PREPARED BY:
Kimley»Horn ©2020
421 FAYETTEVILLE STREET, SUITE 600
RALEIGH, NC 27601

PROJECT REFERENCE NO.	SHEET NO.
U-5873	UC-3A
DESIGNED BY: MAS	
DRAWN BY: SJJ	
CHECKED BY: DCS	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE:(919)707-6690 FAX:(919)250-4151	UTILITY CONSTRUCTION PLANS ONLY

NORTH CAROLINA PROFESSIONAL SEAL 027670 ENGINEER MATTHEW A. SHOSSMITH
Digitally signed by Matthew A. Shossmith
DocuSign Envelope ID: 4A8C8A1B-7A8D-4B0B-A8C8-A8C8A1B7A8D0
8/25/2023

UTILITY CONSTRUCTION

NO SCALE

STANDARD NO. AA
DRAWING NO. V1.0
REVISED DATE 8.23.2011

PRECAST CONCRETE METER BOX FOR 3/4 - INCH DOMESTIC WATER SERVICE

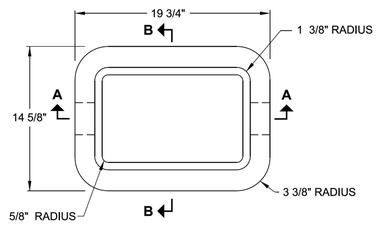
CHARLOTTE-MECKLENBURG UTILITIES
STANDARD DETAILS
WATER

MANUFACTURERS:

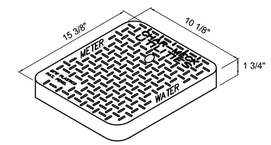
SOUTHERN METER C.H. 5/8" x 3/4" METER BOX BODY
BROOKS #36MB METER BOX BODY
OLDCASTLE #MB36 METER BODY
BES #CO9W METER BOX BODY
CHRISTY B9 METER BOX BODY

NOTES:

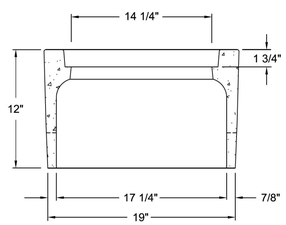
A. METER BOX SHALL ACCOMMODATE COMPANION PLASTIC METER BOX LID - SEE STANDARD DETAIL.
B. MINOR DIMENSION VARIATIONS ARE PERMITTED , BASED ON MANUFACTURER'S PRODUCT LINES, PROVIDED THE CMUD STANDARD PLASTIC LID FITS PROPERLY.
C. CONCRETE SHALL BE MINIMUM f ' c = 3000 PSI COMPRESSIVE STRENGTH.
D. DESIGN SHALL CONFORM TO ASTM C858-SPECIFICATIONS FOR " UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURE ".
E. STEEL REINFORCING DESIGN SHALL CONFORM TO ASTM C 857.
F. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 82.



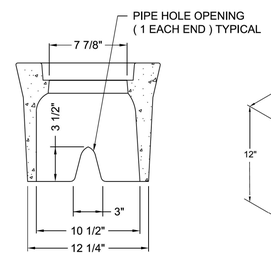
PLAN VIEW



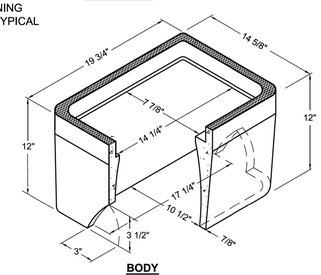
PLASTIC LID



SECTION VIEW A-A



SECTION VIEW B-B



BODY

WEIGHT - 70 LB. (MIN.) - 85 LB (MAX.)

NO SCALE

STANDARD NO. BB
DRAWING NO. V1.0
REVISED DATE 8.23.2011

PRECAST CONCRETE METER BOX FOR 1 - INCH WATER SERVICE

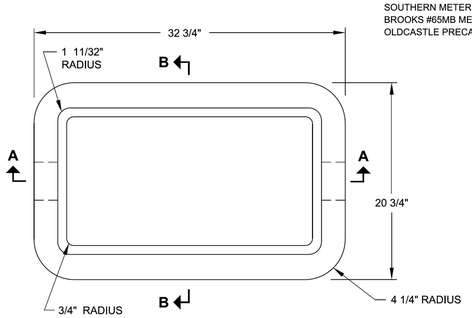
CHARLOTTE-MECKLENBURG UTILITIES
STANDARD DETAILS
WATER

MANUFACTURERS:

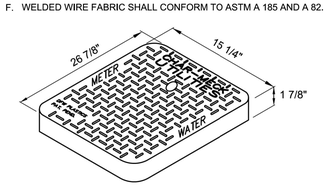
SOUTHERN METER #C.H. 2 METER BOX BODY
BROOKS #65MB METER BOX BODY
OLDCASTLE PRECAST #MB65 METER BOX BODY

NOTES:

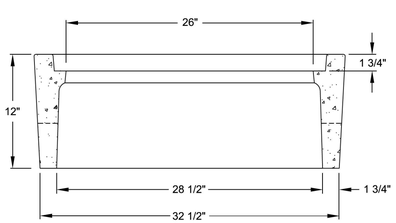
A. METER BOX SHALL ACCOMMODATE COMPANION PLASTIC METER BOX LID - SEE STANDARD DETAIL.
B. MINOR DIMENSION VARIATIONS ARE PERMITTED BASED ON MANUFACTURER'S PRODUCT LINES, PROVIDED THE CMUD STANDARD PLASTIC LID FITS PROPERLY.
C. CONCRETE SHALL BE MINIMUM f ' c = 3000 PSI COMPRESSIVE STRENGTH.
D. DESIGN SHALL CONFORM TO ASTM C858-SPECIFICATIONS FOR " UNDERGROUND PRECAST CONCRETE UTILITY.
E. STEEL REINFORCING DESIGN SHALL CONFORM TO ASTM C 857.
F. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 AND A 82.



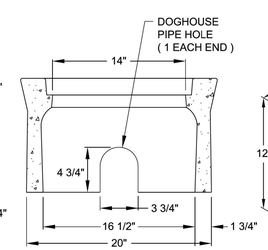
PLAN VIEW



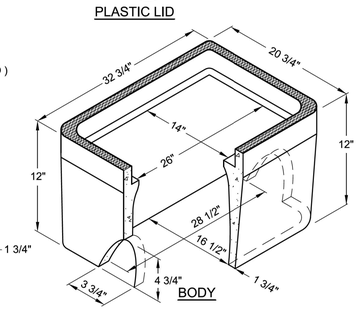
PLASTIC LID



SECTION VIEW A-A

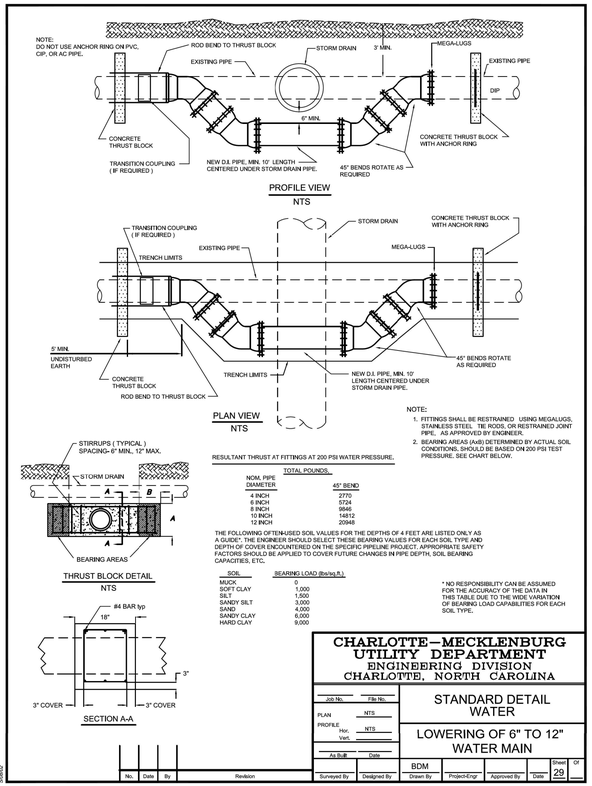


SECTION VIEW B-B



BODY

WEIGHT - 150 LB. (MIN.) - 170 LB (MAX.)



NOTE:

1. FITTINGS SHALL BE RESTRAINED USING MEGALUGS, STAINLESS STEEL TIE RODS, OR RESTRAINED JOINT PIPE. AS APPROVED BY ENGINEER.
2. BEARING AREAS (Ave) DETERMINED BY ACTUAL SOIL CONDITIONS. SHOULD BE BASED ON 200 PSI TEST PRESSURE. SEE CHART BELOW.

RESULTANT THRUST AT FITTINGS AT 200 PSI WATER PRESSURE.

NOM. PIPE DIAMETER	TOTAL POUNDS 45° BEND
4 INCH	2770
6 INCH	5724
8 INCH	9846
10 INCH	14812
12 INCH	20948

THE FOLLOWING OFTEN USED SOIL VALUES FOR THE DEPTHS OF 4 FEET ARE LISTED ONLY AS A GUIDE*. THE ENGINEER SHOULD SELECT THESE BEARING VALUES FOR EACH SOIL TYPE AND DEPTH OF COVER ENCOUNTERED ON THE SPECIFIC PIPELINE PROJECT. APPROPRIATE SAFETY FACTORS SHOULD BE APPLIED TO COVER FUTURE CHANGES IN PIPE DEPTH, SOIL BEARING CAPACITIES, ETC.

SOIL	BEARING LOAD (lbs/sq.ft.)
MUCK	0
SOFT CLAY	1,000
SILT	1,500
SANDY SILT	3,000
SAND	4,000
SANDY CLAY	6,000
HARD CLAY	9,000

* NO RESPONSIBILITY CAN BE ASSUMED FOR THE ACCURACY OF THE DATA IN THIS TABLE DUE TO THE WIDE VARIATION OF BEARING LOAD CAPABILITIES FOR EACH SOIL TYPE.

CHARLOTTE–MECKLENBURG UTILITY DEPARTMENT
ENGINEERING DIVISION
CHARLOTTE, NORTH CAROLINA

STANDARD DETAIL
WATER

LOWERING OF 6" TO 12" WATER MAIN

Job No.	File No.	PLAN	NTS
		PROFILE Hor.	NTS
		Vert.	
As Built	Date		

No.	Date	By	Revision

Surveyed By:	Designed By:	Drawn By:	Project-Engr	Approved By:	Date:	Sheet 29	Of
		BDM					

50 25 0 50 100

C:\SYTME\$\$\$\$ ON 8/25/2023 8:45:46 AM