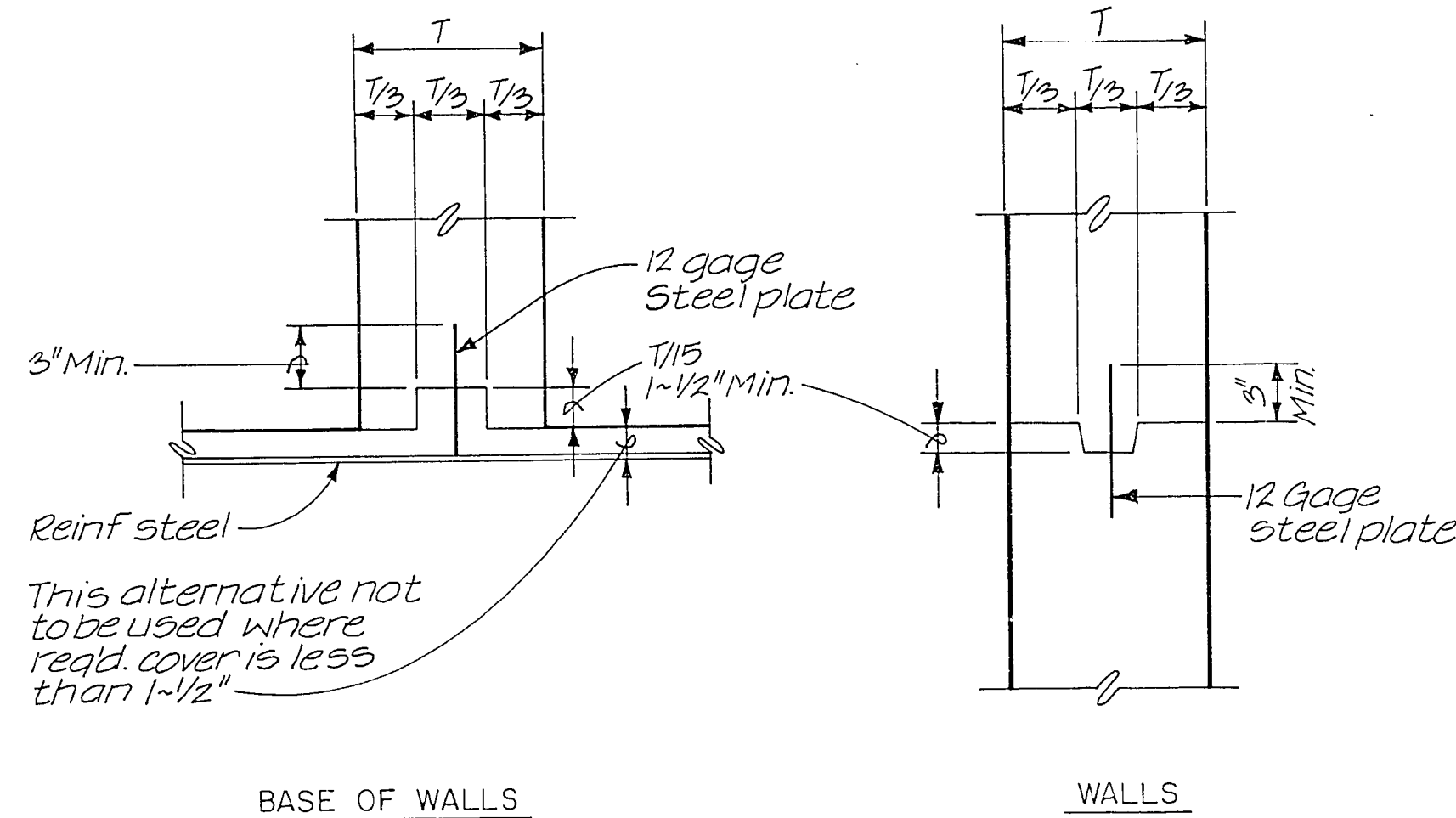
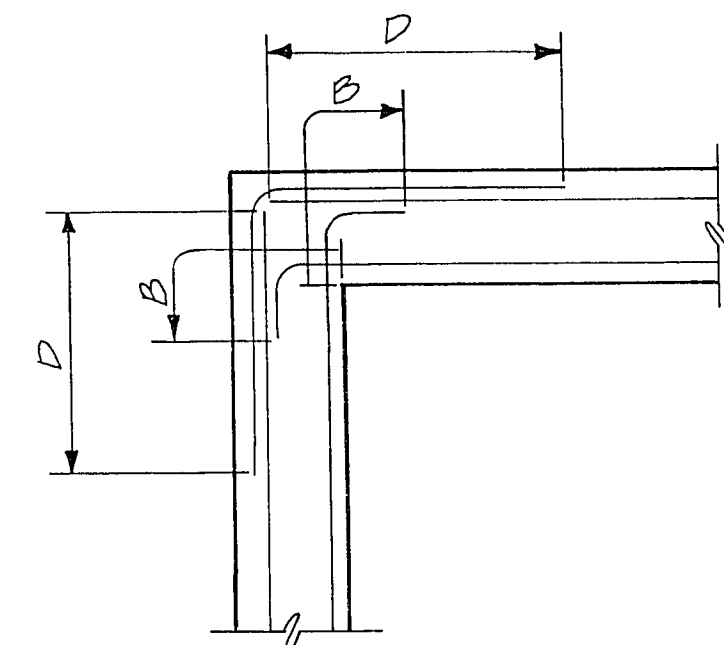




JOINTS WITH WATER STOPS
No scale



TYPICAL CORNER REINFORCING DETAIL
No scale

B = sufficient length to permit bars to extend through the wall to the opposite face and terminate in a standard hook, but shall not be less than the length required for development of top bars, as shown below.

D = Not less than the length required for lapped splices for top bars, as shown below.

Note:
Vertical reinforcing not shown.

SPLICE & DEVELOPMENT LENGTHS					
Bar size	Length of lapped splices for reinf. (inches)		Length of development for end anchorage of reinf. (inches)		Hooked bars
	*Top bars	others	*Top bars	others	
4	22	20	14	12	8
5	29	20	17	12	10
6	37	26	22	15	12
7	50	36	29	21	14

* Top bars are horiz. bars so placed that 12' of conc. is cast in the member below the bar. Horiz. bars in walls are to be provided with laps as req'd for top bars.

Straight bars spaced less than 6" on ctrs. shall have a development length of 1.25 times the length shown.

Except as otherwise indicated on the plans, development lengths for end anchorage & lapped splices shall be not less than (no minus tolerance) shown above.

Lapped splices shall not be made at point of maximum stress as determined by the engineer. If splices are staggered so that no more than 1/2 are spliced in a splice length, the splice length can be reduced to 75% of the lengths tabulated above.

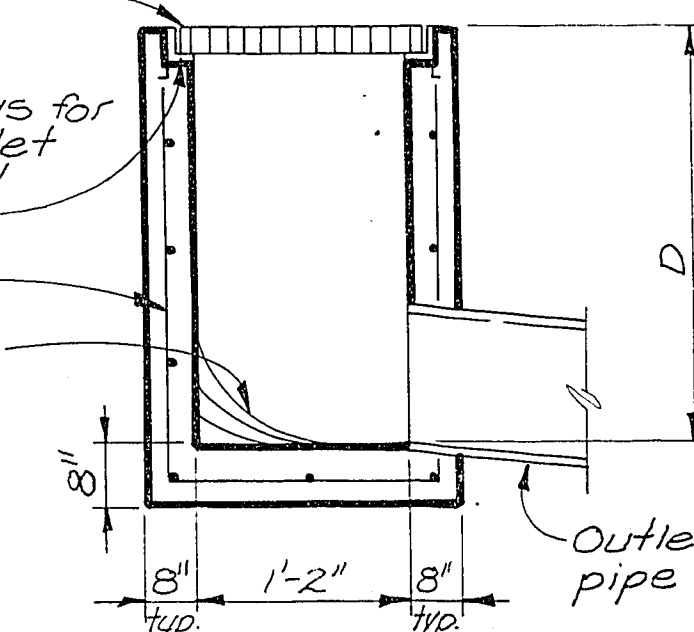
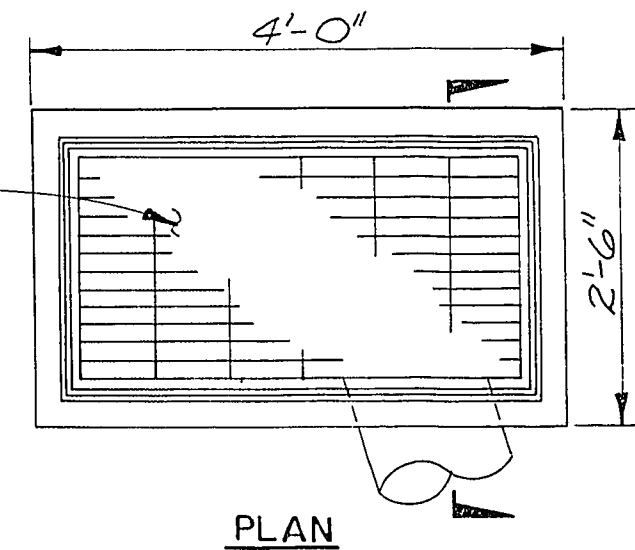
Grate same as for type D drop inlet sh. 13 except no 3 1/2" x 3" x 5/8" frame angle

3' x 3/8" Frame bar all around

Frame same as for type D drop inlet sh. 13 except all around

#4 @ 12" E.W.

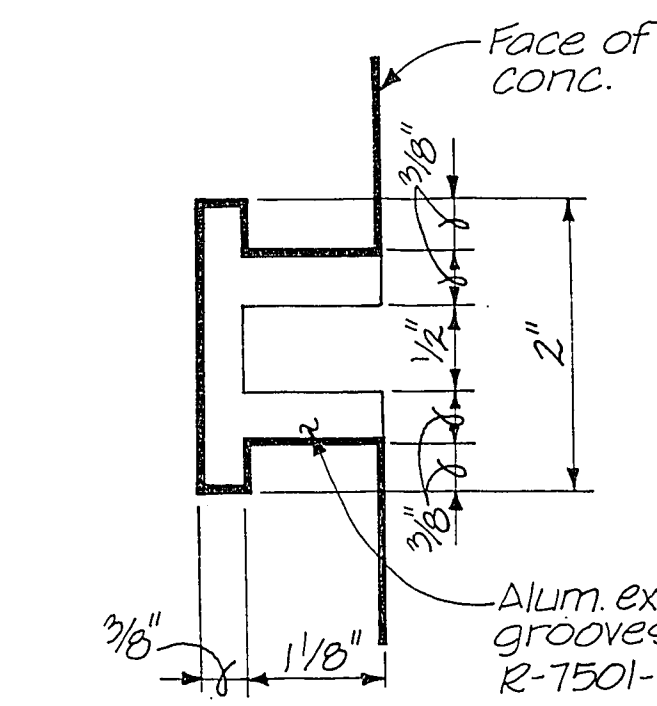
Slope to drain



DROP INLET TYPE E DETAIL *
No scale

DROP INLET LATERAL TYPE I DETAIL *
No scale

* See drop inlet table sh. 9



Alum. extruded grooves

Face of conc.

1/2"

1/8"

Alum. extruded grooves Neenah R-7501-CV or equal

Varies

1/2"

1/8"

Alum. extruded grooves Neenah R-7501-CV or equal

Varies

1/2"

1/8"

Alum. extruded grooves Neenah R-7501-CV or equal

Varies

1/2"

1/8"

Alum. extruded grooves Neenah R-7501-CV or equal

Varies

1/2"

1/8"

Alum. extruded grooves Neenah R-7501-CV or equal

Varies

1/2"

1/8"

Alum. extruded grooves Neenah R-7501-CV or equal

Varies

1/2"

1/8"

Alum. extruded grooves Neenah R-7501-CV or equal

Varies

1/2"

1/8"

Alum. extruded grooves Neenah R-7501-CV or equal

Varies

1/2"

1/8"

Alum. extruded grooves Neenah R-7501-CV or equal

Varies

1/2"

1/8"

Alum. extruded grooves Neenah R-7501-CV or equal

Varies

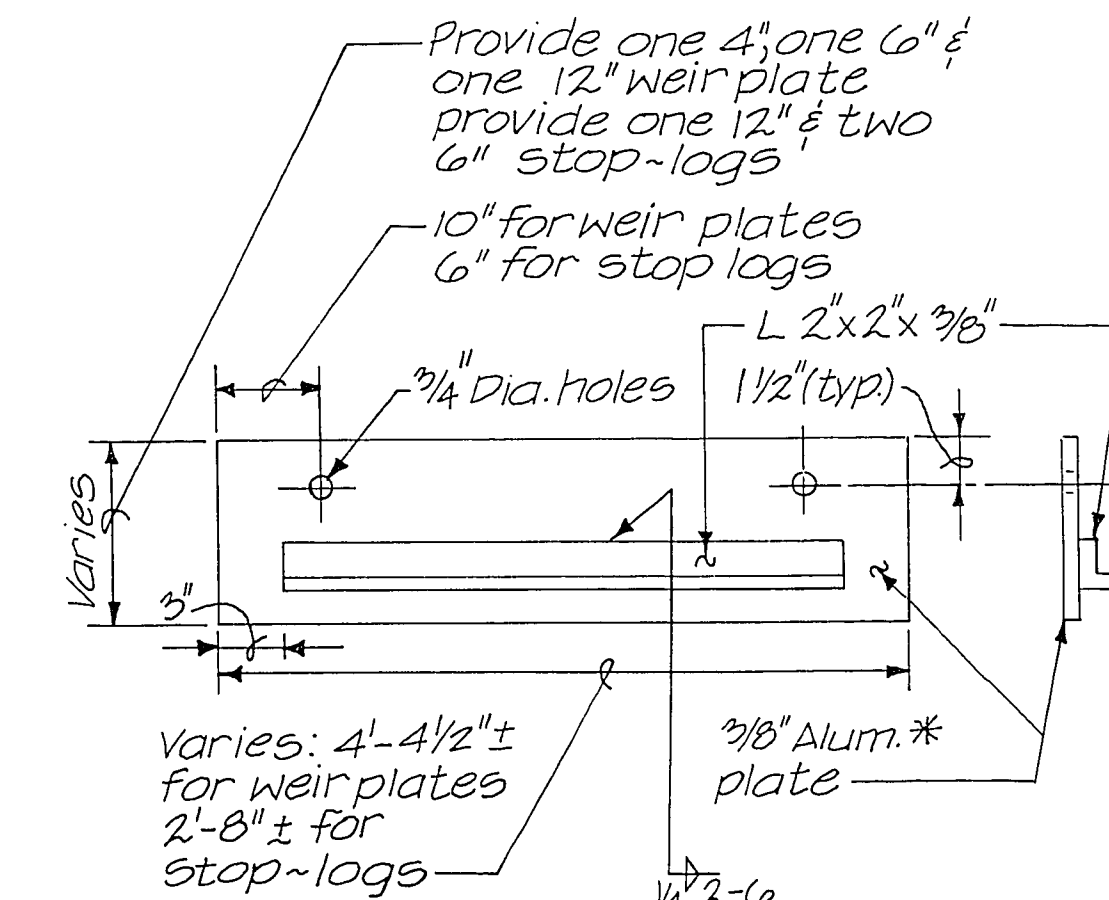
1/2"

1/8"

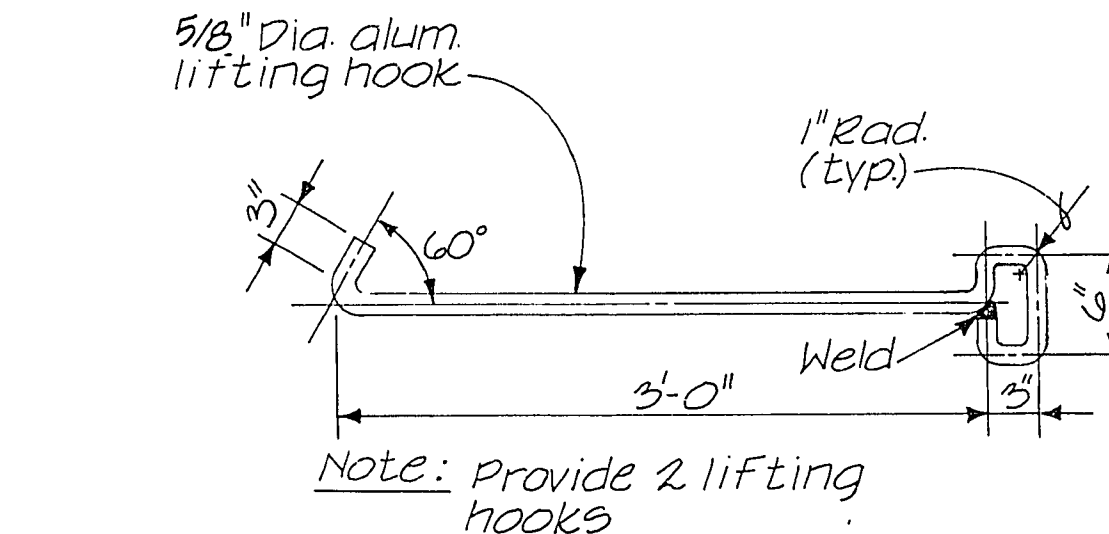
Alum. extruded grooves Neenah R-7501-CV or equal

Varies

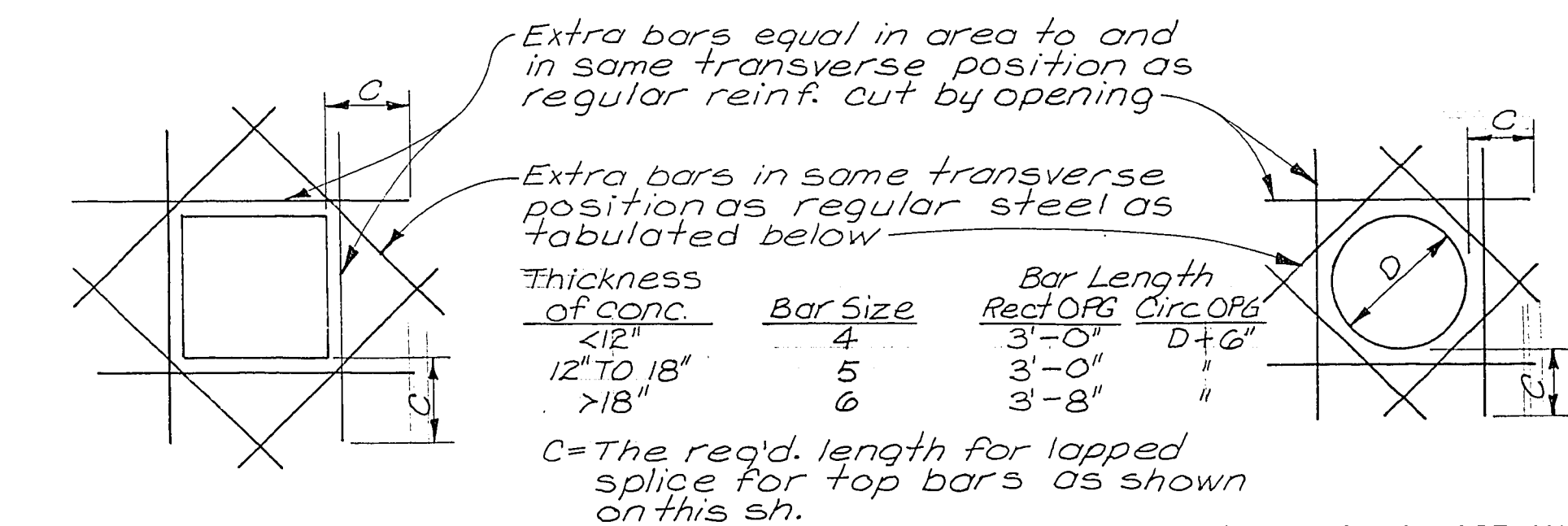
ALUMINUM EXTRUDED WEIR GROOVES
No scale



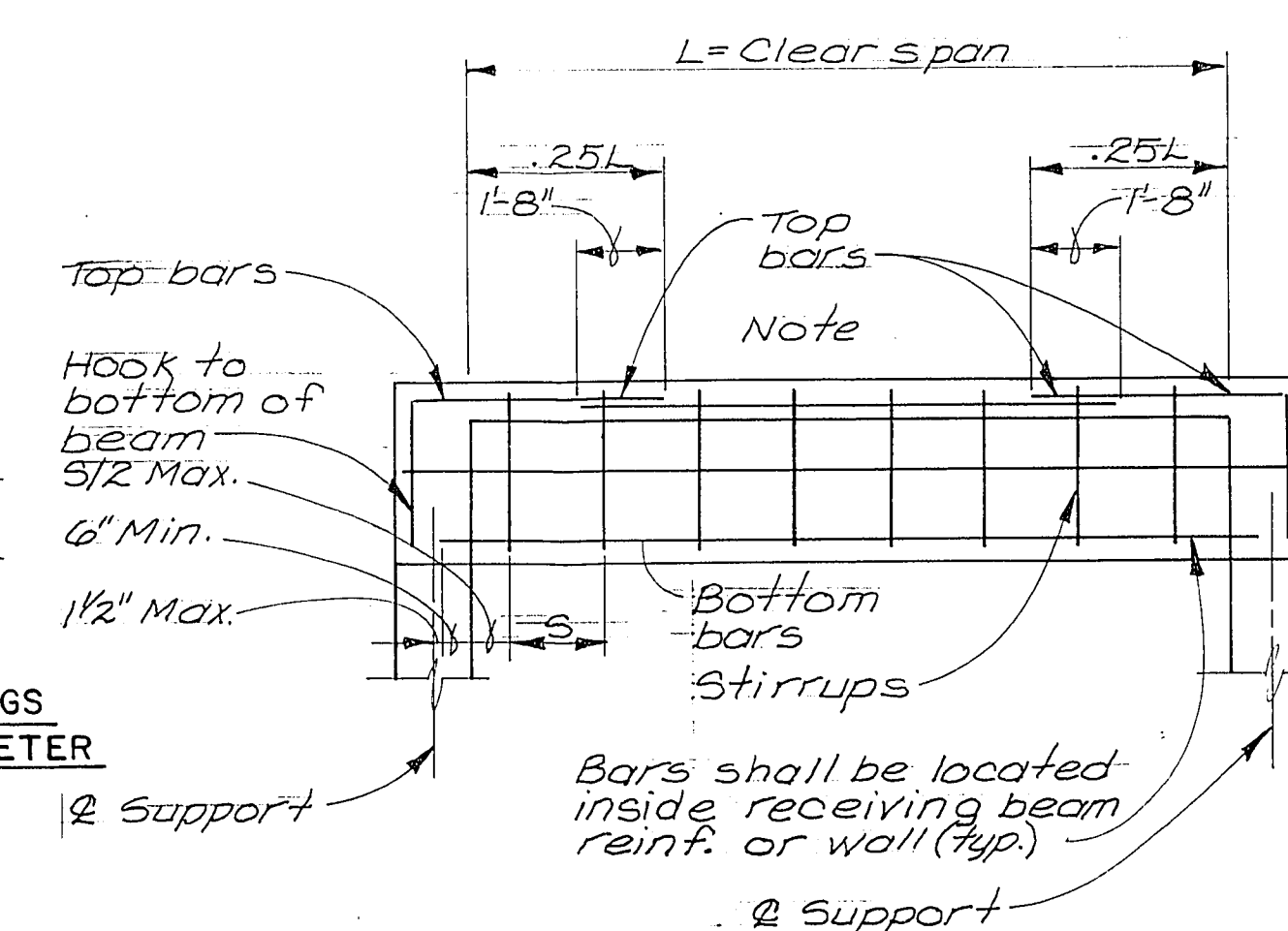
* Alum. to be ASTM B221 alloy 6061-T6
WEIR PLATE & STOP-LOG DETAIL
No scale



LIFTING HOOK DETAIL
No scale



TYPICAL EXTRA REINFORCING AT OPENINGS
No Scale



TYPICAL BEAM DETAIL
No scale

CITY OF LAS VEGAS
DEPARTMENT OF PUBLIC WORKS
23RD STREET RELIEF SEWER
MISCELLANEOUS DETAILS

PROFESSIONAL ENGINEER
DANA V. REEL
CIVIL
No. 7138

DWG. NO.
307-V640

SHEET
14 OF 15

DESIGNED MAS, MAM
CHECKED WJR
APPROVED ADM
DATE 5/25/89

Black & Veatch
Engineers - Architects
Las Vegas, Nevada

PROJECT NO.
14241

DATE REVISIONS AND RECORD OF ISSUE NO. BY CK APP

24-1-41