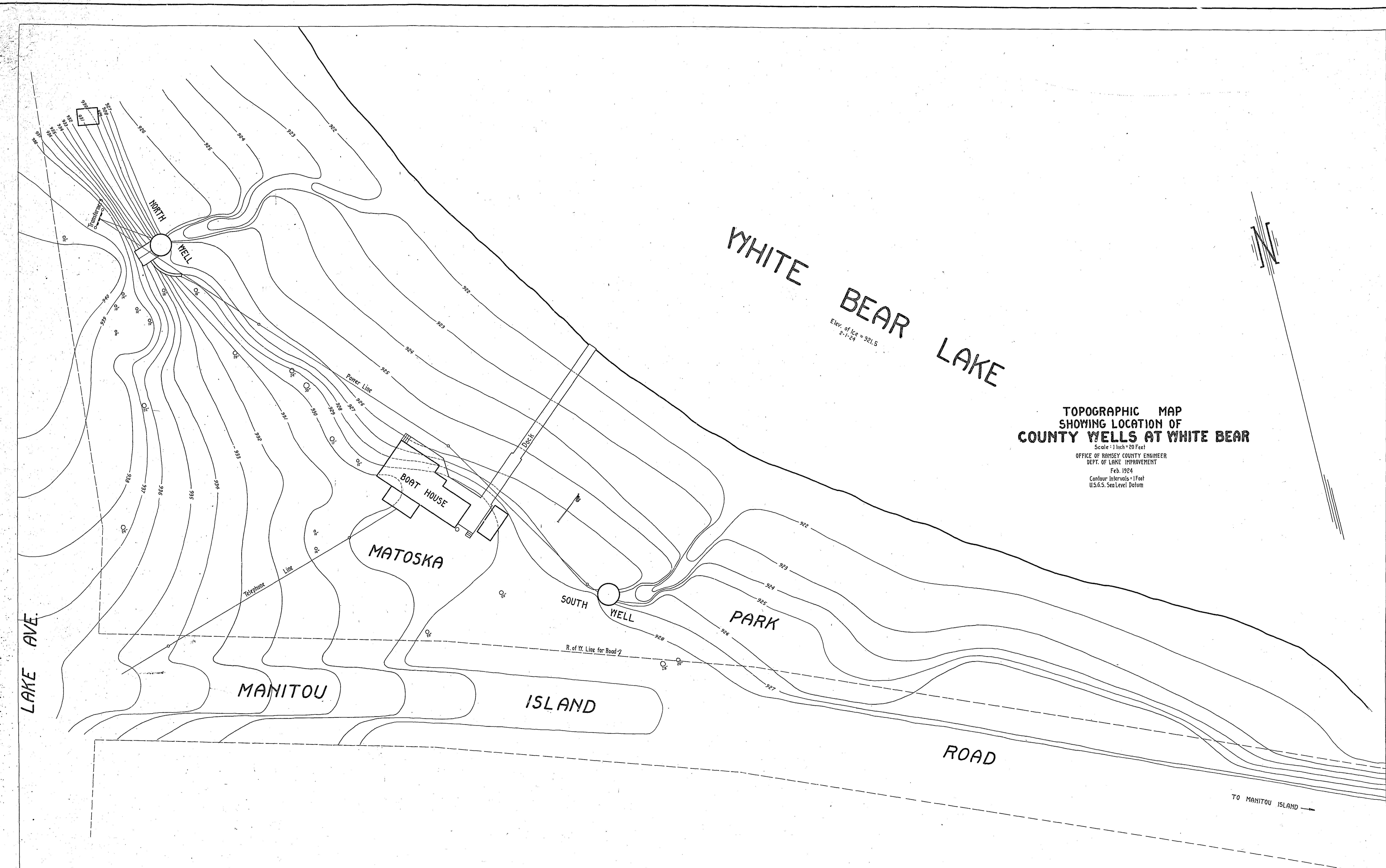


# WHITE BEAR WELLS

## RAMSEY COUNTY LAKE IMPROVEMENT PROJECT 24-01

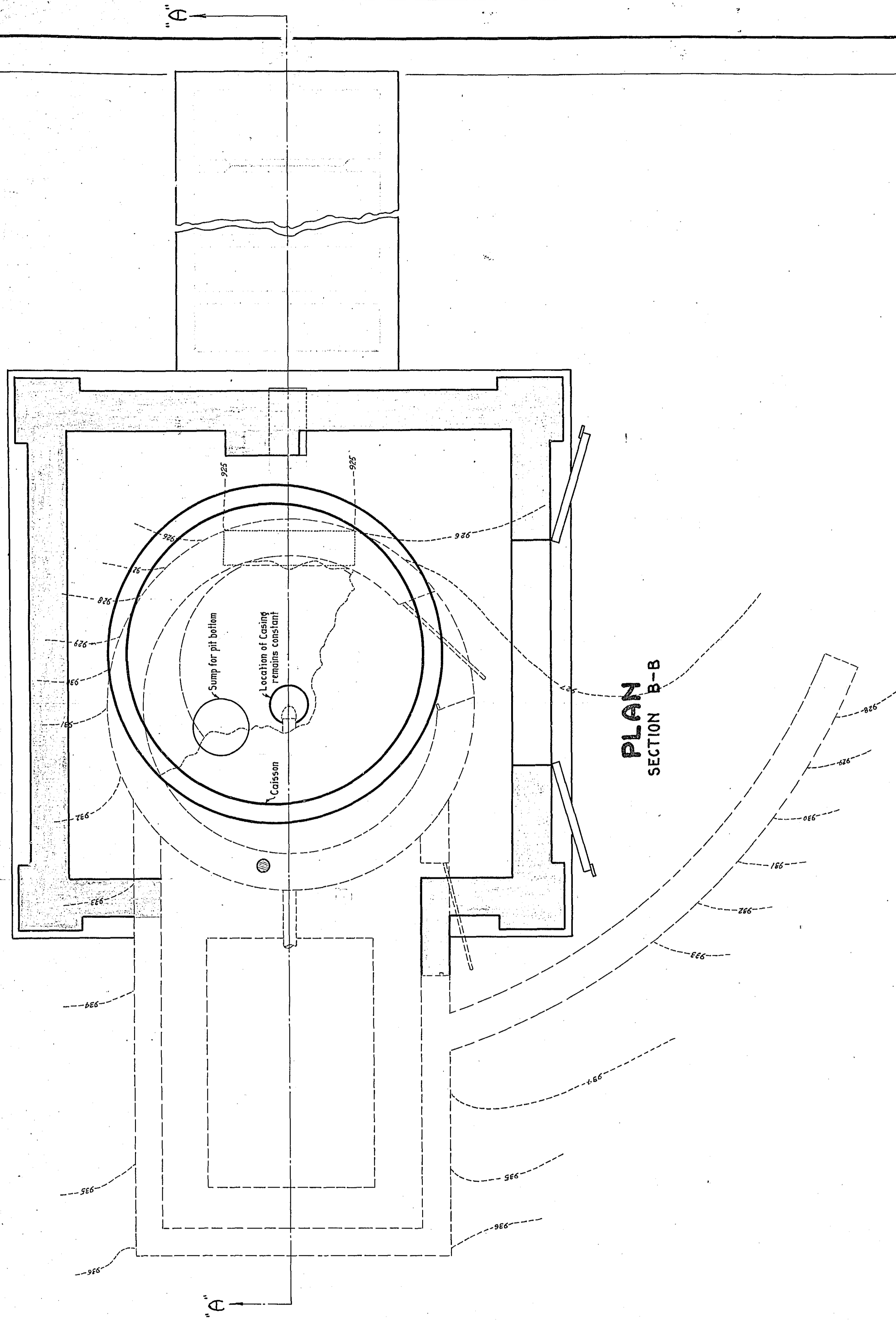
PAUL N. COATES  
COUNTY ENGINEER

1924

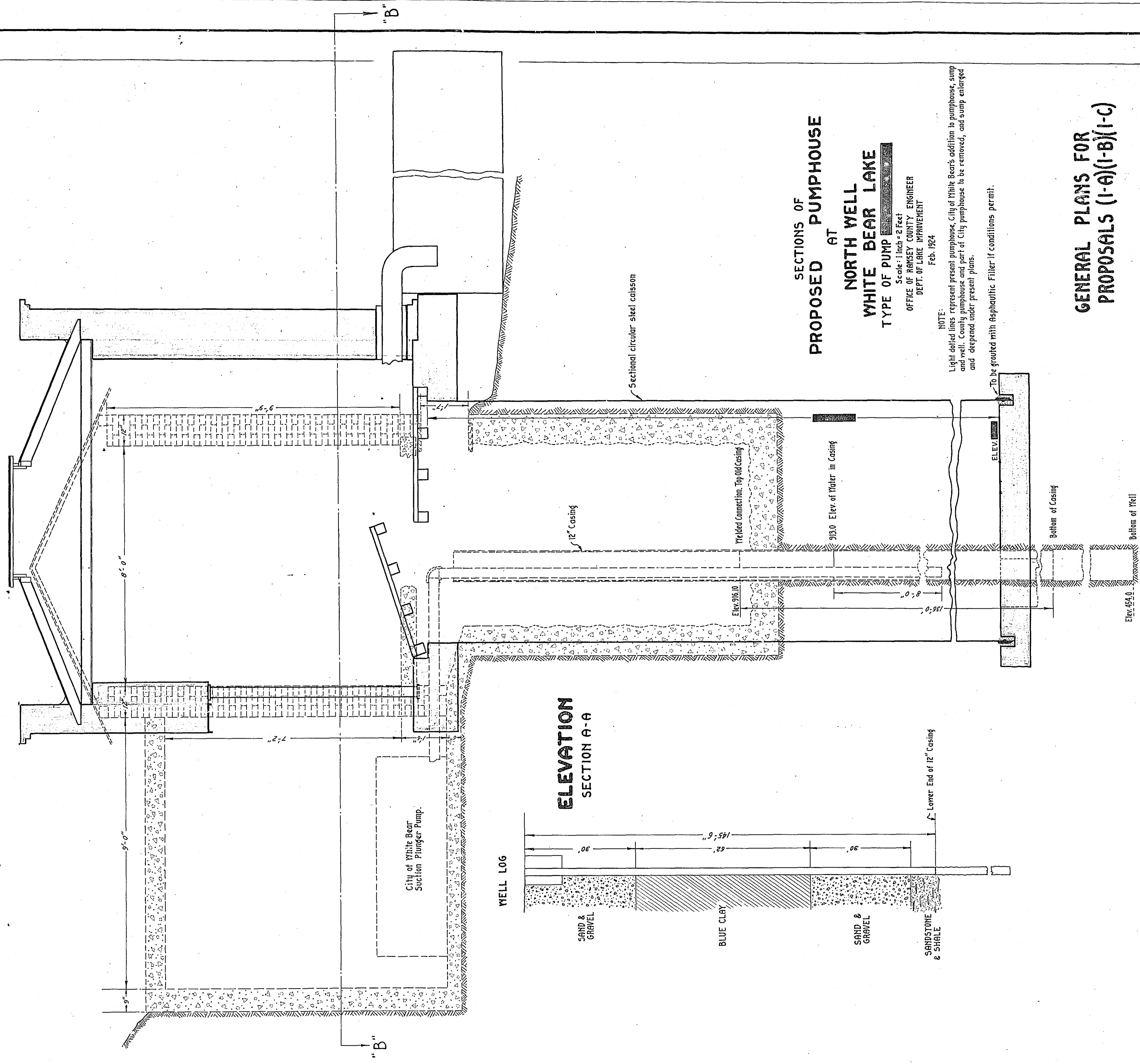


**TOPOGRAPHIC MAP  
SHOWING LOCATION OF  
COUNTY WELLS AT WHITE BEAR**

Scale: 1 inch = 20 Feet  
 OFFICE OF RANSEY COUNTY ENGINEER  
 DEPT. OF LAKE IMPROVEMENT  
 Feb. 1924  
 Contour Intervals - 1 Foot  
 U.S.G.S. Sea Level Datum

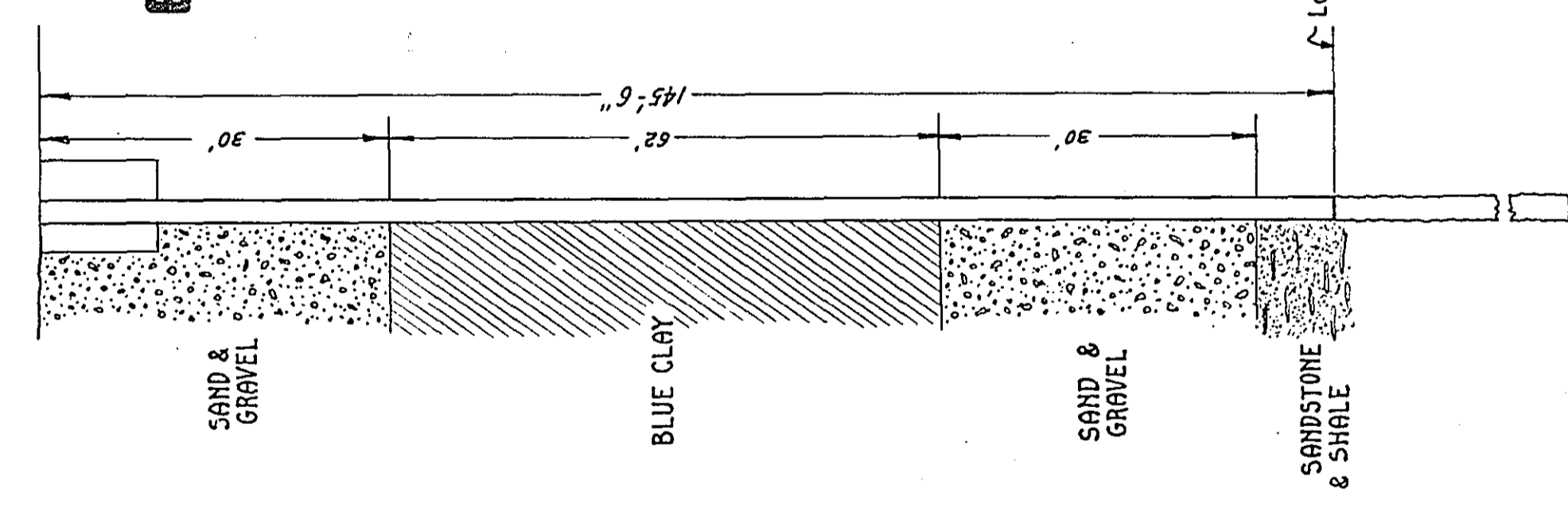


**PLAN**  
SECTION B-B



**ELEVATION**  
SECTION A-A

WELL LOG



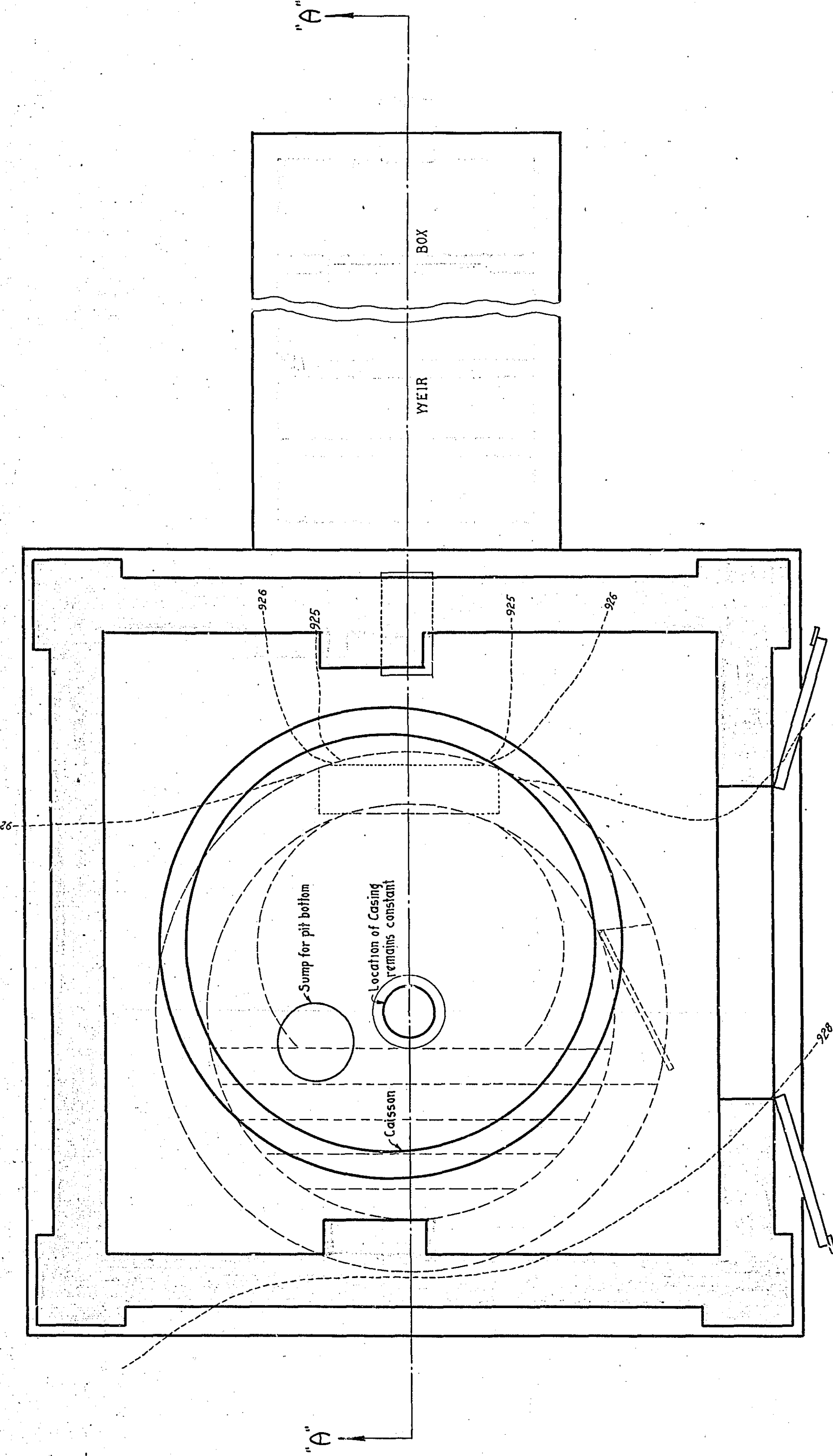
**SECTIONS OF  
PROPOSED  
PUMPHOUSE  
AT  
NORTH BEAR LAKE  
TYPE OF PUMP**

Scale: 1 inch = 2 Feet  
OFFICE OF RAMSEY COUNTY ENGINEER  
DEPT. OF LAKE IMPROVEMENT  
Feb. 1924

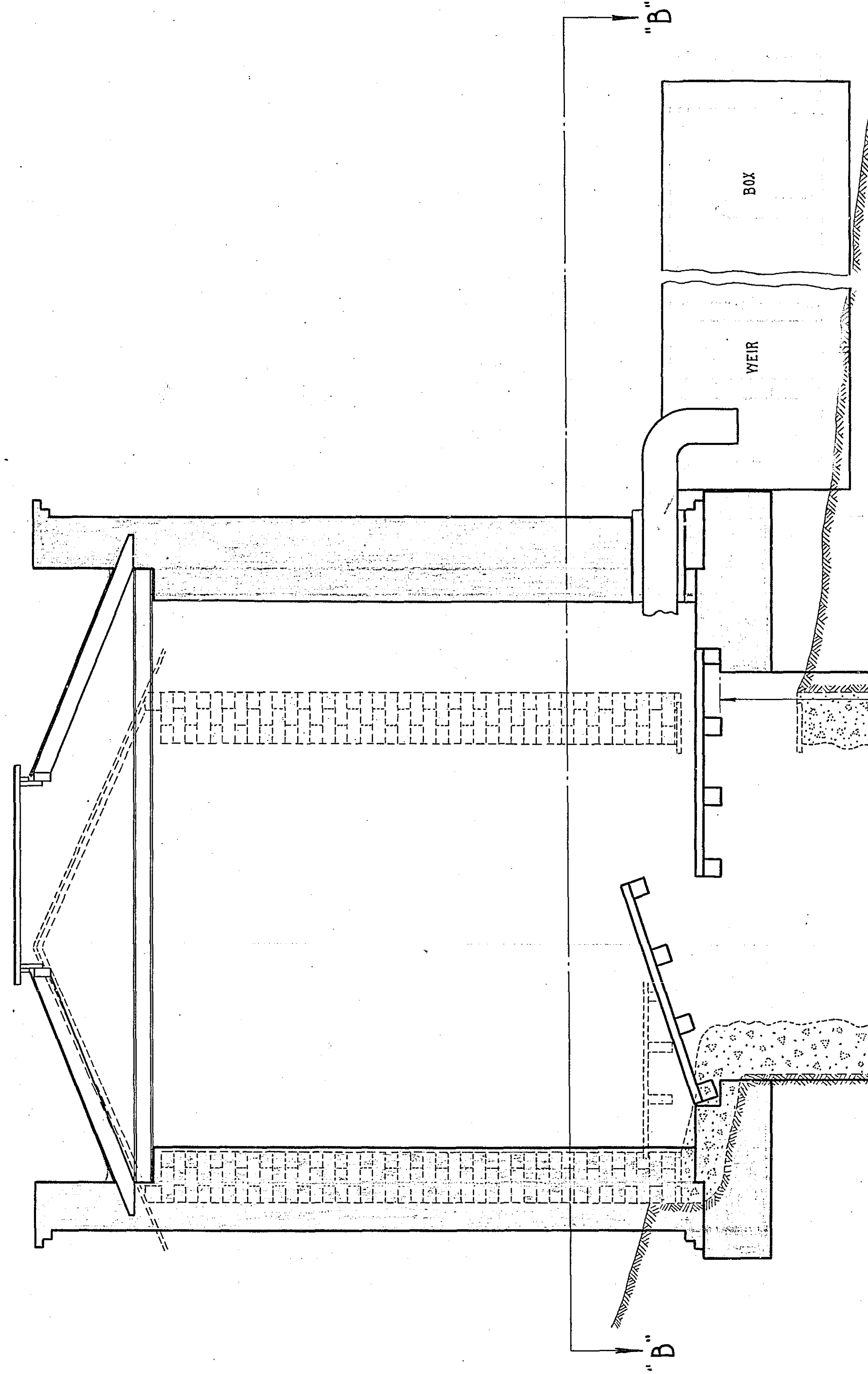
NOTE:  
Light dotted lines represent present pumphouse, City of White Bear's addition to pumphouse, sump and well. County pumphouse and part of City pumphouse to be removed, and sump enlarged and deepened under present plans.

To be grouted with asphaltic filler if conditions permit.

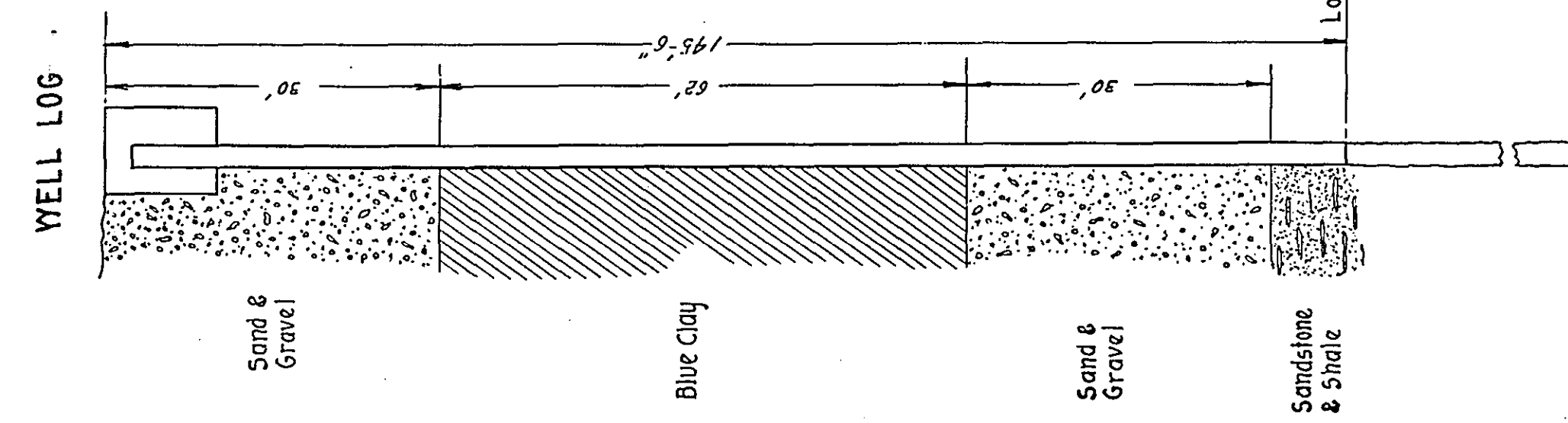
**GENERAL PLANS FOR  
PROPOSALS (1-A)(1-B)(1-C)**



**PLAN**  
SECTION B-B



**ELEVATION**  
SECTION A-A



Sectional circular steel caisson

12" Casing

Top of Old Casing, Welded Connection

Elev. 923.3

9130 Elev. of Water in Casing

To be grouted with asphaltic filler, if conditions permit.

ELEV. 922.4

Bottom of Casing

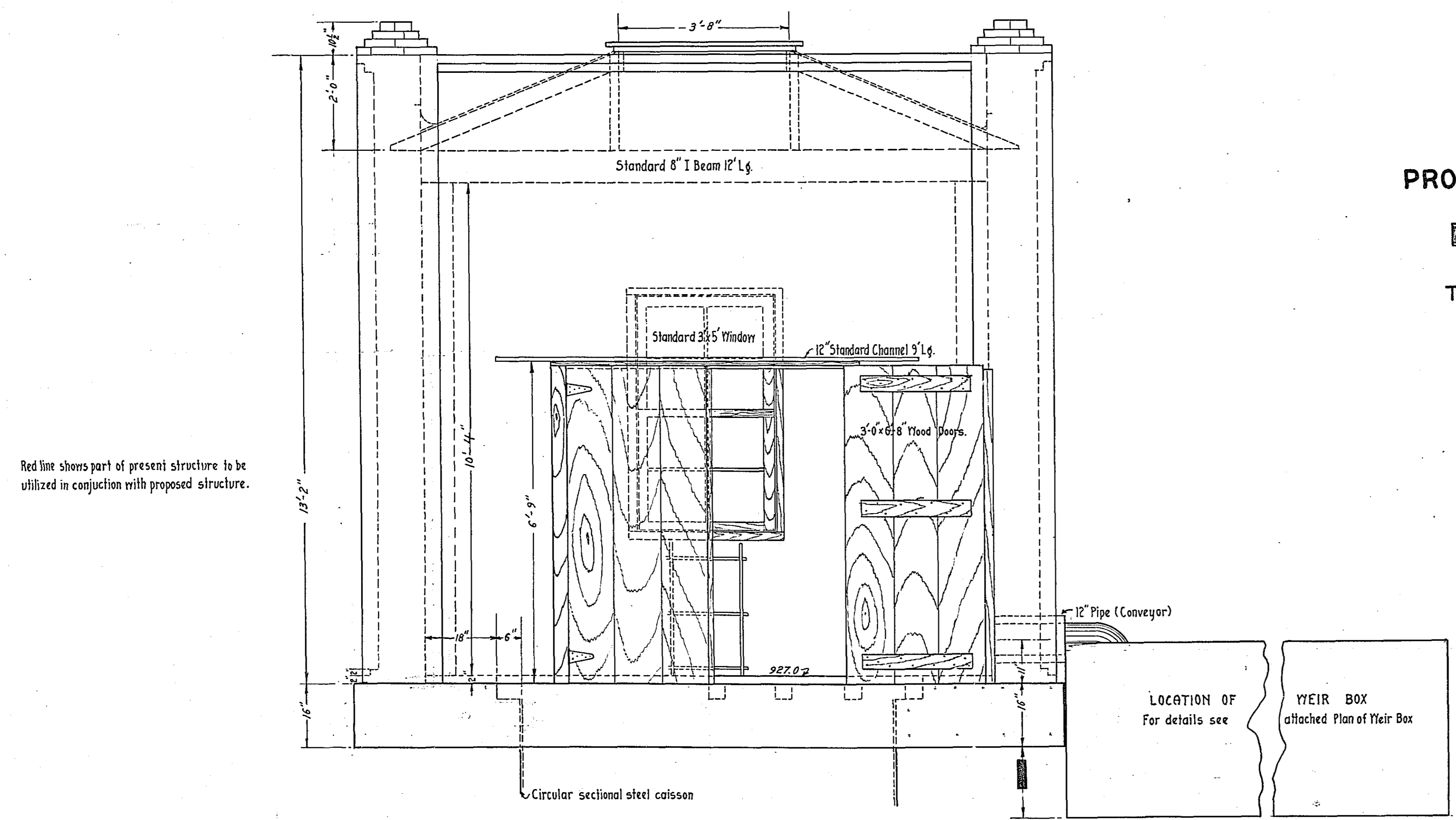
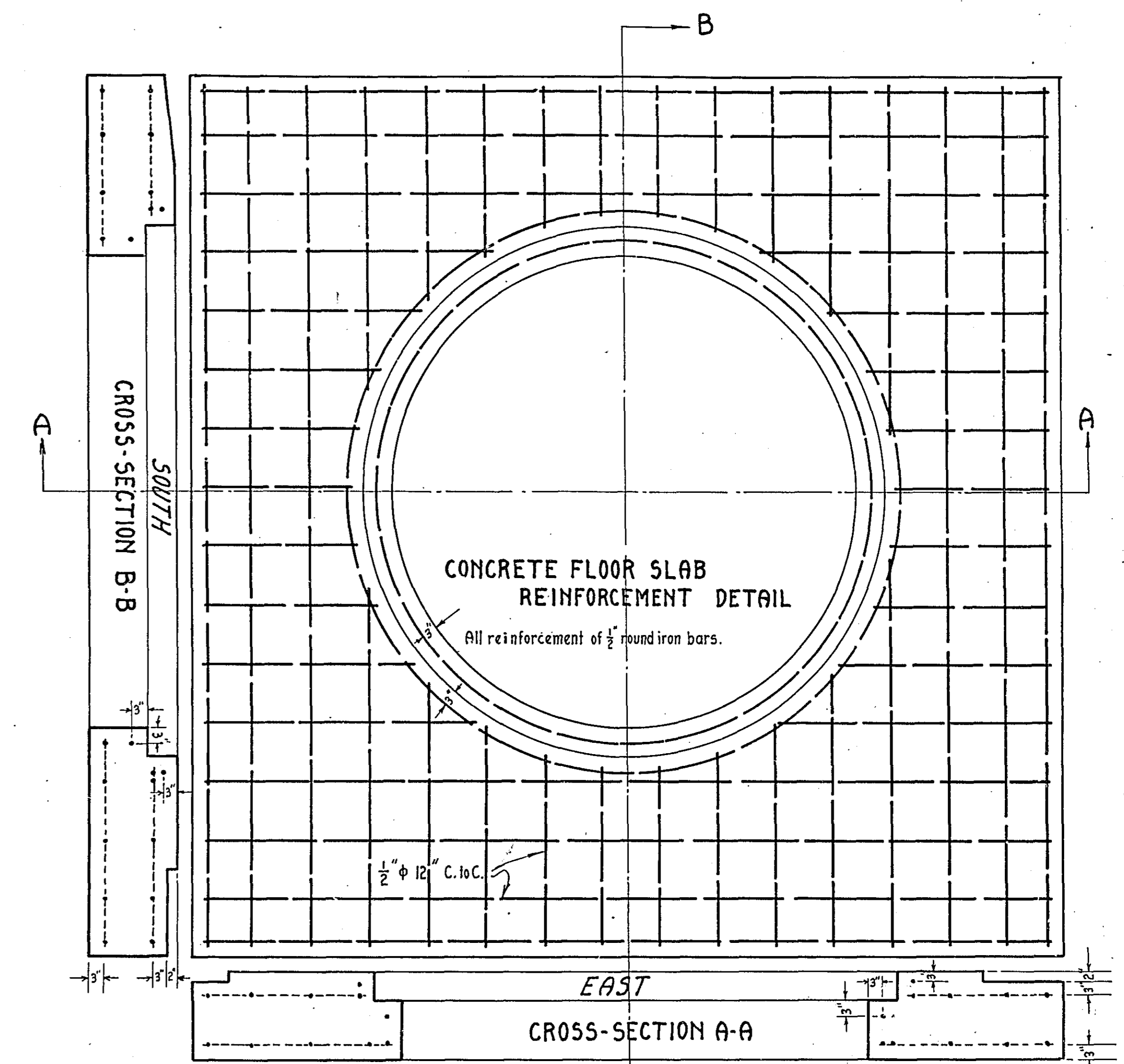
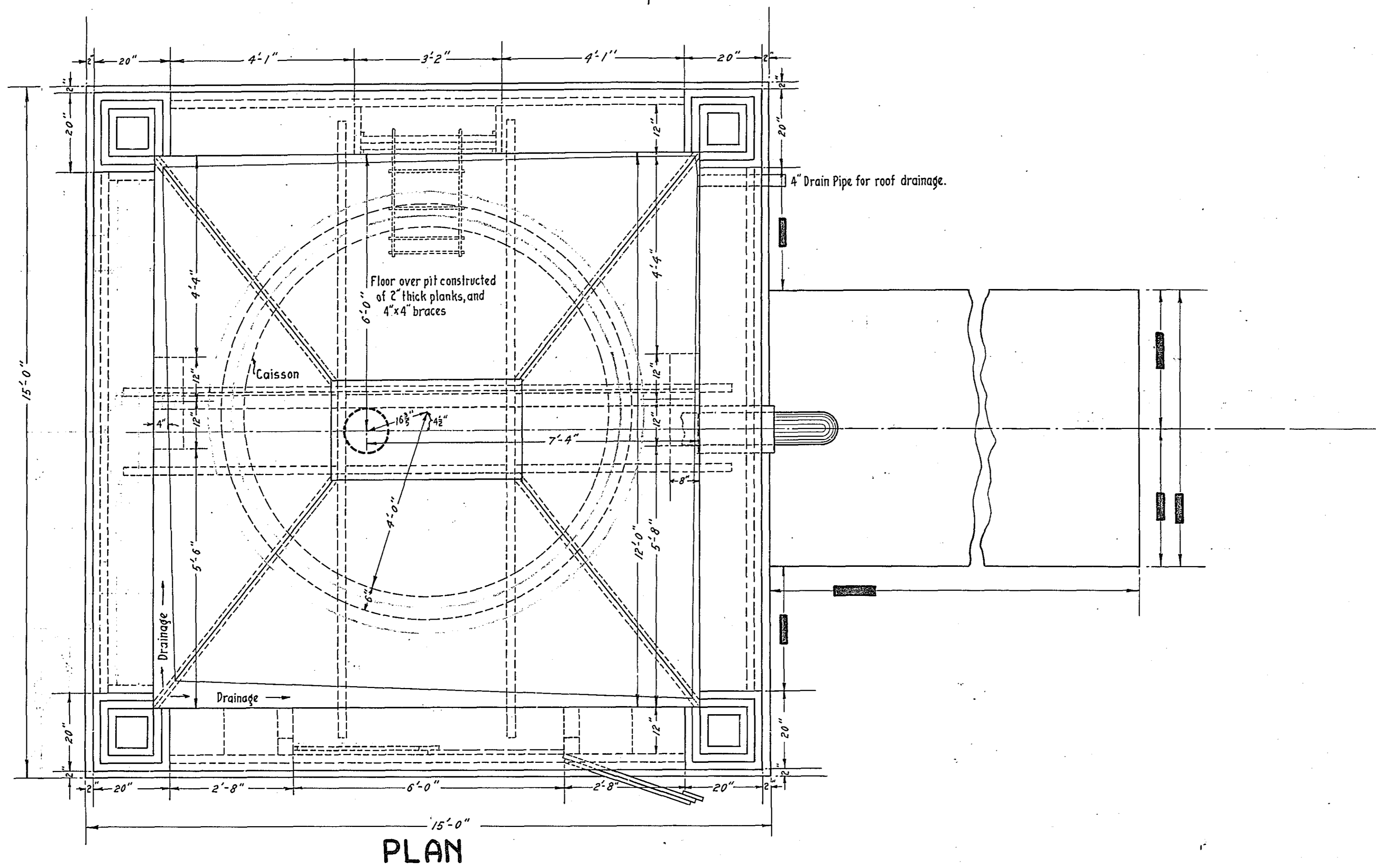
Bottom of Well

**SECTIONS OF  
PROPOSED PUMPHOUSE  
AT  
SOUTH WELL  
WHITE BEAR LAKE  
TYPE OF PUMP**

Scale: 1 Inch = 2 Feet  
OFFICE OF RAMSEY COUNTY ENGINEER  
DEPT. OF LAKE IMPROVEMENT  
Feb. 1924

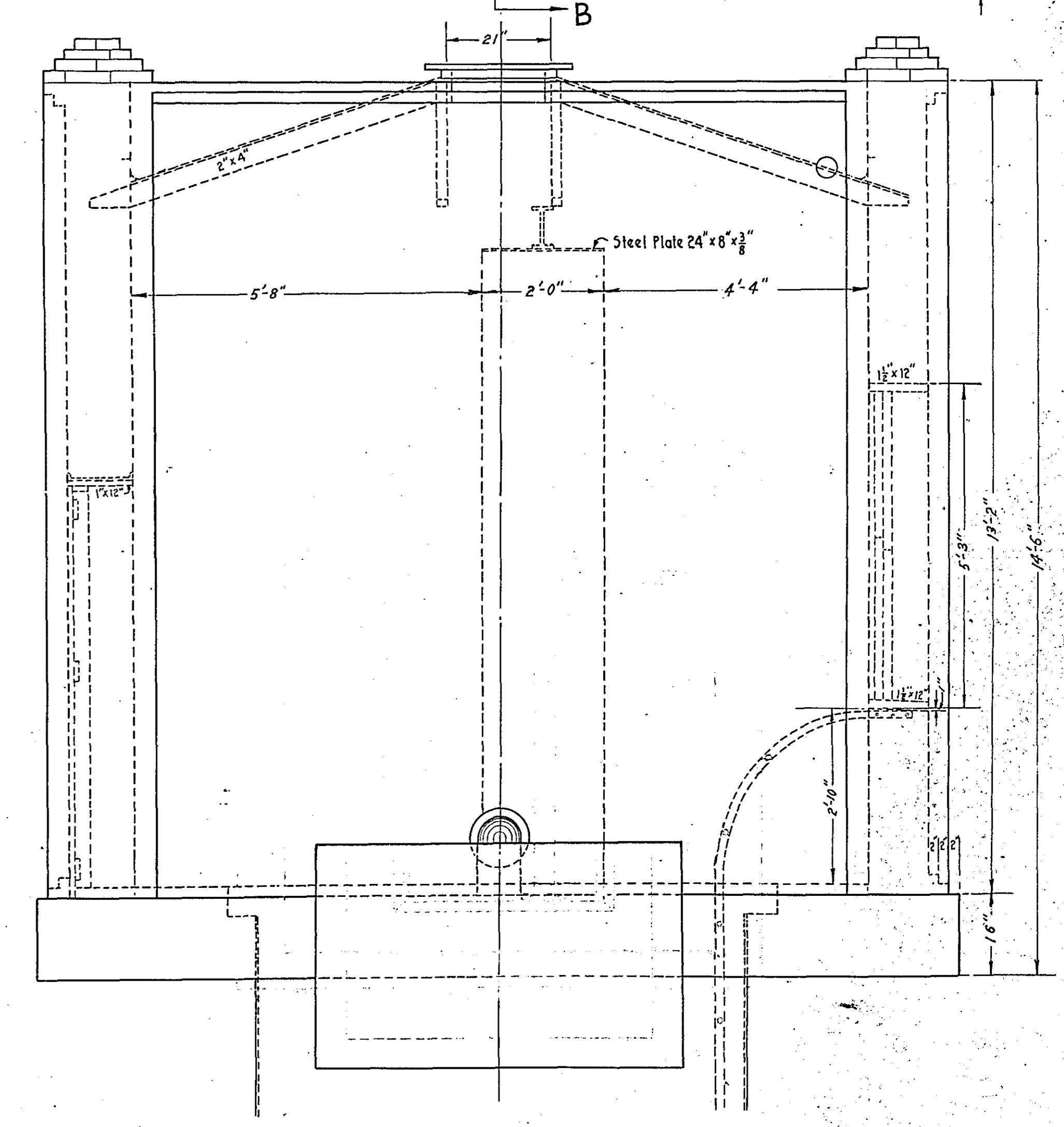
NOTE:  
Light dotted lines represent present pumphouse, sump, and well. The pumphouse is to be removed and the sump enlarged and deepened under proposed plan.

**GENERAL PLANS FOR  
PROPOSALS (I-A)(I-B)(I-C)**



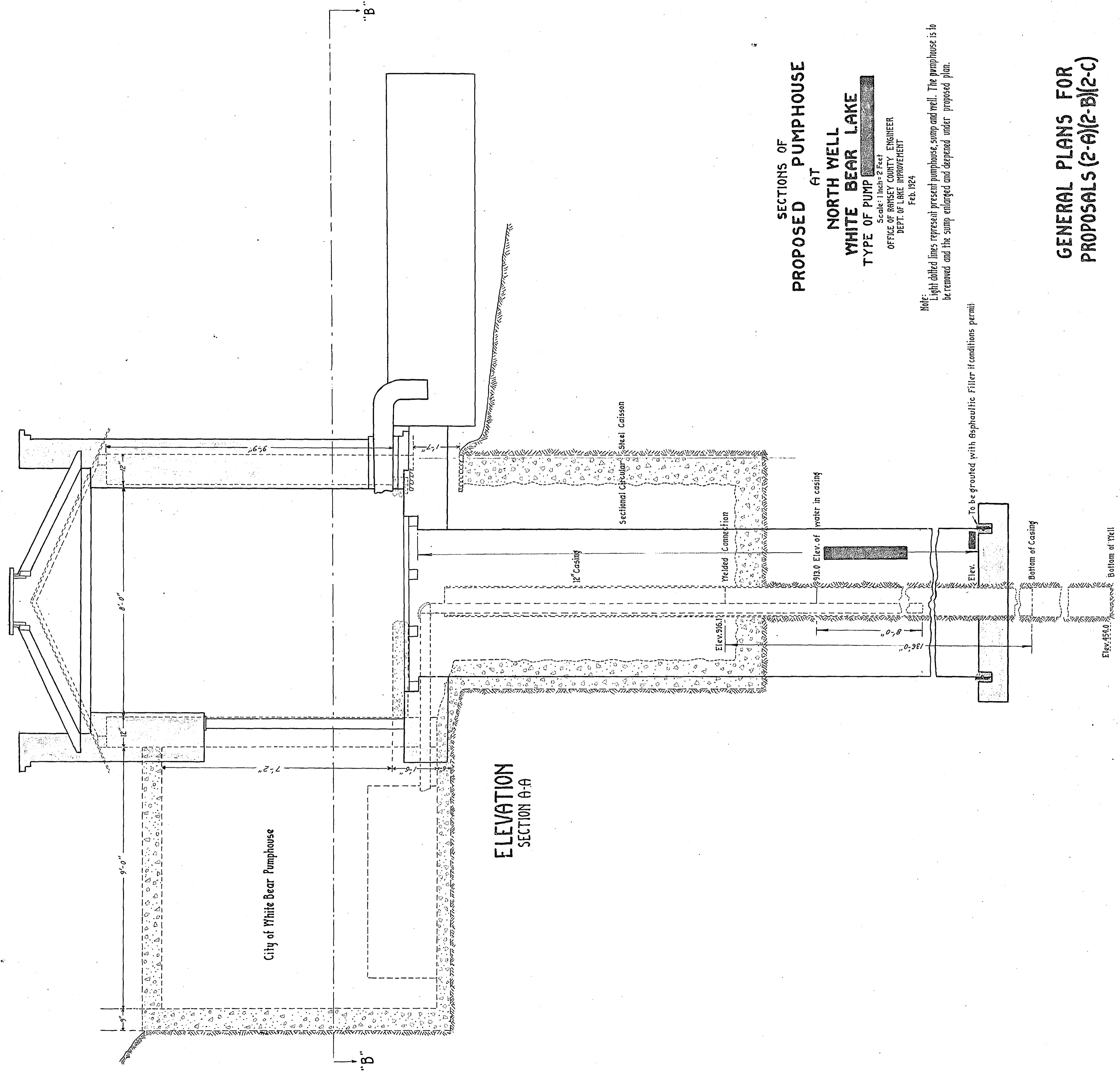
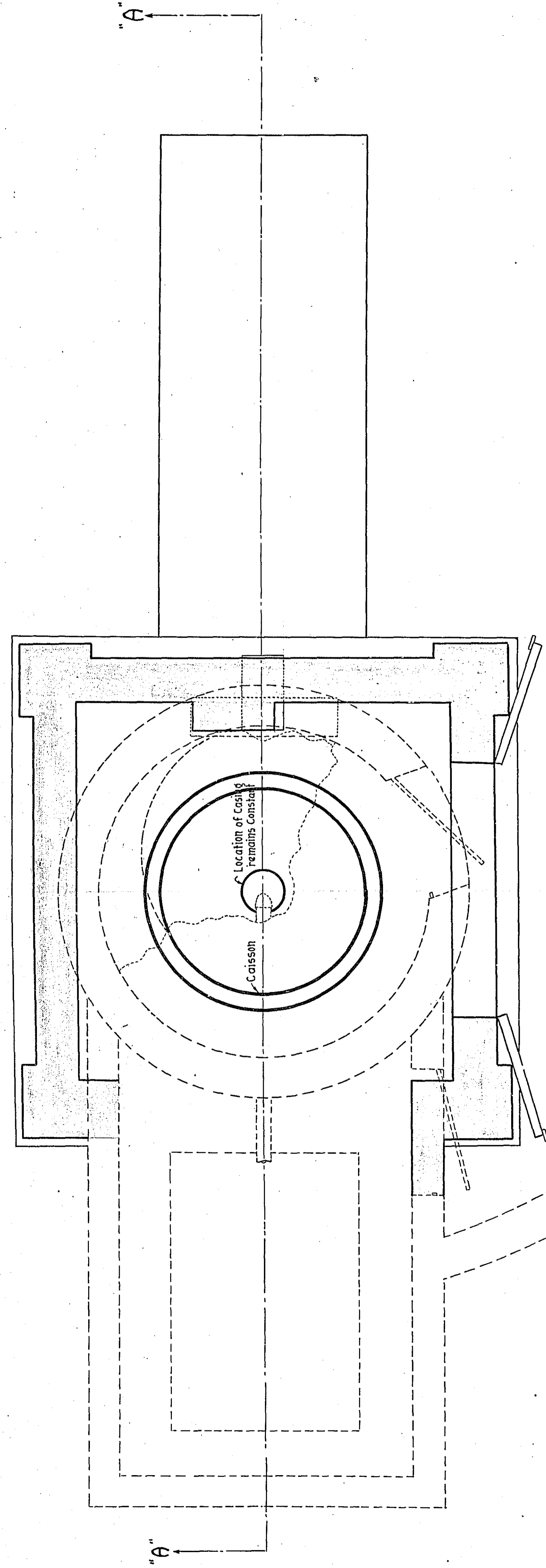
**PROPOSED PUMPHOUSE**  
**AT**  
**WHITE BEAR LAKE**  
**TYPE OF PUMP**  
 Scale: 1 inch = 2 Feet.  
 OFFICE OF RAMSEY COUNTY ENGINEER  
 DEPT. OF LAKE IMPROVEMENT  
 Feb. 1924

**PLAN**  
**DETAIL PLANS FOR**  
**PROPOSALS (I-A)(I-B)(I-C)**



Elev. 926.0 Lake Overflow  
 Elev. 924.0 Lake Departure Line

Elev. 921.5 T.Y.S. Feb. 1, 1924

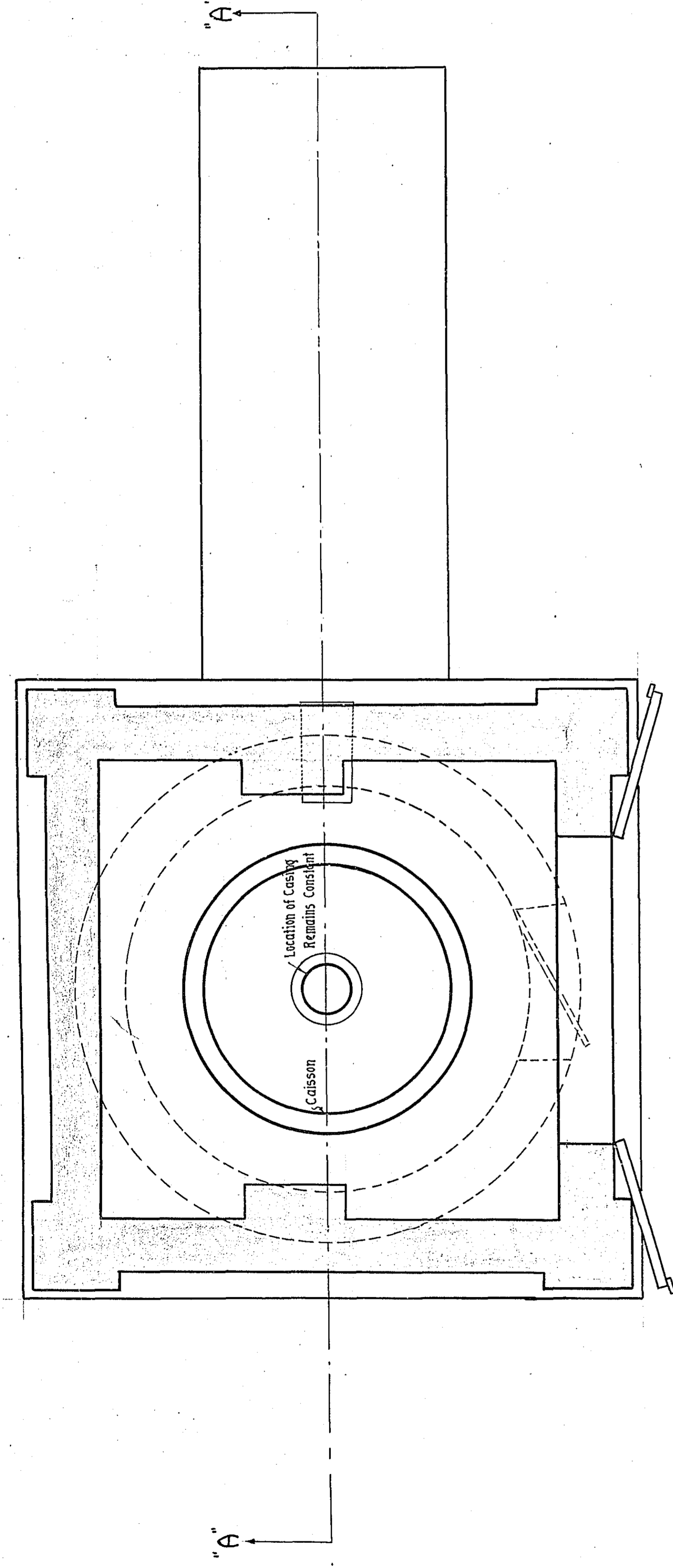


SECTIONS OF  
PROPOSED PUMPHOUSE  
AT  
NORTH WELL  
WHITE BEAR LAKE  
TYPE OF PUMP

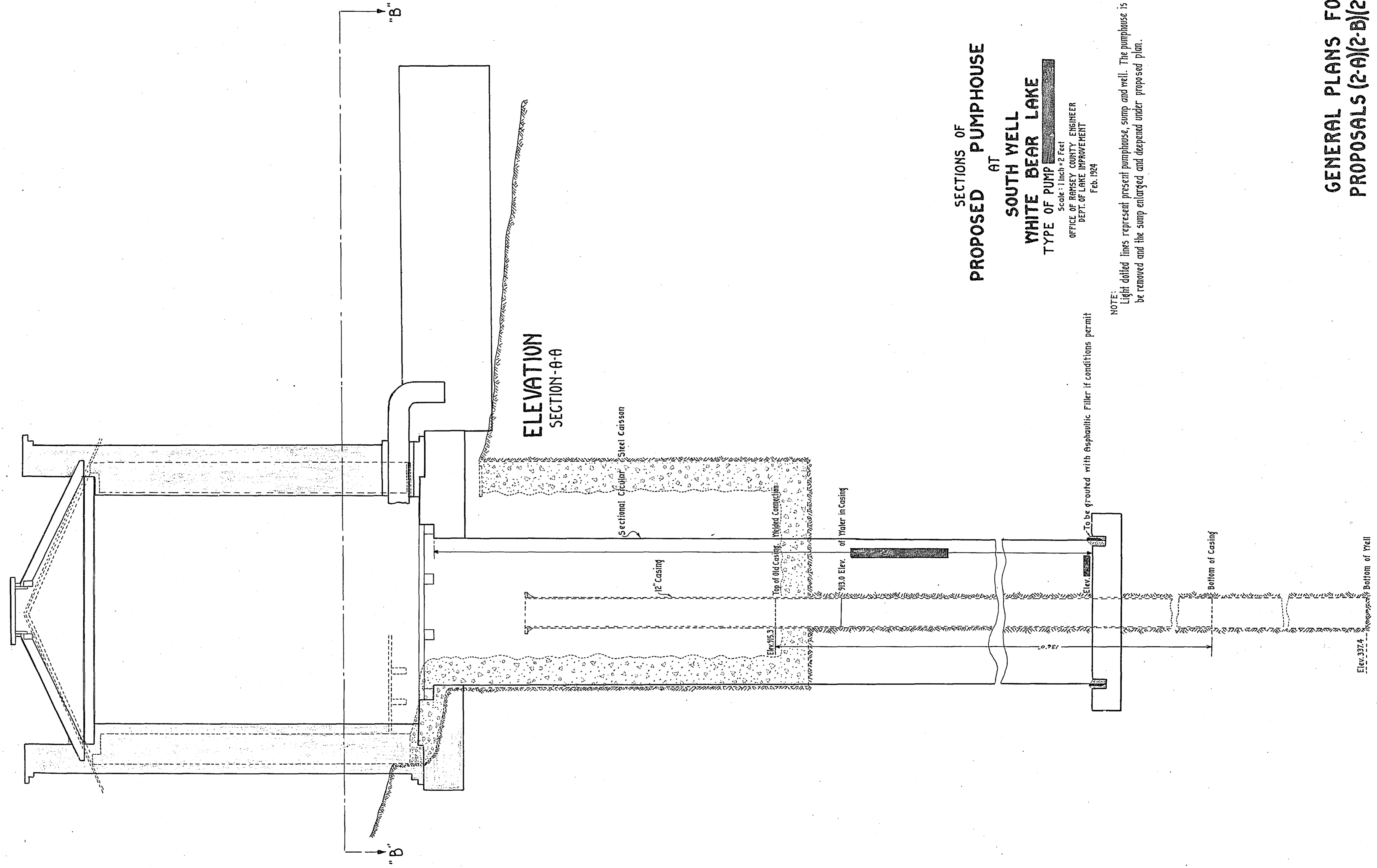
Scale: 1 inch = 2 Feet  
OFFICE OF RAISEY COUNTY ENGINEER  
DEPT. OF LAKE IMPROVEMENT  
Feb. 1924

Note: Light dotted lines represent present pumphouse, sump and well. The pumphouse is to be removed and the sump enlarged and deepened under proposed plan.

GENERAL PLANS FOR  
PROPOSALS (2-A)(2-B)(2-C)



PLAN  
SECTION - B-B



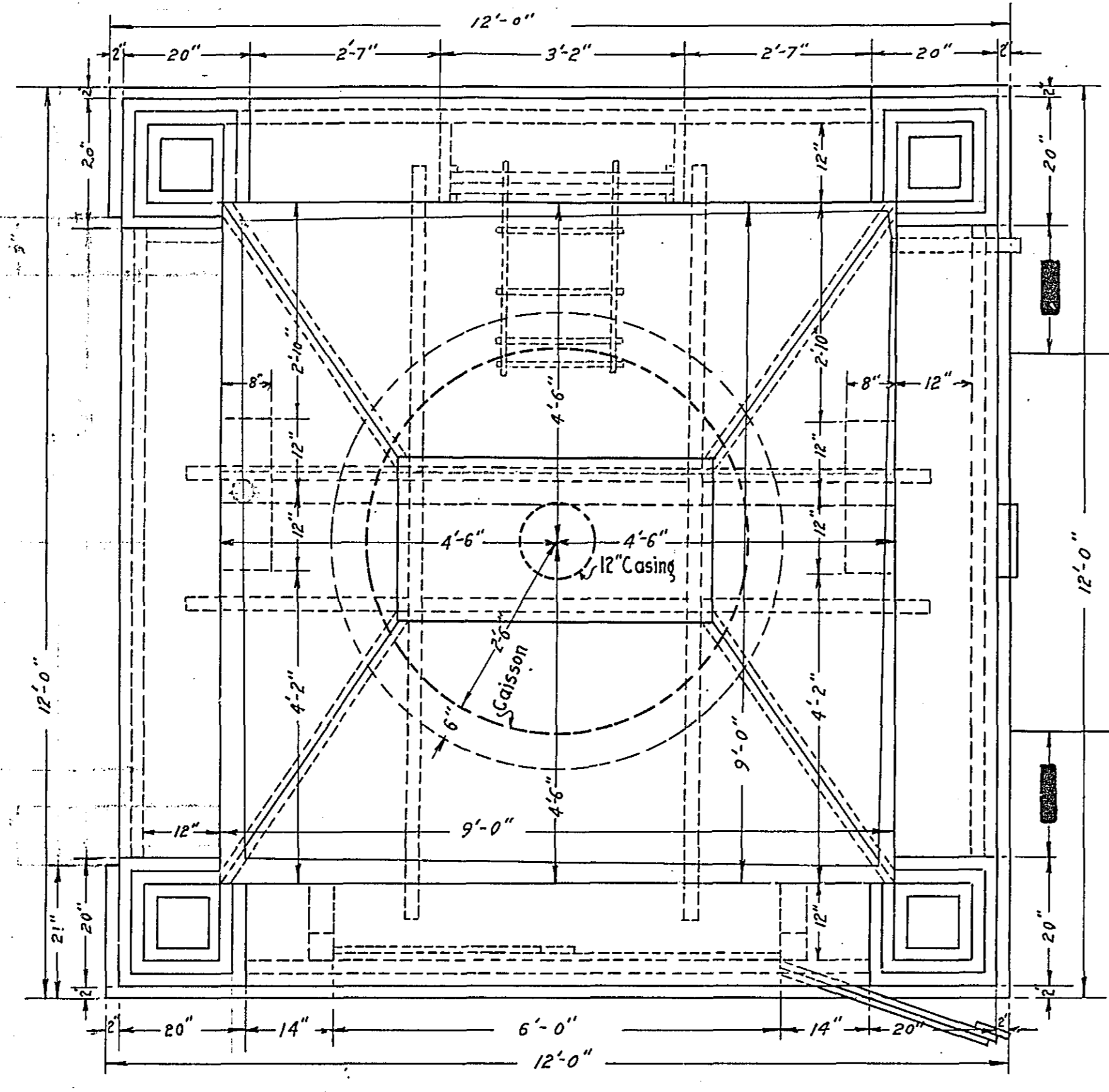
ELEVATION  
SECTION - A-A

SECTIONS OF  
PROPOSED PUMPHOUSE  
AT  
SOUTH WELL  
WHITE BEAR LAKE  
TYPE OF PUMP

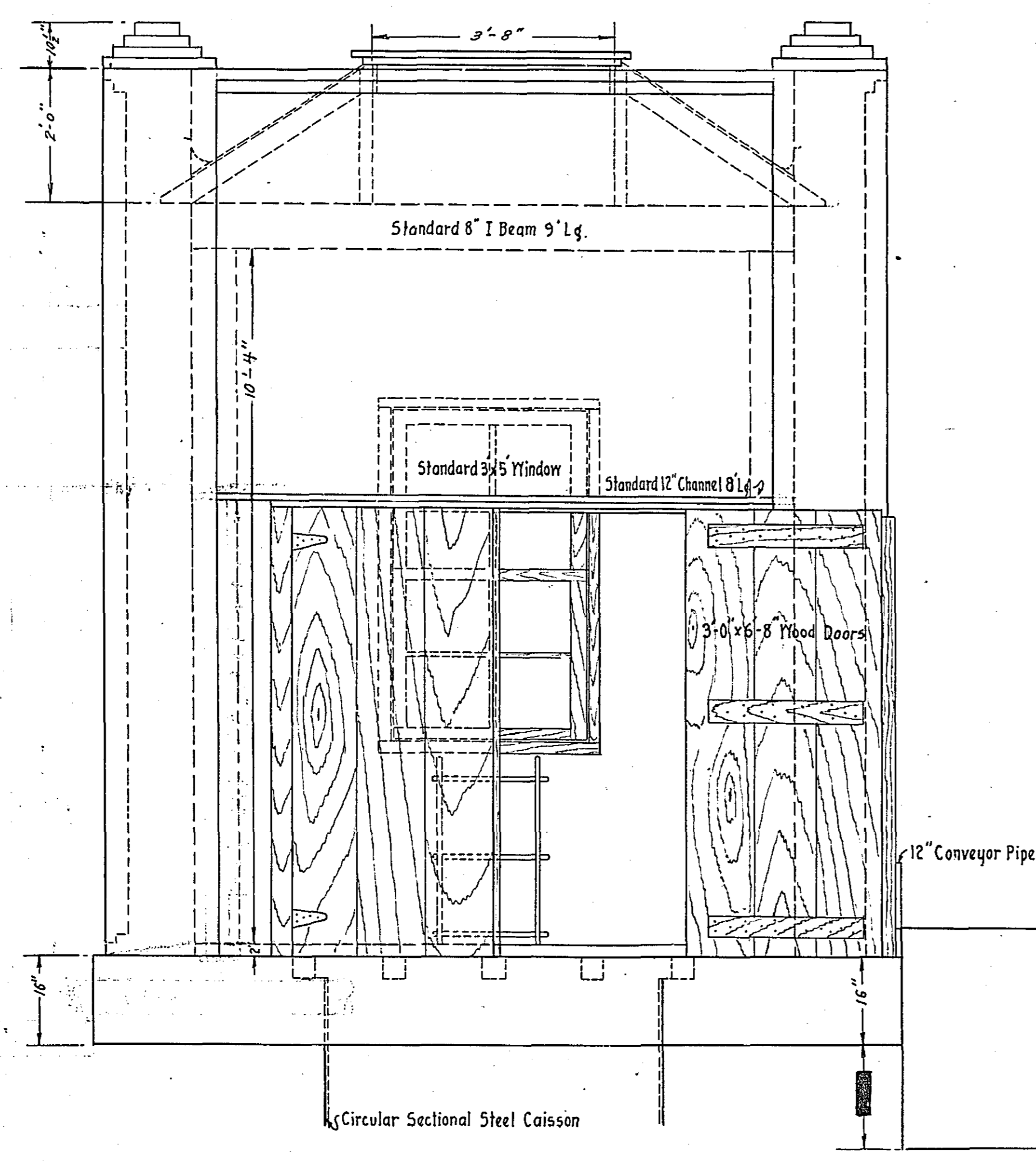
Scale: 1 Inch = 2 Feet  
OFFICE OF RAMSEY COUNTY ENGINEER  
DEPT. OF LAKE IMPROVEMENT  
Feb. 1924

To be grouted with Asphalitic Filler if conditions permit

NOTE:  
Light dotted lines represent present pumphouse, sump and well. The pumphouse is to be removed and the sump enlarged and deepened under proposed plan.



PLAN



SOUTH ELEVATION

PROPOSED PUMPHOUSE  
AT

WHITE BEAR LAKE  
TYPE OF PUMP

Scale: 1 Inch = 2 Feet  
OFFICE OF RAMSEY COUNTY ENGINEER  
DEPT. OF LAKE IMPROVEMENT  
Feb. 1924

PLAN

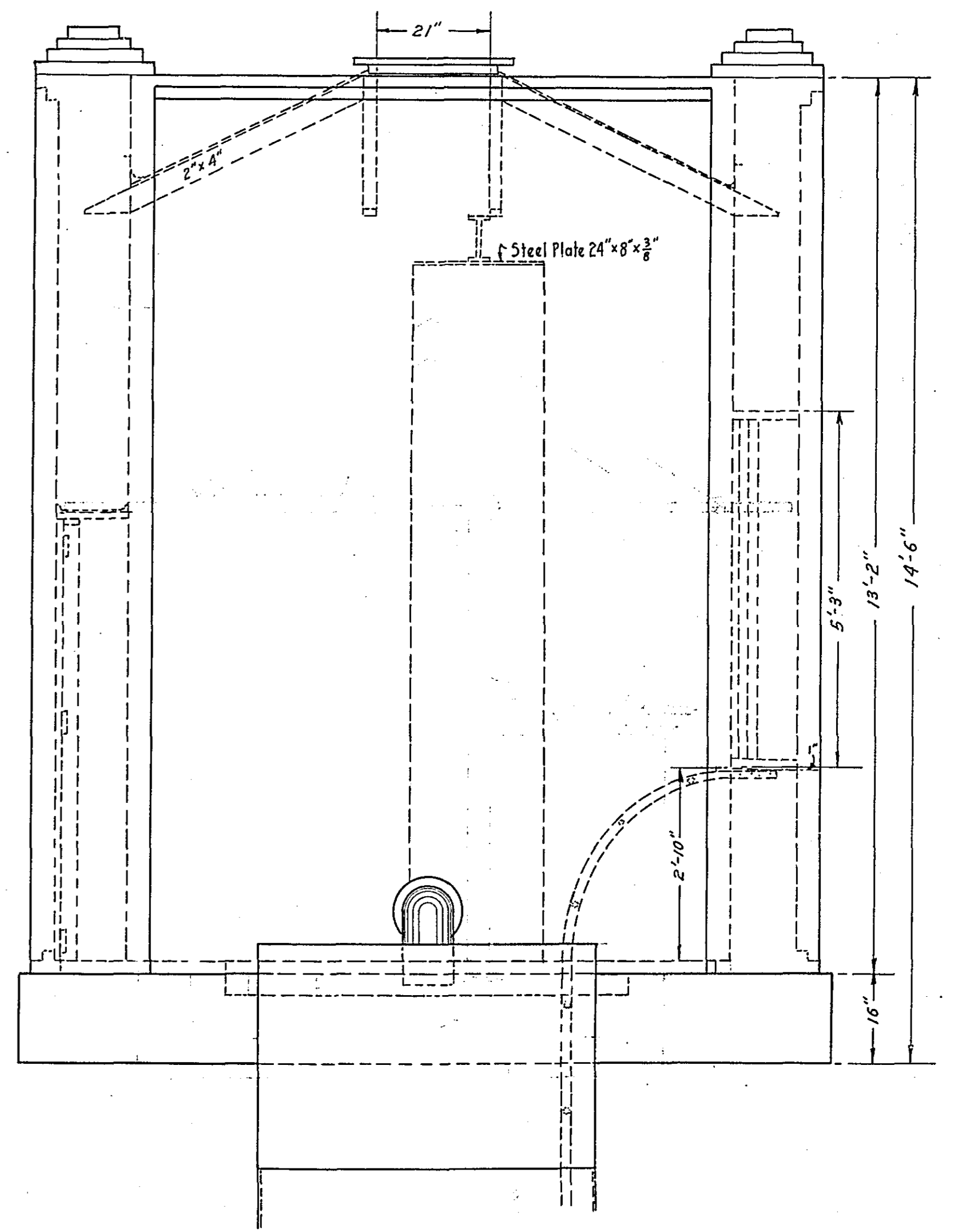
DETAIL PLANS FOR  
PROPOSALS (2-A)(2-B)(2-C)

Elev. 926.0 Lake Overflow

Elev. 924.0 Lake Departure Line

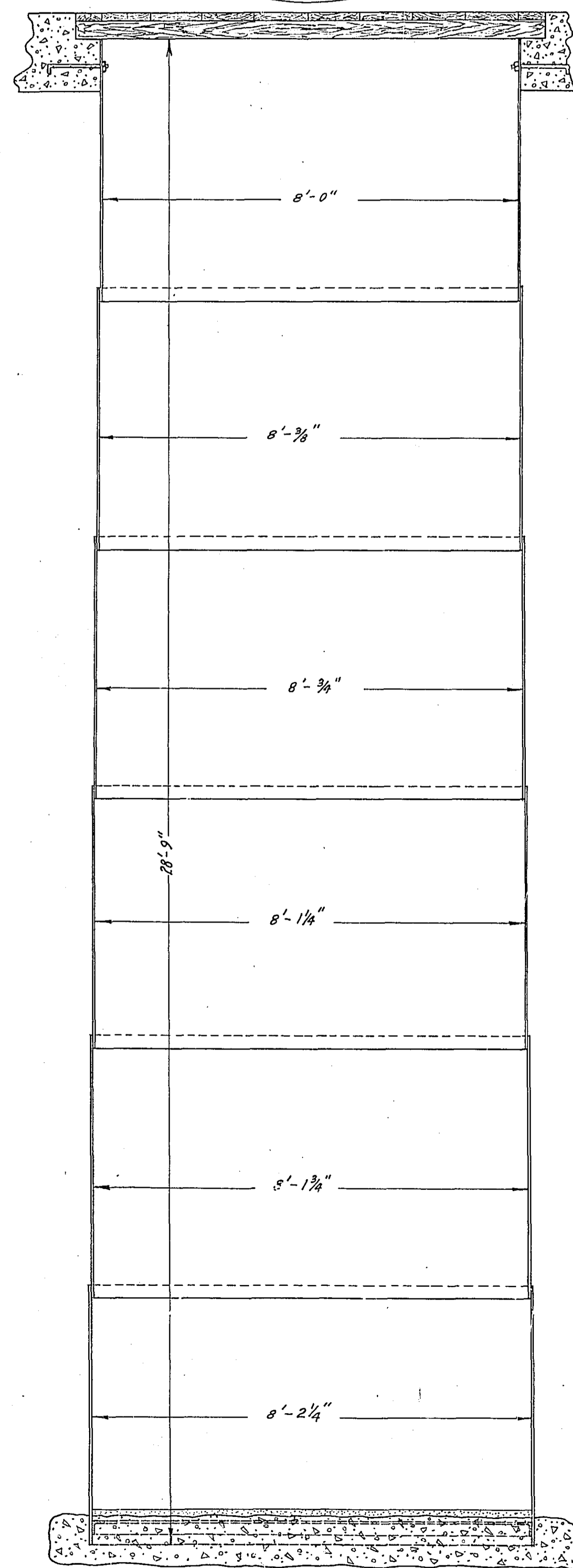
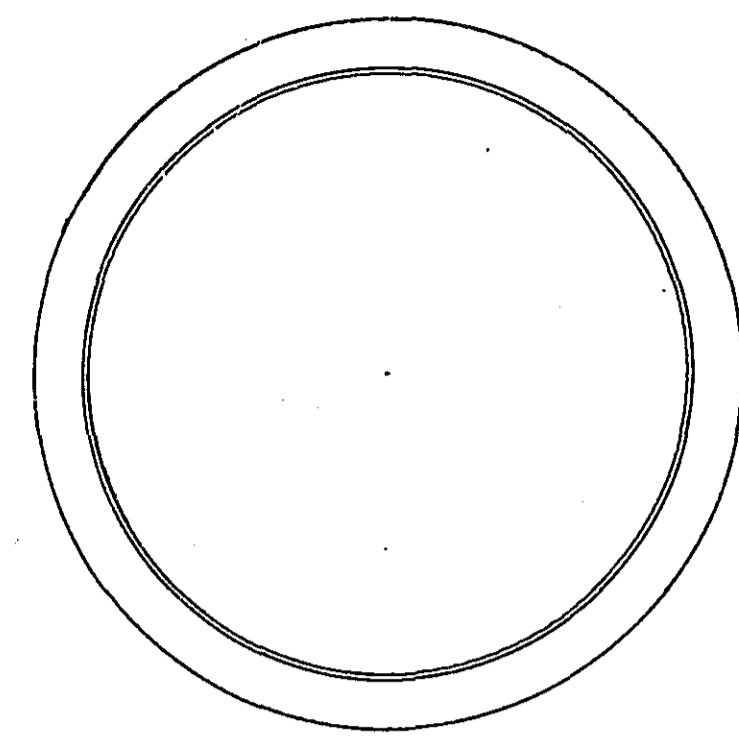
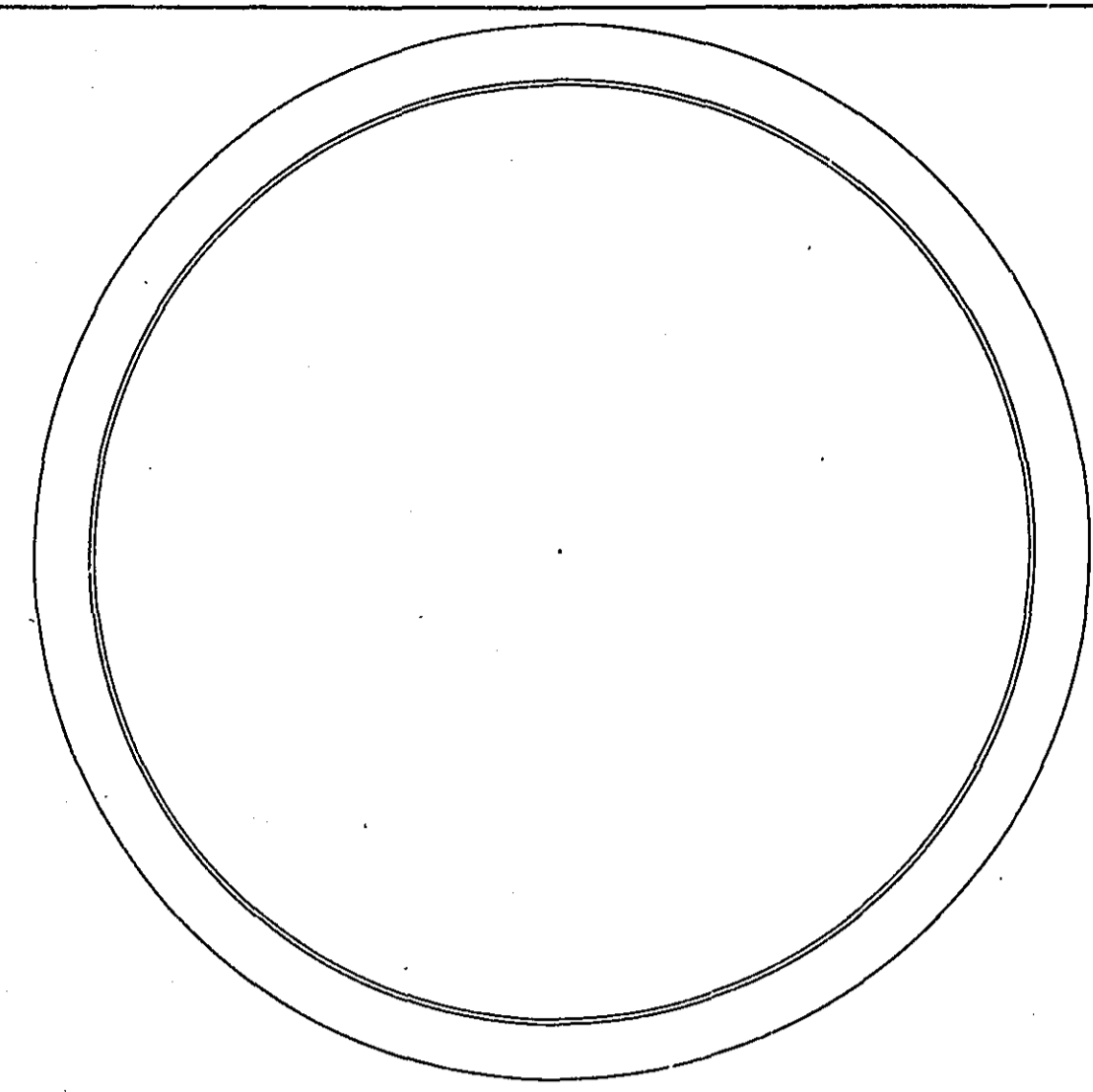
Elev. 921.5 W.S. Feb. 1, 1924

Note:  
The reinforcement of the floor slab of this design shall be similar to that shown on plan sheet of 12' x 12' pumphouse.

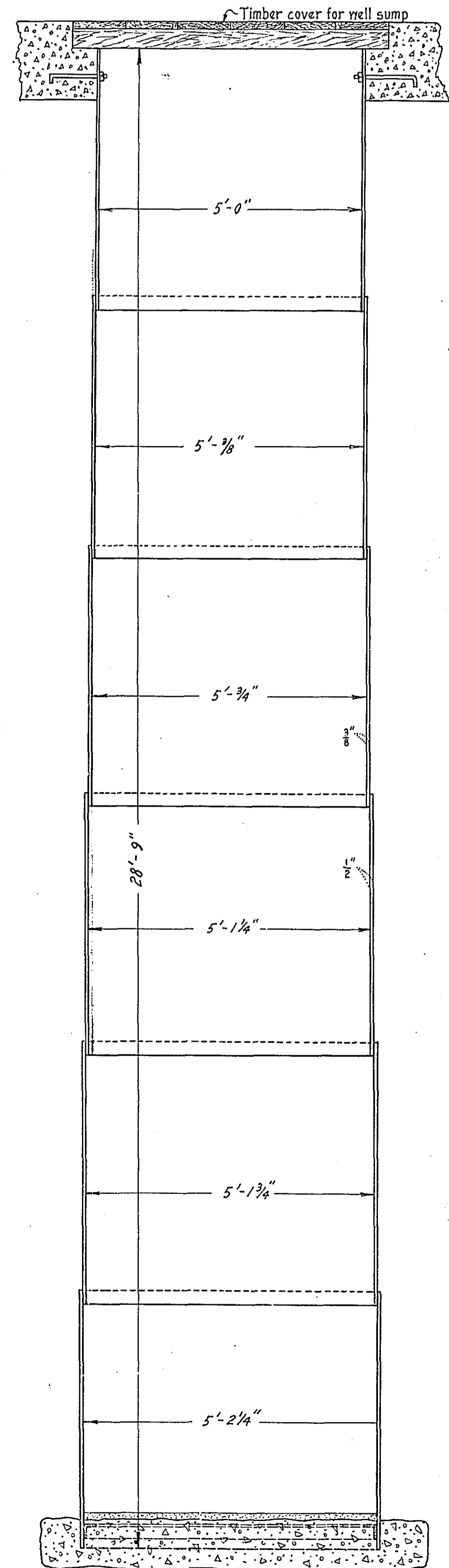


EAST ELEVATION

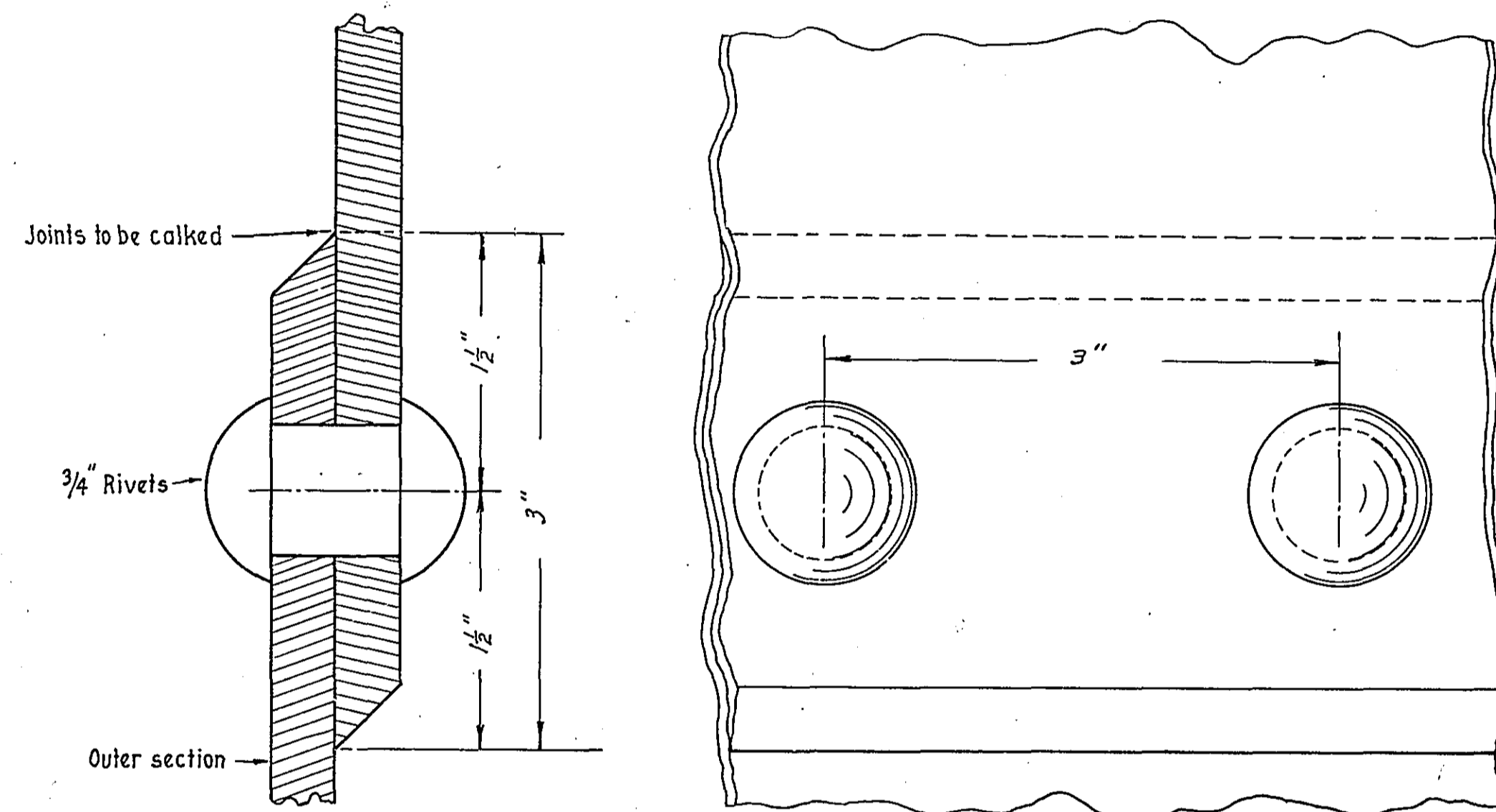




CROSS-SECTION OF 8' CAISSON

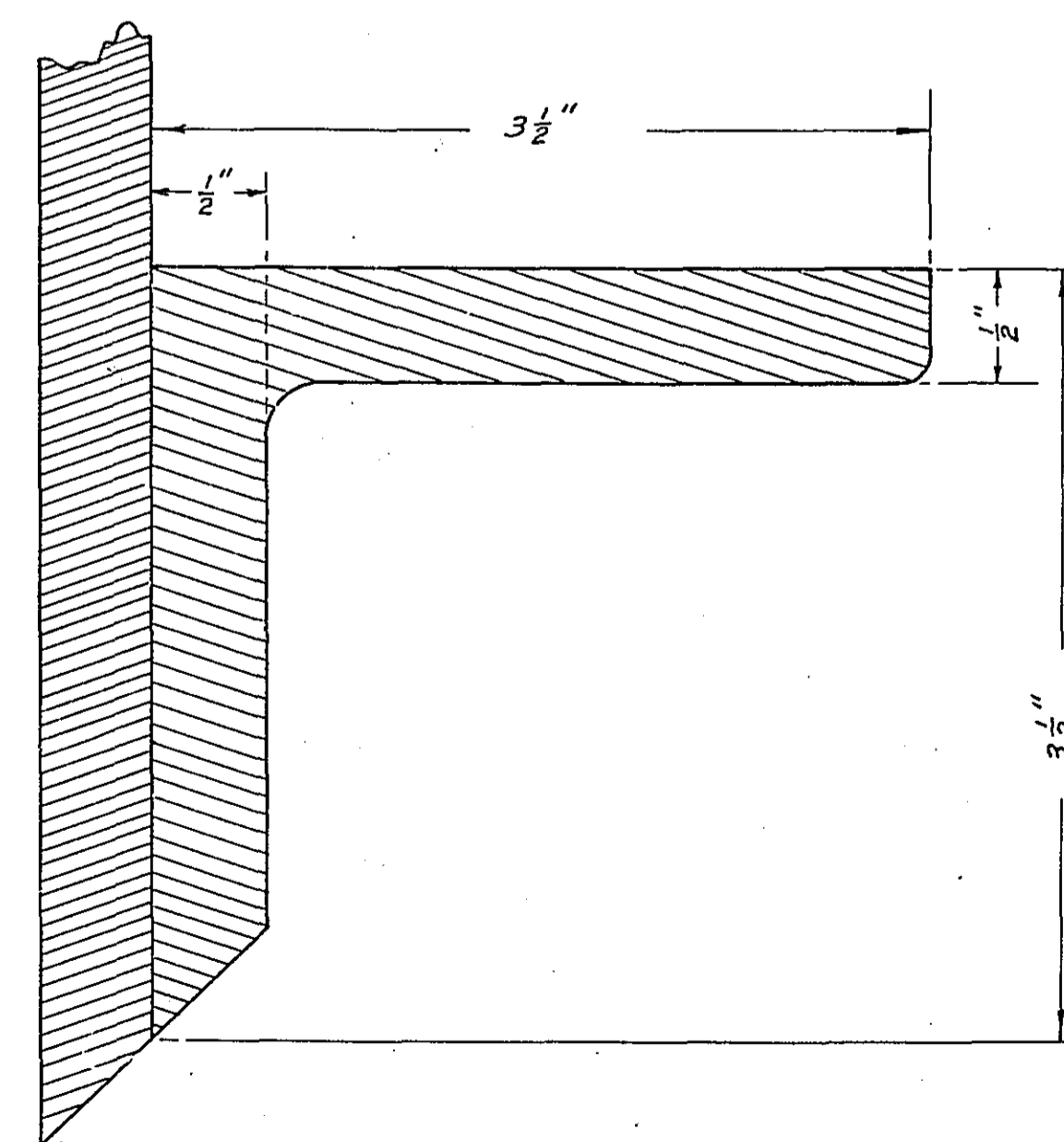


CROSS-SECTION OF 5' CAISSON



DETAIL OF SECTION LAP JOINTS

Scale: 1"=1'



CROSS-SECTION OF BRACE

3 1/2" x 3 1/2" Angle Bar to be welded to lower inside surface of lower section.  
Scale: 1"=1'

GENERAL DETAILS  
OF  
PROPOSED SUMP CAISSON  
COUNTY WELLS, WHITE BEAR

Scale: 1"=2'  
OFFICE OF RAMSEY CO. ENGINEER  
DEPT. OF LAKE IMPROVEMENT  
March, 1924

FOR PROPOSALS (1-A)(1-B)(1-C)(2-A)(2-B)(2-C)

LENGTH OF CAISSONS

ALL SECTIONS ARE 5' LG., THE LENGTHS SHOWN BELOW BEING EXCLUSIVE OF 3' LAP JOINT.

8' CAISSON, 47' 9" Lg.

POSITION OF SECTION	LENGTH OF SECTION	INSIDE DIAMETER	THICKNESS OF STEEL
1 (Lower)	5'-0"	8'-3 3/8"	1/2"
2	4'-9"	8'-3 3/8"	"
3	"	8'-2 7/8"	"
4	"	8'-2 1/8"	"
5	"	8'-1 7/8"	3/8"
6	"	8'-1 1/2"	"
7	"	8'-1 1/8"	"
8	"	8'-3/8"	"
9	"	8'-0"	"
10 (Upper)	"	8'-0"	"

8' CAISSON, 38' 3" Lg.

POSITION OF SECTION	LENGTH OF SECTION	INSIDE DIAMETER	THICKNESS OF STEEL
1 (Lower)	5'-0"	8'-3 3/8"	1/2"
2	4'-9"	8'-2 7/8"	"
3	"	8'-2 1/8"	"
4	"	8'-1 7/8"	"
5	"	8'-1 1/8"	3/8"
6	"	8'-3/8"	"
7	"	8'-0"	"
8 (Upper)	"	8'-0"	"

8' CAISSON, 28' 9" Lg.

POSITION OF SECTION	LENGTH OF SECTION	INSIDE DIAMETER	THICKNESS OF STEEL
1 (Lower)	5'-0"	8'-2 1/4"	1/2"
2	4'-9"	8'-1 3/4"	"
3	"	8'-1 1/4"	"
4	"	8'-3/4"	3/8"
5 (Upper)	"	8'-0"	"

8' CAISSON, 24' 0" Lg.

POSITION OF SECTION	LENGTH OF SECTION	INSIDE DIAMETER	THICKNESS OF STEEL
1 (Lower)	5'-0"	8'-1 3/4"	1/2"
2	4'-9"	8'-1 1/4"	"
3	"	8'-3/4"	3/8"
4	"	8'-0"	"
5 (Upper)	"	8'-0"	"

5' CAISSON, 38' 3" Lg.

POSITION OF SECTION	LENGTH OF SECTION	INSIDE DIAMETER	THICKNESS OF STEEL
1 (Lower)	5'-0"	8'-3 3/8"	1/2"
2	4'-9"	8'-2 7/8"	"
3	"	8'-2 1/8"	"
4	"	8'-1 7/8"	"
5	"	8'-1 1/8"	3/8"
6	"	8'-3/8"	"
7	"	8'-0"	"
8 (Upper)	"	8'-0"	"

5' CAISSON, 28' 9" Lg.

POSITION OF SECTION	LENGTH OF SECTION	INSIDE DIAMETER	THICKNESS OF STEEL
1 (Lower)	5'-0"	8'-2 1/4"	1/2"
2	4'-9"	8'-1 3/4"	"
3	"	8'-1 1/4"	"
4	"	8'-3/4"	3/8"
5 (Upper)	"	8'-0"	"

5' CAISSON, 24' 0" Lg.

POSITION OF SECTION	LENGTH OF SECTION	INSIDE DIAMETER	THICKNESS OF STEEL
1 (Lower)	5'-0"	8'-1 3/4"	1/2"
2	4'-9"	8'-1 1/4"	"
3	"	8'-3/4"	3/8"
4	"	8'-0"	"
5 (Upper)	"	8'-0"	"