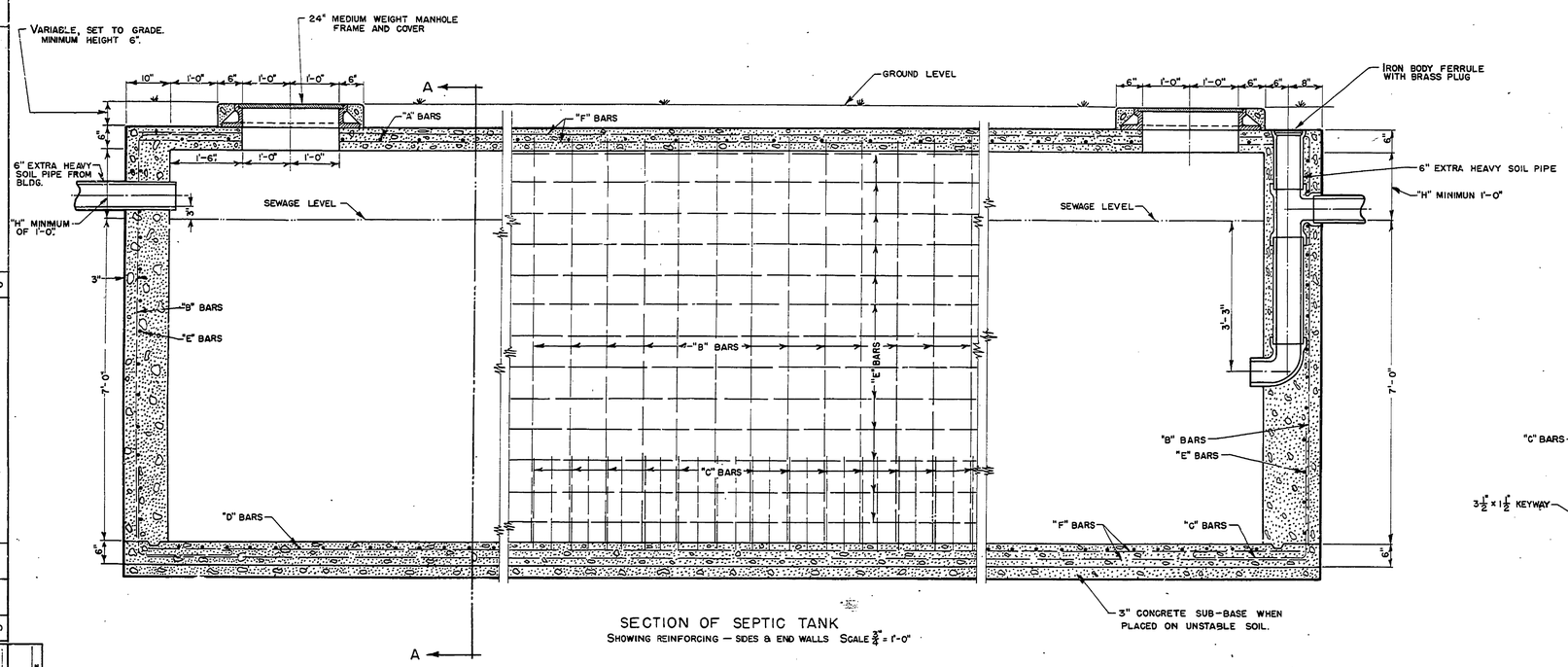
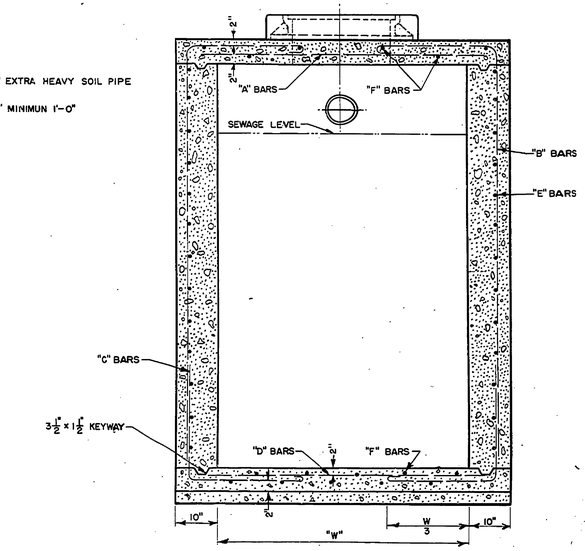
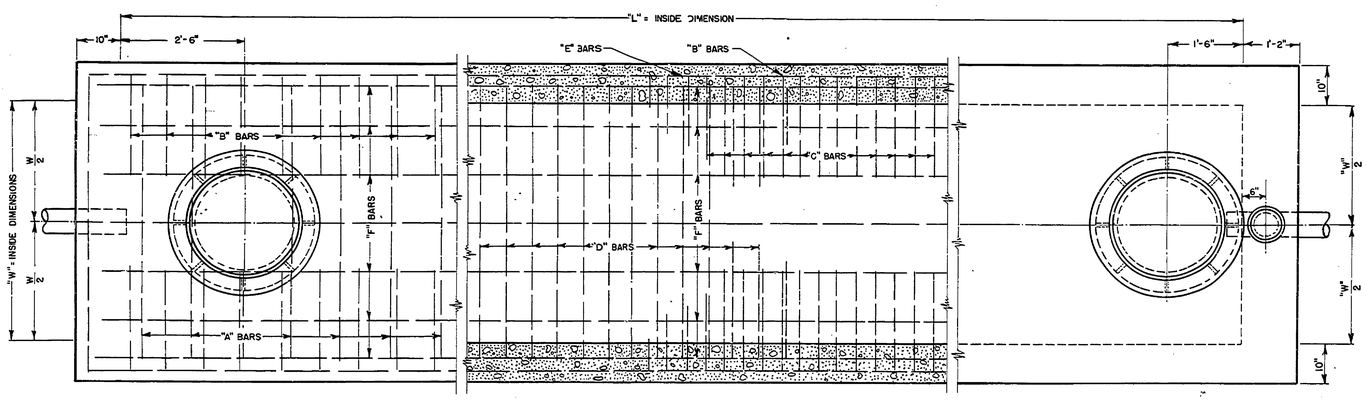


SECTION OF SEPTIC TANK
SHOWING REINFORCING — SIDES & END WALLS SCALE $\frac{3}{4}$" = 1'-0"

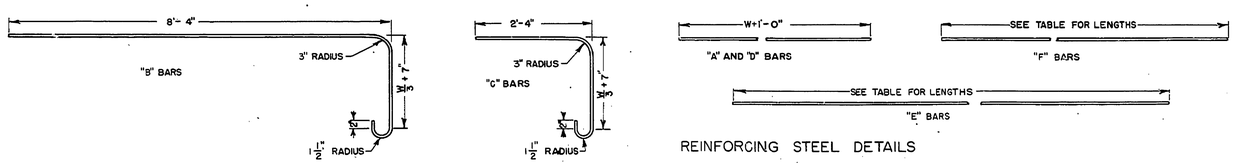


SECTION A-A.
SCALE $\frac{3}{4}$" = 1'-0"



SHOWING REINFORCING — TOP SLAB.

PLAN OF SEPTIC TANK
SHOWING REINFORCING - BOTTOM SLAB. SCALE $\frac{3}{4}$" = 1'-0"



REINFORCING STEEL DETAILS

LENGTH	WIDTH	CAP IN GAL'S.	GAL'S. PER LIN. FT	"A" BARS SIZE & SPACE	"A" BARS LENGTH	"B" BARS SIZE & SPACE	"B" BARS LENGTH	"C" BARS SIZE & SPACE	"C" BARS LENGTH	"D" BARS SIZE & SPACE	"D" BARS LENGTH	"E" BARS SIZE & SPACE	"E" BARS LENGTH	"F" BARS SIZE & SPACE	"F" BARS LENGTH
15'-0" TO 18'-0"	3'-0"	2360 TO 2830	157.1	½"ϕ @ 12" O.C.	W + 1'-0"	½"ϕ @ 12" O.C.	9'-0" PLUS W/3	½"ϕ @ 6" O.C.	9'-9"	½"ϕ @ 7" O.C.	4'-0"	½"ϕ @ 8" O.C.	W+1'-6" L+1'-6"	½"ϕ @ 12" O.C.	L + 1'-6" LAP JOINTS 1'-0"
16'-3" TO 19'-6"	3'-3"	2760 TO 3320	170.2	½"ϕ @ 12" O.C.		½"ϕ @ 12" O.C.		½"ϕ @ 6" O.C.	10'-0"	½"ϕ @ 7" O.C.	4'-3"	½"ϕ @ 8" O.C.	W+1'-6" L+1'-6"	½"ϕ @ 12" O.C.	
17'-6" TO 21'-0"	3'-6"	3200 TO 3850	183.3	½"ϕ @ 12" O.C.		½"ϕ @ 12" O.C.		½"ϕ @ 6" O.C.	10'-3"	½"ϕ @ 7" O.C.	4'-6"	½"ϕ @ 8" O.C.	W+1'-6" L+1'-6"	½"ϕ @ 12" O.C.	
18'-9" TO 22'-6"	3'-9"	3670 TO 4410	196.4	½"ϕ @ 12" O.C.		½"ϕ @ 12" O.C.		½"ϕ @ 6" O.C.	10'-6"	½"ϕ @ 7" O.C.	4'-9"	½"ϕ @ 8" O.C.	W+1'-6" L+1'-6"	½"ϕ @ 12" O.C.	
20'-0" TO 24'-0"	4'-0"	4190 TO 5020	209.4	½"ϕ @ 12" O.C.		½"ϕ @ 10" O.C.		½"ϕ @ 5" O.C.	5'-6"	½"ϕ @ 6" O.C.	5'-0"	½"ϕ @ 8" O.C.	W+1'-6" L+1'-6"	½"ϕ @ 12" O.C.	
21'-3" TO 25'-6"	4'-3"	4730 TO 5650	222.5	½"ϕ @ 12" O.C.		½"ϕ @ 10" O.C.		½"ϕ @ 5" O.C.	5'-6"	½"ϕ @ 6" O.C.	5'-3"	½"ϕ @ 8" O.C.	W+1'-6" L+1'-6"	½"ϕ @ 12" O.C.	
22'-6" TO 27'-0"	4'-6"	5300 TO 6360	235.9	½"ϕ @ 12" O.C.		½"ϕ @ 10" O.C.		½"ϕ @ 5" O.C.	5'-8"	½"ϕ @ 6" O.C.	5'-6"	½"ϕ @ 8" O.C.	W+1'-6" L+1'-6"	½"ϕ @ 12" O.C.	
23'-9" TO 30'-0"	5'-0"	6560 TO 7850	262.0	½"ϕ @ 12" O.C.		½"ϕ @ 9" O.C.		½"ϕ @ 4½" O.C.	5'-10"	½"ϕ @ 6" O.C.	6'-0"	½"ϕ @ 8" O.C.	W+1'-6" L+1'-6"	½"ϕ @ 12" O.C.	
27'-6 TO 33'-0"	5'-6"	7920 TO 9500	288.0	½"ϕ @ 12" O.C.		½"ϕ @ 9" O.C.		½"ϕ @ 4½" O.C.	6'-0"	½"ϕ @ 6" O.C.	6'-6"	½"ϕ @ 8" O.C.	W+1'-6" L+1'-6"	½"ϕ @ 12" O.C.	
30'-0" TO 36'-0"	6'-0"	9400 TO 11,300	314.2	½"ϕ @ 12" O.C.		½"ϕ @ 8" O.C.		½"ϕ @ 4" O.C.	6'-2"	½"ϕ @ 5½" O.C.	7'-0"	½"ϕ @ 8" O.C.	W+1'-6" L+1'-6"	½"ϕ @ 12" O.C.	
32'-6" TO 39'-0"	6'-6"	11,050 TO 13,300	340.4	½"ϕ @ 12" O.C.		½"ϕ @ 8" O.C.		½"ϕ @ 4" O.C.	6'-4"	½"ϕ @ 5½" O.C.	7'-6"	½"ϕ @ 8" O.C.	W+1'-6" L+1'-6"	½"ϕ @ 12" O.C.	
35'-0" TO 42'-0"	7'-0"	12,800 TO 15,380	366.7	½"ϕ @ 10" O.C.		⅝"ϕ @ 5" O.C.		⅝"ϕ @ 5" O.C.	6'-8"	⅝"ϕ @ 7" O.C.	8'-0"	½"ϕ @ 8" O.C.	W+1'-6" L+1'-6"	½"ϕ @ 12" O.C.	
37'-6" TO 45'-0"	7'-6"	14,700 TO 17,640	392.7	½"ϕ @ 10" O.C.		⅝"ϕ @ 5" O.C.		⅝"ϕ @ 5" O.C.	6'-10"	⅝"ϕ @ 7" O.C.	8'-6"	½"ϕ @ 8" O.C.	W+1'-6" L+1'-6"	½"ϕ @ 12" O.C.	
40'-0" TO 48'-0"	8'-0"	16,750 TO 20,050	418.9	½"ϕ @ 9" O.C.		⅝"ϕ @ 5" O.C.		⅝"ϕ @ 5" O.C.	7'-0"	⅝"ϕ @ 6" O.C.	9'-0"	½"ϕ @ 8" O.C.	W+1'-6" L+1'-6"	½"ϕ @ 12" O.C.	

CONCRETE SPECIFICATIONS

THE CONCRETE MIX SHALL CONSIST OF ONE SACK OF CEMENT, 2.25 CU. FT. OF FINE AGGREGATE, 4.0 CU. FT. OF COARSE AGGREGATE AND ENOUGH WATER TO MAKE A WORKABLE MIX, BUT NOT TO EXCEED SIX GALLONS; OR, ONE SACK OF CEMENT, 5.0 CU. FT. OF BANK RUN GRAVEL AND ENOUGH WATER TO MAKE A WORKABLE MIX BUT NOT TO EXCEED SIX GALLONS.

THE AGGREGATE SHALL BE CLEAN, FREE FROM SILT AND CLAY; AND SHALL PASS A 1" SCREEN. TIME OF MIXING SHALL BE NOT LESS THAN 1½ MINUTES.

THE CONCRETE SHALL BE PLACED IN THE FORMS IN HORIZONTAL LAYERS, NOT OVER 2' THICK AND THOROUGHLY SPADED ALONG THE FORMS AND AROUND THE REINFORCING STEEL.

FORM SPECIFICATIONS

SPACING OF STUDDING - USE ¾" SHEATHING 22" O.C.
SPACING OF WALES - USE 2"X 4" STUDDING 30" O.C.
SPACING OF TIES - USE DOUBLE 2"X 4" WALES 30" O.C.
TIE AT EVERY STUD.
SHORING SHALL BE 4"X 4" OR DOUBLE 2"X 4"

"C" BARS TO EXTEND ACROSS BOTTOM SLAB AND UP SIDEWALLS WHEN W= 3'-0" OR 3'-9".
REINFORCING TO BE THE SAME FOR BOTH ENDS AND SIDEWALLS.
BEND "B" BARS AT M.H. TO EXTEND UP M.H. WALLS.
BEND "F" BARS IN TOP SLAB TO CONFORM WITH M.H.

LUDINGTON STATE PARK
HAMLIN LAKE BEACHHOUSE

NO.	DATE	BY	REVISIONS
1	6-6-56	E.C.B.	REDRAWN & REVISED
2	8/11/61	J.N.	Revised - Added steel notes.
3			
4			
5			
6			

DRAWN BY E.J.P.
TRACED BY E.C.B.
CHECKED BY
DATE JUNE 26, 1956

REVIEWED BY SECTIONS: ARCHITECTURAL, ENGINEERING, LANDSCAPE — DATE

APPROVED BY — ASSISTANT CHIEF IN CHARGE OF DESIGN — DATE

APPROVED — CHIEF OF PLANNING AND CONSTRUCTION — DATE

APPROVED — CHIEF OF DIVISION

MICHIGAN
DEPARTMENT OF CONSERVATION
PARKS AND RECREATION DIVISION

SEPTIC TANK STANDARD PLAN

SHEET NO. 9 OF 9

PLAN NO. S.E.-121

A-108