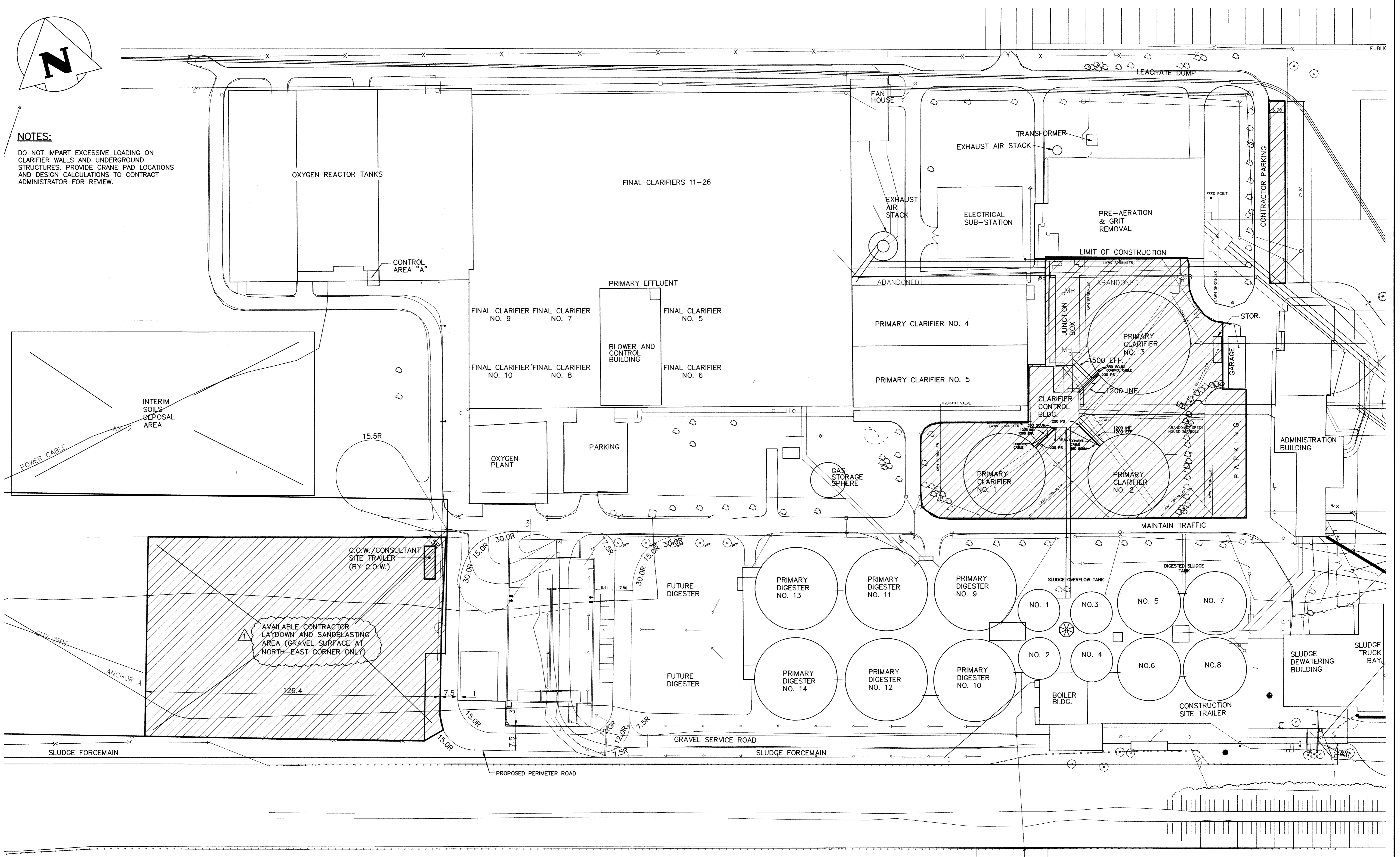


NOTES:

DO NOT IMPART EXCESSIVE LOADING ON CLARIFIER WALLS AND UNDERGROUND STRUCTURES. PROVIDE CRANE PAD LOCATIONS AND DESIGN CALCULATIONS TO CONTRACT ADMINISTRATOR FOR REVIEW.



COWLEGGEND

AS-CONSTRUCTED			
AS-CONSTRUCTED DRAWING REVISIONS ARE BASED SOLELY ON DRAWING MARKUPS OR OTHER FIELD DOCUMENTATION PROVIDED BY THE OWNER. THESE CHANGES HAVE NOT BEEN VERIFIED IN THE FIELD BY KGS GROUP.			
NO.	REVISIONS	DATE	BY
2	ISSUED AS CONSTRUCTED	06/04/10	RJL
1	ISSUED FOR ADDENDUM	05/03/08	RJL
0	ISSUED FOR TENDER	13/02/08	RJL

B.M. ELEV.			

KGS GROUP
CONSULTING ENGINEERS & PROJECT MANAGERS

DESIGNED BY: **RJL**
DRAWN BY: **MB**

HOR. SCALE: 1:750
VERTICAL: .

DATE: **-/12/07**

CH2MHILL

ENGINEER'S SEAL

DESIGNED BY: **RJL**
CHECKED BY: **RJL**
APPROVED BY: _____
RELEASED FOR CONSTRUCTION: _____
DATE: _____

THE ORIGINAL ISSUE REV. 0 WAS STAMPED, DATED AND SIGNED R.J. LONG, P.ENG. 13/02/08

CONSULTANT DRAWING NO. **1-0101P-C0001-001**

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

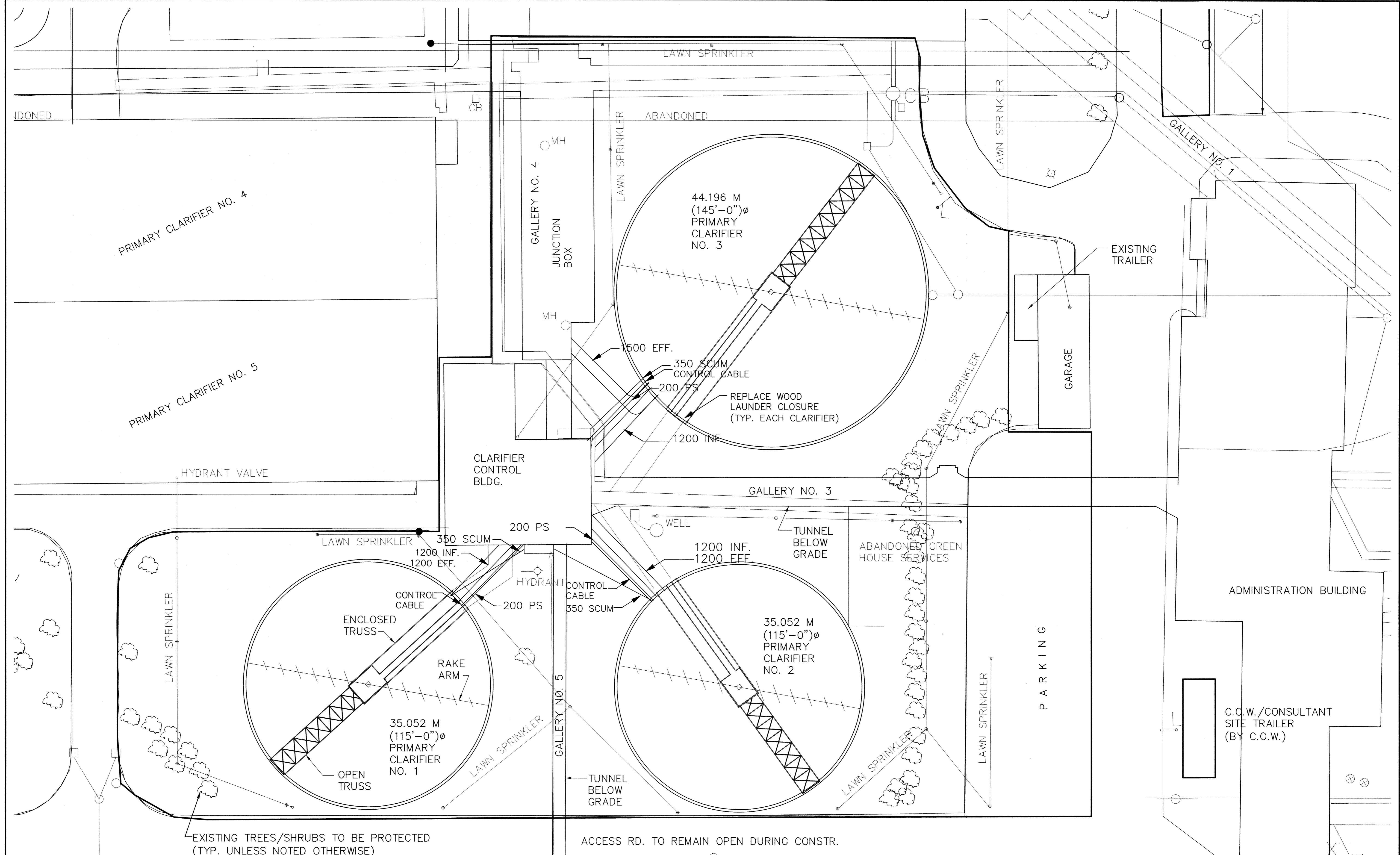
Winnipeg

PROJECT TITLE: **NORTH END WATER POLLUTION CONTROL CENTRE PARTIAL SITE PLAN**

SHEET **01** OF **01**

KGS JOB NUMBER: **06-0107-03**

CITY DRAWING NUMBER: **1-0101P-C0001-001**



NOTES:

- DO NOT IMPART EXCESSIVE LOADING ON CLARIFIER WALLS AND UNDERGROUND STRUCTURES. PROVIDE CRANE PAD LOCATIONS AND DESIGN CALCULATIONS TO CONTRACT ADMINISTRATOR FOR REVIEW 2 WEEKS PRIOR TO POSITIONING CRANE.
- RESTORE SOD, ASPHALT, TREES, SHRUBS, SPRINKLER SYSTEM, ETC. TO EXISTING CONDITION SUBSEQUENT TO THE COMPLETION OF CONSTRUCTION.
- PROVIDE 100 MM HOUSEKEEPING PADS FOR NEW EXHAUST FANS - REF. MECHANICAL DRAWINGS M0001 AND M0002.
- REFERENCE MECHANICAL DRAWING M0004 FOR NEW ROOF TOP AIR CONDITIONING UNIT. RESIZE ROOF OPENING TO SUIT.
- IF ANY CLARIFIER IS EMPTY BETWEEN NOV.1 AND MARCH 30, THE CLARIFIER SHALL BE HOARDED AND HEATED TO MAINTAIN A TEMPERATURE WITHIN THE CLARIFIER OF NOT LESS THAN 10° C.

COWLEGGEND

AS-CONSTRUCTED

AS-CONSTRUCTED DRAWING REVISIONS ARE BASED SOLELY ON DRAWING MARKUPS OR OTHER FIELD DOCUMENTATION PROVIDED BY THE OWNER. THESE CHANGES HAVE NOT BEEN VERIFIED IN THE FIELD BY KGS GROUP.

NO.	REVISIONS	DATE	BY
1	ISSUED AS CONSTRUCTED	06/04/10	RJL
0	ISSUED FOR TENDER	13/02/08	RJL

KGS GROUP
CONSULTING ENGINEERS & PROJECT MANAGERS

DESIGNED BY: RJL
DRAWN BY: MB

HOR. SCALE: 1:250
VERTICAL: .

RELEASED FOR CONSTRUCTION: -/12/07

CH2MHILL

ENGINEER'S SEAL

THE ORIGINAL ISSUE REV. 0 WAS STAMPED, DATED AND SIGNED R.J. LONG, P.ENG. 13/02/08

CONSULTANT DRAWING NO. 1-0101P-C0002-001

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

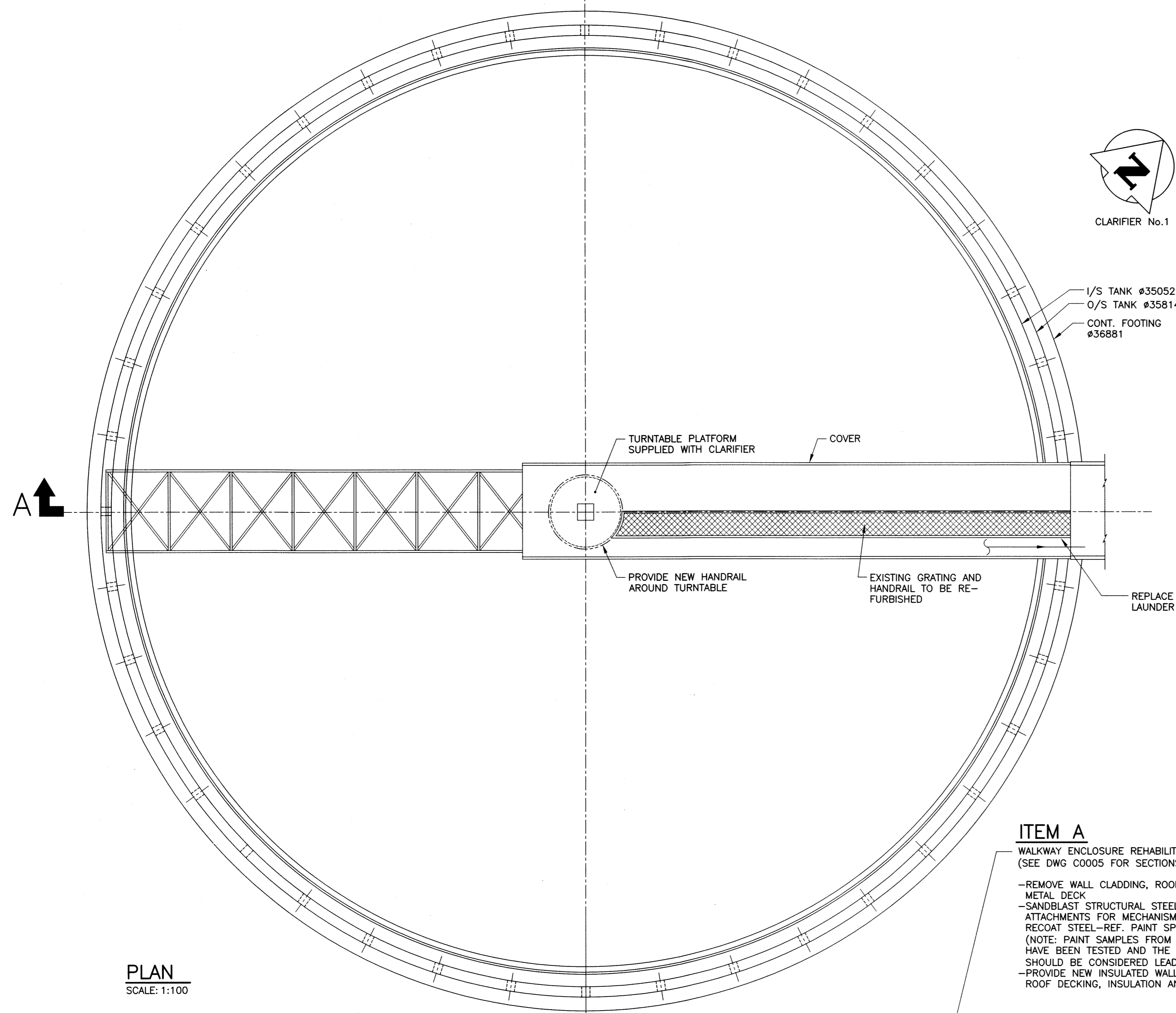
Winnipeg

PROJECT TITLE: NORTH END WATER POLLUTION CONTROL CENTRE PRIMARY CLARIFIERS SITE PLAN

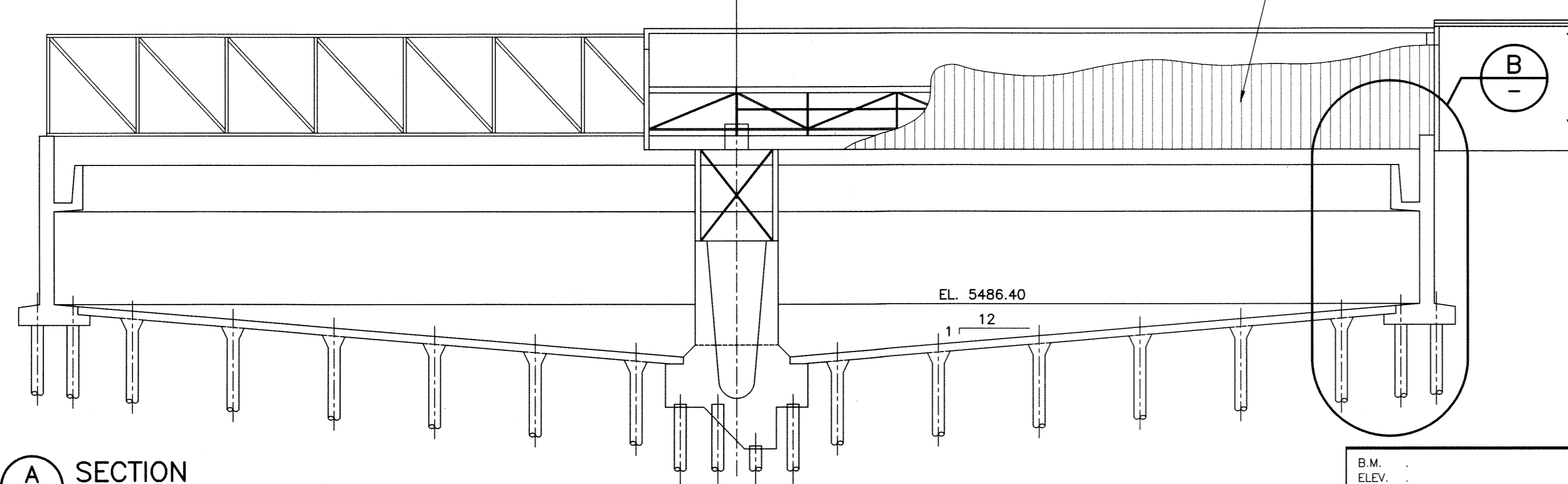
SHEET 01 OF 01

KGS JOB NUMBER 06-0107-03

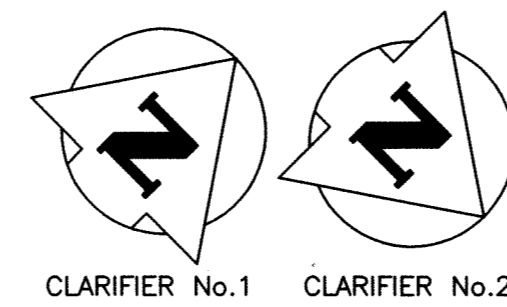
CITY DRAWING NUMBER 1-0101P-C0002-001



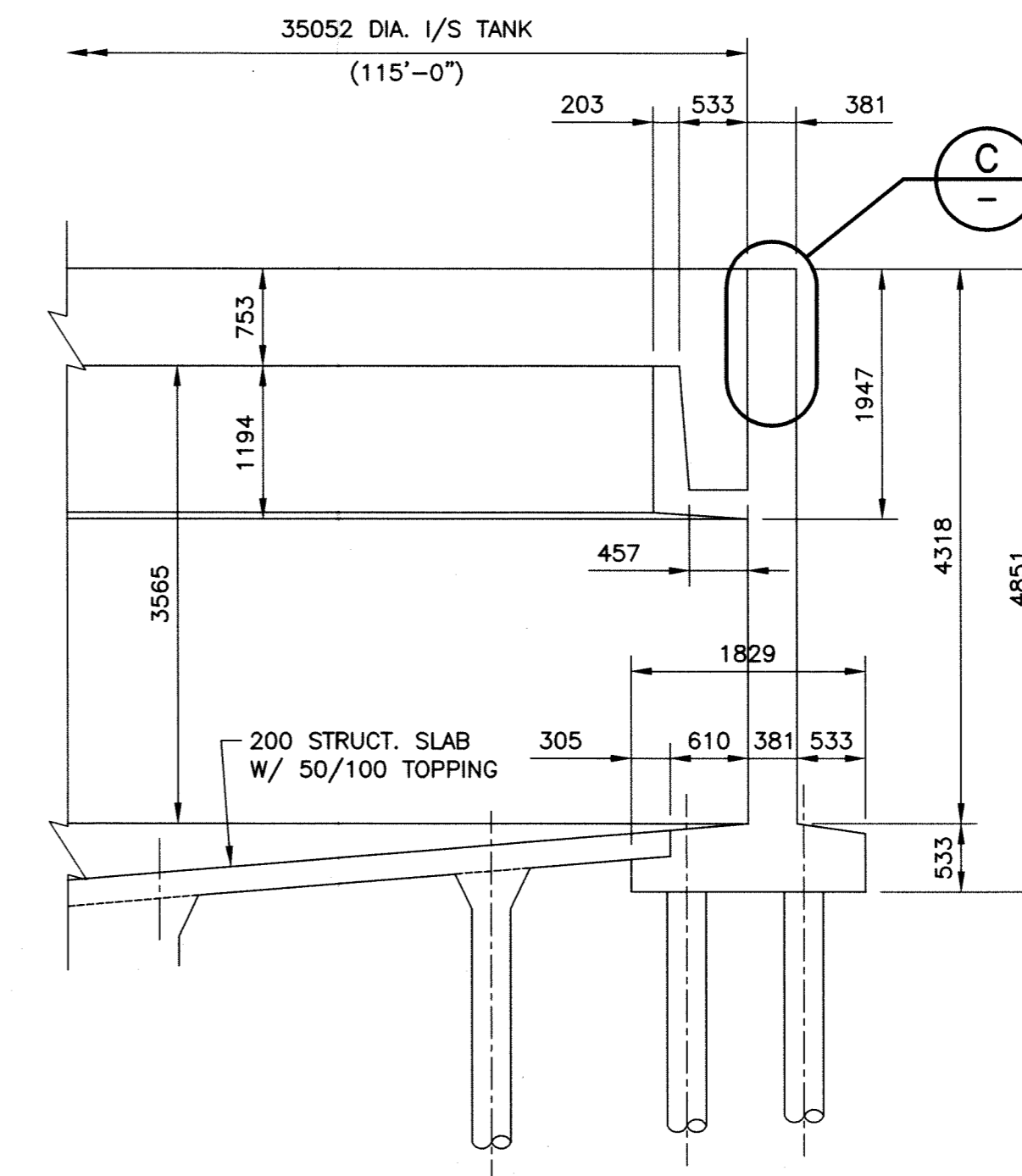
PLAN
SCALE: 1:100



A SECTION
SCALE: 1:100



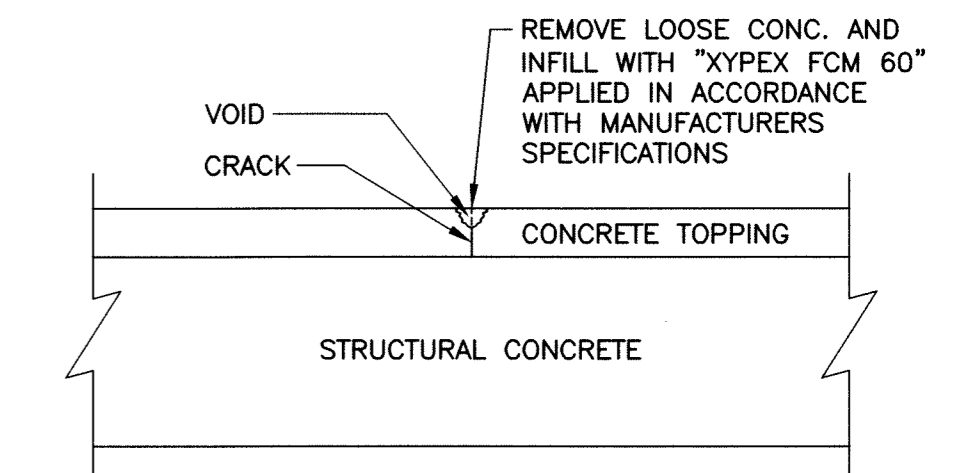
CLARIFIER No.1 CLARIFIER No.2



B DETAIL
SCALE: 1:50

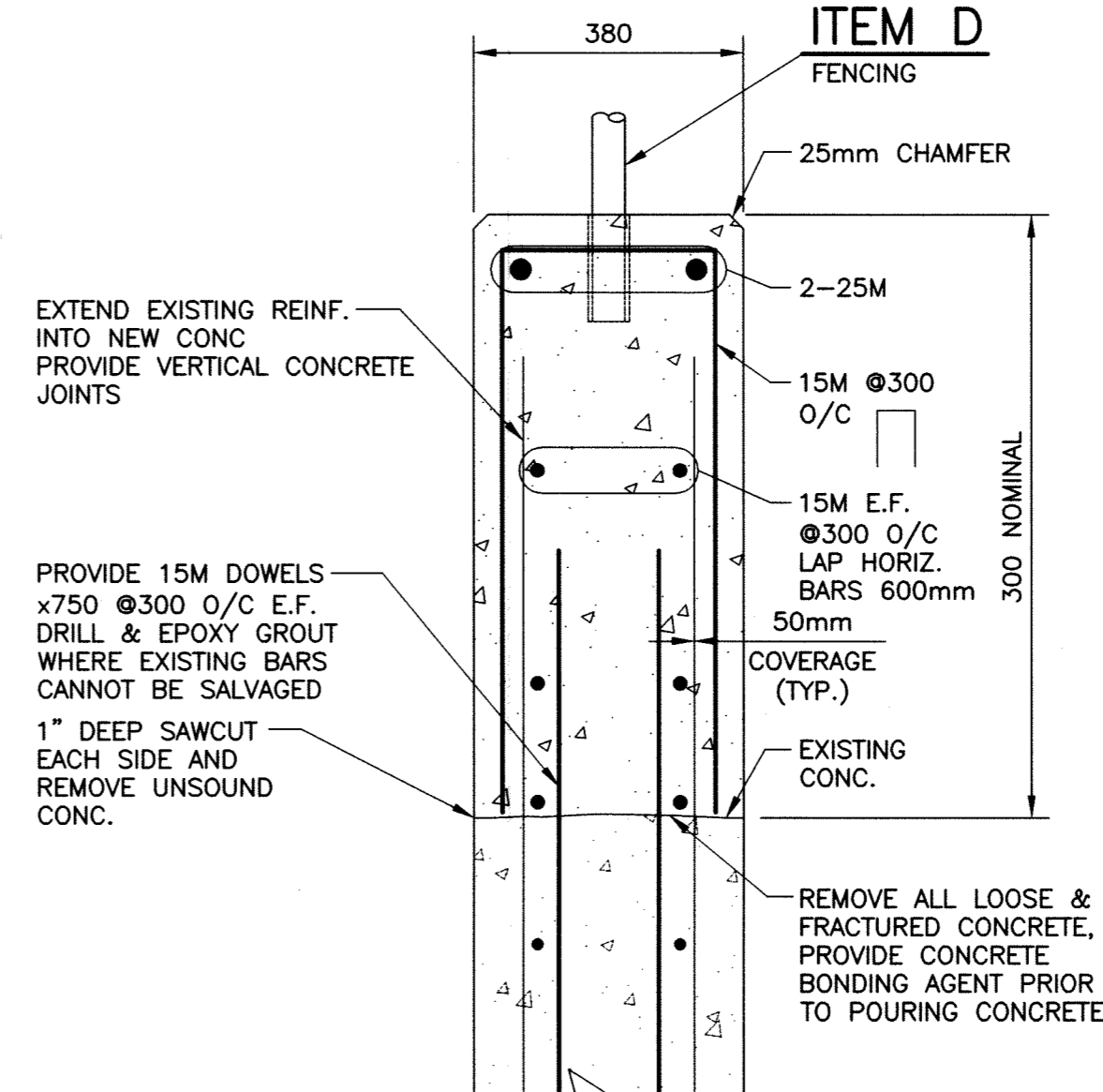
SCOPE OF REMEDIAL WORK:

- A. WALKWAY ENCLOSURE REHABILITATION
- B. TOP OF WALL CONCRETE REPAIR
- C. FLOOR CRACK REPAIR
- D. SUPPLY AND INSTALL NEW CLARIFIER FENCING.

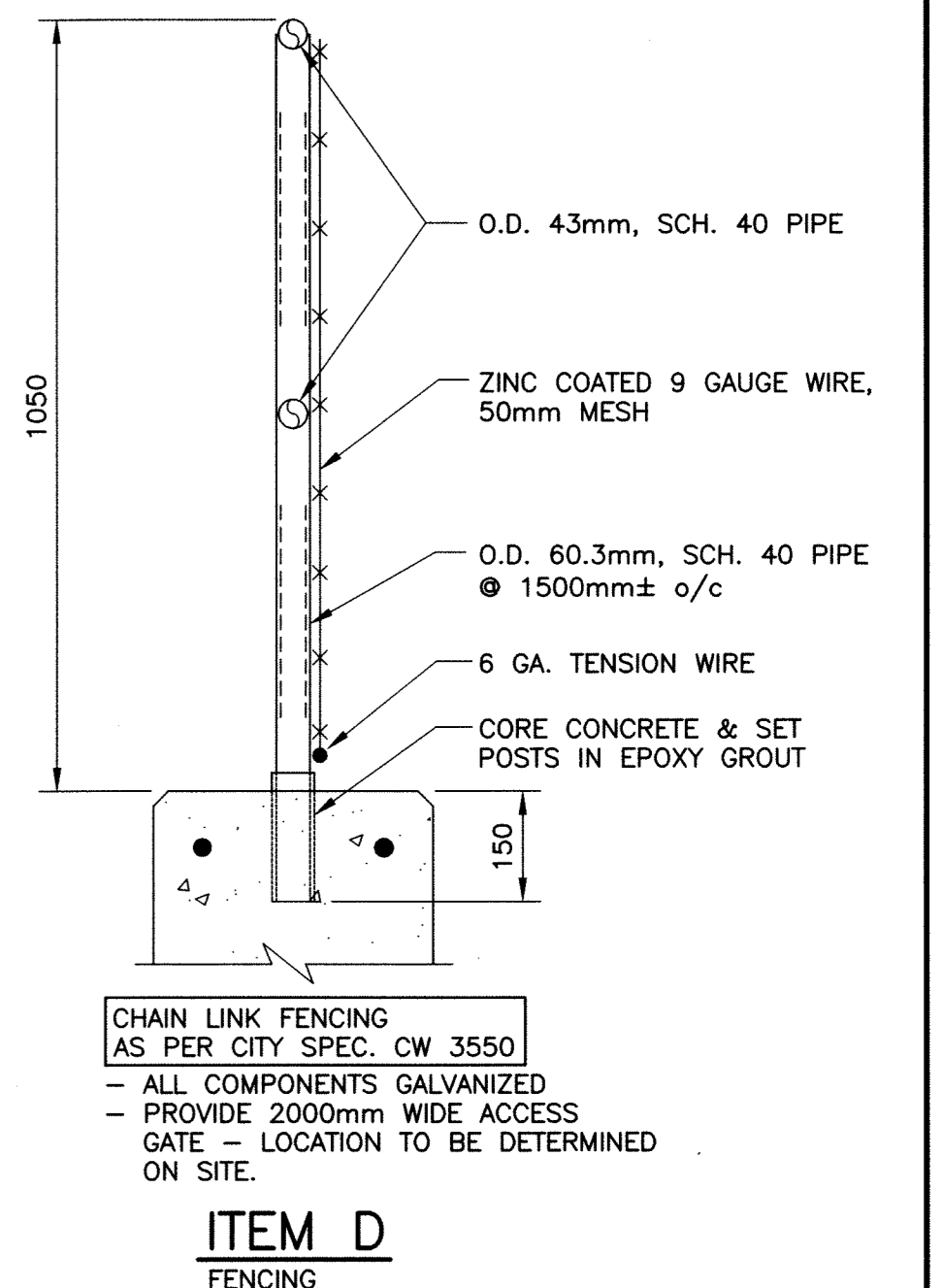


ITEM C FLOOR CRACK REPAIR DETAIL
SCALE: 1:10

- ITEM A**
WALKWAY ENCLOSURE REHABILITATION (SEE DWG C0005 FOR SECTIONS AND DETAILS)
- REMOVE WALL CLADDING, ROOFING AND ROOF METAL DECK
 - SANDBLAST STRUCTURAL STEEL, PROVIDE NEW ATTACHMENTS FOR MECHANISM AS REQUIRED, RECOAT STEEL-REF. PAINT SPEC. SECTION 099719 (NOTE: PAINT SAMPLES FROM TRUSS MEMBERS SHOULD BE CONSIDERED LEAD BASED)
 - PROVIDE NEW INSULATED WALL PANELS AND ROOF DECKING, INSULATION AND MEMBRANE



ITEM B. CONC. REPAIR DETAIL
SCALE: 1:10



ITEM D FENCING

AS-CONSTRUCTED

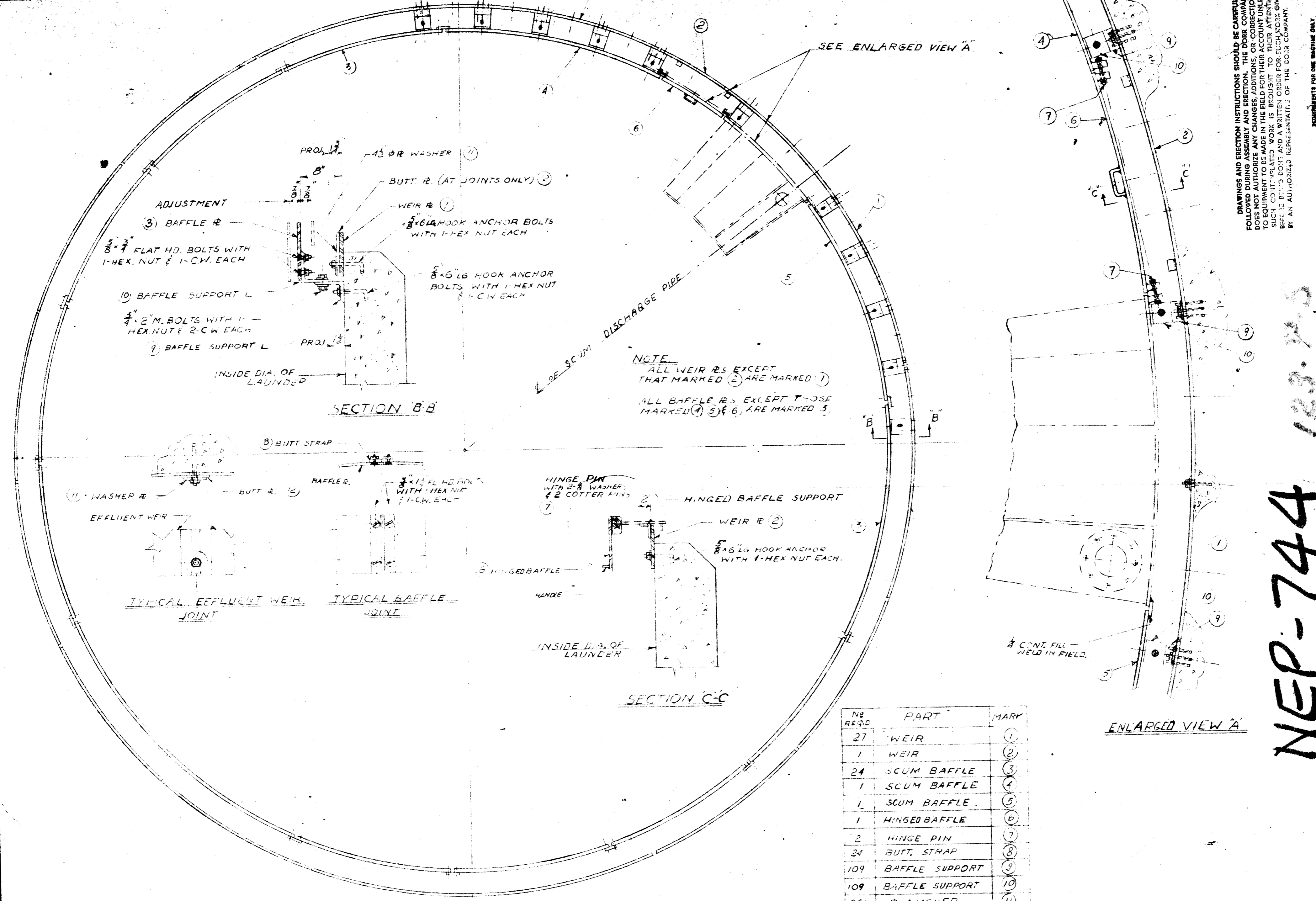
AS-CONSTRUCTED DRAWING REVISIONS ARE BASED SOLELY ON DRAWING MARKUPS OR OTHER FIELD DOCUMENTATION PROVIDED BY THE OWNER. THESE CHANGES HAVE NOT BEEN VERIFIED IN THE FIELD BY KGS GROUP.

NO.	REVISIONS	DATE	BY
1	ISSUED AS CONSTRUCTED	06/04/10	RJL
0	ISSUED FOR TENDER	13/02/08	RJL

KGS GROUP CONSULTING ENGINEERS & PROJECT MANAGERS		CH2MHILL	
DESIGNED BY: RJL	CHECKED BY: RJL	ENGINEER'S SEAL	
DRAWN BY: JG/MB	APPROVED BY:	THE ORIGINAL ISSUE REV. 0 WAS STAMPED, DATED AND SIGNED R.J. LONG, P.ENG. 13/02/08	
HOR. SCALE: AS SHOWN	RELEASED FOR CONSTRUCTION:	CONSULTANT DRAWING NO. 1-0101P-C0003-001	
VERTICAL:	DATE: 08/06		

THE CITY OF WINNIPEG WATER AND WASTE DEPARTMENT		PROJECT TITLE	
NORTH END WATER POLLUTION CONTROL CENTRE		SHEET 01 OF 01	
PRIMARY CLARIFIERS 1 & 2		KGS JOB NUMBER 06-0107-03	
CONCRETE & WALKWAY ENCLOSURE REMEDIAL WORK		CITY DRAWING NUMBER 1-0101P-C0003-001	

COWLEGEND



NOTE
 ALL WEIR #S EXCEPT THAT MARKED (2) ARE MARKED (1)
 ALL BAFFLE #S EXCEPT THOSE MARKED (4), (5) & (6), ARE MARKED (3)

NO. REQD	PART	MARK
27	WEIR	(1)
1	WEIR	(2)
24	SCUM BAFFLE	(3)
1	SCUM BAFFLE	(4)
1	SCUM BAFFLE	(5)
1	HINGED BAFFLE	(6)
2	HINGE PIN	(7)
24	BUTT STRAP	(8)
109	BAFFLE SUPPORT	(9)
109	BAFFLE SUPPORT	(10)
23	R. WASHER	(11)
28	BUTT R.	(12)
109	3/4" x 2" LG. M. BOLTS WITH 1-HEX NUT & 2 CH. EA.	
208	3/4" x 1 1/2" FLAT HD. M. BOLTS WITH 1-HEX NUT & 2 CH. EA.	
100	3/4" x 1 1/2" FLAT HD. M. BOLTS WITH 1-HEX NUT & 2 CH. EA.	

DRAWINGS AND ERECTION INSTRUCTIONS SHOULD BE CAREFULLY FOLLOWED DURING ASSEMBLY AND ERECTION. THE DORR COMPANY DOES NOT AUTHORIZE ANY CHANGES, ADDITIONS, OR CORRECTIONS TO EQUIPMENT TO BE MADE IN THE FIELD FOR THEIR EQUIPMENT UNLESS SUCH CORRECTED WORK IS BROUGHT TO THEIR ATTENTION BEFORE BEING DONE AND A WRITTEN ORDER FOR SUCH WORK GIVEN BY AN AUTHORIZED REPRESENTATIVE OF THE DORR COMPANY.

NEP-744

183.745

THE DORR COMPANY
 ENGINEERS
 ENGINEERING DEPARTMENT STAMFORD, CONN.

TITLE: THE DORR CLABIER
 1450" DIA. x 12'0" SAND
 WEIR & SCUM BAFFLE ERECT DWG

DATE: JUN 26 1953
 SHEET NO. 28623
 ORDER NO. 34205

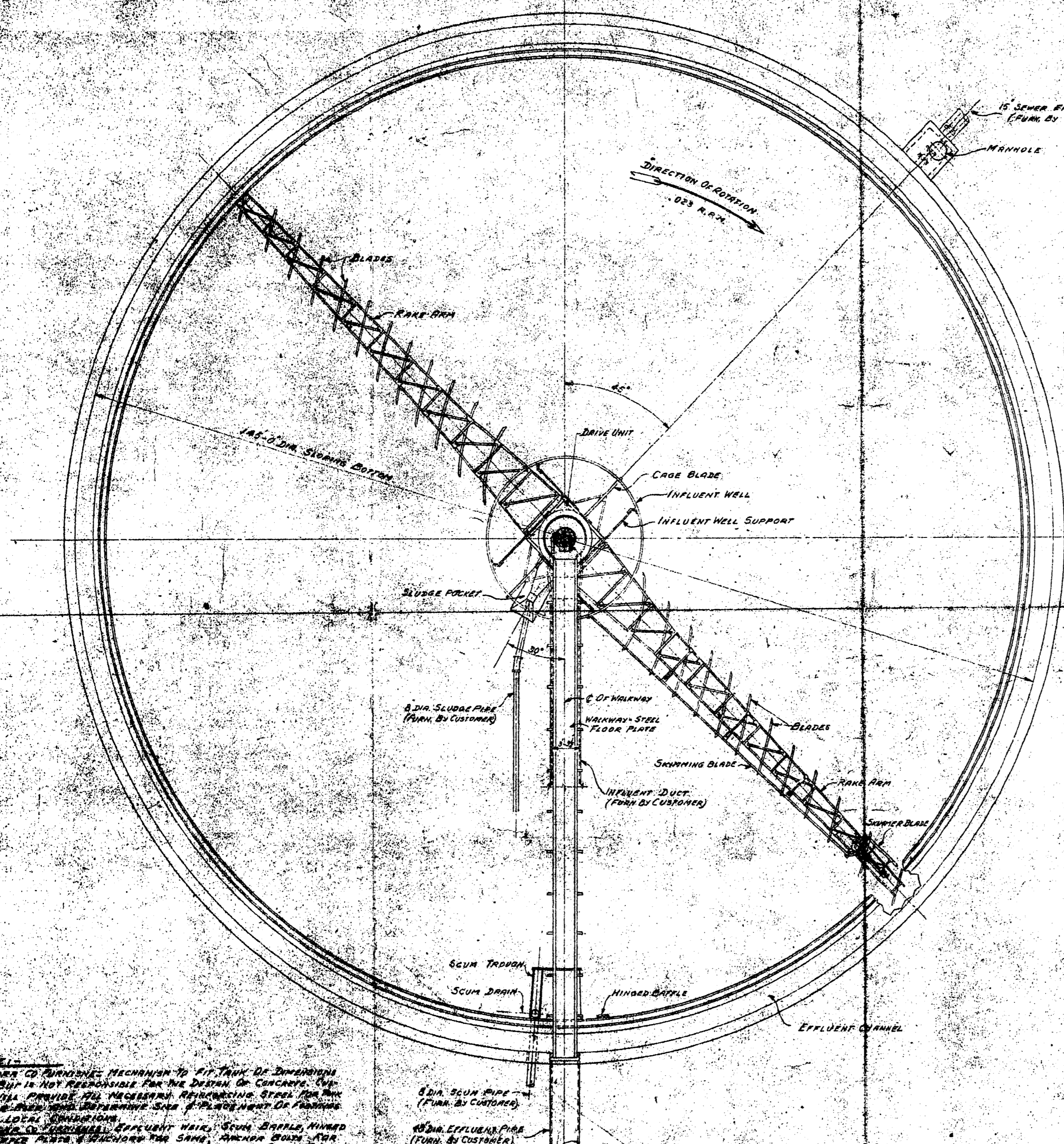
REVISIONS

NO.	DESCRIPTION	DATE	BY

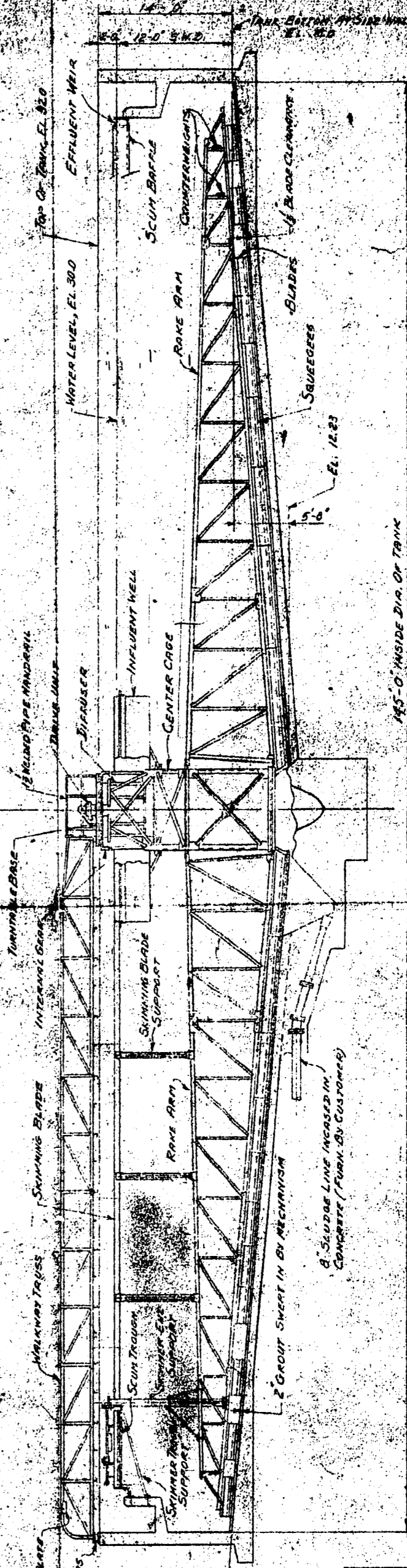
SENT TO: DENVER 426-53 MADE FROM: 34205

REF. OF DRAWING NO. 126-P-5
 DETAILS 145' DIA. GENERAL DWS. CLARIFIER

NEP-747



PLAN



SECTIONAL ELEVATION

NOTES:
 THE DORR CO. FURNISHES MECHANISM TO FIT TRUCK OR DIMENSIONAL
 OWNER, BUT IS NOT RESPONSIBLE FOR THE DESIGN OF CONCRETE. THE
 OWNER WILL PROVIDE THE NECESSARY REINFORCING STEEL FOR THE
 CENTER CAGE AND RAKE ARM. SEE P. 1-PLANS FOR THE
 TO SUIT LOCAL CONDITIONS.
 THE DORR CO. FURNISHES EFFLUENT WEIR, SCUM TRAP, HINGED
 SCUM TRAP, SCUM DRAIN, SCUM TRAP, SCUM TRAP, SCUM TRAP, SCUM TRAP,
 CENTER SUPPORT, RAKE ARM BOLTS AND WALKWAYS, SCUM TRAP
 AND BOLTS.
 THE DORR CO. DOES NOT FURNISH PIPING, GROUT, CONCRETE,
 DIE OR LUBRICANTS, LUBRICATION, WIRING OR CONDUITS, OR OTHER
 METAL, COUPLERS & BEARINGS, OR ANY ELECTRICAL EQUIPMENT
 EXCEPT AS SPECIFIED ON THIS DRAWING.

8" DIA. SCUM PIPE
 (FURN. BY CUSTOMER)
 15" DIA. EFFLUENT PIPE
 (FURN. BY CUSTOMER)

126-P-5

MICROFILMED APR 10 1978

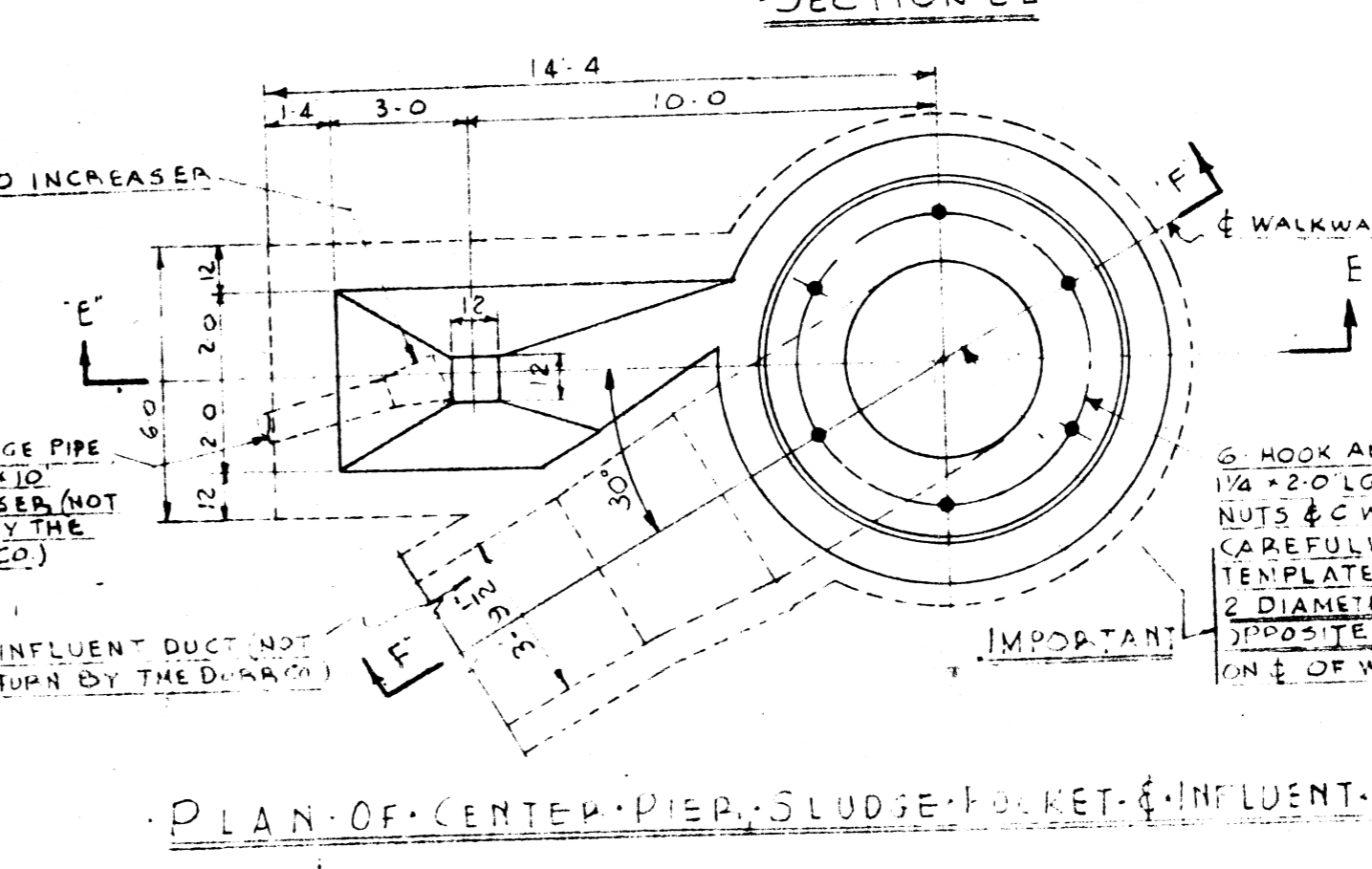
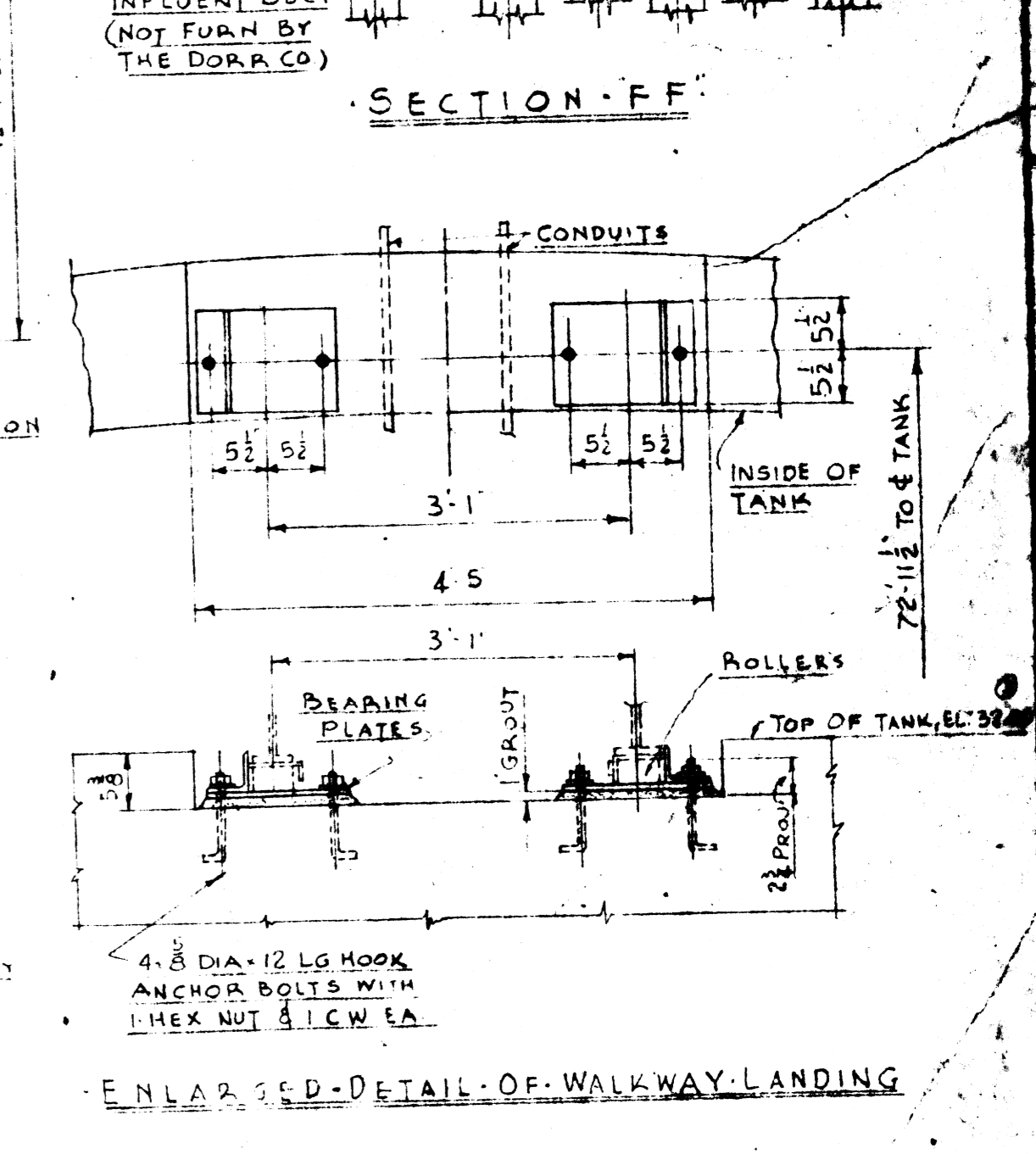
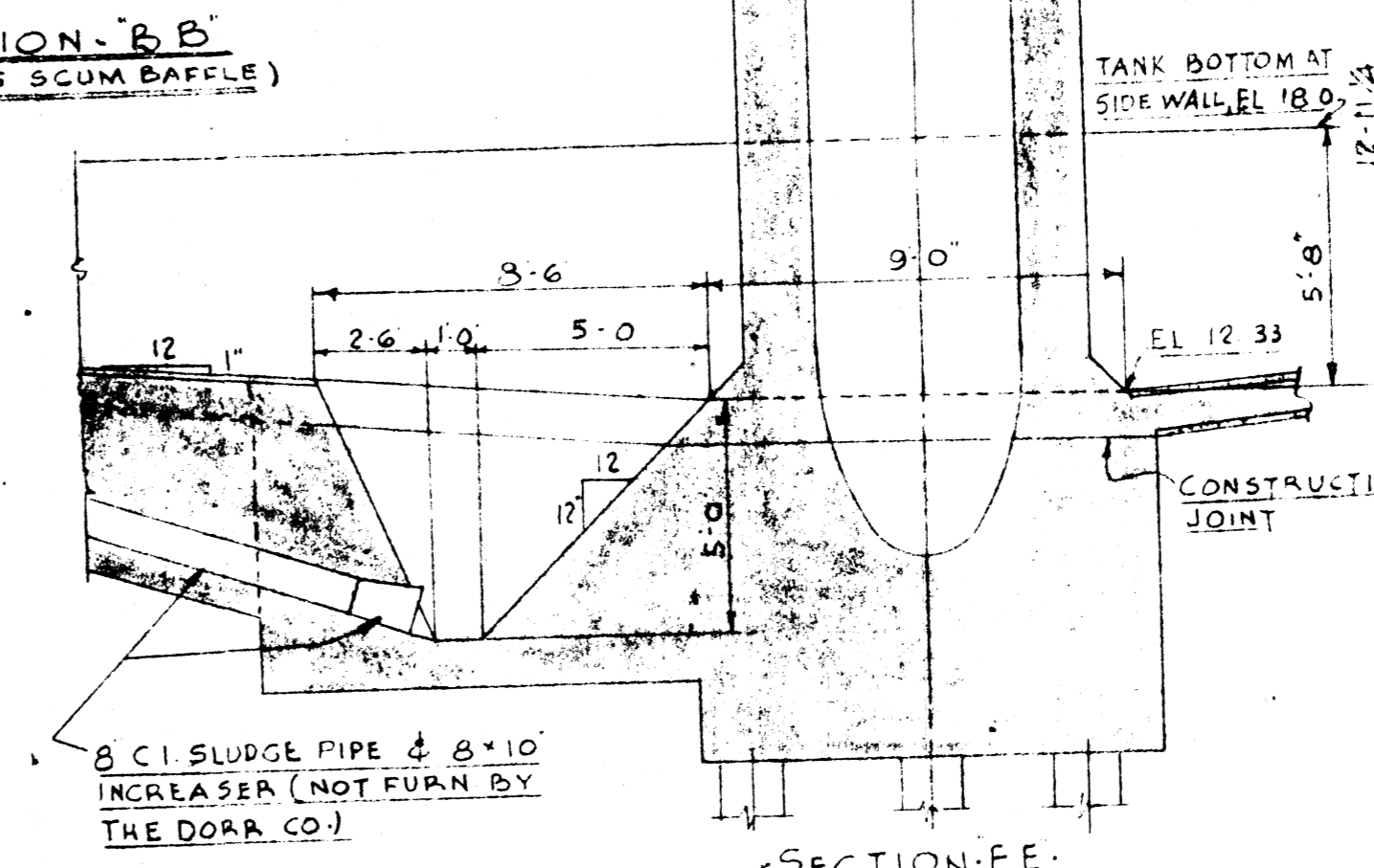
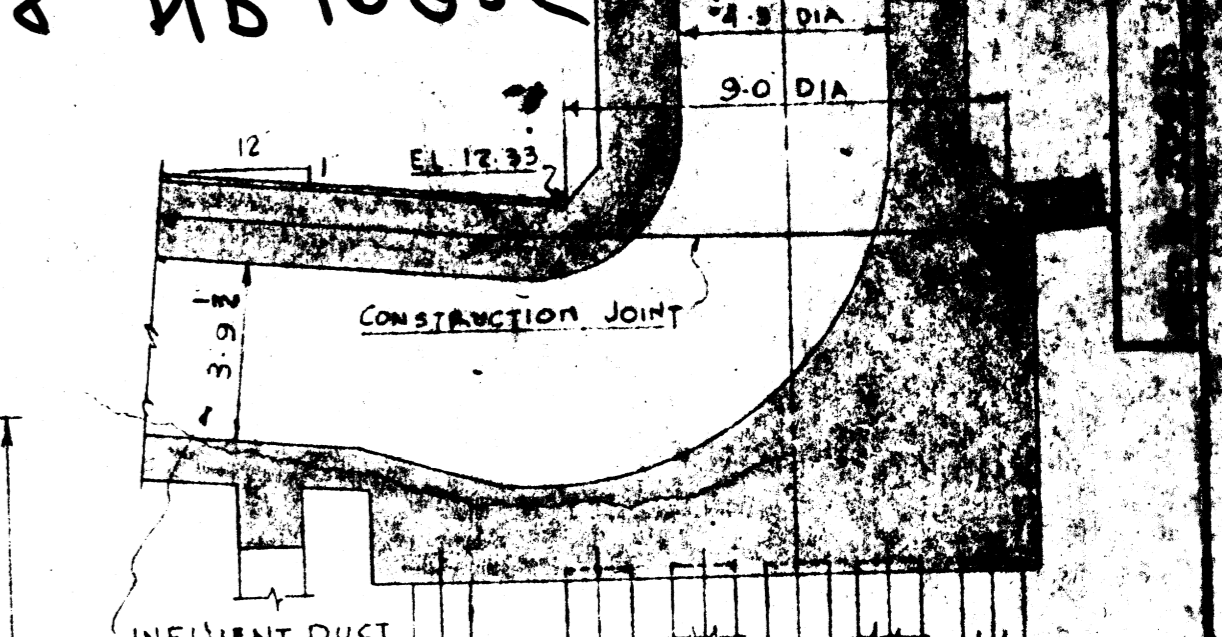
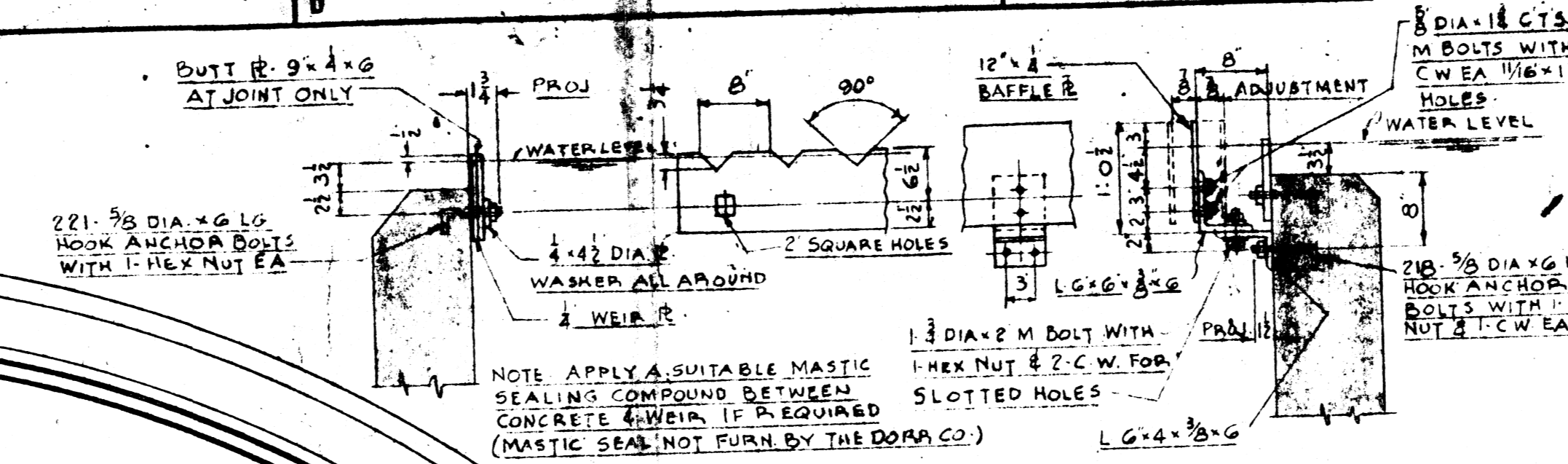
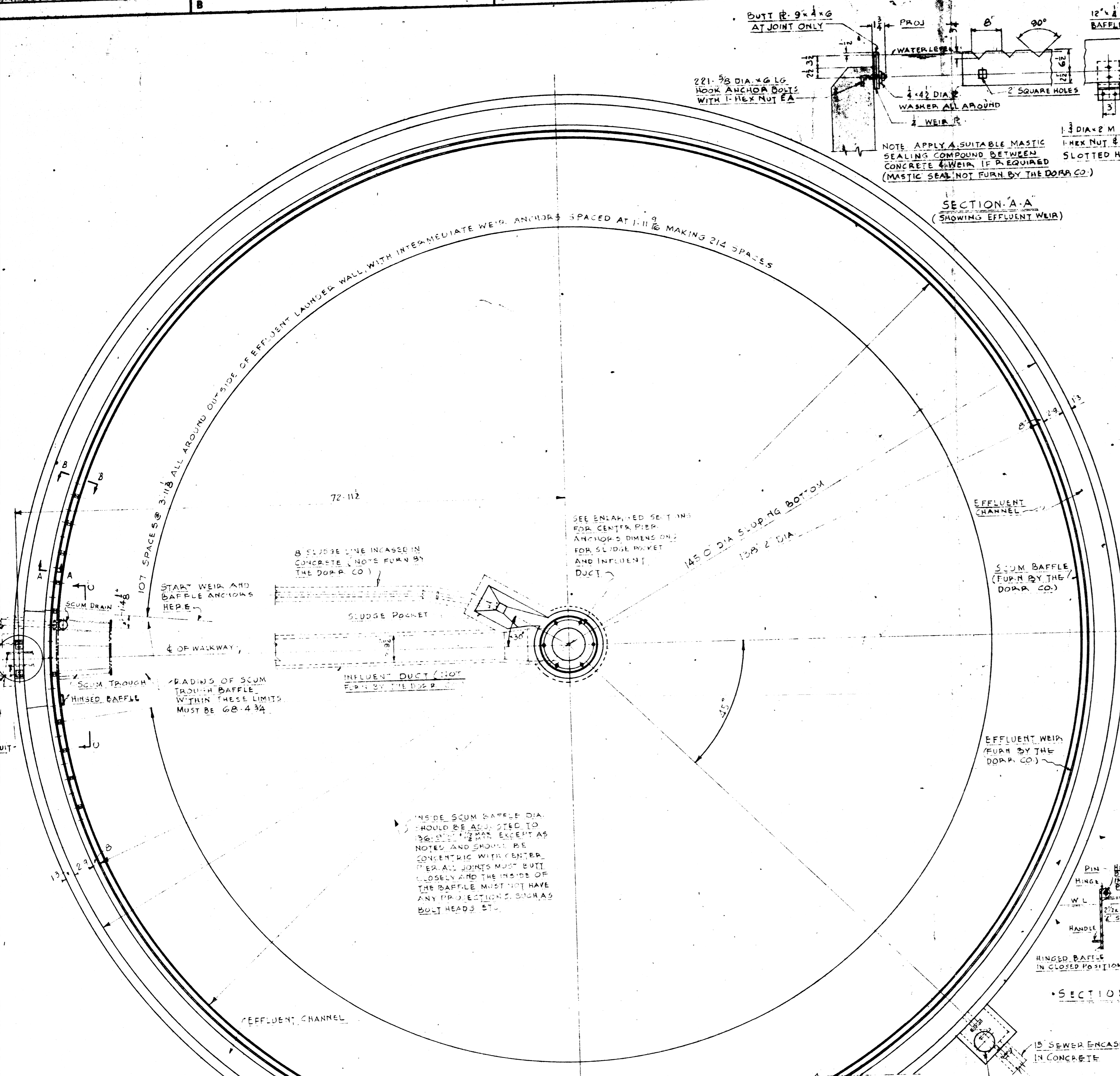
PATENTED

NEP-747

REVISIONS				DATE		BY		TITLE		DRAWN BY		CHECKED BY	

THE DORR COMPANY
 ENGINEERS
 145' DIA. 12'-0" S.W.D.
 GENERAL DRAWING
 APR 17 1953
 3071

MEB J48 NB 10392



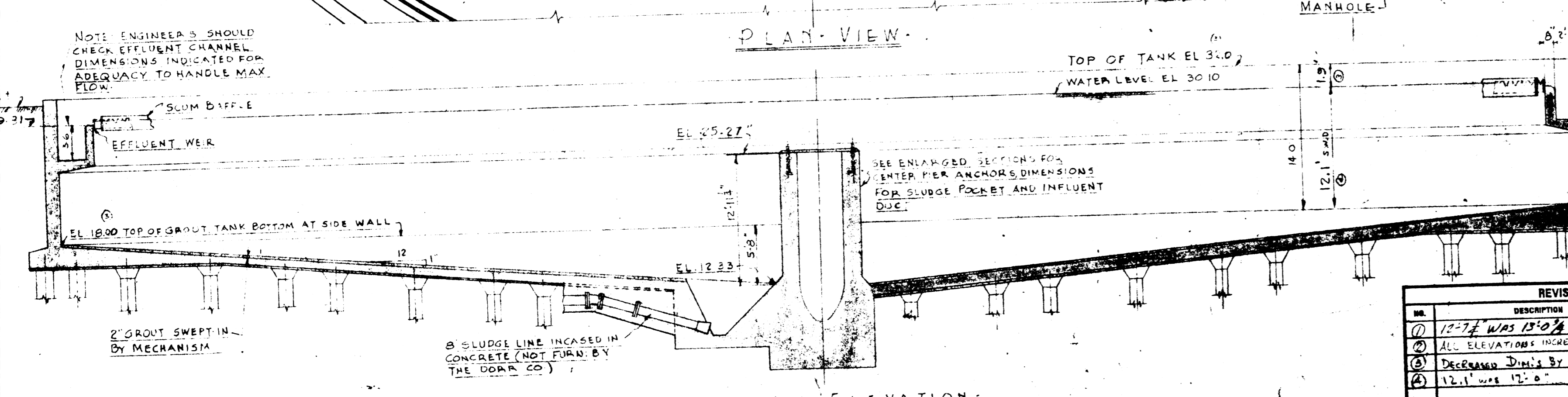
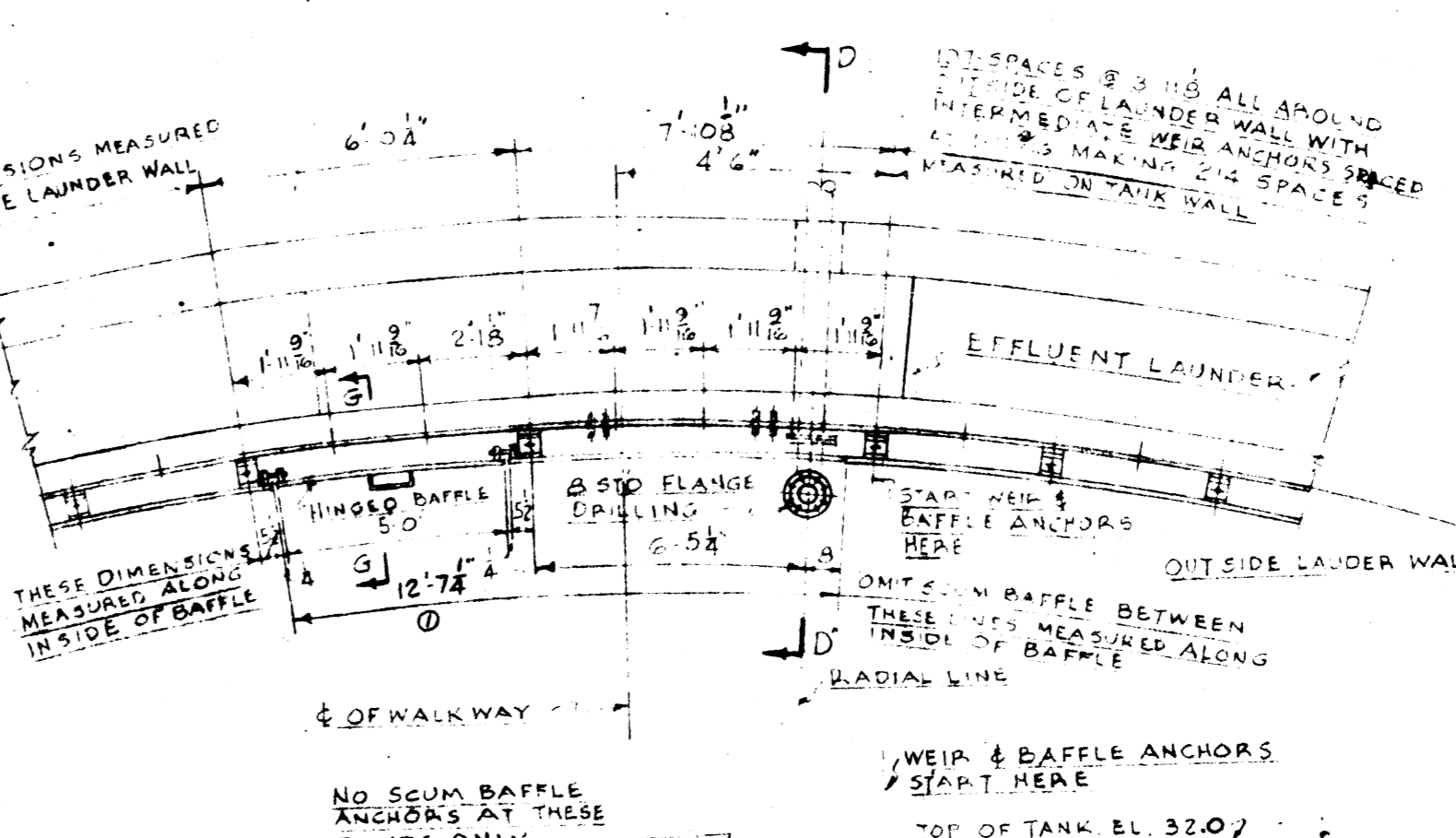
LOADS DUE TO MECHANISM					
TANK DIA (FT)	TORQUE ON CENTER PIER (FT LBS)	MECH DEAD LOAD (LBS)	MECH LIVE LOAD (LBS)	GENERAL WALKWAY (LBS)	GENERAL PIER (LBS)
145.0	72,000	3400	47,500	6300	51,000

NOTE: THE DORR CO. FURNISHES MECHANISM TO FIT TANK OF DIMENSIONS GIVEN, BUT IS NOT RESPONSIBLE FOR THE DESIGN OF CONCRETE. CUSTOMER WILL PROVIDE ALL NECESSARY REINFORCING STEEL FOR TANK AND CENTER PIER AND DETERMINE SIZE AND PLACEMENT OF FOOTINGS TO SUIT LOCAL CONDITIONS.

THE DORR CO. FURNISHES: EFFLUENT WEIR, SCUM BAFFLE, HINGED SCUM BAFFLE PLATE AND ANCHORS FOR SAME, ANCHOR BOLTS FOR CENTER SUPPORT, ANCHOR BOLTS FOR WALKWAY, SCUM TROUGH AND ANCHORS.

THE DORR CO. DOES NOT FURNISH: PIPING, GROUT, CONCRETE, OIL OR GREASE FOR LUBRICATION, WIRING OR CONDUITS BETWEEN MOTOR, CONTROLS AND ALARMS.

DRAWINGS AND ERECTION INSTRUCTIONS SHOULD BE CAREFULLY FOLLOWED DURING ASSEMBLY AND ERECTION. THE DORR COMPANY, DOES NOT AUTHORIZE ANY CHANGES, ADDITIONS, OR CORRECTIONS TO EQUIPMENT TO BE MADE IN THE FIELD FOR THEIR ACCOUNT UNLESS SUCH CONTEMPLATED WORK IS BROUGHT TO THEIR ATTENTION BEFORE BEING DONE AND A WRITTEN ORDER FOR SUCH WORK GIVEN BY AN AUTHORIZED REPRESENTATIVE OF THE DORR COMPANY.



NER-748

REVISIONS				DATE		BY		TITLE	
NO.	DESCRIPTION	SECT	DATE	DATE	BY	DATE	BY	TITLE	
1	12-7-53 WAS 13-0-53	F3	4-15-53					THE DORR COMPANY ENGINEERS	
2	ALL ELEVATIONS INCREASED 1/8"		5-15-53					ENGINEERING DEPARTMENT STAMFORD, CONN.	
3	DECREASED DIM'S BY 1"		6-15-53					ISSUED JUN 26 1953	
4	12.1" WAS 12.0"							SCALE 3/4" = 1'	

DRAWN	3-29-53	CORDARI	TITLE	THE DORR COMPANY ENGINEERS
TRACED			145.0" DIA. x 12.1" SWD. @	ENGINEERING DEPARTMENT STAMFORD, CONN.
CHECKED	3-31-53	781	- CONCRETE DRAWING	ISSUED JUN 26 1953
APPROVED	H	781	SCALE	3/4" = 1'
MAT. LIST	ON ORDER	34205	TYPE	S-T (P.M.)
SENT TO	SHIPPED	4-6-53	MADE FROM	

NOTE: BE SURE TO UP
 WALKWAY TRUSS WITH
 CAMBER AS SHOWN.

CAMBER DIAGRAM

PART	ERECTION MARK
WALKWAY	1 & 2
CENTER DIFFUSER	3
INFLUENT WELL	4 TO 8
SUPPORTS	9 & 10
BAFFLE PLATE	11
CENTER CASE	12 TO 20
RAKE ARM (INNER ARM 'A')	21 TO 36
" " (" ARM 'B')	36 TO 51
" " (INTER ARM 'A')	52 TO 80
" " (" ARM 'B')	78 TO 106
" " (OUTER ARM 'A')	107 TO 117
" " (" ARM 'B')	118 TO 128
CAGE BLADE SUPPORT	129
"	130
RAKE BLADES	X1 TO X9, X11, X13, X15 Y1 TO Y8, Y10, Y12, Y14
RADIAL BLADE	A
CAGE	B

SUMMARY OF FIELD RIVETS (10% ADDED)

NO. REQ.	DIA.	LENGTH	REMARKS
10	3/8"	1 1/8"	COUNTERBUNK END.
460	3/8"	1 1/8"	BUTTON HEAD
270	3/8"	2"	BUTTON HEAD
95	3/8"	2 1/8"	BUTTON HEAD
16	3/8"	2 1/2"	BUTTON HEAD
85	3/4"	2"	BUTTON HEAD
120	3/4"	2 1/8"	BUTTON HEAD
20	3/4"	2 3/8"	BUTTON HEAD
20	3/4"	2 1/2"	BUTTON HEAD

SUMMARY OF FIELD BOLTS (10% ADDED)

NO. REQ.	DIA.	LENGTH	REMARKS
10	1/2"	1 1/8"	HEX. NUT EA.
100	3/8"	1 3/4"	HEX. NUT E.C.W. EA.
5	3/4"	1 1/2"	CAP SCREWS WITH C.W. EA.
20	3/4"	1 1/2"	HEX. NUT EA.
10	3/4"	1 3/4"	HEX. NUT
10	3/4"	1 3/4"	HEX. NUT E.C.W. EA.
15	3/4"	2"	HEX. NUT E.C.W. EA.
35	3/4"	2 1/2"	HEX. NUT E.C.W. EA.

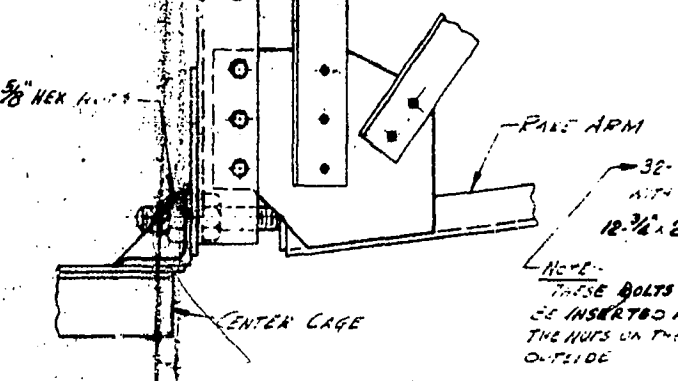
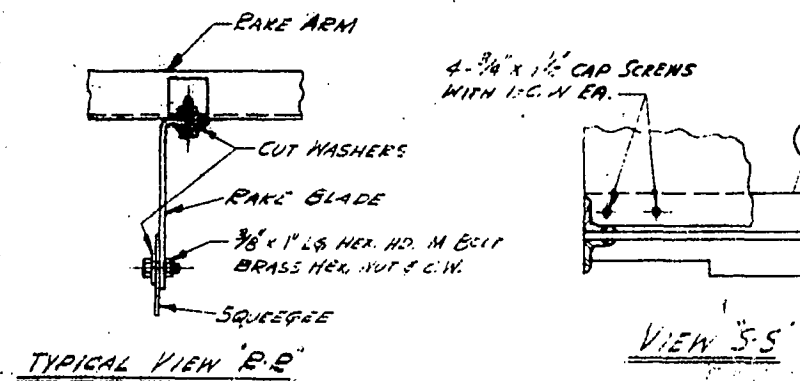
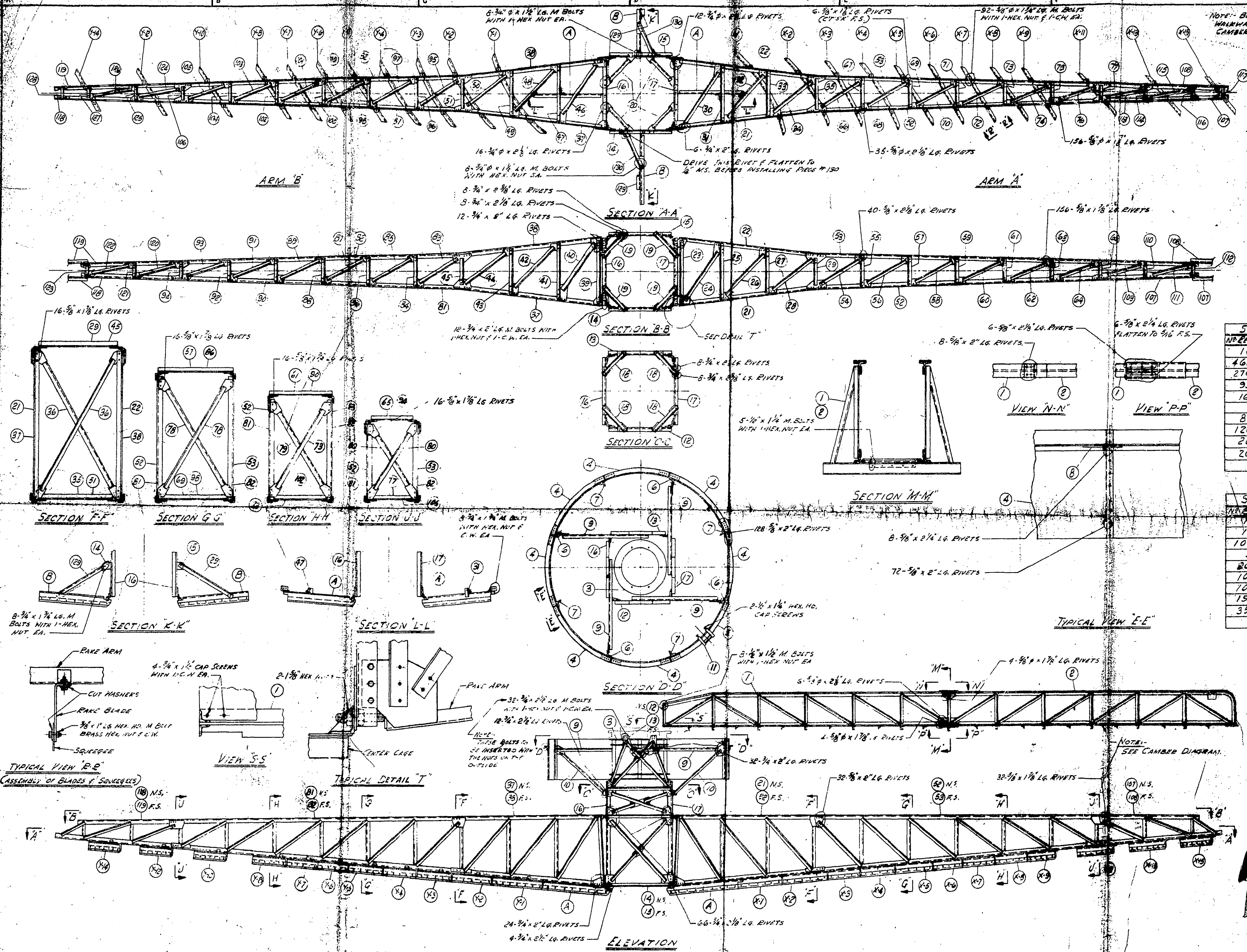
SUMMARY OF ERECTION BOLTS

NO. REQ.	DIA.	LENGTH	REMARKS
320	3/8"	1 1/2"	HEX. NUT EA.
75	3/4"	1 1/2"	HEX. NUT EA.
25	3/4"	2"	HEX. NUT EA.

NOTE: ALL BOLTS MUST HAVE CLEAN, WELL OILED THREADS.
 ALL PARTS ARE TO BE ASSEMBLED IN SHOP TO INSURE PROPER FIT, MARKED WITH ERECTION MARKS AND THEN KNOCKED DOWN FOR SHIPMENT. MARKS MUST BE ON PAINTED SURFACE.
 PREFIX ERECTION MARKS FOR THIS MACHINE WITH THE LETTER 'A'

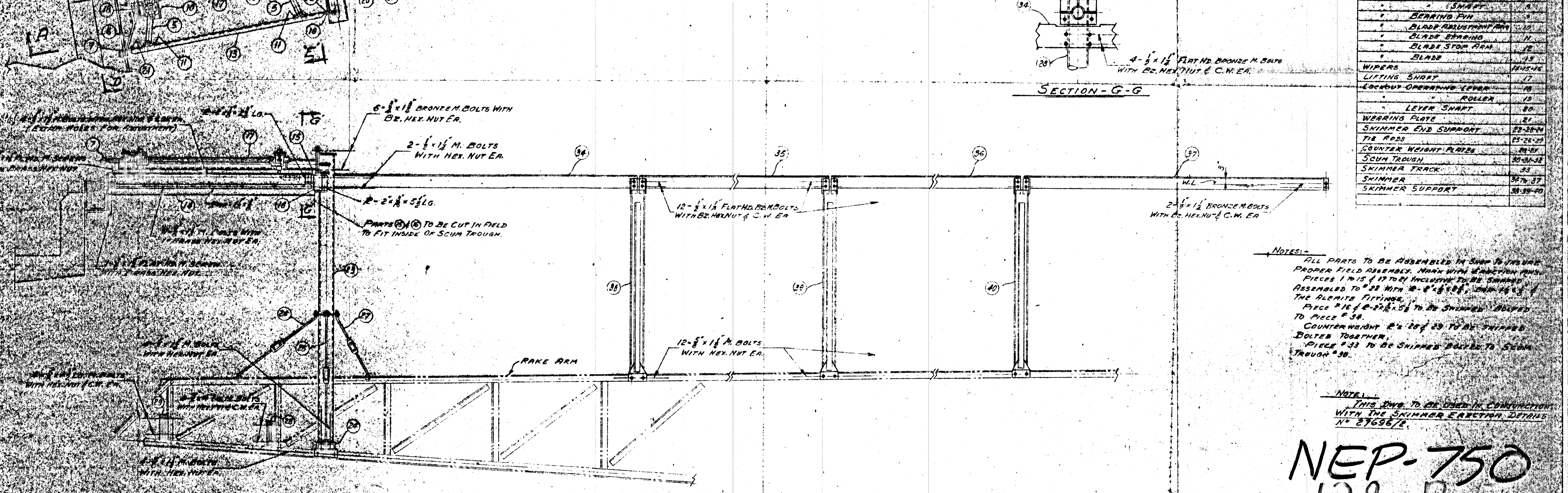
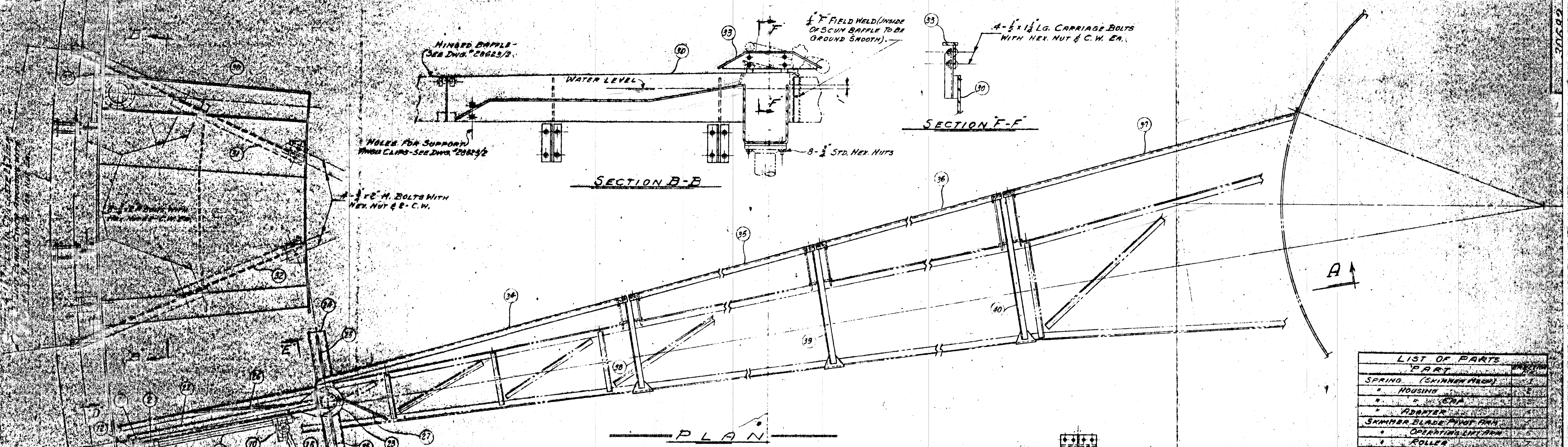
NEP-749
128-P-5
 MARKED PRINT

MICROFILMED APR 10 1979



REVISIONS				BY				TITLE				THE DORR COMPANY ENGINEERS			
NO.	DESCRIPTION	DATE	BY	NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY	NO.	DATE	BY

DESIGNED BY	THE DORR COMPANY	ENGINEERING DEPARTMENT	STAMFORD, CONN.
CHECKED BY	145' O.D. x 12' S.D.	ERECTOR DRAWING	ISSUED
APPROVED BY	3938	TYPE 'S'	SHEET NO. 30333
SCALE	3/8" = 1'-0"	ORDER NO.	34205



LIST OF PARTS

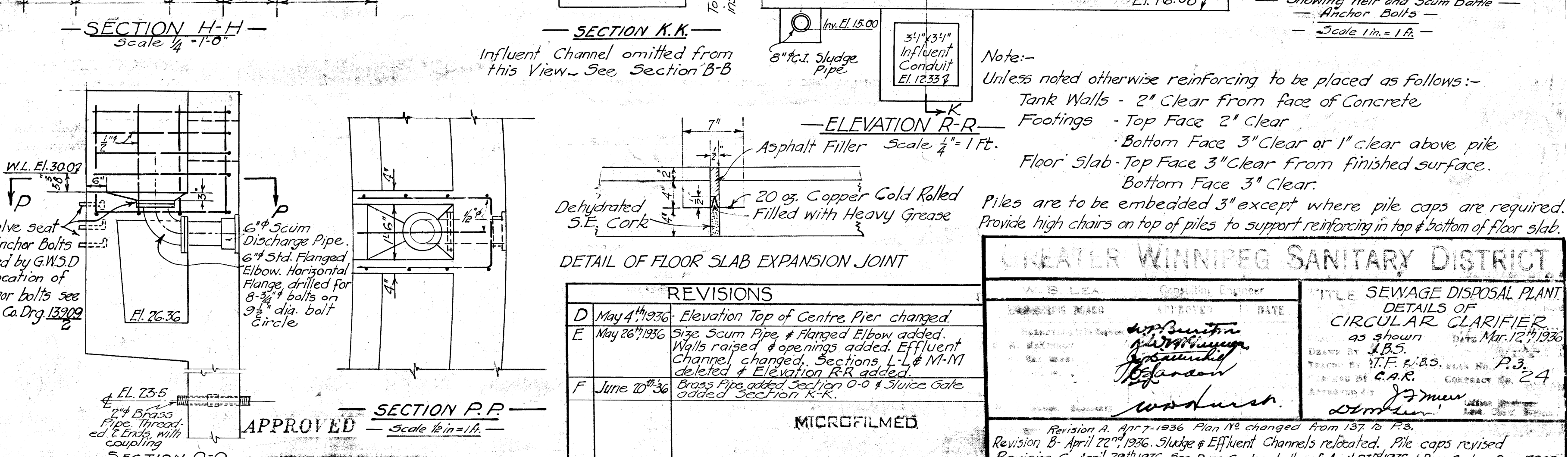
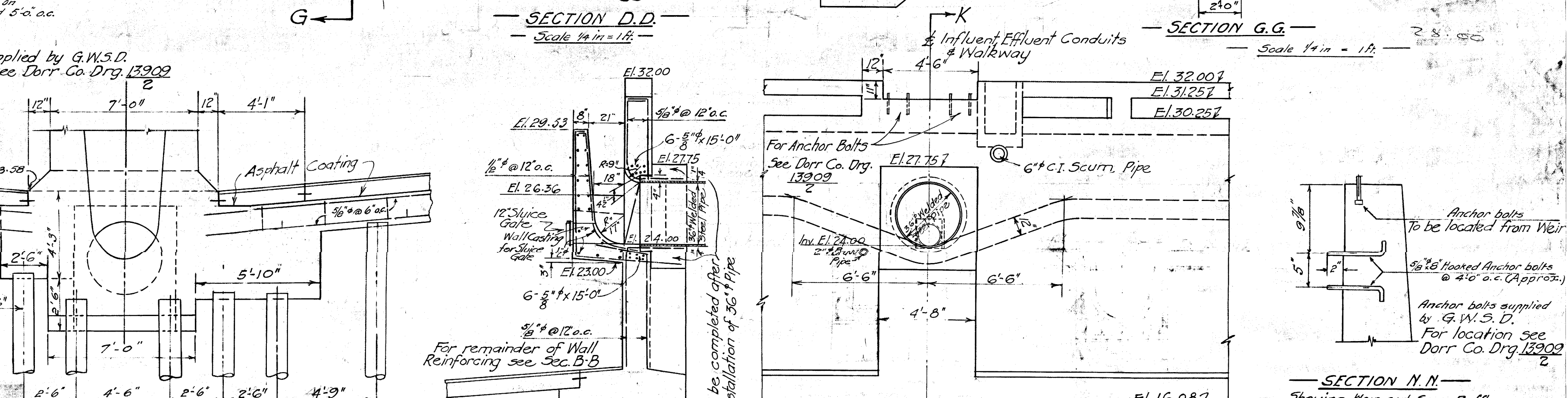
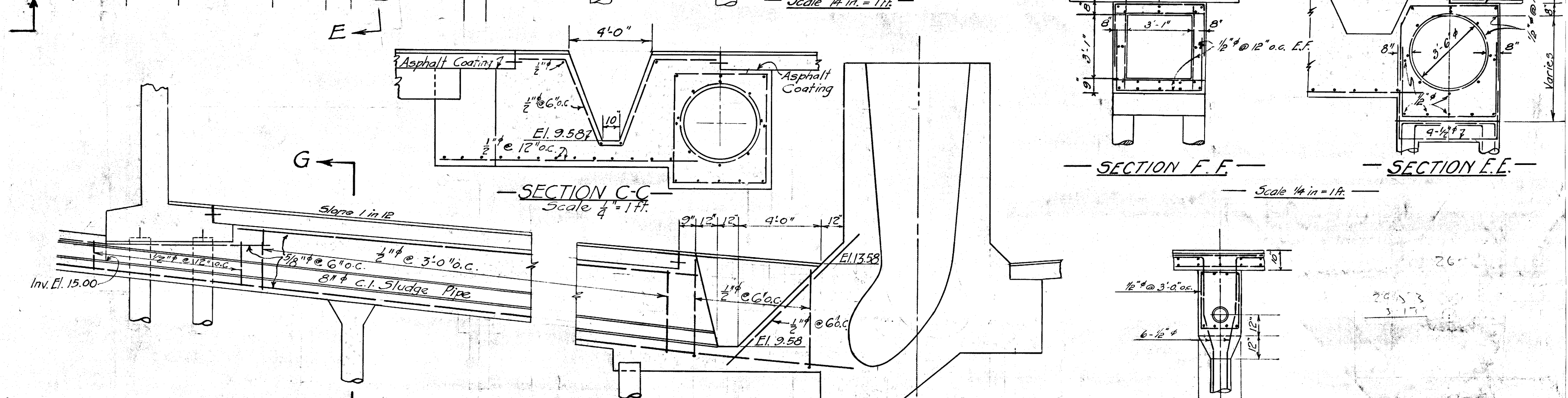
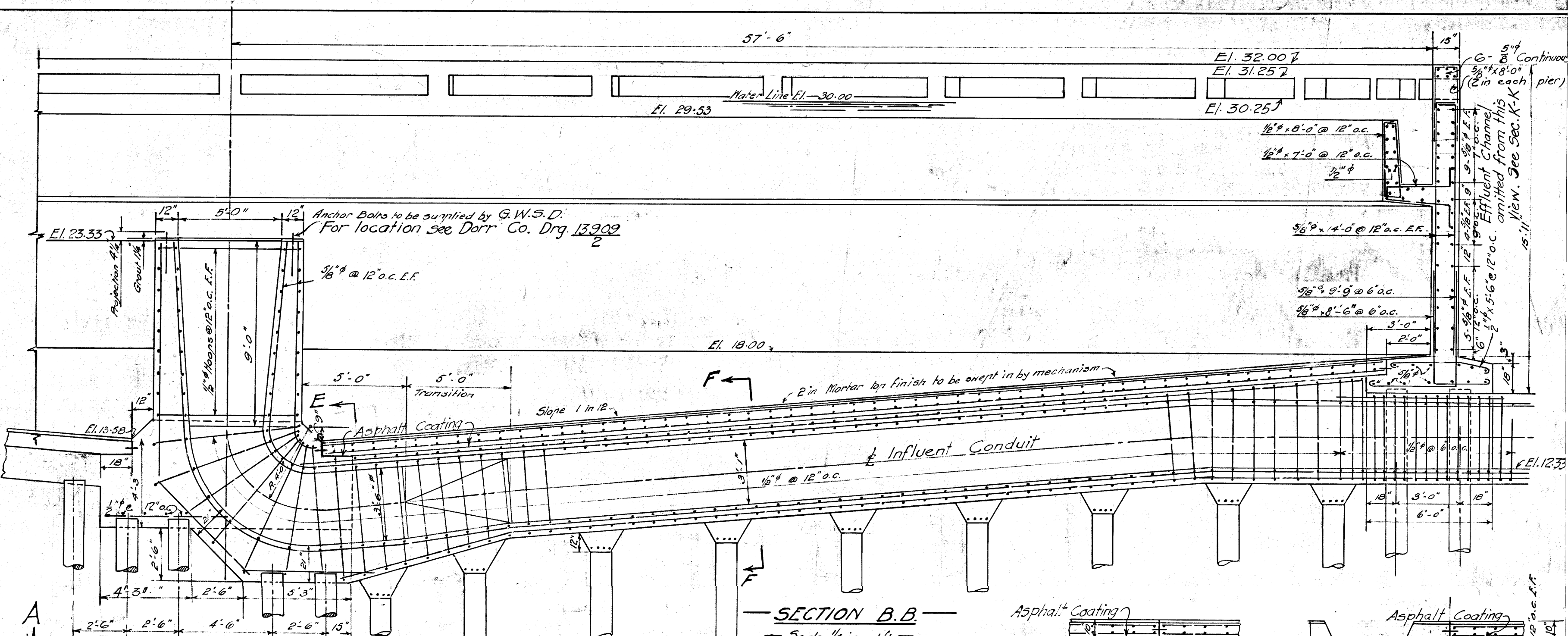
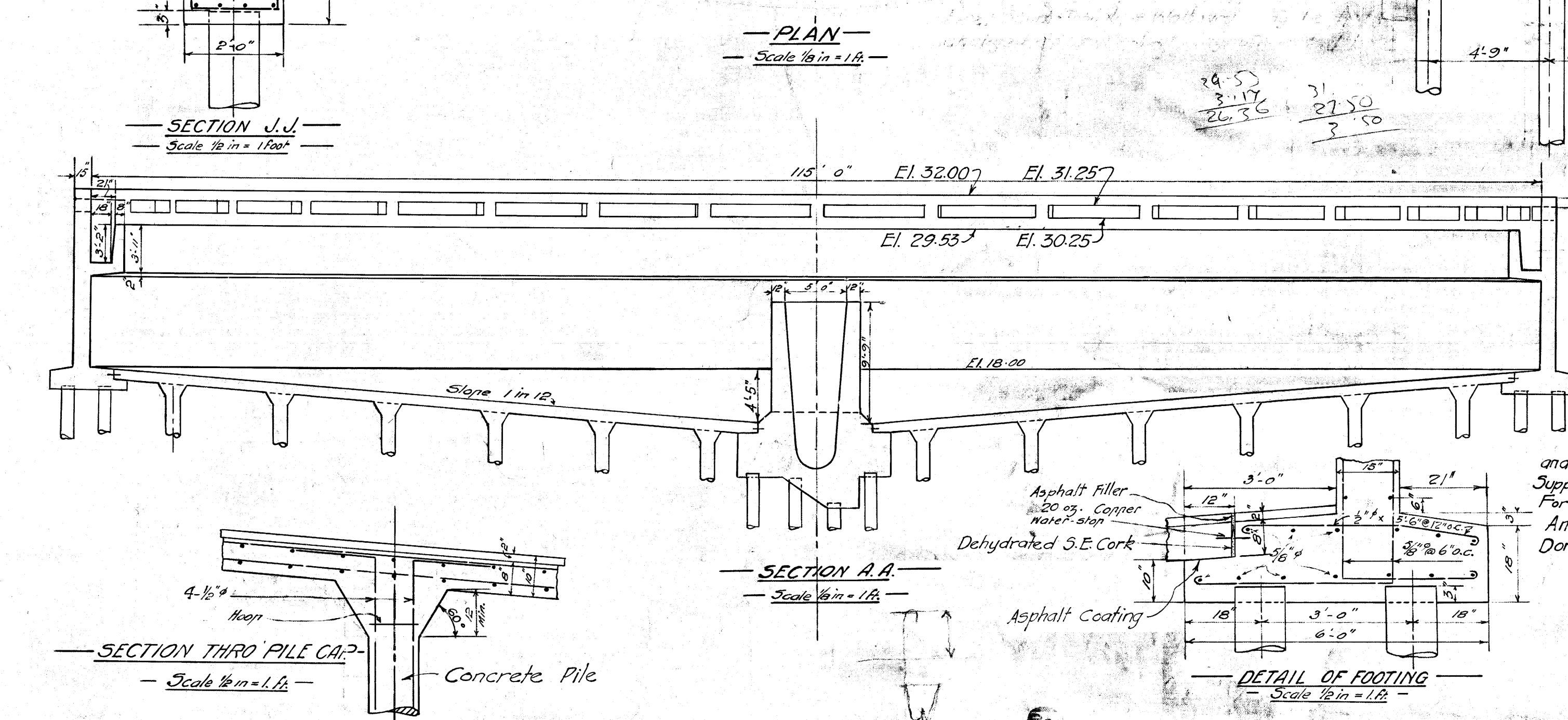
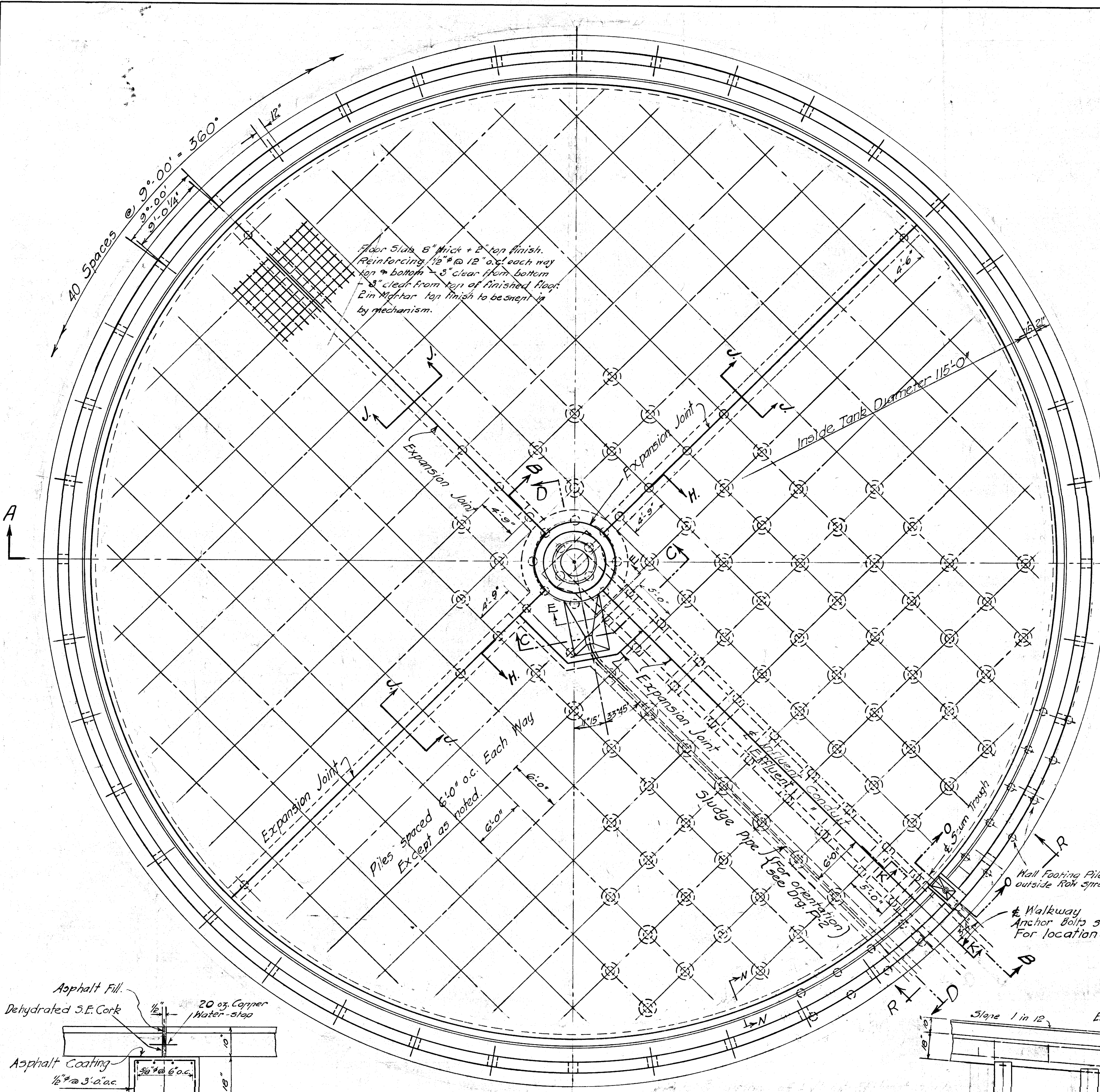
PART	QUANTITY
SPRING (SKINNER TRACK)	1
HOUSING	1
ADAPTER	1
SKIMMER BLADE PIVOT ARM	1
OPERATING LEVER ARM	1
ROLLER	1
BEARING PIN	1
BLADE ADJUSTMENT ARM	1
BLADE BEARING	1
BLADE STOP ARM	1
BLADE	1
WIPERS	1
LIFTING SHAFT	1
LOCKOUT OPERATING LEVER	1
ROLLER	1
LEVER SHAFT	1
WEARING PLATE	1
SKIMMER END SUPPORT	1
TIE RODS	1
COUNTER WEIGHT PLATES	1
SCUM TROUGH	1
SKIMMER TRACK	1
SKIMMER	1
SKIMMER SUPPORT	1

NOTES:
 ALL PARTS TO BE ASSEMBLED IN SHOP TO INSURE PROPER FIELD ASSEMBLY. PARTS WITH DIRECTION ARROWS TO BE SHIPPED TO BE SHIPPED ASSEMBLED TO #33 WITH 12-8 x 1 1/2" BOLTS WITH HEX. NUT & C.W. EA. OF THE ALUMINUM FITTINGS.
 PIECE #16 & #21 & #25 TO BE SHIPPED BOLTED TO PIECE #34.
 COUNTERWEIGHT #2 & #23 TO BE SHIPPED BOLTED TOGETHER.
 PIECE #33 TO BE SHIPPED BOLTED TO SCUM TROUGH #38.

NOTE:
 THIS DWG. TO BE USED IN CONJUNCTION WITH THE SKIMMER ERECTION DETAILS NO. 27696/2.

NEP-750
129-P-5
NR 10927

REVISIONS				DATE	BY	TITLE
NO.	DESCRIPTION	SECT.	DATE	BY		THE DORR CLARIFIER 145'-0" DIA. X 12'-0" STD. SKIMMER ERECTION DIAGRAM TYPE 5-7 SPEC. SCALE 1"=4'-0"
1						
2						
3						
				DATE	BY	TITLE
				APPROVED	BY	THE DORR COMPANY ENGINEERS
				ON ORDER	NO.	306
				SCALE	1"=4'-0"	



Note:-
 Unless noted otherwise reinforcing to be placed as follows:-
 Tank Walls - 2" Clear From Face of Concrete
 Footings - Top Face 2" Clear
 Bottom Face 3" Clear or 1" clear above pile
 Floor Slab - Top Face 3" Clear From Finished Surface.
 Bottom Face 3" Clear.
 Piles are to be embedded 3" except where pile caps are required.
 Provide high chairs on top of piles to support reinforcing in top & bottom of floor slab.

REVISIONS	
D	May 4 th 1936 Elevation Top of Centre Pier changed
E	May 26 th 1936 Size Scum Pipe & Flanged Elbow added. Walls raised & openings added. Effluent Channel changed. Sections L-L & M-M deleted & Elevation R-R added.
F	June 10 th 1936 Brass Pipe added Section R-R. 6" x 6" Sluice Gate added Section R-R.

GREATER WINNIPEG SANITARY DISTRICT	
DESIGNED BY	W. J. B. S. D.
CHECKED BY	C. R. P.
APPROVED BY	W. J. B. S. D.
DATE	APR 23 1936
TITLE	SEWAGE DISPOSAL PLANT DETAILS OF CIRCULAR CLARIFIER as 185.
PROJECT NO.	W.F.E. 2.85.
CONTRACT NO.	2.4
REVISION A	April 7, 1936 Plan No changed from 137 to 135.
REVISION B	April 22 nd 1936 Sluice & Effluent Channels relocated. Pile caps revised.
REVISION C	April 28 th 1936 See Dorr Co. Inc. Letter of April 23 rd 1936 & Dorr Co. Inc. Drg. 13902.

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