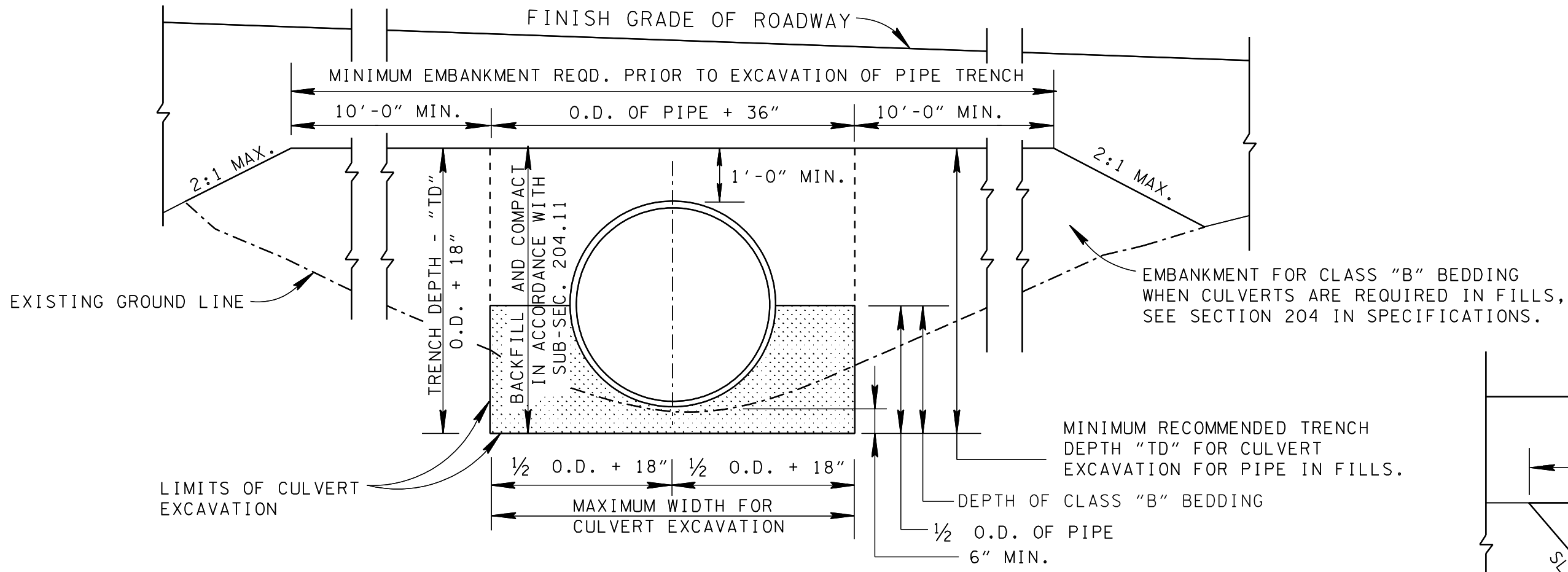


BEDDING MATERIAL (CLASS B) FOR CONCRETE, PIPE CULVERTS	
PIPE DIAMETER (INCHES)	CONCRETE PIPE CU. YD. OF BEDDING MATL. PER LIN. FT.
12	0.162
15	0.187
18	0.212
24	0.266
30	0.321
36	0.380
42	0.442
48	0.507
54	0.573
60	0.643
66	0.716
72	0.790
78	0.868
84	0.949
90	1.032
96	1.118
102	1.206
108	1.298

BEDDING MATERIAL (CLASS B) FOR PIPE - ARCH CULVERTS		
SPAN - RISE	DIMENSION "H" (INCHES)	CU.YD. OF BEDDING MATL. PER LIN. FT.
18" X 11"	4.50	0.133
22" X 13"	4.75	0.143
25" X 16"	5.25	0.154
29" X 18"	5.50	0.163
36" X 22"	6.25	0.185
43" X 27"	7.00	0.206
50" X 31"	8.00	0.233
58" X 36"	9.25	0.265
65" X 40"	10.50	0.297
72" X 44"	11.75	0.331
6'1" X 4'7"	21.0	0.427
6'4" X 4'9"	20.5	0.422
6'9" X 4'11"	22.0	0.461
7'0" X 5'1"	21.4	0.456
7'3" X 5'3"	20.8	0.451
7'8" X 5'5"	22.4	0.496
7'11" X 5'7"	21.7	0.487
8'2" X 5'9"	20.9	0.473
8'7" X 5'11"	22.7	0.525
8'10" X 6'1"	21.9	0.510
9'4" X 6'3"	23.8	0.569
9'6" X 6'5"	22.9	0.554
9'9" X 6'7"	21.9	0.581
10'3" X 6'9"	24.0	0.599
10'8" X 6'11"	26.1	0.664
10'11" X 7'1"	25.1	0.649
11'5" X 7'3"	27.4	0.723
11'7" X 7'5"	26.3	0.700
11'10" X 7'7"	25.2	0.677
12'4" X 7'9"	27.5	0.758
12'6" X 7'11"	26.4	0.731
12'8" X 8'1"	25.2	0.701
12'10" X 8'4"	24.0	0.672
13'5" X 8'5"	26.4	0.759
13'11" X 8'7"	28.9	0.856
14'1" X 8'9"	27.6	0.817
14'3" X 8'11"	26.3	0.785
14'10" X 9'1"	28.9	0.851
15'4" X 9'3"	31.6	0.955
15'6" X 9'5"	30.2	0.953
15'8" X 9'7"	28.8	0.873
15'10" X 9'10"	27.5	0.875
16'5" X 9'11"	30.1	0.986
16'7" X 10'1"	28.7	0.942

BEDDING MATERIAL (CLASS B) FOR STRUCTURAL PLATE PIPE CULVERTS	
PIPE DIAMETER (INCHES)	CU.YD. OF BEDDING MATL. PER LIN. FT.
60	0.564
66	0.623
72	0.684
78	0.747
84	0.813
90	0.880
96	0.949
102	1.020
108	1.093
114	1.168
120	1.245
126	1.324
132	1.406
138	1.489
144	1.574
150	1.661
156	1.750
162	1.841
168	1.934
174	2.029
180	2.126

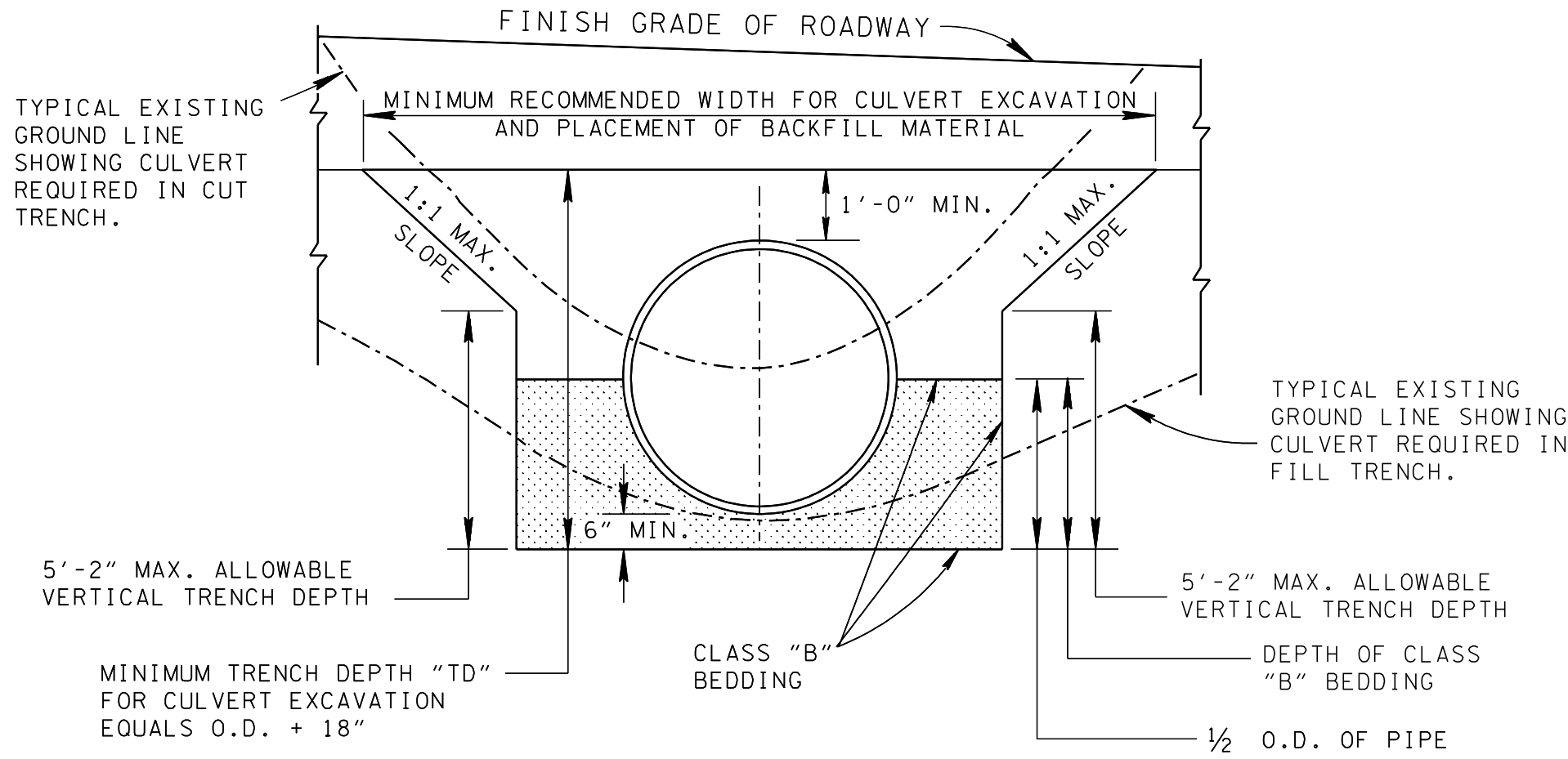
GENERAL NOTES	
(A)	CLASS "B" BEDDING WILL BE REQUIRED UNDER ALL CROSS DRAINS THROUGHOUT THE FULL LENGTH OF THE STRUCTURE, UNDER STORM SEWER LINES WITHIN THE LIMITS OF THE ROADWAY (BACK-OF-SIDEWALK TO BACK-OF-SIDEWALK, OR BACK-OF-CURB TO BACK-OF-CURB WHEN SIDEWALK IS NOT A PART OF THE PRESENT OR ULTIMATE PLANS) AND UNDER ALL CROSS DRAINS UNDER PUBLIC SIDE ROADS.
(B)	CLASS "B" BEDDING WILL NOT BE REQUIRED UNDER SIDE DRAINS FOR PRIVATE DRIVES OR FIELD ENTRANCES, PIPES LYING PARALLEL TO THE ROADWAY IN UNPAVED MEDIANS, PIPES OUTSIDE OF SHOULDER LIMITS IN INTERCHANGES, OR PIPES OUTSIDE NORMAL SLOPE LINES.
(C)	IF NATURAL GROUND IS NOT AT LEAST ONE FOOT ABOVE TOP OF PIPE, ROADWAY EMBANKMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH TYPICAL DETAIL "A" ON THIS SHEET TO A MINIMUM OF ONE FOOT ABOVE TOP OF PIPE PRIOR TO COMMENCEMENT OF EXCAVATION FOR PIPE TRENCH.
(D)	PAYMENT FOR CLASS "B" BEDDING MATERIAL (FOR CUBIC YARD) WILL BE INCLUDED IN THE UNIT PRICE OF THE PIPE.
(E)	EXCAVATION FOR PIPE CULVERTS, SEWERS, CONDUITS, ETC. WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF THE PROPOSED PIPE CULVERT.
(F)	ALL COST OF BACKFILL OTHER THAN CLASS "B" BEDDING AS DESCRIBED IN THE STANDARD SPECIFICATIONS UNDER SECTION 204 WILL BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS.



DETAIL "A" SHOWING PIPE CULVERT INSTALLATION IN FILLS

NOTES :

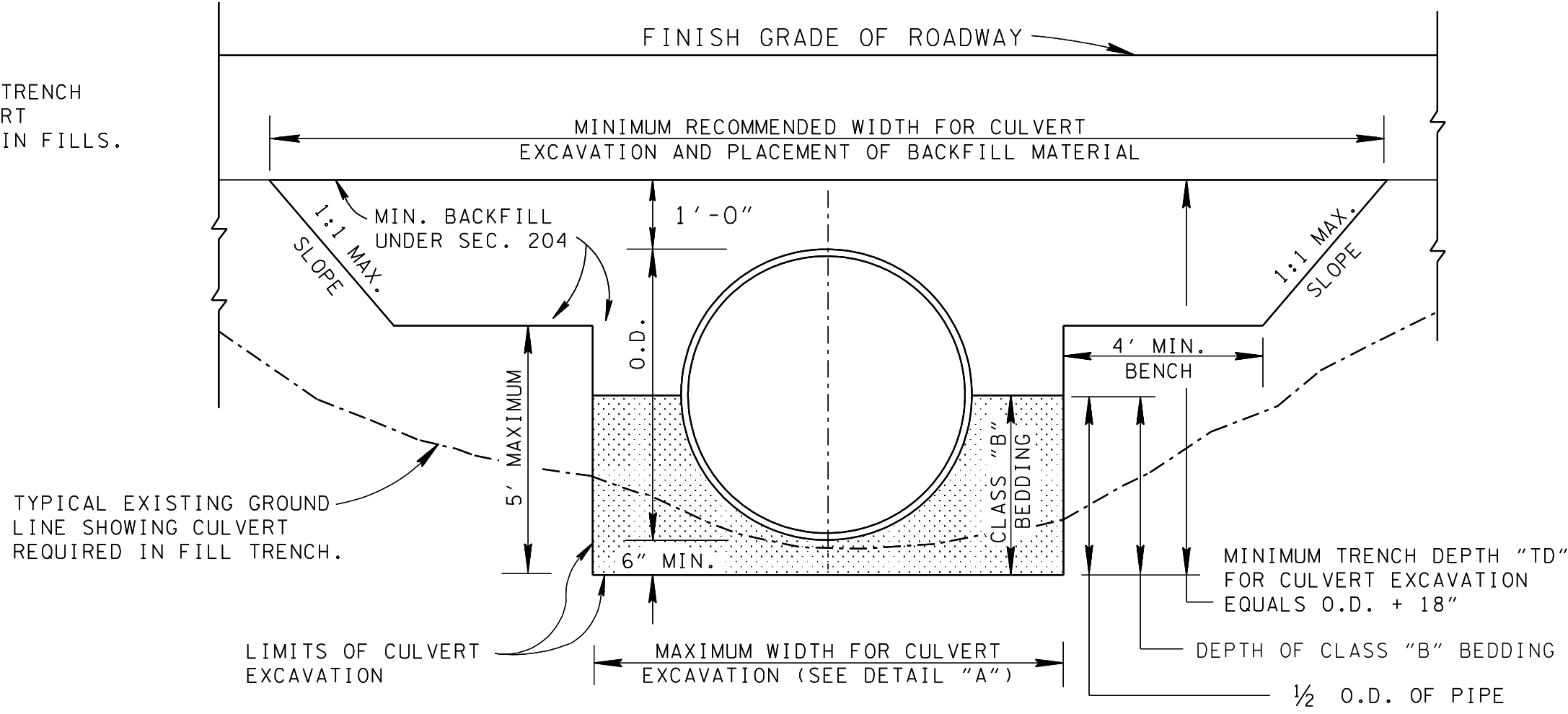
- DETAIL "A" IS FOR PIPE CULVERT DIAMETERS OF 36" OR LESS OR PIPE-ARCHES WITH RISE OF 36" OR LESS. DETAIL "A" SHOWS :
 - LIMITS OF FOR CULVERT EXCAVATION FOR PIPE IN FILLS.
- THIS DETAIL IS FOR TRENCH DEPTH "TD" 5'-2" OR LESS. SEE DETAIL "B" FOR TRENCH DEPTH "TD" GREATER THAN 5'-2".



DETAIL "B" SHOWING MAXIMUM ALLOWABLE DEPTH WITHOUT EARTH BENCHING

NOTES :

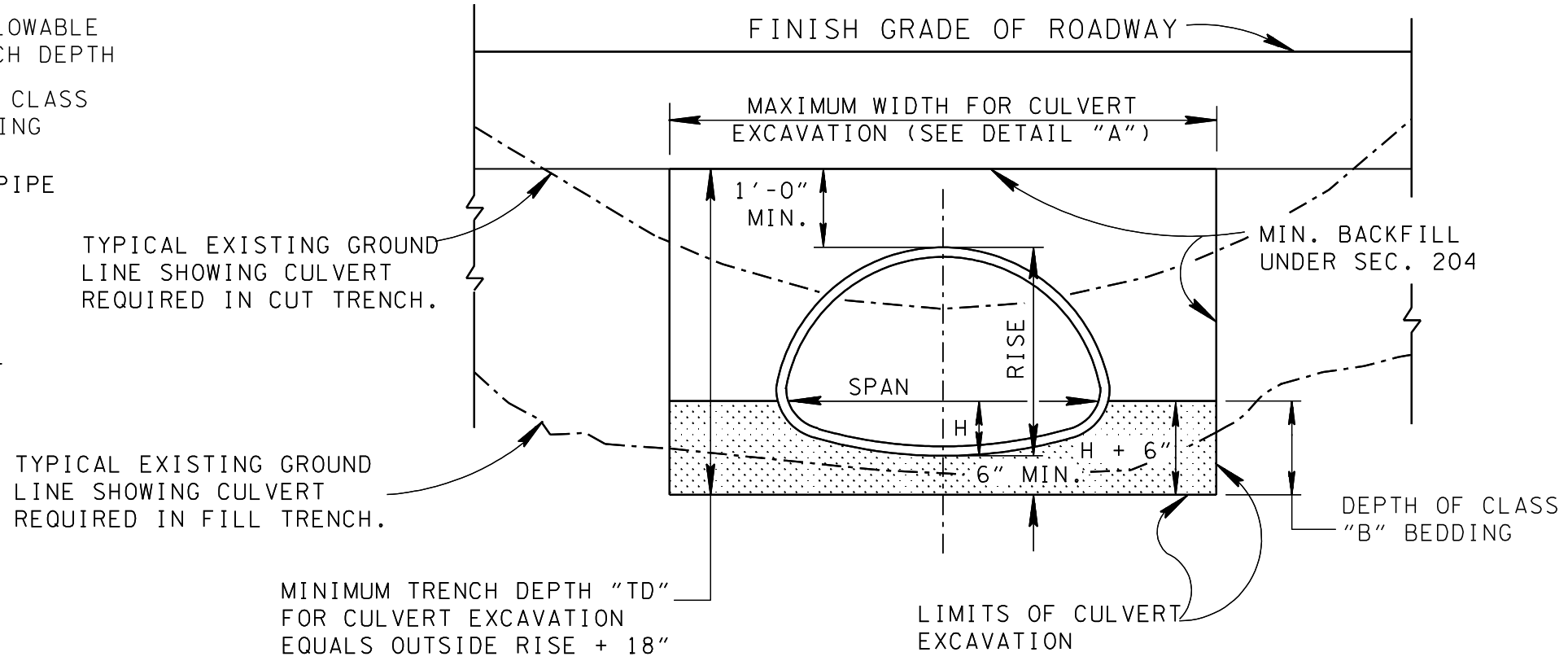
- DETAIL "B" IS FOR PIPE CULVERT DIAMETERS OF 72" OR LESS, OR PIPE-ARCHES WITH RISE OF 72" OR LESS.
- THIS DETAIL IS FOR A TRENCH DEPTH "TD" OF 5'-2" TO 8'-8".
- SEE DETAIL "C" FOR TRENCH DEPTH "TD" GREATER THAN 8'-8".



DETAIL "C" SHOWING MAXIMUM ALLOWABLE DEPTH WITH EARTH BENCHING

NOTES :

- DETAIL "C" IS FOR PIPE CULVERT DIAMETER GREATER THAN 72" OR PIPE-ARCHES WITH RISE GREATER THAN 72".
- THIS DETAIL IS FOR TRENCH DEPTH "TD" GREATER THAN 8'-8".



DETAIL " D " SHOWING CLASS " B " BEDDING FOR PIPE - ARCH CULVERTS

NOTE :

DETAIL FOR FILL CONSTRUCTION, CULVERT EXCAVATION, SAFETY TRENCH CONSTRUCTION EXCAVATION IN CUTS AND BACKFILL AS SHOWN ELSEWHERE ON THIS SHEET, ALSO APPLICABLE TO PIPE - ARCH INSTALLATION.

REV.2-25-77: REORGANIZED SHEET FOR BETTER CLARITY.

REV.7-29-94: REDREW SHEET, REORGANIZED SHEET AND UPDATED TO 1994 STANDARDS.

REV.10-26-96: GENERAL REVISION.

REV.3-15-07: REVISED GENERAL NOTE ①.

REV. 4-15-07: REVISED LIMITS OF PAYMENT.

REV. 9-14-10: REMOVED CMP.

MINOR REVISION -- FHWA
APPROVAL NOT REQUIRED.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STANDARD DETAILS
CLASS "B" BEDDING
AND CULVERT
EXCAVATION

D-PB-1