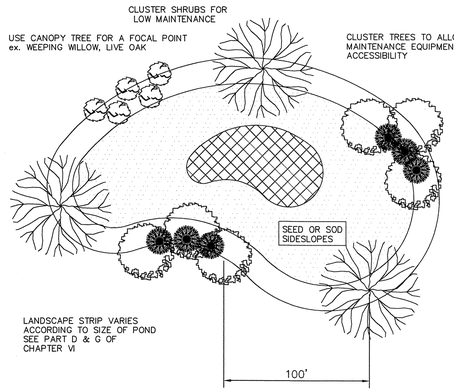
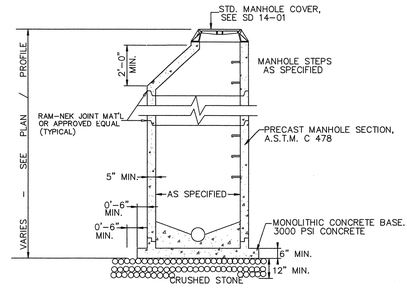


Notes:

1. IF POSSIBLE, LOCATE POND WHERE VEGETATION EXISTS.
2. SUGGEST MINIMAL CLEARING TO CONSERVE VISUAL QUALITY OF SITE AND MINIMIZE THE ADDITIONAL OF TREE PLANTING. AN IRREGULAR SHAPE PROVIDES A MORE NATURAL APPEARANCE.
3. LANDSCAPE STRIP SHALL BE A MAXIMUM SLOPE OF 7:1 IN ORDER TO PLANT VEGETATION.
4. PROVIDE A MINIMUM OF 3 INCHES OF MULCH AROUND ALL VEGETATION.

TYPICAL STORM WATER FACILITY LANDSCAPING PLAN

SD 15–16

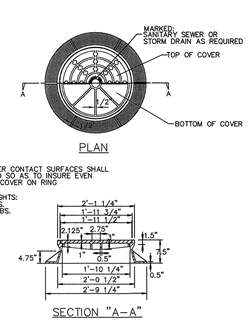


NOTE:
EXTENDED BASE MAY NOT BE REQUIRED WHERE MANHOLES ARE GREATER THAN 4 FEET INSIDE DIAMETER

PRECAST MANHOLE

SD 14–11

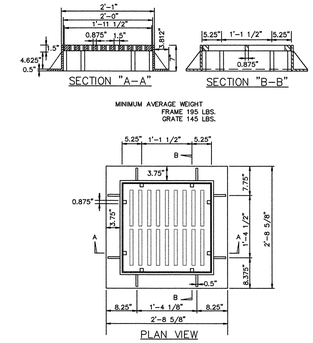
NOT TO SCALE



STANDARD MANHOLE RING AND COVER

SD 14–01

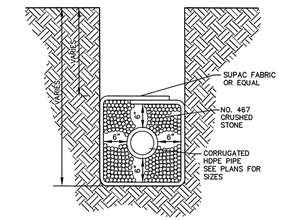
NOT TO SCALE



GRILL BASIN CASTINGS

SD 14–04

NOT TO SCALE



TYPICAL SECTION

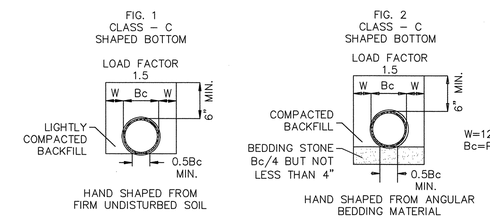
GUIDELINES FOR SUB-DRAIN

SD 2–04

NOT TO SCALE

STORM DRAINAGE NOTES:

1. ALL PIPE BEDDING SHALL BE CLASS "C" UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. ALL STORM DRAINAGE PIPES SHALL BE RCP CLASS III UNLESS OTHERWISE NOTED ON THE PLANS.
3. DO NOT PLANT TREES WITHIN UTILITY AND DRAINAGE EASEMENTS.
4. THE ENGINEER AND THE CONTRACTOR SHALL INSPECT ALL EXISTING PIPES USED IN THE FINAL DRAINAGE SYSTEM AND AGREE ON THE CONDITION OF THE PIPES PRIOR TO CONSTRUCTION. IF DAMAGE OCCURS TO THESE PIPES DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF THE PIPE(S).
5. THE CONTRACTOR SHALL CONTACT ONECALL BEFORE COMMENCING ANY WORK. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES WHETHER INDICATED ON THE DRAWINGS OR NOT. THE CONTRACTOR WILL ASSURE THE PRESENCE ONSITE OF A REPRESENTATIVE OF THE GAS COMPANY WHEN WORKING IN THE VICINITY OF ANY GAS MAINS.

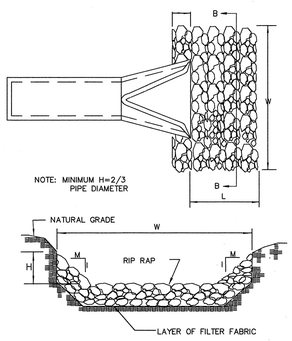


GUIDELINES FOR BEDDING DETAILS, STORM SEWER CLASS C

SD 2–17

NOT TO SCALE

- EXCAVATION FOR STORM DRAINAGE PIPE SHALL BE TO THE LINES AND GRADES AS SHOWN ON THE PLANS.
- THE BEDDING SHALL BE SHAPED IN ACCORDANCE WITH CLASS "C" BEDDING AS SHOWN ON CITY STANDARD DETAIL SD 2–17.
- THE BEDDING SHALL PROVIDE A FIRM FOUNDATION OF UNIFORM DENSITY ALONG THE ENTIRE LENGTH OF PIPE. RECESSES SHALL BE MADE TO ACCOMMODATE BELLS AND JOINTS.
- WHERE UNSTABLE SOILS ARE ENCOUNTERED AS DETERMINED BY GEOTECHNICAL ENGINEER, A MINIMUM 4–INCH THICK BEDDING OF STONE SHALL BE PLACED, SEE FIGURE 2, SD 2–17.
- THE STONE SHALL BE UNIFORMLY GRADED FROM 3/4 INCH TO NO. 4 IN ACCORDANCE WITH ASTM C–33. CARE SHALL BE TAKEN TO PREVENT UNDERCUTTING IN SUITABLE SOIL.
- AREAS UNDERCUT SHALL BE FILLED WITH SUITABLE SOIL AND COMPACTED TO 95% OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY ASTM D 1557 STANDARD TEST METHOD.



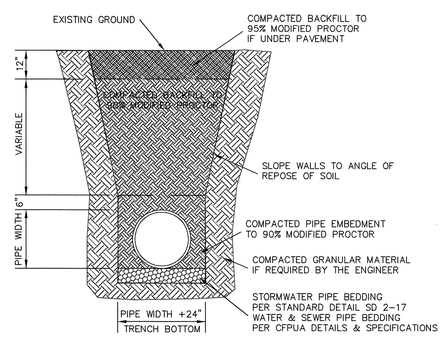
SECTION B–B

NOTES:

1. SEE OUTLET PROTECTION TABLE BELOW FOR RIP–RAP DIMENSIONS AND CLASSES.
2. RIPRAP SHOULD EXTEND UP BOTH SIDES OF THE APRON AND AROUND THE END OF THE PIPE OR CULVERT AT THE DISCHARGE OUTLET AT A MAXIMUM SLOPE OF 2:1 AND A HEIGHT NOT LESS THAN TWO THIRDS THE PIPE DIAMETER OR CULVERT HEIGHT.
3. THERE SHALL BE NO OVERFLOW FROM THE END OF THE APRON TO THE SURFACE OF THE RECEIVING CHANNEL. THE AREA TO BE PAVED OR RIPRAPPED SHALL BE UNDERCUT SO THAT THE INVERT OF THE APRON SHALL BE AT THE SAME GRADE (FLUSH) WITH THE SURFACE OF THE RECEIVING CHANNEL. THE APRON SHALL HAVE A CUTOFF OR TOE WALL AT THE DOWNSTREAM END.
4. THE WIDTH OF THE END OF THE APRON SHALL BE EQUAL TO THE BOTTOM WIDTH OF THE RECEIVING CHANNEL. MAXIMUM TAPER TO RECEIVING CHANNEL 5:1
5. ALL SUBGRADE FOR STRUCTURE TO BE COMPACTED TO 95% OR GREATER.
6. THE PLACING OF FILL, EITHER LOOSE OR COMPACTED IN THE RECEIVING CHANNEL SHALL NOT BE ALLOWED.
7. NO BENDS OR CURVES IN THE HORIZONTAL ALIGNMENT OF THE APRON WILL BE PERMITTED.

RIP RAP APRON OUTLETS

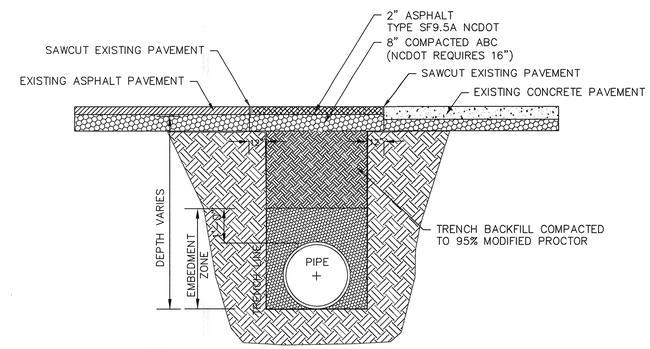
NOT TO SCALE



STANDARD PIPE TRENCH DETAIL

SD 1–07

NOT TO SCALE



NOTES:

* BACKFILL TO BE INSTALLED IN 6" LIFTS (MAXIMUM) AND COMPACTED TO A MINIMUM DENSITY OF 95% AS DETERMINED BY THE MODIFIED A.A.S.H.T.O. STANDARD METHOD T–99
* CUT – BACK TO BE PREPARED AFTER TRENCH BACKFILLING AND COMPACTION

STANDARD SHOWING METHOD MAKING PAVEMENT REPAIRS WHERE PIPE IS INSTALLED

PAVEMENT REPAIR DETAIL

SD 1–16

NOT TO SCALE

OUTLET PROTECTION					PROJECT:			RiverLights - Marina Village		
NY-DOT DISSIPATOR METHOD					LOCATION:			Wilmington, NC		
OUTLET					RIPRAP			APRON		
PC NUMBER	DIA (in)	Q (cfs)	V (fps)	ZONE	D50 (in)	CLASS	Dmax (in)	THICKNESS (in)	LENGTH* (ft)	WIDTH (ft)
1	36	16.28	2.3	1	4	A	6	9	12	9
2	30	32.97	6.7	2	8	B	12	18	15	8

NOTES:
1.) Minimum apron length of 10 ft shall be installed.
2.) Dmax = D50 x 1.5
3.) Thickness = Dmax x 1.5
4.) Width = 3 x Pipe Dia.

REV.NO.	DESCRIPTIONS	DATE
A	CITY OF WILMINGTON TRC SUBMITTAL	04/08/2015

REVISIONS

FINAL DRAWINGS DO NOT USE FOR CONSTRUCTION

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 035107 NICHOLAS J. LAURETTA 04/08/15

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www.mckimcreed.com

NORTH AMERICA SEKISUI HOUSE, LLC

RIVERLIGHTS™ by Newland COMMUNITIES

RIVERLIGHTS MARINA VILLAGE

STORM DRAINAGE DETAILS

DATE:	08APR15
MCE PROJ. #	2735–0124
DRAWN	EEM
DESIGNED	EEM
CHECKED	RMC
PROJ. MGR.	NJL

SCALE
HORIZONTAL: --
VERTICAL: --

M&C FILE NUMBER CG–502
DRAWING NUMBER 22
22 OF28

STATUS: FINAL DESIGN
NOT FOR CONSTRUCTION
REVISION A