72961

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	11-13	CHRISTIAN	437	261b
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DIMENSIONS OF BARS–h to h_9

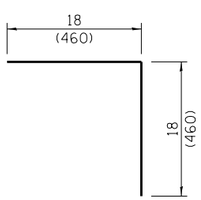
Bars	For 2 Pipes a	For 2 Pipes b
h	4′-11″ (1.5 m)	29 (740)
h_1	4′-11″ (1.5 m)	3′-3½″ (1.0 m)
h_2	5′-5″ (1.65 m)	29 (740)
h_3	5′-5″ (1.65 m)	3′-3½″ (1.0 m)
h_4	6′-9″ (2.06 m)	39 (990)
h_5	6′-9″ (2.06 m)	4′-3″ (1.3 m)
h_6	7′-9″ (2.36 m)	3′-10½″ (1.18 m)
h_7	7′-9″ (2.36 m)	4′-10½″ (1.49 m)
h_8	9′-0″ (2.75 m)	4′-9″ (1.45 m)
h_9	9′-0″ (2.75 m)	5′-9″ (1.75 m)

TABLE OF DIMENSIONS

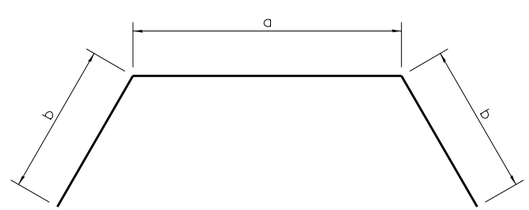
Design No.	Nominal Inside Dia. of Pipe	Slope of Wing Walls	Dimensions: For all Multiples of Pipes A	B	C	F	G	For 2 Pipes D	E
D15-1½ (D375-1½)	15 (375)	1:1½	19 (495)	10 (260)	23 (590)	29½ (750)	37 (940)	5′-1″ (1.55 m)	8′-6½″ (2.61 m)
D15-2 (D375-2)	15 (375)	1:2	26 (660)	10 (260)	23 (590)	3′-3¼″ (1.0 m)	37 (940)	5′-1″ (1.55 m)	9′-8½″ (2.96 m)
D18-1½ (D450-1½)	18 (450)	1:1½	19 (495)	13 (330)	26 (660)	29½ (750)	3′-4″ (1.02 m)	5′-7″ (1.71 m)	9′-0½″ (2.77 m)
D18-2 (D450-2)	18 (450)	1:2	26 (660)	13 (330)	26 (660)	3′-3¼″ (1.0 m)	3′-4″ (1.02 m)	5′-7″ (1.71 m)	10′-2½″ (3.12 m)
D24-1½ (D600-1½)	24 (600)	1:1½	25 (640)	16 (410)	33 (840)	38 (965)	4′-0″ (1.22 m)	6′-11″ (2.11 m)	11′-4½″ (3.47 m)
D24-2 (D600-2)	24 (600)	1:2	34 (860)	16 (410)	33 (840)	4′-2½″ (1.28 m)	4′-0″ (1.22 m)	6′-11″ (2.11 m)	12′-10½″ (3.92 m)
D30-1½ (D750-1½)	30 (750)	1:1½	30 (760)	19 (485)	39 (990)	3′-9″ (1.14 m)	4′-6″ (1.37 m)	7′-11″ (2.41 m)	13′-2½″ (4.02 m)
D30-2 (D750-2)	30 (750)	1:2	3′-4″ (1.01 m)	19 (485)	39 (990)	4′-11″ (1.5 m)	4′-6″ (1.37 m)	7′-11″ (2.41 m)	14′-10½″ (4.53 m)
D36-1½ (D900-1½)	36 (900)	1:1½	36 (915)	22 (560)	3′-10″ (1.17 m)	4′-5½″ (1.36 m)	5′-2″ (1.57 m)	9′-0″ (2.75 m)	15′-6½″ (4.67 m)
D36-2 (D900-2)	36 (900)	1:2	4′-0″ (1.22 m)	22 (560)	3′-10″ (1.17 m)	5′-10½″ (1.79 m)	5′-2″ (1.57 m)	9′-0″ (2.75 m)	17′-6½″ (5.28 m)

TABLE OF QUANTITIES

Design No.	Concrete 2 End Secs. cu. yds. (m^3)	Reinforcement Bars in One End Section (For 2 Pipes): No. 4 (No. 13)-h Bars Bar	Length	No. 4 (No. 13)-b_2 Bars Qty.	Length	No. 4 (No. 13)-b_1 Bars Qty.	Length	No. 4 (No. 13)-b Bars Qty.	Length	No. 4 (No. 13)-v_1 Bars Qty.	Length	No. 4 (No. 13)-v Bars Qty.	Total Quantity 2 End Secs. lbs. (kg)
D15-1½ (D375-1½)	1.4 (1.1)	h	9′-9″ (2.98 m)	2	8′-3″ (2.5 m)			1	6′-3″ (1.9 m)			14	100 (45.4)
D15-2 (D375-2)	1.8 (1.4)	h_1	11′-6″ (3.5 m)	2	9′-3″ (2.82 m)	1	7′-3″ (2.21 m)	1	6′-3″ (1.9 m)			17	130 (59.0)
D18-1½ (D450-1½)	1.7 (1.3)	h_2	10′-3″ (3.13 m)	2	8′-6″ (2.59 m)			1	6′-9″ (2.06 m)			14	100 (45.4)
D18-2 (D450-2)	2.0 (1.5)	h_3	12′-0″ (3.65 m)	2	9′-9″ (2.97 m)	1	7′-9″ (2.36 m)	1	6′-9″ (2.06 m)			17	130 (59.0)
D24-1½ (D600-1½)	2.4 (1.8)	h_4	13′-3″ (4.04 m)	2	11′-0″ (3.35 m)	1	9′-0″ (2.74 m)	1	8′-0″ (2.44 m)	4	31 (790)	18	160 (72.6)
D24-2 (D600-2)	3.0 (2.3)	h_5	15′-3″ (4.66 m)	2	12′-6″ (3.81 m)	1	10′-6″ (3.2 m)	1	8′-0″ (2.44 m)	4	31 (790)	21	180 (81.6)
D30-1½ (D750-1½)	3.0 (2.3)	h_6	15′-6″ (4.72 m)	2	12′-9″ (3.89 m)	1	10′-3″ (3.12 m)	1	8′-3″ (2.51 m)	4	31 (790)	19	170 (77.1)
D30-2 (D750-2)	3.8 (2.9)	h_7	17′-6 ″ (5.34 m)	2	14′-6″ (4.42 m)	1	12′-3″ (3.73 m)	1	8′-3″ (2.51 m)	4	31 (790)	22	190 (86.2)
D36-1½ (D900-1½)	3.9 (3.0)	h_8	18′-6″ (5.65 m)	2	15′-0″ (4.57 m)	1	12′-6″ (3.81 m)	1	9′-9″ (2.97 m)	4	3′-6″ (1.07 m)	22	200 (90.7)
D36-2 (D900-2)	5.0 (3.8)	h_9	20′-6″ (6.25 m)	2	17′-0″ (5.18 m)	1	14′-6″ (4.42 m)	1	9′-9″ (2.97 m)	4	3′-6″ (1.07 m)	26	230 (104)



BAR v



BARS – h to h_9

Bend in field
One required in each headwall

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CAST-IN-PLACE END SECTIONS
MULTIPLE PIPE CULVERTS 15″-36″
FAP 322 (US 51)
SECTION 11-13
CHRISTIAN COUNTY

SCALE: DRAWN BY SEB
DATE 10/2/12 CHECKED BY ADL

SHEET 2 OF 2

10/5/2012

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