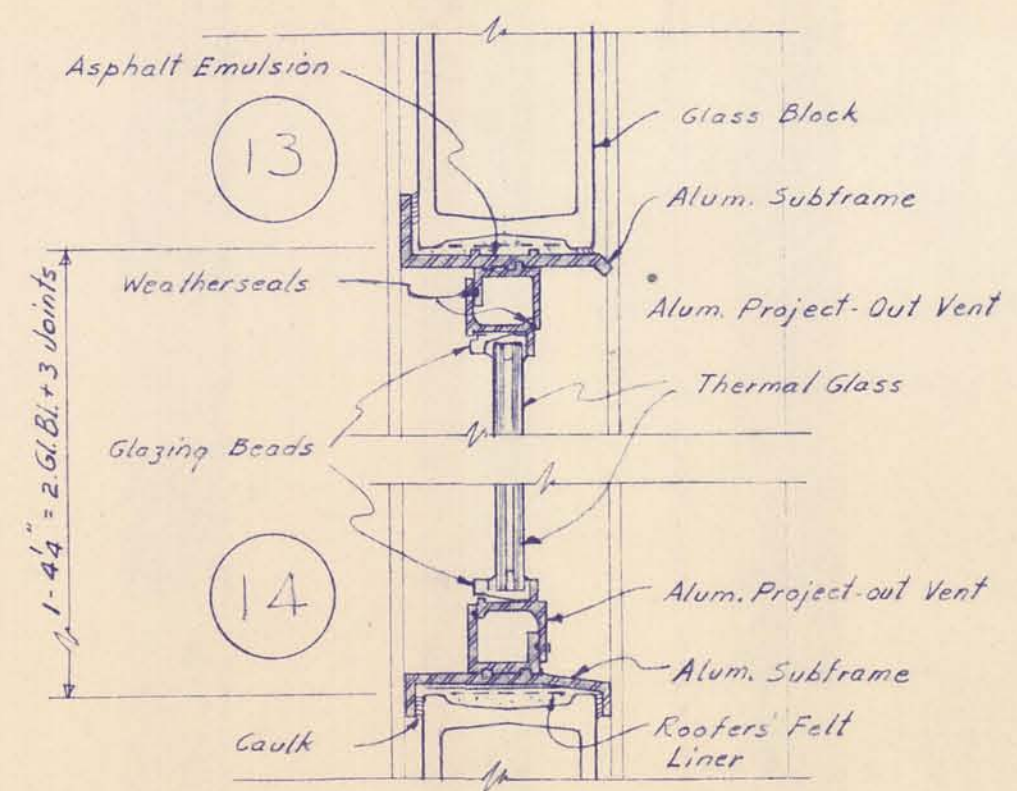
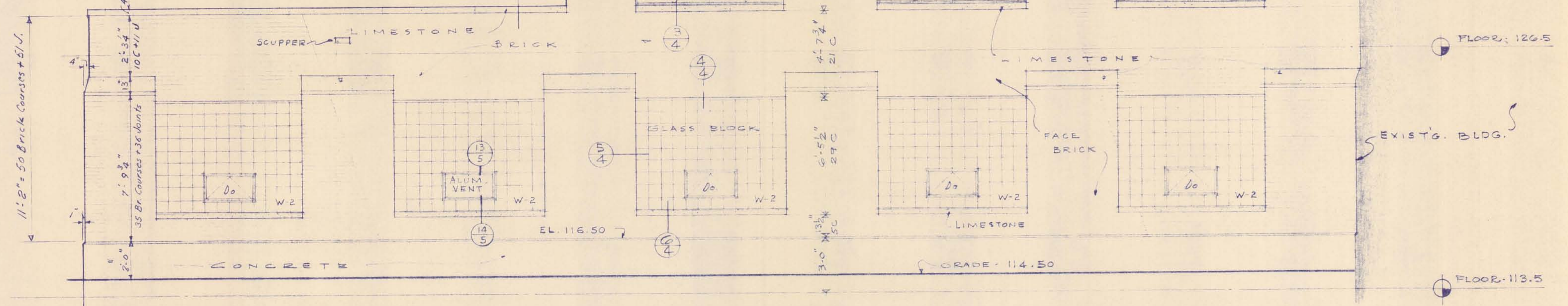


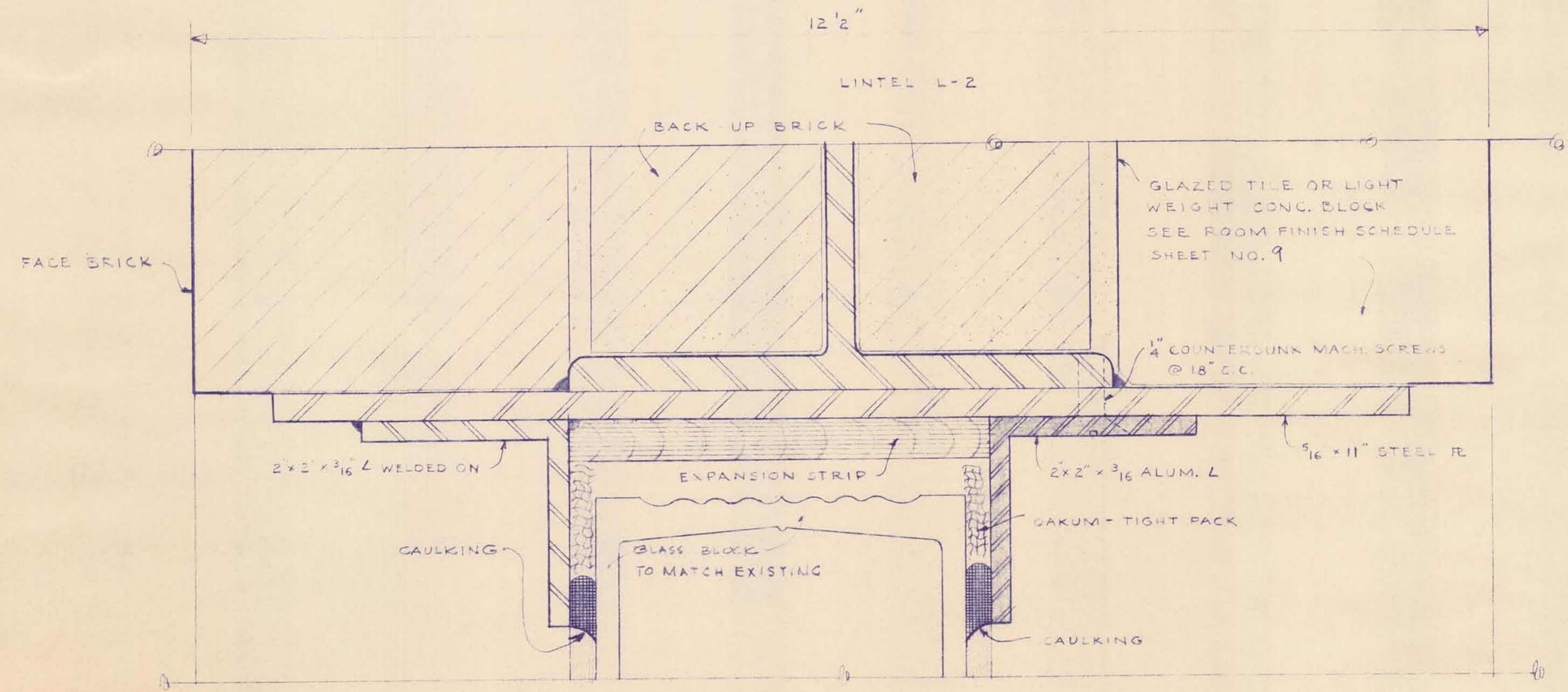
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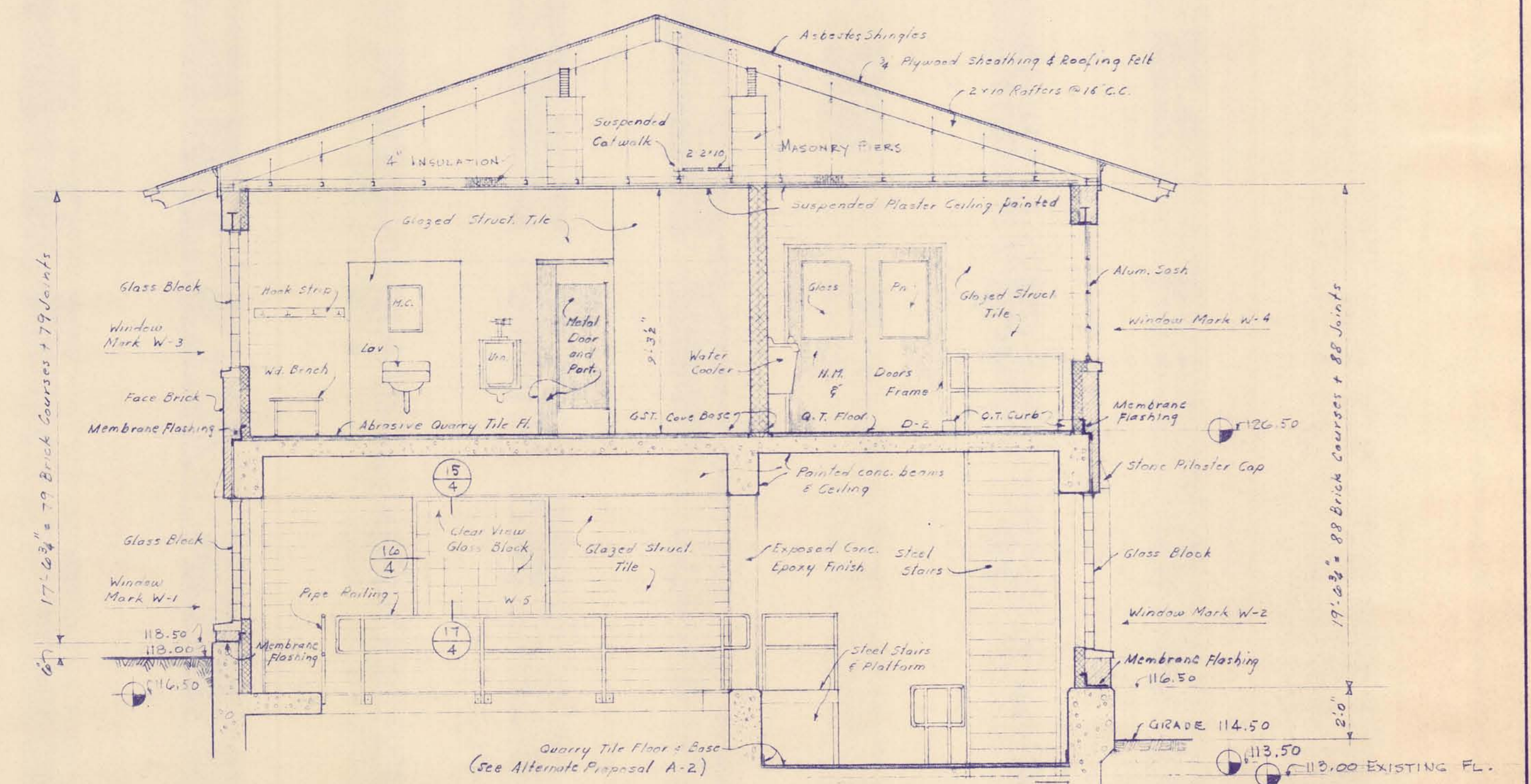
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 NOTE: Jamb Similar - Wash & Felt Not Req'd.



EAST ELEVATION

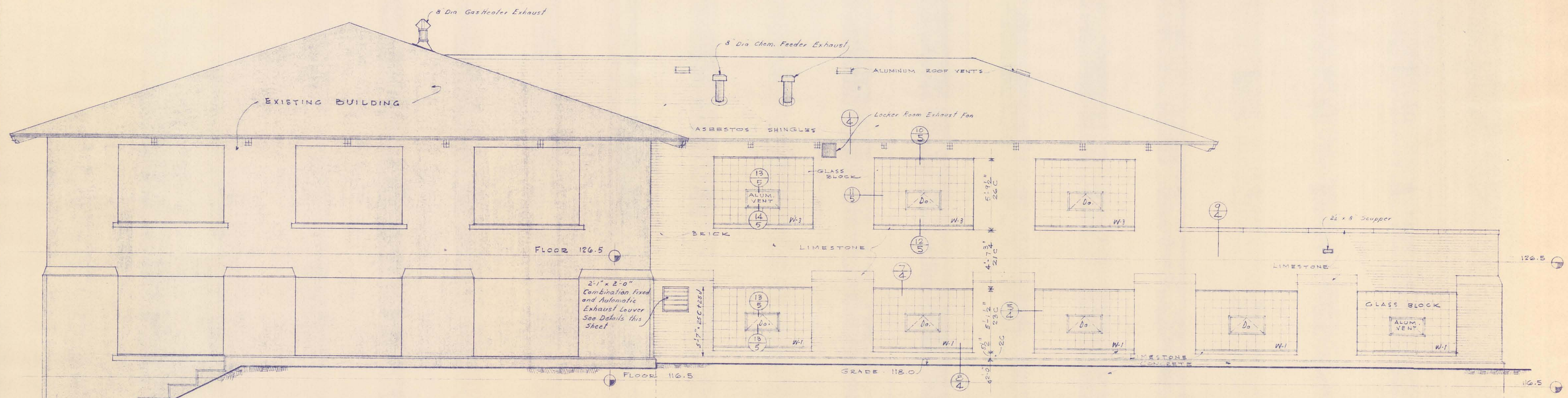


FULL SIZE DETAIL of 10

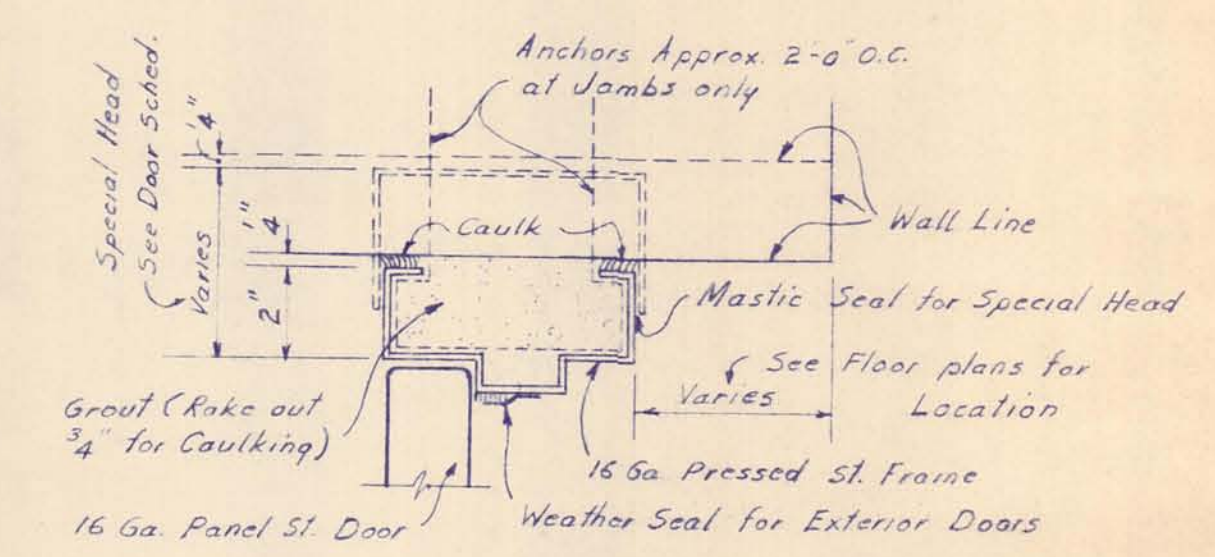


SECTION XX

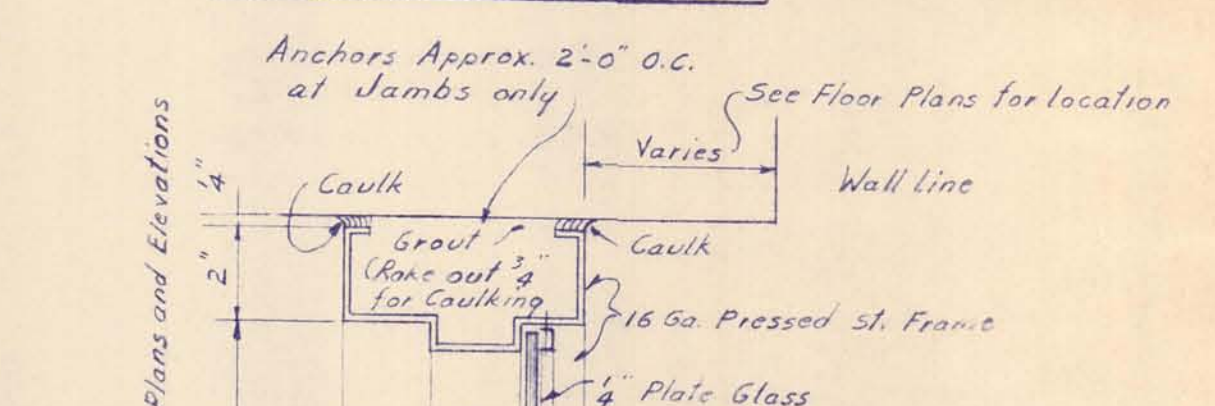
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SCALE: 1/8" = 1'-0" (AS NOTED) ISSUED MAR. 1965			ARCHITECTURAL		
DRAWN W.K.D. TRACED G.W.C. CHECKED J.C.S.			FILTER BUILDING ADDITION		
ISSUE			ELEVATIONS, SECTIONS & DETAILS		
NATURE OF REVISION			CONTRACT		
DATE			1965		
			W-2		
			SHEET		
			5		
			OF 33		



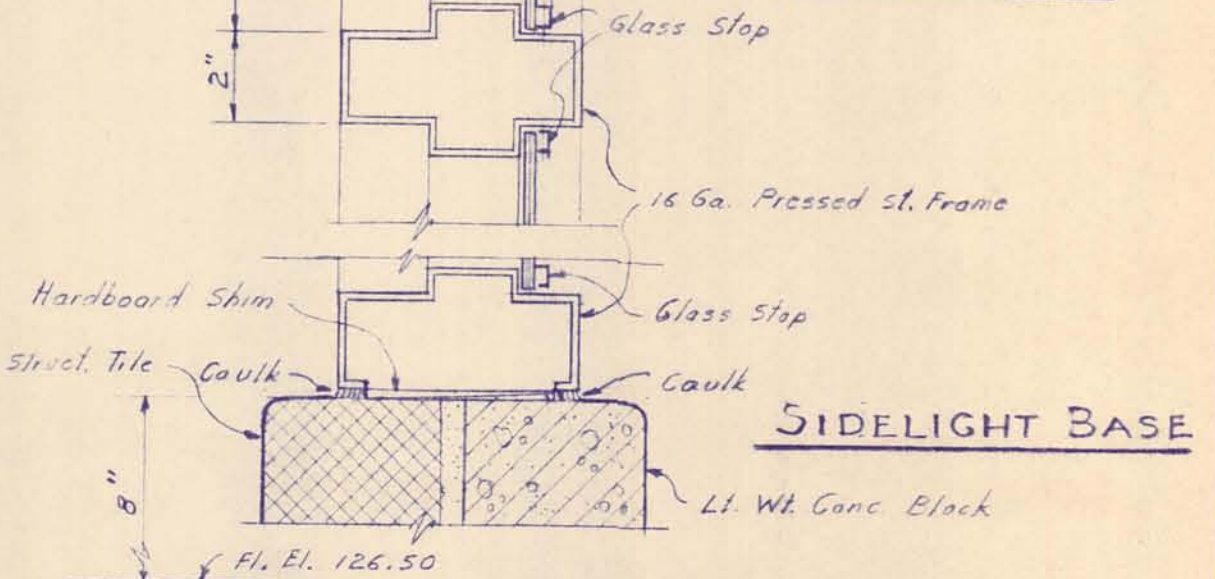
WEST ELEVATION



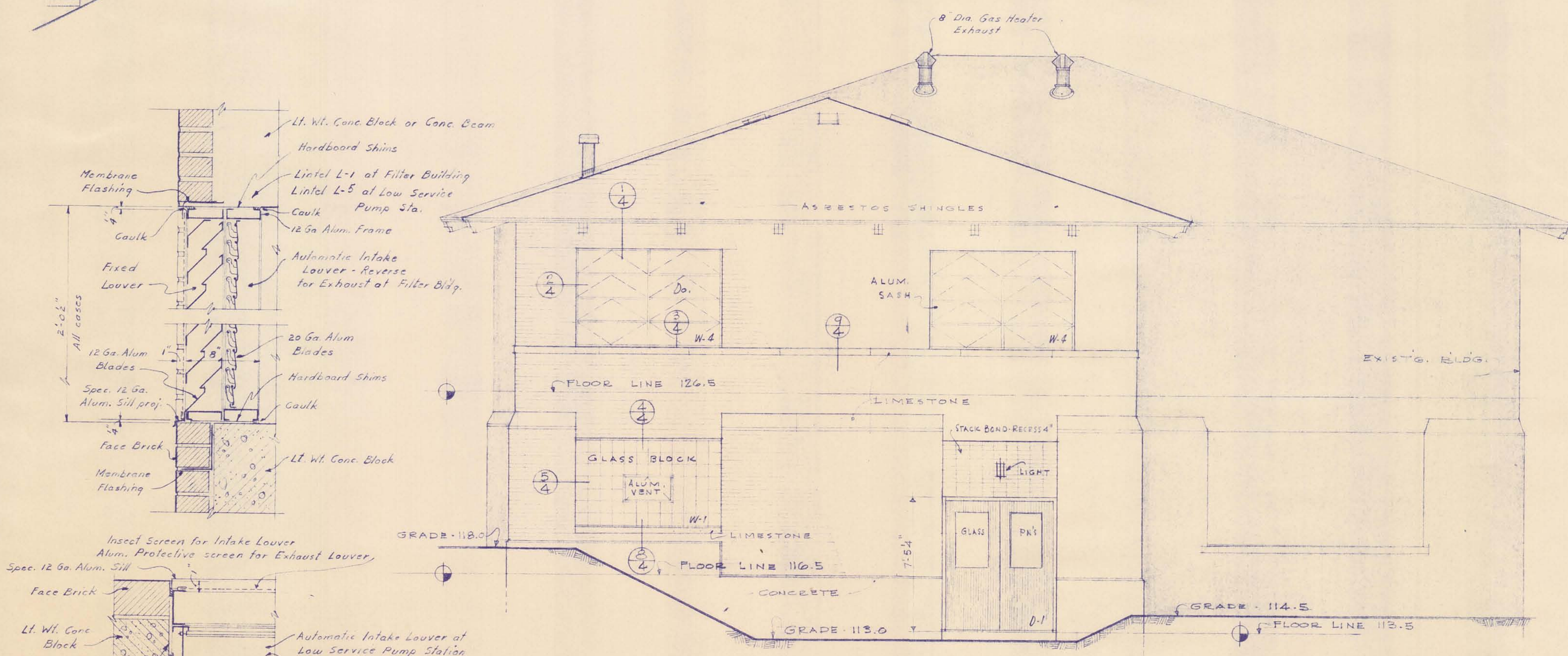
DOOR HEAD & JAMB



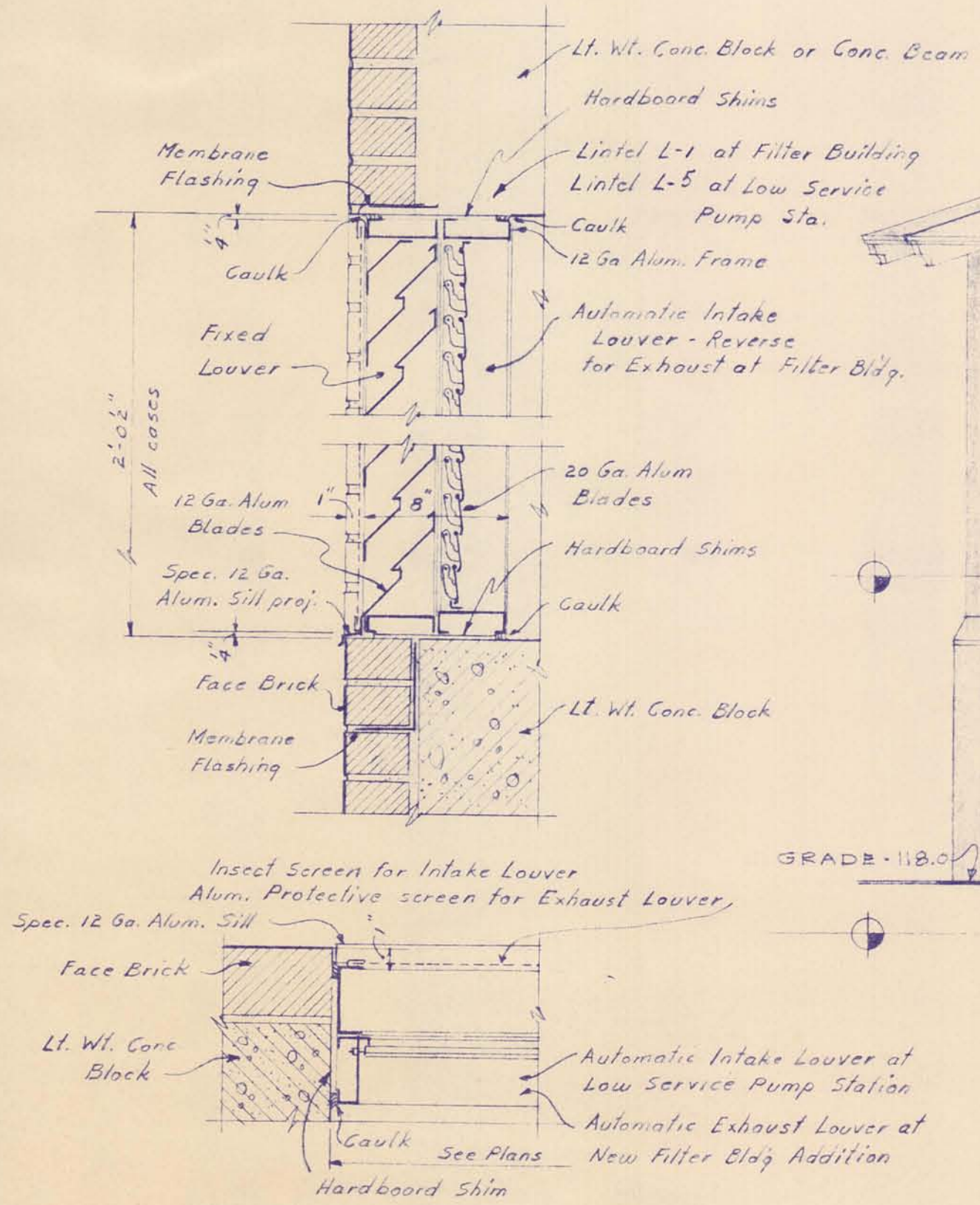
TRANSOM & SIDELIGHT



SIDELIGHT BASE



SOUTH ELEVATION



LOUVER DETAILS  
SCALE: 1/2" = 1'-0"

MCMANEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN			ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION		
SCALE 1/2" = 1'-0"	ISSUED MAR. 1965		ARCHITECTURAL FILTER BUILDING ADDITION ELEVATIONS		
DRAWN W.K.O.	TRACED W.K.O.	CHECKED J.C.S.	CONTRACT 1965 W-2	DATE	SHEET 6 OF 23
ISSUE	NATURE OF REVISION	DATE			





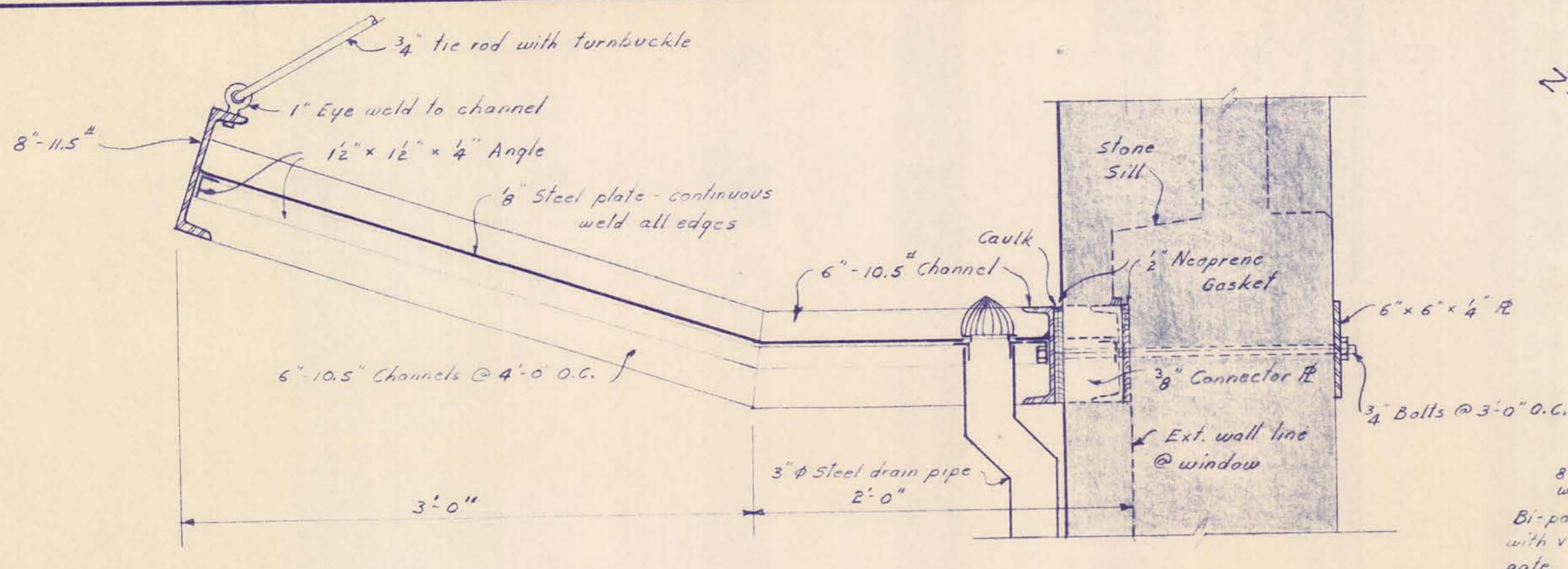


DRAWING NUMBER  
SAFCO PRODUCTS • NEW HOPE, MINNESOTA  
REORDER BY PART NUMBER 6522

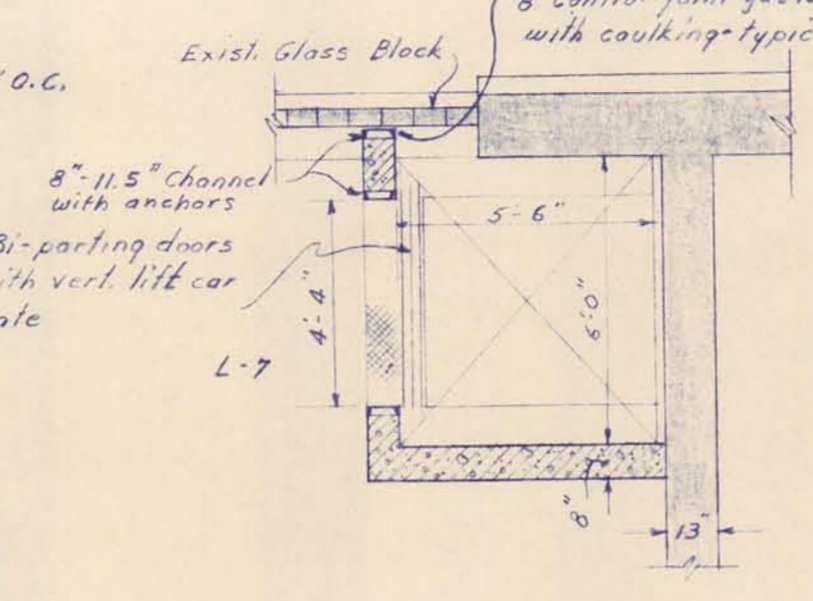
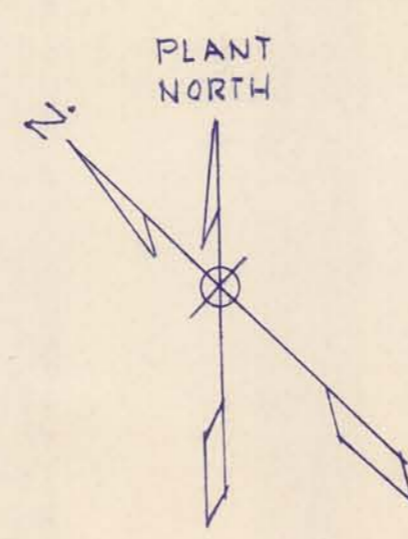
DRAWING NUMBER  
SAFCO PRODUCTS • NEW HOPE, MINNESOTA  
REORDER BY PART NUMBER 6522

WATER TREATMENT  
PLANT 1965  
9 OF 33

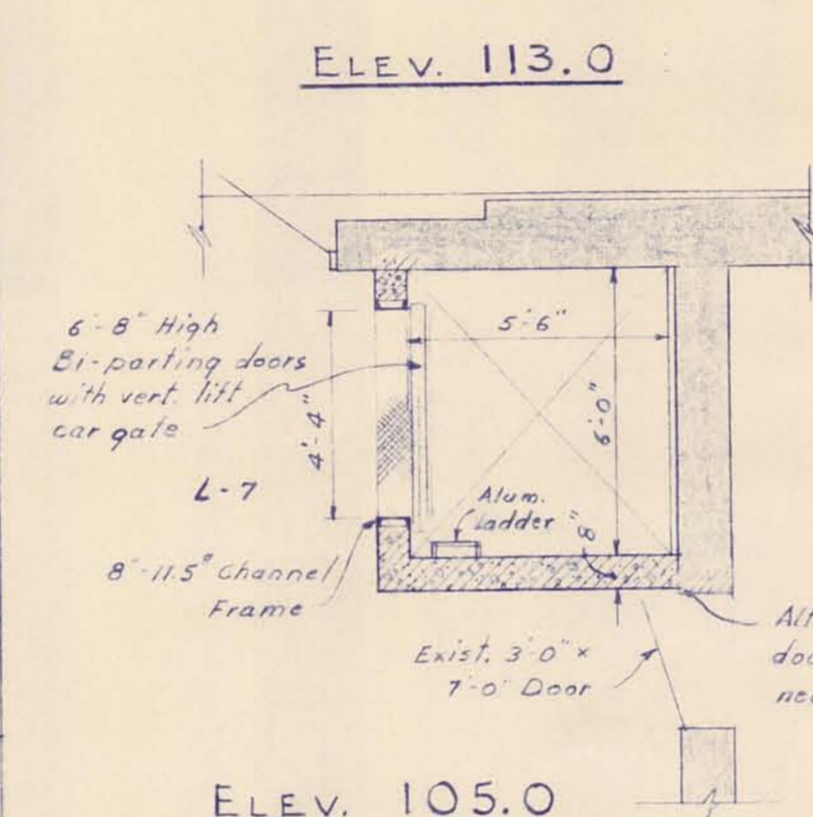
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SAFCO PRODUCTS • NEW HOPE, MINNESOTA  
REORDER BY PART NUMBER 6522



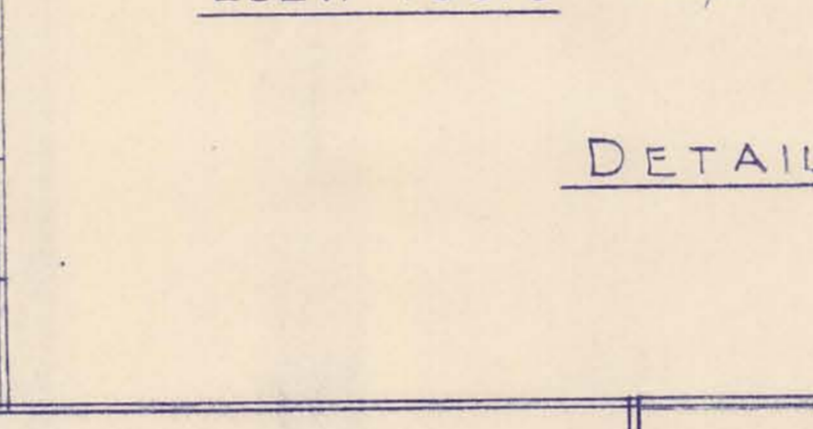
**CANOPY DETAILS**  
SCALE: 1/2" = 1'-0"



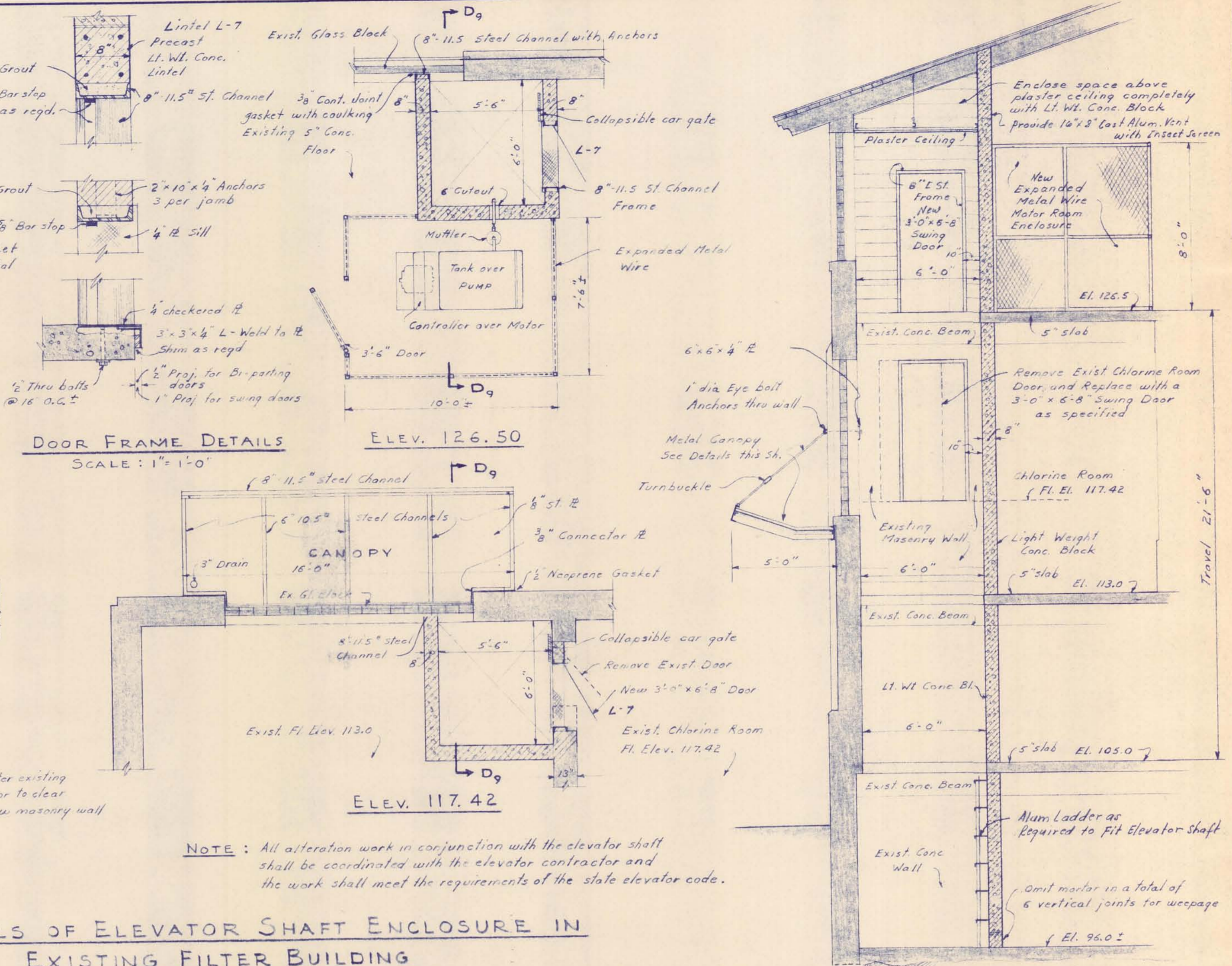
**DOOR FRAME DETAILS**  
SCALE: 1" = 1'-0"



ELEV. 113.0



ELEV. 105.0



**DETAILS OF ELEVATOR SHAFT ENCLOSURE IN EXISTING FILTER BUILDING**  
SCALE: 1/4" = 1'-0"

SECTION D<sub>1</sub>, D<sub>2</sub>

ROOM FINISH SCHEDULE					REMARKS
ROOM	FLOOR	BASE	WALLS	CEILING	
FILTER OPERATING GALLERY	Quarry Tile *	Quarry Tile * 5" High Cove	Glazed Struct. Tile & Exposed Conc. Painted	Painted Conc.	All exposed conc. above floors to be epoxy coated up to bottom of conc. beams. Beams to be painted same as ceiling.
FILTER TANKS	Walkways: Spined Monolithic Conc. with Hardener	None	Do. †	Do.	Do.
CHEMICAL FEED ROOM	Finished Conc. with Hardener	None	Epoxy Finish Lt. Wt. Conc. Bl. & Conc. Columns	Do.	Do.
STAIR HALL	Quarry Tile	Struct. Tile Cove	Glazed Struct. Tile	Painted Plaster	
CHEMICAL HOPPER ROOM	Finished Conc. with Hardener	None	Epoxy Finish Lt. Wt. Conc. Bl.	Painted Plaster	
LOCKER ROOM AND JANITOR'S CLOSET	Quarry Tile	Struct. Tile Cove	Glazed Struct. Tile	Do.	Wood shelving, nails & hook strips painted as specified.
STORAGE ROOM	Finished Conc. with Hardener	None	Painted Lt. Wt. Conc. Bl.	Do.	Depress floor 1/2" for future floor covering
LOW SERVICE PUMP STATION	Do.	None	Do.	Painted Conc.	All exposed concrete column surfaces shall be painted same as walls. Exposed ceiling beams shall be painted same as ceiling.
	* See Alternate Proposal A-2	* See Alternate Proposal A-2	† See Alternate Proposal A-1		

DOOR SCHEDULE							REMARKS
MARK	LOCATION	DOOR SIZE	TYPE	FRAME	GLASS SIZE		
D-1	Exterior - South Wall	2'-3'-0" x 7'-2" x 1'-3/4"	Full Flush Steel	Pressed Steel	23 3/8" x 36 3/8"	1/4" plate Glass - Special Head Filler - Combination Storm/Screen Doors	
D-2	Interior - 2 <sup>nd</sup> Floor, N. End Stair Hall	2'-3'-0" x 7'-2" x 1'-3/4"	Do.	Do.	23 3/8" x 36 3/8"	Frame into new masonry filled opening of existing wall - 1/4" Plate Glass	
D-3	Interior - North Wall, Chem. Hopper Room	2'-3'-0" x 7'-2" x 1'-3/4"	Do.	Do.	23 3/8" x 36 3/8"	Do.	
D-4	Interior - East Wall, Chem. Hopper Room	3'-0" x 7'-2" x 1'-3/4"	Do.	Do.	23 3/8" x 36 3/8"	Fixed Louver below glass panel - 1/4" Plate Glass	
D-5	Interior - Janitors Closet - 2 <sup>nd</sup> Floor	2'-8" x 7'-2" x 1'-3/4"	Do.	Do.	None	Fixed Louver top and bottom	
D-6	Interior - Locker Room - 2 <sup>nd</sup> Floor	2'-6" x 7'-2" x 1'-3/4"	Do.	Do.	None	Do.	
D-7	Interior - Storage Room	3'-0" x 7'-0" x 1'-3/4"	Do.	Do.	25 1/2" x 69 1/4"	Fixed Transom & Side Light - See Elev. & Details Sheets #3, 4, 18, 61.	
D-8	Interior - 1 <sup>st</sup> Floor Chem. Feed Room	3'-0" x 7'-2" x 1'-3/4"	Do.	Do.	23 3/8" x 36 3/8"	Fixed Louver below glass panel - Special Head Filler - 1/4" Plate Glass	
D-9	Interior - Basement - Pipe Gallery	2'-3'-0" x 7'-2" x 1'-3/4"	Do.	Steel Channel	None		
D-10	Exterior - Low Service Pump Sta.	2'-2'-6" x 7'-2" x 1'-3/4"	Do.	Pressed Steel	Do.	Combination Alum. Storm & Screen Doors	
D-11	Do.	3'-0" x 7'-2" x 1'-3/4"	Do.	Do.	Do.	Combination Alum. Storm & Screen Door	
D-12	Interior - W. Wall Filter Oper. Gallery	3'-0" x 7'-2" x 1'-3/4"	Do.	Do.	Do.	Special Head Filler - Provide special anchors into conc. column.	
D-13	Do.	3'-0" x 7'-2" x 1'-3/4"	Do.	Do.	Do.	Special Head Filler - Provide 1 safety chain	
D-14	Do.	3'-0" x 7'-2" x 1'-3/4"	Do.	Do.	Do.	Same as D-13 + Provide special anchors into conc. column	

LINTEL SCHEDULE				REMARKS
MARK	DESCRIPTION	SECTION		
L-1	1'-6" x 4" x 5/16" L (S.L.H.)	┌┐	┌┐	Angle anchored to Conc. beam **
L-2	1'-8" WF 17 Beam + 1'-11" x 5/16" R	I	I	R welded to beam **
L-3	2'-3 1/2" x 5" x 5/16" L3 (S.L.H.)	JL	JL	Angles welded back to back
L-4	2'-3 1/2" x 3 1/2" x 5/16" L5	JL	JL	Angles welded back to back
L-5	1'-3 1/2" x 4" x 5/16" L (S.L.H.) + 1'-4" x 7" x 3/8" L (L.L.H.)	JL	JL	Angles back to back
L-6	Reinforced Conc.	▣	▣	Beam or wall opening
L-7	Precast Lt. Wt. Conc.	▣	▣	4 - 2" Reinforcing rods

\*\* Lintels above windows W-1, W-2 and W-3 shall have 2 x 2 x 1/2" welded - See Sh. No. 4 & 5

WINDOW SCHEDULE														
MARK	QUAN.	TYPE	LOCATION	STRUCT. OP'G.	GLASS BLOCK REQUIRED	SASH UNITS	SASH OPENING IN GLASS BLOCK	GLASS TYPE	MULLIONS	SWING OUT VENTS	SWING IN VENTS	SCREEN UNITS	SASH OPERATOR	REMARKS
W-1	6	Matching Type Glass Block and Insert Type Alum. Sash	Exterior - Main Floor W. & S. Walls	8'-2" x 4'-8 3/4"	76	1	2'-8 1/4" x 1'-4 1/4" (4 Gl. Bl. x 2 Gl. Bl.)	Thermal	None	1	None	1	Underscreen Stay Bar	Sash Unit Framed into Glass Block - See Details Sh. # 4 & 5 Match block as nearly as possible.
W-2	5	Do.	Main Fl. East Wall	8'-2" x 6'-0 3/4"	100	1	Do.	Do.	None	1	None	1	Do.	Do. Sash Unit in Locker Room to be Obscure Glass
W-3	3	Do.	Second Fl. West Wall	8'-2" x 5'-4 3/4"	88	1	Do.	Do.	1	1	1	1	Do.	Do.
W-4	5	Alum. Awning & Hopper Sash	Second Fl. E. & S. Walls	8'-0 1/2" x 5'-4"	None	2	None	Do.	1	3 per sash	1 per sash	2 per sash	As Specified	Combination Aluminum Awning Sash and Hopper Sash - Pole Operators at Stairs
W-5	1	Clear View Glass Block	Interior - Chem. Fd. Rm.	5'-4 3/4" x 4'-8 3/8"	56	None	Do.	None	None	None	None	None	None	Glass Block at Jamb and Head set into Alum. Channel - See Details Sh. # 4
W-6	1	Do.	Do.	5'-4 3/4" x 4'-0 7/8"	48	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Glass Block at Jamb and Head set into Alum. Channel - See Details Sh. # 4
W-7	2	Do.	Interior - Filter Gallery	6'-0 1/2" x 6'-8 3/8"	90	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.
W-8	1	Do.	Do.	5'-4 3/4" x 6'-8 3/8"	80	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.
W-9	1	Do.	Do.	12'-0" x 6'-8 3/8"	180	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.	Do.

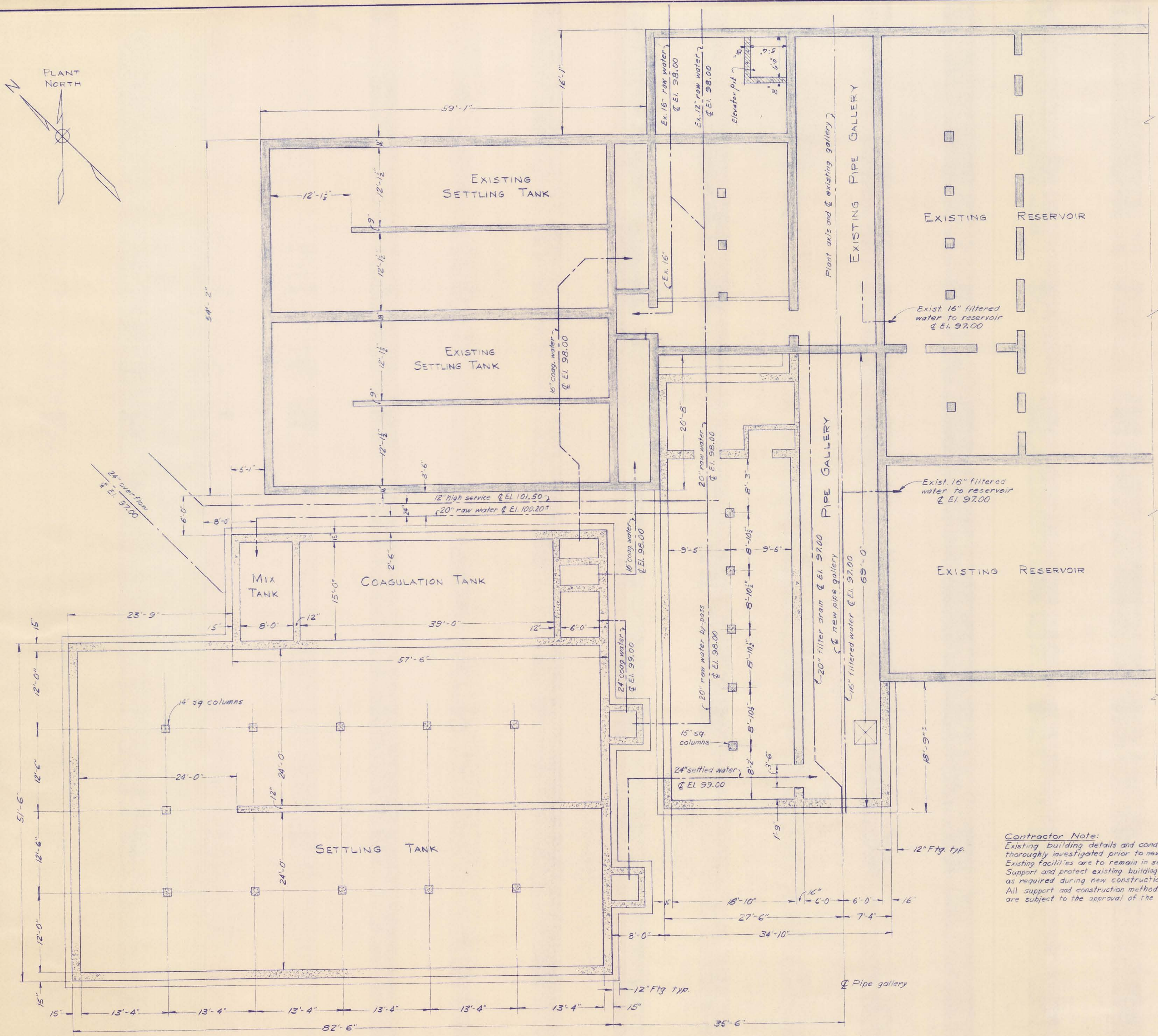
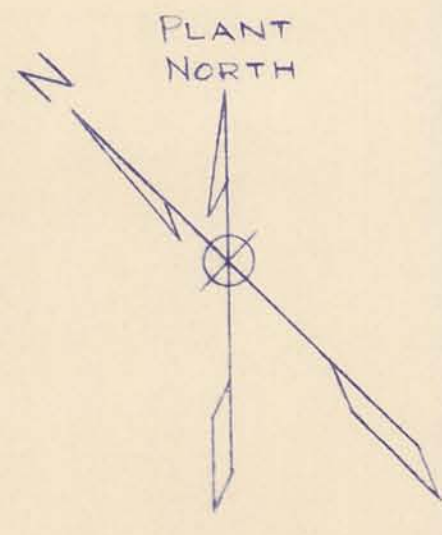
† See alternate proposal A-1. †† Zero type mullion

ARCHITECTURAL SYMBOLS	
	Earth in section
	Existing structure
	Concrete in section (Conc.)
	Stone in section and elevation
	Face brick in large scale & masonry in small scale sections
	Glazed structural tile in section (G.S.T. or G.L. St. Tile)
	Back-up brick in large scale
	Light weight concrete block (Lt. Wt. conc. Bl. or L.W.B.)
	Wood in large scale sections and elevations (Wd.)
	Rigid Insulation in large scale sections
	Structural steel in large scale sections
	Aluminum in large scale sections
	Oakum and caulking in large scale sections
	Caulking in small scale sections
	Glass Block expansion strip
	Metal lath and plaster
	Loose insulation
	Detail Number Reference Sheet

DETAIL SYMBOL	
	Detail Number Reference Sheet

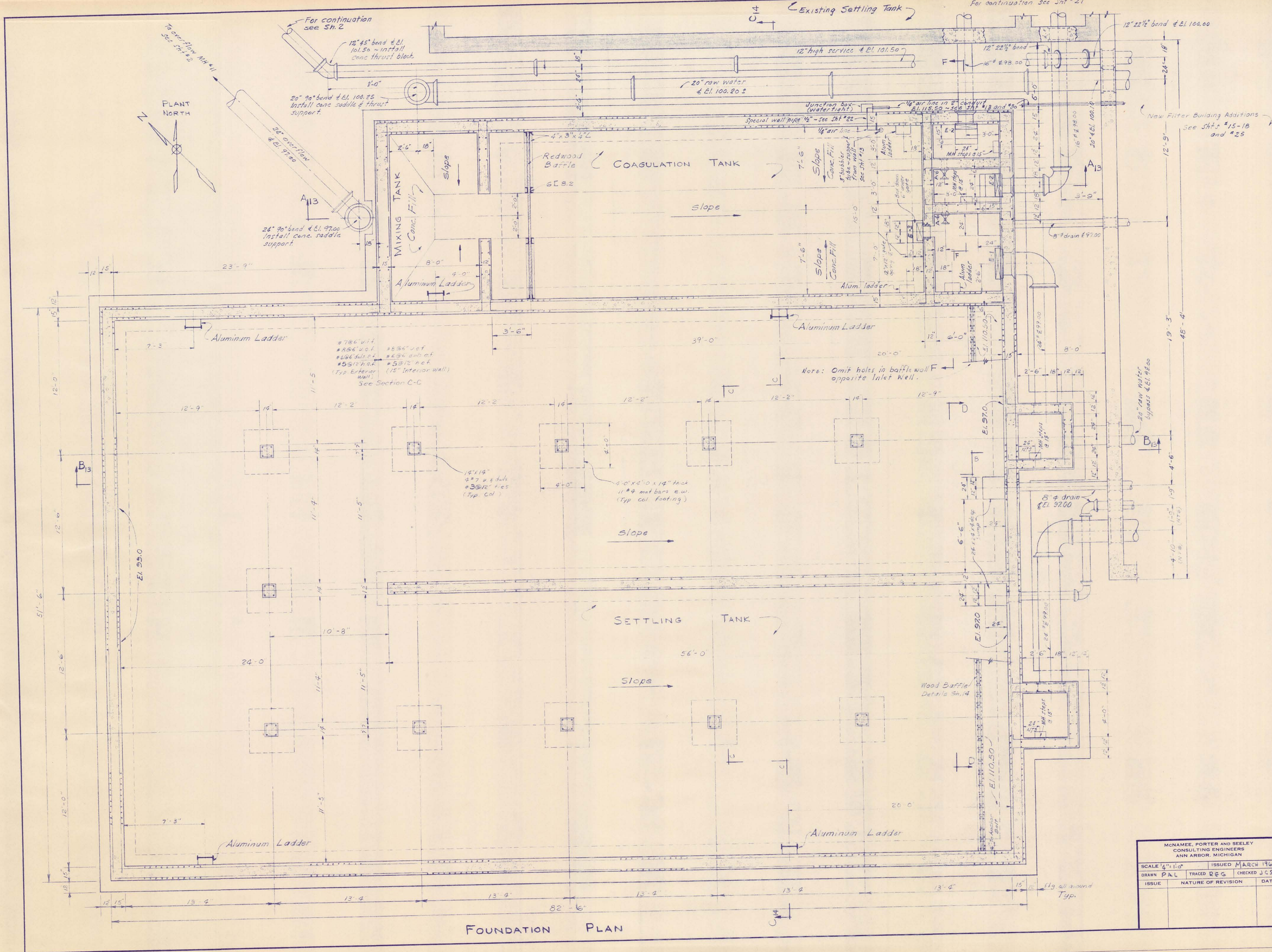
MCMANEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN	
SCALE AS NOTED	ISSUED MAR. 1965
DRAWN G.W.C.	TRACED E.M.C.
CHECKED J.L.C.	DATE
ISSUE	NATURE OF REVISION

ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION	
ARCHITECTURAL SCHEDULES	
MISCELLANEOUS DETAILS	
CONTRACT 1965	SHEET 9 OF 33

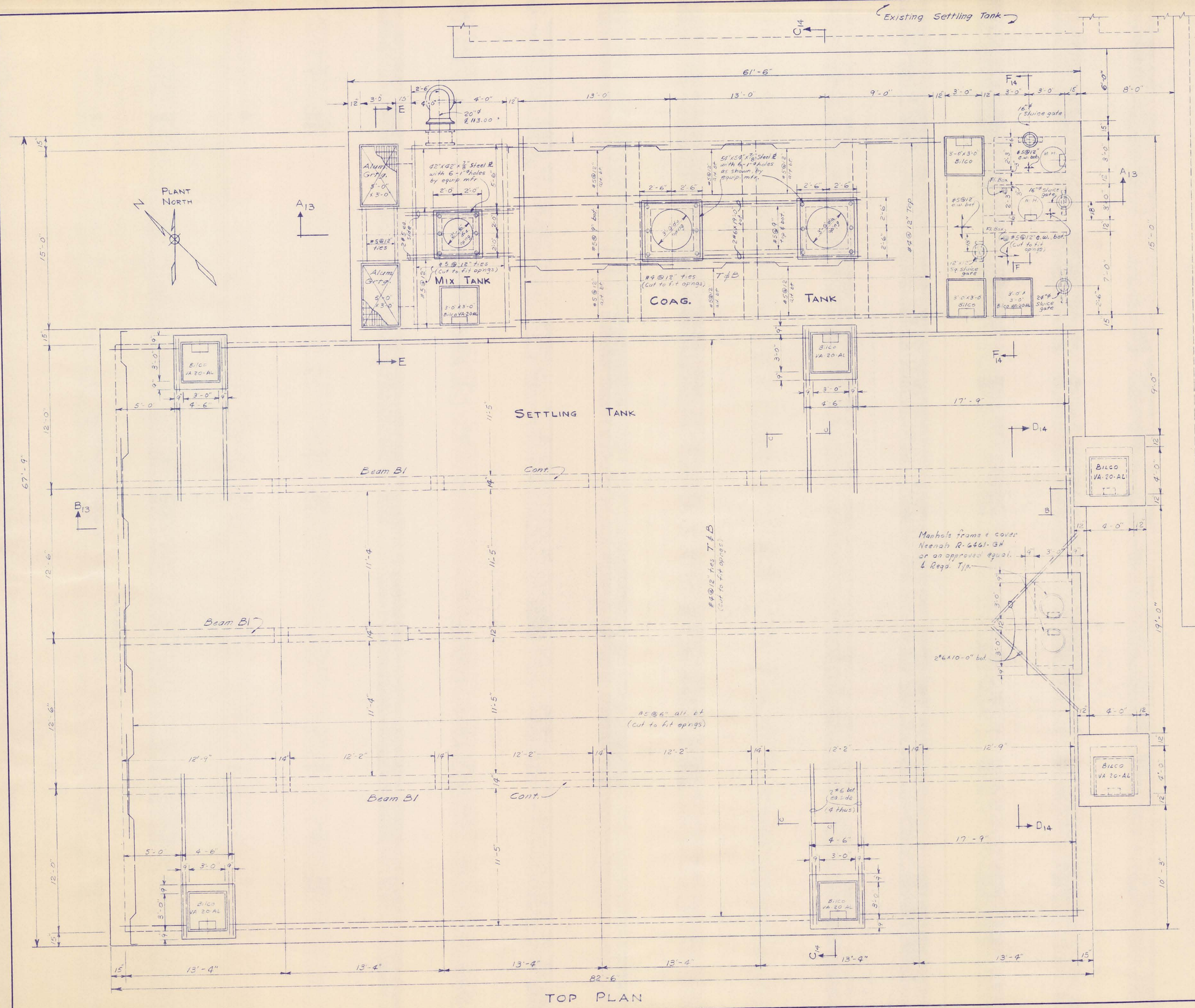


**Contractor Note:**  
Existing building details and conditions shall be thoroughly investigated prior to new construction. Existing facilities are to remain in service. Support and protect existing building and structure as required during new construction. All support and construction methods and details are subject to the approval of the engineer.

McNAMEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN				ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION	
SCALE 1" = 10'	ISSUED	MARCH 1965		FOUNDATION PLAN	
DRAWN P.A.L.	TRACED R.F.G.	CHECKED J.C.S.	DATE		
ISSUE	NATURE OF REVISION		DATE		
				CONTRACT	SHEET
				1965	10
				W-2	OF 33



McNAMEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN				ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION	
SCALE 1/4" = 1'-0"	ISSUED MARCH 1965		MIX, COAGULATION AND SETTLING TANK FOUNDATION PLAN		
DRAWN PAL	TRACED REG	CHECKED JCS	DATE		
ISSUE	NATURE OF REVISION		DATE		
CONTRACT 1965 W-2			SHEET 11 OF 33		



New Filter Building Addition  
See Sh. # 15-18

TOP PLAN

McNAMEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN		ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION		
SCALE 1/4" = 1'-0"	ISSUED MARCH 1965	MIX, COAGULATION SETTLING TANK TOP PLAN		
DRAWN P.A.L.	TRACED R.E.G.			CHECKED J.C.S.
ISSUE	NATURE OF REVISION			DATE
CONTRACT 1965 W-2	SHEET 12 OF 33			

DRAWING NUMBER

SAFCO PRODUCTS • NEW HOPE, MINNESOTA  
REORDER BY PART NUMBER 6522

DRAWING NUMBER

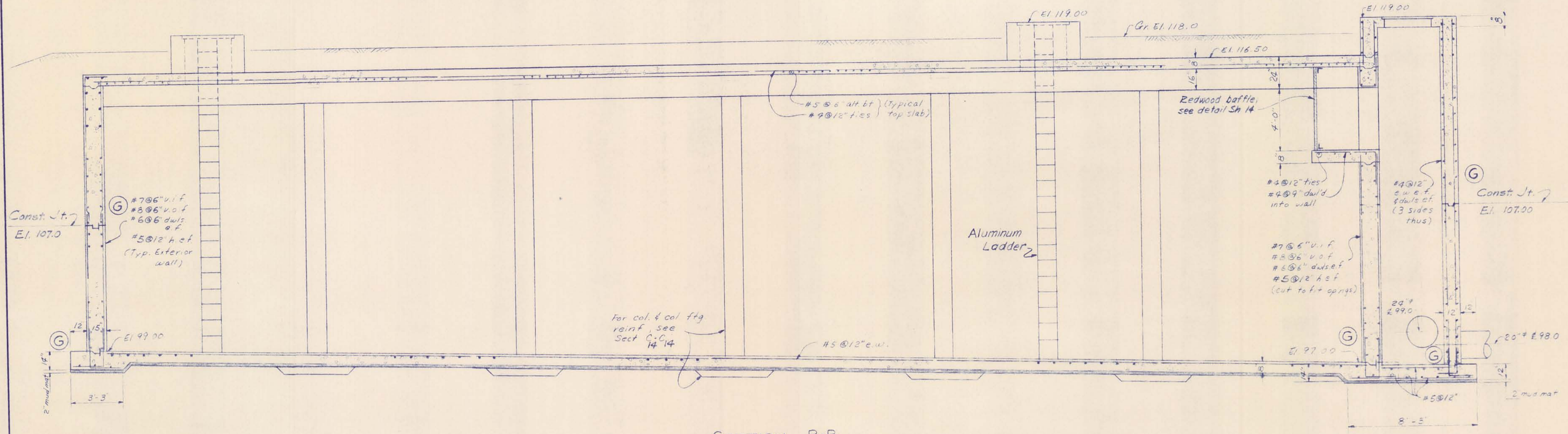
SAFCO PRODUCTS • NEW HOPE, MINNESOTA  
REORDER BY PART NUMBER 6522

ADDITIONS  
WATER TREATMENT  
PLANT 1965  
13 OF 33

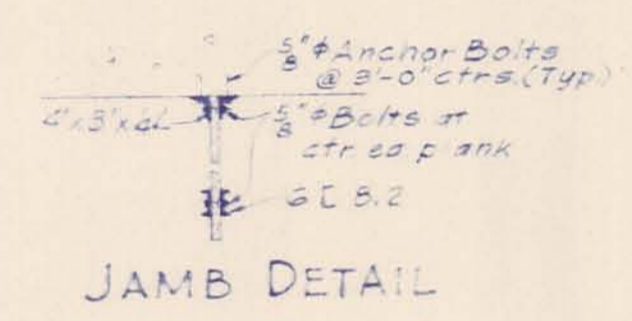
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REORDER BY PART NUMBER 6522

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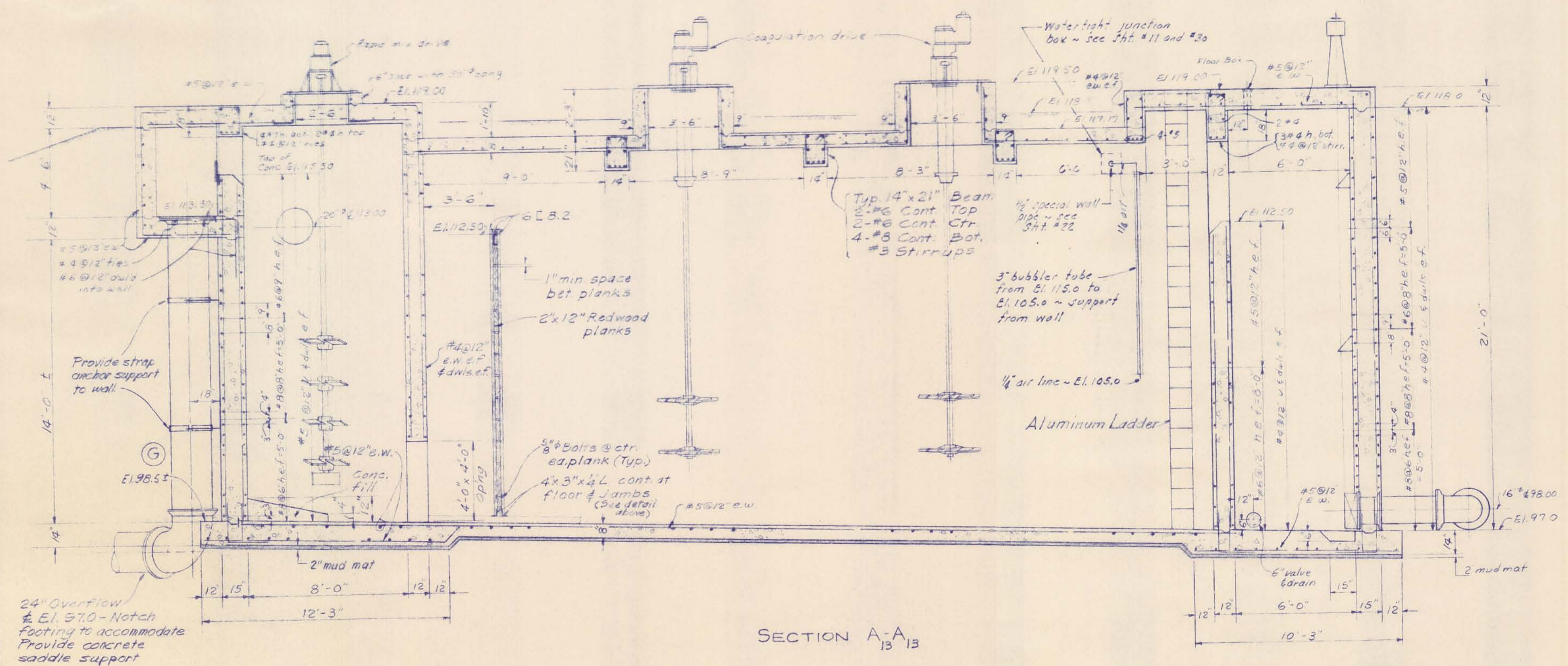
SAFCO PRODUCTS • NEW HOPE, MINNESOTA  
REORDER BY PART NUMBER 6522



SECTION B-B  
13 13

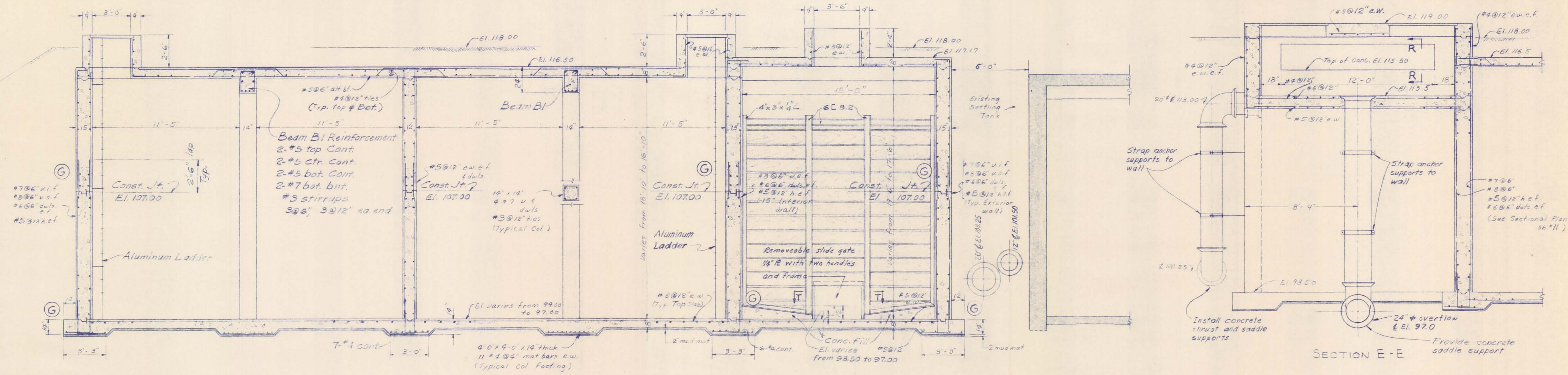


JAMB DETAIL

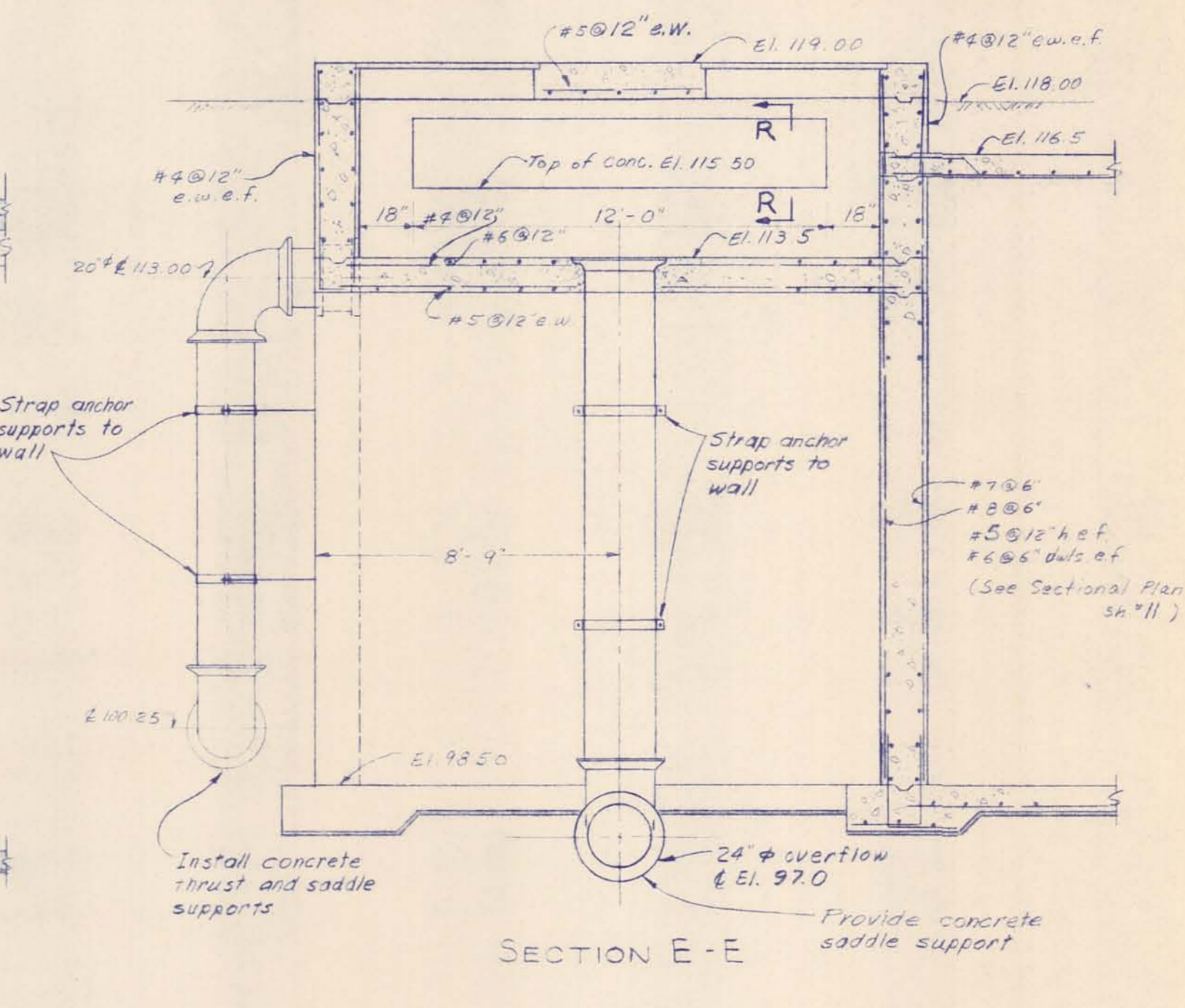


SECTION A-A  
13 13

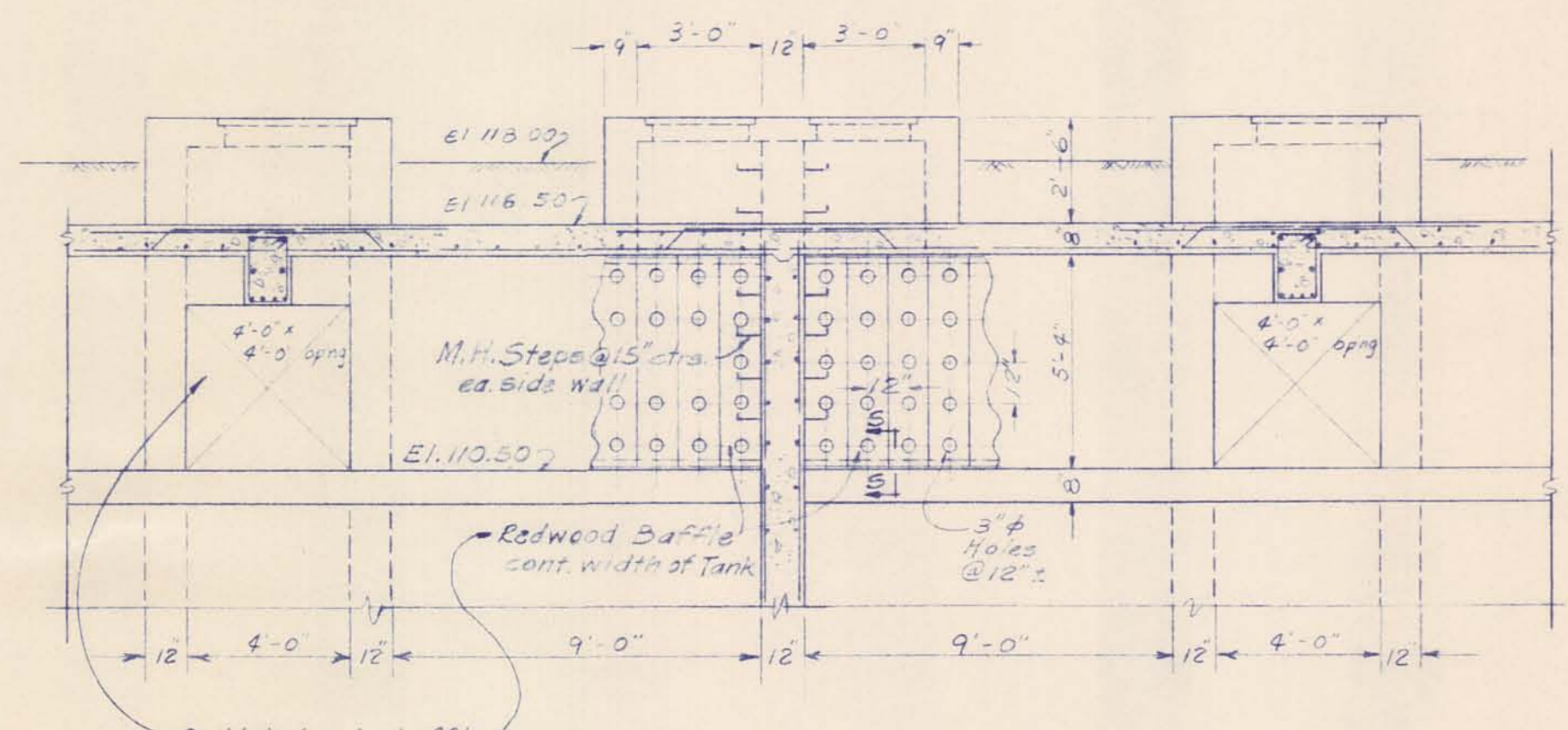
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SCALE 1/4" = 1'-0"	ISSUED MARCH 1965		MIX, COAGULATION AND SETTLING TANK SECTIONS & DETAILS		
DRAWN PAL	TRACED RES	CHECKED JCS			
ISSUE	NATURE OF REVISION	DATE			
CONTRACT 1965 W-2		SHEET 13 OF 33			



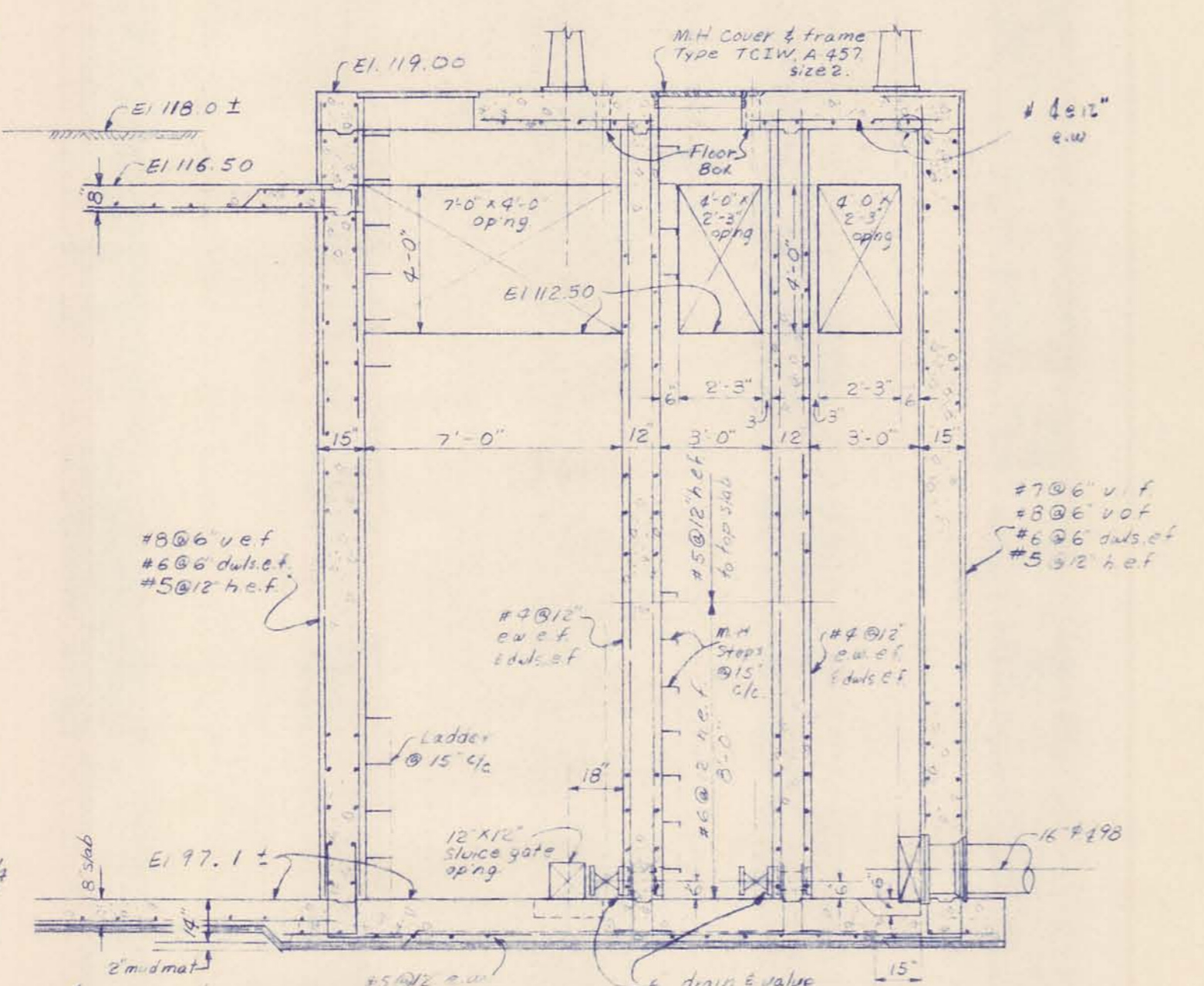
SECTION C-C



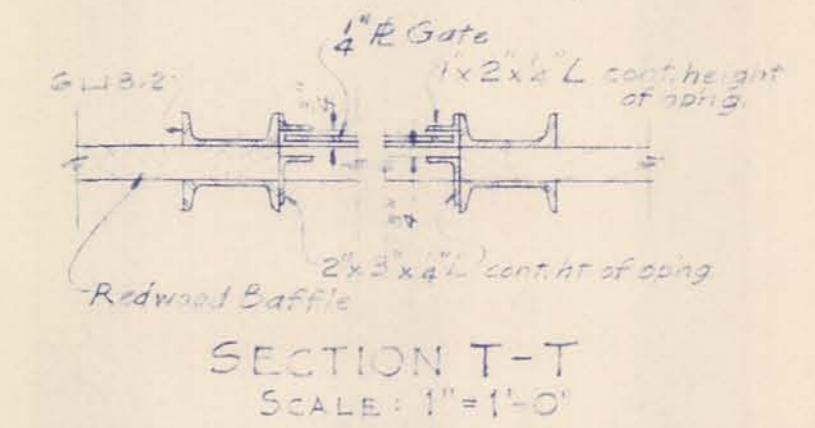
SECTION E-E



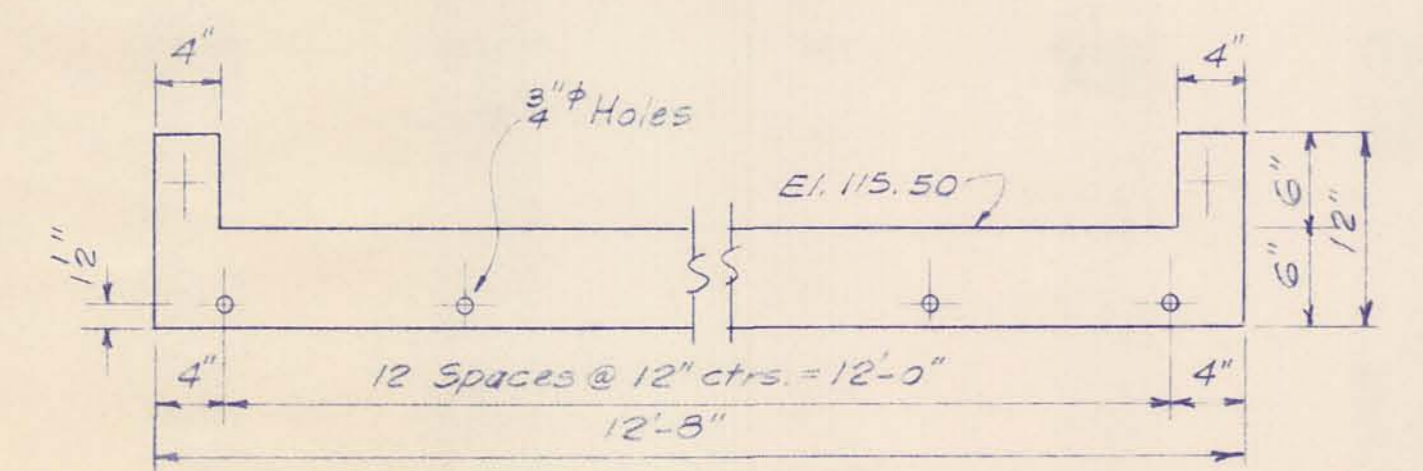
SECTION D-D



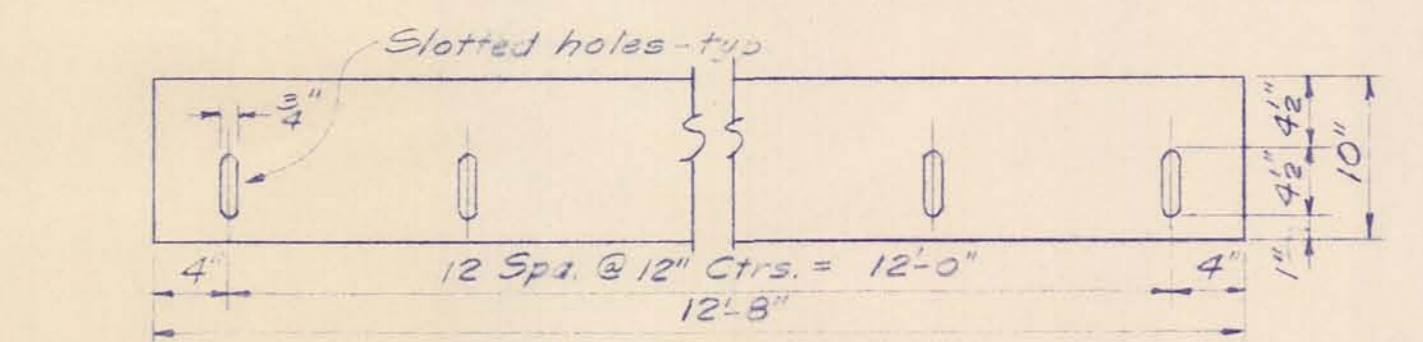
SECTION F-F



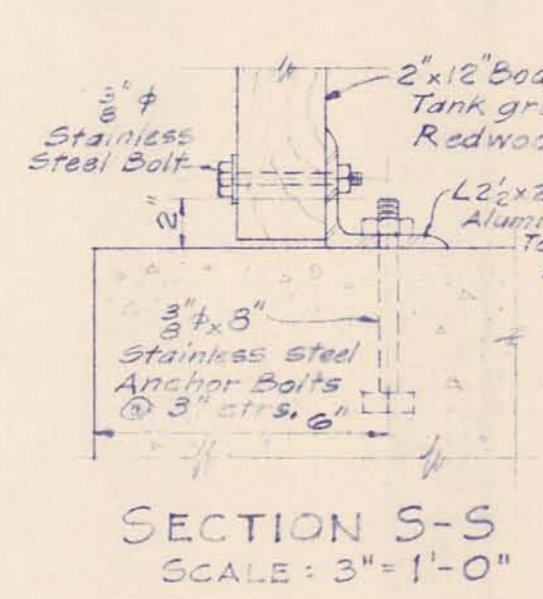
SECTION T-T  
SCALE: 1" = 1'-0"



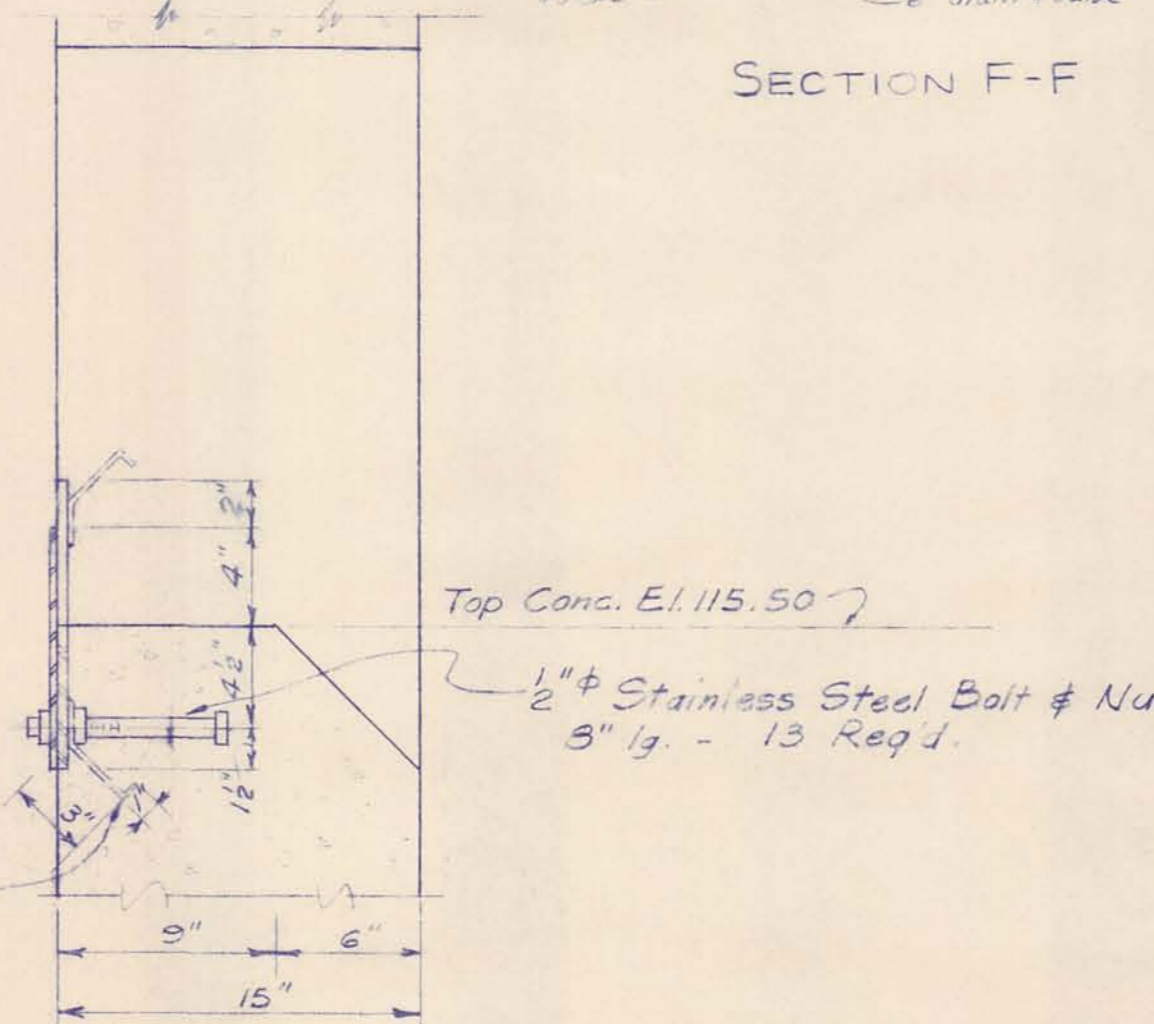
FACE & DETAILS  
SCALE: 1" = 1'-0"



WEIR & DETAILS  
SCALE: 1" = 1'-0"

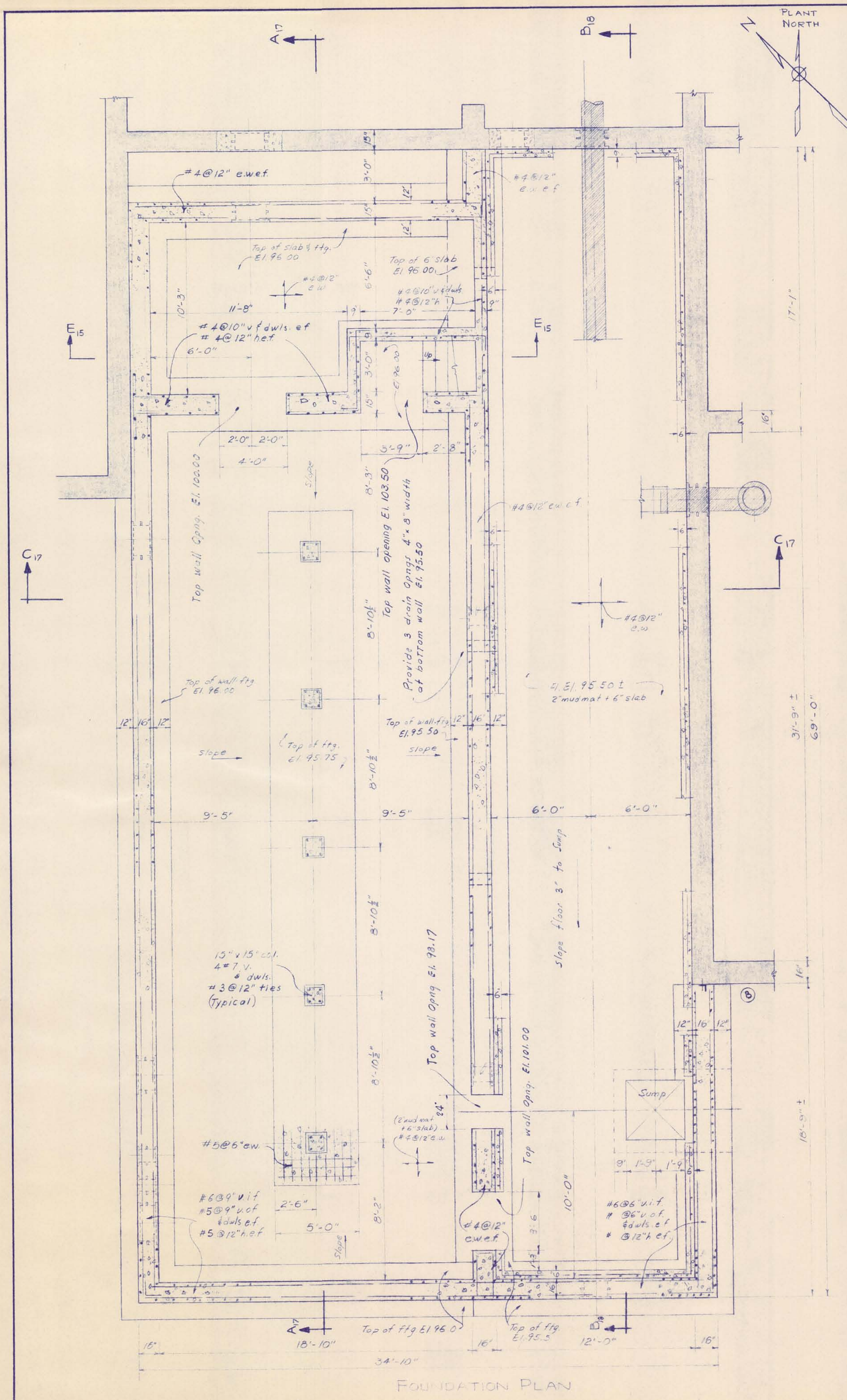


SECTION S-S  
SCALE: 3" = 1'-0"

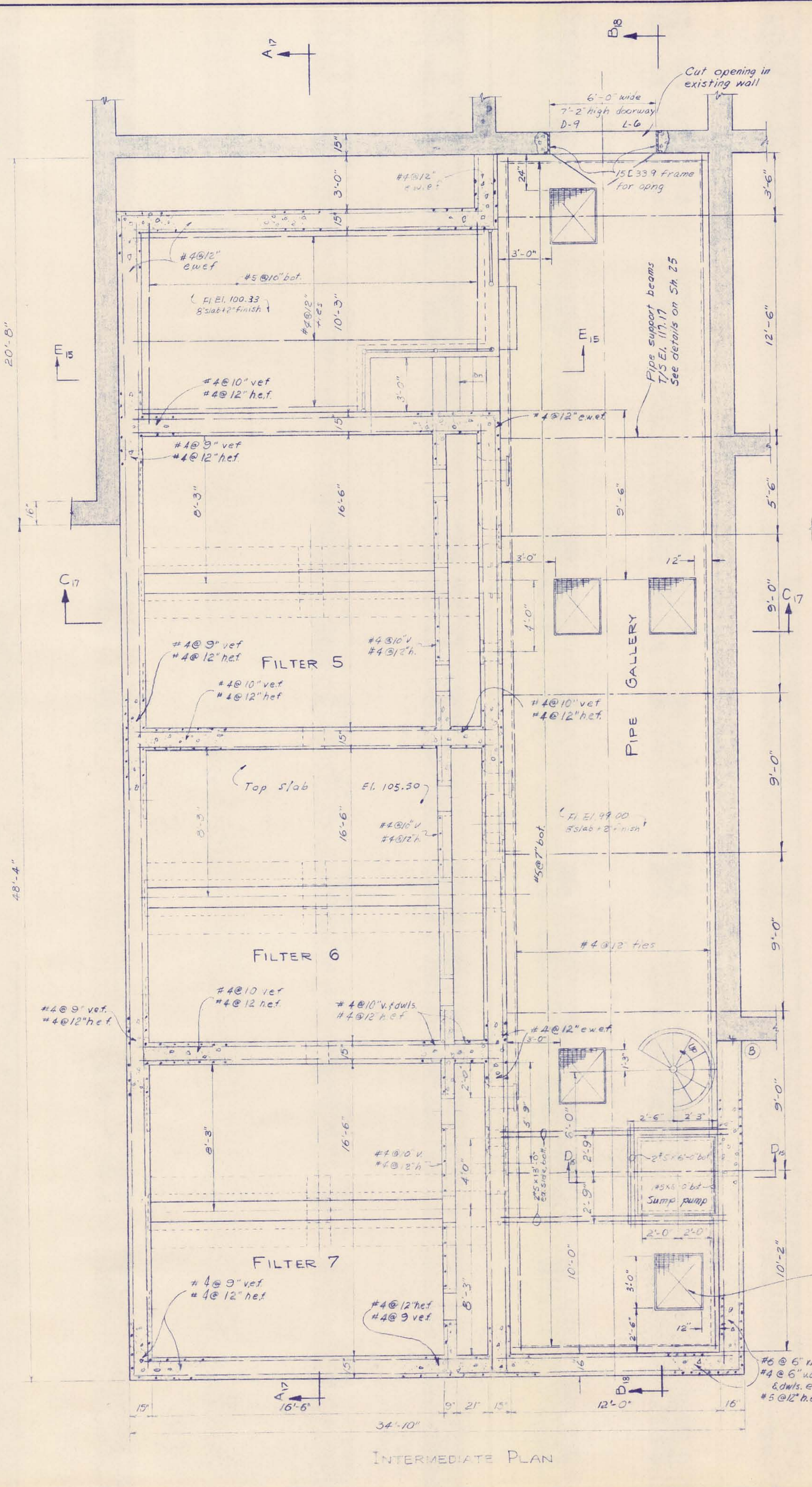


SECTION R-R  
SCALE: 1/2" = 1'-0"

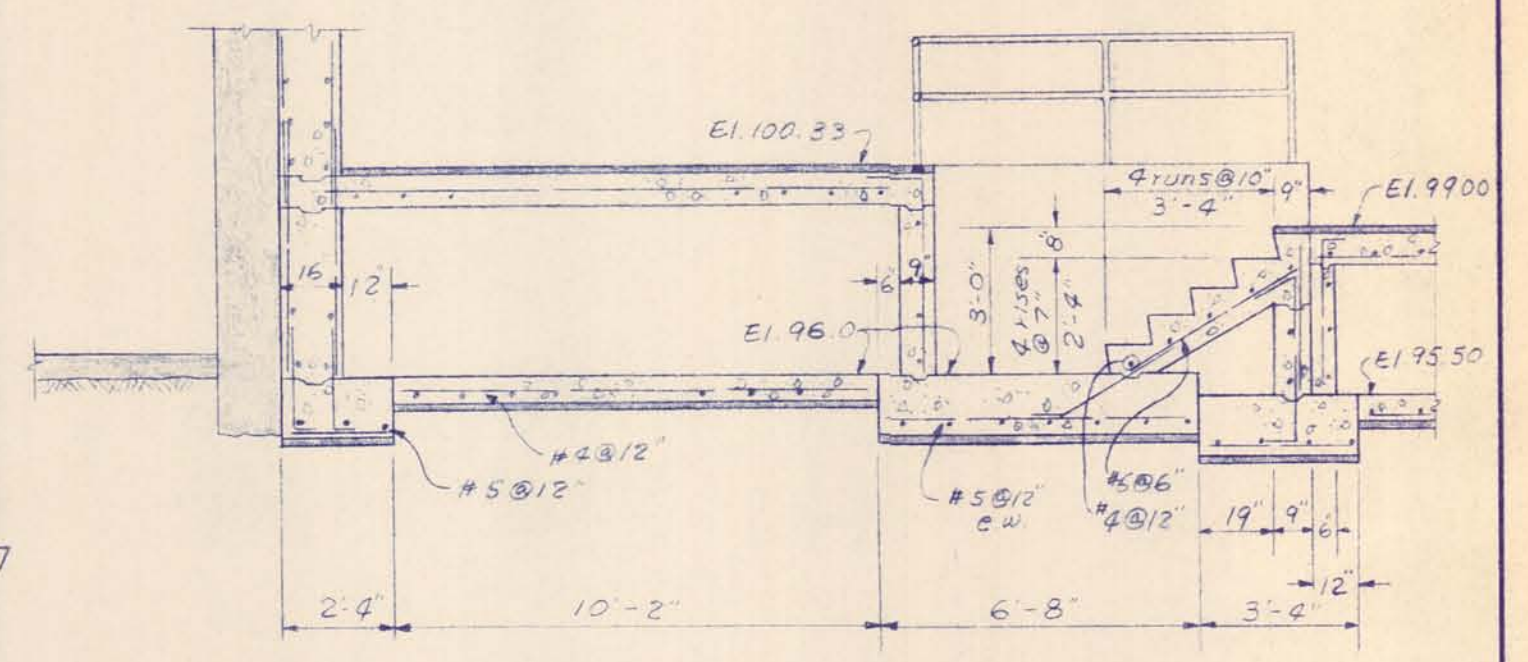
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SCALE 1/2" = 1'-0"	ISSUED MARCH 1965		MIX, COAGULATION AND SETTLING TANK SECTIONS & DETAILS		
DRAWN PAL	TRACED REG	CHECKED JCS	CONTRACT	1965	SHEET
ISSUE	NATURE OF REVISION	DATE	W-2		14 OF 33



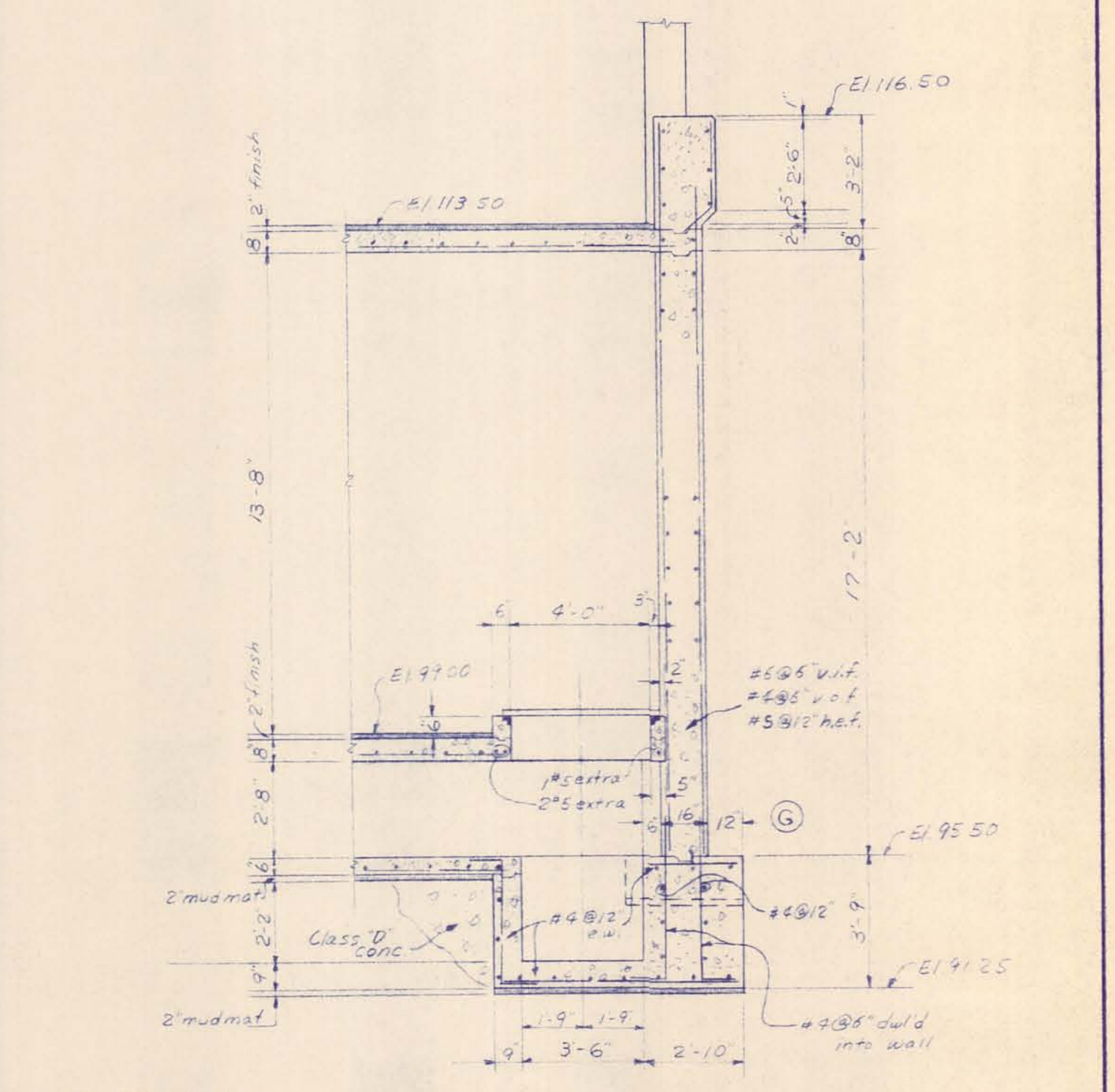
FOUNDATION PLAN



INTERMEDIATE PLAN



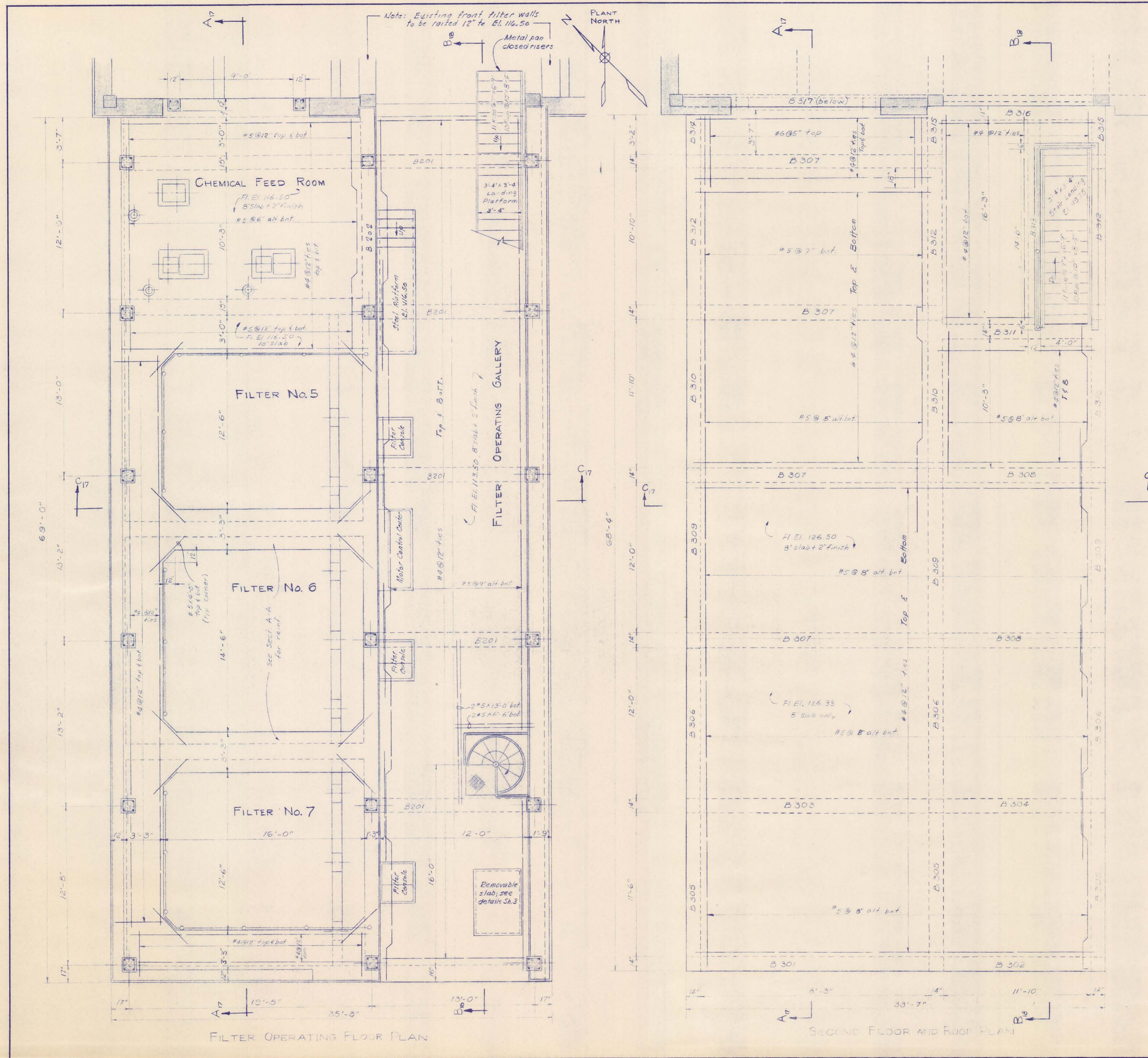
SECTION E15-E15



SECTION D-D

MCNAMEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN			ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION		
SCALE 1/2"=1'-0"	ISSUED MARCH 1965		FILTER BUILDING ADDITION		
DRAWN P.A.L.	TRACED R.E.G.	CHECKED J.C.S.	FOUNDATION PLAN		
ISSUE	NATURE OF REVISION	DATE	INTERMEDIATE PLAN		
			CONTRACT 1065 W-2	SHEET 15 OF 33	





**BEAM SCHEDULE**

Mark	No.	Size	Clear Span	Bottom Bars		Top Bars		U-Stirrups					
				Straight	Truss	Truss	Straight	No.	Size	Spacing	Remark		
B 301	1	14	27	18'-3"	2 #7	1 #9	Cont.	2 #5	Cont.	10	#3	2@6", 3@12"	ea. end
B 302	1	14	27	11'-10"	2 #7	1 #9	Cont.	2 #5	Cont.	8	#3	2@6", 2@12"	-
B 303	1	14	27	18'-3"	2 #7	2 #5	Cont. Ctr.	2 #5	Cont.	10	#3	2@6", 3@12"	-
B 304	1	14	27	11'-10"	2 #7	2 #5	Cont. Ctr.	2 #5	Cont.	8	#3	2@6", 2@12"	-
B 305	3	14	27	11'-6"	2 #5	2 #5	Cont.	2 #5	Cont.	10	#3	2@6", 3@12"	-
B 306	3	14	27	12'-0"	2 #5	2 #5	Cont.	2 #5	Cont.	10	#3	2@6", 3@12"	-
B 307	4	14	27	18'-3"	4 #9	2 #6	2 Row	4 #9	Cont.	44	#3	4@8", 4@6", 3@12"	Sets of 2 ea. end
B 308	2	14	27	11'-10"	4 #9	2 #5	2 Row	4 #9	Cont.	44	#3	4@8", 4@6", 3@12"	Sets of 2 ea. end
B 309	3	14	27	12'-0"	2 #7	2 #5	Cont. Ctr.	2 #6	Cont.	10	#3	2@6", 3@12"	ea. end
B 310	3	14	27	11'-10"	2 #7	2 #5	Cont. Ctr.	2 #6	Cont.	8	#3	2@6", 3@12"	-
B 311	1	14	27	11'-10"	4 #6	2 #5	max bars	2 #6	max bars	12	#3	@12"	Whole Span
B 312	3	14	27	10'-10"	2 #7	2 #6	Extend bars into B 314, 315	2 #6	2 #6	10	#3	2@6", 3@12"	ea. end
B 313	1	12	16	16'-3"	2 #7	2 #6	Cont. Ctr.	2 #5	Cont.	12	#3	3@6", 3@12"	-
B 314	1	14	27	3'-2"	2 #7	2 #5	2 #5 extended from B 312	2 #5	2 #5 extended from B 312	4	#3	@12"	Whole Span
B 315	2	14	30	2'-8"	2 #7	2 #5	2 #5 extended from B 312	2 #5	2 #5 extended from B 312	4	#3	@12"	Whole Span
B 316	1	As shown	11'-10"				See Sect. B-B for reinf.						
B 317	1	12	15	9'-0"	4 #6			2 #6		9	#3	@12"	Whole Span
B 201	5	14	18	12'-0"	1 #9	2 #5	Cont. Ctr.	2 #6		12	#3	3@6", 3@12"	ea. end
B 202	1	15	24	10'-8"	2 #6	2 #5	Cont. Ctr.	2 #6	Cont.	14	#3	3@6", 3@12"	ea. end
B 101	4	15	36	8'-9"	2 #9	2 #7	See Sect. A-A	2 #7	Cont.	12	#3	3@4", 3@10"	ea. end

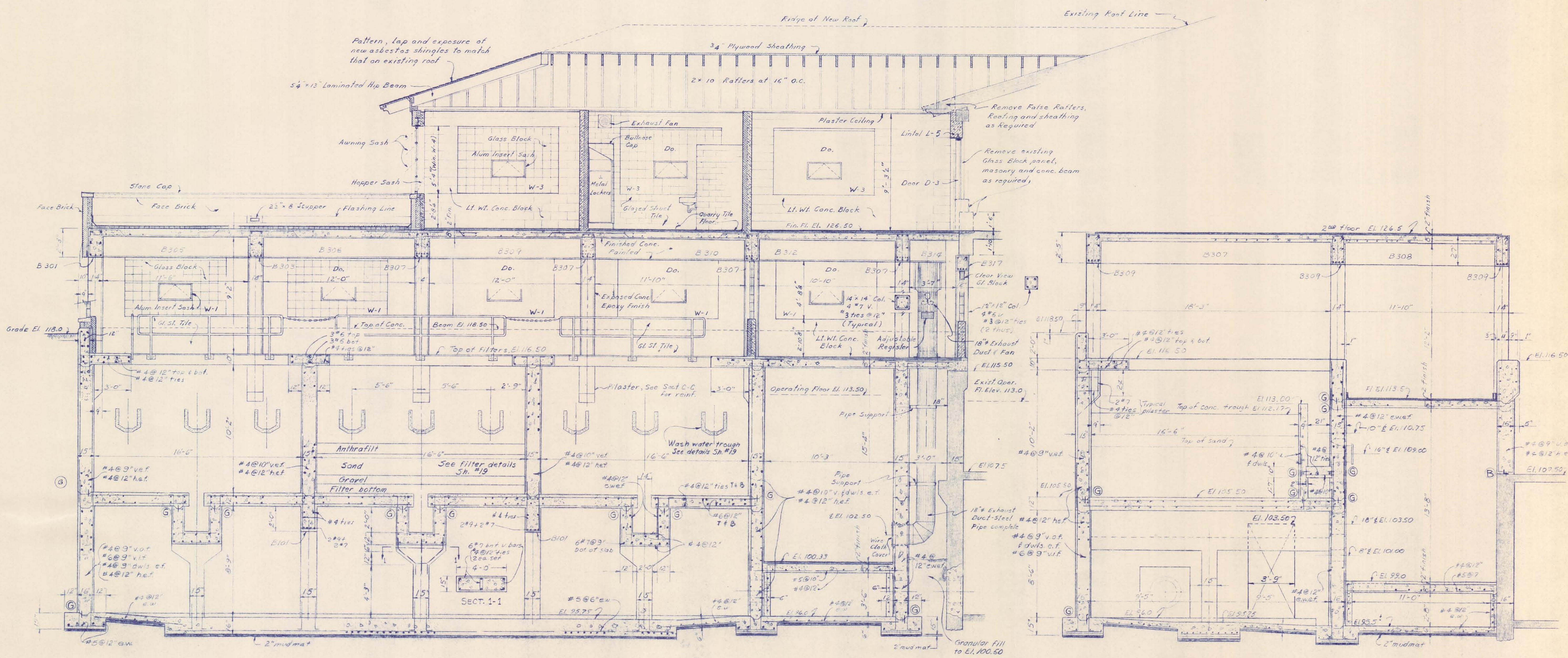
**ALPENA, MICHIGAN**  
**ADDITIONS TO WATER TREATMENT PLANT AND**  
**LOW SERVICE PUMPING STATION**

**OPERATING BUILDING ADDITION**  
**OPERATING FLOOR PLAN**  
**SECOND FLOOR & ROOF PLAN**

MCMAMEE, PORTER AND SEELEY  
CONSULTING ENGINEERS  
ANN ARBOR, MICHIGAN

SCALE: 1/4" = 1'-0" ISSUED: MARCH 1965  
DRAWN: P.A.L. TRACED: R.E.G. CHECKED: J.C.S.  
ISSUE: NATURE OF REVISION: DATE

CONTRACT: 1965 W-2 SHEET: 16 OF 33

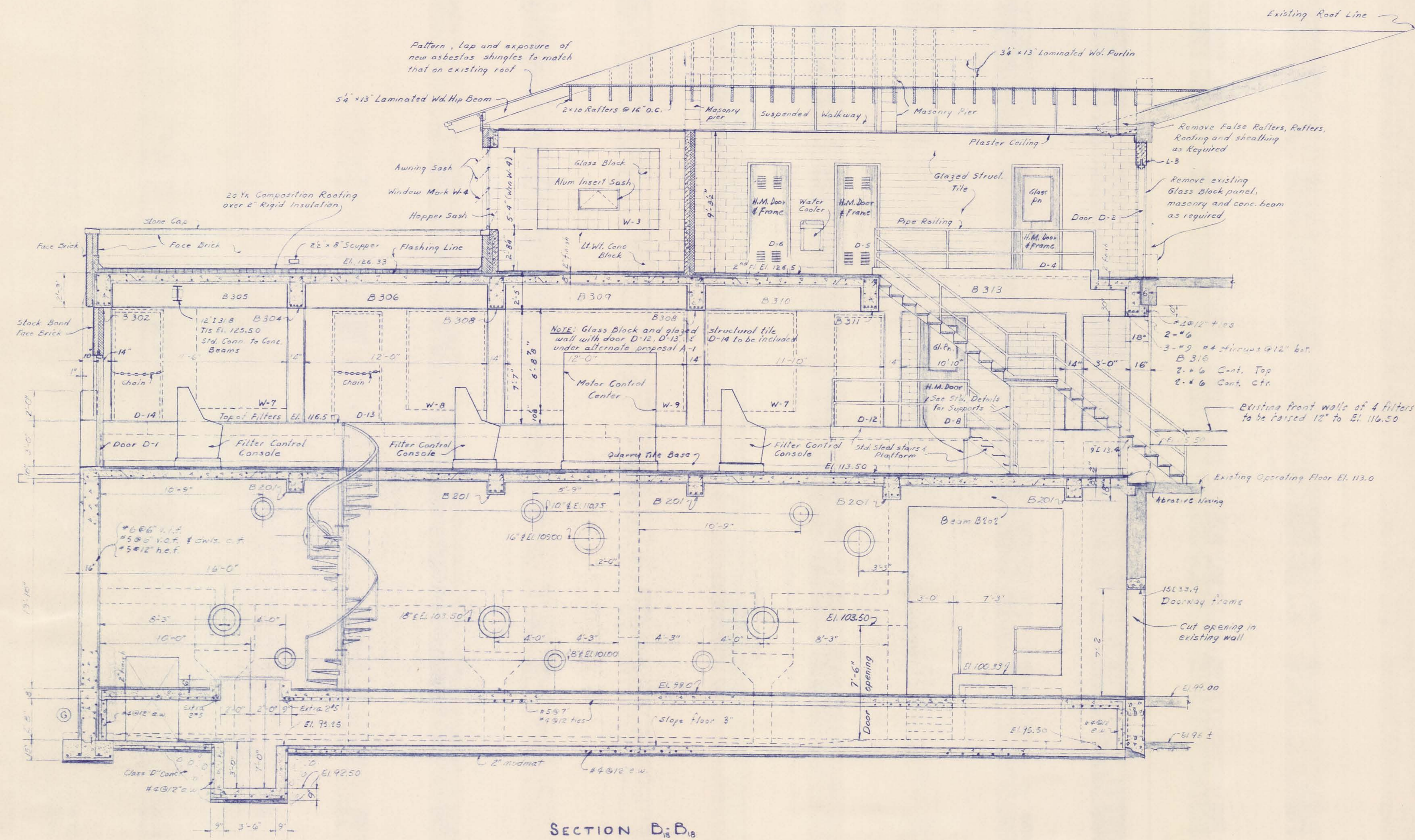


SECTION A-A

SECTION C-C

**Construction Note:**  
 Contractor shall thoroughly investigate all pertinent existing building foundations and facilities and provide adequate support and protection during all phases of new construction. Plant operation is to be maintained. Provide water-tight construction at all construction joints below grade El. and as shown or noted. Construction methods and procedures are to be approved by the engineer.

MCGEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN		ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION	
SCALE 1/4"=1'-0"	ISSUED MARCH 1965	FILTER BUILDING ADDITION SECTIONS	
DRAWN PAL	TRACED REG	CHECKED JCS	DATE
ISSUE	NATURE OF REVISION	DATE	
CONTRACT 1965 W-2	SHEET 17 OF 33		



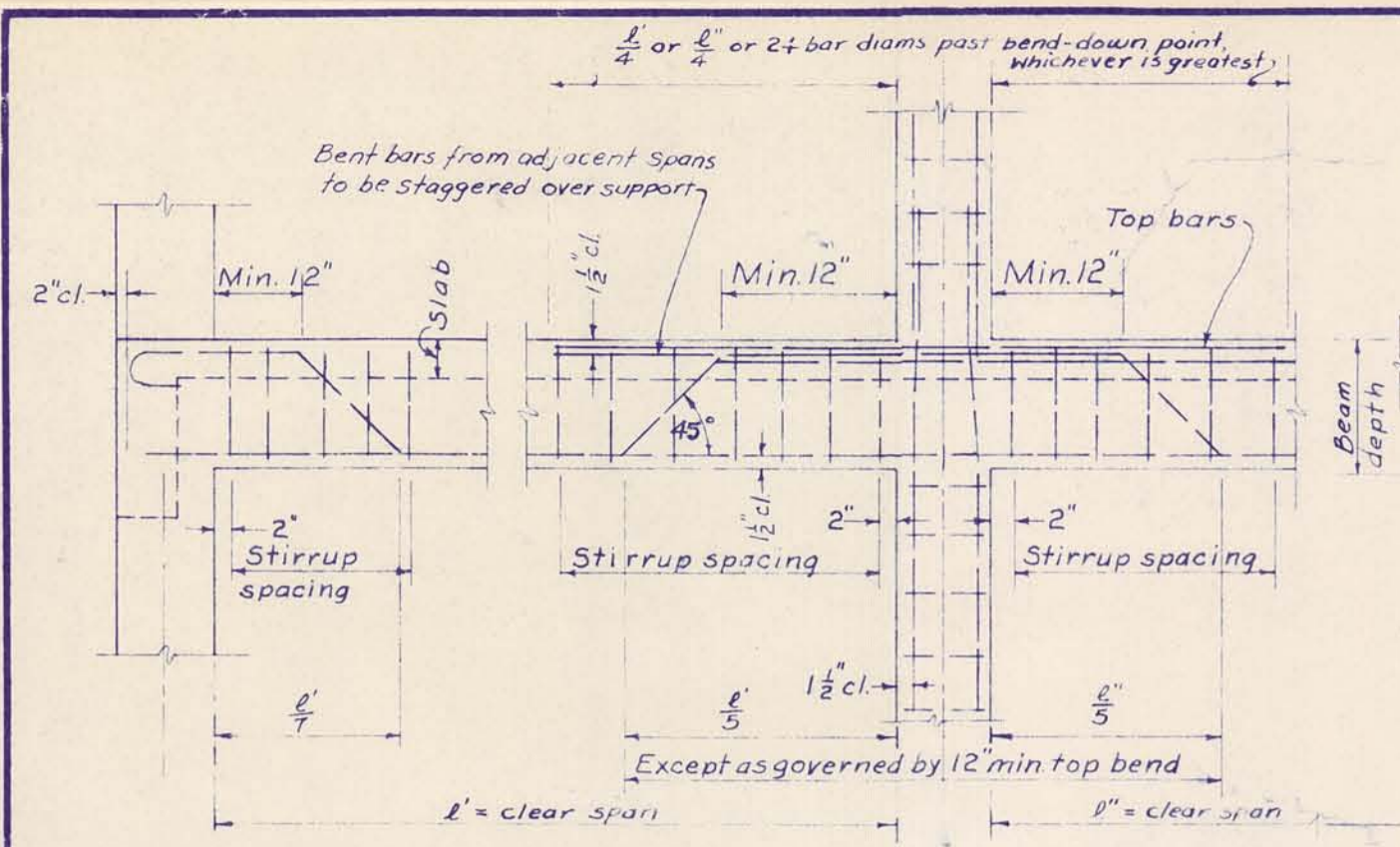
SECTION D-B

McNAMEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN				ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION	
SCALE 1/4" = 1'-0"	ISSUED MARCH 1965				
DRAWN P.A.L.	TRACED R.E.G.	CHECKED J.C.S.			
ISSUE	NATURE OF REVISION	DATE			
CONTRACT 1965 W-2			SHEET 18 OF 33		

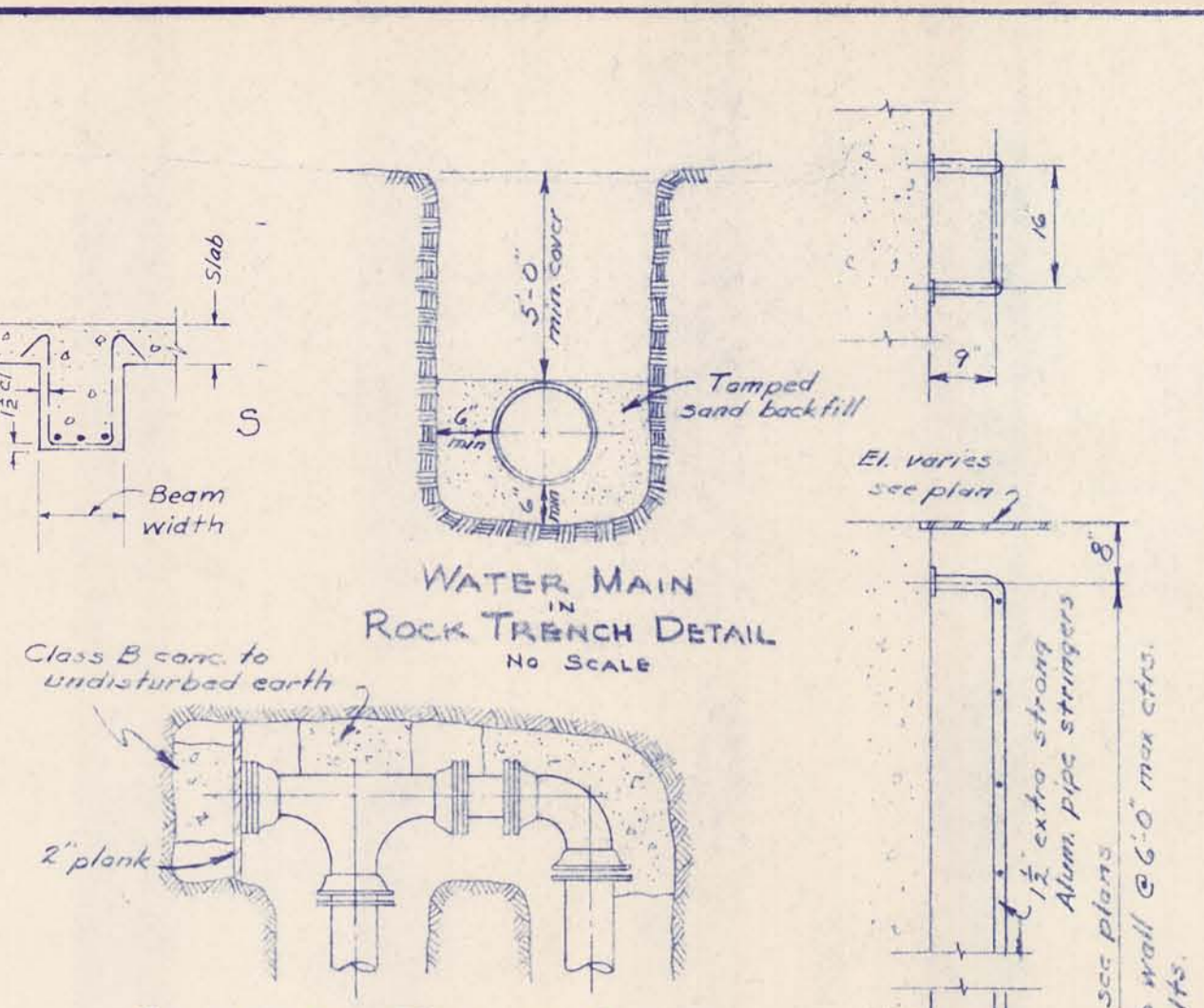




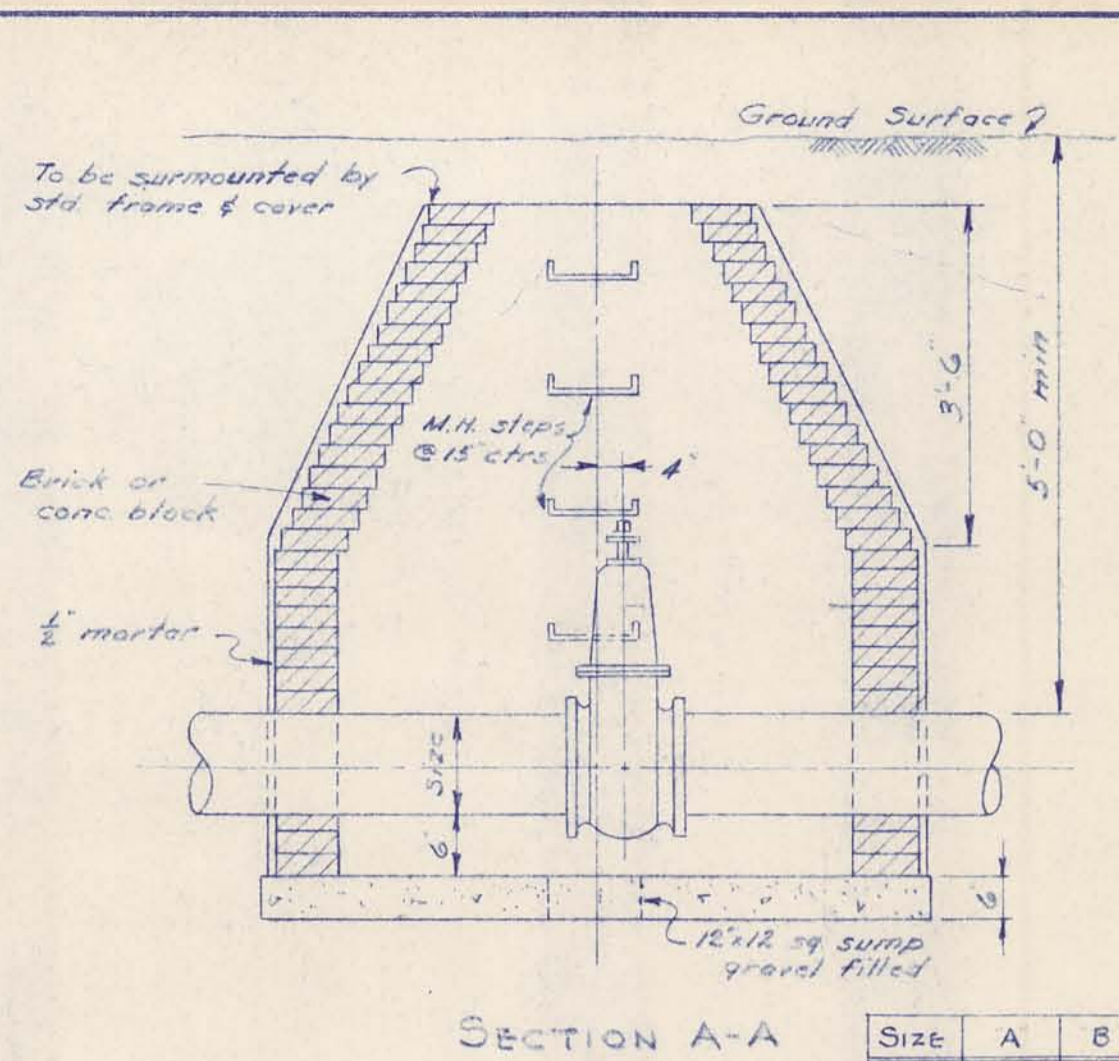




CONCRETE BEAM DETAILS

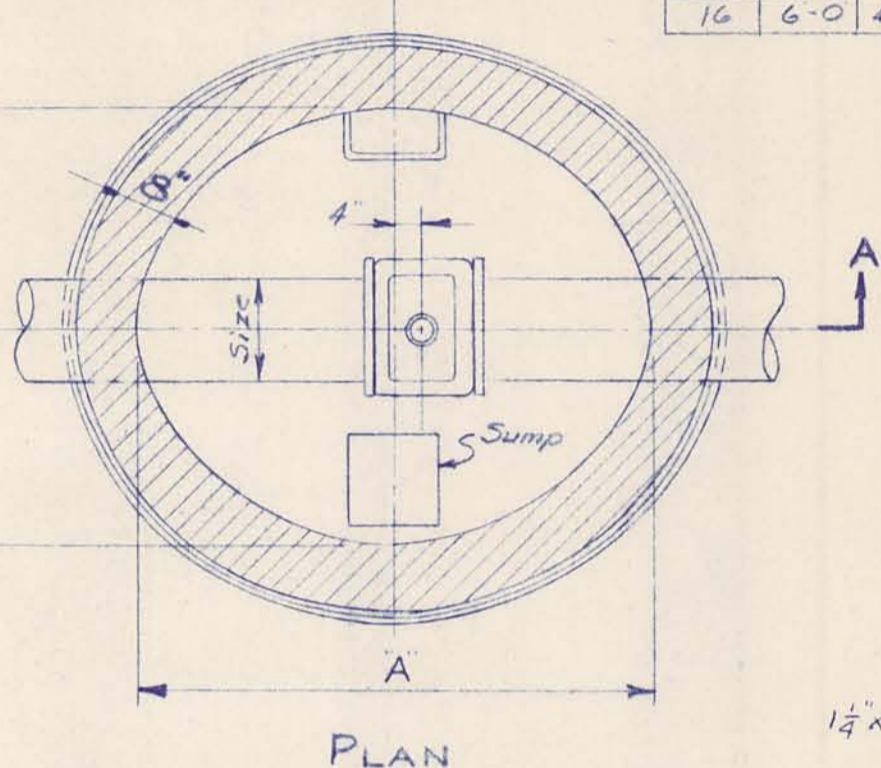


CONCRETE THRUST BLOCK DETAIL FOR WATER MAIN NO SCALE

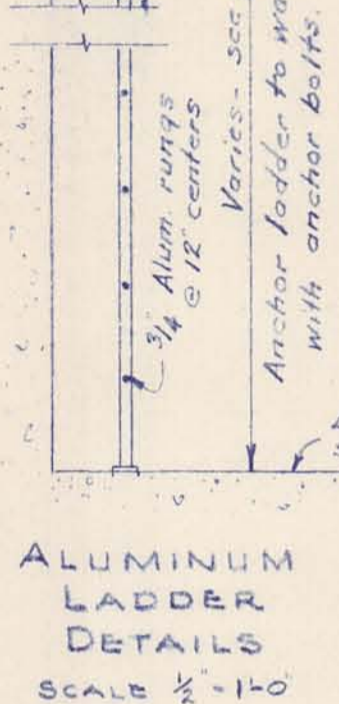


SECTION A-A

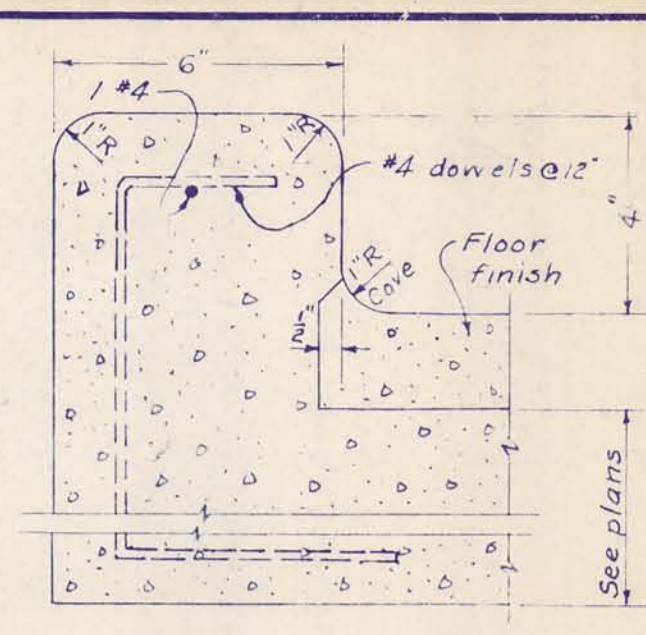
Size	A	B
12	5'-6"	4'-6"
16	6'-0"	4'-6"



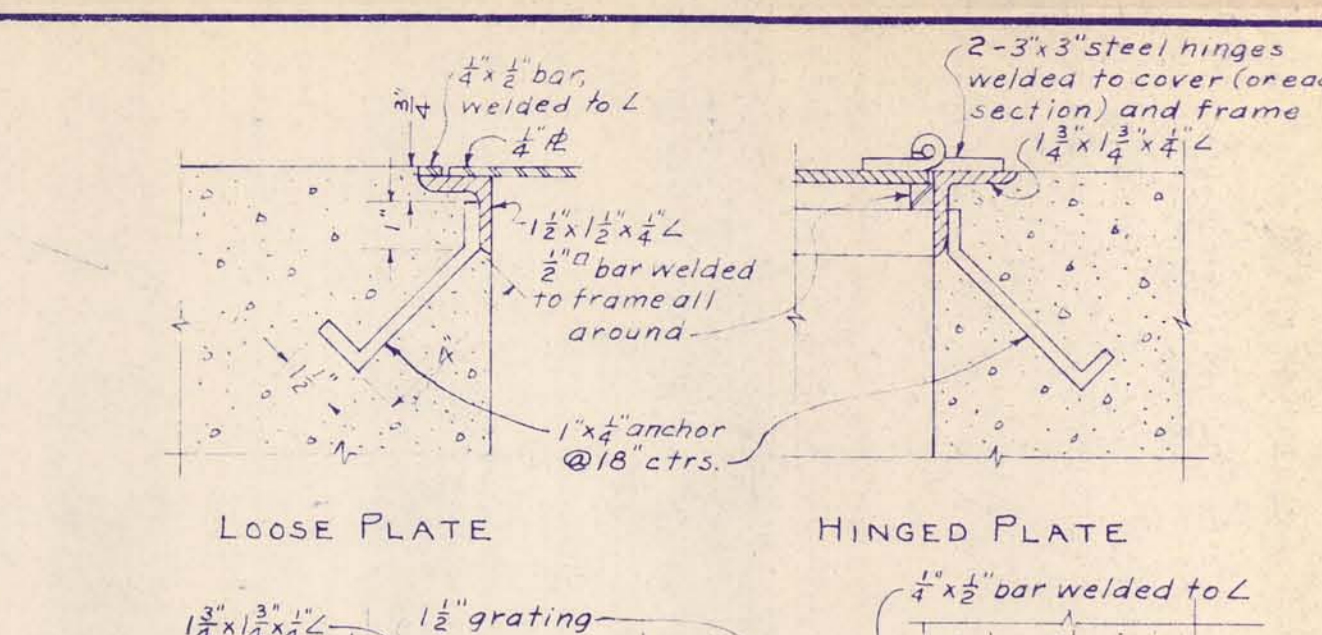
WATER VALVE MANHOLE NO SCALE



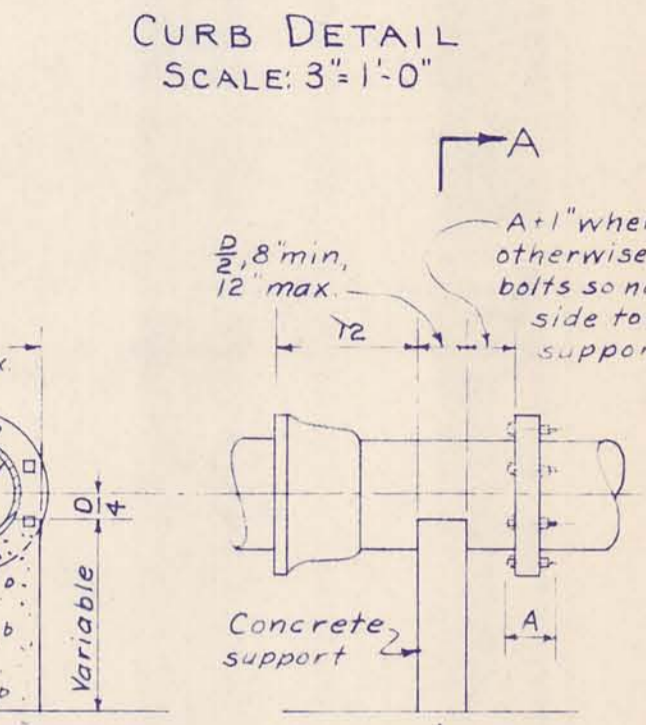
ALUMINUM LADDER DETAILS SCALE 1/2" = 1'-0"



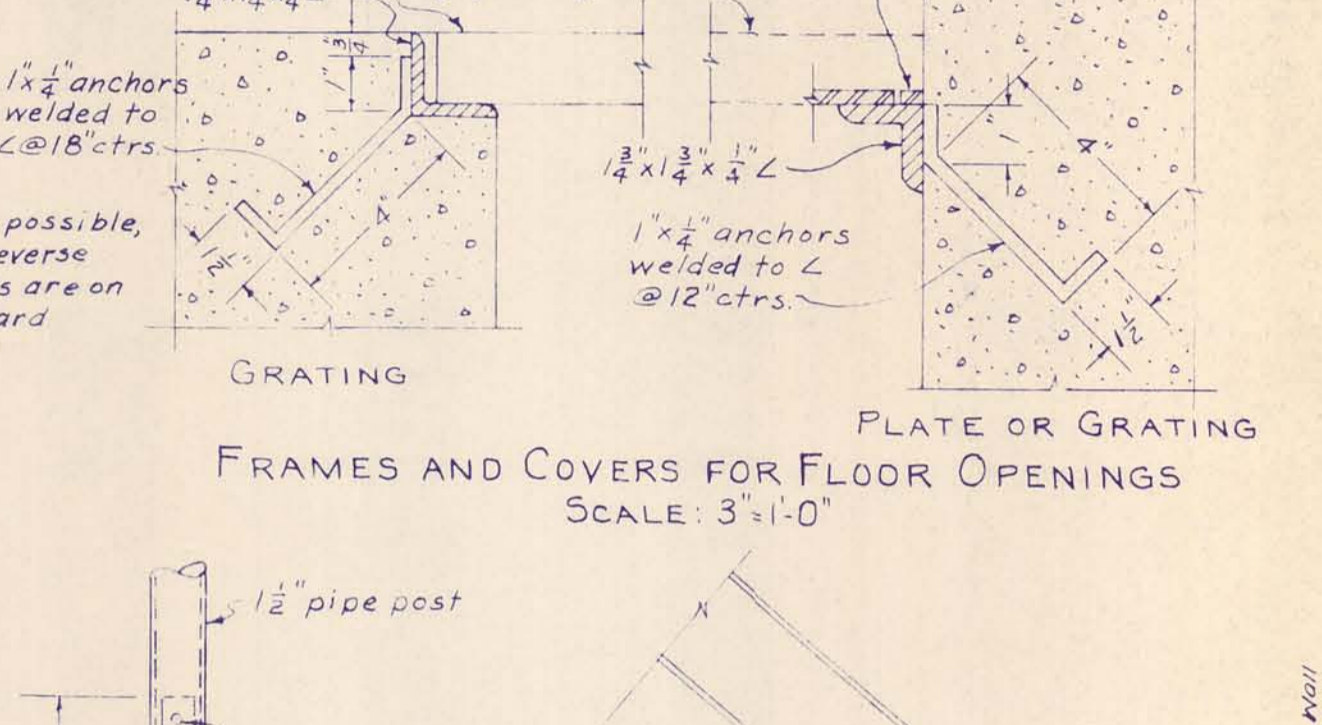
CURB DETAIL SCALE: 3" = 1'-0"



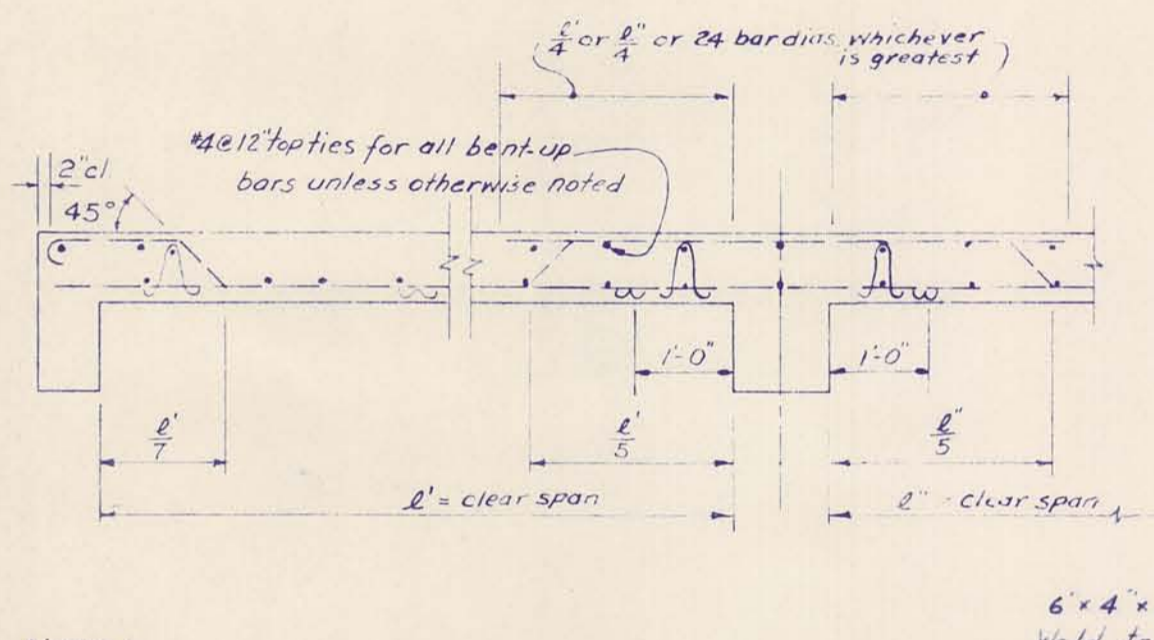
FRAMES AND COVERS FOR FLOOR OPENINGS SCALE: 3" = 1'-0"



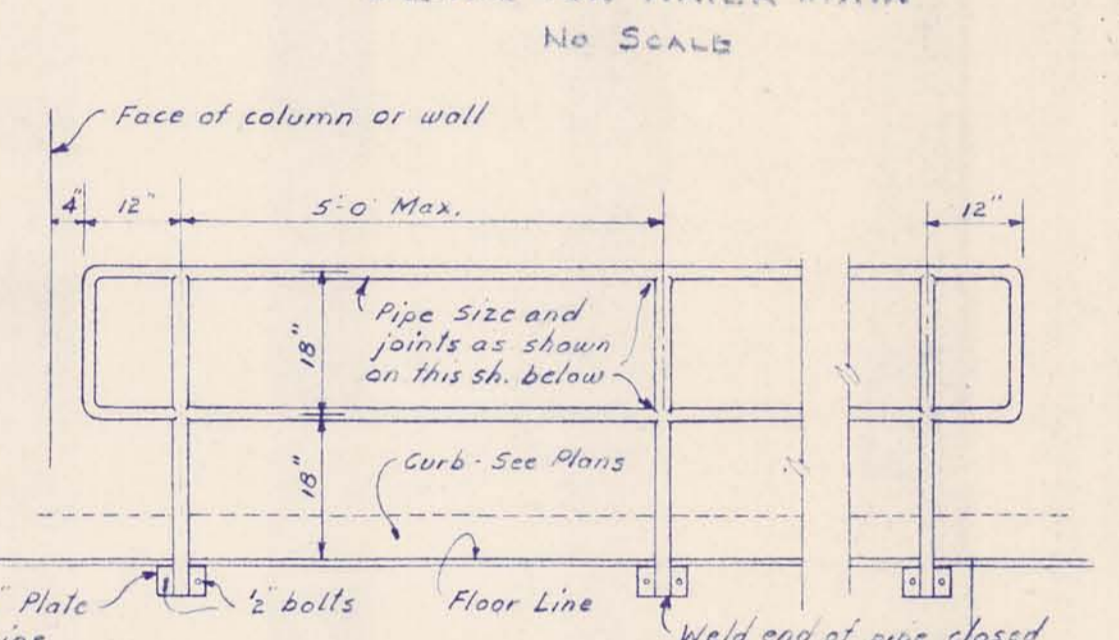
CONCRETE PIPE SUPPORT



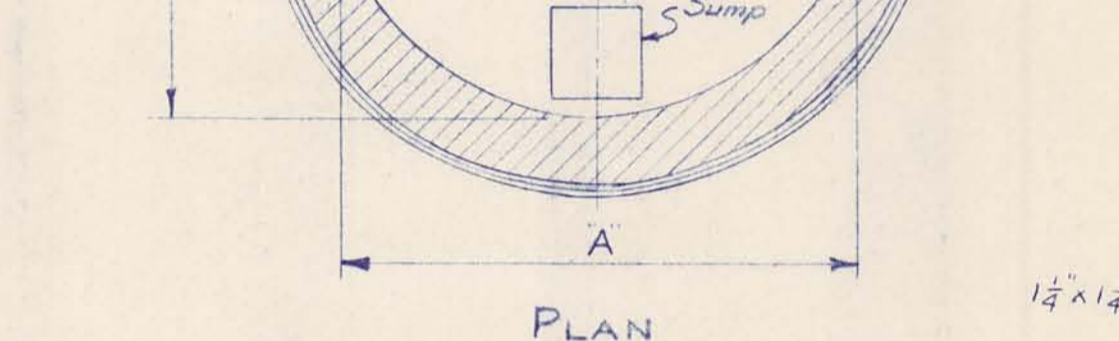
REMOVABLE POST SCALE 1/2" = 1'-0"



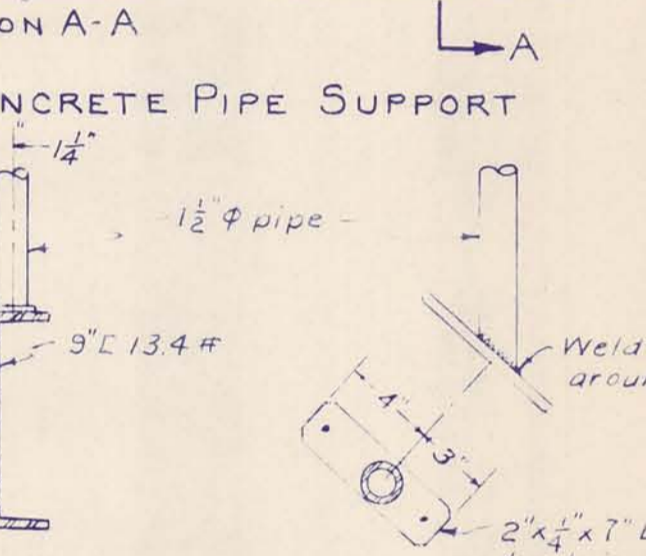
CONCRETE SLAB DETAILS



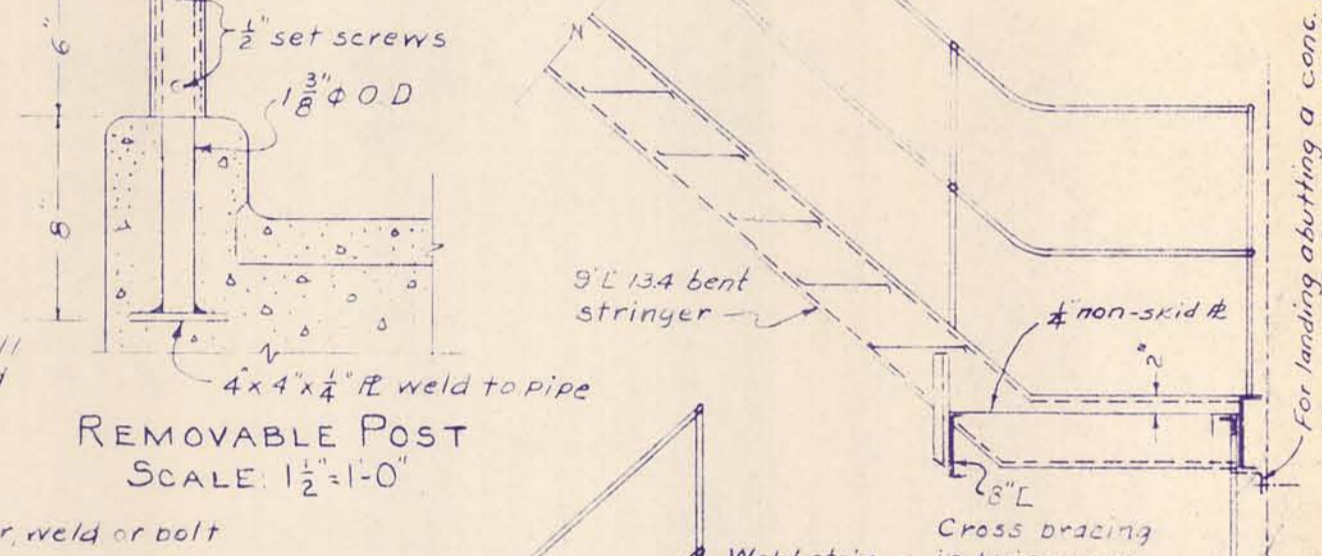
ELEVATION - PIPE RAILING SCALE: 1/2" = 1'-0"



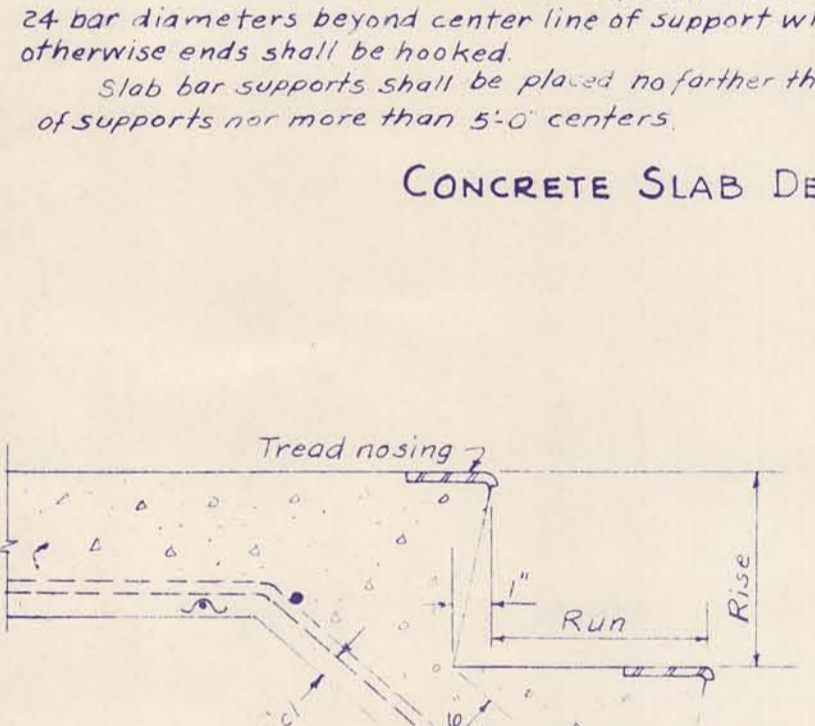
SPECIAL WALL & SLAB PIPE DETAIL FOR PIPES 2" OR LESS IN DIA SCALE: 1" = 1'-0"



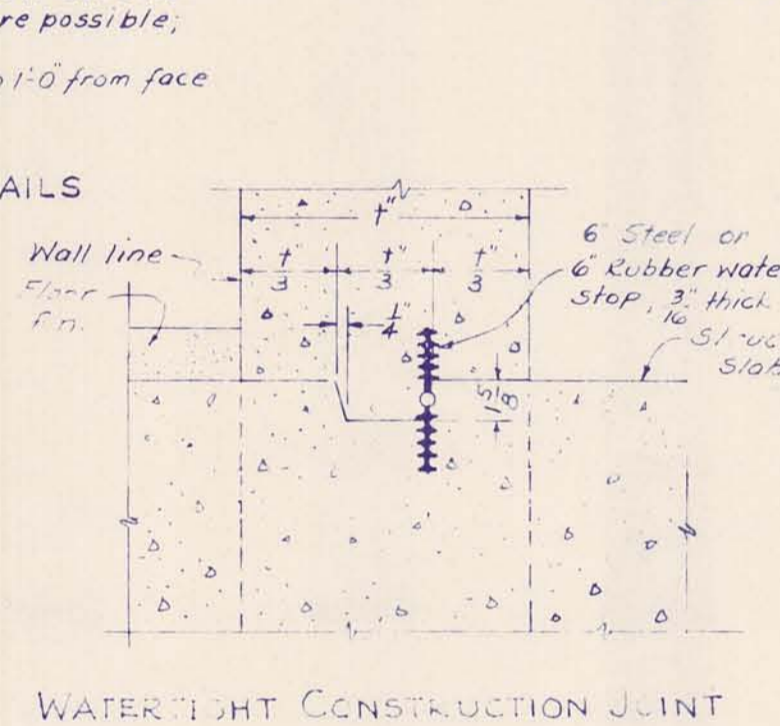
POST CONNECTION TO STRINGER SCALE: 1/2" = 1'-0"



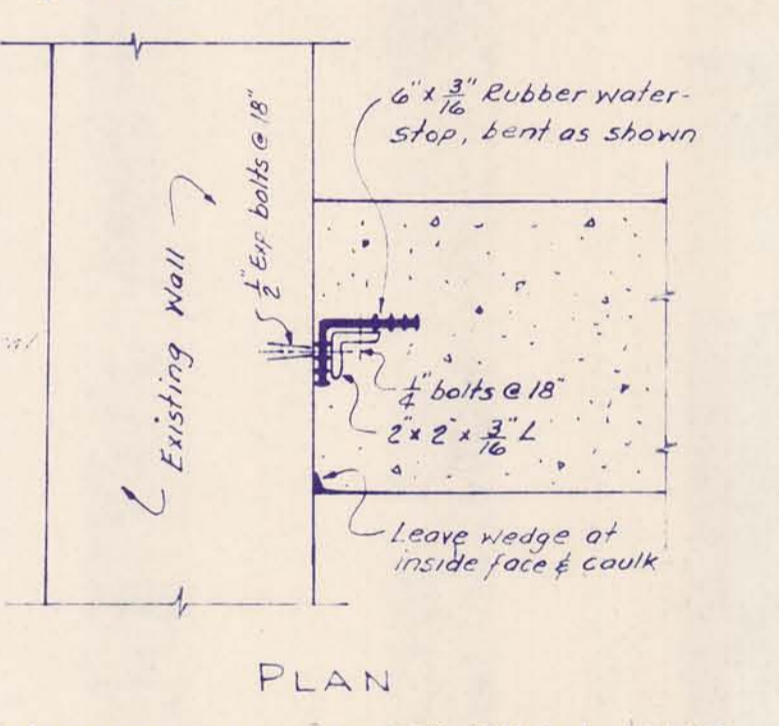
STEEL STAIR LANDING DETAIL



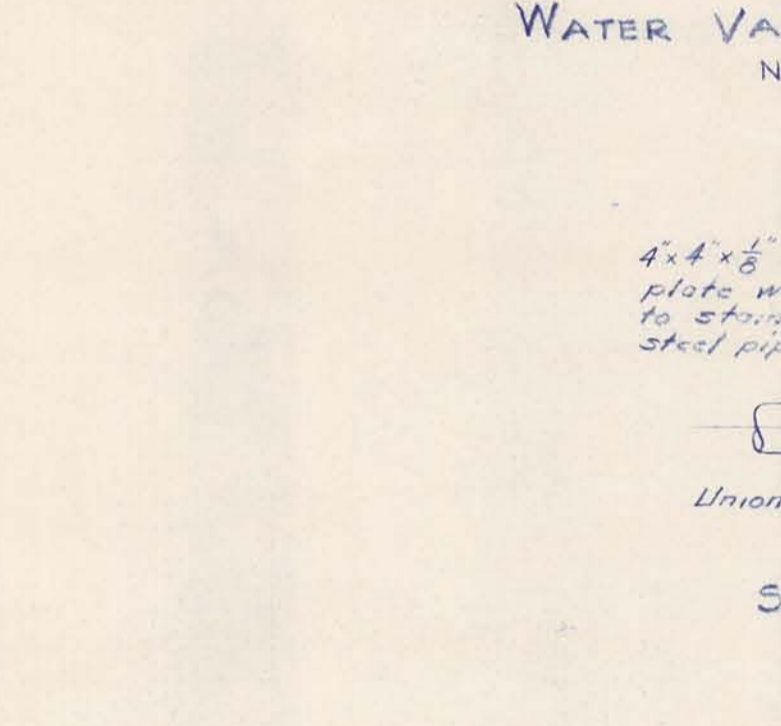
CONCRETE STAIR DETAIL



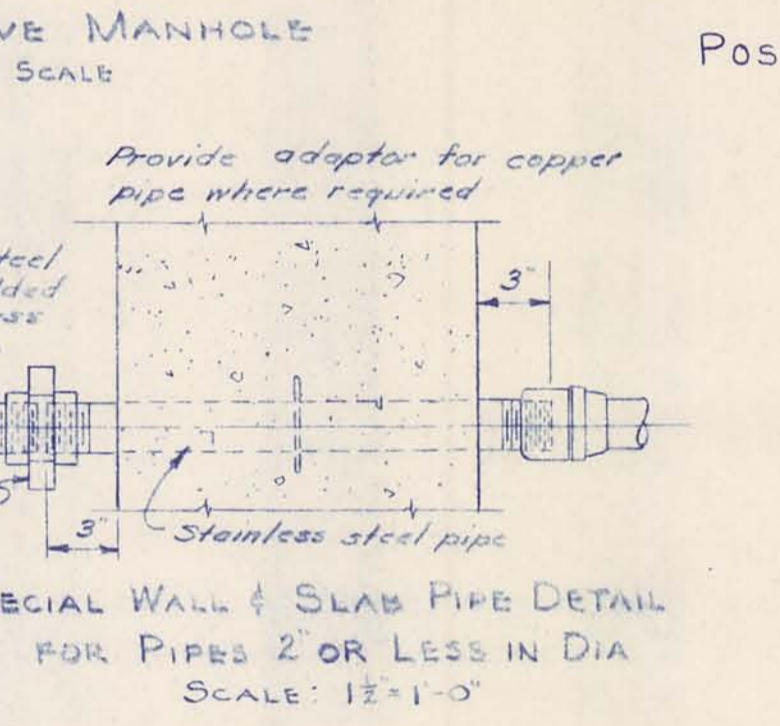
WATERTIGHT CONSTRUCTION JOINT TYPE A Indicated by Symbol (A)



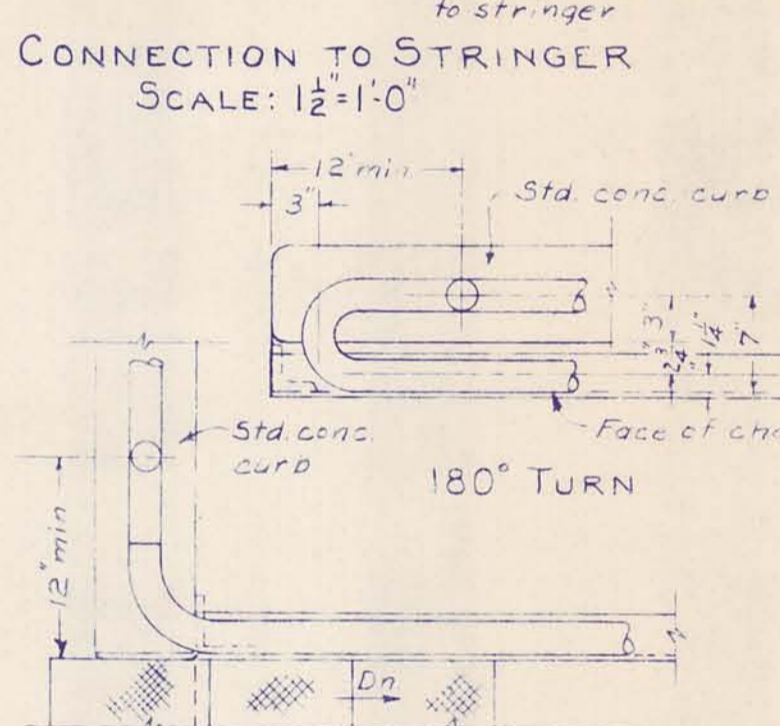
WATERTIGHT CONSTRUCTION JOINT TYPE B Indicated by Symbol (B)



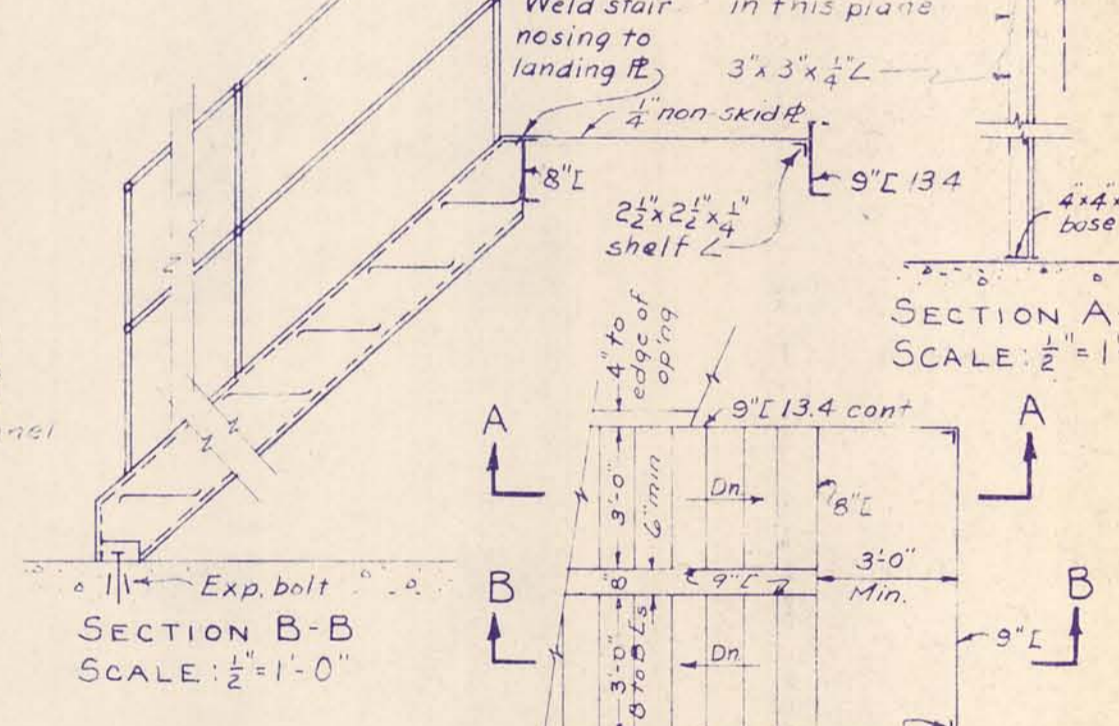
EXPANSION JOINT - TYPE E Indicated by Symbol (E)



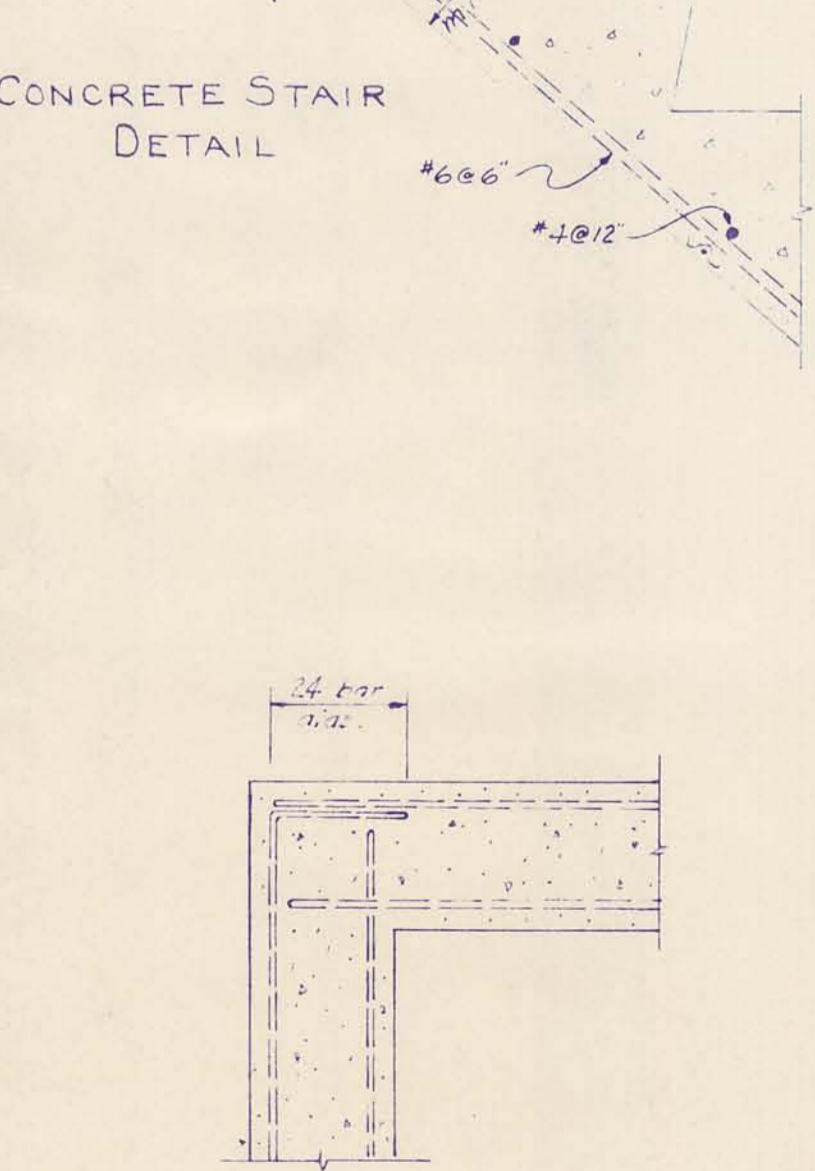
EXPANSION JOINT - TYPE F Indicated by Symbol (F)



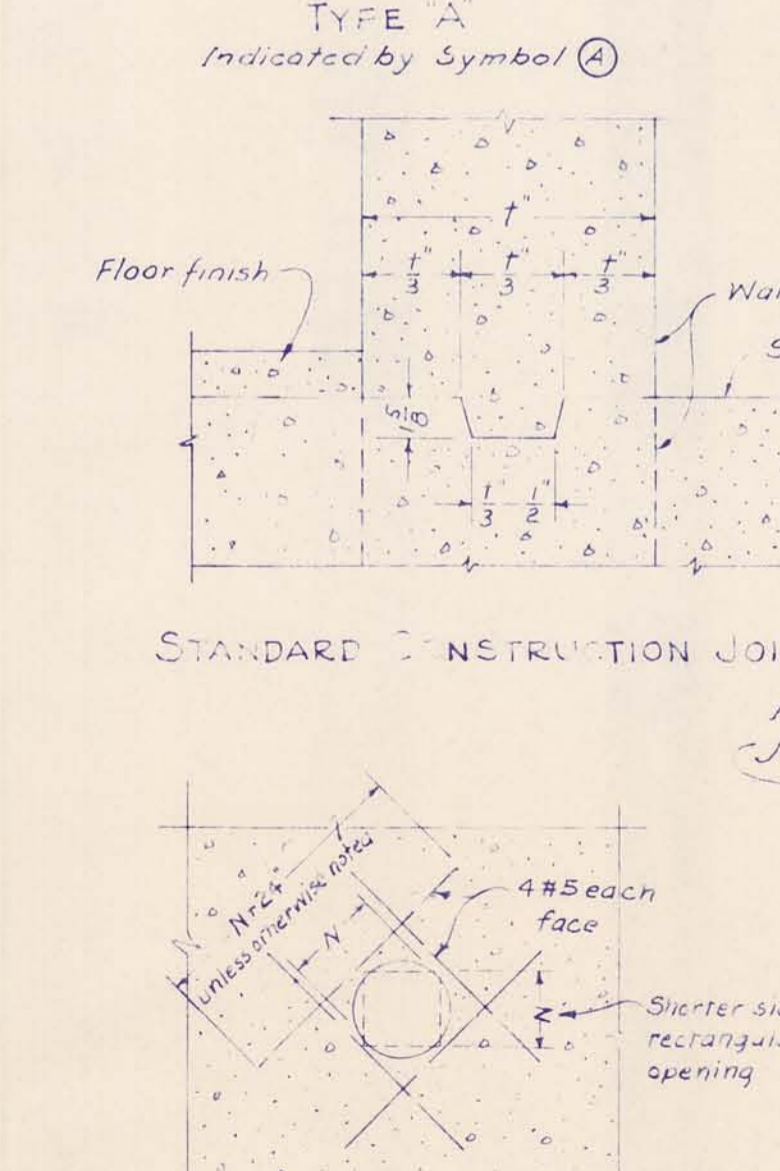
PLAN OF RAILING AT TOP OF STAIRS SCALE: 1" = 1'-0"



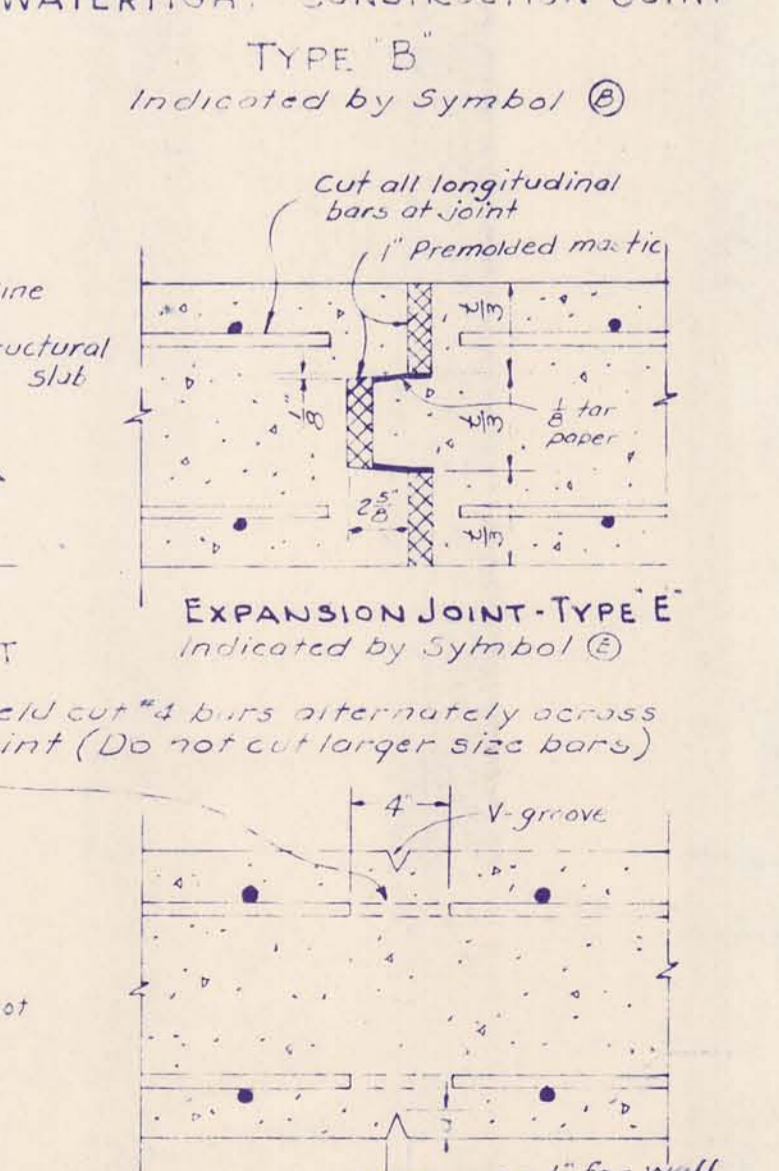
STEEL STAIR DETAIL SCALE: 1/2" = 1'-0"



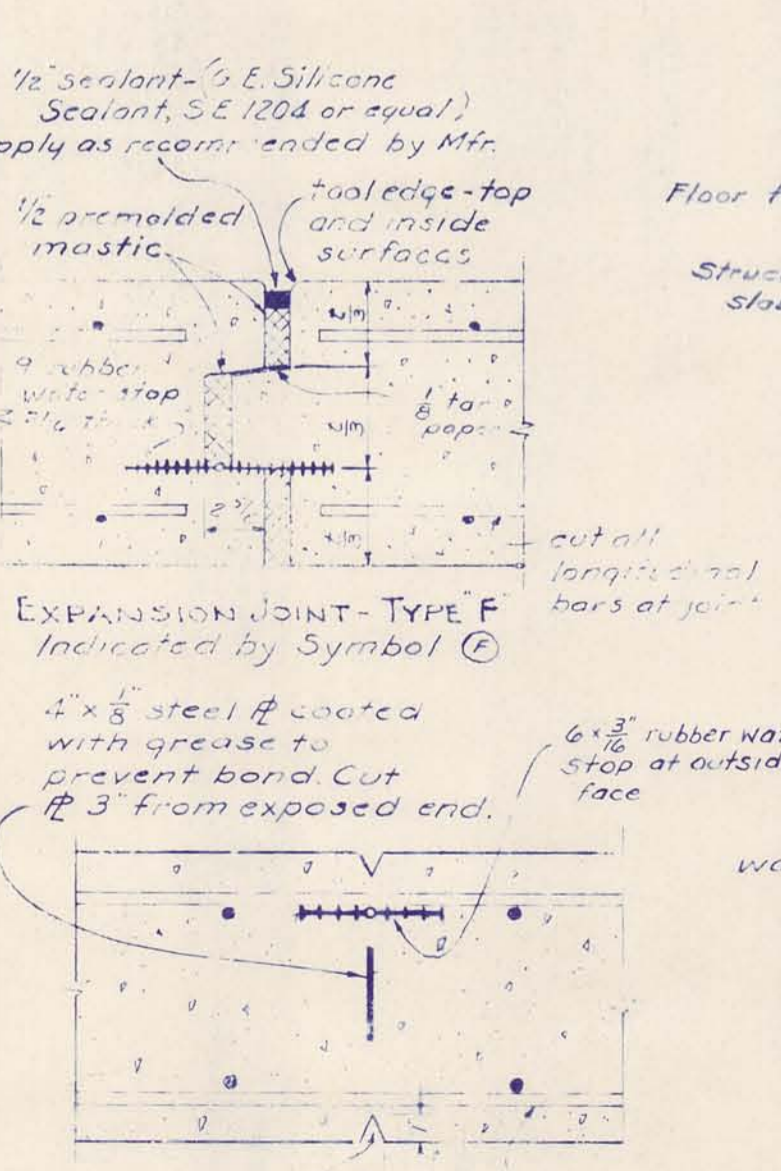
PLAN REINFORCEMENT AT CORNERS



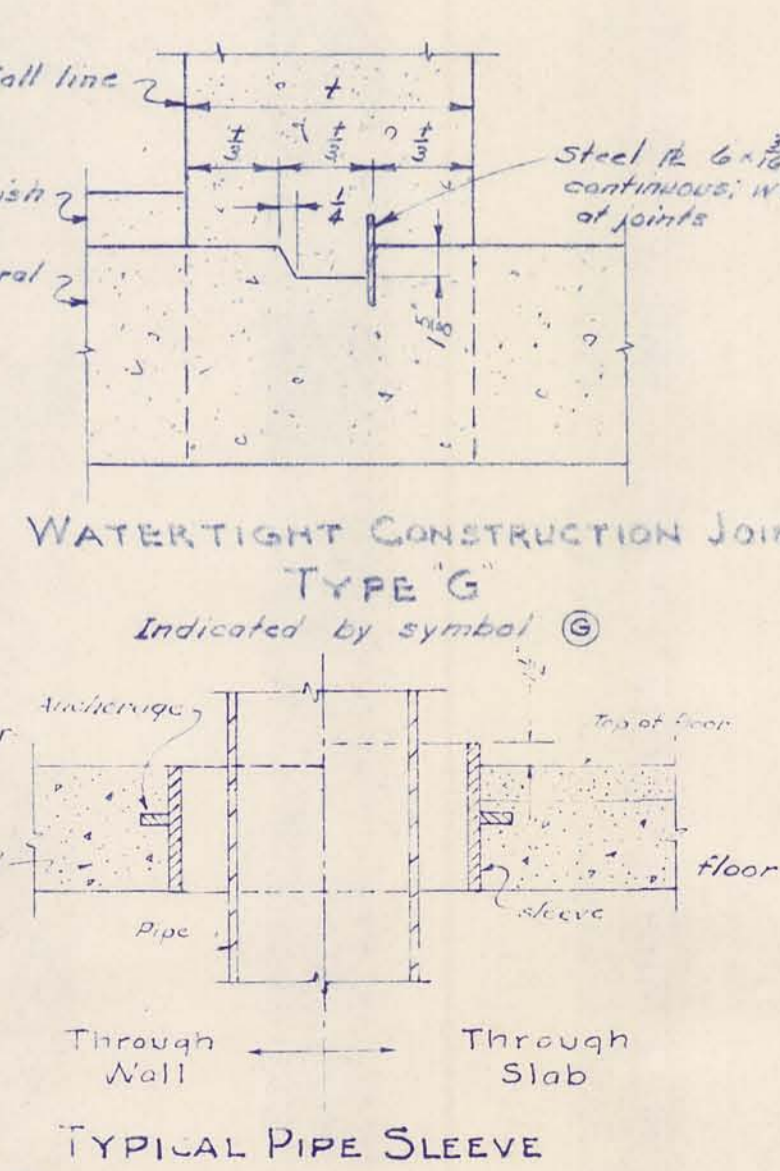
REINFORCEMENT FOR OPENINGS 10 INCHES OR LARGER



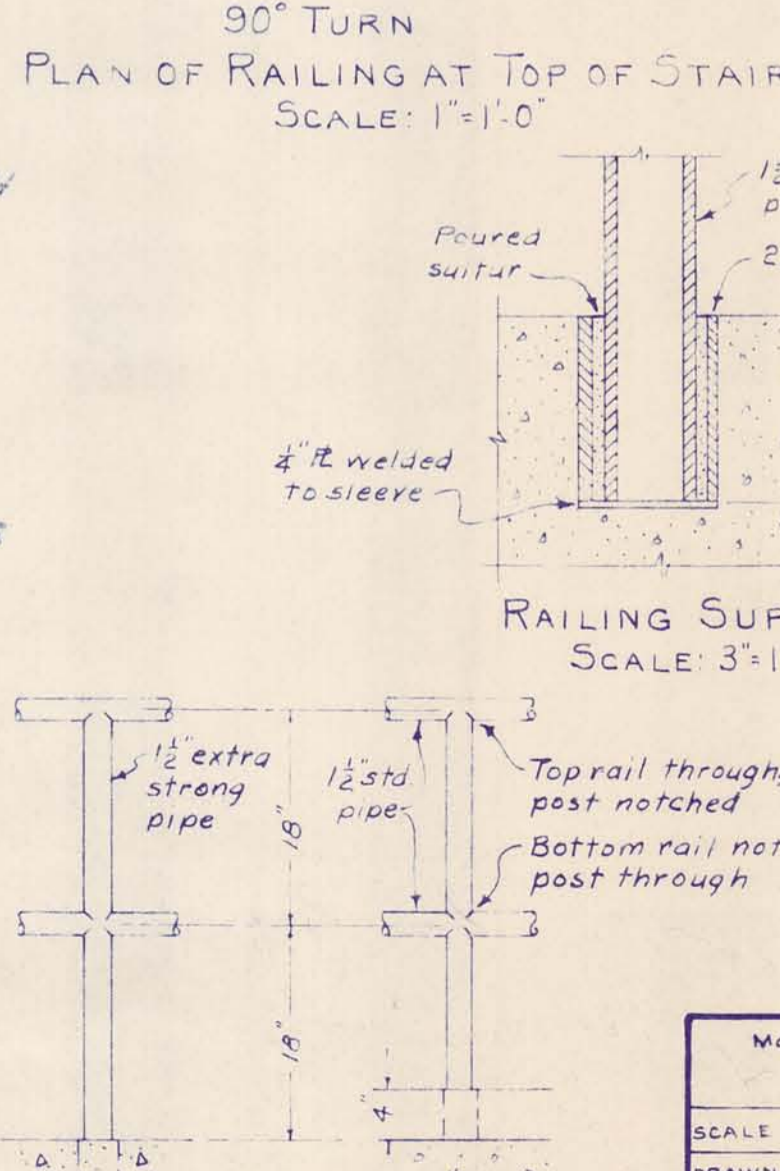
CONTROL JOINT TYPE C Indicated by Symbol (C)



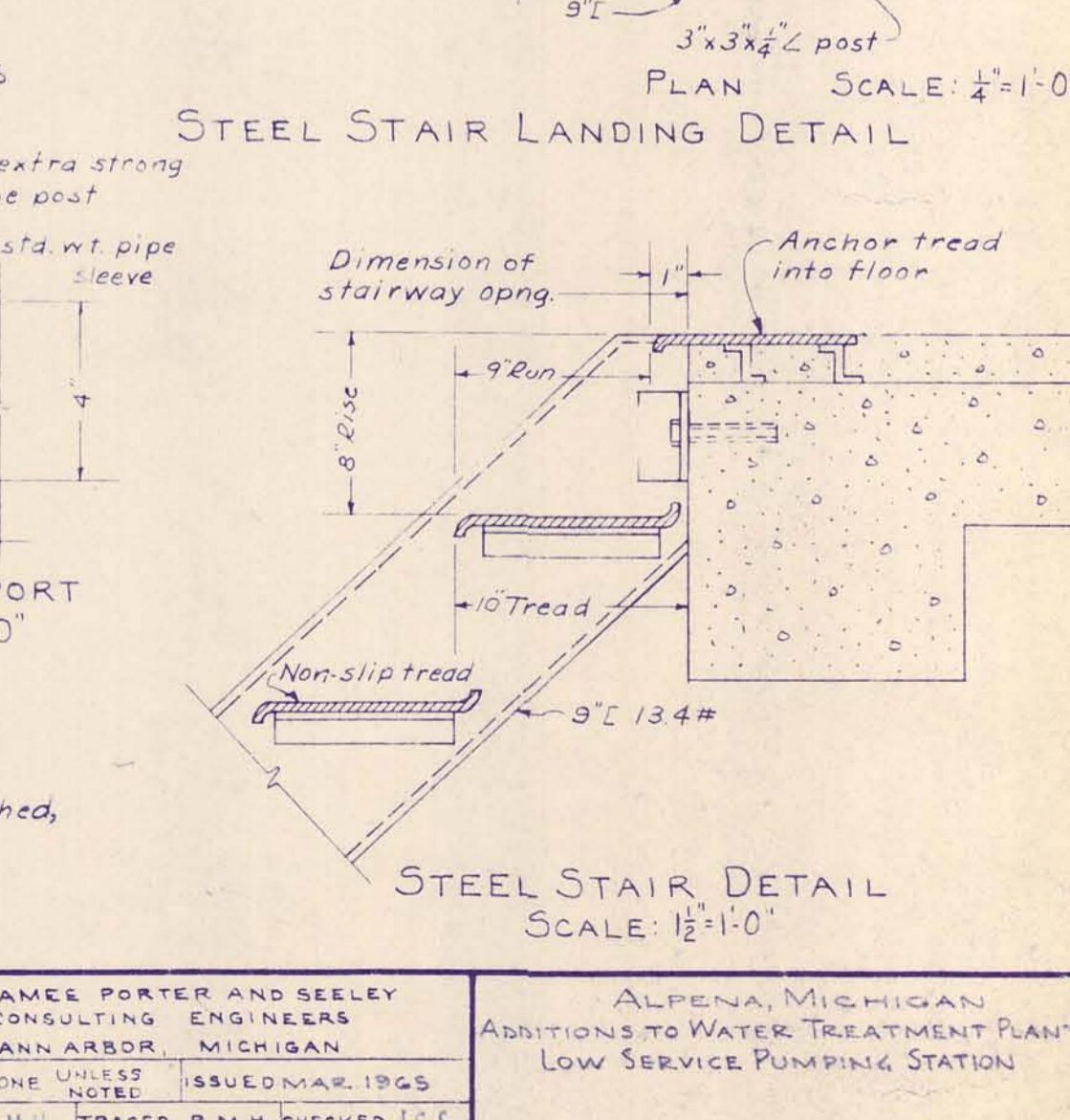
CONTROL JOINT TYPE D Indicated by Symbol (D)



TYPICAL PIPE SLEEVE Through Wall Through Slab NO SCALE



RAILING SUPPORT SCALE: 3" = 1'-0"



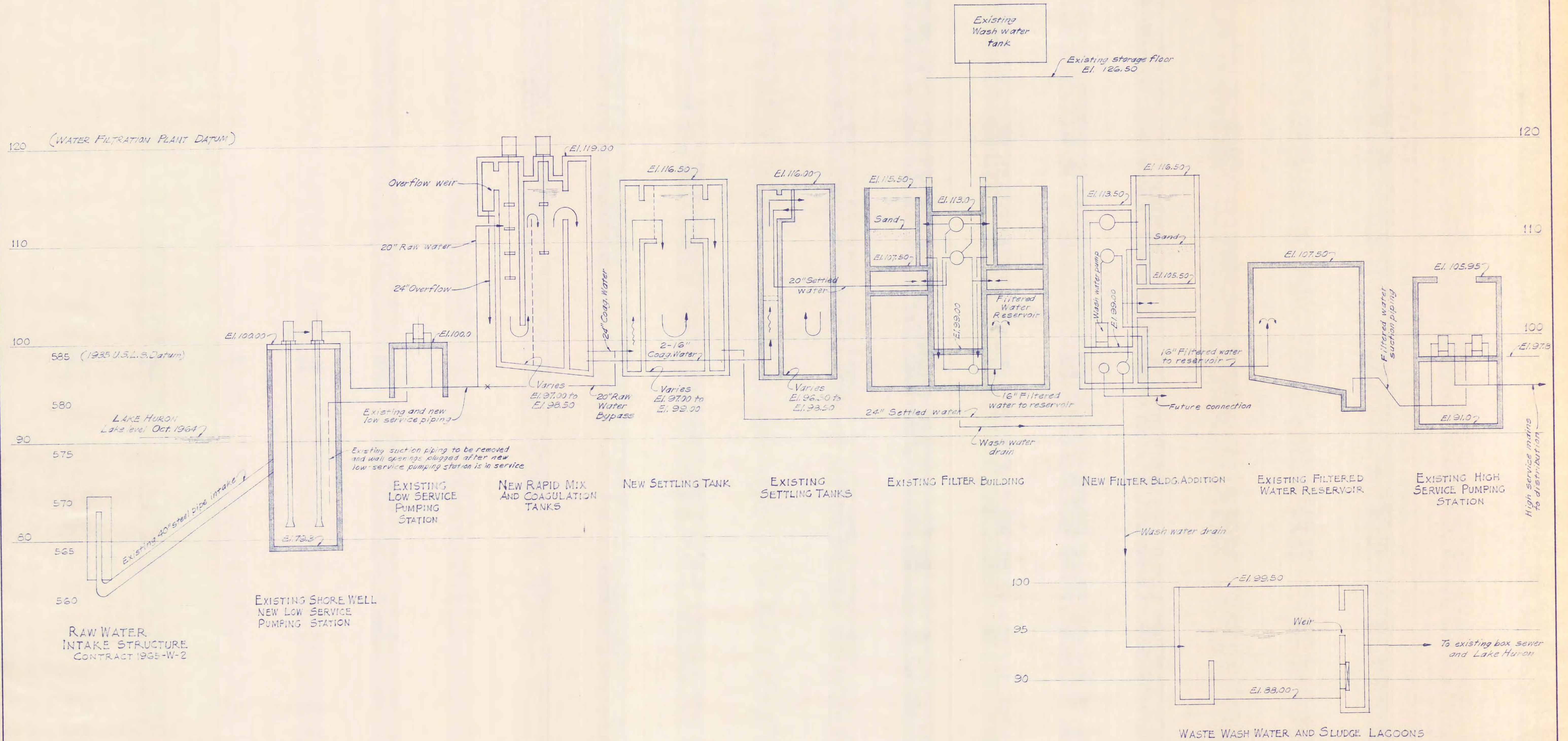
2-PIPE RAILING SCALE: 1/2" = 1'-0"

MCMANEE PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR MICHIGAN			ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION		
SCALE NONE UNLESS NOTED	ISSUED MAR. 1965		CONTRACT	1965	SHEET
DRAWN R.W.H. TRACED R.M.H. CHECKED J.S.S.			W-2		22
ISSUE	NATURE OF REVISION	DATE			OF 33

STANDARD DETAILS



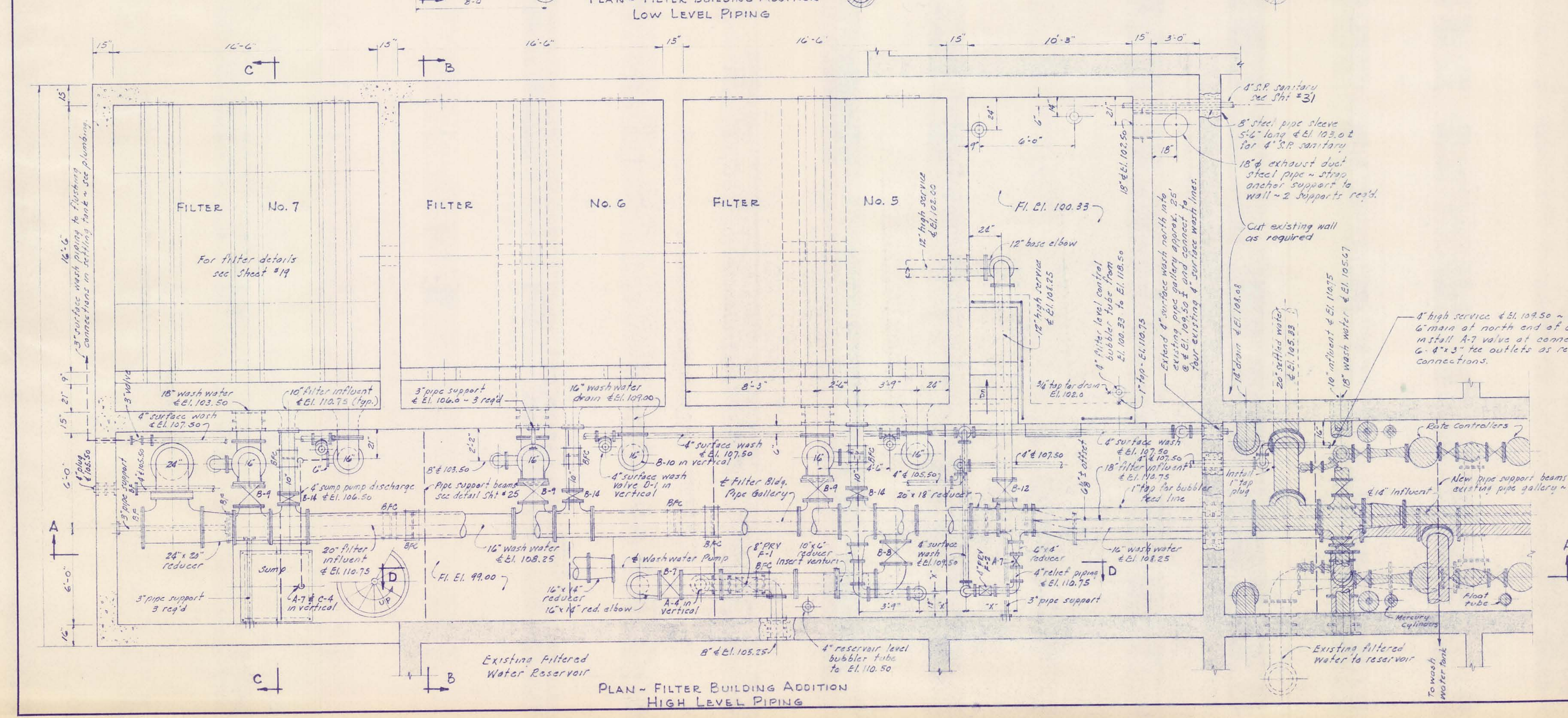
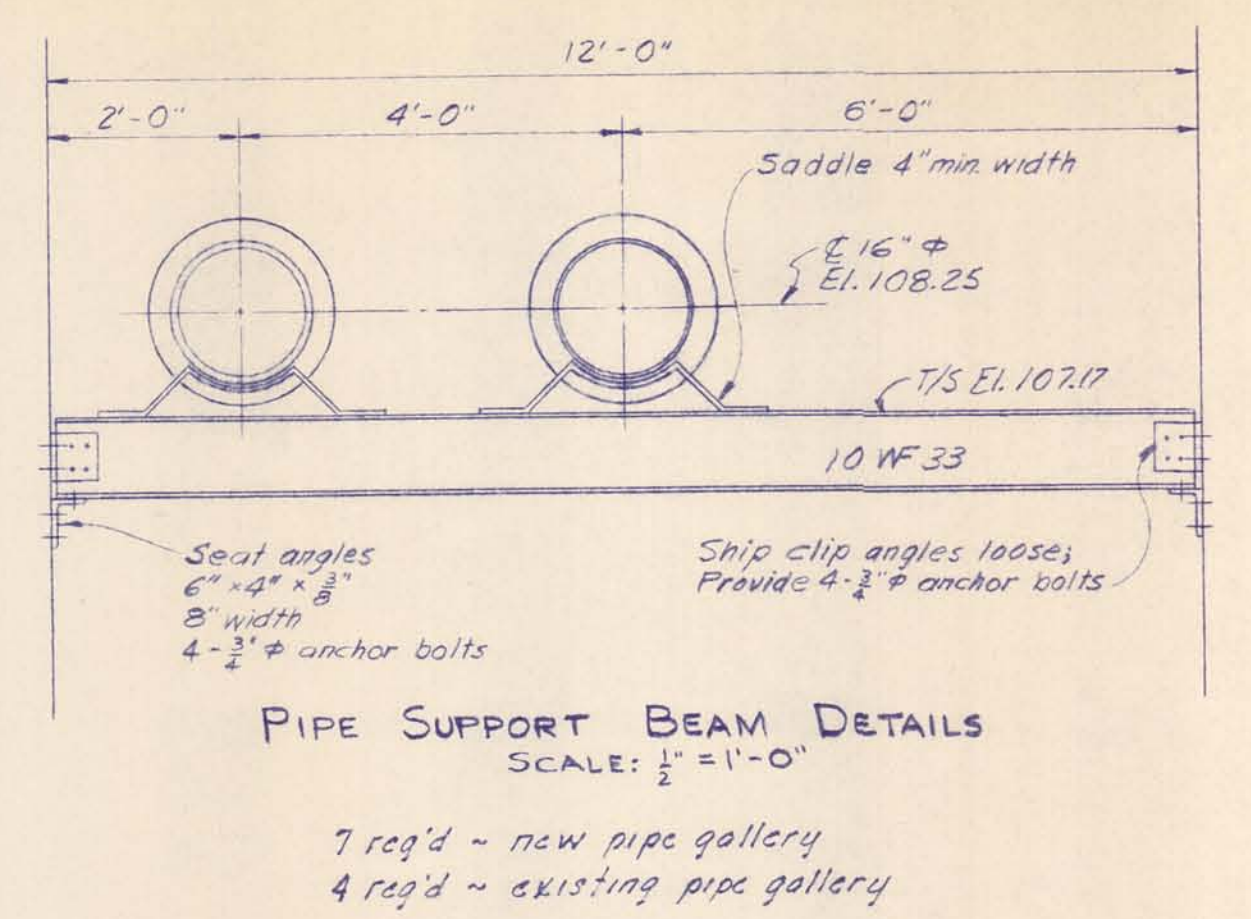
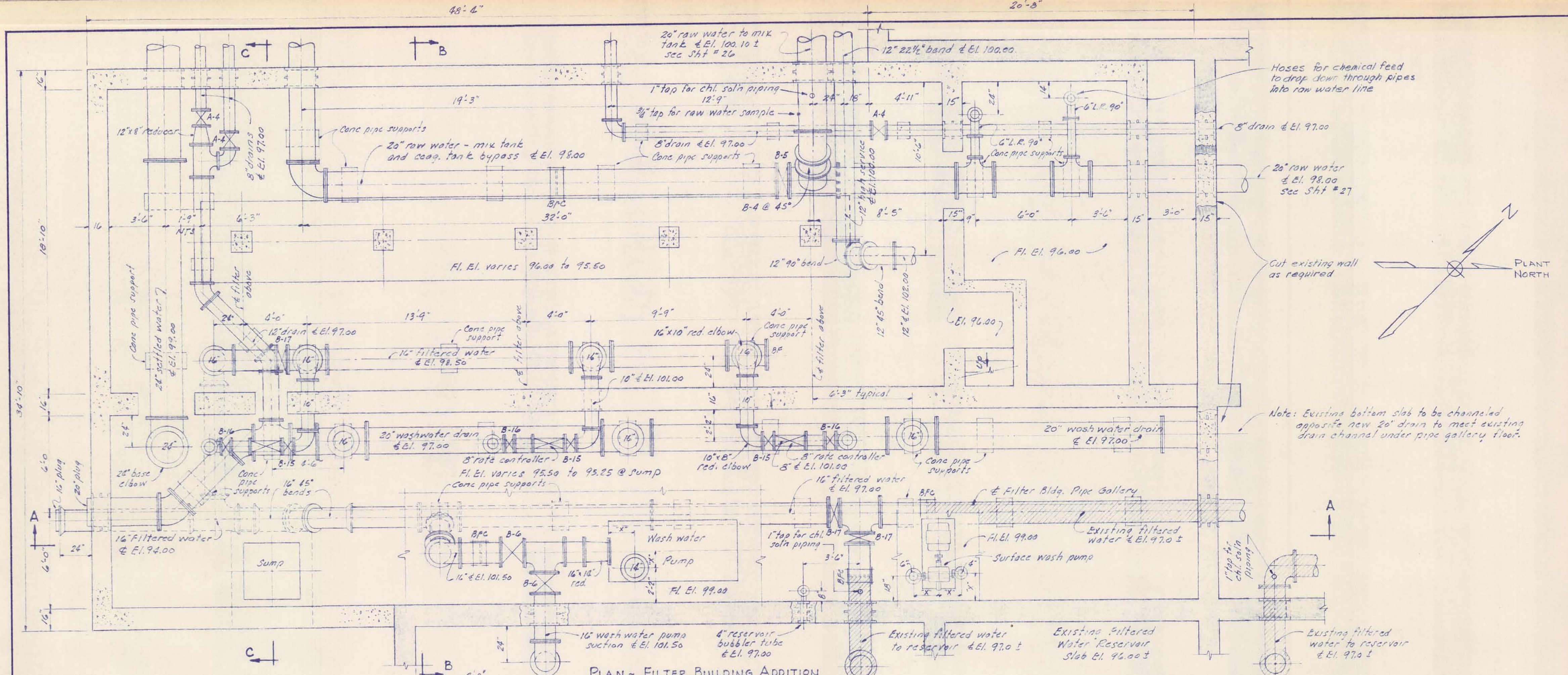




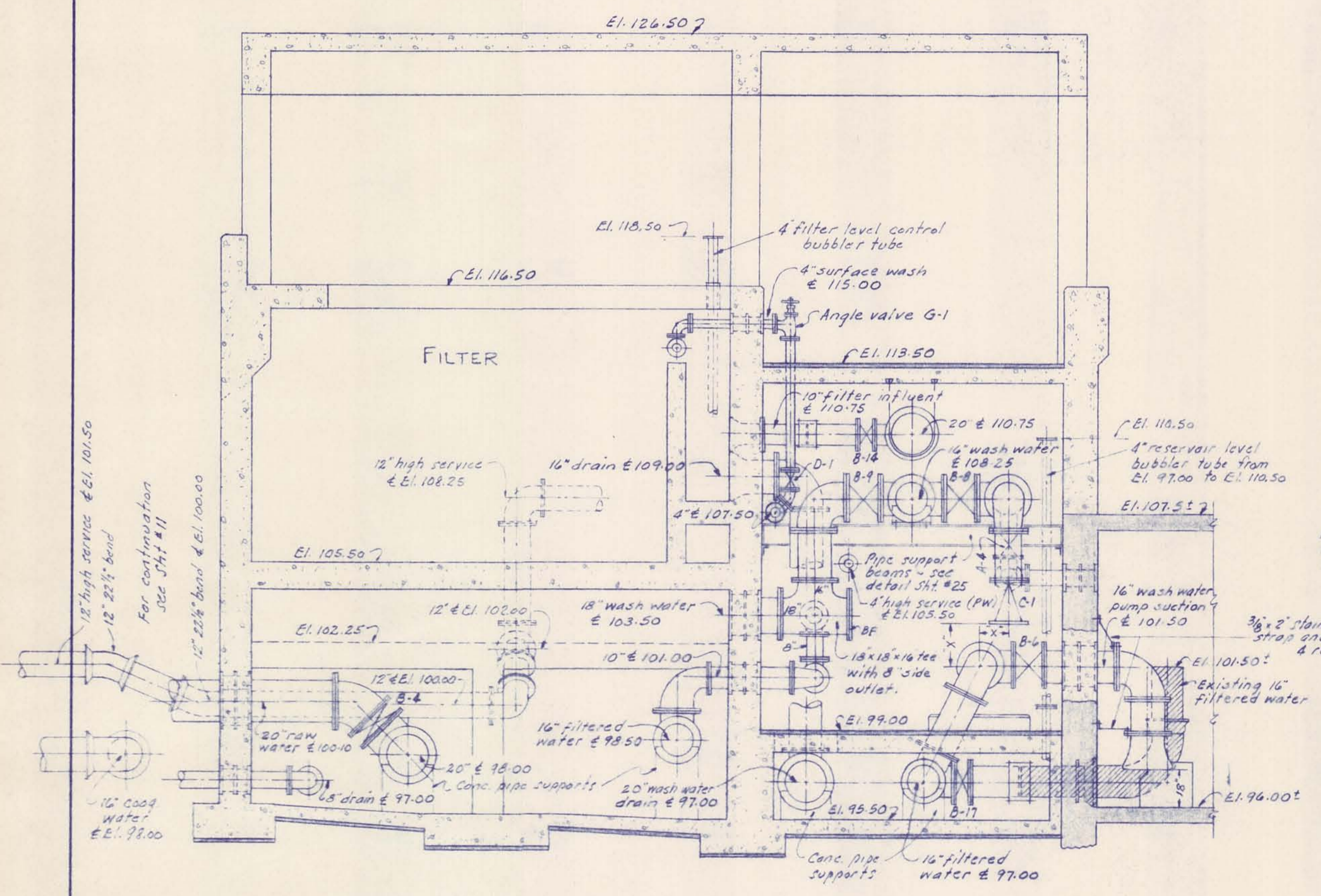
To convert from Water Filtration Plant Datum to 1935 U.S.L.S. Datum, add 486.75'

McNAMEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN		ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION	
SCALE NONE	ISSUED MAR. 1965	HYDRAULIC PROFILE	
DRAWN PAL	TRACED JMA	CHECKED J.C.S.	
ISSUE	NATURE OF REVISION	DATE	
CONTRACT 1965 W-2		SHEET 24 OF 33	

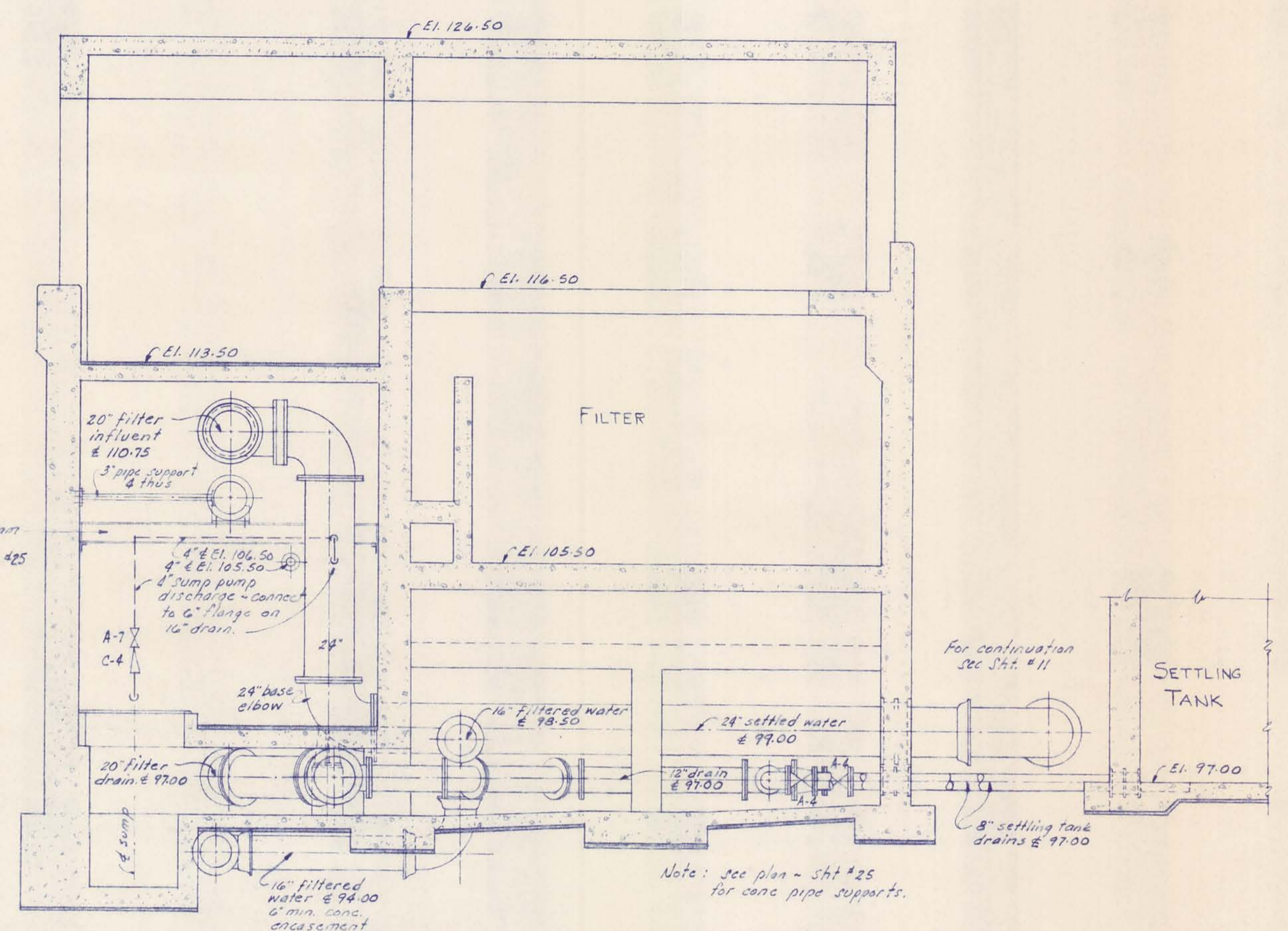
WATER TREATMENT PLANT 1965  
 SHEET 25 OF 33  
 SAFECO PRODUCTS • NEW HOPE, MINNESOTA  
 REORDER BY PART NUMBER 6552



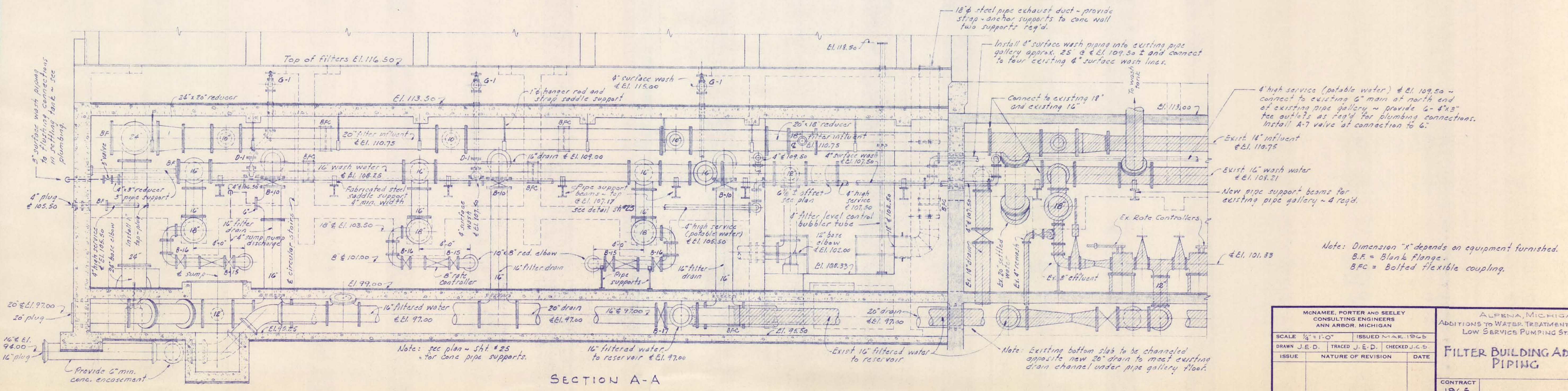
M'NAMEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR MICHIGAN		ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION	
SCALE 1/4" = 1'-0"	ISSUED MAR. 1965	DRAWN J. E. D. TRACED J. E. D. CHECKED J. C. S.	
ISSUE	NATURE OF REVISION	DATE	
CONTRACT 1965 W-2		SHEET 25 OF 33	



SECTION B-B

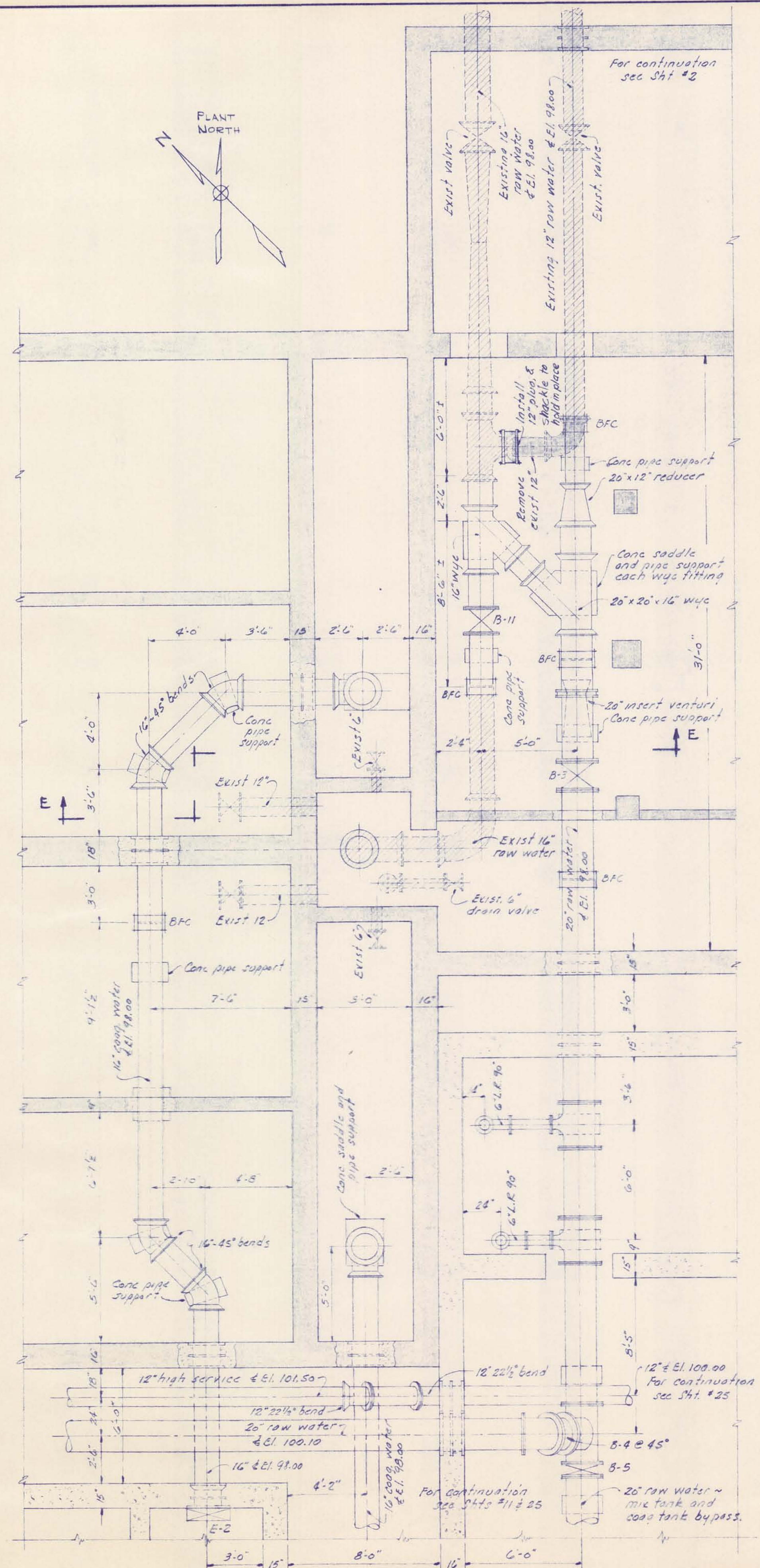


SECTION C-C

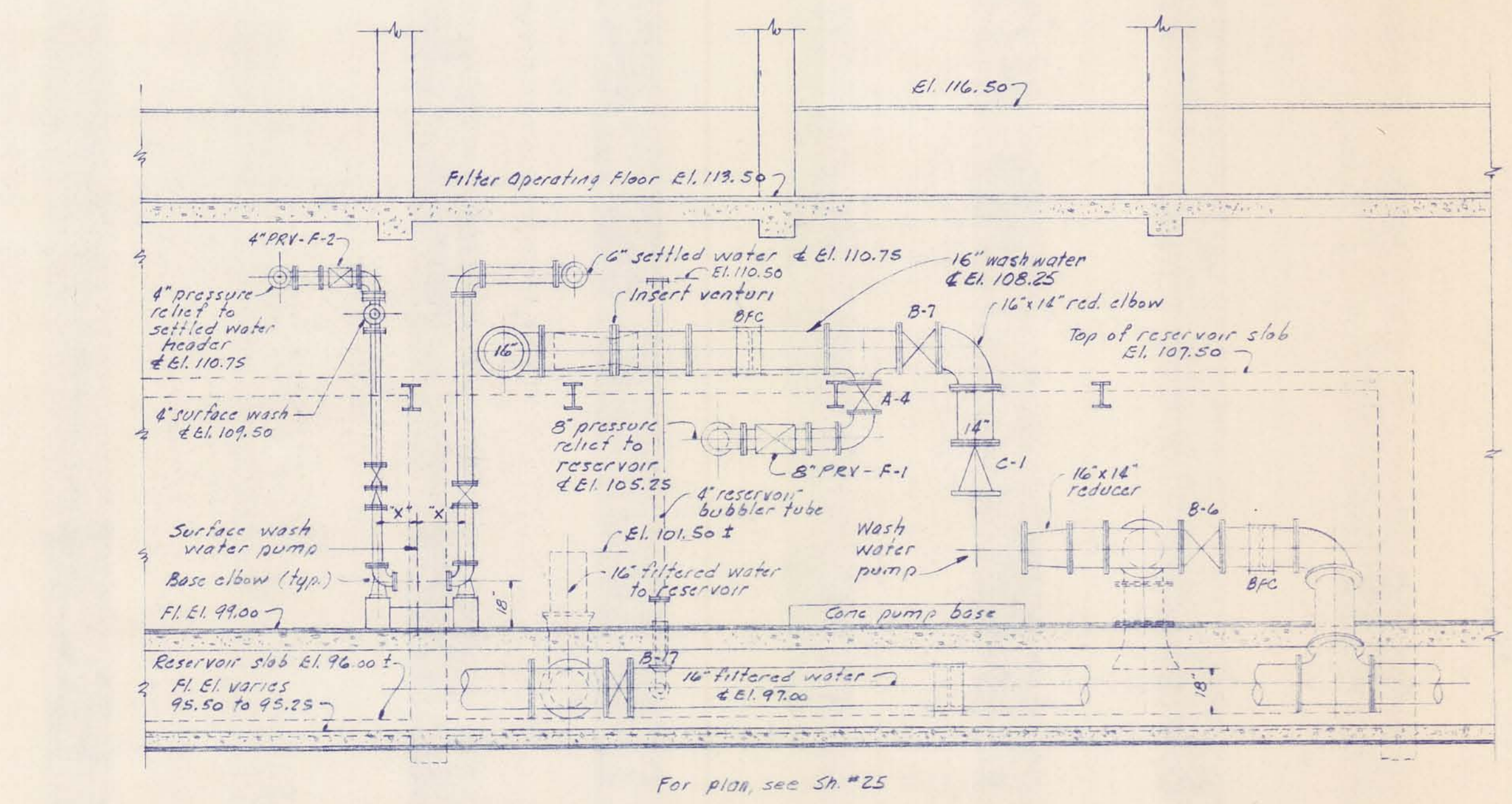
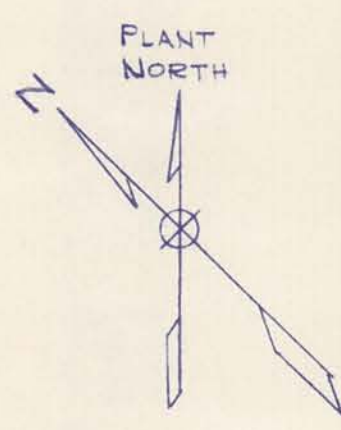


SECTION A-A

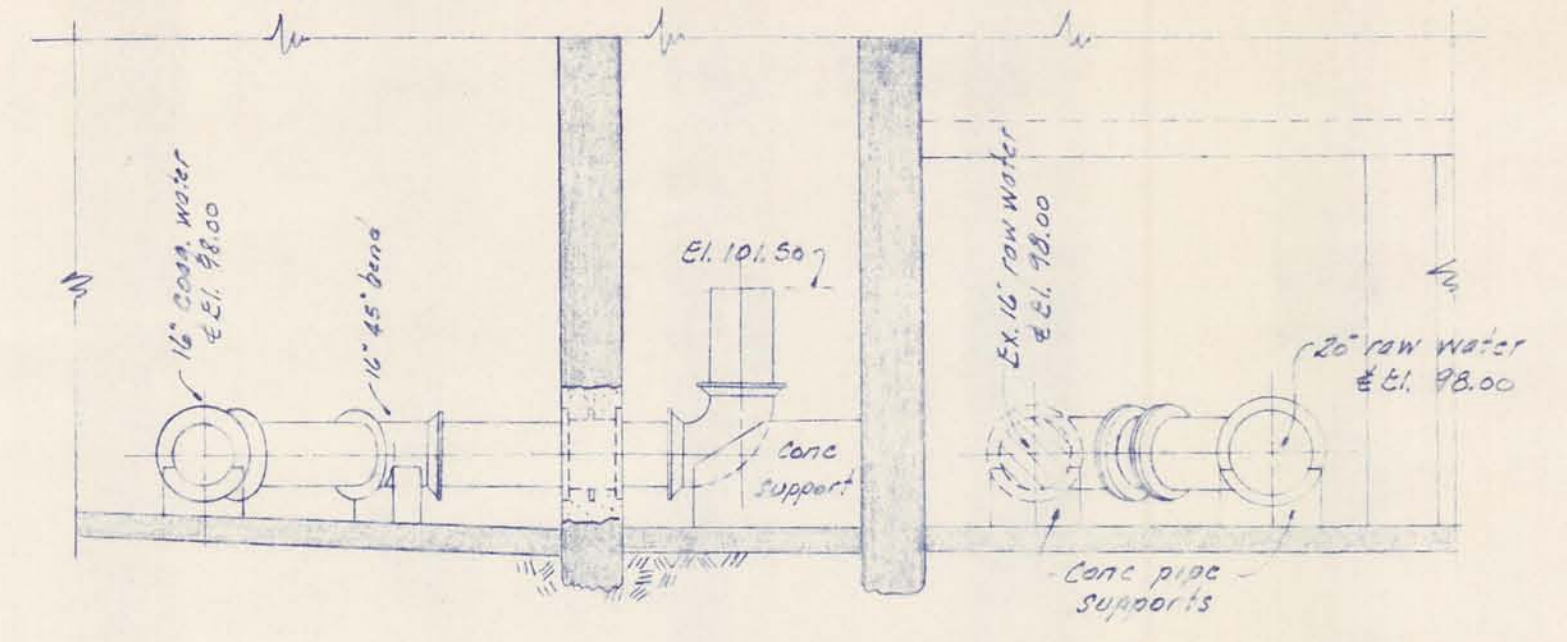
McNAMEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN			ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION		
SCALE 1/4" = 1'-0"	ISSUED MAY 1965		CONTRACT		
DRAWN J.E.D.	TRACED J.E.D.	CHECKED J.C.S.	1965		
ISSUE	NATURE OF REVISION	DATE	W-2		
			FILTER BUILDING ADDITION PIPING		
			SHEET 26 OF 33		



PARTIAL PLAN - EXISTING FILTER BUILDING AND SETTLING TANKS

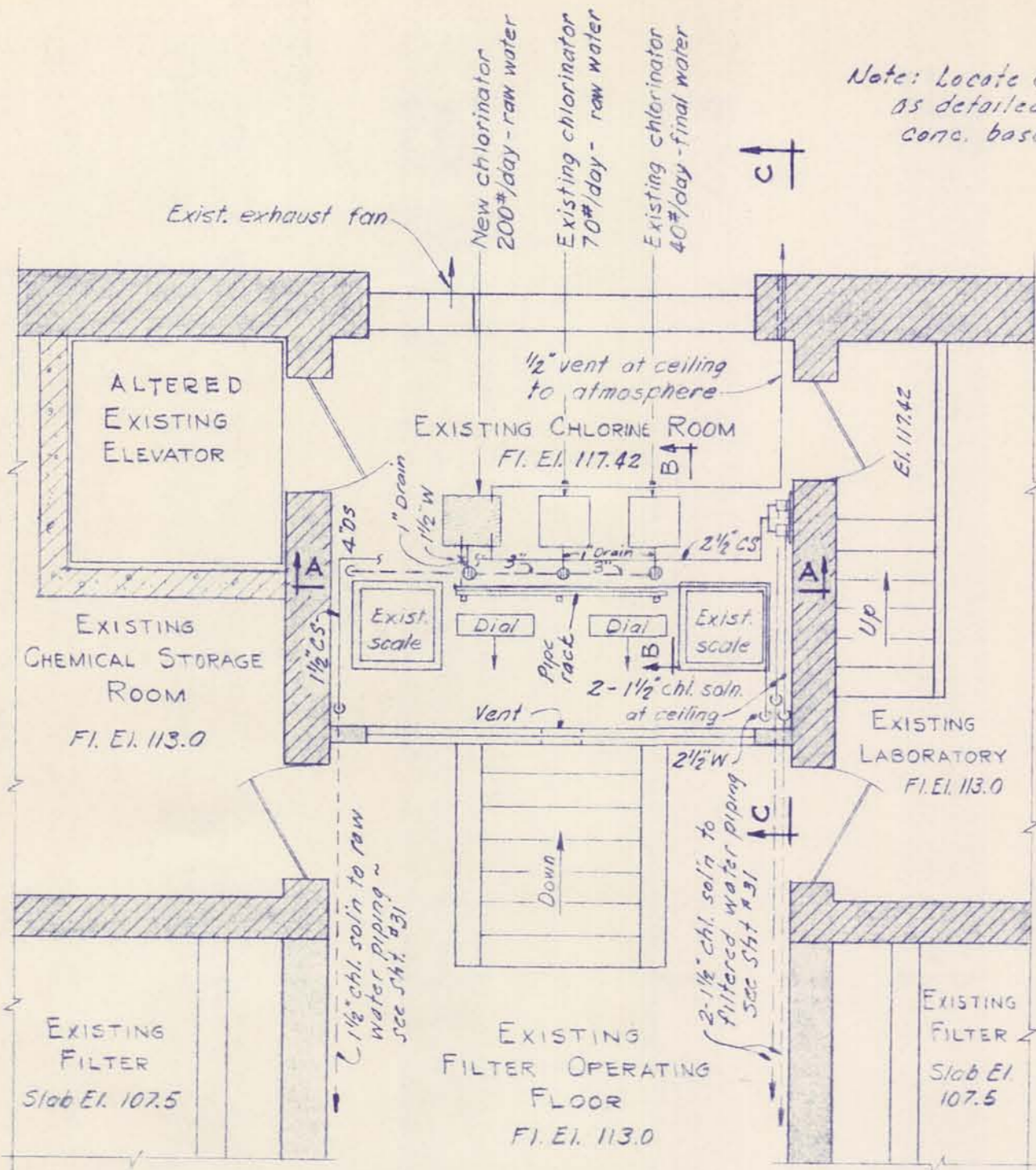


SECTION D-D

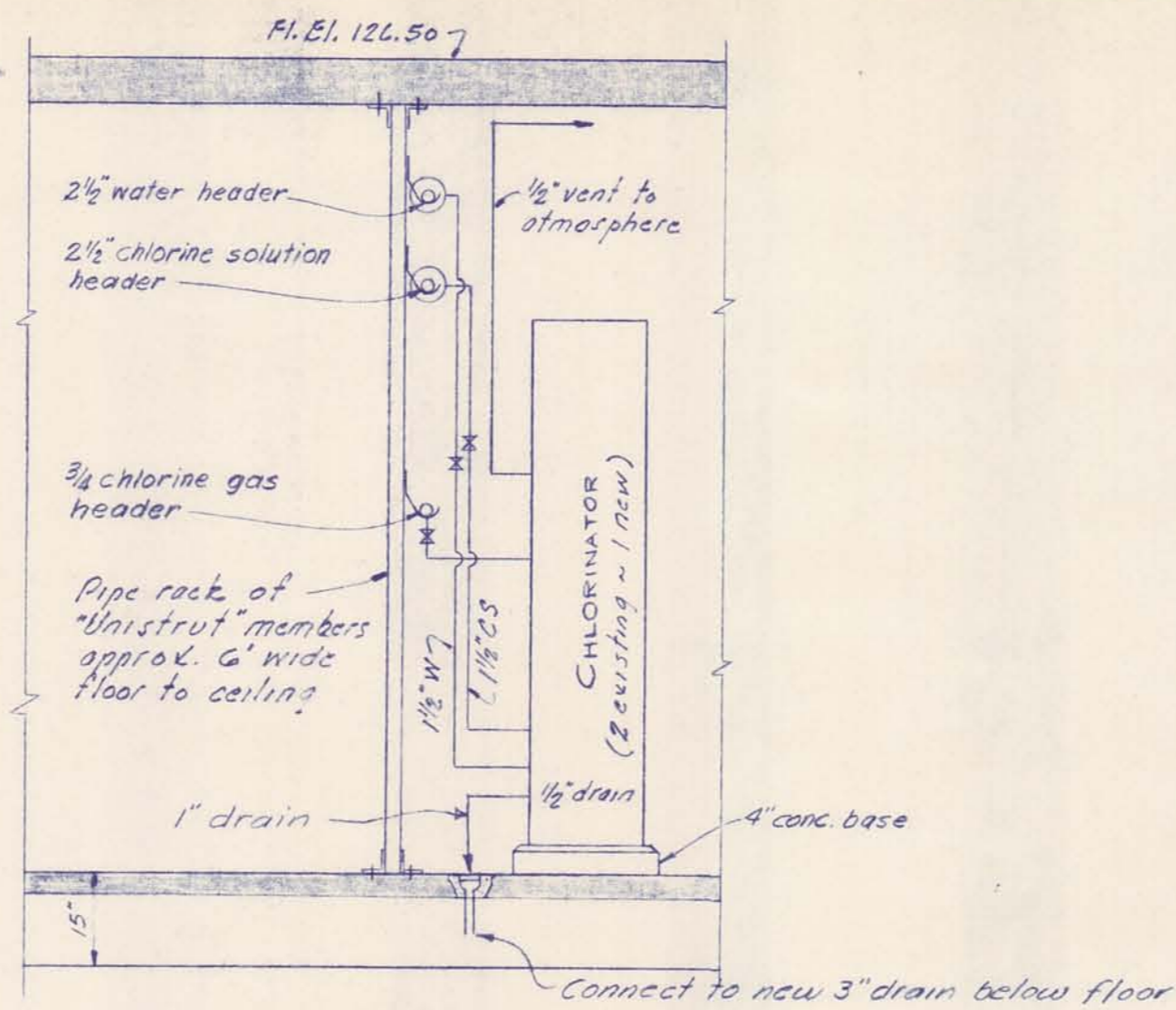


SECTION E-E

MCGRAW, PORTER AND SEELY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN			ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION EXISTING SETTLING TANKS AND FILTER BUILDING PIPING - SECTIONS		
SCALE 1/4" = 1'-0"	ISSUED MAR. 1965		CONTRACT 1965 W-2		SHEET 27 OF 33
DRAWN J.E.D.	TRACED J.E.D.	CHECKED J.C.S.			
ISSUE	NATURE OF REVISION	DATE			



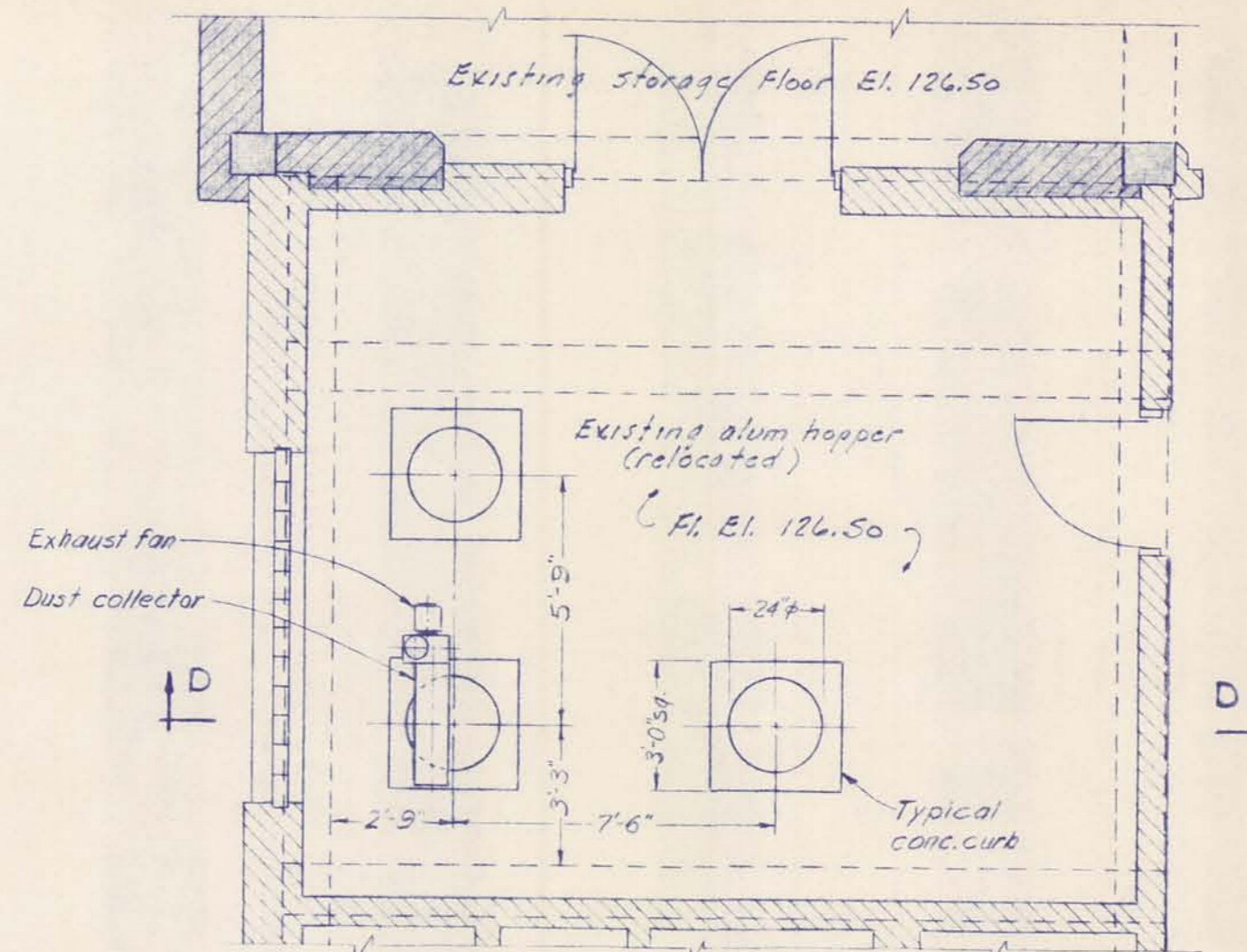
PLAN EXISTING CHLORINE ROOM  
SCALE: 1/4" = 1'-0"



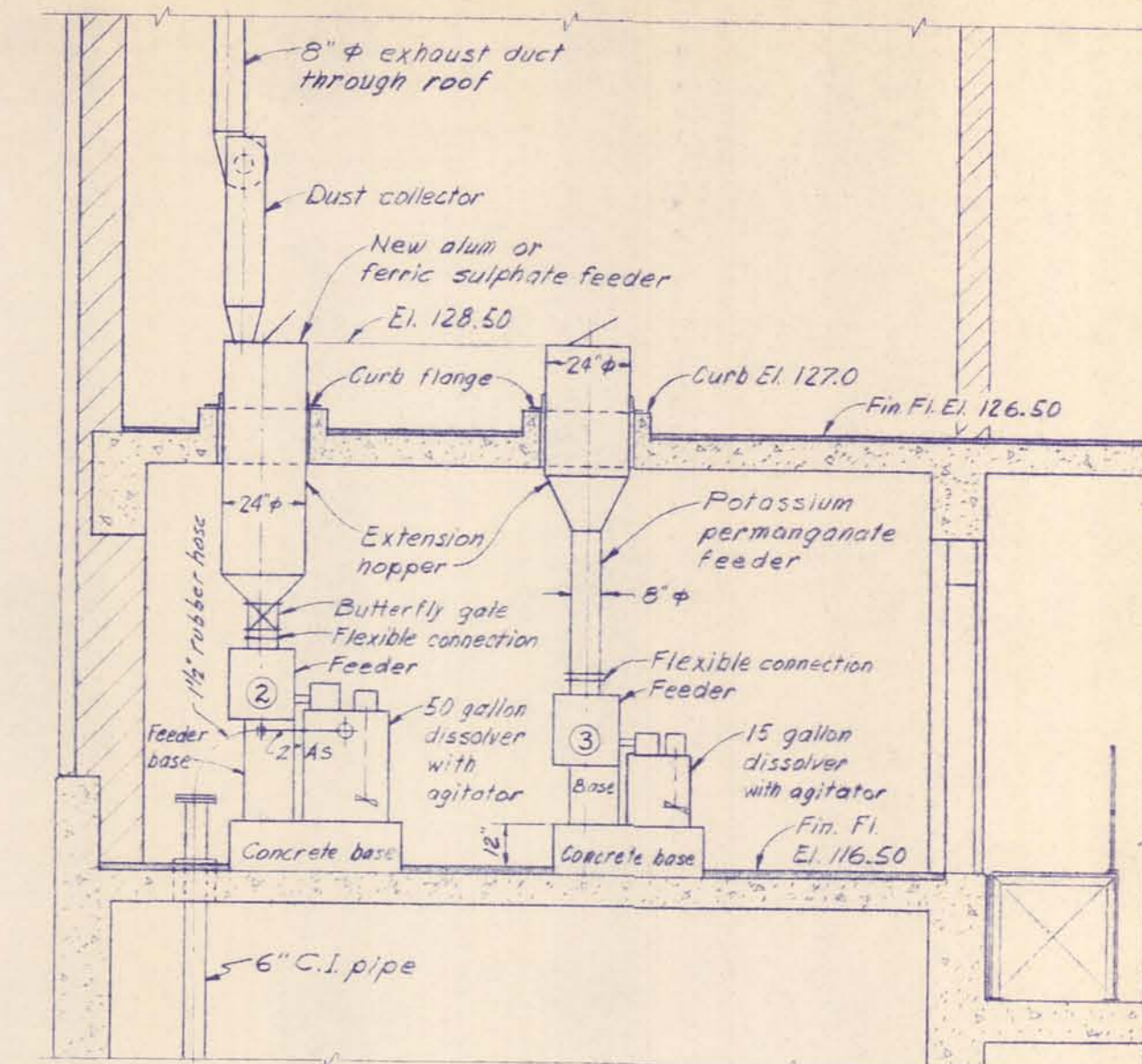
SECTION B-B

SCALE: 1/2" = 1'-0"

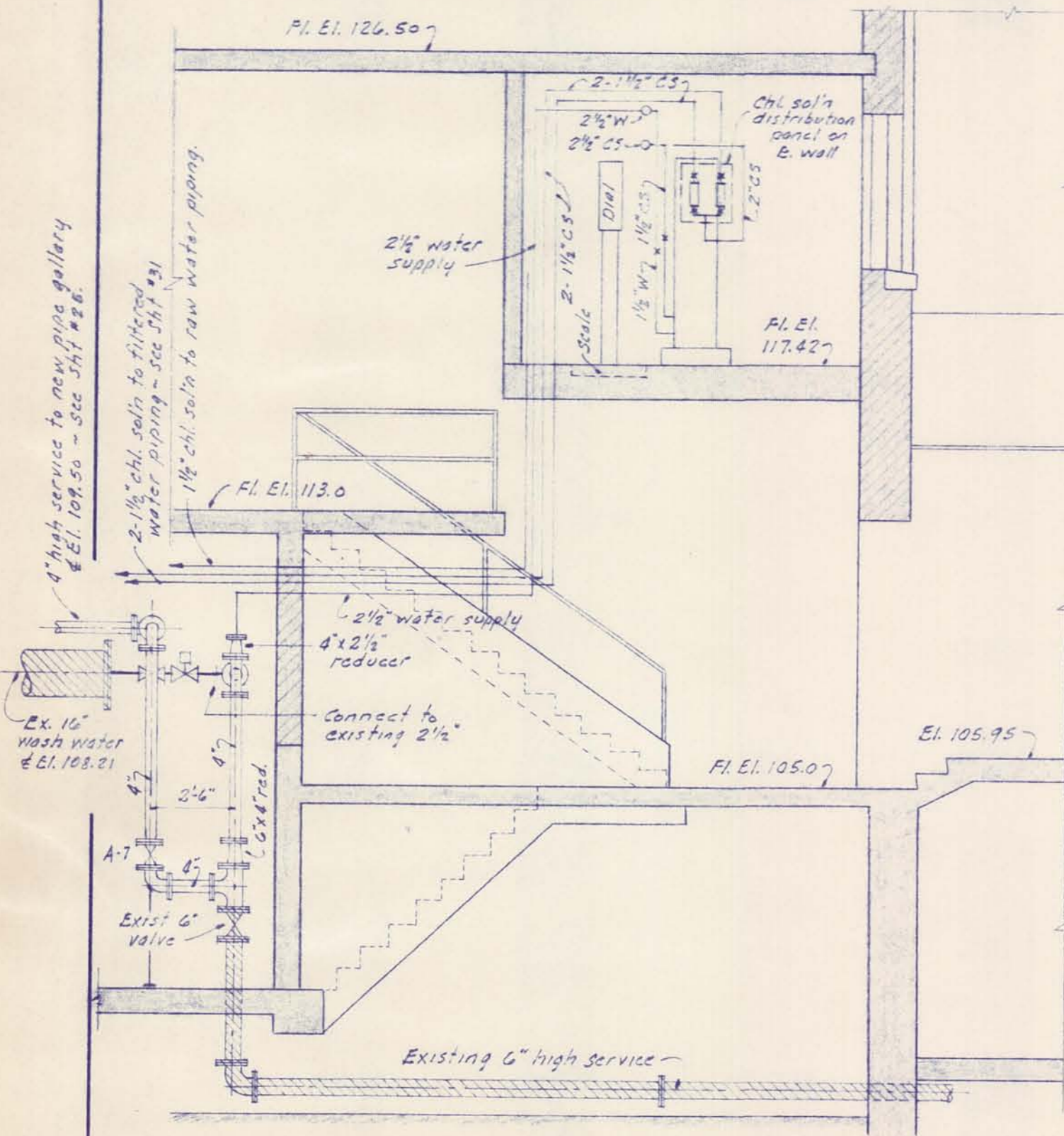
Note: Existing scales & dials not shown.



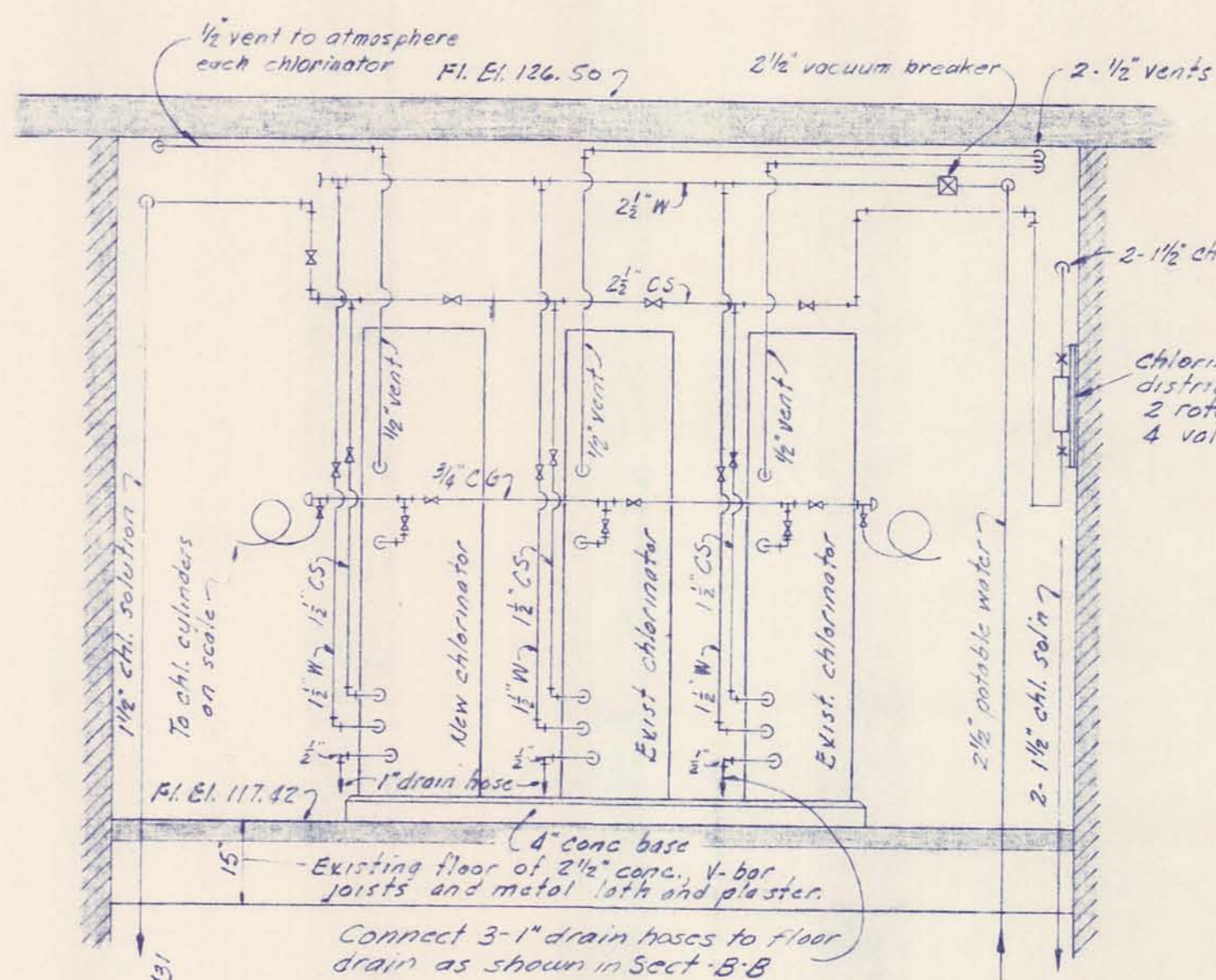
CHEMICAL HOPPER ROOM  
SCALE: 1/4" = 1'-0"



SECTION D-D  
SCALE: 1/4" = 1'-0"

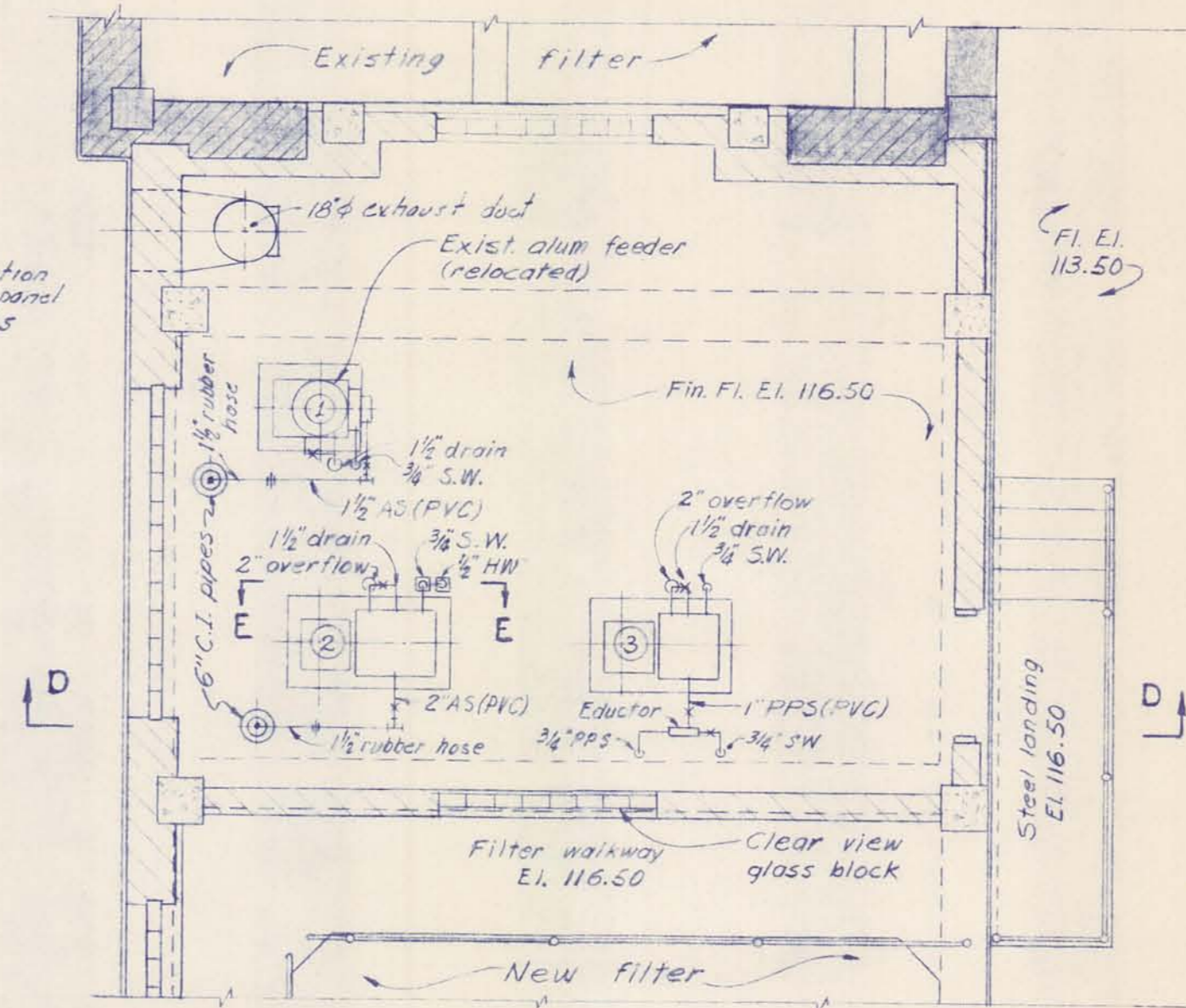


SECTION C-C  
SCALE: 1/4" = 1'-0"

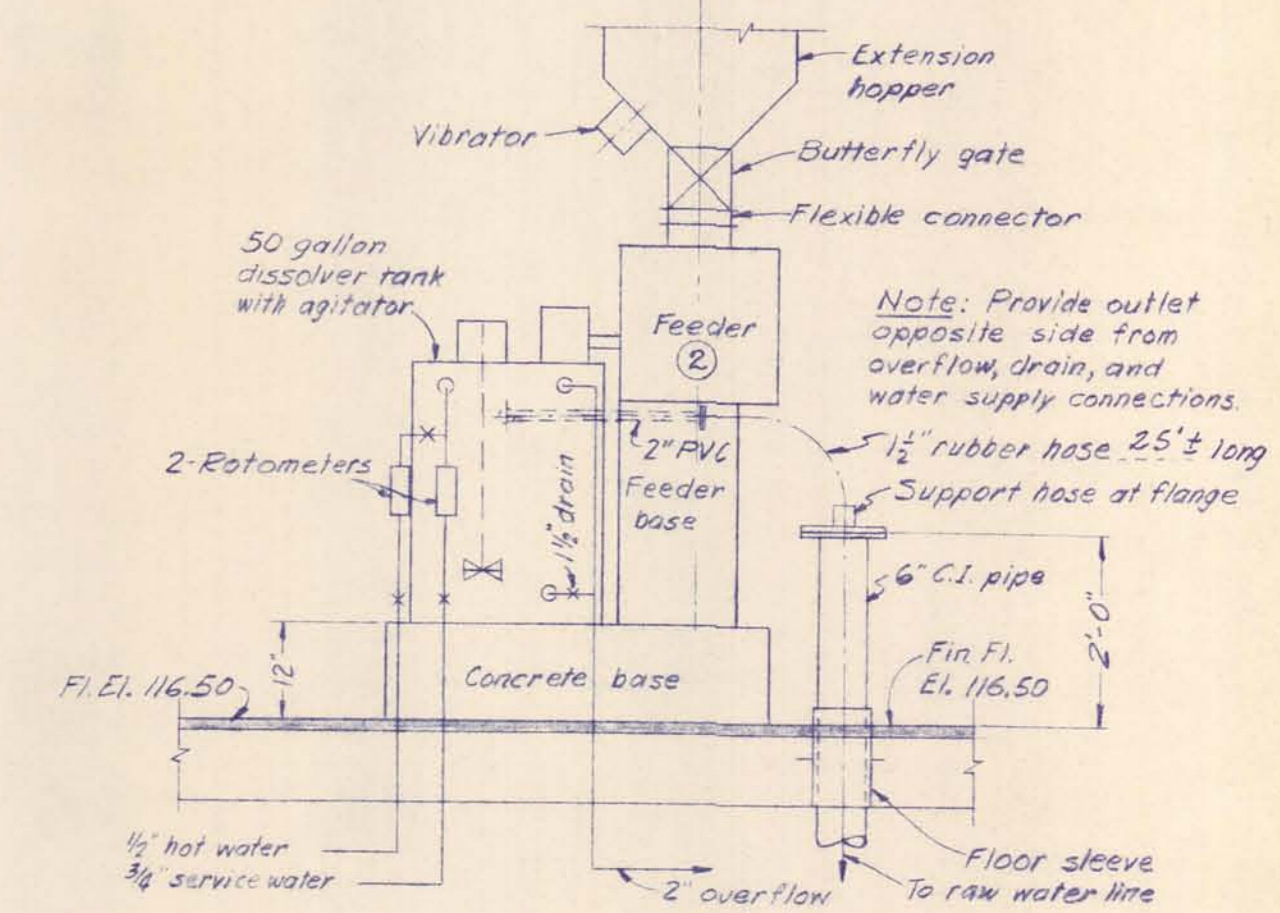


SECTION A-A  
SCALE: 1/2" = 1'-0"

Note: All existing piping in the Chlorine Room to be removed. Chlorine Room to be re-piped as shown with new pipe.



CHEMICAL FEED ROOM  
SCALE: 1/4" = 1'-0"

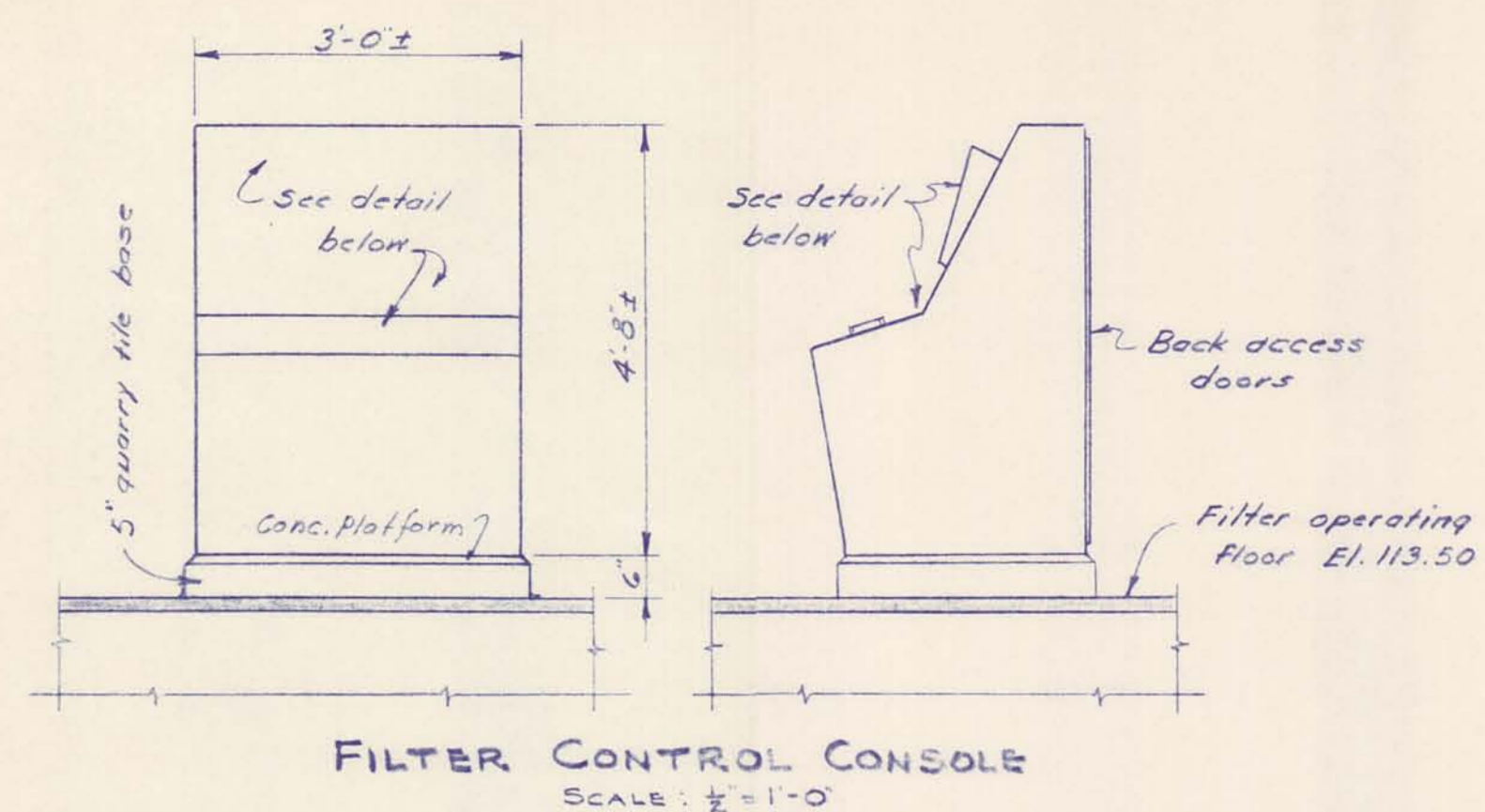


SECTION E-E  
SCALE: 1/2" = 1'-0"

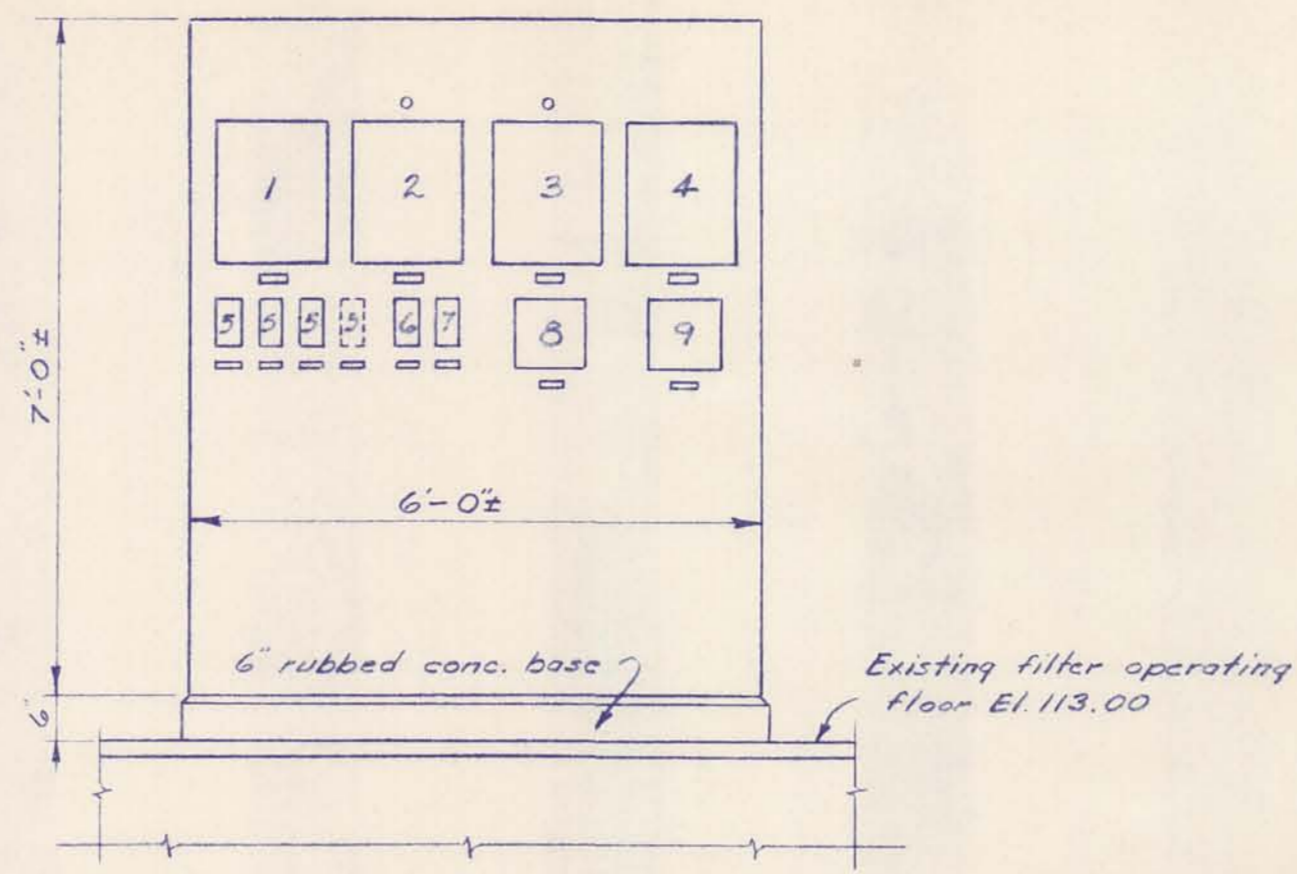
- ① RELOCATE POSITION OF EXISTING ALUM FEEDER
- ② NEW FERRIC SULPHATE OR ALUM FEEDER
- ③ NEW POTASSIUM PERMANGANATE FEEDER

McNAMEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN		ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION	
SCALE AS NOTED	ISSUED MAR 1965	CHLORINE ROOM CHEMICAL FEED ROOM SECTIONS & DETAILS	
DRAWN P.A.L.	TRACED R.E.G.	CHECKED J.C.S.	
ISSUE	NATURE OF REVISION	DATE	
CONTRACT 1965 W-2		SHEET 28 OF 33	

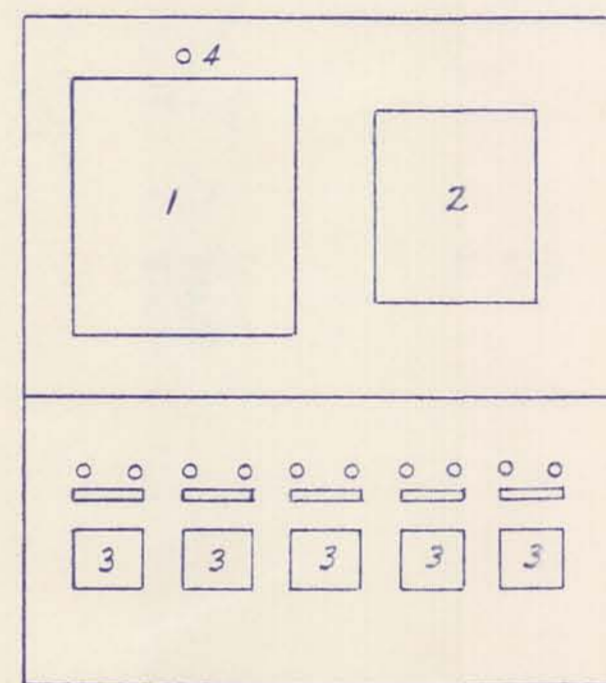
WATER TREATMENT PLANT 1965  
 PLANT 1965  
 29 OF 33  
 SAFECO PRODUCTS • NEW HAVEN, CONNECTICUT  
 REORDER BY PART NUMBER 6522  
 SAFECO PRODUCTS • NEW HAVEN, MINNESOTA  
 REORDER BY PART NUMBER 6522  
 SAFECO PRODUCTS • NEW HAVEN, MINNESOTA  
 REORDER BY PART NUMBER 6522  
 SAFECO PRODUCTS • NEW HAVEN, MINNESOTA  
 REORDER BY PART NUMBER 6522



**FILTER CONTROL CONSOLE**  
SCALE: 1/2" = 1'-0"



**AUXILIARY CONTROL PANEL**  
SCALE: 1/2" = 1'-0"



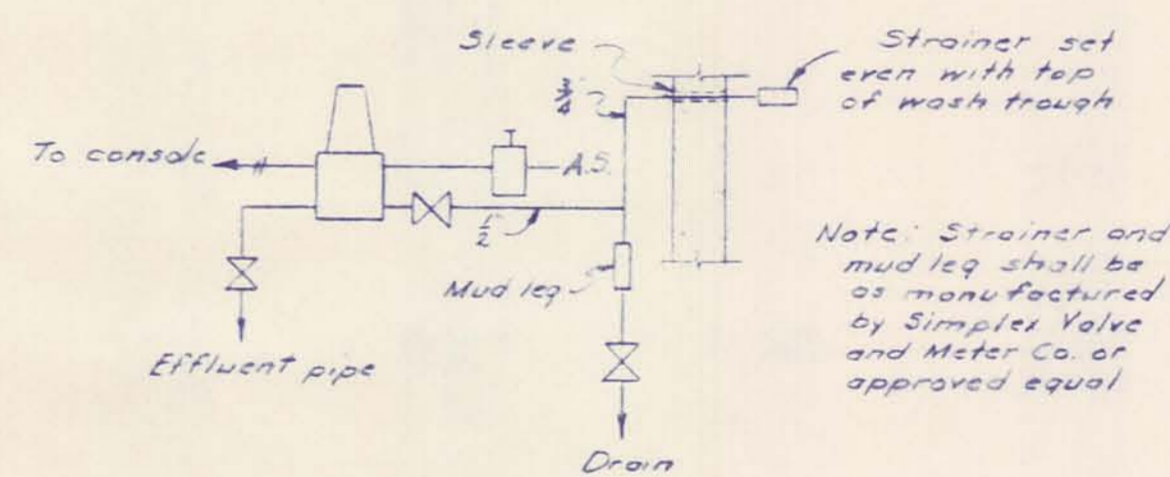
**FILTER CONTROL CONSOLE DETAIL**  
NO SCALE - 3 REQ'D

**CONTROL ITEMS**

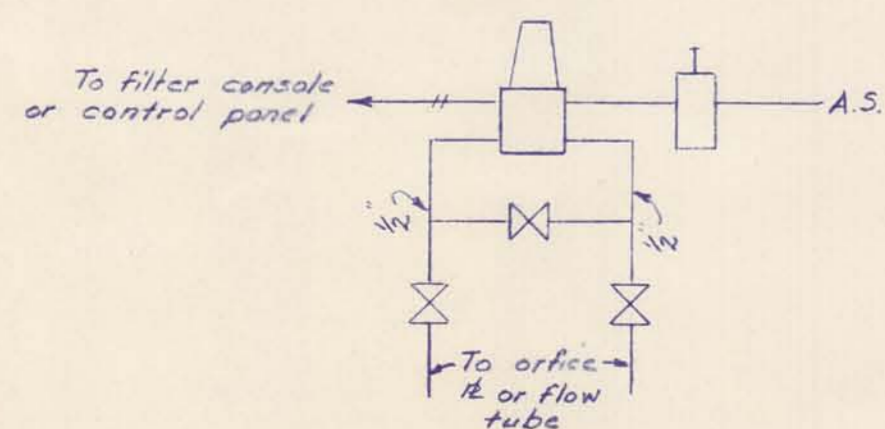
1. Rate of flow and loss of head recorder and controller
2. Wash water indicator and flow control station
3. Open-closed control switches for filter shut-off valves with red and green indicating lights (1-influent, 1-effluent, 1-wash water and 1-surface wash)
4. Red light - loss of head alarm

**CONTROL ITEMS**

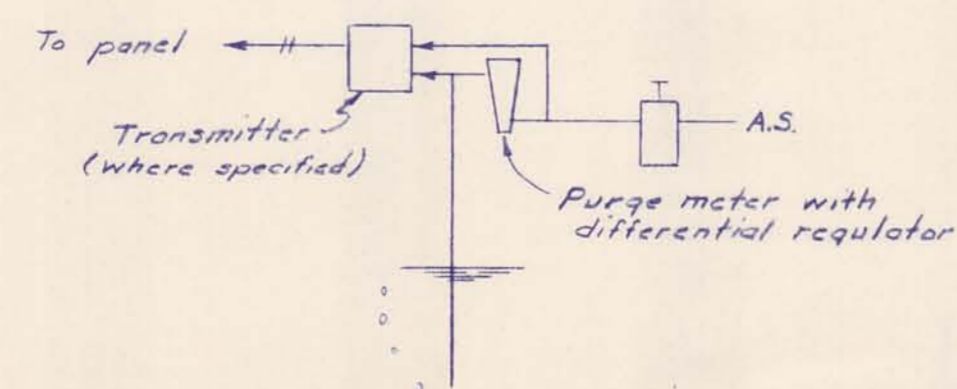
1. Raw water flow control station - recorder, totalizer & controller
2. Coagulation tank and filter level control and indicating station with alarm light
3. Reservoir level indicator and controller with high and low level alarm light
4. Existing and future elevated tank recorder - 2 pan.
5. Low service pump start-stop pushbutton station (1 future) with red and green indicating lights
6. Surface wash pump start-stop pushbutton station with red and green indicating lights
7. Wash water pump start-stop pushbutton station with red and green indicating lights
8. Wash water indicator and flow control station
9. Wash water recorder and totalizer



**LOSS OF HEAD D/P**

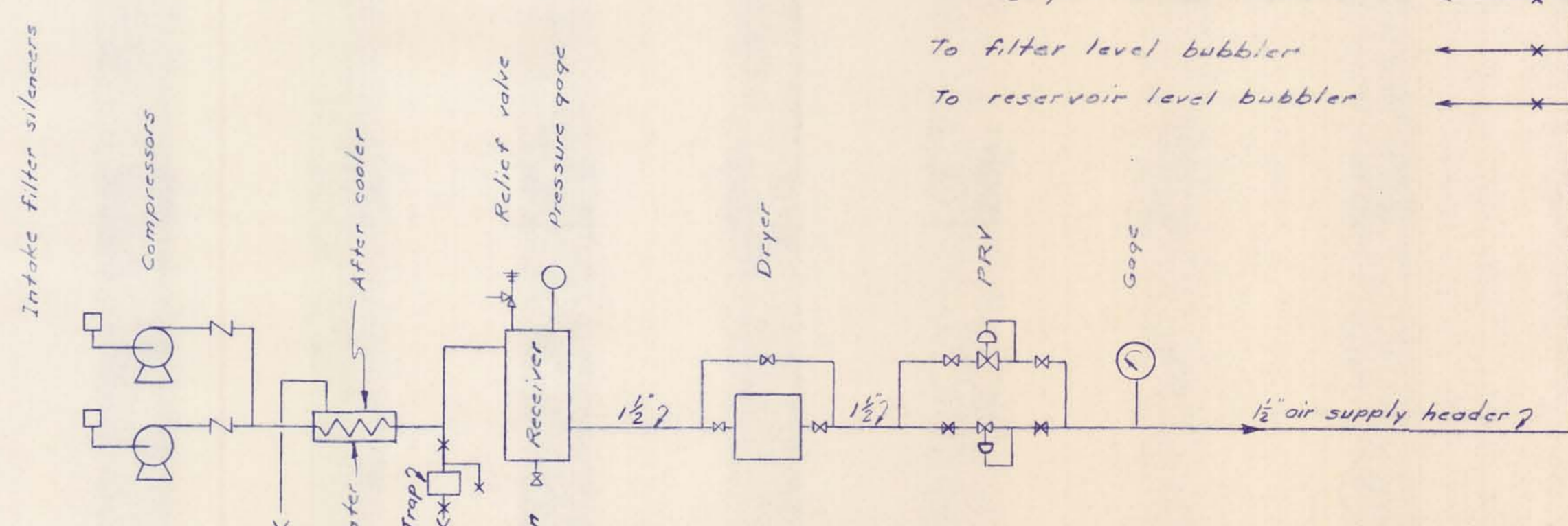
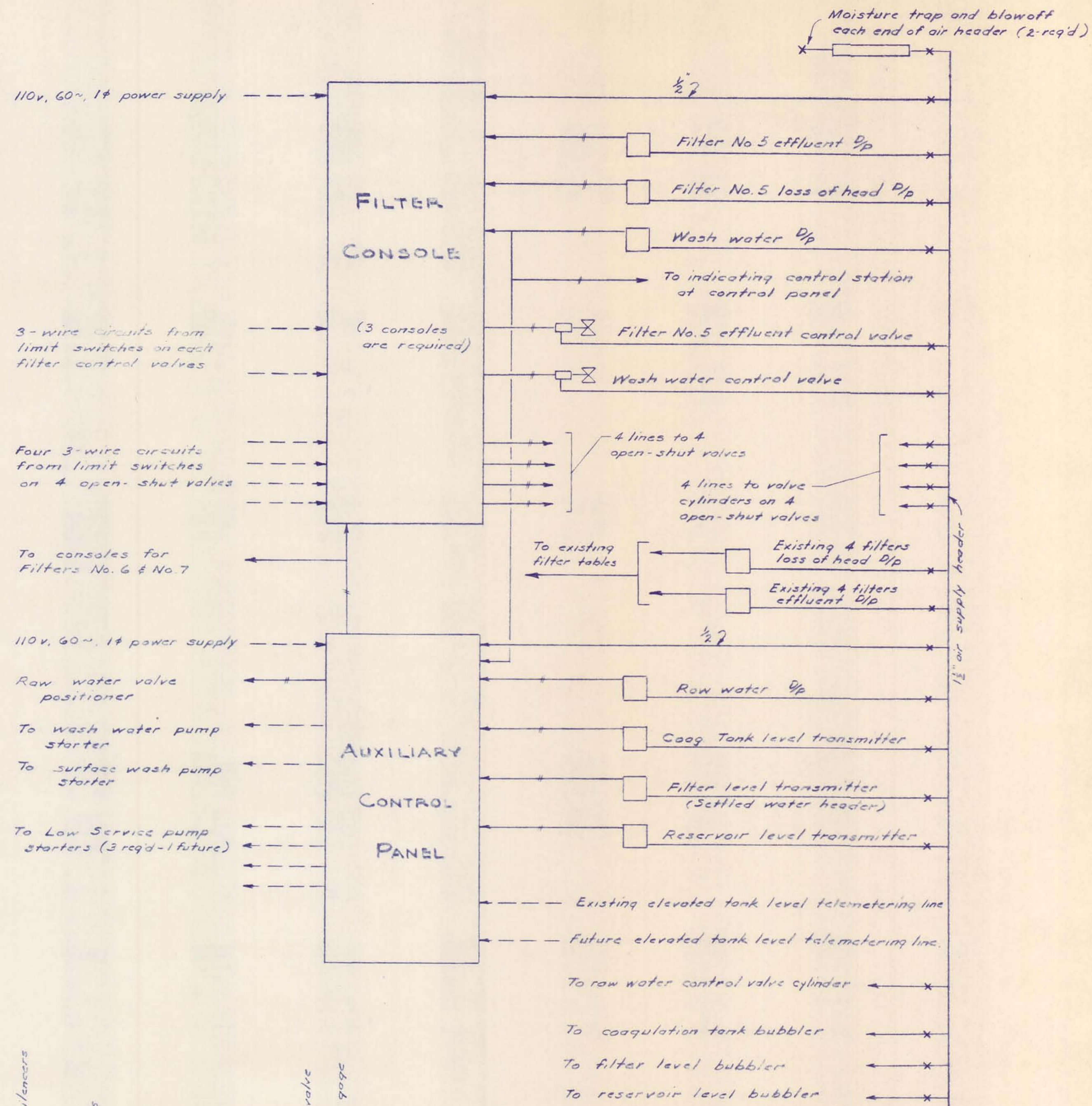


**FLOW D/P**



**BUBBLER ASSEMBLY**

**TYPICAL CONTROL SYSTEM DETAILS**  
NO SCALE



**AIR SUPPLY PIPING SCHEMATIC**

Note: All air lines to valve cylinders shall be 3/8" copper tubing. Other air lines shall be 1/2" copper tubing unless shown otherwise.  
 Console for Filters No. 6 and No. 7 similar to that shown for filter No. 5. Wash water Dp and control valve are common.  
 \* Each filter requires 4 open-shut valves 1-influent, 1-drain, 1-wash water and 1-surface wash

M'NAMEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN			ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION		
SCALE AS NOTED	ISSUED MAR. 1965				
DRAWN P.A.L.	TRACED J.E.D.	CHECKED J.C.B.			
ISSUE	NATURE OF REVISION	DATE			
			<b>METERING AND CONTROLS PIPING AND SCHEMATICS</b>		
			CONTRACT 1965 W-2		SHEET 29 OF 33

DRAWING NUMBER

DRAWING NUMBER

ADDITIONS  
WATER TREATMENT  
PLANT 1965  
30 OF 33

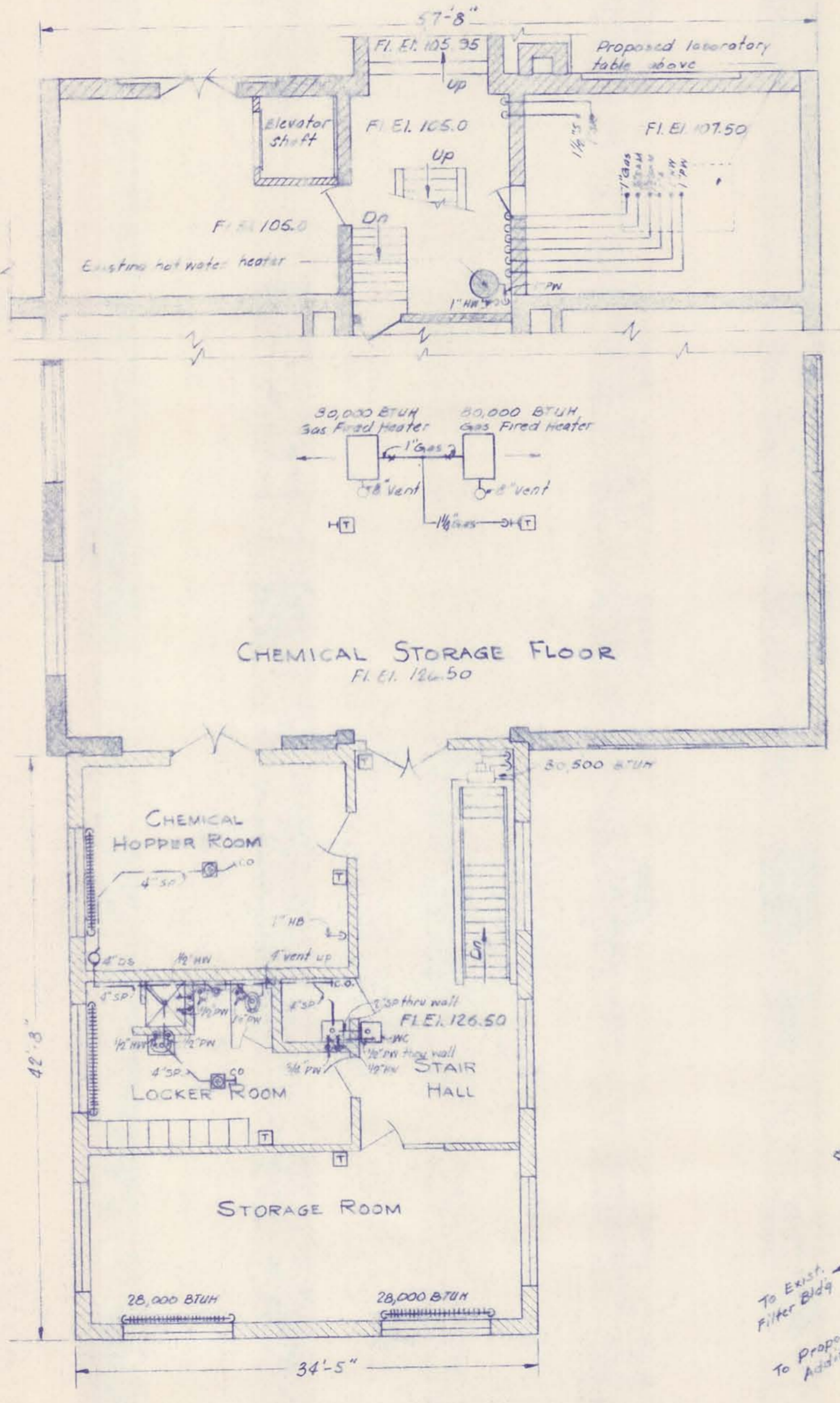
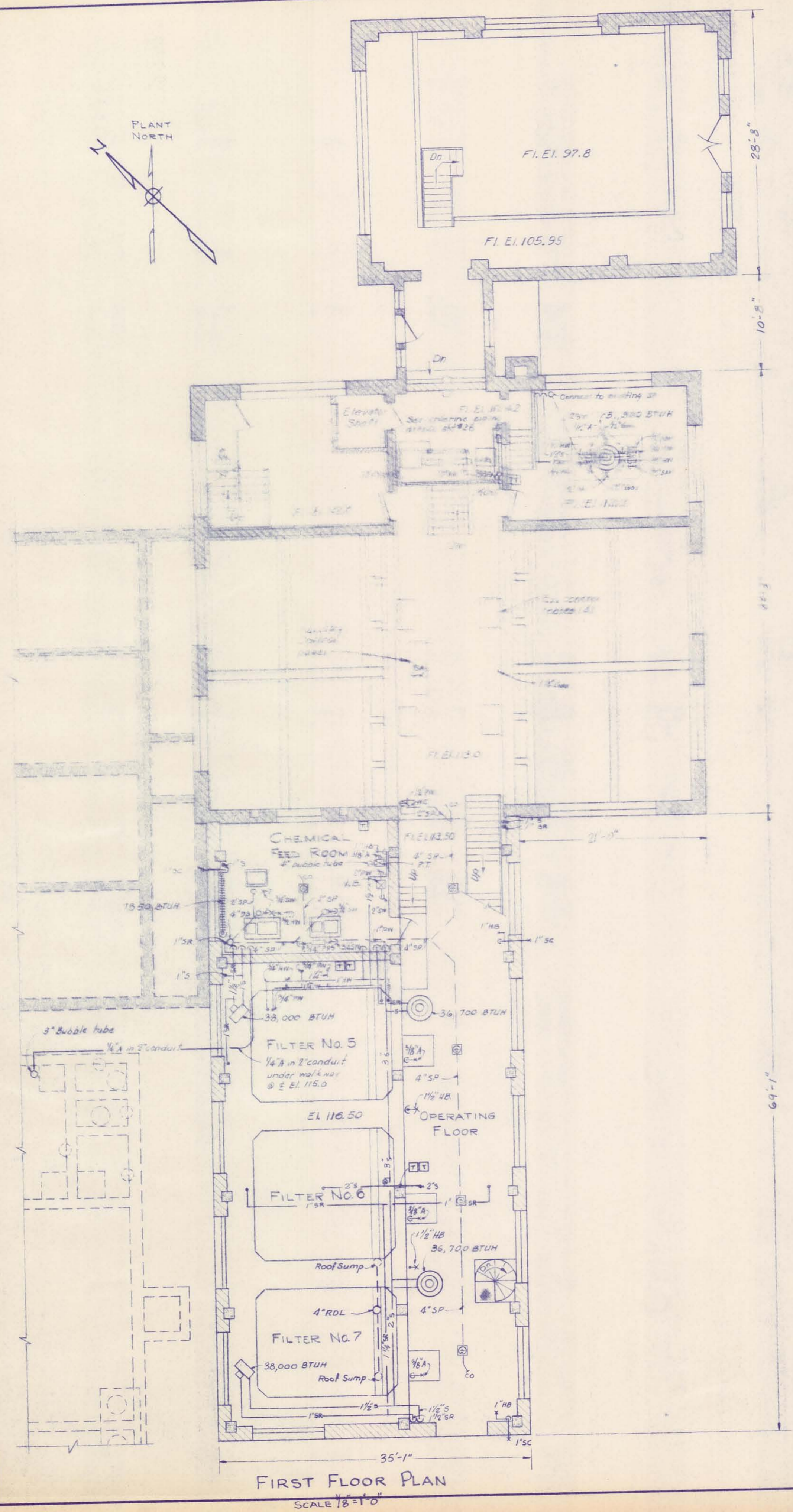
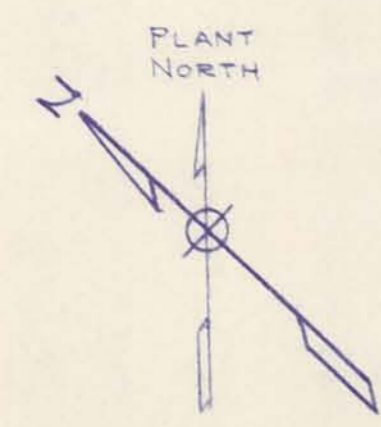
3 NUMBER

BARCO PRODUCTS • NEW HOPE, MINNESOTA  
REORDER BY PART NUMBER 6552

BARCO PRODUCTS • NEW HOPE, MINNESOTA  
REORDER BY PART NUMBER 6552

BARCO PRODUCTS • NEW HOPE, MINNESOTA  
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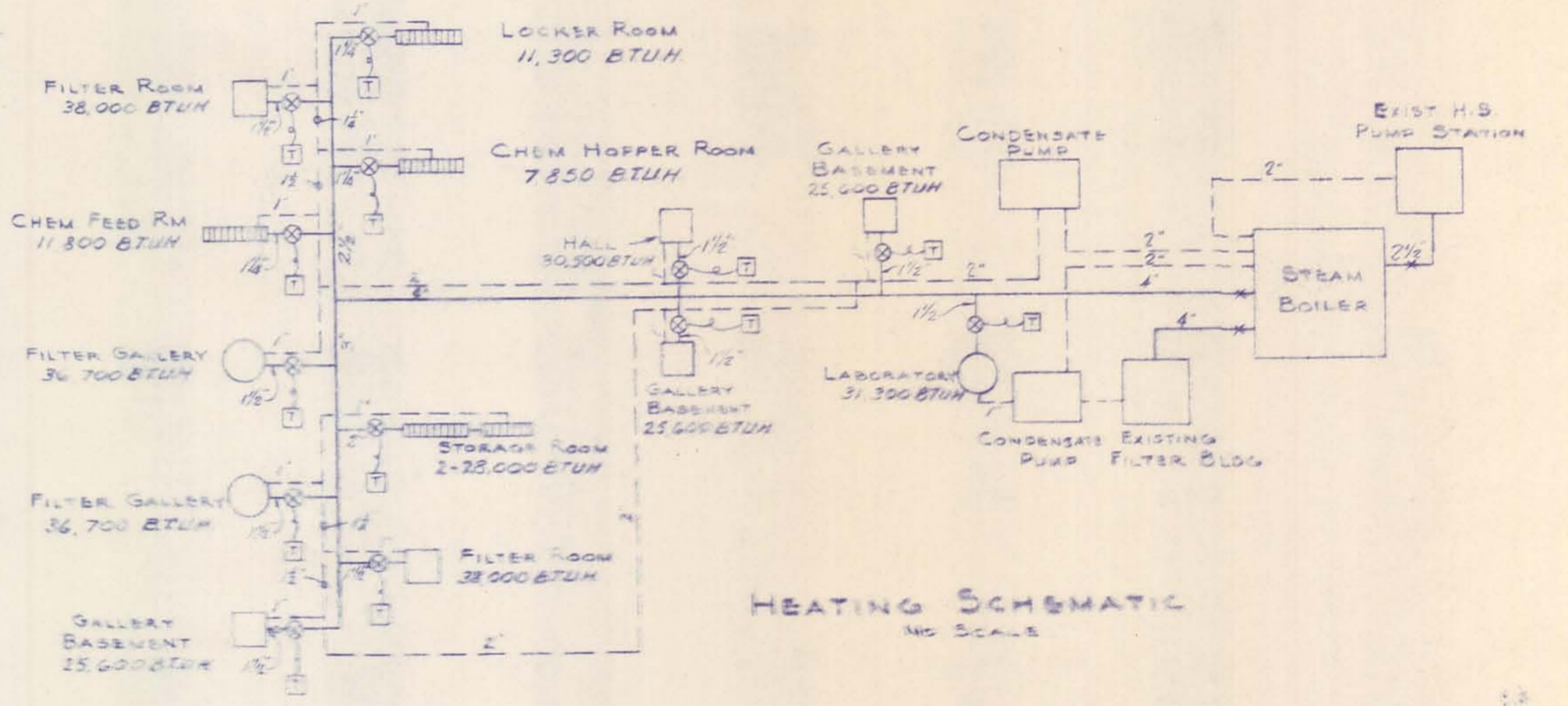
BARCO PRODUCTS • NEW HOPE, MINNESOTA  
REORDER BY PART NUMBER 6552



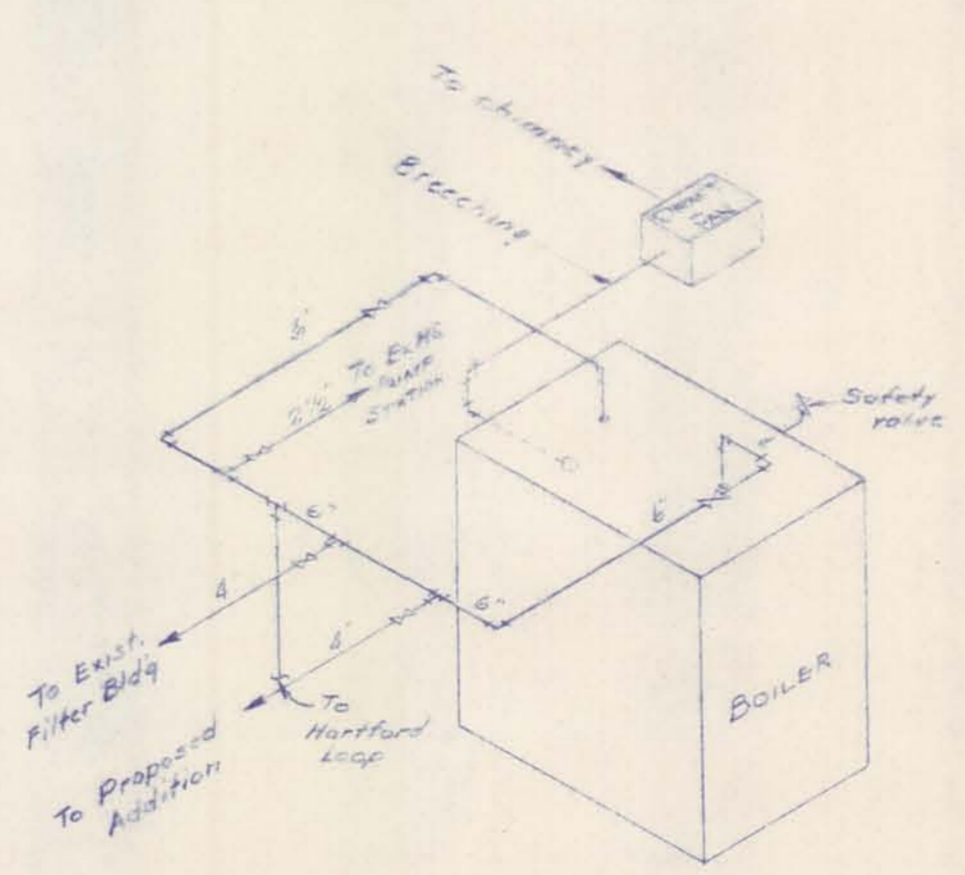
SECOND FLOOR PLAN  
SCALE 1/8" = 1'-0"

### PLUMBING AND HEATING SYMBOLS

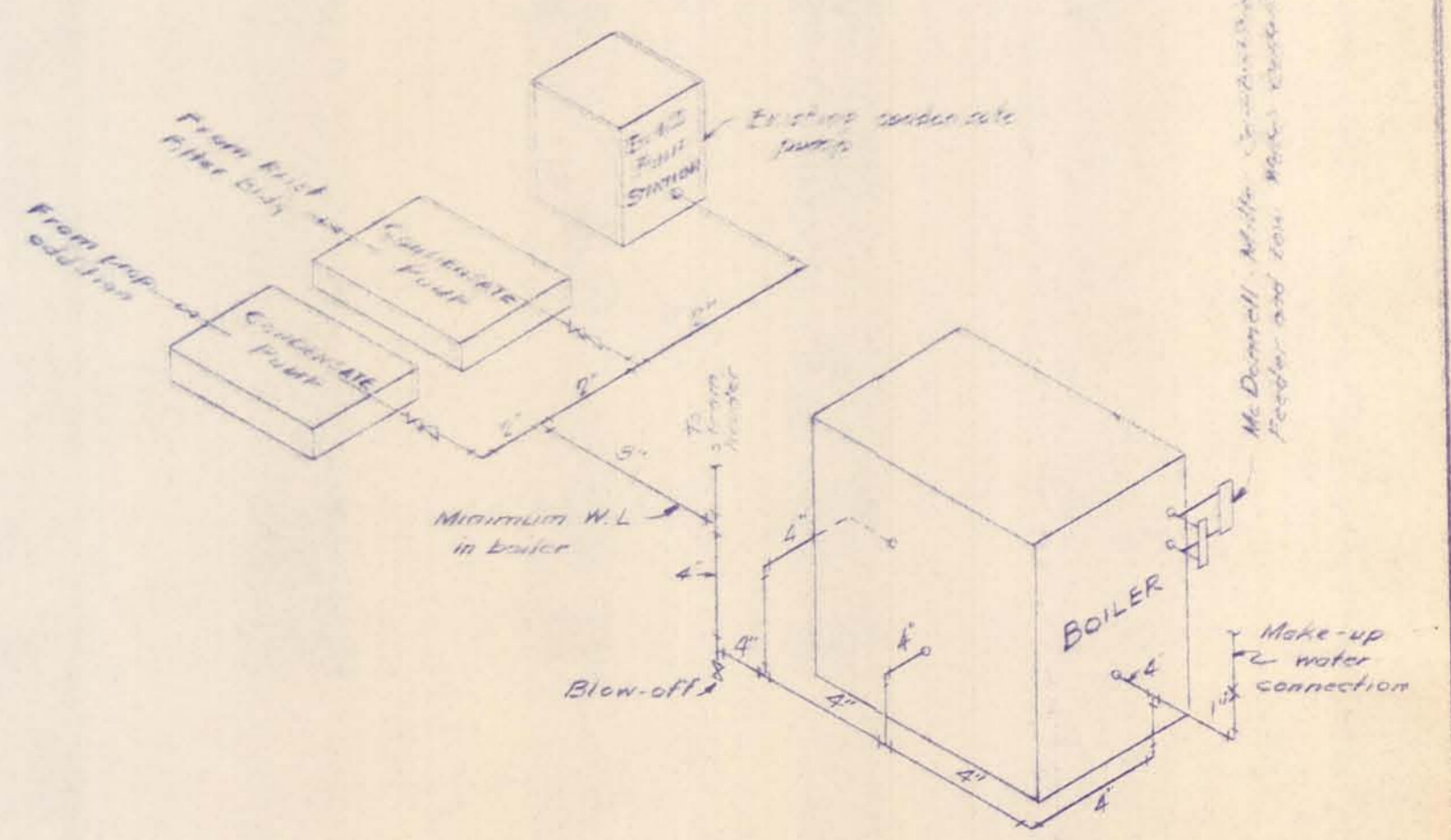
—PW—	Potable water	—xHB—	Hose bibb - 1" size unless noted
—HW—	Hot water	S&W	Stop and waste
—SW—	Service water	—ODS—	Downspout
—CS—	Chlorine solution	—ORDL—	Roof drain leader
—AS—	Alum solution	—OVent—	Vent
—SAM—	Sample lines	—Bubble Tube—	Bubble tube
—PPS—	Potassium Permanganate solution	—S—	Steam supply
—A—	Air piping	—SR—	Steam return
—Gas—	Gas piping	—T—	Thermostat
—Drain—	Drain piping	—C—	Control wiring
—FD—	Floor drain	—Conv—	Convectors
—CO—	leanout	—Unit Heater—	Unit heater
—Rise—	Pipe riser	—RT—	Running trap
—Down—	Pipe down	—A—	Pneumatic valve (solist)
—PRV—	Pressure reducing valve	—SP—	Soil pipe
—CF—	Carbon feed	—VB—	Vacuum break
—F—	Fluoride feed	—WC—	Water cooler
—V—	Valve	—PT—	Pneumatic transmitter
—SC—	Sill cock - 1" size unless noted	—FW—	Flushing water



HEATING SCHEMATIC  
NO SCALE



STEAM PIPING AT BOILER  
NO SCALE



RETURN PIPING AT BOILER  
NO SCALE

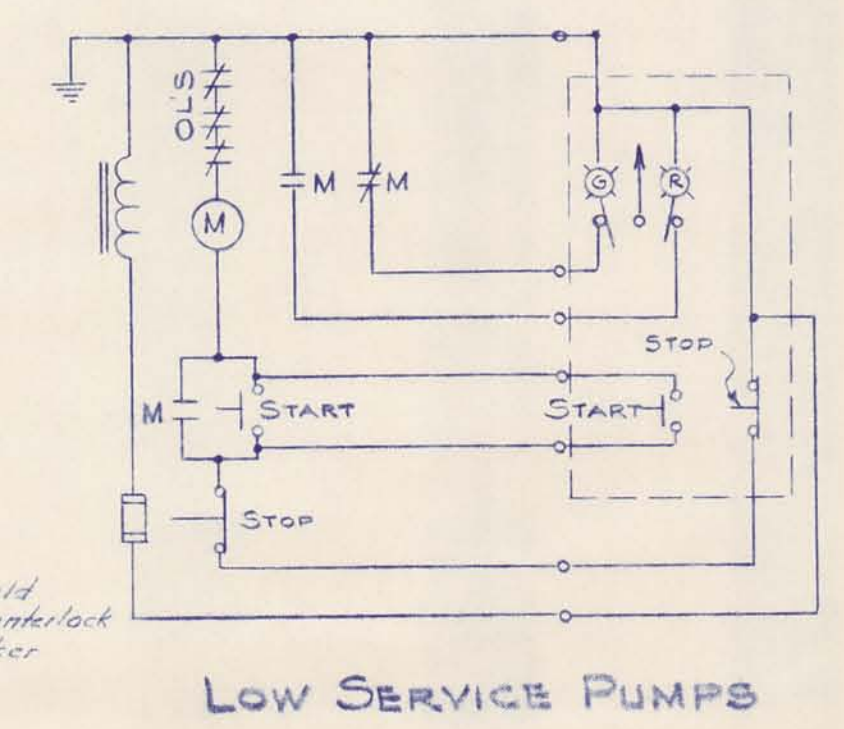
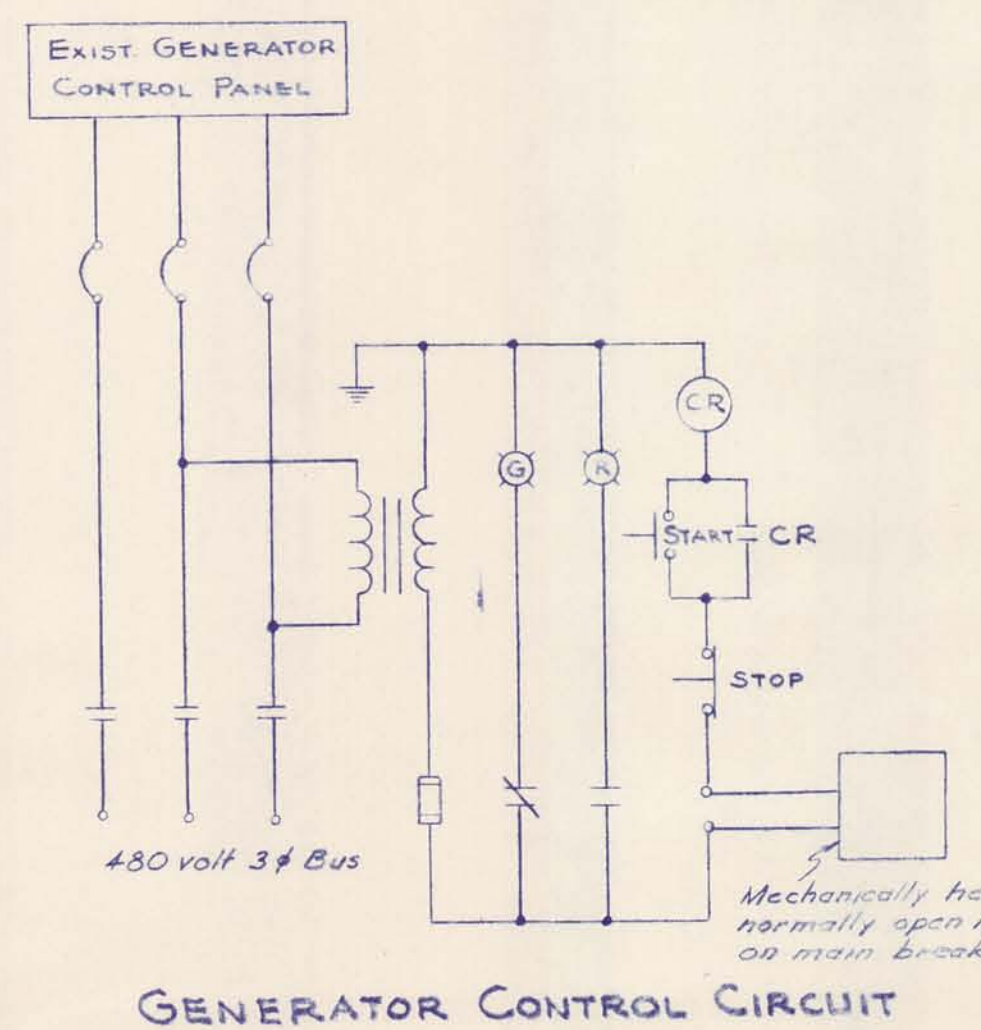
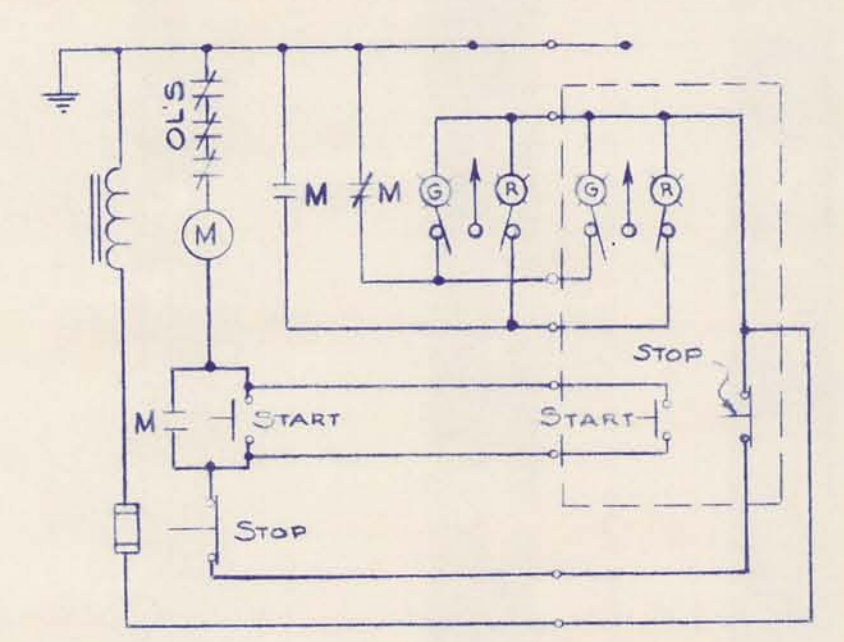
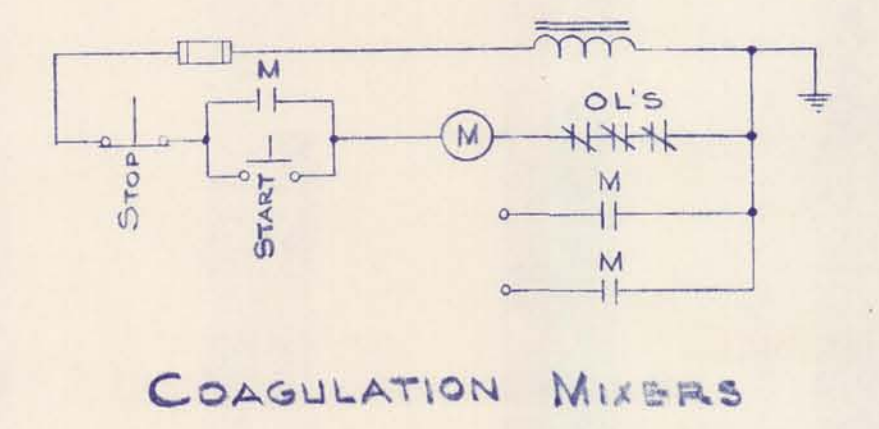
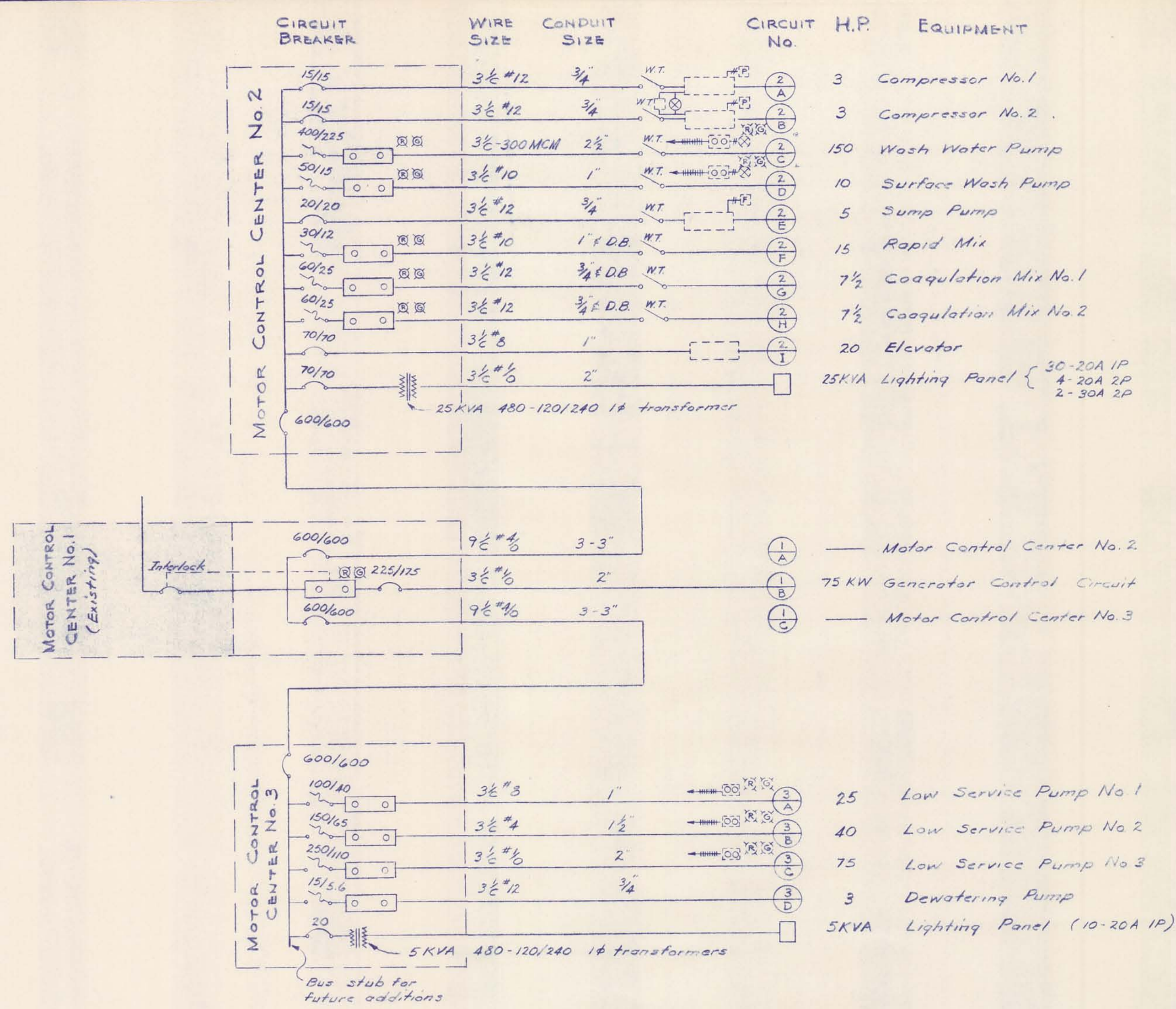
M'NAMEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN			ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION		
SCALE 1/8" = 1'-0" OR AS NOTED	ISSUED MAR. 1965	ISSUED MAR. 1965	PLUMBING AND HEATING DETAILS AND SCHEMATICS		
DRAWN PAL	TRACED REG	CHECKED J.C.S.	CONTRACT 1965 W-2		
ISSUE	NATURE OF REVISION	DATE	SHEET 30 OF 33		



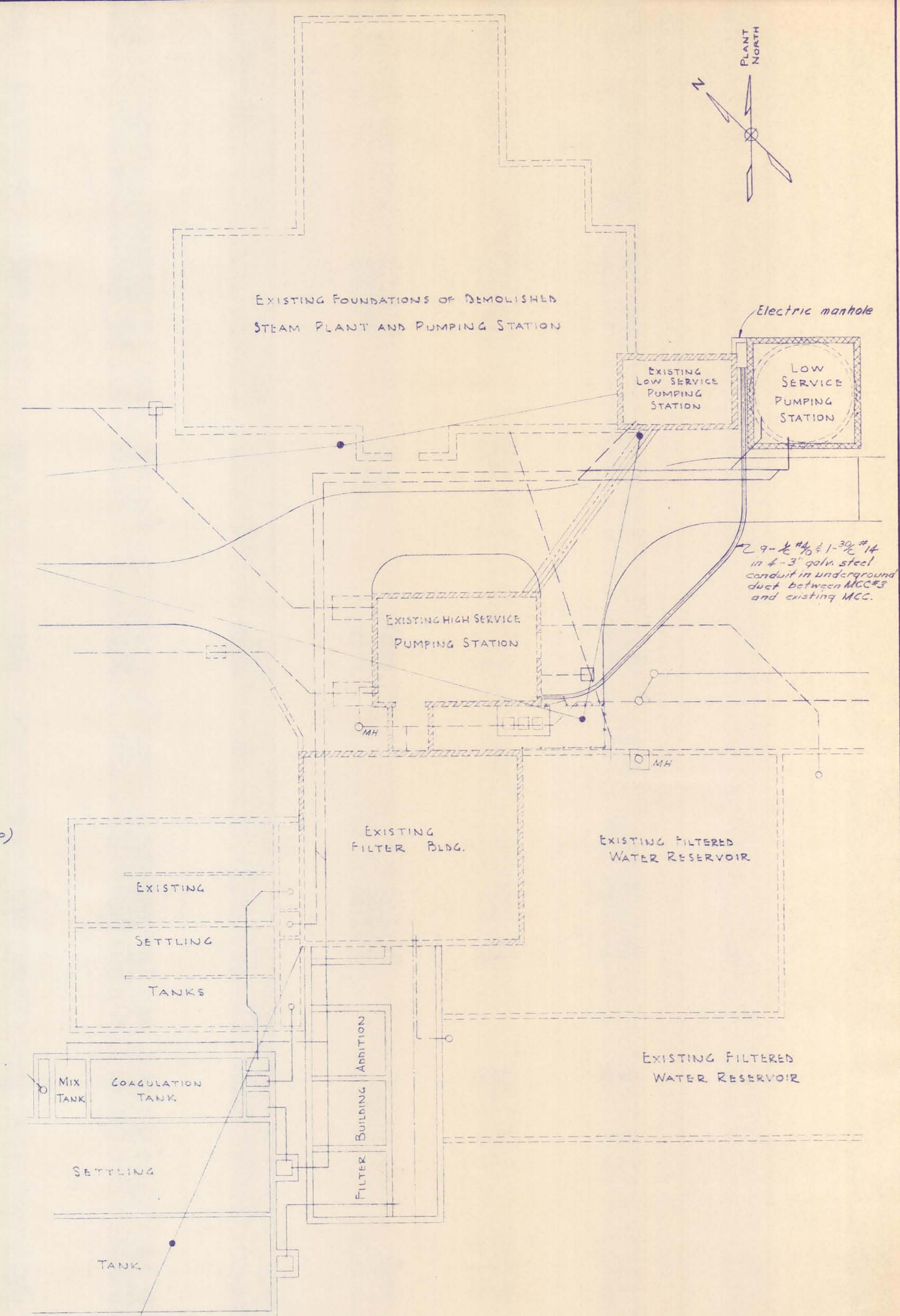


### LEGEND

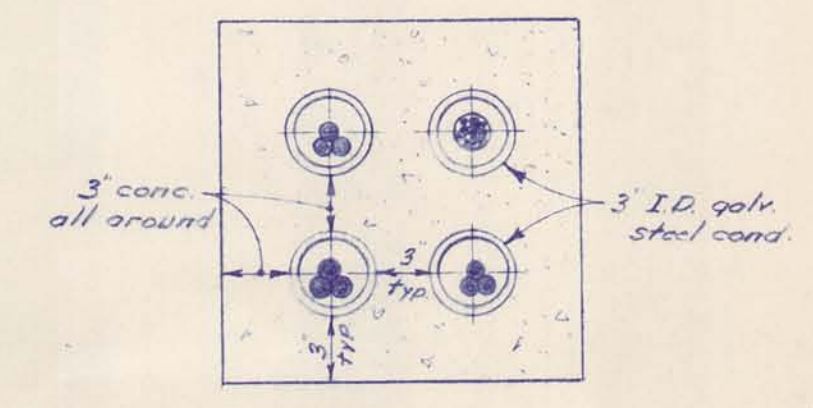
SYMBOLS	DESCRIPTION
	Wall mounted incandescent luminaire
	200 watt incandescent luminaire
	48" fluorescent luminaire with 4-F40 lamps
	110 volt circuit and switch
	110 volt circuit and 3 way switch
	Duplex convenience outlet
	Special 110 volt outlet
	220 volt single phase special outlet
	Telephone outlet
	Telephone circuit
	Fractional horsepower starter
	Starter with pushbuttons in cover
	Starter with hand-off-auto switch
	250 w mercury vapor lamp
	Furnished with equipment
	440 volt motor with circuit switch
	Disconnect switch
	Fused disconnect
	Water tight
	Electric solenoid valve
	Pilot light, red, green, amber
	Motorized valve
	Float switch or liquid level control switch
	Limit switch
	Pressure switch
	Thermostat or timer
	Special 110 volt outlet for heater fan
	Flood light (500 watt)
	Control wiring
	Remote pushbutton station
	Electric clock
	Lockout attachment
	Direct burial cable
	Alarm station



### WIRING SCHEMATICS



SITE PLAN  
SCALE: 1" = 20'



UNDERGROUND DUCT DETAIL  
NO SCALE

McNAMEE, PORTER AND SEELEY CONSULTING ENGINEERS ANN ARBOR, MICHIGAN		ALPENA, MICHIGAN ADDITIONS TO WATER TREATMENT PLANT AND LOW SERVICE PUMPING STATION				
SCALE AS NOTED	ISSUED MAR 1965	<b>ELECTRICAL WORK</b>				
DRAWN J.L.M.	TRACED J.E.D.			ISSUE	NATURE OF REVISION	DATE
CONTRACT 1965 W-2				SHEET 32 OF 33		

