0012722-41.dgn 5/9/2016 8:46:02 AM

MINIMUM CLASS OF CONCRETE OR MINIMUM THICKNESS OF STEEL AND ALUMINUM

PIPE DIAMETER (INCHES)	TYPE	MINIMUM COVER (INCHES)	HEIGHT OF FILL IN FEET ABOVE TOP OF PIPE												PIPE DIAMETER (INCHES)
			1 - 10	10 - 15	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 50	50 - 60	60 - 70	70 - 80		
12	CONCRETE	12	IV	IV	IV	V	V	3500							12
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.075	
15	CONCRETE	12	IV	IV	IV	V	V	3400							15
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.075	.075	.075	.105	
18	CONCRETE	12	IV	IV	IV	V	V	3300							18
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	
	ALUM 1	12	.060	.060	.060	.060	.075	.075	.075	.075	.105	.105	.105	.105	
24	CONCRETE	12	IV	IV	IV	V	V	3300							24
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.064	.064	.079	.079	
	ALUM 1	12	.060	.060	.060	.075	.075	.075	.075	.105	.105	.105	.105		
30	CONCRETE	12	III	IV	IV	V	V	3300							30
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.064	.079	.079	.109	.109	
	ALUM 1	12	.075	.075	.075	.075	.075	.105	.105	.105	.135	.135			
36	CONCRETE	12	III	IV	IV	V	V	3300							36
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.079	.079	.109	.109	.138	
	STEEL 2	12	.064	.064	.064	.064	.064	.064	.064	.064	.079	.079	.109	.109	
	ALUM 1	12	.075	.105	.105	.105	.105	.105	.135	.135	.135	.135			
	ALUM 2	12	.060	.060	.060	.060	.075	.075	.105	.105	.105	.135			
42	CONCRETE	12	III	IV	IV	V	V	3300							42
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.064	.079	.109	.109	.138	.138	
	STEEL 2	12	.064	.064	.064	.064	.064	.064	.064	.079	.109	.109	.109	.138	
	ALUM 1	12	.105	.105	.135	.135	.164	.164							
	ALUM 2	12	.060	.060	.060	.075	.075	.105	.105	.105	.135	.135			
48	CONCRETE	12	III	IV	IV	V	V	3400							48
	STEEL 1	12	.064	.064	.064	.064	.064	.064	.079	.109	.109	.138	.138	.168	
	STEEL 2	12	.064	.064	.064	.064	.064	.064	.064	.079	.109	.109	.138	.138	
	ALUM 1	12	.105	.105	.135	.164	.164	.164							
	ALUM 2	12	.060	.060	.060	.075	.075	.105	.105	.135	.135	.164	.164		
54	CONCRETE	12	III	IV	IV	V	V	3400							54
	STEEL 1	12	.079	.079	.079	.079	.079	.079	.079	.109	.138	.138	.168		
	STEEL 2	12	.064	.064	.064	.064	.064	.064	.079	.109	.109	.138	.138	.168	
	ALUM 1	15	.105	.105	.135	.164	.164	.164							
	ALUM 2	15	.060	.060	.060	.075	.075	.105	.135	.135	.164	.164			
60	CONCRETE	12	III	IV	IV	V	V	3400							60
	STEEL 1	12	.109	.109	.109	.109	.109	.109	.109	.109	.138	.168			
	STEEL 2	12	.064	.064	.064	.064	.064	.079	.079	.109	.138	.138	.168	.168	
	ALUM 1	15	.135	.135	.164	.164	.164	.164							
	ALUM 2	15	.060	.060	.075	.105	.105	.135	.135	.164	.164				
66	CONCRETE	12	III	IV	IV	V	V	3400							66
	STEEL 1	12	.138	.138	.138	.138	.138	.138	.138	.138	.168	.168			
	STEEL 2	12	.064	.064	.064	.064	.064	.079	.109	.109	.138	.168	.168		
	ALUM 1	18	.164	.164	.164	.164	.164								
	ALUM 2	18	.075	.075	.105	.105	.135	.135	.164	.164					
72	CONCRETE	12	III	IV	IV	V	V	3400							72
	STEEL 1	12	.138	.138	.138	.138	.138	.138	.138	.138	.168				
	STEEL 2	12	.064	.064	.064	.064	.079	.109	.109	.138	.138	.168			
	ALUM 1	18	.164	.164	.164	.164	.164								
	ALUM 2	18	.075	.075	.105	.105	.135	.164	.164	.164					
78	CONCRETE	12	III	IV	IV	V	V	3400							78
	STEEL 1	15	.168	.168	.168	.168	.168	.168	.168	.168					
	STEEL 2	15	.064	.064	.064	.064	.079	.109	.109	.138	.168	.168			
	ALUM 2	21	.075	.075	.105	.105	.135	.164	.164						
84	CONCRETE	12	III	IV	V	V	V	3400							84
	STEEL 1	15	.168	.168	.168	.168	.168	.168	.168	.168					
	STEEL 2	15	.064	.064	.064	.079	.079	.109	.109	.138	.168				
	ALUM 2	21	.105	.105	.105	.135	.135	.164	.164						
90	CONCRETE	12	III	IV	V	V	V	3400							90
	STEEL 2	18	.064	.064	.064	.079	.109	.109	.138	.138	.168				
	ALUM 2	24	.105	.105	.135	.135	.164								
96	CONCRETE	12	III	IV	V	V	V	3400							96
	STEEL 2	18	.079	.079	.079	.079	.109	.109	.138	.168					
	ALUM 2	24	.105	.105	.135	.135	.164								
102	CONCRETE	12	III	IV	V	V	V	3400							102
	STEEL 2	24	.079	.079	.079	.109	.109	.138	.138	.168					
	ALUM 2	24	.135	.164	.164										
108	CONCRETE	12	III	IV	V	V	V	3500							108
	STEEL 2	24	.109	.109	.109	.109	.109	.138	.138	.168					
	ALUM 2	24	.135	.164											
114	CONCRETE	12	III	IV	V	V	V	3500							114
	STEEL 2	24	.109	.109	.109	.109	.109	.138	.168						
	ALUM 2	24	.164	.164											
120	CONCRETE	12	III	IV	V	V	V	3500							120
	STEEL 2	24	.109	.109	.109	.109	.138	.138	.168						
	ALUM 2	24	.164	.164											

BY	REVISION	DATE
BJO	REV. TO MEET LRFD & GEN. NOTES	9-14-15
	GEN. REV. NOTES	9-26-01
GJP	ADDED SEAM CONST. NOTE	3-9-99

NO SCALE

DES. ___ DRN. ___ TRA. ___ CK. ___

(SUBMITTED) STATE DESIGN POLICY ENGR.

(APPROVED) CHIEF ENGINEER

OCTOBER 21, 1998

NUMBER 1030D

STANDARD CONCRETE & METAL PIPE CULVERTS

SHEET 2 OF 3

(FILL HEIGHTS FOR CONCRETE & CORRUGATED METAL PIPE)

DEPARTMENT OF TRANSPORTATION

STATE OF GEORGIA

DRAWING NO. 41-0006

NOTES:

1. PIPE IS DESIGNED IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SEVENTH EDITION, 2014
2. STEEL 1 OR ALUM 1 DENOTES CORRUGATION PROFILE 2 2/3" X 1/2"
3. STEEL 2 OR ALUM 2 DENOTES CORRUGATION PROFILE 3" X 1" (OR 5" X 1" FOR STEEL PIPE ONLY)
4. ALL STEEL AND ALUMINUM PIPE SHALL BE LOCK-SEAM OR WELDED-SEAM (HELICAL) CONSTRUCTION.
5. MINIMUM COVER VALUES APPLY TO HS-93 LIVE LOAD. MINIMUM COVER NEEDED FOR CONSTRUCTION VEHICLES MAY BE GREATER AND IS THE RESPONSIBILITY OF THE CONTRACTOR.
6. TRENCH CONSTRUCTION IS REQUIRED FOR ALL CONDITIONS. SEE SHEET 1 OF 3.
7. FOR FILLS OF 30-35 FEET, SPECIAL DESIGN CONCRETE PIPE MUST MEET THE REQUIRED D LOAD SHOWN (LBS).
8. TABLE VALUES FOR ALUMINUM CORRUGATED PIPE (OR ALUMINUM SPIRAL RIB PIPE) ARE COMPUTED BASED UPON ALCLAD ALLOY 3004-H34 HAVING MINIMUM YIELD STRENGTH, fy=24,000 PSI. IF ALUMINUM PIPE IS OTHERWISE FURNISHED AS 3004-H32 (fy=20,000 PSI), THE TABLE NO. 1 ALLOWABLE FILL HEIGHTS SHALL BE ADJUSTED AS FOLLOWS:
   A. ALL MINIMUM COVER VALUES SHALL BE INCREASED BY 15 PERCENT. (EXAMPLE: 12 INCHES BECOMES 13.8 INCHES)
   B. ALL HEIGHT OF FILL VALUES SHALL BE DECREASED BY 15 PERCENT. (EXAMPLE: 35-40 FEET BECOMES 29.7-34.0 FEET)

TABLE NO.3-(INFORMATION ONLY)

	COR. METAL THICKNESS	EQUIVALENT GAGE
STEEL	.064	16
	0.079	14
	0.109	12
	0.138	10
	0.168	8
ALUMINUM	0.060	16
	0.075	14
	0.105	12
	0.135	10
	0.164	8

STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.	0012722		