

SECTION 15010 BASIC MECHANICAL REQUIREMENTS

**PART 1 - GENERAL**

**1.1 CODES, RULES AND REGULATIONS**

A. All work and materials shall conform to the local and State Codes and all State and other applicable Laws and Regulations.

B. Whenever indicated material, workmanship, arrangement or construction is of higher quality or capacity than that required by the above Codes, the Drawings and/or Specifications shall govern.

C. Should there be any direct conflict between Codes and the Drawings and/or Specifications, the Codes, Laws or Regulations shall govern.

**1.2 WORKING DRAWINGS**

A. The working drawings are generally diagrammatic. They do not show every offset, bend or elbow required for installation in the space provided. All locations for mechanical work shall be checked and coordinated with the Architectural, Structural and Electrical Drawings.

B. Where equipment is shown, dimensions have been taken from typical equipment of the class indicated. Carefully check the Drawings to see that the equipment, under consideration for installation, will fit the space provided and that all connections may be made thereto without impairment of area and height requirements and of Code required clearances.

**1.3 SUBMITTALS**

A. Submit all Shop Drawings at one time.

B. Each item submitted shall be clearly referenced by number or symbol.

C. All specified features and performance data must be specifically noted on the submittal.

D. The Contractor shall check Shop Drawings for space requirements and conformance with the Specifications and shall mark corrections and approval on all Shop Drawings prior to submittal to the Architect.

**1.4 GUARANTEES**

A. Furnish written guarantee to Tenant for period of one year covering all defects in material and workmanship. Should any trouble develop during this period due to defective materials or faulty workmanship, the Contractor shall furnish all necessary labor and material and correct the trouble promptly and without any additional cost to the Tenant.

**1.5 PERMITS**

A. Unless otherwise distinctly herein specified, this Contractor shall apply and pay for all necessary permits, fees and inspections required by any public authority having jurisdiction over work.

**1.6 VISITING THE PREMISES:**

A. The Contractor, before submitting Bid on the work, must visit the site and be familiar with all visible existing conditions. As a result of having visited the premises, the Contractor shall be responsible for the installation of the work as it relates to such visible existing conditions.

B. The submission of a bid will be considered an acknowledgment on the part of the Bidder of visitation to the site.

**1.7 PRODUCT DELIVERY, HANDLING AND STORAGE:**

A. Store materials off the ground.

B. Manufacturer's label required on each storage container.

C. Protect from weather and damage.

**1.8 VARIATIONS IN EQUIPMENT**

A. If approved mechanical equipment of other manufacturers require modifications or additions to other work shown on Drawings, Mechanical Contractor shall arrange for and pay all costs of such changes at no additional cost to Tenant.

**PART 2 - PRODUCTS**

**2.1 MATERIAL**

A. All materials and products used for construction shall be new, of the best grade and the latest products as listed in printed catalog data. All articles of a kind shall denote the character and quality of equipment desired and shall not be construed as limiting competition. Equipment to be UL approved where required.

**PART 3 - EXECUTION**

**3.1 SITE OBSERVATION**

A. All work and materials subject to field observation at any and all times by Engineer and/or Tenant's Representative.

B. If observer finds any material or work not conforming to these Specifications, the Contractor shall, within three days after being notified, remove materials from the premises. If the material has been installed, the entire expense of removing and replacing will be borne by Contractor.

**3.2 WORKMANSHIP AND SUPERVISION**

A. Constantly supervise work covered by this Specifications. Verify all conditions on job site and lay out work accordingly.

**3.3 COMPLETION REQUIREMENTS**

A. Upon completion of the work and adjustment of all equipment, all systems shall be tested by the Contractor. At the time of this demonstration, the Contractor shall deliver to the Tenant's Representative four bound copies of the following materials:

B. Spare parts list of manufacturer's recommended replacement parts for each fixture and item of equipment.

C. Operating and maintenance instructions for each item of equipment requiring inspection, lubrication or service, describing and scheduling the performance of such maintenance.

SECTION 15050 BASIC MATERIALS AND METHODS

**PART 2 - PRODUCTS**

**2.1 ELECTRIC MOTOR STARTERS**

A. Furnish for single-phase motors a manual across-the-line starting switch having built-in thermal overload device with heating element rated not more than 115% motor full load current indicated on name plate of motor to be protected. Starters shall be surface mounted. Starters shall be Allen Bradley "Bulletin 600" or comparable manufactured by Square-D, General Electric, Fumas, Westinghouse or approved equal.

B. Starters shall be equipped with auxiliary contacts as necessary to perform the control functions of associated equipment.

C. All motor starters to be provided by Mechanical Contractor. Installation by Division 16.

**PART 3 - EXECUTION**

**3.1 EQUIPMENT IDENTIFICATION**

A. Each new piece of equipment shall bear a permanently attached identification plate, listing the manufacturer's name, capacities, sizes and characteristics. In addition to the manufacturer's identification plate, provide nameplate of black phenolic resin laminate and identify new equipment by name and number, 1/2-inch high white letters.

**3.2 CUTTING AND PATCHING**

A. Cutting, patching and repairing required for the proper installation and completion of the work specified in this Division, including plastering, masonry work, concrete work, carpentry work and painting shall be performed by skilled craftsmen in these respective trades, all at the expense of this Subcontractor. Holes which are cut oversize shall be filled back in so that a tight fit is obtained around the duct or object passing through.

SECTION 15250 INSULATION

**PART 1 - GENERAL**

**1.1 QUALITY ASSURANCE**

A. Qualification of Workmen: Use proficient journeyman insulators and supervisors in the execution of this portion of the work to ensure proper and adequate installation of insulation throughout.

B. Compliance with Specifications:

1. Whenever required during progress of the work, furnish proof acceptable to the Tenant that items installed equal or exceed all requirements specified for this work.

2. In the event such proof is not available, or is not acceptable to the Tenant, the Tenant may require the Contractor to remove the item or items and replace with material meeting the specified requirements and to repair all damage caused in the removal and replacement, all at no additional cost to the Tenant.

**MECHANICAL SPECIFICATION**

**1.2 SUBMITTALS**

A. Product Data: Before insulating materials are delivered to the job site, submit complete data showing insulation materials proposed to be furnished and installed.

**1.3 PRODUCT HANDLING**

A. Protection: Use all means necessary to protect insulation materials before, during and after installation.

B. Replacements: In the event of damage, immediately make all repairs and replacements necessary.

**1.4 FIRE HAZARD CLASSIFICATION:**

A. Maximum fire hazard classification of the composite insulation construction as installed shall be not more than a flame spread of 25, fuel contributed of 50 and smoke developed of 50.

B. Pipe insulation shall be tested in accordance with the requirements of UL "Pipe and Equipment Coverings R5583 400 8.15."

C. Duct insulation shall be tested in accordance with ASTM E-84 and bear the UL label.

**PART 2 - PRODUCTS**

**2.1 MANUFACTURERS**

A. Owens-Corning, Schuller, PPG, Knaf, Armstrong or approved.

**2.2 MATERIAL**

A. Duct Lining: Acoustical duct liner with thermal conductivity of 0.26 (BTU-in)/(hr-sq.ft.-deg. F) at 75F mean temperature. Minimum density of 1.5 pounds per cubic foot.

B. Fiberglass Sectional Pipe Insulation: Thermal conductivity of 0.24 (BTU-in)/(hr-sq.ft.-deg. F) at 75F mean temperature. Minimum density of 1.5 lbs. per cu.ft. Jacketed with white vapor barrier laminated of aluminum foil and white Kraft paper reinforced with glass fiber strands. Jacket shall have factory applied self-sealing lap.

C. Handicapped Lavatory Insulation Kit: P-traps, hot water and cold water insulating guards. Molded closed-cell vinyl with nylon fasteners, paintable thermal conductivity: K = 1.17 (BTU-in)/(hr-sq.ft.-deg. F) at 75F mean temperature. Handi-Lav-Guard by Truebro Inc., Pro Wrap by McGuire, Trap Wrap by Brocar, Inc. or approved. Provide accessories as required for complete installation. White.

**PART 3 - EXECUTION**

**3.1 INSULATION THICKNESS**

A. Exposed Ductwork: Line all supply air ducts 1" thick and all return air ducts 1/2" thick.

B. Domestic Hot and Cold Water Pipe: Cover with 1 inch fiberglass sectional pipe insulation.

C. Handicapped Lavatory: Install lavatory insulation kit.

**3.2 INSTALLATION**

A. Duct Liner: Install mat finish surface on air stream side. Secure insulation to cleaned sheet metal duct with a continuous 100 percent coat of adhesive. For widths over 20 inches, additionally secure liner with mechanical fasteners 15-inches on center.

B. Fiberglass Sectional Insulation: Apply insulation to pipe and seal with self-sealing lap. Use self-sealing butt strips to seal butt joints. Insulate all fittings, valves and unions with single or multiple layers of insulation and cover to match pipe or use preformed PVC molded insulation covers.

SECTION 15300: FIRE PROTECTION

**PART 1 - GENERAL**

**1.1 WORK INCLUDED**

A. Provide the following: Extend existing wet-pipe sprinkler system to area of remodel and/or tenant improvements.

B. Refer to Architectural sheets for additional information relating to the tenant improvements.

**1.2 QUALITY ASSURANCE**

A. Qualifications: Company specializing in sprinkler systems of similar type and scope with three years experience.

B. Regulatory Requirements:

1. Codes: Provide system per the requirements of the following, except as specifically modified herein. Apply edition as enforced by AHJ unless otherwise stated. Comply with State amendments.

a. National, Southern or Uniform Building Code as enforced by the Authority Having Jurisdiction.

b. National, Southern or Uniform Fire Code as enforced by the Authority Having Jurisdiction.

c. National, Southern or Uniform Building Code and applicable standards for Installation of Sprinkler Systems

d. NFPA 13, (Current Edition) Standard for the Installation of Sprinkler Systems.

e. Uniform Fire Code and UFC, Appendix III-C, "Testing Automatic Sprinkler and Standpipe Systems".

f. Listed Components: Provide components UL listed or FM approved, except as modified herein.

2. Definitions:

a. Code: Where this Specification refers to "Code", it shall indicate any or all of the above listed Codes as applicable to that reference.

b. AHJ: Authority Having Jurisdiction indicates all reviewing authorities, including the local Fire Marshal, the Owner's Insurance Underwriters, Tenant's Representative, and any other reviewing entity whose approval is required to obtain systems acceptance.

**1.3 SUBMITTALS**

A. Submit the following for review. Include in Operations & Maintenance Manual.

1. Detailed pipe layout, hangers and supports, components and accessories to the Engineer. Shop Drawings and product data to the Fire Marshal for approval prior to submittal to Engineer, provide proof of approval to Engineer, with all submittals.

2. Project Record Documents indicating record conditions (one paper sepi, two prints).

3. Test Reports: Above ground piping hydrostatic test, water supply flow test. Code-required acceptance tests. Manufacturer's operation and maintenance data. Include written maintenance data on components of system, servicing requirements, and Record Drawings.

**1.4 DELIVERY, HANDLING AND STORAGE**

A. Provide temporary inlet and outlet caps. Maintain caps in place until installation.

**1.5 EXTRA STOCK**

A. Provide extra sprinkler heads per Code, provide suitable wrenches for each head type, and metal storage cabinet in location designated.

**1.6 SYSTEM DESCRIPTION**

A. General:

1. Provide coverage for building areas as indicated. Refer to Architectural Drawings for areas included in this remodel.

2. Design Parameters:

a. It is the Contractor's responsibility to assign sprinkler systems design requirements as defined in Code to all areas, and to obtain approvals for these requirements from the appropriate reviewing authority. These requirements include hazard classifications, sprinkler head temperature ratings, density, sprinkler area, and water supply requirements and availability. Provide design and installation based on the more stringent requirement if AHJ requirements differ from Code.

**1.7 FLOW TEST**

A. Provide materials and labor for a new water supply test on the closest nearby fire hydrants per NFPA 13.

**1.8 GUARANTEE**

A. The Contractor shall guarantee all systems against defective equipment, materials and workmanship for a period of (1) year after Tenant's acceptance.

**PART 2 - PRODUCTS**

**2.1 PIPE AND FITTINGS**

A. General: Provide per AHJ requirements, and as a minimum per below.

B. Materials: Domestic Manufacture.

1. Above Ground Inside Building Piping:

a. Pipe size 2 inch diameter and smaller: ASTM A53, ASTM A135, or ASTM A-795; minimum CRR of 1.00. Threaded, mechanical couplings, or welded fittings.

b. Pipe Size 2-1/2 inch diameter and larger: ASTM A53, ASTM A135, or ASTM A795; wall thickness greater than Schedule 5 (Schedule 5 not approved). Threaded, mechanical couplings, flanged, or welded fittings.

c. Mechanical Couplings: FM approved; Victaulic, Gravelock, or equal.

**2.2 SPRINKLER HEADS**

A. General:

1. Finished Areas: Glass-bulb, recessed pendent with white painted finish, with white painted escutcheon.

2. Non-Finished Areas: Brass finish.

**PART 3 - EXECUTION**

**3.1 INSTALLATION**

A. Coordinate the work of this Section with other trades. Provide adequate space for installation.

B. General:

1. Install pipe runs to minimize obstruction to other work.

2. Install piping in concealed spaces above finished ceilings.

3. Center heads in the middle or quarter point of suspended ceiling tile.

4. Apply stripable tape or paper cover to ensure concealed sprinkler head cover plates do not receive field paint finish. Remove upon completion of painting.

5. Provide seismic restraints per Code. As a minimum, provide a 4-way earthquake bracing at the riser and at each change of direction of the main, and 2-way bracing at 40 feet on center along the main.

6. Flush entire piping system of foreign matter.

7. Route water supply flow test connections to a location which can accept the flow under wide-open flow and pressure for a sufficient time to assure a proper test, and which will not cause damage, including to landscaping.

**3.2 SYSTEM TESTS**

A. Test entire system per Code and AHJ. Provide, arrange, and pay for all testing required by Code or AHJ in order to obtain complete and final acceptance. Tests shall be witnessed by AHJ. Notify AHJ two weeks prior to test.

**3.3 FIELD SERVICES**

A. Instruct the Tenant in the operation of the sprinkler system, including main valve position (open or closed) recognition, system drainage, system testing, [dry pipe valve reset] and the relation to the fire alarm system.

SECTION 15400: PLUMBING

**PART 1 - GENERAL**

**1.1 SUBMITTALS**

A. Provide Shop Drawings for the following equipment:

1. Plumbing Fixtures and Trim.

2. Plumbing Cleanouts, Specialties and Water Heaters.

**PART 2 - PRODUCTS**

**2.1 PIPING:**

A. Soil, Waste, Vent Piping: ABS or Service weight no-hub cast iron soil pipe and fittings with stainless steel couplings and neoprene gaskets.

B. Domestic Water Piping: Type "L" copper tubing and wrought copper fittings. Solder joints; 95/5 tin/antimony solder or Code approved silver alloy solder. Joints to be brazed on piping below grade.

C. Gas Piping: Schedule 40 black steel pipe and screwed malleable iron fittings. Non-soluble joint lubricant or tape specifically suited for natural gas service. Paint all piping exposed to weather with (1) coat of Rustoleum.

D. Condensate Drain Piping for AC-Unit: Type "L" copper tubing and wrought copper or cast brass sweat fittings. 50/50 or 95/5 soldered joints.

**2.2 PLUMBING CLEANOUTS**

A. Cleanouts shall be located as shown on Drawings and as required by the Code Provisions. Cleanouts shall be the same size as the pipe except that greater than 4 inch will not be required. Inside floor type shall have polished nickel bronze tops, and wall type shall have stainless steel covers. All cleanouts shall be Jonespec, Wade, Zurn, or J. R. Smith. Smith numbers used as a basis of selection.

**2.3 PLUMBING FIXTURES:**

A. General: Provide new plumbing fixtures of the type herein specified and of the quantity shown with all fixtures of one manufacturer.

1. Fixtures: Complete with fittings, supports, fastening devices, faucets, valves, traps, stops and appurtenances required.

2. Exposed IPS Piping and Tubing: Brass, chrome plated.

3. Escutcheons: Brass, chrome plated.

4. Fixture Locations: As shown on Architectural Drawings.

5. Stops: Stops installed in each supply pipe at each fixture accessibly located with wall escutcheons.

**2.4 PIPE HANGERS AND SUPPORTS**

A. Pipe Hanger Size 3 Inch and Smaller: Adjustable malleable iron, split ring hanger, black, UL listed. Michigan No. 111. Figure 100 Or 101 approved.

B. Pipe Hanger Larger than Size 3 Inch: Adjustable steel clevis type hanger, black, UL listed. Michigan No. 400 or 415.

C. Riser Clamps: Black steel clamp. Michigan No. 510.

**PART 3 - EXECUTION**

**3.1 PIPE INSTALLATION:**

A. General: Install unions in all non-flanged pipe connections to apparatus and adjacent to all screwed control valves, traps and appurtenances requiring removal for servicing, so located that piping may be disconnected without disturbing the general system. Provide dielectric couplings, unions or flanges between galvanized steel and copper pipe or tubing.

1. Install all piping in accordance with Code Standards and Regulations.

2. Run all exposed piping parallel or perpendicular to the building structure and support it sufficiently to prevent sagging.

B. Sanitary Waste Piping: Slope at uniform grade of 1/4 inch per foot unless noted otherwise. Make changes in size with reducing and wye fittings. Run exposed piping parallel or perpendicular to building structure.

C. Gas Piping: Horizontal runs free of traps and sloped to drain to low points.

**3.2 PIPE HANGERS AND SUPPORTS**

A. General: Provide adjustable hangers on all pipes, complete with adjusters, swivels, rods, etc. Size hangers to clear insulation and guides.

B. On hot pipe lines where expansion and contraction occurs, provide swivel joint at top or bottom of hanger rod.

C. Provide hanger within three feet of all changes in direction.

D. Branches six feet or longer shall have separate hanger.

E. Plumbers Tape: Not permitted as pipe hangers.

F. Hanger Spacing: Pipe Cast iron soil pipe At each joint and at intervals not to exceed 8 feet Steel Pipe 1 inch and Smaller 7 Feet Steel Pipe 1-1/4 Inch and Larger 10 Feet Copper Tubing 1-1/4 Inch and Smaller 6 Feet Copper Tubing 1-1/2 Inch and Larger 10 Feet

**3.3 PIPE TEST:**

A. Drainage, Waste and Vent Piping: Test in accordance with local Plumbing Code provisions.

B. Water Piping: Eliminate air from system. Fill and test at 150 psig for a period of six hours with no leaks or loss in pressure.

C. Gas Piping: Fill with dry nitrogen oil free compressed air and test at 60 psi for six hours with no leaks or loss in pressure. Purge system upon completion of testing. Check with approved leak detector liquids or devices.

**3.4 FIXTURES AND EQUIPMENT**

A. Install fixtures, drains, etc. furnished by Contractor complete with required trim. Test for proper operation and leave in clean condition.

**3.5 PROJECT COMPLETION**

A. Provide instruction/operation services for Contractor furnished items, including indicating specific location of valves, cleanouts, etc.

B. Provide all O&M Manuals, Record Drawings, guarantees and other written data in accordance with Project Specifications. Note: Record Drawings shall conform to Building Tenant's specific requirements.

C. Domestic water piping system shall be thoroughly flushed and chlorinated in accordance with State Board of Health. A certificate of compliance shall be provided to the Building Tenant.

SECTION 15880: AIR DISTRIBUTION

**PART 1 - GENERAL**

**1.1 SUBMITTALS**

A. Provide Shop Drawings for the following equipment:

1. Exhaust Fans

2. Rooftop Air Conditioning Unit.

3. Diffusers and Grilles.

4. Dampers.

**PART 2 - PRODUCTS**

**2.1 EXHAUST FANS**

A. Toilet Room Exhaust Fan: Furnish and install exhaust fan at toilet room, as indicated on the drawings. Motors shall have thermal overload protection and shall be connected to the blower. Fans shall be furnished complete with backdraft damper, inlet grille and wall switch. See Mechanical Floor Plan for manufacture, model and cfm.

B. All exhaust fans to be vented thru roof with ductwork as required (see drawings).

**2.2 DIFFUSERS AND GRILLES**

A. Diffuser sizing based on air being introduced at 20F temperature differential and air being diffused at the five foot level to a velocity not greater than 50 FPM. Diffusers selected so as not to exceed the NC-33 curve when the volume damper is 50% open. Manufacturer shall guarantee to meet the above performance factors or replace all diffusers where required. Tuttle and Bailey, Carnes, Krueger, Agltair, Titus, Air Devices, Anemostat, J&J Register, or approved. See Schedule on Drawings for types. Concentric diffusers to be pre-manufactured and to match the manufacturer of existing rooftop AC-Units.

**2.3 DAMPERS**

A. Spin-in Fittings: Branch ducts shall connect to mains with spin-in fittings with air scoop and volume damper.

B. Volume Dampers (VD): Provide in supply, exhaust and return ducts as required for balancing and construct of galvanized sheets not lighter than 18 gauge, reinforced to prevent vibration equipped at both ends with brass bearing mounts and of sufficient length to provide a complete shutoff of the duct. Provide each damper with operators as specified.

C. Provide each damper with adjustment and locking quadrant device as manufactured by Young Registrar No. 403 operator for accessible locations and No. 315 in chrome-plated finish for inaccessible locations, Ventlock or approved.

D. Smoke/Fire Damper: Cesco Fire Barrier Model 75 Type S motorized fire dampers with motor. 22 gauge roll form galvanized steel with a 24 VAC motor for motorized operation. Standard UL 160F fusible link. To be used in conjunction with approved smoke detectors provided by Contractor. The fire dampers to be U.S. Standard for 1-1/2 hour listing. Motors to be UL listed. Provide the thermal protection via the fusible link and when used with listed smoke detectors having normally closed circuit contacts, the electric operator functions. Damper to normally open. Damper shall be minimum leakage Class I. Provide with manual reset. Damper shall fail closed when power is interrupted to actuator. Cesco, Prefco, Nailor-Hart, National Controlled Air, Greenheck, Ruskin, Pottoriff, Air Balance, or approved.

**2.4 AIR CONDITIONING UNIT**

A. All are existing units. Connect to existing unit with concentric diffuser as scheduled on drawings.

**2.5 DUCT CONSTRUCTION**

A. Low Pressure Ductwork: Constructed from galvanized sheet metal to conform to Chapter 10, Uniform Mechanical Code, Volume II, latest Edition, or ASHRAE Guide Table, latest edition.

B. Flexible Ducts: Galvanized spring steel wire helix covered with continuous liner and attached to liner with spray coating, 1-inch thickness of fiberglass insulation, plastic vapor barrier jacket sealed at both ends, 0.25 K factor at 75F mean temperature, rated for continuous service at 1.5 inch S.P. All joints made with 1/2-inch wide positive locking plastic panelist straps. UL approved per Underwriters' Laboratories 181. Maximum length of five feet on supply ducts. Genflex, Thermoflex, Cleovaflex or approved. Flexible ducts not approved for exposed duct installation.

**PART 3 - EXECUTION**

**3.1 DUCTWORK**

A. Erect all ductwork in a first-class and workmanlike manner, true to dimensions indicated, straight and smooth on inside with neatly finished joints lapped in the direction of air travel. Properly brace and reinforce all ducts with steel angles or other members.

B. Elbows: Standard centerline radius shall equal 1-1/2 times the width of the duct.

C. Square turns shall be provided with air foil type turn vanes.

D. Duct sizes shown on the Drawings are the net inside dimensions.

E. Access doors in ductwork shall be located as required for service of fire dampers, automatic dampers and other items requiring maintenance or inspection. Provide Ductmate Sandwich Access Door "DU1280A" or equivalent.

F. Duct Hangers and Supports: Hang galvanized ducts under 36 inches diameter or maximum size dimension with galvanized strips of No. 16 U.S.S. gauge steel 1-inch wide and all larger ducts with steel angles and adjustable hanger rods similar to piping hangers. Anchor all ducts securely to building in such a manner as to prevent transmission of vibration to structure.

G. Seal all joints in ducts with Duro Dyrnic DWN duct sealant or equivalent water base sealant per local code.

**3.2 BALANCING**

A. Contractor to balance all air devices to plus or minus 10 percent of design values. Submit balancing report with all outlets listed with final CFM values.

**3.3 CONDENSATE DRAIN FOR ROOFTOP AIR CONDITIONING UNIT**

A. Provide static trap seal for the condensate drain of AC unit. Trap seal to be two times of the total static pressure. Route pipe in warm ceiling space and to approved terminal. See Drawings for additional information.

SECTION 15950: CONTROLS

**PART 1 - GENERAL**

**1.1 SYSTEM DESCRIPTION:**

A. Provide a system of low voltage electric controls.

B. Wiring: Shall be as required for a complete operating control system, per State and National Electrical Codes. Provide necessary relays, transformers, fusing, switches and pilot lights. Interlocks and control power from nearest panel.

**PART 2 - PRODUCTS**

**2.1 AC UNIT ROOM THERMOSTATS**

A. Electronic heating/cooling with concealed setting, setpoint to be adjustable. Honeywell T7300 with remote temperature sensor. Provide locking cover #BTG-UK2.

B. Install thermostats & remote sensors at locations shown on drawings.

**PART 3 - EXECUTION**

**3.1 SEQUENCE OF OPERATION:**

A. AC Units: Thermostat modulate economizer and stage DX cooling and heating in sequence to maintain setpoint. Indoor fans to operate continuously in occupied mode.

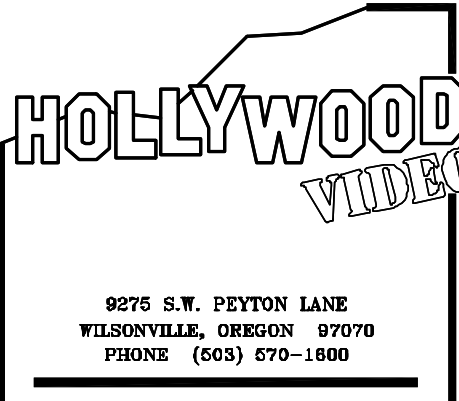
B. Toilet Exhaust Fan/Light: Operated by light switch/Timer provided by Division 16.

**3.2 PROGRAMMING:**

A. Thermostats shall be programmed to 68F in heating mode and 72F in cooling mode for occupied setting (7:00am to 2:00am). Thermostats shall be programmed to 65F in heating mode and 85F in cooling mode for unoccupied setting (2:00am to 7:00am).

END OF MECHANICAL SPECIFICATIONS

**1**



The professional of record is practicing as an individual.

**JAMES C. ALBERTS**  
PROFESSIONAL OF RECORD  
PHONE: 314-821-1100  
LICENSE NO. 6691

**REVISIONS:**

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**PROJECT:**

304121

**PORTLAND/MARGINAL WAY**

160 PREBLE STREET  
PORTLAND, ME 04104  
STORE #019101

**SHEET TITLE**

<b>MECHANICAL SPECS</b> <small>(THIS SHEET FOR INFORMATION ONLY)</small>	
<small>TEMPLATE: 2003-2004</small>	
<small>DESIGNER/INSTRUCTION BULLETIN:</small>	<small>DRAWN BY: MAT</small>
<small>CHECKED BY:</small>	<small>FUN</small>
<small>SCALE:</small>	<small>AS NOTED</small>
<small>DATE:</small>	<small>03-12-04</small>
<small>SHEET NO.</small>	
<b>M2</b>	