



Designed: _____
 Drawn: _____
 Checked: _____

No.	Date	By	Revisions

14093
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 2000 Park Center
 Suite 100
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IBI GROUP

ROYAL PALM BEACH
 COMMONS
 MAINTENANCE BUILDING
 OFFICE FLOOR PLAN
 OFFICE CEILING PLAN

RFB No. EN-PRO701
 Sheet Reference
 Number
AM-3
 Sheet 3 of 6

REFRIGERATOR

REF. - FULL SIZE REFRIGERATOR WITHOUT FREEZER, 19.53 CU. FT. CAPACITY, FRIGIDAIRE #FRU17679

FIRE EXTINGUISHER LEGEND

- FE-1 J.L. INDUSTRIES COSMIC 10B EXTINGUISHER RATED U.L. 4A-60BC PROVIDE STANDARD WALL MOUNTING BRACKET
 - FE-2 SEMI RECESSED FIRE EXTINGUISHER CABINET WITH 2-1/2" RETURN J.L. INDUSTRIES #1027 Q.43 ALUMINUM TUB. ANNOZIZED WITH COSMIC 10E EXTINGUISHER U.L. RATED 4A-60BC
- NOTE: J.L. INDUSTRIES IS SPECIFIED AS A DESIGN BASIS. OTHER ACCEPTABLE MANUFACTURERS ARE LARSON, THOMAS, MODERN METAL PRODUCTS.

TURF LIFT

ABOVE GROUND LIFT SHALL BE GOL. LIFT #GL-8 TURF LIFT, 8000 LB CAPACITY, FLOOR MOUNTED, 6' RISE, AND 2 H.P. 240V 16 MOTOR. INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURER'S PRINTED DIRECTIONS, AND REQUIREMENTS OF THE NATIONAL ELECTRIC CODE.

ICE MACHINE

HOSHIZAKI: ICE MAKER #KML-350MAH - 1 REQUIRED, AIR COOLED COMPRESSOR, 322 LBS PER 24 HOURS @90 DEGREES AMBIANT AIR TEMP, 115V 1φ. - PROVIDE 5-800SF W/ 600 LB CAPACITY. PROVIDE ALL ADAPTERS FOR COMPLETE INSTALLATION

WALL LEGEND

- PRE-ENGINEERED STEEL WALL OVER CMU KNEE WALL W/ 3 5/8" 26 GA. STEEL STUDS @16" O.C. & 5/8" DRYWALL AS INSIDE FINISH PER SECTIONS
- 3 5/8" 20 GA. GALV. STEEL STUDS @ 16" O.C. W/ 5/8" DRYWALL TO CEILING ON OFFICE SIDE AND 5/8" DRYWALL TO BOTTOM OF ROOF SHEETS ON EQUIPMENT SIDE
- 3 5/8" OR 6" (AS NOTED) 26 GA. STEEL STUDS @16" O.C. W/ 5/8" DRYWALL EA SIDE
- 2X4 WOOD STUDS @ 16" O.C. W/ 3/4" 5-C PLYWOOD EA. SIDE PER SECTIONS 10/A-5 & 11/A-5
- PRE-ENGINEERED STEEL WALL OVER CMU KNEE WALL W/ 2X4 WOOD STUDS @ 16" O.C. & 3/4" 5-C PLYWOOD AS INSIDE FINISH

STEEL LOCKERS

- STEEL LOCKERS SHALL BE AS MANUFACTURED BY Penco PRODUCTS OR EQUAL.
- LOCKERS SHALL Penco VANGUARD MODEL DOUBLE TIER, 12" WIDE X 21" DEEP X 72" HIGH.
- LOCKERS SHALL BE MANUFACTURER'S STANDARD DESIGN AND SHALL BE PROVIDED WITH ALL BASES, CLOSURE TRIM, AND SLOPED TOPS REQUIRED FOR A COMPLETE INSTALLATION.
- FINISH SHALL BE MANUFACTURER STANDARD WITH COLOR AS SELECTED BY OWNER.

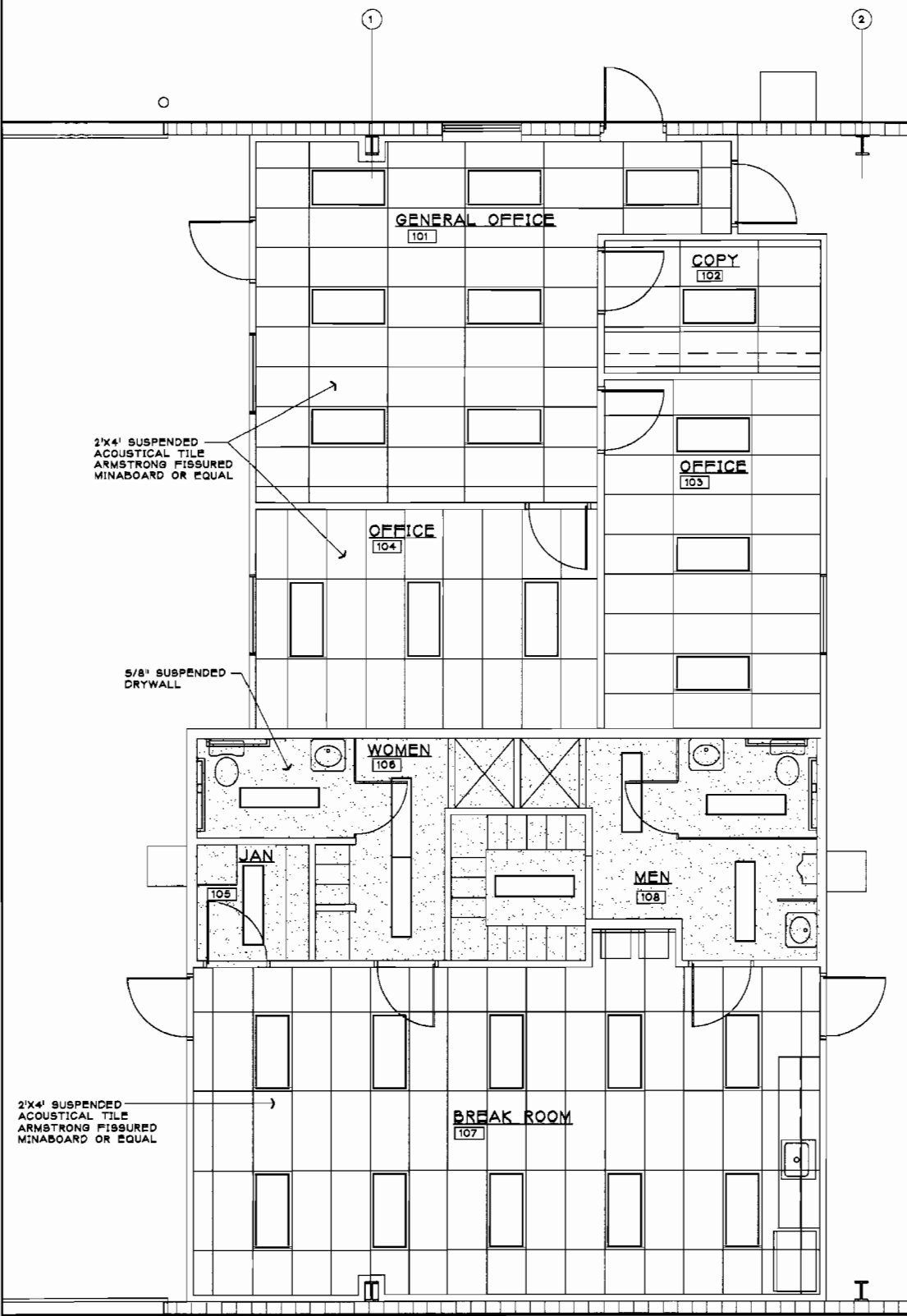
PLASTIC SHELVING

- METROMAX STORAGE SYSTEM - ADVANCED POLYMER HEAVY DUTY SHELVING
- S-1 - STARTER UNIT 18"D X 36"W X 74"H 5X3376X2 800#/SHELF CAPACITY (2 REQUIRED)
 - S-2 - STARTER UNIT 24"D X 36"W X 74"H XN2436G5 600#/SHELF CAPACITY (1 REQUIRED)
 - S-3 - ADD-ON UNIT 18"D X 36"W X 74"H 5X3376X2 800#/SHELF CAPACITY (10 REQUIRED)
 - S-4 - ADD-ON UNIT 24"D X 36"W X 74"H XA2436G5 600#/SHELF CAPACITY (4 REQUIRED)
- CHEMICAL STORAGE
- S-2 - STARTER UNIT 24"D X 36"W X 74"H XN2436G5 600#/SHELF CAPACITY (5 REQUIRED)
 - S-4 - ADD-ON UNIT 24"D X 36"W X 74"H XA2436G5 600#/SHELF CAPACITY (2 REQUIRED)
 - S-5 - ADD-ON UNIT 24"D X 24"W X 74"H XA2424G5 600#/SHELF CAPACITY (5 REQUIRED)
- SALES REPRESENTATIVE: JIM COCKRIEL
 FAX 804-262-6722
 VOICE MAIL 1-800-638-7686 X1872
 E-MAIL jim@cockriel.com

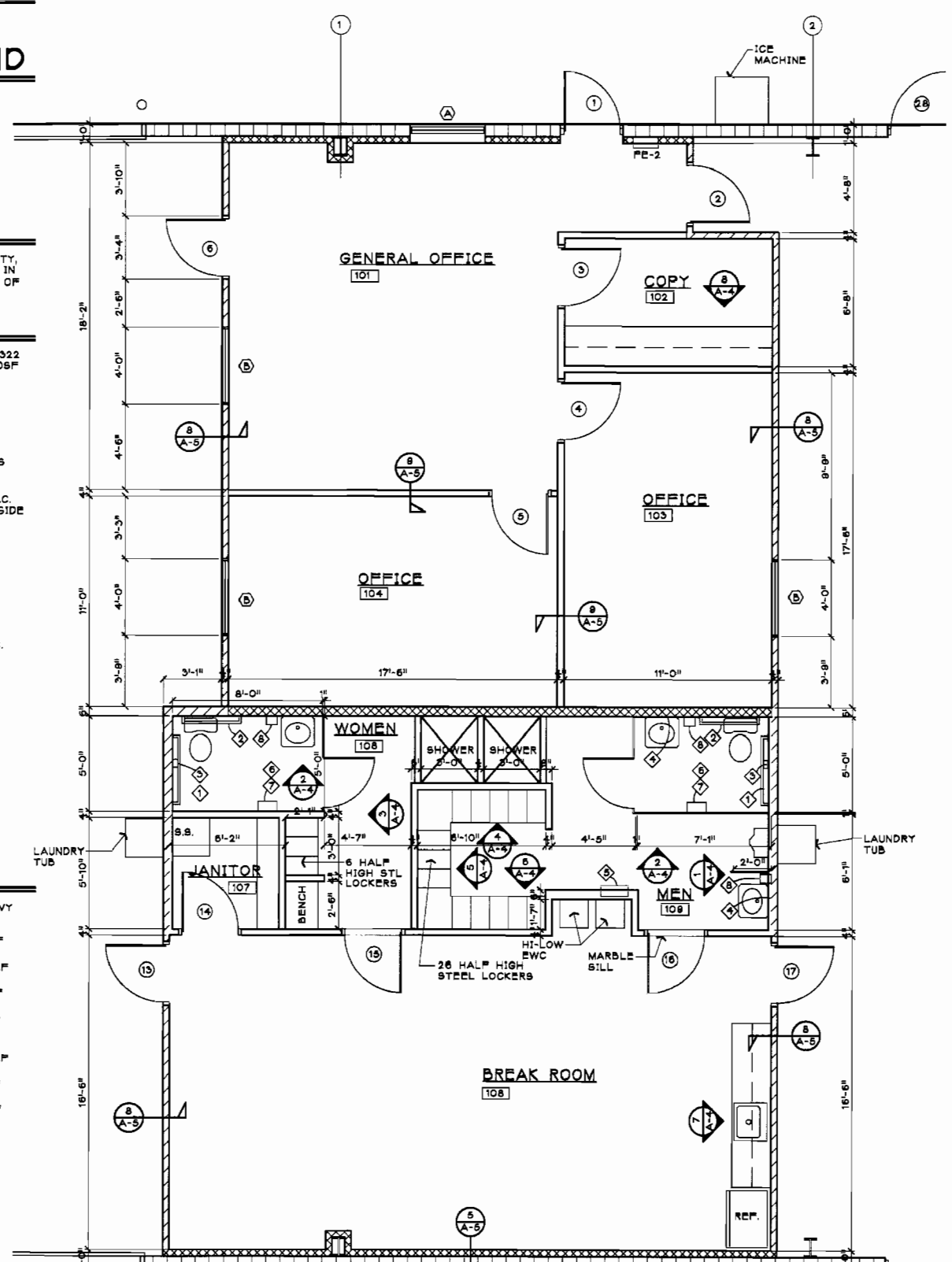
WASHROOM ACCESSORIES

- GRAB BARS: BOBRICK #B-8806 X 42 1-1/2" DIAMETER, 42" LONG, STAINLESS STEEL, CONCEALED MOUNTING. MOUNT 33" A.F.F. TO TOP OF RAIL.
- GRAB BARS: BOBRICK #B-8806 X 36 1-1/2" DIAMETER, 36" LONG, STAINLESS STEEL, CONCEALED MOUNTING. MOUNT 33" A.F.F. TO TOP OF RAIL.
- TISSUE DISPENSER: BOBRICK #B-2740 CAST ALUMINUM, SINGLE ROLL, SURFACED MOUNTED WITH THEFT RESISTANT SPINDLE. WALL MOUNTED AT 32" A.F.F.
- MIRROR: BOBRICK #B-165 18X36, STAINLESS STEEL FRAME, 1/4" PLATE GLASS, 18"X36"
- PAPER TOWEL/WASTE RECEPTACLE: COMBINATION PAPER TOWEL DISP/WASTE RECEPTACLE MOUNTED @ 38" A.F.F. BOBRICK #B-3844
- PAPER TOWEL DISPENSER: PAPER TOWEL DISPENSER MOUNTED @ 38" A.F.F. BOBRICK #B-262
- WASTE RECEPTACLE: WASTE RECEPTACLE BOBRICK #B-278 @ 24" A.F.F. BOBRICK #B-278
- SOAP DISPENSER: WALL MOUNTED SOAP DISPENSER @ 40" A.F.F. BOBRICK #B-40
- CURTAIN ROD: WALL MOUNTED SOAP DISPENSER @ 40" A.F.F. BOBRICK #B-40

NOTES: 1) BOBRICK WASHROOM EQUIPMENT IS SPECIFIED AS A DESIGN BASIS. OTHER ACCEPTABLE MANUFACTURERS ARE AMERICAN SPECIALITIES, INC., AMERICAN DISPENSER, AND BRADLEY.
 2) PROVIDE SOLID WOOD BACKING FOR ALL WALL MOUNTED ACCESSORIES INCLUDING TOILET PARTITIONS.



OFFICE CEILING PLAN
 1/4"=1'-0"



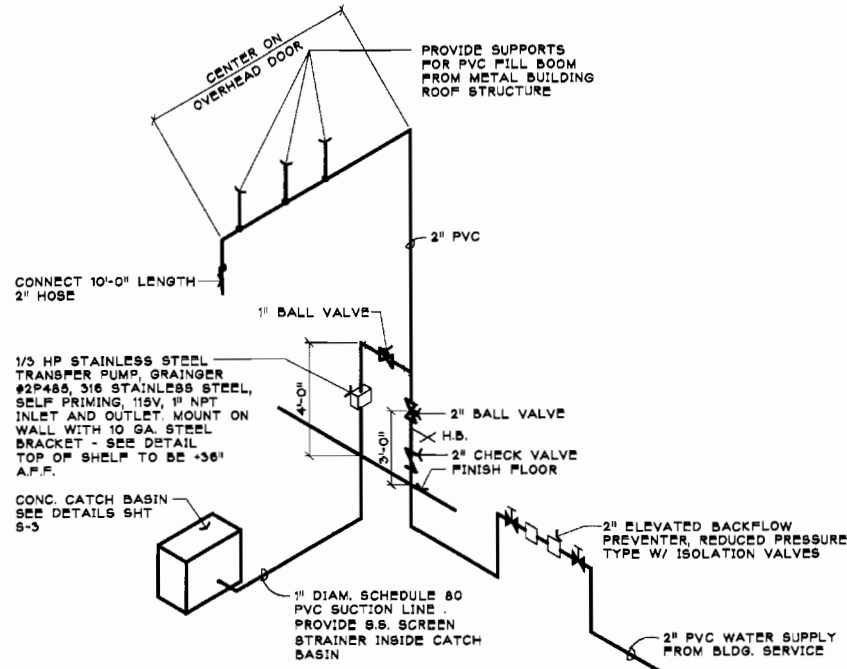
DETAIL OFFICE PLAN
 1/4"=1'-0"



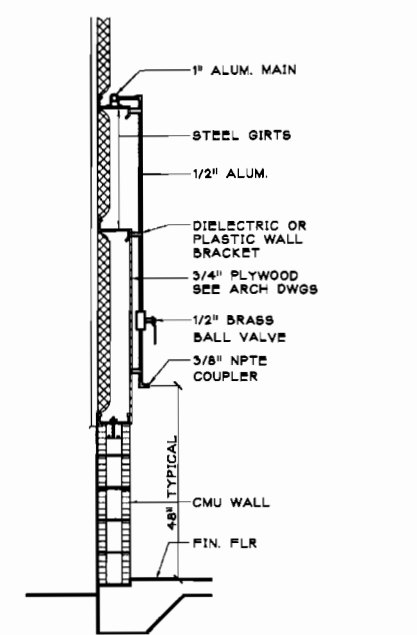
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PLUMBING NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN STRICT ACCORDANCE WITH APPLICABLE LOCAL CODES, RULES AND ORDINANCES.
2. PLUMBING CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS.
3. ALL MATERIALS SHALL BE NEW.
4. REQUIRED INSURANCE SHALL BE PROVIDED BY THE PLUMBING CONTRACTOR FOR PROTECTION AGAINST PUBLIC LIABILITY AND PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
5. PLUMBING CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, INSPECTIONS AND TESTS, PLUMBING CONTRACTOR TO OBTAIN PERMIT AND APPROVED SUBMITTALS PRIOR TO BEGINNING WORK OR ORDERING EQUIPMENT. PLUMBING CONTRACTOR MUST BE PRESENT FOR ALL INSPECTIONS OF HIS WORK BY REGULATORY AUTHORITIES.
6. DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE FOR THE EXACT LOCATION OF FIXTURES, PIPING AND EQUIPMENT.
7. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION. REPORT ANY DISCREPANCY TO ENGINEER/ARCHITECT PRIOR TO BEGINNING CONSTRUCTION.
8. VERIFY LOCATION, SIZE, DIRECTION OF FLOW AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION. ADVISE ENGINEER OF ANY DISCREPANCIES.
9. DOMESTIC WATER PIPE SHALL BE TYPE "L" COPPER WITH NO LEAD SOLDER.
10. SOIL, WASTE, VENT, & STORM PIPING SHALL BE CAST IRON OR SCH 40 PVC IF CODE PERMITS.
11. DIELECTRIC COUPLINGS ARE REQUIRED BETWEEN ALL DISSIMILAR METAL IN PIPING AND EQUIPMENT CONNECTIONS.
12. ISOLATE COPPER PIPE FROM HANGER OR SUPPORTS WITH ISOLATOR PAD.
13. ALL FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE PROPERLY PROTECTED BY FILLING VOIDS BETWEEN PIPE AND WALL/FLOOR SLEEVES.
14. PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF ACCEPTANCE BY OWNER. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED.
15. PROVIDE ACCESS PANELS FOR ALL CONCEALED VALVES. ACCESS PANELS IN RATED WALLS MUST MAINTAIN THE SAME RATING AND MUST MATCH THE FINISH OF THE WALL IN WHICH IT IS INSTALLED.
16. PROVIDE CHROME PLATED COMBINATION COVER PLATE AND CLEAN OUT PLUG OR ACCESS PANEL FOR ALL WALL CLEAN OUT.
17. ALL CONTROL VALVES SHALL BE TAGGED AND MARKED. A REPRODUCIBLE DIAGRAM LOCATING ALL VALVES SHALL BE PROVIDED FOR OWNER/OPERATOR.
18. ALL CONDENSATE DRAIN PIPING SHALL BE SCH 40 PVC WITH 1/2" THICK TYPE "G" CELLULAR FOAM INSULATION, K=0.28 MINIMUM.
19. TEST DOMESTIC WATER TO HYDROSTATIC PRESSURE OF 100 PSI AND REMAIN LEAK FREE FOR 24 HOURS. PROVIDE ALL NECESSARY TEST EQUIPMENT. PERFORM TEST IN PRESENCE OF OWNER'S REPRESENTATIVE. ENTER TEST RESULTS IN GENERAL CONTRACTOR JOB LOG. STERILIZE WATER PIPING WITH SOLUTION CONTAINING NOT LESS THAN 50 PARTS PER MILLION OF CHLORINE AND ALLOW TO REMAIN IN SYSTEM FOR A PERIOD OF EIGHT (8) HOURS. FLUSH SYSTEM AFTER STERILIZATION. ALL COST FOR STERILIZATION AND EQUIPMENT SHALL BE PROVIDED BY THE CONTRACTOR.
20. PROVIDE 1" (R=4.0 MIN) INSULATION FOR ALL HOT WATER LINES.
21. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS AND APPROPRIATELY MARKED ACCESS PANELS. COORDINATE LOCATIONS WITH GENERAL CONTRACTOR PRIOR TO INSTALLATION.
22. PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUTOFF.
23. THE DESIGN & INSTALLATION OF THE PLUMBING SYSTEM & ALL APPURTENANCES SHALL COMPLY STRICTLY WITH THE APPLICABLE PROVISIONS OF THE FLORIDA BUILDING CODE.

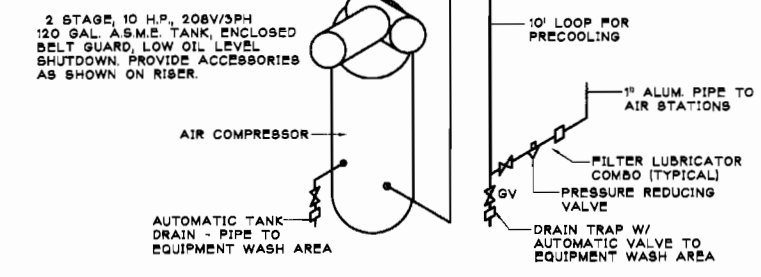


PUMP RISER - BUILDING "B"



TYPICAL COMPRESSED AIR STATION (AO)

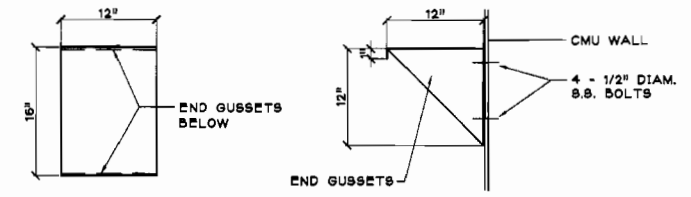
AIR COMPRESSOR



COMPRESSED AIR RISER DIAGRAM

COMPRESSED AIR PIPING SHALL BE LEGRIS ALUMINUM PIPING PER EN 755.2, 755.8, & 573.3 STANDARDS, POLYAMIDE FIBERGLASS REINFORCED FITTINGS, NPT THREADED FITTINGS W/ TEFLON TAPE JOINT SEALS. PRESSURE TEST COMPLETED PIPING SYSTEM W/ DRY NITROGEN OR COMPRESSED AIR AT 175 P.S.I.G. P.S.I.G. STATIC PRESSURE FOR 1 HOUR MINIMUM WITH NO LOSS OF TEST PRESSURE. SPECIAL CARE SHALL BE TAKEN TO MAINTAIN SEPARATION OF METALS BY USING DIELECTRIC UNIONS AND BRACKETS TO CONTROL GALVANIC ACTION.

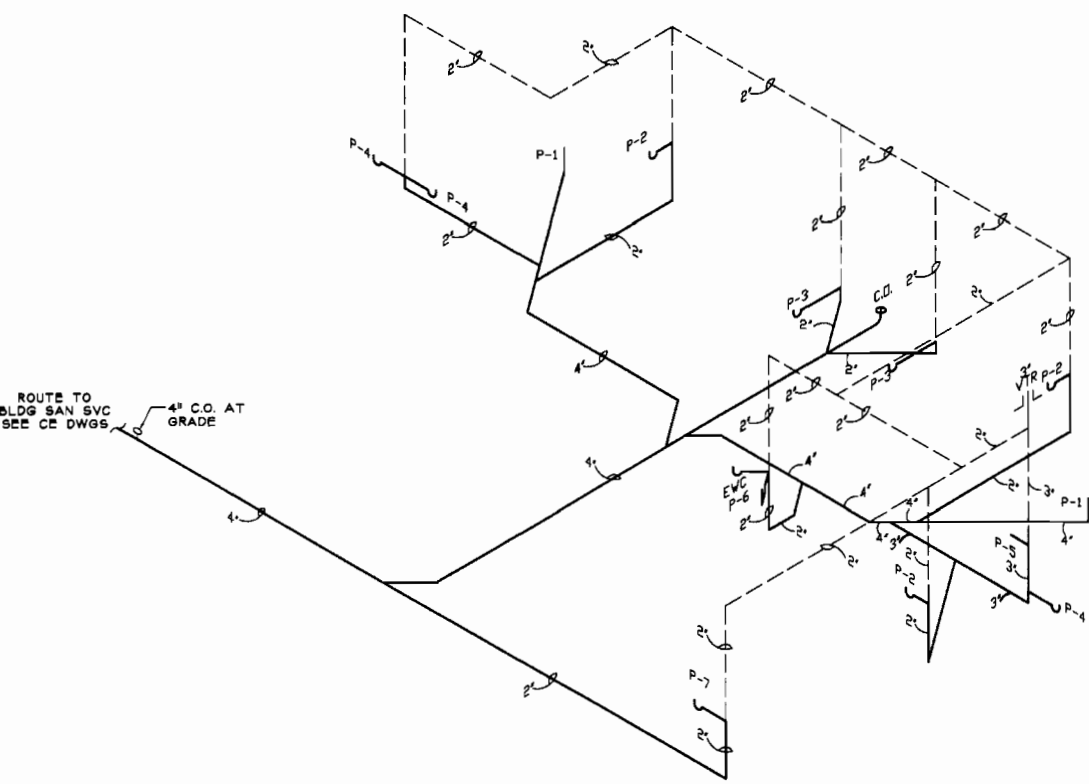
- NOTES:**
1. STEEL SHALL BE 10 GA. MIN. STAINLESS STEEL
 2. CONSTRUCTION TO BE FULLY WELDED



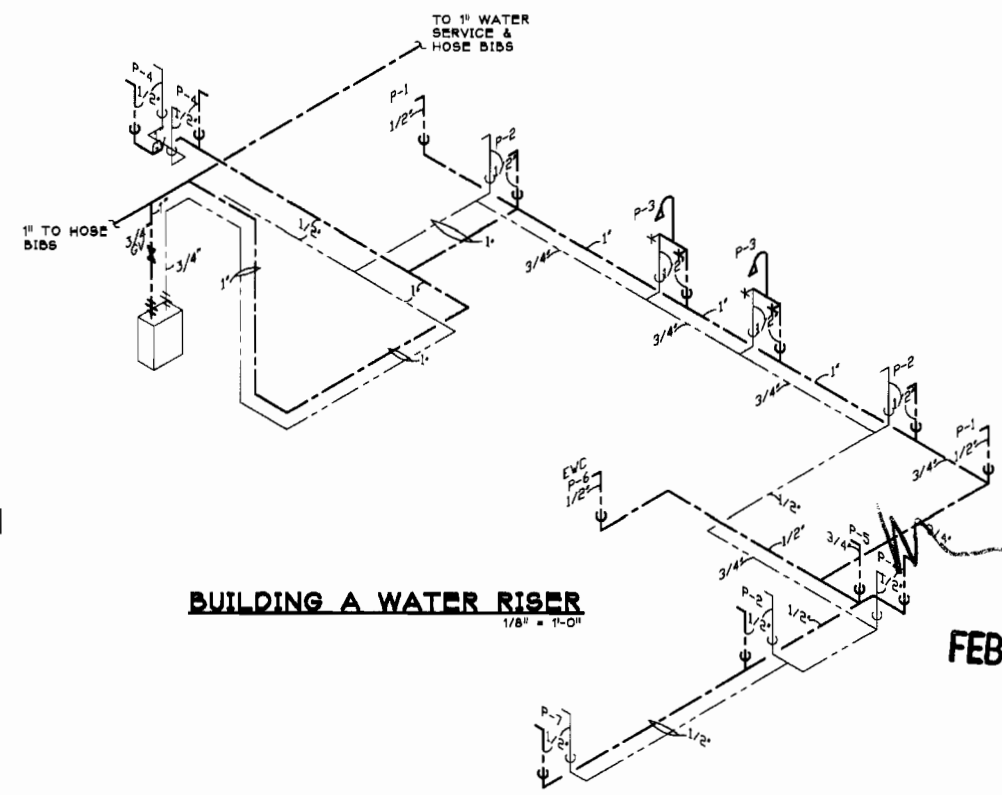
PUMP MOUNTING BRACKET

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURES AND EQUIPMENT NUMBERS ARE BASED ON AMERICAN STANDARD UNLESS OTHERWISE NOTED.	CW SUPPLY	HW SUPPLY	WASTE
P-1	HANDICAPPED WATER CLOSET: 3014.016/4021.016 FLOOR MOUNTED, FLUSH TANK WITH ELONGATED BOWL 18" HIGH FOR HANDICAPPED, WITH TWO BOLT CAPS, AND OPEN FRONT BEAT, AND SUPPLY WITH ANGLE STOP. 1.6 GAL/FLUSH	3/8"	—	3"
P-2	LAVATORY: MODEL 0124.024 WALL HUNG WHITE, WITH JOBAM CARRIER. PROVIDE FLEXIBLE SUPPLIES WITH ANGLE WHEEL STOP, 4446.016 NIPPLE WITH ESCUTCHEON, AND 17 GAUGE 1/2" TRAP AND GRID DRAIN, FAUCET 5400.172H. .5 GPM FLOW RESTRICTOR ON OUTLET	3/8"	3/8"	1 1/4"
P-3	1363.896 PRESSURE BALANCING SHOWER VALVE WITH 8888.014 HANDLE AND WITH 2.5 GPM SHOWER HEAD AND JOBAM DRAIN	1/2"	1/2"	2"
P-4	LAUNDRY TRAY: FLORESTONE MODEL FM FIBERGLASS, 21 GALLON CAPACITY, WITH RUB FREE LEGS, FAUCET 7400.000 WITH 142H HANDLES, 1 1/2 INCH 1/2" TRAP.	1/2"	1/2"	1 1/2"
P-5	URINAL: AMERICAN STANDARD 8601.012020 W/ SLOAN FLUSH VALVE 10 GPM, WHITE, WALL MOUNTED W/ RIM HEIGHT 17" A.F.F.	1"	—	—
P-6	ELKAY VRCL85C HI-LOW WATER COOLER, STAINLESS STEEL FINISH, WALL MOUNTED W/ SPOUT OUTLET AT 36" A.F.F. 7.8 GPM @90 DEG. F	3/8"	—	1 1/4"
P-7	SINK: ELKAY CR-3321, DOUBLE COMPARTMENT, 7" DEEP, WITH LK-35 DRAIN OUTLETS, LK-4123-F FAUCET WITH GOOSENECK SPOUT, PVC P-TRAP & WASTE, SUPPLIES W/ ANGLE STOPS	1/2"	1/2"	1 1/2"
OHD	OPEN HUB DRAIN, PVC INCREASER FITTING W/ OPEN TOP HUB AS 1 PIPE SIZE LARGER THAN BOTTOM OUTLET, TOP HUB SET AT 1" ABOVE FINISH FLOOR.	—	—	—
FD	FLOOR DRAINS: JOSAM 30003-5A-2-90 DRAIN, JOSAM 86250 TRAP SEAL PRIMER VALVE INSTALLED ON ADJACENT LAVATORY CW SUPPLY. INSTALL 1/2" ANNEALED COPPER PIPING CONNECTION TO FLOOR DRAIN BODY.	—	—	3"
HB	HOSE BIB, WALL HYDRANT TYPE, VACUUM BREAKER ON OUTLET.	1/2"	—	—
FCO	FLOOR CLEANOUT, 2 WAY PVC CLEANOUT FITTING, PVC HUB W/ PLUG SET AT 3" MAX. BELOW FIN. FLOOR, CAST IRON ACCESS BOX W/ COVER SET FLUSH W/ FIN. FLOOR, JOSAM # 56040 SERIES.	—	—	—
WCO	WALL CLEANOUT, 2 WAY PVC CLEANOUT FITTING, PVC SANITARY TEE W/ PLUG, C.P. STEEL COVER PLATE W/ CENTER SCREW, SET 12" A.F.F. (N.O.S.)	—	—	—
ECCO	EXTERIOR CLEANOUT, 2 WAY PVC CLEANOUT FITTING, PVC HUB W/ PLUG SET AT 4" MAX. BELOW LOCAL FINISHED GRADE, CAST IRON ACCESS COVER SET FLUSH W/ FINISHED GRADE, JOSAM #8860 OR EQUIV.	—	—	—
IW	INDIRECT WASTE, SCHD 40 PVC PIPE W/ DRAINAGE FITTINGS, MATCH APPLIANCE DRAIN PIPE SIZE, DISCHARGE TO RECEIVING FIXTURE W/ 1" AIR GAP (CENTERED).	—	—	3"
EEW	EMERGENCY EYE WASH: HAWS MODEL 8300 EMERGENCY SHOWER/EYE WASH WITH #100 DUST COVER, 8127 SHOWER HEAD AND SELF CLOSING SPRING.	1 1/2"	—	—
WH	40 GAL. ELECT. WATER HEATER, 4.5 KW	3/4"	3/4"	—



BUILDING A DWV RISER



BUILDING A WATER RISER



Designed: _____
 Drawn: _____
 Checked: _____

No.	Date	By	Revisions

14093
 ARCHITECTS: PLANNERS
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IBI GROUP

ROYAL PALM BEACH COMMONS
 MAINTENANCE BUILDING
 PLUMBING RISERS & DETAILS

FEB 19 2009

RPB No. EN-PRO701
 Sheet Reference Number
PM-2
 Sheet 2 of 2

ELECTRICAL SPECIFICATIONS

GENERAL PROVISIONS. PROVIDE ALL LABOR, MATERIALS, TOOLS, SUPPLIES EQUIPMENT AND TEMPORARY POWER FACILITIES TO COMPLETE THE WORK SHOWN ON THE DRAWINGS AND SPECIFICATIONS. ALL SYSTEMS ARE TO BE COMPLETELY OPERATIONAL. ALL ELECTRICAL WORK SHALL COMPLY WITH THE DRAWINGS AND SPECIFICATIONS, THE NATIONAL ELECTRICAL CODE AND APPLICABLE LOCAL CODES, WHICHEVER IS MOST STRINGENT.

SPECIAL COORDINATION. THE CONTRACTOR IS ADVISED TO PERFORM ALL POSSIBLE COORDINATION WITH THE REVERSE OSMOSIS ENGINEER (GLEN MILLER) AND CONTRACTOR OPERATING CLEARANCES. INSTALL ALL WORK NEATLY SO AS TO BE PROPERLY ACCESSIBLE FOR OPERATION, MAINTENANCE AND REPAIR.

JOB SITE VISIT. VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID. VERIFY ALL DIMENSIONS SHOWN ON DRAWINGS AND DETERMINE THE CHARACTERISTICS OF EXISTING FACILITIES WHICH WILL AFFECT THE PERFORMANCE OF THE WORK, INCLUDING THOSE NOT SHOWN ON DRAWINGS OR SPECIFICATIONS.

SUBSTITUTIONS. ALL EQUIPMENT SUBSTITUTIONS MUST BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO BIDDING.

TEMPORARY LIGHT AND POWER. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID THE COST OF FURNISHING, INSTALLING, MAINTAINING AND REMOVING ALL MATERIAL AND EQUIPMENT REQUIRED TO PROVIDE LIGHT AND POWER TO PERFORM ALL WORK OF ALL TRADES DURING CONSTRUCTION, AND UNTIL WORK IS COMPLETE. COST OF ALL POWER CONSUMED DURING CONSTRUCTION SHALL BE PAID BY THE PARTY DESIGNATED BY THE PRIME CONTRACTOR.

MATERIAL SUBMITTALS. SUBMIT SIX (6) SETS OF SHOP DRAWINGS AND EQUIPMENT DESCRIPTIONS FOR ALL ELECTRICAL WORK PRIOR TO ORDERING. ELECTRICAL MATERIALS FOUND ON THE PROJECT WHICH DO NOT HAVE THE ENGINEER'S APPROVAL MUST BE REMOVED AND REPLACED AT THE ELECTRICAL CONTRACTOR'S EXPENSE.

TRENCHING AND BACKFILLING. EXCAVATION OR DRILLING, BACKFILLING AND REPAIR OF PAVING AND GRASSING IS TO BE IN THE BID OF THE ELECTRICAL CONTRACTOR. THE ACTUAL WORK NEED NOT BE PERFORMED BY THE ELECTRICAL TRADES. HOWEVER, THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL EXCAVATION, DRILLING, DENATURING, BACKFILLING, TAMPING AND REPAIR OF PAVEMENTS AND GRASSING REQUIRED IN SUPPORT OF ELECTRICAL WORK. LOCATE AND PROTECT EXISTING UTILITIES AND OTHER UNDERGROUND WORK IN A MANNER WHICH WILL ENSURE THAT NO DAMAGE OR SERVICE INTERRUPTION WILL RESULT FROM EXCAVATING OR BACK-FILLING. PROTECT PERSONS FROM INJURY AT EXCAVATIONS BY BARRICADES WITH WARNINGS AND ILLUMINATION. IN THE EVENT, IT IS SUSPECTED THAT ACTIVE ELECTRICAL LINES ARE BURIED IN THE AREA OF WORK, POWER IS TO BE DISCONNECTED.

TESTS. CONDUCT OPERATING TESTS FOR APPROVAL. THE SYSTEMS SHALL BE DEMONSTRATED TO OPERATE IN ACCORDANCE WITH THE REQUIREMENTS OF THESE SPECIFICATIONS. TESTS SHALL BE PERFORMED IN THE PRESENCE OF THE ENGINEER OR AN AUTHORIZED REPRESENTATIVE. FURNISH ALL ITEMS REQUIRED TO PERFORM TESTS.

DIVISION OF WORK. ALL POWER WIRING IS TO BE BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF DISCONNECTS, STARTERS, THERMOSTATS, FIRESTATS, CONTROL TRANSFORMERS, SWITCHES, ETC., WITH THE OTHER CONTRACTORS TO MAKE CERTAIN NO ITEMS ARE LEFT OUT OF THE BID. THE PRIME CONTRACTOR SHALL MAKE ANY SPECIAL DECISIONS REGARDING THE DIVISION OF WORK BETWEEN CONTRACTORS. IN NO EVENT SHALL SUCH WORK REQUIRE ADDITIONAL EXPENSE TO THE OWNER.

SERVICE. TAKE SPECIAL NOTE OF 13,000 VOLT CONDUITS AND PULL BOXES BEING INSTALLED FOR FPL ON THIS PROJECT.

FAILURE OF THE ELECTRICAL CONTRACTOR TO COORDINATE AND DOCUMENT THE SERVICE MAY RESULT IN THE ELECTRICAL CONTRACTOR BEARING ALL COSTS OF SERVICE CHANGES.

LOCATIONS. THE ENGINEER MAY MOVE ANY ELECTRICAL DEVICES BY AS MUCH AS SIX (6') FEET PRIOR TO ROUGH-IN AT NO ADDITIONAL COST.

CIRCUITS. ALL OUTLETS, LIGHT FIXTURES AND OTHER ITEMS OF EQUIPMENT SHOWN ON DRAWINGS ARE TO BE CIRCUITED.

BIDDING FROM A FULL SET OF DRAWINGS. THE ELECTRICAL CONTRACTOR IS TO OBTAIN A COMPLETE SET OF DRAWINGS AND SPECIFICATIONS PRIOR TO BIDDING, AND IS TO BECOME THOROUGHLY FAMILIAR WITH THE ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL AND LANDSCAPING FEATURES OF THE PROJECT.

PRIOR TO BIDDING, THE ELECTRICAL CONTRACTOR IS TO HAVE A COMPLETE UNDERSTANDING OF CEILING CONFIGURATIONS, WIRING SPACES, FIRE RATED SURFACES, FOUNDATIONS, AIR CONDITIONING DUCTWORK, SPRINKLER PIPING, PLUMBING AND ALL OTHER FEATURES WHICH BEAR ON THE ELECTRICAL WORK. UNDER NO CONDITIONS IS THIS PROJECT TO BE BID WITHOUT A COMPLETE SET OF DRAWINGS AND SPECIFICATIONS.

FIRE RATED SURFACES. FIRE WALL, CEILING AND FLOOR PENETRATIONS ARE TO BE MADE WITH METALLIC RACEWAYS IN A U.L. APPROVED MANNER. DO NOT KNOCK HOLES INTO VOID SPACES OR OTHERWISE DEGRADE FIRE WALLS. ALL PASSAGES INTO OR THROUGH FIRE WALLS ARE TO BE PERFORMED IN A MANNER ACCEPTABLE TO THE BUILDING DEPARTMENT. ONE (1) HOUR FIRE WALLS ARE TO BE PENETRATED IN EACH STUD CAVITY FROM ONLY ONE (1) SIDE IN A U.L. APPROVED MANNER.

BASIC MATERIALS AND METHODS

U.L. APPROVALS. ALL ELECTRICAL MATERIALS ARE TO BE APPROVED BY THE UNDERWRITER'S LABORATORIES.

GALVANIZED RIGID CONDUITS. RIGID STEEL CONDUITS (GRC) AND FITTINGS ARE TO BE SCHEDULE 40 MILD STEEL PIPE, GALVANIZED. UNDERGROUND GRC CONDUITS ARE TO BE COATED WITH ASPHALT EMULSION TO RESIST CORROSION.

ELECTRICAL METAL TUBING. TUBING 'EMT' SHALL BE STEEL TUBING, ZINC-COATED INSIDE AND OUTSIDE. FITTINGS SHALL BE ZINC-COATED. BENDS WHICH TURN UP OUT OF CONCRETE SHALL BE TREATED WITH ASPHALT EMULSION TO RESIST CORROSION.

PVC CONDUITS. NON-METALLIC CONDUITS SHALL BE POLYVINYL CHLORIDE (PVC), U.L. APPROVED FOR 90C, HEAVY WALL, SCHEDULE 40 RIGID. (EXCEPTION: FPL CONDUITS.)

NON-METALLIC TUBING. ENT MAY NOT BE USED.

RACEWAY LOCATIONS. LOCATION REQUIREMENTS SET FORTH BY THE BUILDING DEPARTMENT SHALL PREVAIL IF MORE STRINGENT. ALL CONDUITS SHALL BE GRC EXCEPT WHERE OTHERWISE SHOWN ON DRAWINGS, AND AS FOLLOWS: EMT MAY BE USED ONLY INDOORS, IN DRY LOCATIONS, OUT OF SOIL, WHERE NOT PHYSICALLY SUBJECT TO DAMAGE. FLEXIBLE CONDUIT SHALL BE USED ONLY IN SHORT LENGTHS FOR MAKING EQUIPMENT CONNECTIONS. PVC CONDUIT SHALL BE USED ONLY UNDERGROUND, IN CONCRETE FLOORS, OR CORROSIVE AREAS. METALLIC RACEWAYS ARE REQUIRED IN CEILING SPACES WHICH SERVE AS RETURN AIR PLENUMS. CONDUITS SHALL NOT BE RUN ABOVE ROOFS.

RACEWAY INSTALLATION. WHERE CONDUITS CROSS EXPANSION JOINTS, INSTALL OFFSET EXPANSION JOINTS OR SLIDING EXPANSION JOINTS WITH BONDING STRAPS AND CLAMPS. EXPOSED RUNS OF CONDUIT OR TUBING SHALL BE INSTALLED WITH RUNS PARALLEL OR PERPENDICULAR TO WALL, STRUCTURAL MEMBERS OR INTERSECTIONS OF VERTICAL PLANES AND CEILINGS, WITH RIGHT ANGLE TURNS. CONDUITS IN STRUCTURAL SLABS SHALL BE PLACED BETWEEN THE UPPER AND LOWER LAYERS OF REINFORCING STEEL. CONDUIT RUNS SHALL ALWAYS BE CONCEALED EXCEPT WHERE INDICATED ON PLANS. A PULL WIRE SHALL BE INSTALLED IN ALL EMPTY CONDUITS. WHERE CONDUITS ARE RUN INDIVIDUALLY, THEY SHALL BE SUPPORTED BY APPROVED PIPE STRAPS, SECURED BY MEANS OF TOGGLE BOLTS ON METAL SURFACES, AND WOOD SCREWS ON WOOD CONSTRUCTION. THE USE OF PERFORATED STRAP OR WIRES WILL NOT BE PERMITTED. UNDERGROUND CONDUITS NOT UNDER CONCRETE SLABS ARE TO BE BURIED AT LEAST TWO (2') FEET BELOW FINISHED GRADE FOR CIRCUITS RATED 600 VOLTS OR LESS. (AND DEEPER FOR FPL.)

CABINETS. CABINETS FOR OUTDOOR SWITCHES, PANELBOARDS, BREAKERS, WIREWAYS, RECEPTACLES, ETC., SHALL BE RATED WEATHERPROOF. NON-METALLIC IS PREFERRED.

MAIN DISCONNECTS. UNLESS SPECIFICALLY SHOWN OTHERWISE, ALL MAIN DISCONNECTS ARE TO BE HEAVY DUTY FUSED SWITCHES. GENERAL DUTY SWITCHES SHALL BE REMOVED AND REPLACED AT THE ELECTRICAL CONTRACTOR'S EXPENSE. FUSES SHALL BE REJECTION TYPE, U.L. CLASS RK1, UNLESS SHOWN OTHERWISE.

SHORT CIRCUIT DESIGN. THE DESIGN CALLS FOR A NUMBER OF SPECIAL CONDITIONS IN ORDER TO HANDLE THE SHORT CIRCUITS AVAILABLE THROUGHOUT THE ELECTRICAL SYSTEM. UNDER NO CONDITIONS MAY THE ELECTRICAL CONTRACTOR DEVIATE FROM THE DESIGN IN TYPES OF SWITCHES, FUSES, CONDUCTORS, BREAKERS OR AIC RATING OF INTERRUPTING DEVICES.

WIRING DEVICES GENERAL. WIRING DEVICES SHALL BE RATED FOR CURRENT, VOLTAGE AND PHASES AS APPLICABLE FOR THE LOADS. WHERE BOXES ARE TO BE MOUNTED ON OPPOSITE SIDE OF A WALL, A MINIMUM SEPARATION OF TWELVE (12") SHALL BE MAINTAINED. NO THROUGH BOXES ARE PERMITTED. BOXES SHALL BE MOUNTED LEVEL AND PLUMB.

SWITCHES ARE TO BE SILENT TYPES, SIDE-WIRED, 20A, 120V.

	ONE POLE	TWO POLE	3-PHASE	4-PHASE
HUBBELL	121-1	122-1	123-1	124-1
BRYANT	121-1	122-1	123-1	124-1
GE	5951-2	5952-2	5953-2	5954-2
P # 5	AC201-1	AC202-1	AC203-1	AC204-1

(IVORY COLORS SHOWN. SUPPLY COLORS AS SELECTED BY ARCHITECT.)

RECEPTACLES. NEMA 5-20R RECEPTACLES SHALL BE USED EXCEPT WHERE SPECIAL RECEPTACLES ARE SHOWN, AND WHERE SINGLE RECEPTACLES ARE ON A 20A CIRCUIT. SPECIAL RECEPTACLES ARE TO MATCH EQUIPMENT PLUGS AS COORDINATED BY THE ELECTRICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL PLUGS AND CORDS ON WATER HEATERS, DISH-WASHERS, DISPOSALS, CLOTHES WASHERS, DRYERS, ETC., UNLESS PROVIDED BY OTHER TRADES. COORDINATE PRIOR TO BIDDING.

FACE PLATES. PLASTIC FACE PLATES ARE REQUIRED IN INTERIOR SPACES. COLORS ARE TO BE SELECTED BY THE ARCHITECT. OUTSIDE PLATES AND COVERS SHALL BE MOUNTED PLUMB, STRAIGHT, AND FIT FLUSH WITH FINISHED SURFACES WITHOUT THE USE OF SHIMS OR MATS. PLATES SHALL NOT SUPPORT WIRING DEVICES. COMMON GANGED PLATES ARE TO BE EMPLOYED WHEREVER TWO (2) OR MORE DEVICES ARE SHOWN ON THE DRAWINGS IN THE SAME LOCATIONS.

PANELBOARDS. PANELBOARDS SHALL BE DEAD-FRONT, CIRCUIT BREAKER TYPE. DIRECTORIES SHALL BE COMPLETE AND TYPEWRITTEN. LOADCENTERS ARE PERMITTED.

MOLDED CASE CIRCUIT BREAKERS. BREAKERS SHALL BE THERMALMAGNETIC OPERATED, WITH SHORT CIRCUIT RATINGS IN SYMMETRICAL AMPERES EQUAL TO OR GREATER THAN THE AIC RATING SHOWN ON THE DRAWINGS.

MOTOR PROTECTION. ALL MOTORS ON THIS PROJECT ARE TO BE FULLY PROTECTED IN ACCORDANCE WITH THE NEC. EVERY MOTOR IS TO BE PROTECTED FROM OVERCURRENTS BY THE INSTALLATION OF FUSED SWITCHES LOCATED IN SIGHT OF MOTORS. EACH AIR HANDLING UNIT IS TO BE FED WITH A FUSED SWITCH FOR THE HEATER, AND A SECOND FUSED SWITCH FOR THE MOTOR (MOTOR SWITCH MAY BE ELIMINATED IF THE AHU IS EQUIPPED WITH INTEGRAL PROTECTION COORDINATED PRIOR TO BIDDING.)

IN APPLICATIONS WITH MOTORS OVER ONE (1) HORSEPOWER, AND WHERE CONTROLS OTHER THAN MANUAL 'ON' AND 'OFF' ARE REQUIRED, MAGNETIC COIL OPERATORS ARE REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR PROPER VOLTAGES, ENCLOSURE TYPES AND START-STOP OR HAND-OFF-AUTO SWITCHES AS REQUIRED BY THE APPLICATION. OVERLOAD ELEMENTS ARE REQUIRED FOR EVERY LEG ABOVE GROUND. STARTERS SHALL BE ALLEN-BRADLEY OR SQUARE D.

CONDUCTORS. CONDUCTORS SHALL BE RATED FOR 600 VOLTS. ALL CONDUCTORS ARE TO BE COPPER. INSULATION SHALL BE TYPE THHN, EXCEPT WHERE SHOWN OTHERWISE.

LIGHTING

LIGHTING. LIGHT FIXTURES SHALL BE INSTALLED USING APPROVED FASTENERS, STEPS, CHAINS, ETC., TO MEET THE REQUIREMENTS OF THE ENGINEER. ALL MOUNTING PROVISIONS ARE TO BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. LIGHT FIXTURES SHALL BE RATED FOR TEMPERATURES SPECIFIED BY THE FIXTURE MANUFACTURER, AND IN NO EVENT FOR LESS THAN 90C. FIXTURES MOUNTED IN FIRE RATED SURFACES SHALL BE INSTALLED WITH THE SURFACE MATERIAL SURROUNDING THE BACK AND SIDES IN ACCORDANCE WITH U.L. PROCEDURES. SUCH FIXTURES ARE TO BE MANUFACTURED SPECIFICALLY TO HANDLE THE RESULTANT BUILD-UP OF HEAT, WITHOUT UNDUE LESSENING OF BALLAST OR LAMP LIFE. FIXTURES INSTALLED IN CEILINGS WHICH ARE INSULATED SHALL BE SPECIALLY RATED BY U.L. FOR DIRECT CONTACT WITH INSULATION. FIXTURES ARE TO BE GROUNDED. FLUORESCENT BALLASTS SHALL BE U.L. APPROVED, RATED BY THE CERTIFIED BALLAST MANUFACTURERS ASSOCIATION, HIGH POWER FACTOR TYPE, WITH MAXIMUM NOISE LEVEL OF 24DB RELATED TO 0.0002 MICROBARS AS MEASURED BY THE ENGINEER. CLASS A NOISE LEVEL REQUIRED. OUTDOOR BALLASTS SHALL BE RATED FOR COLD TEMPERATURE INSTALLATION (ZERO (0) DEGREES FAHRENHEIT). A COMPLETE SET OF LAMPS SHALL BE INSTALLED THROUGHOUT THE PROJECT AT THE TIME OF FINAL ACCEPTANCE. METAL HALIDE LAMPS SHALL BE COLOR CORRECTED AND MANUFACTURED BY PENNSYLVANIA.

SPECIAL SYSTEMS

TELEPHONES. INSTALL CONDUITS, BOXES AND CABLES AS SHOWN. TELEPHONE OUTLET BOXES ARE TO BE 4x4x1-1/2 INCH MINIMUM WITH SINGLE GANG PLATES. CONDUITS ARE TO BE LONG RADIUS TYPES WITH PULL WIRES.

PANELBOARD SCHEDULE GC

BUS AMPS	LOAD DESCRIPTION	WIRE POLES		BUS	WIRE POLES		LOAD DESCRIPTION	BUS AMPS
		A	B		A	B		
10	CART CHARGER	12	1	20	1	2	CART CHARGER	10
10	CART CHARGER	12	1	20	3	4	CART CHARGER	10
10	CART CHARGER	12	1	20	8	8	CART CHARGER	10
10	CART CHARGER	12	1	20	7	8	CART CHARGER	10
10	CART CHARGER	12	1	20	9	10	CART CHARGER	10
10	CART CHARGER	12	1	20	11	12	CART CHARGER	10
10	CART CHARGER	12	1	20	13	14	CART CHARGER	10
10	CART CHARGER	12	1	20	15	16	CART CHARGER	10
10	CART CHARGER	12	1	20	17	18	CART CHARGER	10
	SPACE			20		20	SPACE	
				21		22		
				23		24		
				25		26		
				27		28		
				29		30		

RATED VOLTAGE: 120/208 277/480 3PH: 4 WIRE

BRANCH POLES: 12 20 30 42

RATED AMPS: 100 225 400

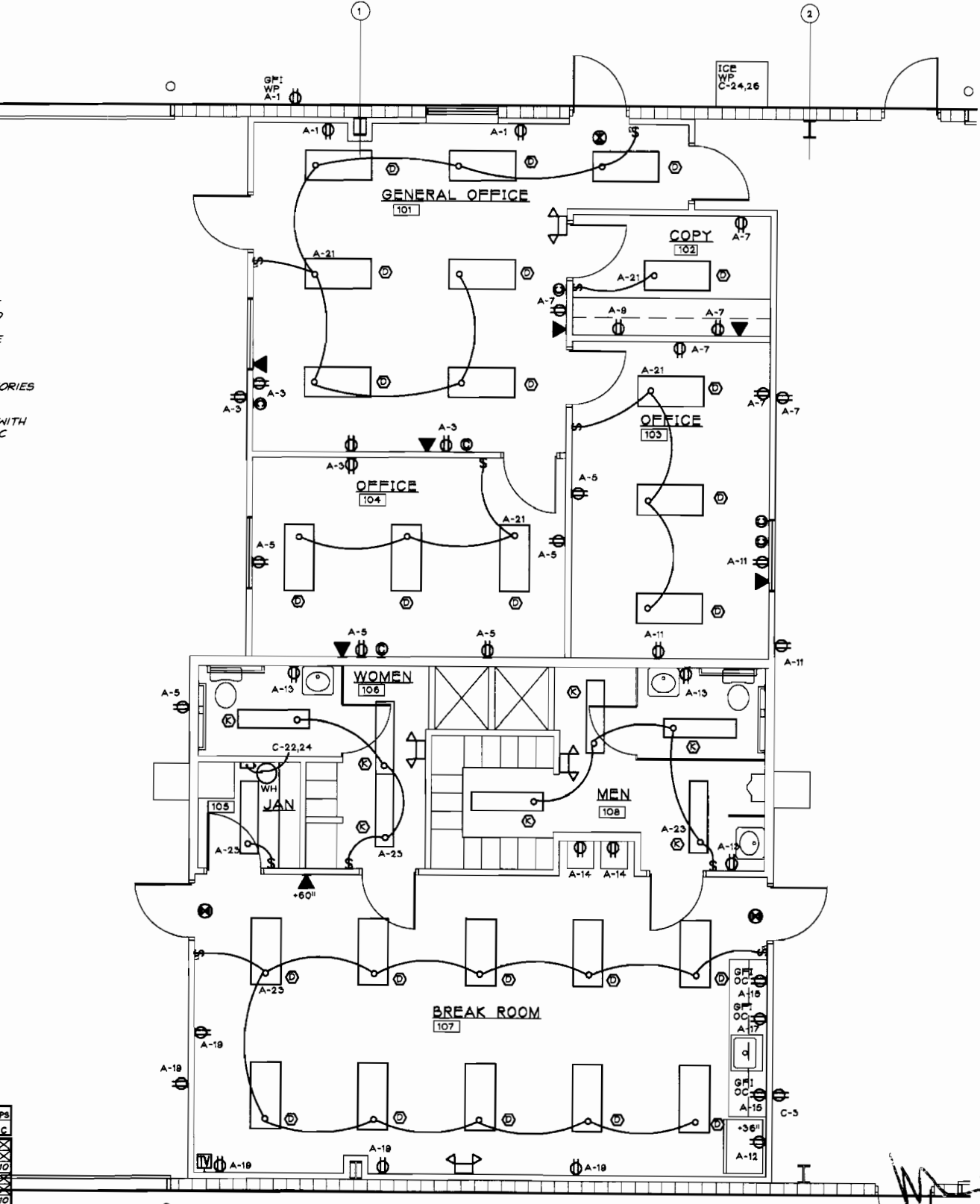
CABINET: SURFACE FLUSH

PULL NEUTRAL BUS: GROUND BUS HINGED DOOR KEYPAD DOOR LATCH PANELS IN PARALLEL

FUSED CIRCUIT BREAKERS BRANCH DEVICES THROUGH FEED LUGS REQUIRED

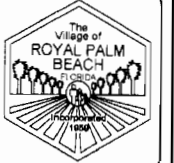
MAIN LUGS ONLY MAIN AMP BREAKER FUSED SWITCH 100 TO BE GFI BREAKERS

ALL BREAKERS MUST BE RATED TO INTERRUPT A SHORT CIRCUIT AIC @ 10000 AMP SYMMETRICAL



OFFICE ELECTRICAL PLAN

1/4"=1'-0"



Designed: _____
 Drawn: _____
 Checked: _____

No.	Date	By	Revisions

14093
 ARCHITECTS, PLANNERS
 1000 Park Center Blvd
 West Palm Beach, Florida 33411
 AL-98001018
IBI GROUP

ROYAL PALM BEACH COMMONS
 MAINTENANCE BUILDING
 OFFICE ELECTRICAL PLAN
 ELECTRICAL NOTES

FEB 19 2009