



CLARK HUGHES

TO: Bid Responders

FROM: Clark Hughes

DATE: November 10, 2016

SUBJECT: Revised Document Plans - Addendum #1

1. There was an error on the MEP set. MEP set M-101 and E-001 was used twice. The attached is a revised plan set correcting this error.

2. The attached is a revised drawing list due to the error in the MEP set.

ATTACHMENT – MEP Plans Set

AC-000 Directory List

Cc: Jim McDonald Chris Menchin Marie Remer

BASIC MECHANICAL REQUIREMENTS

GENERAL

- 1. GENERAL NOTES, SYMBOL LISTS AND DETAILS ARE APPLICABLE TO ALL MECHANICAL DRAWINGS LABELED "M".
- 2. THE CONTRACTOR IS RESPONSIBLE FOR ALL WORK, MATERIALS AND LABOR TO PROVIDE COMPLETE AND WORKING MECHANICAL SYSTEMS WHETHER SPECIFIED OR IMPLIED.
- 3. ALL NECESSARY PERMITS AND INSPECTIONS SHALL BE PROCURED BY THE CONTRACTOR AND ALL FEES PAID BY THE COUNTY. ALL LICENSES REQUIRED BY CONTRACTOR SHALL BE PROCURED AND PAID BY THE CONTRACTOR. SUBMIT TO THE OWNER DUPLICATE
- 4. THE ENTIRE MECHANICAL INSTALLATION SHALL CONFORM TO THE LOCAL CODE, STATE LAWS, 2015 IMC, 2015 IBC, AGA, NFPA, NSPC, ASME, IFGC AND ALL OTHER GOVERNING

CERTIFICATES OF INSPECTION FROM THE APPROVED INSPECTION AGENCIES.

- 5. DO NOT SCALE THE DRAWINGS FOR EXACT DIMENSIONS. VERIFY ALL FIGURES, CONDITIONS, DIMENSIONS, ETC., AT THE JOB SITE.
- 6. CONTRACTOR SHALL GUARANTEE THE COMPLETE INSTALLATION AGAINST DEFECTS IN THE WORKMANSHIP AND MATERIALS. SEE DIVISION 1 SPECIFICATION SECTIONS FOR ADDITIONAL WARRANTY AND GUARANTEE INFORMATION.
- 7. THE CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES TO PREVENT INTERFERENCE BETWEEN BEAMS, STRUCTURES, PIPING, CONDUITS, LIGHTING FIXTURES, FIRE ALARM DEVICES, FIRE SPRINKLERS, ETC.
- 8. ALL MECHANICAL EQUIPMENT SHALL BE LOCATED AT A MINIMUM FLOOR ELEVATION ABOVE THE AREA'S FEMA BASE FLOOR ELEVATION. PROVIDE ALL NECESSARY STRUCTURES. SEE
- 9. ALL MATERIALS USED IN CONSTRUCTION SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS, A SMOKE DEVELOPMENT RATING OF 50 OR LESS, AND A FUEL CONTRIBUTED RATING OF 25 OR LESS. ALL MATERIALS SHALL BE "SELF-EXTINGUISHING"

ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

- 10. ALL PIPING, CONDUIT AND DUCT PENETRATIONS OF "FIRE RATED BUILDING CONSTRUCTION" SHALL BE SLEEVED AND SEALED WITH A FIRE BARRIER MATERIAL EQUAL TO 3M "PENETRATION SEALING SYSTEMS". REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATING OF BUILDING CONSTRUCTION.
- 11. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WRITTEN RECOMMENDATIONS.
- 12. CONTRACTOR SHALL PROVIDE COMPLETE SETS OF BOUND OPERATING AND MAINTENANCE INSTRUCTIONS. CONTRACTOR SHALL INSTRUCT THE OWNER OR HIS AGENT WITH REGARD TO THE PROPER USE OF THE SYSTEM UNTIL SUCH INSTRUCTION IS COMPLETE TO THE OWNER'S SATISFACTION. OPERATION AND MAINTENANCE MANUAL SHALL INCLUDE A VALVE SCHEDULE IF VALVES ARE INSTALLED AS PART OF THE NEW WORK. SEE DIVISION 1 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 13. MECHANICAL CONTRACTOR SHALL LABEL ALL NEW MECHANICAL EQUIPMENT, PIPING AND VALVES (INDOORS AND OUTDOORS) IN A PERMANENT MANNER. MECHANICAL PIPING SHALL BE LABELED IN ACCORDANCE WITH ASME A13.1 FOR LETTERING SIZE, LENGTH OF COLOR FIELD, COLORS, AND VIEWING ANGLES OF IDENTIFICATION. DIRECTION OF FLOW SHALL BE IDENTIFIED WITH DIRECTIONAL ARROW TAPE. VALVES SHALL BE IDENTIFIED WITH BRASS VALVE TAGS. ATTACHED WITH SOLID BRASS CHAINS AND "S" HOOKS. VALVE TAGS SHALL BE COORDINATED WITH VALVE SCHEDULE PROVIDED IN OPERATION AND MAINTENANCE MANUAL. MECHANICAL EQUIPMENT SHALL BE LABELED WITH ENGRAVED PLASTIC TAGS WITH MOUNTING HOLES AND STAINLESS STEEL SCREWS. ALL LABELING SHALL HAVE HIGH CONTRAST BETWEEN LETTER AND BACKGROUND COLORS AND SHALL BE LOCATED FOR EASY VISIBILITY.
- 14. ALL MECHANICAL EQUIPMENT AND APPLIANCES INSTALLED SHALL BEAR THE LABEL OF AN APPROVED AGENCY.
- 15. THE ENTIRE MECHANICAL INSTALLATION SHALL BE MADE IN ACCORDANCE WITH THE 2015 INTERNATIONAL MECHANICAL CODE (IMC) AND ANY ADOPTED SUPPLEMENTS, AS ADOPTED BY THE STATE OF NEW YORK.
- 16. PROVIDE VIBRATION ISOLATION MOUNTINGS FOR ALL MOTOR OPERATED EQUIPMENT AND AS RECOMMENDED BY THE MANUFACTURER.
- 17. ALL EXTERIOR WALL OPENINGS SHALL BE SLEEVED, PROPERLY CAULKED AND SEALED WITH A HIGH QUALITY SEALANT TO PREVENT INFILTRATION OF MOISTURE AND OUTSIDE AIR.
- 18. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ELECTRICAL. CONTRACTOR ALL POWER REQUIREMENTS OF MECHANICAL EQUIPMENT. ELECTRICAL CONTRACTOR SHALL PROVIDE POWER WIRING TO ALL MECHANICAL EQUIPMENT. MECHANICAL CONTRACTOR SHALL FURNISH LOOSE MOTOR STARTERS AND DISCONNECT SWITCHES FOR INSTALLATION AND WIRING BY THE ELECTRICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL PROVIDE ALL CONTROL AND INTERLOCK WIRING AND ALL THERMOSTATS AND ACCESSORIES.
- 19. ALL NEW MECHANICAL FLOOR MOUNTED EQUIPMENT SHALL BE PROVIDED WITH A MINIMUM 4" HIGH CONCRETE HOUSEKEEPING PAD BELOW UNIT. CONCRETE PAD SHALL EXTEND A MINIMUM OF 4" BEYOND DIMENSIONS OF NEW EQUIPMENT ON ALL SIDES.
- 20. PROVIDE BALANCING OF ALL WATER SYSTEMS PER AABC, NEBB OR TABB STANDARDS. SUBMIT TEST DATA AND DEMONSTRATE IN THE FIELD.
- 21. EQUIPMENT ACCESS: CONTRACTOR SHALL PROVIDE ACCESS FOR CONTROL DEVICES, HEAT EXCHANGERS AND HVAC SYSTEMS THAT UTILIZE ENERGY AND ARE LOCATED IN CONCEALED PLACES. ACCESS SHALL BE PROVIDED FOR INSPECTION, REPAIR, SERVICE AND REPLACEMENT WITHOUT THE NEED FOR DISMANTLING ANY PERMANENT CONSTRUCTION INCLUDING WALLS, DUCTS, PIPING, ETC. CONSTRUCTION SHALL BE AS DESCRIBED PER THE 2015 INTERNATIONAL MECHANICAL CODE (IMC), SECTION 306.1, AS ADOPTED BY THE STATE OF NEW JERSEY.
- 22. PRIOR TO CONSTRUCTION, MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO PREPARE ELECTRONIC COORDINATION DRAWINGS FOR ALL TRADES, WHICH SHALL BE SUBMITTED TO ARCHITECT FOR REVIEW. MECHANICAL CONTRACTOR SHALL COORDINATE THIS EFFORT WITH ALL OTHER TRADES PERFORMING WORK ON THE PROJECT. ANY CONFLICTS BETWEEN TRADES MUST BE RESOLVED PRIOR TO CONSTRUCTION. SEE DIVISION 1 AND DIVISION 23 SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- 23. SUBMIT 3/8" SCALE SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION. COORDINATE WITH ALL TRADES. SUBMIT TO THE ARCHITECT FOR APPROVAL, DUPLICATE SPECIFICATION SHEETS OF ALL EQUIPMENT SUPPLIED OR INSTALLED, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- A. FAN COIL UNITS
- B. EXHAUST FANS . PIPING AND PIPING SPECIALTIES & APPURTENANCES PIPING & DUCTWORK LAYOUTS
- COORDINATION DRAWINGS. F. "AS-BUILT" DRAWINGS.

PIPING INSULATION

- 1. PRIOR TO INSULATING, PIPING SHALL BE HYDROSTATICALLY TESTED AT 150 PSIG WITH NO LOSS OF PRESSURE FOR THREE HOURS.
- 2. INSULATION SHALL CARRY THROUGH ALL WALL AND FLOOR PENETRATIONS AND PIPE HANGERS.
- 3. PROVIDE GALVANIZED METAL SHIELDS FORMED TO FIT THE INSULATION BETWEEN HANGERS AND FINISHED INSULATIONS.
- 4. EXCEPT AS OTHERWISE NOTED, INSULATE THE FOLLOWING WITH JOHNS-MANVILLE "MICRO-LOK" AP INSULATION (PROVIDE ZESTON PVC FIITING COVERS) THICKNESS AS SPECIFIED:
- A. CHILLED WATER PIPING: ARMAFLEX FLEXIBLE TYPE, CLOSED-CELL, ELASTOMERIC PIPE INSULATION 1/2" THICK UP TO
- 2" PIPE AND 3/4" THICK FOR PIPE 2-1/2" AND LARGER. B. <u>HEATING HOT WATER WATER PIPING</u>: JOHNS-MANVILLE "MICRO-LOK" AP FIBERGLASS PIPE INSULATION, 1-1/2" THICK UP
- TO 1-1/2" PIPE, 2" THICK FOR 1-1/2" AND LARGER. . CONDENSATE DRAINAGE: 1/2" THICK ARMAFLEX FLEXIBLE TYPE, OSED-CELL, ELASTOMERIC PIPE INSULATION.
- 5. INSULATION SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 6. INSULATION MUST BE FIRE RATED FOR FLAME SPREAD OF 25 OR
- LESS AND SMOKE DEVELOPED OF 50 OR LESS.
- 7. EXTERIOR EXPOSED INSULATION: INSTALL CONTINUOUS ALUMINUM JACKETS AND SEAL ALL JOINTS AND SEAMS WITH WATERPROOF SEALANT, PROVIDE "ZESTON" PVC FITTING COVERS ON ALL FITTINGS. INSTALL METAL JACKET WITH 2-INCH OVERLAP AT LONGITUDINAL AND BUTT JOINTS. OVERLAP LONGITUDINAL JOINTS TO SHED WATER. SEAL BUTT JOINT WITH WEATHERPROOF SEALANT RECOMMENDED BY INSULATION MANUFACTURER. SECURE JACKET WITH STAINLESS-STEEL DRAW BANDS 12 INCHES ON CENTER AND AT BUTT JOINTS.

DUCTWORK

1. UNLESS OTHERWISE NOTED, ALL DUCTWORK SHALL BE CONSTRUCTED OF GALVANIZED SHEET METAL G90 GRADE PER SMACNA. ALL DUCTS CONSTRUCTED OF GALVANIZED STEEL SHEET METAL SHALL HAVE MINIMUM GAGE THICKNESS AS FOLLOWS:

	<u>(IMUM :</u> OUGH	SIDE (IN.) 12	<u>)</u>	<u>GAGE</u> 26
13	-	30		24
31	_	54		22
55	_	84		20
OVE	R	84		16
DIAN	IETER	(IN.)		<u>GAGE</u>
THR	OUGH	12		26
13	-	18		24
19	-	28		22
29	-	36		20
37	-	52		18

PROVIDE ALL NECESSARY CROSS-BREAKING AND DUCT REINFORCING AS REQUIRED PER SMACNA RECOMMENDATIONS.

- 2. ALL DUCTWORK SHALL BE DESIGNED, CONSTRUCTED AND INSTALLED PER SMACNA STANDARDS.
- 3. DUCT SIZES SHOWN ON DRAWINGS ARE CLEAR DIMENSIONS.
- 4. COORDINATE LOCATION OF DUCTWORK, PIPING, AND DIFFUSERS WITH ALL OTHER TRADES.
- . ALL DUCTWORK AND PIPING ABOVE CEILING AND IN AREAS WITHOUT CEILINGS SHALL BE INSTALLED AS HIGH AS POSSIBLE.
- 6. PROVIDE VOLUME DAMPERS AT ALL DUCT BRANCHES AND RUNOUTS. PROVIDE OPPOSED BLADE VOLUME DAMPERS AT ALL REGISTERS, GRILLES AND DIFFUSER NECKS IN SUPPLY, RETURN AND EXHAUST DUCTWORK WHETHER SHOWN ON DRAWINGS OR NOT.
- 7. PROVIDE AT MINIMUM 10 GAUGE STEEL SLEEVES FOR ALL DUCT PENETRATIONS THROUGH FIRE RATED WALLS, FLOORS AND PARTITIONS. PROVIDE PIPE SLEEVES FOR ALL MECHANICAL PIPING PENETRATING THROUGH FIRE RATED WALLS, FLOORS AND PARTITIONS. SEAL ALL ANNULAR SPACE BETWEEN SLEEVES AND DUCTWORK OR PIPING WITH A FIRE BARRIER MATERIAL EQUAL TO 3M "PENETRATION SEALING SYSTEM".
- 8. THE INSIDE OF ALL DUCTWORK VISIBLE THROUGH A GRILLE OR DIFFUSER SHALL BE PAINTED FLAT BLACK.
- 9. THE MECHANICAL CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF MASONRY RETURN AIR OPENINGS AND RECESSED EQUIPMENT WITH THE GENERAL CONTRACTOR.

10. ALL RETURN AIR OPENINGS SHALL BE ABOVE CEILING UNLESS NOTED

- OTHERWISE. PROVIDE AND INSTALL WIRE MESH SCREENS ON ALL OPENINGS.
- 11. ALL PIPING AND DUCTS IN FINISHED ROOMS OR SPACES SHALL BE CONCEALED IN FURRED CHASES OR SUSPENDED CEILING.
- 12. PROVIDE RETURN AIR OPENINGS AS REQUIRED. OPENING SHALL BE SIZED FOR REQUIRED CFM AT A VELOCITY NOT TO EXCEED 400 FEET PER MINUTE. PROVIDE LINTELS AS REQUIRED.
- 13. SUPPORTS FOR DUCTS SHALL BE INSTALLED AT INTERVALS OF NOT MORE
- 14. FLEXIBLE DUCTWORK CONCEALED ABOVE CEILING SHALL BE EQUAL TO THERMAFLEX PRO SERIES G-KM INSULATED FLEXIBLE DUCT (R-VALUE=4.2) WITH POLYETHYLENE VAPOR BARRIER JACKETING. FLEXIBLE DUCT EXPOSED TO VIEW SHALL BE EQUAL TO THERMAFLEX PRO SERIES M-KE INSULATED FLEXIBLE DUCTWORK WITH REINFORECED METALLIZED VAPOR BARRIER JACKETING. FLEX DUCT SHALL BE U.L. LISTED AND LABELED AS A CLASS 1 AIR DUCT, STANDARD 181. FLEX DUCT SHALL BE CONNECTED TO BRANCHES AND MAINS USING CONICAL FITTINGS AND SHALL NOT EXCEED 10'-0" IN LENGTH INCLUDING ONE ELBOW. FLEXIBLE DUCTWORK SHALL NOT BE USE AS RETURN AIR OR EXHAUST DUCTWORK.
- 15. PROVIDE TYPE "B", DYNAMIC FIRE DAMPERS IN DUCTS WHERE DUCT PENETRATES FIRE-RATED WALLS, FLOORS CEILINGS, ETC. WHERE SHOWN ON DRAWINGS AND AS REQUIRED BY THE INTERNATIONAL MECHANICAL CODE 2006. FIRE DAMPERS SHALL COMPLY WITH REQUIREMENTS OF UL 555. DAMPERS SHALL HAVE A MINIMUM RATING OF 1-1/2 HOURS FOR PENETRATIONS OF LESS THAN 3-HOUR FIRE-RESISTANCE-RATED ASSEMBLIES AND A MINIMUM RATING OF 3 HOURS FOR PENETRATIONS OF 3-HOUR OR GREATER FIRE-RESISTANCE-RATED ASSEMBLIES. PROVIDE ACCESS DOORS FOR ALL DAMPERS OR OTHER APPROVED MEANS OF
- 16. DUCT SMOKE DETECTORS AND ASSOCIATED AUDIO/VISUAL DEVICES SHALL BE FURNISHED AND WIRED BY ELECTRICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL ALL DUCT SMOKE DETECTORS AND INSTALL ALL REQUIRED CONTROL WIRING TO AUTOMATICALLY SHUT DOWN FANS AS OUTLINED IN SPECIFICATION.

CONTINUITY OF EXISTING SYSTEMS AND SERVICES

ACCESS.

- . ALL WORK SHALL BE PERFORMED AT SUCH TIME AND IN SUCH MANNER AS WILL LEAST INTERFERE WITH MAINTENANCE AND OPERATION OF OWNER'S ACTIVITIES. PROVISIONS SHALL BE MADE TO PERMIT OWNER'S USE OF ALL THE BUILDING AND OF EXISTING SYSTEMS AT ALL TIMES. PROVIDE TEMPORARY FACILITIES TO SECURE THESE CONDITIONS. REMOVE TEMPORARY FACILITIES WHEN
- 2. FULLY COORDINATE WITH ARCHITECT, OWNER AND ALL OTHER TRADES, ALL WORK INVOLVING SHUT-DOWN AND INTERRUPTION OF EXISTING SYSTEMS AND SERVICE.
- 3. SHUT-DOWN OF EXISTING SERVICES WHERE REQUIRED TO INSTALL NEW SYSTEMS OR ALTER EXISTING, SHALL BE PERFORMED DURING HOURS THAT THE BUILDING IS NOT BEING USED BY OWNER. ALL COSTS FOR PERFORMING WITHOUT "EXTRA" COST TO THE OWNER.
- 4. EXISTING SYSTEMS AND SERVICES THAT ARE TEMPORARILY DISCONNECTED, BUT ARE TO REMAIN IN USE, SHALL BE
- 5. FULLY COORDINATE WITH ARCHITECT, OWNER AND OTHER TRADES TO INSURE COMPLETE CONTINUITY OF ALL SYSTEMS AND SERVICES.

HYDRONIC PIPING

- 1. PIPING SHALL BE RIGIDLY SUPPORTED AT INTERVALS OF NOT MORE THAN 10 FEET.
- 2. PIPE PASSING THROUGH EXTERIOR WALLS SHALL BE SLEEVED AND PROPERLY SEALED AIR AND WATER TIGHT.
- 3. CONTRACTOR TO PROVIDE MANUAL AIR VENTS AT ALL HIGH POINTS IN ALL PIPING SYSTEMS.
- 4. INSULATION SHALL CARRY THROUGH ALL WALL PENETRATIONS AND PIPE HANGERS.
- 5. ALL PIPING CONDUCTING LIQUIDS SHALL BE INSTALLED ON THE "WARM" SIDE OF BUILDING INSULATION. PROVIDE FOR COMPLETE DRAINAGE AT ACCESSIBLE LOW POINTS WITH HOSE END DRAIN
- 6. PROVIDE DIELECTRIC UNIONS IN PIPING WHERE DISSIMILAR METALS ARE JOINED TOGETHER.
- SMALL SCALE OF THE DRAWINGS IT IS NOT POSSIBLE TO INDICATE ALL FITTINGS, VALVES, VENT PIPING AND SPECIALTIES REQUIRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING COMPLETE OPERATING SYSTEMS AND SHALL FURNISH ALL NECESSARY FITTINGS AND SPECIALTIES WHETHER INDICATED OR NOT.

7. THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND DUE TO THE

- 8. THE SIZE OF ALL PIPING SHALL BE AS SHOWN ON THE DRAWINGS, OR WHERE NOT SHOWN, AS REQUIRED.
- 9. CHANGE OF PIPE SIZES ON HORIZONTAL RUNS SHALL BE MADE WITH ECCENTRIC REDUCERS WITH TOP OF PIPE LEVEL.
- 10. PROVIDE A MINIMUM THREE (3) ELBOW SWING FOR ALL PIPE TAKE-

LOOP RETURNS AND AT RETURN RISERS. PROVIDE SHUT-OFF VALVES

12. MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE TO DETERMINE AND PROVIDE EXPANSION COMPENSATION FOR ALL MECHANICAL PIPING SYSTEMS AS NECESSARY TO PREVENT STRESSING ON ALL MECHANICAL PIPING. PROVIDE EXPANSION JOINTS ONLY WHERE EXPANSION LOOPS ARE DIMENSIONALLY IMPRACTICAL. PROVIDE AT MINIMUM TWO (2) PIPE GUIDES ON EACH END OF EXPANSION LOOPS OR JOINTS. PRÓVIDE ACCESS TO ALL EXPANSION JOINTS.

11. PROVIDE COMBINATION BALANCING & SHUTOFF VALVES AT SYSTEM

AT SYSTEM LOOP SUPPLIES AND SUPPLY RISERS.

- 13. PRESSURE DROP THROUGH ALL COIL CONTROL VALVES SHALL NOT EXCEED 5 PSIG.
- 14. PROVIDE VALVE WITH HOSE END ON ALL LOW POINTS OF PIPING
- 15. PRIOR TO INSULATING, PIPING SHALL BE HYDROSTATICALLY TESTED AT 150 PSIG WITH NO LOSS OF PRESSURE FOR 3 HOURS.
- 16. PROVIDE GALVANIZED METAL SHIELDS FORMED TO FIT THE INSULATION BETWEEN HANGERS AND FINISHED INSULATION. 17. VALVE AND ACCESSORIES:
- A. GATE (COPPER TUBING): NIBCO SCOTT S-111. B. BALL (COPPER TUBING): NIBCO SCOTT T-590-Y

OF SYSTEMS.

- C. GLOBE AND ANGLE: NIBCO SCOTT 211. D. COMBINATION SHUT-OFF AND BALANCING: ARMSTRONG "CIRCUIT BALANCING" CRV-1. FURNISH A PORTABLE DIFFERENTIAL PRESSURE METER WITH HOSES TO BE USED DURING BALANCING
- 18. ALL COPPER PIPING SHALL BE JOINED USING 95-5 TIN/ANTIMONY
- 19. ALL VALVES SHALL BE OF THE APPROVED TYPE, AND COMPATIBLE WITH THE TYPE OF PIPING MATERIAL INSTALLED IN THE SYSTEM.
- 20. FLEXIBLE CONNECTORS, EXPANSION AND VIBRATION CONTROL DEVICES AND FITTINGS SHALL BE OF AN APPROVED TYPE.
- 21. SCREWED FITTINGS SHALL BE 125 POUNDS, BLACK MALLEABLE IRON, STANDARD WEIGHT. STOCKHAM, GRINNEL, OR CRANE IN ACCORDANCE
- 22. ALL SUPPLY AND RETURN RUNOUTS SHALL BE A MINIMUM OF 3/4", UNLESS NOTED OTHERWISE.
- 23. HEATING WATER PIPING: TYPE "L" HARD DRAWN COPPER UP TO 2-1/2" DIAMETER AND SCHEDULE 40 BLACK STEEL FOR 3" DIAMETER AND LARGER.
- 24. ALL DOWNFEED BRANCHES, CONVECTORS, UNIT HEATERS AND HEAT TRANSFER COILS SHALL HAVE DRAIN COCKS INSTALLED AT LOWEST

25. ALL UPFEED RISERS SHALL BE MADE WITH TOP CONNECTIONS AT

MAINS. ALL DOWNFEED RISERS SHALL BE MADE WITH BOTTOM

- CONNECTIONS AT MAIN. 26. ALL HORIZONTAL LINES SHALL BE RUN LEVEL WITHOUT POCKETS.
- WHERE VERTICAL DROP IN DIRECTION OF FLOW. 27. INSTALL IDENTIFICATION ARROWS ON SUPPLY AND RETURN LINES

INDICATING DIRECTION OF FLOW.

- 28. WATER PIPE CONNECTIONS TO AIR HEATING AND COOLING COILS SHALL BE MADE SO THERE WILL BE COUNTER FLOW BETWEEN WATER AND AIR SIDES.
- 29. ALL CONDENSATE DRAIN LINES SHALL BE PIPED TO FULL SIZE OF THE UNITS DRAIN OUTLET AND PROVIDED WITH A "P" TRAP SIZED AT MINIMUM TO EXCEED FAN STATIC PRESSURE. CONNECT CONDENSATE DRAINS TO PLUMBING LINES AS INDICATED ON DRAWINGS.
- 30. CONDENSATE DRAINAGE: DWV COPPER TUBING, PITCHED DOWN A MINIMUM OF 1/8" PER FOOT AWAY FROM UNIT.
- 31. INSTALL THE FOLLOWING PIPE HANGERS AND SUPPORTS:
- A. ADJUSTABLE STEEL CLEVIS HANGERS FOR INDIVIDUAL HORIZONTAL
- B. ADJUSTABLE ROLLER HANGERS AND SPRING HANGERS FOR INDIVIDUAL HORIZONTAL RUNS 20 FEET OR LONGER.
- C. PIPE ROLLER: MSS SP-58, TYPE 44 FOR MULTIPLE HORIZONTAL RUNS 20 FEET OR LONGER SUPPORT ON A TRAPEZE.
- D. SPRING HANGERS TO SUPPORT VERTICAL RUNS.
- E. STEEL PIPING, GROOVED OR WELDED, SHALL BE SUPPORTED AT A MAXIMUM HORIZONTAL SPACING OF 12 FEET AND A MAXIMUM VERTICAL SPACING OF 15 FEET.
- F. COPPER PIPING, 1-1/4" AND SMALLER, SHALL BE SUPPORTED AT A MAXIMUM HORIZONTAL SPACING OF 6 FEET AND A MAXIMUM VERTICAL SPACING OF 10 FEET.
- G. COPPER PIPING, 1-1/2" AND LARGER, SHALL BE SUPPORTED AT A MAXIMUM HORIZONTÁL SPACING OF 10 FEET AND A MAXIMUM VERTICAL SPACING OF 10 FEET.

ALTERATIONS TO EXISTING SYSTEMS AND DEMOLITION

- 1. IT IS THE INTENT THAT ALL EXISTING PIPING, DUCTWORK, FIXTURES AND OTHER EQUIPMENT AND MATERIALS THAT INTERFERE WITH THE ALTERED EXISTING BUILDING ARRANGEMENTS AND NEW SYSTEMS BE REMOVED, RELOCATED, REROUTED OR ABANDONED. THE DRAWINGS GENERALLY INDICATE MAJOR ITEMS OF EXISTING MATERIALS AND EQUIPMENT THAT ARE TO BE REMOVED, RELOCATED, REROUTED OR ABANDONED BY EACH TRADE. IT IS NOT POSSIBLE TO INDICATE ALL RELATED ACCESSORIES, SPECIALTIES AND OTHER MINOR ITEMS. HOWEVER, THEIR REMOVAL, RELOCATIONS, REROUTING OR ABANDONMENT SHALL ALSO BE INCLUDED IN THIS CONTRACT AND SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- 2. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK SHALL BE REMOVED BACK TO ACTIVE RISER AND MAIN AND PROPERLY PLUGGED OR CAPPED BEHIND FINISHED SURFACES.
- 3. ALL EXISTING PIPING TO BE DEMOLISHED MAY NOT BE SHOWN. CONTRACTOR SHALL DURING PRE-BID SITE VISIT DETERMINE EXTENT OF DEMOLITION AND INCLUDE COST OF THIS WORK IN BID. SHOULD A CONTRACTOR REQUIRE REMOVAL, RELOCATION OR REROUTING OF ANOTHER TRADE'S WORK THAT IS NOT INDICATED ON DRAWINGS, THE CONTRACTOR REQUIRING SUCH WORK SHALL BE RESPONSIBLE FOR THAT WORK, AND PAY ALL REQUIRED COSTS. ALL UNKNOWN BELOW SLAB PIPING ENCOUNTERED DURING INSTALLATION OF NEW WORK SHALL BE REMOVED AND CAPPED OFF AT ACTIVE MAIN OR BRANCH. ALLOWANCE SHALL BE MADE FOR THESE ITEMS IN BID PRICE.
- 4. EXISTING EQUIPMENT AND MATERIALS THAT ARE TO REMAIN, BUT BECOME EXPOSED DUE TO NEW WORK, SHALL BE RELOCATED AND RECONNECTED AS DIRECTED BY ARCHITECT.
- 5. ALL WORK INVOLVING ALTERATIONS TO EXISTING SYSTEMS, EQUIPMENT AND MATERIALS SHALL BE REVIEWED WITH ARCHITECT AND OWNER BEFORE BEGINNING WORK.
- 6. REMOVED EQUIPMENT AND MATERIALS NOT DESIRED BY OWNER SHALL BECOME PROPERTY OF CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM SITE. EQUIPMENT AND MATERIALS DESIRED BY OWNER SHALL BE DELIVERED BY CONTRACTOR TO AN ON-SITE STORAGE LOCATION DESIGNATED BY OWNER.
- 7. THE CONTRACTOR MUST SURVEY AND VERIFY LOCATIONS AND PHYSICAL SIZES OF ALL EXISTING ITEMS AND DETERMINE WHETHER RELOCATION OR REROUTING WILL BE REQUIRED. IF RELOCATION OR REROUTING IS REQUIRED, INCLUDING THAT OF ALL RELATED ACCESSORIES, SPECIALTIES AND OTHER MINOR ITEMS, THE CONTRACTOR SHALL INCLUDE ALL NECESSARY WORK AS PART OF HIS CONTRACT AND IT SHALL BE DONE AT NO ADDITIONAL COST TO THE
- 8. CONTRACTOR SHALL PATCH AND REPAIR ALL ROOF, FLOOR AND WALL OPENINGS RESULTING FROM THE DEMOLITION OF EXISTING MECHANICAL EQUIPMENT, DUCTWORK, PIPING, DEVICES, ETC. COORDINATE THIS WORK WITH OWNER'S REPRESENTITIVES PRIOR TO DEMOLITION.

ABBREVIATIONS BLACK IRON CEILING DIFFUSER CUBIC FEET PER MINUTE CLG CEILING DEMO DEMOLISH AND REMOVE DEMOLISH AND REMOVE EXHAUST AIR EXHAUST GRILLE **EXISTING** EXIST. EXISTING TO REMAIN LINEAR DIFFUSER MIN. MINIMUM (N) NEW **NECK** OBD OPPOSED BLADE DAMPER OED OPEN ENDED DUCT RETURN AIR EXISTING SHOWN RELOCATED RELOCATE EXISTING RETURN GRILLE SUPPLY AIR SUPPLY GRILLE STATIC PRESSURE TRANSFER DUCT T'STAT THERMOSTAT OR TEMPERATURE SENSOR TYP TYPICAL VARIABLE AIR VOLUME VARIABLE FREQUENCY DRIVE

ALL SYMBOLS OR ABBREVIATIONS ARE NOT NECESSARILY USED ON THE CONTRACT DRAWINGS

WIRE MESH SCREEN

WMS

MECHANICAL SYMBOLS

<u></u>	REVISION NUMBER	
\bigcirc	THERMOSTAT	
\boxtimes	CEILING DIFFUSER	
	RETURN REGISTER OR EXHAUST GRILLE	
$oldsymbol{\Theta}$	CONNECTION POINT	

DISCONNECT POINT

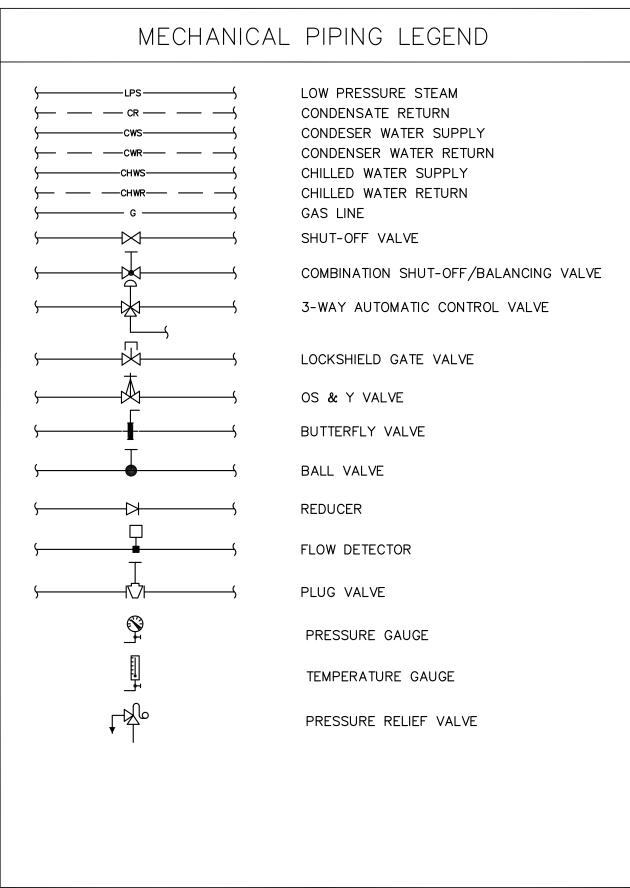
DUCT SMOKE DETECTOR

24X24 <</p> WIDTH X DEPTH) 24"ø (DIAMETER) (DIAMETER SIZE) SUPPLY DUCT CROSS SECTION UP SUPPLY DUCT DN CROSS SECTION UP RETURN OR EXHAUST --------DUCT DN SQUARE ELBOW WITH TURNING VANES RADIUS TURN ELBOW W/FLEXIBLE DUCT & VOLUME DAMPER ON TAKE-OFF TRANSFER DUCT ABV CLG WITH WIRE MESH SCREEN ON END DUCT END CAP **VOLUME DAMPER** 1" UNDERCUT DOOR SUPPLY OR OUTDOOR AIR FLOW DIRECTION RETURN OR EXHAUST AIRFLOW DIRECTION BACKDRAFT DAMPER FIRE DAMPER MOTOR OPERATED DAMPER THE SYMBOLS FOR WORK TO BE DEMOLISHED AND REMOVED ARE THE SAME AS THOSE ABOVE EXCEPT THEY ARE DRAWN WITH A DASHED LINETYPE.

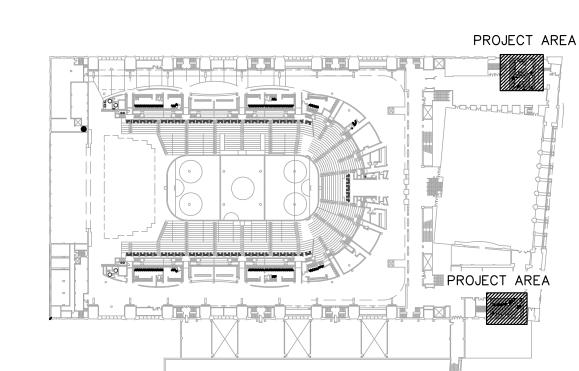
DUCTWORK SYMBOLS

DOUBLE LINE

SINGLE LINE



PIPING TO BE DEMOLISHED ARE SHOWN IN A DASHED LINETYPE.



KEY PLAN (CONCOURSE LEVEL

NTS

atlantic city 1020 Atlantic Avenue 145 West 57th Street Atlantic City, NJ 08401 New York, NY 10019 T: 609.345.5222 T: 212.246.2770 F: 609 345 7486 F: 212.246.2771 www.sosharch.com

ENGINEERING 2311 Atlantic Ave. Atlantic City, New Jersey 08401 (609) 246-7255 Fax (609) 246-7413 New Jersey Certification of Authorization No. 24GA27942000 Anthony H. Caucci

BoardwalkHa

Professional Engineer

New Jersey Lic. # 44806

AC BOARDWALK HALL **RESTROOM RENOVATION**

2301 BOARDWALK, ATLANTIC CITY, NJ 08401

SUBMISSIONS | 10-14-2016 | CONSTRUCTION DOCUMENTS | 08-23-2016 | ISSUE FOR BID

DRAWING TITLE: **MECHANICAL SPECIFICATIONS** LEGEND, SYMBOLS & ABBREVIATIONS

NO. | DATE: | DESCRIPTION:

DRAWN BY: WFH DRAWING NO. REVIEWED BY: PROJECT NO.

15243.00.00

RUNS LESS THAN 20 FEET IN LENGTH.

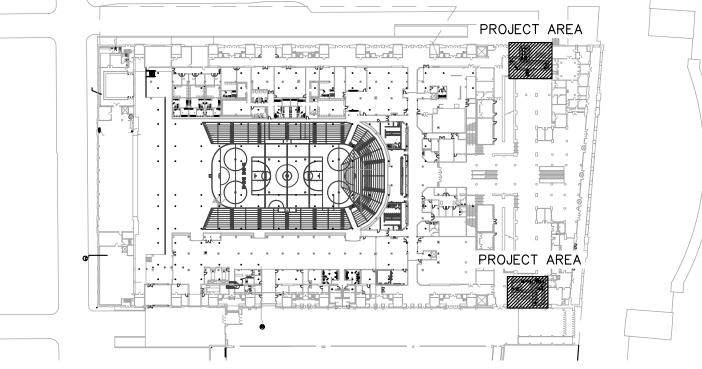
PERMANENT WORK HAS BEEN PLACED INTO SERVICE.

THIS WORK SHALL BE BORNE BY THE CONTRACTOR AND

PERMANENTLY RECONNECTED AND RETURNED TO PROPER

SCOPE OF WORK NOTE:

PLANS SHOW DESIGN INTENT FOR THE RENOVATION OF (4) PUBLIC RESTROOMS. IT IS PLANNED FOR ALL EXISTING MECHANICAL SYSTEMS TO BE UPGRADED, REPAIRED OR REPLACED AS SHOWN ON THE DRAWINGS. MECHANICAL DESIGN IS BASED ON ASSUMPTIONS MADE ABOUT ABOVE CEILING AND IN-WALL CONDITIONS WHICH ARE CURRENTLY INACCESSIBLE. DURING THE DEMOLITION OF THE PROJECT THE CONTRACTOR SHALL INCLUDE DESIGN ASSISTANCE FOR THE ENGINEERING TEAM TO REVISIT THE EXISTING CONDITIONS WHEN THEY BECOME ACCESSIBLE. AFTER ADDITIONAL FIELD WORK THE DESIGN TEAM WILL CONFIRM THE EXISTING DESIGN OR MODIFY THE DESIGN AS REQUIRED TO MEET THE PROJECT'S INTENT.



KEY PLAN (BOARDWALK LEVEL)

SCHEDULE OF AIR DEVICES CEILING DIFFUSER EQUAL TO KRUEGER MODEL 5SH, ALUMINUM, FIXED DISCHARGE WITH ADJUSTABLE 1, 2, OR 4-WAY THROW. BORDER TYPE SHALL BE LAY-IN OR SURFACE MOUNT AS REQUIRED. ACTIVE DIFFUSER FACE AREA SHALL BE MAXIMUM AVAILABLE. PROVIDE MANUFACTURER'S OPPOSED BLADE LEVER OPERATED DAMPER AND ROUND NECK ADAPTOR PER SIZES SHOWN ON PLAN. FINISH SHALL BE BAKED ACRYLIC PAINT, COLOR AS SELECTED BY ARCH. DIFFUSER FACE SIZE SHALL BE 24X24 UNLESS OTHERWISE NOTED. NECK SIZE TO BE DETERMINED BY MANUFACTURER FOR AN NC LEVEL LESS THAN 30. CEILING RETURN GRILLE EQUAL TO KRUEGER MODEL 56490 FOR SQUARE NECK AND 56690 FOR ROUND NECK, STEEL CONSTRUCTION WITH ALUMINUM FACE SCREEN, PERFORATED FACE. PROVIDE LAY-IN OR SURFACE MOUNT BORDER AS REQUIRED. FINISH SHALL BE BAKED ON ENAMEL PAINT, COLOR AS SELECTED BY ARCH. SEE DRAWING FOR GRILLE FACE SIZE. PROVIDE 18X18 NECK IF PLENUM RETURN, OTHERWISE NECK SIZE AS SHOWN ON DRAWINGS. CEILING/SIDEWALL EXHAUST GRILLE EQUAL TO KRUEGER MODEL S585H-OBD, ALUMINUM WITH 1-1/4" BORDER ON ALL SIDES AND A MINIMUM BORDER THICKNESS OF 0.040 INCHES. GRILLE SHALL BE FIXED 45° DEFLECTION WITH 1/2" BLADE SPACING. FRONT BLADES PARALLEL TO LONG DIMENSION. BORDER TYPE AS REQUIRED. PROVIDE WITH OPPOSED BLADE DAMPER. FINISH SHALL BE BAKED ON ACRYLIC PAINT, COLOR AS SELECTED BY ARCHITECT. NECK SIZE AS SHOWN ON DRAWINGS. DOUBLE DEFLECTION CEILING/SIDEWALL SUPPLY GRILLE EQUAL TO KRUEGER MODEL 5880H, ALUMINUM WITH 1-1/4" BORDER ON ALL SIDES AND A MINIMUM BORDER THICKNESS OF 0.040 INCHES. GRILLE SHALL HAVE 3/4" BLADE SPACING. BORDER TYPE AS REQUIRED. PROVIDE WITH ALUMINUM OPPOSED BLADE DAMPER. FINISH SHALL BE BAKED ON ACRYLIC COLOR AS SELECTED BY ARCHITECT. NECK SIZE AS SHOWN ON DRAWINGS.

			E	XHAUST FAN S	CHED	JLE	EF #				
FAN	TYPE	MFR	SERVING	MODEL NUMBER	CFM	E.S.P. IN W.C.	FRPM	DRIVE	НР	V/PH/HZ	NOTES
EF-10	INLINE	LOREN COOK	RESTROOM	165SQNB	2200	1	1210	BELT	1	480V/3Ø/60	ALL
EF-11	INLINE	LOREN COOK	RESTROOM	165SQNB	2230	1	1210	BELT	1	480V/3Ø/60	ALL
NOTES:										•	

1. PROVIDE ELECTRICAL DISCONNECT SWITCH.

2. PROVIDE BACKDRAFT DAMPER

3. SUPPORT WITH HANGING RODS AND VIBRATION ISOLATION KIT FOR SUSPENED INSTALLATION

4. PROVIDE WITH ADJUSTABLE PULLEY AND SHEAVES

FAN STATUS.

									F	AN COI	L UN	IIT :	SCH	EDL	JLE				FCU #										
						FAN D	DATA		CHILLED W	ATER COIL							HOT WATER COIL							ELECTRICAL				L	
UNI	T SIZE.	TAG NO.	MFR.	MODEL NO.	TYPE	CFM	E.S.P. (IN H ₂ O)	HP	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	ROWS	GPM	л	(°F) WB		Γ. (°F) WB	E.W.T.	L.W.T.	HEATING CAPACITY (MBH)	GPM	ROWS	WPD (FT. H₂O)	E.A.T. (°F)	L.A.T. (°F)	E.W.T. (°F)	L.W.T. (°F)	VOLTAGE (V/Φ/Hz)	FULL LOAD AMPS	NOTES
	16	FCU-1-1	ENVIRO-TEC	HPP 16	ABOVE CEILING, HORIZONTAL	905	0.20	(2) 1/4	32.8	26.7	4	6.6	78	65	55.0	54.7	45	55	44.7	4.5	1	18.2	55	101	180	160	115/60/1	9.8	ALL
	16	FCU-1-2	ENVIRO-TEC	HPP 16	ABOVE CEILING, HORIZONTAL	980	0.20	(2) 1/4	32.8	26.7	4	6.6	78	65	55.0	54.7	45	55	44.7	4.5	1	18.2	55	97	180	160	115/60/1	9.8	ALL
	18	FCU-2-1	ENVIRO-TEC	HPP 18	ABOVE CEILING, HORIZONTAL	1225	0.05	(2) 1/4	42.0	31.0	3	8.4	78	65	54.2	53.0	45	55	50.5	5	1	18.2	55	93	180	160	115/60/1	9.8	ALL
	18	FCU-2-2	ENVIRO-TEC	HPP 18	ABOVE CEILING, HORIZONTAL	1225	0.05	(2) 1/4	42.0	31.0	3	8.4	78	65	54.2	53.0	45	55	50.5	5	1	18.2	55	93	180	160	115/60/1	9.8	ALL

1. PROVIDE TOGGLE ELECTRICAL DISCONNECT SWITCH. 2. PROVIDE VIBRATION ISOLATION HANGERS ON HORIZONTAL UNITS.

3. PROVIDE UNIT CONTROLLER MOUNTED WITH A WALL MOUNTED TEMPERATURE SENSOR COMPATIBLE WITH EXISTING FACILITY'S BMS.

4. PROVIDE EMERGENCY OVERFLOW DRAIN PAN UNDER UNITS. 5. PROVIDE DRAIN PAN OVERFLOW SWITCH/CONTROLS TO AUTOMATICALLY SHUT DOWN UNIT ON HIGH DRAIN PAN LEVEL.

6. PROVIDE HOT WATER COIL IN THE REHEAT POSITION.

7. PROVIDE 1" PLEATED MERV-7 AIR FILTERS.

8. PROVIDE SPARE 1" THROWAWAY FILTERS PROVIDE SCR FAN SPEED CONTROLLER.

10. PROVIDE PIPING PACKAGE WITH ISOLATION BALL VALVE W/MEMORY STOP, 2-WAY MODULATING CONTROL VALVE, Y STARINER & AUTOMATIC CATRIDGE FLOW CONTROL W/TWO PRESSURE/TEMPERATURE PORTS.

11. PROVIDE AUTOMATIC AIR VENTS. 12. PROVIDE STAINLESS STEEL CONSTRUCTION DRAIN PAN WITH EXTERNAL INSULATION. AUTOMATIC TEMPERATURE CONTROLS (ATC)

SCOPE OF WORK

A. AUTOMATIC CONTROLS FOR NEW BLOWER COILS, FAN COILS AND FANS SHALL BE AN EXTENSION OF THE EXISTING BUILDING MANAGEMENT SYSTEM. FURNISH AND INSTALL ALL CONTROLLERS, SENSORS, VALVE AND DAMPER MOTORS, WIRING, ETC. AS REQUIRED FOR A COMPLETE INSTALLTION.

B. THE SYSTEM SHALL BE COMPLETE IN ALL RESPECTS INCLUDING ALL LABOR, MATERIALS, EQUIPMENT AND SERVICE AS REQUIRED. THE SYSTEM SHALL BE DESIGNED AND INSTALLED BY AN APPROVED CONTRACTOR HAVING AT LEAST TEN (10) YEARS EXPERIENCE IN THE DESIGN AND INSTALLATION OF HVAC AUTOMATIC CONTROLS AND RELATED WORK WHO SHALL ALSO PROVIDE START-UP, OPERATING INSTRUCTION AND NECESSARY MAINTENANCE AND REPAIRS TO THE SYSTEM THROUGH THE GUARANTEE PERIOD.

THE ATC SYSTEM SHALL CONSIST OF ALL THERMOSTATS, TEMPERATURE SENSORS, TRANSMITTERS, CONTROLLERS, AUTOMATIC DAMPERS AND DAMPER OPERATORS AND CONTROL EQUIPMENT NECESSARY TO FULFILL THE INTENT OF THIS SPECIFICATION AND PROVIDE FOR A COMPLETE AND OPERABLE

COORDINATE THE INSTALLATION OF THE ATC SYSTEM WITH ALL OTHER TRADES AS REQUIRED.

THE CONTROL SYSTEM SHALL ALLOW THE OCCUPANTS OF THE SPACE TO MANUALLY ADJUST THEIR SETPOINTS AND PROGRAMS AS DESIRED. SETPOINTS AND SPACE CONDITIONS SHALL BE MONITORED AT THE BUILDING MANAGEMENT CONTROL STATION AND SHALL ALSO BE ADJUSTABLE FROM THE BMS CONTROL STATION.

2. ELECTRICAL

A. ALL ELECTRICAL WORK REQUIRED FOR THE OPERATION OF THE CONTROL SYSTEMS SHALL BE PROVIDED UNDER THIS SECTION OF THE SPECIFICATION BY THE CONTROL SYSTEMS CONTRACTOR, EXCEPT AS SPECIFICALLY NOTED, AND SHALL BE IN STRICT ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND ALL AUTHORITIES HAVING JURISDICTION.

B. ALL ELECTRICAL CONTROL AND SWITCHES SHALL BE SUITABLE FOR 120 VOLTS, 60 HERTZ. UPON COMPLETION OF THE WORK, AN ELECTRICAL CERTIFICATE FROM THE LOCAL JURISDICTION INSPECTION AGENCY SHALL BE PROVIDED.

C. ALL ELECTRICAL WIRING SHALL BE INSTALLED IN THIN-WALL EMT

THE FOLLOWING WORK WILL BE PROVIDED BY THE ELECTRICAL CONTRACTOR:

> 1. POWER WIRING TO ALL MOTORS 2. WIRING TO THE PRIMARY AUTOMATIC TEMPERATURE 3. FIRE ALARM WIRING FROM SMOKE DETECTORS (IF REQUIRED) 4. FAN SHUT-DOWN WIRING FROM THE FIRE ALARM SYSTEM (IF REQUIRED)

3. SERVICE AND GUARANTEE

A. THE ATC CONTRACTOR SHALL GUARANTEE THE CONTROL SYSTEM IS FREE FROM DEFECTS IN WORKMANSHIP AND MATERIAL FOR A PERIOD OF ONE (1) YEAR FROM DATE OF FINAL ACCEPTANCE. ANY ITEMS PROVEN TO BE DEFECTIVE WITHIN THE GUARANTEE PERIOD SHALL BE REPAIRED OR REPLACED FREE OF CHARGE.

AFTER COMPLETION OF THE INSTALLATION, ALL EQUIPMENT PROVIDED UNDER THIS SPECIFICATION SHALL BE ADJUSTED AND CALIBRATED FOR PROPER OPERATION.

C. THE ATC CONTRACTOR SHALL, UPON COMPLETION OF THE INSTALLATION AND PRIOR TO FINAL ACCEPTANCE, MAKE AVAILABLE TO THE OWNER AN ANNUAL SERVICE AGREEMENT

4. SEQUENCE OF OPERATION

FAN COIL UNITS:

A. FOR ALL NEW BLOWER COIL AND FAN COIL UNITS, PROVIDE A REMOTE WALL MOUNTED TEMPERATURE SENSOR AND A DUCT MOUNTED DISCHARGE AIR TEMPERATURE SENSOR. ALL UNIT SETPOINTS SHALL BE INPUT AND MONITORED BY THE FACILITY'S EXISTING BUILDING MANAGEMENT SYSTEM (BMS).

UNIT'S FAN SHALL RUN CONTINUOUSLY DURING ALL OCCUPIED PERIODS OF THE DAY (AS DETERMINED BY BMS) WHEN UNIT IS ENERGIZED, THE OUTDOOR AIR DAMPER SHALL OPEN TO ITS PRESET MAXIMUM

HEATING COIL CONTROL:

UPON A CALL FOR HEATING FROM THE WALL MOUNTED SPACE TEMPERATURE SENSOR, THE HOT WATER COIL'S 2-WAY CONTROL VALVE SHALL MODULATE OPEN ALLOWING FLOW TO COIL. WHEN SPACE TEMPERATURE HAS BEEN SATISFIED THE REVERSE SHALL OCCUR.

COOLING COIL CONTROL:

UPON A CALL FOR COOLING FROM THE WALL MOUNTED SPACE TEMPERATURE SENSOR, THE CHILLED WATER COIL'S 2-WAY CONTROL VALVE SHALL MODULATE OPEN ALLOWING FLOW TO COIL. WHEN SPACE TEMPERATURE HAS BEEN SATISFIED THE REVERSE SHALL OCCUR.

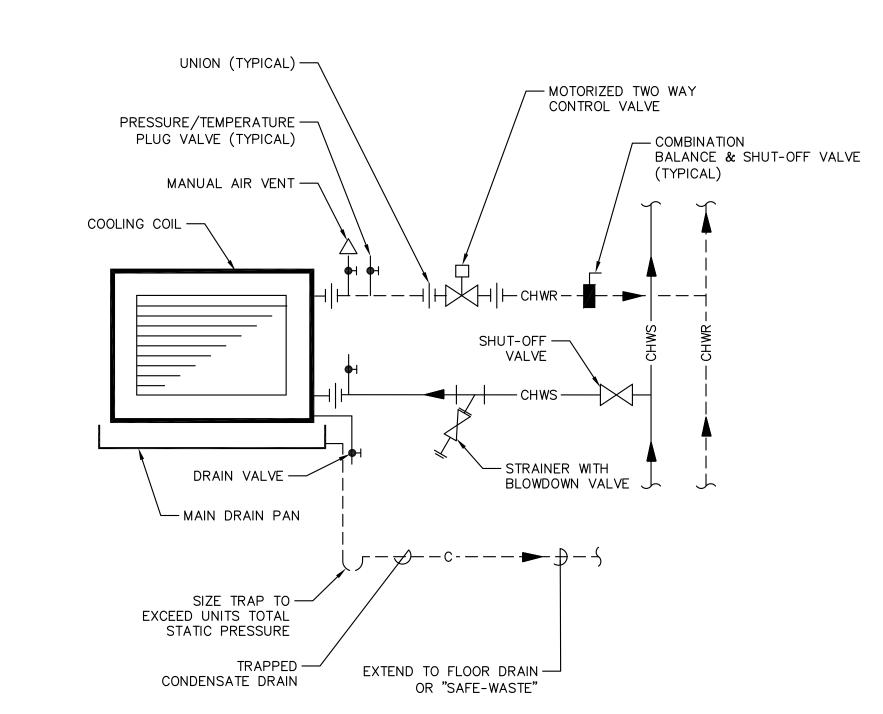
GENERAL EXHAUST FANS:

A. GENERAL EXHAUST FAN SHALL BE CONTROLLED AS FOLLOWS: 1. BATHROOM EXHAUST FANS SHALL BE CONTROLLED BY BMS.

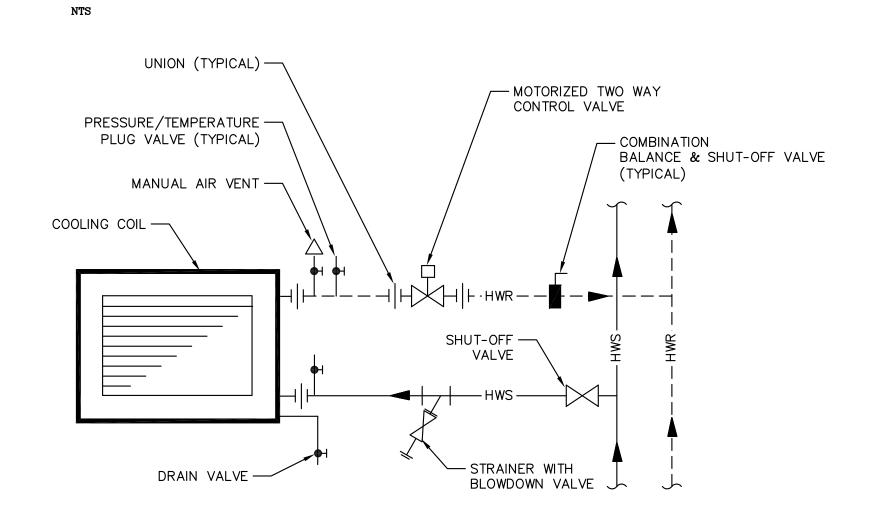
B. UPON ACTIVATION OF EXHAUST FAN, WHERE APPLICABLE, INTERLOCK THE OPERATION OF THE EXHAUST FAN WITH THE FAN'S ASSOCIATED EXHAUST AIR MOTOR OPERATED DAMPER (MOD) BY USE OF AN ENDSWITCH. EXHAUST AIR FAN SHALL NOT ENERGIZE UNTIL EXHAUST DAMPER IS FULLY OPEN. UPON DE-ENERGIZING OF EXHAUST FAN, EXHAUST DAMPER SHALL AUTOMATICALLY

C. PROVIDE CURRENT PROOF-OF-FLOW SWITCH FOR EXHAUST FANS' MOTORS.

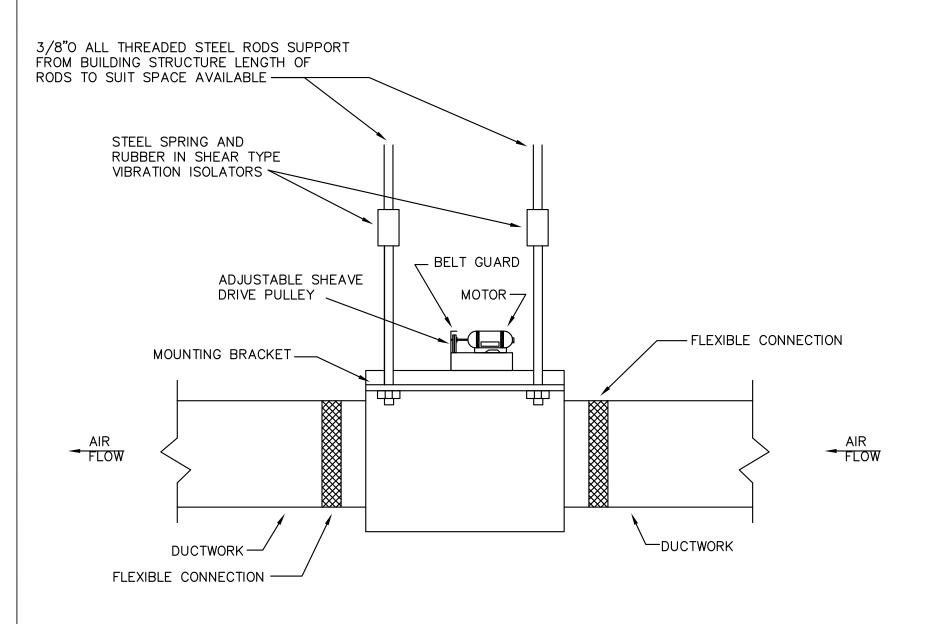
D. ATC CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR NECESSARY TO INTERFACE NEW EXHAUST FANS INTO THE FACILITY'S BMS. PROVIDE BOTH MONITORING AND OVERRIDE CONTROL BY THE BMS, OF THE UNIT'S OPERATIONS. THE BMS SHALL MONITOR STATUS AND PROVIDE CONTROL OF THE FOLLOWING POINTS:



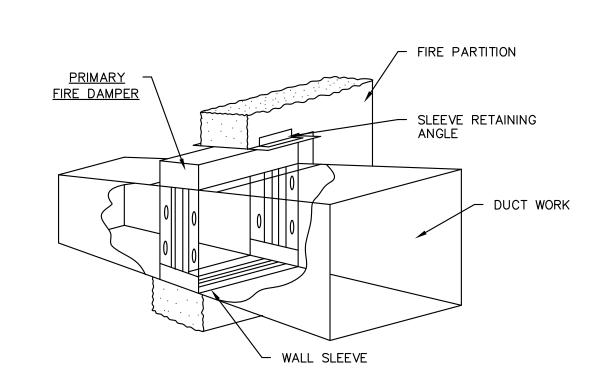
TYPICAL CHILLED WATER COIL PIPING DETAIL



TYPICAL HOT WATER COIL PIPING DETAIL



TYPICAL IN-LINE EXHAUST FAN DETAIL



VERTICAL TYPE "B" FIRE DAMPER DETAIL



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RESTROOM RENOVATION

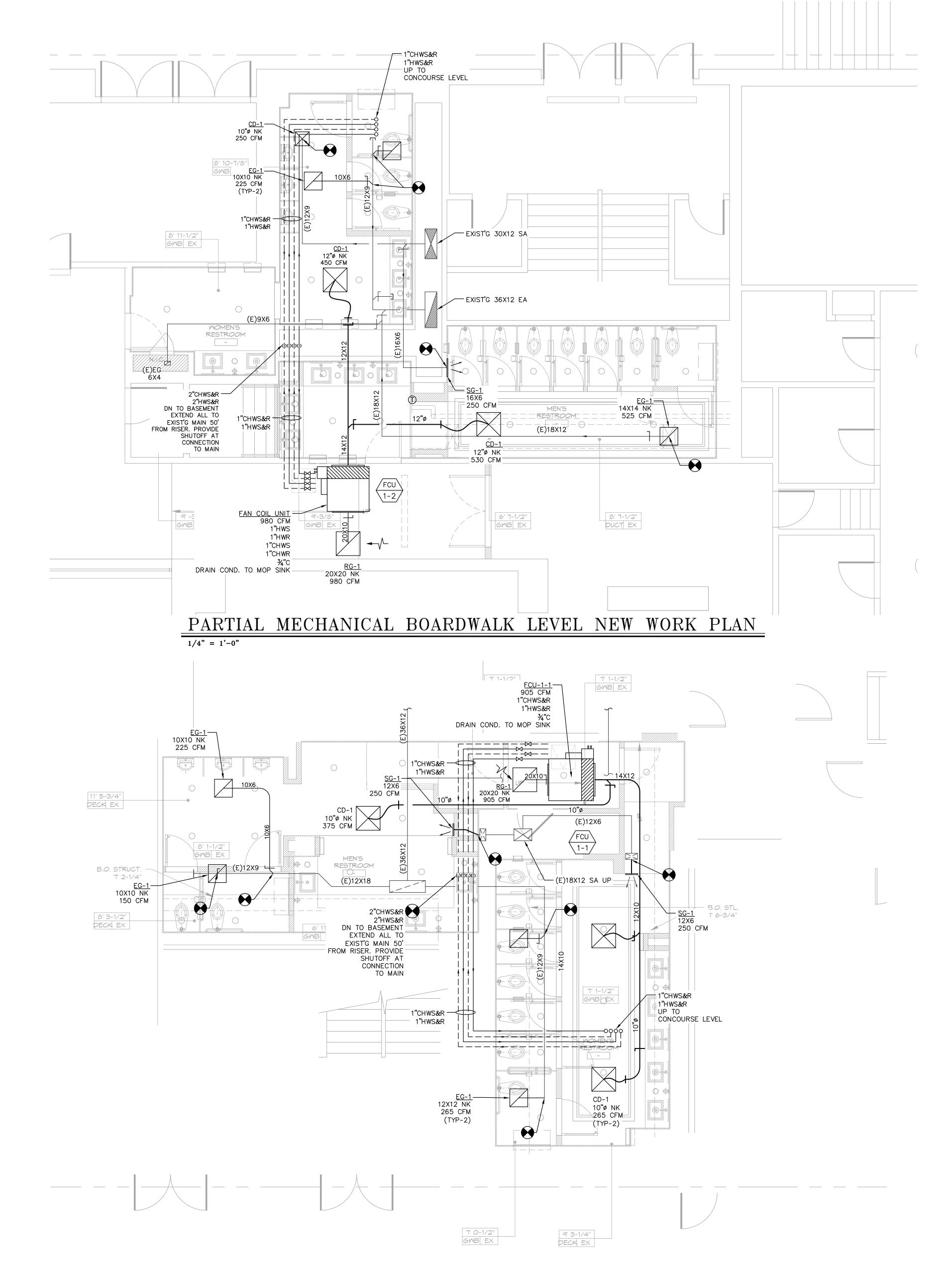
AC BOARDWALK HALL

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DRAWING TITLE: **MECHANICAL** SCHEUDLES & DETAILS

DRAWING NO.	WFH	DRAWN BY:
	AHC	REVIEWED BY:
M-00	0.001	PROJECT NO. 15243.C



PARTIAL MECHANICAL BOARDWALK LEVEL NEW WORK PLAN

1/4" = 1'-0"



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 new york

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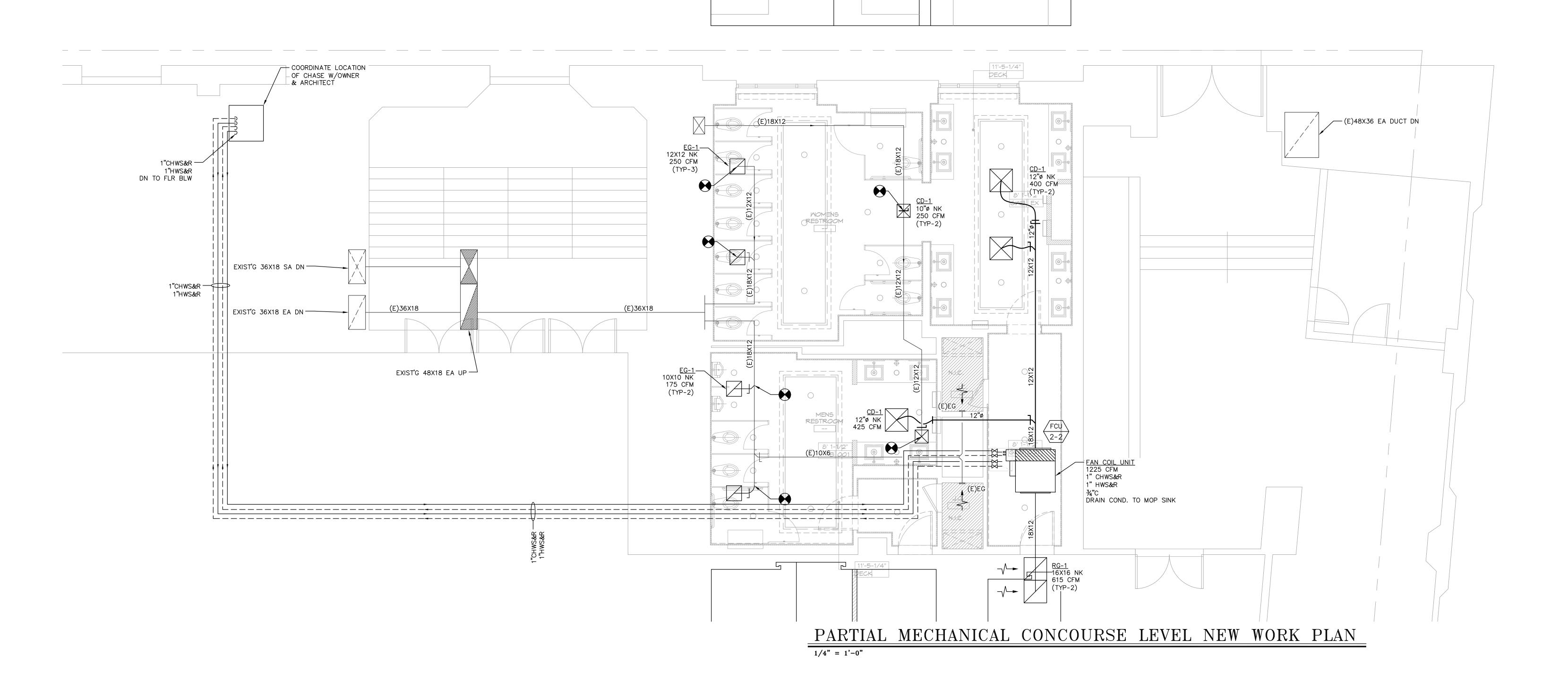
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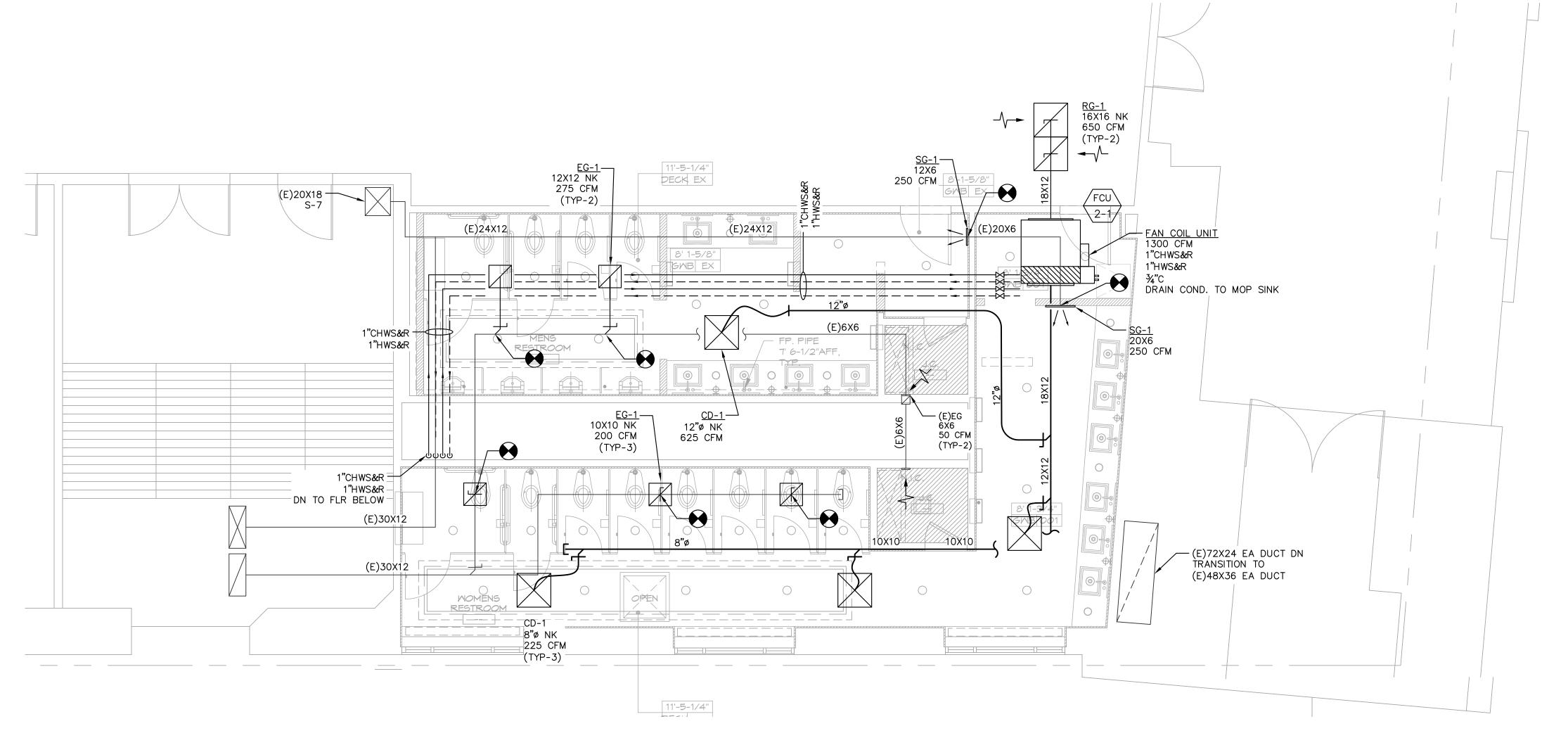
MECHANICAL
BOARDWALK LEVEL
NEW WORK PLANS

DRAWN BY: WFH DRAWING NO.

REVIEWED BY: AHC

PROJECT NO.





PARTIAL MECHANICAL CONCOURSE LEVEL NEW WORK PLAN

1/4" = 1'-0"

MECHANICAL
CONCOURSE LEVEL
NEW WORK PLANS

| 10-14-2016 | CONSTRUCTION DOCUMENTS

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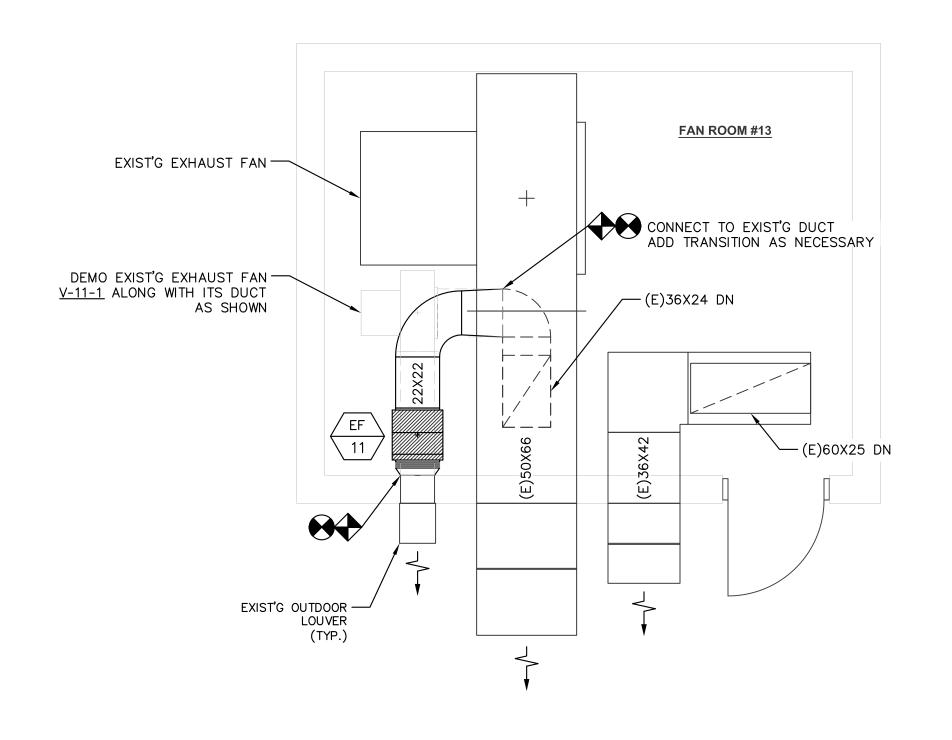


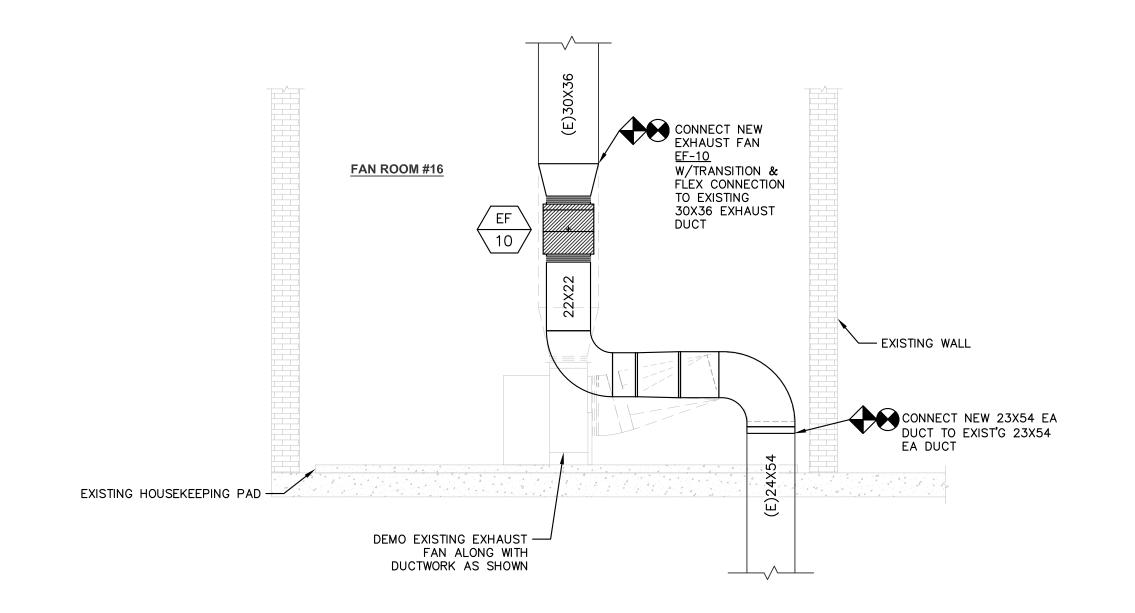
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AC BOARDWALK HALL RESTROOM RENOVATION

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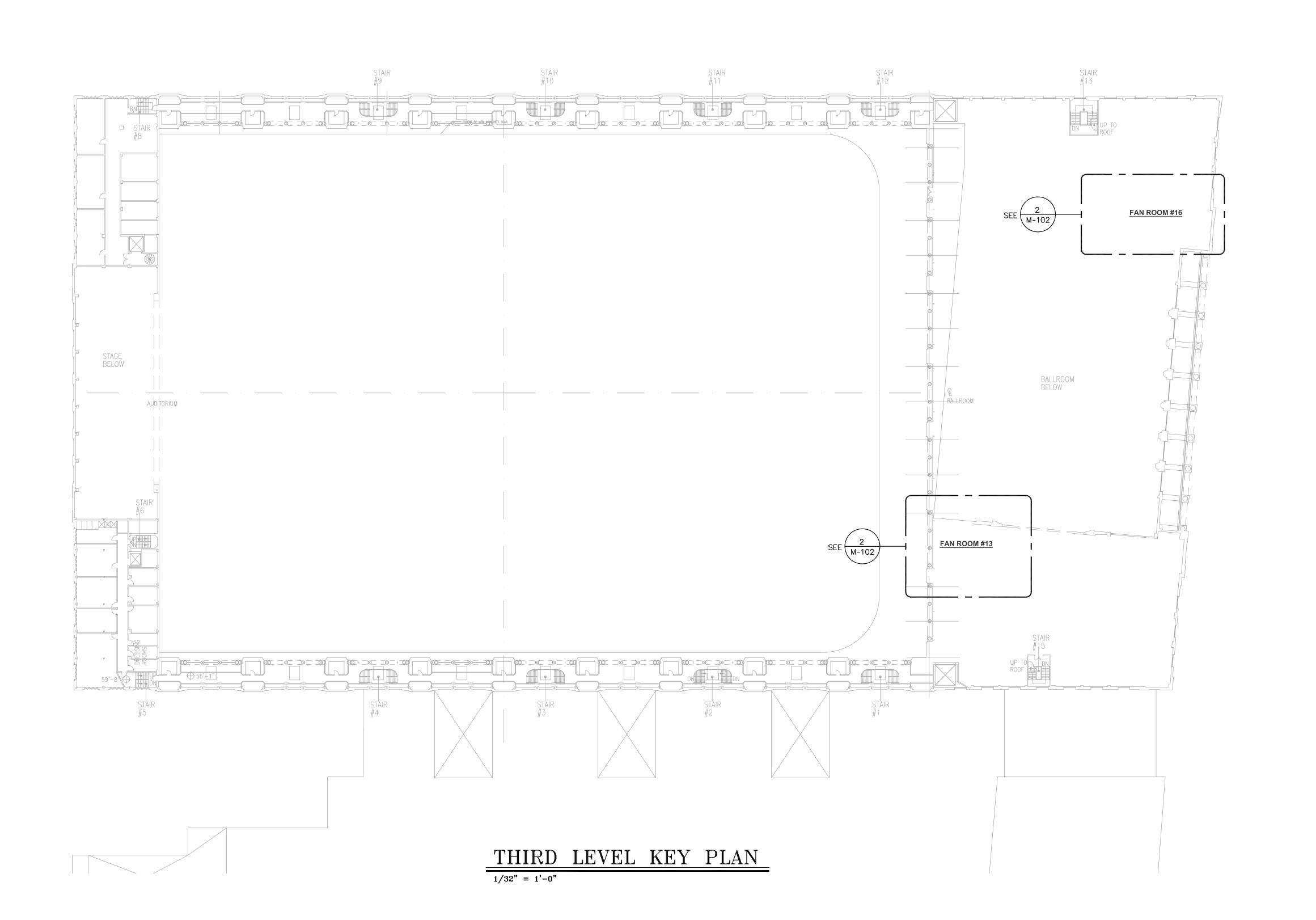
SUBMISSIONS





2 ENLARGED FAN ROOM #16 PLAN M-102 1/4" = 1'-0"







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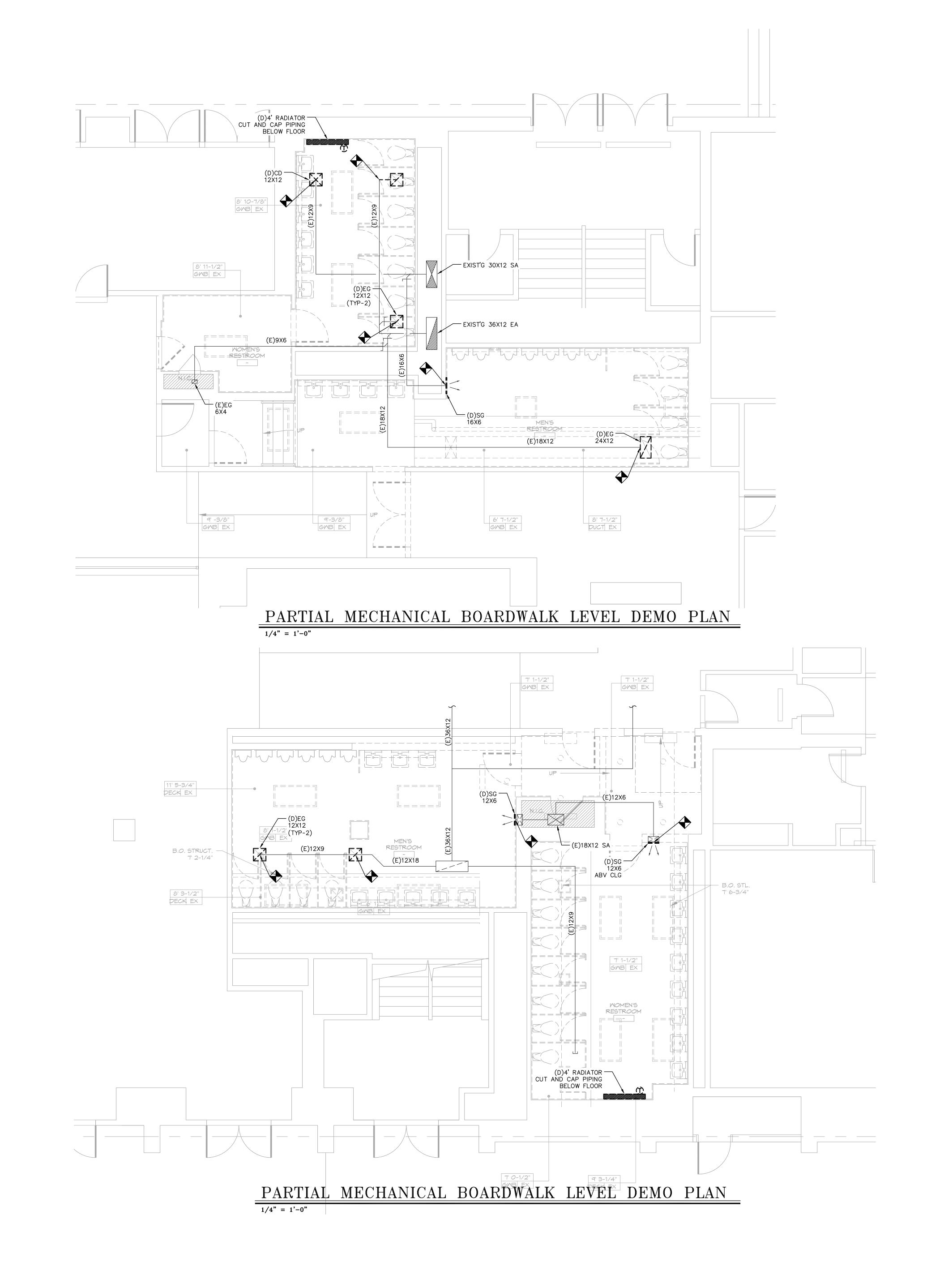
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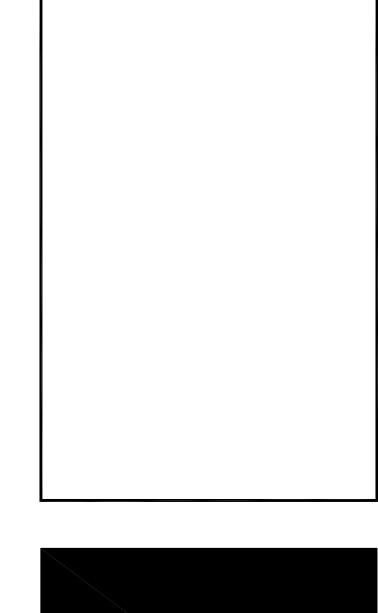
MECHANICAL

CONCOURSE LEVEL

NEW WORK PLANS

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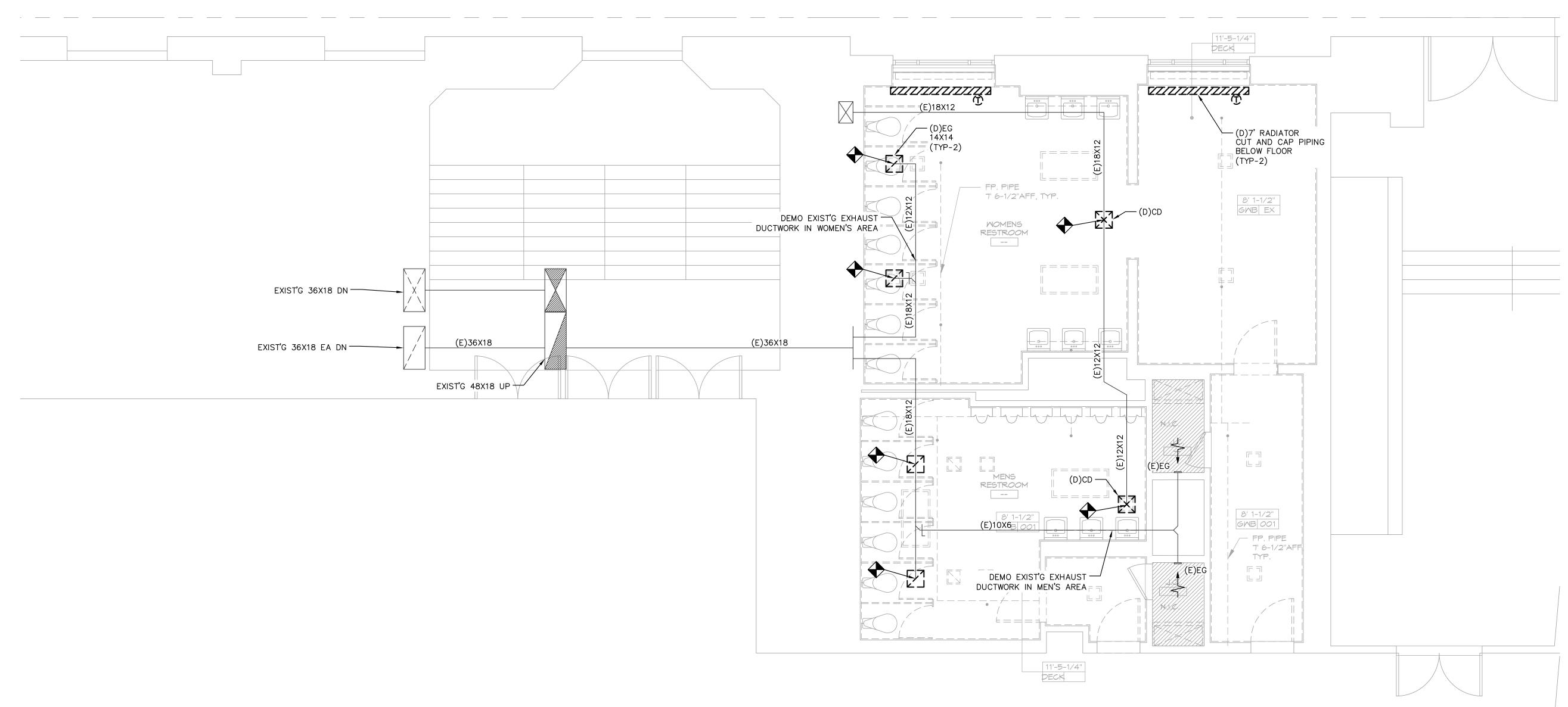
MECHANICAL
BOARDWALK LEVEL
DEMOLITION PLANS

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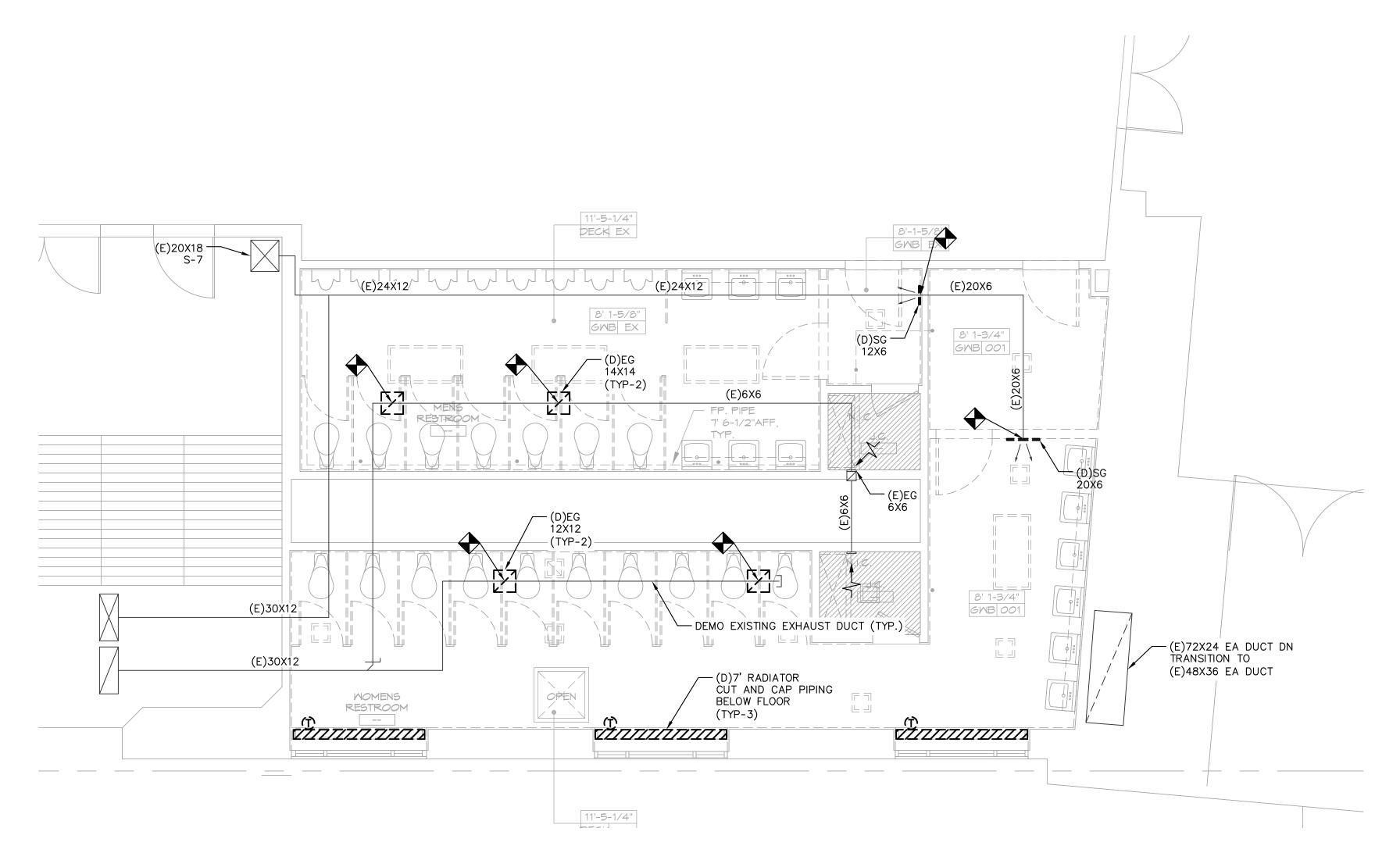
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PROJECT NO.

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PARTIAL MECHANICAL CONCOURSE LEVEL DEMO PLAN 1/4" = 1'-0"



PARTIAL MECHANICAL CONCOURSE LEVEL DEMO PLAN

1/4" = 1'-0"





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AC BOARDWALK HALL RESTROOM RENOVATION

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MECHANICAL
MECHANICAL CONCOURSE LEVEL DEMOLITION PLANS
DEMOLITION PLANS

DRAWING NO.	WFH	DRAWN BY:
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- A. CONTRACT PERFORMANCE
- 1. EXECUTE THE WORK IN THE BEST AND MOST THOROUGH MANNER & TO THE SATISFACTION OF THE CONSULTING ENGINEERS, WHO WILL JOINTLY INTERPRET THE MEANING OF THE DRAWINGS AND SPECIFICATIONS AND SHALL HAVE THE POWER TO REJECT ANY WORK AND MATERIALS WHICH, IN THEIR JUDGMENT, ARE NOT IN FULL ACCORDANCE THEREWITH.
- 2. EXCEPT FOR CHANGES AS MAYBE SPECIFICALLY APPROVED BY THE CONSULTING ENGINEERS, IN ACCORDANCE WITH ALTERNATES OF OPTIONS STATED HEREINAFTER, ALL WORK MUST BE IN FULL ACCORDANCE WITH THE INTENT OF THE PLANS AND SPECIFICATIONS, COMPLETE IN EVERY WAY AND READY FOR SATISFACTORY AND EFFICIENT OPERATION WHEN DELIVERED TO THE OWNER.
- 3. WHERE DISAGREEMENTS OCCUR BETWEEN THE PLANS AND THE SPECIFICATIONS, OR WITHIN EITHER DOCUMENT ITSELF, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY AND THE ARCHITECT SHALL PROVIDE THE CONTRACTOR WITH AN INTERPRETATION ON HOW TO PROCEED.
- 4. THE DRAWINGS SHOW VARIOUS CONDUIT AND PIPING SYSTEMS SCHEMATICALLY. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY JUNCTION BOXES, PULL BOXES, SUPPORT AND ACCESSORIES TO MEET APPLICABLE CODES, BUILDING STANDARDS AND FULFILL CONTRACT DOCUMENTS. NO ADDED COMPENSATION WILL BE PERMITTED FOR VARIATIONS DUE TO FIELD CONDITIONS.
- 5. THE CONTRACTOR COVENANTS AND AGREES THAT HE AND HIS SUBCONTRACTORS AND HIS AND THEIR AGENTS, SERVANTS AND EMPLOYEES WILL PROVIDE AND MAINTAIN A SAFE PLACE TO WORK AND THAT HE AND THEY WILL COMPLY WITH ALL LAWS AND REGULATIONS OF ANY GOVERNMENTAL AUTHORITY HAVING JURISDICTION THEREOF AND THE CONTRACTOR AGREES TO INDEMNITY, DEFEND AND HOLD HARMLESS THE CONSULTING ENGINEER, ARCHITECT AND OWNER FROM AND AGAINST ANY LIABILITY, LOSS, DAMAGE OR EXPENSE, INCLUDING ATTORNEY'S FEES ARISING FROM FAILURE OR ALLEGED FAILURE ON THE PART OF THE CONTRACTOR, HIS SUBCONTRACTORS AND HIS AND THEIR AGENTS, SERVANTS AND EMPLOYEES TO PROVIDE AND MAINTAIN A SAFE PLACE TO WORK OR TO COMPLY WITH ALL LAWS AND REGULATIONS OF ANY GOVERNMENTAL AUTHORITY HAVING JURISDICTION
- 6. THE CONTRACTOR AND EACH SUBCONTRACTOR COVENANTS AND AGREES TO INDEMNITY, DEFEND AND HOLD HARMLESS THE CONSULTING ENGINEER, ARCHITECT AND OWNER FROM AND AGAINST ANY LIABILITY, LOSS, DAMAGE OR EXPENSE, INCLUDING ATTORNEY'S FREES ARISING FROM A FAILURE OR ALLEGED FAILURE ON THE PART OF THE CONTRACTOR, HIS SUBCONTRACTORS AND HIS AND THEIR AGENTS, SERVANTS AND EMPLOYEES PROPERLY TO DISCHARGE THE OBLIGATIONS ASSUMED BY HIM OR THEM IN THE PERFORMANCE OF THE WORK, INCLUDING ANY ACT OR OMISSION ALLEGEDLY RESULTING IN DEATH OR PERSONAL INJURY OR PROPERTY DAMAGE OR IMPROPER CONSTRUCTION, CONSTRUCTION TECHNIQUES OR THE USE OF IMPROPER OR INAPPROPRIATE MATERIAL OR TOOLS.
- 7. ALL WORK SHALL BE DONE IN CONFORMANCE WITH ALL GOVERNING CODES, INCLUDING AMENDMENTS, BULLETINS, ETC., AS WELL AS STANDARDS OF INSTALLATION AND EQUIPMENT ESTABLISHED FOR THE BUILDINGS, AND REQUIREMENTS OF THE OWNER.
- 8. OBTAIN ALL NECESSARY PERMITS AND APPROVAL FROM GOVERNING AUTHORITIES AND FILE ALL NECESSARY FORMS. PAY ALL INSPECTION FEES.
- 9. COORDINATE SCHEDULING OF ALL WORK TO BE PERFORMED WITH OWNER AND/OR HIS AGENT AND INCLUDE ALL NECESSARY PREMIUM TIME
- 10. ALL AREAS ASSOCIATED WITH WORK TO BE PERFORMED SHALL BE EXAMINED PRIOR TO BID SUBMISSION. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR CONDITIONS FOUND DURING INSTALLATION.

REQUIRED FOR SHUTDOWNS, WORK IN OCCUPIED AREAS, ETC.

- 11. BEFORE COMMENCING WORK, EXAMINE ALL ADJOINING WORK ON WHICH THIS WORK IS IN ANY WAY DEPENDENT FOR PERFECT WORKMANSHIP ACCORDING TO THE INTENT OF THIS SPECIFICATION, AND REPORT TO THE CONSTRUCTION MANAGER ANY CONDITION WHICH PREVENTS PERFORMANCE OF FIRST-CLASS WORK, NO "WAIVER OF RESPONSIBILITY" FOR INCOMPLETE, INADEQUATE OR DEFECTIVE ADJOINING WORK WILL BE CONSIDERED UNLESS NOTICE HAS BEEN FILED BEFORE SUBMITTAL OF A PROPOSAL.
- 12. COORDINATE ALL WORK WITH OTHER TRADES TO ENSURE INSTALLATION IS MADE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 13. FURNISH ADEQUATE LIABILITY INSURANCE AND BONDING AS REQUIRED BY
- 14. INCLUDE ALL LABOR, MATERIALS, AND APPURTENANCES REQUIRED FOR THE FURNISHING, INSTALLING AND TESTING OF ALL WORK, COMPLETE AND MAKE READY FOR OPERATION IN A MANNER SATISFACTORY TO THE ARCHITECT AND CONSULTING ENGINEER, ALL WORK SHOWN ON DRAWINGS AND SPECIFIED HEREIN.
- 15. ALL WORK SHALL BE GUARANTEED FOR TWO (1) FULL YEAR FROM THE DATE WHEN THE OWNER HAS ISSUED A "CERTIFICATE OF SUBSTANTIAL COMPLETION".
- B. INSTALLATION PROCEDURE
- 1. THIS CONTRACTOR'S WORK SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING: FURNISHING AND INSTALLATION OF ALL ELECTRICAL WORK, INCLUDING ELECTRICAL AND COMMUNICATIONS OUTLETS IN WALLS AND FLOOR, LIGHTING FIXTURES WITH LAMPS, SWITCHES, DIMMERS, EMERGENCY BATTERY UNITS, ETC., AND ASSOCIATED BRANCH CIRCUIT WIRING, DISCONNECT SWITCH SPECIAL RECEPTACLES, ETC. ALL SPECIAL EQUIPMENT, SUCH AS FANS, AIR CONDITION UNITS, COPIERS, ETC, WILL BE FURNISHED BY OTHERS (U.O.N). WHERE EQUIPMENT REQUIRES PERMANENT CONNECTIONS SHALL BE PROVIDED WITH APPROPRIATE DISCONNECTING MEANS.
- 2. ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK SHOWN N DRAWINGS WITH OTHER TRADES TO ASSURE THAT ALL SYSTEMS ARE COMPLETE AND OPERATIONAL. THIS CONTRACTOR SHALL COORDINATE ALL EQUIPMENT LOCATIONS AND CONDUIT RUNS SUPPLIED AND/OR INSTALLED UNDER THIS SECTION TO AVOID CONFLICTS OR OBSTRUCTIONS TO OTHER TRADES. THIS CONTRACTOR SHALL PROVIDE ALL NECESSARY PULL BOXES, VERTICAL SUPPORT BOXES, AND CONDUIT OFFSETS REQUIRED TO ACCOMPLISH THE ABOVE NOTED COORDINATION AT NO ADDITIONAL COST TO THE OWNER, WHETHER OR NOT INDICATED ON PLANS. ALL VERTICAL SUPPORT BOXES, PULL BOXES, ETC, SHALL BE INSTALLED WHERE REQUIRED TO FACILITATE PULLS AND AT CODE REQUIRED INTERVALS, AT A MINIMUM
- 3. CONDUIT RUNS INDICATED ON PLAN ARE FOR REFERENCE ONLY. EXACT LOCATIONS AND ELEVATION SHALL BE DETERMINED AFTER COORDINATION WITH OTHER TRADES. THIS CONTRACTOR SHALL SUPPLY, AS PART OF THEIR SHOP DRAWING SUBMISSION, THE EXACT LOCATION OF ALL CEILING MOUNTED EQUIPMENT AND CONDUIT RUNS INCLUDING PROPOSED LOCATIONS AND MEANS OF SUPPORT AS WELL AS THE EXPECTED LOAD CONCENTRATION AT THE POINTS OF ATTACHMENT. THE ABOVE NOTED INFORMATION SHALL BE REVIEWED B THE STRUCTURAL ENGINEER BEFORE ANY WORK IS TO COMMENCE.
- 4. FURNISH AND INSTALL ALL NECESSARY CABLE SUPPORT BOXES, PULL BOXES AND CONDUIT SUPPORTS, WHERE NOTED AND AS REQUIRED BY APPLICABLE CODES. ALL LOW TENSION (COMMUNICATIONS, SECURITY, A/V, ETC,) CONDUIT, FIRE ALARM CONDUIT, ETC., WHICH HAVE RUNS IN EXCESS OF 100 FEET IN LENGTH AND/OR CONTAINING BENDS IN EXCESS OF 180 DEGREES SHALL BE PROVIDED WITH A PULLBOX. ALL PULLBOXES SHALL BE LABELED FOR THEIR INTENDED USE. DECALS SHALL BE PROVIDED TO INDICATE VOLTAGE LEVEL. FOR ALARM SYSTEM BOXES SHALL BE PAINTED RED, AND ALL WIRE AND CABLE PROVIDED UNDER THIS SECTION SHALL BE TAGGED (WITH FEEDER OR BRANCH CIRCUIT DESIGNATION) AT ALL BOXES. WHERE CONDUIT BENDS ARE REQUIRED IN COMMUNICATIONS RACEWAYS. PULL BOXES FOR COMMUNICATION RACEWAYS WILL BE PROVIDED IN STRAIGHT PULLS ONLY. LABEL EACH RACEWAY (PER TECHNOLOGY DEPT. REQUIREMENTS) EVERY 50 FEET HORIZONTALLY AND ON EACH FLOOR VERTICALLY. SUBMIT LABELING SYSTEM FOR REVIEW.

ELECTRICAL GENERAL NOTES

- 5. UNLESS SPECIFICALLY APPROVED. NO WIRES SHALL BE PULLED IN UNTIL THE CONDUIT SYSTEM IS COMPLETED. NO GREASE OR OIL SHALL BE USED TO FACILITATE THE PULLING OF WIRES; ONLY APPROVED PULLING COMPOUND SHALL BE USED, ALL WIRES SHALL BE CONTINUOUS BETWEEN OUTLET AND OUTLET, OR FROM PANELBOARD TO THE FIRST OUTLET. JOINTS THAT BECOME NECESSARY IN CIRCUIT WORK AT THE OUTLETS SHALL BE MADE WITH APPROVED PRESSURE CONNECTORS. ALL JOINTS SHALL BE COVERED WITH AN INSULATION EQUAL TO THAT ON THE CONDUCTORS. APPROVED PRESSURE CONNECTORS, IDEAL WINGNUTS, SCOTCH-LOCK, BUCHANAN, OR AS APPROVED, SHALL BE USED,
- 6. EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES, SWITCHES, WALL OUTLETS, ETC., SHALL BE IN ACCORDANCE WITH ARCHITECTURAL DRAWINGS.
- 7. NO ELECTRICAL CONNECTIONS SHALL BE MADE TO, OR WORK PERFORMED ON, ENERGIZED EQUIPMENT.
- 8. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE ACCORDING TO VENDOR APPROVED SHOP DRAWINGS.
- 9. VERIFY ELECTRICAL REQUIREMENTS OF ALL NEW EQUIPMENT TO BE USED. ALL SPECIAL PURPOSE OUTLETS INDICATED ON PLAN SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER PRIOR TO INSTALLATION, TO ENSURE PROPER WIRING AND COMPATIBILITY WITH ATTACHMENT PLUGS OR JUNCTION BOXES THAT MAY BE FURNISHED AS AN INTEGRAL PART OF THE EQUIPMENT.
- 10. COORDINATE ALL LOCATIONS AND HEIGHTS OF STUB-UPS AND OUTLETS IN FIELD WITH VENDORS AND/OR FURNITURE MANUFACTURERS'S APPROVED SHOP DRAWINGS. ALL RECEPTACLES ARE TO BE ACCESSIBLE.
- 11. ALL ELECTRICAL SHALL BE ACCESSIBLE BELOW COUNTERS OR BEHIND EQUIPMENT. CONTRACTOR SHALL COORDINATE EXACT LOCATION OF EQUIPMENT RECEPTACLES WITH EQUIPMENT MANUFACTURER'S REQUIREMENTS AND THE LOCAL INSPECTOR.
- 12. ELECTRICAL CONTRACTOR SHALL PROVIDE DISCONNECTS FOR ALL EQUIPMENT PER CODE AND SHALL COORDINATE ALL DISCONNECT SWITCH REQUIREMENTS AND LOCATION WITH THE ELECTRICAL INSPECTOR, VENDORS APPROVED SHOP DRAWING AND FINAL EQUIPMENT LOCATIONS.
- 13. ELECTRICAL CONTRACTOR SHALL VERIFY PHASE LOAD BALANCING ON POWER PANELS UPON COMPLETION OF THE ELECTRICAL INSTALLATION. INCLUDE RE-DISTRIBUTION OF CIRCUITS WITHIN PANELS TO BALANCE WITHIN A 10% WINDOW (+/-5%).
- 14. ALL CONDUIT AND CABLE "HOMERUNS" SHALL CONSIST OF A SINGLE CIRCUIT PER CONDUIT FOR FEEDERS SERVED BY AN OVERCURRENT PROTECTIVE (OCP) DEVICE IN EXCESS OF 20 AMPERES, SINGLE POLE. WHERE WIRE AND CONDUIT BRANCH CIRCUITS SHARE A CONDUIT HOMERUN, OCP LESS THAN OR EQUAL TO 20 AMPERES SINGLE POLE). THERE SHALL BE A MAXIMUM OF THREE CIRCUITS COMBINED IN A RACEWAY TO THE PANELBOARD, UNLESS OTHERWISE NOTED. ALL CONDUCTORS SHALL BE DERATED PER NATIONAL ELECTRICAL CODE (LATEST VERSION). COMBINING OF MULTIPLE HOMERUNS (MORE THAN THREE) IN A SING CONDUIT SHALL NOT BE PERMITTED.
- 15. ALL CONDUIT SHOWN FOR INDOOR WORK SHALL BE EMT (¾" MINIMUM) WITH SET-SCREW TYPE COUPLINGS UNLESS OTHERWISE NOTED.
- 16. PROVIDED IMC CONDUIT WITH THREADED COUPLINGS WHERE REQUIRED BY
- 17. TYPE MC CABLE MAY BE UTILIZED FOR BRANCH LIGHTING AND RECEPTACLE CIRCUITRY, WHERE PERMITTED BY CODE AND PROVIDED THAT:
- a. IT IS NOT LOCATED WITHIN VIEW, ALL EXPOSED RACEWAYS MUST BE IN
- b. CONTAINS AN INSULATED GROUND WIRE.
- c. CONDUIT IS RUN TO THE FIRST DEVICE DOWN-LINE OF THE PANEL (I,E. RECEPTACLE, LIGHT FIXTURE, ETC.).
- 18. INCLUDE ALL LABOR, MATERIALS, AND APPLICATIONS REQUIRED FOR THE FURNISHING, INSTALLING AND TESTING OF ALL WORK SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, IN A MANNER SATISFACTORY TO THE ARCHITECT.
- 19. WHERE CONDUITS, CABLE TRAY OR OTHER ELECTRICAL EQUIPMENT PENETRATE FIRE OR SMOKE RATED WALLS, PARTITIONS, FLOOR SLABS, ETC., THE SPACE BETWEEN THE SLEEVE OR CUTOUT AND THE ELECTRICAL EQUIPMENT SHALL BE CAULKED WITH A UL LISTED, INTUMESCENT TYPE, APPROVED FIRESTOP SYSTEM. SPACE BETWEEN THE SLEEVE OR CUTOUT AND THE ELECTRICAL EQUIPMENT SHALL BE SIZED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS FOR CONDUIT SIZE AND DAMMING MATERIAL THICKNESS FOR THE TYPE OF RATED CONSTRUCTION FOR WHICH THE SYSTEM IS TO BE USED. THE FIRESTOP SYSTEM SHALL BE AS MANUFACTURED BY 3M FIR PROTECTION PRODUCTS OR AS APPROVED. SEE ARCHITECTURAL DRAWINGS FOR FIRE RATING OF WALLS AND FLOORS.
- 20. WHERE WORK IS ONGOING IN ELECTRICAL PANELS THE COVERS ARE NOT TO BE LEFT OFF UNLESS WORK IS CURRENTLY BEING PERFORMED ON THE PANEL. COVERS SHALL BE REPLACED EACH NIGHT AT THE END OF SHIFT.
- 21. TEMPORARY POWER FROM EXISTING PANELS FOR LIGHTS, DRILLS, WELDING EQUIPMENT, ETC,. SHALL BE LABELED ON THE PANEL AND PRE-APPROVED BY BUILDING OWNER/MANAGER 48 HOURS PRIOR TO INSTALLATION.

ADDITIONAL SCOPE OF WORK 1:

- A. ELECTRICAL CONTRACTOR SHALL INCLUDE IN BASE BID, THE FURNISHING AND INSTALLATION OF THE FOLLOWING ADDITIONAL ITEMS, NOT IDENTIFIED ON DRAWINGS, BUT TO BE IDENTIFIED DURING CONSTRUCTION BY ARCHITECT, ENGINEER OR OWNER:
- 1. THE ELECTRICAL CONTRACTOR SHALL PROVIDE IN THEIR BID, AN ADDITIONAL SIX (8), 20A, 120V BRANCH CIRCUITS TO THE AREA OF WORK (400 FT. HOME RUN TO AN EXISTING POWER PANEL UTILIZING (2)#8cu & (1)#10cu GRD IN 3/4" EMT C.).
- 2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE IN THEIR BID, AN ADDITIONAL FIVE (5) FIRE ALARM SPEAKER/STOBES INCLUDING WIRING & INTERCONNECTION INTO FIRE ALARM SYSTEM.

C. ARCHITECT'S AND/OR ENGINEER'S REVIEW

1. SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO THE START OF ANY WORK ANY WORK OR EQUIPMENT INSTALLED PRIOR TO REVIEW OF SHOP DRAWINGS AND FOUND TO BE UNACCEPTABLE SHALL BE REMOVED AND

MODIFIED AT THE CONTRACTOR'S SOLE EXPENSE INCLUDING ANY

RESULTANT SCHEDULING DELAYS EXPERIENCED BY ANY TRADE.

- 2. THE ARCHITECT AND/OR ENGINEER WILL REVIEW SHOP DRAWINGS AND SAMPLES FOR CONFORMANCE WITH THE DESIGN CONCEPT OF THE PROJECT AND THE INFORMATION CONTAINED IN THE CONTRACT DOCUMENTS. THE ARCHITECT'S AND/OR ENGINEER'S REVIEW OF SHOP DRAWINGS AND SAMPLES IS ONLY FOR THE CONVENIENCE OF THE OWNER IN FOLLOWING THE WORK AND DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE ARCHITECT'S AND/OR ENGINEER'S REVIEW SHALL NOT BE CONSTRUED AS A COMPLETE OR DETAILED CHECK OF THE WORK SUBMITTED, NOR SHALL IT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR ERRORS OF ANY SORT IN THE SHOP DRAWINGS AND SAMPLES, OR FROM THE NECESSITY OF FURNISHING ANY WORK REQUIRED BY THE CONTRACT DOCUMENTS WHICH MAY HAVE BEEN OMITTED FROM SHOP DRAWING
- 3. THE REVIEW OF A SEPARATE ITEM SHALL NOT INDICATE REVIEW OF THE COMPLETE ASSEMBLY IN WHICH IT FUNCTIONS. NOTHING IN THE ARCHITECT'S ANS/OR ENGINEER'S REVIEW OF SHOP DRAWINGS AND SAMPLES SHALL BE CONSIDERED AS AUTHORIZING:
- a. A DEPARTURE FROM CONTRACT DOCUMENTS OR SPECIFICATIONS, OR,
- b. ADDITIONAL COST TO THE OWNER, OR,
- c. INCREASED TIME FOR COMPLETION OF THE WORK
- 4. NO PART OF THE WORK SHALL BE IN THE FABRICATION SHOP OR IN THE FIELD UNTIL THE ARCHITECT AND/OR ENGINEER HAS REVIEWED THE SHOP DRAWINGS AND SAMPLES FOR THAT POTION OF THE WORK. THEREAFTER, THE WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND THE INDICATED STATUS OF THE REVIEWED SHOP
- 5. SAMPLES SHALL BE SUBMITTED FOR REVIEW WHEN REQUESTED BY THE ARCHITECT AND/OR ENGINEER.
- 6. PROVIDE OPERATIONS AND MAINTENANCE MANUALS FOR ALL EQUIPMENT AND MATERIALS.
- D. RECORD DRAWINGS

SUBMITTALS.

- PREPARE AND FURNISH TO OWNER "AS BUILT" PLANS FOR ALL WORK INSTALLED. PROVIDE CAD DRAWINGS AND CAD FILES ON A COMPACT DISC COMPLETED IN THE LATEST VERSION OF AUTOCAD. ALL DRAWINGS SHALL BE IN A STYLE COMMENSURATE WITH THE ENGINEERING DESIGN.
- 2. UPON CONSTRUCTION, KEEP AN ACCURATE RECORD OF ALL DEVIATIONS BETWEEN THE WORK AS SHOWN ON DRAWINGS AND THAT WHICH IS ACTUALLY INSTALLED. THIS RECORD SET OF PRINTS SHALL BE KEPT AT THE JOB SITE FOR INSPECTION.
- J. UPON COMPLETION OF INSTALLATION, SUBMIT ONE SET OF BLACK AND WHITE PRINTS OF THESE "AS-BUILT" RECORD DRAWINGS TO THE CONSULTING ENGINEER FOR REVIEW. AFTER REVIEW BY THE CONSULTING ENGINEER, MAKE NECESSARY CHANGES TO THESE PRINTS AND THEN DELIVER THEM TO THE OWNER FOR RECORD. FINAL PAYMENT WILL BE WITHHELD UNTIL COMPLETION OF "AS-BUILT" DRAWINGS.
- 4. AS-BUILT DRAWINGS SHALL CONTAIN EXACT ROUTING AND ELEVATIONS OF ALL CONDUIT BANKS, ACTUAL PANELBOARD CIRCUIT BREAKER POLE POSITIONS USED FOR EACH CIRCUIT, AND EXACT LOCATION OF ALL EQUIPMENT, ALL DIMENSIONS SHALL BE REFERENCED TO BUILDING STRUCTURE CENTERLINES.
- E. EQUIPMENT SPECIFICATIONS
- 1. ALL EQUIPMENT AND MATERIALS SHALL BE NEW, UL LISTED AND SHALL CONFORM TO ANY ADDITIONAL LABELING, TESTING AND CONSTRUCTION REQUIREMENTS ESTABLISHED BY THE GOVERNING AUTHORITIES. SAME SHALL BE GUARANTEED FOR 1 YEAR SUBSEQUENT TO FINAL ACCEPTANCE.

2. ALL EQUIPMENT (ELECTRICAL AND MECHANICAL) SHALL BE SPECIFIED TO

WATER OR MOISTURE CONDITIONS, OR WHERE BURIED IN SLAB.

- HAVE VOLTAGE RATINGS COMPATIBLE WITH THE PROVISIONS OF ANSI C84.
- 3. ALL CONDUITS FOR LIGHTING AND POWER SYSTEMS SHALL BE ¾" (MINIMUM).4. INTERMEDIATE METAL CONDUIT SHALL BE USED WHERE SUBJECTED TO ANY
- 5. PROVIDE CONDUIT EXPANSION FITTINGS TOGETHER WITH BONDING JUMPER AND SUITABLE SLEEVES WHERE REQUIRED. CONDUIT EXPANSION FITTING SHALL BE INSTALLED IN EACH CONDUIT RUN WHEREVER IT CROSSES AN EXPANSION JOINT IN THE STRUCTURE. THE EXPANSION FITTING SHALL BE INSTALLED ON ONE SIDE OF THE JOINT WITH ITS SLIDING SLEEVE END FLUSH WITH THE AND WITH A LENGTH OF BONDING JUMPER IN THE EXPANSION
- 6. ALL 15A OR 20A, SINGLE POLE, 120 VOLT OR 208 VOLT BRANCH CIRCUIT RUNS IN EXCESS OF 100 FEET FROM THE PANEL TO THE DEVICE SHALL BE PROVIDED WITH #10 MINIMUM AWG WIRE FOR ITS ENTIRE LENGTH.

JOINT EQUAL TO AT LEAST THREE TIMES THE NORMAL WIDTH OF THE JOINT

- 7. JUNCTION OR PULL BOXES SHALL BE FURNISHED AND INSTALLED WHERE INDICATED ON PLANS AND WHEREVER ELSE SUCH A BOX MAY BE NECESSARY TO FACILITATE INSTALLATION OR CONFORM TO CODE REQUIREMENTS. COORDINATE LOCATIONS OF SAME WITH ARCHITECT FOR ACCESSIBILITY AND AESTHETIC CONSIDERATIONS. GENERALLY, JUNCTION BOXES AND PULL BOXES SHALL BE INSTALLED EVERY 100 FEET IN CONDUIT HORIZONTAL RUNS AND SHALL NOT BE EXPOSED IN FINISHED SPACES. ALL CABLES WITHIN PULL BOXES SHALL BE PROPERLY TAGGED FOR IDENTIFICATION. LABEL ALL CONDUITS WITH FEEDER DESIGNATION AT ENTRY AND EXIT TO THE BOX.
- 8. INSULATING BUSHING OR INSULATING THROATS SHALL BE INSTALLED ON ALL
- 9. FOR AREAS OF PUBLIC ASSEMBLY (SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS), BRANCH CIRCUITS FOR LIGHTING AND POWER SHALL BE RIGID GALVANIZED STEEL, AND SHALL BE SEPARATED FROM THE NORMAL LIGHTING AND POWER CIRCUITS, ADDITIONALLY, BRANCH CIRCUITS FOR EMERGENCY EGRESS AND EXIT LIGHTING SHALL BE DEDICATED.

F. PANELBOARDS

- 1. ALL PANELBOARDS SHALL BE OF THE ENCLOSED TYPE, FLUSH OR SURFACE MOUNTED, AS REWIRED, IN CODE GAUGE STEEL CABINETS, WITH STEEL TRIM, CONCEALED HINGES, DOORS AND FLUSH TYPE LOCKS, ALL KEYED ALIKE. PROVIDE DUAL CONCEALED HINGED DOORS (DOOR-IN-DOOR CONSTRUCTION) WITH TWO KEYED LATCHES, AND WITHOUT BOLTS OR SCREWS ON THE NON-HINGED SIDE OF THE DOORS WHERE INDICATED ON DOCUMENTS (SEE ARCHITECTURAL DRAWINGS.)
- . ALL BUSES, INCLUDING NEUTRAL, SHALL BE ELECTRICAL GRADE HARD-DRAWN COPPER AND SIZED IN CONFORMANCE WITH NEMA STANDARDS. BUSES SHALL BE ARRANGED FOR SEQUENCE PHASING AND LOADS SHALL BE BALANCED AS EQUALLY AS POSSIBLE AMONGST THE THREE PHASES.
- S. PANELBOARDS SHALL BE EQUIPPED WITH QUICK-MAKE, QUICK-BREAK FUSED SWITCHES OR BOLT-ON MOLDED CASE CIRCUIT BREAKERS, OF VOLTAGE REQUIRED, AND OF SIZE AND NUMBER OF POLES INDICATED ON THE SCHEDULES.
- 4. A TYPE WRITTEN DIRECTORY OF 5 INCHES X 8 INCHES WITH METAL FRAME AND LEXAN FACE SHALL BE PROVIDED ON THE INSIDE OF THE DOOR OF EACH CABINET, INDICATING THE LOAD SERVED BY EACH CIRCUIT. UTILIZE ARCHITECTURAL DRAWINGS TO INDICATE ROOM NAMES AND NUMBERS OF ALL EQUIPMENTS SERVED. (E.G 1. RECEPT: ROOMS27-202, 203, 205, 207). UPDATE PANEL DIRECTORIES OF ALL EXISTING PANELS.
- 5. POWER, LIGHTING AND UTILITY PANELS FOR 120/208 VOLTS SHALL BE BOLT-ON CIRCUIT BREAKER TYPE UNLESS OTHERWISE NOTED. SINGLE POLE BRANCHES SHALL BE BOLT-ON TYPE OF AT LEAST 10,000 AMPERES RMS SYMMETRICAL INTERPRETING CAPACITY (OR AS INDICATED ON THE DRAWINGS). MULTIPLE POLE BREAKERS SHALL BE COMMON TRIP, OF THE CAPACITY AND NUMBER OF POLES AS INDICATED IN SCHEDULES. PANELBOARDS SHALL BE EQUIPPED WITH 200% SOLID NEUTRAL BAR AND CONTAIN THE NUMBER OF POLES, OVERCURRENT DEVICES AND BUSED SPACES AS SPECIFIED IN SCHEDULE. PANELBOARDS SHALL INCLUDE A SEPARATE GROUND BUS ISOLATED FROM THE CASING. FUSIBLE TYPE PANELS SHALL CONFORM TO REQUIREMENTS OF ABOVE PARAGRAPH.
- INDICATED ON SCHEDULES.7. PROVIDE NEW CIRCUIT BREAKERS IN PANELS AS REQUIRED TO MEET THE

6. PROVIDE ISOLATED GROUND BUSES ON STAND-OFF ISOLATORS WHERE

- 7. PROVIDE NEW CIRCUIT BREAKERS IN PANELS AS REQUIRED TO MEET THE SCHEDULES OR CIRCUIT DESIGN INTENT.
- 8. GUTTER SPACE SHALL BE INCREASED WHEN CONTAINING FEEDER TAPS.
- PROVIDE WIRE TROUGHS WHERE ACCESS TO THE FLOOR SYSTEM IS REQUIRED.
 WHERE SPACE LIMITATIONS REQUIRED REDUCED PANEL WIDTH, PROVIDE
- VERTICAL (SINGLE ROW) BREAKER TYPE PANELS AS PART OF THE INITIAL SCOPE PRICE.
- 11. ALL PANEL BUS BARS SHALL CONSIST OF A MINIMUM 1/8 INCH DEPTH COOPER BUS.
- 12. PROVIDE SHUNT TRIP MAIN CIRCUIT BREAKERS FOR ALL PANELS TO BE CONTROLLED BY BREAKGLASS STATIONS, ANSUL SYSTEMS(IN KITCHENS OR SERVERIES) ETC.
- 13. PROVIDE GFI TYPE BRANCH CIRCUIT BREAKERS FOR ALL CIRCUITS SERVING KITCHENS, HEAT TRACING CIRCUITS, H-WATT CIRCUITS, FREEZE PROTECTION CIRCUITS, WINDOW WASHING CIRCUITS, OUTDOOR CIRCUITS, ETC. AND AS REQUIRED BY CODE.

G. FUSES

- 1. ALL FUSES SHALL BE OF THE SAME MANUFACTURER, BUSSMAN, OR AS APPROVED, AND SHALL BE INSTALLED, AS REQUIRED. IN ALL CUTOUTS, PANE.S AND SAFETY SWITCHES.
- 2. UNLESS OTHERWISE NOTED, FUSES SHALL BE BUSSMAN TYPE LPN, LPS OR
- H. SECONDARY TRANSFORMERS
- 1. PROVIDE DRY TYPE 100% NON-LINER, NON-SINUSOIDAL TRANSFORMERS OF QUANTITY AND KVA RATING AS SHOWN ON DOCUMENTS, 3Ø, 480 VOLT-DELTA-208Y/120 VOLT, 3Ø, 4 W, FURNISHED W/TWO 2-1/2% TAPS ABOVE AND FOUR 2-1/2% BELOW NORMAL 480V PRIMARY FOR TRANSFORMERS. THE NEUTRAL OF THE TRANSFORMERS SHALL BE BROUGHT UP TO A LUG AND BOLT INSIDE OF CASE SO THAT THE NEUTRAL CAN BE GROUNDED EXTERNALLY. ALL REQUIREMENTS SHALL BE IN ACCORDANCE WITH UL 1561 AND UL 506.
- TRANSFORMERS SHALL BE SPECIFICALLY DESIGNED TO SUPPLY RATED CURRENT WHEN LOADED WITH NONLINEAR LOADS AND MEET THE MINIMUM REQUIREMENTS OF EPACT2005 DEPARTMENT OF ENERGY'S STANDARD LEVEL 3 (CSL-3).
- 3. A COPPER ELECTRONIC SHIELD SHALL BE INSERTED BETWEEN THE PRIMARY AND SECONDARY WINDINGS TO ATTENUATE HIGH FREQUENCY HARMONICS.
- 4. THE SECONDARY NEUTRAL SHALL BE TWICE THE AMPACITY OF THE SECONDARY PHASE CONDUCTORS, AND THE PRIMARY WINDING CONDUCTOR SHALL BE OF SUFFICIENT SIZE TO LIMIT THE TEMPERATURE RISE TO ITS RATED VALUE, EVEN WITH THE CIRCULATING 3RD HARMONIC CURRENT.
- 5. THE TRANSFORMER SHALL UTILIZE AN INSULATION SYSTEM THAT HAS BEEN PROPERLY TEMPERATURE CLASSIFIED AND LISTED BY UL. TRANSFORMERS SHALL HAVE A 220 CLASSIFICATION AND A 150 DEGREE CELSIUS WINDING TEMPERATURE RISE AT FULL LOAD.
- 6. ALL TRANSFORMERS SHALL HAVE VIBRATION ISOLATORS THAT ISOLATE THE CASE FROM THE CORE AND COIL ASSEMBLY. TRANSFORMERS SHALL BE CAPABLE OF FLOOR, WALL OR CEILING (TRAPEZE) MOUNTING, AS INDICATED ON THE DRAWINGS. TRANSFORMERS SHALL BE TRAPEZE MOUNTED U.O.N.
- VIBRATION ISOLATORS EQUAL TO MASON INDUSTRIES TYPE HD AND TYPE CD FOR TRAPEZE AND FLOOR MOUNTING RESPECTIVELY, SHALL BE INSTALLED BETWEEN CASE AND TRAPEZE OR FLOOR.
- 8. PROVIDE COPPER GROUND CONDUCTOR, WITH EXOTHERMIC (CADWELD OR AS APPROVED) TO BUILDING STEEL WHERE STEEL IS PROVIDED. SIZE OF GROUND SHALL BE CODE MINIMUM OR AS INDICATED ON THE DRAWINGS. ALL FINAL CONNECTIONS TO TRANSFORMER CASING SHALL BE MADE USING A MINIMUM 24 INCH LENGTH OF FLEXIBLE METAL CONDUIT WITH GROUND BUSHING. ALL CONDUCTORS SHALL BE IN CONDUIT.
- ALL CONNECTIONS TO THE TRANSFORMER SHALL BE MADE WITH TWO BOLT, LONG BARREL COMPRESSION FITTINGS.

I. GENERAL

COPPER.

- 1. OUTLET BOXES SHALL BE CODE GAUGE GALVANIZED STAMPED STEEL, 4 INCH SQUARE BY 1-1/2 INCHES DEEP FOR POWER AND 4 INCHES SQUARE BY 2-1/2 INCHES DEEP FOR COMMUNICATION, FIRMLY ANCHORED IN PLACE. BOX VOLUME SHALL BE AS REQUIRED BY GOVERNING CODES WITH BLANK COVERS PROVIDED FOR ALL BOXES USED FOR JUNCTION PURPOSES. GEM BOXES SHALL ONLY BE USED WHERE DIMENSIONAL RESTRAINTS EXIST AND WHERE THE CONTRACTOR HAS OBTAINED PERMISSION FROM THE ENGINEER. MULTI-GANG BOXES SHALL BE PROVIDED WITH EXTENSION COLLARS MOUNTED WITHIN 1/8 INCH OF OUTER SURFACE. WHERE OUTLET BOXES ARE SHOWN FOR FLUSH MOUNTED DEVICES, A SINGLE GANG PLASTER RING SHALL BE PROVIDED, AND MOUNTED WITH 1/8 INCH OF OUTER SURFACE.
- 2. DISCONNECT SWITCHES SHALL BE QMQB FUSIBLE OR NONFUSIBLE WITH CURRENT AND VOLTAGE RATING AS INDICATED ON PLANS. SWITCHES SHALL BE HORSEPOWER RATED, ENCLOSED TYPE, SUITABLE FOR PADLOCKING IN OPEN POSITION.
- HORSEPOWER RATED THERMAL SWITCHES (BRYANT OR AS APPROVED)
 SHALL BE USED FOR ALL MOTOR CIRCUITS. ELECTRICAL CONTRACTOR
 SHALL INSTALL WHERE APPLICABLE TOGGLE SWITCHES FOR USE AS
 DISCONNECTED. THESE SWITCHES SHALL BE "T" RATED FOR RESISTANCE
 LOADS AND "M" RATED FOR MOTOR LOADS.
- STANDARD DUPLEX CONVENIENCE RECEPTACLES SHALL BE SPECIFICATION GRADE NEMA 5-15R, 5-20R, 2 POLE, 3 WIRE, GROUNDED, 15 OR 20 AMPERE RATED FOR DEVICES SHOWN ON A 15 OR 20 AMPERE CIRCUIT (RESPECTIVELY). PROVIDE DEVICES RATED TO THE EQUIPMENT CIRCUIT BREAKER SIZE UNLESS OTHERWISE NOTED. GROUND FAULT TYPE SHALL BE USED WHERE REQUIRED BY GOVERNING CODES INCLUDING ALL DEVICES SHOWN TO BE WITHIN SIX FEET OF A SINK/WATER.
- 5. SWITCHES SHALL BE FLUSH, SPECIFICATION GRADE, QUIET TUMBLER TYPE, GROUNDED, BEHIND COMMON PLATE WITH BARRIERED BACK BOX WHERE REQUIRED BY CODE FOR MULTIPLE CIRCUITS GREATER THAN 250 VOLTS. SINGLE POLE SWITCHES SHALL BE 20 AMPERES, 277 VOLT.
- 6. DEVICE TYPES, MANUFACTURES AND COLORS SHALL BE SPECIFIED BY THE ARCHITECT. IF NO SPECIFICATION HAS BEEN PROVIDED, THIS CONTRACTOR SHALL OBTAIN ALL INFORMATION REGARDING THE ABOVE FROM THE ARCHITECT PRIOR TO THE SUBMISSION OF BID, OR SHALL INCLUDE THE ABILITY TO FURNISH ANY MANUFACTURER SELECTED BY THE ARCHITECT DURING THE SHOP DRAWING SUBMISSION PHASE.
- 7. DEVICE PLATES SHALL BE AS INDICATED ON THE ARCHITECTURAL DRAWINGS. COORDINATE EXACT COLOR WITH ARCHITECT.
- ALL CABLES SHALL BE COPPER WITH THWN OR THHN INSULATION FOR HORIZONTAL APPLICATIONS AND XHHW FOR VERTICAL APPLICATIONS (I.E. WHEN PASSING THROUGH A CABLE SUPPORT BOX), EMPLOYED AT THE 75°C CODE RATED AMPACITY. NO SMALLER THAN No.12 AWG SHALL BE USED UNLESS SPECIFICALLY NOTED ON PLANS. COLOR CODING SHALL CONFORM TO CODE REQUIREMENTS. DERATE ALL CABLES PER LATEST VERSION OF THE NATIONAL ELECTRICAL CODE.
- 9. ALL CONDUCTORS #10 AND SMALLER SHALL BE SOLID COPPER CONDUCTORS. ALL CONDUCTORS #8 AND LARGER SHALL BE STRANDED
- 10. ALL CABLING FURNISHED FOR INSTALLATION EXPOSED (NOT IN AN ENCLOSED RACEWAY) IN AN AIR PLENUM CEILING OR FLOOR SHALL BE APPROVED FOR USE BY GOVERNING AUTHORITIES, AND SHALL CONFORM TO UL 910 WITH A MINIMUM OF 125 DEGREES CELSIUS RATED JACKED.
- 11. ALL SUPPLIED LUGS FOR EQUIPMENT REQUIRING HARD-WIRED CONNECTIONS, ETC. SHALL BE DOUBLE INDENT, 2 BOLT HOLE, LONG BARREL AND COMPRESSION TYPE. PROVIDE DOUBLE INDENT "HEXAGONAL" COMPRESSION DIES AND TOOL (T & B OR BURNDY OR AS REVIEWED). MECHANICAL LUGS, SINGLE INDENT COMPRESSION TOOLS AND UNIVERSAL DIES SHALL NOT BE PERMITTED. ALL COMPRESSION TOOLS AND DIES SHALL BE MANUFACTURED BY THE LUG VENDOR.
- 12. ALL SUPPLIED IN-LINE SPLICE CONNECTORS, "T: CONNECTORS, ETC., SHALL BE DOUBLE INDENT (PER CONDUCTOR), LONG BARREL AND COMPRESSION TYPE. PROVIDE DOUBLE INDENT "HEXAGONAL" COMPRESSION DIES AND TOOL (T & B, BURNDY OR AS REVIEWED). MECHANICAL CONNECTORS, SINGLE INDENT COMPRESSION TOOLS AND UNIVERSAL DIES SHALL NOT BE PERMITTED. ALL COMPRESSION TOOLS AND DIES SHALL BE MANUFACTURED BY THE CONNECTOR VENDOR.
- 13. PROVIDE LOCAL DISCONNECTS FOR ALL MOTORS, HARD-WIRED PANTRY/KITCHEN EQUIPMENT AND HOT WATER HEATERS, WHETHER OR NOT SHOWN ON PLAN. DISCONNECTS SHALL BE SIZED PER THE OVERCURRENT PROTECTION AND LOCATED PER THE ENGINEER AND ARCHITECT.
- 14. PROVIDE A 120 VOLT DEDICATED CIRCUIT FOR EACH CONDENSATE PUMP FOR ALL AC UNITS. COORDINATE WITH THE ENGINEER, THE PANEL AND BREAKER POSITION, PRIOR TO INSTALLATION.
- 15. ALL EQUIPMENT MATERIALS SHALL BE NEW, UL LISTED AND SHALL CONFORM TO ANY ADDITIONAL LABELING, TESTING AND CONSTRUCTION REQUIREMENTS ESTABLISHED BY THE GOVERNING AUTHORITIES. SAME SHALL BE GUARANTEED FOR 1 YEAR SUBSEQUENT TO FINAL ACCEPTANCE.
- 16. ALL EQUIPMENT (ELECTRICAL AND MECHANICAL) SHALL BE SPECIFIED TO HAVE VOLTAGE RATINGS COMPATIBLE WITH THE PROVISIONS OF ANSI C84
- 17. ALL WORK SHALL BE IN CONDUIT.

THE COMPLETION OF THE PROJECT.

- 18. DISCONNECTS FOR INCOMING SERVICE SHALL BE SERVICE RATED.L. ELECTRONIC MEDIA REQUIREMENT
- 1. ALL INFORMATION INCLUDING, NOT LIMITED TO, SHOP DRAWING SUBMITTALS, "AS-BUILT" DRAWINGS, TEST RESULTS, AND OPERATION AND MAINTENANCE MANUALS SHALL BE SUBMITTED ON CD-ROM(S) PRIOR TO
- a. ALL "AS-BUILT" DRAWINGS SHALL BE IN ELECTRONIC .PDF FORMAT.
- b. ALL CUT SHEETS, SUBMITTALS, MANUALS, AND ASSOCIATED INFORMATION SHALL BE IN .PDF FORMAT.
- 2. EACH CD-ROM SHALL BE INDEXED TO ALLOW READY ACCESS TO ALL INFORMATION.
- 3. PROVIDE THREE (3) COPIES OF EACH CD-ROM.



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AC BOARDWALK HALL

RESTROOM RENOVATION

DRAWING TITLE:
ELECTRICAL
SHEET SPECIFICATIONS

DRAWN BY: EJT DRAWING NO.

REVIEWED BY: AHC

PROJECT NO.

15243.00.001

E-00

ELECTRICAL GENERAL NOTES

- 1. ALL ELECTRICAL WORK TO BE INSTALLED IN ACCORDANCE WITH THE 2014 EDITION OF THE NATIONAL ELECTRICAL CODE ADOPTED BY THE UNIFORM CONSTRUCTION CODE STATE OF NEW JERSEY AND ANY OTHER PARTY HAVING JURISDICTION.
- 2. ALL ELECTRICAL MATERIALS AND EQUIPMENT FOR THE PROJECT SHALL BE NEW AND APPROVED BY UNDERWRITERS LABORATORY (U.L.) OR ANY OTHER NATIONALLY RECOGNIZED TESTING AGENCY UNLESS NOTED OTHERWISE ON DRAWINGS.
- 3. ALL NECESSARY PERMITS, INSPECTIONS, AND LICENSES SHALL BE PROCURED AND ALL FEES PAID BY THE CONTRACTOR. SUBMIT TO THE OWNER DUPLICATE CERTIFICATES OF INSPECTION FROM THE APPROVED INSPECTION AGENCY.
- 4. UPON COMPLETION OF THE WORK, THE ENTIRE WIRING SYSTEM SHALL BE FREE FROM GROUNDS, SHORT CIRCUITS, OPENS, OVERLOADS AND IMPROPER VOLTAGES.
- 5. PRIOR TO FINAL ACCEPTANCE OF THE WORK, A WRITTEN STATEMENT SHALL BE SUBMITTED TO THE OWNER GUARANTEEING ALL EQUIPMENT AND SYSTEMS AGAINST DEFECTIVE MATERIAL AND WORKMANSHIP FOR ONE (1) YEAR FROM THE DATE OF ACCEPTANCE. UPON NOTICE ALL DEFECTIVE EQUIPMENT, MATERIALS AND SYSTEMS SHALL BE PROMPTLY REPAIRED AT NO EXPENSE TO THE OWNER.
- 6. THIS SET OF DRAWINGS IS DIAGRAMMATIC IN NATURE AND INDICATES THE GENERAL ARRANGEMENT OF THE VARIOUS SYSTEMS AND APPROXIMATE LOCATIONS OF THE EQUIPMENT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THAT THERE IS ADEQUATE SPACE AT THE LOCATIONS INDICATED FOR ALL EQUIPMENT PRIOR TO INSTALLATION OF SAME. THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY ALL DIMENSIONS IN THE FIELD, PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- 7. ELECTRICAL CONTRACTOR SHALL SECURE SHOP DRAWINGS FROM OTHER CONTRACTORS AND VERIFY EXACT ELECTRICAL CHARACTERISTICS OF EQUIPMENT TO BE WIRED PRIOR TO ROUGH-IN. IF DISCREPANCIES ARE NOTED BETWEEN THE ELECTRICAL CONTRACT DRAWINGS AND OTHER CONTRACTOR SHOP DRAWINGS, ELECTRICAL CONTRACTOR IS TO NOTIFY ENGINEER AT ONCE. FAILURE TO PERFORM THIS DUTY WILL NOT RELIEVE THE ELECTRICAL CONTRACTOR OF THE RESPONSIBILITY TO CORRECT WIRING DEFICIENCIES AT NO EXPENSE TO THE OWNER.
- 8. ALL DEVICES OR EQUIPMENT SHOWN IN SYMBOL FORM SHALL BE WIRED TO ITS RESPECTIVE PANEL.
- 9. FEEDER AND BRANCH CIRCUIT WIRING SHALL BE COPPER, 600 VOLT CONDUCTOR INSULATION TYPE THHN. THE MINIMUM SIZE 600 VOLT CONDUCTOR SHALL BE #12 AWG FOR POWER AND LIGHTING BRANCH CIRCUIT WIRING. THE MINIMUM SIZE CONDUIT SHALL BE 3/4". ALL CIRCUIT WIRING SIZES LARGER THAN #10 AWG SHALL BE STRANDED AND SMALLER CONDUCTORS SHALL BE SOLID. BRANCH CIRCUITS 100 TO 200 FEET IN LENGTH UTILIZING #12 AWG WIRE SHALL BE INCREASED TO #10 AWG TO THE CENTER OF THE CIRCUIT LOAD AND #12 WIRE TO THE REMAINING DEVICES BEYOND THE LOAD CENTER.
- 10. ALL INTERIOR WIRING SHALL BE INSTALLED IN ELECTRICAL METALLIC TUBING OR METAL CLAD CABLE AND CONCEALED IN WALLS OR IN HUNG CEILING SPACE. WHERE WIRING CANNOT BE CONCEALED IN FINISHED AREAS, IT SHALL BE RUN EXPOSED IN A NEAT MANNER VIA SURFACE RACEWAY. MINIMUM CONDUIT SIZE SHALL BE 3/4" UNLESS NOTED OTHERWISE.
- 11. ALL WIRING, CONNECTIONS AND DEVICES SHALL BE PROVIDED TO COMPLY WITH THE GROUNDING REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND THE DRAWINGS UNLESS NOTED OTHERWISE. ALL EXPOSED NON-CURRENT CARRYING ELECTRICAL EQUIPMENT METALLIC PARTS, RACEWAY SYSTEMS AND WIRING SYSTEM GROUNDING CONDUCTORS SYSTEM SHALL BE GROUNDED.
- 12. PROVIDE A SEPARATE, GREEN-COLORED, INSULATED EQUIPMENT GROUNDING CONDUCTOR WITHIN EACH FEEDER AND BRANCH CIRCUIT RACEWAY. THIS CONDUCTOR SHALL BE SEPARATE FROM THE ELECTRICAL SYSTEM NEUTRAL CONDUCTOR. TERMINATE EACH END OF THIS GROUNDING CONDUCTOR ON A U.L. LISTED LUG, BUS OR BUSHING. THE GROUNDING CONDUCTOR SIZE SHALL BE IN ACCORDANCE WITH NEC, TABLE 250.122.
- 13. THE ELECTRICAL CONTRACTOR SHALL LABEL WITH PERMANENT MARKER ALL JUNCTION BOXES AND RECEPTACLE OUTLET BOXES WITH CIRCUIT NUMBER AND PANEL IDENTIFICATION.
- 14. ALL CUTTING AND PATCHING REQUIRED FOR THE ELECTRICAL WORK SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- 15. PANEL BOARD DIRECTORIES SHALL BE TYPED, AND UPDATED INDICATING NEW CIRCUITING AND DEVICE DESCRIPTION AS SHOWN ON DRAWINGS.
- 16. ALL HOLES OR VOIDS CREATED TO ROUTE CONDUIT OR METAL CLAD CABLE THROUGH FIRE-RATED FLOORS, CEILINGS, AND WALLS SHALL BE PROTECTED WITH A 3-HOUR RATED, APPROVED FIRESTOP SYSTEM EQUAL TO 3M FIRE BARRIER CAULK, PUTTY, STRIP AND SHEET FORM, CAPABLE OF EXPANDING UP TO 8 TO 10 TIMES WHEN EXPOSED TO A TEMPERATURE OF 250 DEGREES FAHRENHEIT AND ABOVE. FIRESTOP SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH ASME E814 (U.L. 1479) AND 2011 NEC ARTICLE 300.21.
- 17. A COMPLETE SET OF "AS-BUILT" DRAWINGS, (1) SET IN HARD COPY REPRODUCIBLE AND (1) SET OF ELECTRONIC FILES PRODUCED IN AUTOCAD FORMAT 2004 (MIN.) SHALL BE FURNISHED TO THE OWNER AND ENGINEER UPON PROJECT COMPLETION.
- 18. ALL EQUIPMENT, DEVICES AND CIRCUITS SHALL BE LABELED ACCORDING TO OWNER REQUIREMENTS.
- 19. TWO OR THREE POLE CIRCUIT BREAKERS SHALL BE COMMON TRIP TYPE. SINGLE POLE BREAKERS WITH YOKED HANDLE WILL NOT BE PERMITTED.
- 20. THE ELECTRICAL CONTRACTOR SHALL NOT UTILIZE A "COMMON NEUTRAL" ON MULTIPLE BRANCH CIRCUITS. EACH SUCH CIRCUIT SHALL BE RUN WITH ITS OWN DEDICATED NEUTRAL WIRE.
- 21. ALL SYSTEM CABLE SHALL BE PLENUM RATED OR RUN IN CONDUIT. SYSTEM CABLE EXPOSED TO PHYSICAL DAMAGE SHALL BE RUN IN CONDUIT. SYSTEM CABLE LOCATED ABOVE ACCESSIBLE CEILINGS SHALL BE INDEPENDENTLY SUPPORTED FROM THE STRUCTURE. CABLES SHALL NOT BE LAID ON CEILING TILES.

- 22. ALL WIRING AND EQUIPMENT INSTALLED IN DUCTS, PLENUMS AND OTHER AIR HANDLING SPACES TO CONFORM TO NEC. ARTICLE 300.22.
- 23. THE ELECTRICAL CONTRACTOR SHALL ASSURE THAT ANY ELECTRICAL DEVICE OR PRODUCT WHICH IS TO BE RELOCATED OR REUSED IS IN PROPER WORKING CONDITION IN ACCORDANCE WITH INSTRUCTIONS INCLUDED IN ITS LISTING OR LABELING. ANY DEVICE OR PRODUCT FOUND TO BE DEFECTIVE OR DAMAGED SHALL BE REPLACED WITH NEW.
- 24. SITE VISIT PRIOR TO BID SUBMISSION:

 A. PRIOR TO BID SUBMISSION, THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH EXISTING CONDITIONS. BIDS AS SUBMITTED WILL BE INTERPRETED TO INCLUDE ALL COSTS AND CHARGES MADE NECESSARY BY
- EXISTING CONDITIONS.

 B. ELECTRICAL CONTRACTOR SHALL VERIFY THE SIZE, LOCATION AND ELEVATION OF ALL SERVICES IN THE FIELD AFFECTED BY THIS WORK BEFORE PROCEEDING WITH CONSTRUCTION. NOTIFY THE CONSTRUCTION MANAGER IMMEDIATELY IN THE EVENT OF EXISTING UTILITIES VARY APPRECIABLY FROM THOSE SHOWN ON DRAWINGS.
- 25. THERMAL OVERLOAD PROTECTION SHALL BE IN COMPLIANCE WITH MOTOR MANUFACTURER'S SPECIFICATIONS.
- 26. WHERE CIRCUIT BREAKERS OR FUSES ARE APPLIED IN COMPLIANCE WITH THE SERIES COMBINATION RATINGS MARKED ON THE EQUIPMENT BY THE MANUFACTURER, THE EQUIPMENT ENCLOSURE(S) SHALL BE LEGIBLY MARKED IN THE FIELD TO INDICATE THE EQUIPMENT HAS BEEN APPLIED WITH A SERIES COMBINATION DEVICE RATING. THE MARKING SHALL BE READILY VISIBLE AND CONFORM TO ARTICLE 110.22 OF THE 2011 EDITION OF THE NATIONAL ELECTRICAL CODE.
- 27. GROUNDING CONTINUITY SHALL BE VERIFIED ON ALL ISOLATED GROUND RECEPTACLES.

 28. THE PLACEMENT OF LIGHTING FIXTURES, RECEPTACLES, ETC. IN MECHANICAL

EQUIPMENT ROOMS SHALL BE COORDINATED WITH THE MECHANICAL EQUIPMENT.

29. PROVIDE NECESSARY COMMON GROUNDS BETWEEN THE ELECTRICAL SERVICE, TELEPHONE SERVICE, UNDERGROUND METALLIC PIPING, CONDUIT, AND

FOUNDATION/FOOTING REBAR PER NEC ARTICLES 250.50 & 250.52

- 30. ALL DUCT MOUNTED SMOKE OR HEAT DETECTORS SHALL BE FURNISHED AND WIRED BY THE ELECTRICAL CONTRACTOR AND INSTALLED BY MECHANICAL CONTRACTOR. THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR THE WIRING OF ALL DUCT MOUNTED DETECTORS TO INSURE A COMPLETE OPERATING SYSTEM. THE ELECTRICAL CONTRACTOR SHALL REFER TO THE MECHANICAL DRAWINGS FOR THE LOCATIONS OF ALL DUCT MOUNTED DETECTORS. ALL DUCT MOUNTED DETECTORS AND THEIR ASSOCIATED WIRING SHALL CONFORM TO ARTICLE 300.22 OF THE 2011 EDITION OF THE NATIONAL ELECTRICAL CODE.
- 31. CONTRACTOR TO PROVIDE RECEPTACLES TO MATCH PLUGS FURNISHED WITH EQUIPMENT.
- 32. LIGHTING AND POWER BRANCH CIRCUIT PANEL BOARDS FOR 120/240 VOLTS SERVICE SHALL BE BOLT-ON CIRCUIT BREAKER TYPE EQUIPPED WITH QUICK-MAKE, QUICK-BREAK, TRIP INDICATING, MOLDED CASE, THERMAL- MAGNETIC CIRCUIT
- 33. ALL LIGHTING AND POWER PANELS SHALL HAVE THEIR TOPS AT 6'-6" ABOVE FINISHED FLOOR.
- 34. PANEL BOARDS SHALL BE DEAD-FRONT, SAFETY-TYPE AND SHALL CONTAIN MAIN LUG RATINGS, BRANCH CIRCUIT BREAKERS, SPACES AND COPPER BUSSES AS INDICATED ON THE DRAWINGS.
- 35. PANEL BOARDS SHALL BE SUITABLE FOR FLUSH MOUNTING OR SURFACE MOUNTED INSTALLATION AS REQUIRED.
- 36. ELECTRICAL CONTRACTOR SHALL LOCATE LIGHTING FIXTURES TO SUIT STRUCTURAL AND ARCHITECTURAL CONDITIONS IN THOSE ROOMS WHERE BEAMS, DROPPED SOFFITS, ACCESS PANELS OR SIMILAR OBSTRUCTIONS REQUIRE A CHANGE IN LIGHTING FIXTURE
- 37. ELECTRICAL CONTRACTOR SHALL COORDINATE PLACEMENT OF ALL ELECTRICAL DEVICES WITH MILLWORK CONSTRUCTOR AND ARCHITECT PRIOR TO ROUGH-IN.
- 38. FOR EMERGENCY LIGHTING AND EXIT SIGN BATTERY PACK UNITS, THE CIRCUIT FEEDING THE UNIT SHALL BE THE SAME BRANCH CIRCUIT AS THAT SERVING THE NORMAL LIGHTING IN THE AREA AND SHALL BE CONNECTED AHEAD OF ANY LOCAL
- 39. THE ELECTRICAL CONTRACTOR SHALL CONFORM TO ARTICLE 400 OF THE 2011 EDITION OF THE NATIONAL ELECTRICAL CODE REGARDING FLEXIBLE CORDS AND CABLES FOR THE SELECTION AND INSTALLATION OF FLEXIBLE FEEDER CABLE FOR TEMPORARY POWER. THE TYPE OF CABLE SHALL BE "EXTRA-HARD USAGE" TYPE "W', COPPER CONDUCTOR, THERMOSET INSULATION WITHOUT EXCEPTION.
- 40. THE ELECTRICAL CONTRACTOR SHALL CONFORM TO ARTICLE 590 OF THE 2011 EDITION OF THE NATIONAL ELECTRICAL CODE REGARDING THE PROTECTION AND INSTALLATION OF TEMPORARY WIRING.

OWNER SHALL BE RESPONSIBLE TO PROVIDE ALL REQUIRED FEES.

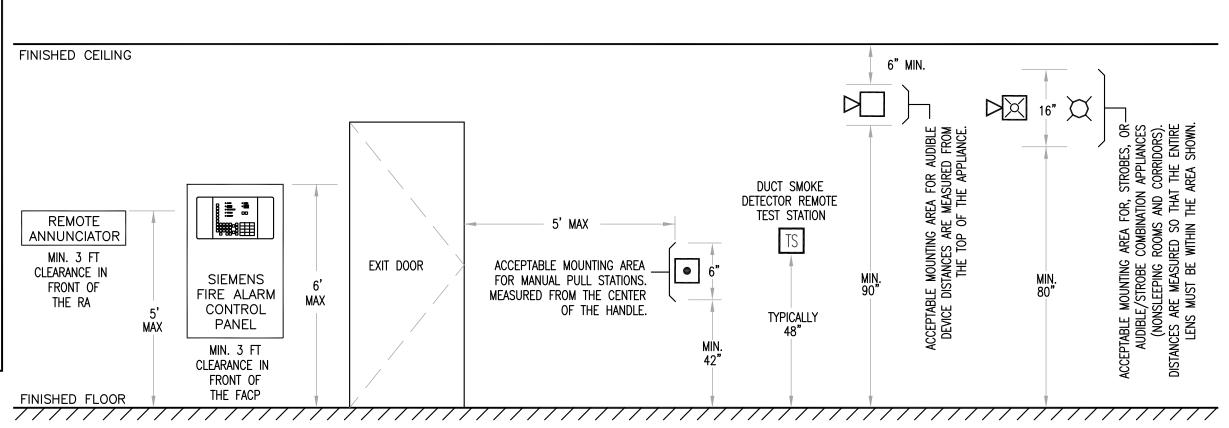
- 41. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SERVICE APPLICATIONS FOR ELECTRICAL, CABLE AND TELEPHONE SERVICE CONNECTIONS. THE
- 42. FOR ALL INSTALLATIONS IN WHICH OUTLET BOXES ARE INSTALLED IN A FIRE- RATED WALL, THE OUTLET BOXES SHALL BE THOMAS & BETTS UNION PHENOLIC THERMOSET BOXES OR EQUAL, INSTALLED PER MANUFACTURERS INSTRUCTIONS.

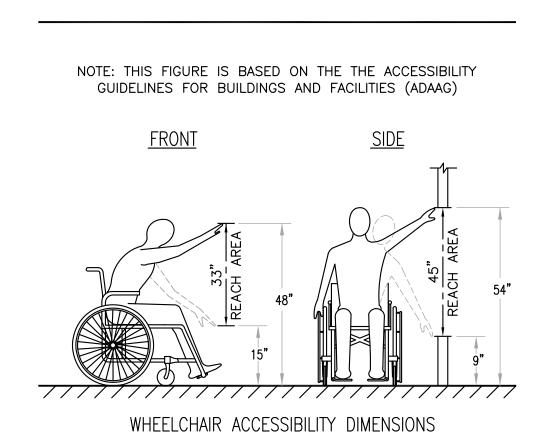
ELECTRICAL DEMOLITION NOTES

- 1. IT IS THE INTENT THAT ALL EXISTING CONDUIT, CONDUCTORS, FIXTURES AND OTHER EQUIPMENT AND MATERIALS THAT INTERFERE WITH THE ALTERED EXISTING BUILDING ARRANGEMENTS AND NEW SYSTEMS BE REMOVED, RELOCATED, REROUTED OR ABANDONED. THE DRAWINGS GENERALLY INDICATE MAJOR ITEMS OR EXISTING MATERIALS AND EQUIPMENT THAT ARE TO BE REMOVED, RELOCATED, REROUTED OR ABANDONED. IT IS NOT POSSIBLE TO INDICATE ALL RELATED ACCESSORIES, SPECIALTIES AND OTHER MINOR ITEMS. HOWEVER, THEIR REMOVAL, RELOCATIONS, REROUTING OR ABANDONMENT SHALL ALSO BE INCLUDED IN THIS CONTRACT AND SHALL BE DONE AT NOT COST TO THE OWNER.
- 2. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK SHALL BE REMOVED BACK TO THE PANEL.
- 3. ALL EXISTING ELECTRICAL DEVICES TO BE DEMOLISHED MAY NOT BE SHOWN.
 CONTRACTOR SHALL PRIOR TO BID PERFORM A SITE VISIT AND DETERMINE FULL EXTENT
 OF DEMOLITION AND INCLUDE COST OF THIS WORK IN BID. SHOULD A CONTRACTOR
 REQUIRE REMOVAL, RELOCATION OR REROUTING OF ANOTHER TRADE'S WORK THAT IS
 NOT INDICATED ON DRAWINGS, THE CONTRACTOR REQUIRING SUCH WORK SHALL BE
 RESPONSIBLE FOR THAT WORK, AND PAY ALL REQUIRED COSTS. ALL UNKNOWN BELOW
 SLAB CONDUIT ENCOUNTERED DURING INSTALLATION OF NEW WORK SHALL BE SAFFED
 OFF. ALLOWANCE SHALL BE MADE FOR THESE ITEMS IN BID PRICE.
- 4. EXISTING EQUIPMENT AND MATERIALS THAT ARE TO REMAIN, BUT BECOME EXPOSED DUE TO NEW WORK, SHALL BE RELOCATED AND RECONNECTED AS DIRECTED BY ARCHITECT.
- 5. ALL WORK INVOLVING ALTERATIONS TO EXISTING SYSTEMS, EQUIPMENT AND MATERIALS SHALL BE REVIEWED WITH ARCHITECT AND OWNER BEFORE BEGINNING WORK.
- 6. REMOVED EQUIPMENT AND MATERIALS NOT DESIRED BY OWNER SHALL BECOME PROPERTY OF CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM SITE. EQUIPMENT AND MATERIALS DESIRED BY OWNER SHALL BE DELIVERED BY CONTRACTOR TO AN ON-SITE STORAGE LOCATION DESIGNATED BY OWNER.
- 7. THE CONTRACTOR MUST SURVEY AND VERIFY LOCATIONS AND PHYSICAL SIZES OF ALL EXISTING ITEMS AND DETERMINE WHETHER RELOCATION OR REROUTING WILL BE REQUIRED. IF RELOCATION OR REROUTING IS REQUIRED, INCLUDING THAT WORK IN BID WITH ALL RELATED ACCESSORIES, SPECIALTIES AND OTHER MINOR ITEMS, THE CONTRACTOR SHALL INCLUDE ALL NECESSARY WORK AS PART OF HIS CONTRACT AND IT SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- 8. WORK SHALL BE PERFORMED BY MECHANICS SKILLED IN PARTICULAR TRADE INVOLVED, THAT IS, ALL ELECTRICAL WORK SHALL BE PERFORMED BY ELECTRICIANS.
- 9. ALL WORK SHALL BE INSPECTED, TESTED AND APPROVED BY THE PROPER AUTHORITIES HAVING JURISDICTION. CERTIFIED COPIES OF THESE APPROVALS AND CERTIFICATES OF OCCUPANCIES (CO'S) SHALL BE DELIVERED TO THE OWNER BEFORE FINAL PAYMENT.
- 10. REMOVE DEMOLITION MATERIS FROM PREMISES BY THE MOST DIRECT PATH. ANY DAMAGE INCURRED BY THE REMOVAL PROCESS SHALL BE REPAIRED TO MATCH THE SURROUNDING WORK AND LEFT IN SATISFACTORY CONDITION. ALL AREAS SHALL BE CLEANED OF ALL DIRT AND DEBRIS RESULTING FROM DEMOLITION.
- 11. ELECTRICAL CONTRACTOR SHALL DISPOSE OF ALL ELECTRICAL COMPONENTS SUCH AS TRANSFORMERS, FLUORESCENT LAMPS, SMOKE DETECTORS, HEAT DETECTORS, BATTERIES, LIGHTING BALLAST, ETC. IN STRICT ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL ENVIRONMENTAL LAWS. COORDINATE DISPOSAL REQUIREMENTS WITH THE GENERAL CONTRACTOR AND THE OWNER.

ELECTRICAL LEGEND

- P1 INDICATES HOME RUN OF WIRING TO PANEL AND CIRCUIT INDICATED
- GROUND FAULT INTERRUPTER
- (F) EXISTING TO REMAIN
- (R) EXISTING TO BE RELOCATED
- (RE) RELOCATED EXISTING, SHOWN IN NEW LOCATION
- (ER) EXISTING TO BE REMOVED
- (N) NEW DEVICE
- (J) JUNCTION BOX TYPICAL
- DISCONNECT SWITCH SIZED AS REQUIRED.
- NEW SURFACE MOUNTED EMERGENCY BATTERY PACK LITHONIA LIGHTING CAT#ELM2-LED-HO-SD
- EXISTING RECESSED DOWNLIGHT EXISTING UNITS SLATED FOR DEMOLITION ARE RATED AT 150W, 120V.
- NEW RECESSED DOWNLIGHT THE NEW LED DOWNLIGHTS ARE RATED AT 13W, 277V. REFER TO THE ARCHITECTURAL DRAWINGS FOR FIXTURE SPECIFICATIONS AND EXACT MOUNTING LOCATIONS
- == EXISTING SURFACE MOUNTED COVE LIGHT 4"X4' EXISTING UNITS SLATED FOR DEMOLITION ARE RATED AT 80W, 277V.
- EXISTING SURFACE MOUNTED 1'X4' EXISTING UNITS SLATED FOR DEMOLITION ARE RATED AT 80W. 277V.
- EXISTING RECESSED 1'X1' EXISTING UNITS SLATED FOR DEMOLITION ARE RATED AT 300W, 120V.
- EXISTING RECESSED 2'X4' EXISTING UNITS SLATED FOR DEMOLITION ARE RATED AT 160W, 277V.
- S SINGLE POLE LIGHTING SWITCH
- © CEILING MOUNTED COMBINATION WIRELESS OCCUPANCY/VACANCY LIGHT SWITCH SENSOR LUTRON #LRF2-OCRB-P-WH
- PP LUTRON POWER PAK DIMMING MODULE
- NEW FIRE ALARM COMBINATION SPEAKER/STROBE DEVICE E.C. SHALL
 FURNISH, INSTALL, WIRE AND PROGRAM THE NEW DEVICES INTO THE
 EXISTING FIRE ALARM SYSTEM. DEVICES SHALL MATCH THE EXISTING
 MANUFACTURER'S DEVICES EXCEPT IN FINISH, ALL NEW DEVICES SHALL
 HAVE A WHITE FINISH





FIRE ALARM EQUIPMENT MOUNTING HEIGHTS DIMENSIONS

MANUAL PULL STATION MOUNTING HEIGHT REFERENCES

CODE MINIMUM MAXIMUM

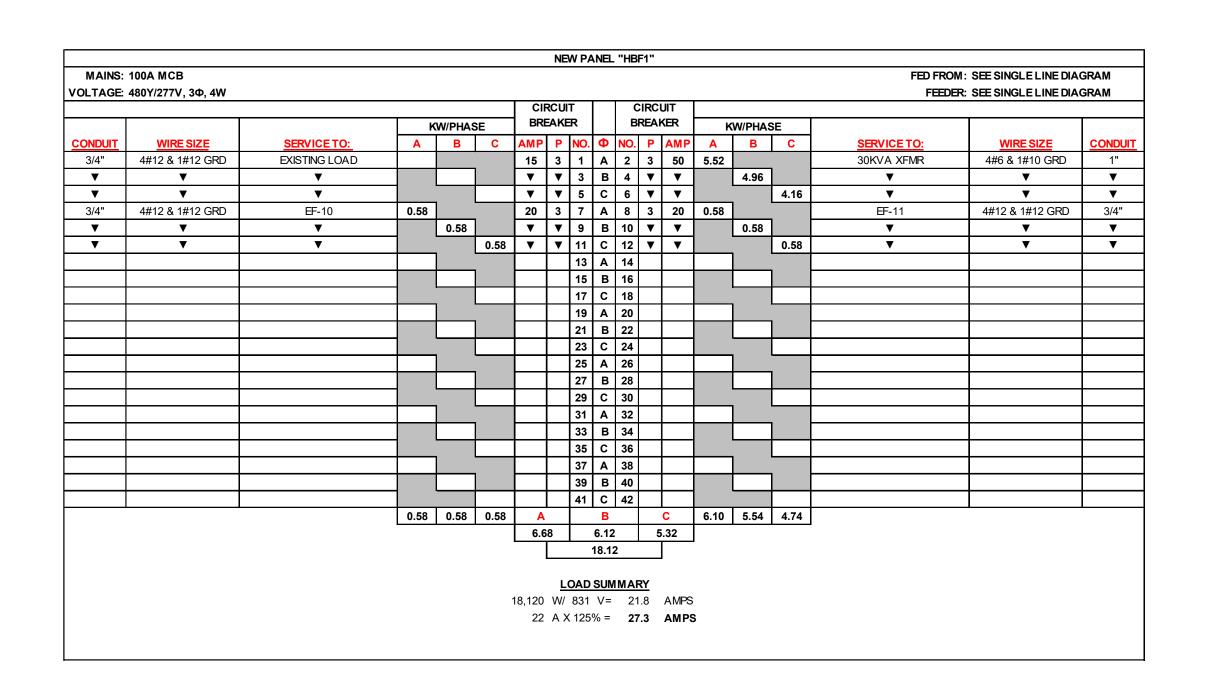
NFPA-72 39" 54"

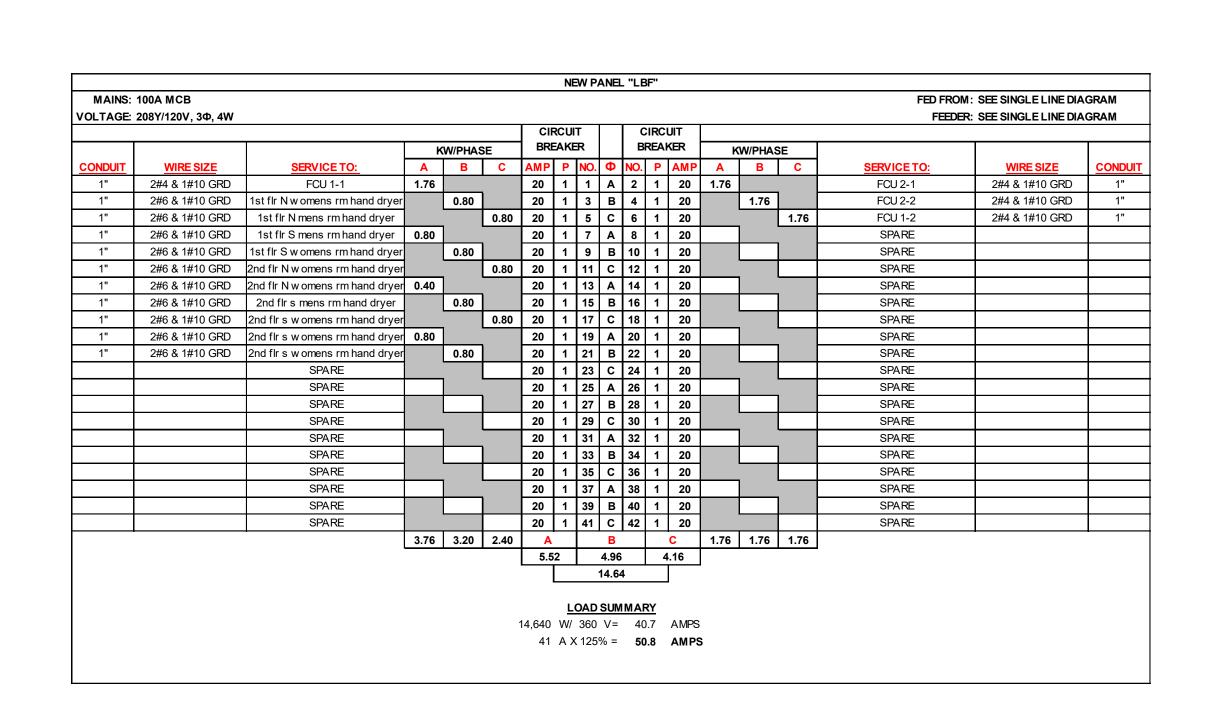
IBC 42" 48"

ADAAG - +48"

THE MOST RESTRICTIVE FRONT REACH DISTANCE

HARMONIZED FIRE ALARM EQUIPMENT MOUNTING DISTANCE REQUIREMENTS — IBC/ADA/NFPA/ANSI
NOT TO SCALE--FOR INSTALLER'S REFERENCE







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New Jersey Certification of
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ELECTRICAL
LEGEND & GENERAL NOTES

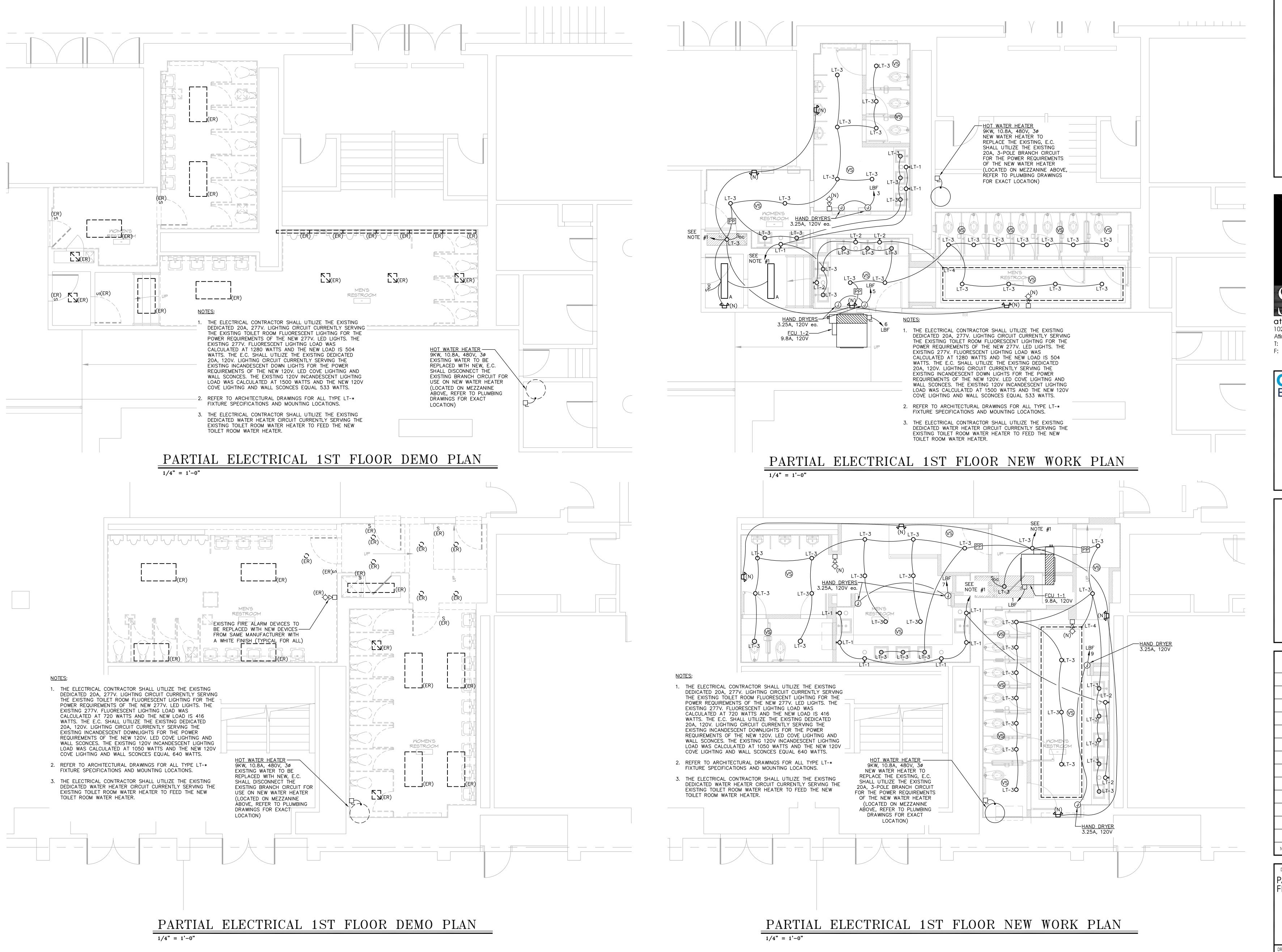
DRAWN BY: EJT DRAWING NO.

REVIEWED BY: AHC

PROJECT NO.

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Anthony H. Caucci Professional Engineer New Jersey Lic. # 44806



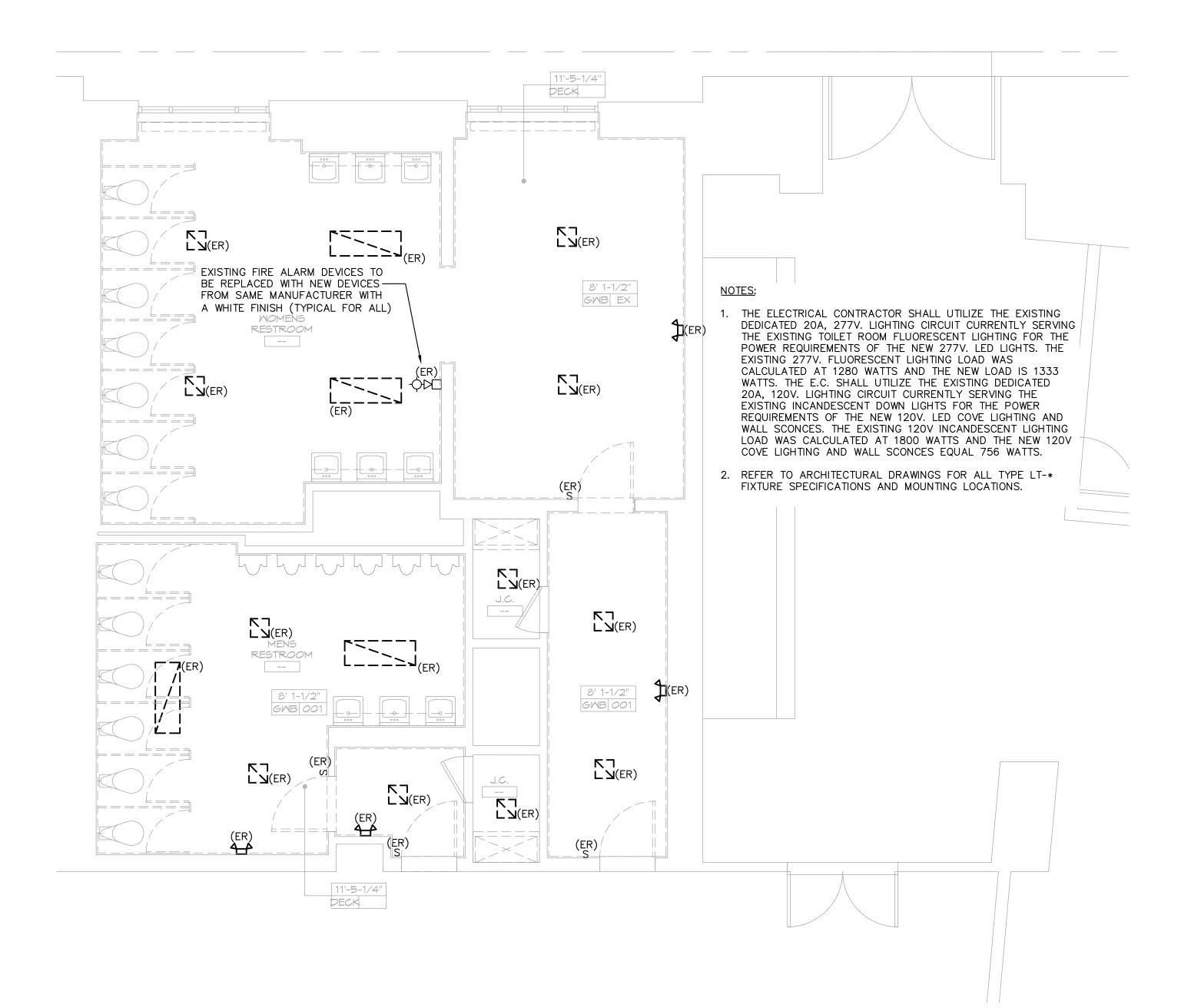
AC BOARDWALK HALL RESTROOM RENOVATION

2301 BOARDWALK, ATLANTIC CITY, NJ 08401

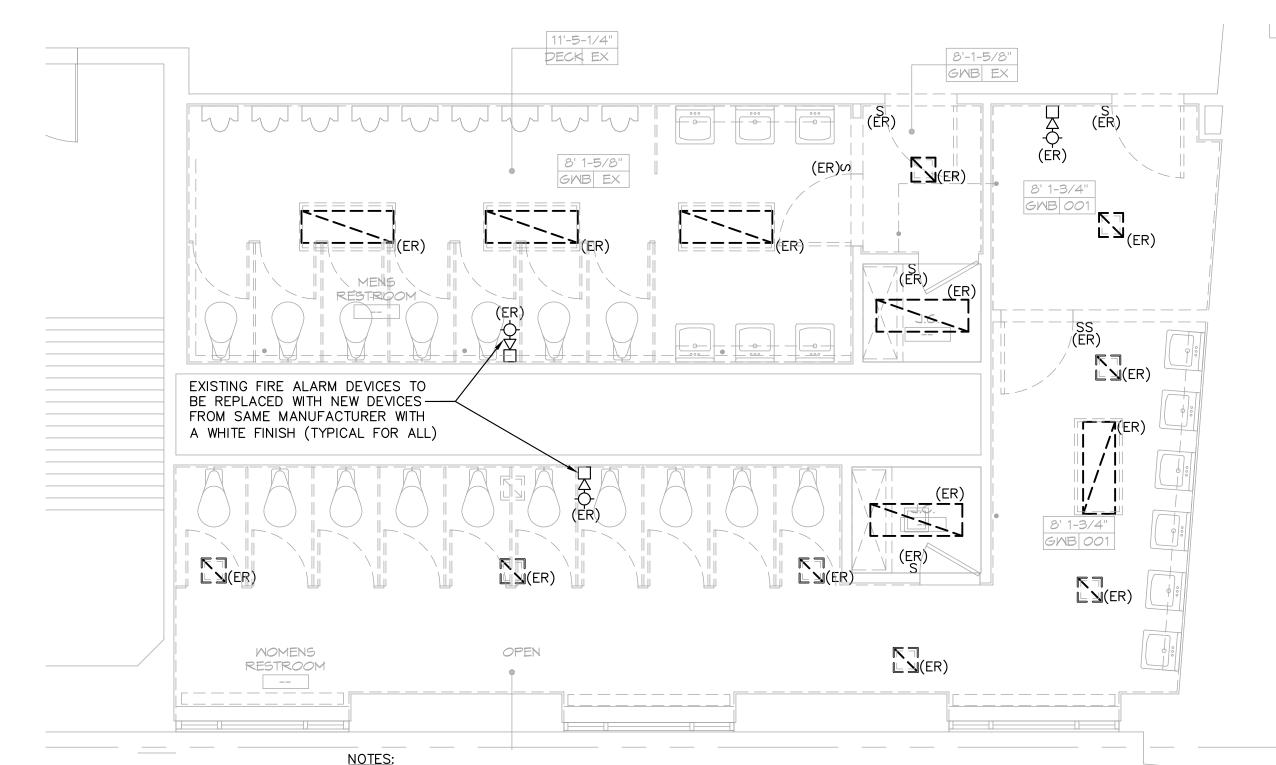
PARTIAL ELECTRICAL FIRST FLOOR PLANS

DRAWN BY: EJT DRAWING
REVIEWED BY: AHC
PROJECT NO.

E-100



PARTIAL ELECTRICAL 2ND FLOOR DEMO PLAN 1/4" = 1'-0"

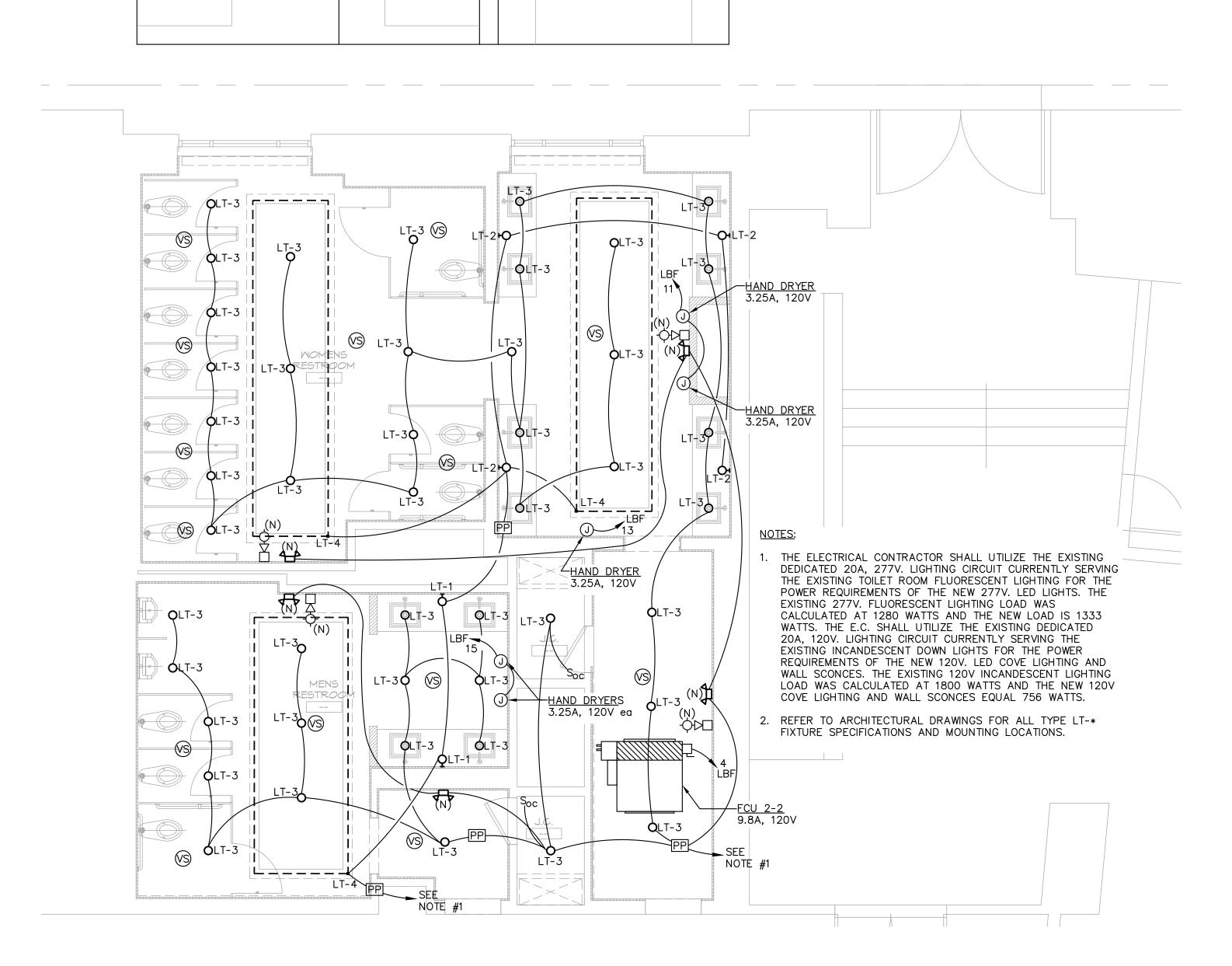


1. THE ELECTRICAL CONTRACTOR SHALL UTILIZE THE EXISTING DEDICATED 20A, 277V. LIGHTING CIRCUIT CURRENTLY SERVING THE EXISTING TOILET ROOM FLUORESCENT LIGHTING FOR THE POWER REQUIREMENTS OF THE NEW 277V. LED LIGHTS. THE EXISTING 277V. FLUORESCENT LIGHTING LOAD WAS CALCULATED AT 1280 WATTS AND THE NEW LOAD IS 1333 WATTS. THE E.C. SHALL UTILIZE THE EXISTING DEDICATED 20A, 120V. LIGHTING CIRCUIT CURRENTLY SERVING THE EXISTING INCANDESCENT DOWN LIGHTS FOR THE POWER REQUIREMENTS OF THE NEW 120V. LED COVE LIGHTING AND WALL SCONCES. THE EXISTING 120V INCANDESCENT LIGHTING LOAD WAS CALCULATED AT 1800 WATTS AND THE NEW 120V COVE LIGHTING AND WALL SCONCES EQUAL 756 WATTS.

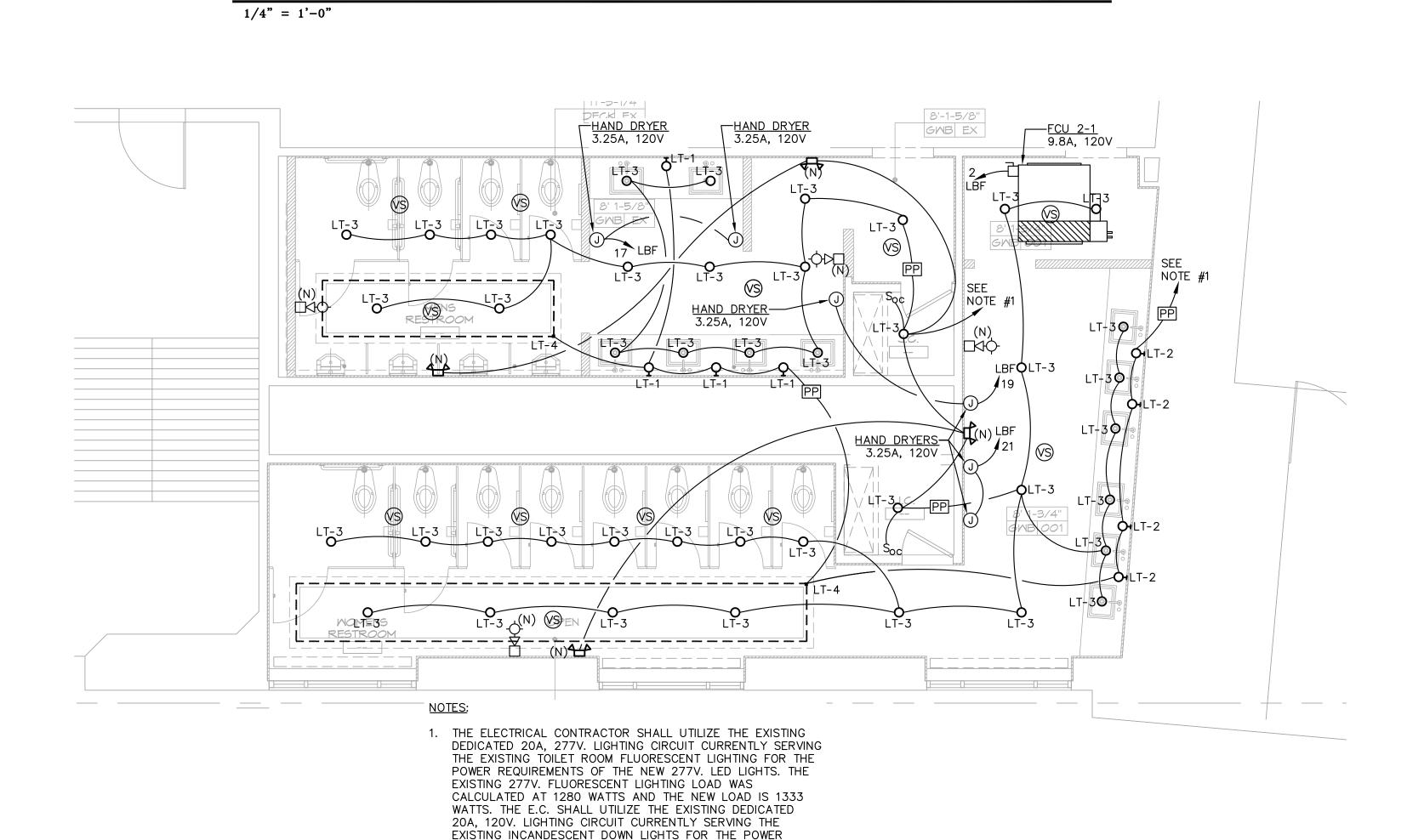
 REFER TO ARCHITECTURAL DRAWINGS FOR ALL TYPE LT-* FIXTURE SPECIFICATIONS AND MOUNTING LOCATIONS.

1/4" = 1'-0"

PARTIAL ELECTRICAL 2ND FLOOR DEMO PLAN



PARTIAL ELECTRICAL 2ND FLOOR NEW WORK PLAN



PARTIAL ELECTRICAL 2ND FLOOR NEW WORK PLAN

REQUIREMENTS OF THE NEW 120V. LED COVE LIGHTING AND

WALL SCONCES. THE EXISTING 120V INCANDESCENT LIGHTING

LOAD WAS CALCULATED AT 1800 WATTS AND THE NEW 120V

COVE LIGHTING AND WALL SCONCES EQUAL 756 WATTS.

2. REFER TO ARCHITECTURAL DRAWINGS FOR ALL TYPE LT-*

FIXTURE SPECIFICATIONS AND MOUNTING LOCATIONS.

1/4" = 1'-0"



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AC BOARDWALK HALL RESTROOM RENOVATION

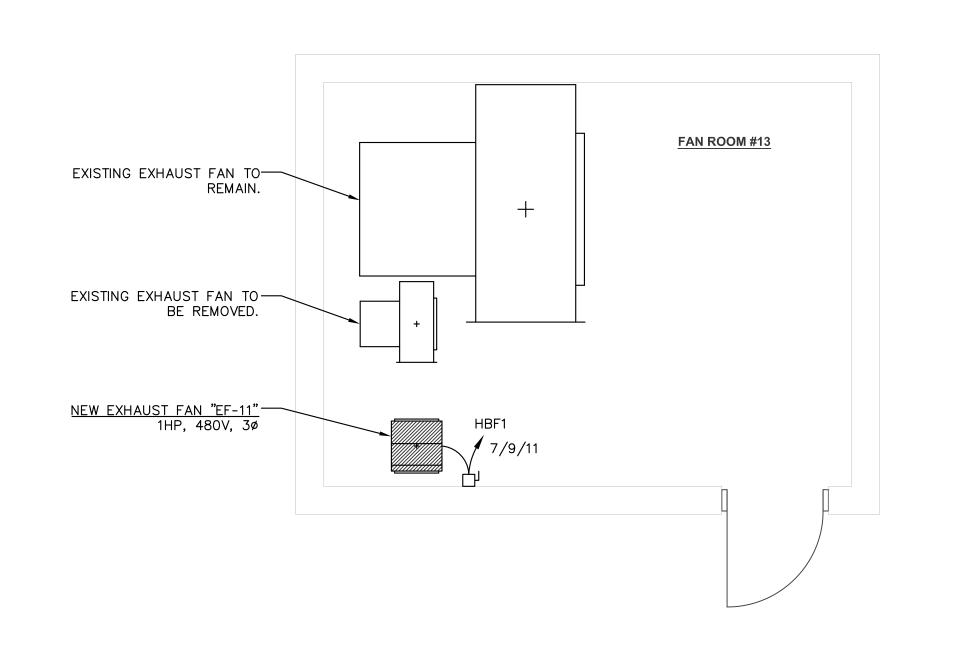
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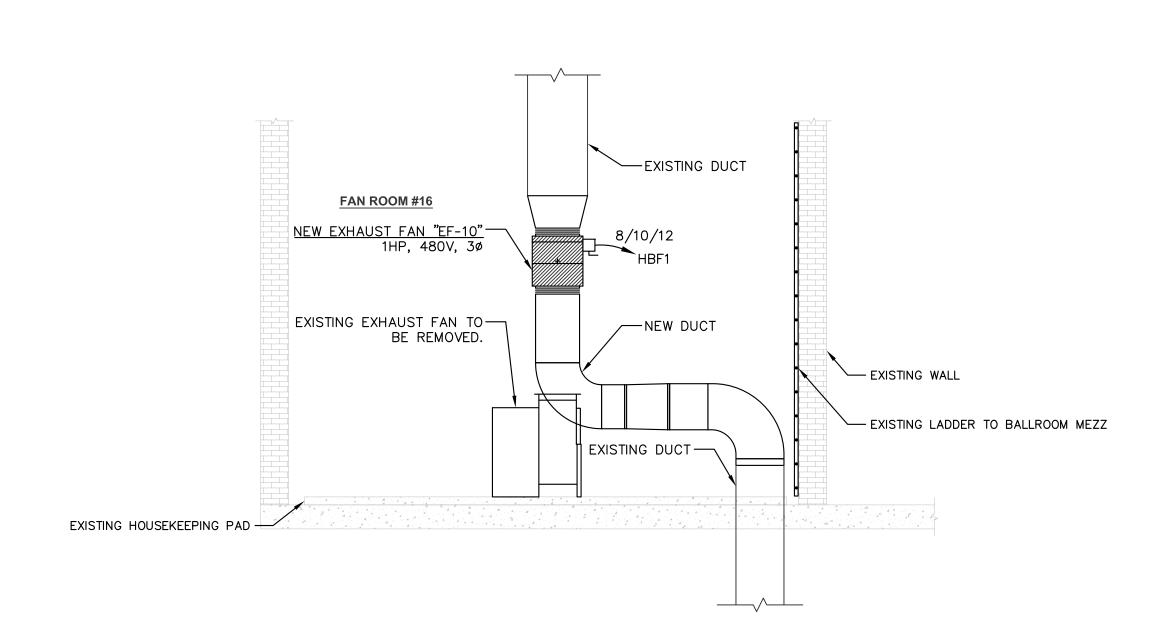
PARTIAL ELECTRICAL SECOND FLOOR PLANS

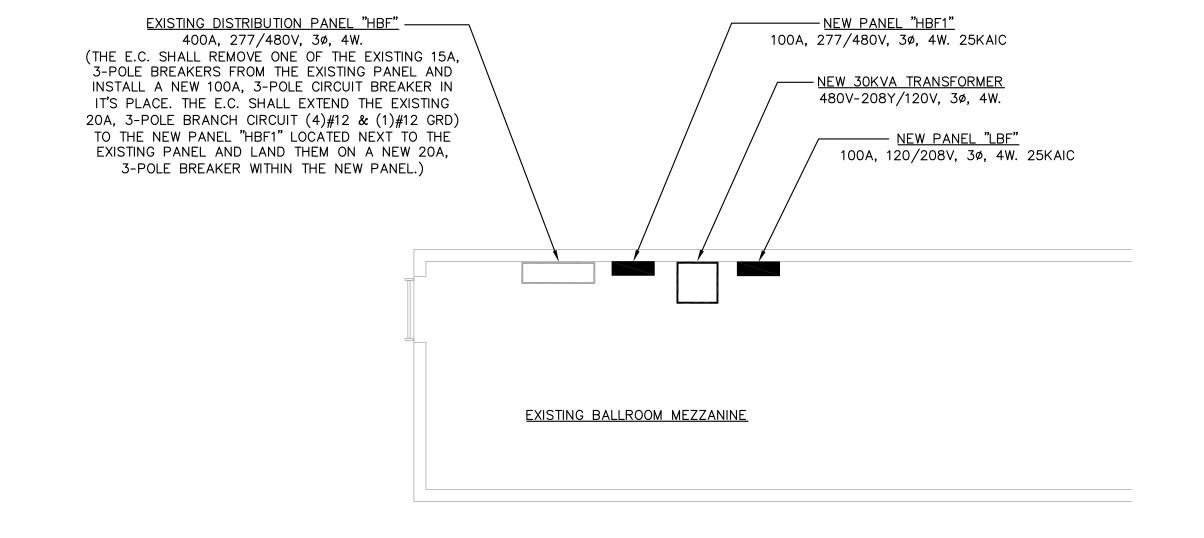
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E-101



E-102 1/4" = 1'-0"



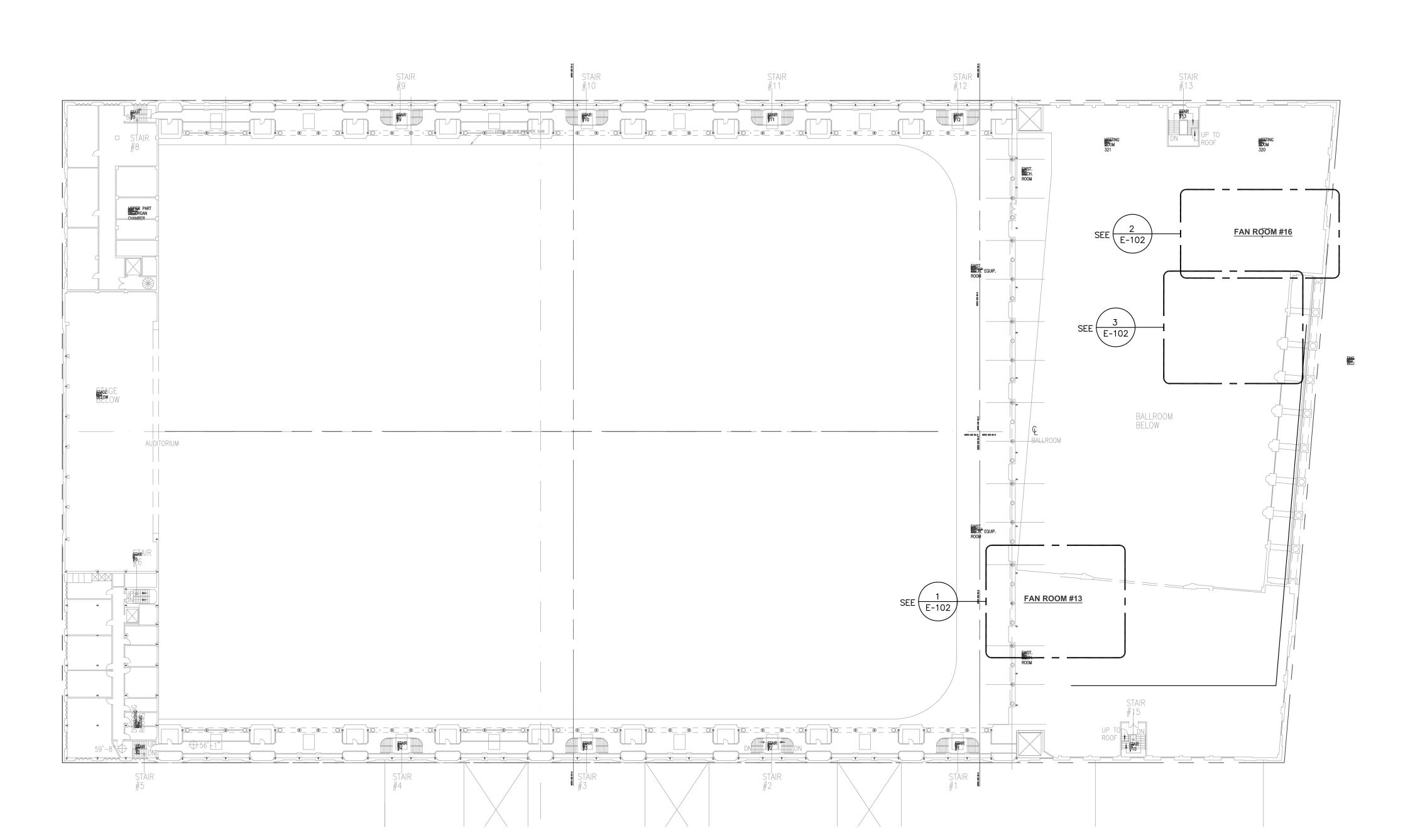


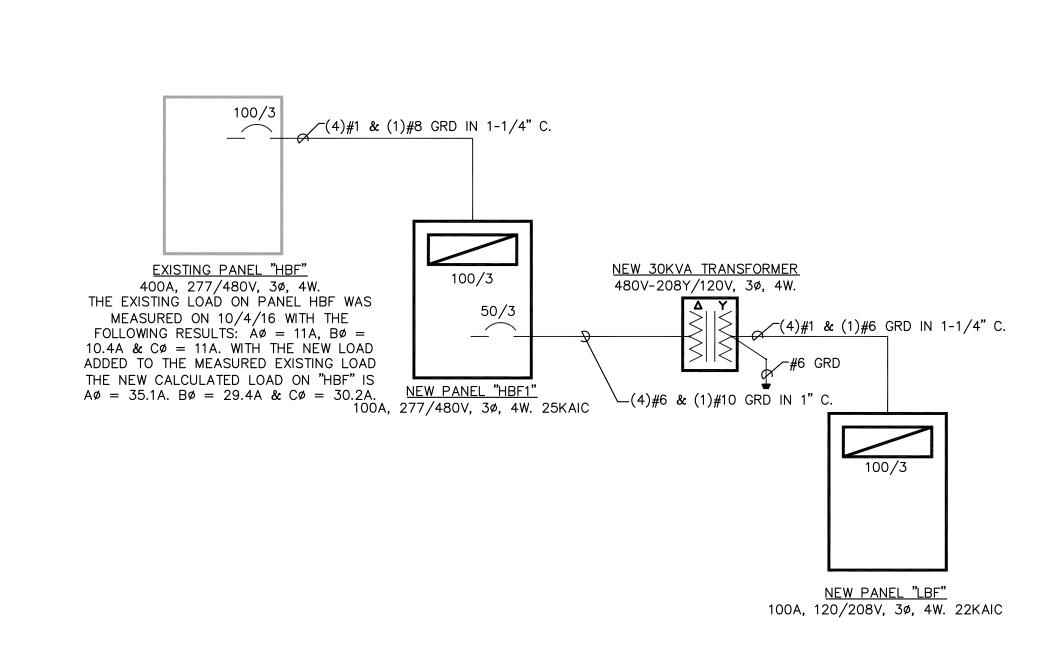
E-102 1/4" = 1'-0"

BALLROOM MEZZANINE PLAN









THIRD LEVEL KEY PLAN





ENGINEERING 2311 Atlantic Ave. Atlantic City, New Jersey 08401 (609) 246-7255 Fax (609) 246-7413 New Jersey Certification of Authorization No. 24GA27942000

Anthony H. Caucci Professional Engineer New Jersey Lic. # 44806



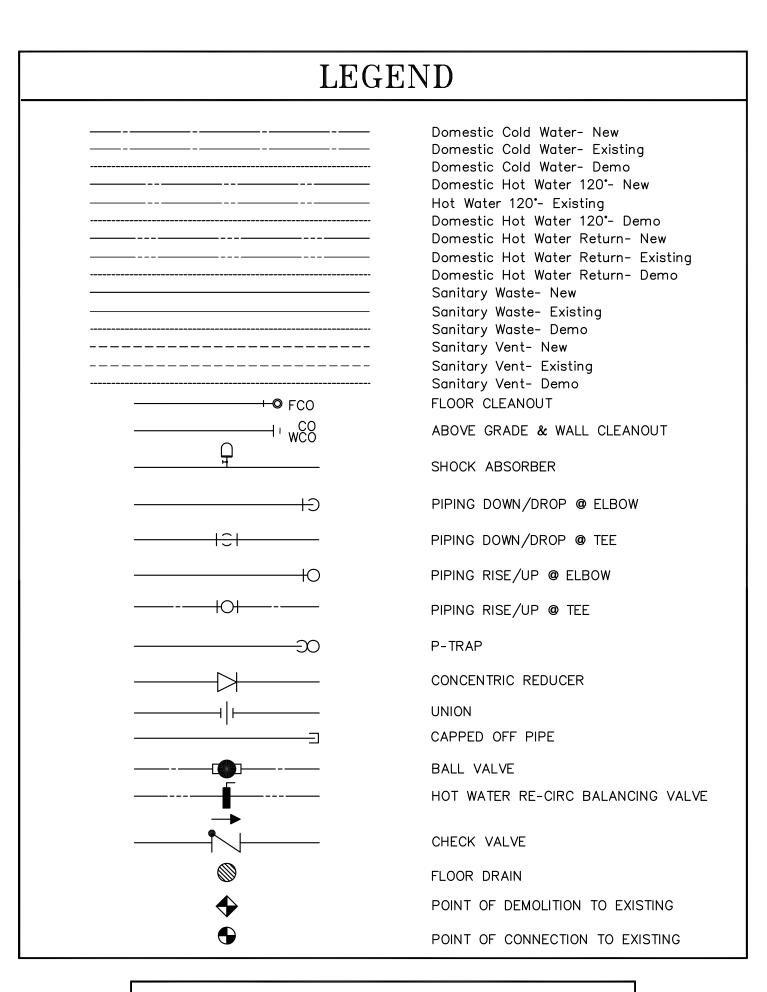
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ATLANTIC CITY, NJ 08401

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DRAWING TITLE:		
LECTRICONCO PLANS		LEVEL
RAWN BY:	EJT	DRAWING NO.
EVIEWED BY:	AHC	
OJECT NO. 15243 OU		E-102

PROJECT NO. 15243.00.001



ABBREVIATIONS

ABV CLG AFF BLW FLR BFP CI CO CW CONT CWFU DF DFU DN DR EC EXIST FCO FD FPC G GC GPM HW HWFU IE LAV MC MR PC PPM SAN SK S/S T UG NO V	ABOVE CEILING ABOVE FINISHED FLOOR BELOW FLOOR BELOW FLOOR BACKFLOW PREVENTER CAST IRON CLEANOUT COLD WATER CONTINUE COLD WATER FIXTURE UNIT DRINKING FOUNTAIN DRAINAGE FIXTURE UNIT DOWN DRAIN ELECTRICAL CONTRACTOR ELECTRICAL WATER COOLER EXISTING FLOOR CLEAN OUT FLOOR DRAIN FIRE PROTECTION CONTRACTOR GAS GENERAL CONTRACTOR GALLONS PER MINUTE HANDICAPPED ACCESSIBLE HOT WATER HOT WATER HOT WATER HOT WATER FIXTURE UNIT INVERT ELEVATION LAVATORY SINK MECHANICAL CONTRACTOR MOP RECEPTOR PLUMBING CONTRACTOR PARTS PER MILLION SANITARY SINK STAINLESS STEEL TEMPERATURE & PRESSURE UNDERGROUND UNLESS NOTED OTHERWISE
MR PC PPM SAN SK	MOP RECEPTOR PLUMBING CONTRACTOR PARTS PER MILLION SANITARY SINK
T´& P UG UNO V VTR W/	TEMPERATURE & PRESSURE UNDERGROUND UNLESS NOTED OTHERWISE VENT VENT THRU ROOF WITH
WC WCO WHA WSFU	WATER CLOSET WALL CLEAN OUT WATER HAMMER ARRESTOR WATER SUPPLY FIXTURE

SUBMITTAL NOTE:

- CONTRACTOR SHALL PROVIDE SUBMITTALS FOR ALL PIPING, VALVES, EQUIPMENT, ETC IN ACCORDANCE WITH ARCHITECTURAL SPECIFICATIONS. NO WORK SHALL BEGIN UNTIL APPROVAL HAS BEEN OBTAINED FROM ARCHITECT/ENGINEER.
- CONTRACTOR SHALL SUBMIT COORDINATION DRAWINGS 1/4" SCALE MINIMUM FOR REVIEW AND APPROVAL AS STATED IN NOTE 1 ABOVE.

 "AS BUILT" CONSTRUCTION DRAWINGS NOTES:
- . A COMPLETE SET OF "AS-BUILT" DRAWINGS, (1) SET ON DISC IN PDF FORMAT AND (1) SET OF ELECTRONIC FILES PRODUCED IN AUTOCAD FORMAT RELEASE 2009. SHALL BE FURNISHED TO THE OWNER AND ENGINEER UPON PROJECT COMPLETION.

PLUMBING DEMOLITION NOTES

- IT IS THE INTENT THAT ALL EXISTING PIPING, DUCTWORK, FIXTURES AND OTHER EQUIPMENT AND MATERIALS THAT INTERFERE WITH THE ALTERED EXISTING BUILDING ARRANGEMENTS AND NEW SYSTEMS BE REMOVED, RELOCATED, REROUTED OR ABANDONED. THE DRAWINGS GENERALLY INDICATE MAJOR ITEMS OF EXISTING MATERIALS AND EQUIPMENT THAT ARE TO BE REMOVED, RELOCATED, REROUTED OR ABANDONED BY EACH TRADE. IT IS NOT POSSIBLE TO INDICATE ALL RELATED ACCESSORIES, SPECIALTIES AND OTHER MINOR ITEMS. HOWEVER, THEIR REMOVAL, RELOCATIONS, REROUTING OR ABANDONMENT SHALL ALSO BE INCLUDED IN THIS CONTRACT AND SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- 2. EXISTING CONCEALED AND EXPOSED EQUIPMENT AND MATERIALS THAT WILL BECOME ABANDONED DUE TO NEW WORK SHALL BE REMOVED BACK TO ACTIVE RISER AND MAIN AND PROPERLY PLUGGED OR CAPPED BEHIND FINISHED SURFACES.
- 3. ALL EXISTING PIPING TO BE DEMOLISHED MAY NOT BE SHOWN. CONTRACTOR SHALL DURING PRE—BID SITE VISIT DETERMINE EXTENT OF DEMOLITION AND INCLUDE COST OF THIS WORK IN BID. SHOULD A CONTRACTOR REQUIRE REMOVAL, RELOCATION OR REROUTING OF ANOTHER TRADE'S WORK THAT IS NOT INDICATED ON DRAWINGS, THE CONTRACTOR REQUIRING SUCH WORK SHALL BE RESPONSIBLE FOR THAT WORK, AND PAY ALL REQUIRED COSTS. ALL UNKNOWN BELOW SLAB PIPING ENCOUNTERED DURING INSTALLATION OF NEW WORK SHALL BE REMOVED AND CAPPED OFF AT ACTIVE MAIN OR BRANCH. ALLOWANCE SHALL BE MADE FOR THESE ITEMS IN BID PRICE.
- 4. EXISTING EQUIPMENT AND MATERIALS THAT ARE TO REMAIN, BUT BECOME EXPOSED DUE TO NEW WORK, SHALL BE RELOCATED AND RECONNECTED AS DIRECTED BY
- 5. ALL WORK INVOLVING ALTERATIONS TO EXISTING SYSTEMS, EQUIPMENT AND MATERIALS SHALL BE REVIEWED WITH ARCHITECT AND OWNER BEFORE BEGINNING WORK.
- 6. REMOVED EQUIPMENT AND MATERIALS NOT DESIRED BY OWNER SHALL BECOME PROPERTY OF CONTRACTOR AND SHALL BE PROMPTLY REMOVED FROM SITE. EQUIPMENT AND MATERIALS DESIRED BY OWNER SHALL BE DELIVERED BY CONTRACTOR TO AN ON-SITE STORAGE LOCATION DESIGNATED BY OWNER.
- THE CONTRACTOR MUST SURVEY AND VERIFY LOCATIONS AND PHYSICAL SIZES OF ALL EXISTING ITEMS AND DETERMINE WHETHER RELOCATION OR REROUTING WILL BE REQUIRED. IF RELOCATION OR REROUTING IS REQUIRED, INCLUDING THAT OF ALL RELATED ACCESSORIES, SPECIALTIES AND OTHER MINOR ITEMS, THE CONTRACTOR SHALL INCLUDE ALL NECESSARY WORK AS PART OF HIS CONTRACT AND IT SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- 8. IN THE REMOVAL OF ANY PART OF A DRAINAGE OR WATER SYSTEM, DEAD ENDS SHALL BE AVOIDED EXCEPT WHERE NECESSARY TO EXTEND TO A CLEANOUT SO AS TO BE

GENERAL SPECIFICATIONS

- 1. ALL PLUMBING SHALL COMPLY WITH THE 2015 EDITION OF THE NATIONAL STANDARD PLUMBING CODE AS AMENDED BY THE NEW JERSEY UNIFORM CONSTRUCTION CODE.
- 2. CONTRACTOR SHALL PROVIDE AND PAY ALL FEES AND PERMITS.
- THE DRAWINGS ARE INTENDED TO SHOW APPROXIMATE AND RELATIVE LOCATIONS OF MATERIALS AND EQUIPMENT. DRAWINGS SHALL NOT BE SCALED TO DETERMINE EXACT POSITIONS AND CLEARANCES. BECAUSE OF DIAGRAMMATIC LAYOUT AND SMALL SCALE OF DRAWINGS, NOT ALL RISES, DROPS, OFFSETS, VENTS, TRAPS AND RELATED SPECIALTIES ARE INDICATED. PROVIDE ALL SUCH PIPING, FITTINGS, VALVES AND SPECIALTIES REQUIRED IN SUCH CASES TO INSURE A COMPLETE AND PROPERLY OPERATING INSTALLATION IN ACCORDANCE WITH CODES AND WITHOUT EXTRA COST TO
- WORK SHALL BE PERFORMED BY MECHANICS SKILLED IN PARTICULAR TRADE INVOLVED, THAT IS, PLUMBING WORK SHALL BE PERFORMED BY PLUMBERS, ELECTRICAL WORK SHALL BE PERFORMED BY ELECTRICIANS, MECHANICAL WORKED PERFORMED BY STEAM FITTERS AND SHEET METAL MECHANICS.
- 5. ALL WORK SHALL BE INSPECTED, TESTED AND APPROVED BY THE PROPER AUTHORITIES HAVING JURISDICTION. CERTIFIED COPIES OF THESE APPROVALS SHALL BE DELIVERED TO THE OWNER BEFORE FINAL PAYMENT.
- 6. SLEEVES SHALL BE INSTALLED THROUGH FLOORS AND FIRE RATED WALLS. SLEEVES SHALL BE 2 PIPE SIZES LARGER THAN PIPE PASSING THRU AND SHALL BE SCHEDULE 40 STEEL PIPE. PROVIDE FIRE PROOF SEAL BETWEEN PIPES AND SLEEVES WHEN PASSING THRU FIRE RATED WALLS/FLOORS. SLEEVES INSTALLED IN FLOORS SHALL EXTEND TO 4" ABOVE FLOOR.
- 7. ESCUTCHEON PLATES SHALL BE PROVIDED ON ALL PIPE WHICH PASS THROUGH WALL PARTITIONS, FLOORS OR CEILINGS AND SHALL BE ONE PIECE OR SPLIT TYPE CONSTRUCTION, CHROME PLATED BRASS.
- 8. COREDRILLING SHALL BE ACCOMPLISHED BY MECHANICAL MEANS IN A MANNER THAT WILL NOT AFFECT THE INTEGRITY OF THE STRUCTURE. AFTER INSTALLATION OF PIPING THRU THE COREDRILL, PACK THE ANNULAR SPACE WITH OAKUM OR FIBROUS GLASS, LEAVING A MINIMUM OF TWO INCHES AT EACH END TO BE FILLED AND FINISHED WITH A "FIRE BARRIER" MATERIAL EQUAL TO 3M "PENETRATION SEALING SYSTEMS" SUCH AS "CP-25 CAULK", "303 PUTTY" OR "FS-195 WRAP". APPLICATION OF "FIRE BARRIER". MATERIAL SHALL BE IN ACORDANCE WITH MANUFACTURER'S STANDARDS AND APPLICABLE CODES.
- 9. PROVIDE COPIES OF ALL TEST REPORTS TO OWNER.
- 1. COORDINATE LOCATION OF ALL ABOVE CEILING PIPING WITH MECHANICAL, ELECTRICAL &

D. FLUSH VALVE HANDLES FOR HANDICAPPED WATER CLOSETS SHALL FACE WIDE SIDE OF

- FIRE PROTECTION CONTRACTORS PRIOR TO INSTALLATION.
- 12. IF CONFLICT ARISES BETWEEN ITEMS SHOWN ON DRAWINGS AND ITEMS SPECIFIED, THE MOST STRINGENT ITEM SHALL BE USED.
- 13. THE INSTALLATION OF ALL INSULATION SHALL BE PERFORMED BY AN EXPERIENCED CRAFTSMAN IN A NEAT WORKMAN-LIKE MANNER AND SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS FOR SERVICE INTENDED.
- 14. ALL NEW PLUMBING FIXTURES SHALL MEET THE APPROPRIATE "ANSI" STANDARDS LISTED IN THE PLUMBING SUBCODE. USE OF SUBSTANDARD AND NON-CONFORMING FOREIGN MADE PRODUCTS IS PROHIBITED.
 15. ALL PLUMBING SYSTEMS AND VALVES SHALL BE LABELED FOR PROPER IDENTIFICATION.

NAMEPLATES, METAL TAGS, PLASTIC PIPE MARKERS IN ACCORDANCE WITH BRIMAR

- IDENTIFICATION & SAFETY PRODUCTS, BRIMAR INDUSTRIES, INC.

 16. INSULATE EXPOSED WASTE & WATER PIPING BELOW HANDICAPPED LAVATORIES WITH
- 17. HANDICAPPED FIXTURE HEIGHTS SHALL BE IN ACCORDANCE WITH ICC/ANSI A-117.1.

TRUBRO LAV GUARD 2 FORM FIT INSULATING COVERS.

- 18. ALL PLUMBING FIXTURES SHALL BE PROVIDED WITH CHROME PLATED SHUT OFF VALVES (ANGLE STOPS), CHROME PLATED SUPPLIES AND P-TRAPS.
- 19. PROVIDE FIRESTOPPING FOR ALL PIPING PENETRATIONS THROUGH WALLS AND FLOORS. ALL FIRESTOPPING SHALL MEET OR EXCEED THE UL RATINGS FOR WALLS AND FLOORS AS NOTED ON ARCHITECTURAL DRAWINGS. FIRESTOPPING SHALL BE BY USE OF CAST IN PLACE OR POST INSTALLED DEVICES, CAULKING MATERIALS OR FOAMS. PENETRATIONS FOR COMBUSTIBLE PIPING SHALL BE PROVIDED WITH SEALANTS, COLLARS OR WRAP DEVICES DESIGNED TO EXPAND WHEN EXPOSED TO FIRE. CONTRACTOR SHALL SUBMIT MANUFACTURER'S SPECIFICATIONS AND TECHINCAL DATA FOR EACH TYPE OF PENETRATION REQUIRED WHICH SHALL INCLUDE COMPOSITION, LIMITATIONS, APPROVED UL LISTINGS AND INSTALLATION INSTRUCTIONS TO ENGINEER FOR REVIEW PRIOR TO INSTALLATION OF THESE DEVICES. INSTALLERS OF THESE DEVICES SHALL BE CERTIFIED, LICENSED OR OTHERWISE QUALIFIED BY THE MANUFACTURER AS HAVING BEEN PROVIDED THE NECESSARY TRAINING TO INSTALL PRODUCT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

HANGERS & SUPPORTS

- HANGERS AND ANCHORS SHALL BE SECURELY ATTACHED TO BUILDING CONSTRUCTION AT SUFFICIENTLY CLOSE INTERVALS TO SUPPORT PIPING AND ITS CONTENTS.

 VERTICAL PIPING FOR CAST IRON SHALL BE SUPPORTED AT BASE AND AT EACH STORY
- B. VERTICAL PIPING FOR COPPER SHALL BE SUPPORTED AT EACH STORY HEIGHT BUT NOT
- MORE THAN 10 FOOT INTERVALS.

 C. HORIZONTAL PIPING FOR CAST IRON SHALL BE SUPPORTED WITH MINIMUM ONE HANGER LOCATED WITHIN 18" OF EACH JOINT UP TO 10 FOOT MAXIMUM PIPE LENGTH, AT CHANGES IN DIRECTION, AND AT EACH BRANCH CONNECTION. WHERE PIPE IS SUSPENDED BY NON-RIGID HANGERS MORE THAN 18" LONG PROVIDE LATERAL SUPPORT AT A MINIMUM 25 FOOT MAXIMUM SPACING. LATERAL SUPPORT SHALL CONSIST OF

EITHER A SWAY BRACE OR EITHER A CHANGE IN DIRECTION OR A BRANCH CONNECTION

- D. HORIZONTAL PIPING FOR COPPER SHALL BE SUPPORTED AT 6 FOOT INTERVALS FOR PIPE SIZES 1 1/4" AND SMALLER AND AT 10 FOOT INTERVALS FOR PIPE SIZES 1 1/2" AND LARGER. WHERE PIPE IS SUSPENDED BY NON-RIGID HANGERS MORE THAN 18" LONG PROVIDE LATERAL SUPPORT.
- 2. ALL SUPPORTS IN CONTACT WITH COPPER PIPING SHALL BE PLASTIC COATED.
- 3. INSTALL METAL SHIELDS ON HANGERS SUPPORTING INSULATED PIPE.
- 4. PROVIDE HANGERS THAT ARE U.L. LISTED AND LABELED.

THAT PROVIDES THE REQUIRED LATERAL SUPPORT.

- 5. ALL DOMESTIC WATER AND SANITARY WASTE PIPE SUPPORTS SHALL BE IN ACCORDANCE WITH NSPC CHAPTER 8, MSS SP-58, 69 & 89.
- 6. PLUMBING SYSTEMS SHALL BE INSTALLED SO AS TO PREVENT STRAINS & STRESSES WHICH WILL EXCEED STRUCTURAL STRENGTH OF PIPE. PROVISIONS SHALL BE MADE FOR EXPANSION & CONTRACTION OF PIPING.
- 7. HANGERS, ANCHORS AND SUPPORTS SHALL BE OF METAL. OTHER MATERIAL OF SUFFICIENT STRENGTH TO SUPPORT THE PIPING AND ITS CONTENTS IS ACCEPTABLE. ALL SUPPORTS AND FASTENERS LOCATED OUTSIDE OR IN CORROSIVE AREAS SHALL BE
- 8. MINIMUM ROD DIAMETER FOR SINGLE RIGID SUPPORTS SHALL BE AS FOLLOWS:
- A. FOR 1/4" THRU 2" PIPE: 3/8"DIAMETER
 B. FOR 2 1/2" AND 3" PIPE: 1/2"DIAMETER
- C. FOR 4" AND 5" PIPE: 5/8"DIAMETER
 D. RODS MAY BE REDUCED ONE SIZE FOR DOUBLE ROD HANGERS(3/8"DIA MIN)
- 3. FOR ABOVE GROUND WASTE PIPING OVER 4" IN DIAMETER USING NO—HUB COUPLINGS, COUPLINGS SHALL BE RESTRAINED WITH BRACES, BLOCKS, RODDING OR OTHER SUITABLE METHODS AS RECOMMENDED BY THE COUPLING MANUFACTURER OR ENGINEER.

DOMESTIC WATER SPECIFICATIONS

- 1. HOT & COLD WATER DISTRIBUTION PIPE SHALL BE ASTM B88 TYPE "L" SEAMLESS COPPER TUBE WITH SOLDER JOINT FITTINGS USING 95-5 SOLDER PER ASTM B32. ALL HOT & COLD WATER DISTRIBUTION PIPING SHALL BE WATER RATED FOR NOT LESS THAN 100PSI @ 180°F. ALL PIPING INSTALLED IN PLENUM SPACES SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPMENT RATING OF 50 OR LESS. PIPING MATERIALS FOR USE ON DOMESTIC WATER SYSTEMS INCLUDING FIXTURES & VALVES SHALL NOT CONTAIN MORE THAN 0.2 PERCENT LEAD.
- PRIOR TO DISINFECTION, POTABLE WATER PIPING SHALL BE FLUSHED WITH WATER UNTIL NO DIRTY WATER APPEARS AT THE POINTS OF OUTLETS.
- 3. POTABLE WATER PIPING SHALL BE DISINFECTED PRIOR TO USE PER NATIONAL STANDARD PLUMBING CODE. THE PIPING SHALL BE FILLED WITH A WATER CHLORINE SOLUTION CONTAINING AT LEAST 50 PARTS PER MILLION OF CHLORINE AND SHALL BE VALVED OFF FOR 24 HOURS OR FILLED WITH A WATER CHLORINE SOLUTION CONTAINING AT LEAST 200 PARTS PER MILLION OF CHLORINE AND ALLOWED TO STAND FOR AT LEAST 3 HOURS. FOLLOWING THE ALLOWED STANDING TIME, THE SYSTEM SHALL BE FLUSHED WITH POTABLE WATER UNTIL NO CHLORINE REMAINS IN THE SYSTEM. PROVIDE RESULTS OF DISINFECTION TO OWNER WHEN COMPLETE. STERILIZATION WORK SHALL COMPLY WITH NSPC 2015 SECTION 10.9.2, PARAGRAPHS A1 TO A9.
- 4. DOMESTIC WATER PIPE SHALL CONSIST OF A HYDROSTATIC PRESSURE TEST OF 25 PSIG ABOVE THE WORKING PRESSURE UNDER WHICH IT IS OPERATED FOR NOT LESS THAN 60 MINUTES.
- 5. IF LEAKS OCCUR DURING TESTING, REPAIRS SHALL BE MADE AND SYSTEM RETESTED UNTIL NO EVIDENCE OF LEAKS EXIST FOR THE DURATION OF THE TEST.
- 6. DOMESTIC WATER PIPE SHALL BE INSULATED WITH 1" THICK FIBERGLASS PREFORMED INSULATION WITH VAPOR JACKET AND SELF SEALING TAPE, EQUAL TO OWENS-CORNING ASJ/SSL-2. PIPING IN EXTERIOR WALLS SHALL HAVE 2"THICK INSULATION. DOMESTIC WATER PIPE MAY BE INSULATED WITH AP/ARMAFLEX SS (SELFSEAL) FLEXIBLE ELASTOMERIC THERMAL INSULATION, 1/2" THICKNESS, OR APPROVED EQUAL. PIPING IN EXTERIOR WALLS SHALL HAVE 1" THICK INSULATION.
- . BALL VALVES SHALL BE EQUAL TO APOLLO LEAD FREE SERIES 77CLF-100, 77CLF-200, 70LF-100 OR 70LF-200 RATED FOR 150 PSIG W.O.G. FOR 3" AND SMALLER PER MSS SP-110.
- 8. HOT WATER RECIRCULATION BALANCING VALVES SHALL BE EQUAL TO BELL & GOSSETT "CIRCUIT SENTRY FLO-SETTER" LEAD FREE MODEL "CS" W/FIELD ADJUSTABLE GPM DIAL.
- 9. SHOCK ABSORBER SHALL BE JR SMITH FIGURE 5005 THRU 5030 AS APPLICABLE, & CERTIFIED TO BE TESTED IN ACCORDANCE WITH STANDARD PDI WH-201& ASSE 1010.

 10. CHECK VALVES SHALL BE FOLIAL TO APOLLO LEAD FREE SERIES 161SLE PER MSS SP-80. CHECK
- 10.CHECK VALVES SHALL BE EQUAL TO APOLLO LEAD FREE SERIES 161SLF PER MSS SP-80. CHECK VALVES MAY BE TRUE UNION BALL CHECK WITH SAME SPECIFICATIONS AS BALL VALVES. 4" & LARGER CHECK VALVES SHALL BE EQUAL TO APOLLO SERIES 910F PER MSS SP-71.

SANITARY WASTE SPECIFICATIONS

- SANITARY WASTE AND VENT PIPE & FITTINGS SHALL BE STANDARD WEIGHT HUBLESS CAST IRON ASTM A-888, WITH ALL STAINLESS STEEL HUBLESS COUPLING WITH NEOPRENE GASKETS IN ACCORDANCE WITH ASTM C-564 & CISPI-310 FOR ABOVE GROUND, ALL COUPLINGS TO BE HEAVY DUTY EQUAL TO HUSKY SD 4000 WITH SEALING SLEEVE CONFORMING TO ASTM C-564. HUB & SPIGOT PIPE & FITTINGS SHALL BE IN ACCORDANCE WITH ASTM A-74 WITH COMPRESSION TYPE GASKETS PER ASTM C-564 FOR BELOW SLAB. ALL CAST IRON SOIL PIPE, FITTINGS COUPLINGS AND GASKETS SHALL BE MARKED W/THE COLLECTIVE TRADEMARK OF THE CAST IRON SOIL PIPE INSTITUTE, IDENTIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF CISPI 310, AND BE LISTED BY NSF INTERNATIONAL AND THE COUNTRY OF ORIGIN & IDENTIFICATION OF THE ORIGINAL MANUFACTURER.
- 2. SANITARY WASTE & VENT PIPE SHALL BE AIR TESTED TO NOT LESS THAN 5 PSIG PRESSURE IN THE SYSTEM. PIPING SYSTEM SHALL SUSTAIN A CONSTANT PRESSURE FOR NOT LESS THAN 15 MINUTES. IF LEAKS OCCUR DURING SYSTEM TESTING, REPAIRS SHALL BE MADE AND SYSTEM RETESTED UNTIL NO EVIDENCE OF LEAKS EXIST FOR THE DURATION OF THE TEST. DRAIN & VENT PIPING LOCATED ABOVE AREAS WHERE FOOD IS STORED, PREPARED OR DISPLAYED SHALL BE AIR TESTED TO NOT LESS THAN 10 PSIG.
- 3. CLEANOUTS SHALL BE TYLER PIPE CLEANOUT BODY STANDARD FERRULE 2-11 WITH TYPE "B" BRASS PLUG FOR ABOVE FLOOR. FLOOR CLEANOUTS SHALL BE JR SMITH SERIES 4020 W/ROUND ADJUSTABLE BRONZE TOP. GRADE CLEANOUTS SHALL BE JR SMITH SERIES 4250. WALL CLEANOUTS SHALL BE JR SMITH FIGURE 4402. CLEANOUTS SHALL BE INSTALLED AT BASE OF EACH RISER, AT EACH CHANGE OF DIRECTION OF HORIZONTAL RUN MORE THAN 45°, AND EVERY 75' OF HORIZONTAL RUN (FOR 4"DIA) AND EVERY 100' OF HORIZONTAL RUN(FOR 5"DIA & LARGER).
- 4. HORIZONTAL DRAIN PIPING SHALL BE INSTALLED AT UNIFORM SLOPE NOT LESS THAN 1/4" PER FOOT FOR 2" AND SMALLER AND NOT LESS THAN 1/8" PER FOOT FOR 3" AND LARGER. LESSER SLOPE MAY BE PERMITTED AS APPROVED BY LOCAL ADMINISTRATIVE AUTHORITY.
- 5. ALL FLOOR DRAINS SHALL HAVE MINIMUM 4" DEEP SEAL TRAPS.
- IN THE REMOVAL OF ANY PART OF A DRAINAGE SYSTEM, DEAD ENDS SHALL BE AVOIDED EXCEPT WHERE NECESSARY TO EXTEND TO A CLEANOUT SO AS TO BE ACCESSIBLE.
- ALL WASTE PIPING LOCATED INSIDE EXTERIOR WALLS SHALL BE INSULATED WITH 2"THICK FIBERGLASS PREFORMED INSULATION WITH VAPOR JACKET AND SELF- SEALING TAPE, EQUAL TO OWENS-CORNING ASJ/SSL-2.

		FIXTUR	E SPE	CIFICATION	SCHEDULE
UNIT NO.	FIXTURE	MANUFACTURER	MODEL NO.	DESCRIPTION	TRIM
LAV-1	LAVATORY	KOHLER	LANDENA K-2214	VITREOUS CHINA UNDERCOUNTER MOUNT W/OVERFLOW, CLAMP ASSEMBLY & TEMPLATE	KOHLER "GEOMETRIC INSIGHT" DM FAUCET W/MIXER MODEL K-7517 POLISHED CHROME, 0.5 GPM FLOW RATE, SENSOR OPERATED, W/3.6V SIZE C HYBRID ENERGY CELL, 30 SECOND CONTINUAL RUN CYCLE, VANDAL RESISTANT AERATOR, 24" FLEXIBLE SUPPLY HOSES, ABOVE COUNTER ADJUSTABLE, REMOVABLE VALVE K-8998 P-TRAP
UR-1	URINAL	KOHLER	FRESHMAN K-4989-R	VITREOUS CHINA WALL MOUNT SIPHON JET ¾" TOP SPUD 1.0 GPF	KOHLER "WAVE" 1.0 GPF FLUSHOMETER VALVE MODEL K-7527, ELECTRONIC INFRARED SENSOR W/ 30 YEAR HYBRID ENERGY CELL, EXPOSED, CHROME PLATED, 3" SPUD JR SMITH FIGURE 0615 LABOR SAVER URINAL SUPPORT
WC-1	WATER CLOSET	KOHLER	HIGHLINE K-4405	VITREOUS CHINA FLOOR MOUNT 1.28 GPF FLUSHMETER ELONGATED, ADA HEIGHT 1½"SPUD	KOHLER "WAVE" 1.28 GPF FLUSHOMETER VALVE MODEL K-7521, ELECTRONIC INFRARED SENSOR W/ 30 YEAR HYBRID ENERGY CELL, EXPOSED, CHROME PLATED, 1½" SPUD K-4731-SA STRONGHOLD COMMERCIAL HEAVY DUTY ELONGATED OPEN FRONT SEAT LESS COVER W/ANTIMICROBIAL SURFACE
WC-2	WATER CLOSET	KOHLER	WELLWORTH K-4406	VITREOUS CHINA FLOOR MOUNT 1.28 GPF FLUSHMETER ELONGATED, 1½"SPUD	KOHLER "WAVE" 1.28 GPF FLUSHOMETER VALVE MODEL K-7521, ELECTRONIC INFRARED SENSOR W/ 30 YEAR HYBRID ENERGY CELL, EXPOSED, CHROME PLATED, 1½" SPUD K-4731-SA STRONGHOLD COMMERCIAL HEAVY DUTY ELONGATED OPEN FRONT SEAT LESS COVER W/ANTIMICROBIAL SURFACE
MR-1	MOP RECEPTOR	N/A	N/A	EXISTING MOP RECEPTOR TO BE REFINISHED BY GC COORDINATE NEW DRAIN INSTALLATION	MUSTEE MODEL 63.600A HEAVY DUTY CHROME PLATED BRASS DUAL HANDLE FAUCET W/TOP REINFORCING BAR, MOUNTING BRACKET & PAIL HOOK ON SPOUT, VACUUM BREAKER, INTEGRAL STOPS, ¾"HOSE END SPOUT
FD-1	FLOOR DRAIN	JR SMITH	2005	CAST IRON FLANGED, W/FLASHING COLLAR, ADJUSTABLE SQUARE NICKEL BRONZE STRAINER HEAD	PROVIDE JR SMITH QUAD CLOSE TRAP SEAL FIGURE 2692-02

	FIXTURE	C	ON	NE	CTIC	ON SCHEDUL	E		
ITEM	DESCRIPTION		CW	HW	SAN	REMARKS	DFU	CWFU	HWFU
LAV-1	LAVATORY		1/2"	1/2"	1 1/4"	-	1	0.8	0.8
UR-1	URINAL		3/4"	1	2"	-	5	5	-
WC-1	WATER CLOSET		1"	1	4"	_	6	8	-
WC-2	WATER CLOSET		1"	ı	4"	-	6	8	-
MR-1	MOP RECEPTOR		1/2"	1/2"	3"	_	3	1.5	1.5
FD-1	FLOOR DRAIN		1	-	2"	-	0	-	_



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AC BOARDWALK HALL RESTROOM RENOVATION

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PLUMBING
LEGEND, NOTES
AND SCHEDULES

DRAWN BY:

REVIEWED BY:

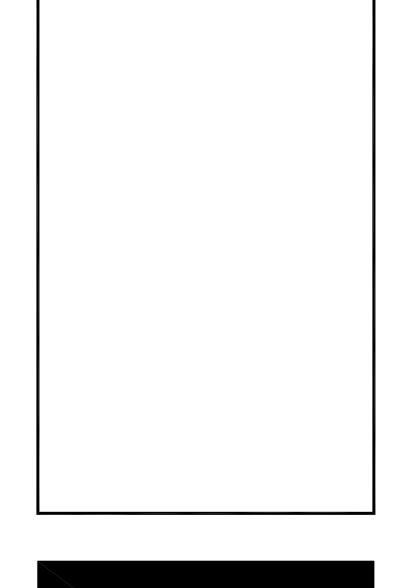
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PROJECT NO.

15243.00.001

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 atlantic city
 new york

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AC BOARDWALK HALL RESTROOM RENOVATION

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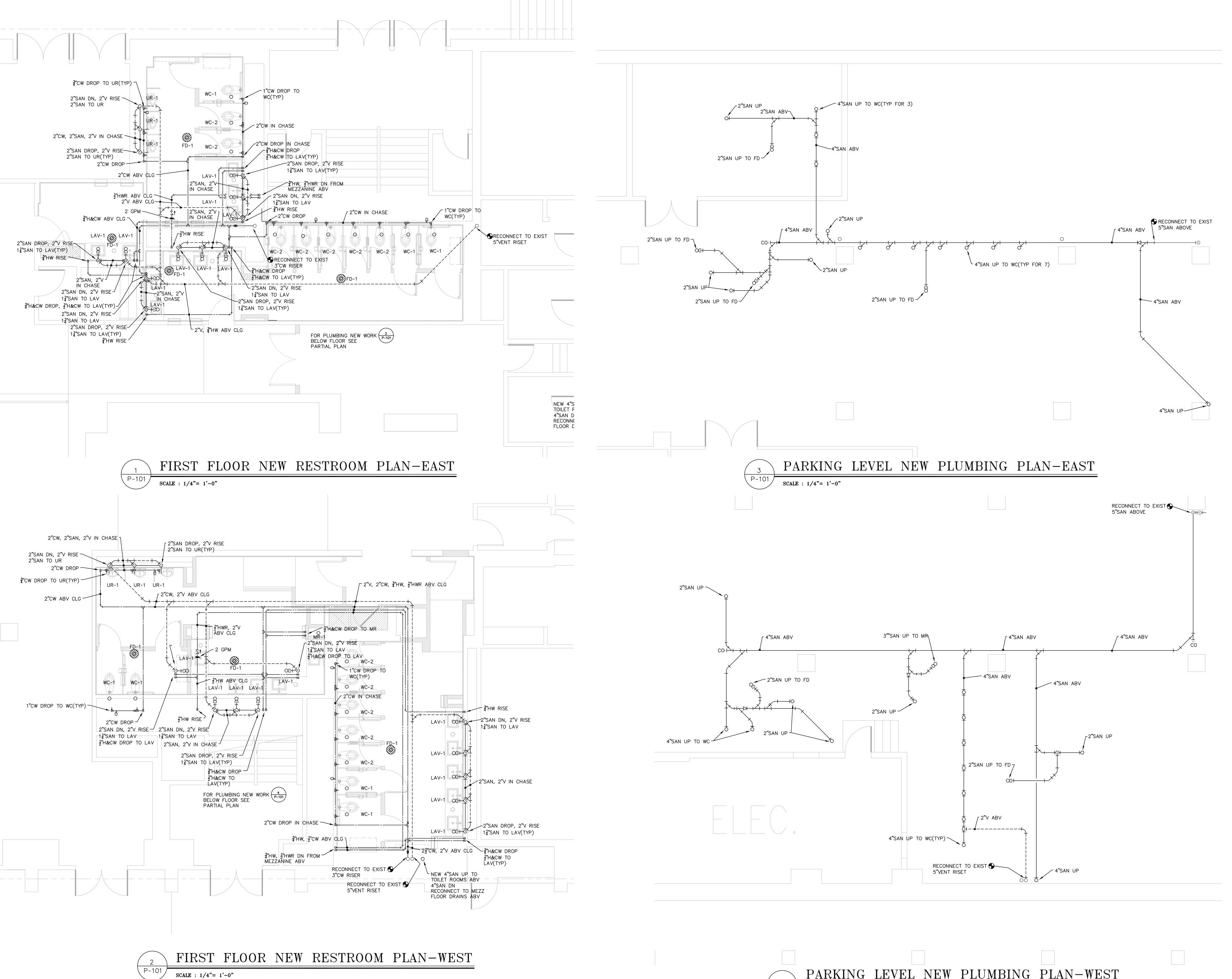
FIRST & SECOND FLOOR
OVERALL NEW WORK
LOCATION PLANS
PLUMBING

DRAWN BY: PJL DRAWING NO.

REVIEWED BY: AHC

PROJECT NO.

PROJECT NO. 15243.00.001 P-100







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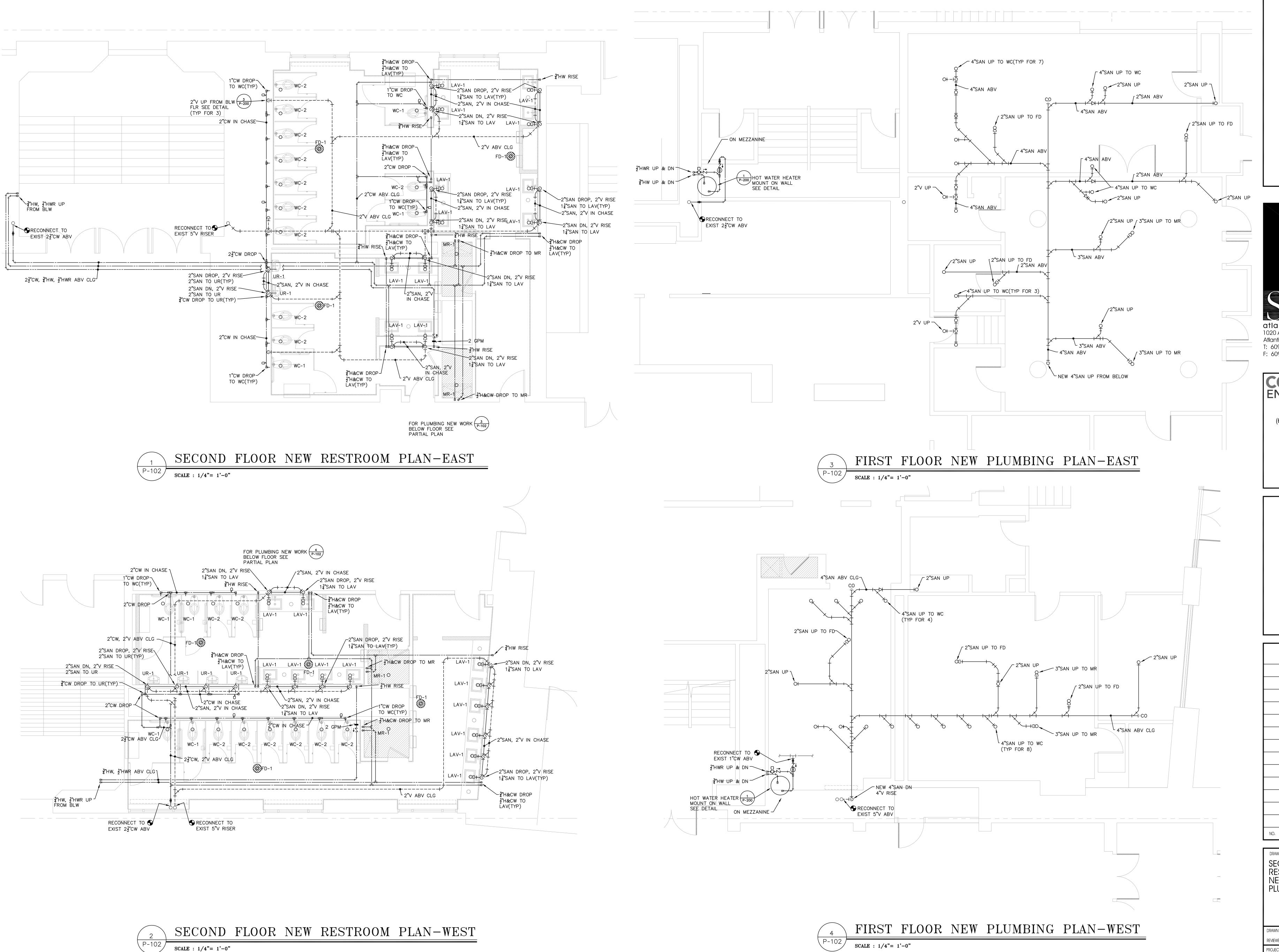
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DRAWING TITLE: FIRST FLOOR RESTOOM NEW WORK PLANS PLUMBING

PJL DRAWING NO. DRAWN BY: REVIEWED BY: PROJECT NO.

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Boardwalk Hall

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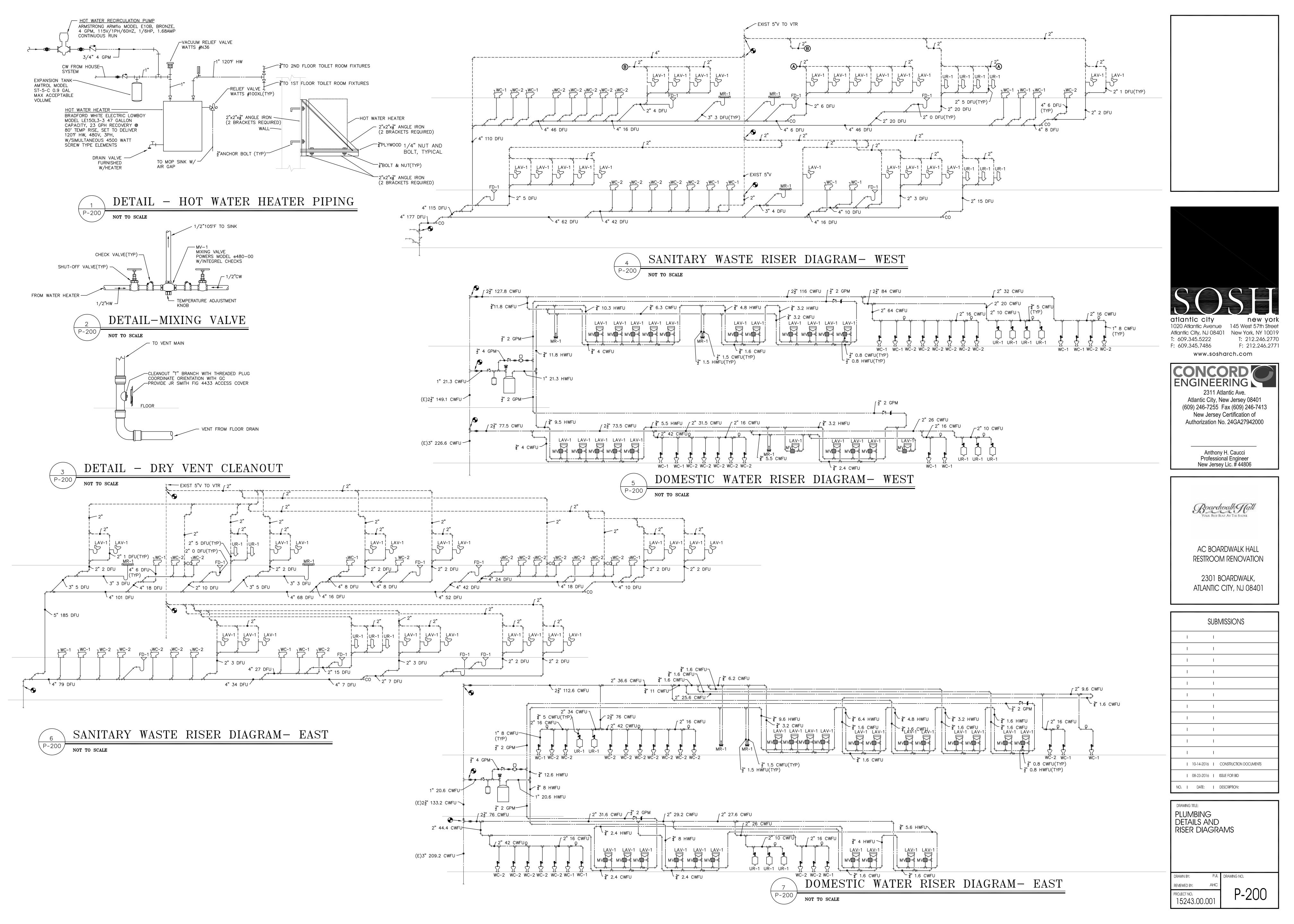
SUBMISSIONS | 10-14-2016 | CONSTRUCTION DOCUMENTS | 08-23-2016 | ISSUE FOR BID NO. | DATE: | DESCRIPTION:

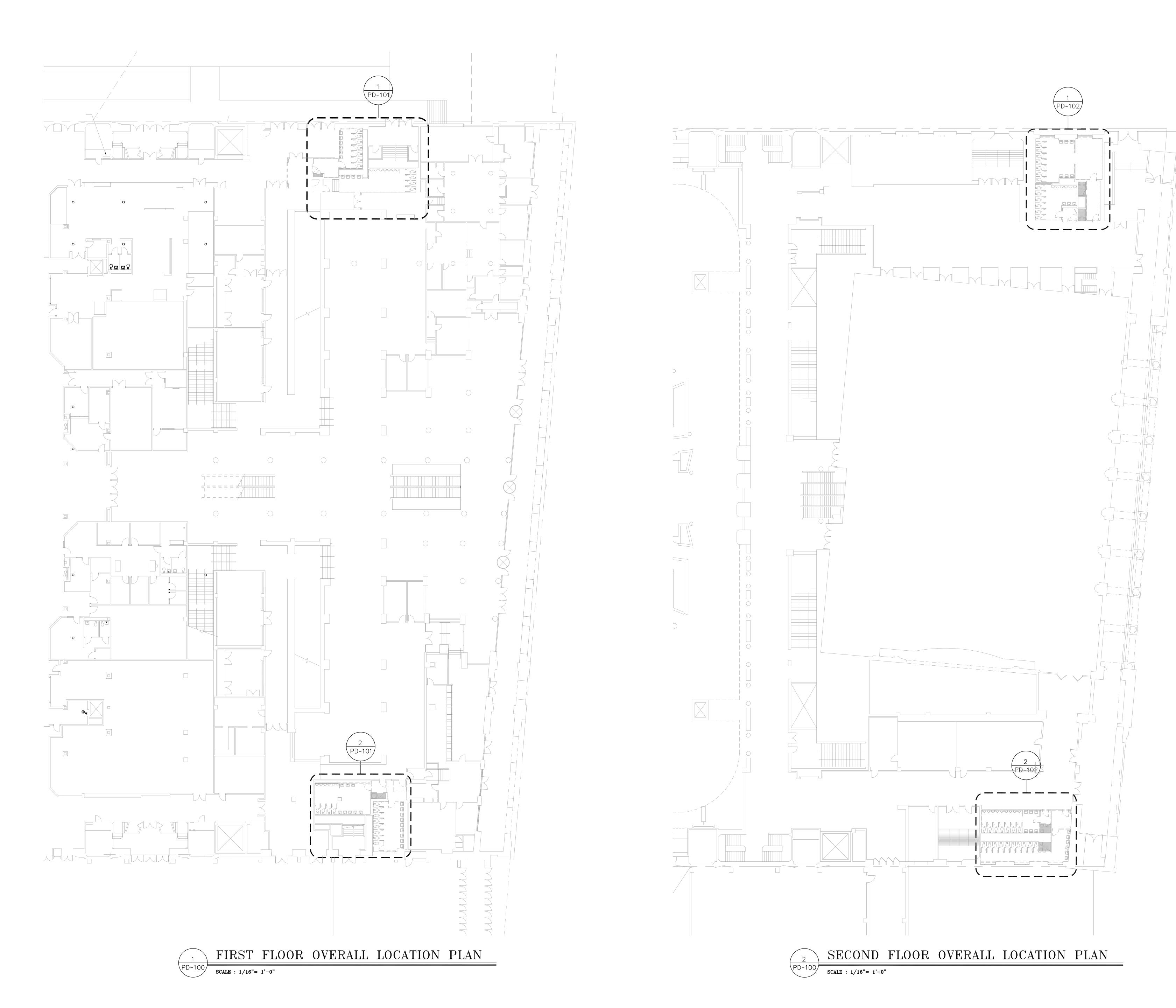
SECOND FLOOR RESTOOM NEW WORK PLANS PLUMBING

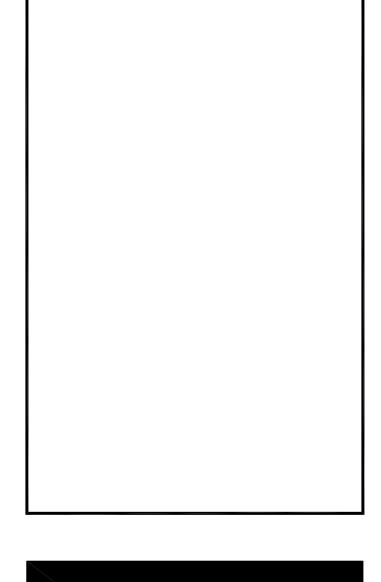
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SCALE : 1/4"= 1'-0"









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 new york

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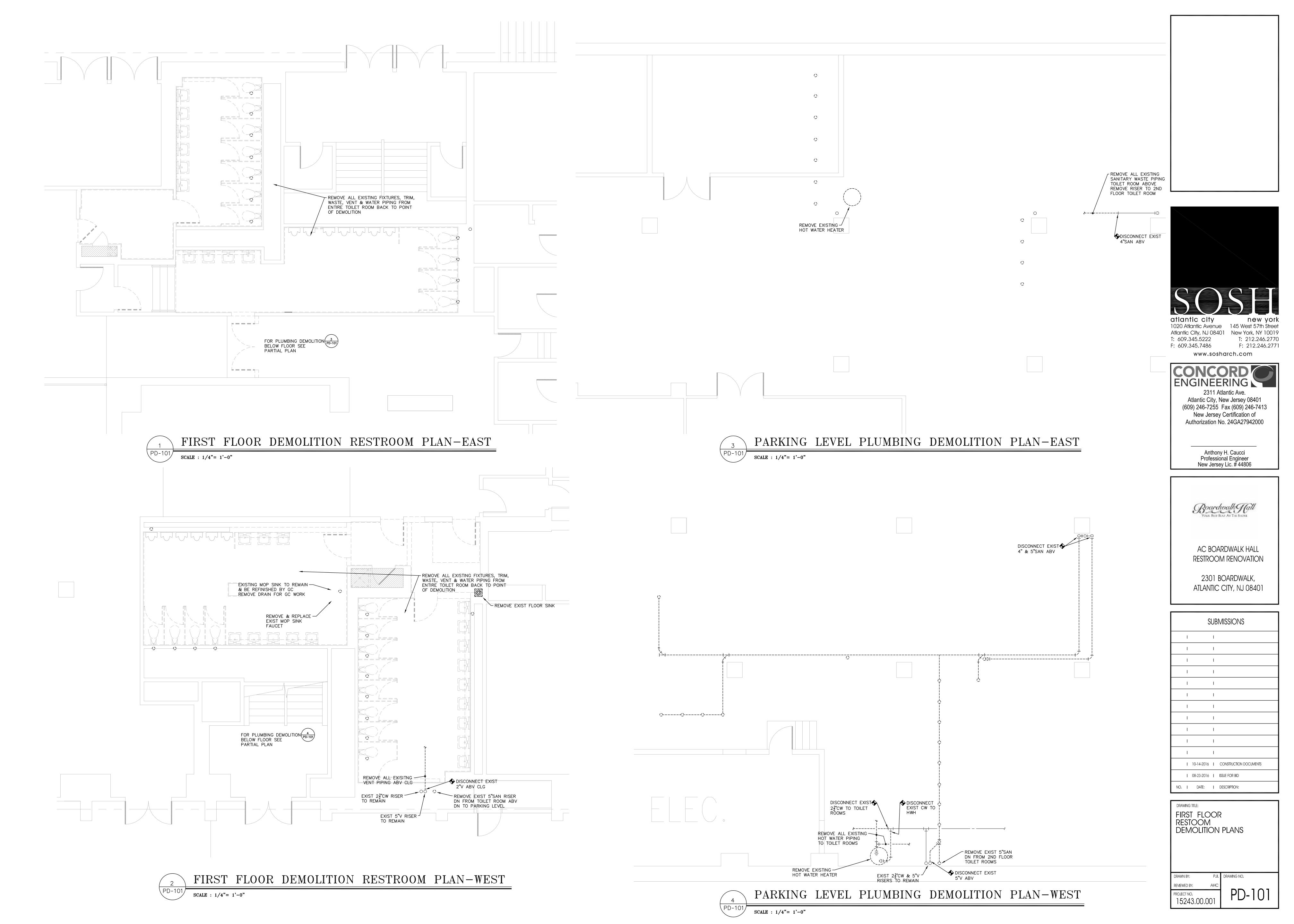
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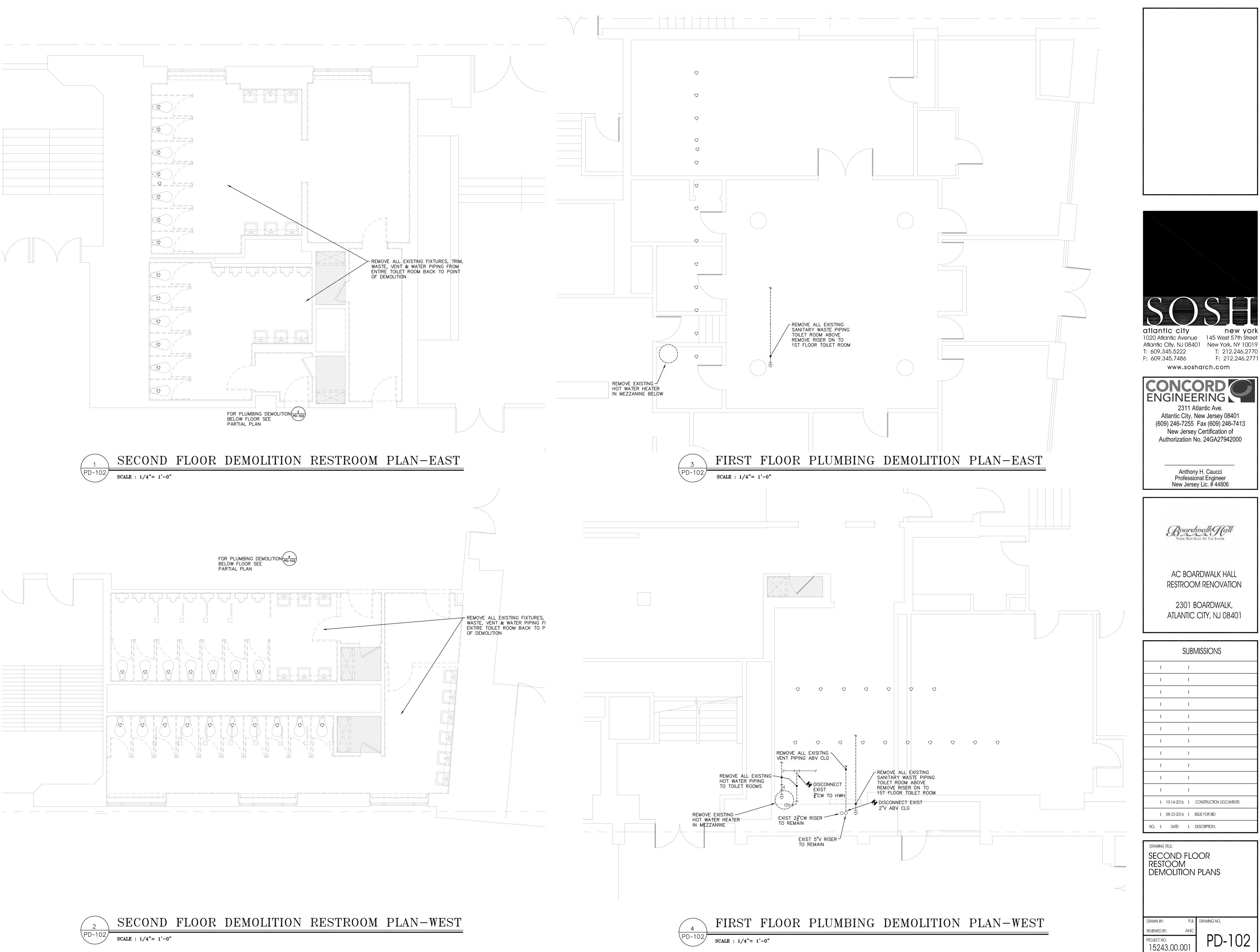
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FIRST & SECOND FLOOR
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AC BOARDWALK HALL

RESTROOM RENOVATION

2301 BOARDWALK,

ATLANTIC CITY, NJ 08401

SUBMISSIONS

FIRE PROTECTION NOTES

- 1. THIS DRAWING IS INTENDED TO SHOW APPROXIMATE AND RELATIVE LOCATIONS OF MATERIALS AND EQUIPMENT. DRAWING SHALL NOT BE SCALED TO DETERMINE EXACT POSITIONS AND CLEARANCES. BECAUSE OF DIAGRAMMATIC LAYOUT AND SMALL SCALE OF DRAWING, NOT ALL RISES, DROPS, OFFSETS AND RELATED SPECIALTIES ARE INDICATED. PROVIDE ALL SUCH PIPING, FITTINGS, VALVES AND SPECIALTIES REQUIRED IN SUCH CASES TO INSURE A COMPLETE AND PROPERLY OPERATING INSTALLATION IN ACCORDANCE WITH CODES AND WITHOUT EXTRA COST TO OWNER.
- 2. THE ENTIRE FIRE SPRINKLER SYSTEM INSTALLATION SHALL BE IN ACCORDANCE WITH NFPA 13-2013 EDITION FOR LIGHT HAZARD OCCUPANCY.
- 3. CONTRACTOR SHALL PROVIDE AND PAY ALL FEES AND PERMITS.
- 4. CONTRACTOR SHALL VISIT THE JOB SITE AND OBSERVE ALL EXISTING CONDITIONS.
- 5. FURNISH AND INSTALL PIPE, SPRINKLER HEADS, EQUIPMENT, ETC., REQUIRED FOR THE PROPER FUNCTIONING OF THE WORK INDICATED ON THE PLAN.
- 6. ALL WORK DONE AND ALL EQUIPMENT AND MATERIALS USED AND ALL TESTS SHALL BE DONE TO MEET THE APPROVAL OF THE INSURER AS WELL AS LOCAL AUTHORITIES HAVING JURISDICTION.
- 7. PIPING SHALL BE ASTM A-135 OR A-795 BLACK STEEL, PIPING 2 1/2" & LARGER SHALL BE SCHEDULE 10, PIPING 2" & SMALLER SHALL BE SCHEDULE 40. PIPE JOINTS SHALL BE ROLL OR CUT GROOVED, THREADED OR FLANGED. SCHEDULE 10 PIPE SHALL NOT BE CUT GROOVED OR THREADED. GROOVED FITTINGS SHALL BE ASTM A536 DUCTILE IRON WITH EDPM GASKETS. THREADED OR FLANGED FITTINGS SHALL BE ASTM A-197 MALLEABLE IRON WITH THREADS CONFORMING TO ANSI B1.20.1. PIPE & FITTINGS SHALL BE PRESSURE RATED FOR MINUMUM 175 PSIG. ALL MATERIALS SHALL BE U.L. LISTED OR FM APPROVED FOR USE IN FIRE PROTECTION SYSTEMS. GROOVED FITTINGS SHALL BE TORQUED PER MANUFACTURER'S SPECIFICATIONS. CONTRACTOR SHALL RECORD ALL TORQUING OPERATIONS WHEN TORQUING IS REQUIRED.
- 8. ALL NEW SPRINKLERS SHALL BE CENTERED IN THE CEILING TILES IN BOTH DIRECTIONS AS SHOWN ON PLAN, UNLESS NOTED OTHERWISE.
- 9. FOR SCREWED JOINTS, APPLY NON-CORROSIVE, NON-HARDENING TEFLON TAPE OR SUITABLE COMPOUND TO MALE THREADS ONLY. CAULKING AND PACKING OF THREADS IS PROHIBITED. THREADS SHALL BE IN ACCORDANCE WITH ANSI/ASME B1.20.1.
- 10. HANGER INSTALLATION SHALL BE CERTIFIED BY A PROFESSIONAL ENGINEER TO BE IN COMPLIANCE WITH THE REQUIREMENTS OF NFPA 13 CHAPTER 9. WHERE APPLICABLE, CERTIFICATION SHALL INCLUDE PROTECTION OF PIPING AGAINST EARTHQUAKE DAMAGE IN ACCORDANCE WITH NFPA 13 SECTION 9.3.
- 11. CONTRACTOR SHALL PREPARE SHOP DRAWINGS AND HYDRAULIC CALCULATIONS, AT HIS OWN EXPENSE, SIGNED AND SEALED BY A QUALIFIED ENGINEER LICENSED IN THE STATE OF NEW JERSEY. CALCULATIONS AND SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW TO THE ENGINEER AND APPROVING AUTHORITIES PRIOR TO PERFORMANCE OF ANY WORK. SHOP DRAWINGS SHALL SHOW PIPE ROUTING, SPRINKLER LOCATIONS AND ANY OTHER INFORMATION REQUIRED TO MAKE COMPLETE CONSTRUCTION DOCUMENTS. PROVIDE COPIES OF ALL DOCUMENTATION FOR NEW EQUIPMENT, PIPING, SPRINKLER HEADS, ETC WITH THE SUBMITTAL.
- 12. ALL WORK SHALL BE INSPECTED BY THE INSURER AND ANY LOCAL AUTHORITIES HAVING JURISDICTION. CERTIFIED COPIES OF THESE APPROVALS SHALL BE DELIVERED TO THE OWNER BEFORE FINAL PAYMENT. ALL TESTS SHALL BE WITNESSED BY OWNER'S REPRESENTATIVE.
- 13. SHOULD A CONTRACTOR REQUIRE REMOVAL, RELOCATION OR REROUTING OF ANOTHER TRADE'S WORK THAT IS NOT INDICATED ON DRAWINGS, THE CONTRACTOR REQUIRING SUCH WORK SHALL BE RESPONSIBLE FOR THAT WORK, AND PAY ALL REQUIRED COSTS.
- 14. WORK SHALL BE PERFORMED BY MECHANICS SKILLED IN PARTICULAR TRADE INVOLVED, THAT IS, PLUMBING WORK SHALL BE PERFORMED BY PLUMBERS, ELECTRICAL WORK SHALL BE PERFORMED BY ELECTRICIANS, MECHANICAL WORKED PERFORMED BY STEAM FITTERS AND SHEET METAL MECHANICS.
- 15. COREDRILLING SHALL BE ACCOMPLISHED BY MECHANICAL MEANS IN A MANNER THAT WILL NOT AFFECT THE INTEGRITY OF THE STRUCTURE. AFTER INSTALLATION OF PIPING THRU THE COREDRILL, PACK THE ANNULAR SPACE WITH OAKUM OR FIBROUS GLASS, LEAVING A MINIMUM OF TWO INCHES AT EACH END TO BE FILLED AND FINISHED WITH A "FIRE BARRIER" MATERIAL EQUAL TO 3M "PENETRATION SEALING SYSTEMS" SUCH AS "CP-25 CAULK", "303 PUTTY" OR "FS-195 WRAP". APPLICATION OF "FIRE BARRIER". MATERIAL SHALL BE IN ACCORDANCE WITH MANUFACTURER'S STANDARDS AND APPLICABLE CODES.
- 16. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING MATERIAL SUBMITTALS FOR REVIEW TO ENGINEER FOR PRIOR APPROVAL BEFORE CONSTRUCTION.
- 17. ALL EQUIPMENT, VALVES, ETC. ARE TO BE INSTALLED SO THAT THEY MAY BE ACCESSIBLE FOR SERVICING.
- 18. AFTER THOROUGHLY CLEANING & FLUSHING, ENTIRE SYSTEM SHALL BE HYDROTESTED IN ACCORDANCE WITH THE REQUIREMENTS OF NFPA 13. TEST SHALL BE WITNESSED BY OWNER'S REPRESENTATIVE AND LOCAL AUTHORITIES HAVING JURISDICTION.
- 19. PROVIDE SLEEVES WHEN PENETRATING FOOTINGS, FLOORS OR WALLS. SLEEVES SHALL BE 2 PIPE SIZES LARGER THAN PIPE. EXTEND SLEEVES THRU FLOORS 2" ABOVE FINISHED FLOORS. SEAL ALL SLEEVES TO ACHIEVE FIRE RESISTANCE EQUAL TO FIRE SEPARATION REQUIRED. COREDRILLS REQUIRE NO SLEEVES.
- 20. CONTRACTOR SHALL PERFORM FLOW TEST OF THE EXISTING FIRE PROTECTION SYSTEM TO VERIFY ALL WATER TEST DATA RELATIVE TO THIS PROJECT. FLOW TEST TO BE PERFORMED IN ACCORDANCE WITH NFPA 291 OR NFPA 20 AS APPLICABLE.
- 21. GATE VALVES 2" & SMALLER SHALL BE CLASS 175 ASTM B-62 CAST BRONZE BODY, OS&Y. GATE VALVES 2 1/2" & LARGER SHALL BE RATED 175 PSI, ASTM A-126 IRON BODY, OS&Y, UNLESS NOTED OTHERWISE.
- 22. CHECK VALVES 2" & SMALLER SHALL BE SWING TYPE ALL BRONZE, REGRINDABLE SEAT, RENEWABLE DISC, 175 PSI. 2 1/2" & LARGER SHALL BE ASTM A-126 IRON BODY W/COMPOSITION TYPE DISC, UNO.
- 23. BALL VALVES SHALL BE RATED 300 PSI ALL BRONZE, THREE PIECE CONSTRUCTION.
- 24. BUTTERFLY VALVES SHALL BE 175 PSI, IRON BODY BRONZE DISC AND STEM, GEAR OPERATE W/ RESILIENT REPLACEABLE LINER SEAT.
- 25. ALL VALVES SHALL BE UL LISTED AND/OR FM APPROVED.
- 26. ALL VALVES SHALL BE ELECTRICALLY SUPERVISED. TAMPER SWITCHES SHALL BE EQUAL TO SYSTEM SENSOR MODEL OSY2. ELECTRICAL CONTRACTOR SHALL WIRE SWITCH TO FIRE ALARM PANEL.
- 27. ALL FIRE SYSTEMS AND VALVES SHALL BE LABELED FOR PROPER IDENTIFICATION.
 NAMEPLATES, METAL TAGS, PLASTIC PIPE MARKERS IN ACCORDANCE WITH BRIMAR
 IDENTIFICATION & SAFETY PRODUCTS, BRIMAR INDUSTRIES, INC.
- 28. WATERFLOW DETECTORS (FLOW SWITCH) SHALL BE SERIES WFD BY SYSTEM SENSOR. ELECTRICAL CONTRACTOR SHALL WIRE SWITCH TO FIRE ALARM PANEL.
- 29. NEW SPRINKLER HEADS SHALL BE AS INDICATED:
 UPRIGHT: VIKING MODEL "VK108"
 CONCEALED PENDENT: VIKING MODEL "VK462"
 SIDEWALL: VIKING MODEL "VK307"
 STANDARD PENDENT: VIKING MODEL "VK110"
- ALL SPRINKLERS ARE TO BE U.L. LISTED AND/OR F.M. APPROVED.
- NOTE: CONCEALED PENDANT COVER PLATES SHALL BE COLOR TO MATCH ARCHITECTURAL COLOR SPECIFICATIONS. REFER TO ARCHITECTURAL DRAWINGS FOR INFORMATION.

 COVER PLATES SHALL NOT BE PAINTED IN FIELD.
- 30. THE CONTRACTOR MUST SURVEY AND VERIFY LOCATIONS AND PHYSICAL SIZES OF ALL EXISTING ITEMS AND DETERMINE WHETHER RELOCATION OR REROUTING WILL BE REQUIRED. IF RELOCATION OR REROUTING IS REQUIRED, INCLUDING ALL THAT OF ALL RELATED ACCESSORIES, SPECIALTIES AND OTHER MINOR ITEMS, THE CONTRACTOR SHALL INCLUDE ALL NECESSARY WORK AS PART OF HIS CONTRACT AND IT SHALL BE DONE AT NO ADDITIONAL COST TO THE OWNER.
- 31. IT IS THE INTENT THAT ALL EXISTING PIPING, DUCTWORK AND OTHER EQUIPMENT AND MATERIALS THAT INTERFERE WITH THE ALTERED EXISTING BUILDING ARRANGEMENTS AND NEW SYSTEMS BE REMOVED, RELOCATED, REROUTED OR ABANDONED. THE DRAWINGS "GENERALLY" INDICATE LOCATIONS OF MAJOR ITEMS OR EXISTING EQUIPMENT.
- 32. PRIOR TO REINSTALLATION, EACH AND EVERY ITEM WHICH IS TO BE RELOCATED SHALL BE CHECKED AND REPAIRED AS MAY BE NECESSARY TO PUT THE DEVICE INTO FIRST CLASS WORKING CONDITION. ALL RELOCATED ITEMS SHALL BE CLEANED AND IF NECESSARY.
- 33. SHOULD A CONTRACTOR REQUIRE REMOVAL, RELOCATION OR REROUTING OF ANOTHER TRADE'S WORK THAT IS NOT INDICATED ON DRAWINGS, THE CONTRACTOR REQUIRING SUCH WORK SHALL BE RESPONSIBLE FOR THAT WORK, AND PAY ALL REQUIRED COSTS.
- 34. COORDINATE ALL PIPING AND SPRINKLER HEAD LOCATIONS WITH ALL CONTRACTORS PRIOR TO INSTALLATION SO AS TO AVOID INTERFERENCES IN THIS
- 35. CONNECTION TO EXIST MAIN: A VICTAULIC MECHANICAL-T STYLE 929, GROOVED ENDS WILL BE ALLOWED FOR CONNECTION TO EXISTING SPRINKLER MAINS. SIMILAR FITTINGS HAVING BOLTED UPPER AND LOWER HOUSINGS AND A COLLAR TO FIT INTO THE OUTLET HOLE IN THE MAIN MAY BE APPROVED.

FIRE PROTECTION NOTES- TEMPORARY PROTECTION

WHEN CEILINGS ARE REMOVED OR FOR ANY REASON EXISTING SPRINKLER PROTECTION IS NOT MAINTAINED DURING CONSTRUCTION, PROVIDE TEMPORARY SPRINKLER PROTECTION. SPRINKLER CONTRACTOR SHALL REMOVE EXISTING PENDENT HEADS AND DROPS AND INSTALL UPRIGHT HEADS FROM ADDED 1"SPRIGS FROM THE SAME CONNECTION. WHERE EXISTING SPRINKLER QUANTITIES ARE NOT SUFFICIENT FOR SPRINKLER PROTECTION, UPRIGHT SPRINKLERS SHALL BE ADDED. PERFORM HYDRAULIC CALCULATIONS FOR ADDED SPRINKLERS BASED ON 0.15 GALLONS PER MINUTE PER SQUARE FOOT FOR A MINIMUM 1500 SQUARE FOOT AREA.

WHERE TEMPORARY CONSTRUCTION WALLS ARE INSTALLED TO ISOLATE WORK AREA, CONTRACTOR SHALL BE RESPONSIBLE FOR RELOCATION OF SPRINKLERS ON EITHER SIDE OF WALL AS REQUIRED TO PROVIDE PROPER SPRINKLER PROTECTION.

SYSTEM IMPAIRMENT CODE REQUIREMENTS

FIRE PROTECTION SYSTEMS OUT OF SERVICE(IMPAIRMANT)

WHILE A REQUIRED FIRE PROTECTION SYSTEM IS OUT OF SERVICE, THE FIRE DEPARTMENT AND THE CODE OFFICIAL SHALL BE NOTIFIED IMMEDIATELY AND, WHERE REQUIRED BY THE CODE OFFICIAL, AN APPROVED FIRE WATCH SHALL BE PROVIDED FOR ALL OCCUPANTS LEFT UNPROTECTED BY THE SHUTDOWN UNTIL THE FIRE SERVICE HAS BEEN RETURNED TO SERVICE.

IMPAIRMENT COORDINATOR

THE BUILDING OWNER SHALL ASSIGN AN IMPAIRMENT COORDINATOR TO COMPLY WITH THESE REQUIREMENTS. IN THE ABSENCE OF A SPECIFIC DESIGNEE, THE OWNER SHALL BE CONSIDERED THE IMPAIRMENT COORDINATOR.

A TAG SHALL BE USED TO INDICATE THAT A SYSTEM OR PORTION OF A SYSTEM HAS BEEN REMOVED FROM SERVICE.

PLACEMENT OF TAG

TAG REQUIRED

THE TAG SHALL BE POSTED AT EACH FIRE DEPARTMENT CONNECTION, SYSTEM CONTROL VALVE, FIRE ALARM CONTROL UNIT, FIRE ALARM ENUNCIATOR AND FIRE COMMAND CENTER INDICATING WHICH PART OF THE SYSTEM HAS BEEN REMOVED FROM SERVICE, THE CODE OFFICIAL SHALL SPECIFY WHERE THE TAG IS TO BE PLACED.

RESTORING SYSTEM TO SERVICE

WHENE SYSTEM IS RESTORED TO NORMAL WORKING ORDER, THE IMPAIRMENT COORDINATOR SHALL VERIFY THAT ALL OF THE FOLLOWING PROCEDURES HAVE BEEN IMPLEMENTED:

1. NECESSARY INSPECTIONS AND TESTS HAVE BEEN CONDUCTED TO VERIFY THAT AFFECTED SYSTEMS ARE OPERATIONAL.

2. SUPERVISORS HAVE BEEN ADVISED THAT PROTECTION HAS BEEN RESTORED.

3. FIRE DEPARTMENT HAS BEEN ADVISED THAT PROTECTION HAS BEEN RESTORED.

4. THE BUILDING OWNER/MANAGER, INSURANCE CARRIER, ALARM COMPANY, AND OTHER INVOLVED PARTIES HAVE BEEN ADVISED THAT THE PROTECTION HAS BEEN RESTORED.

5. THE IMPAIRMENT TAG HAS BEEN REMOVED.

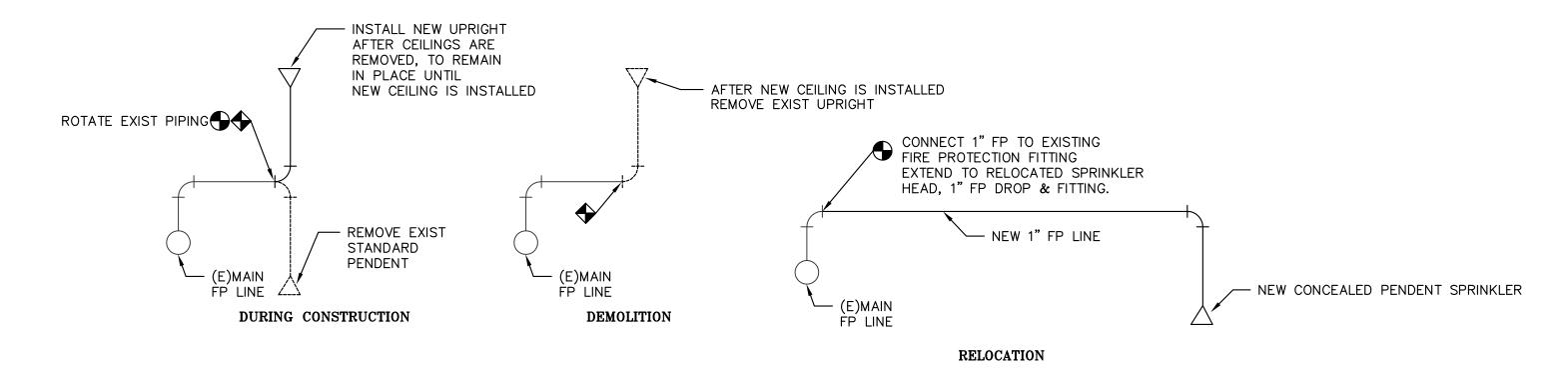
LEGEND

EXISTING PIPING TO BE RELOCATED TO ABOVE CEILINGS.

SPRINKLER HEAD LEGEND:
EXISTING UPRIGHT TO BE

REMOVED

EXISTING STANDARD SIDEWALL TO BE REMOVED



DETAIL- TYPICAL SPRINKLER DEMOLITION/RELOCATION

FP-000 NOT TO SCALE



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PRAWING TITLE:
FIRE PROTECTION
LEGEND, NOTES
AND DETAILS

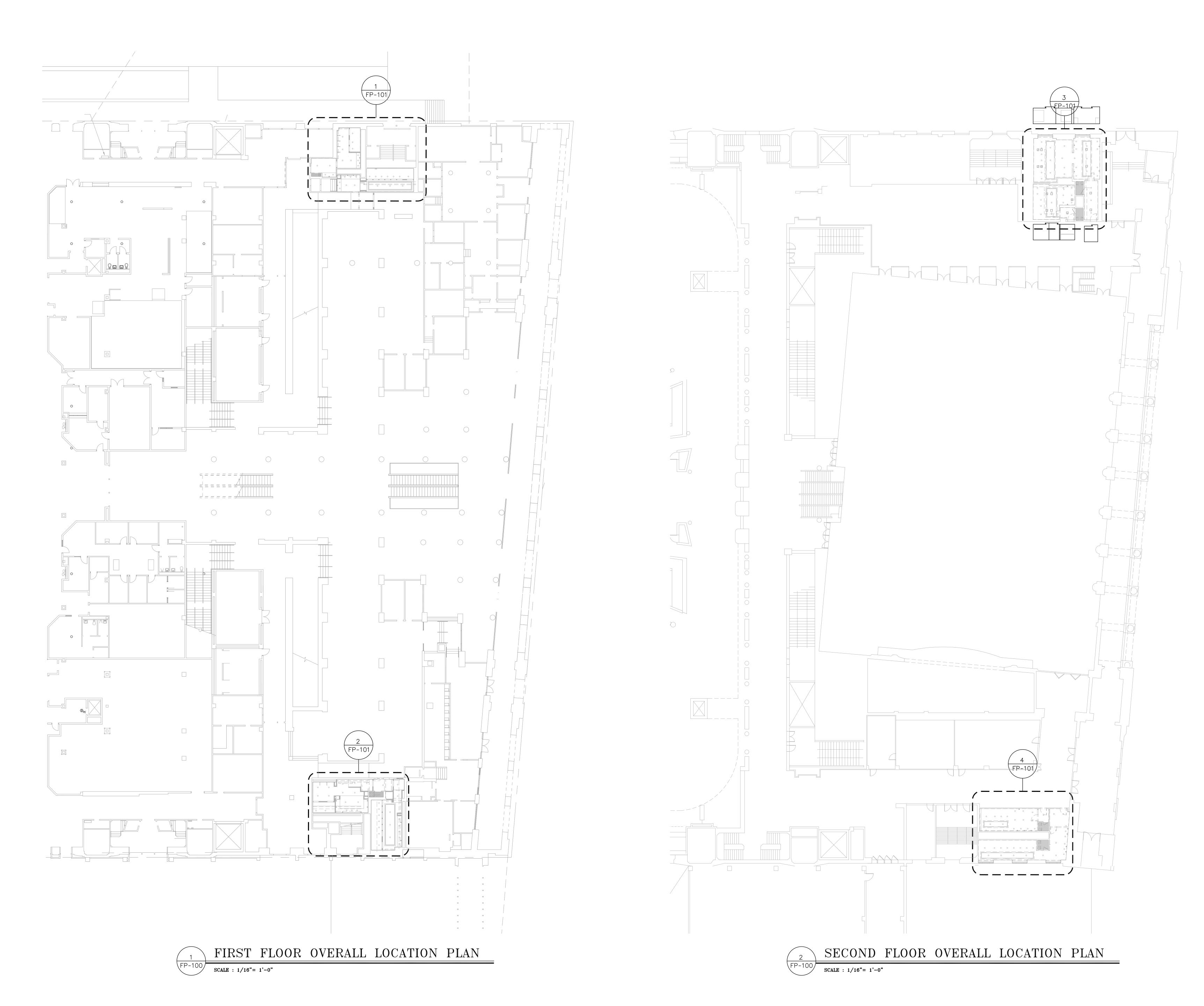
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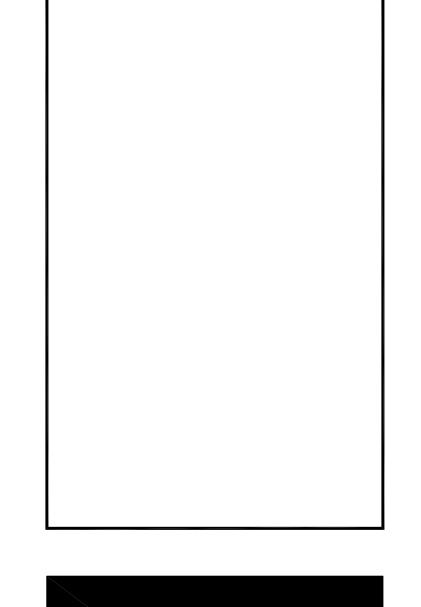
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FIRST & SECOND FLOOR
OVERALL NEW WORK
LOCATION PLANS
FIRE PROTECTION

DRAWN BY: PJL DRAWING NO.

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FIRST & SECOND FLOOR
RESTOOM
NEW WORK PLANS
FIRE PROTECTION

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ARCHITECTURE					
AC-000	COVER SHEET	•			
AC-001	MOUNTING HEIGHTS	•			
AC-100	FIRST FLOOR EGRESS PLAN	•			
AC-102	SECOND FLOOR EGRESS PLAN	•			
AD-101	FIRST FLOOR DEMOLITION PLAN	•			
AD-102	SECOND FLOOR DEMOLITION PLAN	•			
A-101	FIRST FLOOR PLAN	•			
A-102	SECOND FLOOR PLAN	•			
A-111	FIRST FLOOR FINISH PLAN	•			
A-112	SECOND FLOOR FINISH PLAN	•			
A-201	FIRST FLOOR REFLECTED CEILING PLAN	•			
A-202	SECOND FLOOR REFLECTED CEILING PLAN	•			
A-600	INTERIOR ELEVATIONS	•			
A-601	INTERIOR ELEVATIONS	•			
A-602	INTERIOR ELEVATIONS	•			
A-800	PARTITION SCHEDULE	•			
A-910	FINISH SCHEDULE	•			
A-911	FINISH SCHEDULE	•			
MECHANICAL			1		
M-001	MECHANICAL SPECIFICATIONS, LEGEND, SYMBOLS & ABBREVIATIONS	•	1		
M-002	MECHANICAL SCHEDULES & DETAILS	•	1		
MD-100	MECHANICAL DEMOLITION PLANS	•	1		
M-100	MECHANICAL BOARDWALK LEVEL NEW WORK PLANS	•	1		
M-101	MECHANICAL CONCOURSE LEVEL NEW WORK PLANS	•	1		
M-102	MECHANICAL CONCOURSE LEVEL NEW WORK PLANS	•			
			1		
PLUMBING			1		
P-000	PLUMBING LEGEND, NOTES & SCHEDULES	•	1		
PD-100	FIRST & SECOND FLOOR OVERALL DEMOLITION LOCATION PLANS	•			
PD-101	FIRST FLOOR RESTROOM DEMOLITION PLANS	•			
PD-102	SECOND FLOOR RESTROOM DEMOLITION PLANS	•	1		
P-100	FIRST & SECOND FLOOR OVERALL NEW WORK LOCATION PLANS PLUMBING	•	1		
P-101	FIRST FLOOR RESTROOM NEW WORK PLANS PLUMBING	•			
P-102	SECOND FLOOR RESTROOM NEW WORK PLANS PLUMBING	•			1
P-200	PLUMBING DETAILS & RISER DIAGRAMS	•			
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FIRE PROTECTION					
FP-000	FIRE PROTECTION LEGEND, NOTES & DETAILS	•			
FP-100	FIRST & SECOND FLOOR OVERALL NEW WORK LOCATION PLANS FIRE PROTECTION	•			
FP-101	FIRST & SECOND FLOOR RESTROOM NEW WORK PLANS FIRE PROTECTION	•			-
ELECTRICAL					
E-001	ELECTRICAL SHEET SPECIFICATIONS	•			
E-002	ELECTRICAL LEGEND & GENERAL NOTES	•			
E-100	PARTIAL ELECTRICAL FIRST FLOOR PLANS	•			
E-101	PARTIAL ELECTRICAL SECOND FLOOR PLANS	•			

 \mid THE SCOPE OF THIS PROJECT IS TO INCLUDE, BUT IS NOT LIMITED TO: THE DEMOLITION OF THE EXISTING RESTROOMS & REPLACEMENT OF FIXTURES,

ALL WORK MUST COMPLY WITH THE AFOREMENTIONED GOVERNING CODES AS OUTLINED IN THE CODE REVIEW SECTION OF THESE CONSTRUCTION

AND ELECTRICAL INSTALLATIONS, OR INCORPORATE ARCHITECTURAL DESIGN IMPROVEMENTS.

PARTITIONS, MILLWORK, FINISHES, INCLUDING PLUMBING, HEATING, & ELECTRICAL SYSTEMS. THIS PROJECT QUALIFIES AS A "RECONSTRUCTION," PER THE

THESE DOCUMENTS ARE SUBJECT TO MODIFICATION AS NECESSARY TO MEET CODE REQUIREMENTS OR TO FACILITATE STRUCTURAL, MECHANICAL, PLUMBING

GENERAL REQUIREMENTS

N.T.S.

ATLANTIC CITY BOARDWALK HALL

2301BOARDWALK ATLANTIC CITY, NJ 08401

RESTROOM RENOVATION

THIS BUILDING IS LISTED IN THE NATIONAL REGISTER OF HISTORIC PLACES, AND ALL WORK MUST COMPLY WITH THE SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES.

AND ALL APPLICABLE LOCAL CODES, ORDINANCES AND REGULATIONS HAVING JURISDICTION, AS STATED IN THE CODE ANALYSIS.
DO NOT SCALE THE DRAWINGS, USE CALCULATED DIMENSIONS ONLY. SCALES INDICATED REFER TO SHEETS PRINTED AT 30"x42" (INCHES) SIZE AND ARE NOT APPLICABLE TO REDUCED DRAWINGS.
ALL DIMENSIONS INDICATED ON THESE DRAWINGS OF EXISTING CONDITIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED TO THE SATISFACTION OF THE CONTRACTOR PRIOR TO THE WORK COMMENCING.

ALL WORK SHALL BE DEDECOMED IN STRICT ACCORDANCE WITH THE CODES OLITHINED IN THE CODE DEVIEW DORTION OF THE CONSTRUCTION DOCUMENTS

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD CHECK ALL DIMENSIONS AND FIXTURES AND NOT TO DEVIATE FROM THESE DESIGNS AND TO DETERMINE ACTUAL CONSTRUCTION DETAILS AND FABRICATE IN ACCORDANCE WITH ACCEPTABLE STANDARDS OF PRACTICE AND PROCEDURES. ANY DEVIATION FROM

THESE DESIGNS SHALL BE REPORTED TO THE ARCHITECT.

THE CONTRACTOR SHALL PROVIDE PROTECTION FOR THE GENERAL PUBLIC AND CONSTRUCTION WORKERS IN AND AROUND THE CONSTRUCTION AREA, AND FOR THE ADJACENT PROPERTY AND PERSONS. THE CONTRACTOR SHALL PROVIDE ADEQUATE BARRIERS TO EXERCISE CONTROL OF SAFE INGRESS AND EGRESS OF THE PREMISES. FIRE EXITS SHALL BE MAINTAINED AT ALL TIMES, AND AT NO TIME BE BLOCKED. THE CONTRACTOR SHALL BARRICADE ALL UNSAFE OR

FOR THE ADJACENT PROPERTY AND PERSONS. THE CONTRACTOR SHALL PROVIDE ADEQUATE BARRIERS TO EXERCISE CONTROL OF SAFE INGRESS AND EGRESS OF THE PREMISES. FIRE EXITS SHALL BE MAINTAINED AT ALL TIMES, AND AT NO TIME BE BLOCKED. THE CONTRACTOR SHALL BARRICADE ALL UNSAFE OR INJURIOUS CONDITIONS.

THE CONTRACTOR SHALL CHECK AND VERIFY THE EXISTING CONDITIONS AT THE SITE AGAINST THE DRAWINGS AND SPECIFICATIONS, AND INFORM THE

ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK.

CONTRACTOR SHALL LAY OUT ALL WALLS, FLOOR PENETRATIONS, ETC. FOR OWNER AND ARCHITECT TO REVIEW AND APPROVE PRIOR TO COMMENCEMENT OF

CONSTRUCTION.

WORK, AT TIMES, MAY BE CONDUCTED IN A BUILDING OPERATED AND OCCUPIED BY THE OWNER AND THEIR AGENTS CONCURRENTLY. ALL DEMOLITION AND CONSTRUCTION OPERATIONS WILL BE COORDINATED WITH THE OWNER PRIOR TO COMMENCEMENT. CONTRACTOR SHALL NOTIFY THE OWNER WITH A

MINIMUM FIVE (5) BUSINESS DAYS' NOTICE OF ANY DEMOLITION ACTIVITIES, UTILITY SHUT DOWNS OR DELIVERIES.

ALL EXISTING FACILITIES, UTILITIES, AND EQUIPMENT SHALL BE PROTECTED BY THE CONTRACTOR DURING THE ENTIRE PERFORMANCE OF THE WORK. AREAS DISTURBED OR DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AND/OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

ALL EXISTING FACILITIES, UTILITIES, AND EQUIPMENT SHALL BE PROTECTED BY THE CONTRACTOR DURING THE ENTIRE DURATION OF THE PROJECT. AREAS

DISTURBED OR DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED AND/OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORD KEEPING ALL EXPOSED CONDITIONS DISCOVERED DURING THE WORK AND ALL AS-BUILT CONDITIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INTEGRITY OF THE EXISTING STRUCTURE DURING THE CONSTRUCTION PERIOD AND SHALL TAKE ALL NECESSARY MEASURES TO PREVENT ANY DAMAGE TO THE STRUCTURE, ITS OCCUPANTS AND ITS CONTENTS.

THE CONTRACTOR SHALL PROVIDE ALL NECESSARY SHORING AND BRACING TO SUPPORT CONSTRUCTION UNTIL PERMANENT SUPPORT IS ERECTED FOR THEIR WORK, THE CONTRACTOR SHALL TAKE ALL NECESSARY MEASURE TO PREVENT COLLAPSE OF WALLS, SLABS, ETC.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY CLEAN UP OF CONSTRUCTION DEBRIS. ALL UNUSED MATERIAL AND DEBRIS SHALL BE LEGALLY DISPOSED OF, AWAY FROM THE PREMISES. NO ON-SITE STORAGE OR BURIAL OF DEBRIS SHALL BE ALLOWED.

CONTRACTORS AND THEIR SUBSEQUENT CONTRACTORS MUST PRESERVE THE INTEGRITY OF THE DESIGN WITHIN PHYSICAL CONDITIONS AND LIMITATIONS.

CONTRACTORS AND THEIR SUBSEQUENT CONTRACTORS MUST PRESERVE THE INTEGRITY OF THE DESIGN WITHIN PHYSICAL CONDITIONS AND LIMITATIONS.

ALL DECORATIVE MATERIALS MEETING THE REQUIREMENTS AS STATED IN THE JURISDICTIONAL CODES ARE TO BE NON-COMBUSTIBLE FOR FIRE RESISTANCE AND SHALL COMPLY WITH ALL OTHER GOVERNING CODES AND FIRE SPECIFICATIONS AT THE LOCAL AUTHORITARIAN LEVEL AND BEYOND AS OUTLINED IN THE CODE REVIEW SECTION OF THE CONSTRUCTION DOCUMENTS.

ALL ELECTRICAL OUTLETS, PLUMBING FIXTURES, MECHANICAL GRILLES, ETC. SHOWN ON THE ARCHITECTURAL DRAWINGS ARE INDICATED TO SET THE GENERAL LOCATION FOR EACH COMPONENT. THE CONTRACTOR SHALL REFER TO ALL DOCUMENTS, INCLUDING, BUT LIMITED TO, THE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR THE COMPLETE LAYOUT OF EACH RESPECTIVE ITEM.

ALL NEW PIPING AND ELECTRICAL CONDUITS SHALL BE CONCEALED WITHIN NEW CONSTRUCTION UNLESS OTHERWISE NOTED.

ALL EXPOSED WELDS TO BE GROUND AND MADE SMOOTH.

THROUGHOUT THE DURATION OF THE WORK, THE PLUMBING CONTRACTOR SHALL CAP EXISTING SANITARY LINES TO BE RE-UTILIZED.

THE INDICATION OF SUBSTRATE AND THE CONFIGURATION OF CONCEALED ITEMS AND MATERIALS IS FOR GENERAL REFERENCE ONLY. THE CONTRACTOR SHALL NOT BE ENTITLED TO ADDITIONAL COMPENSATION FOR ANY VARIANCE BETWEEN ACTUAL EXISTING CONDITIONS AND THAT REPRESENTED ON THE DRAWINGS.

WORK NOT INDICATED ON A PART OF THE DRAWINGS, BUT REASONABLY IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES, SHALL BE

PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

MINOR DETAILS OR INCIDENTAL ITEMS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR A PROPER AND COMPLETE INSTALLATION OF ANY PART OF THE WORK SHALL BE INCLUDED AS REQUIRED, AS IF THEY WERE INDICATED ON THE DRAWINGS.

ALL ITEMS LABELED "EXISTING" ARE EXISTING "TO REMAIN" UNLESS NOTED OTHERWISE. ITEMS NOT LABELED "EXISTING" ARE TO BE PROVIDED.

THE TERM "PROVIDE" SHALL MEAN FURNISH AND INSTALL, AS IT IS USED THROUGHOUT THE NOTES ON THE DRAWINGS AND IN THE SPECIFICATIONS.

THE CONTRACTOR SHALL PROVIDE SEALANT JOINTS BETWEEN ALL DISSIMILAR BUILDING MATERIALS, UNLESS OTHERWISE NOTED. REFER TO SPECIFICATIONS FOR SCHEDULE OF SEALANTS.

DETAILS AND SECTIONS ON THE DRAWINGS ARE SHOWN AT SPECIFIC LOCATIONS, AND ARE INTENDED TO SHOW GENERAL REQUIREMENTS THROUGHOUT.

DETAILS NOTED AS "TYPICAL" IMPLY ALL SIMILAR CONDITIONS ARE TO BE TREATED AS SUCH.

ALL FIRE-RATED CONSTRUCTION SHALL MEET THE FIRE-RESISTIVE RATINGS AND OTHER REQUIREMENTS OF LOCAL LAWS, ORDINANCES, REGULATIONS AND AUTHORITIES HAVING JURISDICTION AS OUTLINED IN THE CODE REVIEW SECTION OF THE CONSTRUCTION DOCUMENTS.

ALL PENETRATIONS THROUGH FIRE-RATED CONSTRUCTION SHALL RECEIVE FIRE STOPPING, FIRE DAMPERS, FIRE SAFEING, ETC. TO MAINTAIN THE FIRE-RATED

CONSTRUCTION. SUCH PENETRATIONS SHALL INCLUDE, BUT NOT BE LIMITED TO, TELEPHONE, DATA, LIGHT FIXTURES, JUNCTION BOXES, DUPLEX RECEPTACLES, FIRE ALARM SYSTEMS, ROOM ACCESSORIES, ETC.. THE RATING MUST CONTINUE AROUND AND BEHIND THE PENETRATION SO AS TO INSURE THE INTEGRITY OF RATED ASSEMBLY.

WHERE SURFACE DOOR CLOSURE ARE REQUIRED, THE CONTRACTOR SHALL ALLOW A MINIMUM OF SIX INCHES CLEAR TO ANY PARTITION ON THE HINGE SIDE OF

THE DOOR, UNLESS OTHERWISE INDICATED.

ALL PAINTS ARE TO MEET CLASS 'A' FIRE RATING OVER NON-COMBUSTIBLE SURFACES. PAINTS ARE TO CONFORM TO ALL ENVIRONMENTAL CODES.

ALL REQUIRED FIRE TREATED MATERIALS SHALL COMPLY WITH ALL GOVERNING CODES AND FIRE SPECIFICATIONS AT THE LOCAL AUTHORITARIAN LEVEL AND BEYOND AS OUTLINED IN THE CODE REVIEW SECTION OF THE CONSTRUCTION DOCUMENTS.

ALL WOOD USED SHALL BE FIRE-RETARDANT LUMBER AND SHALL COMPLY WITH ALL GOVERNING CODES AND FIRE SPECIFICATIONS AT THE LOCAL AUTHORITARIAN LEVEL AND BEYOND AS OUTLINED IN THE CODE REVIEW SECTION OF THE CONSTRUCTION DOCUMENTS.

ALL LAMINATED SURFACES SHALL MEET STANDARDS CLASS I, 0-25 FLAME SPREAD AND SMOKE DEVELOPED (PER ASTM AND UL TUNNEL TEST METHOD).

LAY-IN ACOUSTICAL TILES TO MEET FLAME SPREAD 0-25 (ASTM E84) CLASS 'A' (FED. SPEC. SS-S118B) 25 OR UNDER (UL LABEL).

PROVIDE WALL COVERINGS THAT BEAR THE UL LABEL, INDICATING THE FOLLOWING FIRE PERFORMANCE CHARACTERISTICS WHEN TESTED IN ACCORDANCE

WITH ASTM E84: FLAME SPREAD, CLASS 1 (A) 0-25, SMOKE DEVELOPED NOT MORE THAN 450

ALL CARPET TO MEET FLAMMABILITY REQUIREMENTS OF ASTM E648 (NFPA-253 RADIANT PANEL TEST (CLASS 11, 75 OR LESS). CLASS 1, 45 WATTS PER CM2.

ALL CARPET TO MEET FLAMMABILITY REQUIREMENTS OF ASTM E648 (NFPA-253 RADIANT PANEL TEST (CLASS 11, 75 OR LESS). CLASS 1, 45 WATTS PER CM2.

MUST PASS DOC-FE-I-70 PILL TEST. SMOKE DEVELOPMENT RATING SHALL BE LESS THAN 540 IN CONFORMANCE TO ASTM E84

GROUT MIXTURES SHALL CONFORM TO THE REQUIREMENTS OF CODES AS OUTLINED IN THE CODE REVIEW SECTION OF THE CONSTRUCTION DOCUMENTS AND

SHALL CONFORM TO ASTM C476.

MORTAR MIXTURES SHALL CONFORM TO THE REQUIREMENTS OF CODES AS OUTLINED IN THE CODE REVIEW SECTION OF THE CONSTRUCTION DOCUMENTS AND SHALL CONFORM TO ASTM STANDARDS.

SHOP DRAWINGS REQUIRED; IF NOT RECEIVED, SUBSEQUENT CONTRACTOR WILL ASSUME TOTAL RESPONSIBILITY FOR ITEMS' SIZE, PROPER FIT, MATERIALS AND ALL CODE COMPLIANCES.

TEN (10) WORKING DAYS ARE REQUIRED BY THE ARCHITECT FOR SHOP DRAWING REVIEW. TEN (10) WORKING DAYS ARE REQUIRED FOR ELECTRICAL, MECHANICAL, PLUMBING, ETC., ENGINEERING REVIEW.

ATTENTION MILLWORKER, CONTRACTOR AND OR SUBSEQUENT CONTRACTORS: ANY PENETRATIONS INTO RATED WALL SYSTEMS FOR TELEPHONE, DATA, LIGHT FIXTURES, JUNCTION BOXES, DUPLEX RECEPTACLES, FIRE ALARM SYSTEMS OR OTHER ROOM ACCESSORIES MUST HAVE A FIRE-RATED GYPSUM WALL BOARD OR SHAFT WALL ENCLOSURE PER ALL APPLICABLE CODES. THE RATING MUST CONTINUE AROUND AND BEHIND COMPLETE PENETRATION SO AS TO INSURE THE INTEGRITY OF THE RATED ASSEMBLY.

DRAWINGS AND SECTIONS OF TRIM AND MOULDING DETAILS ARE FOR DESIGN AND LAYOUT PURPOSES BASED ON ACTUAL TRIM AND BEST AVAILABLE INFORMATION. THEY ARE NOT INTENDED TO ACT OR TAKE PLACE OF WORKING SHOP DRAWINGS FROM A MILLWORK CONTRACTOR.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORD KEEPING ALL EXPOSED CONDITIONS DISCOVERED DURING THE WORK AND ALL AS-BUILT CONDITIONS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR RECORD KEEPING ALL EXPOSED CONDITIONS DISCOVERED DURING THE WORK AND ALL AS-BUILT CONDITION
THE CONTRACTOR SHALL CHECK AND VERIFY THE EXISTING CONDITIONS AT THE SITE AGAINST THE DRAWINGS AND SPECIFICATIONS, AND INFORM THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK.

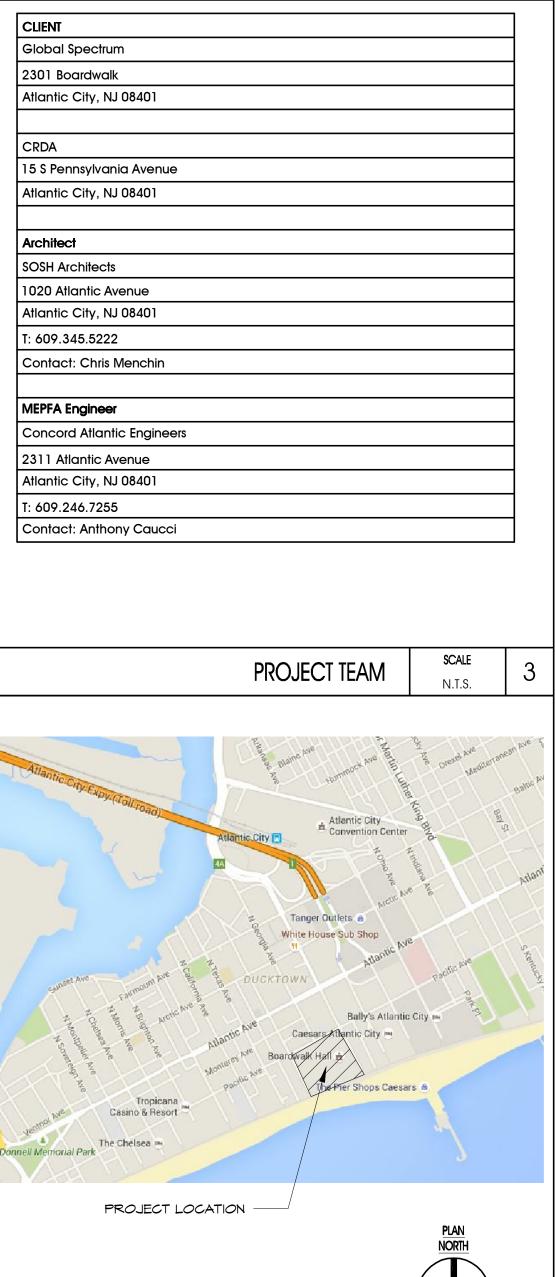
IF THE CONTRACTOR FINDS CONFLICTS BETWEEN THE DRAWINGS AND THE SPECIFICATIONS OR BETWEEN TRADES THE MORE STRINGENT WILL PREVAIL.

NEW JERSEY ADMINISTRATIVE CODE - REHAB SUBCODE	NJAC 5:23-6
INTERNATIONAL BUILDING CODE - NEW JERSEY EDITION	2015
NATIONAL STANDARD PLUMBING CODE	2015
NATIONAL ELECTRICAL CODE	2014
ASHRAE	90.1-2013
INTERNATIONAL MECHANICAL CODE	2015
INTERNATIONAL FUEL GAS CODE	2015
INTERNATIONAL ENERGY CONSERVATION CODE	2013
BARRIER-FREE SUBCODE	NJAC 5:23-7
ICC/ANSI	A117.1-2009
NATIONAL FIRE PROTECTION ASSOCIATION	2013
THE WORK IN THIS PROJECT, AS DEFINED BY CHAPTER 5.23-6 "REHABILITATION SUBCODE" OF CONSTRUCTION CODE OF THE STATE OF NEW JERSEY, QUALIFIES AS A RECONSTRUCTION. THE PHASE INCLUDES THE SELECTIVE DEMOLITION OF EXTERIOR WALLS, INTERIOR WALLS, FLOOF FINISHES, EQUIPMENT, FIXTURES, DUCTWORK & PLUMBING. BUILDING SUMMARY	HE WORK IN THIS
BUILDING SUIVIIVIART	
USE GROUP	A-4
CONSTRUCTION TYPE	1B
SPRINKLERS	YES
FIRST FLOOR AREA OF WORK	1,602 SF
SECOND FLOOR AREA OF WORK	1,858 SF
TOTAL GROSS AREA OF WORK	3,460 SF
OCCUPANT LOAD	1 -,
	Г
REF - INTERNATIONAL BUILDING CODE - NEW JERSEY EDITION	2015 TABLE 1004.1.1
	OCCUPANTS
AREA OF WORK	3,460
AREA OF WORK	J J,+UU
NOTE: REFER TO EGRESS PLANS FOR MORE INFORMATION FIDE DECICEANIOE DATING DECILIDES AFAITE	
FIRE RESISTANCE RATING REQUIREMENTS	
REF - INTERNATIONAL BUILDING CODE - NEW JERSEY EDITION	2015 TABLE
PRIMARY STRUCTURAL FRAME	601 &602 2 HR
	Z FIK
BEARING WALLS	
EXTERIOR	2 HR
INTERIOR	2 HR
NON BEARING WALLS & PARTITIONS	
EXTERIOR	X > 30 = 0 HR
INTERIOR	2 HR
FLOOR CONSTRUCTION & SECONDARY MEMBERS	2 HR
ROOF CONSTRUCTION & SECONDARY MEMBERS	1 HR
INTERIOR WALL & CEILING FINISH REQUIR	EMENTS
REF - INTERNATIONAL BUILDING CODE - NEW JERSEY EDITION	2015 TABLE 803.9 (SPRINKLERE D)
EXIT ENCLOSURES AND EXIT PASSAGEWAYS	CLASS B
CORRIDORS	CLASS C
DOOMO AND ENGLOSED ODAGEG	CLASS C
ROOMS AND ENCLOSED SPACES	
PLUMBING FIXTURE CALCULATION	
	2015 TABLE
PLUMBING FIXTURE CALCULATION	
PLUMBING FIXTURE CALCULATION REF - NATIONAL STANDARD PLUMBING CODE WATER CLOSETS PROVIDED	2015 TABLE 7.21.1
PLUMBING FIXTURE CALCULATION REF - NATIONAL STANDARD PLUMBING CODE WATER CLOSETS PROVIDED MEN	2015 TABLE 7.21.1
PLUMBING FIXTURE CALCULATION REF - NATIONAL STANDARD PLUMBING CODE WATER CLOSETS PROVIDED MEN WOMEN	2015 TABLE 7.21.1
PLUMBING FIXTURE CALCULATION REF - NATIONAL STANDARD PLUMBING CODE WATER CLOSETS PROVIDED MEN WOMEN LAVATORIES PROVIDED	2015 TABLE 7.21.1
PLUMBING FIXTURE CALCULATION REF - NATIONAL STANDARD PLUMBING CODE WATER CLOSETS PROVIDED MEN WOMEN LAVATORIES PROVIDED MEN	2015 TABLE 7.21.1 24 32
PLUMBING FIXTURE CALCULATION REF - NATIONAL STANDARD PLUMBING CODE WATER CLOSETS PROVIDED MEN WOMEN LAVATORIES PROVIDED MEN WOMEN	2015 TABLE 7.21.1 24 32 20 24
PLUMBING FIXTURE CALCULATION REF - NATIONAL STANDARD PLUMBING CODE WATER CLOSETS PROVIDED MEN WOMEN LAVATORIES PROVIDED MEN WOMEN DRINKING FOUNTAIN NOT PROVIDED - EXCEPTIONS WHEN DRINKING WATER SERVICE IS AVAILABLE.	2015 TABLE 7.21.1 24 32 20 24
PLUMBING FIXTURE CALCULATION REF - NATIONAL STANDARD PLUMBING CODE WATER CLOSETS PROVIDED MEN WOMEN LAVATORIES PROVIDED MEN WOMEN	2015 TABLE 7.21.1 24 32 20 24
PLUMBING FIXTURE CALCULATION REF - NATIONAL STANDARD PLUMBING CODE WATER CLOSETS PROVIDED MEN WOMEN LAVATORIES PROVIDED MEN WOMEN DRINKING FOUNTAIN NOT PROVIDED - EXCEPTIONS WHEN DRINKING WATER SERVICE IS AVAIL PORTABLE FIRE EXTINGUISHERS REF - INTERNATIONAL BUILDING CODE - NEW JERSEY EDITION	2015 TABLE 7.21.1 24 32 20 24
PLUMBING FIXTURE CALCULATION REF - NATIONAL STANDARD PLUMBING CODE WATER CLOSETS PROVIDED MEN WOMEN LAVATORIES PROVIDED MEN WOMEN DRINKING FOUNTAIN NOT PROVIDED - EXCEPTIONS WHEN DRINKING WATER SERVICE IS AVAIL PORTABLE FIRE EXTINGUISHERS	2015 TABLE 7.21.1 24 32 20 24 ABLE
PLUMBING FIXTURE CALCULATION REF - NATIONAL STANDARD PLUMBING CODE WATER CLOSETS PROVIDED MEN WOMEN LAVATORIES PROVIDED MEN WOMEN DRINKING FOUNTAIN NOT PROVIDED - EXCEPTIONS WHEN DRINKING WATER SERVICE IS AVAIL PORTABLE FIRE EXTINGUISHERS REF - INTERNATIONAL BUILDING CODE - NEW JERSEY EDITION	2015 TABLE 7.21.1 24 32 20 24 ABLE
PLUMBING FIXTURE CALCULATION REF - NATIONAL STANDARD PLUMBING CODE WATER CLOSETS PROVIDED MEN WOMEN LAVATORIES PROVIDED MEN WOMEN DRINKING FOUNTAIN NOT PROVIDED - EXCEPTIONS WHEN DRINKING WATER SERVICE IS AVAIL PORTABLE FIRE EXTINGUISHERS REF - INTERNATIONAL BUILDING CODE - NEW JERSEY EDITION LIGHT (LOW) HAZARD OCCUPANCY	2015 TABLE 7.21.1 24 32 20 24 ABLE 2015 TABLE 906.3(1)
PLUMBING FIXTURE CALCULATION REF - NATIONAL STANDARD PLUMBING CODE WATER CLOSETS PROVIDED MEN WOMEN LAVATORIES PROVIDED MEN WOMEN DRINKING FOUNTAIN NOT PROVIDED - EXCEPTIONS WHEN DRINKING WATER SERVICE IS AVAILABLE FIRE EXTINGUISHERS REF - INTERNATIONAL BUILDING CODE - NEW JERSEY EDITION LIGHT (LOW) HAZARD OCCUPANCY MINIMUM RATED SINGLE EXTINGUISHER	2015 TABLE 7.21.1 24 32 20 24 ABLE 2015 TABLE 906.3(1)

c. TWO WATER-TYPE EXTINGUISHERS EACH WITH A 1-A RATING SHALL BE DEEMED THE EQUIPVALENT OF ONE 2-A

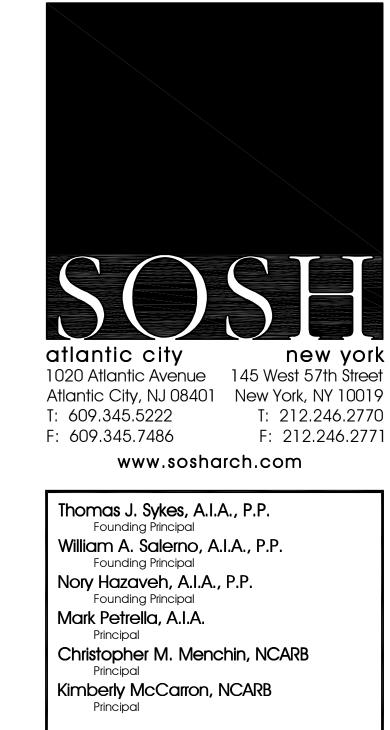
CODE REVIEW

EXTINGUISHER FOR LIGHT (LOW) HAZARD OCCUPANCIES



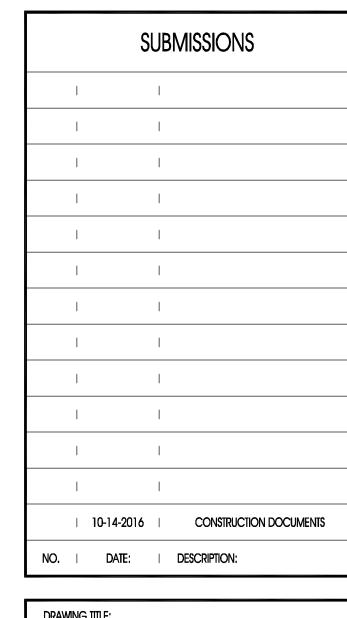
PROJECT LOCATION

LOCATION MAP





www.sosharch.com



DRAWING TITLE:		
COVER	SHEE	Γ
DRAWN BY:	SB	DRAWING NO.
REVIEWED BY:	CM	
PROJECT NO.		L AC-000
l 15243.00).001	