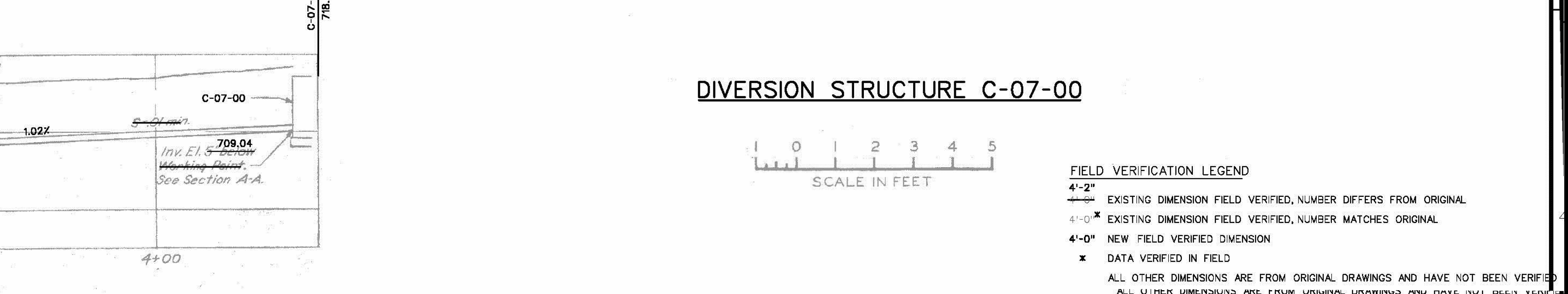
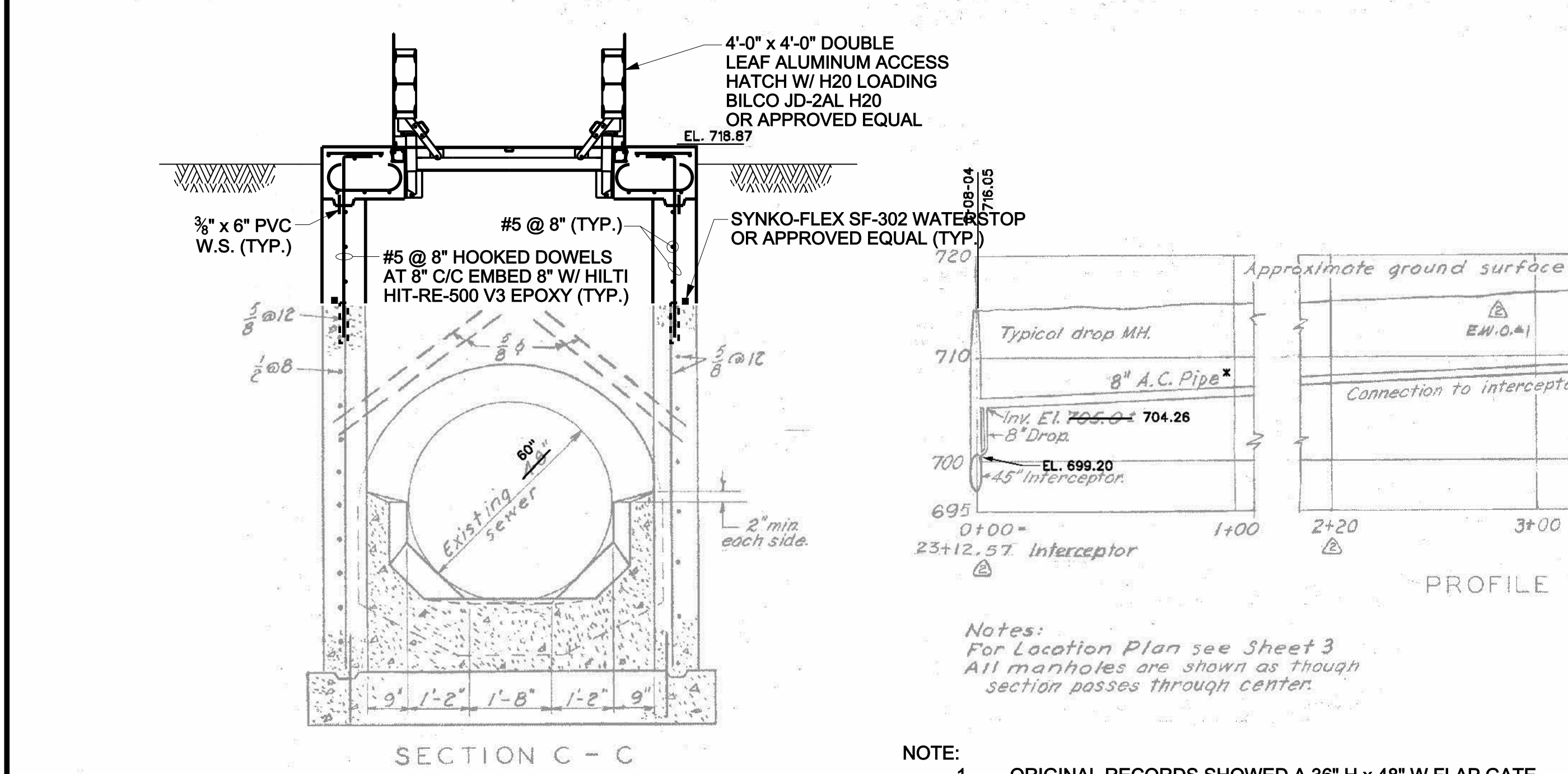
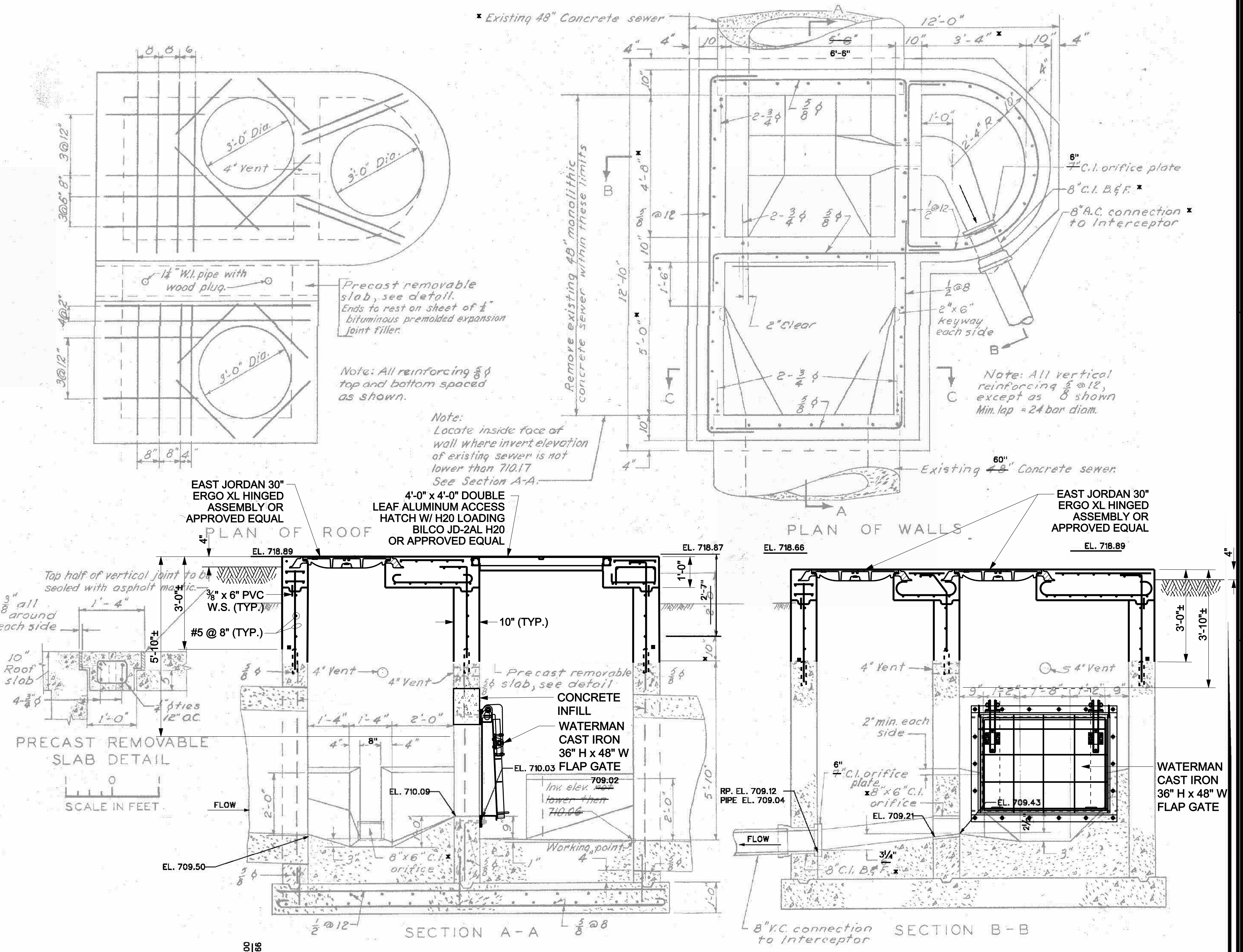
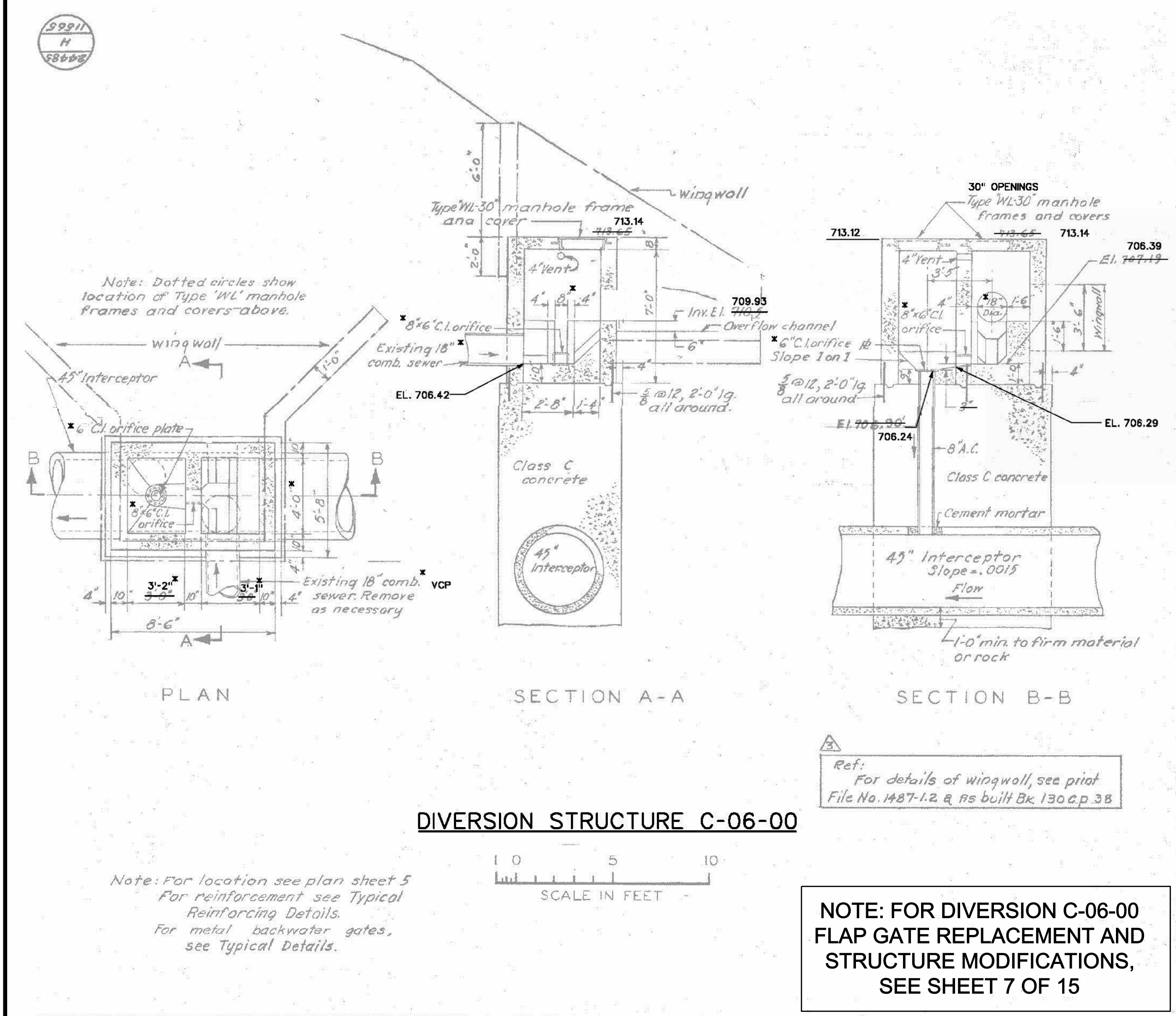


B.1 C-07 DRAWINGS AND PHOTOS
(6 pages)



ALCOSAN DRAWING REFERENCES:

- CONTRACT 30, SHEET 12 OF 16
- MANHOLE AND DIVERSION STRUCTURE INSPECTION PROJECT FIELD VERIFICATION DRAWING, 7/28/04

SHOP DRAWING REFERENCES:

- WATERMAN INDUSTRIES, DRAWING NO. RA-17-0386

NOTE:

- ORIGINAL RECORDS SHOWED A 36" H x 48" W FLAP GATE. UPON INSPECTION, THE EXISTING GATE WAS FOUND TO BE 36" W x 48" H. THE REPLACEMENT GATE AND FRAME WAS SUPPLIED AS 36" H x 48" W, AND THE OPENING WAS MODIFIED BY SAWCUTTING AND PLACING CONCRETE INFILL.
- GPS TOP OF STRUCTURE MANHOLE RIM ELEVATIONS REFERENCE THE MANHOLE AND DIVERSION STRUCTURE INSPECTION PROJECT DATA. NOT FIELD VERIFIED / UPDATED ON THIS PROJECT.

Michael Baker INTERNATIONAL

100 AIRSIDE DRIVE
MOON TOWNSHIP, PA 15108

alleggheny county
sanitary authority

ARLETTA SCOTT WILLIAMS
EXECUTIVE DIRECTOR, ALCOSAN

REV.	DESCRIPTION	DATE	APP.
5			
4			
3			
2			
1	RECORD DRAWING	10/1/18	BGD

ALLEGHENY COUNTY SANITARY AUTHORITY
WASTEWATER TREATMENT PLANT
PITTSBURGH, PENNSYLVANIA

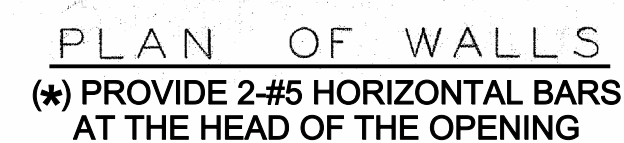
CONTRACT 1660

**FLAP GATE IMPROVEMENTS
AT VARIOUS LOCATIONS**

**DIVERSION C-07-00
FLAP GATE REPLACEMENT
GENERAL PLAN & DETAILS**

SCALE: AS SHOWN CONTRACT NO. 1660 SHEET 8 OF 15

FILENAME: 1660 C-07 GENERAL PLAN & DETAILS.DGN
DATE PLOTTED: 12/20/2018
DRAWING NO.:



1/2"=1'-0"

2 1 0 2 4

1. ALL CONCRETE SHALL BE CAST IN PLACE, AIR-ENTRAINED AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4500 PSI IN 28 DAYS. MAXIMUM WATER/CEMENT RATIO IS 0.42. CEMENT SHALL BE TYPE II
2. REINFORCING STEEL, ASTM A 615, GRADE 60 EPOXY COATED DEFORMED BARS. USE CLASS "B" SPLICES.
3. ALL REBAR SHALL HAVE A MINIMUM OF 2" OF CONCRETE COVER.
4. ALL REBAR LAPS ARE TO BE 2'-0" UNLESS SPECIFICALLY NOTED OTHERWISE.
5. ALL EXISTING CONDITIONS, ELEVATIONS AND DIMENSIONS, SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR MATERIAL PURCHASE. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.
6. STAINLESS STEEL GATE HARDWARE REQUIRED. CONTRACTOR TO PROVIDE ANCHOR BOLT DESIGN SUBMITTALS.
7. CONTRACTOR TO RECONNECT ANY VENT PIPING.
8. INSTALL GATE PER MANUFACTURERS RECOMMENDATIONS USING A 1" GROUT PAD AND NUTS TO CONDUCT INSTALLATION ADJUSTMENTS.

Designed by:	J. SCHAEFER
Drawn by:	J. SPARBANIE
Checked by:	M. RYDER



REV.	DESCRIPTION	DATE	APPROVED
5			
4			
3			
2			
1	RECORD DRAWING	10/1/18	BO

FILENAME: 1660 C-07 STRUCTURE MODIFICATION PLAN.DGN
DATE PLOTTED: 12/20/2018

DRAWING NO.:

EXAMINED BY:

Submittal Information Covering

Cast Iron Flap Valve

Manufacture: Waterman

Type/Model:

F-40

F-20

Size:

48x36

18x18

Provide or Confirm

Invert elevation
Top of wall elevation
Seating Head:
Unseating Head:
Wall Thickness:

48x36 at C-07-00

710.89 +/-

715.89 +/-

7.8'

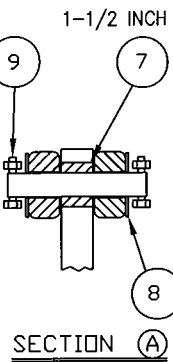
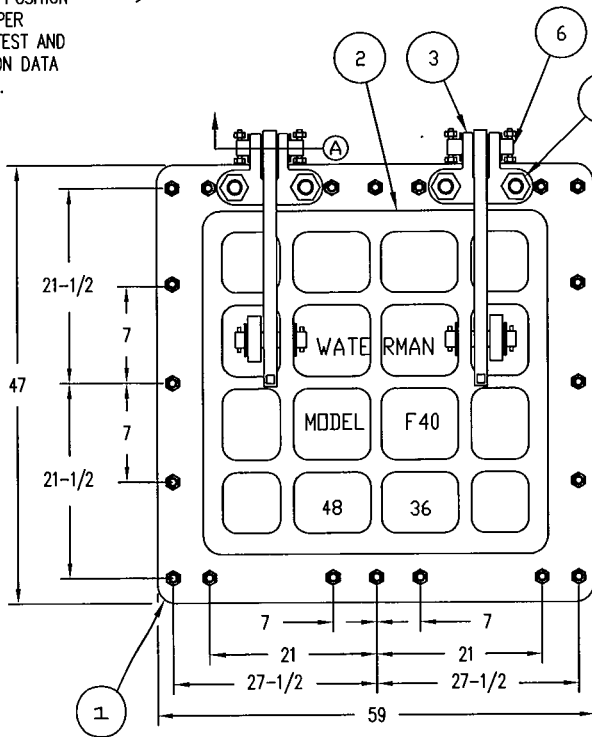
0.25'

10"

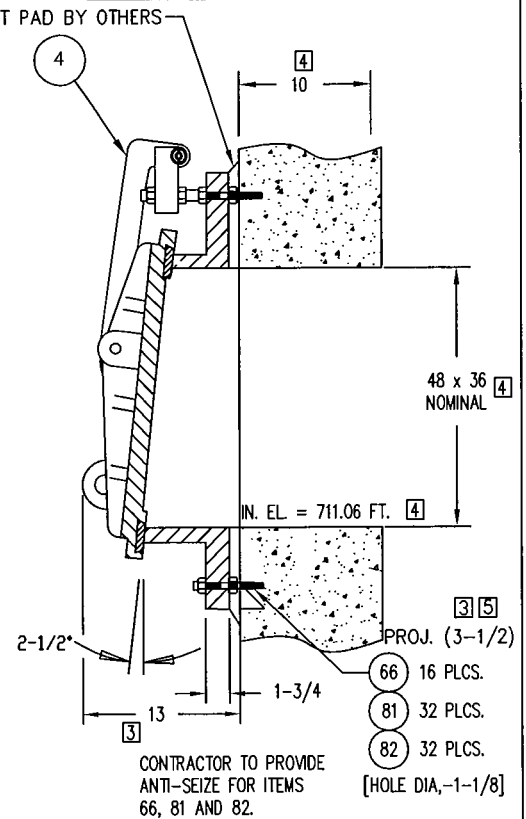
18x18 at M-53-00

SHOP NOTE:
TEST GATE FULLY
ASSEMBLED IN THE
VERTICAL POSITION
FOR PROPER
SEATING. TEST AND
INSPECTION DATA
REQUIRED.

STRUCTURE TOP EL. = 719.73 FT. [4]



EMBEDDED DEPTH FOR ALL THREADED STUDS			
DIAMETER	EMBEDDED DEPTH	HOLE DEPTH	HOLE DIA.
7/8	6-3/4	7	1



DESCRIPTION	PART #/ SIZE	MATERIAL	FIN	QTY	TOT	FINISH KEY
1. FRAME SEAT (ATTACHED BRONZE)	W-1708-00-01	CAST IRON: ASTM A-126 CL. B NAVAL BRZ.: ASTM B-21 AL. C48200	6E 3	1 -	1 -	1. AS CAST 2. MILL
2. COVER SEAT (ATTACHED BRONZE)	W-1707-00-01	CAST IRON: ASTM A-126 CL. B NAVAL BRZ.: ASTM B-21 AL. C48200	6E 3	1 -	1 -	3. MACHINED 4. GALVANIZE ASTM A-123 5. GALVANIZE ASTM A-153
3. PIVOT LUG	W-1009-00-02 (REF. 100189)	DUCTILE IRON: ASTM A-536 GR. 65-45-12	6E	2	2	6F BLAST CLEAN PER SSPC-SP6 (2) CTS (8 MILS/CT) AMERLOCK 400 (TDF-16 MILS) GRAY COLOR: [6]
4. HINGE LINK	1-1/4 THICK (REF. 102116)	STN STL PLATE: ASTM A-240 TY.316/316L D/C	2,3	2	2	NOTES: 1. ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED. 2. DESIGNED FOR 9 FT SEATING HEAD.
5. HINGE STUD & NUTS	1-1/2 NC X 6-3/4 LG 1-1/2 NC	STN STL HDW: ASTM F-593C/D & 594 GRP 1 (TY 304) STN STL HDW: ASTM F-593C/D & 594 GRP 1 (TY 304)	2 2	4 12	4 12	[3] DIMENSION INCLUDES GOUT PAD THICKNESS.
6. HINGE PIN	1-1/8 DIA (REF. 101673-8)	STN STL SHAPES: ASTM A-276 TY.304/304L D/C PERMA-LUBE BRONZE	2	4	4	[4] CONTRACTOR TO VERIFY
7. HINGE BUSHING	1.188 ID X 1.500 OD X 1.25 LG (REF. 101672-8)		2	4	4	[5] CONTRACTOR TO PROVIDE HILTI HIT-RE 500-V3 (WET OR DRY CONDITIONS), EPOXY FOR ANCHORS.
8. WASHER	1-1/8 DIA	304 STN. STL	2	8	8	
9. HEX HEAD BOLT & NYLOC NUT	3/8 NC	STN STL HDW: ASTM F-593C/D & 594 GRP 1 (TY 304)	2	8/8	8/8	
66. ALL THREADED STUD [4]	7/8 NC X 11-1/2 LG	STN STL SHAPES: ASTM A-276 TY.304/304L D/C	2,3	16	16	
81. HEX HEAD BOLT	7/8 NC	STN STL HDW: ASTM F-593C/D & 594 GRP 1 (TY 304)	2	32	32	
82. WASHER	7/8 DIA.	STN. STL 304	2	32	32	

(1) GATE REQ'D @ C-07-00 [4]

REF. PLAN SHEET; 5 OF 9

REUSE OF DOCUMENTS: THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF WATERMAN INDUSTRIES AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF WATERMAN INDUSTRIES ©

48 X 36 WATERMAN MODEL F-40
CAST IRON FLAP GATE

FOR: TRUMBULL INDUSTRIES INC.
400 DIETZ ROAD NE
P.O. Box 30
P.P. WARREN, OH 44482-0030

PO: 09063734

REF: STAINLESS STEEL/CAST IRON FLAP GATES
CONTRACT No. 1660
IMPROVEMENTS AT VARIES LOCATIONS
PITTSBURG, PA

ENG:

REV. NO.	DATE	BY
REV. NO.	DATE	BY
JOB NO.	A28555	
QUOTE NO.	WQ17-A-28555	
QUOTE ITEM NO.	4	
SCALE	NTS	
DRAWING NO.	RA-17-0386	
PROJECT MANAGER	FRANK SOTO	
DRAWN BY	CHK'D BY	ENG BY
AMW	REM	AMW
SHEET	1 OF 1	
DATE	JUNE 28, 2017	

Waterman
INDUSTRIES



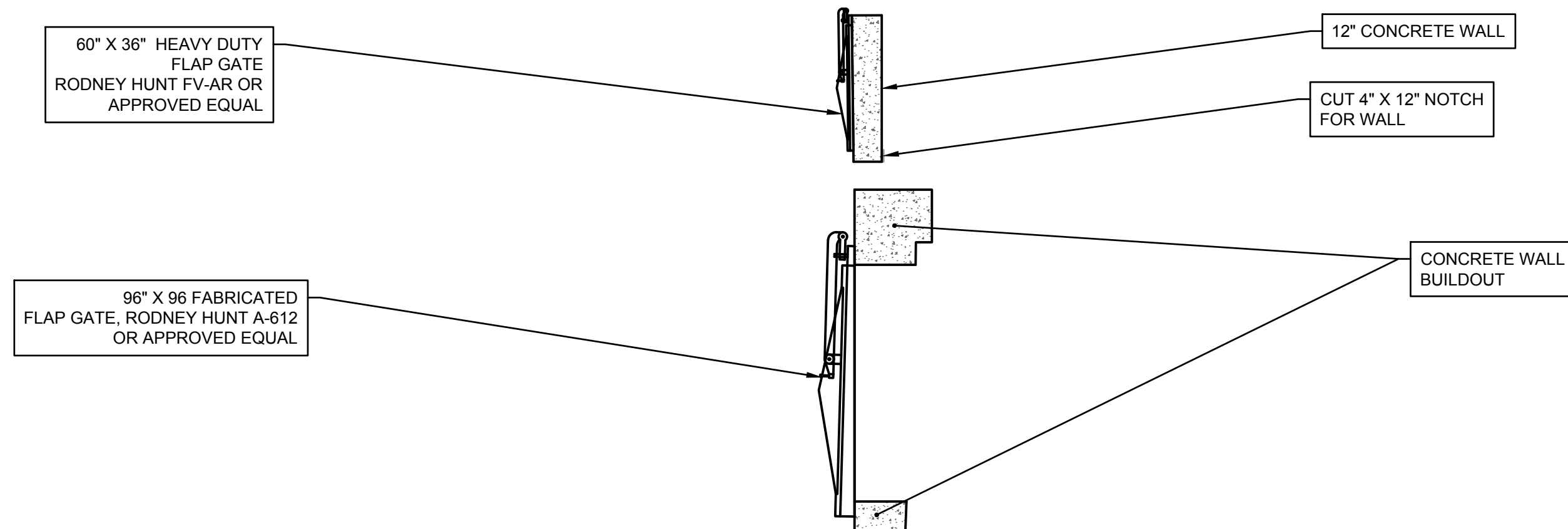
B.2 A-60 DRAWINGS AND PHOTOS
(7 pages)

1. ROUGHEN ALL AREAS WHERE NEW CONCRETE IS TO BE APPLIED, AIR BLAST ALL AREAS WITH OIL-FREE COMPRESSED AIR TO PROTECT AGAINST ANY CONTAMINANT DETRIMENTAL TO THE BOND OF THE NEW CONCRETE. APPLY EPOXY BONDING COMPOUND TO THE ROUGHENED AREA. WHILE THE EPOXY BONDING COMPOUND IS STILL TACKY, PLACE 3000PSI CEMENT CONCRETE. DO NOT PLACE CONCRETE IF THE COMPOUND IS NO LONGER TACKY OR IF THE COMPOUND HAS HARDENED. RECOAT ANY COMPOUND THAT IS NO LONGER TACKY. WIRE BRUSH OR SANDBLAST ANY COMPOUND THAT HAS HARDENED AND RECOAT AREA.
2. REPAIR ANY CONCRETE DAMAGED DURING THE OPERATIONS TO THE SATISFACTION OF THE REPRESENTATIVE AT NO COST TO THE OWNER.
3. PROVIDE MINIMUM 2" CONCRETE COVER OVER REINFORCING BARS.
4. PROVIDE HYDROPHYLIC WATERSTOP AT ALL JOINTS BETWEEN NEW AND EXISTING CONCRETE.
5. BUILD-OUTS SHALL HAVE A 7 DAY COMPRESSIVE STRENGTH OF 3,000 PSI. GATES ARE NOT ALLOWED TO BE HUNG/INSTALLED IF THE COMPRESSIVE STRENGTH IS LESS THAN 3,000 PSI.

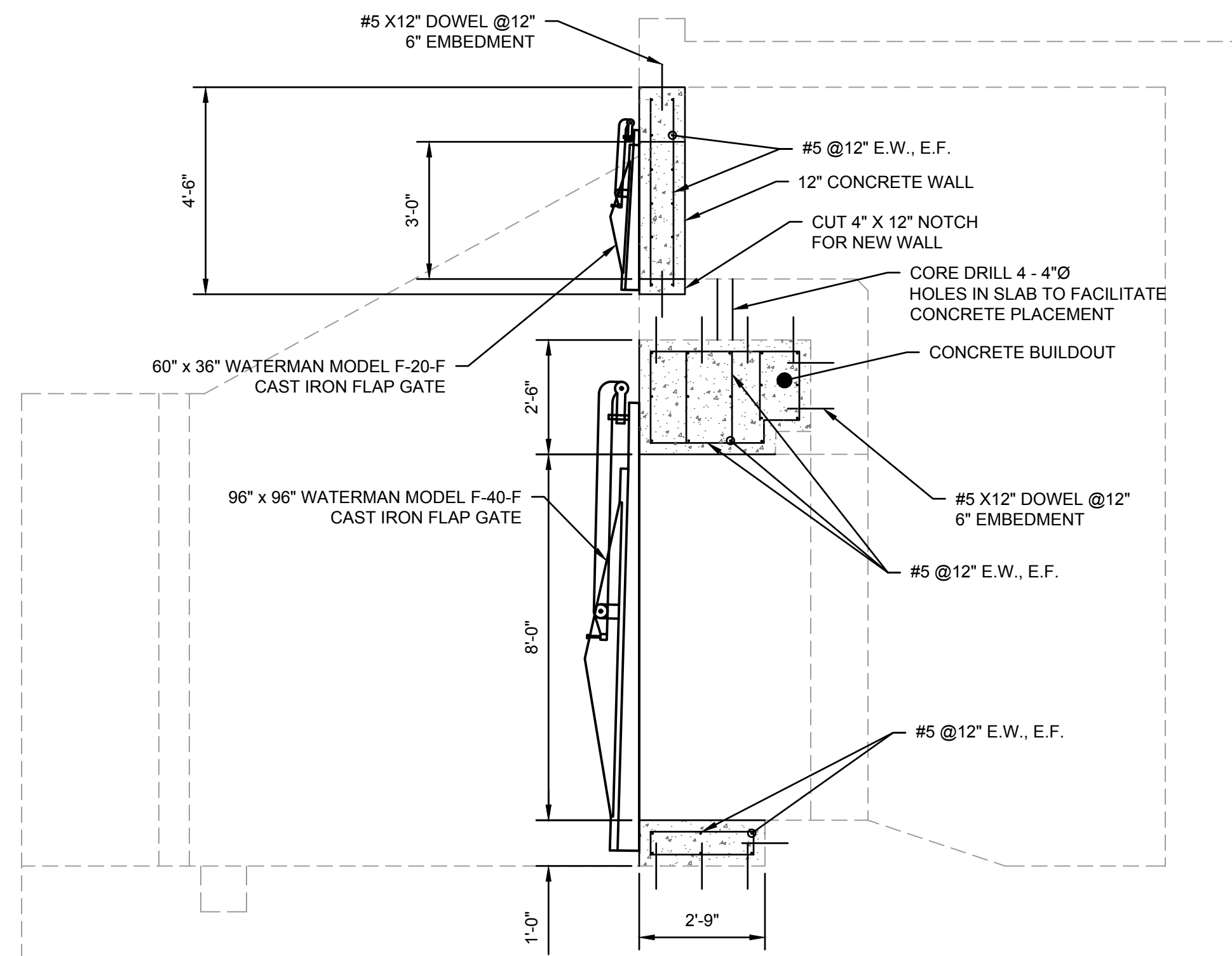
1. CONTRACT 47, SHEETS 30 & 31 DATED 3-31-1954

1. SUBMITTAL NO SDS -22 REINFORCING STEEL
2. SUBMITTAL NO SDS -23 BENDING DIAGRAMS
3. SUBMITTAL NO SDS -25 CONCRETE BONDING AGENTS
4. SUBMITTAL NO SDS -28 CIP CONCRETE MIX DESIGN
5. SUBMITTAL NO SDS -31 CONCRETE CURING COMPOUND
6. SUBMITTAL NO SDS -41 A-60 LOWER GATE
7. SUBMITTAL NO SDS -50 HEAVY DUTY FLAP GATES A-31, A-41, A-68, A-60u & M-45
8. SUBMITTAL NO SDS -55 HEAVY DUTY FLAP GATES

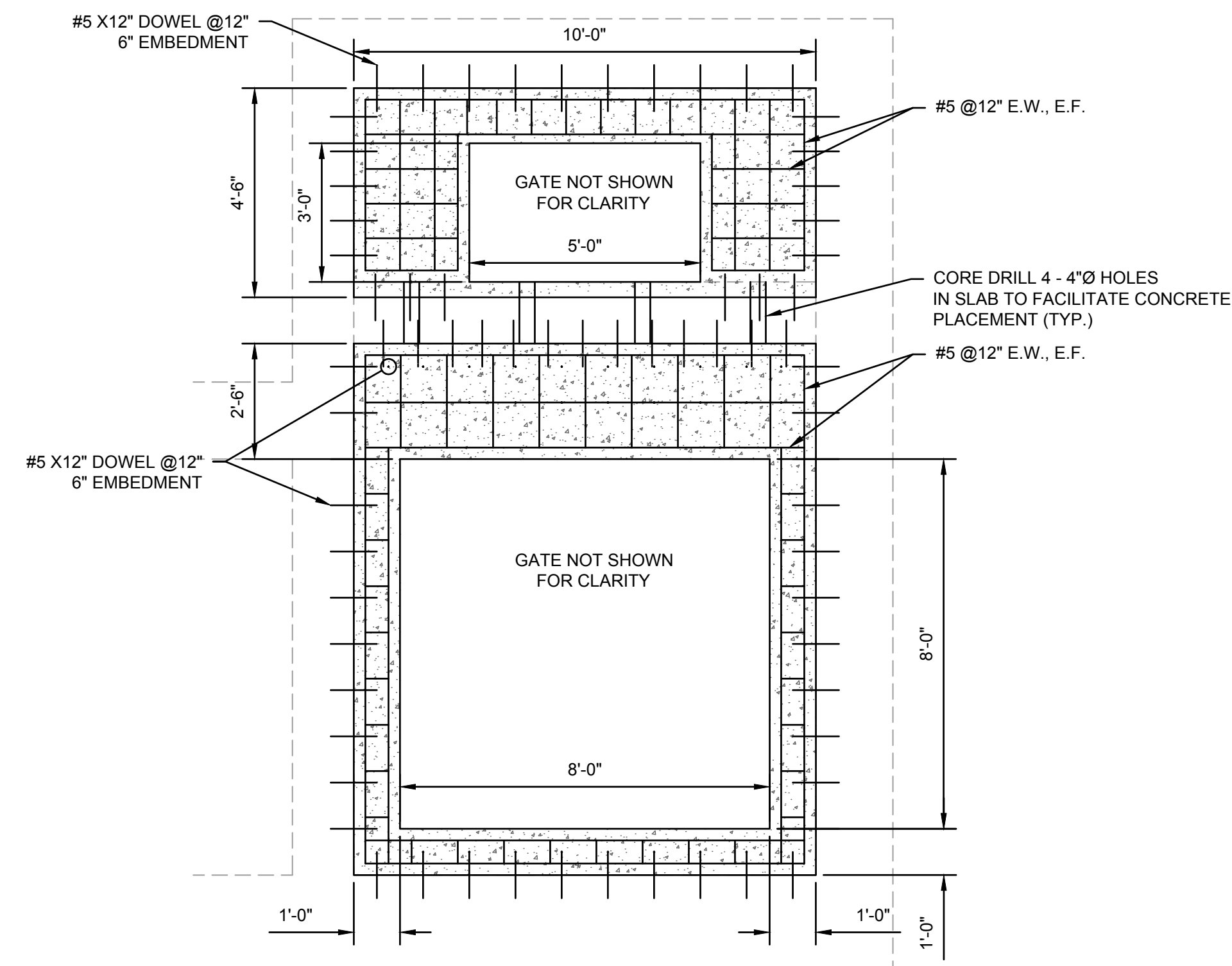
NOTE: SEE TYPICAL HEAVY DUTY
GATE DETAIL ON SHEET 3 FOR
MOUNTING DETAILS



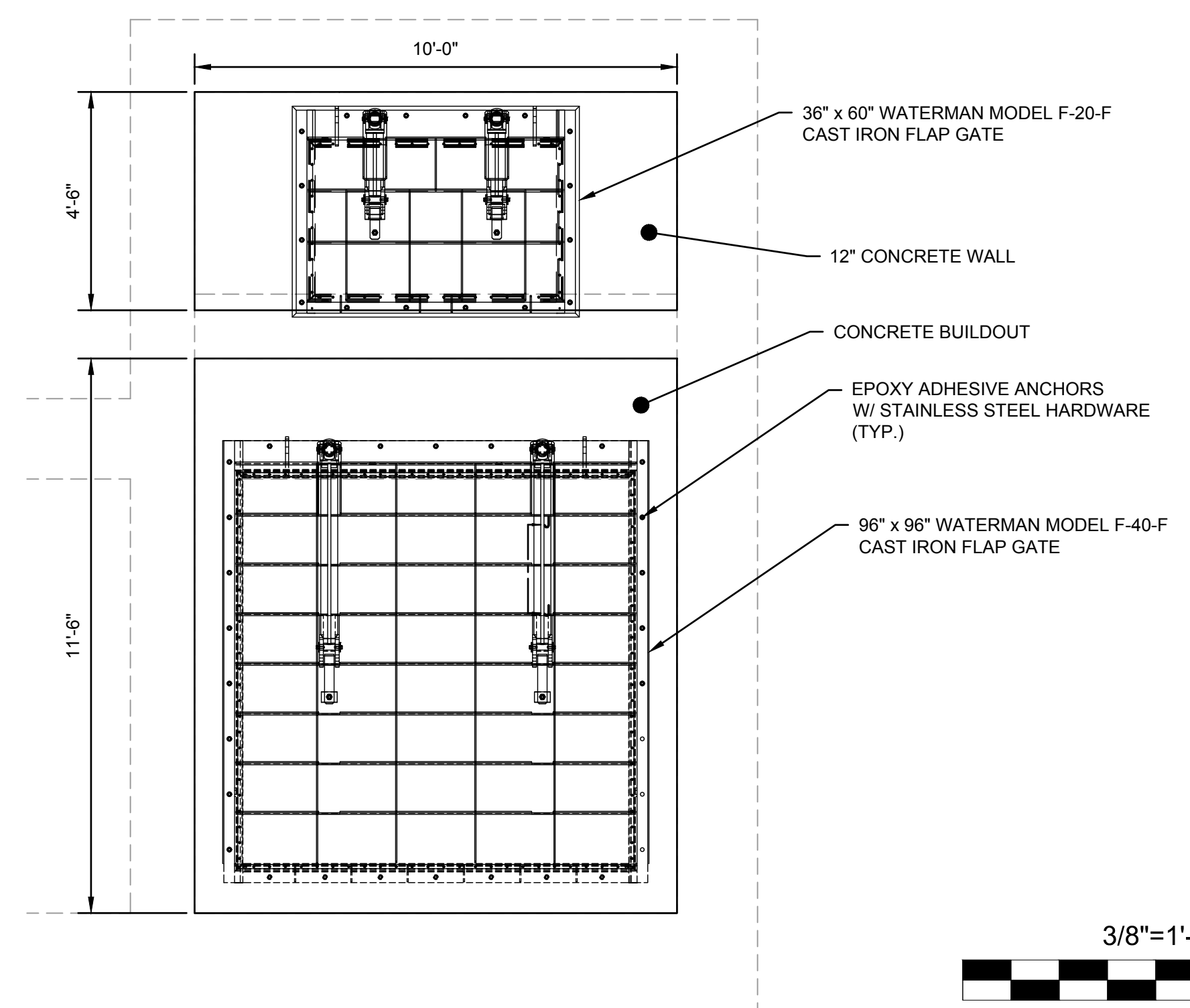
1. DIVERSION STRUCTURE BACKGROUND AND INFORMATION SHOWN BASED ON RECORD DRAWINGS - ALCOSAN CONTRACT 47 SHEET 30 OF 50 ALLEGHENY RIVER, OHIO RIVER TO MILLVALE, DIVERSION STRUCTURE ON SPRING GARDEN AVENUE SEWER, PART 1 DATED MARCH 31, 1954 - AND DO NOT NECESSARILY REFLECT EXISTING CONDITIONS. CONTRACTOR SHALL FIELD VERIFY ALL MEASUREMENTS AND REVIEW SITE FOR ANY AND ALL OBSTACLES PRIOR TO ORDERING EQUIPMENT, MATERIAL AND APPURTENANCES.
2. DRAWING REFERENCES DISPLAYED ON RECORD DRAWING BACKGROUND IMAGES (SECTION CALLOUTS, DETAIL CALLOUTS, ETC.) ARE NOT APPLICABLE TO THIS PLAN SET. DRAWING REFERENCES FOR THE CURRENT PLAN SET ONLY SHALL BE UTILIZED.
3. EXISTING EQUIPMENT, PIPING, FITTINGS, AND APPURTENANCES SHALL BE DEMOLISHED ACCORDING TO PLANS AND SPECIFICATIONS.
4. ALL WALL PENETRATIONS RELATED TO DEMOLITION SHALL BE SEALED WATERTIGHT W/ NON-SHRINK GROUT.
5. ALL DEMOLISHED MATERIAL BECOMES THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE PROJECT MANUAL.
6. CONTRACTOR TO PROVIDE FOR ALL DEWATERING MEASURES NECESSARY FOR COMPLETION OF THE WORK. THIS SHALL INCLUDE DRIVING SHEET PILING OR OTHER APPROVED DEWATERING METHODS.
7. CONTRACTOR SHALL CLEAN OUT ALL DEBRIS IN FRONT OF AND BEHIND GATE.



SCALE: 3/8"=1'-0"

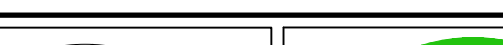


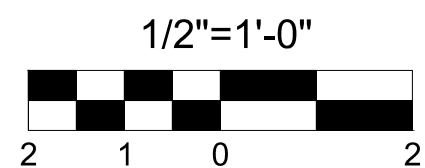
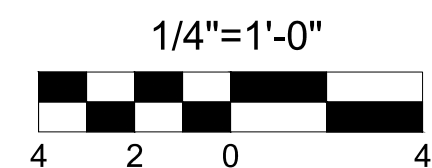
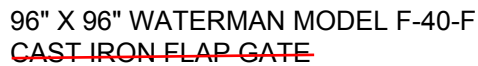
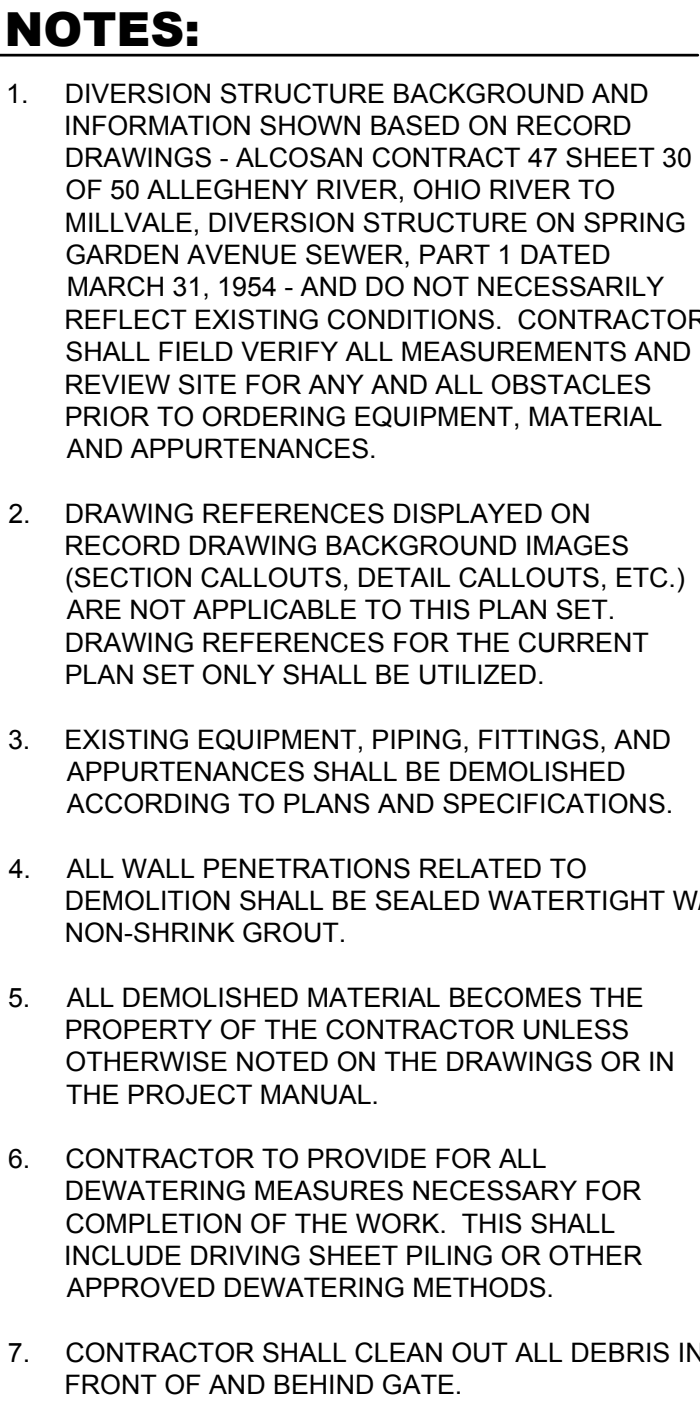
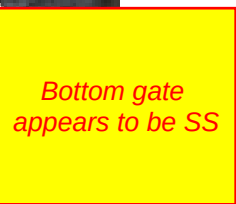
SCALE: 3/8"=1'-0"



SCALE: 3/8"=1'-0"

RECORD DRAWING

Designed by:	REVISION				ISSUED FOR BIDS	Prepared By ms consultants inc. engineers * architects * planners			ARLETTA SCOTT WILLIAMS EXECUTIVE DIRECTOR, ALCOSAN 3300 PREBLE AVE. PITTSBURGH, PENNSYLVANIA PITTSBURGH, PA 15233 (412) 766 - 4810	ALLEGHENY COUNTY SANITARY AUTHORITY REGIONAL CONVEYANCE SYSTEM 2020 FLAP GATE REPLACEMENT PROJECT AT VARIOUS LOCATIONS SHEET - 015 DIVERSION STRUCTURE A-60 SECTIONS	Contract:
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Drawn by:	1										CAD File Name:
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Checked by:											Date:
C JORDAN											01/29/2021
						Sheet:					
						15 of 34					

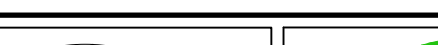
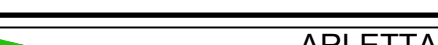


ALCOSAN DRAWING REFERENCES:
1. CONTRACT 47, SHEETS 30 & 31 DATED 3-31-1954

SHOP DRAWING REFERENCES:

1. SUBMITTAL NO. SDS - 22 REINFORCING STEEL
2. SUBMITTAL NO. SDS - 23 BENDING DIAGRAMS
3. SUBMITTAL NO. SDS - 25 CONCRETE BONDING AGENTS
4. SUBMITTAL NO. SDS - 28 CIP CONCRETE MIX DESIGN
5. SUBMITTAL NO. SDS - 31 CONCRETE CHANG COMPOUND
6. SUBMITTAL NO. SDS - 41 A-60 LOWER GATE
7. SUBMITTAL NO. SDS - 50 HEAVY DUTY FLAP GATES A-31, A-41, A-68, A-60u & M-45
8. SUBMITTAL NO. SDS - 55 HEAVY DUTY FLAP GATES

RECORD DRAWING

Designed by:	REVISION				ISSUED FOR BIDS	Prepared By ms consultants inc. engineers * architects * planners			ARLETTA SCOTT WILLIAMS EXECUTIVE DIRECTOR, ALCOSAN 3300 PREBLE AVE. PITTSBURGH, PENNSYLVANIA PITTSBURGH, PA 15233 (412) 766 - 4810	ALLEGHENY COUNTY SANITARY AUTHORITY REGIONAL CONVEYANCE SYSTEM 2020 FLAP GATE REPLACEMENT PROJECT AT VARIOUS LOCATIONS SHEET - 016 DIVERSION STRUCTURE A-60 SECTIONS	Contract:
J LESON	REV No.	DATE	DESCRIPTION	APPV							1724
Drawn by:	1										CAD File Name:
J RAMPOLLO											MHPS-A-60-006.DWG
Checked by:											Date:
											01/29/2021
C JORDAN											Sheet:
					16 of 34						

STRUCTURAL CALCULATIONS FOR:

WATERMAN VALVE, LLC

ACCEPTED
FOR
A-60 LOWER

25500 Road 204
Exeter, CA 93221

Waterman Job # A33686

RB-21 -0496 - 96 x 96 SSF-43-F Flap Gate
Allegheny County Sanitary Authority
Allegheny, PA

BROOKS-RANSOM ASSOCIATES

STRUCTURAL ENGINEERS CIVIL ENGINEERS
WWW.BROOKSRANSOM.COM

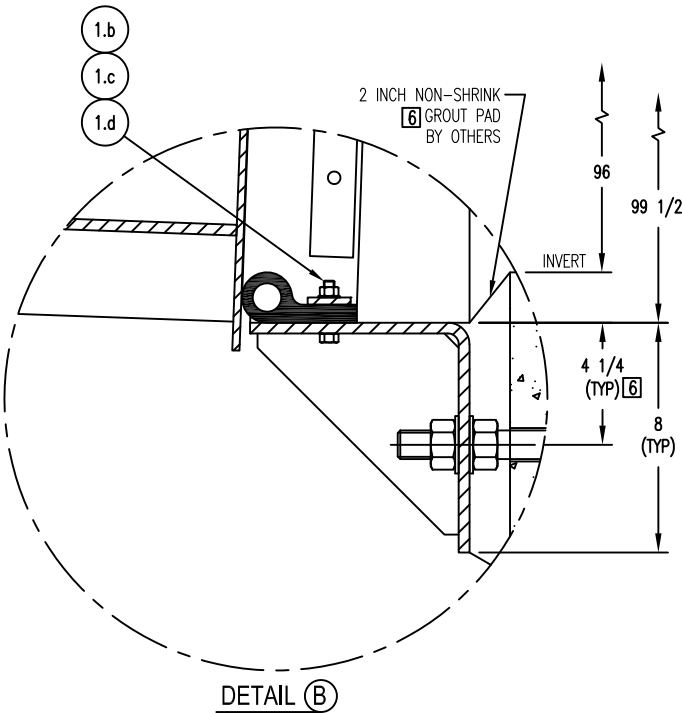
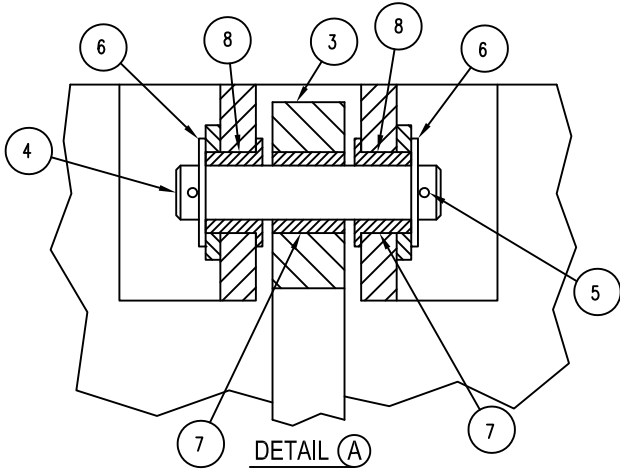
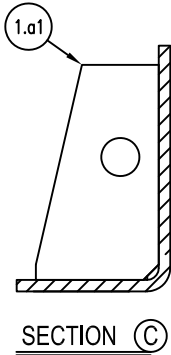
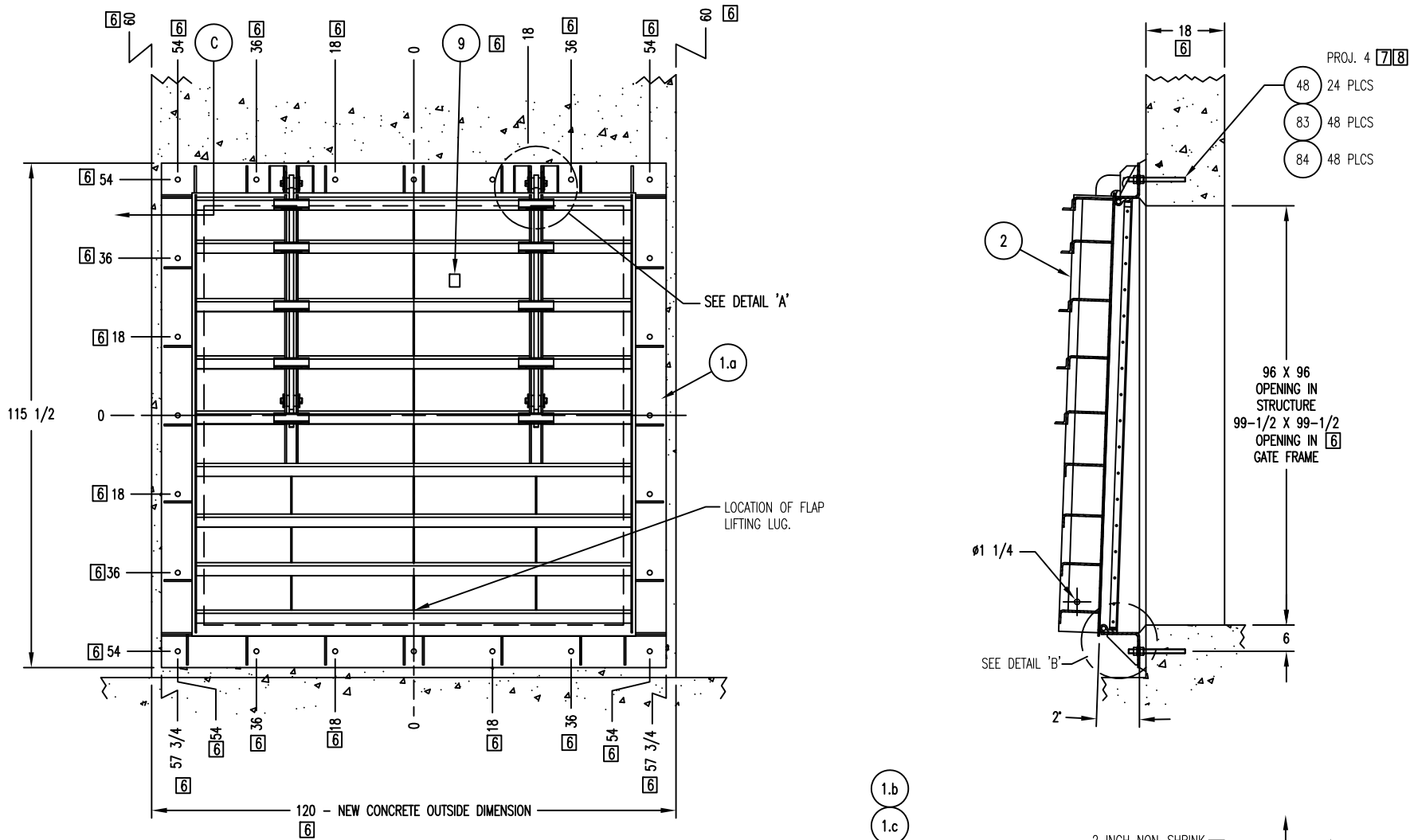


7415 NORTH PALM, SUITE 100
FRESNO, CALIFORNIA 93711
OFFICE: (559)449-8444
FAX: (559) 449-8404

JOB#22115
2021-05-13



Reviewed for conformance with
generally accepted
engineering practice and



MATERIAL KEY		FINISH KEY		PAINT KEY	
9A. STN STL SHAPES:ASTM A-276 TY.304/304L D/C 9C. STN STL PLATE:ASTM A-240 TY.304/304L D/C 13. NEOPRENE RUBBER:ASTM D-2000 15A. STN STL HDW:ASTM F-593C/D & 594 GRP 1 (TY 304) 25. PERMA-LUBE BRONZE		1. AS CAST 2. MILL 3. MACHINED 4. GALVANIZE-ASTM A-123 5. GALVANIZE-ASTM A-153 6. SEE PAINT KEY			
ITEM DESCRIPTION	MATERIAL KEY	FINISH KEY	PART NO. OR SIZE (FOR WATERMAN USE ONLY)	QTY/ GATE	TOTAL QTY
1. FRAME ASSEMBLY a) FRAME WELDMENT (WT: 800 LBS) 1) FRAME LIFTING LUG b) J-BULB SEAL c) RETAINER BAR d) HEX HEAD BOLT, NUT & WASHER 2. COVER WELDMENT (WT: 2675 LBS) 3. HINGE ARM (1 INCH PLATE) 4. HINGE PIN 5. COTTER PIN 6. FLAT WASHER 7. INNER BUSHING 8. OUTER BUSHING 9. IDENTIFICATION TAG	- 9C,15A 9C 13 9A 15A 9A,9C 9C 9A SS 316 SS 304 25 25 STN. STL.	- 2 2 2 2,3 2 2 2 2,3 2,3 2 2,3 2,3	- 3/8 THK. (SEE BUILD PLANS) 1/2 THK. (SEE BUILD PLANS) EXTRUSION REF. 100158-1 1-1/2 X 1/4 FLAT BAR 3/8 NC 3/8 THK. (SEE BUILD PLANS) 1 THK. (SEE BUILD PLANS) 1-1/4 DIA. (SEE BUILD PLANS) 3/16 DIA. X 3 LG. McM# 98355A270 1-1/4 DIA. McM# 6391K295 McM# 6338K596 WATERMAN STANDARD	1 1 2 A/R 4 A/R 1 2 4 8 8 4 8 1	1
48. ALL THREADED STUD 8 83. HEX NUT 84. WASHER	15A 15A SS 304	2,3 2 2	1 NC x 13 LG 1 NC 1 DIA.	24 48 48	24 48 48
NOTES: UNLESS OTHERWISE SPECIFIED. 1. (GATE CAPACITY) MAXIMUM SEATING HEAD = 25 FT.; MAXIMUM UNSEATING HEAD = 0.0 FT. 6 2. 3. 4. 5. 6. CONTRACTOR TO VERIFY OR SUPPLY. 7. DIMENSION INCLUDES GROUT PAD THICKNESS. 8. CONTRACTOR TO PROVIDE HILTI HIT-RE 500-V3 (WET OR DRY CONDITIONS), HILTI HY-200 (DRY CONDITIONS ONLY); OR EQUAL EPOXY FOR ANCHORS.					
(1) GATE(S) REQ'D @ DIVERSION STRUCTURE A-60 6					
REV.NO.	DATE	BY	JOB NO.	PROJECT MANAGER	
			A36686	DEVIN ALDRIDGE	
REV.NO.	DATE	BY	QUOTE NO.	DRAWN BY	CHK'D BY
			WQ21-A-36686A	REM	AA
REV.NO.	DATE	BY	QUOTE ITEM NO.	SHEET	
			1	1 OF 1	
REV.NO.	DATE	BY	SCALE	DATE	
			NTS	DEC. 17, 2021	
REV.NO.	DATE (REVISION IN PROGRESS)	BY	DRAWING NO.		
	FEB. 28, 2022 REM	DA	RB-21-0499		

INSTALLATION NOTES:
1. CONTRACTOR SHALL REVIEW THE SUBMITTAL DRAWING AND INSTALLATION INSTRUCTIONS PRIOR TO INSTALLING GATES AND APPURTENANCES.
2. GATES SHALL BE INSTALLED IN A TRUE VERTICAL PLANE, SQUARE AND PLUMB, WITH NO TWIST, CONVERGENCE, OR DIVERGENCE BETWEEN VERTICAL LEGS OF GUIDE FRAME ON FABRICATED GATES UNLESS OTHERWISE NOTED OR SPECIFIED.
3. THE CONTRACTOR SHALL FILL ANY VOID BETWEEN THE GUIDE FRAME AND THE STRUCTURE WITH NON-SHRINK GROUT (IF APPLICABLE) AND IN ACCORDANCE WITH THE GROUT MANUFACTURER'S RECOMMENDATIONS.
4. THE FRAME CROSS RAIL ON FABRICATED GATES SHALL BE ADJUSTED AS REQUIRED TO MAINTAIN CONSISTENT SEAL COMPRESSION ACROSS THE FULL WIDTH OF GATE.
5. WALL THIMBLES (IF APPLICABLE) TO BE SUPPORTED INTERNALLY BOTH VERTICALLY AND HORIZONTALLY PRIOR TO POURING CONCRETE AS REQUIRED.



25500 Road 204
Exeter, California 93221
Phone: (559) 562-4000
Email: www.watermanusa.com

96 x 96
WATERMAN MODEL
SSF-43-F FLAP GATE

FOR: TRUMBULL INDUSTRIES INC.
P.O. BOX 30
WARREN, OH 44482-0030
PO: 09097073
REF: 2020 FLAP GATE
REPLACEMENT PROJECT
PITTSBURG, PA
ENG: MS CONSULTANTS INC.

SSF-43 RECTANGULAR DRAINAGE FLAP GATES

FABRICATED STAINLESS STEEL

KEY FEATURES

- Fabricated Stainless Steel
- Automatic Operation
- Standard and Custom Sizes Available
- Seating Heads up to 30 feet
- Type 304, 304L, 316 and 316L Stainless Available
- Neoprene Seat for Minimum Leakage
- Flange or Thimble Mounting Available

GENERAL SPECIFICATIONS

(See Website for Latest Detailed Written Specifications)

GENERAL:

The flap gate shall be designed to allow free outflow and prevent backflow for maximum seating heads of up to 30 feet. Gates shall be Waterman model SSF-43 or equal.

CONSTRUCTION:

The frame shall be fabricated stainless steel of flatback design, with seating surface inclined from vertical at a minimum of 2.5-degrees to insure positive closure. For flatback gates mounted to flanges or thimbles, the gate flange shall be machined and drilled to match.

The cover shall be fabricated stainless steel with reinforcing ribs, designed to withstand the seating head specified. A lifting eye shall be provided for manual lifting of the cover.

Seating surfaces for frame and cover shall be neoprene "J seal" with stainless steel retainer.

The gate shall be provided with a double-pivoted hinge linkage so designed to permit complete seating, full opening and with stops or other arrangement to keep the cover from rotating sufficiently to become wedged in the open position. The hinge links shall be bronze brushed stainless steel.

All assembly hardware shall be stainless steel.

MATERIALS AVAILABLE:

Frame and Cover: Stainless Steel per ASTM A-276, ASTM A-240, type 304, type 304L, type 316, type 316L

Pivot Lug: Stainless Steel per ASTM A-276, ASTM A-240, type 304, type 304L, type 316, type 316L

Hinge Link: Stainless Steel per ASTM A-276, ASTM A-240, type 304, type 304L, type 316, type 316L

Bushings and Washers: Commercial Bronze or Stainless Steel

Assembly Hardware and Pins: Stainless Steel per ASTM A-276, ASTM F-593, type 304, type 316

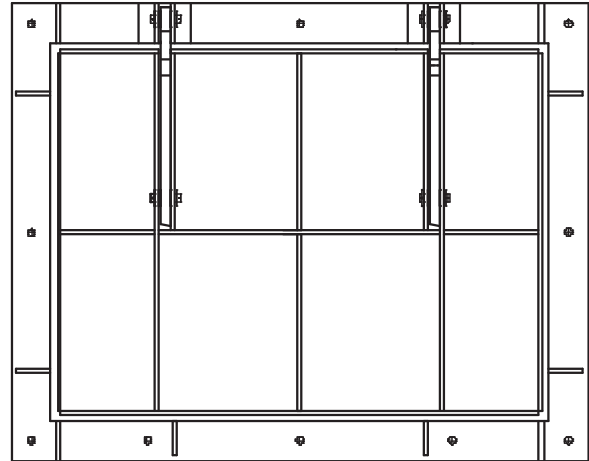
RECOMMENDED MAXIMUM SEATING HEADS:

8" to 30" size: 30 feet of head

36" to 42" size: 20 feet of head

48" to 60" size: 15 feet of head

66" to 84" size: 10 feet of head



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