The Enclosed Document Is Provided For Your Convenience.

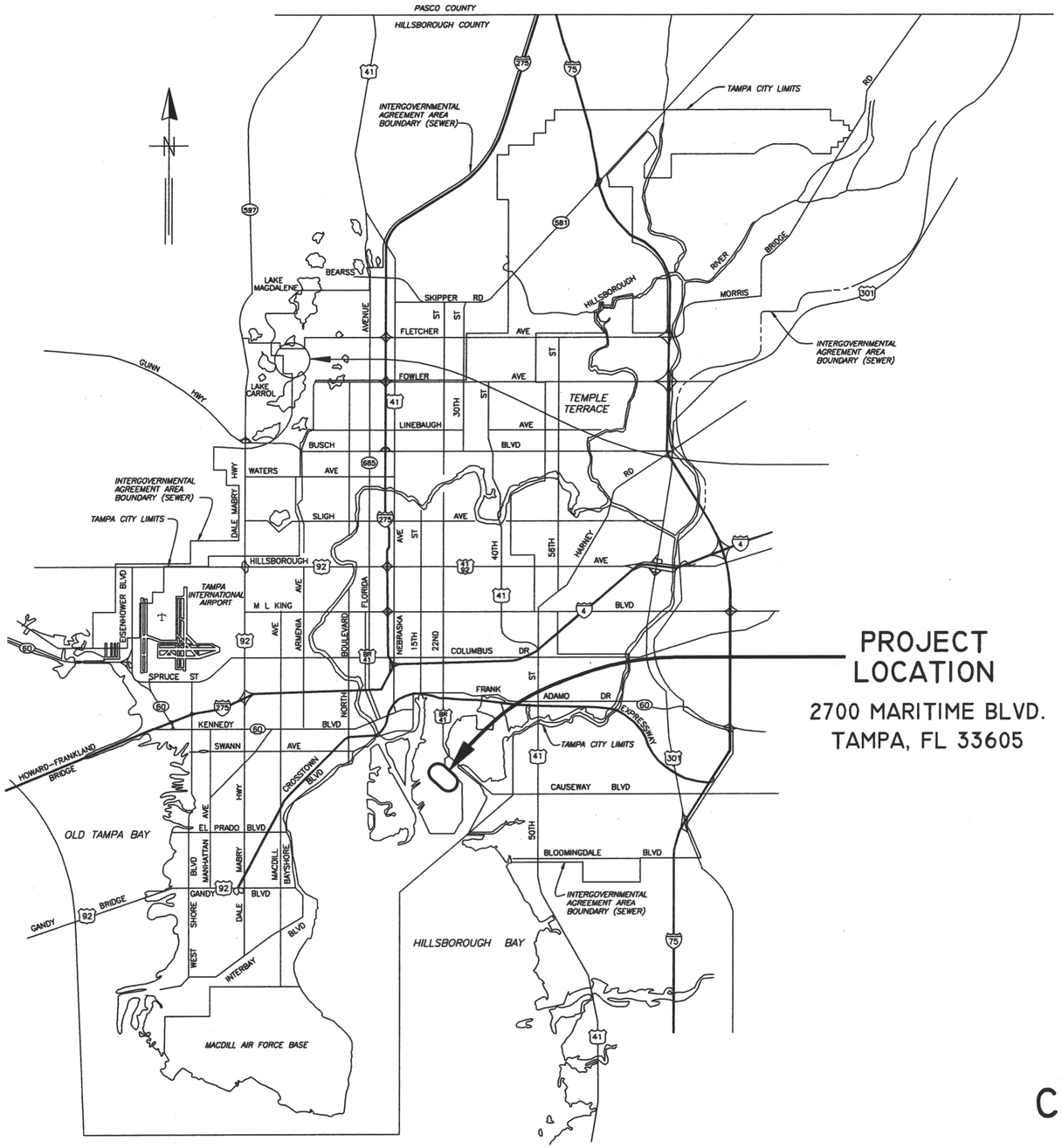
Please Email ALL Questions:

MailTo:ContractAdministration@TampaGov.net

Please Let Us Know If You Plan To Bid

City of Tampa
Contract Administration Department
306 E. Jackson St. #280A4N
Tampa, FL 33602
(813)274-8456

LOCATION MAP



PROJECT LOCATION

2700 MARITIME BLVD.
TAMPA, FL 33605

CITY of TAMPA

WASTEWATER DEPARTMENT

PLANS FOR

HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

SLUDGE CONTROL BUILDING
CONTROL VALVES AND PIPING REPLACEMENT

CONTRACT NO. 14-C-00029

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
PLANNING ENGINEERING PROGRAM MANAGEMENT
107 Hampton Road, Suite 190,
Clearwater, FL 33759
Tel 727-726-0005 Fax 727-726-0009
CA Lic. No: 9086

5/13/2014
PAUL WOOD, P.E. #74193
CIVIL WASTEWATER
LOCKWOOD ANDREWS & NEWNAM, INC.

5/13/2014
GASPAR D. GARCIA, P.E. #76573
ELECTRICAL AND CONTROLS
LOCKWOOD ANDREWS & NEWNAM, INC.

No.	DATE	REVISIONS
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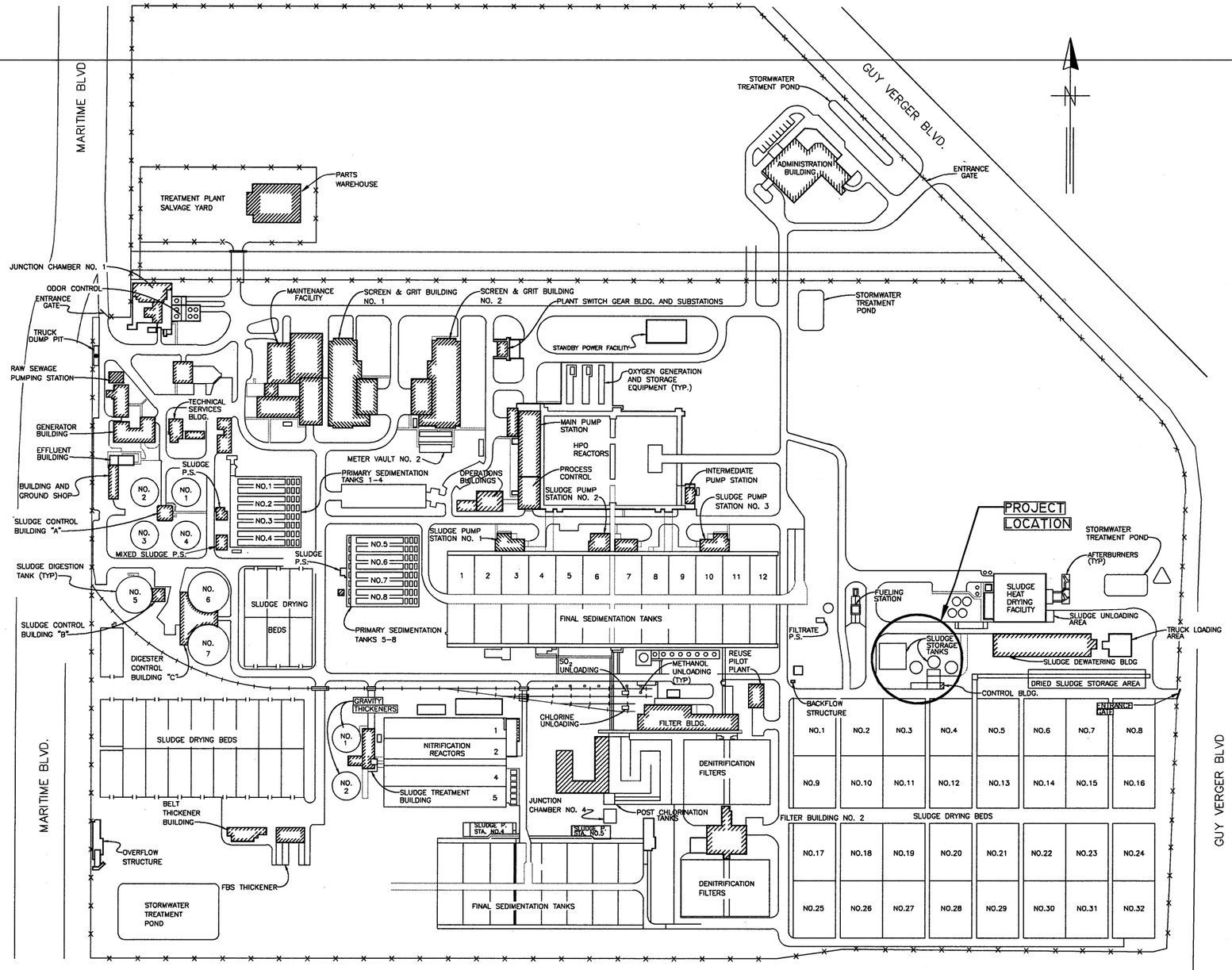
2		
1		

DES: PW
DRN: OL
CKD: PW
DATE: 5/13/14

CITY of TAMPA
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

COVER SHEET

W.O. 4506
SHEET 1



HOWARD F. CURREN WASTEWATER TREATMENT PLANT

SITE PLAN / PROJECT MAP

NOT TO SCALE

INDEX

PAUL WOOD LICENSE No 74193 STATE OF FLORIDA PROFESSIONAL ENGINEER
5/13/2014

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CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
PROJECT LOCATION AND INDEX

W.O.
SHEET 2

GENERAL NOTES

1. THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE CONTRACT ADMINISTRATION DEPARTMENT, WASTEWATER PERSONNEL AND AWTP OPERATIONS. THE FUNCTION OF THE AWTP SHALL NOT BE COMPROMISED AT ANY TIME.
2. CONTRACTOR SHALL VERIFY QUANTITIES OF ALL NECESSARY PIPES, VALVES, REDUCERS, FITTING, SUPPORTS, AND ANY MISCELLANEOUS BRACKETS.
3. SHOP DRAWINGS SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER FOR ALL PROPOSED ITEMS. ALL SUBMITTALS AND SHOP DRAWINGS SHALL BE ORIGINALS OR HIGH QUALITY COPIES (CLEARLY LEGIBLE). NO FAXED SHEET OR POOR QUALITY COPIES WILL BE ACCEPTED FOR SUBMITTAL REVIEW.
4. 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.
5. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY AND THE CONTRACTOR IS SOLELY RESPONSIBLE TO CONSTRUCTION SAFETY. SPECIAL PRECAUTIONS MAY BE REQUIRED IN THE VICINITY OF POWER LINES AND OTHER UTILITIES.
6. THE CONTRACTOR'S WORK FORCE SHALL SECURE THEIR TOOLS, EQUIPMENT AND SUPPLIES DURING ALL PERIODS OF THEIR ABSENCE. IF REQUESTED, THE ENGINEER WITH AWTP PERSONNEL WILL DESIGNATE A CLOSE-BY LOCATION FOR THE CONTRACTOR'S TRAILER(S) AND/OR STORAGE BOX(ES).
7. 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.
8. ANY AREA DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION. THE COST OF ALL RESTORATION SHALL BE BORNE BY THE CONTRACTOR.
9. ANY PLANNED SERVICE INTERRUPTION TO THE NORMAL PLANT OPERATION SHALL BE MADE IN WRITING VIA THE ENGINEER IN SUFFICIENT ADVANCE NOTICE TO ALLOW THE AWTP PERSONNEL TO APPROVE/DISAPPROVE THE REQUEST A MINIMUM OF 2 WEEKS IN ADVANCE. INTERRUPTION SHALL BE KEPT TO THE MINIMUM DURATION AND FREQUENCY POSSIBLE.
10. WHENEVER A METALLIC VALVE, FITTING, SEPARATOR, OR CONNECTING MATERIAL DIFFERS FROM THE STEEL PIPE, A DIELECTRIC UNION OR "DIFFERENT MATERIAL ISOLATION ARRANGEMENT" SHALL BE INSTALLED. CONTRACTOR TO SUBMIT SYSTEM(S) FOR APPROVAL.
11. EXISTING VALVES SHALL ONLY BE CLOSED OR OPENED BY AWTP PERSONNEL. LIKEWISE, ALL AWTP EQUIPMENT SHALL ONLY BE DE-ENERGIZED OR ENERGIZED BY AWTP PERSONNEL.
12. ALL MATERIALS USED IN THE CONSTRUCTION OF THIS PROJECT SHALL BE NEW AND UNUSED AND SHALL CONFORM TO THE LATEST LOCAL JURISDICTION STANDARDS, UNLESS OTHERWISE NOTED.
13. ALL HARDWARE, UNLESS OTHERWISE NOTED, SHALL BE TYPE 316 STAINLESS STEEL.
14. THE CONTRACTOR SHALL UNCOVER AND VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITY CONNECTION POINTS PRIOR TO SCHEDULING CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY THE ENGINEER AND OWNER OF ANY DISCREPANCIES FOUND.
15. THE PROPOSED DIMENSIONS, ELEVATIONS AND LAYOUTS ARE DERIVED FROM EARLIER PLAN SETS AND VISUAL OBSERVATIONS. THE CONTRACTOR SHALL VERIFY THE DIMENSIONS, DETAILS AND SIZED PRIOR TO CONSTRUCTION AND NOTIFY THE ENGINEER OF SIGNIFICANT DISCREPANCIES FROM THE PLANS.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF EXISTING STRUCTURES AND FACILITIES AND SHALL MAKE REPAIRS OR INSTALL NEW AT HIS OWN EXPENSE ANY DAMAGE CAUSED BY HIM, WITH NO COST TO THE CITY.
17. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE A REVIEW OF THE SITE TO DETERMINE EXISTING CONDITIONS AND ANYTHING NOT SHOWN ON THESE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
18. CONTRACTOR SHALL PRESSURE TEST THE LINES AFTER THE WORK HAS BEEN COMPLETED. TESTING IS TO BE DONE BY OPERATING EACH PUMP FOR A MINIMUM OF 1-HOUR.

SUMMARY OF WORK

THIS PROJECT INVOLVES THE REMOVAL AND REPLACEMENT OF 60 VALVES ASSOCIATED WITH SLUDGE PIPING FOR DIGESTED SLUDGE. 21 OF THE VALVES ARE MANUALLY OPERATED, 35 OF THE VALVES ARE CURRENTLY MOTOR OPERATED VALVES (MOVs), QUARTER TURN, WITH OPEN/CLOSE ACTUATION, ONE VALVE IS CURRENTLY MOTOR OPERATED QUARTER TURN VALVE FOR MODULATION SERVICE, AND THREE VALVES ARE CURRENTLY PNEUMATICALLY OPERATED QUARTER TURN VALVES FOR OPEN/CLOSE SERVICE. ALL EXISTING VALVES WILL BE REMOVED. ALL EXISTING MOTOR OPERATORS WILL BE DISCONNECTED FROM ELECTRICAL AND INSTRUMENT SERVICE AND REMOVED. ALL EXISTING NON-ACTUATED VALVES ARE TO BE REPLACED. ALL EXISTING MOVs AND MOTOR OPERATORS ARE TO BE REPLACED WITH NEW MOVs AND MOTOR OPERATORS. EXISTING POWER AND INSTRUMENT CONNECTIONS SHALL BE RECONNECTED TO THE NEW ACTUATORS. ONE EXISTING MOTOR OPERATED MODULATING VALVE IS TO BE REPLACED WITH NEW VALVE AND MOTOR DRIVEN ACTUATOR FOR MODULATING SERVICE. THE THREE EXISTING PNEUMATICALLY OPERATED VALVES ARE TO BE REPLACED WITH NEW VALVES AND MOTOR DRIVEN ACTUATORS FOR OPEN/CLOSE SERVICE. NEW POWER SERVICE SHALL BE RUN TO THE THREE NEW VALVES. EXISTING 4-20mA INSTRUMENT CONNECTIONS PREVIOUSLY USED FOR OPERATING PNEUMATICALLY CONTROLLED VALVES WILL BE RECONNECTED TO THE NEW MOTOR OPERATORS FOR OPEN/CLOSE SERVICE.

PIPING REPLACEMENT WILL ALSO BE REQUIRED ON THE TWO EXISTING POLYMER TANKS.

SEQUENCE OF CONSTRUCTION

THE CONTRACTOR MUST COORDINATE WITH THE WASTEWATER OPERATIONS PERSONNEL A MINIMUM OF TWO WEEKS PRIOR TO DEMOLITION AND REPLACEMENT WORK. THE CITY WILL COORDINATE WITH THE CONTRACTOR AS TO THE POSSIBILITY OF TAKING DOWN MULTIPLE STORAGE TANKS AT A TIME, BUT IT SHOULD BE ASSUMED THAT ONLY ONE STORAGE TANK MAY BE TAKEN DOWN AT ANY PARTICULAR TIME. THE CITY DESIRES THAT THE WORK ASSOCIATED WITH STORAGE TANKS 1, 2, AND 3 BE COMPLETED IN ITS ENTIRETY FIRST BEFORE COMMENCING WORK ON STORAGE TANKS 4 AND 5.

PRIOR TO TURNING OVER ANY WORK TO THE CITY, ALL PIPING AND VALVE SYSTEMS SHALL BE PRESSURE TESTED, ALL ELECTRICAL AND INSTRUMENTATION SYSTEMS SHALL BE CHECKED AND FUNCTIONALITY CONFIRMED.

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 PROPERTY THAT MAY HAVE BEEN DAMAGED DURING CONSTRUCTION TO ITS ORIGINAL CONDITION OR BETTER.

PAUL WOOD
LICENSE
No 74193
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
5/13/2014

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CITY of TAMPA
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

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SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
GENERAL NOTES

W.O.
SHEET 3

ITEM	ITEM DESCRIPTION	VALVE SIZE	VALVE OPERATION	VALVE OPERATOR TYPE	DEMOLITION	INSTALLATION
1	CB-S-001	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-001 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-001 AND ASSOCIATED ACTUATOR
2	CB-S-002	6"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-002 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-002 AND ASSOCIATED ACTUATOR
3	CB-S-003	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-003 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-003 AND ASSOCIATED ACTUATOR
4	CB-S-004	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-004 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-004 AND ASSOCIATED ACTUATOR
5	CB-S-005	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-005 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-005 AND ASSOCIATED ACTUATOR
6	CB-S-006	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-006 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-006 AND ASSOCIATED ACTUATOR
7	CB-S-007	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-007 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-007 AND ASSOCIATED ACTUATOR
8	CB-S-008	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-008 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-008 AND ASSOCIATED ACTUATOR
9	CB-S-009	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-009 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-009 AND ASSOCIATED ACTUATOR
10	CB-S-010	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-010 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-010 AND ASSOCIATED ACTUATOR
11	CB-S-011	6"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-011 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-011 AND ASSOCIATED ACTUATOR
12	CB-S-012	6"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-012 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-012 AND ASSOCIATED ACTUATOR
13	CB-S-013	6"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-013 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-013 AND ASSOCIATED ACTUATOR
14	CB-S-014	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-014 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-014 AND ASSOCIATED ACTUATOR
15	CB-S-015	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-015 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-015 AND ASSOCIATED ACTUATOR
16	CB-S-016	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-016 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-016 AND ASSOCIATED ACTUATOR
17	CB-S-017	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-017 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-017 AND ASSOCIATED ACTUATOR
18	CB-S-018	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-018 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-018 AND ASSOCIATED ACTUATOR
19	CB-S-019	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-019 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-019 AND ASSOCIATED ACTUATOR
20	CB-S-020	12"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-020 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-020 AND ASSOCIATED ACTUATOR
21	CB-S-021	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-021 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-021 AND ASSOCIATED ACTUATOR
22	CB-S-022	12"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-022 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-022 AND ASSOCIATED ACTUATOR
23	CB-S-023	12"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-023 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-023 AND ASSOCIATED ACTUATOR
24	CB-S-024	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-024 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-024 AND ASSOCIATED ACTUATOR
25	CB-S-025	12"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-025 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-025 AND ASSOCIATED ACTUATOR
26	CB-S-026	6"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-026 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-026 AND ASSOCIATED ACTUATOR
27	CB-S-027	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-027 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-027 AND ASSOCIATED ACTUATOR
28	CB-S-028	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-028 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-028 AND ASSOCIATED ACTUATOR
29	CB-S-029	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-029 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-029 AND ASSOCIATED ACTUATOR
30	CB-S-030	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-030 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-030 AND ASSOCIATED ACTUATOR
31	CB-S-031	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-031 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-031 AND ASSOCIATED ACTUATOR
32	CB-S-032	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-032 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-032 AND ASSOCIATED ACTUATOR
33	CB-S-033	6"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-033 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-033 AND ASSOCIATED ACTUATOR
34	CB-S-034	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-034 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-034 AND ASSOCIATED ACTUATOR
35	CB-S-035	8"	OPEN/CLOSE	MOTOR	REMOVE VALVE CB-S-035 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-035 AND ASSOCIATED ACTUATOR
36	CB-S-036	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE CB-S-036	INSTALL NEW VALVE CB-S-036
37	CB-S-040	8"	THROTTLING	MOTOR	REMOVE VALVE CB-S-040 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-S-040 AND ASSOCIATED ACTUATOR
38	FE-200-BLV-1	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-200-BLV-1	INSTALL NEW VALVE FE-200-BLV-1
39	FE-200-BLV-2	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-200-BLV-2	INSTALL NEW VALVE FE-200-BLV-2
40	FE-200-BPV-1	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-200-BPV-1	INSTALL NEW VALVE FE-200-BPV-1
41	FE-201-BLV-1	6"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-201-BLV-1	INSTALL NEW VALVE FE-201-BLV-1
42	FE-201-BLV-2	6"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-201-BLV-2	INSTALL NEW VALVE FE-201-BLV-2
43	FE-201-BPV-1	6"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-201-BPV-1	INSTALL NEW VALVE FE-201-BPV-1
44	FE-202-BLV-1	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-202-BLV-1	INSTALL NEW VALVE FE-202-BLV-1
45	FE-202-BLV-2	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-202-BLV-2	INSTALL NEW VALVE FE-202-BLV-2
46	FE-202-BPV-1	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-202-BPV-1	INSTALL NEW VALVE FE-202-BPV-1
47	FE-203-BLV-1	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-203-BLV-1	INSTALL NEW VALVE FE-203-BLV-1
48	FE-203-BLV-2	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-203-BLV-2	INSTALL NEW VALVE FE-203-BLV-2
49	FE-203-BPV-1	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-203-BPV-1	INSTALL NEW VALVE FE-203-BPV-1
50	FE-204-BLV-1	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-204-BLV-1	INSTALL NEW VALVE FE-204-BLV-1
51	FE-204-BLV-2	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-204-BLV-2	INSTALL NEW VALVE FE-204-BLV-2
52	FE-204-BPV-1	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE FE-204-BPV-1	INSTALL NEW VALVE FE-204-BPV-1
53	CB-STP-1	8"	OPEN/CLOSE	EXIST. AIR ACTUATED	REMOVE VALVE CB-STP-1 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-STP-1 ACTUATOR
54	CB-STP-2	8"	OPEN/CLOSE	EXIST. AIR ACTUATED	REMOVE VALVE CB-STP-2 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE CB-STP-2 ACTUATOR
55	BL-01	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE BL-01	INSTALL NEW VALVE BL-01
56	BL-02	8"	OPEN/CLOSE	MANUAL	REMOVE VALVE BL-02	INSTALL NEW VALVE BL-02
57	DR-01	10"	OPEN/CLOSE	MANUAL	REMOVE VALVE DR-01	INSTALL NEW VALVE DR-01
58	DR-02	10"	OPEN/CLOSE	MANUAL	REMOVE VALVE DR-02	INSTALL NEW VALVE DR-02
59	DR-03	10"	OPEN/CLOSE	MANUAL	REMOVE VALVE DR-03	INSTALL NEW VALVE DR-03
60	ISO-01	12"	OPEN/CLOSE	EXIST. AIR ACTUATED	REMOVE VALVE ISO-01 AND ASSOCIATED ACTUATOR	INSTALL NEW VALVE ISO-01 ACTUATOR

GENERAL NOTES:

1. EXISTING AIR ACTUATORS ARE TO BE REPLACED WITH MOTOR ACTUATORS.
2. EXISTING VALVES WITH CHAIN WHEEL OPERATORS ARE TO BE REPLACED IN KIND.

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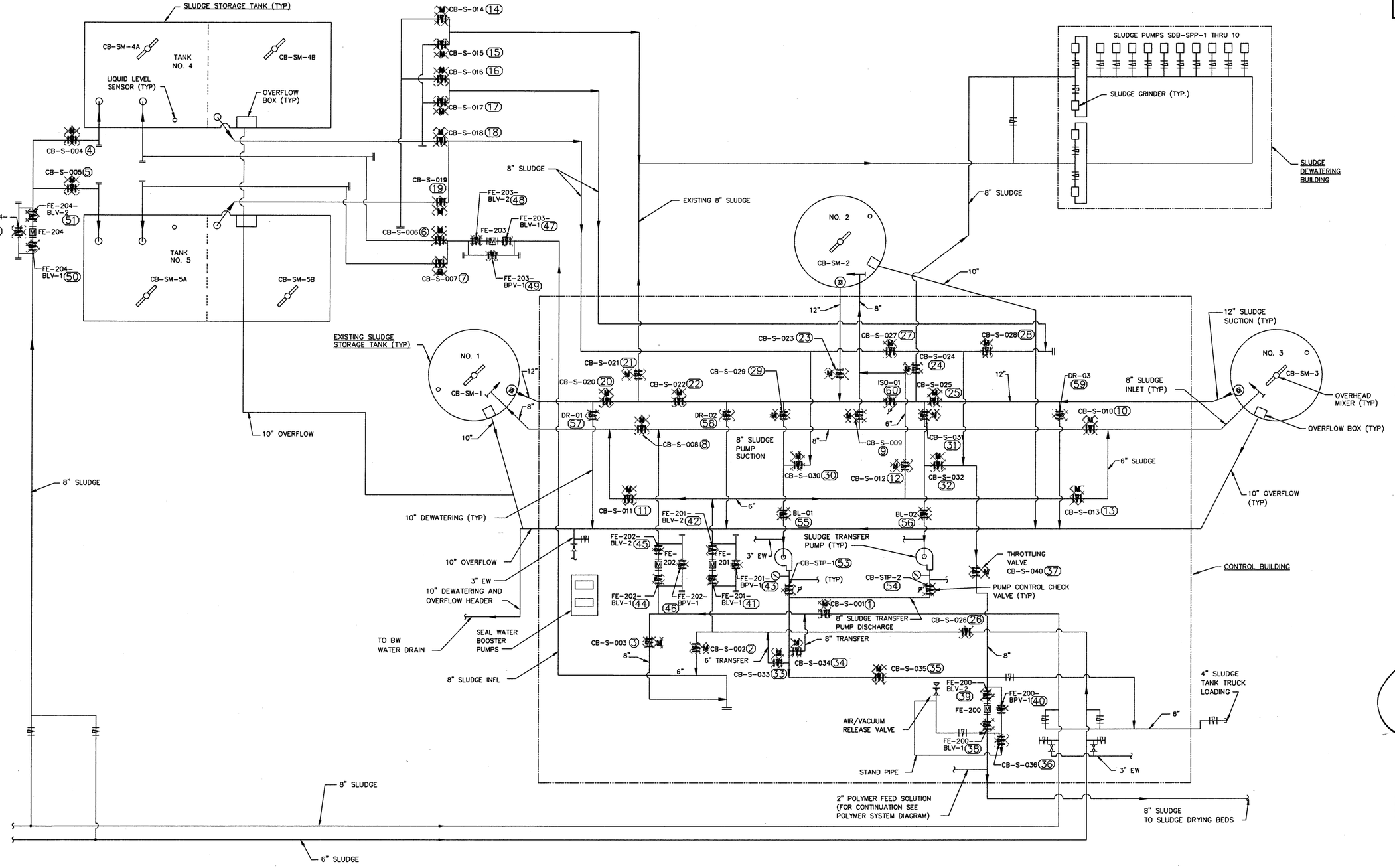
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
VALVE SCHEDULE

W.O.
SHEET 4



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NTS

LEGEND:

INDICATES VALVE TO BE REMOVED

NOTES:

1. P INDICATES AN EXISTING PNEUMATIC VALVE OPERATOR.
2. M INDICATES AN EXISTING MOTOR VALVE OPERATOR.

KEYED NOTES:

FOR ALL KEYED NOTES REFER TO SHEET 4.

EXISTING PLAN VIEW SCHEMATIC

NTS

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SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
DEMOLITION PLAN VIEW SCHEMATIC

W.O.

SHEET 5

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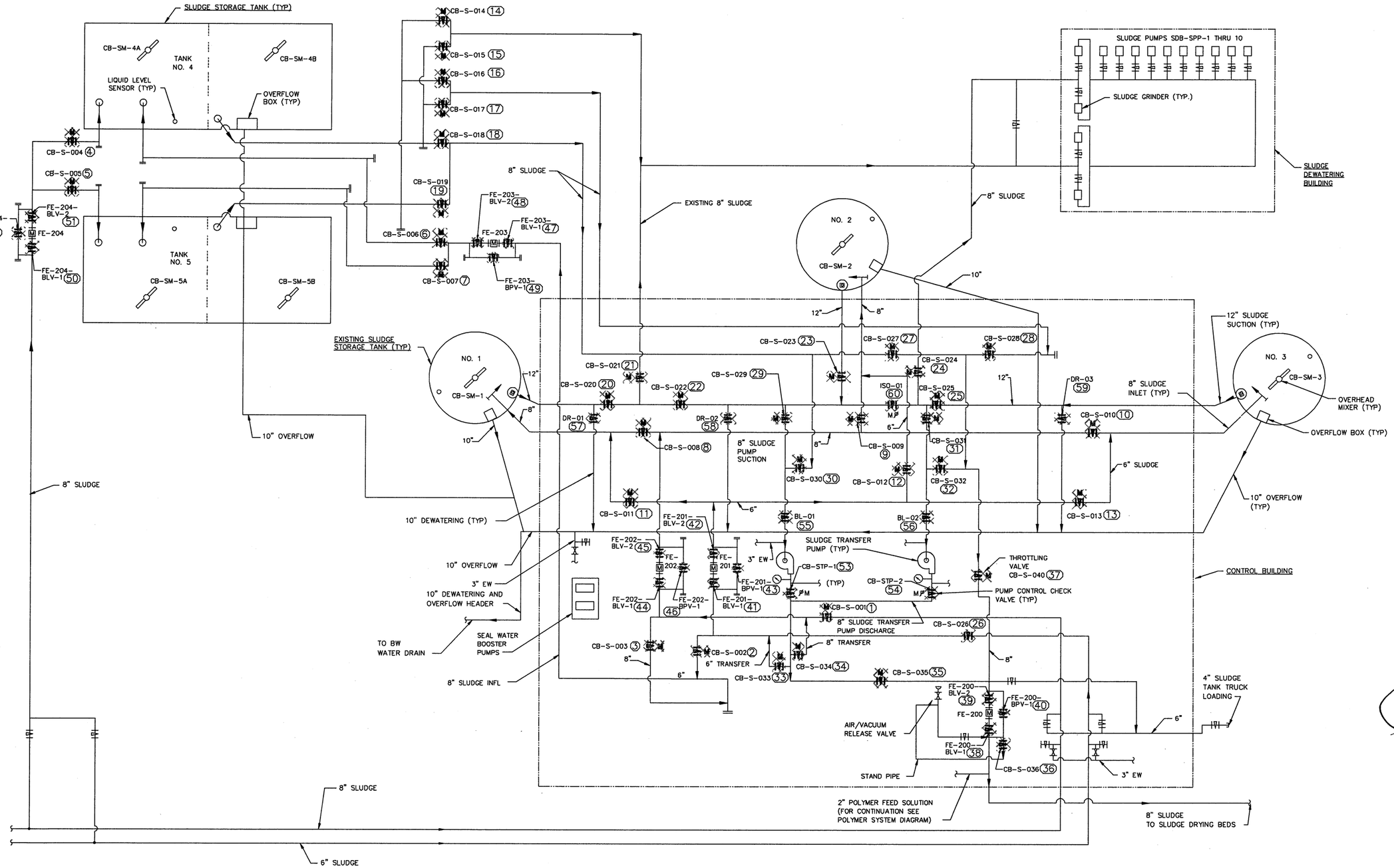

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NTS

LEGEND:

INDICATES VALVE TO BE REMOVED AND REPLACED

NOTES:

1. MP INDICATES REPLACING AN EXISTING PNEUMATIC VALVE OPERATOR WITH A MOTOR OPERATOR.
2. M INDICATED MOTOR VALVE OPERATOR. ALL EXISTING MOTOR VALVE OPERATORS ARE TO BE REPLACED IN KIND.

KEYED NOTES:

FOR ALL KEYED NOTES REFER TO SHEET 4.

PROPOSED PLAN VIEW SCHEMATIC

NTS

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PROPOSED PLAN VIEW SCHEMATIC

W.O.
SHEET 6

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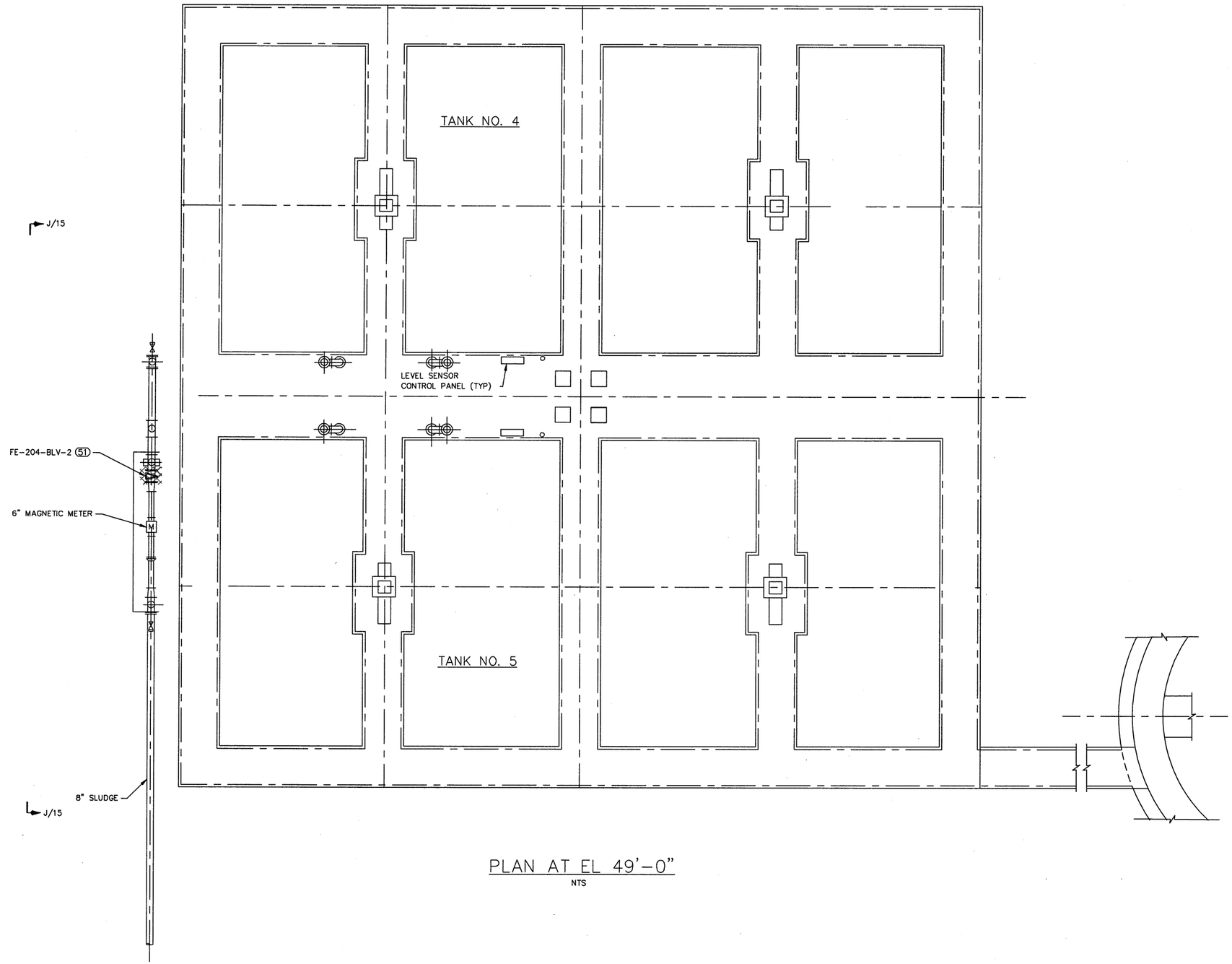

PLAN AT EL 49'-0"
NTS

N
NTS

LEGEND:

INDICATES VALVE TO BE REMOVED AND REPLACED

KEYED NOTES:
FOR ALL KEYED NOTES REFER TO SHEET 4.

PAUL WOOD LICENSE No 74193 STATE OF FLORIDA PROFESSIONAL ENGINEER
5/13/2014

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Tel 727-726-0005 Fax 727-726-0009
CA Lic. No: 9086

No.	DATE	REVISIONS
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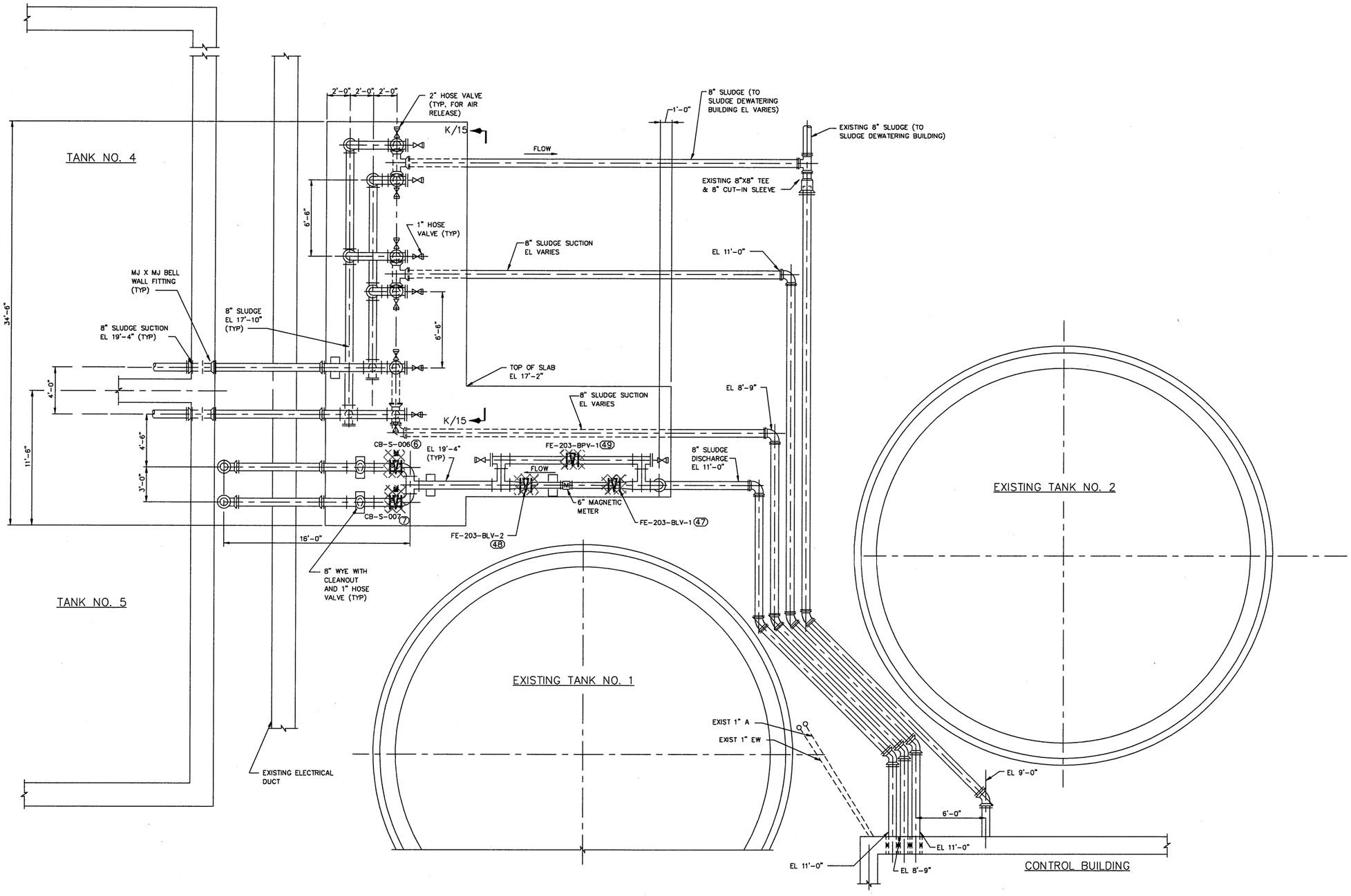
DES: PW
DRN: OL
CKD: PW
DATE: 5/13/14

CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
PROPOSED SITE PLAN AT EL. 49'-0"

W.O.
SHEET 7



PLAN AT EL 21'-0"
NTS

N
NTS

LEGEND:

INDICATES VALVE TO BE REMOVED AND REPLACED

KEYED NOTES:

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CITY of TAMPA
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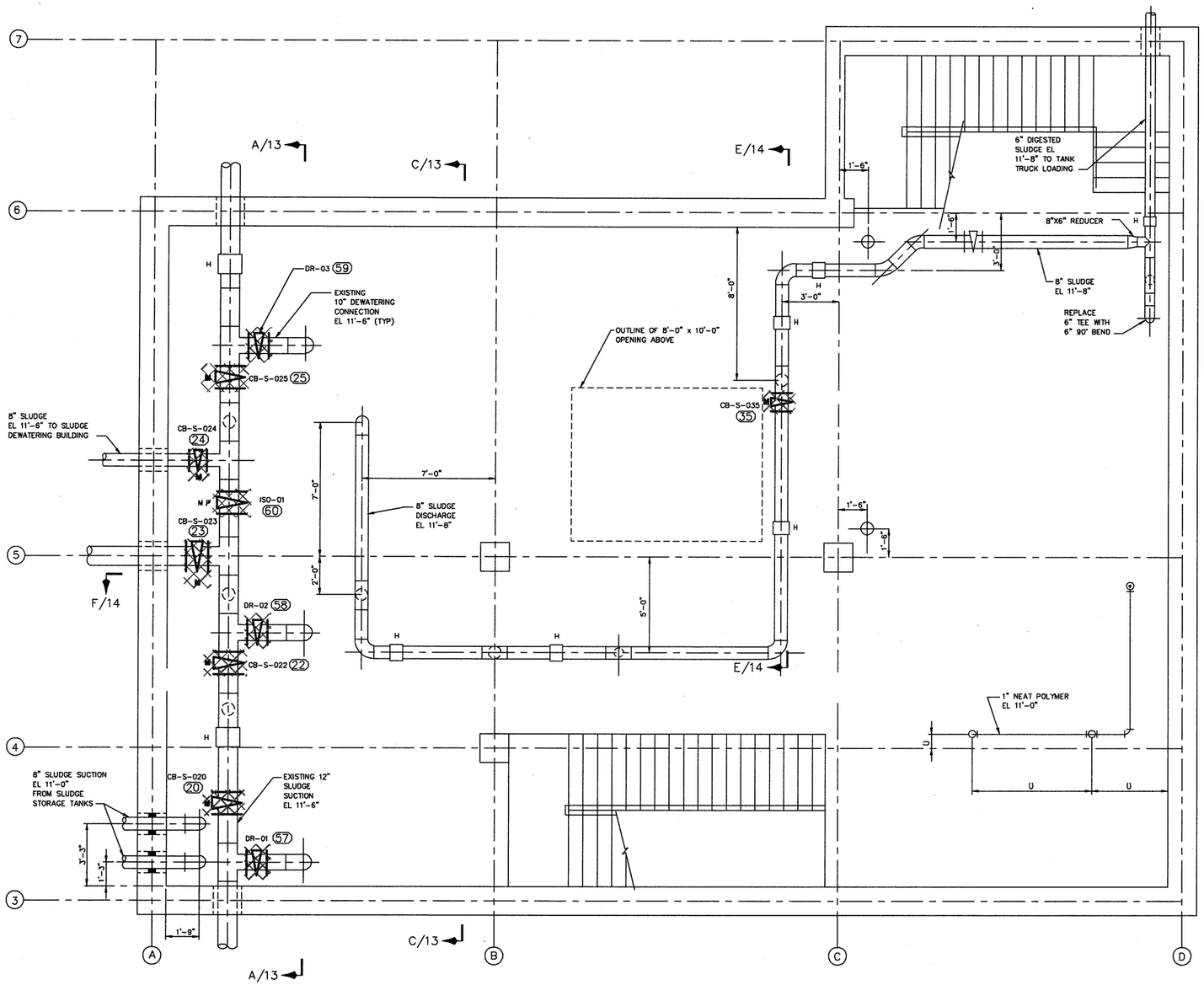
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
PROPOSED SITE PLAN AT EL. 21'-0"

W.O.
SHEET 8



PLAN AT EL 11'-8"

NTS

N

NTS

LEGEND:

INDICATES VALVE TO BE REMOVED AND REPLACED

NOTES:

1. M P INDICATES REPLACING AN EXISTING PNEUMATIC VALVE OPERATOR WITH A MOTOR OPERATOR.

KEYED NOTES:

FOR ALL KEYED NOTES REFER TO SHEET 4.

PAUL WOOD LICENSE No 74193 STATE OF FLORIDA PROFESSIONAL ENGINEER 5/13/2014

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CITY of TAMPA
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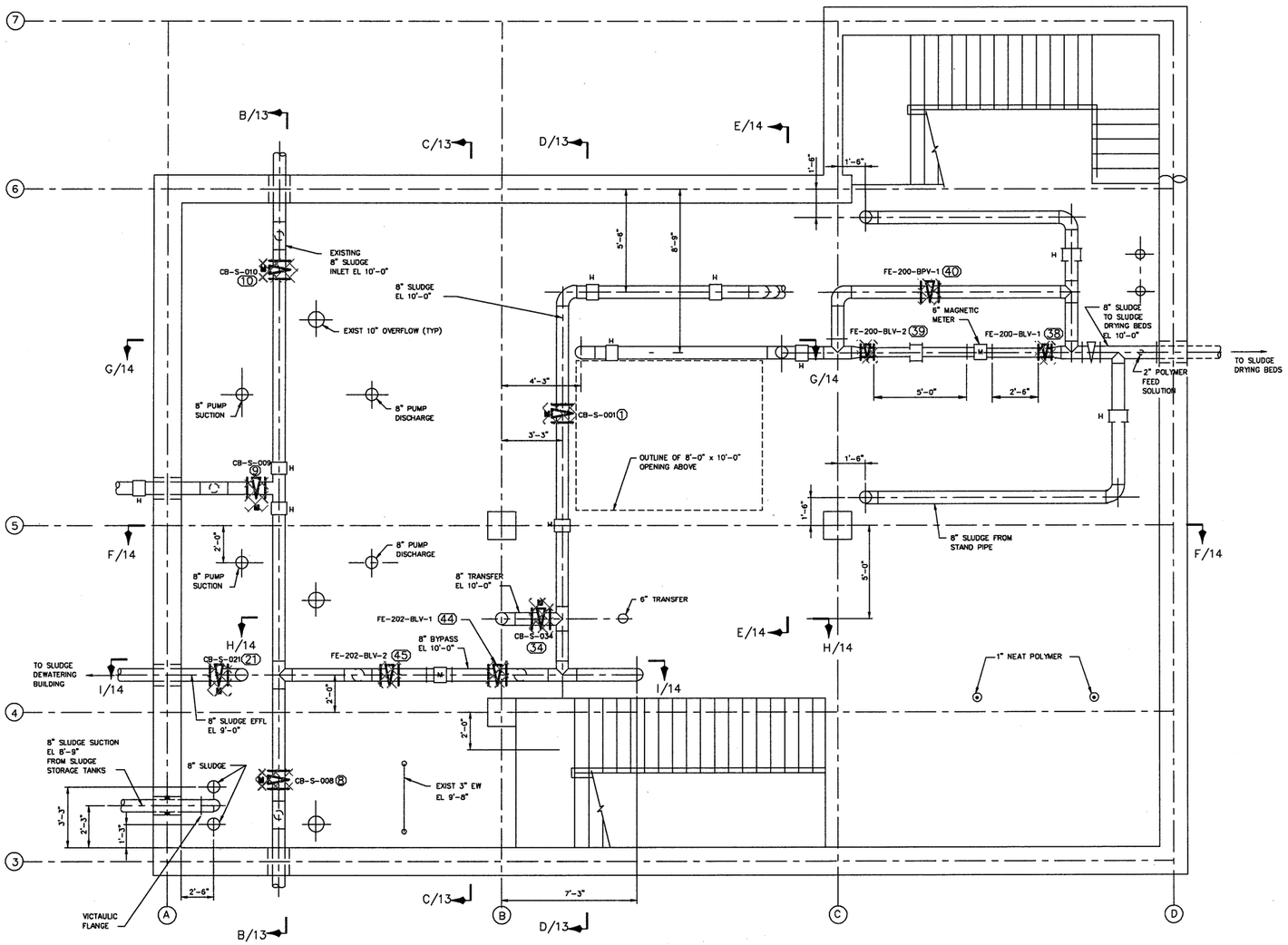
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
PROPOSED SITE PLAN AT EL. 11'-8"

W.O.
SHEET 9



PLAN AT EL 10'-0"

NTS

NTS

LEGEND:

INDICATES VALVE TO BE REMOVED AND REPLACED

KEYED NOTES:

FOR ALL KEYED NOTES REFER TO SHEET 4.

PAUL WOOD
LICENSE
No 74193
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
5/13/2014

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HOWARD F. CURREN
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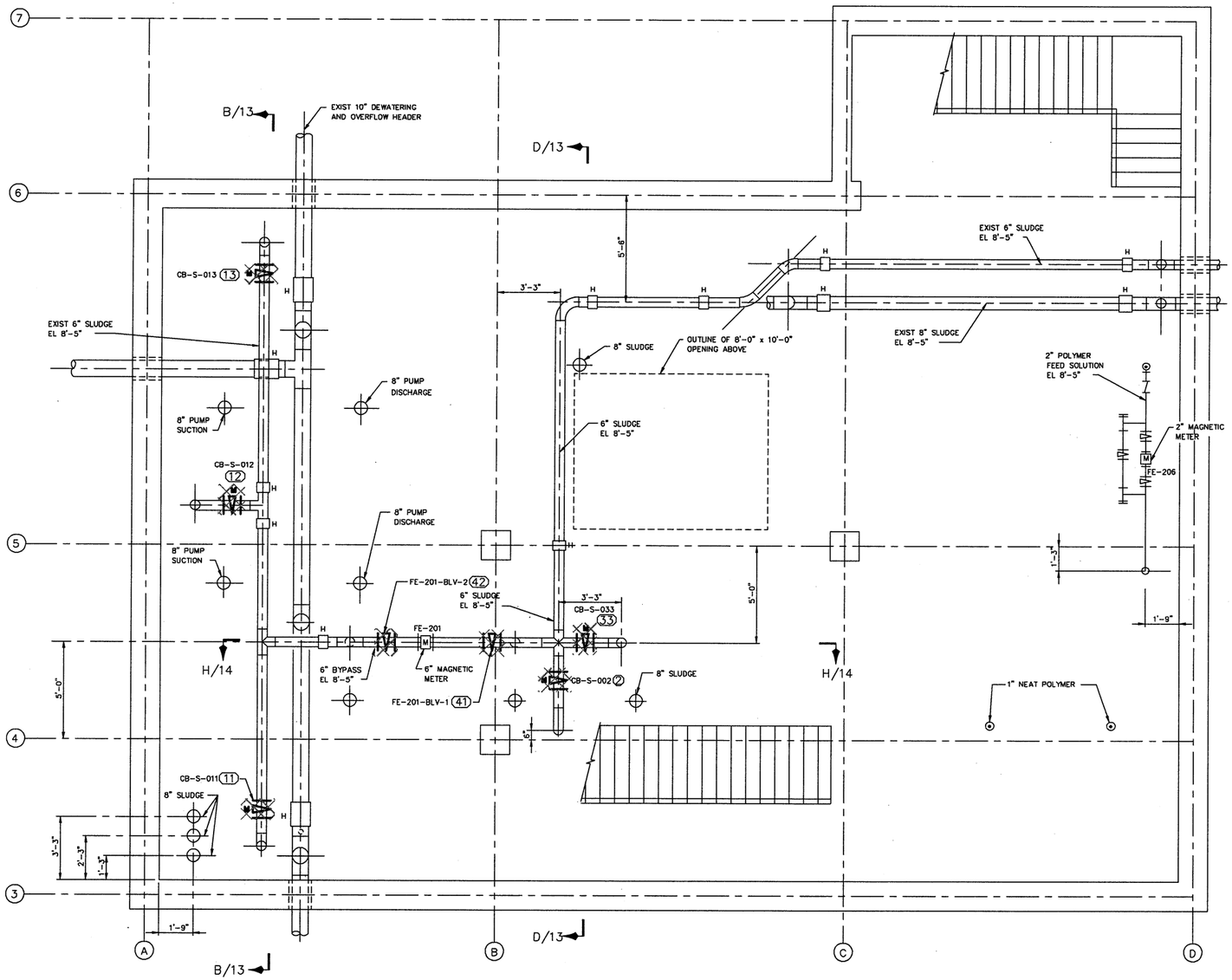
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
PROPOSED SITE PLAN AT EL. 10'-0"

W.O.

SHEET
10



PLAN AT EL 8'-5"

NTS

NTS

LEGEND:

INDICATES VALVE TO BE REMOVED AND REPLACED

KEYED NOTES:

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PAUL WOOD LICENSE No 74193 STATE OF FLORIDA PROFESSIONAL ENGINEER 5/13/2014

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CITY of TAMPA
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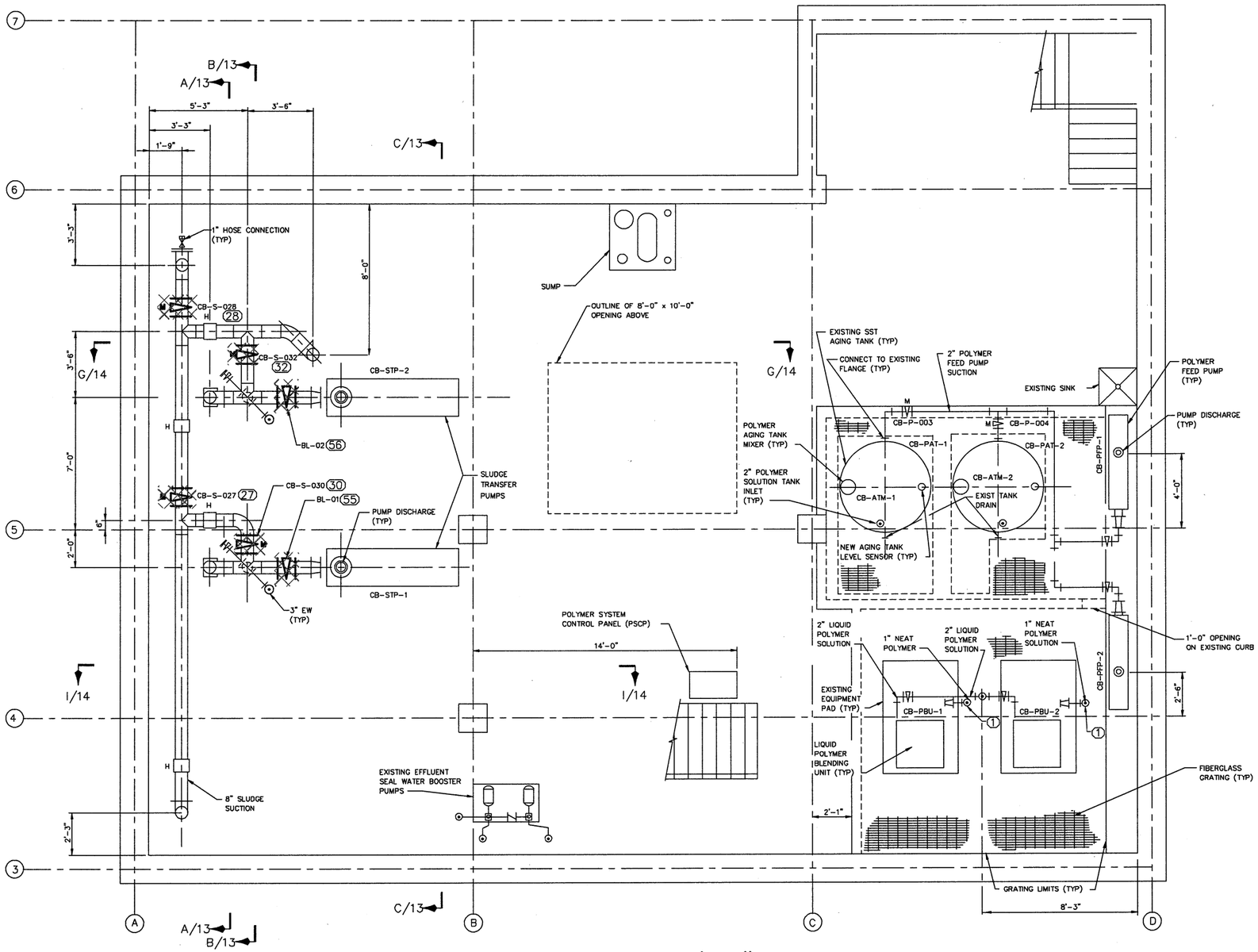
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
PROPOSED SITE PLAN AT EL. 8'-5"

W.O.
SHEET 11



PLAN AT EL 0'-3"

NTS

NTS

LEGEND:

INDICATES VALVE TO BE REMOVED AND REPLACED

KEYED NOTES:

1. REFER TO SECTION A ON SHEET 16 FOR POLYMER PIPING TO TO BE REPLACED.
2. FOR KEYED NOTES 27, 28, 30, 32, 55, AND 56 REFER TO SHEET 4.

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CITY of TAMPA
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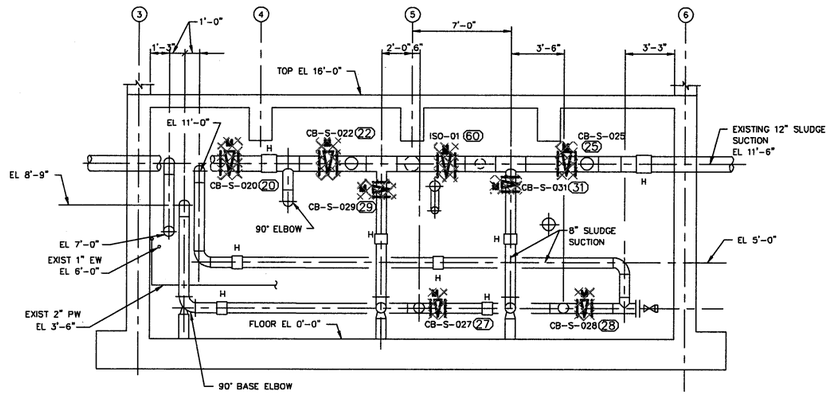
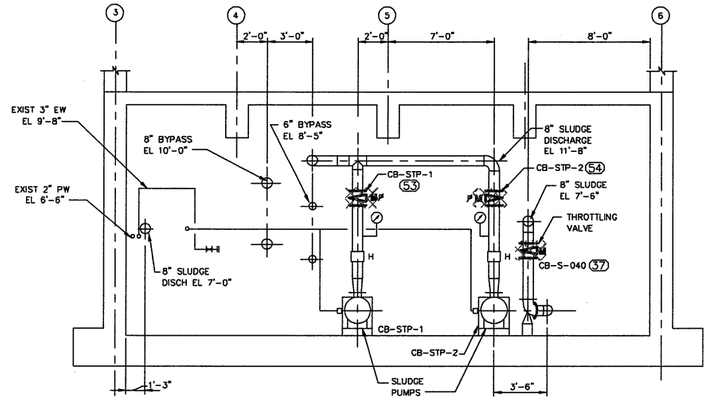
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
PROPOSED SITE PLAN EL. 0'-3"

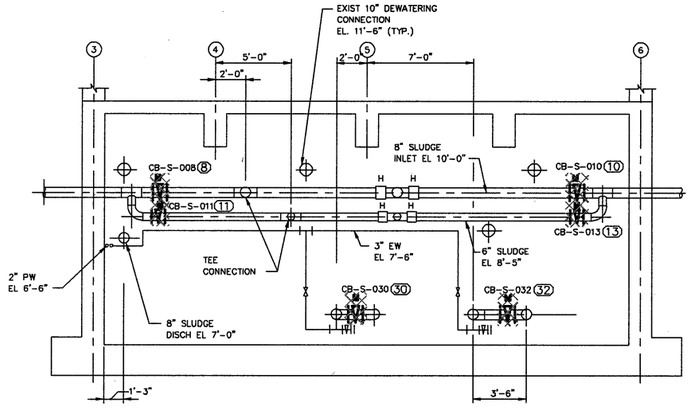
W.O.
SHEET 12



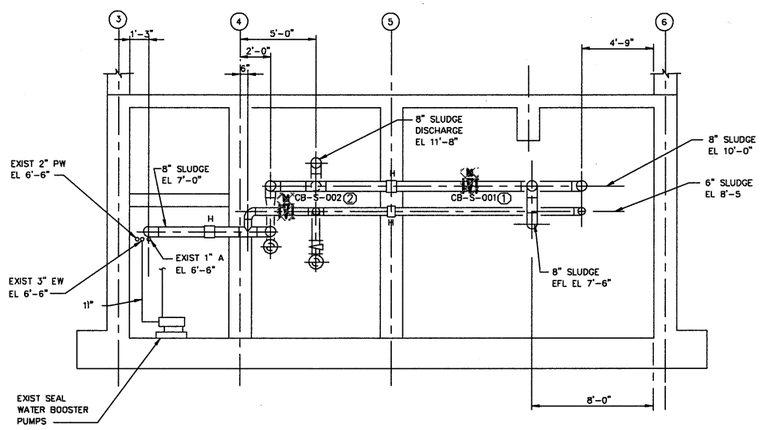
SECTION A/
9,12
NTS



SECTION C/
9,10,12
NTS



SECTION B/
10,11,12
NTS



SECTION D/
10,11
NTS

LEGEND:

INDICATES VALVE TO BE REMOVED

NOTES:

1. M P INDICATES REPLACING PNEUMATIC VALVE OPERATOR WITH MOTOR OPERATOR

KEYED NOTES:

FOR ALL KEYED NOTES REFER TO SHEET 4.

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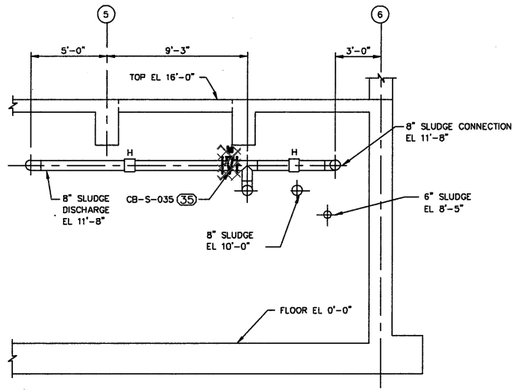
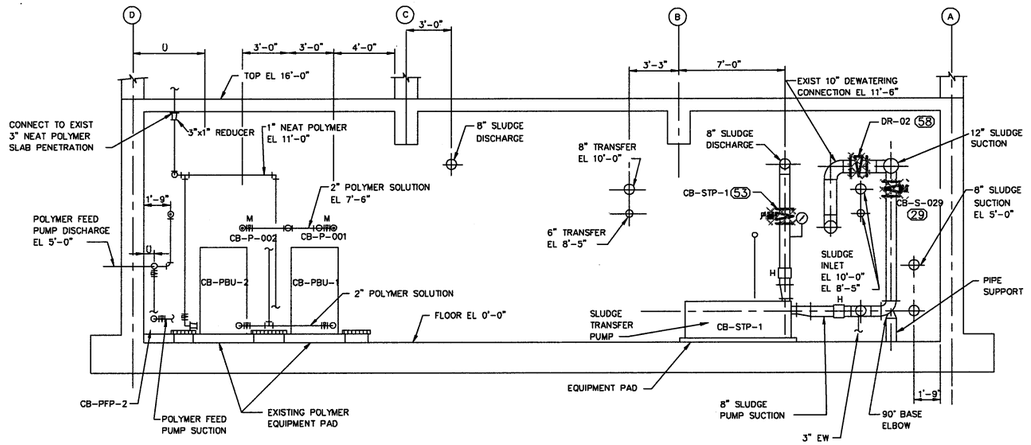
CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
PROPOSED SECTION VIEWS A-D

W.O.
SHEET 13



SECTION E/
9,10
NTS



SECTION F/
9,10
NTS

LEGEND:

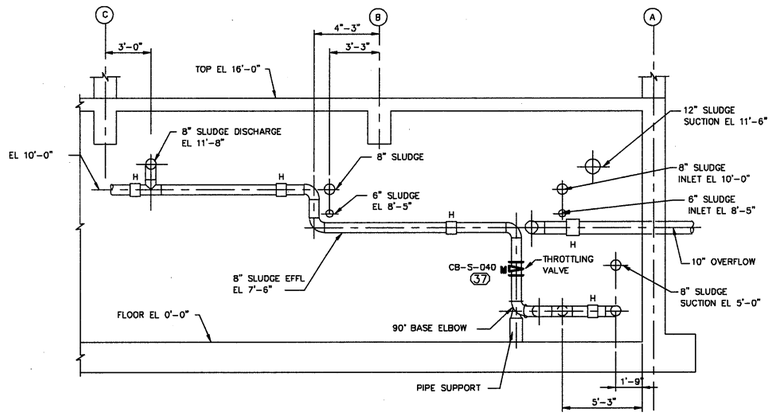
INDICATES VALVE TO BE REMOVED

NOTES:

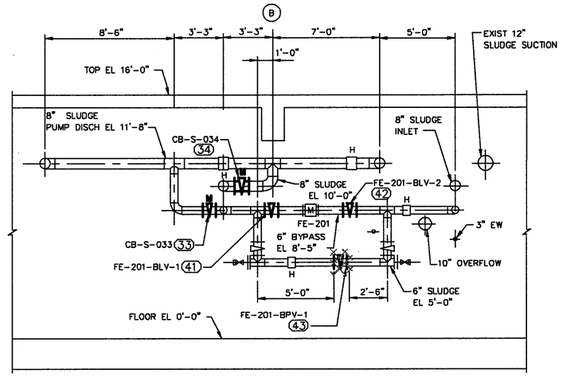
1. M P INDICATES REPLACING PNEUMATIC VALVE OPERATOR WITH MOTOR OPERATOR

KEYED NOTES:

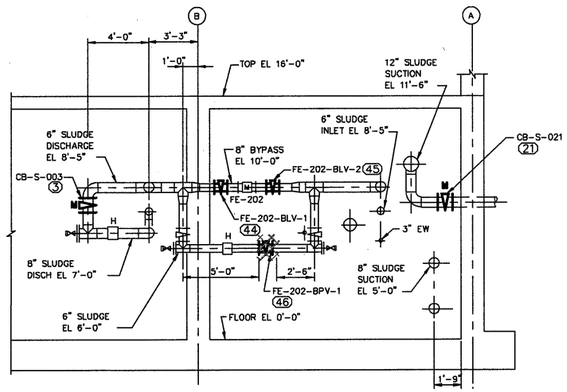
FOR ALL KEYED NOTES REFER TO SHEET 4.



SECTION G/
10,12
NTS



SECTION H/
10,11
NTS



SECTION I/
10,12
NTS

PAUL WOOD LICENSE No 74193 STATE OF FLORIDA PROFESSIONAL ENGINEER
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No.	DATE	REVISIONS
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DES: PW
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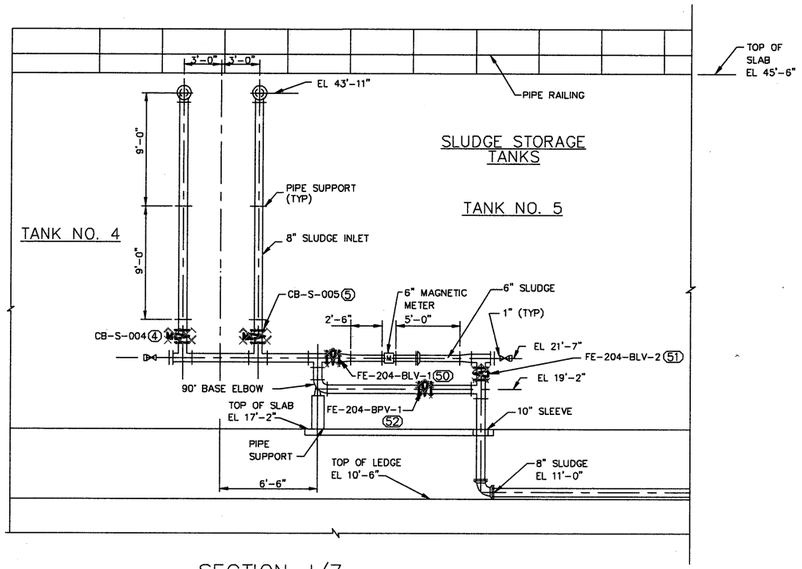
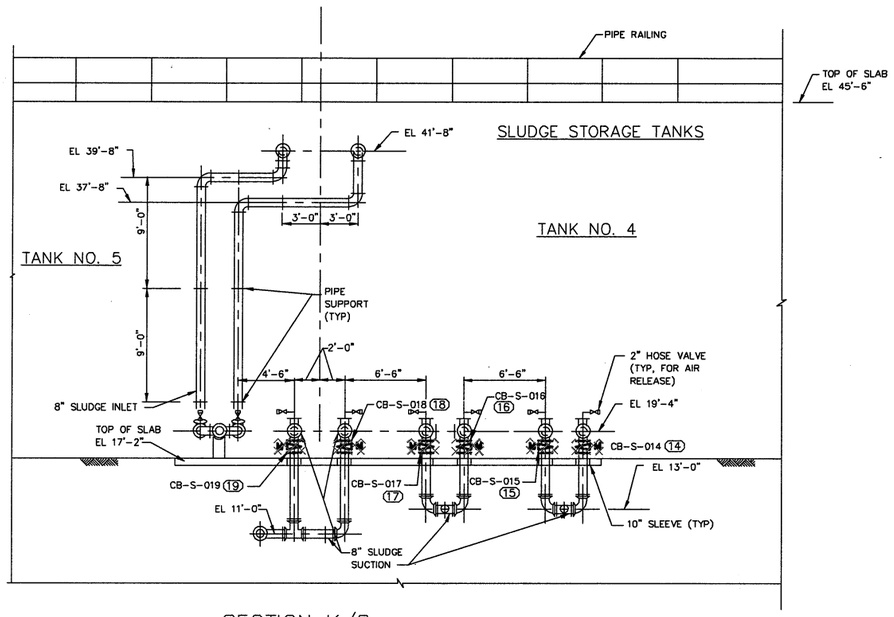
CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
PROPOSED SECTION VIEWS E-I

W.O.
SHEET 14



SECTION J/7
NTS



SECTION K/8
NTS

LEGEND:

INDICATES VALVE TO BE REMOVED

KEYED NOTES:

FOR ALL KEYED NOTES REFER TO SHEET 4.

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SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
PROPOSED SECTION VIEWS J-K

W.O.
SHEET 15

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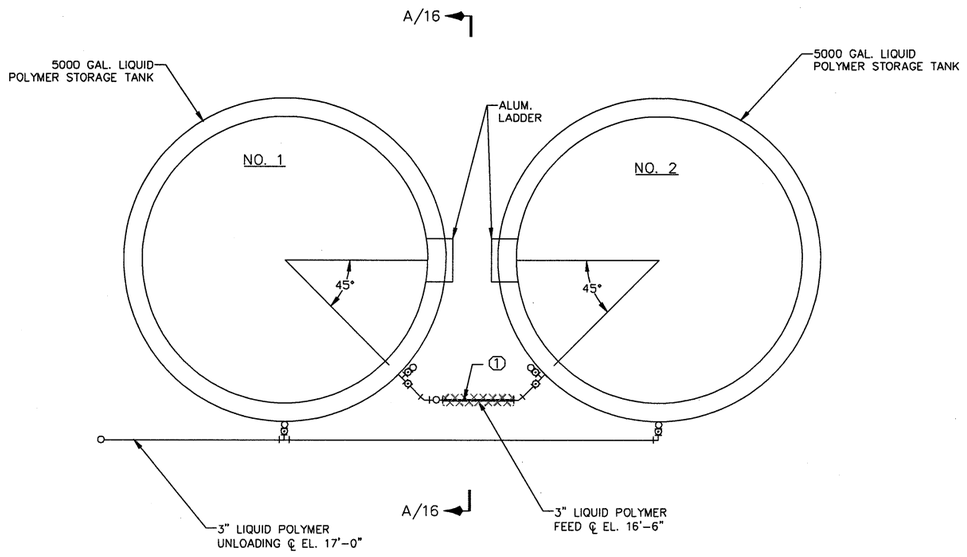
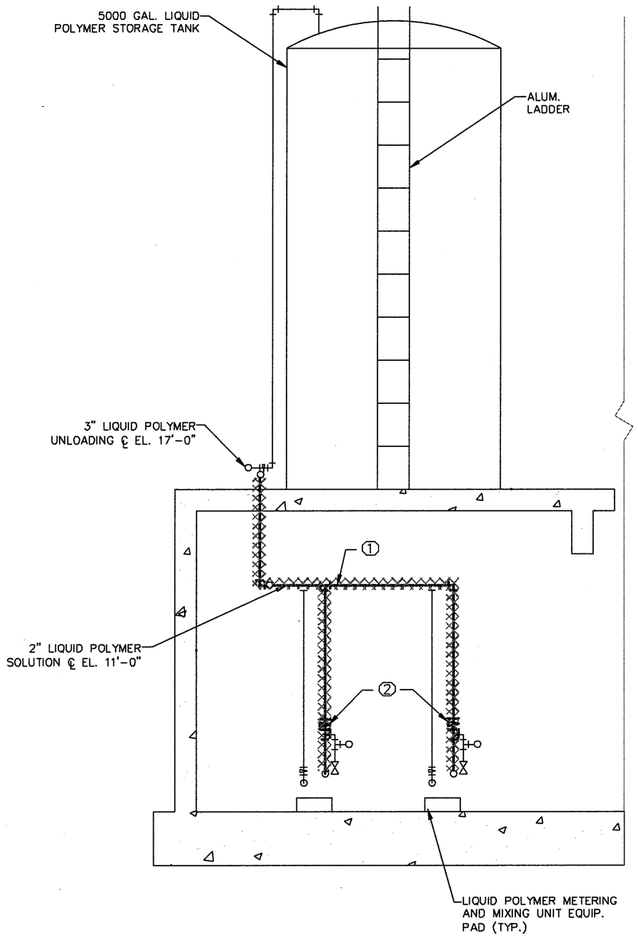
POLYMER STORAGE



PLAN AT EL. 16'-0"
NTS



SECTION A/16
NTS

LEGEND:

INDICATES VALVES AND PIPING TO BE REMOVED AND REPLACED.

KEYED NOTES:

1. EXISTING PIPING, SHOWN IN BOLD, IS TO BE REPLACED WITH SCHEDULE 80 PVC PIPING AND FITTINGS. AT THE CONTRACTORS OPTION PIPING MAY BE JOINED BY SOLVENT WELDING, OR SCREWED AND FLANGED CONNECTIONS. IF SOLVENT WELDED CONNECTIONS ARE UTILIZED, UNIONS OR FLANGES MUST BE INSTALLED TO ALLOW THE PIPING SYSTEM TO BE DISASSEMBLED.
2. REMOVE AND REPLACE EXISTING 2 INCH PLUG VALVES IN KIND.

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HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
PROPOSED POLYMER TANK PIPING

W.O.
SHEET 16

ABBREVIATIONS

A	AMMETER, AMPERE, AMBER
AF	AMPERE FRAME
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AS	AMMETER SWITCH, AMPERE SENSOR
ASU	AIR SUPPLY UNIT
AT	AMPERE TRIP
ATC	AUTOMATIC THROWOVER CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
BC	BARE COPPER
BRKR	BREAKER
BUP	BACK UP PANEL
C	CONDUIT, CONTACTOR
CB	CIRCUIT BREAKER
CC	CONTROL CABLE
CKT	CIRCUIT
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CRE	CORROSION-RESISTANT
CRS	COATED RIGID STEEL CONDUIT
CT	CURRENT TRANSFORMER
DC	DIRECT CURRENT
DIV	DIVISION
E	EMPTY
EHH	ELECTRIC HAND HOLD
EO	ELECTRIC OPERATOR
EQPT	EQUIPMENT
ESS	EMERGENCY SHUTDOWN SWITCH
ETM	ELAPSED TIME METER
EXST	EXISTING
FDR	FEEDER
F	FUSE
FLR	FLOOR
FLUOR	FLUORESCENT
FO	FIBER OPTIC
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
G	GREEN, GROUND
GALV	GALVANIZED
GFCI	GROUND FAULT CIRCUIT INTERRUPTER 5MA
GFI	GROUND FAULT INTERRUPTER-EQUIPMENT-30MA
GFR	GROUND FAULT RELAY
GND	GROUND
H	HIGH SPEED
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HPS	HIGH PRESSURE SODIUM
HS	HAND SWITCH
IC	INTERRUPTING CAPACITY
I & C	INSTRUMENTATION AND CONTROL
INCAND	INCANDESCENT

L	LIGHTING CONTACTOR, LOW SPEED
LDS	LOCKOUT STOP PUSH BUTTON
LR	LATCHING RELAY
LT FLEX	LIQUID TIGHT FLEX CONDUIT
LTS	LIGHTS
M	MAGNETIC CONTACTOR COIL
MCC	MOTOR CONTROL CENTER
MH	MANHOLE, METAL HALIDE
MO	MOTOR OPERATOR
MS	MOTOR STARTER
MT	MOUNT
MTD	MOUNTED
N	NEUTRAL
NA	NON-AUTOMATIC
NC	NORMALLY CLOSED
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NP	NAMEPLATE
OC	ON CENTER
OL	OVERLOAD RELAY
PB	PULL BOX, PUSH BUTTON SWITCH
PC	PHOTOCELL
PH	PHASE
PMR	PHASE MONITOR RELAY
PNL	PANEL
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE CONDUIT
R	RED
RCPT	RECEPTACLE
REQD	REQUIRED
RM	REMOTE MULTIPLEXER
RS	RIGID STEEL CONDUIT
RT	REMOTE TELEMETRY
RVNR	REDUCED VOLTAGE NON-REVERSING
RVR	REDUCED VOLTAGE REVERSING
SA	SURGE ARRESTOR
SCCR	SHORT CIRCUIT CURRENT RATING
S/N	SOLID NEUTRAL
SPD	SPEED
SST	STAINLESS STEEL
SV	SOLENOID VALVE
SW	SWITCH
T	THERMOSTAT
TB	TERMINAL BOARD
TC	TIME CLOSE
TD	TEMPERATURE DETECTOR RELAY
TDR	TIME DELAY RELAY
TJB	TERMINAL JUNCTION BOX
T.O.	TIME OPEN
TS	AUTO TRANSFORMER TEMPERATURE SWITCH
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TYP	TYPICAL
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED

GENERAL NOTES

1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO PURCHASING EQUIPMENT OR COMMENCING CONSTRUCTION.
2. ALL CONDUCTORS SHALL BE STRANDED COPPER, #12 AWG MIN. WITH THWN INSULATION, UNLESS OTHERWISE NOTED.
3. ALL WIRING SHALL BE IDENTIFIED WITH NUMBERS AT ALL TERMINALS AND ON WIRING DIAGRAMS.
4. FIELD VERIFY ALL EQUIPMENT LOCATIONS AND CONNECTIONS PRIOR TO COMMENCING CONSTRUCTION.
5. ALL ELECTRICAL WORK SHALL BE PREFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC AND ALL APPLICABLE LOCAL ORDINANCES.
6. ALL THREADED CONNECTIONS SHALL BE COATED WITH COPPER SHIELD ANTI-SEIZE COMPOUND MANUFACTURED BY THOMAS & BETTS (T & B) OR EQUAL.
7. ALL CONDUIT SHALL BE SUPPORTED AT MAXIMUM 5'-0" INTERVALS.
8. ALL CIRCUITS SHALL HAVE A PROPERLY SIZED GROUNDING CONDUCTOR ROUTED INSIDE EACH CONDUIT WITH POWER CONDUCTORS.
9. ALL CONDUCTOR LENGTHS SHALL BE CONTINUOUS, NO SPLICES OR CONDUCTOR TERMINATIONS SHALL BE PERMITTED UNLESS SPECIFICALLY DESIGNATED IN THE DRAWINGS.
10. NEATLY COIL ALL SPARE CONDUCTORS AND TAPE WITH VINYL ELECTRICAL TAPE (SCOTCH 33+).
11. PROVIDE A MINIMUM OF 3'-6" CLEARANCE IN FRONT OF ALL ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110 OF THE NEC.
12. ALL FASTENING HARDWARE (SCREW, BOLTS, NUTS, ETC.) SHALL BE 316-STAINLESS STEEL. FASTENING HARDWARE CONSTRUCTED OF FERROUS MATERIAL ARE NOT ACCEPTABLE.
13. EXPOSED CONDUITS SHALL BE NON-COATED RIGID ALUMINUM CONDUIT, UNLESS OTHERWISE NOTED (UON). INSTALL PVC COATED RIGID ALUMINUM CONDUIT IN THE WETWELL.
14. DIRECT BURIED AND CONCRETE ENCASED CONDUIT SHALL BE SCHEDULE 80 PVC, UNLESS OTHERWISE NOTED, WITH A TRANSITION TO RIGID ALUMINUM IN THE VERTICAL RUN AT LEAST ONE FOOT PRIOR TO EMERGENCE. ALL ALUMINUM SURFACES IN CONTACT WITH SOIL, CONCRETE, AND OTHER INCOMPATIBLE MATERIALS SHALL BE COATED WITH TWO COATS OF BITUMASTIC OR OTHER APPROVED INSULATING MATERIAL.
15. ABOVE GRADE INDOOR, AND NON-WASHDOWN AREAS, RIGID ALUMINUM CONDUIT CONNECTIONS TO CONTROL BOXES, ETC. SHALL BE MADE WITH ALUMINUM DOUBLE LOCKNUTS AND BUSHINGS. TURN DOWN ON THREADS TO SOLIDLY CONNECT RACEWAY TO BOX OR ENCLOSURE.
16. ALUMINUM WATERTIGHT HUBS (MYERS HUBS) SHALL BE USED FOR CONNECTIONS TO CONTROL BOXES, ETC. MOUNTED OUTDOORS, BELOW GRADE, OR IN WASHDOWN AREAS.
17. A 316-STAINLESS STEEL CHANNEL ERECTOR SYSTEM SHALL BE USED TO SUPPORT ALL CONDUITS, BOXES, ETC. USE 316-STAINLESS STEEL MOUNTING HARDWARE.
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 CONTRACTOR'S 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. VERIFY ALL EQUIPMENT SIZES AND RATING PRIOR TO CONNECTING.
22. ALL PANELS, DISCONNECTS, SWITCHES, AND EQUIPMENT COVER PLATES SHALL BE LABELED WITH NAMEPLATES. NAMEPLATES SHALL BE THREE-PLY PHENOLIC BLACK-WHITE-BLACK ENGRAVED THROUGH THE FIRST BLACK LAYER. LETTERING SHALL BE 0.5 CM (3/16") MINIMUM EDGE OF NAMEPLATE SHALL BE BEVELED 45 DEG.

DRAWING SYMBOLS

- POINT OF CONNECTION
- KEYED NOTES
- A/X — SECTION NO./SHEET NO.

POWER PLAN SYMBOLS

- DUPLEX
- FLOOR MOUNTED
- QUAD
- SINGLE
- THREE PRONG
- SPLIT
- ISOLATED GROUND
- GFCI BREAKER
- GROUNG FAULT
- HALF SWITCHED
- COMBO 15/20A
- PATIENT REF GROUND BUS
- SPECIAL
- CEILING MOUNTED
- WALL MOUNTED
- PULL BOX
- TV TELEVISION
- POWER
- COMMUNICATIONS
- EXISTING
- LOW VOLTAGE
- EXISTING LOW VOLTAGE
- LA-2 HOME RUN – DESTINATION SHOWN
- SINGLE PHASE
- THREE PHASE
- MANUAL
- MAGNETIC
- 30A/3P DISCONNECT UON
- 30A/3P FUSED DISC UON
- COMBO
- XFMR
- ATS
- M — VALVE ACTUATOR

LIGHTING PLAN SYMBOLS

- STRIP FLUORESCENT LIGHT FIXTURE 1x4, LETTER DENOTES TYPE
- STRIP FLUORESCENT LIGHT FIXTURE ON EMERGENCY 1x4 LETTER DENOTES TYPE
- FLUORESCENT LIGHT FIXTURE 2x4, LETTER DENOTES TYPE
- FLUORESCENT LIGHT ON EMERGENCY 2x4 LETTER DENOTES TYPE
- FLUORESCENT LIGHT FIXTURE 2x2, LETTER DENOTES TYPE
- FLUORESCENT LIGHT ON EMERGENCY 2x2 LETTER DENOTES TYPE
- STRIP FLUORESCENT LIGHT FIXTURE, LETTER DENOTES TYPE
- EXTERIOR POLE MOUNTED FIXTURE, LETTER DENOTES TYPE
- SURFACE OR RECESSED LIGHTING FIXTURE, LETTER DENOTES TYPE
- WALL MOUNT EXIT LIGHT
- CEILING MOUNT EXIT LIGHT, ARROW DENOTES DIRECTION
- SELF CONTAINED
- WALL-PACK FIXTURE
- EMERGENCY WALL-PACK FIXTURE

LTG-SWITCH

$ SWITCH:

WALL SWITCH
- 2- DOUBLE POLE
- 3- THREE WAY
- 4- FOUR WAY
- CRE- CORROSION RESISTANT
- D- DIMMER
- K- KEY OPERATED
- P- PILOT LIGHT
- WP- WEATHERPROOF
- OS- OCCUPANCY SENSOR

MOTOR SWITCH
- M- MOTOR RATED TOGGLE SWITCH WITHOUT OVERLOADS
- MS- MANUAL MOTOR STARTER WITH OVERLOADS

- OS — CEILING MOUNTED OCCUPANCY SENSOR
- PE — PHOTOELECTRIC SWITCH

SINGLE LINE DIAGRAM SYMBOLS

- POT HEAD
- POT HEAD
- UTILITY CONNECTION
- BREAKER
- DRAW OUT TYPE
- FUSE
- ATS — ATS
- MTS — MTS
- FORMC
- FUSED SWITCH
- METER REVENUE
- MOTOR
- DC MOTOR
- G — GENERATOR
- PANEL — PANEL "X"
- VALVE ACTUATOR
- T-03 TRANSFORMER 5kVA 600-120/208V Z=0.8%
- AUTO TRANSFORMER
- GROUND
- GROUND/RESISTOR
- GROUND/LARR
- AS — AMMETER SWITCH
- VS — VOLTMETER SWITCH
- X — METER INDICATING
- X — METER RECORDING
- K — KEY INTERLOCK
- XXXX — METEROP
- XXX — CONDUIT TAG

NOTES:

1. THIS IS A STANDARD LEGEND. SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS DRAWING AND NOT ON PLANS.

GASPARD D. GARCIA — LICENSE No 76573 — STATE OF FLORIDA — PROFESSIONAL ENGINEER — 5-13-2014

ELECTRICAL ENGINEER

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
PLANNING ENGINEERING PROGRAM MANAGEMENT
107 Hampton Road, Suite 190, Clearwater, FL 33759
Tel 727-726-0005 Fax 727-726-0009
CA Lic. No: 9086

No.	DATE	REVISIONS
3		
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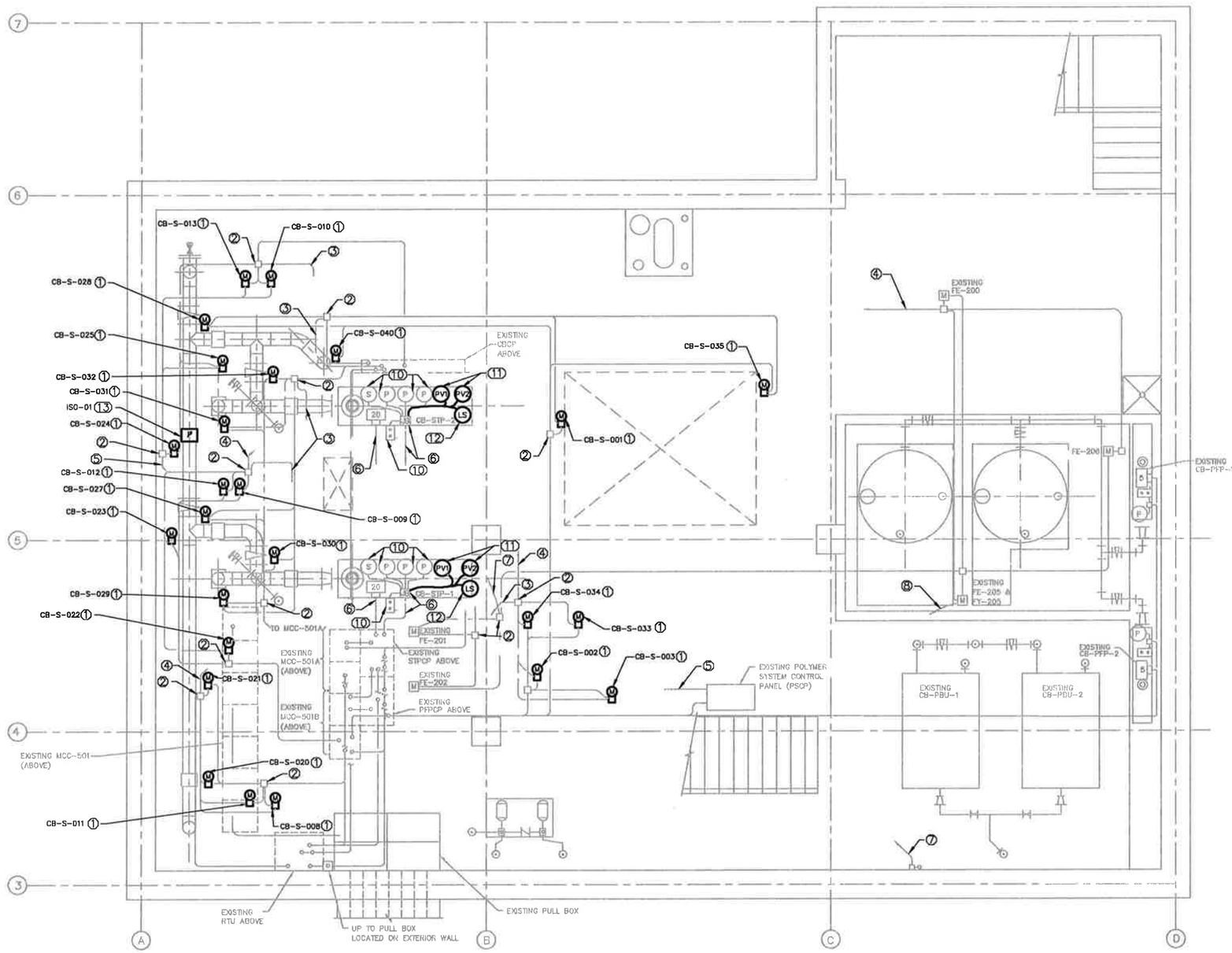
DES: GG
DRN: OL
CKD: DH
DATE: 5/13/14

CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
ELECTRICAL GENERAL NOTES

W.O.
SHEET 17

Project Files: pw:\\Vadpw.lodoc.lnt:projectwise\Documents\Projects\130--10429--003\V--0--Production\V--01--Drawings\
File: C:\projectwise\gfyryn\d0153563\General Notes And Abbr..dwg Plotted: 5/13/2014, 3:44 PM By: Lfryn, Otero



EXISTING PLAN AT EL 0'-3"

NTS

NTS

GENERAL NOTES:

1. EXISTING EQUIPMENT TO REMAIN (SHOWN AS LIGHT SHADED LINES). DEMOLITION WORK IS SHOWN IN BOLD LINES.
2. REFER TO SHEET 17 FOR ELECTRICAL LEGEND AND ABBREVIATIONS.
3. EXISTING POWER AND CONTROL CONDUIT HOMERUNS AND EXISTING PULL BOXES AS SHOWN ARE DERIVED FROM RECORD DRAWINGS. VERIFY EXISTING CONDUIT ROUTING AND PULL BOX LOCATIONS PRIOR TO DEMOLITION. TAG AND TRACE ALL EXISTING VALVE ACTUATOR POWER AND CONTROL CONDUCTORS PRIOR TO REMOVAL. CREATE A POINT-TO-POINT WIRING LIST AND MARK CONDUCTORS TO FACILITATE RECONNECTION.
4. EXISTING VALVE ACTUATORS AS SHOWN ARE DERIVED FROM RECORD DRAWINGS. FIELD VERIFY EXISTING LOCATIONS PRIOR TO REMOVAL.

KEYED NOTES:

1. COORDINATE REMOVAL OF VALVE ACTUATOR WITH MECHANICAL CONTRACTOR. DISCONNECT AND SALVAGE EXISTING VALVE ACTUATOR POWER/INSTRUMENTATION/CONTROL CONDUIT(S) AND CONDUCTORS TO THE NEAREST PULL BOX AS SHOWN. PROTECT AND NEATLY COIL CONDUCTORS FOR CONNECTION TO PROPOSED VALVE ACTUATOR AS SHOWN ON SHEET 21. COORDINATE DISCONNECTION WITH THE CITY.
2. EXISTING PULL BOX TO REMAIN.
3. EXISTING CONDUIT TO EXISTING RTU CABINET TO REMAIN.
4. EXISTING CONDUIT TO "CBCP" TO REMAIN.
5. EXISTING CONDUIT TO "MCC-501A" TO REMAIN.
6. EXISTING JUNCTION BOX AND CONTROL CONDUITS BACK TO "STPCP" TO REMAIN.
7. EXISTING CONDUIT TO "LP-502" TO REMAIN.
8. EXISTING CONDUIT TO "PSCP" TO REMAIN.
9. RESERVED.
10. EXISTING PRESSURE SWITCHES, PUSH BUTTON CONTROL, CONTROL WIRING, AND CONTROL CONDUITS TO "STPCP" TO REMAIN.
11. REMOVE EXISTING PNEUMATIC SOLENOID PILOT VALVES "PV1" AND "PV2". REMOVE EXISTING CONTROL CONDUIT(S) BACK TO JUNCTION BOX. REMOVE EXISTING CONTROL CONDUCTORS BACK TO "STPCP".
12. REMOVE EXISTING PNEUMATIC VALVE LIMIT SWITCH. REMOVE EXISTING CONTROL CONDUIT(S) BACK TO JUNCTION BOX. REMOVE EXISTING CONTROL CONDUCTORS BACK TO "STPCP".
13. COORDINATE REMOVAL OF PNEUMATIC ACTUATOR AND PNEUMATIC CONTROLS WITH MECHANICAL CONTRACTOR. REMOVE CONTROL CONDUCTORS BACK TO PANELS "RTU" AND "CBCP". FIELD VERIFY EXISTING CONTROL CONDUIT SIZE IS ADEQUATE FOR PROPOSED CONTROL CONDUCTORS AS SHOWN ON SHEET 21. IF CONDUIT SIZE NOT LARGE ENOUGH PROVIDE CONDUIT AS SHOWN ON SHEET 27. FIELD VERIFY EXISTING VALVE CONTROL IN "CBCP" AND "RTU" AND MODIFY AS NECESSARY TO ENSURE OPERATION OF PROPOSED VALVE AS SHOWN ON SHEET 21.

GASPARD D. GARCIA
LICENSE
No 76573
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-13-2014

ELECTRICAL ENGINEER

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
PLANNING ENGINEERING PROGRAM MANAGEMENT
107 Hampton Road, Suite 190, Clearwater, FL 33759
Tel 727-726-0005 Fax 727-726-0009
CA Lic. No: 9086

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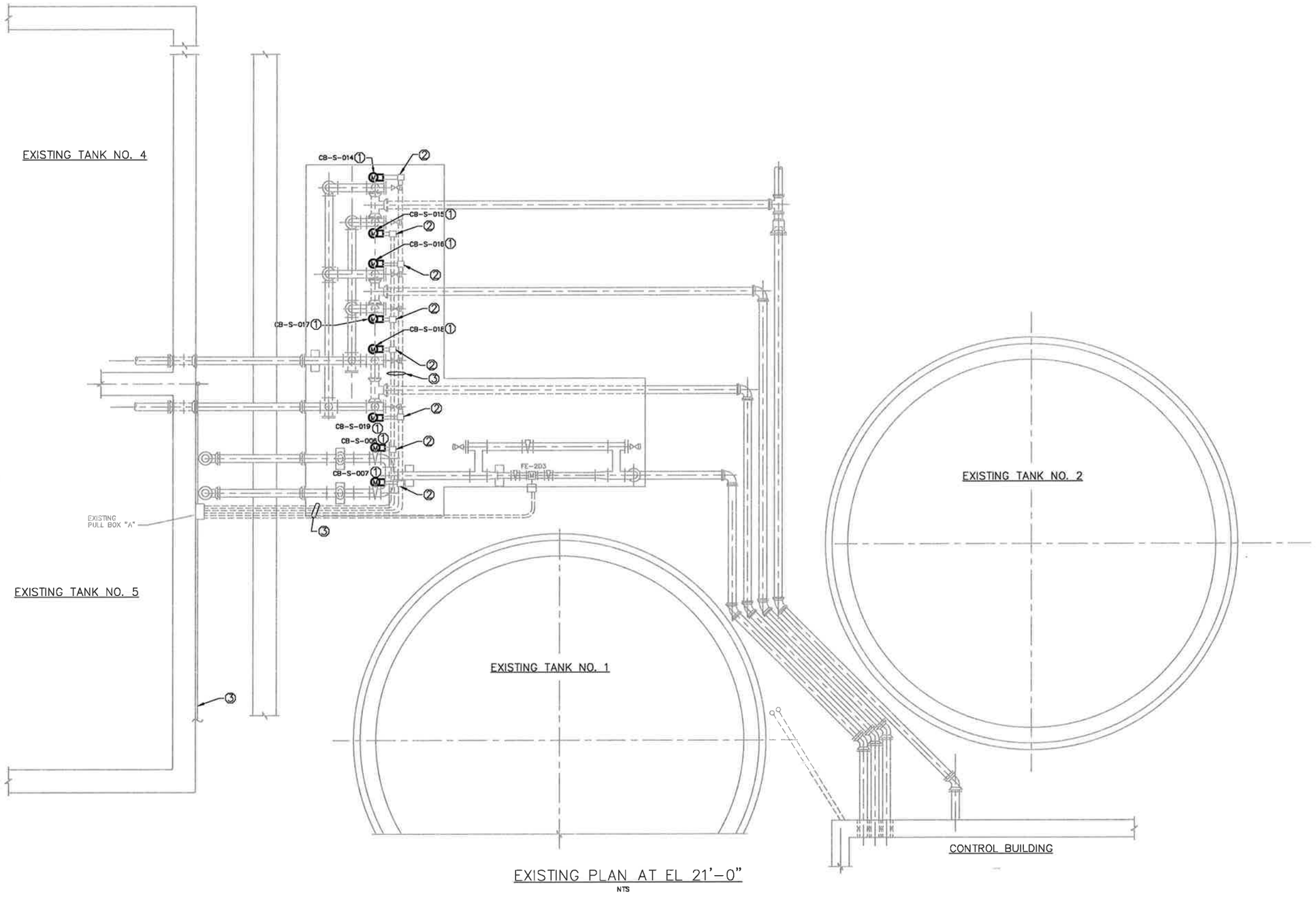
DES: GG
DRN: OL
CKD: DH
DATE: 5/13/14

CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
ELECTRICAL DEMOLITION PLAN AT EL. 0'-3"

W.O.
SHEET 18



EXISTING PLAN AT EL 21'-0"

NTS

N

NTS

GENERAL NOTES:

1. EXISTING EQUIPMENT TO REMAIN (SHOWN AS LIGHT SHADED LINES). DEMOLITION WORK IS SHOWN IN BOLD LINES.
2. REFER TO SHEET 17 FOR ELECTRICAL LEGEND AND ABBREVIATIONS.
3. EXISTING POWER AND CONTROL CONDUIT HOMERUNS AND EXISTING PULL BOXES AS SHOWN ARE DERIVED FROM RECORD DRAWINGS. VERIFY EXISTING CONDUIT ROUTING AND PULL BOX LOCATIONS PRIOR TO CONSTRUCTION. TAG AND TRACE ALL EXISTING VALVE ACTUATOR POWER AND CONTROL CONDUCTORS PRIOR TO REMOVAL.
4. EXISTING VALVE ACTUATORS AS SHOWN ARE DERIVED FROM RECORD DRAWINGS. FIELD VERIFY EXISTING LOCATIONS PRIOR TO REMOVAL.

KEYED NOTES:

1. COORDINATE REMOVAL OF VALVE ACTUATOR WITH MECHANICAL CONTRACTOR. DISCONNECT AND SALVAGE EXISTING VALVE ACTUATOR POWER/INSTRUMENTATION/CONTROL CONDUIT(S) AND CONDUCTORS TO THE NEAREST PULL BOX AS SHOWN. PROTECT AND NEATLY COIL CONDUCTORS FOR CONNECTION TO PROPOSED VALVE ACTUATOR AS SHOWN ON SHEET 22. COORDINATE DISCONNECTION WITH CITY.
2. EXISTING PULL BOX TO REMAIN.
3. EXISTING CONDUITS TO "MCC-501A", "MCC-501B", AND "CBCP" TO REMAIN.

GASPARD D. GARCIA
LICENSE
No 76573
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-13-2014

ELECTRICAL ENGINEER

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
PLANNING ENGINEERING PROGRAM MANAGEMENT
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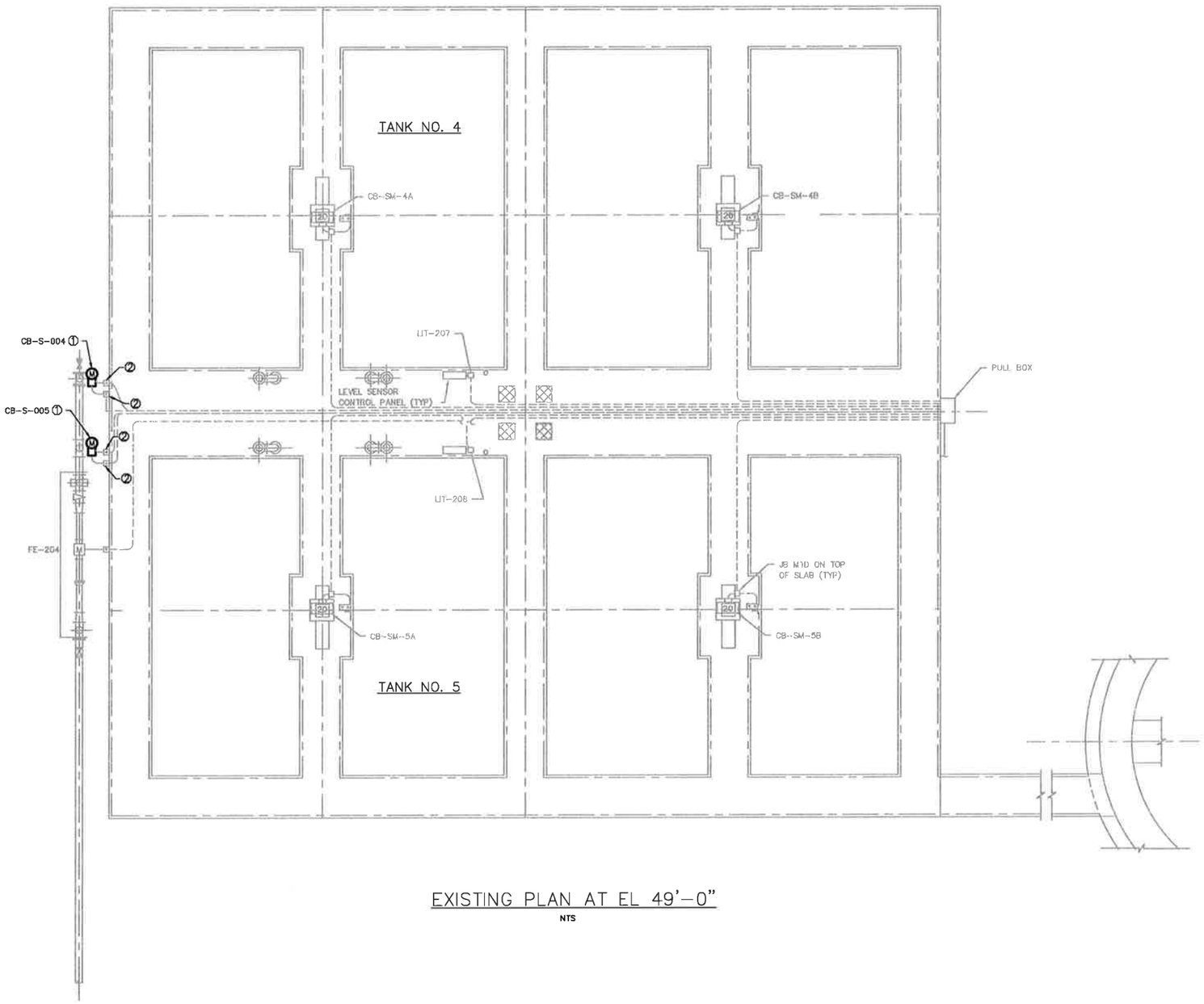
CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
ELECTRICAL DEMOLITION PLAN AT EL. 21'-0"

W.O.

SHEET 19



EXISTING PLAN AT EL 49'-0"

NTS

N

NTS

GENERAL NOTES:

1. EXISTING EQUIPMENT TO REMAIN (SHOWN AS LIGHT SHADED LINES). DEMOLITION WORK IS SHOWN IN BOLD LINES.
2. REFER TO SHEET 17 FOR ELECTRICAL LEGEND AND ABBREVIATIONS.
3. EXISTING POWER AND CONTROL CONDUIT HOMERUNS AND EXISTING PULL BOXES AS SHOWN ARE DERIVED FROM RECORD DRAWINGS. VERIFY EXISTING CONDUIT ROUTING AND PULL BOX LOCATIONS PRIOR TO CONSTRUCTION. TAG AND TRACE ALL EXISTING VALVE ACTUATORS POWER AND CONTROL CONDUCTORS PRIOR TO REMOVAL.
4. EXISTING VALVE ACTUATORS AS SHOWN ARE DERIVED FROM RECORD DRAWINGS. FIELD VERIFY EXISTING LOCATIONS PRIOR TO REMOVAL.

KEYED NOTES:

1. COORDINATE REMOVAL OF VALVE ACTUATOR WITH MECHANICAL CONTRACTOR. DISCONNECT AND SALVAGE EXISTING VALVE ACTUATOR POWER/INSTRUMENTATION/CONTROL CONDUIT(S) AND CONDUCTORS TO THE NEAREST PULL BOX AS SHOWN. PROTECT AND NEATLY COIL CONDUCTORS FOR CONNECTION TO PROPOSED VALVE ACTUATOR AS SHOWN ON SHEET 23. COORDINATE DISCONNECTION WITH THE CITY.
2. EXISTING PULL BOX TO REMAIN.

GASPARD D. GARCIA
LICENSE
No 76573
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-13-2014

ELECTRICAL ENGINEER

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
PLANNING ENGINEERING PROGRAM MANAGEMENT
107 Hampton Road, Suite 190, Clearwater, FL 33759
Tel 727-726-0005 Fax 727-726-0009
CA Lic. No: 9086

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CITY of TAMPA
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
ELECTRICAL DEMOLITION PLAN AT EL. 49'-0"

W.O.
SHEET 20

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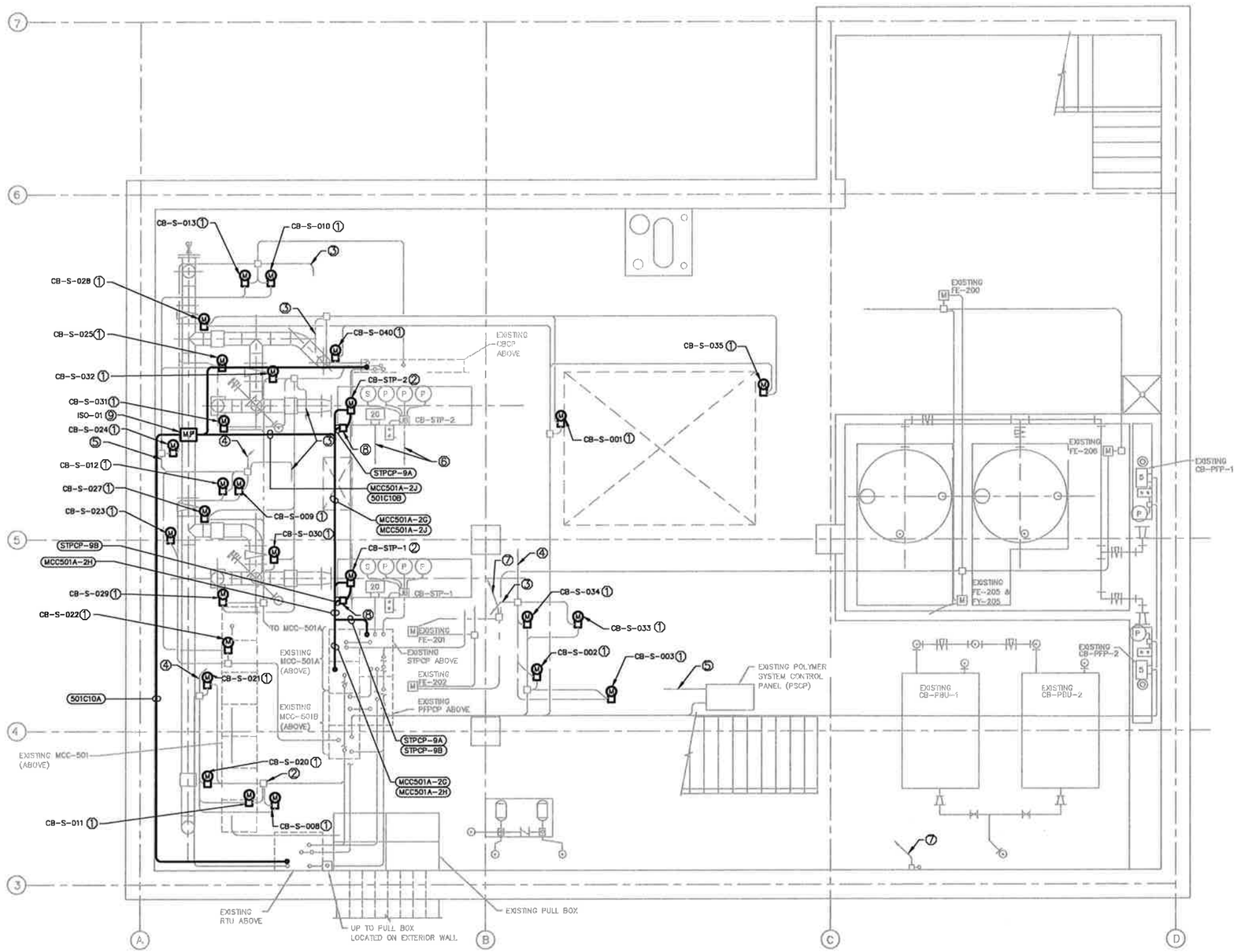

PROPOSED PLAN AT EL 0'-3"

NTS

NTS

GENERAL NOTES:

1. EXISTING EQUIPMENT TO REMAIN (SHOWN AS LIGHT SHADED LINES). PROPOSED WORK IS SHOWN IN BOLD LINES.
2. REFER TO SHEET 17 FOR ELECTRICAL LEGEND AND ABBREVIATIONS.
3. REFER TO SHEET 24 FOR "MCC-501A", "STPCP", "RTU" AND "CBCP" LOCATIONS.
4. REFER TO SHEET 25 FOR ONE-LINE DIAGRAM.
5. REFER TO SHEET 27 FOR ELECTRICAL CONDUIT SCHEDULE.
6. PROPOSED VALVE ACTUATORS AS SHOWN ARE DERIVED FROM RECORD DRAWINGS. REFER TO PLANS AND SECTIONS SHEETS 9 THROUGH 16 FOR LOCATIONS.
7. REFER TO SHEET 28 FOR PROPOSED VALVE ACTUATOR SCHEMATICS.

KEYED NOTES:

1. COORDINATE INSTALLATION OF PROPOSED VALVE ACTUATOR WITH MECHANICAL CONTRACTOR. EXTEND EXISTING POWER AND CONTROL CONDUCTORS AND CONDUIT TO PROPOSED VALVE ACTUATOR FROM NEAREST PULL BOX. IF EXISTING CONDUCTORS ARE FOUND TO BE DETERIORATED PROVIDE NEW CONDUCTORS. WHERE EXISTING CONDUCTORS ARE NOT LONG ENOUGH FIELD VERIFY TO MATCH EXISTING, SPLICE FROM NEAREST PULL BOX AND EXTEND TO PROPOSED VALVE ACTUATOR.
2. COORDINATE INSTALLATION OF PROPOSED VALVE ACTUATOR WITH MECHANICAL CONTRACTOR. PROVIDE POWER AND CONTROL CONDUIT/CONDUCTORS AS INDICATED BY CONDUIT TAG. CONDUIT ROUTING SHOWN IS DIAGRAMMATIC. FIELD VERIFY ROUTING WITH EXISTING CONDUITS AND PIPING.
3. EXISTING CONDUIT TO EXISTING RTU CABINET TO REMAIN.
4. EXISTING CONDUIT TO "CBCP" TO REMAIN.
5. EXISTING CONDUIT TO "MCC-501A" TO REMAIN.
6. EXISTING CONDUIT TO "STPCP" TO REMAIN.
7. EXISTING CONDUIT TO "LP-502" TO REMAIN.
8. REFER TO GENERAL NOTE 20 ON SHEET 17.
9. COORDINATE INSTALLATION OF PROPOSED VALVE ACTUATOR WITH MECHANICAL CONTRACTOR. PROVIDE POWER CONDUIT/CONDUTORS AS INDICATED BY CONDUIT TAG. PROVIDE CONTROL CONDUCTORS IN EXISTING CONTROL CONDUITS AS INDICATED BY CONDUIT TAG. CONDUIT ROUTING SHOWN IS DIAGRAMMATIC. FIELD VERIFY ROUTING WITH EXISTING CONDUITS AND PIPING.

GASPARD D. GARCIA
LICENSE
No 76573
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-13-2014
ELECTRICAL ENGINEER

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
PLANNING ENGINEERING PROGRAM MANAGEMENT
107 Hampton Road, Suite 190, Clearwater, FL 33759
Tel 727-726-0005 Fax 727-726-0009
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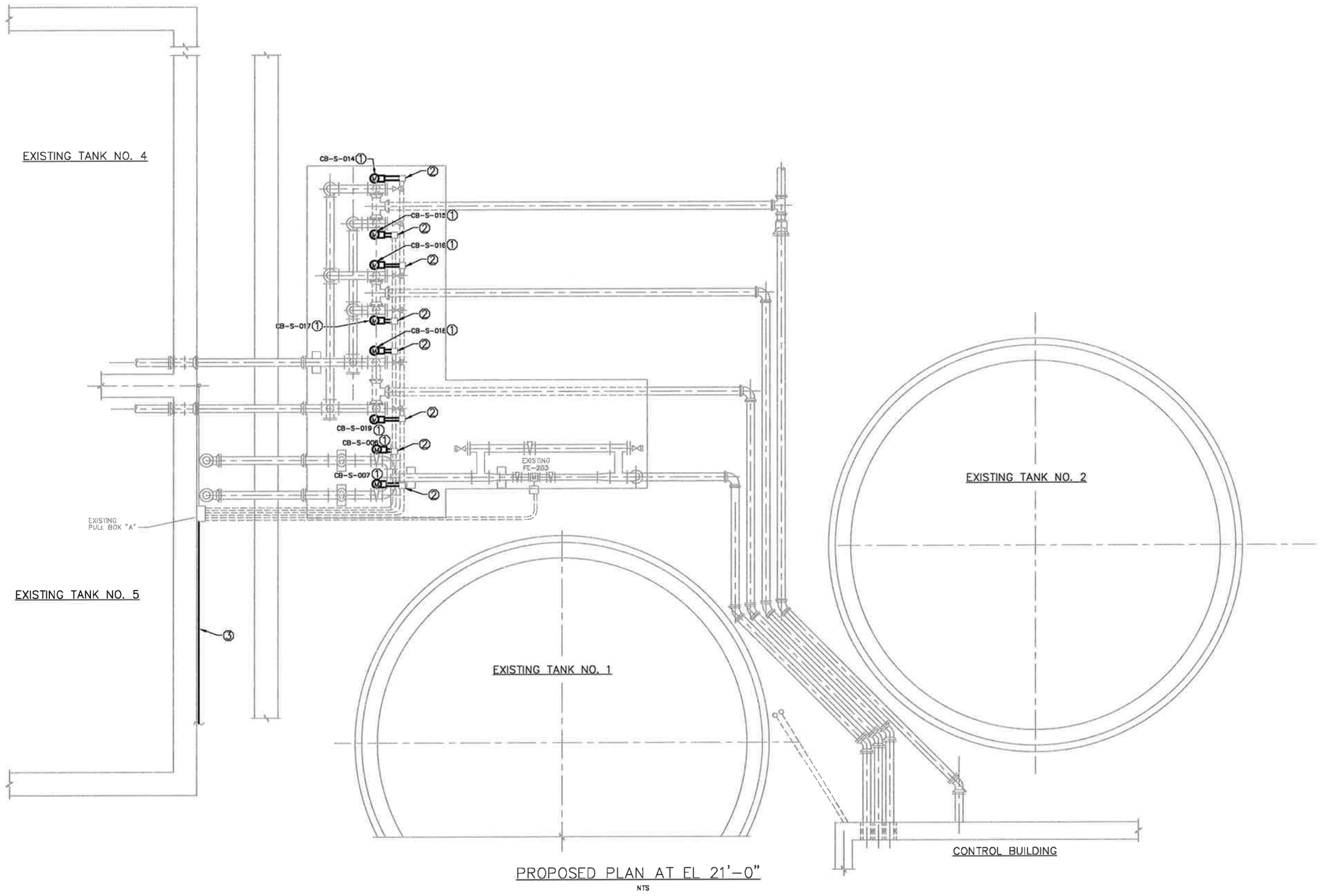
CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
ELECTRICAL PROPOSED PLAN AT EL. 0'-3"

W.O.
SHEET 21



PROPOSED PLAN AT EL 21'-0"

NTS

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NTS

GENERAL NOTES:

1. EXISTING EQUIPMENT TO REMAIN (SHOWN AS LIGHT SHADED LINES). PROPOSED WORK IS SHOWN IN BOLD LINES.
2. REFER TO SHEET 17 FOR ELECTRICAL LEGEND AND ABBREVIATIONS.
3. REFER TO SHEET 27 FOR ELECTRICAL CONDUIT SCHEDULE AND FOR PANEL "LP" SCHEDULE.
4. REFER TO SHEET 24 FOR "MCC-501A", "STPCP", "RTU" AND "CBCP" LOCATIONS.
5. PROPOSED VALVE ACTUATORS AS SHOWN ARE DERIVED FROM RECORD DRAWINGS. REFER TO PLANS AND SECTIONS SHEETS 9 THROUGH 16 FOR LOCATIONS.
6. REFER TO SHEET 28 FOR PROPOSED VALVE ACTUATOR SCHEMATICS.

KEYED NOTES:

1. COORDINATE INSTALLATION OF PROPOSED VALVE ACTUATOR WITH MECHANICAL CONTRACTOR. EXTEND EXISTING POWER AND CONTROL CONDUCTORS AND CONDUIT TO PROPOSED VALVE ACTUATOR FROM NEAREST PULL BOX. IF EXISTING CONDUCTORS ARE FOUND TO BE DETERIORATED PROVIDE NEW CONDUCTORS. WHERE EXISTING CONDUCTORS ARE NOT LONG ENOUGH FIELD VERIFY TO MATCH EXISTING, SPLICE FROM NEAREST PULL BOX AND EXTEND TO PROPOSED VALVE ACTUATOR.
2. EXISTING PULLBOX.
3. EXISTING CONDUITS TO MCC-501A, MCC-501B, CBCP, AND RTU TO REMAIN.

GASPAR D. GARCIA
LICENSE
No 76573
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-13-2014

ELECTRICAL ENGINEER

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
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CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
ELECTRICAL PROPOSED PLAN AT EL. 21'-0"

W.O.

SHEET 22

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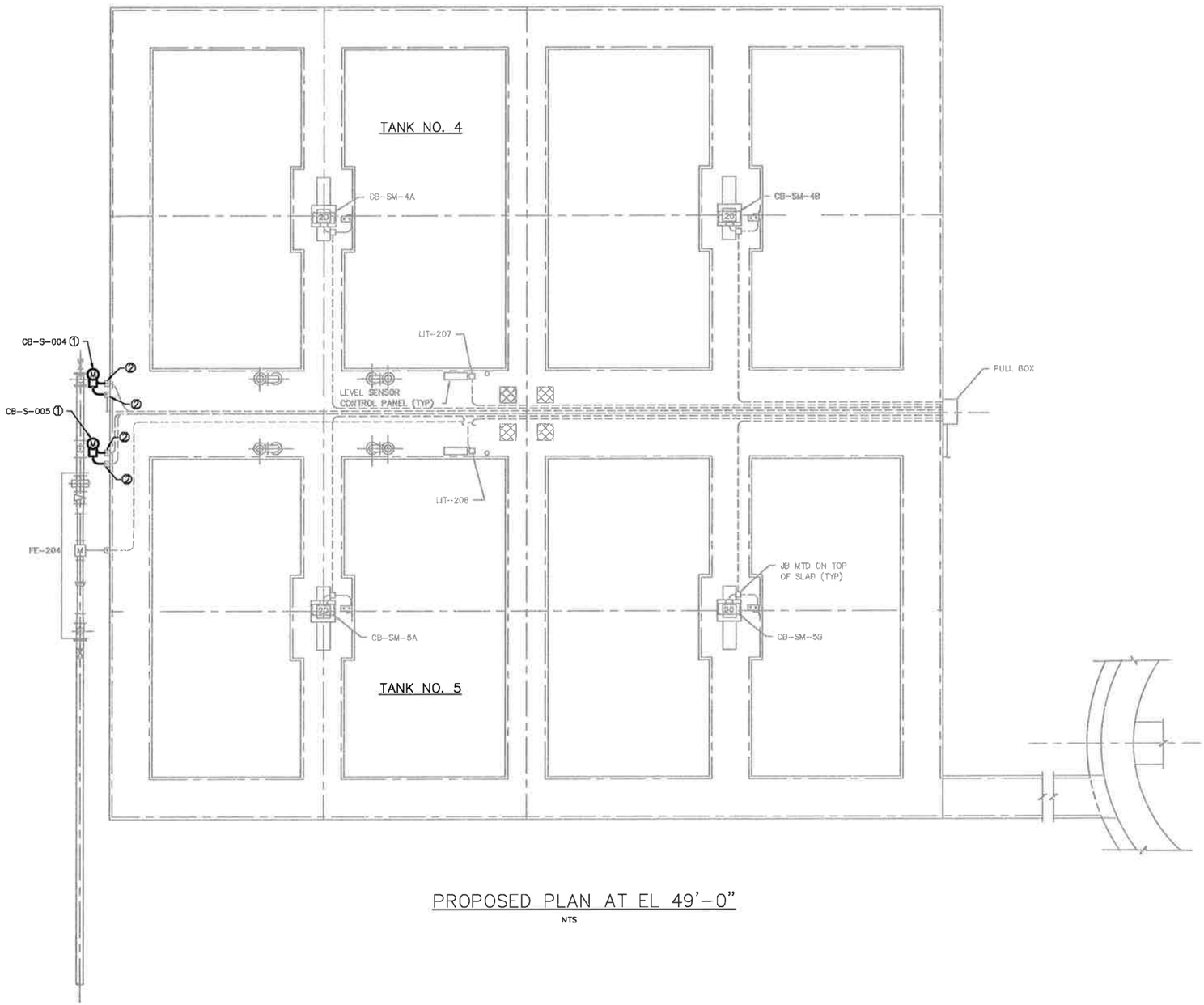

PROPOSED PLAN AT EL 49'-0"
NTS

N
NTS

GENERAL NOTES:

1. EXISTING EQUIPMENT TO REMAIN (SHOWN AS LIGHT SHADED LINES). PROPOSED WORK IS SHOWN IN BOLD LINES.
2. REFER TO SHEET 17 FOR ELECTRICAL LEGEND AND ABBREVIATIONS.
3. REFER TO SHEET 27 FOR ELECTRICAL CONDUIT SCHEDULE AND FOR PANEL "LP" SCHEDULE.
4. REFER TO SHEET 24 FOR "MCC-501A", "STPCP", "RTU" AND "CBCP" LOCATIONS.
5. PROPOSED VALVE ACTUATORS AS SHOWN ARE DERIVED FROM RECORD DRAWINGS. REFER TO PLANS AND SECTIONS SHEETS 9 THROUGH 16 FOR LOCATIONS.
6. REFER TO SHEET 28 FOR PROPOSED VALVE ACTUATOR SCHEMATICS.

KEYED NOTES:

1. COORDINATE INSTALLATION OF PROPOSED VALVE ACTUATOR WITH MECHANICAL CONTRACTOR. EXTEND EXISTING POWER AND CONTROL CONDUCTORS AND CONDUIT TO PROPOSED VALVE ACTUATOR FROM NEAREST PULL BOX. IF EXISTING CONDUCTORS ARE FOUND TO BE DETERIORATED PROVIDE NEW CONDUCTORS. WHERE EXISTING CONDUCTORS ARE NOT LONG ENOUGH FIELD VERIFY TO MATCH EXISTING, SPLICE FROM NEAREST PULL BOX AND EXTEND TO PROPOSED VALVE ACTUATOR.
2. EXISTING PULLBOX.

GASPARD D. GARCIA
LICENSE
No 76573
STATE OF
FLORIDA
PROFESSIONAL ENGINEER
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ELECTRICAL ENGINEER

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
PLANNING ENGINEERING PROGRAM MANAGEMENT
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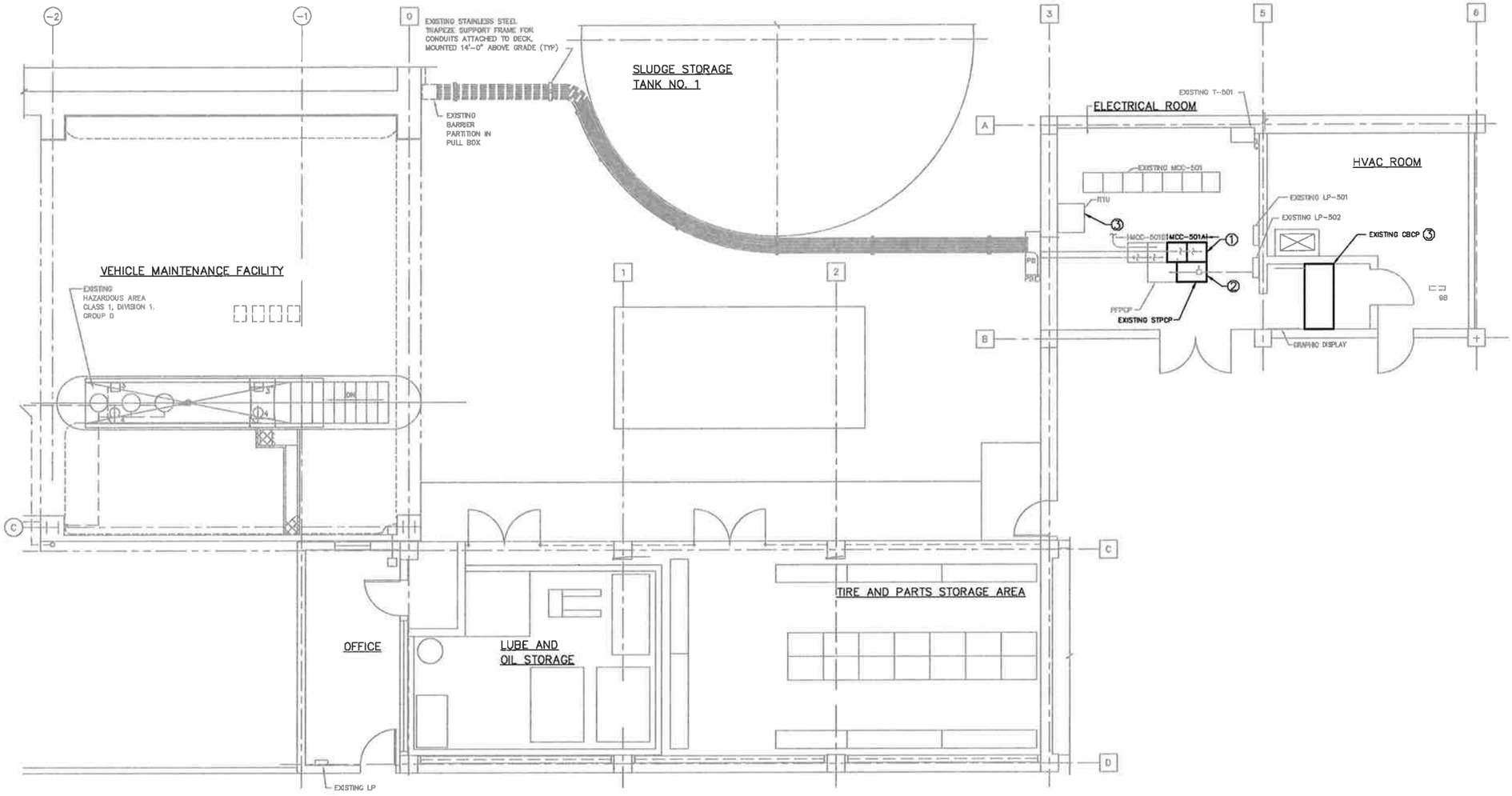
CITY of TAMPA
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
ELECTRICAL PROPOSED PLAN AT EL. 49'-0"

W.O.
SHEET 23



ELECTRICAL FLOOR PLAN

NTS

N

NTS

GENERAL NOTES:

1. PROPOSED VALVE ACTUATORS AS SHOWN ARE DERIVED FROM RECORD DRAWINGS. REFER TO PLANS AND SECTIONS SHEETS 9 THROUGH 16 FOR LOCATIONS.
2. EXISTING EQUIPMENT TO REMAIN (SHOWN AS LIGHT SHADED LINES) PROPOSED WORK IS SHOWN IN BOLD LINES.
3. REFER TO SHEET 17 FOR ELECTRICAL LEGEND AND ABBREVIATIONS.

KEYED NOTES:

1. PROVIDE CONDUIT AND CONDUCTORS FROM EXISTING MCC-501A TO PROPOSED VALVE ACTUATORS. REFER TO SHEET 25 FOR PROPOSED ONE-LINE DIAGRAM. REFER TO SHEET 21 FOR PROPOSED VALVE ACTUATOR LOCATIONS AND CONDUIT ROUTING.
2. PROVIDE CONDUIT AND CONDUCTORS FROM EXISTING "STPCP" TO PROPOSED VALVE ACTUATOR. REFER TO SHEET 21 FOR PROPOSED VALVE ACTUATOR LOCATIONS AND CONDUIT ROUTING. REFER TO SHEET 28 EXISTING "STPCP" SLUDGE TRANSFER PUMP CONTROL SCHEMATIC FOR PROPOSED WORK.
3. PROVIDE CONTROL CONDUCTORS IN EXISTING CONDUIT FROM EXISTING "RTU" AND "CBCP" TO PROPOSED VALVE ACTUATOR. REFER TO SHEET 21 FOR PROPOSED VALVE ACTUATOR LOCATIONS.

GASPARD D. GARCIA
LICENSE
No 76573
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-13-2014

ELECTRICAL ENGINEER

Lockwood, Andrews & Newnam, Inc.
A LBG A DALY COMPANY
PLANNING ENGINEERING PROGRAM MANAGEMENT
107 Hampton Road, Suite 190, Clearwater, FL 33759
Tel 727-726-0005 Fax 727-726-0009
CA Lic. No: 9086

No.	DATE	REVISIONS
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DES: GG
DRN: OL
CKD: DH
DATE: 5/13/14

CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
ELECTRICAL PROPOSED PLAN

W.O.

SHEET 24

ProjectWise: pw:\\lodpw.lodcs.int:projectwise\Documents\Projects\130-10429-003\V4-0-Production\V4-01-Drawings\
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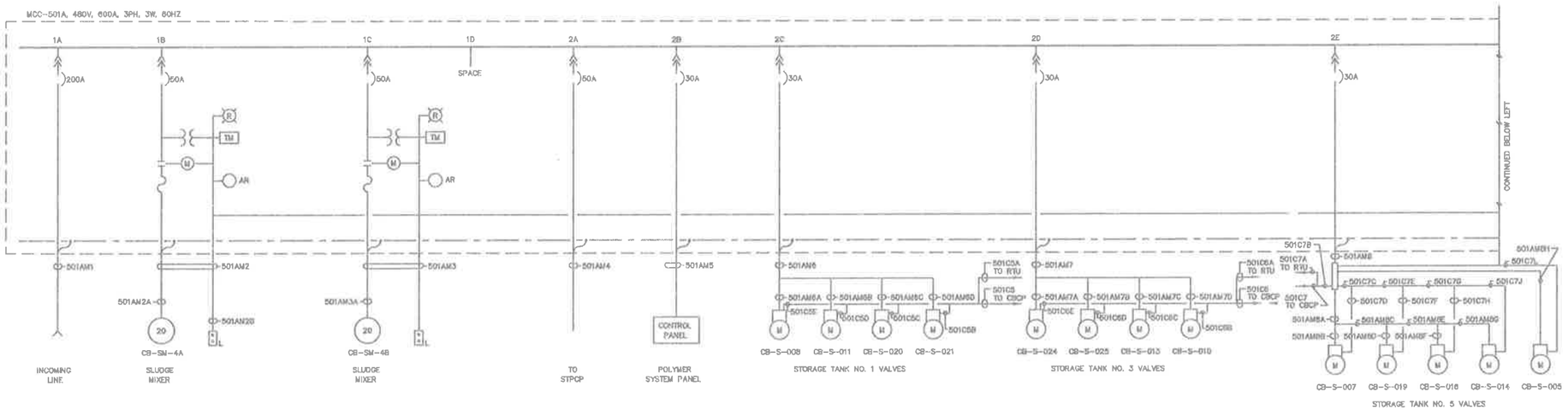

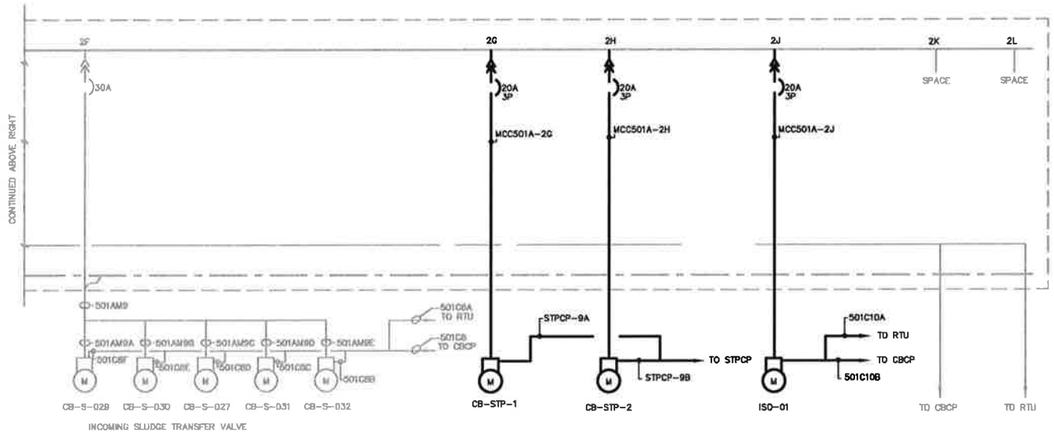

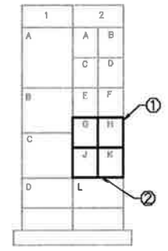

MCC-501A
FRONT ELEVATION

GENERAL NOTES:

1. EXISTING EQUIPMENT TO REMAIN (SHOWN AS LIGHT SHADED LINES). PROPOSED WORK IS SHOWN IN BOLD LINES.
2. REFER TO SHEET 17 FOR ELECTRICAL LEGEND AND ABBREVIATIONS.
3. THE EXISTING MCC ONE-LINE DIAGRAM AND MCC ELEVATION ARE DERIVED FROM RECORD DRAWINGS AND FROM VISUAL OBSERVATION. VERIFY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER AND OWNER OF ANY DISCREPANCIES FOUND.
4. EXISTING CONDUIT TAGS DERIVED FROM RECORD DRAWINGS SHOWN FOR INFORMATION PURPOSES ONLY
5. REFER TO SHEET 27 FOR ELECTRICAL CONDUIT SCHEDULE.
6. REFER TO SHEET 24 FOR "MCC-501A", "STPCP", "RTU", AND "CBCP" LOCATIONS.

KEYED NOTES:

1. PROVIDE DUAL MOUNTED CIRCUIT BREAKERS IN EXISTING MCC CUBICLE. FIELD VERIFY TO MATCH AIC RATING OF EXISTING CIRCUIT BREAKER. PROVIDE NAMEPLATES FOR THE PROPOSED VALVES ON MCC CUBICLE.
2. PROVIDE CIRCUIT BREAKER IN EXISTING MCC CUBICLE. FIELD VERIFY TO MATCH AIC RATING OF EXISTING CIRCUIT BREAKER. PROVIDE NAMEPLATES FOR THE PROPOSED VALVES ON MCC CUBICLE.

GASPARD D. GARCIA
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No 76573
STATE OF FLORIDA
PROFESSIONAL ENGINEER
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ELECTRICAL ENGINEER

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A LEO A DALY COMPANY
PLANNING ENGINEERING PROGRAM MANAGEMENT
107 Hampton Road, Suite 190, Clearwater, FL 33759
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CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
ELECTRICAL ONE-LINE DIAGRAM FOR MCC-501A

W.O.
SHEET 25

ProjectWise: pw:\\lodpw.lodco.int:projectwise\Documents\Projects\130-10429-003\4-0-Production\4-01-Drawings\
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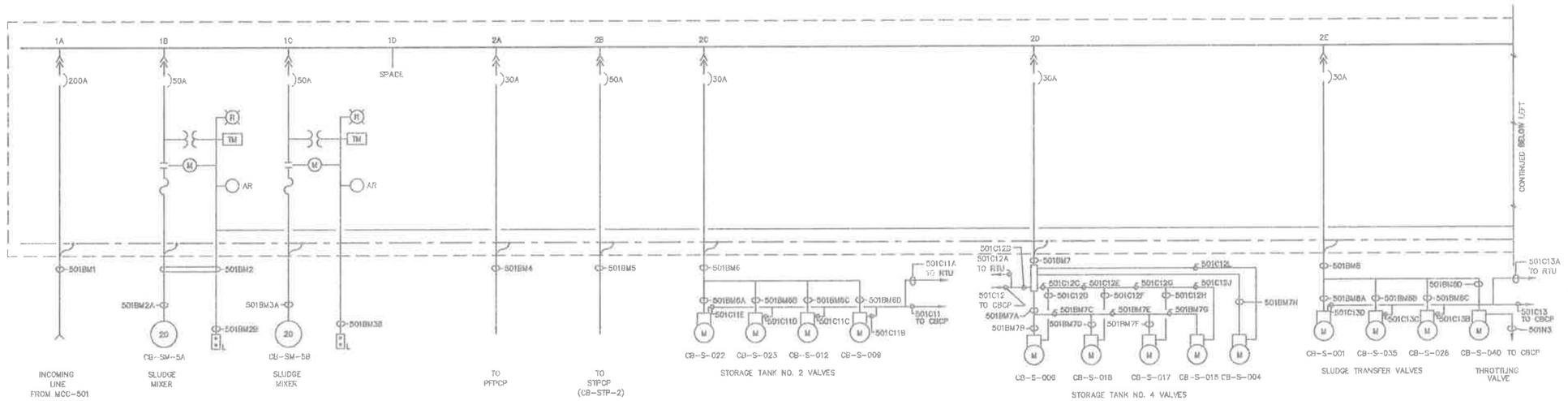

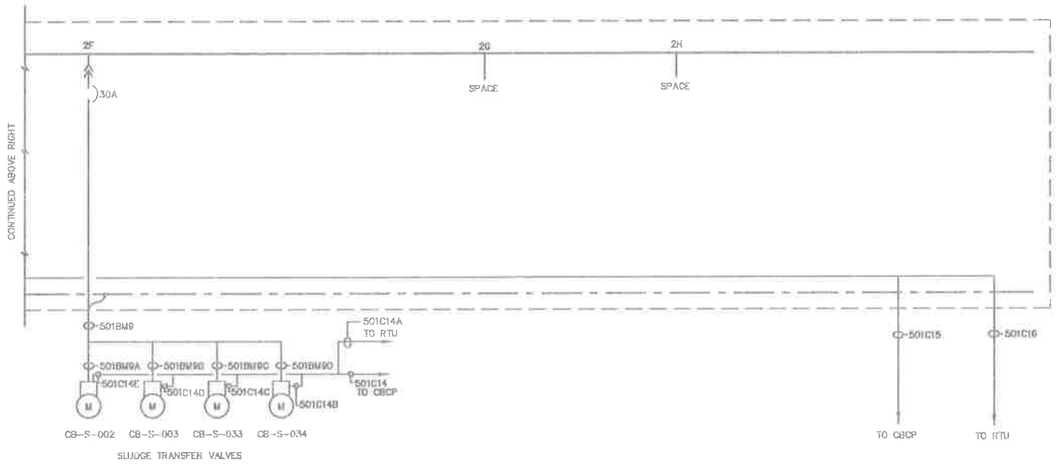

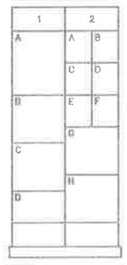

MCC-501B
FRONT ELEVATION

GENERAL NOTES:

1. EXISTING MCC-501B ONE-LINE DIAGRAM IS SHOWN FOR INFORMATION PURPOSES. THERE IS NO PROPOSED WORK FOR THIS SHEET.
2. EXISTING CONDUIT TAGS DERIVED FROM RECORD DRAWINGS SHOWN FOR INFORMATION PURPOSES ONLY.

GASPAR D. GARCIA
LICENSE
No 76573
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-13-2014

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A LEO A DALY COMPANY
PLANNING ENGINEERING PROGRAM MANAGEMENT
107 Hampton Road, Suite 190, Clearwater, FL 33759
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CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
ELECTRICAL ONE-LINE DIAGRAM FOR MCC-501B

W.O.
SHEET 26

CONDUIT SCHEDULE

CONDUIT TAG	TO	FROM	NOTES	CONDUCTORS	CONDUIT
MCC501A-2G	CB-STP-1 MOV	MCC-501A	PROPOSED	3#10 AWG, 1#10AWG GND.	3/4"
STPCP-9A	CB-STP-1 MOV	STPCP	1	1-8PR#16 TP, 1-4"PR#16 STP	1-1/2"
MCC 501A-2H	CB-STP-2 MOV	MCC-501A	PROPOSED	3#10 AWG, 1#10AWG GND.	3/4"
STPCP-9B	CB-STP-2 MOV	STPCP	1	1-8PR#16 TP, 1-4"PR#16 STP	1-1/2"
MCC501A-2J	ISO-01 MOV	MCC-501A	1	3#10 AWG, 1#10AWG GND.	3/4"
501C10A	ISO-01 MOV	CBCP	2	1-8PR#16 TP, 1-4"PR#16 STP	1-1/2"
501C10B	ISO-01 MOV	RTU	2	1-8PR#16 TP, 1-4"PR#16 STP	1-1/2"

NOTE 1: PROVIDE CONTROL CONDUCTORS AS INDICATED TO "STPCP" AS FOLLOWS:
- LIMIT SWITCH STATUS
- VALVE OPEN
- VALVE CLOSE

REFER TO STPCP CONTROL SCHEMATIC SHEET 28 FOR MORE DETAIL.
NOTE 2: UTILIZE EXISTING CONDUIT WHERE POSSIBLE AND PROVIDE CONTROL CONDUCTORS AS INDICATED.

EXISTING CONDUIT TAGS SHOWN FOR INFORMATION ONLY

501AM6	PULLBOX NEAR CB-S-008	MCC-501A	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM6A	CB-S-008	PULLBOX NEAR CB-S-008	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM6B	CB-S-011	PULLBOX NEAR CB-S-009	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM6C	CB-S-020	PULLBOX NEAR CB-S-010	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM6D	CB-S-021	PULLBOX NEAR CB-S-011	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM7	PULLBOX NEAR CB-S-0024	MCC-501A	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM7A	CB-S-024	PULLBOX NEAR CB-S-024	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM7B	CB-S-025	PULLBOX NEAR CB-S-024	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM7C	CB-S-013	PULLBOX NEAR CB-S-024	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM7D	CB-S-010	PULLBOX NEAR CB-S-024	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM8	PULLBOX "A"	MCC-501A	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM8A	PULLBOX NEAR CB-S-007	PULLBOX "A"	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM8B	CB-S-007	PULLBOX NEAR CB-S-007	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM8C	PULLBOX NEAR CB-S-019	PULLBOX NEAR CB-S-007	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM8D	CB-S-019	PULLBOX NEAR CB-S-019	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM8E	PULLBOX NEAR CB-S-016	PULLBOX NEAR CB-S-019	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM8F	CBS-016	PULLBOX NEAR CB-S-016	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM8G	CB-S-014	PULLBOX NEAR CB-S-016	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM8H	CB-S-005	PULLBOX "A"	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM9	PULLBOX NEAR CB-S-029	MCC-501A	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM9A	CB-S-029	PULLBOX NEAR CB-S-029	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM9B	CB-S-030	PULLBOX NEAR CB-S-029	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM9C	CB-S-027	PULLBOX NEAR CB-S-029	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM9D	CB-S-031	PULLBOX NEAR CB-S-029	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501AM9E	CB-S-032	PULLBOX NEAR CB-S-029	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM5	PULLBOX NEAR CB-S-022	MCC-501B	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM5A	CB-S-022	PULLBOX NEAR CB-S-022	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM5B	CB-S-023	PULLBOX NEAR CB-S-022	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM5C	CB-S-012	PULLBOX NEAR CB-S-022	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM5D	CB-S-009	PULLBOX NEAR CB-S-022	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM7	PULLBOX "A"	MCC-501B	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM7A	PULLBOX NEAR CB-S-006	PULLBOX "A"	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM7B	CB-S-005	PULLBOX NEAR CB-S-006	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM7C	PULLBOX NEAR CB-S-018	PULLBOX NEAR CB-S-006	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM7D	CB-S-018	PULLBOX NEAR CB-S-018	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM7E	PULLBOX NEAR CB-S-017	PULLBOX NEAR CB-S-018	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM7F	CB-S-017	PULLBOX NEAR CB-S-017	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM7G	CB-S-015	PULLBOX NEAR CB-S-017	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM7H	CB-S-004	PULLBOX "A"	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM8	PULLBOX NEAR CB-S-001	MCC-501B	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM8A	CB-S-001	PULLBOX NEAR CB-S-001	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM8B	CB-S-035	PULLBOX NEAR CB-S-001	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM8C	CB-S-026	PULLBOX NEAR CB-S-001	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM8D	CB-S-040	PULLBOX NEAR CB-S-001	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM9	PULLBOX NEAR CB-S-002	MCC-501B	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM9A	CB-S-002	PULLBOX NEAR CB-S-002	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM9B	CB-S-003	PULLBOX NEAR CB-S-002	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM9C	CB-S-033	PULLBOX NEAR CB-S-002	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501BM9D	CB-S-034	PULLBOX NEAR CB-S-002	EXISTING	3#10 AWG, 1#10AWG GND.	3/4"
501C6	PULLBOX NEAR CB-S-021	CBCP		32#14, 1#14 GND.	2"
501C6A	PULLBOX NEAR CB-S-021	RTU		12#14, 1#14 GND.	1-1/4"
501C6B	CB-S-021	PULLBOX NEAR CB-S-021		11#14, 1#14 GND.	1-1/4"
501C6C	CB-S-020	PULLBOX NEAR CB-S-021		11#14, 1#14 GND.	1-1/4"
501C6D	CB-S-011	PULLBOX NEAR CB-S-021	CONDUCTOR CONT. THRU D-10	11#14, 1#14 GND.	1-1/4"
501C6E	CB-S-008	PULLBOX NEAR CB-S-021	CONDUCTOR CONT. THRU D-10	11#14, 1#14 GND.	1-1/4"
501C6	PULLBOX NEAR CB-S-010	CBCP	EXISTING	32#14, 1#14 GND.	2"
501C6A	PULLBOX NEAR CB-S-010	RTU	EXISTING	12#14, 1#14 GND.	1-1/4"
501C6B	CB-S-010	PULLBOX NEAR CB-S-010	EXISTING	11#14, 1#14 GND.	1-1/4"
501C6C	CB-S-013	PULLBOX NEAR CB-S-010	EXISTING	11#14, 1#14 GND.	1-1/4"
501C6D	CB-S-025	PULLBOX NEAR CB-S-010	EXISTING	11#14, 1#14 GND.	1-1/4"
501C6E	CB-S-024	PULLBOX NEAR CB-S-010	EXISTING	11#14, 1#14 GND.	1-1/4"
501C7	PULLBOX	CBCP	EXISTING	40#14, 1#14 GND.	2"
501C7A	PULLBOX	RTU	EXISTING	15#14, 1#14 GND.	1-1/4"
501C7B	PULLBOX "A"	PULLBOX	EXISTING	55#14, 1#14 GND.	2-1/2"
501C7C	PULLBOX NEAR CB-S-007	PULLBOX "A"	EXISTING	44#14, 1#14 GND.	2-1/2"
501C7D	CB-S-007	PULLBOX NEAR CB-S-007	EXISTING	11#14, 1#14 GND.	1-1/4"
501C7E	PULLBOX NEAR CB-S-019	PULLBOX NEAR CB-S-007	EXISTING	33#14, 1#14 GND.	2"
501C7F	CB-S-019	PULLBOX NEAR CB-S-019	EXISTING	11#14, 1#14 GND.	1-1/4"
501C7G	PULLBOX NEAR CB-S-016	PULLBOX NEAR CB-S-019	EXISTING	22#14, 1#14 GND.	1-1/2"
501C7H	CB-S-016	PULLBOX NEAR CB-S-016	EXISTING	11#14, 1#14 GND.	1-1/4"
501C7J	CB-S-014	PULLBOX NEAR CB-S-016	EXISTING	11#14, 1#14 GND.	1-1/4"
501C7L	CB-S-005	PULLBOX "A"	EXISTING	11#14, 1#14 GND.	1-1/4"
501C8	PULLBOX NEAR CB-S-032	CBCP	EXISTING	40#14, 1#14 GND.	2"
501C8A	PULLBOX NEAR CB-S-032	RTU	EXISTING	15#14, 1#14 GND.	1-1/4"
501C8B	CB-S-032	PULLBOX NEAR CB-S-32	EXISTING	11#14, 1#14 GND.	1-1/4"
501C8C	CB-S-031	PULLBOX NEAR CB-S-32	EXISTING	11#14, 1#14 GND.	1-1/4"
501C8D	CB-S-027	PULLBOX NEAR CB-S-32	EXISTING	11#14, 1#14 GND.	1-1/4"
501C8E	CB-S-030	PULLBOX NEAR CB-S-32	EXISTING	11#14, 1#14 GND.	1-1/4"
501C8F	CB-S-029	PULLBOX NEAR CB-S-32	EXISTING	11#14, 1#14 GND.	1-1/4"
501C11	PULLBOX NEAR CB-S-009	CBCP	EXISTING	32#14, 1#14 GND.	2"
501C11A	PULLBOX NEAR CB-S-009	RTU	EXISTING	12#14, 1#14 GND.	1-1/4"
501C11B	CB-S-009	PULLBOX NEAR CB-S-009	EXISTING	11#14, 1#14 GND.	1-1/4"
501C11C	CB-S-012	PULLBOX NEAR CB-S-009	EXISTING	11#14, 1#14 GND.	1-1/4"
501C11D	CB-S-023	PULLBOX NEAR CB-S-009	EXISTING	11#14, 1#14 GND.	1-1/4"
501C11E	CB-S-022	PULLBOX NEAR CB-S-009	EXISTING	11#14, 1#14 GND.	1-1/4"
501C12	PULLBOX	CBCP	EXISTING	40#14, 1#14 GND.	2"
501C12A	PULLBOX	RTU	EXISTING	15#14, 1#14 GND.	1-1/4"
501C12B	PULLBOX "A"	PULLBOX	EXISTING	55#14, 1#14 GND.	2-1/2"
501C12C	PULLBOX NEAR CB-S-006	PULLBOX "A"	EXISTING	44#14, 1#14 GND.	2-1/2"
501C12D	CB-S-006	PULLBOX NEAR CB-S-006	EXISTING	11#14, 1#14 GND.	1-1/4"
501C12E	PULLBOX NEAR CB-S-018	PULLBOX NEAR CB-S-006	EXISTING	33#14, 1#14 GND.	2"
501C12F	CB-S-018	PULLBOX NEAR CB-S-018	EXISTING	11#14, 1#14 GND.	1-1/4"
501C12G	PULLBOX NEAR CB-S-017	PULLBOX NEAR CB-S-018	EXISTING	22#14, 1#14 GND.	1-1/2"
501C12H	CB-S-017	PULLBOX NEAR CB-S-017	EXISTING	11#14, 1#14 GND.	1-1/4"
501C12J	CB-S-015	PULLBOX NEAR CB-S-017	EXISTING	11#14, 1#14 GND.	1-1/4"
501C12L	CB-S-004	PULLBOX "A"	EXISTING	11#14, 1#14 GND.	1-1/4"
501C13	PULLBOX NEAR CB-S-028	CBCP	EXISTING	24#14, 1#14 GND.	1-1/2"
501C13A	PULLBOX NEAR CB-S-028	RTU	EXISTING	9#14, 1#14 GND.	1"
501C13B	CB-S-028	PULLBOX NEAR CB-S-028	EXISTING	11#14, 1#14 GND.	1-1/4"
501C13C	CB-S-035	PULLBOX NEAR CB-S-028	EXISTING	11#14, 1#14 GND.	1-1/4"
501C13D	CB-S-001	PULLBOX NEAR CB-S-028	EXISTING	11#14, 1#14 GND.	1-1/4"
501C14	PULLBOX NEAR CB-S-034	CBCP	EXISTING	32#14, 1#14 GND.	2"
501C14A	PULLBOX NEAR CB-S-034	RTU	EXISTING	12#14, 1#14 GND.	1-1/4"
501C14B	CB-S-034	PULLBOX NEAR CB-S-034	EXISTING	11#14, 1#14 GND.	1-1/4"
501C14C	CB-S-033	PULLBOX NEAR CB-S-034	EXISTING	11#14, 1#14 GND.	1-1/4"
501C14D	CB-S-003	PULLBOX NEAR CB-S-034	EXISTING	11#14, 1#14 GND.	1-1/4"
501C14E	CB-S-002	PULLBOX NEAR CB-S-034	EXISTING	11#14, 1#14 GND.	1-1/4"

GENERAL NOTES:

1. EXISTING CONDUIT TAGS SHOWN IN CONDUIT SCHEDULE IS FOR INFORMATION PURPOSES ONLY.

GASPARD D. GARCIA LICENSE No 76573 STATE OF FLORIDA PROFESSIONAL ENGINEER 5-13-2014

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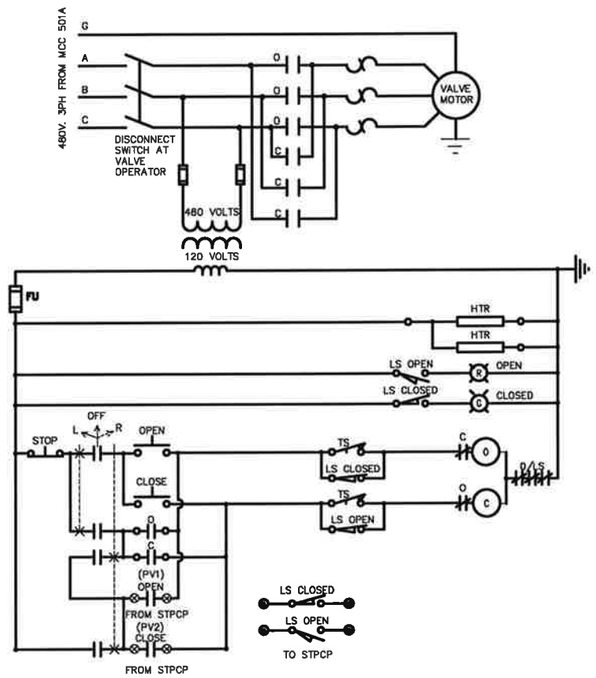
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

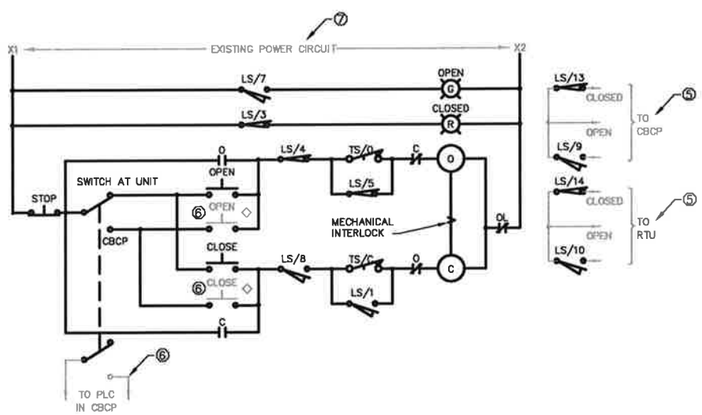
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
ELECTRICAL SCHEDULES

W.O.
SHEET 27



PROPOSED 480 VOLTS, 3ø, VALVE ACTUATOR

TYPICAL FOR CB-STP-1, CB-STP-2, ISO-01



PROPOSED SLUDGE VALVE ACTUATOR

④ INCOMING SLUDGE VALVES CB-S-001 TO CB-S-003
SLUDGE STORAGE TANK INLET VALVES CB-S-004 TO CB-S-013
SLUDGE STORAGE TANK OUTLET VALVES CB-S-014 TO CB-S-025
SLUDGE TRANSFER VALVES CB-S-027 TO CB-S-035

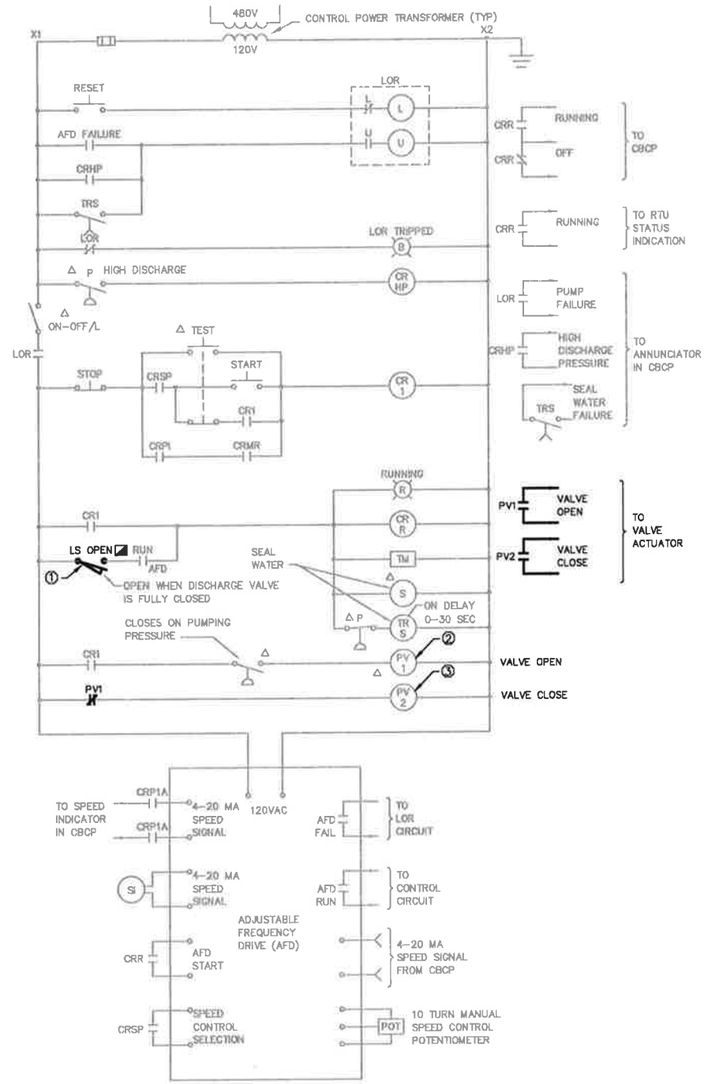
TYPICAL LIMIT SWITCH CONTACT DEVELOPMENT FOR MOTORIZED VALVE ACTUATORS

ROTOR NO.	CONTACT NO.	OPERATOR POSITION: FULL OPEN	OPERATOR POSITION: INTER-MEDIATE	OPERATOR POSITION: FULL CLOSED	CONTACT FUNCTION
1	1	▬			BYPASS CKT
	2	▬			AUXILIARY
	3		▬	▬	INDICATOR LIGHT
	4		▬	▬	FORWARD (OPEN) LIMIT
2	5			▬	BYPASS CKT
	6			▬	AUXILIARY
	7		▬	▬	INDICATOR LIGHT
	8	▬	▬	▬	REVERSE (CLOSED) LIMIT
3	9	▬	▬	▬	AUXILIARY
	10	▬	▬	▬	AUXILIARY
	11	▬	▬		AUXILIARY
	12	▬	▬		AUXILIARY
4	13		▬	▬	AUXILIARY
	14		▬	▬	AUXILIARY
	15	▬			AUXILIARY
	16	▬			AUXILIARY

TS/C – CLOSING TORQUE SWITCH
TS/O – OPENING TORQUE SWITCH
▬ INDICATES CONTACT CLOSED
—— INDICATES CONTACT OPEN

SEE PROPOSED SLUDGE VALVE ACTUATOR SCHEMATIC DIAGRAMS FOR FUNCTION OF THE "AUXILIARY" LIMIT SWITCH CONTACTS

NOTE
◇ DENOTES DEVICE LOCATED IN CBCP



LOCATED AT VALVE ACTUATOR

EXISTING SLUDGE TRANSFER PUMP CB-STP-1

TYPICAL FOR CB-STP-2

GENERAL NOTES:

1. EXISTING EQUIPMENT TO REMAIN (SHOWN AS LIGHT SHADED LINES). PROPOSED WORK IS SHOWN IN BOLD LINES.
2. FIELD VERIFY EXISTING CONTROL PANELS, CONTROL SCHEMATICS, CONTROL DEVICES, AND CONTROL SEQUENCES. MODIFY AS NECESSARY TO ENSURE OPERATION OF PROPOSED VALVE ACTUATORS. COORDINATE ANY MODIFICATIONS WITH THE CITY.

KEYED NOTES:

1. EXTEND AND TERMINATE CONTROL CONDUCTORS FROM PROPOSED VALVE ACTUATOR LIMIT SWITCH TO "STPCP". REFER TO PROPOSED 480 VOLT, 3ø, VALVE ACTUATOR SCHEMATIC ON THIS SHEET. COORDINATE AND VERIFY CONTROL SEQUENCE OF OPERATION WITH THE CITY.
2. REPURPOSE EXISTING CONTROL RELAY FOR PROPOSED VALVE ACTUATOR OPEN COMMAND. REFER TO PROPOSED 480 VOLT, 3ø, VALVE ACTUATOR SCHEMATIC ON THIS SHEET. EXTEND AND TERMINATE CONTROL CONDUCTORS FROM PROPOSED VALVE ACTUATOR TO "STPCP". COORDINATE AND VERIFY VALVE CONTROL SEQUENCE OF OPERATION WITH THE CITY.
3. REPURPOSE EXISTING CONTROL RELAY FOR PROPOSED VALVE ACTUATOR CLOSE COMMAND. REFER TO PROPOSED 480 VOLT, 3ø, VALVE ACTUATOR SCHEMATIC ON THIS SHEET. EXTEND AND TERMINATE CONTROL CONDUCTORS FROM PROPOSED VALVE ACTUATOR TO "STPCP". COORDINATE AND VERIFY VALVE CONTROL SEQUENCE OF OPERATION WITH THE CITY.
4. PROPOSED SLUDGE VALVE ACTUATOR SCHEMATIC DERIVED FROM RECORD DRAWINGS. PRIOR TO CONSTRUCTION FIELD VERIFY EXISTING POWER CIRCUIT, LIMIT SWITCHES, AND CONTROL DEVICES.
5. RECONNECT AND TERMINATE EXISTING CONTROL CONDUCTORS TO LIMIT SWITCHES FROM "CBCP" AND "RTU". COORDINATE AND VERIFY CONTROL SEQUENCE OF OPERATION WITH THE CITY.
6. RECONNECT AND TERMINATE EXISTING REMOTE START/STOP CONTROL CONDUCTORS FROM EXISTING "CBCP". COORDINATE AND VERIFY CONTROL SEQUENCE OF OPERATION WITH THE CITY.
7. RECONNECT AND TERMINATE EXISTING POWER CONDUCTORS FROM EXISTING POWER PANELBOARD.

GASPARD D. GARCIA
LICENSE
No 76573
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-13-2014

ELECTRICAL ENGINEER

Lockwood, Andrews & Newnam, Inc.
A LEO A DALY COMPANY
PLANNING ENGINEERING PROGRAM MANAGEMENT
107 Hampton Road, Suite 190, Clearwater, FL 33759
Tel 727-726-0005 Fax 727-726-0009
CA Lic. No: 9086

No.	DATE	REVISIONS
3		
2		
1		

DES: GG
DRN: OL
CKD: DH
DATE: 5/13/14

CITY of TAMPA
HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT
SLUDGE CONTROL BUILDING CONTROL VALVES AND PIPING REPLACEMENT
ELECTRICAL SCHEMATIC DIAGRAMS

W.O.
SHEET 28