

CONTRACT DOCUMENTS  
FOR THE CONSTRUCTION OF

ARTISAN LAKES MASTER LIFT STATION  
REHABILITATION

PROJECT TEAM

CHRIS SHAREK, PROJECT MANAGER  
RICH MORRISON, CIVIL ENGINEER  
CYRUS SAHARKHIS, I&C ENGINEER  
CLEMENT ANSON, STRUCTURAL ENGINEER  
TAO FU, PROCESS MECHANICAL ENGINEER  
ABEL VALIENTE, BUILDING MECHANICAL ENGINEER  
DAVID NICHOLSON, ELECTRICAL ENGINEER

PREPARED FOR

MANATEE COUNTY UTILITIES  
BRADENTON, FL

VOLUME 2 OF 2  
DRAWINGS

UTILITY AGENCY/OWNERS

COMPANY	CONTACT	TELEPHONE
FPL DISTRIBUTION	GREG COKER	941-723-4430
FPL TRANSMISSION	GARY PETERSON	561-904-3665
TECO PEOPLES GAS	DAN SHANAHAN	941-342-4006
MANATEE COUNTY	SCOTT MAY	941-708-7450
BRIGHT HOUSE	ALEX FLEMING	941-748-3816 EXT. 24051
VERIZON	DENISE HUTTON	941-906-6722
CROWN CASTLE	BRYANT LOWE	724-416-2193

For information regarding this project, contact:

CHRIS SHAREK  
1990 MAIN ST  
SUITE 750  
SARASOTA, FL 34236  
941-915-6003



MANATEE COUNTY PROJECT No: 6110280  
JACOBS PROJECT No: D3599900  
MARCH 2023





PROJECT SITE  
9670 GILLET RD.

BID DOCUMENT



1		2		3		4		5		6	
A	AMMETER, AMPERES	CRS	PVC COATED RIGID STEEL	FSHS	FOLDING SHOWER SEAT	LHR	LEFT HAND REVERSE	PP	POWER POLE	STIF	STIFFENER
AB	ANCHOR BOLT	CS	CUP SINK	FT	FOOT OR FEET	LLH	LONG LEG HORIZONTAL	PPL	POLYPROPYLENE LINED	STIRR	STIRRUP
ABDN	ABANDON	CSATC	CERAMIC SUSPENDED ACOUSTICAL	FTG	FOOTING	LLV	LONG LEG VERTICAL	PRCST	PRECAST	STL	STEEL
AC	ALTERNATING CURRENT		TILE CEILING	FU	FIXTURE UNIT	LNTL	LINTEL	PREFAB	PREFABRICATION	ST	STRAIGHT
AC	ASPHALTIC CEMENT	CT	CERAMIC TILE	FVNR	FULL VOLTAGE NON-REVERSING	LONG	LONGITUDINAL	PRES	PRESSURE	STRL	STRUCTURAL
ACI	AMERICAN CONCRETE INSTITUTE	CT	CURRENT TRANSFORMER	FVR	FULL VOLTAGE REVERSING	LOS	LOCK-OUT STOP PUSHBUTTON	PRI	PRIMARY	STRUCT	STRUCTURE
ACST	ACOUSTICAL	CTR	CENTER	FWD	FORWARD	LP	LIGHT POLE	PRM	PERMANENT REFERENCED MARKER	SUSP	SUSPENDED
ACU	AIR CONDITIONING CONDENSING UNIT	CTR'D	CENTERED			L.P.	LOW POINT	PROJ	PROJECTION	SV	SOLENOID VALVE
AD	AREA DRAIN	CTSK	COUNTERSUNK			LR	LATCHING RELAY	PROP	PROPERTY	SYMM	SYMMETRICAL
ADD	ADDITIONAL	CU	CUBIC	G. GND	GROUND	LR	LOCAL-REMOTE	PS	POLYCARBONATE SHEET		
AFD	ADJUSTABLE FREQUENCY DRIVE	CU FT	CUBIC FOOT	GA	GAUGE	LR	LONG RADIUS	PSF	POUNDS PER SQUARE FOOT	T	THERMOSTAT
AFF	ABOVE FINISHED FLOOR	CU IN	CUBIC INCH	GAL	GALLON	LS	LABORATORY SINK	PSI	POUNDS PER SQUARE INCH	T&B	TOP AND BOTTOM
AG	ACOUSTICAL GLASS	CU YD	CUBIC YARD	GALV	GALVANIZED	LTG	LIGHTS OR LIGHTING	PSIG	POUNDS PER SQUARE INCH, GAUGE	T&G	TONGUE AND GROOVE
AGGR	AGGREGATE	CUH	COPPER TUBING, HARD DRAWN	GB	GRAB BAR	LWL	LOW WATER LEVEL	PT	POINT OF TANGENCY	T/	TOP OF
AHR	ANCHOR	CV	CHECK VALVE	GC	GROOVED COUPLING	LYRS	LAYERS	PT	POTENTIAL TRANSFORMER	TAN	TANGENT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	CWR	CABINET DOOR MOUNTED WASTE RECEPTACLE	GFI	GROUND FAULT INTERRUPTER			PT	PRESSURE TREATED	TB	TERMINAL BOARD
				GFR	GOUND FAULT RELAY	M&BH	MOP AND BROOM HOLDER	PTAC	PACKAGED TERMINAL AIR CONDITIONING	TB	TOWEL BAR
AL (ALUM)	ALUMINUM			GL	GLASS	MA	MANUAL-AUTO	PTD	PAPER TOWEL DISPENSER	TBG	TUBING
ALKY	ALKALINITY	D	DRAIN	GPD	GALLONS PER DAY	MAS	MASONRY	PV	PLUG VALVE	TC	TIME TO CLOSE/ TENSION CONTROLLED
ALTN. (ALT)	ALTERNATE	D	PENNY NAIL SIZE	GPH	GALLONS PER HOUR	MATL	MATERIAL	PVC, P.V.C.	POLYVINYL CHLORIDE		
AM	AUTO-MANUAL	DAS	DATA ACQUISITION SYSTEM	GPM	GALLONS PER MINUTE	MAX	MAXIMUM	PVI	POINT OF VERTICAL INTERSECTION	TCAE	TIME CLOSE AFTER ENERGIZATION
ANDZ	ANODIZE	DBA	DEFORMED BAR ANCHOR	GRTG	GRATING	MB	MACHINE BOLT	PVMT	PAVEMENT	TCL2	TOTAL CHLORINE RESIDUAL
APPROX	APPROXIMATE	DBL	DOUBLE	GR	GRADE	MC	MASONARY CLEARANCE	PVT	POINT OF VERTICAL TANGENCY	TDH	TOTAL DYNAMIC HEAD
APVD	APPROVED	DC	DIRECT CURRENT	GSP	GALVANIZED STEEL PIPE	MC	MODULATE-CLOSE	QT	QUARRY TILE	TDR	TIME DELAY RELAY
ARCH	ARCHITECTURAL	DEG	DEGREE	GV	GATE VALVE	MCC	MOTOR CONTROL CENTER		R (RAD)	TECH	TECHNICAL
AR	ANALOG RELAY	DET	DETAIL	GVL	GRAVEL	MECH	MECHANICAL		RC	TEL	TELEPHONE
ARV	AIR RELEASE VALVE	DF	DOUGLAS FIR	GWB	GYPSPUM WALL BOARD	MET	METAL	RCP, R.C.P.	REINFORCED CONCRETE PIPE	TEMP	TEMPORARY
ASU	AIR SUPPLY UNIT	DF	DRINKING FOUNTAIN	GYP	GYPSPUM	MFD	MANUFACTURED	RCPT	RECEPTACLE	TF	TOP FACE
ATS	AUTOMATIC TRANSFER SWITCH	DHEC	DEPT OF HEALTH AND ENVIRONMENTAL CONTROL DROP INLET	H	HORN OR HOWLER	MFR	MANUFACTURER	RD	ROAD	TFG	TEMPERED FLOAT GLASS
AUTO	AUTOMATIC	DDI	DUCTILE IRON PIPE	HAS	HEADED ANCHOR STUD	MGD	MILLION GALLONS PER DAY	RD	ROOF DRAIN	THD	THREAD
AUX	AUXILIARY	DI	DUCTILE IRON	HB	HOSE BIB	MH	MANHOLE	RDCR	REDUCER	THK	THICKNESS
AVG	AVERAGE	DIA, O	DIAMETER	HC	HOLLOW CORE	MIN	MINIMUM	RDW	REDWOOD	THRU	THROUGH
AVRV	AIR VACUUM RELEASE VALVE	DIAG	DIAGONAL	HD	HUB DRAIN	MIR	MIRROR	R.E.	RIM ELEVATION	TJB	TERMINAL JUNCTION BOX
@	AT	DIP, D.I.P.	DUCTILE IRON PIPE	H.D.P.E.	HIGH DENSITY POLY PIPE	MISC	MISCELLANEOUS	REF	REFER OR REFERENCE	TL	TEFLON LINE PIPE
B	BELL	DIR	DIRECTION	HDR	HEADER	MJ	MECHANICAL JOINT	REF	REFRIGERATOR	TO	TIME TO OPEN
(B)	BRONZE TINT	DISCH	DISCHARGE	HDW	HARDWARE	MLO	MAIN LUGS ONLY	REFR	REFRIGERATE, REFRIGERANT	TOAD	
BAL	BALANCE	DOL	DIRECT-ON-LINE	HESR	HYPALON ELASTIC SHEET ROOFING	MMP	MECHANICAL MOUNTING PANEL	REFR	REFRIGERATE, REFRIGERANT	TOAE	TIME OPEN AFTER ENERGIZATION
B.C.R.	BROWARD COUNTY RECORDS	DS	DOWNSPOUT	HGL	HYDRAULIC GRADE LINE	M.O.	MASONRY OPENING	REINF	REINFORCED, REINFORCING, REINFORCE	T.O.P.	TOP OF PIPE
BD	BUTTERFLY DAMPER	DWG	DRAWING	HGT	HEIGHT	MP	METAL PANEL	REQD	REQUIRED	TP	TURNING POINT
BF	BLIND FLANGE	DWN	DOWN	HID	HIGH INTENSITY DISCHARGE	MPU	MULTIPURPOSE UNIT	RG	REFLECTIVE	TRANS	TRANSFORMER
BFV	BUTTERFLY VALVE	Δ	DELTA	HH	HANDHOLE	MTD	MOUNTED	RH	RIGHT HAND	TRANSV	TRANSVERSE
BH	BUD HEIGHT			HID	HIGH INTENSITY DISCHARGE	MTS	MANUAL TRANSFER SWITCH	RH	ROD HOLE	TDR	TREAD
BL	BASELINE			HK	HOOK	MTS	MILL TYPE STEEL PIPE	RL	RAIN LEADER	TS	TUBE STEEL
BFP	BACKFLOW PREVENTER	E	EAST	HM	HOLLOW METAL	MV	MERCURY VAPOR	RL	RAISE LOWER	TTD	TOILET TISSURE DISPENSER
BLDG	BUILDING	E	EMPTY	HOA	HAND-OFF-AUTO	MWS	MAXIMUM WATER SURFACE	RLS	RUBBER LINED STEEL	TU-X	TREATMENT UNIT NO. X
BLK	BLOCK	EA	EACH	HOR	HAND-OFF-REMOTE			RM	ROOM	TURB	TURBIDITY
BM	BEAM	EE	EMERGENCY EYEWASH	HORIZ	HORIZONTAL	N	NORTH	ROL	RAISE-OFF-LOWER	TYP	TYPICAL
BM	BENCHMARK	EF	EACH FACE	HP	HORSEPOWER	N/A	NOT APPLICABLE	RM	REVOLUTIONS PER MINUTE		
B.O.S.	BOTTOM OF STRUCTURE	EF	EXHAUST FAN	H.P.	HIGH POINT	N/C	NORMALLY CLOSED	RS	RIGID STEEL	U ON	UNLESS OTHERWISE NOTED
BOT. (BOTT), B/	BOTTOM	EFF	EFFLUENT	HPS	HIGH PRESSURE SODIUM	N/O	NORMALLY OPEN	RST	REINFORCING STEEL	UBC	UNIFORM BUILDING CODE
BRG	BEARING	EL, ELEV	ELEVATION	HR	HOSE RACK	N, NEUT	NEUTRAL	RTN	RETURN	UH	UNIT HEATER
BSP	BLACK STEEL PIPE	ELB	ELBOW	HRDN	HARDENER	NA	NON-AUTOMATIC	RRUB	RADIAL RUBBER	UR	URINAL
BV	BALL VALVE	EIFS	EXTERIOR INSULATION FINISH SYSTEM	HSS	HOLLOW STRUCTURAL SECTION	ND	NAPKIN DISPOSAL	R/W	RIGHT OF WAY	UVR	UNDER VOLTAGE RELAY
BVC	BEGINNING OF VERTICAL CIRCUIT	ELC	ELECTRICAL LOAD CENTER	HV	HOSE VALVE	NGS STA	NATIONAL GEODETIC SURVEY STATION	RW	RAW WATER		
		ELEC	ELECTRIC, ELECTRICAL	HVAC	HEATING, VENTILATING AND AIR CONDITIONING	NIC	NOT IN CONTRACT			V	VALVE
C	CONDUIT	ENGR	ENGINEER			NO, #	NUMBER	S	I-BEAM	V	VENT
°C	DEGREE CELSIUS	EOG	EDGE OF GUTTER			NP	NON-PROTECTED	S	SLOPE	V	VOLT
C-C	CENTER TO CENTER	EOP	EDGE OF PAVEMENT	HW	HEADWALL	NPT	NATIONAL PIPE THREADS	S	SOUTH	V	VOLTMETER, VOLTS
CAB	CABINET	E.O.W.	EDGE OF WATER	HWL	HIGH WATER LEVEL	NS	NON-SHRINK	S	SWITCH	VB	VAPOR BARRIER
CAR	CARPET	EP	EDGE OF PAVING	IC	INTERRUPTING CAPACITY	NTS	NOT TO SCALE	SATC	SUSPENDED ACOUSTICAL TILE CEILING	VC	VERTICAL CURVE
CATV	CABLE TELEVISION	EQ	EQUAL	ID	INSIDE DIAMETER			SC	SLIP CRITICAL	VCP	VITRIFIED CLAY PIPE
CB, C.B.	CATCH BASIN	EQ SP	EQUALLY SPACED	IE, I.E.	INVERT ELEVATION	O TO O	OUT TO OUT	SCBA	SELF CONTAINED BREATHING APPARATUS	VDR	VERTICLE DRYING RACK
CB	CIRCUIT BREAKER	EQPT, (EQUIP)	EQUIPMENT	IF	INSIDE FACE	OA	OVERALL	SCC	SOLID CORE	VERT	VERTICAL
CC	CONTROL CABLE	ETM	ELAPSED TIME METER	IG	INSULATING GLASS	OC	ON CENTER	SCFM	STANDARD CUBIC FEED PER MINUTE	VIB	VIBRATION
CCP	CENTRAL CONTROL PANEL	EVC	END OF VERTICAL CURVE	IN	INCH	OC	OPEN-CLOSE	SCH	SCHEDULE	VP	VENEER PLASTER
CCS	CENTRAL CONTROL SYSTEM	EW	EACH WAY	INCAND	INCANDESCENT	OCA	OPEN-CLOSE-AUTO	SCR	SHOWER CURTAIN ROD	VPC	POINT OF VERTICAL CURVATURE
CFM	CUBIC FEET PER MINUTE	EXH	EXHAUST	INJS	INJECTIONS	OCR	OPEN-CLOSE-REMOTE	SCU	SPEED CONTROL UNIT	VPI	POINT OF VERTICAL INTERSECTION
CHAN, C	CHANNEL (BEAM)	EXP	EXPANSION	INST	INSTANTANEOUS	OD	OUTSIDE DIAMETER	SD	SOAP DISPENSER	VPS	VENEER PLASTER SYSTEM
CHDPE	CORRUGATED HIGH DENSITY POLYETHYLENE PIPE	EXP	EXPANDED	INSTM	INSTRUMENT, INSTRUMENTATION	OF	OUTSIDE FACE	SDMH, S.D.M.H.	STORM DRAIN MANHOLE	VPT	POINT OF VERTICAL TANGENT
CHEM	CHEMICAL	EXP AB	EXPANSION ANCHOR BOLT	INSUL	INSULATION	OHW	OVERHEAD WIRE	VT	VENT THRU ROOF		
CI	CAST IRON	EXP JT	EXPANSION JOINT	INVT	INVERT	OL	OVERLOAD RELAY	SDWK	SECONDARY		
CIP	CAST IRON PIPE	EXT	EXISTING	IRRIG	IRRIGATION	OO	ON-OFF	SEC	SECTION	W	WATER
CIPS	CAST IRON SOIL PIPE	EXT	EXISTING	ITG	INSULATED TEMPERED GLASS	OOA	ON-OFF-AUTO	SED	SEDIMENTATION	W	WEST
CJ	CONSTRUCTION JOINT/CONTROL JOINT			IU	INTAKE UNIT	OOR	ON-OFF-REMOTE	SEW	SEWAGE	W	WIDE FLANGE (BEAM)
CKT	CIRCUIT			IW	IRRIGATION WELL	OP	OPAQUE PANEL	SF	SLOWER-FASTER	W/	WITH
CL	CENTERLINE	°F	DEGREE FAHRENHEIT	J, JB	JUNCTION BOX	OPER	OPERATOR	SF	SQUARE FEET	WC	WATER CLOSET
CLDI	CEMENT LINED DUCTILE IRON PIPE	F, FU	FUSE	JAN	JANITOR	OPNG	OPENING	SG	LAMINATED SAFETY GLASS	WD	WOOD
C.L.F.	CHAIN LINK FENCE	FAI	FRESH AIR INLET	JCT	JUNCTION	O.R.B.	OFFICIAL RECORD BOOKS	SGWB	SUSPENDED GYPSUM WALL BOARD	WG	WIRE GLASS
CLG	CEILING	FC	FLEXIBLE CONDUIT	JT	JOINT	OSC	OPEN-STOP-CLOSE	SH	SHOWER	WH	WATER HEATER
CLO	CLOSET	FCA	FLANGED COUPLING ADAPTER			OSD	OPEN SITE DRAIN	SH (SHT)	SHEET	WH	WATTHOUR METER
CLR	CLEAR	FCL2	FREE CHLORINE RESIDUAL	K	KEY INTERLOCK			SHA	SURFACE HARDENING AGENT	WHD	WATTHOUR DEMAND METER
CL2	CHLORINE	FCY	FLOOR CLEANOUT	KIP	THOUSAND POUNDS	P	PILASTER, PIPE	SHS	SOLIDS HANDLING SYSTEM	WP	WATERPROOF
CMP, C.M.P.	CORRUGATED METAL PIPE	FD	FLOOR DRAIN	KIT	KITCHEN	PAV	PAVER TILE	SIM	SIMILAR	WP	WEATHERPROOF
CMU	CONCRETE MASONRY UNIT	FDN	FOUNDATION	KSK	KITCHEN SINK	P.B.	PLAT BOOK	SMH	STORMWATER MANHOLE	WR	WASTE RECEPTACLE
CO	CLEANOUT	FDR	FEEDER	KV	KILOVOLTS	PB	PUSHBUTTON SWITCH	SOLN	SOLUTION	WS	WATER SURFACE
COL	COLUMN	FEXT	FIRE EXTINGUISHER	KVA	KILOVOLT AMPERES	PC	PHOTOCELL	SP	SPACE OR SPACES	WS	WATERSTOP
CONC	CONCRETE	FF	FINISHED FLOOR	KVAR	KILOVOLT AMPERES REACTIVE	PC	POINT OF CURVE	SPA	SPACING	WS	WELDED STEEL
CONDNTN	CONDITIONED	FG	FINISH GRADE	KW	KILOWATT	PE	PLAIN END	SPEC, SPECS	SPECIFICATIONS	WTP	WATER TREATMENT PLANT
CONN	CONNECTION	FHY	FIRE HYDRANT			PED	PEDESTAL	SPEC'D.	SPECIFIED	WTR	WATER
CONST	CONSTRUCT	FIG	FIGURE	L	ANGLE, LENGTH	PEP	POLYETHYLENE PIPE	SPLY	SUPPLY	WU	WALL URN
CONT	CONTINUOUS, CONTINUATION	FL	FLOW LINE	L	ARC LENGTH	PF	PANEL FRONT	SQ	SQUARE	WWTP	WASTEWATER TREATMENT PLANT
CONTR	CONTRACTOR	FLG	FLANGE	LA	LIGHTNING ARRESTER	PG.	PAGE	SQ FT	SQUARE FOOT, FEET		
COORD	COORDINATE	FL (FLR)	FLOOR	LAB	LABORATORY	pH	HYDROGEN ION CONCENTRATION	SQ IN	SQUARE INCH		
CP	CENTER PIVOT	FLEX	FLEXIBLE	LAM	LAMINATE	PI	POINT OF INTERSECTION	SR	SHORT RADIUS		
CP-X	CONTROL PANEL NO. X	FLH	FLAT HEAD	LAT	LATITUDE	PJF	PREMOULDED JOINT FILLER	SS	START-STOP		
CPLG	COUPLING	FLTR	FILTER	LAV	LAVATORY	PL	PLATE (STEEL)	SS, SST	STAINLESS STEEL		
CPRSR	COMPRESSOR	FLUOR	FLUORESCENT	LB	LICENSED BUSINESS	PL	PROPERTY LINE or PARCEL LINE	SSH	SAFETY SHOWER		
CPT	CONTROL POWER TRANFORMER	FNSH	FINISH	LB	POUND	PLAS	PLASTIC	SSK	SERVICE SINK		
CPVC	CHLORINATED PVC	FP	FIELD PANEL	LB/CU FT	POUNDS PER CUBIC FOOT	PLC	PROGRAMMMABLE LOGIC CONTROLLER	S.S.M.H.	SANITARY SEWER MANHOLE		
CR	CONTROL RELAY	FPS	FEET PER SECOND	LC	LIGHTING CONTACTOR	PLC-X	PROGRAMMMABLE LOGIC CONTROLLER	STA	STATUS		
CRS	COLD ROLLED STEEL	FP-W-X	FIELD PANEL NO. WX	LF	LINEAR FEET		NO. X	STD	STANDARD		
		FR	FORWARD REVERSE	LG	LONG	PLYWD	PLYWOOD	STM	STORM WATER		
		FRP	FIBERGLASS REINFORCED PLASTIC	LH	LEFT HAND	PNL	PANEL				

NOTES:

1. THIS IS A STANDARD LEGEND SHEET, THEREFORE SOME ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT ON THE DRAWINGS.

2. CONTACT ENGINEER FOR ABBREVIATIONS NOT LISTED.


1. EXISTING UNDERGROUND UTILITIES OBTAINED FROM COUNTY GIS, AND FROM AS-BUILT DATA. CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION PRIOR TO EXCAVATION. PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION.
2. EXISTING PIPING AND EQUIPMENT ARE SHOWN SCREENED AND/OR LIGHT-LINED. NEW PIPING AND EQUIPMENT ARE SHOWN HEAVY-LINED.
3. UNLESS OTHERWISE SHOWN ALL PIPING SHALL HAVE A MINIMUM OF 36" COVER.
4. ALL PIPES SHALL HAVE CONSTANT SLOPE BETWEEN INVERT ELEVATIONS UNLESS A FITTING IS SHOWN.
5. FOR TRENCHING AND BACKFILL, SEE MANATEE COUNTY STANDARD DETAILS UG-11 AND UG-12.
6. FOR SURFACE RESTORATION OF ASPHALT CONCRETE, SEE MANATEE COUNTY STANDARD DETAIL UG-12, AND FOR GRASS, SEE SPECIFICATION 32 92 00.
7. MINIMUM ALLOWABLE CLEARANCE BETWEEN PIPES AT CROSSINGS SHALL BE AS SHOWN ON THE DRAWINGS AND THE MANATEE COUNTY PUBLIC WORKS STANDARDS, PART 1, UTILITY STANDARDS MANUAL.
8. ALL EXISTING VALVES, HYDRANTS, ETC. SHALL BE ACCESSIBLE DURING AND AFTER THE PROJECT. EXISTING VALVES, HYDRANTS, METER BOXES, SHALL BE ADJUSTED TO NEW FINISHED GRADE IF CHANGED. ANY EXISTING SERVICES DAMAGED DURING CONSTRUCTION SHALL BE REPLACED.

WH-1 VERIFIED VERTICAL AND HORIZONTAL UTILITY LOCATION

NOTE: size of trunk diameter is determined at 4.5' above ground surface and is shown adjoining the symbol in inches.





<div><div><div>Jacobs</div></div><div>GENERAL</div><div>ELECTRICAL LEGEND</div></div>		643 SW 4TH AVE, SUITE 400 GAINESVILLE, FLORIDA 32601 EB2822		DAVID C. NICHOLSON PE 60201	
		MASTER LIFT STATION REHABILITATION		MANATEE COUNTY	
1" = X'					
VERIFY SCALE					
BAR IS ONE INCH ON ORIGINAL DRAWING.		0  1"			
DATE	MARCH 2023				
PROJ	D3599900				
DWG	G-007				
SHEET	6 of 18				

[illegible]







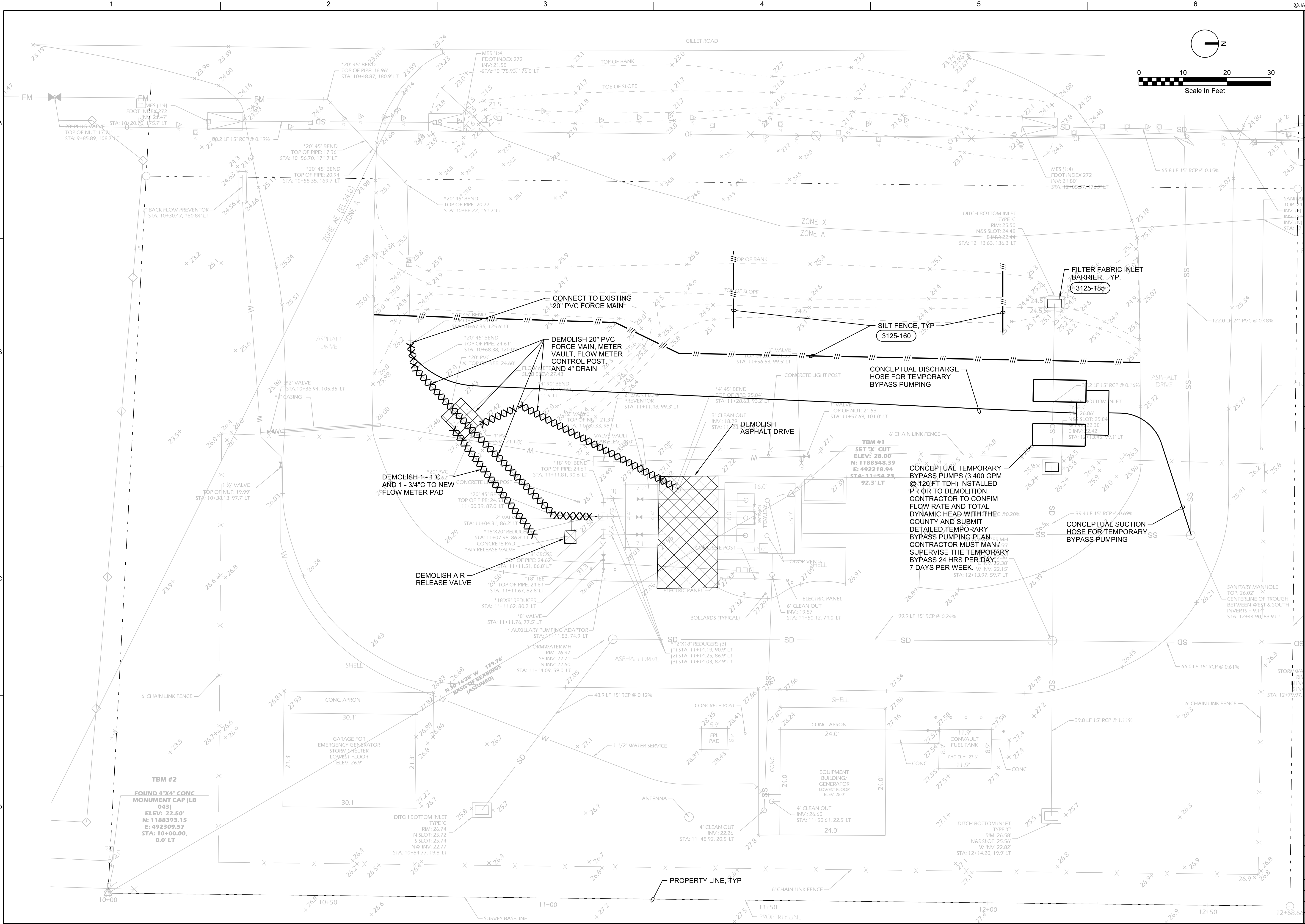
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643 SW 4TH AVE, SUITE 400  
GAINESVILLE, FLORIDA 32601  
EB2822

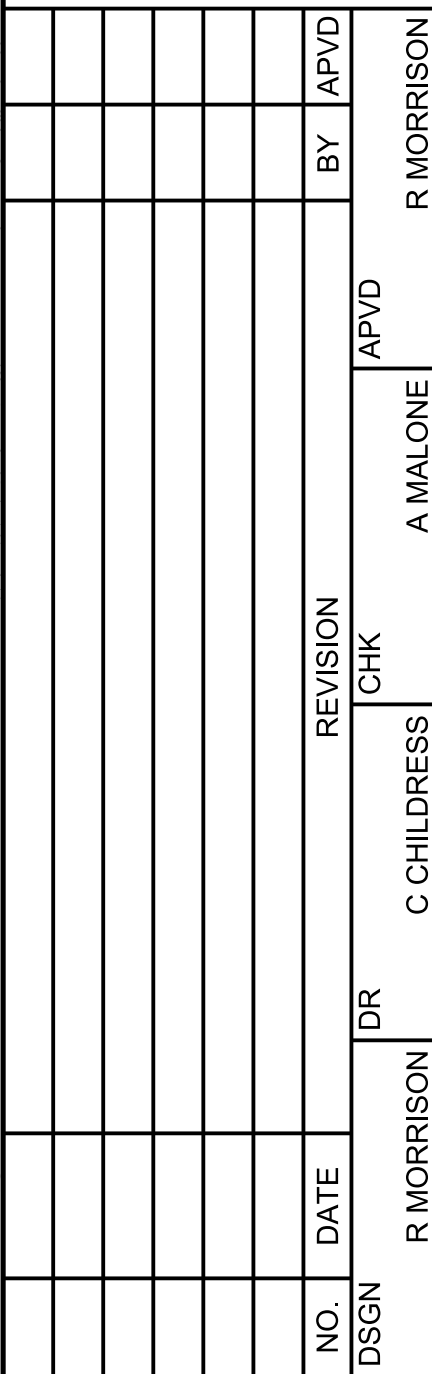
RICHARD THOMAS MORRISON PE 67713

## DEMOLITION AND EROSION CONTROL PLAN

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
0	1"
DATE	MARCH 2023
PROJ	D3599900
DWG	C-101
SHEET	9 of 18







643 SW 4TH AVE, SUITE 400  
GAINESVILLE, FLORIDA 32601  
EB2822

RICHARD THOMAS MORRISON PE 67713

**Jacobs.**

VERIFY SCALE
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BAR IS ONE INCH ON  
ORIGINAL DRAWING.

DATE	MARCH 2023
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PROJ	D3599900
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DWG	C-20
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SHEET	10 of 18
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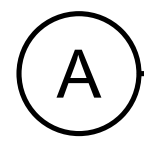
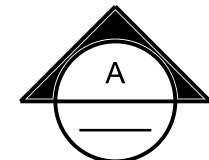






## GENERAL SHEET NOTES

1. BACKGROUND DRAWINGS ARE FROM ARTESIAN LAKES MASTER PUMP STATION COMPASS POINT SURVEYOR RECORD DRAWINGS DATED OCTOBER 2008 AND MAY NOT IN THEIR ENTIRETY REFLECT CURRENT EXISTING FIELD CONDITIONS. THE DRAWINGS ARE PROVIDED AS REFERENCE ONLY. CONTRACTOR SHALL FIELD VERIFY ALL SIZES, DIMENSIONS AND ORIENTATIONS.
2. ALL BURIED PIPES SHALL BE C900 PVC AND DI FITTINGS, UNLESS OTHERWISE SHOWN.
3. CONTRACTOR TO SUPPLY AND INSTALL THREE NEW SUBMERSIBLE PUMPS.
4. ALL BURIED MECHANICAL JOINTS SHALL BE RESTRAINED. FOSTER ADAPTER SHALL BE USED IN THE LOCATIONS SHOWN.


$$3/8'' = 1'-0''$$

20-D-201

**Jacobs.**

PROCESS MECHANICAL

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**BID DOCUMENT**





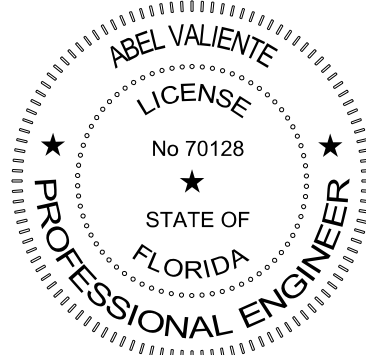








1. DEMOLISH EXISTING FAN AND ALL ASSOCIATED APPURTENANCES. INFILL WALL OPENING ACCORDINGLY TO MATCH AESTHETICS OF THE BUILDING.
2. EXISTING CONDENSER UNIT TO REMAIN.
3. EXISTING INDOOR UNIT TO REMAIN. REMOVE PLYWOOD PANEL BEHIND UNIT AND INFILL WALL OPENING ACCORDINGLY TO MATCH AESTHETICS OF THE BUILDING. SEE DETAIL

[illegible]

643 SW 4TH AVE, SUITE 400  
GAINESVILLE, FLORIDA 32601  
FR2822

CLIENTE PE 70128  
MASTER LIFT STATION  
REHABILITATION  
MANATEE COUNTY

**Jacobs**

MECHANICAL  
MASTER PUMP STATION  
DEMOLITION PLAN

## VERIFY SCALE

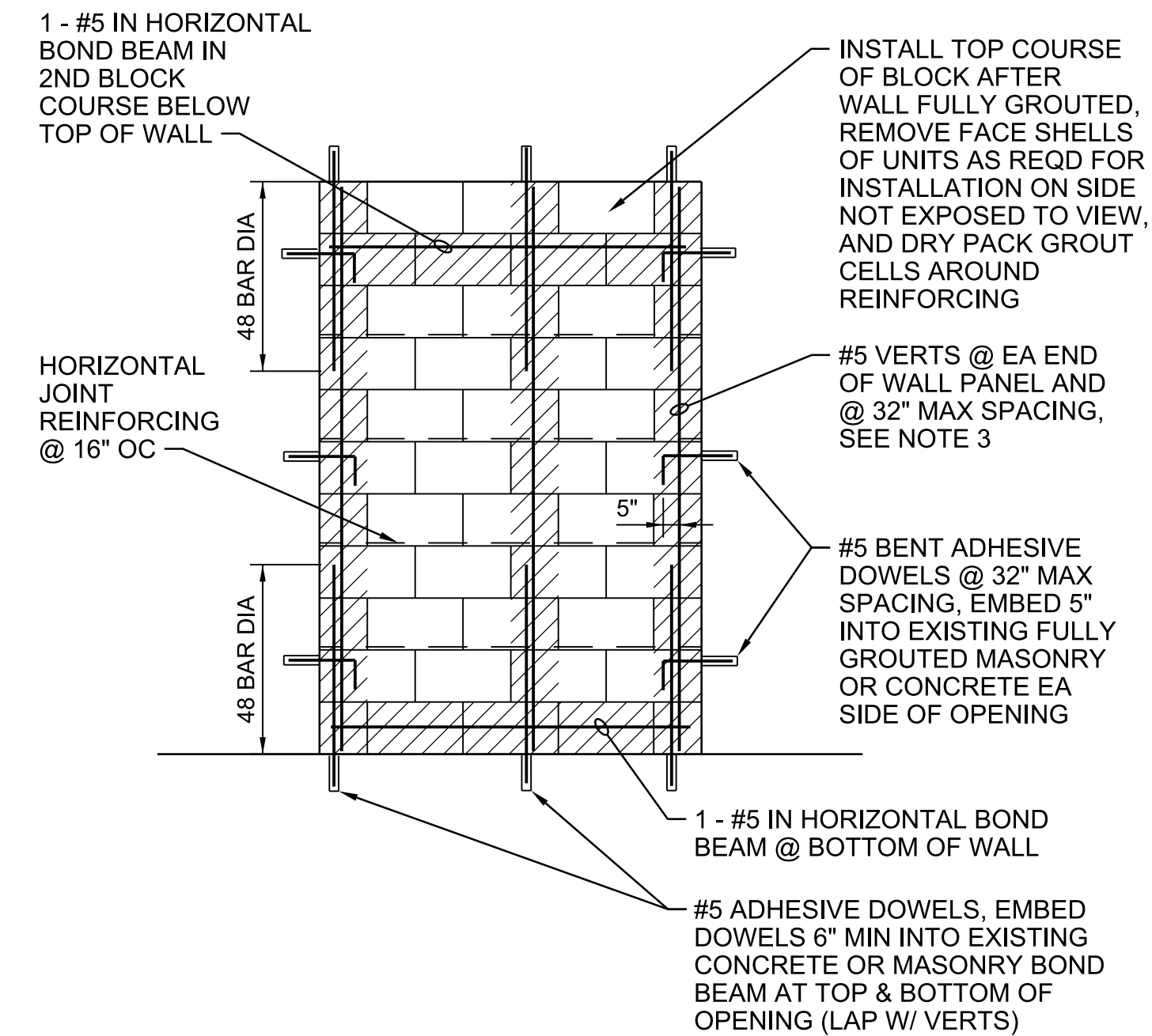
BAR IS ONE INCH ON  
ORIGINAL DRAWING

DATE MARCH 2023

PROJ	D3599900
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DWG	M-10
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SHEET 15 of 18



NOTES:

1. BLOCK INFILL TO MATCH EXISTING ADJACENT BLOCK SIZE, COLOR, TEXTURE, JOINT, STACKED OR RUNNING BOND.
2. FOR WALL PANELS WITH OPENINGS TO BE FILLED THAT ARE IN EXCESS OF 30% OF WALL AREA, REPLACE WALL PANEL COMPLETE.
3. LAP VERTICAL BARS 48 BAR DIAMETERS WITH TOP AND BOTTOM DOWELS AS SHOWN. ALL INTERMEDIATE LAPS SHALL BE 72 BAR DIAMETERS.
4. USE OPEN-ENDED CMU UNITS AS REQUIRED TO CONSTRUCT WALL.
5. APPLY STUCCO ON THE OUTSIDE ACCORDINGLY TO MATCH AESTHETICS OF BUILDING.



GENERATOR AREA

ELECTRICAL  
CONTROL ROOM

RESTROOM

## FLOOR PLAN

$$3/8'' = 1' - 0''$$

1  
0  
5  
BID DOCUMENT



- . EXISTING DX SPLIT AIR CONDITIONING AHU/ACCU-01
- . NEW DX SPLIT AIR CONDITIONING AHU/ACCU-02

### AHU/ACCU-1 & 2 SETPOINTS SCHEDULE:

**OPERATION**  
**COOLING MODE :**

UPON A RISE OF THE TEMPERATURE IN THE ELECTRICAL ROOM OVER THE FIRST TEMPERATURE SETPOINT 77 DEGREES F (ADJ), THE LEAD SYSTEM SUPPLY FAN SHALL START AND THE DX COOLING STAGES SHALL CYCLE TO MAINTAIN THE FIRST SPACE TEMPERATURE SETPOINT. UPON FURTHER RISE OF THE SPACE TEMPERATURE OVER THE SECOND TEMPERATURE SETPOINT 82 DEGREES F (ADJ), THE LAG SYSTEM SUPPLY FAN SHALL ENERGIZE AND THE DX COOLING SHALL CYCLE TO MAINTAIN THE SECOND TEMPERATURE SETPOINT. AS THE SPACE TEMPERATURE SETPOINTS ARE SATISFIED, THE SYSTEMS SUPPLY FANS SHALL STOP AND THE DX COOLING SHALL BE INHIBITED FROM OPERATING.

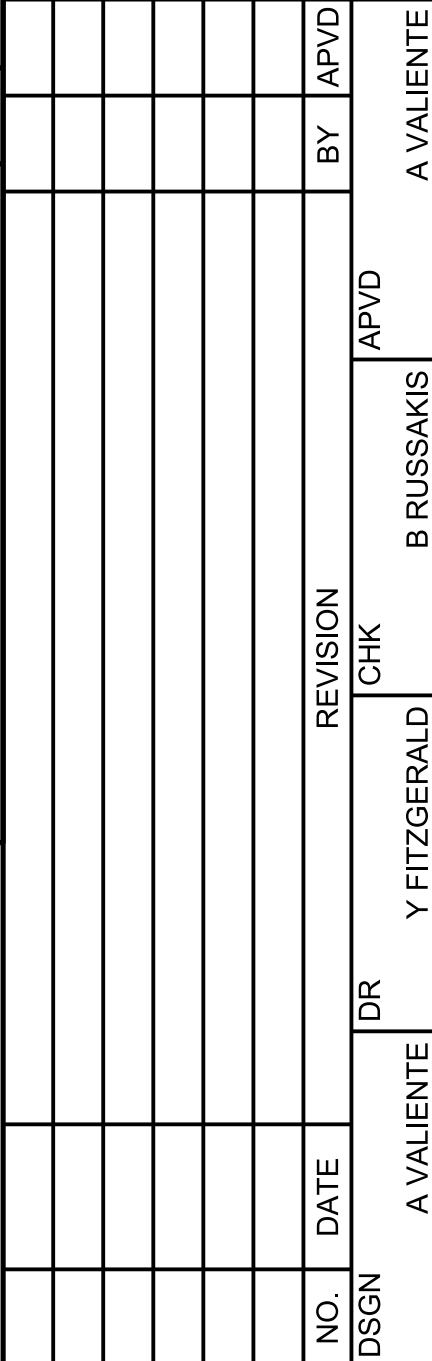


SYMBOL	LOCATION	TYPE	FAN DATA				DX COOLING DATA					DX HEATING DATA			FAN MOTOR DATA			UNIT ELECTRICAL DATA					UNIT DIMENSIONS				MANUFACTURER	MODEL	APPLICABLE REMARKS
			SUPPLY AIR(MAX) CFM	SUPPLY AIR(MIN) CFM	OUTSIDE AIR	EXTERNAL STATIC P IN W.G.	TOTAL BTU/H	SENS. BTU/H	EAT DEG. F		COND. DEG. F	TOTAL BTU/H	EAT DEG. F	COND. DEG. F	FLA	VOLT	PH	#CONN.	MCA	VOLT	PH	FACTORY INSTALLED DISCONNECT	INCHES			MAX. WEIGHT LBS			
									DB	WB													L	W	H				
AHU-02	CEILING	CASSETTE	810	530	0	0.25	24,000	20,640	80	67	95	29,000	70	47	0.49	208	1	1	1	208	1	NO	33 1/16	33 1/16	11 3/4	56	mitsubishi	PLA-A24EA7	A,B,C,D,E

TAG	LOCATION	DX COOLING DATA			DX HEATING DATA			OUTDOOR FAN DATA					COMPRESSOR DATA					UNIT ELECTRICAL DATA					UNIT DIMENSIONS				MANUFACTURER	MODEL	APPLICABLE REMARKS				
		CAPACITY BTU/HR.	AMBIENT	SEER @ ARI	CAPACITY BTU/HR.	COND. DEG. F	COP @ ARI	NO.	F.L.A (EA)	VOLT	PH	CFM (TOTAL)	NO.	STEPS	RLA (EA.)	LRA (EA.)	VOLT.	PH.	# CONN	MCA	MOCF (FUSE)	VOLT	PH	INCHES						MAX. WEIGHT LBS			
			TEMP. DEG. F																					L	W	H							
ACCU-02	WALL	24,000	95	24.2	29000	47	4.4	1	0.4	208	1	1940	1	1	7.0	11.0	208	1	1	19.0	26.0	208	1	14	3/16	37	13/32	37	1/8	153	mitsubishi	PUZ-A24NHA7	A,B,C,D

1. LOCATE THERMOSTATS 5'-0" FEET ABOVE FINISHED FLOOR. CONTRACTOR SHALL FIELD VERIFY EXISTING SYSTEM THERMOSTAT AND REPLACE IF NEEDED WITH 7-DAY PROGRAMMABLE THERMOSTAT.
2. MECHANICAL WORK SHALL COMPLY WITH ALL APPLICABLE CODES. VERIFY REQUIREMENTS PRIOR TO COMMENCING WORK.
3. EQUIPMENT, REFRIGERANT PIPING AND CONDENSATE PIPING SHALL NOT BE LOCATED DIRECTLY ABOVE ELECTRICAL EQUIPMENT.

1. MOUNT NEW CONDENSER ON WALL WITH BRACKET PROVIDED BY EQUIPMENT MANUFACTURER. FIELD VERIFY LOCATION TO AVOID CONFLICTS WITH OTHER EQUIPMENT, CONDUIT, ETC.
2. CONDENSATE DRAIN FULL SIZE OF UNIT CONNECTION. PIPE WITH TRAP AND SLOPE 1/8" PER FOOT. COMBINE CONDENSATE PIPING FROM BOTH UNITS AS SHOWN IN DRAWINGS. DISCHARGE TO EXISTING LOCATION USED BY EXISTING EQUIPMENT.
3. ROUTE ALL PIPING ABOVE CEILING.
4. ALL REFRIGERANT AND CONDENSATE PIPING SHALL BE INSULATED WITH CLOSED CELL ELASTOMERIC INSULATION, ARMAFLEX.
5. CONDENSATE PIPING ABOVE CEILING.



ASTER LIFT STATION  
REHABILITATION

MANATEE COUNTY

AS NO

## VERIFY SCALE

BAR IS ONE INCH ON  
ORIGINAL DRAWING.

DATE	MARCH 2023
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PROJ	D3599900
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DWG	M-201
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## DEMO LAYOUT PLAN

LIGHTING "L":	2 720 KVA @ 1.25 DF=	<u>3 400 KVA</u>	
RECEPT "R":	1 400 KVA 1ST 10KVA + 50% OF REMAINDER=		<u>1 400 KVA</u>
A/C "A":	2 520 KVA @ 1.00 DF=	<u>2 520 KVA</u>	
KITCHEN "K":	0 000 KVA @ .65 DF=	<u>0 000 KVA</u>	
MOTOR "M":	0 000 KVA TOTAL + 25% OF LARGEST=		<u>0 000 KVA</u>
HEATING "H":	1 440 KVA @ 1.00 DF=	<u>1 440 KVA</u>	
MISC "S":	10 800 KVA @ 1.00 DF=	<u>10 800 KVA</u>	

## DEMO PANELBOARD SCHEDULE



## NEW LAYOUT PLAN

[MSC] 1"C, MANUFACTURER SUPPLIED CABLE  
[30E2] 3/4"C, 2#10AWG, 1#10G

LIGHTING "L":	2.720 KVA @ 1.25 DF=	<u>3.400</u> KVA	
RECEPT "R":	1.400 KVA 15T 10KVA + 50% OF REMAINDER=		1.400 KVA
A/C "A":	6.160 KVA @ 1.00 DF=	<u>6.160</u> KVA	
KITCHEN "K":	0.000 KVA @ .65 DF=	<u>0.000</u> KVA	
MOTOR "M":	0.000 KVA, TOTAL + 25% OF LARGEST=	<u>0.000</u> KVA	
HEATING "H":	1.440 KVA @ 1.00 DF=	<u>1.440</u> KVA	
MISC "S":	10.800 KVA @ 1.00 DF=	<u>10.800</u> KVA	

## NEW PANELBOARD SCHEDULE

- ## SHEET KEYNOTES

DAVID L. NELSON  
★ LICENSE ★  
No 60201  
★  
STATE OF  
FLORIDA  
PROFESSIONAL ENGINEER

PVD	
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DAVID C. NICHOLSON PE 60201

MANATEE COUNTY

ELECTRICAL

## DEMO AND NEW

REUSE OF DOCUMENTS:

## VERIFY SCALE

0

DATE	MARCH 2023
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PROJ	D3599900
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DWG	E-201
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1/4" = 1'-0"



DAVID C. NICHOLSON  
 LICENSE  
 No 60201  
 STATE OF  
 FLORIDA  
 PROFESSIONAL ENGINEER

- [illegible]

ELECTRICAL

MASTER PUMP STATION  
EQUIPMENT LAYOUT AND  
RISER DIAGRAM

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