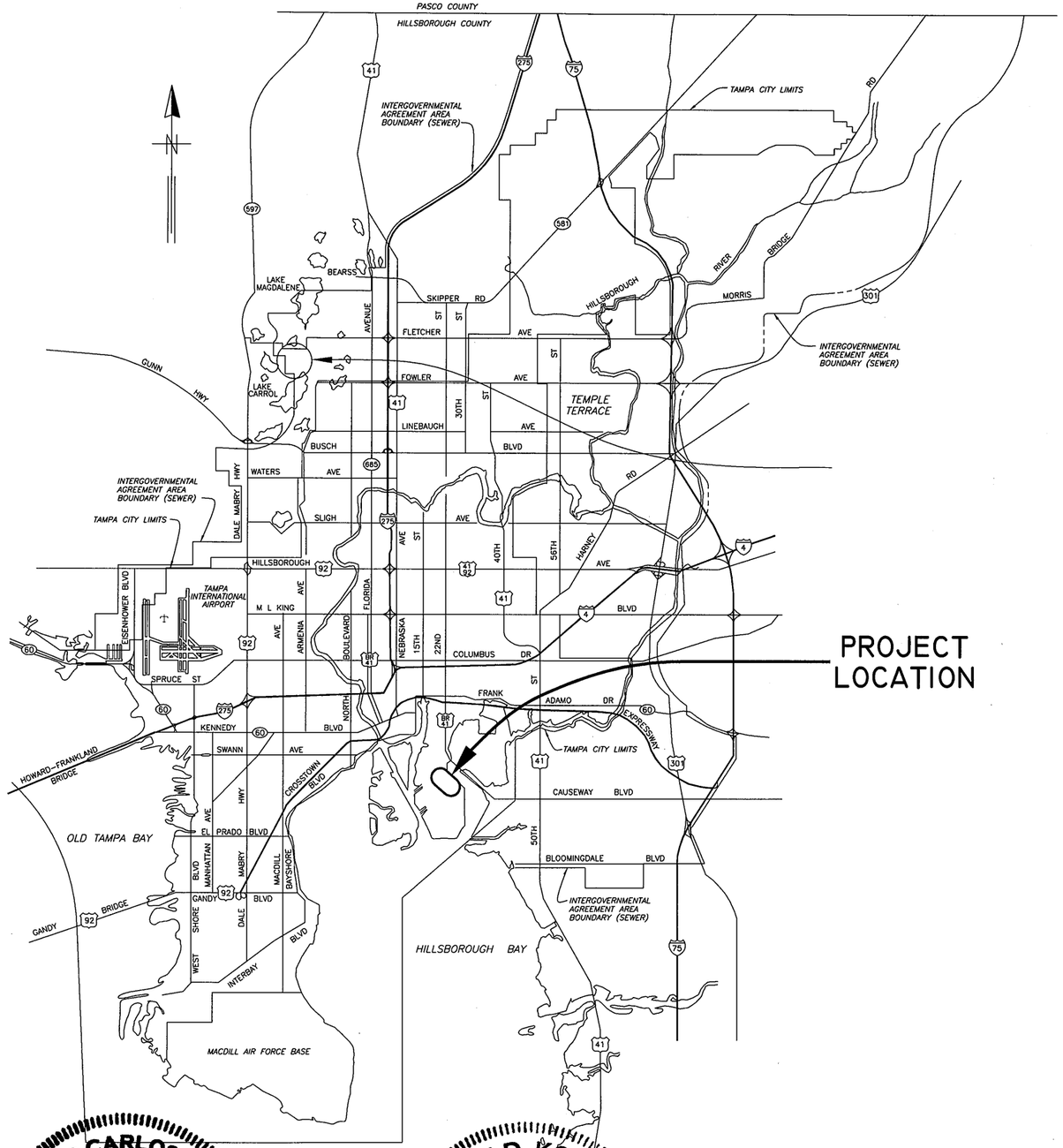
TPB 012-060

LOCATION MAP



PROJECT LOCATION

CITY of TAMPA

CITY OF TAMPA FLORIDA • ORGANIZED JULY 15 1887 • MASCOTTE

WASTEWATER DEPARTMENT

PLANS FOR

HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

RAW SEWAGE PUMPING STATION IMPROVEMENTS

CONTRACT No. 12-C-00042

JACINTO CARLOS FERRAS LICENSE No 49454 STATE OF FLORIDA PROFESSIONAL ENGINEER

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

ROMAN D. KORCHAK LICENSE No 42626 STATE OF FLORIDA PROFESSIONAL ENGINEER

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

No.	DATE	REVISIONS
3		
2		
1		

DES: J.H.
DRN: BB
CKD:
DATE:

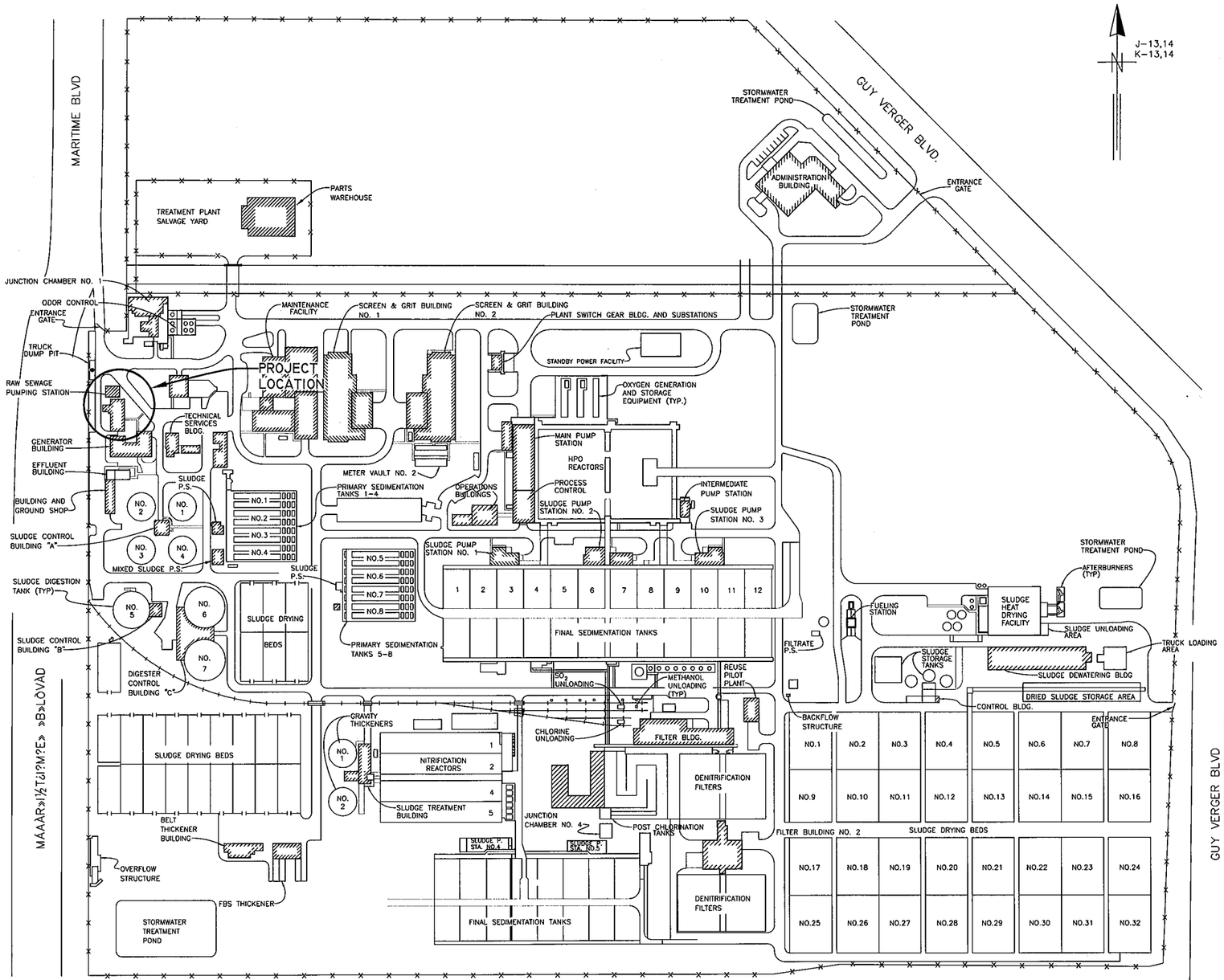
CITY of TAMPA
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

COVER SHEET

W.O. 4506
SHEET 1

K:\WW_PROJECTS\2012\2012_4506-RAW_SEWAGE_P.S\DWG\4506-SHEET-01.DWG

TPB 012-061



HOWARD F. CURREN WASTEWATER TREATMENT PLANT

SITE PLAN / PROJECT MAP

NOT TO SCALE

INDEX

SH. No.	DESCRIPTION	SH. No.	DESCRIPTION
1	COVER SHEET	E15	PROP. MCC-64 BUBBLER (SEC.12)
2	PROJECT LOCATION AND INDEX	E16	PROP. MCC-64 PLC/ANNUN(SEC. 13)
3	NOTES (GENERAL, BYPASS & DEMO)	E16A	PROP. ANNUNCIATOR SCREENS
4	EXISTING SITE PLAN	E16B	PROP. PUMP CONTROL SCREENS
5	DEMOLITION PLAN VIEWS	E17	PROP. MCC-64 SEC. 12-13 FR. EL.
6	DEMOLITION SECTIONS	E18	EX. MCC-65A 1-LINE (SEC. 14)
7	PROPOSED SITE PLAN	E19	PROP. MCC-65A 1-LINE (SEC. 14)
8	PROPOSED PLAN VIEW	E20	EX. MCC-65B 1-LINE(SEC. 15-16)
9	PROPOSED SECTION B-8	E21	PROP. MCC-65B 1-LINE(SEC.15-16)
10	PROPOSED SECTION C-8	E22	EX. AFD No.1 DETAILS (SEC. 9)
11	PROPOSED SECTION D-8	E23	EX. AFD No.1 DETAILS (SEC. 10A)
12	PROPOSED SECTION E-8	E24	PROP. AFD No1 FRONT EL. (SEC. 9)
13	PROP. ROOF STRUCTURE DETAILS	E25	PROP. AFD No1 DETAILS (SEC. 9)
14	CONC. REINFORCEMENT DETAILS	E26	PROP. AFD No1 DETAILS (SEC. 10A)
15	MISCELLANEOUS PROPOSED DETAILS	E27	EX. AFD No.2 DETAILS (SEC. 11)
16	MISCELLANEOUS PROPOSED DETAILS	E28	EX. AFD No.2 DETAILS (SEC. 10B)
17	PROPOSED ELECTRICAL SHEETS	E29	PROP. AFD No.2 FRONT EL. (SEC. 11)
18	EX. CONDITIONS - ELEC. ROOM	E30	PROP. AFD No.2 DETAILS (SEC. 11)
19	EX. CONDITIONS - ELEC. ROOM	E31	PROP. AFD No.2 DETAILS (SEC. 10B)
E0	SITE PLAN & DRAWING INDEX	E32	EX. AFD No.3 DETAILS (SEC. 8)
E1	SYMBOLS (SHEET 1 OF 2)	E33	EX. AFD No.3 DETAILS (SEC. 7B)
E1A	SYMBOLS (SHEET 2 OF 2)	E34	PROP. AFD No.3 FRONT EL. (SEC. 8)
E2	SCOPE OF WORK & GEN. NOTES	E35	PROP. AFD No.3 DETAILS (SEC. 8)
E3	RSPS & CTRL. RM. DEMO PLANS	E36	PROP. AFD No.3 DETAILS (SEC. 7B)
E4	RSPS & CTRL. RM. PROP. PLANS	E37	EX. AFD No.4 DETAILS (SEC. 6)
E5	CONDT. & CONDTR. SCH.(1 OF 2)	E38	EX. AFD No.4 DETAILS (SEC. 7A)
E5A	CONDT. & CONDTR. SCH.(2 OF 2)	E39	PROP. AFD No.4 FRONT EL. (SEC. 6)
E6	EX. 1-LINE DIAGRAM (ELEM.)	E40	PROP. AFD No.4 DETAILS (SEC. 6)
E7	PROP. 1-LINE DIAGRAM (ELEM.)	E41	PROP. AFD No.4 DETAILS (SEC. 7A)
E8	CTRL. RM. SWITCHGEAR / MCC	E42	SCREENING EQUIP. INTERCONNECTIONS
E9	TEMP. POWER DETAILS (1 OF 2)	E43	SCREENING EQ. CTRL. PANEL(1 OF 5)
E9A	TEMP. POWER DETAILS (2 OF 2)	E44	SCREENING EQ. CTRL. PANEL(2 OF 5)
E10	EX. SWCH GR 1 LINE(SEC. 1-5)	E45	SCREENING EQ. CTRL. PANEL(3 OF 5)
E11	PROP. SWCH GR 1 LINE(SEC. 1-5)	E46	SCREENING EQ. CTRL. PANEL(4 OF 5)
E12	EX. MCC-64 1-LINE (SEC. 6-11)	E47	SCREENING EQ. CTRL. PANEL(5 OF 5)
E13	EX. MCC-64 1-LINE (SEC. 12-13)	E48	OUTDOOR DISCONNECT DET. (1 OF2)
E14	PROP. MCC-64 1-LINE(SEC. 6-11)	E49	OUTDOOR DISCONNECT DET. (2 OF2)

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

No.	DATE	REVISIONS
3		
2		
1		

DES: J.H.
DRN: BB
CKD:
DATE:

CITY of TAMPA
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATION IMPROVEMENTS
PROJECT LOCATION & INDEX

W.O. 4506
SHEET 2

K:\WW_PROJECTS\2012\2012_4506-RAW_SEWAGE_P.S.\4506-SHEET-02&03.DWG

TPB 012-062

AWTP RAW SEWAGE PS GENERAL NOTES

1. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE CONTRACT ADMINISTRATION DEPARTMENT, WASTEWATER PERSONNEL AND AWTP OPERATIONS.
2. DIMENSIONS SHOWN ARE NOT NECESSARILY ACCURATE TO THE DEGREE REQUIRED FOR FABRICATION. EXISTING DIMENSIONS AND VIEWS ARE SHOWN BASED ON EARLIER PLAN SETS AND VISUAL OBSERVATIONS. CONTRACTOR SHALL FIELD VERIFY ALL PERTINENT DIMENSIONS AND REFLECT THEM ON DETAILED SHOP DRAWINGS FOR APPROVAL BEFORE ANY FABRICATION.
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 SUBMITTALS REVIEW.
4. CONTRACTOR IS RESPONSIBLE FOR MEETING ALL FEDERAL, STATE AND LOCAL GOVERNMENT REGULATIONS IN REGARDS TO WORKING IN CONFINED SPACES.
5. OSHA STANDARD SAFETY EQUIPMENT, SUCH AS SAFETY HARNESSES, GAS MONITORS, LOWER EXPLOSIVE LIMIT (LEL) DETECTORS, BREATHING APPARATUS, PERSONAL RETRIEVAL SYSTEMS, ETC. SHALL BE UTILIZED WHERE THE WORK DICTATES THEIR USE.
6. DURING THE REHABILITATION PROCESS, THE STRUCTURES SHALL BE ADEQUATELY VENTILATED AND OXYGEN AND HYDROGEN SULFIDE LEVELS SHALL BE CONTINUOUSLY MONITORED. THE CONTRACTOR MAY ALSO UTILIZE FORCED AIR.
7. SEWER SERVICE TO CUSTOMERS SHALL NOT BE DISRUPTED DURING CONSTRUCTION. THE CONTRACTOR SHALL SUBMIT A PROPOSAL FOR A BYPASS PUMPING STRATEGY. THE CONTRACTOR SHALL ALSO SUBMIT A SCHEDULE OF SEQUENCES FOR COMPLETION, TESTING AND TRANSFER OF DUTY BACK TO THE PUMP STATION ALONG WITH THE PUMPING STRATEGY.
8. PRIOR TO BYPASS PUMPING, THE CONTRACTOR SHALL HAVE IN HIS POSSESSION ALL PROPOSED PUMPS, VALVES, PIPING, COATINGS, APPURTENANCES AND ALL NECESSARY BAR SCREEN, WASHER-COMPACTOR AND ELECTRICAL EQUIPMENT TO MINIMIZE THE DURATION OF THE BYPASS PUMPING.
9. THE CONSTRUCTION SITE SHALL BE MAINTAINED IN AS NEAT AND ORDERLY CONDITION AS POSSIBLE DURING CONSTRUCTION OPERATIONS. SITE SHALL BE SECURED WITH TEMPORARY FENCING AND STRUCTURES DURING HOURS WHEN CONTRACTOR IS NOT PRESENT TO ENSURE SAFETY OF CITY PERSONNEL AND THE PUBLIC.
10. PRIOR TO PRESSURE WASHING THE WET WELL, THE CONTRACTOR SHALL BE REQUIRED TO CLEAN AND REMOVE ALL GREASE, SEDIMENT AND DEBRIS FROM THE WET WELL WALLS, CEILING AND FLOOR. THE GREASE, SEDIMENT AND DEBRIS SHALL BE PROPERLY DISPOSED OF AT THE SLUDGE DRYING BEDS ON THE TREATMENT PLANT SITE.
11. CHECK VALVES SHALL BE APCO SERIES 6000B – OIL CONTROL/BOTTOM BUFFER, SWING CHECK VALVES. OIL RESERVOIRS FOR CHECK VALVES SHALL BE MOUNTED ON THE WEST SIDE OF EACH VALVE. EACH VALVE SHALL BE EQUIPPED WITH A LIMIT SWITCH. THE LIMIT SWITCHES SHALL BE MOUNTED ON THE EAST SIDE OF EACH VALVE. SEE ELECTRICAL DETAILS FOR MORE INFORMATION.
12. THE TWO 24" DIAMETER AND TWO 16" DIAMETER DISCHARGE PIPES SHALL BE REPLACED WITH 24" (& 16") HDPE, DR-11, GREEN STRIPE, DIPS-OD PIPING. HDPE JOINTS SHALL BE BUTT FUSED OR FLANGED WITH 316 S.S. BACK-UP RINGS. THE LOCATIONS OF PROPOSED FLANGED JOINTS SHALL BE AS INDICATED IN THE PLANS.
13. TESTING OF THE NEW DISCHARGE PIPES SHALL BE ACCOMPLISHED BY OPERATING EACH PUMP FOR MINIMUM 1-HOUR DURATION AND OBSERVING FOR ANY LEAKS. ANY MANUAL PUMP OPERATION OR SWITCHING PUMPS MUST BE PERFORMED BY CITY PERSONNEL.
14. PROPOSED BAR SCREEN EQUIPMENT SHALL BE ONE CONTINUOUS TRIDEN SCREEN & ONE WASHING COMPACTOR, AS MANUFACTURED BY HYDRO-DYNE ENGINEERING, INC., OLDSMAR, FLORIDA OR SHALL MATCH HYDRO-DYNES PUBLISHED SPECIFICATIONS FOR THESE UNITS. SEE SPECIFICATIONS FOR PERFORMANCE DATA AND TECHNICAL INFORMATION.
15. ALL HARDWARE, UNLESS OTHERWISE NOTED, SHALL BE TYPE 316 STAINLESS STEEL.
16. ALL STAINLESS STEEL PARTS TO BE WELDED SHALL BE THE LOW-CARBON VERSION OF THE GRADE OF STAINLESS STEEL THAT IS CALLED FOR, SUCH AS: T-316L OR T-304L.
17. ALL CEMENTITIOUS CONCRETE AND GROUT, UNLESS OTHERWISE SPECIFIED, SHALL BE CLASS "B" 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
18. THE CONTRACTOR SHALL TREAT ANY EXPOSED REBAR, OR OTHER METAL IN THE CONCRETE EXPOSED BY HIS ACTIONS, BY GRINDING THEM BACK A MINIMUM OF 1/-INCH AND FILLING THE DEPRESSIONS(S) WITH EPOXY.
19. THE CONTRACTOR SHALL RESTORE ANY LANDSCAPING, FENCING, SODDING, SPRINKLER SYSTEM PIPING, PAVEMENT, DITCH BANK AND/OR FLOW LINE, ETC. THAT MAY HAVE BEEN DAMAGED OR ALTERED DURING CONSTRUCTION TO ITS ORIGINAL CONDITION OR BETTER.
20. ALL METAL SURFACES COMING IN CONTACT WITH CONCRETE SHALL BE PROVIDED WITH NEOPRENE PADS OR 2 COATS OF COAL TAR EPOXY WITH PROPER SURFACE PREPARATION. CONTRACTOR SHALL SUBMIT SYSTEM(S) FOR APPROVAL.
21. CONTRACTOR MAY NEED TO DISASSEMBLE PORTIONS OF THE EXISTING PUMP CONTROLS ROOM (IN THE OLD RAW SEWAGE PUMPING STATION BUILDING) IN ORDER TO REMOVE, AND INSTALL, LARGE PIECES OF ELECTRICAL EQUIPMENT. DETAILS OF EXISTING CONTROLS ROOM ARE ON SHEETS 18 & 19 FOR INFORMATION PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING CONTROLS ROOM BACK TO ITS ORIGINAL CONDITION OR BETTER.

BYPASSING NOTES

B-1. SEWER SERVICE TO CUSTOMERS SHALL NOT BE DISRUPTED DURING CONSTRUCTION. CONTRACTOR SHALL SUBMIT DETAILED PROPOSAL FOR PUMPING STRATEGY.

B-2. CONTRACTOR SHALL PROVIDE BACK-UP BYPASS PUMPS DURING ALL PHASES OF BYPASS PUMPING PROCEDURES. CONTRACTOR SHALL SUBMIT BYPASS PUMPING SYSTEM FOR APPROVAL PRIOR TO STARTING BYPASS OPERATIONS. THE BYPASS PUMPS SHALL BE OF THE SELF-PRIMING TYPE AND PUMP NOISE SHALL STRICTLY COMPLY WITH ALL LOCAL REGULATIONS AND ORDINANCES COVERING NOISE CONTROL.

B-3. BYPASS PUMPS SHALL SUCTION FROM THE 2ND MANHOLE UPSTREAM OF THE PUMPING STATION WET WELL AND SHALL DISCHARGE INTO THE TREATMENT PLANT'S JUNCTION CHAMBER NO. 1 FACILITY, AS SHOWN IN THE PLANS. THE CONTRACTOR SHALL ROUTE THE PROPOSED BYPASS DISCHARGE PIPING THROUGH AN EXISTING 30-INCH PIPE, JUST EAST OF JC#1, WHICH RUNS UNDER THE TREATMENT PLANT'S ACCESS ROAD FROM MARITIME BOULEVARD.

B-4. THE BYPASS PUMPING EQUIPMENT IS TO REMAIN IN PLACE FOR A TWENTY-FOUR (24) HOUR PERIOD AFTER THE PROPOSED EQUIPMENT AND MATERIALS HAVE BEEN INSTALLED AND THE PUMP STATION IS PLACED BACK IN SERVICE. THIS IS TO SERVE THE PURPOSE OF A TWENTY-FOUR HOUR TEST PERIOD FOR THE NEW EQUIPMENT.

B-5. ENGINEER WILL NOTIFY THE CONTRACTOR TO PLACE THE PUMPING STATION BACK ON BYPASS IF A FAILURE OF ANY EQUIPMENT (FOR ANY REASON) OCCURS WITHIN THE TWENTY-FOUR HOUR TEST PERIOD.

DEMOLITION NOTES

D-1. SALVAGEABLE MATERIAL, AS DETERMINED BY DEPARTMENT PERSONNEL, SHALL BE DELIVERED TO THE PARTS WAREHOUSE LOCATED ON THE TREATMENT PLANT SITE. NON-SALVAGEABLE MATERIALS ARE TO BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF AT THE CONTRACTOR'S EXPENSE.

D-2. CONTRACTOR SHALL RESTORE ALL LANDSCAPING, SODDING, SPRINKLER SYSTEM PIPING AND PAVEMENT THAT MAY HAVE BEEN DAMAGED DURING CONSTRUCTION TO ITS ORIGINAL CONDITION OR BETTER. CONTRACTOR SHALL SOD ALL UNPAVED AREAS.

D-3. CONTRACTOR SHALL SAW CUT EDGES OF CONCRETE PAVEMENT TO BE REMOVED (AND REPLACED) IN STRAIGHT PERPENDICULAR AND/OR PARALLEL LINES TO EXISTING STRUCTURES.

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

No.	DATE	REVISIONS
3		
2		
1		

DES: J.H.
DRN: BB
CKD:
DATE:

CITY of TAMPA
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATION IMPROVEMENTS
GENERAL NOTES, BYPASS NOTES AND DEMOLITION NOTES

W.O. 4506
SHEET 3

K:\WW_PROJECTS\2012\2012_4506-RAW_SEWAGE_P.S.\4506-SHEET-02.DWG

TPB 012-063

J-13,14
K-13,14

0 20

1"=20'

To Treatment Plant Rear Access Gate

Asphalt Driveway

EOP

EOP

EOP

10" Storm

54" RCP San. w/ 48" Liner

8" VCP

6" San

Electrical Duct in Conc Encasement (Abandoned)

12" FRP Duct

36" PCCP FM

Ex. Fan Vault

Ex. Junction Chamber

C/O

Alum. Access Lids(Typ)

2" Effluent Water

5' Chain Link

EOP

TOB

48" San. Inv. -10.60

48" HOBAS Pipe

6" Drain

Ex. Conc. Curb

Inv. -10.85

TOB

Top of Pipe 4.69

RAW SEWAGE PUMPING STATION

30" DIP FM

Ex. 30" Plug Valve

Ex. 6" Water

54" San (Abandoned)

18" PVCP Wastewater

S/W

Ex. 36" PCCP FM

Ex. 36"x 30" Reducer

Asphalt Driveway

Curb

Ex. 30" Knife Gate Valve

30" DIP Force Main

Ex. 30" Knife Gate Valve

2" Effluent Water

10" Storm

8" Drain

M

Ex. Flow Meter (In Basement)

Ex. PVC 4" Effluent Water

℄ of Ditch

EX. PUMP CONTROLS ROOM (ON FIRST FLOOR)

OLD RAW SEWAGE PUMPING STATION BUILDING

Ex. MH

54" San (Abandoned)

C/O (Typ)

Ex. 18" PVC Wastewater

Ex. 18" VCP Wastewater

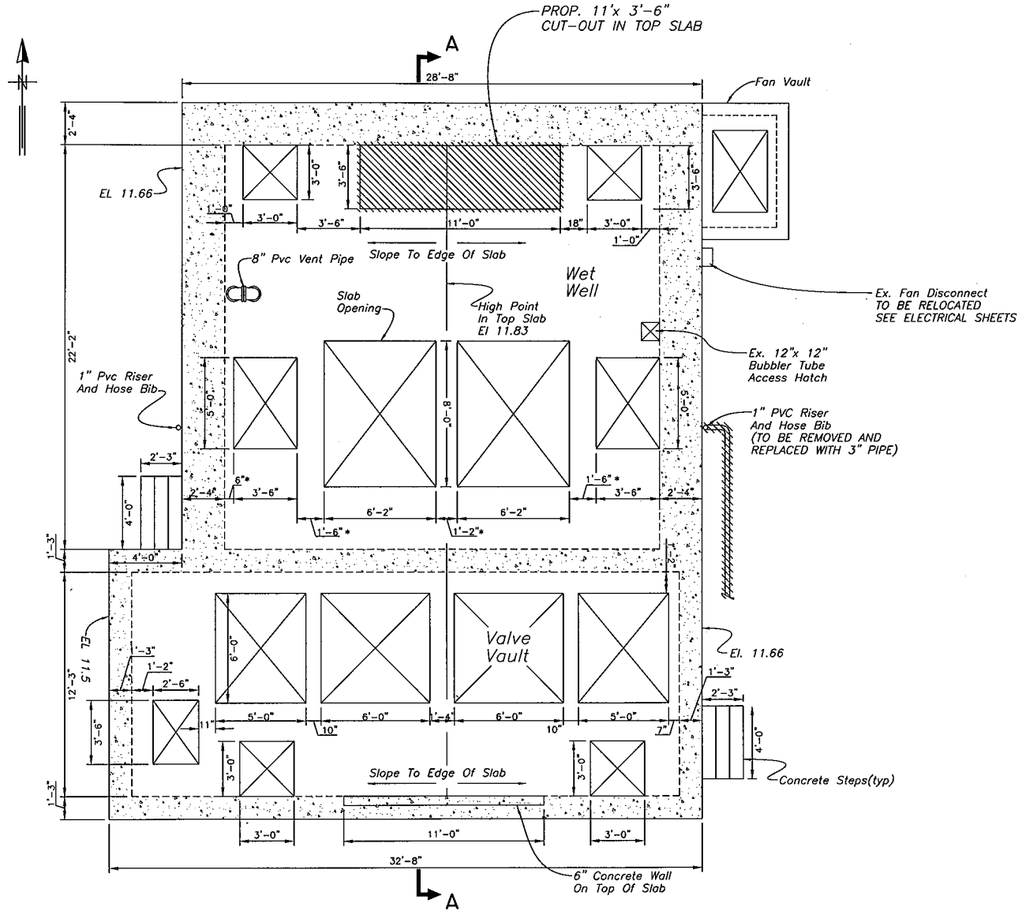
EXISTING SITE PLAN

SCALE: 1" = 20'

K:\WW_PROJECTS\2012\2012_5935_VARIOUSPUMPINGSTATIONIMPROVEMENTS\DWG\4506-SHEET-04&07&09-12.DWG

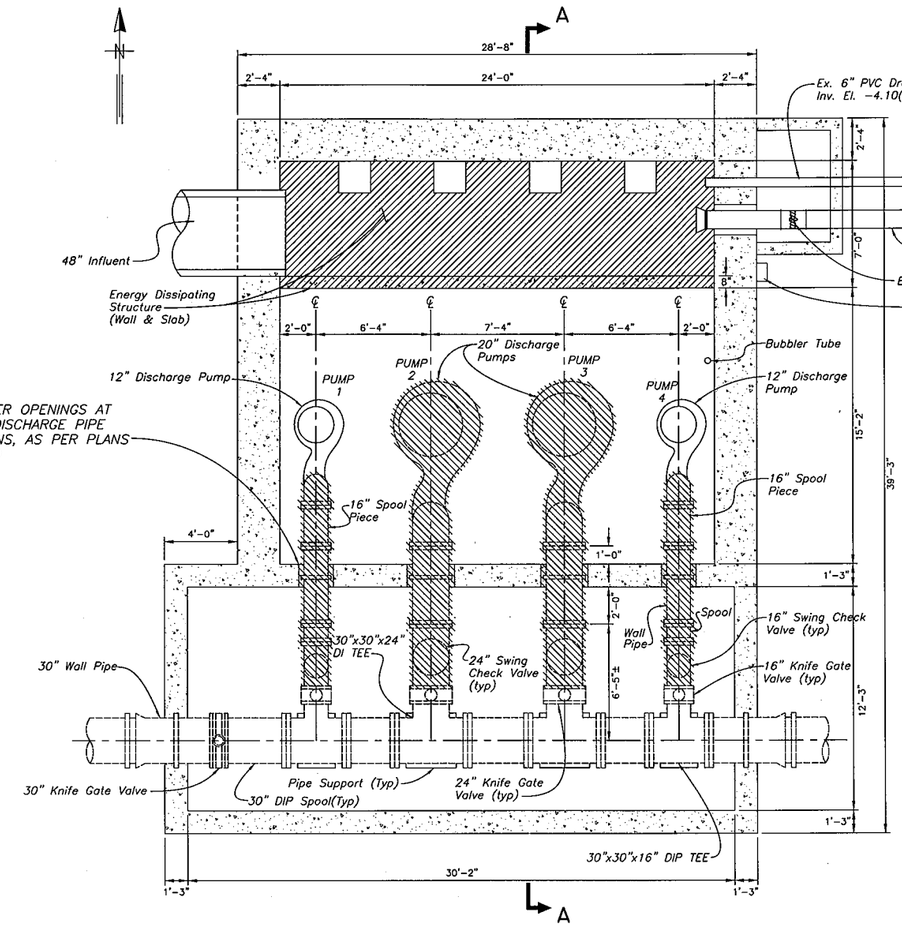
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: J.H. DRN: BB CKD: DATE:	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STAION EXISTING SITE PLAN	W.O. 4506 SHEET 4
	3						
	2						
	1						

TPB 012-064



DEMO PLAN - TOP SLAB

NOT TO SCALE



DEMO PLAN - WET WELL

NOT TO SCALE

EQUIPMENT SHOWN IN HATCHING IS TO BE REMOVED

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

No.	DATE	REVISIONS
3		
2		
1		

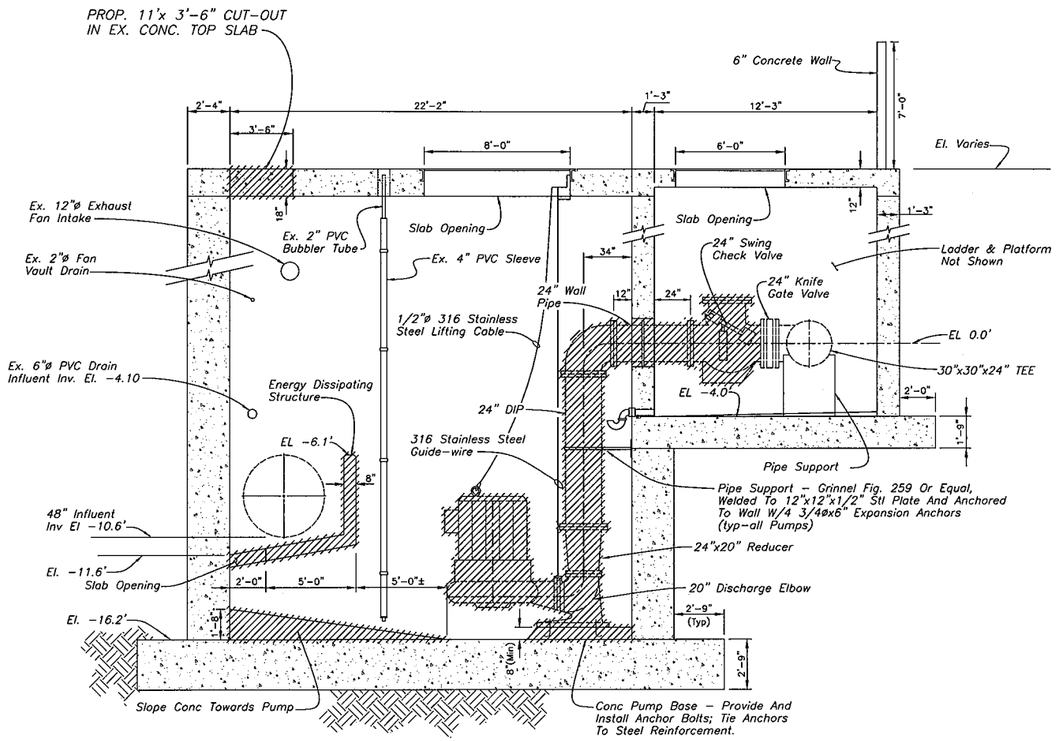
DES: J.H.
DRN: BB
CKD:
DATE:

CITY of TAMPA
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STAITON IMPROVEMENTS
DEMOLITION PLAN VIEWS

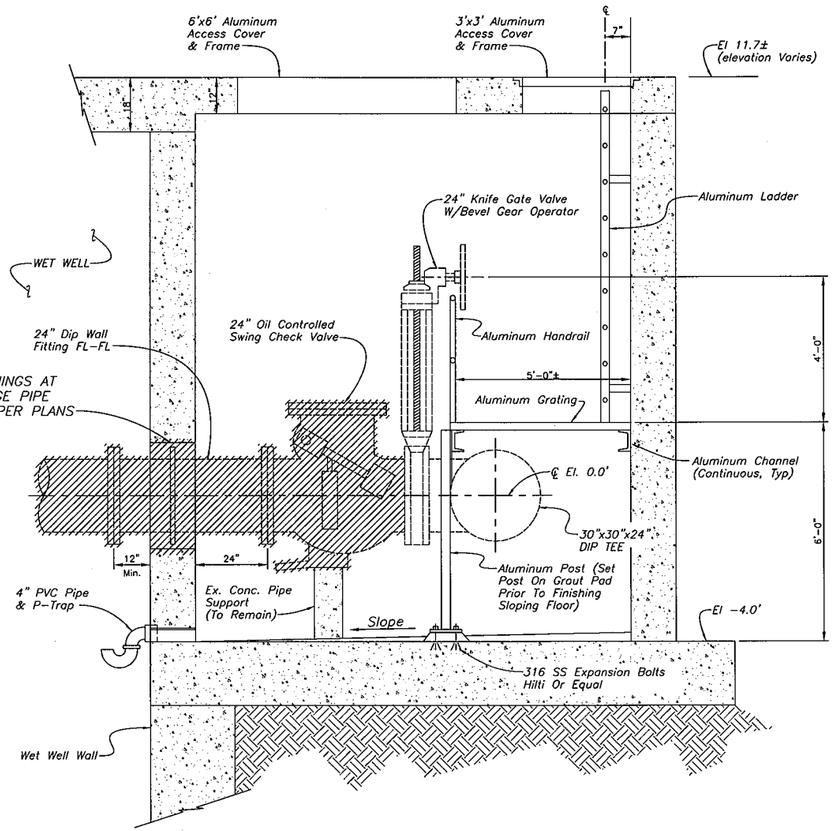
W.O. 4506
SHEET 5

TPB 012-065



DEMO SECTION A-A

NOT TO SCALE



DEMO SECTION A-A (VALVE VAULT)

NOT TO SCALE

EQUIPMENT SHOWN IN HATCHING IS TO BE REMOVED

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: J.H. DRN: BB CKD: DATE:	CITY of TAMPA HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STAITON IMPROVEMENTS DEMOLITION SECTIONS	W.O. 4506 SHEET 6
	3						
	2						
	1						

TPB 012-066

J-13,14
K-13,14

0 20
1"=20'

PROP. BYPASS MH
EOP
To Treatment Plant Rear Access Gate
Asphalt Driveway
EOP
10" Storm
Electrical Duct in Conc Encasement (Abandoned)
12" FRP Duct
36" PCCP FM
PROP. MECHANICAL BAR SCREEN AND SCREENINGS REMOVAL SYSTEM (SEE SHEETS 8 THRU 12)
54" RCP San. w/ 48" Liner
8" VCP
6" San
PROP. 4" THICK CONC. PAD
PROP. CONC. STAIRS
Ex. Fan Vault
PROP. ROOF STRUCTURE NOT SHOWN HERE FOR CLARITY PURPOSES
Ex. Junction Chamber
C/O
Alum. Access Lids(Typ)
PROP. 10.5' WIDE, 6" DEEP CONC. DRIVEWAY WITH 8" CONC. CURBS
5' Chain Link
2" Effluent Water
1/2" EXPANSION JOINT MTL BETWEEN EX. CURB AND PROP. SLAB
EOP
TOB
48" San. Inv. -10.60
6" Drain
48" HOBAS Pipe
R4'-9"
PROP. APPROX. 8'x 10' 6" THICK CONC. PAD & PROP. 4 CU. YD. DUMPSTER, (DUMPSTER SUPPLIED BY C.O.T.)
Inv. -10.85
TOB
PROP. 3" SCH. 80 PVC EFF. WATER
REMOVE 30'± OF EX. CURB
TWO EX. 60 HP PUMPS, FLYGT MODEL NP-3202 AND TWO PROP. 120 HP PUMPS, FLYGT MODEL C-3531
Top of Pipe 4.69
30" DIP FM
R15'-6"
RAW SEWAGE PUMPING STATION
Ex. 30" Plug Valve
Ex. 6" Water
PROP. 3" SCH. 80 PVC EFF. WATER
Ex. 36" PCCP FM
S/W
Ex. 36"x 30" Reducer
18" PVCP Wastewater
54" San (Abandoned)
Asphalt Driveway
Curb
Ex. 30" Knife Gate Valve
30" DIP Force Main
PROP. TIE-IN TO 4" EFF. WATER LINE
Ex. 30" Knife Gate Valve
2" Effluent Water
10" Storm
8" Drain
Ex. PVC 4" Effluent Water
M
Ex. Flow Meter (In Basement)
℄ of Ditch
Ex. PUMP CONTROLS ROOM (ON FIRST FLOOR)
OLD RAW SEWAGE PUMPING STATION BUILDING
Ex. MH
54" San (Abandoned)
C/O (Typ)
Ex. 18" PVC Wastewater
Ex. 18" VCP Wastewater

PROPOSED SITE PLAN

SCALE: 1" = 20'

K:\WW_PROJECTS\2012\2012_5935_VARIOUSPUMPINGSTATIONIMPROVEMENTS\DWG\4506-SHEET-04-09.DWG

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

No.	DATE	REVISIONS
3		
2		
1		

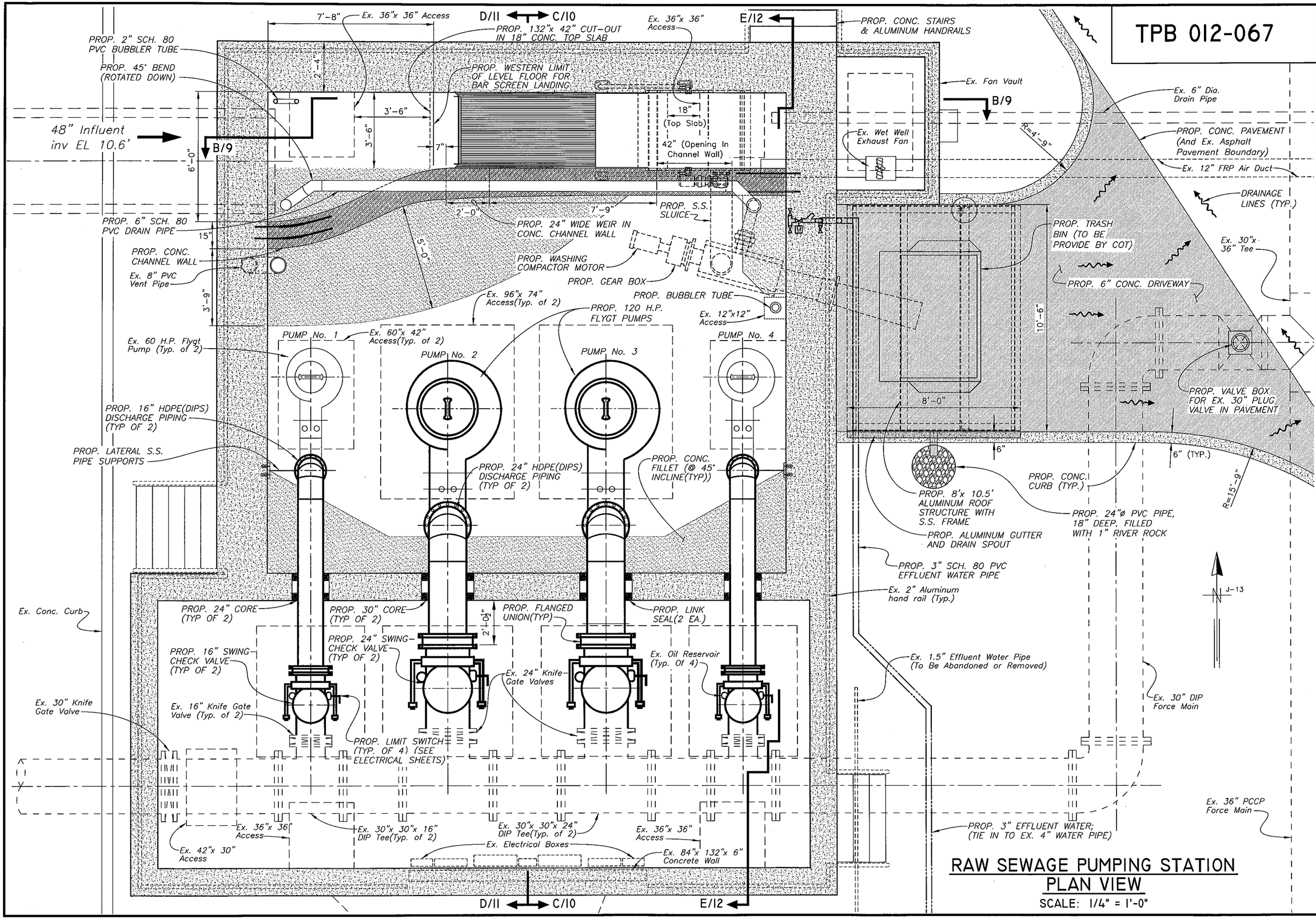
DES: J.H.
DRN: BB
CKD:
DATE:

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STAION
PROPOSED SITE PLAN

W.O. 4506
SHEET 7

TPB 012-067



RAW SEWAGE PUMPING STATION PLAN VIEW

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

No.	DATE
3	
2	
1	

REVISIONS

CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

DES: J.H.
DRN: BB
CKD:
DATE:

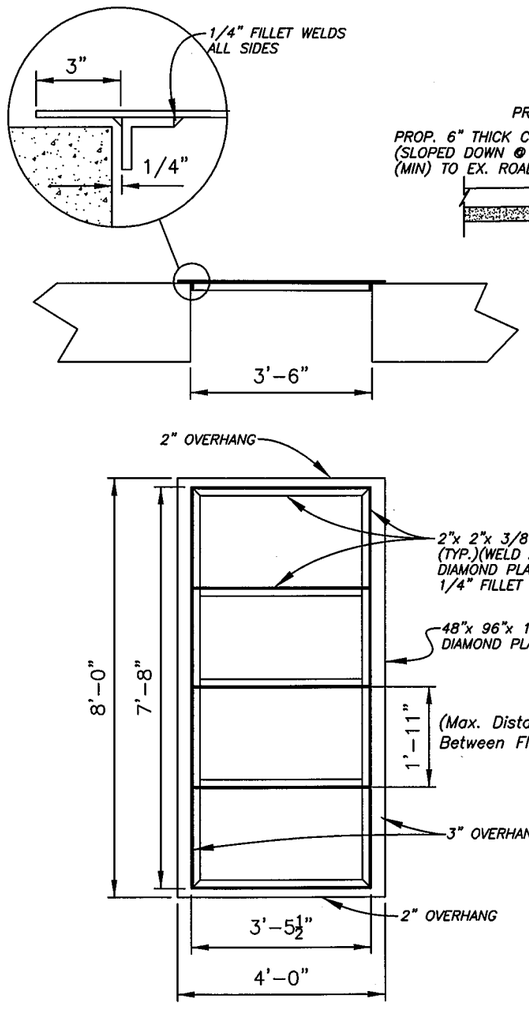
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STAION
PLAN VIEW

W.O. 4506

SHEET 8

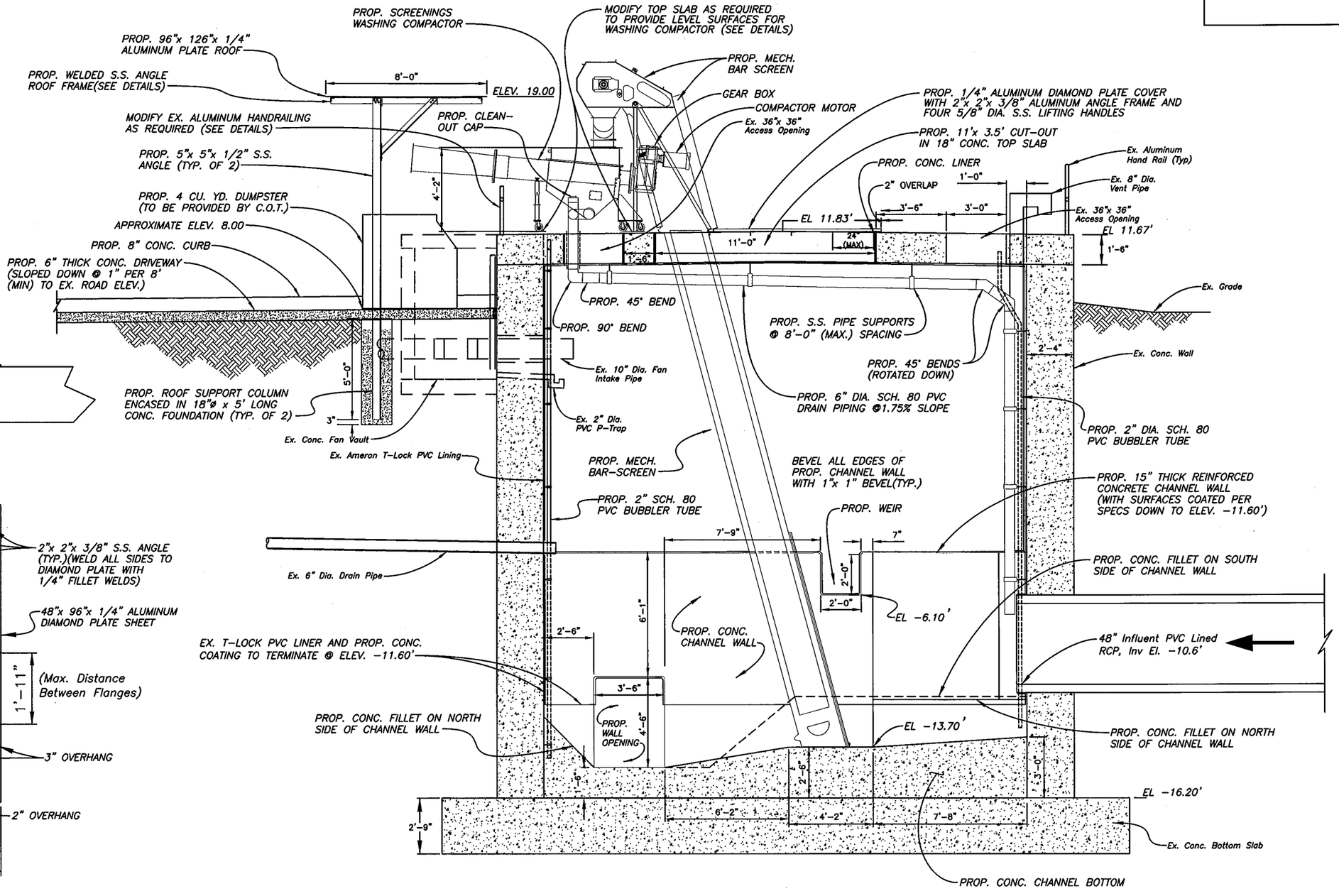
K:\WW_PROJECTS\2012\2012_4506-RAW_SEWAGE_P.S\DWG\4506-SHEET-08.DWG

TPB 012-068



ALUMINUM COVER DETAIL

NOT TO SCALE



SECTION B/8

SCALE: 3/16" = 1'-0"

No.	DATE	REVISIONS
3		
2		
1		

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

DES: J.H.
DRN: BB
CKD:
DATE:

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STAION
PROPOSED SECTION B/8

W.O. 4506
SHEET 9

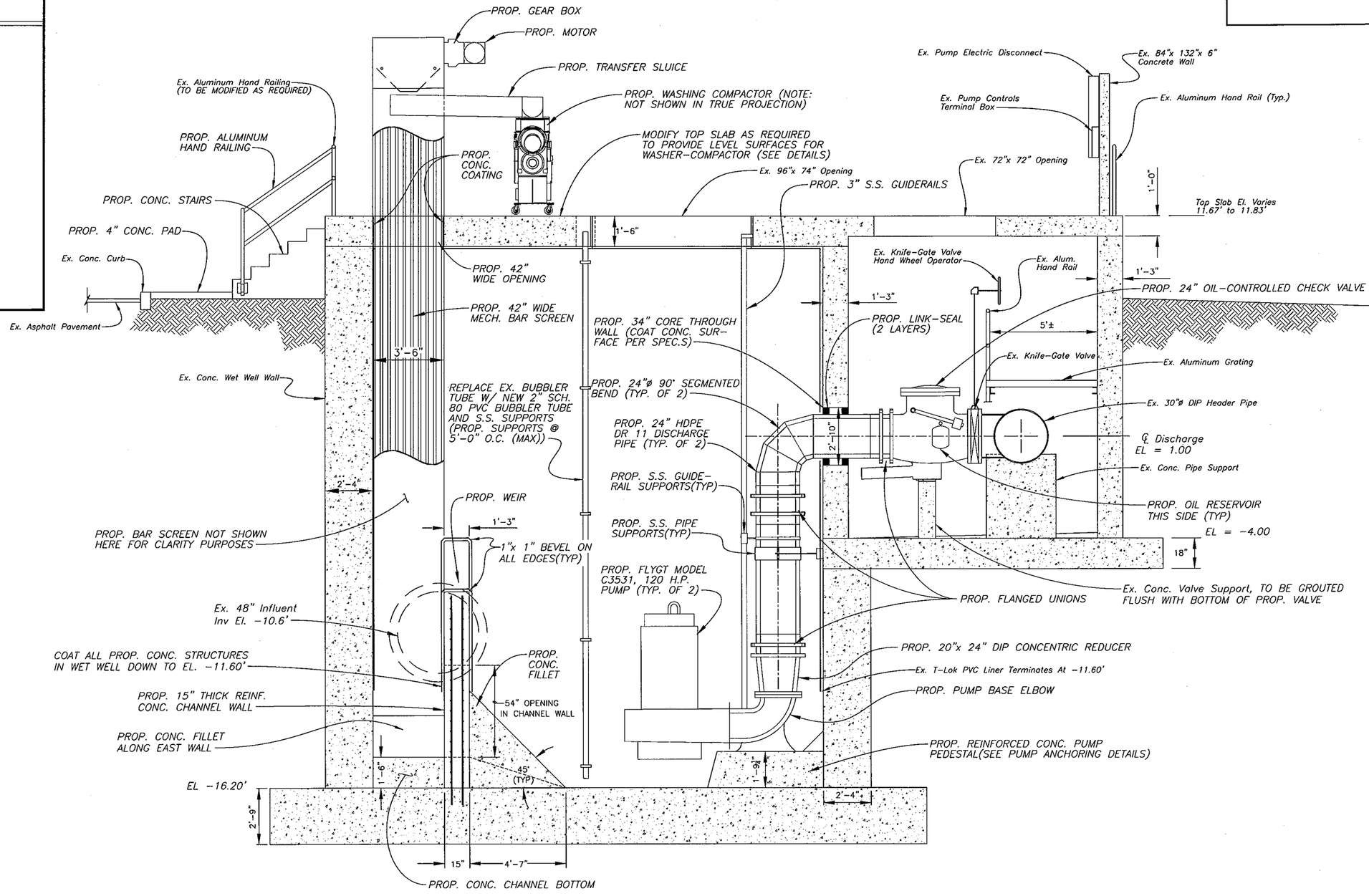
K:\WW_PROJECTS\2012\2012_5935_VARIOUSPUMPINGSTATIONIMPROVEMENTS\DWG\4506-SHEET-04-09.DWG

TPB 012-069

PUMP DATA

EX. PUMPS #1 & 4 DATA
MANUFACTURER: FLYGT
MODEL: 12" NP3202.180 LT-614
60 H.P. 460V 3 PH.
72 FLA 1170 RPM
5,293 GPM @ 32 FT. TDH

PROP. PUMPS #2 & 3 DATA
MANUFACTURER: FLYGT
MODEL: 20" CP3531/765
120 H.P. 460V 3 PH.
195 FLA 590 RPM
11,827 GPM @ 32 FT. TDH



SECTION C/8
SCALE: 3/16" = 1'-0"

No.	DATE	REVISIONS
3		
2		
1		

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

DES: J.H.
DRN: BB
CKD:
DATE:

CITY of TAMPA
WASTEWATER DEPARTMENT

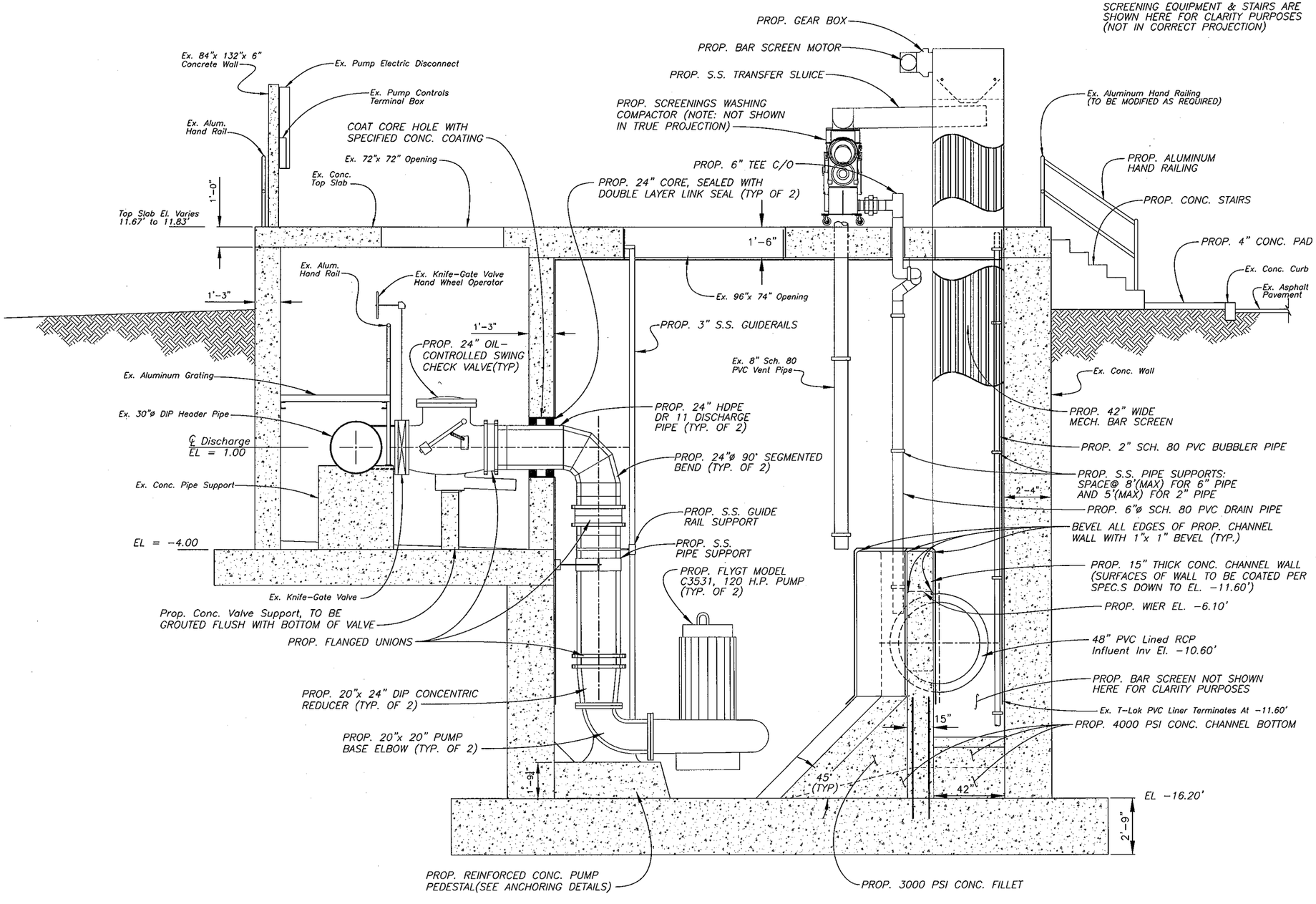
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STAION
PROPOSED SECTION C/8

W.O. 4506
SHEET 10

K:\WW_PROJECTS\2012\2012_5935_VARIOUSPUMPINGSTATIONIMPROVEMENTS\DWG\4506-SHEET-04-09.DWG

TPB 012-070

NOTE:
SCREENING EQUIPMENT & STAIRS ARE SHOWN HERE FOR CLARITY PURPOSES (NOT IN CORRECT PROJECTION)



SECTION D/8

SCALE: 3/16" = 1'-0"

K:\WW_PROJECTS\2012\2012_5935_VARIOUSPUMPINGSTATIONIMPROVEMENTS\DWG\4506-SHEET-04-09.DWG

	No.	DATE	REVISIONS
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	3		
	2		
	1		

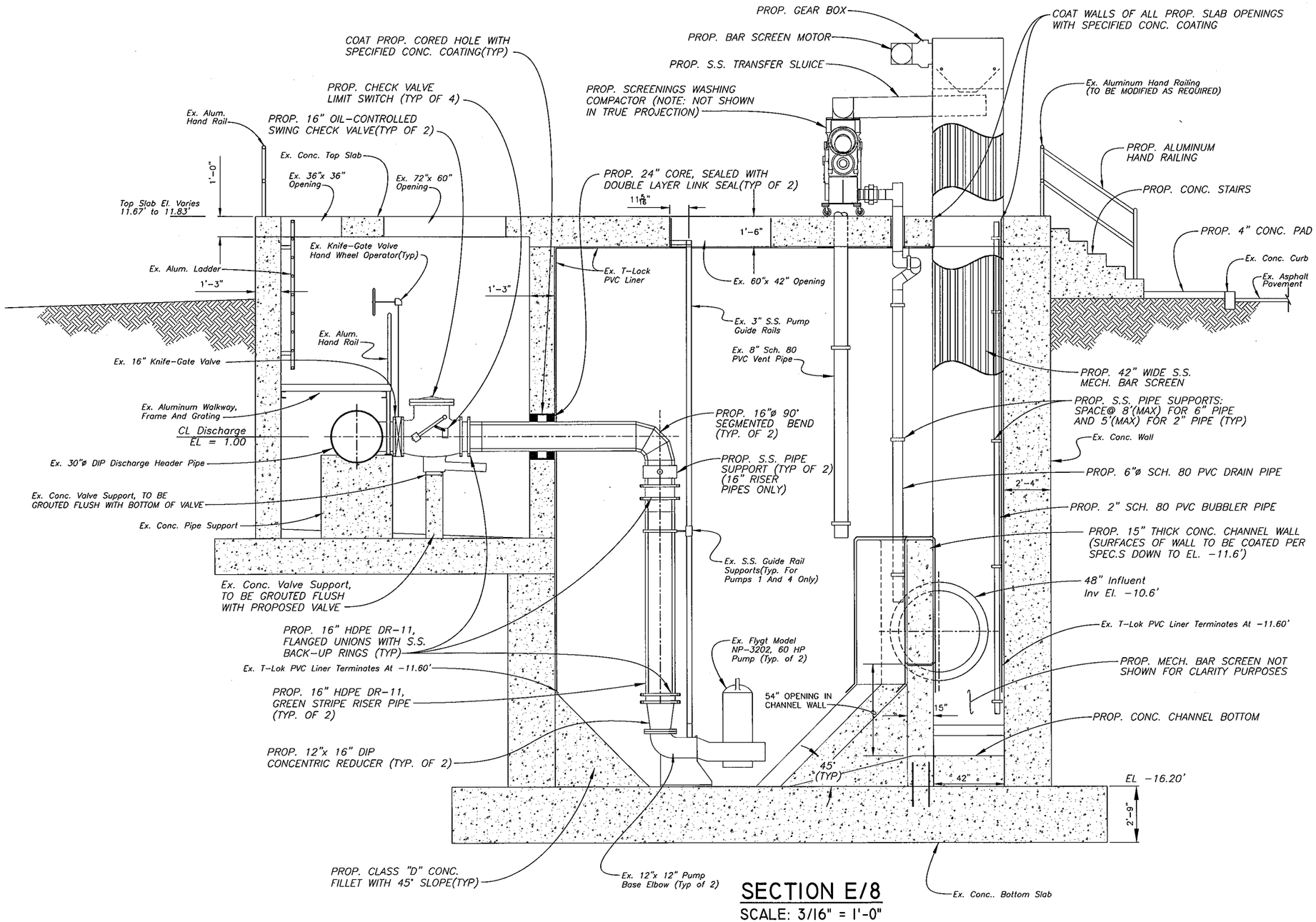
DES: J.H.
DRN: BB
CKD:
DATE:

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STAION
PROPOSED SECTION D/8

W.O. 4506
SHEET 11

TPB 012-071



SECTION E/8

SCALE: 3/16" = 1'-0"

K:\WW_PROJECTS\2012\2012_5935_VARIOUSPUMPINGSTATIONIMPROVEMENTS\DWG\4506-SHEET-04-09.DWG

	No.	DATE	REVISIONS
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	3		
	2		
	1		

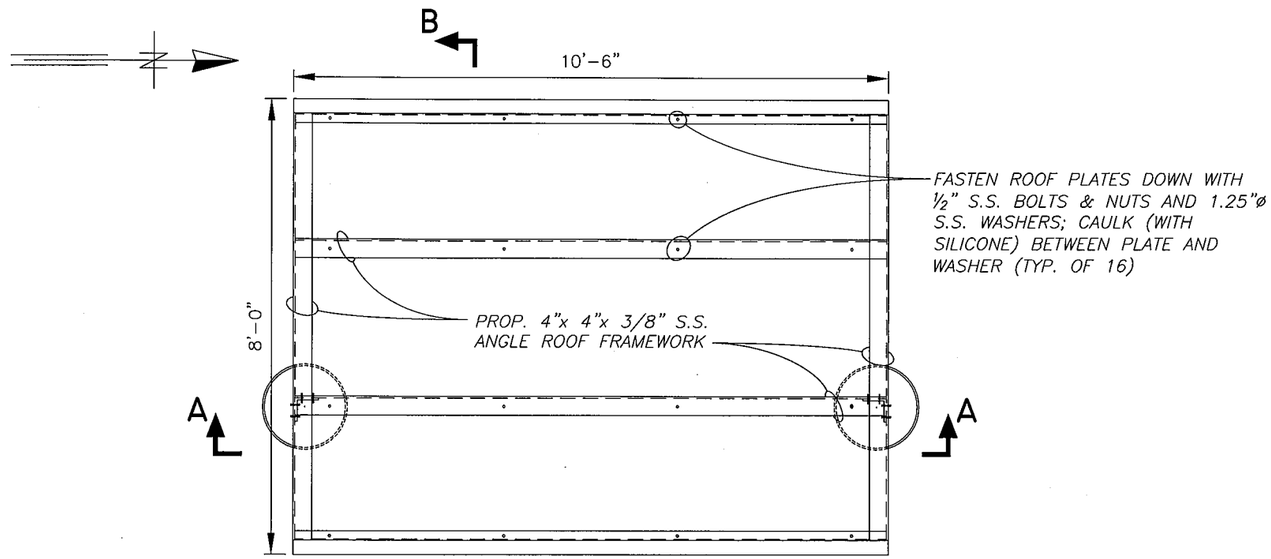
DES: J.H.
DRN: BB
CKD:
DATE:

CITY of TAMPA
WASTEWATER DEPARTMENT

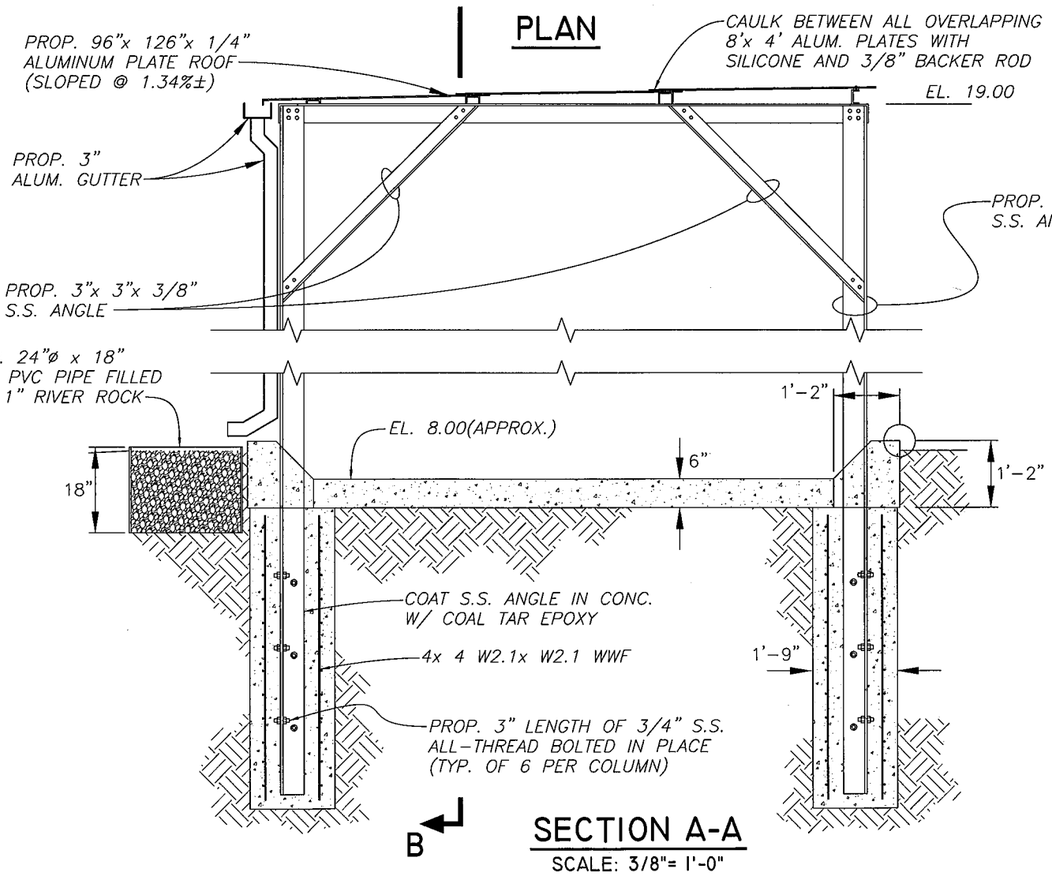
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STAION
PROPOSED SECTION E/8

W.O. 4506
SHEET 12

TPB 012-072

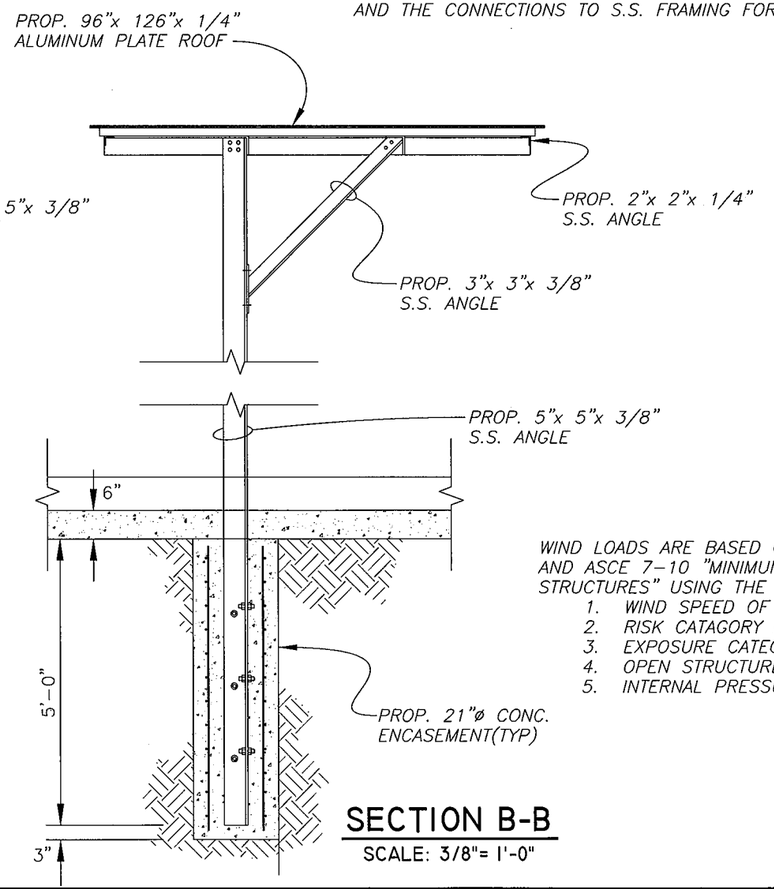


PLAN



SECTION A-A

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



SECTION B-B

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

NOTES:

1. ALL STRUCTURAL ANGLES SHALL BE MADE OF TYPE 304L STAINLESS STEEL.
2. ALL ROOF FRAME HORIZONTAL ANGLES TO BE BUTT WELDED TOGETHER. ROOF FRAME SHALL BE BOLTED TO VERTICAL SUPPORT MEMBERS.
3. ALL STRUCTURAL ANGLE WELDED CONNECTIONS SHALL BE MADE WITH FULL PENETRATION BUTT WELDS. BUTT WELDS SHALL BE GROUND DOWN TO A SMOOTH SURFACE ON ALL MATING SURFACES WITH ADJACENT MEMBERS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS DETAILING ALL WELDS ON PROPOSED ROOF FRAME SYSTEM FOR APPROVAL.
4. ALL STRUCTURAL ANGLE BOLTED CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER TYPE 316 STAINLESS STEEL BOLTS, NUTS, AND LOCK WASHERS.
5. ALL DISSIMILAR METAL CONNECTIONS (I.E. ALUMINUM/STAINLESS STEEL) SHALL BE ELECTRICALLY ISOLATED BY USE OF NYLON WASHERS AND PLASTIC BOLT SLEEVES.
6. CONTRACTOR SHALL SUBMIT DATA ON STAINLESS STEEL ROOF BATTENS AND ISOLATED CONNECTIONS TO S.S. ROOF FRAME AND ALUMINUM ROOF PANELS FOR APPROVAL.
7. CONTRACTOR SHALL SUBMIT DATA ON ALUMINUM GUTTER, DOWNSPOUT AND THE CONNECTIONS TO S.S. FRAMING FOR APPROVAL.

WIND LOADS ARE BASED ON 2010 FLORIDA BUILDING CODE AND ASCE 7-10 "MINIMUM DESIGN LOADS FOR BUILDINGS AND STRUCTURES" USING THE FOLLOWING CRITERIA:

1. WIND SPEED OF 140 MPH
2. RISK CATAGORY II
3. EXPOSURE CATEGORY "C"
4. OPEN STRUCTURE
5. INTERNAL PRESSURE COEFFICIENT: +0.00, -0.00

K:\WW_PROJECTS\2012\2012_5935_VARIOUSPUMPINGSTATIONIMPROVEMENTS\DWG\4506-SHEET-04-09.DWG

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

No.	DATE	REVISIONS
3		
2		
1		

DES: J.H.
DRN: BB
CKD:
DATE:

CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

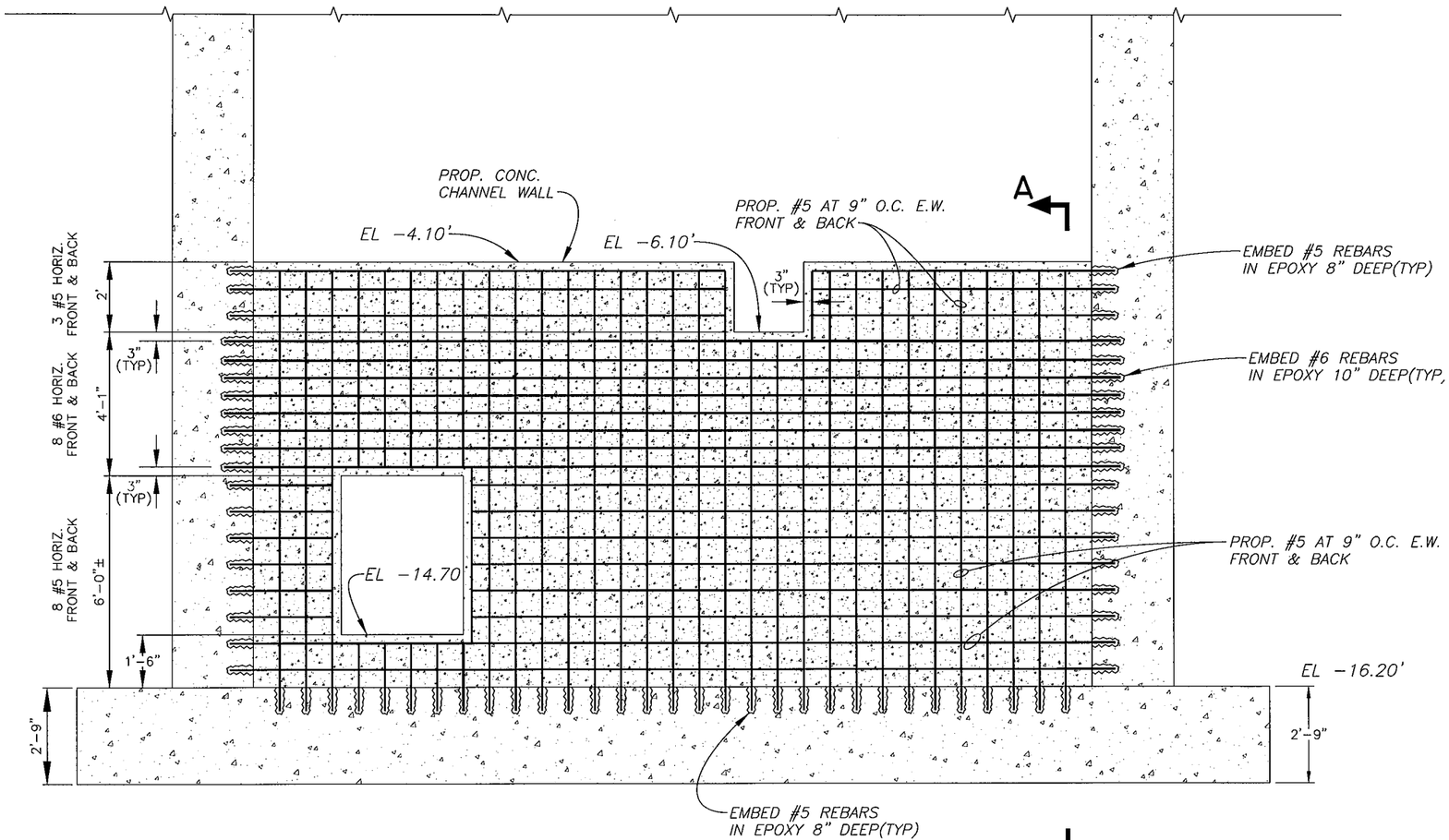
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STAION
PROPOSED ROOF STRUCTURE DETAILS

W.O. 4506
SHEET 13

TPB 012-073

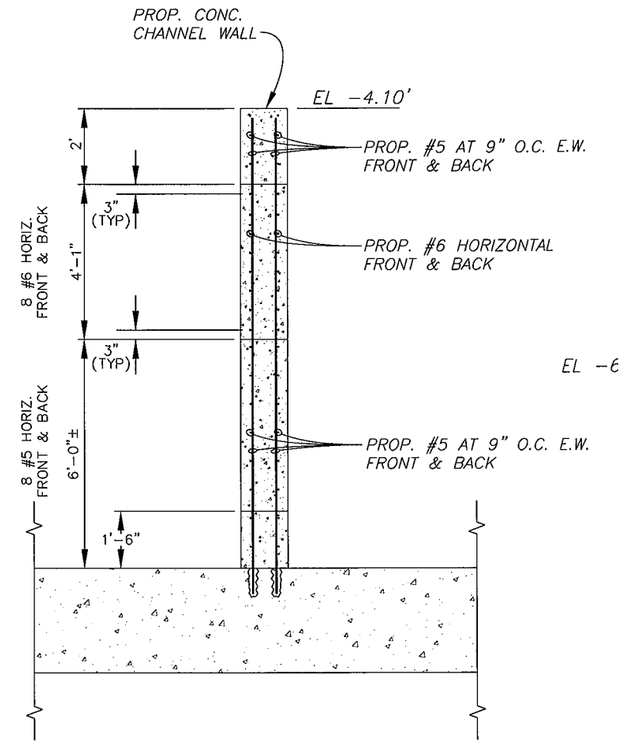
*** NOTE:**

REFER TO SHEET 8 FOR CURVATURE OF PROPOSED CHANNEL WALL



CONCRETE REINFORCEMENT DETAIL

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



SECTION A-A

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

K:\WW_PROJECTS\2012\2012_5935_VARIOUSPUMPINGSTATIONIMPROVEMENTS\DWG\4506-SHEET-04-09.DWG

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

No.	DATE	REVISIONS
3		
2		
1		

DES: J.H.
DRN: BB
CKD:
DATE:

CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

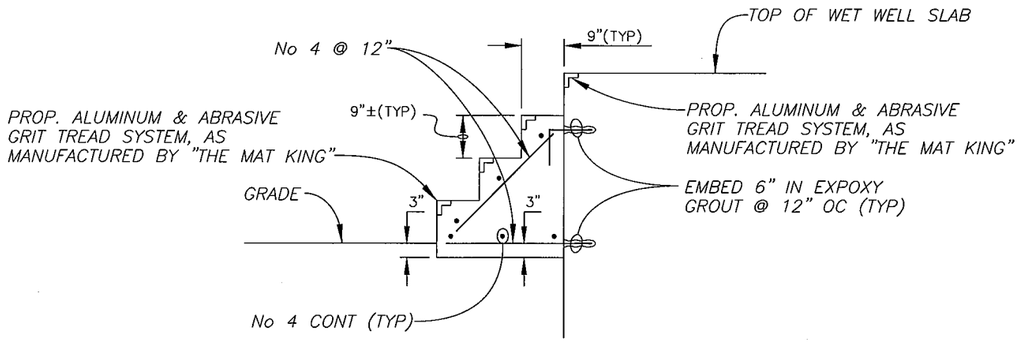
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STAION
CONCRETE REINFORCEMENT DETAIL

W.O. 4506
SHEET 14

TPB 012-074

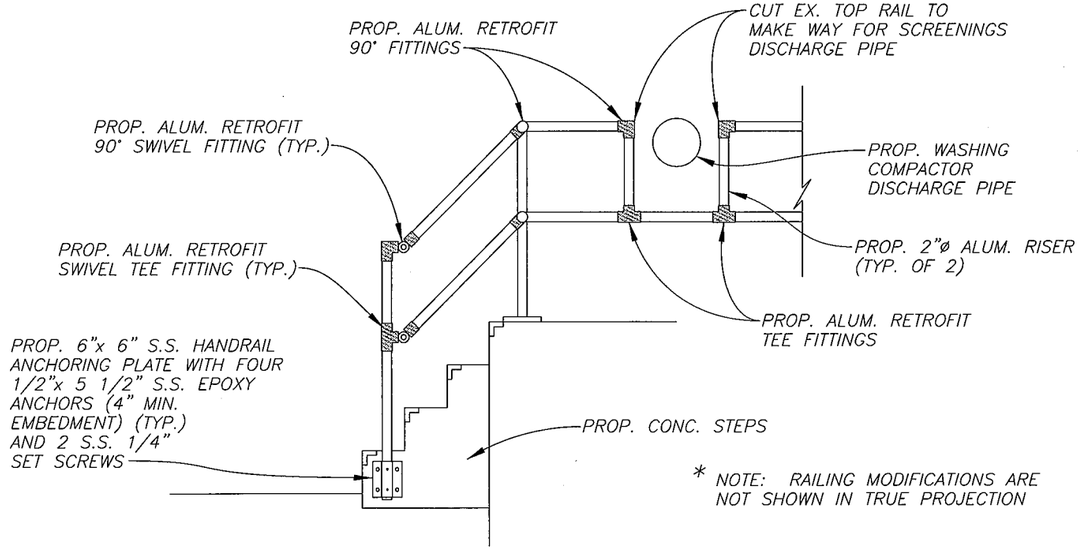
NOTE:

STEP DETAIL IS NOT IN TRUE PROJECTION OF ACTUAL NUMBER OF STEPS REQUIRED.



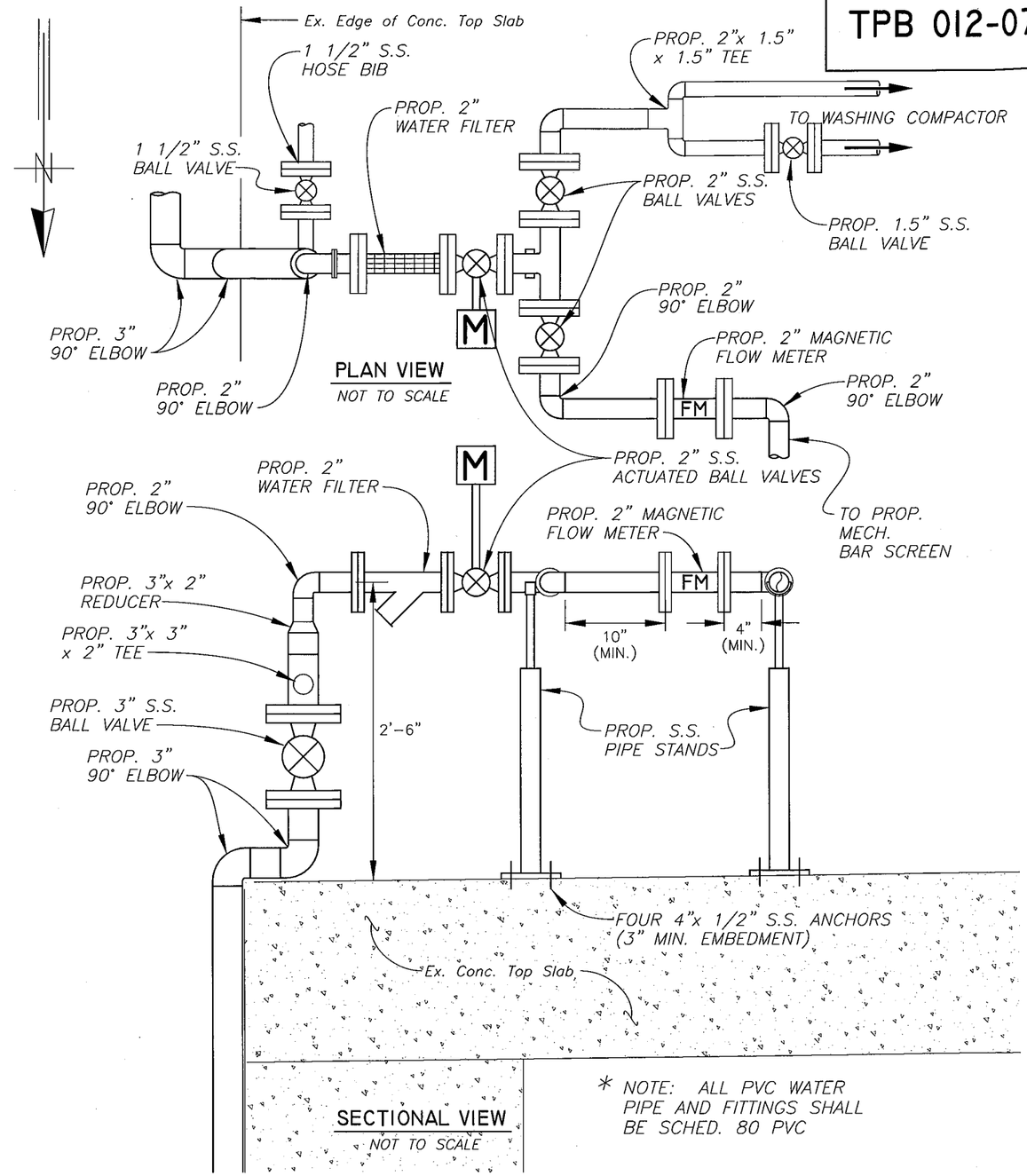
CONCRETE STEP DETAIL

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



PROPOSED ALUMINUM HANDRAIL MODIFICATIONS

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



PROP. WATER SERVICE TO SCREENING EQUIPMENT

NOT TO SCALE

K:\WW_PROJECTS\2012\2012_5935_VARIOUSPUMPINGSTATIONIMPROVEMENTS\DWG\4506-SHEET-04-09.DWG

No.	DATE	REVISIONS
3		
2		
1		

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

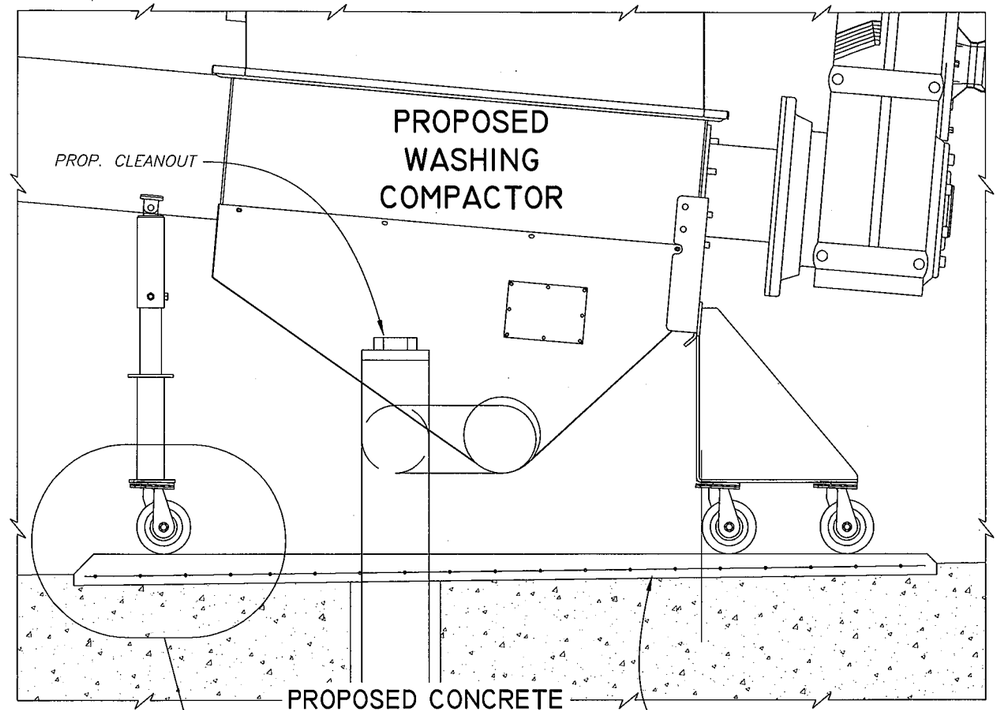
DES: J.H.
DRN: BB
CKD:
DATE:

CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STAION
MISCELLANEOUS DETAILS

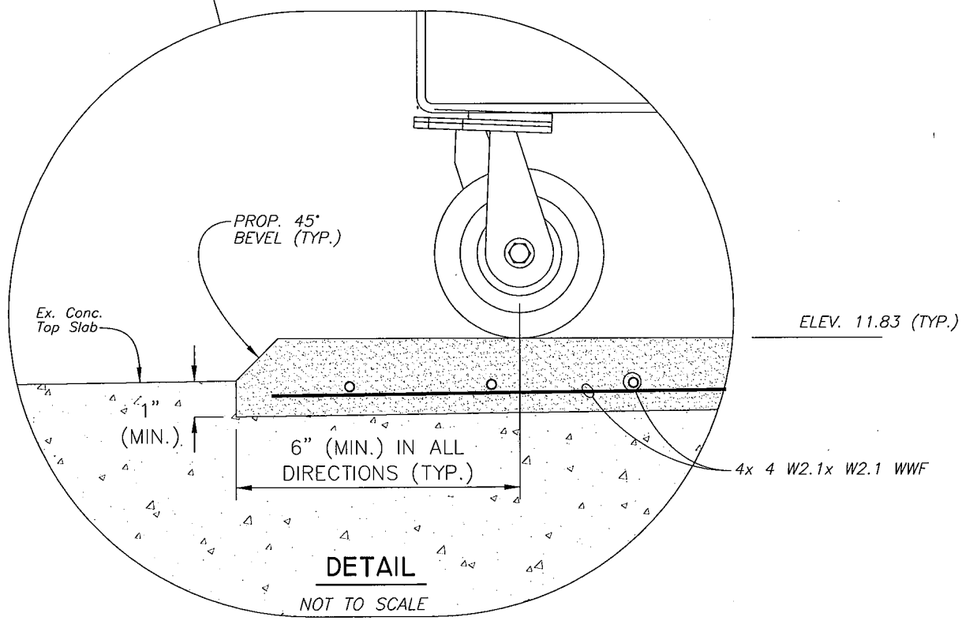
W.O. 4506
SHEET 15

TPB 012-075



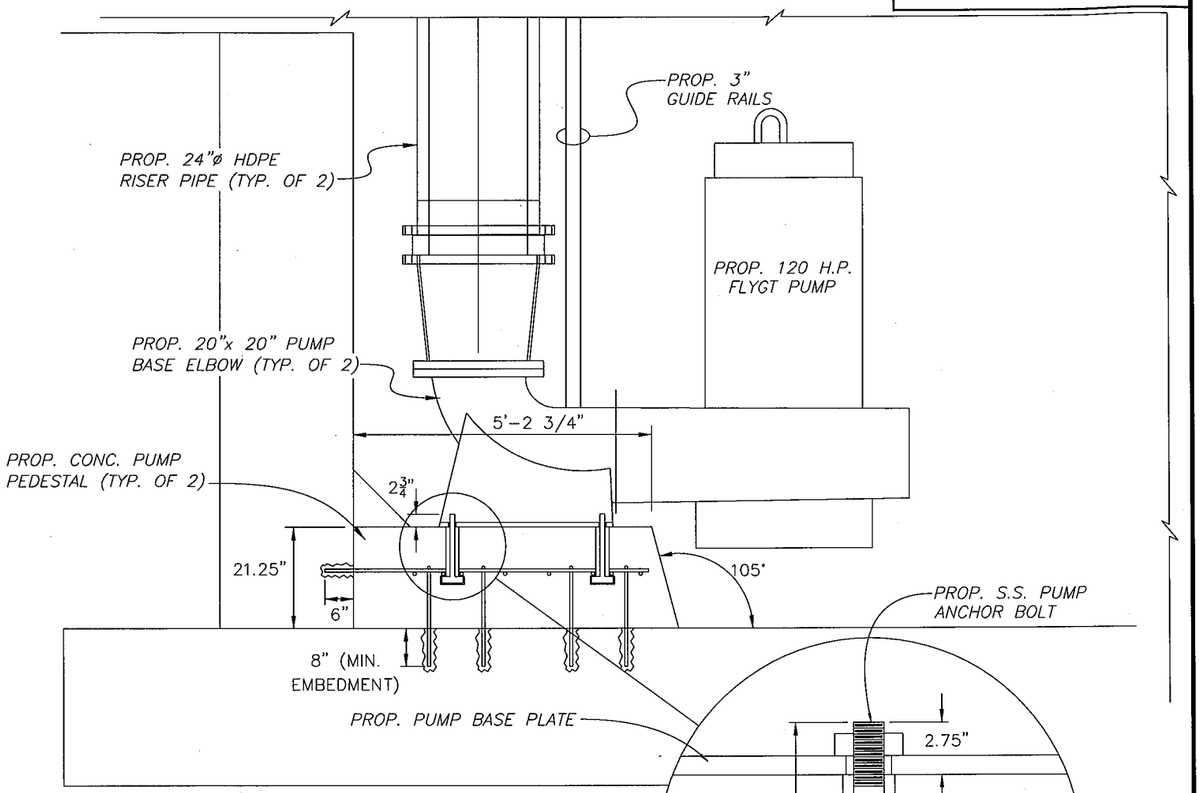
PROPOSED CONCRETE
LEVELING PAD DETAILS

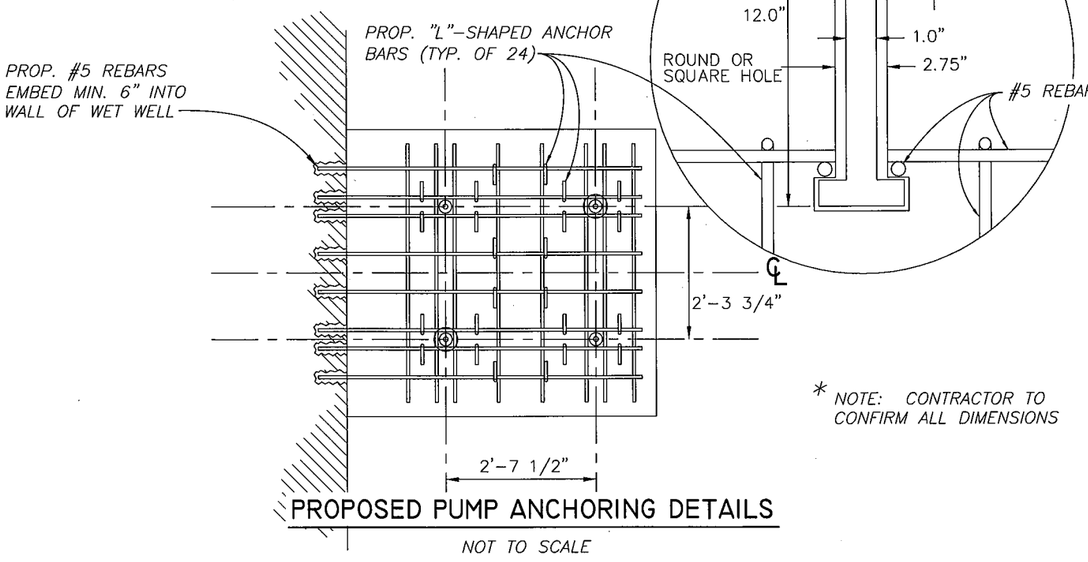
NOT TO SCALE



DETAIL

NOT TO SCALE





PROPOSED PUMP ANCHORING DETAILS

NOT TO SCALE

* NOTE: CONTRACTOR TO CONFIRM ALL DIMENSIONS

K:\WW_PROJECTS\2012\2012_5935_VARIOUSPUMPINGSTATIONIMPROVEMENTS\DWG\4506-SHEET-04-09.DWG

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

No.	DATE	REVISIONS
3		
2		
1		

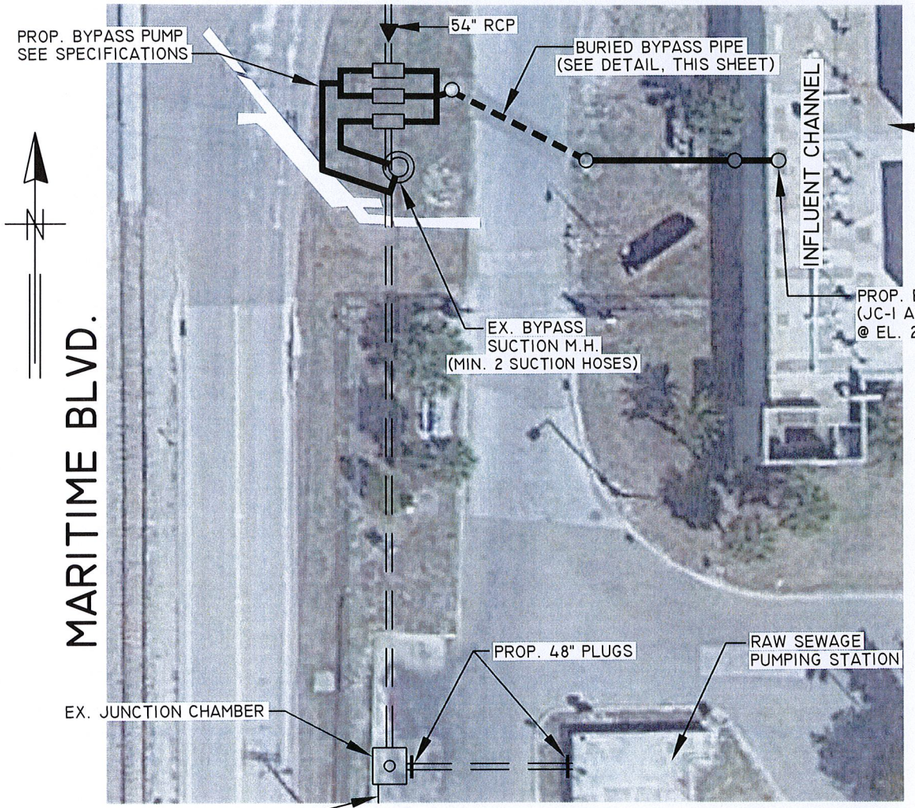
DES: J.H.
DRN: BB
CKD:
DATE:

CITY of TAMPA
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STAION
MISCELLANEOUS DETAILS

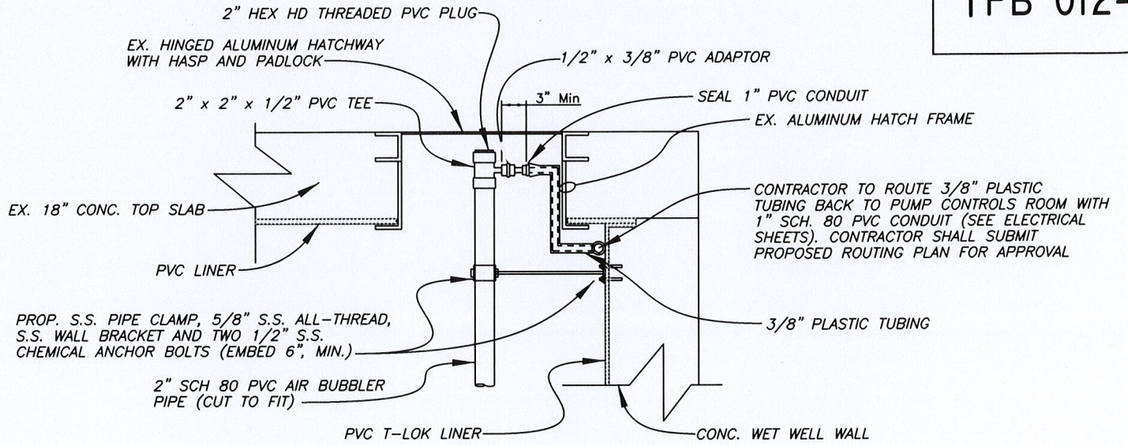
W.O. 4506
SHEET
16

TPB 012-076

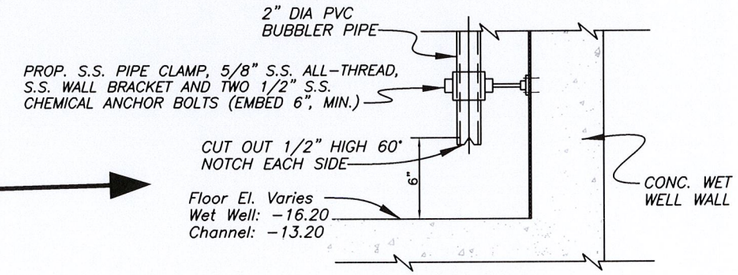


PROPOSED BYPASS - PLAN VIEW

NOT TO SCALE



DETAIL "A"



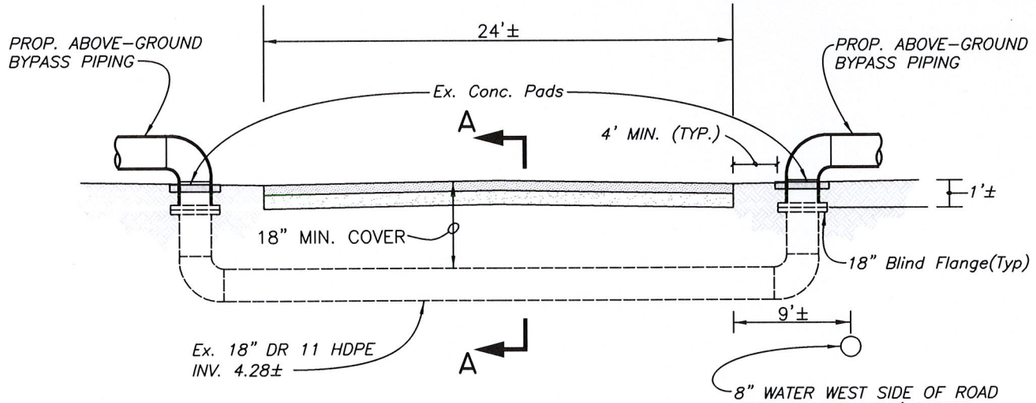
DETAIL "B"

NOTE:

DETAILS ARE TYPICAL FOR BOTH BUBBLER TUBES. CONTRACTOR IS RESPONSIBLE FOR SUBMITTING ROUTING OF TUBING AND CONDUIT, FOR BOTH SYSTEMS, FROM THE WET WELL TO THE CONTROLS ROOM FOR APPROVAL

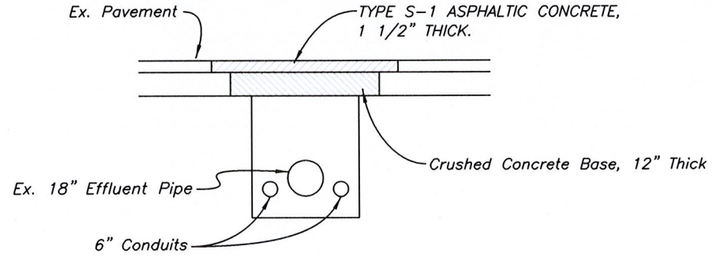
BUBBLER DETAILS

NOT TO SCALE



BYPASS PIPE - CROSSING DETAIL

NOT TO SCALE



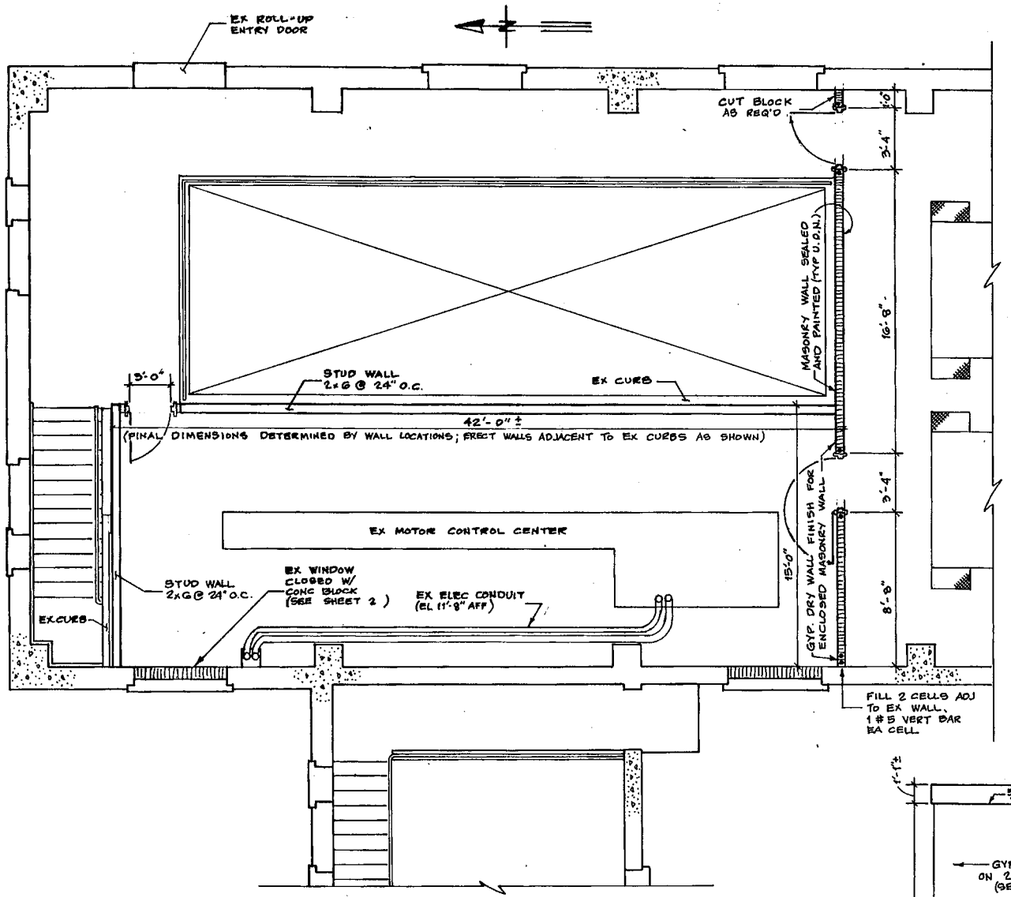
SECTION A-A

NOT TO SCALE

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: J.H. DRN: BB CKD: DATE:	CITY of TAMPA HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STAION MISCELLANEOUS BYPASS DETAILS	W.O. 4506 SHEET 17
	3						
	2						
	1						

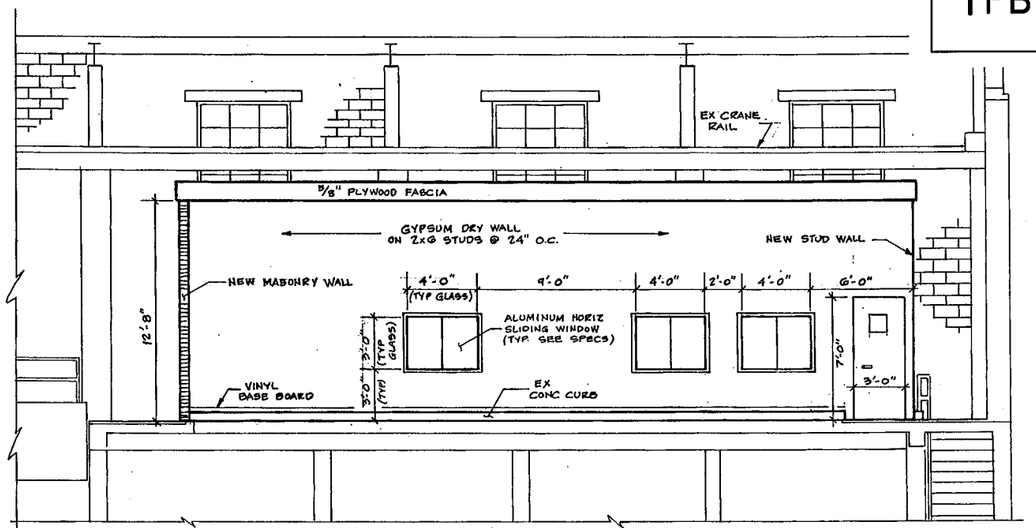
K:\WW_PROJECTS\2012\2012_5935_VARIOUSPUMPINGSTATIONIMPROVEMENTS\DWG\4506-SHEET-04-09.DWG

TPB 012-077



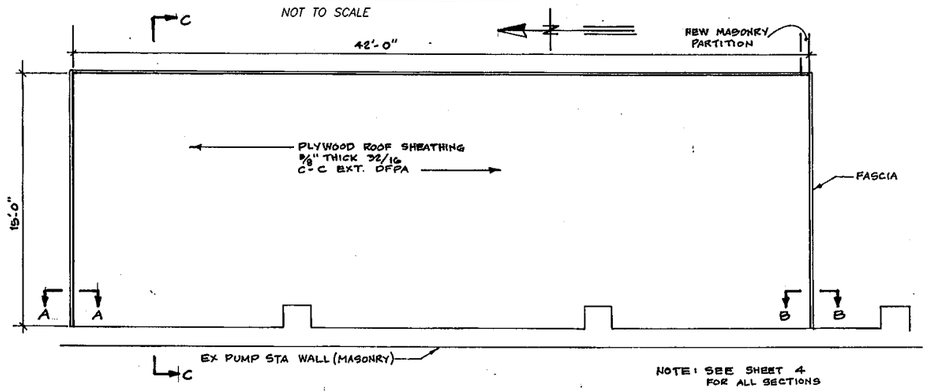
FLOOR PLAN - PROPOSED ENCLOSURE and PARTITION

NOT TO SCALE



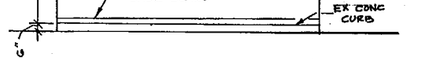
NEW EAST WALL ELEVATION (LOOKING WEST)

NOT TO SCALE



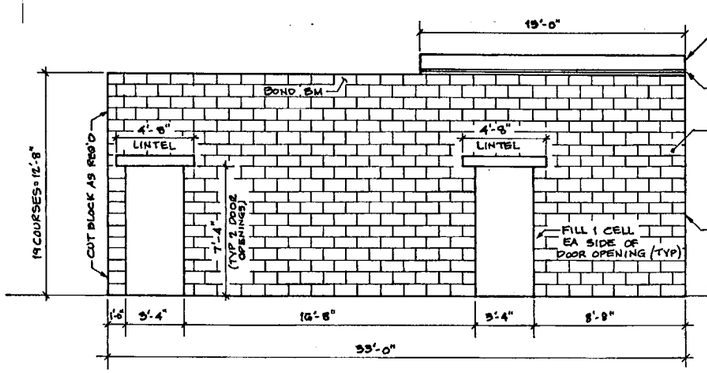
ROOF PLAN - PROP ENCLOSURE

NOT TO SCALE



NEW NORTH WALL ELEVATION (LOOKING SOUTH)

NOT TO SCALE



NEW MASONRY WALL ELEVATION (LOOKING SOUTH)

NOT TO SCALE

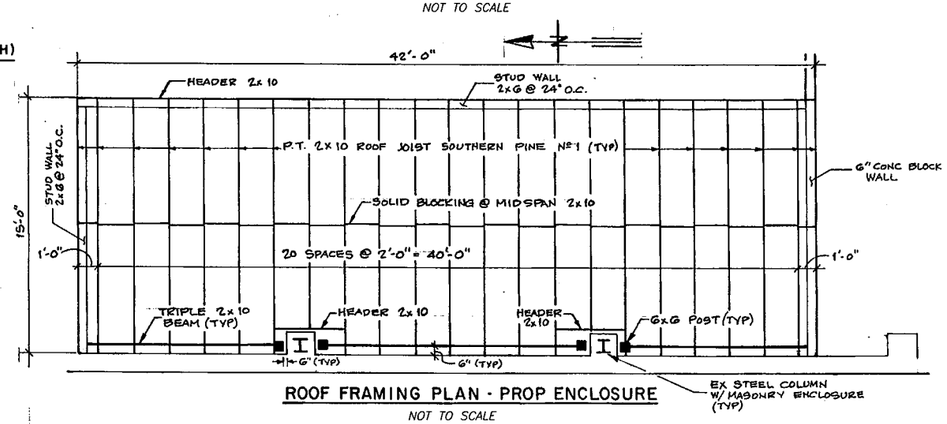
-NOTES-
1. EX CURB IN FRONT OF WALL NOT SHOWN.
2. 1 #5 VERT BAR IN EACH FILLED CELL (TYP)
3. LINTELS SHALL BE STD. 8x8" LINTEL BLOCK W/ 1 #5 BAR CONT AND GROUTED CAVITY.

NOTE: FOR INFORMATIONAL PURPOSES ONLY

THIS SHEET DEPICTS EXISTING CONDITIONS OF THE ELECTRICAL CONTROL ROOM, WHICH IS LOCATED INSIDE OF THE OLD RAW SEWAGE PUMPING STATION BUILDING. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING EQUIPMENT INSIDE OF THE PUMPING STATION.

ELECTRICAL ROOM

NOT TO SCALE



ROOF FRAMING PLAN - PROP ENCLOSURE

NOT TO SCALE

K:\WW_PROJECTS\2012\2012_5935_VARIOUSPUMPINGSTATIONIMPROVEMENTS\DWG\4506-SHEET-04-09.DWG

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

No.	DATE	REVISIONS
3		
2		
1		

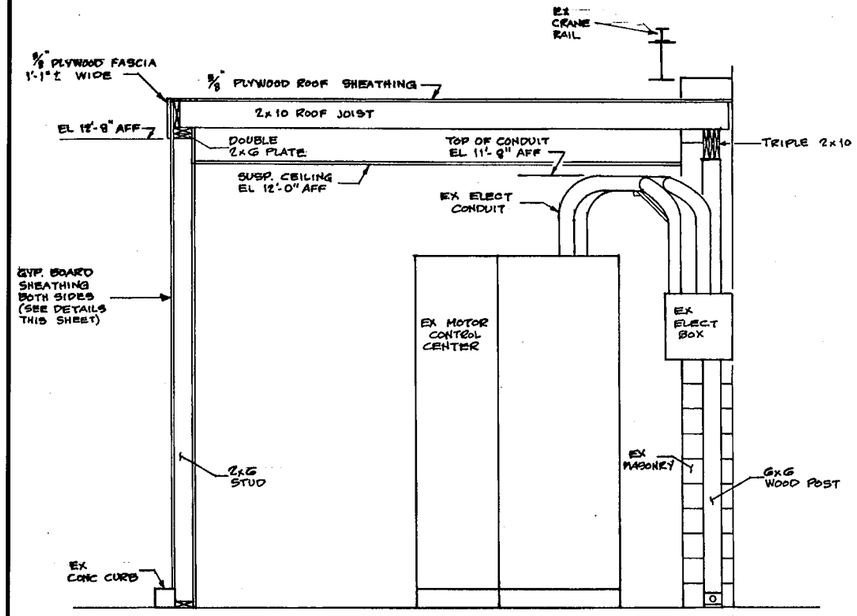
DES: J.H.
DRN: BB
CKD:
DATE:

CITY of TAMPA
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STAION
EXISTING CONDITIONS - ELECTRICAL ROOM

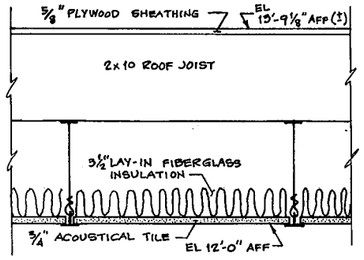
W.O. 4506
SHEET 18

TPB 012-078



SECTION C-C

NOT TO SCALE

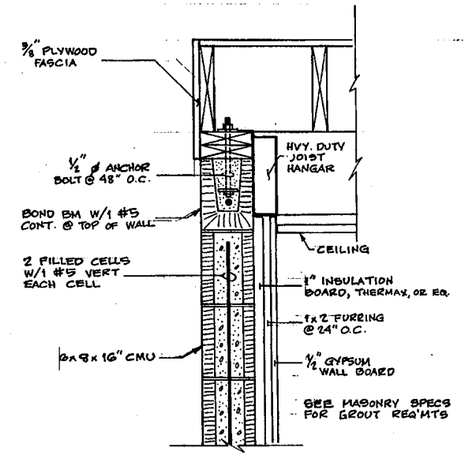


ROOF / CEILING DETAIL

NOT TO SCALE

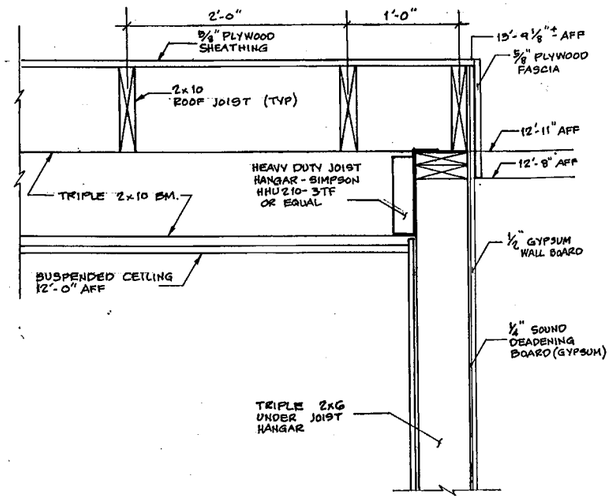
NOTE: FOR INFORMATIONAL PURPOSES ONLY

THIS SHEET DEPICTS EXISTING CONDITIONS OF THE ELECTRICAL CONTROL ROOM, WHICH IS LOCATED INSIDE OF THE OLD RAW SEWAGE PUMPING STATION BUILDING. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING EQUIPMENT INSIDE OF THE PUMPING STATION.



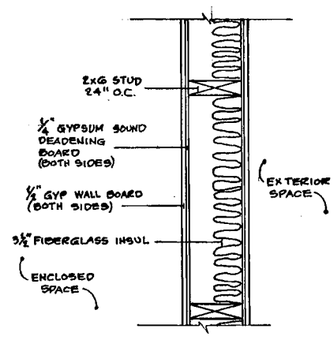
SECTION B-B

NOT TO SCALE



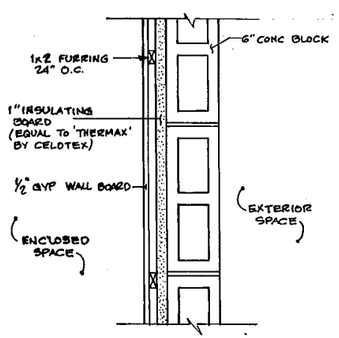
SECTION A-A

NOT TO SCALE



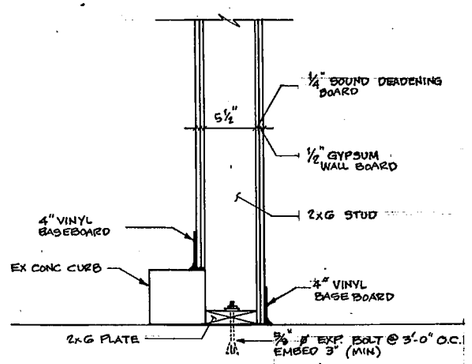
FRAME WALL DETAIL (TYP)

NOT TO SCALE



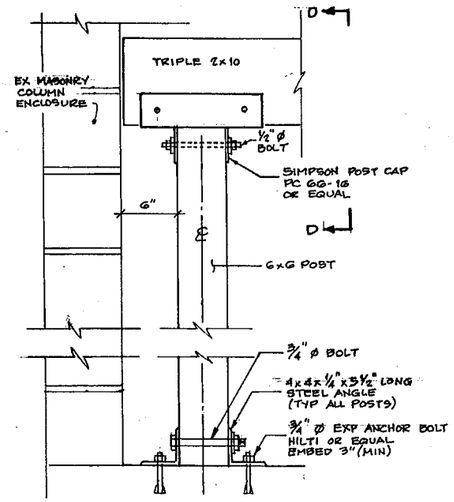
CONCRETE BLOCK WALL DETAIL

NOT TO SCALE



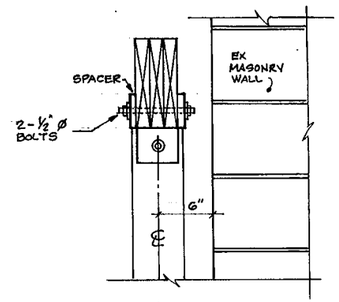
DETAIL - FRAME WALL ADJACENT TO EX CURB (TYP)

NOT TO SCALE



TYPICAL POST CONNECTION DETAILS

NOT TO SCALE



SECTION D-D

NOT TO SCALE

ELECTRICAL ROOM

NOT TO SCALE

K:\WW_PROJECTS\2012\2012_5935_VARIOUSPUMPINGSTATIONIMPROVEMENTS\DWG\4506-SHEET-04-09.DWG

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

No.	DATE	REVISIONS
3		
2		
1		

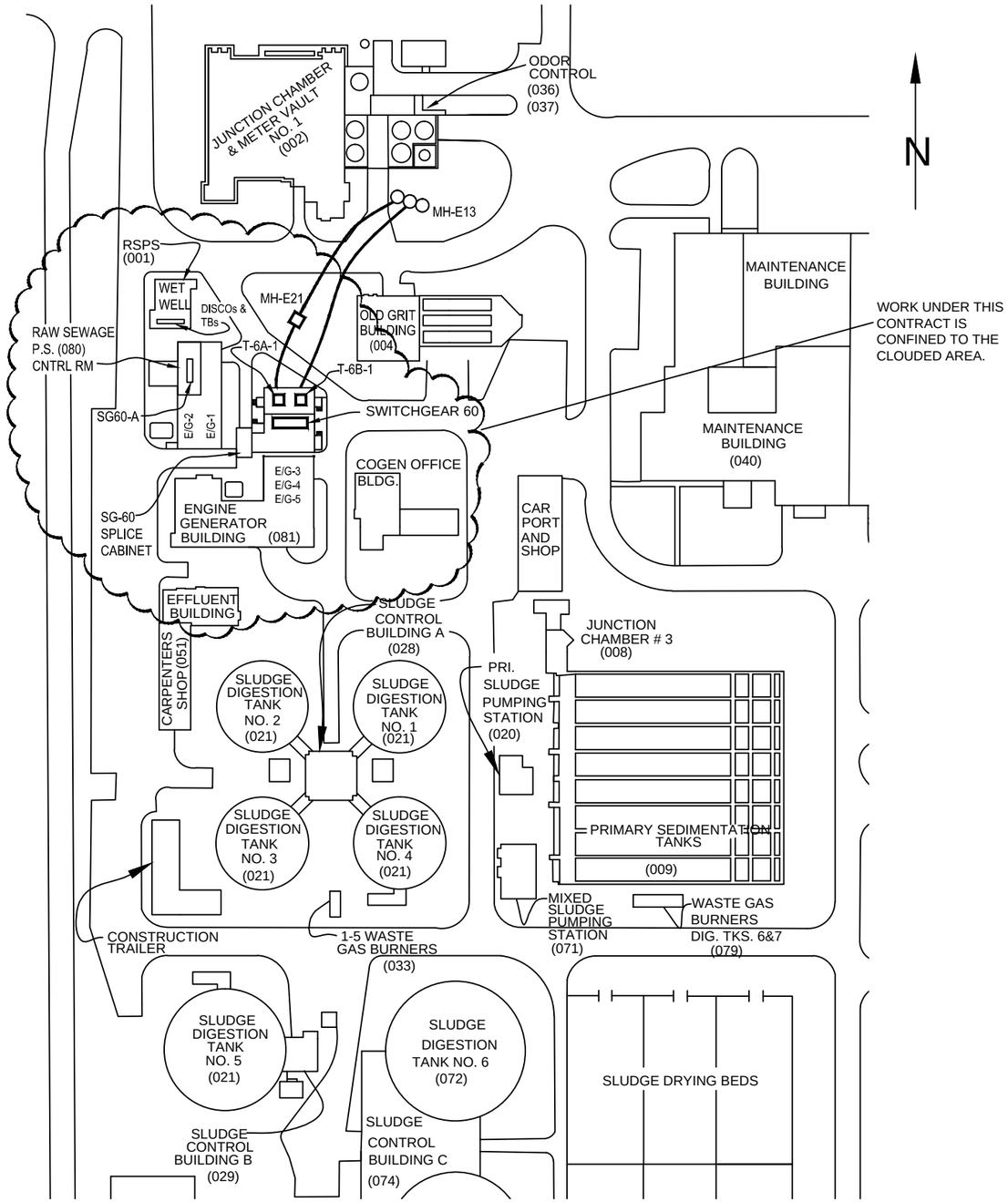
DES: J.H.
DRN: BB
CKD:
DATE:

CITY of TAMPA
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STAION
EXISTING CONDITIONS - ELECTRICAL ROOM

W.O. 4506
SHEET 19

TPB012-079



OVERALL SITE PLAN

SCALE: 1" =100'

ELECTRICAL DRAWING INDEX

E0	OVERALL SITE PAN & DRAWING INDEX
E1	SYMBOLS (SHT. 1 OF 2)
E1A	SYMBOLS (SHT. 2 OF 2)
E2	SCOPE OF WORK & GENERAL NOTES
E3	RSPS & CONTROL ROOM DEMOLITION PLAN
E4	RSPS & CONTROL ROOM PROPOSED PLAN
E5	CONDUIT & CONDUCTOR SCHEDULE (SHT. 1 of 2)
E5A	CONDUIT & CONDUCTOR SCHEDULE (SHT. 2 of 2)
E6	EXISTING OVERALL ELEMENTARY ONE-LINE DIAGRAM
E7	PROPOSED OVERALL ELEMENTARY ONE-LINE DIAGRAM
E8	RSPS CONTROL ROOM SWITCHGEAR / MCC LINEUP
E9	TEMPORARY POWER DETAILS (SHT. 1 OF 2)
E9A	TEMPORARY POWER DETAILS (SHT. 2 OF 2)
E10	EXISTING SWITCHGEAR 60A ONE-LINE DIAGRAM (SEC. 1-5)
E11	PROPOSED SWITCHGEAR 60A ONE-LINE DIAGRAM (SEC. 1-5)
E12	EXISTING MCC-64 ONE-LINE (SEC. 6-11)
E13	EXISTING MCC-64 ONE-LINE (SEC. 12-13)
E14	PROPOSED MCC-64 ONE-LINE (SEC. 6-11)
E15	PROPOSED MCC-64 BUBBLER (SEC. 12)
E16	PROPOSED MCC-64 PLC / ANNUNCIATOR (SEC. 13)
E16A	PROPOSED ANNUNCIATOR SCREENS
E16B	PROPOSED PUMP CONTROL SCREENS
E17	PROPOSED MCC-64 SEC. 12 & 13 FRONT ELEVATION
E18	EXISTING MCC-65A ONE-LINE (SEC. 14)
E19	PROPOSED MCC-65A ONE-LINE (SEC. 14)
E20	EXISTING MCC-65B ONE-LINE (SEC. 15-16)
E21	PROPOSED MCC-65B ONE-LINE (SEC. 15-16)
E22	EXISTING AFD No.1 DETAILS (SEC. 9)
E23	EXISTING AFD No.1 DETAILS (SEC. 10A)
E24	PROPOSED AFD No.1 FRONT EL. (SEC. 9)
E25	PROPOSED AFD No.1 DETAILS (SEC. 9)
E26	PROPOSED AFD No.1 DETAILS (SEC. 10A)
E27	EXISTING AFD No.2 DETAILS (SEC. 11)
E28	EXISTING AFD No.2 DETAILS (SEC. 10B)
E29	PROPOSED AFD No.2 FRONT EL. (SEC. 11)
E30	PROPOSED AFD No.2 DETAILS (SEC. 11)
E31	PROPOSED AFD No.2 DETAILS (SEC. 10B)
E32	EXISTING AFD No.3 DETAILS (SEC. 8)
E33	EXISTING AFD No.3 DETAILS (SEC. 7B)
E34	PROPOSED AFD No.3 FRONT EL. (SEC. 8)
E35	PROPOSED AFD No.3 DETAILS (SEC. 8)
E36	PROPOSED AFD No.3 DETAILS (SEC. 7B)
E37	EXISTING AFD No.4 DETAILS (SEC. 6)
E38	EXISTING AFD No.4 DETAILS (SEC. 7A)
E39	PROPOSED AFD No.4 FRONT EL. (SEC. 6)
E40	PROPOSED AFD No.4 DETAILS (SEC. 6)
E41	PROPOSED AFD No.4 DETAILS (SEC. 7A)
E42	SCREENING EQUIPMENT INTERCONNECTIONS
E43	SCREENING EQUIPMENT CONTROL PANEL (SHT. 1 OF 5)
E44	SCREENING EQUIPMENT CONTROL PANEL (SHT. 2 OF 5)
E45	SCREENING EQUIPMENT CONTROL PANEL (SHT. 3 OF 5)
E46	SCREENING EQUIPMENT CONTROL PANEL (SHT. 4 OF 5)
E47	SCREENING EQUIPMENT CONTROL PANEL (SHT. 5 OF 5)
E48	OUTDOOR DISCONNECT DETAILS (SHT. 1 OF 2)
E49	OUTDOOR DISCONNECT DETAILS (SHT. 2 OF 2)

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 9/20/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATION IMPROVEMENTS- ELECTRICAL
OVERALL SITE PLAN & DRAWING INDEX

W.O. 4506
SHEET
E0
OF

TPB012-080

ONE LINE DIAGRAM SYMBOLS

600 A — BUS–RATING AS SHOWN

INCOMING LINE

OUTCOMING LINE

DISCONNECTING DEVICE

CONDUCTORS CONNECTED

CONDUCTORS NOT CONNECTED

100A — FUSE–RATING AS SHOWN

100A — SINGLE THROW DISCONNECT SWITCH–RATING AS SHOWN

100A/70A — FUSED DISCONNECT SWITCH–100A SWITCH, 70A FUSE

100A — LOW VOLTAGE AIR CIRCUIT BREAKER WITHOUT TRIP DEVICE 100A FRAME

225A/125A — LOW VOLTAGE AIR CIRCUIT BREAKER WITH 225A FRAME AND 125A TRIP

52 — MEDIUM VOLTAGE DRAWOUT TYPE AIR CIRCUIT BREAKER

GROUND CONNECTION

LIGHTNING OR SURGE ARRESTOR

SURGE CAPACITOR

POWER TRANSFORMER WITH WINDING CONNECTIONS INDICATED

CPT — CONTROL POWER TRANSFORMER

PT — POTENTIAL TRANFORMER

CT — CURRENT TRANSFORMER

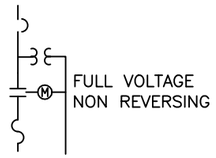
THERMAL OVERLOAD ELEMENT (OL)

(5) — SQUIRREL CAGE MOTOR (INDICATE HORSEPOWER)

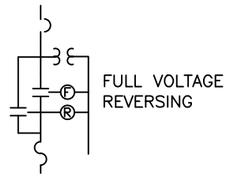
(G) — GENERATOR

(R) — INDICATING LIGHT (R–RED, G–GREEN, A–AMBER, B–BLUE, W–WHITE)

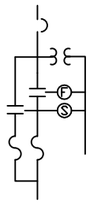
COMBINATION STARTER WITH CONTROL TRANSFORMERS AND OVERLOAD RELAYS AND MOTOR CIRCUIT PROTECTOR



FULL VOLTAGE NON REVERSING



FULL VOLTAGE REVERSING



FULL VOLTAGE TWO SPEED

SCHEMATIC AND WIRING DIAGRAM SYMBOLS

(M) — OPERATING COIL

M–MOTOR STARTER
C– CONTACTOR
F– FORWARD
R– REVERSE
AR– AUXILIARY RELAY
CR– CONTROL RELAY
TR– TIME DELAY RELAY

NORMALLY OPEN CONTACT (N.O.)

NORMALLY CLOSED CONTACT (N.C.)

NORMALLY OPEN CONTACT WITH TIME DELAY CLOSING (ON–DELAY)

INSTANT OPEN– TIME DELAY CLOSED CONTACT (OFF DELAY)

NORMALLY CLOSED CONTACT WITH TIME DELAY OPENING (ON–DELAY)

INSTANT CLOSE– TIME DELAY OPEN CONTACT (OFF DELAY)

(R) — INDICATING LIGHT– PUSH TO TEST (R–RED, G–GREEN, A–AMBER, B–BLUE, W–WHITE)

H O A — 3–POSITION SELECTOR SWITCH (SHOWN IN "H" POS.)

NORMALLY OPEN PUSHBUTTON– MOMENTARY CONTACT

NORMALLY CLOSED PUSHBUTTON– MOMENTARY CONTACT

DOUBLE CIRCUIT PUSHBUTTON WITH SPRING RETURN TO NORMAL

TRANSFORMER

OL — OVERLOAD RELAY CONTACT

THERMAL OVERLOAD ELEMENT (OL)

ON–OFF SWITCH

(G) — GROUND BUS

(N) — NEUTRAL BUS (INSULATED)

SINGLE–POLE CIRCUIT BREAKER

NORMALLY OPEN N.O.	NORMALLY CLOSED N.C.	
		LIMIT SWITCH
		FLOAT SWITCH
		PRESSURE SWITCH
		FLOW SWITCH
		TEMPERATURE

NOTE:

THE SYMBOLS SHOWN COMPRISE A GENERAL LEGEND TO FACILITATE THE USE OF PLANS. REFER TO THE PLANS AND SPECIFICATIONS FOR ITEMS REQUIRED.

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 6/28/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATION IMPROVEMENTS- ELECTRICAL
SYMBOLS (SHT. 1 OF 2)

W.O. 4506
SHEET E1 OF

POWER AND LIGHTING SYMBOLS

TPB012-081

EXPOSED CONDUIT RUN

CONDUIT RUN CONCEALED IN FLOOR OR UNDERGROUND

CONDUIT RUN CONCEALED IN WALLS, ABOVE SUSPENDED CEILING, OR IN ROOF SLAB

CONDUIT WITH HOT, NEUTRAL AND GROUND WIRES (LONG LINE IS NEUTRAL; LONG LINE WITH DOTS DENOTE GROUND)

PNL-1 1,3,5 — HOMERUN TO LIGHTING PANELBOARD (PNL-1 INDICATES PANELBOARD AND 1, 3, 5 INDICATES 20A-1P CKTS. 1, 3 AND 5)

FLEXIBLE LIQUIDTIGHT CONDUIT

CONDUIT-UP (OR TOWARDS VIEWER)

CONDUIT-DOWN (OR AWAY FROM VIEWER)

GROUNDING CONDUCTOR

GROUND ROD

LIGHTNING ROD

CEILING MOUNTED INCANDESCENT OR MERCURY VAPOR FIXTURE. "A" INDICATES FIXTURE TYPE LISTED IN SCHEDULE

WALL MOUNTED LIGHTING FIXTURE

EXIT SIGN

EMERGENCY INCANDESCENT OR MERCURY VAPOR LIGHTING FIXTURE

FLUORESCENT FIXTURE

EMERGENCY FLUORESCENT FIXTURE

POLE MOUNTED LIGHTING FIXTURE

4 — DUPLEX RECEPTACLE- 20 A, 120 V, 3 WIRE (TO PNL- CIRCUIT No.4)

30 A — SINGLE RECEPTACLE - 2 POLE, 3 WIRE, 240V, RATING NOTED

60 A — 3 POLE, 4 WIRE, 240V WELDING OUTLET (60 A)

SINGLE POLE SWITCH

2P — TWO POLE SWITCH

3 — THREE WAY SWITCH

J — OUTLET BOX WITH BLANK COVER

JB — JUNCTION BOX

PB — PULL BOX

TB — TERMINAL BOX

GENERAL SYMBOLS

START-STOP PUSHBUTTON

ON/OFF/L — ON-OFF MAINTAINED CONTACT PUSHBUTTON WITH LOCK ATTACHMENT

S/L — INDICATING LIGHT AND START-STOP PUSHBUTTON WITH LOCK ATTACHMENT ON STOP

RESUME STOP/L — PUSH/PULL BUTTON WITH STOP LOCK. (PULL TO RESUME- PUSH TO STOP)

SELECTOR SWITCH ("HOA" INDICATES HAND, OFF, AND AUTO; "MOR" INDICATES MANUAL, OFF, AND REMOTE; ETC)

L — ON-OFF SWITCH WITH LOCK ATTACHMENT ON OFF POSITION

FL — FLOW SWITCH

LS — LIMIT SWITCH

P — PRESSURE SWITCH

S — SOLENOID OPERATED VALVE

T — TEMPERATURE SWITCH

F — FLOAT SWITCH

L — LEVEL TRANSMITTER (PRESSURE ANALOG TYPE)

LC — LEVEL TRANSMITTER (FLOAT TYPE)

T — TEMPERATURE TRANSMITTER

FT — FLOW TRANSMITTER

MH — DESIGNATES MOUNTING HEIGHT

WP — DESIGNATES WATERPROOF EQUIPMENT

XP

MOV — DESIGNATES MOTOR OPERATED VALVE

EX. — DESIGNATES EXISTING EQUIPMENT

PROP. — DESIGNATES PROPOSED EQUIPMENT

NOTE:
THE SYMBOLS SHOWN COMPRISE A GENERAL LEGEND TO FACILITATE THE USE OF PLANS. REFER TO THE PLANS AND SPECIFICATIONS FOR ITEMS REQUIRED.

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 6/28/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATION IMPROVEMENTS- ELECTRICAL
SYMBOLS (SHT. 1 OF 2)

W.O. 4506
SHEET EIA OF

TPB012-082

SCOPE OF WORK

THE WORK CONSISTS OF FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TRANSPORTATION, AND PERFORMING ALL OPERATIONS REQUIRED TO SUPPORT THE INSTALLATION AND COMMISSIONING OF THE ELECTRICAL PORTION OF THE HFC AWTP RAW SEWAGE PUMPING STATION IMPROVEMENTS. THE WORK INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:

1. SUBMIT WORKING DRAWINGS, PARTS SCHEDULES AND CUT-SHEETS TO THE ENGINEER.

2. FURNISH AND INSTALL ALL EQUIPMENT, CONTROLS AND INSTRUMENTATION AS SHOWN ON THE PLANS AND DESCRIBED IN THE SPECIFICATIONS.

SPECIFICALLY:

A. DEMOLITION

1) PRIOR TO DEMOLITION, THE PROPOSED SWITCHGEAR, MOTOR CONTROL CENTERS, AFDS, AND ASSOCIATED EQUIPMENT SHALL BE ON SITE AND READY FOR INSTALLATION. THREE (3) 60KW PORTABLE DIESEL ENGINE GENERATORS (E/G) SHALL BE PROVIDED AND INSTALLED TO PROVIDE TEMPORARY POWER TO THE FACILITIES DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR MAY RENT THE E/G OR USE EQUIPMENT FROM HIS INVENTORY. THE CONTRACTOR SHALL ALSO SUPPLY AND INSTALL ANY AND ALL CIRCUIT BREAKER PANELBOARDS, COMBINATION STARTERS, CABLING, ETC. THAT MAY BE REQUIRED TO FACILITATE THE TEMPORARY LOAD CONNECTIONS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CUT SHEETS DETAILING HIS TEMPORARY POWER SYSTEM PROPOSAL FOR ENGINEER'S APPROVAL. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR MAINTAINING POWER AT ALL TIMES TO THE SAID FACILITIES AND PERFORMING ALL ASSOCIATED MAINTENANCE FUNCTIONS.
IF DURING HIS PRECONSTRUCTION INVESTIGATION, THE CONTRACTOR UNCOVERS AN ALTERNATE METHOD FOR SUPPLYING TEMPORARY POWER TO ALL, OR PART OF, THE REQUIRED LOADS; HE WILL NOTIFY THE ENGINEER, IN WRITING, THROUGH THE RFI PROCESS. AFTER ENGINEER'S PRELIMINARY APPROVAL, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CUT SHEETS FOR THE PROPOSED TEMPORARY POWER SYSTEM AS WELL AS THE AMOUNT OF CREDIT OFFERED TO THE CITY FOR FINAL APPROVAL.
2) VERIFY EXISTING POWER / INSTRUMENTATION / CONTROL CONNECTIONS IN THE FIELD PRIOR TO COMMENCING DEMOLITION WORK. THE CONTRACTOR SHALL REROUTE OR MAKE OTHER ACCOMMODATIONS FOR ANY UNFORESEEN WIRING PASSING THROUGH CONDUITS OR ENCLOSURES, SCHEDULED FOR DEMOLITION, THAT MUST REMAIN IN SERVICE FOR PROPER OPERATION OF OTHER SYSTEMS. COORDINATE INSTRUMENTATION / CONTROL CONNECTIONS WITH CITY PERSONNEL.
3) IN THE RAW SEWAGE PUMPING STATION CONTROL ROOM: LABEL ALL MAIN AND FEEDER CONDUCTORS ATTACHED TO THE EXISTING SWITCHGEAR 60A (SG-60A) THAT ARE TO BE RECONNECTED TO THE NEW SWITCHGEAR. REMOVE EXISTING SG-60A AND PREPARE EXISTING CONCRETE PAD AS REQUIRED TO INSTALL THE NEW SWITCHGEAR.
4) IN THE RAW SEWAGE PUMPING STATION CONTROL ROOM: LABEL ALL FEEDER CONDUCTORS ATTACHED TO THE EXISTING MOTOR CONTROL CENTERS MCC-65A AND MCC-65B THAT ARE TO BE RECONNECTED TO THE NEW MCC. THE MAIN CONDUCTORS FROM SG-60A SHALL BE REPLACED. REMOVE EXISTING MCC-65A AND MCC-65B AND PREPARE EXISTING CONCRETE PAD AS REQUIRED TO INSTALL THE NEW MCC.
5) IN THE RAW SEWAGE PUMPING STATION CONTROL ROOM: LABEL THE MOTOR CONDUCTORS ATTACHED TO THE EXISTING ADJUSTABLE FREQUENCY DRIVES (AFDS) THAT ARE TO BE RECONNECTED TO THE NEW AFDS. REMOVE EXISTING WET WELL LEVEL CONTROLS, AND PROGRAMMABLE CONTROLLER (PLC) CABINETS. PREPARE EXISTING CONCRETE PAD AS REQUIRED TO INSTALL THE NEW MCC-64.
6) IN THE RAW SEWAGE PUMPING STATION CONTROL ROOM: CAREFULLY REMOVE EXISTING AUTOMATIC TRANSFER SWITCH (ATS) AND TURN OVER TO CITY FOR MAINTENANCE INVENTORY.
7) IN THE RAW SEWAGE PUMPING STATION CONTROL ROOM: CAREFULLY REMOVE EXISTING WASTEWATER FLOW METER TRANSMITTER (FIT) FROM CURRENT LOCATION. TRANSMITTER SHALL BE RELOCATED TO NEW PLC CABINET.
8) IN THE RAW SEWAGE PUMPING STATION WET WELL AREA: CAREFULLY REMOVE THE EXISTING EXHAUST FAN DISCONNECT SWITCH FROM ITS CURRENT LOCATION. DISCONNECT SWITCH SHALL BE RELOCATED AS SHOWN.

B. INSTALLATION

1) IN THE RAW SEWAGE PUMPING STATION CONTROL ROOM: AFTER MODIFYING AND PREPARING THE CONCRETE HOUSEKEEPING PAD TO SUIT THE PROPOSED SWITCHGEAR 60A (SG-60A), INSTALL SWITCHGEAR AND MAKE CABLE CONNECTIONS AS SHOWN.
2) IN THE RAW SEWAGE PUMPING STATION CONTROL ROOM: AFTER MODIFYING AND PREPARING THE CONCRETE HOUSEKEEPING PAD TO SUIT THE PROPOSED MCC-65A & MCC-65B, INSTALL MCCS AND MAKE CABLE CONNECTIONS AS SHOWN.
3) IN THE RAW SEWAGE PUMPING STATION CONTROL ROOM: AFTER MODIFYING AND PREPARING THE CONCRETE HOUSEKEEPING PAD TO SUIT THE PROPOSED MCC-64, INSTALL MCC AND MAKE CABLE CONNECTIONS AS SHOWN.
4) IN THE RAW SEWAGE PUMPING STATION CONTROL ROOM: PROVIDE AND INSTALL THE FOLLOWING EQUIPMENT ON THE WEST WALL: SEWAGE SCREEN SS1 CONTROL ENCLOSURE, SS1 AUTOMATIC TRANSFER SWITCH (POWER SEEKING ATS), SCREEN SPRAY WATER FLOW TRANSMITTER (FIT-1), AND ALL NECESSARY CONDUITS, CONDUCTORS, & GROUNDING AS SHOWN, SPECIFIED, AND REQUIRED. THIS AREA IN NOT CLASSIFIED- UNCOATED RIGID ALUMINUM CONDUIT MAY BE USED.
5) IN THE RAW SEWAGE PUMPING STATION CONTROL ROOM: RELOCATE EXISTING WASTEWATER FLOW METER TRANSMITTER (FIT) TO NEW PLC CABINET.
6) PROVIDE AND INSTALL CONDUIT AND CONDUCTORS EXTENDING FROM THE NEWLY INSTALLED EQUIPMENT TO THE EXISTING SCADA RTU AS SHOWN, SPECIFIED, AND REQUIRED. CITY OF TAMPA INSTRUMENTATION PERSONNEL WILL MAKE ANY REQUIRED MODIFICATIONS TO THE RTU, AND MAKE THE FINAL RTU CONNECTIONS.
7) IN THE RAW SEWAGE PUMPING STATION WET WELL AREA: SEWAGE PUMPS P1 & P4 SHALL REMAIN, WITH MODIFICATIONS, UNDER THIS CONTRACT. SEE CONTRACT DRAWINGS FOR DETAILS.
8) IN THE RAW SEWAGE PUMPING STATION WET WELL AREA: SEWAGE PUMPS P2 & P3 SHALL BE REPLACED UNDER THIS CONTRACT. SEE CONTRACT DRAWINGS FOR DETAILS.
9) IN THE RAW SEWAGE PUMPING STATION WET WELL AREA: MAKE PROPOSED MODIFICATIONS TO EXISTING SEWAGE PUMP DISCONNECTS AND TERMINAL BOXES AS SHOWN ON THE CONTRACT DRAWINGS.
10) IN THE RAW SEWAGE PUMPING STATION WET WELL AREA: RELOCATE AND RECONNECT THE EXISTING WET WELL EXHAUST BLOWER DISCONNECT AS SHOWN ON THE CONTRACT DRAWINGS.
11) IN THE RAW SEWAGE PUMPING STATION WET WELL AREA: PROVIDE AND INSTALL THE FOLLOWING EQUIPMENT RELATED TO WASTEWATER SCREENING: AUTOMATIC BAR SCREEN, SCREEN MOTOR DISCONNECT, WASHER / COMPACTOR, COMPACTOR MOTOR DISCONNECT, LOCAL CONTROL STATION, SLUICE WATER LEVEL DETECTOR, ALARM FLOAT SWITCH, SCREEN SPRAY WATER FLOW METER (FE-1), MOTORIZED OPERATORS FOR SCREEN WATER VALVE, COMPACTOR WATER VALVE & SLUICE WATER VALVE AND ALL NECESSARY CONDUITS, CONDUCTORS, & GROUNDING AS SHOWN, SPECIFIED, AND REQUIRED. ALL PROPOSED CONDUITS, BOXES, AND FITTINGS INSTALLED NEAR THE WET WELL AREA SHALL BE PVC COATED RIGID ALUMINUM.

C. ALL REMOVED EQUIPMENT SHALL REMAIN THE PROPERTY OF THE CITY AND SHALL BE REMOVED FROM THE PREMISES AND DISPOSED OF PROPERLY AS DIRECTED BY THE CITY.

D. PERFORM A SHORT CIRCUIT AND COORDINATION STUDY AS DETAILED IN SECTION 16085 OF THESE SPECIFICATIONS. THE STUDY SHALL BE USED TO DETERMINE THE PROPER SETTINGS FOR THE SWITCHGEAR 60A CIRCUIT BREAKER, ETC.

GENERAL NOTES:

1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR COMMENCING CONSTRUCTION.
2. ALL CONDUCTORS SHALL BE STRANDED COPPER, AWG 12 MIN. w/ THHN INSULATION, UNLESS OTHERWISE NOTED.
3. ALL WIRING SHALL BE IDENTIFIED w/ NUMBERS AT ALL TERMINALS AND ON WIRING DIAGRAMS.
4. VERIFY ALL MECHANICAL EQUIPMENT SIZES AND RATINGS PRIOR TO CONNECTING.
5. FIELD VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTIONS PRIOR TO COMMENCING CONSTRUCTION.
6. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE w/ THE LATEST EDITION OF THE NEC AND ALL APPLICABLE LOCAL ORDINANCES.
7. ALL THREADED CONNECTIONS SHALL BE COATED w/ COPPER SHIELD ANTI-SEIZE COMPOUND MANUFACTURED BY THOMAS & BETTS (T & B).
8. ALL PANELS, DISCONNECTS, SWITCHES AND EQUIPMENT COVERPLATES SHALL BE LABELED w/ NAMEPLATES. NAMEPLATES SHALL BE THREE-PLY PHENOLIC BLACK-WHITE-BLACK ENGRAVED THROUGH THE FIRST BLACK LAYER. LETTERING SHALL BE 0.5 CM (3/16") MIN. EDGE OF NAMEPLATE SHALL BE BEVELED 45 DEG.
9. ALL CONDUIT SHALL BE SUPPORTED AT MAXIMUM 5'-0" INTERVALS.
10. ALL CIRCUITS SHALL HAVE A GROUNDING CONDUCTOR ROUTED INSIDE EACH CONDUIT w/ POWER CONDUCTORS.
11. ALL CONDUCTOR LENGTHS SHALL BE CONTINUOUS. NO SPLICES OR CONDUCTOR TERMINATIONS SHALL BE PERMITTED UNLESS SPECIFICALLY DESIGNATED IN THE DRAWINGS.
12. NEATLY COIL ALL SPARE CONDUCTORS & TAPE w/ VINYL ELECTRICAL TAPE (SCOTCH 33+). U.O.N.
13. PROVIDE A MINIMUM OF 3'-0" CLEARANCE IN FRONT OF ALL ELECTRICAL EQUIPMENT IN ACCORDANCE w/ ARTICLE 110 OF THE NEC. CLEARANCE SHALL NOT BE LESS THAN 42" FOR VOLTAGES GREATER THAN 150V TO GROUND.
14. ALL INSTALLATIONS SHALL BE IN ACCORDANCE w/ CITY OF TAMPA CODE 5-111.6.1.5 CITY OF TAMPA CODE CHAPTER 5 ISSUED 10/01/2005.
15. ALL FASTENING HARDWARE (SCREWS, BOLTS, NUTS, ETC.) SHALL BE 316 STAINLESS STEEL. FASTENING HARDWARE CONSTRUCTED OF FERROUS MATERIAL ARE NOT ACCEPTABLE.
16. ALL CONDUITS SHALL BE RIGID HEAVY WALL ALUMINUM CONDUIT.
17. A 316 STAINLESS STEEL CHANNEL ERECTOR SYSTEM SHALL BE USED TO SUPPORT ALL CONDUITS, BOXES, ETC. USE 316 STAINLESS STEEL MOUNTING HARDWARE. USE EXISTING UNISTRUT SUPPORTS WHERE PRACTICAL.
18. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND MAKE ADJUSTMENTS AS NECESSARY TO EXECUTE THE PROPOSED INSTALLATIONS.
19. ALL EXISTING INSTALLATIONS DENOTED ON THE DRAWINGS ARE FOR THE CONTRACTORS REFERENCE ONLY. ALL EXISTING INSTALLATIONS SHALL BE FIELD VERIFIED PRIOR TO SUBMITTING A BID AND PRIOR TO COMMENCING CONSTRUCTION.
20. PULL BOXES SHALL BE INSTALLED AS NECESSARY TO FACILITATE WIRE PULLS AND TO AVOID EXCESSIVE PULLING TENSION ON WIRING. IN NO CASE SHALL CONDUIT LENGTHS EXCEED 150' OR THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL) WITHOUT A PULL BOX. PULL BOXES SHALL BE SIZED IN ACCORDANCE WITH ARTICLE 314 OF THE NEC.
21. CONDUIT ROUTING SHOWN IS DIAGRAMMATIC UNLESS OTHERWISE NOTED. CONTRACTOR SHALL OPTIMIZE THE CONDUIT ROUTING, TAKING INTO ACCOUNT THE FIELD CONDITIONS AND THE FINAL EQUIPMENT SELECTED AND APPROVED IN THE SUBMITTALS. OVERHEAD CONDUIT SHALL BE MOUNTED AT LEAST 7 FEET AFF.

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

No.	DATE	REVISIONS
3		
2		
1		

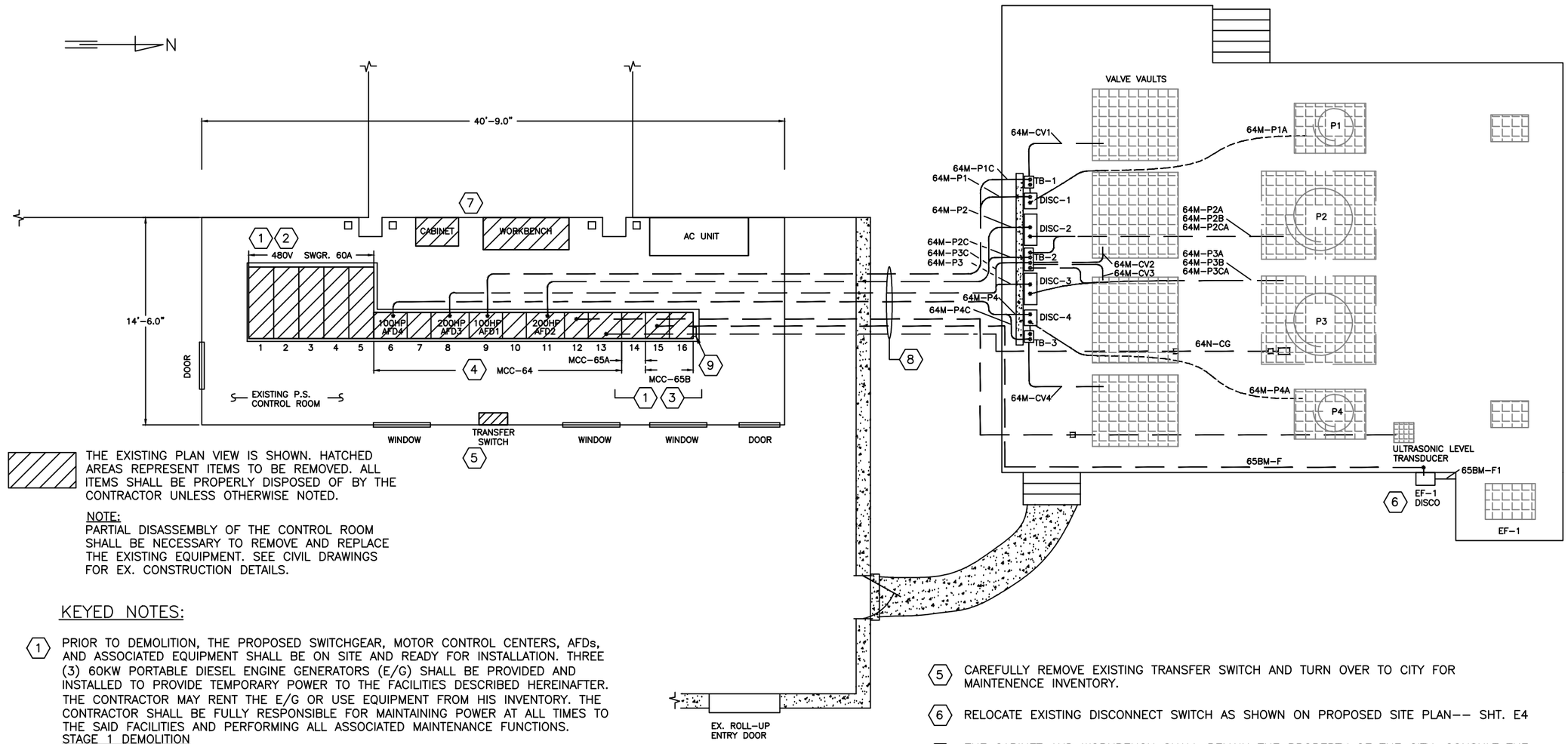
DES: RDK
DRN: RDK
CKD:
DATE: 9/13/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATION IMPROVEMENTS- ELECTRICAL
SCOPE OF WORK & GENERAL NOTES

W.O. 4506
SHEET E2 OF

TPB012-083



THE EXISTING PLAN VIEW IS SHOWN. HATCHED AREAS REPRESENT ITEMS TO BE REMOVED. ALL ITEMS SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR UNLESS OTHERWISE NOTED.

NOTE:
PARTIAL DISASSEMBLY OF THE CONTROL ROOM SHALL BE NECESSARY TO REMOVE AND REPLACE THE EXISTING EQUIPMENT. SEE CIVIL DRAWINGS FOR EX. CONSTRUCTION DETAILS.

KEYED NOTES:

(1) PRIOR TO DEMOLITION, THE PROPOSED SWITCHGEAR, MOTOR CONTROL CENTERS, AFDs, AND ASSOCIATED EQUIPMENT SHALL BE ON SITE AND READY FOR INSTALLATION. THREE (3) 60KW PORTABLE DIESEL ENGINE GENERATORS (E/G) SHALL BE PROVIDED AND INSTALLED TO PROVIDE TEMPORARY POWER TO THE FACILITIES DESCRIBED HEREINAFTER. THE CONTRACTOR MAY RENT THE E/G OR USE EQUIPMENT FROM HIS INVENTORY. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR MAINTAINING POWER AT ALL TIMES TO THE SAID FACILITIES AND PERFORMING ALL ASSOCIATED MAINTENANCE FUNCTIONS.
STAGE 1 DEMOLITION

(2) LABEL ALL MAIN AND FEEDER CONDUCTORS ATTACHED TO THE EXISTING SWITCHGEAR 60A (SG-60A) THAT ARE TO BE RECONNECTED TO THE NEW SWITCHGEAR- SEE SHT. E5, E10, & E11. REMOVE EXISTING SG-60A AND PREPARE EXISTING CONCRETE PAD AS REQUIRED TO INSTALL THE NEW SWITCHGEAR. STAGE 1 INSTALLATION DIRECTLY FOLLOWS STAGE 1 DEMOLITION.

(3) STAGE 2 DEMOLITION

LABEL ALL FEEDER CONDUCTORS ATTACHED TO THE EXISTING MOTOR CONTROL CENTERS MCC-65A AND MCC-65B THAT ARE TO BE RECONNECTED TO THE NEW MCC. THE MAIN CONDUCTORS FROM SG-60A SHALL BE REPLACED- SEE SHT. E5 & E18-E21. REMOVE EXISTING MCC-65A AND MCC-65B AND PREPARE EXISTING CONCRETE PAD AS REQUIRED TO INSTALL THE NEW MCC. STAGE 2 INSTALLATION DIRECTLY FOLLOWS STAGE 2 DEMOLITION.

(4) STAGE 3 DEMOLITION

LABEL THE MOTOR CONDUCTORS ATTACHED TO THE EXISTING AFDs THAT ARE TO BE RECONNECTED TO THE NEW AFDs- SEE SHT. E5 & E12-E17. REMOVE EXISTING WET WELL LEVEL CONTROLS, AND PROGRAMMABLE CONTROLLER CABINETS. PREPARE EXISTING CONCRETE PAD AS REQUIRED TO INSTALL THE NEW MCC-64. STAGE 3 INSTALLATION DIRECTLY FOLLOWS STAGE 3 DEMOLITION.

(5) CAREFULLY REMOVE EXISTING TRANSFER SWITCH AND TURN OVER TO CITY FOR MAINTENENCE INVENTORY.

(6) RELOCATE EXISTING DISCONNECT SWITCH AS SHOWN ON PROPOSED SITE PLAN-- SHT. E4

(7) THE CABINET AND WORKBENCH SHALL REMAIN THE PROPERTY OF THE CITY. CONSULT THE PROJECT INSPECTOR FOR RELOCATION INSTRUCTIONS.

(8) EX. CONDUITS MAY BE REUSED UNDER THE CURRENT CONTRACT. POWER CONDUCTORS MAY BE REUSED IF FOUND IN GOOD CONDITION, OTHERWISE CONTACT THE ENGINEER FOR APPROVAL OF EXTRA WORK FOR REPLACEMENT. ALL CONTROL AND INSTRUMENTATION CONDUCTORS SHALL BE REPLACED USING EXISTING CONDUITS WHERE POSSIBLE. CONTRACTOR SHALL MAKE ALL MODIFICATIONS, ADDITIONS, AND IMPROVEMENTS TO THE CONDUIT/CONDUCTOR SYSTEM AS SHOWN, SPECIFIED AND REQUIRED. SEE CONDUIT SCHEDULE ON SHT. E5 & 5A.

(9) EXISTING WASTEWATER FLOW METER INDICATING TRANSMITTER (FIT). RELOCATE TO PROPOSED PLC/ANNUNCIATOR CABINET (SEC. 13).

SCALE: 1/8" = 1'

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

No.	DATE	REVISIONS
3		
2		
1		

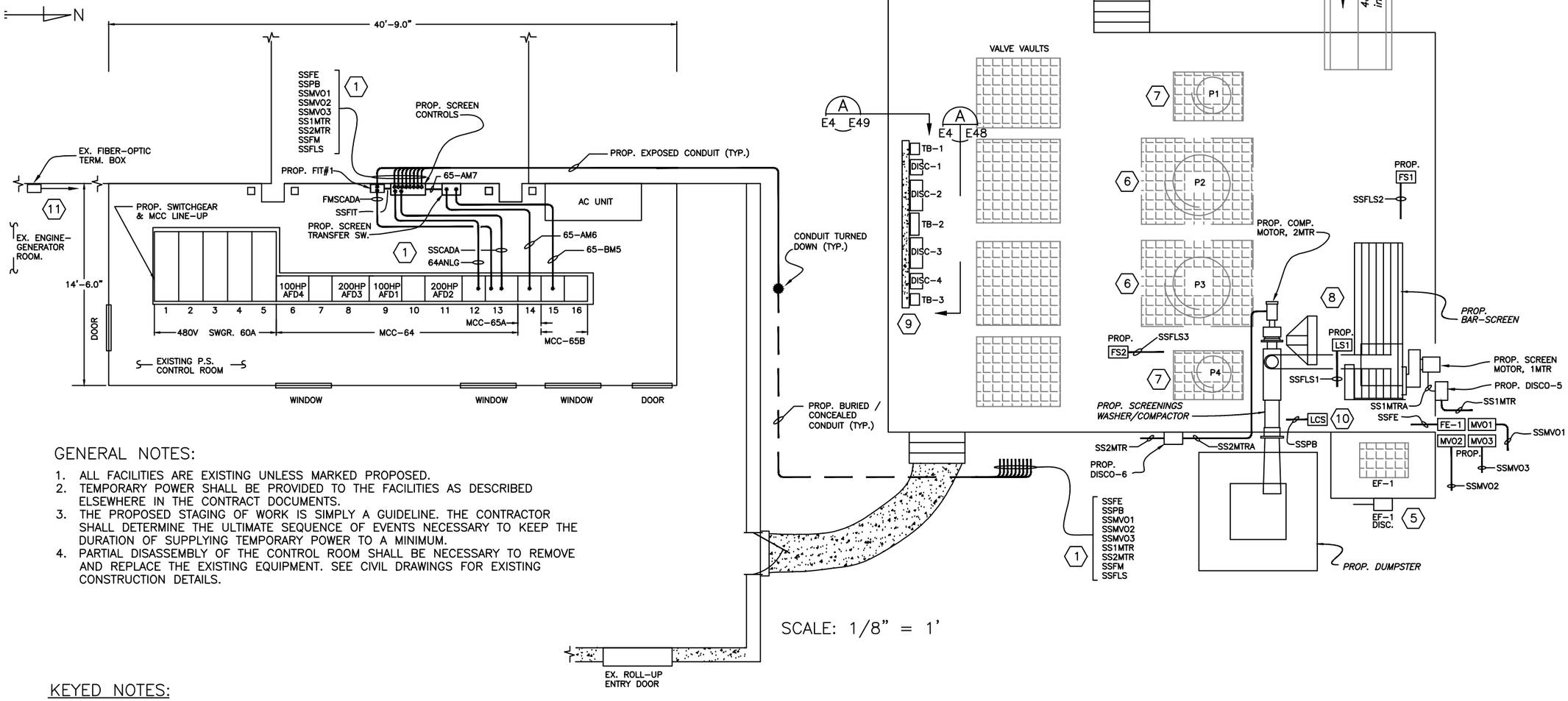
DES: RDK
DRN: RDK
CKD:
DATE: 9/16/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATION IMPROVEMENTS- ELECTRICAL
RSPS & CONTROL ROOM DEMOLITION PLAN

W.O. 4506
SHEET E3 OF

TPB012-084



GENERAL NOTES:

1. ALL FACILITIES ARE EXISTING UNLESS MARKED PROPOSED.
2. TEMPORARY POWER SHALL BE PROVIDED TO THE FACILITIES AS DESCRIBED ELSEWHERE IN THE CONTRACT DOCUMENTS.
3. THE PROPOSED STAGING OF WORK IS SIMPLY A GUIDELINE. THE CONTRACTOR SHALL DETERMINE THE ULTIMATE SEQUENCE OF EVENTS NECESSARY TO KEEP THE DURATION OF SUPPLYING TEMPORARY POWER TO A MINIMUM.
4. PARTIAL DISASSEMBLY OF THE CONTROL ROOM SHALL BE NECESSARY TO REMOVE AND REPLACE THE EXISTING EQUIPMENT. SEE CIVIL DRAWINGS FOR EXISTING CONSTRUCTION DETAILS.

KEYED NOTES:

(1) ALL CONDUITS SHOWN ON THIS SHEET ARE PROPOSED UNLESS OTHERWISE NOTED. SEE CONDUIT SCHEDULE SHT. E5 & E5A.

(2) STAGE 1 INSTALLATION

AFTER MODIFYING AND PREPARING THE CONCRETE HOUSEKEEPING PAD TO SUIT THE PROPOSED SWITCHGEAR 60A, INSTALL SWITCHGEAR AND MAKE CABLE CONNECTIONS AS SHOWN ON SHT. E5, AND E11.

(3) STAGE 2 INSTALLATION

AFTER MODIFYING AND PREPARING THE CONCRETE HOUSEKEEPING PAD TO SUIT THE PROPOSED MCC-65A & MCC-65B, INSTALL MCCs AND MAKE CABLE CONNECTIONS AS SHOWN ON SHT. E5, E19 & E21.

(4) STAGE 3 INSTALLATION

AFTER MODIFYING AND PREPARING THE CONCRETE HOUSEKEEPING PAD TO SUIT THE PROPOSED MCC-64, INSTALL MCC AND MAKE CABLE CONNECTIONS AS SHOWN ON SHT. E5, E14 & E17.

(5) RELOCATE EXISTING BLOWER DISCONNECT, SHOWN ON SHT. E3, TO THIS LOCATION.

(6) SEWAGE PUMPS P2 & P3 SHALL BE REPLACED UNDER THIS CONTRACT. SEE SHT. E5, E14, E29-E31, E34-E36 & E48-E49.

(7) SEWAGE PUMPS P1 & P4 SHALL REMAIN, WITH MODIFICATIONS, UNDER THIS CONTRACT. SEE SHT. E5, E14, E24-E26, E39-E41 & E48-E49.

(8) PROPOSED SCREENING EQUIPMENT- SEE CONDUIT SCHEDULE ON SHT. E5A AND DETAILS ON SHT. E42-E47.

(9) EXISTING DISCONNECTS AND TERMINAL BOXES. SEE PROPOSED MODIFICATIONS TO THIS AREA ON SHT. E48 & E49.

(10) SEE PROP. LOCAL CONTROL STATION (LCS) DETAIL ON SHT. E45.

(11) PROVIDE AND INSTALL A CAT-5 CABLE, IN EXISTING CONDUIT, FROM EX. FIBER-OPTIC TERMINAL BOX IN GENERATOR ROOM TO SECTION 13 OF MCC-64. CITY PERSONNEL WILL PROVIDE AND INSTALL CONVERTER AND MAKE FINAL CONNECTIONS IN TERMINAL BOX.

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 9/16/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATION IMPROVEMENTS- ELECTRICAL
RSPS & CONTROL ROOM PROPOSED PLAN

W.O. 4506
SHEET E4 OF

TPB012-085

CONDUIT & CONDUCTOR SCHEDULE

CONDUIT					
NUMBER	SIZE	NUMBER & TYPE OF CONDUCTORS	FROM	TO	REMARKS
					SEE LEGEND ON SHEET E5A
60M7A	4"	(3)-500KCMIL (1)-#3/0 GND	SWITCHGEAR 60	MAIN "A" SWITCHGEAR 60A	1
60M7B	4"	(3)-500KCMIL (1)-#3/0 GND	SWITCHGEAR 60	MAIN "A" SWITCHGEAR 60A	1
60M110A	4"	(3)-500KCMIL (1)-#2/0 GND	SWITCHGEAR 60	MAIN "B" SWITCHGEAR 60A	1
60M110B	4"	(3)-500KCMIL (1)-#2/0 GND	SWITCHGEAR 60	MAIN "B" SWITCHGEAR 60A	1
60AM1	-	(3)- #4/0, (1)- #4 GND	SWITCHGEAR 60A	MCC-65, BUS "A"	2
60AM2	2"	(3)- #2/0	SWITCHGEAR 60A	COGEN. OFFICES (OLD ADMIN. BLDG)	1
60AM3	-	(3)- 400KCMIL, (1)-#2 GND	SWITCHGEAR 60A	MCC-64, BUS "A"	2
60AM4	-	(3)- 400KCMIL, (1)-#2 GND	SWITCHGEAR 60A	MCC-64, BUS "B"	2
60AM5	1-1/4"	(3)- #2	SWITCHGEAR 60A	GRIT CHAMBER	3
60AM6	2"	(3)- #1/0	SWITCHGEAR 60A	CARPENTER SHOP (OLD EFFL.. BLDG)	1
60AM7	-	(3)- #4/0, (1)- #4 GND	SWITCHGEAR 60A	MCC-65, BUS "B"	2
65AM1	1"		MCC-65A	VP1	3
65AM2	1"	(3)- #12 & (3)-#14	MCC-65A	RSPS- PW2	1
65AM3	3/4"	(3)- #10 & (1)-#10GND	MCC-65A	RSPS- PAC1	4
65AM4	3/4"	(3)- #12 & (3)-#14	MCC-65A	RSPS- SP1	1
65AM5	-	(3)- #6	MCC-65A	ATS IN MCC-65B	2
65AM6	1"	(3)- #6, (1)-#10 GND	MCC-65A	RSPS SCREEN ATS	5
65AM7	-	(3)- #6, (1)-#10 GND	RSPS SCREEN ATS	RSPS SCREEN CONTRLS	5
65BM1	1"		MCC-65B	VP2	3
65BM2	1"	(3)- #12 & (3)-#14	MCC-65B	RSPS- PW1	1
65BM3	3/4"	(3)- #10 & (1)-#10GND	MCC-65B	RSPS- PAC2	4
65BM4					SPARE
65BM5	1"	(3)- #6, (1)-#10 GND	MCC-65B	RSPS SCREEN ATS	5
65BM6	3/4"	(3)- #12, (1)-#12 GND	MCC-65B	RSPS HOIST	1
65BM7	-	(3)- #12, (1)-#12 GND	MCC-65B	MCC-64, PLC/ANN. CPT	5

CONDUIT & CONDUCTOR SCHEDULE

CONDUIT					
NUMBER	SIZE	NUMBER & TYPE OF CONDUCTORS	FROM	TO	REMARKS
					SEE LEGEND ON SHEET E5A
64M-P1	2"	(3)-#2/0;(1)-#4 GND; (1)-3/COND. #14	MCC64; AFD-1	PUMP-1 DISC. SW	1
64M-P1A	2"	CABLE SUPPLIED W/ PUMP	PUMP-1; DISCO SW.	PUMP-1	1
64M-P1C	1"	(12)-#14 & (1)-#12 GND	MCC64; AFD-1	TERM. BOX 1	6
64M-CV1	1"	(4)-#14 & (1)-#12 GND	TERM. BOX 1	CHECK VALVE 1	6
64M-P2	3-1/2"	(3)-#350 KCMIL; (1)-#2 GND; (1)-3/COND. #14	MCC64; AFD-2	PUMP-2. DISC. SW	1
64M-P2A	2-1/2"	CABLE SUPPLIED W/ PUMP	PUMP-2; DISCO. SW.	PUMP-2	7
64M-P2B	2-1/2"	CABLE SUPPLIED W/ PUMP	PUMP-2;DISCO. SW.	PUMP-2	7
64M-P2CA	1-1/2"	CABLE SUPPLIED W/ PUMP	TERM. BOX 2	PUMP-2	7
64M-P2C	1"	(8)-#14; (1)-#12 GND, (3) 2/C SHLD, (2) 3/C SHLD	MCC64; AFD-2	TERM. BOX 2	6
64M-CV2	1"	(4)-#14 & (1)-#12 GND	TERM. BOX 2	CHECK VALVE 2	6
64M-P3	3-1/2"	(3)-#350 KCMIL; 1-#2 GND; (1)-3/COND. #14	MCC64; AFD-3	PUMP-3 DISC. SW.	1
64M-P3A	2-1/2"	CABLE SUPPLIED W/ PUMP	PUMP-3; DISCO. SW.	PUMP-3	7
64M-P3B	2-1/2"	CABLE SUPPLIED W/ PUMP	PUMP-3; DISCO. SW.	PUMP-3	7
64M-P3CA	1-1/2"	CABLE SUPPLIED W/ PUMP	TERM. BOX 2	PUMP-3	7
64M-P3C	1"	(8)-#14; (1)-#12 GND, (3) 2/C SHLD, (2) 3/C SHLD	MCC64; AFD-3	TERM. BOX 2	6
64M-CV3	1"	(4)-#14 & (1)-#12 GND	TERM. BOX 2	CHECK VALVE 3	6
64M-P4	2"	(3)-#2/0;(1)-#4 GND; (1)-3/COND. #14	MCC64; AFD-4	PUMP-4 DISC. SW.	1
64M-P4A	2"	CABLE SUPPLIED W/ PUMP	PUMP-4; DISCO. SW	PUMP-4	1
64M-P4C	1"	(12)-#14 & (1)-#12 GND	MCC64; AFD-4	TERM. BOX 3	6
64M-CV4	1"	(4)-#14 & (1)-#12 GND	TERM. BOX 3	CHECK VALVE 4	6
65BM-F	1"	(3)-#12 & (1)-#12 GND	MCC65B	EXHT. FAN DIS. SW.	8
65BM-F1	3/4"	(3)-#12 & (1)-#12 GND	EXHT. FAN DIS. SW.	EXHAUST FAN	8
64N-CG	1"	(2)-2 COND.#16 SHLD &. (1)-#12 GND	MCC64-LEL	COMB GAS TRANS.	9

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 9/16/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
CONDUIT AND CONDUCTOR SCHEDULE (SHT.I OF 2)

W.O. 4506
SHEET E5
OF .

TPB012-086

CONDUIT & CONDUCTOR SCHEDULE

CONDUIT					
NUMBER	SIZE	NUMBER & TYPE OF CONDUCTORS	FROM	TO	REMARKS
					SEE LEGEND THIS SHEET
SS1MTR	3/4"	(3)-#12 & (1)- #12 GND, (4)-#14	SCREEN CONTROL PNL	DISCO-1	5
SS1MTRA	3/4"	(3)-#12 & (1)- #12 GND, (4)-#14	DISCO-5	SCRN MOTOR, 1MTR	5
SS2MTR	3/4"	(3)-#12 & (1)- #12 GND, (4)-#14	SCREEN CONTROL PNL	DISCO-2	5
SS2MTRA	3/4"	(3)-#12 & (1)- #12 GND, (4)-#14	DISCO-6	COMP. MOTOR, 2MTR	5
SSMVO1	3/4"	(3)-#12 & (1)- #12 GND, (9)-#14	SCREEN CONTROL PNL	MVO-1	5
SSMVO2	3/4"	(3)-#12 & (1)- #12 GND, (9)-#14	SCREEN CONTROL PNL	MVO-2	5
SSMVO3	3/4"	(3)-#12 & (1)- #12 GND, (9)-#14	SCREEN CONTROL PNL	MVO-3	5
SSPB	1"	(22)-#14 & (1)- #12 GND	SCREEN CONTROL PNL	LOCAL CNTR STATION, LCS	5
SSFLS	3/4"	(10)-#14 & (1)- #12 GND	SCREEN CONTROL PNL	JB NEAR FS-1, LS1, FS-2	5
SSFLS1	3/4"	(6)-#14 & (1)- #12 GND	JB	LS1	5
SSFLS2	3/4"	(2)-#14 & (1)- #12 GND	JB	FS-1	5
SSFLS3	3/4"	(2)-#14 & (1)- #12 GND	JB	FS-2	5
SSCADA	1"	(20)-#14 & (1)- #12 GND	SCREEN CONTROL PNL	MCC-64, SEC 13, PLC / ANNUNCIATOR	5
SSFIT	3/4"	(2)-#12, (1)-#12 GND & (2)- #14	SCREEN CONTROL PNL	FLOW METER FIT-1	5
SSFE	3/4"	BY FLOW METER MANUFACTURER	FIT-1	FLOW SENSOR FE-1	5
FMSCADA	3/4"	(1)- 18GA, 1-TWISTED PAIR SHIELDED	FIT-1	MCC-64, SEC 13, PLC / ANNUNCIATOR	5
64ANLG	3/4"	(2)- 18GA, 1-TWISTED PAIR SHIELDED	MCC-64, SEC 12 -W. W. LEVEL CONTROLS	SCREEN CONTROL PNL	5

REMARKS LEGEND:

1. REUSE EXISTING CONDUIT AND CONDUCTORS. ALL SPLICES SHALL BE MADE IN A READILY ACCESSIBLE AREA USING APPROVED METHODS.
2. NEW CONDUCTORS RUN IN TOP BOX OF SWITCHGEAR/MOTOR CONTROL CENTER.
3. CONDUITS AND CONDUCTORS LEADING TO ABANDONED FACILITIES. DO NOT RECONNECT UNDER THIS CONTRACT. REMOVE CONDUCTORS IF POSSIBLE, OR TRIM BACK, NEATLY COIL, AND TAPE.
4. REMOVE CONDUCTORS FROM EXISTING CONDUIT AND PROVIDE AND INSTALL NEW CONDUCTORS IN THE EXISTING CONDUIT.
5. PROVIDE AND INSTALL NEW CONDUIT AND CONDUCTORS.
6. REMOVE CONDUCTORS FROM EXISTING CONDUIT AND PROVIDE AND INSTALL NEW CONDUCTORS IN THE EXISTING CONDUIT. NOTE THAT THE QUANTITY OF CONDUCTORS MAY DIFFER FROM THAT OF THE EXISTING (USUALLY INCREASES).
7. RUN CABLES SUPPLIED WITH NEW PUMPS THROUGH EXISTING CONDUITS.
8. MODIFY EXISTING CONDUIT AND CONDUCTOR RUNS AS NECESSARY TO RELOCATE EXISTING EXHAUST FAN DISCONNECT SWITCH.
9. MODIFY EXISTING CONDUIT RUN AND SUPPLY NEW CONDUCTORS BETWEEN FLAMMABLE GAS DETECTOR AND LEL INDICATING RELAY.

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

No.	DATE	REVISIONS
3		
2		
1		

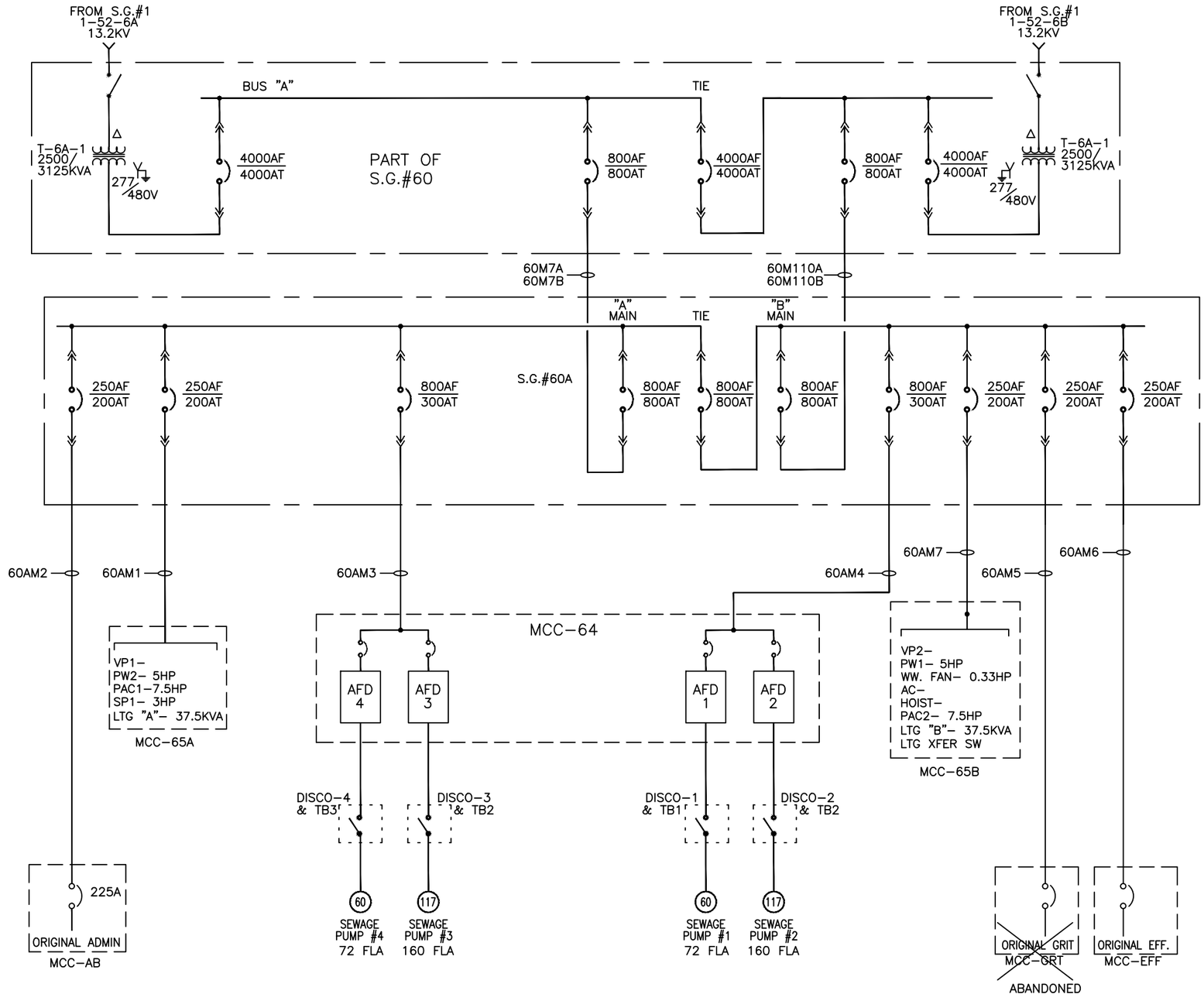
DES: RDK
DRN: RDK
CKD:
DATE: 9/16/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
CONDUIT AND CONDUCTOR SCHEDULE (SHT.2 OF 2)

W.O. 4506
SHEET E5A
OF

TPB012-087



EXISTING OVERALL ELEMENTARY ONE-LINE DIAGRAM

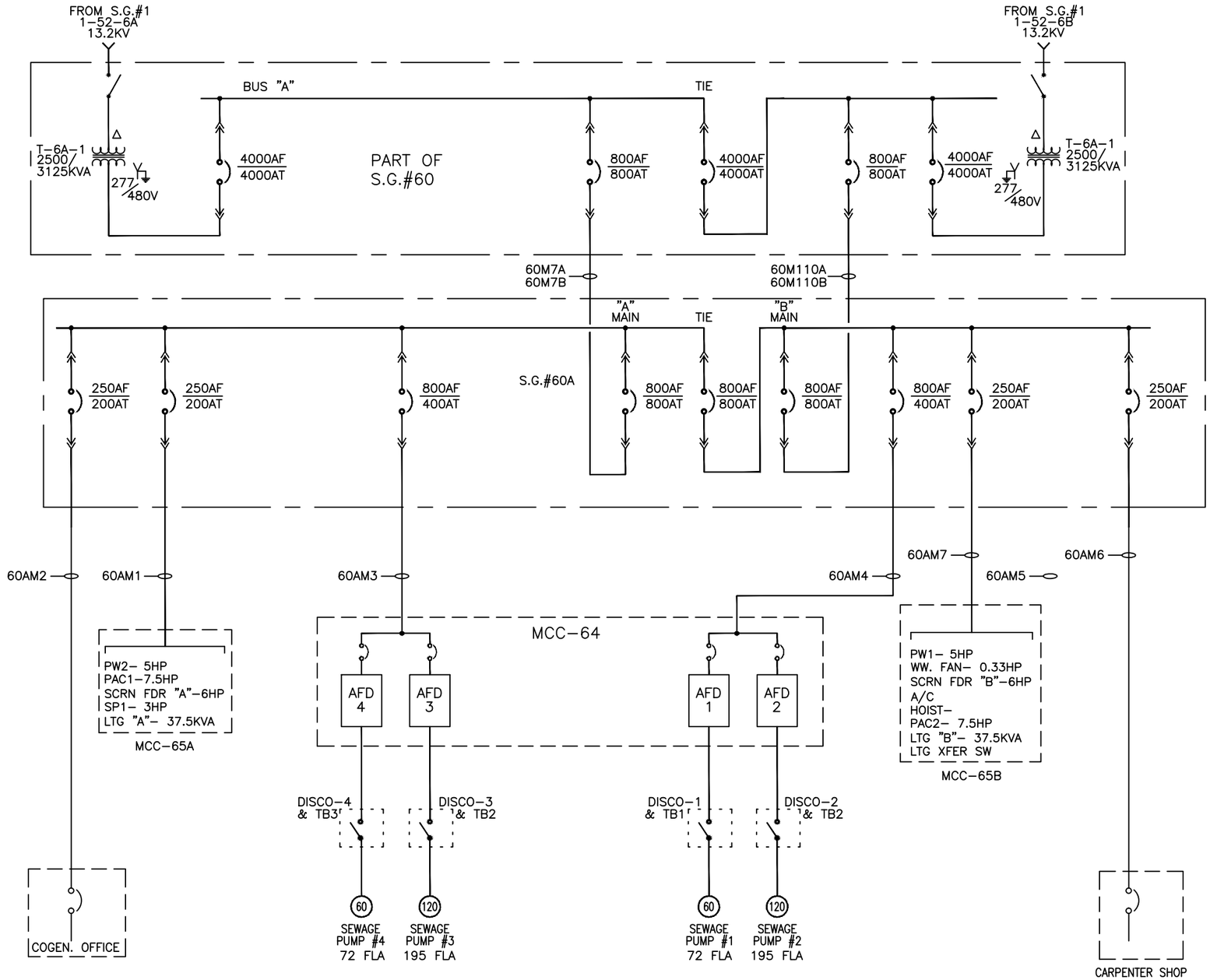
LEGEND

- DRAW-OUT FACILITIES
- 800AF / 400AT — THERMAL-MAGNETIC CIRCUIT BREAKER 800 AMP FRAME / 400 AMP TRIP.
- (65) POLYPHASE INDUCTION MOTOR- 65 HP
- DISCO-1 — 3 POLE SAFETY SWITCH — 64M-P1A (CONDUIT No.)
- AFD 1 — ADJUSTABLE FREQUENCY DRIVE
- T-6A-1 2500/3125KVA — POWER TRANSFORMER- 2500 KVA, STATIC COOLING DELTA PRIMARY, WYE SECONDARY 277/480V
- GROUNDING CONNECTION

THIS DRAWING IS FOR DEMOLITION REFERENCE ONLY

ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No. / DATE / REVISIONS 3 2 1	DES: RDK DRN: RDK CKD: DATE: 9/16/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL EXISTING OVERALL ELEMENTARY ONE-LINE DIAGRAM	W.O. 4506 SHEET E6 OF .

TPB012-088



LEGEND

DRAW-OUT FACILITIES

800AF / 400AT — THERMAL-MAGNETIC CIRCUIT BREAKER 800 AMP FRAME / 400 AMP TRIP.

(65) POLYPHASE INDUCTION MOTOR- 65 HP

DISCO-1 — 3 POLE SAFETY SWITCH — 64M-P1A (CONDUIT No.)

AFD 1 — ADJUSTABLE FREQUENCY DRIVE

T-6A-1 2500/3125KVA — POWER TRANSFORMER- 2500 KVA, STATIC COOLING DELTA PRIMARY, WYE SECONDARY 277/480V

GROUNDING CONNECTION

PROPOSED OVERALL ELEMENTARY ONE-LINE DIAGRAM

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

No.	DATE	REVISIONS
3		
2		
1		

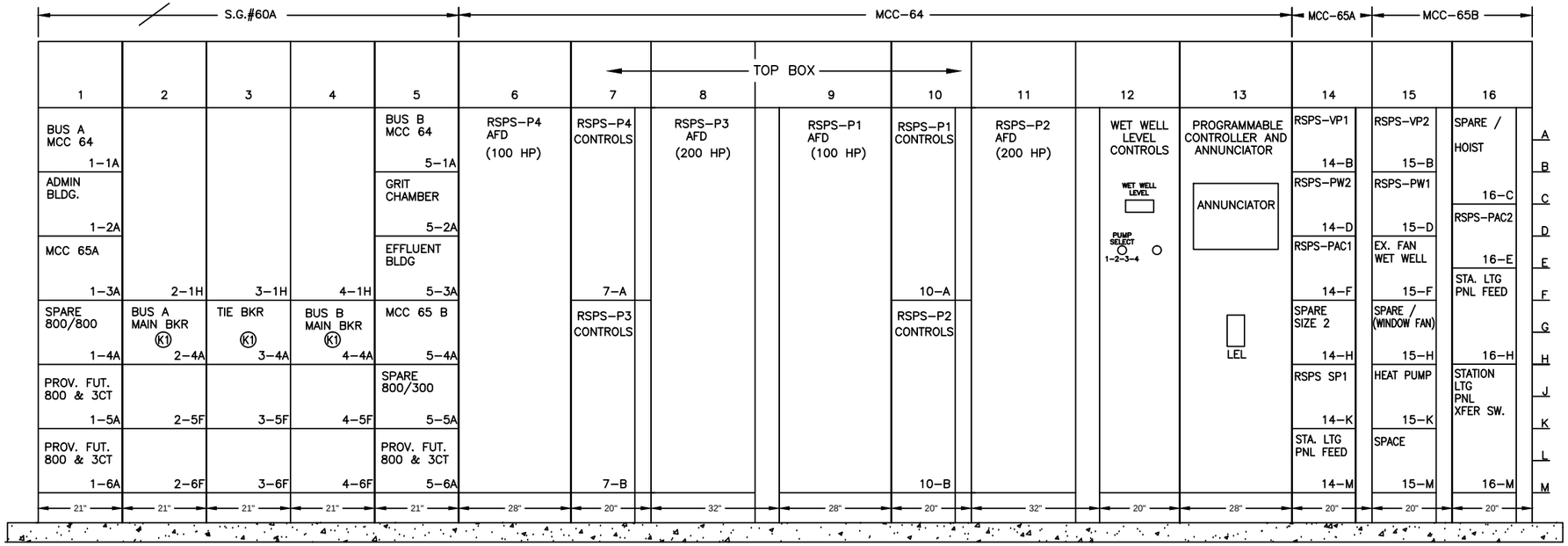
DES: RDK
DRN: RDK
CKD:
DATE: 6/27/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
PROPOSED OVERALL ELEMENTARY ONE-LINE DIAGRAM

W.O. 4506
SHEET E7 OF .

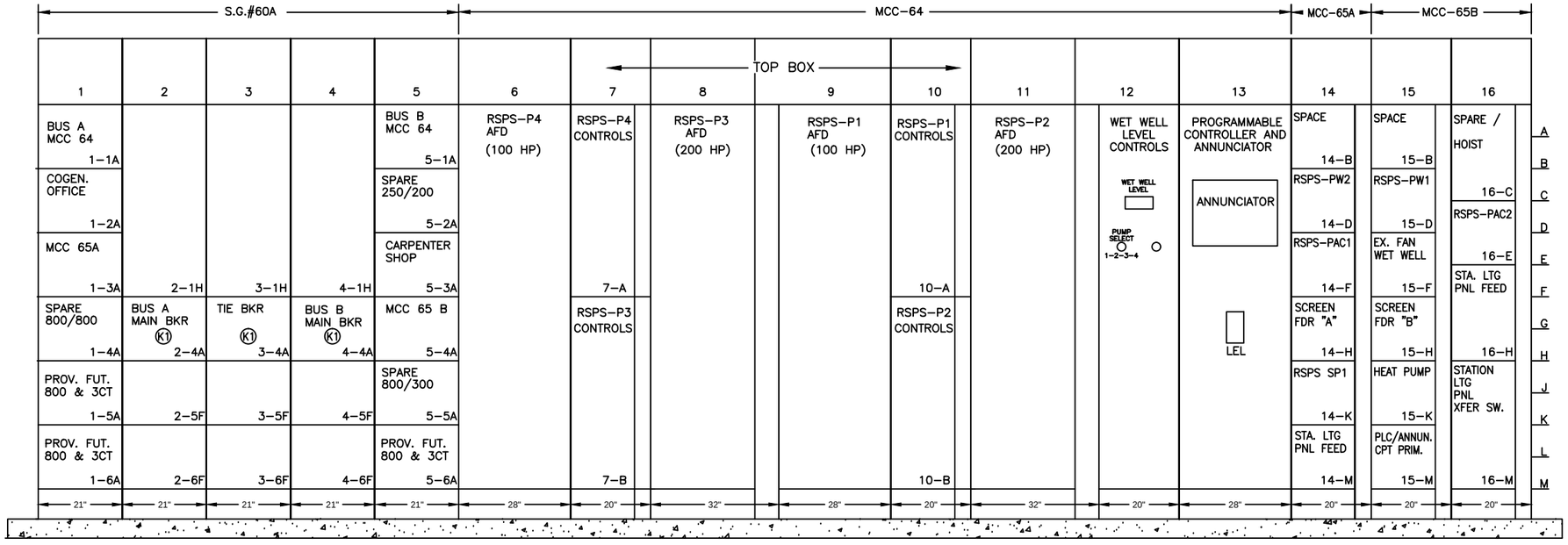
TPB012-089



EXISTING EQUIP. LINEUP

FOR DEMOLITION REFERENCE ONLY

NOT TO SCALE (TYP.)



PROPOSED EQUIP. LINEUP

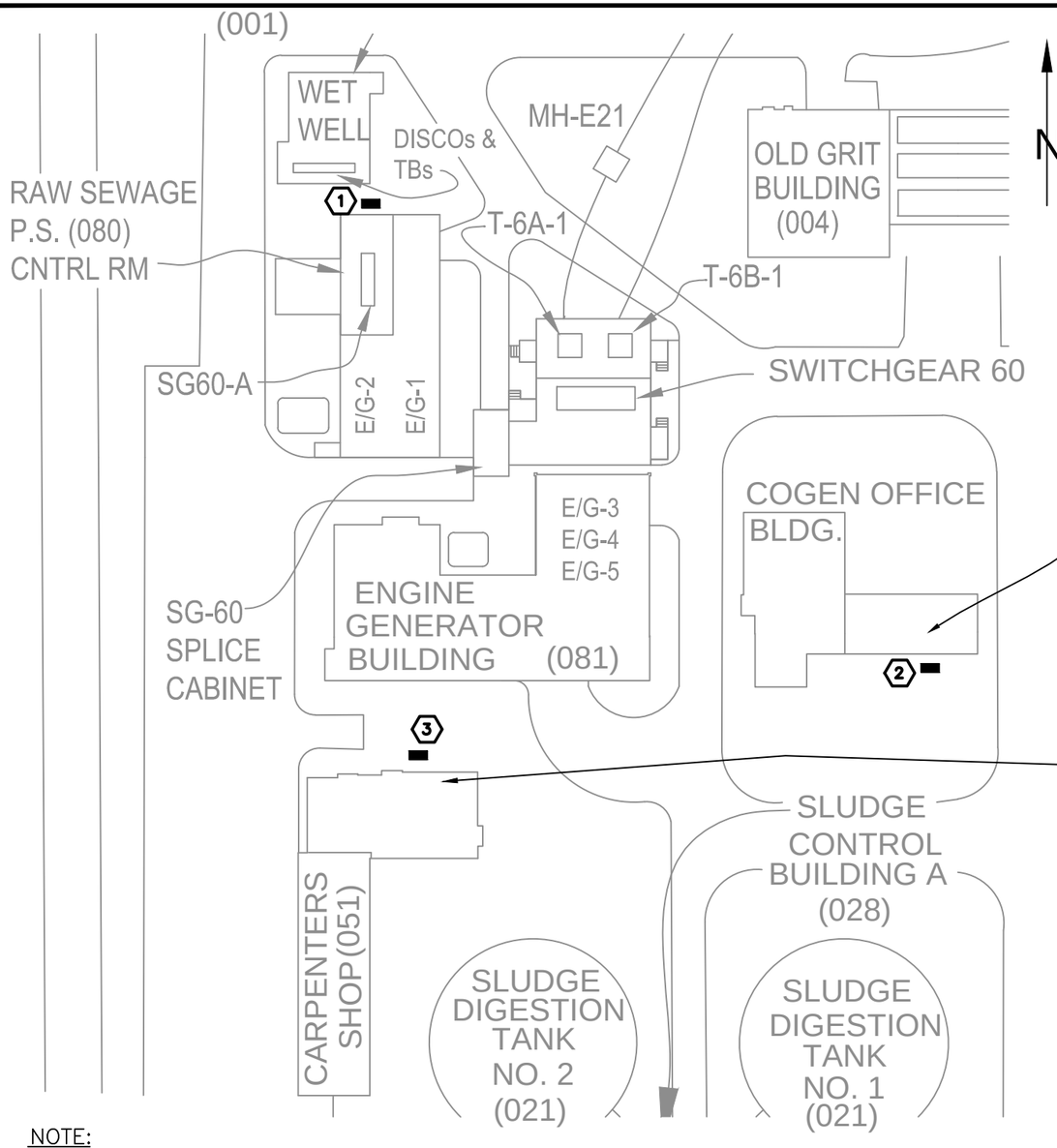
ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No. / DATE / REVISIONS 3 2 1	DES: RDK DRN: RDK CKD: DATE: 9/16/13	CITY of TAMPA WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATION IMPROVEMENTS- ELECTRICAL
CONTROL ROOM SWITCHGEAR / MCC LINEUP

W.O. 4506

SHEET E8 OF

TPB012-090



COGEN OFFICE BLDG.
ELECTRICAL ROOM

CARPENTER SHOP
ELECTRICAL ROOM

NOTE:

THREE (3) 60KW PORTABLE DIESEL ENGINE GENERATORS (E/G) SHALL BE PROVIDED AND INSTALLED TO PROVIDE TEMPORARY POWER TO THE FACILITIES DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR MAY RENT THE E/G OR USE EQUIPMENT FROM HIS INVENTORY. THE CONTRACTOR SHALL ALSO SUPPLY AND INSTALL ANY AND ALL CIRCUIT BREAKER PANELBOARDS, COMBINATION STARTERS, CABLING, ETC. THAT MAY BE REQUIRED TO FACILITATE THE TEMPORARY LOAD CONNECTIONS. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CUT SHEETS DETAILING HIS TEMPORARY POWER SYSTEM PROPOSAL FOR ENGINEER'S APPROVAL. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR MAINTAINING POWER AT ALL TIMES TO THE SAID FACILITIES AND PERFORMING ALL ASSOCIATED MAINTENANCE FUNCTIONS.

IF DURING HIS PRECONSTRUCTION INVESTIGATION, THE CONTRACTOR UNCOVERS AN ALTERNATE METHOD FOR SUPPLYING TEMPORARY POWER TO ALL, OR PART OF, THE REQUIRED LOADS; HE WILL NOTIFY THE ENGINEER, IN WRITING, THROUGH THE RFI PROCESS. AFTER ENGINEER'S PRELIMINARY APPROVAL, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CUT SHEETS FOR THE PROPOSED TEMPORARY POWER SYSTEM AS WELL AS THE AMOUNT OF CREDIT OFFERED TO THE CITY FOR FINAL APPROVAL.

(X) SEE KEYED NOTES ON SHT. E9A.

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: 9/16/13

CITY of TAMPA
WASTEWATER DEPARTMENT

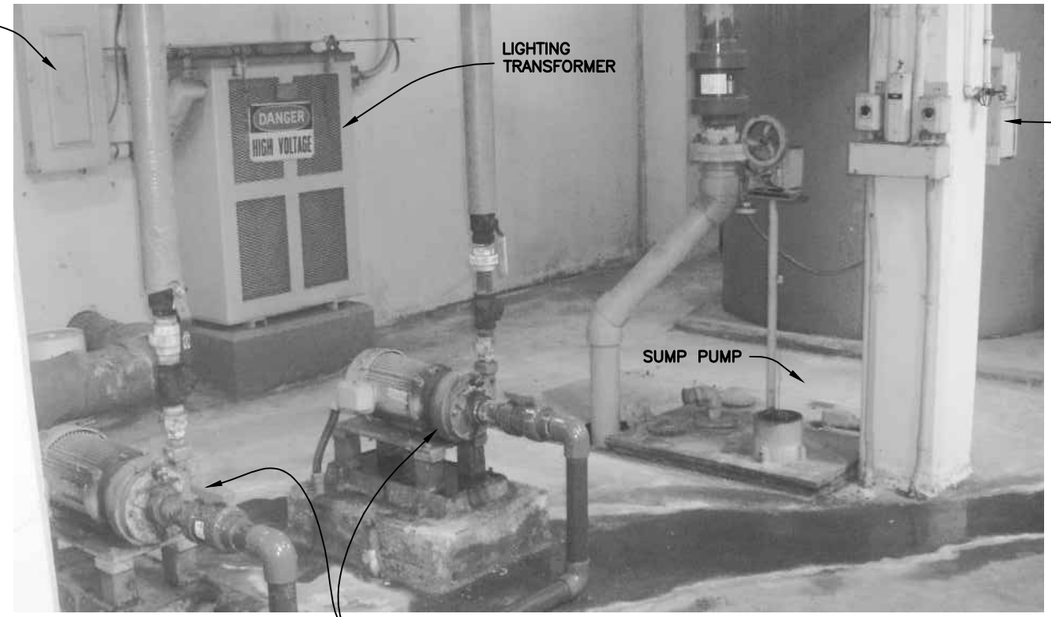
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATION IMPROVEMENTS- ELECTRICAL
TEMPORARY POWER DETAILS (SHT. 1 OF 2)

W.O. 4506
SHEET E9
OF .

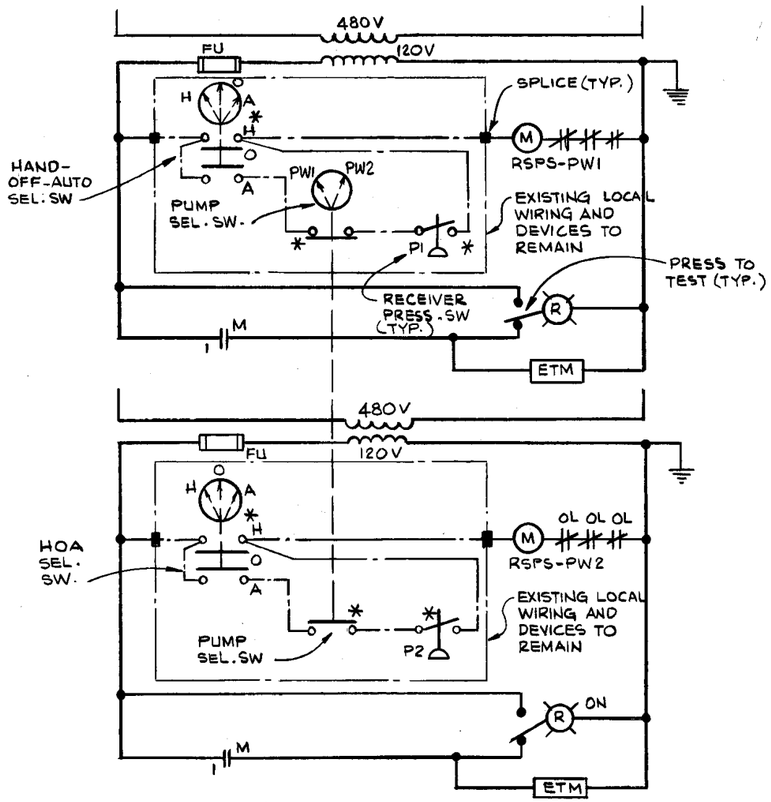
TPB012-091

KEYED NOTES:

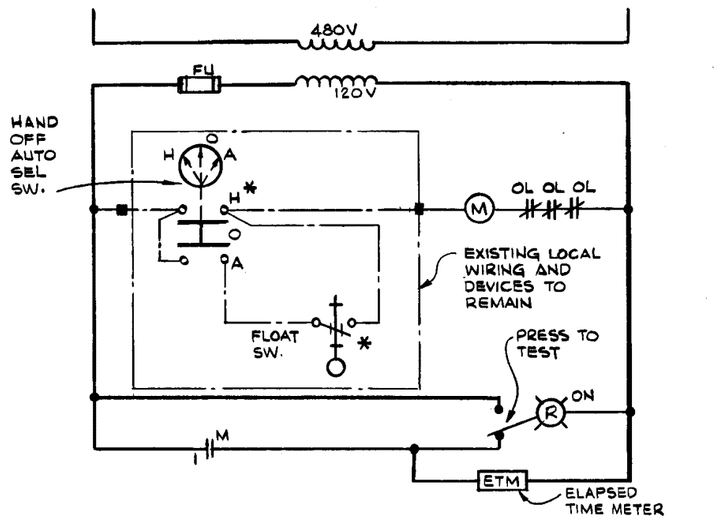
1. PORTABLE 60KW E/G TO POWER LIGHTING TRANSFORMER, PLANT WATER PUMPS, AND SUMP PUMP IN RAW SEWAGE PUMPING STATION (RSPS) BASEBENT (DIRECTLY BELOW RSPS CONTROL ROOM). CONTRACTOR SHALL SUPPLY ALL TEMPORARY FACILITIES REQUIRED TO OPERATE THIS EQUIPMENT.
2. PORTABLE 60KW E/G TO POWER 75KVA TRANSFORMER IN COGENERATION OFFICE BUILDING ELECTRICAL ROOM. CONTRACTOR SHALL PROVIDE TEMPORARY FACILITIES AS REQUIRED.
3. PORTABLE 60KW E/G TO POWER CAPENTER SHOP. CONTRACTOR SHALL PROVIDE TEMPORARY FACILITIES AS REQUIRED.



RSPS BASEMENT



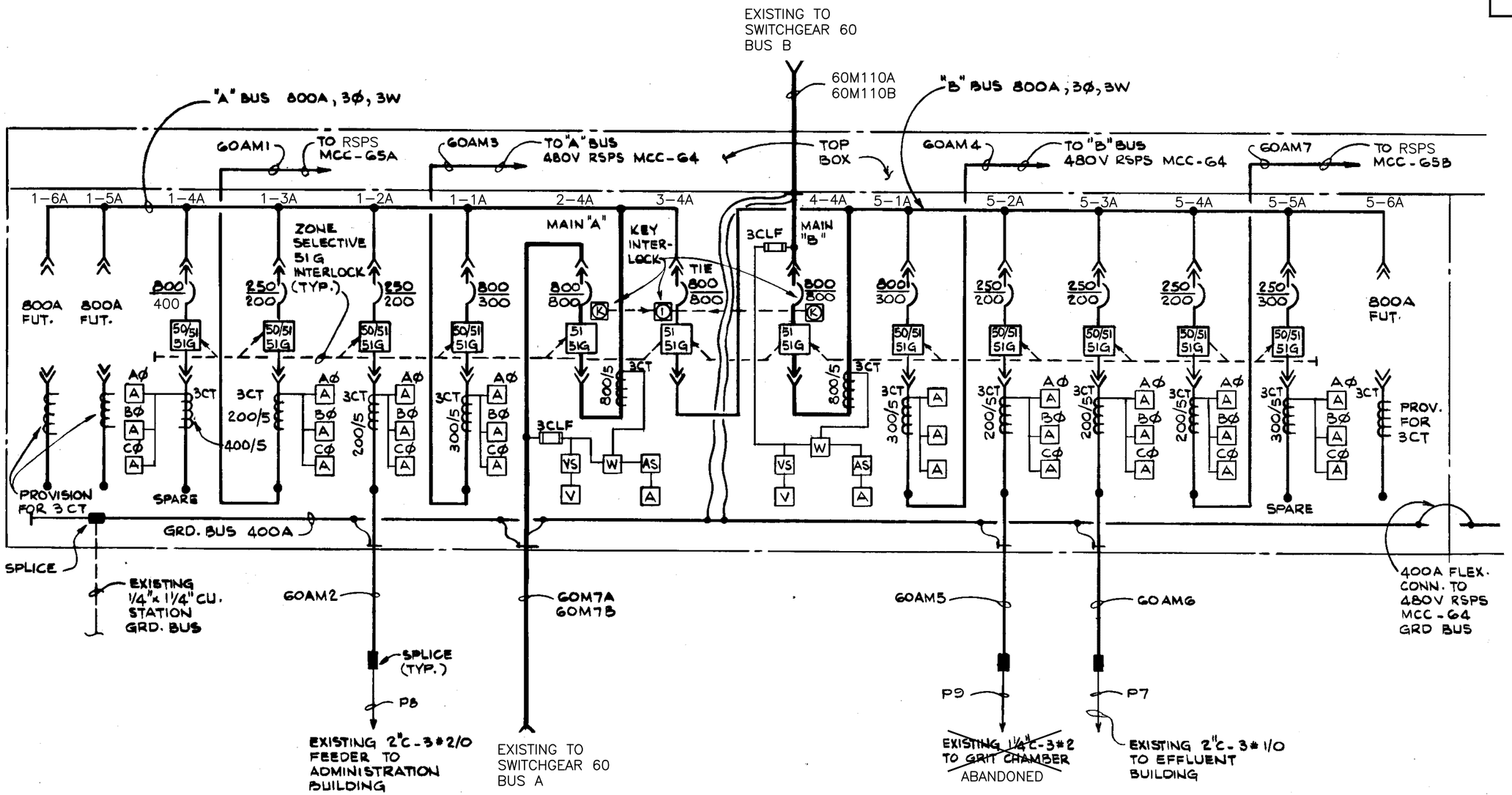
EXISTING PLANT WATER PUMPS
RSPS-PW1 AND RSPS-PW2



EXISTING SUMP PUMP RSPS-SP1

ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK DRN: RDK CKD: DATE: 6/29/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATION IMPROVEMENTS- ELECTRICAL TEMPORARY POWER DETAILS	W.O. 4506 SHEET E9A OF
	3						
	2						
	1						

TPB012-092

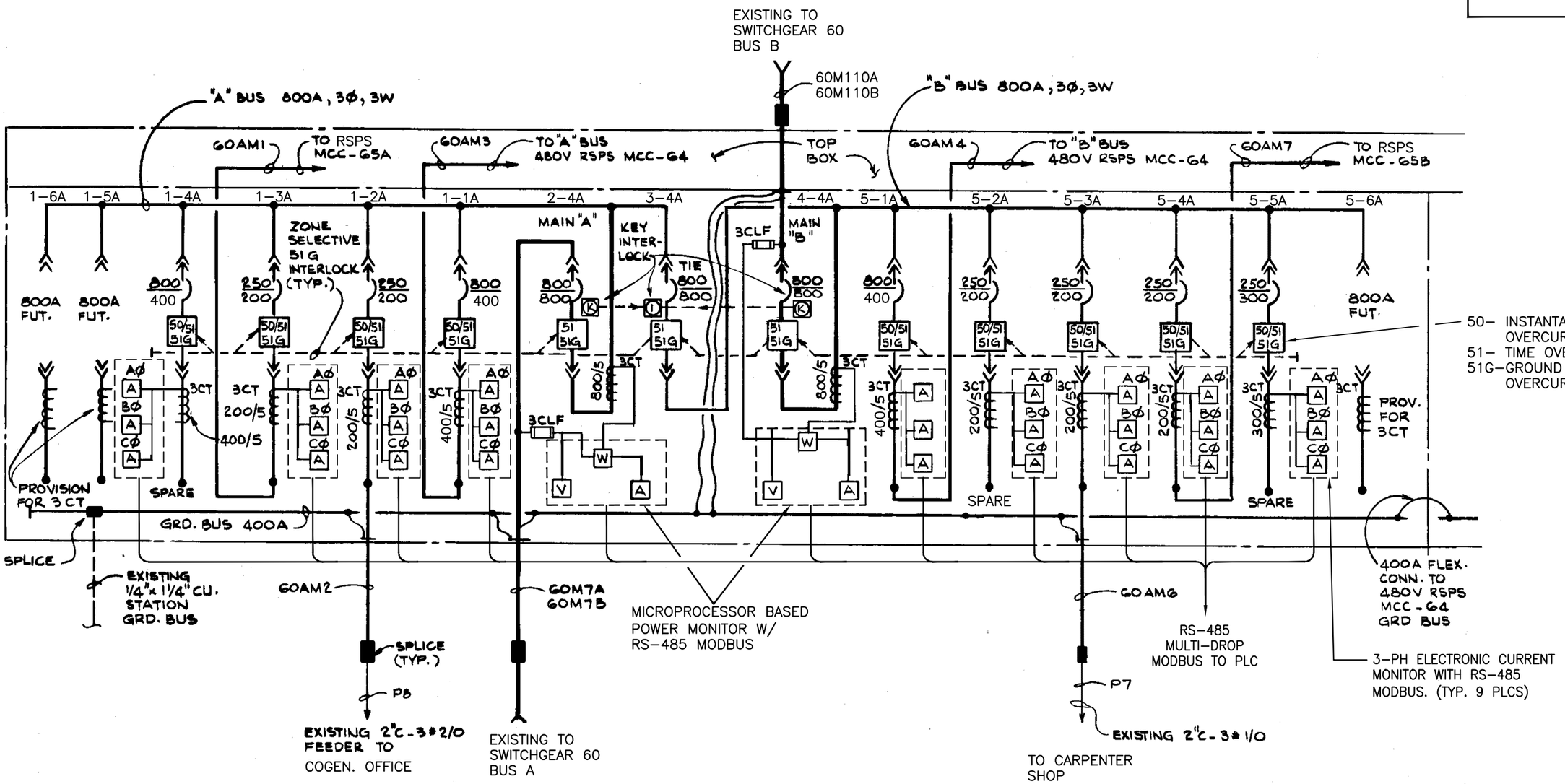


EXISTING SWITCHGEAR 60A ONE-LINE DIAGRAM

THIS DRAWING IS FOR DEMOLITION REFERENCE ONLY

ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK DRN: RDK CKD: DATE: 9/16/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL EXISTING SWITCHGEAR 60A ONE-LINE DIAGRAM (SEC. 1 - 5)	W.O. 4506 SHEET E10 OF
	3						
	2						
	1						

TPB012-093



PROPOSED SWITCHGEAR 60A ONE-LINE DIAGRAM

ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK DRN: RDK CKD: DATE: 6/27/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL PROPOSED SWITCHGEAR 60A ONE-LINE DIAGRAM (SEC. I - 5)	W.O. 4506 SHEET E11 OF
	3						
	2						
	1						

TPB012-094

480 VOLT, 3PH BUS "A" FROM SG60A

CUBICLES 6 AND 7A | CUBICLES 7B AND 8 | CUBICLES 9 AND 10A | CUBICLES 10B AND 11

480 VOLT, 3PH BUS "B" FROM SG60A

CBC4 | CBV4 | CBC3 | CBV3 | CBC1 | CBV2 | CBC2 | CBV2

CPT4 | CPT3 | CPT2 | CPT2

- AFD POWER
- START VS
- START CS
- MASTER STOP
- MANUAL
- AUTO
- LOR RESET
- AFD RESET
- OFF
- RUN CS
- RUN VS
- H O A
- REM LOC
- VS CS
- SPD IND. MANUAL SPD. SET
- ETM

LOR TRIP
VALVE FAIL OP
VALVE FAIL CL
FAIL TO START
STATOR SEAL LEAK
DRIVE FAIL
MTR OVR TEMP

PUMP CONTR/ANNUN.

LOR TRIP
VALVE FAIL OP
VALVE FAIL CL
FAIL TO START
SEAL LEAK
DRIVE FAIL
MTR OVR TEMP
MTR STATOR MOIST
BEARING HI TEMP

PUMP CONTR/ANNUN.

MCS4 | MCS3 | MCS1 | MCS2

LINE REACTOR 3% Z

AFD No.4 | AFD No.3 | AFD No.1 | AFD No.2

MVS4 | MVS3 | MVS1 | MVS2

MOL4 | MOL3 | MOL1 | MOL2

64M–P4C | 64M–P3C | 64M–P1C | 64M–P2C

64M–P4 | 64M–P3 | 64M–P1 | 64M–P2

TB3 | PART OF TB2 | TB1 | PART OF TB2

64M–CV4 | 64M–CV3 | 64M–CV1 | 64M–CV2

DCV–4LS | DCV–3LS | DCV–1LS | DCV–2LS

NOHC
NCHO

DISCO–4 | DISCO–3 | DISCO–1 | DISCO–2

CONDUIT SEAL | CONDUIT SEALS

64M–P4A | 64M–P3A 64M–P3B | 64M–P1A | 64M–P2A 64M–P2B

MTR COND.

64M–P3CA TEMPERATURE & SEAL LEAK DETECT CONDUCTORS

WINDING TEMP & SEAL LEAK DETECT CONDUCTORS

60 | 117 | 60 | 117

PUMP No.4 72 FLA | PUMP No.3 160 FLA | PUMP No.1 72 FLA | PUMP No.2 160 FLA

PART OF MCC–64

LEGEND

- TERMINALS IN PROGRAMMABLE LOGIC CONTROLLER (PLC) BAY
- TERMINALS IN OUTPUT/BYPASS CUBICLE
- TERMINALS IN AFD BAY
- RPM — MOTOR SPEED MONITOR
- VM — MOTOR VOLTAGE MONITOR
- XX–X — NORMALLY OPEN RELAY CONTACT
- XX–X — NORMALLY CLOSED RELAY CONTACT
- METAL OXIDE VARISTOR (MOV)
- XX — CONTROL COILS: MXX– MOTOR CONTACTOR, LOR– LOCKOUT RELAY, TR– TIME DELAY RELAY, CR– CONTROL RELAY
- NORMALLY OPEN SWITCH/PUSHBUTTON
- NORMALLY CLOSED SWITCH/PUSHBUTTON
- W — PUSH TO TEST PILOT LIGHT: R– RED, B– BLUE, A– AMBER, G– GREEN, W– WHITE
- TR–X, ICTO — OFF DELAY RELAY CONTACT, ICTO– INSTANT CLOSE TIME OPEN
- TR–X — ON DELAY RELAY CONTACT (TIMED OPEN)
- DCV–1LS — LIMIT SWITCH
- ETM — ELAPSED TIME METER

EXISTING MCC–64, ONE–LINE DIAGRAM

THIS DRAWING IS FOR DEMOLITION REFERENCE ONLY

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

No.	DATE	REVISIONS
3		
2		
1		

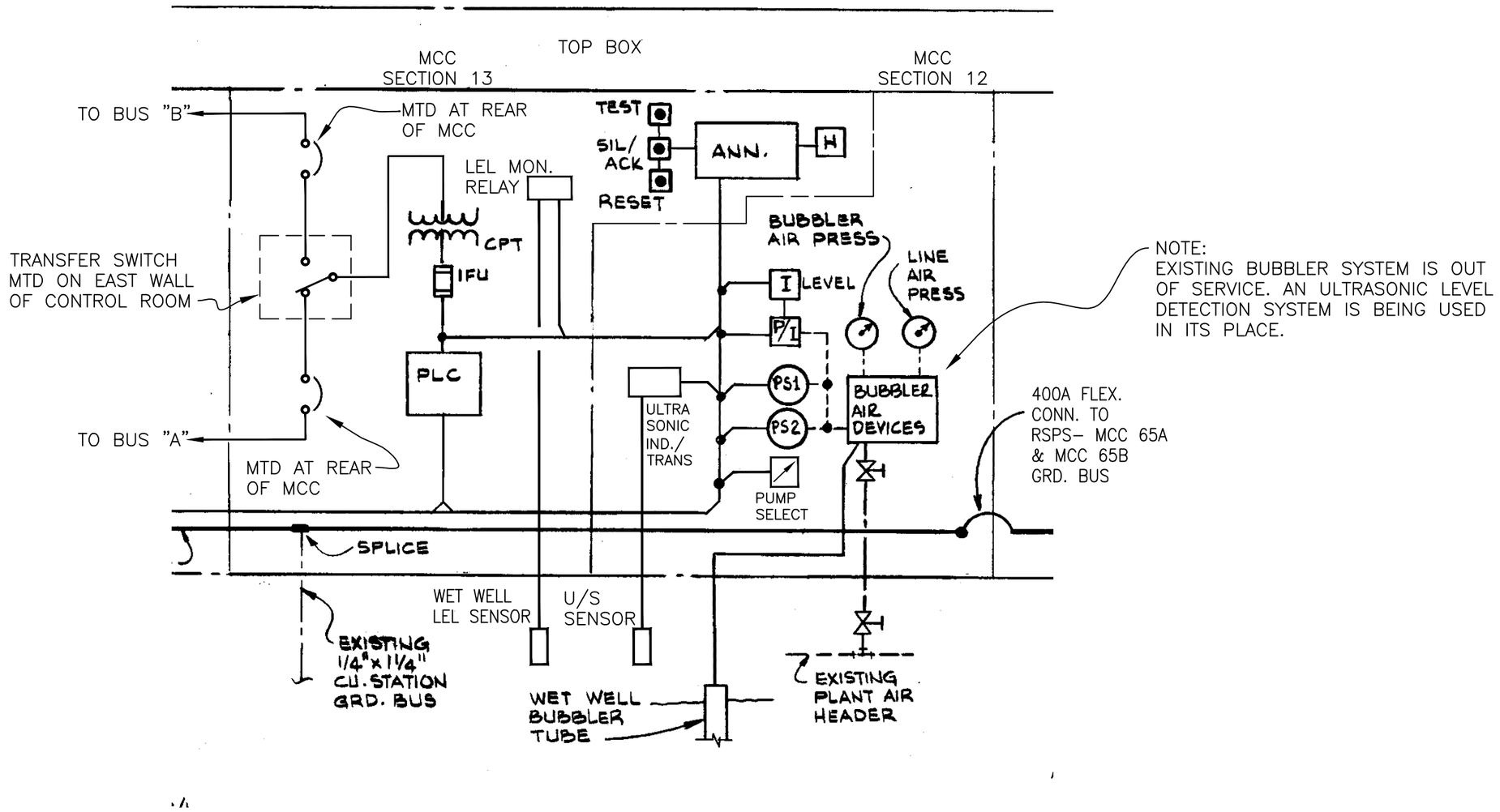
DES: RDK
DRN: RDK
CKD:
DATE: 9/16/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
EXISTING MCC-64 ONE-LINE (SEC. 6 - 11)

W.O. 4506
SHEET E12 OF

TPB012-095



NOTE:
EXISTING BUBBLER SYSTEM IS OUT OF SERVICE. AN ULTRASONIC LEVEL DETECTION SYSTEM IS BEING USED IN ITS PLACE.

400A FLEX. CONN. TO RSPS– MCC 65A & MCC 65B GRD. BUS

EXISTING MCC-64, ONE-LINE DIAGRAM

THIS DRAWING IS FOR DEMOLITION REFERENCE ONLY

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

No.	DATE	REVISIONS
3		
2		
1		

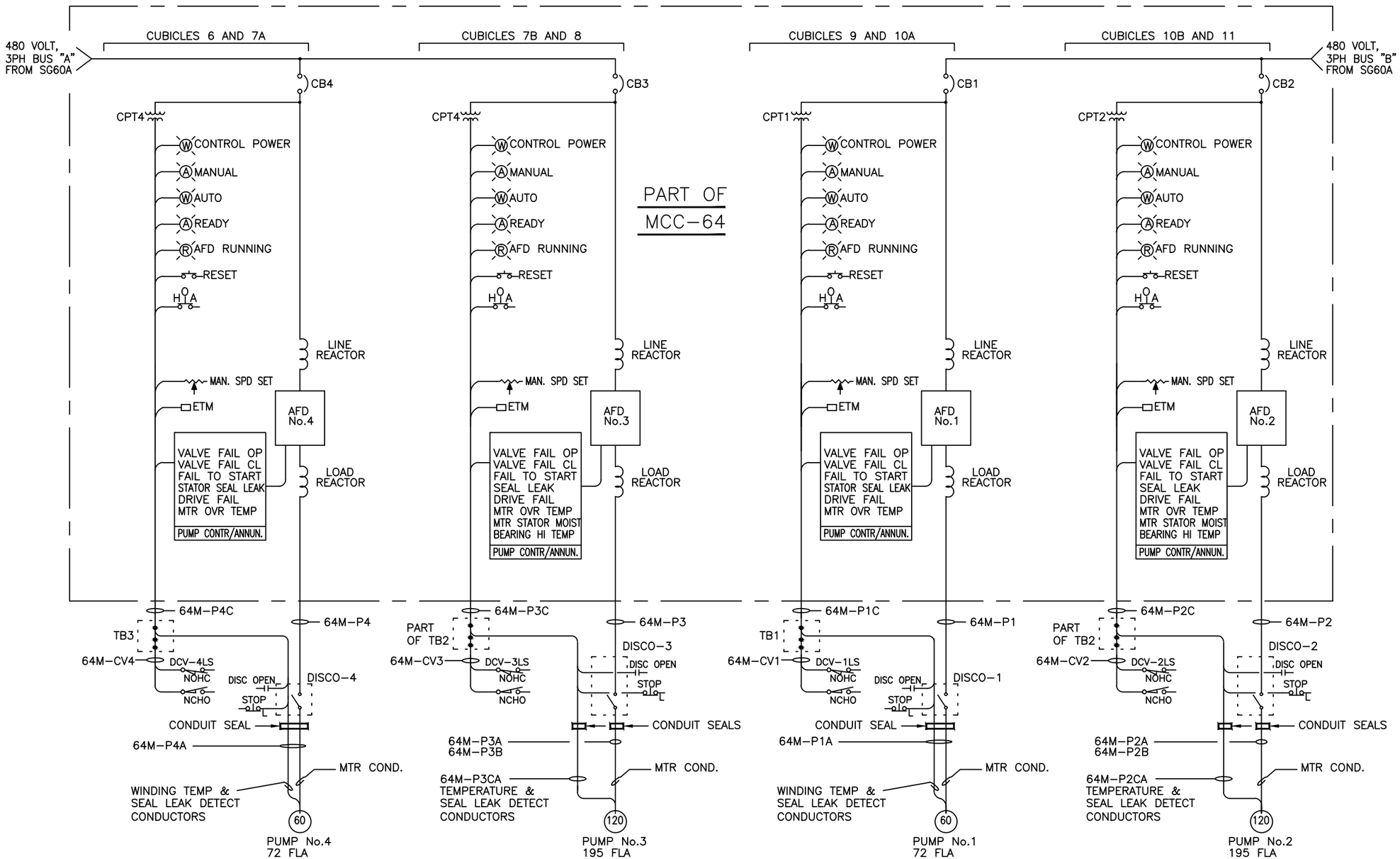
DES: RDK
DRN: RDK
CKD:
DATE: 9/16/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
EXISTING MCC-64 ONE-LINE (SEC. 12 - 13)

W.O. 4506
SHEET
E13
OF

TPB012-096



LEGEND

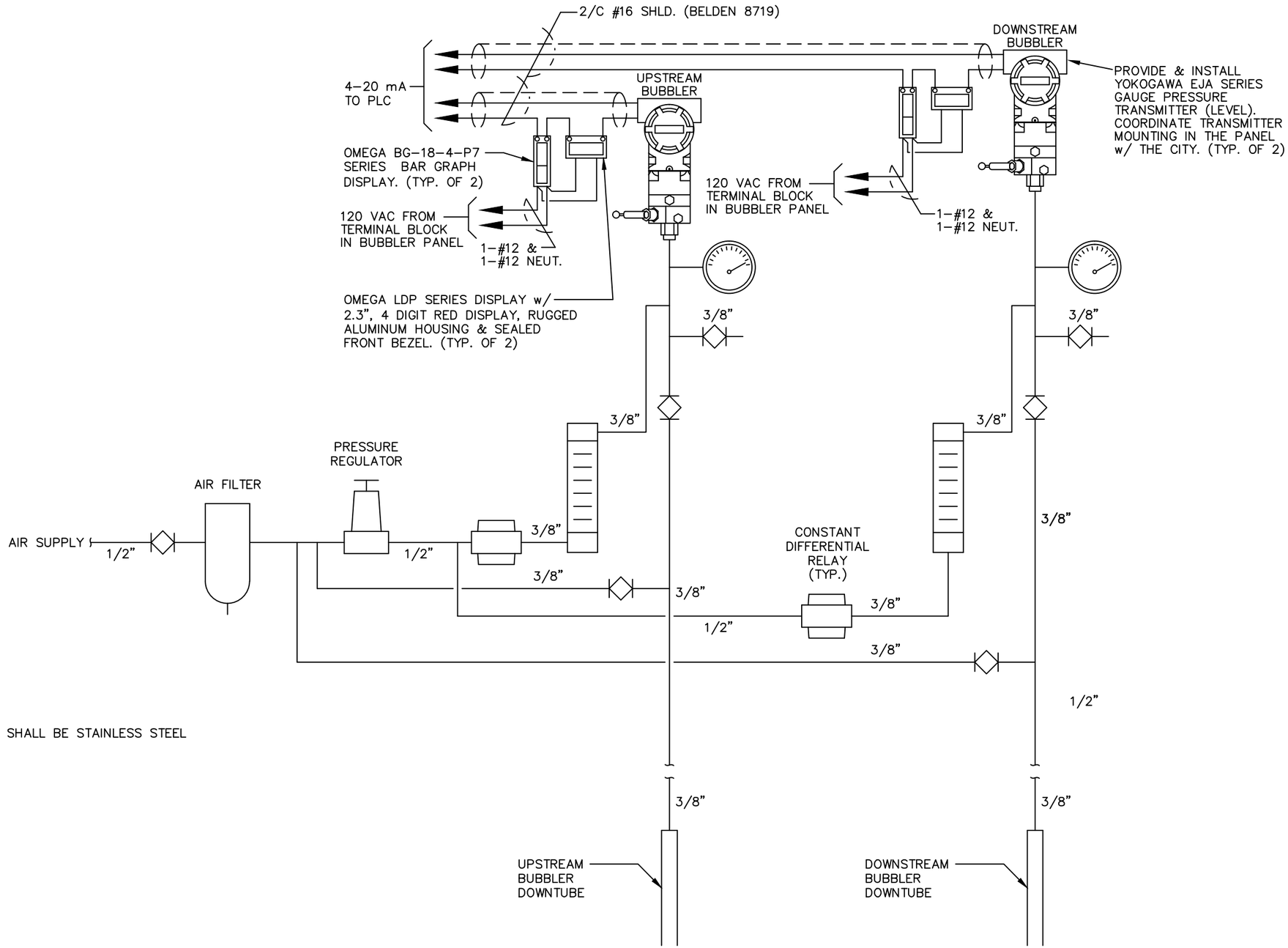
- TERMINALS IN PROGRAMMABLE LOGIC CONTROLLER (PLC) BAY
- TERMINALS IN OUTPUT/BYPASS CUBICLE
- TERMINALS IN AFD BAY
- RPM — MOTOR SPEED MONITOR
- VM — MOTOR VOLTAGE MONITOR
- XX-X — NORMALLY OPEN RELAY CONTACT
- XX-X — NORMALLY CLOSED RELAY CONTACT
- METAL OXIDE VARISTOR (MOV)
- XXX — CONTROL COILS: MXX- MOTOR CONTACTOR, LOR- LOCKOUT RELAY, TR- TIME DELAY RELAY, CR- CONTROL RELAY
- NORMALLY OPEN SWITCH/PUSHBUTTON
- NORMALLY CLOSED SWITCH/PUSHBUTTON
- W — PUSH TO TEST PILOT LIGHT: R- RED, B- BLUE, A- AMBER, G- GREEN, W- WHITE
- TR-X, ICTO — OFF DELAY RELAY CONTACT, ICTO- INSTANT CLOSE TIME OPEN
- TR-X — ON DELAY RELAY CONTACT (TIMED OPEN)
- DCV-1LS — LIMIT SWITCH
- ETM — ELAPSED TIME METER

PROPOSED PUMPS, ONE-LINE DIAGRAM

ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK DRN: RDK CKD: DATE: 7/03/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL PROPOSED MCC-64 ONE-LINE (SEC. 6 II)	W.O. 4506 SHEET E14 OF .
	3						
	2						
	1						

TPB012-097

MCC-64 SECTION 12

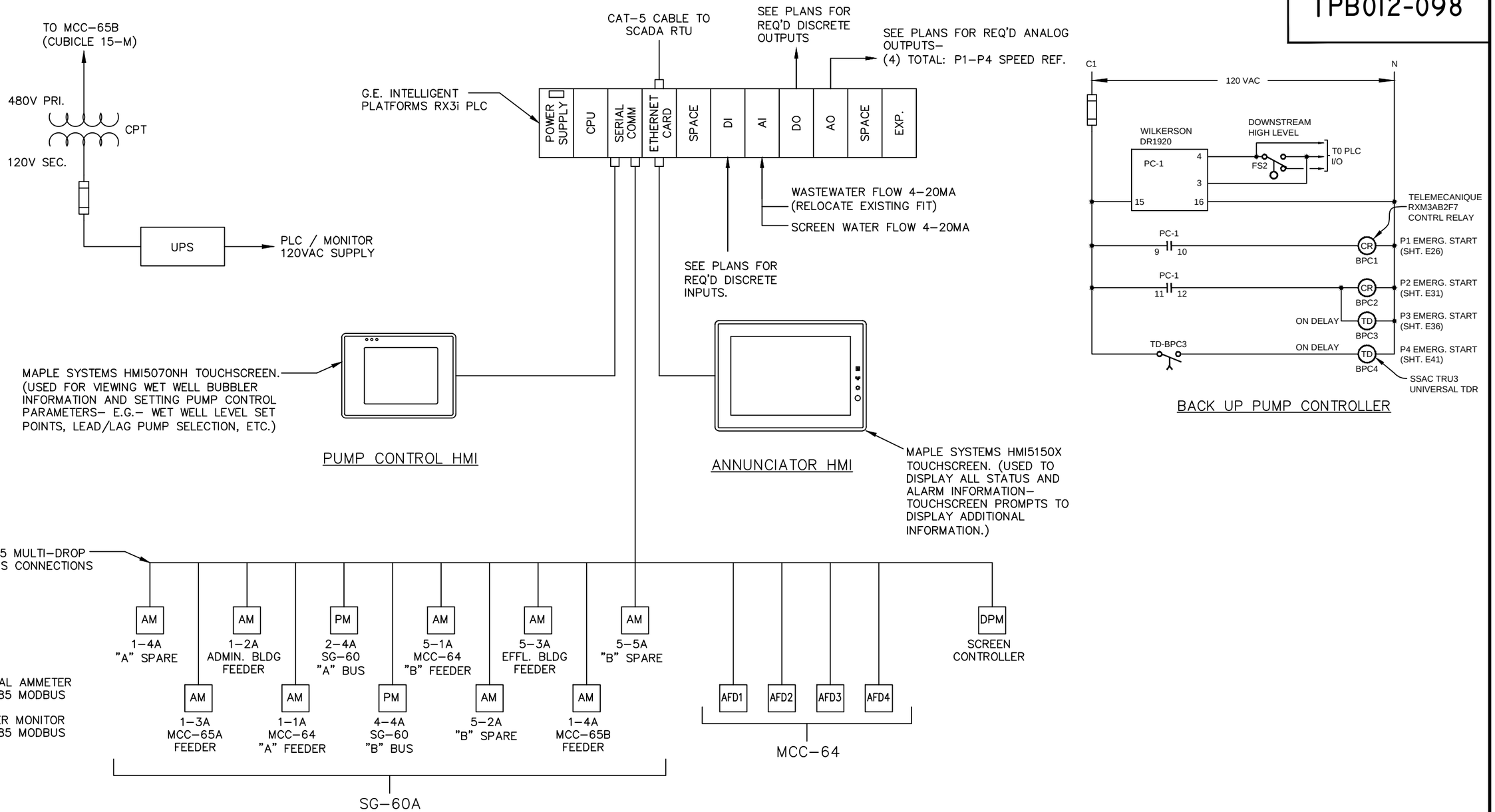


NOTES:

1. TUBING INSIDE PANEL SHALL BE STAINLESS STEEL

ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK DRN: RDK CKD: DATE: 9/17/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL PROPOSED MCC-64 BUBBLER (SEC. 12)	W.O. 4506 SHEET E15 OF
	3						
	2						
	1						

TPB012-098



PROPOSED MCC-64 SEC. 13-- PLC / ANNUNCIATOR RISER DIAGRAM

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 9/18/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
PROPOSED MCC-64 PLC / ANNUNCIATOR (SEC. 13)

W.O. 4506
SHEET E16 OF

TPB012-099

PUMP #1	PUMP #2	PUMP #3	PUMP #4	SWITCHGEAR
STOPPED	RUNNING	STOPPED	STOPPED	MAIN "A" CLOSED
0.0 % SPEED	67.8 % SPEED	0.0 % SPEED	0.0 % SPEED	MAIN "B" CLOSED
0.0 KW	97.3 KW	0.0 KW	0.0 KW	TIE OPENED
0.0 AMPS	146 AMPS	0.0 AMPS	0.0 AMPS	MAIN "A" AMPS
FAIL TO START	FAIL TO START	FAIL TO START	FAIL TO START	MAIN "B" AMPS
AFD READY	AFD READY	AFD NOT READY	AFD READY	MAIN "A" KW

W. W. UPSTREAM HIGH WARNING	P#2 FAILED TO START	P#3 STATOR SEAL LEAK
W. W. UPSTREAM HIGH ALARM	P#2 DISH. VALVE FAIL TO OPEN	P#3 CABLE SEAL LEAK
W. W. DWNSTREAM LOW WARNING	P#2 DISH. VALVE FAIL TO CLOSE	P#3 BEARING OVERTEMP.
BUBBLER CNTRL PWR FAIL	P#2 AFD FAIL	P#4 FAILED TO START
LEL GAS 25%	P#2 MTR STATOR OVERTEMP.	P#4 DISH. VALVE FAIL TO OPEN
LEL GAS 50%	P#2 STATOR SEAL LEAK	P#4 DISH. VALVE FAIL TO CLOSE
GAS DETECTOR OK	P#2 CABLE SEAL LEAK	P#4 AFD FAIL
P#1 FAILED TO START	P#2 BEARING OVERTEMP.	P#4 MTR STATOR OVERTEMP.
P#1 DISH. VALVE FAIL TO OPEN	P#3 FAILED TO START	P#4 STATOR SEAL LEAK
P#1 DISH. VALVE FAIL TO CLOSE	P#3 DISH. VALVE FAIL TO OPEN	
P#1 AFD FAIL	P#3 DISH. VALVE FAIL TO CLOSE	WASTEWATER FLOW MGD
P#1 MTR STATOR OVERTEMP.	P#3 AFD FAIL	W. W. DWNSTREAM HIGH FLOAT
P#1 STATOR SEAL LEAK	P#3 MTR STATOR OVERTEMP.	
ALARMS		

PROPOSED ANNUNCIATOR SAMPLE SCREEN 1

PUMP #1	PUMP #2	PUMP #3	PUMP #4	SWITCHGEAR
STOPPED	RUNNING	STOPPED	STOPPED	MAIN "B" KW
0.0 % SPEED	67.8 % SPEED	0.0 % SPEED	0.0 % SPEED	MAIN "A" PF
0.0 KW	97.3 KW	0.0 KW	0.0 KW	MAIN "B" PF
0.0 AMPS	146 AMPS	0.0 AMPS	0.0 AMPS	MAIN "A" KVA
FAIL TO START	FAIL TO START	FAIL TO START	FAIL TO START	MAIN "B" KVA
AFD READY	AFD READY	AFD NOT READY	AFD READY	MCC-65A AMPS

SUMP PUMP LEVEL	SCREEN CONTROL POWER	COMPACTOR RUNNING
PLANT WATER PRESSURE	SCREEN RUNNING	COMPACTOR FAULT
HVAC TROUBLE	SCREEN FAULT	COMPACTOR LOW LOAD
	SCREEN SPRAY WASH FAILURE	COMPACTOR HIGH LOAD
LIGHTING ATS TROUBLE	SCREEN SPRAY WATER FLOW GPM	
LIGHTING ATS ON BUS "A"		
LIGHTING ATS ON BUS "B"	SCREEN ATS TROUBLE	
	SCREEN ATS ON BUS "A"	
	SCREEN ATS ON BUS "B"	
ALARMS		

PROPOSED ANNUNCIATOR SAMPLE SCREEN 2

SWITCHGEAR
COGEN OFF. AMPS
MCC-64A AMPS
MCC-64B AMPS
CARPR SHOP AMPS
MCC-65B AMPS

ADDITIONAL S/G INFO

NOTE:
1. THE ANNUNCIATOR HMI IS A MAPLE SYSTEMS # HMI5150X.
2. SCREEN 1 AND SCREEN 2 SHOWS THE INFORMATION DISPLAYED ON THE SAME HMI AT DIFFERENT TIMES AS CONTROLLED BY OPERATOR TOUCH-SCREEN INPUT.
3. DISPLAY GRAPHICS AND CHARACTERISTICS SHALL FOLLOW THE STANDARDS SET FORTH AT SULPHUR SPRINGS AND YBOR PUMPING STATIONS.

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

No.	DATE	REVISIONS
3		
2		
1		

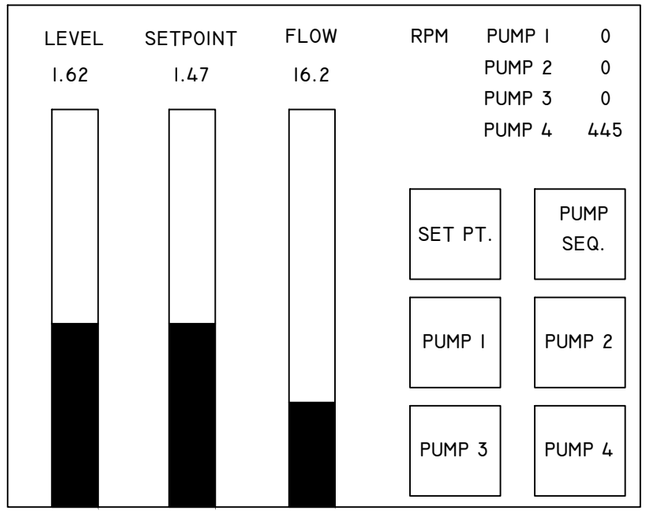
DES: RDK
DRN: RDK
CKD:
DATE: 9/18/13

CITY of TAMPA
WASTEWATER DEPARTMENT

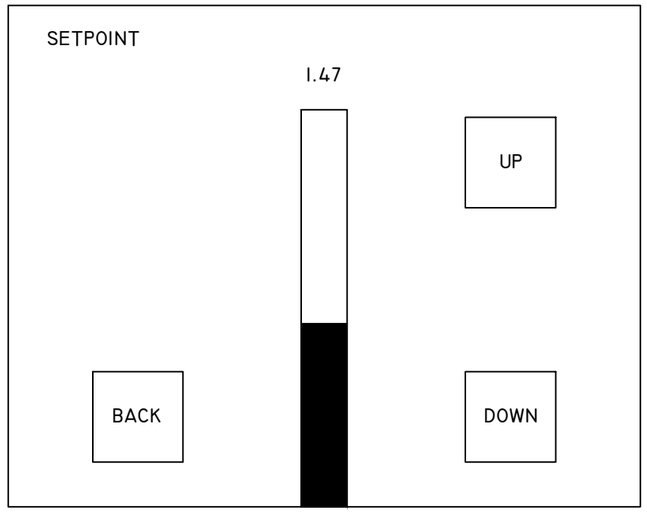
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
PROPOSED ANNUNCIATOR SCREENS

W.O. 4506
SHEET
E16A
OF

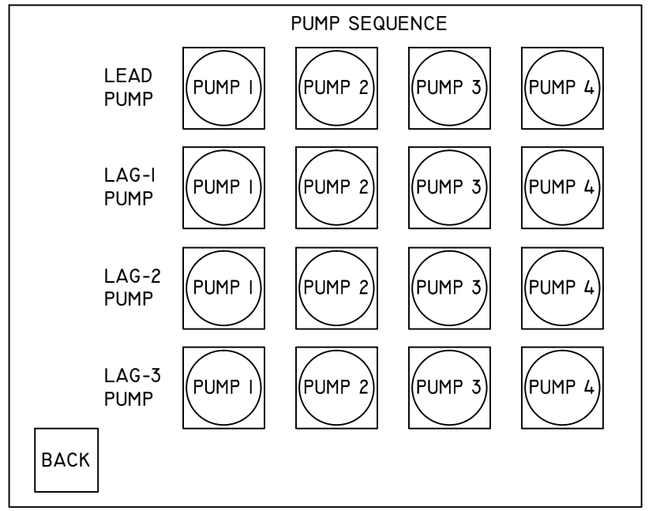
TPB012-100



PROP. PUMP CONTROL- HOME SCREEN

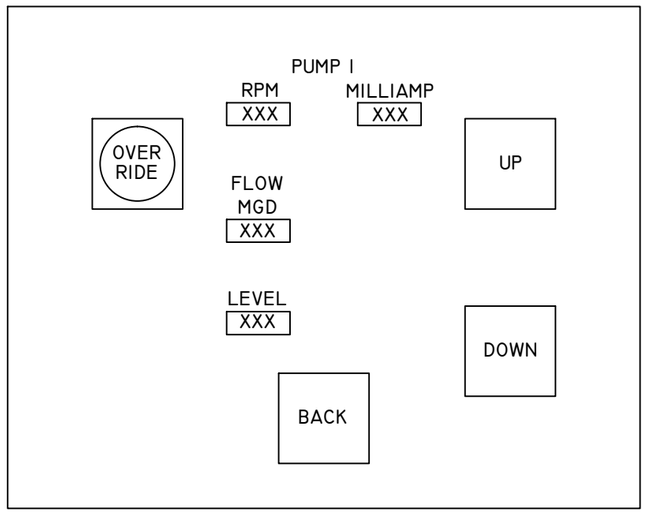


PROP. PUMP CONTROL- SETPOINT SCREEN



PROP. PUMP CONTROL- PUMP SEQUENCE SCREEN

NOTE:
1. THE PUMP CONTROL HMI IS A MAPLE SYSTEMS # HMI5070NH
2. THE THREE SAMPLE SCREENS SHOW THE INFORMATION DISPLAYED ON THE SAME HMI AT DIFFERENT TIMES AS CONTROLLED BY OPERATOR TOUCH-SCREEN INPUT.
3. DISPLAY GRAPHICS AND CHARACTERISTICS SHALL FOLLOW THE STANDARDS SET FORTH AT SULPHUR SPRINGS AND YBOR PUMPING STATIONS.



PROP. PUMP CONTROL- OVERRIDE SCREEN

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

No.	DATE	REVISIONS
3		
2		
1		

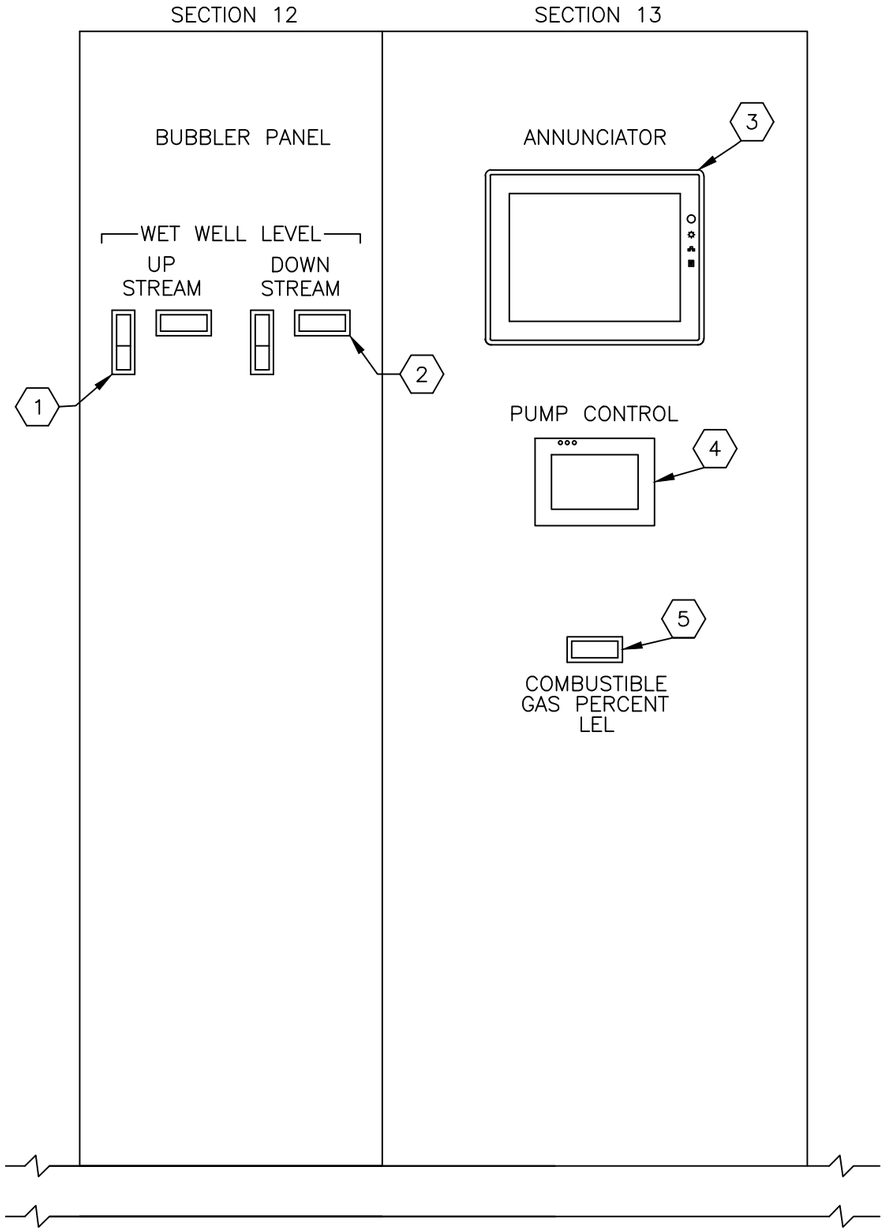
DES: RDK
DRN: RDK
CKD:
DATE: 9/18/13

CITY of TAMPA
WASTEWATER DEPARTMENT

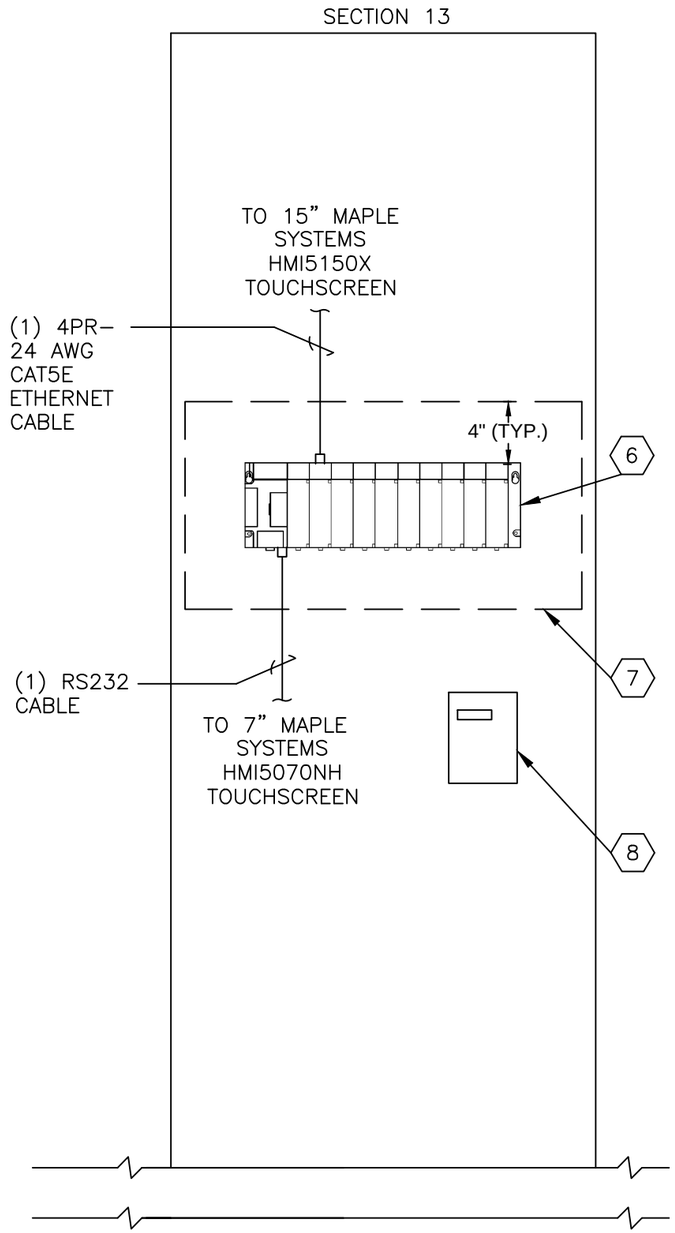
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
PROPOSED PUMP CONTROL SCREENS

W.O. 4506
SHEET
E16B
OF

TPB012-101



PROPOSED MCC-64 SEC 12 & 13 FRONT ELEVATION



PROPOSED MCC-64 SEC 13 FRONT ELEVATION
(DOOR REMOVED- PARTIAL EQUIP. LAYOUT)

KEYED NOTES:

1. OMEGA BG-18-4-P7 SERIES BAR GRAPH DISPLAY. (TYP. OF 2)
2. OMEGA LDP SERIES DISPLAY w/ 2.3", 4 DIGIT RED DISPLAY, RUGGED ALUMINUM HOUSING & SEALED FRONT BEZEL. (TYP. OF 2)
3. ANNUNCIATOR 15" TOUCHSCREEN HMI-- MAPLE SYSTEMS HMI5150X.
4. PUMP CONTROL 7" TOUCHSCREEN HMI-- MAPLE SYSTEMS HMI5070NH.
5. COMBUSTIBLE GAS MONITOR RELAY-- PRECISION DIGITAL PD765-6R2-00
6. DATA CONCENTRATOR/PUMP CONTROLLER/ANNUNCIATOR/SCADA PLC-- GE INTELLIGENT PLATFORMS MODEL RX3i
7. MAINTAIN 4" SPACE AROUND PLC FOR COOLING. COORDINATE MOUNTING IN THE MCC WITH THE CITY.
8. MOVE EXISTING WASTEWATER FLOW METER INDICATING TRANSMITTER TO THIS LOCATION.

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

No.	DATE	REVISIONS
3		
2		
1		

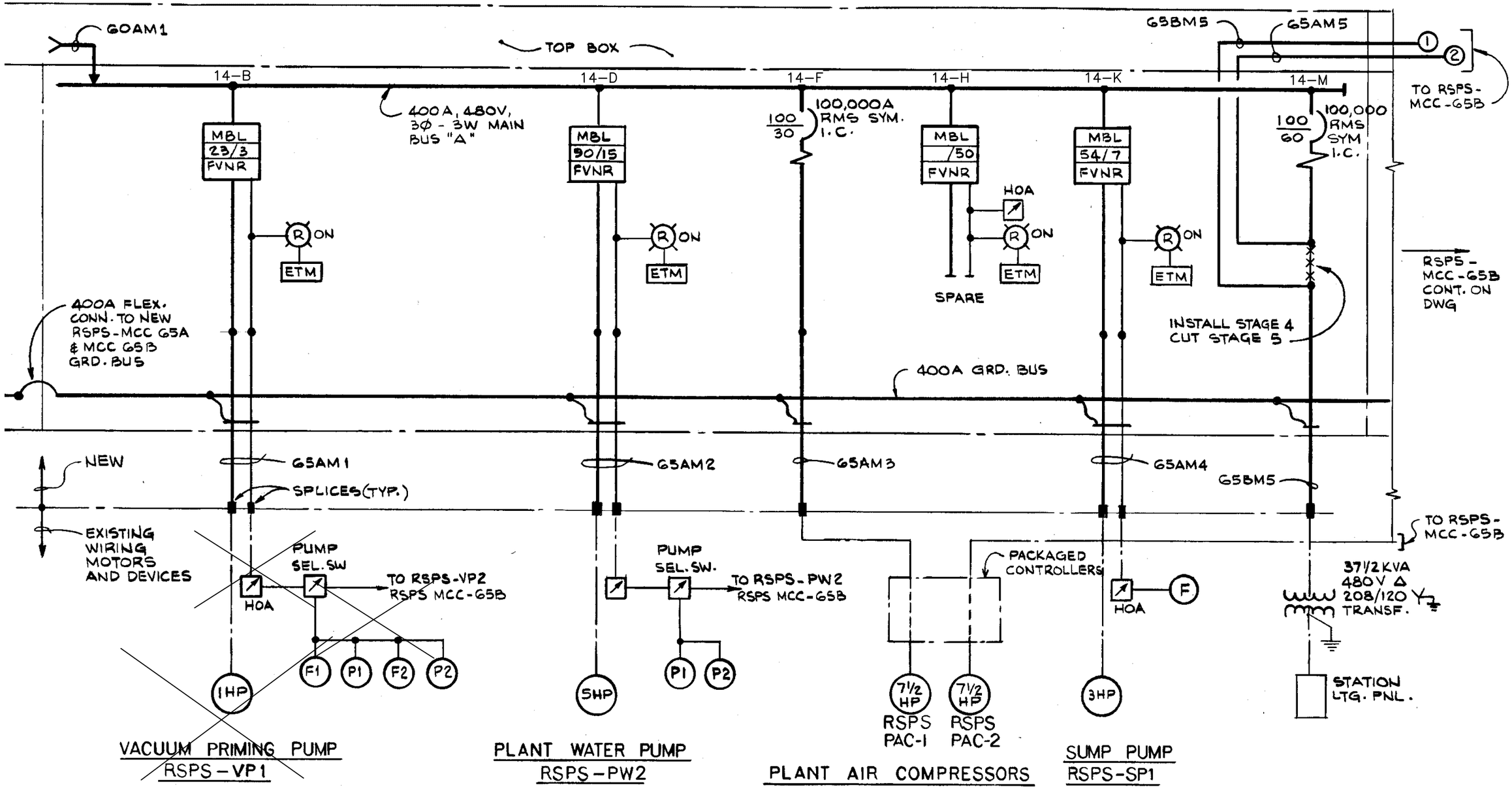
DES: RDK
DRN: RDK
CKD:
DATE: 7/16/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
PROPOSED MCC-64 SEC. 12 & 13 FRONT ELEVATION

W.O. 4506
SHEET E17
OF

TPB012-102



VACUUM PRIMING PUMP
RSPS-VP1

(EQUIPMENT PREVIOUSLY REMOVED.)

PLANT WATER PUMP
RSPS-PW2

PLANT AIR COMPRESSORS

SUMP PUMP
RSPS-SP1

EXISTING MCC-65A, ONE-LINE DIAGRAM

THIS DRAWING IS FOR DEMOLITION REFERENCE ONLY

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

No.	DATE	REVISIONS
3		
2		
1		

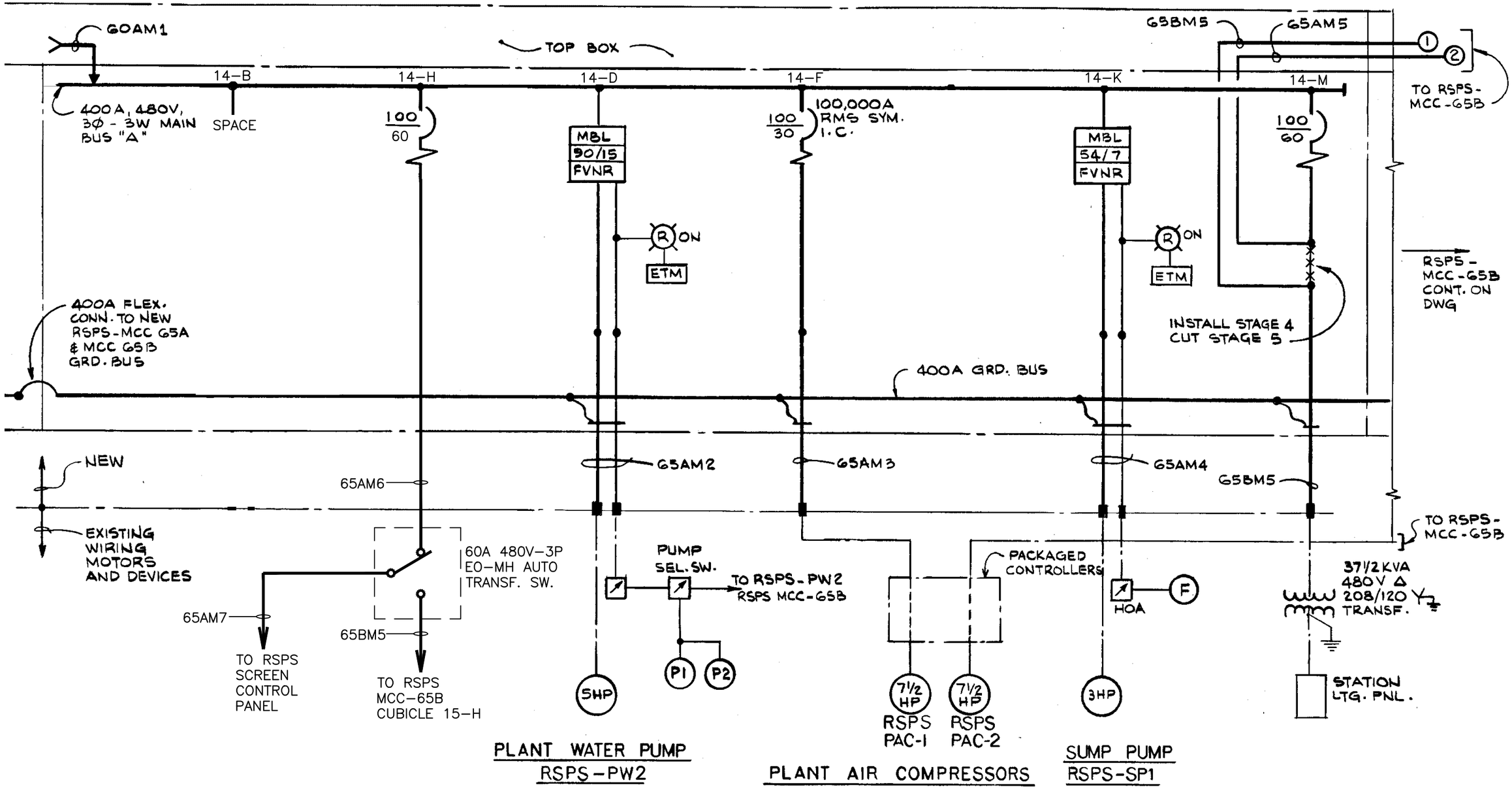
DES: RDK
DRN: RDK
CKD:
DATE: 9-19-13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
EXISTING MCC-65A ONE-LINE (SEC. 14)

W.O. 4506
SHEET E18
OF

TPB012-103



PROPOSED MCC-65A, ONE-LINE DIAGRAM

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

No.	DATE	REVISIONS
3		
2		
1		

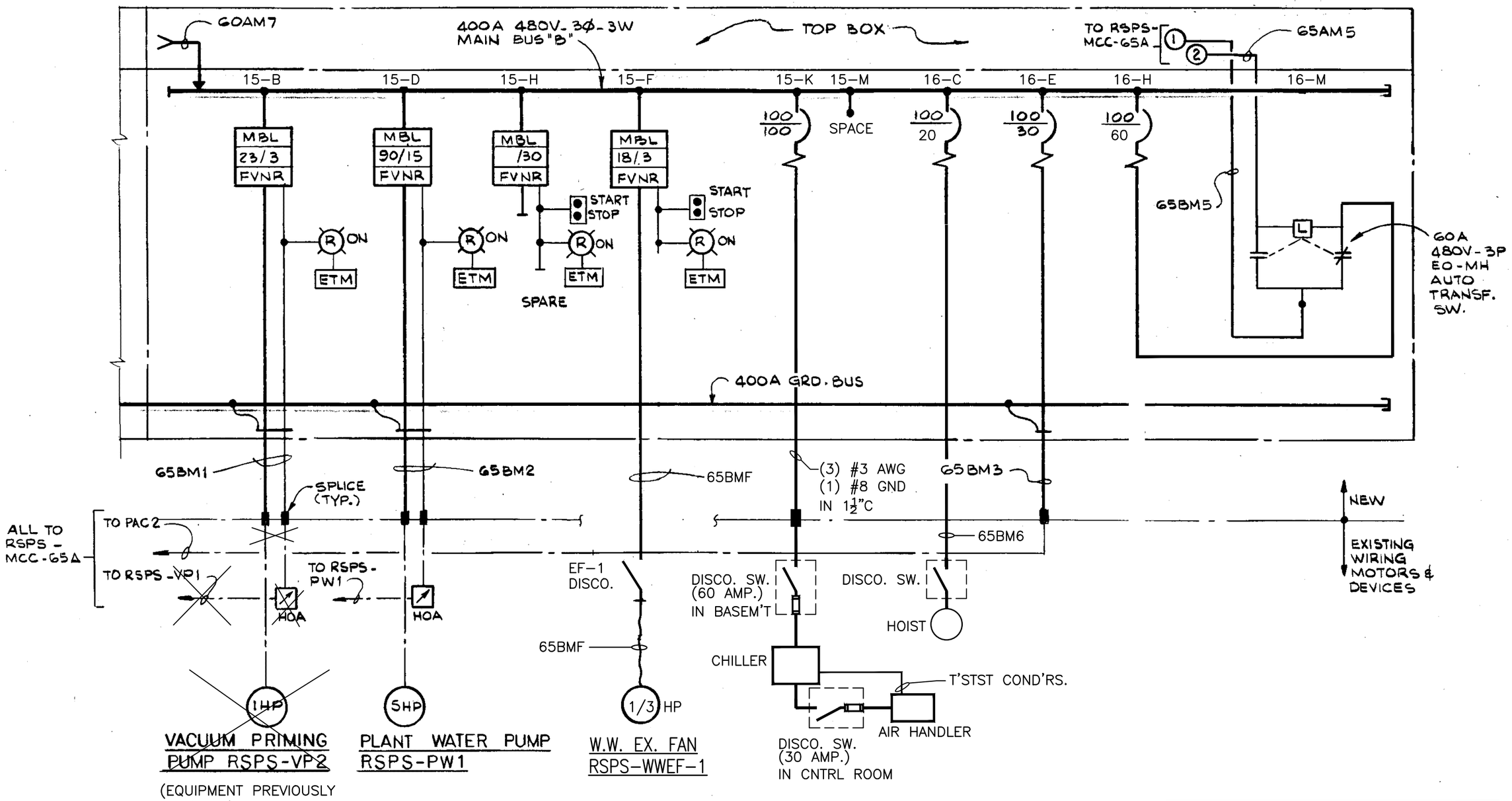
DES: RDK
DRN: RDK
CKD:
DATE: 6/27/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
PROPOSED MCC-65A ONE-LINE (SEC. 14)

W.O. 4506
SHEET E19 OF

TPB012-104



EXISTING MCC-65B, ONE-LINE DIAGRAM

THIS DRAWING IS FOR
DEMOLITION REFERENCE ONLY

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

No.	DATE	REVISIONS
3		
2		
1		

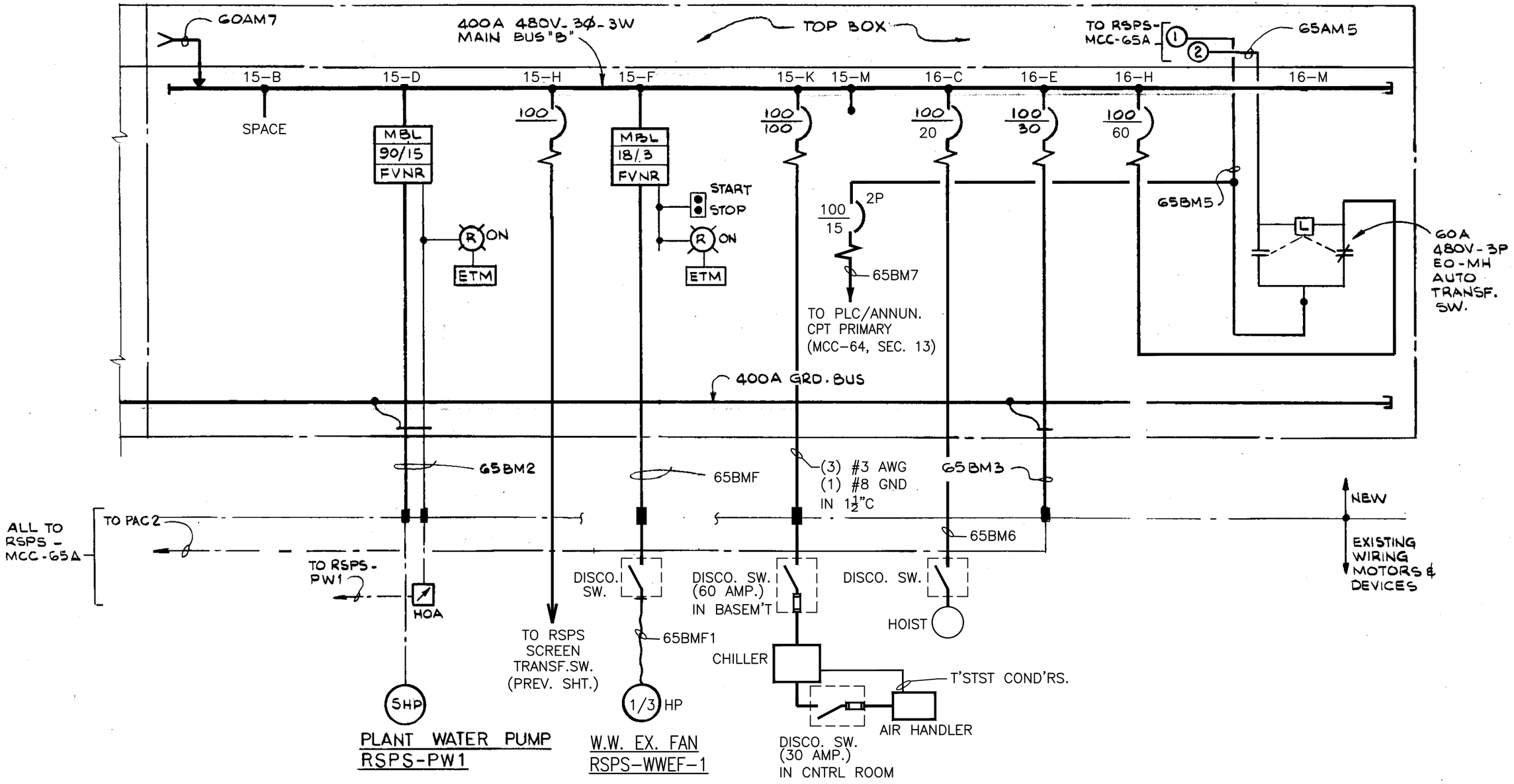
DES: RDK
DRN: RDK
CKD:
DATE: 9/19/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
EXISTING MCC-65B ONE-LINE (SEC. 15 - 16)

W.O. 4506
SHEET
E20
OF

TPB012-105



PROPOSED MCC-65B, ONE-LINE DIAGRAM

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 6/28/13

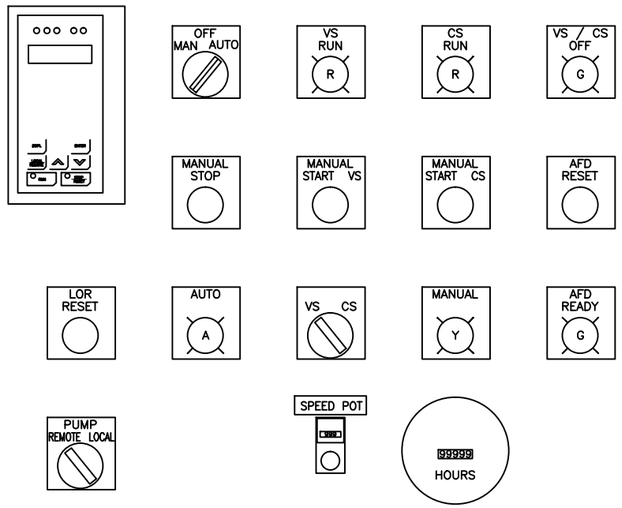
CITY of TAMPA
WASTEWATER DEPARTMENT

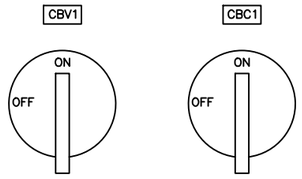
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
PROPOSED MCC-65B ONE-LINE (SEC. 15 - 16)

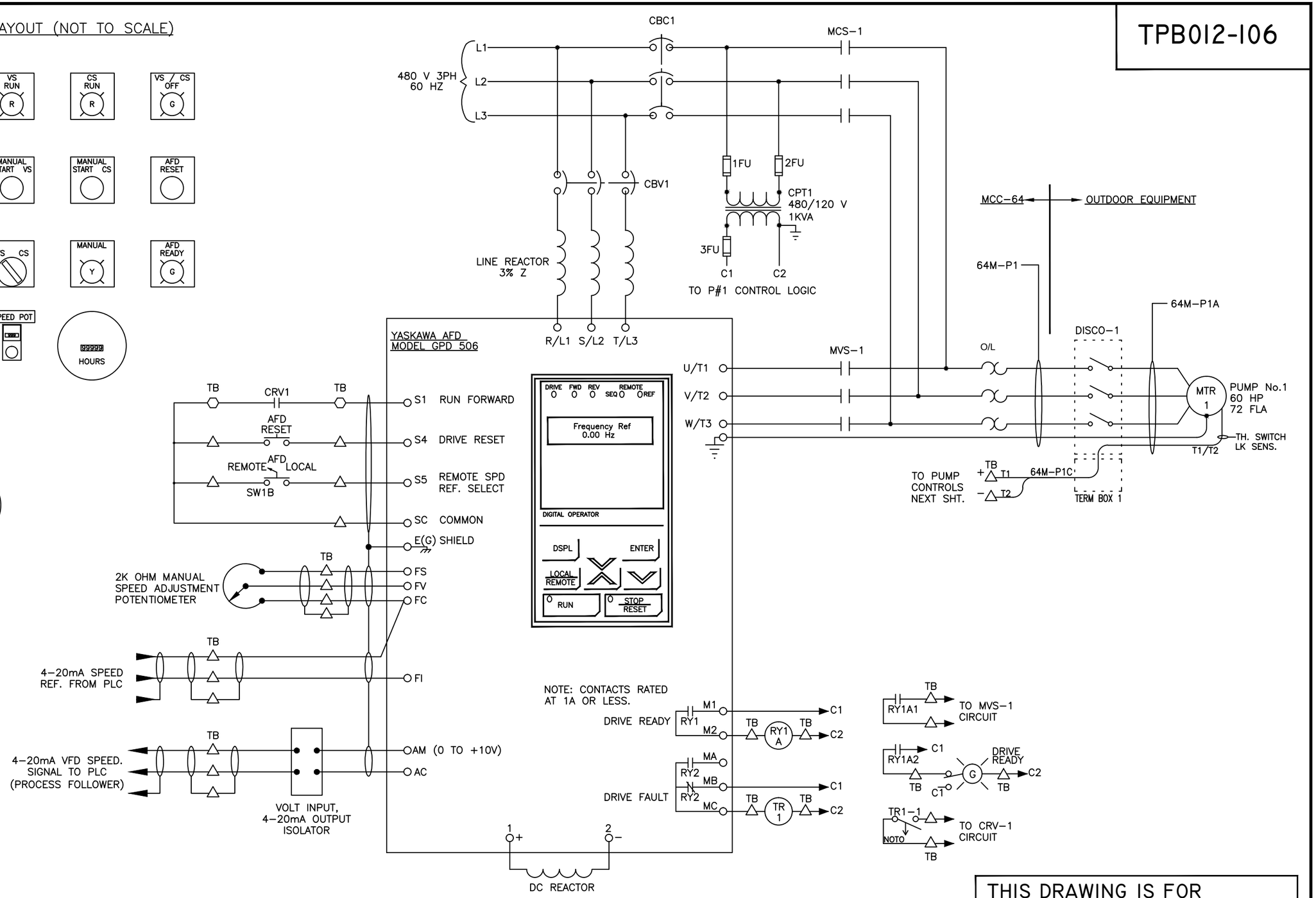
W.O. 4506
SHEET E21 OF

TPB012-106

AFD1 FRONT PANEL LAYOUT (NOT TO SCALE)







THIS DRAWING IS FOR DEMOLITION REFERENCE ONLY

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

No.	DATE	REVISIONS
3		
2		
1		

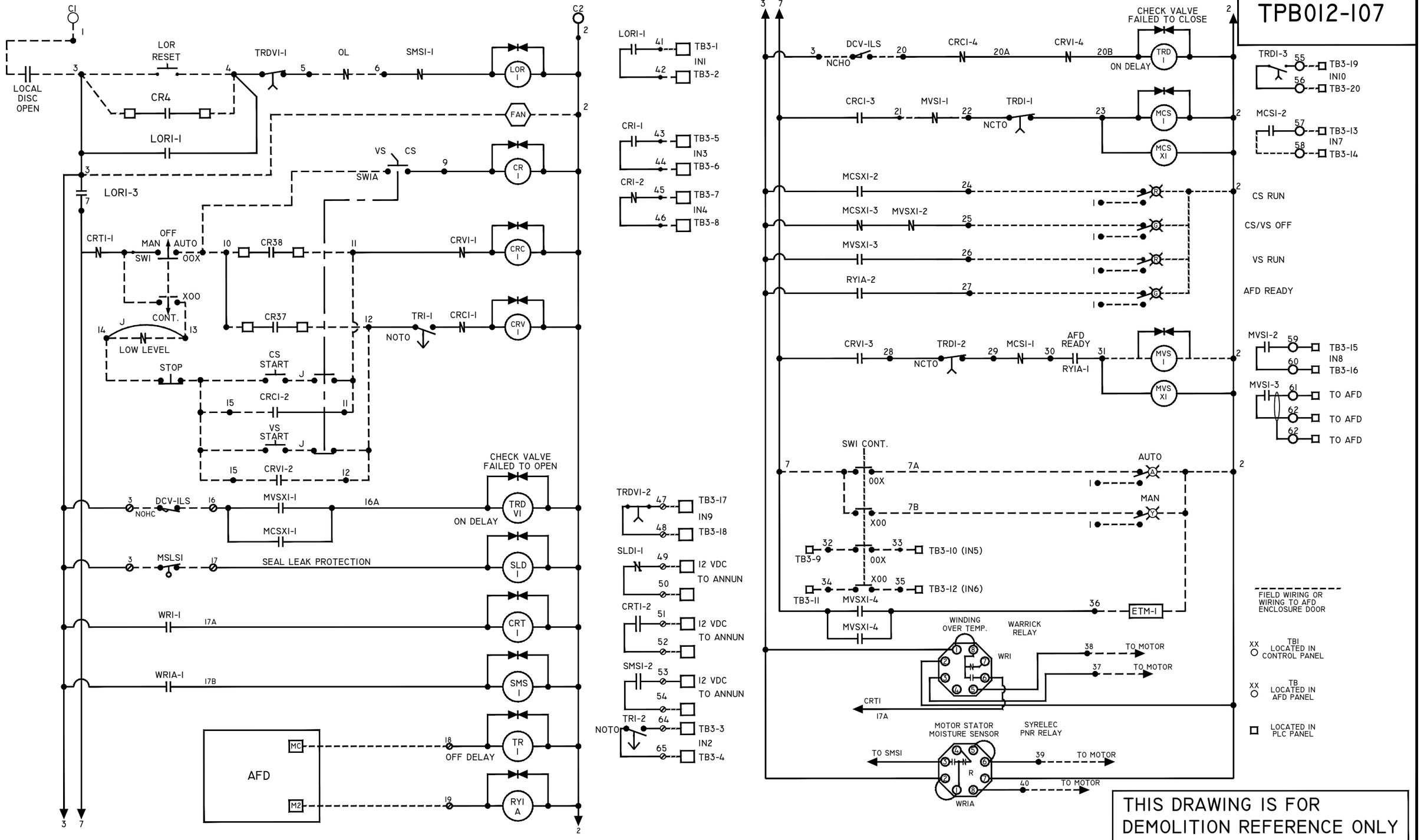
DES: RDK
DRN: RDK
CKD:
DATE: 9/19/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
EXISTING AFD No.I DETAILS (SEC. 9)

W.O. 4506
SHEET E22 OF

TPB012-107



THIS DRAWING IS FOR DEMOLITION REFERENCE ONLY

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 9/19/13

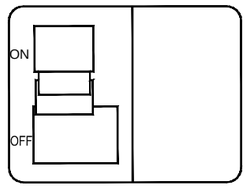
CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
EXISTING AFD No.I DETAILS (SEC. I0A)

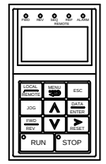
W.O. 4506
SHEET E23
OF

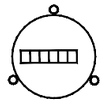
TPB012-108

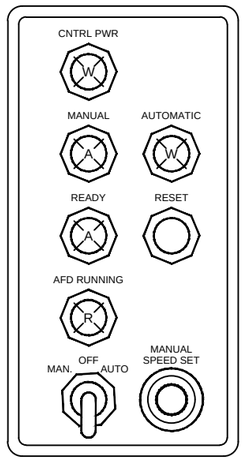
RSPS-P1
AFD



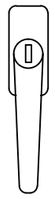
MAIN CIRCUIT BREAKER


DIGITAL OPERATOR


ETM



AFD AND SUPPORT
EQUIPMENT MOUNTED
BEHIND DOOR



KEYED NOTES:

PROPOSED MCC-64 SEC 9 FRONT ELEVATION

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

No.	DATE	REVISIONS
3		
2		
1		

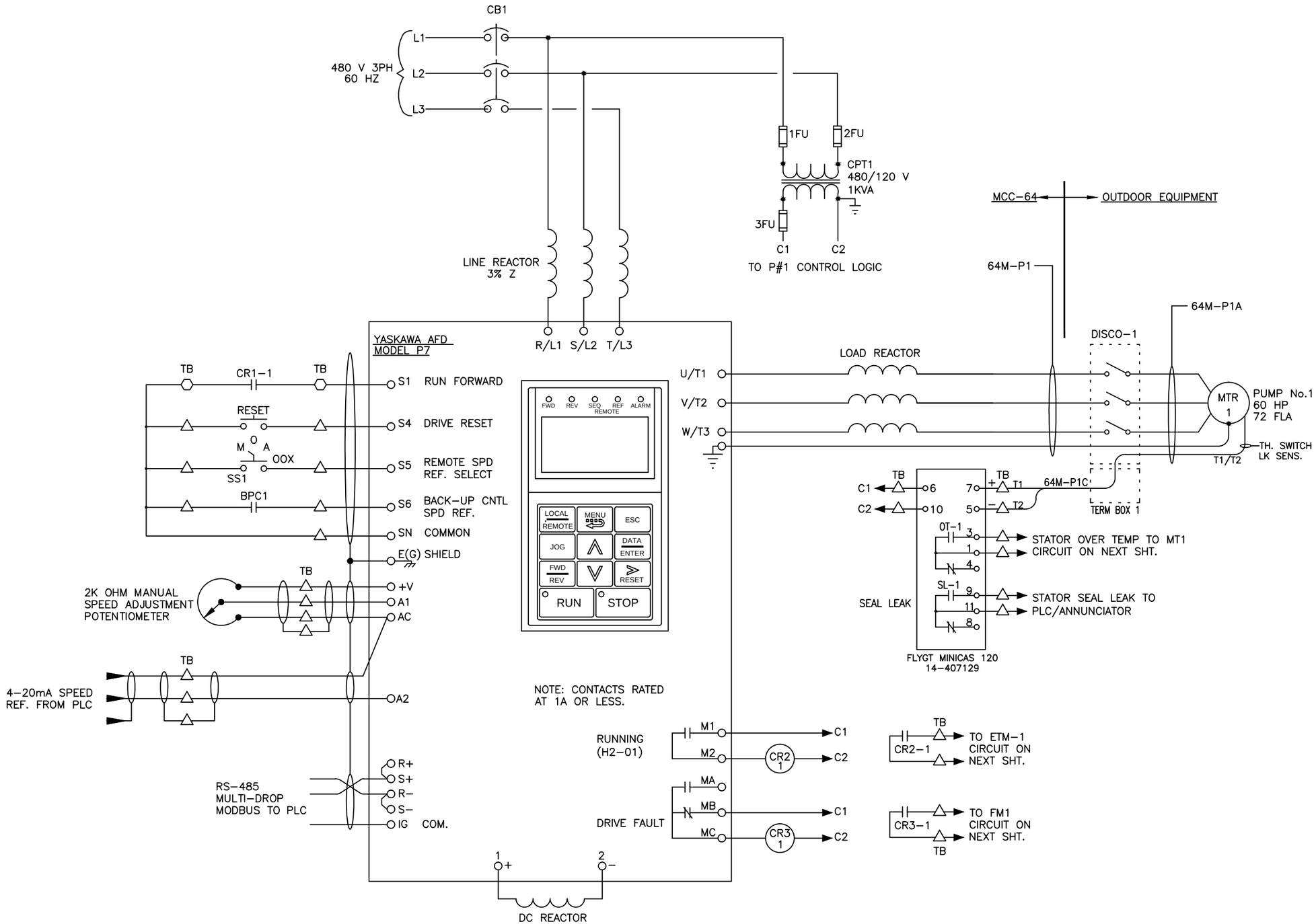
DES: RDK
DRN: RDK
CKD:
DATE: 9/19/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
PROPOSED AFD No.I FRONT EL. (SEC. 9)

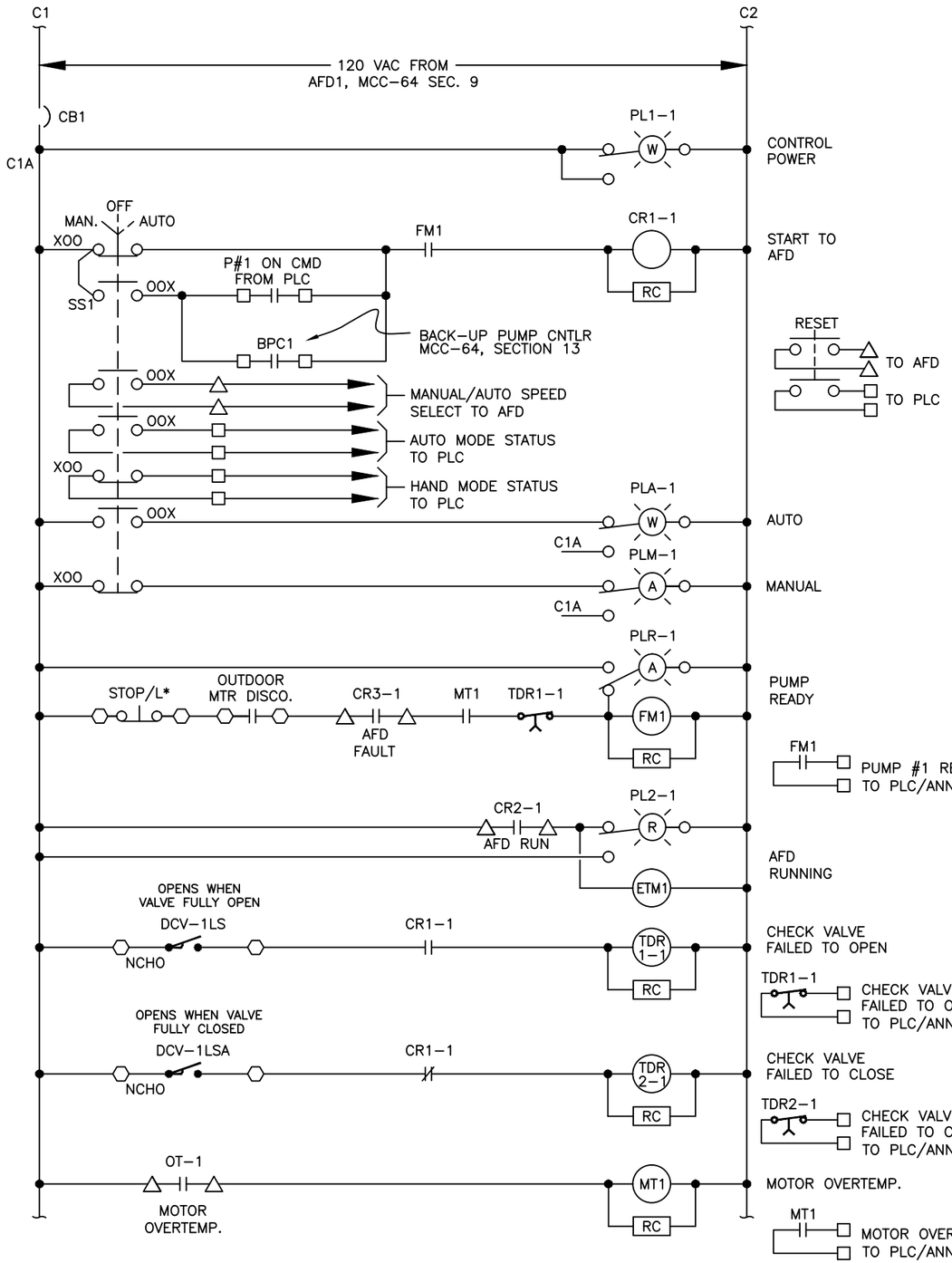
W.O. 4506
SHEET
E24
OF

TPB012-109



ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK DRN: RDK CKD: DATE: 9/19/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL PROPOSED AFD No.I DETAILS (SEC. 9)	W.O. 4506 SHEET E25 OF
	3						
	2						
	1						

TPB012-110



⬡ DENOTES TERMINAL FOR FIELD CONNECTION.

△ TERMINAL LOCATED IN AFD PANEL.

□ TERMINAL LOCATED IN PLC PANEL.

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 9/19/13

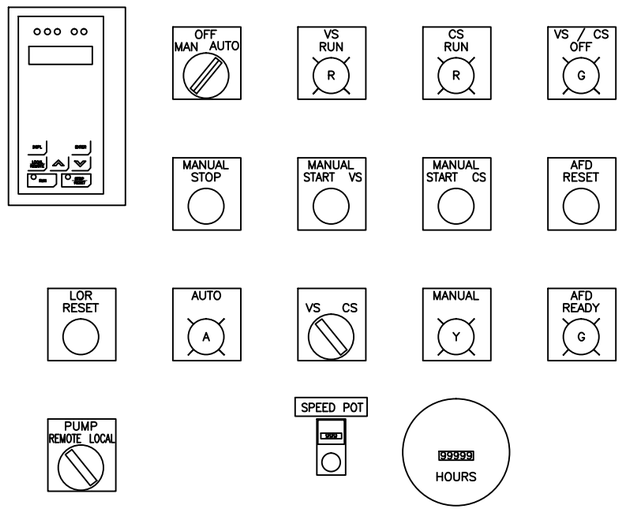
CITY of TAMPA
WASTEWATER DEPARTMENT

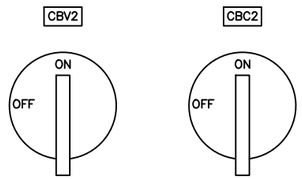
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
PROPOSED AFD No.1 DETAILS (SEC. 10A)

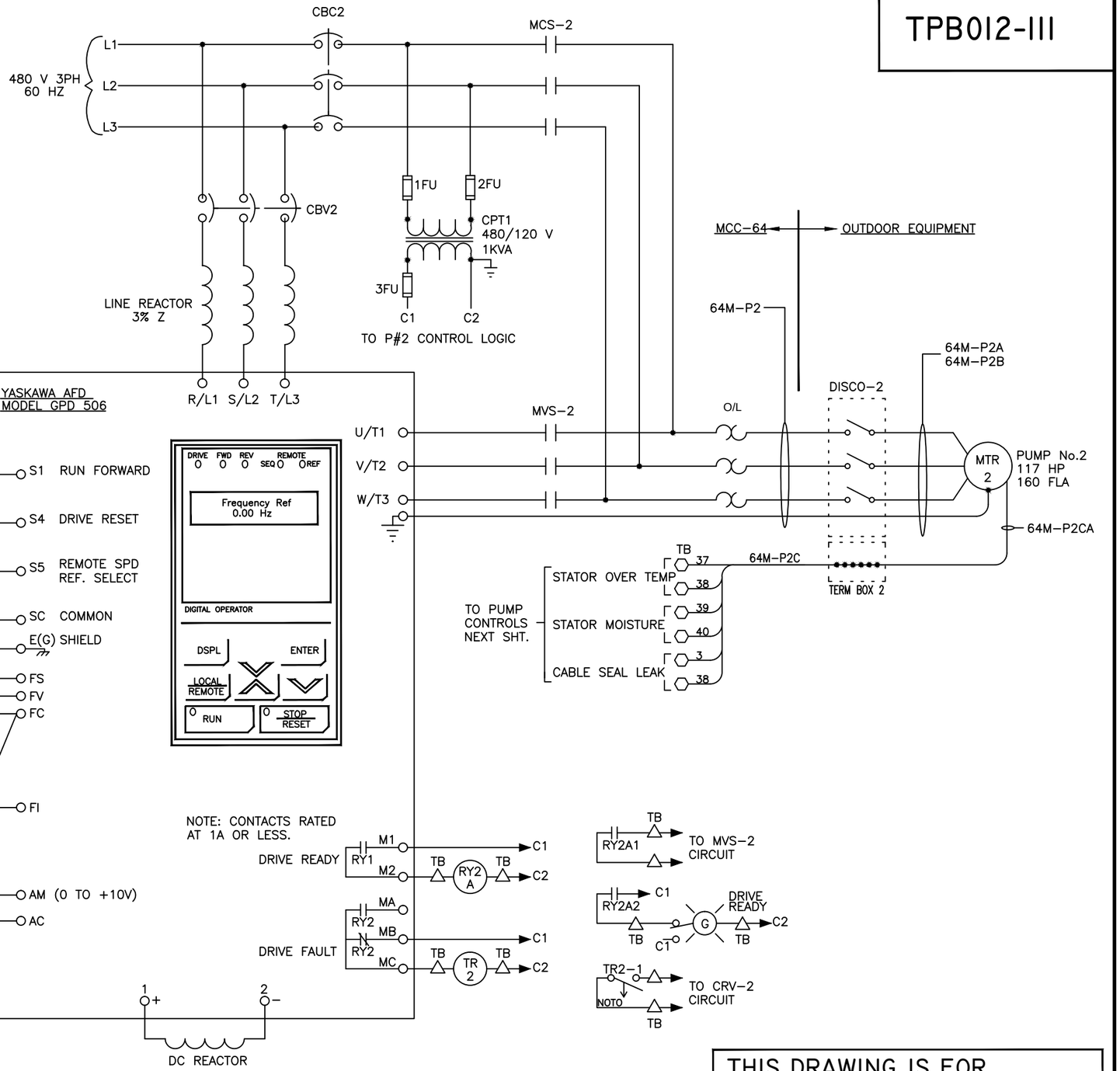
W.O. 4506
SHEET
E26
OF .

TPB012-III

AFD2 FRONT PANEL LAYOUT (NOT TO SCALE)







THIS DRAWING IS FOR DEMOLITION REFERENCE ONLY

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

No.	DATE	REVISIONS
3		
2		
1		

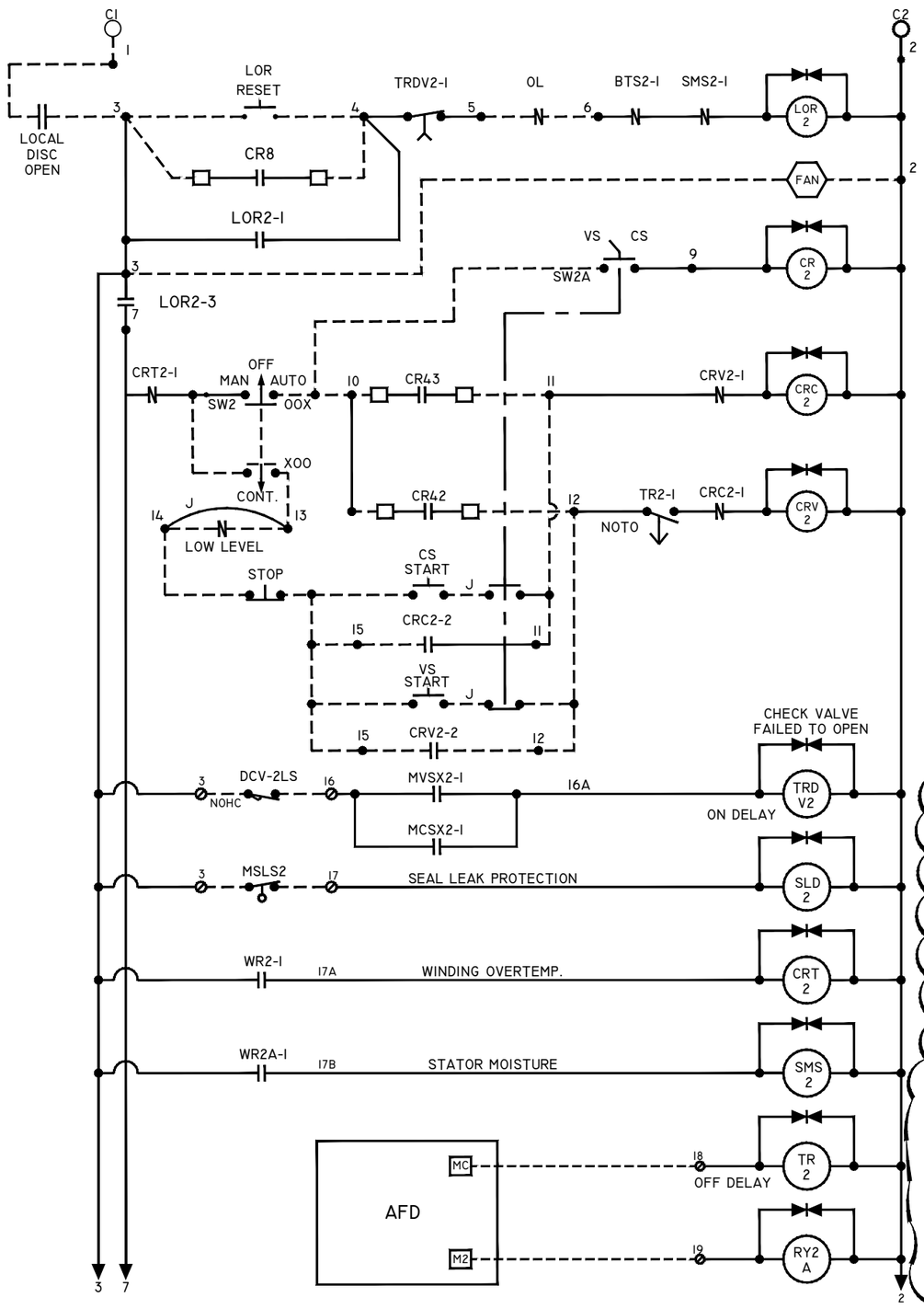
DES: RDK
DRN: RDK
CKD:
DATE: 9/19/13

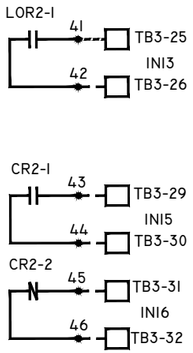
CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
EXISTING AFD No.2 DETAILS (SEC. II)

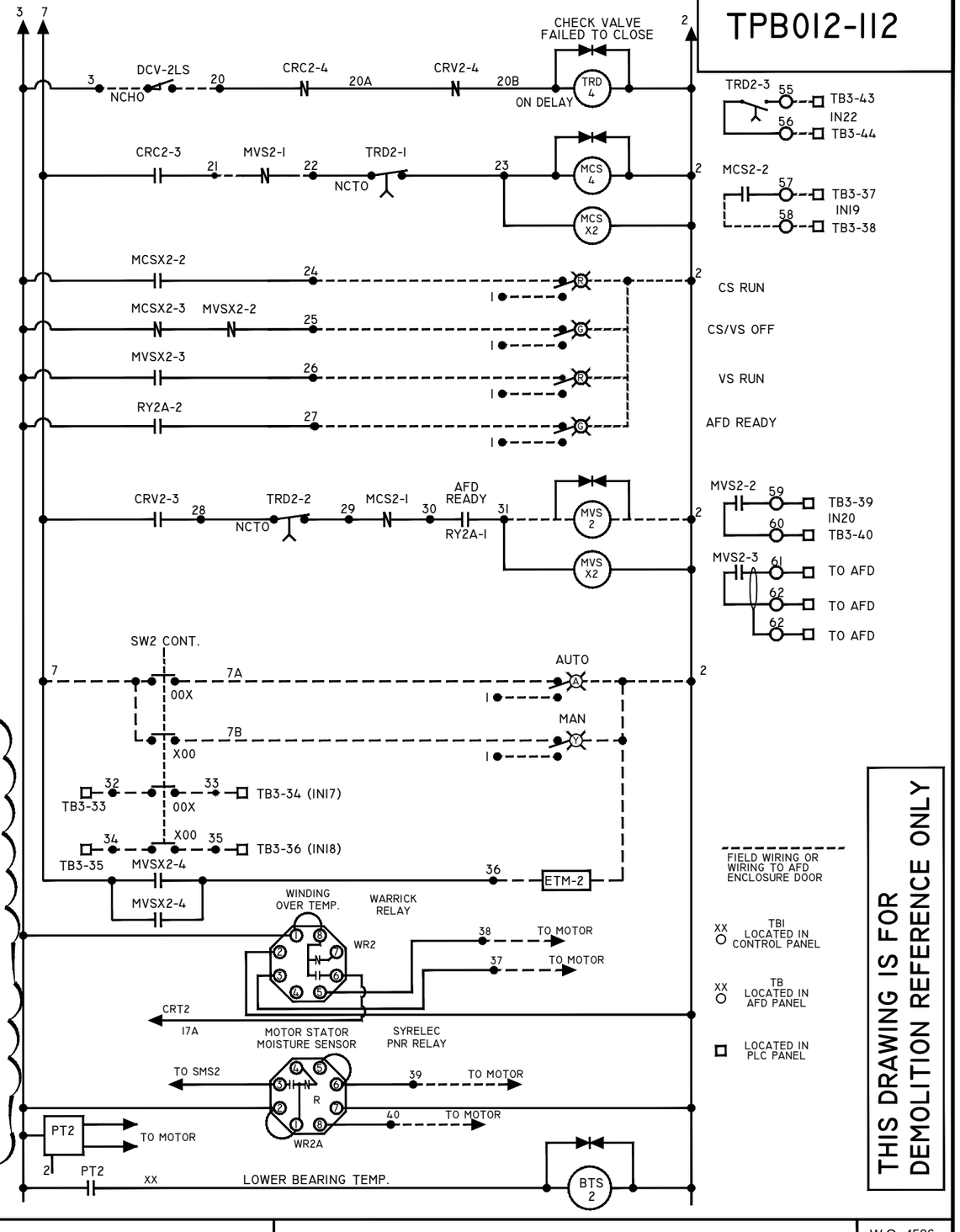
W.O. 4506
SHEET E27
OF

TPB012-112





CHECK



THIS DRAWING IS FOR DEMOLITION REFERENCE ONLY

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 9/19/13

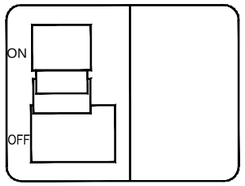
CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
EXISTING AFD No.2 DETAILS (SEC. I0B)

W.O. 4506
SHEET E28
OF .

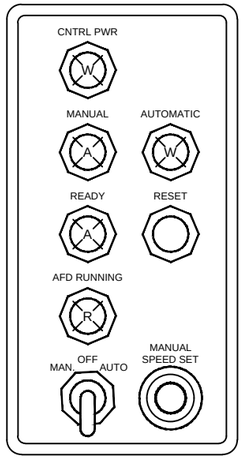
TPB012-113

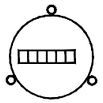
RSPS-P2
AFD

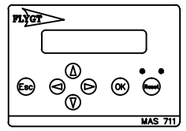


MAIN CIRCUIT BREAKER

DIGITAL OPERATOR

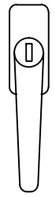



ETM



MAS-2
OPERATOR PANEL

AFD AND SUPPORT
EQUIPMENT MOUNTED
BEHIND DOOR

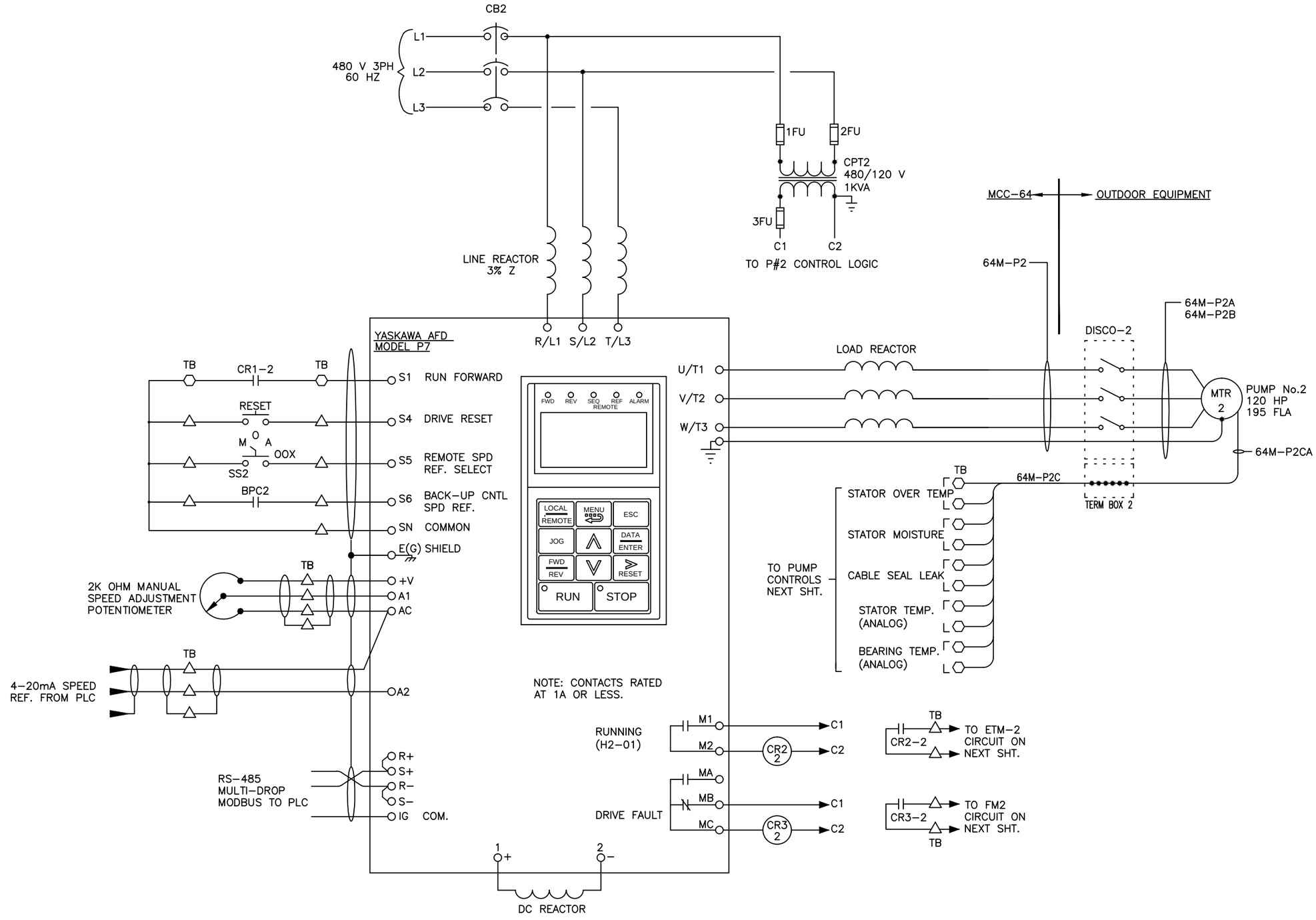


KEYED NOTES:

PROPOSED MCC-64 SEC II FRONT ELEVATION

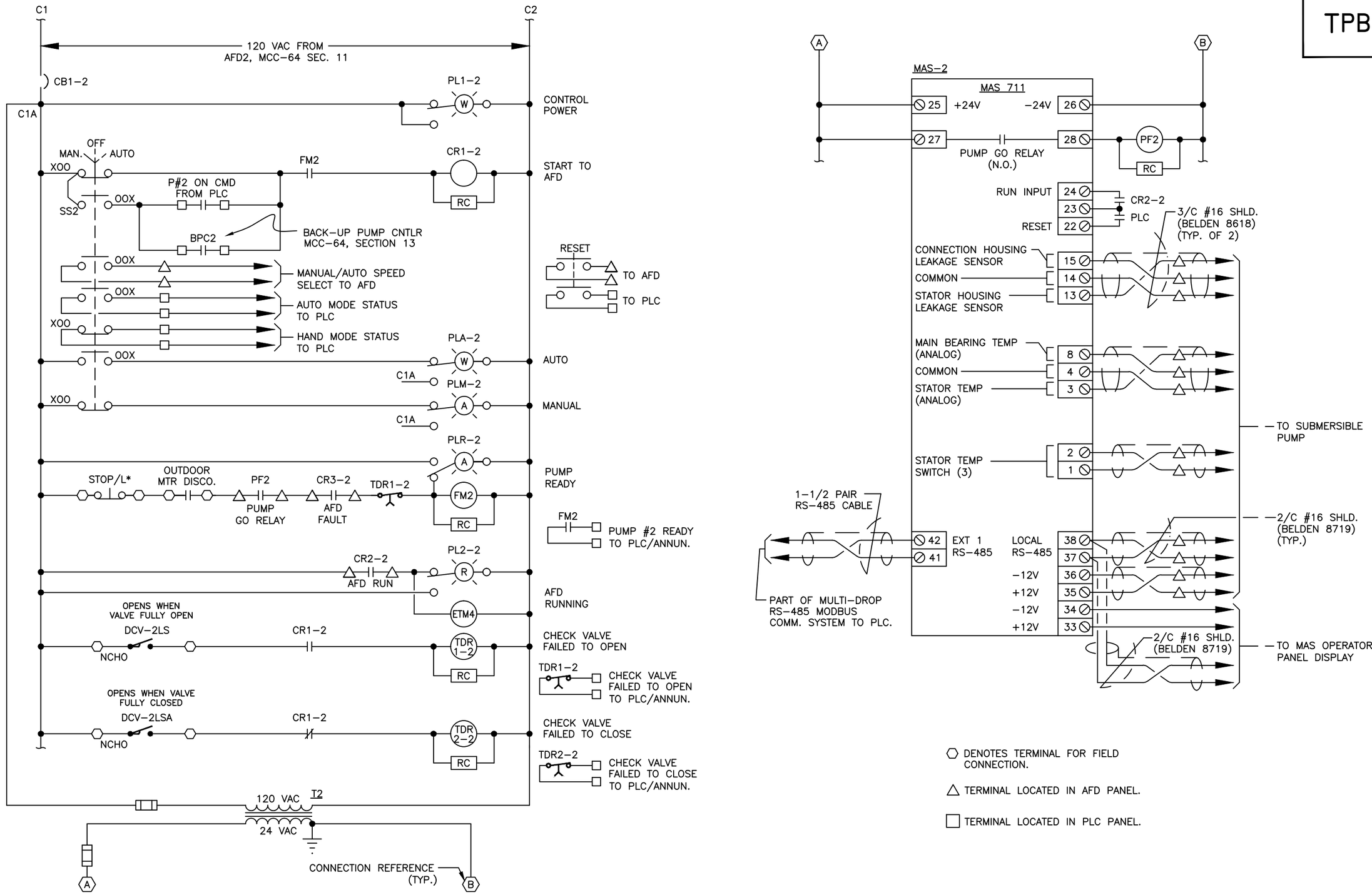
ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK DRN: RDK CKD: DATE: 9/19/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL PROPOSED AFD No.2 FRONT EL. (SEC. II)	W.O. 4506 SHEET E29 OF
	3						
	2						
	1						

TPB012-114



ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK DRN: RDK CKD: DATE: 9/19/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL PROPOSED AFD No.2 DETAILS (SEC. II)	W.O. 4506 SHEET E30 OF .
	3						
	2						
	1						

TPB012-115



⬡ DENOTES TERMINAL FOR FIELD CONNECTION.

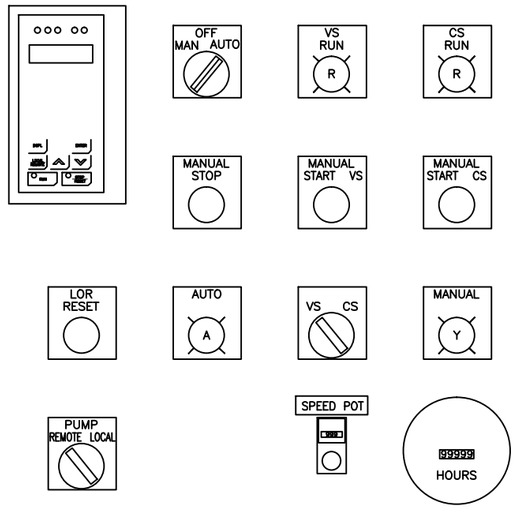
△ TERMINAL LOCATED IN AFD PANEL.

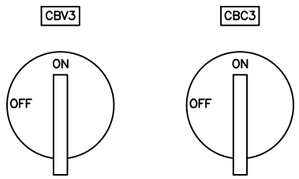
□ TERMINAL LOCATED IN PLC PANEL.

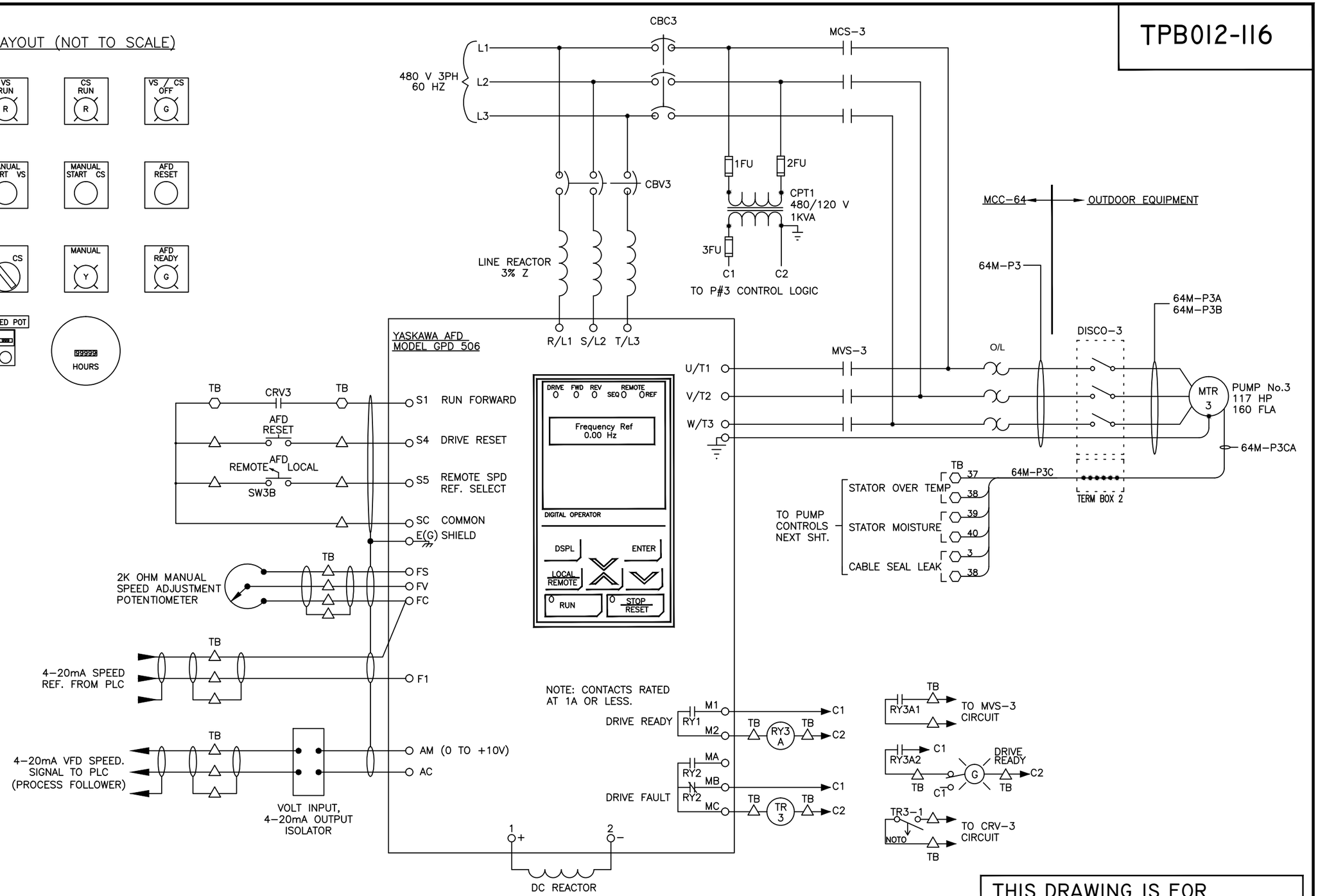
ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK DRN: RDK CKD: DATE: 9/19/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL PROPOSED AFD No.2 DETAILS (SEC. 10B)	W.O. 4506 SHEET E31 OF
	3						
	2						
	1						

TPB012-116

AFD3 FRONT PANEL LAYOUT (NOT TO SCALE)







THIS DRAWING IS FOR DEMOLITION REFERENCE ONLY

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

No.	DATE	REVISIONS
3		
2		
1		

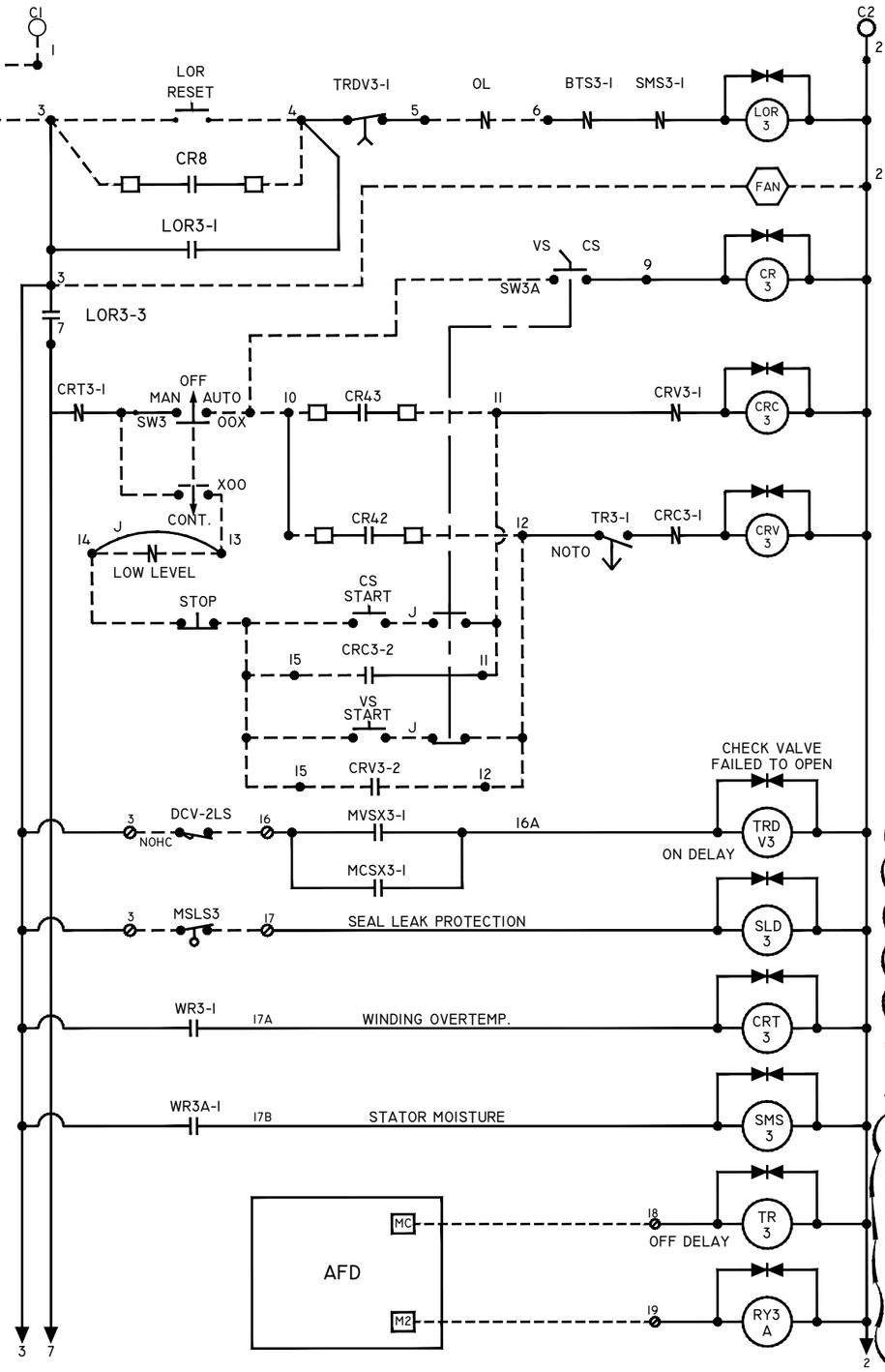
DES: RDK
DRN: RDK
CKD:
DATE: 9/19/13

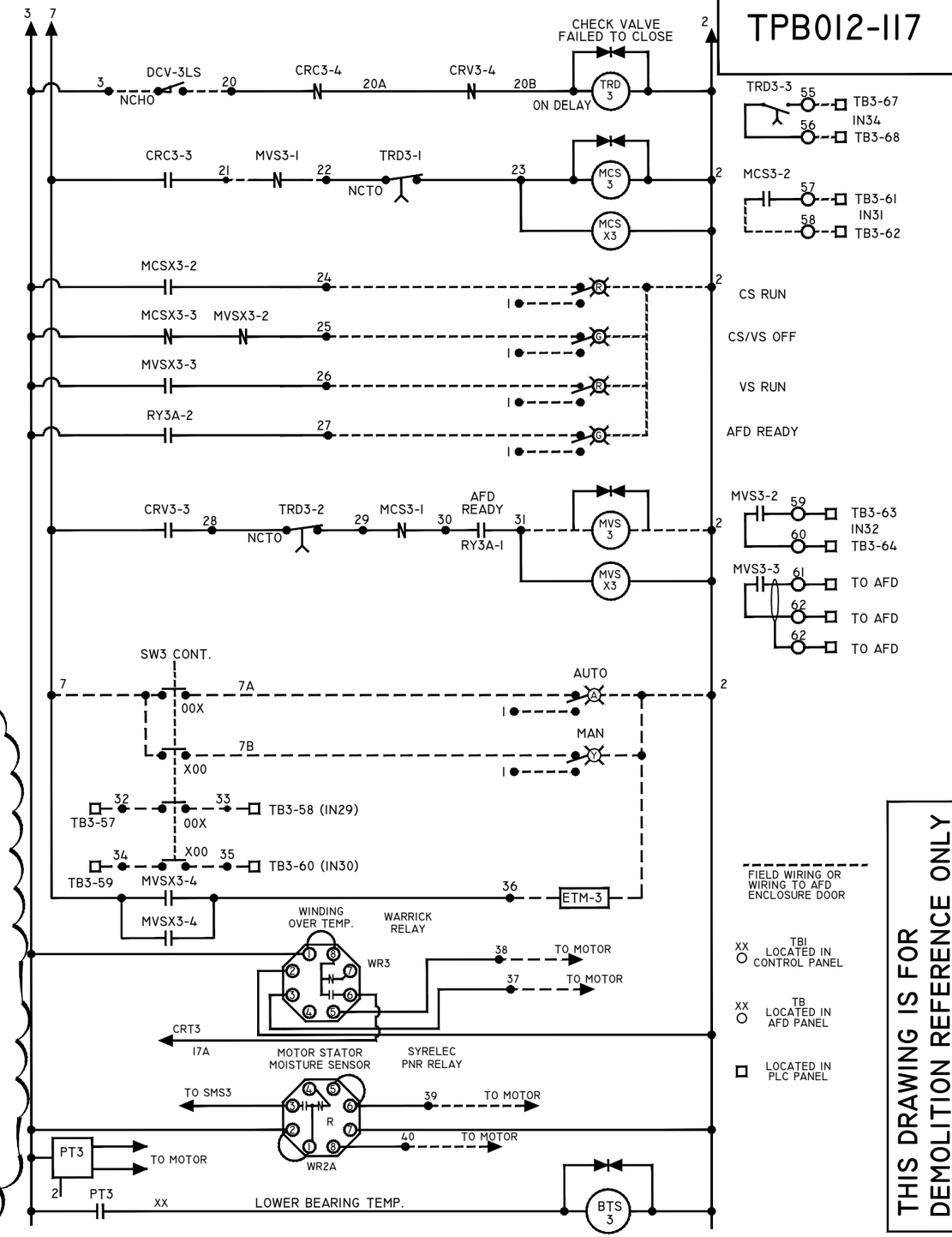
CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
EXISTING AFD No.3 DETAILS (SEC. 8)

W.O. 4506
SHEET
E32
OF

TPB012-117





THIS DRAWING IS FOR DEMOLITION REFERENCE ONLY

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 9/19/13

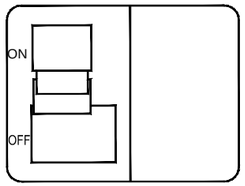
CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
EXISTING AFD No.3 DETAILS (SEC. 7B)

W.O. 4506
SHEET E33 OF

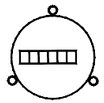
TPB012-118

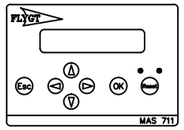
RSPS-P3
AFD



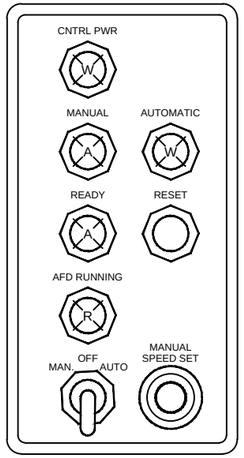
MAIN CIRCUIT BREAKER

DIGITAL OPERATOR

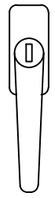

ETM



MAS-2
OPERATOR PANEL



AFD AND SUPPORT
EQUIPMENT MOUNTED
BEHIND DOOR



KEYED NOTES:

PROPOSED MCC-64 SEC 8 FRONT ELEVATION

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

No.	DATE	REVISIONS
3		
2		
1		

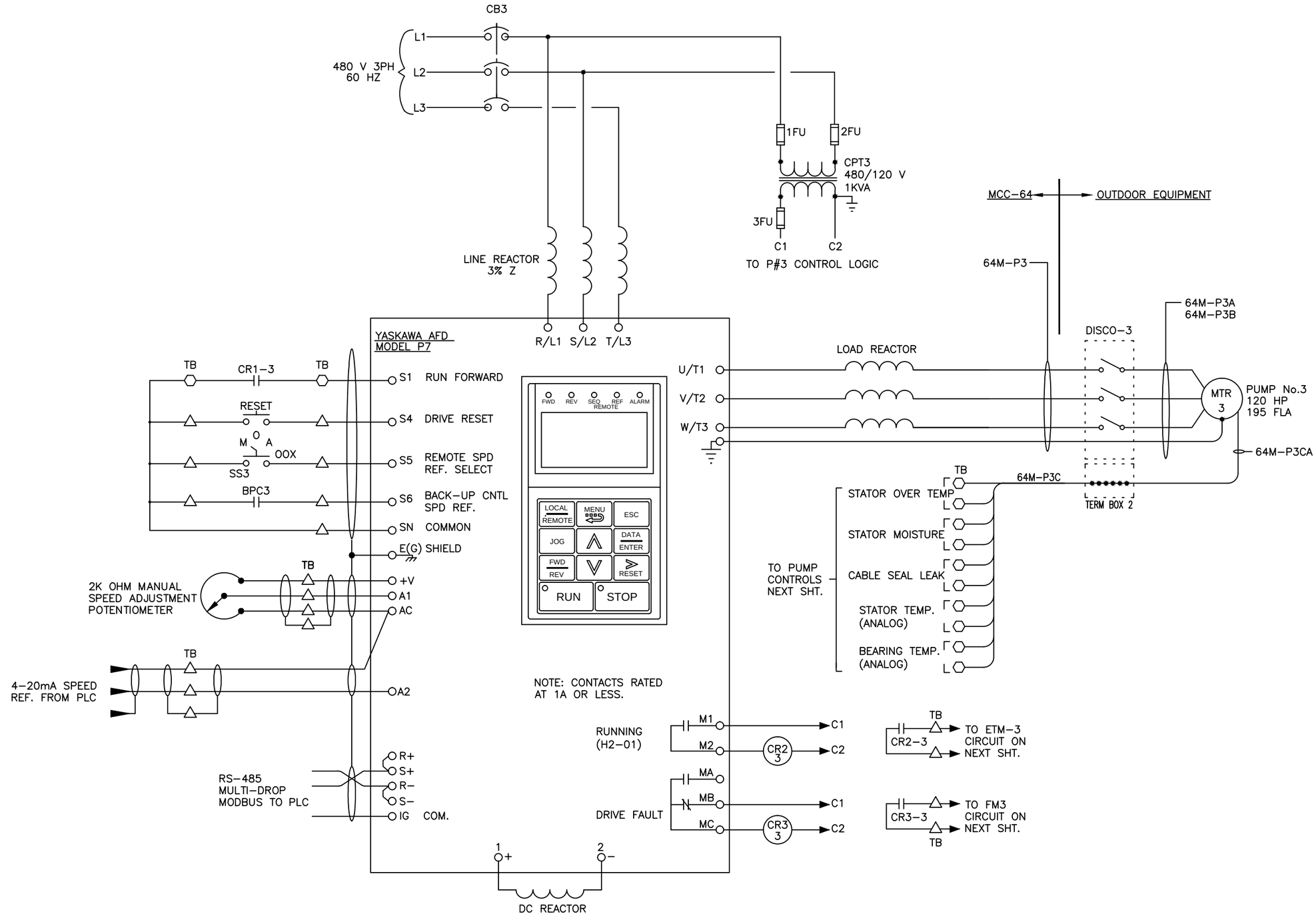
DES: RDK
DRN: RDK
CKD:
DATE: 9/19/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
PROPOSED AFD No.3 FRONT EL. (SEC. 8)

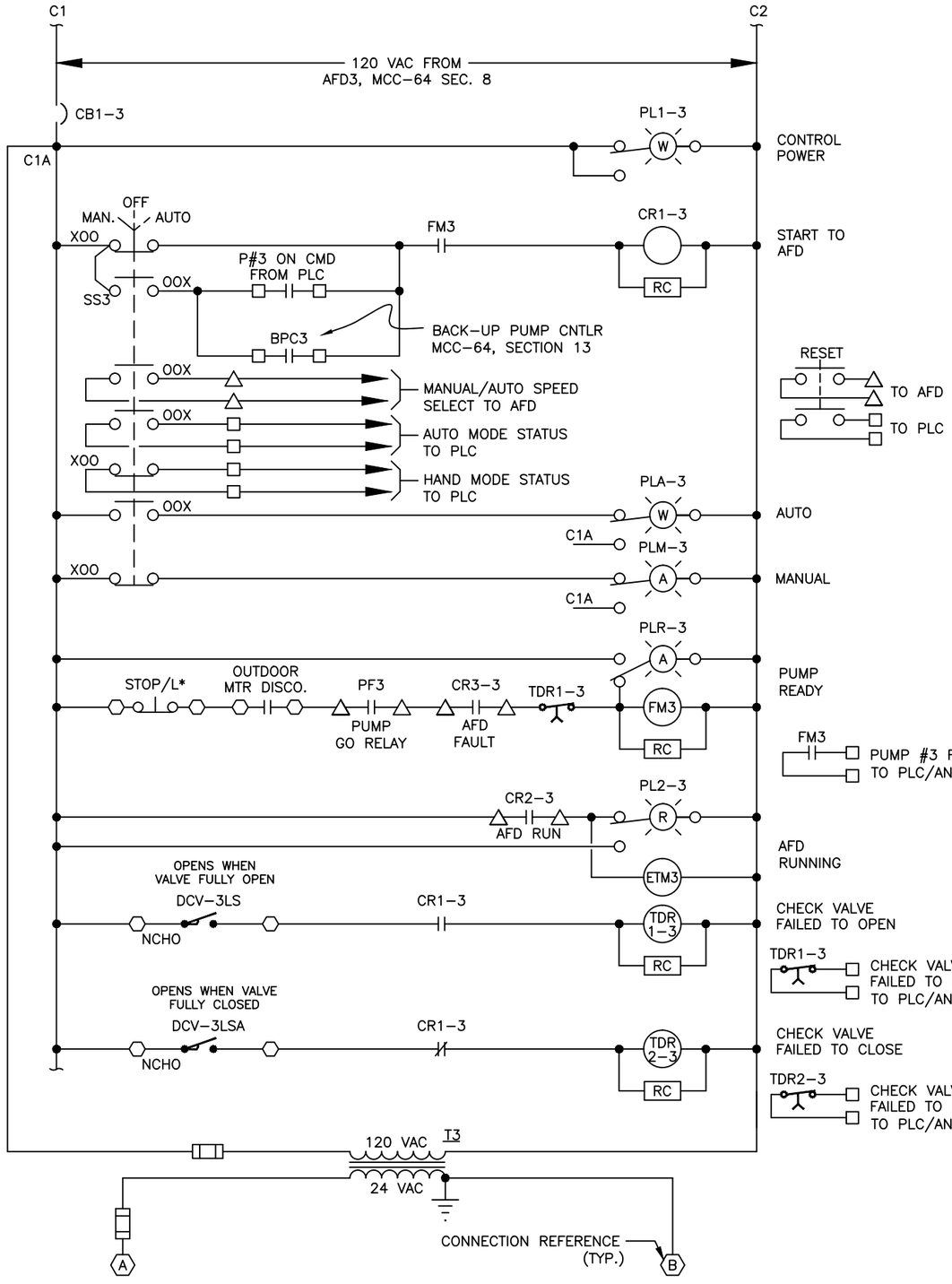
W.O. 4506
SHEET
E34
OF

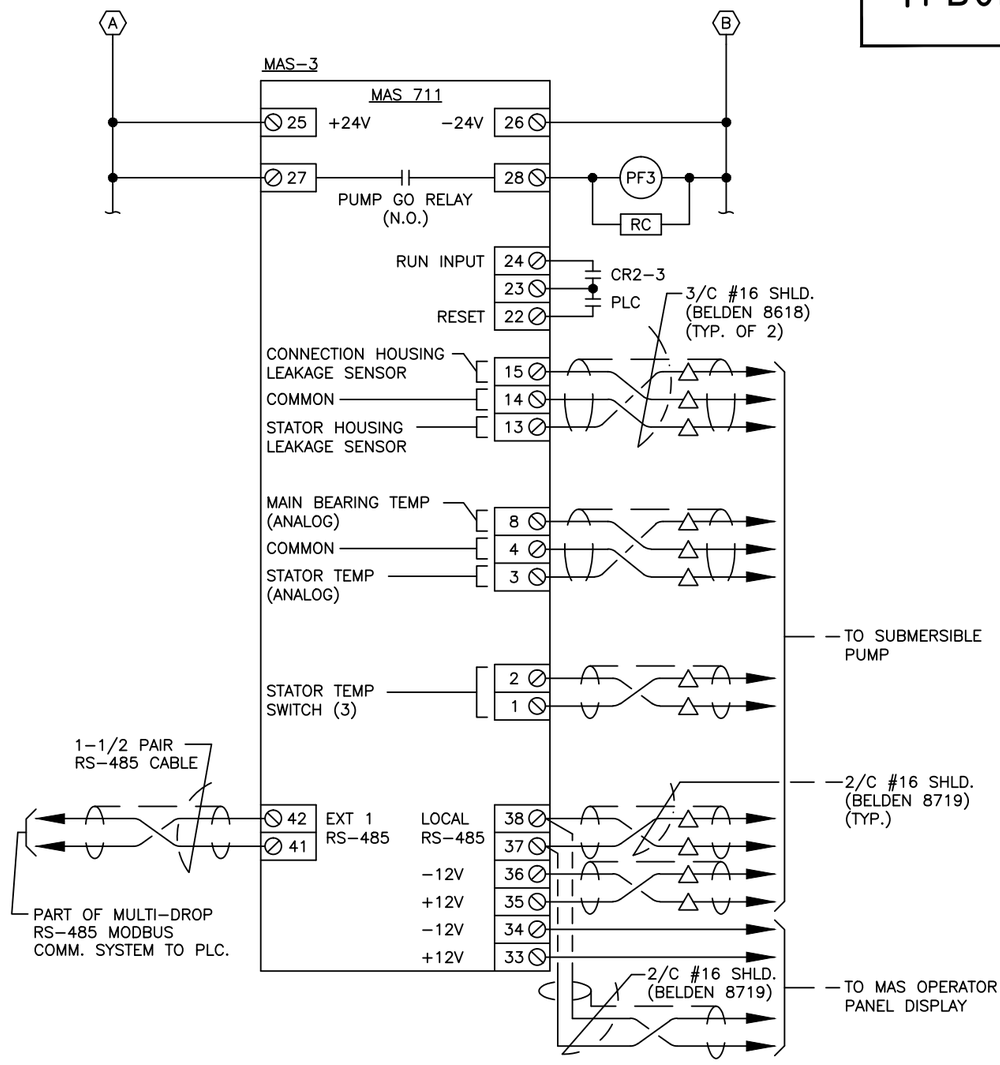
TPB012-119



ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK DRN: RDK CKD: DATE: 9/19/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL PROPOSED AFD No.3 DETAILS (SEC. 8)	W.O. 4506 SHEET E35 OF
	3						
	2						
	1						

TPB012-120





⬡ DENOTES TERMINAL FOR FIELD CONNECTION.

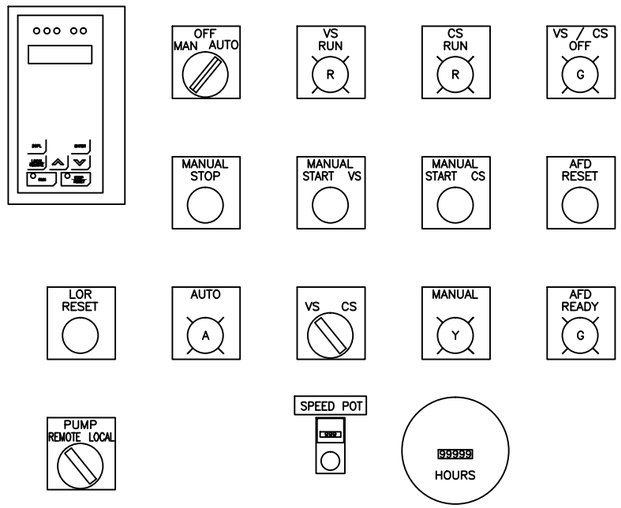
△ TERMINAL LOCATED IN AFD PANEL.

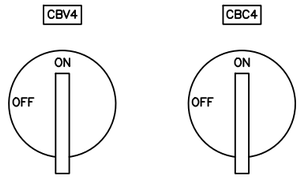
□ TERMINAL LOCATED IN PLC PANEL.

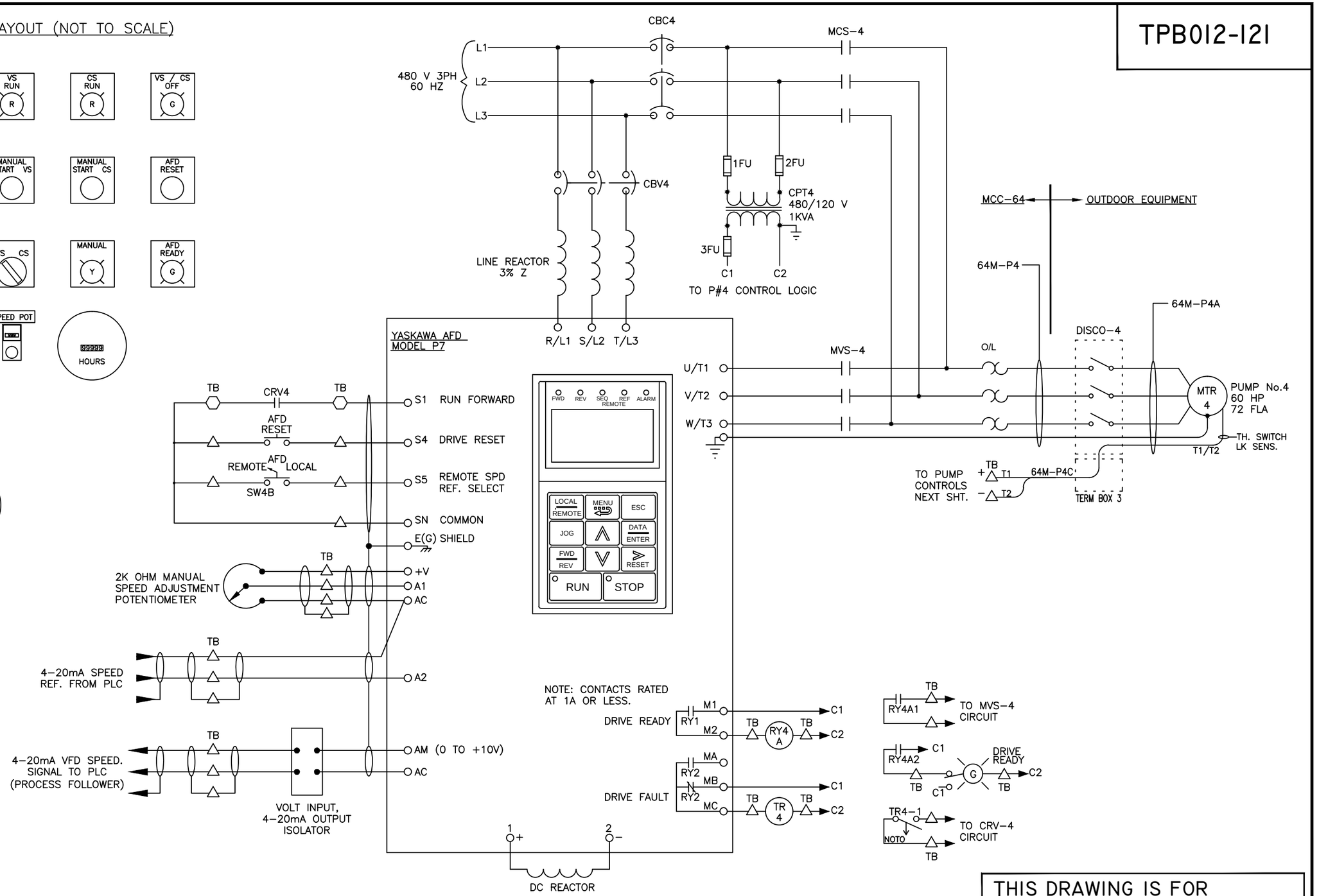
ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No. / DATE / REVISIONS 3 2 1	DES: RDK DRN: RDK CKD: DATE: 9/19/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL PROPOSED AFD No.3 DETAILS (SEC. 7B)	W.O. 4506 SHEET E36 OF

TPB012-121

AFD4 FRONT PANEL LAYOUT (NOT TO SCALE)







THIS DRAWING IS FOR
DEMOLITION REFERENCE ONLY

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

No.	DATE	REVISIONS
3		
2		
1		

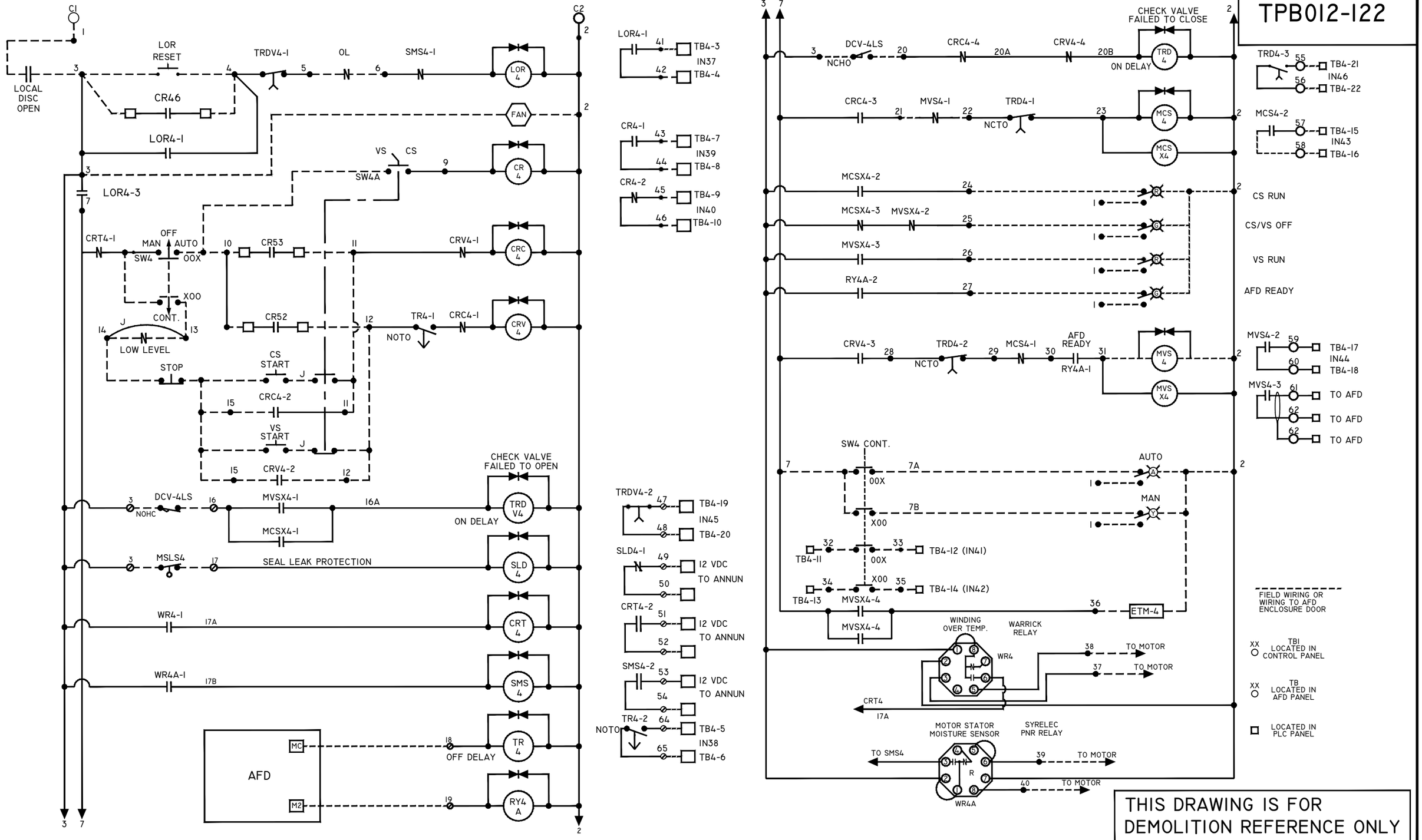
DES: RDK
DRN: RDK
CKD:
DATE: 9/19/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
EXISTING AFD No.4 DETAILS (SEC. 6)

W.O. 4506
SHEET
E37
OF

TPB012-122



THIS DRAWING IS FOR DEMOLITION REFERENCE ONLY

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 9/20/13

CITY of TAMPA
WASTEWATER DEPARTMENT

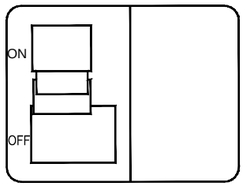
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
EXISTING AFD No.4 DETAILS (SEC. 7A)

W.O. 4506

SHEET
E38
OF

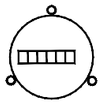
TPB012-123

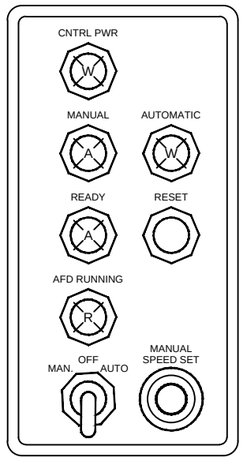
RSPS-P4
AFD



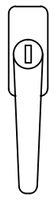
MAIN CIRCUIT BREAKER


DIGITAL OPERATOR


ETM



AFD AND SUPPORT
EQUIPMENT MOUNTED
BEHIND DOOR



KEYED NOTES:

PROPOSED MCC-64 SEC 6 FRONT ELEVATION

ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS
	3		
	2		
	1		

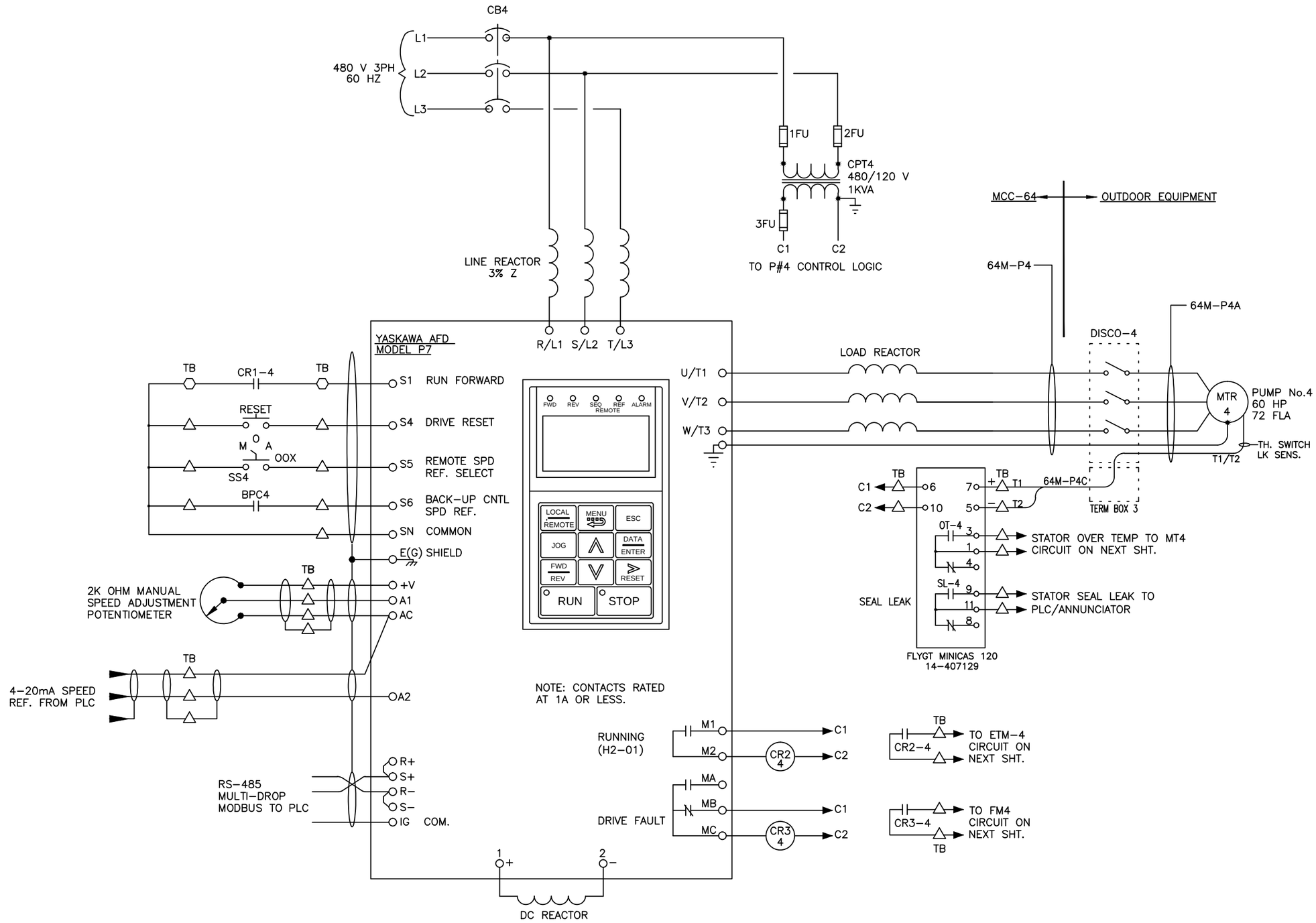
DES: RDK
DRN: RDK
CKD:
DATE: 9/20/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
PROPOSED AFD No.4 FRONT EL. (SEC. 6)

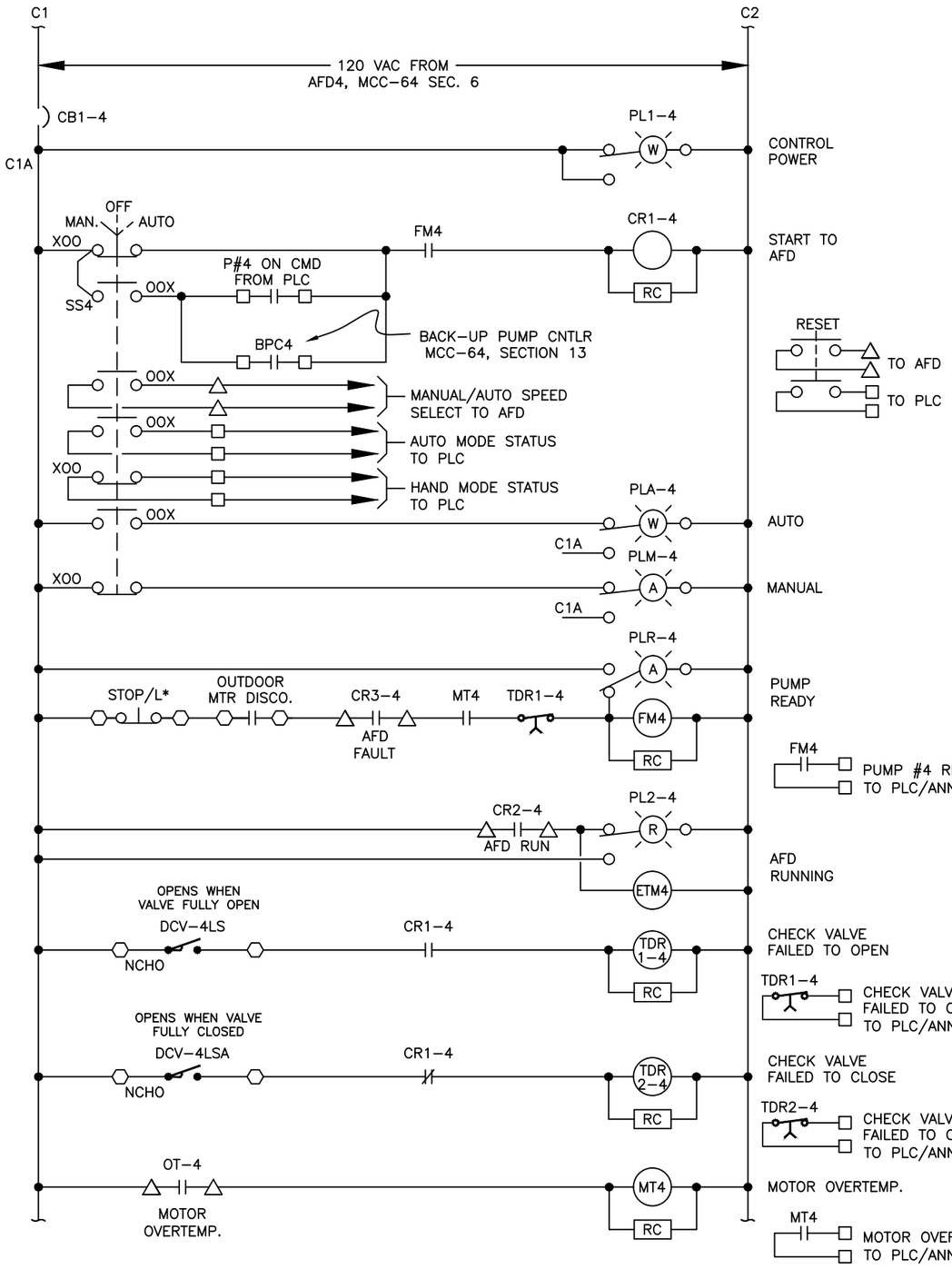
W.O. 4506
SHEET
E39
OF .

TPB012-124



ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK DRN: RDK CKD: DATE: 9/20/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL PROPOSED AFD No.4 DETAILS (SEC. 6)	W.O. 4506 SHEET E40 OF .
	3						
	2						
	1						

TPB012-125



⬡ DENOTES TERMINAL FOR FIELD CONNECTION.

△ TERMINAL LOCATED IN AFD PANEL.

□ TERMINAL LOCATED IN PLC PANEL.

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 9/20/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
PROPOSED AFD No.4 DETAILS (SEC. 7A)

W.O. 4506
SHEET
E41
OF

TPB012-126

SCREEN & COMPACTOR CONTROLS

65-AM6

60A AUTOMATIC TRANSFER SWITCH

65-BM5

480v, 3PH. SUPPLY MCC-65A CUBICLE 14-H

480v, 3PH. SUPPLY MCC-65B CUBICLE 15-H

65-AM7

L1
L2
L3

SS1MTR

DISCO-5

T1
T2
T3

1MTR

SCREEN SS1 1-HP, 480V, 3PH, 1.8FLA

SS1MTRA

SCREEN MOTOR THERMOSTAT

UPSTREAM LEVEL ANALOG (4-20MA)

DOWNSTREAM LEVEL ANALOG (4-20MA)

64ANLG

L1A
L2A
L3A

MVO-1

SCREEN WASH WATER VALVE DRIVE MOTOR

OPEN
CLOSE
COM.
WATER VALVE IS OPEN
WATER VALVE IS CLOSED

SSMVO1

L1B
L2B
L3B

MVO-2

SLUICEWAY WATER VALVE DRIVE MOTOR

OPEN
CLOSE
COM.
WATER VALVE IS OPEN
WATER VALVE IS CLOSED

SSMVO2

SSFLS2

FS-1

INLET CHANNEL ALARM FLOAT (HIGH-HIGH LEVEL)

OFF
HAND
AUTO
M

SCREEN LOCAL CONTROL STA. (LCS)

STOP
START
JOG
S

NOTE:
M= MAINTAINED
S= SPRING RETURN
(TYP. THIS SHEET)

E-STOP
L

SLUICE FLUSH LOCAL CONTROL STA. (LCS)

PART OF SSPB

CONT'D ABOVE RIGHT

LS1

SLUICEWAY LEVEL SWITCH

SSFLS1

SCREEN CONTROL POWER "ON"
SCREEN "RUNNING"
SCREEN "FAULT"
SPRAY WASH "FAIL"
UPSTREAM HIGH WATER WARNING
DOWNSTREAM LOW WATER WARNING
UPSTREAM HIGH WATER ALARM
COMMON

C5
C2
GND
FLOW ALARM

FLOW METER TRANSMITTER (FIT#1)

L
N
G
61
62
O/P3
31 +
32 -
SHLD

4-20mA

SSFIT

SSFE

FE-1

FMSCADA

CONT'D BELOW LEFT

SCREEN & COMPACTOR CONTROLS

SS2MTR

DISCO-6

T1
T2
T3

2MTR

COMPACTOR, CP1 5-HP, 480V, 3PH, 7.6FLA

SS2MTRA

COMP. MOTOR THERMOSTAT

OFF
HAND
AUTO
M

STOP
START
JOG
S

COMP. LOCAL CONTROL STA. (LCS)

E-STOP
L

PART OF SSPB

L1C
L2C
L3C

MVO-3

COMPACTOR WASH WATER VALVE DRIVE MOTOR

OPEN
CLOSE
COM.
WATER VALVE IS OPEN
WATER VALVE IS CLOSED

SSMVO3

SSCADA

COMPACTOR "RUNNING"
COMPACTOR "FAULT"
COMPACTOR "LOW LOAD"
COMPACTOR "HIGH LOAD"
COMMON

PLC ANNUNCIATOR

ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK DRN: RDK CKD: DATE: 7/16/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL SCREENING EQUIPMENT INTERCONNECTIONS	W.O. 4506 SHEET E42 OF .
	3						
	2						
	1						

TPB012-127

480V, 3-PH
FROM ATS

L1
L2
L3
GND

GND BLK

CB1
CB2
CB3
CB4
CB5
CB6

A1 B1 C1
LINE REACTOR
A2 B2 C2

R/L1 S/L2 T/L2 GND
U/T1 V/T2 W/T3 GND

A1 B1 C1
LINE REACTOR
A2 B2 C2

2M
2MOL

TO AMR-1
CT SENSOR /
TRANSMITTER
4-20mA OUTPUT

FU1 FU2
CPT
FU3
C2

CB7 CB8 CB9 CB10

C1

C3
FLOW
METER
POWER

C3
LEVEL
CONTROLLER
POWER

PSL-1
+24V COM
D1
D2

PART OF SCREEN
CONTROL PANEL
(CONT'D ON NEXT SHT.)

1MTR
SCREEN SS1 MOTOR
1-HP, 480V, 3PH, 1.8FLA

MVO1
SCREEN WASH WATER
VALVE DRIVE MOTOR
0.5HP, 480V, 3PH, 1.1FLA

MVO2
SLUICEWAY WATER
VALVE DRIVE MOTOR
0.5HP, 480V, 3PH, 1.1FLA

2MTR
COMPACTOR CP1 MOTOR
5-HP, 480V, 3PH, 7.6FLA

MVO3
COMPACTOR WASH WATER
VALVE DRIVE MOTOR
0.5HP, 480V, 3PH, 1.1FLA

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

No.	DATE	REVISIONS
3		
2		
1		

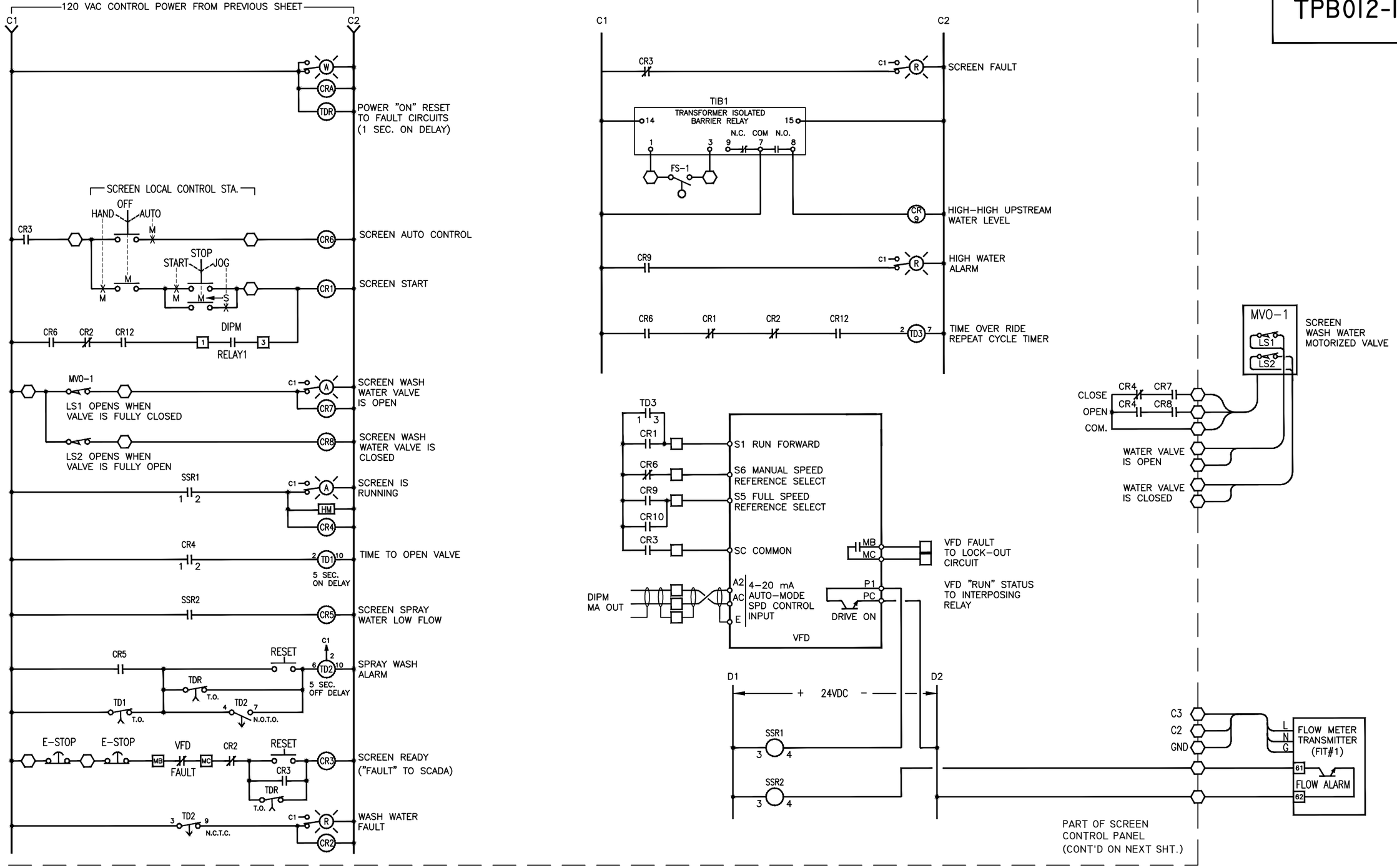
DES: RDK
DRN: RDK
CKD:
DATE: 5/24/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
SCREENING EQUIPMENT CONTROL PANEL (SHT. 1 OF 5)

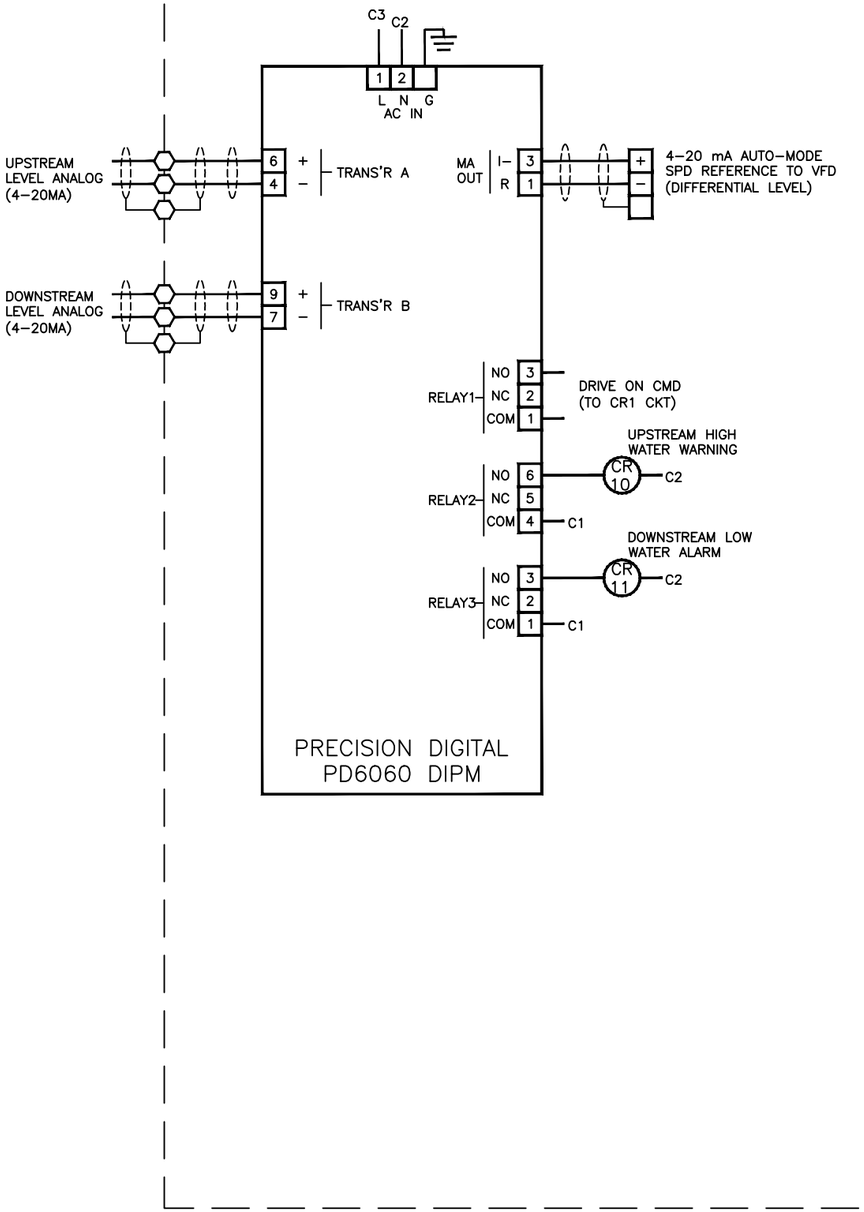
W.O. 4506
SHEET
E43
OF

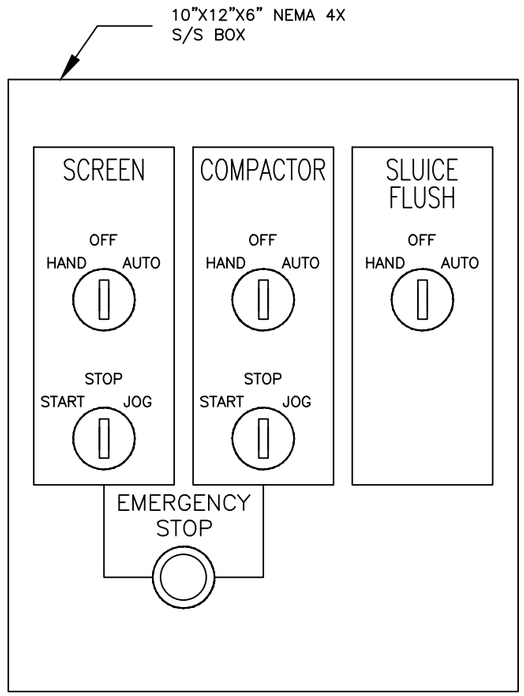
TPB012-128



ROMAN D. KORCHAK, P.E. #42626 ELECTRICAL SECTION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: RDK DRN: RDK CKD: DATE: 9/20/13	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL SCREENING EQUIPMENT CONTROL PANEL (SHT.2 OF 5)	W.O. 4506 SHEET E44 OF
	3						
	2						
	1						

TPB012-129





LOCAL CONTROL STATION (LCS)

MOUNT NEAR EQUIPMENT ON PUMPING STATION DECK (SEE SHT. E4)

PROVIDE AND INSTALL A 316 S/S CHANNEL ERECTOR SYSTEM FOR MOUNTING THE BOX. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO INSTALLATION.

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

No.	DATE	REVISIONS
3		
2		
1		

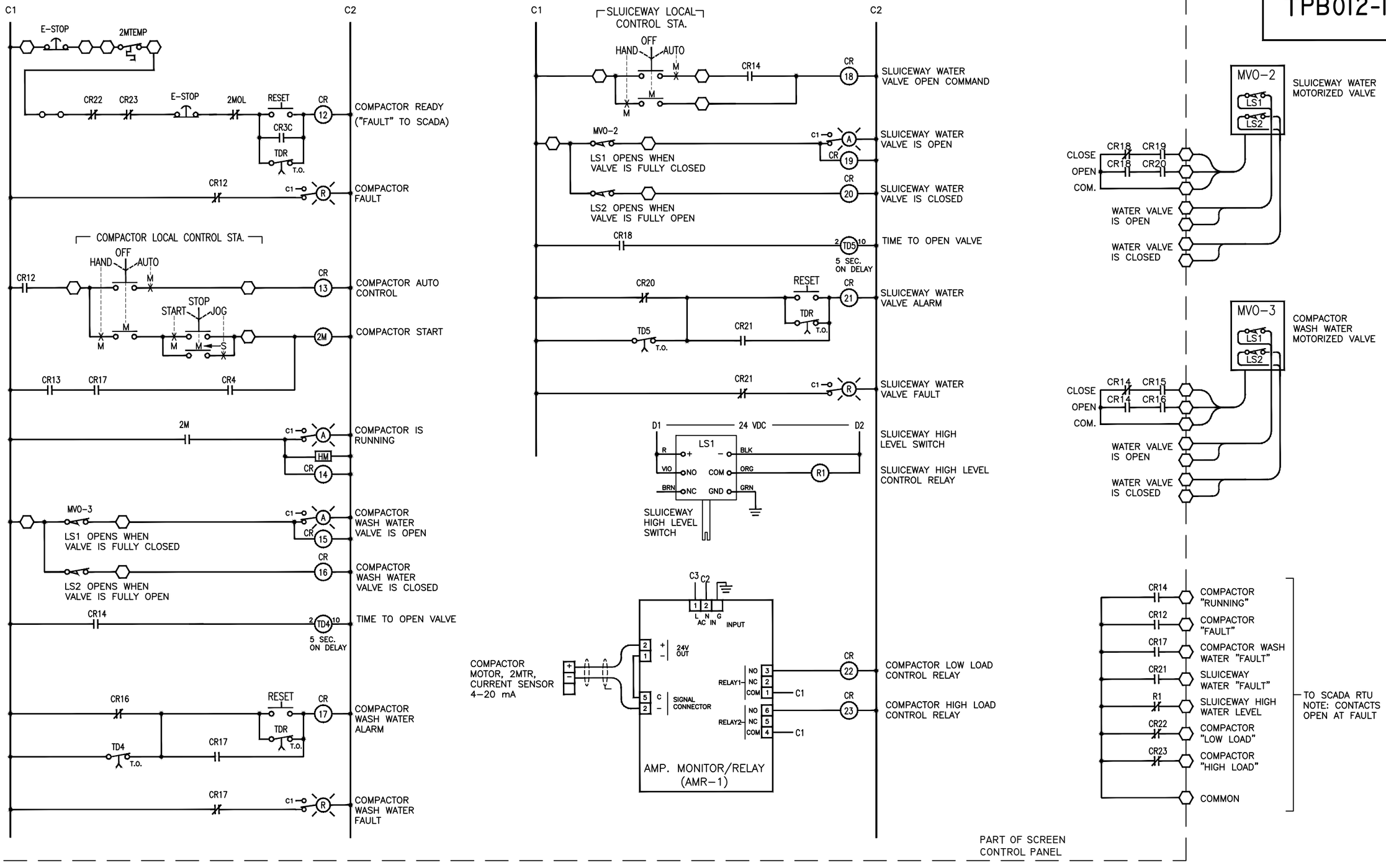
DES: RDK
DRN: RDK
CKD:
DATE: 7/16/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
SCREENING EQUIPMENT CONTROL PANEL (SHT. 3 OF 5)

W.O. 4506
SHEET E45 OF .

TPB012-130



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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 9/20/13

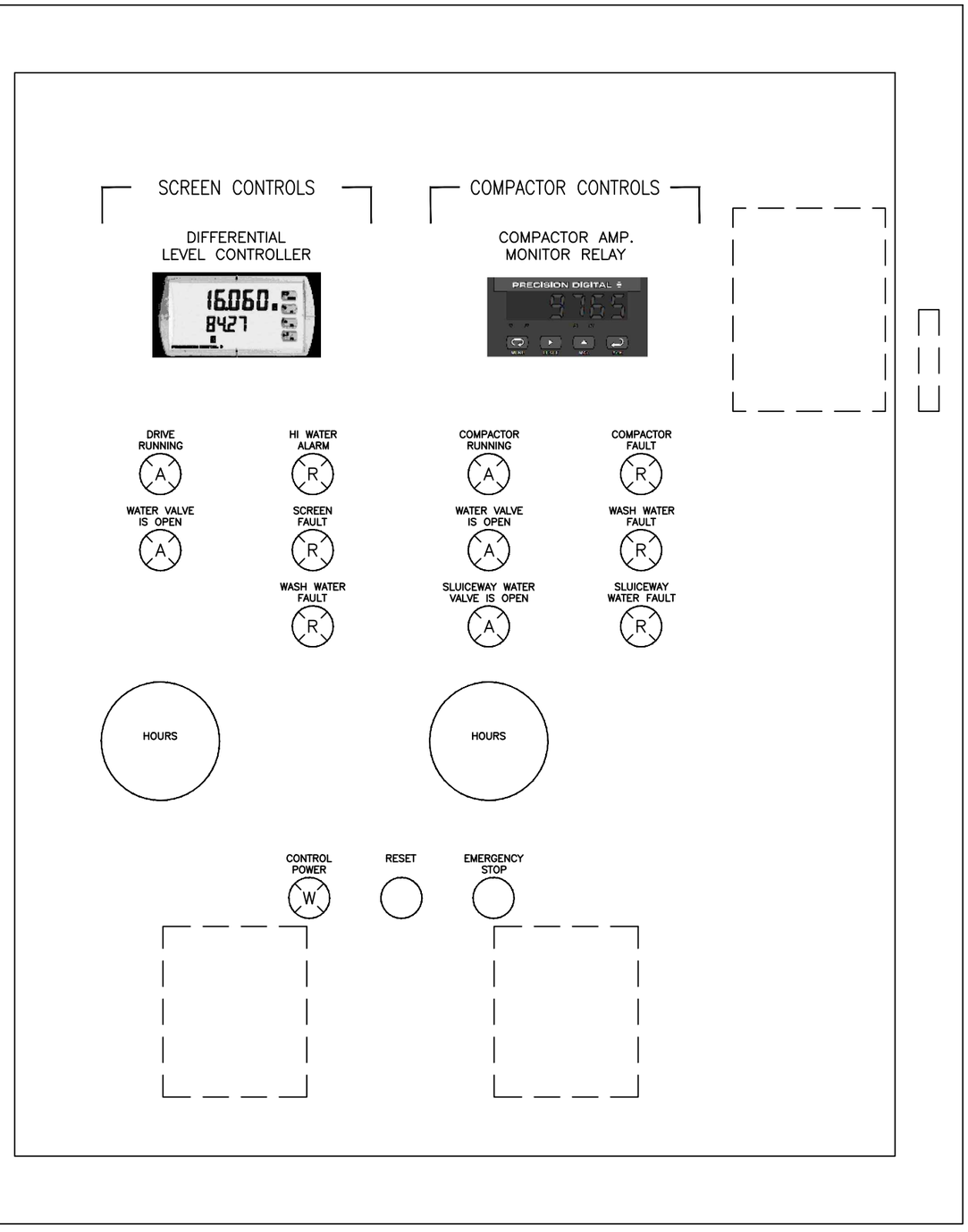
CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
SCREENING EQUIPMENT CONTROL PANEL (SHT. 4 OF 5)

W.O. 4506
SHEET
E46
OF

CONTROL PANEL FRONT DOOR LAYOUT

TPB012-131



BILL OF MATERIALS

QUAN.	SYMBOL	DESCRIPTION
1	CB1	SQUARE D, 3-POLE CIRCUIT BREAKER MODEL FAL34040, 18KAIC,
1	CB1	SQUARE D, FLANGE-MOUNTED CIRCUIT BREAKER OPERATING MECHANISM CLASS 9422, TYPE ARN11
4	CB2, 3, 4 CB6	SQUARE D, 3-POLE CIRCUIT BREAKER MODEL FAL34015
4	CB5	SQUARE D, 3-POLE CIRCUIT BREAKER MODEL FAL34020
4	CB7-CB10	SQUARE D SINGLE POLE CIRCUIT BREAKER MODEL QOU115
1	CPT	SQUARE D CONTROL POWER TRANSFORMER W/ PROPER FUSING
1	VFD	YASKAWA V1000 SERIES WITH PROPER INPUT CONDITIONING, FUSING & HD RATING. MODEL CIMR-VU4A0004BAA, 480V INPUT, 3.4A OUTPUT.
1	PSL-1	PHOENIX CONTACT 24VDC, 0.5A POWER SUPPLY, DIN RAIL MOUNTING.
1	DIPM	PRECISION DIGITAL, INC DUAL ANALOG INPUT PROCESS METER 4 RELAYS & 4-20MA OUTPUT, MODEL PD6060-6R7
24	CRA, CR1-CR23	TELEMECANIQUE, 120VAC, 3PDT, CONTROL RELAYS MODEL RXM3AB2F7 WITH SOCKETS AND HOLD DOWN SPRINGS
1	R1	TELEMECANIQUE, 24VDC, 3PDT, CONTROL RELAYS MODEL RXM3AB2BD WITH SOCKETS AND HOLD DOWN SPRINGS
2	SSR1, SSR2	CROUZET, SOLID STATE CONTROL RELAY, 4-32VDC, SPDT MODEL 84 130 108
4	TD1, TD2 TD4, TD5	SSAC TRU SERIES UNIVERSAL TIME DELAY RELAY MODEL TRU3, 11 PIN, DPDT, WITH SOCKET AND HOLD DOWN SPRINGS
1	TD3	IDEC DUAL TIME RANGE RELAY, MODEL GT3W-A11AF20N 8 PIN, DPDT, WITH SOCKET AND HOLD DOWN SPRINGS
1	2M	SQUARE D NEMA SIZE 1 MOTOR STARTER, CLASS 8536, MODEL SCO3V02S, WITH OVERLOAD HEATER UNITS AS REQ'D
1	CT SENSOR	ENERCORP INSTRUMENTS MODEL SC200-1, SPLIT CORE CURRENT SENSOR, 0-50A IN 3 RANGES, 4-20MA OUTPUT
1	AMR1	PRECISION DIGITAL UNIVERSAL INPUT METER, TRIDENT MODEL PD765-6R2-10, W/ 2 RELAYS & 24V TRANSMITTER SUPPLY
AS REQ'D	TB1	PHOENIX CONTACT UK5N TERMINALS, 600V, 30A RATING. W/ ALUMINUM DIN RAIL
12	PL1-PL12	SQUARE D LED PILOT LIGHTS, CLASS 9001, MODEL SKT-38L W/ PLASTIC DOMED LENS- COLOR AS SCHEDULED, PRESS TO TEST
1	RESET	SQUARE D FULL-GUARD MOMENTARY PUSHBUTTON OPERATOR, CLASS 9001, MODEL SKR1B WITH CONTACTS AS SHOWN
1	E-STOP	SQUARE D RED-MUSHROOM-HEAD MOMENTARY PUSHBUTTON OPERATOR, CLASS 9001, MODEL SKR24R WITH CONTACTS AS SHOWN
1	MAIN ENCLOSURE	HOFFMAN NEMA 12 ENCLOSURE FOR FLANGE MOUNTED DISCONNECT. SIZE CONTINGENT ON FINAL COMPONENT SELECTION.
2	HM	CRAMER 120VAC HOUR METER, NON-RESETABLE, MODEL 635E+S
1	LS1	ULTRASONIC LIQUID LEVEL SWITCH, SINGLE POINT, 24VDC, MAGNETROL MT940-7111E-003
1	TIB1	TRANSFORMER ISOLATED BARRIER RELAY, SINGLE POINT, 120VAC PEPPERL+FUCHS MODEL KFA5-SR2/EX1.W

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 6/12/13

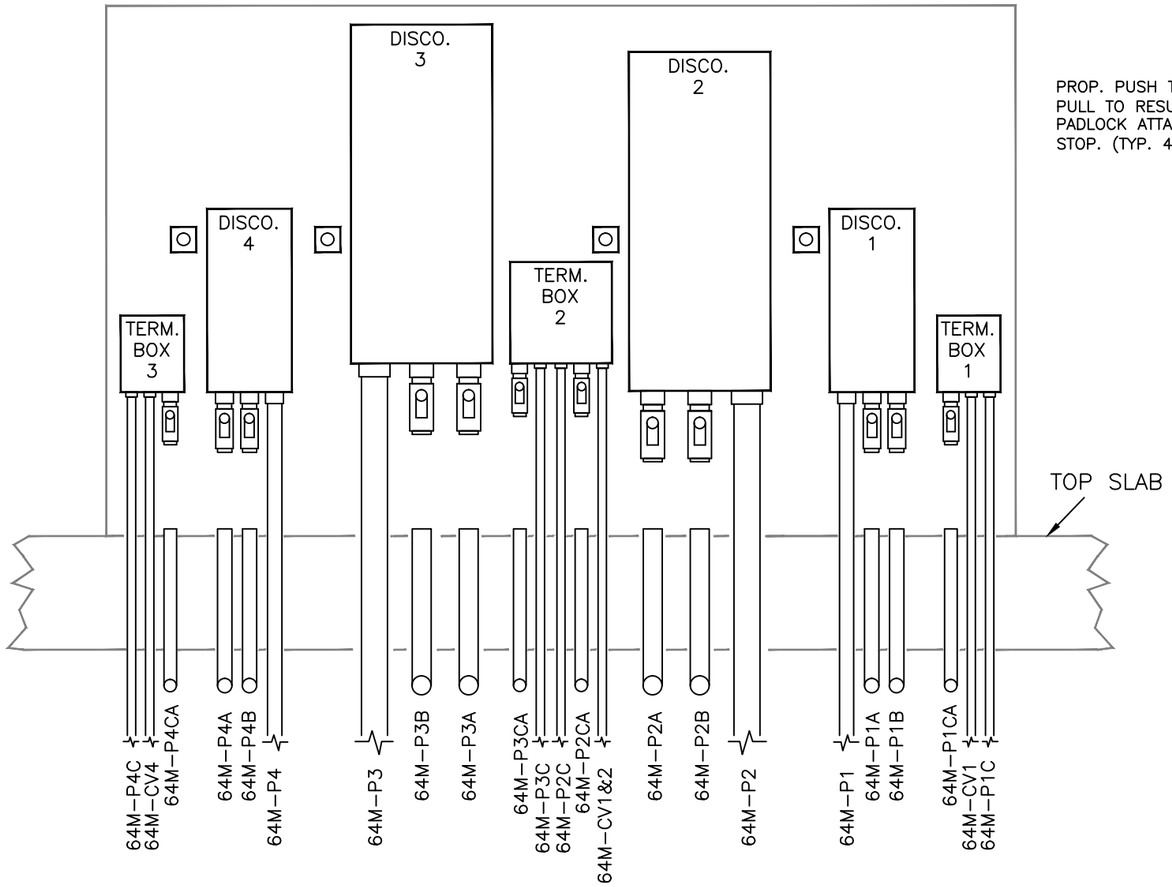
CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
SCREENING EQUIPMENT CONTROL PANEL (SHT. 5 OF 5)

W.O. 4506

SHEET E47 OF

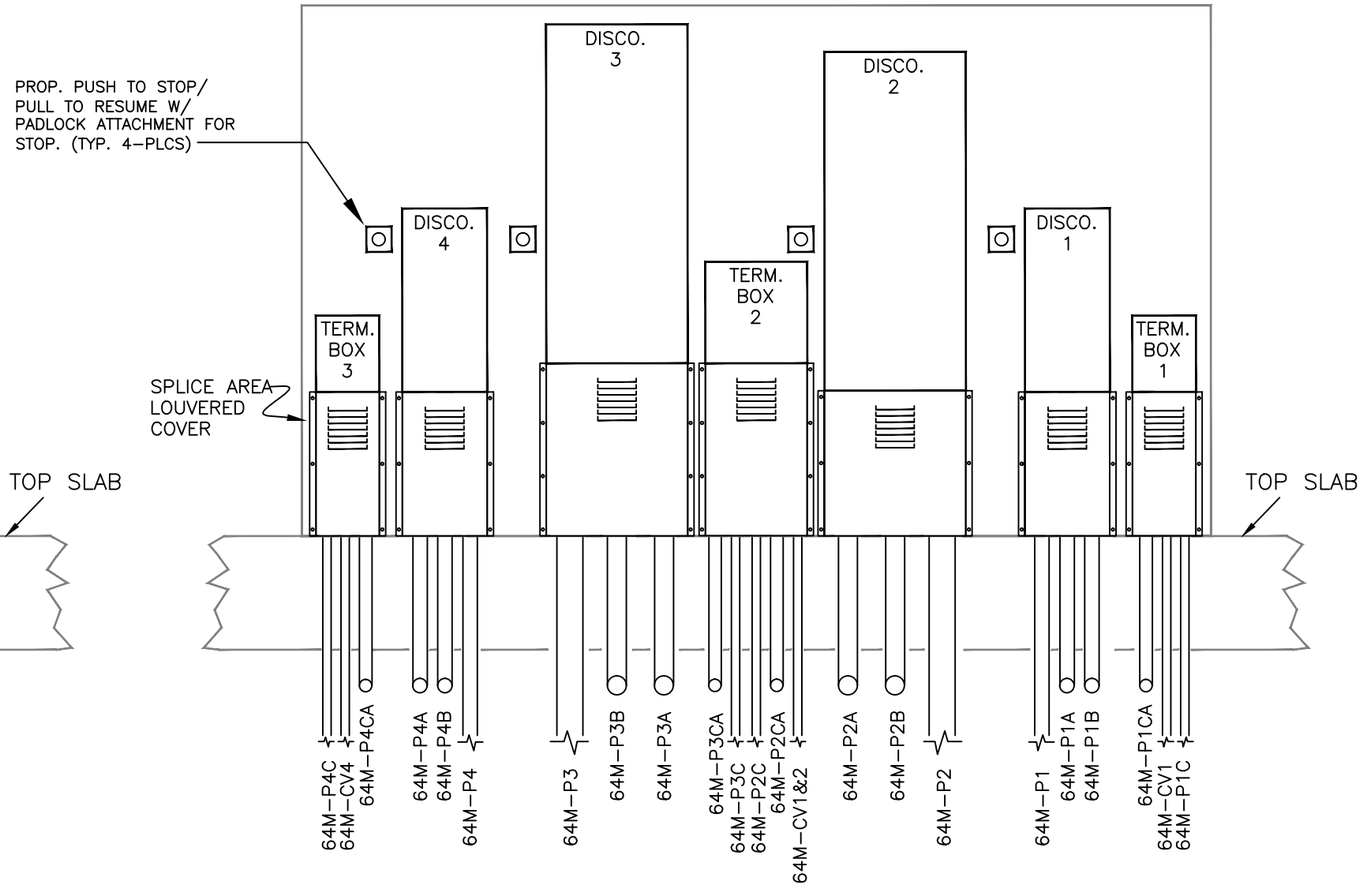
TPB012-132



OUTDOOR DISCONNECTS AND TERMINAL BOXES (COVERS REMOVED TO SHOW SPLICE AREA)

SCALE: 1/2" = 1'

A E4 | E48



OUTDOOR DISCONNECTS AND TERMINAL BOXES (LOUVERED COVERS INSTALLED)

SCALE: 1/2" = 1'

A E4 | E48

NOTE:

1. THE EXISTING SPLICE AREA COVERS MAY BE REUSED IF DETERMINED APPROPRIATE FOR THE CONTRACTED WORK. SUPPLY A NEW COVER, OF THE SAME MATERIAL & WORKMANSHIP AS THE EXISTING, FOR TERM BOX 2 AND ANY COVERS DETERMINED NOT SUITABLE FOR REUSE. ALL COVERS SHALL BE PROVIDED WITH LOUVERS, AS SHOWN.
2. SPLICES SHALL BE MADE UP WITH SPLIT BOLTS AND COVERED WITH INSULATING MATERIAL EQUAL TO INSULATION RATING OF CONDUCTORS. SEAL FITTINGS SHALL BE COPPER–FREE ALUMINUM.

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

No.	DATE	REVISIONS
3		
2		
1		

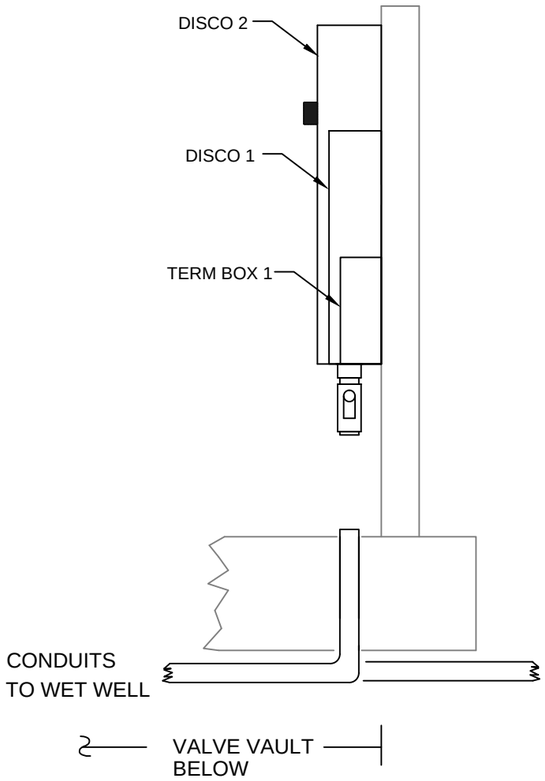
DES: RDK
DRN: RDK
CKD:
DATE: 9/25/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
SEWAGE PUMPS DISCONNECTS AND JUNCTION BOXES

W.O. 4506
SHEET E48 OF

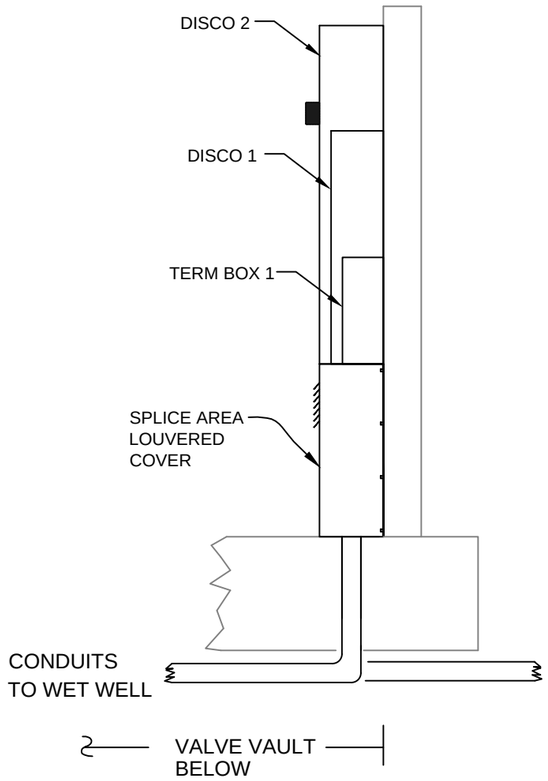
TPB012-133



OUTDOOR DISCONNECTS AND TERMINAL BOXES (COVERS REMOVED TO SHOW SPLICE AREA)

A
E4 | E49

SCALE: 1/2" = 1'



OUTDOOR DISCONNECTS AND TERMINAL BOXES (LOUVERED COVERS INSTALLED)

A
E4 | E49

SCALE: 1/2" = 1'

NOTE:

PACK CONDUITS EXTENDING TO MCC-64 WITH DUCT SEAL COMPOUND.

PLOT

ILLUSTRATOR

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

No.	DATE	REVISIONS
3		
2		
1		

DES: RDK
DRN: RDK
CKD:
DATE: 7/03/13

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
RAW SEWAGE PUMPING STATON IMPROVEMENTS- ELECTRICAL
SEWAGE PUMPS DISCONNECTS AND JUNCTION BOXES

W.O. 4506
SHEET
E49
OF .