



**CONSTRUCTION RULES AND  
REGULATIONS**

**REQUIRED SPECIFICATIONS  
AND PERFORMANCE CRITERIA**

**DESIGN GUIDELINES**

**HIGH PERFORMANCE DESIGN  
& CONSTRUCTION GUIDELINES**

**One Grand Central Place  
New York, NY**

Latest Revision July 17, 2019

**SECTION I**  
**BUILDING RULES AND REGULATIONS**

**A. General**

**CONTACT INFORMATION**

Main..... 212.697.0696  
Property Manager, Daniela T. Zustovich-Perez (dperez@empirestaterealtytrust.com) and  
Project Manager, Gary D'Alessio (GDalessio@empirestaterealtytrust.com). ..... 212.697.0696  
Tenant Services Emergency..... 212.697.0696

**ESRT One Grand Central Place, L.L.C.**

**60 East 42<sup>nd</sup> Street – Suite 803**  
**New York, NY 10165**  
**Phone: 212-697-0696**  
**Fax: 212-953-2187**

**B. Compliance with Rules and Standards**

All construction work proposed for “Tenant Alterations” must comply with NYC Department of Buildings, New York City, New York State and Federal Government agencies having jurisdiction over the project, the Administrative Code of the City of New York, ADA, and One Grand Central Place Building Rules and Regulations and Performance Standards. (the “Rules and Regulations”, which may be modified from time to time as Landlord/Building Management, may determine).

**C. Submission of Drawings**

Tenant shall pay to Landlord as additional rent, on demand, an administrative fee equal to the sum of the reasonable fees of any architect, engineer or attorney employed by Landlord to review any plan, agreement or document submitted for Landlord’s review or approval, and Landlord’s administrative costs for same.

Tenant will submit to Building Management/Landlord for review and comment prior to commencement of any work, (2) sets of .PDFs, four (4) sets, 1/8” scale, one hundred percent (100%) completed (signed & sealed) Architectural, Mechanical, Electrical, Plumbing (including sprinklers), Fire Alarm and Structural submissions.

Request for existing base building drawings by Tenant’s architect or engineer must be made in writing to Building Management. The Tenant will be responsible for all related charges and costs. Building Management/ Landlord are not responsible for base building drawings accuracy. Tenant’s architect(s) and engineer(s) shall confirm accuracy of drawings prior to commencement of any work.

The final “issue for construction” set of drawings and documents shall incorporate all of the Landlord's comments and requirements and shall be maintained on site at all times. Provide electronic .PDFs and two complete sets of full-size and one “half-size” reduced drawings to Building Manager, ESRT Management L.L.C. One Grand Central Place, 60 East 42<sup>nd</sup> Street – Suite 803, New York, NY 10165.

## **D. Permits and applications**

All work shall be filed with the NYC Department of Building and no work shall commence until the permits have been issued by the NYC Department of Buildings. Copies of the permits and perforated/stamped plans must be given to the Building Management as well as posted/maintained on the construction site at all times.

The following expediter shall be used for the purposes of filing for permits:

**Miho Kishi**  
**(MKishi@rizzogroup.com)**  
**Rizzo Group**  
**1333 Broadway 5<sup>th</sup> Floor**  
**New York, NY 10018**  
**(212) 695.5980**

All Permit applications should be sent to:

**ESRT OGCP, L.L.C.**  
**c/o ESRT Management, L.L.C.**  
**One Grand Central Place**  
**60 East 42<sup>nd</sup> Street, Suite 803**  
**New York, NY 10165**

All Tenants, Contractors, Architects and Engineers applying for a permit for construction at One Grand Central Place are required to complete the applications as outlined below:

Business Name: **ESRT One Grand Central Place, L.L.C.**

Address: ESRT One Grand Central Place, L.L.C.  
60 East 42<sup>nd</sup> Street  
Suite 803  
New York, NY 10165

Phone: 212.697.0696

Name of Signatory: Gary D'Alessio, Project Manager

Name of 2<sup>nd</sup> Signatory: Daniela T. Zustovich-Perez, Property Manager

## **E. Contractors**

The Landlord will furnish a pre-approved list of MEPS (Mechanical, Electrical, Plumbing, and Sprinkler sub-Contractors). All MEPS work must be performed by sub-contractors on the pre-approved list. All work must be performed with harmonious labor relations.

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## **F. Building Approved Vendors**

**Fire Alarm:** Firecom Inc. (Rudy Montenora, (718-899-6100))

**BMS:** New York Temperature Controls (John Keogh, (718-554-3920))

**Elevator Maintenance:** Nouveau Elevator (Joseph Crofts, (718-349-4783))

**Elevator Consultant:** BOCA Group (Alex Menendez, (212-983-7010))

## **G. CERTIFICATE OF INSURANCE REQUIREMENTS**

Before commencing any work to the premises, the Tenant is required to have their General Contractor and all subcontractors furnish a certificate of insurance to the Building Management office. See attached for SAMPLE Certificate of Insurance.

## **H. Access to the Building/Contractor Passes**

Tenant to provide a list of contractors' names as well as a Tenant contact employees that will be working in the Building. List to be submitted to Building Management, ESRT OGCP, L.L.C. c/o ESRT Management L.L.C. One Grand Central Place, 60 East 42<sup>nd</sup> Street – Suite 803, New York, NY 10165  
Contractors will be required to register with the BMO and get passes from the loading dock guard booth every day that access is required. Contractors must present an Official Government photo ID in order to receive a pass. No Contractors' pass will be issued without Government issued photo ID presented.

The guard booth is staffed Monday to Friday, 8 AM to 6 PM. No access will be provided before/after- hours unless pre-approved by and scheduled with Building Management.

## **H. Deliveries and Building Freight Elevators**

Delivery of all materials to the construction site must be made to the Freight Entrance, on East 41st Street then hauled through corridor to two (2) freight elevators serving the building – hi-rise and low-rise.

All deliveries must be scheduled with Building Management or such personnel designated by the Building Management. To schedule delivery of materials and use of freight elevators, submit request (see sample) to Building Management or use Work Speed. The normal operating hours for the freight elevators are 8:00 AM to 5:30 PM. Elevators are subject to availability and are available on a "first come first serve" basis. After hours use of the freight elevator for transport of construction materials/personnel must be scheduled in advance and may be subject charges (levied to tenant) at the prevailing rates. Should elevator mechanics be required for special delivery, the cost of having elevator mechanics on site shall be borne by Tenant, as applicable.

**Passenger Elevator cars are not to be used in any way for transporting materials or construction personnel.** No material or equipment shall be carried under or on top of elevators.

All materials are to be brought in proper containers and deliveries must be made directly to space under alterations. No storage or staging of materials is allowed on loading dock, in freight elevator lobby, in public corridors, elevator lobbies or any space other than site of construction.

All dollies, hand trucks, jacks, etc. shall be in good condition; iron wheels are not permitted in the building. Overflow or leakage from containers will not be tolerated.

All carpeted areas that will be affected by the moving of equipment or containers should be protected by pre-approved Building standard means. Refer to Building Rules and Regulations for protection requirements.

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## **I. Protection of Public Areas & Building Equipment**

All public areas such as elevator lobbies, corridors, lobbies, loading docks, toilets, etc. shall be maintained clean and protected using Building standard materials. Equipment and other property belonging to the Building shall also receive protection and shall be repaired if damaged in the course of construction, to the satisfaction of the Building Management. The wall to wall floor protection consists of brown paper, masonite sheets taped together (brown tape), covered by filmtex, and walls to be protected by Building corrugated paper (with masonite underneath in freight areas), provided by Building at Tenant's expense.

Shoe – wiping mats (either wetted down or sticky) to be provided at all entry points to adjacent areas.

## **J. Certificate and Completion of Work**

The Tenant and/or Tenant's General Contractor shall submit the following certificates to the Building Management Office upon completion of work, including, but not limited to:

1. Building Notice Application approvals and sign-offs issued by the Department of Buildings. Electrical and HVAC certificates issued by:
  1. DOB.
  2. FDNY.
  3. Special Inspections.
  4. Equipment use permits.
2. A properly executed air balancing report signed by the project's professional mechanical engineer shall be submitted to the Building Management upon completion of HVAC work.
3. Copies of release of lien from the GC and all sub-contractors.
4. In addition to the above, Tenant to submit to Building Management upon completion of work a "close-out" book which will include all detailed "As-Built" documents for Architectural, Structural, HVAC, Sprinklers, Fire Alarm and Electrical Circuiting Plans. All Guarantees, warranties, and operating manuals of equipment installed shall be provided. (2 hard copies and CAD drawings in Autocad 2000 or later are required).
5. At completion of project, General Contractor to complete project completion checklist. **See Building Management office for completion check-list.**

## **K. Refusal of Permission**

The Building Management Office also reserves the right to halt construction, at tenant's expense, upon failure of the Tenant General Contractor to comply with the Building Rules and Regulations.

## **L. Amendment to Rules and Standards**

Landlord/Building Management reserves the right to amend any of these Rules and Standards at any time.

## **M. Violations of Building Rules**

Repeated violations of any of the Building rules contained herein, including use of passenger elevators, excess noise complaints, shall constitute grounds for Landlord/Building Management requiring ejection of the offender, whether tradesman, subcontractor, or General Contractor. Depending on the severity of the violations, the offender may be barred from performing work throughout the Building and any building supervised by Empire State Realty Trust, Inc., ESRT Management, L.L.C.

Penalties will be charged for violations of certain Building Rules and Standards, in addition to any costs incurred by the Building. These Rules and Standards include (but are not limited to):

- Use of passenger elevators by construction personnel - \$250.00 per occurrence
  - Use of non-designated (tenant only) restrooms - \$250.00 per occurrence
  - Smoking anywhere in the building - \$250.00 per occurrence
  - Use of radios on jobsite - \$250.00 per occurrence
  - Noisy work during non-designated times - \$250.00 per occurrence
  - Class E False Alarm (1st Offense) - \$2,500.00
  - Class E False Alarm (2nd Offense) - \$5,000.00
- Rules and penalty amounts are subject to change.

## **MI. Structural Work**

Any structural modification must be reviewed and approved by building structural engineer prior to commencement of work including any request for core drilling or trenching as the re-enforced cinder concrete floor slab is a structural component of the building.

No trenching or core drilling or cutouts are permitted to be installed in the floor slab without structural review and specific written approval from the Building Management. Building Management reserves the right to restrict locations of such items to areas that will not interfere with the Buildings framing system or components nor interfere with the any other tenant space. No Conduits or cut-outs are permitted outside of Tenant's premises.

## **MII. Building Services and Related Fees**

Contact Building Management office, Gary D'Alessio for current fee schedule.

## **MIII. General Conditions/Requirements for All Work**

**MIV.** There is no smoking allowed anywhere in the Building.

**MV.** No radio playing is permitted on the jobsite.

**MVI.** Use of fuel powered equipment is not permitted.

**MVII.** Do not burn materials or debris on premises.

**MVIII.** All entrance locksets shall be master keyed as required by the Building Management.

**MIX.** Windows shall not be opened without Landlord/Building Management approval. Any windows that are opened must be closed at the end of the work day.

**MX.** No exterior hoisting will be permitted. All products specified are to be assembled on-site and delivered to the site in such a manner so as to allow unobstructed passage through the building freight elevators, lobbies, corridors, etc. The general contractor will be responsible for protection of all finished spaces as required.

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8. If suspected asbestos containing material is uncovered during tenant's renovation the contractor is to immediately stop work and notify Building Management. Building Management will test the materials and complete any remediation as required.
9. General Contractor to provide a superintendent or foreman (project manager) capable of communicating with Building Management on premises at all times. In addition, a laborer capable of communicating with Building Management is to be on site to police job at all times, continually keeping area safe, broom clean, and free of all debris.
10. Contractor to inform Building Management of any incidents (e.g. damage, leaks, thefts, etc.) or injuries and submit a detailed incident report within (1) Business Day of the incident.
11. If Tenant's General Contractor or subcontractors are negligent in any of their responsibilities, Tenant shall be charged for any corrective work performed on tenant's behalf by the Landlord with administrative fee.
12. General Contractor to provide Building Management with an emergency contact list.
13. Harmonious relations shall be used by all contractors and subcontractors performing any and all work in a professional manner. Labor shall work in close harmony with one another as well as with the Building Management and Building's maintenance personnel.
14. Construction personnel are to use only the assigned bathroom and wash-up facilities as directed by Building Management.
15. Contractors and vendors who operate cellular phones, PDA's and/or two-way communication devices should keep the volume on these devices no louder than necessary. When passing through tenant or public spaces, the device should be set to vibrate. Where the use of the device is necessary in a work space, the contractor should be mindful of his or her surroundings and keep conversations and the volume on cellular phones and two-way communications to a minimum. There is to be no loitering in Building common areas for use of these devices.
16. All work shall be accomplished in strict conformance to the applicable local, state, OSHA and Building Rules and Regulations. Removal of materials and equipment items shall be done when safely disconnected from operating services by contractor skilled in this trade.
17. Do not allow demolished materials to accumulate inside or outside of Building. Remove from the site all rubbish and debris resulting from work of demolition. Wet down debris to control dust.
18. The General Contractor shall be responsible for all temporary services and utilities during the course of demolition including adjacent tenants. Cost or use charges for temporary facilities are chargeable to the tenant.
19. All fire exits and/or stairways to be kept clear, marked and accessible and doors are to remain closed at all times to maintain fire evacuation integrity of stairwell.
20. At all times contractor shall maintain: 1. Operable exit signage & egress lighting. 2. Safe egress passage to all exits. 3. Active fire detection/suppressing systems or fire watch.
21. Use designated transportation routes to Tenant work area. Contractor is not to use fire exits, stairways or passenger elevator cars as a means of daily access to and from construction site, or for storage of equipment and materials.
22. The practice of "chocking" open doors or making hardware inoperative will not be permitted.
23. Avoid and prevent the disturbance to other tenants. Work in or around other Tenant areas must be coordinated in advance with Building Management and proper security must be provided at Tenant's expense.
24. No work is to be performed in Building's mechanical equipment rooms, service areas or electrical closets without first checking in with Building management and it's engineering consultant.
25. Restore damaged fireproofing at existing structure due to new construction.
26. Electric panel covers are not to be left off at any time unless when being worked on. Cover shall be replaced each night before leaving the site.

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27. General Contractor to provide temporary lighting and power per code for duration of project. The contractor shall clearly label lighting panels and breakers used for lighting.
28. All work shall be subject to inspection by Building Management. Such supervision and inspection shall be at Tenant's expense, if applicable. Any and all deficiencies noted, as a result of the inspection, shall be corrected by the Tenant, or the Tenant's contractor at the Tenant's expense, if applicable. Any and all punch list items identified by Building Management shall be corrected within twenty (20) Business working Days, unless such items affect life safety in which case they should be addressed immediately, Building Management has the right to back-charge tenant for additional Building Management and consultant services.
29. Landlord/Building Management shall not be responsible for any disturbance or deficiency created in the air conditioning or other mechanical, electrical or structural facilities within the building as a result of the alterations. If such disturbance or deficiency results, it shall be the Tenant's responsibility to correct the resulting conditions immediately and to restore the services to the complete satisfaction of the Building Management, its architect and engineers. Building Management reserves the right to make such corrections at the Tenant's expense.
30. All equipment shall be identified by system number, and their performance/operating data on the design drawings. All equipment shall be specified, with manufacturers name, model number, etc.
31. Contractor's Drawings, Tagging and Labeling: All wires must be properly tagged at panel, and all panels properly phase balanced after addition of separate circuits where change were made. All valves must likewise be properly tagged. Failure to properly tag all wires and valves will result in additional charges to Tenant as Building Management test and tags all wires and valves where General Contractor has made changes. All plumbing lines, electrical lines and telephone wires in another Tenants' premises must be tagged to the Landlord's approval before completion of project if services traverse other occupied Tenant spaces or building common areas. Any slab penetrations must be properly tagged with suite and purpose. A typed completed directory in the electrical panel must be upgraded by Tenant's General Contractor to reflect all circuits both new and existing. A dated, 8 1/2" x 11" complete panel directory, on the Electrical subcontractor's letterhead shall be furnished to Building Management as part of the project closeout documentation.
32. "Safe-off", with valves, caps or plugs, all services supplying plumbing fixtures and equipment in areas designated for demolition, prior to the start of demolition work.
33. All mechanical and plumbing connections to building water systems, waste and vent lines, etc. are to be performed after normal working hours and coordinated with Building Management/ and Management's Engineer. Provide isolation/shut-off valves for all water lines (Mechanical and Plumbing) with no interruption of tenant service during normal business hours and not without being coordinated with building.
34. Base Building fire alarm system integrity shall be maintained at all times. Existing ceiling mounted speakers, smoke detectors and strobes shall be carefully removed from ceiling tiles and walls and placed high in space, secured to the structural steel. Do not disconnect or remove or paint over any fire alarm wiring, devices or fire alarm panels without active participation from Building Management. Carefully protect BBFAS wiring during construction.
35. Per New York City code requirements for floor coverage, the Fire Detection and Protection System must be on-line and the Class "E" system must be maintained. If the above cannot be met, a fire watch must be maintained with a minimum of twenty four (24) hour advance notification to the Building Manager that the General Contractor requires fire detection/protection systems to be off- line. The fire watch is to meet all applicable and governing agency codes, and provide adequate and proper documentation. Fire watch shall perform no other duties while on watch. The fire watch shall be provided by the Landlord at the Tenant's expense. If requested, certified fire watch can be provided by The Building Management at the

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Tenant's expense. If the fire watch is provided by a Tenant's contractor, all responsibilities/duties of such fire watch shall be in compliance with NYC Local Law 5. Any work performed on the Class "E" System must be done by OGCP's Fire Alarm contractor. Terminations and contacts provided by AFA. All requests to take the Class "E" System off-line including sprinkler drain downs requests, if applicable, must be made in writing to the Building Management Office with a minimum of 48 hours in advance. Failure to comply may result in the issuance of monetary fines. All associated fees/fines will be submitted to and are the sole responsibility of the tenant.

36. Provide and maintain filter on supply and return grille openings as applicable, to keep dust from entering the Building's air supply systems. Provide double filters, or apply bulk filter media over package filters at all HVAC equipment running during construction, including perimeter induction units. Upon completion of demolition/construction all filters are to be removed, equipment cleaned to Management satisfaction and unit primary filters to be replaced. If this is not completed, Building Management will perform cleaning at Tenant's expense.
37. Adhesives, sealants and sealant primers must comply with volatile organic compound (VOC) limits as outlined in south coast air quality management district (SCAQMD) Rules 1168 effective July 1, 2005 and amended on January 7, 2005.
38. Aerosol adhesives must comply with green seal standard for commercial adhesives GS-36 requirements in effect on October 19, 2000.



**REQUIRED SPECIFICATIONS AND  
PERFORMANCE CRITERIA**

**One Grand Central Place  
New York, NY**

Latest Revision June 19, 2019

**SECTION II**  
**REQUIRED SPECIFICATIONS AND PERFORMANCE**  
**CRITERIA**

**A. Demolition**

1. All demolition must take place after 6pm or before 8am or on weekends.
2. For PCB ballast and lamps disposal, please contact Building Management to obtain empty barrels and to schedule pick – up of full barrels. All PCB ballasts and lamps to be salvaged for recycling by Building Management.
3. The contractor shall completely remove all abandoned tenant equipment (AC units, exhaust fans, piping, ducts, hangers, supports, receptacles, light fixtures, transformers, wiring, pull boxes, water heaters, etc.) all the way back to core risers, electrical panels, the nearest active branch main, and capped sealed watertight or airtight. All openings shall be properly patched, sealed and firestopped to maintain the original integrity and fire rating of all walls, partitions, ceiling clips, etc.
4. The entire fire alarm system shall be tested by Building Management before and after demolition to verify that all devices remain operational. Existing ceiling mounted speakers, smoke detectors and strobes shall be carefully removed. Contact Building fire alarm vendor (Firecom) and Building Management office for technical assistance in the event that existing devices or wiring are inadvertently damaged during demolition. It will be the demolition contractors' responsibility to pay any fees to correct and/or repair for such services.
5. Fire dampers in ducts (to remain) shall be removed upon removal of fired rated partitions. Ducts shall be properly reconnected after removal of fire damper.
6. Any and all equipment and devices serving other tenants are to remain.
7. All open floor outlets shall be capped with walker Parkersburg Duct Blanking Plate no. 1043- S (or approved equal).

**B. Construction Waste Management and Recycling Requirements**

1. General Contractor and subcontractors to collect targeted construction waste identified in Construction Waste Management, Divert 75% from Landfill outlined in: <https://new.usgbc.org/node/1731280?return=/credits/commercial-interiors/v2009>
2. Description of waste management procedures to be documented and reviewed with the building prior to commencement. A plan should include listing of transportation methods, collection methods and sorting facilities/companies. Any materials being repurposed, salvaged or reclaimed should be identified.
3. Off-site sorting to be sent to a building approved sorting facility/company.
4. All residual food waste and food containers to be segregated from recycled waste materials.
5. G.C. to submit documentation in the form of weigh tickets and/or receipts for all material reclaimed, landfilled and diverted from landfill. Hazardous materials to be identified and disposed of in accordance to Federal/ State and local law.
6. Hazardous materials to be identified and disposed of in accordance to local law.

**C. Ceilings**

1. All hangers to be hung from reinforcing mesh in slab above. Drilling for hangers shall be done before 8 AM or after 6 PM. Hangers shall be a minimum of 1" x 1/8" flat black iron or 1/4" galvanized rod, hung on maximum of 4'-0" centers.
2. Perimeter ceilings should not be below top of window frame.
3. All ceiling tile should have the highest recycled content whenever possible.
4. Refer to Design Guidelines for building standard window pocket details. (Pages 13-14)

#### **D. Flooring and Finishes**

1. Specify highest recycled content materials whenever possible.
2. Specify and install low-emitting (low or no Volatile Organic Compounds) adhesives (GS-36), sealants, paints (Green Seal Standards GS-11), coating, flooring systems, composite wood and agrifiber products.
3. All carpet to have Green Label Plus Certification. All carpet should have backing recycled content face weight, 3<sup>rd</sup> party certified. (SCS or other)
4. Certification of fire and flame spread rating confirming to applicable. Law must be submitted to building management.
5. REQUIRED SPECIFICATION - Window treatment – building standard window treatment to be Phifer Sheerwave style 2100 10% openness with valance.

#### **E. Architectural Woodwork**

1. Woodwork shall be fire-retardant wood only and provide written certification that the same has been complied with.
2. Adhesives shall not contain urea-formaldehyde resins and be able to achieve Greenguard indoor air quality certification.
3. Building **will not** provide free day of AC to acclimate any millwork/wood flooring. Standard/lease defined charges will apply.
4. Specify and use wood products certified by the Forest Stewardship Council (FSC).

#### **F. Furniture**

1. All furniture located within 12” of existing perimeter convector unit enclosures to be open backed furniture and moveable to permit proper access to convector units. No furniture shall be less than 12” from the perimeter.

#### **G. HVAC**

1. Refer to “General Conditions/Requirements for All Work” and “Demolition” for more information.
2. Prior to commencing with design drawings, tenant to provide load letter to building to confirm impact on base building systems and envelop.
3. Heating, Ventilating and Air Conditioning (HVAC) systems shall be designed in accordance with the One GCP Mechanical Specifications and Guidelines, New York City Building Codes, New York State and City Energy Code, SMACNA, ASHRAE and the Requirements and Regulations of all local and national codes.
4. HVAC system design layout shall not have an adverse effect on the existing base building systems. New design supply air quantities shall not exceed base building design air quantities (CFM) and should be field verified. Prior to alterations, perform traverse air readings at all ducts entering the tenant space and design accordingly, record CFM and static pressure available. Submit results of pre-demolition traverse air readings to Building Management with design documents.
5. In the event a window needs to be converted to an outside air intake, the modification to the windows are to be done to manufacturers’ specifications – color is to match the new building standard windows. Building management to approve any window modifications. Coordinate with Building Management. Shop drawings from the manufacturers are available for review at the building office.
6. **Ductwork:**
  - 6.1. Drawings shall show new and existing outside air, supply, return and exhaust air ducts, with all sizes indicated.

- 6.2. All ductwork, except for special exhaust systems, shall be constructed of galvanized sheet metal. Flexible ductwork is not permitted. Supply and return ductwork upstream and downstream of handling units and terminal boxes for the first 15 feet, shall be provided with 1 inch acoustical lining.
- 6.3. All ductwork shall be constructed in accordance with the latest SMACNA manual. Low pressure ductwork, 2 inch rating minimum for ductwork between VAV units and air outlets, and medium pressure ductwork, 6 inch rating minimum for ductwork between base building fans and VAV units.
- 6.4. All ductwork shall be sealed air tight in accordance with and SMACNA seal classification – A.
- 6.5. All ductwork being reused shall be inspected, sealed per SMACNA requirements, leak tested, and insulated by the mechanical contractor. All existing ductwork to be reused shall conform to specifications for new ductwork being installed.
- 6.6. For full floor tenant build out, all new medium pressure ductwork (>2 in. construction) shall be leak tested. Leak testing shall be performed in accordance with SMACNA leak testing manual. Results to be submitted to Building Manager.
- 6.7. Flexible canvas connections and vibration isolators shall be provided at ductwork connections to air handling units, fans and other rotating equipment.
- 6.8. Opposed Blade Volume dampers shall be shown on drawings wherever required for air balancing purposes. Volume dampers above sheetrock or inaccessible ceilings shall be cable type.
- 6.9. Access doors shall be indicated on the drawings wherever required for access and servicing of equipment such as coils, humidifiers, motors, fire/smoke dampers etc. and as necessary, and shall be a minimum of 18 inches x 18 inches. Access doors in insulated or lined ducts shall be double panel, insulated, minimum 20 ga.; access doors in non-insulated duct shall be double panel, minimum 20 ga. or single panel, minimum 18 ga. Access Door openings shall not be obstructed by pipes, conduits, lighting fixtures, sprinkler heads, etc.
- 6.10. Duct hangers shall be indicated and specified in accordance with the New York City Building Code and SMACNA.
- 6.11. Ductwork may not be suspended from electrical conduits, sprinkler piping, or water lines, hung ceiling, or any other existing or new mechanical or electrical system components. All ductwork shall be hung from building steel or existing duct attachments.
7. Air Outlets:
  - 7.1. All air outlets shall be indicated on the drawings, including face size, neck size, and CFM.
  - 7.2. Refer to Design Guidelines for Specific models.
8. Air Terminal Units:
  - 8.1. New air terminal units shall be Variable Air Volume type (VAV), single duct, pressure independent with factory mounted controls. Controls are to be DDC electronic, compatible with Johnson Controls Metasys system or BACNet (or other open protocol) compatible.
  - 8.2. Air terminal units shall not serve more than one tenant, and shall not be located on top of partitions, lighting fixtures, electrical conduits or piping. Operator and access doors of air terminal units shall be fully accessible.
  - 8.3. Tenant shall clean, recondition, recalibrate and test all existing air terminal units to be reused, including controls. Submit results of test to Building Manager.
  - 8.4. All VAV air terminal units shall open to maximum CFM setting during warm-up/cool-down cycle.
  - 8.5. Refer to Design Guidelines for Specific models.
9. Fire and Smoke Dampers:
  - 9.1. Accessible fire and/or smoke dampers and access doors shall be shown on the drawings wherever required by the New York City Building Code or other authorities having jurisdiction. Dampers shall be BSA or MEA approved and conform to the NFPA standards latest edition.
  - 9.2. Combination Fire & Smoke dampers shall be leakage Class 1, constructed to meet the requirements of UL555S, be so labeled, and have MEA number, and be operated by an external two position electric actuator that meets the latest UL555S standard. Dampers shall be controlled by fire alarm system shut down. Interface relays, BMS connection, and all wiring to be provided

- by the tenant.
10. Special Exhaust Systems:
    - 10.1. By approval by Base Building Management.
    - 10.2. As per NYC Building Code.
    - 10.3. Dishwasher exhaust ductwork shall be stainless steel, shall slope downwards in the direction of the dishwasher connection and shall be water tight.
  11. Perimeter Radiators:
    - 11.1. Existing steam radiators shall be shown on drawings including unit, control valve, and thermostat.
    - 11.2. Perimeter radiator should not serve more than one area or office. New control valves and traps should be installed to provide independent control to each office. Coordinate with base building for specific requirements and model.
  12. Insulation:
    - 12.1. Design and performance of components and methods specified herein shall comply with the applicable provisions of the NYC Code, New York State & City Energy Conservation Construction Code.
    - 12.2. All insulation, including jackets or facings, adhesives, mastics, cements, tapes and glass cloth for or as per NYC Code.
    - 12.3. Any treatment applied to jackets or facings to reduce flame spread or smoke production shall be permanent. The use of water soluble treatments is prohibited.
    - 12.4. All perimeter walls behind convector covers shall receive 1" foil rigid insulation attached with masonry screws.
  13. Air Cooled Equipment:
    - 13.1. AC Units 65,000 BTU or less (Constant Volume, Ceiling Mounted). Acceptable Manufacturers: York (JCI), United Cool Air, Carrier or Approved Equal
    - 13.2. AC Units greater than 65,000 BTU (VAV Floor Mounted with free cooling). Acceptable Manufacturers: York (JCI), United Cool Air, Carrier or Approved Equal
  14. Water Cooled Equipment:
    - 14.1. AC Units 65,000 BTU or less (Constant Volume, Ceiling Mounted). Acceptable Manufacturers: York, (JCI), Mammoth or Approved Equal.
    - 14.2. AC Units greater than 65,000 BTU (VAV Floor Mounted With free cooling). Acceptable Manufacturers: York, (JCI), Mammoth or Approved Equal.
  15. Controls:
    - 15.1. Building Controls vendor is New York Temperature Control
    - 15.2. To facilitate coordination, installation, start-up service and warranty, all automatic temperature control work shall be done by the automatic temperature control manufacturer.  
For additional guidance, contact John Keogh, telephone (718) 554-3920
    - 15.3. Tenant build-outs are to include demand based ventilation.
    - 15.4. Tenant to install hard wired leak detection at all AC units and connect to building BMS.
  16. All HVAC systems shall be balanced and adjusted in accordance with ASHRAE 111 (practices for measurement, testing, adjusting and balancing of building heating, ventilation, air conditioning, and refrigeration system), SMACNA (HVAC systems testing, adjusting and balancing) and TABB (international standards for environmental systems balance). The tenant is responsible to retain the services of a certified member of the Associated Air Balance Council (AABC) or the National Environmental Balancing Bureau (NEBB). Final balancing to be witnessed by building staff. A minimum of 24 hours' notice to the property manager is required. Complete balancing reports approved by tenant's engineer to be submitted to Building Manager.
  17. Testing:
    - 17.1. The contractor shall complete all tests required by all rules, regulations, etc., of ASHRAE, National Codes and all New York City authorities having jurisdiction and shall prepare and file all forms, tabulations, plans, etc., pertinent thereto with the referenced authorities. The contractor shall accomplish all testing work with personnel of proper caliber, including design professionals, where so required.

- 17.2. The contractor shall flow balance every system to the quantities as shown on all related drawings.
- 17.3. After installation, all piping, valves, and fittings shall be hydrostatically tested to 150% of their maximum system design pressure but no less than 150 psig. Only water shall be used as a test medium. All testing shall be witnessed by the Building Engineer. The Building Manager shall document his/her observations of successful testing showing no failures or leakage in each system. Duration of test shall be a minimum of 4 hours with system valves capped, pressure apparatus disconnected, and no change in pressure.
18. Prior to accepting any system as ready for use, copies of the necessary Building Department, Fire Department, and DEP permits and record drawings shall be supplied to the Property Manager. Main riser valves to tenant system will not be opened until Building Engineer is fully satisfied that system has been properly cleaned, tested and treated. Main riser valve is only to be opened or closed by building personnel.
19. Piping:
  - 19.1. All modifications to steam system to be approved and reviewed with Building Engineer prior to design. Design to be reviewed by building base engineer. Tie-ins to be coordinated with Building Engineer.
  - 19.2. All design and system operating conditions for all systems to be reviewed with the base Building Engineer prior to start of work.
  - 19.3. Provide dielectric fittings for all systems where dissimilar metal are joined.
  - 19.4. New systems to be flushed and cleaned upon installation being completed to remove any construction debris. Flushing to be performed in compliance with Base Building Water Treatment Vendor's requirements. Coordinate with base Building Management for vendor.

## **H. Plumbing**

1. Refer to "General Conditions/Requirements for All Work" and "Demolition" for more information.
2. All plumbing must be indicated on the drawings. Indicate make and model number for proper engineering and roughing. If a contractor must enter another tenant's area to perform work, it is the tenants' responsibility to make the arrangement with the Building Management.
3. All plumbing work, materials, equipment and fixtures shall be new and approved by Building Manager and by authorities having jurisdiction over the work, including but not limited to, the New York City Plumbing Code.
4. All Pantries, Sinks, Dishwashers, Ice makers, Coffee Machines and other counter-top dispensers must incorporate leak detection and water shut-off systems. The Leak Detection and Shut Off system shall be connected to and monitored by the Building's BMS System at the tenant's expense. shutdown plumbing must be indicated on the drawings. Indicate make and model number for proper engineering and roughing. If a contractor must enter another tenant's area to perform work, it is the tenants' responsibility to make the arrangement with the Building Management.
5. All workmen employed to perform the work shall be skilled in their respective trades and under direct supervision of a New York City licensed plumber. All work shall be performed in a neat and workman like manner consistent with building practices.
6. No plumbing piping shall be run in, or through, electric closet rooms, telephone closet rooms, and elevator machine rooms.
7. Provide hangers and supports for horizontal and vertical piping in accordance with the current New York City Plumbing Code. No piping shall be supported from ductwork, other piping, or electrical conduit.
8. The plumbing contractor shall be responsible for insuring that access doors are installed for both new and existing valves concealed by masonry, plaster or drywall construction. Minimum size shall be 18 inches x 18 inches, unless otherwise approved and shall be rated when installed in rated construction. The rating of the access door shall match the construction it is installed in.
9. Plumbing riser diagrams shall be provide for any plumbing work, all waste drainage, stormdrainage,

Hot water heating equipment shall be approved by the New York City Board of Standards and Appeals.

ers and model numbers shall be specified. M.E.A. numbers for gas fired equipment shall be indicated. Tenant shall provide supplemental tank type electric domestic hot water heater for new pantries, toilets, etc. Provide drip pan beneath heater and automatic shut off with local alarm for all

tank type.

10. Tenant meters are generally not required for hot and cold domestic water services, but if such services are required, they shall be installed in compliance with the NYC DEP.
11. Replace isolation valves at riser prior to furnishing and installing new connections.
12. With Building Manager approval, tenant may install a sump pump for pantries. The sump pump shall be provided with a drip pan and leak detector for automatic shut off with local alarm.
13. All domestic water supply system piping, fittings and valves shall be insulated. All insulation shall be furnished and installed in compliance with the NYC Plumbing Code and New York State & City Energy Conservation Construction Code.
14. Install supplemental drip pan and leak detection to isolate water supply to hot water heaters.
15. Provide unions or flanges at connections to each piece of equipment to facilitate removal.
16. Prior to disconnecting and connecting new work to existing systems, the plumbing contractor shall notify the Property Manager and offer a proposed schedule of work. Building Manager will authorize connections and coordinate necessary shut downs and drain downs as required. Shut downs and drain downs may be performed by Building Management. Two (2) days advance notice to the Property Manager is required.
17. Connecting new work to existing systems shall be performed in a neat and acceptable manner. All affected work is to be restored to its original condition and operation.
18. When connecting to existing stacks and risers, provision is to be made for future connections by providing capped and valved outlets on domestic water risers and plugged outlets on the sanitary and vent stacks.
19. Tests:
  - 19.1 Test all domestic water piping hydrostatically to 125 psig.
  - 19.2 Hydrostatic test pressures shall remain constant, with no variation for 120 minutes.
  - 19.3 Test shall be witnessed by Building Engineer.
  - 19.4 The plumbing contractor will be held responsible for all damage due to test failures and leakage in the test area and adjacent tenant or building spaces.

## **I. Electrical**

1. Refer to “General Conditions/Requirements for All Work” and “Demolition” for more information.
2. Engineer shall retrieve and review all relevant archived documents, which are available in the Property Manager’s office. In addition to this review, the engineer shall field verify all existing conditions and indicate on plans: all meter numbers, panel board designations, circuit numbers, electrical closet designations, etc. This information must be provided regardless of whether or not the equipment will ultimately be removed.
3. Provide a complete power riser diagram including the main riser serving the construction floor/area. Indicate all floors served by the riser and indicate its main overcurrent protection rating. All new risers shall be copper; connections, taps etc. shall be of the high compression type.
4. Energy Efficient Lighting: Specified Light Power Density should be .9-.65 watts PSF. Lighting fixtures shall be completely wired and constructed to comply with all NYC and National Electrical Codes and Underwriters Laboratories Standards for electrical lighting fixtures. Lutron lighting controls should be incorporated in design. For projects 10,000 rsf or larger, Tenant should include Lutron ESN panel. Refer to Design Guidelines for specifications.
5. Emergency Powered Lighting: The tenant engineer must submit a letter to the Property Manager stating that the emergency lighting is code compliant. Emergency lighting fixtures must have self-contained battery back-up units. Battery shall be for 90 minutes of operation.
6. Energy Star equipment/appliances should be used whenever possible.
7. Provide a connected and demand load summary for all new and existing equipment and indicate the watts-per-square-foot usable based on the tenant’s useable square footage.
8. Electric closets shall not be used to install wiring and/or conduit from floor to floor.

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9. Lighting & Appliance Panel boards are maintained by the building and therefore, unless otherwise noted, panel boards shall be provided as follows:

- 8.1 Panel boards exceeding 225 amperes must be approved by Building prior to installation.
- 8.2 Panels shall be factory assembled, deadfront, bolt-on circuit breaker type, UL listed.
- 8.3 Trims shall have door-in-door construction.
- 8.4 New electric panels shall be named as in the following example: LP-10-1

LP = Lighting panel  
10 = Floor number  
1 = Panel ID (sequential)

- 10. Threaded aluminum or rigid steel conduit shall be used when power distribution is exposed and is run outside of tenant space. Provide and install compression fittings when installing EMT within tenant space. EMT can be used in accessible suspended ceiling and shall be run from room to room with a minimum of one junction box in suspended ceiling in each room. MC Cable with ground wire shall be utilized for branch circuits in dry hollow locations, hung ceiling and block walls. MC Cable shall not be used for homeruns. BX Cable shall not be used.
- 11. All wire, cable and bus shall be copper.
- 12. Do not chop outlets, switches, or similar devices into core walls. "Poke through" floor devices are not permitted. No trenching or core drilling or cutouts are permitted to be installed in the floor slab without structural review and specific written approval from the Building Management. Building Management reserves the right to restrict locations of such items to areas that will not interfere with the Buildings framing system or components nor interfere with the any other tenant space. No Conduits or cut-outs are permitted outside of Tenant's premises.
- 13. Sub-Metering: Landlord shall supply and install, at tenant cost, sub meters at all existing base building feeders supplying the leased premises in accordance with approved tenant engineering drawings. Tenant to sub-meter data centers as defined by EPA for Energy Star. Tenant should review W & H Properties Energy Efficiency Guidelines for ways to reduce total tenant energy use.
- 14. All work must be filed with New York City Department of Buildings and the Bureau of Electrical Control. The permit must be posted at the job site and copies of Permit and Final Inspection must be sent to the Property Manager's Office. The electrical drawings identified in the Tenant Work Consent letter must be at the job site at all times.
- 15. It shall be the contractor's responsibility to balance loads to within 10%, correct any existing violations and refurbish electric panels where necessary. The condition of all electric panels and closets at the project completion is subject to the review and approval of Building.
- 16. At the completion of the alteration, meter pans, safety switches, panels, and other distribution devices are to be correctly labeled. Previous labeling or markings are to be removed or painted over. Provide black lamicaid sheet with 3/2 inch white lettering, fastened with epoxy cement.
- 17. All panel directories are to be type written with the main feeder number, main panel number, circuit number and the location and purpose of circuits. Panel board branch circuits shall be labeled as to space, room number, and purpose—"Space 503, Circuit #5, Lighting Outer Office"— by electrical contractor. This work will be done to the satisfaction of the Landlord.
- 18. The source of all new risers shall be identified in a manner consistent with existing switchboard designations. All pull boxes required for new riser installations must identify the riser and the tenant and/or equipment served.
- 19. Wiring must have solid color insulation.
- 20. The color of switch legs must match phase circuit color.
- 21. Blown fuses and tripped circuit breakers on floors not under construction are to be changed or reset by Building Engineer only.
- 22. When an electrical design involving emergency lighting is done by a licensed electrical contractor, the following statement must appear in the comments field of the work permit application: "I certify that the installation and design as indicated on this application complies with the requirements of the building code including Local Law 16."
- 23. Upon completion of the electrical work, the licensed electrical contractor must submit to the Property

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Manager's office, a copy of the Certificate of Electrical Inspection for all work performed including the installation of emergency lighting if applicable.

24. Electrical contractor shall remove all unused wiring back to the source. Any non-used outlets shall be abandoned, existing wires pulled out, and continuation of circuitry if needed to maintain other spaces shall be in scope of work.
25. Where demolition is to take place in the area of the building fire safety equipment such as alarms, speakers, smoke detectors, floor warden stations, etc., the building engineering department must be notified 48 hours prior to start of demolition so that equipment may be protected or removed (by contractor if necessary).
26. Lighting controls shall be designed by Lutron. Lighting shall be controlled wirelessly. Provide wireless occupancy sensors, wireless switch, daylight sensors, and power packs. Refer to Design Guidelines for specific models.

#### **J. Security**

1. REQUIRED SPECIFICATION - Entrance door security system shall be building standard. Furnish and install in-wall J-box, wiring (provide 120V power) and a Siedle flush mounted housing item # GU611-3-1-0 part # KR611-3-1-0. Edge of housing to be 6" from door frame, 48" AFF center line.

#### **K. Telecommunications**

1. Refer to "General Conditions/Requirements for All Work" and "Demolition" for more information
2. Tenant to submit plan identifying cabling route, impact on building common areas and adjacent spaces.
3. Cable should not be attached, connected to any hangers that support ceilings or ducts. Cable to be properly labeled and independently hung up 'J' hooks or cable tray.
4. Cable run outside of demised tenant space to be run in conduit or EMT.
5. Low voltage risers to be labeled on every floor.

#### **L. Class "E". Fire /Life Safety Systems**

1. Refer to "General Conditions/Requirements for All Work" and "Demolition" for more information.
2. The building is equipped with approved modified Class E Fire Alarm System. Tenant's engineer is responsible for meeting all code and Building requirements.
3. Base building fire alarm system vendor is FireCom. Contact Haran Chelliah or Damarys DeJesus (718)899-6100. All equipment, devices and system re-programming shall be provided by this vendor as retained by tenant's contractor.
4. Tenant's engineer shall contact Firecom in order to coordinate project requirements which shall be fully reflected on the design drawings submitted to the building manager for review.
5. Any work on the base building fire alarm system shall be performed with permission of the Building Manager. Work is to be performed at tenant's expense by contractors approved by Building Management. Final connections to the base building system are to be coordinated with the Building Manager.
6. Replace all existing fire speaker/strobe face plates with white, all new fire speaker/strobe to be white.
7. Field verify the location of all existing base building fire alarm devices and indicate all equipment, including duct smoke detectors on both the demolition and construction drawings submitted for review.
8. All new initiating devices installed by tenants shall be intelligent - addressable type compatible with the base building Firecom fire alarm system and approved by the Building Manager. Drawings must be prepared using Building standard symbols and must be reviewed by the Building Manager.

9. Fire Guards (Alteration, Construction):

A person holding a "Certificate of Fitness" F91, F93 (Fire Guard Construction) issued by the Fire Department shall be required to be on duty in the capacity of a fire guard during all hours whenever the smoke detector system or sprinkler system has been taken off-line. Certificate F91 covers 8am-5pm, Monday through Friday. Certificate F93 covers 5pm-8am, Monday through Friday, and all hours on Saturday and Sunday.

Fire guards shall maintain log books recording the following:

- 1) Date and time floor(s) taken off-line.
- 2) Floor(s) taken off-line.
- 3) Time of inspection and conditions found.
- 4) Date and time floor(s) system restored.
- 5) Name and Certificate number of Fire Guard.

All systems must be restored at the close of the business day. In cases of after business hours demolition fire guards shall be on duty as long as the system is off-line.

Certified Fire Guards are required to adhere to all duties of Fire Guard as required by the Certificate of Fitness and have on their person the Certificate of Fitness or photographic copy of such permit for inspection by the Fire Department and One Grand Central Place.

10. The tenant's engineer must field verify the location of all existing base building fire alarm devices and indicate them on both demolition and construction drawings submitted for review.

11. System Control Panels:

11.1 Data gathering panels for tenant connection are located on miscellaneous floors. Additional capacity may be added as needed at the tenant's installation and maintenance expense. All building fire alarm panels including any tenant sub system panels, shall be fitted with FireCom/Notify key. Splicing is not permitted

11.2 All wiring shall be of an approved 200°C jacketed Teflon type. In areas where wiring is susceptible to damage due to exposure to potential mechanical damage (e.g., service elevator lobby, MER, EMR, etc.), the wiring shall be installed in rigid steel conduit.

11.3 All wiring within demised premises shall be upgraded to 200°C Teflon Standard. Replace existing wiring of devices to remain to suit.

12. Sub-Systems (Tenant Systems): Sub-system panels shall be installed within the Tenant demised space and must be readily accessible to Building personnel. Indicate the location of the panel on drawings submitted for review. Approved sub-systems must report to the base building system through interface modules. All sub-system wiring shall be installed in rigid steel conduit as required by code. Tenant sub-system panels shall be fitted with FireComNotifier key number, and shall be accessible to Building at all times.

13. If the total quantity of initiating devices (smoke detectors, duct detectors, pull stations, smoke dampers, waterflow switches, etc.), exceeds base building system capacity, the tenant shall provide and install a separate subpanel or provide necessary components as coordinated with FireCom to accommodate devices.

14. Programming: FireCom is the agent to perform all programming and make computer graphic changes necessary to incorporate tenant fire alarm equipment into the base building fire alarm system. The tenant shall pay all programming costs and the cost to change computer graphics. The tenant's engineer must submit a fire alarm record drawing to facilitate all programming and computer graphics updates. Failure to do so will result in additional costs which will be charged to the tenant. FireCom shall provide installation shop drawings for review/approval prior to commencing installation.

15. Full floor tenants shall provide a two area smoke detectors in each of the passenger, night and freight elevator lobbies, for compliance with current RS-18 requirements. Detectors shall be connected to the addressable loop serving the floor.

16. Full floor tenants shall install new manual pull stations mounted at ADA conforming height at each existing pull station location that is not already at such conform height. When the new pull stations have been programmed, existing pull stations shall be removed and patched to match the exiting finish.

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No splices are permitted.

17. Full floor tenants shall relocate existing fire warden stations to ADA conforming mounting height. Warden station wiring shall be extended to the new location. Upon activation the existing outlet shall be removed and patched to match existing finish. No splices are permitted.

## **M. Sprinklers**

1. Refer to “General Conditions/Requirements for All Work” and “Demolition” for more information.
2. The building is equipped with automatic wet-pipe sprinkler systems. The design of the tenants’ sprinkler systems shall be coordinated with Building Management to ensure compatibility with existing building sprinkler system.
3. Sprinkler systems are to be designed in accordance with building codes of the City of New York, Fire Department rules and regulations, recommendations, and all other authorities having jurisdiction.
4. The sprinkler drawing must include, in addition to a plan view showing all piping, a riser diagram showing proposed connections to the existing system.
5. Sprinkler floor control valve assembly details shall be indicated on drawings with all associated components.
6. Sprinkler head detail shall be shown on the design drawing for each installation type.
7. Sprinkler systems layout shall be designed to insure that all sprinkler heads provide adequate coverage. Associated drawings shall be submitted for review.
8. Pre-action sprinkler system piping layouts shall be indicated on the drawings and shall include the following: pre-action valve assembly, tamper water flow switch and all associated mechanical and electrical components. A separate electrical riser diagram indicating all electric components including but not limited to detectors, pull stations, A/V devices, bells, signage, etc. and tie-ins to existing system shall be provided to facilitate NY Fire Department electrical review and installation approval. Pre-action valve assembly details must be shown on the drawing with all associated components, including drain and test assembly.
9. Hydraulic calculations must be submitted to Building Engineer for all sprinkler system designs. Water density, areas of sprinkler operation and water supply requirements shall be in accordance with NFPA standards as modified by the NYC Building Code
10. The sprinkler system design basis shall be indicated including: Square feet area to be sprinkled, class of occupancy, design density (GPM/sq.ft.), minimum remote sprinkler head pressure (psig). System description including sprinkler size, total number of heads, K-factor and C-factor used.
11. Water supply information including GPM and pressure required, for fire pumps, pressure tanks or gravity tanks shall be provided.
12. Provide details for any modifications, including fire reserve modifications, to the existing gravity tanks where required.
13. Tenants to sprinkler all rooms on leased floor.
14. Sprinkler systems piping material, valves, fittings, hangers, switches, drain/test stations and all associated components shall be in accordance with applicable regulations. Model numbers and pressure ratings of all sprinkler system components shall be specified on the design drawings.
15. Piping: All piping including sprinkler valves assembly shall be Schedule 40 black steel, Schedule 10 piping shall not be used.
16. Fittings: All fittings shall be cast iron threaded, cut grooved or roll grooved.
17. All exposed vertical risers (and valve handwheels) shall be painted in accordance with local law 58.
18. All connections to existing FSP/Spk risers shall utilize welded connections, Weldolet as manufactured by Bonney Forge Corp.
19. Valves: The valves tabulated below have been selected from the catalogs of Nibco & Milwaukee Mfg. Co. and are representative of the design, materials, and working features desired.

1) Gate Valves (all valves 3 inches and larger)

End	Model No.	P.S.I. W.W.P.	Materials	Spindle	Size
Flanged	P-607-OTS	175	IBBM	O.S.&Y.	3" & larger
Flanged	P-667-O	175	IBBM	O.S.&Y.	3" & larger

2) Butterfly valves (1 " through 2-1/2 inches) with built-in tamper switch

End	Model No.	P.S.I. W.W.P.	Materials	Size
Threaded	BB-SCS02	175	Bronze	2-1/2" & smaller
Grooved	BBVSCS02	175	Bronze	2 1/2" & smaller

3) Check Valve

End	Model No.	P.S.I. W.W.P.	Materials	Size
Threaded	KT-403-W	200	Bronze	3" & smaller
Grooved	F-903-W	175	IBBM	2 1/2" & larger

20. Sprinkler Heads: All sprinklers shall be of the quick response type. Spray type, with 1/2 inch normal discharge orifice. Temperature ratings 160°-175° F except where special conditions exist. Sprinkler heads shall be installed and secured in a workman-like manner, so that the finished area is not damaged. Sprinkler heads installed in ceiling tiles shall be located in the center of a tile with a tolerance of  $\pm 1/2$  inch. Where concealed type sprinkler heads are used, the cover plates shall be flush with the ceiling plane and per the manufacturer's installation guidelines to limit shadow effect. Refer to Design Guidelines for Specific models.

21. Waterflow Switches: Vane-type waterflow detectors shall be installed on the sprinkler system piping as designated on the drawings. Waterflow switches shall not be mounted in a fitting or within 12 inches of any fitting that changes the direction of waterflow. Detectors shall be designed for mounting on either vertical or horizontal piping, and have a sensitivity setting to signal any flow of water that equals or exceeds the discharge from one sprinkler head. Detector switch mechanisms shall incorporate an instantly recycling pneumatic retard element with an adjustable range of 0 to 70 seconds. Switches shall have a minimum rated capacity of 7 amp 125 volt A.C. - 25 amp 24 volt D.C. and shall be actuated by a polyethylene vane extending into the waterway of the piping. Detectors shall be of weatherproof dust tight construction, provide a 1/2 inch conduit entrance and be finished in red baked enamel. (Potter Electric or Notifier.)

22. Tamper Switch: Valve supervisory switches shall be provided on all control valves. The switch mechanism shall be contained in a weatherproof die cast aluminum body which shall provide a 1 inch tapped conduit entrance and incorporate the necessary facilities for attachment to the valve. Switch housings shall be finished in red baked enamel. The switch mechanism shall have a minimum rated capacity of 7 amp 125 Volt AC: 0.25 amp 24 volt D.C. (Potter Electric or Notifier). Tamper switches shall be arranged so as not to interfere with normal operation of the valve and shall be adjusted to operate within 2 revolutions of the control valve or when the stem has moved no more than one fifth of the distance from its normal open position

23. Pressure Reducing Valves: Provide pressure reducing valves as required. The valve is to be of all

bronze construction with bronze and stainless steel trim. The valve shall be LTL listed and rated for 300 psi working pressure and able to be tested to its full rating stamped on valve without damage to any part of the valve. The valve shall be spring actuated, balanced piston, single seated type without diaphragm. All parts are to be easily removable or replaceable sealed at the factory; a seal is to be affixed to the valve at the factory for protection against tampering. Cla-Val, Model 90G-21 or approved equal.

24. Pressure Relief Valves: All sprinkler systems requiring a pressure relief valve shall be provided with a diaphragm operated pressure relief valve. The valve seat and all working parts exposed to the fluid to be of non-ferrous material. Lonergan Co. - T Series or approved equal.
25. Pressure Gauges: Gauges are to be of a type approved by authorities having jurisdiction and shall have 4 1/2 inch dials, cast brass cases, and have a range equal to twice the working pressure. Each gauge shall have a shut-off cock or valve together with a plugged outlet for the connection of an inspector's test gauge. Gauges shall be double spring type. Provide a gauge on both sides of each pressure reducing valve.
26. Sprinkler piping exposed to the elements (freezing conditions) shall be adequately covered and heat-traced.
27. Provisions are to be made for electrical connection of the water flow and tamper switches to the Building Modified Class "E" Fire Alarm system, by the electrical contractor. Final connections to the sprinkler alarm riser is to be coordinated with the Building representative.
28. Closing of any building OS&Y control valve at any time is to be coordinated with the Building Manager. Provide a minimum of 3 days' notice.
29. All control valves, pressure reducing valves, check valves, water flow, tamper switches etc., shall be installed so as to be easily accessible for maintenance and removal.
30. Sprinkler system piping shall be installed so that all or any part of the system can be completely drained. Drain assemblies shall be connected to drain riser and are to be provided with a globe or angle type valve and spill to an approved receptacle to avoid flooding drain riser or slop sink. Provide dead leg drains, consisting of either a heel tee with a plugged outlet or a 1" nipple and cap, to allow for drainage of trapped branch lines.
31. Sprinkler piping and risers shall be adequately supported from the building structure. Types of hangers and installation methods shall be in accordance with the requirements of the applicable version of NFPA-13 of 2002 as modified by Appendix Q the NYC Building Code. On branch lines, there shall be not less than one hanger for each length of pipe. On loops or mains, there shall be at least one hanger between each two branch lines.
32. Inspector's test connection shall be at least 1 inch diameter terminating in an outlet giving a flow equivalent to one operating sprinkler. The test assembly shall include a globe or angle valve, sight glass, 1/2 inch orifice, union and all other appurtenances, required for a complete assembly.
33. For any modifications or additions to the existing system and prior to filling sprinkler system with water, air pressure testing is to be done. The air test shall be conducted at a pressure of 40 psig for 24 hours with a maximum pressure loss of 1 1/2 psig. Test is to be witnessed by a Building representative. Arrangements are to be made, with a 24 hour notice, with the Building Engineering. After acceptance of the air pressure test by the Building representative, the system is to be water filled and arrangements made by the tenant to have the formal acceptance test by authorities having jurisdiction and witnessed by the Building Management office representative. A 24 hour notice is required by the Property Manager through the Building representative. In the course of this test, waterflow and tamper switches are to be connected electrically, at the tenant's expense. A hydrostatic test is to be performed on piping installed at a pressure of 200 psig for 2 hours with no loss in pressure, independent of the rest of the building for any modification or addition.
34. Furnish and install signs and seals as and where required by Building, NYC and NFPA. Signs shall be located near the device in a conspicuous location. Furnish and install updated signage at the floor control assemblies indicating required pressure, flow and the quantity of sprinkler heads calculated.

35. Furnish and install a 3 inch brass tag, with 1-1/2 inch red numbers to each valve. Also provide to the Building office representative, a piping diagram of the sprinkler system indicating the location of all control valves by number, and a valve chart, designating purpose or area served by each valve.
36. Upon acceptance of the system, a complete briefing for all personnel is to be conducted for all shifts. The briefing will include a complete demonstration of the system.
37. Furnish the Building Management office with the quantity of spare sprinkler heads and wrenches as specified in NFPA 13 of 2002 as modified by Appendix Q of the NYC Building Code and escutcheon plates.
38. It shall be the responsibility of the tenant to provide a copy of the agencies' signoffs and copies of approved drawings to the Building.

**EMPIRE STATE**

**REALTY TRUST**

[empirestaterealtytrust.com](http://empirestaterealtytrust.com)

**DESIGN GUIDELINES  
(Building Standard Specifications)**

**One Grand Central Place  
New York, NY**

June 19, 2019



**SECTION III**  
**DESIGN GUIDELINES**

<b>GENERAL ARCHITECTURAL</b>	
<b>FIRESTOPPING</b>	<b>SEAL ALL PENETRATIONS OF EXISTING/NEW FIRE RATED PARTITIONS.</b>
<b>ABATEMENT</b>	<b>USE ONLY CERTIFIED ASBESTOS ABATEMENT CONTRACTOR APPROVED BY THE BUILDING MANAGEMENT TO REMOVE ALL ASBESTOS.</b>
<b>MILLWORK</b>	<b>ALL MILLWORK INCLUDING BLOCKING AND BRACING SHALL BE FIRE RETARDANT AS PER CODE</b>
<b>GENERAL ENGINEERING</b>	
<b>SPRINKLER</b>	Fully Sprinklered building
<b>PLUMBING</b>	Tenant connections to the plumbing system are accomplished at various wet columns located through-out the floor. Tenants to install new isolation valves when connecting to CW & HW risers.
<b>HVAC</b>	Commercial Tenants: Ceiling hung or floor mounted air handlers serve sections of each floor. Existing systems are constant volume or VAV. New installations are to be variable volume plenum return for above 5 tons and constant volume for single zone 5 tons and below. Multiple zone systems which are 5 tons and below shall be VAV type. Tenants are served from these units via insulated ductwork. Ventilation air is obtained from landmark approved louvers in existing window openings. Retail Tenants: Air cooled or Water cooled DX by Tenant. Toilet exhaust and ventilation connections are provided into demised space by Property Management.
<b>SUPPLEMENTAL A/C</b>	Commercial Tenants: Air or Water-cooled by Tenant Retail Tenants: Air or Water-cooled DX by Tenant
<b>CONTROLS</b>	Energy Options
<b>ELECTRIC POWER</b>	120/208V power is delivered to each floor via two electrical closets. Electrical distribution is then fed from circuit breaker panels to the tenant space.
<b>METERING</b>	Landlord to install submeters on all power to demised space.
<b>ELECTRICAL LIGHTING</b>	120v – battery backup required for emergency.
<b>FIRE ALARM</b>	AFA

## ARCHITECTURAL TYPICAL DESIGN

### ENTRY DOORS & HARDWARE

#### **Double or Single-Entry Doors:**

Size: Double Door has two sizes: (1) 3'-0" x 7'-10" x 1-3/4" / (1) 2'-0" x 7'-10" x 1-3/4"

*or*

(1) 3'-0" x 7'-10" x 1-3/4"

Type: Rated Solid Core Door

Veneer: Walnut

Color: Stain to match building control sample.

Astragal: Full Height Veneer Wrapped Metal Astragal. (Double Door)

Mail Slot: Existing Mail Slot to be Re-installed.

Closer: Norton Closer Item: 8501BF (Non-Hold Open)

Silencers: Ives Item: SR64

Hinges: Stanley Item: FBB 179 4-1/2" x 4-1/2" (4 per door)

#### **Material Guidelines:**

- Urea formaldehyde free.
- FSC Certified wood.
- Manufactured or extracted within 500 miles of final installation.
- Be engineered wood product with recycled content if possible.

#### **Adhesives**

- No styrene butadiene, methylene chloride or chlorinated hydrocarbons.

#### **Entry Mortise Lockset**

Manufacturer: Schlage

Item: 9453P Mortise 'L' Series

Lever: L-Full Escutcheon Plate

Cylinder: Schlage Type "C"


Keyway: Schlage Type "C"

Finish: US10 Satin Bronze (Corridor Side)

US26D Satin Chrome (Suite Side)


Website : [Schlage L Series](#)

Provide all miscellaneous door hardware required for proper operation or to meet code requirements. Undercut all doors as required for floor finishes. Verify keying requirements with Building Management.

<p><b>ENTRANCE DOOR CONTROL SAMPLE</b></p>	
<p><b>DOOR HARDWARE &amp; FRAMES (METAL &amp; GLASS OFFICE FRONT)</b></p>	<p><b><u>Conference Room:</u></b>  Size: 3'-0" x 8'-0" x 1/2"  Type: Glass Door w/ Passage Set  Color: Clear Anodized metal  Hinges: Manufacturer recommended Finish: US26D Satin Chrome  Door Stop: Manufacturer recommended, Finish: US26D Satin Chrome</p> <p><b><u>Office Doors:</u></b>  Size: 3'-0" x 8'-0" x 1/2"  Type: Glass Door w/ Lockset  Color: Clear Anodized metal  Hinges: Manufacturer recommended. Finish: US26D Satin Chrome  Door Stop: Manufacturer recommended. Finish: US26D Satin Chrome</p> <p><b><u>Storage Set:</u></b>  Manufacturer: Schlage – ‘ND80PD’ Series, Item: Athens</p> <p><b><u>Mechanical Room Set:</u></b>  Manufacturer: Schlage – ‘ND’ Series, Item: Athens  Website: <a href="#">Schlage ND Series</a></p> <p>Hinges: Stanley Item:CB1900 (3)Knuckles, (2) Pair, Finish: US26D Satin Chrome  Door Stop: Ives Item FS 436/435, Finish: US26D Satin Chrome  Silencers: Ives Item:SR64/65 (3) Per Leaf, Finish: Grey</p> <p><b><u>NOTE: All hardware finishes to be US26D Satin Chrome</u></b></p>

<p><b>DOOR HARDWARE &amp; FRAMES (WOOD &amp; GLASS OFFICE FRONT)</b></p>	<p><b><u>Conference Room/ Office Doors:</u></b>  Size: 3'-0" x 8'-0" x 1/2"  Type: Plain Sliced Cherry veneer/glass door  Color: Stain to match building control sample.</p> <p><b>Office Lockset:</b>  Manufacturer: Schlage – ‘D’ Series/ND53PD, Item: Athens  Finish: BHMA 626; US26D</p> <p><b>Conference Rooms Passage set:</b>  Manufacturer: Schlage – ‘D’ Series/ND10S, Item: Athens  Finish: BHMA 626; US26D</p> <p><b>Hinges:</b> Stanley Item: CB900 Series (3) Knuckles, (2) Pair, Finish: US26D Satin Chrome  <b>Door Stop:</b> Hager, Item 242F, Finish: US26D Satin Chrome  <b>Silencers:</b> Ives Item: #SR64 - (3) Per Leaf, Finish: Grey</p> <p>Material Guidelines:</p> <ul style="list-style-type: none"> <li>▪ Urea formaldehyde free.</li> <li>▪ FSC Certified wood with COC certification.</li> <li>▪ Manufactured or extracted within 500 miles of final installation.</li> <li>▪ Be engineered wood product with recycled content cores.</li> </ul> <p>Adhesives:</p> <ul style="list-style-type: none"> <li>▪ No styrene butadiene, methylene chloride or chlorinated hydrocarbons.</li> </ul>
<p><b>DOOR HARDWARE &amp; FRAMES (GENERAL)</b></p>	<p><b><u>Service Rooms, IT Room, Storeroom/Mechanical &amp; Closet Doors:</u></b>  Size: 3'-0" x 8'-0" x 1/2"  Type: Hollow Metal, Non-Rated, Knock-down Frames</p> <p><b>IT Room Louver:</b>  12"x24" frameless louver</p> <p><b>IT Room Lockset:</b>  Manufacturer: Schlage – ‘D’ Series/ND75PD, Item: Athens  Finish: BHMA 626; US26D</p> <p><b>Passage set:</b>  Manufacturer: Schlage – ‘D’ Series/ND10S, Item: Athens  Finish: BHMA 626; US26D</p> <p><b>Storeroom Lockset:</b>  Manufacturer: Schlage – ‘D’ Series/ND80PD, Item: Athens  Finish: BHMA 626; US26D</p> <p><b>Hinges:</b> Stanley Item: CB900 Series (3) Knuckles, (2) Pair, Finish: US26D Satin Chrome  <b>Door Stop:</b> Hager, Item 242F, Finish: US26D Satin Chrome  <b>Silencers:</b> Ives Item: #SR64 - (3) Per Leaf, Finish: Grey</p>

<p><b>DOOR HARDWARE &amp; FRAMES (GENERAL)</b></p>	<p><b>Service Rooms, Storerooms/Mechanical &amp; Closet Doors:</b>  Size: 3'-0" x 8'-0" x 1/2"  Type: Hollow Metal, Non-Rated, Knock-down Frames</p> <p><b>Classroom Lockset:</b>  Manufacturer: Schlage – ‘D’ Series/ND75PD, Item: Athens  Finish: BHMA 626; US26D</p> <p><b>Passage set:</b>  Manufacturer: Schlage – ‘D’ Series/ND10S, Item: Athens  Finish: BHMA 626; US26D</p> <p><b>Mechanical Room and Storeroom Lockset:</b>  Manufacturer: Schlage – ‘D’ Series/ND80S, Item: Athens  Finish: BHMA 626; US26D</p> <p><b>Hinges:</b> Stanley Item: CB900 Series (3) Knuckles, (2) Pair, Finish: US26D Satin Chrome  <b>Door Stop:</b> Hager, Item 242F, Finish: US26D Satin Chrome  <b>Silencers:</b> Ives Item: #SR64 - (3) Per Leaf, Finish: Grey  <b>Closer:</b> Norton #8501, Finish: US26D Satin Chrome (For Mechanical Rooms)  <b>Seal:</b> Zero Head: Jamb Seal #770AA w/ #770SPB. Zero Automatic  Mortised Drop Seal #364AA (For Mechanical Rooms Only)</p>
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<p style="text-align: center;"><b>WOOD SYSTEM CONTROL SAMPLE</b></p>	
<p style="text-align: center;"><b>PAINT</b></p>	<p><b>Primer General:</b> Benjamin Moore – Ultra 500 Primer N534 Website: <a href="#">Benjamin Moore - Ultra Primer N534</a></p> <p><b>Primer Metal Surfaces:</b> Benjamin Moore – Super Spec HP Acrylic Metal Primer P04 Website: <a href="#">Benjamin Moore - Super Spec HP</a></p> <p><b>General Paint:</b> Benjamin Moore – Eco Spec Waterborne Interior Latex Paint Color: Chantilly Lace Finish: Flat Website : <a href="#">Benjamin Moore EcoSpec Flat</a></p> <p><b>Ceiling Paint:</b> Benjamin Moore – Eco Spec Waterborne Interior Latex Paint Color: Bright White Finish: Flat Website : <a href="#">Benjamin Moore EcoSpec Flat</a></p> <p><b>Convactor HM Frame Paint:</b> Benjamin Moore – Eco Spec Waterborne Interior Latex Paint Color: Chantilly Lace Finish: Semi-Gloss Website : <a href="#">Benjamin Moore EcoSpec Semi Gloss</a></p> <p><b>Primer plus two (2) coats paint on all surfaces.</b></p>

**FLOORING**

**Exposed Concrete with Sealer:**

Manufacturer: Dur-A-Flex  
Item: (2) Part Epoxy Resin Sealer  
Dur-a-Glaze # 4 WB Primer hardener w/  
Dur-a-Glaze #4 Resin topcoat  
Finish: High Gloss clear

**Offices / Conference Rooms:**

Manufacturer: Bentley  
Style: Empire County  
Color: Building the Empire  
Product # PDS#147586-021  
Pile Weight: 32oz

**Field Carpet:**

Manufacturer: Bentley  
Style: Empire State  
Color: NY State of Mind  
Product # PDS# 147586-016  
Pile Weight: 32oz

**Resilient Flooring:**

Manufacturer: Amitco  
Style: AR0ABB28  
Color: Black Envy  
Size: 4-1/2" x 36" Beveled  
Website Link: [AMITCO](#)

**Wall Base:**

Manufacturer: Johnsonite  
Style: Wall Base Reveal (MW-121-F)  
Color: # 29 Moon Rock  
4 1/4" High  
Floor Score Certified  
Website: [Johnsonite - Wall Base](#)

**Transition Strips:**

Manufacturer: Roppe  
Style: Vinyl Accessories  
Color: #114 Lunar Dust  
Floor Score Certified  
10% Recycled Content  
Website Link: [Roppe Vinyl Accessories](#)

**Material Guidelines:**

- PVC free.

**Adhesives:**

- Low VOC systems with no styrene butadiene, methylene chloride or chlorinated hydrocarbons.

<p><b>MECHANICAL ROOM FLOOR</b></p>	<p><b>Floor Sealer:</b>  Benjamin Moore – Industrial Enamel  Color: Concrete Exterior Battleship Gray (075)  Finish: Gloss  Website : <a href="#">Benjamin Moore EcoSpec Semi Gloss</a>  Applied per manufacturer instruction.</p>
<p><b>APPLIANCES</b></p>	<p><b>Refrigerator 30”</b>  Manufacturer: GE Monogram  Item: ZIC30GNDII / Reversible Hinge  Finish: Stainless Steel  Website: <a href="#">Refrigerator</a></p> <p><b>Refrigerator 36”</b>  Manufacturer: GE Monogram  Item: ZIC360NHLH / Left Hinge  Item: ZIC360NHRH / Right Hinge  Finish: Stainless Steel  Website: <a href="#">Refrigerator</a></p> <p><b>Microwave</b>  Manufacturer: GE Monogram  Item: ZEM115JSS  Finish: Stainless Steel  Website: <a href="#">Microwave</a></p> <p><b>Dishwasher Single Drawer</b>  Manufacturer: Fisher &amp; Paykel  Item: DD24SCTX9 EZKLEEN  Finish: Stainless Steel Panel  Website: <a href="#">Dishwasher</a></p> <p><b>Dishwasher Double Drawers</b>  Manufacturer: Fisher &amp; Paykel  Item: DD24DAX9 EZKLEEN  Finish: Stainless Steel Panel  Website: <a href="#">Dishwasher</a></p>
<p><b>PANTRY FIXTURES</b></p>	<p><b>Sink</b>  Manufacturer: Elkay ELUHAD-2115  Finish: Stainless Steel  Website: <a href="#">Elkay Sink</a></p> <p><b>Faucet</b>  Manufacturer: Moen Align Series 7165 W/ Spray  Finish: Chrome  Website: <a href="#">Moen Faucet</a></p>



<p><b>SOLID SURFACE COUNTERTOP &amp; BACKSPLASH</b></p>	<p><b>Solid Surface Countertop</b>  Manufacturer: Han Stone  Color: Royal Blanc  Thickness: 1-1/4”  Website: <a href="http://Hanstone.com">Hanstone</a></p> <p><b>Pantry Backsplash</b>  Manufacturer: Walker Zanger  Style: Roku  Color: White  Size: 1-1/2” x 6” Gloss Offset  Website: <a href="http://WalkerZanger.com">WalkerZanger</a></p> <p>Adhesives to be low VOC systems with no styrene butadiene, methylene chloride or chlorinated hydrocarbons.</p>
<p><b>MILLWORK</b></p>	<p><b>Pantry Millwork:</b>  Manufacturer: WilsonArt  Item: Laminate  Color: D354K-01  Finish: High Gloss  20% Recycled Content  Website: <a href="http://Wilsonart.com">Wilsonart</a></p> <p><b>Copy Area Millwork:</b>  Manufacturer: WilsonArt  Item: Laminate  Color: D354-60  Finish: Matte  20% Recycled Content  Website: <a href="http://Wilsonart.com">Wilsonart</a></p> <p>White Melamine on interior cabinets.</p> <p>Material Guidelines:</p> <ul style="list-style-type: none"> <li>▪ Urea formaldehyde free.</li> <li>▪ FSC Certified wood with COC certification.</li> <li>▪ Manufactured or extracted within 500 miles of final installation.</li> <li>▪ Be engineered wood product with recycled content cores.</li> </ul> <p>Adhesives:</p> <ul style="list-style-type: none"> <li>• No styrene butadiene, methylene chloride or chlorinated hydrocarbons.</li> <li>• Adhesives to be low VOC systems with no styrene butadiene, methylene chloride or chlorinated hydrocarbons.</li> </ul>
<p><b>CABINERY PULLS</b></p>	<p>Manufacturer: Hafele  Model: #101.20.720  Website: <a href="http://Hafele.com">Hafele</a></p>

<b>COAT CLOSETS</b>	Landlord to supply chrome rod and birch veneer or approximately 5 linear feet of closet space.
<b>INTERIOR PARTITIONS</b>	<p><b>Demising:</b> Landlord will provide rated, insulated partitions separating each tenant as required by code.</p> <p><b>Typical:</b> 2 ½” metal studs 16” O.C. slab to slab partition with 5/8” gyp. bd. on both sides.</p> <p><b>Typical w/ Sound Attenuation:</b> 2 ½” metal studs 16” O.C. slab to slab partition with 5/8” gyp. bd. on both sides &amp; acoustical batt insulation</p> <p><b>Plumbing:</b> 3 5/8” metal studs 16” O.C. slab to slab partition with 5/8” water resistant gyp. bd. on both sides &amp; acoustical batt insulation</p> <p><b>Rated Partitions:</b> As per Architectural details.</p>
<b>CEILINGS</b>	<p><b>Gypsum Board Ceilings:</b> Furred out existing slab/beam with black iron, 7/8” furring channel and 5/8” gypsum board.</p> <p><b>Acoustic Ceiling Tile:</b> Grid: Armstrong, Silhouette 9/16” bolt slot w/ 1/8” reveal Tile: Armstrong, Ultima Tegular Series #1912HRC (High Recycled Content) Size: 24" x 24" x 3/4" Color: White Website Link: <a href="#">Armstrong Ceiling Grid</a> Website Link: <a href="#">Armstrong Ceiling Tile</a></p> <p><b>Material Guidelines:</b></p> <ul style="list-style-type: none"> <li>▪ Manufactured or extracted within 500 miles of final installation.</li> </ul> <p><b>Adhesives:</b></p> <ul style="list-style-type: none"> <li>▪ No styrene butadiene, methylene chloride or chlorinated hydrocarbons.</li> </ul>
<b>CONVECTOR COVERS</b>	Metal convector covers Contact building management for approved detail
<b>WINDOW TREATMENTS</b>	Manufacturer: Phifer Sheerweave Style: 2100 Color: P02 White Style: 10% Openness Note: White valance, manual crank and mounting hardware Website Link: <a href="#">Phifer SheerWeave Style 2100</a>
<b>EMERGENCY LIGHT FIXTURES</b>	Manufacturer: AtLite Type: LED Exit Light w/ Emergency battery pack Item: Marathon Series Edgelit exit sign series 6” Red letters with White trim Website Link: <a href="#">AT Lite Edgelit Exit Sign</a>
<b>LIFE SAFETY</b>	Each floor is tied into the building Fire Alarm system. All equipment by FIRECOM.

<b>LIGHT FIXTURES</b>	<p><b>Pendant Lighting Fixture:</b>  Item: Axis LT Series Linear Pendant  Lamp: 3000K LED  Driver: 0-10V  Website Link: <a href="#">Axis LT Fixture</a></p> <p><b>Recessed Lighting Fixture:</b>  Manufacturer: Axis  Type: 2x2 / 2x4 recessed light fixture  Item: DIA22 &amp; DIA 24  Lamping: 3000K LED  Driver: 0-10V  Website Link: <a href="#">Axis Dia Fixture</a></p> <p><b>Recessed Downlight:</b>  Manufacturer: Fraxion3 Slim  Item: F3SMFT-WHWH-90C-14A2-5Y1-CA1  Lamp: 3000K 2 SDCM LED  Driver: 0-10V  Website Link: <a href="#">Fraxion3 Slim LT Fixture</a></p> <p><b>Wall Sconces</b>  Manufacturer: Zaneen  Item: L3NE-SUR-SYS-DI-OP-2/4/6-120-L306-DV-00  Lamp: 3000K LED  Driver: 0-10V  Note: Crystal White finish for Wood Office Front Scheme  Anodized aluminum for Metal Office front Scheme  Website Link: <a href="#">Zaneen Never Ending</a></p> <p><b>Undercabinet Lighting:</b>  Manufacturer: Phillips  Model: ColorKinetics ew Power Powercore  Website Link: <a href="#">Phillips eW Profile Powercore</a>  Lamping: INTEGRAL 2700K LEDES</p> <p><b>Mechanical Room:</b>  Manufacturer: Texas Fluorescent – 555 Series  Item: 555-A-48L-F30W4100L-DMV-30K-WH  Lamping: LED  Website Link: <a href="#">Texas Fluorescent</a></p> <p>Note:  Coordinate with Lutron Lighting controls</p>
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<b>MECHANICAL SYSTEMS</b>	
<b>HVAC</b>	<p>Commercial tenants: multiple ceiling hung or floor mounted air-cooled packaged or split dx units serving each floor. Existing systems are constant volume plenum return. New installations (after December 2010) are to be variable volume plenum return. Tenants are served from these units via insulated ductwork. Some upper floors between 45fl and 55fl have existing chilled water air handlers serving their individual floors.</p> <p>Retail tenants: chilled water air handlers or water-cooled dx units.</p> <p>Toilet exhaust: New interior private bathrooms shall be exhausted to the outdoors via ceiling fan and ducted to a new louver installed in an existing window. The new exhaust louver shall be located away from any existing fresh air intakes.</p>
<b>PLUMBING</b>	
<b>SPRINKLER/ PLUMBING (BUILDING STANDARD)</b>	<ul style="list-style-type: none"> <li>▪ Concealed Pendent Sprinkler Type, <a href="#">Reliable model G5-56</a></li> <li>▪ Exposed Upright/Pendent Sprinklers Type <a href="#">Reliable Model F1FR</a></li> <li>▪ Sidewall Sprinkler Type: <a href="#">Viking QR Concealed Sidewall model VK481</a></li> <li>▪ Extended Coverage Sidewall Sprinkler Type: <a href="#">Viking QR Extended Coverage Sidewall model VK680</a></li> </ul>
<b>SPRINKLER PIPING</b>	<p>Mains: Schedule 40 Black Steel pipe, cut grooved pipe Victaulic fittings and couplings.</p> <p>Branches: Schedule 40 Black Steel with 125psi screwed fittings.</p>
<b>PLUMBING PIPING</b>	<p>Tenant connections to the plumbing system are accomplished at various wet columns located through-out the floor. Tenants to install new isolation valves when connecting to cw &amp; hw risers.</p>

<b>ELECTRICAL SYSTEMS</b>	
<b>ELECTRICAL</b>	<p>Electrical Power: Minimum 2 Electric closet/floor; power is fed from 120/208V panels in “Core” electrical closet. Emergency Lighting: Battery backup required for emergency. Exit Tenant power to be sub-metered. Lights: L.E.D. Type (Required under ASHRAE 90.1-2004).</p>
<b>TENBMS VENDOR</b>	NEW YORK TEMPERATURE CONTROL TELL# 718. 554-3920
<b>FIRE ALARM</b>	Firecom
<b>SECURITY</b>	
<b>SECURITY (BUILDING STANDARD)</b>	<p>Manufacturer: SIEDLE USA Type: Vario Flush Mount, (3) Module Color: RAL 1013 Security: Siedle Item: MR 611-3/1-0 W/ KR611-3/1-0 W/GU 611-3/1-0 Custom Color: RAL1013- Provide (2) BM 611-0 and (1) TM612-1 Mounted 4’-4” AFF to top of box. 6” off frame.</p> <p>Website Link: <a href="#">Siedle Vario System</a></p>



**HIGH PERFORMANCE  
DESIGN AND  
CONSTRUCTION  
GUIDELINES**

## ESRT High Performance Design and Construction Guidelines

### Energy Efficiency:

#### Lighting:

Reduce lighting power density from ASHRAE/IESNA 90.1-2016 standards by at least 10% and up to or exceeding 35%.

For office spaces, the ASHRAE/IESNA 90.1 2013 and NYCECC standard is 0.9 W/SF. This may be achieved through efficient lighting design, use of low wattage fixtures and reflective surfaces as well as LED task lights and day-lighting optimization strategies.

Implement dimming and tuning throughout.

Implement lighting controls, including daylight dimming controls for at least 50% of lighting load and occupancy sensors for at least 75% of connected lighting load.

Per NYCECC, daylight-responsive controls complying with Section C405.2.3.1 shall be provided to control the electric lights within 15 feet of windows and under skylights (ASHRAE 90.1-2013 requirements are similar).

Per NYCECC (and ASHRAE 90.1-2013), occupant sensor controls shall be installed to control lights in the following space types:

1. Classrooms/lecture/training rooms
2. Conference/meeting/multipurpose rooms
3. Copy/print rooms
4. Lounges
5. Employee lunch and break rooms
6. Private offices
7. Restrooms
8. Storage rooms
9. Janitorial closets
10. Locker rooms
11. Other spaces 300 square feet or less that are enclosed by floor-to-ceiling height partitions
12. Warehouses
13. Open Plan Offices

All lights in the space are to be tied into occupancy sensor based controls to ensure all lights are turned off following 15 minutes of all occupants leaving the space.

Per NYCECC (and ASHRAE 90.1-2013), occupant sensor controls shall automatically turn off lights within 20 minutes of all occupants leaving the space, be manual on or controlled to automatically turn the lighting on to no more than 50% power, and shall incorporate a manual control to allow occupants to turn lights off.

Per NYCECC (and ASHRAE 90.1-2013), each area of the building that is not provided with occupant sensor controls shall be provided with time switch controls.

Per NYCECC, internally illuminated exit signs shall not be more than 5 watts per side.

Tie in lighting controls to base building BMS for energy data reporting and monitoring.

#### HVAC:

All HVAC systems to meet or exceed ASHRAE 90.1-2016 or NYSERDA Stretch Code, whichever is more stringent.

Air or waterside economizer to be included in all applicable work.

Motorized outside air dampers must be designed, installed, tied into BMS and commissioned.

Where possible, install heating, ventilation and air conditioning systems that comply with the efficiency requirements outlined in the New Building Institute's Advanced Buildings™ Core Performance™ Guide Sections 1.4: Mechanical System Design, 2.9: Mechanical Equipment Efficiency and 3.10: Variable Speed Control.

For the tenant fit-out spaces, provide as applicable:

- a separate control zone for each solar exposure and interior space
- controls capable of sensing space conditions and modulating the HVAC system in response to space demand for all private offices and other enclosed spaces (e.g., conference rooms, classrooms)

The system should be capable of modulating AHU and zone minimum supply volume below 0.30 cfm/ft<sup>2</sup> (1.52 L/m<sup>2</sup>) of supply volume for standard VAV terminals, or below 22.5% of the peak design flow rate for fan powered VAV boxes).

Where possible, tie in radiators or perimeter heating/cooling system to VAV box controls and BMS.

Per NYCECC, HVAC equipment shall meet the minimum efficiency requirements of Tables C403.2.3 when tested and rated in accordance with the applicable test procedure.

Per NYCECC, the supply of heating and cooling energy to each zone shall be controlled by individual thermostatic controls capable of responding to temperature within the zone. Where humidification or dehumidification or both is provided, at least one humidity control device shall be provided for each humidity control system. Where a zone has a separate heating and a separate cooling thermostatic control located within the zone, a limit switch, mechanical stop, or direct digital control system with software programming shall be provided with the capability to prevent the heating set point from exceeding the cooling set point and to maintain a deadband in accordance with Section C403.2.4.1.2.

Per NYCECC, multiple-zone VAV systems with direct digital control of individual zone boxes reporting to a central control panel shall have automatic controls configured to reduce outdoor air intake flow below design rates in response to changes in system ventilation efficiency (Ev) as defined by the New York City Mechanical Code.

Implement Demand Controlled Ventilation through the use of CO<sub>2</sub> sensors in densely occupied areas and throughout the space (CO<sub>2</sub> monitors must be between 3 and 6 feet above the floor) and in the return air stream to the Air Handling Unit serving the space and tie in to controls.

Per NYCECC, demand control ventilation (DCV) shall be provided for spaces larger than 500 square feet and with an average occupant load of 25 people per 1,000 square feet of floor area (as established in Table 403.3 of the New York City Mechanical Code) and shall be served by systems with one or more of the following: 1. An air-side economizer, 2. Automatic modulating control of the outdoor air damper, 3. A design outdoor airflow greater than 3,000 cfm.

Right size equipment based on efficient lighting and plug loads (As stated in the plug load section below target lighting and plug load of 2.0-2.5 Watts per square foot or less of connected load).

Per NYCECC (and ASHRAE 90.1-2013), design loads associated with heating, ventilating and air conditioning of the building shall be determined in accordance with ANSI/ASHRAE/ACCA Standard 183.

If heating and cooling are provided by a single piece of equipment and are controlled by separate thermostats or sensors means will be provided to prevent the heating set point from exceeding the cooling set point minus any applicable proportional band. Means can include limit switches, mechanical stops, or software programming for DDC systems.

Per NYCECC, static pressure sensors used to control VAV fans shall be located such that the controller set points is not greater than 1.2 inches w.c. (200 Pa). Where this results in one or more sensors being located downstream of major duct splits, not less than one sensor shall be located on each major branch to ensure that static pressure can be maintained in each branch.

Specify CFC and HCFC-free refrigerants. Montreal Protocol called for a complete phase-out of CFC-based refrigerants by 1995 and HCFCs by 2030. Do not use CFC-based refrigerants in new HVAC&R systems.

Install local instantaneous hot water heaters. Hot water storage tanks must be separately called out along with an explanation for their requirement versus instantaneous hot water heaters.

Per NYCECC, water-heating equipment and hot water storage tanks shall meet the requirements of Table C404.2.

#### *Additional Efficiency Package Options*

Per NYCECC, Tenant Spaces shall comply with at least one of the following:

1. More efficient HVAC performance in accordance with Section C406.2.
2. Reduced lighting power density system in accordance with Section C406.3.
3. Enhanced lighting controls in accordance with Section C406.4.
4. On-site supply of renewable energy in accordance with Section C406.4.
5. High-efficiency service water heating in accordance with Section C406.7.

Submeter and pay for utilities based on usage. Submeter HVAC, plug loads, and lighting loads separately. At a minimum, assign circuits for lighting, HVAC, and plug loads (for example, circuits 1-4 lighting, 5-8 HVAC, and 9-12 plug load. This is no incremental cost and enables separate tracking of categories of energy usage.

#### Plug Loads:

ESRT's standard Load Letter form shall be utilized and completed for ESRT review.

Reduce plug loads by specifying equipment and appliances including, without limitation: computers, monitors, printers, refrigerators, dishwashers, water coolers, food service equipment, copiers, and A/V and IT equipment that meet or exceed EPA Energy Star requirements.

Implement plug load management strategies including occupancy sensors, outlet-based controls, circuited controls, and/or software programs. This measure is to be implemented if the simple payback period is demonstrated to be five years or less based on projected savings and estimated cost subject to the Empire State Realty Trust team's review.

Target lighting and plug load of 2.0-2.5 Watts per square foot or less of total connected load.

Per ASHRAE 90.1-2013, receptacles greater than or equal to 50% of all 125 volt 15- and 20-amp receptacles shall be automatically controlled in: private offices, conference rooms, rooms used primarily for printing and/or copying functions, break rooms, classrooms, individual workstations. This also applies to 25% of modular furniture circuits. Controlled receptacles must be visually marked to differentiate from uncontrolled receptacles and uniformly distributed throughout the space.

#### Commissioning:

A third party commissioning agent shall perform commissioning of energy systems within the tenant space or installed as part of the tenant's lease agreement including, without limitation, lighting, lighting controls, HVAC systems, BMS (including, but not limited to, VFD's, CO2 sensor calibration and DCV BMS and OA tie-in, motorized OA damper tied into DCV and BMS, static pressure or discharge air temperature reset, supply and return air setback schedules, air and water side economizers), Testing and Balancing, functional testing of applicable equipment, and electrical to ensure design optimizes performance and systems are constructed and function per efficient design.

Commissioning Report shall be submitted to ESRT for review prior to occupancy of the space and shall include, but not be limited to, all systems listed above.

Per NYCECC, commissioning and functional performance testing of the building mechanical systems, service water heating systems, and electrical power and lighting systems is required. HVAC systems shall be balanced in accordance with ASHRAE 111, "Testing, Adjusting, and Balancing of Building HVAC Systems" or other accepted engineering standards as approved by the department. Air and water flow rates shall be measured and adjusted to deliver final flow



rates within the tolerances provided in the product specifications. Test and balance activities shall include air system and hydronic system balancing.

### **Water Efficiency**

Specify WaterSense fixtures for any fixture type that is eligible

- Water closet rate target is 1.1 GPF
- Urinal flow rate target is 0.125 GPF
- Pantry sink flow rate target is 1.0 GPM and include specification for an aerator
- Lavatory faucet flow rate target is 0.35 GPM.
- Shower flow rate target is 1.5 GPM.

Major water users are required to have submeters on water lines serving commercial cooking facilities, commercial laundry facilities, commercial gyms or spas, swimming pools, evaporative cooling towers and boilers serving buildings greater than six stories. All rooftop water tanks must be provided with a high water level alarm.

### **Materials and Resources**

Per NYC Department of Sanitation, recyclable materials must include mixed paper, corrugated cardboard, glass, plastics, and metals. Take appropriate measures for the safe collection, storage, and disposal of two of the following: batteries, mercury-containing lamps, and electronic waste. All eligible materials must be properly disposed of in receptacles labeled per NYC Department of Sanitation regulations.

Any entity (other than residents) in a building which is generating waste must notify their employees, customers, clients, etc., about what and how to separate materials for recycling by:

- posting one or more signs in common areas routinely visited; and/or
- placing containers labeled with what to recycle.

Divert construction waste from landfills through aggressive recycling and donation programs. Develop and implement a construction demolition waste management plan. Include target recycling and diversion percentages (75%) in waste hauler contracts.

Post construction, provide dedicated clearly labeled areas for the collection and storage of recyclable materials.

Specify recycled content materials whenever possible, which may include, without limitation, gypsum board, acoustical tiles, carpet and carpet backing.

Specify regionally produced and extracted materials (within a 100 mile radius) whenever possible.

Specify rapidly renewable resources whenever possible, including, without limitation, bamboo, wool, linoleum and cork. Products must meet the Sustainable Agriculture Standard.

Specify and use wood products certified by the Forest Stewardship Council (FSC).

### **Indoor Environmental Quality**

Monitor delivery of outside air to ensure indoor air quality and outdoor airflow compliance with ASHRAE 62.1-2016 and ASHRAE 55 requirements.

Smoking and vaping shall not be permitted indoors.

Implement Construction Indoor Air Quality Management Plans during performance of work and prior to occupancy to minimize the presence and spread of air pollutants.

Consider conducting indoor air quality testing after construction is complete and prior to occupancy to demonstrate that contaminant maximum concentrations are not exceeded.

Consider installing an air purification system and IEQ monitoring. An example is an air purification system designed to increase bi-polar ionization levels in the interior areas, which would provide cleaner air reducing particles, spores, odors and microorganism levels such as bacteria, mold and viruses. The monitoring system could be designed to measure and track the following parameters: CO<sub>2</sub>, PM<sub>2.5</sub>, TVOC, illumination, noise, temperature, and relative humidity. The monitoring system could ensure no or negligible ozone production.

Specify and install low-emitting (low or no Volatile Organic Compounds) adhesives, sealants, paints, coatings, flooring systems, ceiling systems, composite wood and agrifiber products, systems furniture and seating. Specify and install composite wood and agrifiber products and associated adhesives to contain no added urea-formaldehyde (NAUF).

Do not specify materials listed on the International Living Future Institute Red List.

Design and build to offer occupants control of lighting (task lights at workstations). For at least 90% of individual occupant spaces, provide individual lighting controls that enable occupants to adjust the lighting to suit their individual tasks and preferences, with at least three lighting levels or scenes. For all shared multioccupant spaces have in place multizone control systems that enable occupants to adjust the lighting to meet group needs and preferences, lighting for any presentation or projection wall must be separately controlled, and switches or manual controls must be located in the same space as the controlled luminaires.

Design and build to offer occupants control of temperature (for example. under-floor air diffusers). Provide individual thermal comfort controls for at least 50% of individual occupant spaces. Provide group thermal comfort controls for all shared multioccupant spaces.

Design and build to optimize daylight and views for occupants, which may be achieved through a design that includes interior rather than perimeter offices, or perimeter offices with glass fronts if perimeter offices are a design requirement.

Achieve a direct line of sight to the outdoors via vision glazing for 75% of all regularly occupied floor area.

Consider furniture partitions to be 42" or lower in height in order to allow for access to daylight and views. Additional privacy may be achieved through clear partition glass installed above the furniture panels.

For the avoidance of any doubt, nothing contained in these ESRT High Performance Design and Construction Guidelines shall be construed to modify the provisions of Article 1 of this Lease or impair any of Landlord's consent rights pursuant to Article 8 of this Lease.