

# BAMBERG BOARD OF PUBLIC WORKS FAMILY CIRCLE WATER MAIN EXTENSION

## SCIIP PROJECT # A-23-C009



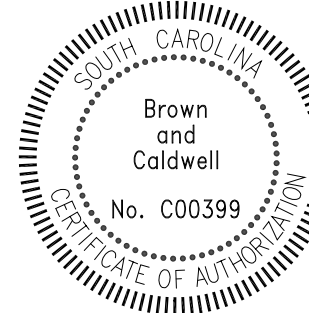
LOCATION MAP

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### BOARD OF PUBLIC WORKS

COMMISSIONERS:  
BUZZY BUNCH: CHAIRMAN  
L.E. GRIFFIN: COMMISSIONER  
CRAIG WALKER: COMMISSIONER



December, 2024

BC PROJECT # 170031

**GENERAL NOTES:**

- ALIGNMENT OF THE WATER MAIN BOTH VERTICALLY AND HORIZONTALLY SHALL BE ACCOMPLISHED BY UTILIZING ONE-HALF THE PIPE MANUFACTURER'S ALLOWABLE DEFLECTION IN THE PIPE JOINTS, FITTINGS, COUPLINGS, SPOOL PIECES, ETC. THE BENDS SHOWN ON THE DRAWINGS PROVIDE GENERAL INFORMATION REGARDING THE ALIGNMENT OF THE WATER MAIN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTIMATING AND PROVIDING ANY AND ALL NECESSARY FITTINGS, COUPLINGS, SPOOL PIECES ETC. NECESSARY TO COMPLETE THE WATER MAIN AS ALIGNED ON THE PLANS, AT NO ADDITIONAL COST TO THE OWNER.
- PROVIDE SHORING, S'HEETING AND BRACING, AS NEEDED, IN CONFORMANCE WITH THE APPLICABLE RULES AND REGULATIONS PROMULGATED BY THE DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), INCLUDING OSHA MANUAL 226, "EXCAVATIONS". WHEN REQUIRED BY RULES AND REGULATIONS, THE CONTRACTOR SHALL PROVIDE DESIGNED SHORING SYSTEMS CERTIFICATIONS APPROVED BY A PROFESSIONAL ENGINEER TO THE OWNER AND ENGINEER FOR REFERENCE ONLY.
- COMPLY WITH THE GUIDELINES OF THE SCDHEC STORM WATER MANAGEMENT AND SEDIMENT AND EROSION CONTROL HANDBOOK FOR LAND DISTURBANCE ACTIVITIES DURING THE ENTIRE CONSTRUCTION PERIOD. SEDIMENT AND EROSION CONTROL PRACTICES SHALL INCLUDE, BUT NOT BE LIMITED TO, SILT FENCES, BERMS, SEDIMENT TUBES, CHECK DAMS, ETC. AS NEEDED OR AS DIRECTED BY THE ENGINEER.
- RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO ORIGINAL CONTOURS, UNLESS OTHERWISE NOTED.
- AREAS DISTURBED BY CONSTRUCTION SHALL BE GRASSED IN ACCORDANCE WITH THE APPROVED SEEDING SCHEDULE ON SHEET 000-C-03, UNLESS OTHERWISE NOTED.
- ANY EXISTING STORM DRAINAGE PIPE REMOVED OR DAMAGED DURING CONSTRUCTION OF THIS PROJECT WILL BE REPLACED WITH THE SAME SIZE AND TYPE PIPE AS WAS PRESENT. ANY CHANGE IN PIPE SIZE OR TYPE WILL REQUIRE APPROVAL FROM SCDOT PRIOR TO THE CHANGE BEING MADE. SIZE AND INVERTS OF NEW PIPES SHALL MATCH EXISTING OR AS NEEDED TO PROVIDE PROPER DRAINAGE.
- NOTE THE PROXIMITY OF POWER POLES, GUY WIRES AND TRANSFORMER BOXES IN RELATIONSHIP TO THE PROJECT AND PROTECT DURING CONSTRUCTION. COORDINATE WITH UTILITY OWNER AS NEEDED TO PROTECT THE INTEGRITY OF ALL POWER POLES AND GUY WIRES DURING CONSTRUCTION.
- ALL UTILITIES SHOWN ARE APPROXIMATE LOCATIONS DETERMINED FROM BEST AVAILABLE INFORMATION AND SITE SURVEYS. HOWEVER, PRIOR TO BEGINNING ANY EXCAVATION, CALL PALMETTO UTILITY PROTECTION SERVICE (PUPS) AT 1-888-721-7877 OR 811 TO LOCATE ALL EXISTING UTILITIES. CONTRACTOR WILL CONFIRM THESE LOCATIONS AND DEPTHS WITH THE PROPER UTILITY COMPANIES BEFORE CONSTRUCTION BEGINS.
- REPAIR OR REPLACE EXISTING FEATURES DISTURBED OR DESTROYED DURING CONSTRUCTION OF THIS PROJECT AT NO ADDITIONAL COST TO THE OWNER. THESE ITEMS INCLUDE, BUT ARE NOT LIMITED TO, FENCES, IRRIGATION SYSTEMS, SHRUBS, SMALL TREES, LANDSCAPING AND LANDSCAPING MATERIALS, CONCRETE CURBING, SIDEWALKS AND ROADWAYS OUTSIDE THE AREAS OF DISTURBANCE.
- ANY CONCRETE MONUMENT ENCOUNTERED DURING CONSTRUCTION WILL NEED TO REMAIN IN PLACE. IF MONUMENTS NEED TO BE REMOVED, THE CONTRACTOR SHALL COORDINATE WITH THE OWNER, ENGINEER AND SCDOT FOR REPLACEMENT OF THE MONUMENT.
- THE CONTRACTOR SHALL RESTORE ROAD RIGHT OF WAYS TO EXISTING OR BETTER CONDITION. ALL DITCHES AND SWALES SHALL BE RESTORED PER SCDOT STANDARD SPECIFICATIONS CONCERNING SLOPE AND GRADE. THE CONTRACTOR SHALL DETERMINE GRADES ON EXISTING STORM CULVERTS PRIOR TO REMOVAL TO ENSURE PROPER REPLACEMENT AT EXISTING GRADES AND ELEVATIONS.
- THE CONTRACTOR SHALL RESTORE DRIVES WITH THE SAME OR LIKE MATERIAL AS EXISTING DRIVES. CONCRETE DRIVES AND SIDEWALKS SHALL BE POURED WITH 3000 PSI FIBER FILLED CONCRETE A MINIMUM OF 4" THICK TO A NEWLY CUT STRAIGHT EDGE. ASPHALT DRIVES AND SIDEWALKS SHALL BE REPLACED WITH A TYPE 1 ASPHALT PER SCDOT REQUIREMENTS TO A MINIMUM THICKNESS OF 2 INCHES.
- THE WATER MAIN SHALL BE INSTALLED TO A DEPTH NECESSARY TO MAINTAIN A MINIMUM OF 4 FEET OF COVER AND MINIMIZE LOCAL HIGH POINTS TO THE MAXIMUM EXTENT POSSIBLE.
- PRESERVE AND PROTECT FROM INJURY ALL TREES NOT REQUIRED TO BE REMOVED. PROVIDE BARRICADES OR OTHER TYPES OF TREE PROTECTION NECESSARY TO PREVENT UNNECESSARY DAMAGE TO TREES 6" IN DIAMETER OR LARGER. ORNAMENTAL SHRUBBERY AND TREE BRANCHES SHALL BE TEMPORARILY TIED BACK, WHERE APPROPRIATE, TO MINIMIZE DAMAGE.
- THE CONTRACTOR SHALL USE RESTRAINED JOINT PIPE AT ALL BENDS ALONG THE WATER MAIN AS INDICATED ON THE DRAWINGS. PIPE RESTRAINT SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND PIPE MANUFACTURER'S RECOMMENDATIONS. THE RESTRAINED JOINT LENGTHS SHOWN ON THE PLANS ARE THE MINIMUM LENGTHS REQUIRED - ACTUAL PIPE RESTRAINT LENGTHS WILL BE IN MULTIPLES OF THE LENGTH OF ONE PIECE OF PIPE (20' FOR DIP).
- MAINTAIN A HORIZONTAL SEPARATION OF 10-FEET AND VERTICAL SEPARATION OF 18-INCHES BETWEEN SEWER MAINS AND STORM MAINS.
- ALL FITTINGS SHALL BE DUCTILE IRON, COMPACT, MECHANICAL JOINT, MANUFACTURED IN ACCORDANCE WITH AWWA C153, AND PRESSURE RATED FOR 350 PSI. STANDARD AWWA C110 M.J. FITTINGS MAY BE SUBSTITUTED WITH NO ADDITIONAL COST TO THE OWNER FOR THE INCREASE IN WEIGHT.
- MECHANICAL JOINT RESTRAINT DEVICES SHALL BE PROVIDED FOR ALL FITTINGS AND VALVES, AND SHALL BE MEGALUG SERIES 1100 FOR DUCTILE IRON PIPE, OR SERIES 2000 FOR PVC PIPE.
- ALL RESTRAINED JOINT DIP PIPE AND ALL PVC PIPE BOTH RESTRAINED AND NON-RESTRAINED SHALL BE INSTALLED IN TYPE 3 BEDDING (AWWA C150 & C151) UNLESS OTHERWISE SHOWN.
- PUSH-ON DUCTILE IRON WATER MAIN (NON-RESTRAINED JOINT) SHALL BE INSTALLED IN TYPE 2 BEDDING (AWWA C150 & C151) UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
- ALL CONNECTIONS TO THE EXISTING SYSTEM SHALL BE COORDINATED WITH THE OWNER.
- ALL TREES, SHRUBBERY, SPOILS, ROCK, ETC. THAT IS REMOVED/EXCAVATED FOR CONSTRUCTION OF THE PROPOSED FACILITIES, AND NOT INCORPORATED INTO THE WORK (i.e. BACKFILL) SHALL BE HAULED OFF SITE AND DISPOSED OF BY THE CONTRACTOR.
- ANY FENCE REMOVED DUE TO WATER MAIN CONSTRUCTION MUST BE REPLACED. TEMPORARY FENCE WILL NEED TO BE INSTALLED AT THE END OF EACH WORK DAY OR WHILE NO CREWS ARE PRESENT AT THE WORK SITE. REPLACEMENT FENCE SHALL BE IN ACCORDANCE TO SCDOT STANDARDS.
- FOR THIS PROJECT, THE PROPOSED WATER FACILITIES ARE TO BE INSTALLED WITHIN ESTABLISHED SCDOT RIGHTS-OF-WAY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE CONDITIONS, LOCATIONS AND REQUIREMENTS OF THE APPROVED PERMITS AND THEIR PROVISIONS.
- THE CONTRACTOR SHALL MAKE A PRACTICAL EFFORT TO MINIMIZE THE ENTRY OF DIRT, DEBRIS AND OTHER FOREIGN MATERIAL INTO THE PIPELINE DURING INSTALLATION.
- THE CONTRACTOR SHALL COMPLY WITH ALL SCDOT, COUNTY ENCROACHMENT PERMITS AND RAILROAD PERMITS OBTAINED BY THE OWNER. THE TRAFFIC CONTROL MEASURES SHOWN WITHIN THE PLAN SET AND SPECIFICATIONS ARE FOR DESIGNING AND MAINTAINING TRAFFIC CONTROL MEASURES IN ACCORDANCE WITH THE SCDOT STANDARDS. THE CONTRACTOR SHALL BE AWARE OF AND PROVIDE FOR ANY SPECIAL PROVISIONS WITHIN THE OBTAINED PERMITS THAT MAY NOT BE SHOWN WITHIN THE PLANS OR SPECIFICATIONS. CONTRACTOR SHALL SUBMIT 48 HOUR NOTIFICATION FORM TO SCDOT AND SHALL OBTAIN AN APPROVED TRAFFIC CONTROL PLAN BEFORE CONSTRUCTION BEGINS. FOR THIS PROJECT, THERE ARE TO BE NO LANE CLOSURES BETWEEN THE TIMES OF 6:00 P.M. AND 7:00 A.M. EST.
- WHERE EXISTING UTILITY SERVICES (WATER, SEWER, TELEPHONE, ETC.) ARE CROSSED AND NEED TO BE TEMPORARILY INTERRUPTED, THE CONTRACTOR SHALL COORDINATE WITH THE PROPERTY OWNER AND UTILITY PROVIDER TO PROVIDE SUFFICIENT NOTICE TO THE CUSTOMER OF AN INTERRUPTION IN SERVICE. SERVICE SHALL BE RESTORED AS QUICKLY AS PRACTICAL.
- WHEN EXCAVATION IS WITHIN 30-FEET OF ANY "SPECIMEN" TREE NOT MARKED FOR REMOVAL, A CERTIFIED ARBORIST IS TO BE ON-SITE. (A SPECIMEN TREE IS CLASSIFIED IN THE BAMBERG COUNTY COMMUNITY DEVELOPMENT CODE 5.11.100 - TREE PROTECTION).
- THE TRENCH SHALL BE CUT TO ADHERE TO THE APPLICABLE OCCUPATION, SAFETY, AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS. THE VERTICAL FACES SHALL BE SHORED TO MEET OSHA REQUIREMENTS, WHERE NECESSARY, AND LATERAL AND VERTICAL SUPPORT MUST BE PROVIDED FOR ALL EXISTING FACILITIES AND STRUCTURES. EXCAVATION METHODS SHALL FOLLOW THE CRITERIA OUTLINED IN CHAPTER 6. ALL FILL SOILS AND EXCAVATED SOILS SHALL BE PLACED ON THE SIDE OF THE TRENCH AWAY FROM THE PAVEMENT. THE PAVEMENT WILL BE KEPT CLEAN OF MUD, DEBRIS, ETC. BEDDING SHALL BE PROVIDED FOR SIX (6) INCHES OR 1/2 THE DIAMETER OF THE PIPE WHICHEVER IS BEDDING SHALL CONSIST OF GRANULAR MATERIAL FREE OF LUMPS, CLODS, STONES, AND FROZEN MATERIAL AND PREPARED TO PROVIDE THE PIPE WITH UNIFORM SUPPORT THROUGHOUT ITS LENGTH. UNSTABLE SOILS AND ROCK LEDGES SHOULD BE SUB-EXCAVATED FROM THE BEDDING ZONE AND REPLACED BY SUITABLE MATERIAL. FOR EXCAVATIONS UNDER THE ROADWAY THROUGH SHOULDERS, BACKFILLING OF TRENCHES IS TO BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT OF THE PIPE. TRENCHES WILL NOT BE LEFT OPEN DURING HOURS OF DARKNESS. BACKFILL IS TO BE PLACED IN SIX (6) INCH LAYERS OR LESS WITH EACH LAYER BEING THOROUGHLY COMPACTED. CARE SHOULD BE EXERCISED TO THOROUGHLY COMPACT THE MATERIAL AROUND AND OVER THE PIPE. EACH LAYER WILL BE COMPACTED TO A DENSITY OF 95 PERCENT AS DETERMINED BY AASHTO METHOD T-99. ALL WORK SHALL BE PERFORMED TO THE SATISFACTION OF THE DEPARTMENT. TRENCH SOIL (OR A SUBSTITUTE SUITABLE MATERIAL USED FOR BACKFILL) MUST BE CAPABLE OF PRODUCING REQUIRED COMPACTION.
- CONTRACTOR SHALL PROVIDE A CONSTRUCTION ENTRANCE AS DETAILED AT EACH POINT OF ACCESS ON AND OFF OF THE ROADWAY.
- CONTRACTOR WILL MAINTAIN ACCESS TO ALL PROPERTY OWNERS AT ALL TIMES DURING CONSTRUCTION UNTIL FINAL INSPECTION AND APPROVAL IS OBTAINED. IF IN THE COURSE OF CONSTRUCTION DRIVeways ARE TO BE CUT AND ACCESS IMPAIRED THE CONTRACTOR WILL BE RESPONSIBLE TO INFORM EACH RESIDENT OF THE INCONVENIENCE AND THE TIME, DATE AND LENGTH OF THE WORK TO BE DONE. REPLACEMENT OF DRIVEWAY MATERIAL SHALL BE IN KIND.
- ALL PRESSURIZED UTILITY PIPE LINES CROSSING SCDOT ROADWAY EITHER IN AN OPEN CUT OR BY A BORING OPERATION ARE TO BE ENCASED IN STEEL CASING OR BE DUCTILE IRON PIPE (DIP) AS INDICATED ON PERMIT DRAWINGS.
- ANY AREA BEHIND THE WORK ZONE WILL BE RESTORED TO ITS TYPICAL SECTION AND PREPARED FOR FINAL GRADING, AND GRASSING IMMEDIATELY AS WORK PROGRESSES. CLEANUP AND EROSION CONTROL MEASURES IN AREAS WHERE CONSTRUCTION HAS BEEN COMPLETED WILL BE CONDUCTED DURING THE LIFE OF THE PROJECT. SEE SCDOT "POLICY FOR SEEDING AND EROSION CONTROL MEASURES INSIDE ROADWAY RIGHTS-OF-WAY".
- ANY EXISTING PAVEMENT MARKINGS OR TRAFFIC SIGNAGE ALTERED DURING THE INSTALLATION OF THIS PERMITTED CONSTRUCTION WILL BE REPLACED BY THE PERMITTEE TO THEIR ORIGINAL CONDITION AS SOON AS POSSIBLE.
- CONTRACTOR SHALL SUBMIT 48 HOUR NOTIFICATION FORM TO SCDOT AND SHALL OBTAIN AN APPROVED TRAFFIC CONTROL PLAN BEFORE CONSTRUCTION BEGINS.
- THERE SHALL BE NO EXCAVATION OF SOIL NEARER THAN TWO FEET FROM ANY PUBLIC UTILITY POLE OR APPURTENANT FACILITY WITHOUT THE WRITTEN CONSENT OF THE OWNER THEREOF. SPECIAL PERMISSION OF THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION AFTER AN OPPORTUNITY TO BE HEARD IS GIVEN THE OWNER OF SUCH POLE OR APPURTENANT FACILITY MAY BE GIVEN.
- NO EXCAVATED MATERIAL OR SPOIL IS TO BE PLACED ON THE PAVEMENT WITHOUT THE PERMISSION OF THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION, AND IF PERMISSION IS GRANTED, THIS MATERIAL MUST BE REMOVED DAILY, AS SOON AS POSSIBLE. THE ROADWAY IS TO BE CLEANED OF ALL MATERIAL IN A MANNER AS TO PROTECT THE EXISTING PAVEMENT. ANY PAVEMENT DESTROYED, OR MARKED BY THIS OPERATION WILL BE REMOVED AND REPLACED AS REQUIRED.
- ALL CROSS INE PIPES ARE TO BE LOCATED AND FLAGGED PRIOR TO BEGINNING OPERATION. ANY CROSS LINE PIPES AND/OR SIDELINE PIPES DISTURBED OR DAMAGED DURING CONSTRUCTION WILL BE REPLACED IMMEDIATELY. NEW PIPE WILL BE PLACED ON PROPER GRADE, SEALED PROPERLY, AND CLEANED TO PROVIDE POSITIVE DRAINAGE. PIPES ARE TO REMAIN UNCOVERED UNTIL A SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION INSPECTOR, INSPECT THE PIPE, THE CONDITION, AND THE PLACEMENT IN THE TRENCH. THEN AT THAT TIME THE PIPE IS TO BE COVERED AND COMPACTED AS REQUIRED.
- ALL CLEARING INSIDE THE SCDOT RIGHT-OF-WAY WILL BE DONE IN ACCORDANCE WITH ALL SCDOT SPECIFICATIONS. ALL STUMPS AND DEBRIS WILL BE REMOVED FROM THE RIGHT-OF-WAY AND DISPOSED OF OFF-SITE BY THE CONTRACTOR. THEN PROPER DRAINAGE WILL BE RESTORED TO ALL DISTURBED AREAS.
- EVERY EFFORT SHALL BE MADE TO NOT PLACE VALVES IN ROADSIDE DITCHES, BOTTOM OR IN THE SLOPES. NOTIFY ENGINEER SHOULD SUCH CONFLICT ARISE.
- A COPY OF THE APPROVED PERMIT WILL BE MADE AVAILABLE TO THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION AT THE WORK SITE AT ALL TIMES AND ALL WORK PERFORMED IN CONNECTION WITH THIS PERMIT SHALL CONFORM TO THE SCDOT "A POLICY FOR ACCOMMODATING UTILITIES ON HIGHWAY RIGHT-OF-WAY" MOST CURRENT EDITION.
- SCDOT SHALL BE NOTIFIED WHEN WORK DEFINED IN THE PERMIT IS TO START AS WELL AS WHEN THE WORK IS COMPLETED. REFERENCE SHALL BE MADE AS PERMIT NUMBER.
- TRENCH SHALL BE PROPERLY BACKFILLED AND THOROUGHLY TAMPED IN ACCORDANCE WITH SCDOT STANDARDS.
- CONTRACTOR TO ENSURE ALL PIPING SHALL HAVE AT A MINIMUM 36" OF COVER FROM TOP OF PIPE TO BOTTOM OF ANY DITCH LINE.

**PLAN LEGEND**

**CIVIL ABBREVIATIONS**

- EFF EFFLUENT FORCE MAIN
- CMP CORRUGATED METAL PIPE
- DIP DUCTILE IRON PIPE
- FH FIRE HYDRANT
- FM FORCE MAIN
- FOC FIBER OPTIC CABLE
- GUY GUY WIRE
- IE INVERT ELEVATION
- INV INVERT
- IPF IRON PIN FOUND
- LF LINEAR FEET
- LP LIGHT POLE
- MB MAIL BOX
- MH MANHOLE
- MJ MECHANICAL JOINT
- NF NOW OR FORMERLY
- OHE OVERHEAD ELECTRIC
- PP POWER POLE
- PVC POLYVINYL CHLORIDE
- RCP REINFORCED CONCRETE PIPE
- RJ RESTRAINED JOINT
- RJP RESTRAINED JOINT PIPE
- R/W RIGHT-OF-WAY
- SS SANITARY SEWER
- STA STATION
- TBM TEMPORARY BENCHMARK
- TBOX TELECOMMUNICATION BOX
- TELEPHONE PEDESTAL
- UGTC UNDERGROUND TELEPHONE
- UGCB UNDERGROUND CABLE BOX
- WM WATER MAIN
- WOS WATERS OF THE STATE
- CPP CORRUGATED PLASTIC PIPE
- RCW RECLAIMED WATER MAIN
- BMP BEST MANAGEMENT PRACTICES
- EX EXISTING
- ARV AIR RELEASE VALVE

**CIVIL SYMBOLS**

**PROPOSED FEATURES**

- NEW DIP WATER MAIN (SIZE LABELED)
- NEW IN LINE VALVE
- NEW AIR RELEASE VALVE
- NEW FIRE HYDRANT
- NEW BLOW-OFF

**EXISTING FEATURES**

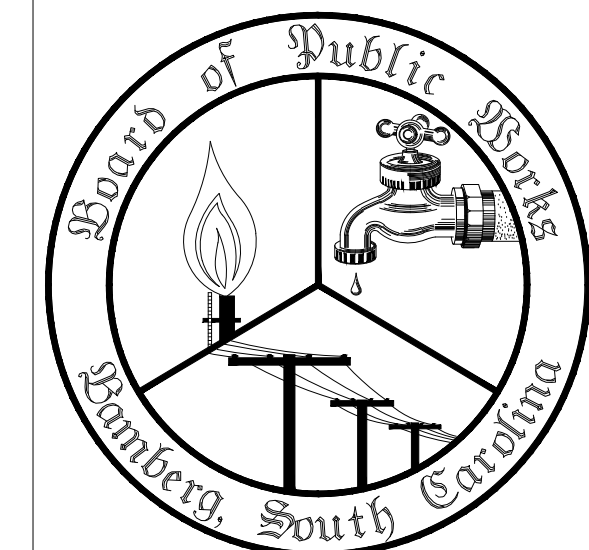
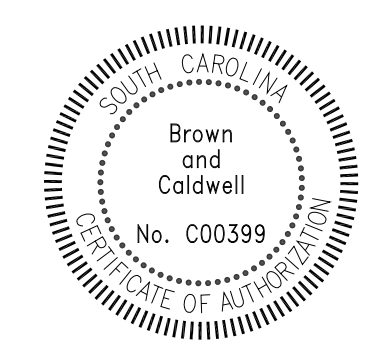
- RIGHT-OF-WAY
- PROPERTY LINE
- UNDER GROUND FIBER OPTIC
- OVERHEAD POWER
- WOODS / TREE LINE
- EXISTING SANITARY SEWER
- EXISTING WATER MAIN
- EXISTING NATURAL GAS
- EXISTING STORM RCP
- DITCH LINE
- PAVEMENT AREA
- EXISTING FENCE LINE
- DIRT/GRAVEL (UNPAVED)
- CONCRETE AREA
- WATER VALVE
- FIRE HYDRANT
- WATER METER
- POWER POLE w/ GUY
- TELEPHONE PEDESTAL
- COMMUNICATIONS VAULT
- UTILITY MARKER
- MAILBOX
- IRON PIN FOUND (IPF)
- EXISTING TREE (SPECIFIC)
- SHRUB
- DROP INLET
- CATCH BASIN
- SANITARY SEWER MH
- SEWER CLEANOUT
- SIGNS (SPECIFIC)
- SIGNS (MISC)
- CONSTRUCTION BENCHMARK

**Survey Note:**  
Survey data was compiled Edisto Engineers and Surveyors, Inc., Orangeburg SC. All drawings reside within the South Carolina State Plane Coordinate System with a datum of NAD83/NGVD29.

**\*\*\*\*\*UTILITY WARNING:\*\*\*\*\***  
The underground utilities shown have been located from field survey information and existing drawings. The engineer/surveyor makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The engineer/surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from the information available. The engineer/surveyor have not physically located any underground utilities.



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**BAMBERG BOARD OF PUBLIC WORKS  
FAMILY CIRCLE  
WATER MAIN  
EXTENSION**

**REVISIONS**

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B. FRICK  
DRAWN: A. JUMPER  
CHECKED: J. SHAW  
CHECKED: B. FRICK  
APPROVED: B. FRICK  
FILENAME: 170031-FCW\_G-00-001.DWG  
BC PROJECT NUMBER: 170031  
SCIP PROJECT NUMBER: A-23-C009

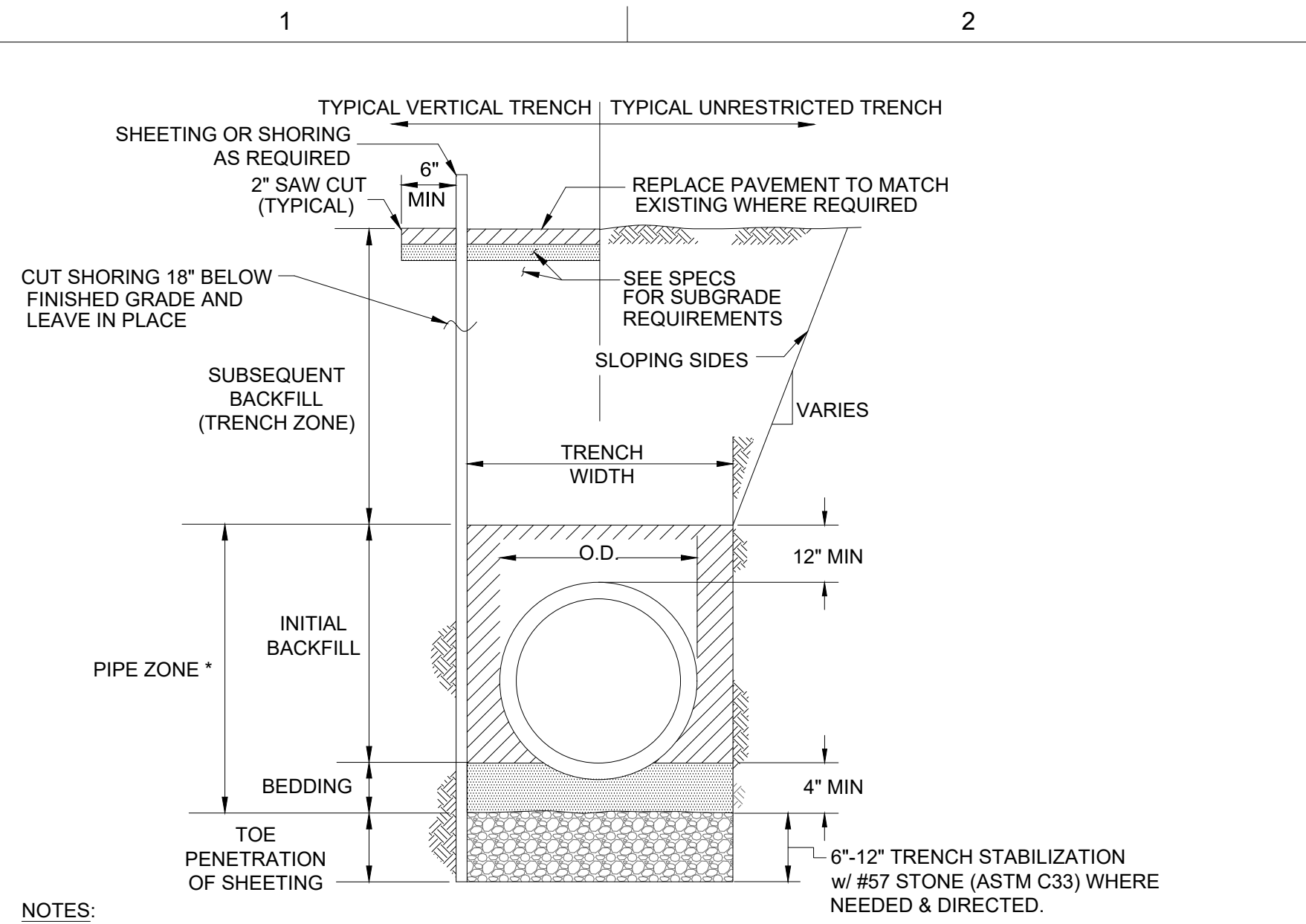
**GENERAL  
GENERAL NOTES  
AND SYMBOLS**

DRAWING NUMBER  
**G-00-001**  
SHEET NUMBER  
2 OF 21

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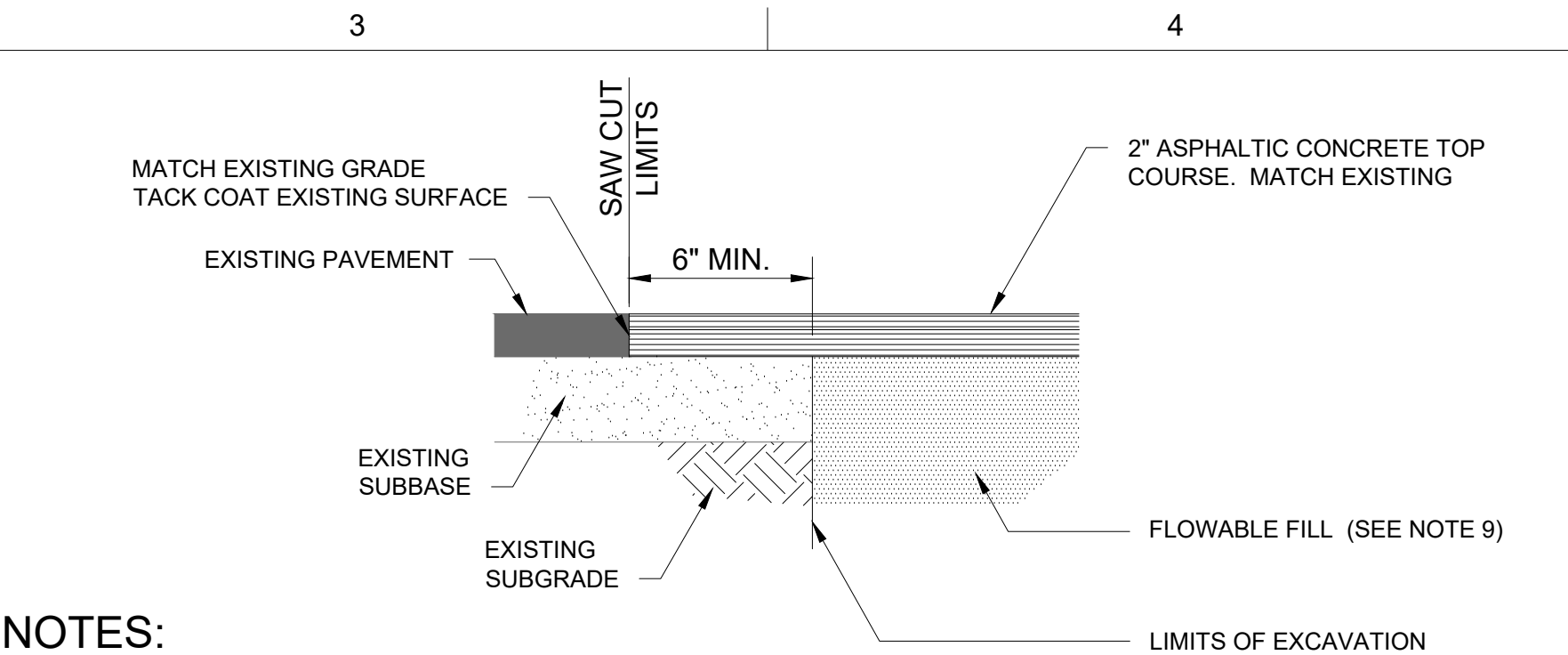






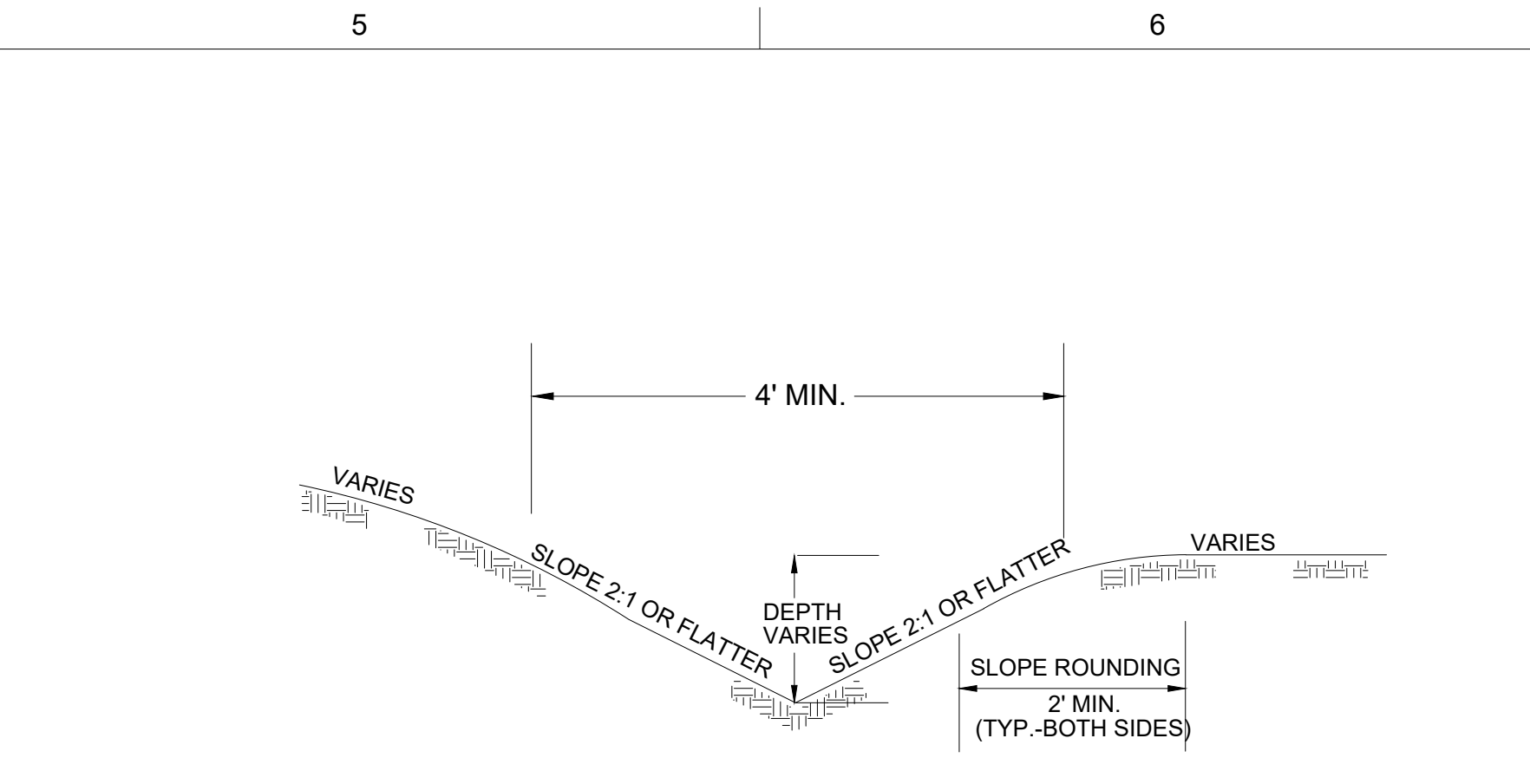
- NOTES:**
1. IN THE AREAS WHERE GROUND WATER IS ENCOUNTERED IN THE PIPE ZONE, AND TYPE C MATERIAL WOULD NORMALLY BE SUITABLE FOR BEDDING AND INITIAL BACKFILL, THE OWNER OR ENGINEER MAY DIRECT THE CONTRACTOR, AS ADDITIONAL TRENCH STABILIZATION, TO USE COMPACTED STONE (TYPE K) BACKFILL UP TO THE STATIC GROUND WATER TABLE LEVEL PLUS ADDITIONAL 1-FOOT.
  2. TYPICAL TRENCH WILL BE A MINIMUM OF 3'-0" FROM EDGE OF PAVEMENT ALONG SC HIGHWAY 170 AND SC HIGHWAY 49.

**1** TYPICAL TRENCH SECTION DETAIL  
SCALE: NONE



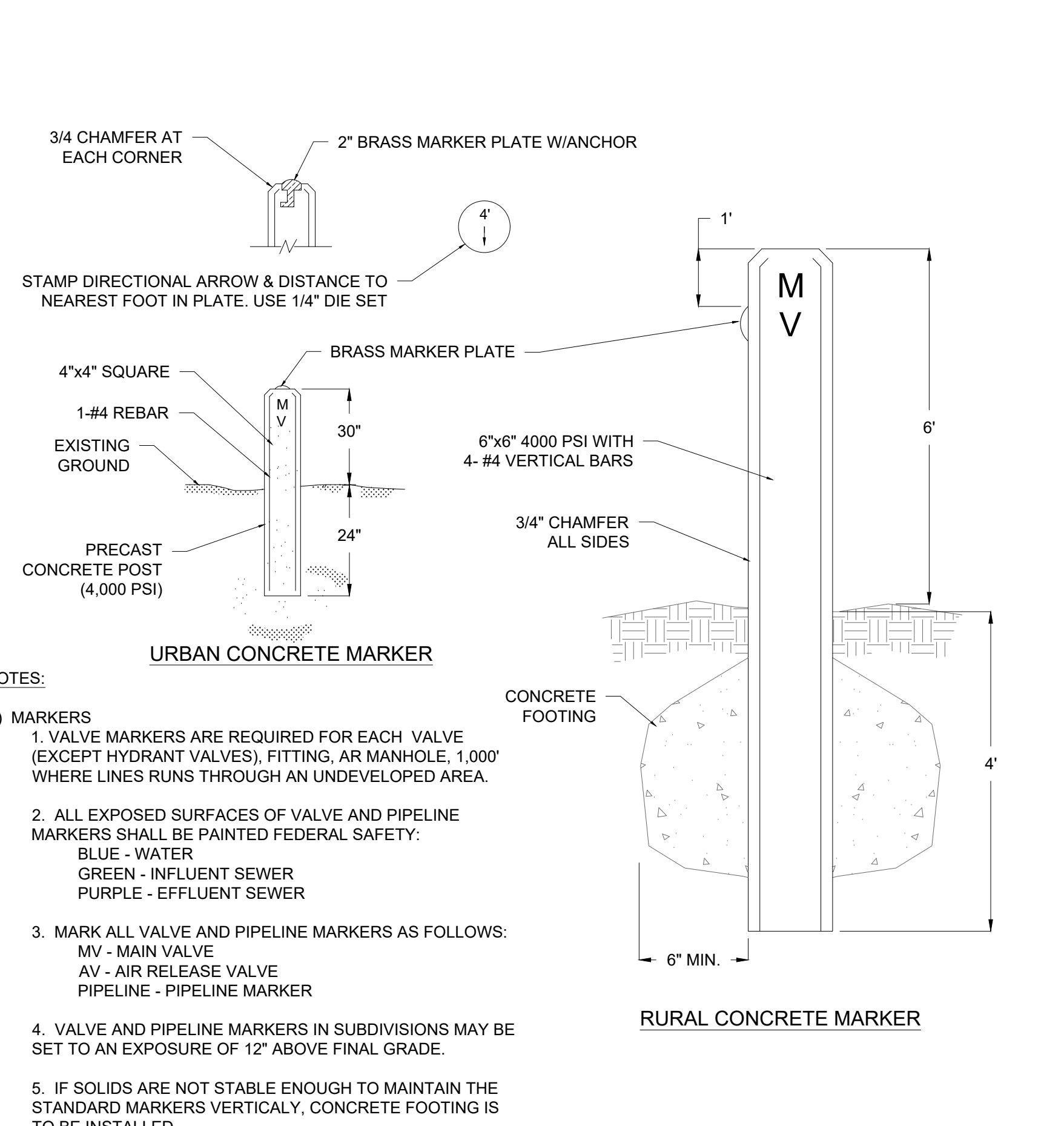
- NOTES:**
1. SEE SECTION 32 25 00 FOR RELATIVE COMPACTION.
  2. ALL TRENCH AND PAVEMENT CUTS SHALL BE MADE BY SAWCUTTING ONLY. THE CUTS SHALL BE A MINIMUM OF 6 INCHES OFF EACH SIDE OF THE TRENCH WIDTH FOR EXCAVATION.
  3. SAWCUTS SHALL BE VERTICAL FULL DEPTH CUTS THAT PROVIDE A CLEAN EDGE TO THE EXISTING PAVEMENT THAT REMAINS.
  4. TACK COAT SHALL BE APPLIED TO EXISTING PAVEMENT AND EDGE OF CUT, AND AT COLD JOINTS AND GUTTER PRIOR TO PAVING, SEE SECTION 32 25 00.
  5. PATCHES SHALL BE FEATHERED AND SHIMMED TO AN EXTENT THAT PROVIDES A SMOOTH-RIDING CONNECTION AND EXPEDITIOUS DRAINAGE FLOW.
  6. THE MINIMUM WIDTH FOR ANY PAVEMENT REPAIR SHALL BE 3-FEET UNLESS OTHERWISE NOTED.
  7. WHERE A PAVEMENT JOINT OR EDGE OF PAVEMENT IS LESS THAN 4-FEET FROM A SAWCUT JOINT, THE PAVEMENT SHALL BE REMOVED TO THAT JOINT OR EDGE.
  8. IF ANY EXISTING PAVEMENT DESIGN IS GREATER THAN THIS DETAIL, USE EXISTING PAVEMENT DESIGN.
  9. EXCAVATIONS WITHIN THE ROAD TRAVEL PATH AND GREATER THAN 7 FEET SHALL BE BACKFILLED WITH CRUSHER RUN OR SELECT FILL COMPACTED TO 95% STANDARD PROCTOR TO THE 5 FOOT DEPTH AND THEN BACKFILLED WITH FLOWABLE FILL PER SCDOT ENCROACHMENT PERMIT.
  10. SOIL RESIDUAL HERBICIDE SHALL BE PLACED PRIOR TO PAVING.

**2** PAVED ROAD SECTION REPAIR DETAIL  
SCALE: NONE



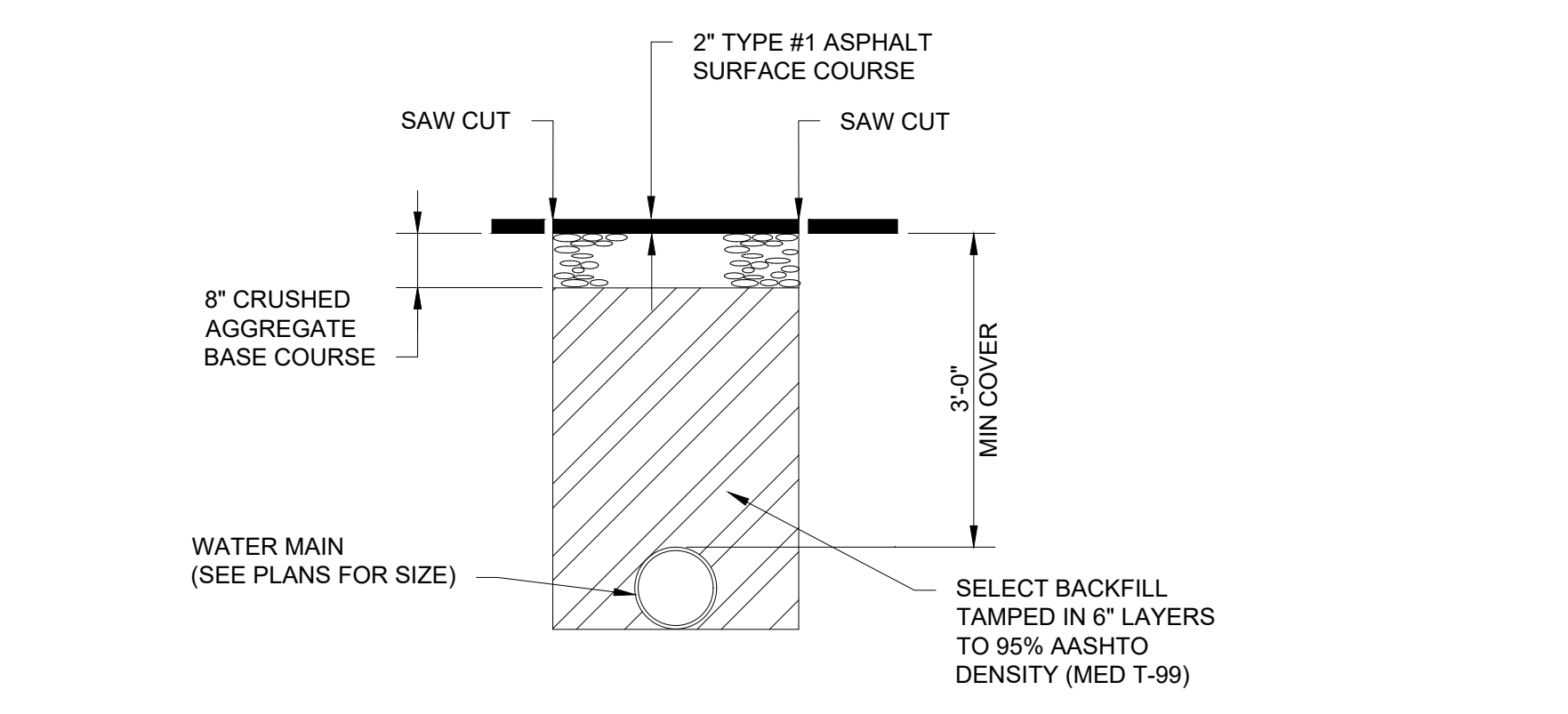
- NOTE:**
1. ALL SWALES SHALL BE GRADED TO INSURE POSITIVE FLOW (1% MIN).

**3** TYPICAL SWALE DETAIL  
SCALE: NONE

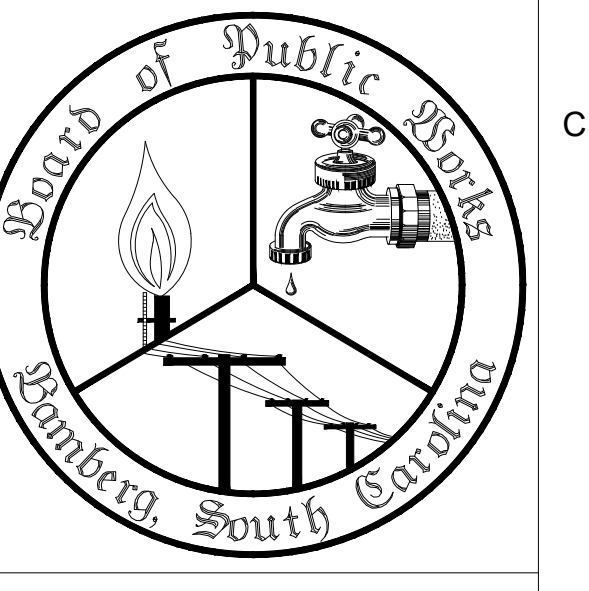
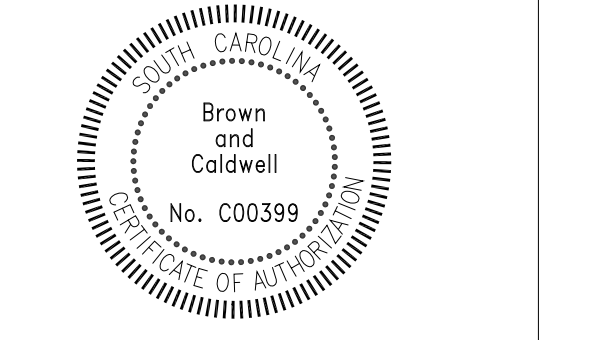


- NOTES:**
- A) MARKERS**
1. VALVE MARKERS ARE REQUIRED FOR EACH VALVE (EXCEPT HYDRANT VALVES), FITTING, AIR MANHOLE, 1,000' WHERE LINES RUNS THROUGH AN UNDEVELOPED AREA.
  2. ALL EXPOSED SURFACES OF VALVE AND PIPELINE MARKERS SHALL BE PAINTED FEDERAL SAFETY:
    - BLUE - WATER
    - GREEN - INFLUENT SEWER
    - PURPLE - EFFLUENT SEWER
  3. MARK ALL VALVE AND PIPELINE MARKERS AS FOLLOWS:
    - MV - MAIN VALVE
    - AV - AIR RELEASE VALVE
    - PIPELINE - PIPELINE MARKER
  4. VALVE AND PIPELINE MARKERS IN SUBDIVISIONS MAY BE SET TO AN EXPOSURE OF 12" ABOVE FINAL GRADE.
  5. IF SOLIDS ARE NOT STABLE ENOUGH TO MAINTAIN THE STANDARD MARKERS VERTICALLY, CONCRETE FOOTING IS TO BE INSTALLED.
  6. ALL VALVE MARKERS SHALL BE LOCATED AT THE BACK OF RIGHT-OF-WAY
- B) VALVE BOX BOTTOMS SHALL HAVE 14" BASE.**

**4** STANDARD VALVE MARKER DETAIL  
SCALE: NONE



**5** DRIVEWAY PAVEMENT REPLACEMENT DETAIL  
SCALE: NONE



**BAMBERG BOARD OF PUBLIC WORKS  
FAMILY CIRCLE  
WATER MAIN  
EXTENSION**

**REVISIONS**

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B. FRICK  
DRAWN: A. JUMPER  
CHECKED: J. SHAW  
CHECKED: B. FRICK  
APPROVED: B. FRICK

FILENAME: 170031-FCW\_C-00-002.DWG  
BC PROJECT NUMBER: 170031  
SCIP PROJECT NUMBER: A-23-C009

**CIVIL  
CIVIL DETAILS 2**

DRAWING NUMBER  
**C-00-002**  
SHEET NUMBER  
5 OF 21

Path: C:\BPC\DWG\3438334 FILENAME: 170031-FCW\_C-00-002.DWG PLOT DATE: 7/11/2024 3:55 PM CAD USER: ANDY JUMPER 8/11/2024 3:55 PM

SYMBOLS FOR EROSION AND SEDIMENT CONTROL PRACTICES

SEEDING SCHEDULE

SEEDING SCHEDULE FOR AREAS IN THE LOWER STATE OF SOUTH CAROLINA

SITE PREPARATION

OUTLET PROTECTION

- SURFACE ROUGHENING
- TOP SOILING
- TREE PRESERVATION AND PROTECTION
- TEMPORARY GRAVEL CONSTRUCTION ENTRY/EXIT

- OUTLET STAB. STRUCTURE

SURFACE STABILIZATION

INLET PROTECTION

- TEMPORARY SEEDING
- PERMANENT SEEDING
- RIP RAP
- TEMPORARY DIVERSIONS
- PERMANENT DIVERSIONS

- TEMPORARY FABRIC DROP INLET PROTECTION
- TEMPORARY BLOCK & GRAVEL INLET PROTECTION
- SOD DROP INLET PROTECTION
- SEDIMENT TUBE INLET PROTECTION
- TEMPORARY SEDIMENT TRAP
- SEDIMENT BASIN

RUNOFF CONVEYANCE MEASURES

- SEDIMENT FENCE (SILT FENCE) SINGLE ROW
- SEDIMENT FENCE (SILT FENCE) DOUBLE ROW
- CHECK DAM
- SEDIMENT TUBE

- FABRIC-LINED SLOPES
- RIP RAP-LINED CHANNELS
- PAVED CHANNELS
- 6.32 TEMPORARY SLOPE DRAINS

NOTES:

1. ABOVE SYMBOLS AND NUMBERS DENOTE EROSION AND SEDIMENT CONTROL PRACTICES PER THE SOUTH CAROLINA DHEC STORM WATER MANAGEMENT BMP HANDBOOK, LATEST REVISION. THESE DETAILS ARE INCORPORATED BY REFERENCE.
2. THE ABOVE LISTING IS GENERAL IN NATURE. SOME PRACTICES MAY NOT BE REQUIRED ON THIS CONTRACT AND SOME PRACTICES NOT SHOWN MAY BE REQUIRED.

PERMANENT VEGETATION SCHEDULE (PER ACRE)

FROM MARCH 1 - AUGUST 14		FROM AUGUST 15 - FEBRUARY 28	
30 LBS.	COMMON BERMUDA (HULLED)	40 LBS.	COMMON BERMUDA (UNHULLED)
10 LBS.	WEeping LOVEGRASS	10 LBS.	WEeping LOVEGRASS
10 LBS.	SWITCHGRASS	10 LBS.	VIRGINIA WILD RYE
		20 LBS.	RESEEDING CRIMSON CLOVER
		20 LBS.	RYE GRAIN

TEMPORARY VEGETATION SCHEDULE (PER ACRE)

ANNUAL SUDAN GRASS		40 LBS. APRIL 1 - AUGUST 15	
BROWN TOP MILLET		50 LBS. APRIL 1 - AUGUST 15	
RYE GRAIN		55 LBS. AUGUST 16 - MARCH 31	

IF HYDROSEEDING USE 13 LBS. PER 1000 SQ. FT. OF LOW SALT FORMULATION OF 19-19-19 INSTEAD 10-10-10 TO GIVE LONG TERM FERTILIZATION BENEFITS.

LIQUID LIME IS NOT A SUBSTITUTE FOR AGRICULTURAL LIME. A FEW GALLONS OF LIQUID LIME RAISES SOIL pH ONE POINT, BUT THIS EFFECT IS VERY TEMPORARY - USUALLY 45-50 WEEKS. LIQUID LIME MAY BE USED WITH AGRICULTURAL LIME TO GIVE QUICK RESULTS TOGETHER WITH THE LONG TERM BENEFITS OF AGRICULTURAL LIME.

GRAIN STRAW MULCH IS THE MOST IMPORTANT INGREDIENT IN THESE SEEDING RECOMMENDATIONS AND IS 90% OF THE REASON FOR SUCCESS. PAPER AND OTHER SYNTHETIC MULCHES MAY BE SUBSTITUTED FOR GRAIN STRAW WHEN A HYDROSEEDER IS USED, BUT NOT ON STEEP AREAS. AREAS WITH CONCENTRATED WATER RUNOFF, OR ON DEEP SANDY SOILS. (ALL SLOPES STEEPER THAN 2:1 MUST BE HYDROSEEDED AND MULCHED WITH GRAIN STRAW USING AN APPROVED ANCHORING METHOD SUCH AS GLUE TACKIFIER OR TRACTOR AND STRAIGHT DISK HARROW.)

CONSTRUCTION SEQUENCE AND MAINTENANCE PLAN

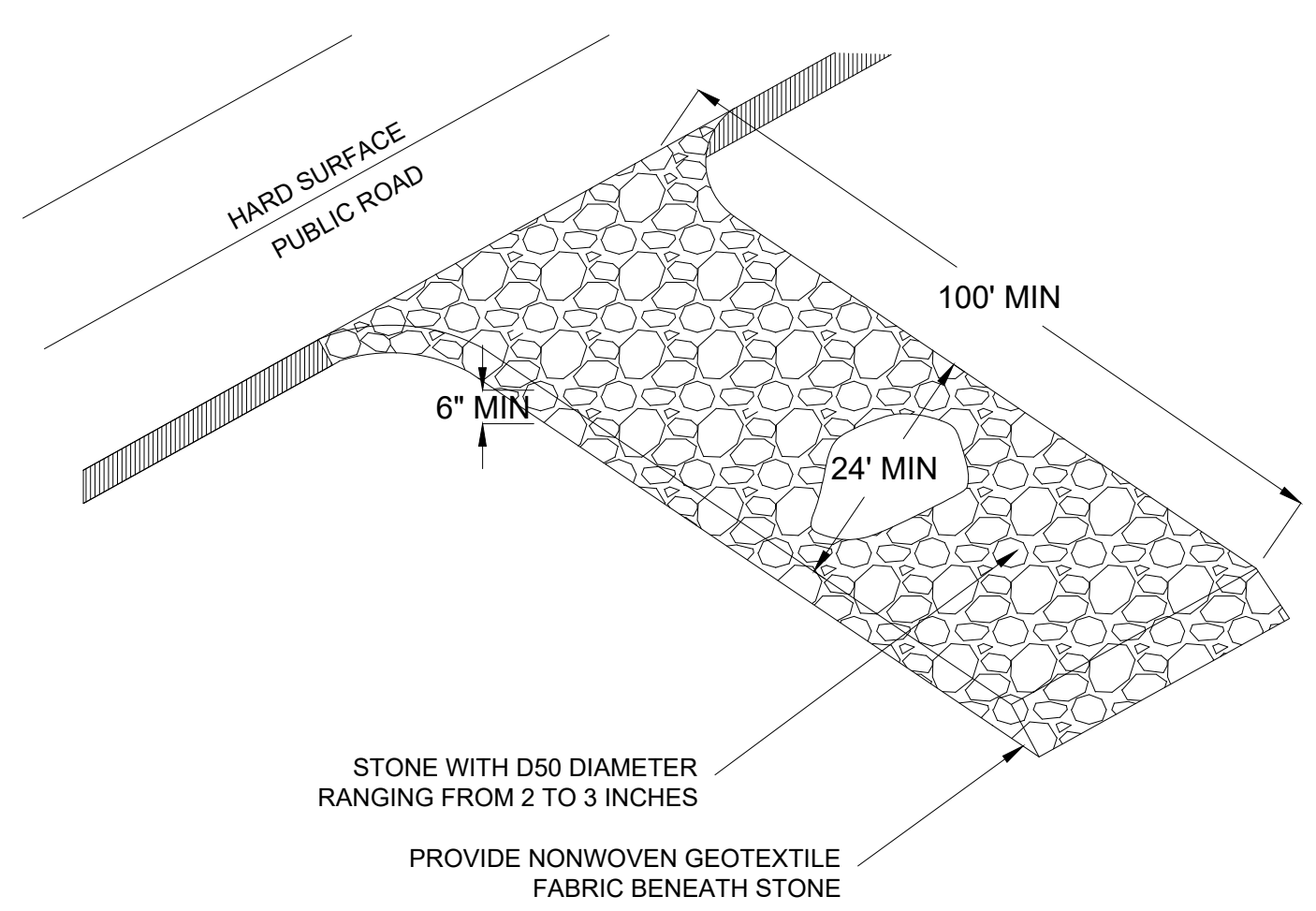
1. NO GROUND DISTURBING ACTIVITIES MAY BE PERFORMED ON THE SITE WITHOUT AN APPROVED SEDIMENT AND EROSION CONTROL PLAN.
2. ONE WEEK PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION CONFERENCE WITH THE ENGINEER. THE PURPOSE OF THIS MEETING WILL BE TO REVIEW THE REQUIREMENTS OF THE SEDIMENT AND EROSION CONTROL PLAN.
3. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING, EXCAVATION, OR FILLING, EXCEPT THOSE OPERATIONS NEEDED TO INSTALL SUCH MEASURES.
4. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED ACCORDING TO THE "STORM WATER MANAGEMENT BMP HANDBOOK," PUBLISHED BY THE SOUTH CAROLINA DHEC, PUBLISHED AUGUST 2005.
5. EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER IF DEEMED NECESSARY BY THE ENGINEER OR SCDHEC INSPECTOR.
6. GRASSING FOR DISTURBED AREA STABILIZATION WILL BE PERFORMED AS NOTED IN THE "STORM WATER MANAGEMENT BMP HANDBOOK," PUBLISHED BY THE SOUTH CAROLINA DHEC. GRASSING FOR TEMPORARY AND PERMANENT SEEDING SHALL BE AS SPECIFIED ACCORDING TO PAGES 8-10 AND 25-27 RESPECTIVELY OF THE ABOVE REFERENCED MANUAL. UNLESS OTHERWISE APPROVED BY THE ENGINEER.
7. ALL TEMPORARY AND PERMANENT DIVERSIONS SHALL BE SEED, FERTILIZED AND LINED WITH FIBER FABRIC IMMEDIATELY UPON COMPLETION OF THE CHANNEL. WITH THE EXCEPTION OF TEMPORARY AND PERMANENT DIVERSIONS, ALL DISTURBED AREAS EXPOSED FOR MORE THAN 30 DAYS SHALL BE SEED AND MULCHED.
8. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AT THE INTERVAL SPECIFIED IN THE SOIL EROSION AND SEDIMENTATION CONTROL NOTES. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN PROPER FUNCTION OF ALL MEASURES.
9. SEDIMENT SHALL BE REMOVED FROM SEDIMENT TRAPS AND BLOCK AND GRAVEL INLET PROTECTION DEVICES WHEN STORAGE CAPACITY HAS REACHED 50%. GRAVEL SHALL BE REPLACED WHEN THE DEVICE NO LONGER DRAINS PROPERLY.
10. SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE ONCE IT HAS ACCUMULATED TO A DEPTH OF 0.5 FT AT THE FENCE. SILT FENCE SHALL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.
11. TEMPORARY AND FINAL SEEDING SHALL BE APPLIED, RE-APPLIED AS NECESSARY, CONTROL DEVISED, ANY RESULTING EXPOSED AREAS SHALL BE STABILIZED.
12. AFTER EARTH DISTURBING ACTIVITIES HAVE CEASED AND ALL EXPOSED SOIL HAS BEEN STABILIZED WITH A VEGETATIVE COVER, THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES MAY BE REMOVED. FOLLOWING REMOVAL OF THE TEMPORARY EROSION CONTROL DEVICES, ANY RESULTING EXPOSED AREAS SHALL BE STABILIZED.
13. SEE SECTION 02270 FOR ADDITIONAL EROSION AND SEDIMENT CONTROL SPECIFICATIONS.

WATERS OF THE STATE / WETLANDS NOTES

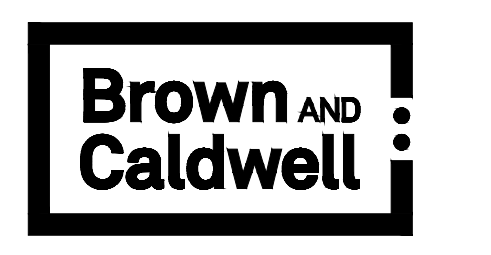
1. NO WORK MAY BEGIN IN AREAS LABELED AS WATERS OF THE STATE OR WETLANDS UNTIL ALL NECESSARY USACOE PERMITS AND SCDHEC 401 CERTIFICATIONS HAVE BEEN OBTAINED.
2. A DOUBLE ROW OF SILT FENCING SHALL BE PROVIDED IN ALL AREAS WHERE A FIFTY FOOT UNDISTURBED BUFFER CANNOT BE MAINTAINED BETWEEN THE DISTURBED AREA AND THE WATERS OF THE STATE.
3. A MINIMUM TEN FOOT BUFFER SHALL BE PROVIDED BETWEEN THE LAST ROW OF SILT FENCE AND THE WATERS OF THE STATE; OR, IF BUFFER CANNOT BE PROVIDED, THEN A STATEMENT FROM THE P.E. SHALL BE MADE ON PLANS INDICATING HOW SILT FENCE WILL BE INSTALLED AND MAINTAINED.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

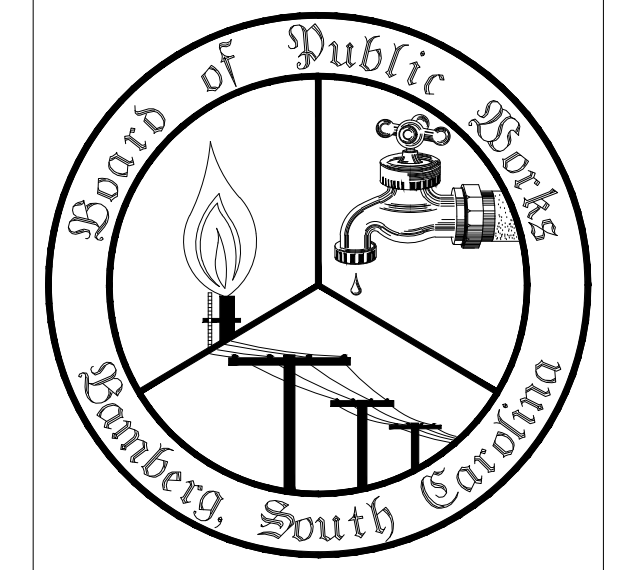
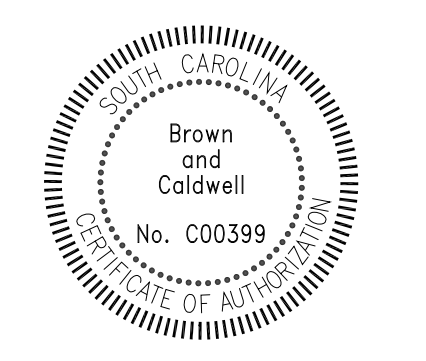
1. IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
2. STABILIZATION 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 FOURTEEN (14) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER. IF SITE INSPECTIONS IDENTIFY BMP'S THAT ARE DAMAGED OR ARE NOT OPERATING EFFECTIVELY, MAINTENANCE MUST BE PERFORMED AS SOON AS PRACTICAL OR AS REASONABLY POSSIBLE AND BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE.
4. 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.
5. 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.
6. THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
7. TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.
8. ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN NOT BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
9. ALL EQUIPMENT STORAGE, LAYDOWN OR STOCKPILES AREAS THAT MAY INCLUDE BUT ARE NOT LIMITED TO CONSTRUCTION MATERIALS, CONSTRUCTION DEBRIS, FUELS, CONSTRUCTION CHEMICALS, RECYCLE MATERIALS (e.g. PAPER, WOOD, CONCRETE, OILS), BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER), TRASH OR BULK WASTE-COLLECTION AREAS SHALL ALL BE CONTAINED THRU BMP'S SUCH AS SILT FENCING, DIKES OR BERMS TO ENSURE THERE IS NO CONATMINATED RUNOFF OR DISCHARGES.
10. WASTE-COLLECTION AREAS (DUMPSTERS, AND SUCH) ARE OFTEN BEST LOCATED NEAR CONSTRUCTION SITE ENTRANCES TO MINIMIZE TRAFFIC ON DISTURBED SOILS. CONSIDER SECONDARY CONTAINMENT AROUND WASTE COLLECTION AREAS TO FURTHER MINIMIZE THE LIKELIHOOD OF CONTAMINATED DISCHARGES.
11. ALL ON-SITE RESTROOM FACILITIES (e.g. PORTA-JOHNS) SHALL BE MAINTAINED, CLEANED AND EMPTIED ON A REGULARLY BASIS. THESE FACILITIES SHALL BE LOCATED AWAY FROM GUTTERS, WATER COURSES AND STORM DRAINS AND WITHIN SILT FENCED AREAS. SECONDARY CONTAINMENT PANS SHALL BE USED UNDER PORTA-JOHNS ON-SITE ALONG WITH TIE-DOWNS OR STAKE DOWNS IN HIGH WIND AREAS. UNDER NO CIRCUMSTANCES ARE RESTROOM FACILITIES ALLOWED TO DISCHARGE OR BURY WASTEWATER ON CONSTRUCTION SITES.



CONSTRUCTION ENTRANCE  
DETAIL  
11  
SCALE: NONE



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Suite 120  
Columbia, SC 29210  
803-873-9701



BAMBERG BOARD OF PUBLIC WORKS  
FAMILY CIRCLE  
WATER MAIN  
EXTENSION

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE  
DESIGNED: B. FRICK  
DRAWN: A. JUMPER  
CHECKED: J. SHAW  
CHECKED: B. FRICK  
APPROVED: B. FRICK  
FILENAME: 170031-FCW\_C-00-003.DWG  
BC PROJECT NUMBER: 170031  
SCIP PROJECT NUMBER: A-23-C009

CIVIL  
EROSION AND  
SEDIMENT CONTROL  
NOTES AND LEGEND

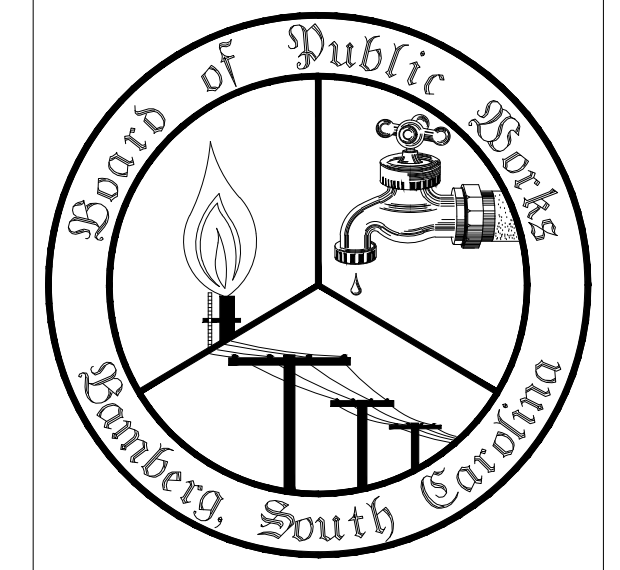
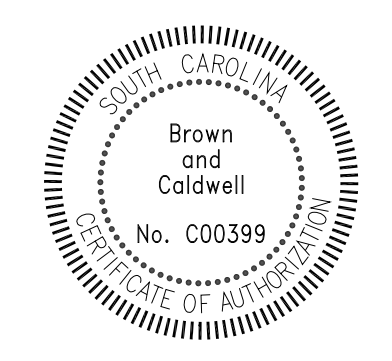
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6 OF 21

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**BAMBERG BOARD OF PUBLIC WORKS  
FAMILY CIRCLE  
WATER MAIN  
EXTENSION**

REVISIONS

REV	DATE	DESCRIPTION
#	#	#
#	#	#
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LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B. FRICK  
DRAWN: J. SHERIDAN  
CHECKED: J. SHAW  
CHECKED: B. FRICK  
APPROVED: B. FRICK

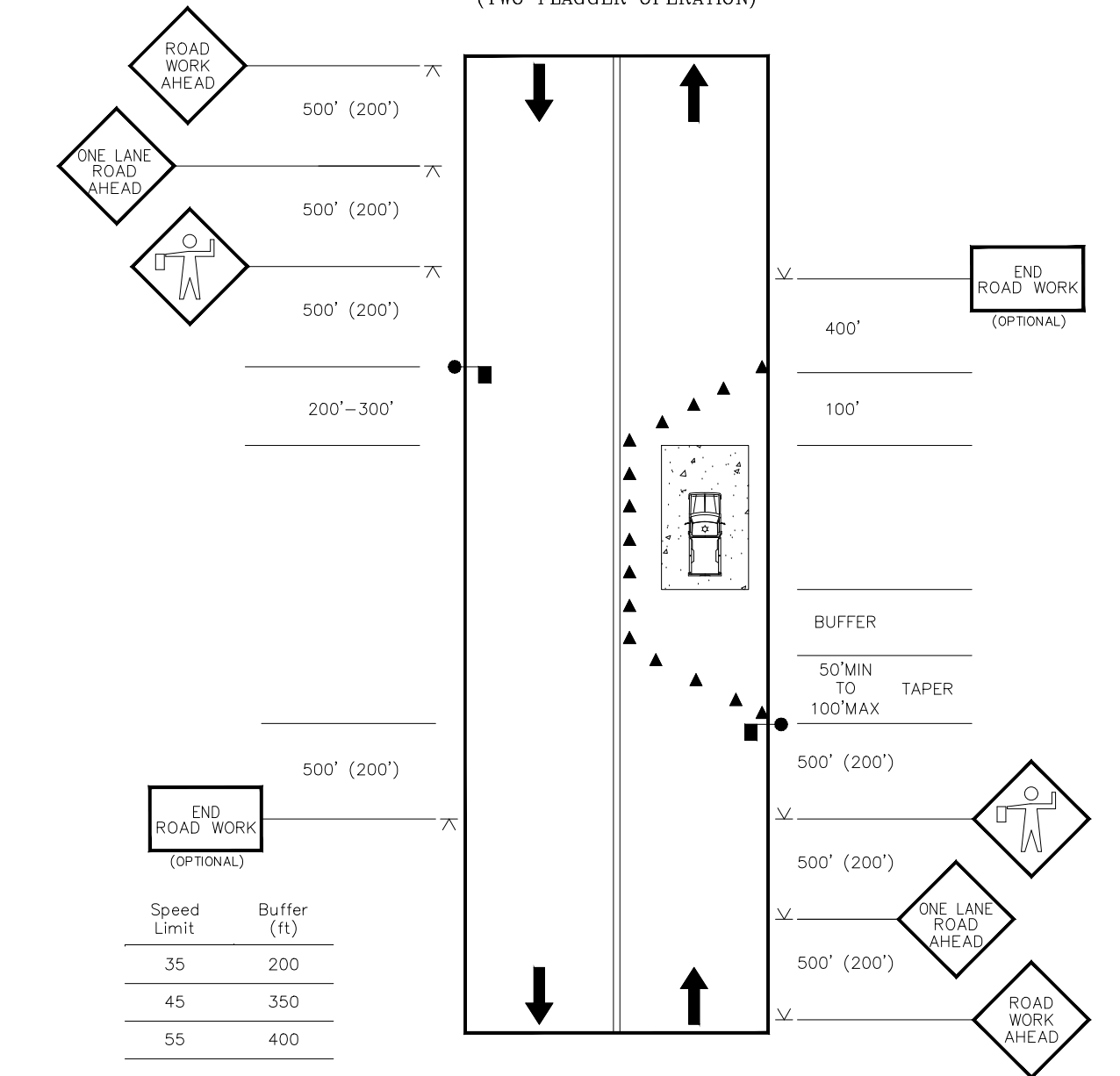
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BC PROJECT NUMBER: 170031  
SCIP PROJECT NUMBER: A-23-C009

**CIVIL**

**TRAFFIC CONTROL PLAN**

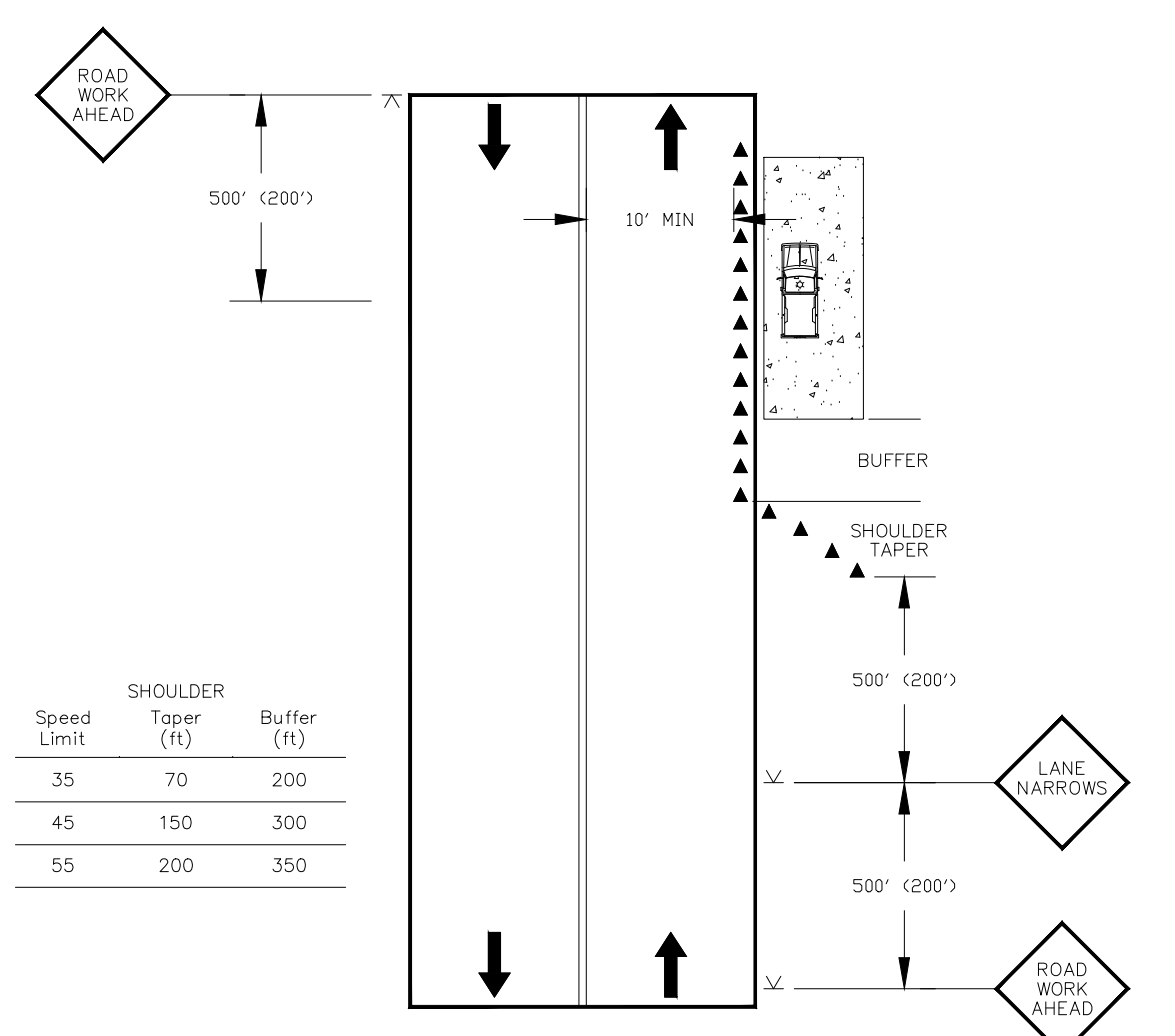
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**C-00-005**  
SHEET NUMBER  
8 OF 21

**LANE CLOSURE ON A TWO-LANE ROAD  
(TWO FLAGGER OPERATION)**



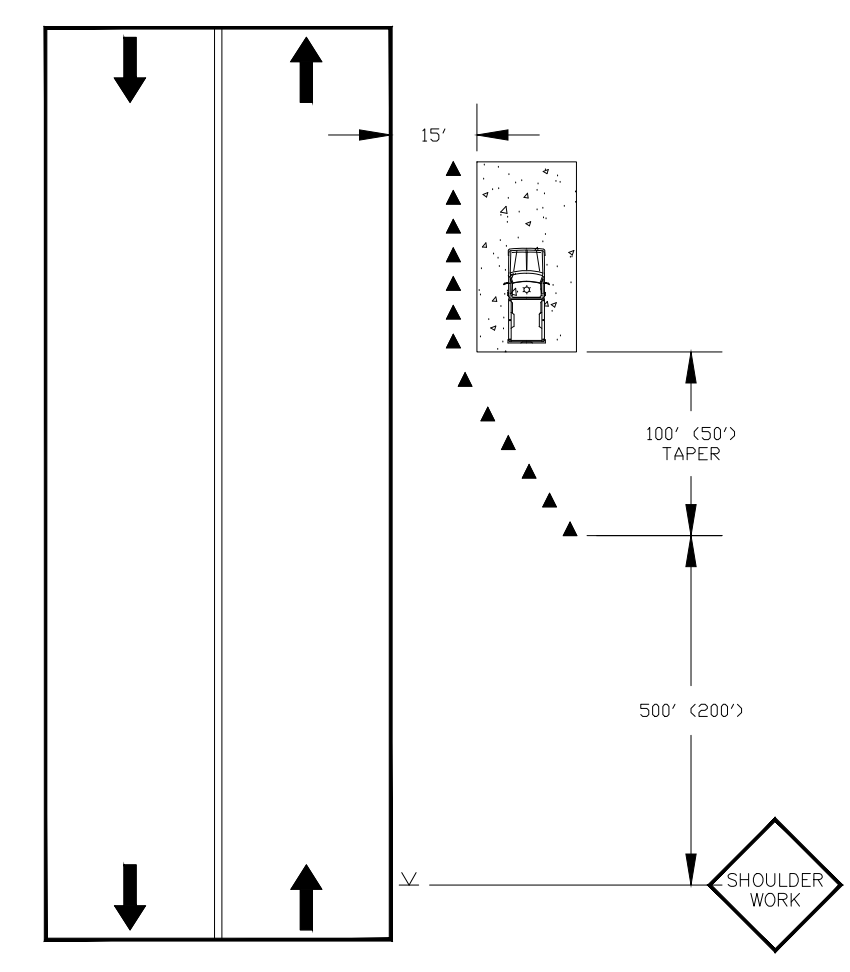
- NOTES**
- For two-lane, low speed (35 MPH or less) urban streets, a 200-foot sign spacing may be used.
  - Generally, the use of the "END ROAD WORK" signs is optional for short duration work sites. However, if the work site, itself, is long, or the beginning and end of the work site are not visible to a driver passing through it, the "END ROAD WORK" sign should be used.

**SHOULDER WORK WITH MINOR ENCROACHMENT  
(WITHIN 2' OF THE EDGE OF PAVEMENT)**



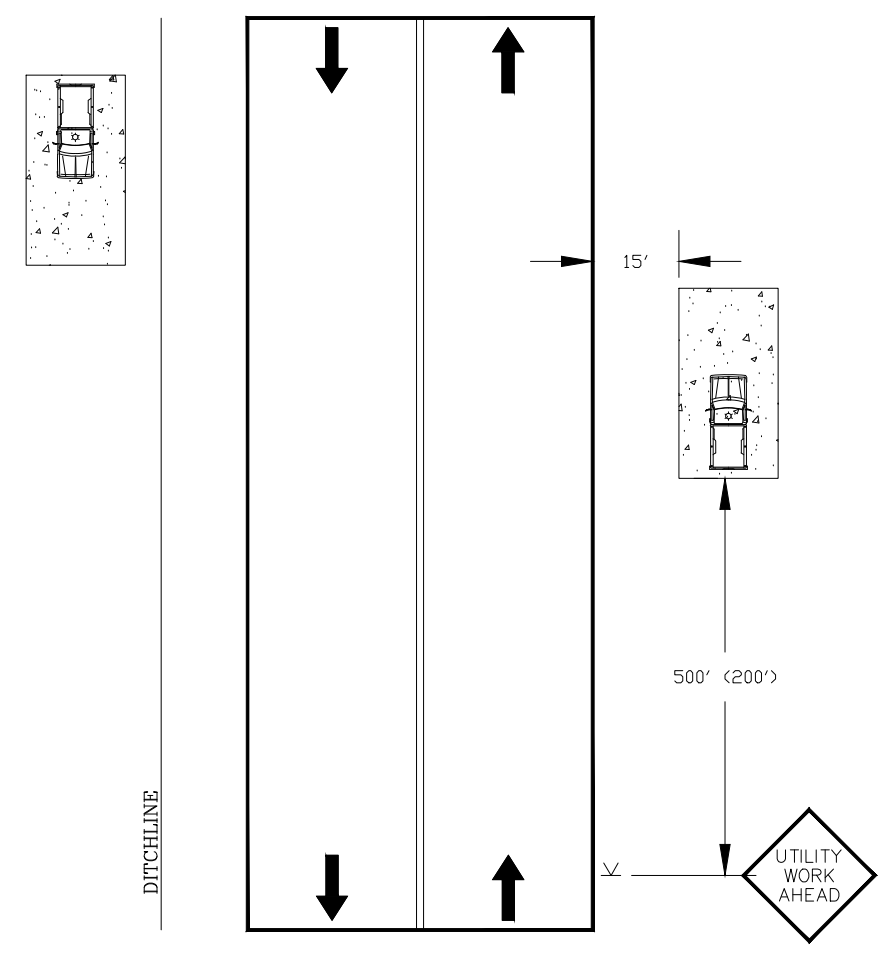
- NOTES**
- For traffic conditions with speeds greater than 35 MPH, a lane closure should be considered (see pages 17 and 18).
  - The lane encroachment should either permit a remaining lane width of 10' or the lane should be closed. However, 9-foot width is acceptable for use in low volume, low speed roadways, provided the traffic does not include long and/or wide heavy commercial vehicles.
  - For two-lane, low speed (35 MPH or less) urban streets, a 200-foot sign spacing may be used.
  - The "LANE NARROWS" sign may be deleted on low-volume, low-speed roads.
  - Another acceptable advance warning sign is "UTILITY WORK AHEAD".

**SHOULDER WORK  
(2' - 15' FROM THE EDGE OF PAVEMENT)**



- NOTES**
- For operation of 15 minutes or less, all signs and channelizing devices may be eliminated if a vehicle with an activated flashing or revolving yellow light is used. For operations of 15-60 minutes, channelizing devices may be eliminated.
  - For two-lane, low-speed (35 MPH or less) urban streets, a 50-foot shoulder taper and 200-foot sign spacing may be used.
  - "UTILITY WORK AHEAD" or "ROAD WORK AHEAD" signs may be used instead of "SHOULDER WORK" signs.

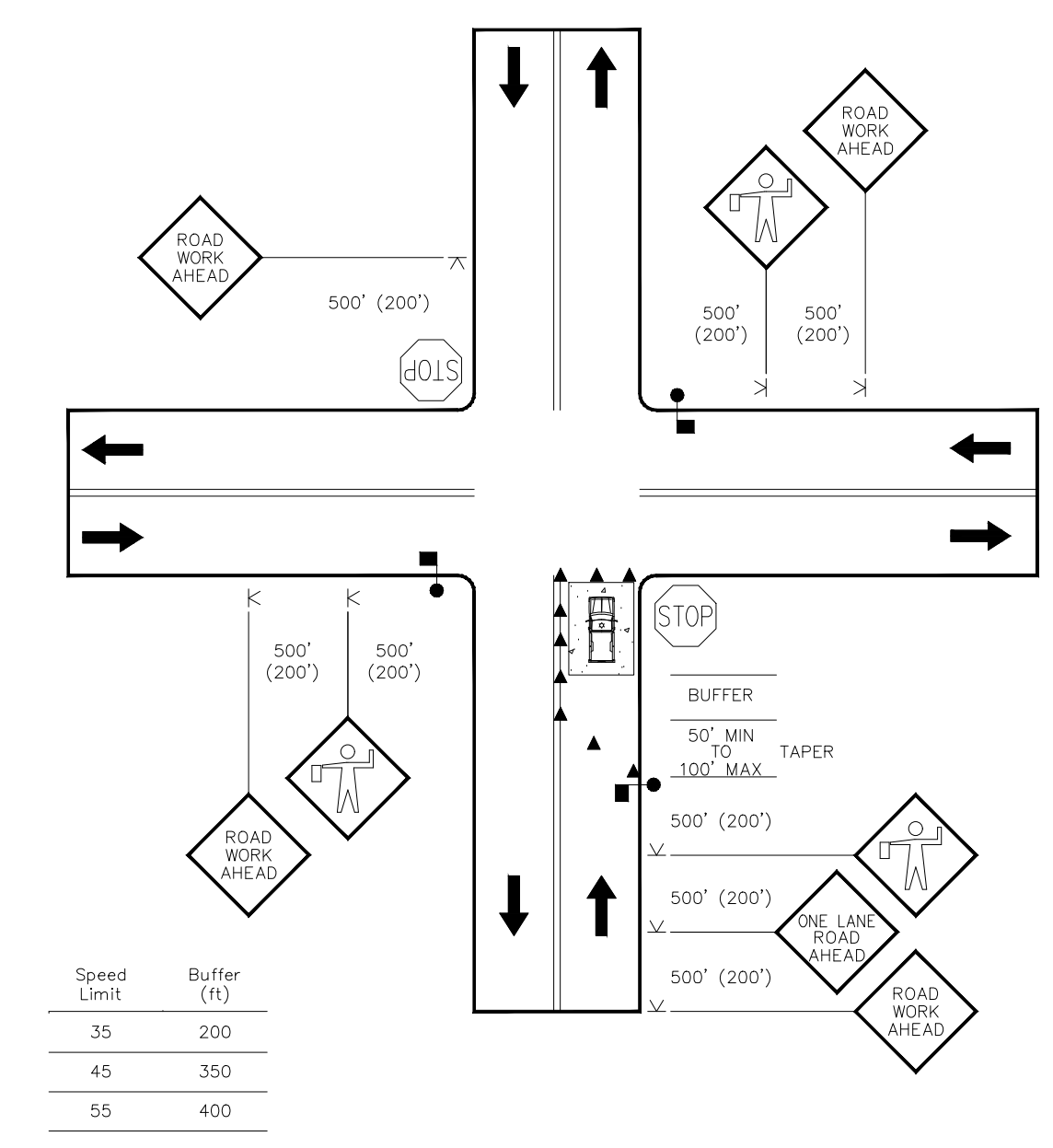
**WORK OUTSIDE THE SHOULDER  
(15' OR MORE FROM THE EDGE OF PAVEMENT)**



- NOTES**
- If vehicle and work activity are both outside the right-of-way, behind the ditchline, behind the guardrail, or 15' or more from the edge of any roadway, then only an activated flashing or revolving yellow light is needed.
  - For two-lane, low-speed (35 MPH or less) urban streets, a 200-foot sign spacing may be used.
  - Any advanced warning sign should be used: if the work will be performed immediately adjacent to the shoulder, if equipment will cross or move along the roadway, or if the activity may distract motorists.
  - Other acceptable advance warning signs are those indicating shoulder work or road work ahead.

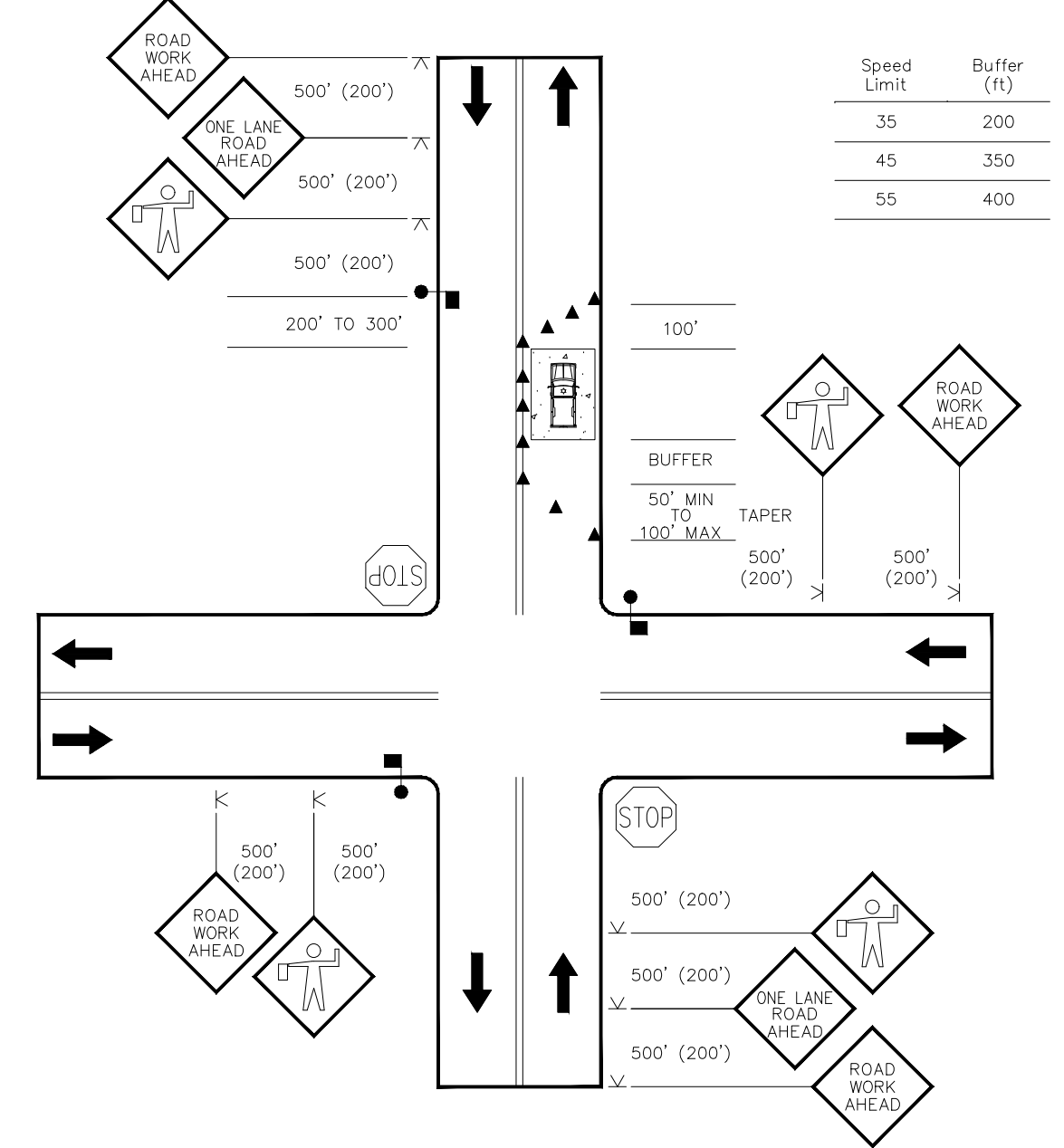
**\*\*NOTICE: CONTRACTOR SHALL SUBMIT 48 HOUR NOTIFICATION FORM TO SCDOT AND SHALL OBTAIN AN APPROVED TRAFFIC CONTROL PLAN BEFORE CONSTRUCTION BEGINS.**

**LANE CLOSURE IN ADVANCE OF INTERSECTION  
(STOP SIGNS ON NORTH/SOUTH APPROACHES)**



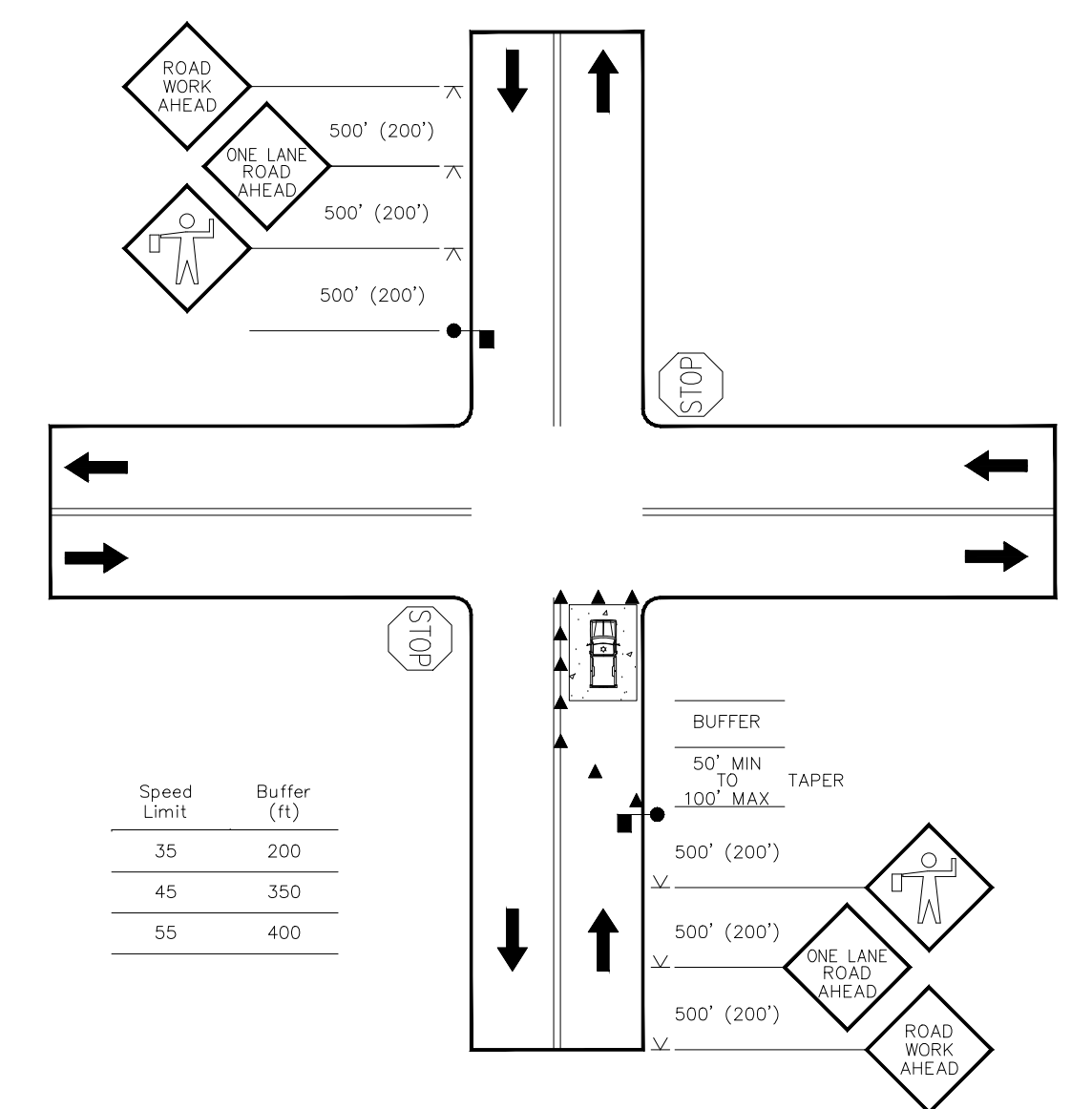
- NOTES**
- Depending on traffic conditions, additional traffic control, such as flaggers and appropriate signage, may be needed on the cross road approaches.
  - For two-lane, low-speed (35 MPH or less) urban streets, a 200-foot sign spacing may be used.

**LANE CLOSURE BEYOND INTERSECTION  
(STOP SIGNS ON NORTH/SOUTH APPROACHES)**



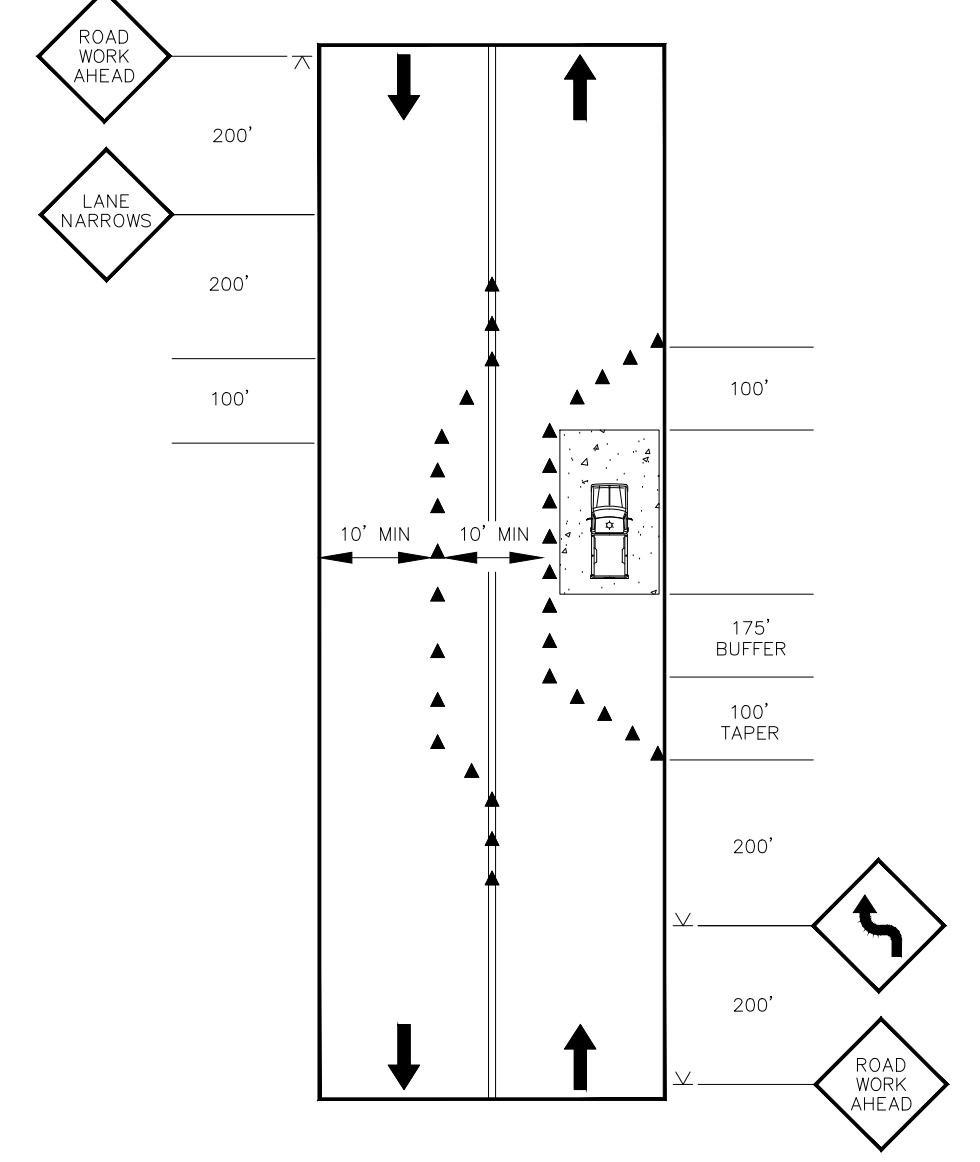
- NOTES**
- Depending on traffic conditions, additional traffic control, such as flaggers and appropriate signage, may be needed on the cross road approaches.
  - For two-lane, low-speed (35 MPH or less) urban streets, a 200-foot sign spacing may be used.

**LANE CLOSURE IN ADVANCE OF INTERSECTION  
(STOP SIGNS ON EAST/WEST APPROACHES)**



- NOTES**
- Depending on traffic conditions, additional traffic control, such as flaggers and appropriate signage, may be needed on the cross road approaches.
  - For two-lane, low-speed (35 MPH or less) urban streets, a 200-foot sign spacing may be used.

**WORK IN TRAVEL LANE OF MINOR URBAN STREET  
(MAINTAINING TWO-WAY TRAFFIC)**



- NOTES**
- This layout is only appropriate for low-volume, low-speed (35 MPH or less) urban streets.
  - A minimum lane of 10' should be provided in both directions. (The lane width should not extend beyond the edge of pavement.)
  - Additional advance warning may be appropriate, such as "LANE SHIFTS" and "LANE NARROWS" signs.

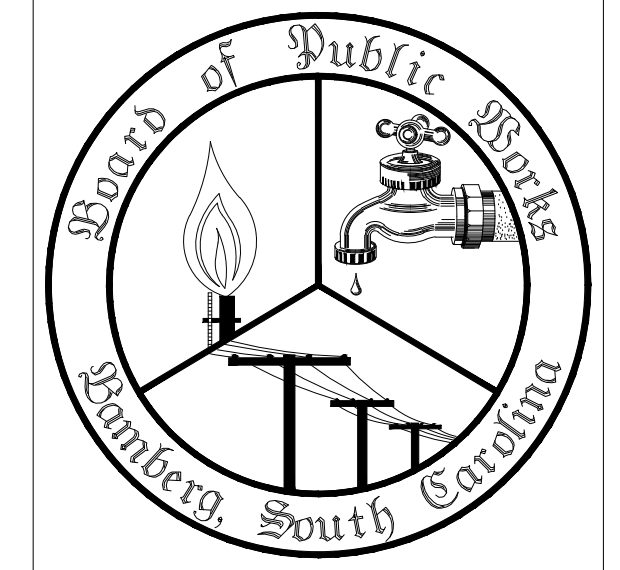
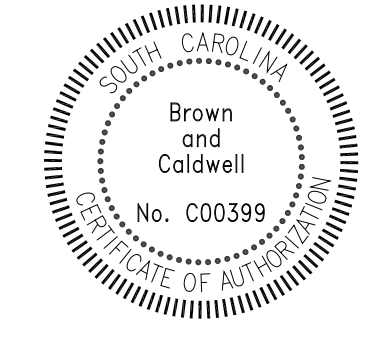
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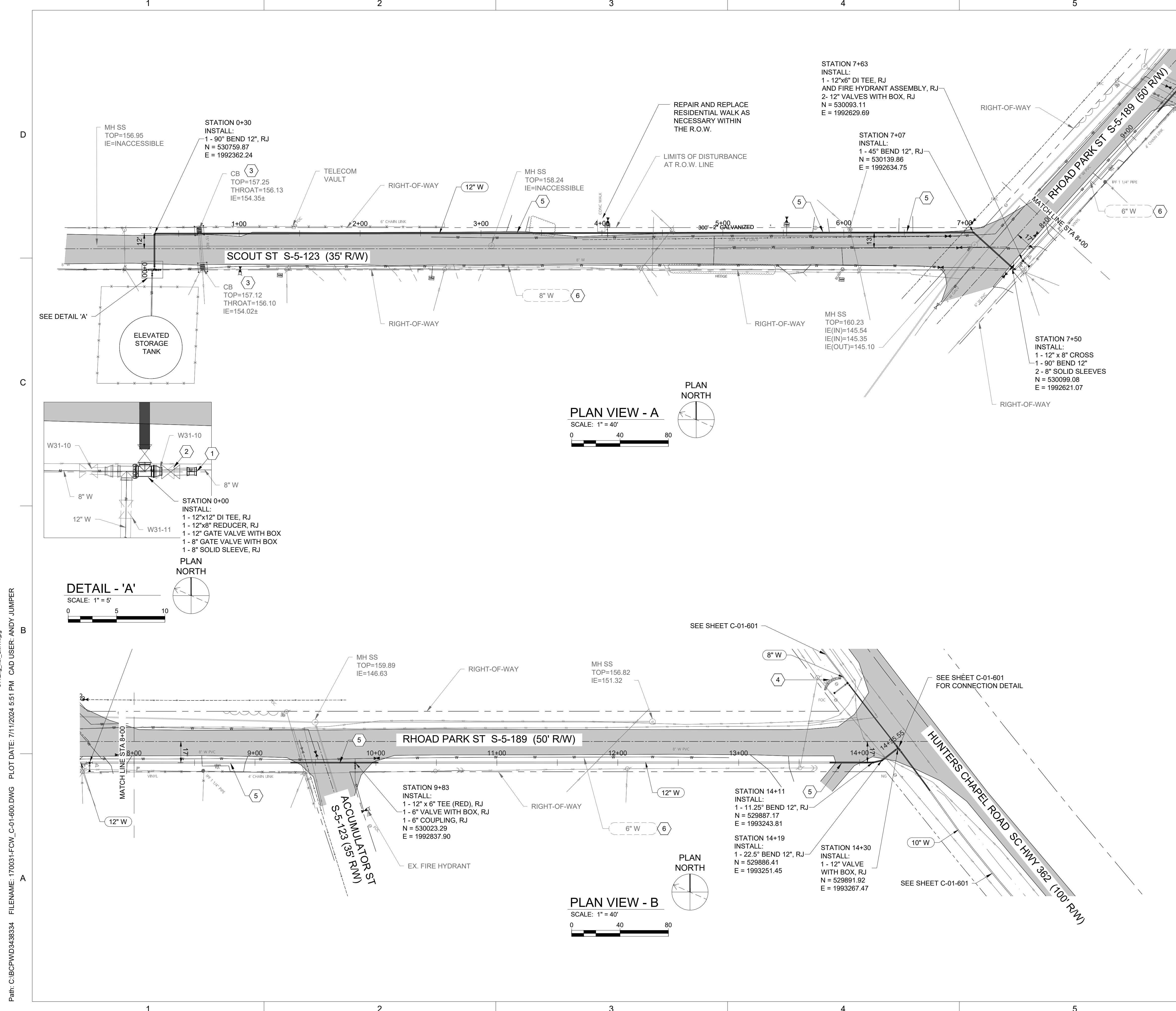


**BAMBERG BOARD OF PUBLIC WORKS**  
**FAMILY CIRCLE WATER MAIN EXTENSION**

REVISIONS		
REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE  
 DESIGNED: B. FRICK  
 DRAWN: J. SHERIDAN  
 CHECKED: J. SHAW  
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 FILENAME: 170031-FCW\_C-00-201.DWG  
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 SCIP PROJECT NUMBER: A-23-C009

**CIVIL**  
**KEY MAP**  
 DRAWING NUMBER  
**C-01-201**  
 SHEET NUMBER  
 9 OF 21



**GENERAL NOTES:**

1. REFERENCE GENERAL NOTES, SHEET G-00-002.
2. OWNER OF ELECTRIC POLES OR TELEPHONE PEDESTALS MUST BE NOTIFIED OF CONSTRUCTION AT LEAST 5 DAYS PRIOR TO WORK BEGINNING.
3. MAINTAIN 36" MINIMUM COVER OVER THE NEW 12" WATER MAIN, UNLESS STATED OTHERWISE.
4. NEW WATER MAINS SHALL BE INSTALLED, TESTED, AND APPROVED TO PLACE INTO OPERATION BEFORE CONNECTING TO EXISTING WATER MAINS AND INSTALLING SERVICES. CONTRACTOR SHALL ISOLATE EXISTING WATER MAIN AND CUT IN SLEEVE TO CONNECT NEW WATER MAIN.
5. ENSURE ALL CONSTRUCTION IS PERFORMED WITHIN THE LIMITS OF PERMANENT CONSTRUCTION EASEMENTS AND SCDOT RIGHT-OF-WAY.
6. CONTRACTOR TO INSTALL DUCTILE IRON WATER MAIN PIPE FROM STATION 0+00 TO STATION 7+63, TO INCLUDE 5 LF BEYOND EDGE OF PAVEMENT ON EACH SIDE OF ROADWAY. CONTRACTOR TO REPAIR THE ROADWAY ACCORDING TO DETAIL 2, C-00-002.

**SEQUENCE OF CONSTRUCTION FOR WATERLINE RELOCATION**

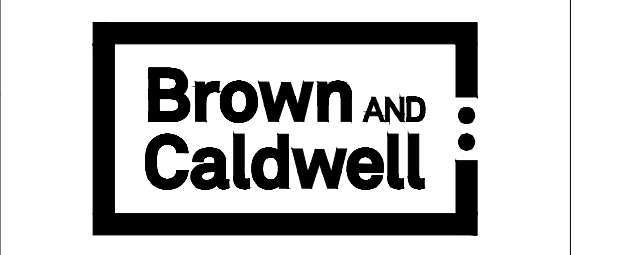
INSTALL EROSION AND SEDIMENT CONTROL MEASURES. PERFORM CLEARING AND GRUBBING.

LOCATE AND INSPECT UNDERGROUND INFRASTRUCTURE, AS REQUIRED BY THE CONTRACT DOCUMENTS.

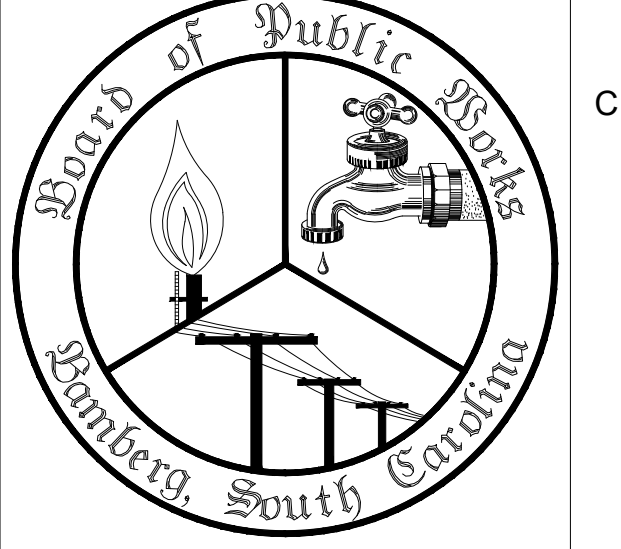
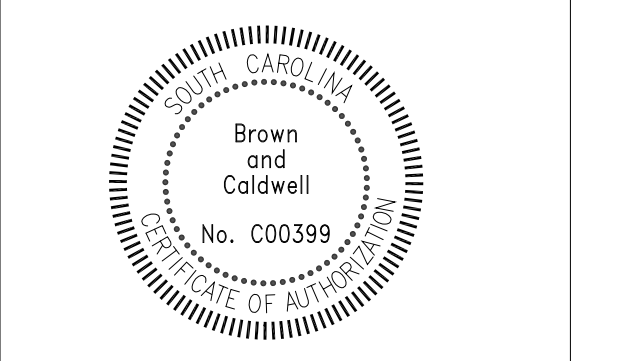
1. INSTALL WATERLINE AS SHOWN BETWEEN CONNECTIONS (NOT THE CONNECTIONS THEMSELVES).
2. CAP AND PRESSURE TEST NEW LINE.
3. COORDINATE WATERLINE SHUTDOWN WITH ENGINEER/OWNER FOR TIE INS.
4. ONCE WATERLINE SHUTDOWN IS STARTED, CONTRACTOR TO WORK CONTINUOUSLY ON RECONNECTION OF BOTH CONNECTION POINTS UNTIL WATERLINE CAN RETURN TO NORMAL SERVICE.
5. SET UP SAMPLE POINT FOR WATER TESTING.
6. ABANDON EXISTING PIPING AS SHOWN ON THE PLANS.
7. COMPLETE SITE WORK, GRADING, PAVING, AND CLEAN UP.

**KEYNOTES:**

- ONLY NOTES APPLICABLE TO THIS DRAWING ARE LISTED.
- 1 COORDINATE CONNECTION TO EXISTING 12" WATER MAIN WITH BAMBERG BOARD OF PUBLIC WORKS.
  - 2 REMOVE EXISTING 8" VALVE (W31-10). RETURN TO OWNER.
  - 3 TEMPORARY FABRIC DROP INLET PROTECTION
  - 4 SEDIMENT TUBE
  - 5 OPEN CUT DRIVEWAYS AS NECESSARY TO INSTALL WATER MAIN AND RESTORE TO PREVIOUS CONDITION WITH SAME DRAINAGE PATTERN.
  - 6 RELOCATED WATER MAINS SHALL BE CONSTRUCTED AND THEN APPROVED BY THE BAMBERG BOARD OF PUBLIC WORKS AND A PERMIT TO OPERATE RECEIVED FROM THE SCDHEC PRIOR TO THE DEMOLITION OR ABANDONMENT OF ANY EXISTING INFRASTRUCTURE.



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Suite 120  
Columbia, SC 29210  
803-873-9701



**BAMBERG BOARD OF PUBLIC WORKS  
FAMILY CIRCLE  
WATER MAIN  
EXTENSION**

REVISIONS		
REV	DATE	DESCRIPTION

DESIGNED:	B. FRICK
DRAWN:	J. SHERIDAN
CHECKED:	J. SHAW
CHECKED:	B. FRICK
APPROVED:	B. FRICK
FILENAME:	170031-FCW_C-01-600.DWG
BC PROJECT NUMBER:	170031
SCIIP PROJECT NUMBER:	A-23-C009

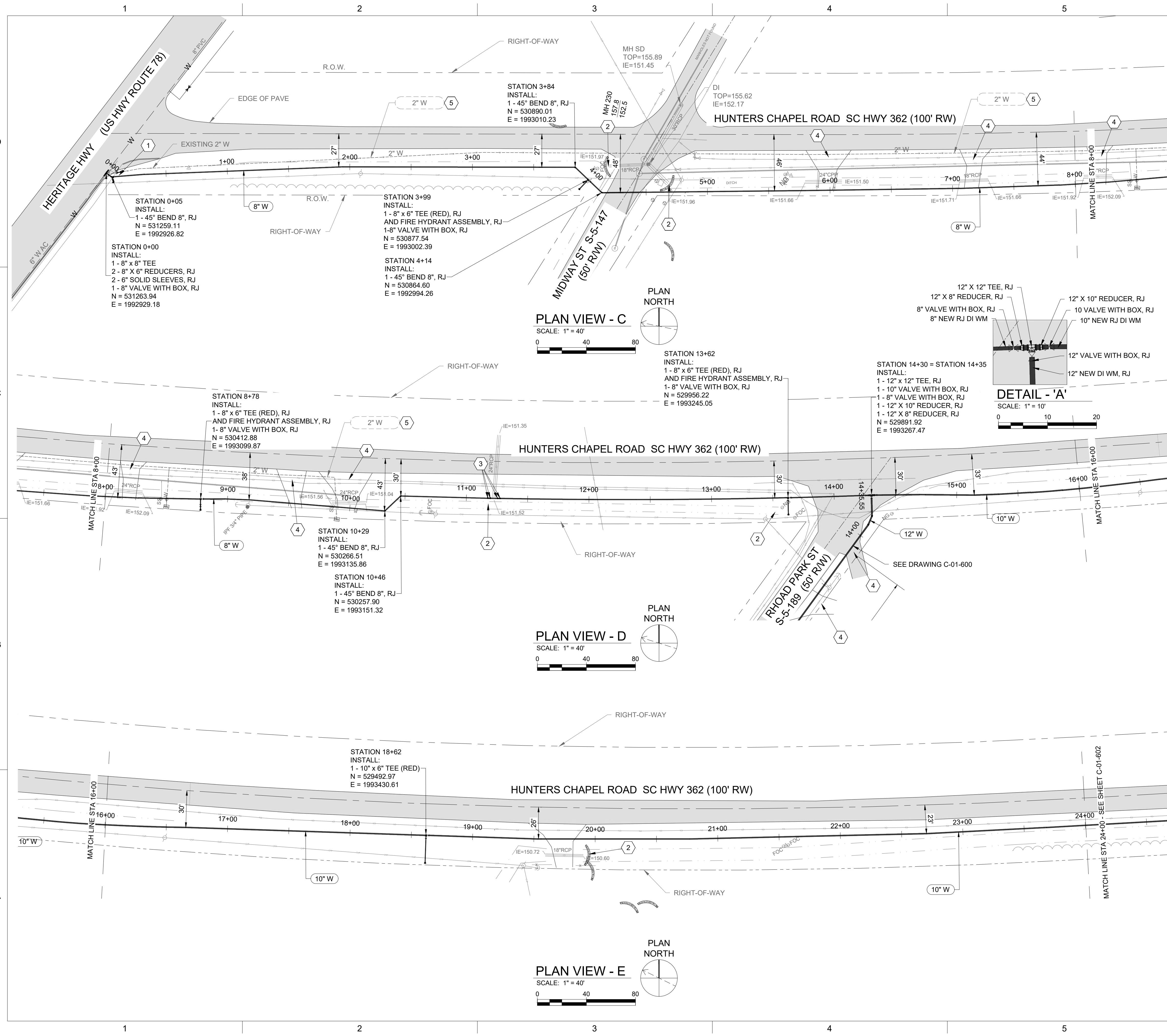
**CIVIL  
WATER MAIN  
PLAN 1**

DRAWING NUMBER	<b>C-01-600</b>
SHEET NUMBER	10 OF 21



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811Eng\_bar\_CMYK.jpg  
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**GENERAL NOTES:**

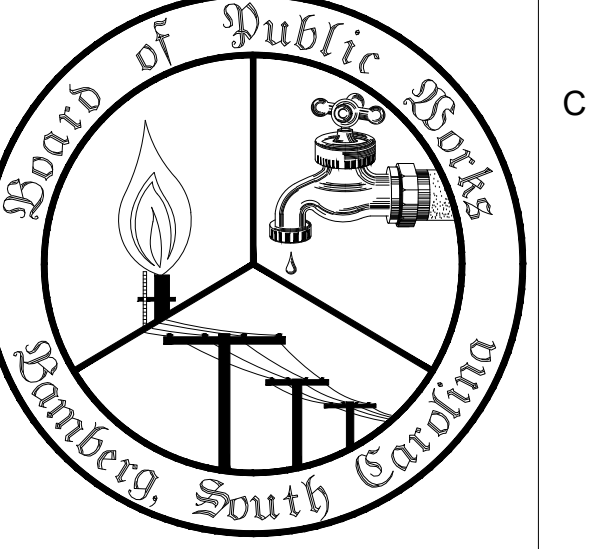
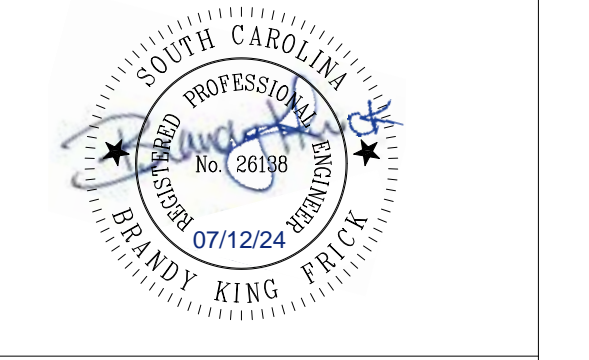
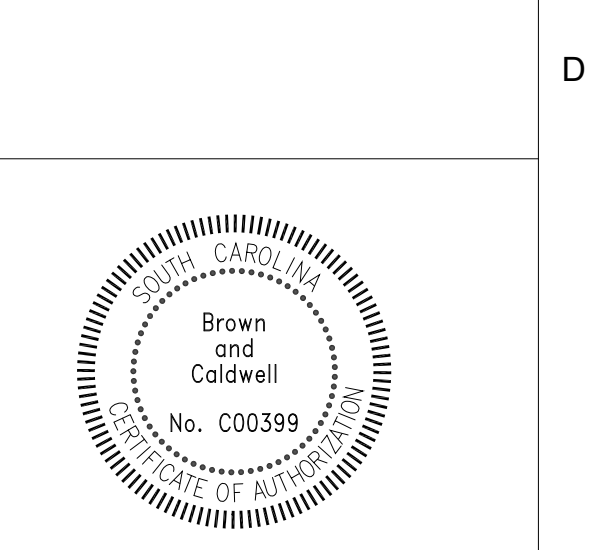
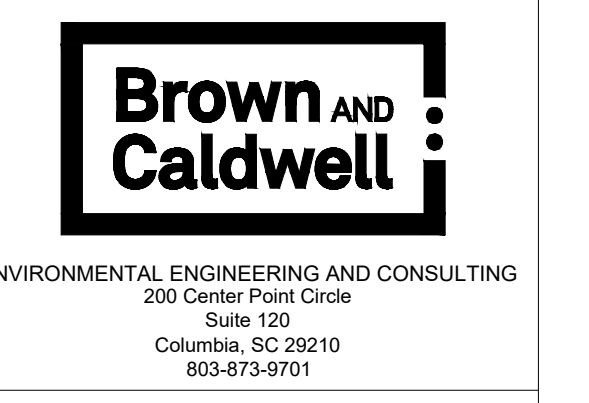
1. REFERENCE GENERAL NOTES, SHEET G-00-002.
2. OWNER OF ELECTRIC POLES OR TELEPHONE PEDESTALS MUST BE NOTIFIED OF CONSTRUCTION AT LEAST 5 DAYS PRIOR TO WORK BEGINNING.
3. MAINTAIN 36" MINIMUM COVER OVER THE NEW 12" WATER MAIN, UNLESS STATED OTHERWISE.
4. NEW WATER MAINS SHALL BE INSTALLED, TESTED, AND APPROVED TO PLACE INTO OPERATION BEFORE CONNECTING TO EXISTING WATER MAINS AND INSTALLING SERVICES. CONTRACTOR SHALL ISOLATE EXISTING WATER MAIN AND CUT IN SLEEVE TO CONNECT NEW WATER MAIN.
5. ENSURE ALL CONSTRUCTION IS PERFORMED WITHIN THE LIMITS OF PERMANENT CONSTRUCTION EASEMENTS AND SCDOT RIGHT-OF-WAY.
6. CONTRACTOR TO INSTALL DI WATER MAIN PIPE FROM STATION 0+00 TO STATION 0+05, STATION 4+14 TO STATION 4+50, STATION 13+62 TO STATION 14+60, AND STATION 13+75 TO STATION 14+35, ALL TO INCLUDE 5 LF BEYOND EDGE OF PAVEMENT ON EACH SIDE OF ROADWAY. CONTRACTOR TO REPAIR THE ROADWAY ACCORDING TO DETAIL 2, C-00-002.

**SEQUENCE OF CONSTRUCTION FOR WATERLINE RELOCATION**

- INSTALL EROSION AND SEDIMENT CONTROL MEASURES. PERFORM CLEARING AND GRUBBING.
- LOCATE AND INSPECT UNDERGROUND INFRASTRUCTURE, AS REQUIRED BY THE CONTRACT DOCUMENTS.
1. INSTALL WATERLINE AS SHOWN BETWEEN CONNECTIONS (NOT THE CONNECTIONS THEMSELVES).
  2. CAP AND PRESSURE TEST NEW LINE.
  3. COORDINATE WATERLINE SHUTDOWN WITH ENGINEER/OWNER FOR TIE INS.
  4. ONCE WATERLINE SHUTDOWN IS STARTED, CONTRACTOR TO WORK CONTINUOUSLY ON RECONNECTION OF BOTH CONNECTION POINTS UNTIL WATERLINE CAN RETURN TO NORMAL SERVICE.
  5. SET UP SAMPLE POINT FOR WATER TESTING.
  6. ABANDON EXISTING PIPING AS SHOWN ON THE PLANS.
  7. COMPLETE SITE WORK, GRADING, PAVING, AND CLEAN UP.

**KEYNOTES:**

- ONLY NOTES APPLICABLE TO THIS DRAWING ARE LISTED.
1. RE CONNECT EXISTING 2" W. INSTALL 8" X 2" SADDLE TAP WITH VALVE AND BOX AND ALL NECESSARY APPURTENANCES FOR A COMPLETE CONNECTION.
  2. SEDIMENT TUBE.
  3. INSTALL 45° VERTICAL BENDS AS REQUIRED FOR DITCH OR UTILITY CROSSINGS TO MAINTAIN MIN COVER/SEPARATION.
  4. OPEN CUT DRIVEWAYS AS NECESSARY TO INSTALL WATER MAIN AND RESTORE TO PREVIOUS CONDITION WITH SAME DRAINAGE PATTERN.
  5. RELOCATED WATER MAINS SHALL BE CONSTRUCTED AND THEN APPROVED BY THE BAMBERG BOARD OF PUBLIC WORKS AND A PERMIT TO OPERATE RECEIVED FROM THE SCDHEC PRIOR TO THE DEMOLITION OR ABANDONMENT OF ANY EXISTING INFRASTRUCTURE.



**BAMBERG BOARD OF PUBLIC WORKS  
 FAMILY CIRCLE  
 WATER MAIN  
 EXTENSION**

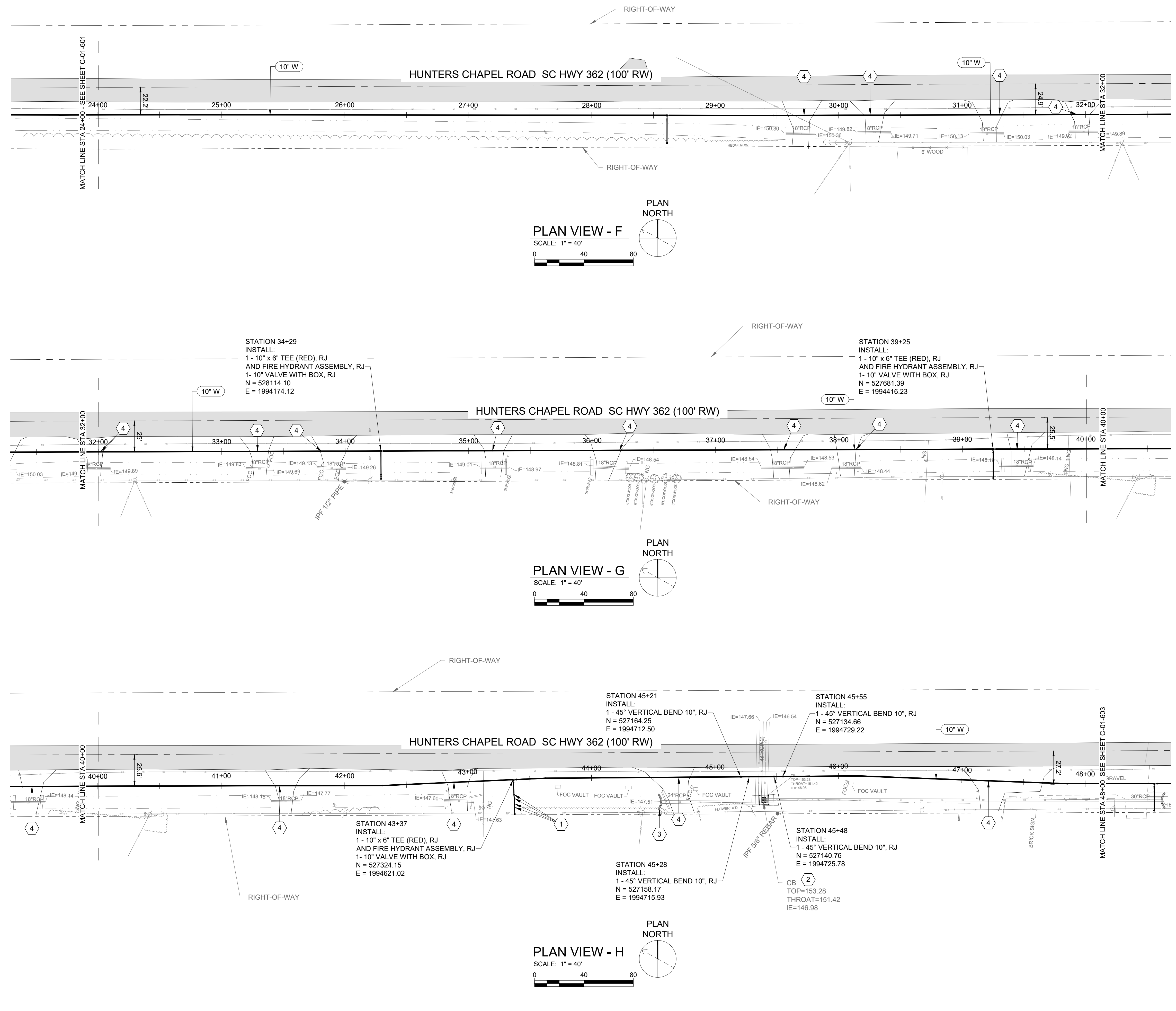
REVISIONS		
REV	DATE	DESCRIPTION

DESIGNED:	B. FRICK
DRAWN:	J. SHERIDAN
CHECKED:	J. SHAW
CHECKED:	B. FRICK
APPROVED:	B. FRICK
FILENAME:	170031-FW_C-01-601.DWG
BC PROJECT NUMBER:	170031
SCIP PROJECT NUMBER:	A-23-C009

CIVIL
<b>WATER MAIN    PLAN 2</b>
DRAWING NUMBER <b>C-01-601</b>
SHEET NUMBER 11 OF 21



811Eng\_har\_CMYK.dwg 8/11/2024 5:56 PM CAD USER: ANDY JUMPER



**GENERAL NOTES:**

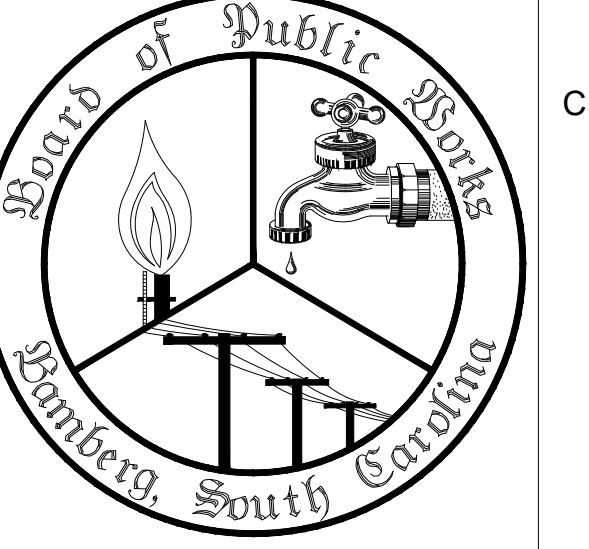
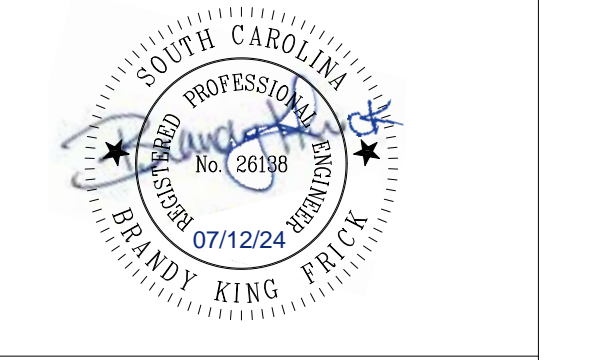
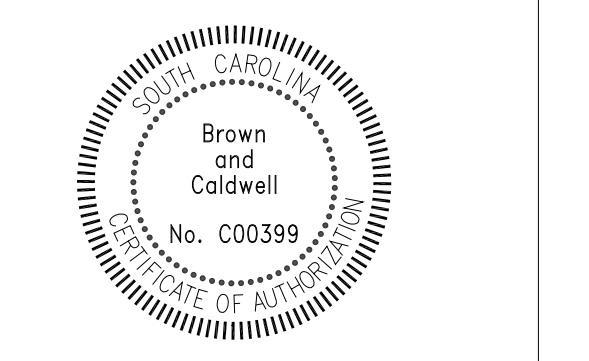
1. REFERENCE GENERAL NOTES, SHEET G-00-002.
2. OWNER OF ELECTRIC POLES OR TELEPHONE PEDESTALS MUST BE NOTIFIED OF CONSTRUCTION AT LEAST 5 DAYS PRIOR TO WORK BEGINNING.
3. MAINTAIN 36" MINIMUM COVER OVER THE NEW 12" WATER MAIN, UNLESS STATED OTHERWISE.
4. NEW WATER MAINS SHALL BE INSTALLED, TESTED, AND APPROVED TO PLACE INTO OPERATION BEFORE CONNECTING TO EXISTING WATER MAINS AND INSTALLING SERVICES. CONTRACTOR SHALL ISOLATE EXISTING WATER MAIN AND CUT IN SLEEVE TO CONNECT NEW WATER MAIN.
5. ENSURE ALL CONSTRUCTION IS PERFORMED WITHIN THE LIMITS OF PERMANENT CONSTRUCTION EASEMENTS AND SCDOT RIGHT-OF-WAY.

**KEYNOTES:**

- ONLY NOTES APPLICABLE TO THIS DRAWING ARE LISTED.
1. INSTALL 45° VERTICAL BENDS AS REQUIRED FOR DITCH OR UTILITY CROSSINGS TO MAINTAIN MIN COVER/SEPARATION.
  2. TEMPORARY FABRIC DROP INLET PROTECTION.
  3. SEDIMENT TUBE.
  4. OPEN CUT DRIVEWAY AS NECESSARY TO INSTALL WATER MAIN AND RESTORE TO PREVIOUS CONDITION WITH SAME DRAINAGE PATTERN.



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Suite 120  
Columbia, SC 29210  
803-873-9701



**BAMBERG BOARD OF PUBLIC WORKS  
FAMILY CIRCLE  
WATER MAIN  
EXTENSION**

REVISIONS		
REV	DATE	DESCRIPTION

DESIGNED:	B. FRICK
DRAWN:	J. SHERIDAN
CHECKED:	J. SHAW
CHECKED:	B. FRICK
APPROVED:	B. FRICK
FILENAME:	170031-FCW_C-01-602.DWG
BC PROJECT NUMBER:	170031
SCIP PROJECT NUMBER:	A-23-C009

**CIVIL**

**WATER MAIN  
PLAN 3**

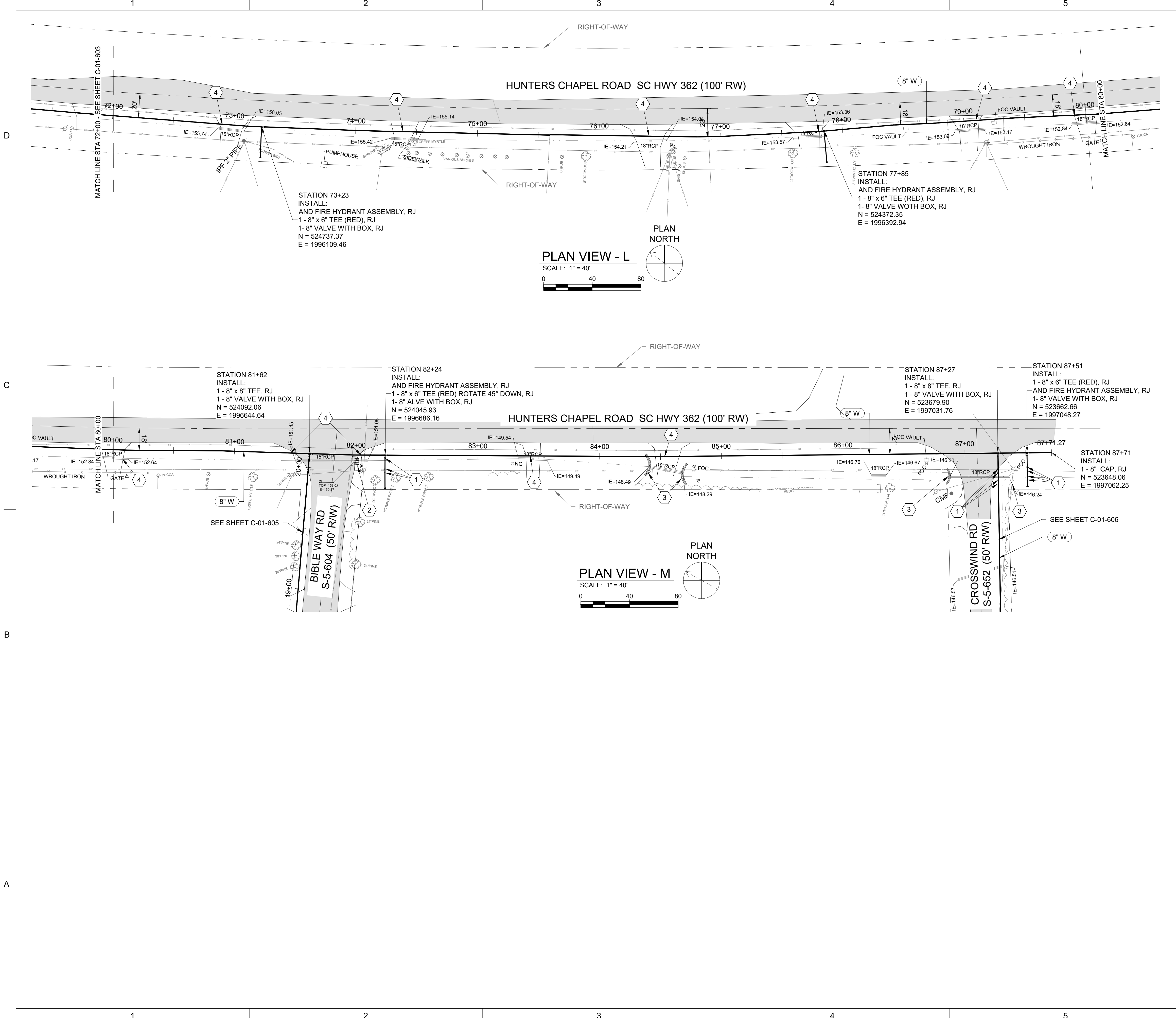
DRAWING NUMBER  
**C-01-602**

SHEET NUMBER  
12 OF 21





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 Path: C:\BCP\W\DWG\170031-FCW\_C-01-604.DWG PLOT DATE: 7/11/2024 7:11 PM CAD USER: ANDY JUMPER



**GENERAL NOTES:**

1. REFERENCE GENERAL NOTES, SHEET G-00-002.
2. OWNER OF ELECTRIC POLES OR TELEPHONE PEDESTALS MUST BE NOTIFIED OF CONSTRUCTION AT LEAST 5 DAYS PRIOR TO WORK BEGINNING.
3. MAINTAIN 36" MINIMUM COVER OVER THE NEW 12" WATER MAIN, UNLESS STATED OTHERWISE.
4. NEW WATER MAINS SHALL BE INSTALLED, TESTED, AND APPROVED TO PLACE INTO OPERATION BEFORE CONNECTING TO EXISTING WATER MAINS AND INSTALLING SERVICES. CONTRACTOR SHALL ISOLATE EXISTING WATER MAIN AND CUT IN SLEEVE TO CONNECT NEW WATER MAIN.
5. ENSURE ALL CONSTRUCTION IS PERFORMED WITHIN THE LIMITS OF PERMANENT CONSTRUCTION EASEMENTS AND SCDOT RIGHT-OF-WAY.
6. CONTRACTOR TO INSTALL DI WATER MAIN PIPE FROM STATION 81+40 TO STATION 82+07, AND STATION 86+77 TO STATION 87+51, ALL TO INCLUDE 5 LF BEYOND EDGE OF PAVEMENT ON EACH SIDE OF ROADWAY. CONTRACTOR TO REPAIR THE ROADWAY ACCORDING TO DETAIL 2, C-00-002.

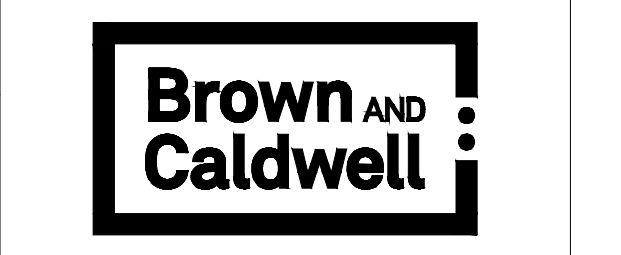
**KEYNOTES:**

- ONLY NOTES APPLICABLE TO THIS DRAWING ARE LISTED.
1. INSTALL 45° VERTICAL RJ BENDS AS REQUIRED FOR DITCH OR UTILITY CROSSINGS TO MAINTAIN MIN COVER/SEPARATION.
  2. TEMPORARY FABRIC DROP INLET PROTECTION.
  3. SEDIMENT TUBE.
  4. OPEN CUT DRIVEWAYS AS NECESSARY TO INSTALL WATER MAIN AND RESTORE TO PREVIOUS CONDITION WITH SAME DRAINAGE PATTERN.

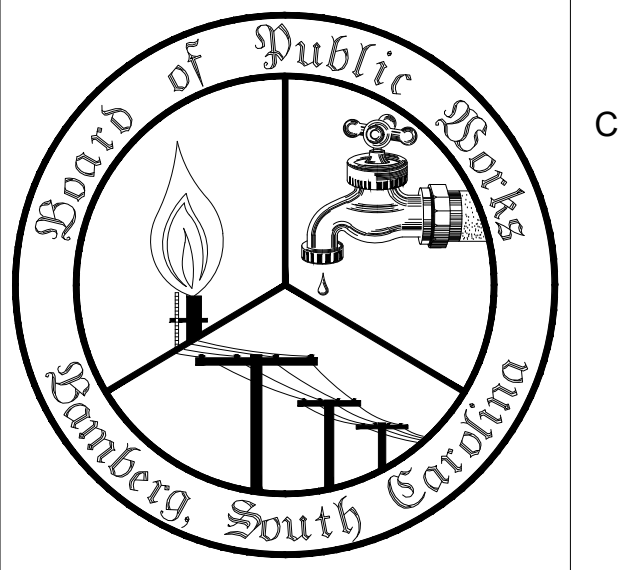
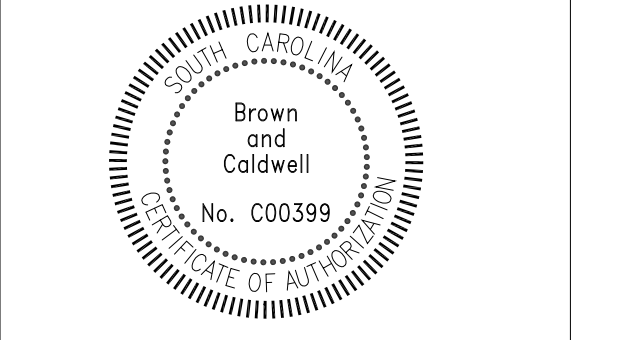
LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B. FRICK  
 DRAWN: J. SHERIDAN  
 CHECKED: J. SHAW  
 CHECKED: B. FRICK  
 APPROVED: B. FRICK

FILENAME: 170031-FCW\_C-01-604.DWG  
 BC PROJECT NUMBER: 170031  
 SCIP PROJECT NUMBER: A-23-C009



ENVIRONMENTAL ENGINEERING AND CONSULTING  
 200 Center Point Circle  
 Suite 120  
 Columbia, SC 29210  
 803-873-9701



**BAMBERG BOARD OF PUBLIC WORKS  
 FAMILY CIRCLE  
 WATER MAIN  
 EXTENSION**

REVISIONS		
REV	DATE	DESCRIPTION

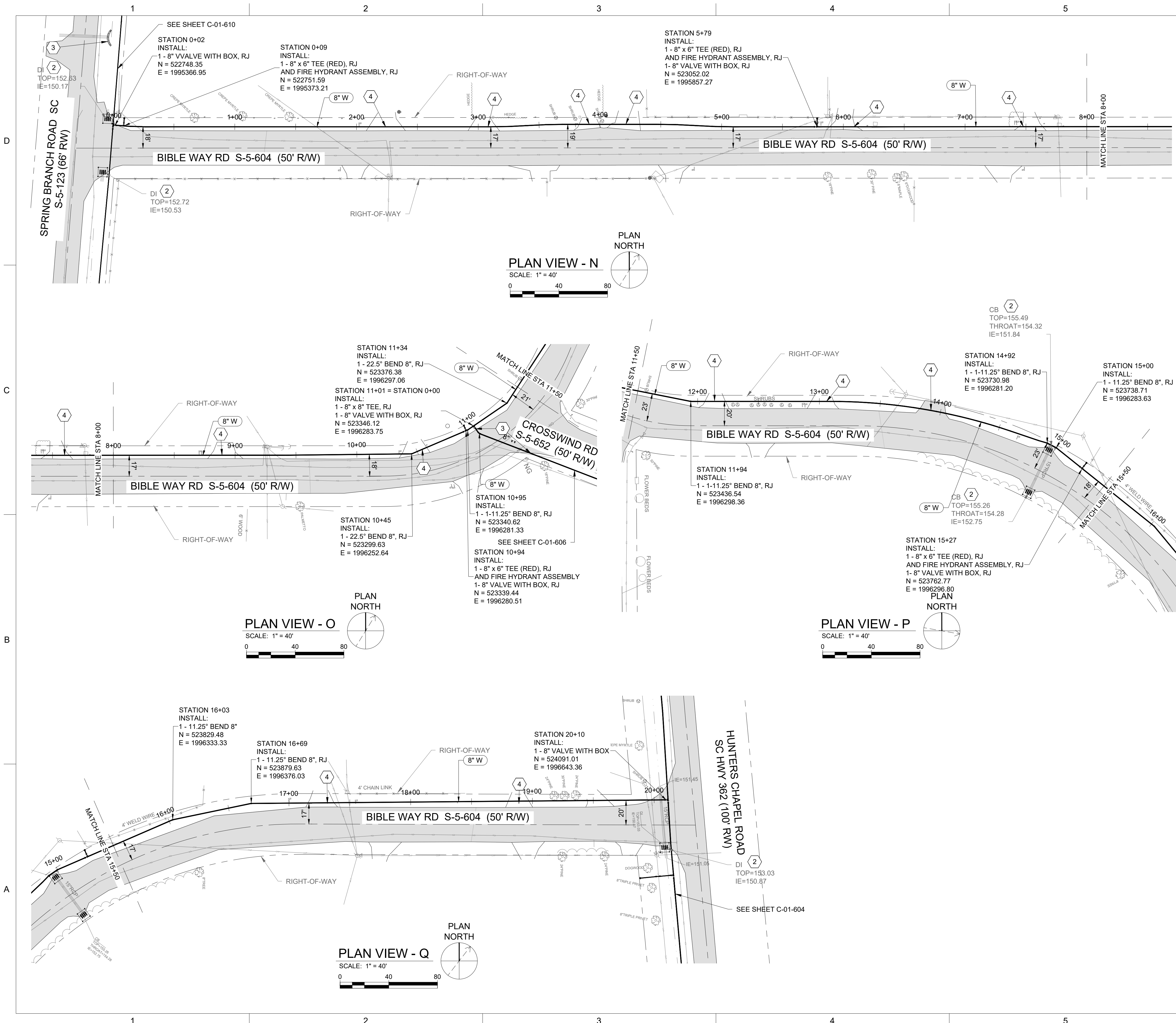
CIVIL

**WATER MAIN  
 PLAN 5**

DRAWING NUMBER  
**C-01-604**

SHEET NUMBER  
 14 OF 21

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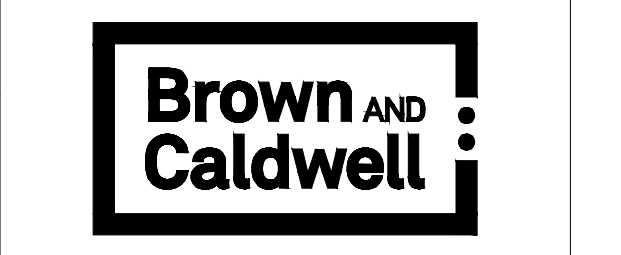


**GENERAL NOTES:**

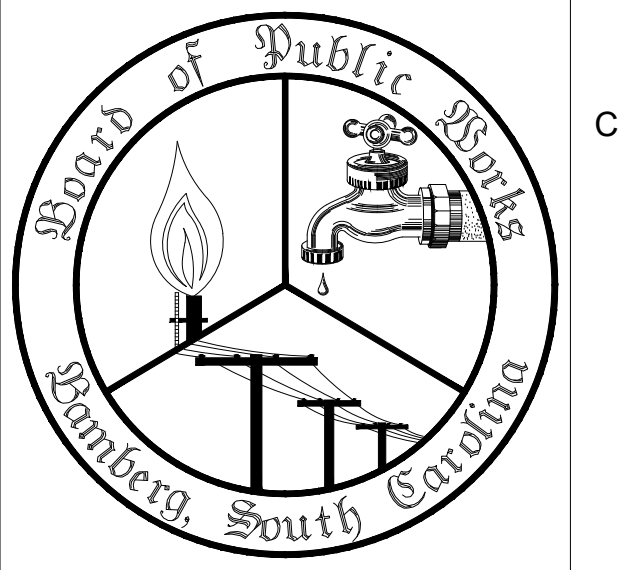
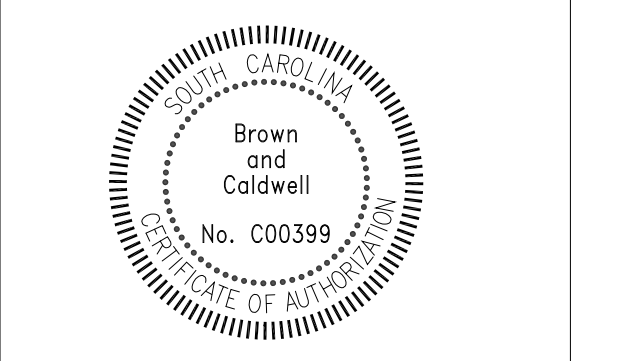
1. REFERENCE GENERAL NOTES, SHEET G-00-002.
2. OWNER OF ELECTRIC POLES OR TELEPHONE PEDESTALS MUST BE NOTIFIED OF CONSTRUCTION AT LEAST 5 DAYS PRIOR TO WORK BEGINNING.
3. MAINTAIN 36" MINIMUM COVER OVER THE NEW 12" WATER MAIN, UNLESS STATED OTHERWISE.
4. NEW WATER MAINS SHALL BE INSTALLED, TESTED, AND APPROVED TO PLACE INTO OPERATION BEFORE CONNECTING TO EXISTING WATER MAINS AND INSTALLING SERVICES. CONTRACTOR SHALL ISOLATE EXISTING WATER MAIN AND CUT IN SLEEVE TO CONNECT NEW WATER MAIN.
5. ENSURE ALL CONSTRUCTION IS PERFORMED WITHIN THE LIMITS OF PERMANENT CONSTRUCTION EASEMENTS AND SCDOT RIGHT-OF-WAY.
6. CONTRACTOR TO INSTALL DI WATER MAIN PIPE FROM STATION 68+24 TO STATION 69+24. ALL TO INCLUDE 5 LF BEYOND EDGE OF PAVEMENT ON EACH SIDE OF ROADWAY. CONTRACTOR TO REPAIR THE ROADWAY ACCORDING TO DETAIL 2, C-00-002.

**KEYNOTES:**

- ONLY NOTES APPLICABLE TO THIS DRAWING ARE LISTED.
- 1 2.5" MAXIMUM ALLOWABLE DEFLECTION.
  - 2 TEMPORARY FABRIC DROP INLET PROTECTION.
  - 3 ROAD AND REPAIR PER DETAIL 2 ON DRAWING 00-C-002
  - 4 OPEN CUT DRIVEWAYS AS NECESSARY TO INSTALL WATER MAIN AND RESTORE TO PREVIOUS CONDITION WITH SAME DRAINAGE PATTERN



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200 Center Point Circle  
Suite 120  
Columbia, SC 29210  
803-873-9701



**BAMBERG BOARD OF PUBLIC WORKS  
FAMILY CIRCLE  
WATER MAIN  
EXTENSION**

REVISIONS

REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B. FRICK  
DRAWN: J. SHERIDAN  
CHECKED: J. SHAW  
CHECKED: B. FRICK  
APPROVED: B. FRICK

FILENAME: 170031-FCW\_C-01-605.DWG  
BC PROJECT NUMBER: 170031  
SCIP PROJECT NUMBER: A-23-C009

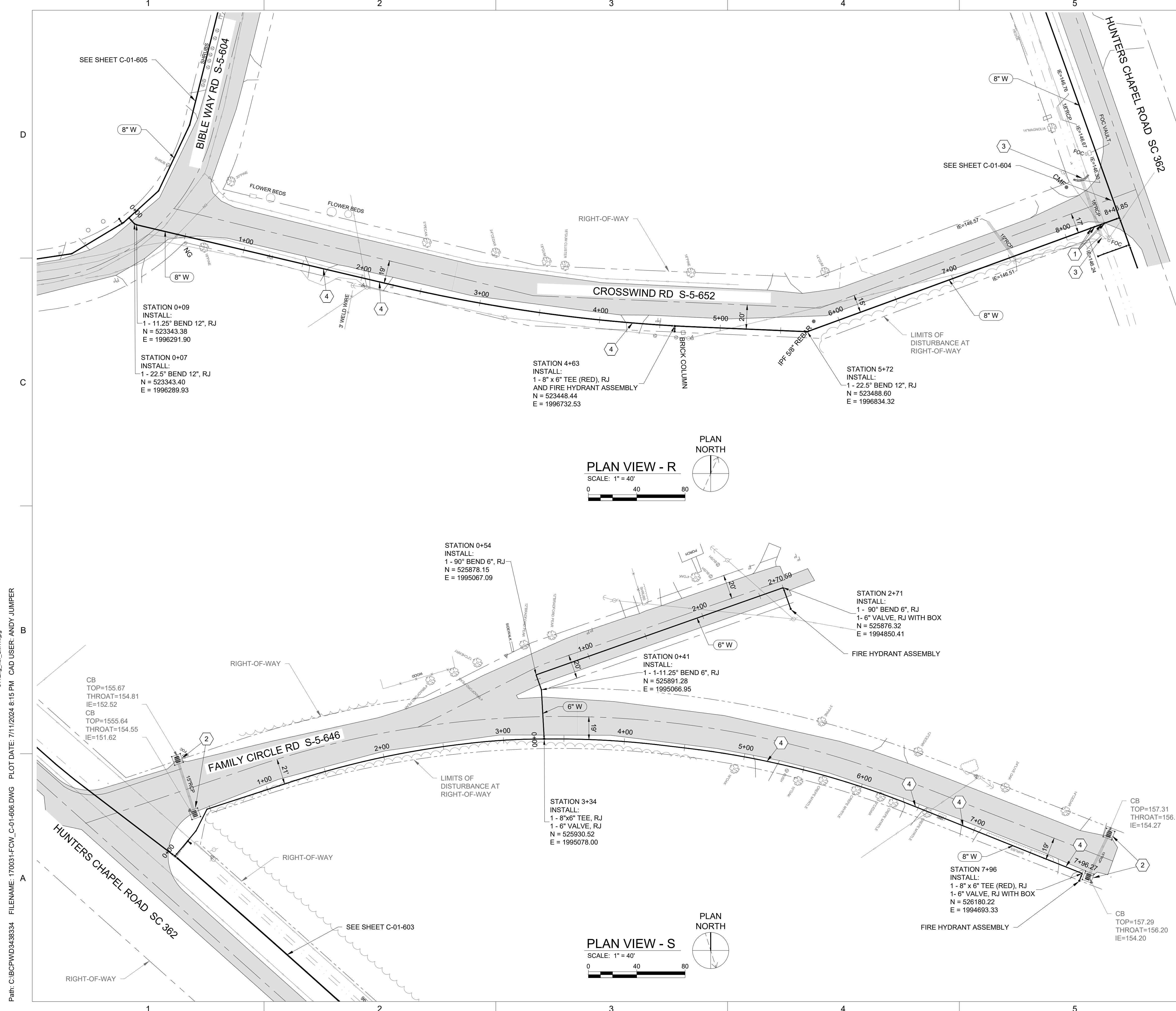
**CIVIL**

**WATER MAIN  
PLAN 6**

DRAWING NUMBER  
**C-01-605**

SHEET NUMBER  
15 OF 21





**GENERAL NOTES:**

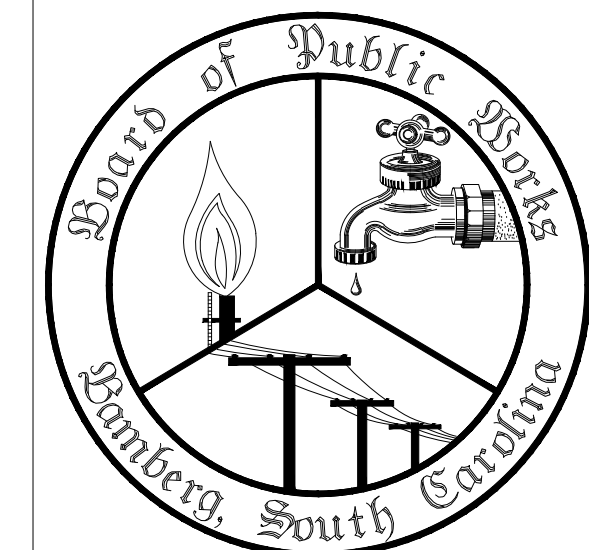
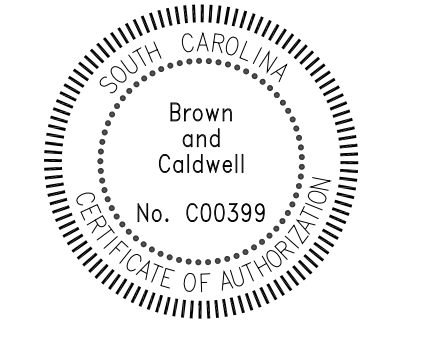
1. REFERENCE GENERAL NOTES, SHEET G-00-002.
2. OWNER OF ELECTRIC POLES OR TELEPHONE PEDESTALS MUST BE NOTIFIED OF CONSTRUCTION AT LEAST 5 DAYS PRIOR TO WORK BEGINNING.
3. MAINTAIN 36" MINIMUM COVER OVER THE NEW 12" WATER MAIN, UNLESS STATED OTHERWISE.
4. NEW WATER MAINS SHALL BE INSTALLED, TESTED, AND APPROVED TO PLACE INTO OPERATION BEFORE CONNECTING TO EXISTING WATER MAINS AND INSTALLING SERVICES. CONTRACTOR SHALL ISOLATE EXISTING WATER MAIN AND CUT IN SLEEVE TO CONNECT NEW WATER MAIN.
5. ENSURE ALL CONSTRUCTION IS PERFORMED WITHIN THE LIMITS OF PERMANENT CONSTRUCTION EASEMENTS AND SCDOT RIGHT-OF-WAY.
6. CONTRACTOR TO INSTALL DI WATER MAIN PIPE FROM STATION 0+00 TO STATION 00+58, AND STATION 8+21 TO STATION 8+46, ALL TO INCLUDE 5 LF BEYOND EDGE OF PAVEMENT ON EACH SIDE OF ROADWAY. CONTRACTOR TO REPAIR THE ROADWAY ACCORDING TO DETAIL 2, C-00-002.

**KEYNOTES:**

- ONLY NOTES APPLICABLE TO THIS DRAWING ARE LISTED.
1. INSTALL 45° VERTICAL BENDS AS REQUIRED FOR DITCH OR UTILITY CROSSINGS TO MAINTAIN MIN COVER/SEPARATION.
  2. TEMPORARY FABRIC DROP INLET PROTECTION.
  3. SEDIMENT TUBE.
  4. OPEN CUT DRIVEWAYS AS NECESSARY TO INSTALL WATER MAIN AND RESTORE TO PREVIOUS CONDITION WITH SAME DRAINAGE PATTERN.



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Suite 120  
Columbia, SC 29210  
803-873-9701



**BAMBERG BOARD OF PUBLIC WORKS  
FAMILY CIRCLE  
WATER MAIN  
EXTENSION**

REVISIONS		
REV	DATE	DESCRIPTION

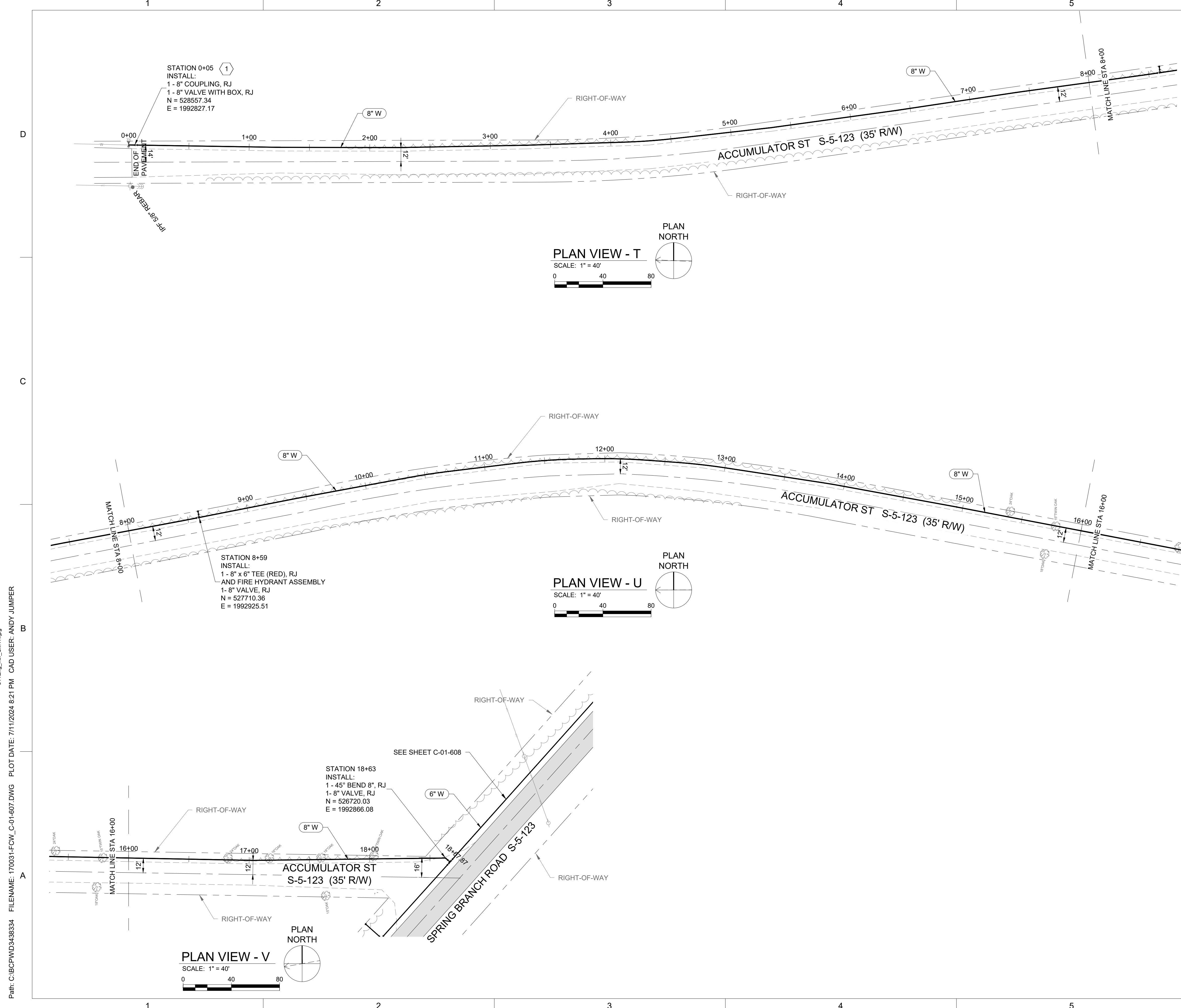
DESIGNED:	B. FRICK
DRAWN:	J. SHERIDAN
CHECKED:	J. SHAW
CHECKED:	B. FRICK
APPROVED:	B. FRICK
FILENAME:	170031-FCW_C-01-606.DWG
BC PROJECT NUMBER:	170031
SCIIP PROJECT NUMBER:	A-23-C009

**CIVIL  
WATER MAIN  
PLAN 7**

DRAWING NUMBER	<b>C-01-606</b>
SHEET NUMBER	16 OF 21



811Eng\_har\_CMYK.jpg Path: C:\BPC\W\03438334 FILENAME: 170031-FCW\_C-01-606.DWG PLOT DATE: 7/11/2024 8:15 PM CAD USER: ANDY JUMPER



**GENERAL NOTES:**

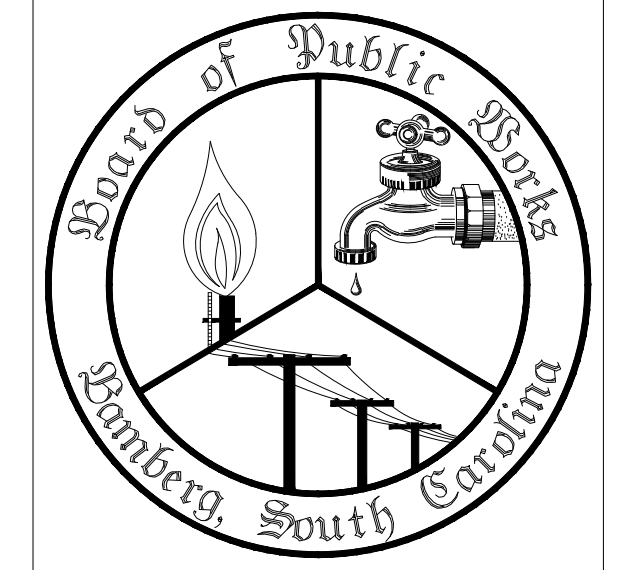
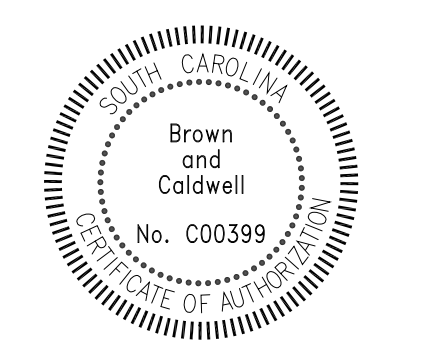
1. REFERENCE GENERAL NOTES, SHEET G-00-002.
2. OWNER OF ELECTRIC POLES OR TELEPHONE PEDESTALS MUST BE NOTIFIED OF CONSTRUCTION AT LEAST 5 DAYS PRIOR TO WORK BEGINNING.
3. MAINTAIN 36" MINIMUM COVER OVER THE NEW 12" WATER MAIN, UNLESS STATED OTHERWISE.
4. NEW WATER MAINS SHALL BE INSTALLED, TESTED, AND APPROVED TO PLACE INTO OPERATION BEFORE CONNECTING TO EXISTING WATER MAINS AND INSTALLING SERVICES. CONTRACTOR SHALL ISOLATE EXISTING WATER MAIN AND CUT IN SLEEVE TO CONNECT NEW WATER MAIN.
5. ENSURE ALL CONSTRUCTION IS PERFORMED WITHIN THE LIMITS OF PERMANENT CONSTRUCTION EASEMENTS AND SCDOT RIGHT-OF-WAY.

**KEYNOTES:**

- 1 COORDINATE CONNECTION TO EXISTING 6" WATER MAIN WITH BAMBERG BOARD OF PUBLIC WORKS.



ENVIRONMENTAL ENGINEERING AND CONSULTING  
200 Center Point Circle  
Suite 120  
Columbia, SC 29210  
803-873-9701



**BAMBERG BOARD OF PUBLIC WORKS  
FAMILY CIRCLE  
WATER MAIN  
EXTENSION**

REVISIONS		
REV	DATE	DESCRIPTION

DESIGNED:	B. FRICK
DRAWN:	J. SHERIDAN
CHECKED:	J. SHAW
CHECKED:	B. FRICK
APPROVED:	B. FRICK
FILENAME	170031-FCW_C-01-607.DWG
BC PROJECT NUMBER	170031
SCIIP PROJECT NUMBER	A-23-C009

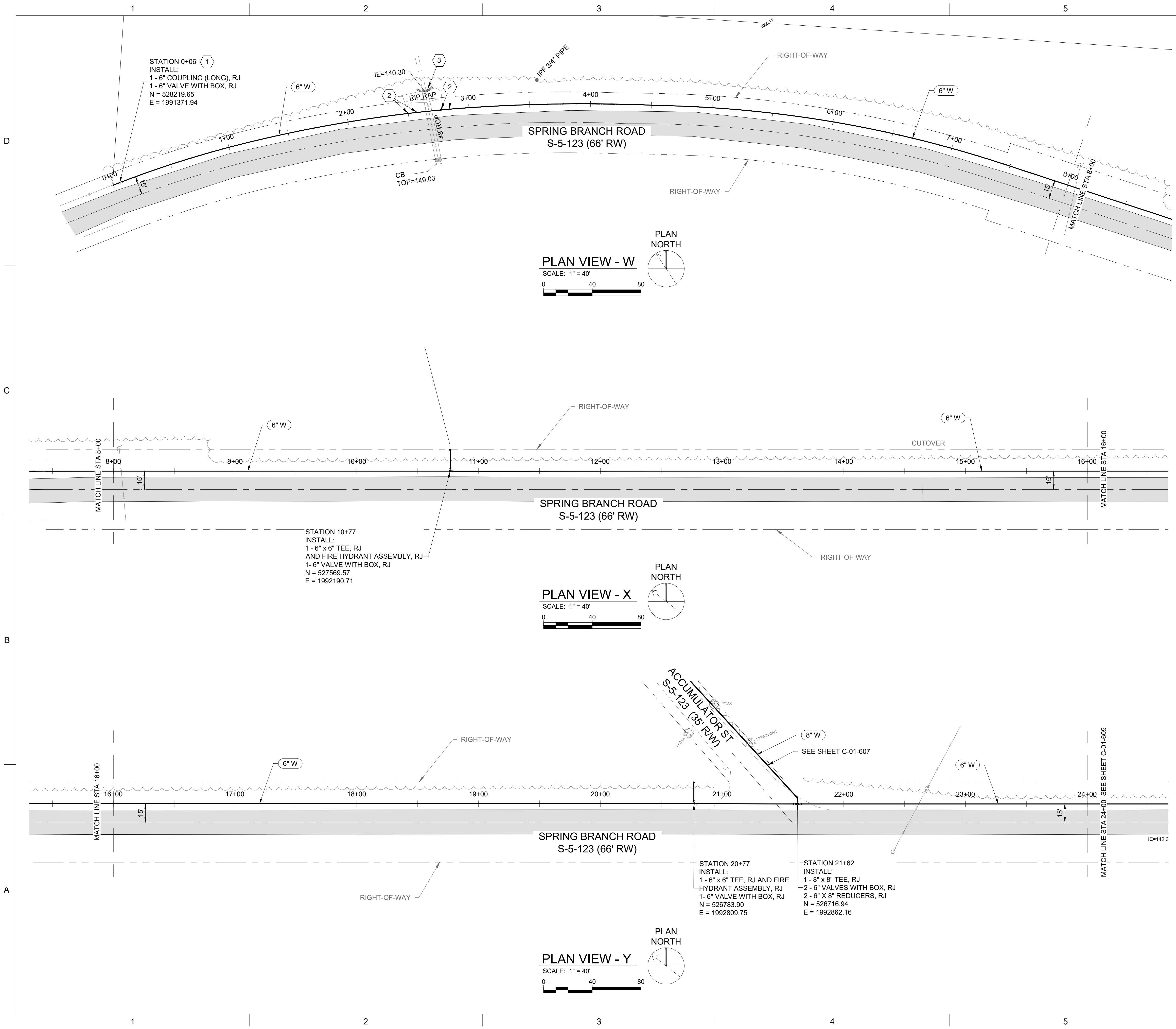
**CIVIL  
WATER MAIN  
PLAN 8**

DRAWING NUMBER	<b>C-01-607</b>
SHEET NUMBER	17 OF 21



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811Eng\_har\_CMYK.jpg  
 Path: C:\BPC\DWG\438334 FILENAME: 170031-FCW\_C-01-608.DWG PLOT DATE: 7/11/2024 8:24 PM CAD USER: ANDY JUMPER



**GENERAL NOTES:**

1. REFERENCE GENERAL NOTES, SHEET G-00-002.
2. OWNER OF ELECTRIC POLES OR TELEPHONE PEDESTALS MUST BE NOTIFIED OF CONSTRUCTION AT LEAST 5 DAYS PRIOR TO WORK BEGINNING.
3. MAINTAIN 36" MINIMUM COVER OVER THE NEW 12" WATER MAIN, UNLESS STATED OTHERWISE.
4. NEW WATER MAINS SHALL BE INSTALLED, TESTED, AND APPROVED TO PLACE INTO OPERATION BEFORE CONNECTING TO EXISTING WATER MAINS AND INSTALLING SERVICES. CONTRACTOR SHALL ISOLATE EXISTING WATER MAIN AND CUT IN SLEEVE TO CONNECT NEW WATER MAIN.
5. ENSURE ALL CONSTRUCTION IS PERFORMED WITHIN THE LIMITS OF PERMANENT CONSTRUCTION EASEMENTS AND SCDOT RIGHT-OF-WAY.

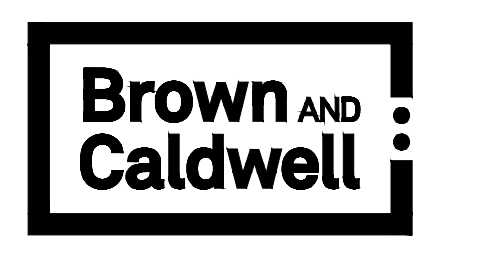
**KEYNOTES:**

- ONLY NOTES APPLICABLE TO THIS DRAWING ARE LISTED.
1. COORDINATE CONNECTION TO EXISTING 6" WATER MAIN WITH BAMBERG BOARD OF PUBLIC WORKS.
  2. INSTALL 45" RJ VERTICAL BENDS AS REQUIRED FOR DITCH OR UTILITY CROSSINGS TO MAINTAIN MIN COVER/SEPARATION.
  3. SEDIMENT TUBE.

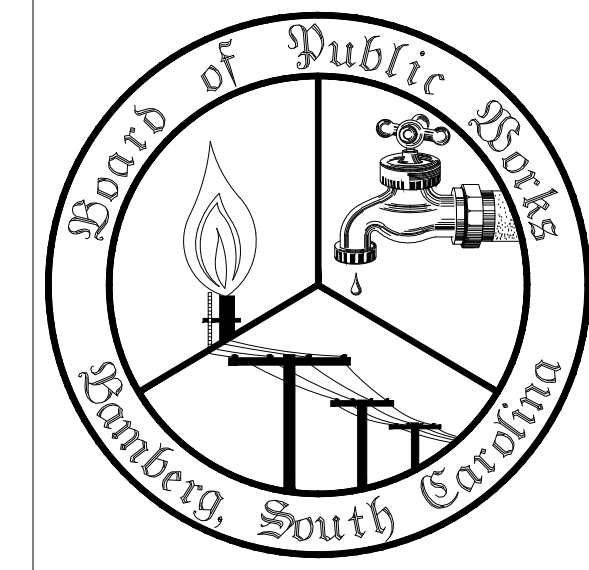
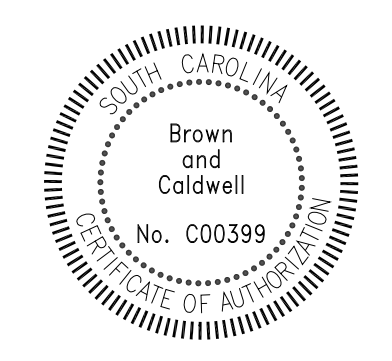
LINE IS 2 INCHES AT FULL SIZE

DESIGNED: B. FRICK  
 DRAWN: J. SHERIDAN  
 CHECKED: J. SHAW  
 CHECKED: B. FRICK  
 APPROVED: B. FRICK

FILENAME: 170031-FCW\_C-01-608.DWG  
 BC PROJECT NUMBER: 170031  
 SCIP PROJECT NUMBER: A-23-C009



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 200 Center Point Circle  
 Suite 120  
 Columbia, SC 29210  
 803-873-9701



**BAMBERG BOARD OF PUBLIC WORKS  
 FAMILY CIRCLE  
 WATER MAIN  
 EXTENSION**

REVISIONS		
REV	DATE	DESCRIPTION

FILENAME: 170031-FCW\_C-01-608.DWG  
 BC PROJECT NUMBER: 170031  
 SCIP PROJECT NUMBER: A-23-C009

**CIVIL**

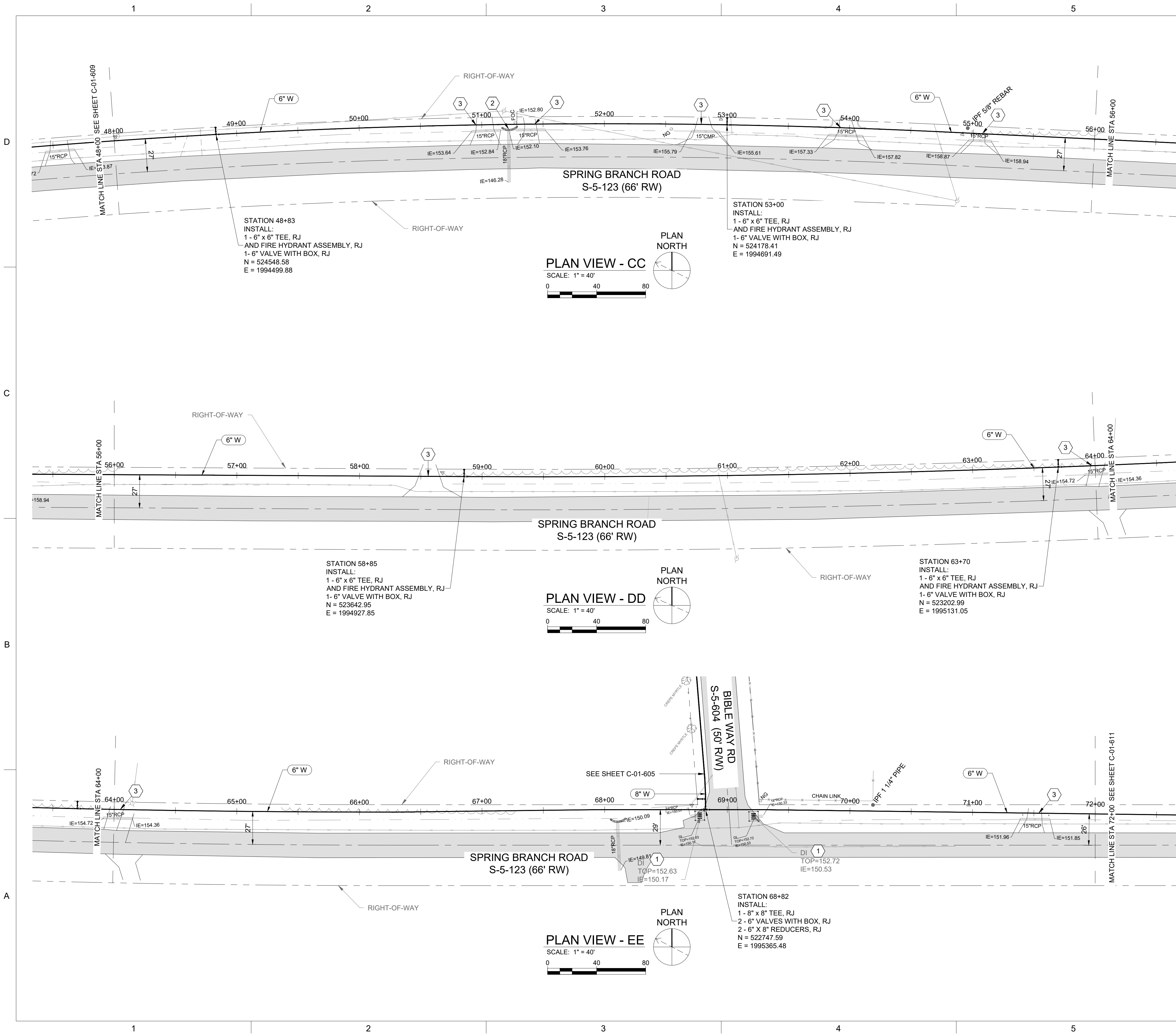
**WATER MAIN  
 PLAN 9**

DRAWING NUMBER  
**C-01-608**

SHEET NUMBER  
 18 OF 21



811Eng\_har\_CMYK.rvt FILENAME: 170031-FCW\_C-01-610.DWG PLOT DATE: 7/11/2024 8:38 PM CAD USER: ANDY JUMPER



**GENERAL NOTES:**

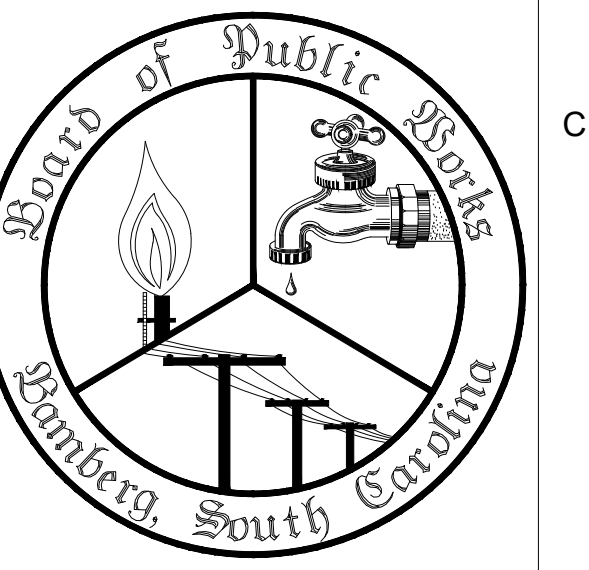
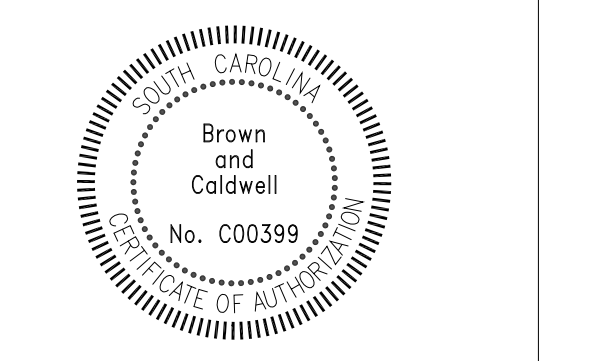
1. REFERENCE GENERAL NOTES, SHEET G-00-002.
2. OWNER OF ELECTRIC POLES OR TELEPHONE PEDESTALS MUST BE NOTIFIED OF CONSTRUCTION AT LEAST 5 DAYS PRIOR TO WORK BEGINNING.
3. MAINTAIN 36" MINIMUM COVER OVER THE NEW 12" WATER MAIN, UNLESS STATED OTHERWISE.
4. NEW WATER MAINS SHALL BE INSTALLED, TESTED, AND APPROVED TO PLACE INTO OPERATION BEFORE CONNECTING TO EXISTING WATER MAINS AND INSTALLING SERVICES. CONTRACTOR SHALL ISOLATE EXISTING WATER MAIN AND CUT IN SLEEVE TO CONNECT NEW WATER MAIN.
5. ENSURE ALL CONSTRUCTION IS PERFORMED WITHIN THE LIMITS OF PERMANENT CONSTRUCTION EASEMENTS AND SCDDT RIGHT-OF-WAY.
6. CONTRACTOR TO INSTALL DI WATER MAIN PIPE FROM STATION 68+73 TO STATION 69+25. TO INCLUDE 5 LF BEYOND EDGE OF PAVEMENT ON EACH SIDE OF ROADWAY. CONTRACTOR TO REPAIR THE ROADWAY ACCORDING TO DETAIL 2, C-00-002.

**KEYNOTES:**

- ONLY NOTES APPLICABLE TO THIS DRAWING ARE LISTED.
1. TEMPORARY FABRIC DROP INLET PROTECTION.
  2. SEDIMENT TUBE.
  3. OPEN CUT DRIVEWAY AS NECESSARY TO INSTALL WATER MAIN AND RESTORE TO PREVIOUS CONDITION WITH SAME DRAINAGE PATTERN



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**BAMBERG BOARD OF PUBLIC WORKS  
FAMILY CIRCLE  
WATER MAIN  
EXTENSION**

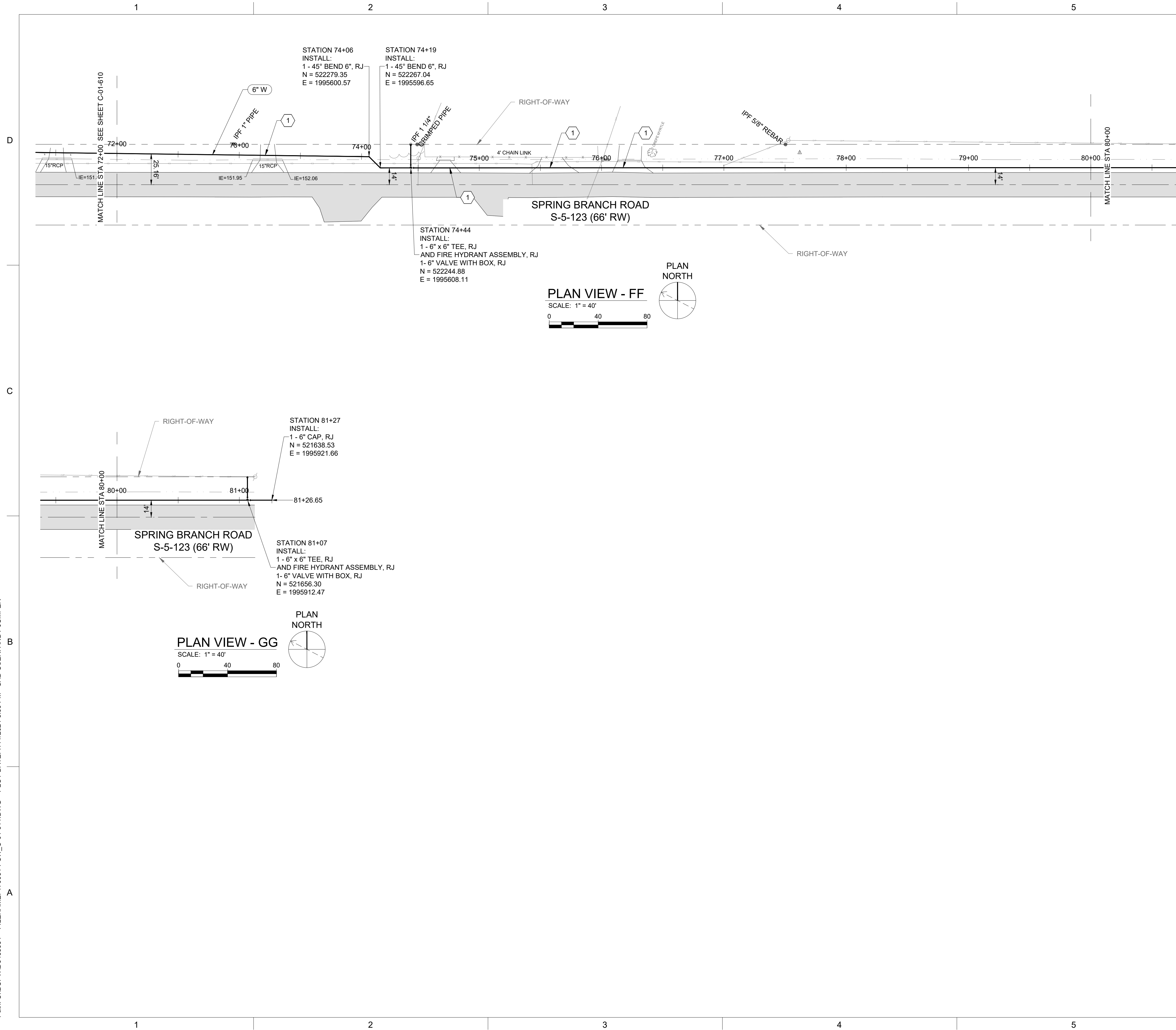
REVISIONS		
REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE  
DESIGNED: B. FRICK  
DRAWN: A. JUMPER  
CHECKED: J. SHAW  
CHECKED: B. FRICK  
APPROVED: B. FRICK  
FILENAME: 170031-FCW\_C-01-610.DWG  
BC PROJECT NUMBER: 170031  
SCIP PROJECT NUMBER: A-23-C009

**CIVIL**  
**WATER MAIN  
PLAN 11**  
DRAWING NUMBER  
**C-01-610**  
SHEET NUMBER  
20 OF 21



811Eng\_bar\_CMYK.jpg  
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**GENERAL NOTES:**

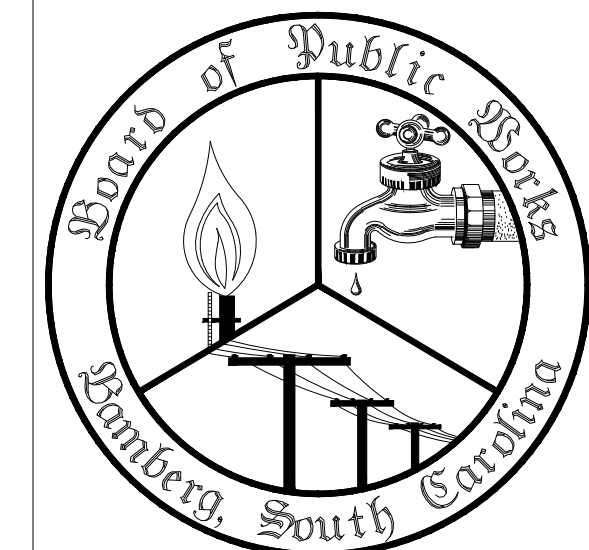
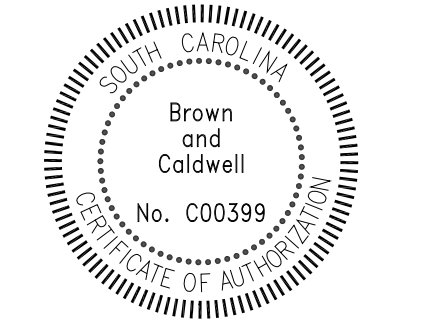
1. REFERENCE GENERAL NOTES, SHEET G-00-002.
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5. ENSURE ALL CONSTRUCTION IS PERFORMED WITHIN THE LIMITS OF PERMANENT CONSTRUCTION EASEMENTS AND SCDOT RIGHT-OF-WAY.

**KEYNOTES:**

- ONLY NOTES APPLICABLE TO THIS DRAWING ARE LISTED.
- 1 OPEN CUT DRIVEWAY AS NECESSARY TO INSTALL WATER MAIN AND RESTORE TO PREVIOUS CONDITION WITH SAME DRAINAGE PATTERN



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**BAMBERG BOARD OF PUBLIC WORKS  
 FAMILY CIRCLE  
 WATER MAIN  
 EXTENSION**

REVISIONS		
REV	DATE	DESCRIPTION

LINE IS 2 INCHES AT FULL SIZE  
 DESIGNED: B. FRICK  
 DRAWN: A. JUMPER  
 CHECKED: J. SHAW  
 CHECKED: B. FRICK  
 APPROVED: B. FRICK  
 FILENAME: 170031-FCW\_C-01-611.DWG  
 BC PROJECT NUMBER: 170031  
 SCIP PROJECT NUMBER: A-23-C009

**CIVIL**  
**WATER MAIN  
 PLAN 12**  
 DRAWING NUMBER  
**C-01-611**  
 SHEET NUMBER  
 21 OF 21

