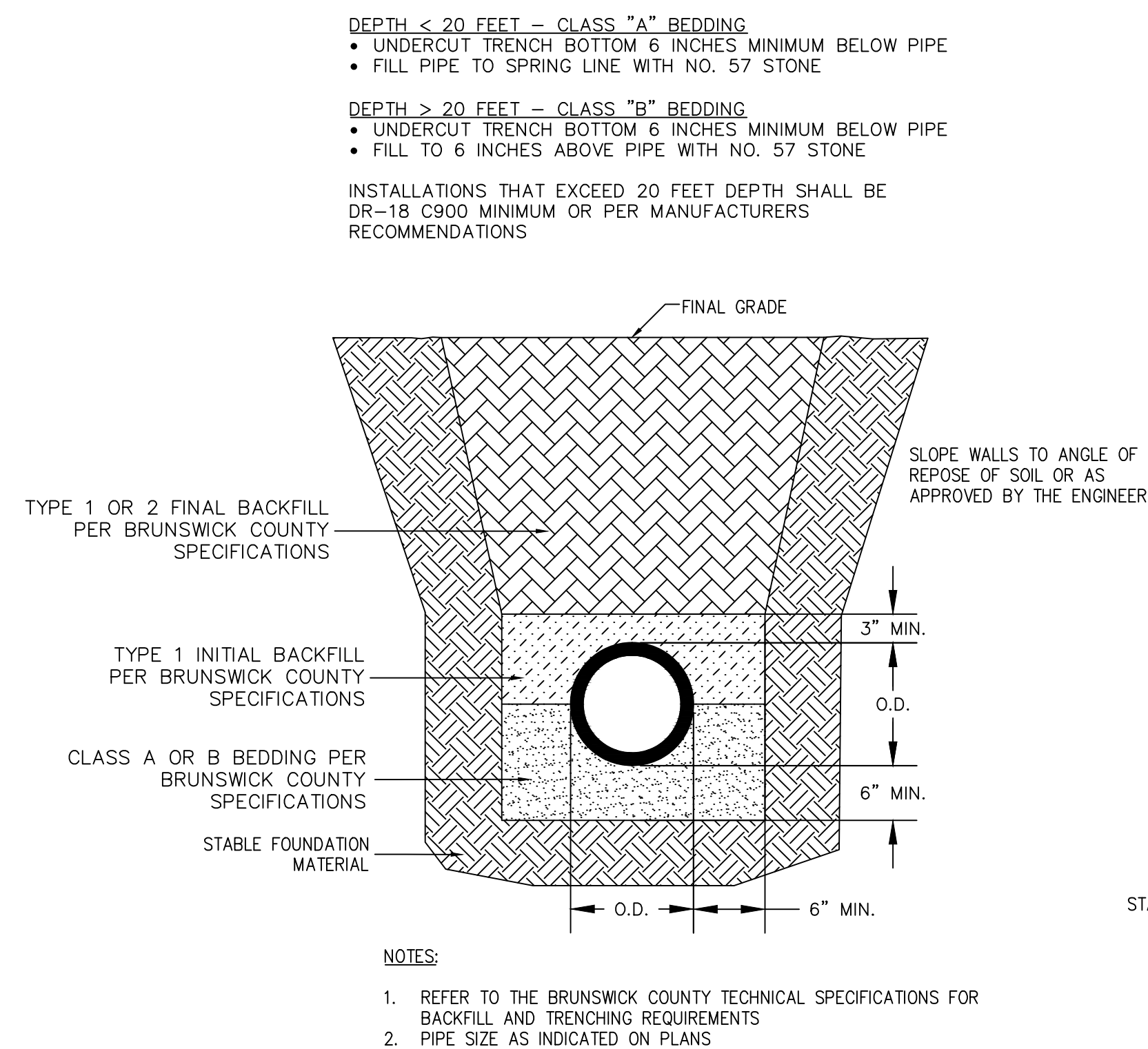


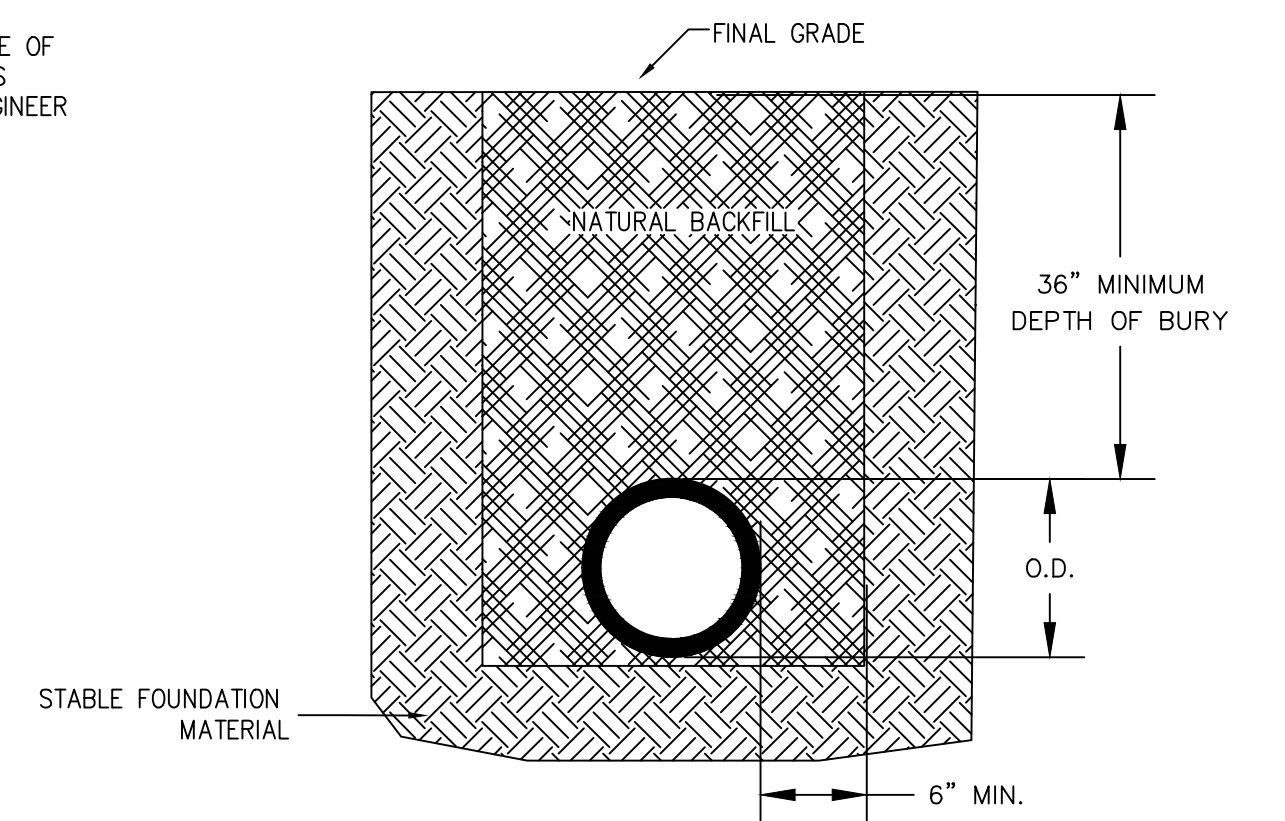
- NOTES:
1. USE STAINLESS STEEL THREADED RODS, MEGA-LUG OR APPROVED EQUAL FOR JOINT RESTRAINT.
 2. SEWER REQUIRES DR-18 C900 UNLESS OTHERWISE APPROVED BY BRUNSWICK COUNTY.
 3. WATER MAY BE DIP OR DR-18 C900 PIPE.

**DITCH AND/OR STORM DRAIN CROSSING
OFFSETS BETWEEN WATER/SEWER
PRESSURE MAIN AND STORM DRAIN
DETAIL WS-20**

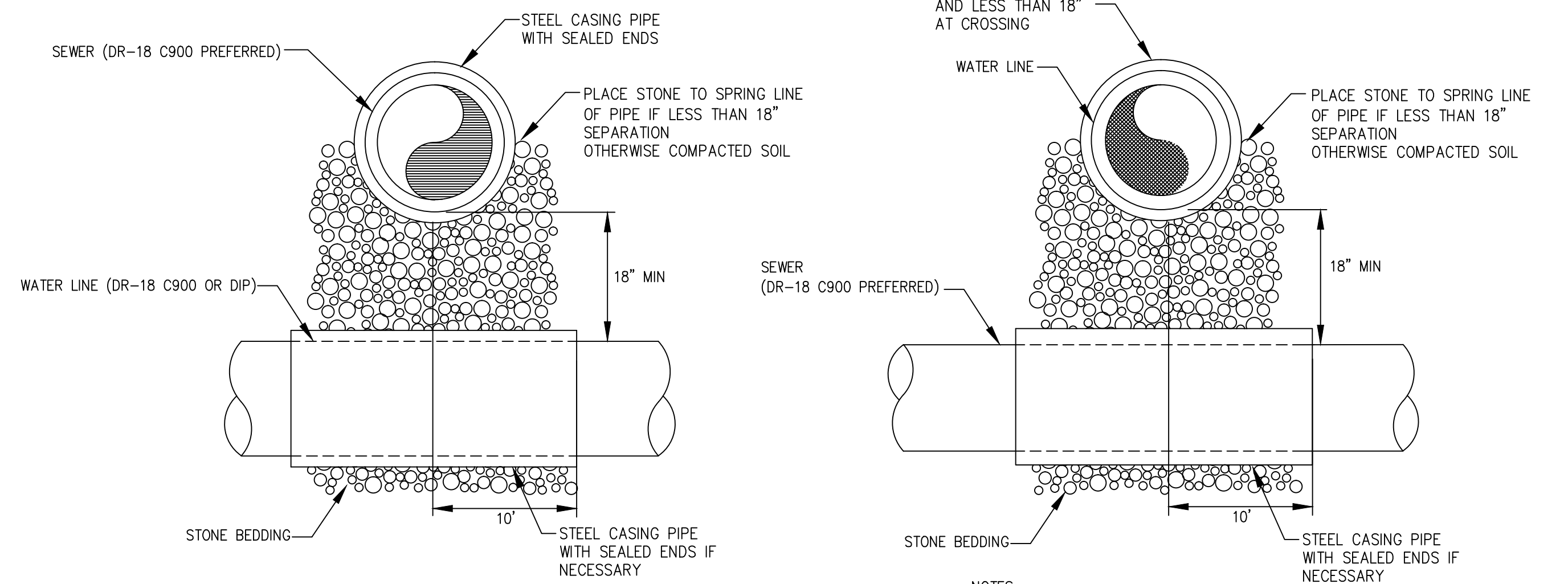


- NOTES:
1. REFER TO THE BRUNSWICK COUNTY TECHNICAL SPECIFICATIONS FOR BACKFILL AND TRENCHING REQUIREMENTS
 2. PIPE SIZE AS INDICATED ON PLANS

**GRAVITY SEWER
PIPE TRENCH/BEDDING DETAIL
DETAIL WS-22**



**WATERMAIN AND/OR SEWER FORCEMAIN (PRESSURE PIPE)
PIPE TRENCH/BEDDING DETAIL
DETAIL WS-22A**



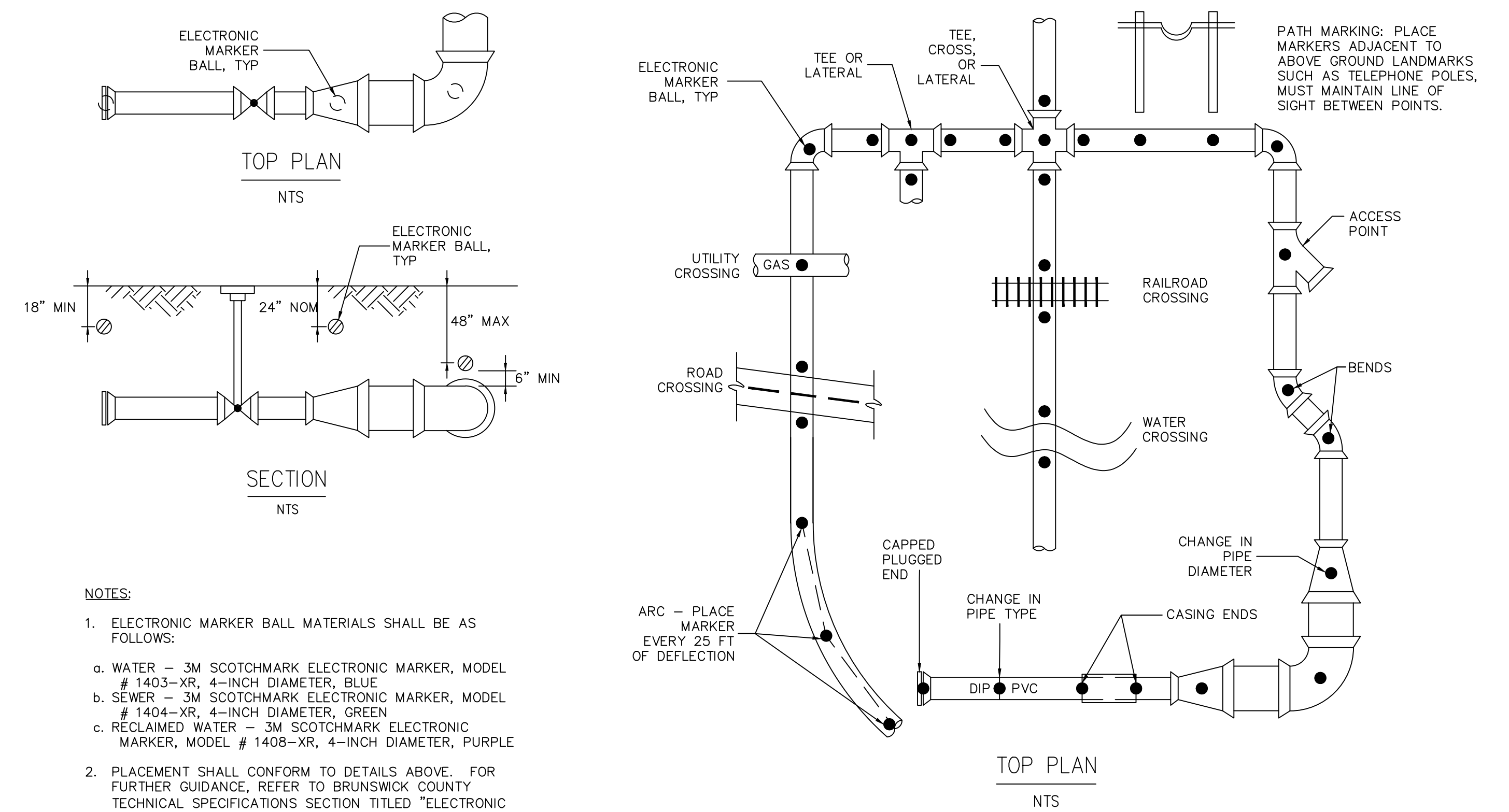
- NOTES:
1. BOTH THE WATER MAIN AND THE SEWER MAIN SHALL BE FERROUS MATERIALS WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A MINIMUM DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING.
 2. ALTERNATIVELY, PIPES MAY BE SLEEVED WITH FERROUS MATERIALS FOR A MINIMUM DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING AS APPROVED BY BRUNSWICK COUNTY ENGINEERING.

SEWER CROSSING ABOVE WATER LINE

- NOTES:
1. SOIL REPLACED UNDER THE WATER MAIN SHALL BE COMPACTED.
 2. IF THE WATER MAIN CROSSES AT LESS THAN 18\"/>

SEWER CROSSING BELOW WATER LINE

**SEWER OFFSETS ABOVE
AND BELOW WATER MAINS
DETAIL WS-21**



- NOTES:
1. ELECTRONIC MARKER BALL MATERIALS SHALL BE AS FOLLOWS:
 - a. WATER - 3M SCOTCHMARK ELECTRONIC MARKER, MODEL # 1403-XR, 4-INCH DIAMETER, BLUE
 - b. SEWER - 3M SCOTCHMARK ELECTRONIC MARKER, MODEL # 1404-XR, 4-INCH DIAMETER, GREEN
 - c. RECLAIMED WATER - 3M SCOTCHMARK ELECTRONIC MARKER, MODEL # 1408-XR, 4-INCH DIAMETER, PURPLE
 2. PLACEMENT SHALL CONFORM TO DETAILS ABOVE. FOR FURTHER GUIDANCE, REFER TO BRUNSWICK COUNTY TECHNICAL SPECIFICATIONS SECTION TITLED "ELECTRONIC MARKER BALLS FOR WATER AND SEWER FORCE MAINS".

**ELECTRONIC MARKER
BALL PLACEMENT DETAIL
DETAIL WS-23**

Revisions	
1.1 - DATED 7/12/2013	
1.2 - DATED 1/16/2014	
1.3 - DATED 1/23/2019	
1.4 - DATED 7/16/2019	
1.5 - DATED 2/12/2021	
Mod WS-20 & WS-21	

COUNTY OF BRUNSWICK

GENERAL WATER & SEWER DETAILS
FOR
BRUNSWICK COUNTY
NORTH CAROLINA

Date: 07-11-12
Scale: NTS
Drawn By: JDM
Checked By: WLP