

# MANATEE COUNTY, FLORIDA

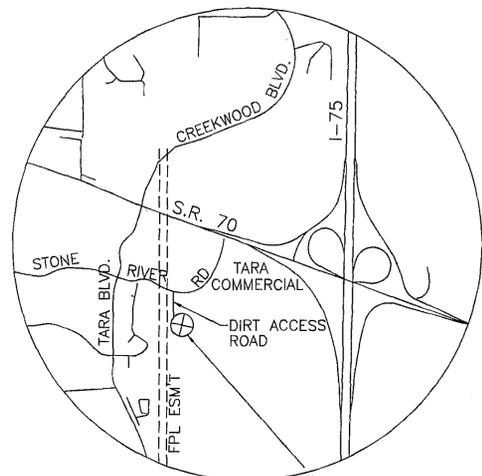
## TARA NO. 20 (RTU #323)

### LIFT STATION UPGRADE

PROJECT NO. 402-5102680

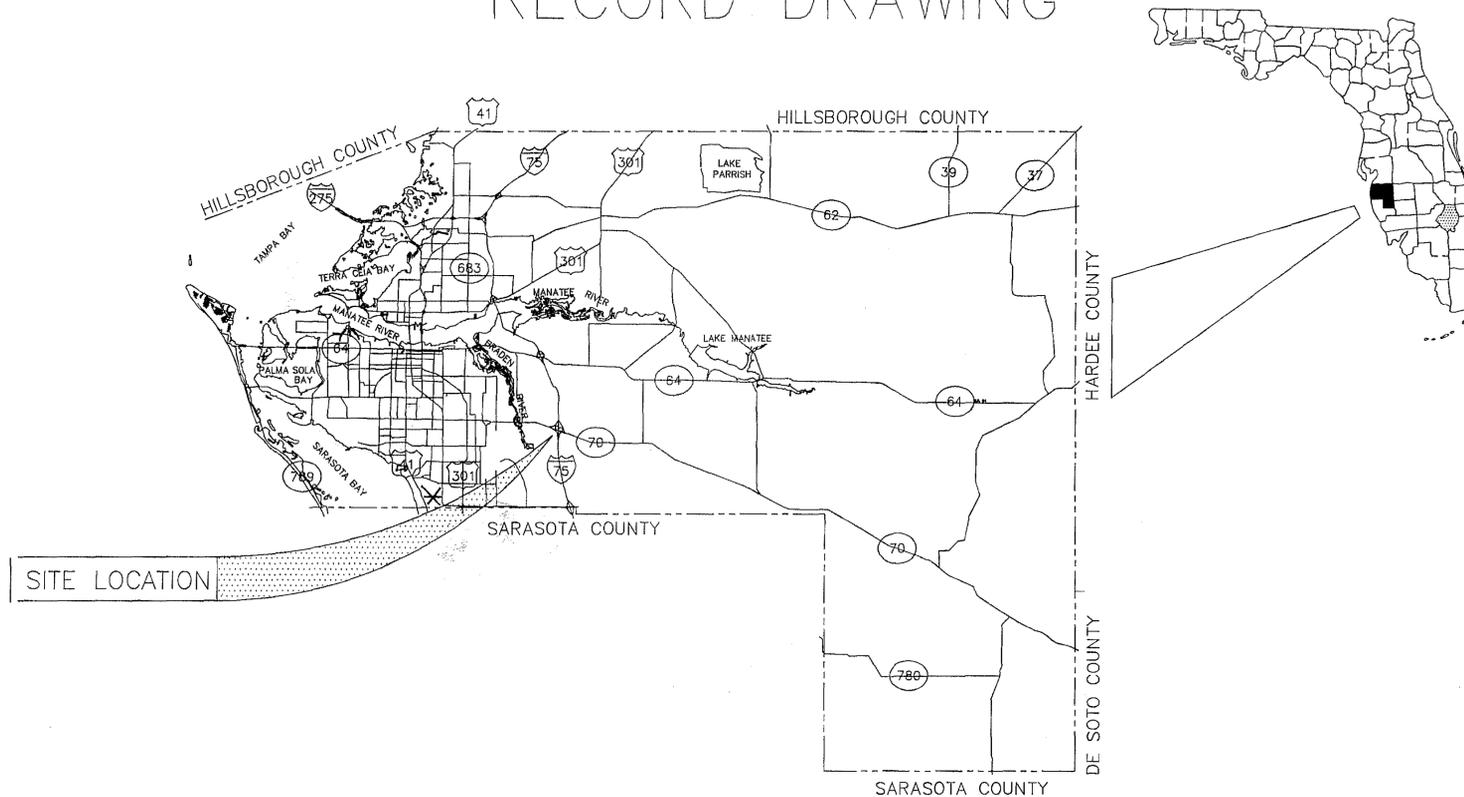
JUNE 2002

## RECORD DRAWING



PROJECT SITE

VICINITY MAP  
N.T.S.



SITE LOCATION

### NO. INDEX OF SHEETS

1	COVER SHEET
2	GENERAL NOTES & LOCATION MAP
3-5	MISCELLANEOUS DETAILS

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PLAN/PROFILE ~ BOOK NOS.				BY	CHECKED	DATE	ENGINEER	PROJECT MANAGEMENT
By	Checked	Date						
Surveyed				JEL				
Plotted				JEL				
Alignment				JEL				
Right of Way								
Scale Horz.	N/A	Scale Vert.	N/A					



# COVER SHEET

NOTE: THESE PLANS DO NOT REFLECT A TRUE BOUNDARY OR RIGHTS-OF-WAY SURVEY. THE LOCATION OF THE STREET RIGHTS-OF-WAY LINES SHOWN IS APPROXIMATE AND IS BASED ON INFORMATION CONTAINED IN THE SUBDIVISION PLATS, RIGHTS-OF-WAY MAPS ON RECORD IN MANATEE COUNTY AND ON TOPOGRAPHIC DATA COLLECTED ON THE ROUTE SURVEY OF THE RIGHTS-OF-WAY BY MANATEE COUNTY SURVEY PERSONNEL. CONSEQUENTLY THE RIGHTS-OF-WAY LINES SHOWN ARE NOT INTENDED TO INDICATE THE EXACT PROPERTY CORNERS.

REVISION DESCRIPTION & DATE	BY	NO.	Proj. No.	402-5102680
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GENERAL NOTES

SCOPE:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SEWAGE FLOWS AT ALL TIMES DURING CONSTRUCTION.
2. BID COSTS SHALL INCLUDE ALL LABOR, PARTS AND EQUIPMENT REQUIRED TO ISOLATE THE LIFT STATION DURING CONSTRUCTION AND PUMP SEWAGE FROM THE GRAVITY SEWAGE SYSTEM TO THE LIFT STATION FORCE MAIN.
3. THE PUMPING SYSTEM USED TO MAINTAIN SEWAGE FLOWS DURING CONSTRUCTION SHALL BE CAPABLE OF PUMPING RAW UNSCREENED SEWAGE WITH A MINIMUM CAPACITY OF 150% OF THE DESIGNED PUMPING CAPACITY OF 1300 GPM @ 58' TDH.
4. THE INSTALLATION COST OF ALL NEW ITEMS BEING INSTALLED SHALL INCLUDE ALL COSTS ASSOCIATED WITH THE REMOVAL AND DISPOSAL OF EXISTING ITEMS BEING REPLACED.
5. ITEMS REMOVED FOR REPLACEMENT SHALL BE DISPOSED OF BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
6. REHABILITATION COSTS FOR REPLACEMENT OF WET WELL ITEMS SHALL INCLUDE THE COST FOR ANY CLEANING REQUIRED TO PERFORM THE REHABILITATION WORK INCLUDING; REMOVAL, TRANSPORTATION AND DISPOSAL OF SLUDGE, GREASE, SAND OR DEBRIS REMOVED FROM THE THE LIFT STATION WET WELL, VALVE VAULT AND FLOW SPLITTER CHAMBER.
7. ALL WORK PERFORMED IN THIS CONTRACT SHALL BE IN STRICT ACCORDANCE WITH FEDERAL, STATE, AND LOCAL SAFETY REGULATIONS ASSOCIATED WITH THE TYPE OF WORK BEING PERFORMED. ALL WORK INSIDE THE LIFT STATION WET WELL SHALL CONFORM TO OSHA 1910.146 "CONFINED SPACE" REGULATIONS.
8. REMOVAL AND REINSTALLATION OF THE SEWAGE PUMPS AND ALL ELECTRICAL WORK, SHALL BE PERFORMED BY THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT, LIFT STATION SECTION PERSONNEL, IN COORDINATION WITH THE CONTRACTOR.
9. SITE VISITS ARE MANDATORY FOR ALL BIDDERS AND VENDORS. THESE SITE VISITS CAN BE ARRANGED BY CALLING JIM MARBLE AT (941) 755-1853 OR JIM OGLESBY AT (941) 792-8811, EXT. 5277.
10. THE BIDDERS AND VENDORS ARE RESPONSIBLE FOR VERIFICATION OF ALL MEASUREMENTS AND QUANTITIES LISTED ON THE DRAWINGS AND SCHEDULES AS PART OF THEIR MANDATORY SITE VISIT.
11. ALL WORK UNDER THIS CONTRACT, EXCEPT THE FIBERGLASS LINING SYSTEM, SHALL BE WARRANTED FOR A MINIMUM PERIOD OF THREE (3) YEARS FROM THE DATE OF COMPLETION. THE FIBERGLASS LINING SYSTEM SHALL BE WARRANTED FOR A MINIMUM PERIOD OF FIVE (5) YEARS.
12. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED UTILITIES, PIPES, STRUCTURES, FENCES, ETC. DUE TO HIS CONSTRUCTION ACTIVITIES WITH NO ADDITIONAL COST TO THE OWNER.
13. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ANY REQUIRED PERMITS.
14. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY STORMWATER MEASURES IN ACCORDANCE WITH THE FDEP "FLORIDA STORMWATER, EROSION AND SEDIMENTATION CONTROL INSPECTOR'S MANUAL."
15. AFTER CLEANING AND PRIOR TO INSTALLATION OF THE NEW FIBERGLASS LINER SYSTEM, ALL SURFACES SHALL BE INSPECTED BY THE ENGINEER AND LIFT STATION PERSONNEL TO DETERMINE THE EXTENT OF LOOSE T-LOCK LINER REMOVAL. IN AREAS WHERE THE EXISTING T-LOCK LINER IS FIRMLY ATTACHED TO THE CONCRETE AND NO DETERIORATION OF THE CONCRETE BEHIND THE LINER IS EVIDENT, THE EXISTING LINER SHALL REMAIN IN PLACE AS DIRECTED BY THE ENGINEER.
16. AN ESTIMATED QUANTITY OF 60% OF THE TOTAL POSSIBLE AREA WAS USED FOR ESTIMATING THE NEW FIBERGLASS LINING SYSTEM. THIS QUANTITY MAY BE ADJUSTED UP OR DOWN AFTER CLEANING AND FIELD INSPECTION OF THE SURFACES.
17. ALL CONSTRUCTION ACTIVITIES SHALL BE COORDINATED WITH THE MANATEE COUNTY UTILITY OPERATIONS DEPARTMENT, LIFT STATION DIVISION AT (941) 792-8811, EXT. 5277.
18. ALL WORK ON THIS PROJECT SHALL BE IN ACCORDANCE WITH MANATEE COUNTY STANDARDS.

SPECIFICATIONS:

IRON BODIED FLANGED FITTINGS

1. ALL IRON BODIED FLANGED FITTINGS AND VALVES SHALL BE CLASS 125, AND CONNECTED USING STAINLESS STEEL HARDWARE (NUTS, BOLTS AND WASHERS). ALL FITTINGS SHALL HAVE A FACTORY APPLIED, FUSION BONDED EPOXY COATING ON THE INTERIOR AND EXTERIOR. COST SHALL INCLUDE ALL GASKETS AND STAINLESS STEEL FASTENERS REQUIRED FOR THE FLANGED CONNECTION TO ADJACENT FITTINGS.

PVC PIPE AND FITTINGS

1. ALL NEW PVC PIPE INSTALLED SHALL BE SCHEDULE 80 WITH THE EXCEPTION OF THE P-TRAP ON THE VALVE VAULT DRAIN WHICH SHALL BE SCHEDULE 40 DWV PVC. ALL PIPE INSTALLED SHALL BE STRAIGHT WITH NO EXCESSIVE BOWS OR DISCOLORATION. ALL FITTINGS SHALL BE SCHEDULE 80 PVC SOLVENT WELD TYPE. ALL SOLVENT WELDS SHALL BE MADE USING HIGH SOLIDS SCHEDULE 80 GLUE IN ACCORDANCE WITH THE FITTING MANUFACTURER'S SPECIFICATIONS.

HARDWARE

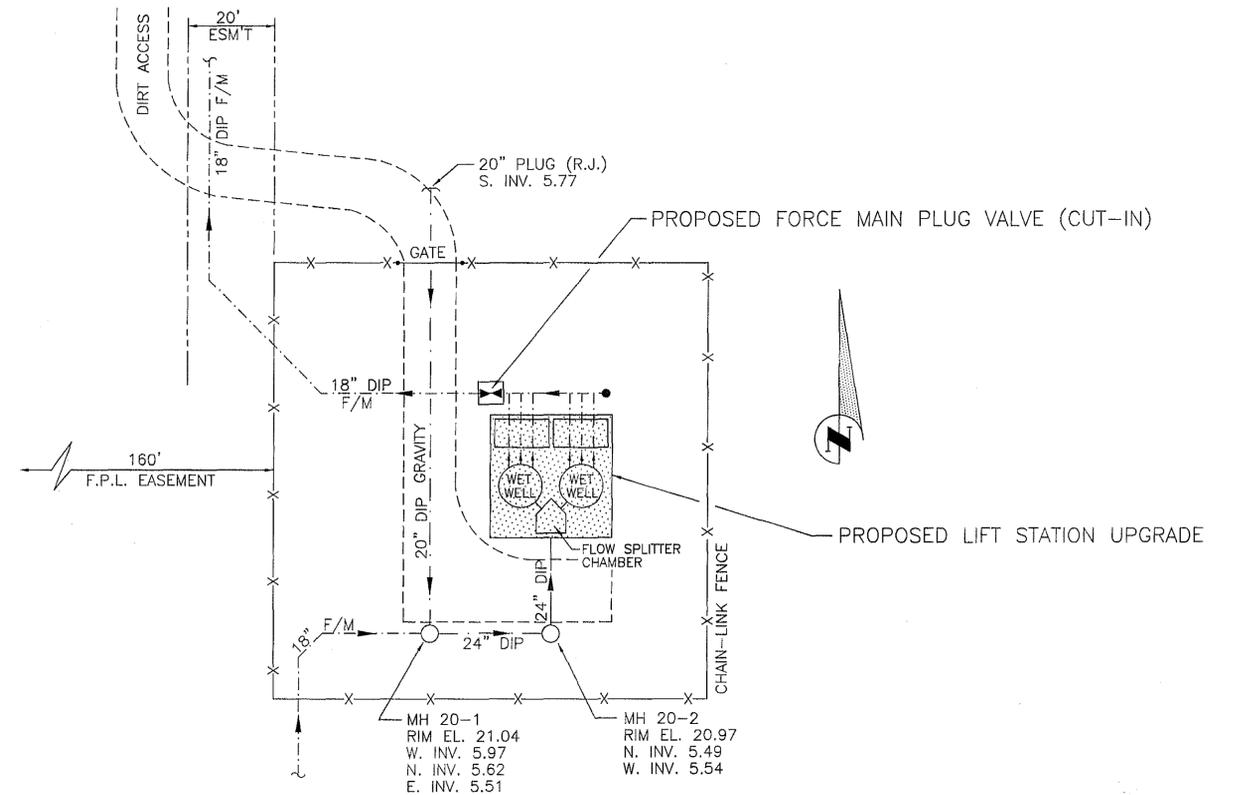
1. ALL FASTENERS SHALL BE TYPE 316 STAINLESS STEEL UNLESS OTHERWISE SPECIFIED. ALL BOLTED CONNECTIONS SHALL HAVE A STAINLESS STEEL BOLT, STAINLESS STEEL FLAT WASHER, STAINLESS STEEL LOCK WASHER AND STAINLESS STEEL NUT. ALL STAINLESS STEEL FASTENERS SHALL BE TREATED WITH NEVER-SEIZE PRIOR TO ASSEMBLY AND TORQUED ACCORDING TO THE FITTING OR FASTENER MANUFACTURER'S SPECIFICATIONS.

BY-PASS PUMPING & WELL POINT PUMPING EQUIPMENT

1. ALL GASOLINE OR DIESEL ENGINE POWERED PUMPING EQUIPMENT USED BY THE CONTRACTOR SHALL BE EQUIPPED WITH MUFFLERS AND SPECIAL CARE SHALL BE USED TO REDUCE THE NOISE BY THIS EQUIPMENT TO THE EXTENT POSSIBLE. THE CONTRACTOR SHALL STRICTLY OBSERVE ALL LOCAL REGULATIONS AND ORDINANCES COVERING NOISE CONTROL.

SUMMARY OF WORK IN THIS PROJECT

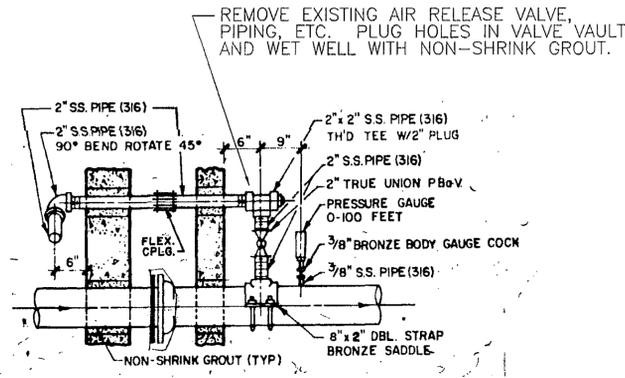
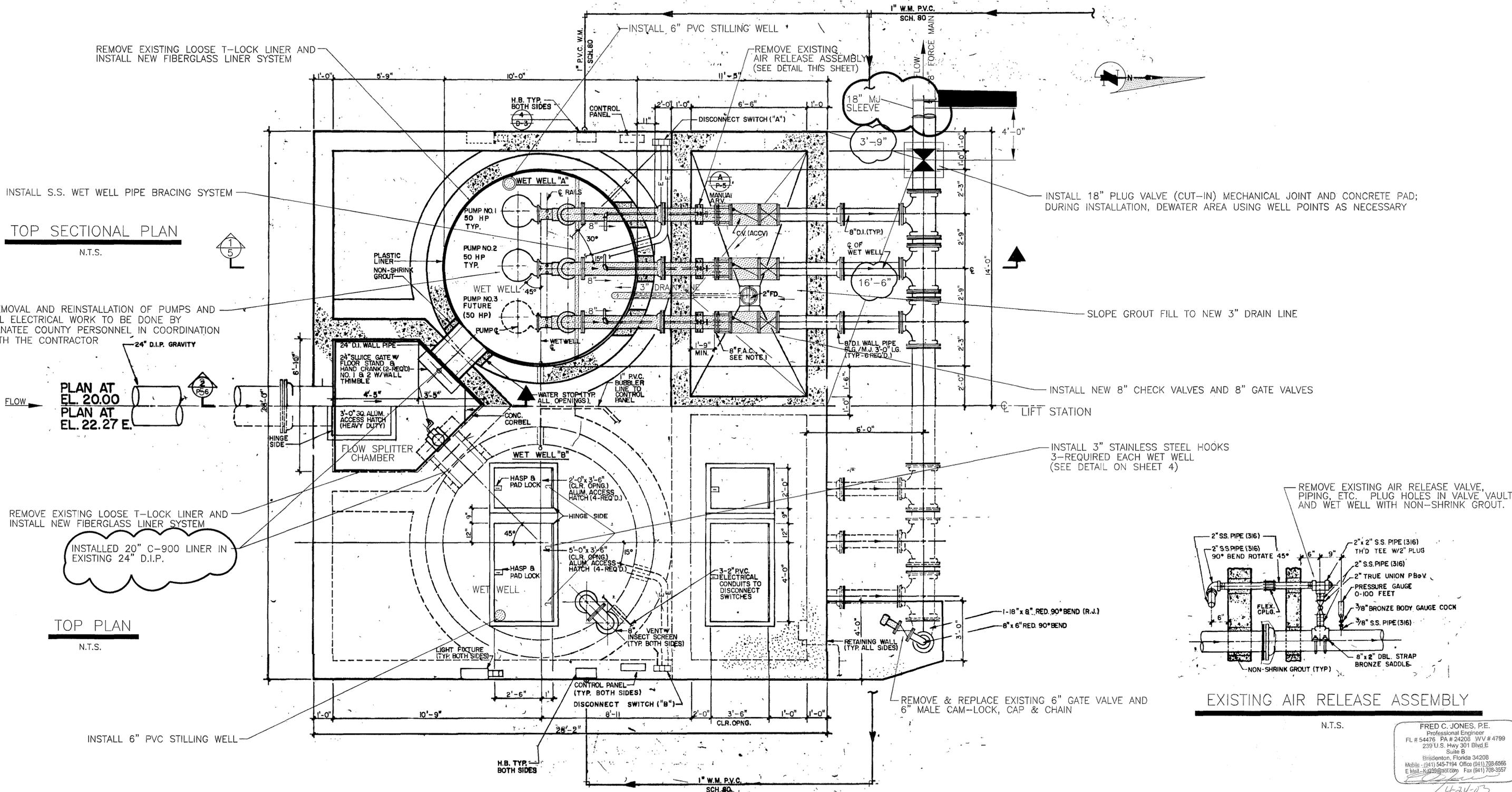
1. REMOVAL AND REPLACEMENT OF THE EXISTING PUMP BASE ELLS WITH SIX (6) NEW BPIU4 PUMP BASE ELLS.
2. REMOVAL AND REPLACEMENT OF THE EXISTING PUMP GUIDE RAIL SYSTEMS WITH SIX (6) NEW GUIDE RAIL SYSTEMS (EACH SYSTEM REQUIRES TWO (2) RAILS) AND NEW STAINLESS STEEL UPPER GUIDE RAIL BRACKETS.
3. REMOVAL OF ALL EXISTING LOOSE T-LOCK PVC LINER AND INSTALLATION OF A NEW FIBERGLASS LINER SYSTEM IN EACH WET WELL AND THE FLOW SPLITTER CHAMBER.
4. INSTALLATION OF TWO (2) STAINLESS STEEL PIPE BRACING SYSTEMS IN EACH WET WELL.
5. REMOVAL AND REPLACEMENT OF THE EXISTING IRON BODIED FLANGED ECCENTRIC REDUCERS WITH THREE (3) NEW FLANGED ECCENTRIC REDUCERS REQUIRED TO ADAPT THE PUMP BASE ELLS TO THE LARGER DIAMETER WET WELL PIPING IN EACH WET WELL.
6. REMOVAL AND REPLACEMENT OF THE EXISTING DUCTILE IRON PIPING WITH NEW 8" SCHEDULE 80 PVC PIPING FROM THE FLANGED ECCENTRIC REDUCER AT THE PUMP BASE ELL TO THE CHECK VALVE IN THE VALVE VAULT INCLUDING 90° ELLS AND "VAN STONE" STYLE FLANGE ADAPTORS.
7. REMOVAL AND REPLACEMENT OF THE EXISTING 8" PUMP DISCHARGE CHECK VALVES WITH SIX (6) NEW 8" IRON BODIED FLANGED CHECK VALVES.
8. REMOVAL AND REPLACEMENT OF THE EXISTING 8" PUMP DISCHARGE GATE VALVES WITH SIX (6) NEW 8" IRON BODIED FLANGED GATE VALVES.
9. REPLACEMENT OF THE EXISTING VALVE VAULT DRAINS WITH NEW 3" PVC DRAINS FROM THE VALVE VAULT STRUCTURES TO THE WET WELLS WITH A P-TRAP INSIDE EACH LIFT STATION WET WELL.
10. INSTALLATION OF A 6" PVC STILLING WELL IN EACH WET WELL (FOR TRANSDUCER USE).
11. REMOVAL OF THE EXISTING AIR RELEASE ASSEMBLIES, INCLUDING VALVES, PIPING, ETC. AND PLUG THE HOLES IN VALVE VAULT AND WET WELL.
12. INSTALLATION OF A NEW 18" MJ PLUG VALVE (CUT-IN) ON THE 18" FORCE MAIN DOWNSTREAM FROM THE LAST TEE IN THE MANIFOLD.
13. REMOVAL AND REPLACEMENT OF THE EXISTING 6" GATE VALVE, CAM-LOCK, ETC. (ON PIPE MANIFOLD).
14. A SUGGESTED SEQUENCE OF CONSTRUCTION:
  - 1.) ISOLATE AND UPGRADE ONE WET WELL AND VALVE VAULT AT A TIME, LEAVING ONE WET WELL IN OPERATION AT ALL TIMES.
  - 2.) AFTER BOTH WET WELLS ARE UPGRADED AND BACK IN OPERATION, THE SEWERAGE CAN BE PUMPED DIRECTLY FROM M.H. 20-2 INTO THE WET WELLS TO ALLOW THE FIBERGLASS LINER SYSTEM INSTALLATION IN THE FLOW SPLITTER CHAMBER.



SITE PLAN  
 TARA NO. 20 LIFT STATION  
 7211 STONE RIVER ROAD  
 (F.P.L. R/W, SOUTH OF S.R. 70, 1/2 MI. WEST OF I-75)  
 SCALE: 1"=20'

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By	Checked	Date	Designed										
Surveyed			JEL					TARA NO. 20 (RTU #323) LIFT STATION UPGRADE GENERAL NOTES & LOCATION MAP				Dwg. Date	JUNE 2002
Plotted			JEL			Dwg. No.			TARAGEN				
Alignment			JEL			Sht.			2 of 5				
Right of Way													
Scale Horz.	N/A	Scale Vert.	N/A										



NOTE: THIS DRAWING WAS DEVELOPED FROM RECORD DRAWING INFORMATION DATED OCTOBER 1988. ALL DIMENSIONS AND EXISTING CONDITIONS ARE TO BE FIELD VERIFIED BY THE CONTRACTOR/BIDDER.

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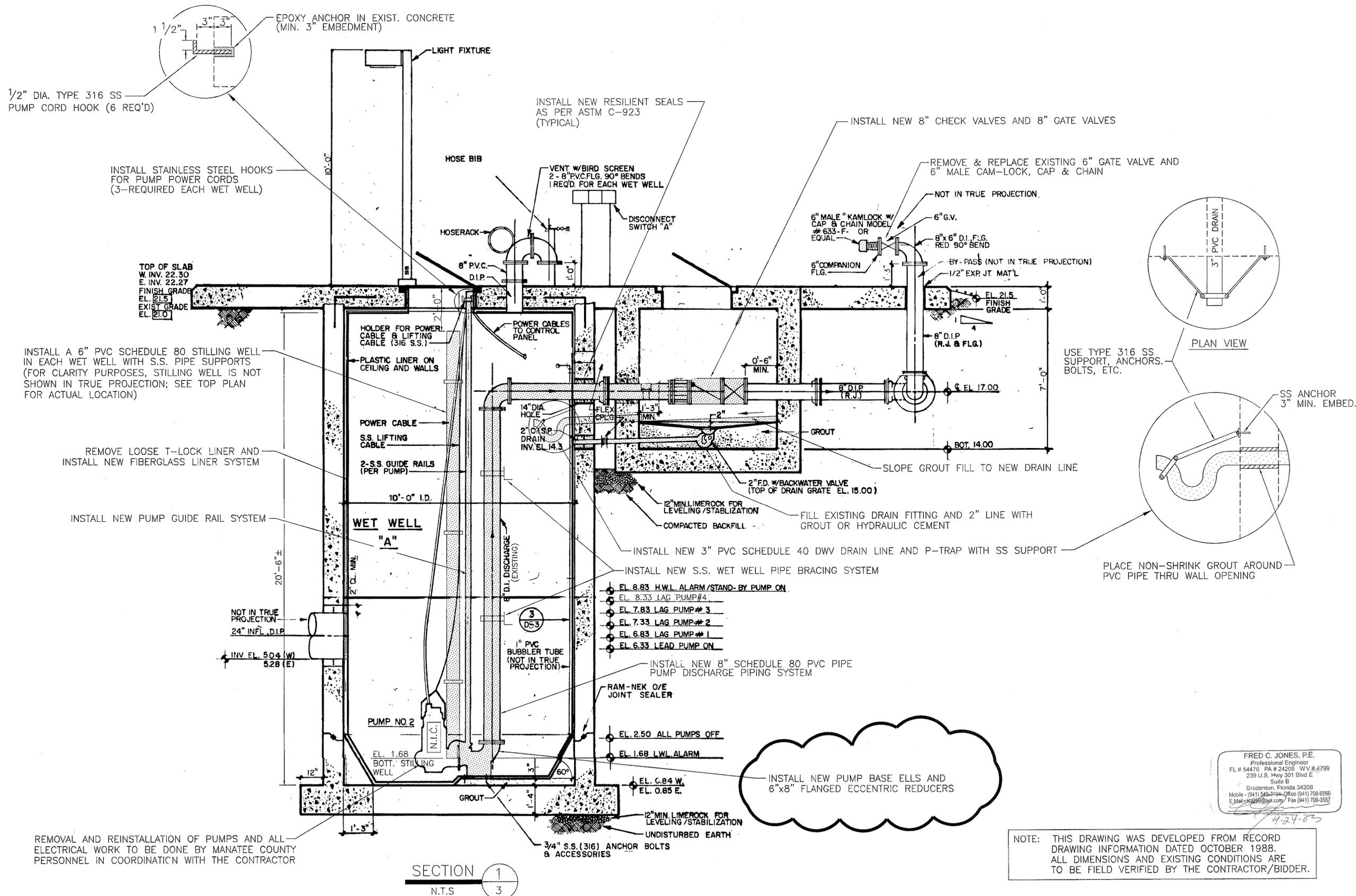
NOTE: BOTH WET WELLS ARE TO BE UPGRADED IDENTICALLY.

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By	Checked	Date						
Surveyed				JEL				
Plotted				JEL				
Alignment				JEL				
Right of Way								
Scale Horz. AS NOTED Scale Vert. AS NOTED								

TARA NO. 20 (RTU #323)  
LIFT STATION UPGRADE  
MISCELLANEOUS DETAILS

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			402-5102680
			Dwg. Date JUNE 2002
			Dwg. No. TARADET1
			Sht. 3 of 5





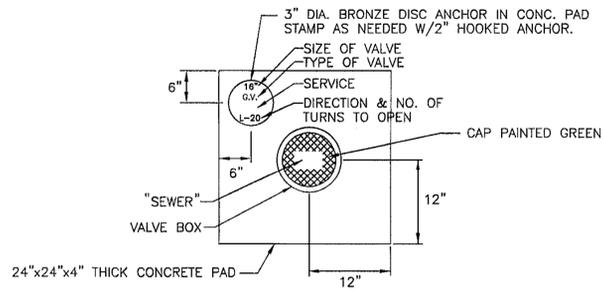
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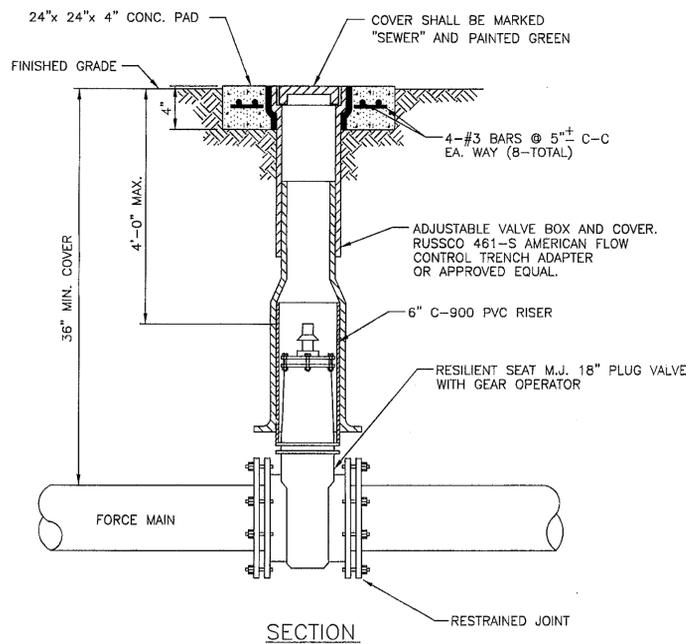
SECTION 1  
 N.T.S. 3

PLAN/PROFILE ~ BOOK NOS.				BY	CHECKED	DATE	ENGINEER	PROJECT MANAGEMENT	TARA NO. 20 (RTU #323) LIFT STATION UPGRADE MISCELLANEOUS DETAILS	REVISION DESCRIPTION & DATE	BY	NO.	Proj. No. 402-5102680
By	Checked	Date	Designed										
Surveyed				JEL									Dwg. Date JUNE 2002
Plotted				JEL									Dwg. No. TARADET2
Alignment				JEL									Sht. 4 of 5
Right of Way													
Scale Horz. AS NOTED Scale Vert. AS NOTED													

2891.004



PLAN



SECTION

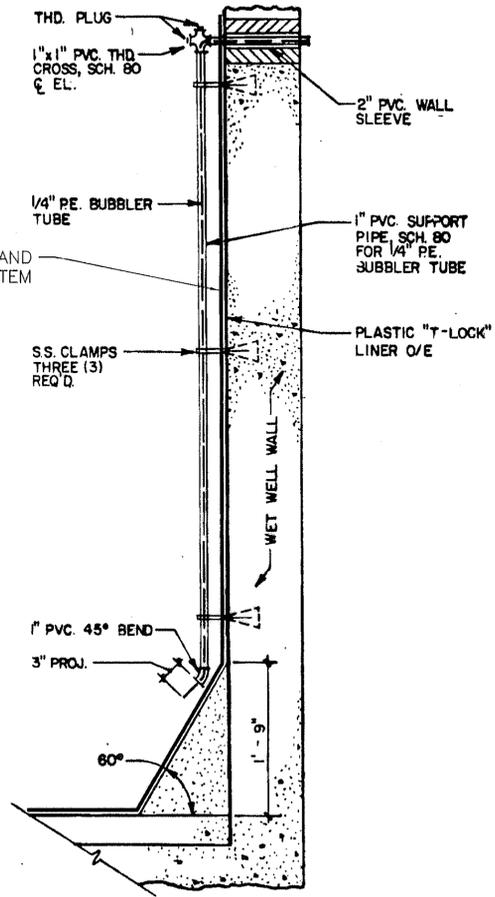
NOTES:

1. PROPOSED VALVE BOX SHALL BE ADJUSTED TO FINISHED GRADES AS ESTABLISHED IN THE FIELD.
2. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
3. PRECAST CONCRETE PADS SHALL NOT BE USED.

PLUG VALVE, BOX, COVER AND TAG

N.T.S.

REMOVE LOOSE T-LOCK LINER AND INSTALL NEW FIBERGLASS LINER SYSTEM

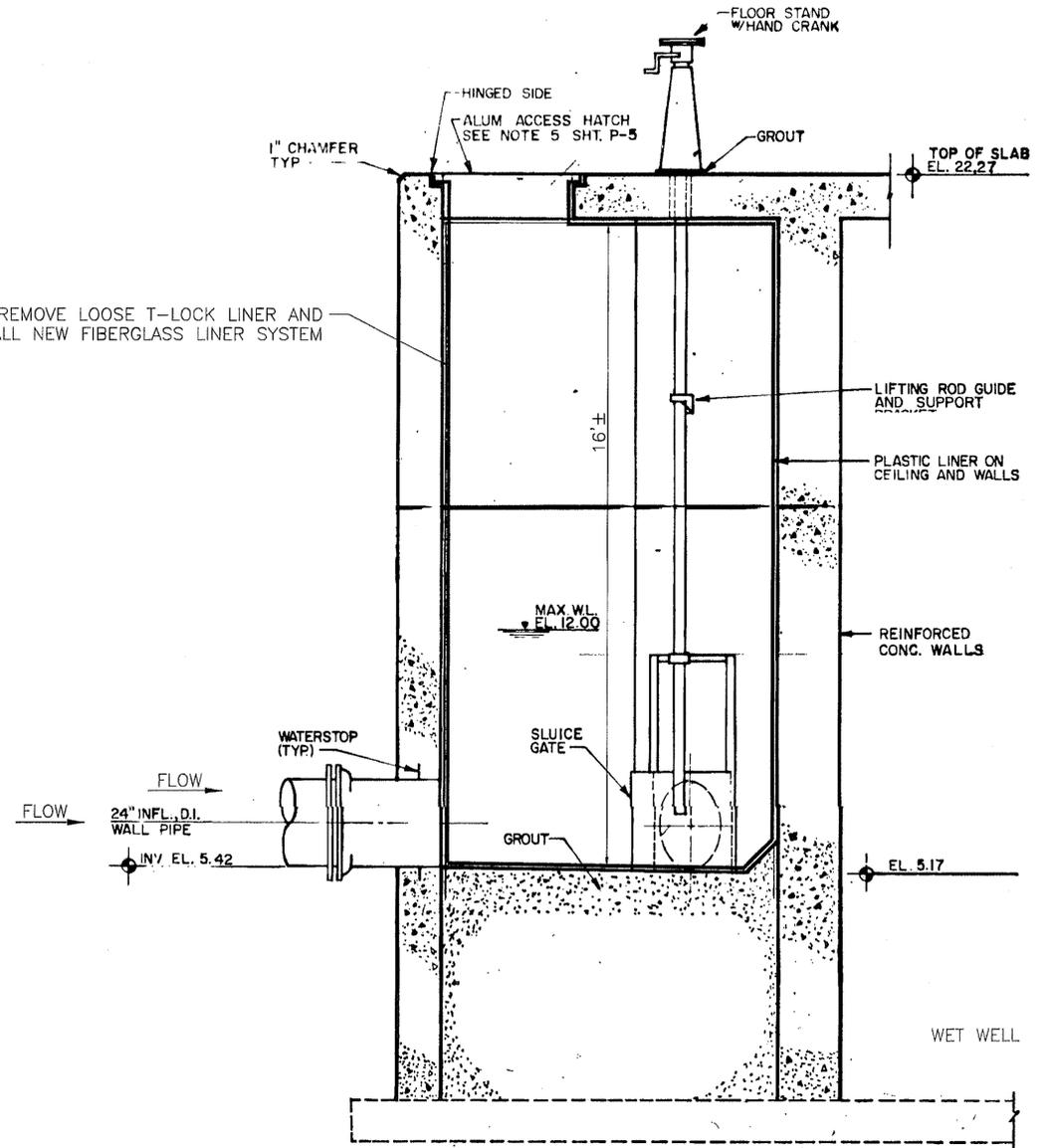


PUMP CONTROL SYSTEM

N.T.S.

3/4

REMOVE LOOSE T-LOCK LINER AND INSTALL NEW FIBERGLASS LINER SYSTEM



FLOW SPLITTER CHAMBER

SECTION

N.T.S.

2/3

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Right of Way			
Scale Horz. AS NOTED Scale Vert. AS NOTED			

	BY	CHECKED	DATE
Designed	JEL		
Drawn	JEL		
Quantities	JEL		

ENGINEER	PROJECT MANAGEMENT



TARA NO. 20 (RTU #323)  
LIFT STATION UPGRADE  
MISCELLANEOUS DETAILS

REVISION	DESCRIPTION & DATE	BY	NO.

Proj. No.	402-5102680
Dwg. Date	JUNE 2002
Dwg. No.	TARADET3
Sht.	5 of 5