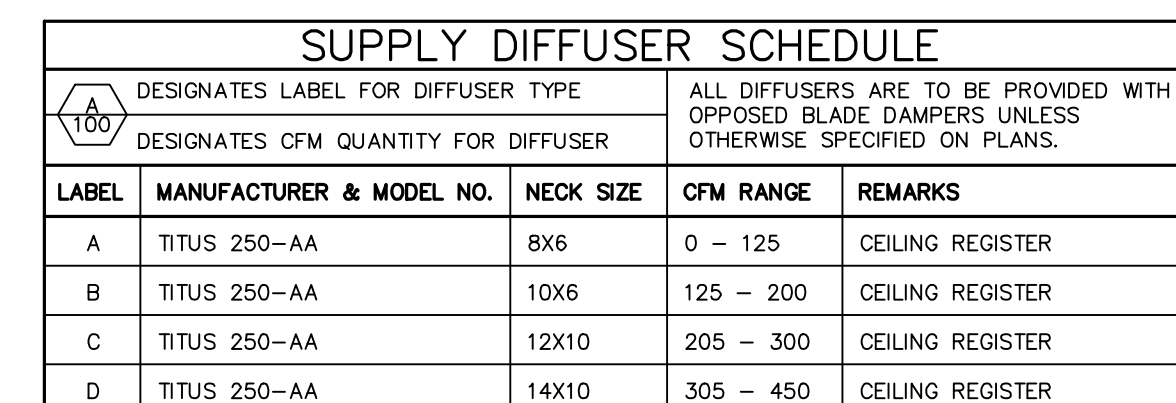


1. GAS PIPING AND FITTINGS SHALL BE SEAMLESS BLACK STEEL WITH MALLEABLE IRON FITTINGS. DIELECTRIC COUPLINGS OR UNIONS SHALL BE UTILIZED WHEN PIPING OF DISSIMILAR METAL IS CONNECTED. EXTERIOR GAS PIPING ON ROOF SHALL BE PAINTED WITH YELLOW "RUSTOLEUM" PAINT. ALL EXPOSED GAS PIPING AND WALL SHALL BE PAINTED TO MATCH. PAINTING TO MATCH BUILDING, GAS PIPING CONNECTIONS SHALL BE THREADED UNLESS OTHERWISE REQUIRED BY CODE.
2. GAS PIPING SYSTEM SHALL BE INSTALLED TO THE REQUIREMENTS OF THE ASIA PAMPHLET "INSTALLATION OF GAS APPLIANCES" AND GAS PIPING" AND THE NFPA STANDARD #40. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS AND PAY ALL FEES WITH THE "LOCAL" GAS COMPANY FOR THE INSTALLATION OF THE GAS METER, GAS SERVICE, AND ITS ACCESSORIES NECESSARY FOR A CONNECTION.
3. GAS PIPING SHALL BE TESTED IN ACCORDANCE WITH THE PROCEDURES DESCRIBED IN NFPA #54, AND ANY OTHER TESTS REQUIRED BY THE LOCAL BUILDING DEPARTMENT AND/OR THE NECESSARY FOR A CONNECTION.
4. THE INSTALLING SUBCONTRACTOR SHALL BE LICENSED BY THE STATE FOR THE INSTALLATION OF GAS PIPING.
5. RUNOUT PIPING, FROM THE MAIN PIPING TO APPLIANCES, SHALL BE WITH AN INVERTED TRAP CONNECTED TO THE MAIN.
6. A 1/2" DIRT LEG, AND A GAS COCK, SHALL BE PROVIDED AT ALL GAS APPLIANCES.
7. ALL EXPOSED GAS PIPING SHALL BE IDENTIFIED BY A YELLOW LABEL MARKED "GAS" IN BLACK LETTERS, THE MARKERS SHALL BE AT INTERVALS NOT EXCEEDING 5'.
8. ALL GAS BURNING EQUIPMENT SHALL BE INSTALLED PER NFPA #58, NFPA #54 (L.P.G.) OR NFPA #66 (COMMERCIAL COOKING EQUIPMENT).
9. GAS PIPE SIZES 2-1/2" AND GREATER SHALL BE WELDED, IF REQUIRED BY CODE.
10. GAS CONNECTIONS PER ANSI Z21.69.

A/C	AIR CONDITIONER	REV.	REVISION	A.H.U.	AIR HANDLING UNIT
DN.	DOWN	N.T.S.	NOT TO SCALE	D.G.	DOOR GRILLE
EXH.	EXHAUST	MFG.	MANUFACTURER	D.P.	DRAIN PIPING
EXT.	EXTERNAL	R/A	RETURN AIR	D.S.	DISPOSABLE
E.F.	EXHAUST FAN	GR.	GRILLE	V.C.D.	VOLUME CONTROL DAMPER
A.F.F.	Above FINISH FLOOR	C.D.	CEILING DIFFUSER	F/A	FRESH AIR
F.F.	FRESH FLOOR	REG.	REGISTER	S.P.	SAFE PAN
TYP.	TYPICAL	C.U.	CONDENSING UNIT	C.D.	CONDENSATE DRAIN



NOTE:
SUPPLY REGISTER SHALL BE PROVIDED WITH A SURFACE MOUNT BORDER TYPE 1.

RETURN GRILLE SCHEDULE				
1 100 DESIGNATES LABEL FOR GRILLE TYPE DESIGNATES CFM QUANTITY FOR GRILLE			FILTER SHALL BE PROVIDED AT UNIT.	
LABEL	MANUFACTURER & MODEL NO.	NECK SIZE	CFM RANGE	REMARKS
1	TITUS 355FL	6X6	0 – 125	CEILING REGISTER
2	TITUS 355FL	14X6	130 – 275	CEILING REGISTER
3	TITUS 355FL	12X12	280 – 400	CEILING REGISTER
4	TITUS 355FL	14x14	405 – 650	CEILING REGISTER
5	TITUS 355FL	18X18	655 – 1200	CEILING REGISTER
6	TITUS 355FL	20X20	1205 – 1600	CEILING REGISTER
7	TITUS 355FL	36X12	1205 – 1600	CEILING REGISTER

NOTE:
RETURN AIR GRILLE SHALL BE PROVIDED WITH A SURFACE MOUNT BORDER TYPE 1.

4 AHU MOUNTING DETAIL

1 LOWER LEVEL - MECHANICAL

AIR COOLED HEAT PUMP SCHEDULE																												
HEAT PUMP											AIR HANDLING UNIT							INTEGRATED ELECTRIC HEATING										
CU LABEL(S)	MANUFACTURER & MODEL NO.	TOTAL CAPACITY COOLING	SENSIBLE CAPACITY COOLING	TOTAL CAPACITY HEATING	COMP. RLA	FAN FLA	VOLTAGE	MOCP	EER/SEER	WEIGHT	AHU LABEL(S)	MANUFACTURER & MODEL NO.	TOTAL CFM	O/A CFM	E.S.P.	BLOWER SPEED	FAN HP	VOLTAGE	WEIGHT	HEATER KW	VOLTAGE	NOTES						
CU #1	CARRIER 25HBB360A003	59,260	44,220	43,770	26.3	1.2	208V/1ø	50A	13.0	295 lbs.	AHU #1	CARRIER FX4DNF06015	1,850	SEE SCH	.25"	HIGH	3/4 HP	208V/1ø	168 lbs.	10 KW	208V/1ø	1 THRU 6						
CU #2	CARRIER 25HBB348A003	47,500	35,360	35,850	21.8	1.2	208V/1ø	50A	13.0	295 lbs.	AHU #2	CARRIER FX4DNF048010	1,600	SEE SCH	.25"	HIGH	3/4 HP	208V/1ø	168 lbs.	7.5 KW	208V/1ø	1 THRU 6						
CU #3	CARRIER 25HBB348A003	47,500	35,360	35,850	21.8	1.2	208V/1ø	50A	13.0	295 lbs.	AHU #3	CARRIER FX4DNF048010	1,600	SEE SCH	.25"	HIGH	3/4 HP	208V/1ø	168 lbs.	7.5 KW	208V/1ø	1 THRU 6						
CU #4	CARRIER 25HBB348A003	47,500	35,360	35,850	21.8	1.2	208V/1ø	50A	13.0	295 lbs.	AHU #4	CARRIER FX4DNF048010	1,600	SEE SCH	.25"	HIGH	3/4 HP	208V/1ø	168 lbs.	7.5 KW	208V/1ø	1 THRU 6						
GENERAL NOTES: * ALL RATINGS ARE AT ARI ENTERING CONDITIONS UNLESS OTHERWISE NOTED. * PROVIDE VIBRATION ISOLATION FOR UNITS. * EXTERNAL STATIC PRESSURE DOES NOT INCLUDE COIL OR FILTER PRESSURE DROP. * CONTRACTOR MAY SUBSTITUTE MANUFACTURER FOR APPROVED EQUAL. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT ANY CLEARANCE REQUIREMENTS ARE MET FOR ANY SUBSTITUTIONS.					ABBREVIATION LEGEND: O/A – OUTSIDE AIR HP – HORSE POWER RLA – RUNNING LOAD AMPS FLA – FULL LOAD AMPS					MOCP – MAX. OVERCURRENT PROTECTION (DUAL ELEMENT TYPE FUSE) E.S.P. – EXTERNAL STATIC PRESSURE EER – ENERGY EFFICIENCY RATIO SEER – SEASONAL ENERGY EFF. RATIO					SPECIFIC NOTES: 1) SIZE AND RUN REFRIGERANT PIPING AS PER MANUFACTURERS PUBLISHED RECOMMENDATIONS. 2) INSULATE REFRIGERANT SUCTION LINE WITH 3/4" ARMAFLEX OR APPROVED EQUAL. 3) INSTALL FILTER DRYER AND STRAINER IN REFRIGERANT LIQUID LINE. 4) PROVIDE FIELD INSTALLED ACCESSORIES AND 5 MINUTE TIME DELAY SWITCH. 5) PROVIDE 5 YEAR WARRANTY ON COMPRESSOR AND 1 YEAR WARRANTY ON ALL PARTS AND LABOR. 6) PROVIDE SINGLE POINT POWER CONNECTION WITH INTEGRAL OVERCURRENT PROTECTION DEVICE.							SEQUENCE OF OPERATION FOR HEATING FIRST STAGE WHEN THE THERMOSTAT CALLS FOR HEATING, THE INDOOR FAN MOTOR, OUTDOOR FAN MOTORS AND THE COMPRESSOR (FULLY LOADED) ARE ENERGIZED. THE REVERSING VALVE SOLENOID IS ENERGIZED IN THE HEATING MODE. SECOND STAGE IF ADDITIONAL HEAT IS REQUIRED, THE ELECTRIC HEAT SHALL BE ENERGIZED.						

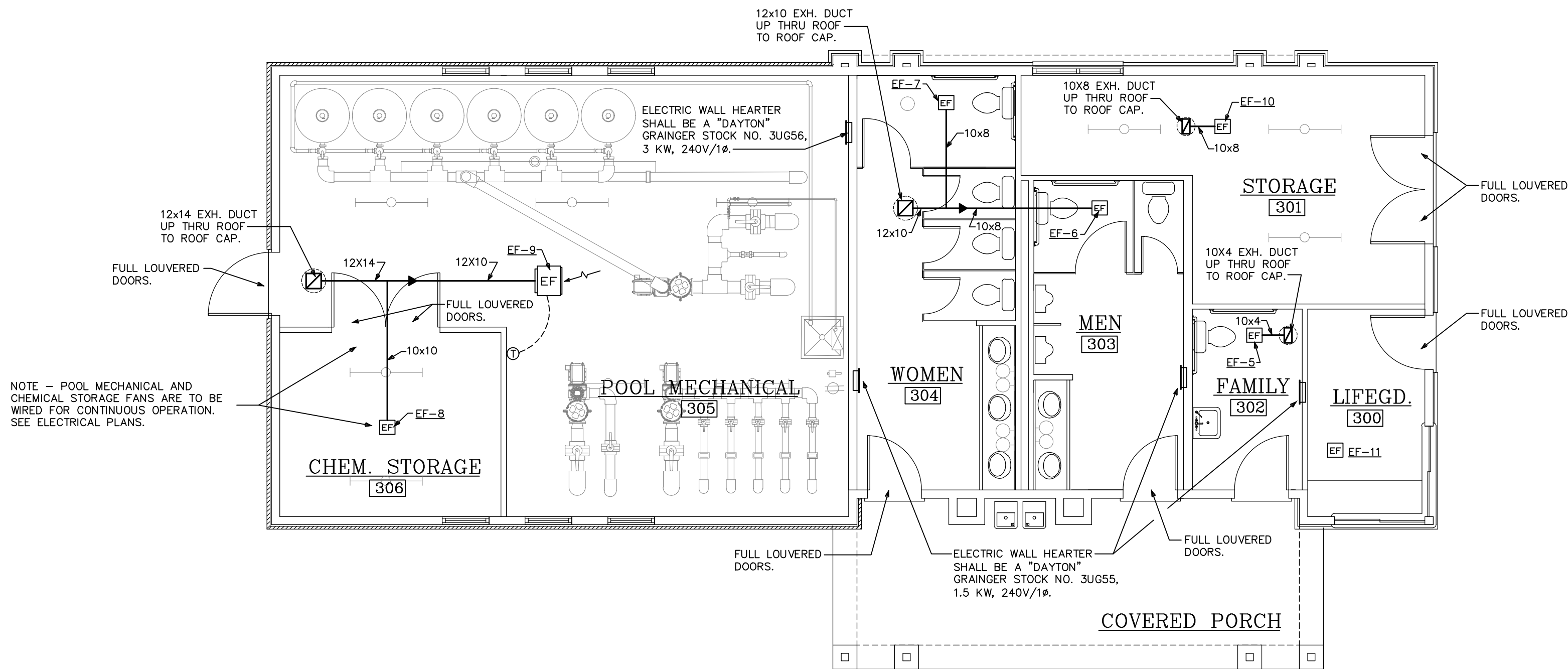
GENERAL MECHANICAL NOTES	
1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE APPLICABLE BUILDING CODE AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND THE LATEST ADDITION OF THE FOLLOWING PUBLICATIONS: SMACNA, ASHRAE, NFPA 90A, 90B, 91 & ANSI B-9.1 ALL DUCTWORK SHALL BE FABRICATED, INSTALLED AND SUPPORTED AS PER SMACNA STANDARDS.	
2. THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.	
3. THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES TO INSURE AN ORDERLY PROGRESS OF THIS WORK.	
4. THE CONTRACTOR SHALL SUPPLY THE OWNER WITH ONE SET OF "AS-BUILT" DRAWINGS UPON COMPLETION OF THIS PROJECT. CONTRACTOR SHALL ALSO LEAVE FOR ONE AT LEAST ONE SET OF THE MANUFACTURER'S INSTALLATION AND OPERATIONS MANUALS FOR ALL EQUIPMENT PROVIDED ON THE PROJECT.	
5. ALL PROVIDED MATERIALS SHALL BE NEW OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY SKILLED WORKMAN.	
6. CONTRACTOR SHALL SUBMIT, FOR APPROVAL FIVE (5) COPIES OF MANUFACTURER'S DRAWINGS FOR EACH PIECE OF EQUIPMENT AND CONTROLS INCLUDED IN CONTRACT. IT IS STRONGLY PREFERRED THAT THE SUBMITTALS BE MADE IN THE FORM OF AN ELECTRONIC SUBMITTAL IN A PDF TYPE FORMAT.	
7. ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE GALVANIZED SHEET STEEL EXTERNALLY WRAPPED WITH WITH A MIN. OF R5 INSULATION OR R8 IF DUCTWORK IS LOCATED EXTERIOR TO BLDG INSULATION ENVELOPE. ALL FLEX DUCT SHALL BE "THERMOFLEX" OR APPROVED EQUAL AND SHALL HAVE EQUIVALENT INSULATION.	
8. ALL EXHAUST DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED SHEET METAL WITH SEALED SEAMS AND JOINTS.	
9. DUCT SIZES SHOWN ARE INSIDE DIMENSIONS.	
10. ALL AIR DEVICES (DIFFUSERS, REGISTERS AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION WITH EXPOSED SURFACE OFF WHITE BAKED ENAMEL FINISH OR AS SPECIFIED BY ARCHITECT. DEVICES SHALL BE TITUS, METALAIR, AIRGUIDE. PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS.	
11. THERMOSTAT SHALL BE COMBINATION COOLING/HEATING, WITH SYSTEM "COOL-AUTO-HEAT-OFF" AND FAN "ON-AUTO" SELECTOR SWITCHES. PROVIDE PROGRAMMABLE TYPE THERMOSTAT. * CONTRACTOR SHALL FULLY INSTRUCT OWNER ON HOW TO PROPERLY PROGRAM INSTALLED THERMOSTATS. * PROGRAMMABLE THERMOSTAT SHALL BE BY MANUFACTURER OF INSTALLED AIR HANDLING UNIT. IT IS RECOMMENDED THAT DURING OCCUPIED HOURS, THE FANS BE SET TO "ON" IN LIEU OF "AUTO". * THERMOSTATS SHALL BE MOUNTED A MAX. OF 48" A.F.F.	
12. REFRIGERANT LINES SHALL BE COPPER, TYPE "L" HARD DRAWN WITH WROUGHT COPPER SOLDER-JOINT TYPE FITTINGS, USE 95/5 SOLDER. REFRIGERANT LINES SHALL SIZED AS PER MANUFACTURER RECOMMENDATIONS.	
13. SPLIT SYSTEMS (IF APPLICABLE) SHALL HAVE ARMAFLEX 3/4" INSULATION (OR APPROVED EQUAL) USED FOR SUCTION LINES. INSTALLATION SHALL BE AS PER MANUFACTURERS INSTRUCTIONS, PRE-INSULATED LINES SETS ARE ACCEPTABLE.	
14. ALL BRANCH TAKE-OFFS TO BE PROVIDED W/MANUAL VOLUME DAMPERS AND TAPS AS PER PLANS REQUIREMENTS.	
15. PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE STARTING THEM. REPLACE THEM PRIOR TO FINAL ACCEPTANCE BY OWNER.	
16. PROVIDE SMOKE DETECTORS WITH ACCESS DOORS IN ALL SUPPLY AIR DUCTS FOR FANS AND AHU'S SERVING A COMMON DESIGN SUPPLY OR RETURN PLENUM OF ABOVE 2000 CFM. ALL SMOKE DETECTORS SHALL BE BY ONE MANUFACTURER, COORDINATE VOLTAGE ETC. WITH ELECTRICAL CONTRACTOR AND FIRE ALARM SYSTEM BEFORE ORDERING. UPON DETECTION, SMOKE DETECTORS SHUT DOWN ASSOCIATED AIR MOVING EQUIPMENT AND ALL AIR MOVING EQUIPMENT SERVING THAT COMMON PLENUM.	
17. HVAC CONTRACTOR SHALL PROVIDE A TEST AND BALANCE REPORT FOR ALL MECHANICAL EQUIPMENT, AIR DEVICES, DAMPERS, AHU'S AND FANS. THE T & B SHALL BE IN ACCORDANCE WITH THE AIR BALANCE COUNCIL STANDARDS, AND SHALL INCLUDE AIR QUANTITIES FOR ALL SUPPLY GRILLS, RETURN GRILLS, AND EXHAUST GRILLS, AND THE LEAVING AND ENTERING AIR TEMPERATURE (°F) FROM SUPPLY GRILLS AND EVAPORATORS.	
18. THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER BEFORE INSTALLATION.	
19. ALL INSULATION SHALL HAVE FIRE/SMOKE RATING LESS THAN 25/50.	
20. MECHANICAL PLANS IN GENERAL ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCH. PLUMBING, ELECTRICAL AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS WILL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.	
21. CONTRACTOR SHALL INSTALL ALL OUTDOOR EQUIPMENT TO WITHSTAND WND LOADING FORCES AS REQUIRED BY LOCAL CODES. REFER TO STRUCTURAL PLANS BY OTHERS FOR STRUCTURAL DETAILS.	
22. PROVIDE ALL NECESSARY CONTACTORS, RELAYS, ETC., FOR A COMPLETE OPERATING SYSTEM.	
23. THROUGHOUT THE COURSE OF THE WORK, MINOR CHANGES AND ADJUSTMENTS TO THE PLANS AND SPECIFICATIONS MAY BE REQUESTED BY THE TENANT. THE CONTRACTOR SHALL MAKE SUCH ADJUSTMENTS WITHOUT ADDITIONAL COST TO THE TENANT, WHERE SUCH ADJUSTMENTS ARE NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE SYSTEMS, AND WITHIN THE INTENT OF THE CONTRACT DOCUMENTS.	
24. NOTWITHSTANDING ANY OTHER PROVISIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR BEARS ULTIMATE RESPONSIBILITY FOR COMPLIANCE OF THE INSTALLATION WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.	
25. IF ANY ERRORS, DISCREPANCIES OR OMISSIONS APPEAR IN THE DRAWINGS, SPECIFICATIONS OR OTHER CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF SUCH ERROR OR OMISSION. IN THE EVENT OF THE CONTRACTOR FAILING TO GIVE SUCH NOTICE BEFORE CONSTRUCTION AND/OR FABRICATION OF THE WORK, HE WILL BE HELD RESPONSIBLE FOR THE RESULTS OF ANY SUCH ERRORS, DISCREPANCIES OR OMISSIONS AND THE COST OF RECTIFYING SAME.	

FAN SCHEDULE										
LABEL	TYPE OF UNIT – AREA SERVED	MANUFACTURER & MODEL NO.	CFM	SP	MOUNTING ARRANGEMENT	MOTOR H.P.	ENCLOSURE TYPE	RPM	VOLTAGE	NOTES
EF-1	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z5H(TDA)	170	.125"	INLINE	83 WATTS	OPEN DRIP PROOF	1550	115V/1Ø	1
EF-2	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z5H(TDA)	170	.125"	INLINE	83 WATTS	OPEN DRIP PROOF	1550	115V/1Ø	1
EF-3	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z8S	250	.125"	CEILING MOUNTED	77 WATTS	OPEN DRIP PROOF	1050	115V/1Ø	1
EF-4	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z10IS	450	.125"	CEILING MOUNTED	153 WATTS	OPEN DRIP PROOF	1050	115V/1Ø	1
EF-5	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z6	90	.125"	CEILING MOUNTED	50 WATTS	OPEN DRIP PROOF	1055	115V/1Ø	1
EF-6	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z8I	300	.125"	CEILING MOUNTED	124 WATTS	OPEN DRIP PROOF	1115	115V/1Ø	1
EF-7	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z8I	300	.125"	CEILING MOUNTED	124 WATTS	OPEN DRIP PROOF	1115	115V/1Ø	1
EF-8	CABINET FAN – CHEMICAL STORAGE	PENN ZEPHYR Z8H	380	.125"	CEILING MOUNTED	1.6A	OPEN DRIP PROOF	1550	115V/1Ø	1
EF-9	CABINET FAN – POOL EQUIPMENT	PENN ZEPHYR Z10H(TDA)	600	.125"	CEILING MOUNTED	3.6A	OPEN DRIP PROOF	1550	115V/1Ø	SET ON HIGH SPEED
EF-10	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z8S	250	.125"	CEILING MOUNTED	77 WATTS	OPEN DRIP PROOF	1050	115V/1Ø	1
EF-11	CABINET FAN – REFER TO PLANS	PENN ZEPHYR Z7	190	.125"	CEILING MOUNTED	68 WATTS	OPEN DRIP PROOF	1640	115V/1Ø	1

NOTES: 1.) CONTROLLED VIA LIGHT SWITCH. REFER TO ELECTRICAL PLANS FOR CONTROL.
2.) CONTROLLED VIA THERMOSTAT.

*ALL FANS TO BE PROVIDED WITH BACKDRAFT DAMPERS

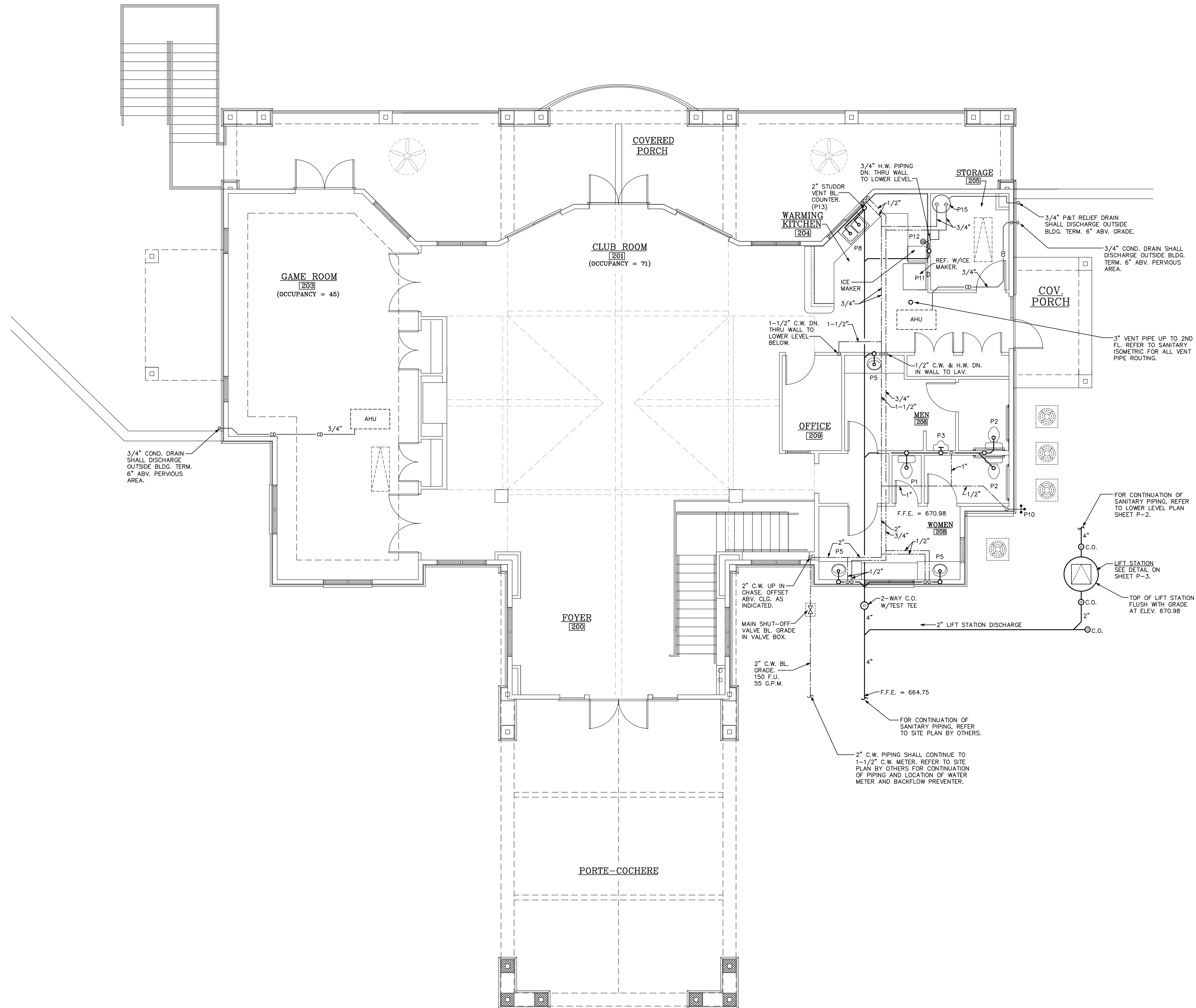
OUTSIDE AIR CALCULATIONS						
THE FOLLOWING IS BASED ON 2012 NCMC TABLE 403.3 MINIMUM VENTILATION RATES FOR OUTSIDE AIR REQUIREMENTS						
MAIN LEVEL						
OCCUPANCY CATAGORY	AREA	ESTIMATED MAX. OCCUPANCY	OUTSIDE AIR REQUIRED (CFM)	E _z	TOTAL	SERVED BY
GAME ROOM 209 (MULTIPURPOSE ASSEMBLY)	676	45 PEOPLE AS PER ARCH. PLANS/5 CFM PER PERSON	(45X5) + (676 X .06) = 265 PEOPLE AREA TOTAL	0.8	265/0.8 = 331	AHU #1
CLUB ROOM 201 (MULTIPURPOSE ASSEMBLY)	900	71 PEOPLE AS PER ARCH. PLANS/5 CFM PER PERSON	(71X5) + (900 X .06) = 409 PEOPLE AREA TOTAL	0.8	409/0.8 = 511	AHU #1 & 2
FOYER 200 (ENTRANCE LOBBY)	104	10 PEOPLE PER 1,000 S.F./5 CFM PER PERSON	(3X5) + (104 X .06) = 22 PEOPLE AREA TOTAL	0.8	22/0.8 = 27	AHU #1 & 2
LOWER LEVEL						
OCCUPANCY CATAGORY	AREA	ESTIMATED MAX. OCCUPANCY	OUTSIDE AIR REQUIRED (CFM)	E _z	TOTAL	TOTAL
AEROBICS 101 (HEALTH CLUB/AEROBICS ROOM)	430	9 PEOPLE PER 1,000 S.F./20 CFM PER PERSON	(9X20) + (430 X .06) = 206 PEOPLE AREA TOTAL	0.8	206/0.8 = 258	AHU #3 & 4
FITNESS CENTER 100 (MULTIPURPOSE ASSEMBLY)	1,350	27 PEOPLE AS PER ARCH. PLANS/5 CFM PER PERSON	(27X5) + (1,350 X .06) = 216 PEOPLE AREA TOTAL	0.8	216/0.8 = 270	AHU #3
* E _z (SYSTEM VENTILATION EFFICIENCY) AS PER 2012 NCMC TABLE 403.3.2.3.2						
			AHU #1=500 CFM / AHU #2=369 CFM / AHU #3 = 300 CFM / AHU #4 = 230 CFM)			



2 CABANA FLOOR PLAN - MECHANICAL
SCALE: 3/16"=1'-0"

APPENDIX B BUILDING CODE SUMMARY (MECHANICAL SUMMARY)	
MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT	
METHOD OF COMPLIANCE: Prescriptive [X] Energy Cost Budget []	
Thermal Zone Zone ?	
Exterior Design Conditions	
winter dry bulb	20° F
summer dry bulb	97° F
Interior Design Conditions	
winter dry bulb	68° F
summer dry bulb	74° F
relative humidity	52.9%
Building Heating Load	356,040 BTU
Building Cooling Load	201,700 BTU
Mechanical Spacing Conditioning System	
Unitary	
Description of unit	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
heating efficiency	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
cooling efficiency	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
heat output of unit	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
cooling output of unit	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
Boiler	
N/A	
total boiler output. If oversized, state reason.	
Chiller	
N/A	
total chiller capacity. If oversized, state reason.	
List equipment efficiencies	
Equipment schedules with motors (mechanical systems)	
REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.	
motor horsepower	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
number of phases	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
minimum efficiency	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
motor type	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
# of poles	REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
DESIGNER STATEMENT: ¹	
To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of the North Carolina Energy Code 2012.	
SIGNED:	
NAME: _____	
TITLE: _____	

NOTE:
COMPLIANCE TO NO ENERGY
EFFECTIVE SIZE IS MADE BY
LIGHTING LEVEL REDUCTION.



2 MAIN LEVEL - PLUMBING
 SCALE: 3/16"=1'-0"

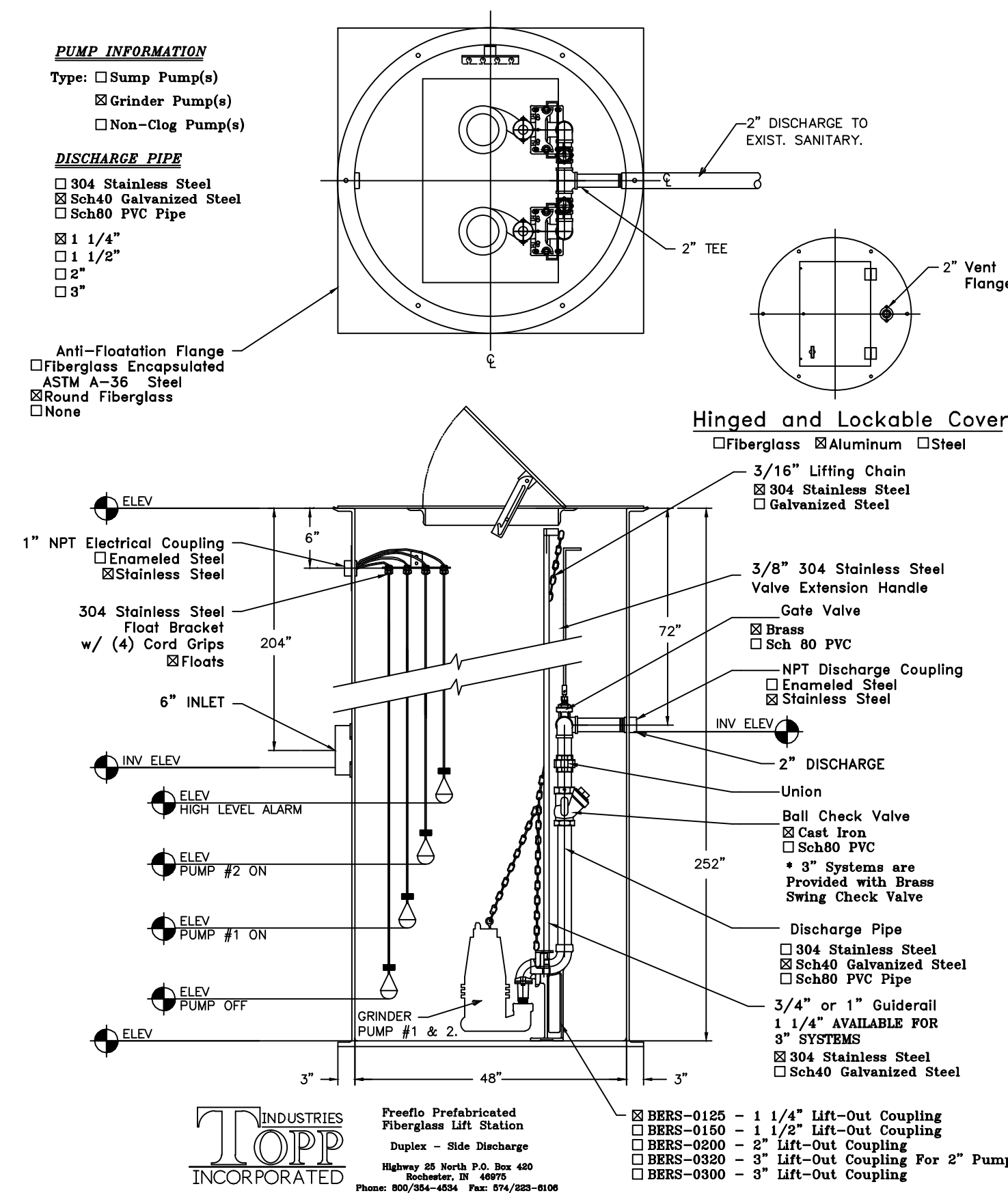
PUMP INFORMATION

Type: ☐ Sump Pump(s)
☒ Grinder Pump(s)
☐ Non-Clog Pump(s)

DISCHARGE PIPE

☐ 304 Stainless Steel
☒ Sch40 Galvanized Steel
☐ Sch80 PVC Pipe
☒ 1 1/4"
☐ 1 1/2"
☐ 2"
☐ 3"

Anti-Floatation Flange
☐ Fiberglass Encapsulated
☒ ASTM A-36 Steel
☒ Round Fiberglass
☐ None



DUPLUX SEWAGE LIFT STATION NOTES

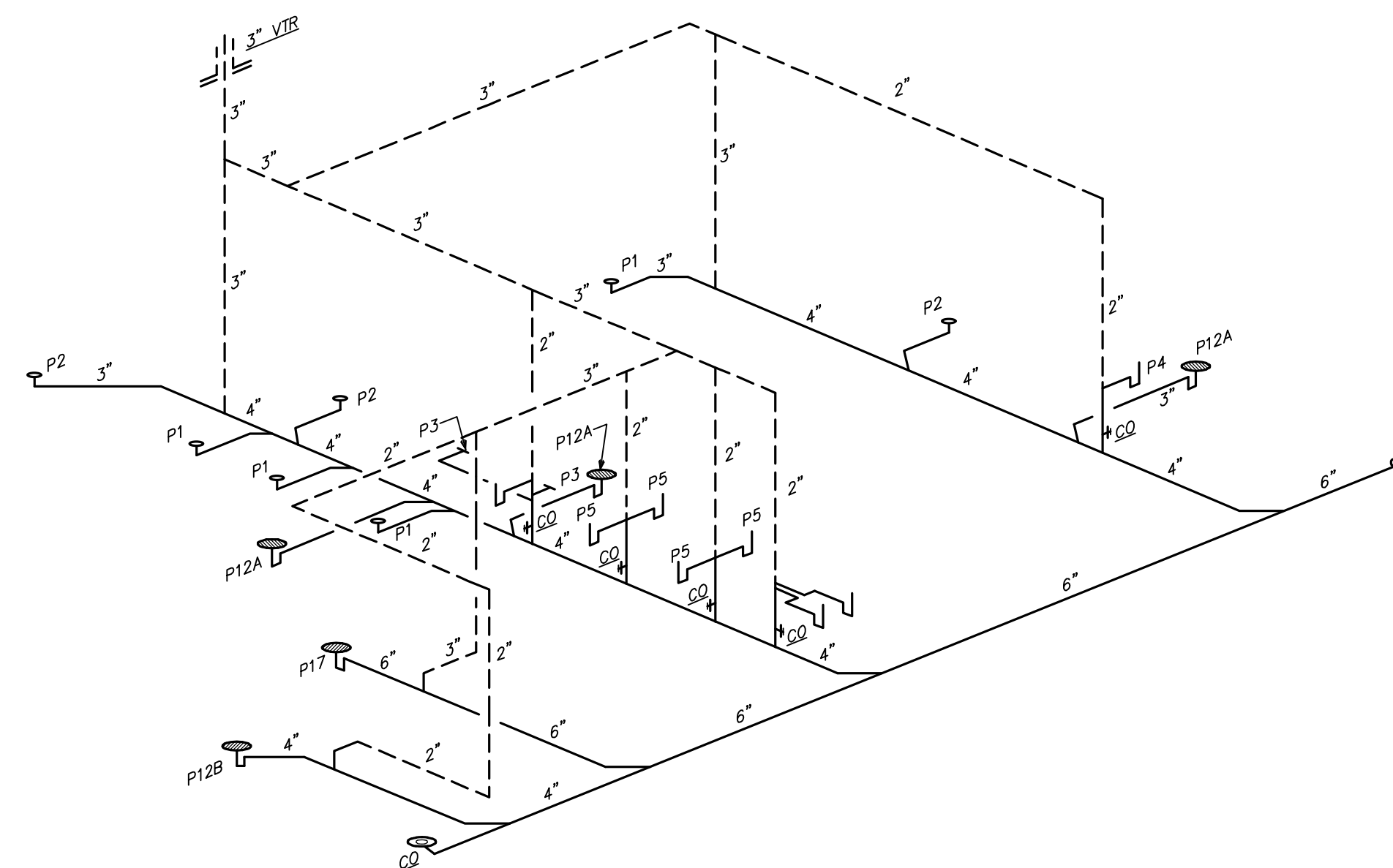
- DUPLUX SEWAGE LIFT STATION—CONSISTING OF:
- GRINDER PUMP #1 & 2
- (2) POWER-FLO MODEL PF2021HV SUBMERSIBLE GRINDER PUMP(S), 2HP, 208V, 1PH, SIZED TO DELIVER 40 GPM @ 20 TDH, WITH 1.25" DISCHARGE. IMPELLER TRIMMED TO 4.25".
- (1) FACTORY PACKAGED BASIN—CONSISTING OF:
- (1) B48X252F 48" DIAMETER X 252" DEPTH FIBERGLASS BASIN WITH ANTI-FLOAT DEVICE.
- (1) SGR125G-D20 FACTORY INSTALLED GUIDE RAIL SYSTEM(S), INCLUDING 1.25" GALVANIZED DISCHARGE PIPE, GUIDE RAILS, BASE ELBOWS, STAINLESS STEEL LIFTING CHAINS, CHECK VALVES, AND GATE VALVES.
- (1) C48HSA ALUMINUM SINGLE HATCH BASIN COVER.
- (1) POWER-FLO MODEL PF2021 DUPLUX CONTROL PANEL WITH NEMA 4X ENCLOSURE. INCLUDES 4 WEIGHTED FLOATS.
- (1) SSF84 STAINLESS STEEL FLOAT BRACKET.

Freeflo Prefabricated
 Fiberglass Lift Station
 Duplex - One Discharge
 Highway 24 North P.O. Box 400
 Belvidere, IL 60009
 Phone: 815/464-4554 Fax: 815/462-8100
<http://www.freeflo.com/>

3 LIFT STATION DETAIL AND SPECIFICATIONS NO SCALE

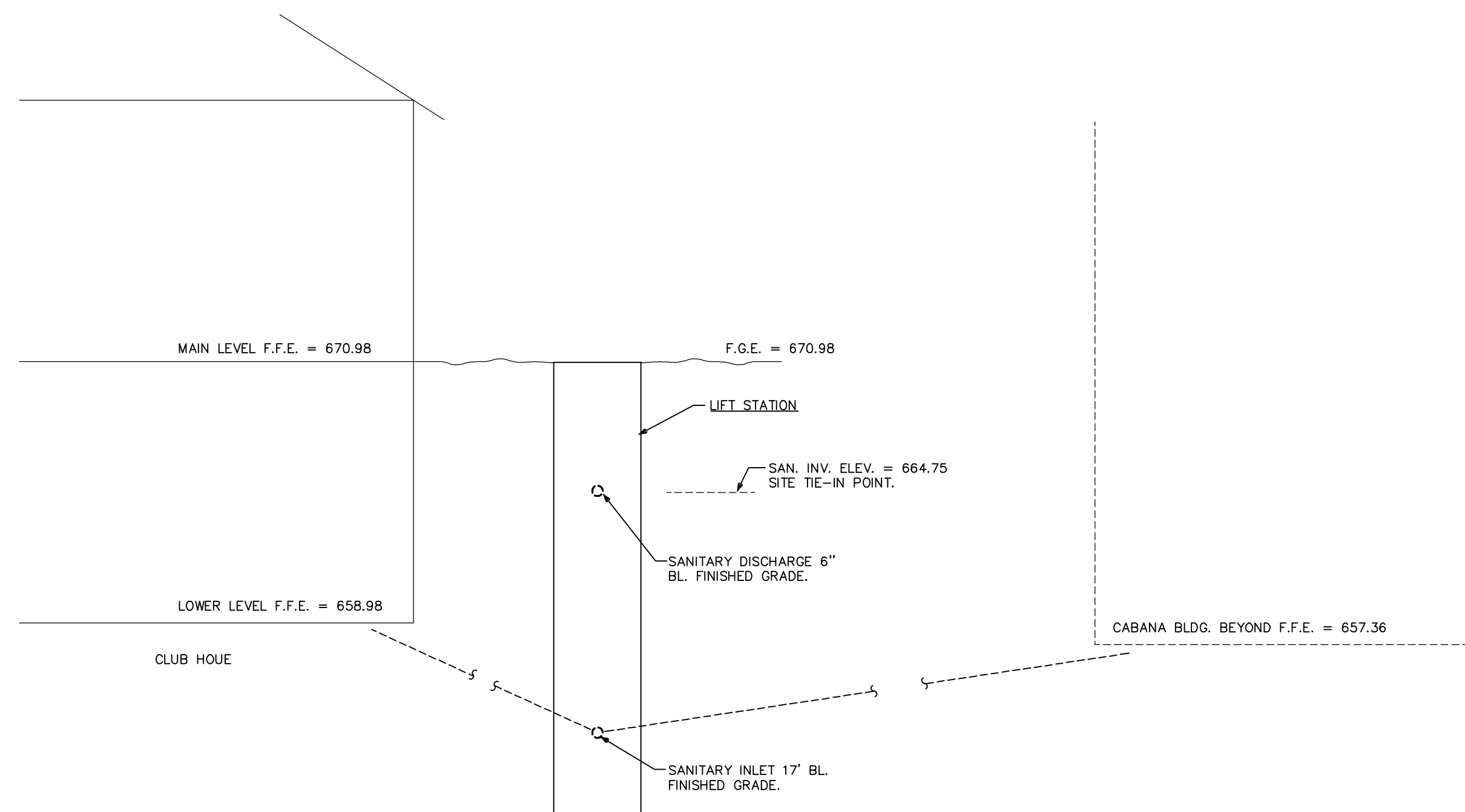
PLUMBING FIXTURE CONNECTION SIZES				
FIXTURE	C.W. CONN. SIZE	H.W. CONNECTION SIZE	SANITARY BRANCH SIZE	F.U. LOAD VALUES
WATER CLOSET (P1,P2)	1/2"	—	3"	5.0
URINAL (P3)	3/4"	—	2"	5.0
LAVATORY (P4,P5)	1/2"	1/2"	1-1/4"	2.0
ELECTRIC WATER COOLER (P6)	1/2"	—	1-1/4"	0.5
SINK (P7,P8)	1/2"	1/2"	1-1/2"	4.0

NOTE: F.U. LOAD VALUES BASED ON IPC 2009 — APPENDIX E TABLE E103.3(2)

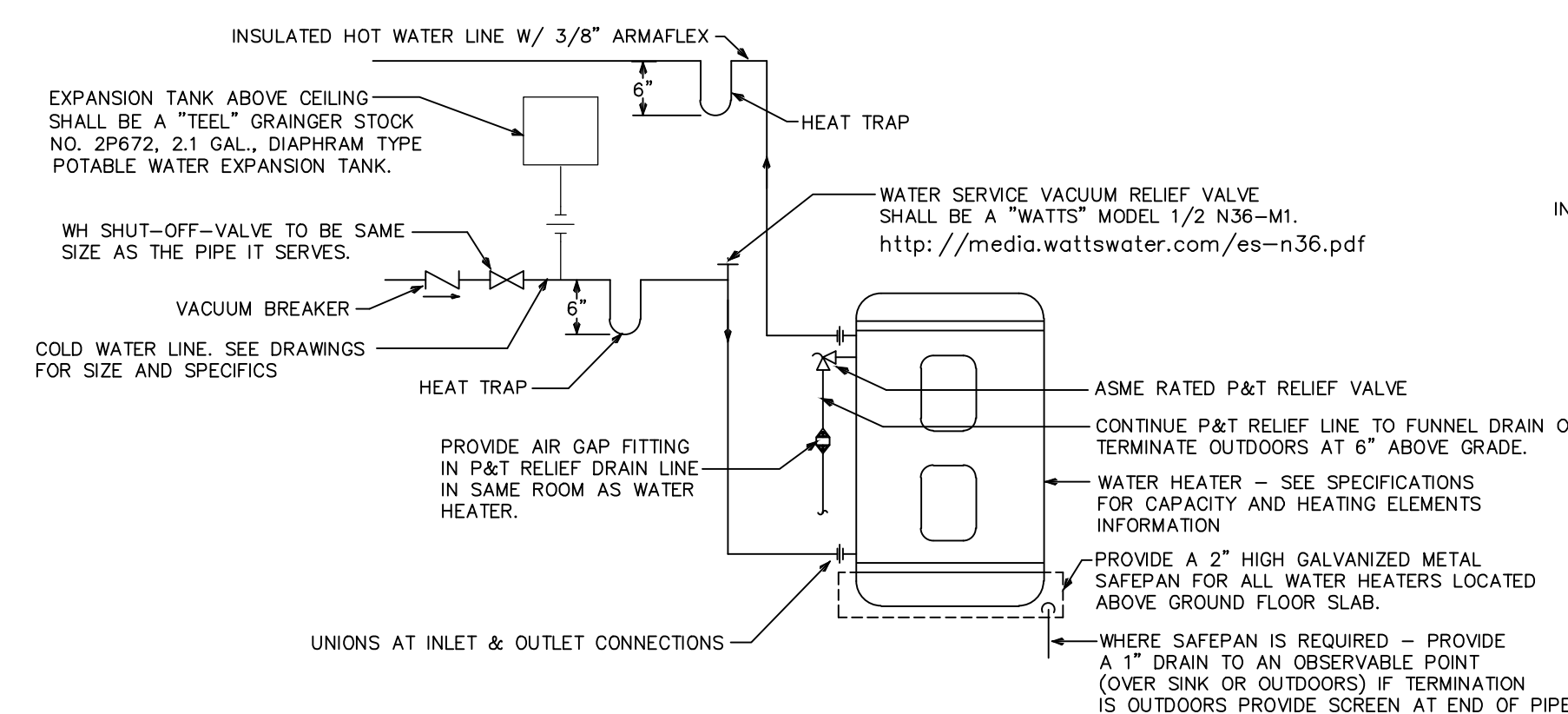


(CABANA BUILDING)

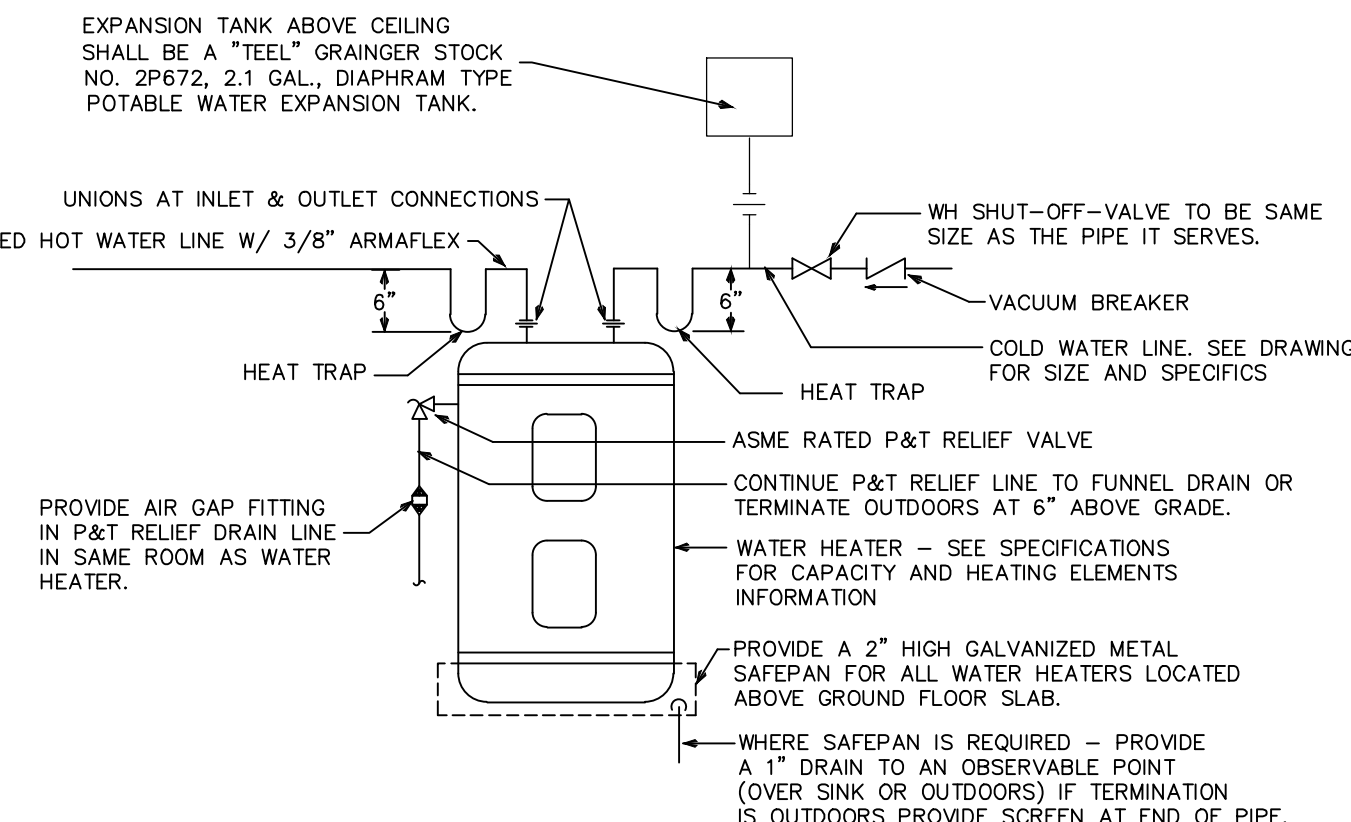
2 SANITARY ISOMETRIC NO SCALE



4 LIFT STATION ELEVATION SCHEMATIC NO SCALE

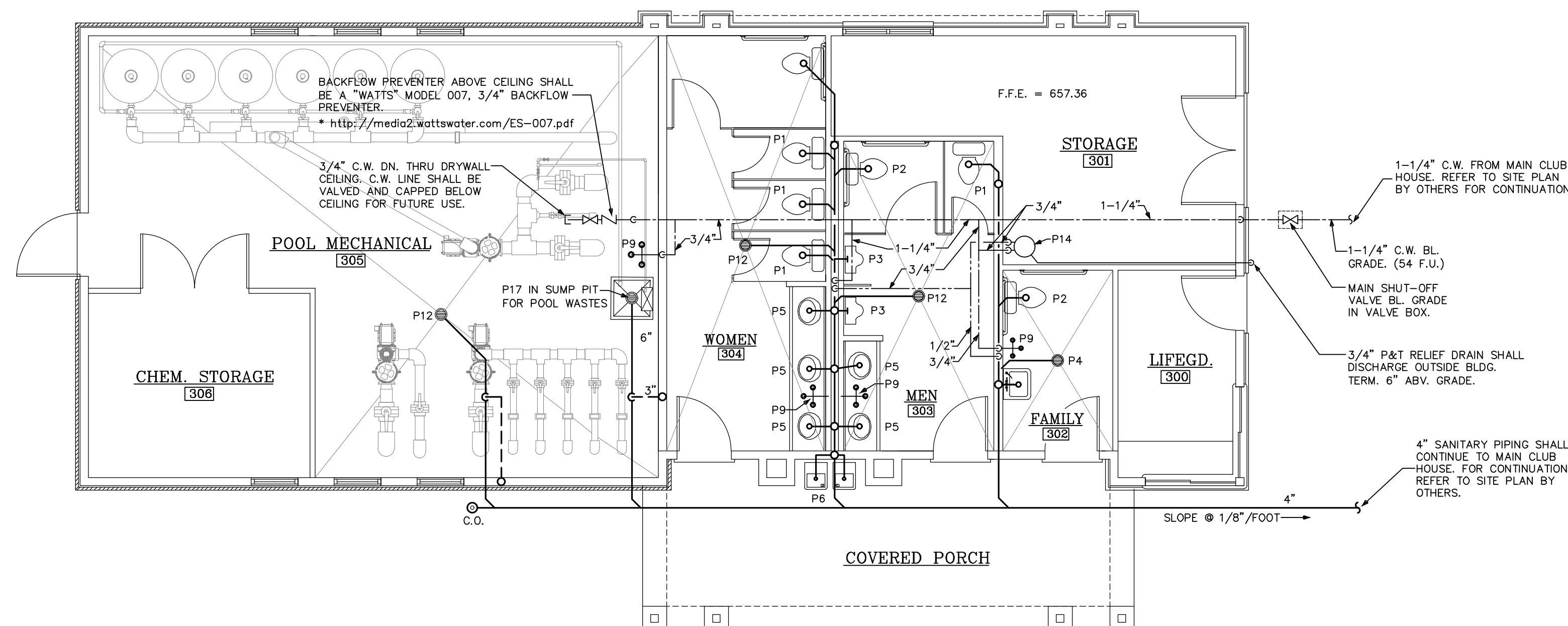


CABANA BLDG.



CLUB HOUSE

5 WATER HEATER DETAILS NO SCALE

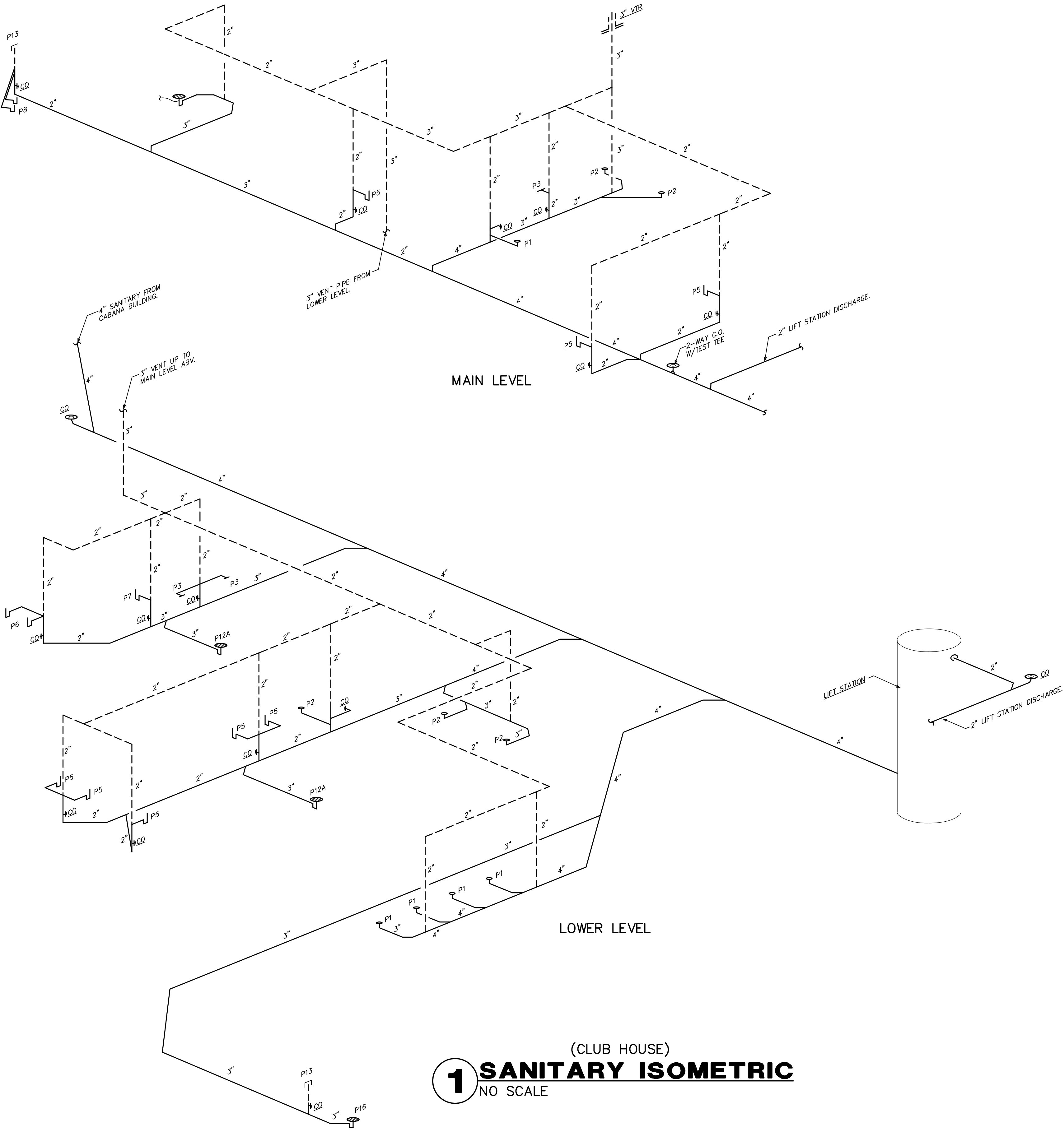


1 CABANA FLOOR PLAN - PLUMBING SCALE: 3/16"=1'-0"

PLUMBING FIXTURE SCHEDULE
P-1 (FLOOR MOUNTED FLUSH TANK WATER CLOSET) SHALL BE AN AMERICAN STANDARD MODEL CABET MODEL 2333.100 ELONGATED 1.6 GPF, VITREOUS CHINA, PRESSURE-ASSISTED SIPHON ACTION BOWL, CLOSE-COUPLED TANK, FLOOR MOUNTED, FLOOR OUTLET, SPEED CONNECT TANK/BOWL COUPLING SYSTEM, WITH AMERICAN STANDARD OPEN FRONT SEAT WITH COVER MODEL 5325.024. * http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_722.pdf
P-2 (HANDICAPPED FLOOR MOUNTED FLUSH TANK WATER CLOSET) SHALL BE AN AMERICAN STANDARD MODEL CABET RIGHT HEIGHT 18-1/2" 2377.100 ELONGATED 1.6 GPF, VITREOUS CHINA, PRESSURE-ASSISTED SIPHON ACTION BOWL, CLOSE-COUPLED TANK, FLOOR MOUNTED, FLOOR OUTLET, SPEED CONNECT TANK/BOWL COUPLING SYSTEM, WITH AMERICAN STANDARD OPEN FRONT SEAT WITH COVER MODEL 5325.024. * http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_1006.pdf
P-3 (HANDICAPPED URINAL) SHALL BE AN AMERICAN STANDARD LYNBROOK MODEL 6601.012 TOP SPUD, 0.83 GPF, FLUSH VALVE SHALL BE SLOAN ROYAL MODEL 180-1. * http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_190.pdf
P-4 (HANDICAPPED WALL HUNG LAVATORY) SHALL BE AN AMERICAN STANDARD REGALYN LAVATORY MODEL 4869.001 (CENTER HOLE ONLY), VITREOUS CHINA, WALL MOUNT WITH CONCEALED ARMS SUPPORT, FAUCET SHALL BE A "CHICAGO" MODEL 3300-ABCP METERING FAUCET WITH 4" CENTERS AND BUILT-IN THERMOSTATIC MIXING VALVE TO DELIVER TEMPERED WATER AT A TEMPERATURE NOT TO EXCEED 105 DEGREES. UNIT IS ADA COMPLIANT, 0.5 GPM WITH AN ADJUSTABLE 2-15 SECOND OPERATING CYCLE PRODUCING UNDER .25 GALLONS PER CYCLE. WATER PIPING AND P-TRAP SHALL BE COVERED WITH AN UNDER-SINK PROTECTIVE PIPE COVER KIT BY TRUEBRO (HTTP://WWW.TRUEBRO.COM) OR APPROVED EQUAL. * http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_1476.pdf * http://www.chicagofaucets.com/catalog/catalog.php?part_number=3300-ABCP
P-5 (HANDICAPPED COUNTER TOP LAVATORY) SHALL BE AN AMERICAN STANDARD MODEL REGALYN MODEL 0490.011 VITREOUS CHINA SELF-RIMMING, FAUCET SHALL BE A "CHICAGO" MODEL 3300-ABCP METERING FAUCET WITH 4" CENTERS AND BUILT-IN THERMOSTATIC MIXING VALVE TO DELIVER TEMPERED WATER AT A TEMPERATURE NOT TO EXCEED 105 DEGREES. UNIT IS ADA COMPLIANT, 0.5 GPM WITH AN ADJUSTABLE 2-15 SECOND OPERATING CYCLE PRODUCING UNDER .25 GALLONS PER CYCLE. WATER PIPING AND P-TRAP SHALL BE COVERED WITH AN UNDER-SINK PROTECTIVE PIPE COVER KIT BY TRUEBRO (HTTP://WWW.TRUEBRO.COM) OR APPROVED EQUAL. * http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_90.pdf * http://www.chicagofaucets.com/catalog/catalog.php?part_number=3400-CP
P-6 (HANDICAPPED ELECTRIC WATER COOLER COMBINATION H/L/O) SHALL BE AN ELKAY MODEL EMABFTL8C, SPLIT LEVEL TWO STATION WATER COOLER WITH BARRIER FREE ACCESS, MODEL EMABFTL8C, 8.8 GPH, 4.0 FLA AT 120 VOLT. * http://www.elkayusa.com/cps/rde/xbr/elkay/12-538_EMABFTL8C_EMABFTLDDC.pdf
P-7 (HANDICAPPED SINGLE BOWL STAINLESS STEEL SINK) SHALL BE A "JUST" MODEL SL-ADA-17519-A-GR, 17-1/2"x19"x8-1/2", SINGLE BOWL, SEAMLESS DIE-DRAWN CONSTRUCTION OF TYPE 304, 18-8 STAINLESS STEEL, INTERIOR AND TOP SURFACES POLISHED TO A NONPOROUS HAND-BLENDED JUST FINISH WITH HIGHLIGHTED BOWL RIM, FULLY COATED UNDERSIDE INSULATED FOR SOUND AND REDUCES CONDENSATION, STRAIGHT-SIDED COMPARTMENT WITH RADIUS CORNERS PROVIDES GREATER CAPACITY. SELF-RIMMING TOP MOUNT GRIP-RIM PLUS WITH 300 SERIES STAINLESS STEEL MOUNTING CHANNELS. CONFORMS TO ASME/ANSI A112.19.3M, CERTIFIED CONFORMANCE WITH ASME A112.19.3/CSA B45.4. FAUCET SHALL BE A "JUST" MODEL J-1174-KS WITH 4" WRIST BLADE HANDLES. * http://www.justmfg.com/PDF/SLADA17519A.pdf * http://www.justmfg.com/PDF/J-1174-KS-29.pdf
P-8 (HANDICAPPED DOUBLE BOWL STAINLESS STEEL SINK) SHALL BE A "JUST" MODEL DL-ADA-1933-A-GR, 19"x33"x6-1/2" DOUBLE BOWL, SEAMLESS DIE-DRAWN CONSTRUCTION OF TYPE 304, 18-8 STAINLESS STEEL, INTERIOR AND TOP SURFACES POLISHED TO A NON-POROUS HAND-BLENDED JUST FINISH WITH HIGHLIGHTED BOWL RIM, FULLY COATED UNDERSIDE INSULATES FOR SOUND, AND REDUCES CONDENSATION, STRAIGHT-SIDED COMPARTMENT WITH 1 3/4" RADIUS CORNERS PROVIDES GREATER CAPACITY. SELF-RIMMING TOP MOUNT GRIP-RIM PLUS WITH 300 SERIES STAINLESS STEEL MOUNTING CHANNELS. DRAIN PUNCH #35 CENTERED FOR JUST J-35. UNLESS OTHERWISE SPECIFIED, FAUCET SHALL BE A "JUST" MODEL J-1174-KS WITH 4" WRIST BLADE HANDLES. * http://www.justmfg.com/PDF/DLADA1933A.pdf * http://www.justmfg.com/PDF/J-1174-KS-29.pdf
P-9 (HOSE BIBB INTERIOR W/HANDWHEEL) SHALL BE A "WOODFORD" MODEL 101 ANTI-SIPHON WALL FAUCET. * http://www.wcmind.com/woodford/Wall_Faucet_Pages/Model-101.html
P-10 (HOSE BIBB - NON-FREEZE HYDRANT WITH LOCK COVER) SHALL BE A "ZURN" Z1300 ENCASED ECOLOTROL, ANTI-SIPHON, AUTOMATIC DRAINING, NON-FREEZE WALL HYDRANT COMPLETE WITH INTEGRAL BACKFLOW PREVENTOR, COPPER CASING, ALL BRONZE INTERIOR PARTS, NON-COMBINATION 3/4 MALE PIPE THREAD INLET CONNECTION STANDARD, REGULARLY FURNISHED WITH 3/4 HOSE CONNECTION. CHROME-PLATED ROUGH CAST BRONZE BOX AND HINGED COVER. INCLUDES OPERATING KEY. * http://content.zurn.com/web_documents/pdfs/specsheets/58867.pdf
P-11 (WATER CONNECTION BOX) SHALL BE A HIGH QUALITY CONNECTION BOX AS SPECIFIED ON PLUMBINGSUPPLY.COM LOCATED ON THIS PAGE "http://www.plumbingsupply.com/icemaker-outlet-boxes.html" SHALL INCLUDE 2 SUPPORT BRACKETS, HIGH IMPACT POLYSTYRENE, 1/4" BRASS BALL VALVE WITH 1/2" SWEAT CONNECTION, OR APPROVED EQUAL.
P-12A (3" FLOOR DRAIN WITH TRAP SEAL) SHALL BE A JOSAM 30003-SA-WT-A SERIES COATED CAST IRON FLOOR DRAIN, TWO PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WELOC INVERTIBLE NON- PUNCTURING FLASHING COLLAR, WEEPHOLES, BOTTOM OUTLET, INSIDE CAULK CONNECTION AND ADJUSTABLE SATIN NIKALOY ROUND SUPER-FLO STRAINER, 4" PIPE CONNECTION. * http://www.josam.com/images/josammk1/sbmt/s06_30000-WT-A.pdf FLOOR DRAIN TRAP SEAL SHALL BE A "SURE SEAL" MODEL SS3000 PREASSEMBLED INLINE FLOOR DRAIN TRAP SEALER, 5 PIECES: COMMERCIAL GRADE ABS PLASTIC HOUSING AND KEEPER PIN, PROPRIETARY NEOPRENE RUBBER DIAPHRAGM, WITH 2 SOFT RUBBER SEALING GASKETS, FLOOR RATING ASSE-1072 AF-GW. * http://www.theasureseal.com/Portals/49321/docs/pitch_sheet_ss3000.pdf
P-12B (4" FLOOR DRAIN WITH TRAP SEAL) SHALL BE A JOSAM 30004-SA-WT-A SERIES COATED CAST IRON FLOOR DRAIN, TWO PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WELOC INVERTIBLE NON- PUNCTURING FLASHING COLLAR, WEEPHOLES, BOTTOM OUTLET, INSIDE CAULK CONNECTION AND ADJUSTABLE SATIN NIKALOY ROUND SUPER-FLO STRAINER, 4" PIPE CONNECTION. * http://www.josam.com/images/josammk1/sbmt/s06_30000-WT-A.pdf FLOOR DRAIN TRAP SEAL SHALL BE A "SURE SEAL" MODEL SS3000 PREASSEMBLED INLINE FLOOR DRAIN TRAP SEALER, 5 PIECES: COMMERCIAL GRADE ABS PLASTIC HOUSING AND KEEPER PIN, PROPRIETARY NEOPRENE RUBBER DIAPHRAGM, WITH 2 SOFT RUBBER SEALING GASKETS, FLOOR RATING ASSE-1072 AF-GW. * http://www.theasureseal.com/Portals/49321/docs/pitch_sheet_ss3000.pdf
P-13 (STUDOR VENT - AIR ADMITTANCE VALVE) SHALL BE A IPS CORPORATION "STUDOR MINI-VENT", 2" VENT. * http://www.ipscorp.com/plumbing/studor/minivent
P-14 (JUNIOR WATER HEATER) WATER HEATER SHALL BE A LOCHINVAR MODEL JRC060S, 6 GALLON GLASSLINED STORAGE TANK, JUNIOR TYPE WATER HEATER WITH (1) - 1.6 KW ELECTRIC ELEMENT AT 115 VOLTS, SINGLE PHASE INCOMING POWER, 3 YEAR LIMITED WARRANTY ON STORAGE TANK AGAINST TANK FAILURE. WATER HEATER SHALL MEET OR EXCEED ALL APPLICABLE SECTIONS OF ASHRAE STANDARD 90-80A AND NAECA REQUIREMENTS FOR ENERGY CONSERVATION. * http://lochinvar.com/_lnfiles/JRE-06.pdf
P-15 (WATER HEATER) SHALL BE A LOCHINVAR MODEL LT405KK, 50 GALLON GLASSLINED STORAGE TANK, TALL TANK TYPE WATER HEATER WITH (2) - 4.5 KW ELECTRIC ELEMENTS WIRED FOR NON-COINCURENT INDEPENDENT OPERATION AT 208 VOLTS, SINGLE PHASE INCOMING POWER, 3 YEAR LIMITED WARRANTY ON STORAGE TANK AGAINST TANK FAILURE. WATER HEATER SHALL MEET OR EXCEED ALL APPLICABLE SECTIONS OF ASHRAE STANDARD 90-80A AND NAECA REQUIREMENTS FOR ENERGY CONSERVATION. * http://lochinvar.com/_lnfiles/JRE.pdf
P-16 (3" FLOOR DRAIN WITH TRAP SEAL) SHALL BE A JOSAM 30000-WT-A SERIES COATED CAST IRON FLOOR DRAIN, TWO PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WELOC INVERTIBLE NON- PUNCTURING FLASHING COLLAR, WEEPHOLES, BOTTOM OUTLET, INSIDE CAULK CONNECTION AND ADJUSTABLE SATIN NIKALOY ROUND SUPER-FLO STRAINER, 3" PIPE CONNECTION. * http://www.josam.com/images/josammk1/sbmt/s06_30000-WT-A.pdf FLOOR DRAIN TRAP SEAL SHALL BE A "SURE SEAL" MODEL SS3000 PREASSEMBLED INLINE FLOOR DRAIN TRAP SEALER, 5 PIECES: COMMERCIAL GRADE ABS PLASTIC HOUSING AND KEEPER PIN, PROPRIETARY NEOPRENE RUBBER DIAPHRAGM, WITH 2 SOFT RUBBER SEALING GASKETS, FLOOR RATING ASSE-1072 AF-GW. * http://www.theasureseal.com/Portals/49321/docs/pitch_sheet_ss3000.pdf
P-17 (12" FLOOR DRAIN WITH 6" DISCHARGE PIPE CONNECTION) SHALL BE A JOSAM 32200 SERIES COATED CAST IRON FLOOR DRAIN, SHALLOW TWO-PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WELOC NON-PUNCTURING FLASHING CLAMP COLLAR, WEEPHOLES, BOTTOM OUTLET, ROUND TOP, AND MEDIUM-DUTY LOOSE-SET ANTI-TILTING SUPER-FLO GRATE WITH PERIMETER DRAINAGE SLOTS. * http://www.josam.com/images/josammk1/zzother/J08_p128-30.pdf
NOTES: 1.) ALL PLUMBING FIXTURES SHALL BE AS SPECIFIED OR APPROVED EQUAL. 2.) PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.

PLUMBING FIXTURE CONNECTION SIZES				
FIXTURE	C.W. CONN. SIZE	H.W. CONNECTION SIZE	SANITARY BRANCH SIZE	F.U. LOAD VALUES
WATER CLOSET (P1,P2)	1/2"	-	3"	5.0
URINAL (P3)	3/4"	-	2"	5.0
LAVATORY (P4,P5)	1/2"	1/2"	1-1/4"	2.0
ELECTRIC WATER COOLER (P6)	1/2"	-	1-1/4"	0.5
SINK (P7,P8)	1/2"	1/2"	1-1/2"	4.0

NOTE: F.U. LOAD VALUES BASED ON IPC 2009 - APPENDIX E TABLE E103.3(2)

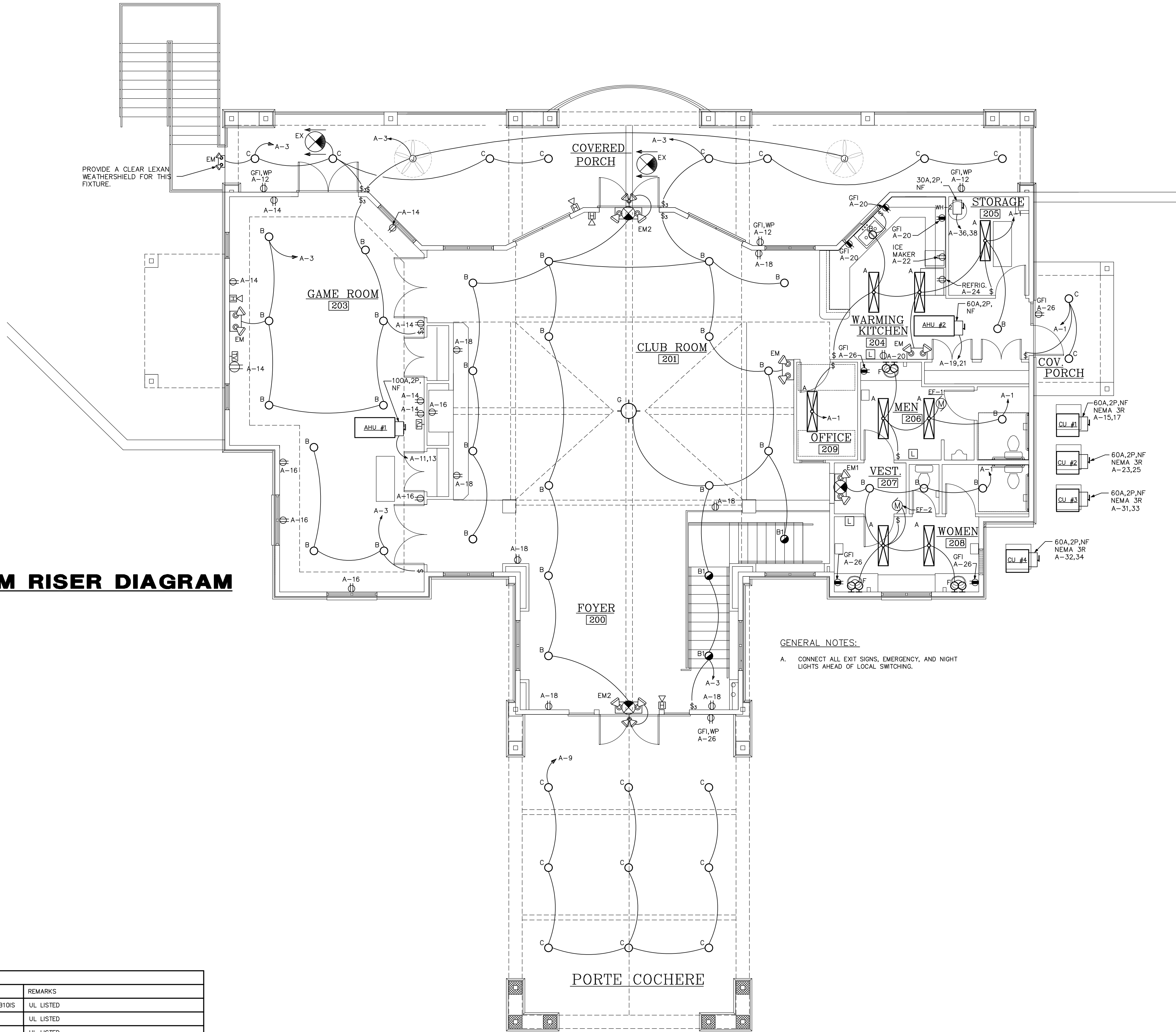


2 SPRINKLER NOTIFICATION SYSTEM RISER DIAGRAM
NO SCALE

ELECTRICAL SYSTEM AND EQUIPMENT	
METHOD OF COMPLIANCE	
PRESCRIPTIVE ☒	PERFORMANCE ☐ ENERGY COST BUDGET ☐
PROVIDE A STANDARD RISER DIAGRAM WHICH INDICATES DESIGNATED POINTS FOR CHECK METERING. PROVIDE A STANDARD PANEL SCHEDULE DESCRIPTION WHICH IDENTIFIES DIFFERENT ENDUSE LOADS.	
LIGHTING SCHEDULE LAMP TYPE REQUIRED IN FIXTURE _____ SEE SCHEDULE ON DRAWINGS NUMBER OF LAMPS IN FIXTURE _____ SEE SCHEDULE ON DRAWINGS BALLAST TYPE USED IN FIXTURE _____ SEE SCHEDULE ON DRAWINGS NUMBER OF BALLASTS IN FIXTURE _____ SEE SCHEDULE ON DRAWINGS TOTAL WATTAGE PER FIXTURE _____ SEE SCHEDULE ON DRAWINGS TOTAL INTERIOR WATTAGE SPECIFIED VS. ALLOWED 6516 VS. 7750 _____ TOTAL EXTERIOR WATTAGE SPECIFIED VS. ALLOWED _____ N/A	
EQUIPMENT SCHEDULES WITH MOTORS (NOT USED FOR MECHANICAL SYSTEMS) MOTOR HORSEPOWER _____ N/A NUMBER OF PHASES _____ N/A MINIMUM EFFICIENCY _____ N/A MOTOR TYPE _____ N/A NUMBER OF POLES _____ N/A	
DESIGNER STATEMENT: TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE ELECTRICAL SYSTEM AND EQUIPMENT REQUIREMENTS OF THE NORTH CAROLINA ENERGY CODE 2012, CHAPTER 5.	
SIGNED: _____ NAME: _____ TITLE: _____	

NOTE:
COMPLIANCE TO NC ENERGY
SECTION 506 IS MADE BY
LIGHTING LEVEL REDUCTION.

LIGHTING FIXTURE SCHEDULE							
LABEL	TYPE OF FIXTURE	FINISH	LENS TYPE	VOLTAGE	LAMP	MANUFACTURER & MODEL NO.	REMARKS
A	1X4 SURFACE FLUORESCENT	WHITE		120	(2) 32W T8	LITHONIA AVSM 2 32 MDR DLS 120 GEB10IS	UL LISTED
B	8" CFL DOWNLIGHT	WHITE	GLASS	120	2/26W DTT	LITHONIA 8HF 2/26DTT MVOLT	UL LISTED
B1	8" CFL DOWNLIGHT	WHITE	GLASS	120	2/26W TRT	LITHONIA 8HF 2/26TRT MVOLT ELR	UL LISTED
C	8" CFL DOWNLIGHT	WHITE	PRISMATIC	120	1/26DTT	LITHONIA 8HF 1/26DTT FBL573 MVOLT	UL LISTED
D	4' FLUORESCENT STRIP	WHITE		120	(2) 32W T8	LITHONIA C232 MV	UL LISTED
F	CFL VANITY	WHITE	GLASS	120	(2) 13W CFL	LITHONIA 11532	UL LISTED
G	CHANDELIER			120	150W MAX.	OWNER SELECT - NOT TO EXCEED 150 WATTS	UL LISTED
EX	EXIT SIGN	WHITE	RED	120	INCLUDED	LITHONIA EXR LED M6	W/ 90 MIN BATTERY BACKUP
EM	EMERG	WHITE	RED	120	INCLUDED	LITHONIA ELM2	W/ LED LAMP HEAD, NI-Cod. 90 MIN BATTERY
EM1	EMERG COMBO	WHITE	RED	120	INCLUDED	LITHONIA LHQM SWRN	W/ 90 MIN BATTERY BACKUP
EM2	EMERG COMBO W/ EXT LTS	WHITE	RED	120	INCLUDED	LITHONIA LHQM SWRHO	W/ 90 MIN BATTERY BACKUP & ELAW TNX EXTERIOR HEADS (2)
F	SLOPED CEILING ADAPTER					LITHONIA SCA8	SPECIFY DEGREE OF SLOPE



GENERAL NOTES:
A. CONNECT ALL EXIT SIGNS, EMERGENCY, AND NIGHT LIGHTS AHEAD OF LOCAL SWITCHING.

1 MAIL LEVEL - ELECTRICAL
SCALE: 3/16"=1'-0"



PANEL SCHEDULE A																			
400 AMP, 120/240 VOLT, SINGLE PHASE, THREE WIRE, 400A. M.C.B., 22000 AMPS MINIMUM A.I.C. BRACING, FLUSH MOUNTED, TYPE NEMA 1 ENCLOSURE																			
##	BKR.	WIRE AND CONDUIT					LOAD DESCRIPTION	NEUT.	LINE A	LINE B	LOAD DESCRIPTION	WIRE AND CONDUIT					BKR.	##	
		COND.	NEUTRAL	GND	C.	KEYS						KEYS	C.	GND	NEUTRAL	COND.			
1	20/1	#12	#12	#12	1/2	CHAL	LIGHTING - DECK/TOILET	1141 720	1141 720	-----	RECEPTACLES - FITNESS	CHAL	1/2	#12	#12	#12	20/1	2	
3	20/1	#12	#12	#12	1/2	CHAL	LIGHTING - CLUB/GAME/OFF	1468 1440	-----	1468 1440	RECEPTACLES - FITNESS	CHAL	1/2	#12	#12	#12	20/1	4	
5	20/1	#12	#12	#12	1/2	CHAL	LIGHTING - TOILET/DECK	1500 1080	-----	1500 1080	RECEPTACLES - TOILETS	CHAL	1/2	#12	#12	#12	20/1	6	
7	20/1	#12	#12	#12	1/2	CHAL	LIGHTING - FITNESS	1500 1000	-----	1500 1000	RECEPTACLE - VENDING	CHAL	1/2	#12	#12	#12	20/1	8	
9	20/1	#12	#12	#12	1/2	CHAL	LIGHTING - COCHERE	252 720	-----	252 720	EWC	CHAL	1/2	#12	#12	#12	20/1	10	
11	70/2	#6	---	---	#8	3/4	AIR HANDLING UNIT - 1	1440 0	-----	5001 0	RECEPTACLES - EXTERIOR	CHAL	1/2	#12	#12	#12	20/1	12	
13	70/2	#6	---	---	#8	3/4	AIR HANDLING UNIT - 1	1260 0	-----	1260 0	RECEPTACLES - GAME RM.	CHAL	1/2	#12	#12	#12	20/1	14	
15	35/2	#10	---	---	#10	1/2	CONDENSING UNIT - 1	720 0	-----	2860 0	RECEPTACLES - OFFICE	CHAL	1/2	#12	#12	#12	20/1	16	
17	35/2	#10	---	---	#10	1/2	CONDENSING UNIT - 1	1440 0	-----	1440 0	RECEPTACLES - CLUB/FOYER	CHAL	1/2	#12	#12	#12	20/1	18	
19	50/2	#8	---	---	#10	1/2	AIR HANDLING UNIT - 2	720 0	-----	3751 0	RECEPTACLES - KITCHEN	CHAL	1/2	#12	#12	#12	20/1	20	
21	50/2	#8	---	---	#10	1/2	AIR HANDLING UNIT - 2	1200 0	-----	1200 0	ICE MAKER	CHAL	1/2	#12	#12	#12	20/1	22	
23	30/2	#10	---	---	#10	1/2	CONDENSING UNIT - 2	1000 0	-----	2392 0	REFRIGERATOR	CHAL	1/2	#12	#12	#12	20/1	24	
25	30/2	#10	---	---	#10	1/2	CONDENSING UNIT - 2	900 0	-----	900 0	GFI RECEPTACLES - TOILET	CHAL	1/2	#12	#12	#12	20/1	26	
27	50/2	#8	---	---	#10	1/2	AIR HANDLING UNIT - 3	0 0	-----	3751 0	AIR HANDLING UNIT - 4	CHAL	1/2	#10	---	#8	50/2	28	
29	50/2	#8	---	---	#10	1/2	AIR HANDLING UNIT - 3	0 0	-----	3751 0									
31	50/2	#8	---	---	#10	1/2	AIR HANDLING UNIT - 3	0 0	-----	3751 0									
33	30/2	#10	---	---	#10	1/2	CONDENSING UNIT - 3	0 0	-----	2392 0	CONDENSING UNIT - 4	CHAL	1/2	#10	---	#10	30/2	32	
35	30/2	#10	---	---	#10	1/2	CONDENSING UNIT - 3	0 0	-----	2392 0									
37	30/2	#10	---	---	#10	1/2	CONDENSING UNIT - 3	0 0	-----	2392 0									
39	40/2	#10	---	---	#10	1/2	SANITARY LIFT STATION	0 0	-----	2880 2250	WATER HEATER	CHAL	1/2	#10	---	#10	30/2	34	
37	40/2	#10	---	---	#10	1/2	SANITARY LIFT STATION	0 0	-----	2880 2250									
39	40/2	#10	---	---	#10	1/2	SANITARY LIFT STATION	0 0	-----	2880 2250									
41							SPACE	200 0	-----	200 0	FIRE SPRINKLER MONITOR	CHAL	1/2	#12	#12	#12	20/1	40	
41							SPACE	0 0	-----	0 0	SPACE							42	
WIRE/CONDUIT KEY								41633		40908	PEAK PHASE (A) UNBALANCED NEUTRAL LOAD AMPS = 85.1 AMPS NON DIVERSIFIED LOAD AT 240 VOLT, SINGLE PHASE = 343.9 AMPS								
1234								82,541											
TEMP RATING								C-CU WIRE											
CONDUIT TYPE								H-THWN											
INSULATION								A-EMT											
WIRING TYPE								L-78-86 Deg. F.											
PRINTED ON PANELS PROGRAM SERIAL NUMBER 2001.4001 REGISTERED TO - TODD W. CAREY AND ASSOCIATES OF THE CARDINAS																			

PANEL SCHEDULE P																			
400 AMP, 120/240 VOLT, SINGLE PHASE, THREE WIRE, 300A. M.C.B., 22000 AMPS MINIMUM A.I.C. BRACING, FLUSH MOUNTED, TYPE NEMA 1 ENCLOSURE																			
##	BKR.	WIRE AND CONDUIT					LOAD DESCRIPTION	NEUT.	LINE A	LINE B	LOAD DESCRIPTION	WIRE AND CONDUIT					BKR.	##	
		COND.	NEUTRAL	GND	C.	KEYS						KEYS	C.	GND	NEUTRAL	COND.			
1	20/1	#12	#12	#12	1/2	CHAL	LIGHTING - CABANA	1370	1370	-----	RECEPTACLES - MECH./STOR	CHAL	1/2	#12	#12	#12	20/1	2	
3	20/1	#12	#12	#12	1/2	CHAL	EF-9	540	540	-----	RECEPTACLES - TOILET/STOR	CHAL	1/2	#12	#12	#12	20/1	4	
5	20/2	#12	---	#12	1/2	CHAL	ELECT. WALL HEATER	432	750	-----	EWC	CHAL	1/2	#12	#12	#12	20/1	6	
7	20/2	#12	---	#12	1/2	CHAL	ELECT. WALL HEATER	1080	720	-----	POOL PUMP - FILTRATION	CHAL	3/4	#8	---	#4	100/2	8	
9	20/2	#12	---	#12	1/2	CHAL	ELECT. WALL HEATER	0	1500	-----	POOL PUMP - SLIDE	CHAL	1/2	#10	---	#8	60/2	12	
11	20/2	#12	---	#12	1/2	CHAL	ELECT. WALL HEATER	0	6000	-----	POOL PUMP - GEYSERS	CHAL	1/2	#10	---	#8	60/2	16	
13	20/2	#12	---	#12	1/2	CHAL	ELECT. WALL HEATER	0	750	-----	WATER HEATER - 3	CHAL	1/2	#12	#12	#12	20/1	20	
15	20/2	#12	---	#12	1/2	CHAL	ELECT. WALL HEATER	0	3349	-----	POOL EQUIP. RECEPTACLE	CHAL	1/2	#12	#12	#12	20/1	22	
17	20/2	#12	---	#12	1/2	CHAL	ELECT. WALL HEATER	0	750	-----	SPACE							24	
19	20/2	#12	---	#12	1/2	CHAL	ELECT. WALL HEATER	0	3349	-----	SPACE							26	
21	30/2	#8	---	#10	1	CHAL	TENNIS COURT LIGHTING **	1500	1500	-----	LIGHTING XFMR-POOL *	CHAL	1/2	#12	#12	#12	20/1	28	
23							SPACE	1800	2190	-----	SPACE							30	
25							SPACE	0	0	-----	SPACE							32	
27							SPACE	0	0	-----	SPACE							34	
29							SPACE	0	0	-----	SPACE							36	
31							SPACE	0	0	-----	SPACE							38	
33							SPACE	0	0	-----	SPACE							40	
35							SPACE	0	0	-----	SPACE							42	
37							SPACE	0	0	-----									
39							SPACE	0	0	-----									
41							SPACE	0	0	-----									
WIRE/CONDUIT KEY								22318	23150	PEAK PHASE (B) UNBALANCED NEUTRAL LOAD AMPS = 37.6 AMPS NON DIVERSIFIED LOAD AT 240 VOLT, SINGLE PHASE = 189.5 AMPS									
1234								45,468											
TEMP RATING								PRINTED ON PANELS PROGRAM SERIAL NUMBER 2001 4001											
CONDUIT TYPE								REGISTERED TO - TODD W. CAREY AND ASSOCIATES											
INSULATION																			
WIRING TYPE																			

PANEL NOTES:
* - PROVIDE GFCI PROTECTED BREAKER FOR THIS CIRCUIT
** - PROVIDE CONTACTOR CONTROL FOR THIS CIRCUIT

PANEL P DIVERSIFICATION CALCULATIONS		
RECEPTACLES (19) -	3420 VA TOTAL	
LIGHTING - FIRST 10 KVA AT 100% -	3420	
HVAC LOAD AT 100% -	9063	
MOTOR LOADS AT 100% -	4500	
PLUS 25% OF THE LARGEST MOTOR -	25828	
MISC NON-CONTINUOUS LOADS AT 100% -	3000	
TOTAL DIVERSIFIED PANEL LOAD -	49531	
LOAD AT 120/240V/1-PHASE/3-WIRE -	206.4A	

PANEL A DIVERSIFICATION CALCULATIONS		
RECEPTACLES (60) -	10720 VA TOTAL	
LIGHTING - FIRST 10 KVA AT 100% -	10000	
HVAC LOAD AT 100% -	360	
MOTOR LOADS AT 100% -	7380	
PLUS 25% OF THE LARGEST MOTOR -	52576	
MISC NON-CONTINUOUS LOADS AT 100% -	5760	
KITCHEN EQUIPMENT (2) -	1368	
2200 X 1.00 -	5420	
TOTAL DIVERSIFIED PANEL LOAD -	85010	
LOAD AT 120/240V/1-PHASE/3-WIRE -	354.2A	

ELECTRICAL SYMBOLS LEGEND				NOTE – NOT ALL SYMBOLS MAY BE USED ON PROJECT
SYMBOLS	DESCRIPTION	SYMBOLS	DESCRIPTION	
	DUPLEX RECEPTACLE, MTD, +18" AFF		TRANSFORMER – SIZE AS NOTED	
	240 VOLT RECEPTACLE (HT. AS REQ.)		PANEL – SIZE AS NOTED	
	QUADPLEX RECEPTACLE, MTD, +18"		F-FAN; M-MOTOR; P-PUMP	
	COUNTERTOP HT. RECEPTACLE +42"		SPECIAL OUTLET – AS REQUIRED	
	UNDER COUNTER RECEPTACLE		CKT. HOMERUN (B INDICATES PANEL) 2" DESIGNATES CIRCUIT NUMBER	
	SINGLE POLE SWITCH, MTD +47"		EXIT SIGN: ONE SIDED, OR TWO SIDED	
	THREE-WAY SWITCH, MTD +47"		EMERGENCY LIGHTING	
	MANUAL STARTER SWITCH		RECESSED MOUNTED LIGHTING FIXTURE B DESIGNATES FIXTURE TYPE	
	DIMMER SWITCH, MTD +47"		RECESSED MOUNTED LIGHTING FIXTURE B DESIGNATES FIXTURE TYPE	
	SWITCH W/ ILLUM WHEN ON MTD +47"		RECESSED MOUNTED DOWNLIGHT B DESIGNATES FIXTURE TYPE	
	THREE-WAY SWITCH W/ OCCU SENSOR MTD +47"		FLUORESCENT LIGHTING FIXTURE B DESIGNATES FIXTURE TYPE	
	SWITCH W/ OCCU SENSOR, MTD, +47"		FLUORESCENT LIGHTING NIGHT LIGHT B DESIGNATES FIXTURE TYPE	
	JUNCTION BOX, FLUSH IF POSSIBLE		FLUORESCENT LIGHTING NIGHT LIGHT B DESIGNATES FIXTURE TYPE	
	TELEPHONE / DATA OUTLET +18"		FLUORESCENT STRIP LIGHTING FIXTURE B DESIGNATES FIXTURE TYPE	
	DED. COMPUTER TERM. OUTLET +18"		IG ISOLATED GROUND	
	DISCONNECT SWITCH W/ STARTER		WP WEATHER-PROOF	
	FLR. MTD. FLUSH DUPLEX RECEPTACLE		BC BELOW COUNTER	
	FLR. MTD. FLUSH QUAD. RECEPTACLE		TC TIME CLOCK – 24 HOUR	
	FLR. MTD. FLUSH PHONE/DATA OUTLET		GF GROUND FAULT INTERRUPTER	
	FLR. MTD. FLUSH COMPUTER OUTLET		AFI ABOVE FINISHED FLOOR	
	AREA SMOKE DETECTOR		EW C ELECTRIC WATER COOLER	
	HEAT DETECTOR		ASW ABOVE SHOW WINDOW	
	DUCT SMOKE DETECTOR		BSW BELOW SHOW WINDOW	
	FIRE ALARM MAN. PULL STATION +47"		FA CP FIRE ALARM CONTROL PANEL	
	HORN WITH STROBE LIGHT, MTD, +80"		FA AP FIRE ALARM ANNUNCIATOR PANEL	
	BESIDE DEVICE IS CANDELLA RATING STROBE LIGHT ONLY MTD, +80"			
	BESIDE DEVICE IS CANDELLA RATING			

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CALCULATION SUMMARY									
AREA NAME	DIMENSIONS	GRID / TYPE	# PTS	SPAC	GROUP	Avg	MAX	MIN	MAX/MIN
Tennis Courts	151.60x115.40ft	New Grid / H-H	500 602	4.00 4.00	<> <>	30.97 7.56	77.46 37.80	5.74 0.01	13.46 4306.0

Paradees Sports Court (13156) LUMINAIRE SCHEDULE						
TYPE	SYMBOL	DESCRIPTION	LAMP	LUMENS	MOUNTING	CUF
A		WWW.TECHLIGHTS SINGLE 1000W MH (1) "SA" LSEVGIA1	(1) MH1000AJ/BT37	120000	20'	0.80
				4	QTY	

AREA SUMMARY SCHEDULE						
AREA NAME	TYPE	DIMENSIONS	LUMENS / CASIMS	WALTS / SQ FT	QTY	
Tennis Courts	1	151.60x115.40ft	120000	0.25	1	215

