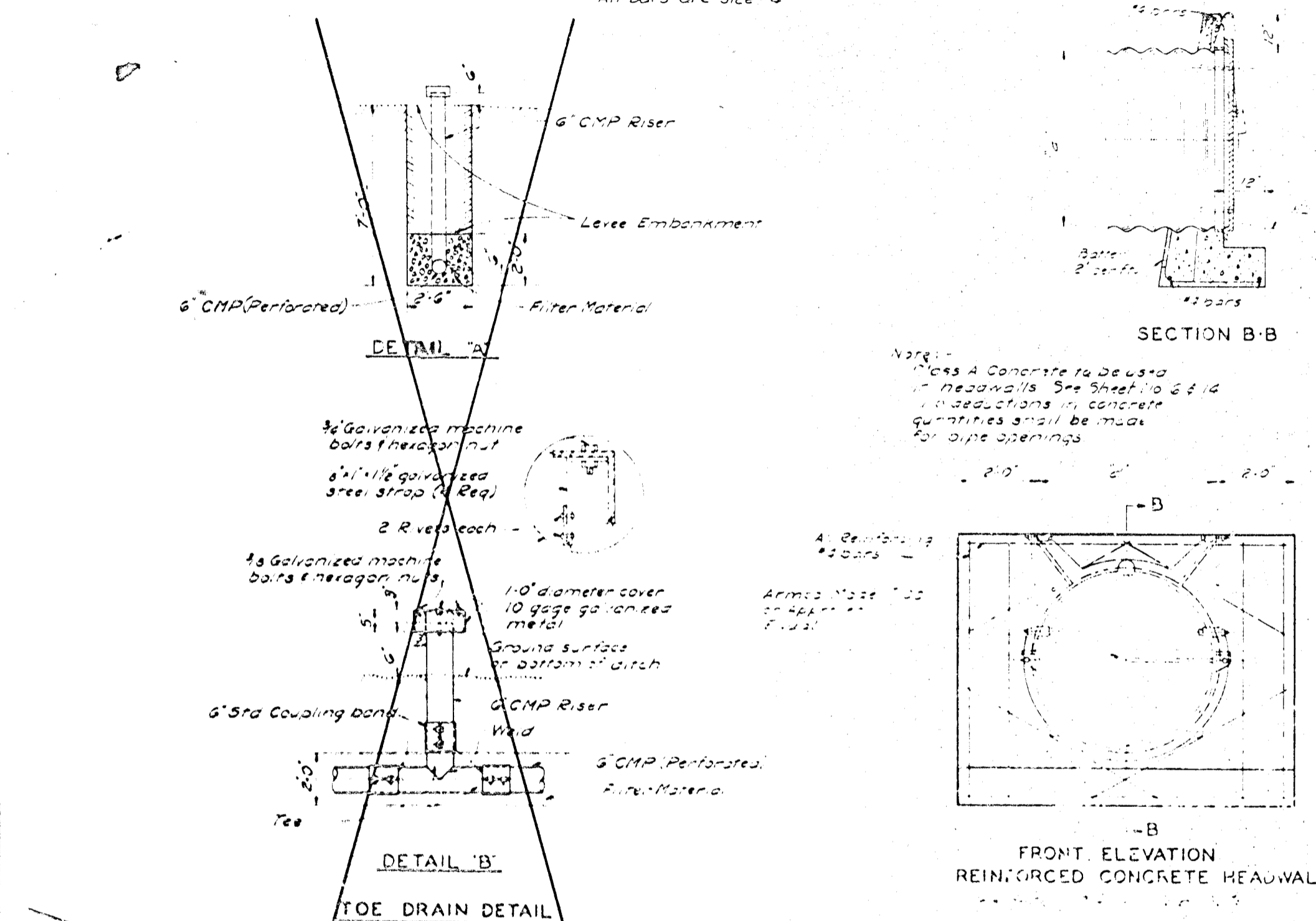


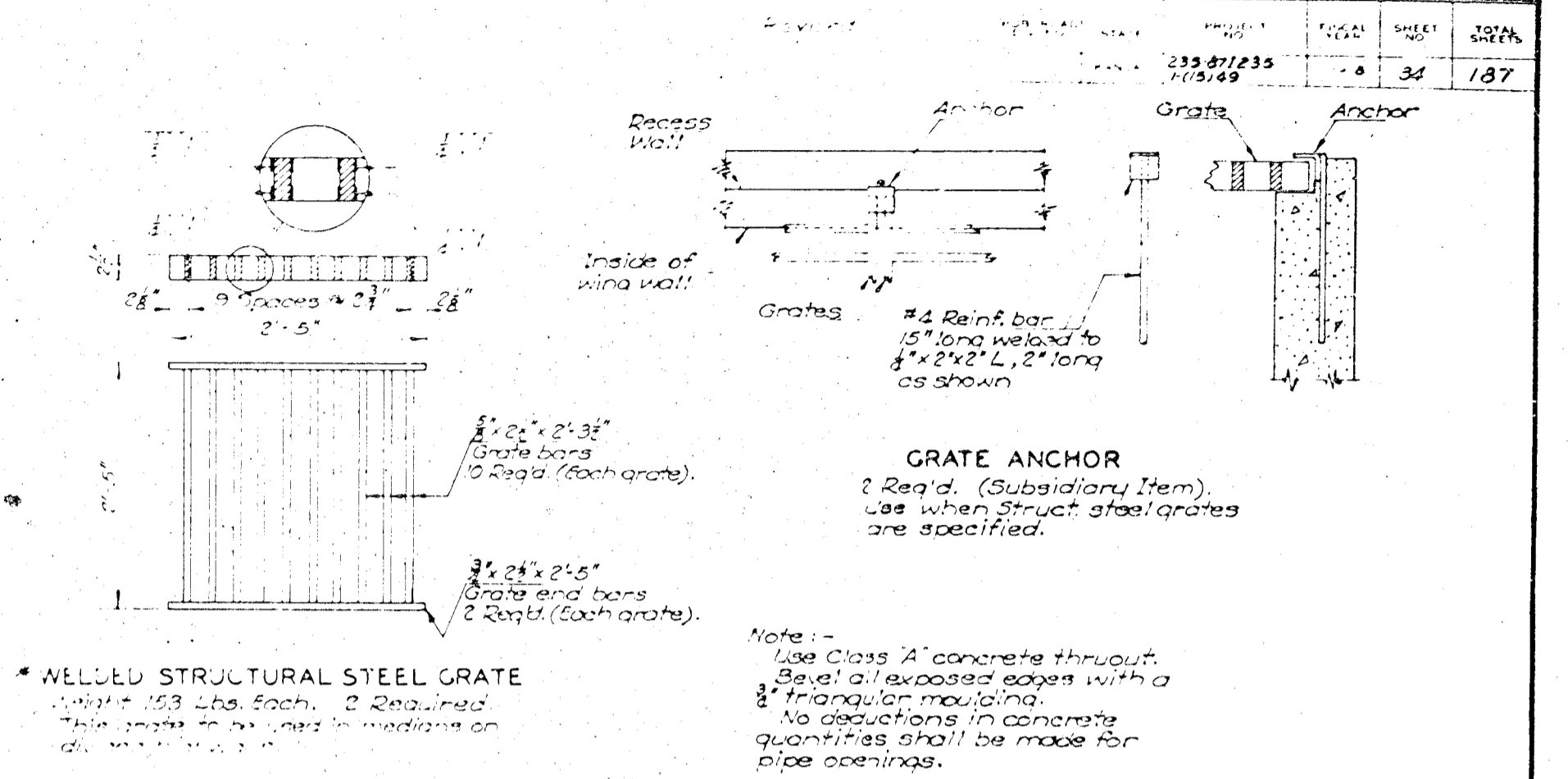
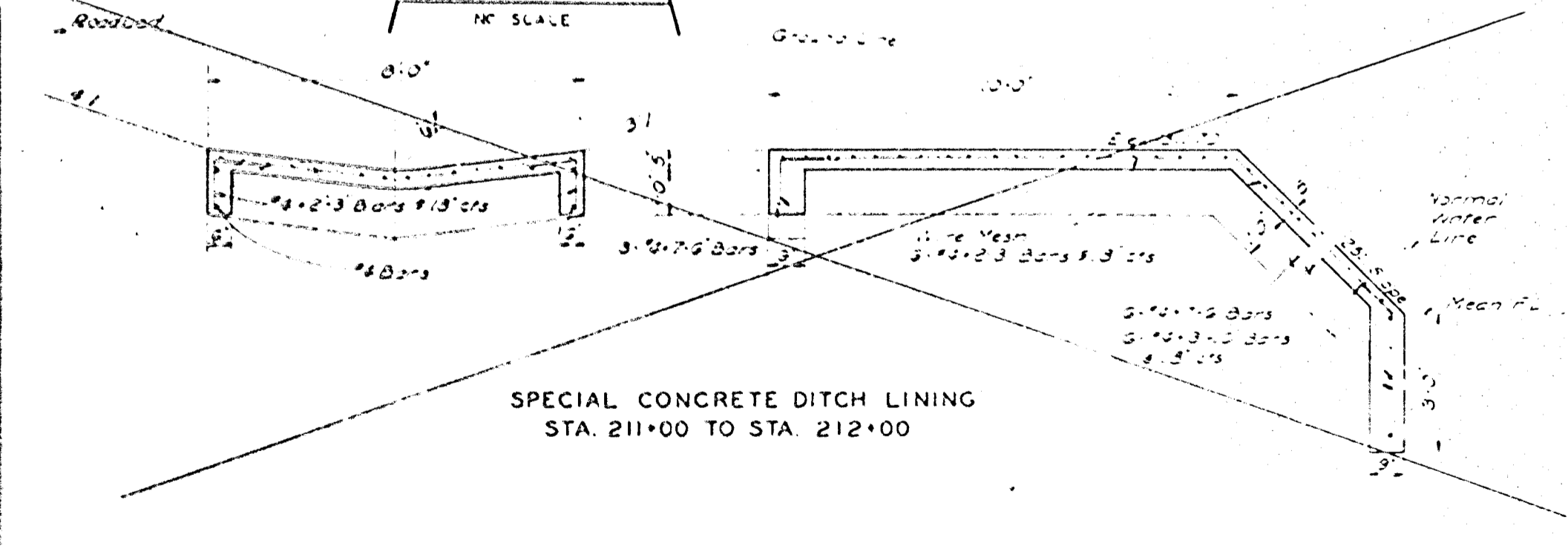
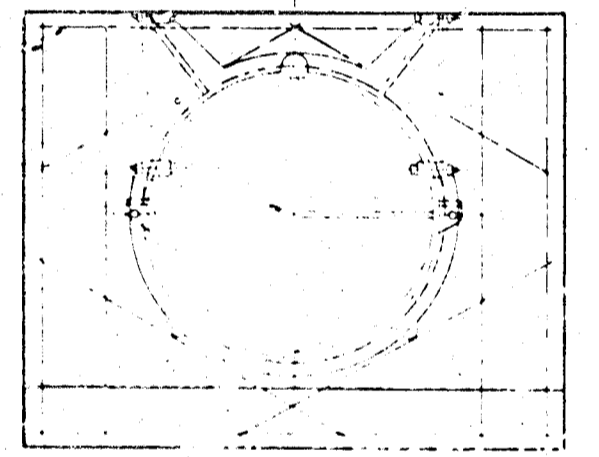
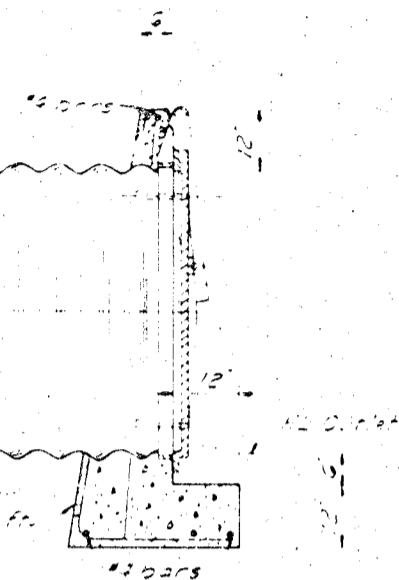
BILL OF MATERIAL			
Bar No.	Length	Bar No.	Length
1	6'-4"	4	7'-7"
2	5'-9"	3	6'-9"
3	4'-3"	2	4'-8"
4	4'-11"	2	5'-5"

Class A Conc. 1 Cu. Yd. Class A Conc. 1 Cu. Yd.
Reinf. Steel 41 Lbs. Reinf. Steel 47 Lbs.

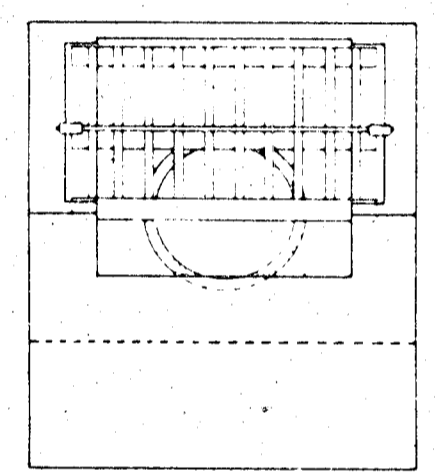
*All bars are size #2



Note: Class A Concrete to be used in headwalls. See Sheet 10 & 11 for reductions in concrete quantities shall be made for pipe openings.



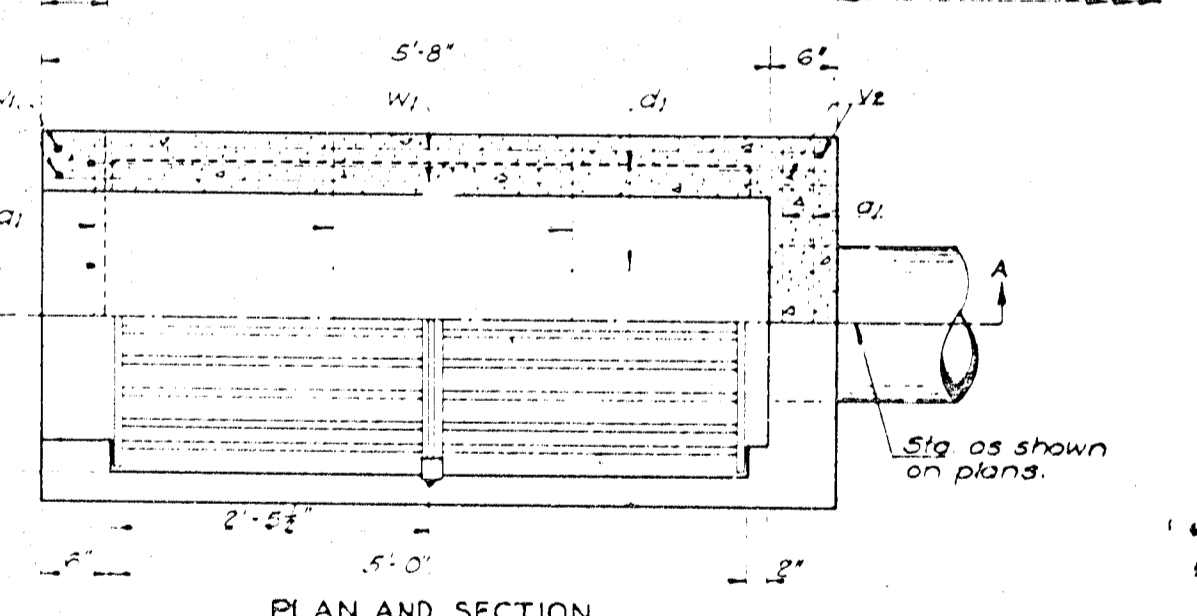
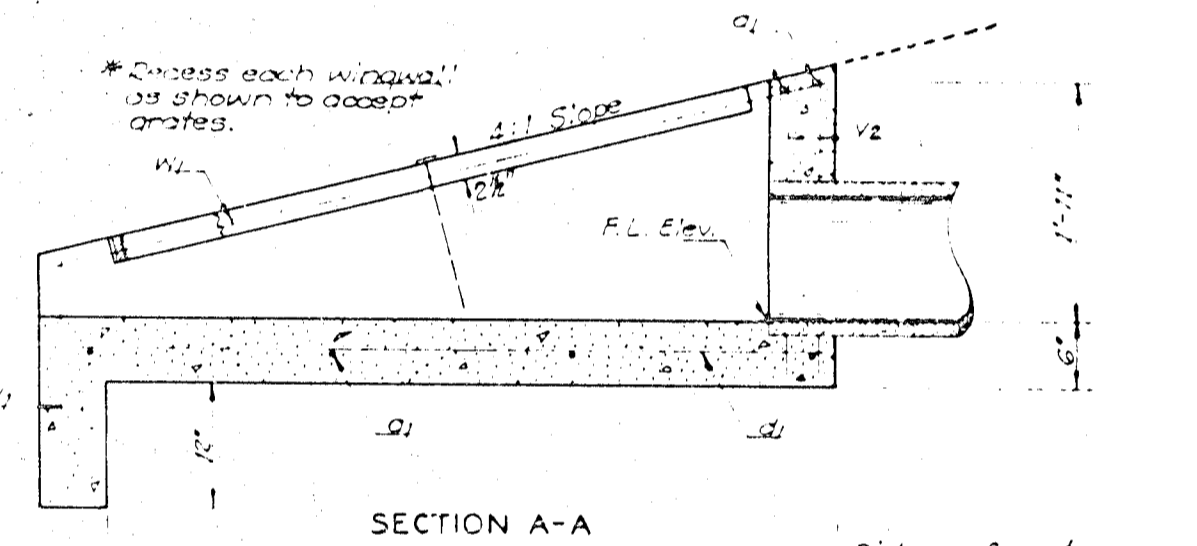
* WELDED STRUCTURAL STEEL GRATE
Weight 103 Lbs. Each. 2 Required.
This grate to be used in headwalls on ditches.



BILL OF MATERIAL	
Bar No.	Length
a1	2'-6"
a2	2'-6"
a3	2'-6"
a4	2'-6"
a5	2'-6"

Class A Conc. 0.8 Cu. Yd.
Reinf. Steel 55 Lbs.
Struct. Steel 306 Lbs.
Class III Exposed 0.1 Cu. Yd.

Note: All reinforcement bars are size #1.



12-55 Add grate anchor
WB CAR
STATE HIGHWAY COMMISSION OF KANSAS
**CONCRETE HEADWALL
STRUCTURAL STEEL GRATE**
TYPE III (INLET)
STD. NO. 303
DATE: 12-55
DESIGNED BY: W.B. CARLSON
CHECKED BY: W.B. CARLSON
DRAWN BY: W.B. CARLSON
SCALE: 1/8" = 1'-0"