

Last Saved By: lodzinski, 11/18/2017 4:45:00 PM G:\DE\Clients\WaterWalk\075356 Morrisville, NC\4.0 Disciplines\Civil\Cad\075356-C600-DET.dwg Plotted By: lodzinski, Jake Platted January 17, 2018, 2:51:49 PM

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

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

GENERAL NOTES:  
 USE CLASS "B" CONCRETE THROUGHOUT.  
 PROVIDE ALL CATCH BASINS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.  
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" 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. 840.05.  
 USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.  
 FOR 8'-0" IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB. OVER 8'-0" TO 16'-0" IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. ADJUST QUANTITIES ACCORDINGLY.  
 CONSTRUCT WITH PIPE CROWNS MATCHING.  
 CHAMFER ALL EXPOSED CORNERS 1".  
 DRAWING NOT TO SCALE.

FRAME, GRATE AND HOOD SEE STD. NO. 840.03

STEPS - STD. NO. 840.66

WHERE 30" TO 36" PIPE IS USED

WHERE 42" TO 54" PIPE IS USED

DETAIL SHOWING METHOD OF RISER CONSTRUCTION

SHEET 1 OF 2  
840.02

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

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

EXPANSION JOINTS

CURB AND GUTTER WITH CATCH BASIN ON STEEP GRADES

USE ON FLAT GRADES 2% AND UNDER

EXPANSION JOINT

DEPRESSED GUTTER LINE

ELEVATION

NORMAL CURB AND GUTTER ON LIGHT GRADES

EXPANSION JOINT

NORMAL GUTTER LINE

USE ON GRADES OVER 2%

EXPANSION JOINT

DEPRESSED GUTTER LINE

ELEVATION

NORMAL CURB AND GUTTER ON STEEP GRADES

DIMENSIONS OF BOX AND PIPE		COVER DIMENSION		CU. YDS. CONC. IN BOX			DEDUCTIONS ONE PIPE			
PIPE	SPAN	WIDTH	WIDTH	SPAN	MIN. HEIGHT	TOP SLAB	BOTTOM SLAB	WALL	PIPE	PIPE
12"	3'-0"	2'-2"	--	2'-3"	2'-3"	0.235	0.172	0.015	0.026	
15"	3'-0"	2'-2"	--	3'-0"	3'-0"	0.235	0.029	0.023	0.036	
18"	3'-0"	2'-2"	--	3'-3"	3'-3"	0.235	0.057	0.033	0.049	
24"	3'-0"	2'-2"	--	3'-9"	3'-9"	0.235	1.001	0.059	0.085	
30"	3'-0"	2'-2"	3'-4"	4'-3"	1'-2"	4'-0"	4	1'-5"	2	3'-9"
36"	3'-0"	2'-2"	3'-10"	4'-9"	1'-9"	4'-0"	4	1'-11"	3	3'-9"
42"	3'-0"	2'-2"	3'-10"	4'-9"	1'-9"	3'-2"	4	1'-8"	2	2'-11"
48"	3'-0"	2'-2"	3'-10"	4'-9"	1'-9"	3'-2"	4	2'-3"	3	2'-11"
54"	3'-0"	2'-2"	3'-10"	4'-9"	1'-9"	3'-2"	4	2'-10"	5	2'-11"

\* RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

SHEET 2 OF 2  
840.02

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

ENGLISH STANDARD DRAWING FOR FRAME, GRATES, AND HOOD FOR USE ON STANDARD CATCH BASIN

NOTE: USE TYPE "E", "F" AND "G" GRATE UNLESS OTHERWISE NOTED.

ALIGN FRAME WITH INSIDE EDGE OF WALL TO ALLOW FOR VERTICAL ADJUSTMENT

WALL SECTION

SECTION - LL

SECTION - MM

SECTION - NN

SECTION - PP

SECTION - RR

SECTION - AA

SECTION - BB

SECTION - KK

HOOD ELEVATION

SHEET 1 OF 2  
840.03

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

ENGLISH STANDARD DRAWING FOR FRAME, GRATES, AND HOOD FOR USE ON STANDARD CATCH BASIN

DETAIL SHOWING TYPES OF GRATES USE ACCORDING TO WATER FLOW.

TYPE "G"

TYPE "E"

TYPE "F"

WATER FLOW

SAG

SECTION A-A

SECTION B-B

TYPE - E

RAISED FLOW ARROW 1/8" HIGH

SECTION A-A

TYPE - F

TYPE G

SECTION A-A

SHEET 2 OF 2  
840.03

MORRISVILLE PROJECT #: 17-11000001 FILE #: 17-0001-S/C

Town of Morrisville APPROVED FOR CONSTRUCTION

Signature: *[Signature]* Date: 5/31/18  
Town of Morrisville, Town Engineer

Signature: *[Signature]* Date: 5/23/18  
Town of Cary Utilities, Water and Sewer

Engineering: *[Signature]*  
Planning: *[Signature]*  
Other (specify): *[Signature]*

Engineering Inspection Services must be contacted (919) 463-6907 at a minimum 24 hours prior to the commencement of any construction activities.

SHEET NO. C801

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

ENGLISH STANDARD DRAWING FOR CONCRETE CATCH BASIN 12" THRU 54" PIPE

11301 Carmel Commons Blvd. Suite 300 Charlotte, NC 28226  
Woolpert Woolsperth Engineering & Construction, Inc. 704.525.6284 FAX: 704.525.8529

SITE IMPROVEMENT PLANS WATERWALK MORRISVILLE

1012 & 1016 LOWER SHILOH WAY MORRISVILLE, NORTH CAROLINA

DRAINAGE DETAILS

REVISION

DATE

NO.

PROJECT NO: 075356

DATE 01/24/17

DES. JG

DR. JL

CKD. TR

01/18/18 REVISED FOR FINAL APPROVAL

SHEET NO. C801