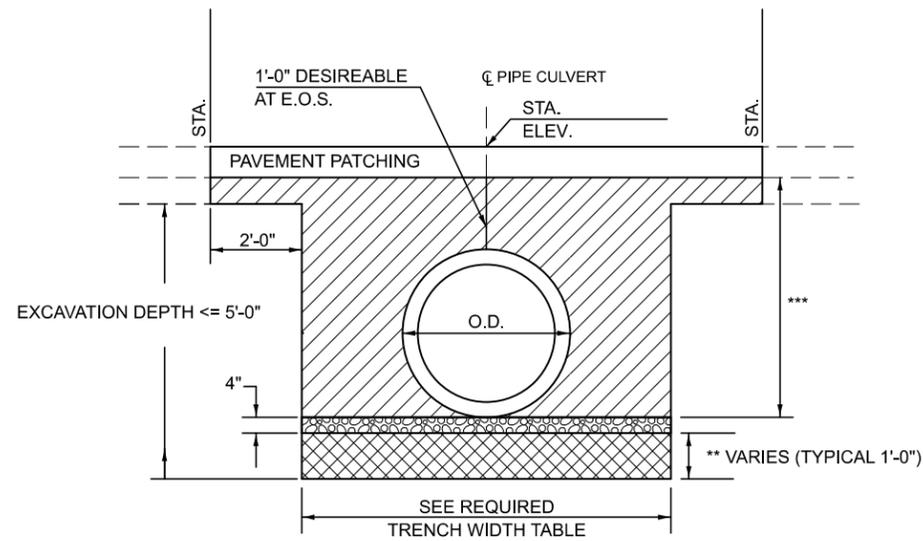


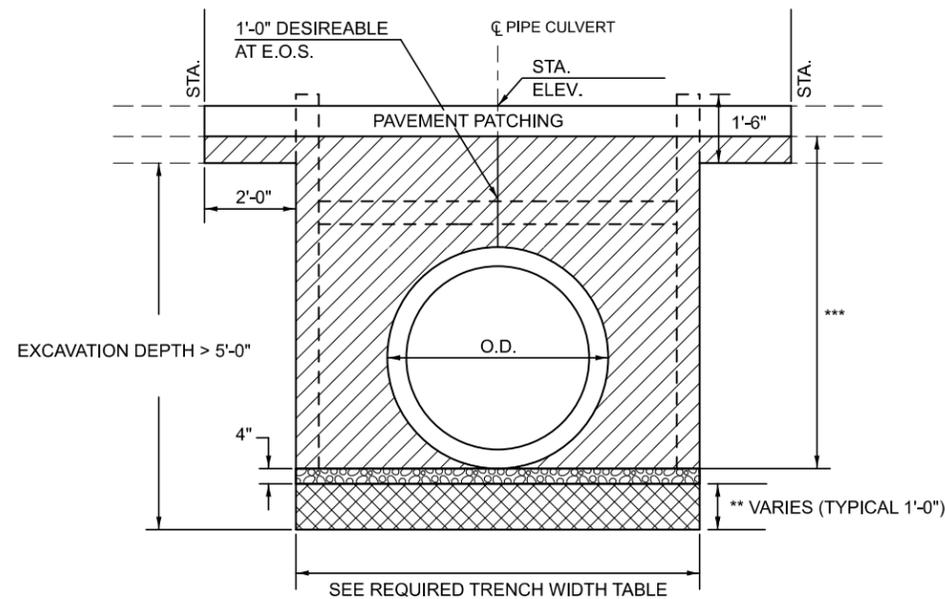
PIPE CULVERTS (EXCEPT ENTRANCE CULVERTS)

METHOD I CONSTRUCTION SHOWN SEE ARTICLE 542.04



INSIDE DIA. OR EQUIVALENT DIA.	REQUIRED TRENCH WIDTH
I.D. <= 24"	9" + O.D. + 9"
24" < I.D. <= 48"	12" + O.D. + 12"
I.D. > 48"	18" + O.D. + 18"

TRENCHING ARTICLE 542.04(B)



TRENCH PROTECTION REQUIRED WHEN EXCAVATION DEPTH EXCEEDS 5'
SEE EXCAVATION DEPTHS TABLE FOR CONTRACTOR OPTIONAL CONFIGURATIONS

** STONE RIPRAP, CLASS A1

(IF REQUIRED)

STONE RIPRAP, CLASS A1 SHALL BE USED TO ADDRESS UNSTABLE SOIL CONDITIONS AS DETERMINED BY THE GEOTECHNICAL ENGINEER.

THE WORK SHALL BE PERFORMED PER APPLICABLE PORTIONS OF SECTION 281.

THIS WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON FOR STONE RIPRAP, CLASS A1.

THE EXCAVATION AND DISPOSAL OF UNSUITABLE MATERIAL SHALL NOT BE MEASURED FOR PAYMENT, COST INCLUDED WITH STONE RIPRAP, CLASS A1.

POROUS GRANULAR BACKFILL (PGB)

POROUS GRANULAR BACKFILL SHALL EXTEND 2 FT. BEYOND THE AGGREGATE SHOULDER.

THE WORK SHALL BE PERFORMED PER APPLICABLE PORTIONS OF SECTIONS 209 AND 542.

THE COARSE AGGREGATE QUALITY SHALL BE CLASS D OR BETTER AND THE GRADATION SHALL BE CA-6 OR CA-10.

POROUS GRANULAR BACKFILL WILL BE MEASURED FOR PAYMENT IN CU. YDS. IN PLACE AS SHOWN. IF THE CONTRACTOR CHOOSES TO EXCAVATE BEYOND THE LIMITS SHOWN, ADDITIONAL QUANTITIES OF POROUS GRANULAR BACKFILL WILL BE AT THEIR EXPENSE.

THE AREA TO BE EXCAVATED FOR THE PROPOSED PIPE CULVERT AND END SECTIONS SHALL NOT BE MEASURED FOR PAYMENT. COST INCLUDED WITH PIPE CULVERTS.

*** IN LIEU OF POROUS GRANULAR BACKFILL, THE CONTRACTOR MAY, AT NO ADDITIONAL COST TO THE DEPARTMENT, BACKFILL THE ENTIRE TRENCH, EXCEPT THE OUTER 3 FT, WITH CONTROLLED LOW-STRENGTH MATERIAL ACCORDING TO SECTION 593.

LEGEND	
	POROUS GRANULAR BACKFILL
	POROUS GRANULAR MATERIAL (CA-7) (Cost included with Pipe Culvert)
	STONE RIPRAP, CLASS A1

EXCAVATION DEPTHS	SLOPES
5'-0" < EXCAVATION DEPTH <= 8'-0"	3/4' : 1'
8'-0" < EXCAVATION DEPTH <= 12'-0"	1' : 1'
12'-0" < EXCAVATION DEPTH <= 20'-0" MUST BE SLOPED FROM EXCAVATION BOTTOM OR SPECIAL DESIGN BY S.E. SEE ARTICLE 522.07 FOR TEMPORARY SOIL RETENTION SYSTEM	1' : 1'

OPTIONAL CONFIGURATIONS MAY BE CONSTRUCTED IN ACCORDANCE WITH OSHA REQUIREMENTS CONTAINED IN THE CODE OF FEDERAL REGULATIONS LABOR 29 PART 1926 SUBPART P - EXCAVATIONS.

WHEN THE CONTRACTOR CONSTRUCTS THE TRENCH WITH SLOPED OR BENCHED SIDES, NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR POROUS GRANULAR BACKFILL OUTSIDE THE VERTICAL LIMITS OF THE SPECIFIED TRENCH WIDTH.

SEE ARTICLE 107.28 FOR CONTRACTOR SAFETY RESPONSIBILITY.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
POROUS GRANULAR BACKFILL	CU YD	X
STONE RIPRAP, CLASS A1	TON	X

MODEL: SHT_PLAN
FILE NAME: C:\Bentley\CONNECT10110\organizer\Chivil\DOT_Standards\Call\DOT_Sheets.cad

USER NAME = Eric.Thomas	DESIGNED - TJB	REVISED - TJB
PLOT SCALE = 0.16666633' / in.	DRAWN - TJB	REVISED - TJB
PLOT DATE = 12/7/2022	CHECKED -	REVISED -
	DATE - 8/29/2017	REVISED - 6/1/2022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

POROUS GRANULAR BACKFILL
S.N. - ; CULVERT NO.

SCALE: SHEET OF SHEETS STA. TO STA.

DISTRICT 5 DETAIL NO. 20900110				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.