

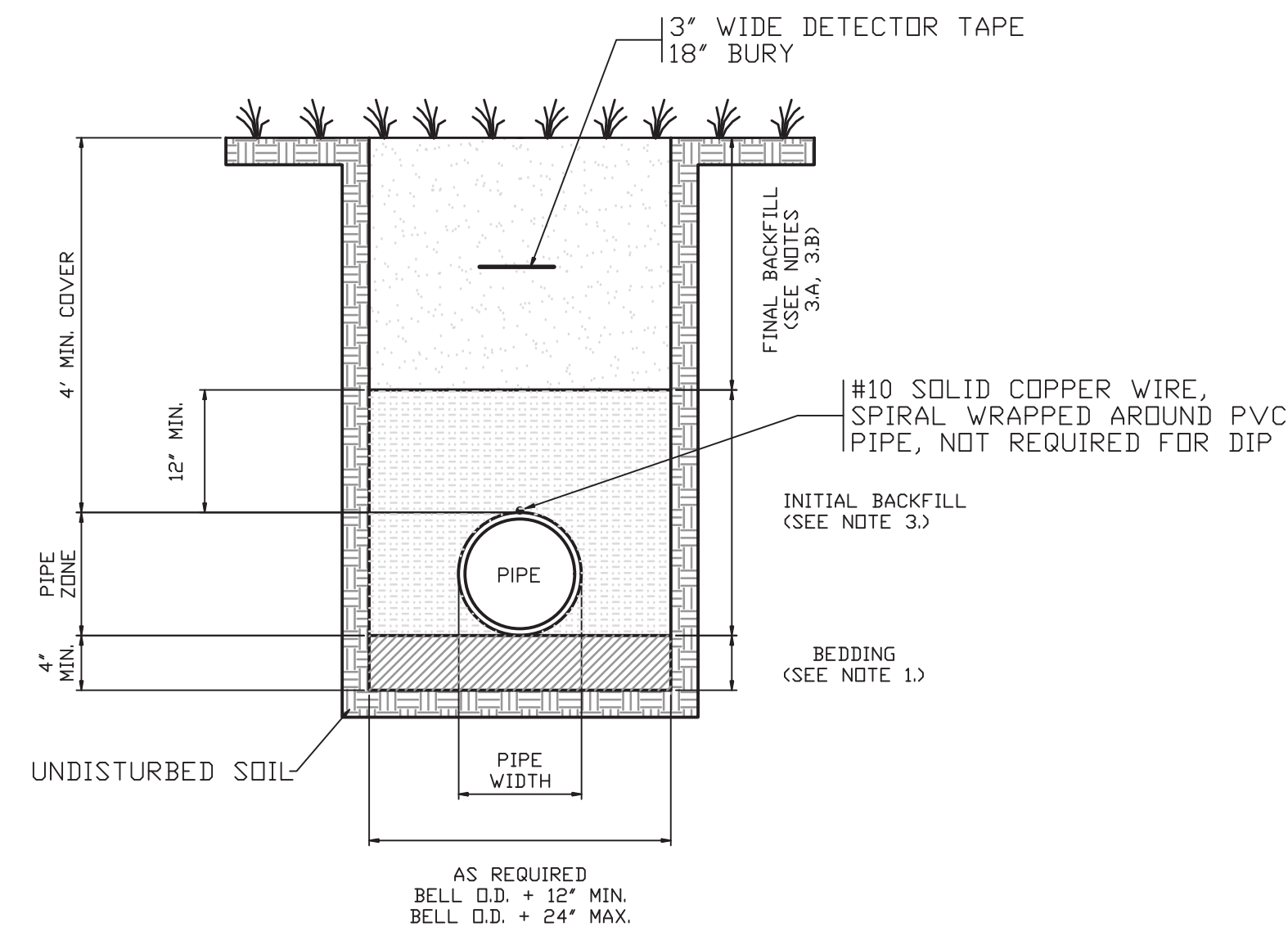
Engineering
Landscape Architecture
Surveying

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PROJECT TYPICAL DETAILS

TOWN OF CARTHAGE

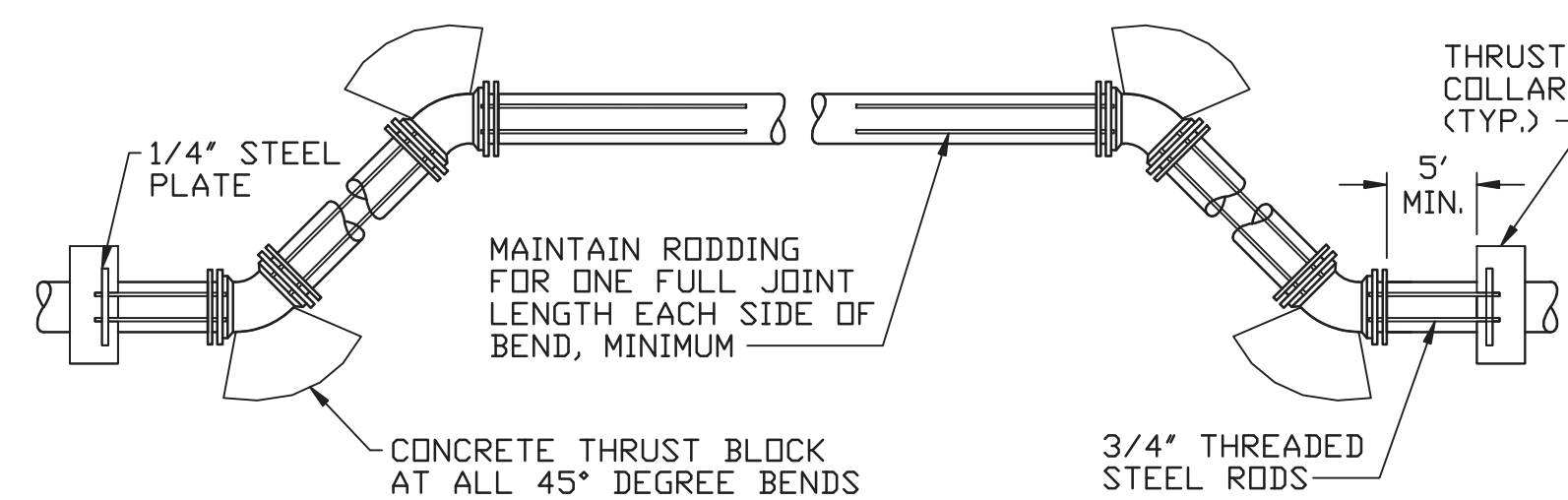
PROJECT REFERENCE NO. BR-0035	SHEET NO. UC-3F
DESIGNED BY: MAL	
DRAWN BY: BCS	
CHECKED BY: MAL	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	6/16/2020
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY
UTILITY CONSTRUCTION	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



FORCE MAIN TRENCH DETAILS
TYPE 3 LAYING CONDITIONS
N.T.S.

NOTES:

- LAYING CONDITIONS AS PER AWWA C600 AND C605 STANDARDS.
- BEDDING MATERIAL SHALL BE 4" MINIMUM THICKNESS, LOOSE SOIL (DEFINED AS NATIVE SOIL EXCAVATED FROM THE TRENCH), FREE FROM ROCKS AND SHALL PROVIDE UNIFORM SUPPORT FOR THE FULL LENGTH OF PIPE. COMPACT TO 95% MAXIMUM DENSITY.
- INITIAL BACKFILL SHALL BE LIGHTLY CONSOLIDATED IN MAXIMUM 6" LOOSE LIFTS, COMPACTED TO 95% OF MAXIMUM DENSITY.
- UNDER AREAS TO BE SEEDED OR SODDED, COMPACT SUCCEEDING LAYERS OF FINAL BACKFILL IN 12" LOOSE LIFTS TO 85% MAXIMUM DENSITY.
- UNDER STRUCTURES, PAVEMENTS AND ROAD SHOULDERS, COMPACT SUCCEEDING LAYERS OF FINAL BACKFILL IN 6" LOOSE LIFTS TO 95% MAXIMUM DENSITY EXCEPT COMPACT TOP 12" OF SUBGRADE TO 98% MAXIMUM DENSITY.
- PROVIDE #10 SOLID COPPER WIRE IN SUFFICIENT LENGTH TO BE CONTINUOUS OVER EACH SEPARATE RUN OF ALL BURIED PVC PIPING. AT VALVE BOXES, BRING WIRE TO WITHIN 6 IN. OF TOP OF BOX AND INSERT INTO BOX THROUGH DRILLED HOLE. NOT REQUIRED FOR DUCTILE IRON PIPE.
- INSTALL 3' WIDE DETECTOR TAPE AT 18" DEPTH. TAPE SHALL HAVE MIDDLE FOIL LAYER.

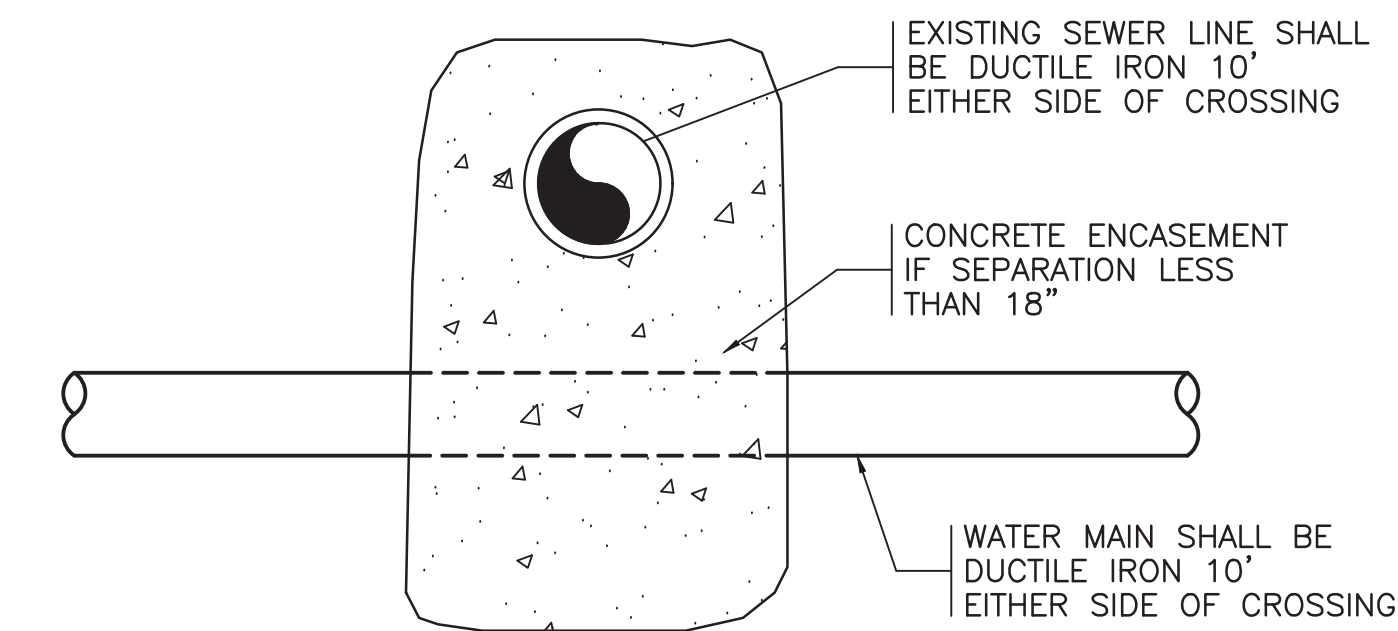


STATIC THRUST SIZE OF 45° BEND	NUMBER OF IN POUNDS	NUMBER OF RODS REQUIRED
6"	4,328	2
8"	7,694	2
12"	17,312	4
16"	30,779	4
20"	48,091	6
24"	69,252	8

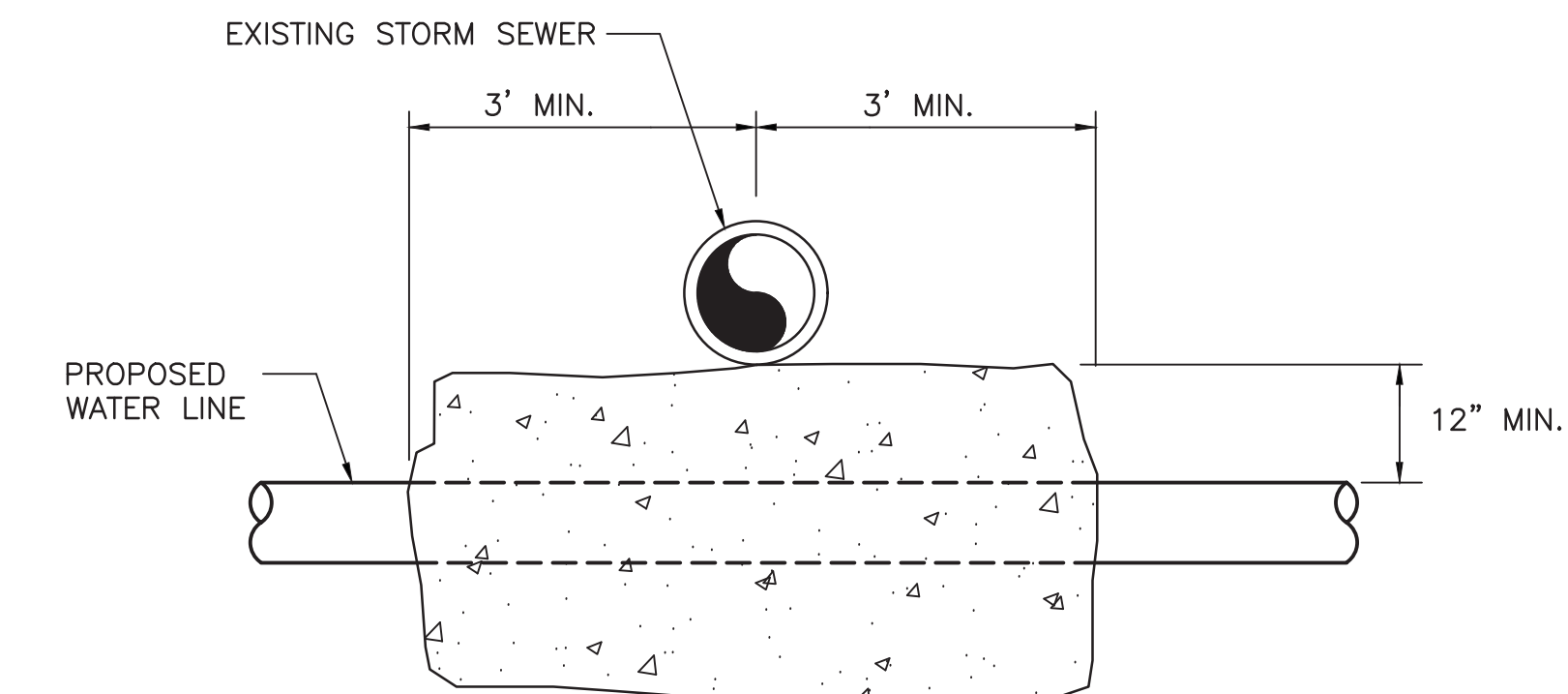
NOTES:

- ONCE INSTALLED AND TIGHT, THE STEEL RODS AND BOLTS SHALL RECEIVE 2 COATS OF BITUMINOUS MATERIAL OR SHALL BE GALVANIZED.
- CONCRETE SHALL NOT CONTACT BOLTS OR ENDS OF MECHANICAL JOINT BENDS.

VERTICAL BENDS
N.T.S.



SEWER AND WATER CROSSING
N.T.S.



STORM SEWER CROSSING
N.T.S.

NOTE:
12" CONC. ENCASEMENT ALL AROUND
PROPOSED WATER LINE AND POURED
TO THE BOTTOM OF THE EXISTING PIPE.