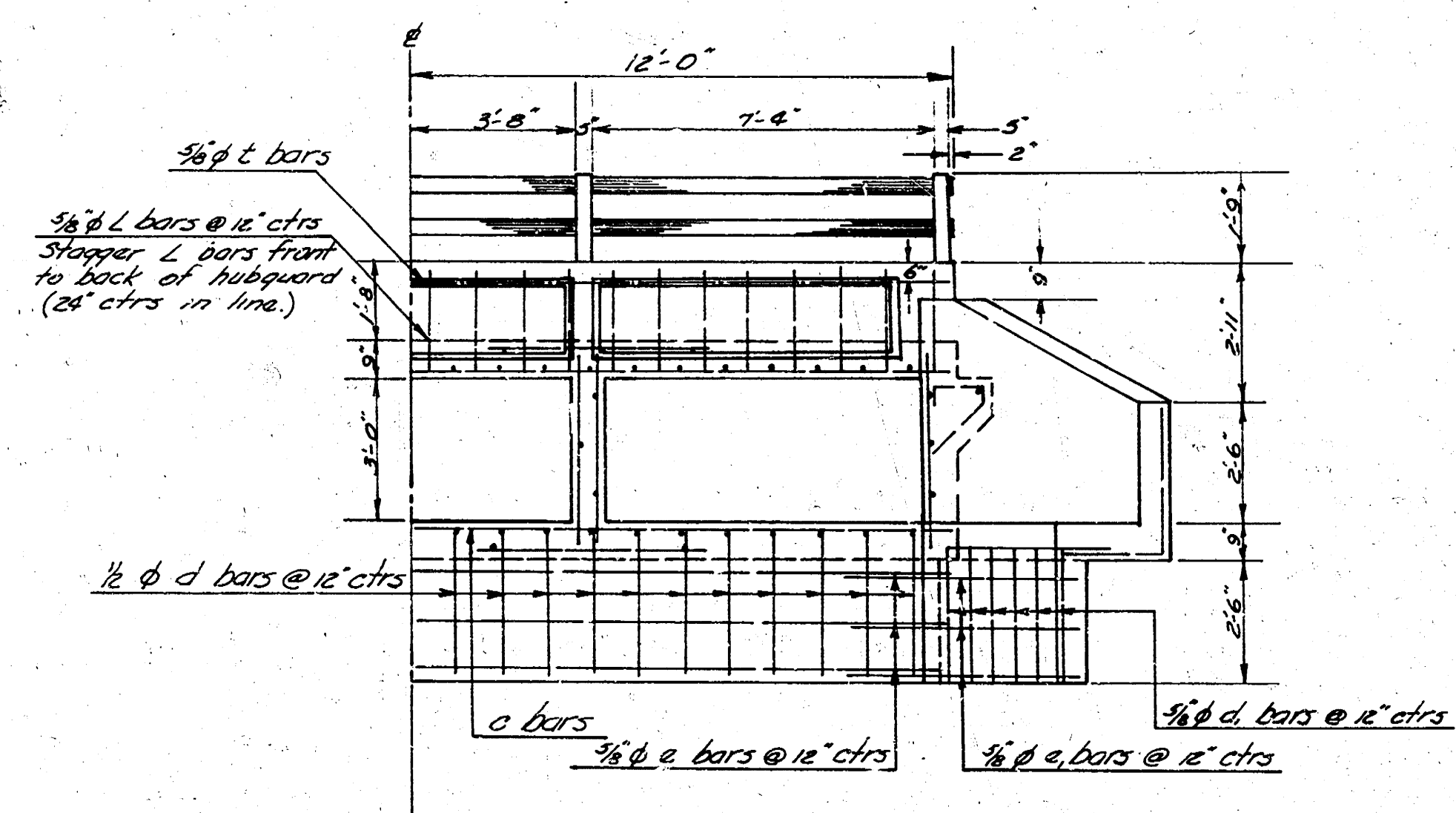
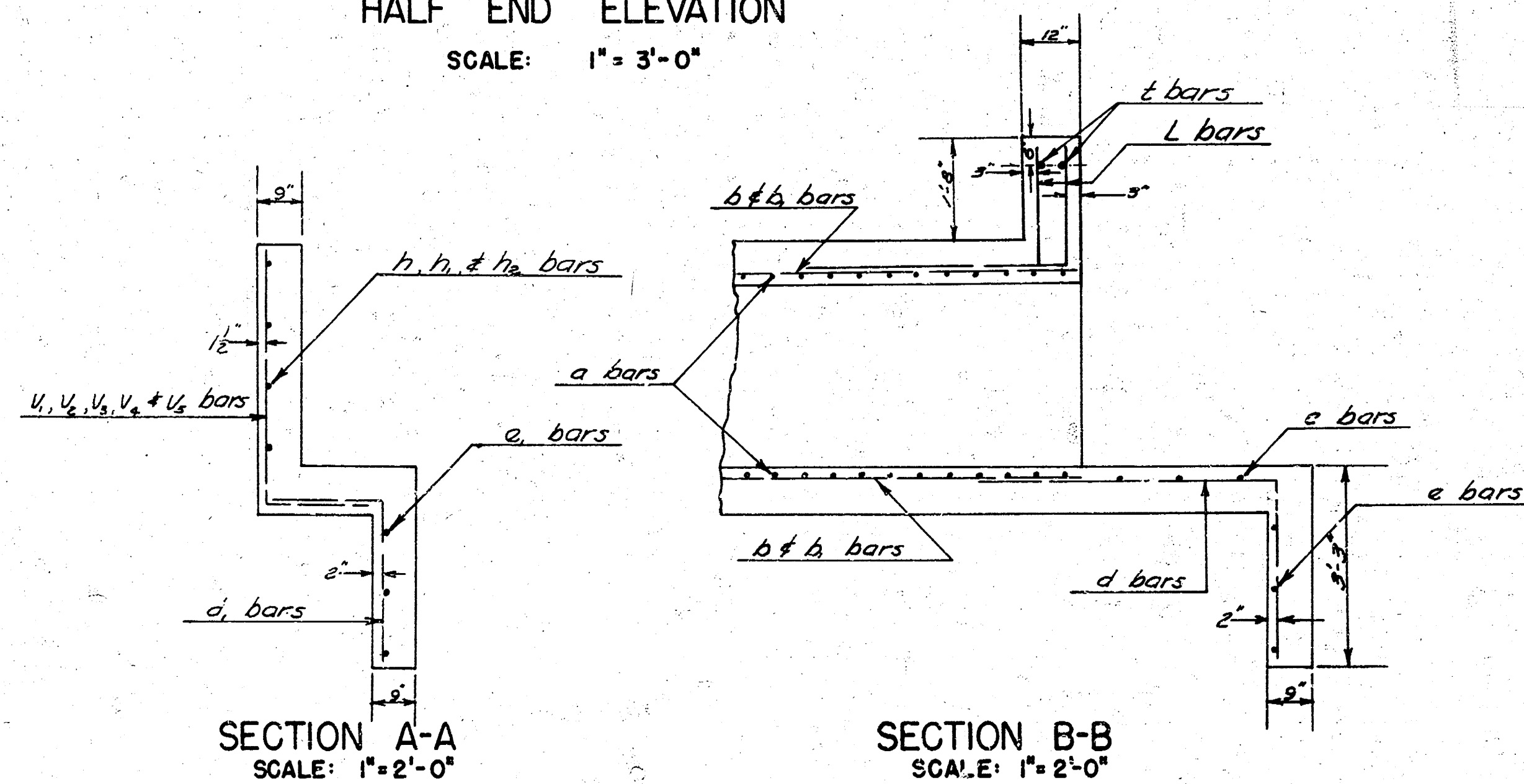


CULVERT DETAILS
MERIDIAN & 33RD ST. SO.

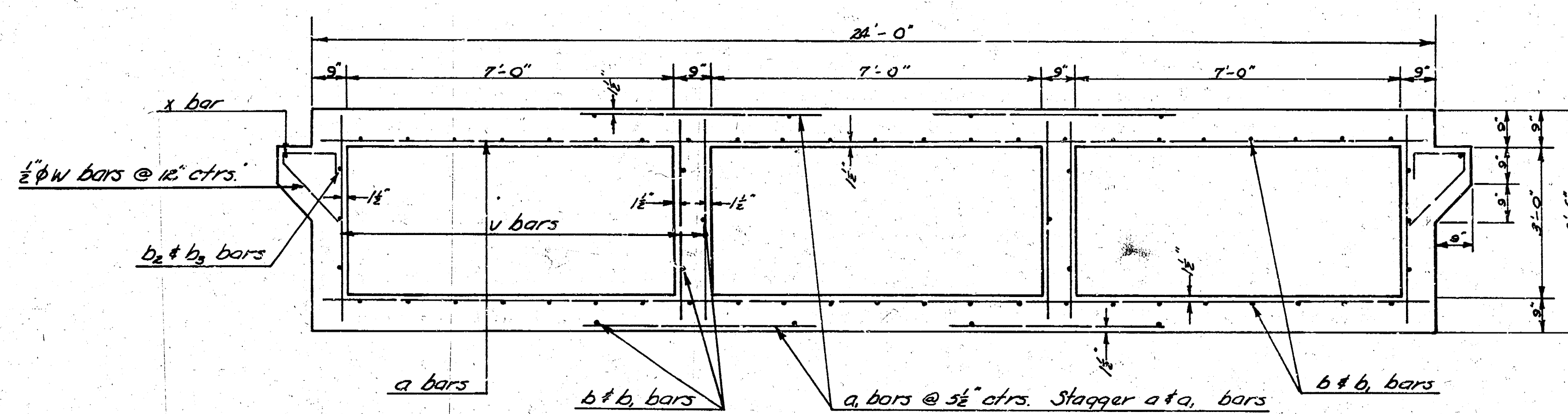


HALF END ELEVATION
SCALE: 1" = 3'-0"

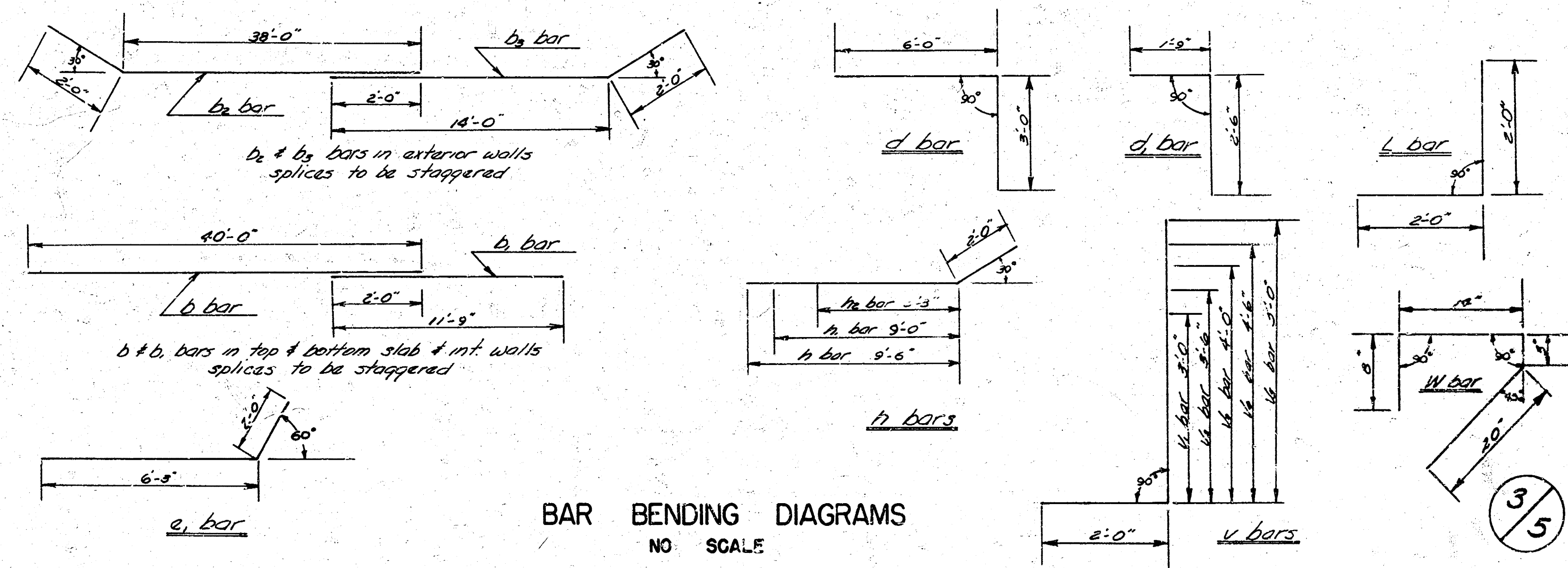


SECTION A-A
SCALE: 1" = 2'-0"

SECTION B-B
SCALE: 1" = 2'-0"



CROSS SECTION OF BOX
SCALE: 1" = 2'-0"



BAR BENDING DIAGRAMS
NO SCALE

* Pipes may be one piece 24'-0" long or cut into lengths as shown.

STEEL SCHEDULE				
Bar	SIZE	NO	LENGTH	SHAPE
A	3/8"	218	23'-7"	
A1	3/8"	436	5'-0"	
B	1/2"	60	40'-0"	
B1	1/2"	60	11'-9"	
B2	1/2"	6	40'-0"	
B3	1/2"	6	16'-0"	
C	3/8"	6	24'-0"	
D	1/2"	46	9'-0"	
D1	3/8"	24	4'-3"	
E	3/8"	6	23'-0"	
E1	3/8"	12	8'-3"	
H	1/2"	8	11'-6"	
H1	1/2"	4	11'-0"	
H2	1/2"	4	7'-3"	
L	3/8"	48	4'-0"	
S	1/2"	4	8'-4"	
T	3/8"	4	23'-6"	
V	1/2"	200	4'-2"	
V1	3/8"	8	5'-0"	
V2	3/8"	8	5'-6"	
V3	3/8"	8	6'-0"	
V4	3/8"	8	6'-6"	
V5	3/8"	4	7'-0"	
W	1/2"	64	5'-5"	
X	3/8"	2	31'-6"	
Y	3/8"	20	1'-0"	
Z	3/8"	12	4'-4"	
Z1	3/8"	12	2'-4"	
Z2	3/8"	24	5'-0"	

HANDRAIL & PARAPET FACE DETAIL
SCALE: 1" = 2'-0"

RAIL CAP DETAIL

PARAPET DETAIL

HANDRAIL POST DETAIL
SCALE: 1" = 0'-1"

Handrail Erection Notes:
 Unit price bid for Metal Handrail shall include installation of handrail anchor bolts & complete fabrication & erection of posts & railing as shown.
 All handrail anchor bolts & nuts shall be either galvanized or cadmium plated steel. All other parts of rail shall be aluminum: tubing Alloy 61S-76, mill finish; cast posts, Alloy 214, sand-blast finish. All aluminum shall have a protective coating prior to erection as shown in specifications.
 Aluminum surfaces in contact with concrete shall be painted with a heavy coat of bituminous paint, Inertal brand or equal.
 The top surface of the parapet wall shall be given a travertine finish, with special care given to provide smooth contact surfaces under handrail posts.
 Posts shall be carefully set to true line and grade; if necessary, shims of fully annealed aluminum shall be used under the posts to provide proper setting of the posts.

SECTIONS THRU CATCH BASINS
SCALE: 1" = 1'-0"

BILL OF MATERIALS		
ITEM	QUANTITY	UNITS
Class A-AE Concrete	112.7	cu.yd.
Reinforcing Steel	12,395	lbs.
Aluminum Handrail	48.0	lin. ft.
General Excavation	410	cu.yd.
Hand Excavation	5	cu.yd.
Compacted Backfill	43	cu.yd.
Integral Curb	72.0	lin. ft.
Catch Basin Lid 2'x5'	6	each
4" Sidewalk	334.5	sq.ft.

General Notes:
 Compacted backfill to be carried to original ground elevation, but in no case to be higher than top of culvert. Backfill to be sand stabilized & mechanically tamped.
 Excavation is to be extended 2' beyond sides of the box & back of wingwalls.
 Bevel all exposed edges with 3/4" moulding unless otherwise noted.
 4" Sidewalk to cover entire area between int. curb & hubward. Bid price of walk to include sand fill between top of box & bottom of walk. Cost of expansion joint between walk & int. curb to be included in walk bid.