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TO THE BEST OF THE ARCHITECT'S OR ENGINEER'S KNOWLEDGE, SAID PLANS AND SPECIFICATIONS COMPLY WITH THE APPLICABLE BUILDING CODES AND THE APPLICABLE MINIMUM FIRE SAFETY STANDARDS AS DETERMINED IN ACCORDANCE WITH CHAPTERS 553, AND 633, FLORIDA STATUTES.

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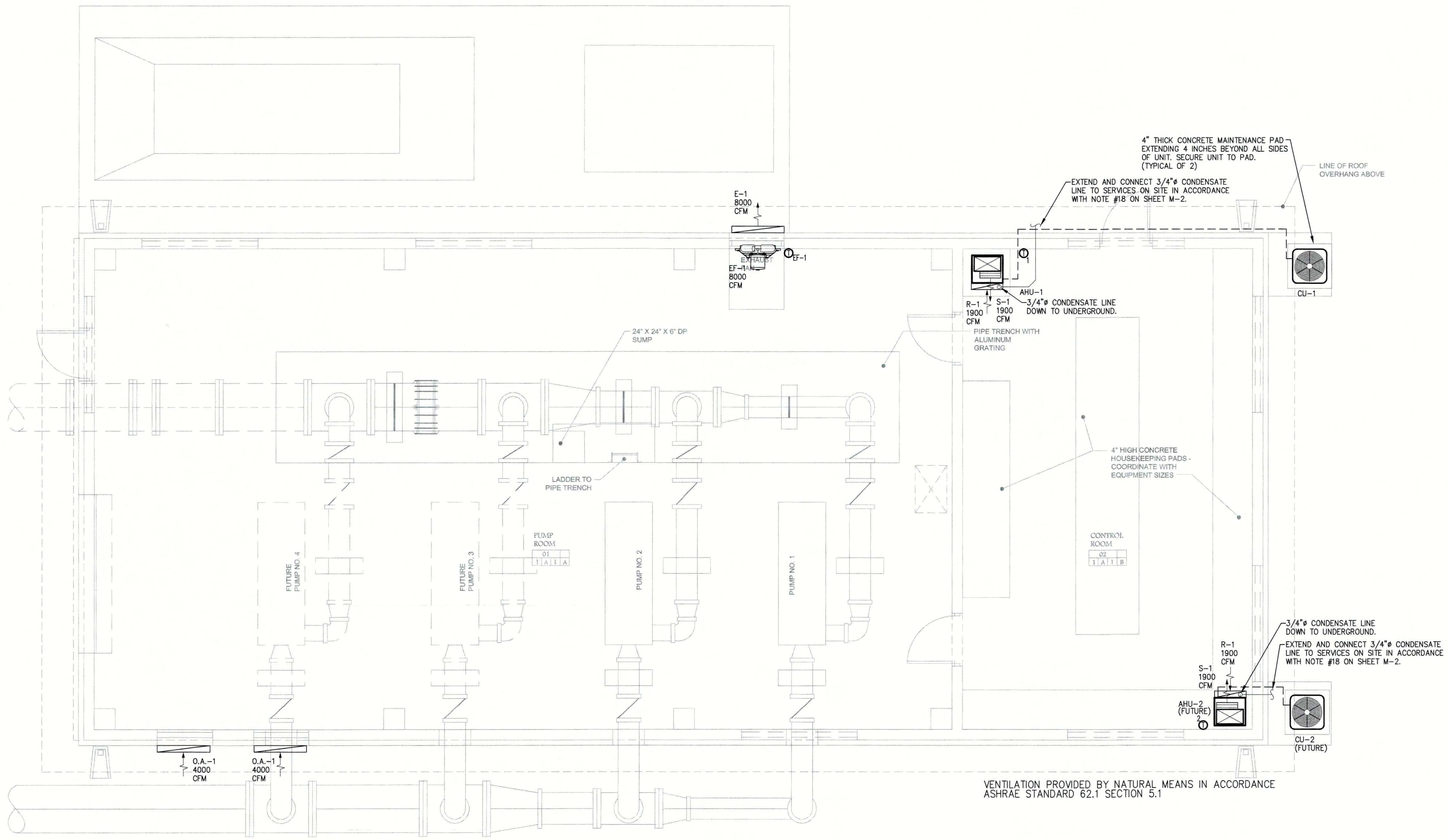


MECHANICAL PLAN | 1
1/4" = 1'-0"

PARRISH MASTER PUMP STATION

12110 ERIE ROAD, PARRISH, FLORIDA

MECHANICAL PLAN

Project No.	15-585
Drawn By	CRB
Checked By	RLC
Date	09.02.15

Revisions:

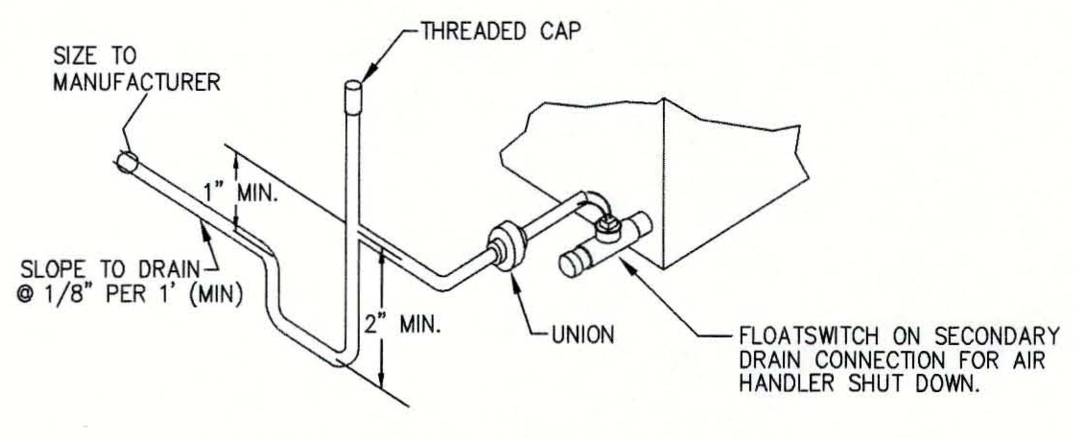
CHRISTOPHER R. BAKER
LICENSE
No 57962
STATE OF FLORIDA
PROFESSIONAL ENGINEER
09/03/2015
Christopher R. Baker
PE 0057962

"To the best of the Architect's or Engineer's knowledge, the plans and specifications comply with the applicable minimum building codes and applicable fire safety standards as determined by local authority in accordance with Chapter 553 and 663 of Florida Statutes."

CONSTRUCTION DRAWINGS

M~1

Originals printed @ 24" x 36"
scale as required



P-TRAP DETAIL
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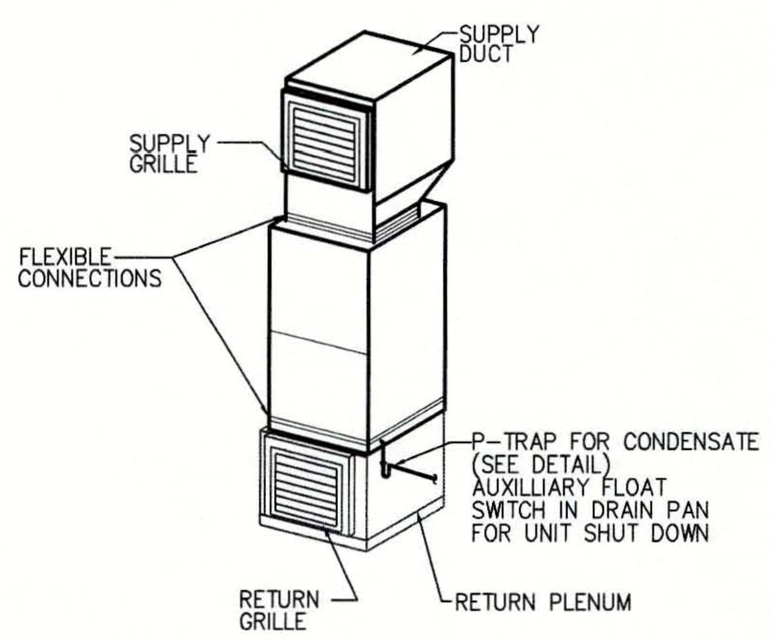
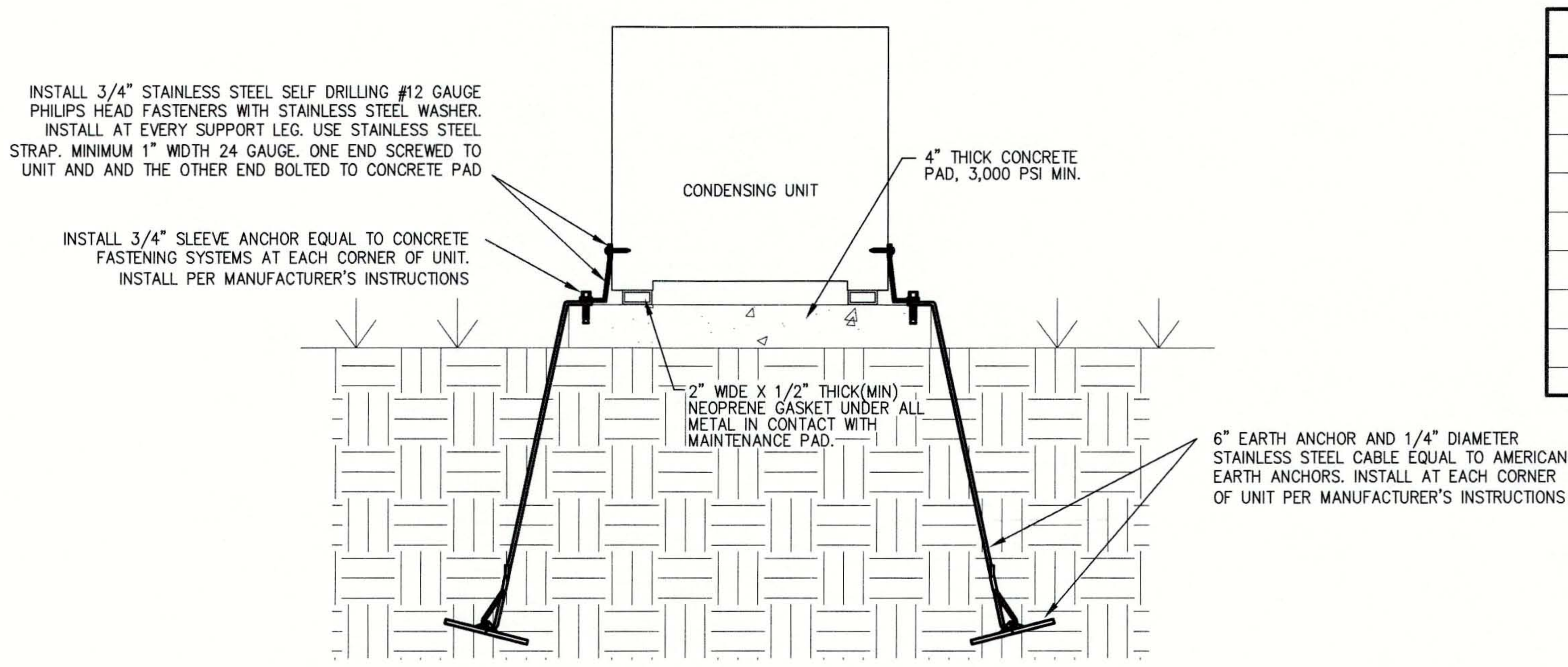
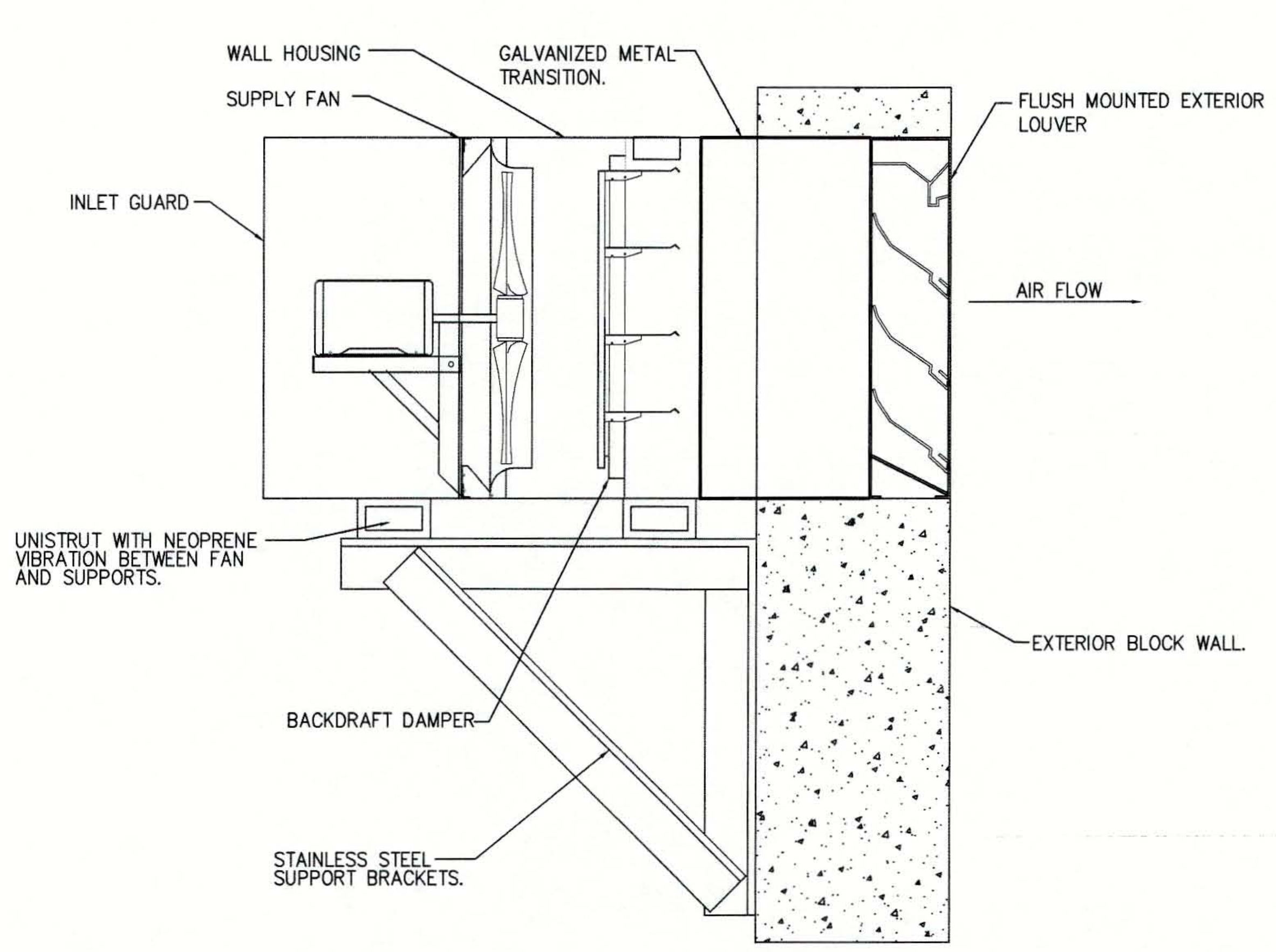


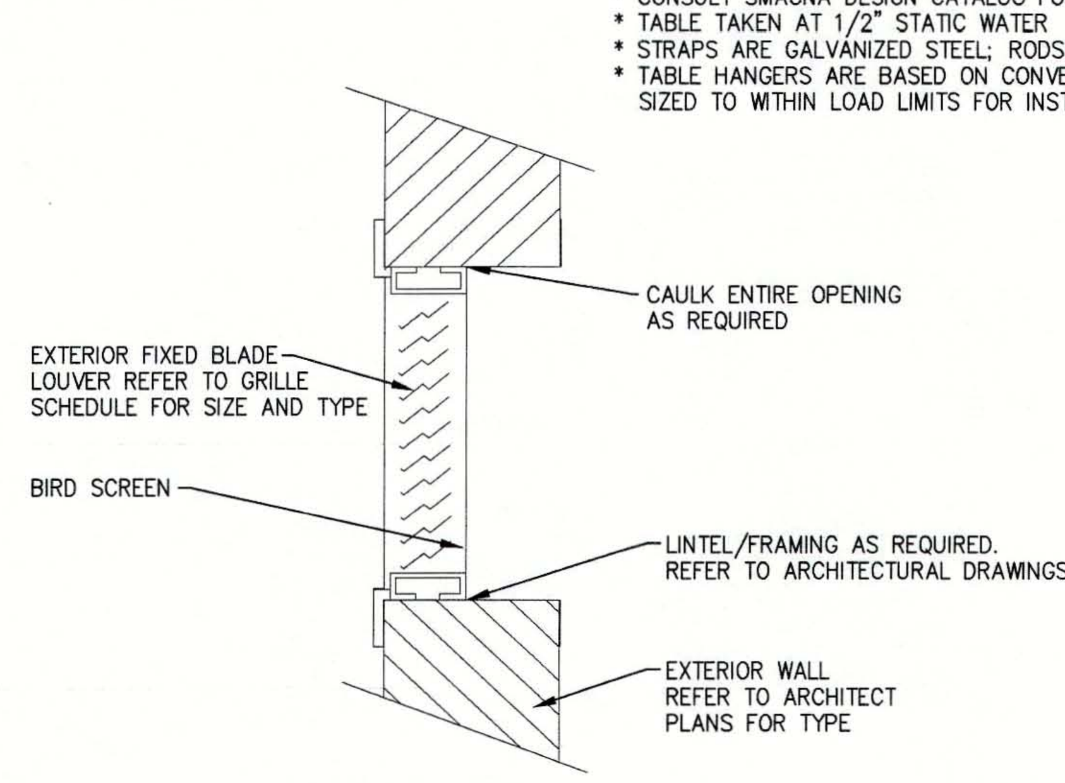
AIR HANDLING UNIT DETAIL
SCALE: NONE



CONDENSING UNIT MOUNTING DETAIL
SCALE: NONE



EXHAUST FAN DETAIL
SCALE: NONE



O. A. LOUVER DETAIL
SCALE: NONE

A/C SCHEDULE

UNIT	MAN'R	MODEL	MBTUH TOT/SEN.	CFM	SEER	VOLT/PH	HEAT(kw)	AHU FAN HP	MCA / C/B	ENTERING AIR TEMP.	LEAVING AIR TEMP.	EXT. STATIC	O. A. CFM	REMARKS
AHU-1	TRANE	GAM5B0C60	---	1900	---	240/1	---	1	10/15	77/65	56/55	.30	---	1
CU-1	TRANE	4TTR3060	57,000	---	13.0	240/1	---	---	35.0/60	92/77	---	---	---	

ACCESSORIES:
1. ECM SINGLE SPEED MOTOR

FUTURE A/C SCHEDULE

UNIT	MAN'R	MODEL	MBTUH TOT/SEN.	CFM	SEER	VOLT/PH	HEAT(kw)	AHU FAN HP	MCA / C/B	ENTERING AIR TEMP.	LEAVING AIR TEMP.	EXT. STATIC	O. A. CFM	REMARKS
AHU-2	TRANE	GAM5B0C60	---	1900	---	240/1	---	1	10/15	77/65	56/55	.30	---	1
CU-2	TRANE	4TTR3060	57,000	---	13.0	240/1	---	---	35.0/60	92/77	---	---	---	

ACCESSORIES:
1. ECM SINGLE SPEED MOTOR

EXHAUST FAN SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER	CATALOG #	CFM	EX.S.P.	VOLT/ø/HZ	AMP/WATTS	FAN SPEED / SONES	ACCESSORIES
EF-1	PROP FAN	GREENHECK	SE2-30-610-B	8000	.35	480/3/60	1.0 HP	1160/30	1,2,3,4,5

ACCESSORIES:
1. WIRING PIGTAIL
2. BACKDRAFT DAMPER
3. SHORT WALL HOUSING WITH CLOSURE ANGLES
4. INLET GUARD
5. INDUSTRIAL EPOXY COATING

AIR DEVICE SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER	CATALOG #	C.F.M.	NECK SIZE	REMARKS
S-1	SIDEWALL	TITUS	300FS	2000	24 X 20	1
R-1	SIDEWALL	TITUS	355ZFL	2000	36 X 30	
O.A.-1	LOUVER	GREENHECK	ESD-435X	4000	36 X 42	2
E-1	LOUVER	GREENHECK	ESD-435X	8000	42 X 42	2

ACCESSORIES:
1. FACE DAMPER
2. BIRD SCREEN

RECTANGULAR DUCT HANGERS

MAX. HALF OF DUCT PERIMETER	PAIR AT 10' SPACING		PAIR AT 8' SPACING	
	STRAP	ROD	STRAP	ROD
P/2=30"	1" X 22 ga	10ga	1" X 22 ga	10ga
P/2=72"	1" X 18 ga	3/8"	1" X 20 ga	1/4"
P/2=96"	1" X 16 ga	3/8"	1" X 18 ga	3/8"

FLEXIBLE DUCT HANGERS

MINIMUM HANGER WIDTH 1 1/2"

ROUND DUCT HANGERS

DUCT DIAMETER	MAX 12' SPACING		
	STRAP	ROD	WIRE
10" DOWN	1" X 22 ga	1/4"	(1)12 ga.
11-18"	1" X 22 ga	1/4"	(2)12 ga. or (1)8 ga.
19-24"	1" X 22 ga	1/4"	(2)10 ga.
25-36"	1" X 20 ga	3/8"	(2)8 ga.

RECTANGULAR DUCT SCHEDULE

RECTANGULAR DUCT DIMENSION	NO REINFORCEMENT DUCT GAGE	REINFORCEMENT TYPE AND SPACING*		
		10'	8'	6'
36"-31"		C-22	C-24	C-26
30"-29"	18 GA.	B-24	B-26	
28"-27"	18 GA.	B-24	B-26	
26"-25"	20 GA.	A-26		
24"-23"	22 GA.	A-26		
22"-21"	22 GA.	A-26		
20"-19"	24 GA.	A-26		
18"-DN	26 GA.	A-26		

* CONSULT SMACNA DESIGN CATALOG FOR REINFORCEMENT DETAILS
* TABLE TAKEN AT 1/2" STATIC WATER PER SMACNA RECOMMENDATIONS
* STRAPS ARE GALVANIZED STEEL; RODS ARE UNCOATED OR GALVANIZED STEEL; WIRE IS BLACK ANNEALED, BRIGHT BASIC OR GALVANIZED STEEL
* TABLE HANGERS ARE BASED ON CONVENTIONAL WALL THICKNESS AND JOINT SYSTEMS WITH ONE LB/SQ.FT OF INSULATION WEIGHT. ADJUST HANGER SIZED TO WITHIN LOAD LIMITS FOR INSTALLATION OF HEAVIER DUCT.

SEQUENCE OF OPERATION

AIR HANDLING UNIT (AHU-1,2)

UNIT OPERATION SHALL BE CONTROLLED BY WALL MOUNTED PROGRAMMABLE THERMOSTAT. THERMOSTATS SHALL SHALL BE SET TO MAINTAIN SPACE TEMPERATURE AT 78°F(ADJUSTABLE).

EXHAUST FAN

PUMP ROOM EXHAUST FAN SHALL HAVE THREE POINTS OF CONTROL. EACH POINT SHALL BE CONNECTED IN PARALLEL TO FAN. THE POINTS OF CONTROL ARE AS FOLLOW:

1. INDIVIDUAL WALL SWITCH
2. THERMOSTAT SET TO MAINTAIN SPACE TEMPERATURE AT 85°F(ADJUSTABLE).
3. TIME CLOCK SET TO RUN EXHAUST FAN FOR A DURATION OF 5 MINUTES 6 TIMES A DAY (ADJUSTABLE).

HVAC - NOTES

1. DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. DRAWINGS ARE NOT TO BE SCALED. THE DRAWINGS AND DETAILS SHALL BE EXAMINED FOR EXACT LOCATION OF FIXTURES AND EQUIPMENT. ANYTHING MENTIONED IN THE SPECIFICATION WILL BE INTERPRETED AS BEING IN BOTH. ANY CONFLICT SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER OR ENGINEER BEFORE PROCEEDING WITH THE WORK.

2. THE HVAC CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIAL, LABOR, ETC. NECESSARY TO PROVIDE A COMPLETE, WORKABLE AND CODE APPROVED AIR CONDITIONING SYSTEM. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS, LOCAL, STATE AND NATIONAL CODES.

3. THE HVAC CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS AND PAY ALL GOVERNMENT FEES, SALES TAXES AND OTHER COSTS IN CONNECTION WITH HIS WORK; FILE ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION; OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK; AND DELIVER TO THE OWNER THE SAME CERTIFICATES BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.

4. THE HVAC CONTRACTOR SHALL GIVE FULL COOPERATION TO OTHER TRADES AND SHALL FURNISH IN WRITING TO THE ARCHITECT, ANY INFORMATION NECESSARY TO PERMIT THE WORK OF ALL TRADES TO BE INSTALLED SATISFACTORILY AND WITH THE LEAST POSSIBLE INTERFERENCE OR DELAY.

5. CLEARANCES AROUND APPLIANCES TO ELEMENTS OF PERMANENT CONSTRUCTION, INCLUDING OTHER INSTALLED EQUIPMENT AND APPLIANCES, SHALL BE SUFFICIENT TO ALLOW INSPECTION, SERVICE, REPAIR OR REPLACEMENT WITHOUT REMOVING SUCH ELEMENTS OF PERMANENT CONSTRUCTION.

6. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER OPERATION AND CONSISTENT WITH GOOD WORKMANSHIP, SHALL BE INCLUDED IN THE ESTIMATE, THE SAME AS IF SHOWN ON DRAWINGS.

7. ALL DUCTWORK IS TO BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH SMACNA MANUALS AND THE FOLLOWING SCHEDULE:

   A. RECTANGULAR DUCTS - GALVANIZED SHEET METAL WITH EXTERNAL DUCT WRAP. SEE RECTANGULAR DUCT SCHEDULE FOR DUCT GAGE. ALL DUCTS WITH 24 INCH WIDTH OR GREATER SHALL HAVE MECHANICAL FASTENERS AT A MAXIMUM OF 18 INCH CENTERS. DUCTBOARD SUCH AS 'SUPERDUCT' AS MANUFACTURED BY JOHNS MANVILLE, INTERNALLY LINED FIBERBOARD MAY BE SUBMITTED AS AN ALTERNATE. THE DUCTBOARD JOINTS SHALL BE TAPED AND MASTICED.

8. MINIMUM INSULATION RESISTANCES FOR DUCTWORK SHALL BE AS FOLLOWS:

   A. CONDITIONED SPACES - R-4.2

9. ALL DUCT SIZES INDICATE "FREE AREA" DIMENSIONS, ALL TAKE-OFFS AND DIVIDED FLOWS SHALL HAVE VOLUME DAMPERS. PROVIDE SPIN-IN COLLARS WITH INTEGRAL SCOOPS AND DAMPERS FOR ALL BRANCH TAKE- OFFS. PROVIDE TURNING VANES FOR ALL ELBOWS AND SPLITTERS.

10. FURNISH AND INSTALL ALL GRILLES, DIFFUSERS AND REGISTERS OF THE TYPE AND AT THE LOCATIONS SHOWN ON THE PLANS. ALL GRILLES, DIFFUSERS, LOUVERS, ETC. SHALL BE EXTRUDED ALUMINUM WITH BAKED WHITE ENAMEL FINISH. SPONGE RUBBER GASKETS SHALL BE INSTALLED BEHIND FLANGES OF ALL GRILLES, DIFFUSERS AND REGISTERS TO PREVENT LEAKAGE AND STREAKING. ALL GRILLES, DIFFUSERS, REGISTERS, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH FACTORY DETAILS.

11. FACTORY MADE OPPOSED BLADE DAMPERS WITH FRONT ACCESSIBLE OPERATOR AND DUCT RING SHALL BE FURNISHED FOR EACH NEW DIFFUSER.

12. PROVIDE FLEXIBLE CONNECTORS WHERE METAL DUCTWORK CONNECTS TO FANS OR AIR HANDLERS.

13. THE REFRIGERANT LINES SHALL BE SIZED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. REFRIGERANT LINE INSULATION SHALL BE 1" MINIMUM IN UNCONDITIONED ATTIC AREAS. COVER INSULATION AT BUILDING EXTERIOR WITH UV RESISTANT COATING. INSTALL INSULATION SECTIONS WITH COMPRESSION GLUE AT BUTT JOINTS.

14. THE HVAC CONTRACTOR IS RESPONSIBLE FOR ALL CONTROLS AND CONTROL WIRING. SEE SEQUENCE OF OPERATION.

15. ALL AIR HANDLERS TO HAVE SLOPED DRAIN PANS.

16. THE HVAC CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL CONDENSATE PIPING. CONDENSATE PIPING SHALL BE CONSTRUCTED OF PVC PIPING. EXTERIOR PVC PIPING SHALL BE COATED WITH UV PROTECTIVE PAINT. CONDENSATE PIPING LOCATED WITHIN RETURN AIR PLENUM SHALL BE CONSTRUCTED OF COPPER PIPING. ALL PIPING SHALL BE RUN TO THE BUILDING EXTERIOR TO A DRYWELL (MAXIMUM 10 TONS EACH), STORM DRAIN OR RETAINAGE AREA. CONDENSATE PIPING SHALL NOT BE ROUTED IN OR ATTACHED TO A BREAKAWAY WALL. PROVIDE FULL LINE SIZE GOOSENECK MAX 5' FROM BUILDING. CONDENSATE LINES LOCATED IN UNCONDITIONED SPACES SHALL BE INSULATED.

17. WORK SHALL INCLUDE TESTING AND BALANCING OF THE HVAC SYSTEM THE CONTRACTOR SHALL SUBMIT COPIES OF TEST AND BALANCE REPORTS SHOWING RESULTS OF BALANCING OF AIR QUANTITIES TO PLAN REQUIREMENTS. MAKE ALL ADJUSTMENTS REQUIRED TO PROVIDE ±10% DESIGN AIR FLOW.

18. WORK SHALL INCLUDE STARTUP OF ALL SYSTEMS, FURNISHING OF OPERATING AND MAINTENANCE INSTRUCTIONS, WALK THROUGH WITH MAINTENANCE CREW, AND ONE YEAR GUARANTEE, COMMENCING ON DATE OF ACCEPTANCE BY OWNER.

19. THE VENTILATION RATE PROCEDURE OF FLORIDA BUILDING CODE-2014 MECHANICAL HAS BEEN USED TO DETERMINE THE AMOUNT OF OUTSIDE AIR FOR THIS SPACE. ANY CHANGE IN SPACE USE, CONTAMINANTS, OR OPERATION MAY REQUIRE A REEVALUATION OF THE DESIGN AND IMPLEMENTATION OF NEEDED CHANGES.

20. ALL EQUIPMENT EXTERIOR TO THE BUILDING SHALL BE SECURED TO WITHSTAND 150MPH WINDS.

21. MECHANICAL EQUIPMENT IDENTIFICATION:
    PROVIDE ENGRAVED PLASTIC LAMINATE SIGN, PLASTIC EQUIPMENT MARKER, OR STENCILED SIGNS FOR THE FOLLOWING EQUIPMENT AND OPERATIONAL DEVICES, FREE HAND LETTERING SHALL NOT BE ACCEPTED.

    A. AIR HANDLERS, CONDENSERS AND SIMILAR MOTOR DRIVEN UNITS

    LETTERING SIZE SHALL BE 1" HEIGHT (MINIMUM) AS NEEDED FOR PROPER IDENTIFICATION TEXT FOR EQUIPMENT IDENTIFICATION SIGNS SHALL INCLUDE, UNIT NAME AND NUMBER AS PROVIDED ON THE CONTRACT DRAWINGS (IE: AHU-1, CU-1, HEX-1 ETC.). IF NOT IDENTIFIED BY THE MANUFACTURER, THE CONTRACTOR SHALL PROVIDE A SIGN TO INDICATE THE LOCATION OF FILTER ACCESS ON AHU'S.

22. BUILDING TEST
THE COMPLETED BUILDING SHALL BE TESTED AND THE AIR LEAKAGE RATE OF THE BUILDING ENVELOPE SHALL NOT EXCEED 0.40CFM/FT^2 AT A PRESSURE DIFFERENTIAL OF 0.3 INCHES WATER GAUGE IN ACCORDANCE WITH ASTM E 779 OR AN EQUIVALENT METHOD APPROVED BY THE CODE OFFICIAL.

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PARRISH MASTER PUMP STATION
12110 ERIE ROAD, PARRISH, FLORIDA
MECHANICAL NOTES, DETAILS, AND SCHEDULES

Project No.	15-585
Drawn By	CRB
Checked By	RLC
Date	09.02.15

Revisions:

Christopher R. Baker
PE 0057962

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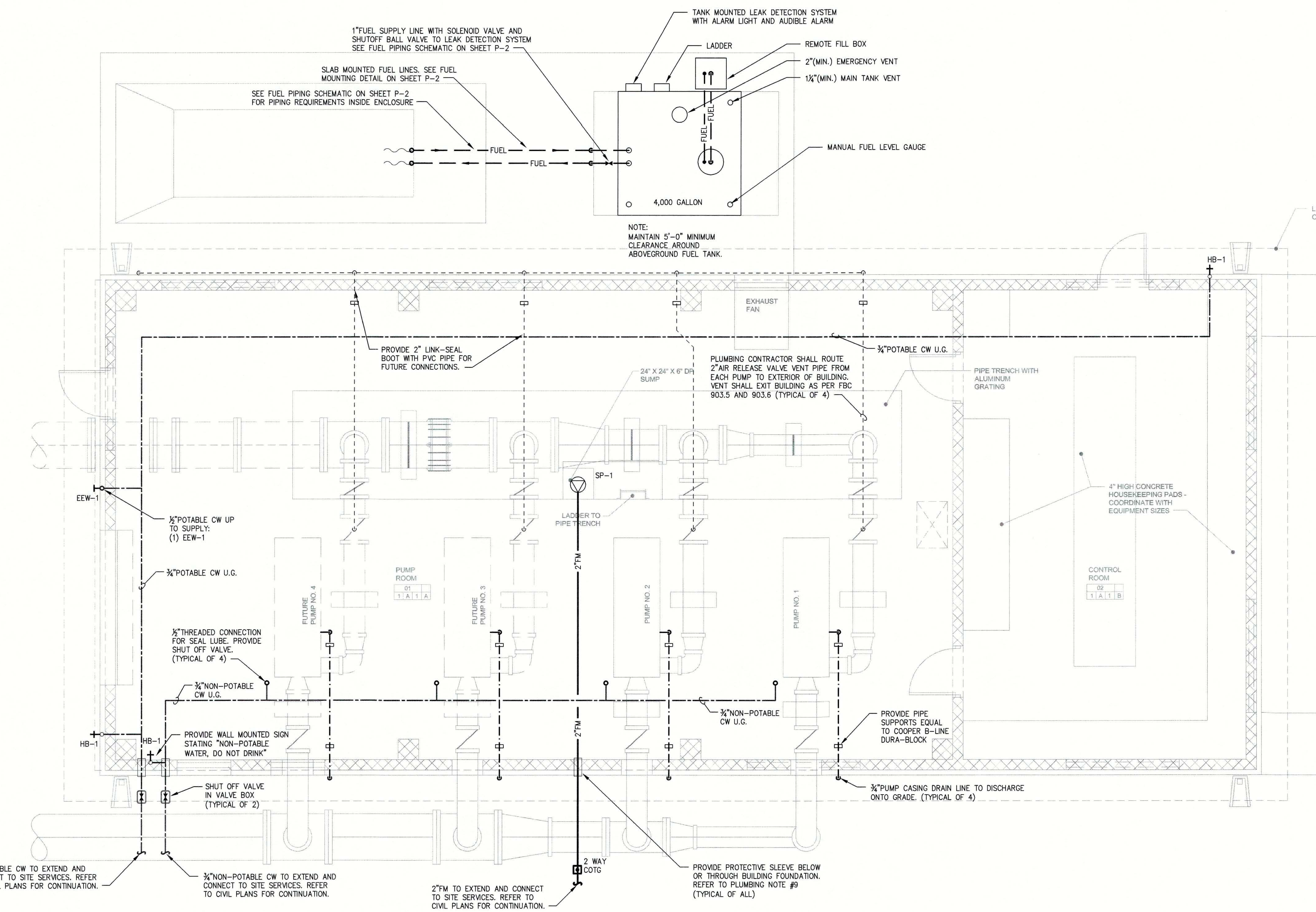
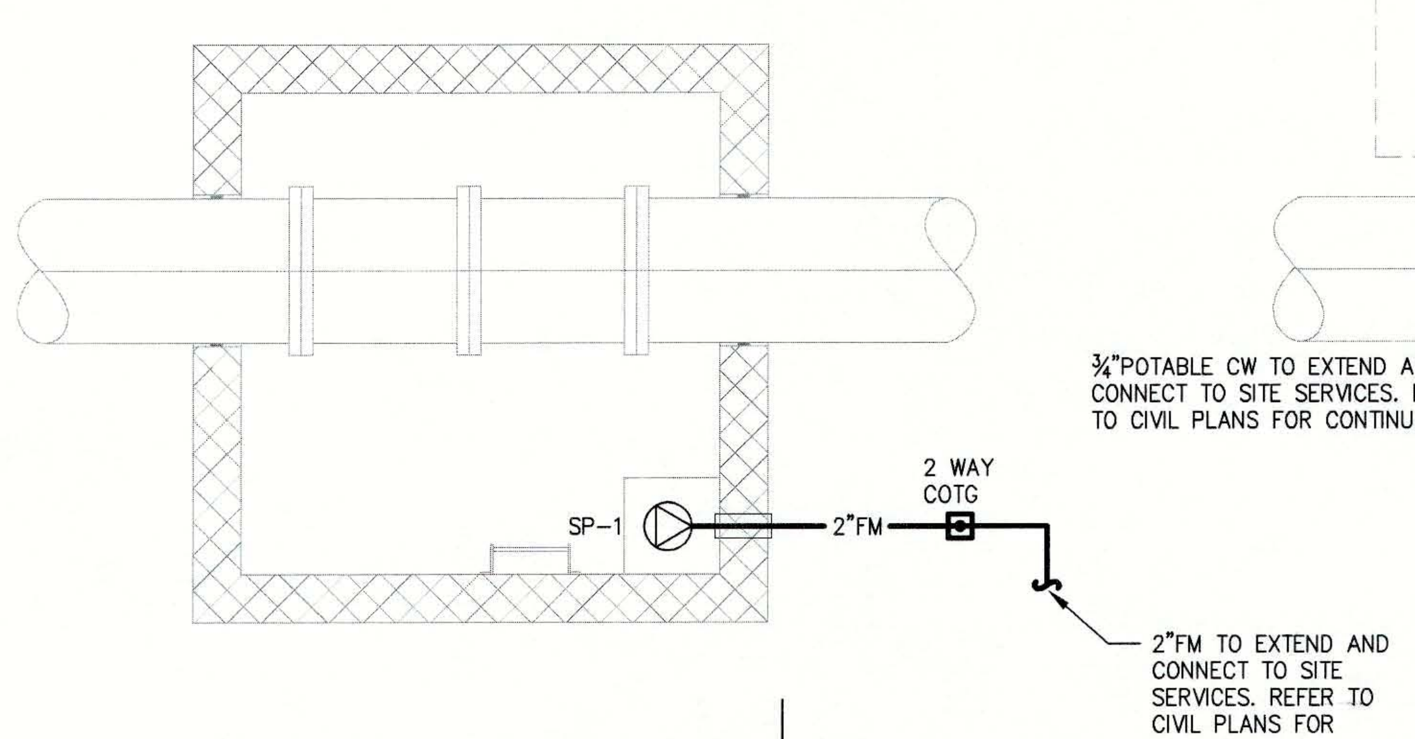
CONSTRUCTION DRAWINGS

M-2





INFLUENT FLOW METER VAULT 2

1/4" = 1'-0"

PLUMBING PLAN 1

1/4" = 1'-0"

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PLUMBING PLAN

Project No.	15-585
Drawn By	AJR
Checked By	RLC
Date	09.02.15

Revisions:

Jon D. Shepard
PE 0071536

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CONSTRUCTION DRAWINGS

P-1

Originals printed @ 24" x 36" scale as required

PLUMBING GENERAL NOTES:

1. DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT OF SYSTEMS AND WORK INCLUDED IN THE CONTRACT. DRAWINGS ARE NOT TO BE SCALED. THE ARCHITECTURAL DRAWINGS AND DETAILS SHALL BE EXAMINED FOR EXACT LOCATION OF FIXTURES AND EQUIPMENT. SYSTEMS SHALL INCLUDE ALL APPURTENANCES AS REQUIRED TO ACHIEVE THE OPERATING CONDITIONS AS SHOWN AND SPECIFIED AND SHALL RESULT IN A SUPERIOR INSTALLATION. INFORMATION CONTAINED ON THE DRAWINGS BUT NOT IN THE SPECIFICATIONS OR IN THE SPECIFICATIONS BUT NOT ON THE DRAWINGS ARE INTENDED TO BE IN BOTH. MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED BUT NECESSARY FOR PROPER OPERATION AND CONSISTENT WITH GOOD WORKMANSHIP WILL BE INCLUDED IN THE ESTIMATE, THE SAME AS IF SHOWN ON THE DRAWINGS. ANY CONFLICT SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER BEFORE PROCEEDING WITH THE WORK.
2. THE PLUMBING CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIAL, LABOR, ETC. NECESSARY TO PROVIDE A COMPLETE, WORKABLE AND CODE APPROVED PLUMBING SYSTEM. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS, LOCAL, STATE AND NATIONAL CODES.
3. THE PLUMBING CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, OBTAIN ALL PERMITS AND PAY ALL GOVERNMENT FEES, SALES TAXES AND OTHER COSTS IN CONNECTION WITH HIS WORK; FILE ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION; OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK; AND DELIVER TO THE ARCHITECT THE SAME CERTIFICATES BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.
4. ALL WORK SHALL BE GUARANTEED, BOTH MATERIAL AND INSTALLATION, FOR A PERIOD OF ONE YEAR FROM ACCEPTANCE BY OWNER.
5. FURNISH SIX (6) COPIES OF SHOP DRAWINGS OF EQUIPMENT OR FIXTURES FOR APPROVAL PRIOR TO PURCHASING.
6. CONTRACTOR SHALL KEEP A RECORD OF THE LOCATIONS OF ALL CONCEALED WORK AND UPON COMPLETION OF THE JOB, SHALL SUPPLY ACAD QUALITY AS-BUILT DRAWINGS SHOWING ANY DEVIATION FROM THE ORIGINAL DRAWINGS. THESE DRAWINGS SHALL INDICATE DIMENSIONS OF BURIED UTILITY LINES FROM BUILDING WALLS.
7. THE PLUMBING CONTRACTOR SHALL COORDINATE WITH ALL TRADES FOR PIPE ROUTING AND INSTALLATION OF EQUIPMENT AND SYSTEMS TO PROVIDE FOR REQUIRED CLEARANCES.
8. ALL OPENINGS THROUGH FIRE RATED WALLS OR FLOORS SHALL BE SEALED WITH A U.L. LISTED PENETRATION AND SHALL MAINTAIN THE FIRE RATED INTEGRITY OF THE WALL OR FLOOR. THE CONTRACTOR SHALL VERIFY FIRE RATINGS WITH ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.
9. PIPE PASSING THROUGH PIT WALLS, BUILDING WALLS, AND BUILDING FLOORS BELOW GRADE SHALL BE PROVIDED WITH SLEEVES OF STANDARD WEIGHT GALVANIZED STEEL PIPE. THE ANNULAR SPACES BETWEEN PIPE AND SLEEVES SHALL BE SEALED WITH LINK SEAL HYDROSTATIC PIPE WALL SEAL. SLEEVES SHALL BE SIZED AS FOLLOWS:

   3" PIPE – 6" ID SLEEVE
   4" PIPE – 8" ID SLEEVE
   6" PIPE – 10" ID SLEEVE
   8" PIPE – 12" ID SLEEVE
   10" PIPE – 12" ID SLEEVE

10. BREAKAGE AND CORROSION: PIPES PASSING UNDER OR THROUGH WALLS SHALL BE PROTECTED FROM BREAKAGE. PIPES PASSING THROUGH CONCRETE OR CINDER WALLS AND FLOORS OR OTHER CORROSIVE MATERIAL SHALL BE PROTECTED AGAINST EXTERNAL CORROSION BY A PROTECTIVE SHEATHING OR WRAPPING OR OTHER MEANS THAT WILL WITHSTAND ANY REACTION FROM LIME AND ACID OF CONCRETE, CINDER OR OTHER CORROSIVE MATERIAL. SHEATHING OR WRAPPING SHALL ALLOW FOR EXPANSION AND CONTRACTION OF PIPING TO PREVENT ANY RUBBING ACTION. MINIMUM WALL THICKNESS OF MATERIAL IS TO BE 0.025 INCH.
11. CONTRACTOR SHALL EXTEND AS NECESSARY AND CONNECT BUILDING DRAIN AND POTABLE WATER LINES TO EXISTING SERVICE LINES AT LOCATION ON SITE OR IN BUILDING AS REQUIRED. VERIFY EXACT LOCATION AND INVERT ELEVATION OF SERVICE CONNECTIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF THE DISTANCE TO SITE SERVICES EXCEED TEN (10) LINEAR FEET FROM THE BUILDING.

POTABLE WATER PIPING:

12. INTERIOR ABOVE AND BELOW GROUND WATER PIPING SHALL BE (CPVC) CHLORINATE POLYVINYL CHLORIDE PLASTIC PIPE AND TUBING (ATSM D-2846) FLOWGUARD OR EQUIVALENT WITH APPROVED CPVC SOLVENT WELDED FITTINGS. CPVC WATER PIPING SHALL NOT BE RUN IN RETURN AIR PLENUM OR FIRE RATED ASSEMBLIES UNLESS ALLOWED BY LOCAL JURISDICTION.
13. EXTERIOR BUILDING SERVICE SHALL BE SCHEDULE 40 PVC (ASTM D-1785) WITH APPROVED PVC SOLVENT WELDED FITTINGS.
14. THE BACKFLOW PREVENTOR AND THE WATER METER ARE EXISTING TO REMAIN.
15. PROVIDE VACUUM BREAKERS AS REQUIRED BY CODE.
16. TEST ALL WATER PIPING AT 100 PSIG FOR TWENTY-FOUR (24) HOURS OR AS REQUIRED BY CODE.
17. STERILIZE ALL WATER PIPING IN ACCORDANCE WITH HEALTH DEPARTMENT REGULATIONS AND AMERICAN WATER WORKS SPECIFICATIONS.
18. SUPPORT ALL WATER PIPING WITH PIPE HANGERS BY GRINNELL OR EQUAL.
19. PROVIDE ACCESS DOORS WHERE NECESSARY TO SERVICE SEALS, VALVES, TRAPS, CLEAN-OUTS, AIR CHAMBERS/WATER HAMMER ARRESTORS, ETC. ALL ACCESS DOORS IN TOILET ROOMS SHALL BE STAINLESS STEEL.
20. PROVIDE DIELECTRIC UNIONS OR FITTINGS WHENEVER FERROUS AND NON-FERROUS PIPES ARE JOINED.
21. THIS SYSTEM WAS DESIGNED TO 50 PSI STATIC PRESSURE WITH RESIDUAL PRESSURE OF 20 PSI AT 1000 GPM FROM THE NEAREST FIRE HYDRANT. THESE CONDITIONS SHALL BE VERIFIED BY THE PLUMBING CONTRACTOR PRIOR TO PROCEEDING WITH THE INSTALLATION. NOTIFY THE ENGINEER IMMEDIATELY IF FLOW AND PRESSURES OBTAINED ARE BELOW THOSE CONTAINED IN THIS PARAGRAPH.

FORCE MAIN PIPING:

22. FORCE MAIN PIPING SHALL BE SCHEDULE 40 PVC (ASTM D-2665) WITH APPROVED PVC SOLVENT WELDED FITTINGS. COMPLY WITH 2014 FLORIDA BUILDING CODE. PVC PIPING SHALL NOT BE RUN IN RETURN AIR PLENUM OR FIRE RATED ASSEMBLIES.
23. FORCE MAIN PIPING, 2-1/2" AND SMALLER, SHALL BE SLOPED AT 1/4" PER FOOT. LARGER WASTE PIPING SHALL BE SLOPED AT 1/8" PER FOOT.
24. FORCE MAIN PIPING BY A 10' WATER COLUMN FOR TWENTY-FOUR (24) HOURS OR AS REQUIRED BY THE BUILDING DEPARTMENT.

POTABLE WATER FIXTURE UNITS SCHEDULE

Quantity	Fixture	Occupancy	Cold	Cold total	Hot	Hot total	Total	Combined
1	EMERGENCY EYEWASH STATION	PRIVATE	0	0	0	0	0	0
2	HOSE BIB OR WALL FAUCET	PUBLIC OR PRIVATE	3	6	0	0	3	6
			C. total	6	H. total	0	Wtr total	6

FLUSH TANK WATER SUPPLY DEMAND: 10.7 GALLONS PER MINUTE

RECOMMENDED SERVICE SIZE 3/4"

NON-POTABLE WATER FIXTURE UNITS SCHEDULE

Quantity	Fixture	Occupancy	Cold	Cold total	Hot	Hot total	Total	Combined
4	PUMP – SEAL LUBE CONNECTION	PRIVATE	0.25	1	0	0	0.25	1
1	HOSE BIB OR WALL FAUCET	PUBLIC OR PRIVATE	3	3	0	0	3	3
			C. total	4	H. total	0	Wtr total	4

FLUSH TANK WATER SUPPLY DEMAND: 8 GALLONS PER MINUTE

RECOMMENDED SERVICE SIZE 3/4"

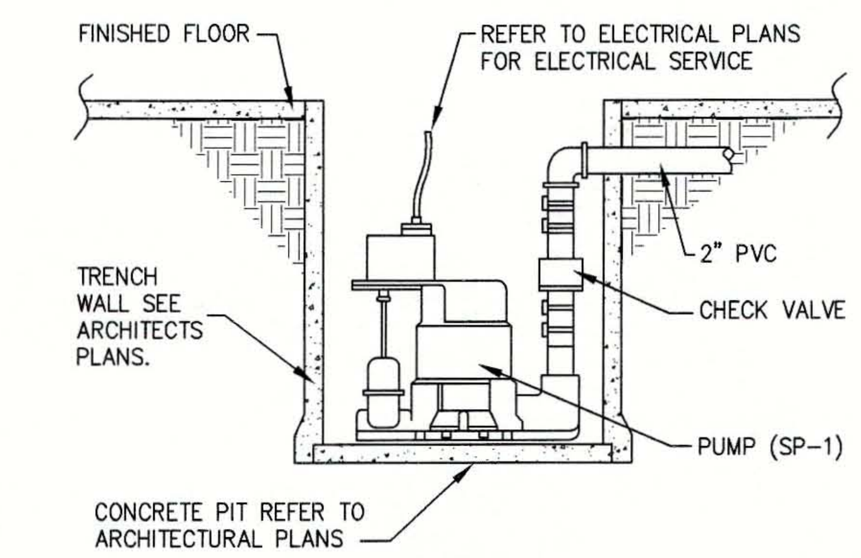
PLUMBING SYMBOL LEGEND

ABV.	DESCRIPTION	SYMBOL	ABV.	DESCRIPTION
AFF	ABOVE FINISH FLOOR	—FM—	FM	FORCE MAIN LINE
AMV	AIR ADMITTANCE VALVE	- - - - - -	V	VENT LINE
BFF	BELOW FINISH FLOOR	— — GT — —	GT	WASTE TO GREASE TRAP LINE
CONT	CONTINUATION		CW	DOMESTIC COLD WATER LINE
CPVC	CHLORINATED POLYVINYL CHLORIDE		HW	DOMESTIC HOT WATER LINE
°F	DEGREE FAHRENHEIT		HWR	DOMESTIC HOT WATER RECIRCULATING LINE
F.A.	FROM ABOVE	— —FUEL— —	FUEL	ENGINE FUEL LINE
F.B.	FROM BELOW	—SD—	SD	STORM DRAIN LINE
GPH	GALLONS PER HOUR			SLEEVE THROUGH EXTERIOR WALL
GPM	GALLONS PER MINUTE		2 WAY C.O.	2 WAY CLEAN OUT
MAX. I.E.	MAXIMUM INVERT ELEVATION		C.O.	CLEAN OUT
MIN. I.E.	MINIMUM INVERT ELEVATION		2 WAY COTG	2 WAY CLEAN OUT TO GRADE
KW	KILOWATT		COTG	CLEAN OUT TO GRADE
LBS	POUNDS		WCO	WALL CLEAN OUT
NC	NORMALLY CLOSED		HB	HOSE BIBB
NIC	NOT IN CONTRACT			PIPE DROP (ELBOW)
NO	NORMALLY OPEN			PIPE RISE (ELBOW)
NTS	NOT TO SCALE			CAP ON END OF PIPE
OD	OUTSIDE DIAMETER		FD	FLOOR DRAIN
OFST	OVERFLOW STORM DRAIN		FS / CWD	FLOOR SINK / CAN WASH DRAIN
PRV	PRESSURE REDUCING VALVE		FH	FLOOR HUB
PSI	POUNDS PER SQUARE INCH		---	GATE VALVE
PVC	POLYVINYL CHLORIDE PIPE		---	CHECK VALVE
RD	ROOF DRAIN		---	PLUG VALVE (GAS)
SF	SQUARE FEET		---	BUTTERFLY VALVE
U.G.	UNDER GROUND		---	UNION
VEL	VELOCITY		---	BALANCING VALVE
VTR	VENT THRU ROOF		T.P.V.	TEMP / PRESS RELIEF VALVE
●	CONNECT TO EXISTING		---	BALL VALVE
NOTE:	ALL SYMBOLS AND ABBREVIATIONS DO NOT NECESSARILY APPLY TO THIS PROJECT		---	REVISION CLOUD
			RPBP	REDUCED PRESSURE BACK FLOW PREVENTOR

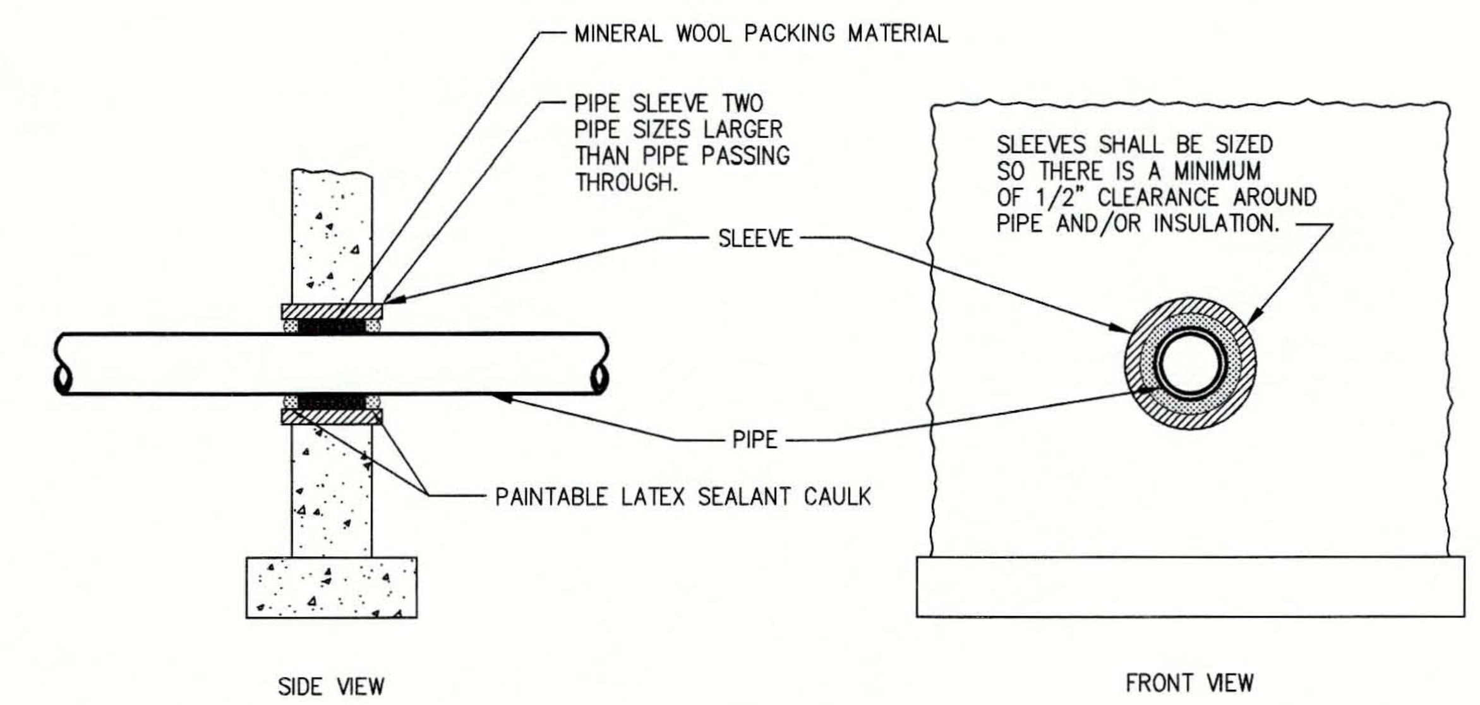
PLUMBING FIXTURE & CONNECTION SCHEDULE

MARK	FIXTURE, MODEL #, DESCRIPTION	ROUGH-IN WASTE	ROUGH-IN VENT	ROUGH-IN CW	ROUGH-IN HW
HB-1	HOSE BIBB WOODFORD MODEL 24P WALL FAUCET WITH MODEL 34HF VACUUM BREAKER, 3/4" MALE HOSE THREAD.	---	---	3/4"	---
EEW-1	EMERGENCY EYEWASH GUARDIAN EQUIPMENT #G1771 EYEWASH UNIT WITH 1/2" CHROME PLATED BRASS STAY-OPEN BALL VALVE WITH FLIP TOP DUST COVERS FOR EACH SPRAY HEAD. OUTLET HEADS SHALL BE POSITIONED BETWEEN 33" AND 45" FROM THE FLOOR AND AT LEAST 6" FROM WALL OR NEAREST OBSTRUCTION. VERIFY FINAL MOUNTING HEIGHT AND LOCATION WITH ARCHITECT.	---	---	1/2"	---
SP-1	SUMP PUMP ZOELLER #M292 AUTOMATIC PUMP, SINGLE SEAL, 20' CORD, 1/2 H.P., 115 VOLTS, 1 PHASE, 15 AMPS.	2"	---	---	---

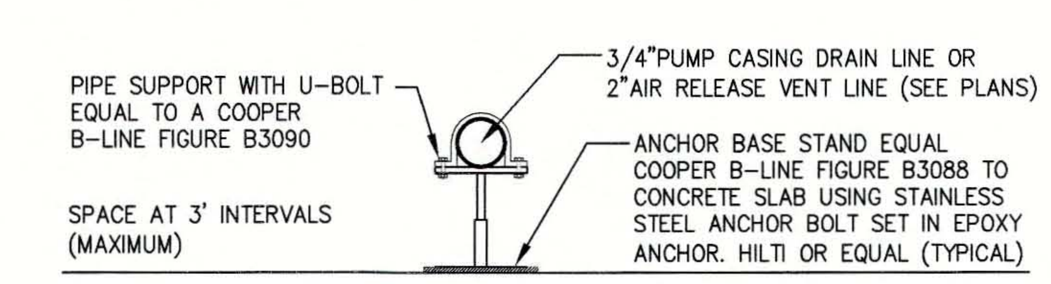
NOTES:
1. INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS AND DIAGRAMS.
2. PLUMBING FIXTURES/ EQUIPMENT SUBSTITUTIONS ALLOWED ONLY THROUGH APPROVAL OF ENGINEER.
3. PROVIDE BRASS CRAFT OR EQUAL STOPS ON ALL NON-FLUSH VALVE FIXTURES.
4. PROVIDE CHROME PLATED SUPPLIES ON SUPPLIES STOPS EXPOSED TO VIEW. AT CONTRACTOR'S OPTION SUPPLIES CONCEALED TO VIEW MAYBE TYPE "L" SOFT DRAWN COPPER. "px" AND POLYBUTYLENE ARE NOT APPROVED.



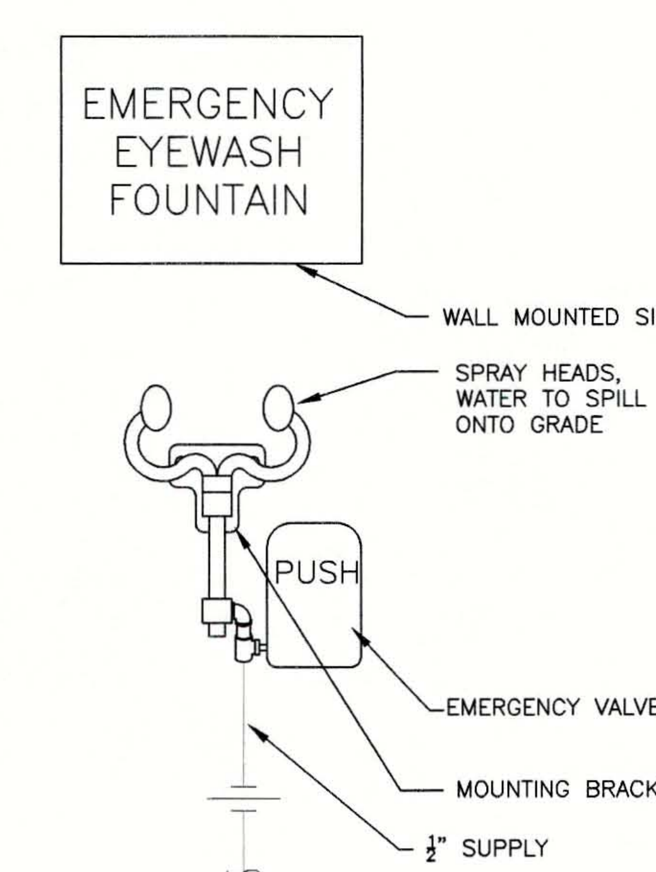
SUMP PUMP DETAIL
SCALE: NONE



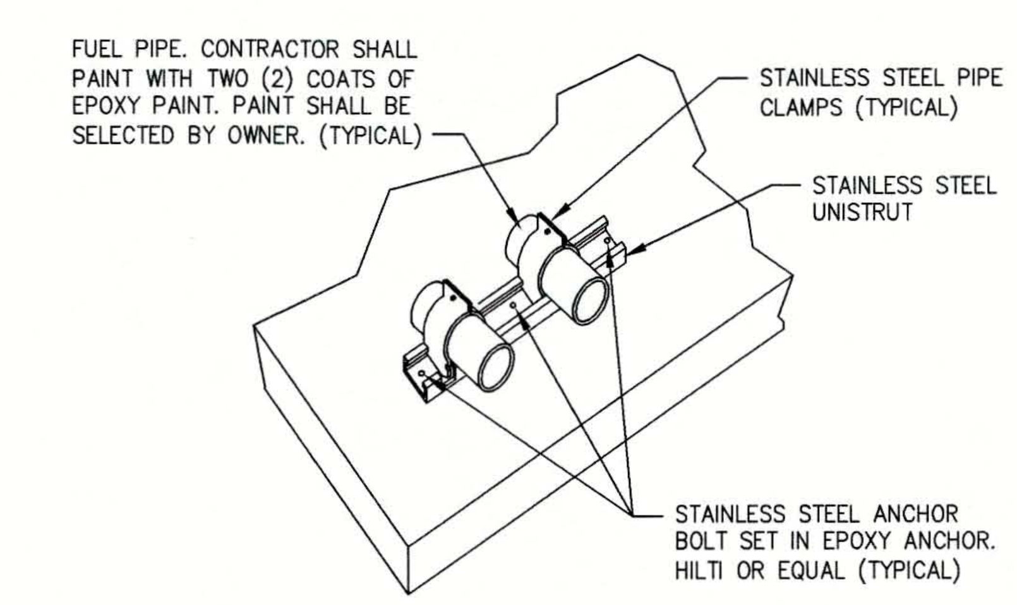
WALL PENETRATION DETAIL
SCALE: NONE



FLOOR MOUNTED PIPE SUPPORT DETAIL
SCALE: NONE



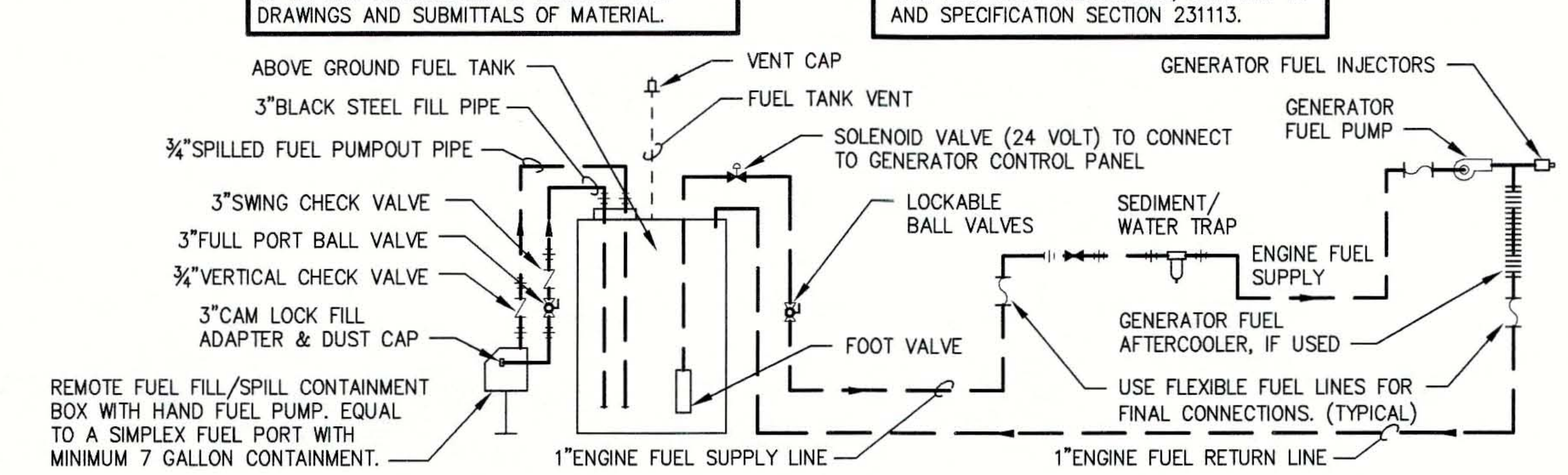
WALL MOUNTED EMERGENCY EYEWASH DETAIL
SCALE: NONE



FUEL PIPING MOUNTING DETAIL
SCALE: NONE

NOTE:
VALVES AND FITTINGS SHALL BE FULL LINE SIZE OF PIPING. CONTRACTOR TO PROVIDE SHOP DRAWINGS AND SUBMITTALS OF MATERIAL.

NOTE:
FUEL PIPING INSTALLATION SHALL COMPLY WITH FBC-2014-MECHANICAL, CHAPTER 13 AND SPECIFICATION SECTION 231113.



FUEL PIPING SCHEMATIC
SCALE: NONE

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PARRISH MASTER PUMP STATION
12110 ERIE ROAD, PARRISH, FLORIDA
PLUMBING NOTES, DETAILS, AND SCHEDULES

Project No.	15-585
Drawn By	AJR
Checked By	RLC
Date	09.02.15

Revisions:

JON DANIEL SHEPARD
No. 71536
STATE OF FLORIDA
PROFESSIONAL ENGINEER

Jon D. Shepard
PE 0071536

"To the best of the Architect's or Engineer's knowledge, the plans and specifications comply with the applicable minimum building codes and applicable fire safety standards as determined by local authority in accordance with Chapter 553 and 663 of Florida Statutes."

CONSTRUCTION DRAWINGS

P-2

PLUMBING NOTES, DETAILS, AND SCHEDULES 1

Originals printed @ 24" x 36" scale as required

STRUCTURAL NOTES
ELECTRONIC VERSIONS OF STRUCTURAL DRAWINGS ARE THE SOLE, COPYRIGHTED PROPERTY OF HEES & ASSOCIATES, INC. ELECTRONIC VERSIONS OF DRAWINGS ARE NOT TO BE USED OR TRANSFERRED WITHOUT THE EXPRESS, WRITTEN PERMISSION OF HEES & ASSOCIATES, INC.

GENERAL NOTES:
STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR DEPRESSIONS, AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS.

DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.

THE STRUCTURE IS DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO INSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUYS OR TIEDOWNS.

DESIGN LOADS:
THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, 2014. THE FOLLOWING SUPERIMPOSED LOADINGS HAVE BEEN UTILIZED:

ROOF:

LIVE LOAD – 20 psf. (TOP CHORD)
10 psf. (NON-HABITABLE WITHOUT STORAGE)
DEAD LOAD – 25 psf. (TOP CHORD)
10 psf. (BOTTOM CHORD)
5 psf. (AVAILABLE TO RESIST UPLIFT)

FLOOR & GRATING:

LIVE LOAD – 250 psf. OR 4,000# CONCENTRATED LOAD
– CRANE CAPACITY 5,000#; WHEEL LOAD MAX.= 3,188# (BASE OF 4'-6")

WIND:

Vult = 150 MPH, Vasd =116 MPH.
EXPOSURE C, RISK CATEGORY II,
INT. PRESS. COEFF. ±0.18 THIS STRUCTURE IS DESIGNED AS AN ENCLOSED STRUCTURE.

SEISMIC (FLORIDA):

IN ACCORDANCE WITH THE PREFACE OF THE 2014 FLORIDA BUILDING CODE, SEISMIC AND SNOW LOADS WERE NOT UTILIZED FOR THIS PROJECT: "THE FLORIDA BUILDING CODE IS BASED ON NATIONAL MODEL BUILDING CODES AND NATIONAL CONSENSUS STANDARDS WHICH ARE AMMENDED WHERE NECESSARY FOR FLORIDA'S SPECIFIC NEEDS. HOWEVER, CODE REQUIREMENTS THAT ADDRESS SNOW AND SEISMIC LOADS ARE PERVASIVE; THEY ARE LEFT IN PLACE BUT SHOULD NOT BE UTILIZED OR ENFORCED BECAUSE FLORIDA HAS NO SNOW LOAD OR EARTHQUAKE THREAT."

SHOP DRAWING REVIEW:
SHOP DRAWINGS WILL BE PROVIDED FOR ALL WORK AND WILL BE REVIEWED FOR GENERAL COMPLIANCE WITH THE DESIGN INTENT OF THE CONTRACT DOCUMENTS ONLY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY COMPLIANCE WITH THE CONTRACT DOCUMENTS AS TO QUANTITY, LENGTH, ELEVATIONS, DIMENSIONS, ETC. SHOP DRAWINGS SHALL BE REVIEWED BY THE CONTRACTOR AND OWNER'S REP PRIOR TO SUBMITTAL TO THE ARCHITECT/ENGINEER. DRAWINGS SUBMITTED WITHOUT REVIEW WILL BE RETURNED UNCHECKED. SHOP DRAWING SUBMITTALS SHALL INCLUDE ONE SEPIA AND THREE SETS OF PRINTS. ONE SET OF PRINTS WILL BE RETAINED BY THE ENGINEER, ONE BY THE ARCHITECT, ONE BY THE LOCAL BUILDING DEPARTMENT (WHERE REQUIRED) AND THE CONTRACTOR SHALL MAKE PRINTS FROM THE ORIGINALS AS REQUIRED FOR DISTRIBUTION. IN ALL INSTANCES THE CONTRACT DOCUMENTS WILL GOVERN OVER THE SHOP DRAWINGS UNLESS OTHERWISE SPECIFIED IN WRITING BY THE ENGINEER.

SHOP DRAWINGS FOR SPECIALTY ENGINEERED PRODUCTS:
ALL SPECIALTY ENGINEERED PRODUCTS OR SYSTEMS REQUIRE SIGNED & SEALED CALCULATIONS AND FABRICATION AND ERECTION DRAWINGS PREPARED BY A DELEGATED ENGINEER.

THIS INCLUDES BUT IS NOT LIMITED TO CANOPIES, PRE-ENGINEERED TRUSSES, ICF WALL SYSTEMS, ALL LIGHT GAUGE METAL STUD FRAMING SYSTEMS, ALUMINUM WALL SYSTEMS, GLAZED CURTAIN WALLS, PREFABRICATED STEEL STAIRS & RAILINGS, ARCHITECTURAL PRECAST CONCRETE ELEMENTS, STRUCTURAL PRECAST OR TILT-UP SYSTEMS, GLASS FIBER REINFORCED CONCRETE PANEL SYSTEMS, OPEN WEB STEEL JOISTS, STRUCTURAL STEEL CONNECTIONS REQUIRING ENGINEERING, TILT-WALL ERECTION DRAWINGS, GLULAM BEAMS, TECTUM PLANKS, PEMB, ETC.

SUBMITTALS SHALL CLEARLY IDENTIFY THE SPECIFIC PROJECT AND APPLICABLE CODES, LIST THE DESIGN CRITERIA, AND SHOW ALL DETAILS AND PLANS NECESSARY FOR PROPER FABRICATION AND INSTALLATION. CALCULATIONS AND SHOP DRAWINGS SHALL IDENTIFY SPECIFIC PRODUCT UTILIZED. GENERIC PRODUCTS WILL NOT BE ACCEPTED.

SHOP DRAWINGS AND CALCULATIONS SHALL BE PREPARED UNDER THE DIRECT SUPERVISION AND CONTROL OF THE DELEGATED ENGINEER. SHOP DRAWINGS AND CALCULATIONS REQUIRE THE IMPRESSED SEAL, DATE AND SIGNATURE OF THE DELEGATED ENGINEER.

COMPUTER PRINTOUTS ARE AN ACCEPTABLE SUBSTITUTE FOR MANUAL COMPUTATIONS PROVIDED THEY ARE ACCOMPANIED BY SUFFICIENT DESCRIPTIVE INFORMATION TO PERMIT THEIR PROPER EVALUATION. SUCH DESCRIPTIVE INFORMATION SHALL BEAR THE IMPRESSED SEAL AND SIGNATURE OF THE DELEGATED ENGINEER AS AN INDICATION THAT HE/SHE HAS ACCEPTED RESPONSIBILITY FOR THE RESULTS. SEPIAS DO NOT REQUIRE SIGNATURE AND SEAL. THE STRUCTURAL ENGINEER WILL RETAIN ONE SIGNED AND SEALED BLUELINE PRINT FOR RECORD.

DRAWINGS PREPARED SOLELY TO SERVE AS A GUIDE FOR FABRICATION AND INSTALLATION (SUCH AS REINFORCING STEEL SHOP DRAWINGS OR STRUCTURAL STEEL ERECTION DRAWINGS) AND REQUIRING NO ENGINEERING DO NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.

CATALOG INFORMATION ON STANDARD PRODUCTS DOES NOT REQUIRE THE SEAL OF A DELEGATED ENGINEER.

REVIEW BY THE STRUCTURAL ENGINEER OF RECORD OF SUBMITTALS IS LIMITED TO VERIFYING THE FOLLOWING:

a) THAT THE SPECIFIED STRUCTURAL SUBMITTALS HAVE BEEN FURNISHED.

b) THAT THE STRUCTURAL SUBMITTALS HAVE BEEN SIGNED AND SEALED BY THE DELEGATED ENGINEER.

c) THAT THE DELEGATED ENGINEER HAS UNDERSTOOD THE DESIGN INTENT AND HAS USED THE SPECIFIED STRUCTURAL CRITERIA. (NO DETAILED CHECK OF CALCULATIONS WILL BE MADE).

d) THAT THE CONFIGURATION SET FORTH IN THE STRUCTURAL SUBMITTALS IS CONSISTENT WITH THE CONTRACT DOCUMENTS. (NO DETAILED CHECK OF DIMENSIONS OR QUANTITIES WILL BE MADE).

SUBMITTALS NOT MEETING THE CRITERIA LISTED IN THIS SECTION WILL NOT BE REVIEWED.

FOUNDATIONS:
ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 2,000 psf ON COMPACTED FILL. BEFORE CONSTRUCTION COMMENCES, SOIL BEARING CAPACITY SHALL BE VERIFIED BY A SUBSURFACE INVESTIGATION, AS WELL AS FIELD AND LABORATORY TESTS PERFORMED BY A CERTIFIED TESTING LABORATORY, WHOSE REPORT SHALL INCLUDE ANALYSIS AND RECOMMENDATIONS FOR SITE PREPARATION IN ORDER TO BEAR THE FOUNDATION LOADS. ABOVE REPORT SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW BEFORE FOUNDATION CONSTRUCTION BEGINS.

FORMWORK AND SHORING:
NO STRUCTURAL CONCRETE SHALL BE STRIPPED UNTIL IT HAS REACHED AT LEAST TWO THIRDS OF THE 28 DAY DESIGN STRENGTH. DESIGN, ERECTION AND REMOVAL OF ALL FORMWORK, SHORES AND RESHORES SHALL MEET THE REQUIREMENTS SET FORTH IN ACI STANDARDS 347 AND 301.

PLUMBING SLEEVES:
SLEEVE LOCATIONS AND SIZES MUST BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. MINIMUM SLEEVE SPACING SHALL BE THREE DIAMETERS CENTER TO CENTER OF THE LARGER SLEEVE OR 6" CLEAR BETWEEN SLEEVES, WHICHEVER IS GREATER. SLEEVES OR GROUPS OF SLEEVES 16 INCH IN DIAMETER AND LARGER SHALL BE TREATED AS A SLAB OPENING AND REINFORCED PER TYPICAL OPENING REINFORCING DETAILS.

EMBEDDED CONDUITS:
LOCATIONS AND SIZES OF CONDUIT MUST BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT. WITHIN SLABS, BEAMS OR WALLS, CONDUIT SHALL OCCUPY ONLY THE MIDDLE ONE THIRD OF THE MEMBER DEPTH OR THICKNESS. MAXIMUM CONDUIT O.D. FOR SINGLE CONDUITS OR SUM OF O.D.'S FOR MULTIPLE CONDUITS THAT CROSS SHALL BE NO LARGER THAN ONE THIRD THE SLAB DEPTH. PARALLEL CONDUITS SHALL BE SPACED WITH A MINIMUM OF 3 DIAMETERS CLEAR. CONDUITS SHALL BE A MINIMUM OF ONE DIAMETER AWAY FROM AND SHALL NOT INTERFERE WITH OR DISPLACE ANY REINFORCING. CONDUIT SHALL NOT BE TIED TO REINFORCING. CONDUITS SHALL NOT OCCUR WITHIN COLUMN ZONES OF SLABS AND OR TRANSFER GIRDERS. CONDUIT PLACEMENT SHALL NOT IMPAIR THE STRENGTH OF THE CONSTRUCTION AS JUDGED BY THE ENGINEER.

REINFORCING STEEL:
SHALL BE ASTM A615 GRADE 60 DEFORMED BARS, FREE FROM OIL, SCALE AND RUST AND PLACED IN ACCORDANCE WITH THE TYPICAL BENDING DIAGRAM AND PLACING DETAILS OF ACI STANDARDS AND SPECIFICATIONS. SECURE APPROVAL OF SHOP DRAWINGS PRIOR TO COMMENCING FABRICATION.

CONCRETE:
SHALL BE PER AN APPROVED MIX DESIGN PROPORTIONED TO ACHIEVE A STRENGTH AT 28 DAYS AS LISTED BELOW WITH A PLASTIC AND WORKABLE MIX:

4000psi FOR ALL CONCRETE

CONCRETE SHALL BE PLACED AND CURED ACCORDING TO ACI STANDARDS AND SPECIFICATIONS.

SUBMIT PROPOSED MIX DESIGN WITH RECENT FIELD CYLINDER OR LAB TESTS FOR REVIEW PRIOR TO USE. MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER OR OTHER POSITIVE IDENTIFICATION. MIX SHALL MEET THE REQUIREMENTS OF ASTM C33 FOR COARSE AGGREGATE. CONCRETE SHALL COMPLY WITH THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING, MIXING, TRANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED. THE MAXIMUM TIME ALLOWED FROM THE TIME THE MIXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHALL NOT EXCEED ONE AND ONE HALF (1-1/2) HOURS. IF FOR ANY REASON THERE IS A LONGER DELAY THAN THAT STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE. SLABS SHALL BE CURED USING A DISSIPATING CURING COMPOUND MEETING ASTM STANDARD C309 TYPE 1-D AND SHALL HAVE A FUGITIVE DYE. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY. CALCIUM CHLORIDES SHALL NOT BE UTILIZED; OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER.

CONSTRUCTION OR CONTROL JOINTS SHALL BE PROVIDED IN SLABS ON GRADE SO THAT THE MAXIMUM AREA OF THE SLAB BETWEEN JOINTS SHALL BE 225 SQUARE FEET, OR AS SHOWN ON THE PLANS. SAW CUT CONTROL JOINTS SHALL BE MADE AS SOON AS SLAB WILL SAFELY SUPPORT MEN AND EQUIPMENT AND THE SLAB WILL NOT BE DAMAGED BY EQUIPMENT, BUT NO LATER THAN 24 HOURS. ASPECT RATIO (LONGSIDE TO SHORTSIDE OF CONCRETE AREA) SHALL NOT EXCEED 1.5. NO EMBEDDED ANGLES OR OTHER FIXED METAL ITEMS SHALL EXTEND THROUGH JOINTS, UNLESS OTHERWISE NOTED. EMBEDDED ANGLES AND OTHER FIXED METAL ITEMS SHALL BE CONTINUOUS BETWEEN CONCRETE JOINTS, UNLESS OTHERWISE NOTED. ENGINEER SHALL APPROVE LOCATION OF ALL JOINTS NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL.

CONCRETE MIX DESIGNS SHALL INCLUDE A WRITTEN DESCRIPTION INDICATING WHERE EACH PARTICULAR MIX IS TO BE PLACED WITHIN THE STRUCTURE. IF ACCEPTED, PEA ROCK PUMP MIX USE IS LIMITED TO VERTICAL ELEMENT POURS AND BEAM POURS LESS THAN 60 LINEAL FEET PER POUR.

CONCRETE DESIGN MIX SUBMITTALS SHALL INCLUDE TESTED, STATISTICAL BACK-UP DATA AS PER CHAPTER 5 OF ACI 318.

WATER/CEMENT RATIO FOR CONCRETE AT EXTERIOR BALCONIES OR CONCRETE EXPOSED TO WEATHER SHALL NOT EXCEED 0.40 BY WEIGHT.

CONCRETE TESTING:
AN INDEPENDENT TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST IN PLACE CONCRETE:

a)ASTM C143 "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT CONCRETE." MAXIMUM SLUMP SHALL BE 4 TO 6 INCHES.
b)ASTM C39 "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS." A SEPARATE TEST SHALL BE CONDUCTED FOR EACH CLASS, FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF), PLACED PER DAY. REQUIRED CYLINDER(S) QUANTITIES AND TEST AGE AS FOLLOWS:
1 AT 7 DAYS
2 AT 28 DAYS

ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE DIRECTION OF THE ENGINEER, IF REQUIRED. IF 28 DAY STRENGTH IS ACHIEVED, THE ADDITIONAL CYLINDER(s) MAY BE DISCARDED.

PENETRATIONS:
NO PENETRATIONS SHALL BE MADE IN ANY STRUCTURAL MEMBERS OTHER THAN THOSE LOCATED ON THE STRUCTURAL DRAWINGS WITHOUT PREVIOUS APPROVAL OF THE ENGINEER. CONTRACTOR SHOULD SUBMIT SLAB DRAWINGS INDICATING ANY CONCENTRATION OF PIPES, OPENINGS OR PENETRATIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS PRIOR TO CONCRETE POURS.

MASONRY WALLS:
MASONRY UNITS SHALL MEET ASTM C 90 FOR HOLLOW LOAD BEARING TYPE MASONRY WITH UNIT STRENGTH OF 1900 psi ON THE NET AREA (f'm = 1500 psi). MORTAR SHALL BE TYPE "M" OR "S" AND MEET ASTM C 270. GROUT SHALL BE 2000 psi MINIMUM COMPRESSIVE STRENGTH AND MEET ASTM C 476. PROVIDE HOOKED DOWELS IN FOOTINGS FOR VERTICAL REINFORCING ABOVE. LAP SPLICES 48 BAR DIAMETERS.

BLOCK CELLS SHALL BE GROUT FILLED WITH VERTICAL REINFORCING BARS AT CORNERS, INTERSECTIONS, EACH SIDE OF OPENINGS AND WALL CONTROL JOINTS AND AS SHOWN ON THE PLANS. DOWELS SHALL BE USED TO PROVIDE CONTINUITY INTO THE STRUCTURE ABOVE AND/OR BELOW, UNLESS NOTED OTHERWISE. USE METAL LATH, MORTAR, OR SPECIAL UNITS TO CONFINE CONCRETE AND GROUT TO AREA REQUIRED. MASONRY SHALL BE LAID IN RUNNING BOND PATTERN UNLESS NOTED OTHERWISE. ALL INTERSECTING WALLS SHALL BE INTERLOCKING.

PROVIDE 9 GAGE GALVANIZED HORIZONTAL JOINT REINFORCING (DUR O WALL LADDER TYPE, OR ENGINEER APPROVED SUBSTITUTION) AT ALTERNATE BLOCK COURSES. OVERLAP JOINT REINF. @ CORNERS.

SUBMIT PROPOSED GROUT MIX DESIGN FOR REVIEW PRIOR TO USE. MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER OR OTHER POSITIVE IDENTIFICATION. GROUT SLUMP SHALL BE BETWEEN 8 AND 11 INCHES. USE OF SUPERPLASTICIZER IS PROHIBITED.

CELLS TO BE GROUT FILLED SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED, CONTINUOUS VERTICAL GROUT SPACE. CLEANOUT OPENINGS SHALL BE PROVIDED AT THE BOTTOM OF CELLS TO BE GROUT FILLED IN EACH POUR IN EXCESS OF 5 FEET IN HEIGHT. ANY OVERHANGING MORTAR OR OTHER OBSTRUCTION OR DEBRIS SHALL BE REMOVED FROM THE INSIDES OF SUCH CELL WALLS. THE CLEANOUTS SHALL BE SEALED BEFORE GROUTING, AFTER INSPECTION.

VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 BAR DIAMETERS. CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLIDLY WITH GROUT. GROUT SHALL BE POURED IN LIFTS OF 4 FEET MAXIMUM HEIGHT. GROUT SHALL BE CONSOLIDATED AT TIME OF PLACING BY VIBRATING AND RECONSOLIDATED LATER BY VIBRATING BEFORE PLASTICITY IS LOST.

WHEN TOTAL GROUT POUR EXCEEDS 5 FEET IN HEIGHT, THE GROUT SHALL BE PLACED IN 4 FOOT LIFTS. MINIMUM CELL DIMENSION SHALL BE IN ACCORDANCE WITH TABLE 5 OF ACI 530.1 (3" X 3" FOR COARSE GROUT, 12 FT. MAXIMUM POUR HEIGHT).

WHEN THE GROUTING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE MADE BY STOPPING THE POUR OF GROUT NOT LESS THAN 1-1/2 INCH BELOW THE TOP OF THE UPPERMOST UNIT GROUTED.

WALL CONSTRUCTION JOINTS SHALL BE SPACED @ 24'-0" O.C. MAX. WITH TYP. VERT. REINF. AT EA. SIDE OF JOINT. HORIZONTAL JOINT REINF. SHALL TERMINATE 2" FROM EA. SIDE OF JOINT. BOND BEAM/TIE BEAM REINF. SHALL BE CONTINUOUS THROUGH WALL C.J.

INTERIOR CMU WALLS SHALL HAVE SMOOTH SURFACE. SEE ARCH'L. FOR FINISHING REQUIRED. SEE ARCH'L SPECIFICATIONS FOR MASONRY VENEER REQUIREMENTS.

LINTELS FOR MASONRY:
OPENINGS NOT PROVIDED WITH CONCRETE BEAMS SHALL BE SPANNED WITH PRECAST CONCRETE LINTELS WITH A WIDTH TO MATCH WALL WIDTH AND WITH 2#5 REINF. BARS, MIN.. ALL PRECAST LINTELS SHALL BEAR A MINIMUM OF 8" AT EACH END. PRECASTER TO DESIGN PRECAST LINTELS FOR LOADS NOTED ON THIS SHEET.

STRUCTURAL STEEL:
WIDE FLANGE SHAPES SHALL CONFORM TO ASTM A-572 OR A-992 GRADE 50 AND OTHER SHAPES SHALL CONFORM TO ASTM A36 AND "THE SPECIFICATION FOR DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC. SHOP CONNECTIONS TO BE WELDED (UTILIZING E70XX ELECTRODES) AND FIELD CONNECTIONS TO BE BOLTED, UNLESS OTHERWISE NOTED ON STRUCTURAL DRAWINGS. STEEL SHALL RECEIVE ONE SHOP COAT AND ONE FIELD TOUCH UP COAT OF APPROVED PAINT, EXCEPT WHERE GALVANIZING IS INDICATED ON THE DRAWINGS.

STRUCTURAL TUBING SHALL CONFORM TO ASTM A-500, GRADE B, Fy = 46 ksi. STRUCTURAL PIPE SHALL CONFORM TO ASTM A-53 GRADE B, TYPE E OR S, Fy = 35 ksi. BEAM CONNECTIONS TO TUBE COLUMNS SHALL BE A.I.S.C. THRU-PLATE TYPE UNLESS SHOWN OTHERWISE.

BOLTED CONNECTIONS SHALL CONSIST OF MINIMUM ¾ INCH DIAMETER ASTM A-325N HIGH STRENGTH BOLTS. BEAM CONNECTIONS SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED TO PRACTICE IN THE STATE OF FLORIDA FOR THE REACTIONS SHOWN ON THE PLANS. IF NOT SHOWN, THE ENGINEER SHALL DESIGN THE BEAM CONNECTIONS TO SUPPORT AN END REACTION OF W/2 KIPS FROM THE TABLES 3-6 "ALLOWABLE UNIFORM LOADS IN KIPS FOR BEAMS LATERALLY SUPPORTED" OF THE MANUAL OF STEEL CONSTRUCTION (14TH EDITION), BUT CONNECTIONS SHALL NOT HAVE LESS THAN 2 ROWS OF BOLTS. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GRADE 36 OR A-36 (THREADED ROD). A SIGNED & SEALED CALCULATION SUBMITTAL SHALL BE ISSUED WITH SHOP DRAWINGS FOR REVIEW BY THE ENGINEER-OF-RECORD.

WELDING:
WELDING SHALL BE DONE BY WELDERS WITH CURRENT CERTIFICATION USING ASTM E70 SERIES ELECTRODE FOR SHOP WELDING A36 STEEL, AND E70 SERIES LOW HYDROGEN ELECTRODES FOR ALL WELDING OF HIGH STRENGTH STEELS AND FOR FIELD WELDING.

WELDS SHOWN ON STRUCTURAL DRAWINGS ARE MINIMUM DESIGN REQUIREMENTS. THE FABRICATOR'S SHOP DRAWINGS SHALL REFLECT WELDS IN ACCORDANCE WITH AWS REQUIREMENTS.

ALL FULL PENETRATION GROOVE WELDS SHALL BE INSPECTED BY ULTRASONIC TESTING. TWENTY-FIVE PERCENT OF THE REMAINING WELDS SHALL BE INSPECTED AT RANDOM UNLESS NOTED OTHERWISE. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

UNLESS NOTED OTHERWISE ON THE DRAWINGS, GROOVE WELDS SHALL BE FULL PENETRATION.

PROVIDE FILLET WELDS AT CONTACT POINTS BETWEEN STEEL MEMBERS SUFFICIENT TO DEVELOP THE ALLOWABLE TENSILE STRENGTH OF THE SMALLER MEMBER AT THE JOINT UNLESS DETAILED OTHERWISE ON THE DRAWINGS.

WOOD:
WOOD: THE WOOD COMPONENTS SHALL BE IN ACCORDANCE WITH CHAPTER 23, WOOD, OF THE FBC 2014. AND STRUCTURAL WOOD COMPONENTS (BEAMS, JOISTS, RAFTERS, POSTS, ETC.) SHALL BE NO. 2 SOUTHERN PINE CONFORMING TO THE LATEST EDITION OF NDS.

ALL WOOD TO WOOD CONNECTIONS SHALL EMPLOY METAL ANCHORS. NO TOE OR END NAILING SHALL BE PERMITTED, EXCEPT FOR TOP AND BOTTOM PLATES IN WALLS. (U.N.O. ON DRAWINGS.)

STUDS OR JOISTS SHALL NOT BE CUT TO INSTALL PLUMBING OR WIRING UNLESS METAL OR WOOD SIDE PIECES ARE PROVIDED TO STRENGTHEN THE MEMBER.

NAIL MULTIPLE PLY BEAMS WITH TWO ROWS 16d NAILS AT 12" O.C. TOP AND BOTTOM. BOLT 3 AND 4 PLY MICROLAMS WITH 2 ROWS 1/2"ø THRU-BOLTS AT 24" O.C. (STAGGERED AT 12" O.C.) SPLICES ARE NOT PERMITTED IN ANY PLY BETWEEN SUPPORTS.

TIMBER FASTENING SHALL BE PER THE 2014 FBC. "FASTENING SCHEDULE" UNLESS NOTED AS GREATER ON DRAWINGS. ALL WOOD BEAMS TO BEAR ON MULTIPLE STUDS, SAME NUMBER OF STUDS AS NUMBER OF BEAM, PILES (2) MINIMUM, UNLESS GREATER NUMBER NOTED ON PLANS. PROVIDE ADDITIONAL FULL HEIGHT STUDS DOWN TO FOUNDATION, WITH SOLID BLOCKING AT FLOORS.

MULTIPLE STUD POSTS WITH (2) OR MORE STUDS SHALL BE NAILED TOGETHER WITH EACH STUD NAILED TO THE ADJACENT STUD W/(2) ROWS 16d NAILS AT 12"o.c. STAGGERED AT 6"o.c.

ALL WALL DOUBLE TOP PLATES, SHALL BE LAPPED AT CORNERS AND INTERSECTIONS AND FASTENED PER 2014 FBC FASTENING SCHEDULE. ALL DOUBLE PLATE END JOINTS SHALL BE OFFSET AT LEAST 24". DOUBLE PLATES TO BE FASTENED TOGETHER PER FASTENING SCHEDULE. PROVIDE SIMILAR CONNECTIONS AT TRIPLE PLATES.

ALL NAILS SHALL BE COMMON NAILS U.N.O. ON DRAWINGS.

AT INTERIOR WALLS, PROVIDE (2) JACK STUDS AND (1) FULL HEIGHT STUDS EA. SIDE OF OPENINGS U.N.O.

ALL BEAM-TO-BEAM FLUSH CONNECTIONS SHALL BE MADE USING BEAM HANGERS.

SPLICES ARE NOT PERMITTED IN RAFTERS, BEAMS OR POSTS EXCEPT AT SUPPORTS.

ALL HEADERS FOR WOOD FRAMED WALLS ARE TO BE (2)2X10 #2 SOUTHERN PINE, U.N.O.

WHERE DIRECT APPLIED CEILING DOES NOT OCCUR, PROVIDE 1x4 CONTINUOUS BOTTOM FLANGE BRACING, WITH DIAGONAL KICKERS AT END SPACES, SPACED AS DIRECTED BY THE MANUFACTURER.

NAILS NOTED IN SECTIONS, PLANS AND DETAILS ARE COMMON WIRE NAILS UNLESS NOTED OTHERWISE. PNEUMATIC GUN NAILING IS ALLOWED WITH UNITS OF EQUIVALENT GAGE AND LENGTH AS COMMON WIRE NAIL OF SIZE NOTED.

SPAN DIRECTION OF PLYWOOD SHEETS TO BE PERPENDICULAR TO FRAMING SPAN.

THE GYPSUM BOARD PLASTER COMPONENTS SHALL BE IN ACCORDANCE WITH CHAPTER 25, GYPSUM BOARD AND PLASTER, OF THE FBC 2010.

STRUCTURAL WOOD COMPONENTS (BEAMS, JOISTS, RAFTERS, ETC.) SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE FIBER STRESSES OF NO. 2 SOUTHERN PINE CONFORMING TO THE LATEST EDITION OF NDS, AS FOLLOWS:

SHEAR Fv = 175 psi.
BENDING 2X6 Fb = 1,250 psi.
BENDING 2X8 Fb = 1,200 psi.
BENDING 2X10 Fb = 1,050 psi.
BENDING 2X12 Fb = 975 psi.

WOOD IN CONTACT WITH CONCRETE OR MASONRY, EXPOSED TO EXTERIOR, AND AT OTHER LOCATIONS AS SHOWN ON STRUCTURAL DRAWINGS, SHALL BE PROTECTED OR PRESSURE TREATED IN ACCORDANCE WITH AMERICAN WOOD – PRESERVERS' ASSOCIATION STANDARDS. MEMBER SIZES SHOWN ARE NOMINAL UNLESS NOTED OTHERWISE.

ENGINEERED WOOD TRUSS SYSTEMS SHALL BE DESIGNED BY SUPPLIER'S SPECIALTY ENGINEER (TRUSS SYSTEM ENGINEER) TO CONFIGURATION AND LOAD CARRYING CAPACITY SHOWN ON DRAWINGS AND SPECIFICATIONS. ALTERNATE TRUSS LAYOUTS ARE ACCEPTABLE ONLY AS A CHANGE ORDER WHICH WILL INCLUDE ENGINEERING CHARGES FOR REDESIGN OF THE STRUCTURE BY THE ENGINEER OF RECORD. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL SHOW AND SPECIFY CONNECTOR TYPES UTILIZED WITHIN TRUSSES, AS WELL AS CONNECTORS UTILIZED IN OTHER CONNECTIONS AND ATTACHMENTS BETWEEN TRUSSES OR COMPONENTS SUPPLIED AS PART OF THE ENGINEERED TRUSS SYSTEM. AN ERECTION DRAWING SHALL BE INCLUDED, IDENTIFYING TRUSS SYSTEM COMPONENTS, AS WELL AS PERMANENT BRACING REQUIRED FOR TRUSS DESIGN. SUPPLIER SHALL NOT USE GYPSUM BOARD AS A PERMANENT, TRUSS BRACING ELEMENT. TRUSS TOP CHORDS SHALL BE 2x6 MINIMUM.

ENGINEERED SHOP DRAWINGS SHALL BEAR THE SIGNATURE AND IMPRESSED SEAL OF A FLORIDA REGISTERED PROFESSIONAL ENGINEER AS THE SPECIALTY ENGINEER. THE FOLLOWING LOAD DURATION FACTORS SHALL BE USED:

DEAD LOAD 0.90
DEAD LOAD + FLOOR LIVE LOAD 1.00
DEAD LOAD + ROOF LIVE LOAD 1.25
DEAD LOAD + WIND LOAD 1.33

PLYWOOD FLOOR, WALL AND ROOF SHEATHING ARE DESIGNED AS DIAPHRAGMS AND SHALL COMPLY WITH APPLICABLE PROVISIONS OF CHAPTER 23 OF THE FLORIDA BUILDING CODE. UNLESS SHOWN OTHERWISE, SPAN RATED PANELS SHALL BE FASTENED TO NOMINAL 2X SOUTHERN PINE FRAMING SPACED UP TO 24" O/C. IN ACCORDANCE WITH THE FOLLOWING:

PANELS UP TO 5/8" THICK: 10d NAILS AT 6" O/C. EDGE, 12" O/C. ELSEWHERE.
PANELS UP TO 3/4" THICK: 12d NAILS AT 6" O/C. EDGE, 12" O/C. ELSEWHERE.

WOOD FRAMING CONNECTORS:
CONNECTORS SHALL BE GALVANIZED [Z-MAX COATED].
CONNECTOR MODEL NUMBERS SHOWN ARE Strong tie CONNECTORS AS MANUFACTURED BY SIMPSON Strong Tie Co., 1450 DOOLITTLE DR., P.O. BOX 1568, SAN LEANDRO, CA 94577. SUBSTITUTIONS ARE ACCEPTABLE WITH THE APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD. UNLESS SHOWN OTHERWISE, INSTALL SIZE AND NUMBER OF FASTENERS SHOWN IN LATEST SIMPSON CATALOG.

ABBREVIATIONS

A.B.	ANCHOR BOLT	KSI	KIPS PER SQUARE INCH
A.F.F.	ABOVE FINISHED FLOOR	KSF	KIPS PER SQUARE FOOT
AL.	ALUMINUM	#	POUND
ALT.	ALTERNATE	LLH	LONG LEG HORIZONTAL
&	AND	LLV	LONG LEG VERTICAL
APPROX.	APPROXIMATE	MAX.	MAXIMUM
APPVD.	APPROVED	MEZZ.	MEZZANINE
@	AT	MFR.	MANUFACTURER
AVG.	AVERAGE	MIN.	MINIMUM
BLDG	BUILDING	MISC.	MISCELLANEOUS
BOTT.	BOTTOM	NS	NEAR SIDE
C.L.	CENTER LINE	N.T.S.	NOT TO SCALE
CL. OR CLR.	CLEAR OR CLEARANCE	#	NUMBER OR REBAR SIZE
CONN.	CONNECTION	O.H	OPPOSITE HAND
CMU	CONCRETE MASONRY UNIT	o.c.	ON CENTER
CONST	CONSTRUCTION	P.A.F.	POWDER ACTUATED FASTENER
CONT.	CONTINUOUS	PLF	POUNDS PER LINEAR FOOT
C.J.	CONSTRUCTION OR CONTROL JOINT	PCF	POUNDS PER CUBIC FOOT
CONC.	CONCRETE	PCI	POUNDS PER CUBIC INCH
COL.	COLUMN	PSF	POUNDS PER SQUARE FOOT
CTR.	CENTER	PSI	POUNDS PER SQUARE INCH
DIAG.	DIAGONAL	P.T.	POST TENSIONED
Ø OR DIAM.	DIAMETER	PROJ.	PROJECTION
DIM.	DIMENSION	REV.	REVISION
DWG.	DRAWING	REF.	REFERNCE
DBA	DEFORMED BAR ANCHOR	REINF.	REINFORCING
E.E.	EACH END	REQ'D	REQUIRED
EA.	EACH	SIM.	SIMILAR
E.A.	EACH FACE	SCHED.	SCHEDULE
E.J.	EXPANSION JOINT	SLH	SHORT LEG HORIZONTAL
E.S.	EACH SIDE	SLV	SHORT LEG VERTICAL
E.W.	EACH WAY	SPEC.	SPECIFICATION
ELEV.	ELEVATION	SQ.	SQUARE
ELEC.	ELECTRICAL	SF	SQUARE FEET
EMBED.	EMBEDMENT	S.S.	STAINLESS STEEL
E.O.R.	ENGINEER OF RECORD	STD.	STANDARD
= OR EQ.	EQUAL	STIFF.	STIFFENER
EQUIP	EQUIPMENT	STL.	STEEL
EXIST.	EXISTING	STRUCT.	STRUCTURAL
EXP.	EXPANSION	SYM.	SYMMETRICAL
EXT.	EXTENDED	SYP	SOUTHERN YELLOW PINE
F.F.	FINISHED FLOOR	T.E.	THICKENED EDGE
FLR.	FLOOR	THD.	THREAD
FT.	FEET OR FOOT	THK.	THICK
F.S.	FAR SIDE	TRD.	TREAD
FTG.	FOOTING	T/WALL	TOP OF WALL
FOUND.	FOUNDATION	TEMP.	TEMPORARY
F.V.	FIELD VERIFY	THRU	THROUGH
Fy OR fy	YIELD STRENGTH	T.O.S.	TOP OF STEEL
f'c	28 DAY COMPRESSIVE STRENGTH	TYP.	TYPICAL
GA.	GAUGE OR GAGE	U.N.O.	UNLESS NOTED OTHERWISE
GALV.	GALVANIZED	W.C.J.	WALL CONTROL JOINT
GEN.	GENERAL	WT.	WEIGHT
HGT.	HEIGHT	w/o	WITHOUT
HORIZ.	HORIZONTAL	w/	WITH
IN.	INCH OR INCHES	WWF	WELDED WIRE FABRIC
I.J.	ISOLATION JOINT		
K.	KIPS (1000#)		

LEGEND

ITEM	SYMBOL	ITEM	SYMBOL
CONCRETE		SPOT ELEVATION TOP OF CONCRETE	+0'-0"
GROUT		STEP IN FTG. OR GRADE BM. TO CLG. PLUMB.	8"
EARTH		℄ BEAM SPLICE	
CONCRETE BLOCK (CMU)		AND	&
SECTION INDICATOR	1 / S2	PLATE	℘
DETAIL INDICATOR	B / S2	CENTERLINE	℄
COLUMN TYPE FOOTING TYPE TOP OF FOOTING ELEVATION	C1 F2.0A -2'-0	NUMBER (PRECEDING)	#. NO.
		PLUS OR TENSION	+
		MINUS OR COMPRESSION	–
		POUNDS (FOLLOWING)	#
		STEP IN STRUCTURE OR DEPRESSED SLAB	1"
		TOP OF STEEL ELEVATION	T/S EL. +20'-8" OR (+20'-0")

15HA003

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12110 ERIE ROAD, PARRISH, FLORIDA

GENERAL NOTES

Project No.	2007077.00
Drawn By	DM
Checked By	KFH
Date	August 2015

Revisions:

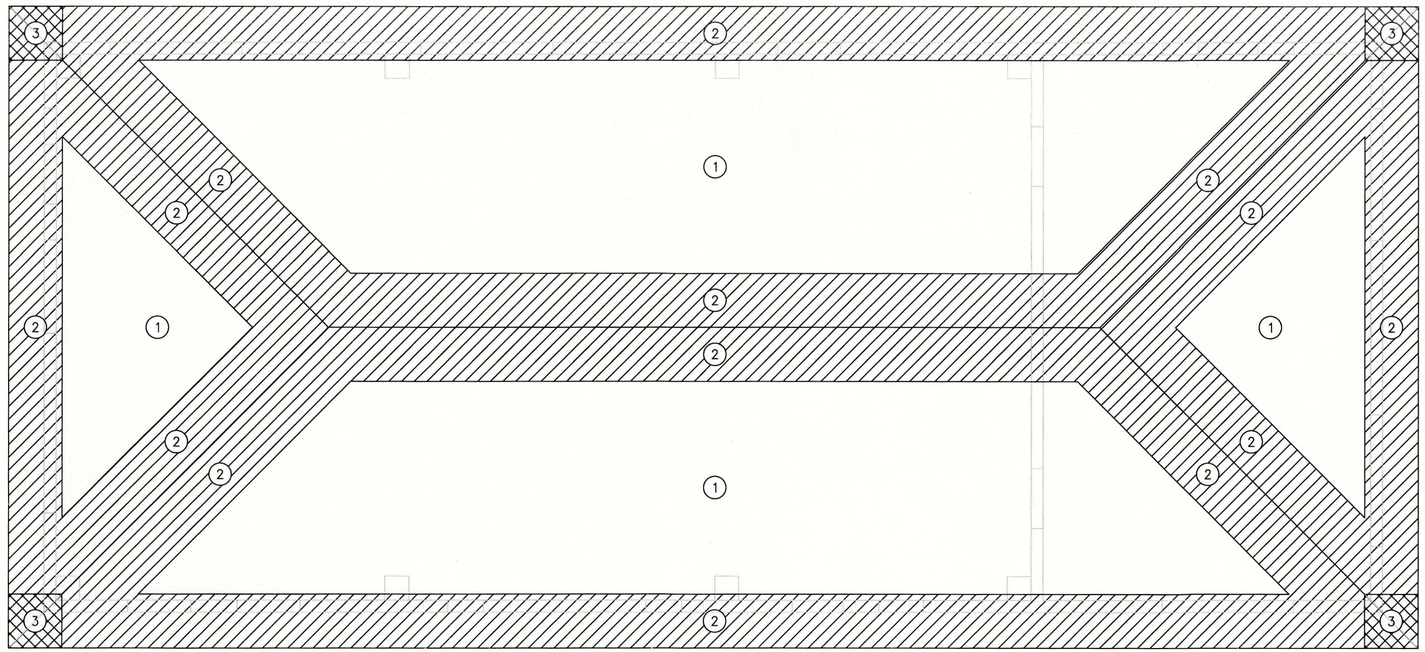
KARL F. HEES
FL PE 59795
SEP 02 2015

"To the best of the Architect's or Engineer's knowledge, the plans and specifications comply with the applicable minimum building codes and applicable fire safety standards as determined by local authority in accordance with Chapter 553 and 663 of Florida Statutes."

CONSTRUCTION DOCUMENTS

S1.00

Originals printed @ 24" x 36" scale as required



ROOF PLAN
SCALE: 1/4"= 1'-0"

WIND: 2014 FLORIDA BUILDING CODE: SECTION 1609,
SPEED: V(ult)=150 MPH, V(asd)=116 MPH, EXPOSURE: C, RISK CATEGORY II

COMPONENT AND CLADDING WIND PRESSURES (ALLOWABLE)

	COMPONENT LOCATION (ZONES)	POSITIVE PRESSURE(psf)				NEGATIVE PRESSURE (psf)			
		Ae= 10SF	Ae= 20SF	Ae= 50SF	Ae= 100SF	Ae= 10SF	Ae= 20SF	Ae= 50SF	Ae= 100SF
ROOFS	ELSEWHERE – ZONE 1	21.2	19.3	16.8	14.9	-33.6	-32.6	-31.5	-30.5
	WITHIN 4ft. FROM HIPS & RIDGES–ZONE 2	21.2	19.3	16.8	14.9	-58.5	-53.8	-47.6	-42.9
	WITHIN 4ft. FROM CORNERS ZONE 3	21.2	19.3	16.8	14.9	-86.5	-80.8	-73.5	-67.8
	AT OVERHANGS–ZONE 2					-74.0	-74.0	-74.0	-74.0
	AT OVERHANGS WITHIN 4ft FROM CORNERS–ZONE 3					-120.7	-108.8	-95.3	-83.4
WALLS	ELSEWHERE–ZONE 4	36.7	35.1	32.8	31.3	-39.8	-38.3	-35.9	-34.4
	WITHIN 4ft. FROM CORNERS ZONE 5	36.7	35.1	32.8	31.3	-49.1	-46.0	-41.4	-38.3

NOTE: 1) Ae: EFFECTIVE AREA
2) PRESSURES ARE ALLAWABLE BASED ON WIND SPEED AND RISK CATEGORY NOTED ABOVE.
3) PRESSURES ARE FOR "ENCLOSED" CONDITION WITH INTERNAL PRESSURE COEFFICIENT OF ± 0.18.
4) PRESSURES CALCULATED WITH Kd=1.00
5) "30V" OR "20V" INDICATES OVERHANG WIND LOAD DESIGN PRESSURES.

COLUMN SCHEDULE

COLUMN TYPE	C1	
COLUMN SIZE	16"x16"	
BASE PLATE FOUNDATION	N/A	
ANCHOR BOLTS	N/A	
VERT. REINF.	(4) #5	
TIE REINF.	#3 TIES @ 8" O.C. MAX.	
REMARKS	16"x16"x8" CMU BLOCKS FOUR FILL CELLS SEE 7/S5.00	

FOOTING SCHEDULE
(2000 PSF MIN. BEARING CAPACITY)

MARK	F2.5A	F1.5A	TE	F4.0	F1	F11.0
FOOTING SIZE	2'-4" WIDE x 12" THK. x CONT.	1'-8" WIDE x 12" THICKENED SLAB	1'-0" WIDE x 24" TURNED DOWN FOOTING	4'-0" x 4'-0" x 12" THK.	SEE PLAN x 12" THK.	41'-6" x 11'-0" x 12" THK.
REINF. E.W. BOTT. (UNO)	(3) #5 BOTT. CONT. W/ #5 @ 24" O.C. BOTT. TRANS.	(2) #5 BOTT. CONT. W/ #5 @ 24" O.C. BOTT. TRANS.	(2) #5 TOP & BOTT. CONT.	(5) #5 EA. WAY BOTT.	#5 @ 12" O.C. EA. WAY TOP & BOTT.	#5 @ 12" O.C. EA. WAY TOP & BOTT.
REMARKS						

NOTE: ALL WALL FOOTING REINFORCING SHALL BE CONTINUOUS THROUGH PAD FOOTING WHERE APPLICABLE. PROVIDE CORNER BARS TO MATCH CONTINUOUS BARS, TYP.

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WIND PRESSURES & TABLES

Project No. 2007077.00
Drawn By DM
Checked By KFH
Date August 2015

Revisions:

KARL F. HEES
FL PE 59795
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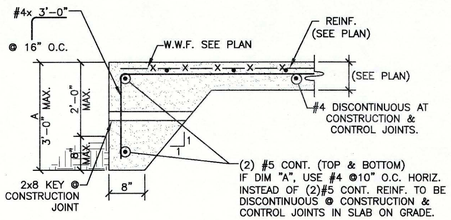
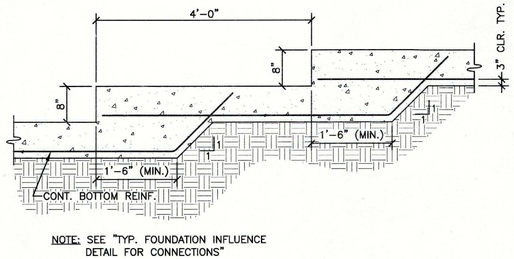


TYP. THICKENED EDGE (TE)

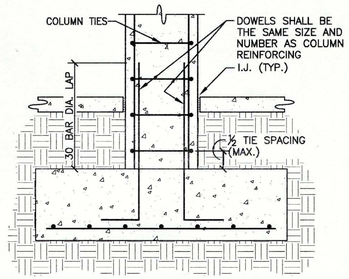
SCALE: ¾"=1'-0"



NOTE: SEE "TYP. FOUNDATION INFLUENCE DETAIL FOR CONNECTIONS"

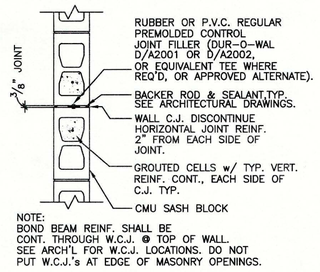
TYPICAL STEPPED FOOTING SECTION

SCALE: ¾"=1'-0"



CONCRETE COLUMN BASE

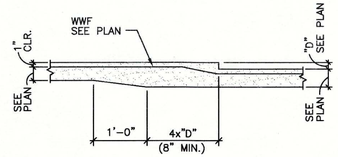
SCALE: ¾"=1'-0"



NOTE:
BOND BEAM REINF. SHALL BE CONT. THROUGH W.C.J. @ TOP OF WALL. SEE ARCH'L FOR W.C.J. LOCATIONS. DO NOT PUT W.C.J.'s AT EDGE OF MASONRY OPENINGS.

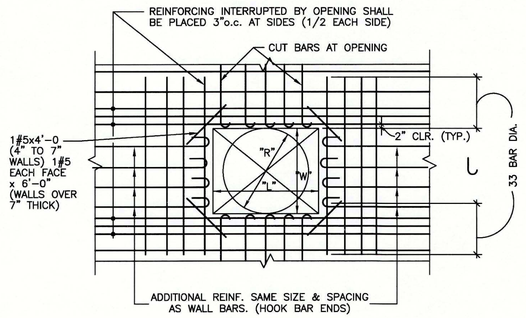
TYPICAL CMU WALL CONTROL JOINT DETAIL

SCALE: ¾"=1'-0"



TYP. DEPRESSED SLABS ON GRADE

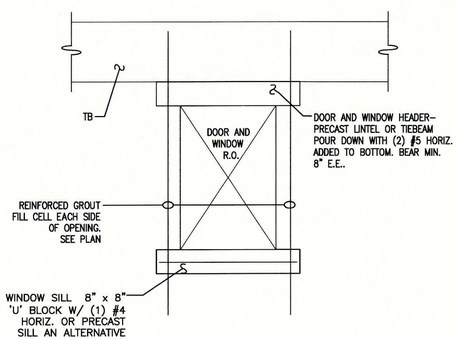
NOT TO SCALE



WHERE W OR R IS 12" OR LESS, SPREAD MAIN REINFORCING AROUND OPENINGS. BAR SPACING, SHOWN ON DRAWINGS AND SCHEDULES, SHALL NOT BE EXCEEDED. IF OPENING CREATES A BAR SPACING GREATER THAN SHOWN ON DRAWINGS, PROVIDE ADDITIONAL REINFORCING OF SAME SIZE AND SPACING AS REGULAR SLAB REINFORCING.

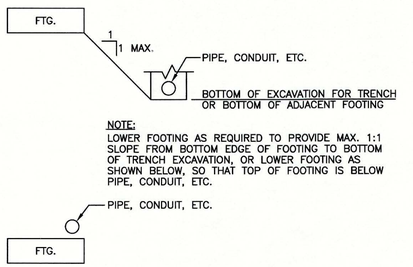
TYPICAL DETAIL FOR OPENING REINF.

NOT TO SCALE



M.O. FRAMING DETAIL

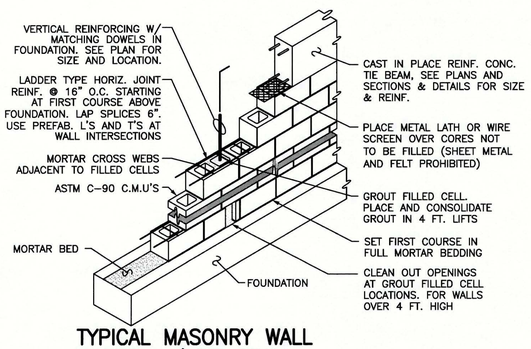
SCALE: ½"=1'-0"



NOTE:
LOWER FOOTING AS REQUIRED TO PROVIDE MAX. 1:1 SLOPE FROM BOTTOM EDGE OF FOOTING TO BOTTOM OF TRENCH EXCAVATION, OR LOWER FOOTING AS SHOWN BELOW, SO THAT TOP OF FOOTING IS BELOW PIPE, CONDUIT, ETC.

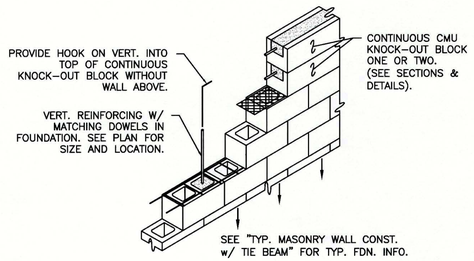
TYP. FOUNDATION INFLUENCE DETAIL

SCALE: ¾"=1'-0"



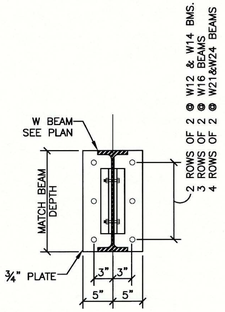
TYPICAL MASONRY WALL CONST. w/ TIE BEAM

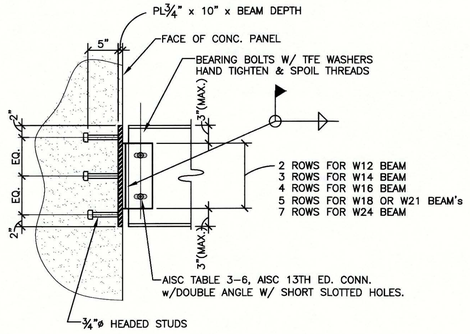
SCALE: N.T.S.



TYPICAL MASONRY WALL CONST. w/ KNOCK-OUT BEAM

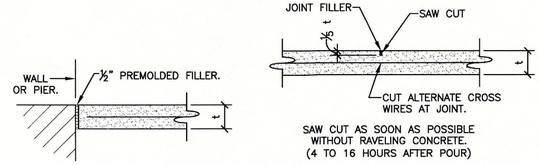
SCALE: N.T.S.





STEEL BEAM TO CONC. DETAIL

SCALE: 1"=1'-0"

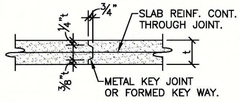


ISOLATION JOINT (IJ)

SCALE: 1"=1'-0"

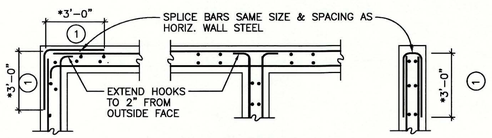
CONTROL JOINT (C.J.)

SCALE: 1"=1'-0"

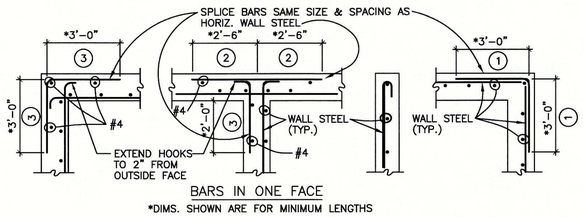


CONSTRUCTION JOINT (C.J.)

SCALE: 1"=1'-0"



BARS IN BOTH FACES



BARS IN ONE FACE

*DIMS. SHOWN ARE FOR MINIMUM LENGTHS

1. 34 BAR DIAMETER
2. 34 BAR DIAMTER + 1/2 OF WALL THICKNESS
3. 34 BAR DIAMETER + WALL THICKNESS LESS 2"

ARRANGEMENT OF REINFORCEMENT AT CONCRETE WALL & SPANDREL CORNERS, ENDS & INTERSECTIONS

NOT TO SCALE
SEE SECTIONS FOR PLACEMENT OF HORIZONTAL AND VERTICAL REINFORCING

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12110, ERIE ROAD, PARRISH, FLORIDA
TYPICAL DETAILS

Project No.	2007077.00
Drawn By	DM
Checked By	KFH
Date	August 2015

Revisions:

15HA003
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KARL F. HEES
FL PE 59795
SEP 02 2015

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CONSTRUCTION DOCUMENTS

S1.02

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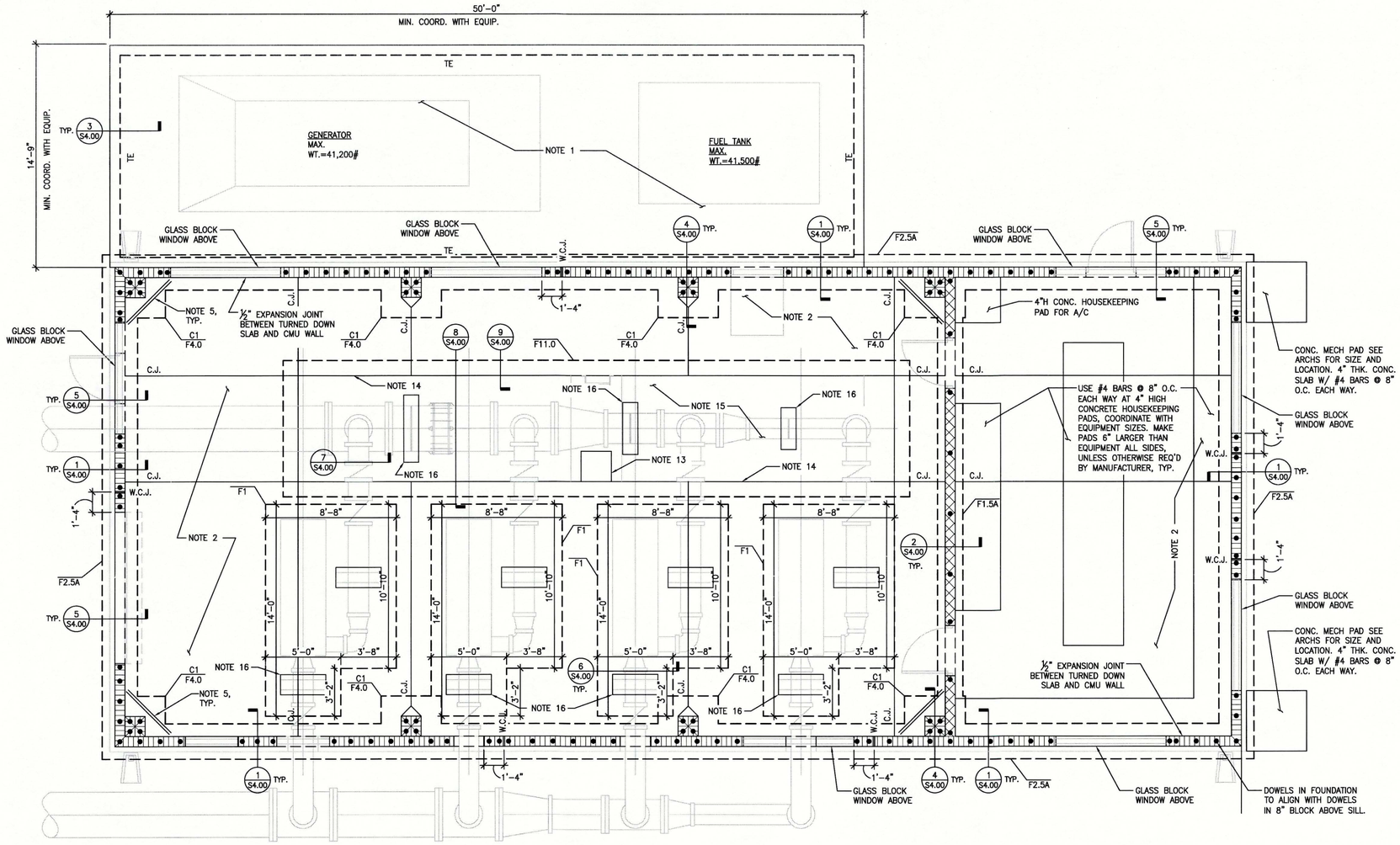

FOUNDATION PLAN NOTES:

1. 12" CONCRETE SLAB W/ #5 BARS @ 12" O.C. EACH WAY TOP & BOTTOM OVER CLEAN, COMPACTED, TREATED FILL OVER 10 MIL VAPOR BARRIER.
2. 8" CONCRETE SLAB W/ #5 BARS @ 12" O.C. EACH WAY OVER 10 MIL VAPOR BARRIER OVER CLEAN, COMPACTED, TREATED FILL.
3. CJ TYPICALLY DENOTES CONTROL JOINT PER DETAIL ON S1.02.
4. TOP OF FOOTING =-1'-0" BELOW GRADE, TYP. U.N.O.
5. TYPICALLY DENOTES (2) #4 x 4'-0"LG SLAB RE-ENTRANT BARS @ 1" O.C.
6. VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS BEFORE COMMENCING CONSTRUCTION. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER. FOR ADDITIONAL INFORMATION SEE ARCHITECTURAL DRAWINGS.
7. FOR DIMENSIONS NOT SHOWN, SEE OTHER STRUCTURAL DRAWINGS AND VERIFY WITH ARCHITECTURAL DRAWINGS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE STRUCTURAL ENGINEER.
8. SEE ARCHITECTURAL DRAWINGS FOR SLOPES, DROPS AND DRAIN LOCATIONS IN FLOOR SLABS.
9. CENTERLINES OF COLUMNS, WALLS, AND BEAMS SHALL COINCIDE WITH FOUNDATION CENTERLINES, U.N.O.
10. ELEVATIONS SHOWN REFERENCE SLAB-ON-GRADE, EL. 0'-0".
11. FOR ADDITIONAL STRUCTURAL NOTES AND STANDARD DETAILS, SEE SHEET S1.00 & S1.02.
12. SEE S1.01 FOR COLUMN AND FOOTING SCHEDULE.
13. SUMP 24"x24"x8" ADD GROUT AS REQUIRED TO MAINTAIN 2% SLOPE TO SUMP PIT WITH 4" MIN. GROUT THICKNESS AT SUMP FOR TOTAL 8" PIT DEPTH (TYP.)
14. ALUMINUM GRATING SUPPORT EDGE, SEE DETAIL 9/S4.
15. PIPE TRENCH WITH GRATING (GRATING BY GRATING MFR).
16. CONCRETE PIPE SUPPORT. PROVIDE AS REQUIRED BY MECH'L.
17. ALL OPENING HATCHES TO BE BY HATCH MFR, TYP.
18. MAX. WEIGHT OF PIPE AT PIPE SUPPORTS SHOWN ON F1 = 4,000#; MAX WEIGHT OF PIPE SUPPORT SHOWN ON F11.0 = 10,000#.

FOUNDATION PLAN

SCALE: 1/4"= 1'-0"

12" SPLIT FACE CMU COMBINED WITH 8" CMU (SEE ARC'L AND STRUCT. SECTIONS) W/ (1) #5 IN EACH OF 1ST CELL [(1) #5 TOTAL] GROUTED SOLID AT ENDS OF WALLS, CORNERS, TEES, E.E. OF WALL CONTROL JOINTS & E.S. OF OPENINGS. REINF. CELL SHALL BE FULL HEIGHT OF WALL. IN ADDITION ADD #5 IN GROUTED CELLS @ 16" O.C. MAX BETWEEN, TYP. U.N.O. GROUT ALL WALLS W/ VERTICAL REINF. SOLID.

8" CMU W/ (1) #5 IN EACH OF 1ST CELL [(1) #5 TOTAL] GROUTED SOLID AT ENDS OF WALLS, CORNERS, TEES, E.E. OF WALL CONTROL JOINTS & E.S. OF OPENINGS. REINF. CELL SHALL BE FULL HEIGHT OF WALL. IN ADDITION ADD #5 IN GROUTED CELLS @ 48" O.C. MAX BETWEEN, TYP. U.N.O. GROUT ALL WALLS W/ VERTICAL REINF. SOLID.

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PARRISH MASTER PUMP STATION

12110 ERIE ROAD, PARRISH, FLORIDA

FOUNDATION PLAN

Project No.	2007077.00
Drawn By	DM
Checked By	KFH
Date	August 2015

Revisions:

KARL F. HEES
FL PE 59795
SEP 02 2015

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CONSTRUCTION DOCUMENTS

S2.00

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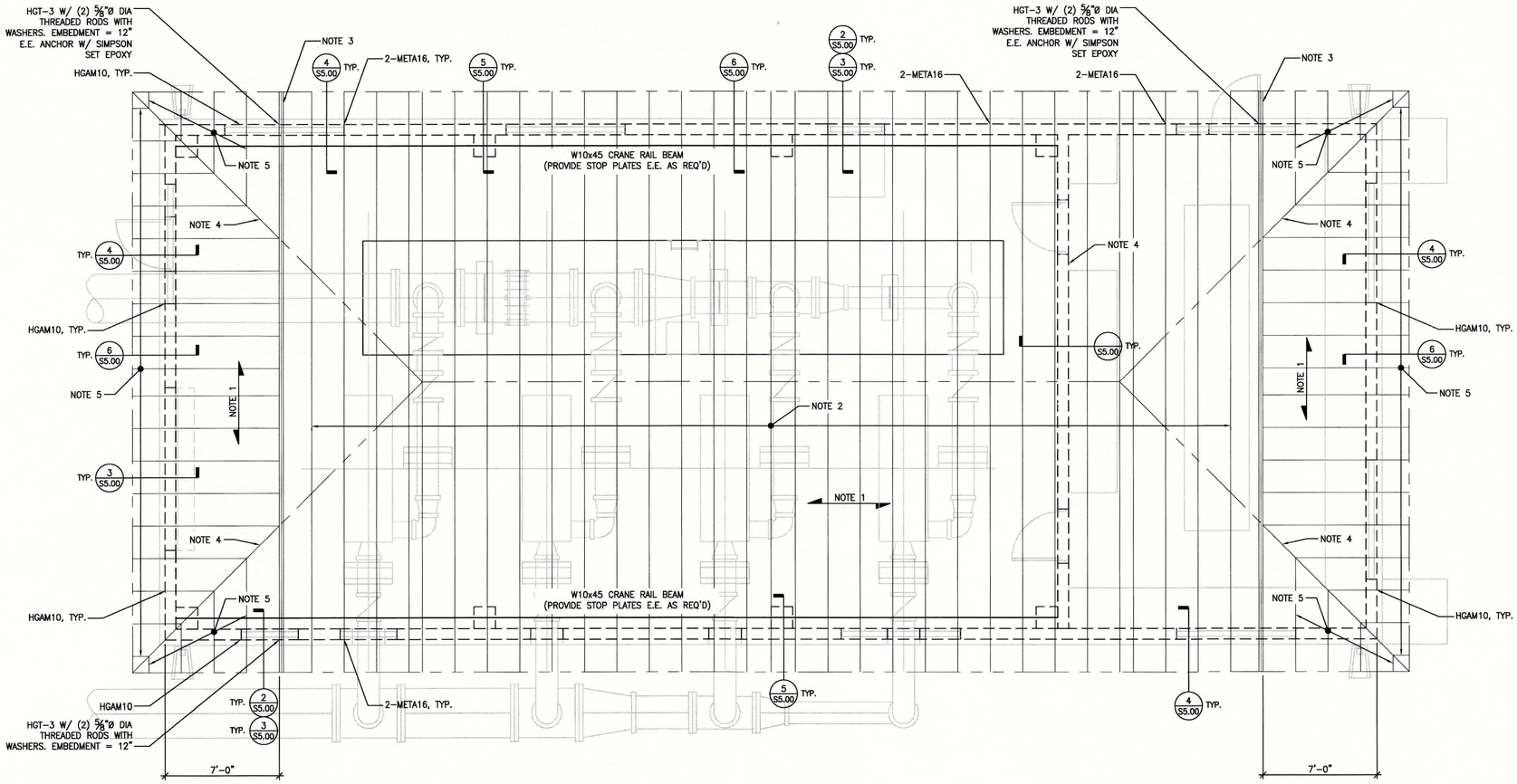
ROOF FRAMING NOTES:

1. ⟷ INDICATES DIRECTION OF SPAN OF 5/8" THK. PLYWOOD SHEATHING. ATTACH W/ 10d COMMON NAILS @ 4" O.C. MAX. @ ALL BOUNDARIES & PANEL EDGES (BLOCKED @ ALL PANEL EDGES) 12" O.C. @ ALL OTHER SUPPORTS.
2. PRE-ENGINEERED WOOD ROOF TRUSSES @ 24" O.C. MAX.
3. PRE-ENGINEERED WOOD (3) PLY GIRDER TRUSS.
4. PRE-ENGINEERED WOOD HIP TRUSS.
5. PRE-ENGINEERED WOOD JACK TRUSSES @ 24" o.c. MAX.
6. SEE ARCHITECTURAL DRAWINGS FOR TRUSS PROFILES.
7. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS BEFORE COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT & ENGINEER. FOR ALL ADDITIONAL INFORMATION SEE ARCH'L DRAWINGS.
8. FOR DIMENSIONS NOT SHOWN, SEE OTHER STRUCTURAL DRAWINGS & VERIFY W/ ARCHITECTURAL DRAWINGS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT & ENGINEER.
9. SEE ARCHITECTURAL DRAWINGS FOR SLOPES, DROPS, HATCHES & DRAIN LOCATIONS IN ROOF.
10. NON-LOAD BEARING WALL BELOW.



ROOF FRAMING PLAN

SCALE: 1/4"= 1'-0"

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ROOF FRAMING PLAN

Project No.	2007077.00
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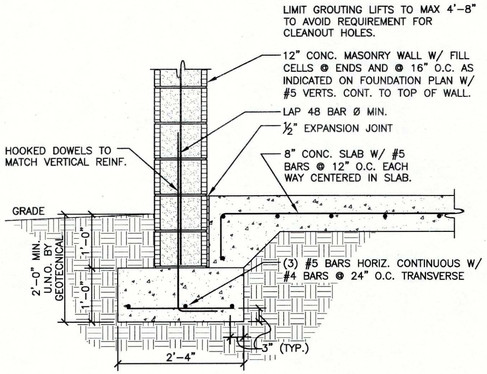
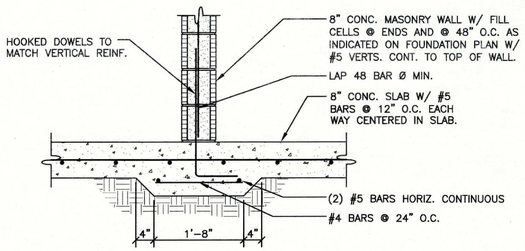


1 S4.00 **SECTION** SCALE: ¾"=1'-0"



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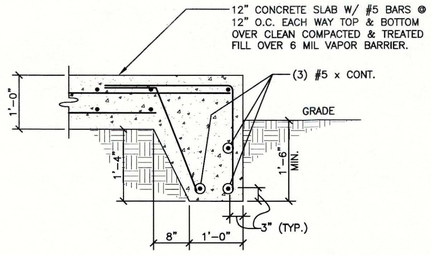

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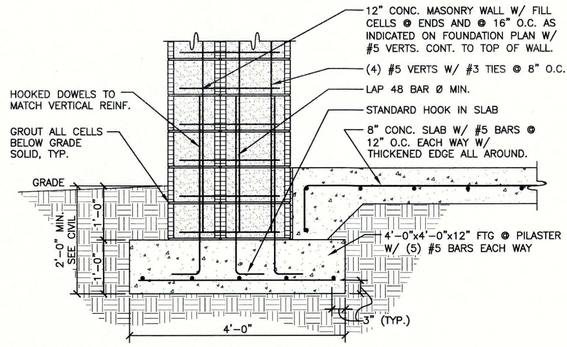

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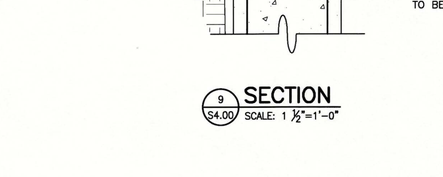

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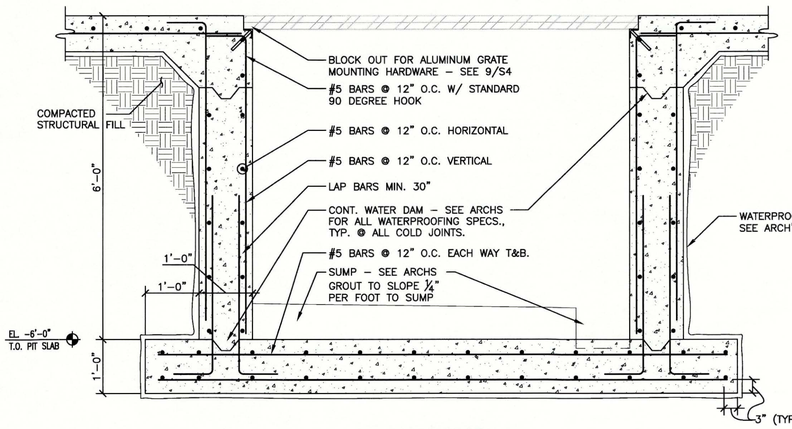
6 S4.00 **SECTION** SCALE: ¾"=1'-0"

7 S4.00 **SECTION** SCALE: ¾"=1'-0"



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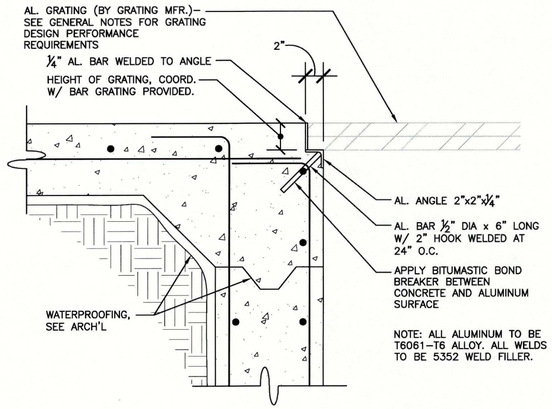

9 S4.00 **SECTION** SCALE: 1 ½"=1'-0"

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SECTIONS & DETAILS

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