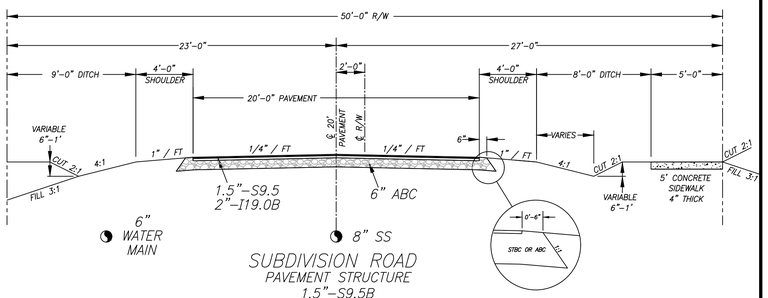
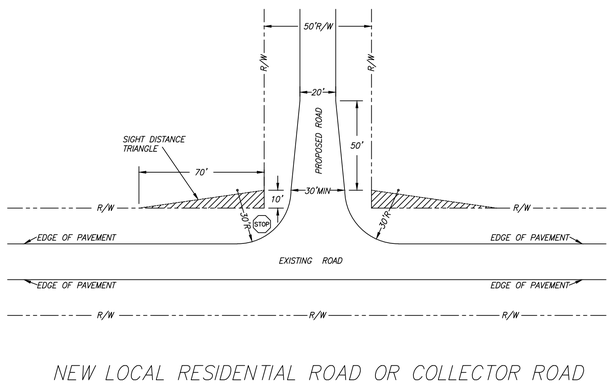


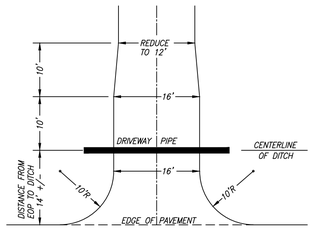
SUBDIVISION ROAD
PAVEMENT STRUCTURE
1.5"-S9.5B
2"-I19.0B
6" ABC

TYPICAL SECTION
50' R/W



NEW LOCAL RESIDENTIAL ROAD OR COLLECTOR ROAD
AND EXISTING STATE MAINTAINED ROAD
WITHOUT CURB AND GUTTER

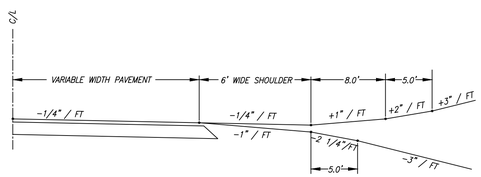
STOP CONDITION



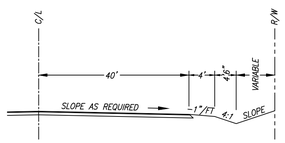
NOTE:

1. MINIMUM SIZE TO BE DETERMINED BY ENGINEER WITH NO LESS THAN 15" IS ALLOWED.
2. MINIMUM PIPE LENGTH IS 26 LINEAR FEET.
3. MINIMUM PIPE COVER IS 12".

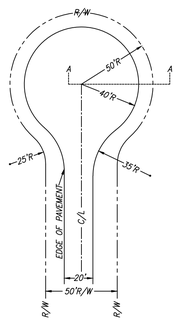
DRIVEWAY CONSTRUCTION DETAIL
ACROSS ROADWAY DITCH



SHOULDER SECTION
DRIVEWAY TURNOUT GRADES



SECTION AA
ALL CUL-DE-SAC ROADS



NOTE:
CENTERLINE OF ASPHALT IS SHIFTED 2.0' LEFT
OF CENTERLINE RIGHT OF WAY.

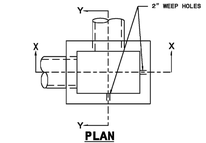
PLAN VIEW
ALL CUL-DE-SAC ROADS

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

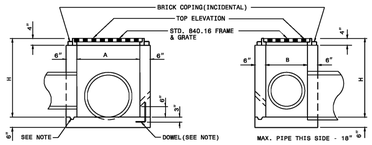
1-12

ENGLISH STANDARD DRAWING FOR
CONCRETE DROP INLET
12" THRU 30" PIPE

SHEET 1 OF 1
840.14



PLAN
WITH GRATE & FRAME REMOVED



SECTION X-X **SECTION Y-Y**

DOWEL

GENERAL NOTES:
USE CLASS "B" CONCRETE THROUGHOUT.
PROVIDE ALL DROP INLETS OVER 3'-8" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR 3" KEYWAY OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
CONSTRUCT WITH PIPE CROWNS MATCHING.
SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.
INSTALL 2' WEEPHOLES AS DIRECTED BY THE ENGINEER.
INSTALL STONE DRAINS, OF A MINIMUM OF 1 CUBIC FOOT OF NO. 78M STONE IN A POROUS FABRIC BAG OR WRAP, AT EACH WEEP HOLE OR AS DIRECTED BY THE ENGINEER.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.

DIMENSIONS AND QUANTITIES FOR DROP INLET(BASED ON MIN. HEIGHT, H)								
DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONC. IN BOX			DEDUCTIONS FOR ONE PIPE	
PIPE	SPAN	WIDTH	H	BOTTOM SLAB	WALL PER FT. HT.	TOTAL CONCRETE FOR MINIMUM HEIGHT, H	C.Y.	R.C.
D	A	B						
12"	3'-0"	2'-0"	2'-0"	0.222	0.222	0.592	0.015	0.026
15"	/	/	2'-3"	/	/	0.648	0.023	0.035
18"	/	/	2'-6"	/	/	0.703	0.033	0.049
24"	/	/	3'-0"	/	/	0.814	0.059	0.085
30"	3'-0"	2'-0"	3'-6"	0.222	0.222	0.925	0.092	0.127

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
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RALEIGH, N.C.

1-12

ENGLISH STANDARD DRAWING FOR
CONCRETE DROP INLET
12" THRU 30" PIPE

SHEET 1 OF 1
840.14

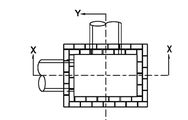
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12

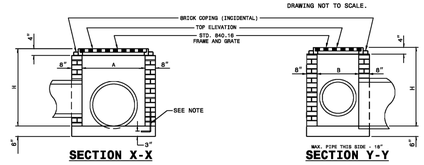
ENGLISH STANDARD DRAWING FOR
BRICK DROP INLET
12" THRU 30" PIPE

SHEET 1 OF 1
840.15

GENERAL NOTES:
MORTAR JOINTS ½" +/- ⅝" THICK.
USE CLASS "B" CONCRETE THROUGHOUT.
USE FORMS FOR CONSTRUCTION OF THE BOTTOM SLAB.
USE #4 BAR DOWELS AT 12" CENTERS.
DEDUCT FOR PIPE(S) FROM TOTAL CU. YDS. OF BRICK MASONRY.
PROVIDE ALL CATCH BASINS OVER 3'-8" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
USE BRICK OR CONCRETE BLOCK WHICH COMPLIES WITH THE REQUIREMENTS OF SECTION 840 OF THE STANDARD SPECIFICATIONS.
IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
FOR 8'-0" HEIGHT OR LESS, USE 8" WALL. OVER 8'-0" IN HEIGHT, USE 12" WALL TO 8'-0" FROM TOP OF WALL, AND 8" WALL FOR THE REMAINING 8'-0". QUANTITIES TO BE ADJUSTED ACCORDINGLY.
CONSTRUCT WITH PIPE CROWNS MATCHING.
SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES.
DO NOT USE BRICK MASONRY DROP INLET IN LOCATIONS SUBJECT TO TRAFFIC.
CHAMFER ALL EXPOSED CORNERS 1".
DRAWING NOT TO SCALE.



PLAN
WITH COPING REMOVED



SECTION X-X **SECTION Y-Y**

DOWEL

DIMENSIONS AND QUANTITIES FOR DROP INLET(BASED ON MIN. HEIGHT, H)							
DIMENSIONS OF BOX & PIPE				CUBIC YARDS CONCRETE	CUBIC YARDS BRICK MASONRY	DEDUCTIONS FOR ONE PIPE	
PIPE	SPAN	WIDTH	MIN. HEIGHT	BOTTOM SLAB	WALL PER FOOT HT.	TOTAL BRICK MASONRY FOR MIN. HEIGHT, H	C.Y.	R.C.
D	A	B	H					
12"	3'-0"	2'-0"	2'-0"	0.268	0.313	0.522	0.020	0.032
15"	/	/	2'-3"	0.268	0.313	0.600	0.031	0.047
18"	/	/	2'-6"	0.268	0.313	0.678	0.044	0.065
24"	/	/	3'-0"	0.268	0.313	0.835	0.078	0.113
30"	3'-0"	2'-0"	3'-6"	0.268	0.313	0.991	0.122	0.170

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12

ENGLISH STANDARD DRAWING FOR
BRICK DROP INLET
12" THRU 30" PIPE

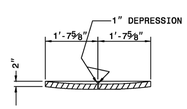
SHEET 1 OF 1
840.15

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

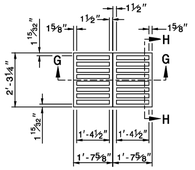
1-12

ENGLISH STANDARD DRAWING FOR
DROP INLET FRAME AND GRATES
FOR USE WITH STD. DWG.S 840.14 AND 840.15

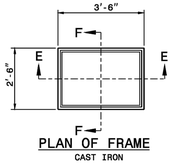
SHEET 1 OF 1
840.16



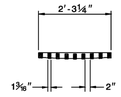
SECTION G-G



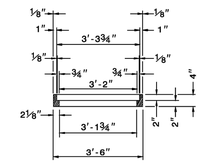
PLAN OF GRATING
CAST IRON



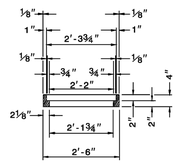
PLAN OF FRAME
CAST IRON



SECTION H-H



SECTION E-E



SECTION F-F

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12

ENGLISH STANDARD DRAWING FOR
DROP INLET FRAME AND GRATES
FOR USE WITH STD. DWG.S 840.14 AND 840.15

SHEET 1 OF 1
840.16

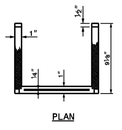
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

1-12

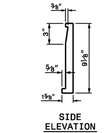
ENGLISH STANDARD DRAWING FOR
DRAINAGE STRUCTURE STEPS

SHEET 1 OF 1
840.66

NOTE:
INSTALL ALL STEPS PROTRUDING 4" FROM INSIDE FACE OF STRUCTURE WALL.
STEPS DIFFERING IN DIMENSIONS, CONFIGURATION, OR MATERIALS FROM THOSE SHOWN MAY ALSO BE USED PROVIDED THE CONTRACTOR HAS FURNISHED THE ENGINEER WITH DETAILS OF THE PROPOSED STEPS AND HAS RECEIVED WRITTEN APPROVAL FROM THE ENGINEER FOR THE USE OF SUCH STEPS.

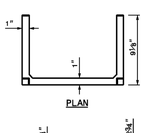


PLAN

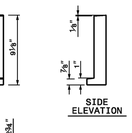


SIDE ELEVATION

ELEVATION
CAST IRON

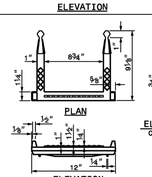


PLAN

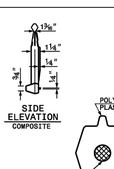


SIDE ELEVATION

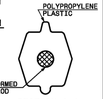
ELEVATION
CAST IRON



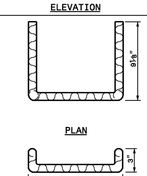
PLAN
ELEVATION

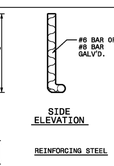


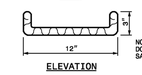
SIDE ELEVATION
COMPOSITE



SECTION A-A







ELEVATION

NOTE:
DO NOT USE IN SANITARY SEWER MANHOLES.

STATE OF NORTH CAROLINA
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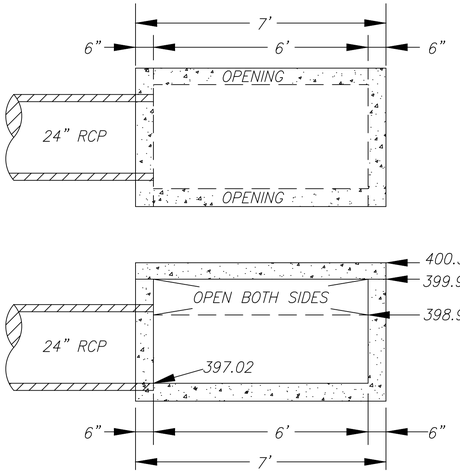
RALEIGH, N.C.

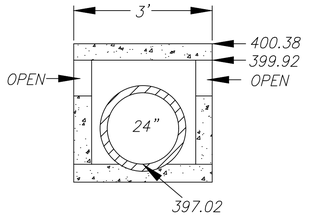
1-12

ENGLISH STANDARD DRAWING FOR
DRAINAGE STRUCTURE STEPS

SHEET 1 OF 1
840.66

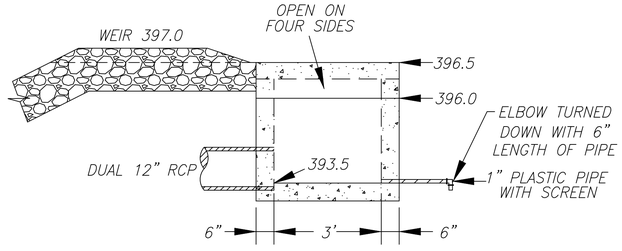


CATCH BASIN INLET AT DITCH LINE



11/14/2016

PRELIMINARY PLAN
DO NOT USE FOR CONSTRUCTION FOR REVIEW BY LOCAL OFFICIALS AND STATE OF NORTH CAROLINA.



OUTLET STRUCTURE FOR DETENTION POND

SAMIR W. BAHHO, PE
CIVIL & STRUCTURAL ENGINEERING SERVICES, PLLC.
4612 KAPLAN DRIVE
RALEIGH, NORTH CAROLINA 27606
TEL: (919) 851-1642
BUSINESS LICENSE P-0537

PROJECT:
WHISPERING MEADOWS SUBDIVISION
OWNER: WINDSTAR PROPERTIES, LLC.
ROADWAY DETAILS
CHATHAM COUNTY NORTH CAROLINA
CENTER TOWNSHIP
ROADWAY DETAILS

REVISIONS

NO.	DATE	DESCRIPTION	BY:

DATE: 11/14/16	SCALE: NOTED
DESIGNED: SWB	CHECKED: SWB
DRAWN: REB	APPROVED: WM

SHEET: NCDOT DETAILS 5 OF 10
CAD FILE: WM
PROJECT NO: 2011.09