DocuSign Envelope ID: F6DE343C-7A34-4575-8599-13461D400599

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4405 | 2C-8 |

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

ENGLISH DETAIL DRAWING FOR

# CONCRETE MEDIAN DROP INLET TYPE 'A' EXTRA DEPTH OVER 12' TO 25'

12" THRU 72" PIPE

SHEET 1 OF 2 — 840D17

GENERAL NOTES:

USE CLASS "B" CONCRETE THROUGHOUT.

PROVIDE DROP INLETS 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.

WHEN PAYMENT FOR THE DROP INLET IS MADE ON A PER EACH BASIS, THE CONCRETE APRON WILL BE CONSIDERED PART OF THE DROP INLET.

CONSTRUCT WITH PIPE CROWNS MATCHING.

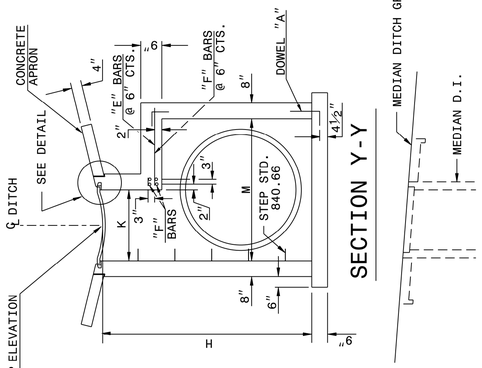
USE STANDARD FRAMES AND GRATES 840.22 (SHOWN), 840.24(SHOWN), 840.20, 840.29, AND 840.33.

SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.

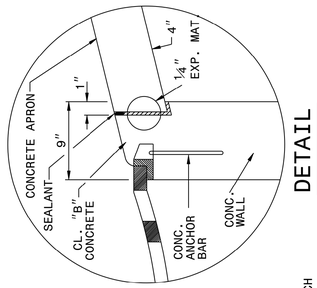
CHAMFER ALL EXPOSED CORNERS 1".

DRAWING NOT TO SCALE.

MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 25 FEET.

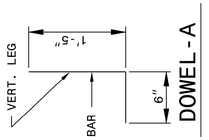



SECTION Y-Y

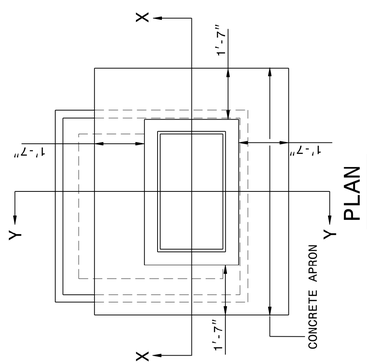



DETAIL

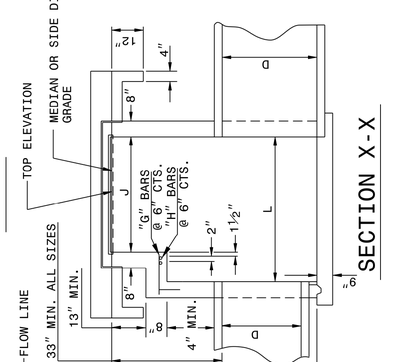
(APRON SUPPORT NOTCH)




DOWEL-A




PLAN




SECTION X-X

| STATE OF<br>NORTH CAROLINA<br>DEPT. OF TRANSPORTATION<br>DIVISION OF HIGHWAYS<br>RALEIGH, N.C. | ENGLISH DETAIL DRAWING FOR<br>**CONCRETE MEDIAN DROP INLET TYPE 'A' EXTRA DEPTH OVER 12' TO 25'**<br>12" THRU 72" PIPE | SHEET 1 OF 2<br>840D17 |
|---|---|---|

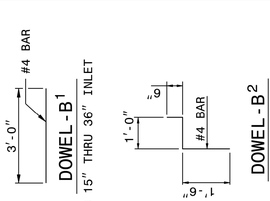
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR

# CONCRETE MEDIAN DROP INLET TYPE 'A' EXTRA DEPTH OVER 12' TO 25'

12" THRU 72" PIPE

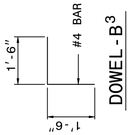
SHEET 2 OF 2 — 840D17



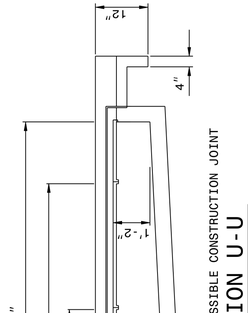

DOWEL-B¹
FOR 15" THRU 36" INLET



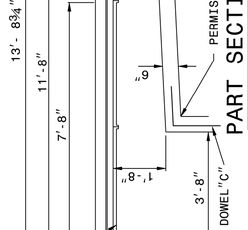

DOWEL-B²
FOR 42" INLET



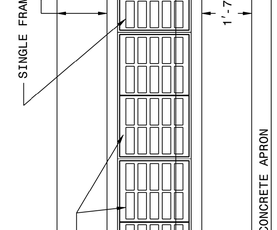

DOWEL-B³

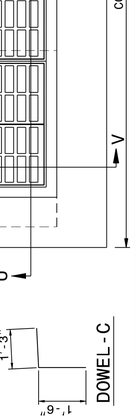



PART SECTION U-U




PART SECTION V-V




DOWEL-C

**MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE GRATED DROP INLET(BASED ON MIN. HEIGHT, H)**

| DIMENSIONS OF BOX AND PIPE | | | | | | REINFORCING STEEL - NO. 4 BARS | | | | | | | | | | CU YDS CONC. IN BOX | | | DEDUCTIONS FOR ONE PIPE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PIPE | SPAN | WIDTH | SPAN | WIDTH | HEIGHT | BARS E | | BARS F | | BARS G | | BARS H | | TOTAL WEIGTH LBS. | BOTTOM SLAB | H TOTAL | H PER FT HT | APRON | TOTAL | C.S. | R.C. |
| D | J | K | L | M | H | NO. | LENGTH | NO. | LENGTH | NO. | LENGTH | NO. | LENGTH | | | | | | | |
| 12" | 3'-8" | 2'-0" | 3'-8" | 2'-0" | 3'-9" | — | — | — | — | — | — | — | — | — | 0.362 | 0.926 | 0.247 | 0.395 | 1.683 | 0.015 | 0.024 |
| 15" | 3'-8" | 2'-0" | 3'-8" | 2'-0" | 4'-0" | — | — | — | — | — | — | — | — | — | 0.362 | 0.988 | 0.247 | 0.395 | 1.745 | 0.023 | 0.036 |
| 18" | | | | 2'-0" | 4'-3" | — | — | — | — | — | — | — | — | — | 0.362 | 1.050 | 0.247 | | 1.807 | 0.033 | 0.049 |
| 24" | | | | 2'-10" | 4'-9" | 8 | 1'-5" | 6 | 4'-9" | — | — | — | — | 27 | 0.444 | 1.362 | 0.278 | | 2.201 | 0.059 | 0.085 |
| 30" | | | 3'-8" | 3'-5" | 5'-3" | 8 | 2'-0" | 7 | 4'-9" | — | — | — | — | 33 | 0.502 | 1.644 | 0.288 | | 2.541 | 0.092 | 0.127 |
| 36" | | | 4'-0" | 4'-0" | 5'-9" | 8 | 2'-5" | 8 | 4'-11" | 4 | 0'-9" | 2 | 4'-11" | 47 | 0.560 | 1.931 | 0.321 | | 2.920 | 0.132 | 0.178 |
| 42" | | | 4'-10" | 4'-10" | 6'-3" | 10 | 3'-1" | 9 | 5'-7" | 3 | 1'-5" | 3 | 5'-7" | 67 | 0.704 | 2.500 | 0.370 | | 3.677 | 0.180 | 0.243 |
| 48" | | | 5'-4" | 5'-4" | 6'-9" | 11 | 3'-7" | 10 | 6'-1" | 4 | 1'-11" | 4 | 6'-1" | 87 | 0.823 | 3.013 | 0.407 | | 4.315 | 0.235 | 0.317 |
| 54" | | | 6'-0" | 6'-0" | 7'-3" | 12 | 4'-1" | 11 | 6'-7" | | 2'-5" | 5 | 6'-7" | 107 | 0.951 | 3.589 | 0.444 | | 5.072 | 0.297 | 0.401 |
| 60" | | | 6'-6" | 6'-6" | 7'-9" | 13 | 4'-9" | 12 | 7'-3" | | 3'-1" | 6 | 7'-3" | 135 | 1.311 | 4.539 | 0.494 | | 6.170 | 0.367 | 0.495 |
| 66" | | | 7'-2" | 7'-2" | 8'-3" | 14 | 5'-4" | 14 | 7'-10" | | 3'-7" | 7 | 7'-10" | 168 | 1.136 | 5.061 | 0.537 | | 6.901 | 0.444 | 0.599 |
| 72" | | 2'-0" | 7'-8" | 7'-8" | 8'-9" | 15 | 5'-11" | 15 | 8'-5" | 4 | 4'-3" | 8 | 8'-5" | 199 | 1.500 | 5.860 | 0.580 | 0.395 | 7.868 | 0.528 | 0.713 |

| STATE OF<br>NORTH CAROLINA<br>DEPT. OF TRANSPORTATION<br>DIVISION OF HIGHWAYS<br>RALEIGH, N.C. | ENGLISH DETAIL DRAWING FOR<br>**CONCRETE MEDIAN DROP INLET TYPE 'A' EXTRA DEPTH OVER 12' TO 25'**<br>12" THRU 72" PIPE | SHEET 2 OF 2<br>840D17 |
|---|---|---|

SEAL 022966 NORTH CAROLINA PROFESSIONAL ENGINEER S. Howerton
DocuSigned by: Jhowerton 073F3D17DCDC45F...
6/15/2018

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: 2002 STD.840.17 DATE:
MODIFIED BY: K.A. KEMPF DATE: 07-06-09
CHECKED BY: DATE:
FILE SPEC.: /stand/840d17 Extra Depth 2GI.dgn

01-MAR-2018 07:33
S:\Contracts\Special Details\erickward\usr\details\stand\840d17 Extra Depth 2GI.dgn
jhowerton AT CSD-292995