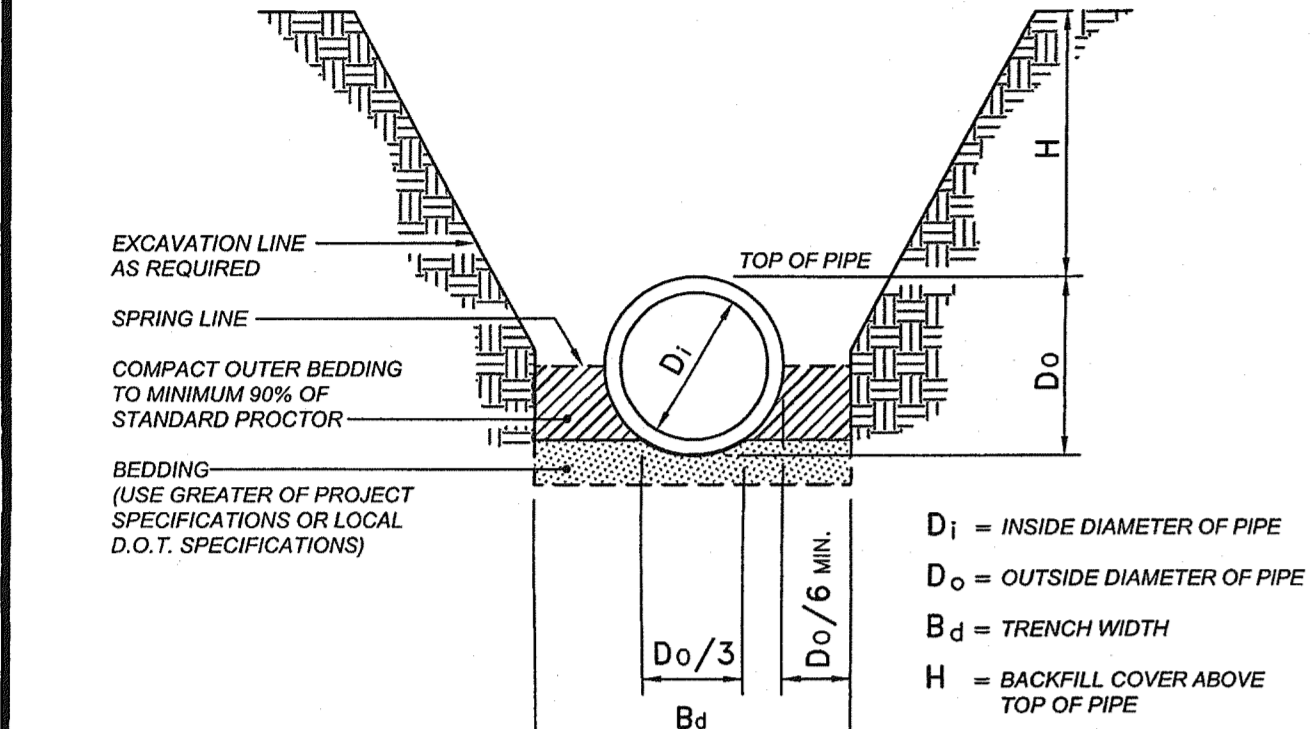


$K_u = 0.110$
SOIL TYPE = ORDINARY CLAY, SATURATED

LAYING CONDITIONS: TYPE 4
TRENCH CONDITIONS SHOWN - THESE DEPTHS DO NOT APPLY FOR "EMBANKMENT CONDITIONS", REGISTERED P.E. TO DETERMINE H FOR EMBANKMENT CONDITIONS
DESIGN BASED ON "DESIGN DATA 40, ACPA" CLASS C BEDDING
(1350 pF PER FT OF INTERNAL DIA.) CLASS III, ASTM C-76
(2000 pF PER FT OF INTERNAL DIA.) CLASS IV, ASTM C-76

		(0.01 CRACK)	(0.01 CRACK)
15'	4"	9.5'	14.5'
18'	4"	9.5'	15.0'
24'	4"	12.0'	23.5'
30'	5.5'	10.0'	17.0'
36'	6"	10.5'	18.0'
42'	6.5'	13.0'	19.0'
48'	7"	13.5'	20.0'
54'	6"	13.0'	19.5'
60'	9"	11.0'	18.0'
72'	10"	13.0'	19.0'

THIS TABLE ASSUMES TYPE 4 INSTALLATION & NO STONE BEDDING



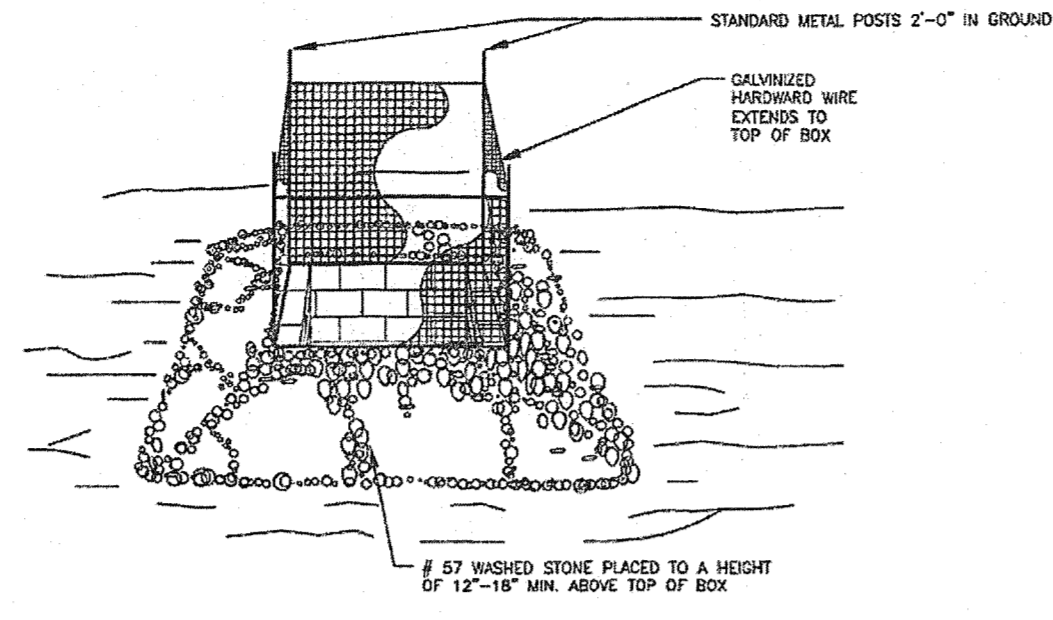
GREATER DEPTHS ARE ACHIEVABLE BY EITHER CONTROLLING BACKFILL TYPE, NARROWING TRENCH WIDTH BUT SUPPLY SUFFICIENT ROOM FOR COMPACTION, IMPROVING BEDDING OR LOADING TO ULTIMATE LOAD (D_u), FOR OTHER BURY DEPTHS THAN SHOWN (H), PROFESSIONAL ENGINEER TO PROVIDE CALCS ON PIPE BURY THAT EXCEED THOSE GIVEN IN THIS CHART FOR THE CONDITIONS IN WHICH IT IS PROPOSED TO BE USED.

THIS TABLE OF BURY DEPTHS (H) APPLIES EQUALLY TO A CLASS C STONE BEDDING, TYPE 4 LAYING CONDITIONS.

MINIMUM COVER NOT SHOWN BUT NO LESS THAN 12" W/O ENGINEERS APPROVAL UP TO 48" PIPE.

MAXIMUM BURY TABLE FOR "TRENCH CONDITIONS" PER THE DETAIL SHOWN ON THIS SHEET.

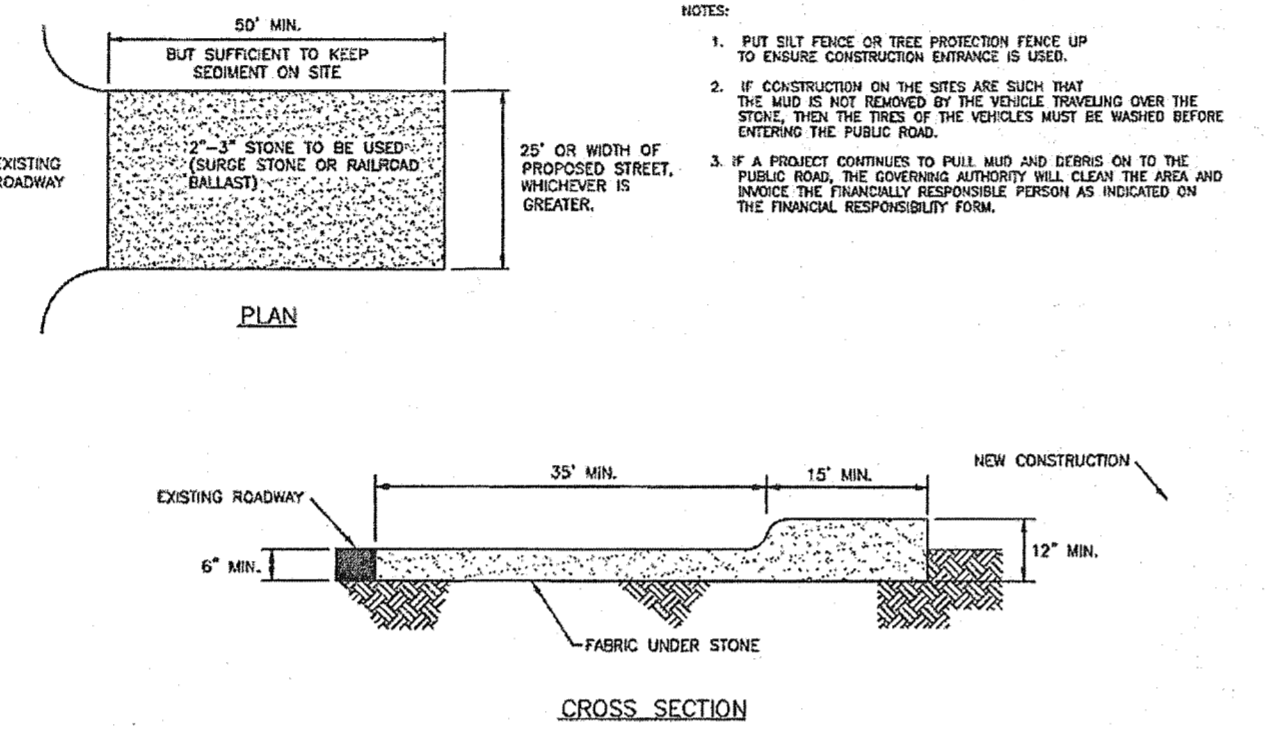
TRENCH DETAIL (STORM DRAINAGE RCP)



DRAWING NOT TO SCALE

STANDARD CATCH BASIN/YARD INLET PROTECTION
TOWN OF HOLLY SPRINGS ENGINEERING DEPARTMENT

STANDARD DETAIL NUMBER: HS422
DATE: REVISIONS

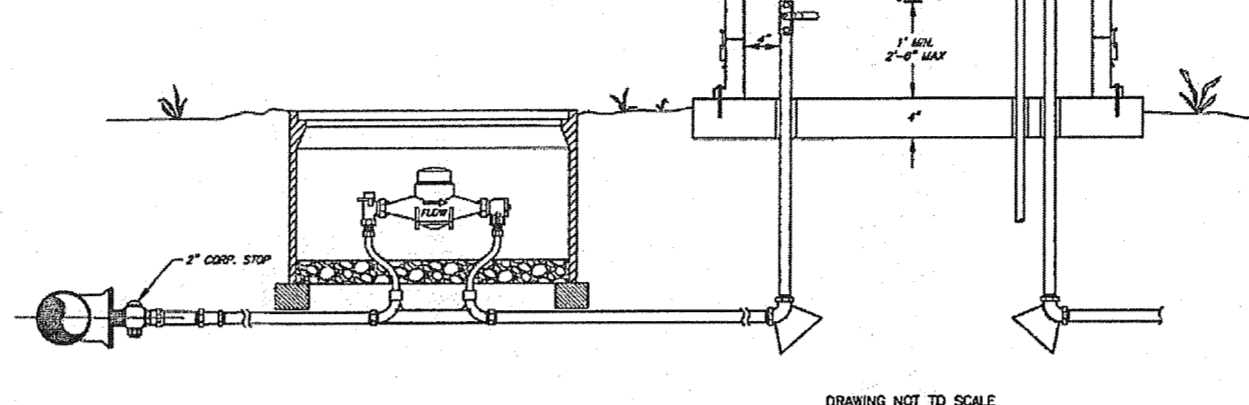


DRAWING NOT TO SCALE

CONSTRUCTION ENTRANCE
TOWN OF HOLLY SPRINGS ENGINEERING DEPARTMENT

STANDARD DETAIL NUMBER: HS414
DATE: REVISIONS

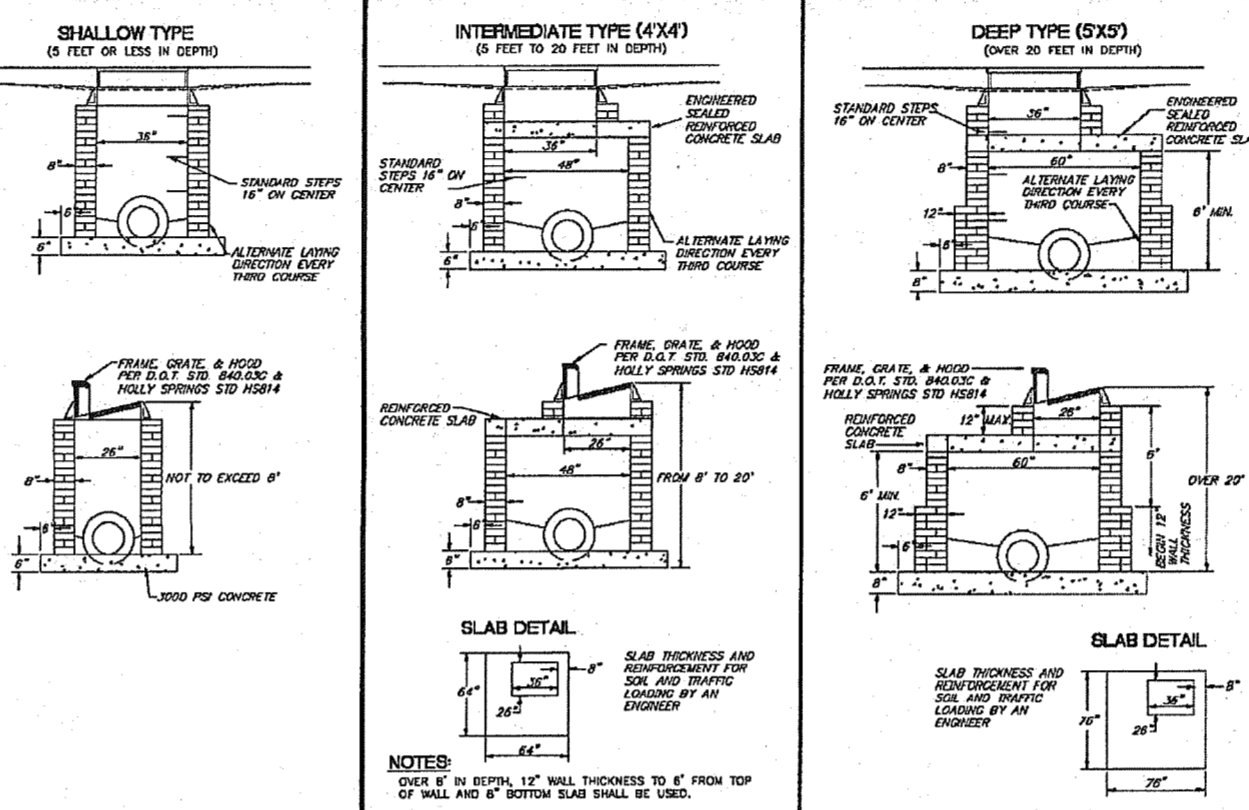
- NOTES:
1. INSTALL VALVE ASSEMBLY IN ACCORDANCE WITH DRAWINGS. BE SURE THAT THE OUTSIDE DIMENSIONS OF THE VALVE ASSEMBLY WILL FIT INTO THE BOX BEFORE SETTING "HOT BOX".
 2. PROVIDE GFCI RECEPTACLE, ULL STD. 843-NEMA3R, INSIDE ENCLOSURE. MOUNT AT LEAST 6" ABOVE DISCHARGE POINT AND NEAR PIPE KICK ON THE HEATER CONNECTION SIDE.
 3. WHEN PLACING HOT BOX OVER VALVE ASSEMBLY, BOX SHOULD BE COMPLETELY GROUND AND LAPPED BEFORE FASTENING TO FOOTING/SLAB.
 4. ACCESS DOOR OR OPENING FRONT MUST BE PLACED ON THE SIDE OF THE VALVE REQUIRING TESTING OR MAINTENANCE ACCESS.
 5. USE CLAYEY TOPPED CONCRETE BIT TO DRILL THROUGH PIPE OR RIBBED HOLES IN ENCLOSURE BASE FLANGES. INSERT "RED WELD" EXPANSION ANCHORS AND BOLT FINALLY TO CONCRETE.
 6. CONCRETE TO BE 3000 PSI AT 28 DAYS.
 7. RPZ MUST BE LOCATED BEHIND THE METER ON THE PRIVATE SIDE.



DRAWING NOT TO SCALE

RPZ INSTALLATION FOR COMMERCIAL IRRIGATION METERS
TOWN OF HOLLY SPRINGS ENGINEERING DEPARTMENT

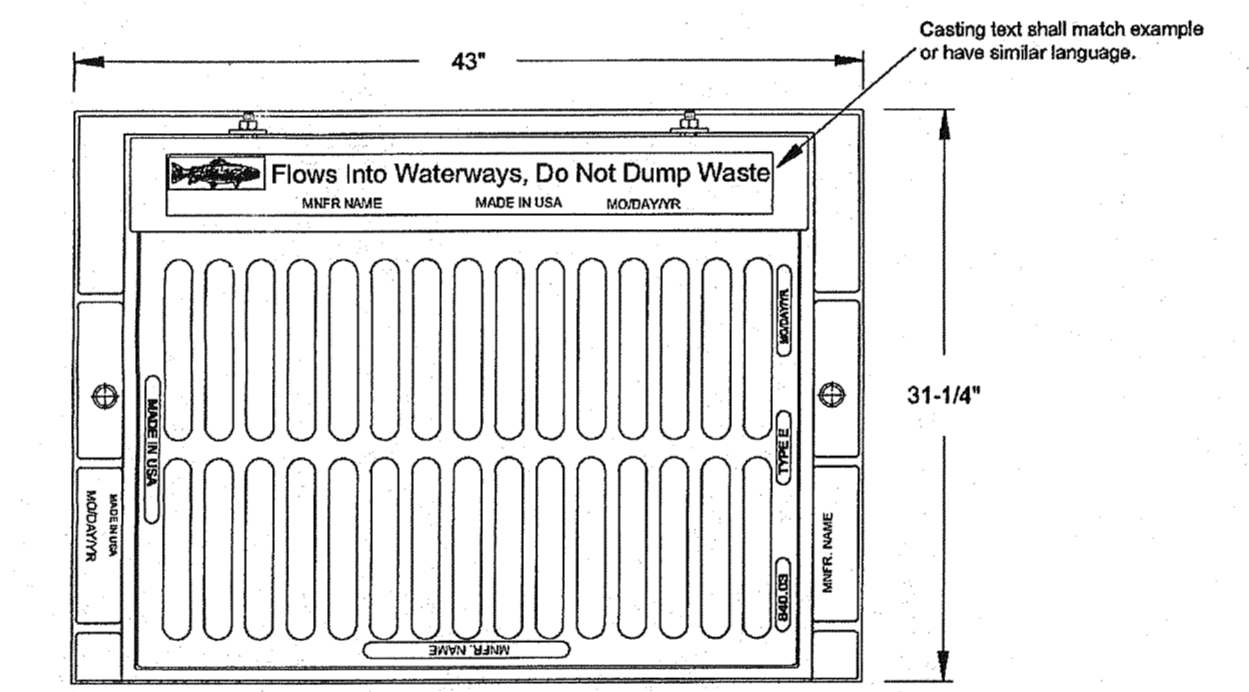
STANDARD DETAIL NUMBER: HS518
DATE: REVISIONS



DRAWING NOT TO SCALE

CONCRETE BLOCK OR BRICK CATCH BASIN
TOWN OF HOLLY SPRINGS ENGINEERING DEPARTMENT

STANDARD DETAIL NUMBER: HB804
DATE: REVISIONS



MUST MEET NCDOT STANDARDS ROADWAY STANDARD DRAWING 840.03

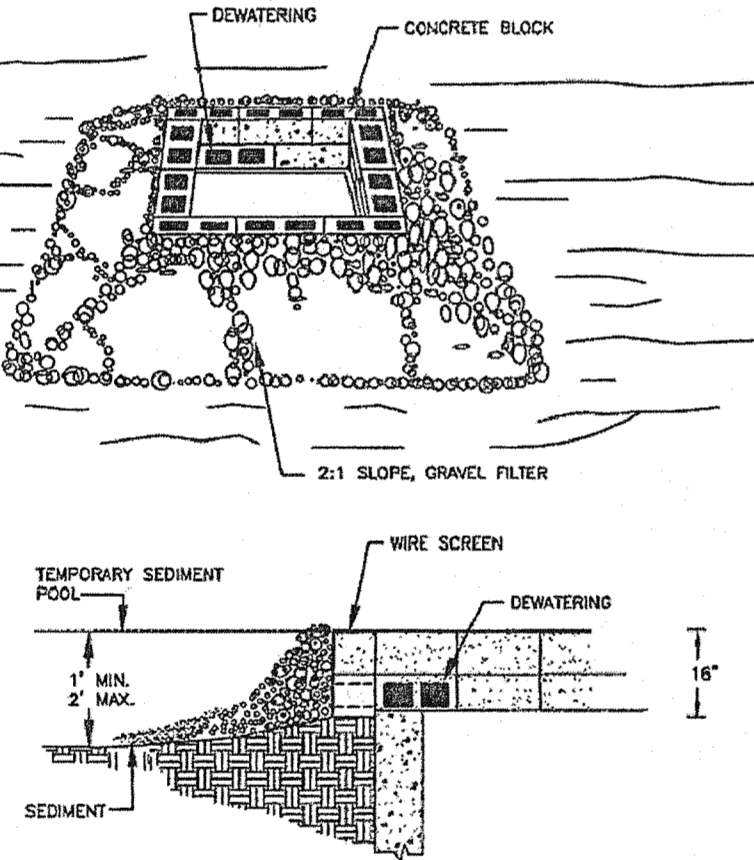
DRAWING NOT TO SCALE

STANDARD FRAME LABEL FOR CATCH BASIN
TOWN OF HOLLY SPRINGS ENGINEERING DEPARTMENT

STANDARD DETAIL NUMBER: HS814
DATE: REVISIONS

CONSTRUCTION SPECIFICATIONS

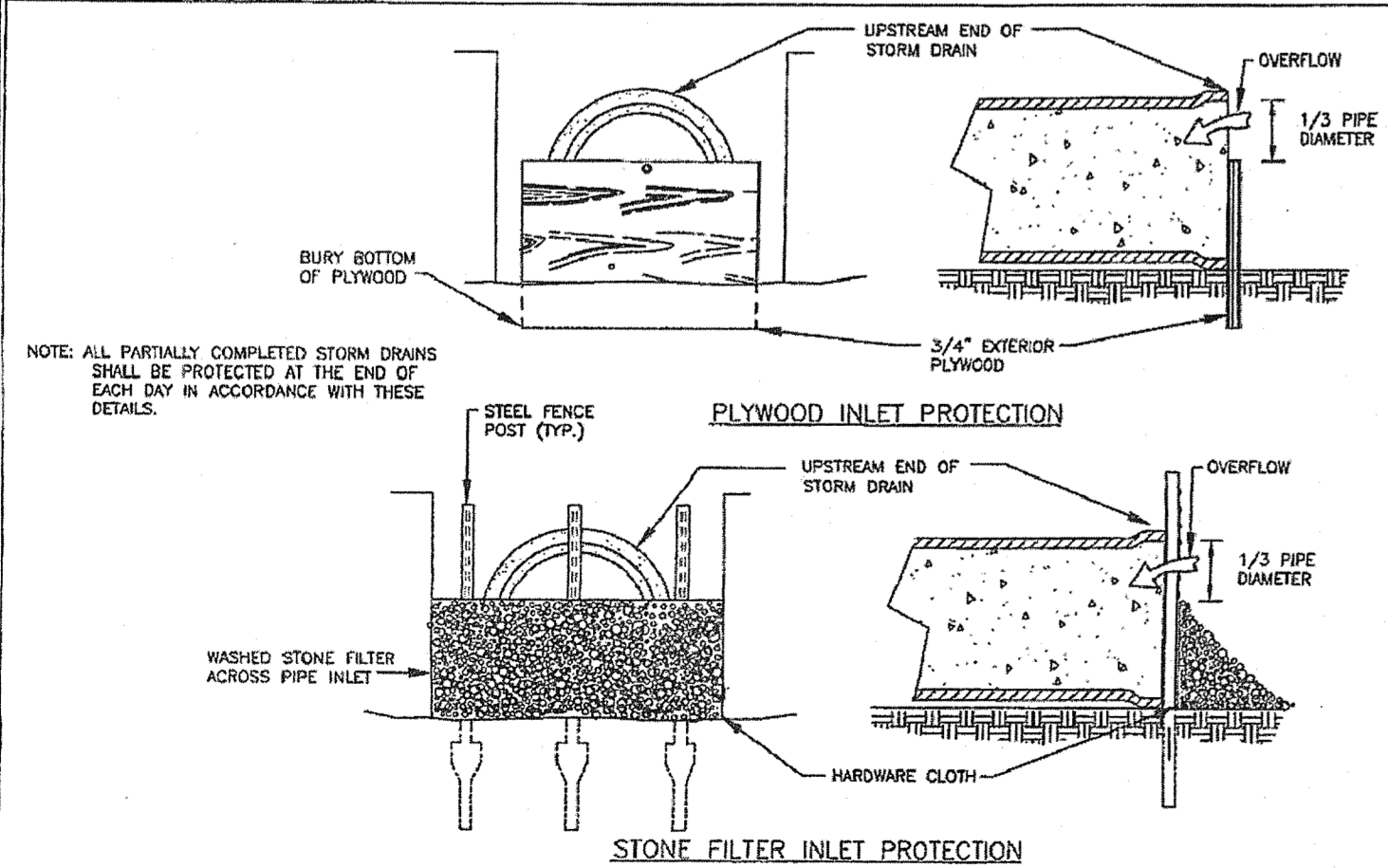
1. LAY ONE BLOCK ON EACH SIDE OF THE STRUCTURE ON ITS SIDE IN THE BOTTOM ROW TO ALLOW PROOF DRAINAGE. THE FOUNDATION SHOULD BE EXCAVATED AT LEAST 2 INCHES BELOW THE CREST OF THE STORM DRAIN. PLACE THE BOTTOM ROW OF BLOCKS AGAINST THE EDGE OF THE STORM DRAIN FOR LATERAL SUPPORT AND TO AVOID WASHOUTS WHEN OVERFLOW OCCURS. IF NEEDED, ONE LATERAL SUPPORT TO SUBSEQUENT ROWS BY PLACING 2 X 4 WOOD STUDS THROUGH BLOCK OPENINGS.
2. CAREFULLY FIT HARDWARE CLOTH OR COMPARABLE WIRE MESH WITH 1/2-INCH OPENINGS OVER ALL BLOCK OPENINGS TO HOLD GRAVEL IN PLACE.
3. USE CLEAN GRAVEL, 3/4" TO 1 1/2-INCH IN DIAMETER, PLACED 2 INCHES BELOW THE TOP OF THE BLOCK ON A 2:1 SLOPE OR FLATTER AND SMOOTH IT TO AN EVEN GRADE. 57 WASHED STONE IS RECOMMENDED.



DRAWING NOT TO SCALE

BLOCK AND GRAVEL DROP INLET PROTECTION
TOWN OF HOLLY SPRINGS ENGINEERING DEPARTMENT

STANDARD DETAIL NUMBER: HS421
DATE: REVISIONS



NOTE: ALL PARTIALLY COMPLETED STORM DRAINS SHALL BE PROTECTED AT THE END OF EACH DAY IN ACCORDANCE WITH THESE DETAILS.

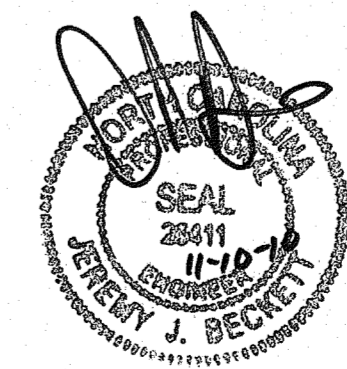
DRAWING NOT TO SCALE

PIPE INLET PROTECTION (PLYWOOD AND STONE)
TOWN OF HOLLY SPRINGS ENGINEERING DEPARTMENT

STANDARD DETAIL NUMBER: HS423
DATE: REVISIONS

DRAINAGE STRUCTURE NOTES

1. BOXES SHALL COMPLY WITH LOCAL JURISDICTIONAL STANDARDS AND SPECIFICATIONS.
2. ANY NONSTANDARD BOX IS TO BE DESIGNED BY A PROFESSIONAL ENGINEER.
3. THE MAXIMUM HEIGHT OF AN UN-REINFORCED MASONRY DRAINAGE STRUCTURE WITH 8" WALLS SHALL BE LIMITED TO 8'-0" FROM INVERT OF THE OUTLET PIPE TO THE TOP OF THE CASTING. DEPTHS GREATER THAN 8'-0" SHALL HAVE WALLS 12" THICK. BASINS OVER 12" IN TOTAL DEPTH SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER. FOUR INCH WALLS ARE NOT ALLOWED ON DRAINAGE STRUCTURES. BOTTOM SLAB ON STRUCTURES SHALL BE REINFORCED WHEN BOX DEPTHS EXCEEDS 8 FT.
4. STEPS ARE TO BE PROVIDED ON ALL BASINS DEEPER THAN 42".
5. STEPS ARE TO BE PSI-PF AS MANUFACTURED BY M.A. INDUSTRIES OR AN APPROVED EQUAL. LOCATE ON NON-PIPE WALLS.
6. MORTAR IN MASONRY BOXES IS TO BE TYPE M.
7. CLAY BRICK STRUCTURES ARE NOT ALLOWED.
8. CONCRETE PIPE IS TO BE MINIMUM CLASS III.
9. CONCRETE BUILDING BRICK IS TO MEET ASTM C-55, GRADE N, TYPE 1.
10. BASINS LOCATED IN WET AREAS, OR AS OTHERWISE REQUIRED BY THE TOWN ENGINEER, SHALL HAVE WEEP HOLES AS SHOWN ON DETAILS.
11. ALL CAST-IN-PLACE PRECAST CONCRETE DRAINAGE STRUCTURES LOCATED IN PAVED AREAS ACCESSIBLE TO TRUCK LOADINGS TO BE DESIGNED TO MEET AASHTO HS 20-44 LOADING. SEE MANUFACTURERS DETAILS FOR WALL, TOP AND BOTTOM THICKNESS.



PRELIMINARY DESIGN - NOT RELEASED FOR CONSTRUCTION

NO.	DATE	DESCRIPTION
1	07-16-08	REVISE PER NEW LIGHT LOCATIONS
2	08-15-08	REVISE PER TOWN SCOPING MEETING
3	09-19-08	REVISE PER TOWN COMMENTS #1
4	10-08-08	REVISE PER TOWN COMMENTS #2
5	09-13-10	REVISE PER NEW SURVEY
6	11-04-10	REVISE PER TOWN COMMENTS #3

COMMERCIAL SITE DESIGN

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FAX: (336) 703-5739

BB&T
SOUTHPARK VILLAGE
701 VILLAGE WALK DRIVE
HOLLY SPRINGS, NORTH CAROLINA

PROJECT NO: BBT-0714
FILENAME: BBT0714-DTL2
DRAWN BY: JWR
SCALE: N.T.S.
DATE: OCTOBER 17, 2007
SHEET NO: C-6

DETAILS