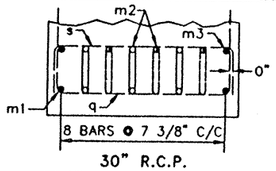
SECTION A – A

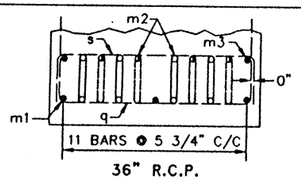
SPACING DIAGRAMS FOR MAIN LONGITUDINAL STEEL
FOR s AND q BARS SEE NOTE 2

KEY

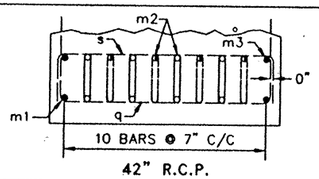
TRUSS BAR — TRUSS BAR FROM ADJACENT SPAN — STRAIGHT BAR



30" R.C.P.



36" R.C.P.



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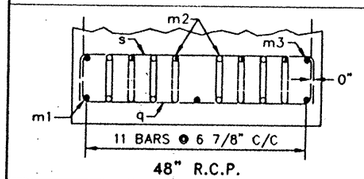

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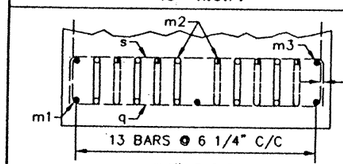
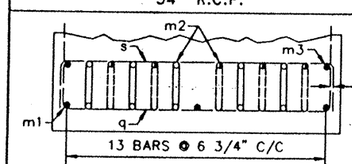


54" R.C.P.



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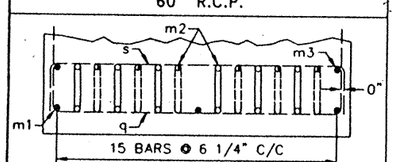


66" R.C.P.

BAR SCHEDULE PER 12' SPAN

GIVEN: NO.–SIZE, LENGTH, SPACING

BAR	30"	36"	42"	48"	54"	60"	66"	SHAPE	POSITION
m_1	2–#8(1"ø) SEE NOTE 1. SEE SECT. A–A	3–#8(1"ø) SEE NOTE 1. SEE SECT. A–A	2–#9(1 1/8"ø) SEE NOTE 1. SEE SECT. A–A	3–#9(1 1/8"ø) SEE NOTE 1. SEE SECT. A–A	3–#9(1 1/8"ø) SEE NOTE 1. SEE SECT. A–A	3–#9(1 1/8"ø) SEE NOTE 1. SEE SECT. A–A	3–#9(1 1/8"ø) SEE NOTE 1. SEE SECT. A–A	STR.	LONGITUDINAL BOTTOM OF CRADLE
m_2	3–#8(1"ø) 19'–11" NOTE 4. SEE SECT. A–A	4–#8(1"ø) 19'–11" NOTE 4. SEE SECT. A–A	4–#9(1 1/8"ø) 19'–11" NOTE 4. SEE SECT. A–A	4–#9(1 1/8"ø) 19'–11" NOTE 4. SEE SECT. A–A	5–#9(1 1/8"ø) 19'–11" NOTE 4. SEE SECT. A–A	5–#9(1 1/8"ø) 19'–11" NOTE 4. SEE SECT. A–A	6–#9(1 1/8"ø) 19'–11" NOTE 4. SEE SECT. A–A	BENT	LONGITUDINAL BOTTOM OF CRADLE AND BENT OVER SUPPORT
m_3	2–#8(1"ø) SEE NOTE 1. SEE SECT. A–A	2–#8(1"ø) SEE NOTE 1. SEE SECT. A–A	2–#9(1 1/8"ø) SEE NOTE 1. SEE SECT. A–A	2–#9(1 1/8"ø) SEE NOTE 1. SEE SECT. A–A	2–#9(1 1/8"ø) SEE NOTE 1. SEE SECT. A–A	2–#9(1 1/8"ø) SEE NOTE 1. SEE SECT. A–A	2–#9(1 1/8"ø) SEE NOTE 1. SEE SECT. A–A	STR.	LONGITUDINAL TOP OF CRADLE
p	6–#4(1/2"ø) SEE NOTE 1. 0'–5"	6–#4(1/2"ø) SEE NOTE 1. 0'–6 1/4"	6–#4(1/2"ø) SEE NOTE 1. 0'–8 1/4"	6–#4(1/2"ø) SEE NOTE 1. 0'–10"	6–#4(1/2"ø) SEE NOTE 1. 0'–11"	6–#4(1/2"ø) SEE NOTE 1. 1'–0"	6–#4(1/2"ø) SEE NOTE 1. 1'–1"	STR.	LONGITUDINAL SIDE OF CRADLE
q	6–#5(5/8"ø) 11'–0" NOTE 4. 2'–0"	7–#5(5/8"ø) 12'–1" NOTE 4. 1'–8 1/2"	10–#5(5/8"ø) 13'–0½" NOTE 4. 1'–2 1/2"	11–#5(5/8"ø) 14'–1½" NOTE 4. 1'–1"	13–#5(5/8"ø) 14'–11½" NOTE 4. 0'–11"	14–#5(5/8"ø) 16'–0½" NOTE 4. 0'–10 1/4"	15–#5(5/8"ø) 17'–1½" NOTE 4. 0'–9 1/2"	BENT	LONG VERTICAL STIRRUPS IN CRADLE
r	2–#4(1/2"ø) 4'–6" 1'–10"	2–#5(5/8"ø) 5'–0" 1'–10"	2–#6(3/4"ø) 5'–6" 1'–10"	2–#6(3/4"ø) 6'–0" 1'–10"	2–#7(7/8"ø) 6'–6" 1'–10"	2–#7(7/8"ø) 7'–0" 1'–10"	2–#7(7/8"ø) 7'–6" 1'–10"	STR.	UPPER TRANSVERSE HORIZONTAL IN CAPITAL
s	6–#5(5/8"ø) 6'–3" NOTE 4. 2'–0"	7–#5(5/8"ø) 6'–9" NOTE 4. 1'–8 1/2"	10–#5(5/8"ø) 7'–3" NOTE 4. 1'–2 1/2"	11–#5(5/8"ø) 7'–9" NOTE 4. 1'–1"	13–#5(5/8"ø) 8'–3" NOTE 4. 0'–11"	14–#5(5/8"ø) 8'–9" NOTE 4. 0'–10 1/4"	15–#5(5/8"ø) 9'–3" NOTE 4. 0'–9 1/2"	BENT	SHORT VERTICAL STIRRUPS IN CRADLE
t	3–#3(3/8"ø) 8'–11" NOTE 4. 2'–1"	3–#3(3/8"ø) 8'–11" NOTE 4. 2'–4"	3–#3(3/8"ø) 8'–11" NOTE 4. 2'–7"	3–#3(3/8"ø) 8'–11" NOTE 4. 2'–10"	3–#3(3/8"ø) 8'–11" NOTE 4. 3'–1"	3–#3(3/8"ø) 8'–11" NOTE 4. 3'–4"	3–#3(3/8"ø) 8'–11" NOTE 4. 3'–7"	BENT	VERTICAL STIRRUPS IN CAPITAL
u	8–#5(5/8"ø) 3'–11" NOTE 4. AS SHOWN	8–#5(5/8"ø) 3'–11" NOTE 4. AS SHOWN	8–#5(5/8"ø) 3'–11" NOTE 4. AS SHOWN	8–#5(5/8"ø) 3'–11" NOTE 4. AS SHOWN	8–#5(5/8"ø) 3'–11" NOTE 4. AS SHOWN	8–#5(5/8"ø) 3'–11" NOTE 4. AS SHOWN	8–#5(5/8"ø) 3'–11" NOTE 4. AS SHOWN	BENT	PILE DOWELS
v	2–#8(1"ø) 4'–6" 1'–10"	2–#8(1"ø) 5'–0" 1'–10"	2–#8(1"ø) 5'–6" 1'–10"	2–#8(1"ø) 6'–0" 1'–10"	2–#8(1"ø) 6'–6" 1'–10"	2–#8(1"ø) 7'–0" 1'–10"	2–#8(1"ø) 7'–6" 1'–10"	STR.	LOWER TRANSVERSE HORIZONTAL IN CAPITAL

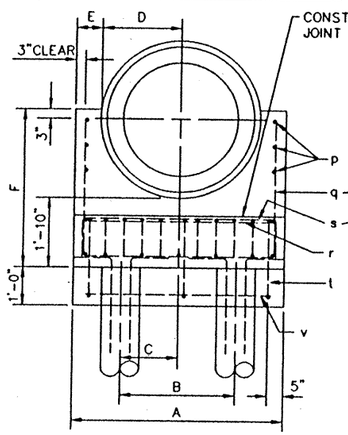
CRADLE DIMENSIONS

PIPE DIA	A	B	C	D NOTE 11.	E	F
30"	5'–0"	3'–0"	1'–6"	1'–9½"	0'–8½"	3'–10½"
36"	5'–6"	3'–0"	1'–6"	2'–1"	0'–8"	4'–2"
42"	6'–0"	3'–0"	1'–6"	2'–3¾"	0'–8¼"	4'–4¾"
48"	6'–6"	3'–4"	1'–8"	2'–7¼"	0'–7¾"	4'–8¼"
54"	7'–0"	3'–8"	1'–10"	2'–9¼"	0'–8¾"	4'–10¼"
60"	7'–6"	4'–0"	2'–0"	3'–0¾"	0'–8¼"	5'–1¾"
66"	8'–0"	4'–4"	2'–2"	3'–4¼"	0'–7¾"	5'–5¼"

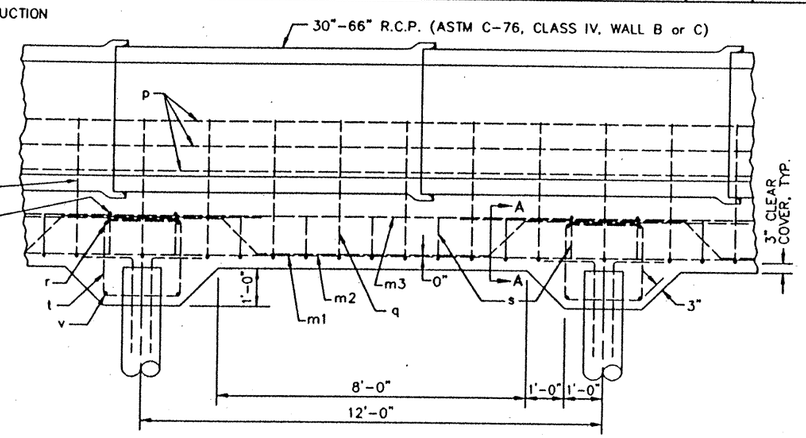
BAR DIMENSIONS

PIPE DIA	G	H	J	*CONCRETE CU. YD./FT.	REIN. STL. LBS./FT. NOTE 1.	PILE CAP. TONS
30"	3'–4½"	4'–6"	1'–0"	0.580	45.3	40
36"	3'–8"	5'–0"	1'–0"	0.651	56.2	45
42"	3'–10¾"	5'–6"	1'–0"	0.709	68.7	55
48"	4'–2¼"	6'–0"	1'–0"	0.781	76.5	60
54"	4'–4¼"	6'–6"	1'–0"	0.820	88.4	65
60"	4'–7¾"	7'–0"	1'–0"	0.892	92.7	65
66"	4'–11¼"	7'–6"	1'–0"	0.964	103.0	70

* CONCRETE QUANTITIES ARE ESTIMATED FOR WALL 'C' PIPE.



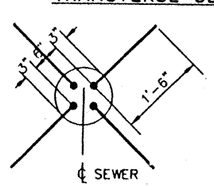
TRANSVERSE SECTION



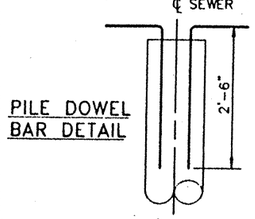
LONGITUDINAL SECTION

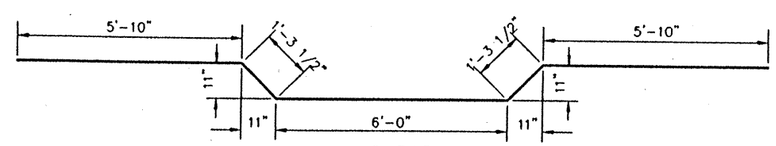
NOTES:

1. STEEL QUANTITIES ARE FOR ESTIMATING PURPOSES ONLY. A 40 DIAMETER LAP IS FIGURED FOR ALL SPLICES AND A STOCK BAR LENGTH OF 20' IS FIGURED FOR ALL STRAIGHT BARS. THE STEEL QUANTITY PAID SHALL BE THE ACTUAL WEIGHT OF STEEL IN PLACE.
2. SEE LONGITUDINAL SECTION FOR s AND q BAR POSITIONS.
3. THE MINIMUM RADIUS OF BENT BARS SHALL BE 3 BAR DIAMETERS. THE RADIUS OF A BEND IS TO THE INSIDE OF THE BAR.
4. LENGTH GIVEN IN TABLES FOR BENT BARS IS APPROXIMATELY THE LENGTH ALONG THE CENTERLINE OF THE BAR. SEE DETAIL FOR DIMENSIONS.
5. POSITIONS OF TRUSS BARS WILL BE REVERSED IN ALTERNATE SPANS.
6. ALL REINFORCING STEEL SHALL HAVE A MINIMUM COVER OF 3".
7. LENGTH OF LAP FOR SPLICING REINFORCEMENT SHALL BE 40 BAR DIAMETERS.
8. DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.
9. AT THE LIMITS OF EACH POUR A BULKHEAD OR OTHER SUITABLE METHOD SHALL BE USED TO PROVIDE A PROPER JOINT IN KEEPING WITH GOOD ENGINEERING PRACTICE.
10. ALL CONCRETE SHALL BE CLASS "C".
11. "D" DIMENSION IS OUTSIDE RADIUS OF BELL. (DIMENSIONS FOR WALL 'C' PIPE ARE SHOWN.)

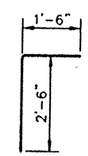


PILE DOWEL BAR DETAIL

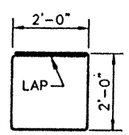




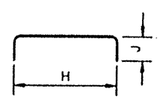
m2 BAR



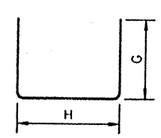
u BAR



t BAR



s BAR



q BAR

DO NOT SCALE – USE DIMENSIONS ONLY

CITY OF AKRON BUREAU OF ENGINEERING	CONSTRUCTION STANDARD DWG. No. S–5
David [illegible] 2-12-98 MANAGER, DESIGN DIVISION Pawan K. Khaitan MANAGER, CONSTRUCTION DIVISION [illegible] CITY ENGINEER	PILE SUPPORT 30"–66" PIPE SEWERS AUTOCAD DRAWING – STD_S-5.DWG February 11, 1998 REVISIONS: