

LOCATION MAP

CITY of TAMPA

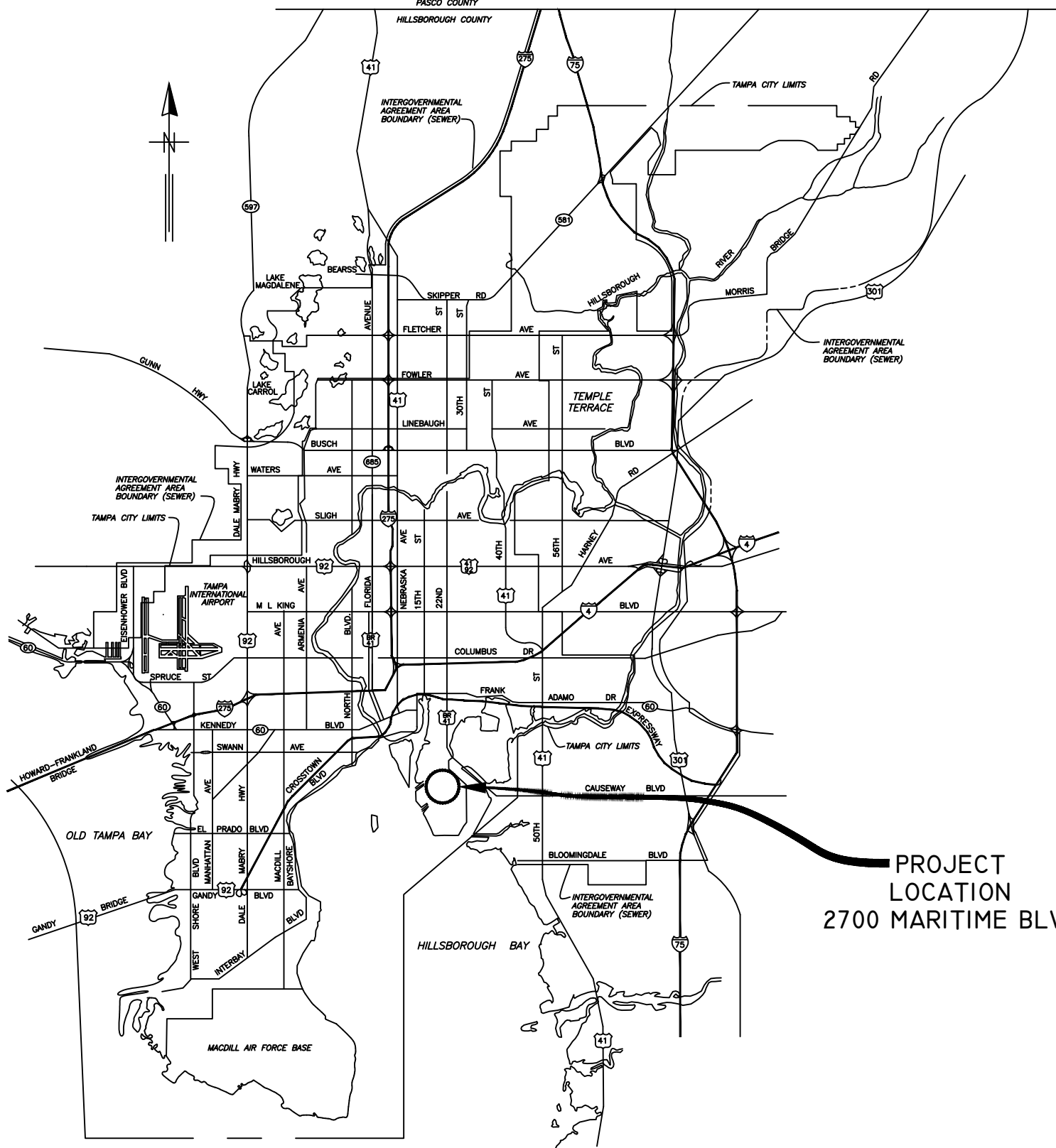


WASTEWATER DEPARTMENT

PLANS FOR

HOWARD F. CURREN AWTP FINAL SEDIMENTATION TANKS NO. 1-6 PROCESS AIR PIPING IMPROVEMENTS

CONTRACT NO.
23-C-00026



PROJECT
LOCATION
2700 MARITIME BLVD.

User: S513 Drawing Name: C:\Users\ss513\AppData\Local\Temp\AcPublish_2612\HFC AWTP Final Sedimentation Tanks No 1-6 Air Piping Improvements.dwg
Layout: Sep 14, 2023 - 3:41pm CTB - MONOCHROME.CTB

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

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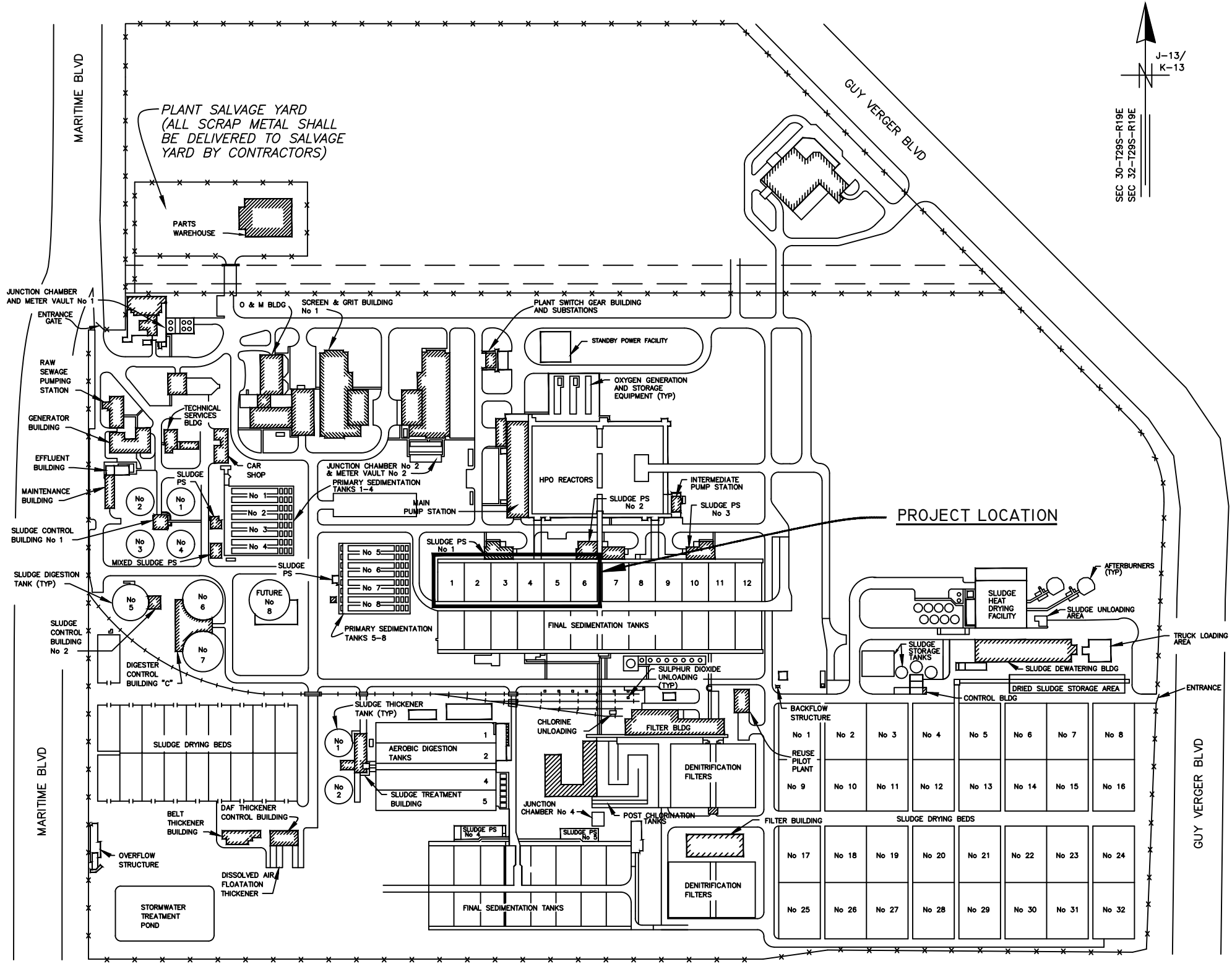
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DRN: JHJ
CKD:
DATE: 8/16/23

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN AWTP
FINAL SEDIMENTATION TANKS NO. 1-6
PROCESS AIR PIPING IMPROVEMENTS
COVER SHEET

SHEET
1

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HFC AWTP LOCATION MAP

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 WASTEWATER DEPARTMENT

HOWARD F. CURREN AWTP
 FINAL SEDIMENTATION TANKS NO. 1-6
 PROCESS AIR PIPING IMPROVEMENTS
 LOCATION MAP & INDEX

GENERAL NOTES

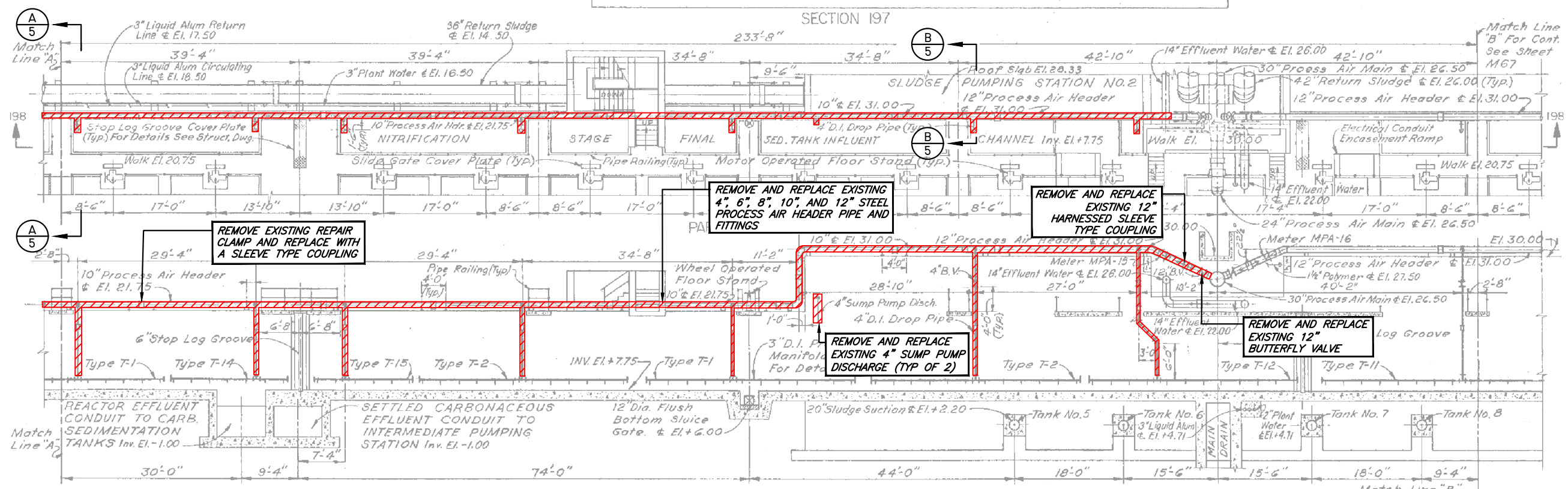
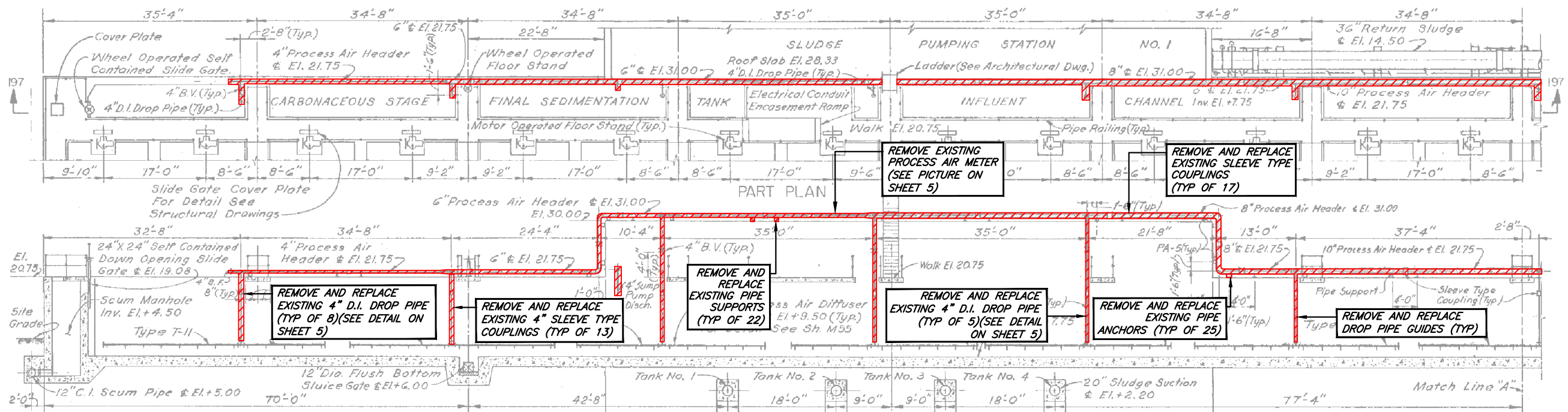
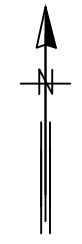
1. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES INCLUDING DESIGNATED LAYDOWN AREA FOR MATERIALS AND PARKING WITH CITY OF TAMPA WASTEWATER PERSONNEL, AND CONTRACT ADMINISTRATION DEPARTMENT PERSONNEL PRIOR TO COMMENCING ACTIVITIES.
2. CONTRACTOR SHALL VERIFY QUANTITIES OF ALL NECESSARY PIPES, VALVES, REDUCERS, FITTINGS, SUPPORTS, ANCHORS AND DROP GUIDES. EXISTING DIMENSIONS AND ELEVATIONS ARE BASED ON THE BEST INFORMATION AVAILABLE. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING TRUE DIMENSIONS AND ELEVATIONS IN THE FIELD PRIOR TO LAYOUT AND SHOP DRAWING SUBMITTALS.
3. ALL SUBMITTALS AND SHOP DRAWINGS SHALL BE HIGH RESOLUTION COLOR, BOOKMARKED, AND UNSECURED ELECTRONIC PORTABLE DOCUMENT FORMAT (PDF).
4. IT IS THE ENGINEER'S INTENT THAT ALL WORK INVOLVED IN THIS PROJECT WILL BE PERFORMED WHILE THE SEDIMENTATION TANKS 1-6 ARE OFF-LINE AND DRAINED. THIS WORK CAN'T OCCUR DURING HURRICANE SEASON AND THEREFORE MUST BE PERFORMED AND COMPLETED BETWEEN NOVEMBER 1ST AND JUNE 1ST. IF THE PROJECT START MUST BE DELAYED TO SATISFY THIS REQUIREMENT, THE CITY WILL EXTEND THE CONTRACT TIME ACCORDINGLY BUT WILL NOT PROVIDE ANY MONETARY COMPENSATION.
5. AWTP PERSONNEL SHALL BE RESPONSIBLE FOR DRAINING SEDIMENTATION TANKS 1-6. CONTRACTOR SHALL PROVIDE A MINIMUM OF FIVE WORKING DAYS NOTICE (IN WRITING) BEFORE HAVING AWTP PERSONNEL DRAIN THE TANKS.
6. CONTRACTOR SHALL REPLACE EXISTING 4", 6", 8", 10", AND 12" STEEL PROCESS AIR HEADER PIPE AND FITTINGS AT THE INFLUENT CHANNEL OF SEDIMENTATION TANKS 1 THRU 6 WITH SCHEDULE 40 TYPE 316L STAINLESS STEEL (SEE TABLE 1 ON THIS SHEET FOR ESTIMATED QUANTITIES). PROCESS AIR HEADER PIPE SHALL BE LABELED PROCESS AIR INCLUDING DIRECTIONAL FLOW ARROWS AS SPECIFIED, PAINTING OF STAINLESS STEEL PIPING IS NOT REQUIRED.
7. CONTRACTOR SHALL REPLACE ALL 4-INCH AIR DROP PIPING BETWEEN THE PROCESS AIR HEADER PIPE, AT THE TOP AND THE DIFFUSERS AT THE BOTTOM OF THE FINAL SEDIMENTATION TANKS INFLUENT CHANNEL INCLUDING DROP PIPE GUIDES WITH SCHEDULE 40 TYPE 316L STAINLESS STEEL. (A TOTAL OF 13 DROP PIPES ARE TO BE REPLACED). INSULATING FLANGE SHALL BE USED TO CONNECT TO EXISTING 4"x 3" FLANGED REDUCER (SEE SHEET 10 FOR DETAIL).
8. CONTRACTOR SHALL CLEAN EXISTING PROCESS AIR PIPING AND DIFFUSERS TO REMAIN AT THE BOTTOM OF THE INFLUENT CHANNEL OF SEDIMENTATION TANKS NO. 1 THRU 6.
9. CONTRACTOR SHALL REPLACE SLEEVE TYPE COUPLINGS AT THE INFLUENT CHANNEL OF SEDIMENTATION TANKS NO. 1 THRU 6 WITH 316 STAINLESS STEEL SLEEVE TYPE COUPLINGS. A TOTAL OF 31 SLEEVE TYPE COUPLINGS (VARIOUS SIZES) AND (1) 12" HARNESSED SLEEVE TYPE COUPLING WILL BE REQUIRED (SEE TABLE 1, THIS SHEET).
10. CONTRACTOR SHALL REPLACE EXISTING (25) PIPE ANCHORS AT THE INFLUENT CHANNEL OF SEDIMENTATION TANKS NO. 1 THRU 6 WITH 316L STAINLESS STEEL PIPE ANCHORS AND EXISTING (22) PIPE SUPPORTS WITH 316L STAINLESS STEEL PIPE SUPPORTS - VARIOUS SIZES (SEE TABLE 1, THIS SHEET).
11. CONTRACTOR SHALL REPLACE 1 EXISTING 12" BUTTERFLY VALVE AS DESIGNATED ON THE PLANS. BUTTERFLY VALVE SHALL BE DEZURK HIGH PERFORMANCE (BHP) OR APPROVED EQUAL. VALVE SHALL BE PROVIDED WITH A MANUAL HANDWHEEL OPERATOR. INSULATING FLANGE SHALL BE USED TO CONNECT TO EXISTING 12-INCH PIPE (SEE SHEET 10 FOR DETAILS). REPLACEMENT OF THIS VALVE WILL REQUIRE PROCESS AIR SHUTDOWN. DURATION OF SHUTDOWN SHALL NOT BE MORE THAN 2 HOURS AND A MINIMUM OF 5 WORKING DAYS ADVANCED NOTICE WILL BE REQUIRED.
12. CONTRACTOR SHALL REPLACE (13 TOTAL: 5 IN VERTICAL POSITION AND 8 IN HORIZONTAL POSITION) EXISTING 4" BUTTERFLY VALVES AT THE INFLUENT CHANNEL OF SEDIMENTATION TANKS NO.1 THRU 6 WITH DEZURK HIGH PERFORMANCE BUTTERFLY VALVES (BHP) OR APPROVED EQUAL. VALVES SHALL BE EQUIPPED WITH 316 STAINLESS STEEL ADJUSTABLE LEVERS.
13. CONTRACTOR SHALL REPLACE (12 TOTAL: 4 IN VERTICAL POSITION AND 8 IN HORIZONTAL POSITION) BUTTERFLY VALVE LEVERS AT THE INFLUENT CHANNEL OF SEDIMENTATION TANKS NO. 7 THRU 12 WITH 316 STAINLESS STEEL ADJUSTABLE LEVERS.
14. CONTRACTOR SHALL REPLACE (2) EXISTING 4" SUMP PUMP DISCHARGE PIPES AND FLANGE WITH SCHEDULE 40 TYPE 316L STAINLESS STEEL AT LOCATION SHOWN ON PLANS. INSULATING FLANGE SHALL BE USED TO CONNECT TO EXISTING 4" PIPE (SEE SHEET 10 FOR DETAILS).
15. ALL HARDWARE, UNLESS OTHERWISE NOTED, SHALL BE TYPE 316L STAINLESS STEEL.
16. USE OF EXPANSION ANCHORS SHALL NOT BE ALLOWED.
17. CONTRACTOR SHALL REMOVE ALL DEBRIS FROM THE INFLUENT CHANNEL OF SEDIMENTATIONS TANKS NO. 1 THRU 6 AND PLACED IN DRYING BEDS DESIGNATED BY THE CITY. THE CITY WILL TAKE CARE OF FINAL DEBRIS DISPOSAL. THE CITY WILL PAY THE CONTRACTOR BASED ON CUBIC YARDS OF MATERIAL REMOVED. THE CITY ESTIMATES 250 CUBIC YARDS OF DEBRIS WILL NEED TO BE REMOVED.

18. THE UPPER DECK OF THE SEDIMENTATION TANKS SHALL BE KEPT CLEAN OF MATERIALS AND DEBRIS AT ALL TIMES. WALKWAYS AND DRIVEWAY SHALL BE KEPT CLEAR FOR AWTP PERSONNEL TO PASS THROUGH.
19. NON-SALVAGEABLE MATERIALS ARE TO BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF AT THE CONTRACTORS EXPENSE.
20. CONTRACTOR IS RESPONSIBLE FOR MEETING ALL FEDERAL, STATE, AND LOCAL GOVERNMENT REGULATIONS IN REGARDS TO WORKING CONDITIONS AND MATERIALS HANDLING AND DISPOSAL.
21. OSHA STANDARD SAFETY EQUIPMENT SUCH AS SAFETY HARNESSSES, GAS MONITORS, LOWER EXPLOSIVE LIMIT (LEL) DETECTORS, BREATHING APPARATUS, ETC SHALL BE UTILIZED WHERE THE WORK DICTATES THEIR USE.
22. NORMAL WORKING HOURS SHALL BE WEEKDAYS FROM 7:30AM TO 4PM UNLESS OTHERWISE APPROVED BY THE ENGINEER/INSPECTOR.
23. PIPE WELDING SHALL BE TESTED BY VISUAL INSPECTION. THE VISUAL INSPECTION SHALL BE PERFORMED BY A THIRD PARTY, CERTIFIED WELD INSPECTION COMPANY THAT IS EXTREMELY FAMILIAR WITH 316 STAINLESS STEEL WELDS. THE VISUAL INSPECTION SHALL CONSIST OF INSPECTING AND APPROVING THE INITIAL (ROOT) WELDS ON THE FIRST DAY OF WELDING IN ORDER TO ESTABLISH AN APPROVED CRITERIA. FINAL WELD VISUAL INSPECTIONS OF ALL WELDS SHALL ALSO BE PERFORMED. ALL DEFICIENT WELDS AS IDENTIFIED BY THE TESTING COMPANY SHALL BE CORRECTED AND RE-INSPECTED AT NO ADDITIONAL COST TO THE CITY. ALL COSTS ASSOCIATED WITH THE VISUAL WELD INSPECTION SHALL BE CONTRACTOR'S RESPONSIBILITY.
24. CONTRACTOR SHALL PERFORM A POST-INSTALLATION TEST OF THE SYSTEM. THE POST-INSTALLATION TEST SHALL CONSIST OF OPERATING THE SYSTEM UNDER LIVE FLOW FOR A 48-HOUR PERIOD AND CHECKING FOR AIR LEAKS. ANY DEFICIENCY IDENTIFIED BY TESTING SHALL BE CORRECTED AND RE-TESTED AT NO ADDITIONAL COST TO THE CITY.
25. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE 7TH EDITION (2020), AND CHAPTER 5 OF THE CITY OF TAMPA CODE.
26. CONTRACTOR SHALL MEET ALL REQUIREMENTS AS LISTED IN THE SPECIFIC PROVISIONS AND INDIVIDUAL SPECIFICATION SECTIONS INCLUDED IN THE CONTRACT DOCUMENTS.
27. CONTRACTOR SHALL RESTORE ALL STRUCTURES, SODDING AND PAVEMENT THAT MAY HAVE BEEN DAMAGED DURING CONSTRUCTION TO ITS ORIGINAL CONDITION OR BETTER.
28. ELEVATIONS INDICATED ON THE DRAWINGS BASED ON A CITY SPECIFIC DATUM AS PER THE SEPTEMBER 1973 RECORD DRAWINGS.

PIPE DIAMETER	SLEEVE TYPE COUPLINGS REQUIRED (see detail sh 10)	APPROXIMATE LENGTH OF PIPE REQUIRED	PIPE ANCHORS REQUIRED (see detail sh 9)	PIPE SUPPORTS REQUIRED (see detail sh 9)	INSULATING FLANGES REQUIRED (see detail, sh 10)	LONG DROP LEGS REQUIRED (BV VERTICAL POSITION)	SHORT DROP LEGS REQUIRED (BV HORIZONTAL POSITION)
4"	14	280'	1	2	15	0	1
6"	4	80'	6	4	0	1	1
8"	4	80'	6	4	0	2	0
10"	8	200'	10	11	0	0	6
12"	1	40'	2	1	1	2	0
	1 HARNESSED						

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JACINTO CARLOS FERRAS, P.E., #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: KJG DRN: JHJ CKD: DATE: 8/16/23	CITY of TAMPA WASTEWATER DEPARTMENT	HOWARD F. CURREN AWTP FINAL SEDIMENTATION TANKS NO. 1-6 PROCESS AIR PIPING IMPROVEMENTS GENERAL NOTES	SHEET
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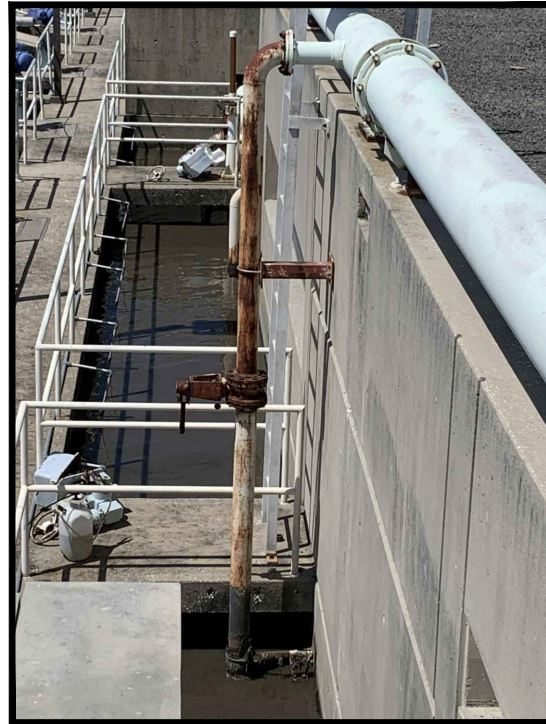
HATCHED AREAS AND BOXED TEXT ON THIS SHEET INDICATE PIPING AND EQUIPMENT TO BE REMOVED

DEMOLITION PLAN & SECTIONS
SCALE: N.T.S.

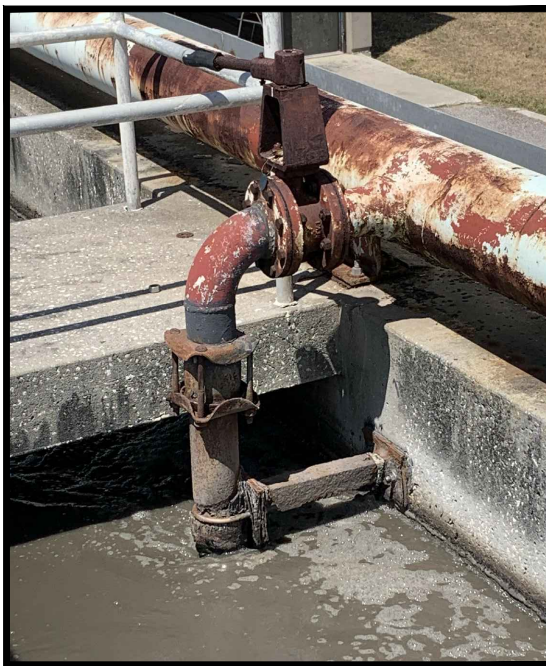
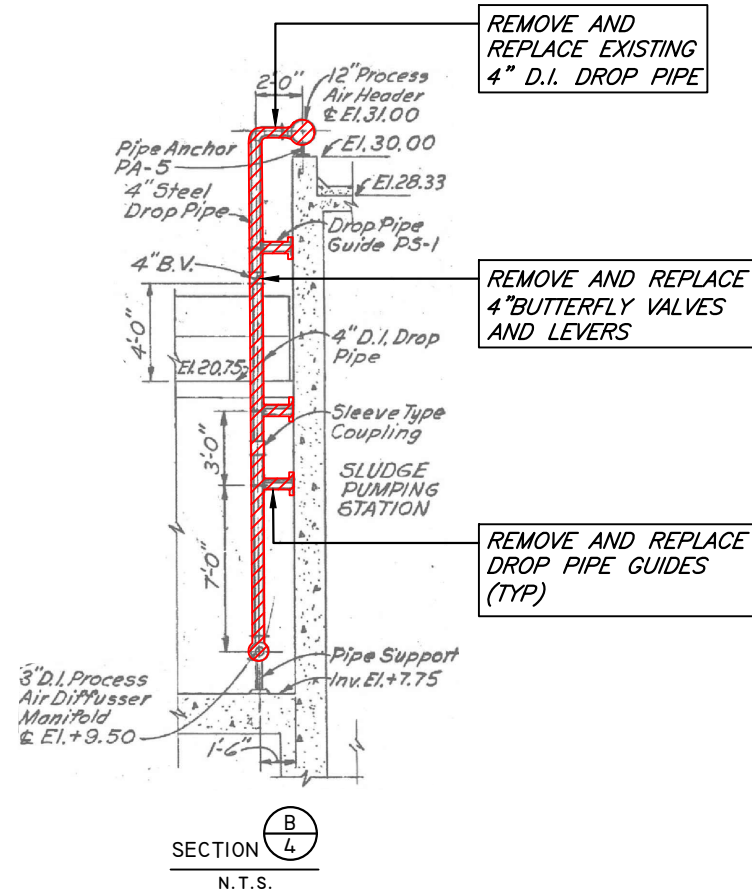
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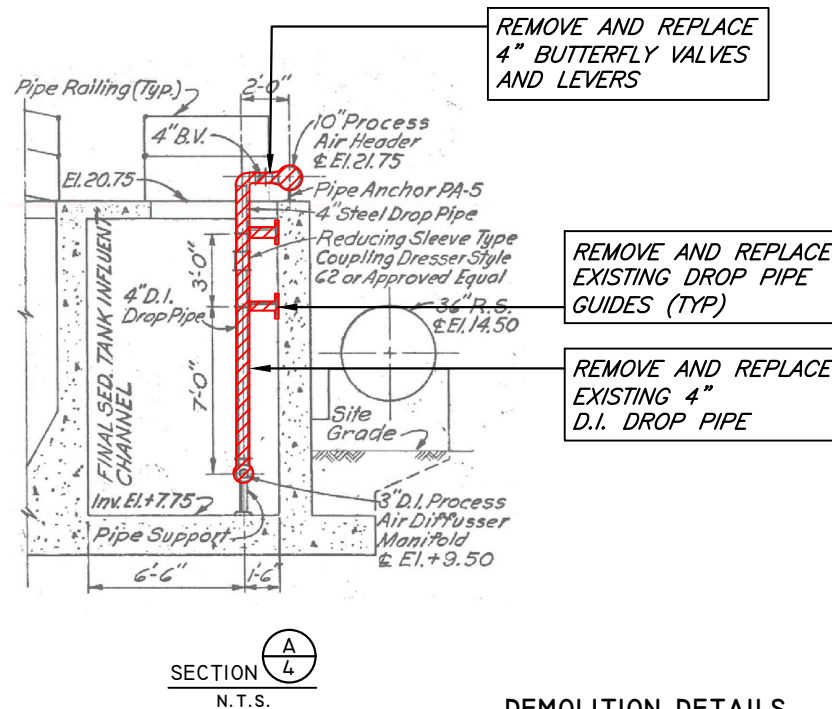
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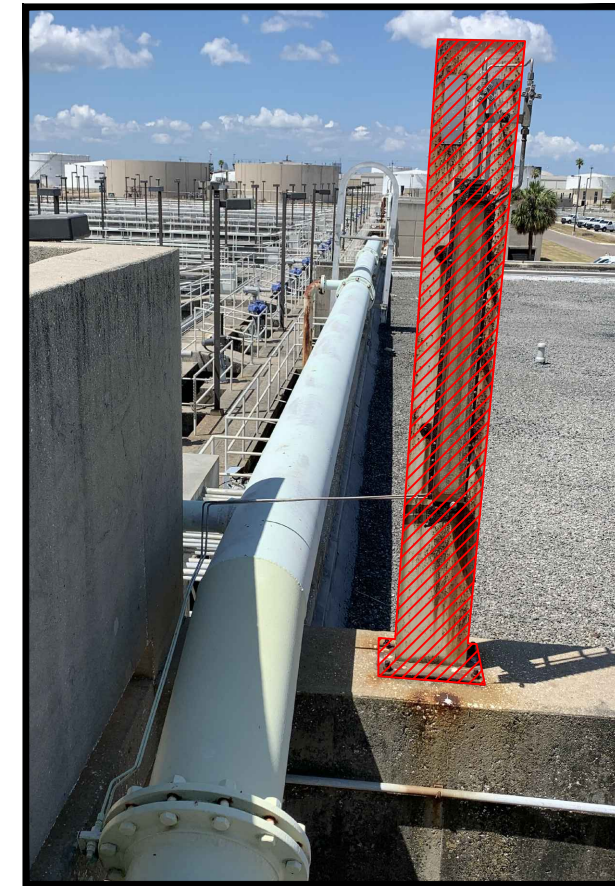
DROP PIPE W/ VERTICAL BUTTERFLY VALVE AND DROP PIPE GUIDES (TYP OF 5)



DROP PIPE W/ HORIZONTAL BUTTERFLY VALVE AND DROP PIPE GUIDES (TYP OF 8)



DEMOLITION DETAILS
N.T.S.



PROCESS AIR METER

NOTE: CONTRACTOR SHALL REMOVE EXISTING FLOWMETER AND MANOMETER PEDESTAL AT THE SLUDGE PUMP STATION NO. 1. CONCRETE SHALL BE GROUND BACK TO A SMOOTH CONCRETE SURFACE.

HATCHED AREAS AND BOXED TEXT ON THIS SHEET INDICATE PIPING AND EQUIPMENT TO BE REMOVED

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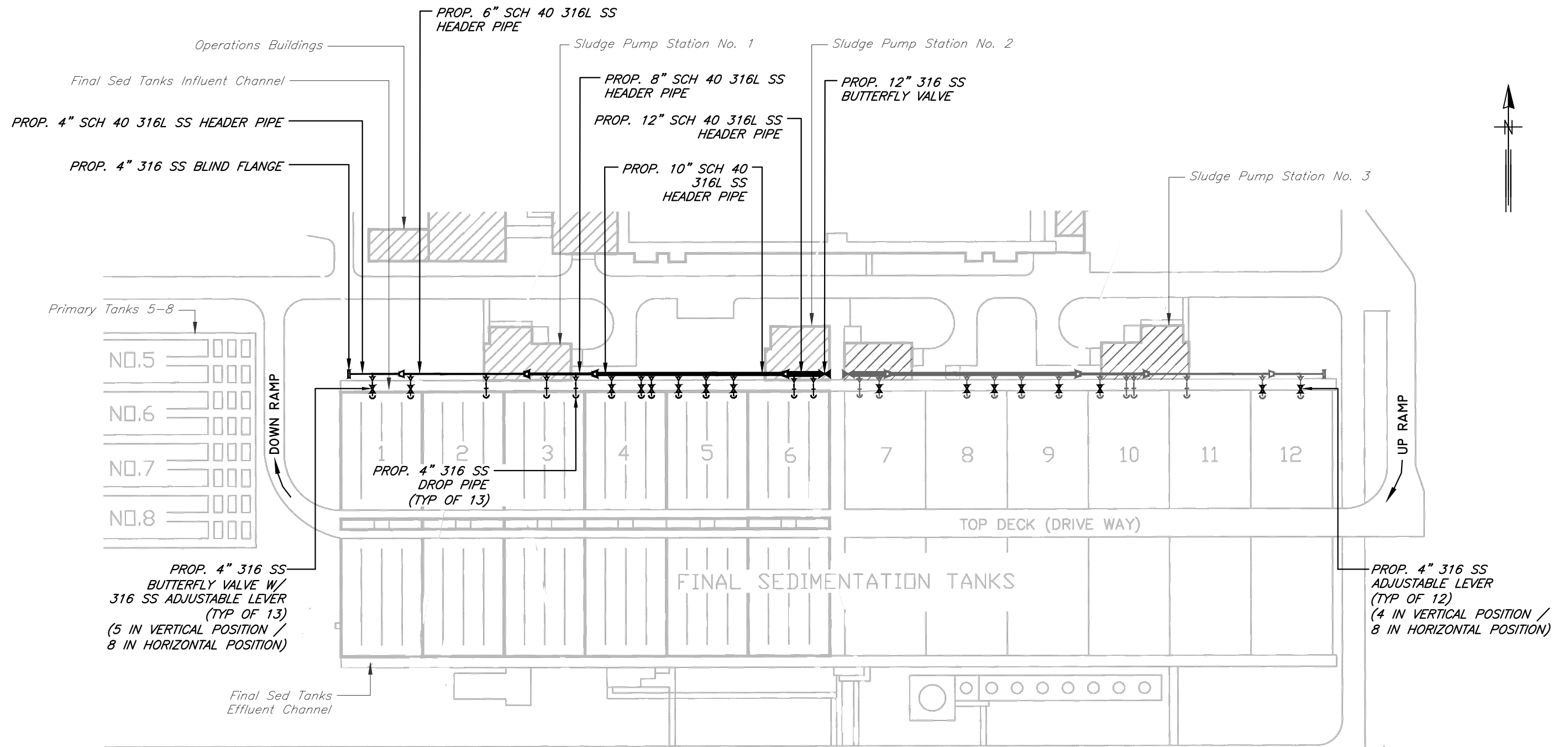
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CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN AWP
FINAL SEDIMENTATION TANKS NO. 1-6
PROCESS AIR PIPING IMPROVEMENTS
DEMOLITION DETAILS

SHEET
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LEGEND

- PROPOSED BUTTERFLY VALVE
- ◻ PROPOSED REDUCER
- ↓ PROPOSED 4" 90° BEND DROP PIPE

FINAL SEDIMENTATION TANKS PLAN VIEW

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

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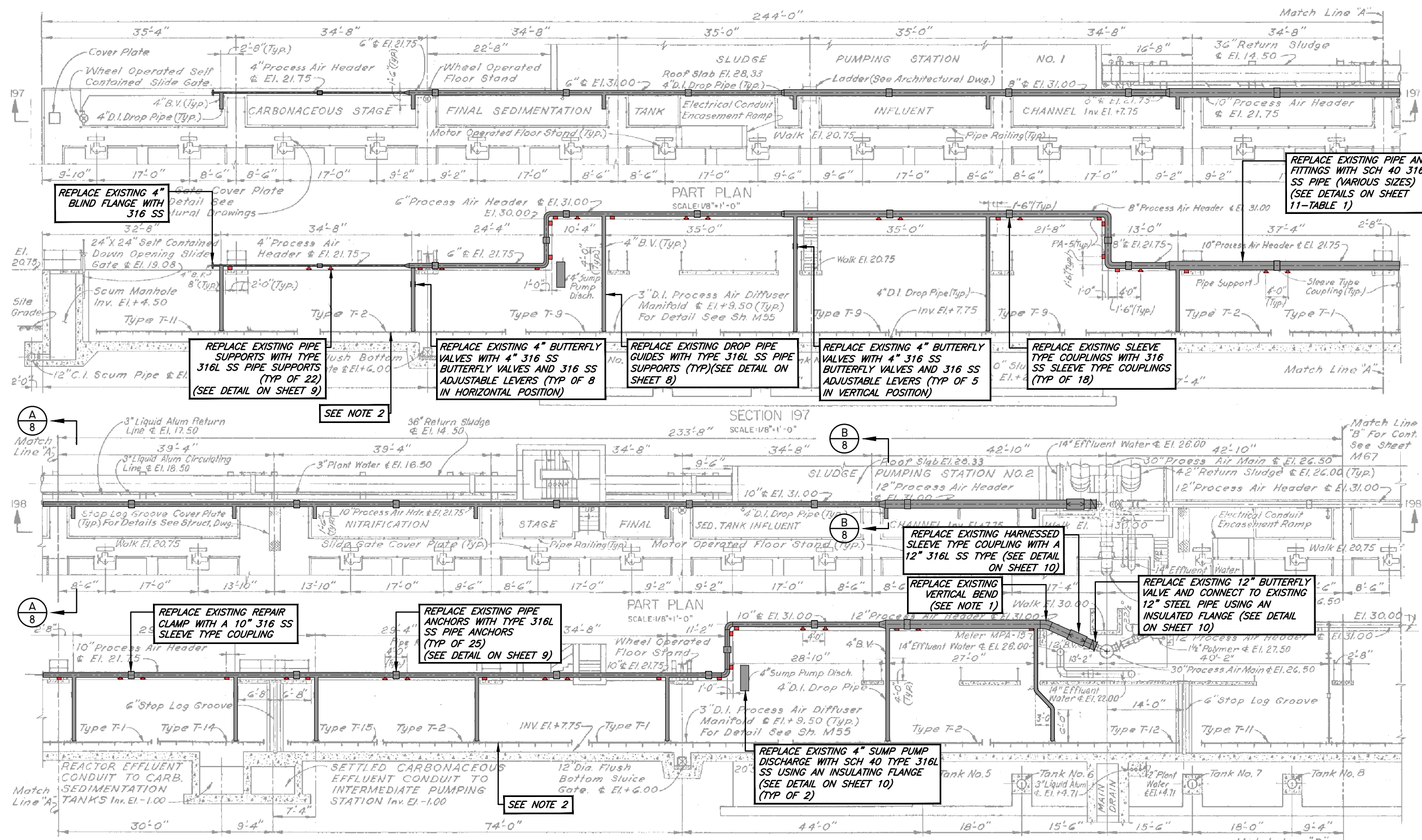
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HOWARD F. CURREN AWTP
 FINAL SEDIMENTATION TANKS NO. 1-6
 PROCESS AIR PIPING IMPROVEMENTS
 FINAL SEDIMENTATION TANKS PLAN VIEW

SHEET

6



REPLACE EXISTING 4" BLIND FLANGE WITH 316 SS

REPLACE EXISTING PIPE SUPPORTS WITH TYPE 316L SS PIPE SUPPORTS (TYP OF 22) (SEE DETAIL ON SHEET 9)

REPLACE EXISTING 4" BUTTERFLY VALVES WITH 4" 316 SS BUTTERFLY VALVES AND 316 SS ADJUSTABLE LEVERS (TYP OF 8 IN HORIZONTAL POSITION)

REPLACE EXISTING DROP PIPE GUIDES WITH TYPE 316L SS PIPE SUPPORTS (TYP)(SEE DETAIL ON SHEET 8)

REPLACE EXISTING 4" BUTTERFLY VALVES WITH 4" 316 SS BUTTERFLY VALVES AND 316 SS ADJUSTABLE LEVERS (TYP OF 5 IN VERTICAL POSITION)

REPLACE EXISTING SLEEVE TYPE COUPLINGS WITH 316 SS SLEEVE TYPE COUPLINGS (TYP OF 18)

REPLACE EXISTING PIPE AND FITTINGS WITH SCH 40 316L SS PIPE (VARIOUS SIZES) (SEE DETAILS ON SHEET 11-TABLE 1)

REPLACE EXISTING REPAIR CLAMP WITH A 10" 316 SS SLEEVE TYPE COUPLING

REPLACE EXISTING PIPE ANCHORS WITH TYPE 316L SS PIPE ANCHORS (TYP OF 25) (SEE DETAIL ON SHEET 9)

REPLACE EXISTING HARNESS SLEEVE TYPE COUPLING WITH A 12" 316L SS TYPE (SEE DETAIL ON SHEET 10)

REPLACE EXISTING 12" BUTTERFLY VALVE AND CONNECT TO EXISTING 12" STEEL PIPE USING AN INSULATED FLANGE (SEE DETAIL ON SHEET 10)

REPLACE EXISTING 4" SUMP PUMP DISCHARGE WITH SCH 40 TYPE 316L SS USING AN INSULATING FLANGE (SEE DETAIL ON SHEET 10) (TYP OF 2)

SHADED AREAS AND BOXED TEXT ON THIS SHEET INDICATE PROPOSED WORK

- LEGEND**
- PROPOSED 316L PIPE SUPPORT
 - PROPOSED 316 SS SLEEVE TYPE COUPLING
 - PROPOSED 316L SS PIPE ANCHOR

MECHANICAL PLAN & SECTIONS
SCALE: N.T.S.

- NOTE:**
1. CONTRACTOR SHALL MITER CUT PIPE TO MATCH EXISTING PIPE ANGLE (APPROX. 22 1/2°)
 2. CONTRACTOR SHALL CLEAN ALL EXISTING PROCESS AIR PIPING AND DIFFUSERS AT THE BOTTOM OF THE INFLUENT CHANNEL OF SEDIMENTATION TANKS NO. 1-6.

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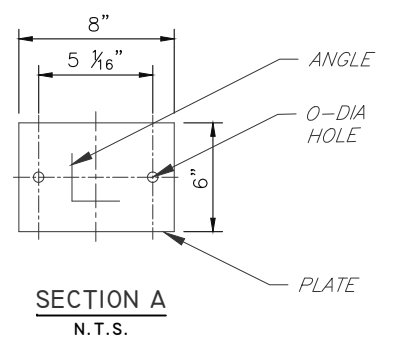
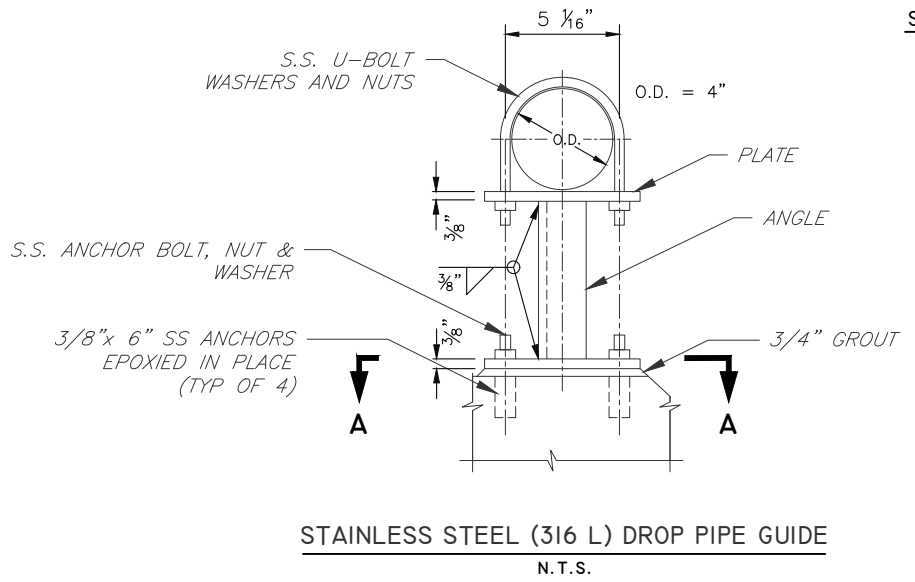
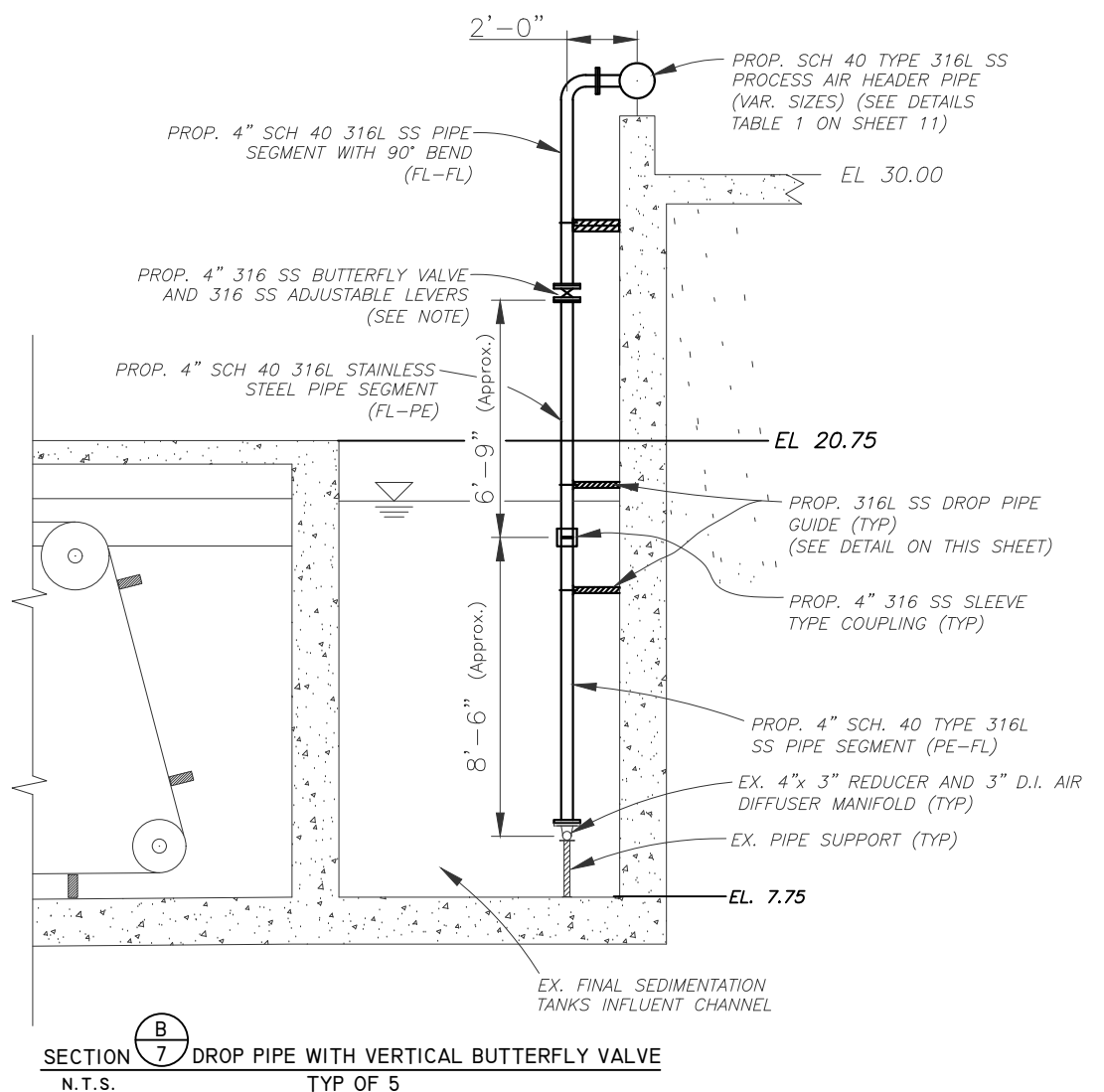
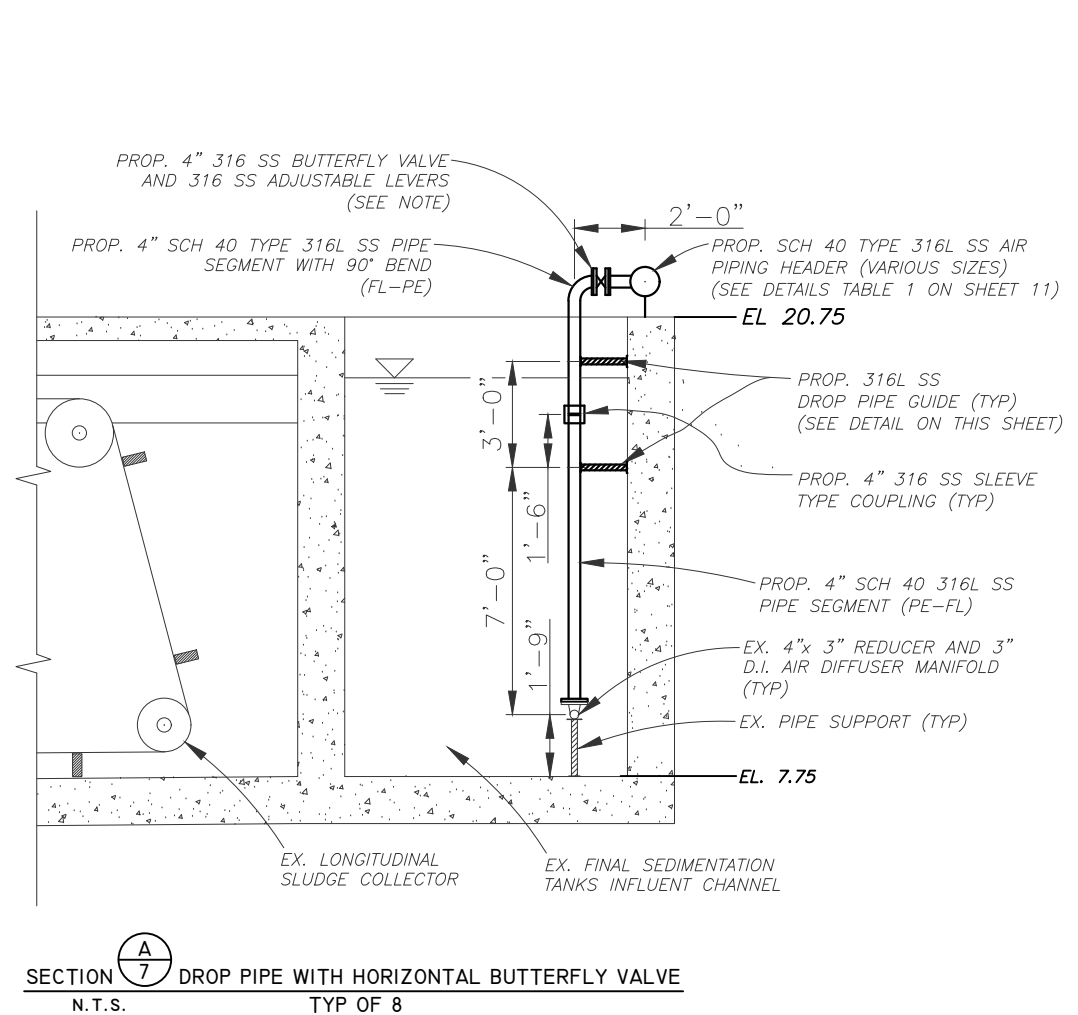
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CITY of TAMPA
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HOWARD F. CURREN AWP
FINAL SEDIMENTATION TANKS NO. 1-6
PROCESS AIR PIPING IMPROVEMENTS
INFLUENT CHANNEL PLAN & SECTIONS

SHEET
7

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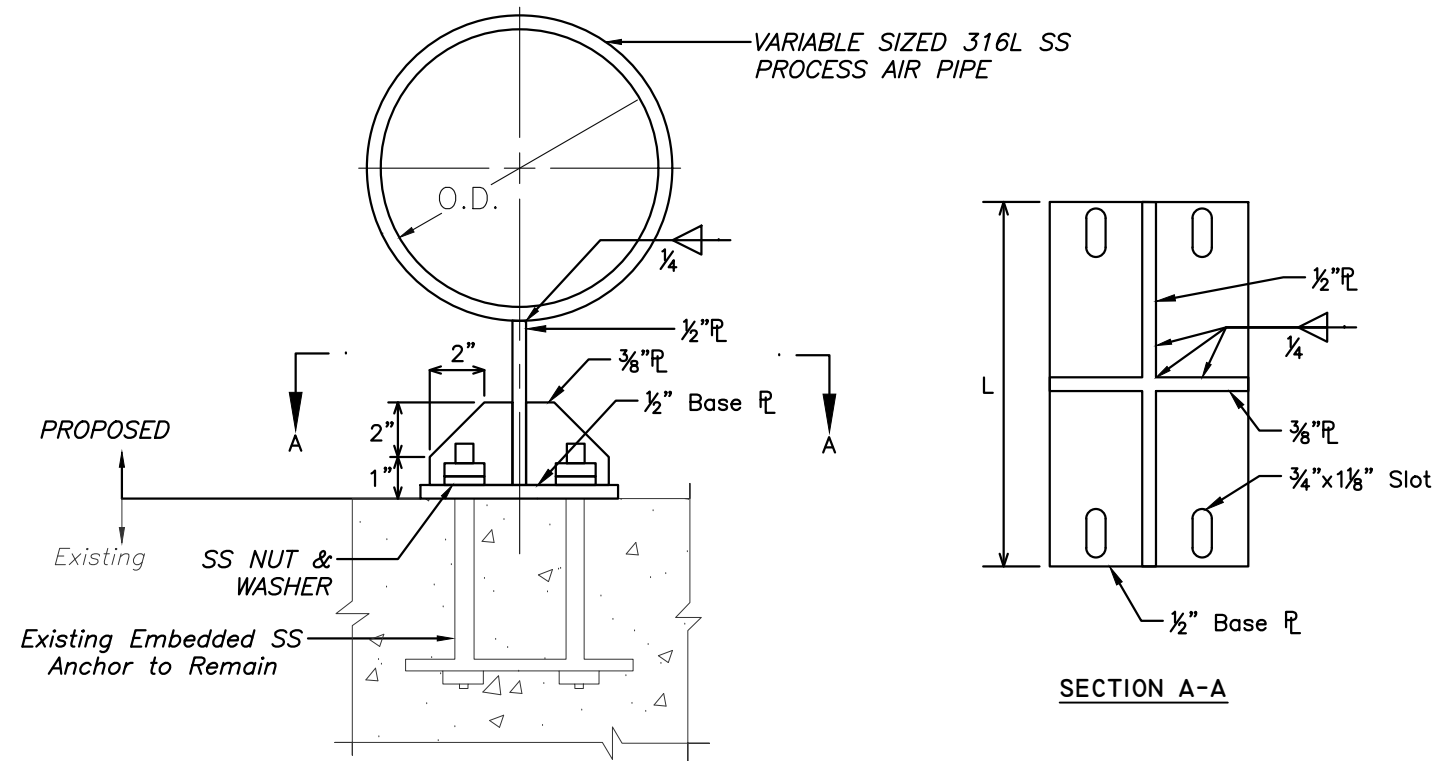
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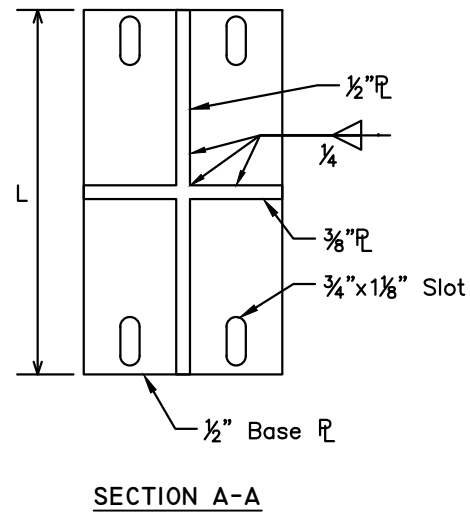
HOWARD F. CURREN AWTP
 FINAL SEDIMENTATION TANKS NO. 1-6
 PROCESS AIR PIPING IMPROVEMENTS
 DROP PIPE REPLACEMENT SYSTEMS

SHEET
8

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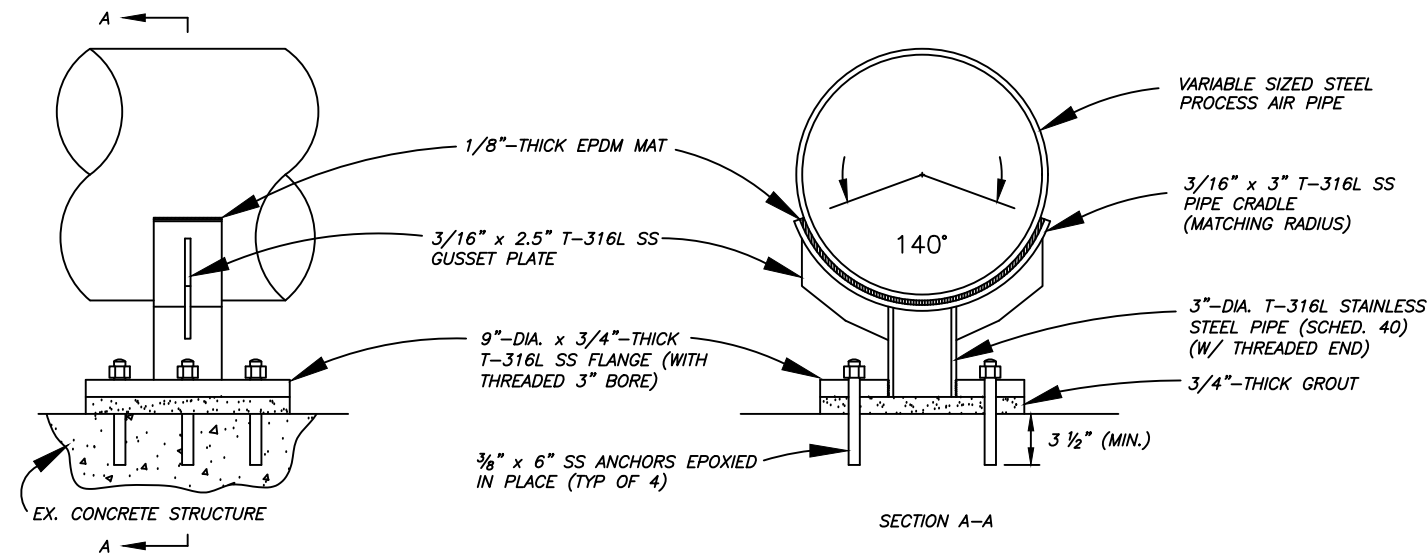
PROPOSED STAINLESS STEEL (316L) PIPE ANCHOR
N.T.S.



PIPE ANCHOR SCHEDULE	
PIPE O.D.	L
4.5	6"
6.625	6"
8.625	8"
10.75	1'-1"
12.75	1'-3"



EXISTING PIPE ANCHOR



STAINLESS STEEL (316 L) PIPE SUPPORT
N.T.S.

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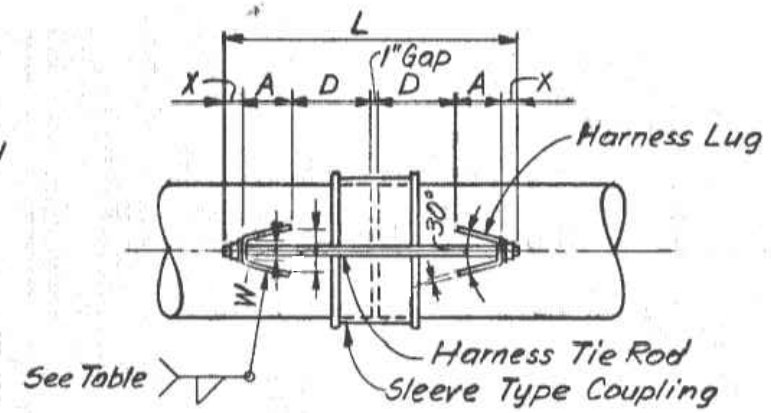
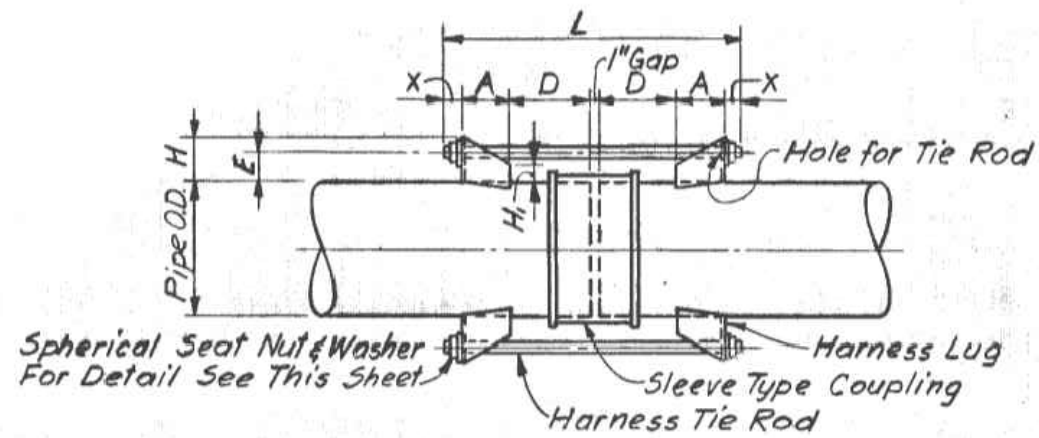
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MISCELLANEOUS DETAILS I

SHEET

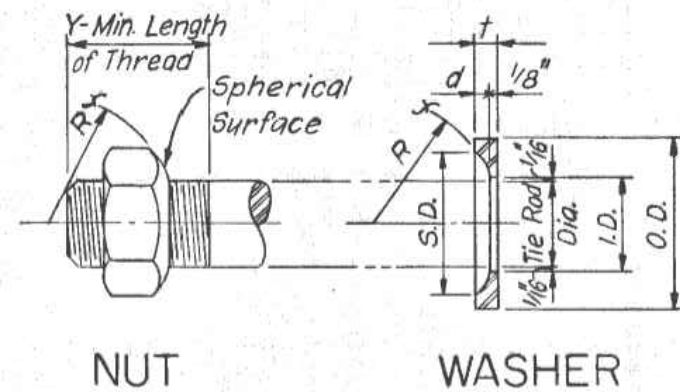
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TYPE A HARNESSSED SLEEVE TYPE COUPLING JOINT FOR STAINLESS STEEL PIPE - SCHEDULE																				
NORMAL PIPE SIZE	WALL THICK-NE SS	O.D OF PIPE	MAX PRESS. FOR HARNESS TIE ROD P.S.I.	MIDDLE RING		HARNESS TIE ROD				HARNESS LUG MINIMUM DIMENSION								COUPLING SERVICE		
				LENGTH	THICKNESS	NO.	DIA.	X	L	A	W	Z	T	E	H	H1	D		HOLE	WELD
12	0.406	12.750	70	7	0.313	2	0.625	1.125	26.250	3	1.25	2.875	0.375	3	3.875	2	8.5	0.75	0.25	PROCESS AIR

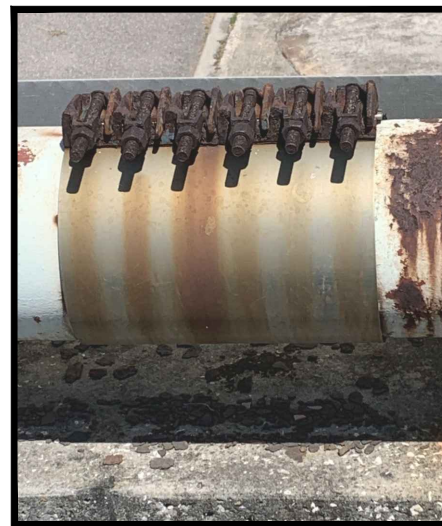
TYPE A HARNESSSED SLEEVE
N.T.S.

Note: All Dimensions In Inches



TIE ROD DIA.	THD./IN.	ID	OD	S.D.	R	d	t	Y MIN. THREAD LENGTH
5/8	11	3/4	1 1/2	1 3/8	1 1/16	3/16	5/16	1 7/8

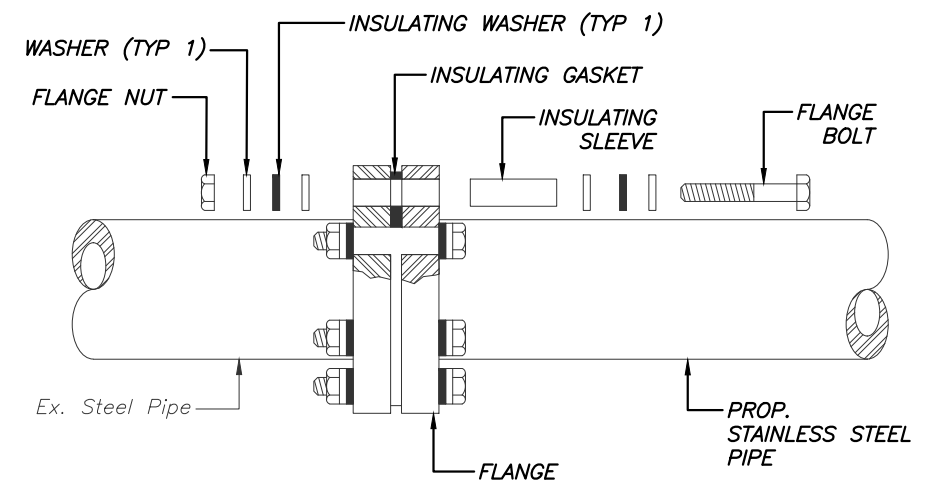
HARNESSSED TIE ROD SPHERICAL NUT AND WASHER
N.T.S.



EXISTING PIPE REPAIR CLAMP
N.T.S.

NOTES:

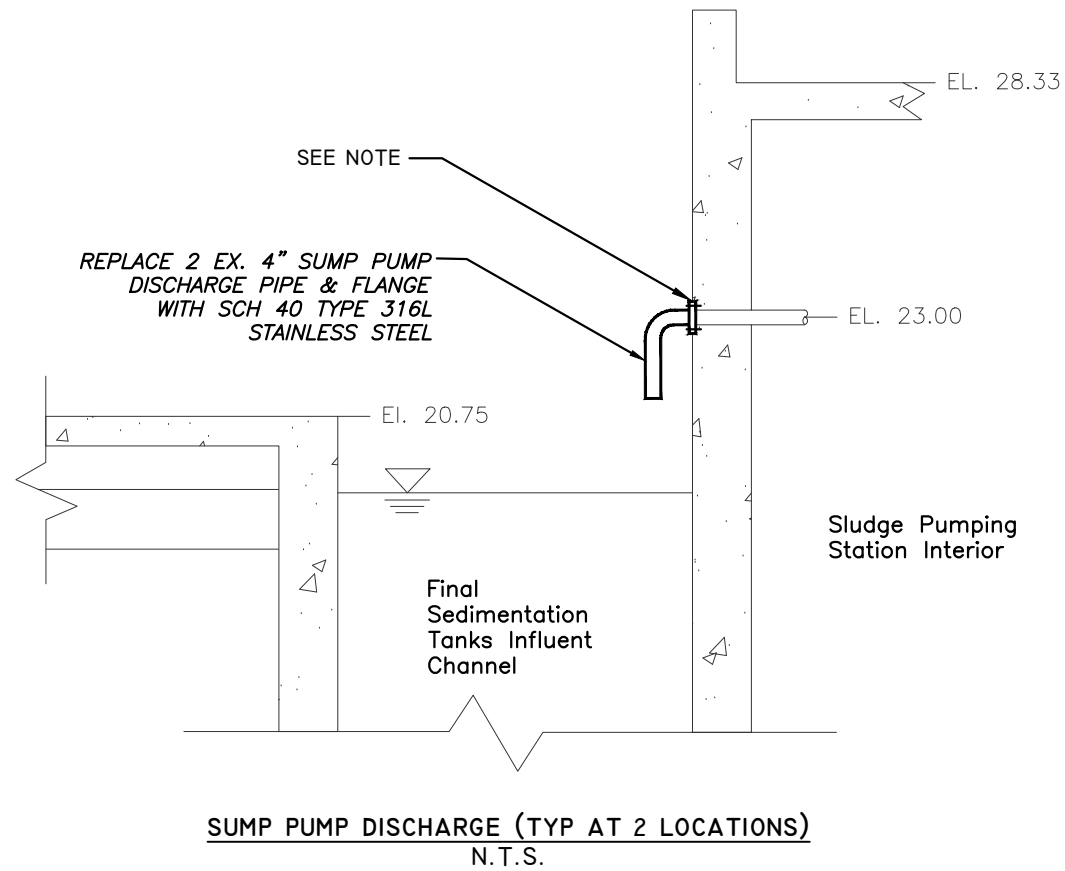
1. THERE IS A 10" REPAIR CLAMP THAT WILL NEED TO BE REPLACED WITH 316SS SLEEVE TYPE COUPLING AS DETAILED.
2. ALL SLEEVE TYPE COUPLINGS AND HARNESSING HARDWARE SHALL BE 316SS.



INSULATING FLANGE
N.T.S.

No.	DATE	REVISIONS
3		
2		
1		

User: SS13, Drawing Name: C:\Users\ss13\AppData\Local\Temp\AcPublish_2612\HFC_AWTP_Final_Sedimentation_Tanks No 1-6 Air Piping Improvements.dwg, Layout: Sep 14, 2023 - 3:41pm



NOTE:
USE AN INSULATING FLANGE BETWEEN EXISTING PIPE
AND NEW STAINLESS STEEL PIPE
(SEE SHEET 10 FOR DETAIL)



EXISTING SUMP PUMP DISCHARGE

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

No.	DATE	REVISIONS
3		
2		
1		

DES: KJG
DRN: JHJ
CKD:
DATE: 8/16/23

CITY of TAMPA
WASTEWATER DEPARTMENT

HOWARD F. CURREN AWTP
FINAL SEDIMENTATION TANKS NO. 1-6
PROCESS AIR PIPING IMPROVEMENTS
MISCELLANEOUS DETAILS III

SHEET

11