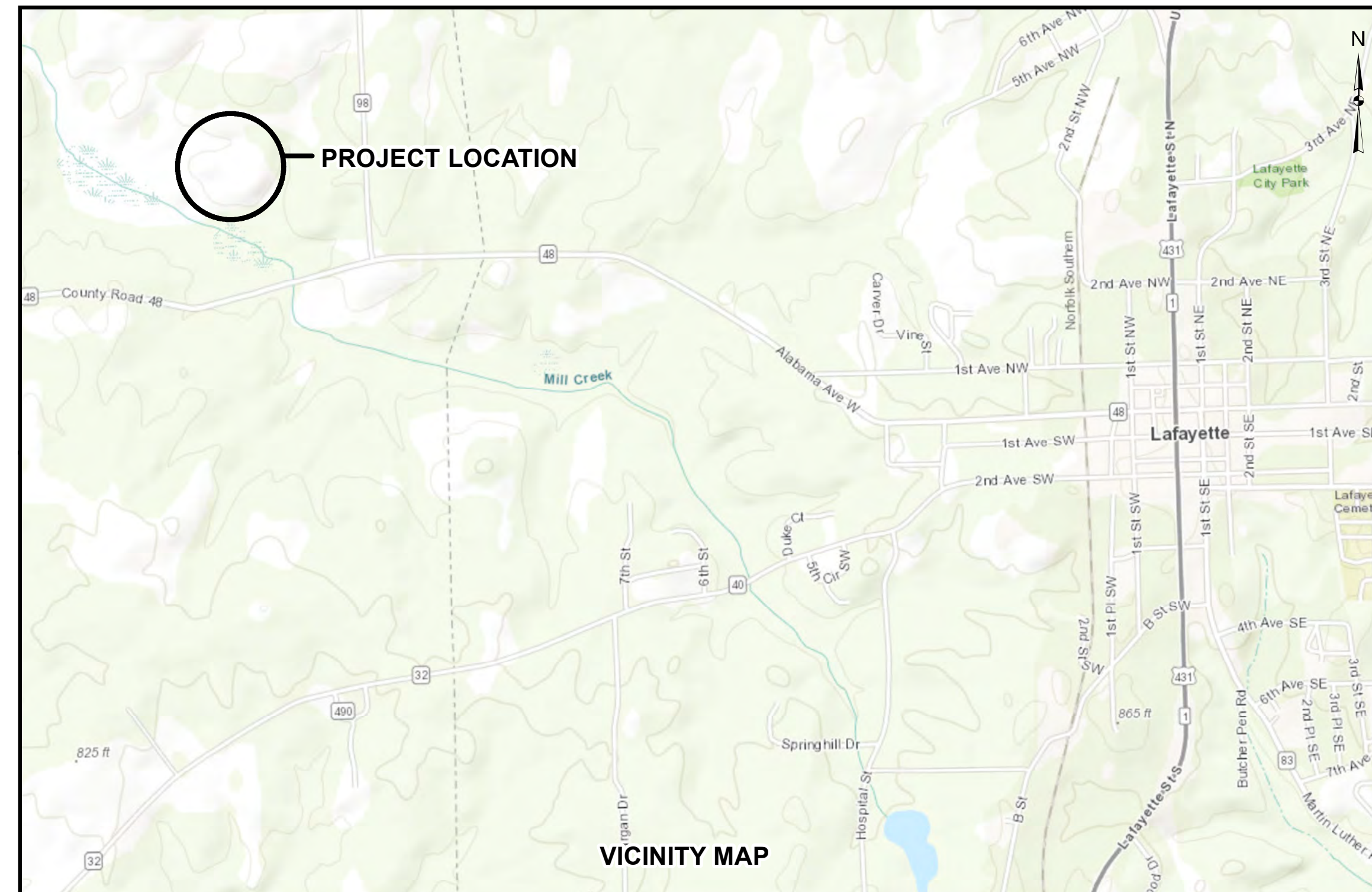


**THE CITY OF
LAFAYETTE, ALABAMA
WASTEWATER TREATMENT PLANT IMPROVEMENTS
CWSRF PROJECT NO. CSO10403-05
CONTRACT NO. I
CONTRACT NO. LF23-096**



2024



ENGINEER
UTILITY ENGINEERING CONSULTANTS, LLC.
130 SOUTHCREST DRIVE
SUITE 100
HOMEWOOD, ALABAMA 35209
PHONE : (205) 951-3838

STRUCTURES

	Unpaved Road or Driveway
	Paved Road or Driveway
	Paved Road with Gutter
	Proposed Bridge, Box Culvert, or Storm Drain with Headwall (Size and Type Structure Noted)
	Existing Bridge, Box Culvert, or Storm Drain (Size and Type Structure Noted)
	Walk Bridge
	Railroad Track Single
	Railroad Track Double
	Outdoor Advertising Sign
	Masonry Wall (Note Type)
	Mailbox (Noted M.B.)
	Clothes Lines and Poles (Noted)
	Well
	Levee or Earth Dam
	Wood Fence
	Hog Wire or Barbed Wire Fence
	Chain Link Fence
	Drop Inlet (Noted)
	Electric Light
	Gas Light
	Pipe in Place (Note Size and Type of Pipe)
	Traffic or Street Sign
	Outbuilding (Dimension to Scale)
	Air Conditioner, Heat Pump, Etc.
	Guardrail
	Pavement Replacement

NATURAL

	Trees (Draw dot to scale of tree)
	Hedges or Shrubbery
	Shrub
	Flower Bed, Garden, or Rock Garden (Noted)
	Lake or Pond
	Swamp, Marsh, Wetlands, Etc.
	Flowing Stream (Arrow indicates direction of flow)
	Dry Ditch or Stream
	Earth
	Rock

MISCELLANEOUS

	Interstate Highway
	United States Highway
	State Highway
	County Highway

SURVEY

	Center Line Pipe Location
	Land Tie (Center Line P.O.T. Sta., Angle to Center Line from Land Line, and Distance to Corner Noted)
	Right of Way (Type Noted-Acq'd, Req'd, Etc.)
	Permanent Easement
	Property Iron (Size and Type Noted)
	Property Line
	Section Corner or 1/4 Section Corner Iron (Size, Type, and Description Noted)
	1/4 or 1/4-1/4 Section Line
	Section Line
	Right of Way Monuments (Noted for Existing)
	Construction Limits (Temporary Easement)
	Horizontal Curve (P.C., P.I., P.T. Stations, Length, Tangent, Radius, Central Angle, and Degree of Curve Noted)
	Vertical Curve (V.P.C., V.P.I., V.P.T. Stations, Elevation of V.P.I., Length, and % Grade on Tangents)
	City and Town Limits (Noted)
	Original Lot Lines
	Land Hooks
	Denotes Tract No. For R.O.W. Acquisition Purposes Only

SHEET INDEX

SHEET NO.	REFERENCE NO.	DESCRIPTION
1.	COVER.DGN	COVER SHEET
2.	SYMBOL.DGN	STANDARD SYMBOL SHEET
3.	DEMO.DGN	DEMO BAR SCREEN
4.	MECH.DGN	PUMP MECH. PLAN AND SECTIONS
5.	STRUC.DGN	PUMP STATION STRUCTURAL
6.	ELEC2.DGN	PUMP STATION ELECTRICAL
7.	ELEC.DGN	BAR SCREEN ELECTRICAL
8.	DETAIL.DGN	MISCELLANEOUS DETAILS

TYPICAL LINE DETAILS

NEW	
EXISTING	
FUTURE	

ABBREVIATIONS

Acquired	Acq'd	Linear Feet	L.F.
Acre	Ac.	Point on Curve	P.O.C.
Bench Mark	B.M.	Point of Curve	P.C.
Bituminous Coated		Point of Intersection	P.I.
Corrugated Metal Pipe	B.C.C.M.P.	Point of Tangent	P.T.
Brick Residence	Br. Res.	Point on Tangent	P.O.T.
Building	Bldg.	Property Line	R
Carrying Capacity	C.C.	Railroad	R.R.
Cast Iron Pipe	C.I.P.	Range	R.
Center Line	CL	Right of Way	R.O.W.
Concrete	Conc.	Required	Req'd.
Corner	Cor.	Reinforced Concrete Pipe	R.C.P.
Cubic Yard	C.Y.	Sanitary Sewer	San. Sew.
Curb and Gutter	C&G	Section	Sec.
Design Flow	D.F.	Shoulder	Shldr.
Distance	Dist.	Side Drain	S.D.
Double	Dbl.	Square Yard	S.Y.
Drainage Area	D.A.	Station	Sta.
Ductile Iron	D.I.	Storm Sewer	Stm. Sew.
Ductile Iron Pipe	D.I.P.	Street	St.
Easement	Esmt.	Tangent to Curve	Tan. to C.
Elevation	El.	Township	T.
Flow Line	F.L.	Valley Gutter	V.G.
Frame Residence	Fr. Res.	Vertical	Vert.
Gallons Per Minute	G.P.M.	Vertical Point of Curve	V.P.C.
Gas Meter	G.M.	Vertical Point of Intersection	V.P.I.
Gas Valve	G.V.	Vertical Point of Tangent	V.P.T.
Headwall	Hdwl.	Vitrified Clay Pipe	V.C.P.
High Water	H.W.	Water Meter	W.M.
Horizontal	Horiz.	Water Valve	W.V.
Junction	Jct.	Wing Wall	W.W.
Junction Box	Jct. Box	Yard	Yd.

PIPE FITTING SYMBOLS

(A)	90° ELBOW	(L)	SIDE OUTLET TEE
(B)	90° BASE ELBOW	(M)	WYE
(C)	90° LONG RADIUS ELBOW	(N)	CONCENTRIC REDUCER
(D)	90° REDUCING ELBOW	(O)	ECCENTRIC REDUCER
(E)	45° ELBOW	(P)	BLIND FLANGE
(F)	22 1/2° ELBOW	(Q)	MECHANICAL JOINT PLUG
(G)	1 1/4° ELBOW	(R)	VICTAULIC COUPLING
(H)	TEE	(S)	MERCER EXPANSION JOINT
(J)	CROSS	(T)	FLANGED COUPLING ADAPTER w/ THRUST TIES
(K)	90° SIDE OUTLET ELBOW	(U)	GROOVED END IPS PIPE
		(V)	RETAINER GLANDS
		(W)	FLARE 90° ELBOW
		(X)	FLARE CASTINGS
		(WF)	WALL PIPE
		(FP)	FLOOR PIPE
		(WS)	WALL SLEEVE
		(FS)	FLOOR SLEEVE

UTILITIES

	Proposed Sanitary Sewer Manhole
	Existing Sanitary Sewer Manhole
	Existing Sanitary Sewer Gravity Line (Tick Upstream Side)
	Existing Sanitary Sewer Force Line (Arrow Indicates Flow)
	Utility Manhole (Note Type in Circle-P, T, Etc.)
	Power Junction Box
	Power Pole
	Light Pole (Note Type)
	High Voltage Transmission Pole or Tower
	Underground Power Conduit
	Overhead Power Lines
	Telephone Junction Box
	Telephone Pole
	Underground Telephone Conduit
	Overhead Telephone Lines
	Combination Pole
	Overhead Telephone and Power Lines
	Guy Pole
	Utility Pole Anchor
	Gas Line Marker (Noted)
	Gas Meter
	Gas Line (Note Diameter of Pipe)
	Valve (Note Gas or Water)
	Water Line (Note Diameter of Pipe)
	Water Meter
	Fire Hydrant
	Air Release Valve
	House Service Connections
	Storm Sewer

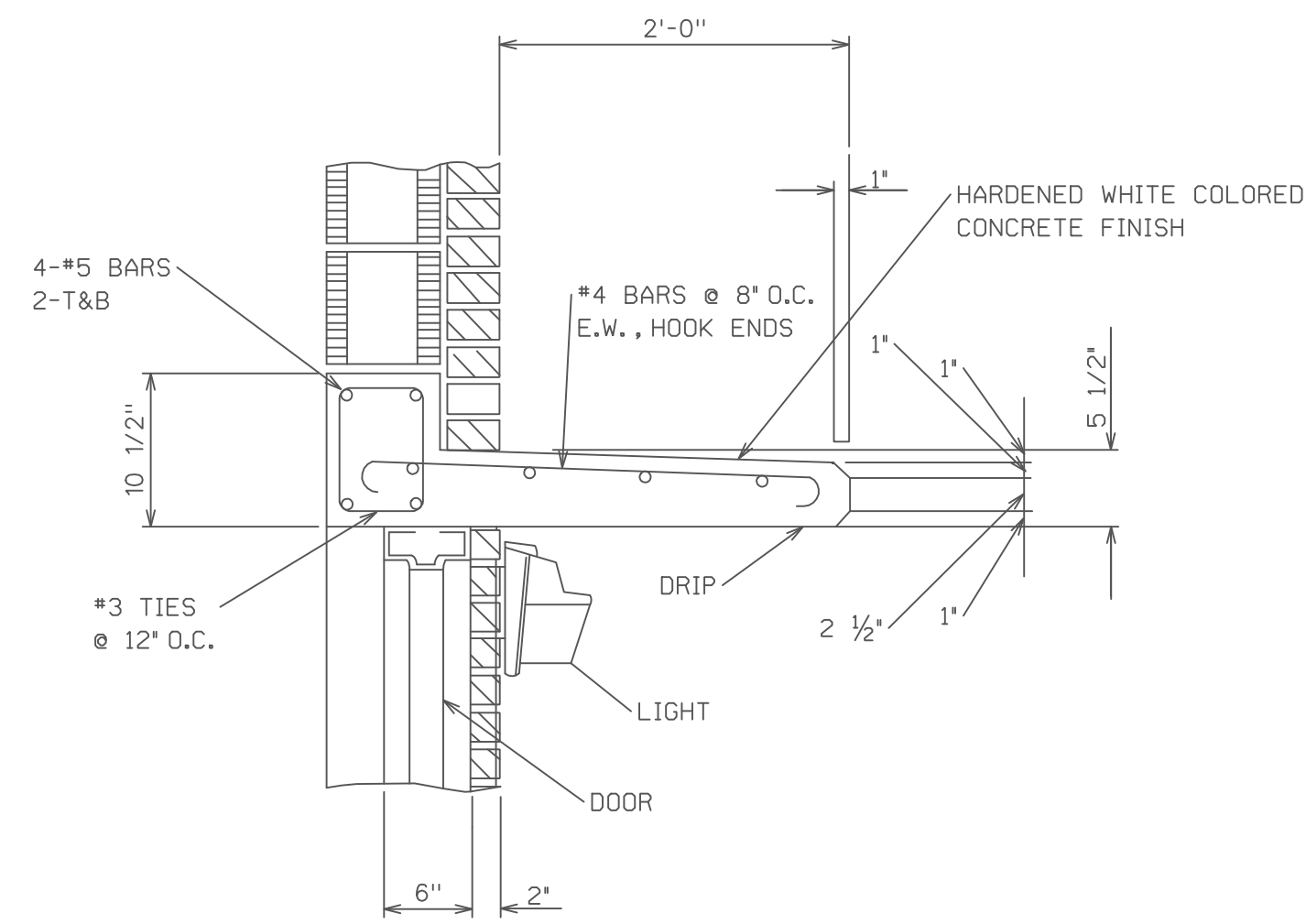
CONTRACTOR NOTE:

THE TYPE, SIZE, LOCATION AND DEPTH OF ALL PUBLIC UTILITIES ARE SHOWN FROM AVAILABLE RECORDS. THE CONTRACTOR IS REQUIRED TO VERIFY LOCATIONS PRIOR TO CONSTRUCTION. LOCATIONS MAY BE ASCERTAINED BY CONTACTING ALABAMA LINE LOCATION CENTER @ 1-800-292-8525. THE LOCATIONS OF HOUSE SERVICES FOR UTILITIES ARE NOT SHOWN, UNLESS NOTED OTHERWISE

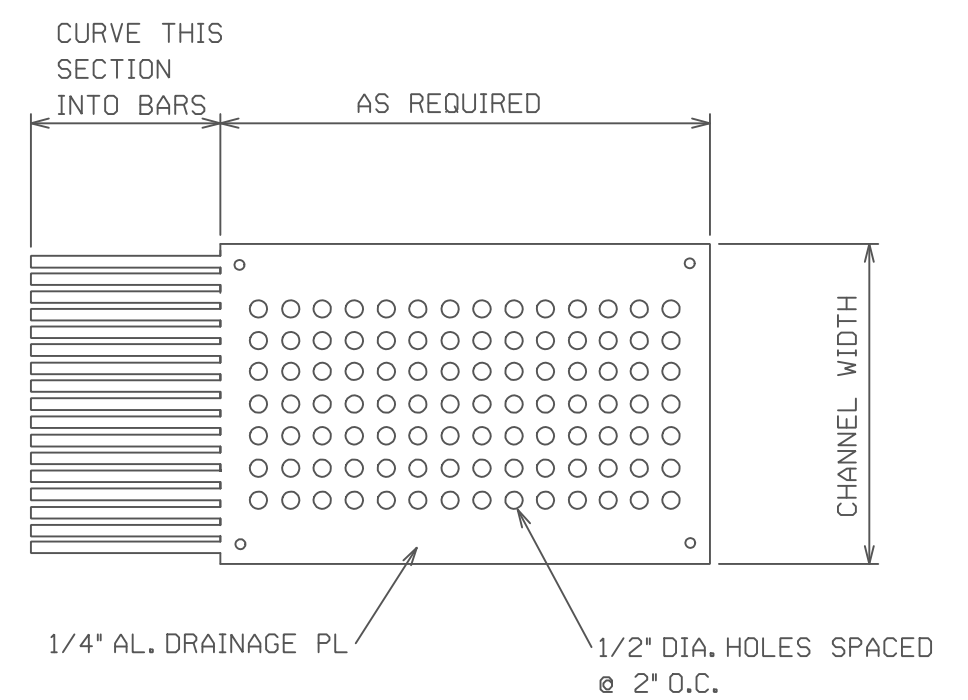


NO.	DATE	REMARKS	BY
REVISIONS			

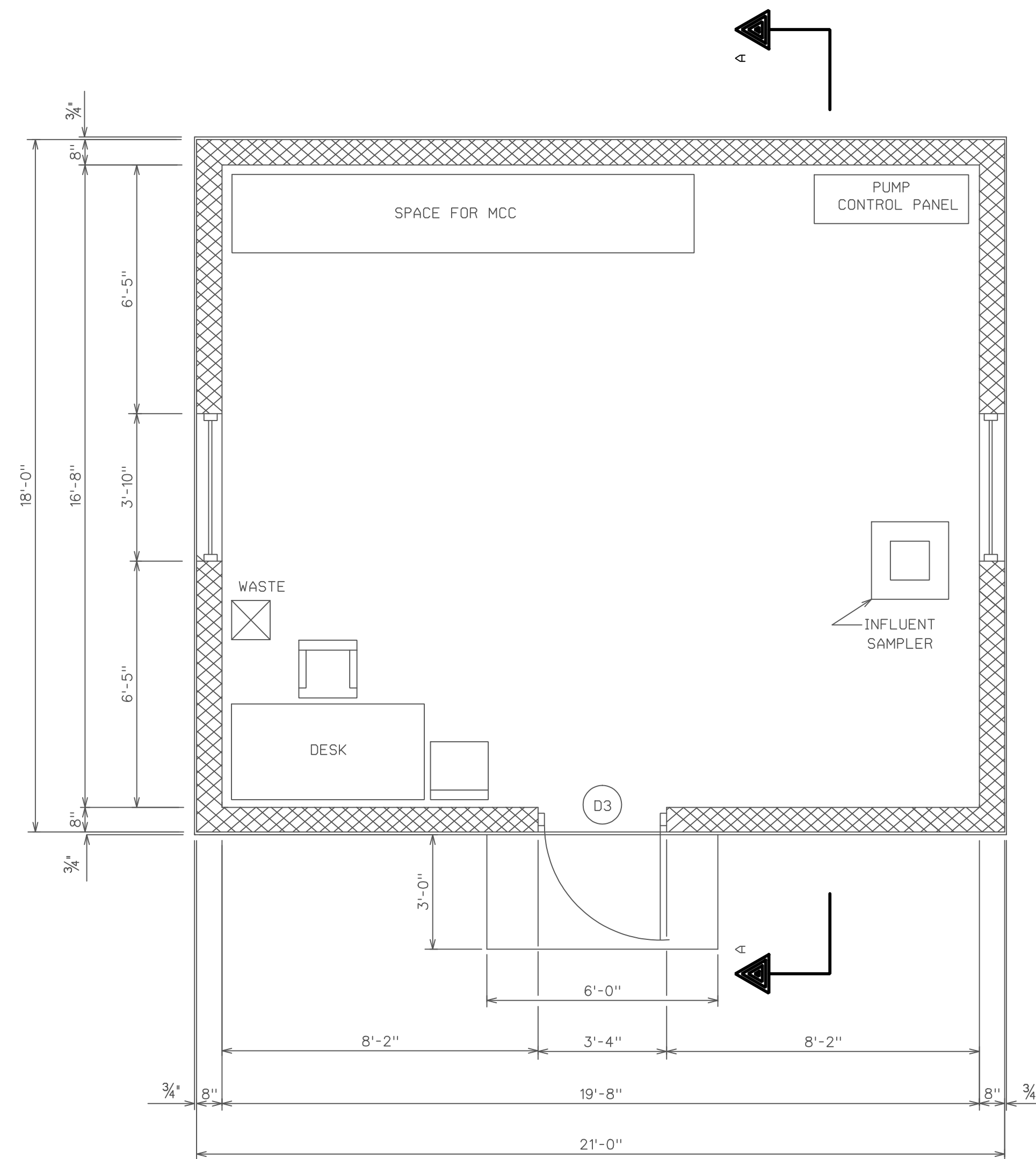
THE CITY OF LAFAYETTE, ALABAMA		Utility Engineering Consultants, LLC <small>100 SOUTHVIEW DRIVE SUITE 50 HOMESWOOD, ALABAMA 36880</small>	
DESIGNED DBB	DRAWN DWS	SCALE AS NOTED	DATE 10/31/2023
APPROVED <i>Dale B. Bechtel</i>		REFERENCE PS_SYMB01.dgn	JOB NO. LF23 096
SYMBOL SHEET		SHEET <u>2</u> OF <u>8</u>	



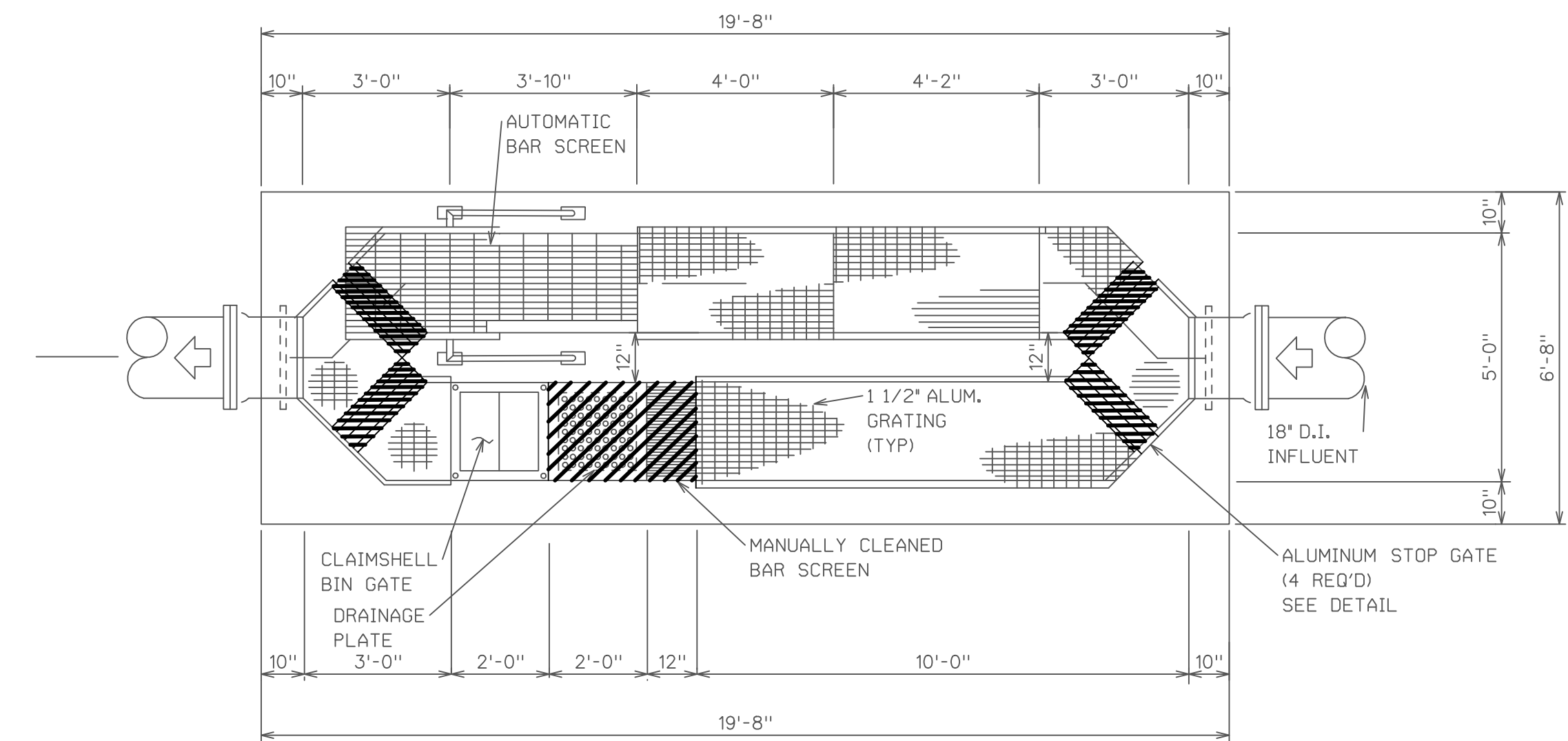
EXISTING CANOPY DETAIL
SCALE: 1" = 1'-0"



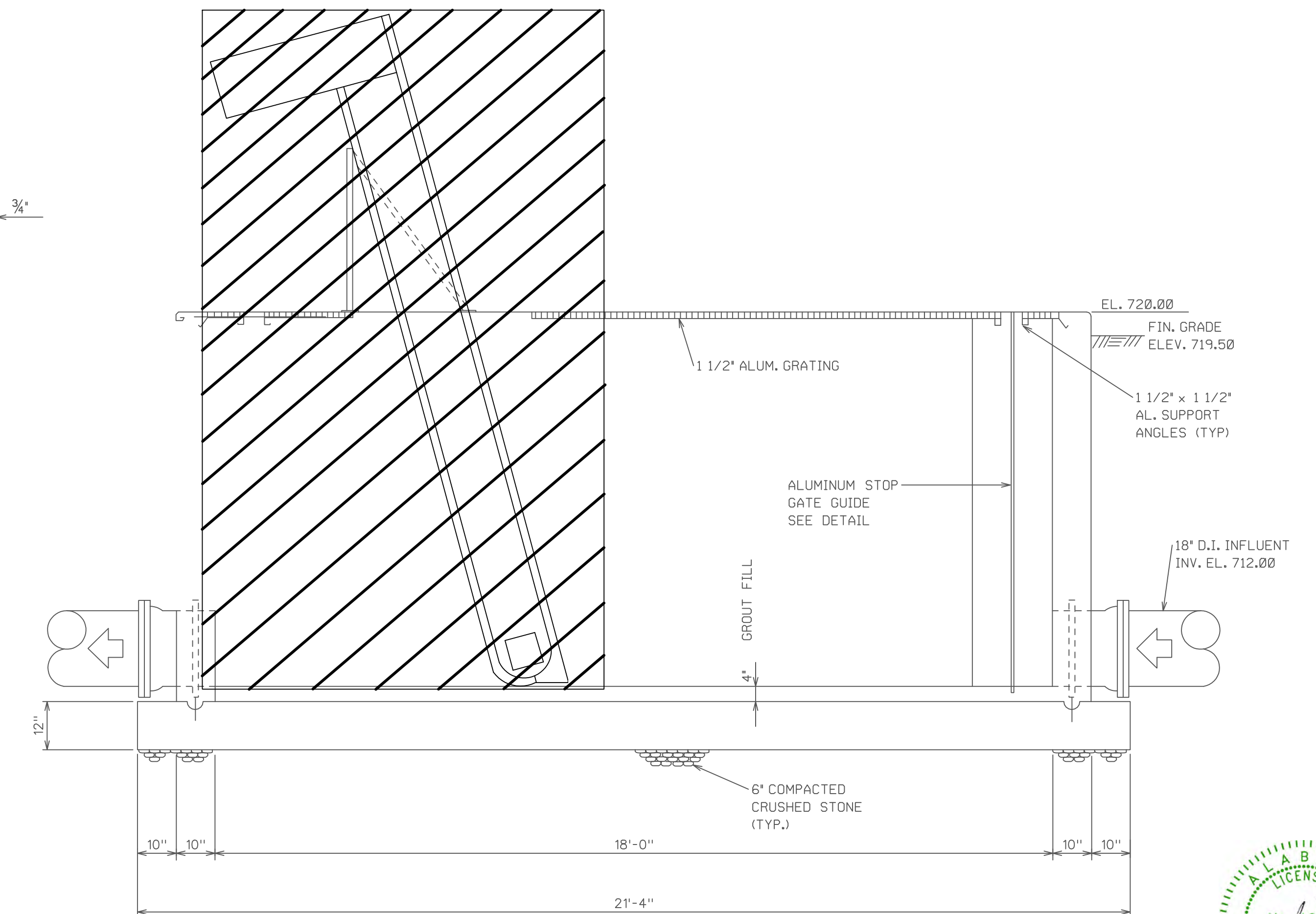
EXISTING DRAINAGE PLATE DETAIL
SCALE: 1" = 1'-0"



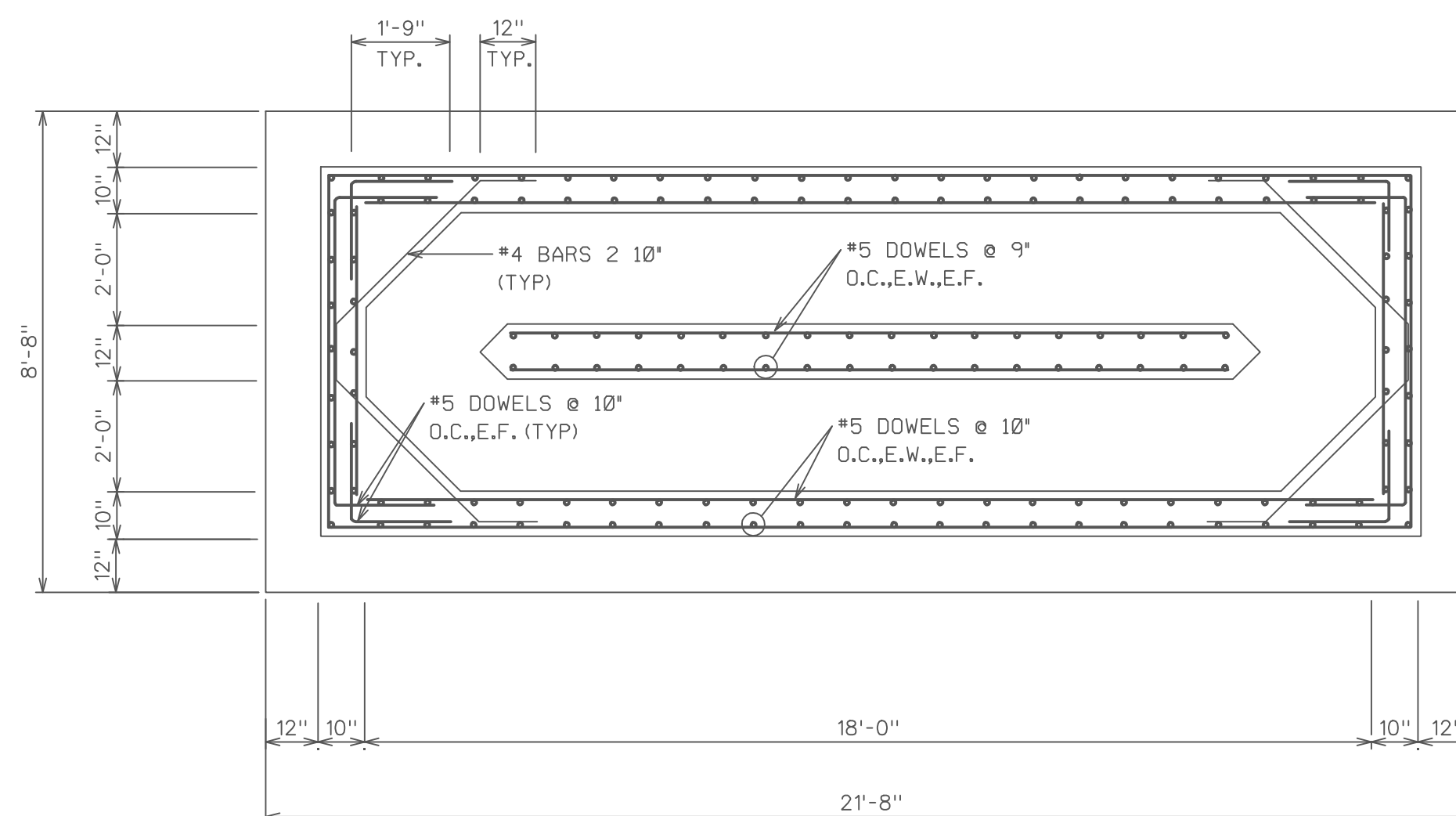
EXISTING PLAN INFLUENT PUMP STATION CONTROL BUILDING
SCALE: 3/8" = 1'-0"



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



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

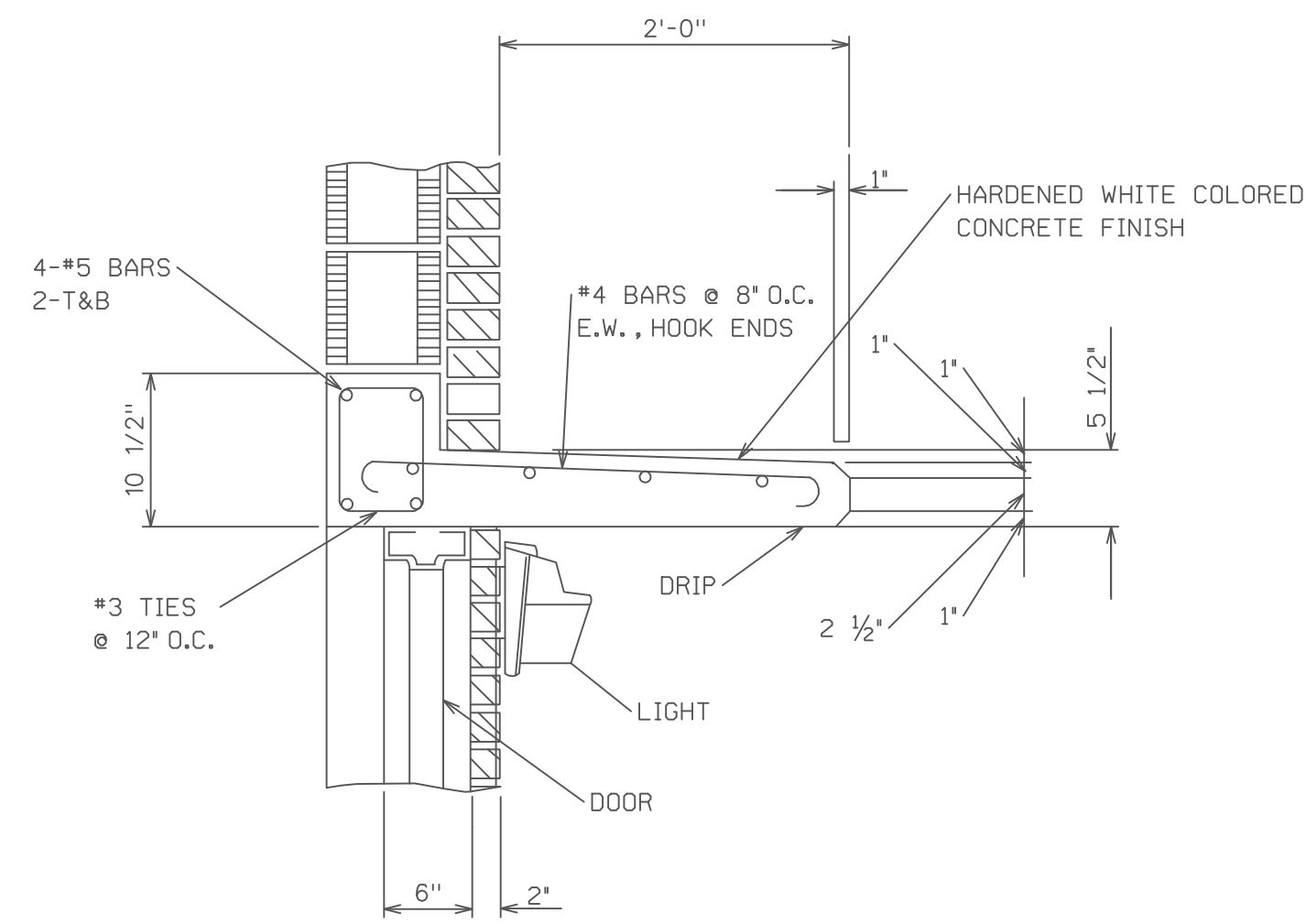


EXISTING PLAN
SCALE: 3/8" = 1'-0"

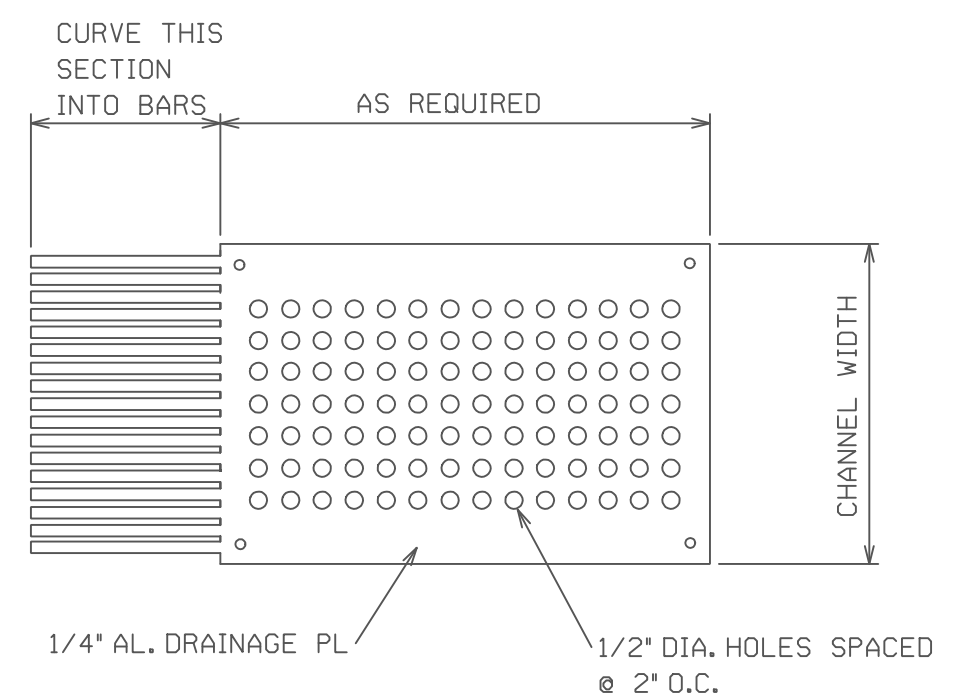


NO.	DATE	REMARKS	BY
REVISIONS			

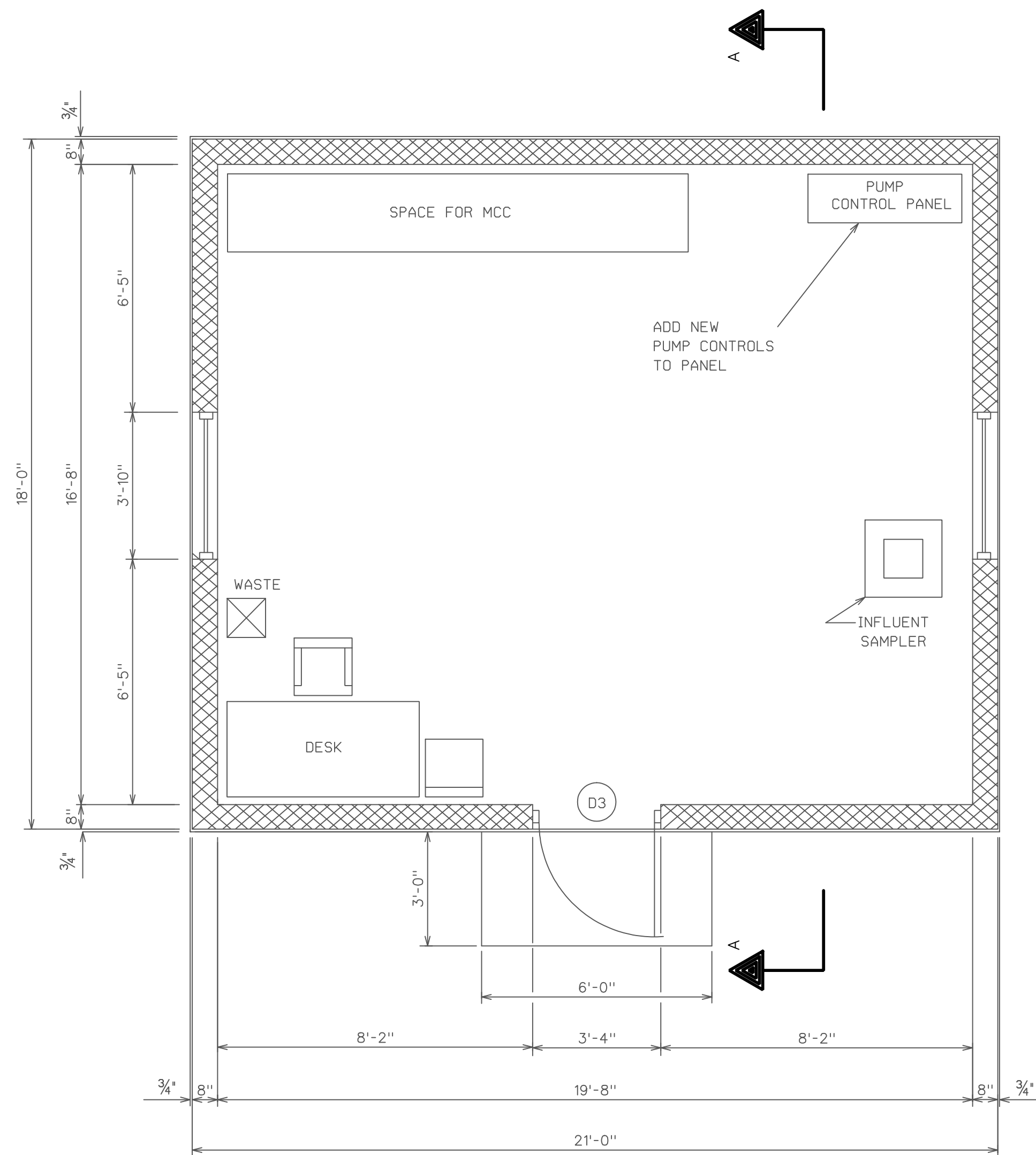
THE CITY OF LAFAYETTE, ALABAMA			
WASTEWATER TREATMENT PLANT IMPROVEMENTS CWSRF PROJECT NO. CS010403-05		100 SOUTHCHURCH DRIVE SUITE 200 HUNTSVILLE, ALABAMA 35890	
DESIGNED DBB	DRAWN DWS	SCALE AS NOTED	DATE 10/31/2023
APPROVED <i>Due B. Bechtel</i>		REFERENCE PS_DEMO.dgn	JOB NO. LF23 096
		SHEET 3 OF 8	



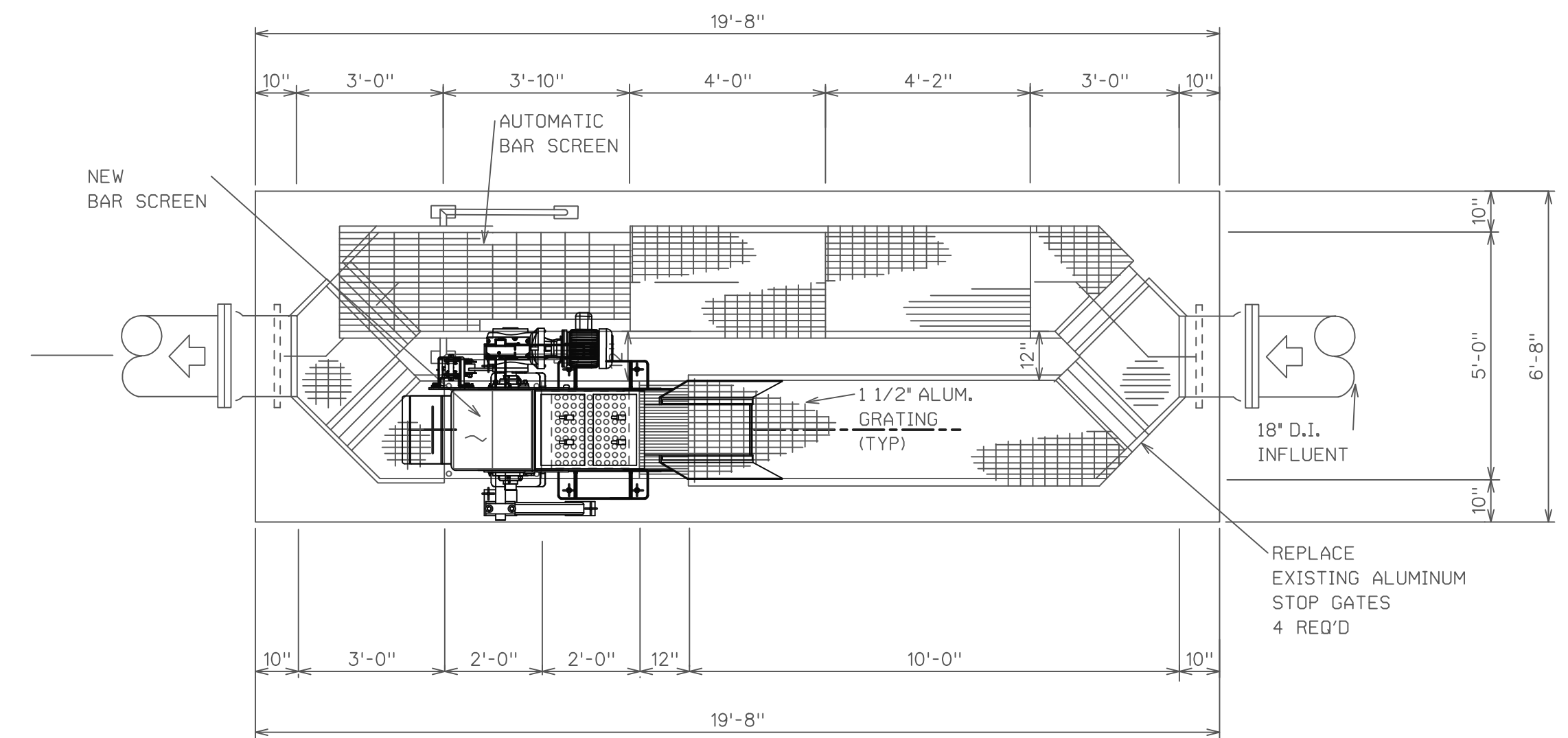
EXISTING CANOPY DETAIL
SCALE: 1" = 1'-0"



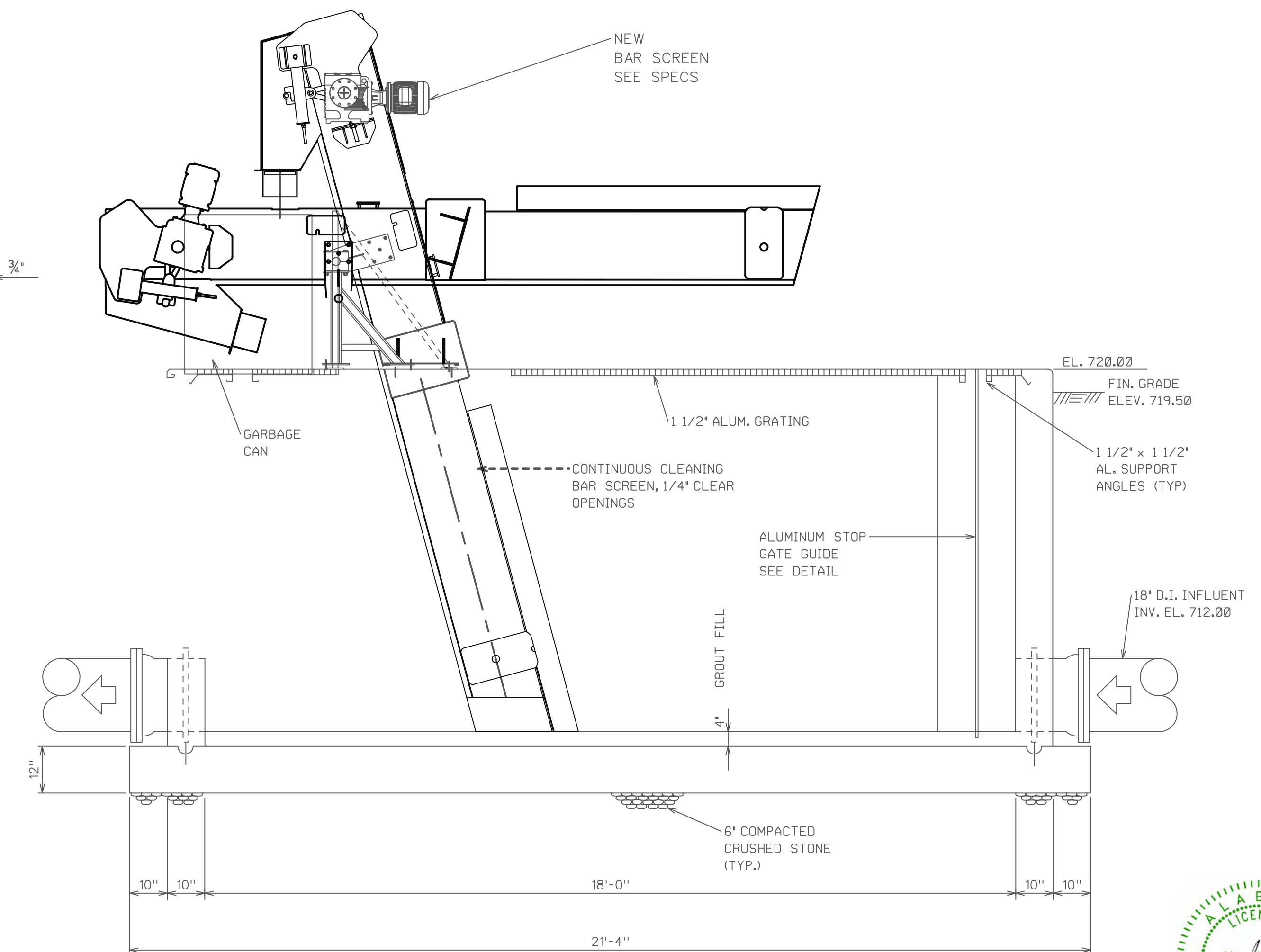
EXISTING DRAINAGE PLATE DETAIL
SCALE: 1" = 1'-0"



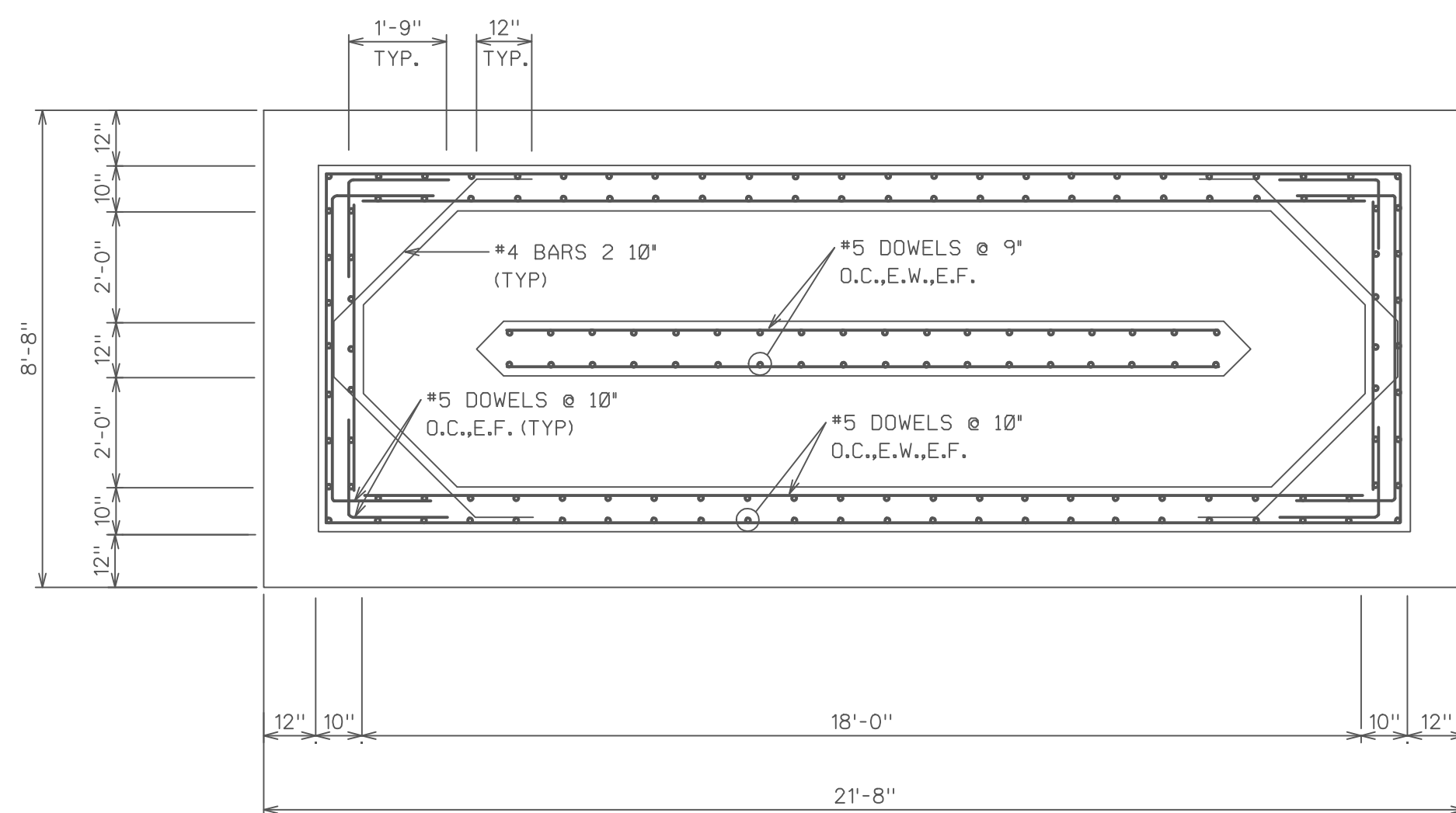
EXISTING PLAN INFLUENT PUMP STATION CONTROL BUILDING
SCALE: 3/8" = 1'-0"



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



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

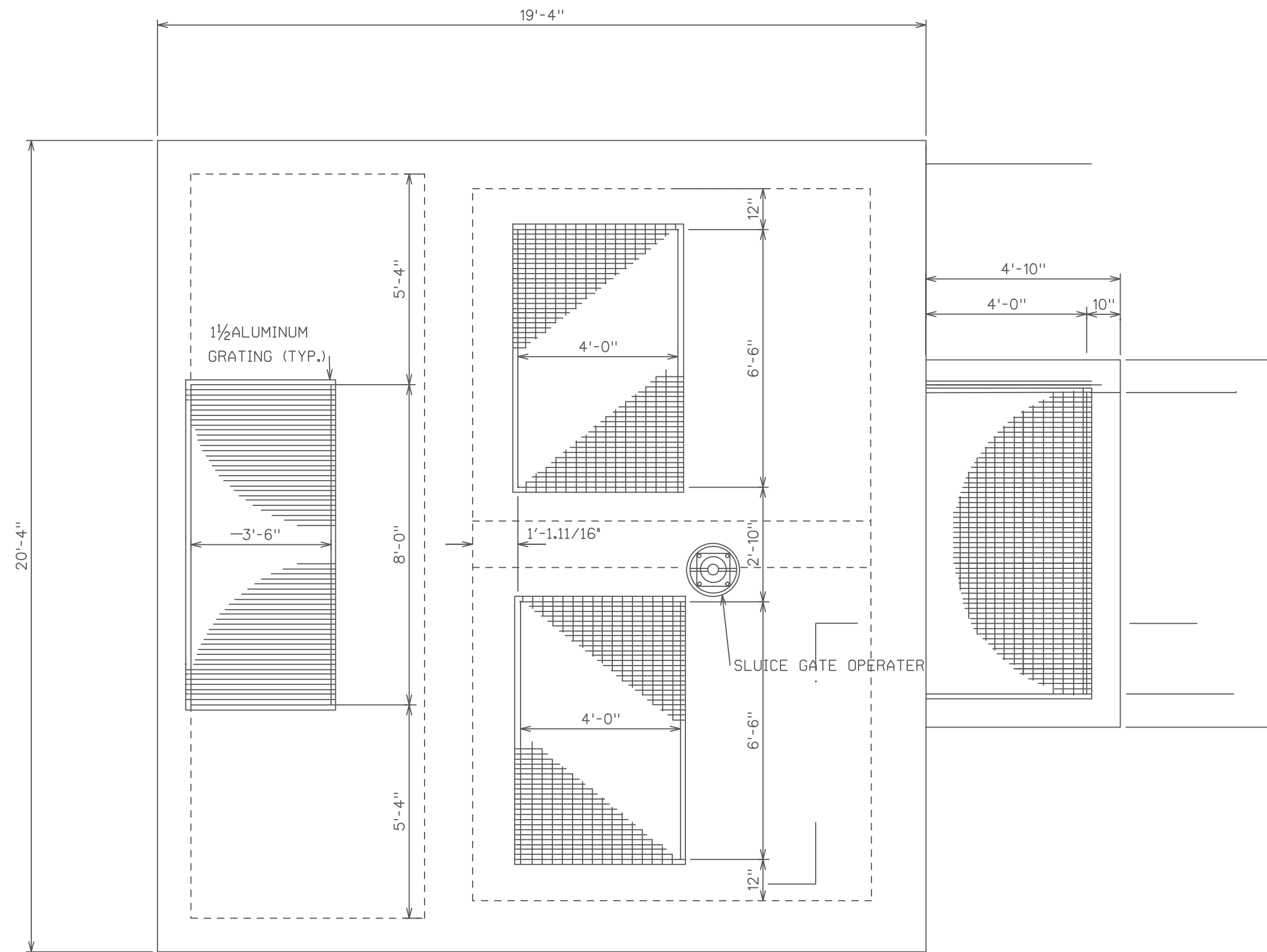


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SCALE: 3/8" = 1'-0"

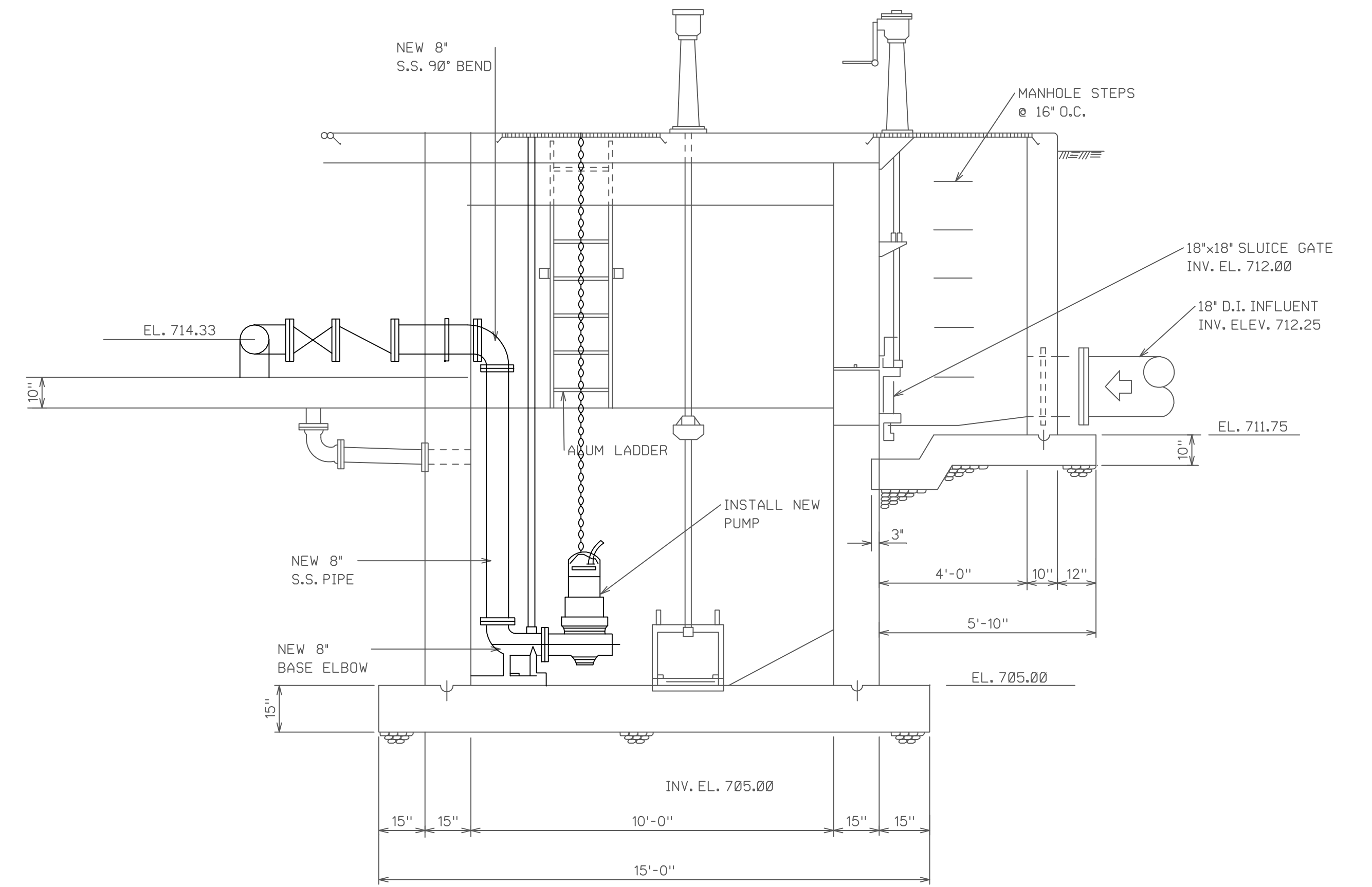


NO.	DATE	REMARKS	BY
REVISIONS			

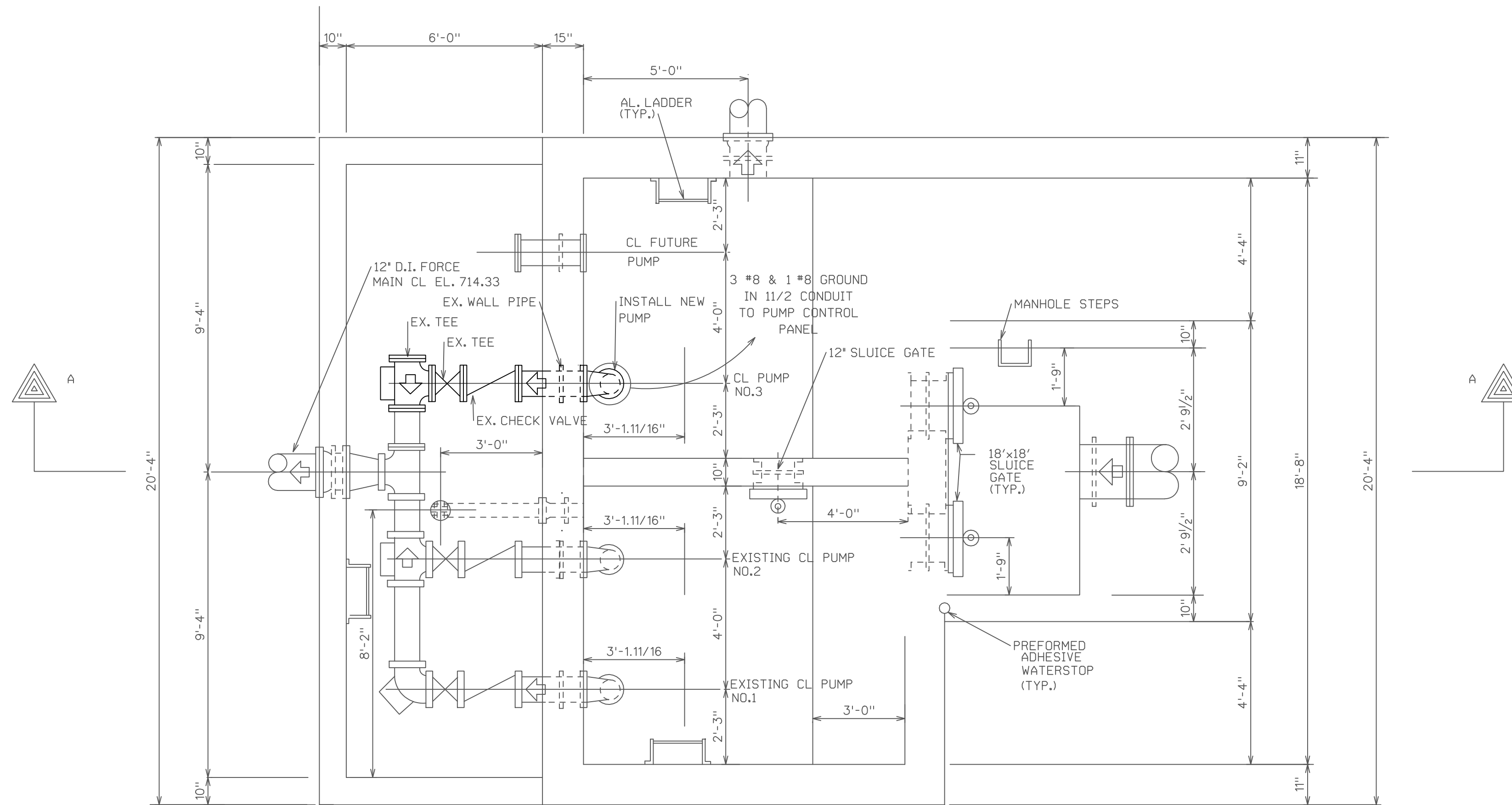
THE CITY OF LAFAYETTE, ALABAMA		Utility Engineering Consultants, LLC	
WASTEWATER TREATMENT PLANT IMPROVEMENTS CWSRF PROJECT NO. CS010403-05		100 SOUTHVIEW DRIVE SUITE 50 HOMESWOOD ALABAMA 35080	
DESIGNED DBB	DRAWN DWS	SCALE AS NOTED	DATE 10/31/2023
APPROVED <i>Due B. Bechtel</i>		REFERENCE PS_STRUC.dgn	JOB NO. LF23 096
BAR SCREEN MODIFICATION		SHEET 4 OF 8	



PLAN @ ELEVATION 720.00
SCALE: 3/8" = 1'-0"



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

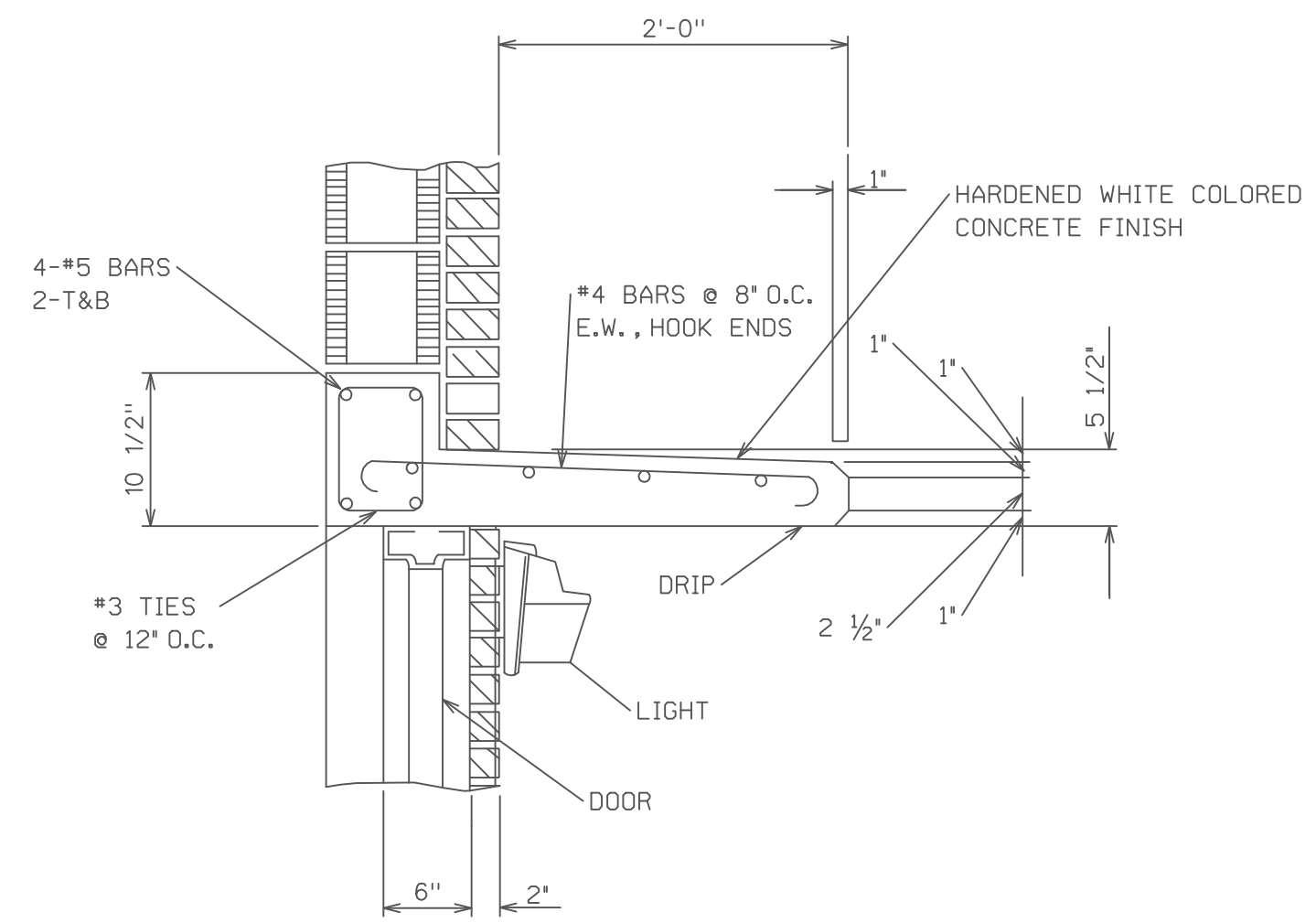


PLAN @ ELEVATION 717.00
SCALE: 3/8" = 1'-0"

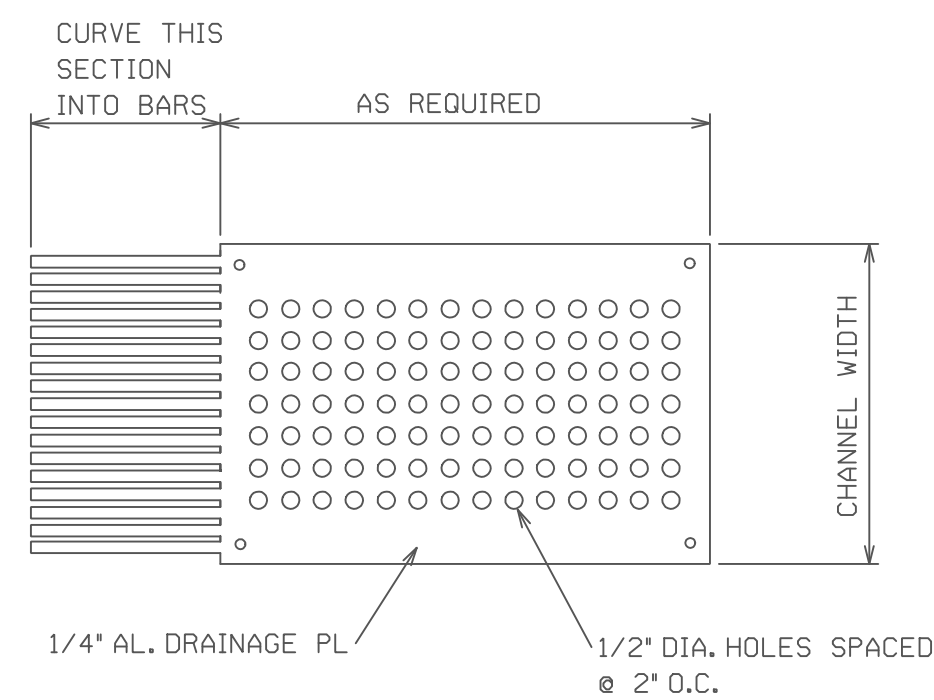


NO.	DATE	REMARKS	BY
REVISIONS			

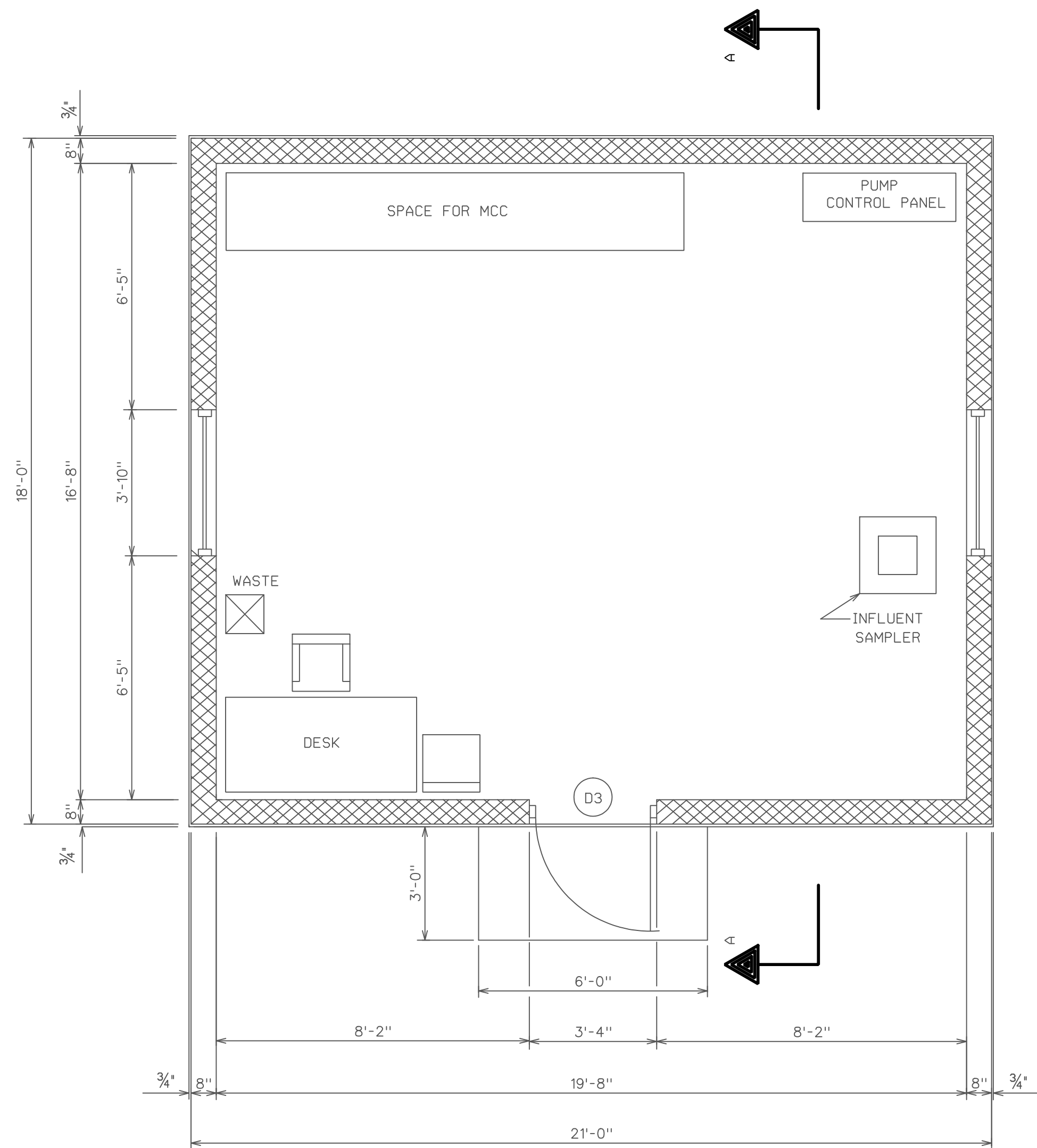
THE CITY OF LAFAYETTE, ALABAMA		 Utility Engineering Consultants, LLC <small>100 BOUTWRIGHT DRIVE SUITE 200 HUNTSVILLE, ALABAMA 35899</small>	
WASTEWATER TREATMENT PLANT IMPROVEMENTS CWSRF PROJECT NO. CS010403-05		DESIGNED: DBB DRAWN: DWS SCALE: AS NOTED DATE: 10/31/2023	APPROVED: <i>Dale B. Bechtel</i> REFERENCE: PS_MECH.dgn SHEET: 5 OF 8
INFLUENT PUMP STATION MODIFICATIONS		JOB NO.: LF23 096	DATE: 10/31/2023



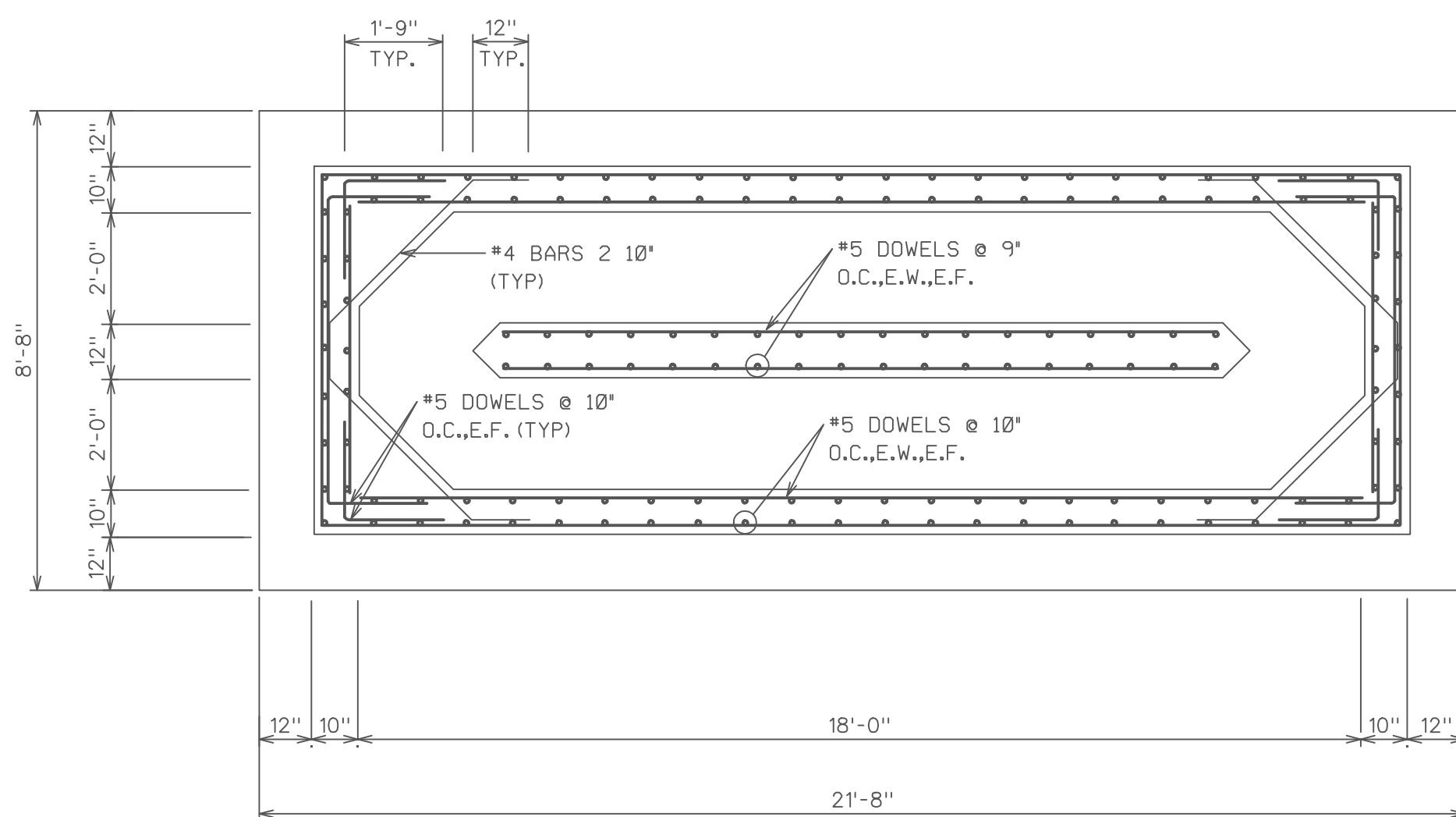
CANOPY DETAIL
SCALE: 1" = 1'-0"



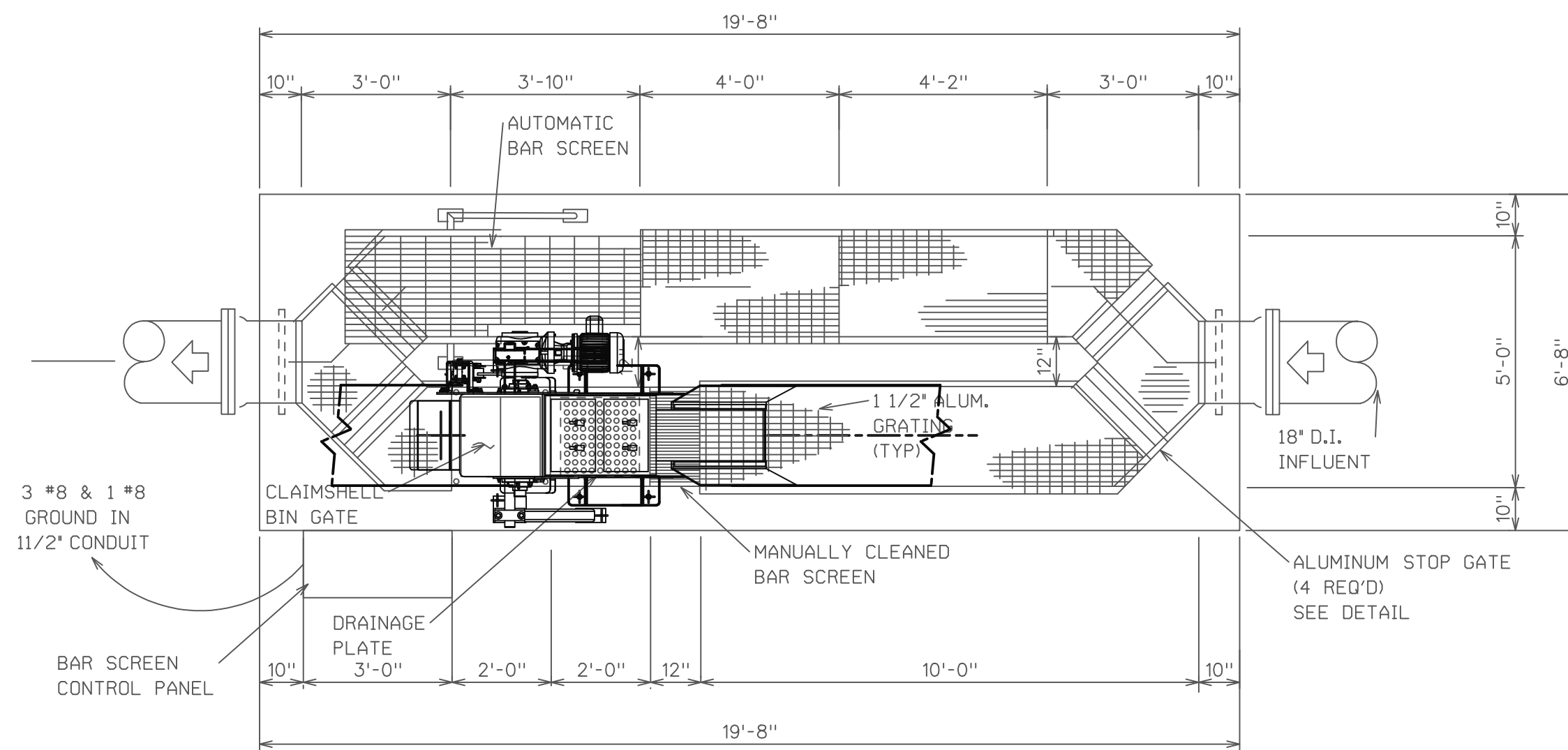
DRAINAGE PLATE DETAIL
SCALE: 1" = 1'-0"



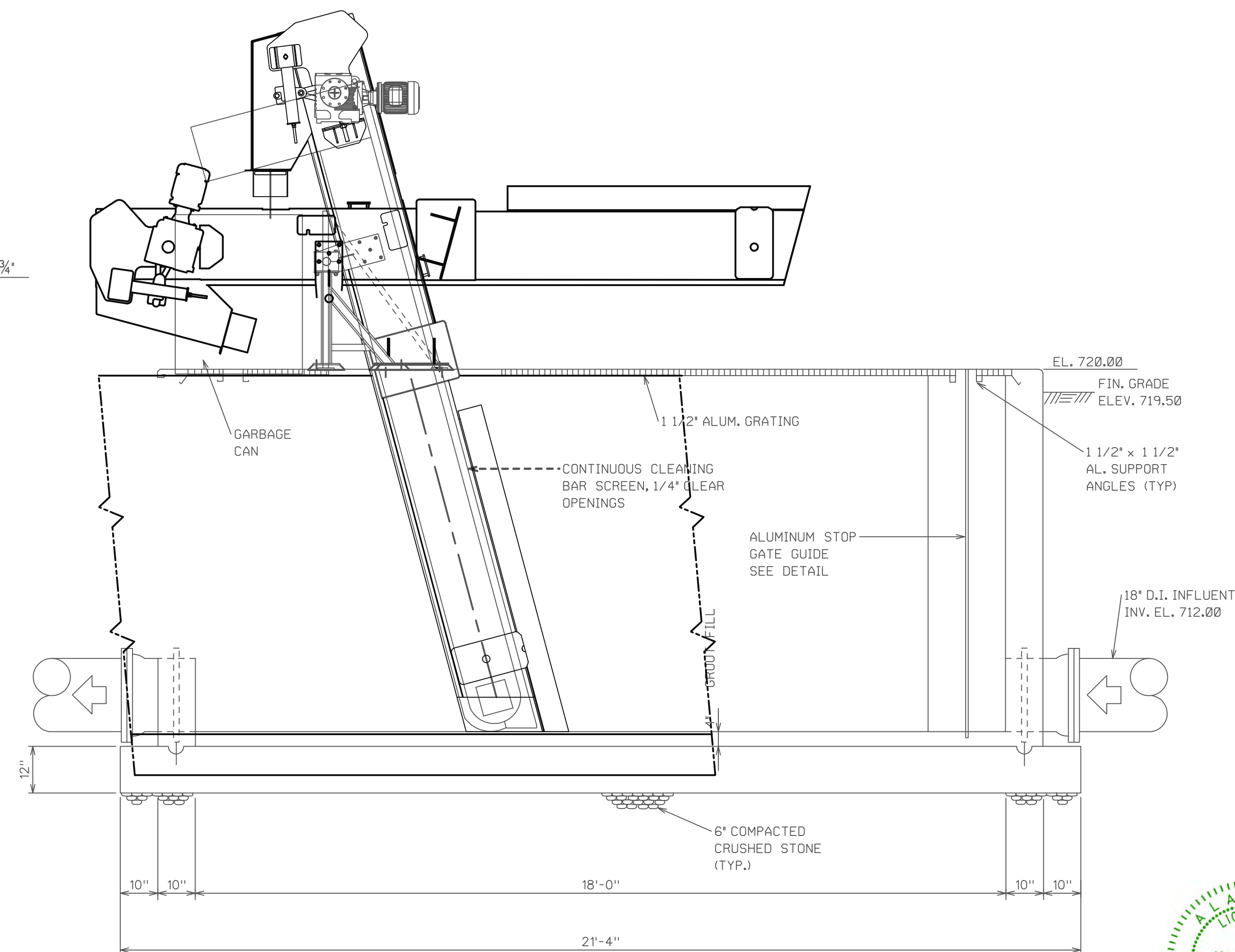
PLAN INFLUENT PUMP STATION CONTROL BUILDING
SCALE: 3/8" = 1'-0"



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



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

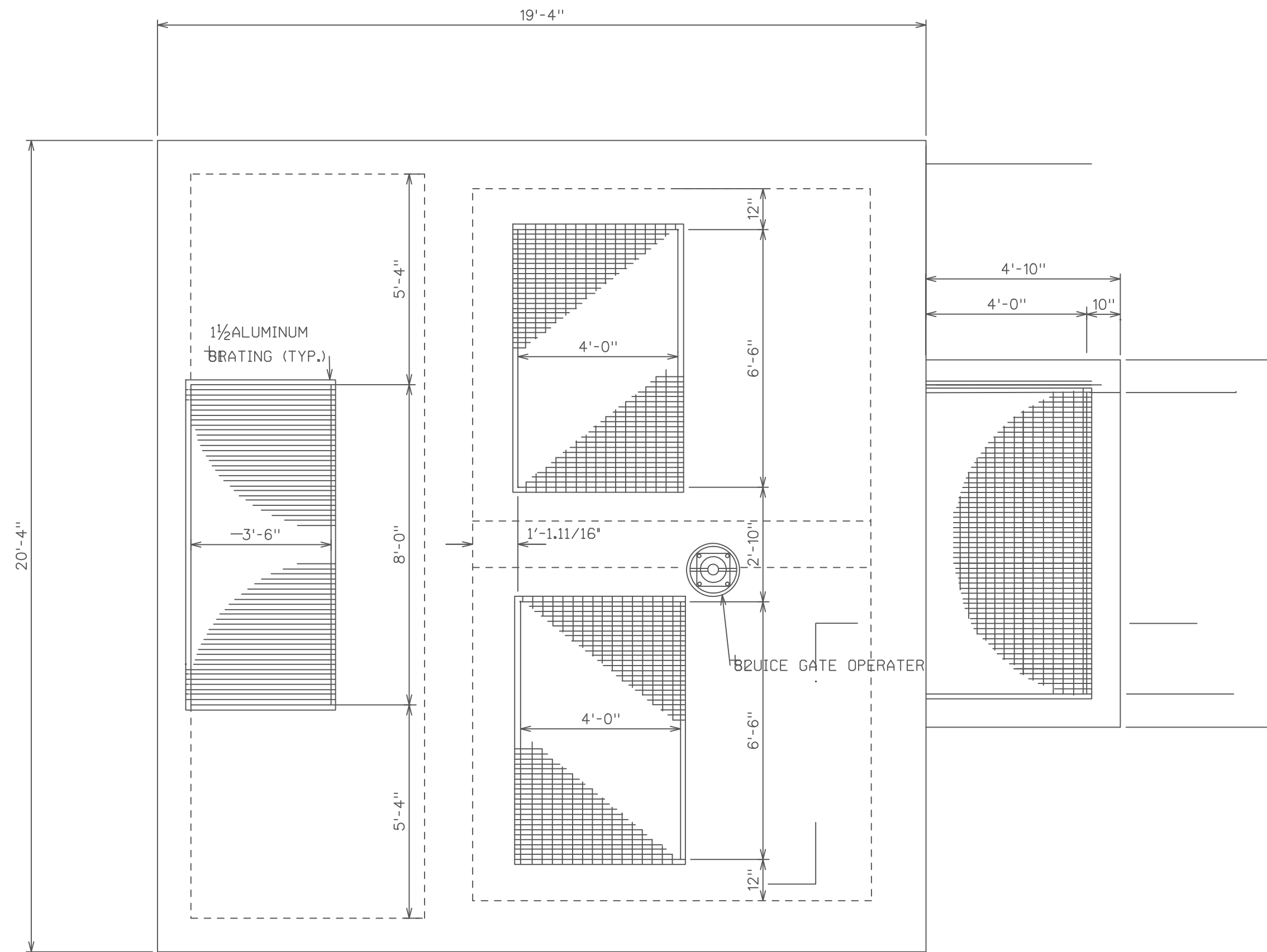


SECTION A-A
SCALE: 1/2" = 1'-0"

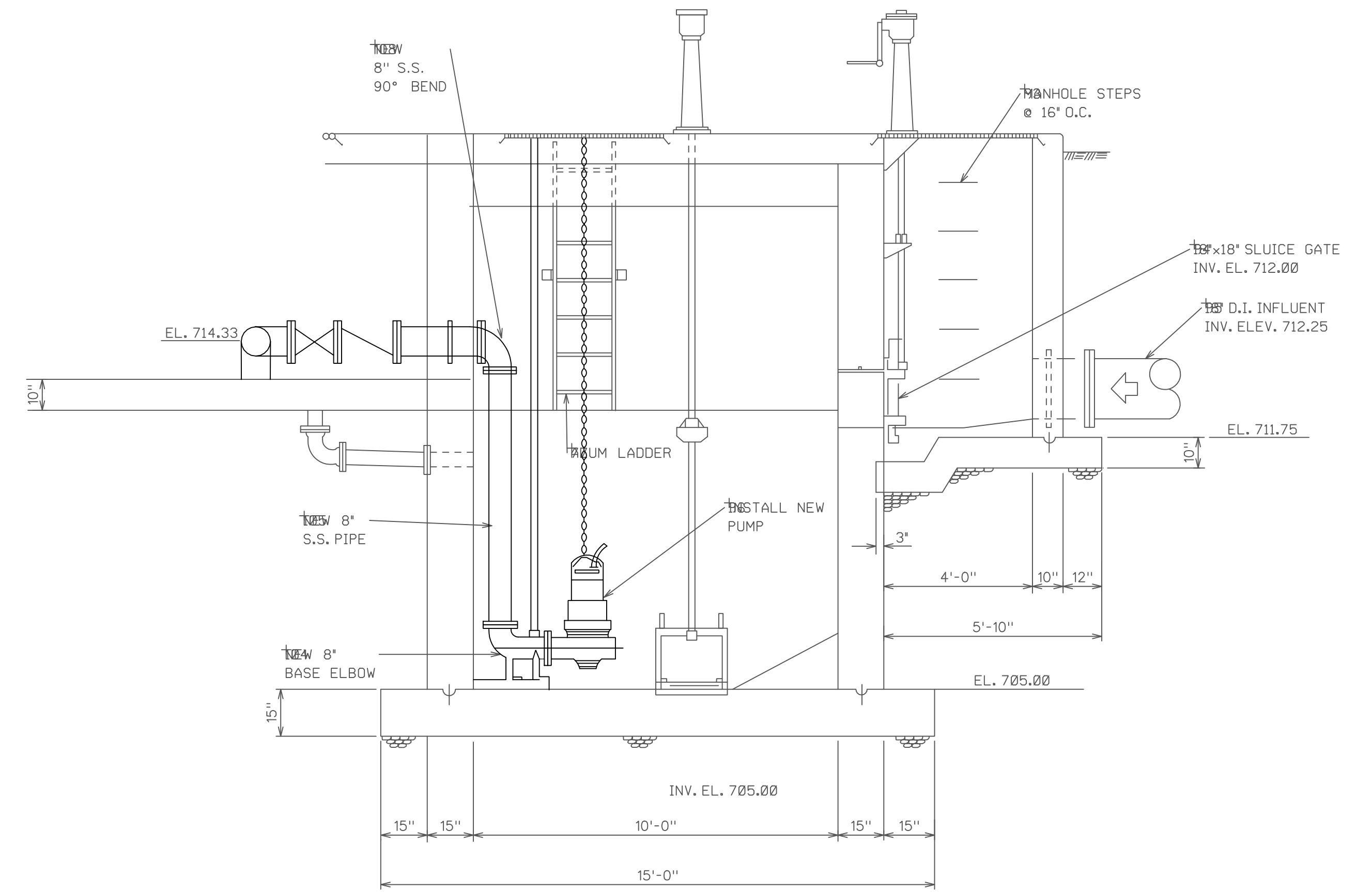


NO.	DATE	REMARKS	BY
REVISIONS			

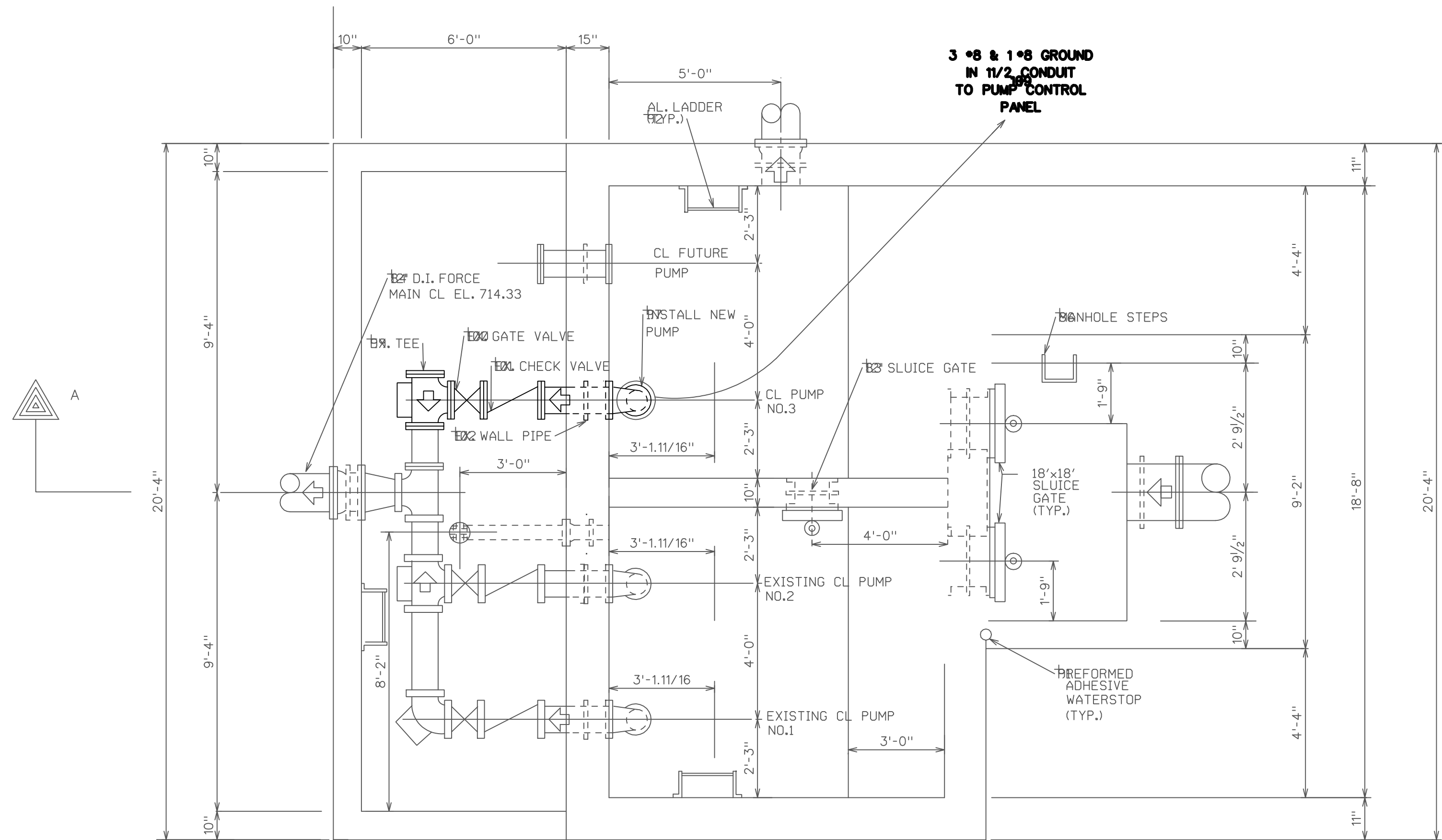
THE CITY OF LAFAYETTE, ALABAMA		 Utility Engineering Consultants, LLC	
WASTEWATER TREATMENT PLANT IMPROVEMENTS CWSRF PROJECT NO. CS010403-05		DESIGNED: DBB DRAWN: DWS APPROVED: <i>Dale B. Bechtel</i>	SCALE: AS NOTED DATE: 10/31/2023 REFERENCE: PS_ELEC2.dgn SHEET 6 OF 8
ELECTRICAL MODIFICATIONS		JOB NO.: LF23 096	100 BOUTWRIGHT DRIVE SUITE 50 HOMEWOOD, ALABAMA 35898



PLAN @ ELEVATION 720.00
SCALE: 3/8" = 1'-0"



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

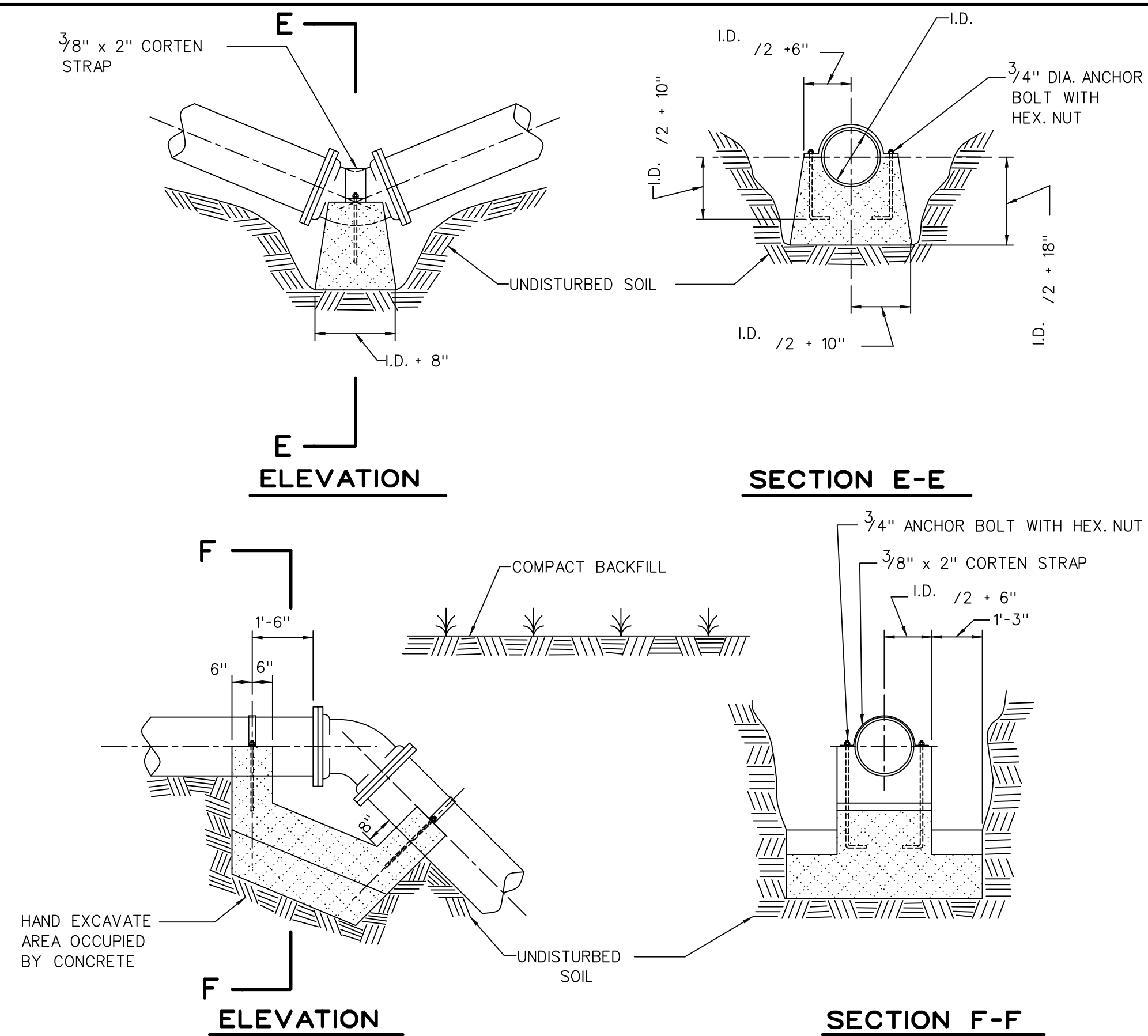
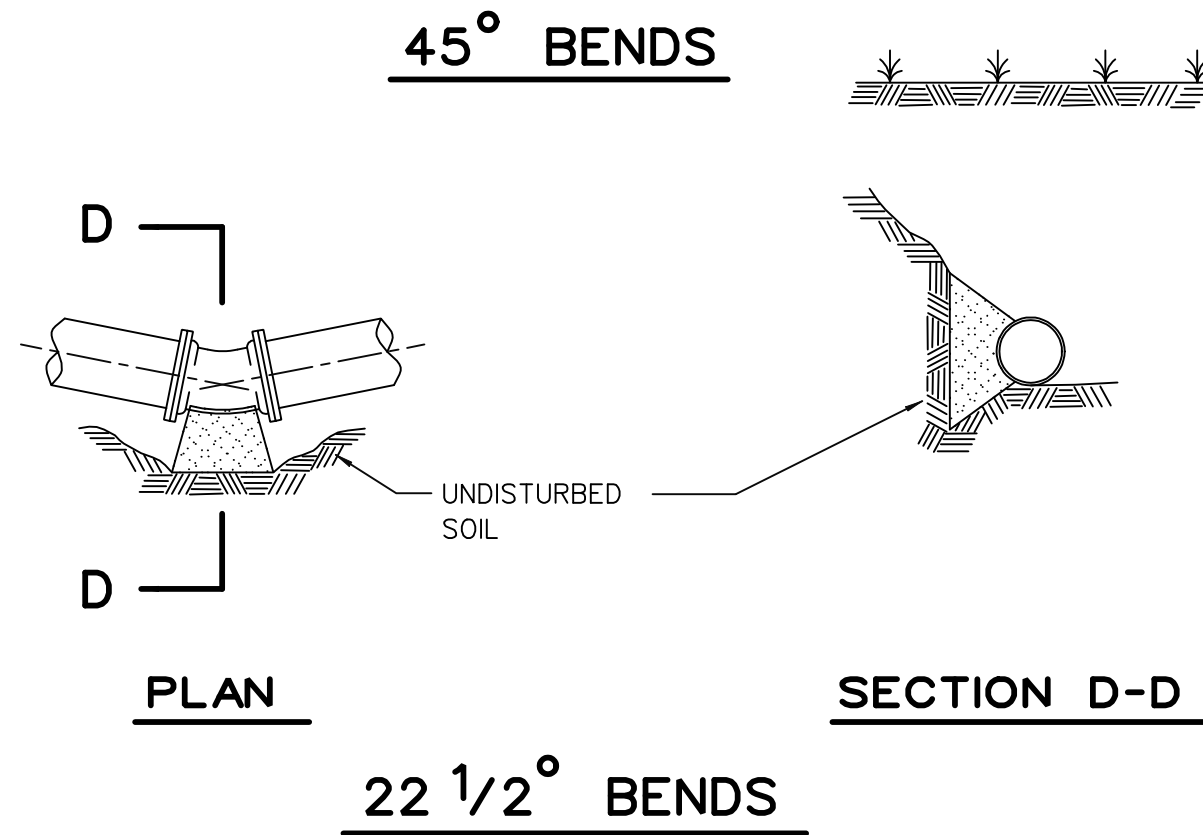
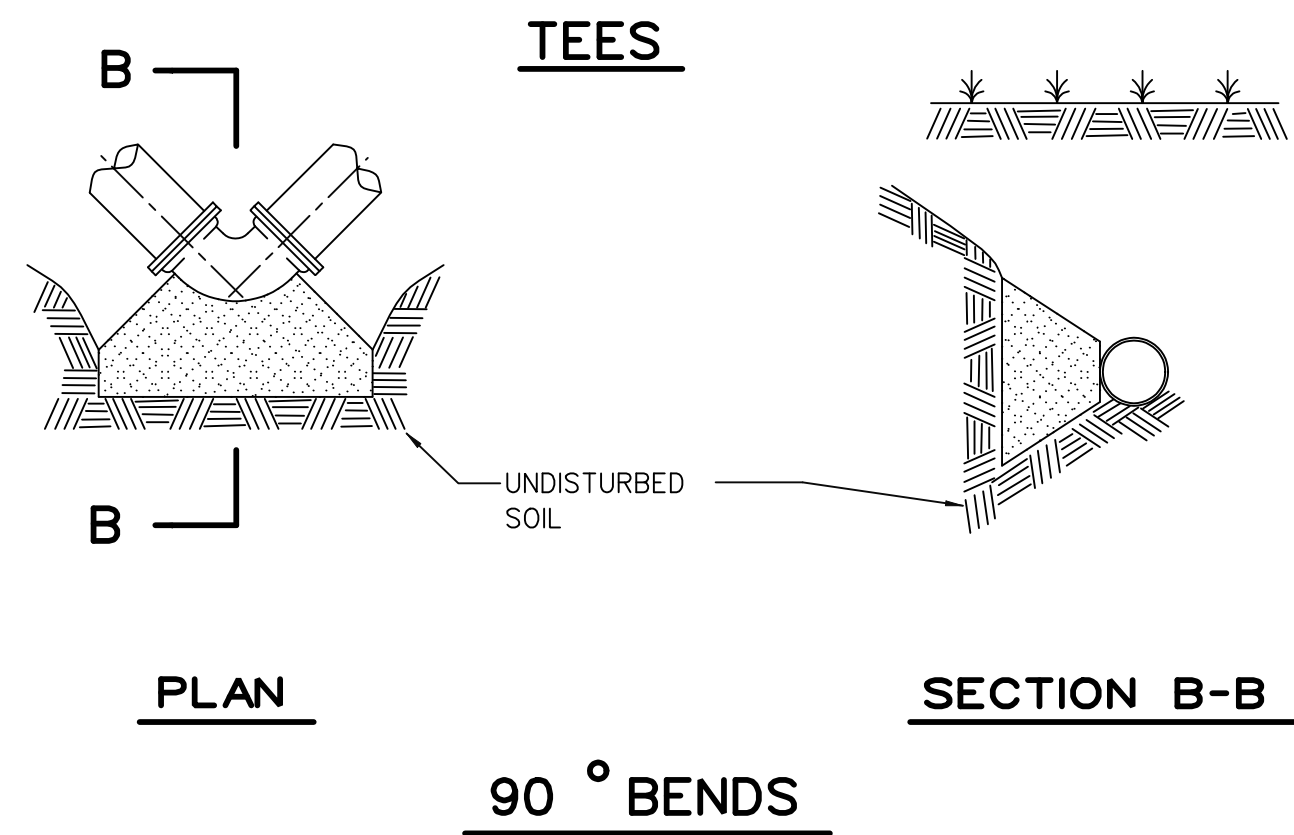
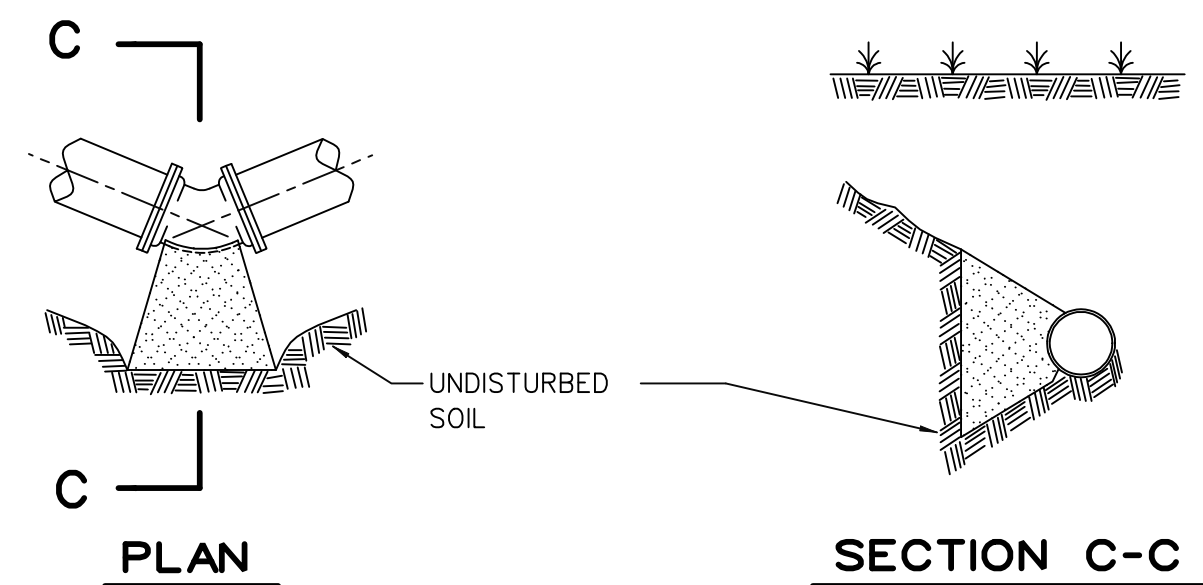
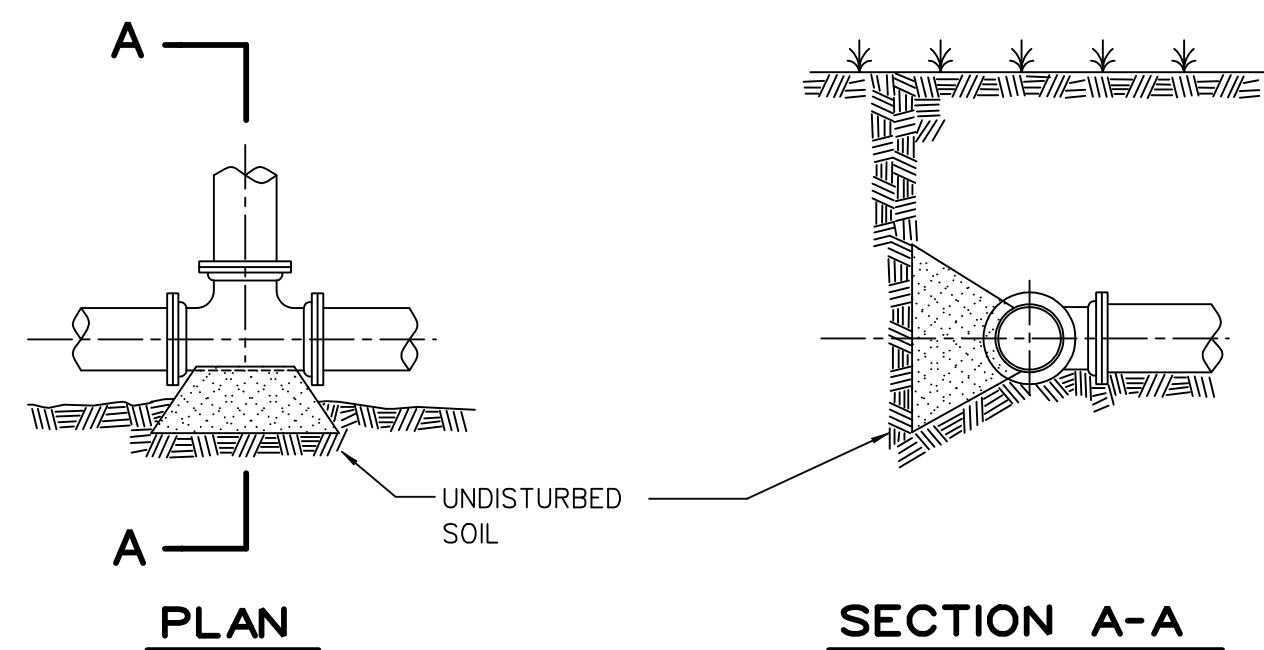


PLAN @ ELEVATION 717.00
SCALE: 3/8" = 1'-0"

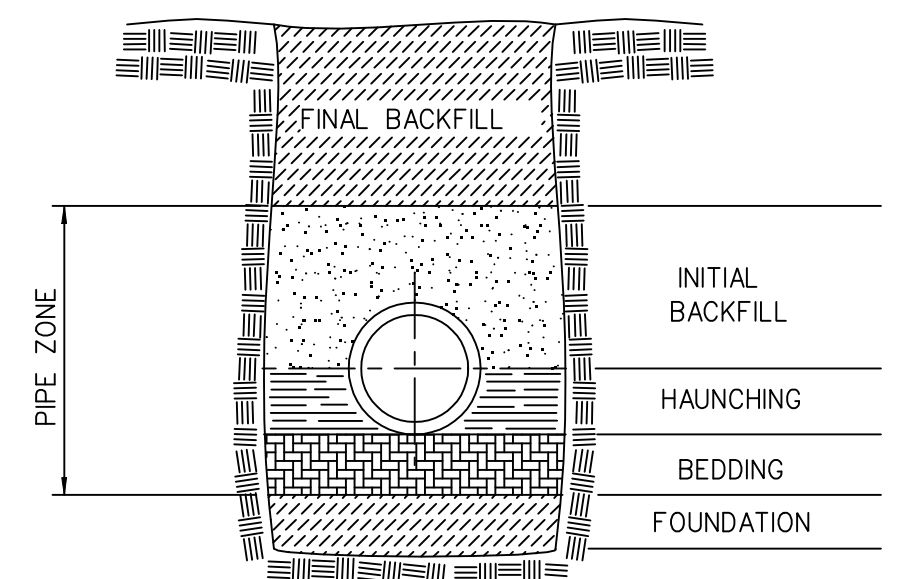


NO.	DATE	REMARKS	BY
REVISIONS			

THE CITY OF LAFAYETTE, ALABAMA		 Utility Engineering Consultants, LLC <small>100 SOUTHCHICK DRIVE SUITE 100 HUNTSVILLE, ALABAMA 35894</small>	
DESIGNED DBB	DRAWN DWS	SCALE AS NOTED	DATE 10/31/2023
WASTEWATER TREATMENT PLANT IMPROVEMENTS CWSRF PROJECT NO. CS010403-05		APPROVED <i>Dale B. Bechtel</i>	REFERENCE PS_ELEC.dgn
ELECTRICAL MODIFICATIONS		JOB NO. LF23 096	SHEET 7 OF 8



DETAILS OF TYPICAL CONCRETE BRACING & VERTICAL BENDS



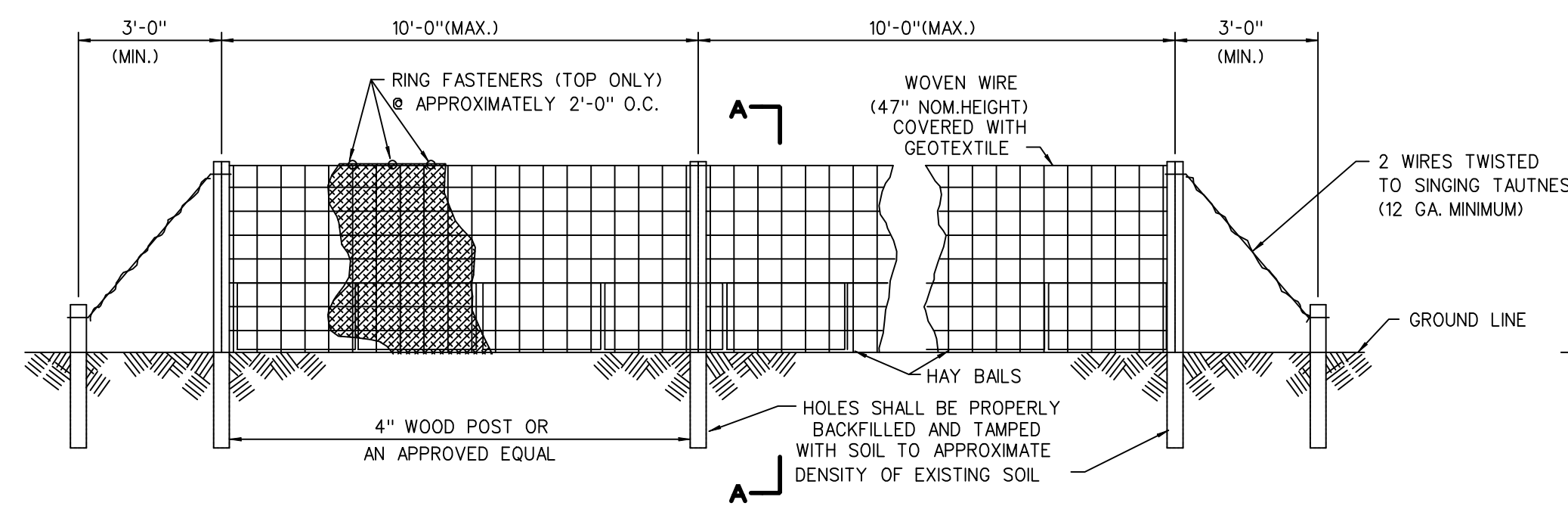
PIPE INSTALLATION TERMINOLOGY
NOT TO SCALE

FITTING SIZE	TEE, WYE, PLUG, OR CAP		90° BEND PLUGGED CROSS		TEE PLUGGED ON RUN				BEND ANGLE					
	A	V	A	V	BRANCH		RUN		45°		22 1/2°		11 1/4°	
					A	V	A	V	A	V	A	V	A	V
4	2	1/4	2	1/4	2	1/4	2	1/4	1.5	1/4	1	1/4	1	1/4
6	3.5	1/4	3.5	1/4	3.5	1/4	3.5	1/4	2	1/4	1.5	1/4	1	1/4
8	5	1/2	6	1/2	5	1/2	6	1/2	3.5	1/4	2	1/4	1.5	1/4
10	7.5	1/2	9.5	3/4	7.5	1/2	9.5	3/4	5.5	1/2	3	1/4	2	1/4
12	10	3/4	15	3/4	10	3/4	15	3/4	7.5	1/2	4	1/2	3	1/4
14	15	3/4	18	1	15	3/4	18	1	10	3/4	6	1/2	4	1/2
16	20	1	24	1	20	1	24	1	15	3/4	7.5	1/2	6	1/2
18	25	1	30	1 1/2	25	1	30	1.5	20	1	10	3/4	7.5	1/2
20	30	1 1/2	36	2	30	1.5	36	2	25	1	15	3/4	10	3/4
24	45	2	54	3	45	2	54	3	30	1 1/2	20	1	15	3/4
30	50	3	60	4	50	3	60	4	37.5	2	25	1	20	1
36	60	4	72	5	60	4	72	5	49	3	30	1 1/2	25	1
42	70	5	84	6	70	5	84	6	56	4	35	2	30	1 1/2
48	80	6	96	7	80	6	96	7	65	5	45	3	40	2
54	90	7	108	8	90	7	108	8	75	5	60	4	50	3

TYPICAL CONCRETE BRACE FOR HORIZONTAL FITTINGS

HORIZONTAL BENDS LEGEND

A = MINIMUM BEARING AREA OF THRUST BLOCKS IN SQ. FT.
V = MINIMUM CONCRETE VOLUME OF THRUST BLOCKS IN CUBIC YDS.

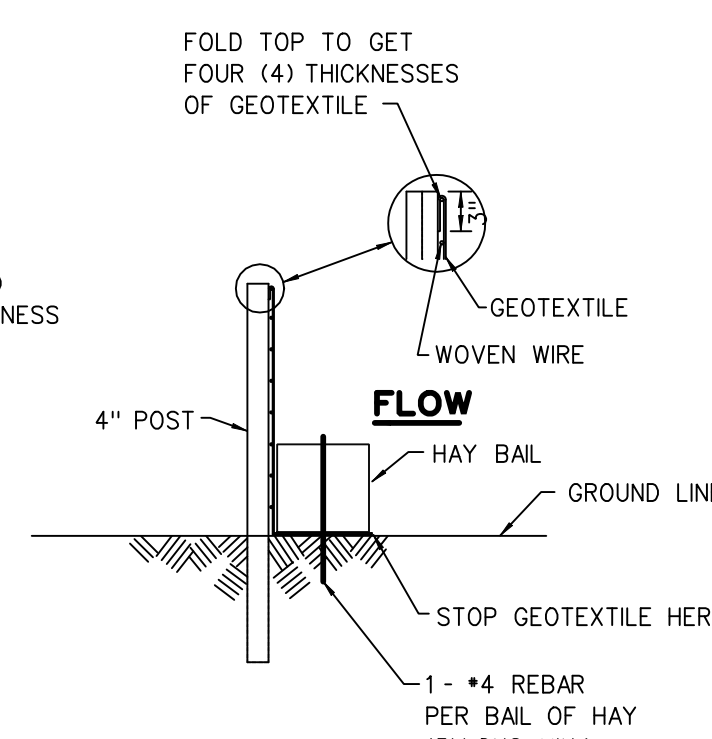


ELEVATION

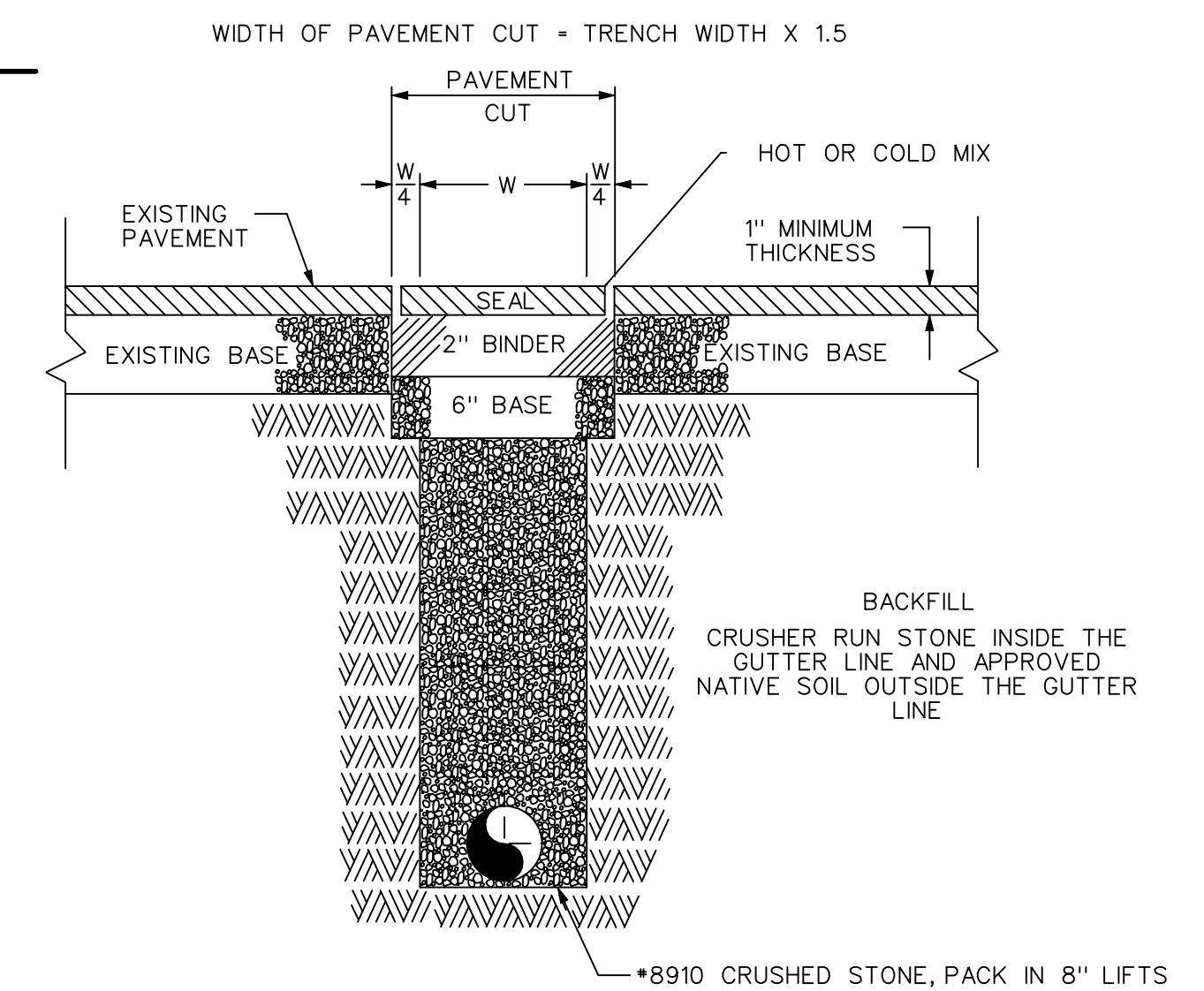
GENERAL NOTES:
(1) EROSION CONTROL FENCING SHOULD BE LOCATED ALONG EDGE OF CLEARING LIMITS ADJACENT TO ALL STREAMS AND CHANNELS.
(2) THIS DETAIL IS A MINIMUM REQUIREMENT.
(3) GEOTEXTILE FABRIC SHALL BE WOVEN STYLE #2125 AMOCO FABRIC AND FIBERS COMPANY.

TYPE "B" SILT FENCE DETAIL

NOT TO SCALE



SECTION "A-A"



TEMPORARY STREETCUT AND BACKFILLING DETAIL

NOT TO SCALE



NO.	DATE	REMARKS	BY
REVISIONS			

THE CITY OF
LAFAYETTE, ALABAMA

Utility Engineering Consultants, LLC
100 SOUTHWEST DRIVE
SUITE 100
HUNTSWOOD, ALABAMA 35896

WASTEWATER TREATMENT PLANT IMPROVEMENTS CWSRF PROJECT NO. CS010403-05

DESIGNED: DBB, DRAWN: DWS, SCALE: AS NOTED, DATE: 10/31/2023

APPROVED: *Dave B. Beckel*, REFERENCE: PS_DETAILS.dgn, JOB NO.: LF23 096

MISCELLANEOUS DETAILS

SHEET 8 OF 8