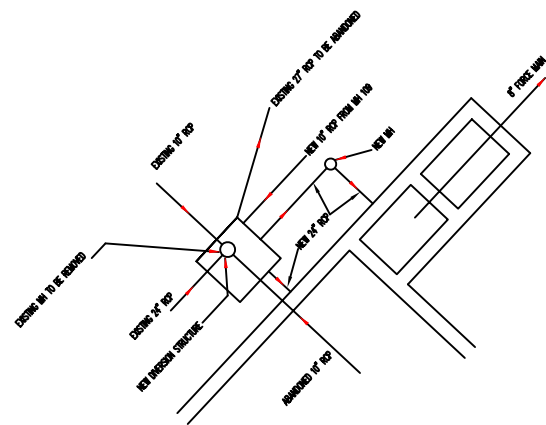
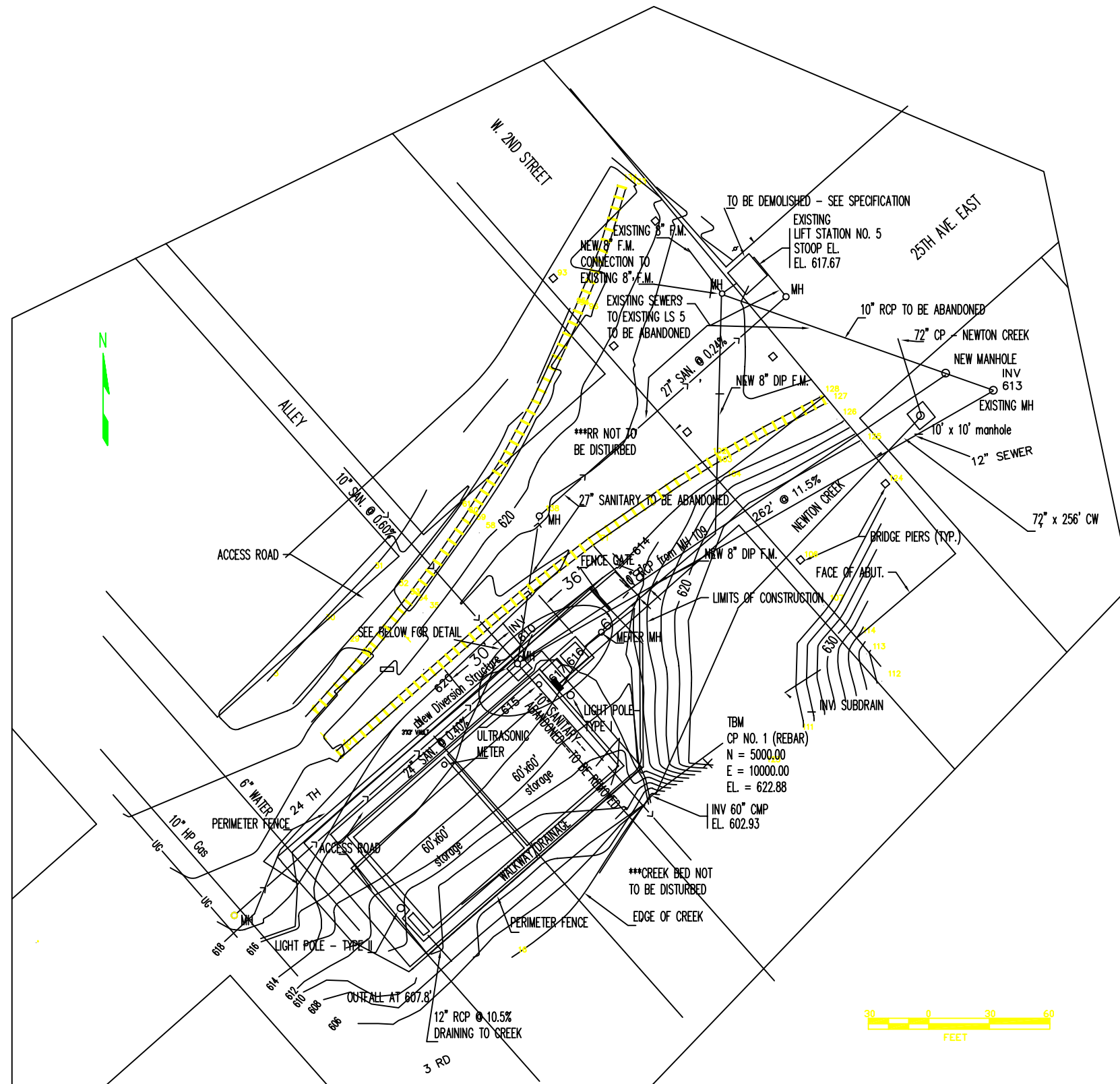


NEW CONTOUR, LIMITS OF CONSTRUCTION AND AREAS TO BE SODDED



DIVERSION STRUCTURE/STORAGE/LIFT STATION HYDRAULIC DETAIL



Sheet G 3

NO.	DATE	DESCRIPTION	APPROVED
REVISIONS			

DESIGNED _____
 DRAWN _____
 CHECKED _____
 DATE _____

SCALE

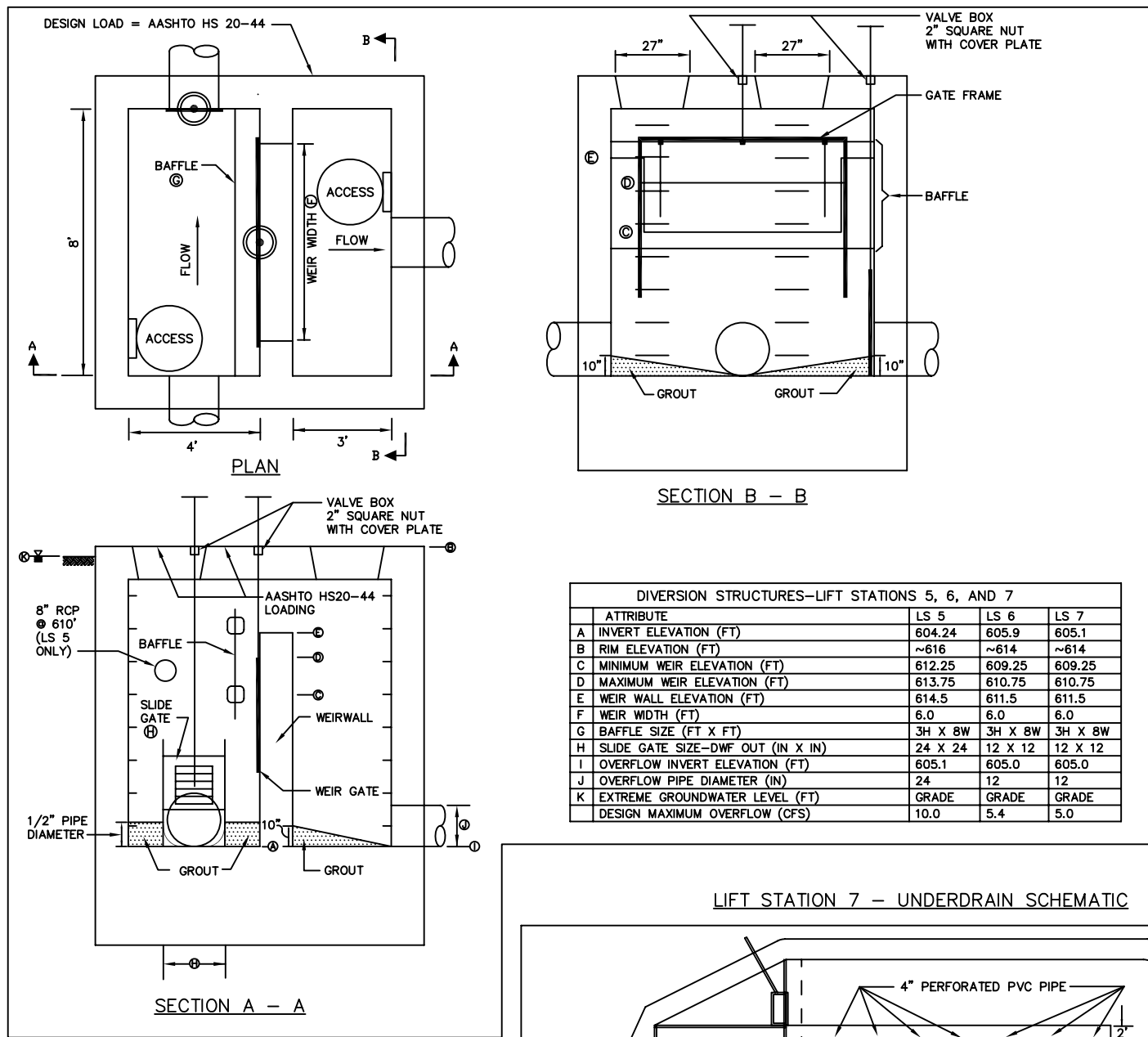


CITY OF SUPERIOR, WISCONSIN
 DEPARTMENT OF PUBLIC WORKS

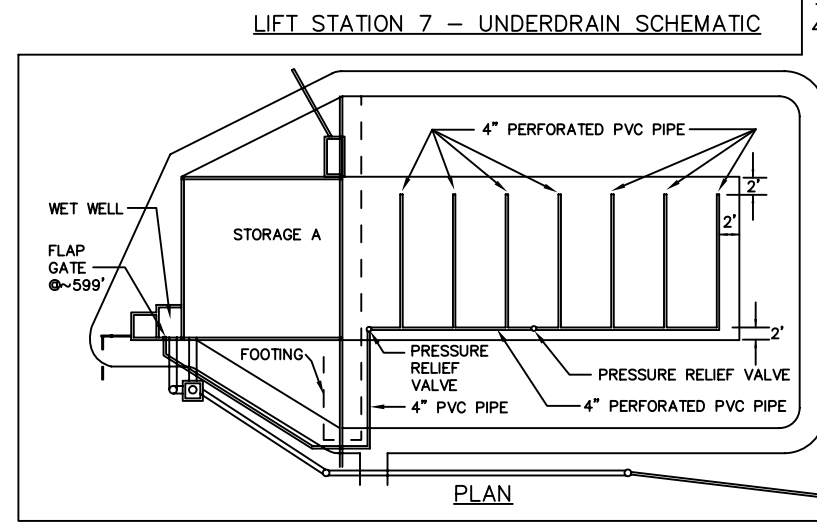
CONTRACT NO. 3

SHEET LS 5
 OF SHEETS
 PROJECT NO. 3899-03

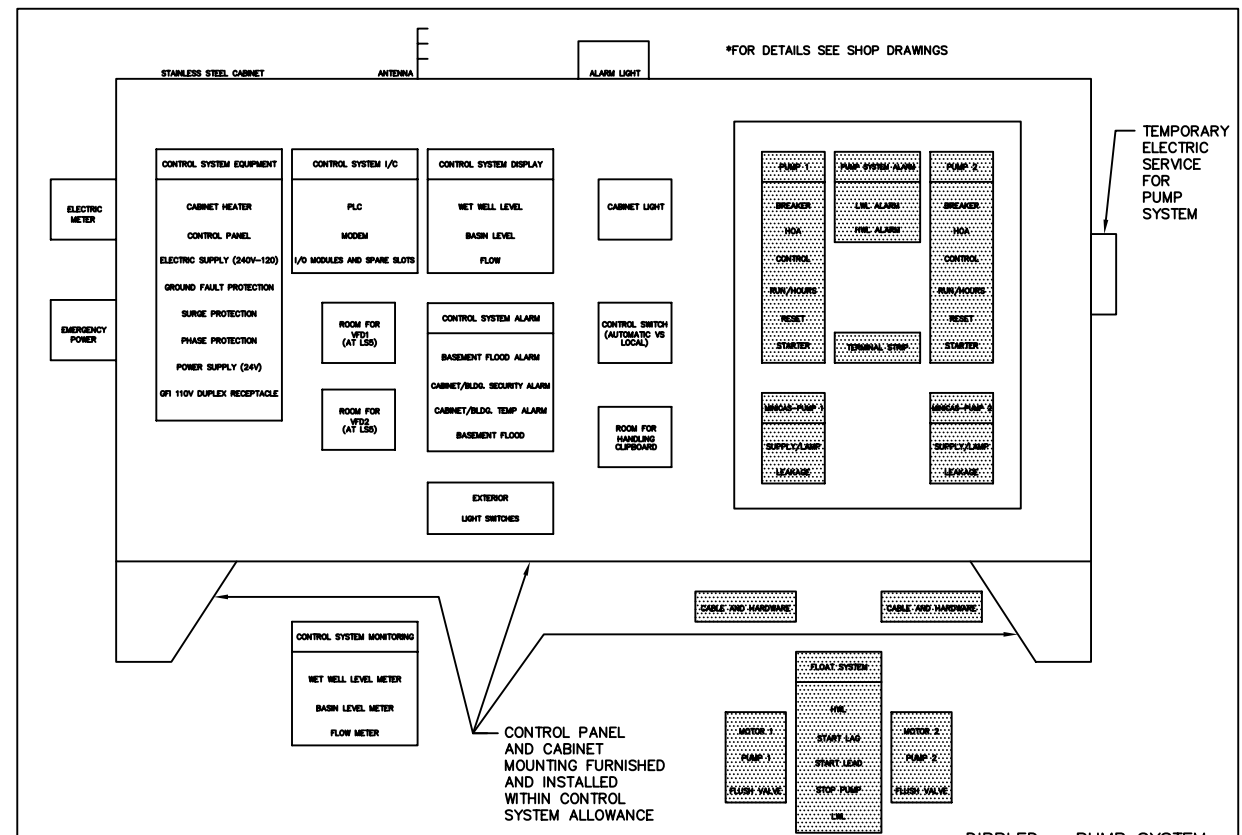
LIFT STATION DIVERSION STRUCTURES



ATTRIBUTE	LS 5	LS 6	LS 7
A INVERT ELEVATION (FT)	604.24	605.9	605.1
B RIM ELEVATION (FT)	~616	~614	~614
C MINIMUM WEIR ELEVATION (FT)	612.25	609.25	609.25
D MAXIMUM WEIR ELEVATION (FT)	613.75	610.75	610.75
E WEIR WALL ELEVATION (FT)	614.5	611.5	611.5
F WEIR WDH (FT)	6.0	6.0	6.0
G BAFFLE SIZE (FT X FT)	3H X 8W	3H X 8W	3H X 8W
H SLIDE GATE SIZE—DWF OUT (IN X IN)	24 X 24	12 X 12	12 X 12
I OVERFLOW INVERT ELEVATION (FT)	605.1	605.0	605.0
J OVERFLOW PIPE DIAMETER (IN)	24	12	12
K EXTREME GROUNDWATER LEVEL (FT)	GRADE	GRADE	GRADE
DESIGN MAXIMUM OVERFLOW (CFS)	10.0	5.4	5.0



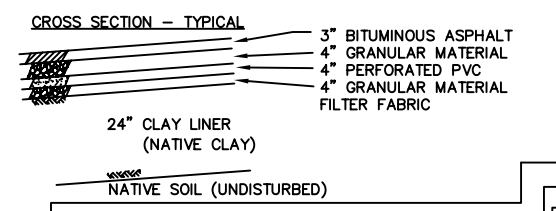
LIFT STATION PUMP AND CONTROL SYSTEMS -- CABINET/SYSTEM SCHEMATIC



- PUMP AND CONTROL SYSTEM NOTES**
- GENERAL CONTRACTOR**
INCLUDE ALLOWANCE COST IN BID. INCLUDE ALL INCIDENTAL WORK FOR COMPLETE SYSTEM, COORDINATION, MOUNTING OF PANEL, ALL ELECTRIC SERVICE, ELECTRIC AND CONTROL, CONDUIT AND WIRING. FURNISH AND INSTALL COMPLETE PUMP SYSTEM, PROVIDE COMPLETE LIFT STATION OPERATION, MONITORING AND ALARM IRRESPECTIVE EQUIPMENT/WORK OF THE ALLOWANCE. MOUNTING OF BRACKETS FOR ULTRASONIC LEVEL MONITORS. REMOVE AND STORE EXISTING PLC, AND RADIO SYSTEM. MOUNTING OF BRACKETS FOR ULTRASONIC LEVEL MONITORS. REMOVE AND STORE EXISTING PLC, AND RADIO SYSTEM.
 - CONTROL SYSTEM ALLOWANCE**
THIS ALLOWANCE SHALL INCLUDE THE FOLLOWING: CONTROL SYSTEM PER THIS DRAWING AND SPECIFICATION 16950". PANEL AND PEDESTAL WITH ROOM FOR GENERAL CONTRACTORS PUMP SYSTEM. MOUNTING WET WELL LEVEL MONITORS, SPECIAL CONTROL WIRES, AND METER CALIBRATION.

PANEL BOARD SCHEDULE

VOLTAGE—120/240V 1Ø MAINS 50 AMP MAIN BREAKER, 100 AMP MAIN.		
BRANCH CIRCUIT	NO.	DESIGNATION
MAGMETER	1	2 ULTRASONIC
WEIR GATE OPERATOR	3	4 CONTROL PANEL
*LIGHT POLE GFI	5	6 *LIGHT POLE GFI
*LIGHT POLE GFI	7	8
*LIGHT POLE GFI	9	10 SPARE
*LIGHT POLE GFI	11	12 SPARE



FEEDER/BRANCH CIRCUIT SCHEDULE

ITEM	VOLTAGE	PH	MOTOR HP	AMPERE	WIRE SIZE	CONDUIT SIZE	REMARKS
SERVICE ENTRANCE	240/120	3	100	2	1-1/4		LOCATION AS REQUIRED
CONTROL PANEL	240	3	100	2	1-1/4		
PUMP MOTOR NO. 1	240	3	20/10*	27/14*	10/12*	3/4	*10 HP AT LIFT STATION NO. 7 ONLY
PUMP MOTOR NO. 2	240	3	20/10*	27/14*	10/12*	3/4	*10 HP AT LIFT STATION NO. 7 ONLY
LIGHT POLE	240	1	*	8	3/4		*SEE LIGHT POLE LAYOUT FOR EACH STATION
LIGHT PANEL	240/120	1	50	8	3/4		12 CIRCUIT LIGHTING PANEL 100 AMP MAINS
MAGNETIC FLOW METER POWER	120	1	1	12	3/4		CONNECT AS REQUIRED
MAGNETIC FLOW METER CONTROL					2/C	3/4	MANUFACTURER RECOMMENDED SIGNAL CABLE
ULTRASONIC METER POWER	120	1	1	12	3/4		CONNECT AS REQUIRED
ULTRASONIC METER CONTROL					2/C	3/4	MANUFACTURER RECOMMENDED SIGNAL CABLE
WEIR GATE POWER	120	1	.33	7.2	12	3/4	FUTURE USE
WEIR GATE CONTROL					4/#14	3/4	FUTURE USE

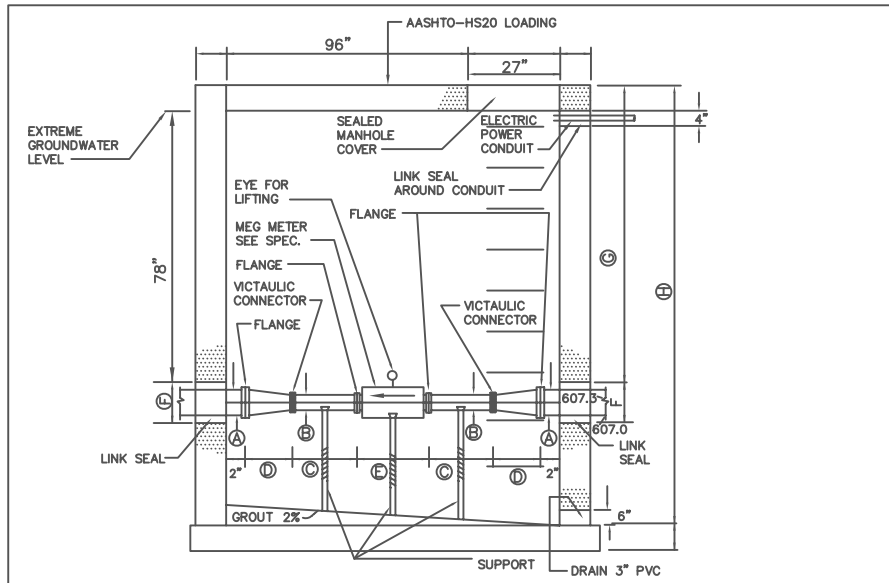
*NUMBER OF GFI CIRCUIT BREAKERS DEPENDENT ON SITE LOCATIONS. ALL CIRCUIT BREAKERS 20 AMP
D.W.
B.H.P.

NO SCALE

CONTRACT NO. 3
LIFT STATION & STORAGE IMPROVEMENTS

M:\PROJECTS\30905-3\030521\01\01.dwg Plotted on 7/2/98 @ 1:17 P.M. by MORGENTHAU

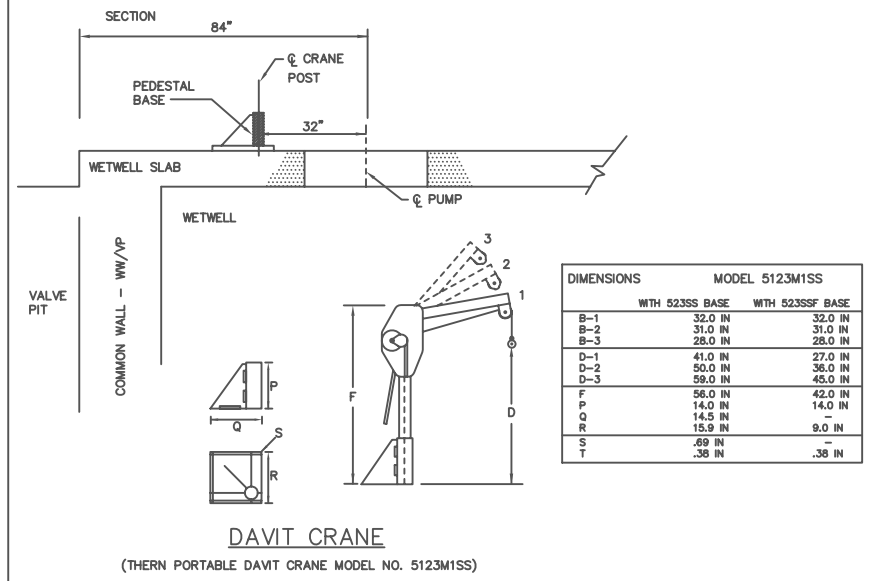
METER MANHOLE



	LS 5	LS 6	LS 7
LINK SEAL/FORCE MAIN OD/ID	10"/6"	10"/6"	8"/4"
LINK SEAL/CONDUIT OD/ID	8"/4"	8"/4"	8"/4"
LINK SEAL/DRAIN OD/ID	8"/4"	8"/4"	8"/4"
FORCE MAIN ϕ , (A)	8"	8"	6"
MAG METER ϕ , (B)	6"	6"	4"
MAG METER ℓ , (C)	~12"-18"	~12"-18"	~12"-18"
ENLARGEMENT/REDUCER SMALL ϕ , LARGE ϕ	8"/6"	8"/6"	6"/4"
SMALL ϕ PIPE ℓ , (D)	18"	18"	12"
ENLARGEMENT/REDUCER ℓ , (E)	11"	11"	9"
FORCE MAIN PENETRATION, OD (F)	10"	10"	8"
GRADE TO F.M. INVERT (G)	8'	6.15'	6'
GRADE TO DRAIN INVERT (H)	9'	7.15'	7'

NOTES:

- EXTREME GROUNDWATER ELEVATION IS AT GRADE.
- EARTH COVER 0'-0".
- DESIGN LOADING - AASHTO HS 20-44
- PLAN VIEW SHAPE - SQUARE OR CIRCULAR.
- STRUCTURE SHALL BE SEALED TO EXTERNAL WATER SOURCES.
- D.J.P. SPOOL WITH VITUALIC TYPE ENDS TO BE PROVIDED AT ALL METER MANHOLES. SPOOL LENGTH TO BE 2x Cx E. PAINTED AS DIRECTED BY OWNER OR ENGINEER.

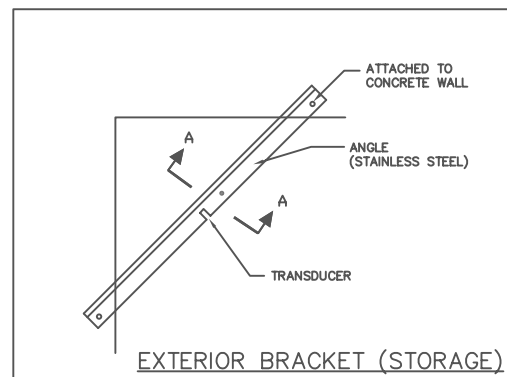


D.W

B.H.P.

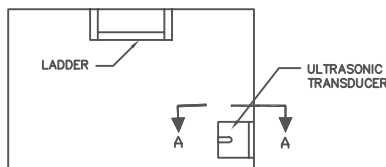
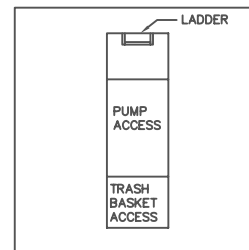
NO SCALE

ULTRASONIC LEVEL METER



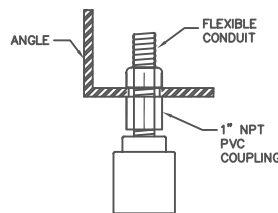
EXTERIOR BRACKET (STORAGE)

PLAN



ACCESS HATCH WET WELL AND LEVEL SENSORS

INTERIOR BRACKET (WET WELL)



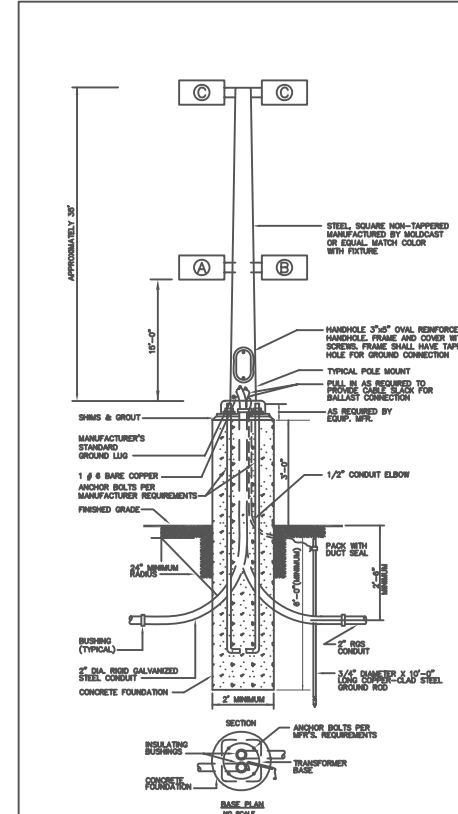
SECTION A - A

LIGHT POLE

LIGHTING POLE TYPE	EQUIPMENT REQUIREMENTS		
	FIXTURE TYPE	QUANTITY	CONTROL
I	(A)	1	PHOTO CONTROL
	(B)	1	CONTROL PANEL INTERIOR SWITCH
	(C)	2	CONTROL PANEL INTERIOR SWITCH
II	(C)	2	CONTROL PANEL INTERIOR SWITCH
III	(A)	1	PHOTO CONTROL
	(B)	1	CONTROL PANEL INTERIOR SWITCH
	(C)	3	CONTROL PANEL INTERIOR SWITCH

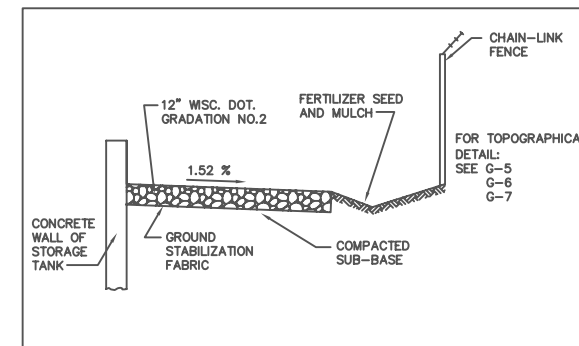
- (A) 150 WATT HIGH PRESSURE SODIUM WITH PHOTO CONTROL AND TYPE III REFLECTOR AS MANUFACTURED BY MOLDCAST MODEL NO. MF 1325-24-7-3-0-XX-PCR OR EQUAL.
- (B) 400 WATT METAL HALIDE SWITCHED, WITH TYPE IV REFLECTOR AS MANUFACTURED BY MOLDCAST MODEL NO. MF 2340-24-N-3-0-XX.
- (C) 400 WATT HIGH PRESSURE SODIUM SWITCHED, WITH TYPE III REFLECTOR AS MANUFACTURED BY MOLDCAST MODEL NO. MF 2340-24-N-3-0-XX.
- N = # OF FIXTURES REQUIRED AS DESCRIBED IN LIGHTING FIXTURE TYPE SCHEDULE.
- XX = COLOR TO BE DETERMINED BY OWNER.
- POLE - 35 FEET SQUARE STEEL NON-TAPERED AS MANUFACTURED BY MOLDCAST MODEL NO. S1635JB, COLOR TO BE DETERMINED BY OWNER.

- THE VOLTAGE FOR ALL FIXTURES SHALL BE 240 VOLT.
- SWITCHES MOUNTED IN CONTROL PANEL SHALL BE 20 AMP.
- MINIMUM WIRE SIZE SHALL BE #10 AWG, THHW. CALCULATE VOLTAGE DROP AND RESIZE WIRE AS NECESSARY.
- INCLUDE ALL WIRE, CONDUIT, MOUNTING EQUIPMENT AND ALL APPURTENANCES NECESSARY FOR A COMPLETE INSTALLATION.
- PRIOR TO ORDERING CONSULT WITH OWNER ON DIRECTION AND ANGLE OF FIXTURE MOUNTS.
- ALL POLES MUST BE FACTORY DRILLED FOR THE FIXTURES SPECIFIED.
- MODEL NO. WERE AS OF 6/96. VERIFY WITH MANUFACTURER PRIOR TO BIDDING.



TYPICAL POLE FOUNDATION DETAIL

ACCESS ROAD - BASE



SHEET G-7:
1. REMOVE DAVIT CRANE DRAWING AND INFORMATION (SEE REVISED CRANE IN ITEM 6 OF SPECIFICATION ABOVE.)

2. RENAME ULTRASONIC LEVEL METER DRAWING AS LEVELING METERS AND MODIFY SECTION A-A WITH THE FOLLOWING.

ULTRASONIC LEVEL METER TRANSDUCER BRACKET/ASSEMBLY NOTES:
1. ALL HARDWARE AND BRACKETS TO BE STAINLESS STEEL.
2. 1/4\"/>

FLOAT TREE BRACKET/ ASSEMBLY NOTES:

- FLOAT TREE CABLE TO BE STAINLESS STEEL AND ATTACHED TO 1/4\"/>
- ALL HARDWARE AND BRACKET TO BE STAINLESS STEEL.
- 1/4\"/>
- STAINLESS STEEL HANDLE FOR LIFTING OF FLOAT SYSTEM TO BE PROVIDED

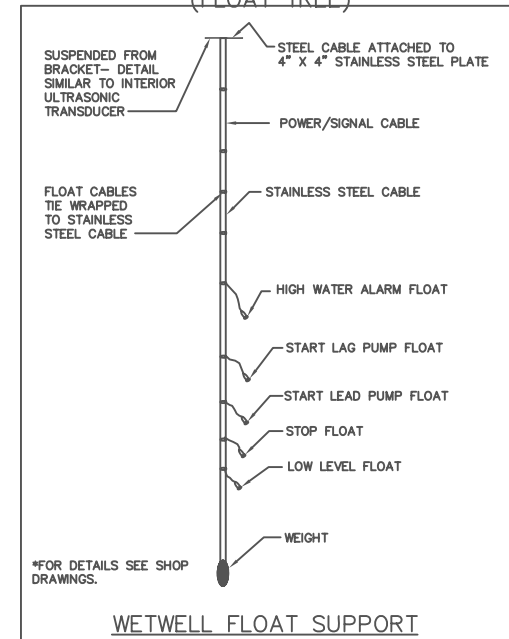
3. METER MANHOLE DRAWING

GENERAL NOTES:
1. SUPPORTS TO BE 316 GRADE L STAINLESS STEEL.
2. PROVIDE SPARE DIP TO BE AVAILABLE IN EACH METER MANHOLE FOR REPLACEMENT OF MAGNETIC FLOW METER AND PIPE END WHEN REMOVED.

4. LIGHT POLE DRAWING.

- 120 V, 20 AMP, 6FCI, WEATHERPROOF DUPLEX RECEPTACLE TO BE PROVIDED AT BASE OF ALL LIGHT POLES. RECEPTACLES TO BE SWITCHED AT CONTROL PANEL.
- SWITCHES TO CONTROL YARD LIGHTING TO BE HOUSED IN CONTROL PANEL.

(FLOAT TREE)

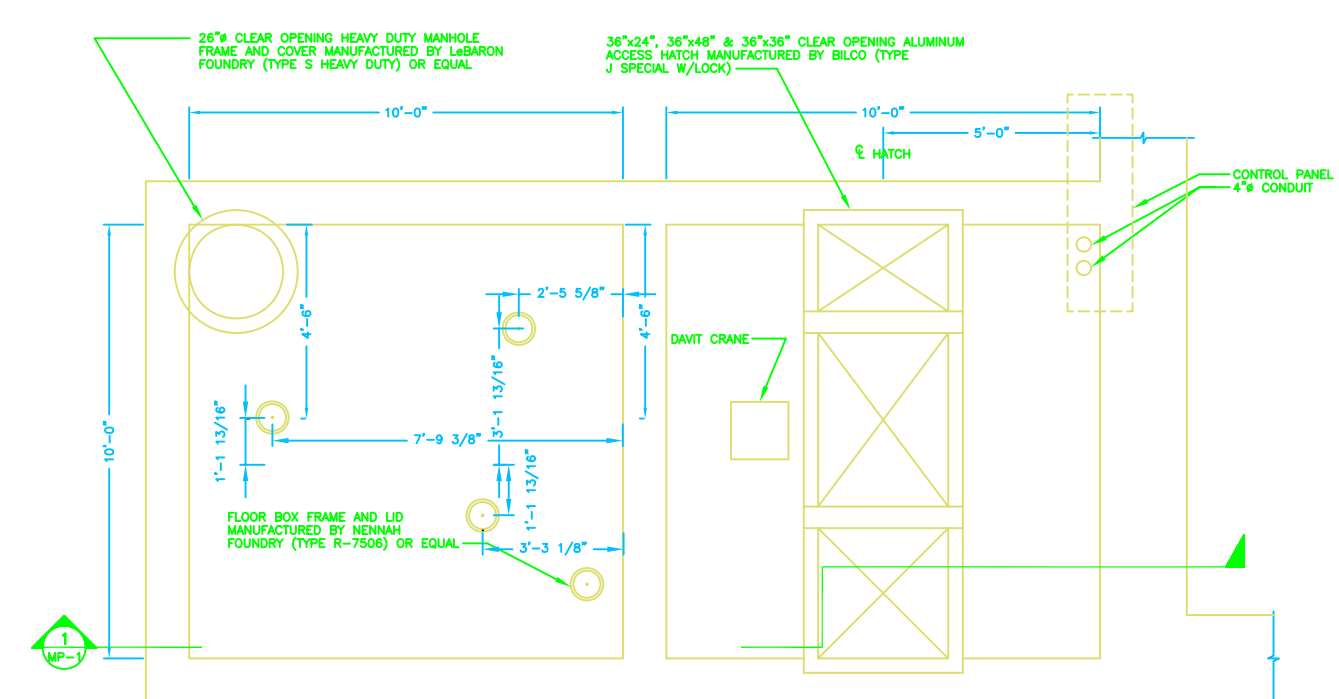


*FOR DETAILS SEE SHOP DRAWINGS.

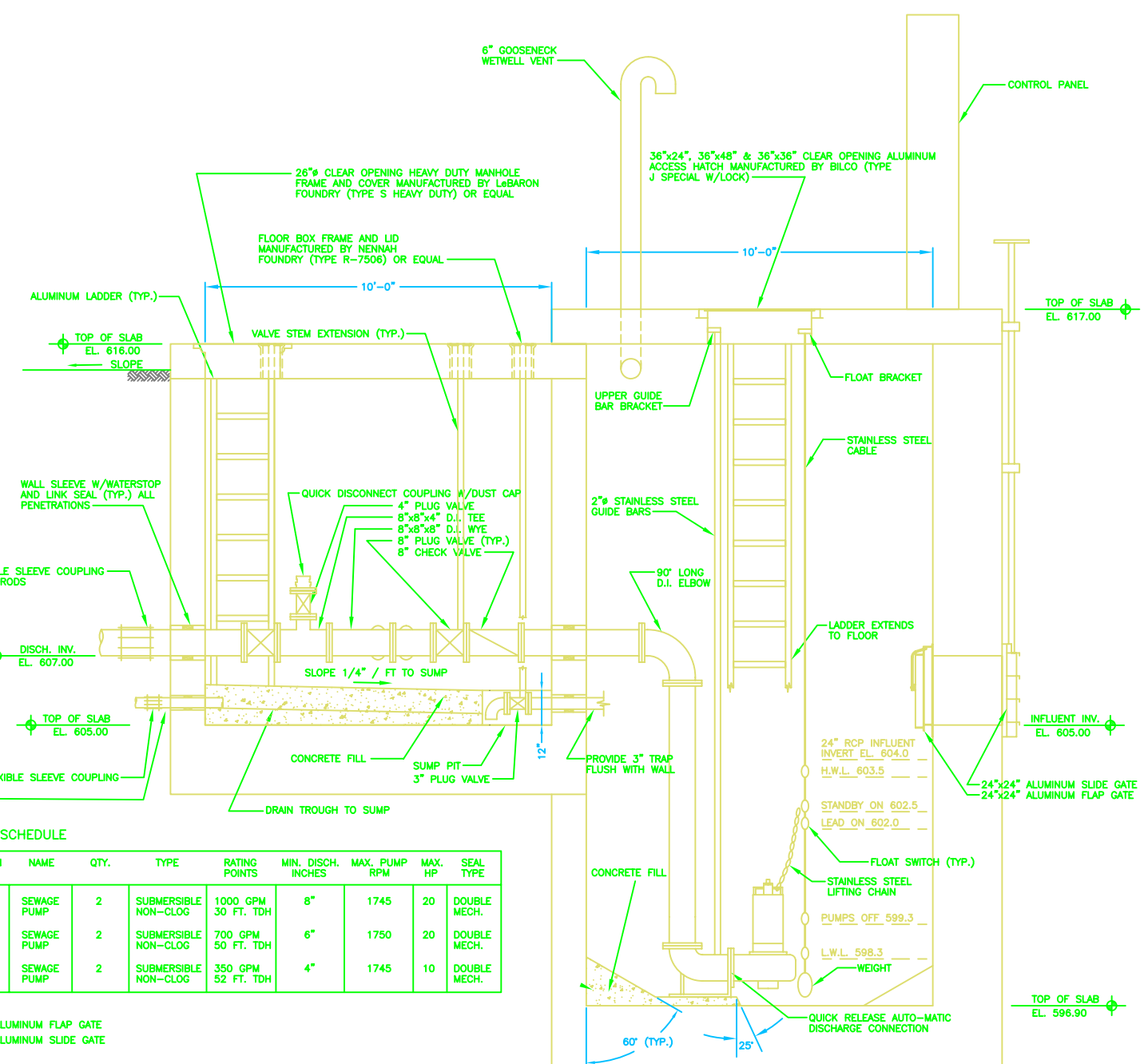
WETWELL FLOAT SUPPORT

G-7

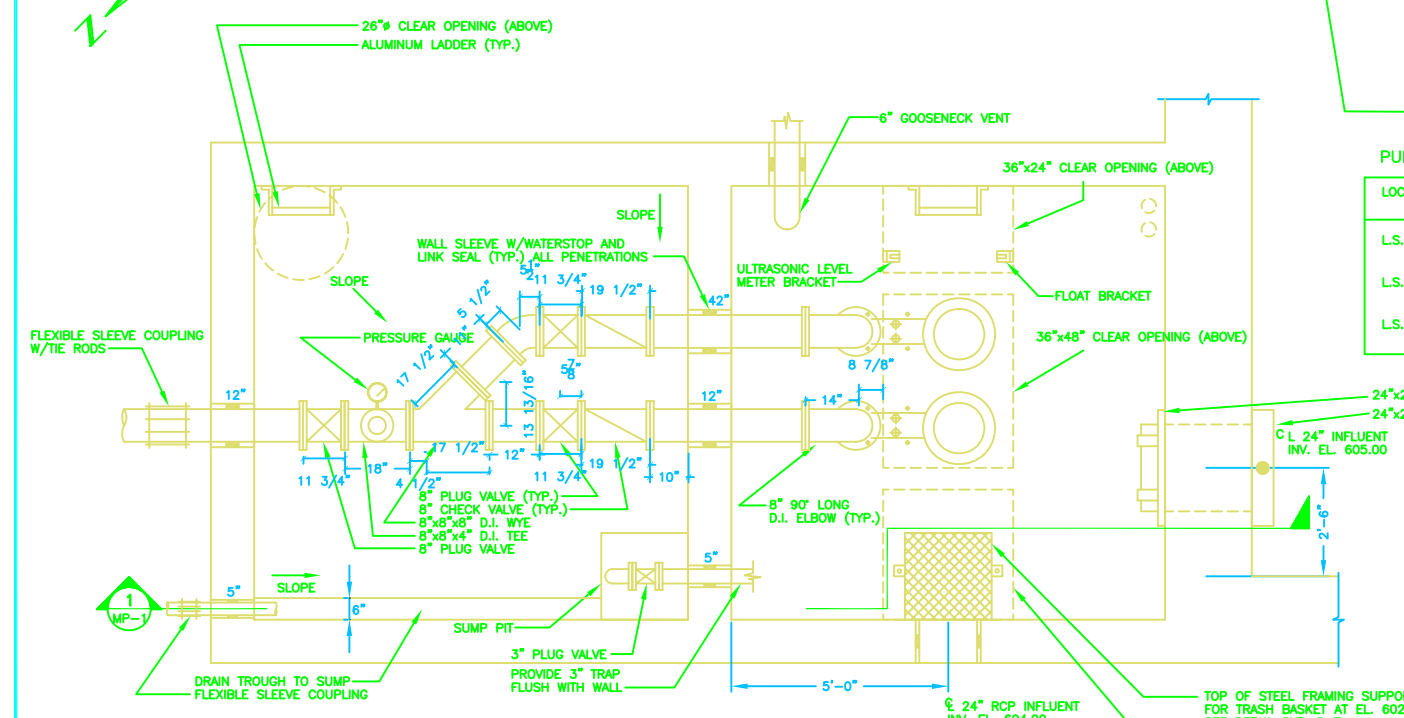
CONTRACT NO. 3
LIFT STATION & STORAGE IMPROVEMENTS



LIFT STATION No. 5 (UPPER)
SCALE: 1/2"=1'-0"



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



LIFT STATION No. 5 (LOWER)
SCALE: 1/2"=1'-0"

PUMP SCHEDULE

LOCATION	NAME	QTY.	TYPE	RATING POINTS	MIN. DISCH. INCHES	MAX. PUMP RPM	MAX. HP	SEAL TYPE
L.S. # 5	SEWAGE PUMP	2	SUBMERSIBLE NON-CLOG	1000 GPM 30 FT. TDH	8"	1745	20	DOUBLE MECH.
L.S. # 6	SEWAGE PUMP	2	SUBMERSIBLE NON-CLOG	700 GPM 50 FT. TDH	6"	1750	20	DOUBLE MECH.
L.S. # 7	SEWAGE PUMP	2	SUBMERSIBLE NON-CLOG	350 GPM 52 FT. TDH	4"	1745	10	DOUBLE MECH.

- SHEETS: MP-1, MP-2, AND MP-3
- GENERAL NOTE 3:
VALVE FIT LADDERS TO BE ALUMINUM SURETRACK LADDERS WITH SURETRACK CLIMBING SYSTEM AS MANUFACTURED BY MILLER EQUIPMENT, FRANKLIN, PA.
 - GENERAL NOTE 5:
WET WELL LADDER TO BE 316 GRADE L STAINLESS. FALL PROTECTION IS NOT TO BE PROVIDED. WET WELL IS A CLASS 1, DIVISION 2 AREA.
 - GENERAL NOTE 6:
GUIDE RAILS FOR PUMPS AND TRASH BASKETS TO BE 316 GRADE L STAINLESS STEEL.
 - GENERAL NOTE 7:
STAINLESS STEEL LIFTING CHAIN TO BE LOAD RATED FOR 1 TON AND SUFFICIENTLY LONG FOR ATTACHMENT TO CABLE HOIST OF DAVIT CRANE.
 - GENERAL NOTE 8:
ONE SPARE T-HANDLE TO BE PROVIDED AND STORED IN EACH VALVE PIT.

- GENERAL NOTES:
- DIMENSIONS TO SUIT EQUIPMENT MANUFACTURER'S AND ENGINEER'S RECOMMENDATIONS.
 - CONTRACTOR TO PROVIDE PROPER SUPPORT FOR PIPING BOTH DURING AND AFTER CONSTRUCTION.
 - ALL LADDERS TO BE ALUMINUM SURETRACK LADDERS WITH SURETRACK CLIMBING SYSTEM AS MANUFACTURED BY MILLER EQUIPMENT, FRANKLIN, PA.
 - WET WELL NOT DESIGNED TO HANDLE VEHICULAR TRAFFIC.
 - 4" QUICK DISCONNECT CONNECTION TO BE BRONZE COUPLER WITH FLANGED FACE AND DUST CAP AS MANUFACTURED BY DOVER CORP./OPW DIVISION (TYPE 633-LBS) OR EQUAL.

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				

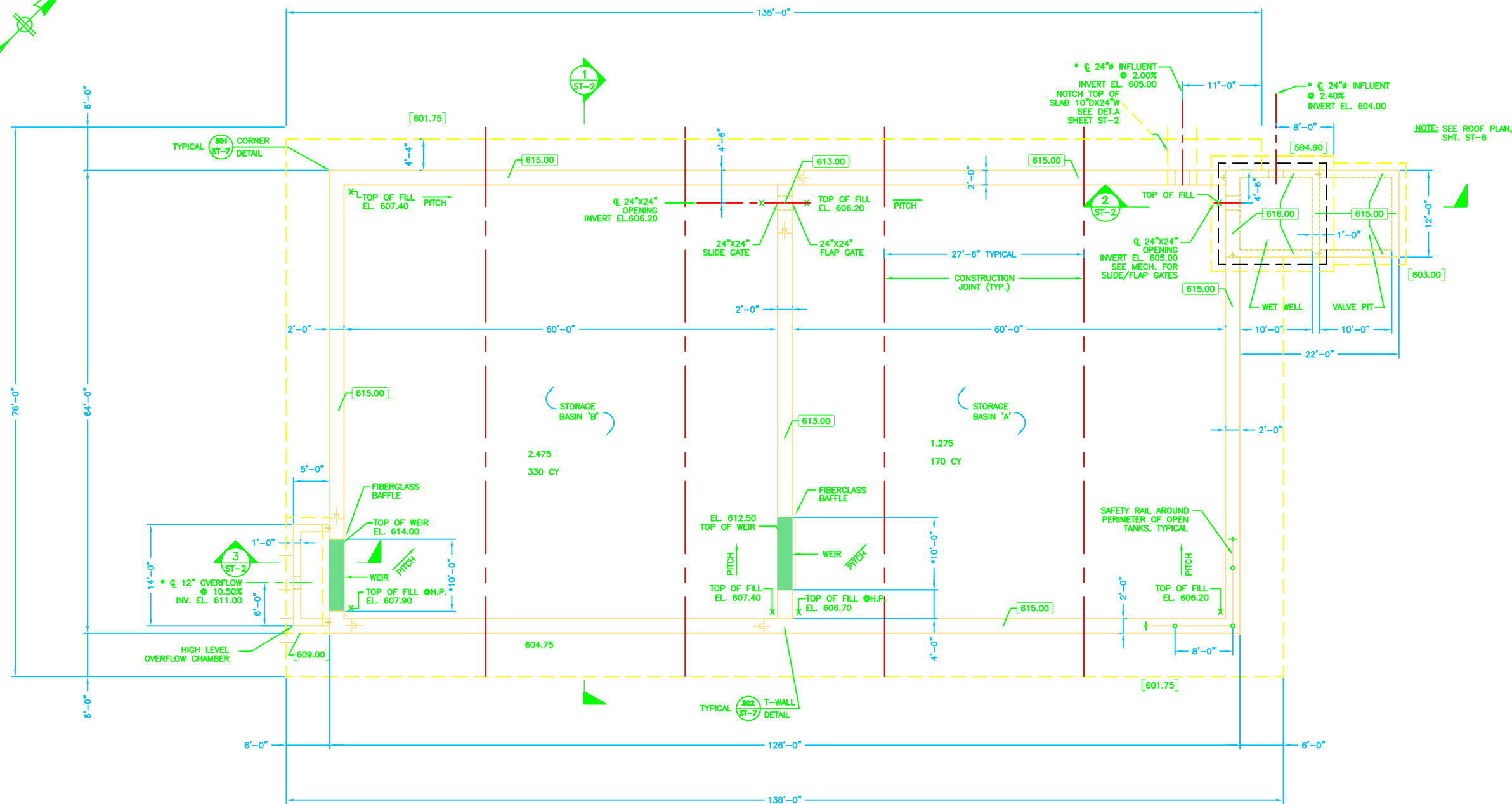
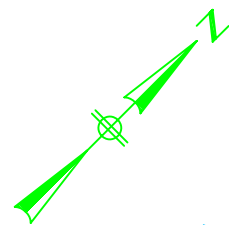
DRAWN BY	GS
DEPT. CHECK	JF
PROJ. CHECK	JF

BETA ENGINEERING, INC.
Engineers/Planners

SCALE:
1/2"=1'-0"
UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

LIFT STATION NO. 5
SUPERIOR, WISCONSIN
LIFT STATION PLAN / SECTION
MECHANICAL

JOB: 632
DATE: JUNE 26, 1996
FILE: 632MP1.DWG
SHEET: **MP-1**



FOUNDATION PLAN – LIFT STATION No. 5

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

LEGEND:


- 1. [601.75] – INDICATES BOTTOM OF FOOTING
- 2. X – INDICATES TOP OF CONCRETE FILL ELEVATION
- 3. [615.00] – INDICATES TOP OF CONCRETE WALL
- 4. * – COORDINATE WITH MECH./PROCESS DRAWINGS

SHEETS: S-1, S-2, AND S-3:

- 1. NOTE: BAFFLES TO EXTEND 6 INCHES ABOVE CONCRETE WEIR ELEVATION, 6 INCHES BEYOND WEIR ENDS, 12 INCHES BELOW CONCRETE WEIR ELEVATION AND 12 INCHES AWAY FROM WALL.
- 2. NOTE: FIBERGLASS WEIR PLATES TO BE PROVIDED AT EMERGENCY OVERFLOW WEIRS WITH 2" ADJUSTABLE SLOTS SUFFICIENTLY SIZED SO THAT 4" OF PLATE EXTENDS ABOVE CONCRETE WEIR ELEVATION WHEN CENTERED.

NUMBER	DATE	MADE BY	CHECKED BY	REVISIONS	DESCRIPTION

DRAWN BY	KAH
DEPT. CHECK	RSW
PROJ. CHECK	JF

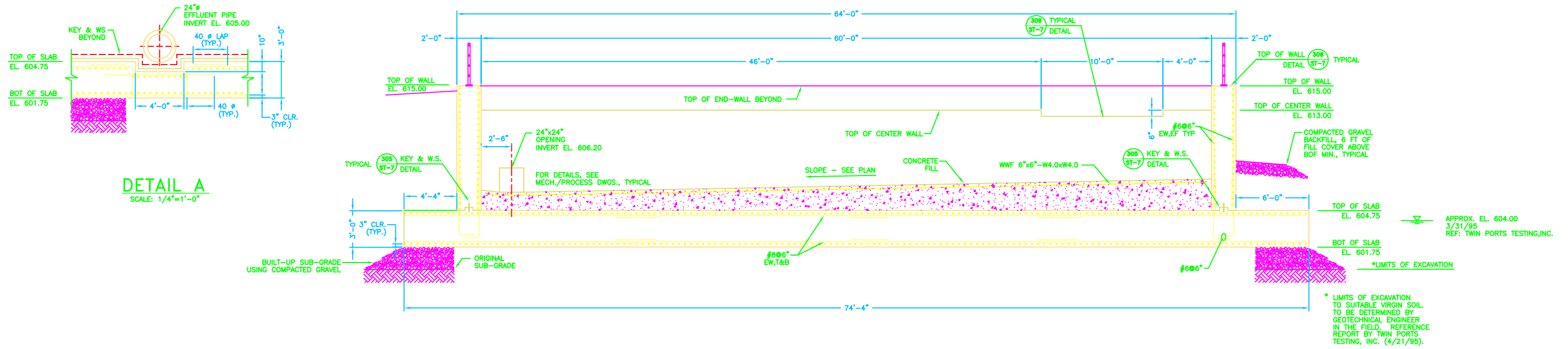

BETA ENGINEERING, INC.
 Engineers/Planners

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

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

LIFT STATION NO. 5
 SUPERIOR, WISCONSIN
 FOUNDATION PLAN
 STRUCTURAL

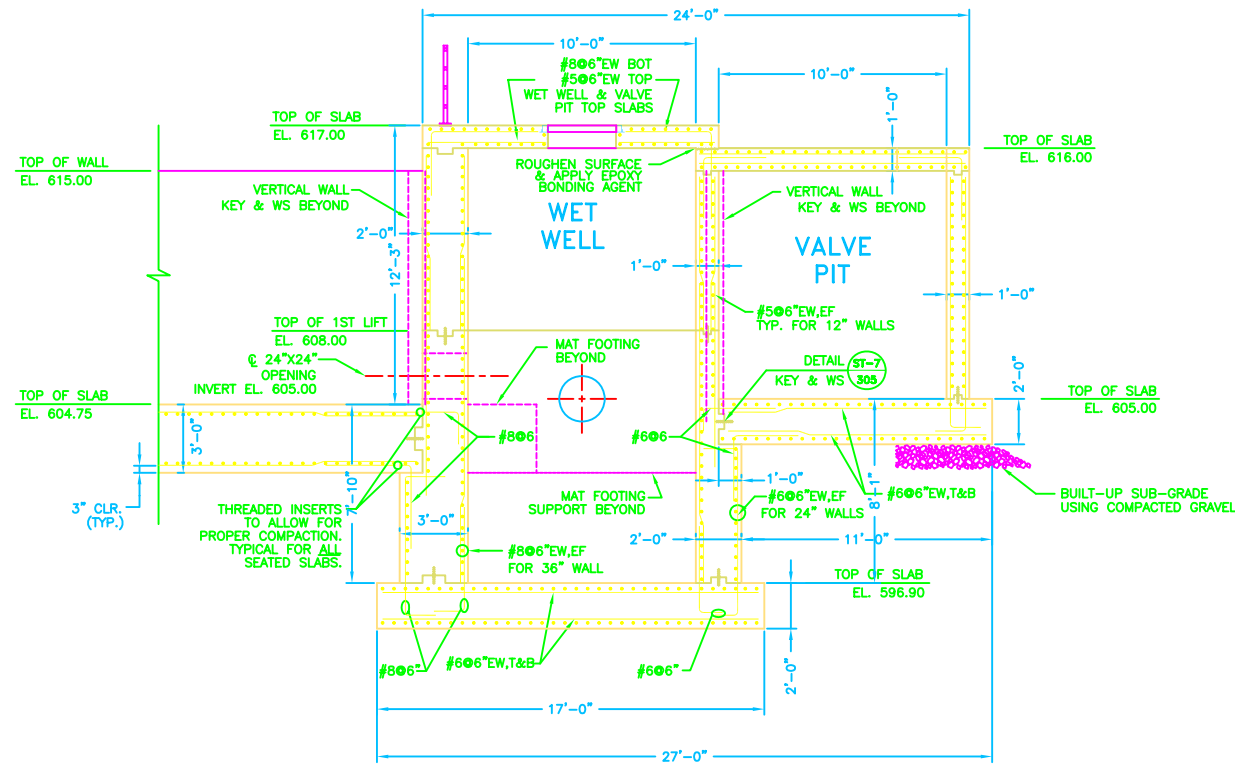
JOB:	632
DATE:	JUNE 26, 1996
FILE:	632ST1.DWG
SHEET:	ST-1



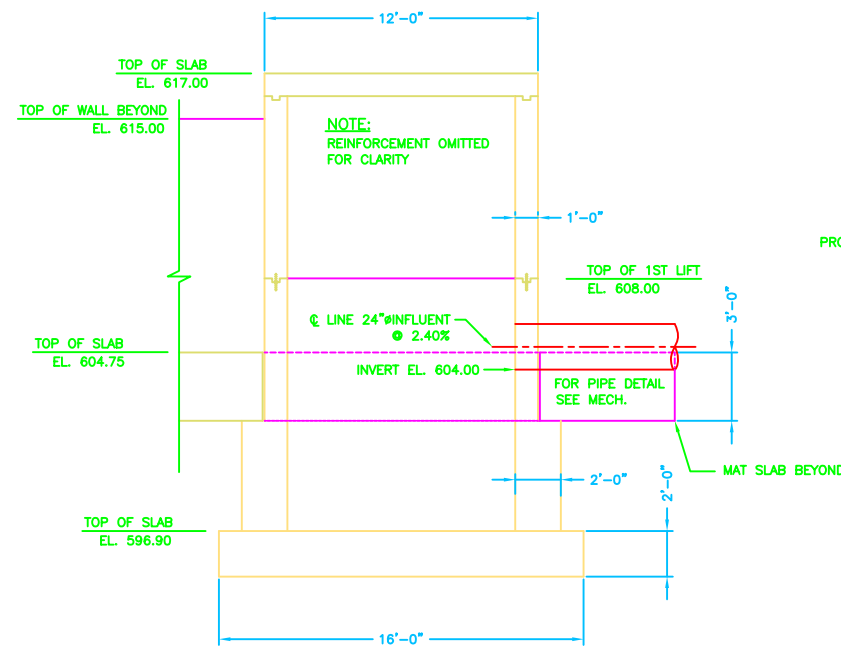
DETAIL A
SCALE: 1/4"=1'-0"

LIFT STATION No. 5

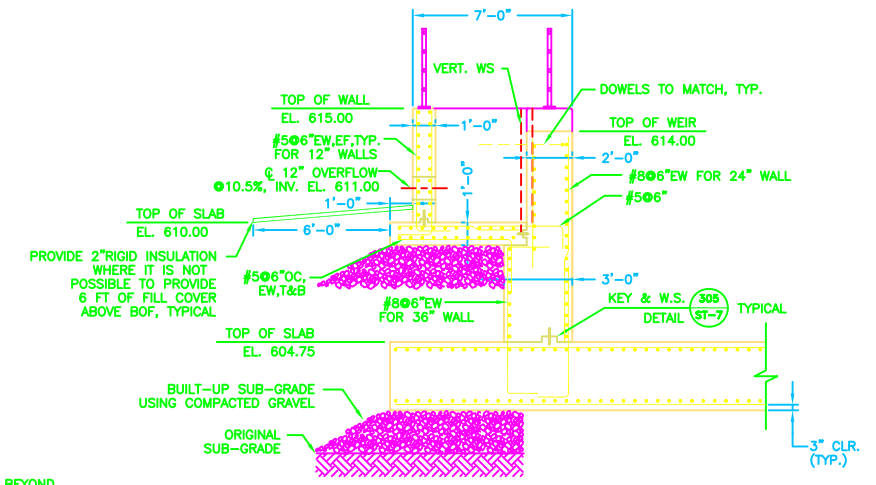
SECTION 1
SCALE: 1/4"=1'-0" ST-1



SECTION 2
SCALE: 1/4"=1'-0" ST-1



SECTION 3
SCALE: 1/4"=1'-0" ST-2



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

SHEETS: S-1, S-2, AND S-3:

- NOTE: BAFFLES TO EXTEND 6 INCHES ABOVE CONCRETE WEIR ELEVATION, 6 INCHES BEYOND WEIR ENDS, 12 INCHES BELOW CONCRETE WEIR ELEVATION AND 12 INCHES AWAY FROM WALL.
- NOTE: FIBERGLASS WEIR PLATES TO BE PROVIDED AT EMERGENCY OVERFLOW WEIRS WITH 2" ADJUSTABLE SLOTS SUFFICIENTLY SIZED SO THAT 4" OF PLATE EXTENDS ABOVE CONCRETE WEIR ELEVATION WHEN CENTERED.

DRAWN BY	KAH
DEPT. CHECK	RSW
PROJ. CHECK	JF

BETA ENGINEERING, INC.
Engineers/Planners

SCALE:

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

LIFT STATION NO. 5
SUPERIOR,
WISCONSIN
SECTIONS
STRUCTURAL

JOB:	632
DATE:	JUNE 26, 1996
FILE:	632ST2.DWG
SHEET:	ST-2

UNLESS OTHERWISE NOTED OR CHANGED BY REPRODUCTION

NUMBER	DATE	MADE BY	CHECKED BY	DESCRIPTION
REVISIONS				