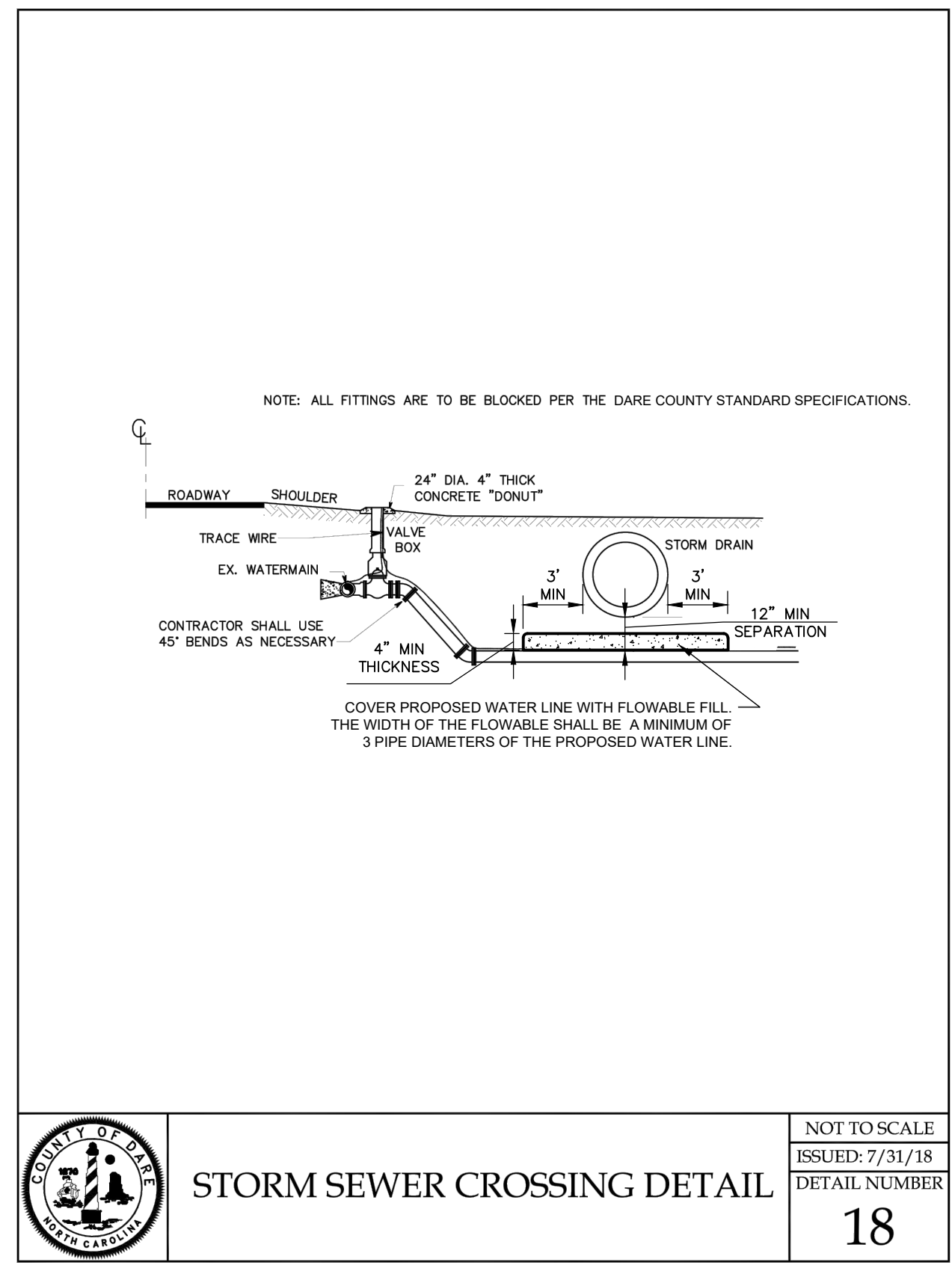


**WATER/SEWER CROSSING
DETAIL**

NOT TO SCALE
ISSUED: 7/31/18
DETAIL NUMBER
17

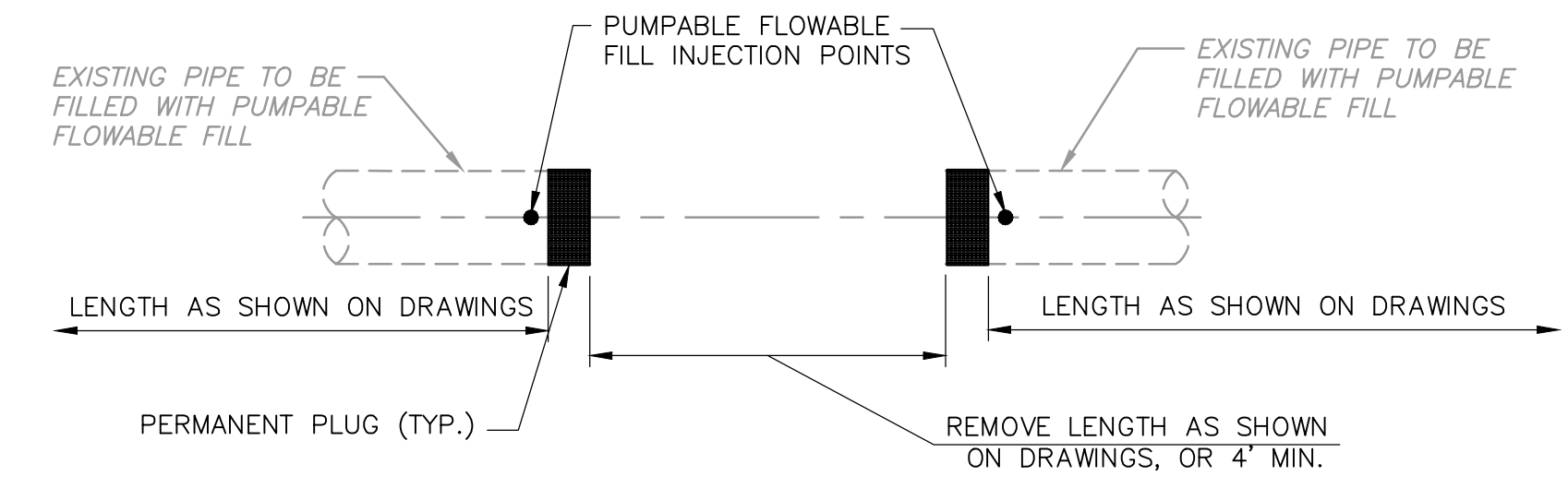
DETAIL A
NTS



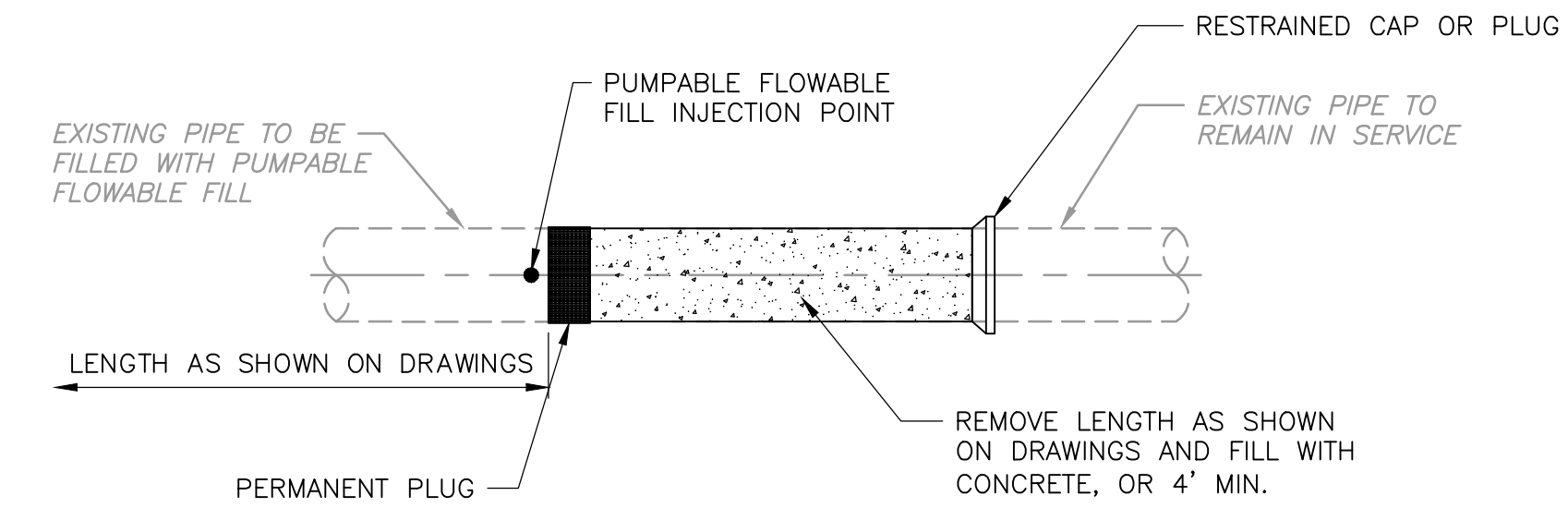
STORM SEWER CROSSING DETAIL

NOT TO SCALE
ISSUED: 7/31/18
DETAIL NUMBER
18

DETAIL B
NTS

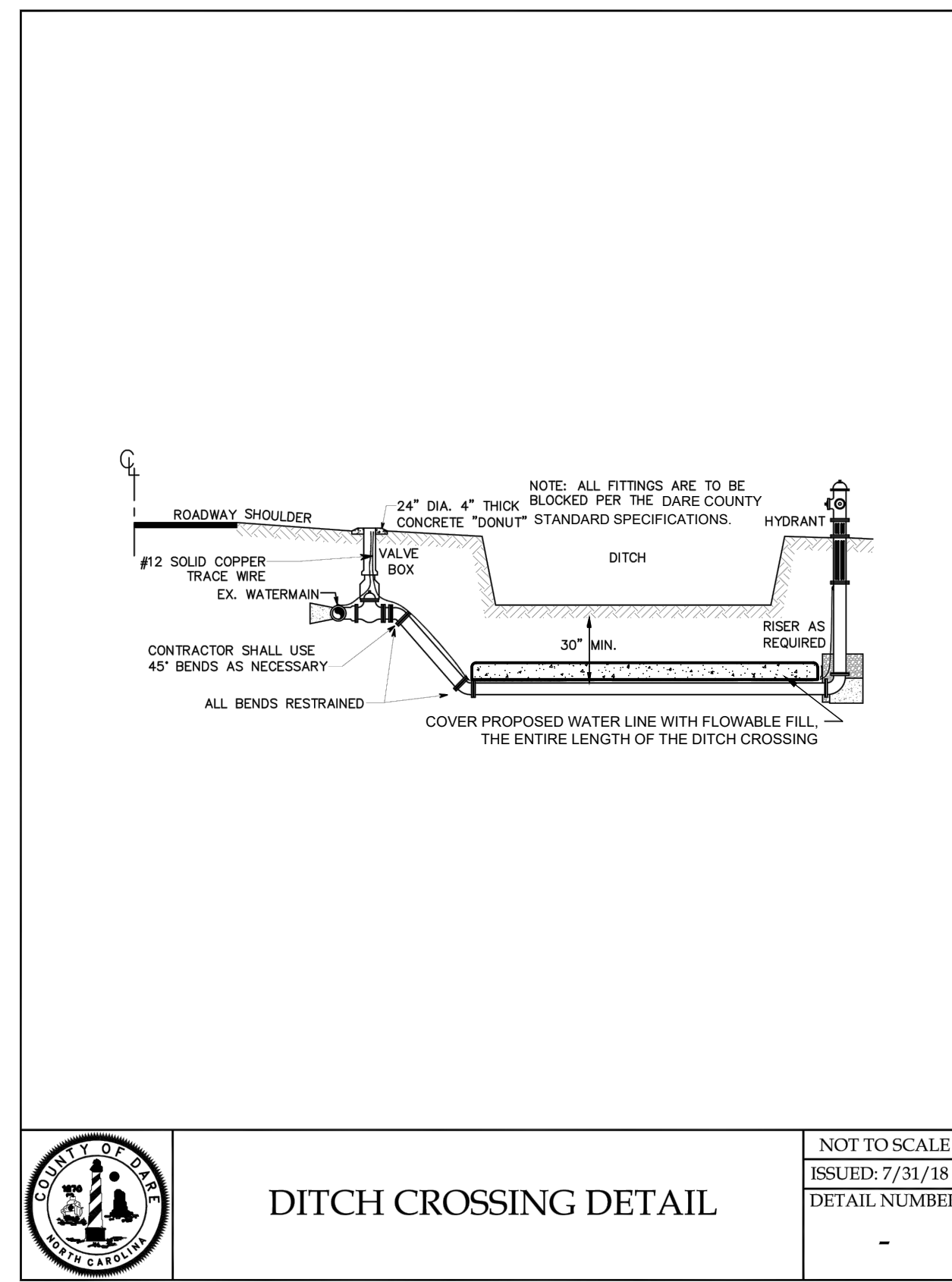


TYPICAL IN-LINE PIPE CUT AND PLUG



TYPICAL IN-LINE PIPE CUT AND RESTRAINED PLUG

DETAIL C
NTS



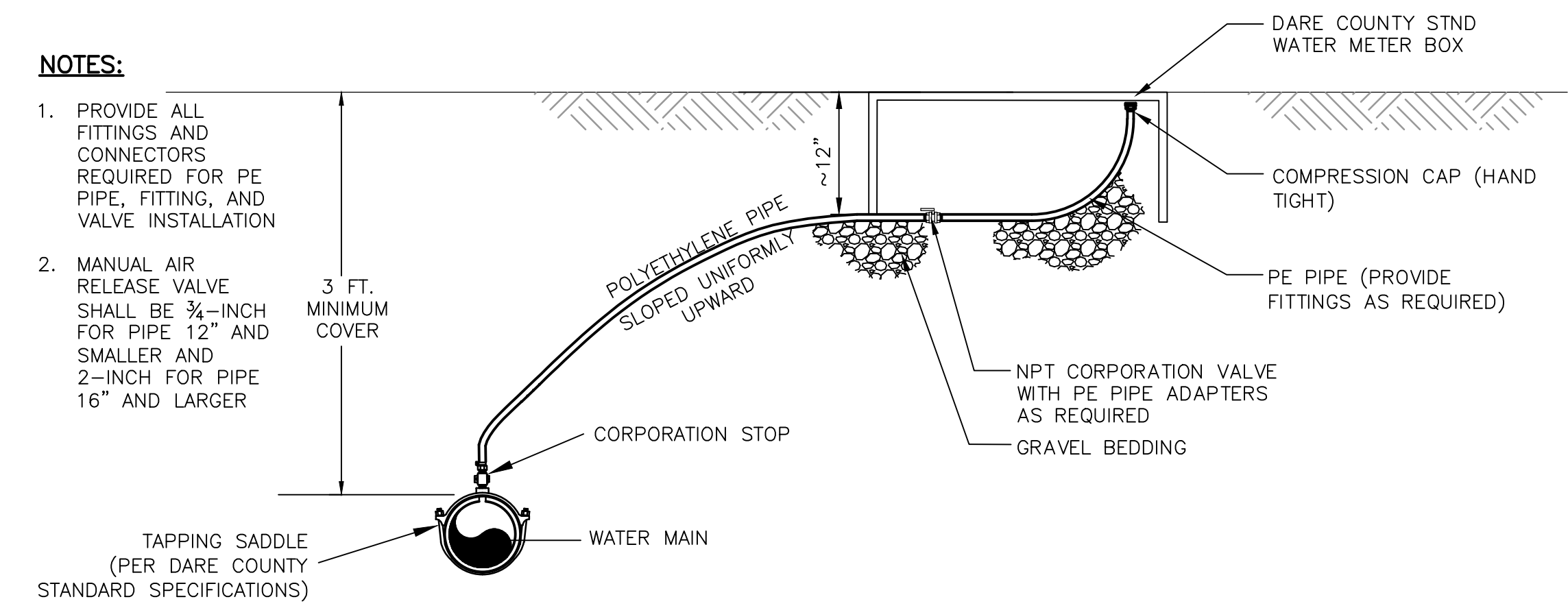
DITCH CROSSING DETAIL

NOT TO SCALE
ISSUED: 7/31/18
DETAIL NUMBER
-

DETAIL D
NTS

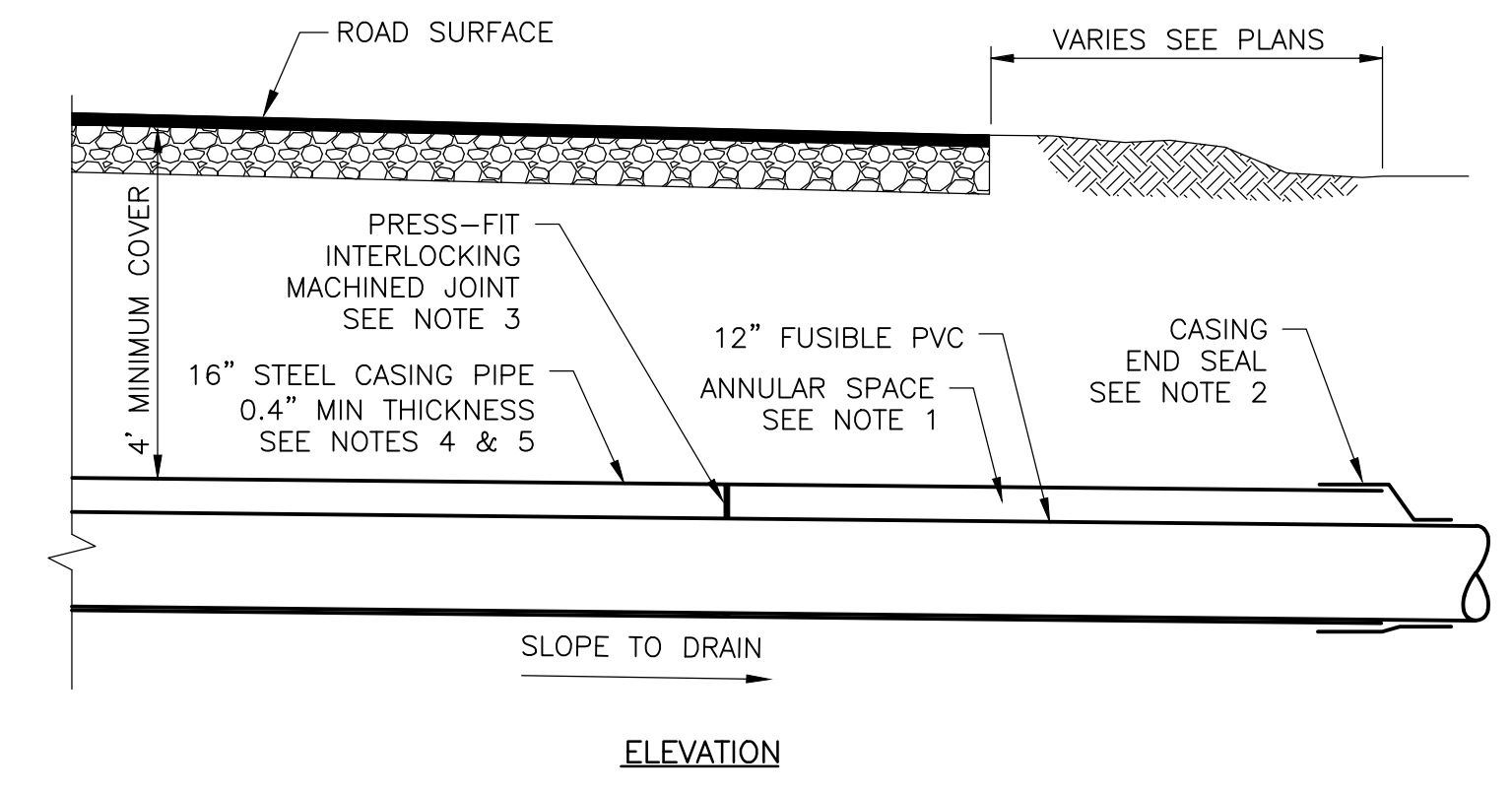
NOTES:

1. PROVIDE ALL FITTINGS AND CONNECTORS REQUIRED FOR PE PIPE, FITTING, AND VALVE INSTALLATION
2. MANUAL AIR RELEASE VALVE SHALL BE 3/4-INCH FOR PIPE 12" AND SMALLER AND 2-INCH FOR PIPE 16" AND LARGER



MANUAL AIR RELEASE VALVE

DETAIL E
NTS



INTERLOCKING STEEL ENCASING PIPE

DETAIL F
NTS

NOTES:

1. ANNULAR SPACE TO REMAIN OPEN AND SHALL NOT BE FILLED OR GROUTED.
2. INSTALL CASING END SEALS WITH STAINLESS STEEL BANDS AS MANUFACTURED BY PIPELINE SEAL AND INSULATOR, INC., ADVANCE PRODUCTS & SYSTEMS, LLC, WESTLANTIC TECH, OR APPROVED EQUAL.
3. MACHINED JOINT SHALL BE PERMALOK AB JOINT BY NORTHWEST PIPE COMPANY, TRI-LOC BY TRINITY PRODUCTS, OR APPROVED EQUAL. MACHINED JOINT SHALL BE LEAK RESISTANT UTILIZING A SILICONE SEALANT OR APPROVED EQUAL.
4. CASING PIPE TO BE INSTALLED VIA OPEN CUT ACCORDANCE WITH SPECIFICATIONS AND DETAIL F ON SHEET UC-3C.
5. MINIMUM ENCASMENT PIPE THICKNESS MAY ONLY BE MODIFIED WITH STRUCTURAL DESIGN CALCULATIONS PREPARED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF NORTH CAROLINA. THE CALCULATIONS SHALL CERTIFY A DURABILITY AND A DESIGN LIFE OF 100 YEARS. THE CALCULATIONS SHALL INCLUDE A RATE OF CORROSION FOR STEEL PIPE BASED ON THE SUBSURFACE CONDITIONS AT EACH ENCASMENT LOCATION. THE SUBSURFACE CONDITIONS AND RATE OF CORROSION FOR STEEL PIPE SHALL BE OBTAINED FROM SUBSURFACE TESTING AT EACH LOCATION PERFORMED AND CERTIFIED BY A GEOTECHNICAL SERVICES FIRM LICENSED IN THE STATE OF NORTH CAROLINA.

REVISIONS

8/17/19