

 DEPTH OF INLET (H) TO BE SHOWN ON PLANS. FOR DEPTH GREATER THAN 6'-6", USE ST'D. DI-12, DI-12A.

THE "H" DIMENSION SHOWN ON THE STANDARDS AND SPECIFIED ON THE PLANS WILL BE MEASURED FROM THE INVERT OF THE OUTFALL PIPE TO THE TOP OF THE STRUCTURE. PLAN "H" DIMENSIONS ARE APPROXIMATE ONLY FOR ESTIMATING PURPOSES AND THE ACTUAL DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FROM FIELD CONDITIONS.

WHEN SPECIFIED ON THE PLANS THE INVERT IS TO BE SHAPED IN ACCORDANCE WITH STANDARD IS-1. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.

IN THE EVENT THE INVERT OF THE OUTFALL PIPE IS HIGHER THAN THE BOTTOM OF THE STRUCTURE, THE INVERT OF THE STRUCTURE SHALL BE SHAPED WITH CEMENT MORTAR TO PREVENT STANDING OR PONDING OF WATER IN THE STRUCTURE. THE COST OF FURNISHING AND PLACING ALL MATERIALS INCIDENTAL TO THE SHAPING IS TO BE INCLUDED IN THE BID PRICE FOR THE STRUCTURE.

- STEPS ARE TO BE PROVIDED WHEN H IS 4'-0" OR GREATER. FOR DETAILS SEE STANDARD ST-1.
- 5. THIS ITEM MAY BE PRECAST OR CAST-IN-PLACE.
- 7. # 4 DOWELS 12" LONG, 12" C-C TO BE PLACED IN ALL AREAS ADJACENT TO ABUTTING CONCRETE TO PREVENT SETTLEMENT.
- 8. 3" DIAMETER WEEP HOLE 12"X12" PLASTIC HARDWARE CLOTH 1/4" MESH OR GALVANIZED STEEL WIRE, MINIMUM WIRE DIAMETER 0.03", NUMBER 4 MESH HARDWARE CLOTH ANCHORED FIRMLY TO THE OUTSIDE OF THE STRUCTURE.
- ALL REINFORCING STEEL SHALL HAVE A MIN. COVER OF 2".
- ALL REINFORCING STEEL TO BE CUT CLEAR OF ALL OPENINGS BY 2".
- 11. CAST-IN PLACE CONCRETE IS TO BE CLASS A3 (3000 PSI). PRECAST CONCRETE IS TO BE 4000 PSI

NOTES

DI-12B, 12C

- 12. LENGTH OF SLOT (L) WILL IN EVERY CASE, BE SHOWN ON PLANS.
- 13. ALL REINFORCING BARS TO BE #4
- 14. DI-12C CONCRETE GUTTER INCREMENT: ADD 0.07 CU. YDS CLASS A3 CONCRETE FOR EACH ADDITIONAL FOOT OF SLOT LENGTH GREATER THAN MINIMUM 3'-8".
- 15. GRATE BARS TO BE INSTALLED SO THEY WILL BE ALIGNED PARALLEL TO THE DITCH FLOW.
- 16. IF NORMAL DITCH GRADE IS TOO FLAT TO ALLOW FOR ADJUSTED GRADE TO INLET A SPECIAL GUTTER DETAIL WILL BE REQUIRED ON PLANS.
- 17. DI-12B----NO GUTTER
 DI-12C----PERIPHERAL GUTTER
- PAVED DITCHES ARE TO BE TRANSITIONED TO MEET INLET GUTTER AS SHOWN IN STANDARD PG-2A.
- QUANTITIES SHOWN ARE FOR INLETS WITHOUT PIPES. PIPE DISPLACEMENTS MUST BE DEDUCTED TO OBTAIN TRUE QUANTITIES.
- PAVED TRANSITION WHERE REQUIRED ON PLANS. TRANSITION IS TO BE SHAPED TO CONFORM TO ROUNDED CONCRETE GUTTER OF DI-12C.
- 21. TYPE I GRATE: LIMITED ACCESS AND RURAL UNLIMITED ACCESS
- 22. TYPE II GRATE: URBAN AREAS
- 23. L = LENGTH ROUNDED FOR PLAN USE.
- 24. DI-12C: FOR APPROX. QUANTITIES FOR DI-12C, ADD 0.36 CU. YDS. OF CLASS A3 CONCRETE TO DI-12B QUANTITIES FOR CONCRETE GUTTER. QUANTITY SHOWN IS FOR A MINIMUM SLOT LENGTH OF 3'-8". FOR OTHER LENGTHS SEE CONCRETE GUTTER INCREMENT BELOW.
- 25. DI-12B AND DI-12C ARE NOT TO BE UTILIZED IN LOCATIONS NORMALLY SUBJECT TO TRAFFIC.
- 26. DUMP NO WASTE DRAINS TO WATERWAYS LETTERING IS REQUIRED ON ALL DI-12 GRATES. LOCATION OF LETTERING MAY VARY BY MANUFACTURER.
- 27. TYPE LAND TYPE LIGRATES SHALL NOT BE LOCATED WITHIN THE LIMITS OF ANY PEDESTRIAN ACCESS ROUTE, SUCH AS A SIDEWALK, SHARED USE PATH, OR PEDESTRIAN CROSSING (MARKED OR UNMARKED).

TABULATION CHARTS

L (SEE NOTE 23)			MATE QUANTITIES D (SEE NOTES 19 & 2	24)	Y			
		(MININ)	ALIMA LIFICUITA SLOT					
			(MINIMUM HEIGHT) SLOT 4'TO 14' (SEE NOTE 23)					
	L1	CONCRETE CU. YDS.	REINFORCING STEEL LBS.	NUMBER GRATES	CONCRETE CHAMBER INCREMENTS PER FOOT CU. YDS.			
4	3'-8''	0.99	81.27	2				
6 5	5'-8¾''	1.28	122.81	3				
8	7'-8''	1.48	161.90	4	.35			
10 9	9'-8¾''	1.79	203.37	5				
12	11'-8''	2.09	242.45	6				
14 13		2.40	283.93	7				

SPECIFICATION REFERENCE 241 503

GRATE

TYPE

TYPE I

TYPE II

GRATE SECTION Y-Y
NOTE: SEE GRATE DIMENSION TABLE

OPENING

WIDTH

(1)

31/4

5 OPENINGS

11/2"

8 OPENINGS

FOR GRATE TYPE I & II DIMENSIONS

GRATE DIMENSIONS

THICKNESS

(2)

13/6"

4 BARS

7 BARS

END SECTION

WIDTH

(3)

21/8"

23/6"

GRATE

THICKNESS

(4)

33/4"

33/4"

MULTIGRATE DROP INLET

VIRGINIA DEPARTMENT OF TRANSPORTATION

ROAD AND BRIDGE STANDARDS

REVISION DATE SHEET 2 OF 2

08/14 104.34

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