

**CONSTRUCTION SEQUENCE**

1. CONTRACTOR SHALL ENSURE THAT ALL NECESSARY PERMITS HAVE BEEN RECEIVED AND THAT THOSE REQUIRED TO BE DISPLAYED ON-SITE ARE AVAILABLE.
2. CONTRACTOR SHALL HOLD PRE-CONSTRUCTION MEETING AT LEAST 48 HOURS BEFORE THE ACTUAL START OF CONSTRUCTION.
3. CONTRACTOR SHALL CONTACT CAROLINA ONE CALL AND ALL ENTITIES HAVING BURIED UTILITIES AT LEAST 72 HOURS PRIOR TO DIGGING OR AS DIRECTED AT THE PRE-CONSTRUCTION MEETING.
4. CONTRACTOR SHALL MAINTAIN TRAFFIC AND SAFETY CONTROL MEASURES AT ALL TIMES ON THE PROJECT. (SEE TRAFFIC CONTROL.)
5. CONTRACTOR SHALL INSTALL TEMPORARY CONSTRUCTION ENTRANCES (IF ANY) AT EACH POINT OF ACCESS TO STORAGE AND CONSTRUCTION AREAS.
6. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH PLANS AND BEFORE STARTING WORK.
7. CONTRACTOR SHALL CLEAR RIGHT-OF-WAY IF NECESSARY.
8. STOCKPILE RIP-RAP ON SITE AND INSTALL ALL OTHER EROSION CONTROL MEASURES WHERE THE WORK IS OCCURRING. THE CONTRACTOR SHALL NOT INSTALL EROSION CONTROL MEASURES IN AREAS WHERE THE WORK WILL NOT OCCUR FOR SOME TIME. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE CITY/PROJECT ENGINEER OR UPON RECOMMENDATION OF NC DENR PERSONNEL AS CONDITIONS WARRANT.
9. STABILIZATION FOR THIS PROJECT SHALL COMPLY WITH THE TIME FRAME GUIDELINES AS SPECIFIED BY THE NCG-01000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.
10. CONTRACTOR SHALL COORDINATE ALL BLOW-OFFS AND TESTING WITH THE CITY ENGINEERING DEPARTMENT'S CONSTRUCTION ADMINISTRATOR AT LEAST 24 HOURS IN ADVANCE OF SUCH WORK. NOTIFY THE RESPONSE AREA FIRE DEPARTMENT IF EXISTING SYSTEM VALVES NEED TO BE SHUT OFF IN THE COURSE OF THE WORK.
11. UPON COMPLETION OF THE INSTALLATION AND WITH APPROVAL OF NC DEQ-DLR, ALL EROSION CONTROL DEVICES EXCEPT FOR CREEK/STREAM BANK STABILIZATION SHALL BE REMOVED AND DISPOSED OF IN AN ACCEPTABLE MANNER. EACH SECTION SHALL BE SEED AT EARLIEST POSSIBLE DATE AFTER INSTALLATION OF PIPE, STRUCTURE, OR ACCESS.
12. ONCE GROUND COVER IS FIRMLY ESTABLISHED, ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITH THE APPROVAL OF NC DEQ-DLR.
13. CONTRACTOR SHALL REFERENCE SPECIAL CONDITIONS FOR JOB SEQUENCE AND OTHER DIRECTIONS, IF ANY. CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITY WITH THE CITY ENGINEERING DEPARTMENT.

**GENERAL NOTES**

1. ALL MATERIALS, EQUIPMENT, LABOR, AND WORKMANSHIP IS TO BE IN ACCORDANCE WITH AND SUBJECT TO THE WATER AND SEWER AUTHORITY OF CABARRUS COUNTY'S STANDARD SPECIFICATIONS; THE CITY OF CONCORD'S ORDINANCES, POLICIES, AND STANDARD SPECIFICATIONS, AND NCDOT STANDARD SPECIFICATIONS, AND THE NORTH CAROLINA ADMINISTRATIVE CODE FOR WASTEWATER COLLECTION AND WATER DISTRIBUTION SYSTEMS. IN THE EVENT OF CONFLICT BETWEEN THE WATER AND SEWER AUTHORITY OF CABARRUS COUNTY'S STANDARD SPECIFICATION; THE CITY OF CONCORD'S ORDINANCES, POLICIES, AND STANDARD SPECIFICATIONS, AND NCDOT STANDARD SPECIFICATIONS, OR THE NORTH CAROLINA ADMINISTRATIVE CODE, THE MORE RESTRICTIVE REQUIREMENTS SHALL APPLY.
2. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL CONFORM TO THE LATEST STANDARDS OF THE N.C. SEDIMENTATION POLLUTION CONTROL ACT AND APPLICABLE LOCAL AND FEDERAL REQUIREMENTS.
3. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION ADMINISTRATOR OF THE CITY OF CONCORD ENGINEERING DEPARTMENT AT LEAST 48 HOURS IN ADVANCE OF BEGINNING WORK.
4. INDIVIDUAL WATER, GAS, SEWER, TELEPHONE, AND CABLE SERVICES MAY OR MAY NOT BE SHOWN ON THE PLANS. CONTRACTOR TO CONTACT APPROPRIATE AGENCY FOR FIELD LOCATIONS.
5. CITY OF CONCORD ELECTRIC, WATER, AND SEWER DEPARTMENT PERSONNEL WILL ASSIST THE CONTRACTOR IN LOCATING ALL CITY OF CONCORD UTILITY SERVICES AND LINES.
6. IF MAILBOX PULL-OFF AREAS ARE DISTURBED, CRUSHED STONE STABILIZER SHALL BE PLACED WITH SUFFICIENT LENGTH TO ACCOMMODATE VEHICULAR TRAFFIC. THESE AREAS SHALL BE MAINTAINED FOR THE ONE-YEAR WARRANTY PERIOD. THE COST OF THESE ITEMS SHALL BE INCLUDED IN THE COST OF LAYING PIPE AND OR REPLACING CULVERTS.
7. THIS PROJECT IS SUBJECT TO 100 YEAR FLOOD PER FIRM MAP 3710553900K, NOVEMBER 16, 2018.
8. FIRE HYDRANT EXTENSIONS, IF NEEDED, SHALL BE INCLUDED IN THE COST OF THE HYDRANT INSTALLATION.
9. GATE OR BUTTERFLY VALVES, BLOW-OFFS, AND FIRE HYDRANTS MAY BE FIELD ADJUSTED 50 FEET IN EITHER DIRECTION WITH THE PERMISSION OF THE ENGINEERING AND WATER RESOURCES DEPARTMENTS.

**RIGHT-OF-WAY NOTES**

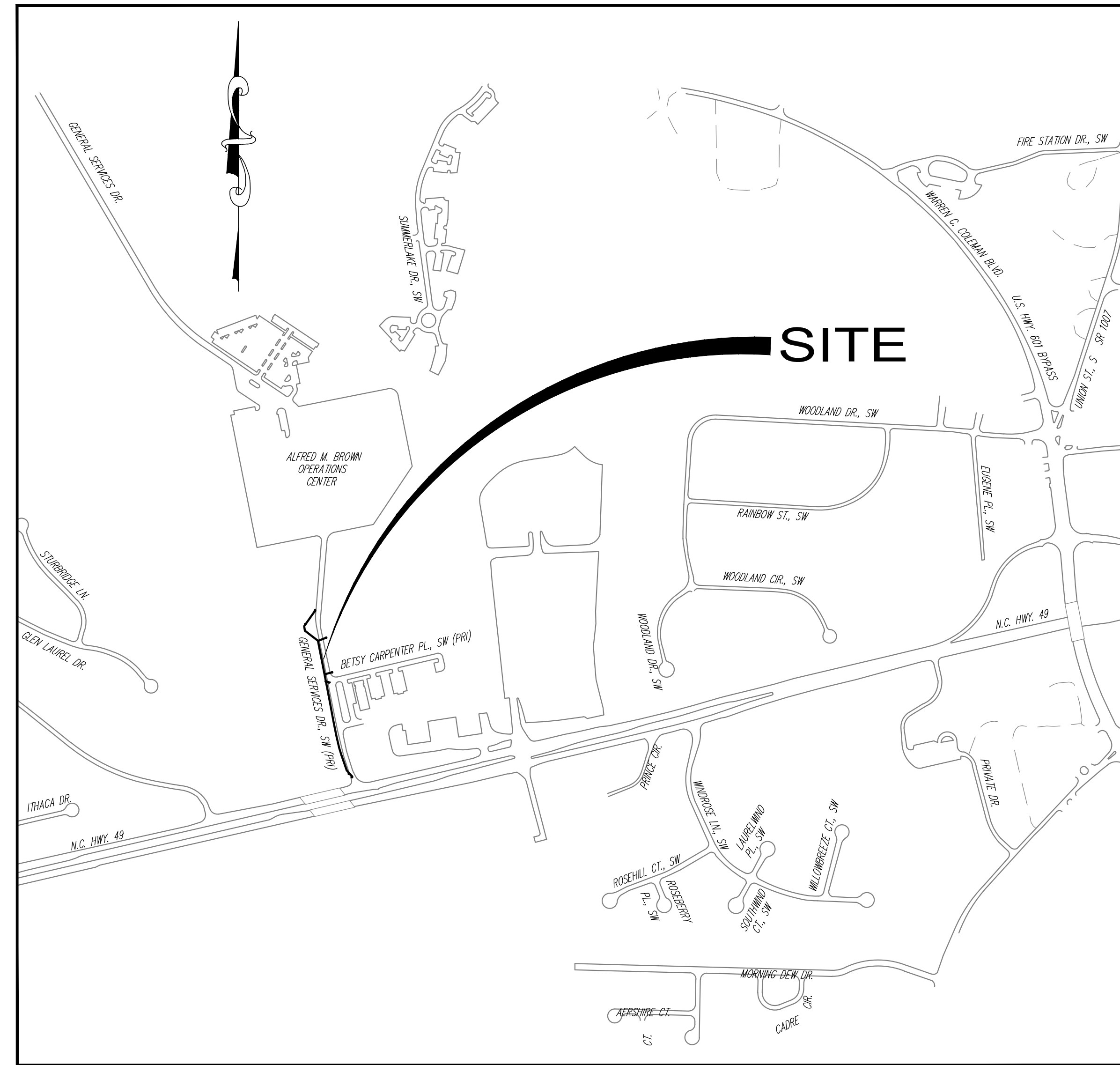
1. RIGHT-OF-WAY LINES AND PROPERTY LINES ARE SHOWN ON THE DESIGN DRAWINGS AND ARE FOR REFERENCE ONLY. FOR EXACT LOCATIONS REFER TO THE SURVEY PLATS BY THE CITY OF CONCORD'S CONSULTING REGISTERED LAND SURVEYOR OR BY THE CITY SURVEYOR.
2. REFER TO STANDARDS AND SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION FOR FURTHER DETAILS CONCERNING THE RIGHT-OF-WAY.

**TRAFFIC CONTROL**

1. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES FOR WORK ZONE TRAFFIC SAFETY AND CONTROL.
2. ALL WORK ZONE TRAFFIC CONTROL DEVICES AND OPERATIONS USED ON STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY OR INCIDENT MANAGEMENT SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS IN THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD).
3. ALL TRAFFIC/SAFETY CONTROL DEVICES SHALL BE IN GOOD REPAIR AND SHALL BE POSITIONED AT ALL TIMES IN THE APPROPRIATE LOCATIONS FOR THE WORK OPERATION. THE CONTRACTOR SHALL CAREFULLY MONITOR SITE CONDITIONS SUCH AS LIGHT, WEATHER, TRAFFIC VOLUME, ETC. TO ENSURE THAT ALL TRAFFIC/SAFETY CONTROL MEASURES ARE OPERATING EFFECTIVELY.

# CITY OF CONCORD CONCORD, NORTH CAROLINA

## GENERAL SERVICES DR. 12" WATERLINE REPLACEMENT PROJECT # : 2020-076



VICINITY MAP

SCALE: N.T.S.

**NARRATIVE DESCRIPTION**

THIS PROJECT CONSISTS OF THE INSTALLATION OF APPROXIMATELY 941± LINEAR FEET OF 12" WATER MAIN REPLACING THE EXISTING 8" WATER LINE FOR THE PURPOSE OF IMPROVING THE WATER SUPPLY SYSTEM. THE EFFECTIVE AREA OF GROUND DISTURBANCE IS 0.5± ACRES BASED UPON AN AVERAGE CONSTRUCTION WIDTH OF 20 FEET. THE WORK IS TO PROCEED IN SUCH A MANNER AS TO LIMIT THE AMOUNT OF GROUND DISTURBANCE BY HAVING ONLY ONE SECTION OF THE DITCH OPEN AT A TIME THEREBY REDUCING THE POTENTIAL FOR LARGE QUANTITIES OF SEDIMENT TO BE TRANSPORTED OFF SITE. SEEDING OF DENUDE AREAS SHALL BE DONE AS SOON AS POSSIBLE, BUT IN NO CASE LONGER THAN 10 DAYS AND IN ACCORDANCE WITH THE SPECIFICATIONS GIVEN IN THE PLANS. REMOVAL OF ALL SEDIMENTATION AND EROSION CONTROL DEVICES SHALL ONLY BE DONE AFTER APPROVAL HAS BEEN COORDINATED WITH NDEQ - DIVISION OF ENERGY, MINERAL AND RESOURCES AND THE CITY OF CONCORD.

LOCATION AND PROTECTION OF ALL UTILITIES IN THE WORK AREA SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. IN THE EVENT OF AN UNFORESEEN CONFLICT, THE CONTRACTOR SHALL NOTIFY THE CITY OF CONCORD ENGINEERING DEPARTMENT IMMEDIATELY.

ALL TRAFFIC CONTROL AND SAFETY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CONDUCTED IN STRICT ACCORDANCE WITH THE LATEST REVISION OF PART IV OF THE M.U.T.C.D., NCDOT, AND ALL OTHER STATE AND FEDERAL REGULATIONS. COMPLETION AND ACCEPTANCE OF THE WORK IS ANTICIPATED TO BE FALL OF 2021.

**LEGEND**

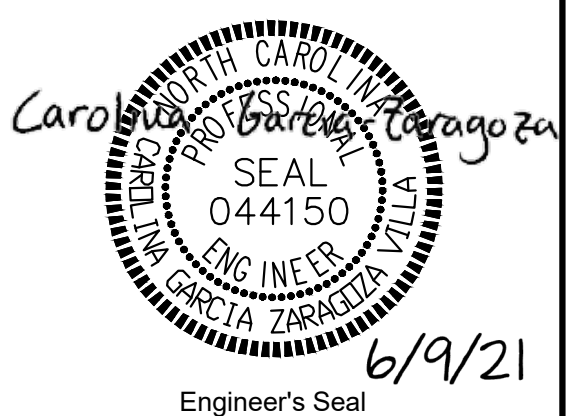
- SS ——— SS PROPOSED SEWER LINE, MANHOLE & CLEAN-OUT
- W ——— W PROPOSED WATER LINE
- ⊕ PROPOSED FIRE HYDRANT
- ⊕ PROPOSED WATER VALVE
- ⊕ PROPOSED BLOW-OFF
- SEDIMENT FENCING
- ▲—▲— DA-GLO ORANGE PERSONNEL FENCING
- ▨ PROPOSED ENCASEMENT
- SS ——— SS EXISTING SEWER AND MANHOLE
- FM ——— FM EXISTING SEWER FORCE MAIN
- W ——— W EXISTING WATER LINE
- GAS ——— GAS EXISTING GAS LINE
- UT ——— OT EXISTING TELEPHONE (OVERHEAD OR UNDERGROUND)
- UE ——— OE EXISTING ELECTRIC (OVERHEAD OR UNDERGROUND)
- EIP PROPERTY LINE AND IRON PIN
- --- TEMPORARY CONSTRUCTION EASEMENT
- --- RIGHT OF WAY/PERMANENT EASEMENT
- --- WATERWAY/DITCH LINE
- X—X— EXISTING BARBED WIRE FENCE
- EXISTING WOVEN WIRE FENCE
- EXISTING CHAIN LINK FENCE
- ~ ~ ~ TREE/WOODS LINE
- ⊕ EXISTING FIRE HYDRANT
- ⊕ EXISTING WATER VALVE
- ⊕ EXISTING WATER METER
- ⊕ EXISTING WELL
- ⊕ EXISTING TELEPHONE/POWER RISER
- ⊕ EXISTING LIGHT POLE
- ⊕ EXISTING POWER POLE/GUY WIRE
- — — EXISTING STREET OR LOCATION SIGN
- ▣ CONC. MON. EXISTING CONCRETE R/W MONUMENT
- ⊕ BENCHMARK/TEMPORARY BENCHMARK
- — — EXISTING RCP OR CMP
- MB EXISTING MAILBOX

**DRAWING INDEX**

SHEET	DESCRIPTION
1	PROJECT NARRATIVE, NOTES, LEGEND, SITE MAP
2	DESIGN - PLAN/PROFILE
3	DETAILS - WATER
4	DETAILS - EROSION CONTROL
5	DETAILS - STREAM



PREPARED BY  
ENGINEERING DEPARTMENT  
CITY OF CONCORD  
P.O. BOX 308  
CONCORD N.C. 28026  
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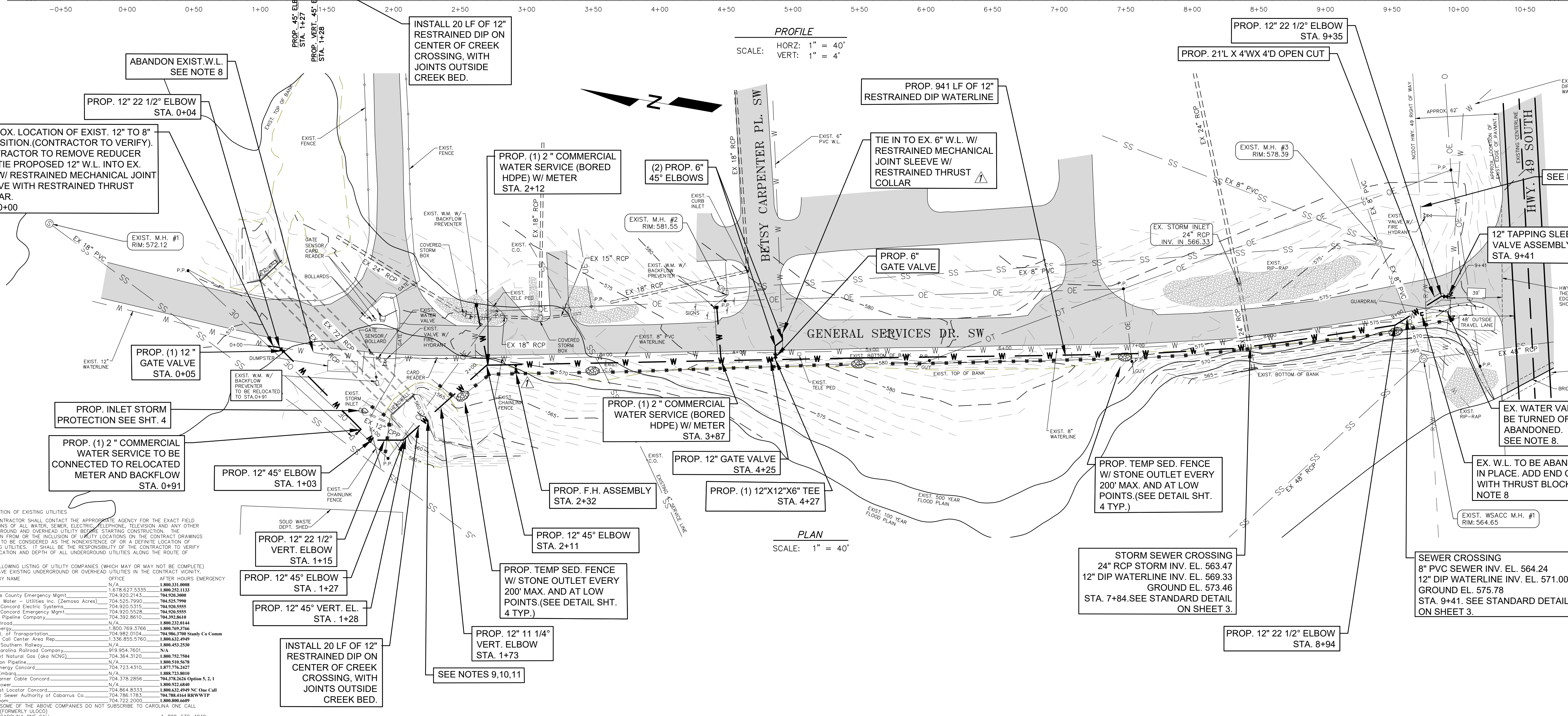
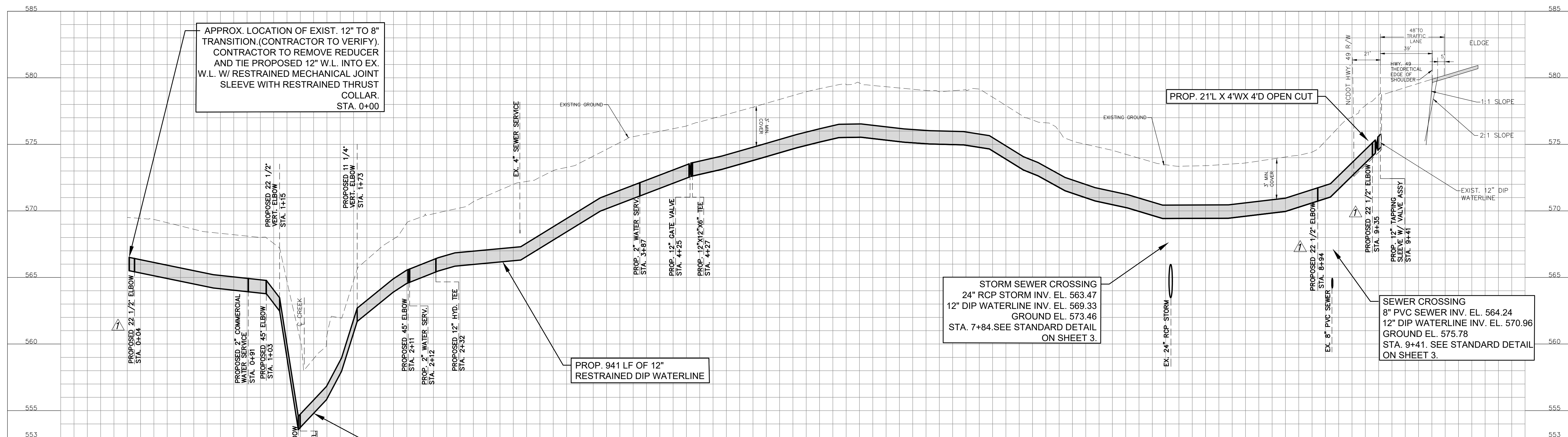


Engineer's Seal

Surveyor's Seal

REV. #	DATE	DESCRIPTION	BY
0	05/06/21	FOR CONSTRUCTION	EES
1	06/09/21	ADDRESSED COMMENTS	EES

PROPOSED WATERLINE PROFILE



PROTECTION OF EXISTING UTILITIES  
THE CONTRACTOR SHALL CONTACT THE APPROPRIATE AGENCY FOR THE EXACT FIELD LOCATIONS OF ALL WATER, SEWER, ELECTRIC, TELEPHONE, TELEVISION AND ANY OTHER UNDERGROUND AND OVERHEAD UTILITY BEFORE STARTING CONSTRUCTION. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE CONTRACT DRAWINGS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF WORK.

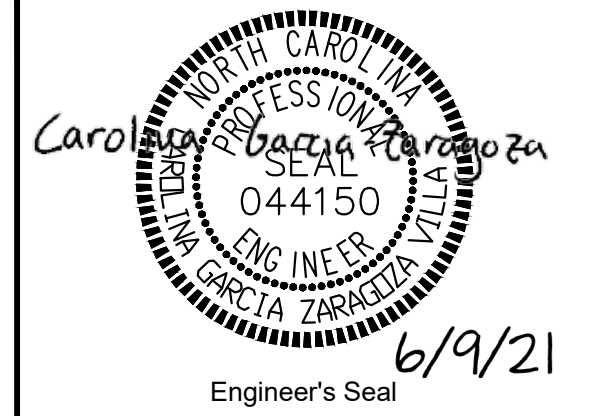
THE FOLLOWING LISTING OF UTILITY COMPANIES (WHICH MAY OR MAY NOT BE COMPLETED) MAY HAVE EXISTING UNDERGROUND OR OVERHEAD UTILITIES IN THE CONTRACT VICINITY:

COMPANY NAME	OFFICE	AFTER HOURS EMERGENCY
Atexco	N/A	1-800-331-8088
ATAI	1-678-627-5335	1-800-252-1133
Cabarrus County Emergency Mgmt.	704-920-2143	704-920-3069
Carolina Water - Utilities Inc. (Zemosa Acres)	704-525-7990	704-525-7990
City of Concord Electric Systems	704-920-5375	704-920-5345
City of Concord Emergency Mgmt.	704-920-3528	704-920-5555
Colonial Pipeline Company	704-392-8670	704-920-2610
CSX Railroads	N/A	1-800-332-8144
Duke Energy	1-800-763-3769	1-800-763-3766
NC Dept. of Transportation	1-919-882-0104	1-800-966-3700-Statdy Cn Comm
NC One Call Center Area Rep.	1-336-855-5760	1-800-632-4949
Norfolk Southern Railway	N/A	1-800-452-5259
North Carolina Railroad Company	919-954-7601	N/A
Piedmont Natural Gas (aka NCGN)	704-364-3120	1-800-752-7594
Plantation Pipeline	N/A	1-800-516-5478
PINE Energy Concors	704-723-4370	1-877-674-2447
Sprint Embargo	N/A	1-888-723-8010
Time Warner Cable Concord	704-378-2856	704-378-2626-Option 5, 2, 1
Union Power	N/A	1-800-722-6610
USQuest Locator Concord	704-864-8333	1-800-632-4949-NC One Call
Water & Sewer Authority of Cabarrus Co.	704-586-7833	704-784-6144-900W-TP
Windstream	704-722-2000	1-800-800-6409

NOTE: SOME OF THE ABOVE COMPANIES DO NOT SUBSCRIBE TO CAROLINA ONE CALL (FORMERLY ULCO)  
NORTH CAROLINA ONE CALL 1-800-632-4949



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6/9/21  
Engineer's Seal

Surveyor's Seal

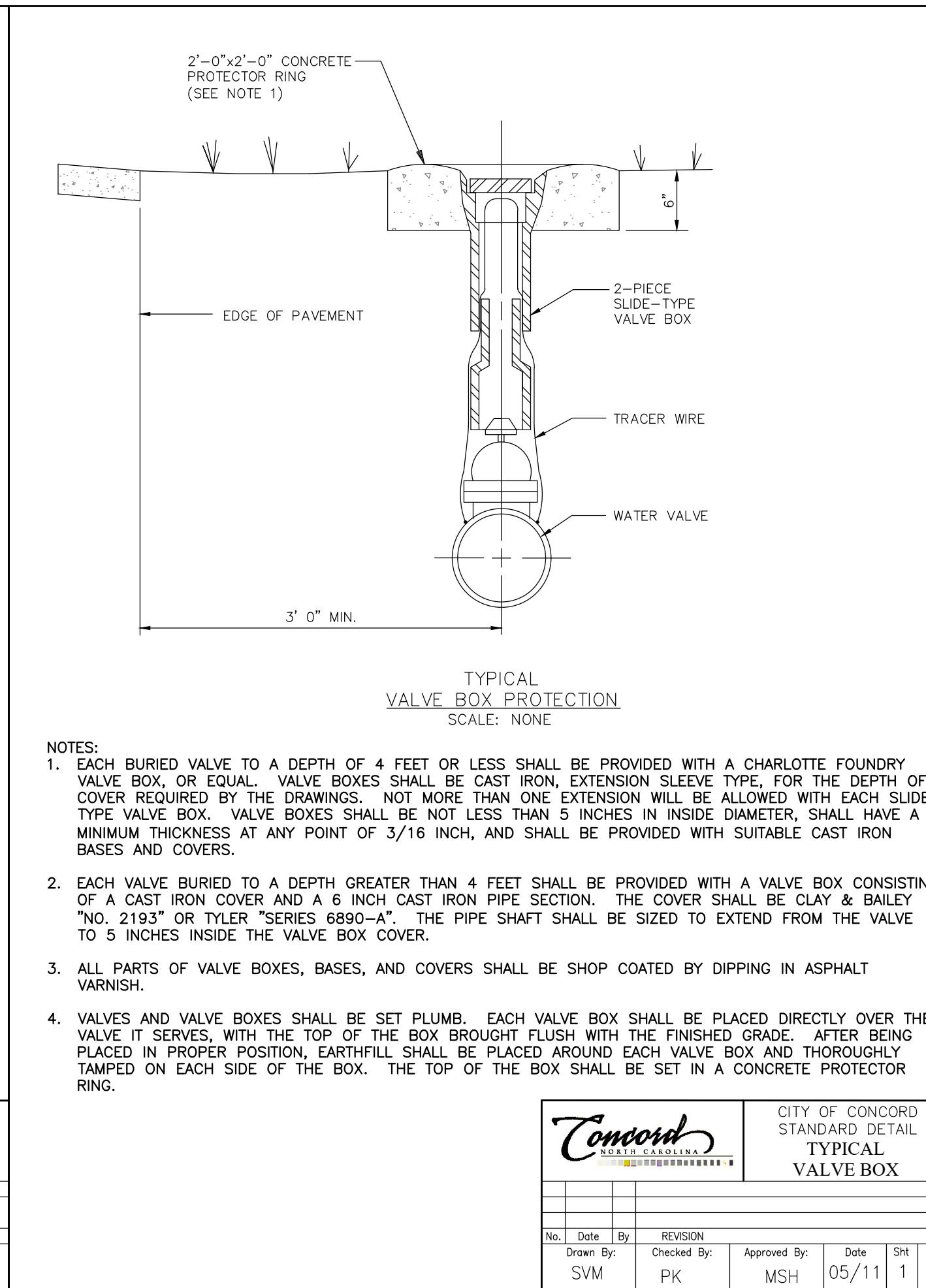
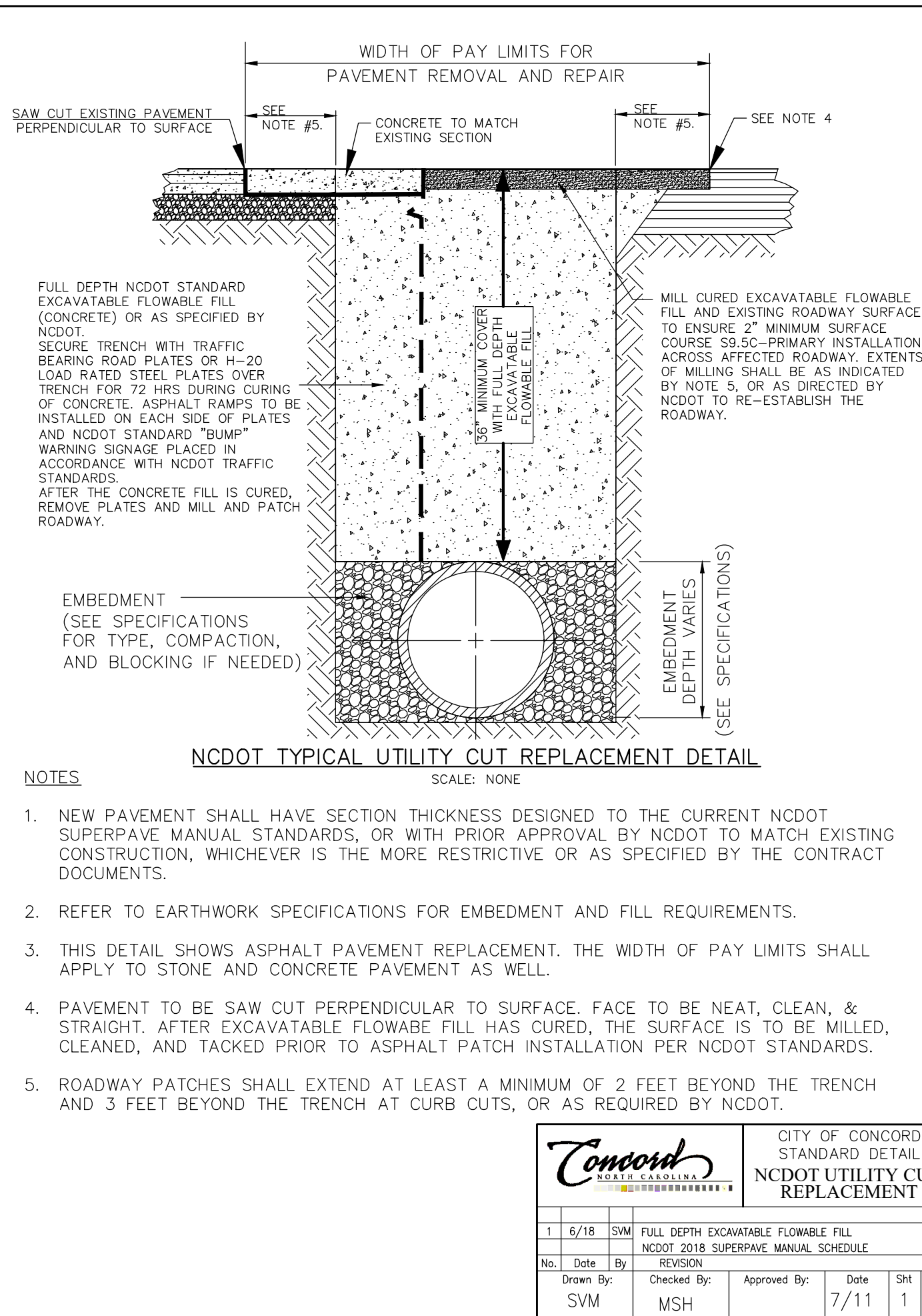
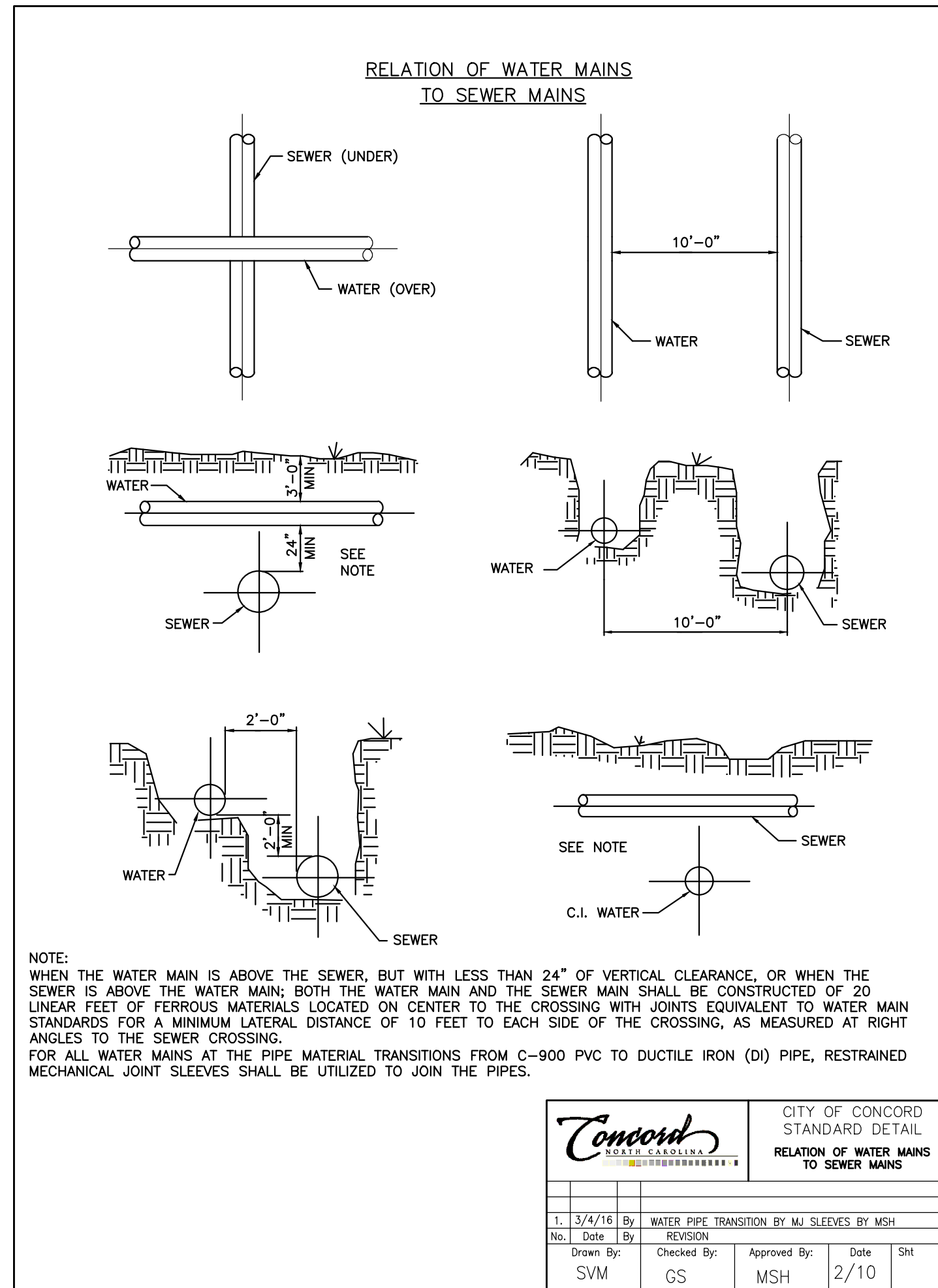
GENERAL SERVICES DR.  
12" WATERLINE REPLACEMENT  
PROJECT # : 2020-076

REV. #	DATE	DESCRIPTION
0	05/06/21	FOR CONSTRUCTION
1	06/09/21	ADDRESSED COMMENTS

DESIGNED BY: CGZV  
DRAWN BY: EES  
CHECKED BY: EAB  
SCALE: AS SHOWN  
DATE: 02/04/2020  
PROJECT NUMBER: 2020-076  
SHEET: 2 OF 5

**NOTES FOR THE 12" GENERAL SERVICES DR. W.L.:**

- ALL EXISTING UTILITIES LOCATIONS TO BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION.
- CONTRACTOR IS TO MAINTAIN A MINIMUM COVER OF 3'-0" OVER THE PROPOSED WATERLINE.
- ALL DUCTILE IRON PIPE SHALL BE RESTRAINED JOINT.
- CONTRACTOR SHALL INSTALL NEW LINE AS TO MINIMIZE SERVICE INTERRUPTION. CONTRACTOR TO CONFIRM EXISTING WATER SERVICE SIZE AND INSTALL EQUIVALENT WATER SERVICE. AMI METER BOXES AND LIDS WILL BE PROVIDED BY THE CITY OF CONCORD.
- CONTRACTOR TO ACQUIRE PLUMBING PERMIT FOR EACH WATER SERVICE TIE-IN AND INSTALL A SHUT-OFF VALVE AND PRV IN A SEPARATE WATER SERVICE BOX THAT IS LOCATED DIRECTLY BEHIND EACH RENEWED WATER SERVICE IN ACCORDANCE WITH NC PLUMBING CODE ON THE BUILDING SERVICE LINE.
- THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MINIMIZE THE DURATION OF ANY WATER SUPPLY DISRUPTION AND/OR LOSS TO THE EXISTING CITY OF CONCORD CUSTOMERS. THE CONTRACTOR MUST NOTIFY THE ASSIGNED CITY OF CONCORD CONSTRUCTION INSPECTOR AT LEAST 48 HOURS IN ADVANCE OF ANY SCHEDULE WATER SERVICE LOSS OR DISRUPTION, AND PROVIDE WRITTEN NOTIFICATION ON A CITY APPROVED FORM TO EACH CITY OF CONCORD CUSTOMERS THAT SPECIFIES THE DATE AND DURATION OF ANY SCHEDULE WATER SERVICE LOSS OR DISRUPTION AND INCLUDE THE APPROPRIATE CITY CONTACT NUMBERS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY POTABLE WATER SUPPLIES TO ANY CUSTOMER UPON REQUEST BY THE CITY AND/OR WHEN THE DURATION OF THE WATER SERVICE LOSS OR DISRUPTION EXCEEDS 4 HOURS.
- EXISTING WATERMAIN TO BE ABANDONED IN PLACE BY PLUGGING ENDS. EXISTING VALVE BOXES ARE TO BE DECOMMISSIONED, REMOVED AND DISPOSED OF IN ACCORDANCE WITH CITY STANDARDS AND ALL VOIDS ARE TO BE BACKFILLED WITH THE APPROPRIATE MATERIALS AND STABILIZED.
- STOCKPILING AND DISPOSAL OF MATERIALS OR SPOILS FROM EXCAVATION OF WATERLINE SAHLL NOT BE PERMANENTLY OR TEMPORARILY STORED INSIDE FEMA 100-YEAR FLOODPLAIN. 100-YEAR FLOODPLAIN AREA SHALL BE REGRADED TO ITS PRE-CONSTRUCTION CONTOURS AND REVEGETATED WITH NATIVE SPECIES.
- THE MIXING OF TOPSOIL AND SUBSOILS WITHIN THE WETLANDS ALONG UTILITY CORRIDOR SHALL BE MINIMIZED TO THE GREATEST EXTENT PRACTICAL. DURING EXCAVATION, THE SOILS SHALL BE PLACED ON FABRIC TO MINIMIZE IMPACTS WHENEVER POSSIBLE. TOPSOIL EXCAVATED FROM UTILITY TRENCHES WILL BE PILED SEPARATELY FROM SUBSOILS AND WILL BE BACKFILLED INTO THE TRENCH ONLY AFTER THE SUBSOILS HAVE BEEN PLACED AND COMPACTED.
- HEAVY EQUIPMENT WORKING IN WETLANDS OR MUDDFLATS MUST BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE.
- ALL WORK IN THE NCDOT ROW IS SUBJECT TO THE PROVISIONS OF THE APPROVED NCDOT ENCROACHMENT AGREEMENT. THE CONTRACTOR MUST HAVE A COPY OF THE APPROVED NCDOT ENCROACHMENT AGREEMENT ON THE JOB SITE PRIOR TO BEGINNING ANY WORK WITHIN NCDOT ROW.
- PROPOSED FITTINGS MAY BE FIELD ADJUSTED WITH THE PERMISSION OF THE ENGINEER.



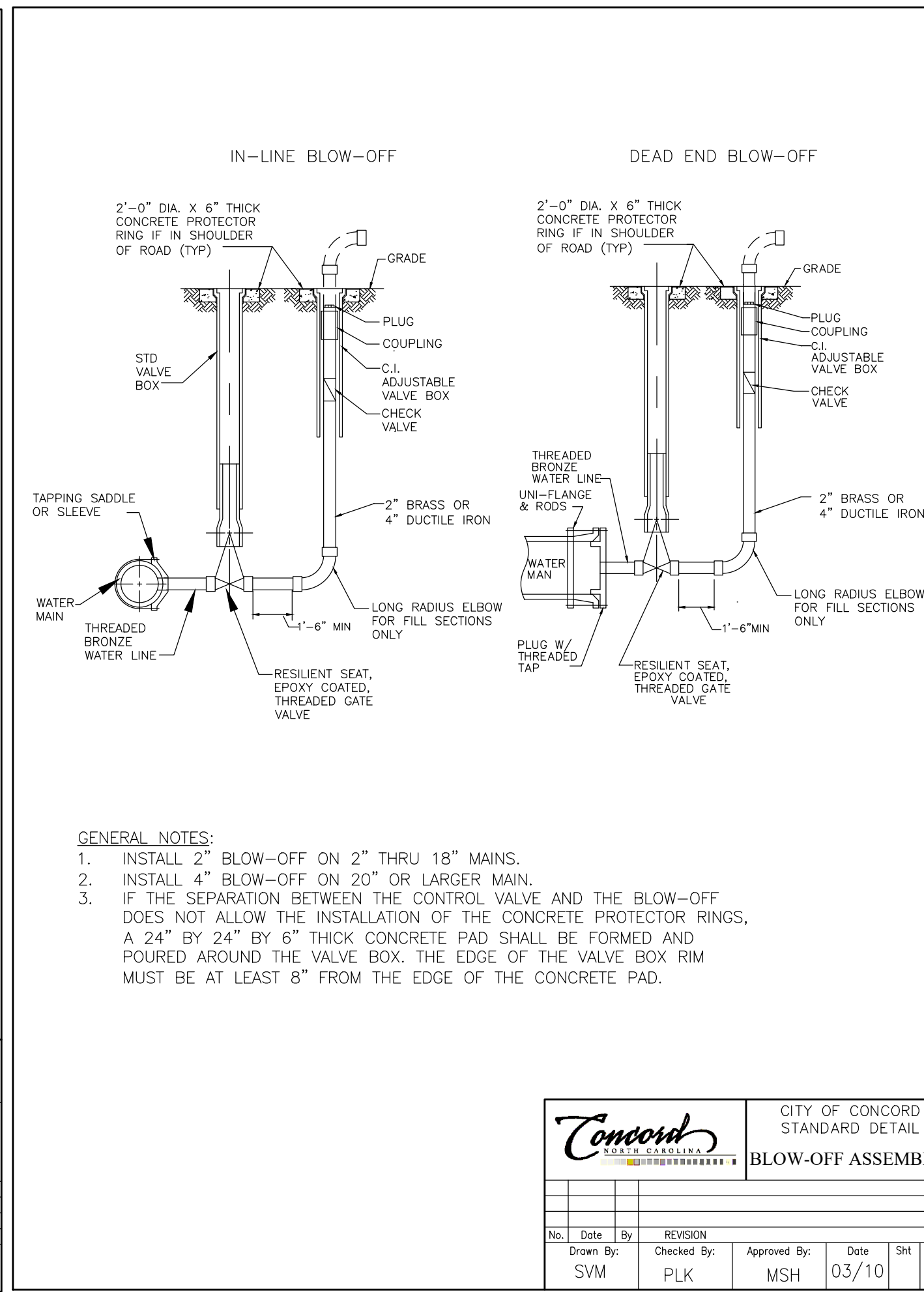
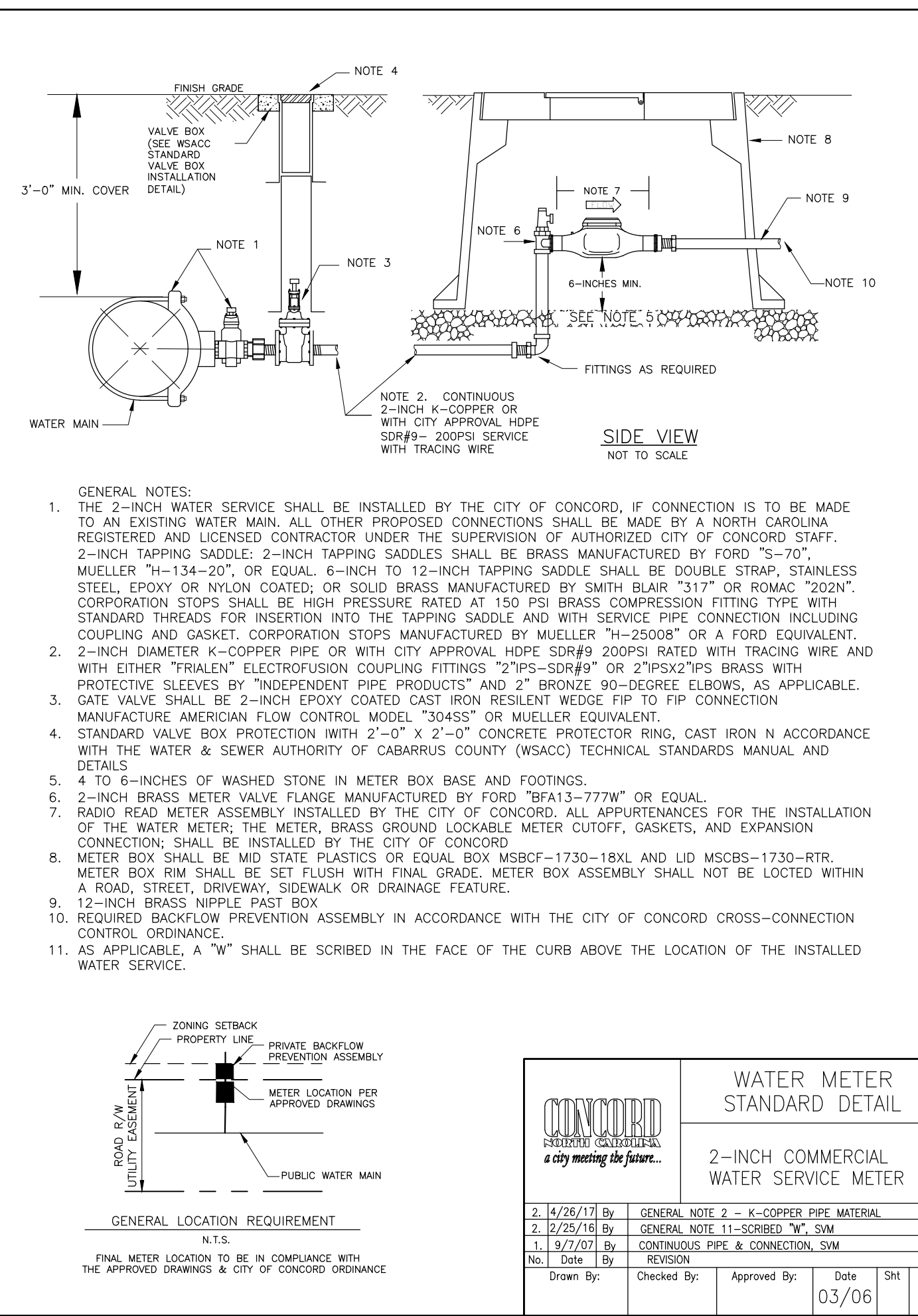
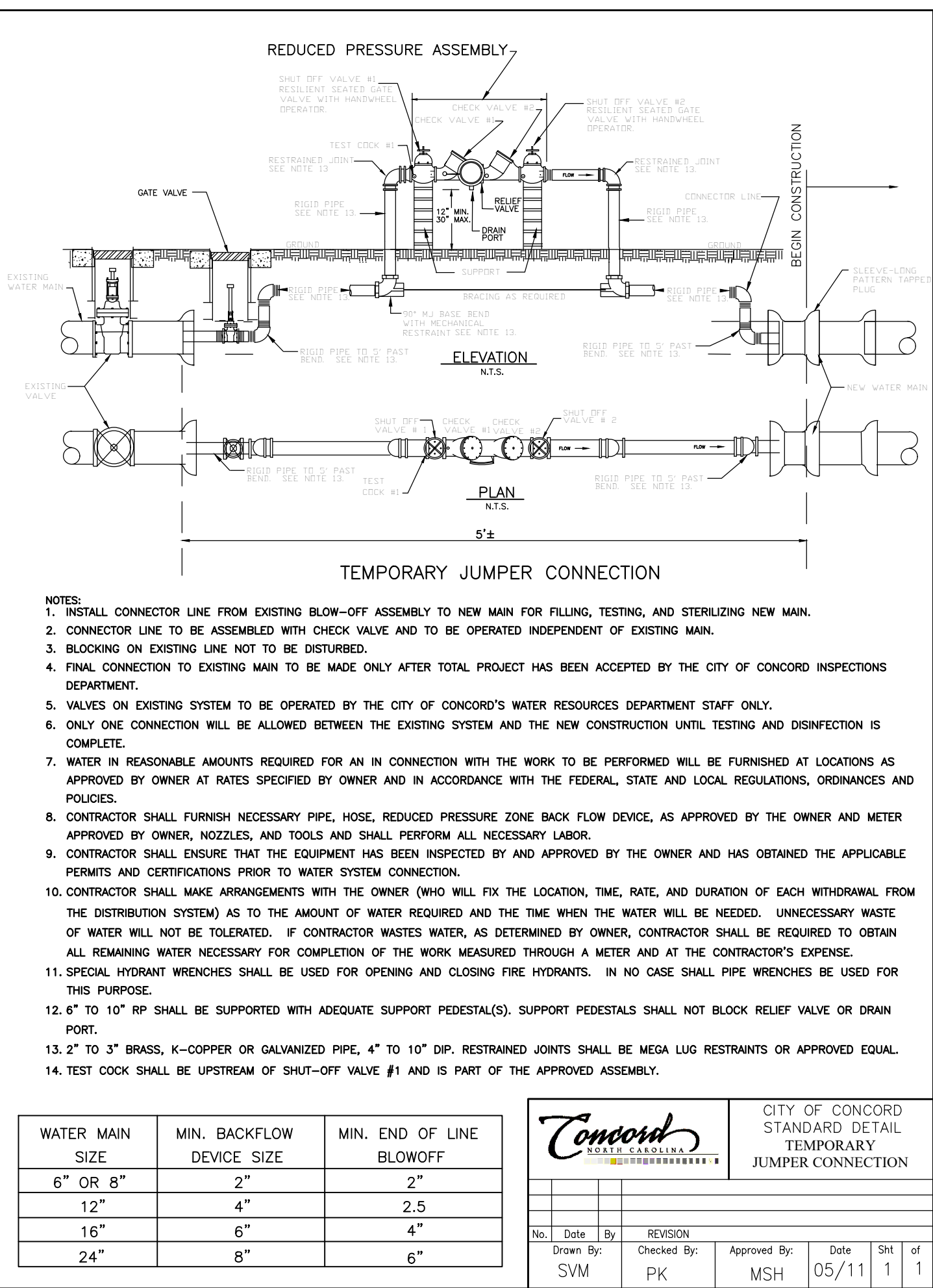
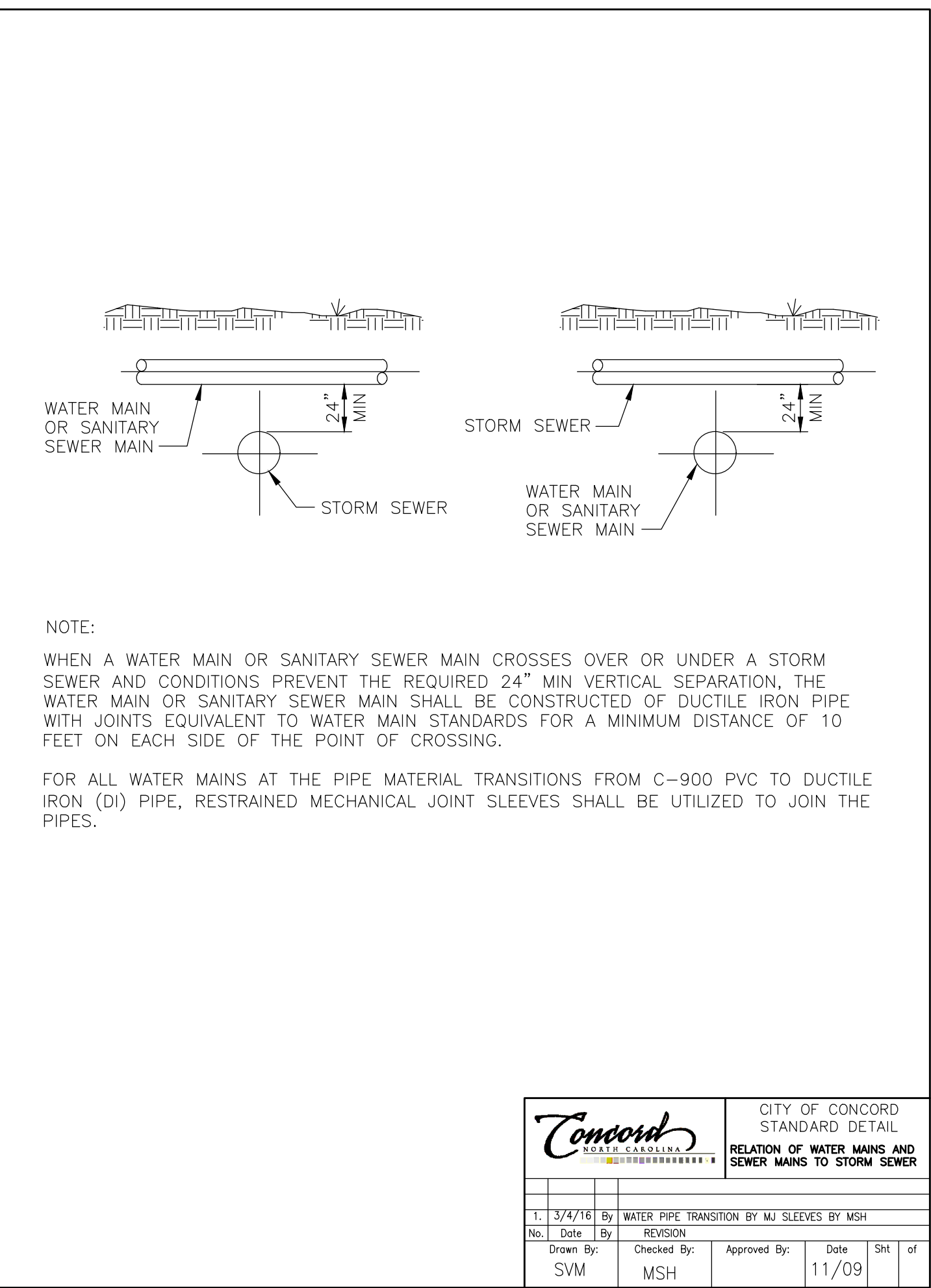
**Concord**  
NORTH CAROLINA  
High Performance Living

PREPARED BY  
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6/9/21  
Engineer's Seal

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**GENERAL SERVICES DR.  
12" WATERLINE REPLACEMENT  
STANDARD WATER DETAILS**  
PROJECT # - 2020-076



REV #	DATE	DESCRIPTION
0	05/06/21	FOR CONSTRUCTION
1	06/09/21	ADDRESSED COMMENTS

DESIGNED BY: CGZV  
DRAWN BY: EES  
SCALE: AS SHOWN  
DATE: 02/04/2020  
PROJECT NUMBER: 2020-076  
SHEET: 3 OF 5

EROSION CONTROL NOTES

- 1. THE CONTRACTOR SHALL INSTALL AND MAINTAIN THROUGHOUT THE PROJECT CONSTRUCTION ALL EROSION CONTROL MEASURES SHOWN WITHIN THESE PLANS IN ACCORDANCE WITH APPLICABLE NCDEQ EROSION AND SEDIMENT CONTROL AND NCDOT REGULATIONS.
- 2. ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL REGULATIONS, NCDOT, U.S. DEPARTMENT OF AGRICULTURE, AND U.S. SOIL CONSERVATION SERVICE REGULATIONS.
- 3. ALL CONSTRUCTION WORK SHALL BE IN COMPLIANCE WITH REGULATIONS OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORM WATER GENERAL PERMIT.
- 4. THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE NCDEQ EROSION CONTROL INSPECTOR SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.
- 5. APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS. CONTACT PROJECT ENGINEER AND PROJECT EROSION CONTROL INSPECTOR TO ENSURE ADDITIONAL EROSION CONTROL MEASURES ARE INSTALLED PRIOR TO OFF-SITE GRADING.
- 6. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED CONTINUOUSLY, RELOCATED WHEN AND AS NECESSARY AND SHALL BE CHECKED AFTER EVERY RAINFALL. SEEDED AREAS SHALL BE CHECKED REGULARLY AND SHALL BE WATERED, FERTILIZED, RESEEDED AND MULCHED AS NECESSARY TO OBTAIN A DENSE STAND OF GRASS.
- 7. STABILIZATION IS THE BEST FORM OF EROSION CONTROL. ALL DISTURBED AREAS WHICH ARE NOT OTHERWISE STABILIZED SHALL BE TOP SOILED AND SEEDED, TEMPORARILY OR PERMANENTLY IN ACCORDANCE WITH THE NORTH CAROLINA SEDIMENT CONTROL REGULATIONS. PERMANENT SEEDING AND GRASS ESTABLISHMENT IS REQUIRED PRIOR TO PROJECT COMPLETION AND ACCEPTANCE.
- 8. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.
- 9. WHEN A CRUSHED STONE CONSTRUCTION ENTRANCE HAS BEEN COVERED WITH SOIL OR HAS BEEN PUSHED INTO THE SOIL BY CONSTRUCTION TRAFFIC, IT SHALL BE REPLACED WITH A DEPTH OF STONE EQUAL TO THAT OF THE ORIGINAL APPLICATION.
- 10. ALL DRAINAGE INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING.
- 11. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE, AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
- 12. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AN EROSION AND SEDIMENTATION PERMIT FROM THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES FOR ANY NEW OFF-SITE BORROW AREA. ANY OFF-SITE BORROW AND WASTE REQUIRED FOR THIS PROJECT MUST COME FROM AN APPROVED EROSION CONTROL PLAN SITE, A SITE REGULATED UNDER THE MINING ACT OF 1971, OR A LANDFILL REGULATED BY THE DIVISION OF SOLID WASTE MANAGEMENT. DEBRIS FROM DEMOLITION ACTIVITIES SHOULD BE DISPOSED OF AT AN APPROVED FACILITY.

SELF-INSPECTION

PERSONS RESPONSIBLE FOR LAND DISTURBING ACTIVITIES MUST INSPECT THE SEDIMENT AND EROSION CONTROL MEASURES ON THIS PROJECT AFTER EACH PHASE TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. SELF-INSPECTION REPORTS ARE REQUIRED. A SAMPLE REPORT AND DETAILS OF THE PROGRAM CAN BE FOUND ON THE LAND QUALITY WEBSITE.

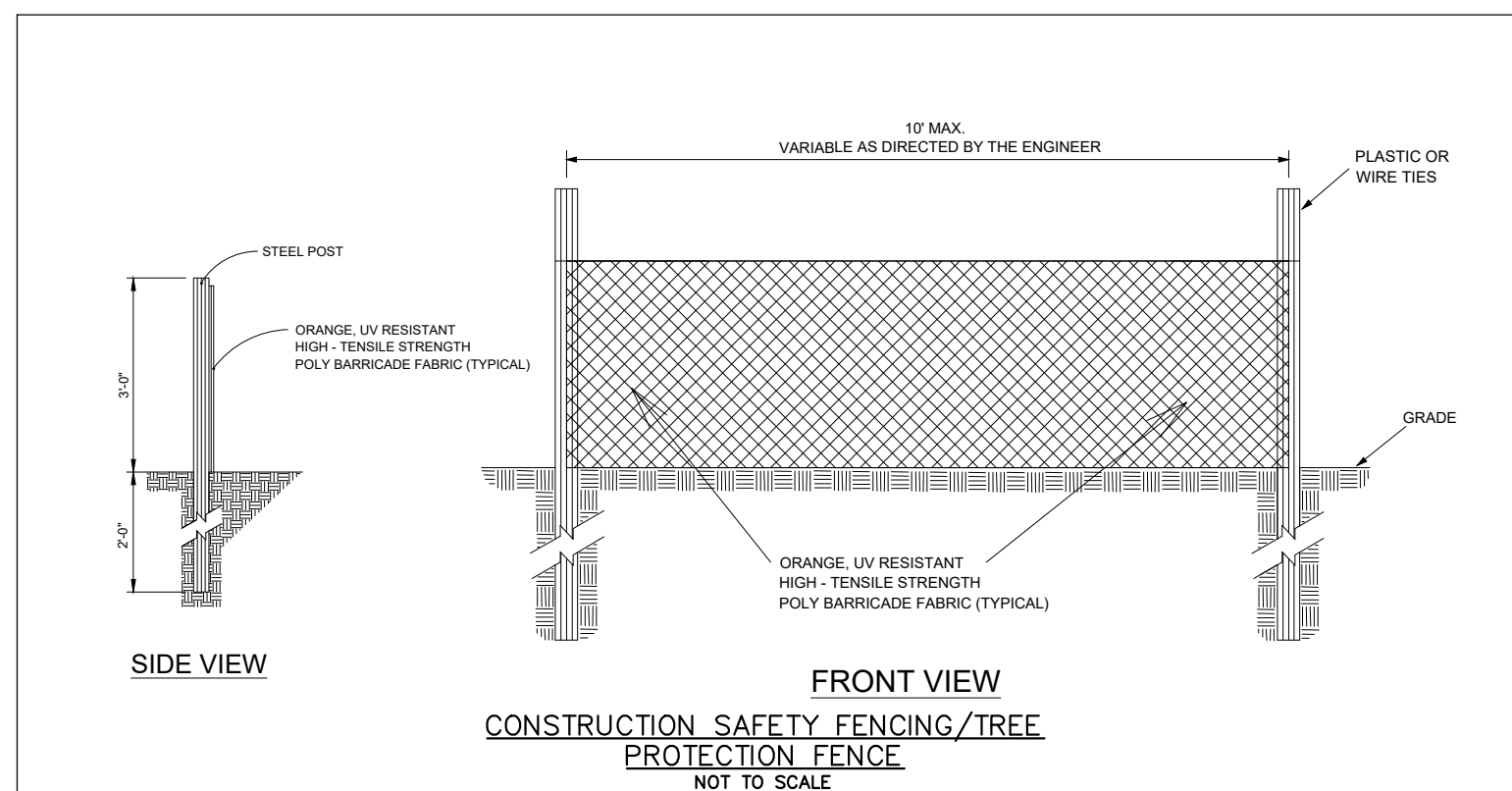
STABILIZATION REQUIREMENTS

**Stabilization Requirements:**  
(03-11-16)S-3  
Stabilization for this project shall comply with the time frame guidelines as specified by the NC-010000 general construction permit effective August 3, 2011 issued by the North Carolina Department of Environment and Natural Resources Division of Water Quality. Temporary or permanent ground cover stabilization shall occur within 7 calendar days from the last land-disturbing activity, with the following exceptions in which temporary or permanent ground cover shall be provided in 14 calendar days from the last land-disturbing activity.

- Slopes between 2:1 and 3:1, with a slope length of 10 ft. or less
- Slopes 3:1 or flatter, with a slope of length of 50 ft. or less
- Slopes 4:1 or flatter

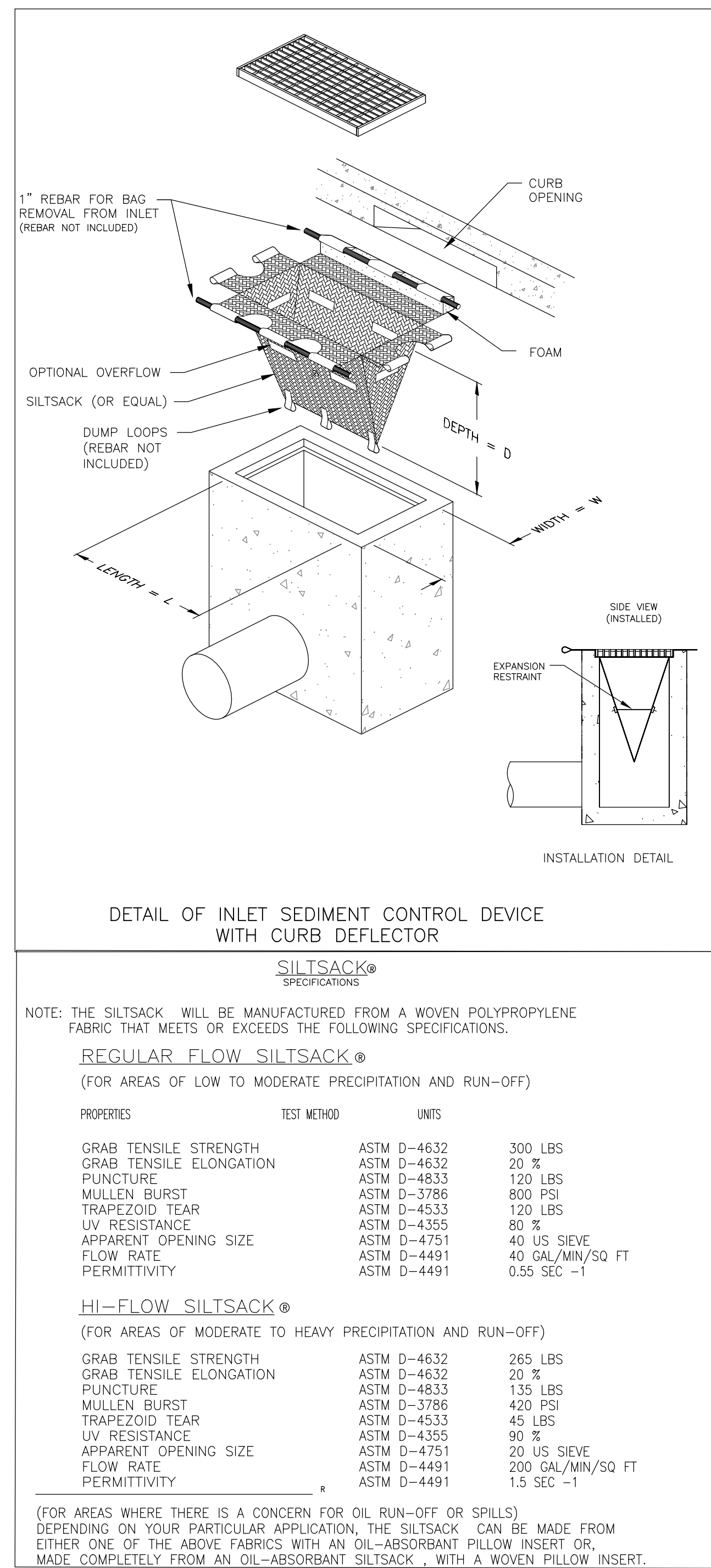
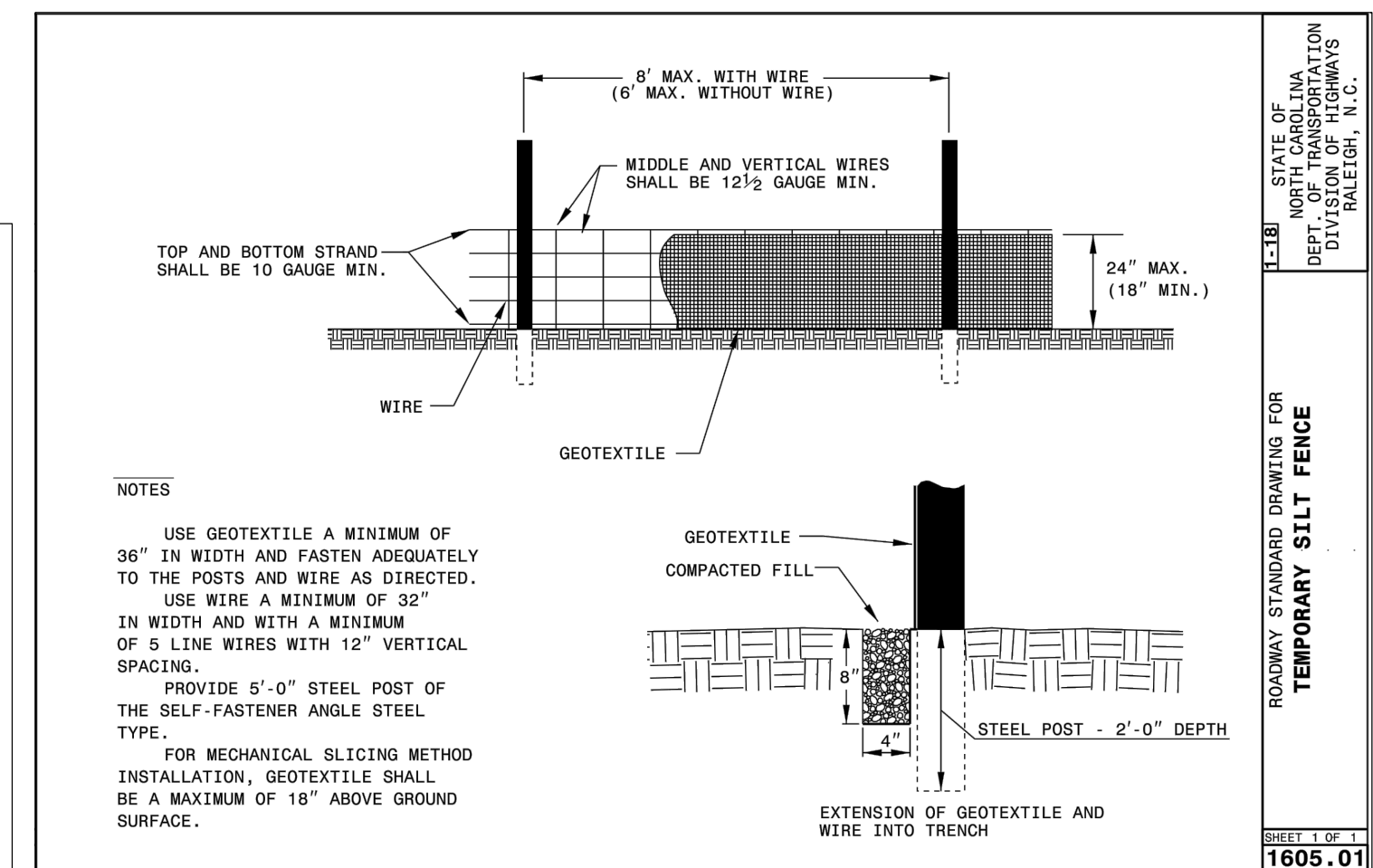
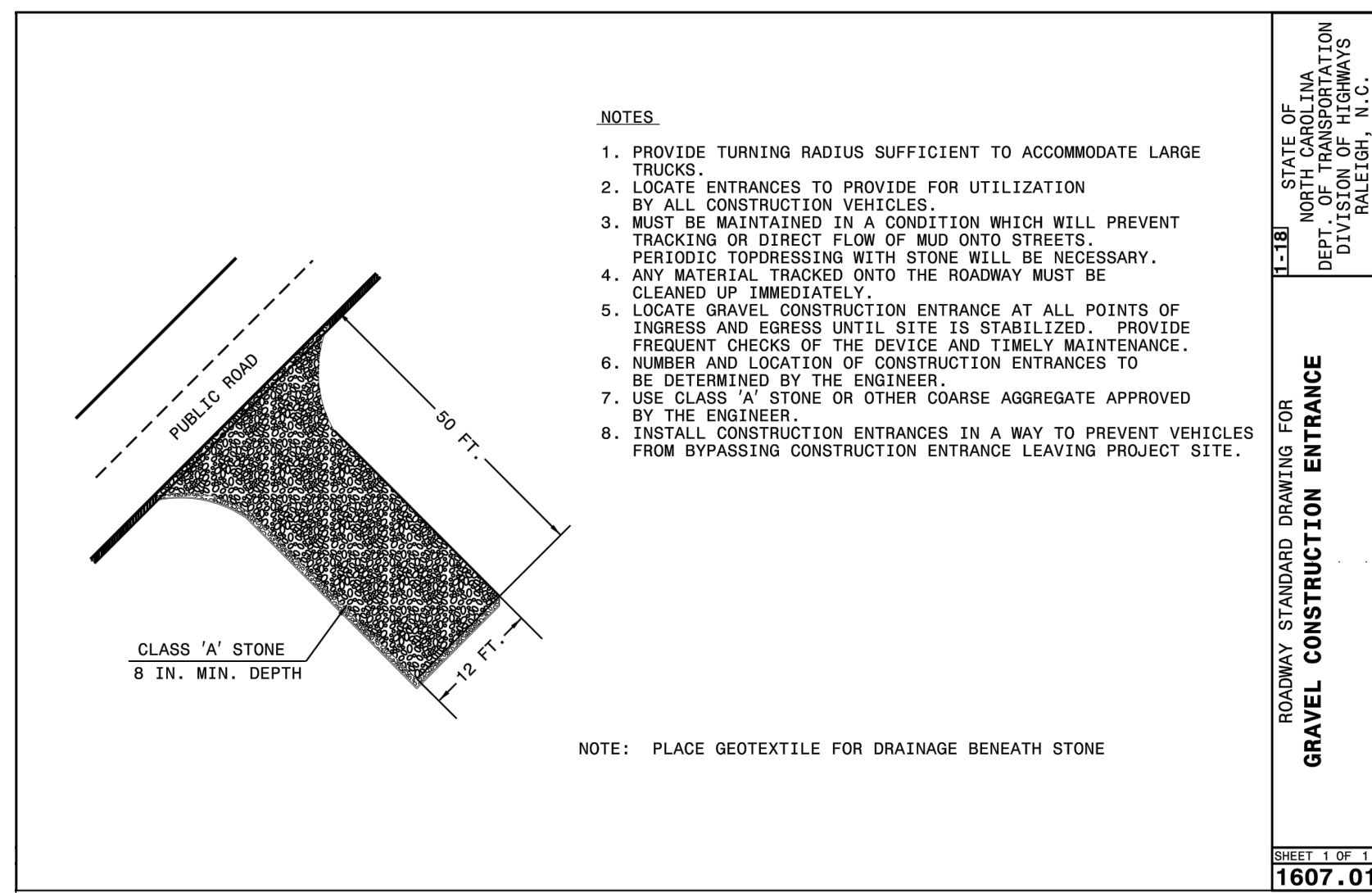
The stabilization timeframe for High Quality Water (HQW) Zones shall be 7 calendar days with no exceptions for slope grades or lengths. High Quality Water Zones (HQW) Zones are defined by North Carolina Administrative Code 15A NCAC 04A.0105 (25). Temporary and permanent ground cover stabilization shall be achieved in accordance with the provisions in this contract and as directed.

Provisions for a permanent ground cover sufficient to restrain erosion must be accomplished within 15 working days of 90 calendar days following completion of construction or development, whichever period is shorter.



MAINTENANCE PLAN

- 1. ALL EROSION AND SEDIMENTATION CONTROL DEVICES WILL BE CHECKED BY THE CONTRACTOR FOR STABILITY AND OPERATION WITHIN 24 HOURS AFTER EVERY RUNOFF PRODUCING RAINFALL INCLUDING ANY STORM EVENT GREATER THAN 0.5" OF PRECIPITATION DURING ANY 24 HOUR PERIOD, BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED. DAMAGED OR INEFFECTIVE DEVICES SHALL BE REPAIRED OR REPLACED AS NECESSARY.
- 2. MAINTAIN EROSION CONTROL DEVICES AS FOLLOWS:
  - TEMPORARY SILT FENCE – REMOVE SEDIMENT DEPOSITS WHEN IT BECOMES 0.5 FT DEEP AT THE FENCE AND AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. AVOID UNDERMINING THE FENCE.
  - TEMPORARY CHECK DAM – REMOVE SEDIMENT ACCUMULATION BEHIND THE DAMS AS NEEDED TO PREVENT DAMAGE TO CHANNEL VEGETATION. ADD STORE TO DAMS AS NEEDED TO MAINTAIN DESIGN HEIGHT AND CROSS SECTION.
  - STORM DRAIN INLET PROTECTION – REMOVE SEDIMENT AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAINFALL.
  - TEMPORARY DIVERSION DITCH – INSPECT TEMPORARY DIVERSIONS ONCE A WEEK AFTER EVERY RAINFALL. IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED. WHEN THE AREA PROTECTED IS PERMANENTLY STABILIZED, REMOVE THE RIDGE AND THE CHANNEL TO BLEND WITH THE NATURAL GROUND.
  - SEDIMENT DAMS – REMOVE SEDIMENT AND RESTORE BASIN TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. CHECK THE STRUCTURE FOR DAMAGE FROM EROSION TO ENSURE IT IS A MINIMUM 1.5 FEET BELOW THE LOW POINT OF THE EMBANKMENT.
  - TEMPORARY SLOPE DAM – INSPECT THE SLOPE DRAIN AND SUPPORTING DIVERSION AFTER EVERY RAINFALL AND PROMPTLY MAKE NECESSARY REPAIRS. WHEN THE PROTECTED AREA HAS BEEN PERMANENTLY STABILIZED, TEMPORARY MEASURES MAY BE REMOVED. MATERIALS DISPOSED OF PROPERLY AND ALL DISTURBED AREAS STABILIZED APPROPRIATELY.
  - SEDIMENT TUBE – CHECK SEDIMENT TUBE AFTER EACH RAINFALL. REMOVE SEDIMENT AND RESTORE ORIGINAL VOLUME WHEN SEDIMENT ACCUMULATES TO ONE-HALF THE DESIGN VOLUME.
- 3. ALL GRADED AREAS WILL BE SEEDED, FERTILIZED AND MULCHED ACCORDING TO SPECIFICATIONS, SPECIAL PROVISIONS AND THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL TO MAINTAIN A VIGOROUS, DENSE, VEGETATIVE COVER WITHIN REQUIRED SOIL STABILIZATION TIMEFRAMES. IF WORK ON THE PROJECT CEASES FOR MORE THAN THE AFOREMENTIONED LENGTH OF TIME, ALL DISTURBED AREAS SHALL HAVE TEMPORARY VEGETATIVE GROUND COVER ESTABLISHED AND EROSION CONTROL DEVICES MAINTAINED.
- 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.
- 5. ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND 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 TRAKING OF MUD ONTO THE PAVED ROADWAY CONSTRUCTION AREAS. 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 DIVERT SEDIMENT, LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS. TEMPORARY SEDIMENT BASIN MUST BE MAINTAINED PRIOR TO TRANSITIONING TO PERMANENT DRY OR WET BASINS.



NOTE: THE SILTSACK WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

**REGULAR FLOW SILTSACK®**  
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4633	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

**HI-FLOW SILTSACK®**  
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)  
DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK WITH A WOVEN PILLOW INSERT.

**SOIL STABILIZATION TIME FRAMES**

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

SEEDING AND MULCHING:  
(West)  
The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

Shoulder and Median Areas

August 1 – June 1	May 1 – September 1
20# Kentucky Bluegrass	20# Kentucky Bluegrass
75# Hard Fescue	75# Hard Fescue
25# Rye Grain	10# German or Browntop Millet
500# Fertilizer	500# Fertilizer
4000# Limestone	4000# Limestone

Areas Beyond the Mowing Pattern, Waste and Borrow Areas:

August 1 – June 1	May 1 – September 1
100# Tall Fescue	100# Tall Fescue
15# Kentucky Bluegrass	15# Kentucky Bluegrass
30# Hard Fescue	30# Hard Fescue
25# Rye Grain	10# German or Browntop Millet
500# Fertilizer	500# Fertilizer
4000# Limestone	4000# Limestone

Approved Tall Fescue Cultivars

06 Dust	Escalade	Justice	Serengeti
2nd Millennium	Essential	Kalahari	Shelby
3rd Millennium	Evergreen 2	Kitty Hawk 2000	Sheridan
Apache III	Falcon IV	Legitimate	Signia
Avenger	Falcon NG	Lexington	Silver Hawk
Barlexas	Falcon V	LSD	Silverstar
Barlexas II	Faith	Magellan	Shenandoah Elite
Bar Fa	Fat Cat	Matador	Sidewinder
Barrera	Festnova	Millennium	SRP Skyline
Barrington	Fidelity	Monet	Southern Choice II
Barrobusto	Finelawn Elite	Mustang 4	Speedway
Barvado	Finelawn Xpress	Ninja 2	Spyder LS
Biltmore	Finesse II	Ol' Glory	Sunset Gold
Bingo	Firebird	Olympic Gold	Blockwatch
Bizam	Firecracker LS	PadreTaccua	Blade Runner II
Firezza	Firezza	Tanzania	Bonsai
Five Point	Pedigree	Trio	
Focus	Picasso	Tahoe II	
Braveheart	Forfe	Piedmont	Talladega
Bravo	Garrison	Plantation	Tarheel
Bullseye	Gazelle II	Proseeds 5301	Terrano
Cannavaro	Gold Medallion	Prospect	Titan Ltd
Catalyst	Grande 3	Pure Gold	Titanium LS
Coyenne	Greenrocks	Quest	Tracer
Crossline Rz	Greenkeeper	Raptor II	Traverse SRP
Chippier	Gremlin	Rebel Exeda	Tulsa Time
Cochise IV	Greystone	Rebel Sentry	Turbo
Constitution	Guardian 21	Rebel IV	Turbo RZ
Corgi	Guardian 41	Regiment II	Ultimate
Corona	Hemi	Regenerate	Venture
Coyote	Honky Tonk	Rendition	Umbrella
Darlington	Hot Rod	Rhombler 2 SRP	
Davinci	Hunter	Rembrandt	
Van Gogh	Desire	Inferno	
Reunion	Watchdog	Dominion	Innovator
Riverside	Wolfpack II	DynamicIntegrity	RNPxtremgreen
DynastyJaguar 3	Rocket	Enderver	Jamboree
Scorpion			

Approved Kentucky Bluegrass Cultivars:

4-Season	Blue Velvet	Gladstone	Quantum
Leap	Alexa II	Bluelberry	Granite
Rambo	America	Boomerang	Hampton
Rhapsody	Apollo	Brilliant	Harmonie
Rhythm	Arcadio	Cabernet	Impact
Rito	Aries	Champagne	Jefferson
Royce	Armada	Champlain	Juliet
Rubicon	Arrow	Chicago II	Jump Start
Rugby II	Arrowhead	Corsair	Keeneland
Shiraz	Aura	Courtyard	Langara
Avid	Delight	Liberator	Skys Award
Diva	Madison	Solar Eclipse	Awesome
Dynamo	Mercury	Sonoma	Bandera
Eagleton	Midnight	Sorbonne	Barduke
Emblem	Midnight II	Starburst	Barriqua
Empire	Moon Shadow	Sudden Impact	Baroness
Enviata	Moonlight SLT	Total Eclipse	Barrister
Everest	Mystere	Touche	Barvette HGT
Everglade	Nu Destiny	Tsunami	Bedazzled
Excursion	Nu	Chicago	Unique
Belissimo	Freedom II	Nu Glade	Valor
Bewitched	Freedom III	Odyssey	Voyager II
Beyond	Front Page	Perfection	Washington
Blacksburg II	Futurity	Pinot	Zinfandel
Blackstone	Gaelic	Princeton 105	Blue Note Ginney II
Prosperity			

Approved Hard Fescue Cultivars:

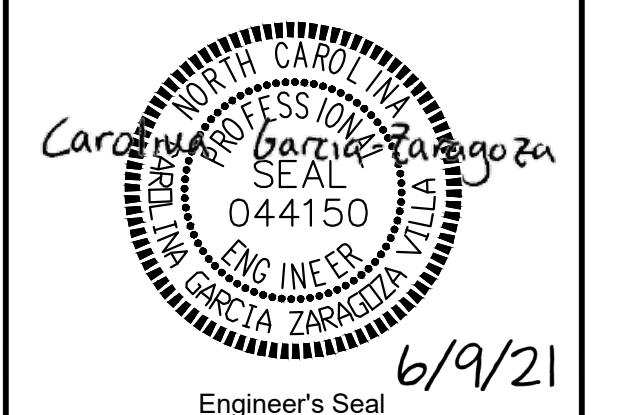
Aurora II	Eureka II	Oxford	Scaldis II
Aurora Gold	Firefly	Reliant II	Spartan II
Berkshire	Granite	Reliant IV	Stonhenge
Bighorn GT	Chariot	Heron	Nordic
Rescue 911	Rhino		

On cut and fill slopes 2:1 or steeper add 20# Sericea Lespedeza January 1 – December 31.

Fertilizer shall be 10-20-20 analysis. A different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis and as directed.



PREPARED BY  
ENGINEERING DEPARTMENT  
CITY OF CONCORD  
P.O. BOX 308  
CONCORD N.C. 28026  
(704) 920-5425



GENERAL SERVICES DR.  
EROSION CONTROL DETAILS  
PROJECT # : 2020-076

REV #	DATE	DESCRIPTION	BY
0	05/09/21	FOR CONSTRUCTION	EES
1	06/09/21	ADDRESSED COMMENTS	EES

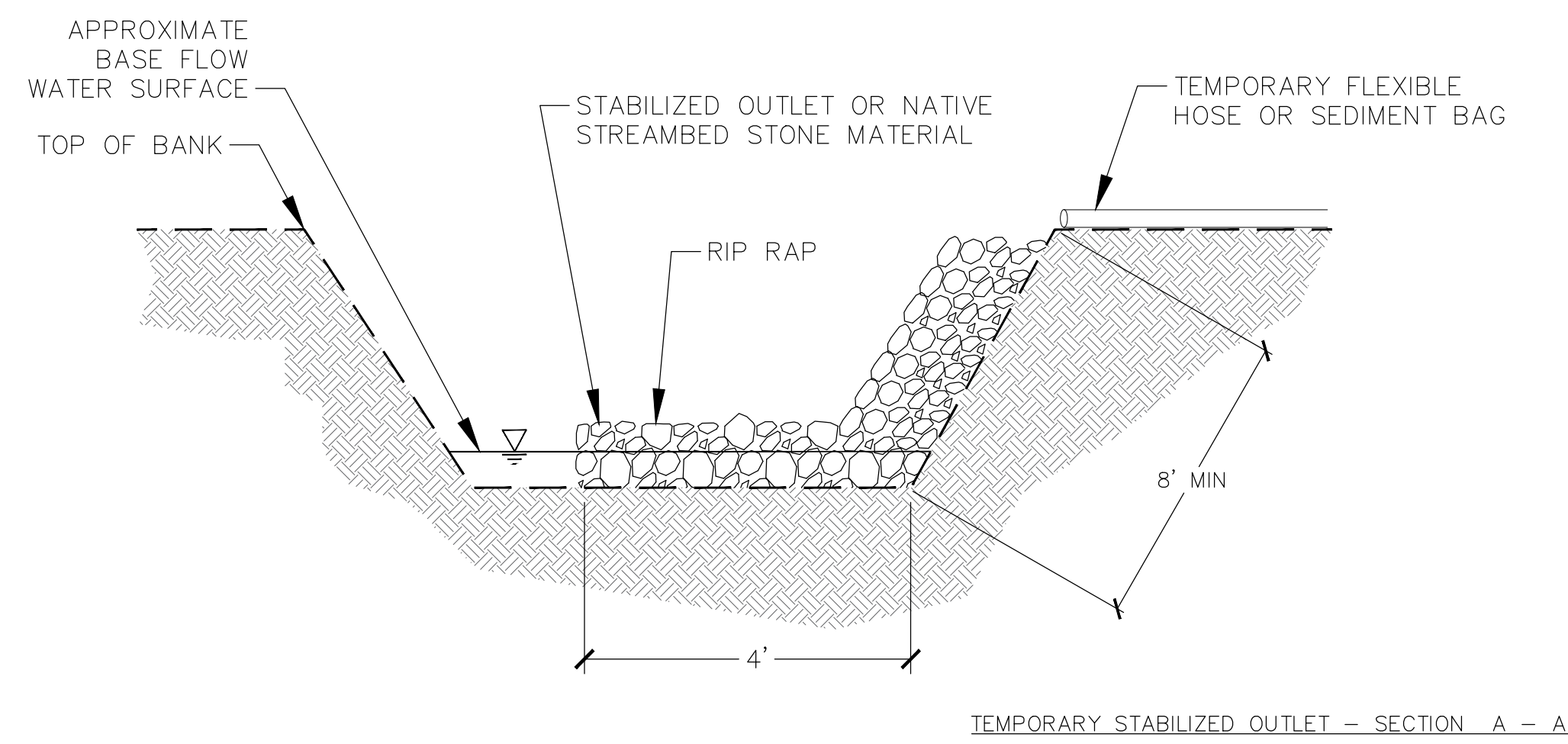
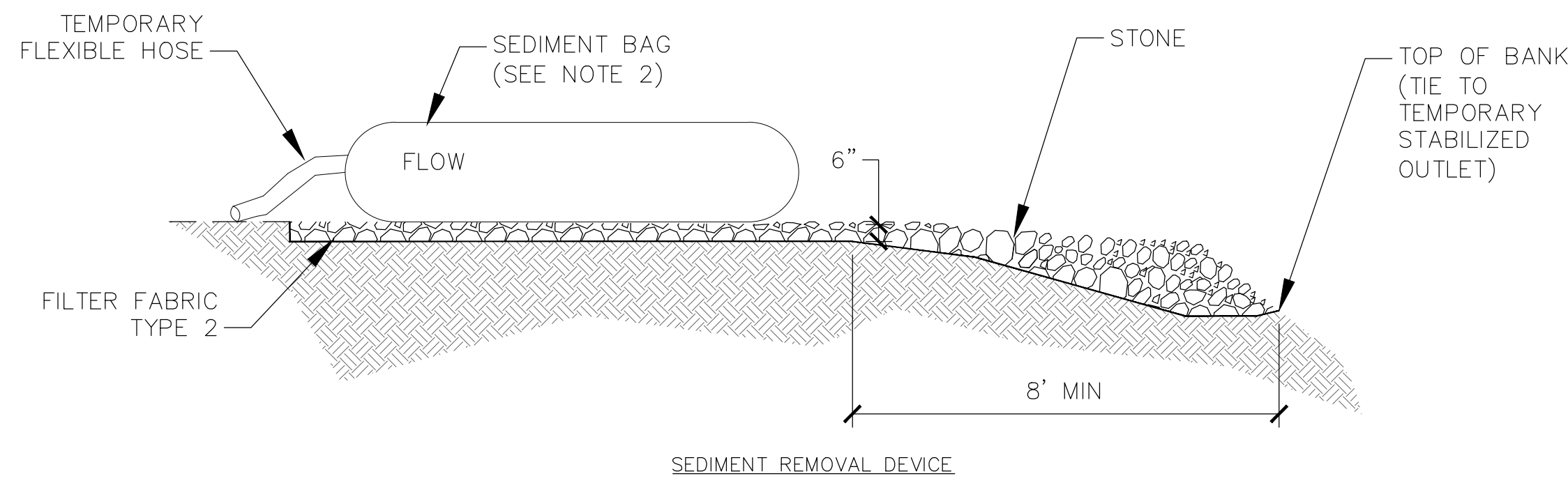
DESIGNED BY: CGZV  
DRAWN BY: EES  
CHECKED BY: EAB  
SCALE: AS SHOWN  
DATE: 02/04/2020  
PROJECT NUMBER: 2020-076  
SHEET: 4 OF: 5

NOTES:

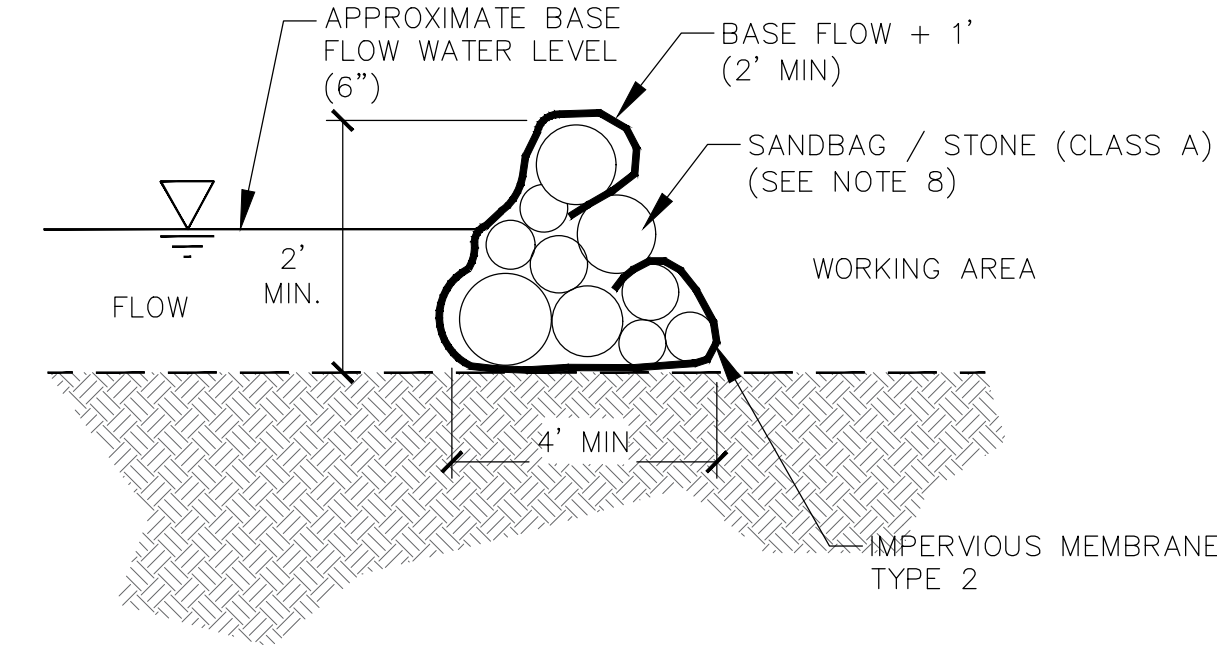
SPECIFICATION	REQUIREMENTS
GRAB TENSILE STRENGTH (ONE INCH GRIP), POUNDS, MINIMUM IN EACH DIRECTION ASTM DESIGNATION: D 4632 OR APPROPRIATE TEST METHOD FOR SPECIFIC POLYMER	255
ELONGATION, PERCENT, MINIMUM IN EACH DIRECTION ASTM DESIGNATION: D 4632 OR APPROPRIATE TEST METHOD FOR SPECIFIC POLYMER	15
PERMITTIVITY, 1/SEC., MINIMUM ASTM DESIGNATION: D 4491	1.5
FLOW RATE, GALLONS PER MINUTE PER SQUARE FOOT MINIMUM ASTM DESIGNATION: D 4491	200
ULTRAVIOLET STABILITY, PERCENT TENSILE STRENGTH RETAINED AFTER 500 HOURS, MINIMUM ASTM DESIGNATION: D 4355 (XENON-ARC LAMP AND WATER SPRAY WEATHERING METHOD)	80

NOTES:

- THE SEDIMENT FILTER BAG SHALL BE 10'X12'X1.5' (MIN) AND SHALL BE COMPLETE WITH LIFTING LOOPS AND DUMP STRAPS ATTACHED AT THE BOTTOM TO FACILITATE EMPTYING OF SEDIMENT FILTER BAG.
- LIFTING STRAPS, SHOULD BE PLACED UNDER THE DEWATERING SEDIMENT FILTER BAG TO FACILITATE REMOVAL AFTER USE.
- PLACE THE DEWATERING SEDIMENT FILTER BAG ON A LEVEL STABILIZED AREA OVER DENSE VEGETATION/STRAW, OR GRAVEL (IF INCREASED DRAINAGE SURFACE AREA IS NEEDED)
- INSERT DISCHARGE HOSE FROM PUMP INTO THE DEWATERING SEDIMENT FILTER BAG A MINIMUM OF SIX INCHES (6") AND TIGHTLY SECURE WITH ATTACHED STRAP TO PREVENT WATER FROM FLOWING OUT OF THE UNIT WITHOUT BEING FILTERED.
- REPLACE THE UNIT WHEN ONE HALF (1/2) FULL OF SEDIMENT OR WHEN SEDIMENT HAS REDUCED THE FLOW RATE OF THE PUMP DISCHARGE TO AN IMPRACTICAL RATE.
- REMOVE THE UNIT AND SEDIMENT FROM ENVIRONMENTALLY SENSITIVE AREA AND WATERWAYS AT THE APPROVED DISPOSAL SITE OPEN OR SLIT THE UNIT, REMOVE SEDIMENT AND GRADE SMOOTHLY INTO EXISTING TOPOGRAPHY. DISPOSE OF THE DEWATERING SEDIMENT FILTER BAG, AT AN APPROPRIATE RECYCLING OR SOLID WASTE FACILITY.

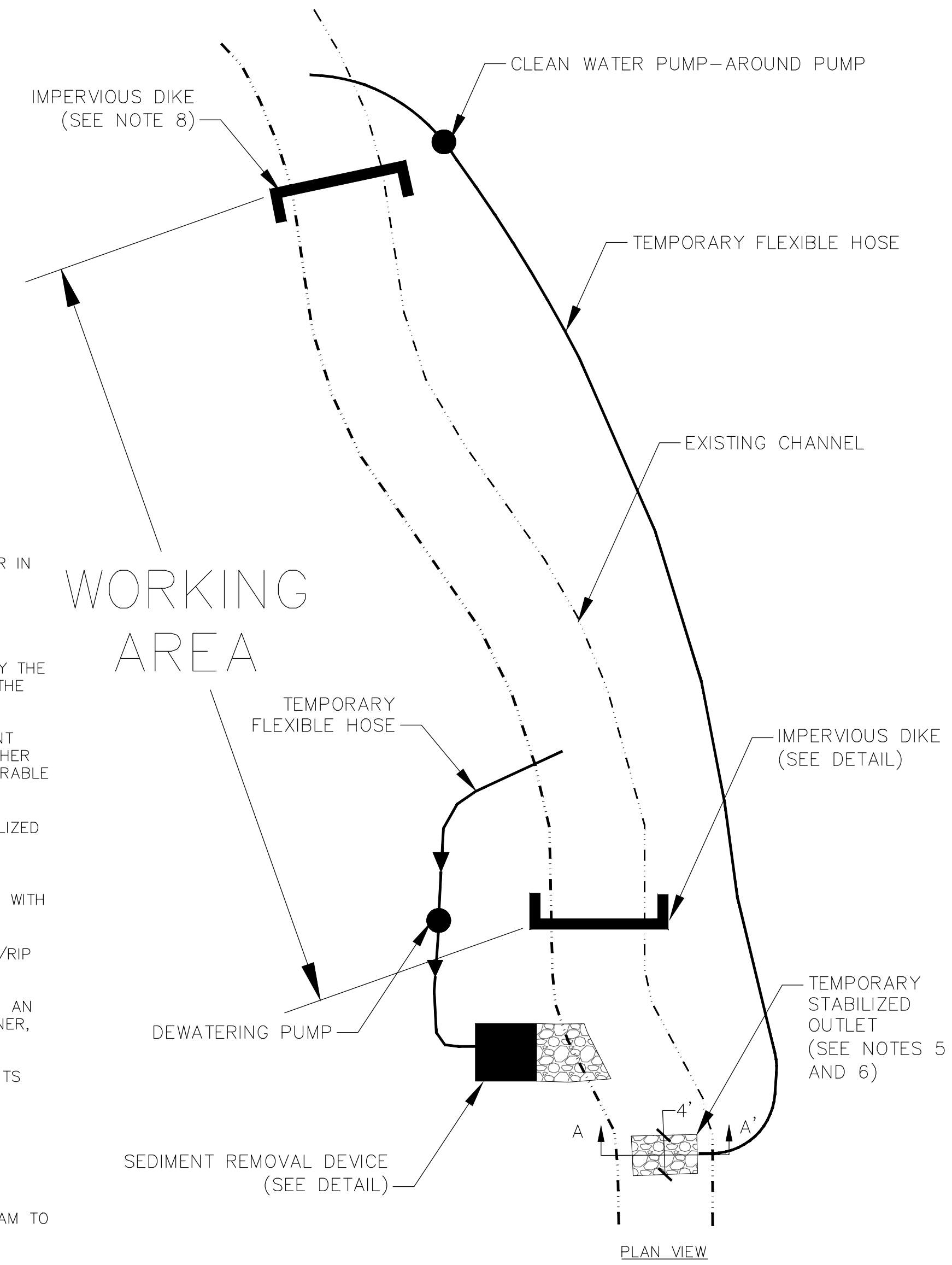


**DEWATERING SEDIMENT FILTER BAG** NTS



NOTES:

- ALL CHANNEL WORK INVOLVING EXCAVATION SHALL BE PERFORMED IN DRY CONDITIONS OR IN CHANNEL SECTIONS ISOLATED BY IMPERVIOUS DIKES AND KEPT DE-WATERED.
- THE CONTRACTOR SHALL NOT DISTURB MORE AREA THAN CAN BE STABILIZED THE SAME WORKING DAY.
- PUMP-AROUND PUMP AND HOSE SHALL ADEQUATELY CONVEY BASEFLOW AS SPECIFIED BY THE DESIGNER. DE-WATERING PUMP SHALL ADEQUATELY DE-WATER THE WORKING AREA AT THE DOWNSTREAM IMPERVIOUS DIKE.
- GRAVITY-BASED GEOTEXTILE BAG FILTERS SHALL BE USED TO COLLECT SILT AND SEDIMENT FROM WORK AREA DEWATERING. THE DESIGNER MAY SPECIFY A SEDIMENT BASIN OR OTHER SEDIMENT CONTROL MEASURE IN LIEU OF A SEDIMENT BAG IF SITE CONDITIONS ARE FAVORABLE (I.E. - TREES WILL NOT BE IMPACTED FOR BASIN EXCAVATION, ETC.).
- EFFLUENT FROM CLEAN WATER PUMP AROUND MAY BE DISCHARGED DIRECTLY INTO STABILIZED OUTLET (NO SEDIMENT REMOVAL DEVICE REQUIRED).
- A STABILIZED OUTLET SHALL BE USED TO CONTROL THE EFFLUENT FROM ALL PUMPING OPERATIONS. THE DESIGNER SHALL SPECIFY ALL MATERIALS AND DIMENSIONS ASSOCIATED WITH STABILIZED OUTLETS.
- FILTER FABRIC AS SPECIFIED BY THE DESIGNER SHALL BE USED UNDERNEATH ALL STONE/RIP RAP PLACED FOR SEDIMENT BAGS, STABILIZED OUTLETS, SPLASH PADS.
- IMPERVIOUS DIKES SHALL BE CONSTRUCTED TO ISOLATE THE IN-STREAM WORKING AREA. AN IMPERVIOUS FABRIC MEMBRANE AND SAND BAGS OR STONE, AS SPECIFIED BY THE DESIGNER, SHALL BE USED TO CREATE THE DIKES.
- STREAM AREAS IMPACTED DUE TO SITE DEWATERING ACTIVITIES SHALL BE REGRADED TO ITS PRECONSTRUCTION CONTOURS AND REVEGETATED WITH APPROPRIATE NATIVE SPECIES.
- THE WORK SEQUENCE IN PUMP-AROUND OPERATIONS PROCEEDS TYPICALLY AS FOLLOWS:
  - INSTALL SEDIMENT REMOVAL DEVICE AND TEMPORARY STABILIZED OUTLETS AT THE DOWNSTREAM END OF WORKING AREA.
  - INSTALL PUMP-AROUND PUMP AND FLEXIBLE HOSE.
  - INSTALL UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING (CLEAN WATER) DOWNSTREAM TO STABILIZED OUTLET.
  - INSTALL DOWNSTREAM IMPERVIOUS DIKE AND DE-WATERING PUMP.
  - PERFORM CHANNEL WORK IN ACCORDANCE WITH THE PLANS IN THE WORKING AREA.
  - DE-WATER THE WORKING AREA (AS NEEDED) INTO THE SEDIMENT REMOVAL DEVICE AND TEMPORARY STABILIZED OUTLET.
  - UPON COMPLETION OF WORK, REMOVE ANY SEDIMENT ACCUMULATION BEHIND IMPERVIOUS DIKES.
  - REMOVE DOWNSTREAM AND THEN UPSTREAM DIKES AND ALL PUMPS AND HOSE.
  - SEED AND MULCH ALL DISTURBED AREAS PER THE PLANTING PLAN.



REV #	DATE	DESCRIPTION	BY
0	05/06/21	FOR CONSTRUCTION	EES
1	06/09/21	ADDRESSED COMMENTS	EES

DESIGNED BY: CGZV  
DRAWN BY: EES  
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