



180 W CAMPUS DR
FLAT ROCK, NC 28731

FLAT ROCK BUILDING RENOVATION

3202-200950

PLAN REVIEWER NOTES

- 1. SMALL-SCALE RENOVATION OF EXISTING BUILDING (ALTERATION - LEVEL 2).
2. WORK INCLUDES: SELECTIVE DEMOLITION OF WALL PARTITIONS AND FLOOR FINISHES.
3. EXTENTS OF AREAS THAT ARE NOT IN SCOPE ARE INDICATED ON FLOOR PLAN SHEETS
4. OCCUPANT LOADS MAY BE FOUND ON LIFE SAFETY SHEET - G-101
5. MECHANICAL SYSTEM MODIFICATIONS ARE LIMITED TO NEW RESTROOM VENTILATION COMPLIANCE

PROJECT TEAM

LS3P ASSOCIATES LTD. ARCHITECT
227 W TRADE STREET, SUITE 700
CHARLOTTE, NC 28202

MSWG ENGINEERS MECHANICAL, ELECTRICAL, PLUMBING
4223 SOUTH BLVD
CHARLOTTE, NC 28209

30 NOVEMBER, 2020



227 WEST TRADE STREET SUITE 700
CHARLOTTE, NORTH CAROLINA 28202
TEL. 704.333.6686 FAX 704.333.2926
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REVISIONS:

Table with 3 columns: No., Description, Date

PROJECT: 3202-200950
DATE: 30 NOV 2020

PROJECT INFORMATION SHEET

G-001

ISSUED FOR PERMIT

NORTH CAROLINA EXISTING BUILDING CODE - 2018 EDITION (APPENDIX B)

Name of Project: FLAT ROCK BUILDING RENOVATION
Address: 180 W CAMPUS DR, FLAT ROCK, NC
Zip Code: 28731
Proposed Use: BUSINESS

Owner or Authorized Agent: PETER HEMANS
Phone #: 828-694-1723
E-Mail: PETER.HEMANS@LS3P.COM
Owned By: City/County Private State
Code Enforcement Jurisdiction: City County HENDERSON State

PROJECT SUMMARY
Building description: Interior renovation of 7,200 SF of space within an existing administration building
Scope of work details: Work to include the renovation of existing office configuration (including fixtures) and installation of new plumbing fixtures.

LEAD DESIGN PROFESSIONAL: LS3P ASSOCIATES LTD.
Table with columns: DESIGNER, FIRM, NAME, LICENSE# TELEPHONE# E-MAIL

2015 EDITION OF NC CODE FOR NEW CONSTRUCTION
EXISTING: Reconstruction Alteration Repair Renovation
CONSTRUCTED (date): 1975 ORIGINAL USE(S) (Ch. 3): BUSINESS
RENOVATED (date): 2002 CURRENT USE(S) (Ch. 3): BUSINESS
PROPOSED USE(S) (Ch. 3): BUSINESS

BASIC BUILDING DATA
Construction Type: I-A, I-B, I-C, I-D, I-E, I-F, I-G, I-H, I-I, I-J, I-K, I-L, I-M, I-N, I-O, I-P, I-Q, I-R, I-S, I-T, I-U, I-V, I-W, I-X, I-Y, I-Z
Sprinklers: No, Partial, Yes
Standpipes: No, Yes
Fire District: No, Yes
Building Height: (feet) 28'-8"

ALLOWABLE AREA
Table with columns: FLOOR, EXISTING (SQ FT), NEW (SQ FT), SUB-TOTAL

OCCUPANCY:
Assembly, Business, Educational, Factory, Hazardous, Institutional, Mercantile, Residential, Storage, Utility and Miscellaneous
Accessory Occupancies:
Mixed Occupancy: No, Yes Separation: Exception:
Incidental Use Separation (508.2.5)
This separation is not exempt as a Non-Separated Use (see exceptions).

SCHEDULE OF SPECIAL INSPECTION SERVICES
No special inspections required for this project
Special inspections required for this project:
IT-1 Verification of Soils
IT-2 Excavation and Fill
IT-3 Piling and Drilling Piers
IT-4 Modular Retaining Walls
IT-5 Reinforced Concrete
IT-6 Post-Tension Slab
IT-7 Cast-in-Place Concrete Erection
IT-8 Pre-Cast Concrete
IT-9 Inspection of Pre-cast Fabrication

ACCESSIBLE PARKING (SECTION 1106)
Table with columns: TOTAL, REQUIRED, PROVIDED, REGULAR VAN SPACES WITH ACCESSIBLE, 15% ACCESSIBLE, 15% ACCESSIBLE, PROVIDED

ALLOWABLE HEIGHT
Table with columns: Type of Construction, Type, Allowable Height (Table 503), Increase for Sprinklers, Shown on Plans, Code Reference

U.S. SHEET DESIGNATORS AND SHEET ORDER
LEVEL 1 - DISCIPLINE DESIGNATORS
LEVEL 3 - SHEET TYPE DESIGNATORS
LEVEL 4 - PLAN TYPE DESIGNATORS

Table with columns: LEVEL 1 - DISCIPLINE DESIGNATORS, LEVEL 3 - SHEET TYPE DESIGNATORS, LEVEL 4 - PLAN TYPE DESIGNATORS

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PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)
Table with columns: USE, WATERCLOSETS, LAVATORIES, SHOWERS/TUBS, DRINKING FOUNTAINS

FIRE PROTECTION REQUIREMENTS (EXISTING BUILDING, NOT APPLICABLE)
Table with columns: BUILDING ELEMENT, FIRE SEPARATION DISTANCE, RATING, DETAIL #, DESIGN #, DESIGN # FOR DESIGN #

LIFE SAFETY SYSTEM REQUIREMENTS G-101, G-102
Emergency Lighting: No, Yes
Exit Signs: No, Yes
Fire Alarm: No, Yes
Smoke Detection Systems: No, Yes
Panic Hardware: No, Yes

LIFE SAFETY PLAN REQUIREMENTS
Life Safety Plan Sheet #: G-101
Fire and/or smoke rated wall locations (Chapter 7)
Assumed and real property line locations
Exterior wall opening area with respect to distance to assumed property lines (705.8)
Existing structures within 30' of the proposed building
Occupancy types for each area as it relates to occupancy load calculation (Table 1004.1.1)
Occupant loads for each area
Exit access travel distances (1016)
Common path of travel distances (1014.3 & 1028.8)
Dead end lengths (1018.4)
Clear exit widths for each exit door
Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.1)
Actual occupant load for each exit door
A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
Location of doors with panic hardware (1008.1.10)
Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)
Location of doors with electromagnetic egress locks (1008.1.9.8)
Location of doors equipped with hold-open devices
Location of emergency escape windows (1029)
The square footage of each fire area (902)
The square footage of each smoke compartment (407.4)
Note any code exceptions or table notes that may have been utilized regarding the items above

MECHANICAL SUMMARY
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
Thermal Zone: winter dry bulb, summer dry bulb, winter dry bulb, summer dry bulb, relative humidity, building heating load, building cooling load, Mechanical Space Conditioning System
Unitary: description of unit, heating efficiency, cooling efficiency, size category of unit:
Boiler: Size category, if oversized, state reason.
Chiller: Size category, if oversized, state reason.
List equipment efficiencies:

ELECTRICAL SUMMARY
ELECTRICAL SYSTEMS AND EQUIPMENT
Method of Compliance: SEE ELECTRICAL DRAWINGS
Energy Code: Prescriptive Performance, Prescriptive Performance
Lighting schedule: lamp type required in future number of lamps in fixture, ballast type in fixture, number of ballasts in fixture, total wattage per fixture, total interior wattage specified vs. allowed (whole building or space by space), total exterior wattage specified vs. allowed

Table with columns: TOTAL, REQUIRED, PROVIDED, REGULAR VAN SPACES WITH ACCESSIBLE, 15% ACCESSIBLE, 15% ACCESSIBLE, PROVIDED

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STRUCTURAL DESIGN (EXISTING BUILDING, NOT APPLICABLE)
Design Loads: Wind (W), Snow (S), Seismic (SE), Live Load (L), Ground Snow Load (GS), Wind Load (Basic Wind Speed, Exposure Category, Wind Base Shears)
SEISMIC DESIGN CATEGORY: Occupancy Category (Table 6.1), Site Classification (Table 6.2), Data Source
Basic structural system: Bearing Wall, Moment Frame, Dual w/ Special Moment Frame, Dual w/ Intermediate R/C or Special Steel Moment Frame, Inverted Pendulum
Seismic Base Shear: V_s, V_e
Analysis Procedure: Simplified, Equivalent Lateral Force, Dynamic
Architectural/Mechanical Components anchored? Yes/No
LATERAL DESIGN CONTROL: Earthquake, Wind
SOIL BEARING CAPACITIES: Field Test (provide soil test report), Presumptive Bearing Capacity
File size, type, and capacity

ENERGY REQUIREMENTS (EXISTING BUILDING, NOT APPLICABLE)
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each designer shall furnish the project information for the design data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.
Climate Zone: 3, 4, 5
Method of Compliance: Prescriptive (Energy Code), Performance (Energy Code), Prescriptive (ASHRAE 90.1), Performance (ASHRAE 90.1)

THERMAL ENVELOPE
Roof/Ceiling Assembly (each assembly)
Description of assembly
U-Value of total assembly
R-Value of insulation
Solar heat gain coefficient
Projection Factor
Door R-values
Walls below grade (each assembly)
Description of assembly
U-Value of total assembly
R-Value of insulation
Horizontal/vertical requirement
Slab Headed
Exterior Walls (each assembly)
Description of assembly
U-Value of total assembly
R-Value of insulation
Openings (windows or doors with glass)
U-Value of assembly
Solar heat gain coefficient
Projection Factor
Door R-values
Walls above grade (each assembly)
Description of assembly
U-Value of total assembly
R-Value of insulation
Roof slabs on grade (each assembly)
Description of assembly
U-Value of total assembly
R-Value of insulation
Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)
Location of doors with electromagnetic egress locks (1008.1.9.8)
Location of doors equipped with hold-open devices
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GENERAL PROJECT NOTES

- 1. UNLESS OTHERWISE NOTED, DIMENSIONS ARE FROM COLUMN CENTERLINE, FACE OF METAL STUD, FACE OF MASONRY, AND FACE OF CONCRETE. DO NOT SCALE THE DRAWING.
2. METAL STUDS SHALL BE ATTACHED WITH TWO SCREWS AT 18" O.C. IN THE BOTTOM AND TOP TRACKS UNLESS DEFLECTION TRACKS ARE UTILIZED.
3. THE G.C. SHALL VERIFY ALL EXISTING CONDITIONS AND ADVISE THE ARCHITECT OF ANY DISCREPANCY PRIOR TO THE START OF WORK.
4. ALL PENETRATIONS THROUGH FLOOR SLABS SUCH AS PIPING, CONDUITS, ETC. SHALL BE SEALED WITH FIRE RATED MATERIALS AND SHALL SEAL AGAINST WATER PENETRATION.
5. ALL OUTSIDE CORNERS AND END GYPSUM WALL PARTITIONS SHALL HAVE METAL CORNER BEADS OR METAL TRIM, U.N.O.
6. PROVIDE FIRE TREATED WOOD BLOCKING OR SHEET METAL PLATES FOR ATTACHMENT OF WALL MOUNTED ACCESSORIES SUCH AS SHELVING, CASEWORK, ETC.
7. ENSURE THAT FINISH MATERIALS SUCH AS PAINT ARE COMPATIBLE WITH SEALANTS UTILIZED IN THE WORK.
8. ALL WALL MOUNTED DEVICES SUCH AS ELECTRICAL RECEPTACLE PLATES, ELECTRICAL SWITCH PLATES, FIRE ALARM STROBES, ETC. SHALL BE MOUNTED LEVEL AND PLUMB. WHERE DEVICES ARE ADJACENT TO ONE ANOTHER, THE TOP OF THE DEVICE SHALL ALIGN WITH THE ADJACENT DEVICE, U.N.O.
9. THE ENGINEERING DRAWINGS SUPPORT THE ARCHITECTURAL DRAWINGS IN DEFINING THE SCOPE OF WORK OF THE CONTRACT DOCUMENTS. DISCREPANCY BETWEEN THE ARCHITECTURAL AND ENGINEERING DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE COMMENCING THE WORK. ANY WORK INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE AND AT NO ADDITIONAL COST TO THE OWNER.
10. WHETHER OR NOT SPECIFICALLY INDICATED, ALL GLAZING SHALL BE TEMPERED WHEN WITHIN 18" OF THE FLOOR OR WITHIN 36" HORIZONTAL DISTANCE FROM ANY DOOR.
11. DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO THOSE SHOWN. WHERE SPECIFIC DIMENSIONS, DETAIL OR DESIGN INTENT CANNOT BE DETERMINED, CONSULT THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.

DRAWING SHEET INDEX

Table with columns: GENERAL, ARCHITECTURAL, PLUMBING, MECHANICAL, ELECTRICAL

MATERIAL LEGEND

Table with columns: PLAN AND SECTION, ELEVATION, ACOUSTICAL TILE, GYPSUM WALLBOARD, CARPET AND PAD

GRAPHIC SYMBOL LEGEND

Table with columns: DRAWING TITLE, DRAWING LOCATION ON SHEET GRID, DRAWING NAME, DRAWING SCALE, DRAWING LOCATION ON SHEET GRID, DRAWING NAME, SHEET NUMBER WHERE DETAIL IS DRAWN, SHEET NUMBER WHERE DETAIL IS REFERENCED, DETAIL/PLAN KEY, DETAIL LOCATION ON SHEET GRID, LOCATION OF DETAIL, REVISION INDICATION, CENTERLINE, AREA REVISED, TYPICAL DIMENSION INDICATOR, DOOR NUMBER, FLOOR ELEVATION, 1ST FLOOR

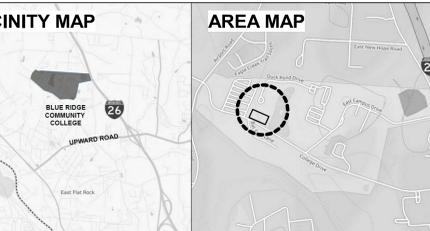
ABBREVIATIONS

Table with columns: A/C, ADMIN, AFF, ALT, ALUM, APPROX, ARCH, AUTO, AUX, AV, BITUM, BL, BLDG, BN, BOS, CAB, CL, CLJ, CLC, CLG, CLGHT, CLO, CLR, CMU, COL, CONC, CONF, CONT, CORR, CU FT, CU YD, DEMO

Table with columns: FACE OF CURB, FACE OF FINISH, FACE OF MASONRY, FACE OF SLAB, FACE OF WALL, FOOT, FEET, FOOTING, FURN, FURNISH, FURNITURE, GAGE, GALV, GALVANIZED, GENERAL CONTRACTOR, GYP BD, GYPSUM BOARD, GYP PLAS, HANDICAP, HEAVY DUTY, HARDWOOD, HARDWARE, HOLLOW METAL, HORIZ, HORIZONTAL, HEIGHT, HEATING, VENTILATION & AIR CONDITIONING, INSIDE DIAMETER, INCLUDED (ING), INFORMATION, INSUL, INSULATION, INTERIOR, JANITOR CLOSET, KITCHEN, KNOCKOUT, LABORATORY, LAM, LAMINATE, LAUNDRY, LAV, LAVATORY

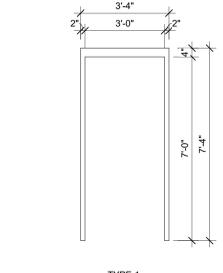
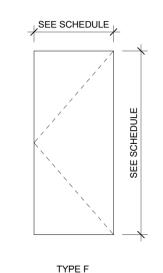
Table with columns: LINEAR FEET, LOUVER, MAINTENANCE, MATERIAL, MAXIMUM, MECH, MEZZANINE, MANUFACTURING, MANUFACTURER, MINIMUM, MISCELLANEOUS, MASONRY OPENING, MOUNTED, MOUNTING, METAL, NORTH, NOT IN CONTRACT, NOMINAL, NON-COMBUSTIBLE, NOT TO SCALE, ON CENTER, OUTSIDE DIAMETER, OPPOSITE, OPTION(L), POUNDS PER CUBIC FOOT, PLAM, PLASTIC LAMINATE, POLYMER, PLYWOOD, PLYWOOD, PANEL, PAIR, PREFAB, PREFABRICATED, PREFER

Table with columns: PARKING, POUNDS PER SQUARE FOOT, POUNDS PER SQUARE INCH, PAINT, POST-TENSIONED, PRE-TREATED, POLY VINYL CHLORIDE (PVC), QUARTER, QUANTITY, RADIUS, RISER, REFLECTED CEILING PLAN, ROOF DRAIN, REFRIGERATOR, REFERENCE, REQUIRED, ROOF LEADER, ROOM, ROUGH OPENING, RIGHT OF WAY, SOUTH, SOLID CORE, STORM DRAIN, SECTION, SIMILAR, SQUARE FEET, SIMILAR, SPECIFICATION, SPEAKER, SQUARE, STAINLESS STEEL, STANDARD, STORAGE, SUSPENDED, SYSTEM, TREAD, TELEPHONE, TEMPORARY, TOP OF FINISH FLOOR, THICKNESS, THROUGH, TOP OF, TOP OF BEAM, TOP OF CONCRETE, CURB, TOP OF FOOTING, TOP OF JOIST, TOP OF MASONRY, TOP OF PARAPET, TOP OF SLAB, TOP OF WALL, TREATED, TELEVISION, TYPICAL, UNDERWRITERS LABORATORIES, UNLESS NOTED OTHERWISE, VERTICAL, VESTIBULE, VERIFY IN FIELD, WATER, WATER, WEST, WEST, WITH, WITHOUT, WALL TO WALL, WATER, WATER, WOOD, WORKING PLAN, WATER REPELLANT, WEIGHT, WELDED WIRE FABRIC, YARD



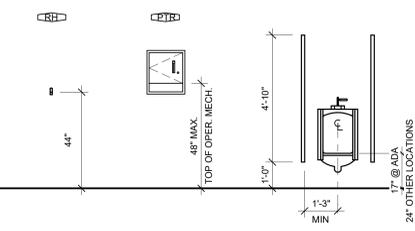
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DOOR AND FRAME SCHEDULE WOMEN'S RESTROOM								
DOOR NUMBER	MATL	TYPE	FINISH	SIZE	LABEL	FRAME MATL	FINISH	REMARKS
2ND FLOOR								
110C	WOOD	F	STAIN	36" x 84"	60 MIN	HM	PTD	1 SELF CLOSER / LATCH

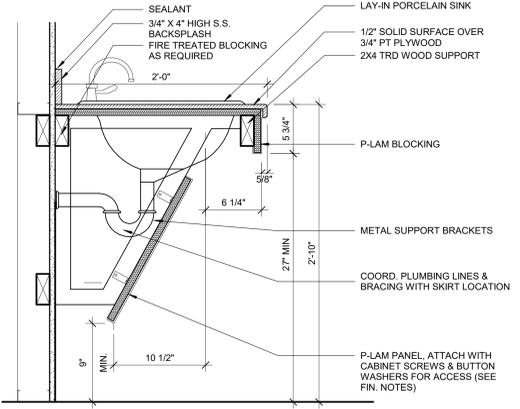


DOOR TYPE LEGEND
3/8" = 1'-0"

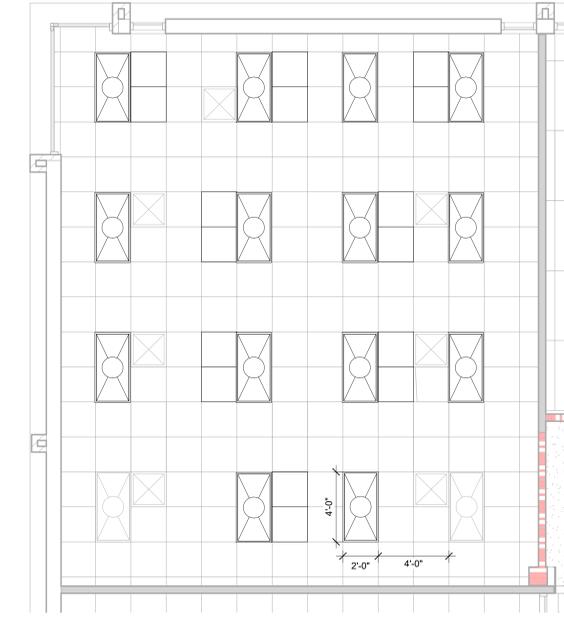
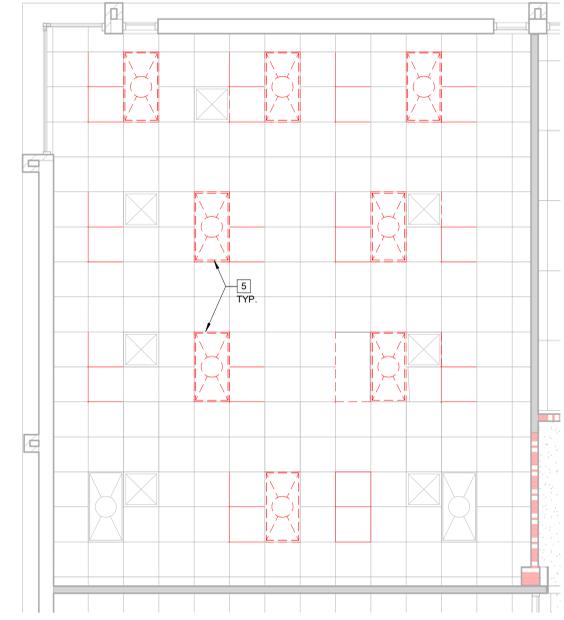
FRAME TYPE LEGEND
3/8" = 1'-0"



TYPICAL MOUNTING HEIGHTS
3/8" = 1'-0"

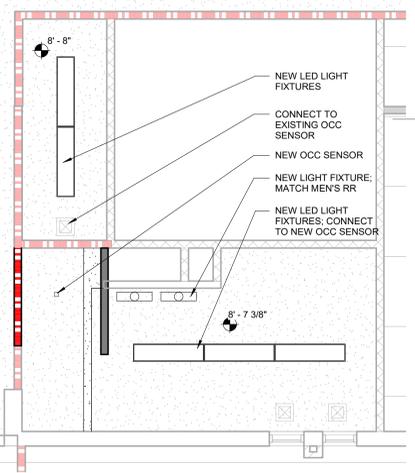
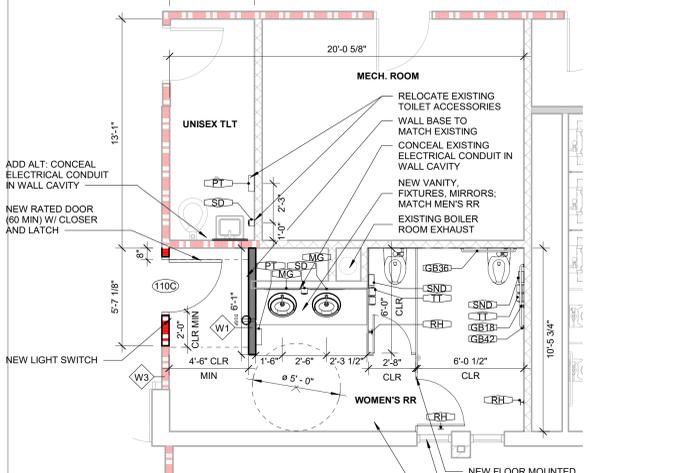
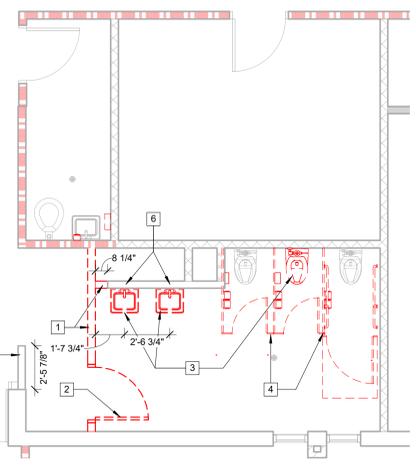


D3 SECTION THROUGH BATHROOM VANITY
1 1/2" = 1'-0"



D1 2ND FLOOR RCP - CRIMINAL JUSTICE DEMO
1/4" = 1'-0"

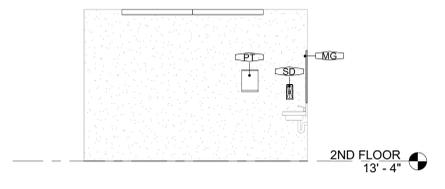
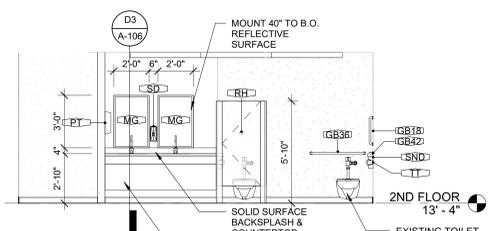
D2 2ND FLOOR RCP - CRIMINAL JUSTICE
1/4" = 1'-0"



A1 2ND FLOOR WOMEN'S RR DEMO PLAN
1/4" = 1'-0"

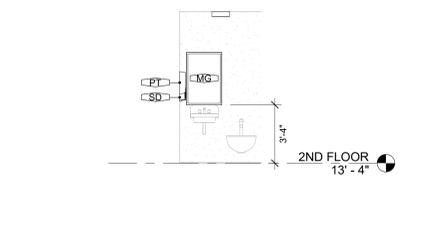
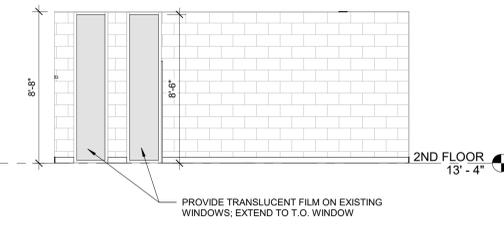
A2 2ND FLOOR WOMEN'S RR FLOOR PLAN
1/4" = 1'-0"

A3 2ND FLOOR WOMEN'S RR RCP
1/4" = 1'-0"



A4 INTERIOR ELEVATION - WOMEN'S RR NORTH
1/4" = 1'-0"

A6 INTERIOR ELEVATION - UNISEX TLT EAST
1/4" = 1'-0"



A5 INTERIOR ELEVATION - WOMEN'S RR SOUTH
1/4" = 1'-0"

A7 INTERIOR ELEVATION - UNISEX TLT SOUTH
1/4" = 1'-0"

DEMOLITION KEY NOTES

- REMOVE EXISTING WALL OR PORTION OF WALL AS INDICATED.
- REMOVE EXISTING DOOR & FRAME. SALVAGE DOOR, FRAME & HARDWARE FOR REUSE.
- REMOVE EXISTING PLUMBING.
- REMOVE EXISTING STALL PARTITIONS
- REMOVE EXISTING LIGHT FIXTURE, SALVAGE FOR REUSE
- REMOVE PORTION OF WALL TO ALLOW FOR NEW PLUMBING INSTALLATION
- EXTEND WALL TO DECK, SEAL TO ACHIEVE 1HR RATED ASSEMBLY

DEMOLITION LEGEND

1 DEMOLITION KEY NOTE

EXISTING PARTITION

EXISTING PARTITION TO BE REMOVED

EXISTING DOOR TO BE REMOVED

DEMOLITION GENERAL NOTES

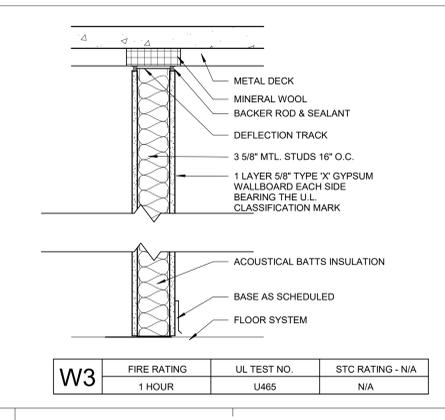
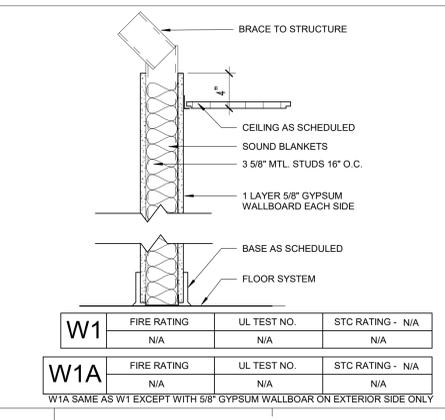
- NUMBERED KEY NOTES DO NOT IMPLY SEQUENCE. CONTRACTOR TO PERFORM DEMOLITION WORK AS REQUIRED PER WORK SEQUENCE.
- DEMOLITION DRAWINGS ARE INTENDED TO SHOW GENERAL AREAS OF DEMOLITION AS WELL AS GENERAL EXISTING CONDITIONS. THEY DO NOT SHOW ALL WORK WHICH MAY BE NECESSARY. COMPARE WITH DRAWINGS INDICATING NEW CONSTRUCTION.
- EXISTING WORK TO REMAIN SHALL BE TEMPORARILY SECURED, BRACED AND STABILIZED UNTIL PERMANENT CONSTRUCTION IS IN PLACE.
- VERIFY FIELD CONDITIONS PRIOR TO START OF DEMOLITION CONSTRUCTION AND NOTIFY THE ARCHITECT OF ANY DISCREPANCIES.
- ERECT BARRICADES, FENCES OR OTHER SECURABLE MEANS TO PREVENT UNAUTHORIZED ACCESS INTO CONSTRUCTION ZONES.
- DO NOT ALLOW MATERIAL AND DEBRIS GENERATED BY DEMOLITION ACTIVITIES TO ACCUMULATE ON THE JOB SITE. REMOVE DAILY AND DISPOSE OF IN A LEGAL MANNER. NO ON-SITE SALE OR BURNING OF REMOVED ITEMS IS PERMITTED.
- THE CONTRACTOR MUST MAINTAIN ADEQUATE SUPPORT INSULATION, WATERPROOFING, EMERGENCY LIGHTING, SECURITY, ALARMS, ETC. FOR ALL OR PART OF ITEMS WHICH ARE TO REMAIN.
- TERMINATE AND CAP ANY UTILITY IN WALLS CEILINGS AND FLOORS TO BE REMOVED AND NOT INTENDED FOR REUSE.
- PREPARE AND PATCH SURFACES THAT RECEIVE NEW FINISHES AS REQUIRED BY REMOVING OR RELOCATING DEVICES, WIRING OR OTHER APPURTENANCES NO LONGER APPROPRIATE FOR THE NEW USE OF THE ROOM.
- MAINTAIN EXISTING FINISHES, OPERATIONAL CHARACTERISTICS, AND APPEARANCE OF ITEMS SCHEDULED TO REMAIN OR BE REUSED.

FLOOR PLAN SHEET NOTES

- INTERIOR DIMENSIONS INDICATED ARE TO (FACE OF FINISH, FACE OF STUD, PARTITION CENTERLINE) AND CENTERLINES OF COLUMNS, UNO.
- LOCATE DOOR OPENINGS 4" FROM NEAREST PERPENDICULAR WALL.
- FIRE AND SOUND RATED WALLS / PARTITIONS TO BE CONSTRUCTED TIGHT TO STRUCTURE, PIPING, DUCTWORK AND OTHER PENETRATIONS. ALL WORK IS TO BE BRACED TO STRUCTURE ABOVE.
- WHERE PARTITIONS OF DIFFERENT FIRE RATINGS INTERSECT, THE HIGHEST RATED PARTITION SHALL CONTINUE THROUGH. MAINTAIN PARTITION FIRE RATING BEHIND RECESSED FIRE EXTINGUISHER CABINETS.
- INSTALL BLOCKING IN PARTITIONS FOR CASEWORK, WALL MOUNTED EQUIPMENT, TRIM AND RELATED CONSTRUCTION AS INDICATED IN THE SPECIFICATIONS.
- SEE LIFE SAFETY PLANS FOR REQUIRED FIRE SEPARATION WALLS.
- SEE SHEETS A-721 FOR FINISH FLOORING, TRANSITIONS, FINISH SCHEDULE.
- PROVIDE SOUND ATTENUATION BLANKETS IN ALL NEW WALLS THAT ENCLOSE AN OFFICE OR OFFICE SUITE.

TOILET ACCESSORIES LEGEND

DESCRIPTION	SYMBOL
TOILET TISSUE DISPENSER (OP / CI)	TT
PAPER TOWEL DISPENSER (OP / CI)	PT
SOAP DISPENSER (OP / CI)	SD
36" GRAB BAR	GB36
42" GRAB BAR	GB42
18" VERTICAL GRAB BAR	GB18
GLASS MIRROR UNIT	MG
ROBE HOOK	RH



SCOPE

THE CONTRACTOR SHALL COORDINATE THE WORK AND EQUIPMENT OF THIS DIVISION WITH THE WORK AND EQUIPMENT SPECIFIED ELSEWHERE IN ORDER TO ASSURE A COMPLETE AND SATISFACTORY INSTALLATION.

IT IS THE INTENTION OF THESE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION. WHENEVER THE WORD "PROVIDE" IS USED, IT SHALL MEAN "FURNISH AND INSTALL COMPLETE AND READY FOR USE."

THE WORD "PROVIDE" MEANS FURNISH, FABRICATED, COMPLETE, INSTALL, ERECT, INCLUDING LABOR AND INCIDENTAL MATERIALS NECESSARY TO COMPLETE IN PLACE AND READY FOR OPERATION OR USE THE ITEM REFERRED TO OR DESCRIBED HEREIN AND/OR SHOWN OR REFERRED TO ON THE CONTRACT DRAWINGS.

EQUIPMENT APPLICATION AND PERFORMANCE

THE CONTRACTOR AND/OR EQUIPMENT SUPPLIER SHALL BE RESPONSIBLE TO SEE THAT EQUIPMENT SUPPLIED IS CORRECT FOR THE INTENDED APPLICATION AND WILL PERFORM WITHIN THE LIMITS OF CAPACITY, NOISE, LIFE EXPECTANCY, PRESSURE DROP, AND SPACE LIMITATIONS INTENDED FOR THAT EQUIPMENT AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIFICATIONS.

WHERE THE CONTRACTOR PROPOSES TO USE AN ITEM OF EQUIPMENT OTHER THAN THAT SPECIFIED OR DETAILED ON THE DRAWINGS, WHICH REQUIRES ANY REDESIGN OF THE STRUCTURE, PARTITIONS, FOUNDATIONS, PIPING, WIRING OR ANY OTHER PART OF THE MECHANICAL, ELECTRICAL, OR ARCHITECTURAL LAYOUT, ALL SUCH REDESIGN, AND ALL NEW DRAWINGS AND DETAILING REQUIRED THEREFORE, SHALL BE PREPARED BY THE SUBCONTRACTOR AT HIS OWN EXPENSE AND SUBMITTED FOR APPROVAL BY THE ARCHITECT.

WHERE SUCH APPROVED DEVIATION REQUIRES A DIFFERENT QUANTITY AND ARRANGEMENT OF DUCTWORK, PIPING, WIRING, CONDUIT, AND EQUIPMENT FROM THAT SPECIFIED OR INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL FURNISH AND INSTALL ANY SUCH DUCTWORK, PIPING, STRUCTURAL SUPPORTS, INSULATION, CONTROLLERS, MOTORS, STARTERS, ELECTRICAL WIRING AND CONDUIT, AND ANY OTHER ADDITIONAL EQUIPMENT REQUIRED BY THE SYSTEM, AT NO ADDITIONAL COST TO THE OWNER.

DIELECTRIC CONNECTIONS
DIELECTRIC CONNECTIONS SHALL BE USED AT ANY POINTS WITHIN THE PIPING SYSTEMS WHERE DISSIMILAR METALS MEET. CAREFUL ATTENTION SHALL BE GIVEN TO SUPPORT BRACKETS AND HANGERS TO SELECT PROPER MATERIALS TO AVOID DISSIMILAR METAL CONTACT AT THESE POINTS.

DUTIES OF CONTRACTOR

CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS CALLED FOR IN THESE SPECIFICATIONS AND ACCOMPANYING DRAWINGS, AND MUST FURNISH THE APPARATUS COMPLETE IN EVERY RESPECT. ANYTHING CALLED FOR IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS OR SHOWN ON THE DRAWINGS AND NOT CALLED FOR IN THE SPECIFICATIONS MUST BE FURNISHED BY THE CONTRACTOR.

CONTRACTOR IS RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH THE DETAILS OF THE CONSTRUCTION OF THE BUILDING. WORK UNDER THESE SPECIFICATIONS INSTALLED IMPROPERLY OR WHICH REQUIRES CHANGING DUE TO IMPROPER READING OR INTERPRETATION OF BUILDING PLANS SHALL BE CORRECTED AND CHANGED AS DIRECTED BY THE ARCHITECT WITHOUT ADDITIONAL COST TO THE OWNER.

CONDITIONS SOMETIMES OCCUR WHICH REQUIRE CERTAIN CHANGES IN DRAWINGS AND SPECIFICATIONS. IN THE EVENT THAT SUCH CHANGES IN DRAWINGS AND SPECIFICATIONS ARE NECESSARY, THE SAME ARE TO BE MADE BY THE CONTRACTOR WITHOUT EXPENSE TO THE OWNER, PROVIDING SUCH CHANGES DO NOT REQUIRE FURNISHING MORE MATERIALS, OR PERFORMING MORE LABOR THAN THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS DEMANDS. IT IS UNDERSTOOD THAT WHILE THE DRAWINGS ARE TO BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES PERMIT, THE CONTRACTOR IS HELD RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEM ACCORDING TO THE TRUE INTENT AND MEANING OF THE DRAWINGS.

THE RIGHT TO MAKE ANY RESPONSIBLE CHANGE IN LOCATION OF APPARATUS, EQUIPMENT, ROUTING OF PIPING UP TO THE TIME OF ROUGHING IN, IS RESERVED BY THE ARCHITECT WITHOUT INVOLVING ANY ADDITIONAL EXPENSE TO THE OWNER.

IT SHALL BE THE DUTY OF PROSPECTIVE CONTRACTORS TO VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH JOB CONDITIONS. NO EXTRAS WILL BE ALLOWED BECAUSE OF ADDITIONAL WORK NECESSITATED BY, OR CHANGES IN PLANS REQUIRED BECAUSE OF EVIDENT JOB CONDITIONS, THAT ARE NOT INDICATED ON THE DRAWINGS.

CODES, RULES, PERMITS AND FEES

ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH THE NATIONAL FIRE CODES OF THE NATIONAL FIRE PROTECTION ASSOCIATION, AND WITH THE REQUIREMENTS OF ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION.

ALL MATERIALS AND EQUIPMENT FOR THE ELECTRICAL PORTION OF THE MECHANICAL SYSTEM SHALL BEAR THE APPROVAL LABEL, AND SHALL BE LISTED BY THE UNDERWRITERS' LABORATORIES, INC.

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NORTH CAROLINA STATE BUILDING CODE, AND REQUIREMENTS OF GOVERNMENTAL AGENCIES HAVING JURISDICTION.

COOPERATION WITH OTHER TRADES

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

WHERE THE WORK OF THE CONTRACTOR WILL BE INSTALLED IN CLOSE PROXIMITY TO, OR MAY INTERFERE WITH THE WORK OF OTHER TRADES, HE SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE A SATISFACTORY ADJUSTMENT. IF SO DIRECTED BY THE ARCHITECT, THE CONTRACTOR SHALL PREPARE COMPOSITE WORKING DRAWINGS AND SECTIONS AT A SUITABLE SCALE NOT LESS THAN 3/8" = 1'-0", CLEARLY SHOWING HOW HIS WORK IS TO BE RELATED TO THE WORK OF OTHER TRADES.

THE CONTRACTOR SHALL FURNISH TO OTHER TRADES, AS REQUIRED, ALL NECESSARY TEMPLATES, PATTERNS, SETTING PLANS, AND SHOP DETAILS FOR THE PROPER INSTALLATION OF WORK AND FOR THE PURPOSE OF COORDINATING ADJACENT WORK.

SAFETY REQUIREMENTS

ALL SYSTEMS SHALL BE INSTALLED SO AS TO BE SAFE OPERATING AND ALL MOVING PARTS SHALL BE COVERED WHERE SUBJECT TO HUMAN CONTACT. ALL ROUGH EDGES OF EQUIPMENT AND MATERIALS SHALL BE MADE SMOOTH.

ALL SAFETY CONTROLS SHALL BE CHECKED UNDER THE SUPERVISION OF THE ARCHITECT'S REPRESENTATIVE AND EIGHT (8) COPIES OF TEST DATE SHOWING SETTING AND PERFORMANCE OF SAFETY CONTROLS SHALL BE SUBMITTED TO THE ARCHITECT. ALL PRESSURE VESSELS SHALL BE ASME STAMPED AND SHALL HAVE STAMPED RELIEF VALVES. WATER HEATERS SHALL BE PROVIDED WITH ASME STAMPED T & P RELIEF VALVE.

CONCEALED PIPE

IN GENERAL, ALL PIPES IN FINISHED SPACES SHALL BE RUN CONCEALED IN FLOORS, WALLS, PARTITIONS AND ABOVE CEILINGS, UNLESS OTHERWISE NOTED, ALL PIPE SHALL RUN INSIDE THE INSULATED PERIMETER OF THE BUILDING.

PROTECTION

THE CONTRACTOR SHALL PROTECT ALL WORK AND MATERIAL FROM DAMAGE, AND SHALL BE LIABLE FOR ALL DAMAGE DURING CONSTRUCTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR WORK AND EQUIPMENT UNTIL ALL CONSTRUCTION IS FINALLY INSPECTED, TESTED AND ACCEPTED. HE SHALL PROTECT WORK AGAINST THEFT, INJURY OR DAMAGE, AND SHALL CAREFULLY STORE MATERIAL AND EQUIPMENT RECEIVED ON SITE WHICH IS NOT IMMEDIATELY INSTALLED. HE SHALL CLOSE OPEN ENDS OF WORK INCLUDING PIPE, DUCT, OR EQUIPMENT WITH TEMPORARY COVERS OR PLUGS DURING STORAGE AND CONSTRUCTION TO PREVENT ENTRY OF OBSTRUCTING MATERIALS OR DUST AND DEBRIS.

PROVIDE A PROTECTIVE COVERING OF NOT LESS THAN 0.004" THICK VINYL SHEETING (OR A SIMILAR APPROVED MATERIAL) TO BE USED IN COVERING ALL ITEMS OF EQUIPMENT, IMMEDIATELY AFTER THE EQUIPMENT HAS BEEN SET IN PLACE, (OR IF IN A PLACE OF STORAGE WITHIN THE BUILDING UNDER CONSTRUCTION) TO PREVENT THE ACCUMULATION OF DIRT, SAND, CEMENT, PLASTER, PAINT OR OTHER FOREIGN MATERIALS FROM COLLECTING ON THE EQUIPMENT AND/OR FOULING WORKING PARTS.

CLEANING

CLEAN FROM ALL EXPOSED INSULATION AND METAL SURFACES GREASE, DEBRIS OR OTHER FOREIGN MATERIAL.

CHROME PLATED FITTINGS, FIXTURES, PIPING AND TRIM SHALL BE POLISHED UPON COMPLETION.

EQUIPMENT SERVICEABILITY

ALL EQUIPMENT SHALL BE SERVICEABLE. ALL EQUIPMENT SHALL BE INSTALLED SO THAT IT CAN BE REMOVED. ALL EQUIPMENT IN OR CONNECTED TO PIPING SYSTEMS SHALL HAVE VALVES TO ISOLATE THIS EQUIPMENT FROM THE PIPING SYSTEM. THIS INCLUDES, BUT NOT NECESSARILY LIMITED TO CONTROL VALVES, WATER HEATERS, SENSORS, SWITCHES, PUMPS, TRAPS AND STRAINERS. UNIONS (SCREWED OR FLANGED) SHALL BE PROVIDED SO THAT ALL EQUIPMENT IS REMOVABLE.

ACCEPTANCE OF EQUIPMENT

CONTRACTOR SHALL MAKE ALL NECESSARY TESTS, TRIAL OPERATION BALANCING AND BALANCE TESTS, ETC., AS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER TO PROVE THAT ALL WORK UNDER THESE PLANS AND SPECIFICATION IS IN COMPLETE SERVICEABLE CONDITION AND WILL FUNCTION AS INTENDED. OIL BURNERS, GAS BURNERS, AND WATER CHILLERS SHALL BE STARTED BY A REPRESENTATIVE OF THE EQUIPMENT MANUFACTURER. ALL COSTS OF THESE PROCEDURES SHALL BE BORNE BY THIS CONTRACTOR.

UPON COMPLETION OF ALL WORK THE SYSTEM SHALL BE TESTED TO DETERMINE IF ANY EXCESS NOISE OR VIBRATION IS APPARENT DURING OPERATION OF THE SYSTEM. IF ANY SUCH OBJECTIONS ARE DETECTED IN THE SYSTEM OR NOISY EQUIPMENT FOUND, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING SAME. DUCTS, PLENUMS AND CASINGS SHALL BE CLEANED OF ALL DEBRIS AND BLOWN FREE OF ALL PARTICLES OF

RUBBISH AND DUST BEFORE INSTALLING OUTLET FACES. EQUIPMENT SHALL BE WIPED CLEAN WITH ALL TRACES OF OIL, DUST, DIRT AND PAINT SPOTS REMOVED. TEMPORARY FILTERS SHALL BE PROVIDED FOR ALL FANS THAT ARE OPERATED DURING CONSTRUCTION AND AFTER ALL CONSTRUCTION DIRT HAS BEEN REMOVED FROM THE BUILDING, NEW FILTERS SHALL BE INSTALLED. BEARINGS SHALL BE LUBRICATED AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER. ALL CONTROL VALVES AND EQUIPMENTS SHALL BE ADJUSTED TO SETTING INDICATED. FANS SHALL BE ADJUSTED TO THE SPEED INDICATED BY THE MANUFACTURER TO MEET SPECIFIED CONDITIONS.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THE COMPLETE MECHANICAL SYSTEM AGAINST DEFECT DUE TO FAULTY MATERIALS, FAULTY WORKMANSHIP OR FAILURE DUE TO NEGLIGENCE OF THE CONTRACTOR. THIS GUARANTEE WILL EXCLUDE NORMAL WEAR AND TEAR, MAINTENANCE LUBRICATION, REPLACEMENT OF EXPENDABLE COMPONENTS, OR ABUSE. THE GUARANTEE PERIOD SHALL BEGIN ON THE DATE OF THE FINAL ACCEPTANCE AND SHALL CONTINUE FOR A PERIOD OF 12 MONTHS DURING WHICH TIME THE CONTRACTOR SHALL MAKE GOOD SUCH DEFECTIVE WORKMANSHIP AND MATERIALS AND ANY DAMAGE RESULTING THERE FROM, WITHIN A REASONABLE TIME OF NOTICE GIVEN BY THE OWNER.

TEST

ALL PIPING SHALL BE TESTED BEFORE COVERING IS APPLIED OR WORK CONCEALED, AND ALL LEAKS CORRECTED BY REMOVAL OF DEFECTIVE MATERIAL AND/OR MAKING UP NEW JOINTS. EQUIPMENT SHALL BE PROTECTED FROM TEST PRESSURE BY CAPPING LINES OR WITH VALVES DURING TEST. CAULKING OF PIPING WILL NOT BE PERMITTED AND WHERE EVIDENT OF CAULKING IS NOTED, THE JOINTS SHALL BE REMOVED FROM THE PIPING SYSTEM REGARDLESS OF WHETHER OR NOT IT IS LEAKING.

TEST ALL WATER PIPING AT 125 PSI.

TEST ALL WASTE AND VENT PIPING WITH A 10 FOOT HEAD.

STERILIZATION OF WATER PIPING SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATION 0601. AFTER THE PRESSURE TESTS HAVE BEEN MADE, THE SYSTEM SHALL BE FLUSHED WITH WATER. THE CHLORINATING MATERIAL SHALL BE LIQUID CHLORINE-WATER MIXTURE CALCIUM HYPOCHLORITE, SODIUM HYPOCHLORITE, OR CHLORINATED LIME-WATER MIXTURE. THE SOLUTION SHALL HAVE NOT LESS THAN 50 PPM AVAILABLE CHLORINE. THE DISINFECTING SOLUTION SHALL BE ALLOWED TO REMAIN IN THE SYSTEM FOR A MINIMUM PERIOD OF 24 HOURS. AFTER DISINFECTION, THE SYSTEM SHALL BE FLUSHED WITH CLEAN WATER UNTIL RESIDUAL CHLORINE CONTENT IS NOT GREATER THAN .02 PPM. AFTER THE SYSTEM IS FLUSHED, WATER SAMPLES SHALL BE TAKEN AND TESTED AT THE CONTRACTOR'S EXPENSE BY AN INDEPENDENT TESTING LAB AND REPORTS SHALL BE FURNISHED TO THE ENGINEER'S FOR APPROVAL IF THE WATER IS FOUND UNSAFE FOR HUMAN CONSUMPTION, THE DISINFECTION PROCEDURE SHALL BE REPEATED.

PIPING

SOIL, WASTE, VENT AND DRAIN PIPING SHALL BE SOLID WALL PVC PLASTIC PIPE AND FITTINGS CONFORMING TO ASTM D 2665. JOINTS FOR PVC PIPE SHALL BE SOLVENT CEMENT IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

COPPER - ALL PIPING SHALL BE HARD DRAWN COPPER TUBING ASTM B 88 TYPE "L" ABOVE GRADE, TYPE "K" BELOW GRADE.

FITTINGS FOR COPPER TUBING SHALL BE ANSI B16.18 OR B16.22 SOLDER JOINT FITTINGS. ENDS OF PIPE SHALL BE REAMED, PIPE AND FITTINGS CLEANED. USE ONLY 95-5 (95% TIN AND 5% ANTIMONY) SOLDER WITH NON-CORROSIVE FLUX.

WITH OWNER'S APPROVAL, PEX PIPING MAY BE USED FROM THE UNIT ISOLATION VALVE TO THE FIXTURES. PIPING SHALL BE SDR9 CROSSLINKED POLYETHYLENE MANUFACTURED USING THE ENGEL METHOD (PEX-A). THE MINIMUM DEGREE OF CROSS-LINKING SHALL BE BETWEEN 70-80% WHEN TESTED IN ACCORDANCE WITH ASTM D2765, METHOD B. PIPING SHALL BE MANUFACTURED IN ACCORDANCE WITH ASTM F876 AND ASTM F877 AND TESTED FOR COMPLIANCE BY AN INDEPENDENT, THIRD-PARTY AGENCY. PIPING SHALL HAVE A MINIMUM MATERIAL DESIGNATION OF PEX 5106 AND SHALL COMPLY WITH NSF 14 AND NSF 61 AND BEAR THE "NSF-PW" MARKING. TEMPERATURE AND PRESSURE REQUIREMENTS SHALL BE IN ACCORDANCE WITH PPI TR-3: 73.4°F AT 80PSI, 180°F AT 100PSI AND 200°F AT 80PSI.

FITTINGS FOR PEX: ASTM F1960 COLD-EXPANSION FITTING MANUFACTURED FROM THE FOLLOWING MATERIAL TYPES

- UN5 NO. C69300 LEAD-FREE (LF) BRASS
20R GLASS-FILLED POLYSULFONE AS SPECIFIED IN ASTM D6394
UNREINFORCED POLYSULFONE (GROUP 01, CLASS 1, GRADE 2) AS SPECIFIED IN ASTM D6394
POLYPHENYLSULFONE (GROUP 03, CLASS 1, GRADE 2) AS SPECIFIED IN ASTM D6394
BLEND OF POLYPHENYLSULFONE (55-80%) AND UNREINFORCED POLYSULFONE (REM.) AS SPECIFIED IN ASTM D6394

REINFORCING COLD-EXPANSION RINGS SHALL BE MANUFACTURED FROM THE SAME SOURCE AS PEX-A PIPING AND MARKED "F1960"; POTABLE WATER FITTINGS SHALL COMPLY WITH NSF 14 AND NSF 61 AND BEAR THE "NSF-PW" MARKING.

HANGERS

ALL PIPING SHALL BE SUPPORTED ON NOT LESS THAN 10' CENTERS AND WITHIN 30" OF EACH CHANGE OF DIRECTION EXCEPT THAT PIPING 1 1/4" SIZE AND SMALLER SHALL BE SUPPORTED ON 8' 0" CENTERS.

PIPE HANGERS SHALL BE SUPPORTED BY MEANS OF IRON HANGER RODS FROM THE BUILDING CONSTRUCTION OR FROM STRUCTURAL STEEL MEMBERS, AND IN AN APPROVED MANNER, WHERE REQUIRED, PIPING SHALL BE HUNG FROM ANGLE IRON CLIPS OR SUITABLE BRACKETS ATTACHED TO SIDES OF MASONRY CONSTRUCTION.

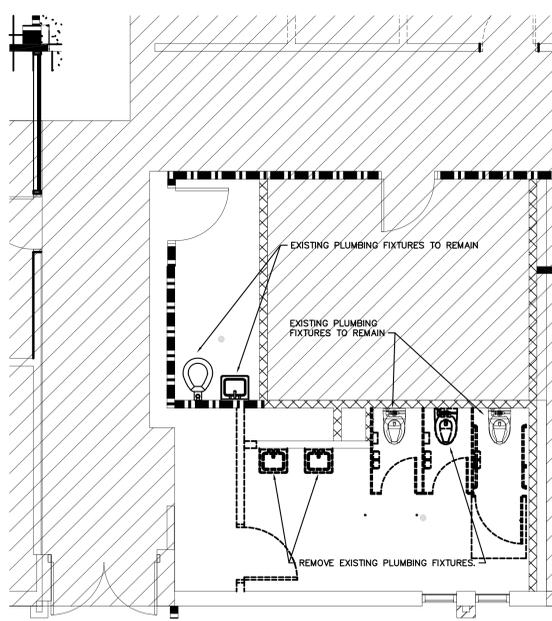
PIPE INSULATION

ALL WATER PIPING SHALL BE INSULATED WITH HEAVY DENSITY FIBERGLASS WITH AN ALL-SERVICE JACKET COMPOSED OF AN OUTER LAYER OF VINYL, FIBERGLASS SCRIM CLOTH, ALUMINUM FOIL, AND KRAFT PAPER, IN THAT ORDER, FROM OUTSIDE TO INSIDE OF PIPE COVERING. INSULATION THICKNESS SHALL BE 1" FOR ALL PIPING.

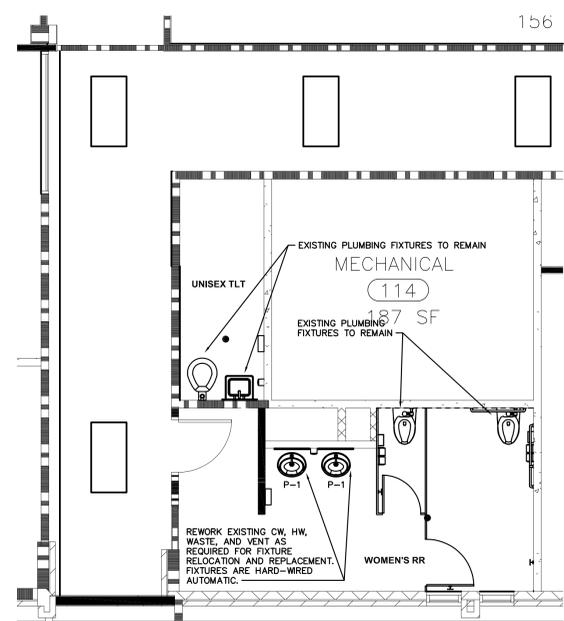
VALVES

BALL VALVES SHALL BE CAST RED BRONZE WITH TWO PIECE BODY, FULL PORT. WHEN INSTALLED IN INSULATED PIPING FURNISH EXTENDED TEE HANDLE. ALL ISOLATION VALVES INSTALLED ABOVE CEILINGS SHALL BE BALL VALVES.

SOIL, WASTE, VENT AND DRAIN PIPING SHALL BE SOLID WALL PVC PLASTIC PIPE AND FITTINGS CONFORMING TO ASTM D 2665. JOINTS FOR PVC PIPE SHALL BE SOLVENT CEMENT IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.



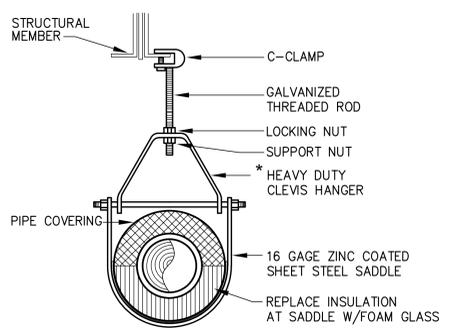
1 PLUMBING DEMOLITION PLAN
SCALE: 1/4" = 1'-0"



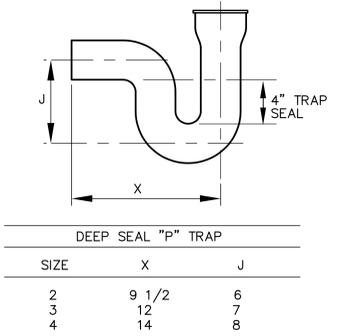
2 PLUMBING RENOVATION PLAN
SCALE: 1/4" = 1'-0"

Table with columns: SYM, DESCRIPTION, CW, HW, W, V, MODEL NUMBER, REMARKS. Row 1: P-1 LAVATORY (COUNTER GRID) 1/2" 1/2" 2" 2" KOHLER "FARMINGTON" K-2905-4; CHICAGO 802-665ABCP FAUCET; K-7607 SUPPLY; K-8998 TRAP, K-7129-A DRAIN.

- 1. SEE ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL FIXTURES.
2. EQUAL CHINA FIXTURE BY AMERICAN STANDARD, ZURN & SLOAN
3. EQUAL FAUCETS BY SYMMONS, DELTA, MOEN, ZURN & AMERICAN STANDARD.
4. PROVIDE INTEGRAL CHECK STOPS AT ALL WALL FAUCETS.



3 PIPE HANGER DETAIL
NTS



4 MINIMUM TRAP DIMENSIONS
NTS



227 WEST TRADE STREET SUITE 700
CHARLOTTE, NORTH CAROLINA 28202
TEL. 704.333.6686 FAX 704.333.2926
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Table with columns: No., Description, Date. Row 1: 1, Description, Date.

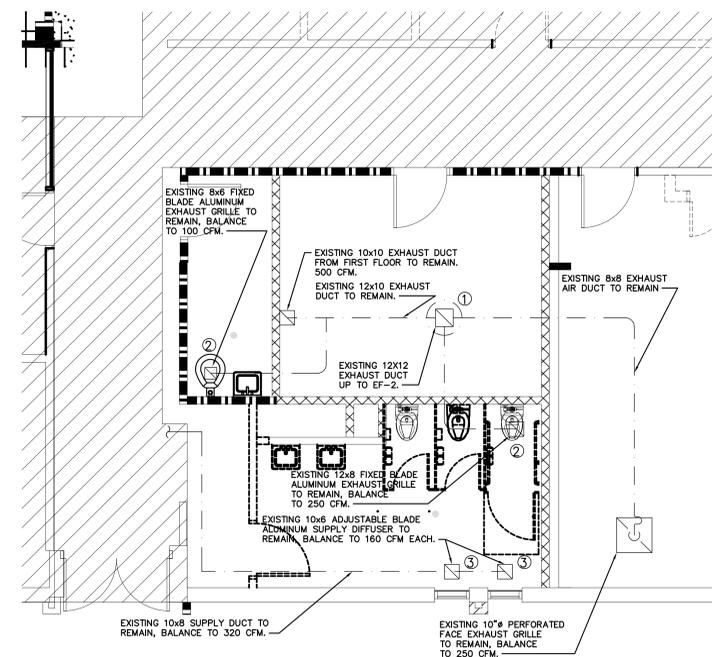
PROJECT: 3202-200950
DATE: 30 NOV 2020
DRAWN BY: BSC
CHECKED BY: BSC

2ND FLOOR
PLAN-PLUMBING

P-106

ISSUED FOR PERMIT

No.	Description	Date



KEYED NOTES:

- EXISTING ROOF MOUNTED EXHAUST FAN, EF#2 SHALL BE RE-BALANCED, AND OR REPLACED AS REQUIRED TO ACHIEVE 1,100 CFM AT 0.375" ESP. NOTE THAT EXISTING DUCT TO FIRST FLOOR SERVES THREE EXISTING 100 CFM EXHAUST GRILLES AND ONE EXISTING 200 CFM EXHAUST GRILLE ON THE FIRST FLOOR. RE-BALANCE ENTIRE SYSTEM TO ENSURE DESIGN AIRFLOW IS ACHIEVED.
- CLEAN EXISTING EXHAUST GRILLE DURING RENOVATION.
- CLEAN EXISTING SUPPLY DIFFUSER DURING RENOVATION.

EXISTING CONDITIONS NOTE:
DURING DEMOLITION AND RENOVATION, MECHANICAL CONTRACTOR SHALL INSPECT EXISTING HVAC SYSTEMS TO CONFIRM THAT ALL FIRE DAMPERS (WHERE EXISTING) ARE OPEN AND FULLY FUNCTIONAL. ALL OTHER SYSTEM DAMPERS SHALL BE INSPECTED TO CONFIRM THAT SYSTEM BALANCING CAN BE ACHIEVED PRIOR TO THE START OF RENOVATION.

1 MECHANICAL RENOVATION PLAN
SCALE: 1/4" = 1'-0"

RENOVATION LEGEND	
—	NEW EQUIPMENT
- - - - -	EXISTING

SCOPE

THE CONTRACTOR SHALL COORDINATE THE WORK AND EQUIPMENT OF THIS DIVISION WITH THE WORK AND EQUIPMENT SPECIFIED ELSEWHERE IN ORDER TO ASSURE A COMPLETE AND SATISFACTORY INSTALLATION. WORK SUCH AS EXCAVATION, BACKFILL, CONCRETE, FLASHING, WIRING, ETC., WHICH IS REQUIRED BY THE WORK OF THIS SECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE APPLICABLE SECTION OF THE SPECIFICATIONS.

IT IS THE INTENTION OF THESE SPECIFICATIONS AND DRAWINGS TO CALL FOR FINISHED WORK, TESTED AND READY FOR OPERATION. WHENEVER THE WORD "PROVIDE" IS USED, IT SHALL MEAN "FURNISH AND INSTALL COMPLETE AND READY FOR USE".

THE WORD "PROVIDE" MEANS FURNISH, FABRICATED, COMPLETE, INSTALL, ERECT, INCLUDING LABOR AND INCIDENTAL MATERIALS NECESSARY TO COMPLETE IN PLACE AND READY FOR OPERATION OR USE THE ITEM REFERRED TO OR DESCRIBED HEREIN AND/OR SHOWN OR REFERRED TO ON THE CONTRACT DRAWINGS.

EQUIPMENT APPLICATION AND PERFORMANCE

THE CONTRACTOR AND/OR EQUIPMENT SUPPLIER SHALL BE RESPONSIBLE TO SEE THAT EQUIPMENT SUPPLIED IS CORRECT FOR THE INTENDED APPLICATION AND WILL PERFORM WITHIN THE LIMITS OF CAPACITY, NOISE, LIFE EXPECTANCY, PRESSURE DROP AND SPACE LIMITATIONS INTENDED FOR THAT EQUIPMENT AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIFICATIONS. THE SHOP DRAWINGS SHALL SHOW THE CAPACITY AND OPERATING CHARACTERISTICS OF THE EQUIPMENT.

WHERE THE CONTRACTOR PROPOSES TO USE AN ITEM OF EQUIPMENT OTHER THAN THAT SPECIFIED OR DETAILED ON THE DRAWINGS, WHICH REQUIRES ANY REDESIGN OF THE STRUCTURE, PARTITIONS, FOUNDATIONS, PIPING, WIRING OR ANY OTHER PART OF THE MECHANICAL, ELECTRICAL, OR ARCHITECTURAL LAYOUT, ALL SUCH REDESIGN, AND ALL NEW DRAWINGS AND DETAILING REQUIRED THEREFORE, SHALL BE PREPARED BY THE SUBCONTRACTOR AT HIS OWN EXPENSE AND SUBMITTED FOR APPROVAL BY THE ARCHITECT.

WHERE SUCH APPROVED DEVIATION REQUIRES A DIFFERENT QUANTITY AND ARRANGEMENT OF DUCTWORK, PIPING, WIRING, CONDUIT, AND EQUIPMENT FROM THAT SPECIFIED OR INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL FURNISH AND INSTALL ANY SUCH DUCTWORK, PIPING, STRUCTURAL SUPPORTS, INSULATION, CONTROLLERS, MOTORS, STARTERS, ELECTRICAL WIRING AND CONDUIT, AND ANY OTHER ADDITIONAL EQUIPMENT REQUIRED BY THE SYSTEM, AT NO ADDITIONAL COST TO THE OWNER.

DIELECTRIC CONNECTIONS

DIELECTRIC CONNECTIONS SHALL BE USED AT ANY POINTS WITHIN THE PIPING SYSTEMS WHERE DISSIMILAR METALS MEET. CAREFUL ATTENTION SHALL BE GIVEN TO SUPPORT BRACKETS AND HANGERS TO SELECT PROPER MATERIALS TO AVOID DISSIMILAR METAL CONTACT AT THESE POINTS.

DUTIES OF CONTRACTOR

CONTRACTOR SHALL FURNISH AND INSTALL ALL MATERIALS CALLED FOR IN THESE SPECIFICATIONS AND ACCOMPANYING DRAWINGS, AND MUST FURNISH THE APPARATUS COMPLETE IN EVERY RESPECT. ANYTHING CALLED FOR IN THE SPECIFICATIONS AND NOT SHOWN ON THE DRAWINGS OR SHOWN ON THE DRAWINGS AND NOT CALLED FOR IN THE SPECIFICATIONS MUST BE FURNISHED BY THE CONTRACTOR.

CONTRACTOR IS RESPONSIBLE FOR FAMILIARIZING HIMSELF WITH THE DETAILS OF THE CONSTRUCTION OF THE BUILDING. WORK UNDER THESE SPECIFICATIONS INSTALLED IMPROPERLY OR WHICH REQUIRES CHANGING DUE TO IMPROPER READING OR INTERPRETATION OF BUILDING PLANS SHALL BE CORRECTED AND CHANGED AS DIRECTED BY THE ARCHITECT WITHOUT ADDITIONAL COST TO THE OWNER.

CONDITIONS SOMETIMES OCCUR WHICH REQUIRE CERTAIN CHANGES IN DRAWINGS AND SPECIFICATIONS. IN THE EVENT THAT SUCH CHANGES IN DRAWINGS AND SPECIFICATIONS ARE NECESSARY, THE SAME ARE TO BE MADE BY THE CONTRACTOR WITHOUT EXPENSE TO THE OWNER, PROVIDING SUCH CHANGES DO NOT REQUIRE FURNISHING MORE MATERIALS, OR PERFORMING MORE LABOR THAN THE TRUE INTENT OF THE DRAWINGS AND SPECIFICATIONS DEMANDS. IT IS UNDERSTOOD THAT WHILE THE DRAWINGS ARE TO BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES WILL PERMIT, THE CONTRACTOR IS HELD RESPONSIBLE FOR THE INSTALLATION OF THE SYSTEM ACCORDING TO THE TRUE INTENT AND MEANING OF THE DRAWINGS. ANYTHING NOT ENTIRELY CLEAR IN THE DRAWINGS AND SPECIFICATION WILL BE FULLY EXPLAINED IF APPLICATION IS MADE TO THE ARCHITECT. SHOULD, HOWEVER, CONDITIONS ARISE WHERE IN THE JUDGMENT OF THE CONTRACTOR CERTAIN CHANGES WILL BE ADVISABLE, THE CONTRACTOR WILL COMMUNICATE WITH THE ARCHITECT AND SECURE HIS APPROVAL OF THESE CHANGES BEFORE GOING AHEAD WITH THE WORK.

THE RIGHT TO MAKE ANY RESPONSIBLE CHANGE IN LOCATION OF APPARATUS, EQUIPMENT, ROUTING OF PIPING UP TO THE TIME OF ROUGHING IN, IS RESERVED BY THE ARCHITECT WITHOUT INVOLVING ANY ADDITIONAL EXPENSE TO THE OWNER.

IT SHALL BE THE DUTY OF PROSPECTIVE CONTRACTORS TO VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH JOB CONDITIONS. NO EXTRAS WILL BE ALLOWED BECAUSE OF ADDITIONAL WORK NECESSITATED BY, OR CHANGES IN PLANS REQUIRED BECAUSE OF EVIDENT JOB CONDITIONS, THAT ARE NOT INDICATED ON THE DRAWINGS.

CODES, RULES, PERMITS AND FEES

ALL MATERIALS FURNISHED AND ALL WORK INSTALLED SHALL COMPLY WITH THE NATIONAL FIRE CODES OF THE NATIONAL FIRE PROTECTION ASSOCIATION, AND WITH THE REQUIREMENTS OF ALL GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION.

ALL MATERIALS AND EQUIPMENT FOR THE ELECTRICAL PORTION OF THE MECHANICAL SYSTEM SHALL BEAR THE APPROVAL LABEL, AND SHALL BE LISTED BY THE UNDERWRITERS' LABORATORIES, INC.

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE NORTH CAROLINA STATE BUILDING CODE, AND REQUIREMENTS OF GOVERNMENTAL AGENCIES HAVING JURISDICTION.

COOPERATION WITH OTHER TRADES

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

WHERE THE WORK OF THE CONTRACTOR WILL BE INSTALLED IN CLOSE PROXIMITY TO, OR MAY INTERFERE WITH THE WORK OF OTHER TRADES, HE SHALL ASSIST IN WORKING OUT SPACE CONDITIONS TO MAKE A SATISFACTORY ADJUSTMENT. IF SO DIRECTED BY THE ARCHITECT, THE CONTRACTOR SHALL PREPARE COMPOSITE WORKING DRAWINGS AND SECTIONS AT A SUITABLE SCALE NOT LESS THAN 3/8" = 1'-0", CLEARLY SHOWING HOW HIS WORK IS TO BE INSTALLED IN RELATION TO THE WORK OF OTHER TRADES. IF THE CONTRACTOR INSTALLS HIS WORK BEFORE COORDINATION WITH OTHER TRADES, OR SO AS TO CAUSE ANY INTERFERENCE WITH WORK OF OTHER TRADES, HE SHALL MAKE THE NECESSARY CHANGES IN HIS WORK TO CORRECT THE CONDITION WITHOUT EXTRA CHARGE.

THE CONTRACTOR SHALL FURNISH TO OTHER TRADES, AS REQUIRED, ALL NECESSARY TEMPLATES, PATTERNS, SETTING PLANS, AND SHOP DETAILS FOR THE PROPER INSTALLATION OF WORK AND FOR THE PURPOSE OF COORDINATING ADJACENT WORK.

SAFETY REQUIREMENTS

ALL SYSTEMS SHALL BE INSTALLED SO AS TO BE SAFE OPERATING AND ALL MOVING PARTS SHALL BE COVERED WHERE SUBJECT TO HUMAN CONTACT. ALL ROUGH EDGES OF EQUIPMENT AND MATERIALS SHALL BE MADE SMOOTH.

ALL SAFETY CONTROLS SHALL BE CHECKED UNDER THE SUPERVISION OF THE ARCHITECT'S REPRESENTATIVE AND EIGHT (8) COPIES OF TEST DATE STAMPED SETTING AND PERFORMANCE OF SAFETY CONTROLS SHALL BE SUBMITTED TO THE ARCHITECT. ALL PRESSURE VESSELS SHALL BE ASME STAMPED AND SHALL HAVE SHOWING RELIEF VALVES. WATER HEATERS SHALL BE PROVIDED WITH ASME STAMPED T & P RELIEF VALVE.

PROTECTION

THE CONTRACTOR SHALL PROTECT ALL WORK AND MATERIAL FROM DAMAGE AND SHALL BE LIABLE FOR ALL DAMAGE DURING CONSTRUCTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR WORK AND EQUIPMENT UNTIL ALL CONSTRUCTION IS FINALLY INSPECTED, TESTED AND ACCEPTED. HE SHALL PROTECT WORK AGAINST THEFT, INJURY OR DAMAGE, AND SHALL CAREFULLY STORE MATERIAL AND EQUIPMENT RECEIVED ON SITE WHICH IS NOT IMMEDIATELY INSTALLED. HE SHALL CLOSE OPEN ENDS OF WORK INCLUDING PIPE, DUCT, OR EQUIPMENT WITH TEMPORARY COVERS OR PLUGS DURING STORAGE AND CONSTRUCTION TO PREVENT ENTRY OF OBSTRUCTING MATERIALS OR DUST AND DEBRIS.

PROVIDE A PROTECTIVE COVERING OF NOT LESS THAN 0.004" THICK VINYL SHEETING (OR A SIMILAR APPROVED MATERIAL) TO BE USED IN COVERING ALL ITEMS OF EQUIPMENT, IMMEDIATELY AFTER THE EQUIPMENT HAS BEEN SET IN PLACE, (OR IF IN A PLACE OF STORAGE WITHIN THE BUILDING UNDER CONSTRUCTION) TO PREVENT THE ACCUMULATION OF DIRT, SAND, CEMENT, PLASTER, PAINT OR OTHER FOREIGN MATERIALS FROM COLLECTING ON THE EQUIPMENT AND/OR FOULING WORKING PARTS.

CLEANING

CLEAN FROM ALL EXPOSED INSULATION AND METAL SURFACES GREASE, DEBRIS OR OTHER FOREIGN MATERIAL.

CHROME PLATED FITTINGS, FIXTURES, PIPING AND TRIM SHALL BE POLISHED UPON COMPLETION.

EQUIPMENT SERVICEABILITY

ALL EQUIPMENT SHALL BE SERVICEABLE. ALL EQUIPMENT SHALL BE INSTALLED SO THAT IT CAN BE REMOVED. ALL EQUIPMENT IN OR CONNECTED TO PIPING SYSTEMS SHALL HAVE VALVES TO ISOLATE THIS EQUIPMENT FROM THE PIPING SYSTEM. THIS INCLUDES, BUT NOT NECESSARILY LIMITED TO CONTROL VALVES, WATER HEATERS, SENSORS, SWITCHES, PUMPS, TRAPS AND STRAINERS. UNIONS (SCREWED OR FLANGED) SHALL BE PROVIDED SO THAT ALL EQUIPMENT IS REMOVABLE.

ACCEPTANCE OF EQUIPMENT

CONTRACTOR SHALL MAKE ALL NECESSARY TESTS, TRIAL OPERATION BALANCING AND BALANCE TESTS, ETC., AS MAY BE REQUIRED AS DIRECTED BY THE ENGINEER TO PROVE THAT ALL WORK UNDER THESE PLANS AND SPECIFICATION IS IN COMPLETE SERVICEABLE CONDITION AND WILL FUNCTION AS INTENDED. OIL BURNERS, GAS BURNERS, AND WATER CHILLERS SHALL BE STARTED BY A REPRESENTATIVE OF THE EQUIPMENT MANUFACTURER. ALL COSTS OF THESE PROCEDURES SHALL BE BORNE BY THIS CONTRACTOR.

UPON COMPLETION OF ALL WORK THE SYSTEM SHALL BE TESTED TO DETERMINE IF ANY EXCESS NOISE OR VIBRATION IS APPARENT DURING OPERATION OF THE SYSTEM. IF ANY SUCH OBJECTIONS ARE DETECTED IN THE SYSTEM OR NOISY EQUIPMENT FOUND, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING SAME. DUCTS, PLENUMS AND CASINGS SHALL BE CLEANED OF ALL DEBRIS AND BLOWN FREE OF ALL PARTICLES OF RUBBISH AND DUST BEFORE INSTALLING OUTLET FACES. EQUIPMENT SHALL BE WIPED CLEAN WITH ALL TRACES OF OIL, DUST, DIRT AND PAINT SPOTS REMOVED. TEMPORARY FILTERS SHALL BE PROVIDED FOR ALL FANS THAT ARE OPERATED DURING CONSTRUCTION AND AFTER ALL CONSTRUCTION DIRT HAS BEEN REMOVED FROM THE BUILDING, NEW FILTERS SHALL BE INSTALLED. BEARINGS SHALL BE LUBRICATED AS RECOMMENDED BY THE EQUIPMENT MANUFACTURER. ALL CONTROL VALVES AND EQUIPMENTS SHALL BE ADJUSTED TO SETTING INDICATED. FANS SHALL BE ADJUSTED TO THE SPEED INDICATED BY THE MANUFACTURER TO MEET SPECIFIED CONDITIONS.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THE COMPLETE MECHANICAL SYSTEM AGAINST DEFECT DUE TO FAULTY MATERIALS, FAULTY WORKMANSHIP OR FAILURE DUE TO NEGLIGENCE OF THE CONTRACTOR. THIS GUARANTEE WILL EXCLUDE NORMAL WEAR AND TEAR, MAINTENANCE, LUBRICATION, REPLACEMENT OF EXPENDABLE COMPONENTS, OR ABUSE. THE GUARANTEE PERIOD SHALL BEGIN ON THE DATE OF THE FINAL ACCEPTANCE AND SHALL CONTINUE FOR A PERIOD OF 12 MONTHS DURING WHICH TIME THE CONTRACTOR SHALL MAKE GOOD SUCH DEFECTIVE WORKMANSHIP AND MATERIALS AND ANY DAMAGE RESULTING THERE FROM, WITHIN A REASONABLE TIME OF NOTICE GIVEN BY THE OWNER. REFRIGERATION COMPRESSORS SHALL HAVE A FIVE (5) YEAR WARRANTY.

CONTROLS

EXISTING EXHAUST FAN, EF#2 WAS ORIGINALLY DESIGNED WITH A TIME-CLOCK CONTROL. CONTRACTOR SHALL VERIFY EXISTING TIME-CLOCK IS STILL FUNCTIONING AND THAT SYSTEM OPERATES AS REQUIRED DURING OCCUPIED AND UNOCCUPIED HOURS. COORDINATE WITH BUILDING FACILITIES MANAGER.

TESTING AND BALANCING

WORK SHALL BE PERFORMED BY TECHNICIANS COMPETENT IN THE TRADE OF TESTING AND BALANCING ENVIRONMENTAL SYSTEMS AND SHALL BE DONE IN AN ORGANIZED MANNER UTILIZING APPROPRIATE TEST AND BALANCE FORMS. ALL EQUIPMENT SHALL BE BALANCED TO WITHIN +/- 10% OF THE SCHEDULED VALUE.

INSTRUMENTS FOR USE IN THE TEST AND BALANCING PROCEDURES SHALL BE OF FIRST QUALITY AND BE ACCURATELY CALIBRATED AT THE TIME OF USE. ALL FIELD INSTRUMENTS USED IN THE BALANCE SHOULD HAVE BEEN CALIBRATED AT LEAST WITHIN THE PREVIOUS THREE MONTHS.

STARTING DATE FOR MECHANICAL SYSTEM SHALL BE SCHEDULED WELL IN ADVANCE OF EXPECTED COMPLETION DATE AND SHALL BE ESTABLISHED A MINIMUM OF TWO WEEKS PRIOR TO ACCEPTANCE DATE. THE SYSTEM SHALL BE IN FULL OPERATION WITH ALL EQUIPMENT FUNCTIONAL PRIOR TO ACCEPTANCE DATE.

PERFORMANCE READINGS SHALL BE TAKEN AND RECORDED ON ALL AIR DISTRIBUTION DEVICES AND THE SYSTEM SHALL BE BALANCED OUT PRIOR TO ACCEPTANCE. BALANCING OF THE SYSTEM SHALL BE ACCOMPLISHED WITH DUCT DAMPERS AND ONLY MINOR ADJUSTMENTS MADE WITH GRILLE DAMPERS. RECORD AND SUBMIT RESULTS IN TABLE FORM ALONG SIDE OF SCHEDULED QUANTITIES.

ALL UNITS SHALL BE CHECKED OUT THOROUGHLY AND THE INFORMATION RECORDED ON EACH MACHINE. CHECK SHEETS SHALL BE INCLUDED IN OPERATING AND MAINTENANCE INSTRUCTIONAL MANUAL.

SYMBOL SCHEDULE	
GENERAL SYMBOLS	
SYMBOL	DESCRIPTION
---	CONDUIT RUN CONCEALED ABOVE CEILINGS OR IN WALLS.
----	CONDUIT RUN CONCEALED IN OR BELOW FLOORS OR UNDERGROUND.
- - - -	CONDUIT RUN EXPOSED.
→	CONDUIT TURNING UP
↘	CONDUIT TURNING DOWN
■	SQUARE ON CONDUIT SYMBOL INDICATES THAT CIRCUIT CONTINUES BUT NOT SWITCHES.
→→	HOMERUN TO PANEL AND CIRCUIT(S) DESIGNATED. ARROW(S) INDICATE QUANTITY OF CIRCUITS.
⊕	JUNCTION BOX PER N.E.C.
◇	SPECIAL NOTE, NUMERALS IDENTIFY, SEE SCHEDULE.
LIGHTING	
SYMBOL	DESCRIPTION
○	LED OR FLUORESCENT LIGHTING FIXTURE, DRAWN TO SCALE.
○	COMPACT FLUORESCENT, LED OR HID LIGHTING FIXTURE, CEILING MOUNTED.
●	COMPACT FLUORESCENT, LED OR HID LIGHTING FIXTURE, CONNECTED TO AN EMERGENCY CIRCUIT OR EMERGENCY BALLAST.
⊕	COMPACT FLUORESCENT, LED OR HID LIGHTING FIXTURE. UTILIZED AS A NIGHT-LIGHT. CONNECT TO THE UNSWITCHED LEG OF THE CIRCUIT.
■	COMPACT FLUORESCENT, LED OR HID LIGHTING FIXTURE, CONNECTED TO AN EMERGENCY CIRCUIT OR EMERGENCY BALLAST. CONNECT TO THE UNSWITCHED LEG OF THE CIRCUIT.
DISTRIBUTION	
SYMBOL	DESCRIPTION
■	ELECTRICAL PANELBOARD, FLUSH MOUNTED.
■	ELECTRICAL PANELBOARD, SURFACE MOUNTED.
S	LIGHT SWITCH, SINGLE-POLE.
⊕	DUAL TECHNOLOGY OCCUPANCY SENSOR, CEILING MOUNTED. PROVIDE WITH 10 FEET WHIP TO ALLOW FIELD ADJUSTMENT OF LOCATION. COORDINATE EXACT LOCATION WITH MANUFACTURERS RECOMMENDATION.

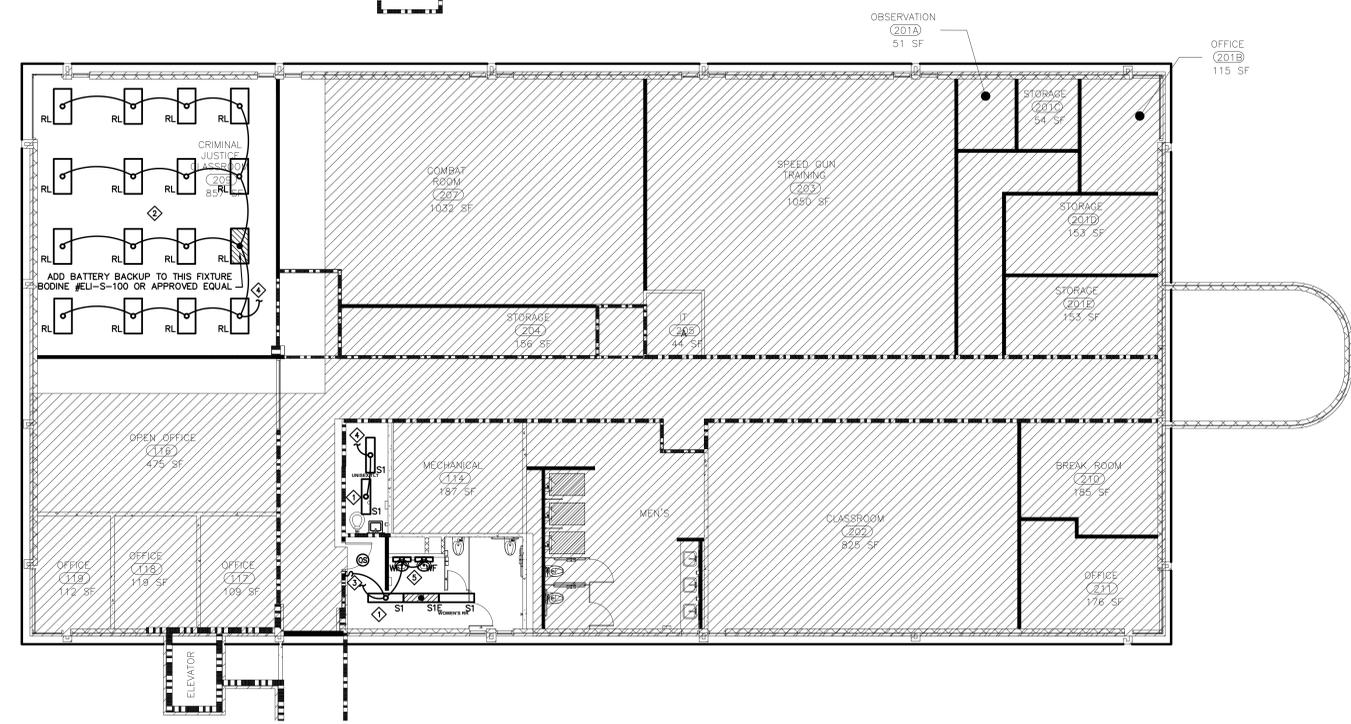
LIGHTING FIXTURE SCHEDULE -- LITHONIA VOLUMETRIC														
TYPE	DESCRIPTION	VOLT.	QTY	TYPE	BULB	BASE	TEMP	LAMPS			WATTS	MOUNTING	MANUF. CATALOG NO.	
								CR	LUMENS	DRIVER/BALLASTS				
S1	1'x4' SURFACE MOUNTED LED TROFFER. HOUSING AND REFLECTORS ARE DIE FORMED COLD ROLLED STEEL, ACRYLIC LINEAR PRISMATIC DIFFUSER, CONTOUR SHIELDING, WHITE POWDER COAT FINISH. 3000 LUMENS NOMINAL.	120	-	LED	-	-	3500 K	80	3226	1	0-10V DIMMING DRIVER	30	CEILING, SURFACE	LITHONIA #ALLS4-30L EQUALS BY WILLIAMS, METALUX OR APPROVED EQUAL
S1E	SAME AS FIXTURE S1 ABOVE EXCEPT ALSO PROVIDE WITH EMERGENCY BATTERY PACK TO ILLUMINATE FIXTURE AT MINIMUM 1000 LUMENS FOR 90 MIN.													
RL	EXISTING LIGHT FIXTURE RELOCATED AS A PART OF THIS WORK. CLEAN RELAMP AND REINSTALL AS INDICATED. REFER TO ARCHITECTURAL DEMOLITION RCP FOR LIGHT FIXTURES TO BE RELOCATED.													

ABBREVIATIONS	
A	AMPERES
ACC	ARMORED CLAD CABLE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
ANN	FIRE ALARM ANNUNCIATOR CABINET
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
DN	DOWN
DW	DISHWASHER
EMT	EMPTY CONDUIT
EMT	ELECTRICAL METALLIC TUBING
ENT	ELECTRICAL NON-METALLIC TUBING
EW	ELECTRIC WATER COOLER
FACP	FIRE ALARM CONTROL PANEL
FMC	FLEXIBLE METAL CONDUIT
G	GROUND
GFI	GROUND FAULT INTERRUPTER
HDA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HK	HIGH REACTANCE
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
IS	INSTANT START
JB	JUNCTION BOX
KVA	KILOVOLT-AMPERES
FPN	FUSE PER NAMEPLATE
KW	KILOWATTS
LFMC	LIQUIDTIGHT FLEXIBLE NON-METALLIC CONDUIT
LFMC	LIQUIDTIGHT FLEXIBLE METALLIC CONDUIT
LVC	LOW VOLTAGE CONTROL CABINET
MCB	MAIN CIRCUIT BREAKER
MCC	METAL CLAD CABLE
MLO	MAIN LUGS ONLY
MTD	MOUNTED
NMC	NON-METALLIC CLAD CABLE
PN	PULLBOX
PBL	PANELBOARD
PRS	PROGRAM RAPID START
RS	PROGRAM START
PWR	POWER
REC	RECEPTACLE
RMC	RIGID METAL CONDUIT
RS	RAPID START
SC	FIRE ALARM PULL STATION
SW	SWITCH
SWBD	SWITCHBOARD
TB	TELEPHONE TERMINAL BOARD
TEL	TELEPHONE
TV	TELEVISION
TV	TYPICAL
V	VOLTS
VP	VAPOR PROOF
W	WALL MOUNTED
WG	WIRE GUARD
WP	WEATHER PROOF
XFR	TRANSFORMER

- ELECTRICAL SPECIFICATIONS**
1. PROVIDE ALL WORK AND MATERIALS REQUIRED FOR A COMPLETE AND WORKMANLIKE INSTALLATION AS SHOWN BY THE DRAWINGS AND SPECIFIED HEREIN.
 2. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, STATE, AND LOCAL CODES. ELECTRICAL MATERIALS SHALL BE NEW AND SHALL COMPLY WITH ALL APPLICABLE NEMA, U.L., ANS, OSHA, AND IECA STANDARDS.
 3. PERFORM ALL CUTTING AND PATCHING NECESSARY FOR THE PROPER INSTALLATION OF THIS WORK AND REPAIR ANY DAMAGE DONE AS A RESULT OF THIS WORK.
 4. AN ELECTRICAL INSPECTION CERTIFICATE SHALL BE ISSUED BY THE AUTHORITIES HAVING JURISDICTION BEFORE WORK WILL BE APPROVED FOR FINAL PAYMENT.
 5. ALL ELECTRICAL CONDUIT AND CONDUCTORS WHICH ARE ABANDONED SHALL EITHER BE REMOVED COMPLETELY OR MECHANICALLY AND ELECTRICALLY SECURED. BACK BOXES OF OUTLETS AND SWITCHES SHOWN TO BE REMOVED FROM THE WALLS REMAINING SHALL BE REMOVED AND THE WALL PROPERLY PATCHED. ALL EXISTING ELECTRICAL OUTLETS NOT SHOWN TO BE REMOVED SHALL BE RECONNECTED. ALL MATERIALS AND EQUIPMENT NOTED TO BE REUSED IN THE NEW WORK SHALL BE CLEANED AND, IF NECESSARY, REPAIRED AND SHALL BE STORED AND PROTECTED ON THE SITE. ALL REUSED FIXTURES SHALL BE RELAMPED. PROVIDE OUTLET BOX EXTENSIONS WHERE NEW WALL FINISHES REQUIRED. ADDITIONAL OUTLET BOX DEPTH. RELOCATE ANY EXISTING CONDUITS, CONDUCTORS, FIXTURES, AND OUTLETS WHERE REQUIRED BY THIS WORK.
 6. ALL CONDUCTORS SHALL BE COPPER, TYPE THHN/THWN, AND SOLID OF #10, #12, AND #14 AWG AND STRANDED FOR #8 AWG AND LARGER. BRANCH CIRCUIT CONDUCTORS SHALL NOT BE SMALLER THAN #12 AWG. CONDUCTORS SHALL BE COLOR CODED BLACK/RED/BLUE FOR 120/208 VOLT SYSTEMS. CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET. NO SPLICES SHALL BE MADE EXCEPT WITHIN OUTLET OR JUNCTION BOXES. SPLICES SHALL BE MADE BY TWISTING SECURELY AND FASTENING WITH U.L. LISTED, PRESSURE-TYPE TWIST ON INSULATED-WIRE CONNECTORS OF THE SAME TEMPERATURE RATING AS THE CONDUCTORS. SPLICES TO LIGHT FIXTURE LEADS SHALL BE MADE WITH PLASTIC WIRE NUTS.
 7. ALL WIRING SHALL BE IN CONDUIT. WHERE CONCEALED WIRING SHALL BE METAL CLAD (MC) CABLE UNLESS OTHERWISE NOTED. WHERE EXPOSED, WIRING SHALL BE IN ELECTRICAL METALLIC TUBING (EMT), 1-INCH TRADE SIZE MINIMUM. WHERE EMT IS USED, FITTINGS SHALL BE THREADED-COMPRESSION TYPE GALVANIZED STEEL. WHERE FLEXIBLE METAL CONDUIT IS USED, CONNECTORS SHALL BE T & B NYLON-INSULATED "TITE-BITE".
 8. OUTLET BOXES SHALL BE GALVANIZED SHEET STEEL. FIXTURE OUTLET BOXES ON CEILINGS SHALL NOT BE LESS THAN 4 INCHES OCTAGONAL OUTLET BOXES ON NEW GYPSUM DRYWALL WALLS SHALL BE 4 INCHES SQUARE WITH SQUARE-CUT COVER EXTENSIONS.
 9. SWITCHES AND RECEPTACLES SHALL BE SPECIFICATION GRADE BY ARROW-HART, GENERAL ELECTRIC, BRYANT, OR HUBBELL. PLATES SHALL BE 302 STAINLESS STEEL.
 10. TELEPHONE SYSTEM CONDUIT SHALL BE 1-INCH TRADE-SIZE MINIMUM, UNLESS OTHERWISE NOTED. EXTEND TO ABOVE CEILING AND TERMINATE WITH PLASTIC BUSHING. PROVIDE PULLCORDS.
 11. OUTLET AND JUNCTION BOXES SHALL BE CAST TYPE WITH THREADED HUBS. BOXES AND ENCLOSURES LARGER THAN 5 INCHES SQUARE SHALL BE NEMA 12.
 12. ALL CONDUIT SHALL BE RUN AS HIGH AS POSSIBLE, PARALLEL WITH STRUCTURAL MEMBERS, SUPPORTED ON APPROVED TYPES OF GALVANIZED TRAPEZES, HANGERS, OR STRAPS.
 13. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE USED FOR EQUIPMENT CONNECTIONS, BUT NOT AS A WIRING METHOD OTHERWISE.
 14. A CONTINUOUS GREEN GROUND WIRE SHALL BE RUN WITH EACH CIRCUIT.
 15. SHOP DRAWINGS SHALL BE SUBMITTED FOR DRY-TYPE TRANSFORMERS AND PANELBOARDS.
 16. PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR PANELBOARDS.
 17. UPDATE PANEL DIRECTORY TO REFLECT ALL CHANGES REQUIRED BY THIS WORK.

MOUNTING HEIGHTS
(DISTANCE FROM FINISHED FLOOR TO CENTER OF DEVICE UNLESS OTHERWISE NOTED)

RECEPTACLE	18" AFF. (UNLESS OTHERWISE NOTED)
GENERAL	44" AFF. (UNLESS OTHERWISE NOTED)
ABOVE COUNTER TOP	44" AFF. (UNLESS OTHERWISE NOTED)
LIGHT SWITCH	46" AFF. (UNLESS OTHERWISE NOTED)
TELECOMMUNICATIONS	
GENERAL	18" AFF. (UNLESS OTHERWISE NOTED)
ABOVE COUNTER TOP	44" AFF. (UNLESS OTHERWISE NOTED)
WALL	46" AFF. (UNLESS OTHERWISE NOTED)
TELEVISION	
FIRE ALARM	
PULL STATION	46" AFF. (UNLESS OTHERWISE NOTED)
AUDIBLE/STROBE COMBINATION OR STROBE DEVICE ONLY	80" AFF. TO BOTTOM OF APPLIANCE



1 OVERALL SECOND FLOOR PLAN -- ELECTRICAL
SCALE: 1/8" = 1'-0"

- NOTES:**
- ◇ REPLACE EXISTING LIGHT FIXTURES IN THIS AREA WITH NEW.
 - ◇ RELOCATE EXISTING LIGHT FIXTURES IN THIS AREA AS SHOWN.
 - ◇ CONNECT TO EXISTING LIGHTING CIRCUIT IN THIS AREA WITH 2#12, #12G, 1/2". PROVIDE NEW SWITCH AND OCCUPANCY SENSOR AS SHOWN. NOTE: INTERLINK WITH SEPARATE OCCUPANCY SENSOR ON THE CEILING. LOCATION, TBD
 - ◇ CONNECT TO EXISTING LIGHTING CIRCUIT IN THIS AREA WITH 2#12, #12G, 1/2". EXISTING SWITCHING AND OCCUPANCY SENSOR CONTROL TO REMAIN.
 - ◇ CONCEAL EXISTING WIRING FOR AUTOMATIC FAUCETS BEHIND WALL TO THE EXTENT POSSIBLE. REMOVE EXISTING WIREMOLD.



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REVISIONS:

No.	Description	Date

PROJECT: 3202-200950
DATE: 30 NOV 2020
DRAWN BY: MDK
CHECKED BY: MPA

2ND FLOOR
ELECTRICAL
PLAN

E-101

ISSUED FOR PERMIT