Construction Document Criteria

Introduction

Information contained in this section has been assembled to assist the architect and the architect's consultants in preparation of Construction Documents and Specifications. The architect is responsible for adhering to the requirements outlined in **Lease Criteria** as well as the following criteria.

Architecture and Finishes

Floors

Floors on Grade: Six inch concrete slab with a minimum strength of 3,000 PSI reinforced with 6" x 6" - W1.4 WWF on a vapor barrier (4 mil minimum). Tenant shall provide additional sand fill and remove excess as required.

Upper Level Floors: Approximately two inches of concrete topping in designated areas adjacent to the Tenant's storefront lease line.

Mezzanines: Where mezzanines are approved by the Landlord, Tenant is required to submit Structural Design Drawings and Calculations for Landlord's review and approval. Mezzanines shall be framed, supported, and constructed with materials suitable to the use intended and as required by governing codes.

- 1. All materials employed in Tenant's storefront shall be hard surface, durable materials that require minimum maintenance.
- All storefront work requiring structural support shall be floor supported and braced at their head sections by a welded structural steel framework secured to the existing building steel structure.
- 3. Storefront grilles shall be concealed in an overhead or side storage pocket during shopping center hours.
- 4. Identify and specify any security system to be used.
- 5. Any mechanical device (time clocks, grille locks, grille controls, etc.) shall be concealed within Tenant's storefront construction.
- 6. Expansion joints in storefronts must be detailed and illustrated in the Construction Documents. Expansion joints should be incorporated into the storefront design and be inconspicuous.

Walls, Partitions and Separations

- Landlord will erect metal stud partitions dividing the Tenant's premises from the adjacent tenant spaces or common areas at the Tenant's expense. Tenant shall verify Landlord's placement of wall studs <u>prior to space acceptance</u> and advise Landlord in writing of any discrepancies immediately. Failure to notify Landlord of discrepancies shall be regarded as acceptance by the Tenant.
- 2. Demising walls and steel columns shall receive a minimum of one layer of 5/8" fire code gypsum wallboard with taped and spackled joints from floor to underside of structure above.

- 3. Tenant's interior partitions shall be made of metal stud framing with gypsum board finish on all sides with taped and spackled joints.
- 4. Tenant shall provide and install non-combustible fire stops as may be required at separations from the leased premises and ceiling above mall areas. Fire stop must not be attached to the Landlord's mall ceiling system.

Exit / Access / Doors and Corridors

- 1. Exit/access doors shall be minimum 3'-0" x 6'-8" x 1-3/4" "B" label fire door and frame with commercial grade hardware in accordance with governing codes.
- 2. After installation of exit/access door, Tenant shall restore service corridor to original condition. Where vestibules are constructed, extend corridor base into the vestibule and provide corner guards as per the Landlord's specifications.
- 3. Exit/access door shall be painted per color specified by Landlord and labeled with store name and number as specified by center management.
- 4. Exit/access corridor walls shall receive one layer of 5/8" fire code gypsum wallboard on both sides from floor to underside of structure above. All joints must be taped and spackled.

Ceiling Work

- 1. Ceiling heights are shown on the Space Layout Drawing (See Sheet 1 of 2) included with the Tenant Design Package. Tenant is responsible for field verification of the existing conditions. Ceiling heights above the height shown on the Space Layout Drawing may be possible but Landlord does not guarantee clearances for such ceilings. In some cases, existing utilities may be relocated by Tenant at Tenant's expense. Written approval from Landlord is required before proceeding with such work.
- 2. Metal suspension systems shall be used for all ceilings and shall be secured to Landlord's structural framing only. No connections to Landlord's roof deck will be permitted. Only lay-in acoustical ceilings may be secured to floor deck, refer to Landlord's Standard Project Details.
- 3. Combustible materials of any sort may not be used or stored above the Tenant's ceilings.
- 4. All diffusers, grilles, tracks, etc., must be painted to match finish ceiling.
- 5. Provide access panels to permit servicing to all equipment located above the ceiling. Access panels in hard surface ceilings must be flush with adjacent finishes. Access panels should be installed on vertical ceiling soffits or located as inconspicuously as possible.

Floor Finishes

- 1. All floor finishes at the storefront lease line shall be the same finish floor elevation as the Landlord's mall floor.
- 2. Expansion joints in sales areas must be detailed and illustrated in the Construction Documents. Expansion joint material must be compatible with the floor finish materials.

Interiors

- Toilet Rooms: All toilet room floors above grade level shall have a Landlord approved waterproof membrane between the structural sub-floor and Tenant's finish floor. All toilet rooms shall have ceramic tile sanitary floors and bases that extend a minimum of 4" above finish floor. Floor drains and thresholds are also required.
- 2. **Rubbish Storage Rooms:** Provide a storage area for rubbish in all food or beverage service operations. All storage area floors above grade level shall have a Landlord approved waterproof membrane between Landlord's structural sub-floor and Tenant's finish floor.
- 3. **Food Preparation and Service Areas:** All food preparation and service area floors above grade level shall have a Landlord approved waterproof membrane between the structural sub-floor and Tenant's finish floor. They also must have an adequate number of floor drains.

Storefront Signage Dimensional and Location Requirements

- 1. The average height of sign letters or components shall not exceed twelve inches. Letters are limited to fourteen inch maximum height.
- 2. Signs shall not project beyond the storefront lease line more than two inches if less than eight feet above finished floor line, nor more than four inches above eight feet.
- 3. The extreme outer limits of the sign letters and components shall fall within a rectangular area that can be defined as follows: The two short sides shall not fall closer than twenty-four inches to the side lease lines of the premises and the top side of which shall fall no closer than twelve inches to the soffit of the mall fascia.

Prohibited Sign Types

- 1. Signs with exposed neon or other lamps or signs using flashing lights.
- 2. Sign manufacturer's name, stamps or decals, or registered trademarks.
- 3. Signs with exposed raceways, ballast boxes or transformers.
- 4. Signs with painted letters.
- 5. Signs employing luminous, vacuum-formed plastic letters.
- 6. Signs of exposed box or cabinet-type design that employ transparent, translucent or luminous plastic background panels.
- 7. Shadow box type signs.
- 8. Signs employing un-edged or uncapped plastic letters with no returns.
- 9. Paper, plastic or cardboard signs. In addition, stickers or decals of any kind are not permitted on the storefront glass or in entry area, unless approved by Landlord.
- 10. Signs with exposed fasteners, vents or weep holes.
- 11. Signs with an orientation other than horizontal, that is, no vertical, perpendicular or diagonal signage, etc., unless approved by Landlord.

Structural Modifications and Alterations

Modifications and alterations to Landlord's framing structure will not be permitted without Landlord's prior written approval. In the event that Landlord approves Tenant's request, Tenant shall leave Landlord's structure as strong as or stronger than original design with finishes unimpaired.

Penetration of Landlord's Floor Structure

- Concrete floor penetrations required by Tenant shall be coordinated with Landlord's Field Representative, shall be engineered to fit existing conditions and installed according to the Standard Project Details included with the Tenant Design Package.
- 2. Tenant's contractor must verify with Landlord's Field Representative all proposed hole locations to assure that they do not coincide with post-tension cable locations. Once this has been verified the hole may be opened using an electric chipping hammer and extreme caution. Should a post-tension cable be encountered, all work shall immediately be stopped and Landlord's Field Representative notified. <u>Tenant will be responsible for any damage to structure</u>. Power coring machines are not permitted.
- 3. Power fasteners are not permitted. Once post-tension cable locations are verified with Landlord's Field Representative, expansion fasteners may be <u>drilled</u> into slab to a maximum 3/4" to 1" in depth.
- 4. All floor penetrations in food service/preparation areas and toilet rooms shall have watertight sleeves extending a minimum of 4" above finish floor.
- 5. All roof penetrations and repairs shall be done by Landlord's roofing contractor at Tenant's expense. Tenant shall enter into a direct contract with Landlord's roofing contractor.

Design Loads

Stores: 75 pounds per square foot plus a 20 pounds per square foot allowance

for partitions.

Restaurants: 75 pounds per square foot.

Mezzanines: Subject to Landlord review and approval.

Heating, Ventilation and Air-Conditioning

- 1. Refer to **Section Three**: <u>Design for additional criteria regarding Mechanical and Electrical components</u>.
- 2. Verify points of connection to existing ducts, waste, vent and water stubs with Landlord's Field Representative.
- 3. Kitchen ventilation system to be approved by local health authorities.
- 4. Tenant shall not permit odors from within the leased premises to enter other areas of the center. If any tenant or occupant of the center objects to odors from the leased premises the Landlord may, at Landlord's discretion, instruct the Tenant to control such odors. Failure to correct the situation would be a material breach of the Lease. If Tenant's mechanical system is unable to function in a manner to prevent odors from leaving the premises, Tenant shall make the necessary adjustments or additions to its present system to the satisfaction of the Landlord's Field Representative.
- 5. Exhaust hoods on roof shall be up-blast type and be located a minimum of twenty feet away from all fresh-air intakes. Provide exhaust to remove all hot food odors.
- 6. Cutting and patching of roof openings when approved by the Landlord shall be done by the Landlord's roofing contractor and paid for by the Tenant.
- 7. Mechanical Load Tabulation Sheets must be filled out completely, certified and included with Construction Documents for Landlord Review.
- 8. Tenant shall engage a separate temperature control contractor for final set-up of system(s) operations and air balancing.

To determine which mechanical system applies to your particular location within the Center refer to your Lease. Upon Determination of system type refer to the appropriate section of the criteria on the following pages.

For Tenants on 23, 33 and 50 Levels Connecting to the Central Air-Conditioning Supply System

Landlord Work

Landlord will provide a variable volume, central air-conditioning system completely installed including "air-side economizer" operation with the following:

- 1. Conditioned, filtered, fixed temperature, variable volume air to each tenant space through a series of vertical duct shafts and horizontal supply ducts.
- 2. Conventional high velocity supply ducts stubbed into or in proximity to each tenant space.
- 3. Standard variable air volume control device sets complete with pneumatic operators and thermostats. VAV control device sets will be available from Landlord's Field Representative for installation by Tenant's Contractor.
- 4. Main pneumatic temperature control loop (20 PSI) in ceiling space with valved connections for extension to Tenant's system.
- 5. Toilet exhaust ducts stubbed into or in proximity to each tenant space.

- 6. The air-conditioning supply system as provided by the Landlord will be designed and installed to maintain the following conditions in the sales areas only:
 - a. Inside temperature of 78° Fahrenheit <u>+</u>2° Fahrenheit dry bulb and 50% <u>+</u>5% relative humidity during summertime when outside conditions are 90° Fahrenheit dry bulb and 76° Fahrenheit wet bulb and the following inside design conditions are not exceeded:

Lighting: 6.0 watts/SF

- Occupancy: One person/75 SF.
- b. Landlord's system will not operate during shopping center off-hours as determined by the Landlord.
- 7. Central smoke exhaust system using ceiling plenums for conveyance of smoke.

Tenant Work

Tenant, at its sole cost and expense shall prepare Design, Construction Drawings and Specifications for, and shall initially construct and provide all heating, ventilation, exhaust equipment including controls, ducts, insulation, and all structural, plumbing, and electrical work for the leased premises. Each tenant shall provide an individual system proceeding from the high-velocity air-conditioning ducts and the toilet exhaust duct provided. All equipment shall bear UL labels.

- 1. Central Air-Conditioning System will provide 56° Fahrenheit ±2° Fahrenheit air with outside temperature at 90° Fahrenheit dry bulb and 76° Fahrenheit wet bulb.
- 2. Tenant's heating equipment shall be designed to maintain the leased premises at an inside dry bulb temperature of 70° Fahrenheit when the outside temperature is 3° Fahrenheit dry bulb and average wind velocity is 15 MPH.
- 3. Tenant shall furnish and install standard low velocity air distribution system to sales areas of the leased premises. Tenant may elect to supply air to other than sales areas with the understanding that temperature, as stated above, may not be maintained.
- 4. Design, fabricate and construct all ductwork from galvanized sheet metal in accordance with the latest ASHRAE and SMACNA standards.
- 5. Tenant's supply-air ductwork shall be insulated and all ductwork shall be installed in concealed space above ceilings. Space between ceiling and structure shall be used as a return-air and smoke exhaust plenum.
- 6. Return-air will be taken above retail space and mall ceilings. The Tenant will provide screened openings above ceiling in Tenant's demising walls for passage of return-air. Size and location as determined by Landlord.
- 7. All tenants shall provide ceiling return-air registers or grilles (maximum velocity 400 FPM net). These grilles are also to be used for smoke removal.
- 8. Tenant shall furnish and install all code complying pneumatic temperature control piping as required per manufacturer's recommendations or the Landlord's review comments.

- 9. Quantity of air supplied to the leased premises will be verified by Landlord upon review of Tenant's Construction Drawings and Mechanical Load Tabulation Form.
- 10. Equipment must be installed allowing clear access for servicing.

Heating

- 1. The majority of the required tenant heating will be generated by inherent internal loads, that is, the daytime contribution from people and lighting.
- 2. Those tenants affected by external heat losses (roof, exterior walls, doors, windows, floors, etc.) shall install independent electric heat supplied from Tenant's power source consisting of the following:
 - a. 50 Level (With roof parking above): By self-contained, thermostatically controlled electric unit heaters installed in the space between ceiling and slab above. Unit heaters shall be designed to maintain a minimum inside dry bulb temperature of 55E Fahrenheit in this plenum. Thermostat shall be set and locked at 55E Fahrenheit.
 - b. 23 and 33 Levels (With open-air parking garage below): By VAV Control Device Set (Type B), complete with integral fan for off-hours operation. Units selected shall be capable of maintaining inside dry bulb temperature of 70° Fahrenheit in the effected space via a duct mounted electric coil downstream from the VAV device. VAV Control Device Set to be supplied by Landlord. Electric duct coil supplied by Tenant. <u>All</u> control interface by Tenant's control contractor.
 - c. **Exterior Walls, Doors, Windows:** By self-contained, thermostatically controlled electric heaters or electric baseboard type radiant heaters. Heaters shall be designed to maintain a minimum inside dry bulb temperature of 70° Fahrenheit in affected space.

Ventilation

- 1. **Sales Area:** Central air-conditioning supply system will provide minimum air circulation of 7.5 CFM outside-air per occupant.
- 2. **Toilet Rooms:** Shall be exhausted per local code requirements. Exhaust equipment shall be of ceiling or in-line type complete with backdraft damper and duct connection to Landlord's toilet exhaust system.

Air-Conditioning

Tenant shall install a minimum of one Landlord supplied VAV control device set. VAV control device sets are of the variable volume type with 90% shut-off, complete with pneumatic operator and room thermostat.

For Tenants on 70 Level (Restaurant) Connecting to the Central Condenser Water and Building Heating Hot Water Supply Systems

It is suggested that each 70 Level Tenant's HVAC design be submitted to Landlord on a preliminary basis prior to preparation of Construction Documents.

Landlord Work

Landlord will provide the following:

- 1. A series of central, outside-air intake and relief shafts, and central kitchen exhaust duct routing shafts and central toilet exhaust duct riser all accessible to the Tenant's equipment. Configuration and routing to these shafts as determined by the Landlord.
- 2. Centrally supplied condenser water supply and return pipes and building heating hot water supply and return pipes via loops provided in the 70 Level ceiling space with valved connections stubbed into or in close proximity to each Tenant space for extension to Tenant's system.
- 3. The Condenser Water Supply System as provided by the Landlord will be designed and installed to maintain the following conditions within the leased premises:
 - a. Inside temperature of 78° Fahrenheit ±2° Fahrenheit dry bulb and 50% ± 5% relative humidity during summertime when outside conditions are 90° Fahrenheit dry bulb and 76° Fahrenheit wet bulb and the total Sensible and Latent Heat Load of 96 BTUH/SF of leased premises is not exceeded.
 - b. The condenser water supply system will be available during regular shopping center hours when the outdoor air temperature exceeds 55° Fahrenheit for a sustained period of time. Landlord shall determine when such system shall be available.
 - Condenser Water Supply: 85° Fahrenheit
 - Condenser Water Return: 95° Fahrenheit Maximum
- 4. The hot water heating supply system will be available at all times outdoor air temperature falls below 55° Fahrenheit for a sustained period of time. Landlord shall determine when such system shall be available.
- 5. Centrally located gas metering areas at the 70 Level. Gas may be used for general purpose only (no space heating). Gas meter and fuel line to Tenant's gas equipment by Tenant.

Tenant Work

Tenant, at its sole cost and expense shall prepare Design, Construction Drawings and Specifications for, and shall initially construct or provide all heating, ventilation, exhaust equipment and controls, ducts, insulation, and all structural, plumbing, and electrical work related thereto. Each tenant shall provide an individual system(s) as outlined below. All equipment shall bear UL labels.

- 1. Furnish and install complete air-conditioning system(s) with full economizer operation and self-contained water-cooled condenser(s) within the leased premises.
 - a. Tenant will supply in-line secondary pumping system(s) to utilize the condenser water loop.
 - b. Condenser water will <u>not</u> be available during the winter months when the outside air temperature is below 55° Fahrenheit and as required by the Landlord. The Tenant's system must be capable of 100% economizer operations during these periods. Duct routings to Landlord provided shafts as indicated by the Lease Exhibits or as directed by the Landlord.

- 2. Furnish and install all code complying temperature controls as required by the manufacturer's recommendations and/or the Landlord's review comments.
- 3. Tenant's heating equipment shall be designed to maintain the leased premises at an inside dry bulb temperature of 70° Fahrenheit when the outside temperature is 3E Fahrenheit dry bulb with average wind velocity of 15 MPH.
- 4. Tenant shall furnish and install a standard, low-velocity air distribution system to condition the leased premises. Design, fabricate and construct all ductwork from galvanized sheet metal in accordance with the latest ASHRAE and SMACNA standards.
- Tenant shall furnish and install, if applicable, a complete kitchen exhaust and makeup air duct system. Ductwork shall be fabricated of galvanized sheet metal in gauges specified by NFPA 96 for the use intended and shall be designed and constructed according to all codes and the latest ASHRAE and SMACNA standards.
- 6. Tenant shall provide all process requirements, hood exhausts, equipment vents and other contaminated exhausts. When permitted by the Landlord, they shall extend in ductwork through the roof. This ductwork shall be located in special shafts built by Landlord at locations and of construction designated by the Landlord. Non-grease laden ductwork that passes through service corridor walls or Upper Level floors shall have UL approved fire dampers located in ductwork at wall and floor. Provide approved access doors for such dampers. All grease laden ducts that pass through fire-rated partitions are to be encased in calcium silicate blocks or other suitable material approved for use by the code authorities.
- 7. All process exhausts, hood exhaust, equipment vents, and other contaminated exhaust, when permitted by Landlord, shall discharge vertically to the atmosphere twenty feet minimum horizontally away from any fresh-air intakes, properly dispersing odors or fumes away from same.
- 8. Process exhaust and kitchen exhaust systems shall be the 70/30 compensating type similar to Econo-Vent Systems, Inc. or equal as specified by the Tenant's design engineer and as approved by the Landlord.
- 9. All air supplied to Tenant's area by its equipment shall not migrate to the mall area or adjacent spaces. Tenant's system(s) shall provide a minimum constant negative pressurization with regard to the public mall area of 10% or as required by the Landlord.
- 10. Condenser water piping systems are to include a suitable strainer on the supply side of the Tenant's water source, DX air-conditioning unit, a Griswold or equal flow control balancing valve on the return and flexible piping connections. Piping materials are to comply and be compatible with Landlord's piping systems. Unit is to be installed with properly designed vibration isolation to eliminate all transmission of vibration to building structure. Tenant's air-conditioning unit shall be floor supported in Tenant's space independent of Landlord's structural system. Do not suspend air-conditioning unit from building structure.
- 11. Tenant's supply and make-up air ductwork shall be insulated and shall be installed in concealed spaces above ceilings. The space between the ceiling and the structure shall <u>not</u> to be used as a return-air plenum. Return-air from conditioned space to air-handling equipment <u>must</u> be duct connected.
- 12. Equipment must be installed allowing clear access for servicing.

- 13. Tenant's roof equipment shall be located in areas designated by the Landlord to specified heights according to Landlord's approval.
 - a. Exception: Should weight or location of equipment by Tenant require supports, screens, catwalks or roof hatch and ladder, they shall be provided by Tenant according to Standard Project Details. Landlord will determine when and where the above shall be required.
 - b. **Finish:** All such equipment shall be factory-finish painted according to the Landlord's paint schedule and specifications.
 - c. **Identification:** Tenant's roof equipment shall be clearly identified with Tenant's name.

Heating

- 1. The majority of required Tenant heating will be generated by inherent internal loads, that is, the daytime contribution from people and lighting.
- 2. Those tenants affected by external heat losses (roof, exterior walls, doors, windows, floors, etc.) shall install independent electric heat, fed from Tenant's power source consisting of the following:
 - a. **Roof:** By self-contained, thermostatically controlled electric duct heaters.
 - b. **Exterior walls, doors, windows:** By self-contained, thermostatically controlled electric heaters or electric baseboard type radiant heaters. Heaters shall be designed to maintain a minimum inside dry bulb temperature of 70° Fahrenheit in affected space.

Ventilation

- 1. **Sales Area:** Minimum outside-air for ventilation purposes shall be provided by Tenant. Tenant's source of outside-air is to be taken from Landlord's central, outside-air shaft.
- 2. **Toilet Rooms:** Shall be exhausted per local code requirements. Exhaust equipment shall be of ceiling or in-line type complete with backdraft damper and duct connection to Landlord's toilet exhaust system.

Plumbing

Landlord Work

- 1. On-site water supply mains combined for domestic and fire protection, shut-off valves, and fire hydrants. Interior domestic water branch lines stubbed above or below Tenant's premises at a point to be determined by Landlord.
- 2. Sanitary and plumbing vent branch lines stubbed at a point to be determined by Landlord.

Tenant Work

- 1. Plumbing fixtures and piping system including all rough-in and final connections for same. Installation of all hot and insulated cold water lines, drains, and vents, electrical water heaters, water meter, and final connections to Tenant's specialty equipment. All installed per governing codes.
- 2. Plumbing fixtures and accessories shall be of commercial quality and shall be of water conserving type.

- 3. Food and beverage service tenants shall connect all grease laden waste to a grease receptor. Tenant is responsible for setting up a regularly scheduled servicing of the grease receptor as determined by the Landlord.
- 4. Floor drains to be provided in toilet rooms and kitchens.
- 5. Pipe sleeves shall be installed in penetrations through floor slabs.
- 6. Provide water meter within the leased premises. Install meter near floor (preferably in Toilet Room) in an easily accessible location. Meter shall read in gallons.
- 7. Food and beverage service tenants shall make gas service arrangements with the gas utility company. Routing of gas line shall be approved by Landlord prior to construction.
- 8. Food and beverage service tenants on levels 33, 50, and 70 shall be required to provide the following:
 - a. Waterproof membrane installed by Landlord's designated contractor at Tenant's expense.
 - b. Install all under floor sanitary and kitchen waste piping in soldered type DWV copper.
 - c. Insulate all under floor sanitary and kitchen waste piping.

Fire Protection

General Requirements

Landlord Work

Interior, hydraulically calculated fire protection sprinkler system main stubbed above Tenant's premises at a point to be determined by Landlord. Fire protection system is provided with a supervised alarm system.

Tenant Work

- 1. Hydraulically calculated fire protection sprinkler system, fire hose cabinets, fire extinguishers, and other equipment within Tenant's premises according to Landlord's Insurance Underwriters' Fire Rating Inspection Bureau and code requirements. Since the entire fire protection system for the project is required to be an inter-related, centrally controlled installation, Tenant shall cause to be designed and installed, by a qualified sprinkler contractor acceptable to Landlord, said system within Tenant's premises according to the Landlord's requirements; and shall submit for Landlord's review, shop drawings, specifications and hydraulic calculations for the sprinkler system that have been approved by the Fire Rating Inspection Bureau. Landlord's approval of this shall not constitute the assumption of any responsibilities by Landlord for the accuracy or sufficiency of the sprinkler system. Tenant shall be solely responsible for the system within the leased premises.
- 2. Valves are not allowed in the sprinkler system. Valving and alarm system is accomplished at source to building by Landlord.
- 3. Provide dry chemical fire protection system for range, hoods, etc.

Design Criteria

- 1. Sales Area: Density 0.20 GPM/SF over 3,000 feet.
- 2. **Stock Rooms:** Where stock exceeds twelve feet in height, coordinate design with the Fire Rating Inspection Bureau.
- 3. Pressure and Flow Requirements:

	STATIC	RESIDUAL	FLOW
23 Level	149 PSI	138 PSI	700 GPM
33 Level	139 PSI	105 PSI	700 GPM
50 Level	132 PSI	91 PSI	700 GPM
70 Level	124 PSI	45 PSI	700 GPM

Sprinkler Heads

Sprinkler heads in gypsum board and other hard surface ceilings must be concealed type while sprinkler heads in lay-in ceilings to be semi-recessed heads. Pendant type sprinkler heads are permitted only in stock/storage areas.

Electrical

General Requirements

- 1. Refer to **Section Three**: <u>Design for requirements regarding Mechanical and Electrical components.</u>
- 2. Watt density equals 6.0 watts/SF (maximum heat producing load).
- 3. Transformers are to be supported at the floor, not from the building structure.
- 4. Equipment must be installed allowing clear access for servicing.
- 5. Electrical Data Tabulation Sheets must be filled out completely, certified, and submitted with Construction Document for Landlord Review Process.

Landlord Work

- 1. Electrical primary and secondary distribution feeders to Center's central distribution bus duct(s), panel board(s) and switchboard(s).
- 2. Power available for the leased premises is 480/277 volt, 3 phase, 4 wire, 60 hertz.
- 3. Telephone incoming feeders to project central distribution closets.

Tenant Work

- 1. Electrical feeders in conduit from Landlord's distribution equipment to Tenant's premises. This work shall include, but not be limited to, furnishing and installing check meter in Tenant's premises and fusible disconnect switch at Landlord's distribution equipment and conduit and conductors of sufficient capacity for Tenant's requirements. Tenant shall coordinate metering and power requirements with Landlord. All conductors shall be insulated copper wire type THW or THWN. Minimum size shall be 30 amp at 480/277 volt, 3 phase, 4 wire.
- 2. Tap box, panel board(s), transformer(s), distribution center, conduits, and branch wiring, outlet boxes, and final connections to all electrical devices including mechanical equipment, controls, and signs.
- 3. Panel board(s) shall be designed for 20% minimum spare ampacity (based on connected load) and 20% spare breaker space.
- 4. All lighting fixtures, lamps, convenience outlets, time clocks, signs, etc., and all related conduits and wiring.
- 5. All fluorescent or incandescent lighting fixtures in Tenant's sales areas, other than track-type and decorative fixtures shall be recessed. Fluorescent fixtures shall have deep cell parabolic lenses. Bare lamp fluorescent or incandescent fixtures may not be used except in stockrooms or areas inaccessible to customers. Connections to all devices in Tenant's sales areas shall be concealed.
- 6. Telephone and Internet equipment, conduits and wire installations from tenant Dmark to central distribution cabinet shall be coordinated through Granite Telecommunications only, (855) GRT-GRID / (855) 478-4743.
- 7. Television and burglar alarm equipment, and all conduits, wiring, and related items for same. The installation of any roof mounted antenna must be approved, in writing, by Landlord.
- 8. Exit/emergency lighting system functioning on a normal source or battery operated source for loss of power conditions (as required by governing codes). Emergency lighting shall be provided by Tenant to illuminate stock or sales area and rear exit way during power outages. Said lighting shall be battery operated, recessed lights or twin-head light pack(s). In areas visible to customers, battery assembly for emergency lights shall be concealed and remote type light fixtures used.
- 9. Transformers, ballast, conduit, wiring, and related items for signs. Circuits serving sign(s) shall be connected by a time switch.
- 10. **Service call system:** Tenant shall provide and install a buzzer call system and all related conduit and wire located at back service corridor and must not be audible in sales area.
- 11. Three phase transformers (dry-type), for all tenants, shall have six standard full capacity tap arrangements. Entire installation within Tenant's premises shall be balanced equally across all three phases.
- 12. Entire installation shall meet all requirements of national or local electrical codes. All equipment shall bear UL labels.
- 13. All electrical wiring systems shall be in conduit. The use of "Bx" or "Romex" is not permitted.

Speaker or low voltage wiring must be plenum rated or in conduit.

- 14. Inspect existing neutral conductor(s). The neutral conductor shall <u>not</u> be bonded to ground at Tenant's electrical distribution equipment. The ground fault protection in Landlord's distribution system will not function properly if the neutral is bonded to ground anywhere. Correct this situation if found existing.
- 15. Unless approved otherwise in the Tenant's lease, a roof access agreement is required prior to the installation of any roof mounted antenna or satellite dish.