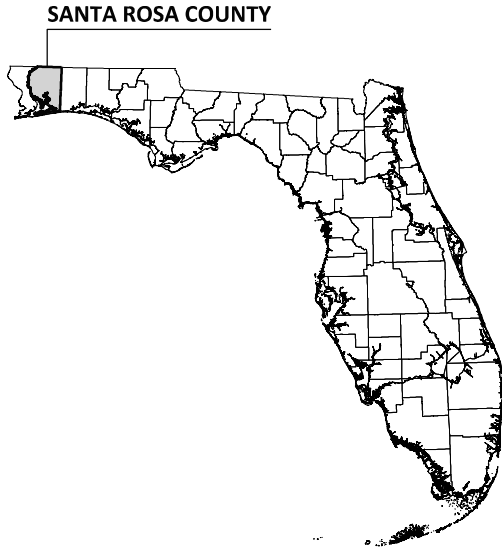


WHITING AVIATION PARK FIRE FLOW EXPANSION - PHASE A

PROJECT NO. 1202201

ISSUED FOR BID: JUNE 2024

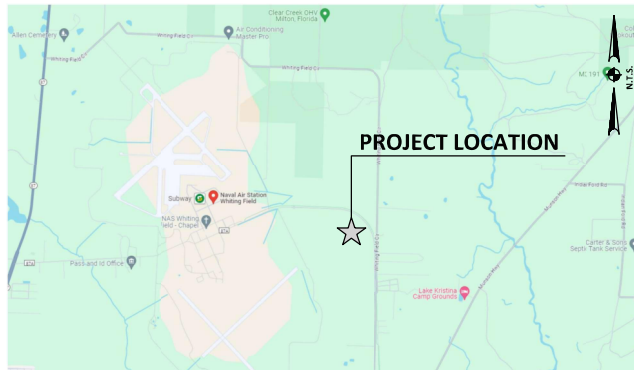


SANTA ROSA COUNTY, FLORIDA BOARD OF COUNTY COMMISSIONERS

SAM PARKER
KERRY SMITH
JAMES CALKINS
RAY EDDINGTON
COLTEN WRIGHT

DISTRICT 1 - CHAIRMAN
DISTRICT 2 - COMMISSIONER
DISTRICT 3 - VICE CHAIRMAN
DISTRICT 4 - COMMISSIONER
DISTRICT 5 - COMMISSIONER

LOCATION MAP



SHEETS INDEX

SHEET	SHEET NO.	SHEET TITLE
1	G-01	TITLE SHEET
2	G-02	PROJECT NOTES AND ABBREVIATIONS
3	C-01	EXISTING SITE PLAN
4	C-02	REQUIRED SITE PLAN
5	M-01	FIRE SERVICE BOOSTER PUMP STATION DETAILS
6	S-01	FIRE SERVICE BOOSTER PUMP STATION FOUNDATION
7	D-01	CONSTRUCTION DETAILS
8	D-02	CONSTRUCTION DETAILS
9	D-03	CONSTRUCTION DETAILS
10	E-01	EXISTING ELECTRICAL SITE PLAN
11	E-02	REQUIRED ELECTRICAL SITE PLAN
12	E-03	ELECTRICAL ONE-LINE DIAGRAM
13	E-04	ELECTRICAL DETAILS AND SCHEDULES
14	E-05	ELECTRICAL DETAILS AND SCHEDULES
15	E-06	ELECTRICAL DETAILS AND SCHEDULES

PREPARED BY

VOLKERT

215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561
WWW.VOLKERT.COM



NOTIFICATION REQUIREMENTS/CONTACTS

- 1. 24-HR EMERGENCY CONTACT: CITY OF MILTON PUBLIC WORKS DEPT.
- OFFICE HOURS (7:30 AM - 4:30 PM, M - F): (850) 983-5400, EXT 1200
- AFTER HOURS: (850) 983-5420
- 2. OWNER: SANTA ROSA COUNTY, FLORIDA
6495 CAROLINE ST., SUITE C
MILTON, FLORIDA 32570
PHONE: (850) 981-2109
- 3. ENGINEER: VOLKERT, INC.
215 FAIRPOINT DRIVE, SUITE B
GULF BREEZE, FLORIDA 32561
CONTACT: THOMAS BRYMER, PE, MS
PHONE: (251) 342-1070
- 4. NOTIFY INSPECTIONS OF THE FOLLOWING AT THE INDICATED TIME INTERVAL. THE INSPECTION POINT OF CONTACT WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING:
- 24 HOURS PRIOR TO THE BEGINNING OF EACH PHASE OF CONSTRUCTION.
- 7 DAYS PRIOR TO SHUT OFF OF SERVICES AND/OR WET CUT-INS. THIS ALSO REQUIRES A FOLLOW-UP NOTIFICATION TO INSPECTOR AND AFFECTED CUSTOMERS A MINIMUM OF 24 HOURS PRIOR TO INTERRUPTING SERVICE
- 5. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING UTILITIES AND COORDINATE WITH THE APPLICABLE UTILITY COMPANIES A MINIMUM OF 72 HOURS PRIOR TO BEGINNING CONSTRUCTION IN AREAS WHERE THE UTILITIES ARE SHOWN OR ARE SUSPECTED TO BE. THE FOLLOWING LIST OF UTILITY COMPANIES IS NOT ALL INCLUSIVE AND IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THE APPROPRIATE UTILITY COMPANIES ARE NOTIFIED WHETHER OR NOT THEY ARE LISTED HEREIN:
 - SEWER/WATER: THE CITY OF MILTON
6738 DIXON STREET
MILTON, FLORIDA 32572
(850) 983-5400
 - ELECTRIC: GULF POWER
5120 DOGWOOD DRIVE
MILTON, FLORIDA 32570
(850) 549-1031
 - CABLE: MEDIACOM
1516 NANTHALA DRIVE
GULF BREEZE, FLORIDA 32563
(850) 934-2564
 - TELEPHONE: AT&T FLORIDA
6689 EAST MAGNOLIA STREET
MILTON, FLORIDA 32570
(850) 623-3654
 - GAS: CITY OF MILTON, GAS DEPT.
5438 ALABAMA STREET
MILTON, FLORIDA 32570
(850) 983-5434
 - FIBER OPTIC: SOUTHERN LIGHT
107 SAINT FRANCIS STREET
SUITE 1800
MOBILE, ALABAMA 36602
(251) 662-1170
 - COMMUNICATIONS: LEVEL 3 COMMUNICATIONS
1025 ELDORADO BOULEVARD
BROOMFIELD, COLORADO 80021
(720) 888-4988
 - MISCELLANEOUS: SUNSHINE STATE ONE-CALL
7200 LAKE ELLENOR DRIVE
SUITE 200
ORLANDO, FLORIDA 32809
(800) 432-4770

UTILITY GENERAL NOTES

- 1. ALL CONSTRUCTION SHALL BE CONSTRUCTED IN STRICT ACCORDANCE WITH THE LATEST CITY OF MILTON PUBLIC WORKS MANUAL.
- 2. ALL CONSTRUCTION SHALL COMPLY WITH THE CONTRACT PLANS, SPECIFICATIONS, PERMIT REQUIREMENTS, AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES. NO ADDITIONAL PAYMENT WILL BE GIVEN FOR ANY COSTS INCURRED TO COMPLY WITH REQUIREMENTS SET BY THE AFOREMENTIONED ITEMS.
- 3. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE OWNER OF ANY DISCREPANCIES OR ERRORS DISCOVERED IN THE CONTRACT DOCUMENTS. ANY DEVIATION FROM THE PLANS WITHOUT PRIOR CONSENT OF OWNER MAY BE CAUSE FOR THE WORK TO BE UNACCEPTABLE.
- 4. ALL NECESSARY LICENSES, BONDS, PERMITS, ETC. SHALL BE OBTAINED BY THE CONTRACTOR AT THE CONTRACTOR'S OWN EXPENSE.
- 5. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH SANTA ROSA COUNTY, ENGINEER, CONTRACTOR, AND DOT (IF APPLICABLE) PRIOR TO COMMENCING WORK.

UTILITY GENERAL NOTES CONT'D

- 6. ALL CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO PUBLIC RIGHT-OF-WAYS AND ACQUIRED EASEMENTS. WORK IS TO BE PERFORMED IN CONFORMITY WITH ALL APPLICABLE PERMITS, AGREEMENTS, AND EASEMENT STIPULATIONS. CONTRACTOR SHALL NOT ENTER OR OCCUPY ANY EASEMENT WITHOUT FIRST CONFIRMING WITH SANTA ROSA COUNTY THAT SUCH EASEMENT IS FULLY EXECUTED. CONTRACTOR SHALL NOT ENTER OR OCCUPY ANY LAND OUTSIDE OF THE EASEMENTS AND RIGHT-OF-WAYS. SHOULD THE CONTRACTOR DESIRE OR REQUIRE ADDITIONAL SPACE, THE CONTRACTOR MUST ARRANGE FOR SUCH A SPACE WITH THE EASEMENT OWNER AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL PROVIDE COPIES OF EASEMENT AGREEMENTS TO THE OWNER PRIOR TO WORK COMMENCING ON PRIVATE PROPERTY.
- 7. LAND DISTURBANCE SHALL BE LIMITED TO THOSE AREAS INDICATED ON THE PLANS FOR ACCESS, STAGING, AND UTILITY CONSTRUCTION.
- 8. ALL BUFFERS AND TREE SAVE AREAS ARE TO BE CLEARLY IDENTIFIED WITH TREE PROTECTIVE FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.
- 9. INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES SHALL TAKE PLACE PRIOR TO AND CONCURRENT WITH LAND DISTURBANCE ACTIVITIES. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES AND SHALL BE INSPECTED REGULARLY. ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED IF DEEMED NECESSARY BY THE OWNER. CONTRACTOR SHALL ALSO REMOVE TEMPORARY BMPs AT APPROPRIATE TIME.
- 10. DRAINAGE SYSTEMS SHALL BE MAINTAINED, KEPT FREE OF DEBRIS, AND IN GOOD OPERATING CONDITION AT ALL TIMES DURING CONSTRUCTION OF THIS PROJECT.
- 11. MONUMENTS OR LANDMARKS SHALL NOT BE DISTURBED OR REMOVED BY THE CONTRACTOR WITHOUT THE PRIOR CONSENT OF THE OWNER. ANY MONUMENTS OR LANDMARKS REMOVED OR DAMAGED SHALL BE REPLACED BY A FLORIDA-LICENSED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
- 12. NO TRENCH SHALL BE OPENED MORE THAN 150 FEET AHEAD OF PIPE LAYING AND NO MORE THAN 500 FEET OF TRENCH MAY BE OPEN AT ANY ONE TIME. CLEANUP AND GRASSING SHALL FOLLOW A MAXIMUM OF 500 FEET BEHIND PIPE INSTALLATION. NO TRENCH IS TO BE LEFT OPEN OVERNIGHT WITHOUT THE WRITTEN APPROVAL BY THE OWNER.
- 13. CONTRACTOR SHALL FURNISH SUITABLE BORROW MATERIAL FOR THE PROJECT AND THE MATERIAL SHALL BE APPROVED BY THE OWNER PRIOR TO USE. ALL SPOIL MATERIALS, REFUSE, AND DEBRIS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND LEGALLY DISPOSED OF AT AN APPROPRIATE OFF-SITE LOCATION. BURNING OF SPOIL MATERIAL, REFUSE, AND DEBRIS IS NOT PERMITTED.
- 14. FILL AREAS UNDER PAVED AREAS SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR AND FILL AREAS UNDER NON-PAVED AREAS SHALL BE COMPACTED TO A MINIMUM OF 85% STANDARD PROCTOR, UNLESS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS OR DIRECTED BY THE ENGINEER.
- 15. CONTRACTOR IS TO ALLOW FULL ACCESS TO INSPECTION AND MATERIALS TESTING PERSONNEL. ANY FAILED MATERIALS TESTS SHALL REQUIRE THE CONTRACTOR TO REDO THE WORK UNTIL THE TEST IS PASSED. ADDITIONAL WORK AND TESTING CAUSED BY FAILED TESTS WILL BE PERFORMED AT THE EXPENSE OF THE CONTRACTOR.
- 16. ALL PROJECT SITE AREAS DISTURBED BY THE CONTRACTOR SHALL BE STABILIZED WITH PERMANENT GRASSING UNLESS OTHERWISE NOTED. PERMANENT GRASSING SHALL BE SOD UNLESS OTHERWISE SPECIFICALLY NOTED IN THE CONTRACT DOCUMENTS OR APPROVED BY THE OWNER. ANY AREAS OUTSIDE THE PROJECT SITE AREA THAT ARE DISTURBED SHALL BE RESTORED AT THE EXPENSE OF THE CONTRACTOR.
- 17. THE CONTRACTOR SHALL RESTORE ALL DISTURBED GRAVEL, PAVED, OR CONCRETE ENTRANCES, DRIVEWAYS, AND APRONS TO PRE-CONSTRUCTION CONDITION OR BETTER AND IN ACCORDANCE WITH ALL APPLICABLE DOT STANDARDS AND REQUIREMENTS.
- 18. VEHICULAR AND PEDESTRIAN TRAFFIC ACCESS TO PUBLIC ROADWAYS, DRIVEWAYS, FIRE HYDRANTS, VALVES, ETC. SHALL BE MAINTAINED AT ALL TIMES FOR RESIDENTS, PROPERTY OWNERS, PEDESTRIANS, THE TRAVELING PUBLIC, TRASH PICKUP, MAIL AND PARCEL DELIVERY SERVICES, SCHOOL BUSES, AND EMERGENCY VEHICLES.
- 19. STREET INTERSECTIONS MAY NOT BE BLOCKED EXCEPT FOR ONE-HALF OF THE ROADWAY AT ANY GIVEN TIME. IF IT BECOMES NECESSARY TO CLOSE A PORTION OF THE ROAD, THE CONTRACTOR SHALL PROVIDE A TRAFFIC ROUTING/DETOUR PLAN FOR REVIEW AND APPROVAL PRIOR TO CLOSING THE ROAD.
- 20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY FLAGMEN, SIGNAGE, BARRICADES, LIGHTS, AND OTHER TRAFFIC CONTROL DEVICES NECESSARY TO CONTROL TRAFFIC AND PROTECT THE PUBLIC. ALL TRAFFIC CONTROL MUST BE IN ACCORDANCE WITH THE MANUAL (LATEST EDITION) AND DOT STANDARDS. TRAFFIC CONTROL TO BE FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATIONS.
- 21. CONTRACTOR SHALL PROVIDE PARKING WITHIN THE CONSTRUCTION LIMITS DETAILED AND SHALL PARK VEHICLES AND EQUIPMENT SO THAT THERE IS NO DISRUPTION TO TRAFFIC. NO PARKING ON PRIVATE PROPERTY WILL BE PERMITTED.
- 22. THE SIZE, TYPE, MATERIALS, AND LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE BASED ON THE BEST AVAILABLE INFORMATION. SUBSURFACE UTILITY DATA SHOWN IS APPROXIMATE ONLY AND NO GUARANTEE IS MADE THAT ALL UTILITIES AND OTHER FEATURES ARE REPRESENTED ON THE PLANS ARE CORRECT. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE LOCATION AND SIZE OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.

UTILITY GENERAL NOTES CONT'D

- 23. IF THE CONTRACTOR ENCOUNTERS SUBSURFACE CONDITIONS DIFFERENT FROM THOSE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER. NO EXISTING UTILITY SHALL BE DISTURBED WITHOUT PROPER AUTHORITY AND THEN ONLY IN SUCH A MANNER AS PRESCRIBED AND APPROVED BY THE EXISTING UTILITY OWNER.
- 24. SHOULD IT BECOME NECESSARY TO DISTURB AN EXISTING UTILITY, THE CONTRACTOR IS TO NOTIFY THE OWNER AND THE OWNER OF THE UTILITY. WHEN NECESSARY, CONTRACTOR IS TO CEASE WORK UNTIL SATISFACTORY ARRANGEMENTS HAVE BEEN MADE WITH THE UTILITY OWNER AND PROPER CARE FOR AND RELOCATE THE UTILITY. NO CLAIMS FOR DAMAGES SHALL BE ALLOWED BY THE CONTRACTOR ON ACCOUNT OF ANY DELAY OCCASIONED THEREBY.
- 25. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE. ANY DAMAGE TO EXISTING UTILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. EITHER THE CONTRACTOR OR UTILITY OWNER WILL PERFORM THE REPAIR AT THE DISCRETION OF THE UTILITY OWNER. NO CLAIMS FOR DAMAGES SHALL BE ALLOWED BY THE CONTRACTOR ON ACCOUNT OF ANY DELAY OCCASIONED THEREBY.
- 26. THE CONTRACTOR SHALL PROVIDE ALL LABOR, TOOLS, MATERIALS, AND EQUIPMENT NECESSARY FOR THE COMPLETE INSTALLATION OF THE PROPOSED PIPELINES, TANKS, STRUCTURES, AND REQUIRED APPURTENANCES WHETHER OR NOT SUCH ITEMS ARE SHOWN OR CALLED OUT ON THE PLANS. THE CONTRACTOR IS ADVISED THAT FIELD ADJUSTMENTS MAY BE NECESSARY BASED ON ACTUAL SUBSURFACE CONDITIONS AND LOCATIONS OF EXISTING BURIED UTILITIES ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL NOT RECEIVE ANY ADDITIONAL PAYMENT OR TIME EXTENSION FOR ITEMS NOT BEING SHOWN IN PLANS OR FOR FIELD ADJUSTMENTS MADE DUE TO ACTUAL SUBSURFACE CONDITIONS AND UTILITY LOCATION.
- 27. PIPELINE ROUTE STATIONING IS BASED ON PROPOSED PIPE CENTERLINE. PAYMENT FOR PIPELINES WILL BE BASED ON ACTUAL LENGTH OF PIPELINE INSTALLED, IN ACCORDANCE WITH THE SPECIFICATIONS.
- 28. A MINIMUM OF 10 FEET EDGE-TO-EDGE HORIZONTAL SEPARATION AND 1.5 FEET EDGE-TO-EDGE VERTICAL SEPARATION SHALL BE MAINTAINED BETWEEN WATER MAINS AND SEWER MAINS. WHEN CROSSING PIPES, THE PIPE JOINTS ARE TO BE PLACED AS FAR AWAY FROM EACH OTHER AS POSSIBLE. WHENEVER PRACTICAL, WATER MAINS SHALL CROSS ABOVE THE SEWER MAINS.
- 29. AT THE COMPLETION OF CONSTRUCTION, ALL VALVE BOXES, METERS, AND APPURTENANCES SHALL BE SET FOR PROPER FINISH GRADE. PRECAST STRUCTURES, MANHOLE FRAMES, AND COVERS ARE TO BE SET FLUSH WITH FINISHED GRADE UNLESS OTHERWISE INDICATED IN THE PLANS OR SPECIFICATIONS.
- 30. CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER PRIOR TO ANY CONNECTIONS TO AN EXISTING UTILITY.
- 31. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY FITTINGS REGARDLESS IF THEY ARE SHOWN OR CALLED-OUT ON THE PLANS.
- 32. MEGA-LUG JOINT RESTRAINTS, OR ENGINEER-APPROVED EQUAL, SHALL BE USED FOR ALL NEW PIPING, ALL SIZES, THROUGHOUT THEIR ENTIRE LENGTH.
- 33. CONCRETE THRUST BLOCKS SHALL BE INSTALLED ON ALL NEW PRESSURE PIPE BENDS, TEES, TAPPING SLEEVES, AND DEAD ENDS.
- 34. ALL FITTINGS, RESTRAINTS, THRUST BLOCKS, AND OTHER ASSOCIATED APPURTENANCES ARE INCIDENTAL TO THE INSTALLATION OF THE PIPE, UNLESS A PAY ITEM IS LISTED.

WATER NOTES

- 1. WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF MILTON'S PUBLIC WORKS MANUAL, LATEST EDITION.
- 2. WORK SHALL BE SEQUENCED IN SUCH A MANNER THAT INTERRUPTED WATER SERVICES SHALL BE RESTORED BEFORE THE WORK DAY IS COMPLETE.
- 3. THE PROPOSED WATER MAINS SHALL BE INSTALLED AT A MINIMUM COVER OF 30 INCHES UNLESS OTHERWISE SHOWN ON THE PLANS OR APPROVED BY THE ENGINEER.
- 4. ALL NEW WATER MAINS SHALL BE PRESSURE TESTED, DISINFECTED, AND ACCEPTED BY THE OWNER PRIOR TO BEING PLACED INTO SERVICE.
- 5. AIR RELIEF VALVES ARE TO BE PLACED AT ALL HIGH POINTS WHERE AIR CAN ACCUMULATE.
- 6. AUTOMATIC AIR RELIEF VALVES SHALL NOT BE INSTALLED WHERE FLOODING OF THE VALVE MANHOLE OR CHAMBER MAY OCCUR.
- 7. THE OPEN END OF THE AIR RELIEF PIPE FROM ALL AUTOMATIC AIR RELIEF VALVES SHALL EXTEND AT LEAST ONE (1) FOOT ABOVE GRADE AND WILL BE PROVIDED WITH A SCREENED, DOWNWARD-FACING ELBOW.
- 8. AT UTILITY CROSSINGS, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE OR THE PIPES SHALL BE ARRANGED SO THE WATER MAIN JOINTS ARE AT LEAST THREE (3) FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III, CHAPTER 62-610, F.A.C.
- 9. LOCATIONS OF POTABLE WATER AND FIRE WATER STUBOUTS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND DEPTHS OF THESE STUBOUTS PRIOR TO COMMENCING CONSTRUCTION OF THE PROPOSED 16" FIRE WATER MAIN.

PROJECT-SPECIFIC NOTES

- 1. THE FIRE PUMP HOUSE SHALL BE BY PREMIERFLOW, (TULSA, OK), OR ENGINEER-APPROVED EQUAL. SEE SPECIFICATION SECTION 11 2200 FOR ADDITIONAL DETAILS.

ABBREVIATIONS

- PVC = POLYVINYL CHLORIDE
- DI = DUCTILE IRON
- EX. = EXISTING
- REQ'D = REQUIRED
- WM = WATER MAIN
- WL = WATER LINE
- SS = SANITARY GRAVITY SEWER
- G = NATURAL GAS
- STA. = STATION
- TYP. = TYPICAL
- HDD = HORIZONTAL DIRECTIONAL DRILL

SUMMARY OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	QTY.
1	SITE/CIVIL WORK, INCL. HEADWALL AND RIP RAP	LS	1
2	FIRE SERVICE PIPING, ALL TYPES AND SIZES	LF	215
3	DUCTILE IRON FITTINGS, ALL TYPES AND SIZES	LBS	3800
4	TAPPING VALVE AND SLEEVE	EA	1
5	FIRE SERVICE BOOSTER PUMP STATION INSTALLATION	LS	1
6	ELECTRICAL WORK	LS	1
7	NEW FENCING	LF	180
8	SITE DEMO	LS	1



NO.	DATE	DESCRIPTION	BY	REVISIONS

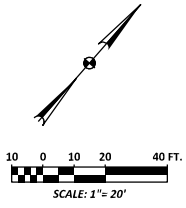
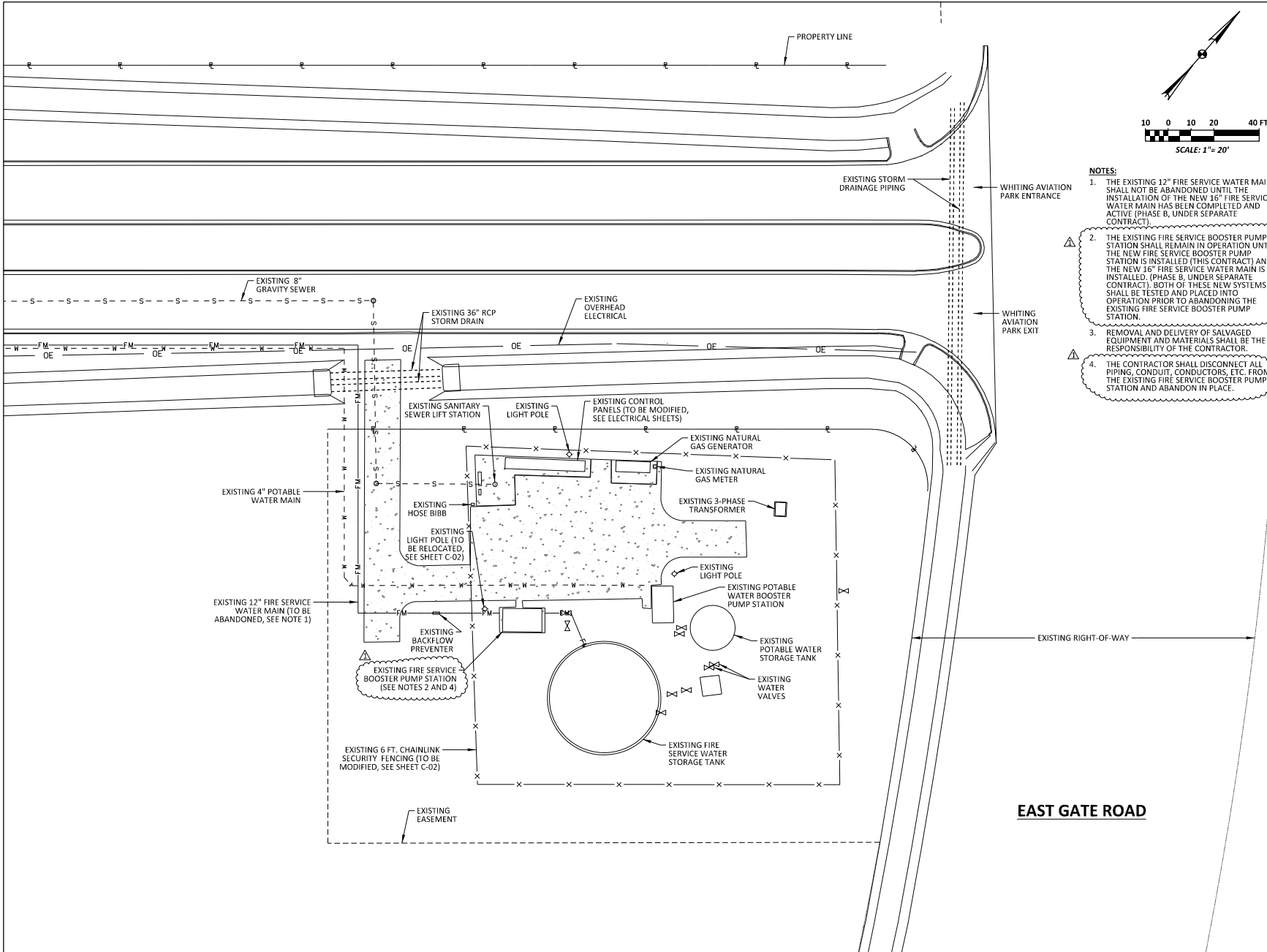
WHITING AVIATION PARK
 FIRE FLOW EXPANSION - PHASE A
 PROJECT NOTES AND ABBREVIATIONS



DRAWN BY: T.B.	CHECKED BY: R.M.
DESIGNED BY: T.B.	CHECKED BY: R.M.
VOLKERT PROJECT NO. 1202201	
DATE: JUNE 2024	

SHEET NUMBER

G-02



- NOTES:**
1. THE EXISTING 12" FIRE SERVICE WATER MAIN SHALL NOT BE ABANDONED UNTIL THE INSTALLATION OF THE NEW 16" FIRE SERVICE WATER MAIN HAS BEEN COMPLETED AND ACTIVE (PHASE B, UNDER SEPARATE CONTRACT).
 2. THE EXISTING FIRE SERVICE BOOSTER PUMP STATION SHALL REMAIN IN OPERATION UNTIL THE NEW FIRE SERVICE BOOSTER PUMP STATION IS INSTALLED (THIS CONTRACT) AND THE NEW 16" FIRE SERVICE WATER MAIN IS INSTALLED. (PHASE B, UNDER SEPARATE CONTRACT). BOTH OF THESE NEW SYSTEMS SHALL BE TESTED AND PLACED INTO OPERATION PRIOR TO ABANDONING THE EXISTING FIRE SERVICE BOOSTER PUMP STATION.
 3. REMOVAL AND DELIVERY OF SALVAGED EQUIPMENT AND MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 4. THE CONTRACTOR SHALL DISCONNECT ALL PIPING, CONDUIT, CONDUCTORS, ETC. FROM THE EXISTING FIRE SERVICE BOOSTER PUMP STATION AND ABANDON IN PLACE.



NO.	DATE	DESCRIPTION	BY	DATE	REVISIONS

**WHITING AVIATION PARK
FIRE FLOW EXPANSION - PHASE A
EXISTING SITE PLAN**

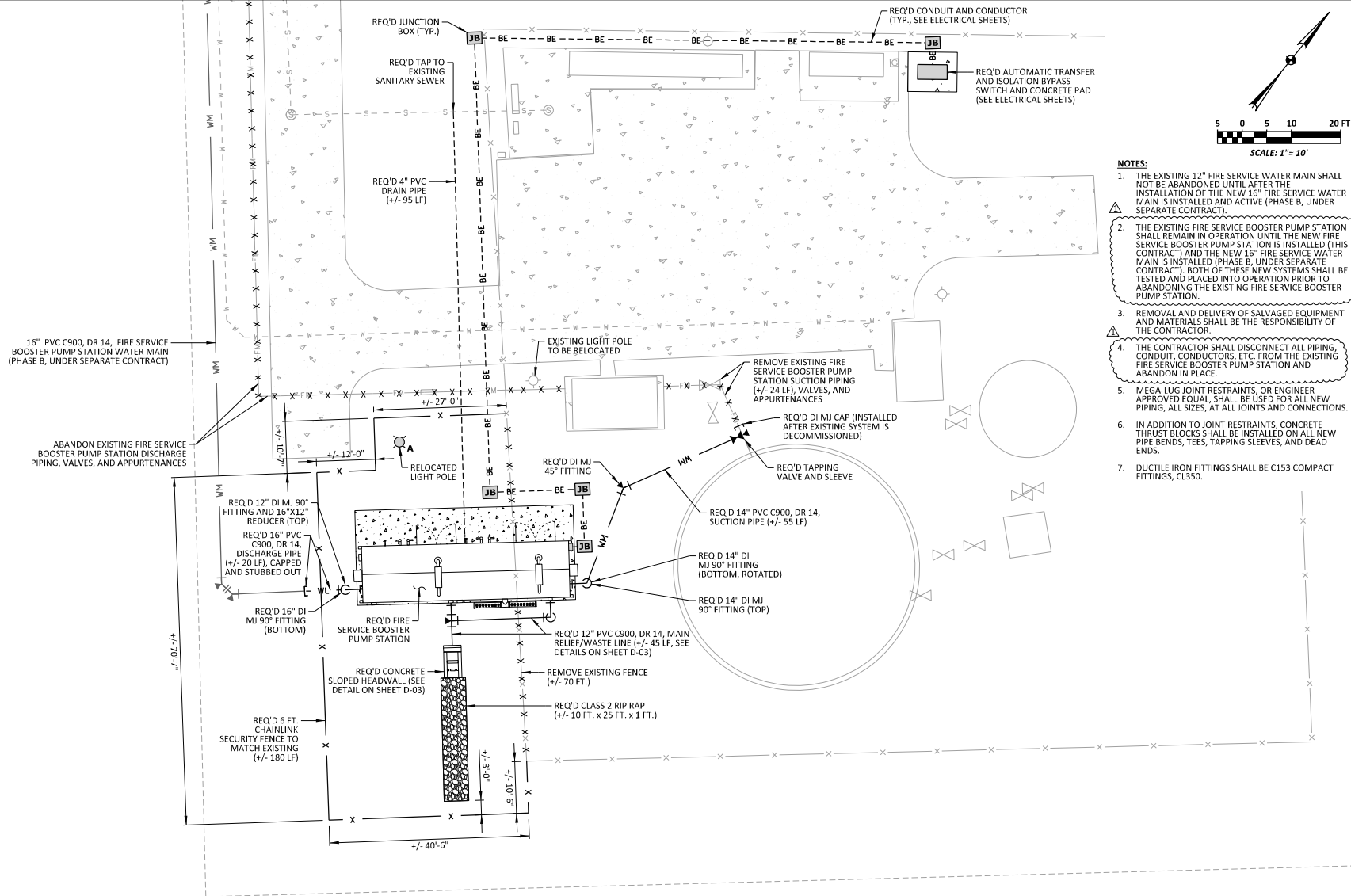
Volkert
215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561

DRAWN BY: T.B.	CHECKED BY: R.M.
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VOLKERT PROJECT NO.: 1202201	
DATE: JUNE 2024	

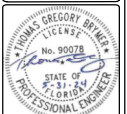
SHEET NUMBER

C-01

SHEET 3 OF 15



- NOTES:**
1. THE EXISTING 12" FIRE SERVICE WATER MAIN SHALL NOT BE ABANDONED UNTIL AFTER THE INSTALLATION OF THE NEW 16" FIRE SERVICE WATER MAIN IS INSTALLED AND ACTIVE (PHASE B, UNDER SEPARATE CONTRACT).
 2. THE EXISTING FIRE SERVICE BOOSTER PUMP STATION SHALL REMAIN IN OPERATION UNTIL THE NEW FIRE SERVICE BOOSTER PUMP STATION IS INSTALLED (THIS CONTRACT) AND THE NEW 16" FIRE SERVICE WATER MAIN IS INSTALLED (PHASE B, UNDER SEPARATE CONTRACT). BOTH OF THESE NEW SYSTEMS SHALL BE TESTED AND PLACED INTO OPERATION PRIOR TO ABANDONING THE EXISTING FIRE SERVICE BOOSTER PUMP STATION.
 3. REMOVAL AND DELIVERY OF SALVAGED EQUIPMENT AND MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
 4. THE CONTRACTOR SHALL DISCONNECT ALL PIPING, CONDUIT, CONDUCTORS, ETC. FROM THE EXISTING FIRE SERVICE BOOSTER PUMP STATION AND ABANDON IN PLACE.
 5. MEGA-LUG JOINT RESTRAINTS, OR ENGINEER APPROVED EQUAL, SHALL BE USED FOR ALL NEW PIPING, ALL SIZES, AT ALL JOINTS AND CONNECTIONS.
 6. IN ADDITION TO JOINT RESTRAINTS, CONCRETE THRUST BLOCKS SHALL BE INSTALLED ON ALL NEW PIPE BENDS, TEES, TAPPING SLEEVES, AND DEAD ENDS.
 7. DUCTILE IRON FITTINGS SHALL BE C153 COMPACT FITTINGS, CL350.



NO.	DATE	DESCRIPTION	BY	CHKD.

**WHITING AVIATION PARK
FIRE FLOW EXPANSION - PHASE A
REQUIRED SITE PLAN**

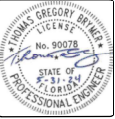


DRAWN BY: T.B.	CHECKED BY: R.M.
DRAWN BY: T.B.	CHECKED BY: R.M.
VOLKERT PROJECT NO.: 1202201	
DATE: JUNE 2024	

SHEET NUMBER

C-02

SHEET 4 OF 15

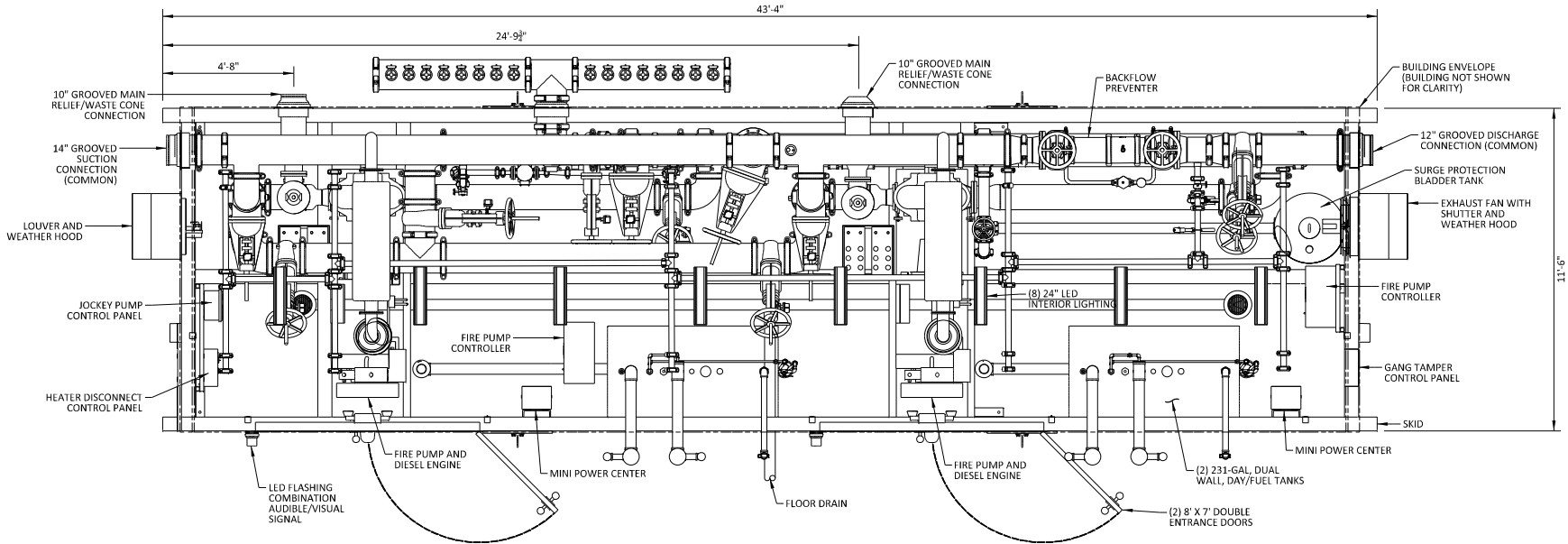


NO.	DATE	DESCRIPTION	REVISIONS

WHITING AVIATION PARK
 FIRE FLOW EXPANSION - PHASE A
 FIRE SERVICE BOOSTER
 PUMP STATION DETAILS

Volkert
 215 FAIRPOINT DRIVE
 SUITE B
 GULF BREEZE, FL 32561

DRAWN BY: T.B.	CHECKED BY: R.M.
DESIGNED BY: T.B.	CHECKED BY: R.M.
VOLKERT PROJECT NO.: 1202201	
DATE: JUNE 2024	
SHEET NUMBER	
M-01	
SHEET 5 OF 15	



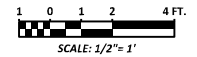
FIRE SERVICE BOOSTER PUMP STATION

SCALE: 1/2" = 1'

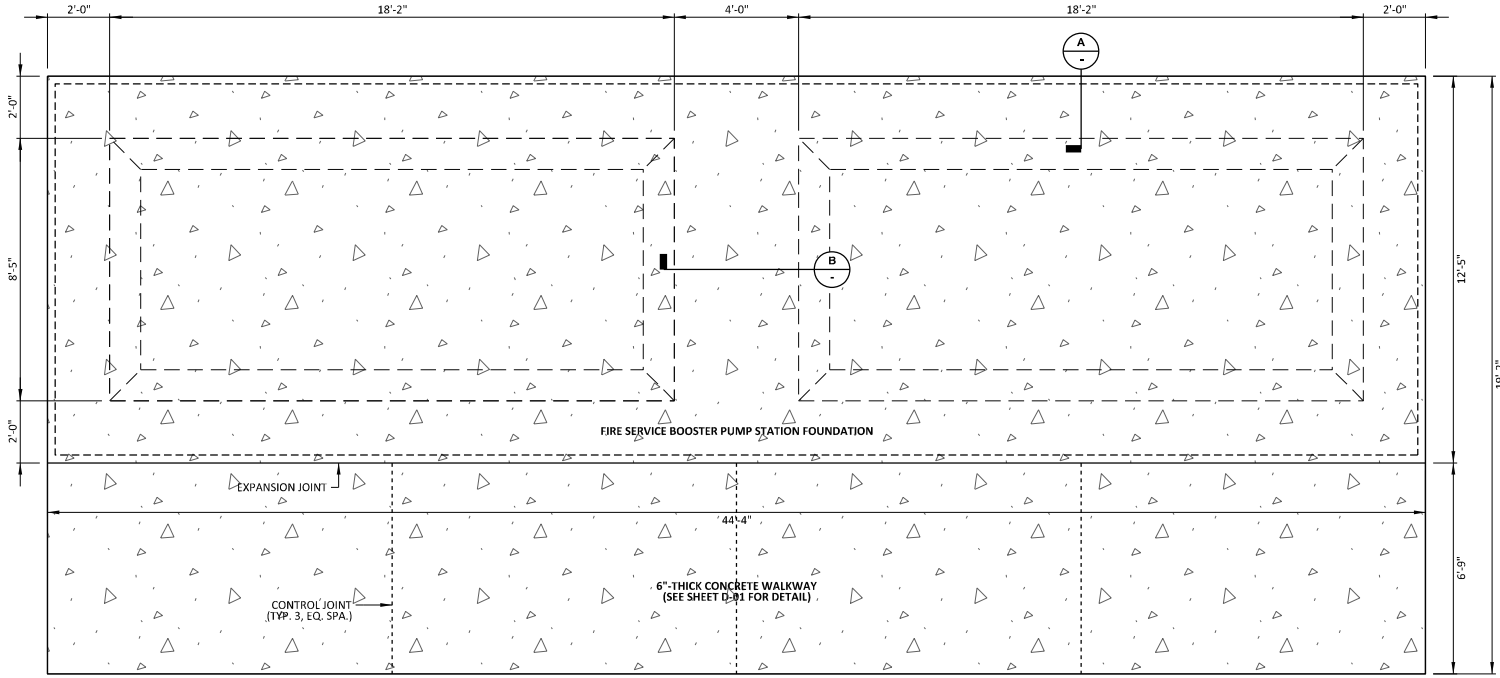
FIRE PUMP REQUIREMENTS (EACH PUMP)			
LOCATION	FLOW (GPM)	DISCHARGE PRESSURE (PSI)	TDH (FT.)
EXISTING UTILITY YARD	2000	100	231

NOTES:

- FIRE PUMP SYSTEM SHALL MEET ALL APPLICABLE CODES AND REQUIREMENTS, INCL. NFPA 20 - STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS, FOR FIRE PROTECTION.
- HOUSING SHALL MEET ALL APPLICABLE BUILDING CODES AND REQUIREMENTS.
- THIS DRAWING IS PROVIDED BY PREMIERFLOW (TULSA, OK) AND IS BASED ON SERIES PF-FIRE PF-2000/2000-D-H-FP. ACTUAL DIMENSIONS, PANEL LOCATIONS, CONNECTION POINTS, ETC. ARE DEPENDENT UPON PROCURED EQUIPMENT. THE CONTRACTOR SHALL CONFIRM ALL ASPECTS OF THEIR WORK AND SHALL INCLUDE ALL COSTS IN THEIR PROPOSAL TO TIE THE FIRE PUMP HOUSE INTO THE REQUIRED SYSTEM PIPING SHOWN ON THE DRAWINGS.
- ALL INSTALLATIONS SHALL BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- FIRE PUMP SYSTEM SHALL BE HYDRO TESTED, PER NFPA 20 REQUIREMENTS.
- SKID SHALL BE FILLED WITH CONCRETE AND PUMP/ENGINE BASE SHALL BE FILLED WITH NON-FERROUS, NON-SHRINK GROUT. CONTRACTOR SHALL PROTECT ALL FLOOR DRAINS AND OTHER OPENINGS FROM BECOMING CLOGGED OR FILLED WITH CONCRETE/DEBRIS.
- SEE SHEET S-01 FOR PUMP HOUSE FOUNDATION DETAILS.
- PUMP HOUSE SHALL INCLUDE SURGE PROTECTION BLADDER TANK WHICH MEETS ASME BOILER AND PRESSURE VESSEL CODE. BLADDER SHALL BE HIGH PERFORMANCE, REPLACEABLE BUTYL WITH MINIMUM PRESSURE RATING OF 250 PSI.



0 1 IN.
SCALE: AS NOTED

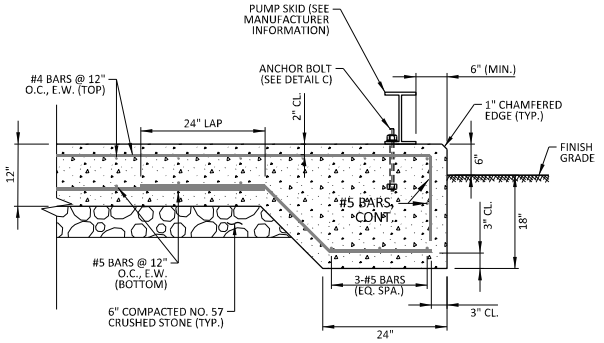


FIRE SERVICE BOOSTER PUMP HOUSE FOUNDATION PLAN

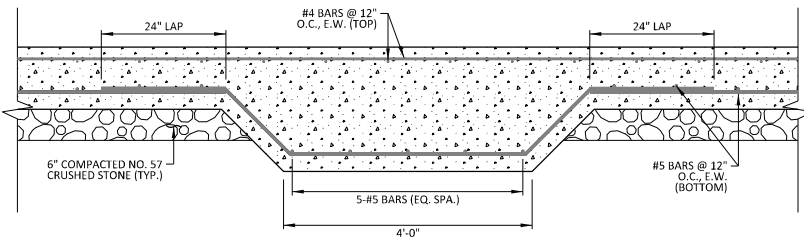
SCALE: 1/2" = 1'

NOTES:

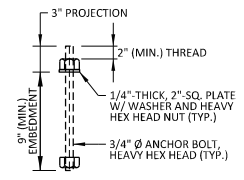
1. THE CONTRACTOR SHALL CONFIRM ACTUAL SIZE OF PROCURED FIRE PUMP HOUSE AND ADJUST FOUNDATION DIMENSIONS ACCORDINGLY.
2. CONCRETE SHALL BE 3500 PSI (MIN.).
3. CONTRACTOR SHALL COORDINATE NUMBER AND LOCATION OF ANCHOR BOLTS WITH FIRE PUMP HOUSE MANUFACTURER.
4. CONTRACTOR SHALL INSTALL ANCHOR BOLTS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
5. SKID SHALL BE FILLED WITH CONCRETE AND PUMP/ENGINE BASE SHALL BE FILLED WITH NON-FERROUS, NON-SHRINK GROUT. CONTRACTOR SHALL PROTECT ALL FLOOR DRAINS OR OTHER OPENINGS FROM BECOMING CLOGGED OR FILLED WITH CONCRETE/DEBRIS.
6. OVERALL BOOSTER PUMP STATION FOUNDATION (EXCLUDING WALKWAY) SHALL BE 3" LONGER THAN STATION ON ALL SIDES.



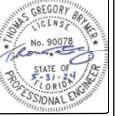
A DETAIL
SCALE: 1" = 1'



B DETAIL
SCALE: 1" = 1'



C DETAIL
SCALE: 1" = 6"



NO.	DATE	DESCRIPTION	REVISIONS

WHITING AVIATION PARK
FIRE FLOW EXPANSION - PHASE A
FIRE SERVICE BOOSTER PUMP
STATION FOUNDATION

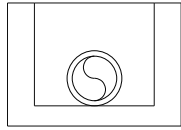
Volkert
215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561

DRAWN BY: T.B. CHECKED BY: S.S.
DESIGNED BY: S.S. CHECKED BY: T.B.
VOLKERT PROJECT NO.: 1202201
DATE: JUNE 2024

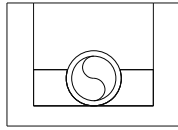
SHEET NUMBER

S-01

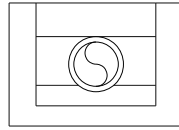
SHEET 8 OF 15



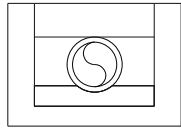
TYPE 1
FLAT-BOTTOM TRENCH, LOOSE EMBEDMENT
E = 50 PSI (340 kPa), K = 0.110



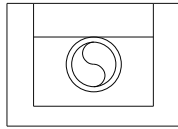
TYPE 2
CONSOLIDATED TO CENTERLINE OF PIPE,
FLAT-BOTTOM TRENCH, EMBEDMENT LIGHTLY
E = 200 PSI (1,380 kPa), K = 0.110



TYPE 3
PIPE BEDDED ON 4" (100 mm) MINIMUM
OF LOOSE SOIL, EMBEDMENT LIGHTLY
CONSOLIDATED TO TOP OF PIPE,
E = 400 PSI (2,760 kPa), K = 0.102



TYPE 4
PIPE BEDDED ON SAND, GRAVEL OR CRUSHED
STONE TO DEPTH OF 1/8 PIPE DIAMETER, 4"
(100 mm) MINIMUM, EMBEDMENT COMPACTED
TO TOP OF PIPE, (APPROXIMATELY 80% STANDARD
PROCTOR, AASHTO T-99 OR ASTM D 698)
E = 1,000 PSI (6,900 kPa), K = 0.096



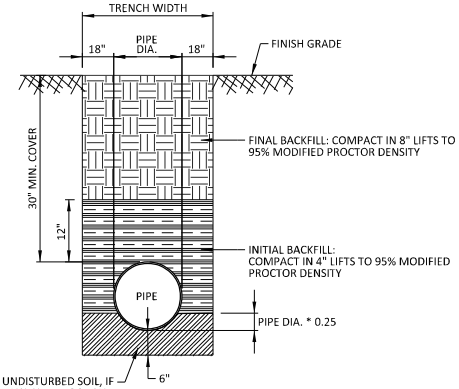
TYPE 5
PIPE EMBEDDED IN COMPACTED GRANULAR
MATERIAL TO CENTERLINE OF PIPE, COMPACTED
GRANULAR OR SELECT MATERIAL TO TOP OF PIPE,
(APPROXIMATELY 90% STANDARD PROCTOR,
AASHTO T-99 OR ASTM D 698)
E = 2,000 PSI (13,800 kPa), K = 0.083

NOTES:

1. REQUIRED EMBEDMENT TYPE WILL DEPEND ON THE PIPE'S DIMENSION RATIO, INTERNAL OPERATING PRESSURE, AND EXTERNAL LOAD AND SHALL BE SPECIFIED BY THE PURCHASER.
2. "FLAT-BOTTOM" IS DEFINED AS UNDISTURBED EARTH.
3. "LOOSE SOIL" OR "SELECT MATERIAL" IS DEFINED AS NATIVE SOIL EXCAVATED FROM THE TRENCH, FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH. A SOFT "LOOSE SOIL" BEDDING WILL CONTOUR TO THE PIPE BOTTOM, CAUTION MUST BE EXERCISED TO ENSURE PROPER PLACEMENT OF EMBEDMENT MATERIAL UNDER THE HAUNCH OF THE PIPE.

PIPE ENVELOPE REQUIREMENTS

SCALE: NOT TO SCALE



BEDDING: UNDISTURBED SOIL, IF ACCEPTABLE DENSITY, REMOVE AND REPLACE WITH COMPACTED GRANULAR MATERIAL, AS NECESSARY, FOR UNACCEPTABLE SOILS.

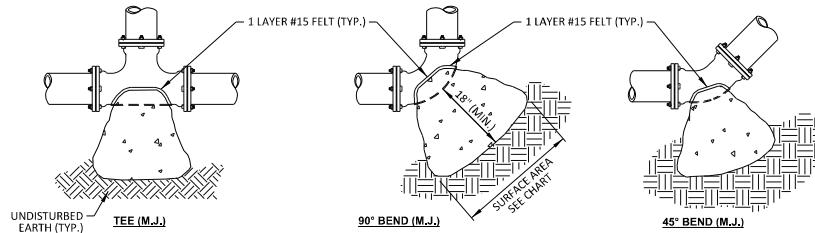
TRENCH DETAIL

SCALE: NOT TO SCALE

MINIMUM THRUST BLOCK DIMENSIONS SURFACE AREA AGAINST UNDISTURBED SOIL					
FITTING	DEAD END OR TEE	90° BEND	45° BEND	22.5° BEND	
4"	1' X 2'	1.5' X 1.5'	1' X 1.5'	1' X 1'	
6"	2' X 2'	2.5' X 2.5'	2' X 1.5'	1' X 1.5'	
8"	2.25' X 3'	3' X 3'	2' X 2.5'	1.5' X 1.5'	
10"	3.5' X 3'	4' X 3.75'	2.75' X 3'	2' X 2'	
12"	4' X 4'	4' X 5'	3' X 4'	2' X 3'	
16"	5' X 5.5'	6' X 6.5'	4' X 5'	3' X 3.5'	

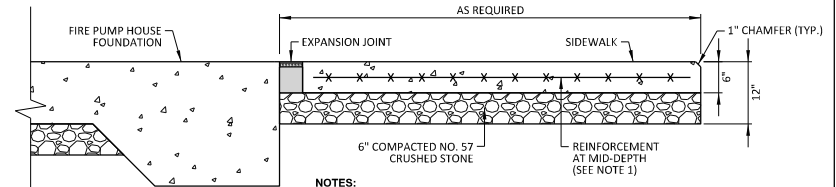
NOTES:

1. ONE LAYER OF #15 FELT TO BE USED TO PREVENT ADHESION OF CONCRETE TO FITTING.
2. ALL THRUST BLOCKS TO BE BACKED BY UNDISTURBED SOIL.
3. THRUST BLOCK DIMENSIONS BASED ON SM SOIL CLASSIFICATION.
4. CONCRETE SHALL BE 2500 PSI (MIN.)
5. JOINT RESTRAINTS ARE TO BE USED ON ALL FITTINGS. THRUST BLOCKS REQUIRED ON ALL 90° BENDS, 45° BENDS, 22.5° BENDS, TEES, TAPPING SLEEVES, AND DEAD ENDS.



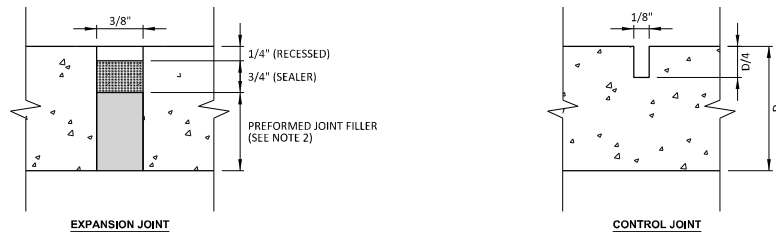
THRUST BLOCK DETAILS

SCALE: NOT TO SCALE



NOTES:

1. CONCRETE SIDEWALK SHALL BE REINFORCED WITH 6 X 6-W1.4 X W1.4 WELDED WIRE MESH.
2. PREFORMED JOINT FILLER SHALL MEET REQUIREMENTS OF FDOT STANDARD SPECIFICATION 952-1.1.
3. CONTROL JOINT SHALL BE EITHER HAND TOOLED OR SAW CUT TO A MINIMUM DEPTH OF 1.5".



CONCRETE SIDEWALK DETAIL

SCALE: NOT TO SCALE



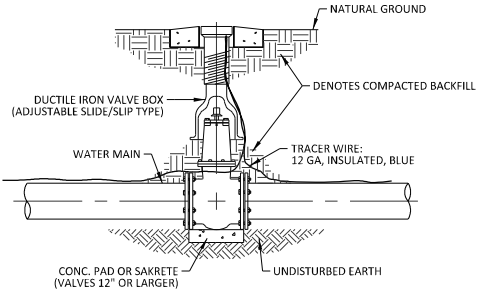
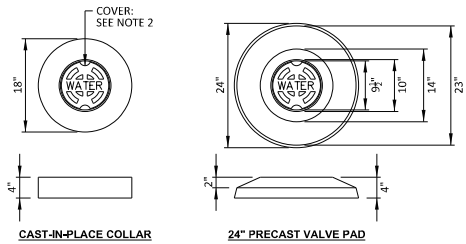
NO.	DATE	DESCRIPTION	REVISIONS	
			BY	DATE

WHITING AVIATION PARK
FIRE FLOW EXPANSION - PHASE A

CONSTRUCTION DETAILS

Volkert
215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561

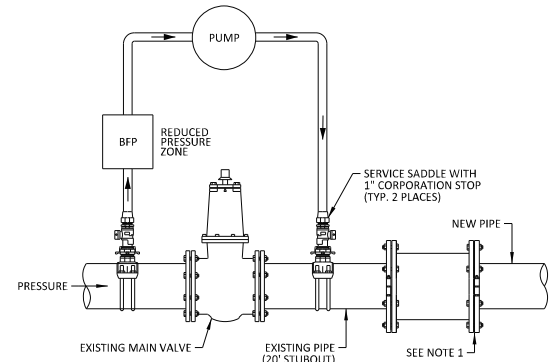
DRAWN BY: T.B.	CHECKED BY: R.M.
DESIGNED BY: T.B.	CHECKED BY: R.M.
VOLKERT PROJECT NO.: 1202201	
DATE: JUNE 2024	
SHEET NUMBER	
D-01	
SHEET 7 OF 15	



GATE VALVE AND BOX INSTALLATION
SCALE: NOT TO SCALE

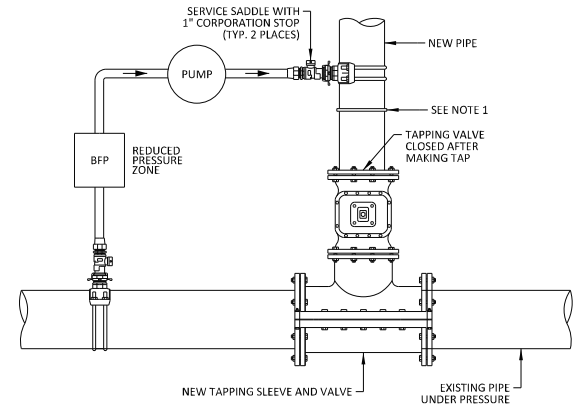
- NOTES:**
1. VALVE AND BOOT SHALL BE DUCTILE IRON.
 2. VALVE COVER SHALL BE MARKED "WATER".
 3. VALVE BOX TOP SHALL BE FLUSH WITH FINISH GRADE OR 3" ABOVE NATURAL GROUND LEVEL.
 4. GATE VALVE SHALL BE RESILIENT SEAT WITH MECHANICAL JOINT ENDS, OR ENGINEER-APPROVED EQUAL.
 5. EARTH UNDER FLANGE OF VALVE BOX AND COLLAR TO BE FIRM AND WELL TAMPED TO ENSURE AGAINST VALVE BOX SETTLING.

- NOTES:**
1. NEW PIPE SHALL BE CAPPED OR PLUGGED FOR PRESSURE TEST. ONCE TEST IS SATISFACTORILY COMPLETED, NEW MAIN IS TO BE CONNECTED TO EXISTING MAIN IN A MANNER ACCEPTABLE TO THE OWNER.
 2. THE CONTRACTOR SHALL FLUSH LINE PRIOR TO STARTING THE CHLORINATION PROCEDURE. ALL FLUSHING SHALL BE DONE THROUGH THE EXISTING VALVE WITH ALL HYDRANTS AND SERVICE LINES OPEN. OWNER'S INSPECTOR SHALL BE THE ONLY PERSON ALLOWED TO OPERATE THE VALVE AND SHALL BE PRESENT DURING FLUSHING OPERATION. ONCE FLUSHING IS COMPLETE, THE INSPECTOR SHALL CLOSE THE VALVE.
 3. ONCE SATISFACTORY BACTERIOLOGICAL SAMPLES ARE OBTAINED, THE CONTRACTOR SHALL CLOSE BOTH CORPORATION STOPS AND REMOVE SERVICE TUBING, PUMP, AND BACKFLOW PREVENTER, CAP CORPORATION STOPS WITH BRASS CAPS.
 4. CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY FOR FILLING, CHLORINATING, AND TESTING PROCEDURES. CONTRACTOR SHALL PROVIDE SAMPLING TAPS AT THOSE LOCATIONS APPROVED BY THE OWNER. THE OWNER SHALL COLLECT TEST SAMPLES.
 5. IF 20" STUB-OUT IS NOT PRESENT, SPECIAL ARRANGEMENTS WILL HAVE TO BE MADE TO DEPRESSURE THE EXISTING MAIN TO MAKE CONNECTION TO THE EXISTING VALVE.



TYPICAL CONNECTION FOR NEW LINE FILLING, PRESSURE TESTING, FLUSHING, AND CHLORINATION (EXISTING STUBOUT)

- NOTES:**
1. NEW PIPE SHALL BE CAPPED OR PLUGGED FOR PRESSURE TEST. ONCE TEST IS SATISFACTORILY COMPLETED, NEW MAIN IS TO BE CONNECTED TO TAPPING VALVE. TAPPING VALVE IS TO REMAIN CLOSED.
 2. THE CONTRACTOR SHALL FLUSH LINE PRIOR TO STARTING THE CHLORINATION PROCEDURE. ALL FLUSHING SHALL BE DONE THROUGH THE TAPPING VALVE WITH ALL HYDRANTS AND SERVICE LINES OPEN. OWNER'S INSPECTOR SHALL BE THE ONLY PERSON ALLOWED TO OPERATE THE VALVE AND SHALL BE PRESENT DURING FLUSHING OPERATION. ONCE FLUSHING IS COMPLETE, THE INSPECTOR SHALL CLOSE THE VALVE.
 3. ONCE SATISFACTORY BACTERIOLOGICAL SAMPLES ARE OBTAINED, THE CONTRACTOR SHALL CLOSE BOTH CORPORATION STOPS AND REMOVE SERVICE TUBING, PUMP, AND BACKFLOW PREVENTER, CAP CORPORATION STOPS WITH BRASS CAPS.
 4. CONTRACTOR SHALL FURNISH ALL MATERIALS, EQUIPMENT, AND LABOR NECESSARY FOR FILLING, CHLORINATING, AND TESTING PROCEDURES. CONTRACTOR SHALL PROVIDE SAMPLING TAPS AT THOSE LOCATIONS APPROVED BY THE OWNER. THE OWNER SHALL COLLECT TEST SAMPLES.



TYPICAL CONNECTION FOR NEW LINE FILLING, PRESSURE TESTING, FLUSHING, AND CHLORINATION (TAPPING SLEEVE AND VALVE)

- NOTES:**
1. DISINFECTION SHOULD CONFORM TO THE CURRENT VERSION OF AWWA STANDARD C-651.
 2. CALCIUM HYPOCHLORITE (HTH) WITH 65% AVAILABLE CHLORINE, BY WEIGHT.
 3. FORMULAS ARE AS FOLLOWS:
 $CL_2 \text{ REQUIRED FOR DISINFECTION (OZ)} = \text{VOLUME (MG)} \times CL_2 \text{ DOSAGE (PPM)} \times (8.34 \text{ LB/GAL}) \times (16 \text{ OZ/LB})$
 $CL_2 \text{ REQUIRED FOR DISINFECTION (OZ)} = \text{VOLUME (MG)} \times CL_2 \text{ DOSAGE (PPM)} \times (8.34 \text{ LB/GAL}) \times (16 \text{ OZ/LB})$
 $CL_2 \text{ REQUIRED FOR DISINFECTION (OZ)} / (\% \text{ AVAILABLE } CL_2) = 100$

PIPE SIZE	GALLONS PER 100'	CHLORINE REQUIRED PER 100' FOR 25 PPM	HTH REQUIRED PER 100' FOR 25 PPM	CHLORINE REQUIRED PER 100' FOR 50 PPM	HTH REQUIRED PER 100' FOR 50 PPM
4"	65.3	0.22 OZ.	0.34 OZ.	0.44 OZ.	0.67 OZ.
12"	587.5	1.96 OZ.	3.02 OZ.	3.92 OZ.	6.03 OZ.

CHLORINE AND CALCIUM HYPOCHLORITE REQUIRED FOR DISINFECTION

TYPICAL DISINFECTION AND CHLORINATION

SCALE: NOT TO SCALE

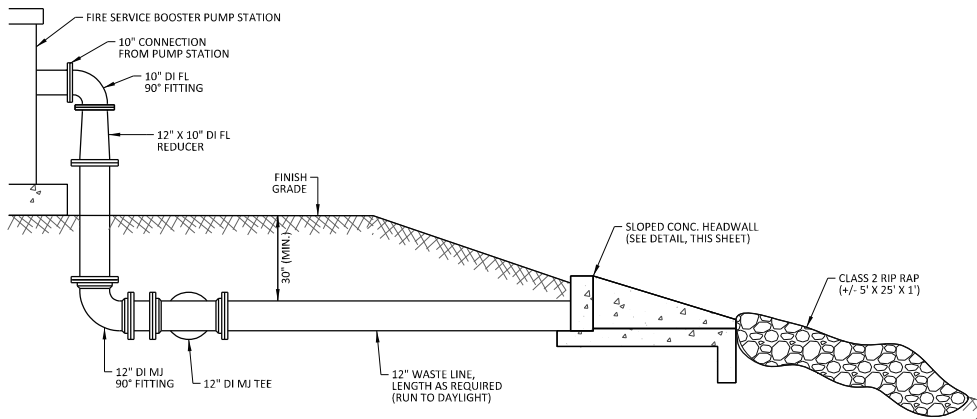


NO.	DATE	DESCRIPTION	REVISIONS

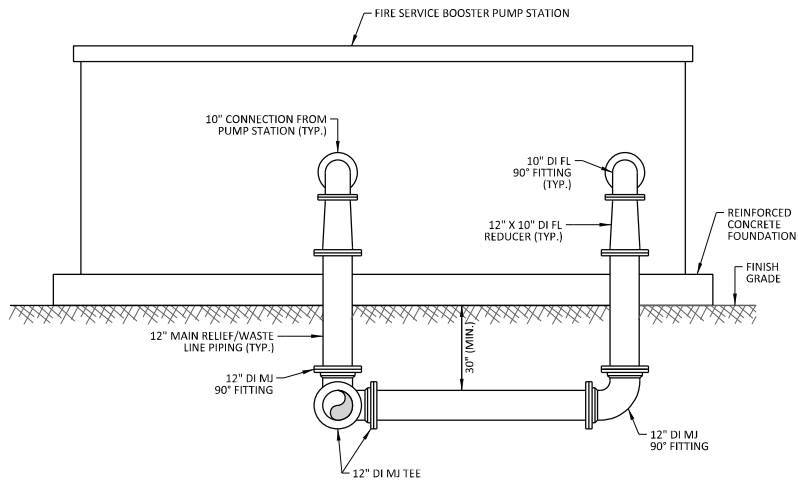
WHITING AVIATION PARK
FIRE FLOW EXPANSION - PHASE A
CONSTRUCTION DETAILS

Volkert
215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561

DRAWN BY: T.B.	CHECKED BY: R.M.
DESIGNED BY: T.B.	CHECKED BY: R.M.
VOLKERT PROJECT NO.: 1202201	
DATE: JUNE 2024	
SHEET NUMBER	
D-02	
SHEET 8 OF 15	



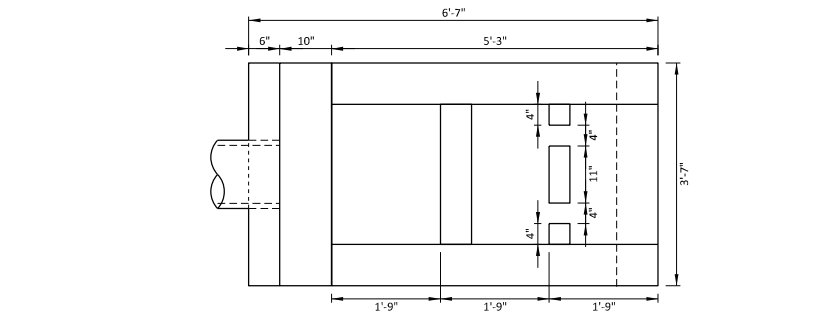
SECTION VIEW



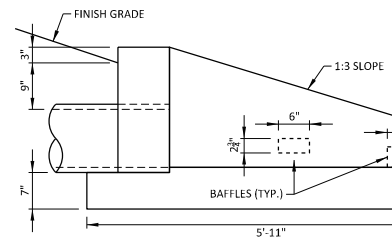
ELEVATION VIEW

FIRE PUMP HOUSE MAIN RELIEF/WASTE CONE CONNECTION ASSEMBLY (TYP.)

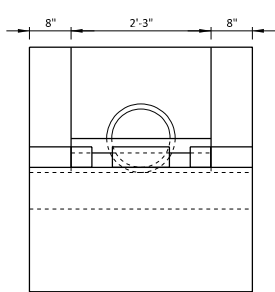
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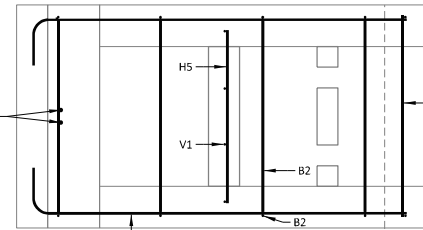
DIMENSIONAL DETAIL PLAN



DIMENSIONAL DETAIL ELEVATION



DIMENSIONAL DETAIL BACKWALL SECTION



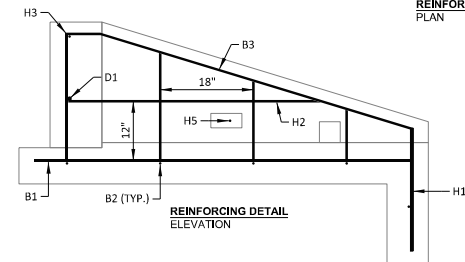
REINFORCING DETAIL PLAN

NOTES:

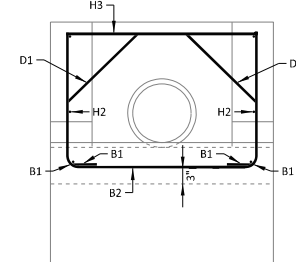
- ALL BARS SHALL BE #4 WITH 2" CLEARANCE UNLESS NOTED OTHERWISE.

LEGEND:

- H = HORIZONTAL BARS
- V = VERTICAL BARS
- B = BENT BARS
- D = DWEL OR DIAGONAL BARS



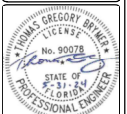
REINFORCING DETAIL ELEVATION



REINFORCING DETAIL BACKWALL SECTION

CONCRETE SLOPED HEADWALL DETAILS

SCALE: NOT TO SCALE



NO.	DATE	DESCRIPTION	REVISIONS

BY: _____

DATE: _____

DESCRIPTION: _____

REVISIONS: _____

**WHITING AVIATION PARK
FIRE FLOW EXPANSION - PHASE A
CONSTRUCTION DETAILS**

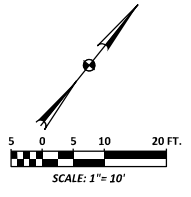
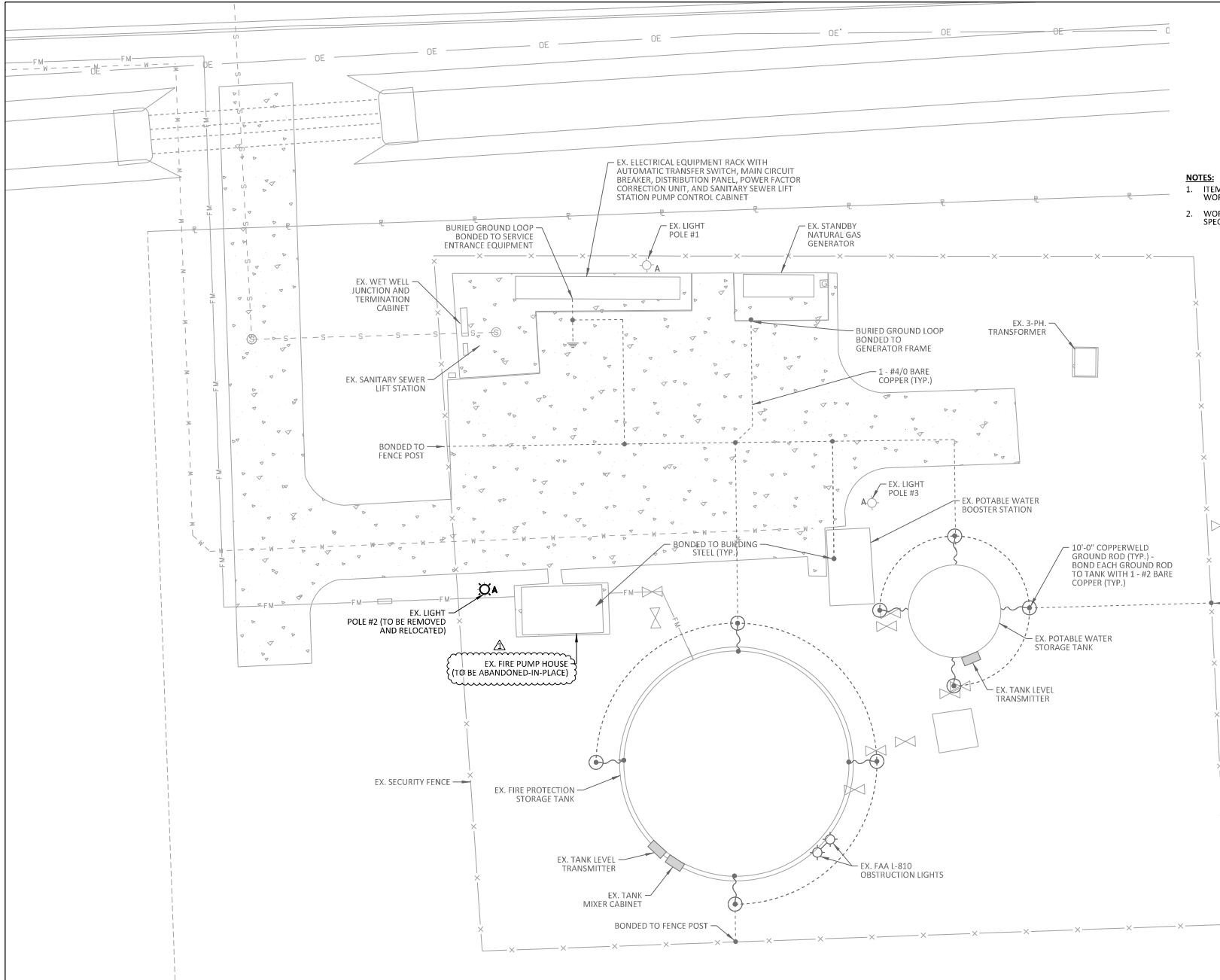
Volkert
215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561

DRAWN BY: T.B.	CHECKED BY: R.M.
DESIGNED BY: T.B.	CHECKED BY: R.M.
VOLKERT PROJECT NO.: 1202201	
DATE: JUNE 2024	

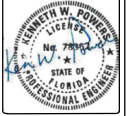
SHEET NUMBER

D-03

SHEET 9 OF 15



- NOTES:**
1. ITEMS IN GRAY-SCALE ARE EXISTING. REQUIRED WORK IS SHOWN IN BOLD.
 2. WORK RELATED TO THIS SHEET IS GOVERNED BY SPECIFICATION DIVISION 16.



NO.	DATE	DESCRIPTION	BY		REVISIONS
			DATE	BY	

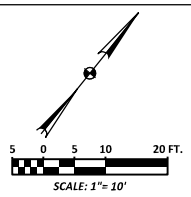
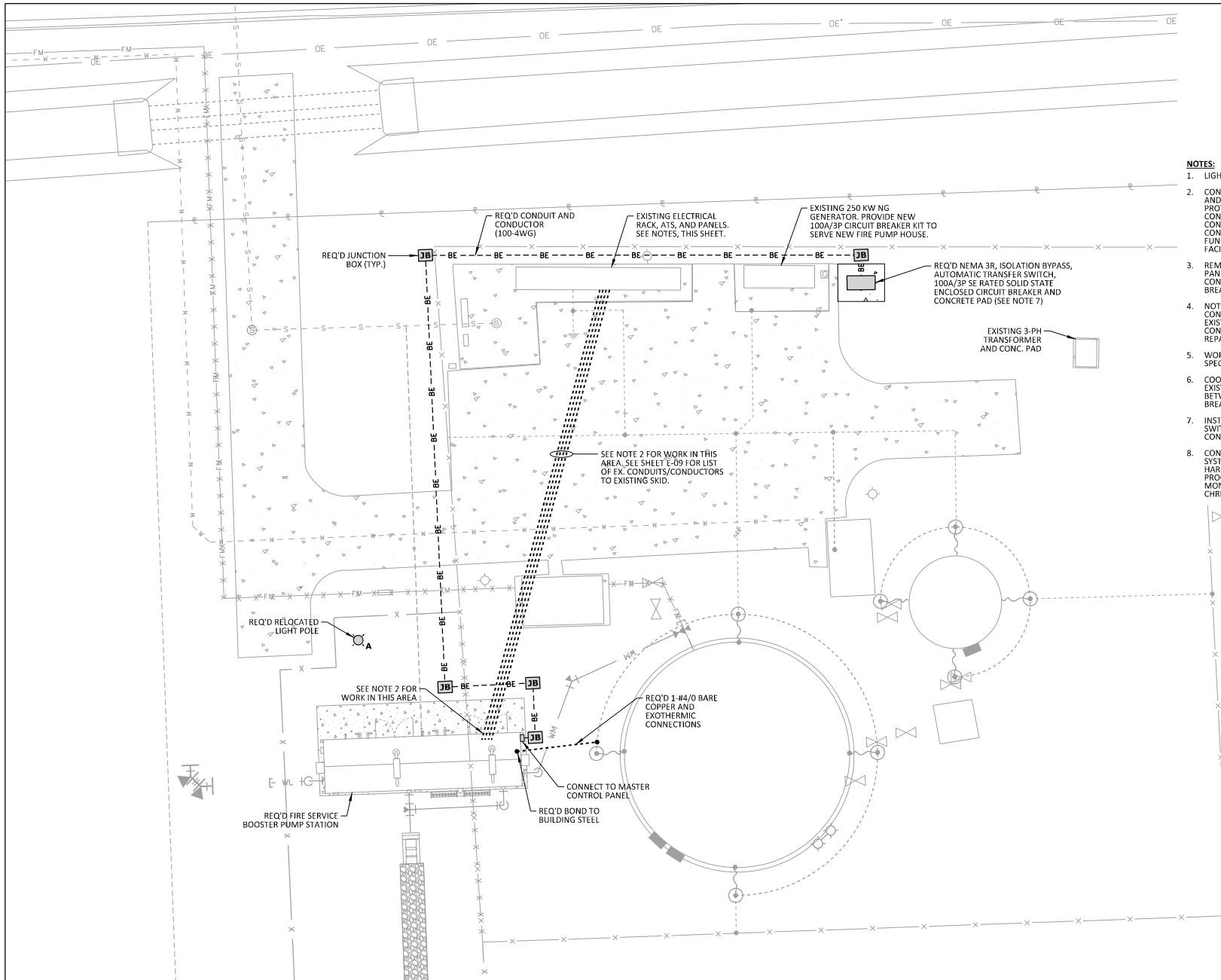
WHITING AVIATION PARK
FIRE FLOW EXPANSION - PHASE A
EXISTING ELECTRICAL SITE PLAN

Volkert
215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561

DRAWN BY: T.B.	CHECKED BY: R.M.
DESIGNED BY: K.P.	CHECKED BY: R.M.
VOLKERT PROJECT NO.: 1202201	
DATE: JUNE 2024	
SHEET NUMBER	

E-01

SHEET 10 OF 15



- NOTES:**
1. LIGHT POLE DETAILS ON SHEET E-07.
 2. CONTRACTOR SHALL EXCAVATE EXISTING CONTROL AND MONITORING CIRCUITS ASSOCIATED WITH FIRE PROTECTION BOOSTER STATION. REUSE EXISTING CONDUITS TO EXTENT POSSIBLE AND PULL NEW CONDUCTORS/CABLES AS REQUIRED TO MAKE CONNECTIONS TO MATCH EXISTING SYSTEM FUNCTIONALITY. PROVIDE JUNCTION BOX(ES) TO FACILITATE RECONNECTIONS.
 3. REMOVE EXISTING POWER CONDUCTORS BETWEEN PANEL "HA" AND FIRE PUMP HOUSE. ABANDON CONDUIT IN PLACE AND MARK EXISTING 100A/3P BREAKER AS "SPARE".
 4. NOT ALL EXISTING CONDUITS ARE SHOWN. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE EXISTING CONDUITS. ANY DAMAGE TO EXISTING CONDUITS OR EQUIPMENT SHALL BE REPAIRED/REPLACED AT NO ADDITIONAL COST.
 5. WORK RELATED TO THIS SHEET IS GOVERNED BY SPECIFICATION DIVISION 16.
 6. COORDINATE WITH FP&L AS FOR CONNECTIONS TO EXISTING UTILITY TRANSFORMER. PROVIDE 4" C BETWEEN TRANSFORMER AND NEW ENCLOSED BREAKER.
 7. INSTALL OWNER-PROVIDED AUTOMATIC TRANSFER SWITCH. ALL OTHER REQUIRED MATERIALS SHALL BE CONTRACTOR FURNISHED AND INSTALLED.
 8. CONTRACTOR SHALL COORDINATE WITH AVS SYSTEMS TO FURNISH AND INSTALL ALL NECESSARY HARDWARE, SOFTWARE, TELEMETRY, AND PROGRAMMING FOR REQUIRED ALARM MONITORING FOR SANTA ROSA COUNTY. CONTACT CHRIS SHRIVER AT (850) 484-8882.



NO.	DATE	DESCRIPTION	REVISIONS

**WHITING AVIATION PARK
FIRE FLOW EXPANSION - PHASE A
REQUIRED ELECTRICAL SITE PLAN**

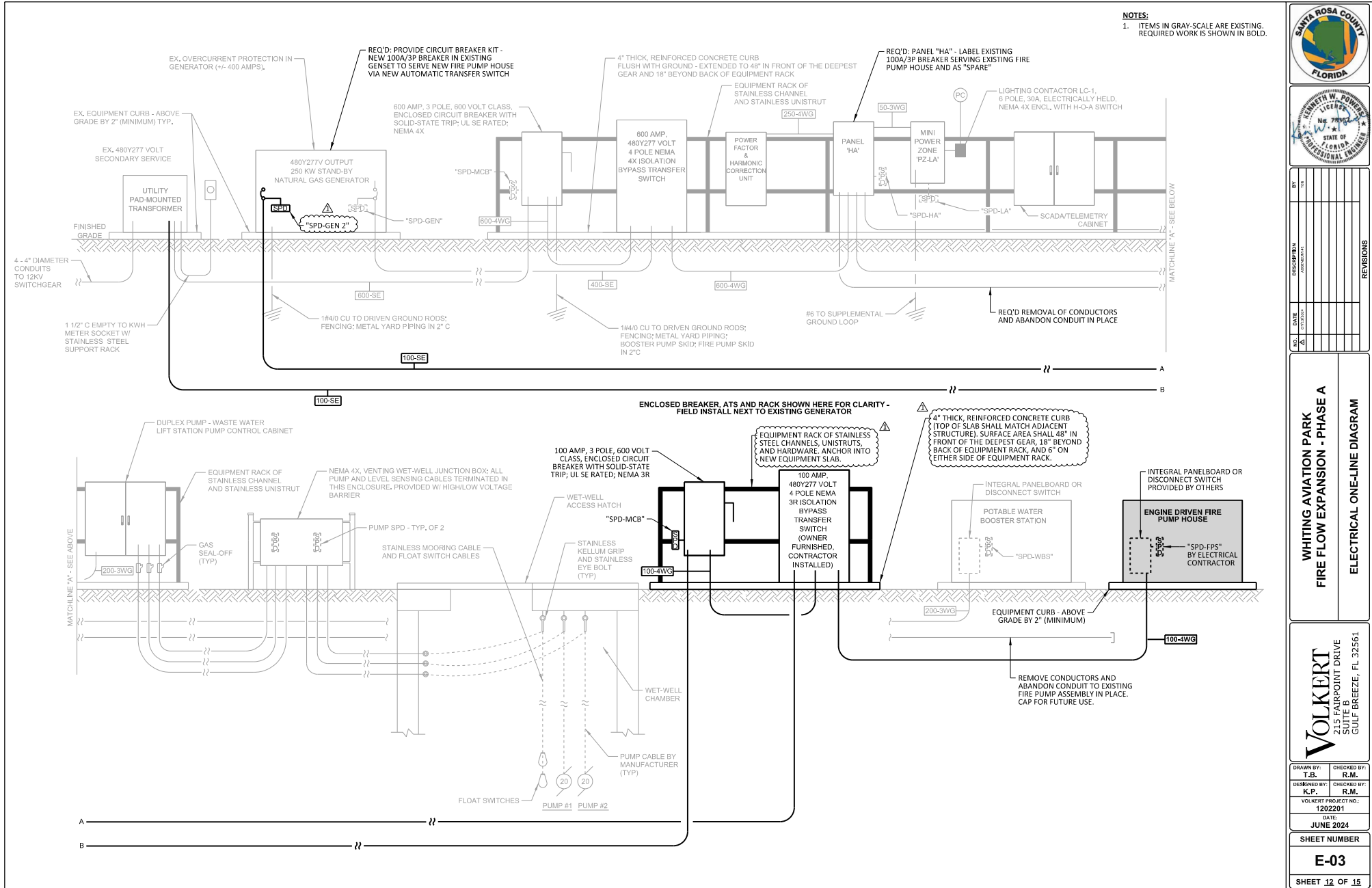
Volkert
215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561

DRAWN BY: T.B.	CHECKED BY: R.M.
DESIGNED BY: K.P.	CHECKED BY: R.M.
VOLKERT PROJECT NO.: 1202201	
DATE: JUNE 2024	

SHEET NUMBER

E-02

SHEET 11 OF 15



NO.	DATE	DESCRIPTION	BY	APP'D

**WHITING AVIATION PARK
 FIRE FLOW EXPANSION - PHASE A
 ELECTRICAL ONE-LINE DIAGRAM**

Volkert
 215 FAIRPOINT DRIVE
 SUITE B
 GULF BREEZE, FL 32561

DRAWN BY: T.B.	CHECKED BY: R.M.
DESIGNED BY: K.P.	CHECKED BY: R.M.
VOLKERT PROJECT NO.: 1202201	
DATE: JUNE 2024	
SHEET NUMBER: E-03	
SHEET 12 OF 15	



NO.	DATE	DESCRIPTION	REVISIONS

**WHITING AVIATION PARK
FIRE FLOW EXPANSION - PHASE A
ELECTRICAL DETAILS AND SCHEDULES**

Volkert
215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561

DRAWN BY: T.B.	CHECKED BY: R.M.
DESIGNED BY: K.P.	CHECKED BY: R.M.

VOLKERT PROJECT NO.:
1202201

DATE:
JUNE 2024

SHEET NUMBER

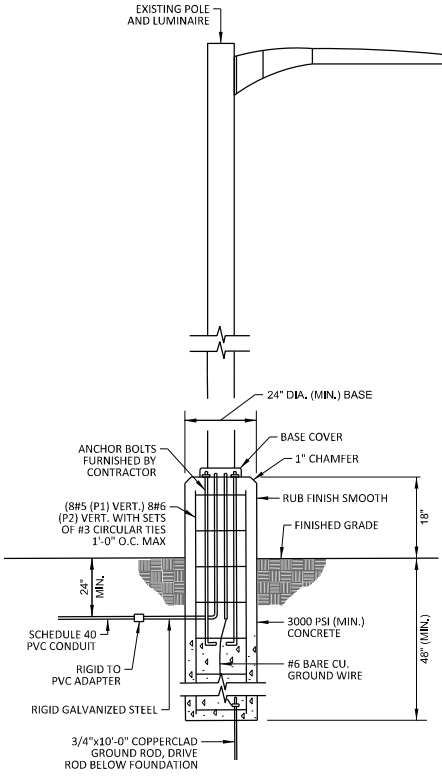
E-04

SHEET **13** OF **15**

WIRING SCHEDULE - COPPER

AMPS	(2WG)	(3WG)	(4WG)	SE	4W-(IG)	(5WG)	5W-(IG)
	10, 2 WIRE, GROUND	10, 3 WIRE, GROUND OR 30, 3 WIRE, GROUND	30, 4 WIRE, GROUND	30, 4 WIRE, SERVICE	ISOLATED GROUND	30, 5 WIRE, GROUND, 200% NEUTRAL	ISOLATED GROUND
20	(2#12 & 1#12 G) 3/4"C	(3#12 & 1#12 G) 3/4"C	(4#12 & 1#12 G) 3/4"C		1#12 IG, 3/4" C	(5#12 & 1#12 G) 3/4"C	1#12 IG, 3/4" C
30	(2#10 & 1#10 G) 3/4"C	(3#10 & 1#10 G) 3/4"C	(4#10 & 1#10 G) 3/4"C		1#10 IG, 3/4" C	(5#10 & 1#10 G) 3/4"C	1#10 IG, 3/4" C
40	(2#8 & 1#10 G) 3/4"C	(3#8 & 1#10 G) 3/4"C	(4#8 & 1#10 G) 1"C		1#10 IG, 1" C	(5#8 & 1#10 G) 1"C	1#10 IG, 1" C
50	(2#6 & 1#10 G) 3/4"C	(3#6 & 1#10 G) 1"C	(4#6 & 1#10 G) 1"C		1#10 IG, 1" C	(5#6 & 1#10 G) 1"C	1#10 IG, 1 1/4" C
60	(2#4 & 1#10 G) 1"C	(3#4 & 1#10 G) 1"C	(4#4 & 1#10 G) 1 1/4"C		1#10 IG, 1 1/4" C	(5#4 & 1#10 G) 1 1/4"C	1#10 IG, 1 1/4" C
70	(2#4 & 1#8 G) 1"C	(3#4 & 1#8 G) 1 1/4"C	(4#4 & 1#8 G) 1 1/4"C		1#8 IG, 1 1/4" C	(5#4 & 1#8 G) 1 1/4"C	1#8 IG, 1 1/4" C
80	(2#2 & 1#8 G) 1"C	(3#2 & 1#8 G) 1 1/4"C	(4#2 & 1#8 G) 1 1/2"C		1#8 IG, 1 1/2" C	(5#2 & 1#8 G) 1 1/2"C	1#8 IG, 1 1/2" C
90	(2#2 & 1#8 G) 1"C	(3#2 & 1#8 G) 1 1/4"C	(4#2 & 1#8 G) 1 1/2"C		1#8 IG, 1 1/2" C	(5#2 & 1#8 G) 1 1/2"C	1#8 IG, 1 1/2" C
100	(2#1 & 1#8 G) 1 1/4"C	(3#1 & 1#8 G) 1 1/2"C	(4#1 & 1#8 G) 1 1/2"C	(4#1) 1 1/2"C	1#8 IG, 2" C	(5#1 & 1#8 G) 2"C	1#8 IG, 2" C
110	(2#1 & 1#6 G) 1 1/4"C	(3#1 & 1#6 G) 1 1/2"C	(4#1 & 1#6 G) 1 1/2"C	(4#1) 1 1/2"C	1#6 IG, 2" C	(5#1 & 1#6 G) 2"C	1#6 IG, 2" C
125	(2#1 & 1#6 G) 1 1/4"C	(3#1 & 1#6 G) 1 1/2"C	(4#1 & 1#6 G) 1 1/2"C	(4#1) 1 1/2"C	1#6 IG, 2" C	(5#1/0 & 1#4 G) 2"C	1#4 IG, 2" C
150	(2#1/0 & 1#6 G) 1 1/4"C	(3#1/0 & 1#6 G) 1 1/2"C	(4#1/0 & 1#6 G) 2"C	(4#1/0) 2"C	1#6 IG, 2" C	(5#2/0 & 1#4 G) 2 1/2"C	1#4 IG, 2 1/2" C
175	(2#2/0 & 1#6 G) 1 1/2"C	(3#2/0 & 1#6 G) 2"C	(4#2/0 & 1#6 G) 2"C	(4#2/0) 2"C	1#6 IG, 2" C	(5#3/0 & 1#4 G) 2 1/2"C	1#4 IG, 2 1/2" C
200	(2#3/0 & 1#6 G) 1 1/2"C	(3#3/0 & 1#6 G) 2"C	(4#3/0 & 1#6 G) 2"C	(4#3/0) 2"C	1#6 IG, 2 1/2" C	(5#4/0 & 1#4 G) 3"C	1#4 IG, 3" C
225	(2#4/0 & 1#4 G) 2"C	(3#4/0 & 1#4 G) 2"C	(4#4/0 & 1#4 G) 2 1/2"C	(4#4/0 & 1#4 G) 2 1/2"C	1#4 IG, 2 1/2" C	(5-250 KCMIL & 1#3 G) 3"C	1#3 IG, 3" C
250	(2-250 KCMIL & 1#4 G) 2"C	(3-250 KCMIL & 1#4 G) 2 1/2"C	(4-250 KCMIL & 1#4 G) 3"C	(4-250 KCMIL & 1#4 G) 3"C	1#4 IG, 3" C	(5-300 KCMIL & 1#3 G) 3"C	1#3 IG, 3" C
300	(2-350 KCMIL & 1#4 G) 2"C	(3-350 KCMIL & 1#4 G) 3"C	(4-350 KCMIL & 1#4 G) 3"C	(4-350 KCMIL & 1#4 G) 3"C	1#4 IG, 3" C	(5-400 KCMIL & 1#3 G) 3 1/2"C	1#3 IG, 3 1/2" C
380	(2-500 KCMIL & 1#3 G) 2 1/2"C	(3-500 KCMIL & 1#3 G) 3"C	(4-500 KCMIL & 1#3 G) 3 1/2"C	(4-500 KCMIL) 3 1/2"C	1#3 IG, 3 1/2" C	2[(5#4/0 & 1#3 G) 3"C]	1#3 IG, 3" C
400	2[(2#3/0 & 1#3 G) 1 1/2"C]	2[(3#3/0 & 1#3 G) 2"C]	2[(4#3/0 & 1#3 G) 2 1/2"C]	2[(4#3/0) 2 1/2"C]	1#3 IG, 3 1/2" C	2[(5#4/0 & 1#2 G) 3"C]	1#2 IG, 3" C
450	2[(2#4/0 & 1#2 G) 2"C]	2[(3#4/0 & 1#2 G) 2"C]	2[(4#4/0 & 1#2 G) 2 1/2"C]	2[(4#4/0) 2 1/2"C]		2[(5-250 KCMIL & 1#1 G) 3"C]	
500	2[(2-250 KCMIL & 1#2 G) 2"C]	2[(3-250 KCMIL & 1#2 G) 2 1/2"C]	2[(4-250 KCMIL & 1#2 G) 3"C]	2[(4-250 KCMIL) 3"C]		2[(5-300 KCMIL & 1#1 G) 3"C]	
600	2[(2-350 KCMIL & 1#1 G) 2 1/2"C]	2[(3-350 KCMIL & 1#1 G) 3"C]	2[(4-350 KCMIL & 1#1 G) 3"C]	2[(4-350 KCMIL) 3"C]		2[(5-400 KCMIL & 1#1/0 G) 3 1/2"C]	
700	2[(2-500 KCMIL & 1#1/0 G) 2 1/2"C]	2[(3-500 KCMIL & 1#1/0 G) 3"C]	2[(4-500 KCMIL & 1#1/0 G) 3 1/2"C]	2[(4-500 KCMIL) 3 1/2"C]		3[(5-300 KCMIL & 1#1/0 G) 3"C]	
760	2[(2-500 KCMIL & 1#1/0 G) 2 1/2"C]	2[(3-500 KCMIL & 1#1/0 G) 3"C]	2[(4-500 KCMIL & 1#1/0 G) 3 1/2"C]	2[(4-500 KCMIL) 3 1/2"C]		3[(5-300 KCMIL & 1#1/0 G) 3"C]	
800	3[(2-300 KCMIL & 1#1/0 G) 2"C]	3[(3-300 KCMIL & 1#1/0 G) 2 1/2"C]	3[(4-300 KCMIL & 1#1/0 G) 3"C]	3[(4-300 KCMIL) 3"C]		3[(5-350 KCMIL & 1#2/0 G) 3 1/2"C]	
1000	3[(2-400 KCMIL & 1#2/0 G) 2 1/2"C]	3[(3-400 KCMIL & 1#2/0 G) 3"C]	3[(4-400 KCMIL & 1#2/0 G) 3"C]	3[(4-400 KCMIL) 3"C]		3[(5-500 KCMIL & 1#3/0 G) 4"C]	
1200	4[(2-350 KCMIL & 1#3/0 G) 2 1/2"C]	4[(3-350 KCMIL & 1#3/0 G) 3"C]	4[(4-350 KCMIL & 1#3/0 G) 3"C]	4[(4-350 KCMIL) 3"C]			
1600	5[(2-400 KCMIL & 1#4/0 G) 2 1/2"C]	5[(3-400 KCMIL & 1#4/0 G) 3"C]	5[(4-400 KCMIL & 1#4/0 G) 3 1/2"C]	5[(4-400 KCMIL) 3 1/2"C]			
2000	6[(2-400 KCMIL & 1-250 KCMIL G) 2 1/2"C]	6[(3-400 KCMIL & 1-250 KCMIL G) 3"C]	6[(4-400 KCMIL & 1-250 KCMIL G) 3 1/2"C]	6[(4-400 KCMIL) 3 1/2"C]			
2500	7[(2-500 KCMIL & 1-350 KCMIL G) 3"C]	7[(3-500 KCMIL & 1-350 KCMIL G) 3 1/2"C]	7[(4-500 KCMIL & 1-350 KCMIL G) 3 1/2"C]	7[(4-500 KCMIL) 3 1/2"C]			
3000	8[(2-500 KCMIL & 1-400 KCMIL G) 3"C]	8[(3-500 KCMIL & 1-400 KCMIL G) 3 1/2"C]	8[(4-500 KCMIL & 1-400 KCMIL G) 3 1/2"C]	8[(4-500 KCMIL) 3 1/2"C]			
3500	10[(2-500 KCMIL & 1-500 KCMIL G) 3"C]	10[(3-500 KCMIL & 1-500 KCMIL G) 3 1/2"C]	10[(4-500 KCMIL & 1-500 KCMIL G) 4"C]	10[(4-500 KCMIL) 4"C]			
4000	11[(2-500 KCMIL & 1-500 KCMIL G) 3"C]	11[(3-500 KCMIL & 1-500 KCMIL G) 3 1/2"C]	11[(4-500 KCMIL & 1-500 KCMIL G) 4"C]	11[(4-500 KCMIL) 4"C]			

CONDUCTOR SIZES ARE BASED ON 60° TERMINATIONS LESS THAN 100A AND 75° TERMINATIONS GREATER THAN 100A PER NEC 110.14
ADJUSTMENT FACTORS ARE BASED ON 90° TEMPERATURE RATINGS PER NEC 110.14
CONDUIT SIZES ARE BASED ON NEC CH.9 TABLE 4 (RNC SCHED 80) FOR WORST CASE AND TABLE 5 (THHN INSULATION).



NOTES:

1. PROVIDE NEW FOUNDATION FOR POLE RELOCATION.

LIGHTING POLE DETAIL

SCALE: NOT TO SCALE

PANEL:	HA	VOLTAGE:	277/480V, 3PH, 4W
LOCATION:	MAIN ELECTRICAL RACK	MINIMUM BUS:	600
MOUNTING:	SURFACE	MAIN:	MLO
		MINIMUM AIC:	42000

NO.	LOAD			TYPE	LOAD DESCRIPTION	BREAKER		BUS		BREAKER		TYPE	LOAD DESCRIPTION	LOAD			NO.
	A	B	C			POLE	TRIP	A	B	C	TRIP			POLE	A	B	
1	26700			E	SEWAGE LIFT STATION	3	200	+	+	30	3	E	SPD-HA				2
3		26700		E								E			200		4
5			26700	E								E				200	6
7	6500			E	PANEL 'PZ-LA'	3	50	+	+	100	3	E	SPARE				8
9		6650		E								E					10
11			3800	E								E					12
13	750			E	PF/HARMONIC CORRECTION	3	250	+	+	200	3	E	WATER BOOSTER STATION	24500			14
15		750		F								E		24500			16
17			750	E								E			24500		18
19					SPARE	1	20	+	+	100	3		SPARE				20
21					SPARE	1	20	+	+								22
23					SPARE	1	20	+	+								24
25					SPARE	1	20	+	+	20	3		SPARE				26
27					SPARE	1	20	+	+								28
29					SPARE	1	20	+	+								30
31					SPARE	3	30	+	+	40	3		SPARE				32
33																	34
35																	36
37					SPARE	3	30	+	+	40	3		SPARE				38
39																	40
41																	42

LOAD TYPE	PANEL TOTAL	FEED THRU TOTAL	SUBFEED TOTAL	FEEDER SUBTOTAL	DEMAND	FEEDER TOTAL
(L) LIGHTING	0			0	125%	0
(R) RECEPTACLES	0			0	NEC 220	0
(LM) LARGEST MOTOR	0			0	25%	0
(M) MOTORS (ALL)	0			0	100%	0
(E) EQUIPMENT	165950		165950	165950	100%	165950
(A) APPLIANCES	0			0		0
				PANEL TOTAL (KVA):		165.9
				PANEL TOTAL (A):		199.7

MODIFICATIONS TO EXISTING PANEL "HA"

PANEL:	POWER ZONE PZ-LA	PRIMARY VOLTAGE:	480V, 3PH, 3W
LOCATION:	MAIN ELECTRICAL RACK	SECONDARY VOLTAGE:	120/208V, 3PH, 4W
MOUNTING:	SURFACE	MAIN OCP: MIN BUS:	100/3 CB
		MINIMUM AIC:	10000

NO.	LOAD			TYPE	LOAD DESCRIPTION	BREAKER		BUS		BREAKER		TYPE	LOAD DESCRIPTION	LOAD			NO.
	A	B	C			POLE	TRIP	A	B	C	TRIP			POLE	A	B	
1	400			R	REC - GEN PURPOSE #1	1	20	+	+	30	3	E	SPD-LA				2
3		400		R	REC - GEN PURPOSE #2	1	20	+	+			E			200		4
5			500	E	TANK 1 LEVEL TRANSDUCER	1	20	+	+			E				200	6
7	500			E	TANK 2 LEVEL TRANSDUCER	1	20	+	+	20	1	L	LGT - SITE AND AREA	500			8
9		1600		E	TANK MTR	1	30	+	+	20	1	L	LGT - SITE AND AREA		750		10
11			1150	E	SCADA/TELEMETRY PANEL	1	20	+	+	20	1	L	LGT - ENTRANCE SIGN			750	12
13	500			E	AVIATION BEACON	1	20	+	+	50	3	E	PANEL 'G' IN GENERATOR	3000			14
15		0			SPARE	1	20	+	+						3000		16
17			0		SPARE	1	20	+	+								18
19	0		0		SPARE	1	20	+	+	20	1		PF CORRECTION UNIT	1400			20
21		0			SPARE	1	20	+	+	20	1		PF CORRECTION UNIT		700		22
23			0		SPARE	1	20	+	+	20	1		SPARE			0	24

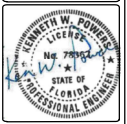
LOAD TYPE	PANEL TOTAL	FEED THRU TOTAL	SUBFEED TOTAL	FEEDER SUBTOTAL	DEMAND	FEEDER TOTAL
(L) LIGHTING	2000			2000	120%	2500
(R) RECEPTACLES	800			800	NEC 220	800
(LM) LARGEST MOTOR	0			0	25%	0
(M) MOTORS (ALL)	0			0	100%	0
(E) EQUIPMENT	6200			6200	100%	6200
(A) APPLIANCES	0			0		0
				PANEL TOTAL (KVA):		16.9
				PANEL TOTAL (A):		20.7

SCHEDULE FOR EXISTING "PZ-LA"

SHOWN FOR REFERENCE ONLY

SCHEDULE OF SURGE PROTECTION DEVICES (SPD) FOR POWER DISTRIBUTION											
LOCATION	RATING IN AMPS OF CONNECTED BUSS OR MAIN CIRCUIT BREAKER	VOLTAGE	SPD DESIGNATION	SURGE SUPPRESSION, INCORPORATED SPD/TVSS MODEL NUMBER	PEAK SURGE CURRENT PER PHASE (KA)	WARRANTY DETAILS (NO EXCEPTIONS)	REMOTE INDICATOR LIGHT KIT	RESPONSIBLE PURCHASING AND INSTALLING PARTY (NO EXCEPTIONS)	FREQUENCY RESPONSIVE CIRCUITRY	ENCLOSURE RATING (NEMA #)	SPD MOUNTED INTEGRAL TO PANELBOARD / SWITCHBOARD / MCC / CABINET / LIGHT POLE
GENERATOR MAIN CIRCUIT BREAKER #2 AT EXISTING SITE	100	277/480Y 3PH/4W	'SPD-GEN 2'	CDLA3Y2-LP-21	180	25-YEAR REPLACEMENT - EXCLUDING INSTALLATION	NO	ELECTRICAL CONTRACTOR	YES	1	YES
FIRE SERVICE BOOSTER PUMP STATION	100	277/480Y 3PH/4W	'SPD-FPS'	CDLA3YE230-21	180	25-YEAR REPLACEMENT - EXCLUDING INSTALLATION	YES	ELECTRICAL CONTRACTOR	YES	1	NO
MAIN UTILITY ENCLOSED CIRCUIT BREAKER	100	277/480Y 3PH/4W	'SPD-MCB'	SMLD3Y2E31X3-21	300	25-YEAR REPLACEMENT - EXCLUDING INSTALLATION	NO	ELECTRICAL CONTRACTOR	NO	4X	NO

REQUIRED SURGE PROTECTION DEVICE (SPD) SCHEDULE

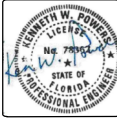


NO.	DATE	DESCRIPTION	BY
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WHITING AVIATION PARK
 FIRE FLOW EXPANSION - PHASE A
 ELECTRICAL DETAILS AND SCHEDULES



DRAWN BY: T.B.	CHECKED BY: R.M.
DESIGNED BY: K.P.	CHECKED BY: R.M.
VOLKERT PROJECT NO.: 1202201	
DATE: JUNE 2024	
SHEET NUMBER: E-05	
SHEET 14 OF 15	



NO.	DATE	DESCRIPTION	BY	REVISIONS	
				NO.	DATE

**WHITING AVIATION PARK
FIRE FLOW EXPANSION - PHASE A
ELECTRICAL DETAILS AND SCHEDULES**

Volkert
215 FAIRPOINT DRIVE
SUITE B
GULF BREEZE, FL 32561

DRAWN BY: T.B.	CHECKED BY: R.M.
DESIGNED BY: K.P.	CHECKED BY: R.M.
VOLKERT PROJECT NO.: 1202201	
DATE: JUNE 2024	
SHEET NUMBER	

E-06

SHEET **15** OF **15**

INSTRUMENTATION AND BRANCH CIRCUIT WIRE AND CONDUIT SCHEDULE FOR EXISTING UTILITY SITE

TAG	CONDUIT SIZE	CIRCUIT TYPE	ROUTING	WIRING	FROM	TO	NOTES
1	1"	DATA	AS REQUIRED/ UNDER GRADE	3#12 + 1#12EG	BYPASS ISOLATION TRANSFER SWITCH	WASTEWATER LIFT STATION PUMP CONTROL CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED. PROVIDE STATION ON STANDBY POWER STATUS CONDITION.
2	1"	DATA	AS REQUIRED/ UNDER GRADE	3#12 + 1#12EG	BYPASS ISOLATION TRANSFER SWITCH	DOMESTIC WATER BOOSTER PUMP STATION PUMP CONTROL CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED. PROVIDE STATION ON STANDBY POWER STATUS CONDITION.
3	1.1/4"	POWER	AS REQUIRED/ UNDER GRADE	3#6 + 1#6N + 1#8EG	PANEL PZLA	GENERATOR ENCLOSURE - INTERNAL PANELBOARD	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
4	1.1/4"	DATA	AS REQUIRED/ UNDER GRADE	19#12 + 1#12EG	GENERATOR ENCLOSURE - INTERNAL CONTROL CABINET	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
5	1.1/4"	DATA	AS REQUIRED/ UNDER GRADE	TWO CAT 6 ETHERNET CABLES	GENERATOR ENCLOSURE - INTERNAL CONTROL CABINET	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
6	1.1/4"	DATA	SURFACE/EXPOSED	11#12 + 1#12EG	WASTEWATER LIFT STATION PUMP CONTROL CABINET	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
7	1.1/4"	DATA	SURFACE/EXPOSED	TWO CAT 6 ETHERNET CABLES	WASTEWATER LIFT STATION PUMP CONTROL CABINET	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
8	1.1/2"	POWER	AS REQUIRED/ UNDER GRADE	3#6 + 1#8EG	WASTEWATER LIFT STATION PUMP CONTROL CABINET	WET WELL JUNCTION/TERMINATION BOX - PUMP MOTOR #1	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED. CONNECT SPD IN WETWELL JUNCTION BOX.
9	1.1/2"	POWER	AS REQUIRED/ UNDER GRADE	3#6 + 1#8EG	WASTEWATER LIFT STATION PUMP CONTROL CABINET	WET WELL JUNCTION/TERMINATION BOX - PUMP MOTOR #2	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED. CONNECT SPD IN WETWELL JUNCTION BOX.
10	1"	DATA	AS REQUIRED/ UNDER GRADE	5#12 + 1#12EG	WASTEWATER LIFT STATION PUMP CONTROL CABINET	WET WELL JUNCTION/TERMINATION BOX - PUMP MOTOR #1	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
11	1"	DATA	AS REQUIRED/ UNDER GRADE	5#12 + 1#12EG	WASTEWATER LIFT STATION PUMP CONTROL CABINET	WET WELL JUNCTION/TERMINATION BOX - PUMP MOTOR #2	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
12	1"	DATA	AS REQUIRED/ UNDER GRADE	7#12 + 1#12EG	WASTEWATER LIFT STATION PUMP CONTROL CABINET	WET WELL JUNCTION/TERMINATION BOX - FLOAT SWITCHES	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
13	1"	DATA	AS REQUIRED/ UNDER GRADE	5#12 + 1#12EG	BYPASS ISOLATION TRANSFER SWITCH	GENERATOR ENCLOSURE - INTERNAL CONTROL CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED. GENERATOR START SIGNALS.
14	3/4"	POWER	SURFACE/EXPOSED	3#12 + 1#12EG	PANEL PZLA	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
15	1"	DATA	AS REQUIRED/ UNDER GRADE	TWO BELDEN 8719 TWIST SHIELD PAIRS	DOMESTIC WATER BOOSTER PUMP STATION PUMP CONTROL CABINET	TANK 1 - LEVEL TRANSMITTER INDICATOR CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
16	1"	DATA	AS REQUIRED/ UNDER GRADE	5#12 + 1#12EG	DOMESTIC WATER BOOSTER PUMP STATION PUMP CONTROL CABINET	TANK 1 - LOW AND HIGH LEVEL FLOAT SWITCHES	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
17	1.1/4"	DATA	AS REQUIRED/ UNDER GRADE	11#12 + 1#12EG	DOMESTIC WATER BOOSTER PUMP STATION PUMP CONTROL CABINET	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
18	1.1/4"	DATA	AS REQUIRED/ UNDER GRADE	TWO CAT 6 ETHERNET CABLES	DOMESTIC WATER BOOSTER PUMP STATION PUMP CONTROL CABINET	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
19	1"	POWER	AS REQUIRED/ UNDER GRADE	2#10 + 1#10EG	LIGHTING CONTACTOR 'LC1'	SITE LIGHTING POLE 1	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED; INSTALL SPD IN POLE BASE.
20	1"	POWER	AS REQUIRED/ UNDER GRADE	2#10 + 1#10EG	LIGHTING CONTACTOR 'LC1'	SITE LIGHTING POLE 2	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED; INSTALL SPD IN POLE BASE.
21	1"	POWER	AS REQUIRED/ UNDER GRADE	2#8 + 1#10EG	LIGHTING CONTACTOR 'LC1'	SIGNAGE LIGHTING CIRCUIT TO EACH FIXTURE	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED; INSTALL SPD AT LOCAL FIXTURE JUNCTION BOX.
22	1.1/4"	POWER	SURFACE/EXPOSED	3#8 + 1#8N + 1#8EG	PANEL PZLA	LIGHTING CONTACTOR 'LC1'	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
23	3/4"	DATA	SURFACE/EXPOSED	5#14 + 1#12EG	LIGHTING CONTACTOR 'LC1'	EQUIPMENT RACK MOUNTED PHOTOCELL	POINT PHOTOCELL NORTH AND AWAY FROM EXTERIOR LIGHTING FIXTURES
24	1"	POWER	AS REQUIRED/ UNDER GRADE	2#10 + 1#10EG	SITE LIGHTING POLE 2	SITE LIGHTING POLE 3	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED; INSTALL SPD IN POLE BASE.
25	3/4"	3/4"	SURFACE/EXPOSED	3#12 + 1#12EG	PANEL PZLA	RACK MOUNTED GENERAL PURPOSE GFCI RECEPTACLE #1	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
26	3/4"	3/4"	SURFACE/EXPOSED	3#12 + 1#12EG	PANEL PZLA	RACK MOUNTED GENERAL PURPOSE GFCI RECEPTACLE #2	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
27	2-2"	DATA	AS REQUIRED/ UNDER GRADE	EMPTY - FOR FUTURE USE - COPPER OR FIBER NETWORK SERVICE	NEAREST POWER COMPANY RISER POLE TO SITE	MAIN EQUIPMENT RACK NEAR SCADA CABINET - STUB UP 6" ABOVE FINISHED GRADE AND CAP.	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
28	2-1"	SPARE	AS REQUIRED/ UNDER GRADE	EMPTY - FOR FUTURE USE	DOMESTIC WATER BOOSTER PUMP STATION PUMP CONTROL CABINET	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
29	1.1/4"	DATA	SURFACE/EXPOSED	FOUR BELDEN 8719 TWIST SHIELD PAIRS	DOMESTIC WATER BOOSTER PUMP STATION PUMP CONTROL CABINET	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED. FLOW SIGNAL TO TELEMETRY.
30	1.1/4"	DATA	SURFACE/EXPOSED	FOUR BELDEN 8719 TWIST SHIELD PAIRS	FIRE PROTECTION PUMP STATION - CONTROL CABINET	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED. FLOW SIGNAL TO TELEMETRY.
31	1"	DATA	SURFACE/EXPOSED	TWO BELDEN 8719 TWIST SHIELD PAIRS	FIRE PROTECTION PUMP STATION - CONTROL CABINET	TANK 2 - LEVEL TRANSMITTER INDICATOR CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
32	1"	DATA	SURFACE/EXPOSED	5#12 + 1#12EG	FIRE PROTECTION PUMP STATION - CONTROL CABINET	TANK 2 - LOW AND HIGH LEVEL FLOAT SWITCHES	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
33	2-1"	SPARE	AS REQUIRED/ UNDER GRADE	EMPTY - FOR FUTURE USE	FIRE PROTECTION PUMP STATION - CONTROL CABINET	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
34	1"	DATA	AS REQUIRED/ UNDER GRADE	3#12 + 1#12EG	BYPASS ISOLATION TRANSFER SWITCH	FIRE PROTECTION PUMP STATION - CONTROL CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED. PROVIDE STATION ON STANDBY POWER STATUS CONDITION.
35	1.1/4"	DATA	AS REQUIRED/ UNDER GRADE	11#12 + 1#12EG	FIRE PROTECTION PUMP STATION - CONTROL CABINET	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
36	1.1/4"	DATA	AS REQUIRED/ UNDER GRADE	TWO CAT 6 ETHERNET CABLES	FIRE PROTECTION PUMP STATION - CONTROL CABINET	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
37	1"	POWER	AS REQUIRED/ UNDER GRADE	2#12 + 1#10EG	PANEL PZLA	TANK 1 - LEVEL TRANSMITTER INDICATOR CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
38	1"	POWER	AS REQUIRED/ UNDER GRADE	2#12 + 1#10EG	PANEL PZLA	TANK 2 - LEVEL TRANSMITTER INDICATOR CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
38	1"	POWER	AS REQUIRED/ UNDER GRADE	2#10 + 1#10EG	PANEL PZLA	TANK 2 MIXER CONTROL CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
39	1"	POWER	AS REQUIRED/ UNDER GRADE	2#10 + 1#10EG	PANEL PZLA	TANK 2 AVIATION BEACON CONTROL CABINET AND WIRING UP TO BEACON FIXTURE.	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
40	1"	POWER	SURFACE/EXPOSED	2#10 + 1#10EG	TANK 2 MIXER CONTROL CABINET	MIXER MOTOR	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED. ROUTE 1" C WITH 2#10 + 1#10EG UP TANK TO MIXER MOTOR.
41	1"	DATA	AS REQUIRED/ UNDER GRADE	5#12 + 1#12EG	TANK 2 MIXER CONTROL CABINET	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
42	1"	DATA	AS REQUIRED/ UNDER GRADE	TWO BELDEN 8719 TWIST SHIELD PAIRS	TANK 2 MIXER CONTROL CABINET	SCADA CABINET	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
43	1"	DATA	SURFACE/EXPOSED	CABLE PROVIDED WITH SIEMENS TRANSDUCER	TANK 1 - LEVEL TRANSMITTER INDICATOR CABINET	TANK 1 - ULTRASONIC TRANSDUCER HEAD	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
44	1"	DATA	SURFACE/EXPOSED	CABLE PROVIDED WITH SIEMENS TRANSDUCER	TANK 2 - LEVEL TRANSMITTER INDICATOR CABINET	TANK 2 - ULTRASONIC TRANSDUCER HEAD	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
45	3/4"	POWER	SURFACE/EXPOSED	2#12 + 1#10EG	PANEL PZLA	PF CORRECTION UNIT HVAC	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.
46	3/4"	POWER	SURFACE/EXPOSED	2#12 + 1#10EG	PANEL PZLA	PF CORRECTION UNIT	PROVIDE FLEX CONDUIT CONNECTION AS REQUIRED.

NOTES:

- TAGS #4 AND #5 - PROVIDE NEW SETS OF CONDUITS/CONDUCTORS AS REQUIRED BETWEEN EXISTING GENERATOR CONTROL CABINET AND SCADA FOR MONITORING OF NEW TRANSFER SWITCH.
- TAG# 19 - ADD NEW CONDUIT/CONDUCTORS SHOWN AS BETWEEN NEW TRANSFER SWITCH AND EXISTING GENERATOR.
- CONDUCTORS FOR TAG NUMBERS 30 - 32 AND TAG NUMBERS 35 - 36 SHALL BE REPLACED IN-KIND THROUGH EXISTING CONDUITS (IF REQUIRED TO AVOID SPLICING FOR CONNECTIONS TO NEW EQUIPMENT).
- TAG# 34 - REMOVE EXISTING CIRCUIT - PROVIDE NEW CONDUIT/CONDUCTORS AS REQUIRED TO TIE IN NEW TRANSFER SWITCH TO NEW FIRE PUMP CONTROL CABINET.