

TYPICAL PLAN VIEW

NO.	DESCRIPTION
1	PROPOSED R.J. D.I.P. WATER MAIN - PREFERRED LOCATION
2	PROPOSED R.J. D.I.P. WATER MAIN - OPTIONAL LOCATION
3	ROAD WITH CURB AND GUTTER OR EDGE OF PAVEMENT
4	CULVERT - PIPE OR BOX
5	CULVERT WING WALL
6	CULVERT FOOTING
7	STEEL ENCASEMENT PIPE
8	DISTANCE AS INDICATED ON CONSTRUCTION PLANS
9	4 FEET MIN. BELOW CREEK BED - MINIMUM
10	STEEL ENCASEMENT PIPE - INSTALLATION BY DRY BORE METHOD OR HORIZONTAL DIRECTIONAL DRILL METHOD
Bx	BENDS - AS REQUIRED

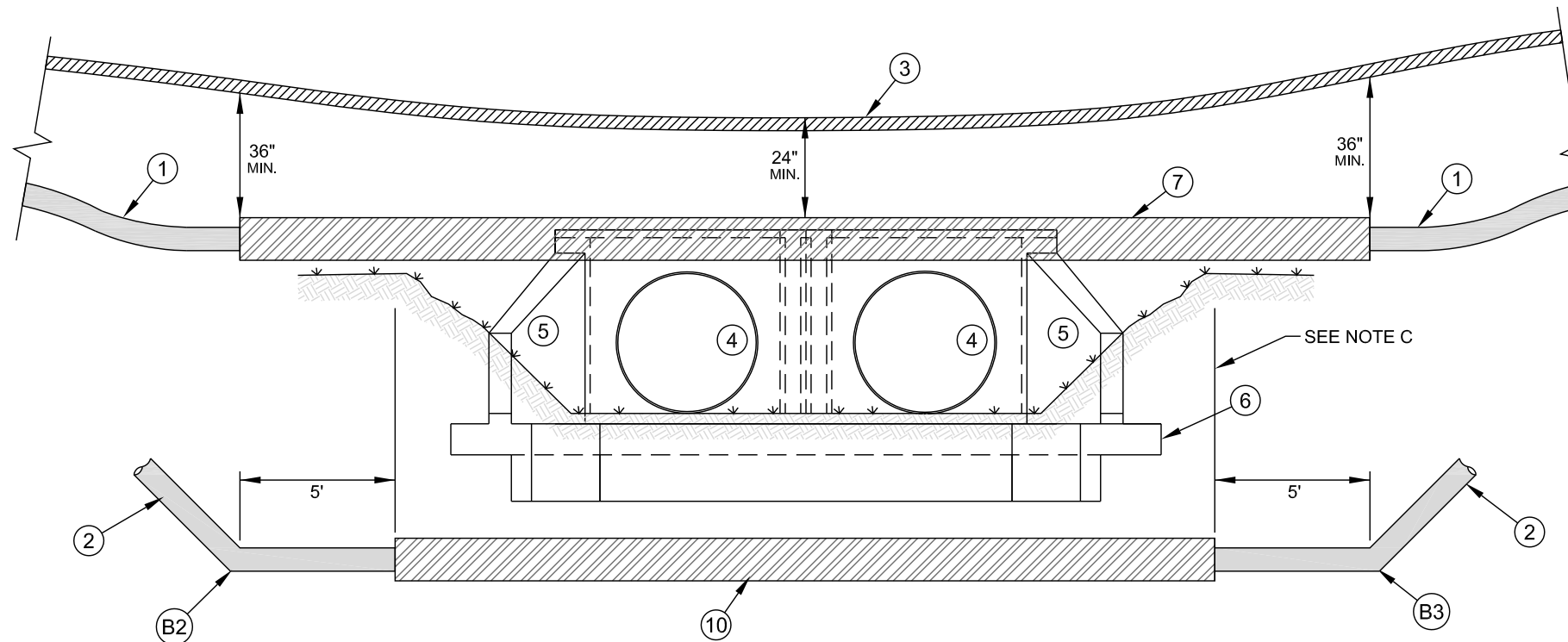
NOTES:

- A. IN PREFERRED LOCATION (#1), CASING PIPE (#7) IS REQUIRED WITH LESS THAN 36" COVER AT PIPE CENTER LINE. MINIMUM COVER BASED ON PAVEMENT ELEVATION SHALL BE 24-INCHES.
- B. STEEL CASING PIPE (#7) MAY NOT BE REQUIRED WHEN MIN. COVERS ARE PROVIDED FOR NORMAL PIPE INSTALLATION.
- C. IN OPTIONAL LOCATION (#2), CASING PIPE (#10) SHALL EXTEND FROM TOP OF BANK TO TOP OF BANK - MINIMUM.
- D. ALL PIPE SHALL BE RESTRAINED JOINT DUCTILE IRON PIPE FROM BEND B1 TO B4.
- E. RESTRAINED LENGTHS LB1 AND LB4 SHALL BE DETERMINED BY THE ENGINEER.

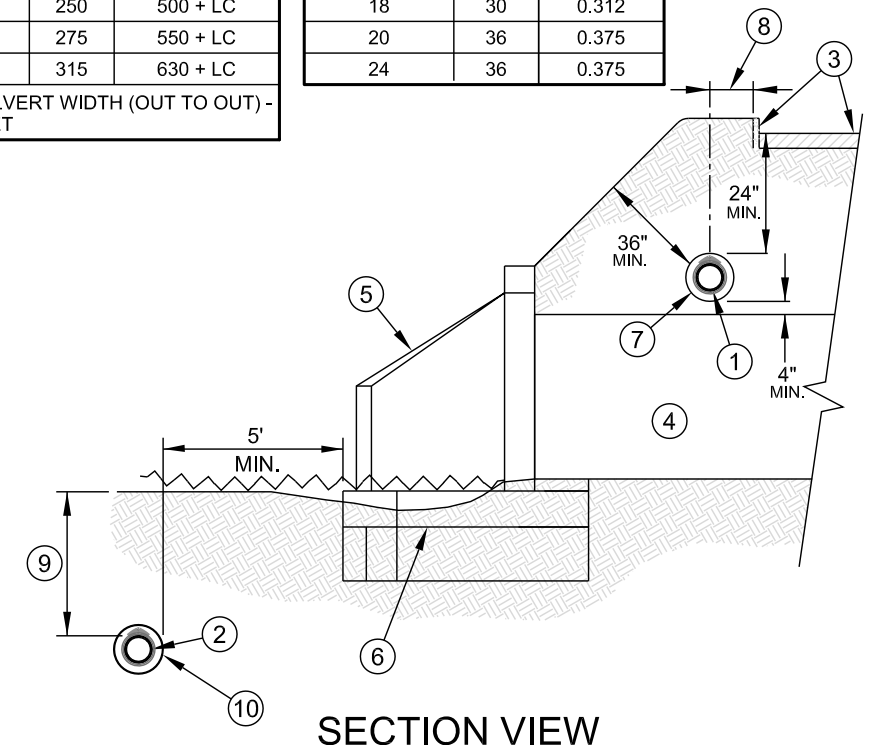
CARRIER PIPE DIAMETER (INCHES)	LR (FEET)	TOTAL RESTRAINED LENGTH (FEET)
6	100	200 + LC
8	125	250 + LC
10	155	310 + LC
12	180	360 + LC
14	205	410 + LC
16	230	460 + LC
18	250	500 + LC
20	275	550 + LC
24	315	630 + LC

LC = CULVERT WIDTH (OUT TO OUT) - FEET

CARRIER PIPE DIAMETER (INCHES)	CASING DIA. (INCH)	WALL THICKNESS (INCH)
6	12.75	0.250
8	16	0.250
10	18	0.250
12	20	0.250
14	22	0.250
16	24	0.250
18	30	0.312
20	36	0.375
24	36	0.375



TYPICAL ELEVATION VIEW



SECTION VIEW

WATER MAIN LOCATIONS AT CULVERTS
USING STEEL CASING PIPE
6-INCH THROUGH 24-INCH MAINS

CHARLOTTE-MECKLENBURG UTILITIES
STANDARD DETAILS
WATER

NO SCALE

STANDARD NO. WW
VERSION NO. 1.0
VERSION DATE 8.30.2011

