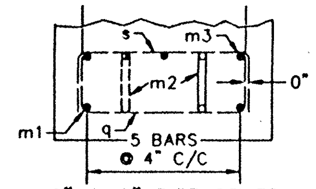
SECTION A - A

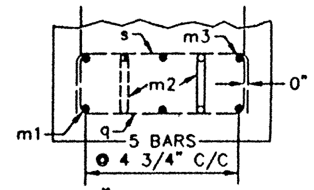
SPACING DIAGRAMS FOR MAIN LONGITUDINAL STEEL FOR s, q, AND x BARS SEE NOTE 2

KEY

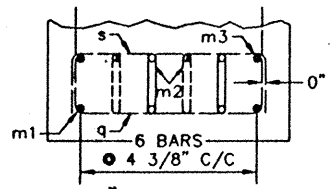
TRUSS BAR — TRUSS BAR FROM ADJACENT SPAN — STRAIGHT BAR ●



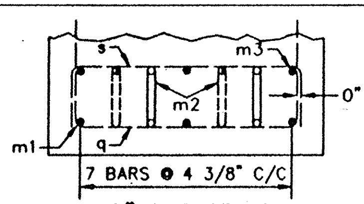
6" & 8" PIPE SEWER



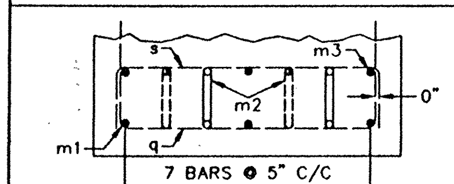
10" PIPE SEWER



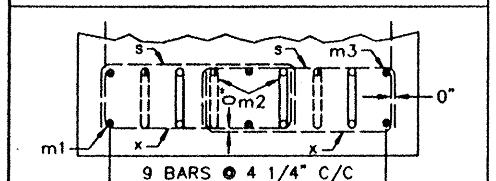
12" PIPE SEWER



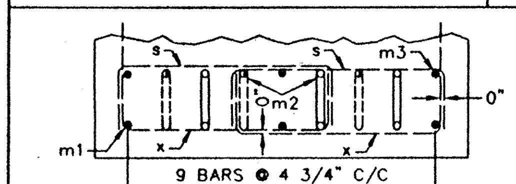
15" PIPE SEWER



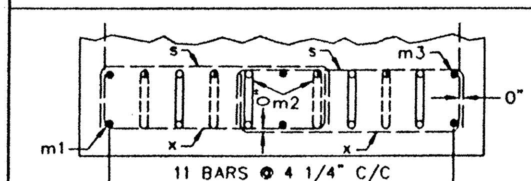
18" PIPE SEWER



21" PIPE SEWER



24" PIPE SEWER



27" PIPE SEWER

BAR SCHEDULE PER 12' SPAN

GIVEN: NO.-SIZE / LENGTH / SPACING

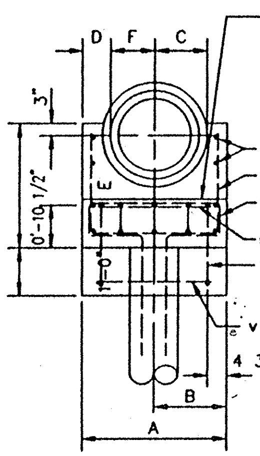
BAR	6" & 8"	10"	12"	15"	18"	21"	24"	27"	SHAPE	POSITION
m1	2-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	3-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	2-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	3-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	3-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	3-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	3-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	3-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	STR.	LONGITUDINAL BOTTOM OF CRADLE
m2	1-#8(1"ø) 18'-9" NOTE 4. SEE SECT. A-A	1-#8(1"ø) 18'-9" NOTE 4. SEE SECT. A-A	2-#8(1"ø) 18'-9" NOTE 4. SEE SECT. A-A	2-#8(1"ø) 18'-9" NOTE 4. SEE SECT. A-A	2-#8(1"ø) 18'-9" NOTE 4. SEE SECT. A-A	3-#8(1"ø) 18'-9" NOTE 4. SEE SECT. A-A	3-#8(1"ø) 18'-9" NOTE 4. SEE SECT. A-A	4-#8(1"ø) 18'-9" NOTE 4. SEE SECT. A-A	BENT	LONGITUDINAL BOTTOM OF CRADLE AND BENT OVER SUPPORT
m3	3-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	3-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	2-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	2-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	3-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	3-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	3-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	3-#8(1"ø) SEE NOTE 1. SEE SECT. A-A	STR.	LONGITUDINAL TOP OF CRADLE
p	2-#4(1/2"ø) SEE NOTE 1. AS SHOWN	2-#4(1/2"ø) SEE NOTE 1. AS SHOWN	2-#4(1/2"ø) SEE NOTE 1. AS SHOWN	4-#4(1/2"ø) SEE NOTE 1. 0'-5"	4-#4(1/2"ø) SEE NOTE 1. 0'-6"	4-#4(1/2"ø) SEE NOTE 1. 0'-7"	4-#4(1/2"ø) SEE NOTE 1. 0'-8"	4-#4(1/2"ø) SEE NOTE 1. 0'-9"	STR.	LONGITUDINAL SIDE OF CRADLE
q or x	7-#3(3/8"ø) 4'-2 1/2"NOTE 4. 8" C-C	7-#3(3/8"ø) 4'-8" NOTE 4. 8" C-C	7-#3(3/8"ø) 5'-2" NOTE 4. 8" C-C	7-#3(3/8"ø) 5'-10" NOTE 4. 8" C-C	7-#3(3/8"ø) 6'-8" NOTE 4. 8" C-C	18-#3(3/8"ø) 4'-6 1/2" NOTE 4. 8" C-C	18-#3(3/8"ø) 4'-11" NOTE 4. 8" C-C	18-#3(3/8"ø) 5'-2 3/4" NOTE 4. 8" C-C	BENT	LONG VERTICAL STIRRUPS IN CRADLE
r	2-#4(1/2"ø) 1'-6" 1'-4 1/2"	2-#4(1/2"ø) 1'-9" 1'-4 1/2"	2-#5(5/8"ø) 2'-0" 1'-4 1/2"	2-#5(5/8"ø) 2'-4" 1'-4 1/2"	3-#5(5/8"ø) 2'-8" 0'-8"	3-#6(3/4"ø) 3'-0" 0'-8"	3-#6(3/4"ø) 3'-4" 0'-8"	3-#7(7/8"ø) 3'-8" 0'-8"	STR.	UPPER TRANSVERSE HORIZONTAL IN CAPITAL
s	6-#3(3/8"ø) 2'-7" NOTE 4. 8" C-C	6-#3(3/8"ø) 2'-10" NOTE 4. 8" C-C	6-#3(3/8"ø) 3'-1" NOTE 4. 8" C-C	6-#3(3/8"ø) 3'-5" NOTE 4. 8" C-C	6-#3(3/8"ø) 3'-9" NOTE 4. 8" C-C	12-#3(3/8"ø) 3'-0" NOTE 4. 8" C-C	12-#3(3/8"ø) 3'-2 1/2" NOTE 4. 8" C-C	12-#3(3/8"ø) 3'-4 1/4" NOTE 4. 8" C-C	BENT	SHORT VERTICAL STIRRUPS IN CRADLE
t	2-#3(3/8"ø) 7'-1" NOTE 4. AS SHOWN	2-#3(3/8"ø) 7'-1" NOTE 4. AS SHOWN	2-#3(3/8"ø) 7'-1" NOTE 4. AS SHOWN	2-#3(3/8"ø) 7'-1" NOTE 4. AS SHOWN	2-#3(3/8"ø) 7'-1" NOTE 4. AS SHOWN	2-#3(3/8"ø) 7'-1" NOTE 4. AS SHOWN	2-#3(3/8"ø) 7'-1" NOTE 4. AS SHOWN	2-#3(3/8"ø) 7'-1" NOTE 4. AS SHOWN	BENT	VERTICAL STIRRUPS IN CAPITAL
u	4-#5(5/8"ø) 3'-11" NOTE 4. AS SHOWN	4-#5(5/8"ø) 3'-11" NOTE 4. AS SHOWN	4-#5(5/8"ø) 3'-11" NOTE 4. AS SHOWN	4-#5(5/8"ø) 3'-11" NOTE 4. AS SHOWN	4-#5(5/8"ø) 3'-11" NOTE 4. AS SHOWN	4-#5(5/8"ø) 3'-11" NOTE 4. AS SHOWN	4-#5(5/8"ø) 3'-11" NOTE 4. AS SHOWN	4-#5(5/8"ø) 3'-11" NOTE 4. AS SHOWN	BENT	PILE DOWELS
v	2-#4(1/2"ø) 1'-6" 1'-4 1/2"	2-#4(1/2"ø) 1'-9" 1'-4 1/2"	2-#4(1/2"ø) 2'-0" 1'-4 1/2"	2-#4(1/2"ø) 2'-4" 1'-4 1/2"	2-#4(1/2"ø) 2'-8" 1'-4 1/2"	2-#4(1/2"ø) 3'-0" 1'-4 1/2"	2-#4(1/2"ø) 3'-4" 1'-4 1/2"	2-#4(1/2"ø) 3'-8" 1'-4 1/2"	STR.	LOWER TRANSVERSE HORIZONTAL IN CAPITAL

CRADLE DIMENSIONS

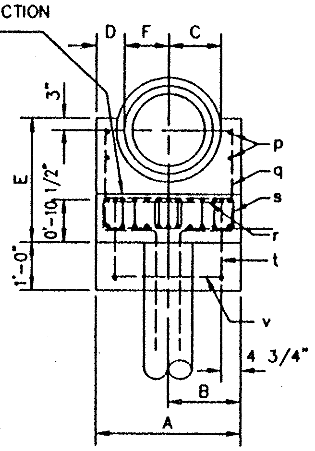
PIPE DIA	A	B	C NOTE 3.	D	E	F
6"	2'-0"	1'-0"	0'-5"	0'-8 1/4"	1'-11 1/4"	0'-3 3/4"
8"	2'-0"	1'-0"	0'-6 1/2"	0'-7"	1'-11 1/4"	0'-5"
10"	2'-3"	1'-1 1/2"	0'-7 1/2"	0'-7 1/2"	2'-0 1/2"	0'-6"
12"	2'-6"	1'-3"	0'-9 1/4"	0'-7 3/4"	2'-2"	0'-7 1/4"
15"	2'-10"	1'-5"	0'-11 1/2"	0'-7 3/4"	2'-4"	0'-9 1/4"
18"	3'-2"	1'-7"	1'-1"	0'-8"	2'-7"	0'-11"
21"	3'-6"	1'-9"	1'-3 1/4"	0'-7"	2'-8"	1'-2"
24"	3'-10"	1'-11"	1'-5 1/4"	0'-7 1/4"	2'-10"	1'-3 3/4"
27"	4'-2"	2'-1"	1'-7 1/4"	0'-7 1/2"	3'-0"	1'-5 1/2"

BAR DIMENSIONS

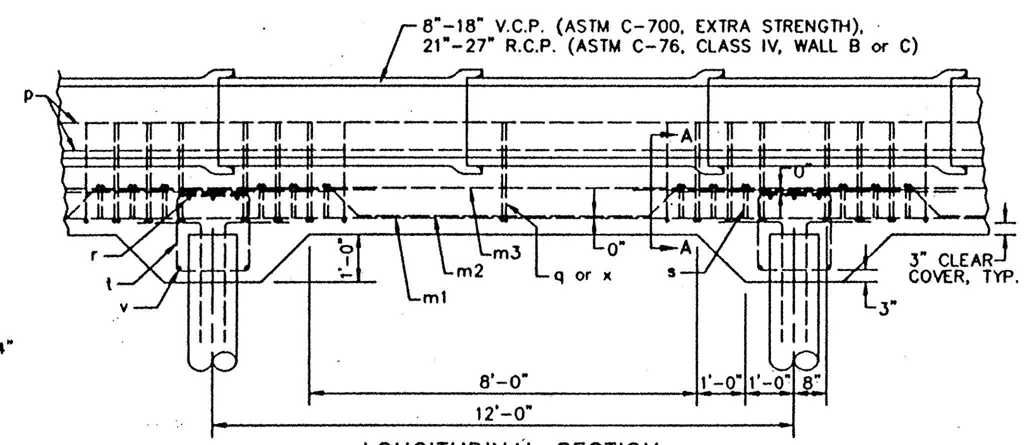
PIPE DIA	G	H	J	CONCRETE CU. YD./FT.	REIN. STL. LBS./FT. NOTE 1.	PILE CAP. TONS
6"	1'-5 1/4"	1'-6"		0.149	25.2	25
8"	1'-5 1/4"	1'-6"		0.142	25.2	25
10"	1'-6 1/2"	1'-9"		0.165	28.6	30
12"	1'-8"	2'-0"		0.189	26.7	30
15"	1'-10"	2'-4"		0.220	31.7	35
18"	2'-1"	2'-8"		0.264	35.4	40
21"	2'-2"	1'-11"	0'-7 1/2"	0.275	41.6	45
24"	2'-4"	2'-1 1/2"	0'-7 1/2"	0.311	42.1	50
27"	2'-6"	2'-3 1/4"	0'-7 1/2"	0.349	47.1	55



TRANSVERSE SECTION
6"-18" PIPE SEWERS



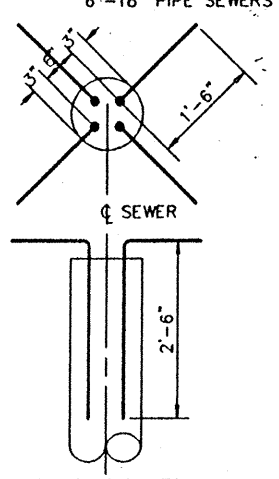
TRANSVERSE SECTION
21"-27" PIPE SEWERS



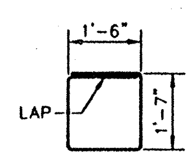
LONGITUDINAL SECTION

● VERTICAL STIRRUPS IN CRADLE (6"-18" PIPE SEWERS) (SEE TRANSVERSE SECTION)

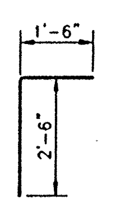
○ VERTICAL STIRRUPS IN CRADLE (21"-27" PIPE SEWERS) (SEE TRANSVERSE SECTION)



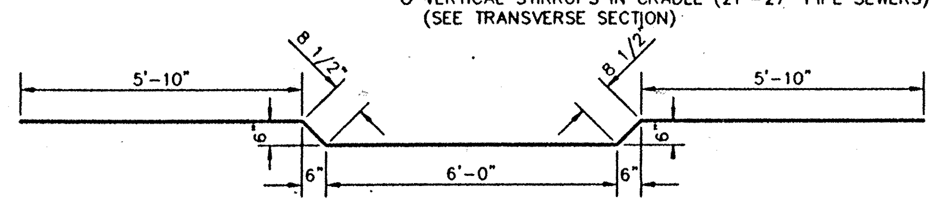
PILE DOWEL BAR DETAIL



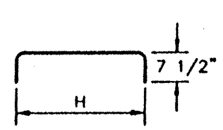
t BAR



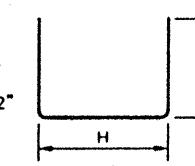
u BAR



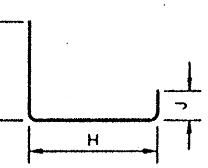
m2 BAR



s BAR



q BAR
(6"-18")



x BAR
(21"-27")

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, q, AND x BAR POSITIONS.
3. 'C' DIMENSION IS OUTSIDE RADIUS OF BELL FOR WALL C R.C.P.
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. THE MINIMUM RADIUS OF BENT BARS SHALL BE 3 BAR DIAMETERS. THE RADIUS OF A BEND IS TO THE INSIDE OF THE BAR.
7. ALL REINFORCING STEEL SHALL HAVE A MIMIMUM COVER OF 3".
8. LENGTH OF LAP FOR SPLICING REINFORCEMENT SHALL BE 40 BAR DIAMETERS.
9. DIMENSIONS FOR REINFORCING BARS ARE OUT TO OUT.
10. 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.
11. ALL CONCRETE SHALL BE CLASS "C".

DO NOT SCALE - USE DIMENSIONS ONLY

CITY OF AKRON
BUREAU OF ENGINEERING

CONSTRUCTION STANDARD DWG. No. S-3

David Jelik 2-12-98
MANAGER, DESIGN DIVISION

Pawan K. Khailan
MANAGER, CONSTRUCTION DIVISION

[signature]
CITY ENGINEER

PILE SUPPORT
6" - 27" PIPE SEWERS
TO 10' DEEP

AUTOCAD DRAWING - STD_S-3.DWG February 11, 1998

REVISIONS: