

SURVEYED BY _____
 SUPERVISED BY AA
 DESIGNED BY BD

DESIGN FEATURES RELATING TO CONSTRUCTION
 OR TO REGULATION AND CONTROL OF TRAFFIC
 MAY BE SUBJECT TO CHANGE AS DEEMED
 NECESSARY BY THE DEPARTMENT

REVISED	STATE	FEDERAL AID	ROUTE	STATE	SHEET NO.
		PROJECT		PROJECT	
	VA.				

PB-1

GENERAL

1. METHOD "A" PIPE BEDDING SHALL BE USED FOR ALL TYPES OF PIPE CULVERTS WITHIN THE APPLICABLE HEIGHT OF COVER RANGE NOTED IN THE STANDARD PC-1 TABLES UNLESS OTHERWISE NOTED ON THE PLANS.
2. H - HEIGHT OF COVER MEASURED FROM TOP OF CULVERT TO FINISHED GRADE.
3. b - EXCAVATION DEPTH AS SHOWN ON PLANS OR TO FIRM BEARING SOIL.

CIRCULAR PIPE

1. D - OUTSIDE DIAMETER OF PIPE.
2. d - INSIDE DIAMETER OF PIPE.
3. x - WIDTH OF CLASS I BACKFILL MATERIAL BEYOND THE EXTREMITY OF THE PIPE.
 $x = 12"$ WHERE d IS LESS THAN $36"$.
 $x = 18"$ WHERE d IS $36"$ AND GREATER.
4. WHERE DIRECTED BY THE ENGINEER, BEDDING MATERIAL MAY BE ELIMINATED FOR NORMAL EARTH FOUNDATIONS UNDER ROUTINE ENTRANCE PIPE (EXCEPT PLASTIC PIPE) 30" AND LESS IN DIAMETER WITH HEIGHT OF COVER 15' OR LESS.
5. REGULAR BACKFILL MATERIAL MAY BE USED IN LIEU OF CLASS I BACKFILL MATERIAL FOR ALL FOUNDATION TYPES FOR ROUTINE ENTRANCE PIPE (EXCEPT PLASTIC PIPE) 30" AND LESS IN DIAMETER WITH HEIGHT OF COVER 15' OR LESS.
6. BEDDING MATERIAL AND CLASS I BACKFILL MATERIAL MAY BE ELIMINATED FOR SHOULDER SLOT INLET (D-13) OUTLET PIPES INSTALLATIONS.

ELLIPTICAL PIPE

1. S_1 - OUTSIDE SPAN DIMENSION OF PIPE.
2. S_2 - INSIDE SPAN DIMENSION OF PIPE.
3. R - OUTSIDE RISE DIMENSION OF PIPE.
4. x - WIDTH OF CLASS I BACKFILL MATERIAL BEYOND THE EXTREMITY OF THE PIPE.
 $x = 12"$ WHERE S_2 IS LESS THAN $36"$.
 $x = 18"$ WHERE S_2 IS $36"$ AND GREATER.
5. WHERE DIRECTED BY THE ENGINEER, BEDDING MATERIAL MAY BE ELIMINATED FOR NORMAL EARTH FOUNDATIONS UNDER ROUTINE ENTRANCE PIPE WHERE S_2 IS 38" OR LESS AND HEIGHT OF COVER 15' OR LESS.
6. REGULAR BACKFILL MATERIAL MAY BE USED IN LIEU OF CLASS I BACKFILL MATERIAL FOR ALL FOUNDATION TYPES FOR ROUTINE ENTRANCE PIPE WHERE S_2 IS 38" OR LESS AND HEIGHT OF COVER 15' OR LESS.

PIPE ARCH

1. S - SPAN DIMENSION OF PIPE.
2. R - RISE DIMENSION OF PIPE.
3. b - SEE PC-1 TABLE FOR APPLICABLE PIPE MATERIAL.
4. x - WIDTH OF CLASS I BACKFILL MATERIAL BEYOND THE EXTREMITY OF THE PIPE.
 $x = 12"$ WHERE S_2 IS LESS THAN $36"$.
 $x = 18"$ WHERE S_2 IS $36"$ AND GREATER.
5. WHERE DIRECTED BY THE ENGINEER, BEDDING MATERIAL MAY BE ELIMINATED FOR NORMAL EARTH FOUNDATIONS UNDER ROUTINE ENTRANCE PIPE WHERE S_2 IS 35" OR LESS AND HEIGHT OF COVER 15' OR LESS.
6. REGULAR BACKFILL MATERIAL MAY BE USED IN LIEU OF CLASS I BACKFILL MATERIAL FOR ALL FOUNDATION TYPES FOR ROUTINE ENTRANCE PIPE WHERE S IS 35" OR LESS AND HEIGHT OF COVER 15' OR LESS.

INSTALLATION OF PIPE CULVERTS AND STORM SEWERS
 GENERAL NOTES

NEW. 1/04
 107.00

SPECIFICATION REFERENCE
302
303

VIRGINIA DEPARTMENT OF TRANSPORTATION

NEW 1/04
 SPECIAL DESIGN SECTION
 DRAWING NO. A-151

PLAN NO.	PROJECT	FILE NO.	SHEET NO.