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CHILDREN'S LIBRARY ACOUSTICAL TILE CEILING AND PIPE INSULATION REPLACEMENT

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3	04/03/24	ISSUE FOR RE-BID
2	03/04/24	ISSUE FOR BID
1	12/06/23	ISSUE FOR CLIENT REVIEW
ISSUE NO.	ISSUE DATE	DESCRIPTION

LOCATION MAP

LIST OF DRAWINGS

ARCHITECTURAL DRAWINGS

A000 COVER SHEET

A100 REFLECTED CEILING **DEMOLITION PLAN LEGEND & NOTES**

REFLECTED CEILING PLAN & CEILING DETAILS **LEGEND & NOTES**

MEP ENGINEERING DRAWINGS

M-001 MECHANICAL SYMBOLS, ABBREVIATIONS, **NOTES & SPECIFICATIONS**

M-002 MECHANICAL SPECIFICATIONS M-101 MECHANICAL LOWER LEVEL DEMOLITION PLAN

M-201 MECHANICAL LOWER LEVEL NEW WORK PLAN

M-701 MECHANICAL DETAILS

E-001 ELECTRICAL SYMBOLS, ABBREVIATIONS, **NOTES & SPECIFICATIONS**

E-002 ELECTRICAL SPECIFICATIONS

E-003 ELECTRICAL SPECIFICATIONS

E-101 ELECTRICAL LOWER LEVEL DEMOLITION PLAN

E-201 ELECTRICAL LOWER NEW WORK CEILING PLAN

E-601 ELECTRICAL LIGHTING FIXTURE SCHEDULE

E-701 ELECTRICAL DETAILS

ABBREVIATIONS

ACT - ACOUSTICAL CEILING TILE AFC - ABOVE FINISHED COUNTER

AFF - ABOVE FINISHED FLOOR

BLDG. - BUILDING CLG - CEILING DWG(S) - DRAWING(S)

EQ - EQUAL EXIST/EXT'G - EXISTING

FIN - FINISH GWB - GYPSUM WALL BOARD HVAC - HEATING, VENTILATING, AND

AIR CONDITIONING MFCTR - MANUFACTURER

MECH - MECHANICAL NYS - NEW YORK STATE O.C. - ON CENTER PT - PAINT

REQ' D - REQUIRED

SEFL - SEE ELEVATION FOR LOCATION STD(S) - STANDARD(S) TYP. - TYPICAL

U.O.N. - UNLESS OTHERWISE NOTED

REQ' MNTS - REQUIREMENTS

AREA OF WORK

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CHILDREN'S LIBRARY ACOUSTICAL TILE CEILING AND PIPE INSULATION **REPLACEMENT**

COVER SHEET

2639-00 SCALE: PROJECT NO.:

DRAWING NO.:

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NOTES BUILDING MANAGEMENT AND COORDINATION

REVIEW THE REQUIREMENTS OF THE BUILDING MANAGEMENT TO DETERMINE THE USE OF BUILDING ELEVATORS, LOADING DOCKS, RAMPS, ETC., AND INCORPORATE RELATED CHARGES IN THE COST OF THE

BEFORE STARTING ANY WORK TO EXISTING UTILITIES. WHICH WILL DISRUPT SERVICES, GIVE 48 HOURS NOTICE TO THE ARCHITECT AND THE BUILDING MANAGEMENT AND OBTAIN THEIR APPROVAL IN WRITING BEFORE PROCEEDING WITH THIS PHASE OF WORK.

WORK GENERATING LOUD NOISE THAT WILL BE DISRUPTIVE TO THE TENANTS OF THE BUILDING SHALL BE PERFORMED ON OFF HOURS. COORDINATE WITH BUILDING MANAGEMENT AND ARCHITECT. REVIEW AND COMPLY WITH BUILDING MANAGEMENT, UNION AND/OR SUBCONTRACTOR REQUIREMENTS.

PLACEMENT OF PERMIT - THE BUILDING PERMIT OR COPY SHALL BE KEPT ON THE SITE OF THE WORK UNTIL THE COMPLETION OF THE PROJECT.

REVIEW INSPECTION REQUIREMENTS WITH THE LOCAL JURISDICTION AND COMPLY WITH ALL INSPECTION REQUIREMENTS.

SCOPE OF WORK COVERED ON THE DRAWINGS

ARCHITECT'S ATTENTION FOR REVIEW.

THE CONTRACT DOCUMENTS HAVE BEEN PREPARED TO SHOW THE GENERAL CONFIGURATION OF THE COMPONENTS OF THIS PROJECT. THE PLANS DO NOT DETAIL, NOR ARE THEY INTENDED TO DETAIL, QUANTITY OR QUALITY OF MATERIALS, NAILING PROCEDURES OR DETAILED ASSEMBLY INSPECTIONS. DRAWINGS SHOW WORK THAT IS INTENDED TO BE COMPLETE FINISHED, TESTED, GUARANTEED AND READY FOR OCCUPANCY. FOLLOW THE INTENT OF THE DRAWINGS. MAKE NO CHANGES WITHOUT THE APPROVAL

E DRAWINGS SHALL NOT BE USED BY PERSONS OTHER THAN EXPERIENCED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE REQUIRED CRAFTS.

INSTALLATION OF EQUIPMENT, MATERIAL, FINISHES AND OTHER ELEMENTS SHALL BE PER THE MANUFACTURER'S INSTRUCTIONS. CONFLICTING MANUFACTURER INSTRUCTIONS SHALL BE BROUGHT TO THE

ANY WORK ABOVE AND BEYOND THE AGREEMENT SHALL NOT PROCEED WITHOUT THE PRIOR WRITTEN APPROVAL FROM THE CLIENT

BE FAMILIAR WITH TERMS AND CONDITIONS ON THE DRAWINGS. INFORM ONESELF WITH THE CONDITIONS UNDER WHICH WORK WILL BE PERFORMED. EMPLOY WORKMEN AND METHODS THAT WILL NOT CAUSE INTERRUPTION OR INTERFERENCE WITH THE EXECUTION OF THE WORK.

PROTECT SURROUNDING FROM AREAS POTENTIAL DAMAGE FROM CONSTRUCTION. PROVIDE A PROTECTION PLAN FOR REVIEW AND APPROVAL BY THE BUILDING REPRESENTATIVE AND ARCHITECT.

. COVERING OF THE FLOOR AND WALLS IN AREAS WHERE MATERIALS OR WORKERS ACCESS THE SITE. P. PROTECTION OF OCCUPIED AREAS FROM DUST AND ODORS. 3. PROTECTION OF HVAC SYSTEMS FROM DUST AND MATERIAL ENTERING THE SYSTEM. . PROTECTION OF PUBLIC AREAS WITH PHYSICAL AND VISUAL BARRICADES OR TEMPORARY WALLS TO ISOLATE THE WORK AREA FROM ADJOINING AREAS AND TO ENSURE SAFE OCCUPANCY OF ADJOINING

<u>DEMOLITION NOTES:</u>

PROVIDE TEMPORARY LIGHTING ACCORDING TO CODE REQUIREMENTS.

DEMOLITION SHALL INCLUDE BUT NOT BE LIMITED TO THE EXISTING CEILING, FIXTURES, WALLS, PARTITIONS, DOORS, BUILT IN FURNITURE, EQUIPMENT, WIRING, PLUMBING, EXISTING THERMOSTATS, DUCTS, TELEPHONES, PLUMBING LINES OR FIRE SPRINKLER SYSTEM. WIRING SHALL BE REMOVED PACK TO PANELS

ACTIVE WIRING, PLUMBING OR OTHER BUILDING SYSTEMS PASSING THROUGH THE SPACE SHALL BE MAINTAINED IN OPERATION UNTIL A COORDINATED AND SCHEDULED RELOCATION.

EXISTING EQUIPMENT, DOORS, BUCKS, HARDWARE AND OTHER REUSABLE ELEMENTS, REMOVED SHALL NOT BE REUSED BUT SHALL BE WIPED CLEAN AND GIVEN TO THE CLIENT FOR STORAGE.

KEEP THE PREMISES FREE FROM ACCUMULATED REFUSE. CONSTRUCTION DEBRIS SHALL NOT BE MIXED WITH BUILDING OCCUPANT'S REFUSE.

AS REMOVAL WORK PROGRESSES, DEBRIS AND SURPLUS MATERIAL SHALL BE REMOVED FROM THE BUILDING. EACH AREA SHALL BE LEFT IN A BROOM CLEAN CONDITION DAILY. EMPLOY RUBBER WHEELED CARTS TO REMOVE DEBRIS FROM THE BUILDING. PROTECT EXISTING

REMOVE EXISTING TELEPHONE AND POWER WIRING BACK TO PANEL FROM OUTLETS REMOVED.

REMOVE EXISTING FLOORING INCLUDING CARPETING DOWN TO CONCRETE FLOOR DECK. SCRAPE FLOOR CLEAN OF ANY REMAINING FLOORING MATERIALS AND FLOORING INSTALLATION. FLOOR SURFACES SHALL BE MADE READY TO ACCEPT NEW FLOORING.

REMOVE SURFACE MOUNTED ELECTRICAL OUTLETS AND ASSOCIATED CONDUIT AND WIRING.

REMOVE EXISTING PIPE AND CONDUIT STUBS IN EXISTING FLOORS.

PROTECT ADJACENT BUILDING AREAS AND PROPERTIES. ANY DAMAGE DONE TO ADJACENT AREAS SHALL MATERIALS THAT ARE REMOVED OR DEMOLISHED SHALL BE DISPOSED OFF SITE ACCORDING TO LOCAL

CONSTRUCTION MATERIAL DISPOSAL REGULATIONS. PROVIDE CARTING AND REMOVE EXISTING DOORS AND FRAMES TO ALLOW INSTALLATION OF NEW DOORS.

DOORS AND OTHER MATERIALS INTENDED FOR REUSE ELSEWHERE SHALL BE PROPERLY REMOVED AND

REMOVE EXISTING CEILING, CEILING FIXTURES, AND ALL ATTENDANT COMPONENTS BACK TO CONCRETE

PRECAUTIONS DURING ERECTION

CONSTRUCTION FROM DAMAGE

ADEQUATE CONSTRUCTION BRACING AND SHORING AND THE MEANS AND METHODS OF CONSTRUCTION ARE THE CONTRACTOR'S RESPONSIBILITY. EMPLOY A LICENSED ENGINEER WHEN REQUIRED BY AHJ.

TEMPORARY BRACING AND SHORING SHALL BE USED WHENEVER NECESSARY TO RESIST ANY LOADS WHICH MAY BE APPLIED DURING ERECTION. SUCH BRACING SHALL REMAIN IN PLACE AS LONG AS NECESSARY

AS ERECTION PROGRESSES, WORK SHALL BE SECURELY BRACED, BOLTED, OR WELDED, TO RESIST DEAD

LOADS, WIND, AND ERECTION STRESSES. CONSTRUCTION EQUIPMENT AND MATERIALS SHALL BE STORED AND PLACED SO AS NOT TO ENDANGER THE PUBLIC, WORKERS AND/OR ADJOINING PROPERTY FOR THE DURATION OF THE CONSTRUCTION PROJECT.

TIMELY COMPLETION OF WORK

COMPLETE THE PROJECT WITH IN THE AGREED TIME SCHEDULE. IF THE PROJECT IS NOT PROGRESSING OR COMPLETED PER THE TIME SCHEDULE FOR ANY REASON, THE CLIENT MAY TAKE ACTIONS THEY DEEM APPROPRIATE TO COMPLETE THE WORK.

SIGNIFICANT DEPARTURES FROM CONTRACT DOCUMENTS SHALL BE DOCUMENTED BY THE CONTRACTOR ON FIELD RECORD DRAWINGS (AS BUILT) ON PRINTS AT THE CONTRACTOR'S EXPENSE.

GENERAL NOTES

PRECAUTIONS ABOVE.

BEFORE STARTING WORK, PREPARE AND SUBMIT A SCHEDULE SHOWING THE COMMENCEMENT, SEQUENCE AND COMPLETION DATES OF WORK.

WORK SHALL CONFORM TO CITY OF WHITE PLAINS, ZONING ORDINANCES, CITY OF WHITE PLAINS AND NEW YORK STATE BUILDING CODE REQUIREMENTS, APPLICABLE NEW YORK STATE ENERGY CONSERVATION CODE AND OTHER AGENCY REQUIREMENTS HAVING JURISDICTION.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES,

VERIFY FIELD CONDITIONS AND REPORT DISCREPANCIES TO THE ARCHITECT BEFORE COMMENCING WORK. DISCREPANCIES BETWEEN THE DRAWINGS AND/OR FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE WORK IS COMMENCED.

VERIFY ALL FIELD DIMENSIONS BEFORE ELEMENTS FABRICATED OFF SITE ARE ORDERED OR MANUFACTURED. FIELD DIMENSIONS ARE THOSE DIMENSIONS THAT ARE CRITICAL TO THE DESIGN AND/OR LIMITING THE INSTALLATION OF OFFSITE FABRICATED COMPONENTS. SHOP DIMENSIONS ARE THOSE DIMENSIONS DETERMINED BY THE MANUFACTURER.

PROVIDE AND PAY FOR LABOR MATERIALS, EQUIPMENT, UTILITIES AND OTHER SERVICES NECESSARY FOR A FIRST CLASS, FULLY FUNCTIONING AND COMPLETE PROJECT INSTALLATION. BRACE AND SHORE WALLS ADEQUATELY UNTIL PERMANENT FRAMING AND SUPPORTS ARE IN PLACE. SEE

COORDINATE WORK WITH THE WORK OF ALL OTHER SUBCONTRACTORS INCLUDING THE TELEPHONE COMPANY AND ALL OTHER CLIENT SUBCONTRACTORS

MECHANICAL AND ELECTRICAL SHUTDOWNS OR CONNECTIONS MUST BE MADE AT A TIME CONVENIENT TO THE OWNER, EVEN IF THESE SHUTDOWNS AND CONNECTIONS ARE MADE AFTER NORMAL WORKING HOURS.

PROTECT SURROUNDING AREAS AND AREAS TRAVELED BY WORKERS TO INSURE THAT NO DAMAGE OCCURS TO SURROUNDING CONSTRUCTION OR PROPERTIES. PROTECTION SHALL MEET THE APPROVAL OF THE ARCHITECT AND BUILDING MANAGEMENT.

ACCESS PANELS, DOORS, GRILLES, CONTROLS, AND OTHER CONTROL POINTS SHALL BE MAINTAINED. RELOCATION OR REWORKING OF THESE ITEMS IS SUBJECT TO APPROVAL OF THE ARCHITECT. PROVIDE AND INSTALL ALL NEW ACCESS PANELS, DOORS, GRILLES, CONTROLS AND CONTROL POINTS, AND FRAMING AND FASTENERS REQUIRED FOR ACCESS OF ALL NEW AND EXISTING CONSTRUCTION.

PROVIDE ESCUTCHEON PLATES AT ALL PIPE PENETRATIONS. VISIBLE ESCUTCHEON IN FINAL SPACE SHALL BE CHROME PLATED OR AS OTHERWISE APPROVED BY THE ARCHITECT.

ARCHITECTURAL NOTES:

WALLS SHALL BE TYPICAL PARTITION 4/A-300 UNLESS OTHERWISE NOTED.

CONCEALED SPACES WITHIN PARTITIONS, WALLS, FLOORS, ROOFS, STAIRS, FURRING, PIPE SPACES, COLUMN ENCLOSURES, AND OTHER ELEMENTS THAT CAN PERMIT PASSAGE OF FLAME, SMOKE, FUMES, OR HOT GASES FROM ONE FLOOR TO ANOTHER, OR FROM ONE CONCEALED AREA TO ANOTHER, SHALL BE FIRE-STOPPED TO FORM A DRAFT BARRIER OR SHALL BE FILLED WITH NONCOMBUSTIBLE MATERIAL. FIRE STOPPING SHALL BE AS PERMITTED BY NYS BUILDING CODE AND AHJ.

DUCTS AND PIPES ENCLOSED IN CONSTRUCTION, BUT NOT IN SHAFTS, SHALL BE FIRE-STOPPED AT EVERY

INFILL SLAB OPENINGS AND OTHER UNUSED PENETRATIONS. AS PERMITTED BY NEW YORK STATE BUILDING CODE AND AHJ FIRE RATED MATERIAL SHALL BE USED TO PROVIDE OR MAINTAIN FIRE RATINGS.

PATCH AND REPAIR FIRE RATED WALLS IN DISREPAIR. OR OTHERWISE AFFECTED BY THE WORK ESPECIALLY WHERE PENETRATIONS ARE NOT TIGHTLY FITTED ABOVE THE CEILINGS. PROVIDE FIRE RATED DAMPERS OR TRANSFER OPENINGS WHERE OPENINGS ARE REQUIRED.

DIMENSIONS ARE SHOWN FROM GWB FINISH TO GWB FINISH UNLESS OTHERWISE NOTED.

MARK PARTITION LOCATIONS ON THE FLOOR FOR APPROVAL BY THE ARCHITECT BEFORE PROCEEDING WITH THE CONSTRUCTION. NOTIFY THE ARCHITECT 48 HOURS BEFORE STRIKING PARTITIONS AND OBTAIN ARCHITECT'S APPROVAL BEFORE STARTING PARTITION INSTALLATION.

PARTITIONS SHALL BE PLUMB, TRUE, STRAIGHT, PROPERLY BRACED AND RIGID. WITHIN 1/8" VARIATION

PROVIDE BLOCKING FOR MILLWORK, BLOCKING SHALL BE FIRE TREATED DIMENSIONAL LUMBER. 3/4 INCH FIRE TREATED PLYWOOD MOUNTED BEHIND THE GYPSUM WALL BOARD OR 18 GAUGE SHEET METAL

CONTROLLED INSPECTIONS

MOUNTED BEHIND THE GYPSUM WALLBOARD.

THE OWNER SHALL HIRE A LICENSED THIRD PARTY ARCHITECT OR ENGINEER THE INSPECTOR FOR THE CONTROLLED INSPECTIONS REQUIRED BY CITY OF WHITE PLAINS.

THE THIRD PARTY ARCHITECT OR ENGINEER SHALL DIRECTLY SUPERVISE THE REQUIRED INSPECTIONS AND TESTS AND SHALL FILE WITH THE BUILDING DEPARTMENT SIGNED COPIES OF REQUIRED INSPECTION AND TEST REPORTS WITH HIS OR HER SIGNED STATEMENT THAT THE MATERIAL AND ITS USE OR INCORPORATION INTO THE WORK COMPLY WITH NYS OR CITY OF WHITE PLAINS CODE AND DESIGN REQUIREMENTS.

IN CASES WHERE NYS OR CITY OF WHITE PLAINS CODE PROVISIONS REQUIRE THE OFF-SITE INSPECTION AND/OR TESTING OF MATERIALS OR TESTING PRIOR TO ACTUAL USE OR INCORPORATION INTO THE WORK. THE INSPECTOR SHALL MARK THE MATERIAL INSPECTED AND THE REPORTED RESULTS OF THE INSPECTION

BEFORE WORK IS COMMENCED ON CONSTRUCTION REQUIRING CONTROLLED INSPECTION. THE CONTRACTOR SHALL NOTIFY THE PERSONS RESPONSIBLE FOR THE CONTROLLED INSPECTIONS, IN WRITING, WITH AT

SHALL STATE THAT THE MATERIAL WAS MARKED FOR IDENTIFICATION.

LEAST SEVENTY-TWO HOURS NOTICE PRIOR TO WORK

CONCEALED VERTICAL SPACES IN WALLS AND PARTITIONS SHALL BE FIRESTOPPED AT EACH FLOOR LEVEL AND AT THE CEILING OF THE UPPERMOST STORY, SO THAT SUCH SPACES WILL NOT BE CONTINUOUS FOR MORE THAN ONE STORY OR COMMUNICATE WITH CONCEALED HORIZONTAL SPACES IN THE FLOOR OR ROOF

FIRESTOPPING OF AT LEAST 1-INCH NOMINAL SOLID LUMBER. 5/16-INCH THICK GYPSUM BOARD. OR THE EQUIVALENT, SHALL BE PROVIDED TO CUT OFF CONCEALED DRAFT OPENINGS BETWEEN WALLS AND PARTITIONS INCLUDING FURRED SPACES AND THE ROOF OR FLOORS SO AS TO RETARD VERTICAL MOVEMENT OF FIRE. IN PARTICULAR, SUCH CONCEALED SPACES MUST BE CONSTRUCTED SO THAT FLOOR-TO-CEILING CONCEALED SPACES ON ONE FLOOR DO NOT COMMUNICATE WITH ANY CONCEALED SPACE ON ANOTHER FLOOR, ANY CONCEALED SPACES IN THE FLOOR, OR ANY CONCEALED SPACE IN THE ROOF CAVITY. AN APPROVED BARRIER MUST BE INSTALLED TO PREVENT COMMUNICATION BETWEEN ADJACENT CONCEALED SPACES.

FIRE PARTITIONS, PROTECTION AND DRAFT STOPPING

TESTED IN ACCORDANCE WITH ASTM E 814.

FIRE RATED PARTITIONS SHALL EXTEND FROM THE TOP OF THE CONCRETE FLOOR ASSEMBLY BELOW TO THE UNDERSIDE OF THE CONCRETE FLOOR/ROOF SLAB OR DECK ABOVE OR TO THE FIRE-RESISTANCE-RATED FLOOR/CEILING OR ROOF/CEILING ASSEMBLY ABOVE. WHERE PARTITIONS ARE NOT CONTINUOUS TO THE CONCRETE DECK, AND WHERE CONSTRUCTED OF COMBUSTIBLE CONSTRUCTION, THE SPACE BETWEEN THE CEILING AND THE DECK ABOVE SHALL BE FIRE BLOCKED OR DRAFT STOPPED

WHERE SLEEVES ARE USED FOR PENETRATIONS THROUGH FIRE RATED ASSEMBLIES, THEY SHALL BE SECURELY FASTENED TO THE ASSEMBLY PENETRATED. THE SPACE BETWEEN THE ITEM CONTAINED IN THE SLEEVE AND THE SLEEVE ITSELF AND ANY SPACE BETWEEN THE SLEEVE AND THE ASSEMBLY PENETRATED SHALL BE SEALED AND PROTECTED WITH FIRESTOPPING.

PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AS

JOINTS INSTALLED IN OR BETWEEN FIRE RESISTANCE RATED WALLS, FLOOR OR FLOOR/CEILING ASSEMBLIES AND ROOFS OR ROOF/CEILING ASSEMBLIES SHALL BE PROTECTED BY AN APPROVED FIRE-RESISTANT JOINT SYSTEM DESIGNED TO RESIST THE PASSAGE OF FIRE FOR A TIME PERIOD NOT LESS THAN THE REQUIRED FIRE-RESISTANCE RATING OF THE WALL, FLOOR OR ROOF IN OR BETWEEN WHICH IT IS INSTALLED.

FIRE-RESISTANT JOINT SYSTEMS SHALL BE SECURELY INSTALLED IN OR ON THE JOINT FOR ITS ENTIRE I FNGTH SO AS NOT TO DISLODGE. LOOSEN OR OTHERWISE IMPAIR IT'S ABILITY TO ACCOMMODATE EXPECTED BUILDING MOVEMENTS AND TO RESIST THE PASSAGE OF FIRE AND HOT GASES.

FIRE-RESISTANT JOINT SYSTEMS SHALL BE TESTED IN ACCORDANCE WITH THE REQUIREMENTS OF UL 2079 COLUMNS, GIRDERS, TRUSSES, BEAMS, LINTELS OR OTHER STRUCTURAL MEMBERS THAT ARE REQUIRED TO HAVE A FIRE-RESISTANCE RATING SHALL BE INDIVIDUALLY PROTECTED ON ALL SIDES FOR THE FULL LENGTH WITH MATERIALS HAVING THE REQUIRED FIRE-RESISTANCE RATING.

WHERE COLUMNS REQUIRE A FIRE-RESISTANCE RATING, THE ENTIRE COLUMN, INCLUDING ITS CONNECTIONS TO BEAMS OR GIRDERS, SHALL BE PROTECTED, WHERE THE COLUMN EXTENDS THROUGH A CEILING, FIRE RESISTANCE OF THE COLUMN SHALL BE CONTINUOUS FROM THE TOP OF THE FLOOR THROUGH THE CEILING SPACE TO THE TOP OF THE COLUMN

PIPES, WIRES, CONDUITS, DUCTS OR OTHER SERVICE FACILITIES SHALL NOT BE EMBEDDED IN THE REQUIRED FIRE PROTECTIVE COVERING OF A STRUCTURAL MEMBER THAT IS REQUIRED TO BE INDIVIDUALLY

FIRE DOORS SHALL BE LABELED SHOWING THE NAME OF THE MANUFACTURER, THE NAME OF THE THIRD-PARTY INSPECTION AGENCY, THE FIRE-PROTECTION RATING AND, WHERE REQUIRED FOR FIRE DOORS IN EXIT ENCLOSURES, THE MAXIMUM TRANSMITTED TEMPERATURE END POINT. LABELS SHALL BE APPROVED AND PERMANENTLY AFFIXED. THE LABEL SHALL BE APPLIED AT THE FACTORY WHERE FABRICATION AND ASSEMBLY ARE PERFORMED.

FIRE DOORS SHALL BE SELF-CLOSING OR AUTOMATIC CLOSING.

SINGLE FIRE DOORS AND BOTH LEAVES OF PAIRS OF SIDE—HINGED SWINGING FIRE DOORS SHALL BE PROVIDED WITH AN ACTIVE LATCH BOLT THAT WILL SECURE THE DOOR WHEN IT IS CLOSED.

AUTOMATIC-CLOSING FIRE DOOR ASSEMBLIES SHALL BE SELF-CLOSING. DAMPERS SHALL BE LISTED AND BEAR THE LABEL OF AN APPROVED TESTING AGENCY INDICATING COMPLIANCE WITH THE CODE STANDARDS.

FIRE AND SMOKE DAMPERS SHALL BE PROVIDED WITH AN APPROVED MEANS OF ACCESS, LARGE ENOUGH TO PERMIT INSPECTION AND MAINTENANCE OF THE DAMPER AND ITS OPERATING PARTS. THE ACCESS SHALL NOT AFFECT THE INTEGRITY OF FIRE-RESISTANCE-RATED ASSEMBLIES. THE ACCESS OPENINGS SHALL NOT REDUCE THE FIRE-RESISTANCE RATING OF THE ASSEMBLY. ACCESS POINTS SHALL BE PERMANENTLY IDENTIFIED ON THE EXTERIOR BY A LABEL HAVING LETTERS NOT LESS THAN 0.5 INCH (12.7 MM) IN HEIGHT READING: SMOKE DAMPER OR FIRE DAMPER. ACCESS DOORS IN DUCTS SHALL BE TIGHT FITTING AND SUITABLE FOR THE REQUIRED DUCT CONSTRUCTION.

BATTS OR BLANKETS OF MINERAL OR GLASS FIBER OR OTHER APPROVED NON-RIGID MATERIALS SHALL BE ALLOWED AS FIRE BLOCKING IN WALLS CONSTRUCTED USING PARALLEL ROWS OF STUDS OR STAGGERED

FIRE BLOCKING SHALL BE PROVIDED IN CONCEALED SPACES OF STUD WALLS AND PARTITIONS, INCLUDING FURRED SPACES, AT THE CEILING AND FLOOR LEVELS AND AT 10-FOOT INTERVALS BOTH VERTICAL AND

FIRE BLOCKING SHALL BE PROVIDED AT INTERCONNECTIONS BETWEEN CONCEALED VERTICAL STUD WALL OR PARTITION SPACES AND CONCEALED HORIZONTAL SPACES CREATED BY AN ASSEMBLY OF FLOOR JOISTS OR TRUSSES, AND BETWEEN CONCEALED VERTICAL AND HORIZONTAL SPACES SUCH AS OCCUR AT SOFFITS, DROP CEILINGS, COVE CEILINGS AND SIMILAR LOCATIONS.

GLASS AND GLAZING GLASS ASSEMBLIES AND GLAZING SHALL CONFORM TO ALL APPLICABLE NY STATE CODES AND GOVERNING

AUTHORITIES, INCLUDING U.S. CONSUMER PRODUCTS SAFETY COMMISSION (CPSC) SAFETY STANDARD FOR ARCHITECTURAL GLAZING MATERIALS. OSHA AND CRSC GLAZING SAFETY STANDARDS. EACH PANE OF TEMPERED GLASS, EXCEPT TEMPERED SPANDREL GLASS, SHALL BE PERMANENTLY IDENTIFIED BY THE MANUFACTURER. THE IDENTIFICATION LABEL SHALL BE ACID ETCHED. SAND BLASTED.

EACH GLASS PANE SHALL BEAR THE MANUFACTURER'S LABEL DESIGNATING THE TYPE AND THICKNESS OF THE GLASS OR GLAZING MATERIAL. THE IDENTIFICATION SHALL NOT BE OMITTED UNLESS APPROVED AND AN AFFIDAVIT IS FURNISHED BY THE GLAZING CONTRACTOR CERTIFYING THAT EACH LIGHT IS GLAZED IN

CERAMIC FIRED, EMBOSSED OR SHALL BE OF A TYPE THAT ONCE APPLIED CANNOT BE REMOVED WITHOUT

GYPSUM WALL BOARD

ACCORDANCE WITH APPROVED CONSTRUCTION DOCUMENTS.

FURNISH AND INSTALL GYPSUM DRYWALL PARTITIONS AND RELATED ITEMS, COMPLETE WITH CORNER BEAD

AND OTHER ACCESSORIES REQUIRED FOR PROPER INSTALLATION. METAL FRAMING - DRYWALL FRAMING SHALL BE USG 20 GAUGE SYSTEM, INCLUDING TOP AND BOTTOM RUNNERS, BRIDGING AND OTHER NECESSARY ELEMENTS. STUD SPACING SHALL BE 16 INCHES ON CENTER. MAIN RUNNER CEILING CHANNELS SHALL BE 3-5/8 INCH C.R. GALVANIZED STEEL. OPEN CELL BLACK SPONGE NEOPRENE SHALL BE USED WHERE NEOPRENE PADS OR GASKETS ARE REQUIRED. FOR STUDS TALLER THAN 12 FEET, USE MANUFACTURER'S RECOMMENDED GAUGES.

GYPSUM WALLBOARD SHALL BE 5/8 INCH THICK, 4 FEET WIDE AND IN LENGTHS PRACTICAL TO MINIMIZE THE NUMBER OF JOINTS. GYPSUM WALLBOARD SHALL BE APPLIED WITH LONG DIMENSION PARALLEL TO FRAMING MEMBERS. END JOINTS SHALL OCCUR OVER A BEARING SURFACE AND SHALL BE FITTED NEATLY AND ACCURATELY. SCREW FASTENERS SHALL BE SPACED 12 INCHES ON CENTERS ALONG FACH SUPPORTING MEMBER AND PLACED WITHIN 3/8 OF AN INCH FROM FDGE OF SUPPORTING MEMBERS SCREW HEADS SHALL PROVIDE A SLIGHT DEPRESSION BELOW THE SURFACE OF THE BOARD. INSTALL METAL TRIM AND ACCESSORIES. WALLS SHALL BE PLUMB AND TRUE AND ANCHOR SECURELY.

ACOUSTICAL SEALANT SHALL BE USED TO SEAL TOP AND BOTTOM CHANNELS AND OPENINGS ACCORDING TO WALLBOARD MANUFACTURER'S DIRECTIONS AND AS DRAWN.

INSTALL GYPSUM BOARD ON WALLS AND CEILINGS AS PER MANUFACTURER'S SPECIFICATIONS. INSTALL FASTENERS, JOINT TREATMENT, MOLDINGS, ACCESSORIES, AND OTHER ELEMENTS NEATLY. EXAMINE THE SUPPORTING STRUCTURE AND INSURE THAT IT IS ADEQUATE FOR THE GYPSUM WALL BOARD

INSTALLATION. STARTING AN INSTALLATION WILL BE CONSTRUED TO MEAN THAT SURFACES ARE IN

COMPLY WITH THE MANUFACTURER'S PRINTED TEMPERATURE AND VENTILATION REQUIREMENTS DURING APPLICATION AND FINISHING. VENTILATE THE INSTALLATION TO RELIEVE EXCESS MOISTURE.

ALL BOARD SHALL HAVE TAPERED EDGES AND SHALL BE MANUFACTURED BY US GYPSUM, NATIONAL GYPSUM COMPANY, JOHNS MANVILLE OR EQUAL. WALLBOARD SHALL BE ATTACHED TO FRAMING WITH SPECIALLY DESIGNED STEEL SCREWS WITH A

RUST-INHIBITIVE COATING 1-1/4 INCHES LONG, SIMILAR TO U.S. GYPSUM HI-LO SCREW TYPE-8 BUGLE HEAD. MAXIMUM SPACING OF SCREWS SHALL BE 12 INCHES ON CENTER. IN THE FIELD AND 8" O.C. ALONG EDGES STAGGER JOINTS AND ALTERNATE COURSES. JOINT TAPE AND JOINT COMPOUND SHALL COMPLY WITH ASTM C-475 AS RECOMMENDED BY THE

WALLBOARD MANUFACTURER. APPLY A MINIMUM OF 3 COATS OF JOINT COMPOUND OVER JOINTS, FASTENER HEADS AND OTHER DEPRESSIONS. WALLS SHALL BE FINISHED TO "GYPSUM CONSTRUCTION HANDBOOK" FINISH: (SEE HANDBOOK FOR

LEVEL 5 - (FOR PAINTED WALLS OR WALLS WITH THIN WALL COVERINGS). LEVEL 5 REQUIRES 1/8" SKIM COAT SANDED FLAT TO WITH IN VARIATIONS OF 1/8" IN 16 FEET.

PROVIDE GALVANIZED METAL DRYWALL ACCESSORIES INCLUDING CORNER BEAD, CASING BEAD, AND OTHER ELEMENTS AND ACCESSORIES AS SPECIFIED BY MANUFACTURER.

DOOR AND HARDWARE

DOORS SHALL HAVE LEVER HANDLES UNLESS OTHERWISE NOTED

ACCEPTABLE CONDITION FOR THE INSTALLATION.

DOORS SHALL HAVE A MINIMUM CLEAR OPENING WIDTH OF 32 INCHES. ALL DOOR LATCHES SHALL BE EQUIPPED WITH ADA COMPLIANT LEVER TYPE HANDLES OR PANIC BARS.

HARDWARE SHALL COMPLY WITH AMERICAN WITH DISABILITIES ACT.

DOOR OPENING HARDWARE SHALL BE MOUNTED AT 34 INCHES ABOVE FINISHED FLOOR UNLESS OTHERWISE NOTED. WHEN MOUNTING HEIGHTS ARE DIFFERENT THAN 34 INCHES, DOOR OPENING HARDWARE SHALL BE MOUNTED BETWEEN 30 INCHES AND 44 INCHES ABOVE FINISH FLOOR

FLOOR AREAS AT EACH SIDE OF ALL DOORS SHALL BE CLEAR AND LEVEL ON BOTH SIDES OF DOORS AS PFR NFPA 101 SECTION 5-2.1.3.3. MAXIMUM THRESHOLD HEIGHT SHALL BE 1/2 INCH. SADDLES SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT. THRESHOLDS SHALL BE FLUSH U.O.N. RAISED THRESHOLDS AND FLOOR LEVEL CHANGES GREATER THAN 0.25 INCH AT DOORWAYS SHALL BE BEVELED WITH A SLOPE NOT GREATER THAN ONE UNIT VERTICAL IN TWO UNITS HORIZONTAL (50-PERCENT

PROVIDE LABOR, PARTS AND ACCESSORIES FOR A COMPLETE DOOR AND HARDWARE INSTALLATION. EXIT DOORS SHALL BE OPERABLE WITH OUT THE USE OF KEYS, SPECIAL KNOWLEDGE OR SPECIAL EFFORT.

EXIT DOORS SHALL HAVE CLEARANCES GREATER THAN 32 INCHES AS PER "AMERICANS WITH DISABILITY"

(ADA) REQUIREMENTS AND NFPA 101 SECTION 5-2.1.3.1. EXIT DOORS SHALL HAVE PANIC TYPE HARDWARE COMPLYING WITH SECTION 5-2.1.5.1 OF NFPA 101. BRACE WALLS ABOVE DOORS TO THE STRUCTURE ABOVE.

LOCKING CYLINDERS SHALL BE GRAND MASTERS KEYED PER OWNER DIRECTION. EXISTING HARDWARE INTENDED FOR REUSE SHALL BE RE-KEYED PER OWNER DIRECTION.

INSTALL DOORS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. DOORS SHALL BE PLUMB. LEVEL AND WITH PROPER CLEARANCES. INSTALL AND ADJUST HARDWARE FOR GOOD AND PROPER OPERATION WOOD DOORS SHALL BE FIRST QUALITY AND SHALL BE WARRANTEED NOT TO WARP OR TWIST.

IMMEDIATELY AFTER ERECTION, SAND SMOOTH, DAMAGED AREAS OF DOORS, AND APPLY TOUCH-UP AS SPECIFIED BY MANUFACTURER. DOORS SHALL BE PROPERLY PROTECTED FROM DAMAGE OR DETERIORATION UNTIL CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE WORK.

THE WOODWORK MANUFACTURER IS RESPONSIBLE FOR DETAILS AND DIMENSIONS NOT CONTROLLED BY JOB SITE CONDITIONS. SHOW REQUIRED FIELD MEASUREMENTS BEYOND THE CONTROL OF THE WOODWORKER

COORDINATE BLOCKING REQUIREMENTS WITH GENERAL CONTRACTOR. BLOCKING CAN BE EITHER FRAMING MOUNTED BETWEEN STUDS OR SHEET MATERIAL MOUNTED ON THE FACE OF STUDS. SHEET BLOCKING SHALL BE 3/4 INCHES THICK PLYWOOD OR 18 GAUGE SHEFT METAL MOUNTED BETWEEN THE GYPSUM

PROVIDE SHOP DRAWINGS OF ALL WOODWORK FOR REVIEW AND APPROVAL BY THE ARCHITECT.

WALL BOARD AND STUD FRAMING. SHEET BLOCKING SHALL SPAN ACROSS AT LEAST THREE STUDS

EXPOSED ENDS SHALL BE LOCK MITERED AND GLUED UNLESS OTHERWISE NOTED AND CONFORM TO AWI

PROVIDE LABOR AND MATERIAL REQUIRED FOR A COMPLETE CEILING SYSTEM. INSTALLATION SHALL BE COMPLETE WITH SUSPENSION DEVICES AND RELATED ACCESSORY ITEMS AS SHOWN ON THE DRAWINGS AND AS OTHERWISE FOR A COMPLETE, FIRST-CLASS AND NEW YORK STATE CODE COMPLIANT INSTALLATION.

ACOUSTICAL SUSPENDED CEILING INSTALLATION SHALL BE PER THE "CISCA CODE OF PRACTICES FOR

CEILINGS SHALL BE LEVEL TO WITHIN 1/8 INCH IN 12 FEET.

ACOUSTICAL CEILING SYSTEMS" - MOST CURRENT ADDITION.

WOOD FINISHES SHALL BE SHOP APPLIED.

REFLECTED CEILING

NEW GRILLES AND REGISTERS SHALL BE THE SAME COLOR AS THE SURROUNDING CEILINGS, UNLESS

PREVAIL WHICH WILL NOT ALLOW THE ORIGINAL DESIGN, NOTIFY THE ARCHITECT IMMEDIATELY. PRIOR TO ORDERING OF MATERIALS AND INSTALLATION.

ACOUSTICAL CEILING MATERIAL SHALL BE INSTALLED AS NEATLY AS POSSIBLE. IF EXISTING CONDITIONS

ACOUSTICAL MATERIALS SHALL BE PROTECTED FROM DAMAGE AND FROM SOILING. FINISHED SURFACES SHALL BE LEFT FREE OF FINGER MARKS, DIRT STREAKS, TOOL MARKS, SCRATCHES, ABRASIONS, CHIPS AND BROKEN CORNERS OR OTHER MARKS OR DAMAGE.

COORDINATE THE INSTALLATION OF ACOUSTICAL CEILINGS WITH INSTALLATION OF LIGHTING FIXTURES, SPRINKLER PIPING, DUCTWORK, HVAC GRILLES AND OTHER ITEMS.

HAND-HELD FIRE EXTINGUISHERS

GENERAL AREAS AND COMMON AREAS REQUIRE A 2A RATED EXTINGUISHER.

FURNISH AND INSTALL ONE #10 ABC FIRE EXTINGUISHER IN EACH ELECTRICAL CLOSET AND ONE #10 ABC FIRE EXTINGUISHER AT EACH MECHANICAL ROOM.

PROVIDE 1 FIRE EXTINGUISHER FOR EVERY 3,000 SQUARE FEET OF LIGHT (LOW) HAZARD OCCUPANCY. MAXIMUM TRAVEL DISTANCE TO ANY FIRE EXTINGUISHER SHALL BE 75 FEET.

FURNISH AND INSTALL ADDITIONAL FIRE EXTINGUISHERS PER CITY OF WHITE PLAINS FIRE DEPARTMENT AND

BEFORE STARTING PAINTING, EXAMINE SURFACES AND CONDITIONS FOR IMPERFECT OR OTHERWISE NONCOMPLIANT WORKMANSHIP. STARTING AN INSTALLATION WILL BE CONSTRUED TO MEAN THAT SURFACES ARE IN ACCEPTABLE CONDITION FOR THE INSTALLATION. CORRECTIVE WORK SHALL BE PERFORMED AT NO

MATERIALS SHALL BE DELIVERED TO THE SITE IN ORIGINAL MANUFACTURER'S SEALED CONTAINERS.

PAINTED SURFACES SHALL BE CLEAN, SMOOTH, FREE FROM SCRATCHES AND DUST, AND SHALL B THOROUGHLY DRY. METAL SURFACES SHALL BE CAREFULLY SANDED WITH FINE SANDPAPER PRIOR TO THE

PAINTING SHALL BE DONE BY SKILLED MECHANICS. MATERIALS SHALL BE EVENLY SPREAD, SMOOTHLY FLOWED AND FREE FROM RUNS, SAGS, DRIPS, HOLIDAYS AND OTHER DEFECTS. FINISHED SURFACES SHALL BE UNIFORM IN SHEEN OR FINISH, COLOR, SHADE AND FREE FROM BRUSH MARKS, ENCRUSHED BRUSH BRISTLED, LINT AND DUST PIMPLES. LINES OF DEMARCATION BETWEEN PAINTS OR FNAMELS OF DIFFERENT COLORS SHALL BE CAREFULLY DRAWN, TRUE AND FREE FROM BLURRED OR RAGGED EDGES.

NAIL HOLES, SCREW HOLES, CRACKS, JOINTS, IRREGULARITIES AND IMPERFECTIONS IN SURFACES TO BE

INTERIOR GYPSUM BOARD WALLS AND CEILINGS SHALL BE PAINTED WITH INTERIOR LATEX PAINT, BRUSH AND ROLL APPLIED. PROVIDE PRIMER AND TWO FINISH COATS OF PAINT TO SURFACES. SUBMIT PRIMER 3

DURING PAINTING, SWITCH AND RECEPTACLE PLATES, HARDWARE AND OTHER FIXED OR ATTACHED FINISHED EQUIPMENT SHALL BE REMOVED. UPON COMPLETION OF PAINTING. THESE ITEMS SHALL BE REPLACED IN THEIR ORIGINAL CONDITION AND LOCATION. DAMAGED OR MISSING PARTS SHALL BE REPLACED IN KIND AT

CERAMIC AND STONE TILE

PAINTED SHALL BE CUT, STOPPED OR FILLED FLUSH.

SHEEN SHALL BE AS APPROVED BY THE ARCHITECT.

PAINT LITERATURE TO ARCHITECT FOR REVIEW AND APPROVAL.

COMPLY WITH MATERIAL AND INSTALLATION STANDARDS OF THE TILE COUNCIL OF AMERICA (TCA) AND

STANDARD GRADE REQUIREMENTS OF TCA 1371. AREAS WITH FLOOR TILES SHALL HAVE A SINGLE PLY NONMETALLIC WATERPROOF MEMBRANE OR LIQUID APPLIED MEMBRANE WITH TILES INSTALLED OVER THE MEMBRANE WITH A THIN-SET ADHESIVE ACCORDING TO TILE COUNCIL OF AMERICA "HANDBOOK FOR CERAMIC TILE INSTALLATION" THIRTY-FOURTH EDITION

AREAS WITH WALL TILES SHALL HAVE TILES INSTALLED OVER DENSGLASS TYPE GYPSUM WALL BOARD WITH A THIN-SET ADHESIVE ACCORDING TO TILE COUNCIL OF AMERICA "HANDBOOK FOR CERAMIC TILE INSTALLATION" THIRTY-FOURTH EDITION APPLICATION #W243-96

FOLLOW MANUFACTURERS PRINTED SPECIFICATIONS AND INSTALLATION INSTRUCTIONS FOR EACH MATERIAL. USE SKILLED WORKMEN WHO ARE EXPERIENCED IN THE CRAFTS REQUIRED BY THIS WORK

INSTALLATION OF CERAMIC TILE AS APPROVED BY A.S.A. INSTALL TILES IN ACCORDANCE WITH TCA "HANDBOOK FOR CERAMIC TILE INSTALLATION" AND ANSI A108.1

THIN SET MORTAR SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARD SPECIFICATIONS FOR THE

SEAL STONE OR OTHER TILES AS PER THE SUPPLIERS RECOMMENDATIONS AND OR TCA STANDARD GRADE GROUT TYPE, COLOR, TEXTURE AND JOINT WIDTH SHALL BE AS REVIEWED AND APPROVED BY THE

ARCHITECT. SUBMIT SAMPLES FOR REVIEW.

PROVIDE BLANK COVER PLATES ON ALL UNUSED JUNCTION BOXES AND JUNCTION BOXES INTENDED FOR USE BY THE TELEPHONE OR DATA LOCATIONS

WHERE EXISTING WALLS OR PARTITIONS ARE TO RECEIVE NEW FINISHES. THE EXISTING FINISH SHALL BE

ENTIRELY REMOVED, SURFACES THOROUGHLY CLEANED AND PREPARED AS DIRECTED TO RECEIVE THE NEW WHERE NEW FINISHES DO NOT MATCH THE COLOR, FINISH, DIMENSION OR SIZE OF THE EXISTING

INISHES, THE NEW WORK WILL BE CARRIED ACROSS THE SURFACE TO WHICH IT IS APPLIED AND

CONTINUED TO A NATURAL STOPPING POINT OR CORNER. ALL PAINTS AND OTHER FINISHES SHALL HAVE A FLAME SPREAD RATING LESS THAN 200 AND A SMOKE GENERATION FACTOR LESS THAN 450. PROVIDE SPECIFICATION AND/OR OTHER DOCUMENTATION TO THE BUILDING DEPARTMENT VERIFYING THIS INFORMATION.

BUILDING DEPARTMENT FOR REVIEW AND APPROVAL. FINISHES SHALL HAVE A FLAME SPREAD RATING LESS THAN 200 AND SMOKE GENERATION OF LESS THAN 450 AS PER SECTION 6-5 OF NFPA 101. SURFACES RECEIVING PAINT SHALL BE PREPARED IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. SURFACES SHALL BE SEALED AND THE PAINT SHALL BE APPLIED ACCORDING TO

SUBMIT DOCUMENTATION ON THE CLASS AND FLAME SPREAD OF MATERIALS TO THE ARCHITECT AND THE

MANUFACTURER'S SPECIFICATION. PAINT SHALL BE APPLIED BY SKILLED TRADESMEN AND SHALL BE FREE PAINTED SURFACES SHALL HAVE 1 PRIMER COAT AND 2 FINISH COATS. MIL THICKNESS PRECOAT SHALL

COLORS SHALL BE PREMIXED AND DELIVERED IN SEALED CONTAINERS WITH MANUFACTURER'S LABEL AFTER OCCUPANCY OF PREMISES, SURFACES SHALL BE INSPECTED. NICKS, SCRATCHES, AND/OR

SAMPLES, OF FINISH COLORS SPECIFIED, SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL BEFORE FINISHED HARDWARE, LIGHTING FIXTURES, AND SWITCH PLATES SHALL BE PROTECTED OR REMOVED BEFORE PAINTING IS STARTED AND SHALL BE REPLACED AFTER PAINTING AND FINISHING ARE COMPLETED. INDUCTION UNIT ENCLOSURES SHALL BE ELECTROSTATIC ALLY PAINTED IN SEMI-GLOSS FINISH.

PAINT HOLLOW METAL DOORS AND BUCKS IN SEMI-GLOSS FINISH OF THE SAME COLOR AS THE ADJACENT

AND MECHANICAL ENGINEER FOR REVIEW AND APPROVAL.

WALL, UNLESS OTHERWISE NOTED.

COMPLY WITH PAINT MANUFACTURER'S REQUIREMENTS.

DEFECTS, SHALL BE TOUCHED UP AND REPAINTED.

COORDINATION MECHANICAL SHOP DRAWINGS SHALL BE SUBMITTED TO THE ARCHITECT AND ENGINEER FOR REVIEW. COORDINATED SHOP DRAWINGS SHALL INCLUDE LOCATIONS OF: DUCTWORK, DIFFUSERS, REGISTERS, GRILLES, PLUMBING, WIRING, FIRE-SPRINKLER PIPING, CEILING SUPPORTS, LIGHT FIXTURES AND THERMOSTAT LOCATIONS. NOTE ALL CONFLICTS.

INSTALL ACCESS DOORS FOR VALVES, DAMPERS AND OTHER DEVICES REQUIRING ACCESS. THERMOSTATS SHALL BE 54 INCHES AFF UNLESS OTHERWISE NOTED.

WALL AND CEILING FINISH SHALL BE LEVEL 5 FINISH AS PER US GYPSUM ASSOCIATION.

HVAC NOTES:

WALLS SHALL BE CONSTRUCTED OF LIGHT GAUGE METAL DESIGNED TO RESIST DEFLECTION OF L/360 @ FULL HEIGHT. 20 GAUGE 362S125-18/33 ASTMC754 COMPLIANT BY US GYPSUM OR EQUIVALENT. ANCHOR TO CONCRETE WITH STUB NAIL, POWER DRIVEN FASTENERS. FASTEN STUDS, TRACKS AND RUNNERS WITH 3/8" TYPE S PAN HEAD SCREWS.

TESTING AND BALANCING SHALL BE PERFORMED AND SHALL BE IN ACCORDANCE WITH ASSOCIATED AIR

BALANCE COUNCIL REQUIREMENTS. SUBMIT TESTING AND BALANCE REPORTS TO THE CLIENT, ARCHITECT

NOTES

ELECTRIC NOTES:

OTHERWISE NOTED.

INTERFERENCE WITH CARPETING

REMOVE UNUSED SWITCHES, CAP AND REFINISH WALLS TO MATCH EXISTING FINISH OR SPECIFIED FINISH. NEW SWITCHES SHALL BE 45 INCHES ABOVE FINISHED FLOOR TO THE CENTERLINE OF SWITCH, UNLESS

PROVIDE BLANK COVER PLATES FOR TELEPHONE OR OTHER DEVICES WITH JUNCTION BOXES. PROVIDE JUNCTION BOXES, 3/4 INCH CONDUIT STUB-UPS AND PULL STRINGS TO ABOVE THE FINISHED FLOOR OR BELOW CEILING FOR WIRING, DATA AND TELEPHONE WORK UNLESS OTHERWISE NOTED. OUTLETS SHALL BE 18" ABOVE FINISHED FLOOR TO CENTERLINE OF OUTLET UNLESS OTHERWISE NOTED. REMOVE AND CAP EXISTING FLOOR MOUNTED ELECTRICAL AND TELEPHONE OUTLETS NOT BEING REUSED. CAP FLOOR MOUNTED ELECTRICAL AND TELEPHONE OUTLETS LEVEL WITH THE SLAB, TO PREVENT

CHECK EXISTING FLOOR CAPS. IF CAPS ARE NOT FLUSH WITH THE SLAB, REMOVE THE EXISTING CAPS, ROUT SLAB AND RECAP LEVEL WITH SURROUNDING SLAB.

EXISTING TELEPHONE OUTLETS AND WIRING NOT BEING REUSED SHALL BE REMOVED. PATCH WALLS, CEILINGS. AND FLOORS IN KIND TO RESTORE SURFACES TO ORIGINAL AND FLUSH CONDITION.

EXISTING ELECTRICAL SWITCHES, OUTLETS, AND LIGHTS BEING REMOVED, SHALL BE CAPPED AND WALLS PATCHED IN KIND TO RESTORE SURFACES TO ORIGINAL AND FLUSH CONDITION. REMOVE OR RELOCATE EXPOSED CONDUIT OR PIPE STUBS, ELECTRICAL, AND TELEPHONE CONDUIT

MARK DISTRIBUTION AND BREAKER CABINETS PLAINLY. IDENTIFY BREAKERS WITH LISTS AND MARKERS IN EACH CABINET IN LEGIBLE PRINTING OR ON TYPEWRITTEN CARDS INSERTED IN OR APPLIED TO THE INSIDE

MAGNETIC LOCKS, CARD READERS AND OTHER SECURITY DEVICES SHALL HAVE A FAILSAFE CONNECTION TO THE FIRE ALARM SYSTEM. IN THE EVENT OF FIRE OR ALARM, PERSONS SHALL BE ABLE TO EGRESS FROM ANY SPACE WITH OUT KEYS OR SPECIAL KNOWLEDGE.

PRIOR TO OCCUPANCY, SPACES SHALL BE THOROUGHLY CLEANED AT THE COMPLETION OF CONSTRUCTION. CLEANING SHALL INCLUDE VACUUMING. CLEANING OF WALLS AND WINDOWS AND CLEANING OF MILLWORK.

CLEANING SHALL BE PERFORMED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE.

UNLESS OTHERWISE INDICATED, CLEAN SHALL MEAN FREE OF DUST, DIRT, MUD, DEBRIS, OIL, GREASE RESIDUES, AND CONTAMINATION. ACCEPTABILITY SHALL BE DETERMINED BY SIGHT, TOUCH, AND WIPING WITH A CLEAN SOFT CLOTH AND SUITABLE CLEANING AGENT.

EVERY ROOM OR SPACE THAT IS AN ASSEMBLY OCCUPANCY SHALL HAVE THE OCCUPANT LOAD OF THI ROOM OR SPACE POSTED IN A CONSPICUOUS PLACE, NEAR THE MAIN EXIT OR EXIT ACCESS DOORWAY FROM THE ROOM OR SPACE, POSTED SIGNS SHALL BE OF AN APPROVED LEGIBLE PERMANENT DESIGN AS APPROVED BY OWNER, ARCHITECT AND AHJ AND SHALL BE MAINTAINED BY THE OWNER OR AUTHORIZED

A TACTILE SIGN STATING EXIT THAT COMPLIES WITH ICC/ANSI A117.1 SHALL BE PROVIDED ADJACENT TO

DOOR PROVIDING ACCESS TO AN AREA OF REFUGE FROM AN ADJACENT FLOOR AREA SHALL BE IDENTIFIED BY A SIGN COMPLYING WITH ICC/ANSI A117.1, STATING: AREA OF REFUGE, AND SHALL INCLUDE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY. WHERE EXIT SIGN ILLUMINATION IS REQUIRED BY \$1003.2.10.4, THE AREA OF REFUGE SIGN SHALL BE ILLUMINATED. ADDITIONALLY, TACTILE SIGNAGE COMPLYING WITH ICC/ANSI A117.1 SHALL BE LOCATED AT EACH DOOR TO AN AREA OF REFUGE.

PROVIDE EXITS AND ELEVATORS SERVING A REQUIRED ACCESSIBLE SPACE BUT NOT PROVIDING AN APPROVED ACCESSIBLE MEANS OF EGRESS, WITH SIGNAGE INSTALLED INDICATING THE LOCATION OF ACCESSIBLE MEANS OF EGRESS.

EGRESS DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY OR

SPECIAL KNOWLEDGE OR EFFORT.

METALLIC-COATED BY THE HOT-DIP PROCESS

SCREW-ATTACHED GYPSUM PANEL PRODUCTS

AND METAL PLASTER BASES

EACH DOOR TO AN EGRESS STAIRWAY.

REFERENCE STANDARDS: ASTM A1003 - STANDARD SPECIFICATION FOR STEEL SHEET, CARBON, METALLIC- AND

ASTM A924 - STANDARD SPECIFICATION FOR GENERAL REQUIREMENTS FOR STEEL SHEET,

NONMETALLIC-COATED FOR COLD-FORMED FRAMING MEMBERS ASTM A653 - STANDARD SPECIFICATION FOR STEEL SHEET, ZINC-COATED (GALVANIZED) OR ZINC-IRON ALLOY-COATED (GALVANNEALED) BY THE HOT-DIP PROCESS

ASTM C754 - STANDARD SPECIFICATION FOR INSTALLATION OF STEEL FRAMING MEMBERS TO RECEIVE

ASTM C955 - STANDARD SPECIFICATION FOR LOAD-BEARING (TRANSVERSE AND AXIAL) STEEL STUDS

RUNNERS (TRACKS), AND BRACING OR BRIDGING FOR SCREW APPLICATION OF GYPSUM PANEL PRODUCTS

12/06/23 ISSUE FOR CLIENT REVIEW **ISSUE DATE** DESCRIPTION

CHILDREN'S LIBRARY AND PIPE INSULATION

SCALE: PROJECT NO.: 2639-00

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ISSUE NO.

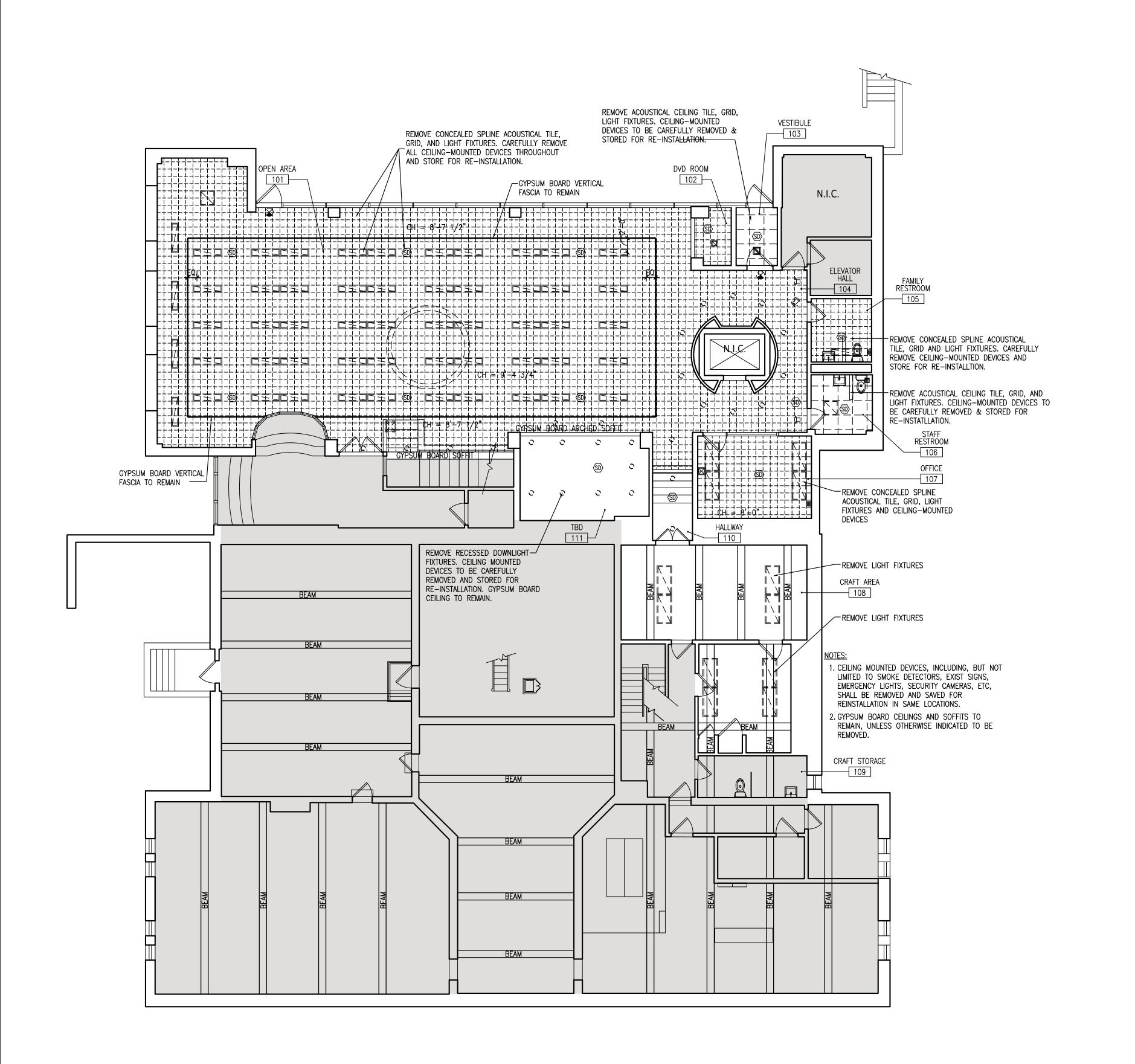
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ACOUSTICAL TILE CEILING **REPLACEMENT**

GENERAL NOTES

DRAWING NO.:

A001



DEMOLITION LIGHTING/CEILING LEGEND

FIXTURE DESCRIPTION

FIXTURE ITEM

WALL / CEILING MOUNTED EXIT SIGN

WALL / CEILING MOUNTED EXIT SIGN

SMOKE DETECTOR

SUPPLY AIR DIFFUSERS

RETURN AIR, OR EXHAUST AIR, GRILLES

SECURITY CAMERA

CEILING GRID AND TILES

EMERGENCY FLOOD LIGHT

DEMOLITION LIGHTING/CEILING NOTES

1. ALL EXISTING LIGHT FIXTURES TO BE REMOVED AND DISPOSED COMPLETELY.

2. ALL EXISTING CEILING DEVICES TO BE CAREFULLY REMOVED, STORED AND CLEANED FOR RE—INSTALLTION. REPLACE NEW DEVICES TO MATCH EXISTING IF NOT WORKING.

3. EXISTING EXIT SIGNS TO BE CAREFULLY REMOVED, STORED AND CLEANED FOR RE—INSTALLATION. REPLACE NEW DEVICES TO MATCH EXISTING IF NOT WORKING.

4. REFER TO ELECTRICAL & MECHANICAL DEMOLITION DRAWINGS FOR MORE

5. IF DAMAGED DURING CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT.



333 Westchester Avenue White Plains, New York 10604

914-741-1115

2 03/04/24 ISSUE FOR BID
1 12/06/23 ISSUE FOR CLIENT REVIEW
ISSUE NO. ISSUE DATE DESCRIPTION



WARNER LIBRARY

CHILDREN'S LIBRARY
ACOUSTICAL TILE CEILING
AND PIPE INSULATION
REPLACEMENT

CEILING DEMOLITION PLAN - LOWER LEVEL

PROJECT NO.: 2639-00 SCALE: 1/8" = 1'-0"

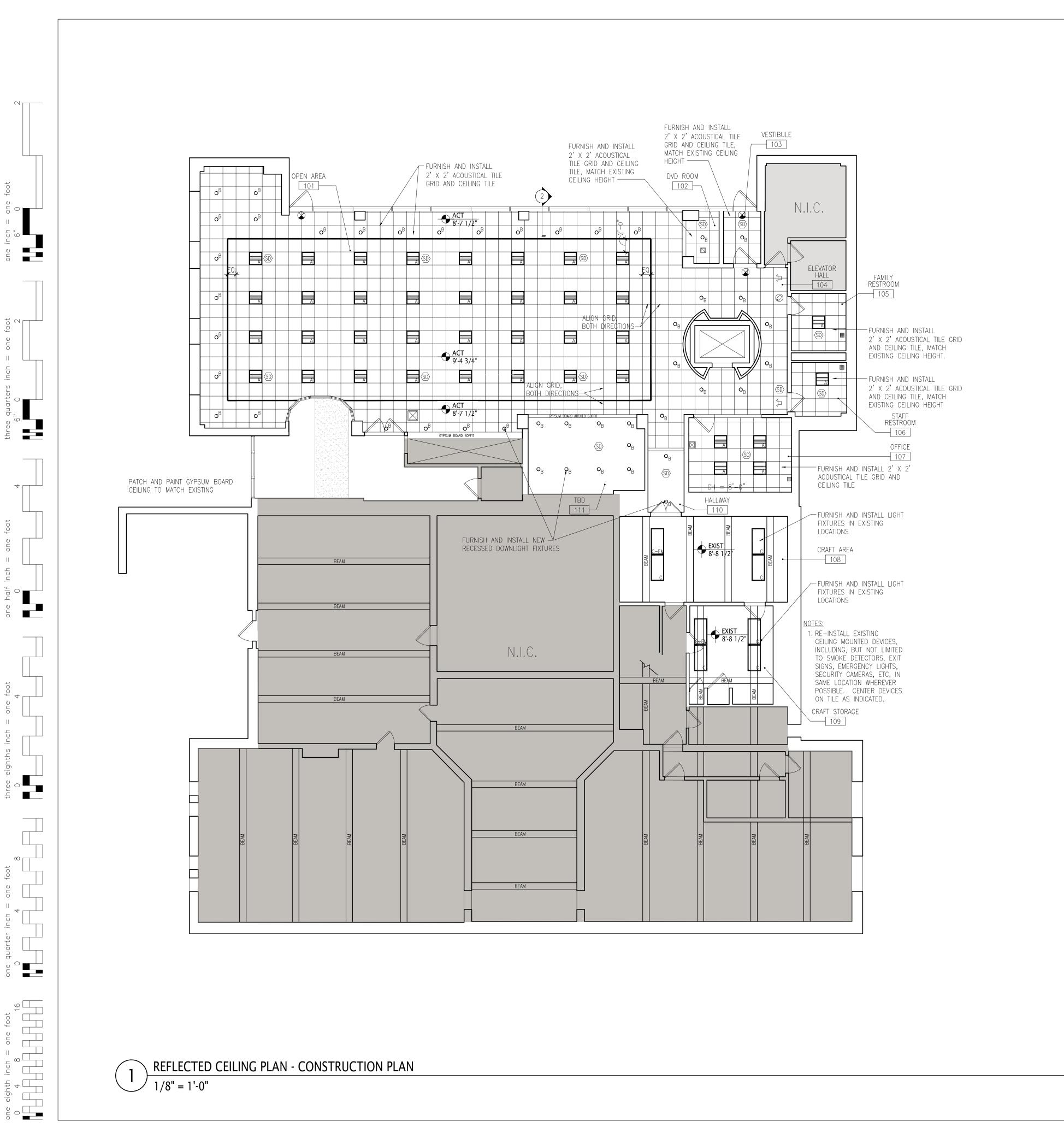
DRAWING NO.:

A100

REFLECTED CEILING PLAN - REMOVAL PLAN

 $1)\frac{n}{1}$

1/8" = 1'-0"



LIGHTING/CEILING LEGEND FIXTURE DESCRIPTION FIXTURE ITEM 24" X 24" RECESSED LIGHT FIXTURE BY FOCAL POINT WALL OR CEILING MOUNTED EXIT SIGN ZEPHYR 2X2 SPEC#: FZR-22-FL-3500L-30K-1C-UNV-G-WH 24" X 24" RECESSED LIGHT FIXTURE BY FOCAL POINT SMOKE DETECTOR - RE-INSTALL (SD) EXISTING ZEPHYR 2X2 SPEC#: FZR-22-FL-3500L-30K-1C-UNV-G-EM-WH 3.5" DIA. RECESSED DOWNLIGHT BY FOCAL POINT NEW SUPPLY AIR DIFFUSERS **o**_B | ID+3.5" \mathbb{Z} SPEC#: FLC3D-RO-SW-900L-UNV-LC3-35K-WH 3.5" DIA. RECESSED DOWNLIGHT BY FOCAL POINT NEW RETURN AIR, OR EXHAUST AIR, GRILLES OB-EM ID+3.5"
SPEC#: FLC3D-RO-SW-900L-UNV-EMR-LC3-35K-WH 24" X 48" SURFACE MOUNTED LIGHT FIXTURE BY FOCAL SECURITY CAMERA - RE-INSTALL POINT AMICA2 2X4 EXISTING 24" X 48" SURFACE MOUNTED LIGHT FIXTURE BY FOCAL EMERGENCY FLOOD LIGHT -POINT AMICA2 2X4 RE-INSTALL EXISTING #:FAM2-24-ACR-5000L-30K-1C-UNV-C24-EM-WH CEILING TILE BY OWA - OCTAVE-70 HIGH CAC RE 9/16" - 24"x24"x3/4" WITH CEILING GRID BY OWACLIQ 9/16"

#CLIQ-9/16-MR CLIQ-9/16-CT AND 50/15G #CLIQ-9/16-MR, CLIQ-9/16-CT, AND 50/15G

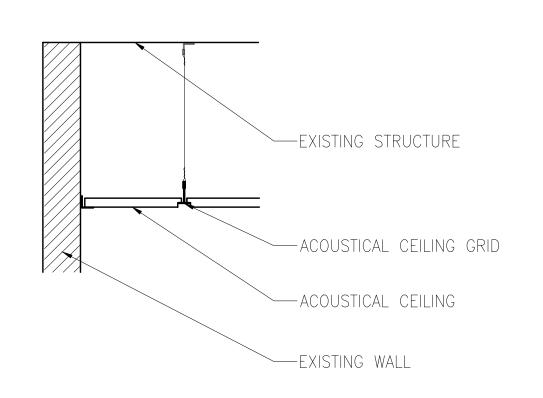
LIGHTING/CEILING NOTES

1. RE-INSTALL EXISTING CEILING DEVICES INCLUDING BUT NOT LIMITED TO: SMOKE DETECTORS, EMERGENCY FLOOD LIGHTS, SECURITY CAMERAS, DIFFUSERS AND RETURN GRILLES.

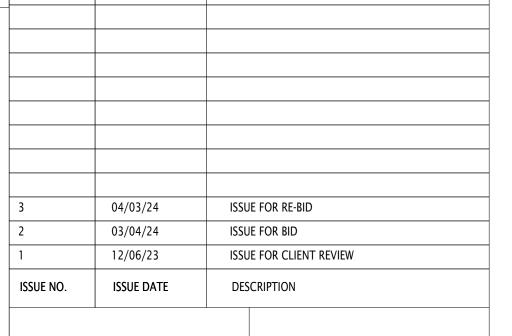
- 2. SEE RCP FOR ACOUSTICAL CEILING HEIGHTS.
- 3. REFER TO ELECTRICAL & MECHANICAL DRAWINGS FOR MORE INFORMATION.
- 4. ALL LIGHT FIXTURES ARE NEW UNLESS OTHERWISE NOTED.



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CHILDREN'S LIBRARY ACOUSTICAL TILE CEILING AND PIPE INSULATION **REPLACEMENT**

REFLECTED CEILING PLAN - LOWER LEVEL

PROJECT NO.:

2639-00 SCALE:

1/8" = 1'-0"

DRAWING NO.:

A101

REFLECTED CEILING PLAN - CONSTRUCTION PLAN

1/8" = 1'-0"

SYMBOL	ABBREVIATION	DESCRIPTION	SYMBOL	ABBREVIATION	DESCRIPTION
	AC-	AIR CONDITIONING UNIT		CD	1-WAY
	AD	ACCESS DOOR		CD	2-WAY
-	AFF	ABOVE FINISHED FLOOR		CD	2-WAY
_					
_	AHC	ABOVE HUNG CEILING		CD	3-WAY
_	AP	ACCESS PANEL		CD	4-WAY RETURN REGISTER/GRILLE/EXHAUST
_	BHP	BRAKE HORSEPOWER		RR/RG/ER	REGISTER REGISTER
_	BTU	BRITISH THERMAL UNIT		-	SUPPLY DUCT UP
_	CFM	CUBIC FEET PER MINUTE		-	SUPPLY DUCT DOWN
_	COD	CABLE OPERATED DAMPER		-	RETURN DUCT UP
_	DB	DRY BULB TEMPERATURE		-	RETURN DUCT DOWN
_	DIA. OR Ø	DIAMETER	1	-	TRANSITION FROM SQUARE TO ROUND DUCT
_	DX	DIRECT EXPANSION	{ }	-	TRANSITION
_	DTS	DUAL TEMPERATURE SUPPLY	{ D→ }	-	DUCT DROP
_	DTR	DUAL TEMPERATURE RETURN		-	DUCT RISE
	EA	EXHAUST AIR		-	SQUARE VANED ELBOW
_	EAT	ENTERING AIR TEMPERATURE		-	DUCT RISE
	ER	EXHAUST REGISTER	7	_	DUCT DROP
	ESP	EXTERNAL STATIC PRESSURE		_	DUCT TRANSITION
-				<u>-</u>	
_	EWT	ENTERING WATER TEMPERATURE	1		ACQUISTIC LINING
_	FCU	FAN COIL UNIT		AL	ACOUSTIC LINING
_	FPM	FEET PER MINUTE		FD/AD	FIRE DAMPER W/ ACCESS DOOR
_	FPS	FEET PER SECOND		SD/AD	SMOKE DAMPER W/ ACCESS DOOR
_	GPM	GALLONS PER MINUTE		CFSD	COMBINATION FIRE/SMOKE DAMPER W/ ACCESS DOOR
_	HP	HORSE POWER	\	VD	VOLUME DAMPER
_	LAT	LEAVING AIR TEMPERATURE	\ <u>=</u>	AL	ACOUSTIC LINING
_	LF	LINEAR FEET	> 6x8 >	-	DUCT SIZE - 1ST FIGURE IS SIDE SHOW
_	LWT	LEAVING WATER TEMPERATURE		FC	FLEXIBLE CONNECTION
_	MBH	1000 BRITISH THERMAL UNITS PER HOUR	7777	-	ALUMINUM DUCT
_	MER	MECHANICAL EQUIPMENT ROOM	ER CFM	-	EXHAUST REGISTER
_	NIC	NOT IN CONTRACT	(CD-A) CFM	-	NEW CEILING DIFFUSER
_	OAI	OUTSIDE AIR INTAKE	NOTE: FOR REFERENCE	ot ONLY. NOT ALL SY	MBOLS OR ABBREVIATIONS ARE USED IN
	PSI	POUNDS PER SQUARE INCH	THIS PROJECT.		
_	RA	RETURN AIR	CENIEDAL NO	TEC	
	RF-	RETURN FAN	GENERAL NO) I E S	
	RPM	REVOLUTIONS PER MINUTE	1. CONTRACTOR TO F	FIELD VERIFY ALL E	EXISTING CONDITIONS PRIOR TO THE
			BEGINNING OF WOI	RK AND COORDINA	ATE NEW WORK.
_	SA	SUPPLY AIR			GH PARTITIONS WITH PIPE SLEEVES. D PARTITIONS, THE SPACE BETWEEN
-	SP	STATIC PRESSURE			SEALED WITH FIRE STOPPING
_	TD	TRANSFER DUCT		R SHALL SLIBMIT FO	OR REVIEW A COMPOSITE SHOP
_	TF-	TRANSFER FAN	DRAWING, FULLY C	OORDINATED WIT	H ALL OTHER TRADES, INDICATING KE DETECTORS, LIGHTS, CONDUITS,
-	TSP	TOTAL STATIC PRESSURE	DUCTWORK, PLUMB DIFFUSERS, GRILLE	The state of the s	AL DETECTORS, LIGHTS, CONDUITS,
_	TYP.	TYPICAL			EY RELATE TO THE GENERAL
_	U.O.N.	UNLESS OTHERWISE NOTED	SHALL BE UNDERS	TOOD AS DIAGRAN	QUIPMENT, PIPING AND SHEETMETAL, MATIC. ANY CHANGES TO SHEETMETAL
_	WB	WET BULB TEMPERATURE	AND EQUIPMENT LO OTHER TRADES SH		SARY TO AVOID INTERFERENCE WITH IO EXTRA COST.
_	WG	INCHES OF WATER GAUGE			BASIS OF DESIGN PURPOSES ONLY.
	EX.	EXISTING TO REMAIN	APPROVED EQUAL	PRODUCTS ARE A	CCEPTABLE.
	REL.	REMOVE AND RELOCATE	EQUIPMENT	NOTES	
	NEW	NEW WORK	LQUII IVILINI		
	DEM.	EXISTING TO BE REMOVED			N JOHNS MANVILLE MICRO-LOK HP
<u> </u>	DLIVI.		FACTORY-APPLIED		PE INSULATION WITH ACKET WITH SELF-SEALING CLOSURE
<u> </u>	-	THERMOSTAT	CAP.		
	-	AIR INTO REGISTER POINT OF CONNECTION			
•	-	DISCONNECTION			
_ -	SR	SUPPLY REGISTER			

SPECIFICATIONS

M-1 SCOPE OF WORK

A.) THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPERVISION AND OVERHEAD FOR THE FURNISHING AND INSTALLING OF ALL THE HEATING, VENTILATING AND AIR CONDITIONING AND RELATED WORK COMPLETE, IN ACCORDANCE WITH THE DRAWINGS, SCHEDULES AND SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- 1. INSTALLATION OF NEW INSULATION ON DUEL TEMPERATURE SUPPLY & RETURN PIPING.
- 2. INSTALLATION OF NEW CONDENSATE DRAIN PIPING.

M-2 WORK EXCLUDED

- A.) THE FOLLOWING ITEMS ARE EXCLUDED FROM THIS SECTION OF WORK:

 1.) MOUNTING AND POWER WIRING FOR ALL MOTOR STARTERS.
- 2.) ALL ELECTRIC POWER WIRING EXCEPT WHERE FURNISHED AS AN INTEGRAL PART OF FACTORY ASSEMBLED EQUIPMENT OR AS OTHERWISE REQUIRED FOR AUTOMATIC TEMPERATURE CONTROLS, VARIOUS SAFETY CONTROLS AND MOTOR INTERLOCKS.

M-3 GENERAL REQUIREMENTS

A.) CONSTRUCT ALL APPARATUS OF MATERIALS AND PRESSURE RATINGS SUITABLE FOR THE CONDITIONS ENCOUNTERED DURING CONTINUOUS OPERATION.

B.) WHERE CORROSION CAN OCCUR, APPROPRIATE CORROSION-RESISTANT MATERIALS AND ASSEMBLY METHODS SHALL BE USED, INCLUDING ISOLATION OF DISSIMILAR METALS AGAINST GALVANIC INTERACTION. RESISTANCE TO CORROSION SHALL BE ACHIEVED BY THE USE OF THE APPROPRIATE BASE MATERIALS COATINGS SHALL BE RESORTED TO ONLY WHEN SPECIFICALLY PERMITTED BY THE SPECIFICATIONS.

C.) CONSTRUCT ALL EQUIPMENT IN ACCORDANCE WITH REQUIREMENTS OF ALL APPLICABLE CODES. ALL PRESSURE VESSELS AND SAFETY DEVICES THAT FALL WITHIN THE SCOPE OF THE ASME CODE SHALL CONFORM TO THE CODE AND BEAR THE ASME LABEL OR STAMP.

D.) MATCH AND BALANCE ALL SYSTEM COMPONENTS TO ACHIEVE COMPATIBILITY OF EQUIPMENT FOR SATISFACTORY OPERATION AND PERFORMANCE THROUGHOUT THE ENTIRE OPERATING TEMPERATURE AND CONTROL RANGES. ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND GUIDELINES.

E.) UPON COMPLETION OF WORK, THE ENTIRE MECHANICAL SYSTEM SHALL BE OPERATED IN THE PRESENCE OF THE OWNER TO DEMONSTRATE THAT ALL COMPONENTS ARE INSTALLED AND OPERATING PROPERLY.

F.) PROVIDE ALL CONTROLS, WIRING (EXCEPT POWER WIRING FOR MOTORS), PIPING, VALVES, ACCESSORIES AND OTHER COMPONENTS NECESSARY TO MAKE ALL SYSTEMS COMPLETE AND OPERABLE.

M-4 REMOVALS

A.) REMOVE AND DISPOSE OF ALL EQUIPMENT, DUCTWORK, PIPING, DIFFUSERS AND ACCESSORIES WITHIN THE PROJECT AREA AS SHOWN ON THE DRAWINGS OR AS REQUIRED FOR THE INSTALLATION OF THE WORK OF THIS PROJECT.

B.) THIS WORK SHALL BE EXECUTED IN AN ORDERLY AND CAREFUL MANNER, WITH DUE CONSIDERATION FOR THE PROTECTION OF ADJACENT ACTIVITIES. DUST PRODUCING DEMOLITION SHALL BE ISOLATED WITH PROPER PRECAUTIONS.

C.) THE CONTRACTOR SHALL ASK THE OWNER FOR INSTRUCTIONS IF HE/SHE ENCOUNTERS DEMOLITION WORK WHICH MIGHT RESULT IN A HAZARDOUS CONDITION.

D.) MECHANICAL DEMOLITION INDICATED ON THE DRAWING IS ACCORDING TO THE BEST INFORMATION AVAILABLE. CONTRACTOR SHALL VERIFY ALL DEMOLITION WORK WITHIN THE AREA AND SHALL CONDUCT REMOVALS, AS REQUIRED, OR AS INSTRUCTED BY THE OWNER.

M-5 DUST PROTECTION

A.) IT IS IMPERATIVE THAT DURING DEMOLITION, AND ALSO DURING NORMAL CONSTRUCTION, WHERE THERE IS ANY POSSIBILITY OF DUST DUE TO CONSTRUCTION WORK CONTAMINATING THE OWNER'S EQUIPMENT OR CAUSING A NUISANCE TO PERSONNEL, THIS CONTRACTOR SHALL FURNISH AND INSTALL SUITABLE PROTECTION AS REQUIRED.

B.) WHEREVER POLYETHYLENE IS USED AS PROTECTIVE TARPAULINS OR DROPCLOTH, IT SHALL BE FIRE-RETARDANT POLYETHYLENE SHEETING, .004" THICK.

M-6 TIME AND MANNER

A.) ALL WORK SHALL BE PERFORMED DURING NORMAL WORKING HOURS UNLESS OTHERWISE DIRECTED BY THE OWNERS REPRESENTATIVE.

B.) PRIOR TO THE BEGINNING OF WORK THE CONTRACTOR SHALL SUBMIT A SCHEDULE OF WORK TO THE OWNER. ANY SHUTDOWNS OF EXISTING EQUIPMENT AND/OR SYSTEMS SHALL BE VERIFIED IN WRITING WITH THE OWNER'S REPRESENTATIVE.

C.) ANY SHUT-DOWN OF EXISTING SYSTEMS WHERE SUCH SHUT-DOWN IS REQUIRED FOR THE PERFORMANCE OF THE WORK UNDER THE CONTRACT SHALL BE AT SUCH TIMES AS DESIGNATED BY OWNER'S REPRESENTATIVE. RESTORE SYSTEMS TO ORIGINAL CONDITION AFTER PERFORMANCE WORK. THE INTENT IS TO INSURE MINIMUM INTERFERENCE WITH OPERATION OF EXISTING FACILITIES. REPAIR ANY DAMAGE DONE TO BUILDING RESULTING FROM INSTALLATION OF NEW WORK.

M-7 SITE INSPECTION

A.) VISIT SITE BEFORE SUBMITTING BID. INSPECT AND VERIFY ALL CONDITIONS WHICH MAY AFFECT COST OF INSTALLATION. VERIFY EXACT LOCATION OF

ALL EXISTING PIPES, DUCTS, BEAMS, ETC., WHETHER SHOWN ON THE DRAWINGS OR NOT, SO FAR AS THESE LOCATIONS RELATE TO THE NEW WORK. PROVIDE ANY OFFSETS IN NEW PIPING OR DUCTS AS MAY BE REQUIRED FOR PROPER CLEARANCES TO AVOID EXISTING DUCTS, CABLES OR OTHER OBSTRUCTION.

M-8 RUBBISH REMOVAL

A.) EQUIPMENT, DUCTWORK, ETC., SPECIFIED TO BE REMOVED AND RUBBISH CAUSED BY CONSTRUCTION SHALL BE REMOVED FROM THE CONSTRUCTION SITE.

M-9 CUTTING AND PATCHING

A.) THE CONTRACTOR SHALL PROVIDE ALL CUTTING REQUIRED FOR DUCTS, PIPING AND CONTROL CONDUITS PASSING THROUGH WALLS, FLOORS, ETC.

B.) PENETRATIONS FOR PIPING SHALL BE MADE BY CORE DRILLING WHENEVER POSSIBLE.

C.) PATCHING SHALL BE PROVIDED BY THE GENERAL CONTRACTOR EXCEPT WHERE DAMAGE AND/OR REPAIRS ARE NECESSITATED DUE TO ERROR OR NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS SUB-CONTRACTORS.

M-10 SHOP DRAWINGS AND SUBMITTALS REQUIRED

A.) MANUFACTURER'S DATA OR SHOP DRAWINGS OF THE FOLLOWING APPARATUS GIVING FULL INFORMATION AS TO CATALOG NUMBERS, DIMENSIONS, MATERIALS AND ALL INFORMATION PERTINENT TO THE ADEQUACY OF THE SUBMITTED EQUIPMENT SHALL BE SUBMITTED FOR REVIEW:

- 1.) HANGERS AND INSERTS.
- 2.) INSULATION.

M-11 PIPE INSULATION

A.) INSULATE ALL NEW PIPING AND ALL EXISTING PIPING WITH PRE-FORMED PIPE INSULATION. INSULATION SHALL HAVE A MAXIMUM FLAME SPREAD INDEX OF 25 AND A SMOKE-DEVELOPED INDEX NOT EXCEEDING 450. PIPE INSULATION INSTALLED WITHIN AIR PLENUMS SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF NOT MORE THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM E84 OR UL 723. REFER TO PIPE INSULATION SCHEDULE FOR INSULATION THICKNESS.

B.) PIPING VALVES AND FITTINGS ON ALL INSULATED PIPES SHALL BE PROVIDED WITH FABRICATED SECTIONS OF INSULATION OR PRE MOLDED FITTING COVERS EQUAL IN THICKNESS AND MATERIAL TO ADJOINING PIPE INSULATION.

C.) ALL INSULATION SHALL BE APPLIED AS PER MANUFACTURER'S RECOMMENDATIONS WITH USE OF 2" STRIPS AT ALL SEAMS SECURED WITH ADHESIVE. ALL SEAMS AND JOINTS SHALL BE VAPOR SEALED USING VAPOR BARRIER TAPE AND VAPOR SEAL ADHESIVE. STAPLES ARE NOT PERMITTED. ALL INSULATION AND VAPOR BARRIERS SHALL BE CONTINUOUS THROUGH SLEEVES, HANGERS, ETC. INSULATION FOR STRAINERS AND OTHER FITTINGS OR ACCESSORIES REQUIRING SERVICING OR INSPECTION SHALL HAVE INSULATION REMOVABLE AND REPLACEABLE WITHOUT DAMAGE.

D.) ALTERNATE MANUFACTURERS:

- 1.) ARMSTRONG
- 2.) JOHNS MANVILLE
- 3.) OWENS-CORNING

E.) PIPE INSULATION JACKETING: SHALL BE WHITE ZESTON 2000 PVC COVERS FOR PIPING AND FITTINGS. JACKET ALL PIPING AND FITTING THAT ARE EXPOSED IN ANY ROOM.

F.) PIPE LABELS: SHALL BE SETON ULTRA-MARK WEATHER RESISTANT FOR OUTDOOR APPLICATION AND OPTI-CODE FOR INDOOR APPLICATION. LETTERS AND ARROWS SHALL BE $2\frac{1}{2}$ " HIGH AND SHALL BE WHITE ON A GREEN BACKGROUND AND SHALL CONFORM TO ANSI AND OSHA STANDARDS. APPLY OVER INSULATION ONLY.

M-12 PIPING INSTALLATION - GENERAL REQUIREMENTS

A.) REFER TO DRAWINGS FOR REQUIRED PIPING LAYOUTS. CONNECTION DETAILS INDICATE REQUIRED PIPING AT VARIOUS PIECES OF EQUIPMENT. FLOOR PLANS INDICATE GENERAL ROUTING OF PIPING. SPECIFICATIONS DEFINE MATERIALS, INSTALLATION REQUIREMENTS AND SUPPLEMENTARY REQUIREMENTS TO THOSE SHOWN ON DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR PROVIDING A COMPLETE SYSTEM BASED ON ALL DOCUMENTATION PROVIDED. TO EQUIPMENT SCHEDULES FOR NOMINAL FLOW RATES. FINAL SIZING SHALL BE BASED ON FLOW RATE OF CONTRACTOR PURCHASED EQUIPMENT.

B.) WHERE DRAWING DETAILS REFER BRANCH PIPE SIZING TO FLOW RATES, REFER TO DRAWINGS.

C.) PIPING SHALL BE INSTALLED IN STRAIGHT PARALLEL RUNS, PARALLEL TO PIPING OF OTHER TRADES. ROUTING SHALL BE COORDINATED WITH PIPING AND CONDUIT RUNS OF OTHER TRADES.

D.) ALL PIPE SHALL BE NEW, CLEAN, OF DOMESTIC MANUFACTURE, AND MARKED WITH APPROPRIATE STANDARD.

E.) PIPING SHALL BE INSTALLED TO MINIMIZE TURBULENCE AND PREVENT NOISE AND WATER HAMMER. WATER PIPING SHALL PITCH 1" IN 40 FEET, UPWARD IN DIRECTION OF FLOW. PROPER PROVISION SHALL BE MADE FOR EXPANSION AND CONTRACTION IN ALL PORTIONS OF PIPEWORK, TO PREVENT UNDUE STRAINS ON PIPING OR EQUIPMENT. ALL PIPE SHALL BE SUITABLY REINFORCED AT ALL ANCHOR POINTS.

F.) PIPE SUPPORTS SHALL BE SPACED, REDUCERS ARRANGED AND PIPING PITCHED TO ALLOW AIR TO BE VENTED TO SYSTEM HIGH POINTS AND TO ALLOW THE SYSTEM TO BE DRAINED AT THE LOW POINTS. DRAIN VALVES



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MECHANICAL SYMBOLS, ABBREVIATIONS, NOTES & SPECIFICATIONS 1 OF 2

PROJECT NO.: NLAA0034.00 | SCALE:

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M-001

SPECIFICATIONS CONTINUED

WITH HOSE CONNECTIONS SHALL BE PROVIDED AT THE BASE OF EACH RISER, AT ALL LOW POINTS AND WHEREVER REQUIRED TO PERMIT COMPLETE DRAINING OF ALL LINES.

G.) AUTOMATIC FLOAT TYPE AIR VENTS SHALL BE PROVIDED AT HIGH POINTS OF WATER LINES AND WHEREVER REQUIRED TO ALLOW AIR TO VENT FROM SYSTEM. EACH VENT SHALL HAVE A DRAIN LINE PIPED TO NEAREST INDIRECT WASTE.

H.) RUN OUTS, AND CONNECTIONS TO EQUIPMENT, SHALL BE PROVIDED WITH A SWING JOINT OR FLEXIBLE CONNECTION TO WITHSTAND EXPANSION AND CONTRACTION. RISERS SHALL HAVE SWING JOINTS COMPOSED OF AT LEAST 4 ELBOWS.

I.) ALL CHANGES IN SIZE AND DIRECTION OF PIPING SHALL BE MADE WITH FITTINGS. DO NOT USE MITER FITTINGS, FACE OR FLUSH BUSHINGS, CLOSE NIPPLES OR STREET ELBOWS. ALL NIPPLES (PIPE LESS THAN 3" LONG) SHALL BE EXTRA HEAVY.

J.) ALL BRANCH CONNECTIONS SHALL BE MADE WITH TEES, EXCEPT THAT ON STEEL PIPING FORGED STEEL "WELDOLETS" AND "LATROLETS" AS MANUFACTURED BY BONNEY FORGE MAY BE USED WHERE THE BRANCH PIPE IS AT LEAST TWO NOMINAL PIPE SIZES LESS THAN THE MAIN PIPE.

K.) ECCENTRIC REDUCING FITTINGS OR ECCENTRIC REDUCING COUPLINGS SHALL BE USED WHERE REQUIRED BY THE CONTRACT DOCUMENTS OR WHERE REQUIRED TO PREVENT POCKETING OF LIQUID OR NON-CONDENSIBLES.

L.) FITTINGS SHALL BE FACTORY MANUFACTURED. SHOP OR FIELD FABRICATED FITTINGS ARE NOT ACCEPTABLE. WELDING FITTINGS SHALL BE "TUBE-TURNS" OR EQUIVALENT. FITTINGS SHALL HAVE THE SAME PRESSURE RATING AS THE SYSTEM IN WHICH THEY ARE INSTALLED.

M.) ELECTROLYTIC COUPLINGS OR UNIONS SHALL BE INSTALLED BETWEEN COPPER AND STEEL PIPE.

N.) ALL JOINTS SHALL BE MADE IN A WORKMANLIKE MANNER USING CLEAN THREADS, DEBURRED PIPE AND PROPER MATERIALS. ALL JOINTS SHALL CONFORM TO THE APPLICABLE ANSI AND ASTM STANDARDS. QUALIFY WELDERS TO THE CODE FOR PRESSURE PIPING ANSI SPECIFICATIONS B31.1, WITH CERTIFICATION BY THE WELDING BUREAU OF HEATING, PIPING AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION. ASME STAMP SHALL BE PROVIDED AS REQUIRED.

O.) RUN OUTS, AND CONNECTIONS TO EQUIPMENT, SHALL BE PROVIDED WITH A SWING JOINT OR FLEXIBLE CONNECTION TO WITHSTAND EXPANSION AND CONTRACTION. RISERS SHALL HAVE SWING JOINTS COMPOSED OF AT LEAST 4 ELBOWS.

- Q.) PIPING MATERIALS: REFER TO PIPING MATERIAL SCHEDULE.
- R.) PIPE FITTINGS: REFER TO PIPING MATERIAL SCHEDULE.
- S.) PIPING CONNECTIONS TO EQUIPMENT

1.) FLANGES OR UNIONS SHALL BE PROVIDED AT ALL FINAL CONNECTIONS TO EQUIPMENT AND CONTROL VALVES TO FACILITATE DISMANTLING. OFFSETS SHALL BE PROVIDED AND CONNECTIONS ARRANGED SO THAT THE EQUIPMENT BEING SERVED MAY BE REMOVED WITHOUT DISTURBING THE PIPING.

2.) ALL AUTOMATIC VALVES SHALL BE PROVIDED WITH A GATE VALVE AND A STRAINER ON THE INLET SIDE.

3.) HANGERS AND SUPPORTS FOR CONNECTED EQUIPMENT SHALL CONFORM TO THE CRITERIA FOR PIPING. NO WIRE, TAPE OR METAL BANDS ARE PERMITTED.

4.) INSTALL ALL SUPPLY PIPING TO EQUIPMENT INCLUDING GATE VALVES AND STRAINERS AT LINE SIZE WITH THE REDUCTION IN SIZE BEING MADE ONLY AT THE INLET TO THE CONTROL VALVE OR PUMP. INSTALL THE OUTLET PIPING FROM THE CONTROL VALVE AT THE FULL SIZE OF THE TAPPING IN THE EQUIPMENT SERVED.

5.) FOR EQUIPMENT MOUNTED ON ISOLATION BASES AND WHEREVER INDICATED ON DRAWING AND DETAILS, MASON INDUSTRIES TYPE BSS STAINLESS STEAL BRAIDED FLEXIBLE HOSE CONNECTIONS OR EQUIVALENT SHALL BE PROVIDED.

T.) VALVES

1.) ALL HAND VALVES, CHECK-VALVES, VENT VALVES, COCKS, ETC., SHALL BE FURNISHED AND INSTALLED AS REQUIRED FOR THE COMPLETE AND PROPER VALVING OF THE ENTIRE INSTALLATION AS DEFINED HEREIN. VALVES SHALL HAVE THE SAME PRESSURE RATING AS THE SYSTEM IN WHICH THEY ARE INSTALLED.

2.) VALVES WITH HAND-WHEELS SHALL BE INSTALLED HORIZONTALLY OR VERTICALLY UPWARD UNLESS SPECIFICALLY SHOWN OTHERWISE. ALL VALVES SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS TO FACILITATE EASY REMOVAL FOR REPAIR OR REPLACEMENT.

3.) VALVES SHALL BE FULL LINE SIZE UNLESS OTHERWISE NOTED. ALL DRAIN VALVES IN EQUIPMENT ROOMS SHALL BE LOCATED AT AN ELEVATION NOT GREATER THAN 6'-0" ABOVE FLOOR AND SHALL BE PROVIDED WITH 3/4" HOSE CONNECTIONS.

4.) VALVES SHALL BE CAPABLE OF BEING REPACKED WHILE WIDE OPEN AND OPERATING AT THEIR RATED PRESSURE.

5.) UNLESS OTHERWISE NOTED OR REQUIRED BY THE APPLICATION, SCREWED VALVES SHALL BE OF BRONZE CONSTRUCTION AND FLANGED VALVES OF CAST IRON CONSTRUCTION WITH BRONZE TRIM. GLOBE AND CHECK VALVE DISCS SHALL BE IN ACCORDANCE WITH MANUFACTURERS

RECOMMENDATIONS FOR THE SERVICE. ALL CAST IRON BODY VALVES SHALL HAVE RENEWABLE BRONZE SEAT RINGS AND BRONZE SPINDLES.

6.) IN GENERAL, USE GLOBE VALVES FOR ALL THROTTLING SERVICE (INCLUDING PUMP DISCHARGES). FOR WATER LINES 3" AND OVER, ECCENTRIC PLUG VALVES SHALL BE USED. WHERE BUTTERFLY OR BALL VALVES ARE SPECIFIED THESE TYPES SUFFICE FOR THROTTLING. BALL VALVES USED FOR BALANCING SHALL HAVE LOCKING STOP.

7.) HORIZONTAL CHECK VALVES SHALL GENERALLY BE 15 DEGREE SWING CHECK TYPE. CHECK VALVES IN VERTICAL PIPING AND IN ALL PUMP DISCHARGES SHALL BE SPRING-CUSHIONED OF THE DISC OR DUAL PLATE TYPE AS MANUFACTURED BY ONE OF THE FOLLOWING:

- a. MILLER VALVE CO.
- b. CPV CO.
- c. SMOLENSKY VALVE CO.
- d. WILLIAMS GAUGE CO. "WILLIAMS HAGER"e. MISSION "DUO-CHEK"

8.) EXCEPT WHERE SPECIFICALLY STATED TO CONTRARY, ALTERNATE MANUFACTURERS FOR VALVES ARE AS FOLLOWS: CRANE CO., LUNKENHEIMER CO., NIBCO, INC.

9.) THE CONTRACTOR SHALL PROVIDE THE VALVES SPECIFIED, OR THE EQUIVALENT AS PRODUCED BY ONE OF THE ABOVE LISTED MANUFACTURERS.

U.) PIPE SLEEVES AND ESCUTCHEONS

1.) ALL PIPE OPENINGS THROUGH WALLS, CEILINGS, FURRING, PARTITIONS AND SLABS SHALL BE PROVIDED WITH SLEEVES HAVING AN INTERNAL DIAMETER AT LEAST 2" LARGER THAN THE OUTSIDE DIAMETER OF THE PIPE FOR UNINSULATED LINES OR OF THE INSULATION FOR INSULATED SERVICES. SLEEVES SHALL BE LOCATED SO THAT THE PIPE PASSES THROUGH CENTER OF SLEEVE.

2.) SLEEVES SHALL BE INSTALLED THROUGH INTERIOR WALLS AND PARTITIONS FLUSH WITH FINISHED SURFACE; SLEEVES THROUGH OUTSIDE WALLS SHALL PROJECT 1/2" ON EACH SIDE OF THE FINISHED WALL; FLOOR SLEEVES SHALL PROJECT 1" ABOVE FINISHED FLOORS.

3.) INTERIOR WALLS AND FLOORS - THE SPACE BETWEEN OUTSIDE OF PIPE OR INSULATION AND THE INSIDE OF THE SLEEVE OR FRAMED OPENING SHALL BE FILLED WITH FIBROUS GLASS AND FIRE STOPPED WITH 3-M FIRE BARRIER.

4.) ESCUTCHEONS SHALL BE PROVIDED ON BOTH SIDES OF THE PENETRATION THROUGH THE STRUCTURE FOR ALL PIPES EXPOSED TO VIEW PASSING THROUGH FURRING, WALLS, FLOORS, CEILING AND PARTITIONS, WHETHER INSULATED OR NOT. FOR PIPES PASSING THROUGH FLOORS, AND EXTERIOR WALLS, ESCUTCHEONS SHALL FIT OVER THE SLEEVE.

5.) ALL ESCUTCHEONS SHALL BE CHROME PLATED BRASS, SPLIT HINGED TYPE WITH SET SCREWS.

V.) PIPING SPECIALTIES

A.) PROVIDE ALL SPECIAL APPLIANCES REQUIRED FOR THE PROPER OPERATION OF THE PIPING SYSTEMS.

B.) PROVIDE "Y" TYPE STRAINERS WITH FULL SIZE BLOW-OFF-VALVES. SPENCE, MUELLER, McALEAR OR CRANE CAST BRONZE UP TO 2 1/2", SEMI-STEEL 3" AND OVER. MONEL BASKETS WITH NO. 20 MESH.

C.) PROVIDE FLOAT AND THERMOSTATIC TRAPS AS MANUFACTURED BY SPIRAX/SARCO OR APPROVED EQUAL. TRAPS SHALL BE CAST IRON BODY AND BOLTED COVER, STAINLESS STEEL OR BRONZE BELLOWS TYPE AIR VENT, STAINLESS STEEL OR COPPER FLOAT, STAINLESS STEEL LEVER AND VALVE ASSEMBLY.

W.) CLEANING - ALL PIPING SYSTEMS

1.) ALL OPEN ENDS OF PIPING, VALVES AND EQUIPMENT SHALL BE PLUGGED EXCEPT WHEN ACTUAL WORK IS BEING PERFORMED, TO MINIMIZE ACCUMULATION OF DIRT AND DEBRIS.

2.) AFTER INSTALLATION IS COMPLETE TEMPORARY SCREENS SHALL BE PLACED AT CONNECTIONS TO ALL EQUIPMENT AND AT AUTOMATIC CONTROL VALVES WHERE PERMANENT STRAINERS ARE NOT PROVIDED.

3.) PRIOR TO THE PERFORMANCE OF TESTS, ALL PIPING THAT IS TO RECEIVE A HYDROSTATIC TEST SHALL BE FLUSHED OUT WITH CLEAN WATER. PIPING THAT IS TO BE AIR OR GAS PRESSURE TESTED SHALL BE BLOWN OUT WITH COMPRESSED AIR. DIRT AND DEBRIS COLLECTED AT SCREENS STRAINERS, AND OTHER POINTS FROM THE SYSTEM, SHALL BE REMOVED BOTH BEFORE AND AFTER TESTING.

4.) THE MANUFACTURER SHALL CLEAN ALL STEEL PIPE AND FITTINGS BEFORE SHIPMENT. THE PIPE AND FITTINGS SHALL BE DIPPED INTO A SOLUTION OF SULPHURIC ACID TO REMOVE THE MILL SCALE AND THEN INTO A SOLUTION TO STOP THE CHEMICAL ACTION ON THE METAL AND REMOVE GREASE.

X.) HANGERS, SUPPORTS, ANCHORS AND GUIDES - GENERAL

1.) SUPPORT, ANCHOR AND GUIDE ALL PIPING AND CONNECTED EQUIPMENT TO PRECLUDE FAILURE OR DEFORMATION. CONSTRUCT AND INSTALL HANGERS, SUPPORTS, ANCHORS, GUIDES AND ACCESSORIES IN CONFORMANCE WITH THE CODE FOR PRESSURE PIPING ANSI B-31.1 AS A MINIMUM REQUIREMENT. WHERE SPECIFICATION REQUIREMENTS ARE MORE STRINGENT THAN THE CODE, THE SPECIFICATION SHALL APPLY. WIRE, TAPE OR METAL BANDS SHALL NOT BE USED.

2.) PIPING SHALL BE SECURELY FASTENED TO THE STRUCTURE WITHOUT OVERSTRESSING ANY PORTION OF THE SUPPORTS OF THE STRUCTURE

ITSELF. SUFFICIENT INTERMEDIATE STEEL SHALL BE PROVIDED TO TRANSFER LOADS TO AREAS WHERE THEY CAN SAFELY BE ACCOMMODATED. PIPE SUPPORTS, ANCHORS AND GUIDES SHALL BE SECURED TO STEEL BY WELDED BRACKETS, BEAM CLAMPS, OR BY FASTENING RODS OVER THE BEAM TOP FLANGE, AND TO CONCRETE BY MEANS OF INSERTS, OR IF GREATER LOAD CARRYING CAPACITY IS REQUIRED, BY MEANS OF STEEL FISHPLATES EMBEDDED IN THE CONCRETE ABOVE THE REINFORCEMENT RODS. ALL HANGERS SHALL BE LOCATED TO PERMIT FREE EXPANSION AND CONTRACTION.

3.) UNLESS OTHERWISE INDICATED, ALL HORIZONTAL PIPING SHALL BE HUNG TIGHT TO CEILING BEAMS AND LOCATED MORE THAN SIX FEET ABOVE THE FLOOR. PIPING LOCATED WITHIN SIX FEET OF THE FLOOR SHALL BE SUPPORTED ON FABRICATED STANDS OR PIERS. WHERE PIPING RUNS ALONG WALLS, SUITABLE WALL TYPE AND GANG-TYPE HANGERS SHALL BE PROVIDED.

4.) PIPING AND TUBING SHALL BE SUPPORTED AT ALL CHANGES IN DIRECTION. MAXIMUM DEFLECTION SHALL BE 1/8". MAXIMUM SPACING BETWEEN SUPPORTS SHALL BE:

MATERIAL 1/2" - 1-1/4" 1-1/2" - 2"

COPPER TUBING 6 FT O.C. 10 FT O.C.

5.) HANGER RODS FOR BOTH SINGLE AND DOUBLE ROD HANGERS SHALL CONFORM TO THE FOLLOWING SCHEDULE OF DIAMETERS:

STEE	EL PIPE	COPPER TUBING			
PIPE SIZE	HANGER ROD Ø	PIPE SIZE	HANGER ROD Ø		
1/2" - 1"	- 3/8"	1/2" - 2"	- 3/8"		
1-1/4" - 2"	- 1/2"	2-1/2" - 5"	- 5/8"		
2-1/2" - 4"	- 1/2"	5" - 6"	- 3/4"		

6.) COPPER PLATED PIPE HANGERS AND SUPPORTS SHALL BE USED FOR VERTICAL AND HORIZONTAL RUNS OF COPPER OR BRASS PIPE AND TUBING WHERE THE HANGER IS IN DIRECT CONTACT WITH THE PIPE, OTHERWISE STEEL HANGERS AND SUPPORTS SHALL BE USED.

7.) PIPE HANGERS AND SUPPORTS COMPLETE WITH RODS, BOLTS, LOCKNUTS, SWIVELS, COUPLINGS, BRACKETS AND ALL OTHER COMPONENTS AND ACCESSORIES SHALL BE PROVIDED.

Y.) HANGER TYPES

1.) IN GENERAL, HANGERS SHALL BE OF CLEVIS TYPE OR ROLL TYPE WITH VERTICAL ADJUSTMENT. WHERE SEVERAL LINES OF PIPING RUN AS A COMMON GROUP, THEY SHALL BE SUPPORTED ON A COMMON HANGER BAR OF GALVANIZED CHANNEL OR BACK TO BACK ANGLE SECTIONS OR "UNISTRUT" TYPE SUPPORTS.

2.) HANGERS SHALL BE AS FOLLOWS:

APPLICATION CENTRAL IRON FIG. NO.
CLEVIS HANGER 10
RISER CLAMP - THRU 3" 261
RISER CLAMP - OVER 3" 262
ROLL HANGER THRU 6" 272
ROLL HANGER OVER 6" 171

3.) ALTERNATE MANUFACTURERS: GRINELL, GRABLER, CRANE

M-13 MISCELLANEOUS

A.) THE CONTRACTOR SHALL PROVIDE THE OWNERS WITH CATALOG DATA, OPERATING INSTRUCTIONS, MAINTENANCE INSTRUCTIONS AND RECORD (AS-BUILT) DRAWINGS OF ALL COMPLETED WORK. AS-BUILT DRAWINGS SHALL SHOW EXACT LOCATION OF ALL MECHANICAL SYSTEMS, EQUIPMENT, DUCTWORK, PIPING, ETC.

B.) SUBMIT THREE (3) SETS OF AS BUILT DRAWINGS AND AN ELECTRONIC FILE OF THE AS BUILT DOCUMENTS IN AN AUTO CAD LT 2004 FORMAT TO BUILDING MANAGEMENT.

C.) ALL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE BY THE OWNER.

END OF SPECIFICATIONS

NOTES:

CONDENSATE DRAIN SIZING

EQUIPMENT CAPACITY	MINIMUM CONDENSATE DRAIN PIPE DIAMETER (IN.)
UP TO 20 TONS OF REFRIGERATION	3/4"
OVER 20 TONS OF REFRIGERATION	1"
OVER 40 TONS TO 90 TONS OF REFRIGERATION	11/4"
OVER 90 TONS TO 125 TONS OF REFRIGERATION	1½"
OVER 125 TONS TO 250 TONS OF REFRIGERATION	2"

NOTES: FOR SI: 1"=25.4mm, 1 TON OF CAPACITY=3.517 kW

MECHANICAL PIPE MATERIAL SCHEDULE

DIDE OVOTEM	0175	PIPE		FITTINGS			REMARKS	
PIPE SYSTEM	SIZE	MATERIAL	TYPE / WEIGHT	STANDARD	MATERIALS	TYPE / WEIGHT	STANDARD	REWARKS
CONDENSATE DRAIN	ALL	COPPER	HARD TEMPER TYPE L	ASTM B88	COPPER	WROUGHT COPPER SOLDER JOINT	ANSI 16.18	

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CHILDREN'S LIBRARY
ACOUSTICAL TILE CEILING
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REPLACEMENT

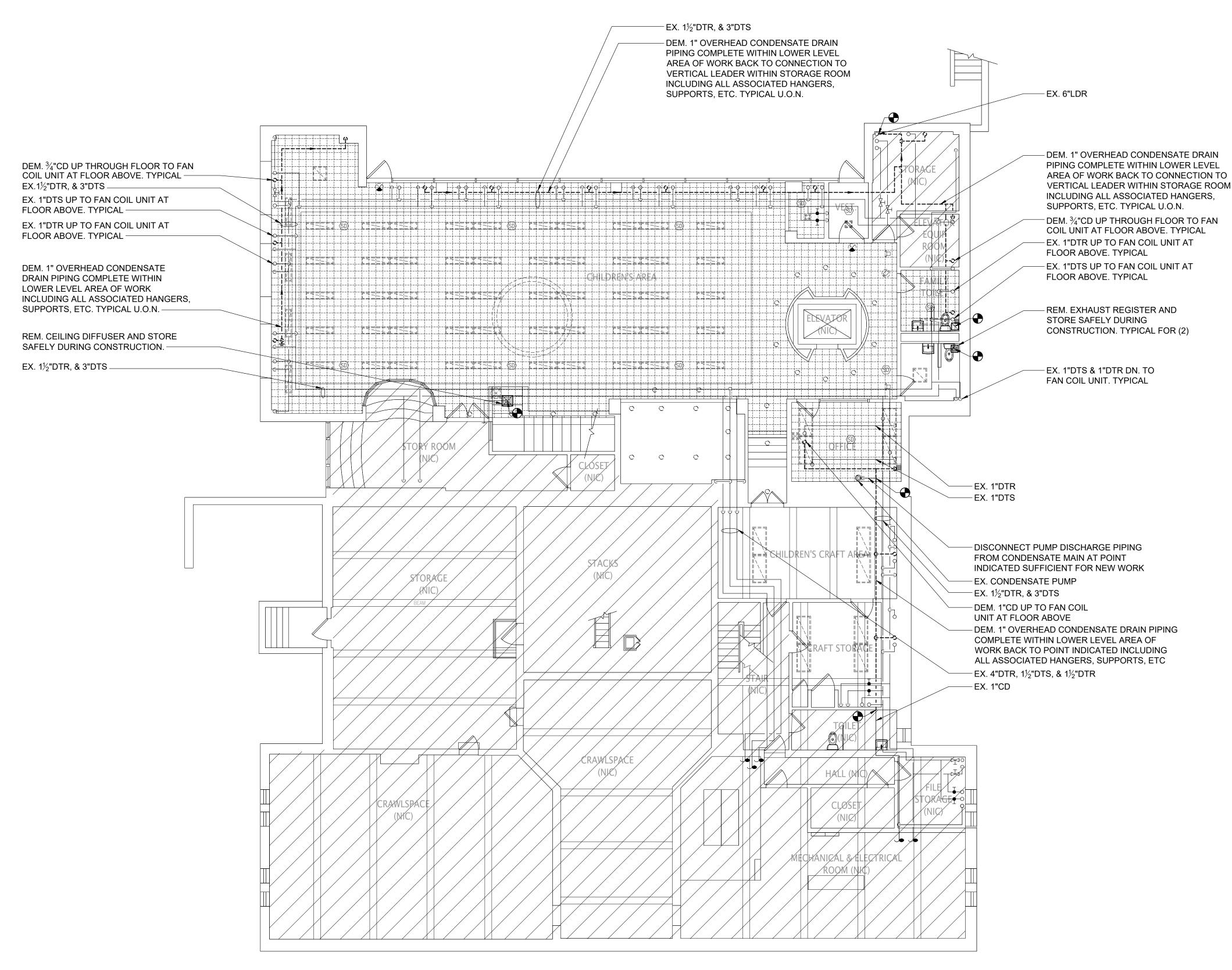
MECHANICAL SPECIFICATIONS 2 OF 2

PROJECT NO.: NLAA0034.00 | SCALE:

DRAWING NO.:

M-002

AS NOTED





1. DEMOLISH DUAL TEMPERATURE SUPPLY AND RETURN INSULATION COMPLETE

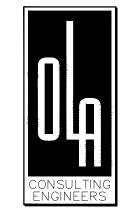
THROUGHOUT LOWER LEVEL AREA OF WORK.

2. ALL CONDENSATE DRAIN / PUMP DISCHARGE PIPING FROM FAN COIL UNITS AT LOWER LEVEL SHALL BE DISCONNECTED FROM THE OVERHEAD CONDENSATE MAIN AND REMAIN IN PLACE SUFFICIENT FOR NEW WORK WHETHER INDICATED OR NOT.



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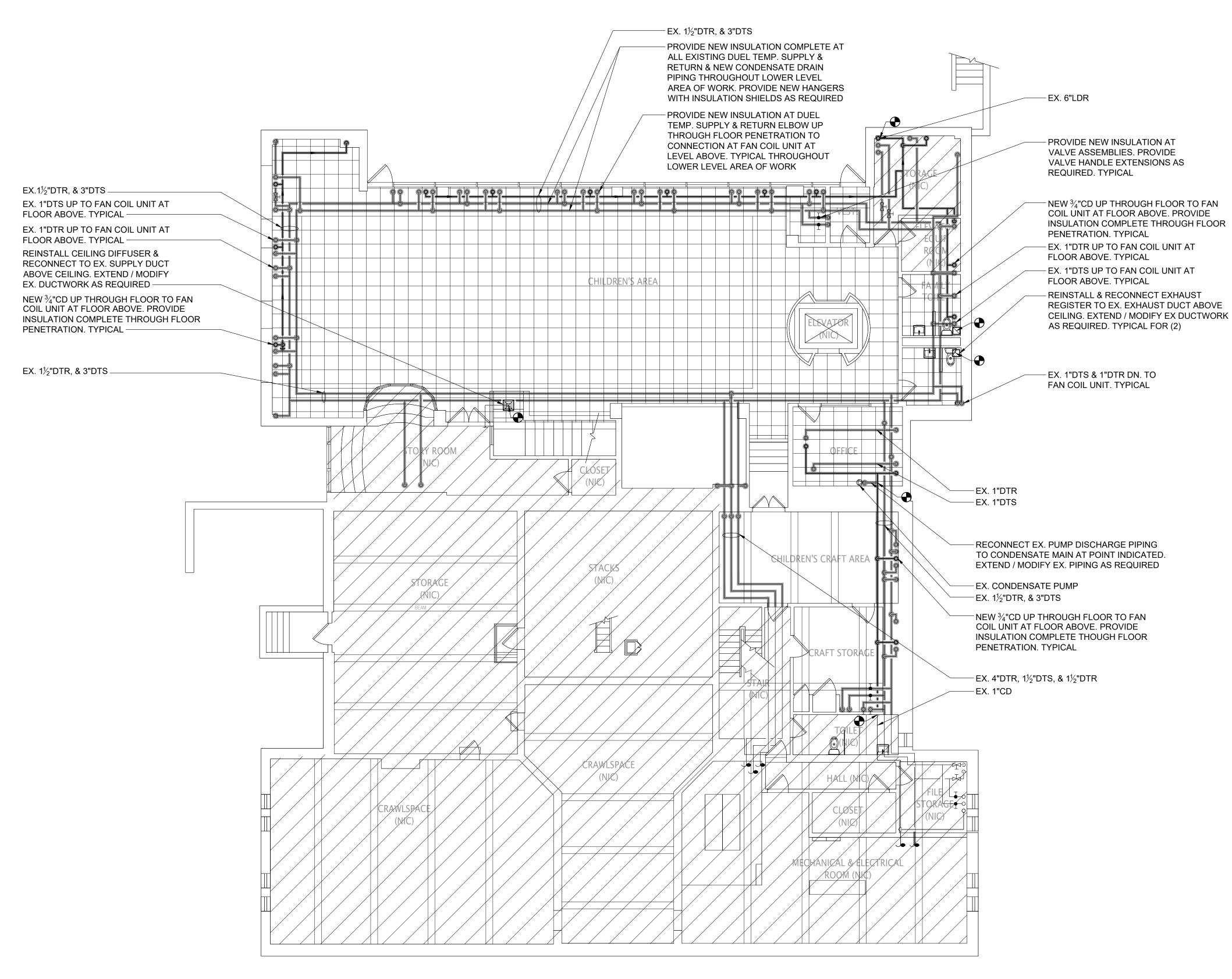
MECHANICAL LOWER LEVEL **DEMOLITION PLAN**

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M-101



MECHANICAL LOWER LEVEL NEW WORK PLAN SCALE: 1/8" = 1'-0"

NOTES:

1. NEW INSULATION AT DUAL TEMPERATURE SUPPLY & RETURN PIPING AND CONDENSATE DRAIN PIPING SHALL BE CONTINUOUS UP THROUGH ALL FLOOR PENETRATIONS. FLOOR PENETRATIONS SHALL BE PROPERLY SEALED TO BE WATERTIGHT.

- 2. ALL CONDENSATE DRAIN / PUMP DISCHARGE PIPING FROM FAN COIL UNITS AT LOWER LEVEL SHALL BE RECONNECTED EX. TO NEW OVERHEAD CONDENSATE MAIN WHETHER INDICATED OR NOT. EXTEND / MODIFY EX. PIPING AS REQUIRED
- 3. NEW CONDENSATE DRAIN PIPING SHALL MAKE USE OF EXISTING FLOOR PENETRATIONS THROUGHOUT FOR INSTALLATION.



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MECHANICAL LOWER LEVEL NEW WORK PLAN

PROJECT NO.: NLAA0034.00 SCALE:

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M-201

TABLE C403.2.10 MINIMUM PIPE INSULATION THICKNESS (IN INCHES)A,C

FLUID OPERATING TEMPERATURE	INSULATION CONDUCTIVITY		NOMINAL PIPE OR TUBE SIZE (INCHES)				
RANGE AND USAGE (°F)	CONDUCTIVITY BTU*IN./(H*FT ² *°F) ^B	MEAN RATING TEMPERATURE, °F	< 1	1 TO < 1½	1½ TO < 4	4 TO < 8	≥ 8
> 350	0.32 - 0.34	250	4.5	5.0	5.0	5.0	5.0
251 - 350	0.29 - 0.32	200	3.0	4.0	4.5	4.5	4.5
201 - 250	0.27 - 0.30	150	2.5	2.5	2.5	3.0	3.0
141 - 200	0.25 - 0.29	125	1.5	1.5	2.0	2.0	2.0
105 - 140	0.21 - 0.28	100	1.0	1.0	1.5	1.5	1.5
40 - 60	0.21 - 0.27	75	0.5	0.5	1.0	1.0	1.0
< 40	0.20 - 0.26	50	0.5	1.0	1.0	1.0	1.5

FOR SI: 1 INCH = 25.4 MM, °C = [(°F)-32]/1.8

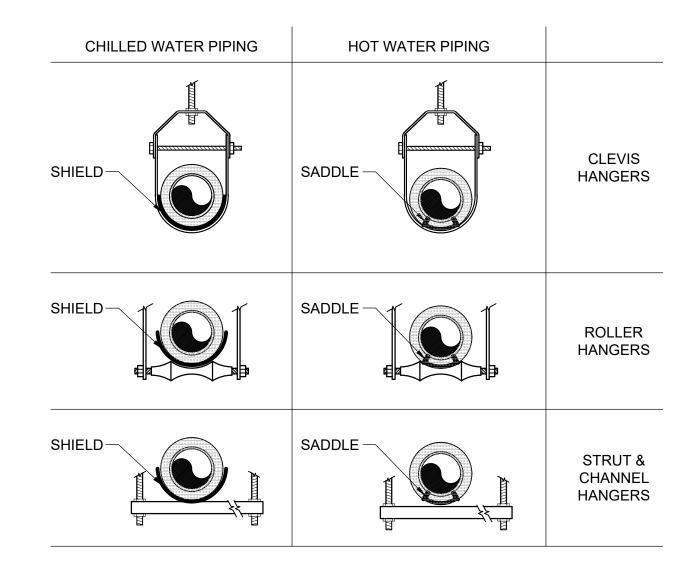
a. FOR PIPING SMALLER THAN 11/2 INCHES AND LOCATED IN PARTITIONS WITHIN CONDITIONED SPACES, REDUCTION OF THESE THICKNESSES BY 1 INCH SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE b) BUT NOT TO A THICKNESS LESS THAN 1 INCH.

b. FOR INSULATION OUTSIDE THE STATED CONDUCTIVITY RANGE, THE MINIMUM THICKNESS (T) SHALL BE DETERMINED AS FOLLOWS:

 $T = r\{(1 + t/r)K/k - 1\}$

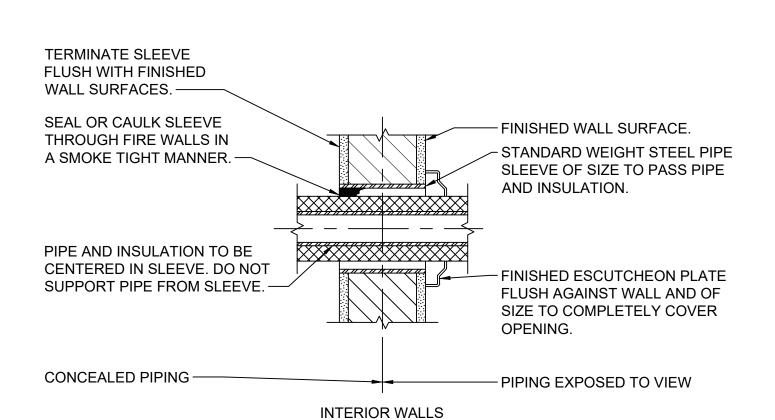
WHERE:

- T = MINIMUM INSULATION THICKNESS, r = ACTUAL OUTSIDE RADIUS OF PIPE,
- t = INSULATION THICKNESS LISTED IN THE TABLE FOR APPLICABLE FLUID TEMPERATURE AND PIPE SIZE, K = CONDUCTIVITY OF ALTERNATE MATERIAL AT MEAN RATING TEMPERATURE INDICATED FOR THE
- APPLICABLE FLUID TEMPERATURE (BTU * IN/H * FT² * °F)
- k = THE UPPER VALUE OF THE CONDUCTIVITY RANGE LISTED IN THE TABLE FOR THE APPLICABLE FLUID TEMPERATURE.
- c. FOR DIRECT=BURIED HEATING AND HOT WATER SYSTEM PIPING, REDUCTION OF THESE THICKNESSES BY 1½ INCHES (38 MM) SHALL BE PERMITTED (BEFORE THICKNESS ADJUSTMENT REQUIRED IN FOOTNOTE b BUT NOT TO THICKNESSES LESS THAN 1 INCH (25 MM).



- 1. INSULATION ON ALL COLD SURFACES SHALL BE APPLIED WITH A CONTINUOUS, UNBROKEN VAPOR SEAL. HANGERS, SUPPORTS, ANCHORS, ETC., THAT ARE SECURED DIRECTLY TO COLD SURFACES SHALL BE ADEQUATELY INSULATED AND VAPOR SEALED TO PREVENT CONDENSATION.
- 2. GALVANIZED METAL SHIELDS SHALL BE APPLIED BETWEEN HANGERS OR SUPPORTS AND THE PIPE INSULATION AS SHOWN ABOVE. SHIELDS SHALL BE FORMED TO FIT THE INSULATION AND SHALL EXTEND UP TO THE CENTERLINE OF THE PIPE
- 3. RIGID INSULATION INSERTS SHALL BE INSTALLED ON PIPE SIZES 11/2" (38 MM) OR LARGER AS SHOWN ABOVE. INSERTS SHALL BE OF EQUAL THICKNESS TO THE ADJOINING INSULATION AND SHALL BE PROVIDED WITH VAPOR RETARDER SEALS.

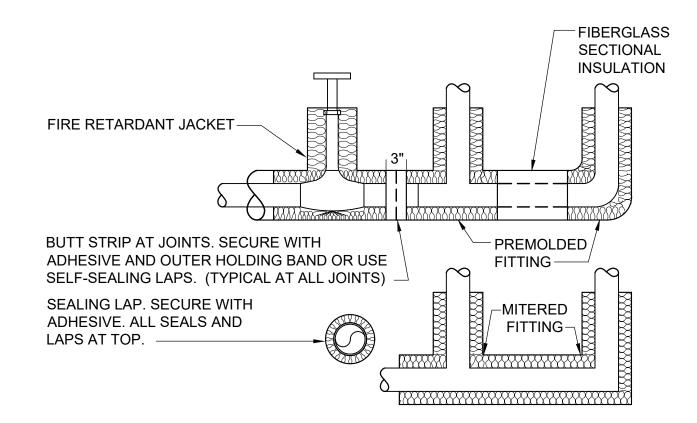




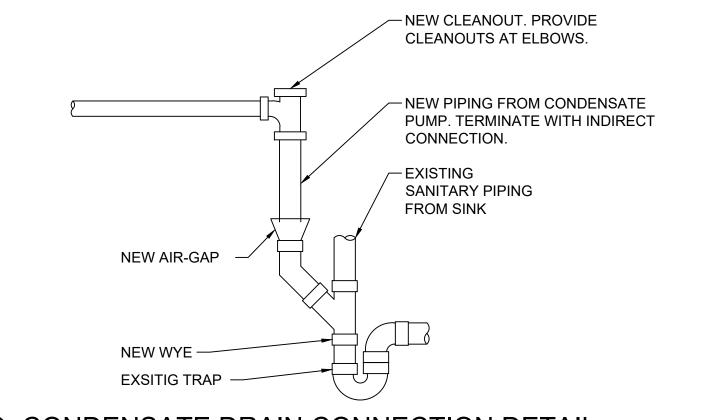
CONCEALED VALVES AND FITTINGS 1. WRAP WITH I" THICK, I LB. DENSITY TO REQUIRED PIPE INSULATION THICKNESS. 2. SECURE WITH WIRE OR TAPE. 3. VAPOR SEAL COLD WATER AND STORM WATER PIPING.

EXPOSED VALVES AND FITTINGS 1. PREMOLDED FIBERGLASS OR RADIAL MITERED PIPE INSULATION.

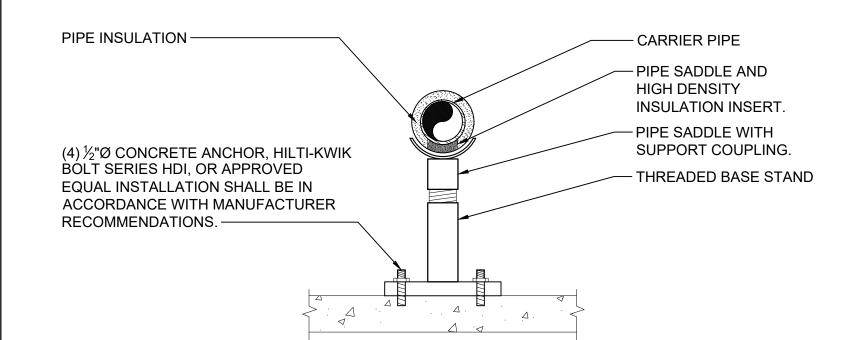
- 2. SKIM COAT OF INSULATING CEMENT.
- 3. COAT OF MASTIC
- 4. WRAP WITH FIBERGLASS REINFORCING CLOTH. 5. FINISH COAT OF MASTIC.
- 6. OVERLAP 2" ON PIPE INSULATION.



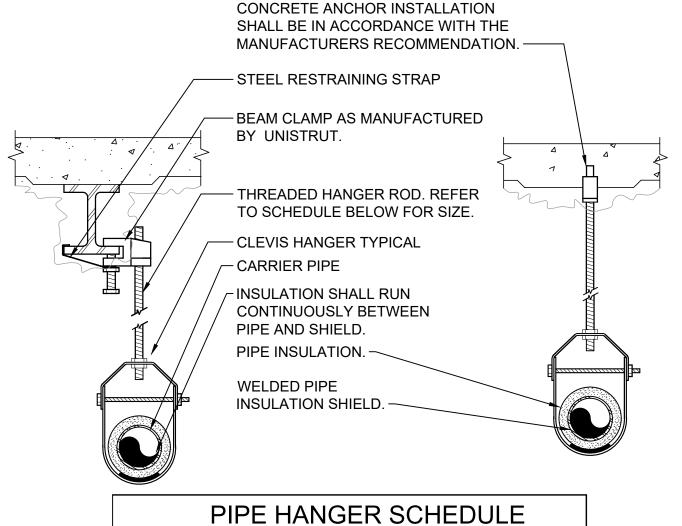
PIPE INSULATION DETAIL



CONDENSATE DRAIN CONNECTION DETAIL



FLOOR PIPE SUPPORT DETAIL



3/4"-2" 2 1/2"-3" 4"-5" 6" 8"-12" HANGER DIA. 3/8" 1/2" 5/8" 3/4" 7/8"

- 1. CLEVIS HANGERS WITH WELDED INSULATION SHIELDS SIMILAR TO RAUCH FIG. 100SH ON ALL PIPES LARGER THAN 1".
- 2. FOR PIPES 1" OR SMALLER, A BAND HANGER WITH INSULATION SHIELD MAY BE USED SIMILAR TO RAUCH FIG. NO. 1ASH
- 3. FOR NON-INSULATED PIPE, INSULATION SHIELDS MAY BE OMITTED.
- 4. ALL PIPE HANGERS SHALL BE GALVANIZED STEEL OR FACTORY PAINTED BLACK WITH ENAMEL
- 5. FOR NON FERROUS PIPING WITHOUT INSULATION, ALL HANGERS SHALL BE COPPER PLATED OR FURNISHED WITH A DI-ELECTRIC BETWEEN PIPE AND HANGERS.
- 6. WHERE EXISTING BUILDING STRUCTURAL COMPONENTS HAVE FIREPROOF MATERIAL, ANY AREA THAT IS DISTURBED OR DAMAGED AS A RESULT OF HANGER INSTALLATION SHALL BE PATCHED WITH UL AND FM APPROVED FIREPROOFING TO
- MATCH EXISTING. 7. ALL ANCHORS AND INSERTS SHALL HAVE NEW YORK CITY BOARD OF STANDARD AND APPEALS, (BSA) APPROVAL.





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PIPE WALL SLEEVE DETAIL FOR INTERIOR WALLS

CAMBOI		ABBREVIATIONS
SYMBOL	ABBREVIATION	DESCRIPTION
		CONDUIT AND WIRING
,	<u>-</u>	CONDUIT & WIRING TO BE REMOVED UON
	<u>-</u>	HOMERUN TO PANEL, ARROWS INDICATE # 1P
	<u>-</u> 	MULTI-POLE HOMERUN
	-	ELECTRICAL EQUIPMENT AS INDICATED
	-	ELECTRICAL EQUIPMENT TO BE REMOVED UON
	-	BATTERY PACK EMERGENCY LIGHT FIXTURE
	-	EXIT LIGHT, FACES-SHADED, CHEVRON-ARROW
S _x	- 	SINGLE POLE SWITCH (x - INDICATES FIXTURE BEING CONTROLLED) (DIM - INDICATES DIMMER)
S _x ³	-	THREE WAY SWITCH (x - INDICATES FIXTURE BEING CONTROLLED)
	-	WALL MOUNTED OCCUPANCY SENSOR (V - INDICATES VACANCY SENSOR)
<u>©</u>	-	CEILING MOUNTED OCCUPANCY SENSOR (V - INDICATES VACANCY SENSOR)
(S)	-	SMOKE DETECTOR
FACP	FACP	FIRE ALARM CONTROL PANEL
	А	AMPERE(S)
	AF	AMPERAGE OF FUSE
	AWG	AMERICAN WIRE GAUGE
	BLDG	BUILDING
	С	CONDUIT
	CD	CANDELA
	CKT	CIRCUIT
	CLG	CEILING
	COL	COLUMN
	CU	COPPER
	DEM.	DEMOLISH AND REMOVE
	DISC	DISCONNECT
	DWG	DRAWING
	ELEV	ELEVATOR
	EMT	ELECTRICAL METALLIC TUBING
	EM	EMERGENCY
	EX.	EXISTING TO REMAIN
	F	FLOOR
	NIC	NOT IN CONTRACT
	NTS	NOT TO SCALE
	P	POLE
	 PNL	PANEL
	REL.	REMOVE AND RELOCATE
	TYP	TYPICAL
	UON	UNLESS OTHERWISE NOTED
	VIF	VERIFY IN FIELD
	v (I	VOLT(S)

GENERAL NOTES

- ALL WORK SHOWN IS NEW UNLESS OTHERWISE NOTED (UON) EXISTING TO REMAIN (EX.).
- 2. THE DRAWINGS ARE TO BE CONSIDERED SCHEMATIC ONLY AND DO NOT NECESSARILY SHOW THE EXACT LOCATIONS AND DETAILS OF THE WORK TO BE INSTALLED.
- 3. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL

GENERAL NOTES CONTINUED

NECESSARY PERMITS AND PAYING ALL FEES ASSOCIATED WITH THIS WORK INCLUDING FILING WITH THE UTILITY COMPANY (AS REQUIRED), AND WITH LOCAL AUTHORITY HAVING JURISDICTION.

- 4. ALL CONDUCTORS SHALL BE COPPER UON "ON DRAWINGS".
- 5. ELECTRONIC FILES OF THE MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION DRAWINGS ARE AVAILABLE TO THE CONTRACTOR. THE ENGINEER MAY GRANT THE CONTRACTOR A LIMITED LICENSE TO MAKE A DERIVATIVE WORK OF THE DATABASE FOR THE PURPOSE OF SHOP DRAWINGS, SUBMITTALS AND AS-BUILT DRAWINGS. UPON REQUEST, THE ENGINEER SHALL PROVIDE A RELEASE FORM THAT MUST BE SIGNED AND RETURNED BY THE CONTRACTOR PRIOR TO RELEASE OF THE ELECTRONIC FILES.
- . CIRCUIT NUMBERS ARE FOR INFORMATION PURPOSES ONLY. ACTUAL CIRCUIT NUMBERS SHALL BE DETERMINED IN THE FIELD.
- 7. CORE DRILLING OR TRENCHING THROUGH AN EXISTING FLOOR SLAB, WHEN REQUIRED, SHALL BE COORDINATED WITH THE OWNER. FLOOR SLABS SHALL BE RADAR SCANNED PRIOR TO CORE DRILLING OR TRENCHING. ALL WORK, INCLUDING CORE DRILLING, RADAR SCAN, INSTALLATION OF FIRE STOPPING, & CONDUIT/CABLE INSTALLATION SHALL BE PERFORMED DURING NON-BUSINESS HOURS AND INCLUDED IN BASE BID. USE EXTREME CAUTION DURING ANY CUTTING OPERATION TO AVOID DAMAGE TO EXISTING EQUIPMENT/SYSTEMS. ANY ITEMS DAMAGED AS A RESULT OF CORE DRILLING SHALL BE REPAIRED AT NO COST TO THE CLIENT. ALL CORES SHALL BE FIRE SEALED.
- 8. INSTALL CONDUIT EXPANSION FITTINGS AT ALL LOCATIONS WHERE CONDUITS CROSS BUILDING OR STRUCTURE EXPANSION JOINTS.
- 2. CEILING MOUNTED RECEPTACLES SHALL BE MOUNTED FLUSH TO CEILING.

DEFINITION OF TERMS

- 1. WHEREVER IN THE CONTRACT DOCUMENTS THE WORD "CLIENT" IS USED, IT MUST BE UNDERSTOOD THAT "WARNER LIBRARY" IS INTENDED.
- 2. WHEREVER IN THE CONTRACT DOCUMENTS THE WORD "ARCHITECT" IS USED, IT MUST BE UNDERSTOOD THAT "LOTHROP ASSOCIATES ARCHITECTS DPC" IS INTENDED.
- 3. WHEREVER IN THE CONTRACT DOCUMENTS THE WORD "ENGINEER" IS USED, IT MUST BE UNDERSTOOD THAT "OLA CONSULTING ENGINEERS" IS INTENDED.
- 4. WHEREVER IN THE CONTRACT DOCUMENTS THE WORDS "FIRE ALARM SYSTEM" OR "FIRE ALARM VENDOR" ARE USED, IT MUST BE UNDERSTOOD THAT "GLOBAL SYSTEM INTEGRATORS" IS INTENDED.
- 5. "WORK" MUST BE DEEMED TO CONSIST OF ALL LABOR AND OPERATIONS, TRANSPORTATION, HOISTING, MATERIALS, TOOLS, EQUIPMENT, SERVICES, INSPECTIONS, INVESTIGATIONS, COORDINATION AND SUPERVISION REQUIRED AND / OR REASONABLY NECESSARY TO PRODUCE THE CONSTRUCTION REQUIRED BY THE CONTRACT DOCUMENTS.
- 6. "FURNISH" MEANS THE DESIGN, FABRICATION, PURCHASE AND DELIVERY TO THE JOB SITE.
- 7. "INSTALL OR INSTALLATION" MEANS THE ACT OF PHYSICALLY PLACING, APPLYING, SETTING, ERECTING, ANCHORING, SECURING, ETC., CONSTRUCTION MATERIALS, EQUIPMENT, FURNISHINGS, APPLIANCES, AND SIMILAR ITEMS SPECIFIED AND FURNISHED AT THE JOB SITE. INSTALLATION OF SPECIFIED ITEMS MUST BE COMPLETE IN ALL RESPECTS.
- 8. "PROVIDE" MEANS TO FURNISH AND INSTALL CONSTRUCTION MATERIAL EQUIPMENT. ETC. AS DEFINED ABOVE.
- 9. THE FOLLOWING ARE DEFINITIONS OF SHOP DRAWING STAMP ACTIONS:
- A. "NO EXCEPTIONS TAKEN" MEANS THAT THE SHOP DRAWING IS CORRECT AS TO PERFORMANCE, CAPACITY, ETC. AND SUBSTANTIAL CONFORMANCE TO THE CONTRACT DRAWINGS AND SPECIFICATIONS. FABRICATION AND/OR PURCHASE MAY COMMENCE.
- B. "MAKE CORRECTIONS NOTED" MEANS THAT THE SHOP DRAWING IS CORRECT AS TO PERFORMANCE, CAPACITY, ETC. AND SUBSTANTIAL CONFORMANCE TO THE CONTRACT DRAWINGS AND/OR SPECIFICATIONS, SUBJECT TO AND IN COMPLIANCE WITH THE ANNOTATIONS AND/OR CORRECTIONS INDICATED ON THE SHOP DRAWING. FABRICATION AND/OR PURCHASE MAY COMMENCE.
- C. "AMEND AND RESUBMIT" MEANS THAT THE COMMENTS AND/OR CORRECTION ARE SO EXTENSIVE AND IMPORTANT THAT THE REVIEWER WANTS TO SEE HOW THE COMMENTS AND/OR CORRECTIONS ARE RESOLVED PRIOR TO RELEASE FOR FABRICATION AND/OR PURCHASE. FABRICATIONS AND/OR PURCHASE MAY NOT COMMENCE.
- D. "REJECTED" MEANS THAT THE SHOP DRAWING DOES NOT COMPLY OR CONFORM TO THE CONTRACT DRAWINGS AND/OR SPECIFICATIONS. FABRICATION AND/OR PURCHASE MAY NOT COMMENCE.

TYPICAL BRANCH CIRCUIT WIRING LEGEND

2-#12 & 1-#12 GND (1-1P-20A OR 1-1P-15A CB)

3-#12 & 1-#12 GND (3P-20A OR 3P-15A CB)

2-#12 & 1-#12 GND (2P-20A OR 2P-15A CB)

LIGHT FIXTURE TYPE

A SWITCH CONTROL

A SWITCH CONTROL

LIGHT FIXTURE

CIRCUIT #

CIRCUIT #

₩ NOTES:

1. EACH 120V AND 277V CIRCUIT SHALL HAVE A DEDICATED NEUTRAL CONDUCTOR. SHARED NEUTRAL HOMERUNS ARE NOT PERMITTED.

2. CONDUCTORS SHALL BE INCREASED FOR VOLTAGE DROP AND DERATING AS PER APPLICABLE ELECTRICAL CODE. FOR CIRCUITS THAT ARE BETWEEN 100' AND 150' IN LENGTH, PHASE AND NEUTRAL CONDUCTORS SHALL BE #10 AWG. FOR CIRCUITS THAT ARE BETWEEN 150' AND 225' IN LENGTH, PHASE AND NEUTRAL CONDUCTORS SHALL BE #8 AWG. FOR LENGTHS GREATER THAN 225' IN LENGTH, VERIFY CONDUCTOR SIZES WITH ENGINEER.

DEMOLITION NOTES

- ALL EQUIPMENT SHALL BE DISCONNECTED AND REMOVED BACK TO POWER SOURCE ORIGINATION UNLESS OTHERWISE NOTED (UON) EXISTING TO REMAIN (EX.).
- 2. CONTRACTOR SHALL VERIFY EXTENT OF DEMOLITION WORK IN THE FIELD PRIOR TO BID AND SHALL INCLUDE ALL LABOR AND MATERIALS IN BASE BID INCLUDING ALL TEMPORARY CONNECTIONS, CONDUIT AND WIRE IN ORDER TO ACCOMMODATE CONSTRUCTION AND PROVIDE CONTINUOUS SERVICE TO DEVICES AND SYSTEMS TO REMAIN, TEMPORARY AND PERMANENTLY. WORK REQUIRING THE SHUT-DOWN OF THE BUILDING POWER SHALL BE PERFORMED DURING OVERTIME AND SHALL BE INCLUDED IN BASE BID.
- CIRCUIT BREAKER, CONDUIT AND CONDUCTOR SIZES INDICATED SHALL BE FIELD VERIFIED PRIOR TO BID.
- ALL EXISTING ELECTRICAL EQUIPMENT NO LONGER IN USE, SUCH AS DISCONNECT SWITCHES, MOTOR CONTROLLERS, MOTOR STARTER PANELS, ETC. SHALL BE REMOVED UON.
- 5. ALL DISCONNECTED & REMOVED EXISTING ELECTRICAL ITEMS THAT ARE NOT BEING REUSED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF AS DIRECTED.
- 6. THE CONTRACTOR SHALL INCLUDE IN THE BASE BID FOR ALL MATERIAL & LABOR REQUIRED FOR THE EXTENSIONS, REROUTING & RELOCATION OF EXISTING SYSTEM COMPONENTS, EQUIPMENT, WIRING, CONDUITS & CABLING SO AS TO MAINTAIN OPERATION OF ALL SYSTEMS THROUGHOUT THE BUILDING DURING DEMOLITION & CONSTRUCTION PHASES.

SPECIFICATIONS

E-1. SCOPE OF WORK

- A. ALL WORK SHOWN ON THE DRAWINGS IS NEW UNLESS OTHERWISE NOTED EXISTING TO REMAIN (EX.). THIS CONTRACTOR SHALL PROVIDE ALL MATERIALS, LABOR, EQUIPMENT, TOOLS, APPLIANCES, SERVICES, HOISTING, SCAFFOLDING, SUPERVISION AND OVERHEAD FOR THE FURNISHING AND INSTALLING OF ALL THE ELECTRICAL AND RELATED WORK COMPLETE, IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- 1. MODIFICATION OF EXISTING PANELBOARDS, BALANCING AND UPDATED TYPED DIRECTORIES.
- 2. REMOVAL, DISPOSAL, RELOCATION AND/OR INSTALLATION OF FIRE ALARM SYSTEM COMPONENTS, ELECTRICAL LIGHTING FIXTURES, SWITCHES, RECEPTACLES, WIRING, PANELBOARDS, TRANSFORMERS, DISCONNECT SWITCHES AND ASSOCIATED CONDUIT, ALARM WIRING AND ANY OTHER ELECTRICAL EQUIPMENT.
- 3. LIGHTING FIXTURES, COMPLETE WITH NECESSARY HANGER ASSEMBLIES, STEMS AND SWIVELS, COUPLINGS, LAMP AUXILIARIES, LAMPS, MISCELLANEOUS MOUNTING DEVICES AND HARDWARE TO MEET THE BOCA SEISMIC REQUIREMENTS.
- 4. JUNCTION AND OUTLET BOXES COMPLETE WITH COVERS, SWITCHES, RECEPTACLES AND ANY OTHER WIRING DEVICES AND SPECIAL COVERPLATES.
- 5. CONDUIT, CONDUIT FITTINGS, OUTLET BOXES, JUNCTION AND PULL BOXES, TROUGHS, WIREWAYS AND ALL APPURTENANCES NECESSARY FOR ELECTRICAL RACEWAY SYSTEMS, INCLUDING NECESSARY SUPPORTS AND FASTENERS.
- 6. INSULATED CONDUCTORS COMPLETE WITH SPLICES AND CONNECTIONS, INCLUDING CONNECTORS AND CONNECTION LUGS.
- GROUNDING AND BONDING SYSTEM.
 HOLES AND SLEEVES FOR CONDUITS PASSING THROUGH WALLS,
- FLOORS AND PARTITIONS.

 9. TAGGING AND IDENTIFYING ALL EQUIPMENT AND DEVICES WITH NAMEPLATES.
- 10. FIELD TESTS OF ALL EQUIPMENT AND ITS OPERATIONS AS SPECIFIED.
- 11. CUTTING AND PATCHING AS REQUIRED FOR INSTALLATION OF ELECTRICAL WORK.
- 12. TEMPORARY POWER AND LIGHT AS REQUIRED.
- 13. FIRE ALARM SYSTEM MODIFICATION AS INDICATED.
- 14. AS-BUILT DRAWINGS.

E-2 MATERIAL AND WORKMANSHIP

A. GENERAL:

1. THE WORK PERFORMED SHALL BE "FIRST-CLASS WORK" IN EVERY RESPECT. THE WORK SHALL BE PERFORMED BY A LICENSED ELECTRICIANS SKILLED IN THEIR RESPECTIVE TRADES, WHO SHALL AT ALL TIMES BE UNDER THE SUPERVISION OF COMPETENT PERSONS.

SPECIFICATIONS CONTINUED

- WORK THAT IS SLIPSHOD, POORLY LAID OUT, NOT PERFECTLY ALIGNED, OR THAT IS NOT CONSISTENT WITH THE REQUIREMENTS GENERALLY ACCEPTED IN THE TRADE FOR "FIRST-CLASS WORK" SHALL NOT BE ACCEPTABLE.
- 3. IN ADDITION TO THE MATERIALS SPECIFIED ELSEWHERE, ALL OTHER MISCELLANEOUS ITEMS NECESSARY FOR THE COMPLETION OF THE WORK SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR TO THE EXTENT THAT ALL SYSTEMS BE COMPLETE AND OPERATIVE.
- 4. ALL MATERIALS AND EQUIPMENT FURNISHED UNDER THIS SECTION SHALL BE NEW AND LISTED AND/OR LABELED BY THE UNDERWRITERS' LABORATORIES, INC., FOR THE APPLICATION, UNLESS OTHERWISE SPECIFIED HEREIN. MATERIALS, MATERIAL SIZES AND METHOD OF CONSTRUCTION NOT SPECIFIED SHALL BE AT LEAST EQUAL TO OR BETTER THAN THE STANDARDS AS LISTED BY THE UNDERWRITERS' LABORATORIES, INC., AND/OR THE REQUIREMENTS OF THE LAWS, REGULATIONS AND CODES MENTIONED HEREINAFTER. DEFECTIVE MATERIALS OR MATERIALS DAMAGED IN THE COURSE OF INSTALLATION OR TESTS SHALL BE REPLACED OR REPAIRED IN A MANNER MEETING WITH THE APPROVAL OF THE CLIENT.
- 5. ALL WORK UNDER THIS SECTION SHALL BE PERFORMED IN COOPERATION WITH THE WORK BY ALL OTHER CONTRACTORS AND SUBCONTRACTORS ON THE PROJECT, IN ORDER TO AVOID INTERFERENCES AND TO SECURE THE PROPER INSTALLATION OF ALL WORK. THIS CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS COVERING THE WORK TO BE PERFORMED UNDER ALL SECTIONS, SO THAT HE UNDERSTANDS THE RELATION AND EXTENT OF THE WORK OF THIS SECTION WITH RESPECT TO THE WORK OF THE OTHER SECTIONS.
- 6. ALL WORK SHALL BE COORDINATED WITH THE OWNER & CLIENT AND SHALL MEET ALL CLIENT STANDARDS WHERE APPLICABLE AND SHALL BE SUBJECT TO APPROVAL FROM AN AUTHORIZED CLIENT REPRESENTATIVE. ALL MATERIALS USED SUCH AS CONDUIT, WIRING, LIGHT FIXTURES, WIRING DEVICES, ETC. SHALL MEET CLIENT STANDARDS UNLESS OTHERWISE INDICATED.

E-3 LAWS, REGULATIONS AND CODES

A. GENERAL:

1. ALL WORK UNDER THIS SECTION SHALL COMPLY WITH THE APPLICABLE FEDERAL, STATE, LOCAL CODES AND AUTHORITIES. WHERE REFERENCE IS MADE TO LAWS, CODES, REGULATIONS AND STANDARDS, THESE DOCUMENTS, INCLUDING THE LATEST REVISIONS AND AMENDMENTS THERETO IN EFFECT AS OF THE DATE OF BID OPENING. SHALL FORM PART OF THESE SPECIFICATIONS.

E-4 SHOP DRAWINGS

- A. GENERAL: MANUFACTURER'S DATA OR SHOP DRAWINGS OF THE FOLLOWING APPARATUS GIVING FULL INFORMATION AS TO DIMENSIONS, MATERIALS, AND ALL INFORMATION PERTINENT TO THE ADEQUACY OF THE SUBMITTED EQUIPMENT INCLUDING WIRING DIAGRAMS SHALL ALSO BE SUBMITTED FOR APPROVAL AS DIRECTED:
- 1. CONDUIT
- 2. CONDUCTORS
- WIRING DEVICES
 LIGHTING FIXTURES
- 5. LIGHTING CONTROL DEVICES/SYSTEMS
- 6. EXIT LIGHTING UNITS
- 7. FIRE ALARM SYSTEM (DEVICES/WIRING DIAGRAM/CALCULATIONS)

E-5 RECORD DRAWINGS

A. GENERAL

1. THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF ALL DEVIATIONS IN WORK AS ACTUALLY INSTALLED FROM WORK AS INDICATED. THIS RECORD SHALL BE UPDATED DAILY AND SHALL BE KEPT AVAILABLE AT THE SITE FOR INSPECTION. UPON COMPLETION OF THE WORK, AND BEFORE FINAL PAYMENT IS AUTHORIZED, MARKED PRINTS WITH SIGNED CERTIFICATION OF ACCURACY, SHALL BE DELIVERED TO THE OWNER'S REPRESENTATIVE.

E-6 INSTALLATION OF WORK

A. GENERA

- THE CONTRACTOR SHALL BE RESPONSIBLE TO EXAMINE THE SITE AND CHECK ALL FIELD CONDITIONS. NOTIFY THE ENGINEER OF ANY CONDITION WHICH DIFFERS FROM THAT INDICATED ON THE PLAN.
- 2. ALL WORK SHALL BE CAREFULLY LAID OUT IN ADVANCE SO THAT UNNECESSARY CUTTING, CHANNELING, CHASING OR DRILLING OF WALLS, PARTITIONS, FLOORS, CEILINGS OR OTHER SURFACES WILL BE AVOIDED. WHERE WORK IS NECESSARY FOR THE PROPER INSTALLATION, SUPPORT OR ANCHORAGE OF RACEWAYS, OUTLETS OR OTHER ELECTRICAL WORK, IT SHALL BE CAREFULLY DONE IN SUCH A MANNER AS TO AVOID ANY DAMAGE. ALL WORK WHICH MAY BE DAMAGED SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER.
- 3. ALL ELECTRICAL WORK SHALL BE PROTECTED AGAINST DAMAGE DURING CONSTRUCTION AND ANY WORK DAMAGED OR MOVED OUT OF LINE AFTER ROUGHING-IN SHALL BE REPAIRED AND RESET TO THE APPROVAL OF THE OWNER.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL ROUTING IN THE FIELD WITH EXISTING EQUIPMENT. PROVIDE ALL NECESSARY OFFSETS TO AVOID EXISTING EQUIPMENT & OBSTRUCTIONS.
- 5. CORE DRILLING OR TRENCHING THROUGH AN EXISTING FLOOR SLAB, WHEN REQUIRED, SHALL BE COORDINATED WITH THE OWNER. FLOOR SLABS SHALL BE RADAR SCANNED PRIOR TO CORE DRILLING OR TRENCHING. ALL WORK, INCLUDING CORE DRILLING, RADAR SCAN, INSTALLATION OF FIRE STOPPING, & CONDUIT/CABLE INSTALLATION SHALL BE PERFORMED DURING NON-BUSINESS HOURS AND

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WARNER LIBRARY

CHILDREN'S LIBRARY
ACOUSTICAL TILE CEILING
AND PIPE INSULATION
REPLACEMENT

ELECTRICAL SYMBOLS,
ABBREVIATIONS, NOTES &
SPECIFICATIONS

PROJECT NO.: NLAA0034.00 SCALE:

DRAWING NO.:

E-001

AS NOTED

SPECIFICATIONS CONTINUED ON NEXT PAGE

INCLUDED IN BASE BID. USE EXTREME CAUTION DURING ANY CUTTING OPERATION TO AVOID DAMAGE TO EXISTING EQUIPMENT/SYSTEMS. ANY ITEMS DAMAGED AS A RESULT OF CORE DRILLING SHALL BE REPAIRED AT NO COST TO THE CLIENT. ALL CORES SHALL BE FIRE SEALED.

6. CONTRACTOR SHALL VERIFY CONDUIT ROUTING WITH OWNER AND/OR CLIENT PRIOR TO INSTALLATION.

B. CONDUIT WORK:

- 2. ALL THREADED JOINTS IN CONDUIT WORK SHALL BE MADE WATERTIGHT BY A COATING OF THOMAS & BETTS KOPR-SHIELD COMPOUND ON THE MALE THREADS ONLY. WHENEVER THREADS ARE CUT, THEY SHALL BE COATED WITH KOPR-SHIELD BEFORE MAKING UP THE CONNECTION.
- 3. EXPOSED CONDUIT ON CEILING SHALL BE RUN PARALLEL OR PERPENDICULAR TO WALL AND VISE VERSA TO CEILING, WHEN INSTALLED ON WALL. SECURE CONDUIT CLAMPS AND SUPPORTS TO MASONRY MATERIALS BY TOGGLE BOLT, EXPANSION BOLT OR STEEL INSERT. SPACING OF CONDUIT SUPPORTS SHALL NOT EXCEED 7 FEET.
- 4. THE ENDS OF ALL CONDUIT SHALL BE CAREFULLY REAMED OUT FREE FROM BURRS BEFORE INSTALLATION AND AFTER THREADING. THE END OF EACH CONDUIT 1" AND SMALLER SHALL BE PROVIDED WHERE IT ENTERS A JUNCTION BOX, OUTLET BOX, CABINET, ETC., WITH A LOCK NUT AND BUSHINGS. FOR CONDUITS 1-1/4" AND LARGER, INSULATED BUSHINGS SHALL BE USED. IF INSULATED BUSHINGS ARE OF THE FULLY INSULATED TYPE, AN ADDITIONAL LOCK NUT SHALL BE USED INSIDE JUNCTION BOX OR CABINET BEFORE INSTALLING THE BUSHINGS.
- 5. FLEXIBLE SEAL-TITE CONDUIT AND SEAL-TITE FITTINGS SHALL BE USED TO CONNECT ALL MOTORS SO AS TO ISOLATE THE MOTION OR VIBRATION FROM THE RIGID CONDUIT SYSTEM AND THE BUILDING. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED IN ALL FLEXIBLE CONDUITS.
- 6. CONDUITS SHALL BE SECURELY FASTENED IN PLACE WITH STRAPS, HANGERS AND SUPPORTS AS REQUIRED.
- 7. CONDUIT IN HUNG CEILINGS SHALL BE SUPPORTED IN AN APPROVED MANNER FROM THE BUILDING STRUCTURE.
- 8. FLEXIBLE METALLIC CONDUIT OR MC CABLE SHALL BE USED FOR BRANCH CIRCUIT WIRING ABOVE HUNG CEILINGS AND IN PARTITIONS.
- 9. THE CONTRACTOR SHALL PROVIDE PULL BOXES, JUNCTION BOXES, CONDUITS, CONDUIT ELBOWS, AND OFFSETS IN CONDUIT RUNS WHICH INTERFERE WITH THE STRUCTURAL WOOD OR STEEL, MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., TO SUIT THE FIELD CONDITIONS.
- 10. NO MORE THAN THREE RIGHT ANGLE BENDS SHALL BE PERMITTED IN CONDUIT BETWEEN ANY TWO TERMINATION OR PULLBOXES. PROVIDE ADDITIONAL PULLBOXES AS REQUIRED.
- 11. TELEPHONE SERVICE CONDUITS SHALL HAVE ONE 18"x18"x8" PULL BOX AFTER 270 DEGREES OF BENDS WITH A MAXIMUM OF 360 DEGREES OF BEND PER RUN. ALL BENDS IN CONDUIT SHALL BE SWEEPING BENDS FOR FIBER OPTIC CABLE. 90 DEGREE BENDS SHALL NOT BE PERMITTED.
- 12. ALL MC CABLE RUNS ABOVE HUNG CEILINGS SHALL BE SECURED TO BUILDING STRUCTURE. NO MC CABLES SHALL BE LEFT UNSUPPORTED ON DUCTWORK OR CEILING TILES.
- 13. WHERE MULTIPLE HOME RUNS ARE ROUTED TOGETHER IN THE SAME RACEWAY LONGER THAN 24 INCHES, CONDUCTORS SHALL BE INCREASED TO #10 AWG FOR UP TO EIGHT CONDUCTORS (HOT & NEUTRAL) MAXIMUM. INSTALLATION SHALL BE IN ACCORDANCE WITH THE AFOREMENTIONED CODE.

C. CABLE AND WIRING WORK:

- 1. CONDUCTORS FOR BRANCH CIRCUITS SHALL BE OF SIZES INDICATED ON THE ELECTRICAL DRAWINGS, BUT SHALL NOT BE SMALLER THAN NO. 12 AWG EXCEPT AS OTHERWISE SHOWN OR SPECIFIED.
- 2. ALL JOINTS, SPLICES AND TAPS FOR WIRING CONNECTIONS SHALL BE MADE WITH MATERIALS AS HEREINAFTER SPECIFIED.
- 3. CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET, AND NO SPLICES OR CONNECTIONS SHALL BE MADE, EXCEPT WITHIN OUTLET BOXES, JUNCTION BOXES OR CABINETS.
- 4. THE NEUTRAL WIRE SHALL NOT BE USED AS A GROUND WIRE. THE NEUTRAL WIRE SHALL BE AN INSULATED WIRE AND SHALL BE CONNECTED TO THE GROUND SYSTEM AT ONE PLACE ONLY. THIS CONNECTION SHALL BE MADE AT THE BEGINNING OF THE SEPARATELY DERIVED SYSTEM.
- 5. TELEPHONE/DATA CABLING RUN ABOVE THE HUNG CEILING SHALL NOT BE LEFT UNSUPPORTED. ALL CABLING SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE.

D. ELECTRICAL GROUNDING AND BONDING:

- 1. ALL CABINETS AND TERMINAL BOXES SHALL BE BONDED TO THE CONDUIT SYSTEM, AND WHERE APPLICABLE TO THE GROUND WIRE.
- 2. THE ELECTRICAL RACEWAY SYSTEM, METALLIC ELECTRICAL EQUIPMENT FRAMES, HOUSING AND ENCLOSURES SHALL BE BONDED TOGETHER AND GROUNDED.
- 3. THE EQUIPMENT BONDING JUMPERS SHALL NOT BE SMALLER THAN THE SIZES LISTED IN THE AFOREMENTIONED CODE.
- GROUND LUGS FOR CABLE CONNECTIONS SHALL BE SIMILAR TO BURNDY, TYPE YAV FOR CONDUCTOR SIZES AS PERMITTED BY THE AFOREMENTIONED CODES.

- 5. ALL GROUNDING AND BONDING SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER AND SHALL BE AS INCONSPICUOUS AS POSSIBLE. ALL WORK EXPOSED TO MECHANICAL DAMAGE SHALL BE PROTECTED IN AN APPROVED MANNER. ALL GROUND SCREWS AND BUSHINGS SHALL BE MADE TIGHT.
- 6. THE PROVISION OF A FULLY-WIRED GROUNDING SYSTEM DOES NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR PROVIDING CONTINUITY OF THE METALLIC RACEWAY SYSTEM. THE METALLIC RACEWAY SYSTEM SHALL BE ASSEMBLED AND BONDED TOGETHER TO FORM A CONTINUOUS PATH FROM THE MOST REMOTE OUTLET.
- 7. ALL GROUNDING WIRES, EXCEPT AS OTHERWISE SPECIFIED OR INDICATED ON THE DRAWINGS, SHALL BE SIZED IN ACCORDANCE WITH THE RULES OF THE AFOREMENTIONED CODE.
- 8. FOR CONNECTION TO THE GROUNDING SYSTEM, THE CONTRACTOR SHALL FURNISH AND INSTALL A GROUND LUG WELDED TO THE INTERIOR OF EVERY METALLIC BOX, CABINET, HOUSING OR ENCLOSURE WHICH IS FURNISHED UNDER THIS OR ANY OTHER SECTION OF THE SPECIFICATIONS.
- 9. EACH STEEL BOX SHALL BE CONNECTED BY THE USE OF A GROUNDING BUSHING ON RIGID CONDUIT, O.Z. TYPE BLG.
- 10. A SEPARATE GREEN INSULATED GROUND WIRE SHALL BE RUN WITH EACH CIRCUIT AS INDICATED.

E. OUTLET BOXES:

- 1. OUTLET BOXES SHALL BE INSTALLED AT ALL LOCATIONS SHOWN ON THE DRAWINGS FOR ALL ELECTRICAL DEVICES INCLUDING CONVENIENCE RECEPTACLES AND LIGHTING FIXTURES. THE LOCATIONS OF THE OUTLETS ON THE DRAWINGS ARE APPROXIMATE. ACTUAL LOCATIONS SHALL BE COORDINATED IN THE FIELD.
- 2. ALL OUTLETS SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS AND NONE SHALL BE INSTALLED ABOVE DUCTS, BEHIND FURRING OR OTHER SIMILAR LOCATIONS. ANY OUTLET DESIGNATED AS PROVIDING POWER FOR A PARTICULAR PIECE OF EQUIPMENT SHALL BE ACCESSIBLE FOR DISCONNECTION WITH SAID UNIT IN PLACE. ALL JUNCTION BOXES SHALL BE LABELED IDENTIFYING THE CIRCUIT(S) CONTAINED.
- 3. OUTLETS IN HUNG CEILING AREAS SHALL BE CONCEALED ABOVE HUNG CEILING FOR RECESSED LIGHTING FIXTURES; OR SET FLUSH WITH HUNG CEILING FOR SURFACE AND PENDANT MOUNTED LIGHTING FIXTURES. THESE OUTLETS SHALL BE SECURELY SUPPORTED FROM THE FRAMING WORK WHICH SUPPORTS THE CEILING OR FROM THE BUILDING STRUCTURE ABOVE THE CEILING.
- 4. WHERE NECESSARY FOR THE SUPPORT OF THE ELECTRICAL WORK, BARS, ANGLES OR CHANNEL MEMBERS OF SUITABLE SIZE SHALL BE FURNISHED AND INSTALLED.
- 5. MOUNTING HEIGHTS FOR ELECTRICAL DEVICES SHALL BE AS INDICATED ON ARCHITECTURAL PLANS. IF THERE ARE NO ARCHITECTURAL PLANS FOR THIS PROJECT THE MOUNTING SHALL BE AS FOLLOWS, UNLESS OTHERWISE NOTED ON THE PLANS:
 - a. LIGHT SWITCHES: 48" AFF TO CENTERLINE OF BOX.
 - b. WALL MOUNTED OCCUPANCY SENSORS: 48" AFF TO CENTERLINE OF BOX
 - c. RECEPTACLES: 18" AFF TO CENTERLINE OF BOX.
 - d. DATA/TELEPHONE OUTLETS: 18" AFF TO CENTERLINE OF BOX.
 - e. FIRE ALARM MANUAL PULL STATION: 42" MIN./48" MAX. AFF TO HANDLE.f. FIRE ALARM AUDIO AND/OR STROBE: 80" AFF TO BOTTOM OF
 - STROBE LENS OR 6" FROM CEILING TO TOP OF STROBE LENS, WHICHEVER IS LOWER.
- 6. BLANK STEEL BOX COVERS SHALL BE INSTALLED ON ALL UNUSED OUTLETS UNLESS OTHERWISE INDICATED. IN FINISHED AREAS, BLANK COVERS SHALL BE PROVIDED. COLOR SHALL BE COORDINATED WITH THE ARCHITECT.
- 7. OUTLET BOXES FOR SWITCHES, RECEPTACLES AND COMMUNICATION OUTLETS SHALL NOT BE MOUNTED BACK-TO-BACK

E-7 MATERIALS

A. CONDUIT:

- 7. MINIMUM SIZE OF CONDUIT SHALL BE 3/4" EXCEPT FOR LOW VOLTAGE CONTROL AND WIRING BETWEEN LIGHT FIXTURES WHERE 1/2" CONDUIT MAYBE USED OR UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR SPECIFIED.
- 8. FLEXIBLE METALLIC CONDUIT, EXCEPT WHERE OTHERWISE SPECIFIED, SHALL BE SINGLE-STRIP ELECTROGAL VANIZED, SPIRALLY-WOUND, INTERLOCKED, STEEL FLEXIBLE CONDUIT.
- 9. MC CABLE MAY BE USED FOR WIRING IN CONCEALED AREAS OR AS INDICATED ON DRAWINGS. EMT SHALL BE USED IN ALL EXPOSED AREAS AND FOR WIRING PENETRATING FLOOR.
- 10. LOCKNUTS SHALL BE HEAVY GAUGE SHEET STEEL TYPE WITH A PLATED CORROSION-RESISTANT COATING.
- 11. BUSHINGS SHALL BE MALLEABLE IRON INSULATED TYPE WITH A CADMIUM COATING.
- 12. ALL CONDUIT INSTALLED IN WET LOCATIONS, OR WHERE EXPOSED TO WEATHER SHALL BE RIGID GALVANIZED STEEL CONDUIT (RGS), CONDUITS INSTALLED UNDERGROUND SHALL BE SCHEDULE 40 PVC AND INTERIOR CONDUITS SHALL BE EMT U.O.N.
- 13. ALL MAIN FEEDERS AND CIRCUITRY FOR MECHANICAL EQUIPMENT OR IN EXPOSED AREAS SHALL BE IN CONDUIT.

B. SLEEVES:

. SLEEVES THROUGH FIRE RESISTANT WALLS AND CEILINGS SHALL BE COMPLETELY PACKED WITH NON-COMBUSTIBLE FIRE STOP MATERIAL RATED FOR THE PARTICULAR WALL BEING PENETRATED. PENETRATIONS THRU FIRE RATED MATERIAL SHALL BE MINIMIZED.

C. WIRE AND CABLE:

1. ALL WIRE AND CABLE SHALL HAVE SOFT ANNEALED COPPER CONDUCTORS WITH 600 VOLT INSULATION, AND SHALL BE LISTED AND APPROVED BY UNDERWRITERS' LABORATORIES, AND SHALL MEET

ALL SPECIFICATIONS OF THE IPCEA-NEMA STANDARDS.

2. ALL WIRE FOR GENERAL USE, UNLESS SHOWN OR SPECIFIED OTHERWISE, SHALL BE TYPE THHN. ALL WIRE INSTALLED UNDERGROUND OR ON ROOFTOPS SHALL BE TYPE XHHW-2 UNLESS OTHERWISE NOTED. WIRE #10 AWG AND SMALLER SHALL BE CONSISTENTLY COLOR CODED THROUGHOUT BY MEANS OF COLORING APPLIED TO THE OUTER COVERING TO INDICATE PHASE AND NEUTRAL. ALL OTHER WIRES AND CABLES SHALL BE COLOR CODED BY APPLICATION OF A BAND OF APPROPRIATELY COLORED PLASTIC TAPE APPLIED OVER THE JACKETS AT EACH OUTLET, JUNCTION, PULL AND TERMINAL POINTS. THE COLOR CODING FOR WIRING SHALL BE:

120/208V 277/480V
PHASE A BLACK BROWN
PHASE B RED ORANGE
PHASE C BLUE YELLOW
NEUTRAL WHITE GRAY
GROUND GREEN GREEN

- 3. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE MINIMUM #12 AWG SIZE UNLESS OTHERWISE INDICATED.
- 4. GROUND WIRE AND CABLE SHALL BE COPPER CONDUCTORS.
- 5. 120 VOLT CONDUCTOR LENGTHS IN EXCESS OF 100 FEET SHALL BE #10 AWG MIN.

D. CONNECTORS FOR WIRE AND CABLE:

- 1. WIRE AND CABLE CONNECTORS SHALL BE SOLDERLESS, MECHANICAL, SOLID COPPER OR COPPER ALLOY TYPES. CONNECTORS SHALL BE BUCHANAN ELECTRICAL PRODUCTS COPPER SQUEEZE-ON TYPE WITH MOLDED RUBBER OR VINYL CAP, MINNESOTA MINING AND MANUFACTURING COMPANY "SCOTCHLOCK: OR IDEAL INDUSTRIES "SUPER NUT" SPRING CONNECTOR WITH MOLDED VINYL CAP.
- 2. CONNECTORS FOR CONDUCTORS LARGER THAN #8 AWG SHALL BE MECHANICAL BOLTED TYPE, INSULATED WITH CLAMP-ON MOLDED COVERS. THE MANUFACTURER SHALL BE OZ ELECTRICAL MANUFACTURING COMPANY OR BURNDY ENGINEERING COMPANY.
- 3. ELECTRICAL INSULATING TAPE SHALL BE VINYL PLASTIC TYPE WITH PRESSURE ADHESIVE, MINNESOTA MINING AND MANUFACTURING COMPANY "SCOTCH" NO. 33 ELECTRICAL TAPE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. ALL CONNECTORS AND CONNECTIONS HAVING IRREGULAR SURFACES SHALL BE PROPERLY PADDED WITH "SCOTCHFIL" PUTTY PRIOR TO APPLICATION OF TAPE.
- 4. ALL CABLE TIES INSTALLED IN PLENUM SHALL BE PANDUIT, TYPE HALAR, U.L. LISTED/APPROVED FOR USE IN PLENUM AREAS. ALL OTHER LOCATIONS SHALL BE NYLON TIE STRAPS AS MANUFACTURED BY THOMAS AND BETTS.

E. WIRING AND OUTLET DEVICES:

- UNLESS OTHERWISE NOTED, WIRING DEVICES SHALL BE AS HEREIN SPECIFIED OR AS PER BUILDING STANDARDS, INDUSTRIAL GRADE. DEVICES AND COVER PLATES SHALL SHALL BE GANGED UNDER COMMON FACEPLATE U.O.N. AND SHALL MATCH EXISTING DEVICES. VERIFY IN FIELD.
- 2. DUPLEX RECEPTACLES SHALL BE 15 OR 20 AMPERE, TWO-POLE, THREE WIRE, 125 VOLT, SELF GROUNDING, NEMA 5-15 OR 5-20, WITH MATCHING DEVICE PLATE.
- 3. ISOLATED GROUND DUPLEX RECEPTACLE SHALL BE 15 OR 20 AMPERE, 125 VOLT, NEMA 5-15 OR 5-20, (ORANGE) WITH WHITE COVER PLATE.
- 4. SINGLE POLE, THREE-WAY AND FOUR-WAY SWITCHES SHALL BE 15 OR 20 AMPERE, 120/277 VOLTS, TOGGLE TYPE, WITH MATCHING DEVICE PLATE.
- 5. GFI RECEPTACLE SHALL BE 15 OR 20 AMPERE, TWO-POLE, THREE WIRE, 125 VOLT, NEMA 5-15 OR 5-20, WITH MATCHING DEVICE PLATE. COORDINATE COLOR WITH ARCHITECT.

F. OUTLET AND JUNCTION BOXES:

- RECESSED CEILING FIXTURE OUTLETS SHALL BE 4-11/16" SQUARE SHEET METAL BOX WITH BLANK COVER AND SUITABLE HANGER BAR; BOX TO BE FASTENED TO CEILING SUSPENSION MEMBERS IN AN APPROVED MANNER, NOT LESS THAN 1'-0" FROM FIXTURE OPENING.
- 2. EXTENSION RINGS FOR FLUSH OUTLETS SHALL BE GALVANIZED, DRAWN SHEET STEEL 4" OCTAGONAL OR SQUARE, 4-11/16" SQUARE RINGS TO SUIT FLUSH OUTLETS, 1-1/2" DEEP OR DEEPER WHERE NECESSARY.
- 3. ALL EQUIPMENT EXPOSED TO THE OUTDOORS SHALL BE IN A NEMA-3R ENCLOSURE, INCLUDING THE GFI RECEPTACLES.

G. MISCELLANEOUS MATERIALS:

- 1. PIPE STRAPS FOR EXPOSED CONDUIT SHALL BE HEAVY DUTY CADMIUM OR ZINC COATED, ONE SCREW, MALLEABLE RIGID CONDUIT CLAMPS, COMPLETE WITH BACKSTRAPS (CLAMP BACKS), APPLETON ELECTRIC COMPANY #17100 AND #27100 LINE.
- 2. HANGER RODS SHALL BE GALVANIZED OR CADMIUM PLATED THREADED STEEL RODS OF ADEQUATE SIZE TO SUPPORT THE LOAD WHICH THEY CARRY. MINIMUM DIAMETER SHALL BE 1/2".
- 3. INSERTS IN EXISTING CONCRETE WORK SHALL BE EXPANSION ANCHORS WITH TAPPED STEEL OR BRASS CORE NUTS SET IN DRILLED HOLES. PIERCE, PHILLIPS READ HEAD, STAR OR ACKERMAN-JOHNSON EXPANSION NUTS WILL BE ACCEPTABLE.
- 4. SPECIAL FASTENERS SHALL COMPRISE MISCELLANEOUS TYPES OF CONDUIT AND BOX FASTENERS OF MALLEABLE IRON OR STEEL WITH A CORROSION-RESISTANT COATING OF CADMIUM OR ZINC; THESE SHALL BE PROVIDED AS REQUIRED OR NECESSARY TO COMPLETE THE INSTALLATION OF ELECTRICAL WORK. THE TYPE SELECTED SHALL BE OF ADEQUATE STRENGTH FOR THE LOAD TO WHICH IT IS SUBJECTED AND OF A DESIGN SUITED TO THE INSTALLATION

CONDITIONS.

- 5. FASTENING HARDWARE SHALL BE CADMIUM OR ZINC-PLATED STEEL, SHEET METAL OR MACHINE SCREWS, BOLTS, NUTS, WASHERS, SHIMS AND SIMILAR FASTENING ACCESSORY HARDWARE.
- 6. REFER TO ENGINEERING DRAWINGS (ELECTRICAL, MECHANICAL OR PLUMBING) FOR DETAIL.

H. LIGHTING FIXTURES:

- 1. FURNISH AND INSTALL ALL LIGHTING FIXTURES SHOWN AND AS DESCRIBED ON THE DRAWINGS. ALL NEW FIXTURES SHALL BE AS INDICATED BY THE FIXTURE SCHEDULE. ALL FIXTURES SHALL BE FURNISHED AND INSTALLED COMPLETE WITH ALL MOUNTING HARDWARE AS REQUIRED BY SPECIFIC CEILING CONSTRUCTION OR OTHER MOUNTING METHODS. ALSO PROVIDE ALL YOKES, BACKBOXES, APPROVED HANGERS, ALL REQUIRED MISCELLANEOUS HARDWARE AND LAMPS. ALL STEEL PARTS SHALL BE BONDERIZED AND PHOSPHATIZED. ALL FIXTURES AND TRIMS SHALL BE FREE FROM LIGHT LEAKS.
- 2. SUPPORT EACH FIXTURE SECURELY. RECESSED FLUORESCENT FIXTURES SHALL BE SECURED AT A MINIMUM OF TWO POINTS TO THE BUILDING STRUCTURE TO MEET THE LOCAL BUILDING CODE SEISMIC REQUIREMENTS.
- REQUIREMENTS.

 3. UPON COMPLETION OF WORK AND AFTER THE BUILDING AREA IS BROOM CLEAN, ALL FIXTURES SHALL BE MADE CLEAN. USE
- DESTATITIZING CLOTH ON ALL PLASTIC AND GLASS MATERIAL
 4. RELAMPING ACCESS SHALL REQUIRE NO SPECIAL TOOLS.
- 5. ALL FLUORESCENT FIXTURES SHALL BE EQUIPPED WITH ELECTRONIC BALLASTS.
 6. ALL FLUORESCENT LAMPS SHALL BE WARM WHITE 3000K 82 CRI
- 6. ALL FLUORESCENT LAMPS SHALL BE WARM WHITE 3000K, 82 CRI UNLESS OTHERWISE INDICATED. FURNISH NEW LAMPS FOR ALL NEW FIXTURES.

I. PULLBOXES AND TROUGHS:

- 12. PULLBOXES AND TROUGHS WITH COVERS SHALL BE FABRICATED FROM MINIMUM #12 USSG GALVANIZED SHEET STEEL WITH ALL SEAMS AND JOINTS WELDED AND GROUND SMOOTH. COVERS SHALL BE SECURED TO PULLBOXES WITH NICKEL OR CADMIUM PLATED, OVAL HEAD SCREWS PROVIDED WITH STOP BEAD WASHERS. TROUGHS SHALL HAVE HINGED COVERS AND SHALL BE HELD CLOSED WITH EXTERNAL CLAMPS. DIMENSIONS OF BOXES AND TROUGHS SHALL BE AS REQUIRED BY ARRANGEMENT OF CONDUITS, EQUIPMENT OR APPLICABLE CODE REQUIREMENTS.
- 13. PULLBOXES AND TROUGHS SHALL BE FINISHED INSIDE AND OUTSIDE WITH A SHOP-APPLIED COAT OF ASA #61 LIGHT GRAY ENAMEL.
- 14. THE CONTRACTOR SHALL PROVIDE ALL PULLBOXES REQUIRED TO PULL WIRES IN CONDUIT RUNS WHETHER INDICATED ON THE DRAWINGS OR NOT. BOXES AND TROUGHS USING CONCENTRIC OR ACENTRIC KNOCKOUTS SHALL BE GROUNDED TO THE INCOMING CONDUITS BY MEANS OF GROUNDING FITTINGS AND BONDING JUMPERS. OZ TYPE BLG INSULATED GROUNDING BUSHINGS, AS SPECIFIED ELSEWHERE, SHALL BE USED. BONDING JUMPERS SHALL BE COPPER SIZED IN ACCORDANCE WITH THE AFOREMENTIONED CODE. A GROUND LUG SHALL BE WELDED INSIDE EACH BOX AND TROUGH.

M. ALTERATIONS AND REMOVAL OF EXISTING EQUIPMENT, CONDUIT &

- 1. THE EXISTING BUILDING ELECTRICAL SYSTEMS SHALL BE MAINTAINED IN OPERATION DURING THE CONSTRUCTION PERIOD. EXISTING SYSTEMS SHALL NOT BE SHUT DOWN NOR SHALL CONNECTIONS BE MADE THERETO WITHOUT PRIOR APPROVAL OF THE OWNER.
- 2. CERTAIN EXISTING CONDUITS AND ASSOCIATED WIRING ARE INDICATED ON THE DRAWINGS ACCORDING TO THE BEST INFORMATION AVAILABLE. CERTAIN OTHER EXISTING CONDUITS AND ASSOCIATED WIRING MAY NOT BE SHOWN. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO DETERMINE THE LOCATION OF EXISTING CONDUIT AND WIRING AS REQUIRED FOR NEW CONSTRUCTION OR IF DAMAGED DURING CUTTING OPERATIONS, REPLACE/REPAIR AT NO EXPENSE TO THE OWNER.
- 3. WHERE EQUIPMENT IS REMOVED OR WHERE WALLS AND CEILINGS ARE DEMOLISHED, WIRING DEVICES, CONDUIT, WIRING AND INSTALLATION MATERIAL (FITTINGS, BOXES, HANGERS, SUPPORTS, ETC.) THAT IS NOT TO BE REUSED SHALL BE REMOVED. ALL CONDUITS REMOVED SHALL BE CUT FLUSH WITH CONSTRUCTION AND OPENINGS PATCHED. ALL WIRING REMOVED SHALL BE DISCONNECTED AS FAR BACK AS THE BRANCH CIRCUIT PANELBOARD TERMINALS UNLESS OTHERWISE NOTED. WHERE WIRING IS TO REMAIN IN EXISTING CONDUITS TO MAINTAIN CONTINUITY OF CIRCUITS AND PASSES THROUGH OUTLET BOXES NOT TO BE REUSED FOR WIRING DEVICES OR LIGHTING FIXTURES, SUCH OUTLETS SHALL BE FURNISHED WITH COVERPLATES. ACTIVE CIRCUITS, IF REQUIRED AND NECESSARY TO REMAIN, SHALL BE REROUTED WITH NEW MATERIALS.
- 4. ALL EQUIPMENT WHICH IS BEING REMOVED AND NOT BEING REUSED SHALL BE RETURNED TO THE OWNER OR DISPOSED OF AS DIRECTED.
- 5. CONTRACTOR SHALL MEASURE STEADY STATE LOAD CURRENTS ON EACH PANELBOARD FEEDER OR EACH PANELBOARD THAT WAS ALTERED. SHOULD THE DIFFERENCE AT ANY PANELBOARD BETWEEN PHASES EXCEED 20 PERCENT, REARRANGE CIRCUITS IN PANELBOARD TO BALANCE THE PHASE LOAD WITHIN 20 PERCENT. TAKE CARE TO MAINTAIN PROPER PHASING FOR MULTI-WIRE BRANCH CIRCUITS. UPDATE DIRECTORIES ACCORDINGLY.

E-8 FIRE ALARM SYSTEM MODIFICATIONS

- A. NEW FIRE ALARM SYSTEM COMPONENTS AND OPERATION SHALL BE PER BUILDING STANDARDS AND AS INDICATED.
- B. ALL NEW FIRE ALARM DEVICES TO BE INSTALLED IN THE SPACE SHALL BE SPECIFICATIONS CONTINUED ON NEXT PAGE.



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ELECTRICAL SPECIFICATIONS

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E-002

AS NOTED

SPECIFICATIONS CONTINUED

FURNISHED BY THIS CONTRACTOR. WIRING DIAGRAMS FOR SYSTEM CONNECTIONS SHALL BE OBTAINED AT THIS CONTRACTOR'S COST. CONNECTIONS TO THE LOCAL FIRE ALARM PANEL SHALL BE MADE BY THIS CONTRACTOR UNDER THE SUPERVISION OF A QUALIFIED, LICENSED F.A. INSTALLER. INSTALLATION OF CONTROL PANEL COMPONENTS AND SYSTEM PROGRAMMING SHALL BE ACCOMPLISHED BY A QUALIFIED LICENSED F.A. INSTALLER AT THIS CONTRACTOR'S EXPENSE.

- C. THIS CONTRACTOR SHALL INCLUDE IN HIS BID, A PRICE FOR SYSTEM PROGRAMMING AND TESTING INCLUDING FINAL SYSTEM TEST WITH THE FIRE DEPARTMENT REPRESENTATIVE PRESENT. ARRANGEMENTS FOR THIS TEST SHALL BE MADE BY THIS CONTRACTOR.
- D. ALL WORK AND WORKMANSHIP SHALL CONFORM TO THE AFOREMENTIONED CODES.
- E. ALL WORK INVOLVING THE FIRE ALARM SYSTEM SHALL BE COORDINATED WITH THE BUILDING MANAGER. NO WORK SHALL BE PERFORMED WITHOUT THE BUILDING MANAGER'S APPROVAL.
- F. ALL FIRE SYSTEM WIRING SHALL BE APPROVED FOR USE IN FIRE ALARM SYSTEMS AND SHALL BE PLENUM RATED WHERE RUN EXPOSED ABOVE HUNG CEILINGS. ALL FIRE ALARM WIRING WHICH IS NOT CONCEALED IN HUNG CEILING SPACES OR IN WALLS OR BELOW RAISED FLOOR SHALL BE RUN IN EMT. NO FIRE ALARM WIRING SHALL BE LEFT EXPOSED TO PHYSICAL DAMAGE. ALL CABLES SHALL BE LABELED AT BOTH ENDS INDICATING SOURCE AND DESTINATION. SPEAKERS, BELLS & HORNS SHALL BE WIRED ON SEPARATE CIRCUITS FROM THE STROBE UNITS. TWO PAIR OF WIRES SHALL BE ROUTED TO EACH COMBINATION AUDIO/VISUAL UNIT.
- G. ALL FIRE ALARM DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF ADA. WALL MOUNTED AUDIO/VISUAL DEVICES SHALL BE MOUNTED AT 80" ABOVE THE FINISHED FLOOR OR 6" BELOW THE HUNG CEILING WHICHEVER IS LOWER.

E-9 PAINTING

A. PULL BOXES AND WIREWAYS SHALL BE SHOP PAINTED INSIDE AND OUTSIDE WITH ONE COAT OF PRIMER AND ONE COAT OF ENAMEL UNDERCOATER IN A LIGHT GRAY COLOR AS APPROVED BY THE CLIENT'S REPRESENTATIVE.

E-10 IDENTIFICATION

- A. THE CONTRACTOR SHALL PROVIDE UPDATED TYPE WRITTEN PANELBOARD DIRECTORIES IN ALL NEW PANELBOARDS AND ANY EXISTING PANELBOARD THAT HAS BEEN ALTERED. CONTRACTOR SHALL TRACE CIRCUITS TO REMAIN AS REQUIRED.
- B. ALL ELECTRICAL EQUIPMENT, SUCH AS PANELS, AND ALL OTHER SIMILAR ITEMS WHICH ARE FURNISHED UNDER THIS HEADING OF THE SPECIFICATIONS SHALL BE ADEQUATELY IDENTIFIED WITH ENGRAVED LAMINATED PLASTIC NAMEPLATE HAVING BLACK BACKGROUNDS AND WHITE LETTERS. WORDING ON THE NAMEPLATES SHALL CLEARLY INDICATE THE NAMES AND FUNCTIONS OF THE EQUIPMENT. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL, FIVE COPIES OF A LIST OF ALL EQUIPMENT TO BE IDENTIFIED TOGETHER WITH THE WORDING TO BE USED ON THE NAMEPLATES BEFORE ORDERING.
- C. A MAINTENANCE LABEL SHALL BE AFFIXED TO ALL EQUIPMENT REQUIRING PREVENTATIVE MAINTENANCE. TWO COPIES OF ALL MAINTENANCE MANUALS SHALL BE PROVIDED TO THE CLIENT.
- D. ALL FEEDERS SHALL BE TAGGED WITH APPROVED-TYPE STENCILED METAL TAGS IN ALL PANELS AND PULLBOXES THROUGH WHICH THEY ARE ROUTED. THIS TAGGING SHALL INCLUDE FEEDER NUMBER, PANEL SOURCE, CIRCUIT NUMBER, FEEDER SIZE AND EQUIPMENT SUPPLIED.
- E. EACH DUPLEX AND QUAD RECEPTACLE SHALL BE LABELED WITH THE CIRCUIT NUMBER WHICH IT SERVES.

E-11 TESTING

- A. ALL CIRCUITS SHALL BE TESTED FOR UNWANTED GROUNDS AND PROPER PHASE RELATION.
- B. THE CONTRACTOR SHALL PROVIDE QUALIFIED PERSONNEL TO CONDUCT AND/OR TO ASSIST THE CLIENT'S REPRESENTATIVE TO CONDUCT OPERATING TESTS AT THE COMPLETION OF THE WORK. THESE OPERATING TESTS WILL INCLUDE CHECKING THE FOLLOWING ELECTRICAL SYSTEMS:
- 1. LIGHTING FIXTURES: OPERATION CHECK.
- 2. LIGHTING CONTROL SYSTEMS: ENGAGE A FACTORY-AUTHORIZED SERVICE REPRESENTATIVE TO TEST AND INSPECT COMPONENTS, ASSEMBLIES, AND EQUIPMENT INSTALLATIONS, INCLUDING CONNECTIONS. PERFORM FULL OPERATIONAL TESTS. ADJUST CONTROLS AS NEEDED.
- 3. TEST ALL CIRCUITS FOR PROPER FUNCTIONING AND CONNECTION.
- 4. FIRE ALARM SYSTEM: COMPLETE OPERATION TEST WITNESSED BY FIRE DEPARTMENT PERSONNEL AND AS OTHERWISE SPECIFIED.
- 5. EMERGENCY POWER AND LIGHTING SYSTEMS VERIFICATION OF CONNECTION TO THE BUILDING EMERGENCY POWER.
- 6. ELECTRICAL CURRENT READINGS IN ALL PANELBOARDS AFFECTED BY WORK TO VERIFY BALANCING OF LOADS.
- C. THE CONTRACTOR SHALL TEST THE CLIENT GROUNDING SYSTEM FOR CONTINUITY FROM THE INTERIOR GROUND RING TO THE WATER PIPE AND FROM THE ANTENNA MOUNTS TO THE WATER PIPE. TESTING SHALL BE PERFORMED IN THE PRESENCE OF THE CLIENT REPRESENTATIVE AND/OR ENGINEER.

E-12 TEMPORARY LIGHT AND POWER

- A. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND UPON COMPLETION, REMOVE SYSTEM OF TEMPORARY LIGHTING AND POWER FOR THE USE OF ALL CONSTRUCTION TRADES AS NECESSARY.
- B. WIRING SHALL BE PROVIDED FOR TEMPORARY USE DURING BUILDING CONSTRUCTION, INCLUDING GROUNDING AND FUSED MAIN CUT-OFF SWITCHES. TEMPORARY ELECTRIC LINES WITH BRANCH SWITCHES SHALL BE PROVIDED FOR LIGHTING AND FOR TAPS FOR ELECTRIC TOOLS, PUMPS AND OTHER TEMPORARY EQUIPMENT; ALL EQUIVALENT TO A MAIN LINE LOOPED THROUGH FLOOR SPACES AND UP STAIRWELLS OR SHAFTS. ALL POWER OUTLETS SHALL BE GROUNDED TO AN EQUIPMENT GROUND WIRE IN AN APPROVED MANNER. ELECTRIC LINES SHALL BE EXTENDED TO POWER TOOLS WHICH CANNOT BE LOCATED WITHIN REACH OF EXTENSION CORDS.
- C. LIGHT BULBS SHALL BE PROVIDED IN SUFFICIENT QUANTITY TO LIGHT THE BUILDING FOR SAFETY PURPOSES. EXTENSION CORDS SHALL BE PROVIDED AS MAY BE ESSENTIAL TO THE PROPER EXECUTION OF THE WORK.
- D. TEMPORARY LIGHTING SHALL BE PROVIDED FOR ALL STAIRS AND OTHER LOCATIONS WHERE NEEDED FOR SAFETY OR THE PROPER EXECUTION OF WORK AND SHALL CONFORM TO ALL OSHA STANDARDS.
- E. THE ELECTRICAL CONTRACTOR SHALL MAINTAIN TEMPORARY LIGHTING AND POWER SYSTEMS IN GOOD WORKING CONDITION, INCLUDING THE RELOCATION AND REINSTALLATION WHEN REQUIRED TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
- F. PROVIDE GROUND FAULT PERSONNEL PROTECTION FOR ALL SINGLE PHASE, 15 AND 20 AMPERE RECEPTACLES. ALL RECEPTACLES AND PORTABLE CORD CONNECTORS SHALL HAVE NEMA STANDARD LOCKING TYPE CONFIGURATIONS AND SHALL CONFORM TO ALL OSHA STANDARDS.



Associates Architects D.P.C.

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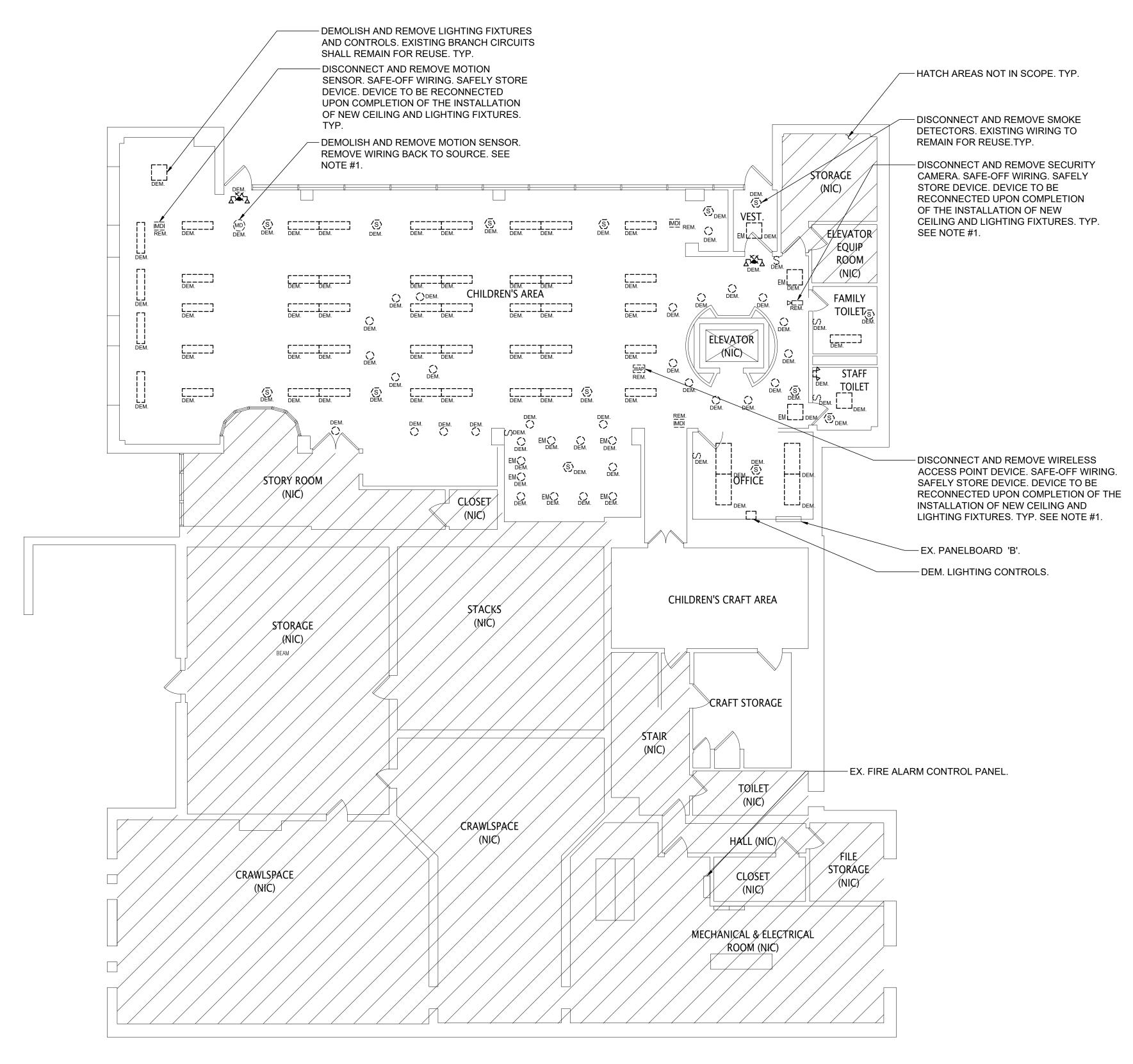
CHILDREN'S LIBRARY
ACOUSTICAL TILE CEILING
AND PIPE INSULATION
REPLACEMENT

ELECTRICAL SPECIFICATIONS

PROJECT NO.: NLAA0034.00 SCALE:

AS NOTED

DRAWING NO.:





1.) COORDINATE REMOVAL AND REINSTALLATION OF ALL LOW VOLTAGE DEVICES INCLUDING AT A MINIMUM, SMOKE DETECTORS, SECURITY CAMERAS, WIRELESS ACCESS POINTS, MOTION SENSORS, AND ASSOCIATED CABLE/WIRING, ETC. WITH THE CLIENT'S LOW VOLTAGE VENDORS TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF THE CEILING. CONTACT GLOBAL SYSTEMS INTEGRATOR (SAL LOPES OR SIMON LOPES) AT 914-592-8372 FOR THE FIRE ALARM AND SECURITY SYSTEM/DEVICES AND CONTACT RYEBROOK SECURITY AT 914-934-7700 FOR THE CCTV SYSTEM/DEVICES. DEVICES SHALL BE CLEANED AND STORED DURING CONSTRUCTION AND WIRING/CABLES SAFE-OFF AND PROTECTED TO BE REUTILIZED. EXTEND WIRING/CABLES AS REQUIRED.



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CHILDREN'S LIBRARY ACOUSTICAL TILE CEILING AND PIPE INSULATION **REPLACEMENT**

ELECTRICAL LOWER LEVEL **DEMOLITION PLAN**

PROJECT NO.: NLAA0034.00 | SCALE:

AS NOTED

DRAWING NO.:

DESIGN INTENT - LIGHTING CONTROL SYSTEM

1.) LIGHTING CONTROL SYSTEM IS BASED ON N-LIGHT BY SENSOR SWITCH (FINN O'BRIEN (646) 352-2188) OR APPROVED EQUAL. (OTHER ACCEPTABLE MANUFACTURERS ARE LUTRON & COOPER LIGHTING.)

2.) LIGHTING CONTROL COMPONENTS SHOWN ARE FOR GENERAL DESIGN INTENT. ALL COMPONENTS AND WIRING ARE NOT SHOWN. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL NECESSARY COMPONENTS, WIRING (LINE AND LOW VOLTAGE) AND PROGRAMMING FOR A FULLY OPERATIONAL SYSTEM. CONTRACTOR IS RESPONSIBLE FOR DELEGATED DESIGN OF THE SYSTEM BASED ON THE DESIGN INTENT INCLUDED ON THESE DRAWINGS.

3.) THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE LIGHTING CONTROLS WITH LIGHT FIXTURES.

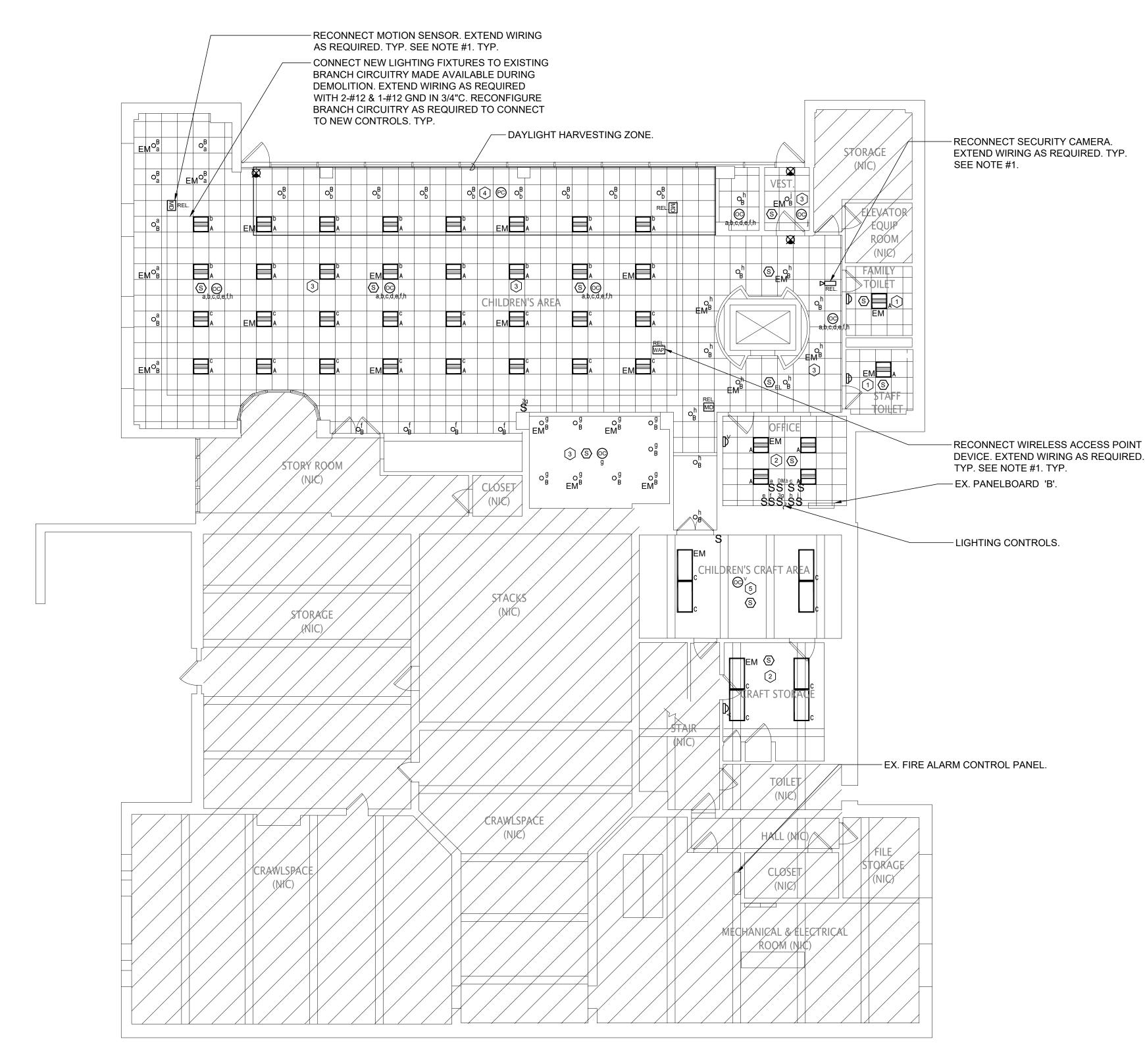
4.) ALL LIGHT FIXTURE AND LIGHTING CONTROL SUBMITTALS SHALL BE SUBMITTED AT THE SAME TIME FOR APPROVAL.

LIGHTING CONTROL LEGEND

- (1) LINE VOLTAGE WALL SWITCH DUAL TECHNOLOGY OCCUPANCY SENSOR.
- 2 LINE VOLTAGE WALL SWITCH DUAL TECHNOLOGY VACANCY SENSOR.
- 3 TIMECLOCK WITH DUAL TECHNOLOGY OCCUPANCY CONTROL AFTER HOURS WITH MANUAL OVERRIDE SWITCH.
- 4 DAYLIGHT HARVESTING
- (5) LINE VOLTAGE CEILING MOUNTED DUAL TECHNOLOGY VACANCY SENSOR WITH LINE VOLTAGE WALL SWITCH.

NOTES:

1.) COORDINATE REMOVAL AND REINSTALLATION OF ALL LOW VOLTAGE DEVICES INCLUDING AT A MINIMUM, SMOKE DETECTORS, SECURITY CAMERAS, WIRELESS ACCESS POINTS, MOTION SENSORS, AND ASSOCIATED CABLE/WIRING, ETC. WITH THE CLIENT'S LOW VOLTAGE VENDORS TO ACCOMMODATE THE REMOVAL AND REINSTALLATION OF THE CEILING. CONTACT GLOBAL SYSTEMS INTEGRATOR (SAI LOPES OR SIMON LOPES) AT 914-592-8372 FOR THE FIRE ALARM AND SECURITY SYSTEM/DEVICES AND CONTACT RYEBROOK SECURITY AT 914-934-7700 FOR THE CCTV SYSTEM/DEVICES. DEVICES SHALL BE CLEANED AND STORED DURING CONSTRUCTION AND WIRING/CABLES SAFE-OFF AND PROTECTED TO BE REUTILIZED. EXTEND WIRING/CABLES AS REQUIRED.







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ELECTRICAL LOWER LEVEL NEW WORK CEILING PLAN

PROJECT NO.: NLAA0034.00 | SCALE:

AS NOTED

DRAWING NO.:

LIGHTING FIXTURE SCHEDULE							
FIXTURE DESIGNATION	MANUFACTURER	CATALOG NUMBER	WATTAGE	LUMENS	VOLTS	MOUNTING	REMARKS
А	FOCAL POINT	FZR-22-FL-3500L-30K- UNV-G-WH	33W	3500	120V 277V	RECESSED	ZEPHYR 2' x 2' LED, 3000K
A-EM	FOCAL POINT	FZR-22-FL-3500L-30K- UNV-G-EM-WH	33W	3500	120V 277V	RECESSED	ZEPHYR 2' x 2' LED, 3000K, 10 WATT 120 EM BATTERY PACK
В	FOCAL POINT	FLC3D-RO-SW-900L- UNV-LC3-35K-WH	10W	919	120V 277V	RECESSED	ID+3.5", 3.5" DIAMETER LED DOWNLIGHT, 3500K
B-EM	FOCAL POINT	FLC3D-RO-SW-900L- UNV-EMR-LC3-35K-WH	10W	919	120V 277V	RECESSED	ID+3.5", 3.5" DIAMETER LED DOWNLIGHT, 3500K, 7 WATT EM BATTERY PACK WITH REMOTE TEST / INDICATOR LIGHT
С	FOCAL POINT	FAM2-24-ACR-5000L- 30K-1C-UNV-C24-WH	38W	5000	120V 277V	SURFACE	2' x 4' LED FLAT LENS, PENDANT MOUNTED WITH 24" AIRCRAFT CABLE, 3000K
C-EM	FOCAL POINT	FAM2-24-ACR-5000L- 30K-1C-UNV-C24-EM-WH	38W	5000	120V 277V	SURFACE	2' x 4' LED FLAT LENS, PENDANT MOUNTED WITH 24" AIRCRAFT CABLE, 3000K, 10 WATT EM BATTERY PACK WITH INTEGRAL TEST SWITCH
⋈	LITHONIA LIGHTING	LQM-S-W-3-R-MVOLT -ELN-SD	LED	-	120V	SURFACE	LED EXIT SIGN, THERMOPLASTIC HOUSING WITH 90 MINUTES OF BATTERY BACKUP TIME, MIN., UNIVERSAL MOUNTING, RED LETTERS ON WHITE BACKGROUND AND NICKEL CADMIUM BATTERY. PROVIDE CHEVRONS AS INDICATED ON DRAWINGS.

NOTES:

- 1.) VERIFY ALL FIXTURE CATALOG NUMBERS FOR INTENDED APPLICATIONS WITH REQUIRED ACCESSORIES.
- 2.) LIGHT FIXTURES INDICATED AS EMERGENCY (EM) ON DRAWINGS SHALL CONTAIN AN EMERGENCY BACK-UP BATTERY WHERE POSSIBLE THE SHALL BE INTERNAL
- TO FIXTURE WITH A VISUAL INDICATING CHARGE LAMP AND TEST SWITCH. IF IT IS NOT POSSIBLE TO INSTALL THE EMERGENCY BATTERY IN THE FIXTURE, THE CONTRACTOR SHALL FURNISH & INSTALL A REMOTE EMERGENCY BATTERY. EACH BATTERY PACK SHALL BE CONNECTED SO THAT THE FIXTURE CAN BE SWITCHED UNDER NORMAL CONDITIONS AND IN THE EVENT OF A POWER OUTAGE, THE FIXTURE SHALL AUTOMATICALLY ILLUMINATE FOR 90 MINUTES WITH A 1200 LUMEN
- OUTPUT (TOTAL FROM FIXTURE), MINIMUM. 3.) ALL EXIT AND EMERGENCY FIXTURES SHALL BE FED FROM UNSWITCHED LEG OF ASSOCIATED LOCAL LIGHTING CIRCUITS.
- 4.) IN THE EVENT THE CONTRACTOR CHOOSES TO SUBSTITUTE LIGHT FIXTURES FOR THOSE THAT ARE SPECIFIED ON THE LIGHT FIXTURE SCHEDULE, THE
- CONTRACTOR SHALL SUBMIT POINT-TO-POINT PHOTOMETRIC CALCULATIONS FOR ALL AREAS WHERE THE SUBSTITUTED FIXTURES ARE INDICATED TO BE
- INSTALLED ON THE DRAWINGS. THESE CALCULATIONS SHALL BE SUBMITTED ALONG WITH THE LIGHT FIXTURE SHOP DRAWINGS.

LIGHTING SYSTEM FUNCTIONAL TESTING/COMMISSIONING

I. FUNCTIONAL TESTING

PRIOR TO PASSING FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE EVIDENCE TO THE BUILDING OWNER AND THE ENGINEER THAT THE LIGHTING CONTROL SYSTEMS HAVE BEEN TESTED TO ENSURE THAT CONTROL HARDWARE AND SOFTWARE ARE CALIBRATED, ADJUSTED, PROGRAMMED AND IN PROPER WORKING CONDITION IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURER'S DOCUMENTS. FUNCTIONAL TESTING, FOR THE APPLICABLE CONTROL TYPE, SHALL BE IN ACCORDANCE WITH THE FOLLOWING:

1. OCCUPANT SENSOR CONTROLS

WHERE OCCUPANT SENSOR CONTROLS ARE PROVIDED. THE FOLLOWING PROCEDURES SHALL BE PERFORMED:

- A. CERTIFY THAT THE OCCUPANT SENSOR HAS BEEN LOCATED AND AIMED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
- B. FOR PROJECTS WITH SEVEN OF FEWER OCCUPANT SENSORS, EACH SENSOR SHALL BE TESTED.
- C. FOR PROJECTS WITH MORE THAN SEVEN OCCUPANT SENSORS, TESTING SHALL BE DONE FOR EACH UNIQUE COMBINATION OF SENSOR TYPE AND SPACE GEOMETRY. WHERE MULTIPLES OF EACH UNIQUE COMBINATION OF SENSOR TYPE AND SPACE GEOMETRY ARE PROVIDED, NOT LESS THAN 10 PERCENT, BUT IN NO CASE LESS THAN ONE, OF EACH COMBINATION SHALL BE TESTED UNLESS THE BUILDING OFFICIAL OR DESIGN PROFESSIONAL REQUIRES A HIGHER PERCENTAGE TO BE TESTED. WHERE 30 PERCENT OR MORE OF THE TESTED CONTROLS FAIL, ALL REMAINING IDENTICAL COMBINATIONS SHALL BE TESTED.

FOR OCCUPANT SENSOR CONTROLS TO BE TESTED, VERIFY THE FOLLOWING:

- WHERE OCCUPANT SENSOR CONTROLS INCLUDE STATUS INDICATORS, VERIFY CORRECT OPERATION.
- ii. THE CONTROLLED LIGHTS TURN OFF OR DOWN TO THE PERMITTED LEVEL WITHIN THE REQUIRED TIME.
- iii. FOR AUTO-ON OCCUPANT SENSOR CONTROLS. THE LIGHTS TURN ON TO THE PERMITTED LEVEL WHEN AN OCCUPANT ENTERS THE SPACE.
- iv. FOR MANUAL-ON OCCUPANT SENSOR CONTROLS, THE LIGHTS TURN ON ONLY WHEN MANUALLY
- v. THE LIGHTS ARE NOT INCORRECTLY TURNED ON BY MOVEMENT IN ADJACENT AREAS OR BY HVAC OPERATION.

2. TIME-SWITCH CONTROLS

WHERE TIME-SWITCH CONTROLS ARE PROVIDED, THE FOLLOWING PROCEDURES SHALL BE PERFORMED:

- A. CONFIRM THAT THE TIME-SWITCH CONTROL IS PROGRAMMED WITH ACCURATE WEEKDAY, WEEKEND AND HOLIDAY SCHEDULES.
- B. PROVIDE DOCUMENTATION TO THE OWNER OF TIME-SWITCH CONTROLS PROGRAMMING INCLUDING WEEKDAY, WEEKEND, HOLIDAY SCHEDULES, AND SET-UP AND PREFERENCE PROGRAM SETTINGS.
- C. VERIFY THE CORRECT TIME AND DATE IN THE TIME SWITCH.
- D. VERIFY THAT ANY BATTERY BACK-UP IS INSTALLED AND ENERGIZED
- E. VERIFY THAT THE OVERRIDE TIME LIMIT IS SET TO NOT MORE THAN 2 HOURS.
- F. SIMULATE OCCUPIED CONDITION. VERIFY AND DOCUMENT THE FOLLOWING:
- ALL LIGHTS CAN BE TURNED ON AND OFF BY THEIR RESPECTIVE AREA CONTROL SWITCH.
- ii. THE SWITCH ONLY OPERATES LIGHTING IN THE ENCLOSED SPACE IN WHICH THE SWITCH IS LOCATED.
- G. SIMULATE UNOCCUPIED CONDITION. VERIFY AND DOCUMENT THE FOLLOWING:
- i. NONEXEMPT LIGHTING TURNS OFF.
- ii. MANUAL OVERRIDE SWITCH ALLOWS ONLY THE LIGHTS IN THE ENCLOSED SPACE WHERE THE OVERRIDE SWITCH IS LOCATED TO TURN ON OR REMAIN ON UNTIL THE NEXT SCHEDULED SHUTOFF OCCURS.

3. DAYLIGHT RESPONSIVE CONTROLS

WHERE DAYLIGHT RESPONSIVE CONTROLS ARE PROVIDED, THE FOLLOWING SHALL BE VERIFIED:

- A. CONTROL DEVICES HAVE BEEN PROPERLY LOCATED, FIELD CALIBRATED AND SET FOR ACCURATE SET POINTS AND THRESHOLD LIGHT LEVELS.
- B. DAYLIGHT CONTROLLED LIGHTING LOADS ADJUST TO LIGHT LEVEL SET POINTS IN RESPONSE TO AVAILABLE DAYLIGHT.
- C. THE CALIBRATION ADJUSTMENT EQUIPMENT IS LOCATED FOR READILY ACCESS ONLY BY AUTHORIZED

II. DOCUMENTATION REQUIREMENTS

THE DOCUMENTS DESCRIBED IN THIS SECTION SHALL BE PROVIDED TO THE BUILDING OWNER OR OWNER'S AUTHORIZED AGENT WITHIN 60 DAYS OF THE DATE OF RECEIPT OF THE CERTIFICATE OF OCCUPANCY.

- A. DRAWINGS:
- i. AS-BUILT CONSTRUCTION DOCUMENTS, SHOWING THE LOCATION AND CATALOG NUMBER OF EACH PIECE OF EQUIPMENT.
- B. MANUALS: AN OPERATING AND MAINTENANCE MANUAL SHALL BE PROVIDED AND INCLUDE THE FOLLOWING:
- NAME AND ADDRESS OF NOT LESS THAN ONE SERVICE AGENCY FOR INSTALLED EQUIPMENT.
- ii. A NARRATIVE OF HOW EACH SYSTEM IS INTENDED TO OPERATE, INCLUDING RECOMMENDED SET
- iii. SUBMITTAL DATA INDICATING ALL SELECTED OPTIONS FOR EACH PIECE OF LIGHTING EQUIPMENT AND LIGHTING CONTROLS.
- iv. OPERATION AND MAINTENANCE MANUALS FOR EACH PIECE OF LIGHTING EQUIPMENT. REQUIRED ROUTINE MAINTENANCE ACTIONS, CLEANING AND RECOMMENDED RELAMPING SHALL BE CLEARLY
- v. A SCHEDULE FOR INSPECTING AND RECALIBRATING ALL LIGHTING CONTROLS.
- C. REPORT: A REPORT OF TEST RESULTS SHALL BE PROVIDED AND INCLUDE THE FOLLOWING.
 - RESULTS OF FUNCTIONAL PERFORMANCE TESTS.
- ii. DISPOSITION OF DEFICIENCIES FOUND DURING TESTING, INCLUDING DETAILS OF CORRECTIVE
- MEASURES USED OR PROPOSED.



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ELECTRICAL LIGHTING FIXTURE SCHEDULE

PROJECT NO.: NLAA0034.00 | SCALE:

DRAWING NO.:

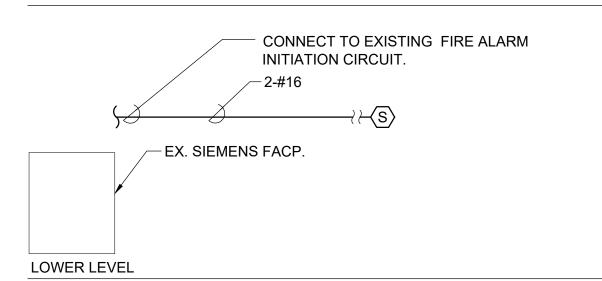
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RISER NOTES:

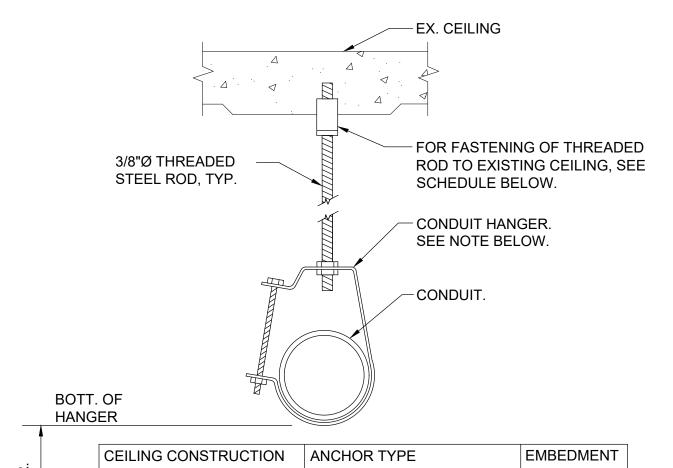
- 1. THIS IS NOT A POINT-TO-POINT WIRING DIAGRAM. PRIOR TO STARTING ANY WORK, A WORKING POINT-TO-POINT WIRING DIAGRAM SHALL BE OBTAINED FROM FIRE ALARM SYSTEM VENDOR AND PERFORM ALL WORK IN ACCORDANCE WITH THAT DIAGRAM.
- 2. ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE BASE BID ALL 120V CIRCUITS THAT ARE REQUIRED TO SUPPORT THE OPERATION OF THE FIRE ALARM SYSTEM. COORDINATE REQUIREMENTS WITH THE FIRE ALARM VENDOR.
- 3. QUANTITY OF STROBE BOOSTER POWER SUPPLY PANELS AND ASSOCIATED 120V CIRCUITS SHALL BE COORDINATED WITH SELECTED FIRE ALARM SYSTEM MANUFACTURER AND/OR FIRE ALARM VENDOR.
- 4. PROVIDE ALL NECESSARY WIRING, MODULES, COMPONENTS, ENTENDER CABINET, AND PROGRAMMING REQUIRED TO CONNECT NEW DEVICES TO EXISTING SYSTEM.
- 5. PROVIDE AS PART OF THE BASE CONTRACT ALL LABOR AND MATERIALS TO INSTALL FIVE (5) ADDITIONAL FIRE ALARM DEVICES DURING CONSTRUCTION. THE FIVE (5) FIRE ALARM DEVICES CAN BE BUT NOT LIMITED TO SMOKE DETECTOR, HEAT DETECTOR, ETC. INCLUDE ALL LABOR AND MATERIALS INCLUDING WIRE, BOXES, CONDUIT, TERMINATIONS, HARDWARE, SOFTWARE, PROGRAMMING AND TESTING.
- 6. ALL VISUAL ALARM DEVICES SHALL BE ADA COMPLIANT.
- 7. FIRE ALARM VENDOR IS GLOBAL SYSTEM INTEGRATORS AT 914-592-8372.

ROOF

1ST FLOOR



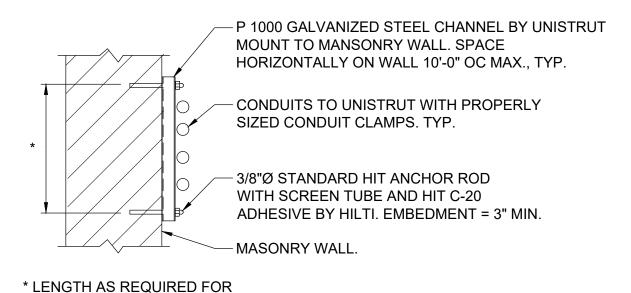
FIRE ALARM PARTIAL RISER DIAGRAM SCALE: NONE



	TITUTOLIC					
ı						
نہ		CEILING CONSTRUCTION	ANCHOR TYPE	EMBEDMENT		
CLR		NORMAL WT. CONC	HILTI HDI DROP-IN ANCHOR	1" MIN.		
Σ̈́		CINDER CONCRETE	HILTI KWIK BOLT II	3" MIN.		
<u>.</u>		HOLLOW CONSTRUCTION	TOGGLE BOLTS	NA		
7	TOP O	F EXIST.				
,	FLOOF	₹				

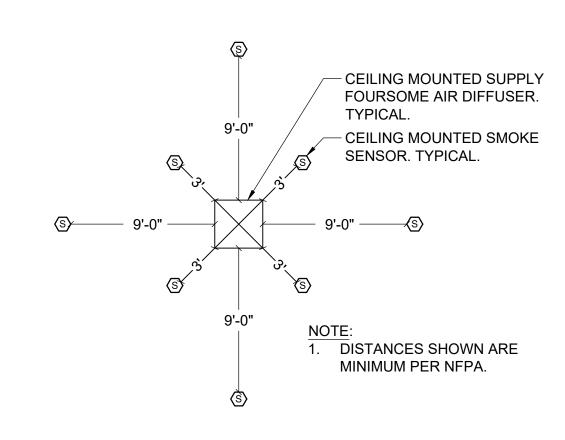
NOTE: CLEVIS HANGERS REQUIRED ON PIPING LARGER THAN 1". GENERAL PURPOSE HANGERS MAY BE USED ON PIPING 1" OR SMALLER.



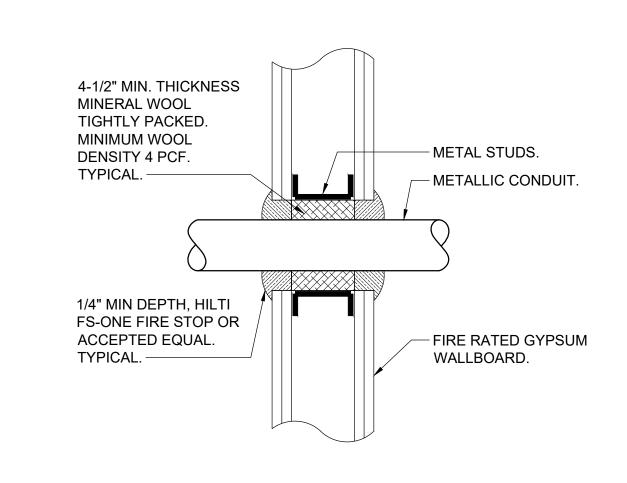


TYPICAL CONDUIT SUPPORT ON MASONRY DETAIL SCALE: NONE

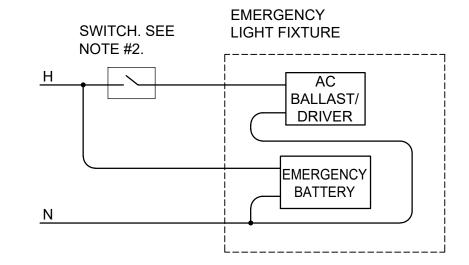
NUMBER OF CONDUITS



CEILING MOUNTED SMOKE DETECTOR LOCATION WITH RESPECT TO AIR DIFFUSER

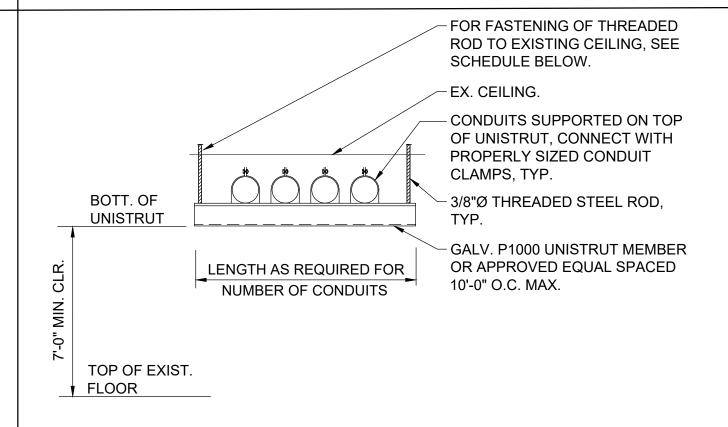


TYPICAL FIRE RATED GYPSUM WALL **CONDUIT PENETRATION DETAIL** SCALE: NONE



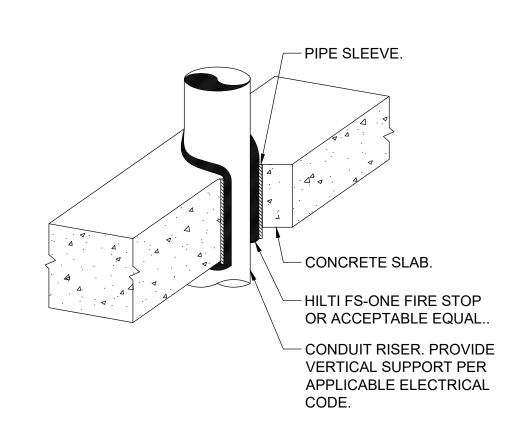
- 1. THE CONNECTION TO THE LAMPS IS NOT SHOWN FOLLOW
- MANUFACTURER WIRING DIAGRAMS.
- 2. "SWITCH" REPRESENTS A SINGLE POLE SWITCH, A SET OF CONTACTS, A COMBINATION OF 3 WAY AND 4 WAY SWITCHES, ETC. SEE DRAWINGS FOR ACTUAL SWITCH CONFIGURATION.

SWITCHED EMERGENCY FIXTURE WIRING DIAGRAM SCALE: NONE



CEILING CONSTRUCTION	ANCHOR TYPE	EMBEDMENT
NORMAL WT. CONC	HILTI HDI DROP-IN ANCHOR	1" MIN.
CINDER CONCRETE	HILTI KWIK BOLT II	3" MIN.
HOLLOW CONSTRUCTION	TOGGLE BOLTS	NA

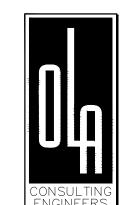
TRAPESE SUPPORT DETAIL



TYPICAL VERTICAL CONDUIT PENETRATION DETAIL SCALE: NONE



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3	03/04/2024	ISSUED FOR BID
2	11/22/2023	100% CDs - ISSUE FOR CLIENT REVIEW
1	08/22/2023	ISSUED FOR SCHEMATIC DESIGN
ISSUE NO.	ISSUE DATE	DESCRIPTION

WARNER LIBRARY

CHILDREN'S LIBRARY ACOUSTICAL TILE CEILING AND PIPE INSULATION **REPLACEMENT**

ELECTRICAL DETAILS

PROJECT NO.: NLAA0034.00 SCALE:

AS NOTED

DRAWING NO.