DocuSign Envelope ID: 7F65D594-2BCD-4077-A8F2-914419640769

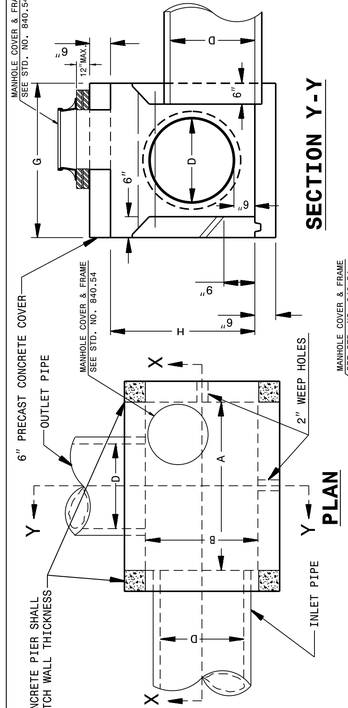
PROJECT REFERENCE NO.	SHEET NO.
R-4707	2C-5

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

ENGLISH DETAIL DRAWING FOR
CONCRETE CATCH BASIN
(3 OR 4 SIDE OPEN THROAT)
(MANHOLE OPTIONAL)

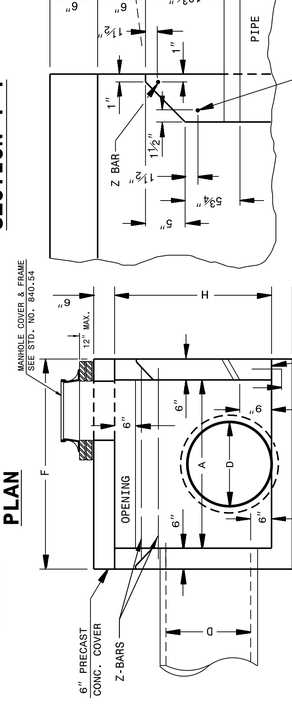
SHEET 1 OF 2 — 840D04

GENERAL NOTES:
ALL CATCH BASINS OVER 3'-6" IN DEPTH TO BE PROVIDED WITH STEPS 12" ON CENTERS. STEPS SHALL BE IN ACCORDANCE WITH STD. 840.66.
ALL EXPOSED CORNERS TO BE CHAMFERED 1".
CLASS "B" CONCRETE TO BE USED THROUGHOUT.
2" PIPE WEEPHOLES TO BE PLACED AS DIRECTED BY ENGINEER.
THE 6" OPENING SHOWN MAY BE INCREASED TO 8" MAXIMUM IF DEEMED TO BE NECESSARY BY THE ENGINEER.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #5 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
FORMS ARE TO BE USED FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STD. DWG. 840.00.
A STONE DRAIN CONSISTING OF 1 CUBIC FOOT OF NO. 78M STONE CONTAINED IN A BAG OF POROUS FABRIC SHALL BE PLACED AT EACH WEEP HOLE.
FOR 8' IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB.
OVER 8' IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. QUANTITIES TO BE ADJUSTED ACCORDINGLY.
DIMENSIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.

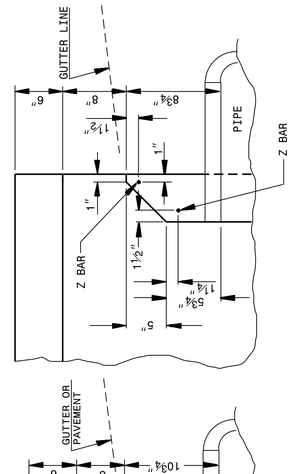


SECTION Y-Y

PLAN



SECTION X-X



PART SECTION Y-Y

SHOWING METHOD OF CONSTRUCTION IF INCREASED OPENING IS USED

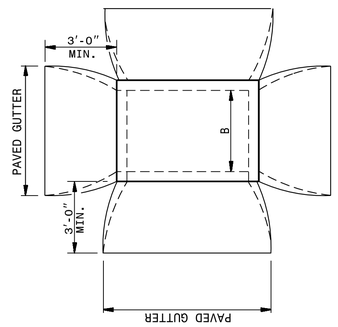
DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H)

DIM'S OF BOX & PIPE				MIN. DIMENSIONS AND REINFORCING						CU. YDS. CONC. IN BOX		TOTAL QUANTITIES BOX & SLABS		DEDUCTION ONE PIPE		DED. ONE (2) THROAT OPENING
PIPE D	SPAN A	WIDTH B	HEIGHT H	BARS - X NO.	BARS - X LENGTH	BARS - Y NO.	BARS - Y LENGTH	BARS - Z NO.	BARS - Z LENGTH	TOP SLAB	BOT. SLAB	WALL/FT.	LBS. REINF.	C.S.	R.C.	YD³
12"	3'-6"	2'-3"	1'-10"	4	3'-0"	6	4'-3"	2	4'-3"	0.181	0.271	0.250	27	1.046	0.015	0.032	0.046
15"	3'-6"	2'-3"	2'-1"	4	3'-0"	6	4'-3"	2	4'-3"	0.181	0.271	0.250	27	1.108	0.023	0.036	0.046
18"	4'-0"	2'-8"	2'-4"	5	3'-5"	7	4'-9"	2	4'-9"	0.226	0.340	0.284	35	1.379	0.033	0.049	0.053
24"	4'-0"	2'-8"	2'-10"	5	3'-5"	7	4'-9"	2	4'-9"	0.226	0.340	0.284	35	1.521	0.059	0.085	0.053
30"	4'-0"	3'-6"	3'-4"	5	4'-3"	9	4'-9"	2	4'-9"	0.278	0.417	0.315	43	1.916	0.092	0.127	0.053
36"	4'-6"	4'-0"	3'-10"	5	4'-9"	10	5'-3"	2	5'-3"	0.340	0.510	0.352	51	2.390	0.132	0.178	0.059
42"	5'-0"	4'-6"	4'-4"	5	5'-3"	12	5'-9"	2	5'-9"	0.407	0.611	0.389	64	2.914	0.180	0.243	0.066
48"	5'-0"	5'-0"	4'-10"	5	5'-9"	13	5'-9"	2	5'-9"	0.444	0.666	0.407	68	3.298	0.235	0.317	0.066

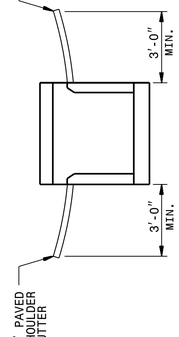
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
CONCRETE CATCH BASIN
(3 OR 4 SIDE OPEN THROAT)
(MANHOLE OPTIONAL)

SHEET 2 OF 2 — 840D04

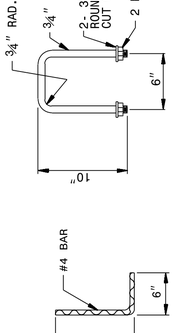


PLAN OF CATCH BASIN IN MEDIAN STRIP



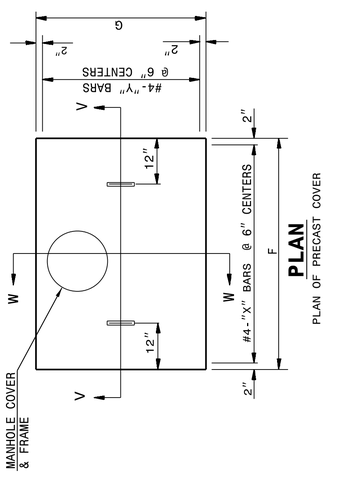
SECTION OF CATCH BASIN MEDIAN STRIP

DETAIL SHOWING METHOD OF PLACING CATCH BASIN AND PAVED SHOULDER GUTTER



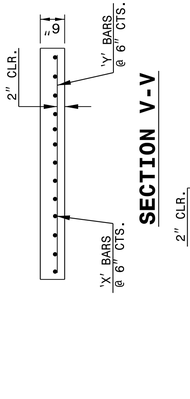
DETAIL OF HANDLE

DOWEL

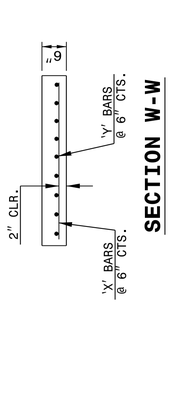


PLAN

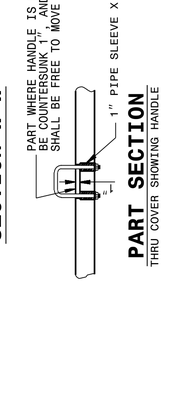
PLAN OF PRECAST COVER



SECTION V-V



SECTION W-W



PART SECTION

THRU COVER SHOWING HANDLE

NORTH CAROLINA PROFESSIONAL SEAL 022966 ENGINEER Joel S. Howerton

DocuSigned by: 4/17/2020

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

CONTRACT STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: _____ DATE: _____
MODIFIED BY: rnbritt DATE: 07-03-2014
CHECKED BY: _____ DATE: _____
FILE SPEC.: details/nbritt/english/hydro/840d04.dgn

24-APR-2019 07:24
S:\Contracts\Contracts\Special Details\jhowerton\840d04 3 or 4 side OTCB.dgn
jhowerton AT CSD-292595