


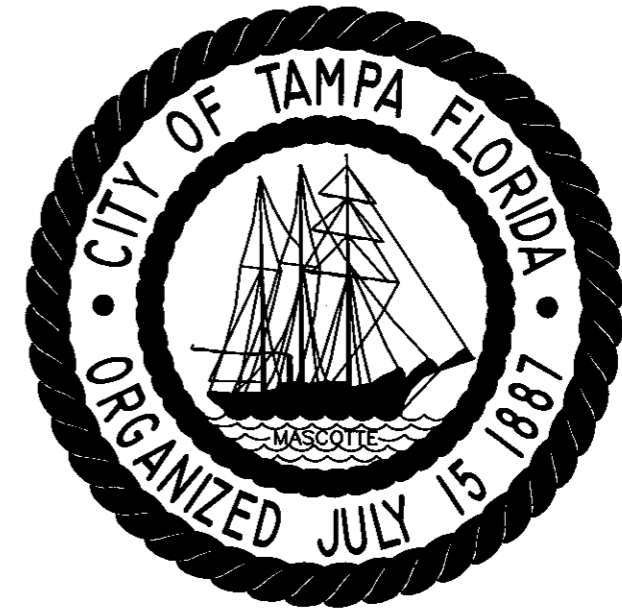
THE ENCLOSED DOCUMENT IS
PROVIDED FOR YOUR CONVENIENCE.

 **REGISTER AS A “PLANHOLDER”**
TO BE LISTED ON THE WEBPAGE,
TO BE FOUND BY POTENTIAL
SUB-CONTRACTORS,
AND TO BE OFFICIALLY NOTIFIED OF
ADDENDA.

FOR ASSISTANCE OR
TO REGISTER CONTACT:

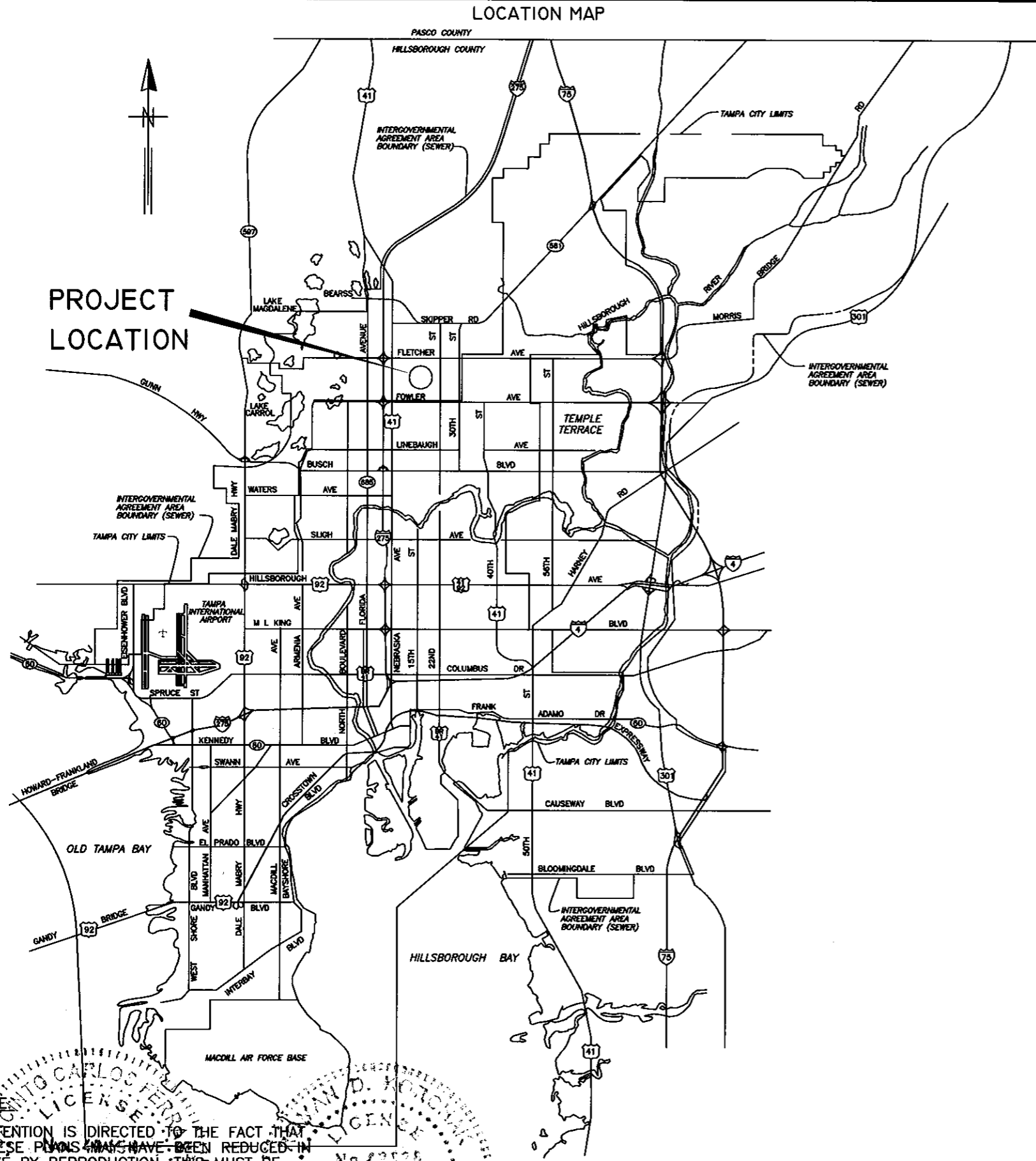
MAILTO:BERNICE.WHEELER@TAMPA.GOV.NET
BERNICE WHEELER, (813)274-8456, FAX 274-8080
CONTRACT ADMINISTRATION DEPARTMENT
306 E. JACKSON ST. #280A4N
TAMPA, FL 33602

CITY of TAMPA



WASTEWATER DEPARTMENT

PLANS FOR
**UNIVERSITY PUMPING STATION
 PUMP NO. 2 REPLACEMENT**
 CONTRACT : 08-C-00034



NOTE:
 ATTENTION IS DIRECTED TO THE FACT THAT
 THESE PLANS MAY HAVE BEEN REDUCED IN
 SIZE BY REPRODUCTION. THIS MUST BE
 CONSIDERED WHEN OBTAINING SCALED DATA.

User: s88k Drawing Name: K:\micah\autocad\DESIGN WORK\JACK\UNIVERSITY (131st st.) PS\DWGS\UNIVERSITY PS.DWG Layout: Jul 01, 2008 - 10:48am

JACINTO CARLOS FERRAS, P.E. #9454
 DESIGN DIVISION HEAD
 WASTEWATER DEPARTMENT

ROMAN D. KORCHAK, P.E. #42823
 ELECTRICAL SECTION HEAD
 WASTEWATER DEPARTMENT

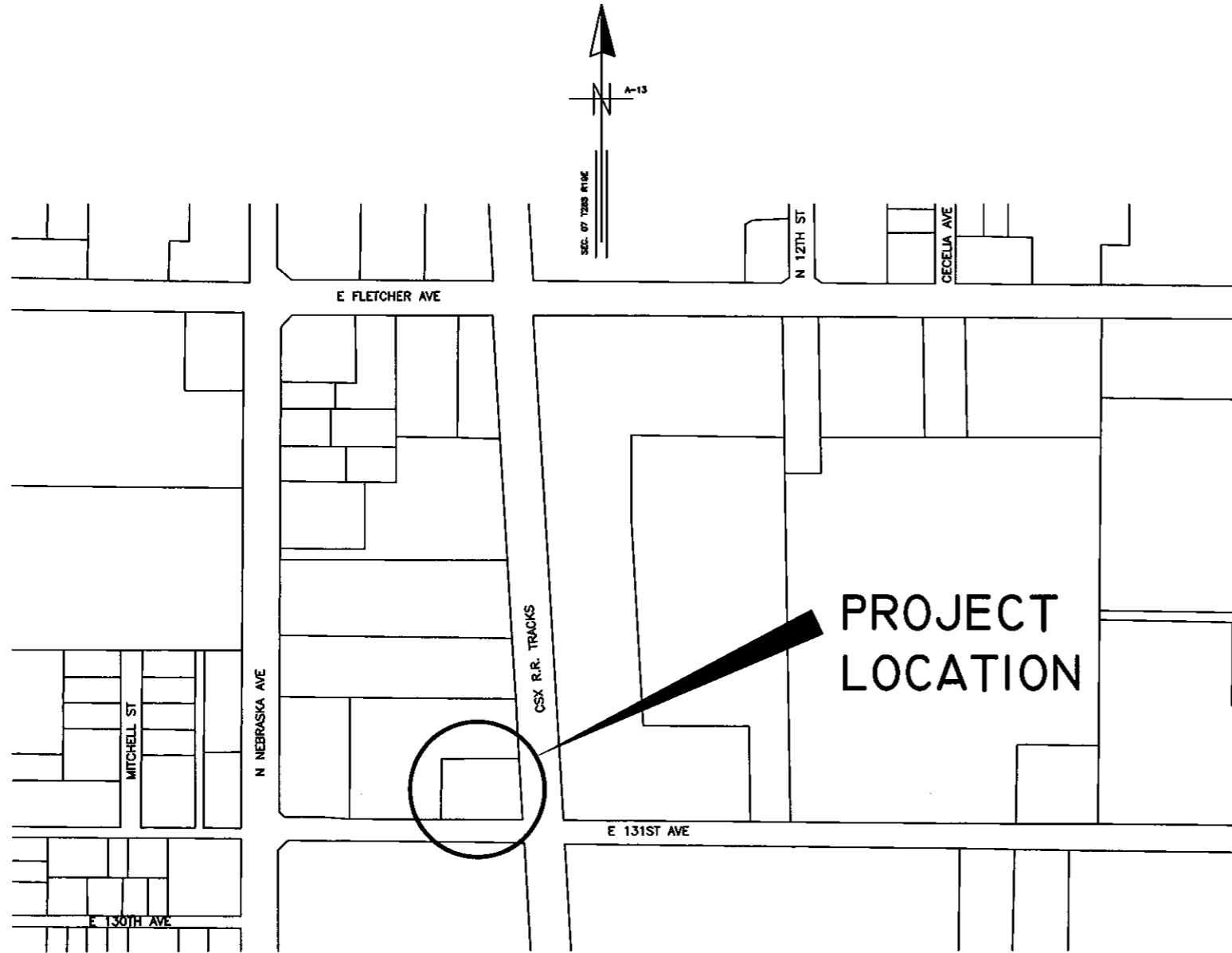
No.	DATE	REVISIONS
3		
2		
1		

DES: JH
 DRN: MRL
 CKD: JF
 DATE: 7/1/08

CITY of TAMPA
 WASTEWATER DEPARTMENT

COVER SHEET
 1

W.O. 5395
 SHEET
 1

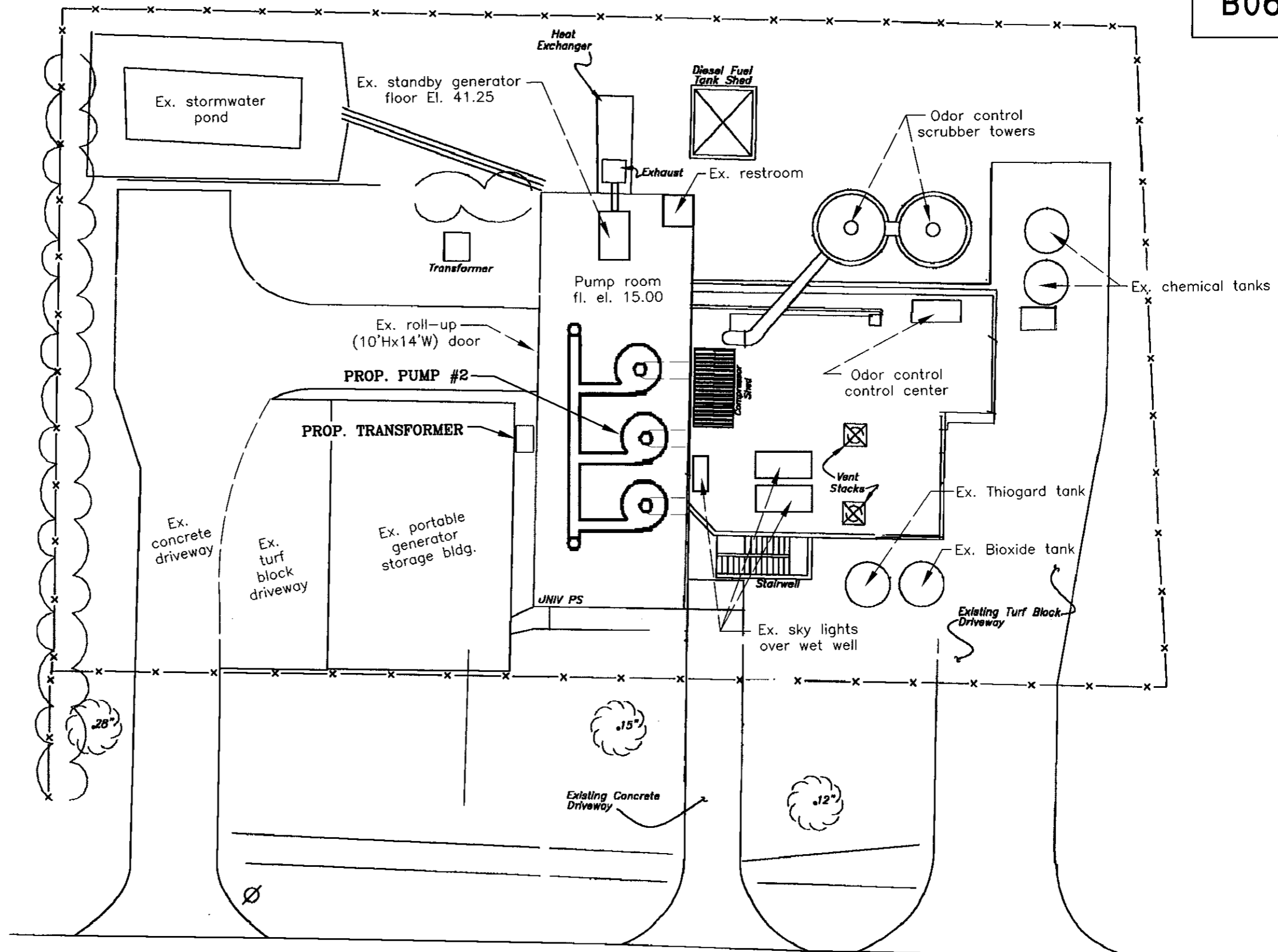


INDEX

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JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: JH DRN: MRL CKD: JF DATE: 7/1/08	CITY of TAMPA WASTEWATER DEPARTMENT	UNIVERSITY PUMPING STATION PUMP NO. 2 REPLACEMENT COVER SHEET	W.O. 5395
	3						SHEET
	2						2
	1						



131ST AVE

SITE PLAN
NOT TO SCALE

User: ss8k Drawing Name: K:\micah\autocad\DESIGN WORK\JACK\UNIVERSITY (131st st.) PS\DWGS\UNIVERSITY PS.DWG Layout - Jul 01, 2008 - 10:49am

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: JH	CITY of TAMPA WASTEWATER DEPARTMENT	UNIVERSITY PUMPING STATION PUMP NO. 2 REPLACEMENT SITE PLAN	W.O. 5395
	3			DRN: MRL			SHEET
	2			CKD: JF			3
	1			DATE: 7/1/08			

CONSTRUCTION NOTES

GENERAL

- G-1. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH DEPARTMENT PERSONNEL AND PUMPING STATION OPERATIONS.
- G-2. EXISTING DIMENSIONS AND ELEVATIONS ARE BASED ON THE BEST INFORMATION AVAILABLE. TRUE DIMENSIONS AND ELEVATIONS SHALL BE DETERMINED IN THE FIELD PRIOR TO LAYOUT AND SHOP DRAWING SUBMITTALS.
- G-3. ALL SUBMITTALS AND SHOP DRAWINGS SHALL BE ORIGINALS OR HIGH QUALITY COPIES (EASILY READABLE). NO FAXED SHEETS OR POOR QUALITY COPIES WILL BE ACCEPTED FOR SUBMITTAL REVIEW.
- G-4. CONTRACTOR SHALL PROVIDE AND INSTALL A STOP LOG AND STEEL SHEET (AS A BULKHEAD) TO BE USED TO DIVERT THE FLOW FROM WET WELL #2 TO WET WELL #1 IN ORDER TO REMOVE THE EXISTING KNIFE GATE VALVE AND 24"x16" REDUCER UNDER THE EXISTING PUMP #2. THE STOP LOG SHALL BE PLACED IN THE STOP LOG GROOVE IN BETWEEN WET WELL #1 AND WET WELL #2. THE STEEL SHEET SHALL BE PLACED OVER THE BAR SCREEN IN THE CHANNEL JUST UPSTREAM FROM WET WELL #2.
- G-5. DIVERTING FLOW FROM WET WELL #2 MAY ONLY BE DONE DURING THE LOW FLOW PERIOD OF THE DAY, BETWEEN 2:00AM AND 7:00AM.
- G-6. MECHANICAL AND ELECTRICAL EQUIPMENT TO BE LOCKED OUT SHALL BE LOCKED OUT WITH A MULTIPLE-LOCK MASTER LOCK-OUT DEVICE, WHICH SHALL BE INSTALLED BY CITY PERSONNEL AND LOCKED BY BOTH THE CITY PERSONNEL AND THE CONTRACTOR.
- G-7. CONTRACTOR SHALL PROVIDE THE PUMP, PIPING AND RELATED EQUIPMENT FOR PUMPING DOWN WET WELL #2 AFTER THE STOP LOG/BULKHEAD ARE INSTALLED. THE CONTRACTOR SHALL FURNISH SUFFICIENT PUMPING EQUIPMENT AND DISCHARGE PIPING TO HANDLE ANY LEAKAGE AROUND THE STOP LOGS THAT MAY OCCUR.
- G-8. CONTRACTOR MAY TEMPORARILY REMOVE SKYLIGHTS OVER THE SCREEN ROOM IN ORDER TO INSTALL STOP LOG AND STEEL PLATE BULKHEAD.
- G-9. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING, INSTALLING, LEVELING AND ALIGNING MOTOR AND PUMP. PROCEDURES FOR INSTALLATION, AS OUTLINED IN THE HYDRAULIC INSTITUTE STANDARDS, MOST CURRENT EDITION, SHALL BE ADHERED TO.
- G-10. PROPOSED PUMP SHALL BE A 350 HORSEPOWER, 24-INCH, 600 RPM FAIRBANKS MORSE VERTICAL CLOSE-COUPLED ANGLEFLOW PUMP MODEL#C5741. PUMP SHALL BE RATED FOR 28.4 MGD @ 50.8 FEET TDH. SEE SPECIFICATIONS FOR MOTOR INFORMATION.
- G-11. PROPOSED KNIFE GATE VALVE SHALL BE A 24" L&M MODEL 24M145C100-BG4-X PERFORMANCE PLUS KNIFE GATE VALVE, AS MADE BY TYCO VALVE AND CONTROLS.
- G-12. PUMP-CHECK VALVE SHALL BE A 30" DEZURIK PEF, ECCENTRIC PLUG VALVE AND SHALL BE PROVIDED WITH A REMOTELY OPERATED PNEUMATIC ACTUATOR THAT SHALL BE PROPERLY SIZED FOR THE EXISTING PUMPING STATION COMPRESSED AIR SYSTEM.

- G-13. AIR SUPPLY FOR PNEUMATICALLY ACTUATED PUMP-CHECK VALVE SHALL BE FROM EXISTING STATION AIR. ARRANGEMENT OF PIPING AND CONNECTIONS TO EXISTING PIPES SHALL BE MADE BY THE CONTRACTOR UNDER THE DIRECTION OF THE ENGINEER.
- G-14. ANCHOR BOLTS SHALL BE AS PER PUMP MANUFACTURER'S RECOMMENDATIONS. ANCHOR BOLTS SHALL BE DOUBLE NUTTED AND FINISHED WITH NON-SHRINK GROUT. ALL BOLTS SHALL EXTEND BEYOND THE FASTENING NUTS BY A MINIMUM OF 1/2-INCH.
- G-15. ALL HARDWARE, UNLESS OTHERWISE NOTED, SHALL BE TYPE 316 STAINLESS STEEL.
- G-16. 30"x30"x30" TEE AND 30"x24" STEEL REDUCER SHALL BE FABRICATED TO SUIT THE DIMENSIONS OF THE PROPOSED EQUIPMENT AND SHALL BE A36-STEEL WITH A 150 PSI RATING. STEEL FITTINGS SHALL BE MANUFACTURED BY AN AWWA CERTIFIED FABRICATOR.
- G-17. ALL CEMENTITIOUS CONCRETE AND GROUT, UNLESS OTHERWISE SPECIFIED, SHALL BE CLASS "B" 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
- G-18. EXPOSED CONCRETE CORNERS SHALL HAVE A 3/4" CHAMFER AND RE-ENTRANT CORNERS SHALL HAVE A 3/4" FLAT FILLET UNLESS OTHERWISE NOTED.
- G-19. CONCRETE PEDESTAL SHOP DRAWINGS INCLUDING FLANGE SUPPORT DETAILS SHALL BE SUBMITTED FOR APPROVAL.
- G-20. ALL STEEL REINFORCING SHALL BE DETAILED ACCORDING TO THE LATEST "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES". ACTUAL PLACEMENT OF STEEL REINFORCING SHALL BE SHOWN ON SHOP DRAWINGS. ALL LAPS AND SPLICES SHALL BE AT LEAST 32 BAR DIAMETERS OR 24 INCHES.
- G-21. CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO MINIMIZE DAMAGE TO REINFORCING STEEL WHEN PENETRATING CONCRETE FLOOR BEAM FOR ELECTRICAL CONDUIT ROUTING. CONTRACTOR SHALL SUBMIT METHOD OF BEAM PENETRATION FOR APPROVAL.
- G-22. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL TO THE ENGINEER FOR THE PROPOSED STOP LOG AND BULKHEAD. SHOP DRAWINGS SHALL INCLUDE MATERIAL(S) TO BE USED TO MINIMIZE LEAKAGE BETWEEN STEEL SHEETS AND EXISTING STRUCTURES.
- G-23. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL TO THE ENGINEER FOR THE TRANSFORMER MOUNTING PLATFORM.

DEMOLITION NOTES

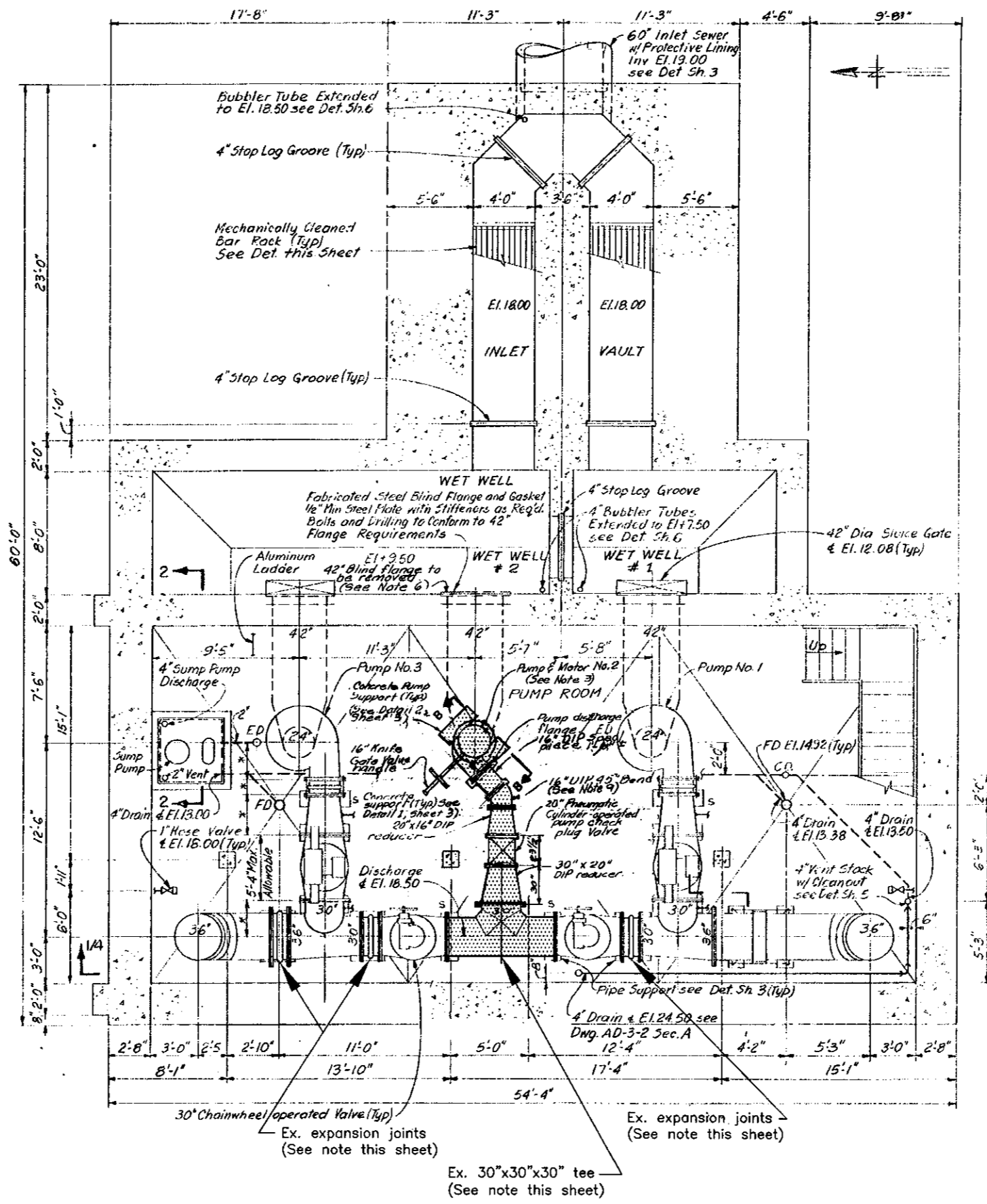
- D-1. ALL DIMENSIONS ARE APPROXIMATE. TRUE DIMENSIONS SHALL BE DETERMINED IN THE FIELD.
- D-2. SALVAGEABLE MATERIAL AS DETERMINED BY DEPARTMENT PERSONNEL SHALL BE DELIVERED TO THE CITY OF TAMPA'S HOWARD F. CURREN AWTP AT 2700 MARITIME BOULEVARD. NON-SALVAGEABLE MATERIALS ARE TO BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. IN GENERAL, ALL PUMP AND CONTROLS EQUIPMENT SHALL REMAIN PROPERTY OF THE CITY AND SHALL BE DELIVERED TO THE TREATMENT PLANT.
- D-3. THE PUMP STATION SITE SHALL BE MAINTAINED IN AS NEAT AND ORDERLY CONDITION AS POSSIBLE DURING CONSTRUCTION OPERATIONS. WALKWAYS AND DRIVEWAYS SHALL BE KEPT CLEAR FOR DEPARTMENT PERSONNEL TO PASS THROUGH.
- D-4. CONTRACTOR SHALL CUT ALL EXPOSED REINFORCING STEEL TO A DEPTH OF 1-INCH BELOW THE EXPOSED SURFACE AND GROUT OVER.
- D-5. CONTRACTOR SHALL SUBMIT A PLAN FOR APPROVAL THAT WILL PREVENT THE EXPANSION JOINTS IN THE 30"-36" DISCHARGE HEADER FROM EXPANDING AFTER THE EXISTING 30"x30"x30' TEE HAS BEEN REMOVED IN THE PUMP ROOM.


"POSSIBLE" SEQUENCE OF OPERATIONS

- S-1. CLOSE EXISTING 16" KNIFE GATE VALVE UNDER PUMP #2 AND TWO 30" PLUG VALVES IN DISCHARGE PIPING HEADER; REMOVE PUMP, MOTOR, PIPE AND FITTINGS (INCLUDING 30"x30"x30" TEE). ALSO, REMOVE EXISTING ELECTRICAL EQUIPMENT, CONDUIT AND WIRING FOR EXISTING PUMP #2.
- S-2. RELOCATE STOP LOG AND STEEL PLATE BULKHEAD TO WET WELL #2 CHAMBERS, PUMP OUT WET WELL #2, REMOVE EXISTING 16" KNIFE GATE VALVE AND 24" X 16" SPOOL PIECE, INSTALL NEW 24" SPOOL PIECE AND 24" KNIFE GATE VALVE. ALSO, BEGIN INSTALLING ELECTRICAL EQUIPMENT, CONDUIT, AND WIRING FOR PROPOSED PUMPING EQUIPMENT.
- S-3. INSTALL PROPOSED PUMP #2, MOTOR, PUMP CHECK VALVE, PIPE AND FITTINGS (INCLUDING 30"x30"x30" TEE).
- S-4. POUR CONCRETE PEDESTALS FOR PROPOSED PUMP AND PIPING. ALSO, TIE-IN ELECTRICAL EQUIPMENT AND CONTROLS.
- S-5. PERFORM REQUIRED TESTS ON PROPOSED PUMPING EQUIPMENT.
- S-6. PERFORM TRAINING, COMPLETE PUNCHLIST ITEMS.

User: ss8k Drawing Name: K:\micah\autocad\DESIGN WORK\JACK\UNIVERSITY (131st st). PS\DWGS\UNIVERSITY PS.DWG Layout - Jul 01, 2008 - 10:49am

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: JH DRN: MRL CKD: JF DATE: 7/1/08	CITY of TAMPA WASTEWATER DEPARTMENT	UNIVERSITY PUMPING STATION PUMP NO. 2 REPLACEMENT NOTES	W.O. 5395 SHEET 4
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	2						
	1						



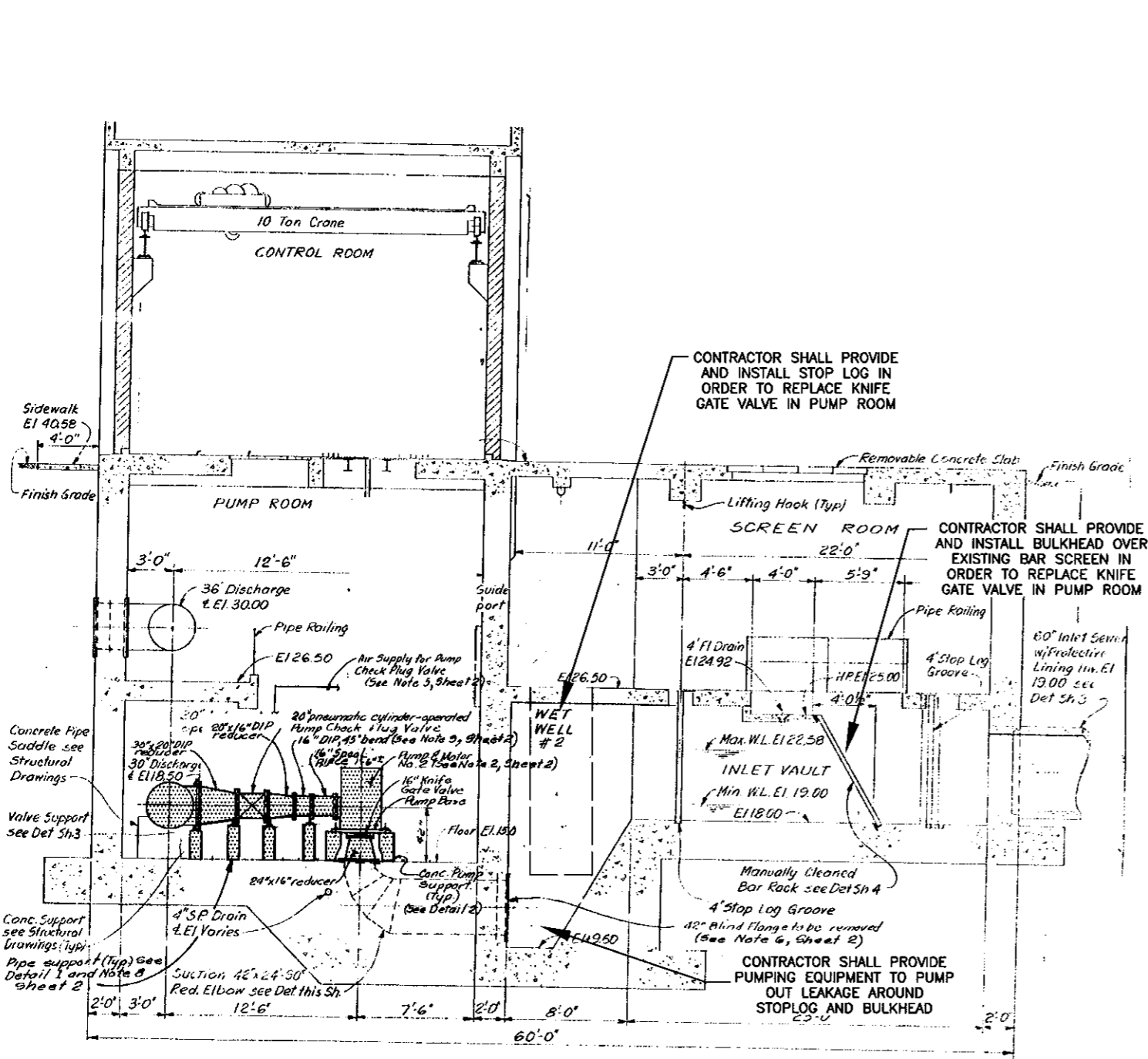
 Ex. structures and equipment to be removed by the contractor

NOTE: PRIOR TO REMOVING EXISTING 30"x30"x30" TEE CONTRACTOR SHALL SUBMIT FOR APPROVAL A METHOD FOR PREVENTING EXPANSION JOINTS IN DISCHARGE HEADER FROM EXPANDING UNDER PRESSURE.

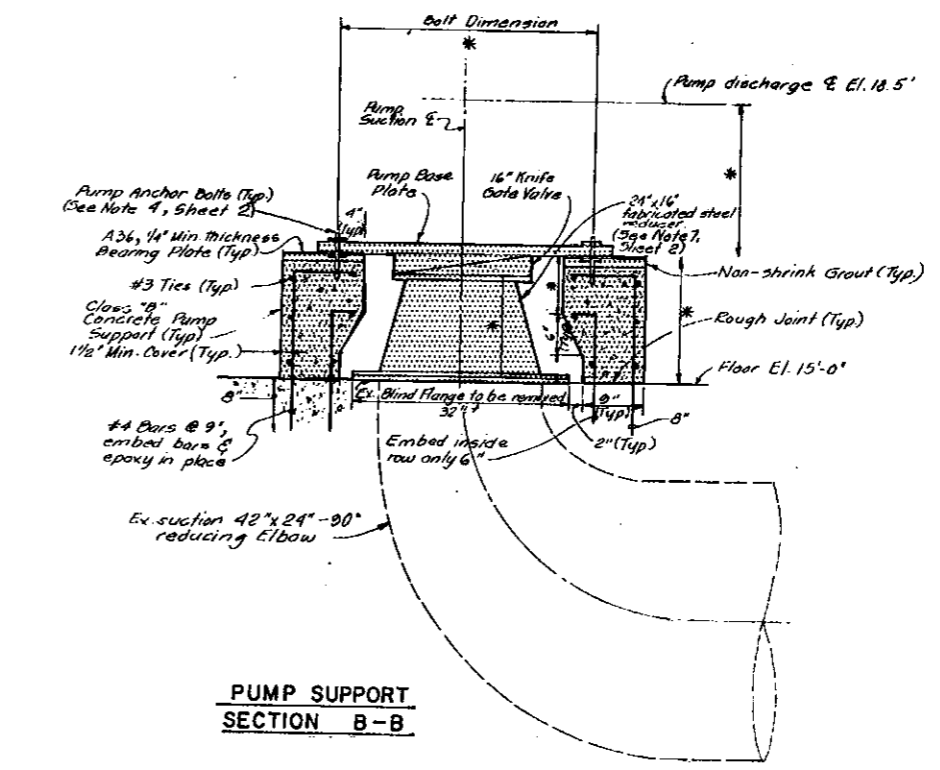
DEMOLITION PLAN AT EL. 15.00
NOT TO SCALE

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JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: JH DRN: MRL CKD: JF DATE: 7/1/08	CITY of TAMPA WASTEWATER DEPARTMENT	UNIVERSITY PUMPING STATION PUMP NO. 2 REPLACEMENT DEMOLITION PLAN	W.O. 5395
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	1						

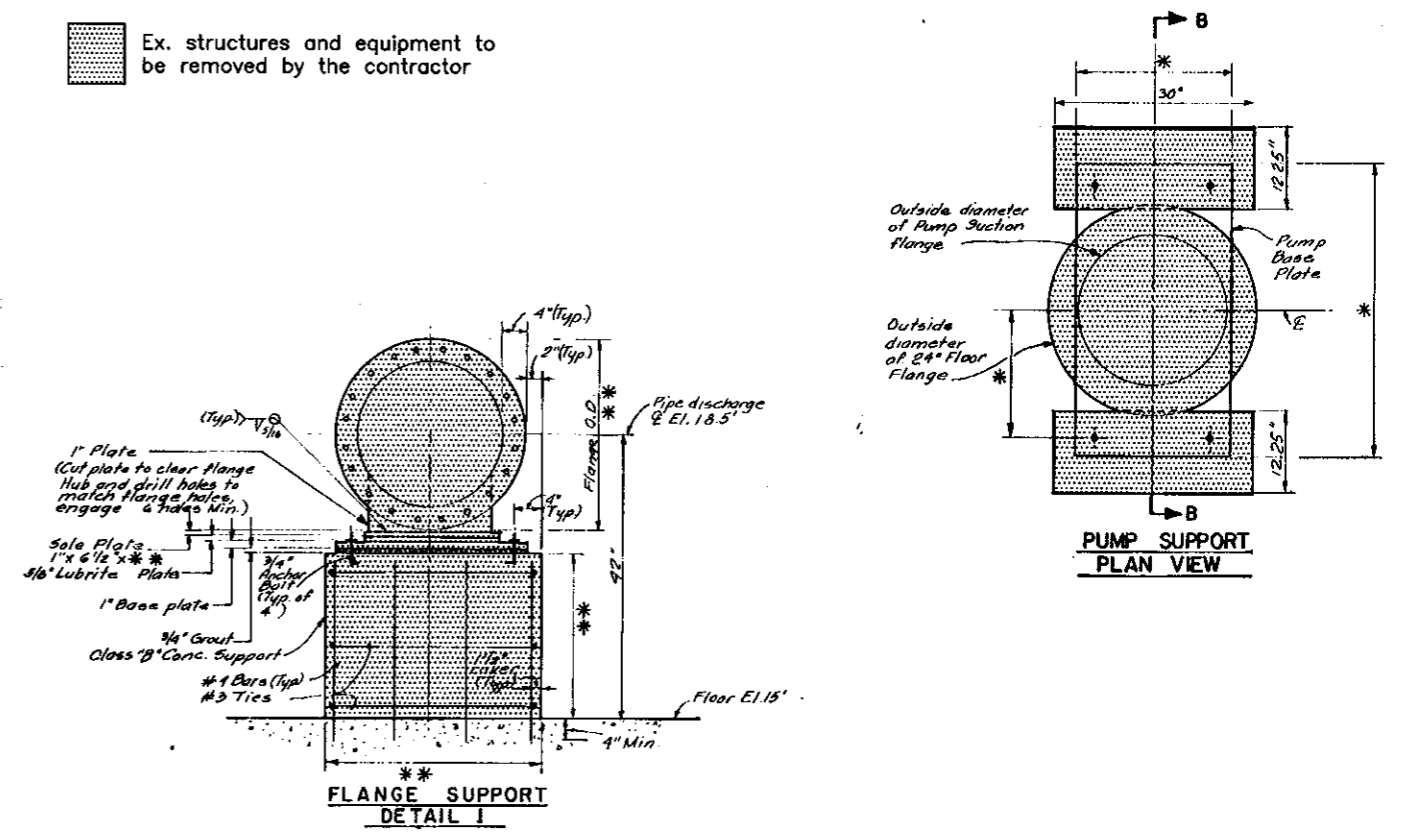


SECTION A/A
NOT TO SCALE



PUMP SUPPORT
SECTION B-B

Ex. structures and equipment to be removed by the contractor



FLANGE SUPPORT
DETAIL I

PUMP SUPPORT
PLAN VIEW

User: ss8k Drawing Name: K:\micah\autocad\DESIGN WORK\JACK UNIVERSITY (131st st.) PS\DWGS\UNIVERSITY PS.DWG Layout: Jul 01, 2008 - 10:49am

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

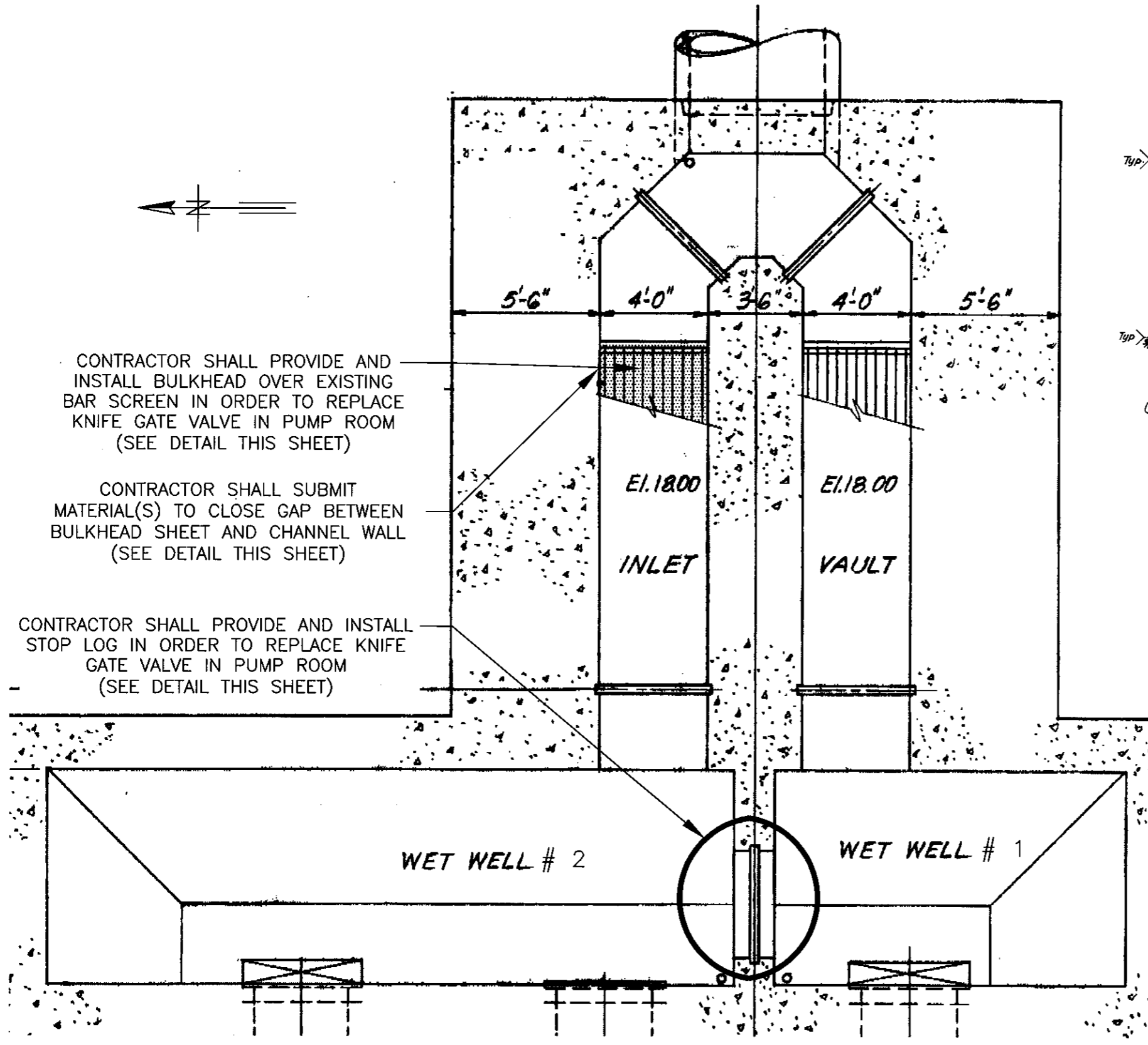
No.	DATE	REVISIONS
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DES: JH
DRN: MRL
CKD: JF
DATE: 7/1/08

CITY of TAMPA
WASTEWATER DEPARTMENT

UNIVERSITY PUMPING STATION
PUMP NO. 2 REPLACEMENT
DEMOLITION SECTIONS

W.O. 5395
SHEET
6

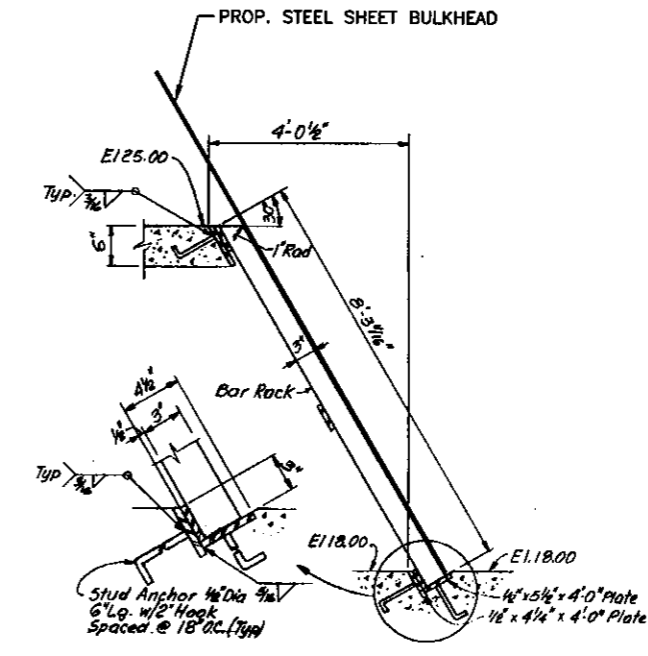


SECTIONAL PLAN AT EL. 15.00
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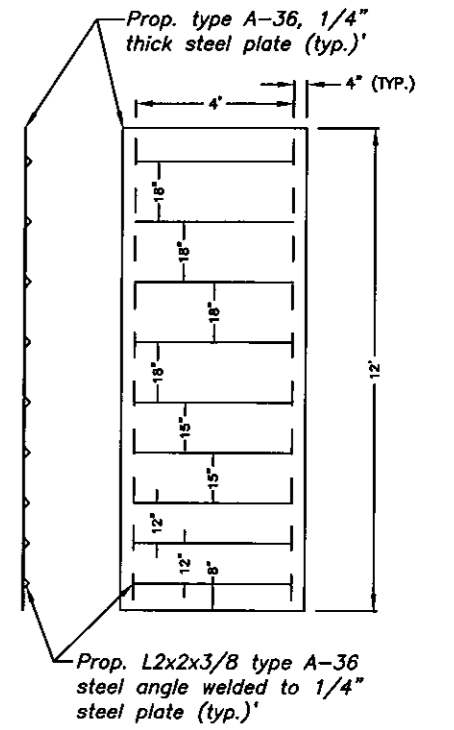
CONTRACTOR SHALL PROVIDE AND INSTALL BULKHEAD OVER EXISTING BAR SCREEN IN ORDER TO REPLACE KNIFE GATE VALVE IN PUMP ROOM (SEE DETAIL THIS SHEET)

CONTRACTOR SHALL SUBMIT MATERIAL(S) TO CLOSE GAP BETWEEN BULKHEAD SHEET AND CHANNEL WALL (SEE DETAIL THIS SHEET)

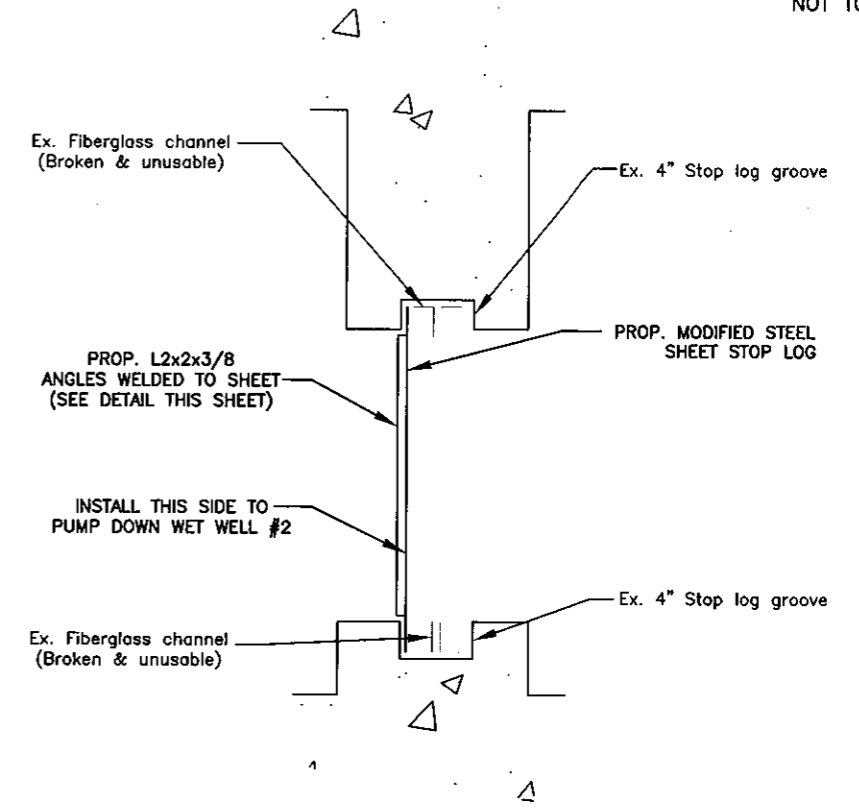
CONTRACTOR SHALL PROVIDE AND INSTALL STOP LOG IN ORDER TO REPLACE KNIFE GATE VALVE IN PUMP ROOM (SEE DETAIL THIS SHEET)



TEMP. BULKHEAD DETAIL
NOT TO SCALE



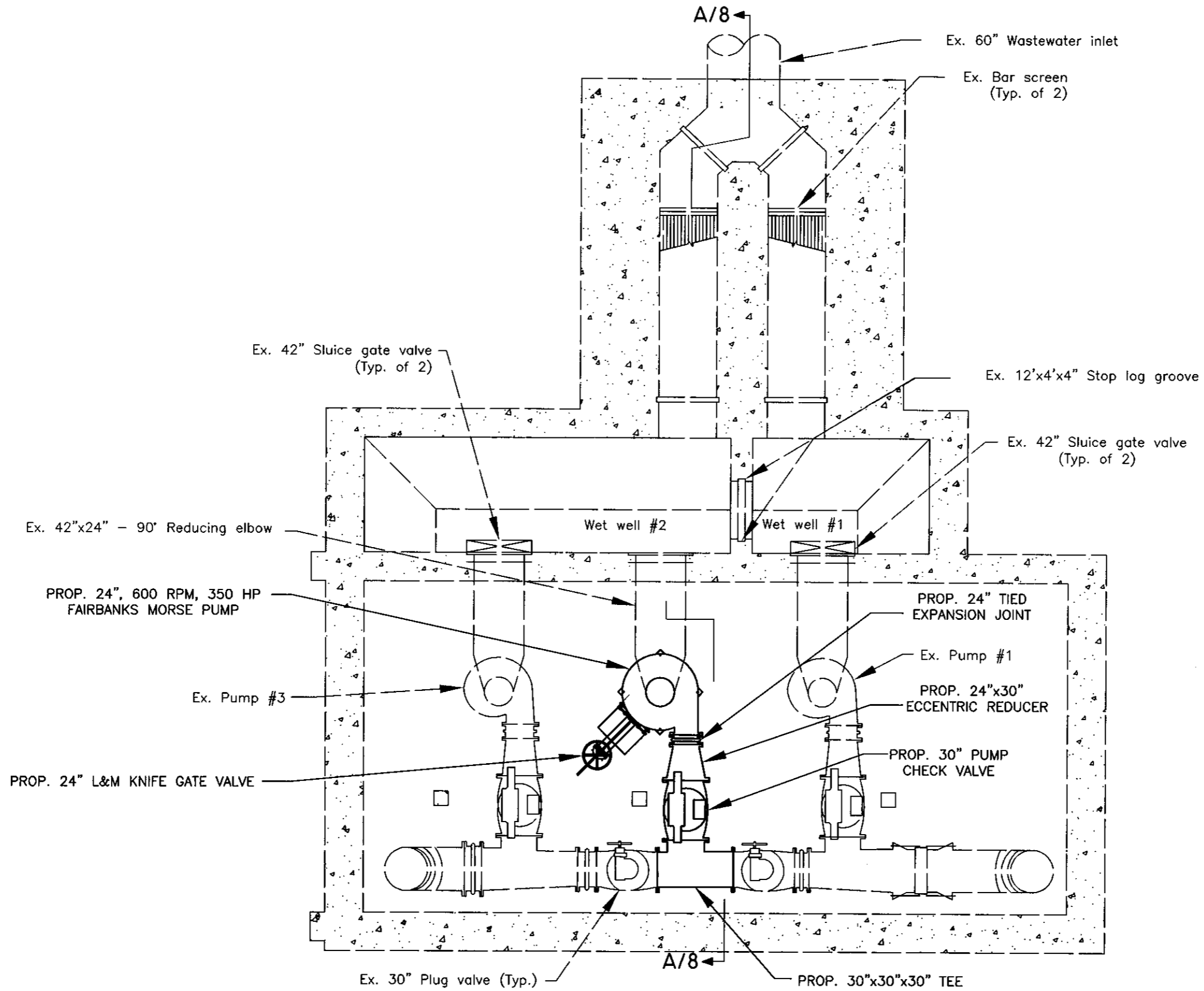
PROPOSED STOP LOG DETAIL
NOT TO SCALE



STOP LOG GROOVE DETAIL
NOT TO SCALE

User: ss8k Drawing Name: K:\mical\autocad\DESIGN WORK\JACK\UNIVERSITY (131st st.) PS\DWGS\UNIVERSITY PS.DWG Layout- Jul 01, 2008 - 10:49am

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: JH DRN: MRL CKD: JF DATE: 7/1/08	CITY of TAMPA WASTEWATER DEPARTMENT	UNIVERSITY PUMPING STATION PUMP NO. 2 REPLACEMENT WET WELL ISOLATION DETAILS	W.O. 5395 SHEET 7
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	2						
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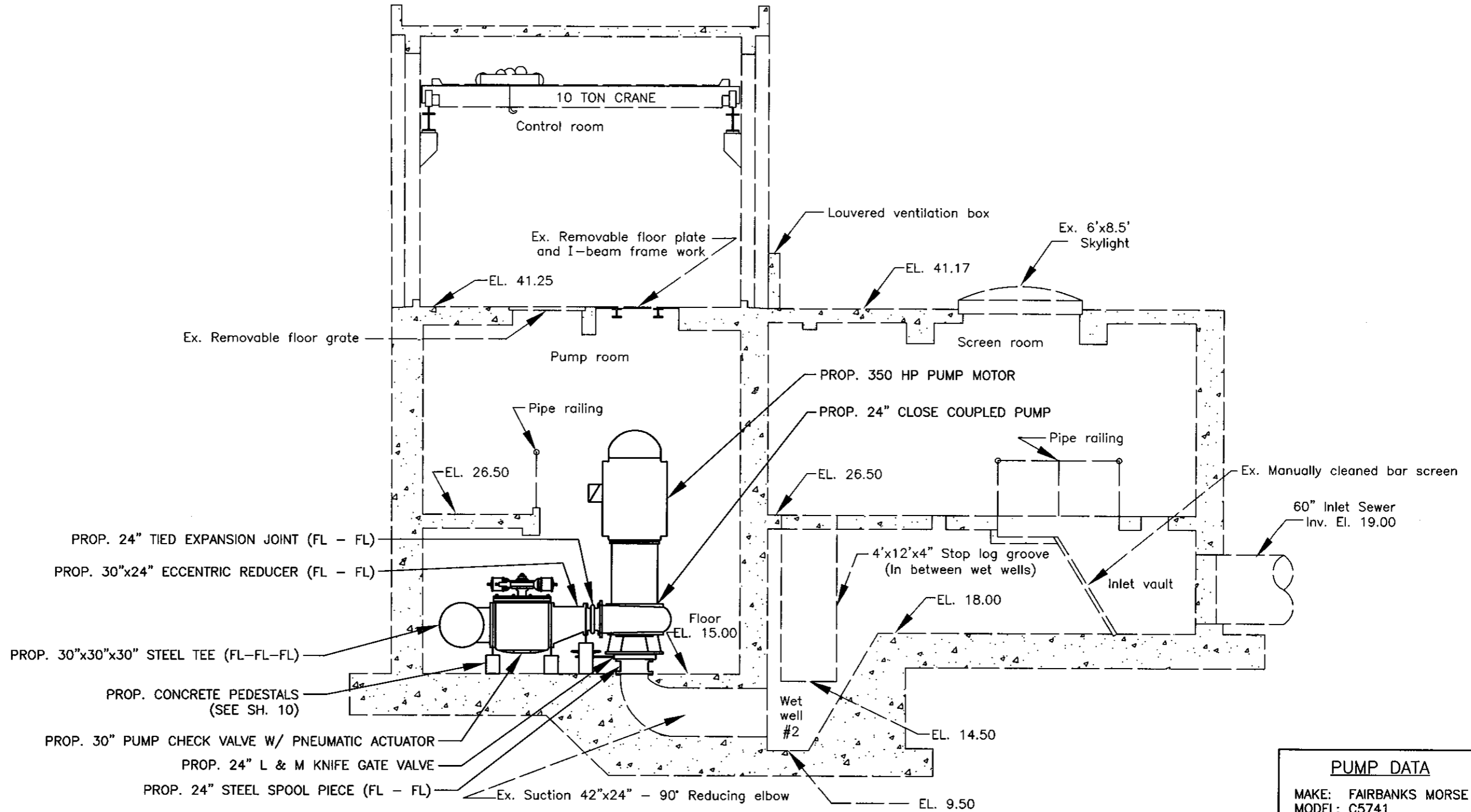


PLAN AT EL. 19.00

1/8" = 1'

User: s8bk Drawing Name: K:\micah\autocad\DESIGN WORK\JACK\UNIVERSITY (131st st.) PS\DWGS\UNIVERSITY PS.DWG Layout - Jul 01, 2008 - 10:49am

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: JH DRN: MRL CKD: JF DATE: 7/1/08	CITY of TAMPA WASTEWATER DEPARTMENT	UNIVERSITY PUMPING STATION PUMP NO. 2 REPLACEMENT PROPOSED PUMP ROOM PLAN	W.O. 5395
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	2						8
	1						

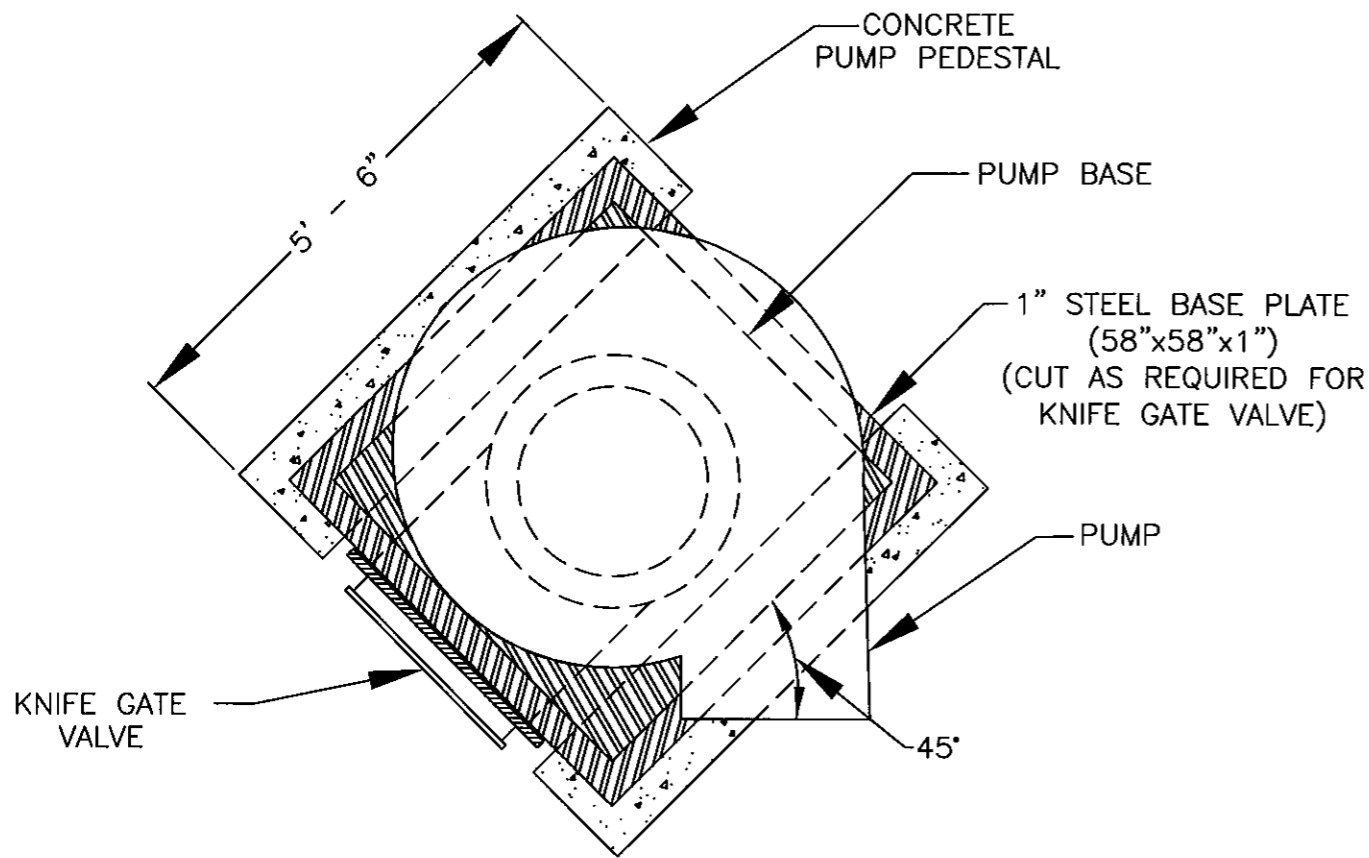


PUMP DATA	
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MODEL:	C5741
HP:	350
460V, 3 PHASE, 497.0 FLA	

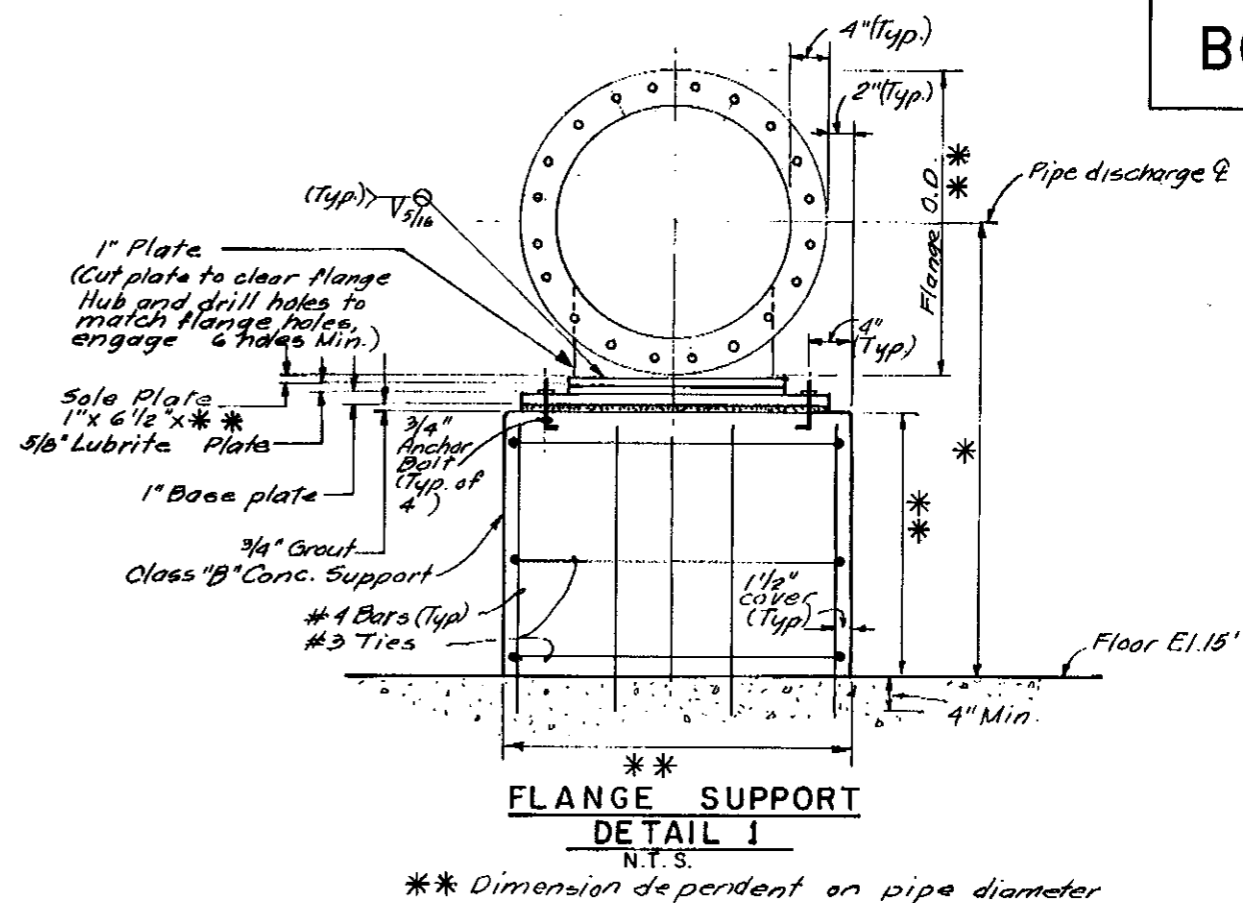
SECTION A/7
1/8" = 1'

User: ss8k Drawing Name: K:\micah\autocad\DESIGN WORK\JACK\UNIVERSITY (131st st.) PS\DWGS\UNIVERSITY PS.DWG Layout - Jul 01, 2008 - 10:49am

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: JH	CITY of TAMPA WASTEWATER DEPARTMENT	UNIVERSITY PUMPING STATION PUMP NO. 2 REPLACEMENT PROPOSED PUMP ROOM PROFILE	W.O. 5395
	3			DRN: MRL			SHEET
	2			CKD: JF			9
	1			DATE: 7/1/08			

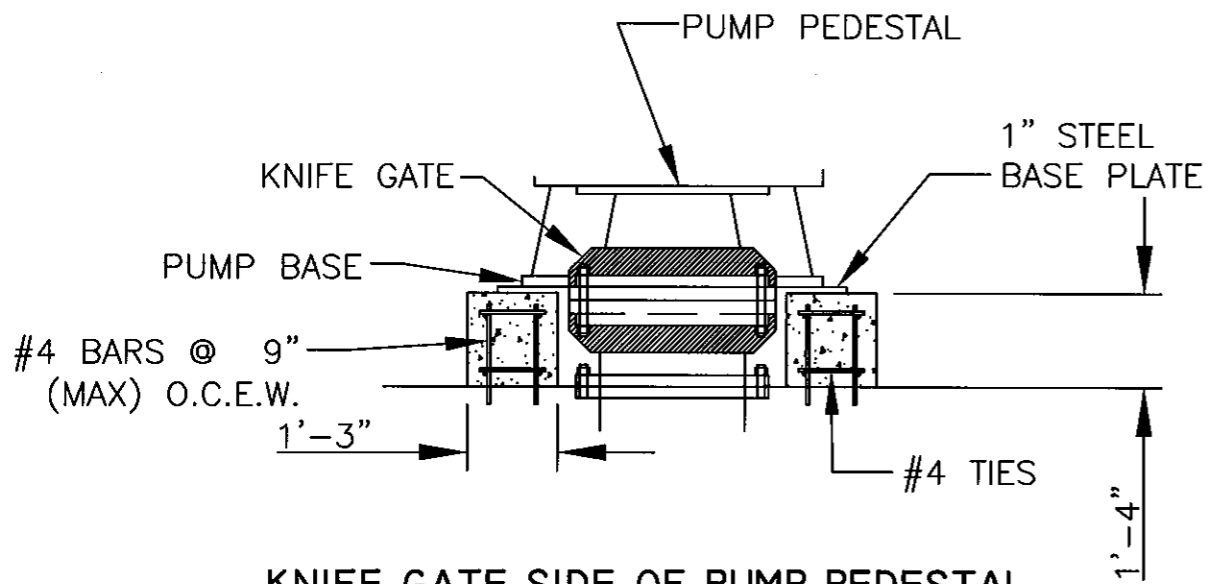


PUMP SUPPORT - PLAN
NOT TO SCALE

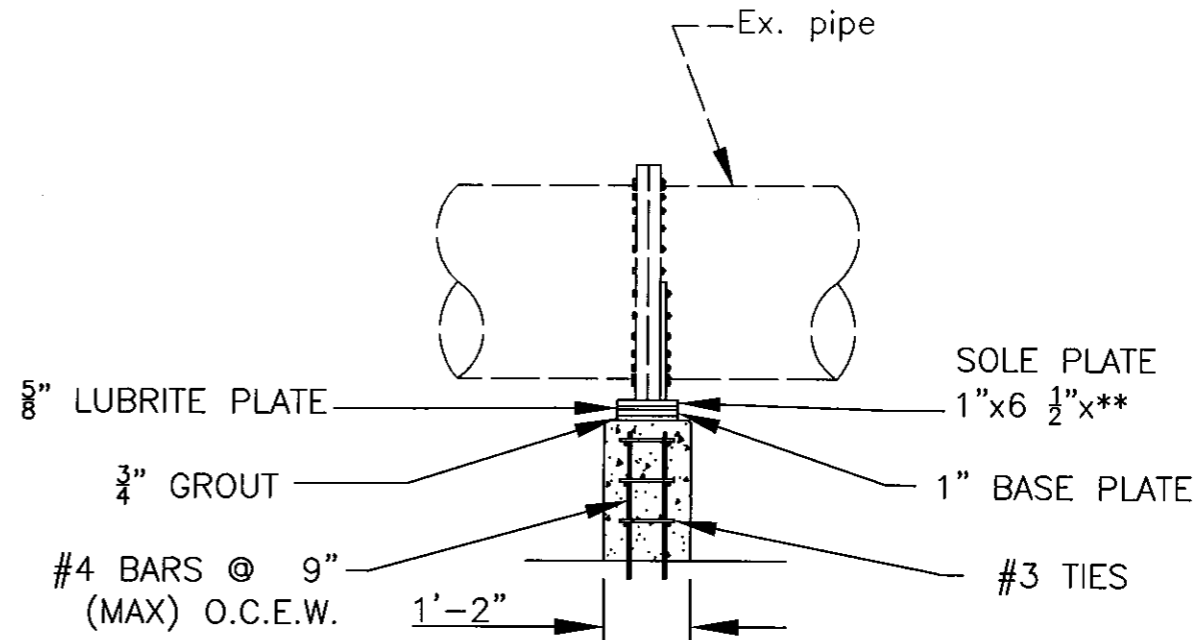


FLANGE SUPPORT DETAIL 1
N.T.S.

** Dimension dependent on pipe diameter



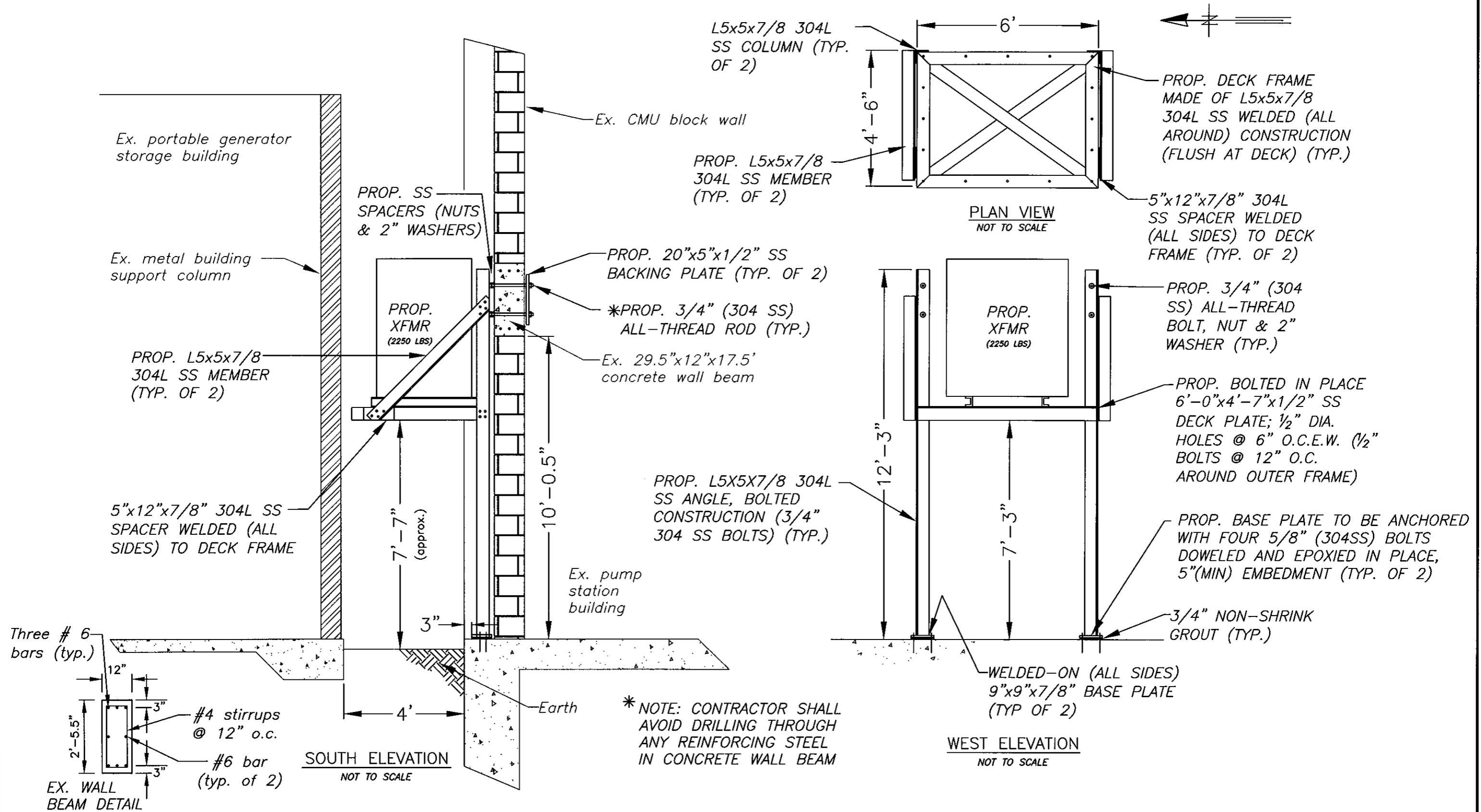
KNIFE GATE SIDE OF PUMP PEDESTAL
NOT TO SCALE



FLANGE SUPPORT DETAIL 2
NOT TO SCALE

User: s88k Drawing Name: K:\micah\autocad\DESIGN WORK\JACK\UNIVERSITY (131st st.) PS\DWGS\UNIVERSITY PS.DWG Layout- Jul 01, 2008 - 10:49am

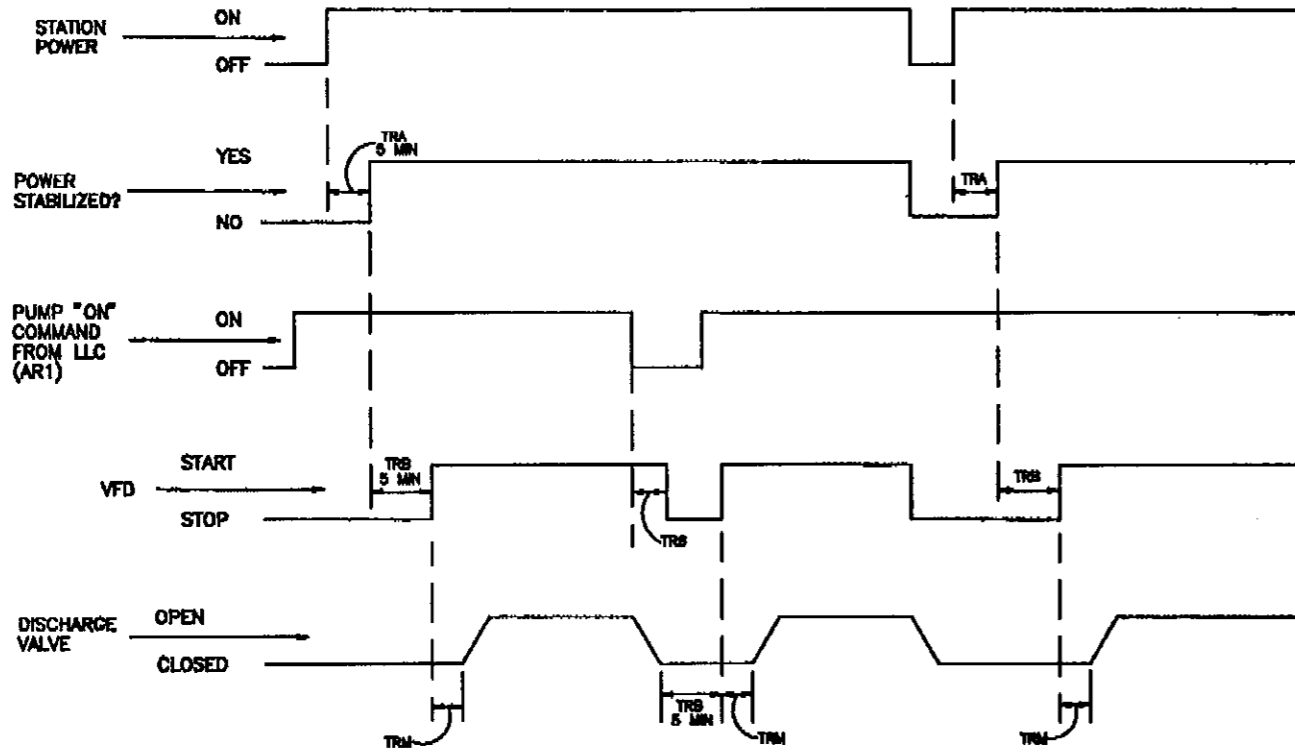
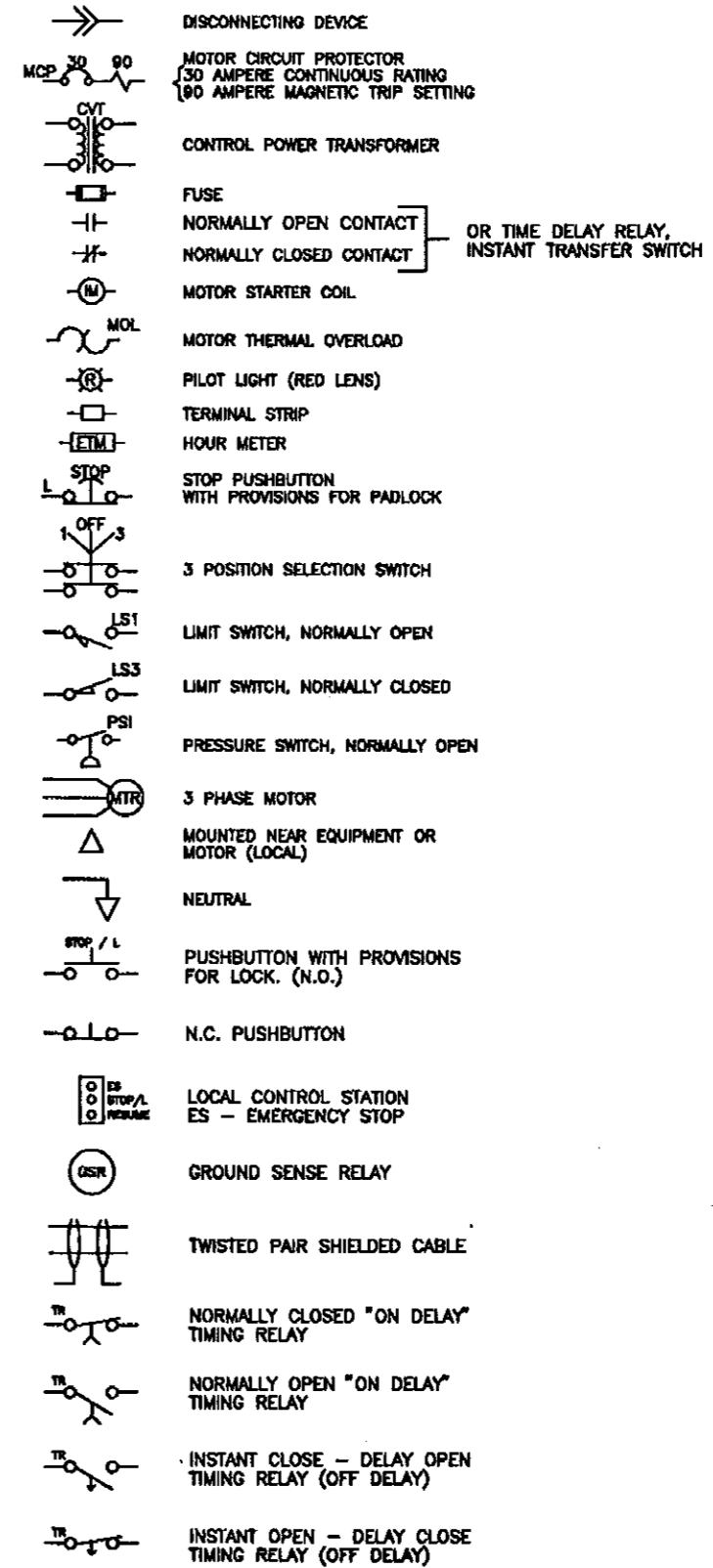
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: JH	CITY of TAMPA WASTEWATER DEPARTMENT	UNIVERSITY PUMPING STATION PUMP NO. 2 REPLACEMENT MISC. PUMP ROOM DETAILS	W.O. 5395
	3			DRN: MRL			SHEET
	2			CKD: JF			10
	1			DATE: 7/1/08			



User: ss8k Drawing Name: K:\micah\autocad\DESIGN WORK\JACK\UNIVERSITY (131st st.) PS\DWGS\UNIVERSITY PS.DWG Layout- Jul 03, 2008 - 3:06pm

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: JH DRN: MRL CKD: JF DATE: 7/1/08	CITY of TAMPA WASTEWATER DEPARTMENT	UNIVERSITY PUMPING STATION PUMP NO. 2 REPLACEMENT PROPOSED TRANSFORMER PLATFORM	W.O. 5395
	3						SHEET
	2						11
	1						

LEGEND



**SEWAGE PUMP NO. 2
(TIMING DIAGRAM)**

PLOT

FILENAME

ROMAN D. KORCHAK, P.E. #42626
ELECTRICAL SECTION HEAD
WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
3		
2		
1		

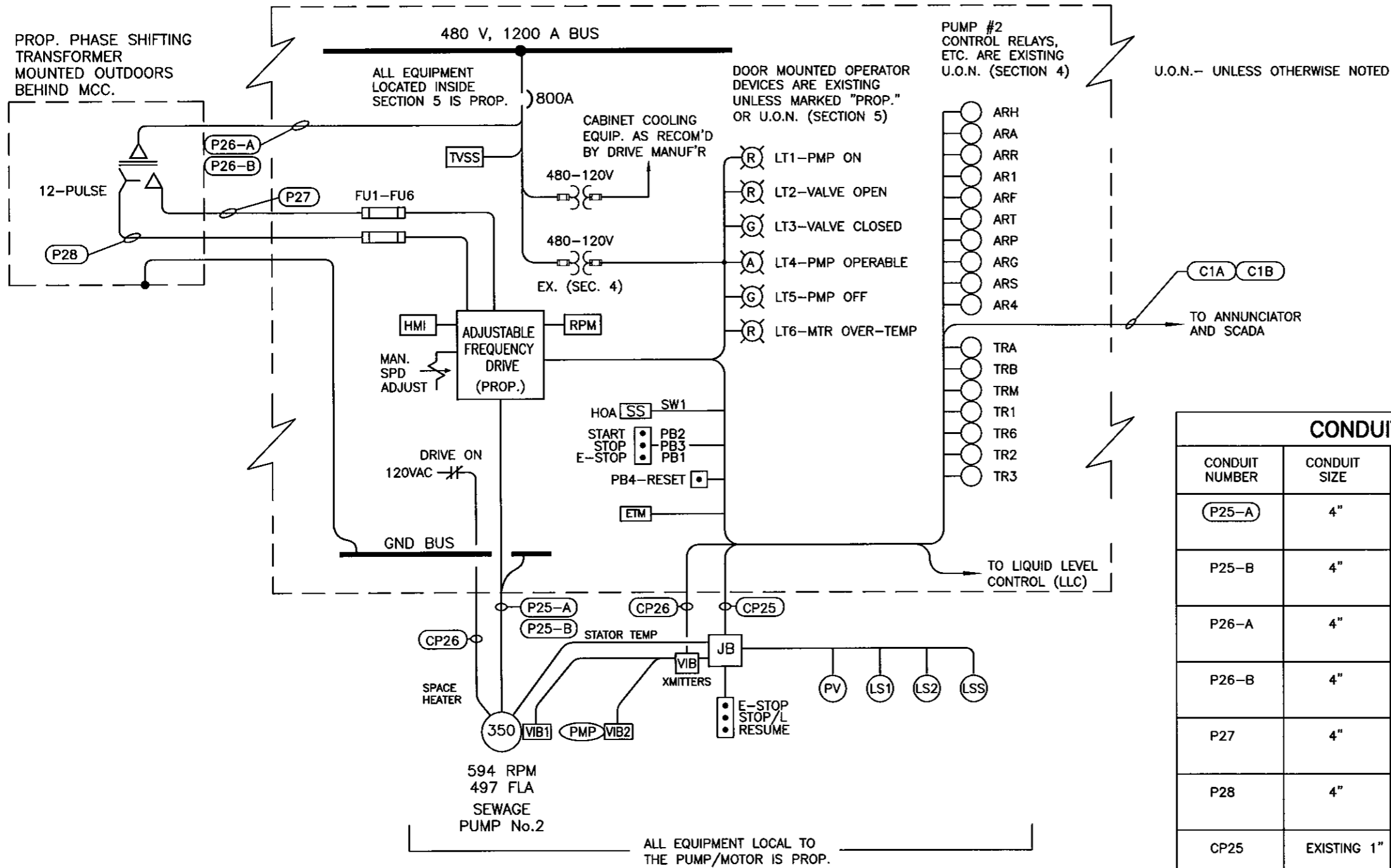
DES: RDK
DRN: RDK
CKD:
DATE: 6/10/08

CITY of TAMPA
WASTEWATER DEPARTMENT

UNIVERSITY P.S.
PUMP No.2 REPLACEMENT
TIMING DIAGRAM AND LEGEND

W.O. 5395
SHEET
E0
OF

EXISTING SEWAGE PUMPS CONTROL CENTER (SECTIONS 4 & 5)



ONE LINE DIAGRAM - PUMP No.2
480V - 3PH - 60HZ

CONDUIT AND CONDUCTOR SCHEDULE					
CONDUIT NUMBER	CONDUIT SIZE	CONDUCTOR QUAN. & SIZE	FROM	TO	REMARKS
P25-A	4"	(3)-400KCMIL (1)-#2/0 GND	PUMP CONTROL CENTER, SEC. 5	PUMP MOTOR No.2	POWER LEADS
P25-B	4"	(3)-400KCMIL (1)-#2/0 GND	PUMP CONTROL CENTER, SEC. 5	PUMP MOTOR No.2	POWER LEADS
P26-A	4"	(3)-500KCMIL (1)-#2/0 GND	PUMP CONTROL CENTER, SEC. 5	12-PULSE TRANSFORMER	PRIMARY LEADS
P26-B	4"	(3)-500KCMIL (1)-#2/0 GND	PUMP CONTROL CENTER, SEC. 5	12-PULSE TRANSFORMER	PRIMARY LEADS
P27	4"	(3)-500KCMIL (1)-#2/0 GND	12-PULSE TRANSFORMER	PUMP CONTROL CENTER, SEC. 5	SECONDARY LEADS
P28	4"	(3)-500KCMIL (1)-#2/0 GND	12-PULSE TRANSFORMER	PUMP CONTROL CENTER, SEC. 5	SECONDARY LEADS
CP25	EXISTING 1"	(34)-#14 (2)-#12 GND	PUMP CONTROL CENTER, SEC. 5	T.B. AT PUMP No.2 MOTOR	CONTROL WIRING
CP26	1-1/2"	(2)-#10 (1)-#10 GND	PUMP CONTROL CENTER, SEC. 4	PUMP MOTOR No.2	SPACE HEATER
		(2)#16-2C, SHLD		VIB. XMITTERS	ANALOG SIG.
		(2)#16-3C, SHLD			120VAC POWER
C1A OR C1B	EXISTING	ADD COND. AS REQ'D	PUMP CONTROL CENTER, SEC. 4	METERING AND SCADA PANEL	ANNUN. & RTU WIRING

PLOT

FILENAME

ROMAN D. KORCHAK, P.E. #42626
ELECTRICAL SECTION HEAD
WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
3		
2		
1		

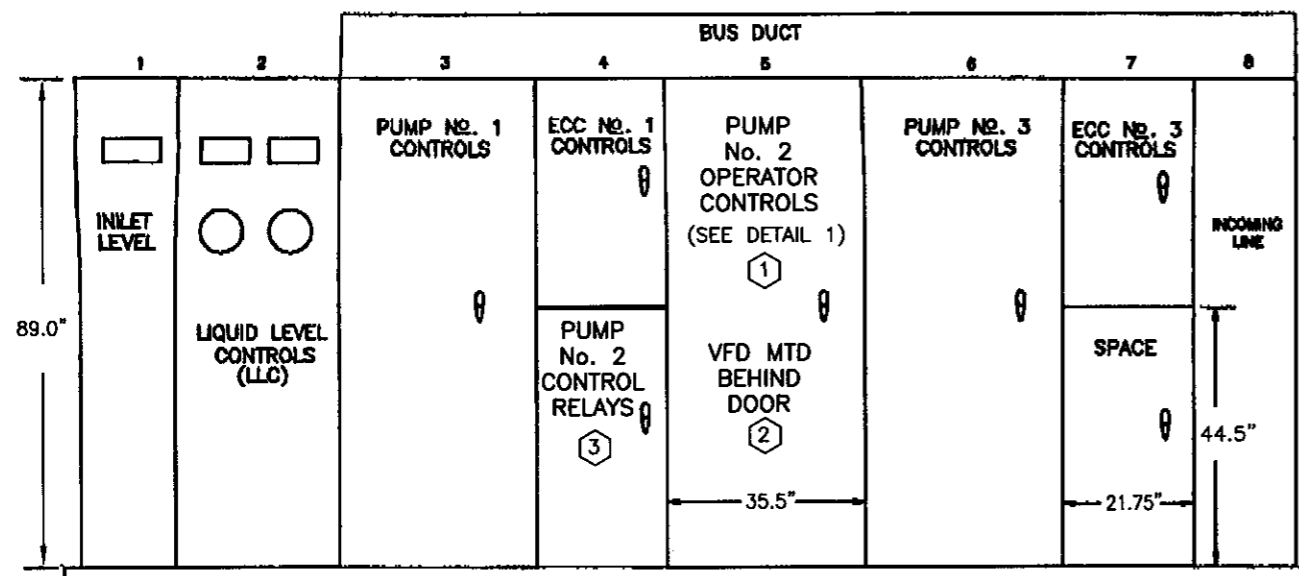
DES: RDK
DRN: RDK
CKD:
DATE: 6/02/08

CITY of TAMPA
WASTEWATER DEPARTMENT

UNIVERSITY P.S.
PUMP No.2 REPLACEMENT
ELECTRICAL- ONE-LINE DIAGRAM

W.O. 5395
SHEET
EI
OF

TOP OF EXISTING DOOR

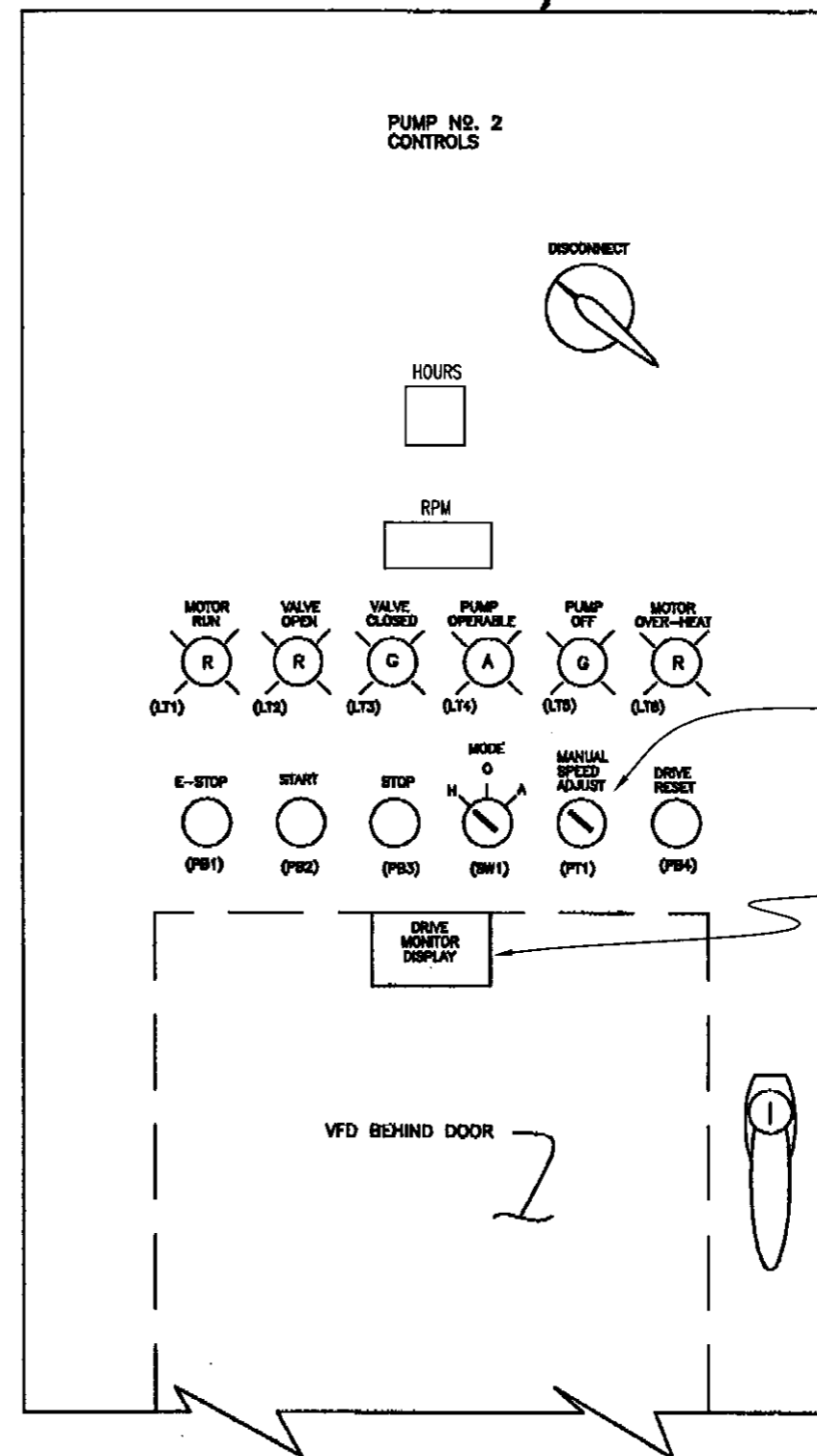


**EXISTING SEWAGE PUMPS CONTROL CENTER
(FRONT ELEVATION)**

THE NOTED EXISTING EQUIPMENT SHALL BE REMOVED OR MODIFIED AS REQUIRED TO FACILITATE THE INSTALLATION OF THE NEW EQUIPMENT PROVIDED AND INSTALLED UNDER THIS CONTRACT.

INDEXED NOTES:

- ① DOOR MOUNTED OPERATOR DEVICES ARE EXISTING UNLESS MARKED "PROP." OR U.O.N.
- ② ALL EQUIPMENT LOCATED INSIDE SECTION 5 IS PROPOSED.
- ③ PUMP No.2 CONTROL RELAYS, ETC, ARE EXISTING U.O.N.



PROP. 10-TURN POTENTIOMETER W/ TURNS COUNTING DIAL. REMOVE EXISTING AND REPLACE W/ HONEYWELL #73JA2K POT AND BOURNS #H-46-6A DIAL

PROP. DIGITAL OPERATOR (HMI)- REMOVE EXISTING AND MODIFY SPACE AS REQUIRED.

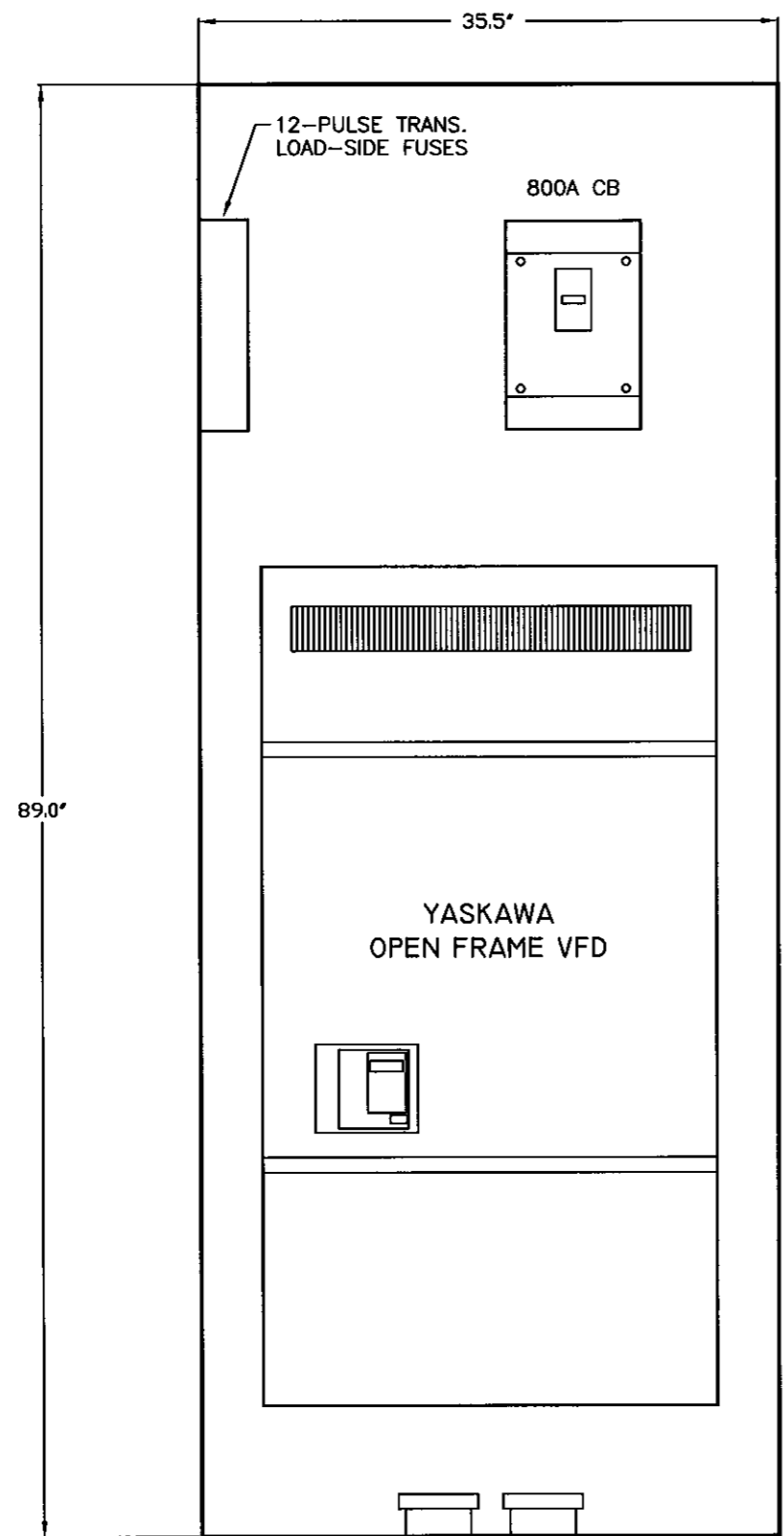
**DETAIL 1, PUMP NO. 2 CONTROLS
(FRONT DOOR LAYOUT)**

①

PLOT

FILENAME

ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK	CITY of TAMPA WASTEWATER DEPARTMENT	UNIVERSITY P.S. PUMP No.2 REPLACEMENT ELECTRICAL- MCC LAYOUT	W.O. 5395
	3			DRN: RDK			SHEET
	2			CKD:			E2
	1			DATE: 6/30/08			OF



NOTE:
 VFD #2 VENTILATION SHALL BE PROVIDED AND
 INSTALLED UNDER THE GUIDANCE AND
 SUPERVISION OF AN INDIVIDUAL WITH YASKAWA
 AUTHORIZED SERVICE PROVIDER CERTIFICATION.

**SEWAGE PUMP No.2
 SECTION 5 - PROP. LAYOUT**

(DOOR REMOVED FOR CLARITY)

PROP. (2)- 4" AL RIGID C. W/
 GROUNDING BUSHING. CORE
 DRILL CONCRETE AS REQ'D.

PLOT

FILENAME

ROMAN D. KORCHAK, P.E. #42626
 ELECTRICAL SECTION HEAD
 WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
3		
2		
1		

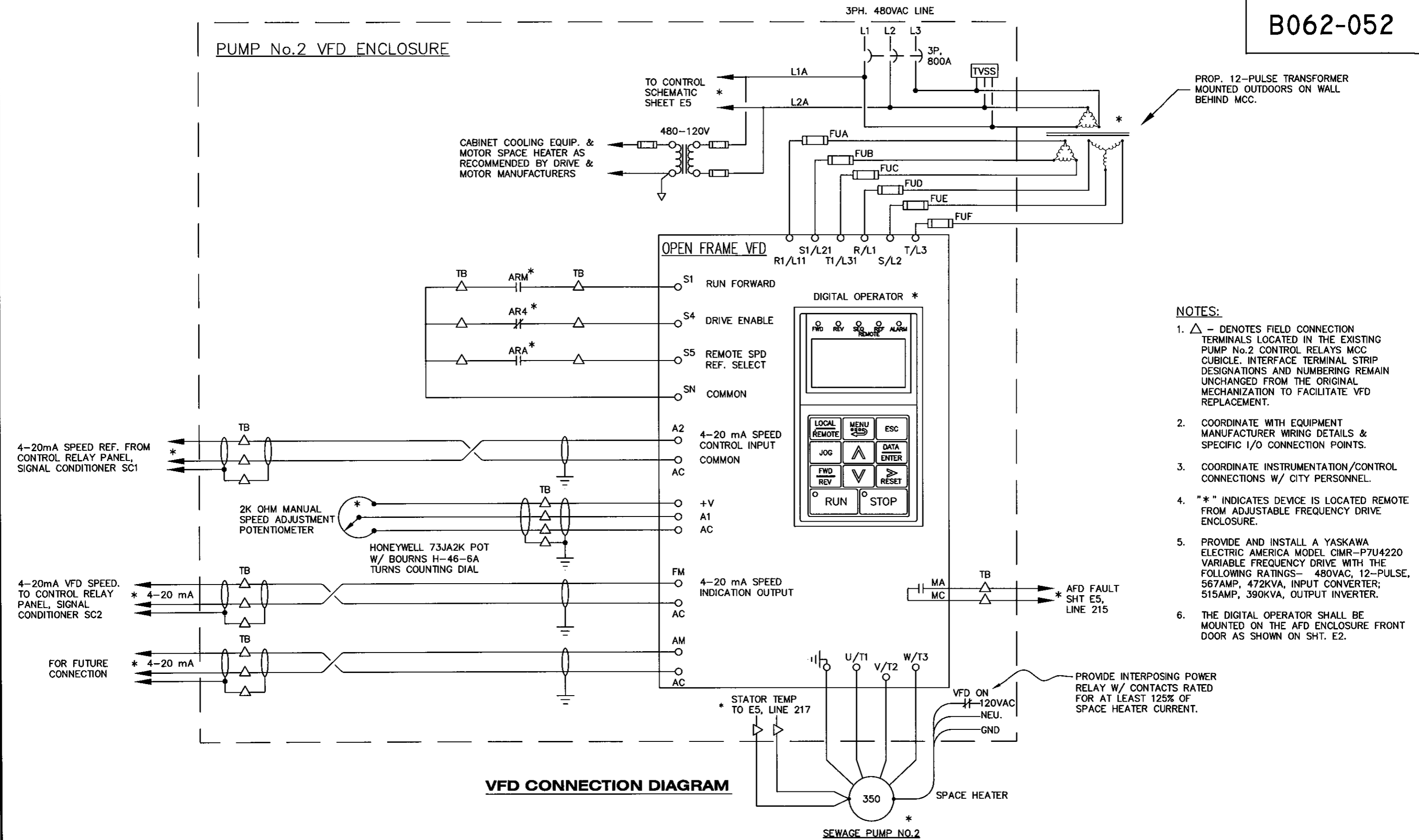
DES: RDK
 DRN: RDK
 CKD:
 DATE: 6/02/08

CITY of TAMPA
 WASTEWATER DEPARTMENT

UNIVERSITY P.S.
 PUMP No.2 REPLACEMENT
 PROP. VFD CUBICLE LAYOUT

W.O. 5395
 SHEET
E3
 OF

PUMP No.2 VFD ENCLOSURE



- NOTES:**
1. Δ - DENOTES FIELD CONNECTION TERMINALS LOCATED IN THE EXISTING PUMP No.2 CONTROL RELAYS MCC CUBICLE. INTERFACE TERMINAL STRIP DESIGNATIONS AND NUMBERING REMAIN UNCHANGED FROM THE ORIGINAL MECHANIZATION TO FACILITATE VFD REPLACEMENT.
 2. COORDINATE WITH EQUIPMENT MANUFACTURER WIRING DETAILS & SPECIFIC I/O CONNECTION POINTS.
 3. COORDINATE INSTRUMENTATION/CONTROL CONNECTIONS W/ CITY PERSONNEL.
 4. "*" INDICATES DEVICE IS LOCATED REMOTE FROM ADJUSTABLE FREQUENCY DRIVE ENCLOSURE.
 5. PROVIDE AND INSTALL A YASKAWA ELECTRIC AMERICA MODEL CIMR-P7U4220 VARIABLE FREQUENCY DRIVE WITH THE FOLLOWING RATINGS- 480VAC, 12-PULSE, 567AMP, 472KVA, INPUT CONVERTER; 515AMP, 390KVA, OUTPUT INVERTER.
 6. THE DIGITAL OPERATOR SHALL BE MOUNTED ON THE AFD ENCLOSURE FRONT DOOR AS SHOWN ON SHT. E2.

VFD CONNECTION DIAGRAM

FILENAME

ROMAN D. KORCHAK, P.E. #42626
ELECTRICAL SECTION HEAD
WASTEWATER DEPARTMENT

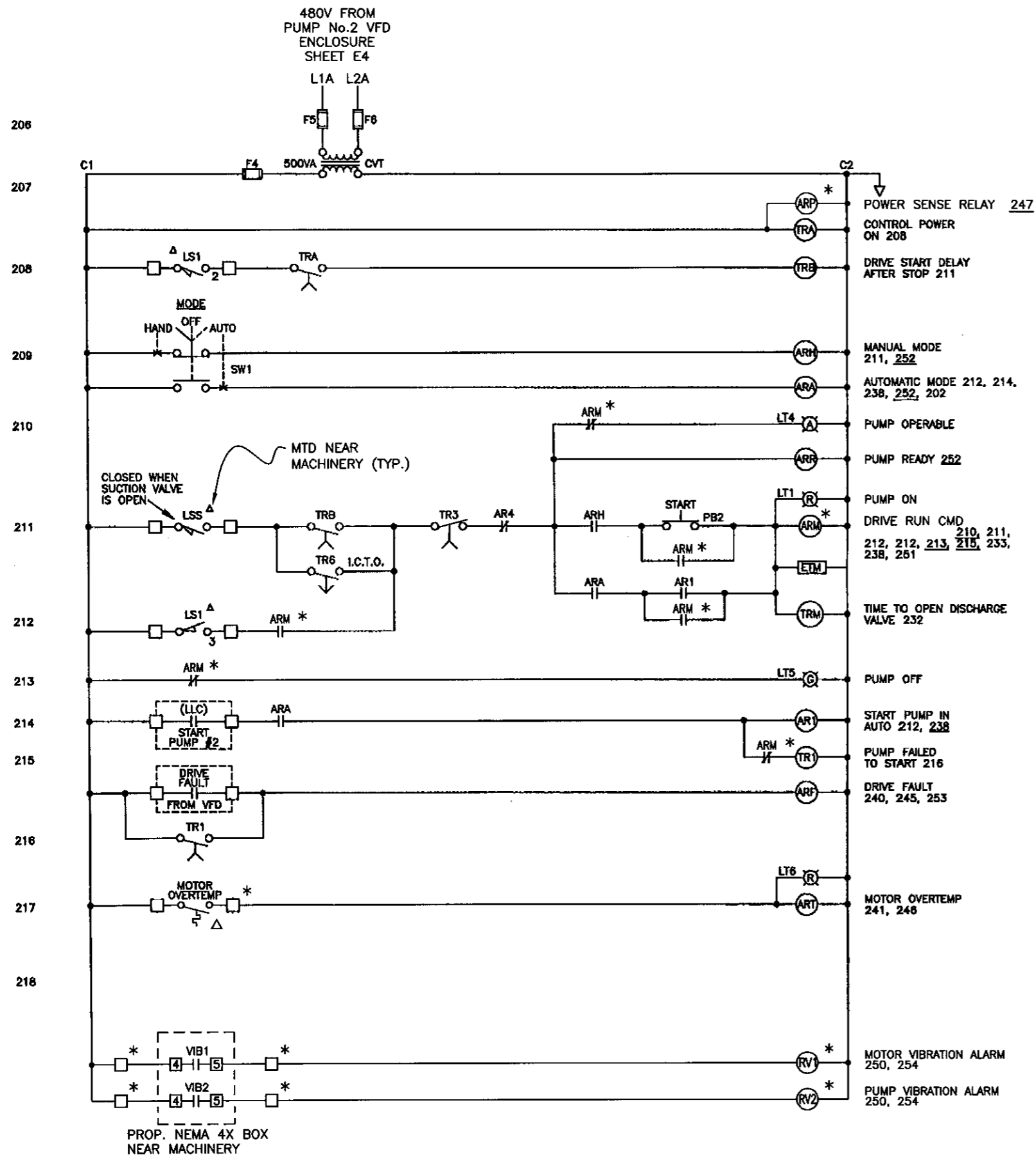
No.	DATE	REVISIONS
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DES: RDK
DRN: RDK
CKD:
DATE: 6/30/08

CITY of TAMPA
WASTEWATER DEPARTMENT

UNIVERSITY P.S.
PUMP No.2 REPLACEMENT
ELECTRICAL- VFD INTERCONNECTIONS

W.O. 5395
SHEET
E4
OF



LS	CONTACT	DISCHARGE VALVE POSITION		
		FULLY CLOSED	INTERMED POSITION	FULLY OPEN
LS1	1		X	X
	2	X		
	3		X	X
	4	X		
LS2	1	X	X	
	2			X
	3	X	X	
	4			X

CONTROLS ARE LOCATED IN THE LOWER HALF OF SECTION 4 OF THE PUMP CONTROL CENTER.

MODIFICATIONS TO THE EXISTING CONTROLS ARE MARKED WITH "*".

PLOT

FILENAME

ROMAN D. KORCHAK, P.E. #42626
ELECTRICAL SECTION HEAD
WASTEWATER DEPARTMENT

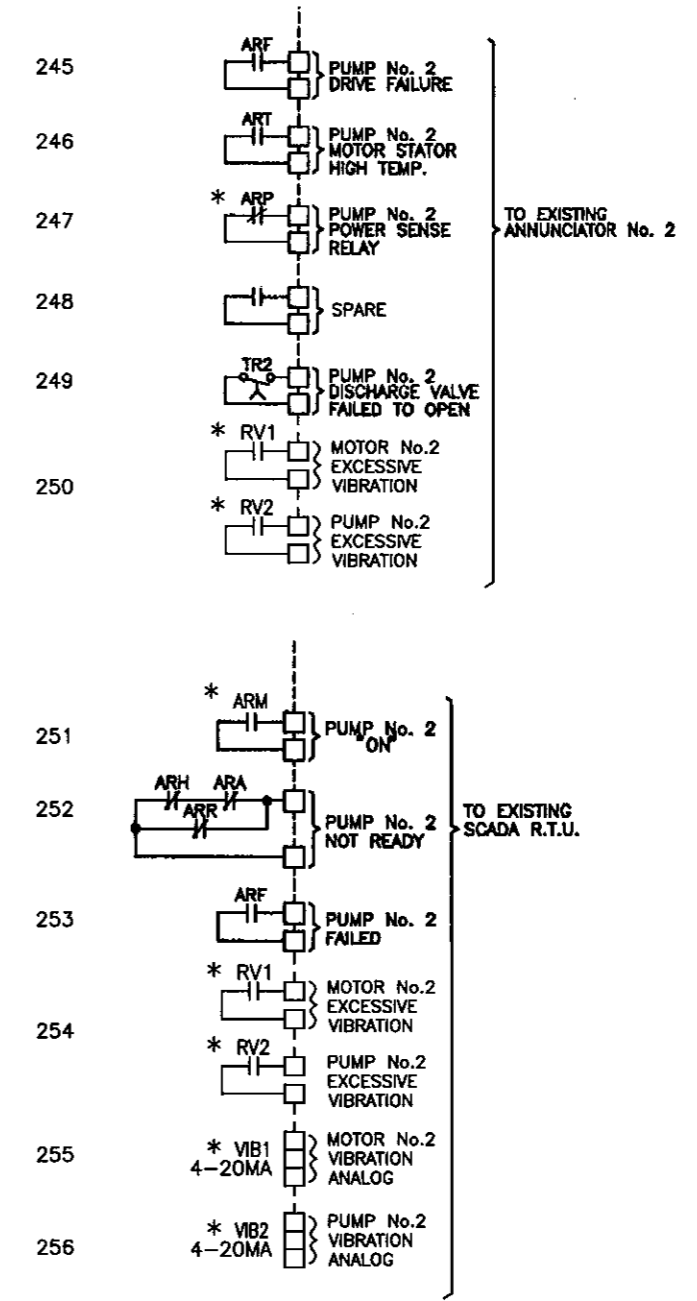
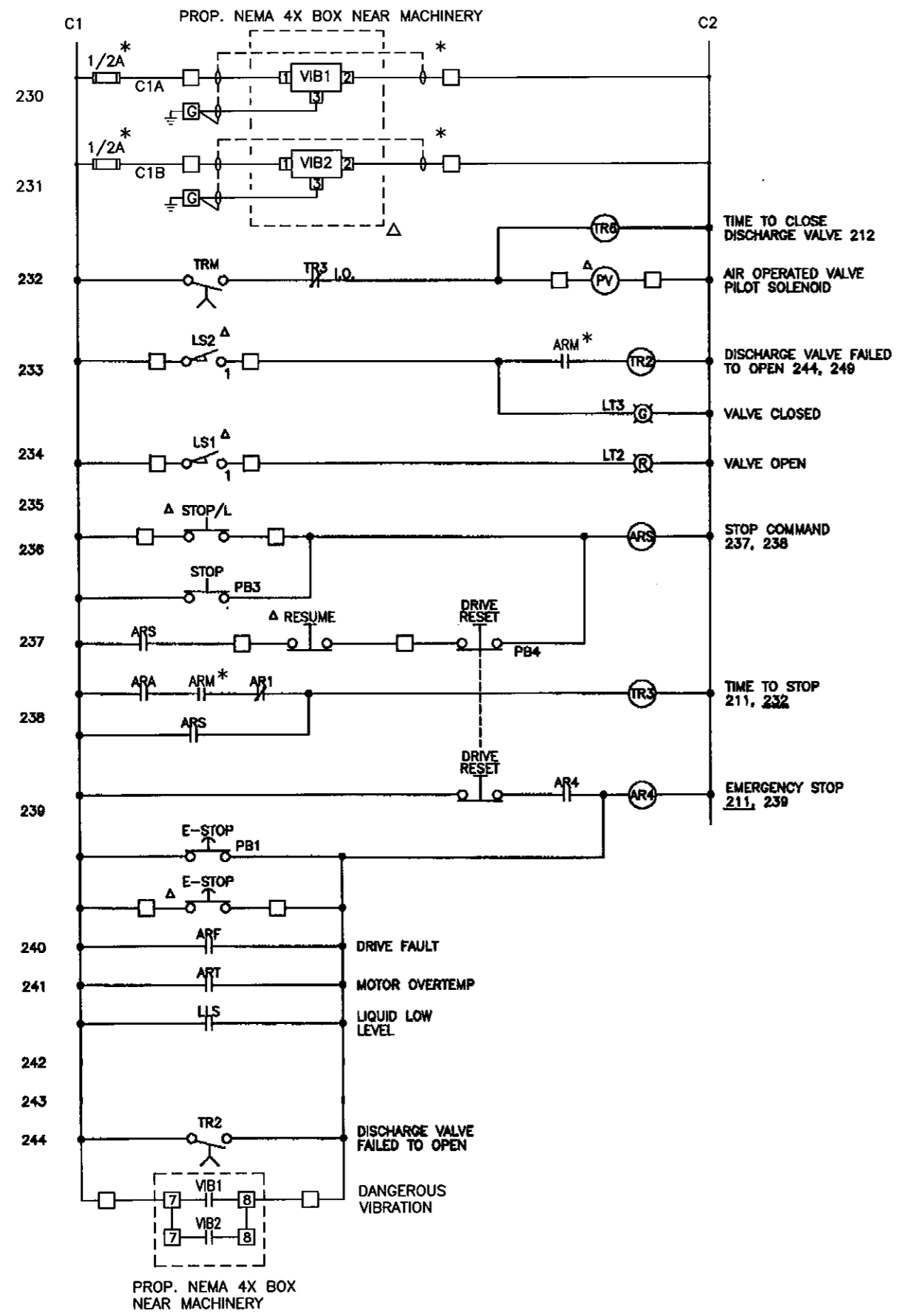
No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 6/30/08

CITY of TAMPA
WASTEWATER DEPARTMENT

UNIVERSITY P.S.
PUMP No.2 REPLACEMENT
PUMP No.2 CONTROLS (SHT. 1 OF 4)

W.O. 5395
SHEET
E5
OF



CONTROLS ARE LOCATED IN THE LOWER HALF OF SECTION 4 OF THE PUMP CONTROL CENTER.
 MODIFICATIONS TO THE EXISTING CONTROLS ARE MARKED WITH "*".

PLOT

FILENAME

ROMAN D. KORCHAK, P.E. #42626
 ELECTRICAL SECTION HEAD
 WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
3		
2		
1		

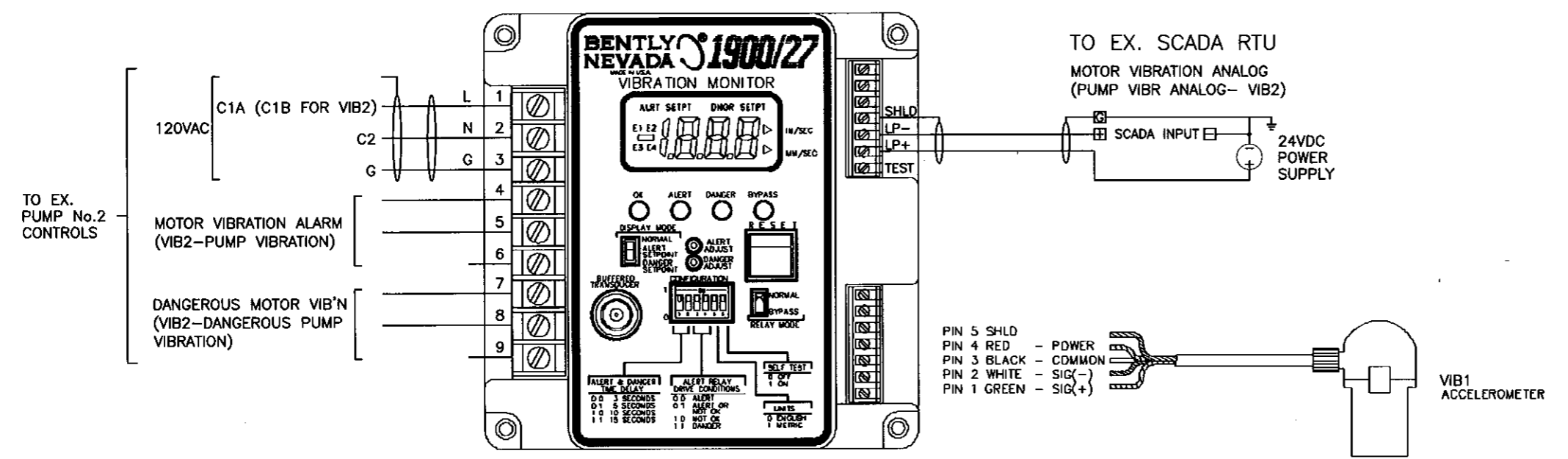
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 CKD:
 DATE: 6/30/08

CITY of TAMPA
 WASTEWATER DEPARTMENT

UNIVERSITY P.S.
 PUMP No.2 REPLACEMENT
 PUMP No.2 CONTROLS (SHT. 2 OF 4)

W.O. 5395
 SHEET
E6
 OF

VIB1 TRANSMITTER



POWER SUPPLY CONNECTIONS	
INPUT VOLTAGE	CONNECTIONS
110 VAC	1 LINE 2 NEUTRAL 3 GROUND
220 VAC	1 LINE 1 2 LINE 2/NEUTRAL 3 GROUND
24 VDC	1 +24 VDC 2 COMMON 3 GROUND

RELAY CONTACTS			
		NORMALLY DE-ENERGIZED (FACTORY DEFAULT)	NORMALLY ENERGIZED
ALERT	4	NORMALLY CLOSED	NORMALLY OPEN
	5	COMMON	COMMON
	6	NORMALLY OPEN	NORMALLY CLOSED
DANGER	7	NORMALLY CLOSED	NORMALLY OPEN
	8	COMMON	COMMON
	9	NORMALLY OPEN	NORMALLY CLOSED

MOTOR VIBRATION MONITOR, VIB1
(PUMP VIBRATION MONITOR, VIB2, IS SIMILAR)

THE PUMP / MOTOR SUPPLIER SHALL PROVIDE THE SPECIFIED VIBRATION MONITORING EQUIPMENT AND INSTALL THE ACCELEROMETERS ON THE MACHINERY AS REQUIRED. VIB1 AND VIB2 TRANSMITTERS SHALL BE MOUNTED IN A COMMON NEMA 4X S.S. ENCLOSURE MOUNTED NEAR THE MACHINERY AND WIRED AS REQUIRED BY THE ELECTRICAL SUBCONTRACTOR.

PLOT

FILENAME

ROMAN D. KORCHAK, P.E. #42626
ELECTRICAL SECTION HEAD
WASTEWATER DEPARTMENT

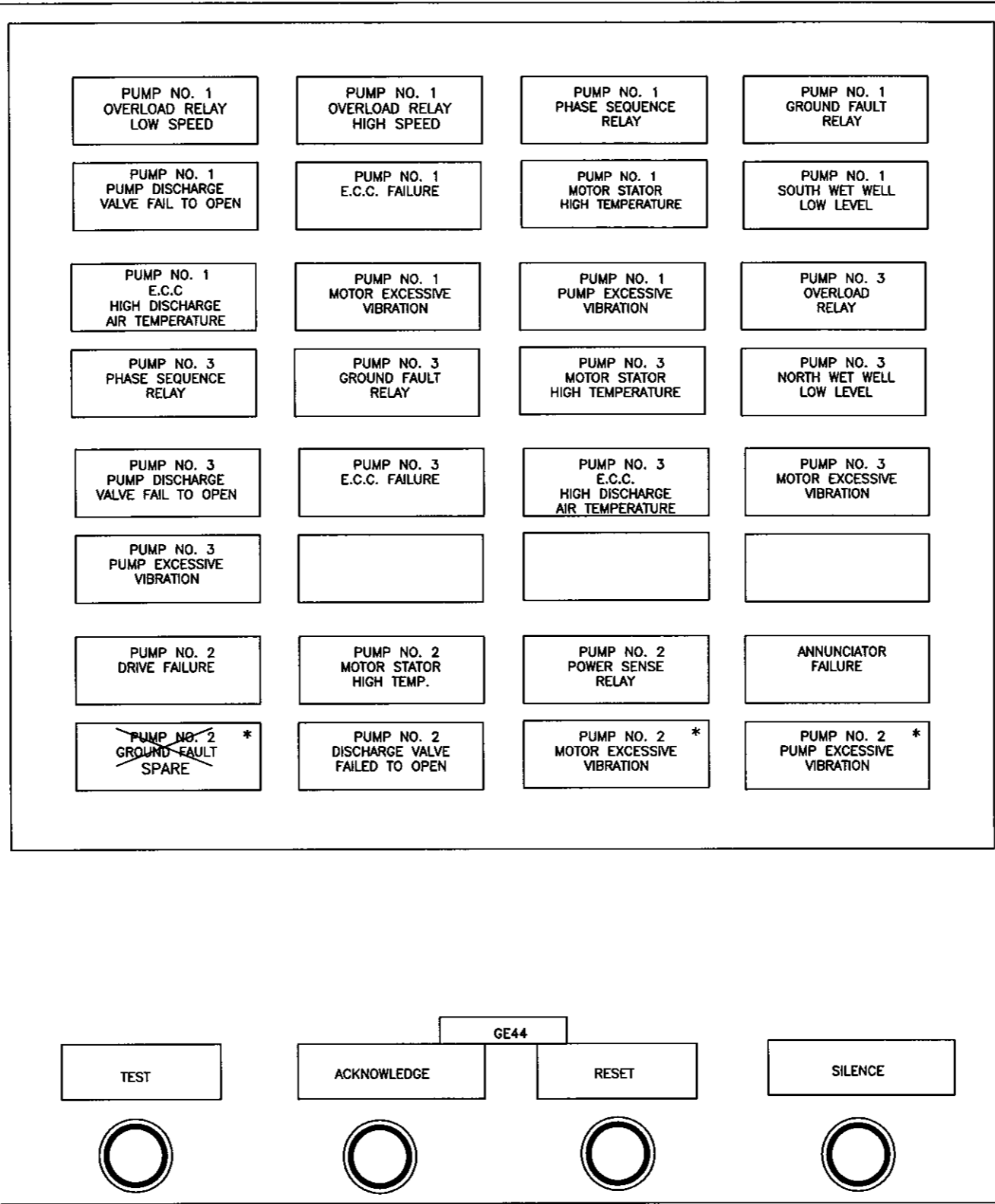
No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 6/06/08

CITY of TAMPA
WASTEWATER DEPARTMENT

UNIVERSITY P.S.
PUMP No.2 REPLACEMENT
PUMP No.2 CONTROLS (SHT. 3 OF 4)

W.O. 5395
SHEET
E7
OF



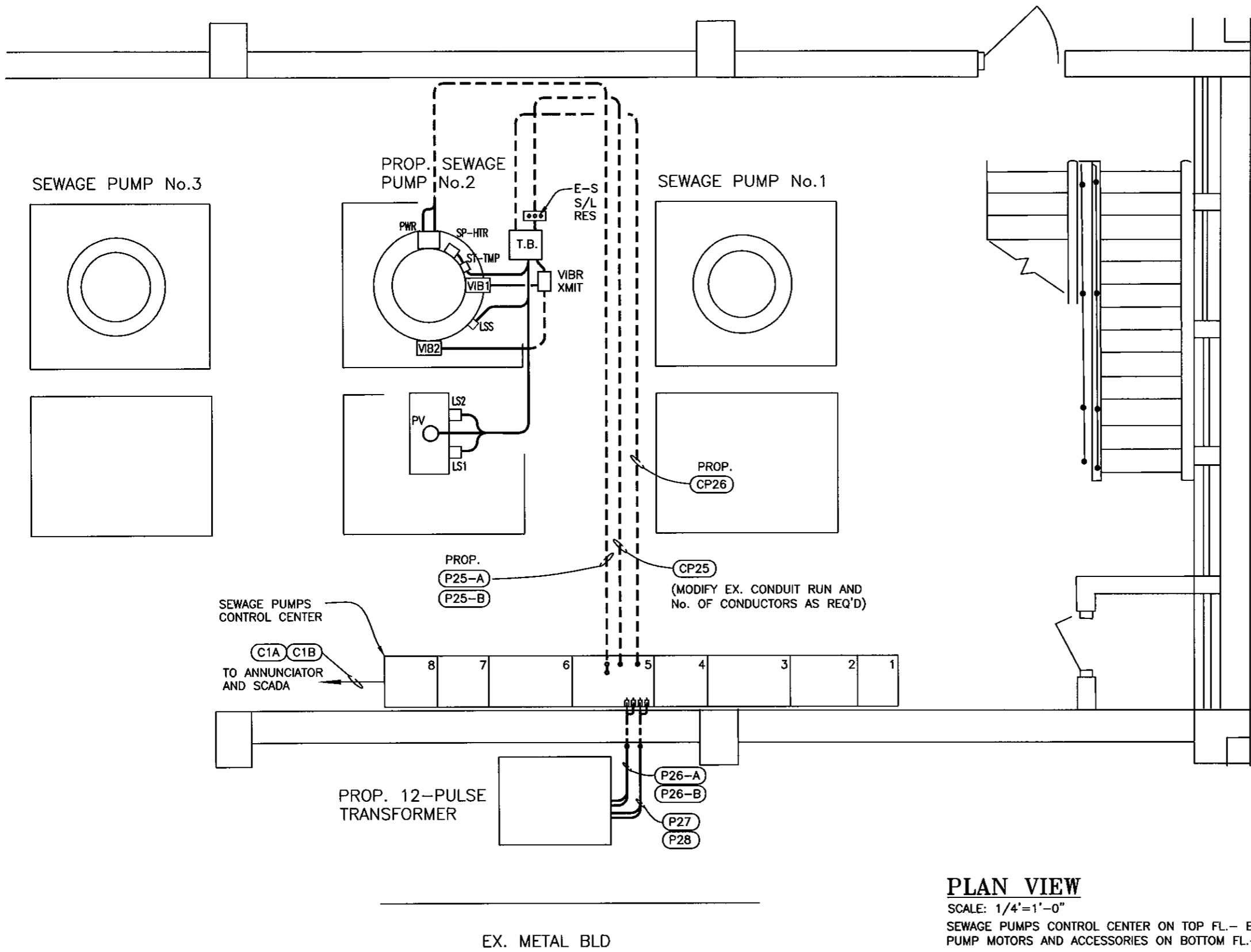
EXISTING ANNUNCIATOR

WINDOWS TO BE ADDED ARE MARKED "*"

PLOT

FILENAME

ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK	CITY of TAMPA WASTEWATER DEPARTMENT	UNIVERSITY P.S. PUMP No.2 REPLACEMENT PUMP No.2 CONTROLS (SHT. 4 OF 4)	W.O. 5395
	3			DRN: RDK			SHEET
	2			CKD:			E8
	1			DATE: 6/30/08			OF



ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK	CITY of TAMPA WASTEWATER DEPARTMENT	UNIVERSITY P.S. PUMP No.2 REPLACEMENT ELECTRICAL- POWER PLAN	W.O. 5395
	3			DRN: RDK			SHEET
	2			CKD:			E9
	1			DATE: 6/06/08			OF

PLOT

FILENAME

ROMAN D. KORCHAK, P.E. #42626
ELECTRICAL SECTION HEAD
WASTEWATER DEPARTMENT

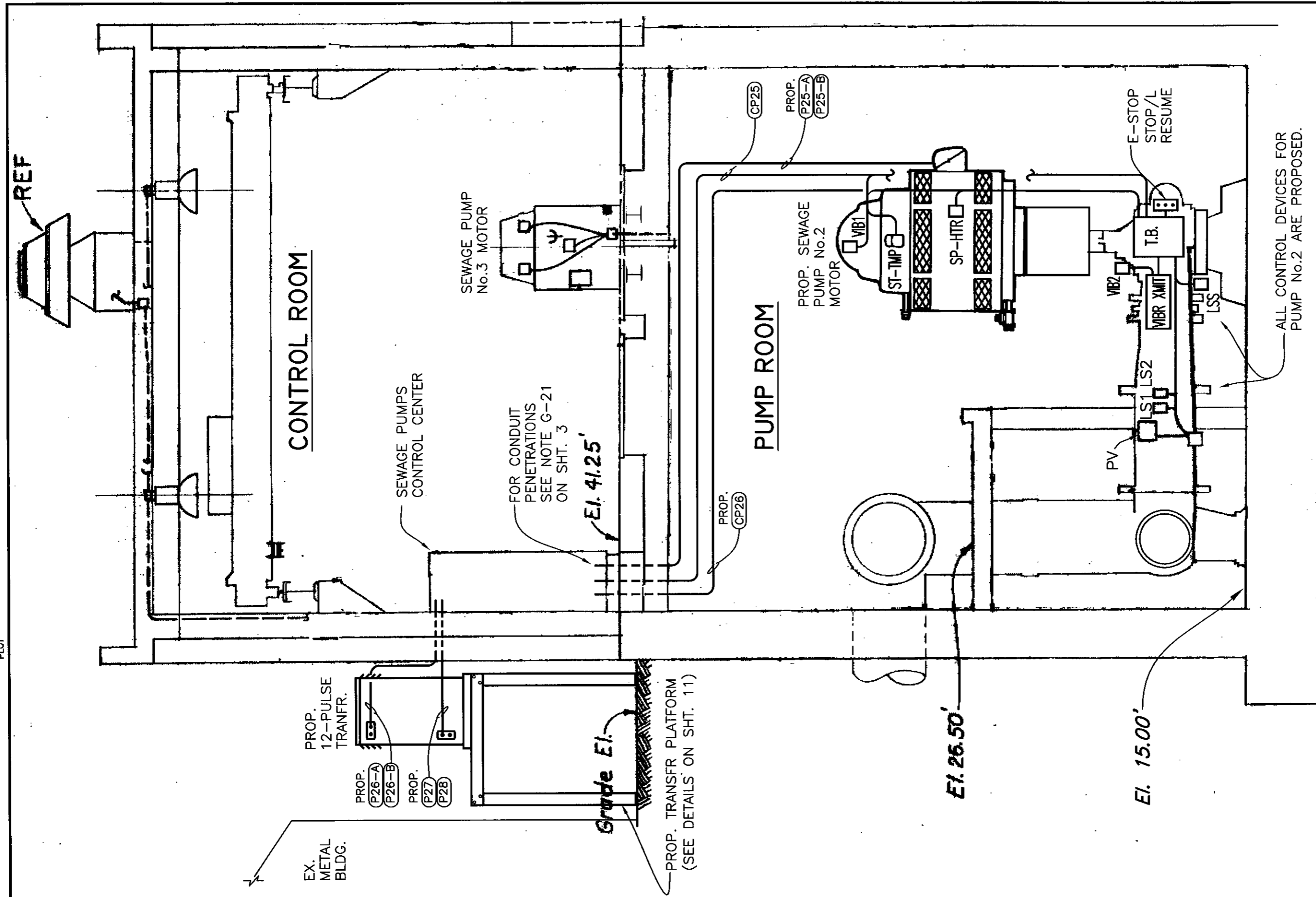
No.	DATE	REVISIONS
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2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 6/09/08

CITY of TAMPA
WASTEWATER DEPARTMENT

UNIVERSITY P.S.
PUMP No.2 REPLACEMENT
ELECTRICAL POWER SECTION

W.O. 5395
SHEET
E10
OF



ALL CONTROL DEVICES FOR PUMP No.2 ARE PROPOSED.

NOTE: ALL ITEMS NOT MARKED "PROP." ARE EXISTING.

SECTION X-X

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