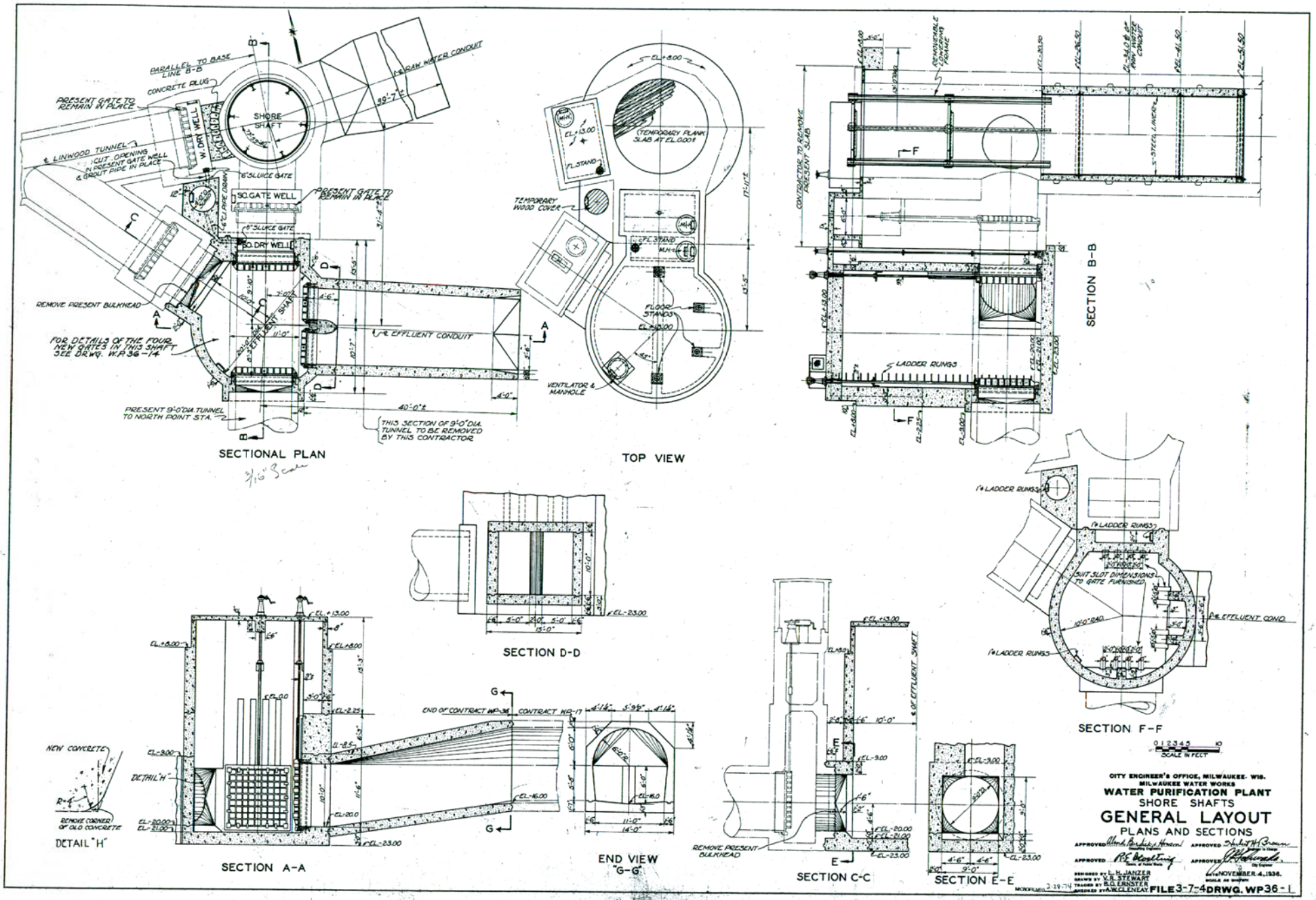
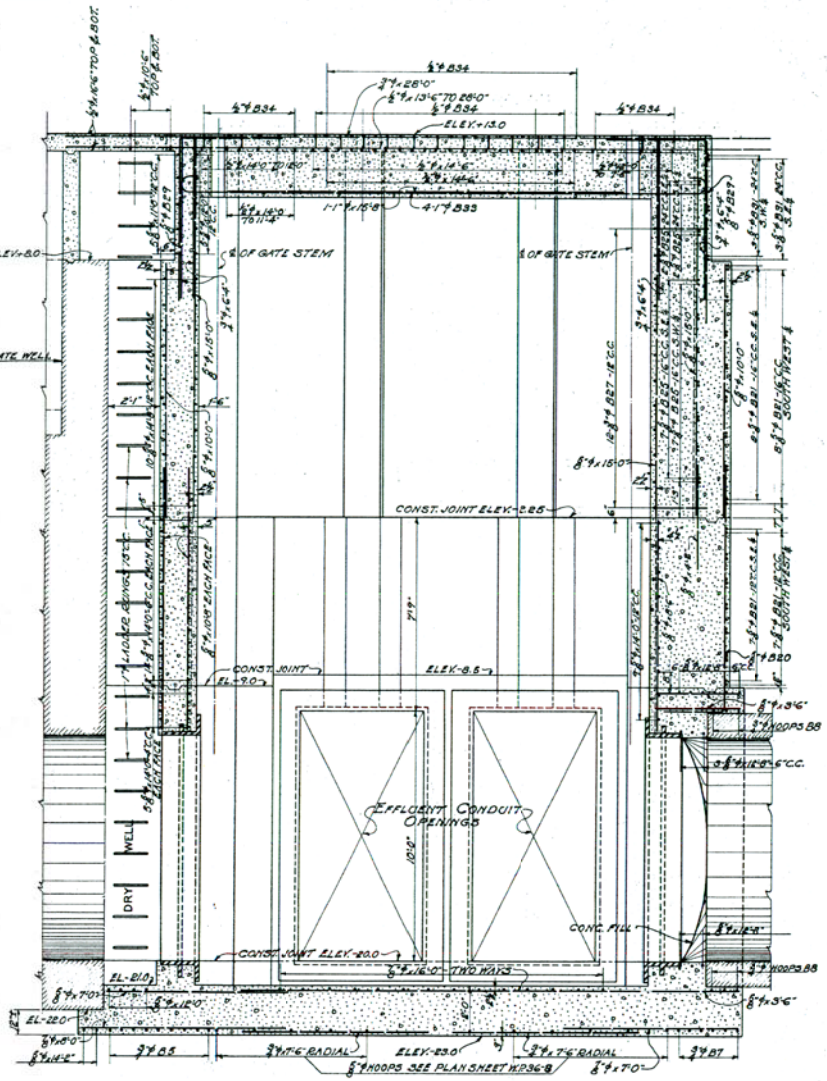
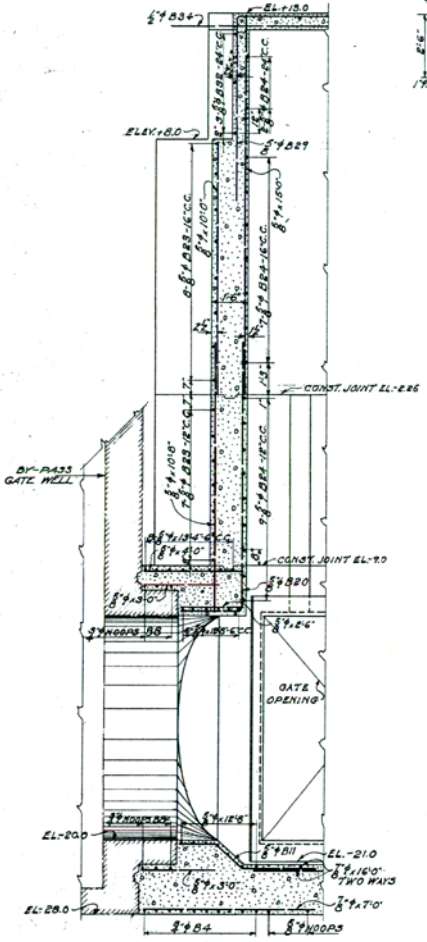
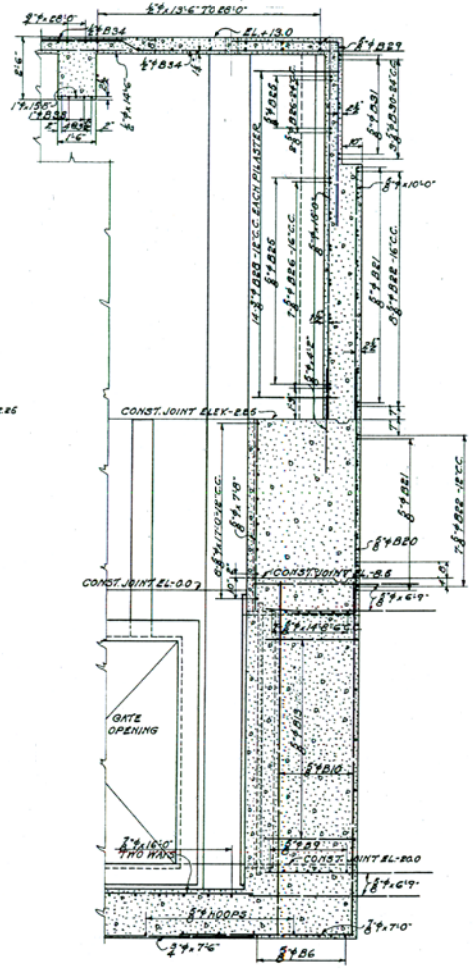

SECTIONAL PLAN
TOP VIEW
SECTION B-B
SECTION D-D
SECTION F-F
SECTION A-A
END VIEW "G-G"
SECTION C-C
SECTION E-E
DETAIL "H"
PARALLEL TO BASE LINE B-B
CONCRETE PLUG
PRESENT GATE TO REMAIN IN PLACE
SHORE SHAFT
W. DRY WELL
℄ LINWOOD TUNNEL
CUT OPENING IN PRESENT GATE WELL & GROUT PIPE IN PLACE
6" SLUICE GATE
SC. GATE WELL
PRESENT GATE TO REMAIN IN PLACE
SC. DRY WELL
REMOVE PRESENT BULKHEAD
FOR DETAILS OF THE FOUR NEW GATES IN THIS SHAFT SEE DRWG. W.P. 36-14
EFFLUENT SHAFT
℄ EFFLUENT CONDUIT
PRESENT 9'-0" DIA. TUNNEL TO NORTH POINT STA.
THIS SECTION OF 9'-0" DIA. TUNNEL TO BE REMOVED BY THIS CONTRACTOR
℄ RAW WATER CONDUIT
TEMPORARY PLANK SLAB AT EL. 0.00±
TEMPORARY WOOD COVER
FLOOR STANDS
VENTILATOR & MANHOLE
CONTRACTOR TO REMOVE PRESENT SLAB
REMOVEABLE LOWERING FRAME
STEEL LINER
LADDER RUNGS
1" ⌀ LADDER RUNGS
SUIT SLOT DIMENSIONS TO GATE FURNISHED
℄ EFFLUENT COND.
END OF CONTRACT WP-36
CONTRACT WP-17
NEW CONCRETE
REMOVE CORNER OF OLD CONCRETE
℄ OF EFFLUENT SHAFT
REMOVE PRESENT BULKHEAD
SCALE IN FEET
CITY ENGINEER'S OFFICE, MILWAUKEE, WIS.
MILWAUKEE WATER WORKS
WATER PURIFICATION PLANT
SHORE SHAFTS
GENERAL LAYOUT
PLANS AND SECTIONS
APPROVED
APPROVED
APPROVED
APPROVED
DESIGNED BY L. H. JANZER
DRAWN BY V. R. STEWART
TRACED BY B. O. ERNSTER
CHECKED BY A. W. CLENEAY
DATE NOVEMBER 4, 1936.
SCALE AS SHOWN
MICROFILMED 2-29-74
FILE 3-7-4 DRWG. WP36-1
28x42



SECTION E-E



SECTION F-F



SECTION G-G

LOCATIONS OF SECTIONS E-E, F-F & G-G ON DRAWING W.P.36-8

SCALE IN FEET

NOTE:

LEAVE STUBS OF REINFORCING PROJECT 40 DIA. FROM PRESENT STRUCTURE.

DOT AND DASH LINES INDICATE EXISTING STRUCTURES.

SOLID LINES INDICATE NEW WORK.

BAR MARKINGS ON THIS DRAWING APPLY ALSO ON DRAWINGS WP-36-8 & 10.

MICROFILMED 3-6-74

CITY ENGINEER'S OFFICE, MILWAUKEE, WIS.
MILWAUKEE WATER WORKS

WATER PURIFICATION PLANT

SHORE SHAFTS

EFFLUENT SHAFT

VERTICAL SECTIONS

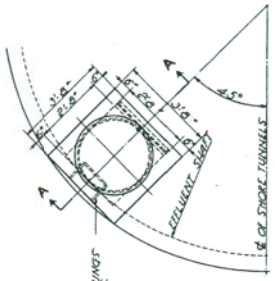
APPROVED Wend Burdick & Howson — APPROVED Herbert H. Brown

APPROVED R.E. Blottnig — APPROVED H. Edwards

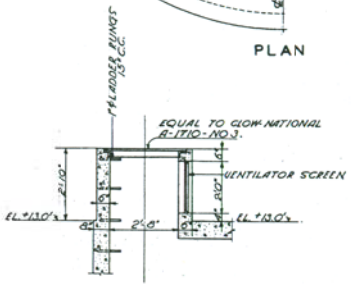
DESIGNED BY H.A. LOSER
DRAWN BY H. PALM
TRACED BY H. PALM
CHECKED BY A.W. CLENEAY

DATE NOVEMBER 4, 1936.
SCALE AS SHOWN

FILE 3-7-4 DRWG. WP 36-9



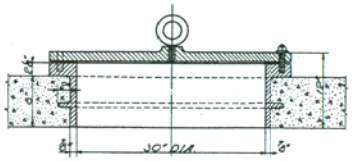
PLAN



SECTION A-A

VENTILATOR & MANHOLE FOR EFFLUENT SHAFT

0 1 2 3 6
SCALE IN FEET

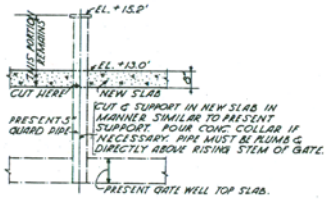


30" DIA. PRESSURE MANHOLE

ONE REQUIRED - WEST DRY WELL
ONE REQUIRED - SOUTH DRY WELL
ONE REQUIRED - SOUTH GATE WELL

FURNISHED BY CITY - SET BY THIS CONTRACTOR.

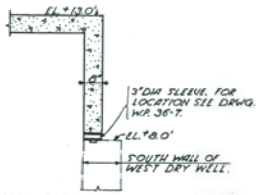
0 1 2
SCALE IN FEET



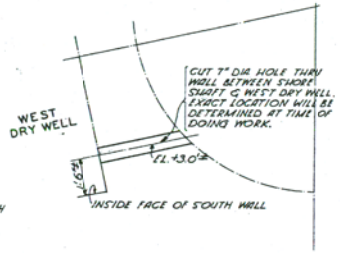
5" GUARD PIPE

TWO THUS

0 1 2 3 6
SCALE IN FEET

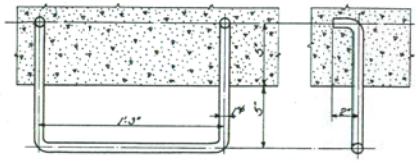


WALL PIPE - WEST GATE WELL



RAW WATER SUCTION SLEEVE

0 1 2 3 6
SCALE IN FEET

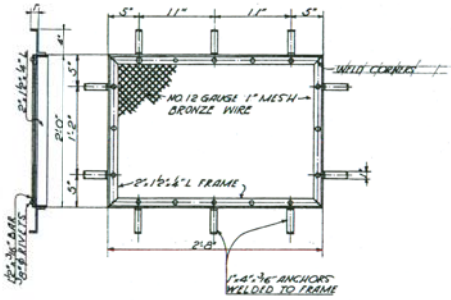


DETAIL OF LADDER RUNGS

88 REQUIRED

26 IN SOUTH DRY WELL
23 IN SUMP PIT
29 IN EFFLUENT SHAFT
4 IN WEST DRY WELL
4 IN NORTH POINT GATE WELL

0 3 6 12
SCALE IN INCHES

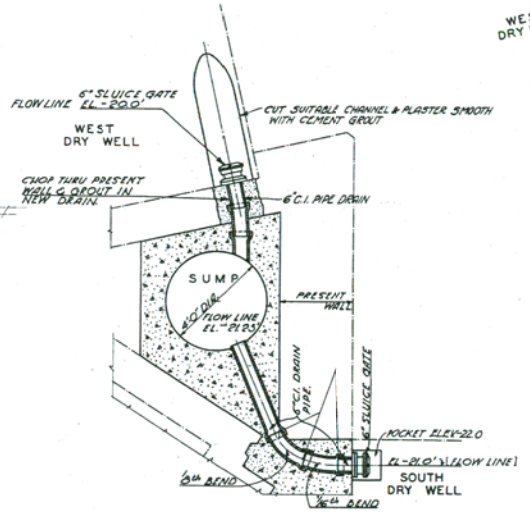


DETAILS OF VENTILATOR SCREEN

ONE REQUIRED

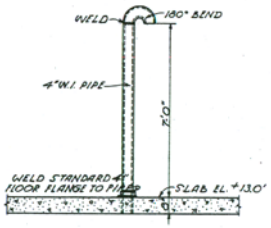
NOTE: HOT GALVANIZE FRAME AFTER FABRICATION.

0 1 2
SCALE IN FEET



PLAN OF DRAINS TO SUMP PIT

0 1 2 3 6
SCALE IN FEET



TYPICAL 4" VENT

ONE REQUIRED - WEST DRY WELL
ONE REQUIRED - SOUTH DRY WELL
ONE REQUIRED - SOUTH GATE WELL

FOR LOCATION SEE DRWG. W.P. 36-7

0 1 2 3 6
SCALE IN FEET

CITY ENGINEER'S OFFICE, MILWAUKEE, WIS.
MILWAUKEE WATER WORKS
WATER PURIFICATION PLANT
SHORE SHAFTS
EFFLUENT SHAFT
MISCELLANEOUS STEEL

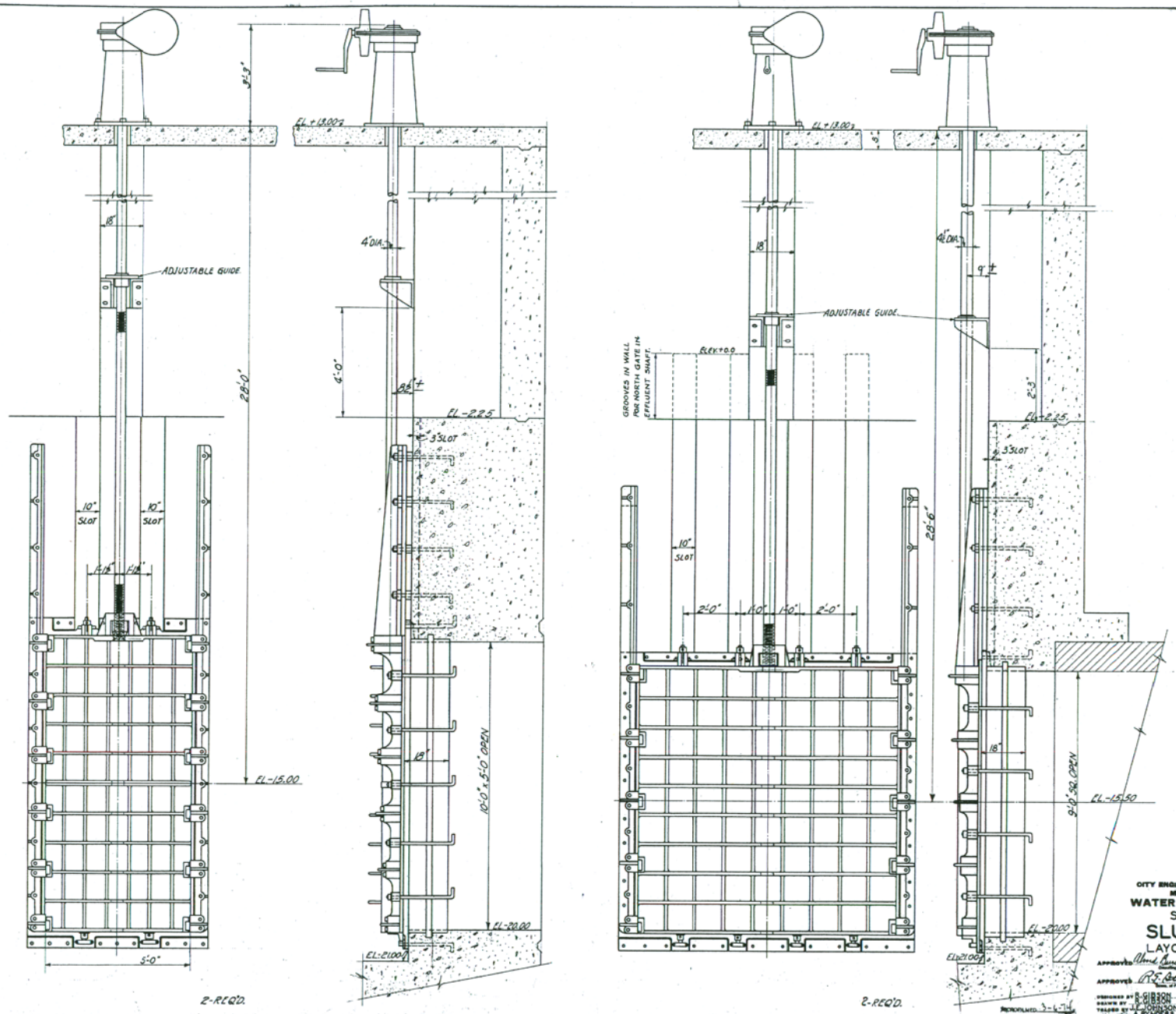
APPROVED Alvord, Burdick & Howson, Consulting Engineers
APPROVED Charles H. Brown, Engineer in Charge
APPROVED R. E. Hoffmann, Commissioner of Public Works
APPROVED [illegible], City Engineer

DESIGNED BY H. A. LOSER
DRAWN BY H. BALM
TRACED BY V. B. SEDWARD
CHECKED BY A. W. CLENCAY

DATE NOVEMBER 4, 1938.
SCALE 1/8 INCH.

MICROFILMED 3-6-74

FILE 3-7-4 DRWG. WP 36-11



CITY ENGINEER'S OFFICE, MILWAUKEE, WIS.
MILWAUKEE WATER WORKS

WATER PURIFICATION PLANT

SHORE SHAFTS

SLUICE GATES

LAYOUTS AND DETAILS

APPROVED Alfred Burdick & Hansen, Consulting Engineers — APPROVED Thelbert H. Brown, Engineer in Charge

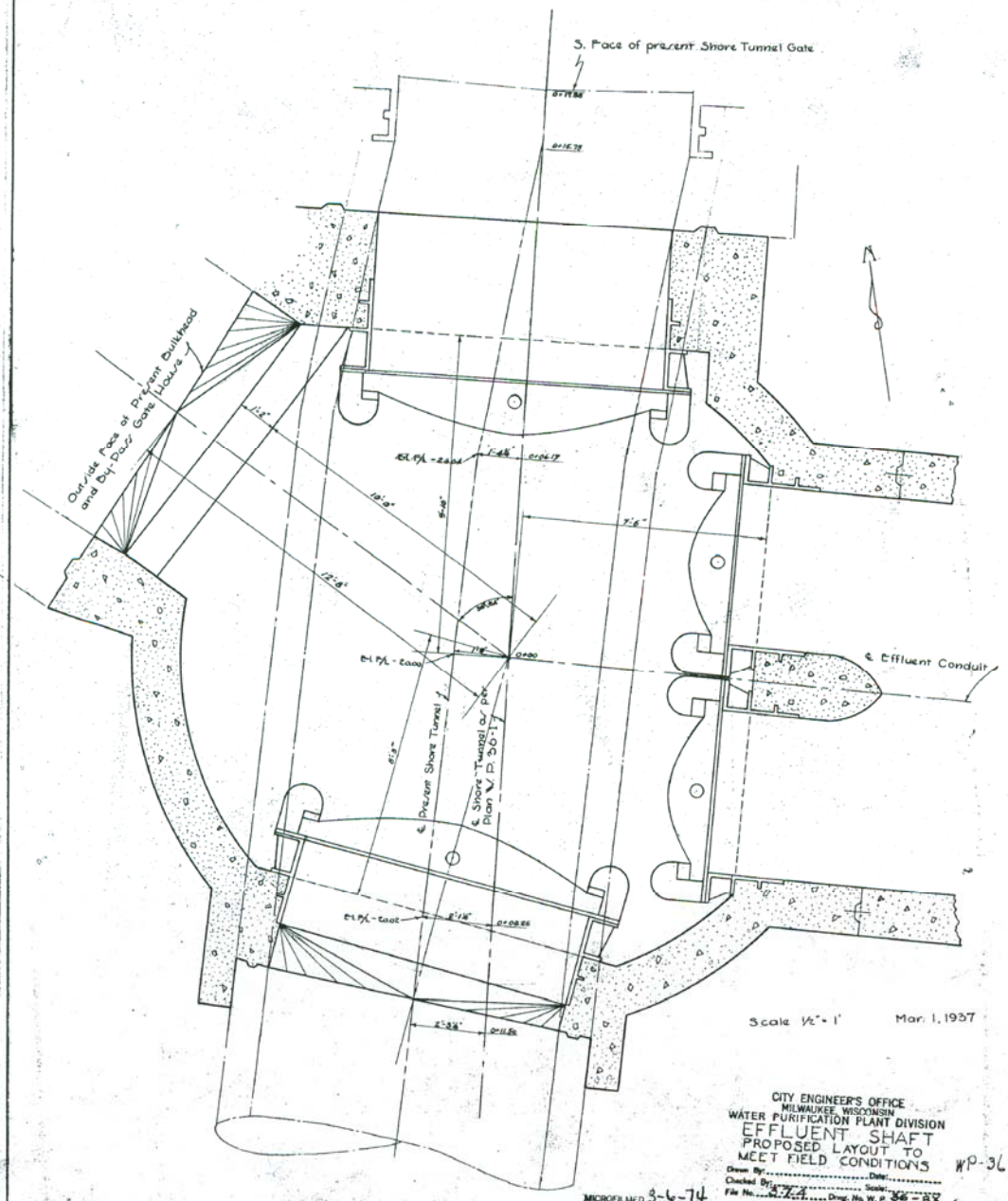
APPROVED R. E. Stortting, Comm. of Public Works — APPROVED [illegible], City Engineer

DESIGNED BY R. GIBSON
DRAWN BY R. GIBSON
TRACED BY J. F. JOHNSON
CHECKED BY A. RYNDERS

DATE NOVEMBER 4, 1938.
SCALE AS SHOWN

MICROFILMED 3-6-74

FILE 3-7-4 DRWG. WP 36-14

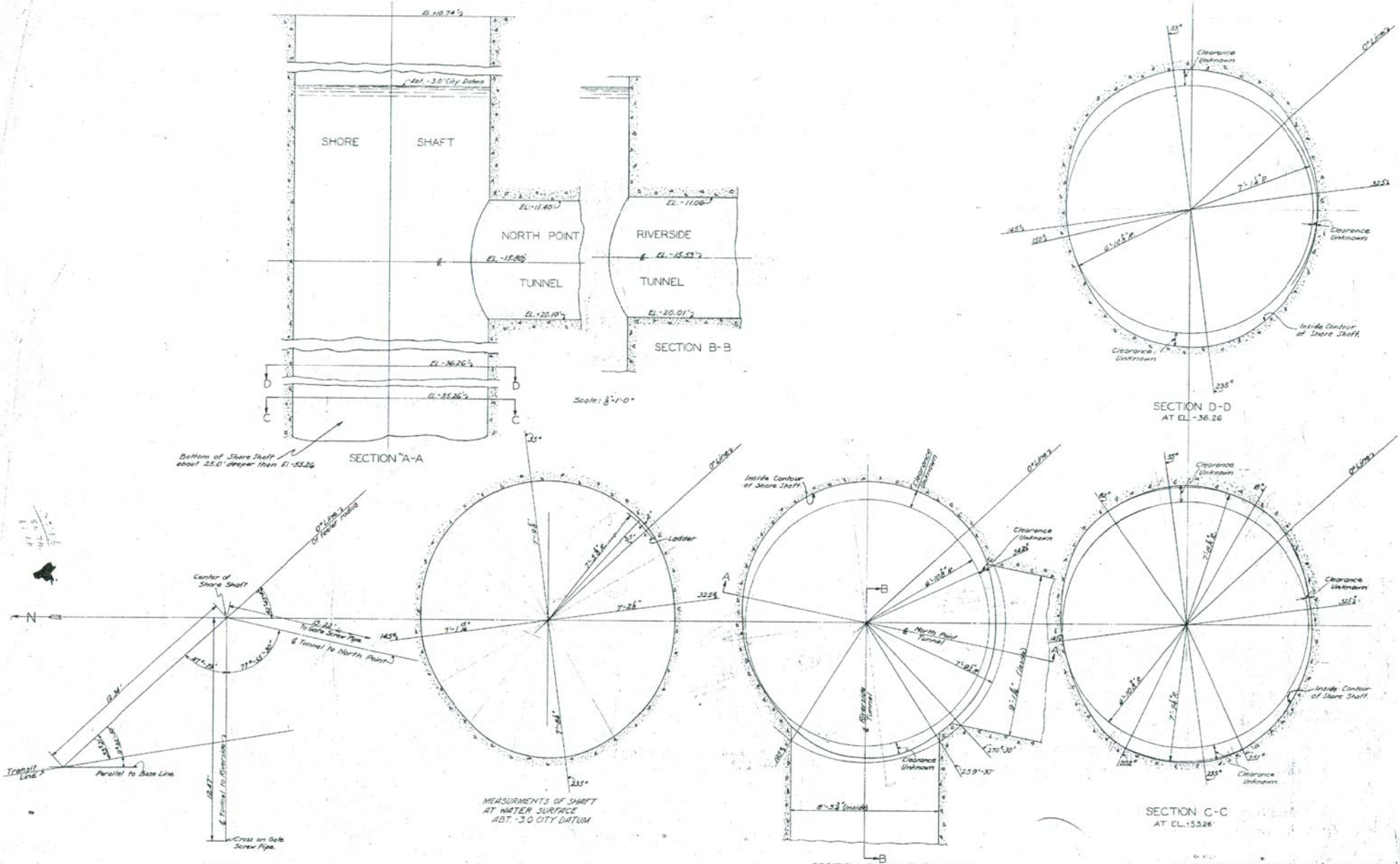


CITY ENGINEER'S OFFICE
MILWAUKEE, WISCONSIN
WATER PURIFICATION PLANT DIVISION
EFFLUENT SHAFT
PROPOSED LAYOUT TO
MEET FIELD CONDITIONS

WP-36-15

Drawn By: ..... Date: .....
Checked By: ..... Scale: .....
File No. 3-7-4 Dwg. No. W. P. 36-88

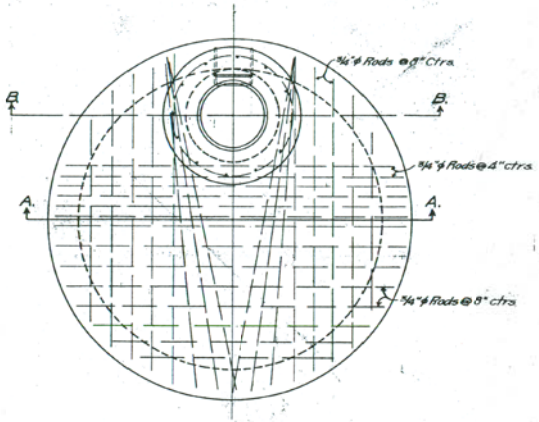
MICROFILMED 3-6-74



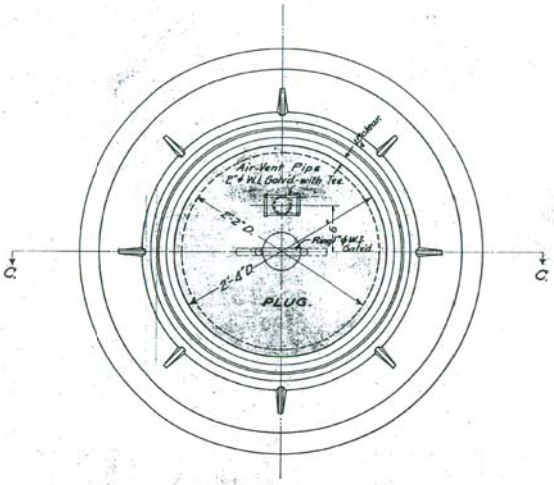
CITY ENGINEER'S OFFICE, MILWAUKEE, WIS.
WATER PURIFICATION PLANT
SHORE SHAFT OF INTAKE TUNNEL
SKETCH SHOWING DIMENSIONS
BY FIELD MEASUREMENTS, 1935
DRAWN BY: R.A. Rafenstein DATE: 5-17-35
FILE 3-7-4 SCALE: 1/8"=1'-0" DWG. NO. 36-1U
Revised: 5-27-35

SECTION FILED 3-6-74

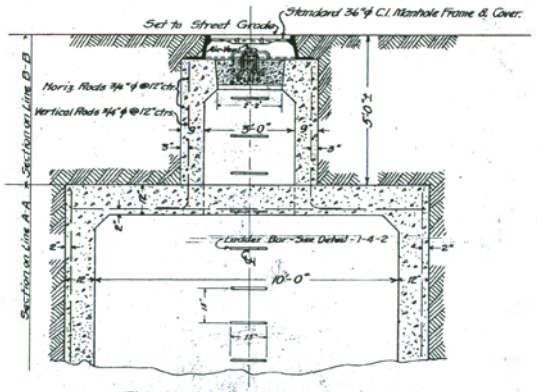
WP17-1



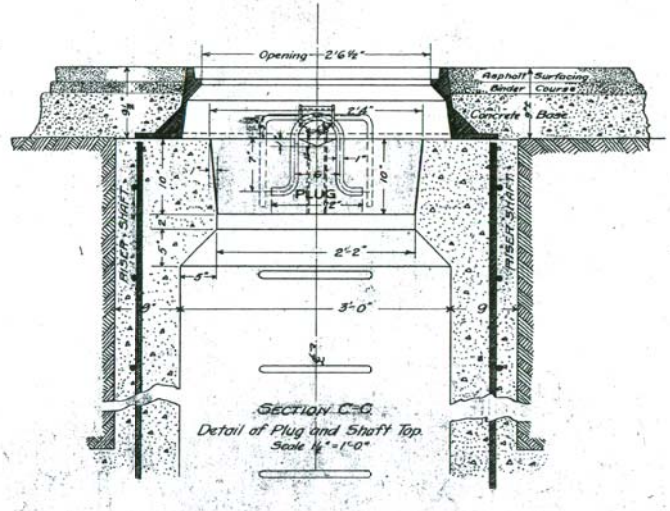
Steel Plan of Top of Shaft (M.H. Frame & Cover removed).
Scale: ½" = 1'-0".



Plan of Shaft Top Showing Manhole Frame & Cover, and Plug.
Scale 1½" = 1'-0".



Elevation on Lines A-A and B-B.
Scale ½" = 1'-0".



SECTION C-C
Detail of Plug and Shaft Top.
Scale ½" = 1'-0"

MICROFILMED 7-21-71

CITY ENGINEER'S OFFICE, MILWAUKEE, WIS.
MILWAUKEE WATER WORKS

PLAN & DETAILS OF ROOF FOR
[redacted] DRIVE SHAFTS
[redacted]

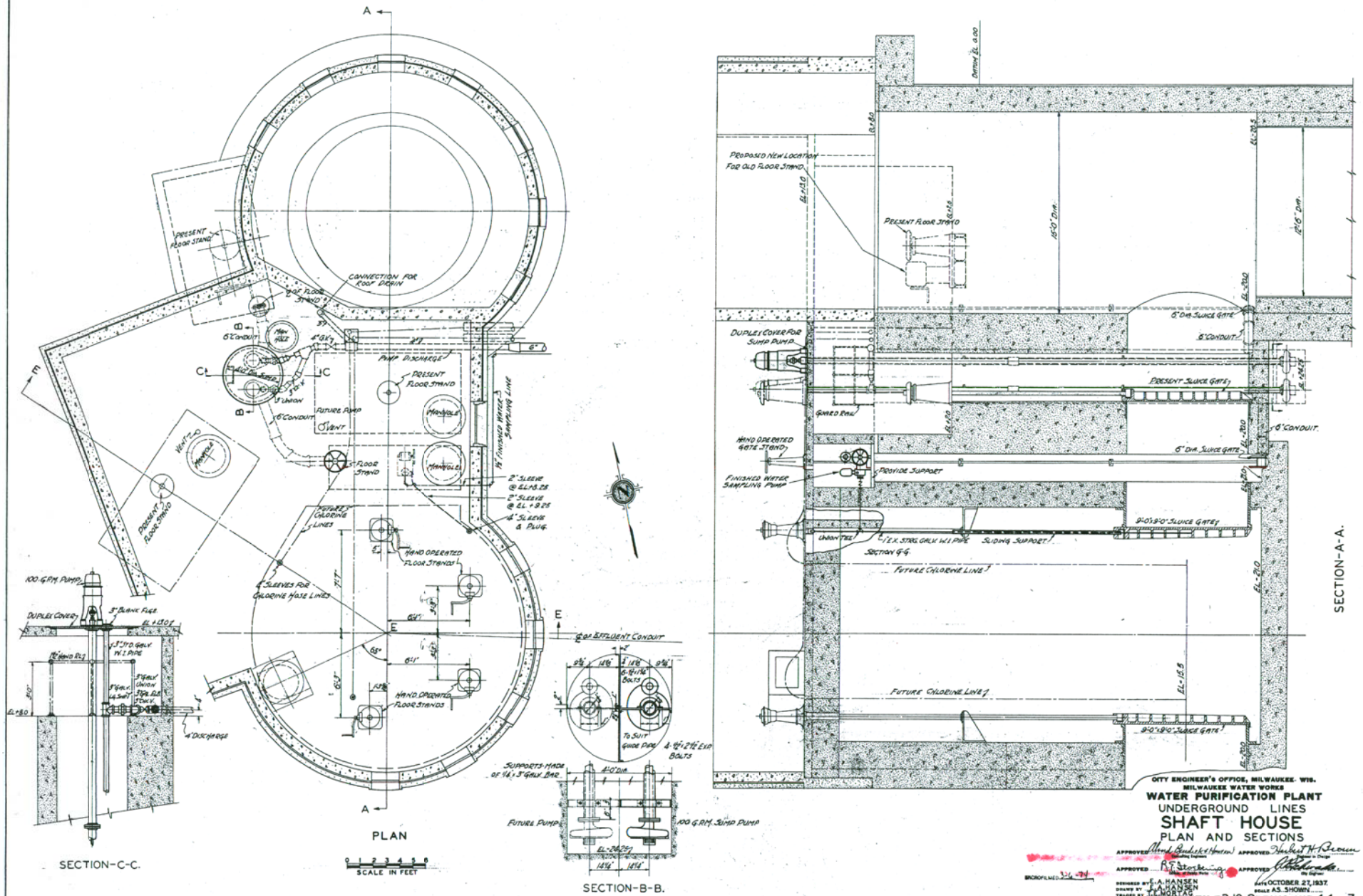
Drawn by C.S.G.
Traced by F.W.S.
Checked by C.S.G.
O.K'd by E.L.K.

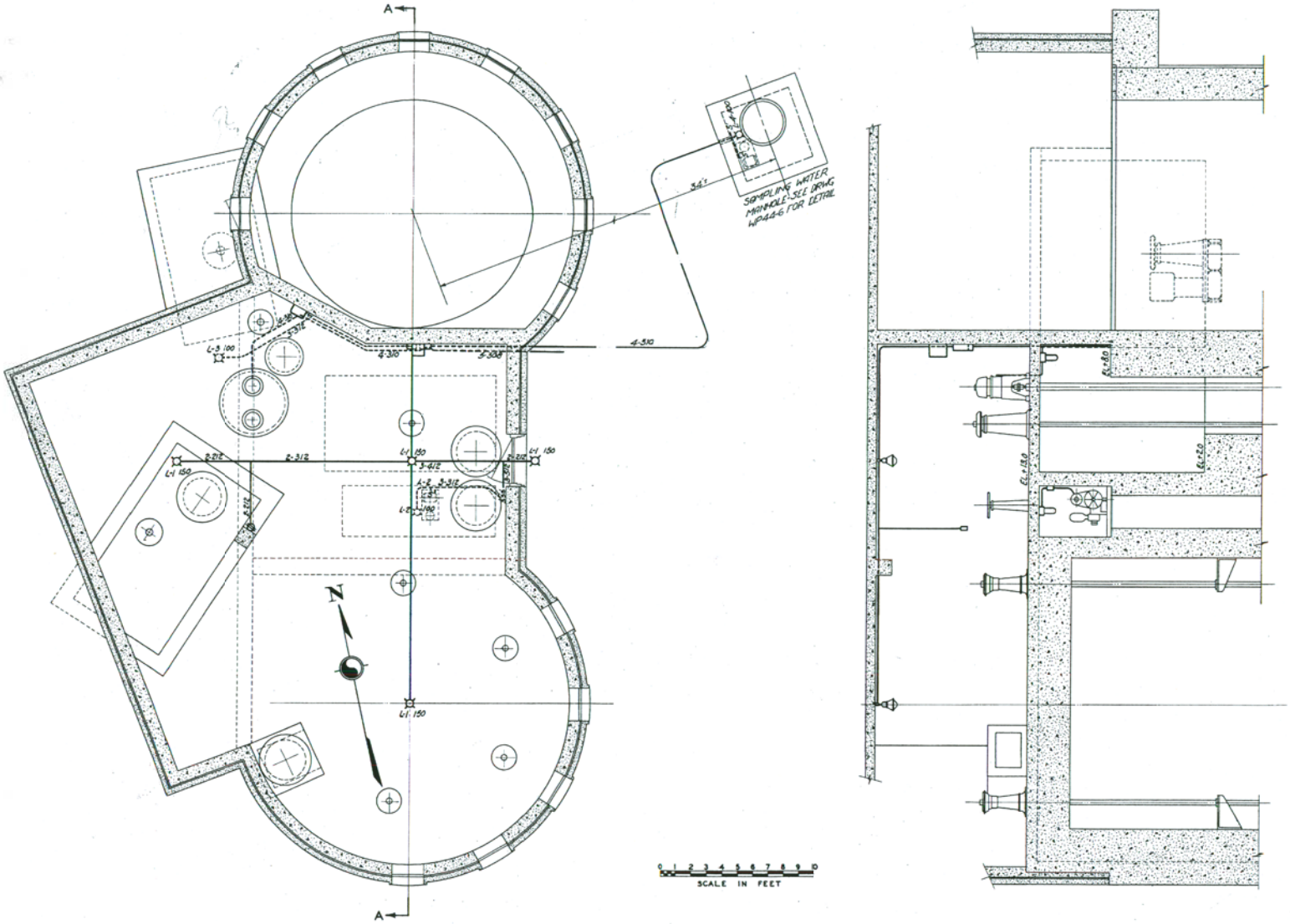
Date, Mar. 22, 1921
Scales: As noted on Drawings

APPROVED: George P. Hauf
CITY ENGINEER.

FILE 1-4-2E.

T-38-7


PLAN
SCALE IN FEET
SECTION-C-C.
SECTION-B-B.
SECTION-A-A.
PRESENT FLOOR STAND
CONNECTION FOR ROOF DRAIN
PUMP DISCHARGE
FUTURE PUMP
MANHOLE
VENT
FLOOR STAND
FUTURE CHLORINE LINES
HAND OPERATED FLOOR STANDS
4" SLEEVES FOR CHLORINE HOSE LINES
2" SLEEVE @ EL.+8.25
2" SLEEVE @ EL.+9.25
4" SLEEVE & PLUG
1½" FINISHED WATER SAMPLING LINE
100 G.P.M. PUMP
DUPLEX COVER
3" BLANK FLGE.
4" DISCHARGE
℄ OF EFFLUENT CONDUIT
TO SUIT GUIDE PIPE
SUPPORTS MADE OF 1/4" x 3" GALV. BAR
FUTURE PUMP
100 G.P.M. SUMP PUMP
PROPOSED NEW LOCATION FOR OLD FLOOR STAND
PRESENT FLOOR STAND
DUPLEX COVER FOR SUMP PUMP
GUARD RAIL
HAND OPERATED GATE STAND
FINISHED WATER SAMPLING PUMP
PROVIDE SUPPORT
6" DIA. SLUICE GATE
6" CONDUIT
PRESENT SLUICE GATE
9'-0"x9'-0" SLUICE GATE
UNION TEE
1" EX. STRG. GALV. W.I. PIPE
SLIDING SUPPORT
SECTION G-G
FUTURE CHLORINE LINE
15'-0" DIA.
12'-6" DIA.
DATUM EL. 0.00
CITY ENGINEER'S OFFICE, MILWAUKEE, WIS.
MILWAUKEE WATER WORKS
WATER PURIFICATION PLANT
UNDERGROUND LINES
SHAFT HOUSE
PLAN AND SECTIONS
APPROVED
APPROVED
APPROVED
APPROVED
MICROFILMED
DESIGNED BY E.A. HANSEN
DRAWN BY E.A. HANSEN
TRACED BY T.E. MORTAG
CHECKED BY A. RYNDERS
DATE OCTOBER 27, 1937
SCALE AS SHOWN
FILE 3-10-2
DRWG. WP 44-7
28 x 42



PLAN

LEGEND
S' LIGHTING SWITCH
S' MOTOR SWITCH
L-3 100 LIGHTING CIRCUIT NO 3, 100 WATT LIGHT
4-310 3/4 OR 1" CONDUIT CONTAINING 3#10 WIRES
CEILING OUTLET
WALL OUTLET
SERVICE OUTLET

CITY ENGINEER'S OFFICE, MILWAUKEE, WIS.
MILWAUKEE WATER WORKS
WATER PURIFICATION PLANT
UNDERGROUND LINES
GATE HOUSE WIRING
PLAN AND SECTION

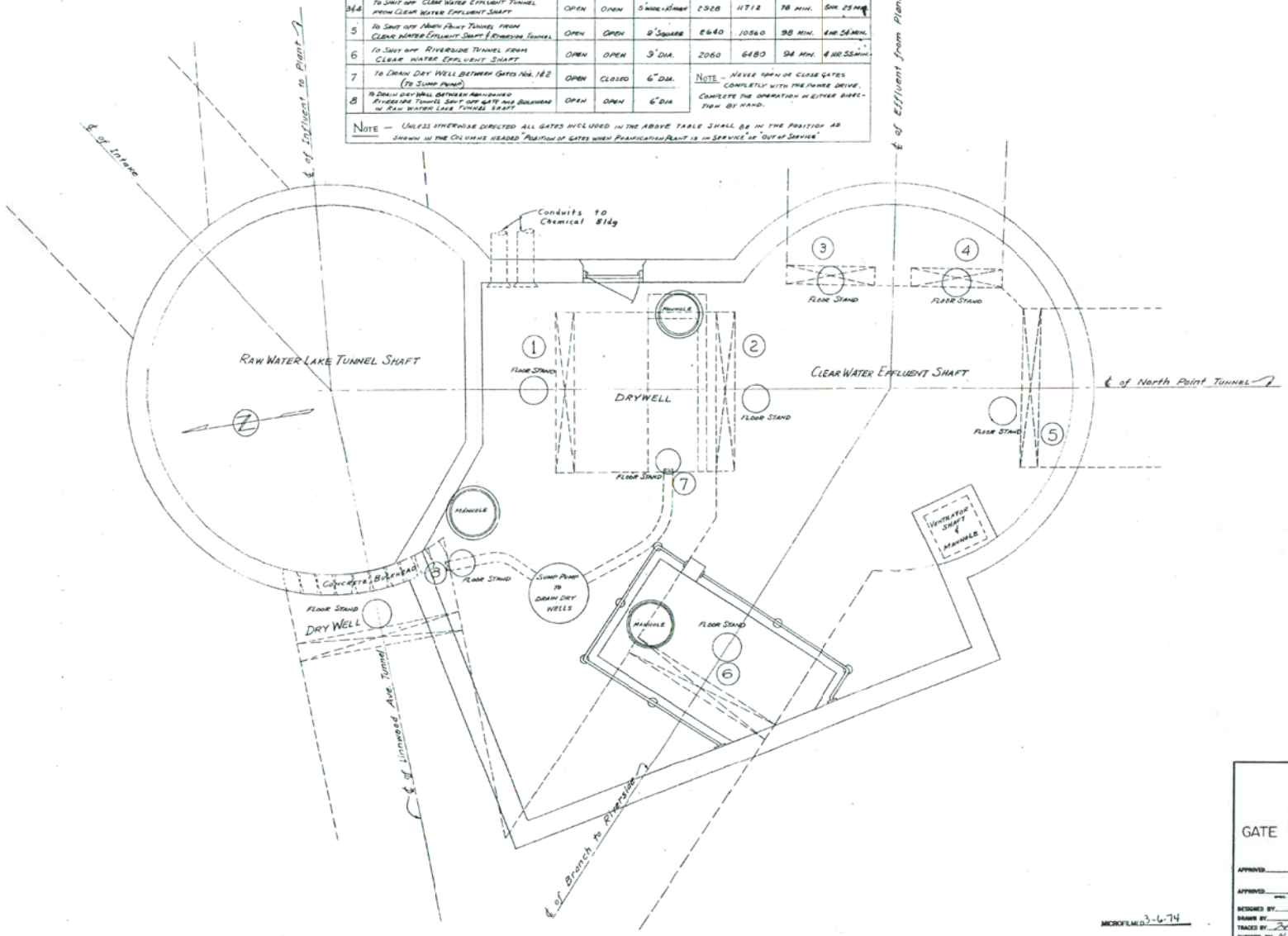
APPROVED Wend Burdick & Howson (Consulting Engineers) APPROVED Herbert H. Brown (Engineer in Charge)
APPROVED R.F. Storthing (Office of Public Works) APPROVED J.P. Edwards (City Engineer)
DESIGNED BY H.O. HEIMAN
DRAWN BY H.O. HEIMAN
TRACED BY E.A. HANSEN
CHECKED BY A. RYNDERS
DATE SEPTEMBER 18, 1937.
SCALE AS SHOWN
FILE 3-10-2 DRWG. WP44-8

MICROFILMED 3-6-74

GATE NO.	PURPOSE OF GATE	POSITION OF GATE WHEN PURIFICATION PLANT IS IN SERVICE	POSITION OF GATE WHEN PURIFICATION PLANT IS OUT OF SERVICE	SIZE OF GATE	NO. OF REVOLUTIONS HIGH GEAR	NO. OF REVOLUTIONS LOW GEAR	APPROX. TIME IN OPERATING WHEN PUMPS DRAWN HIGH GEAR	APPROX. TIME IN OPERATING WHEN PUMPS DRAWN LOW GEAR
1 & 2	TO BY-PASS PURIFICATION PLANT AND TO ESTABLISH DRY WELL	CLOSED	OPEN	#1 GATE 3' DIA. #2 GATE 8' SQ.	#1 GATE 2582 #2 GATE 2688	#1 GATE 8688 #2 GATE 10288	#1 GATE 54 MIN. #2 GATE 56 MIN.	#1 GATE 4 HR. 33 MIN. #2 GATE 4 HR. 48 MIN.
3 & 4	TO SHUT OFF CLEAR WATER EFFLUENT TUNNEL FROM CLEAR WATER EFFLUENT SHAFT	OPEN	OPEN	5' WIDE × 8' HIGH	2328	11712	78 MIN.	5 HR. 25 MIN.
5	TO SHUT OFF NORTH POINT TUNNEL FROM CLEAR WATER EFFLUENT SHAFT & RIVERSIDE TUNNEL	OPEN	OPEN	8' SQUARE	2640	10560	98 MIN.	4 HR. 54 MIN.
6	TO SHUT OFF RIVERSIDE TUNNEL FROM CLEAR WATER EFFLUENT SHAFT	OPEN	OPEN	3' DIA.	2060	6480	94 MIN.	4 HR. 55 MIN.
7	TO DRAIN DRY WELL BETWEEN GATES NOS. 1 & 2 (TO SUMP PUMP)	OPEN	CLOSED	6" DIA.				
8	TO DRAIN DRY WELL BETWEEN ABANDONED RIVERSIDE TUNNEL SHUT OFF GATE AND BULKHEAD IN RAW WATER LAKE TUNNEL SHAFT	OPEN	OPEN	6" DIA				

NOTE — UNLESS OTHERWISE DIRECTED ALL GATES INCLUDED IN THE ABOVE TABLE SHALL BE IN THE POSITION AS SHOWN IN THE COLUMNS HEADED "POSITION OF GATES WHEN PURIFICATION PLANT IS IN SERVICE" OR "OUT OF SERVICE".

NOTE — NEVER OPEN OR CLOSE GATES COMPLETELY WITH THE POWER DRIVE. COMPLETE THE OPERATION IN EITHER DIRECTION BY HAND.



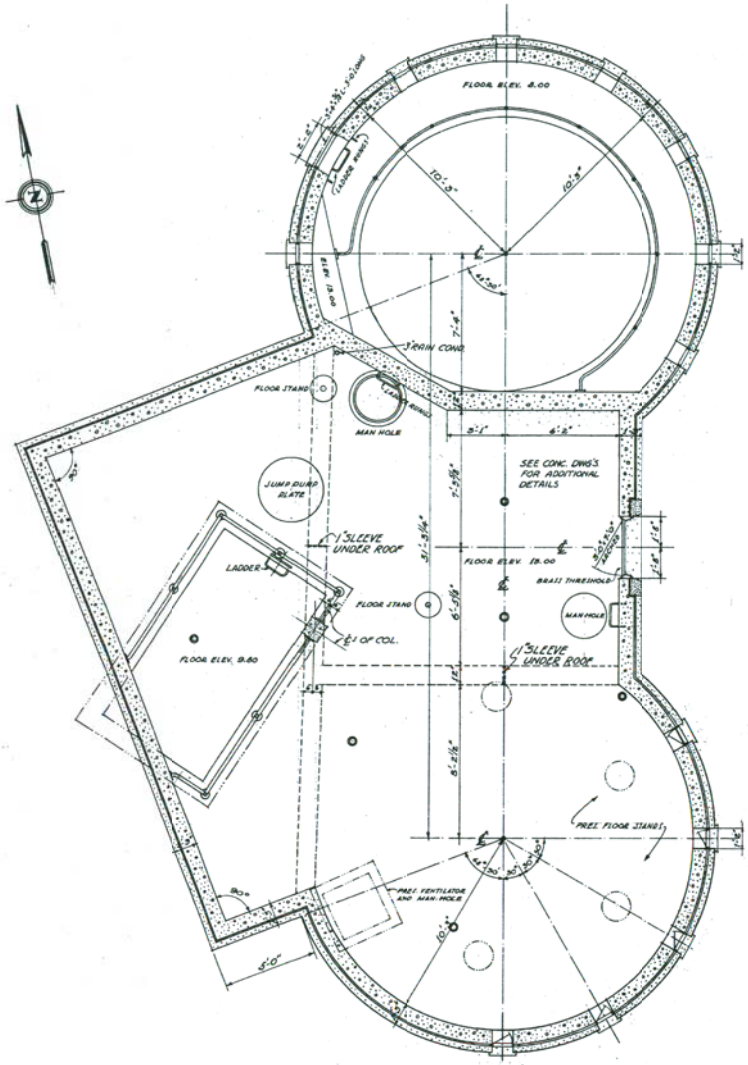
MICROFILMED 3-6-74

WATER ENGINEERING DIVISION
BUREAU OF ENGINEERS
MILWAUKEE WATER WORKS
DEPARTMENT OF PUBLIC WORKS

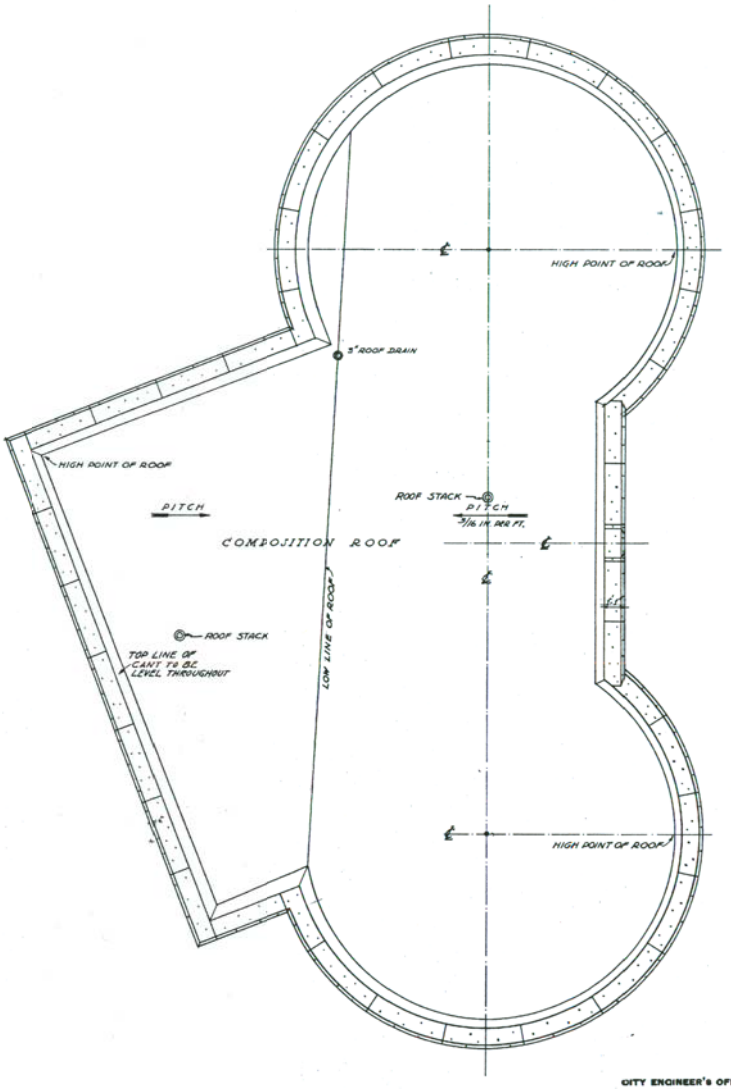
LINNWOOD PURIFICATION PLANT
GATE VALVE OPERATION - INSTRUCTIONS
GATE HOUSE

APPROVED: _____ APPROVED: _____ (SUPERVISOR OF ENGINEER)
APPROVED: _____ (PRES. DEPUTY COMMISSIONER OF PUBLIC WORKS) APPROVED: _____ (CITY ENGINEER)

DESIGNED BY: _____
DRAWN BY: _____
TRACED BY: N. F. B.
CHECKED BY: N. F. L.
DATE: 8-29-69
SCALE: 1/4" = 1'-0"
FILE 3-10-2 DRWG. WP-44-15



FLOOR PLAN



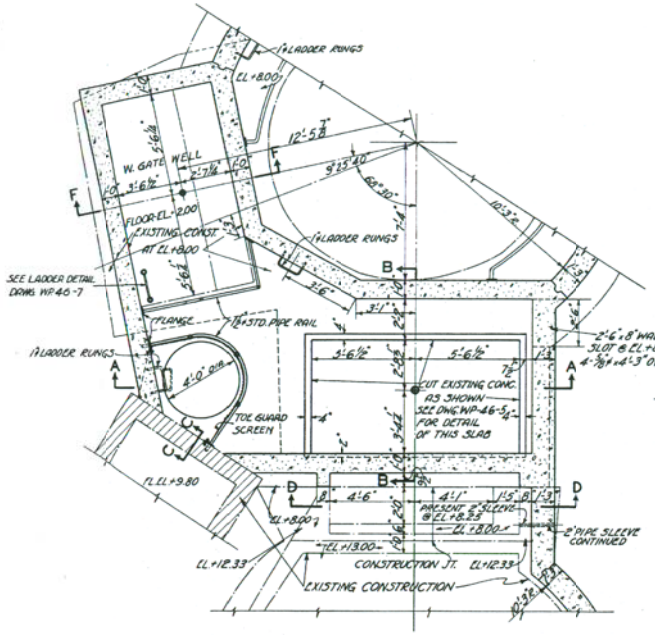
ROOF PLAN

0 5 10 15 20
SCALE IN FEET

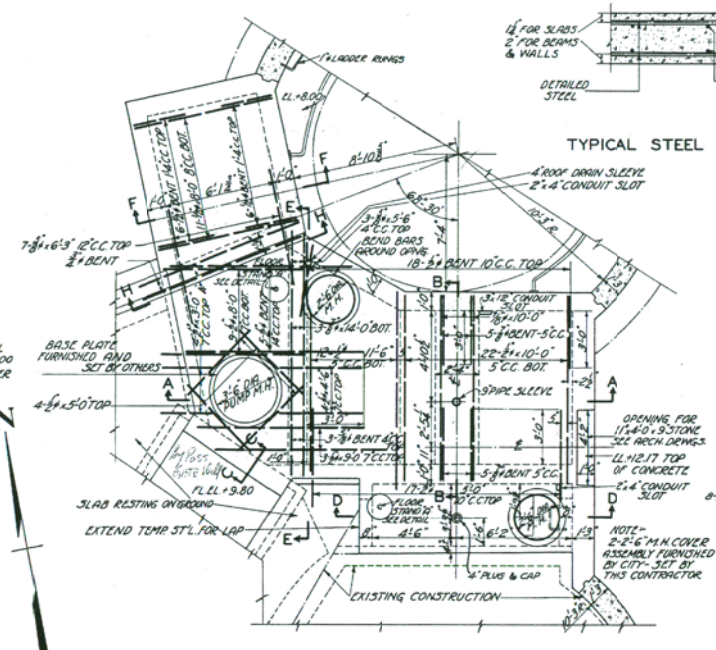
CITY ENGINEER'S OFFICE, MILWAUKEE- WIS.
MILWAUKEE WATER WORKS
WATER PURIFICATION PLANT
SHORE SHAFT HOUSE
FLOOR & ROOF PLANS

APPROVED Alfred Budick & Howard (Consulting Engineers) APPROVED Herbert H. Brown (Engineer in Charge)
APPROVED R. E. Storting (Comm. of Public Works) APPROVED J. Schwada (City Engineer)
DESIGNED BY W. W. JUDELL
DRAWN BY W. W. JUDELL
TRACED BY W. W. JUDELL
CHECKED BY M. G. FINDLEY
DATE JAN. 19, 1938
SCALE AS SHOWN
FILE 3-7-5 DRWG. WP 46-2

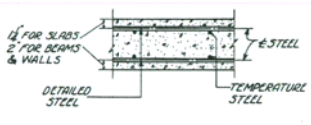
MICROFILMED 2-28-74



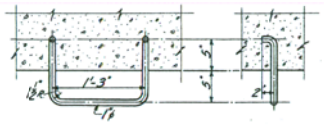
PLAN AT EL. +8.00



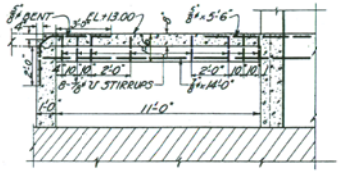
PLAN AT EL. +13.00



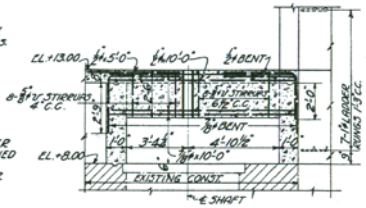
TYPICAL STEEL SPACING



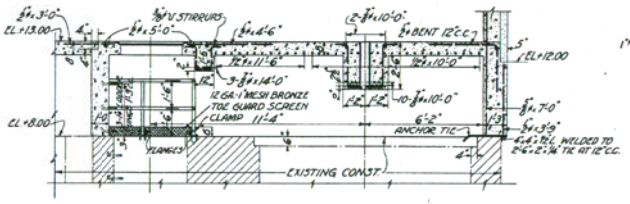
DETAIL OF LADDER RUNGS
23-REQ'D.



SECTION E-E

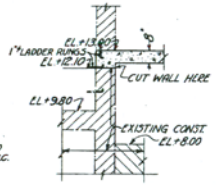


SECTION B-B

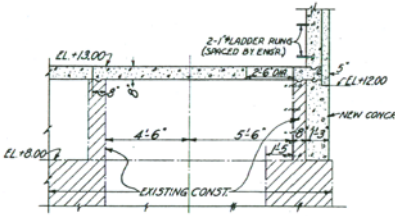


SECTION A-A

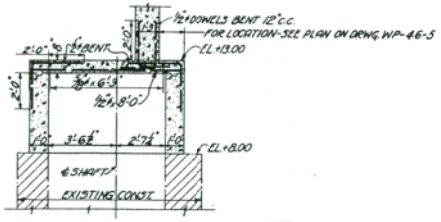
SCALE IN FEET



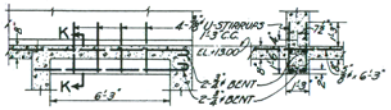
SECTION C-C



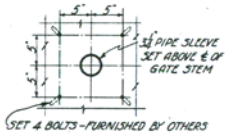
SECTION D-D



SECTION F-F



SECTION H-H SECTION K-K



FLOOR STAND "A"
SETTING DETAIL

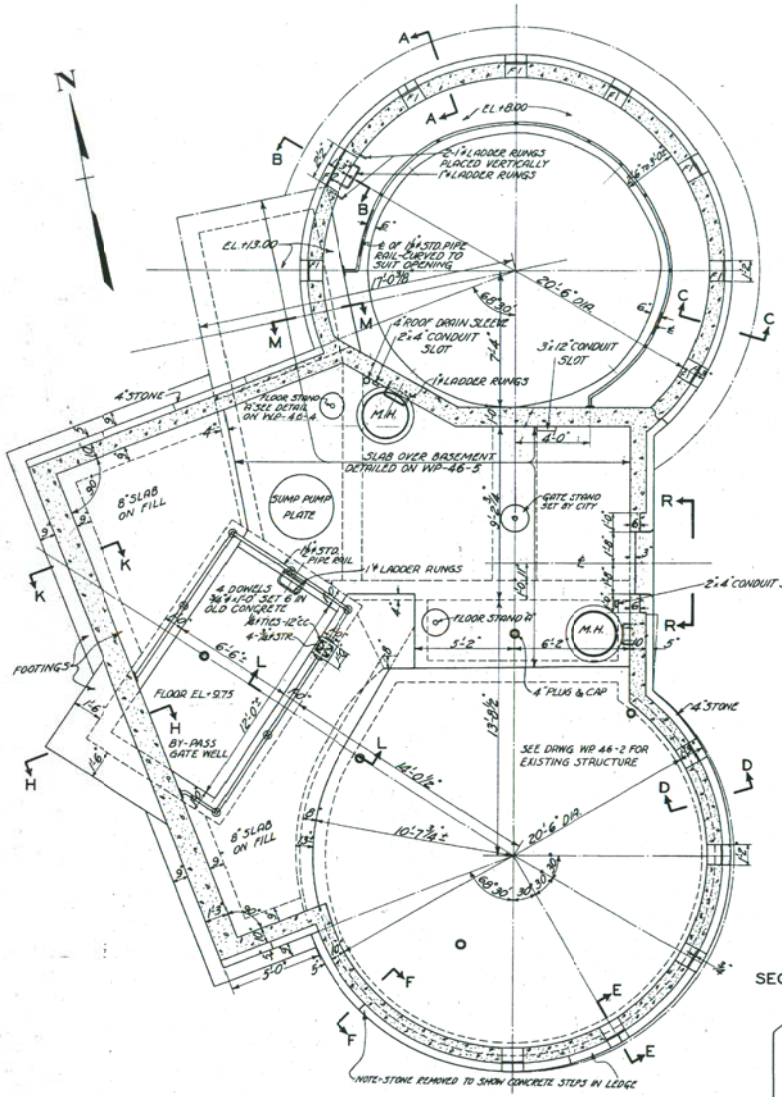
NOTE -
ALL WALLS AND SLABS - REINFORCE BOTH FACES BOTH DIRECTIONS - 0.2 x 1% OF GROSS VOLUME EACH DIRECTION WHERE NOT SHOWN.
POUR SLAB AT ELEV. +8.00 AFTER THE CITY SETS GATE STAND AT ELEV. +13.00

CITY ENGINEER'S OFFICE, MILWAUKEE - WIS.
MILWAUKEE WATER WORKS
WATER PURIFICATION PLANT
SHORE SHAFT HOUSE
BASEMENT DETAILS
SLAB AND WALLS

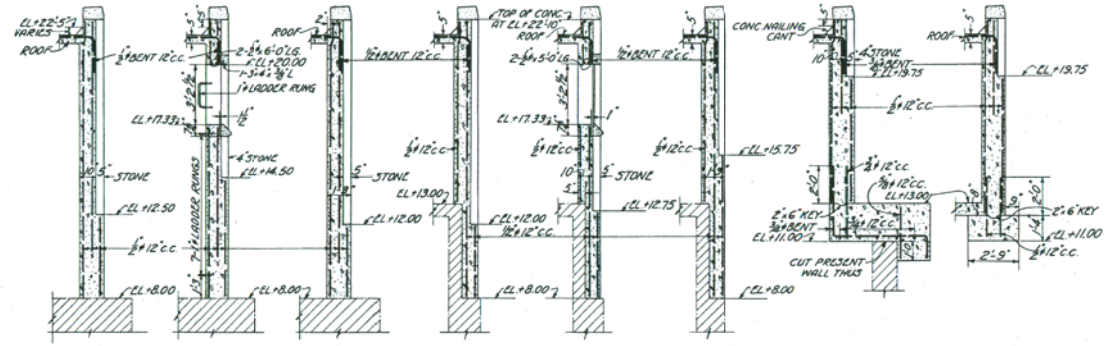
APPROVED Consulting Engineers APPROVED Engineer in Charge
APPROVED Comm. of Public Works APPROVED City Engineer

DESIGNED BY M.G. FINDLEY
DRAWN BY E.A. SCHELLIN
TRACED BY V.E. JOHNSON
CHECKED BY E.A. SCHELLIN
DATE JAN. 19, 1938
SCALE AS SHOWN
FILE 3-7-5 DRWG. WP46-4

MICROFILMED 2-13-74

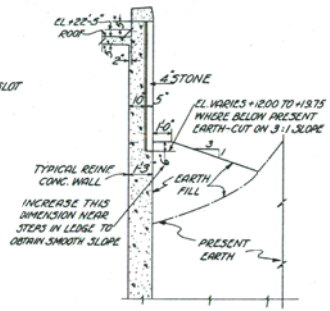


PLAN AT EL.+13.00

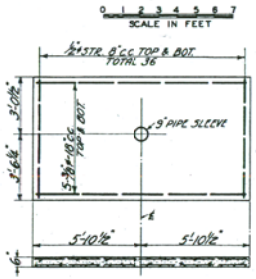


SECTION A-A B-B C-C D-D E-E F-F H-H K-K

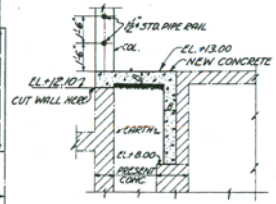
SEE DRWG. WP-46-3 FOR ELEVATIONS OF ALL LEDGES



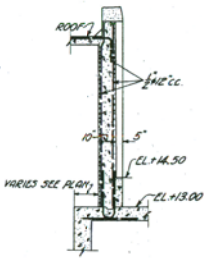
TYPICAL SECTION
SHOWING FILL



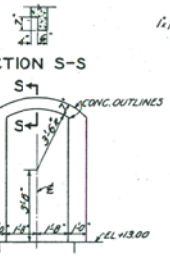
SLAB AT EL.+8.00



SECTION L-L

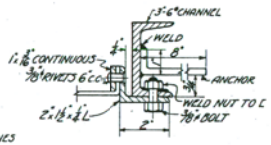


SECTION M-M



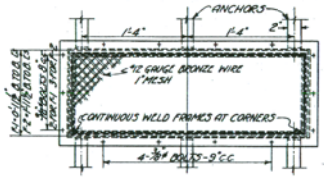
SECTION S-S

ELEVATION R-R

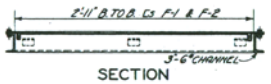


TYPICAL BOLT DETAIL

NOTE-
ALL WALLS AND SLABS-REINFORCE BOTH FACES BOTH DIRECTIONS -0.2x1% OF GROSS VOLUME EACH DIRECTION WHERE NOT SHOWN.
FASTEN HAND RAILS TO EXISTING CONCRETE WITH EXPANSION BOLTS.



PLAN



SECTION

WINDOW FRAME & GRATING

7-REQUIRED F-1
1-REQUIRED F-2

MICROFILMED 2-23-74

CITY ENGINEER'S OFFICE, MILWAUKEE, WIS.
MILWAUKEE WATER WORKS

WATER PURIFICATION PLANT

SHORE SHAFT HOUSE

WALLS AND FOOTINGS

AND SLAB ON FILL

APPROVED Consulting Engineers — APPROVED Chief Engineer

APPROVED Gen. Supt. Water Works — APPROVED City Engineer

DESIGNED BY M.G. FINDLEY
DRAWN BY E.A. SCHELLIN
TRACED BY J.C. JOHNSON
CHECKED BY E.A. SCHELLIN

DATE JAN. 19, 1938
SCALE AS SHOWN

FILE 3-7-5 DRWG. WP 46-5