING L-2 **NOT TO SCALE**

NOT TO SCALE

# L-2

**SECTION** 

#### TILL COMPOST 6" DEEP. REMOVE ALL STICKS, STONES, ETC RAKE SMOOTH PRIOR TO PLANTING. LAWN AREA OR -PLAN PAVEMENT - SEE PLAN OR PLANT LIST



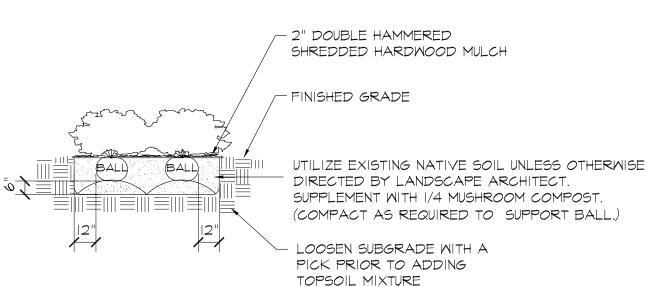
TYPICAL GROUNDCOVER PLANTING

NOT TO SCALE

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



SHRUB PLANTING NOT TO SCALE

#### INSTRUCTIONS FOR PERFORMING A PERCOLATION TEST

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 HOLE.

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 LEVEL

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

HOW TO INTERPRET RESULTS					
IF WATER LEVEL IN HOLE DROPS	SITE IS				
LESS THAN ONE-HALF INCH PER HOUR	POORLY DRAINED AND SUITED TO WET -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 D

## GRADE MATER LEVEL OVER TIME STARTING WATER LEVEL ENDING WATER LEVEL

NOT TO SCALE

PERCOLATION TEST HOLE

- MEASURING TOOL

**ISOMETRIC** -NEVER CUT A LEADER 1. TEST FOR PERCOLATION PRIOR TO PLANTING. 2. WATER AFTER PLANTING 3. DO NOT WRAP TREES 2" DOUBLE HAMMERED SHREDDED HARDWOOD MULCH REMOVE VARIES BURLAP/STRAPPING - FINISHED GRADE AND WIRE FROM TOP 1/3 OF ROOT BALL UTILIZE EXISTING NATIVE SOIL UNLESS OTHERWISE BALLS GREATER THAN 2' DIAMETER . DIRECTED BY LANDSCAPE SHALL SIT ON MOUND OF ARCHITECT. SUPPLEMENT UNDISTURBED SOIL TO PREVENT WITH 1/4 MUSHROOM SETTLING. BALLS SMALLER THAN 2 COMPOST (COMPACT AS MAY SIT ON COMPACTED SOIL REQUIRED TO SUPPORT MIXTURE.

# CRAPE MYRTLE PLANTING **NOT TO SCALE**

PLANTING NOTES

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 PLANTINGS RELOCATED.

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.

II. 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

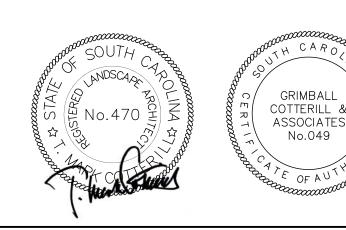
13. PLANTS SHALL BE GUARANTEED FOR THE DURATION OF ONE (1) FULL YEAR AFTER THE FINAL ACCEPTANCE OF THE PLANTING BY THE OWNER AND SHALL BE ALIVE AND IN SATISFACTORY GROWTH AT THE END OF THE GUARANTEE PERIOD. ANY PLANT NOT IN A HEALTHY AND VIGOROUS STATE AT THE END OF THE GUARANTEE PERIOD SHALL BE REPLACED 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





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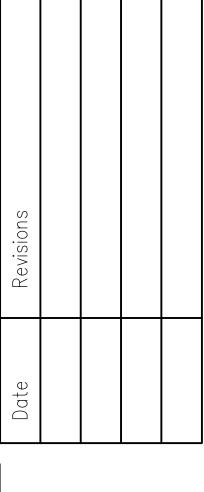
#### **GENERAL NOTES**

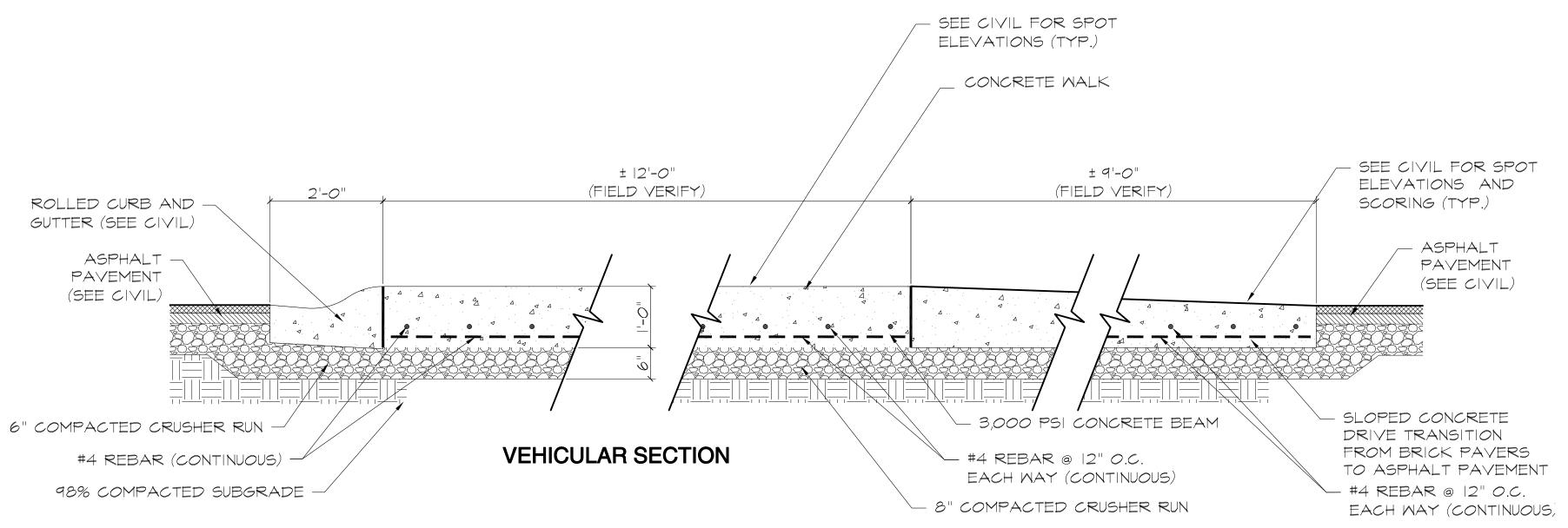
I. EXISTING ECOLOGY AND AESTHETICS WILL OFTEN CAUSE ADJUSTMENT OF THESE PLANS TO FIT THE SITE. STAKE-OUT BY THE CONTRACTOR AND ADJUSTMENT BY THE LANDSCAPE ARCHITECT IS ABSOLUTELY NECESSARY.

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.

3. CONTRACTOR SHALL INFORM LANDSCAPE ARCHITECT IF PROPOSED DESIGN IS 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 CHAO & ASSOCIATES DATED MARCH 2013.





DRIVEWAY SECTION (BASE BID) L-3.1

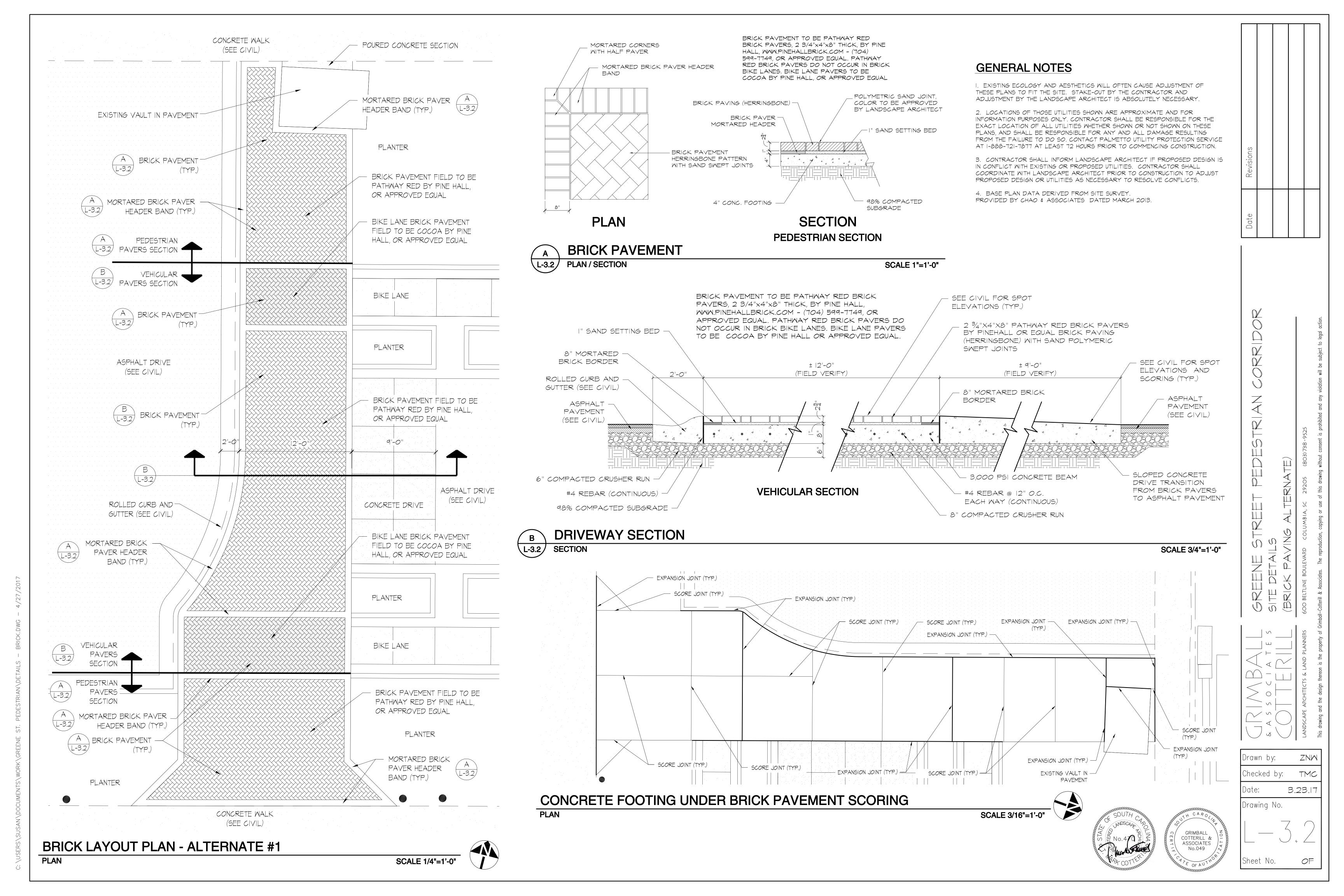
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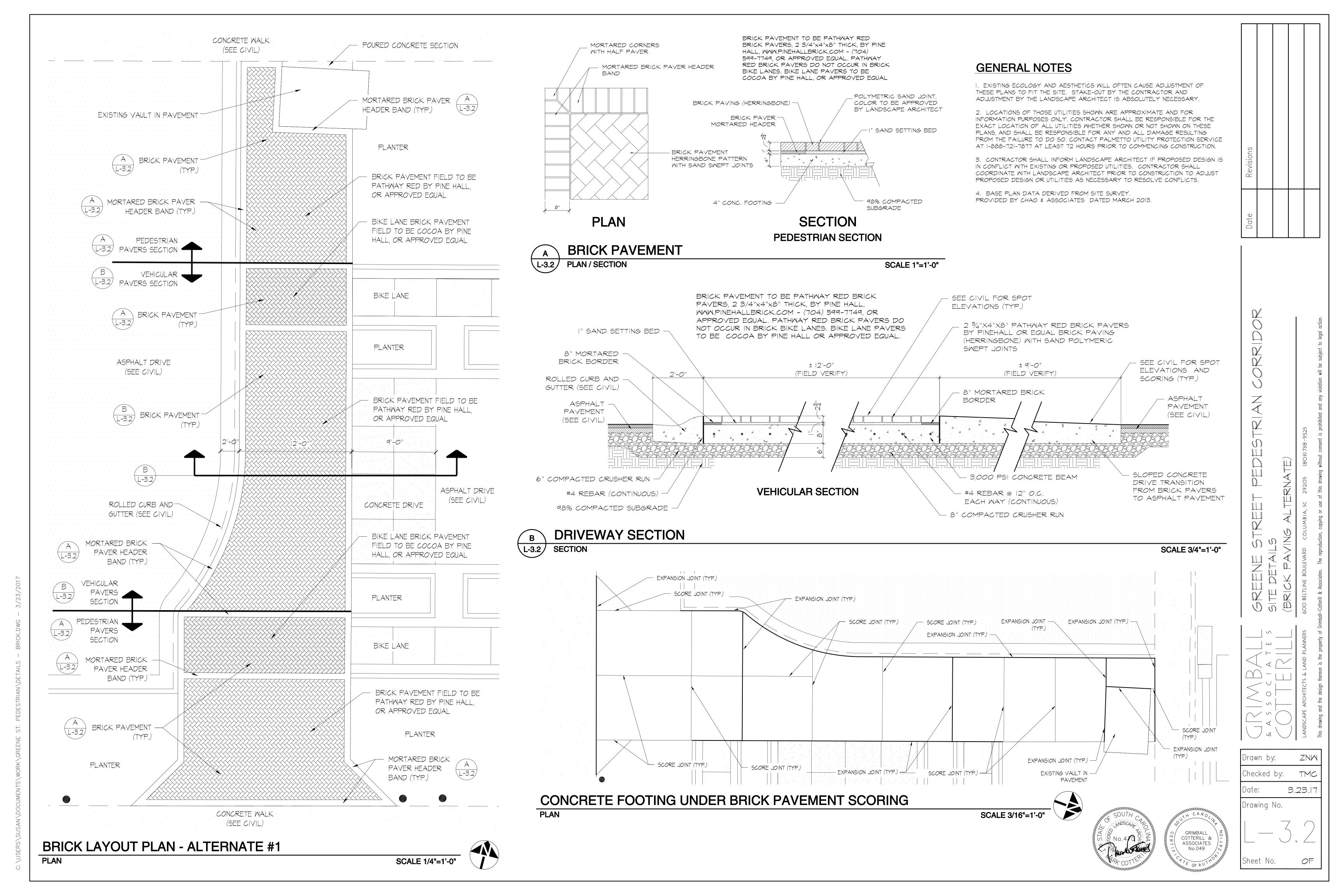
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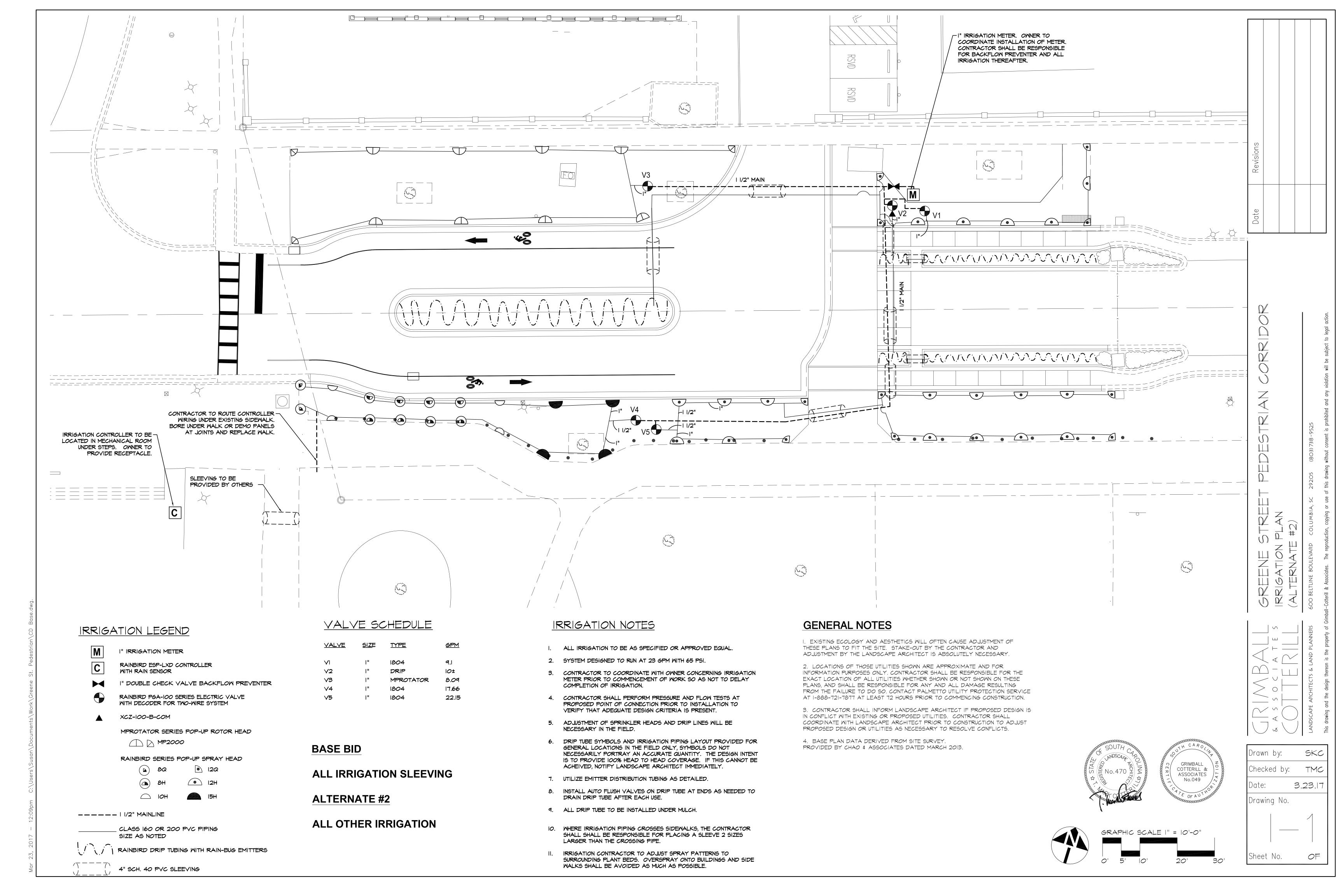
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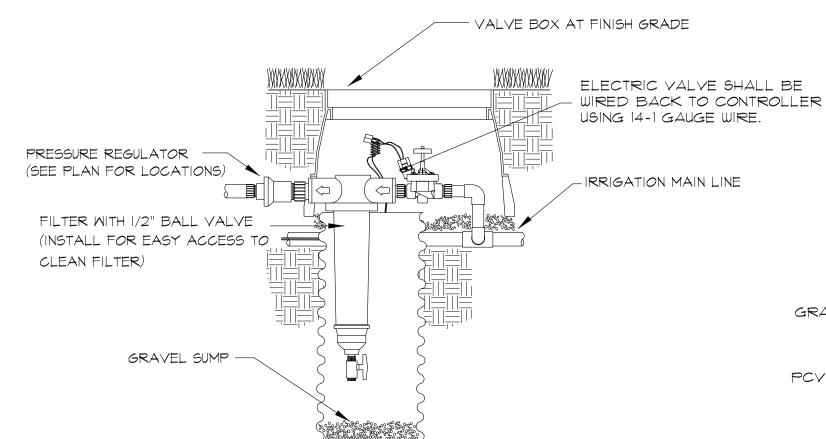


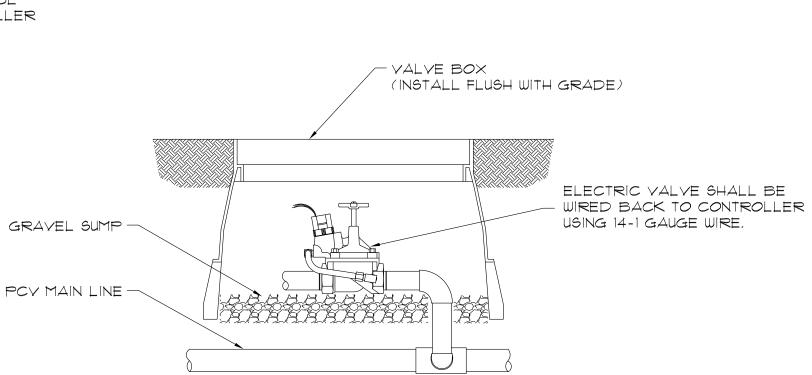






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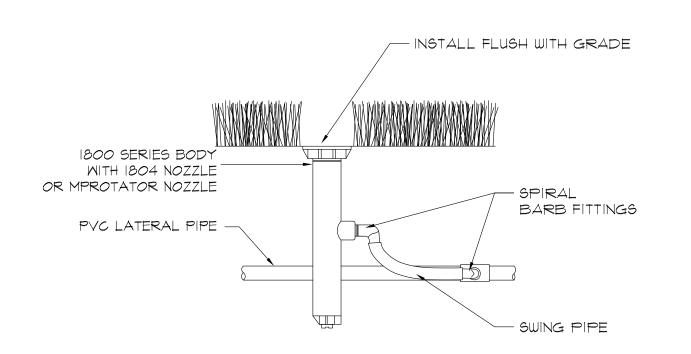


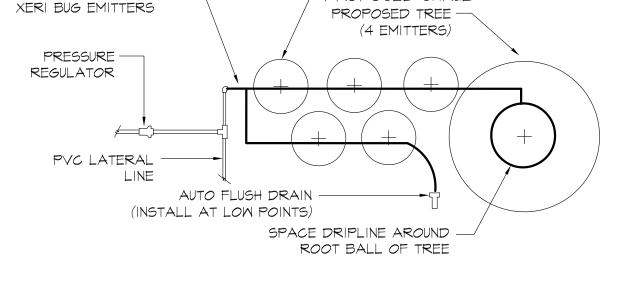


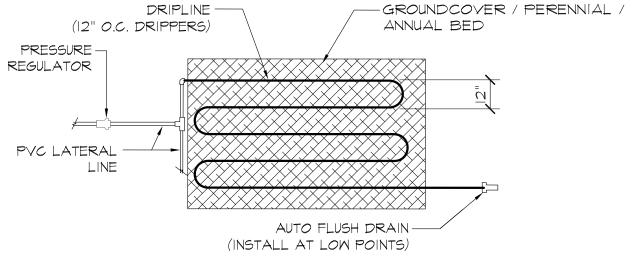










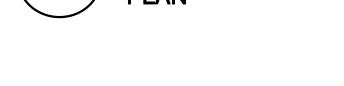




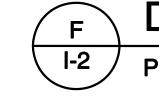


PROPOSED SHRUB





DRIPLINE WITH



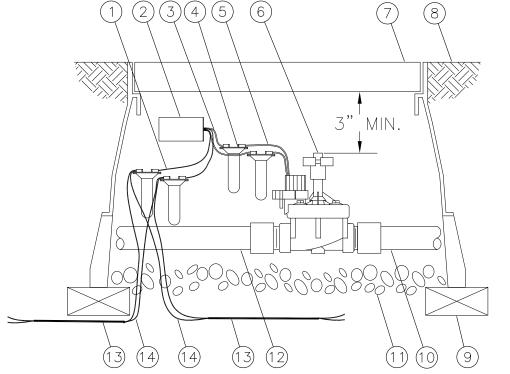
# NOT TO SCALE

#### (1) GREEN/YELLOW WIRE FROM SD-210TURF TO GROUNDING ROD BRASS CLAMP (1 OF 2)

(2) SENSOR DECODER:

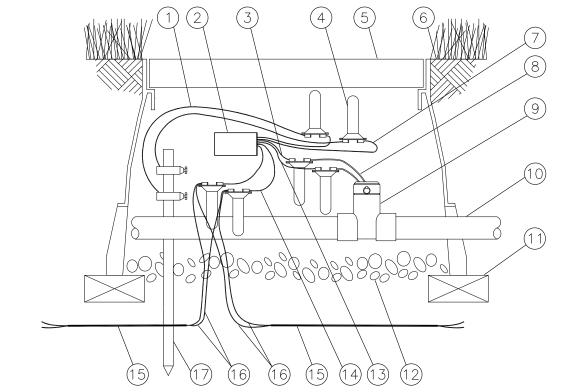
- RAIN BIRD SD-210TURF M13009 SENSOR DECODER (3) RED WIRE FROM SD-210TURF TO FLOW SENSOR
- (4) DB SERIES WIRE CONNECTOR: RAIN BIRD DBTWC25 (1 OF 6)
- (5) 12-INCH VALVE BOX WITH COVER: RAIN BIRD VB-STD
- (6) FINISH GRADE OR TOP OF MULCH
- (7) GROUND WIRE FROM SD-210TURF TO DB SERIES WIRE CONNECTOR (1 OF 2)
- (8) FLOW SENSOR WIRE (1 OF 2)
- (9) FLOW SENSOR
- (10) PVC MAINLINE PIPE
- 11) BRICK (1 OF 4)
- (12) 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
- (13) BLACK WIRE FROM SD-210TURF TO FLOW SENSOR
- (14) BLUE WIRE FROM SD-210TURF (1 OF 2)
- (15) TWO-WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR OR ESP-LXD CONTROLLER)
- (16) COMMUNICATION WIRE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR, OR ESP-LXD CONTROLLER)

(17) GROUNDING ROD



1. MAXIMUM LENGTH OF SECONDARY WIRE PATH (14 AWG) FROM FIELD DECODER TO SOLENOID IS 450 FEET. 2. PLACE 3 FEET OF EXTRA WIRE IN EVERY VALVE BOX

- 1 BLUE WIRE FROM FIELD DECODER (1 OF 2)
- (2) FIELD DECODER: RAIN BIRD FD-101TURF M13011 DECODER OR FD-102TURF M13004 DECODER
- (3) WHITE WIRE FROM FIELD DECODER (1 OF 2)
- (4) DB SERIES WIRE CONNECTOR: RAIN BIRD DBTWC25 (1 OF 4)
- (5) SOLENOID WIRE (1 OF 2)
- (6) RAIN BIRD REMOTE CONTROL VALVE
- 7 12-INCH VALVE BOX WITH COVER: RAIN BIRD VB-STD
- (8) FINISH GRADE OR TOP OF MULCH
- (9) BRICK (1 OF 4)
- (10) PVC MAINLINE PIPE
- (11) 3-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
- (12) PVC LATERAL PIPE
- (13) TWO-WIRE CABLE TO NEXT DEVICE (FIELD DECODER, SENSOR DECODER, LINÈ SURGE PROTECTOR OR ESP-LXD CONTROLLER)
- (14) COMMUNICATION WIRE TO NEXT DEVICE FIELD DECODER, SENSOR DECODER, LINE SURGE PROTECTOR OR ESP-LXD CONTROLLER)



1. MAXIMUM LENGTH OF SECONDARY WIRE PATH (14 AWG) FROM DECODER TO RELAY IS 450 FEET.

- 2. PLACE 3-FEET OF EXTRA WIRE IN VALVE BOX FOR EASY SERVICING.
- 3. IN A SITE CONTROL DECODER SYSTEM A PULSE TRANSMITTER (PT322) SHOULD BE INSTALLED BETWEEN THE SENSOR DECODER AND THE FLOW SENSOR. THIS IS NOT NEEDED IN AN ESP-LXD CONTROLLER SYSTEM.
- 4. GROUNDING SHOULD BE TO 10 OHMS OR LESS.

### DECODER AND FLOW SENSOR

NOT TO SCALE **SECTION** 

#### **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.

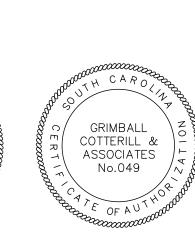
8. THE IRRIGATION CONTRACTOR SHALL CONNECT ALL VALVE WIRING TO A SPECIFIED CONTROLLER LOCATED AS NOTED ON THIS PLAN.

- 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 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.

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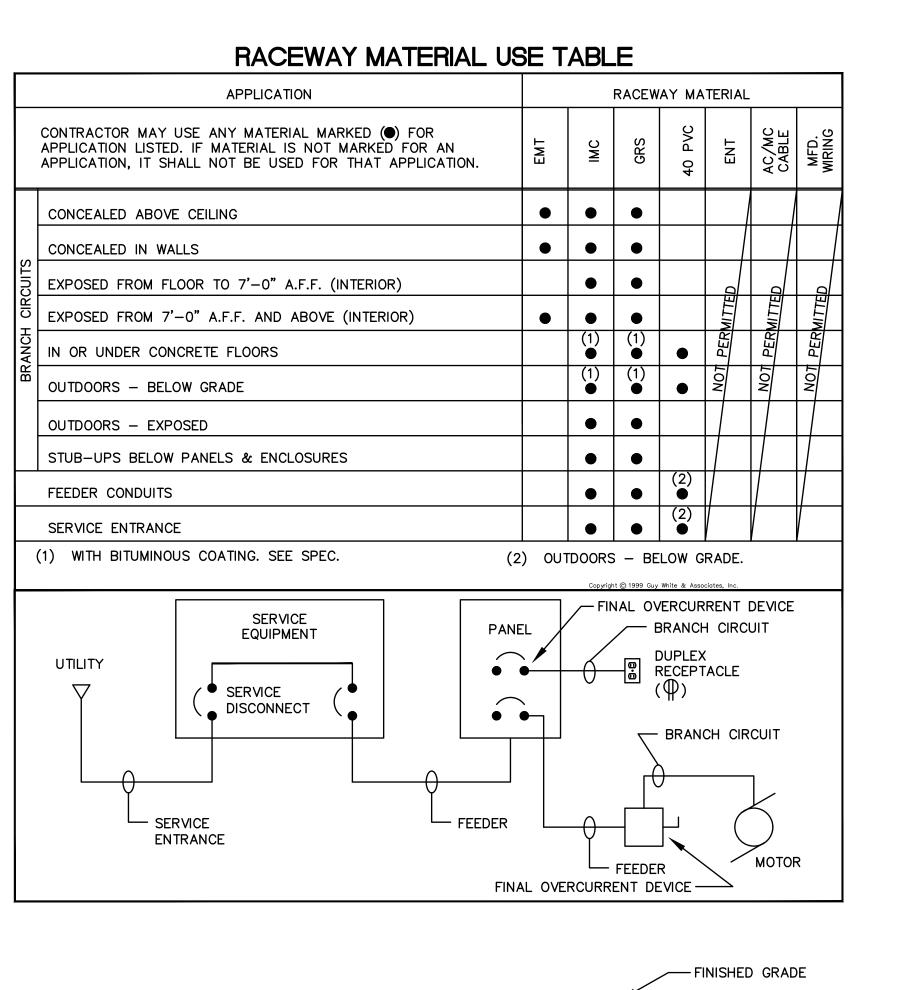
**I-2** 

DECODER CONNECTION TO VALVE

FOR EASIER SERVICING.

**SECTION** 

NOT TO SCALE



FLOWABLE FILL OR -

AS SPECIFIED.

COMPACTED BACKFILL

30" MIN

NON-PAVED AREA

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.

ABOVE FINISHED FLOOR BELOW FINISHED FLOOR ABOVE FINISHED GRADE B.F.G. BELOW FINISHED GRADE U.N.O. UNLESS NOTED OTHERWISE CKT. CIRCUIT CONDUIT E.C. EMPTY CONDUIT FLX.

FLEXIBLE CONDUIT

#### BRANCH CIRCUIT WIRING -HASHMARK CODE

WEATHERPROOF FLEXIBLE CONDUIT

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:

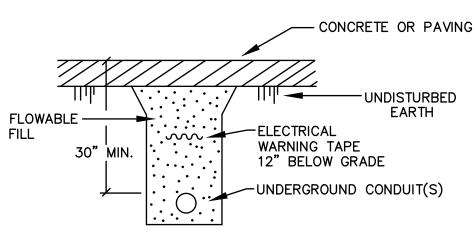
EACH PHASE AND NEUTRAL WIRE IN A CONDUIT RUN IS REPRESENTED BY A HASHMARK. FOR EXAMPLE -

> 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.



**FITTING** 

NO SCALE

CONCRETE OR PAVED AREA

#### UNDERGROUND CONDUIT NOT IN A DUCTBANK

- UNDISTURBED

EARTH

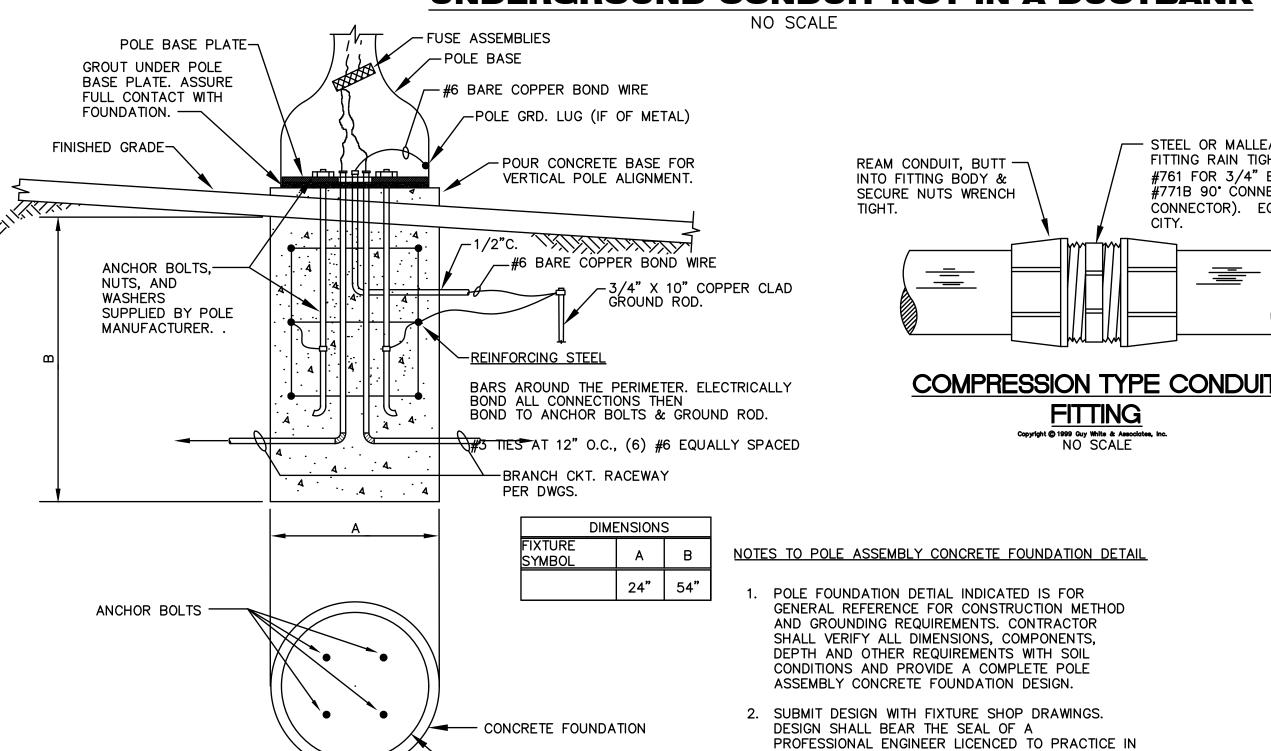
||||| **→** 

-ELECTRICAL

WARNING TAPE

12" BELOW GRADE

-UNDERGROUND CONDUIT(S)

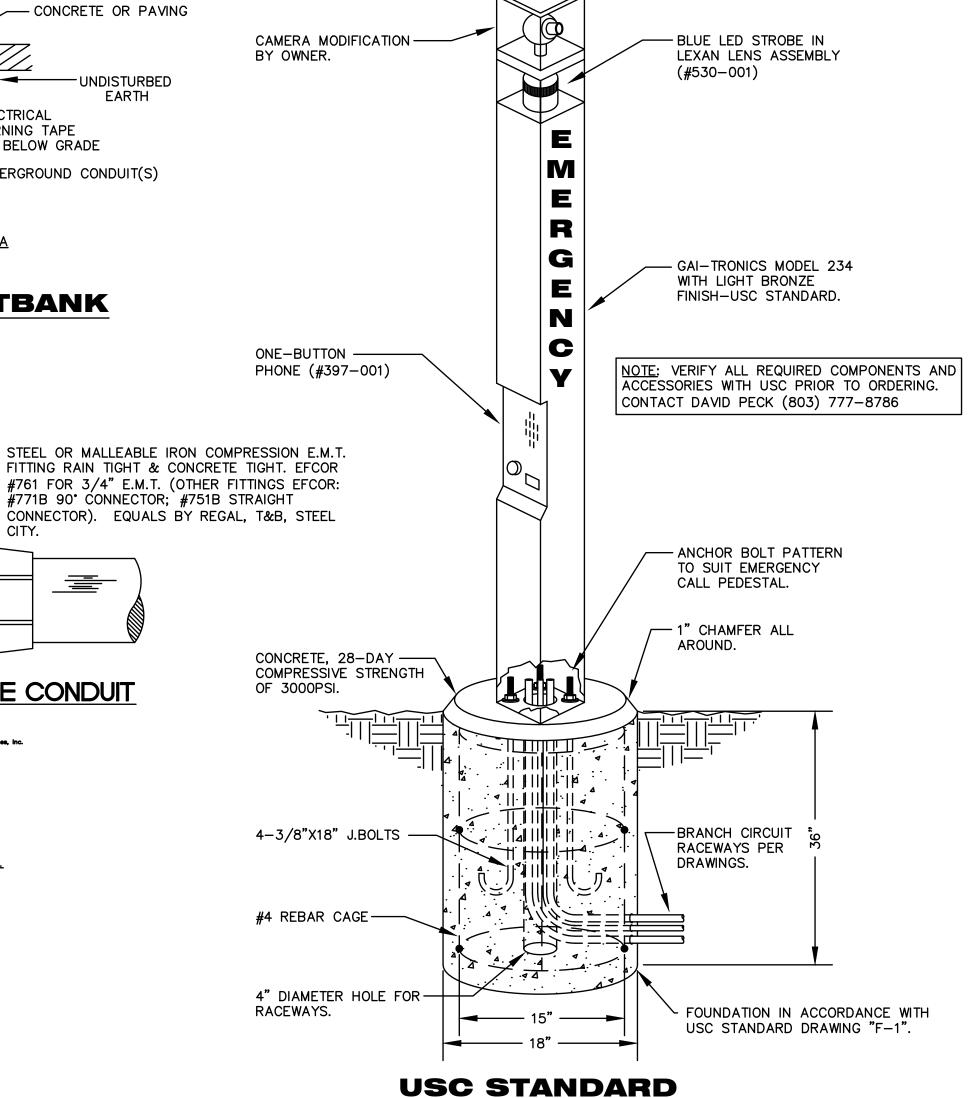


BASE: CONCRETE, 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI, EXCEPT TRAFFIC ARM POLES WHICH SHALL BE 5000 PSI.

#### TYPICAL POLE ASSEMBLY CONCRETE **FOUNDATION DETAIL**

- POLE ASSEMBLY BASE

- 1. 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.
- 2. MINIMUM SIZE CONDUCTOR FOR POWER SHALL BE NO. 12 AWG. ALL CONDUCTORS SHALL BE
- 3. ALL FUSES SHALL BE DUAL-ELEMENT TYPE, "FUSETRON" BY BUSSMAN, OR "ECON" BY ECONOMY.
- 4. BRANCH CIRCUIT SIZES ARE AWG 12-3/4" C. UNLESS OTHERWISE NOTED IN PANELBOARD
- 5. ALL BRANCH CIRCUIT LOADS SHALL BE BALANCED ACROSS PANELBOARD BUSSES TO OBTAIN MINIMUM NEUTRAL CURRENT.
- 6. 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.
- 7. 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.
- 8. ALL WORK SHALL COMPLY WITH NFPA, ADA, AASHTO, SCDOT, CITY OF COLUMBIA AND ALL OTHER APPLICABLE CODES AND STANDARDS.
- 9. SEE CIVIL AND UTILITY PLANS FOR DUCTBANKS, MANHOLES, HANDHOLES AND ADDITIONAL NEW UTILITIES. VERIFY EXACT LOCATIONS OF HANDHOLES, RISER POLES, PEDASTALS AND THE LIKE WITH
- 10. NEW DUCTBANK WITH MANHOLES, HANDHOLES, SPLICE VAULTS, TRAFFIC INFRASTRUCTURE AND OTHER UTILITIES ARE INDICATED ON CIVIL PLANS.
- 11. CONDUIT ROUTING SHOWN DOES NOT INDICATE PATH OF ROUTING-SHOWN FOR CLARITY ONLY. ROUTE CONDUITS IN R.O.W. SEE CIVIL PLANS.
- 12. COORDINATE ALL NEW METER POINT LOCATIONS AND SERVICE LOCATIONS WITH SCE&G PRIOR TO
- 13. ALL CONDUIT ELBOWS BELOW GRADE SHALL BE BITUMINOUS COATED GRS.
- 14. IF REQUIRED TO SUIT LUGS, PROVIDE HYDRAULIC CRIMP TYPE WIRE REDUCERS IN METER CENTER AS REQUIRED TO CONNECT FEEDER CONDUCTORS TO CONTACTOR/CIRCUIT BREAKERS.
- 15. MINIMUM COVER FOR LIGHTING, TRAFFIC CONTROL AND IRRIGATION POWER CIRCUITS SHALL BE 30".
- 16. CONTRACTOR IS CAUTIONED THAT THESE PLANS ARE DIAGRAMMATIC ONLY AND THAT EXACT LOCATIONS AND ROUTINGS FOR NEW WORK SHALL BE AS OBVIOUSLY INDICATED AND AS DIRECTED BY OWNER, WITH MODIFICATIONS AS REQUIRED TO AVOID CONFLICTS IN THE FIELD. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND



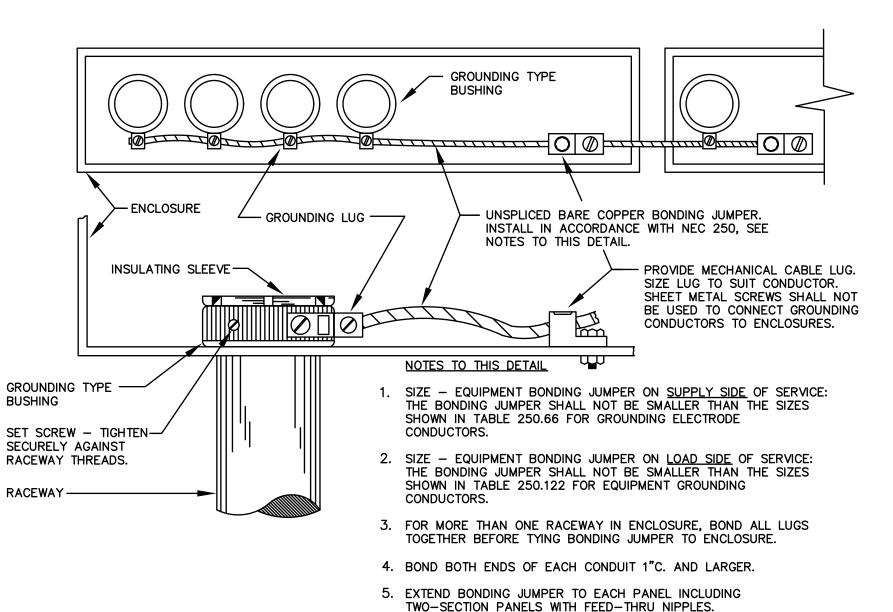
## **EMERGENCY CALL BOX**

NO SCALE

_	ELECTRICAL SYMBOLS					
	•—	OUTDOOR LIGHTING STANDARD & FIXTURE	•	PUSHBUTTON		
	•—	OUTDOOR LIGHTING STANDARD & FIXTURE	A	BUZZER, BELL OR CHIME		
	<b>T</b>	TRANSFORMER PANELBOARD	<b>E</b>	CONNECTION TO EXISTING CIRCUIT		
		SAFETY SWITCH		BRANCH CIRCUIT RACEWAY — CONCEALED IN WALL OR CEILING		
	J	FLUSH JUNCTION BOX CEILING (①—IWALL) PULL BOX OR JUNCTION BOX IN FLOOR		BRANCH CIRCUIT RACEWAY — CONCEALED IN FLOOR OR UNDERGROUND		
	0	CONDUIT STUB		BRANCH CIRCUIT RACEWAY - EXPOSED		
	φ	DUPLEX RECEPTACLE (HHIGH MOUNT)	<b>₩\$</b>			
	ФWР	WEATHERPROOF DUPLEX RECEPTACLE. 16" UP	$ \bigotimes $	TYPICAL: SYMBOLS DENOTE EXISTING.		
	ФGFI	GROUND FAULT INTERRUPTER RECEPTACLE	××× ×××	REMOVE COMPLETE.		
	ECB	EMERGENCY CALL BOX		TYPICAL: "X" ON PLAN SYMBOLS DENOTES EXISTING. REMOVE COMPLETE.		
	EX ER	EXISTING; TO REMAIN EXISTING; BEING RELOCATED				

NOTE: ALL DEVICES SHOWN ON THIS SCHEDULE ARE SYMBOLIC ONLY. SEE ELECTRICAL SPECIFICATIONS FOR EXACT DEVICE REQUIREMENTS AND PERFORMACE CHARACTERISTICS.

EXISTING; NEW LOCATION



#### GROUNDING OF CONDUITS 1" C. **AND LARGER**

GWA, INC. ELECTRICAL ENGINEERS No. C00825



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NO SCALE

THE STATE OF SOUTH CAROLINA.

3. DESIGN SHALL BE IN ACCORDANCE WITH

APPLICABLE AASHTO, SCDOT AND USC.

4. VERIFY ALL POLE BASE/FIXTURE LOCATIONS WITH

USC AND CIVIL ENGINEER PRIOR TO INSTALLATION.

