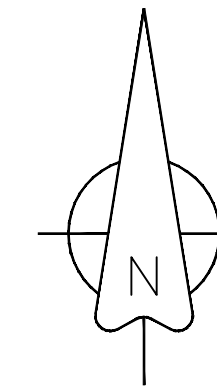
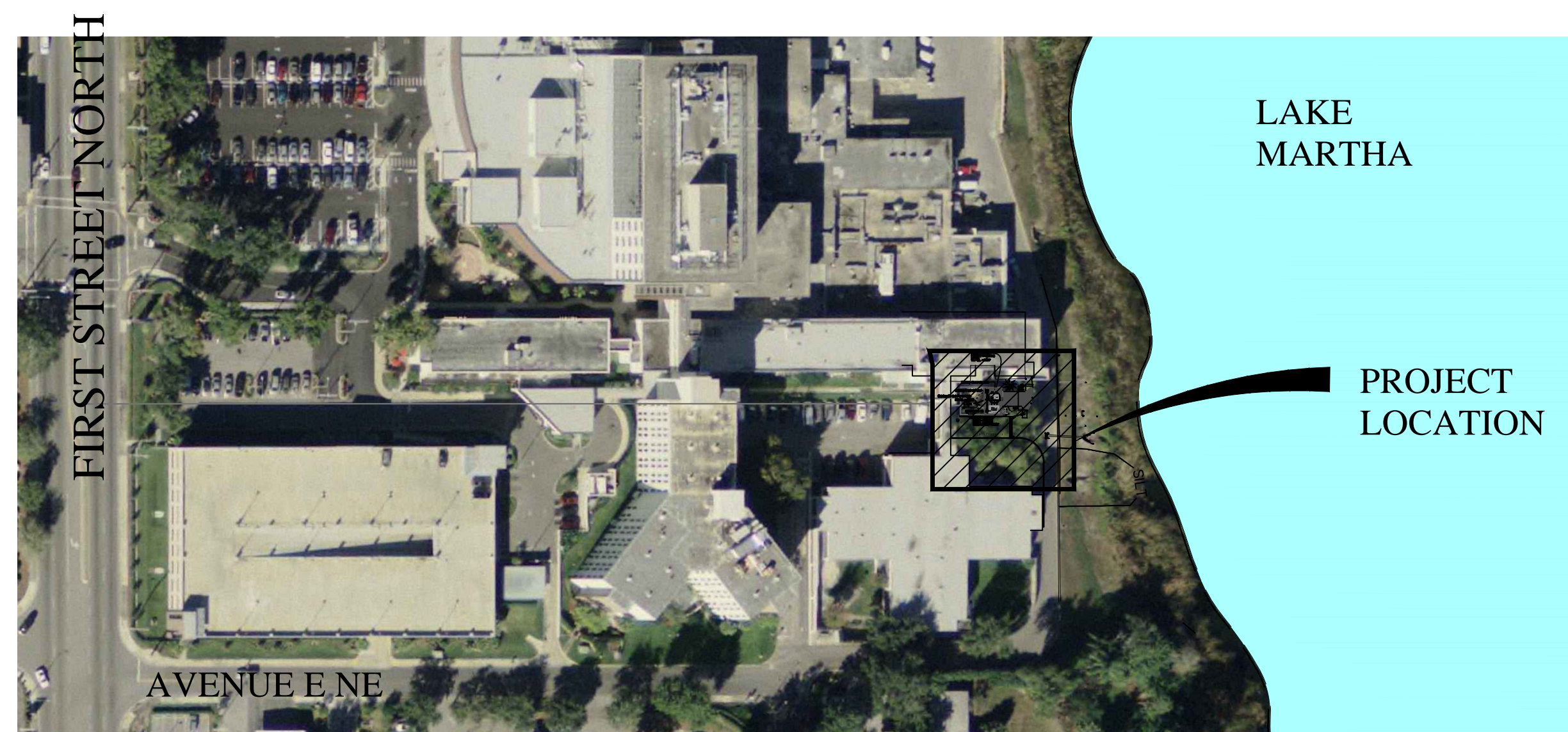


REPLACEMENT OF LS-110 (WINTER HAVEN HOSPITAL)



PLEASE NOTE THAT THIS CONSTRUCTION SITE IS ON A SMOKE FREE AND TOBACCO PRODUCT FREE CAMPUS AND THE CONTRACTOR WILL BE REQUIRED TO ADHERE TO THIS POLICY.

DRAWING INDEX

SHT No.	DESCRIPTION
1	COVER SHEET
2	EXISTING CONDITIONS & DEMOLITION
3	CONSTRUCTION PLAN
4	CONSTRUCTION NOTES & DRIVEWAY LAYOUT
5	LIFT STATION DETAILS

490 3rd STREET N.W.
WINTER HAVEN, FL 33881
PHONE: 863/291-5850
FAX: 863/291-5211

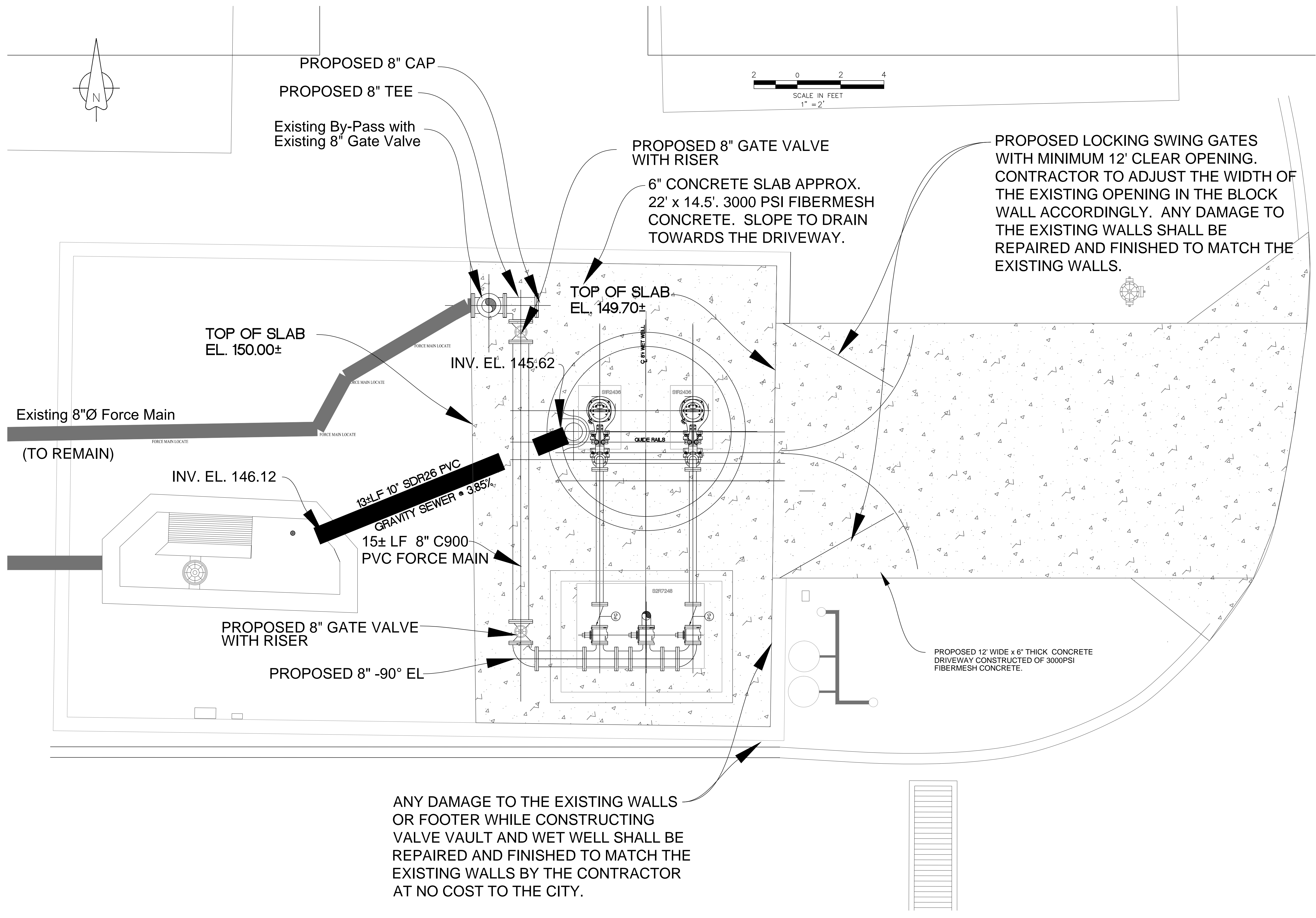


ENGINEERING SERVICES DIVISION

AMIN A HANHAN, P.E.
FLORIDA LICENSE #68410

PROJECT No.: 10-111-IH DATE: MAY 2011

Drawing: C:\Users\dknourf\appdata\local\temp\AcPublish_4692\DESIGN 2 LS-110 REPLACEMENT.dwg
 Layout: CONSTRUCTION PLAN
 Oct 07, 2011, 4: 05pm

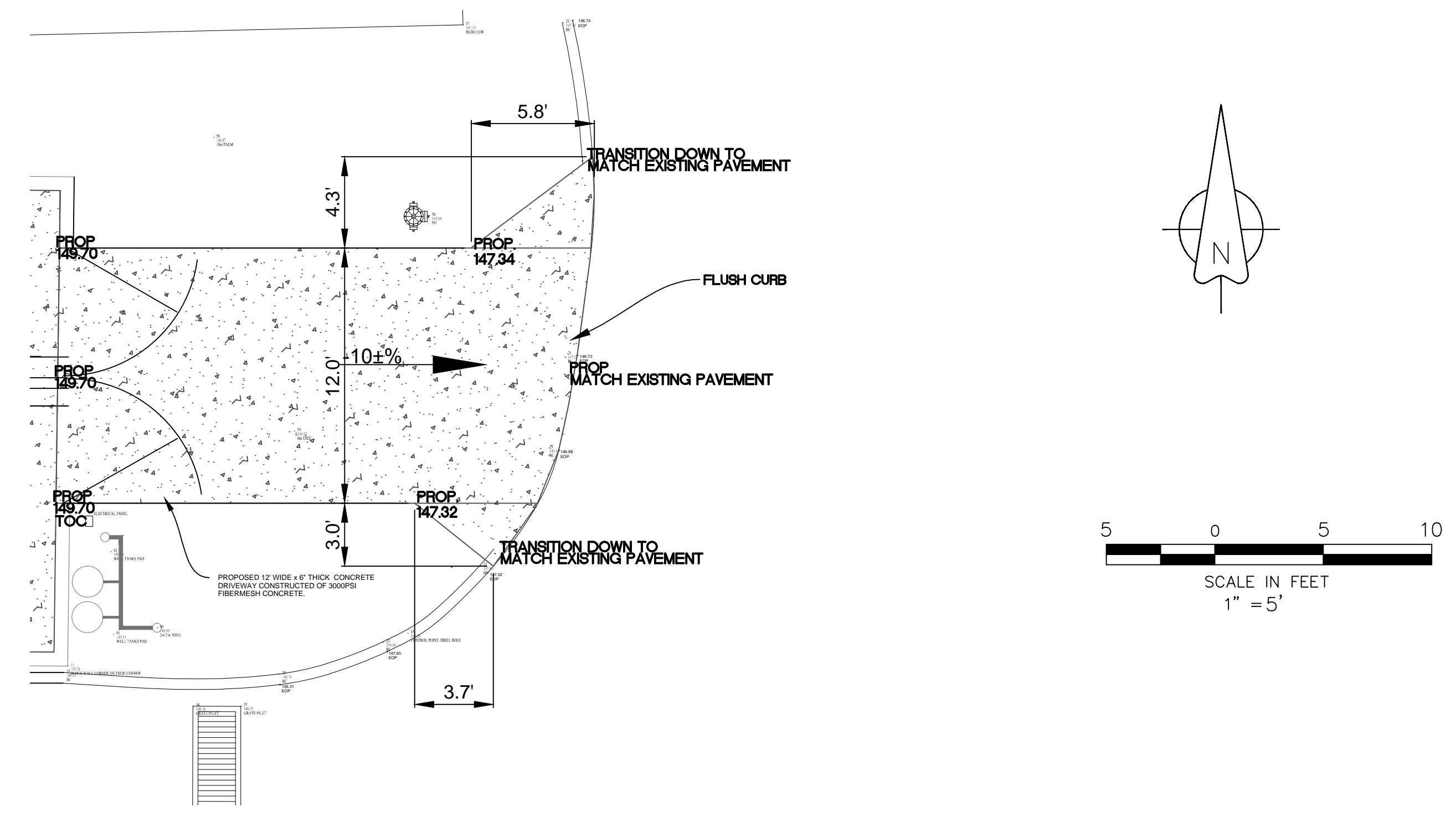


DESIGNED	DKK				
DRAWN	DKK				
CHECKED	JM				
APPROVED	AAH				
PROJECT NO.	10-111-IH				
DATE	MAY 2011				
NO.					
REVISION	DESCRIPTION				
ENGINEERING SERVICES DIVISION 490 THIRD STREET, N.W. WINTER HAVEN, FLA. 33881 (863) 291-5850					
LS-110 CONSTRUCTION PLAN					
CITY OF WINTER HAVEN REPLACEMENT OF LIFT STATION 110					
AMIN A HANHAN FL. P.E. NO. 68410					
SHEET NO.					
3					

Drawing: C:\Users\dknourf\appdata\local\temp\AcPublish_4692\DESIGN 2 LS-110 REPLACEMENT.dwg
 Layout: CONSTRUCTION NOTES AND DRIVEWAY
 Oct 07, 2011, 4: 05pm

CONTRACTOR NOTES:

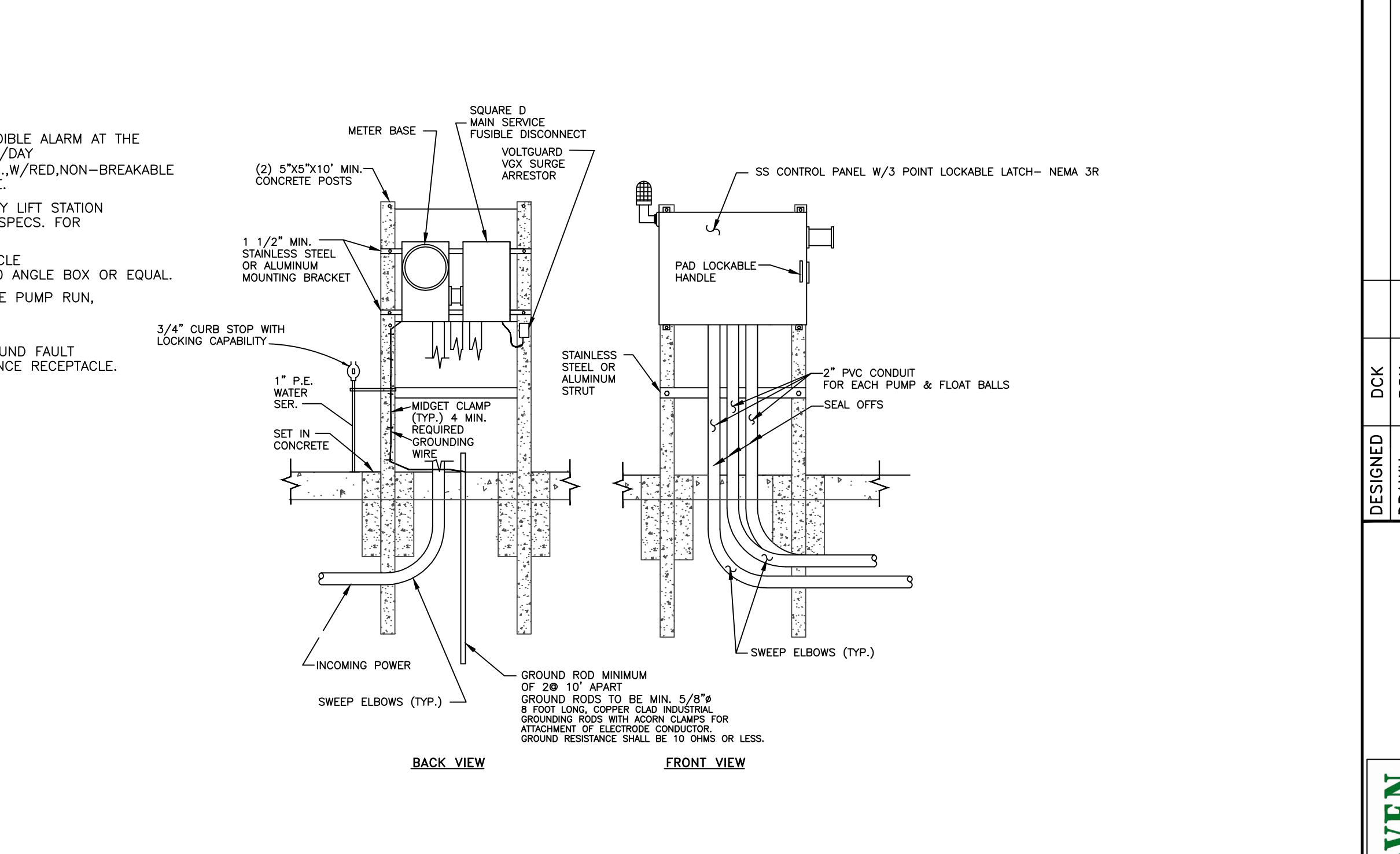
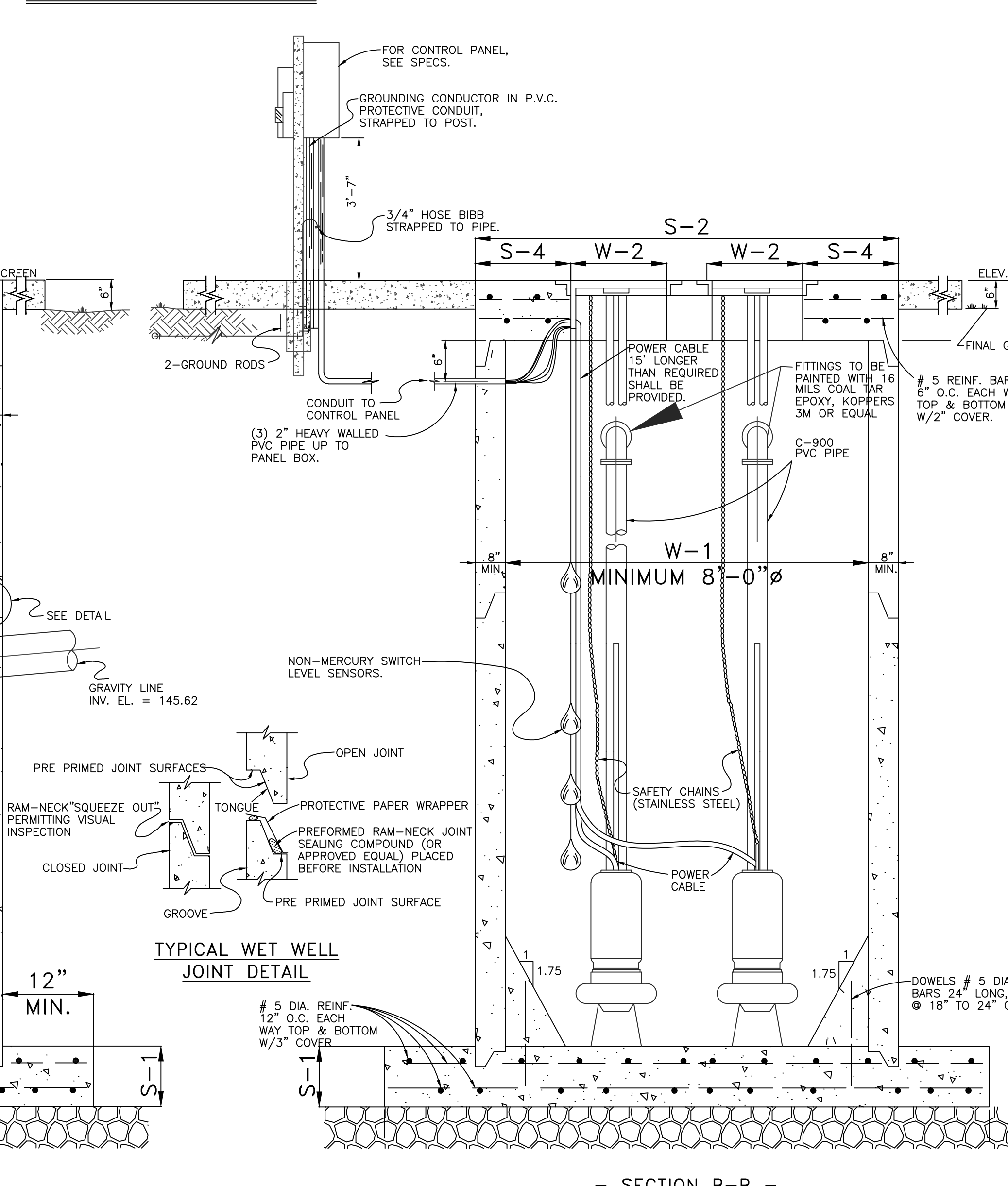
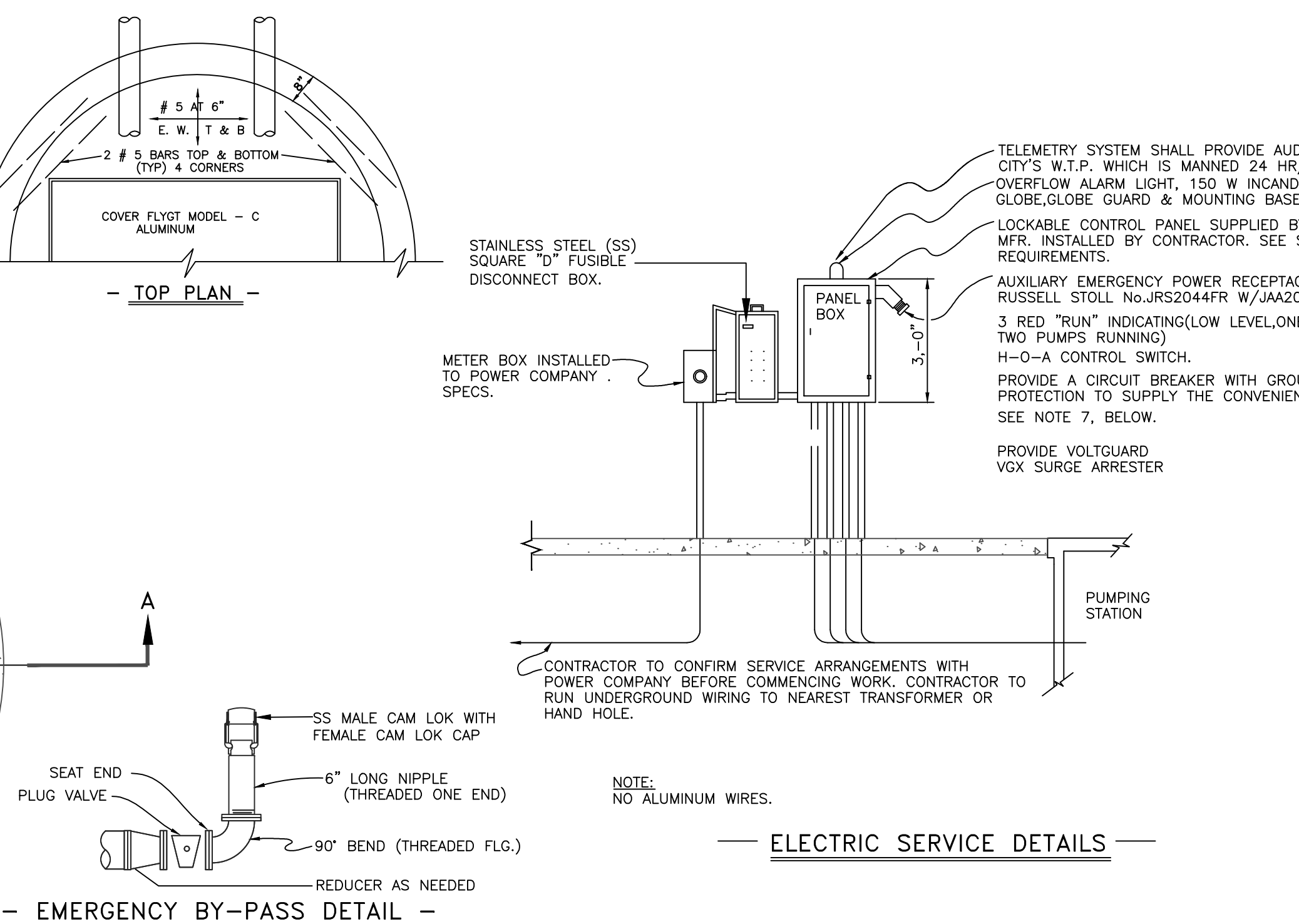
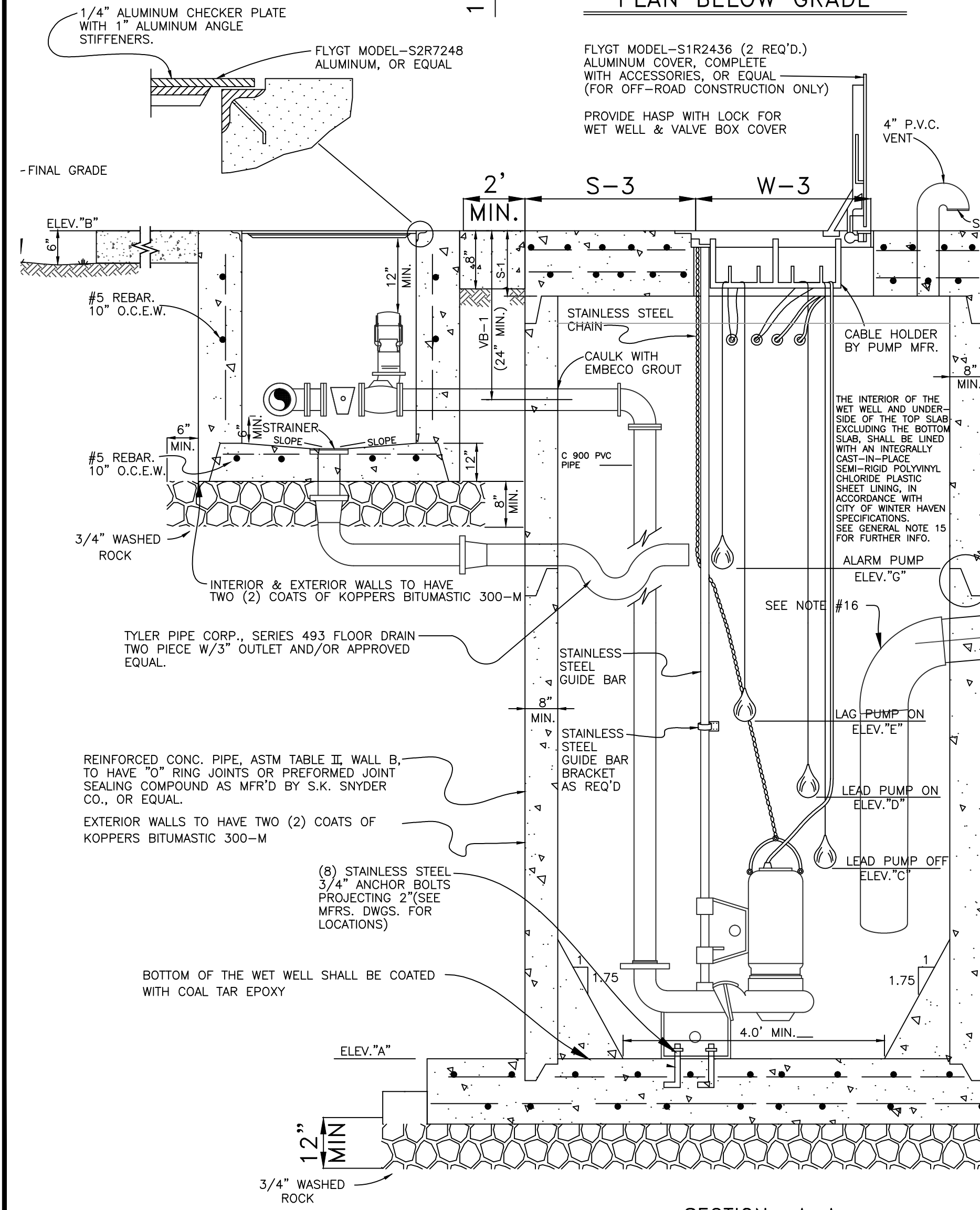
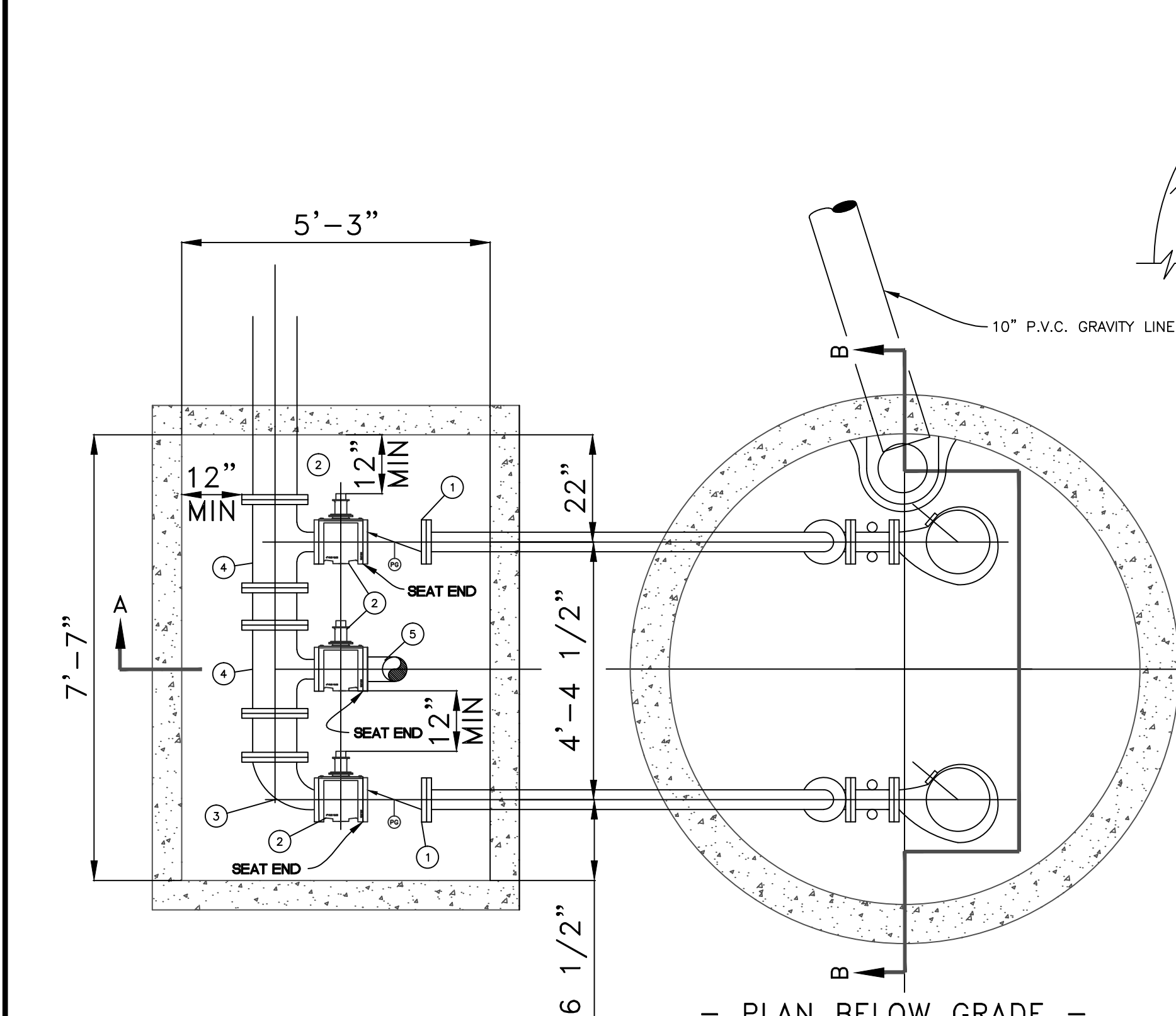
1. CONTRACTOR SHALL INSTALL NEW FLYGT PUMPS & ASSOCIATED EQUIPMENT FURNISHED BY THE CITY OF WINTER HAVEN. (SEE NOTE 2)
2. CITY OF WINTER HAVEN WILL FURNISH, PUMPS, PEDESTALS, GUIDE RAILS, GUIDE RAIL BRACKETS, CABLE HOLDER, LIFT CHAINS WITH GRIP EYES, EXPANSION ANCHORS, CONTROL PANEL TO CITY OF WINTER HAVEN STANDARDS, GENERATOR RECEPTACLE, CABLE, WET WELL HATCH AND VALVE VAULT HATCH.
3. CONTRACTOR SHALL FURNISH THE WET WELL (WITH LINER ON THE INSIDE AND COATED ON THE OUTSIDE AND WRAPPED TO ABOVE THE NORMAL HIGH WATER ELEVATION), VALVE BOX (COATED INSIDE AND OUT), PIPING, VALVES, AND ALL OTHER MATERIAL, EQUIPMENT, LABOR AND SUPERVISION REQUIRED TO COMPLETE THE CONSTRUCTION AND START UP OF THE LIFT STATION SO THAT IT IS IN COMPLETE OPERATION BEFORE IT IS ACCEPTED BY THE CITY OF WINTER HAVEN.
4. CONTRACTOR SHALL NOTIFY ITT FLYGT AT 1-407-880-2900 OF THE PRE-CAST CONCRETE MANUFACTURER'S ADDRESS FOR THE DELIVERY OF THE WET WELL AND VALVE VAULT HATCHES.
5. PUMPS SHALL BE FLYGT 4"NP3153.181 WITH 253mm DIAMETER IMPELLER #464 AND A 20HP, 460V, 3Ø, 60Hz MOTOR DESIGNED TO PUMP 753 GPM @ 51.5' TDH. (SEE PUMP CURVE #63-464-00-6050)
6. EXISTING TELEMETRY SHALL BE RECONNECTED BY THE CITY OF WINTER HAVEN UTILITIES DEPARTMENT BEFORE START-UP OF THE SYSTEM.
7. CONTRACTOR SHALL INSTALL AND MAINTAIN BYPASS PUMPS UNTIL THE NEW LIFT STATION IS CLEARED FOR OPERATION BY THE FDEP. BYPASS PUMP SYSTEM SHALL BE A DUAL PUMP SYSTEM PROVIDING AN AUTOMATIC BACK-UP PUMP FOR THE SYSTEM. THE SYSTEM SHALL ALSO HAVE AN AUTOMATIC TELEPHONE DIALING SYSTEM TO NOTIFY THE CONTRACTOR AND SELECTED CITY EMPLOYEES OF ANY PUMPING FAILURE.
8. CONTRACTOR SHALL CONNECT THE NEW 8" FORCE MAIN TO THE EXISTING 8" C.I. FORCE MAIN AT THE EXISTING BYPASS VALVE CONNECTION AS SHOWN. CONTRACTOR SHALL FURNISH ALL FITTINGS NECESSARY TO MAKE THIS CONNECTION.
9. THE INTERIOR AND EXTERIOR OF NEW VALVE VAULT SHALL BE COATED WITH TWO (2) COATS OF KOPPERS BITUMASTIC 300-M.
10. PIPE INSIDE OF THE WET WELL AND VALVE VAULT SHALL BE PVC C-900 WITH 125# FLANGED DUCTILE IRON FITTINGS. ALL PIPE IN THE WET WELL AND VALVE VAULT SHALL BE COATED WITH TWO (2) COATS OF KOPPERS BITUMASTIC 300-M OR APPROVED EQUAL. PIPE CONNECTING THE WET WELL TO THE VALVE VAULT SHALL BE FLANGED DUCTILE IRON PIPE. ALL BOLTS AND NUTS IN THE WET WELL AND VALVE VAULT SHALL BE 316 L STAINLESS STEEL.
11. ALL DISTURBED AREAS SHALL BE SODDED TO MATCH EXISTING SOD AFTER FINAL GRADING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING AND MAINTAINING THE SOD FOR 30 DAYS AFTER ACCEPTANCE OF THE LIFT STATION BY THE CITY.
12. CONTRACTOR SHALL SAW CUT AND REMOVE THE EXISTING TYPE "D" CURB AT THE LOCATION OF THE PROPOSED DRIVEWAY. RE-GRADE THE DRIVEWAY AREA AS NEEDED. INSTALL NEW TYPE "D" TRANSITION CURB AND FLUSH CURB AND CONSTRUCT THE PROPOSED DRIVEWAY.
13. CONTRACTOR SHALL FURNISH AND INSTALL A NEW 12' WIDE (CLEAR OPENING) DOUBLE SWING GATE PER THE CITY'S SPECIFICATIONS.
14. CONTRACTOR SHALL USE THE AREA BETWEEN LAKE MARTHA AND BACK OF CURB FOR STAGING EQUIPMENT AND MATERIAL. CONTRACTOR SHALL REPAIR ALL DAMAGE TO THE AREA, INCLUDING ANY DAMAGE TO THE CURB, AND RE-SOD THE AREA UPON COMPLETION OF THE PROJECT.
15. CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE NORTH AND SOUTH PAST THE PROJECT SITE AND AT LEAST ONE LANE INTO THE PARKING LOT WEST OF THE PROJECT SITE.



PLEASE NOTE THAT THIS CONSTRUCTION SITE IS ON A SMOKE FREE AND TOBACCO PRODUCT FREE CAMPUS AND THE CONTRACTOR WILL BE REQUIRED TO ADHERE TO THIS POLICY.

DESIGNED	DKK						
DRAWN	DKK						
CHECKED	JM						
APPROVED	AAH						
PROJECT NO. 10-111-IH		DATE: MAY 2011		NO.		REVISION DESCRIPTION	
							
ENGINEERING SERVICES DIVISION 490 THIRD STREET, N.W. WINTER HAVEN, FLA. 33881 (863) 291-5850							
CITY OF WINTER HAVEN REPLACEMENT OF LIFT STATION 110 CONSTRUCTION NOTES & DRIVEWAY LAYOUT							
AMIN A HANHAN FL. P.E. NO. 68410							
SHEET NO.							
4							

VALVE BOX NOTES:
 1.) ANY INCREASE IN PIPE SIZE TO MATCH FORCE MAIN SIZE SHALL BE DONE INSIDE ON THE VALVE BOX.



WET WELL DIMENSIONS			SLAB DIMENSIONS				VALVE PIT DIMENSIONS		
DIA. W-1	DIM. W-2	DIM. W-3	DEPTH "S-1"	WIDTH "S-2"	DIM. S-3	DIM. S-4	DIM. S-5	DIM. S-6	WALL THICKNESS
TOP	BOTT.	TOP	BOTT.	TOP	BOTT.	TOP	BOTT.	TOP	6"
8'-0"	2'-0"	3'-0"	8"	12"	9'-4"	11'-4"	3'-10"	18"	3'-0"
									INSIDE DIMENSIONS
									7'-7" x 5'-3"
									① CHECK VALVE W/ PRESSURE GAUGE
									(2) 4"
									② ECC PLUG VALVE
									(3) 4"
									③ 90°
									(1) 8" x 4"
									④ TEE
									(2) 8" x 8" x 4"
									CROSS
									⑤ EMERGENCY BYPASS
									4"

ELECTRICAL EQUIPMENT										
STATION NO.	PUMP H.P.	NO. OF PUMPS	VOLTS	PUMP AMPS	TOTAL AMPS.	SERVICE DATA			SERVICE SWITCH	
						CABLE SIZE	NO. OF CABLES	CONDUIT SIZE	MAIN BRKR. FRAME	MAIN BRKR. TRIP
110	20	2	460	26	52	#6	3	2"	100	100

* INCLUDES ONE BARE CONDUCTOR GROUND WIRE.

STATION ELEVATIONS (FROM U.S.G.A. DATUM)						
ELEV."A"	ELEV."B"	ELEV."C"	ELEV."D"	ELEV."E"	ELEV."F"	ELEV."G"
139.00	150.00	141.00	143.00	144.50	N/A	145.50

PUMP DATA					
FLYGT MODEL NO.	G.P.M.	T.D.H.	H.P.	R.P.M.	IMPELLER NO.
4"NP3153.181 HT	753	51.5	20	1755	464

SEE PUMP CURVE #63-464-00-6050

- GENERAL NOTE
- THE EQUIPMENT DESCRIBED HEREIN IS THAT DEEMED BEST SUITED FOR THE SERVICE ANTICIPATED ANY OTHER EQUIPMENT TO BE CONSIDERED MUST BE APPROVED BY THE CITY OF WINTER HAVEN.
 - ANY WORDING OR DETAIL HEREUPON SHALL BE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTICE BY THE CITY OF WINTER HAVEN.
 - THE DEVELOPER SHALL PROVIDE EACH LIFT STATION WITH THREE (3) PHASE ELECTRIC SERVICE FOR PUMPS.
 - USE EMPIRE SEWAGE AIR RELEASE VALVE OR EQUAL.
 - WHERE DEPTH OF LIFT STATION EXCEEDS 14' A STRUCTURAL REVIEW IS REQUIRED.
 - CITY STANDARD REQUIRES THE PUMPS TO REMAIN COVERED. STORAGE CALCULATIONS MUST BE BASED FROM THE TOP OF THE PUMPS, NOT THE BOTTOM OF THE LIFT STATION
 - THE DEVELOPER WILL PROVIDE AND INSTALL TELEMETRY SYSTEM. (DATA FLOW SYSTEMS INC./TAC PAC)
 - CONTRACTOR SHALL CONSTRUCT A HARD SURFACE ALL-WEATHER PAVEMENT (CONCRETE OR ASPHALT) ACCESS TO THE LIFT STATION. APRON WITHIN RIGHT-OF-WAY AND INSIDE OF FENCED AREA SHALL BE 6" THICK 3000 P.S.I. REINFORCED OR FIBERMESH CONCRETE. (USE OF ASPHALT MUST BE APPROVED BY THE CITY ENGINEER.)
 - PROVIDE PUMP SHAFT SEAL FAILURE PROTECTION.
 - CONTROL PANEL SHALL HAVE ALTERNATOR FOR AUTOMATIC PUMP SWITCHING.
 - 100 YEAR FLOOD ELEV. APPROX. 144.00'
 - SEASONAL HIGH GROUND WATER ELEVATION = 142.50'
 - CONTRACTOR SHALL APPLY AN EXTERNALLY APPLIED WATER TIGHT SEAL, SUGGESTED MANUFACTURER "WRAPDISEAL" OR CITY APPROVED EQUAL, AROUND THE OUTSIDE OF EACH JOINT THAT FALLS BELOW THE SEASONAL HIGH GROUND WATER TABLE.
 - PUMPS SHALL BE NEW FLYGT CORP. EQUIP.
 - PLASTIC LINING SHALL BE INSTALLED, SEALED AND SPARK TESTED IN ACCORDANCE WITH THE LINING MANUFACTURER'S RECOMMENDATION SO THAT THE FINAL ASSEMBLY OF THE WET WELL WILL HAVE A TIGHTLY ADHERING LINING WITHOUT PIN HOLES OR OTHER AREAS NOT COVERING THE CONCRETE SURFACE. PLASTIC LINING SHALL BE "T-LOK" MANUFACTURED BY AMERON PROTECTIVE LINING DIVISION, "DURA PLATE 100" MANUFACTURED BY A-LOK PRODUCTS, OR "AGRU SURE-GRIP HDPE" BY TAYLOR PRECAST. PROVIDE A GROUT FILLET AROUND THE BOTTOM OF THE WET WELL. GROUT SHALL BE 4000 PSI CONCRETE, EXCEPT THE MAXIMUM AGGREGATE SIZE SHALL BE 3/8" INCH.
 - INSTALL ELBOW POINTED DOWN ON THE END OF THE GRAVITY LINE DISCHARGING INTO THE LIFT STATION, IF APPLICABLE. INSTALL AN ELBOW TURNED DOWN AND EXTEND A PIPE TO NEAR THE BOTTOM OF THE WET WELL AND INSTALL A 45° ELBOW ON THE BOTTOM OF THE PIPE ON FORCE MAINS DISCHARGING INTO THE LIFT STATION, IF APPLICABLE.