

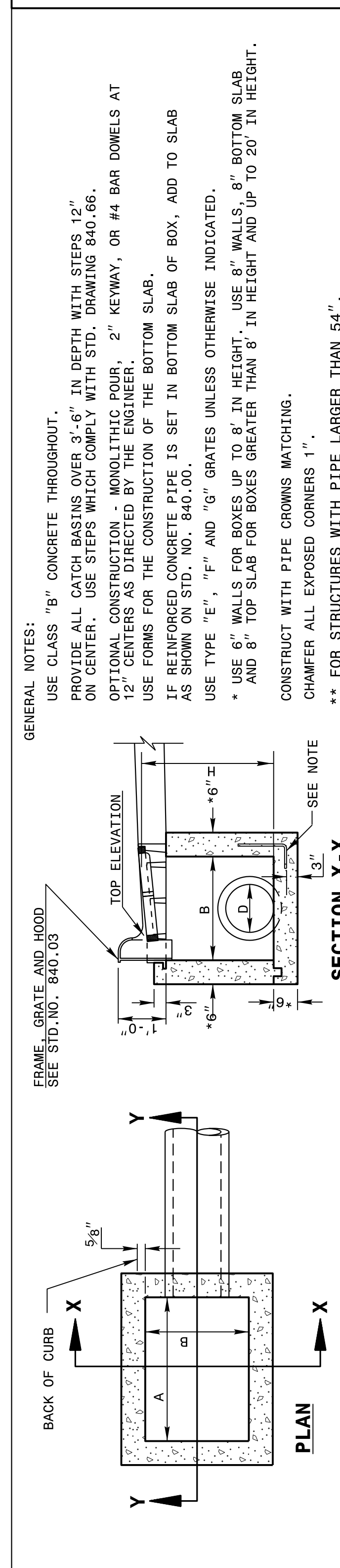
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5/14/99

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

ENGLISH DETAIL DRAWING FOR EXTRA DEPTH CONCRETE CATCH BASIN 12" THRU 84" PIPE

SHEET 1 OF 2 840D02

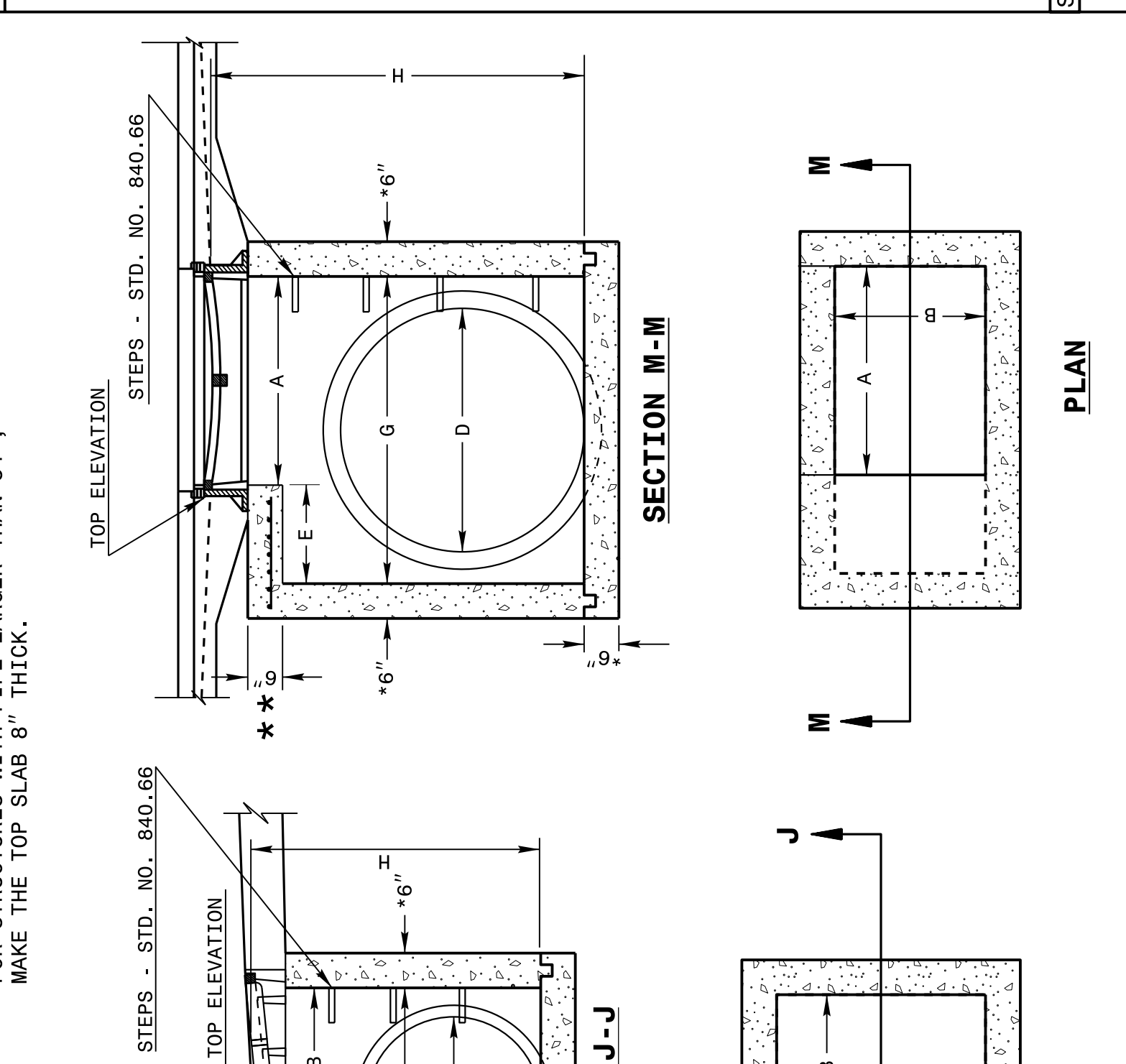


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SHEET 1 OF 2 840D02

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. 840.00.
 USE TYPE "E", "F" AND "G" GRATES UNLESS OTHERWISE INDICATED.
 * USE 6" WALLS FOR BOXES UP TO 8' IN HEIGHT. USE 8" WALLS, 8" BOTTOM SLAB AND 8" TOP SLAB FOR BOXES GREATER THAN 8' IN HEIGHT AND UP TO 20' IN HEIGHT.
 CONSTRUCT WITH PIPE CORNERS MATCHING.
 CHAMFER ALL EXPOSED CORNERS 1".
 ** FOR STRUCTURES WITH PIPE LARGER THAN 54", MAKE THE TOP SLAB 8" THICK.

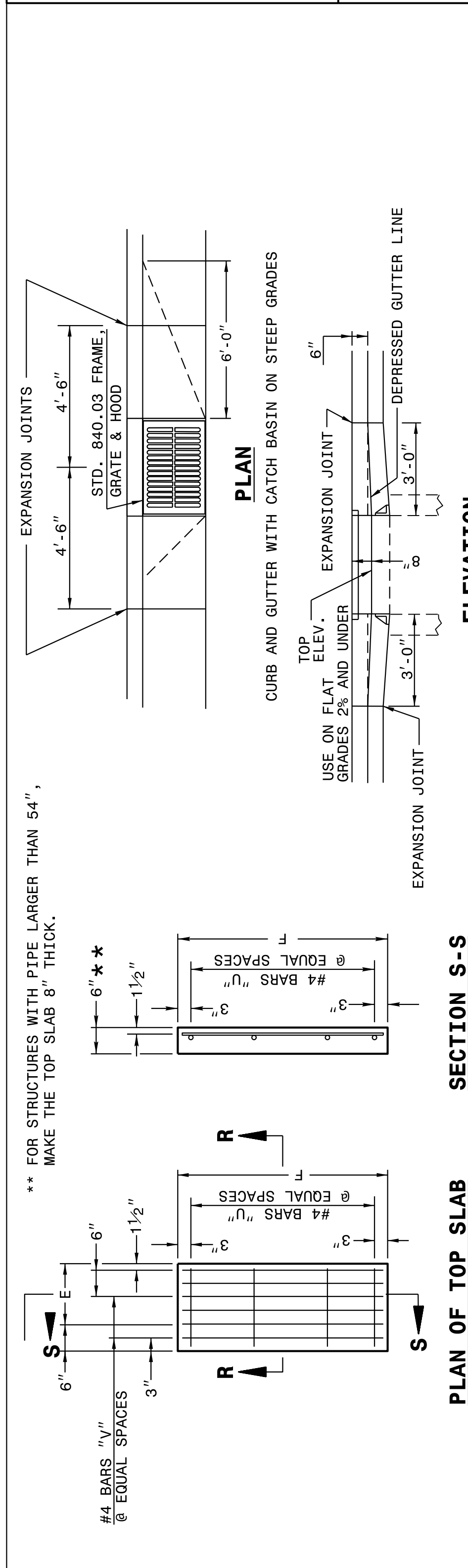


FRAME, GRATE AND HOOD SEE STD. NO. 840.03
 TOP ELEVATION
 BACK OF CURB
 RISER HT. VARIES
 DETAIL SHOWING METHOD OF RISER CONSTRUCTION
 PLAN
 SECTION X-X
 SECTION Y-Y
 SECTION J-J
 SECTION M-M

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ENGLISH DETAIL DRAWING FOR EXTRA DEPTH CONCRETE CATCH BASIN 12" THRU 84" PIPE

SHEET 2 OF 2 840D02

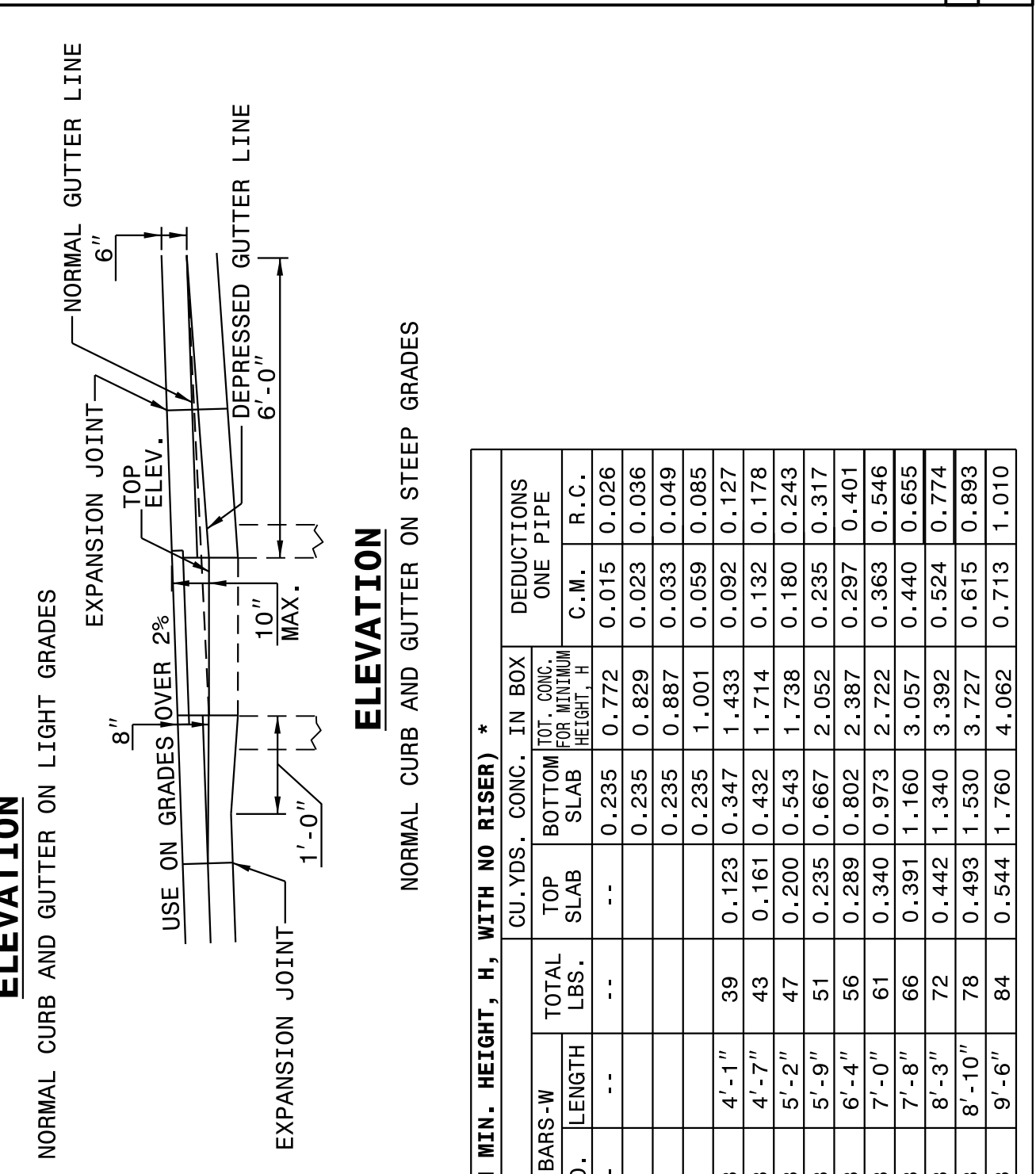


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ENGLISH DETAIL DRAWING FOR EXTRA DEPTH CONCRETE CATCH BASIN 12" THRU 84" PIPE

SHEET 2 OF 2 840D02

EXPANSION JOINTS
 STD. 840.03 FRAME, GRATE & HOOD
 CURB AND GUTTER WITH CATCH BASIN ON STEEP GRADES
 TOP ELEV.
 USE ON FLAT GRADES 2% AND UNDER
 EXPANSION JOINT
 DEPRESSED GUTTER LINE
 ELEVATION
 NORMAL CURB AND GUTTER ON LIGHT GRADES
 EXPANSION JOINT
 TOP ELEV.
 USE ON GRADES OVER 2%
 DEPRESSED GUTTER LINE
 ELEVATION
 NORMAL CURB AND GUTTER ON STEEP GRADES



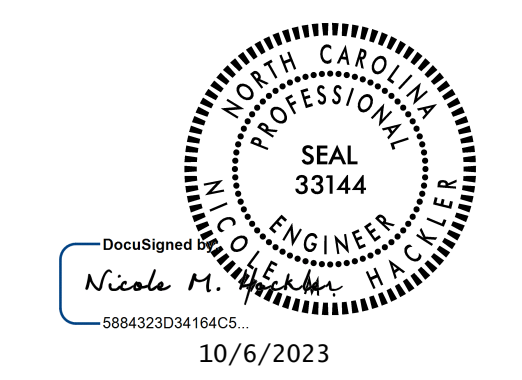
MINIMUM DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H, WITH NO RISER) *
 * RISER HAS .228 CUBIC YARDS OF CONCRETE PER FOOT HEIGHT

PIPE D.	DIMENSIONS OF BOX AND PIPE			COVER DIMENSION			BARS-U			BARS-V			BARS-W			TOTAL LBS.	CU. YDS. CONC. IN BOX	DEDUCTIONS		
	SPAN	WIDTH	MIN. HEIGHT	E	F	H	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	TOP SLAB			BOTTOM SLAB	TOT. CONC. FOR MINIMUM HEIGHT, H	C.M.	R.C.
12"	3'-0"	2'-2"	2'-0"	..	..	2'-0"	..	..	..	..	..	..	..	..	..	..	0.235	0.772	0.015	0.026
15"	3'-0"	2'-2"	2'-3"	..	..	2'-3"	..	..	..	..	..	..	..	..	..	..	0.235	0.829	0.023	0.036
18"	3'-0"	2'-2"	3'-1"	..	..	3'-1"	..	..	..	..	..	..	..	..	..	..	0.235	0.887	0.033	0.049
24"	3'-0"	2'-2"	3'-10"	..	..	3'-10"	..	..	..	..	..	..	..	..	..	..	0.235	1.001	0.059	0.085
30"	3'-0"	2'-2"	3'-4"	..	..	3'-4"	..	..	..	..	..	..	..	..	..	..	0.123	0.347	1.433	0.092
36"	3'-0"	2'-2"	3'-10"	..	..	3'-10"	..	..	..	..	..	..	..	..	..	..	0.161	0.432	1.714	0.132
42"	3'-0"	2'-2"	4'-5"	..	..	4'-5"	..	..	..	..	..	..	..	..	..	..	0.200	0.543	1.738	0.180
48"	3'-0"	2'-2"	5'-0"	..	..	5'-0"	..	..	..	..	..	..	..	..	..	..	0.235	0.667	2.052	0.235
54"	3'-0"	2'-2"	5'-7"	..	..	5'-7"	..	..	..	..	..	..	..	..	..	..	0.289	0.802	2.387	0.297
60"	3'-0"	2'-2"	6'-3"	..	..	6'-3"	..	..	..	..	..	..	..	..	..	..	0.340	0.973	2.722	0.363
66"	3'-0"	2'-2"	6'-11"	..	..	6'-11"	..	..	..	..	..	..	..	..	..	..	0.391	1.160	3.057	0.440
72"	3'-0"	2'-2"	7'-6"	..	..	7'-6"	..	..	..	..	..	..	..	..	..	..	0.442	1.340	3.392	0.524
78"	3'-0"	2'-2"	8'-1"	..	..	8'-1"	..	..	..	..	..	..	..	..	..	..	0.493	1.530	3.727	0.615
84"	3'-0"	2'-2"	8'-9"	..	..	8'-9"	..	..	..	..	..	..	..	..	..	..	0.544	1.760	4.062	0.713

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

SEE PLATE FOR TITLE

ORIGINAL BY: 2002 Std.840.01 DATE: _____
 MODIFIED BY: E.E. WARD DATE: 3-1-02
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: jhewerton/840d02 Extra_Depth CB.dgn



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