NYSIF

ATTACHMENT 6

MATERIAL SPECIFICATIONS FOR THE FACILITY

The specifications set forth herein are minimum quality specifications for materials utilized in any work performed on behalf of the State of New York and pursuant to this agreement.

Bidder covenants to utilize new materials as specified herein and agrees that no material of a lesser quality shall be used or consumed in the performance of work contemplated herein unless Bidder shall have previously requested and received written approval for each specific proposed substitution.

All materials to be installed in accordance with manufacturer's specifications. Material installations shall comply with all applicable codes, rules and regulations, and the American's with Disabilities Act Accessibility Guidelines (ADAAG).

Except where specifically provided otherwise, whenever any product is specified by brand name, i.e., manufacturer's or supplier's name or trade name, catalog or model number or name, the intent is not to limit competition but to establish a standard of quality. The words "or equal" shall be deemed inserted in each instance.

In the event Bidder purposes to substitute material having characteristics or specifications differing from those set forth herein, such proposal shall include the requested substitution under the "Comments and Limitations" portion of their proposal submission.

All sections for materials may not be needed for each job. The Bidder or their representative should utilize the appropriate specification for each job.

Bidder should take note of all ***bold italic items*** to ensure compliance with the State's intent to comply with sustainable building design and construction standards.

MATERIALS SPECIFICATIONS FOR FACILITIES – CONDENSED TABLE OF CONTENTS

NOTE: All manufacturers listed are suggested or approved equal.

DIVISION 5 - METALS
SECTION 055800 – FORMED METAL FABRICATIONS / SHADE & BLIND POCKETS

A. QUALITY ASSURANCE
1. Verify dimensions by field measurement before fabrication. Design units to provide for adjustment and fitting of components during field installation.
2. See Section 122000 for window treatments: blinds and shades.

SECTION 055800.1 – FORMED METAL FABRICATIONS

A. PERFORMANCE REQUIREMENTS (MINIMUM)
1. Fabricate units to support a min. loading of 200 lbs. per sq. ft. or 150 lbs. per lin. ft (whichever is greater) without permanent deflection. Provide stiffeners or laminated backing as required for strength and rigidity. Include brackets, plates and straps in the assemblies for support and anchorage to other work.
2. See Section 131000 Refurbishment for repair of existing enclosures.

End of Section

DIVISION 6 - WOOD AND PLASTICS
SECTION – 062023 INTERIOR FINISH CARPENTRY

A. *ENVIRONMENTAL CRITERIA*
1. ***All composite wood, engineered wood, or agrifiber products (e.g. plywood, particleboard, medium density fiberboard) shall contain no added urea-formaldehyde resins. Acceptable resins and binders include, but are not limited to, phenol formaldehyde and methyl disocyanate (MDI). Submit certificate substantiating meeting criteria.***
2. ***Field applied adhesives or sealants used for work in this Section shall meet the requirements "Volatile Organic Compound (VOC) Limits for Adhesives, Sealants and Architectural Coatings," where applicable.***
3. ***Optional Upgrade to materials: Upgrade to be indicated in Request for Proposal, Room Data Sheets, or Lease Work Letter.***
   (a) ***Wood materials shall be "FSC Certified" products (except recycled or salvaged wood) which have been harvested in accordance with the "FSC Principles and Criteria" for well managed forests developed by the Forest Stewardship Council (FSC).***
   (b) ***Engineered wood (except FSC Certified or salvaged wood) shall contain a minimum of 25% (combined) post-industrial/post-consumer recycled content (the percentage of recycled content is based on the weight of the component materials).***

B. WOOD MATERIAL
1. For miscellaneous wood blocking, grounds, furring as required, use Utility Grade Coastal Douglas Fir or Southern Pine, free from knots, shakes, rot or other defects, straight, square edges and straight grain, air seasoned with maximum moisture content of nineteen (19) percent. Wood shall be S4S, S- Dry, complying with PS-20-15.
2. All interior wood material specified herein shall be fire retardant treated to comply with the AWPA standards (C20 for lumber, C27 for plywood) for pressure impregnation with fire retardant chemical to achieve a flame spread rating of not more than 25 (UL Class "FR-S") when tested in accordance with UL Test 723 or ASTM E 84. The fire retardant chemicals used to treat
   (a) After treatment, kiln dry to a moisture content of fifteen (15) percent; if wood is to be painted or finished, kiln dry to a moisture content of twelve (12) percent. Treatment shall be equal to "Dricon" made by Arch Wood Protection Inc. or approved equal. Provide UL approved identification on treated materials.
   (b) Fire retardant treatment shall be certified by the treating plant that treatment material complies with governing ordinances and that treatment will not bleed through finished surfaces.

   Electrical Panels: For backing panels of electrical and communication equipment, provide C- D/INT-APA with exterior glue, fire retardant treated.
3. For exterior blocking, roofing and sheet metal, pressure treat wood with copper azole, Type A (CBA-A); ammoniacal copper quat (ACQ) or similar preservative product that contains no arsenic or chromium. Preservative shall comply with AWPB Standard U1 for lumber and for plywood, (.25 lbs./cubic foot of chemical in wood).
   (a) After treatment, kiln dry to a maximum moisture content of fifteen (15) percent. Treatment shall be equal to "Wolmanized Natural Select" made by Arch Wood Protection Inc. or approved equal.
4. Treated wood which is cut or otherwise damaged shall be further treated in accordance

with the AWPA Standard M-4.

End of Section

SECTION 064023 – INTERIOR ARCHITECTURAL WOODWORK

A. ENVIRONMENTAL *CRITERIA*
   1. ***All composite wood, engineered wood, or agrifiber products (e.g. plywood, particleboard, medium density fiberboard) shall contain no added urea-formaldehyde resins. Acceptable resins and binders include, but are not limited to, phenol formaldehyde and methyl diisocyanate (MDI). Submit certificate substantiating meeting criteria.***
   2. ***Field applied adhesives or sealants used for work in this Section shall meet the requirements "Volatile Organic Compound (VOC) Limits for Adhesives, Sealants and Architectural Coatings," where applicable.***
      Optional Upgrade to materials: Bidder is encouraged to upgrade. Specific upgrades may be indicated in Request for Proposal, Room Data Sheets, or Lease Work Letter.
      (a) ***Wood materials shall be "FSC Certified" products (except recycled or salvaged wood) which have been harvested in accordance with the "FSC Principles and Criteria" for well managed forests developed by the Forest Stewardship Council (FSC).***
      (b) ***Engineered wood (except FSC Certified or salvaged wood) shall contain a minimum of 25% (combined) post-industrial/post-consumer recycled content (the percentage of recycled content is based on the weight of the component materials).***

B. MATERIALS GENERAL REQUIREMENTS
   1. Softwood lumber shall conform to the requirements of the latest edition of American Lumber Standards Simplified Practice Recommendation R-16. Grades shall conform to the grading rules of the Association having jurisdiction and shall bear the official grade and trademark of the Inspection Bureau of the Association and a mark of mill identification.
   2. Framing and Rough Lumber: No. 1 KD grade Southern Pine or Dense Construction grade Douglas Fir, having extreme fiber in bending stress of at least 1700 psi, surfaced four sides (S4S). Provide fire retardant treatment in accordance with Code.
   3. Lumber: AWI Section 100 with the following requirements:
      (a) Hardwood for Transparent Finish: Premium Grade.
      (b) Hardwood for Opaque Finish: Any hardwood which, when finished, will not show any grain, imperfection or other surface defects when used with the opaque finish specified.
   4. ***Plywood: AWI Section 200; Veneer core, particle or plywood core. Core shall contain no added urea formaldehyde.***
   5. Veneers:
      (a) Face Veneers for Transparent Finish: AWI Section 500.

C. PLASTIC LAMINATE
   1. Face Sheets: NEMA Publication LD3, Grade GP50, Type I, 0.05” thick.
   2. Backing Sheets: Non-decorative, high-pressure plastic laminate, NEMA LD3, Grade BK20, 0.02” thick.

D. CABINETS AND COUNTERS WITH PLASTIC LAMINATE FINISH
   1. Fabricate all cabinetry and millwork to the “Premium Grade” standards of the AWI, Section 400.
   2. Plastic Laminate
      (a) Plastic Laminate for Horizontal Surfaces: 0.050” thick, general purpose type (high pressure).
      (b) Plastic Laminate for External Vertical Surfaces: 0.028” thick, general purpose type (high pressure).
      (c) Plastic Laminate for Post Forming: 0.042” thick, post forming (high pressure).
      (d) Plastic Laminate for Cabinet Linings: 0.020” thick, cabinet liner (high pressure).
      (e) Plastic Laminate for Concealed Panel Backing: 0.020” thick, backer type (high pressure).

E. WOOD FOR RAILS, CAPS, TRIM, BASES, MOLDINGS AND FRAMES
   1. Quality Standard: For the following types of interior architectural woodwork, comply with indicated standards as applicable.
      (a) Standing and Running Trim: AWI Section 300.
      (b) Miscellaneous Millwork: AWI Section 700.
      (c) Stair Handrails: AWI Section 800.

End of Section

DIVISION 7 - THERMAL & MOISTURE PROTECTION

SECTION 072116 – BLANKET INSULATION

A. GENERAL
   1. Sound deadening within full depth of partition cavity: Insert in partition cavity from bottom to top

of steel stud system. Blankets or batts shall be pressed tightly in place with a snug friction fit.

2. Sound deadening within ceiling plenum shall be un-faced mineral insulation.

B. SUGGESTED MANUFACTURERS
   1. *Fiberglass: Owens-Corning, Certainteed with minimum of 25% recycled content*
   2. Mineral Insulation or Thermafiber: USG
   3. Or approved equal.

End of Section

DIVISION 8 - OPENINGS
SECTION 081113.13- STANDARD HOLLOW METAL DOORS AND FRAMES

A. *ENVIRONMENTAL CRITERIA*
   1. *Every effort shall be made to maximize post-industrial/post-consumer waste, but steel members shall contain a minimum of 50% (combined) post-industrial/post-consumer recycled content (the percentage of recycled content is based on the weight of the component materials). Certification of recycled content shall be in accordance with the Submittal Requirements herein.*

B. SUGGESTED MANUFACTURERS
   1. Provide products manufactured by Steelcraft (L20 Series Doors), Curries, Ceco Door Products, or approved equal meeting these specifications.

C. FRAMES
   1. Frames for exterior openings shall be made of commercial grade cold-rolled steel conforming to ASTM A1008/A, Type B not less than 14 gauge and shall have a hot dipped galvannealed coating conforming to ASTM A924 and A653 with G-60 coating. The zinc-alloy coating shall be a dull matte surface treated for paint adhesion.
   2. Frames for interior openings shall be either commercial grade cold-rolled steel conforming to ASTM A1008/A, Type B or commercial grade hot-rolled steel conforming to ASTM A1011/A, Commercial Steel, Type B. Metal thickness shall be not less than sixteen (16) gauge for frames in openings 4'-0" or less in width; not less than fourteen (14) gauge for frames in openings over 4'-0" in width.
   3. Design
      (a) All frames shall be welded units with integral trim, of the sizes and shapes shown on approved shop drawings. Unless otherwise noted, knocked-down frames will not be accepted.
         1) Where knock-down frames are scheduled (at drywall), corners shall be mitered and reinforced with a wedge lock corner clip to provide a firm interlock of jambs to head.
      (b) Welded frames shall have corners mitered, reinforced and continuously welded full depth and width of frame; conforming to NAAMM Standard HMMA-820.
      (c) Hardware Reinforcements
         1) Frames shall be mortised, reinforced, drilled and tapped at the factory for fully-templated mortised hardware only, in accordance with approved hardware schedule and templates provided by the hardware supplier. Where surface-mounted hardware is to be applied, frames shall have reinforcing plates.
         2) Minimum thickness of hardware reinforcing plates shall be as follows:
            a) Hinge and pivot reinforcements - seven (7) gauge, 1-1/4" x 10” minimum size.
            b) Strike reinforcements - twelve (12) gauge
            c) Flush bolt reinforcements - twelve (12) gauge
            d) Closer reinforcements - twelve (12) gauge
            e) Reinforcements for surface mounted hardware - twelve (12) gauge.
            f) Frames to be coordinated with requirements for security system, as required for each project.
            g) Frames in existing base building construction that are slated for reuse and require a fire rating shall bear a label from a testing and inspection agency acceptable to authorities having local jurisdiction stating the fire-protection rating required by the local code. If such label no longer exists, the Bidder shall have unlabeled doors recertified by a testing and inspection agency acceptable to the authorities having local jurisdiction.

D. HOLLOW METAL DOORS
   1. Suggested Materials: Doors shall be made of commercial quality, level, cold rolled steel conforming to ASTM A1008/A, Commercial Steel, Type B and free of scale, pitting or other surface defects. Face sheets for interior doors shall be not less than eighteen (18) gauge.
   2. Design
      (a) All doors shall be fully welded seamless construction with no visible seams or joints on their faces or vertical edges. Minimum door thickness shall be 1-3/4".

(b) Laminated Honeycomb Core for Interior Doors: Resin impregnated Kraft paper with maximum 1" cells; fastened to face sheets with waterproof adhesive.
(c) Fire Rated Door Core: As required to provide fire-protection and temperature rise ratings indicated.

3. Door faces shall be joined at their vertical edges by a continuous weld extending the full height of the door. All such welds shall be ground, filled and dressed.
4. Finish: After fabrication, all tool marks and surface imperfections shall be dressed, filled and sanded as required to make all faces and vertical edges smooth, level and free of all irregularities. Doors shall then be chemically treated to insure maximum paint adhesion and shall be coated, on all exposed surfaces, with manufacturer's standard rust-inhibitive alkyd primer as specified for frames which shall be fully cured before shipment.
5. Doors to be coordinated with requirements for security system, as required by each project.

End of Section

SECTION 081116 - ALUMINUM ENTRANCE DOORS AND FRAMES

A. GENERAL
1. Installation to be in accordance with manufacturer's specifications.

B. FABRICATION
1. Door frame(s) and frames combining transoms, sidelights and panel framing of formed or extruded aluminum not less than 0.125" thick.
2. Glazed doors with fabricated stiles and rails of extruded aluminum tubular shapes, minimum wall thickness, not less than 3" wide. Attach extrusions together by means of concealed mechanical fasteners and concealed welding.
3. Overlapping astragal with compression type weather stripping. Astragal should be mounted so proper door is active.
4. *Architectural Powder Coat and Finish: Kynar Interpon D 2000 powder coat finish complying with AMMA 605.2-92 (no VOC's).*

C. SUGGESTED MANUFACTURERS
1. United States Metals & Manufacturing Corp. D41 Intermediate Style with #7235 astragal and coordinator.
2. Kawneer 350 Medium Style with Panic Guard astragal bar.
3. Or approved equal

End of Section

SECTION 081416 – FLUSH WOOD DOORS

A. *ENVIRONMENTAL CRITERIA*
1. *All composite wood, engineered wood, or agrifiber products (e.g. plywood, particleboard, medium density fiberboard) shall contain no added urea-formaldehyde resins. Acceptable resins and binders include, but are not limited to, phenol formaldehyde and methyl diisocyanate (MDI). Submit certificate substantiating meeting criteria.*
2. *Field applied adhesives or sealants used for work in this Section shall meet the requirements "Volatile Organic Compound (VOC) Limits for Adhesives, Sealants and Architectural Coatings", where applicable.*
3. *Optional Upgrade to materials: Upgrade to be indicated in Request for Proposal, Room Data Sheets, or Lease Work Letter.*
   (a) *Wood materials shall be "FSC Certified" products (except recycled or salvaged wood) which have been harvested in accordance with the "FSC Principles and Criteria" for well managed forests developed by the Forest Stewardship Council (FSC).*

B. SUGGESTED MATERIALS
1. Non-rated Solid Core Doors for Transparent Finish: Comply with the following requirements:
   (a) Faces: Select center book match White Birch Finish to be selected.
   (b) Plain sliced, straight grain book-matched.
   (c) Rotary cut Select White Birch
   (d) Edges: Shall match face veneer.
   (e) AWI Grade: Premium, Double A Grade Face
   (f) *Construction: Composite wood containing no added Urea formaldehyde "Medite II" or equal.*
   (g) *Use adhesives that meet the VOC limits of South Coast Air Quality Management District Rule 1168, and all sealants used as filter must meet or exceed Bay Area Air Quality Management District Regulation #8, Rule #51.*

2. Fire-Rated Solid Core Doors: Comply with the following requirements:
    (a) Faces and Grade: Provide faces and grade to match non-fire-rated doors in same area of building, unless otherwise indicated.
    (b) Construction: Manufacturer's standard core construction as required providing fire-resistance rating indicated.
    (c) Blocking: Provide composite blocking designated to maintain fire resistance of door with improved screw-holding capability of same thickness as core.
    (d) Top rail blocking and lockbox blocking.
3. Non-rated and Rated Doors Edge Construction: Provide manufacturer's standard laminated-edge construction for improved screw-holding capability and split resistance as compared to edges composed of a single layer of treated lumber. Exposed edges shall match face veneer.
4. Transparent Finish: Comply with requirements indicated for grade, finish system, staining effect, and sheen. ***All coatings must meet or exceed the VOC and chemical component limits of Green Seal requirements (Flat coats must be less than 50g/liter; non-flat must be less than 100g/liter; non-flat, High Gloss must be less than 150g/liter).***
    (a) Grade: Premium
    (b) Finish (shop Applied): Manufacturer's standard finish with performance requirements comparable to AWI System TR-6 catalyzed polyurethane or UV catalyzed polyester.
    (c) Staining: As selected by Architect approved by Agency from manufacturer's full range.
    (d) Effect: Open-grain finish.
    (e) Sheen: Satin-medium rubbed effect.
5. Vision Lights
    (a) Non-Fire Rated Doors: Tempered glass ASTM C 1048, Condition A (uncoated), Type I (transparent glass, flat), Class 1 (clear), Quality Q3 (glazing), Kind FT (fully tempered), ¼ inch thick.
    (b) Fire Rated Doors: Use wired glass with a maximum of 100 sq. inches.
    (c) Vision Lite Frames: Wood veneer (to match door veneer) vision lite frame, appropriate for use in fire rated doors, nominal size as indicated in Door Schedule.
6. Astragals
    (a) Provide surface mounted astragal at all double doors. Coordinate type for required rated doors/frames and closers. Provide door coordinator(s) as required.
7. Doors to be coordinated with requirements for security system, as required by each project.

C. SUGGESTED MANUFACTURERS
1. Marshfield Door Systems
2. Eggers Industries, Architectural Door Division
3. Mohawk Flush Wood Doors, Inc. – Wood Stave Core Door or 45/60/90 Minute Fire Door
4. Or approved equal.

End of Section

SECTION 084236 - GLASS DOORS AND PARTITIONS

A. QUALITY ASSURANCE
1. Provide systems, including anchorage, capable of withstanding required loads without structural failure, deflection exceeding specified limit, support components transferring stresses to glazing, and glazing-to-glazing or glazing-to-support contact as determined by structural analysis.
2. Clear Glass: ASTM C 1048, Kind FT (fully tempered), Condition A (uncoated surfaces), Type I (transparent), Class 1 (clear) requirements. Provide products of thickness indicated that have been tested for surface and edge compression according to ASTM C 1048 and for impact strength according to CPSC 16 CFR, Part 1201 for Category II materials. Provide distraction markings.

B. SUGGESTED MANUFACTURERS: 1) CRL Laurence 2) Blumcraft 3) OR Approved Equal

End of Section

SECTION 087100 - DOOR HARDWARE

A. QUALITY ASSURANCE
1. Hardware shall be suitable and adapted for its required use and shall fit its designated location. Should any hardware as shown, specified or required fail to meet the intended requirements or require modification to suit or fit the designated location, determine the correction or modification necessary and notify the Architect in ample time to avoid delay in the manufacture and delivery of hardware.
2. For fire rated openings provide hardware complying with NFPA Standard No. 80 requirements of authorities having jurisdiction.
3. Barrier Free Requirements: Maximum pressure applied to the latch area to open exterior doors

shall not exceed fifteen (15) pounds. Interior doors which have a self-closing feature shall require pressure not to exceed five (5) pounds.

B. FINISHES

1. Hardware finishes shall meet in all respects the requirements of the U.S. Bureau of Standards for the following:
   (a) US 28 Satin anodized aluminum
   (b) US 32D Satin stainless steel
   (c) NOTE: A single finish should be selected and used uniformly throughout the facility.

C. REQUIREMENTS

1. All doors with locksets shall be keyed under a Grand Master and Tenant Master System.
2. All existing door hardware shall be ADA compliant. If existing door hardware is not ADA complaint, it shall be replaced with new ADA compliant hardware.
3. Hardware shall be coordinated with security requirements for each project. Hardware not contained in this section should be submitted to NYSIF for their comment.

D. TYPE AND MANUFACTURER

1. Aluminum Entrance Doors (Pairs):
   - **Hinges**: Quantity: 3 pair. Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
   - **Door Closer**: a) Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
   - b) Power Assisted Door operators shall be installed on all main entry doors (see section 08700 Section E)
   - **Door Pull**s: Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
   - **Push Bars**: Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications. Exit Devices: Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications. Flush Bolts: Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
2. Aluminum vestibule doors: Same as entrance doors
3. Public Toilet Doors:
   - **Hinges:** Quantity: 1½ pair. Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
   - **Door Closers**: Quantity: 1 ½ pair.
     1) Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
     2) Power Assisted Door operators shall be installed on all toilet room doors (see section 08700 Section E)
   - **Push Plate**:
     1) Size: 14" x 18".
     2) Gauge: 16.
     3) Material: Stainless Steel
   - **Door Pull**: Manufacturer: Commercial grade, heavy-duty use as per manufacturer specification.
   - **Kick Plate**:
     1) Size: 8" x 2" x less than door width.
     2) Material: Stainless Steel
   - **Knob Bumper**: Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
   - **Lock Set**: Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications
4. Staff Toilet Doors:
   - **Hinges**: Quantity: 1 ½ pair. Manufacturer: Commercial grade, heavy-duty use as per manufacturer specification.
   - **Door Closer**:
     1) Manufacturer and Series: Commercial grade, heavy-duty use as per manufacturer specifications.
     2) Power Assisted Door operators shall be installed on all toilet room doors.
   - **Knob Bumpers**: Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
   - **Push-Button Lock**:
     1) Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications
     2) NOTE: Specify manufacturer of removable core cylinder.
5. Stair Doors
   - **Hinges:** Quantity: 1 ½ pair. Manufacturer: Commercial grade, heavy-duty use as per manufacturer specification.

- **Door Closer:** Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications **Knob Bumper:** Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications **Lockset:** Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
- **Exit Device:** Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.

6. Corridor Doors to Offices
   - **Hinges:**
     1) Quantity: 1 ½ pair.
     2) Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
   - **Door Closer:** Manufacturer and Series: Commercial grade, heavy-duty use as per manufacturer specifications
   - **Lockset:** Manufacturer and Series: Commercial grade, heavy-duty use as per manufacturer specifications
   - **Lever Handle Lockset**: Manufacturer and Series: Commercial grade, heavy-duty use as per manufacturer specifications
   - **Knob Bumper:** Manufacturer and Series: Commercial grade, heavy-duty use as per manufacturer specifications
7. Private Office Doors
   - **Hinges:** Quantity: 1 ½ pair. Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
   - **Lockset:** Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
   - **Knob Bumpers:** Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
   - **Coat Hooks:** Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
8. Closet Doors
   - **Hinges:** Quantity 1 ½ pair. Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
   - **Lockset:** Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
   - **Knob Bumper:** Manufacturer: Commercial grade, heavy-duty use as per manufacturer specifications.
9. Door hardware functions shall be passage sets, classroom, privacy or storage functions as required or otherwise specified on design drawings. All door hardware shall be commercial grade and meet ADA requirements.

E. POWER ASSIST OPERATORS

1. Quality Assurance
   (a) Fire-rated and emergency exit openings: Provide door operators that comply with NFPA for requirements for doors as emergency exits, and that do not interfere with fire ratings.
   (b) BHMA Standard: Provide power door operators that comply with applicable requirement of ANSI A156.10 (BHMA 1601, Power Operated Pedestrian Door Standard.
   (c) UL Standard: Provide power door operators that comply with UL 325.
2. General Door Operator Requirements:
   (a) Capacity: provide operators of the size recommended by the manufacturer for the door size, weight and movement, for condition of exposure; and for long-term, maintenance-free operation under normal traffic load for the type of occupancy indicated.
   (b) Exposed housing for operators: Minimum 0.0598-inch (16 gauge) thick formed sheet steel cover with provisions for maintenance access. Provide with fasteners concealed with door is in closed position. Provide with manufacture's standard prime coat finish for field painting.
   (c) Adjustment features: operators shall be fully adjustable. Provide adjustment for opening, closing and checking speeds, as well as length of time the door remains open.
   (d) Electro-Mechanical Operator for Swinging Doors: Provide the manufacturer's standard electromechanical unit with doors power-opened and spring-closed, with the closing speed controlled mechanically by gear train and dynamically by braking action of electric motor and, with easy manual operation including spring closing with power off. Provide operator action as indicated and mounting as indicated below:
      1) Operator Mounting Type: Surface-mounted overhead operator
      2) Fire Door Accessories: Provide fire door accessory package consisting for UL-listed latch mechanism power reset box, and caution labels for fire-resistance rated doors indicated for electro-mechanical operation.
   (e) Card Reader Access: Coordinate with security hardware vendor as necessary to provide complete operation for function/security as required. Provide operator with auxiliary contacts as necessary for security vendor.

(f) Door to be activated by remote mounted ADA compliant controller.
All manufacturers listed are suggested or approved equal

End of Section

DIVISION 9 – FINISHES
SECTION 092900 - GYPSUM BOARD

A. *ENVIRONMENTAL CRITERIA*
   1. *Steel studs, track, and miscellaneous framing shall contain a minimum of 35% (combined) post- industrial/post-consumer recycled content (the percentage of recycled content is based on the weight of the component materials). Gypsum wallboard shall contain "synthetic" gypsum produced with a minimum of 75% post-industrial recycled content. If required, certification of recycled content shall be in accordance with the requirements found in the Request for Proposal, Room Data Sheets, or Lease Work Letter.*

B. MATERIALS
   1. Studs, tracks and furring: ASTM C-645, 25 gauge galvanized steel, minimum 3 5/8" wide, at 16" on center high recycled content.
   2. *Gypsum wallboard shall contain "synthetic" gypsum produced with a minimum of 75% post- industrial recycled content*.
   3. Fire resistant gypsum board: ASTM C-36 5/8" thick, Type X, UL listed and bearing listing marking, long edges tapered.
   4. Moisture resistant gypsum board: ASTM C-630, 5/8" thick, long edges tapered.
   5. Moisture and fire-resistant gypsum board, ASTM C-630, 5/8" thick, Type X, UL listed and bearing listing mark, long edges tapered.
   6. Metals and trim accessories: Galvanized steel in accordance with gypsum board manufacturer's recommendation. Alternate: Paper face beads and trim.
   7. Joint tapes: ASTM C-475, gypsum board manufacturers.
   8. *Joint compound: ASTM C-475, Joint Compound: Factory premixed vinyl base product, free of antifreeze vinyl adhesives, preservatives, biocides and other slow releasing compounds.*
   9. Sound Batts: Un-faced fiberglass insulation "Sound Attenuation Batts" by Owens Corning or approved equal.
   10. Acoustical Sealant: USG "Acoustical Sealant" or "Tremco Acoustical Caulking" of Tremco Mfg. Co. or approved equal.
   11. Gypsum Manufacturers: (a) United States Gypsum (b) National Gypsum (c) Or approved equal

End of Section

SECTION 093013 – CERAMIC TILING

A. GENERAL
   1. Installation shall comply with ANSI 108.1 - 108.10 as applicable for type and method of tile installation.
   2. Wall tile shall be from floor to ceiling.
   3. Ceramic base tile shall be coved.
   4. *Adhesive to have a VOC limit of 130 grams/liter or latest requirement of South Coast Rule #1168 by South Coast Air Quality Management District.*
   5. Tile and Base Manufacturer: Both tile and base must be supplied by the same manufacturer.
   6. Install with 1/2" cement board or waterproof gypsum board at shower areas.
   7. Install all ceramic tile in accordance with the recommendations contained in Handbook for Ceramic Tile Installation of the Tile Council of America, Inc. latest edition.

B. PORCELAIN TILE
   1. Tile should carry a Porcelain Enamel Institute (PEI) rating for abrasion of Class 4+ - Heavy to Extra Heavy Traffic.
   2. Tile shall be impervious having an absorption rate between 0.0 – 0.5%.
   3. Tile should have a through body color.
   4. Matt or non-skid finish for floor application.

End of Section

SECTION 095300 - ACOUSTIC PANEL CEILINGS

A. QUALITY ASSURANCE
   1. Fire rated assembly of complete ceiling system, where required by applicable local building code, shall comply with applicable requirements "UL Fire Resistance Index" and with "UL Design Numbers" corresponding to the assembly.
   2. Main and cross runners, wall angle or channel shall be steel with manufacturer's standard smooth matte white painted finish, containing recycled contents if available.

B. REFERENCES

1. The metal suspension system shall meet the requirements of ASTM C635 Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.

C. SUSPENSION SYSTEM MATERIALS
   1. Suspension System:
      (a) Type ID/EG: Intermediate duty, direct hung, exposed grid (minimum load carrying capability of main runner; 12 lb./lin. ft.)
      (b) Type HD/EG: Heavy duty, direct hung, exposed grid (minimum load carrying capability of main runners; 16 lb./lin. ft.)
      (c) Suggested Manufacturers:
         1) USG DXF/DXLF (9/16" wide)
         2) Armstrong Silhouette XL 9/16" Bolt Slot with 1/8" reveal.
         3) Or approved equal.
   2. Acoustical Ceiling Tile for Offices, Conference Rooms and Corridors:
      (a) Minimum requirements: Furnish products that meet or exceed the following requirements:
         1) Class A Mineral Fiber panel, 5/8" thick, 24"x24" and 24" x 48".
         2) Flame spread rating (ASTM E84): Class A 25 or less
         3) NRC: 90
         4) Minimum AC 170
         5) Minimum CAC 35
         6) Light reflectance: .75% (LR-1) or more.
      (b) Standard finish: Manufacturer's standard factory applied white paint finish with mold and mildew inhibitor
      (c) ***37% -75% post recycled content***
      (d) Suggested Manufacturers: 1) USG 2) Armstrong 3) Or approved equal
   3. Ceiling tile for computer/server rooms.
      (a) USG Clean Room Clima Plus or equal
   4. Acoustic Ceiling Tile for Special Use Areas:
      (a) Landlord's architect to provide separate submittal for approval by NYSIF prior to use.

End of Section

SECTION 096513 - RESILIENT BASE AND ACCESSORIES

A. GENERAL
   1. Installation shall be in accordance with manufacturer's specifications.
   2. Materials shall comply with ASTM E 648 and ASTM E 662.
   3. ***Adhesives to have a VOC limit of 150 grams/liter or latest requirement of South Coast Rule #1168 by South Coast Air Quality Management District.***
   4. ***Leveling Compound: Low VOC, latex type as recommended by manufacturer of tiles.***
   5. ***Use of base with recycled content.***

B. MATERIALS
   1. Cove Base Materials:
      (a) Size: 4" high
      (b) Thickness: 1/8"
      (c) Length: Nominal 4 foot
      (d) Exterior Corners: Jobsite formed
      (e) Interior Corners: Jobsite formed
   2. Base Manufacturers: (a) Armstrong (b) Roppe (c) Or approved equal

End of Section

SECTION 096519 – RESILIENT TILE FLOORING

A. GENERAL
   1. Installation shall be in accordance with manufacturer's specifications.
   2. Materials shall comply with ASTM E 648 and ASTM E 662.
   3. ***Adhesive to have a VOC limit of 150 grams/liter or latest requirement of South Coast Rule #1168 by South Coast Air Quality Management District.***
   4. ***Leveling Compound: Low VOC, latex type as recommended by manufacturer of tiles.***
   5. ***Use of VCT with recycled content is encouraged.***

B. MATERIALS AND MANUFACTURERS
   1. Tile Materials:
      (a) Size: 12"X12" tiles.
      (b) Thickness: 1/8".
      (c) Class: 2 (through pattern tile).
      (d) Wear Surface: smooth.
   2. Suggested Manufacturers:

(a) Armstrong's "Standard Excelon"
(b) Or approved equal

End of Section

SECTION 096813 - TILE CARPETING

A. GENERAL

1. Install tile carpeting and miscellaneous materials in accordance with CRI 104, Section 14 and with tile carpeting manufacturer's written installation instructions.
   (a) Maintain dye lot integrity or specify mergeable dye lot materials. Do not mix dye lots in the same area.
2. Carpeting must be full glue application or approved dry adhesive.
3. References:
   (a) AATCC - The American Association of Textile Chemists and Colorists, Research Triangle Park, NC 27709, www.aatcc.org.
   (b) CRI – Carpet and Rug Institute, Dalton, GA 30722-2048, www.carpet-rug.com.
   (c) Carpet tile must comply with the Carpet and Rug Institutes Indoor Air Quality Program (ASTM-D-5116)
4. ***Utilize adhesives, which are CRI Indoor Air Quality Green Label Certified.***
5. Flammability Certification:
   (a) Radiant Panel Flooring Flammability Test: NFPA 253. Class I, Minimum 0.45 watts per sq. centimeter.
   (b) Methenamine Tablet Test: DOC-FF-1-70 and ASTM D 2859. Meet the "Standards for the Surface Flammability of Carpets".
   (c) Smoke Density Test: NFPA 258 and ASTM E 662. Specific optical density (DM) of 450 or less (flaming).
6. ***Dimensional Stability: Aachen Method DIN 54318, 0.2 percent or less.***
7. ***Obtain each type of carpet tile from one source and by a single manufacturer.***
8. ***War***ranty including the following:
   (a) Abrasive wear warranty of 10% wear maximum over a 10-year minimum period from date of installation.
   (b) Lifetime warranty coverage for tuft bind, static, delamination and edge ravel.
   (c) Backing shall be warranted against cupping, doming, delamination and squareness for a minimum period of 10 years from date of installation.

B. PRODUCTS/SIZE SELECTION

1. Subject to compliance with requirements, provide products of the following:
2. Carpet tile including products from the following manufacturers:
   (a) Mohawk Carpet, Kennesaw, GA 30144, (800) 554-6637, www.mohawkgroup.com
   (b) Shaw Contract, Calhoun, GA 30701, (800) 241-4014, www.shawcontract.com
   (c) Mannington Commercial Carpet, Calhoun, GA 30703, (800) 241-2262 www.mannington.com
   (d) Milliken Carpet, LaGrange, GA 30240 (800) 528-8453, www.millikencarpet.com
   (e) Or approved equal
3. All carpet tile shall meet the following standards:
   (a) Carpet Tile: carpet module size available (24" x 24", 18" x 36", 9" x 36", 12" x 48", other).
   (b) Face Weight: 20 oz.
   (c) Gauge: 1/8
   (d) Colorfastness to Light: AATCC 16, Option E. Minimum rating of 4 on grey scale after 80- hours exposure for 100% solution Dyed or Cationic Nylon.
   (e) Colorfastness to Crocking: AATCC 165. Minimum rating of 4 wet and dry for 100% solution Dyed or Cationic Nylon.
   (f) Appearance Retention Rating: ASTM D 5252. CRI TM-101 "Severe" rating.
   (g) Stain Resistance: AATCC 175. Rating of 8 or better. Manufacturer Stain Warrantee.
   (h) Static Resistance: AATCC 134. 3.5 kv or less, at 70 degrees F and 20 percent RH.
   (i) Tuft Bind: ASTM D 1335. Average pounds of force not less than 12 pounds.
   (j) Maximum Pile Height (inches): .156.
   (k) Minimum Pile Thickness (inches): .130.
   (l) Minimum Stitches per Inch: 8.3.
   (m) Fiber Type: 100 percent Type 6 or 6.6 Nylon.
   (n) Dye Method: Yarn Dyed, Injection Dyed, or Solution Dyed.
   (o) Minimum density: 5000
   (p) Minimum pattern repeat-size subject to approval by owner (overprinting not acceptable). Type A Tile Carpeting: Tufted, Textured Loop Pile (Random Pattern).
   (q) Backing System: Manufacturer's standard vinyl-free or thermoplastic polyolefin compound with fiberglass reinforced layer-backing or integral-cushion thermoplastic backing system, must be recyclable and contain recycled content, maintaining a 100 percent moisture barrier between secondary backing and the floor substrate.
   (r) Option: Backing made from 100% reclaimed thermoplastic content.

(s) Option: LEED Building Criteria: Comply with testing and product requirements of the Carpet and Rug Institute "Green Label Plus" program.
(t) Minimum NSF Gold certification
(u) Minimum Cradle to Cradle Silver certified
(v) Must have Declare label, red list compliant

4. Miscellaneous
   (a) Trowel-able: Leveling and Patching Compounds: Latex-modified Portland cement based, or blended hydraulic-cement-based formulation provided or approved by tile carpeting manufacturer for application on substrate surface and grade level.
   (b) Resilient Edge Strips: Not less than one-inch wide, tapered bullnose edge, thickness and color as selected.
   (c) Adhesives: Tile carpeting manufacturer's recommended water-resistant materials formulated for application on substrate surface and grade level.
   (d) Low VOC Flooring Adhesive and Joint Materials: Tile carpeting manufacturer's recommended water-resistant materials formulated for low VOC (VOC Limit 50g/L less water) and for application on substrate and grade level.
   (e) Cleaning Solvents: Low toxicity, and a flash point in excess of 100 degrees F.
   (f) Wood Floor Primer: Tile carpeting manufacturer's recommended type.
   (g) Liquid Floor Stripper: Tile carpeting manufacturer's recommended type.
   (h) Metal Edge Strips: Extruded aluminum, mill finish; butt type for concealed anchorage; countersunk stainless-steel fasteners, with anchors suitable for substrate surface.

C. EXECUTION
1. The persons installing the tile carpeting and their Supervisor shall be experienced in carpeting installation, including the requirements of the tile carpeting manufacturer. Examine surfaces scheduled to receive tile carpeting for defects that will adversely affect the proper installation. Do not proceed until unsatisfactory conditions are corrected.
2. Install pattern parallel to walls and borders.
3. Cut and fit tile carpeting neatly around projections through floor and to walls and other vertical surfaces.
4. Bind or seal cut edges as recommended by the tile carpeting manufacturer.
5. Stagger joints of tile carpeting so tile carpeting grid is offset from access flooring panel grid.
6. Install edge strips where tile carpeting terminates at other floor coverings or finishes. Use one full length piece where possible. Where splicing cannot be avoided, butt ends tight and flush.
7. Upon completion of the tile carpeting installation, immediately remove spots and smears of excessive adhesive from tile carpeting with cleaning solvent. Remove loose pieces of face yard with sharp scissors.
8. Place usable remnants of tile carpeting in an area designated by the Director's Representative.
9. Remove waste materials and tools.
10. Upon completion, thoroughly vacuum clean carpeted areas.
11. After each area of tile carpeting has been installed, protect from soiling and damage.

End of Section

SECTION 096816 - SHEET CARPETING

A. GENERAL
1. References:
   (a) AATCC - The American Association of Textile Chemists and Colorists, Research Triangle Park, NC 27709, www.aatcc.org.
2. CRI – Carpet and Rug Institute, Dalton, GA 30722-2048, www.carpet-rug.com
3. Flammability Certification:
   (a) Radiant Panel Flooring Flammability Test: NFPA 253. Class I, Minimum 0.45 watts per sq centimeter.
   (b) Methenamine Tablet Test: DOC-FF-1-70 and ASTM D 2859. Meet the "Standards for the Surface Flammability of Carpets". Code of Federal Regulations (govinfo.gov)
   (c) Smoke Density Test: NFPA 258 and ASTM E 662. Specific optical density (DM) of 450 or less (flaming).
4. Colorfastness to Light: AATCC 16, Option E. Minimum rating of 4 on grey scale after 80 hours exposure.
5. Colorfastness to Crocking: AATCC 165. Minimum rating of 4 wet and dry.
6. Appearance Retention Rating: ASTM D 5252. CRI TM-101 "Severe" rating.
7. Stain Resistance: AATCC 175. Rating of 8 or better.
8. Static Resistance: AATCC 134. 3.5 kv or less, at 70 degrees F and 20 percent RH.
9. Tuft Bind: ASTM D 1335. Average pounds of force not less than 12 pounds.
10. Installer Qualifications: The persons installing the sheet carpeting and their Supervisor shall be

experienced in carpeting installation, including the requirements of the sheet carpeting manufacturer,

11. Manufacturer's Warranty: Minimum 15-year wear warranty.
12. ***Optional: LEED Submittals:***
    - ***(a) Indoor Environmental Quality: Indicate compliance with testing and product requirements of the Carpet and Rug Institute's "Green Label Plus" program. Adhesive: Include printed statement of VOC content and chemical components.***
    - ***(b) Recycled Content: Indicate recycled content; include minimum percentage of pre- consumer and post-consumer recycled materials.***
    - ***(c) Local/Regional Materials: Indicate sourcing and manufacturing locations.***

B. PRODUCTS

1. SHEET CARPETING MANUFACTURERS
   (a) Mohawk Carpet, Kennesaw, GA 30144, (800) 554-6637, www.mohawkgroup.com
   (b) Shaw Contract, Calhoun, GA 30701, (800) 241-4014, www.shawcontract.com
   (c) Mannington Commercial Carpet, Calhoun, GA 30703, (800) 241-2262 www.mannington.com
   (d) Milliken Carpet, LaGrange, GA 30240 (800) 528-8453, www.millikencarpet.com Or equal.
2. Type A Sheet Carpeting: Tufted, Textured Loop Pile (Random Pattern):
   (a) Fiber Type: 100 percent Type 6.6 Nylon.
   (b) Minimum Face Yarn Weight: 20 oz.
   (c) Maximum Pile Height (inches): .156.
   (d) Minimum Pile Thickness (inches): .130.
   (e) Minimum Stitches per Inch: 8.3.
   (f) Minimum Gauge: 1/8.
   (g) Minimum Density: 5000.
   (h) Dye Method: Yarn Dyed, Injection Dyed, or Solution Dyed.
   (i) Backing: 1) Primary- Polypropylene 2) Secondary- Synthetic
   (j) Width: 12 feet.
   (k) Opti*onal: LEED Building Criteria: Comply with testing and product requirements of the Carpet and Rug Institute's "Green Label Plus" program.
3. Carpet Cushion: Sheet carpeting manufacturer's recommended cushion material for substrates and specified sheet carpeting types.
4. Resilient Edge Strips: Not less than one-inch wide, tapered bullnose edge, thickness and color as selected.
5. Metal Edge Strips: Extruded aluminum, mill finish; butt type for concealed anchorage; countersunk stainless-steel fasteners, with anchors suitable for substrate surface.
6. Trowel-able Leveling and Patching Compounds: Latex-modified Portland cement based or blended hydraulic-cement-based formulation provided or approved by sheet carpeting manufacturer for application on substrate surface and grade level.
7. Adhesives: Sheet carpeting manufacturer's recommended water resistant materials formulated for application on substrate surface and grade level.
8. ***Low VOC Flooring Adhesive and Joint Materials: Flooring manufacturer's recommended water-resistant materials formulated for low VOC (VOC Limit 50g/L less water) and for application on substrate and grade level.***
9. Seam Sealer: Sheet carpeting manufacturer's recommended type
10. Cleaning Solvents: Low toxicity, and a flash point in excess of 100 degrees F.
11. Wood Floor Primer: Sheet carpeting manufacturer's recommended type.
12. Liquid Floor Stripper: Sheet carpeting manufacturer's recommended type.

C. EXECUTION

1. Examine surfaces scheduled to receive sheet carpeting for defects that will adversely affect the proper installation. Do not proceed until unsatisfactory conditions are corrected.
2. Install sheet carpeting in accordance with approved seam diagram. Match sheet carpeting pattern at seams.
3. Seaming: Treat edges cut for seaming with seam sealer. Apply the sealer along the edge of the sheet carpeting at the point where the face yarn goes into the back. Immediately remove excess sealer from face of pile with cleaning solvent recommended by seam sealer manufacturer.
4. Cut and fit sheet carpeting neatly around projections through floor and to walls and other vertical surfaces.
5. Direct Glue-Down Method: Apply adhesive in accordance with manufacturer's instructions. Broom or roll sheet carpeting to remove air bubbles and insure bond.
6. Stairs and Steps: Secure sheet carpeting by anchorage methods recommended by sheet carpeting manufacturer.
7. Install edge strips where sheet carpeting terminates at other floor coverings or finishes. Use one full length piece where possible. Where splicing cannot be avoided, butt ends tight and flush.

8. Upon completion of the sheet carpeting installation, immediately remove spots and smears of excessive adhesive from sheet carpeting with cleaning solvent. Remove loose pieces of face yard with sharp scissors.
9. Remove all waste materials and tools.
10. Upon completion, thoroughly vacuum clean carpeted areas.
11. After each area of sheet carpeting has been installed, protect from soiling and damage.

End of Section

SECTION 096913 - RIGID-GRID ACCESS FLOOR (BOLTED STRINGER)

A. QUALITY ASSURANCE:

1. Installer Qualifications: Firm approved by access flooring manufacturer and that has successfully installed access flooring systems of a scope similar to that of this project.

B. PERFORMANCE REQUIREMENTS (MINIMUM)

1. Panels
   (a) Panels shall have a maximum electrical resistance of 1 ohm or less from the top edge of the panel, less surface covering and pedestal pad, to the understructure.
   (b) Concentrated Load: Panel shall support a 1000 lb. load at any location, with top surface deflection not to exceed 0.100", and a permanent set not to exceed 0.010".
   (c) Uniform Load: Panel shall support 250 lb. per square foot load, with a maximum top surface deflection not to exceed 0.060" and a permanent set not to exceed 0.010".
   (d) Ultimate Load: 3000 lbs. minimum at weakest point.
   (e) Rolling Load: Panels shall withstand a rolling load of 800 lbs. applied through a 3" dia. x 1-13/16" wide phenolic caster for 10 passes. Permanent top surface set shall not exceed 0.040". Panels shall withstand a rolling load of 600 lbs. applied through a 6" diameter x 1-1/2" wide hard rubber-surfaced wheel for 10,000 cycles over the same path. Permanent top surface set shall not exceed 0.020".
   (f) Impact Load: A 150 lb. load dropped from 36" onto a one-inch square indenter shall not cause system failure.
   (g) ASTM E 84: Flame spread of 5 or less and smoke development of 25 or less.
2. Pedestals
   (a) Axial Load: Pedestal assembly shall provide a 5000-lb. axial load without permanent deformation.
   (b) Overturning Moment: Pedestal assembly shall provide an average overturning moment of 1000 in-lbs. when glued to a clean sound, uncoated concrete surface.
3. Stringers
   (a) Mid-span Concentrated Load: Stringer shall be capable of withstanding a concentrated load of 450 lbs. placed in the mid-span stringer center on a one square inch area using a round or square indentor without exceeding a permanent set of 0.010” after load is removed.
4. Floor Panels
   (a) Manufacturer's standard 24" x 24" nominal size, interchangeable, welded steel construction floor panels easily placed and removed by a portable lifting device.
   (b) Chemically clean bottom surfaces and edges of floor panels. Prime and paint with manufacturer's conductive paint. Do not paint top surface of panels.
   (c) Floor Covering: Finish top of each floor panel with one (1) piece of high pressure laminated plastic, 1/8" nominal thickness, of type specifically designed and manufactured for use on computer room floors. Edge each panel on four (4) sides with manufacturer's standard shape, extruded, conductive, vinyl plastic edge trim.
   (d) Carpet Covering: Provide plain panel factory finished steel ready to accept carpet tiles.
5. Grid System
   (a) Manufacturer's standard steel stringers, interlocking with pedestal heads to form a grid pattern for supporting each edge of each floor panel, and with a pedestal under each corner of each floor panel.
      1) Rigid grid with stringers securely locked or bolted to pedestal heads.
      2) Rigid conductive vinyl pads for bearing surfaces of stringers.
   (b) Finish of Steel: Galvanized or manufacturer's standard primer and paint.
6. Accessories
   (a) Cutouts: Fabricate floor panels with cutouts for cables and grilles at locations shown. Trim cutouts with plastic edging and provide foam rubber pad for sealing and protection of cables. Provide additional support if required to satisfy performance requirements.
   (b) Grilles and Dampers: Manufacturer's standard load-bearing vent grilles and dampers in floor panels at locations shown. Isolate grilles and dampers from metal-to-metal contact. Reinforce

floor panel units if required to satisfy performance requirements. Units shall not project more than 0.125 inch above floor finish.

(c) Perforated Floor Panels: Computer room floor strength perforated floor panels, with dampers, at locations as required by design. Must be interchangeable with solid panels.

(d) Plenum Dividers: Minimum 0.064-inch thick aluminum or 16-gauge galvanized steel sheet.

(e) Sealing Mastic: Mastic recommended by flooring manufacturer.

(f) Vertical Closures (Fascia): Minimum 0.080-inch thick aluminum side closure plates.

(g) Ramps: Units of the same basic performance and construction requirements as the flooring system. Cover ramps with floor covering to match access floor. Provide non-slip pads on top surface of ramp covering. Cut panels will not be accepted unless warranted by manufacturer to have equivalent performance as required by specifications for full panels.

(h) Steps: Fabricated of same basic materials as floor panels, with Non-slip aluminum nosing on steps, unless otherwise shown.

(i) Railings: Manufacturer's standard satin-finished aluminum post and rail type handrails, with end caps, wall and floor flanges, plates and anchorages.

(j) Panel Lifting Device: Provide a minimum of two double, suction type, panel-lifting device for hard surfaced panel installation.

7. Attic Stock

Attic stock for individual rooms/floors of buildings shall be provided for the following items:

(a) Grid system components of each style used.

(b) Standard panels for each flooring finish

(c) Cut panels for each finish, including grommets if required

(d) The quantity of attic stock for individual rooms or building with one or more floors of raised flooring or individual rooms shall be calculated as follows:

(e) Standard panels for each flooring finish:

(f) Individual Rooms: 1 panel for each 100 USF of raised floor, minimum of one

(g) Building with one or more floors: 1 panel for each 5,000 USF of raised floor, minimum of two.

(h) Perforated Panels for each floor finish: 5% of initial design requirement.

(i) Cut panels for each finish:

1) Individual Rooms: 2 panels for each 100 USF, minimum of two.

2) Buildings with one or more floors: 2% of the number of cut panels, minimum of two.

(j) Grid components for each raised floor type:

1) Individual Rooms: sufficient components to support one panel for every 100 USF, minimum of one.

2) Buildings with one or more floors: sufficient components of support one panel for every 5,000 usf, minimum of two.

8. Manufacturers:

(a) Tate Concore 3000 bolted stringer

(b) Or approved equal

End of Section

SECTION 097200 – VINYL COATED FABRIC WALLCOVERING

A. GENERAL:

1. Wall covering to meet ASTM E-84 Tunnel Test with the following flame spread scale and smoke development rate:
   (a) Flame Spread Scale: 0 to 25
   (b) Smoke Development Rate: 0 to 25
2. Wall covering shall have a vinyl surface.
3. Type II (heavy duty): Total weight 22 oz./sq. yd. minimum
4. Material width: 54"
5. Fabric Backing: Drill or Polyester Osnaburg
6. Performance and Physical Properties:
   (a) Tensile breaking strength (minimum): 50 lbs. X 50 lbs.
   (b) Tear Strength (minimum): 25 x 25 scale reading
   (c) Abrasion Resistance: 300 double rubs
   (d) Meets ASTM D 1308 with no appreciable effect of staining
   (e) Meets ASTM D 1308b with no fading due to strong cleaning solution
   (f) Meets ASTM D 751-79 with adhesion of coating to fabric being a minimum of six lbs. per two-inch width
7. Pattern and color: To be selected by Tenant.
8. Adhesive, primer/sealer: type recommended by wall covering manufacturer. All materials must be

mildew-resistant and non-staining to the wall covering.

9. Corner Guards are to be installed 48" above the base on all exterior corners and columns (See Section 102613).
10. Manufacturers:
    (a) Korseal Wall covering (B.F.Goodrich)
    (b) Genon
    (c) J.M.Lynn
    (d) Wolf Gordon Inc.
    (e) Or approved equal

End of Section

SECTION 099123 INTERIOR PAINTING AND FINISHING

A. GENERAL APPLICATION

1. Paint all existing presently painted surfaces, two (2) coats.
2. Paint all new wallboard, three (3) coats, one (1) prime and two (2) finish).
3. Paint all ferrous metals, two (2) coats, (one (1) prime and one (1) finish).
4. ***Wooden top caps, one (1) coat stain, two (2) coats water emulsion or water based urethane.***
5. Provide primers and undercoat paint produced by the same manufacturer as the finish coats.
6. ***All paint to be Low or No VOC. Maximum VOC limit for Interior Coatings: Non-flat 100; Flat 50; or latest Green Seal standard for paints.***
7. All painting and application shall be as per manufacturer's instructions.

NOTE: No painting required for manufacturer's pre-finished paint surfaces or newly hung ceilings.

B. SUGGESTED MANUFACTURERS FOR DESIGNATED SURFACES

1. Gypsum Drywall (Ceilings): Lusterless (flat) emulsion finish, two coats over primer.
    a. Primer: Pristine Eco Spec. Latex Primer by Benjamin Moore, Sherwin Williams Pro Mar 200 Zero VOC Interior Latex Primer B28W02600 or equal.
    b. 1st and 2nd Finish Coat: Pristine Eco Spec. Latex Flat #219 by Benjamin Moore, Sherwin Williams Pro Mar 200 Zero VOC Interior Latex Paint Flat B30W12651, or equal.
2. Gypsum Drywall (Walls Tenant Area): Eggshell finish; two coats over primer.
    a. Primer: Pristine Eco Spec. Latex Primer #231 by Benjamin Moore, Sherwin Williams Pro Mar 200 Zero VOC Interior Latex Primer B28W02600, or equal.
    b. 1st and 2nd Finish Coat: Pristine Eco Spec Latex Eggshell #223 by Benjamin Moore, Sherwin Williams Pro Mar 200 Zero VOC Interior Latex Eggshell B20W12651 or equal.
3. Gypsum Drywall – polomyx and aqua fleck.
    a. Primer: One coat Benjamin Moore Interior Latex Primer/Sealer #231, Sherwin Williams Pro Mar 200 Zero VOC Interior Latex Primer B28W02600.or equal.
    b. ***1st and 2nd Finish Coat: Eco Spec Semi-gloss #224 by Benjamin Moore, Sherwin William Pro Mar 200 Zero VOC Interior Latex Semi-Gloss B31W02651 or equal.***
    c. For painting over Polymyx substrates: 1ct Sherwin Williams Extreme Bond Primer B51-150, 2cts Sherwin Williams Pro Mar 200 Zero VOC Interior Latex Semi-Gloss B31W02651
4. Ferrous Metal (including factory primed hollow metal doors and frames): Semi-gloss acrylic latex, two coats over primer.
    a. Primer: Alkyd metal primer M06 by Benjamin Moore, Sherwin Williams Hi Solids Alkyd Metal Primer B50NZ0002, or equal.
    *Alternate: Acrylic metal primer, M04 by Benjamin Moore, Sherwin Williams Pro Industrial DTM Acrylic Primer Finish B66W00011, or equal.
    b. ***1st*** and ***2nd Finish Coat: Eco Spec Semi-gloss #224 by Benjamin Moore, Sherwin Williams Pro Mar 200 Zero VOC Interior Latex Semi-Gloss B31W02651, or equal.***
5. Painted Wood Trim and Doors (Semi-Gloss):
    a. Primer: One coat Benjamin Moore Paste Wood Filler #238, Sherwin Williams MinWax Wood Filler 0779, or equal.
    b. Stain: One coat Benjamin Moore Interior Wood Penetrating Stain #234, Sherwin Williams Wood Classics Interior Oil Stain A49N00202, or equal; color as selected by Architect and approved by NYSIF.
    c. ***Finish Coat: Two coats Benjamin Moore Urethane water based stays clear #422, Sherwin Williams Wood Classics Waterborne Polyurethane Varnish A68V00091, or equal.***

6. CMU/Gypsum/Metal Doors/Trim (Labs & Restrooms)
    a. Primer: Sherwin Williams Pro Mar 200 Zero VOC Interior Latex Primer B28W02600
    b. 1 and 2 Finish Coat: Sherwin Williams Paint Shield EPA Approved Microbicidal Coating D12W00051.

End of Section

DIVISION 10 - SPECIALTIES

SECTION 102113 – METAL TOILET COMPARTMENTS

A. MATERIALS FOR TOILET PARTITIONS AND SCREENS

1. Steel Sheet for Baked Enamel Finish: Prime quality carbon steel, cold rolled, stretcher leveled, galvanized (0.00015" thick galvanized coating on each face) and bonderized.
2. Core Insulation: Manufacturer's standard rot-proof and vermin-proof double-faced honeycomb or corrugated type core material; required in all panels, screens, pilasters and doors.
3. Hardware: Solid forged brass or stainless steel (Type 302 or 304), as indicated below. Stamped, cast alloy, or aluminum extrusions shall not be accepted.
    (a) Ceiling Hung: Stainless steel, one-piece (no visible joints or seams) flush or offset design, twenty (20) gauge.
    (b) Hinges: Gravity hinge type, self-closing, concealed within door, fully adjustable, to bring door to rest in thirty (30) degree open position. Hinge brackets solid forged brass or stainless steel, with solid stainless-steel pin and pintels.
    (c) Latch: Solid forged brass with solid stainless-steel slide.
    (d) Strike and Keeper: One-piece, solid forged brass or sixteen (16) gauge stainless steel, with rubber bumper mechanically applied and theft proof.
    (e) Bumper Coat Hook: Solid forged brass, with ferrule held rubber bumper on back of each toilet compartment door.
    (f) Stirrup Brackets: Fourteen (14) gauge stainless steel or forged brass.
    (g) Hardware Finishes (select one):
        1) On Forged Brass: Heavy chromium plating over nickel over copper. Satin Finish (US26D).
        2) On Stainless Steel: No. 4, Satin Finish.
4. Fasteners: Provide exposed fasteners of stainless steel or chromium plated brass, same finish as adjoining metal, theft proof. Provide concealed fasteners of non-corrosive metal.
5. Furnish galvanized steel anchorage devices, complete with threaded rods, lock washers, and leveling adjustment nuts at pilasters, to permit structural connection at floor. Furnish shoe at each pilaster to conceal anchorage.

B. FABRICATION

1. Minimum Acceptable Metal Gauges
    (a) Face Sheets for Panels and Screens: Twenty (20) gauge steel sheet.
    (b) Face Sheets for Doors: Twenty-two (22) gauge steel sheet.
    (c) Face Sheets for Pilasters: Sixteen (16) gauge steel sheet for baked enamel finish, unless otherwise indicated.
        1) For pilasters less than four (4) inches wide - fourteen (14) gauge.
    (d) Edge Moldings: Eighteen (18) gauge galvanized, bonderized steel.
    (e) Concealed Reinforcement: Fourteen (14) gauge galvanized steel for tapping and twelve (12) gauge galvanized steel for anchoring devices.

C. STEEL FRAMING FOR SUPPORT OF CEILING HUNG TOILET

1. Light steel framing (ASTM A36) and hanger for support of ceiling hung toilet compartments shall consist of adequately sized steel channels extending between walls directly over pilasters and be supported by 1/2" dia. galvanized steel rods. Rods shall be securely attached to structural slab above and securely attached to steel channels. Locate rods above every other pilaster. Install light steel framing and hangers prior to installation of suspended ceiling.

B. SUGGESTED MANUFACTURERS

1. Ceiling Hung Toilet compartments:
    (a) "Flushung" of Flush Metal Partition Corp. (Metal panels)
    (b) "Century" of the Sanymetal Products Co. (Metal panels)
    (c) "Forum CH-700" of the Metpar Co (Resin)
    (d) Or approved equal.

End of Section

SECTION 102213 - WIRE MESH PARTITIONS

A. MATERIALS

1. Wire Mesh Partitions
   (a) Mesh: 1-1/2" diamond-intermediate crimped.
   (b) Wire: No. 10 W & M gauge.
   (c) Vertical Channel: 1-1/4" x 5/8" "C" Type with 1/4" bolts.
   (d) Horizontal Channel: 1" x 1/2".
   (e) Center Reinforcement: Double: Two 1" x 1/2" CCR channel bolted each side of mesh.
   (f) Corner Post: 1-3/4" x 1-3/4" x 1/8" angle.
   (g) Top Reinforcement: 2-1/4" x 1" Channel: Fastened with 1/4" "U" bolts. Approximately 24" on center.
   (h) Floor Sockets: 1-1/4" x 1-1/4" x 2-1/2" high-ductile iron (weldable).
   (i) Sliding Door Frame: 1-1/2" x 3/4" channel.
   (j) Swinging Door Frame: 1-1/4" x 1/2" channel.
   (k) Hardware: Mortise type lock operated by key outside, recess knob inside. Spring catches on pass windows.
2. Finish
   (a) Fabricated units shall be dipped in a cleaning bath.
   (b) Units shall be polyester powder coated and air dried.
   (c) Color shall be as selected by the Architect from manufacturer's standard colors.

B. SUGGESTED MANUFACTURER:

1. Cisco-Eagle
2. Miller Wire Works, Inc.
3. Acorn Wire and Iron Works Inc.
4. Or Approved Equal

End of Section

SECTION 102238 - OPERABLE PANEL PARTITIONS

A. QUALITY ASSURANCE

1. Folding partitions, accessories, and trim shall be the product of a single manufacturer.
2. Sound Transmission Classification: Comply with ASTM E 90.
3. Fire Hazard Classification: Vinyl-faced fabrics as tested and classified by UL in accordance with ASTME 84 and equal to or less than the following:
   (a) Flame Spread: 25
   (b) Fuel Contributed: 15
   (c) Smoke Developed: 25

B. ACCORDION FOLDING PARTITION

1. Construction: Collapsible steel frame, 24-gauge steel panels and acoustical membrane.
2. Panel Assembly: Each panel attaches to frame with steel leaf fasteners.
3. Panel Surface Finish: Vinyl, manufacturer standard.

C. FOLDING PANEL PARTITIONS:

1. Panel Construction: 3” thick (minimum) horizontal and vertical formed steel frame, 21-gauge steel panels welded directly to the frame, or 3” thick (minimum) gypsum with manufacturer’ standard vinyl, high pressure plastic laminate, wood veneer or carpet covering
2. Panel Surface Finish: (a) Vinyl, manufacturer’s standard (b) High pressure plastic laminate (c) Panel Configuration: (d) Paired panels (e) Continuously hinged panels (f) Single panels
3. Track Assembly
   (a) Manufacturer’s standard top supported galvanized steel or extruded aluminum track and trolley assembly sized to suit dimensions and operation application.
   (b) Center meeting bi-parting units, with manufacturer’s standard center meeting molding or strike.
   (c) Side stacking units.
4. Carriers
   (a) Manufacturer’s standard ball bearing trolley assemblies
5. Sound Rated Units

(a) Sound transmission classification (STC) of 45, minimum.

6. Hardware
   (a) Pull Bar, Draw Latches, Screws and Installation Hardware: Manufacturer's standard for folding or accordion folding partitions furnished.
   (b) Latch: operable from both sides of closed unit.
7. Manufacturer: Hufcor Corp, Modernfold or an approved equal.

End of Section

SECTION 102613 - CORNER GUARDS

A. QUALITY ASSURANCE
1. Cover materials shall be classified in accordance with ASTM E 84 as to flame spread and smoke development and shall be classified as self-extinguishing in accordance with ASTM D 635.

B. MATERIAL
1. Surface mounted, 2-piece, CG-10, corner guard consisting of aluminum retainer and high impact vinyl cover, selected from manufacturer's standard colors.
2. Minimum width 3".
3. Minimum height 48".
4. Screw mount (no self-adhesive).
5. Install on all outside corridor corners (all areas open to public) and high traffic areas.
6. Suggested Manufacturers: (a) Pawling Pro-Tek wall protection systems (b) Or approved
7. Chair rail. Minimum 6" height. Acrovyn SCR-48 or equal. Height to be determined during design.

End of Section

SECTION 102813 - TOILET & BATH ACCESSORIES

A. MATERIALS
1. Stainless Steel: AISI Type 302/304 with No. 4 satin finish, unless otherwise indicated.

B. FABRICATION
1. Provide keyed vandal-resistant lock where key access is specified.
2. Mounting Devices: Type and size compatible with accessory unit specified which will securely mount accessory to wall or partition construction indicated. Grab Bars: Provide anchoring devices, which will withstand minimum downward pull of 500 pounds.
3. Exposed Mounting Devices and Fasteners: (a) Type: Concealed fasteners (b) Finish: Match accessory finish, unless otherwise indicated.

C. TYPES AND MANUFACTURERS
1. Mirrors
   (a) Type:
      1) Tempered glass mirror in stainless steel frame.
      2) Tempered glass mirror in stainless steel frame with integral shelf.
      3) Fixed tilt, tempered glass mirror in stainless steel frame to meet ADA requirements.
   (b) Frame: Either of the following:
      1) Angle Framed Construction: Stainless steel angle frame with No. 4 finish, minimum 5/8" x 1/8" x 18 gauge, corners mitered, heliarc welded, ground smooth and polished, with concealed 18 gauge stainless steel angles welded on inner side of frame 6" on center and tapped to receive back plate fasteners.
      2) Roll-formed Angle Framed Construction: Roll-formed stainless steel angle frame with concealed, continuous integral stiffener/retainer around perimeter, No. 4 finish, minimum 3/4" x 1/4" x 12 gauge, corners mitered, heliarc welded, ground smooth and polished. Stiffener/retainer shall be tapped to receive back plate fasteners.
   (c) Back Plate: Galvanized steel, 20 gauge, full interior area of frame, secured to frame with concealed, cadmium-plated screws 6" OC"
   (d) Mounting Frame (Hanger Bracket): Rigid box or rectangular type, welded construction, fabricated of 18 gauge, galvanized steel, with 18 gauge locking tabs.
   (e) Mirror Quality:
      1) Identification Stamp: Identify tempered glass units by affixing manufacturer's stamp labeled "tempered" to a glass face.
      2) Mirror Backing: Shock absorbing material over entire back mirror surface.
   (f) Integral Shelf: 22-gauge stainless steel for units up to 36" wide, 18 gauge for units wider than 36"; No. 4 finish. Size: 5" deep x full width of mirror frame. Bend front edge down ½" and fold metal back on itself to form finished edge. Bend sides down ½". Heliarc weld corners grind smooth and polish all welds.

2. Paper Towel Dispensers - Recessed: Units fabricated of 22-gauge stainless steel with 22-gauge double-pan, or 18 gauge single-pan, stainless steel door construction. Hang door on full length, continuous stainless-steel hinge. Approximate size: 17" wide x 29" high x 10 ½" deep to accommodate roll paper towel. Keyed access.
3. Paper Towel Dispensers - Surface Mounted: Unit fabricated of stainless steel. Front cover shall be fabricated of smoked transparent, high impact plastic, or stainless. Approximate cabinet size: 17" wide x 15" high x 10 ½" deep to accommodate roll paper towel. Keyed access. Fabricate units with flush, tight seams and joints, rounded corners, sloping tops and all exposed edges rolled. Option: ADA compliant unit with motion sensor when required for employees.
4. Double Roll Toilet Tissue Holder: Constructed of stainless steel or smoked transparent high impact plastic. Units shall have hinged arm for filling, pilfer resistant locking mechanism, and designed to prevent free roll of tissue for each roll.
   (a) Type 1: Holder shall accommodate standard 4 ½" wide jumbo tissue rolls. Approximate size: 15" wide x 12" high x 6" deep.
   (b) Type 2: Smoked transparent high impact to accommodate 4 wide jumbo tissue rolls. Approximate size: 15" wide x 12" high x 6" deep.
5. Waste Receptacles - Surface Mounted: Units fabricated of 22-gauge stainless steel with rounded front corners and hemmed edges. Approximate size: 23" high x 16½" wide x 12½" deep. Liner: Removable vinyl liner.
6. Waste Receptacles - Recessed: Unit fabricated of 22-gauge stainless steel with cabinet access door, and removable and reusable metal or rigid molded plastic waste contained equipped with lifting handle. Fabricated door of 22-gauge stainless steel double-pan, or 18-gauge stainless steel single-pan, construction. Mount door on full length, continuous stainless-steel hinge. Approximate overall size: 48" high x 14" wide x 7" deep. Minimum capacity of waste container: 1.3 cubic feet. Units shall have integral trim flange and key access.
7. Combination Paper Towel Dispensers and Waste Receptacles: Units fabricated of 22-gauge stainless steel with dispenser door, waste cabinet access door, and removable and reusable metal or rigid molded plastic waste container equipped with lifting handle. Fabricate doors of 22-gauge stainless steel double-pan, or 18-gauge stainless steel single-pan construction. Mount doors on full length, continuous stainless-steel hinge. Approximate overall size: 54" high x 14" wide x 10" deep. Units to dispense roll paper towels. Units may be surface mounted or recessed with integral trim flange.
8. Feminine Napkin Disposals - Surface Mounted (FND-SM): Units fabricated of 22-gauge stainless steel with 22-gauge stainless steel sloping cover mounted on a full length, continuous stainless-steel hinge. Equip cover with a side-mounted handle for lifting. Approximate overall size: 11" high x 8" wide x 4" deep.
9. Feminine Napkin Disposals - Recessed: Units fabricated of 22-gauge stainless steel, completely enclosed, with self-closing door and removable receptacle. Mount door on a full length, continuous stainless-steel hinge. Receptacle shall have a recessed finger grip for removal. Approximate overall size: 18" high x 14" wide x 4" deep. Door shall have stamped or embossed lettering reading: "Napkin Disposal" and "push". Units shall have integral trim flange.
10. Lather/Foam Soap Dispensers - Surface Mounted: Individual surface mounted tank type consisting of smoked transparent high impact plastic or stainless-steel one-piece body with polished satin finish, push-in soap dispenser valve with stainless steel mechanism, locked filler cap at top, and stainless steel back with vandal resistant mounting bracket. Soap tank capacity: Not less than 40 oz. liquid soap. Approximate overall size: 8 ½" wide x 4 ¾" high x 5 ½" deep. Valve shall have bulking multiplier of 10 or more. Units shall have refill indicator window and service key access for refilling.

D. SUGGESTED MANUFACTURERS:
   (a) Bobrick Washroom Equipment Inc.
   (b) Bradley Corporation
   (c) Or approved equal

End of Section

SECTION 102814 - ELECTRICAL HAND DRYERS

A. GENERAL
1. 110 or 220-volt Surface mounted automatic hand dryer. Fractional horsepower motor to be automatic thermal overload switches to protect overheating.
2. No-Touch electronic operation; automatically turn off when hands are moved away.
3. Base should be one-piece heavy-duty non-corroding alloy.
   (a) Cover should be heavy duty, scratch and dent-resistant cast-iron vitreous enamel finish cover. Cover should have tamper resistant bolts.
   (b) Nozzle to be a die cast alloy, which is located to allow hand drying.
4. Suggested Manufacturers:
   1) Bobrick Washroom Equipment B-7000 Series

2) Or approved equal

End of Section

SECTION 104413 - FIRE PROTECTION CABINETS

A. QUALITY ASSURANCE
1. Provide portable fire extinguishers, cabinets and accessories by one manufacturer.
2. UL-Listed Products: Provide new portable fire extinguishers which are UL-listed and bear UL "Listing Mark" for type, rating, and classification of extinguisher indicated.

B. EXTINGUISHERS
1. Multi-Purpose Dry Chemical Type: UL rated 4A-60B:C, 10 lb. nominal capacity, in enameled steel container, for Class A, Class B and Class C fires.
2. Provide sufficient quantity to meet National Fire Protection Association reference standards.

C. MANUFACTURES
1. Cabinets - Architect Series by Larsens or approved equal.
2. Walter Kidde or approved equal.

End of Section

DIVISION 11 - EQUIPMENT

SECTION 113100 - APPLIANCES, PORTABLE HEATING/COOLING APPLIANCES

A. ENERGY STAR: Refrigerators, dishwashers, water heaters and miscellaneous appliances must have "Energy Star Label".

B. REFRIGERATORS:

1) Solid double door refrigerator, Turbo Air Model M3R47-2-N or approved equal.

2) Solid single door refrigerator, Turbo Air Model M3R24-1-N or approved equal.

End of Section

SECTION 115213 - PROJECTION SCREENS

A. ELECTRICALLY OPERATED, REMOTE CONTROL SCREENS
1. Provide units for recessed ceiling mounting completely housed in a metal-lined wood case, listed by UL and bearing re-examination markers of UL. Mount top of screen fabric to metal roller with roller supported on brackets with self-aligning bearings.
2. Screen Case: Fabricate wood case with metal lined motor compartment, hinged or removable access panel to motor compartment, electrical outlet box, and finished with manufacturer's standard primer coat.
3. Motor Units: Size and capacity recommended by the screen manufacturer. Use instant reversing, gear drive motor with permanently lubricated ball bearings, automatic thermal overload protection, and pre-set limit switches to automatically stop screen in "up" and "down" and "stop" in a box with cover plate for flush wall mounting. Stop action to be positive to prevent coasting.

B. SUGGESTED MANUFACTURERS:
1. Da-Lite
2. Or approved equal

End of Section

DIVISION 12 - FURNISHINGS

SECTION 122000 - WINDOW TREATMENT

A. HORIZONTAL LOUVER BLINDS
1. Components:
(a) Slats:
1) Width: 1"
2) Thickness: .006 - .008 prior to painting
3) Material: aluminum or aluminum alloy
(b) Finish: Baked oil paint, resistant to fading/discoloration
(c) Color: coordinated with office colors
(d) Ladders and Lift Cords:
1) Material: braided polyester with minimum stretch

2) Color: to match slats

2. Head Channel:
   (a) Material: Electro-galvanized steel
   (b) Thickness: .025" in a "U" shaped channel
   (c) Finish: Baked on polyester finish to match color of slats
   (d) Edges to be rolled
3. Bottom Rail:
   (a) Material: cold-rolled sheet steel
   (b) Thickness: .018 - .031"
   (c) Finish: baked or polyester finish to match color of slats
   (d) End caps: to match color of slats
4. Cord Lock: Securely raise & lower the blind to any height without tearing cords
5. Tilt Wand:
   (a) Material: clear acrylic
   (b) Shape: tubular
6. Tilter: worm and gear type
7. Intermediate Support Brackets: furnished for blinds over 48" wide
8. Suggested Manufacturers
   (a) Levolor 1" (25mm) Monaco Blind
   (b) Hunter Douglas Flexalum Decor 1" (25mm)
9. Bali Classics Mini Blinds

B. SHADES

1. Provide manually operated shade system equal to "Mecho-Shade" made by the Mecho-Shade Corp. or equal made by Sol-R-Veil Inc. or Kirsch Co. or approved equal conforming to standards specified herein.
2. Shade system shall be a smooth operating chain and sprocket operated roller shade system which incorporates an adjustable slip clutch to control the rate of fall, from free running zero friction factor, to a factor of 100%. The shade may be adjusted to stop and hold at an infinite number of positions, or adjustable at any percentage of friction to control the fall rate of the shade as required. The shade position when set as a free fall system to be mechanical, by use of a chain retainer. At either setting the highest and lowest shade position will have an automatic stop to prevent over winding or unrolling. The window shade mechanism shall have sufficient latitude to accommodate small lightweight shades, as well as large heavy shades compatible with glass sizes in the building.
3. Shade mounting brackets shall be made of 1/8" thick sheet steel and a 7/16" welded steel shaft which shall be the axis for the entire sprocket and spring clutch assembly. Reversible for left hand or right-hand operation. Wall, jamb, or ceiling mounted as required, shall be permanently installed with the mechanism concealed from view when fully assembled. Delrin cover plate shall be mechanically attached to sheet steel. Injection molded Delrin cover plate is provided for each of the brackets to conceal the metal brackets from view, provide means of attaching a fabric without exposed hardware, and guide and retain the chain gear assembly. Brackets to act as protective retainer for tube and shade assembly preventing accidental dislocation of tube and shade by vibration, rough usage. The bracket assembly to be permanently mounted to the building; shade tube and fascia are removable.
4. SnapLoc Tube: Extruded 6063-XT6 aluminum, 1-1/2" o.d., either end of tube to engage drive system through internal extruded keyway. Tube shall be extruded with two fabric mounting channels which shall provide anti-deflection support for wide span shades. All tubes removable, interchangeable without removing the drive assembly, block resetting, or readjusting the pre-set stops. Shade tube to be self-aligning and self-leveling.
5. SnapLoc Fabric Mounting Spline: Spline to be of extruded vinyl with symmetrical insertion locking channels and embossed fabric guide. Spline shall have sufficient capacity to hold heavy shades when spline is snapped and locked into the tube. Fabric shade shall be readily removable without removing the tube from the retainer brackets or removing the brackets from the wall.
6. Fabric-Guide End Cap: Delrin end cap shall have steel pin which permits up to 5/16" lateral adjustment in tube width. End cap shall have 2-1/4" o.d. fabric-guide tapered disc feature to assure alignment and protection of the shade cloth.
7. Finishes: All exposed aluminum parts have an anodized finish. Steel parts are either nickel plated, satin finish, or have been bonderized prior to painting with a baked, enamel finish.

End of Section

DIVISION 13 - METAL REFURBISHMENT

SECTION 131000 REFURBISHMENT

A. GENERAL

1. Work of this section shall be accomplished by an experienced fabricator or installer, who has been

engaged in work of equivalent scope for at least five (5) years. Materials, methods of finishing, re-finishing, fabrication, fitting, assembly bracing, supporting, fastening, and erection shall be in accordance with drawings and specifications, approved shop drawings, and be of highest quality practices of the industry, using new and clean materials, having structural properties sufficient to safely sustain or withstand stresses and strains to which materials and assembled work will be subjected. All work shall be accurately and neatly fabricated, assembled and erected.

2. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication, to ensure proper fitting of the new work to existing.
3. The Contractor by commencing the work of this Section, assumes overall responsibility, as part of his warranty of the work, to assure that all assemblies, components and parts shown or required within the work of this Section, comply with the Contract Documents. The Contractor shall further warrant:
   (a) That all components, specified or required to satisfactorily complete the installation, are compatible with each other and with the existing conditions of installation and expected use.
   (b) The overall effective integration and correctness of individual parts and the existing system.
   (c) Compatibility with adjoining existing substrates, materials and work of other trades.
   (d) There shall be no premature material failure due to improper finish, design and installation.
4. All results of refurbishing must meet with the Architect's approval.

B. SUBMITTALS
1. Materials list of items proposed to be provided under this Section;
2. Fabricators descriptions and other data needed to prove compliance with the specified requirements;
3. Shop Drawings showing details of refurbishment, details of construction, installation, and anchorage.

C. FABRICATION AND FITTING CRITERIA
1. Cutting: Cut metal by sawing, shearing or blanking. Flame cutting will be permitted only if cut edges are ground back to clean, smooth edges. Make cuts accurate, clean, sharp, square and free of burrs, without deforming adjacent surfaces or metals.
2. Holes: Drill or cleanly punch holes (do not burn), so that holes will be accurate, clean, neat and sharp without deforming adjacent surfaces or metals.
3. Connections
   (a) Make connections with tight joints, capable of developing full strength of member, flush unless indicated otherwise, formed to exclude water where exposed to water. Locate joints where indicated on drawings. Provide connections to allow for thermal movement of metal at locations and by methods approved by Architect. For work exposed to view, use concealed fasteners (unless welded or other connections indicated) with joints accurately fitted, flush and rigidly secured with hairline contacts.
   (b) Welding: Welding shall be in accordance with recommendations of the American Welding Society and shall be done with electrodes and/or methods recommended by the manufacturers of the metals being welded. Welds shall be continuous, except where spot welding is specifically permitted. Welds exposed to view shall be ground flush and dressed smooth with and to match finish of adjoining surfaces so that joint will not be visible; undercut metal edges where welds are required to be ground flush and dressed smooth. All welds on or behind surfaces which will be exposed to view shall be done so that finished surface will be free of imperfections such as pits, runs, splatter, cracks, warping, dimpling, depressions or other forms of distortion or discoloration. Remove weld splatter and welding oxides from all welded surfaces.
4. Supplementary Parts: Provide as necessary to complete each item of work, even though such supplementary parts are not shown or specified.
5. Accurately cut, fit, drill and tap work of this Section to accommodate and fit existing conditions. Furnish or obtain templates for proper coordination of this work.
6. Exposed Work: In addition to requirements specified herein or shown on drawings, all surfaces exposed to view shall be clean, and free from dirt, stains, grease, scratches, distortions, waves, dents, buckles, tool marks, burrs and other defects which mar appearance of finished work. Work exposed to view shall be straight and true to line or curve, smooth arises and angles as sharp as practicable, miters formed in true alignment, profiles accurately intersecting, and with joints carefully matched to produce continuity of line and design. Exposed fastenings, where permitted, shall be of the same material, color and finish as the metal to which applied, unless otherwise indicated, and shall be of the smallest practicable size.
7. Materials used shall be of such strength, thickness and alloy that they are capable of meeting all standards and descriptions specified herein, shall match existing and as detailed on drawings.
8. All painting and re-painting shall conform to the requirements of Section 099101 and as specified herein.

End of Section

DIVISION 22 - PLUMBING

SECTION 224239 - COMMERCIAL FAUCETS, SUPPLIES AND TRIM

A. MATERIALS
1. Valve body: cast brass
2. Internal Components:
   (a) Metals: Brass or stainless steel
   (b) Non-Metals: Materials not adversely affected by contact with water, temperature changes or a combination of both.
3. Finishes: All exposed to view surfaces installed in finished spaces shall be brass, polished and chrome plated, or stainless steel, with a No. 4 brush finish.
4. Handicapped Installation to have single action faucet.
5. ***Faucets: Laminar flow reduction (saves up to 30%), Hot/cold mixing valve: connects to hot water side.***

B. SUGGESTED MANUFACTURES: 1) Moen Lavatory or Sink Faucet 2) Or approved equal

End of Section

SECTION 224200 - PLUMBING FIXTURES

A. QUALITY ASSURANCE
1. Each fixture and fitting shall be plainly and permanently marked with the manufacturer's name or trademark.
2. Acid resistant surfaces shall be plainly and permanently marked with the manufacturer's label or symbol indicating "acid resistance".
3. ***Water Closet's: 1.6-gallon gravity flush,*** *1.28 GPF desired.*
4. ***Urinals: 1.0-gallon gravity flush, .5 GPF desired.***
5. ***Lavatory: 0.50 GPM, 0.1 desired***
6. ***Shower head: low-flow 1.25 to 2.5 GPM.***

B. MATERIALS
1. Vitreous China: First quality, smooth, uniform color and texture and having a fused-on glaze covering all surfaces exposed to view.
   (a) Surfaces shall be free of chips, craze, warpage, cracks and discolorations. All surfaces in contact with walls or floors shall be flat, with warpage not to exceed 1/16" per foot.
   (b) Color: White
2. Fixture Trim: Stainless steel 18-8 type 302 or 304.
3. Trim Finishes (exposed to view): Stainless steel with invisible welds and seams, polished to No. 4 commercial finish.
4. Fixture hold-down bolts: Steel, plated for corrosion resistance. Cap nuts: polished chrome plated finish

C. TYPES AND MANUFACTURERS (Or approved equal)
1. Wall Hung Chair Carrier Lavatory
   - Manufacturer: American-Standard Lavatory 20" x 18"
2. Handicapped Wall Hung Chair Carrier Lavatory
   - Manufacturer: American-Standard Wheelchair Lavatory 27" x 20"
3. Floor Mounted Water Closet:
   - Manufacturer: American-Standard Toilet
4. Handicapped Floor Mounted Water Closet:
   - Manufacturer: American-Standard 18" high Elongated Cadet Toilet
5. Wall Hung Chair Carrier Water Closet:
   - Manufacturer: American-Standard Afwall Toilet with back spud
6. Water Closet Seat
7. Materials
   (a) Extra heavy-duty, commercial design
   (b) Solid plastic, open front, without a cover, molded in one piece with no joints, seams or crevices.
   (c) Manufacturer's name shall be molded into the seat.
   (d) Metal check hinges shall be integrally molded into the seat. Hinges, inserts, bearings and posts shall be of brass or stainless steel; the upper post and metal exposed above the fixture rim shall be covered with plastic to match the seat.
   (e) Surface shall be hard, polished, impervious to moisture, and not affected by the action of uric acid.

(f) Color: White. Manufacturer: Kohler Company, Model No. K-4666-C

8. Urinal: Manufacturer- American-Standard Urinal

End of Section

SECTION 224713 – DRINKING FOUNTAINS AND WATER COOLERS

A. GENERAL

1. Supply a sufficient number of water coolers as required by the applicable building code.
2. Water coolers to be high/low type and be ADA compliant
3. Each single or double bowl Water Cooler to include a Bottle Filling Station.
4. Each double bowl unit shall constitute a single water cooler as defined by building code.

B. INSTALLATION

1. All required plumbing shall be supplied and installed.
2. All required electrical items and work shall be supplied and installed.

C. SUGGESTED MANUFACTURERS

1. Elkay: Enhanced EZH2O Bottle Filling Station & Single ADA Cooler, Filtered 8 GPH Light Gray.
2. Or approved equal.

End of Section

DIVISION 23 - MECHANICAL

SECTION 230500 - HEATING, VENTILATION, AND AIR CONDITIONING

A. Thermostats-- programmable thermostat for commercial use with seven-day flexible programming, liquid crystal display, individual temperature set-points for occupied and unoccupied heating and cooling, concealed keyboard and locking cover, automatic heat/cool changeover, auxiliary relay output for economizer cycle, conventional or heat pump operation.

B. Energy Management Systems: PC based programmable with individual controls for set points for temp, humidity, flow and economy saving operations. Maintaining log of building environment 24 hours per day and 7 days per week including point updates at least hourly.

C. Ductwork: Galvanized sheet metal with fiberglass wrap with factory applied aluminum foil facing reinforced with fiberglass scrim laminated to a UL KRAFT, Insulation minimum 2" thick.

D. ***Fans: High efficiency, variable speed motors/controllers with energy star rating.***

E. ***Filters: Minimum 65% efficient***

F. ***Refrigerants: shall be non-ozone depleting.***

G. ***Pumps and motors to be high efficiency with energy star rating.***

H. No electric resistance elements will be allowed to satisfy temperature requirements called out in the lease.

End of Section

SECTION 233439 – HIGH SPEED, LOW SPEED PROPELLER FAN (CEILING EXHAUST)

A. GENERAL

1. Fans shall be U.L. listed and labeled.
2. Sound power level: AMCA Standard 300-67.

B. PRODUCT

1. General: Fans shall be of the electric motor driven centrifugal type, installed in an insulated sheet steel unit casing with a decorative air intake grille, slow speed electric motor, electric terminal box inside housing, speed controller and outside wall cap. Quiet operation, less than 1.5 sones for toilets
2. Fan Assembly: True centrifugal wheels, mounted on the extended shaft of an electric motor. Fabricate fan scroll from heavy gauge sheet steel with a corrosion resistant coating. Isolate the entire fan assembly from the unit casing with elastomer type vibration eliminators. Fan assembly shall be easily removable from the unit casing.
3. Unit Casing: Fabricate from heavy gauge sheet steel, with a corrosion resistant coating. Acoustically line the interior surfaces of the casing with fibrous glass, coated on the exposed side. Provide discharge outlet complete with backdraft damper.
4. Electric Motor: Low speed (1200 RPM or below), with built-in thermal overload protection, designed to operate on 120-volt, 60 cycle, 1 phase service. Assembly shall be complete with flexible electric cord, plug and electrical receptacle inside housing. Suitably ground fan motor.
5. Inlet Air Grille:
   (a) Aluminum: Etched and coated with clear acrylic lacquer.
   (b) Steel: Primed and finished with baked-on white enamel.

(c) Plastic: White of the egg crate design.

6. Conference Rooms only to have speed control. Solid-state circuitry, with polished chromium plated wall plate, suitable for use with standard electrical wall box.
7. Switching thru lighting system or occupancy sensor.

C. SUGGESTED MANUFACTURERS: 1) NuTone, Panasonic, Dayton, Broan. 2) Or approved equal

End of Section

DIVISION 26 - ELECTRICAL

SECTION 260533 - ELECTRICAL CONDUIT FOR TELEPHONE/SIGNAL OUTLETS

A. MATERIALS
1. Metallic raceway of sufficient size including two bushings (minimum).
2. Metallic box with connector.
3. Drag line.

B. INSTALLATION
1. Install metallic box at standard outlet height and connect EMT of sufficient size to box. EMT to terminate above hung ceiling. Drag line and bushings to be installed in conduit.
2. Size of EMT to be determined by landlord's designer in coordination with telecom/data provider.

End of Section

SECTION 260923 - LIGHTING CONTROL DEVICES

A. Occupancy Sensor - Wall Switches
1. General
(a) Three-wire, self-contained dual technology utilizing passive infrared and ultrasonic technologies, designed for taking the place of a standard toggle switch, and compatible with solid state lighting ballasts.
(b) Adjustments: Auto-off time delay adjustable 2-15 minutes, and adjustable sensitivity.
(c) Controls: Hands free automatic on, automatic off, manual on, manual off.
(d) Indicators: Red LED to indicate when unit is triggered; and audible warning tone to pre-signal automatic shutdown.
2. Suggested Manufacturers: Lightolier Controls "Insight" Series
(a) Watt Stopper.
(b) Sensor Switch.
(c) Or approved equal.

B. Occupancy Sensor - Ceiling
1. General:
(a) Ceiling mounted, dual technologies utilizing passive infrared and ultrasonic technologies. Unit shall operate in conjunction with a separately mounted power pack. Field of view may be reduced by lens masking labels.
(b) Adjustments: Manual-off time delay adjustable 20 seconds to 30 minutes (adjustment at power pack), and adjustable sensitivity.
(c) Photocell: Prevents automatic-on activation based on an (adjustable) minimum ambient light level setting.
(d) Controls: Automatic-on or manual-on (selectable at power pack), automatic off, and manual-off.
(e) Indicators: Red LED to indicate when unit is triggered.
(f) Multiple sensors: May be used to control a single power pack.
(g) Power packs: Separately mounted UL listed power supply consisting of transformer, contact closure relay, and system configuration electronics and selector switches. Power output of transformer must be sufficient for powering up to twelve sensors.
(h) Slave relays: As required for controlling additional lighting circuits from the same sensor(s) connected to a power pack.
2. Suggested Manufacturers
(a) Lightolier Controls
(b) Watt Stopper
(c) Or approved equal

Light Level Controls: Automated control systems based on daylight, occupancy and timed schedules.

End of Section

SECTION 265116 - FLUORESCENT FIXTURES

A. UL listed fixture.

B. Fixtures

Type 1:

a. Type: Indirect/direct recessed, 2 lamps.
b. Size: 2'0"X4'0"
c. Type of Lamps: 32 watt (type 32T8).
d. Lamp Shield: Perforated metal
e. Finish: 95% Reflective baked white acrylic matte high reflectance paint finish.
f. Fixture Manufacturer: Lightolier
g. Ballasts: Rapid start HPF thermally protected class "P" ballast. Use dimming ballast if called for.

Type 2:

a. Type: Indirect/direct recessed, 1 lamp.
b. Size: 2'-0" x 2'-0"
c. Type of Lamps: TT-5 B-tube.
d. Lamp Shield: Perforated metal
e. Finish: Baked white acrylic matte high-performance paint finish.
f. Fixture Manufacturer: Lightolier
g. Ballasts: Rapid start HPF thermally protected class "P" ballast. Use dimming ballast if called for.

Suggested Manufacturers: 1. Lightolier's "Alter". 2. National's "AST-series". 3. Or approved equal.

Type 3:

a. Type: Recessed parabolic troffer, 3 lamps.
b. Size: 2'0" x 4'0".
c. Type of lamps: 32-watt lamps (Type F32T8).
d. No. of cells: 4" deep troffer – 24 cell anodized aluminum
e. Louver Finish: Low iridescent diffuse silver louver, black reveal, high gloss baked white enamel finish, IES RP24 criteria.
f. Ballasts: Integrated circuit solid-state electronic ballast for each fixture. Total harmonic distortion less than 15% and shall be dedicated for use with the type of lamp connected. Ballasts to be CBM (certified Ballast Mfr. Association) certified. All with 3-year warranty period including labor/material. One 3-lamp solid state electronic ballast, suitable for one, two, or three lamp, 120 volt or 277-volt operation, U.L. listed, and CBM certified by ETL. Ballast Manufacturer: Advance
g. Fixture Manufacturer: Lithonia Fluorescent Series Paramax or equal

Type 4

a. Type: Recessed parabolic troffer, 2 lamps.
b. Size: 2'0" x 4'0"
c. Type of Lamps: 32-watt lamps (Type 32T8).
d. No. of Cells: 4" deep troffer – 18 cell aluminum.
e. Louver Finish: Same.
f. See Type 1, Item 6
g. Fixture Manufacturer: Lithonia Fluorescent Series Paramax or equal.

C. Lamps:

1. F32T8: Color index of 85, min efficiency of 89 lumens per watt. Color temperature of 4100 deg K.
2. Compact Fluorescent Lamps: Min color index of 82, min efficiency of 60 lumens per watt. Suggested Manufacturers: Phillips or approved equal.

D. Dimming Ballasts

1. Dimming shall be smooth and continuous without flicker over a range from 100 percent to 1 percent of full light for T-8-Fluorescent lamps.
2. Ballast shall be capable of striking the lamps at any level without first flashing to full light.

NOTE:

- NYC area provided equal fixture with I.B.E.W. Local #3 stamp. See below for NYC specifics.
  - Emergency lighting capability is available with fixtures. See Emergency Lighting Spec (265213.13) for further information.

End of Section

SECTION 255119 - LED LIGHTING

A. TYPE 1:

1. Type: Indirect/direct center basket recessed.
2. Size: 2'-0" X 4'-0"

3. Type of LED: 4450 lumens; 42 watts
    a. Temperature: 3500 Kelvin
    b. A CRI of 90 or greater
    c. An efficacy of 100 Lumens per watt or more
    d. Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: A delineated perforated basket down the middle of the fixture
5. Finish: High specularity reflective white painted steel
6. Life Time rating of 50,000 hours at L85
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable
    a. A power factor of 90 or greater.
    b. THD: <20%
    c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed
   Suggested manufacturers: a) Current by GE LAB series b) Lumax Lighting c) Or approved equal

B. TYPE 2:
1. Type: Indirect/direct center basket recessed.
2. Size: 2'-0" X 4'-0"
3. Type of LED: 2880 lumens; 27 watts
    a. Temperature: 3500 Kelvin.
    b. A CRI of 90 or greater
    c. An efficacy of 100 Lumens per watt or more
    d. Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: A delineated perforated basket down the middle of the fixture
5. Finish: High specularity reflective white painted steel
6. Life Time rating of 50,000 hours at L85
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable
    a. A power factor of 90 or greater.
    b. THD: <20%
    c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed
   Suggested manufacturers: a) Current by GE LAB series b) Lumax Lighting c) Or approved equal

C. TYPE 3:
1. Type: Indirect/direct center basket recessed.
2. Size: 2'-0" X 2'-0"
3. Type of LED: 3000 lumens; 30 watts
    a. Temperature: 3500 Kelvin.
    b. A CRI of 90 or greater
    c. An efficacy of 100 Lumens per watt or more
    d. Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: A delineated perforated basket down the middle of the fixture
5. Finish: High specularity reflective white painted steel
6. Lifetime rating of 50,000 hours at L85
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable
    a. A power factor of 90 or greater.
    b. THD: <20%
    c. c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed
   Suggested manufacturers: a) Current by GE LAB series b) Lumax Lighting c) Or approved equal

D. TYPE 4:
1. Type: Indirect/direct center basket recessed.
2. Size: 2'-0" X 2'-0"
3. Type of LED: 19400 lumens; 20 watts
    a. Temperature: 3500 Kelvin or 4000 Kelvin.
    b. A CRI of 90 or greater
    c. An efficacy of 100 Lumens per watt or more
    d. Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: A delineated perforated basket down the middle of the fixture
5. Finish: High specularity reflective white painted steel
6. Lifetime rating of 50,000 hours at L85
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable

   a. A power factor of 90 or greater.
   b. THD: <20%
   c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed
   Suggested manufacturers: a) Current by GE LAB series b) Lumax Lighting c) Or approved equal

E. TYPE 5:
1. Type: Center row baffle direct recessed.
2. Size: 2′-0″ X 4′-0″
3. Type of LED: 4900 lumens; 42 watts
   a. Temperature: 3500 Kelvin.
   b. A CRI of 90 or greater
   c. An efficacy of 100 Lumens per watt or more
   d. Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: Curving single row baffle down the middle of the fixture and uniform light across the lens.
5. Finish: High specularity reflective white painted steel
6. Life Time rating of 50,000 hours at L85
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable
   a. A power factor of 90 or greater.
   b. THD: <20%
   c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed.
   Suggested manufacturers: a) Current by GE LAC series b) Lumax Lighting c) Or approved equal

F. TYPE 6:
1. Type: Center row baffle direct recessed
2. Size: 2′-0″ X 4′-0″
3. Type of LED: 3150 lumens; 27 watts
   a. Temperature: 3500 Kelvin.
   b. A CRI of 90 or greater
   c. An efficacy of 100 Lumens per watt or more
   d. Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: Curving single row baffle down the middle of the fixture and uniform light across the lens.
5. Finish: High specularity reflective white painted steel
6. Life Time rating of 50,000 hours at L85
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable
   a. A power factor of 90 or greater.
   b. THD: <20%
   c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed.
   Suggested manufacturers: a) Current by GE LAC series b) Lumax Lighting c) Or approved equal

G. TYPE 7:
1. Type: Center row baffle direct recessed.
2. Size: 2′-0″ X 2′-0″
3. Type of LED: 3000 lumens; 30 watts
   a. Temperature: 3500 Kelvin.
   b. A CRI of 90 or greater
   c. An efficacy of 100 Lumens per watt or more
   d. Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: Curving single row baffle down the middle of the fixture and uniform light across the lens.
5. Finish: High specularity reflective white painted steel
6. Lifetime rating of 50,000 hours at L85
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable
   a. A power factor of 90 or greater.
   b. THD: <20%
   c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed.
   Suggested manufacturers: a) Current by GE LAC series b) Lumax Lighting c) Or approved equal

H. TYPE 8:
1. Type: Center row baffle direct recessed.
2. Size: 2′-0″ X 2′-0″
3. Type of LED: 2050 lumens; 20 watts
   a. Temperature: 3500 Kelvin.
   b. A CRI of 90 or greater

   c. An efficacy of 100 Lumens per watt or more
   d. Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: Curving single row baffle down the middle of the fixture and uniform light across the lens.
5. Finish: High specularity reflective white painted steel
6. Life Time rating of 50,000 hours at L85
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable
   a. A power factor of 90 or greater.
   b. THD: <20%
   c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed.

   Suggested manufacturers: a) Current by GE LAC series b) Lumax Lighting c) Or approved equal

I. TYPE 9:

1. Type: Curved step lens, recessed.
2. Size: 2'-0" X 4'-0"
3. Type of LED: 4900 lumens; 42 watts
   a. Temperature: 3500 Kelvin.
   b. A CRI of 90 or greater
   c. An efficacy of 100 Lumens per watt or more.
   d. Color consistency of 4 Step MacAdam Ellipse or less.
4. LED shield: Curved step lens down the middle of the fixture with uniform light across the lenses.
5. Finish: High specularity reflective white painted steel
6. Lifetime rating of 50,000 hours at L85
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable.
   a. A power factor of 90 or greater.
   b. THD: <20%
   c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed.

   Suggested manufacturers: a) Current by GE LAD series b) Lumax Lighting c) Or approved equal

J. TYPE 10:

1. Type: Curved step lens, recessed.
2. Size: 2'-0" X 4'-0"
3. Type of LED: 3150 lumens; 27 watts
   a. Temperature: 3500 Kelvin.
   b. A CRI of 90 or greater
   c. An efficacy of 100 Lumens per watt or more
   d. Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: Curved step lens down the middle of the fixture with uniform light across the lenses.
5. Finish: High specularity reflective white painted steel
6. Lifetime rating of 50,000 hours at L85
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable
   a. A power factor of 90 or greater.
   b. THD: <20%
   c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed

   Suggested manufacturers: a) Current by GE LAD series b) Lumax Lighting c) Or approved equal

K. TYPE 11:

1. Type: Curved step lens, recessed.
2. Size: 2'-0" X 2'-0"
3. Type of LED: 3000 lumens; 30 watts
   a. Temperature: 3500 Kelvin
   b. A CRI of 90 or greater
   c. An efficacy of 100 Lumens per watt or more
   d. Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: Curved step lens down the middle of the fixture with uniform light across the lenses.
5. Finish: High specularity reflective white painted steel
6. Lifetime rating of 50,000 hours at L85
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable
   a. A power factor of 90 or greater
   b. THD: <20%
   c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed.

Suggested manufacturers: a) Current by GE LAD series b) Lumax Lighting c) Or approved equal

L. TYPE 12:
1. Type: Curved step lens, recessed
2. Size: 2'-0" X 2'-0"
3. Type of LED: 2050 lumens; 20 watts
    a. Temperature: 3500 Kelvin
    b. A CRI of 90 or greater
    c. An efficacy of 100 Lumens per watt or more Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: Curved step lens down the middle of the fixture with uniform light across the lenses.
5. Finish: High specularity reflective white painted steel
6. Lifetime rating of 50,000 hours at L85
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable
    a. A power factor of 90 or greater
    b. THD: <20%
    c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed.

Suggested manufacturers: a) Current by GE LAD series b) Lumax Lighting c) Or approved equal

M. TYPE 13:
1. Type: flat translucent non-pixilating lens, recessed
2. Size: 2'-0" X 4'-0"
3. Type of LED: 4800 lumens; 36 watts
    a. Temperature: 3500 Kelvin or 4000 Kelvin
    b. A CRI of 80 or greater
    c. An efficacy of 100 Lumens per watt or more
    d. Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: Curved step lens down the middle of the fixture with uniform light across the lenses.
5. Finish: High specularity reflective white painted steel
6. Lifetime rating of 50,000 hours at L70
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable
    a. A power factor of 90 or greater
    b. THD: <20%
    c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed.

Suggested manufacturers: a) Current by GE LBT series b) Lumax Lighting c) Or approved equal

N. TYPE 14:
1. Type: flat translucent non-pixilating lens, recessed
2. Size: 2'-0" X 4'-0"
3. Type of LED: 3000 lumens; 23 watts
    a. Temperature: 3500 Kelvin
    b. A CRI of 80 or greater
    c. An efficacy of 100 Lumens per watt or more
    d. Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: Curved step lens down the middle of the fixture with uniform light across the lenses.
5. Finish: High specularity reflective white painted steel
6. Lifetime rating of 50,000 hours at L70
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable
    a. A power factor of 90 or greater
    b. THD: <20%
    c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed.

Suggested manufacturers: a) Current by GE LBT series b) Lumax Lighting c) Or approved equal

O. TYPE 15:
1. Type: flat translucent non-pixilating lens, recessed
2. Size: 2'-0" X 2'-0"
3. Type of LED: 3300 lumens; 26 watts
    a. Temperature: 3500 Kelvin
    b. A CRI of 80 or greater
    c. An efficacy of 100 Lumens per watt or more
    d. Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: Curved step lens down the middle of the fixture with uniform light across the lenses.
5. Finish: High specularity reflective white painted steel
6. Lifetime rating of 50,000 hours at L70

7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable
    a. A power factor of 90 or greater
    b. THD: <20%
    c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed.

Suggested manufacturers: a) Current by GE LBT series b) Lumax Lighting c) Or approved equal

P. TYPE 16:
1. Type: flat translucent non-pixilating lens, recessed
2. Size: 2'-0" X 2'-0"
3. Type of LED: 2000 lumens; 16 watts
    a. Temperature: 3500 Kelvin
    b. A CRI of 80 or greater
    c. An efficacy of 100 Lumens per watt or more
    d. Color consistency of 4 Step MacAdam Ellipse or less
4. LED shield: Curved step lens down the middle of the fixture with uniform light across the lenses.
5. Finish: High specularity reflective white painted steel
6. Lifetime rating of 50,000 hours at L70
7. Fixture manufacturer: Current by G.E.
8. Driver: 0-10 V dimmable
    a. A power factor of 90 or greater
    b. THD: <20%
    c. Voltage; 120V thru 277V; 50/60 Hz
9. U.L. Listed.

Suggested manufacturers: a) Current by GE LBT series b) Lumax Lighting c) Or approved equal

End of Section

SECTION 265213 - EMERGENCY + EXIT LIGHTING

A. GENERAL
1. UL Listed
2. Independent self-contained unit inverter system with charger.
3. Compatible with 32-watt lamp.
4. Sealed rechargeable, maintenance free battery. Battery shall be capable of energizing one (1) 32-watt lamp to provide not less than 1-foot candle for 90 minutes.

B. INSTALLATION
1. Wired into building night light circuit therefore permanently energized.
2. Approximate placement in corridors, subject to design review:
    (a) Crosswire troffers every 40'
    (b) Lengthwise troffers every 30'
3. Maximum coverage in offices is 1,500 square feet.

C. SUGGESTED MANUFACTURERS: 1) Lithonia 2) Or approved equal

NOTE: Retrofit unit is available by Lithonia - Power Sentry Unit Inverters, and Philips Bodine.

End of Section

SECTION 265213.13 - EMERGENCY LIGHTING

A. GENERAL
1. Type, quantity and type shall conform to all applicable codes and NFPA 101 - Life Safety Code (Section 5-9).
2. Installation shall be in accordance with manufacturer's directions.

B. TYPE
1. EZ-2: to be used in areas with an ambient temperature above 45 degrees F.
    (a) Six-volt maintenance free battery (sealed lead-calcium free electrolyte or sealed pure lead cells). Batteries shall be of suitable rating and capacity to supply and maintain at not less than 87½% of the nominal battery voltage for the total lamp load associated with the unit for a period of at least 1½ hours.
    (b) Low battery voltage cut-off (not less than 80% of nominal battery voltage).
    (c) Electronic or sealed dust-tight transfer relay.
    (d) Six volt, 12-watt integral tungsten halogen lighting heads.
    (e) Input circuit suitable for operation on 120 volts 60 hz. Circuit.
    (f) Mounting shelf or bracket.
2. EZ-2D: to be used in areas where the ambient temperature may be less than 45 degrees F., i.e., unheated storage areas and parking garages

(a) Six-volt nickel cadmium battery, wet cell, pocket plate type. Batteries shall be of six-volt nickel-cadmium battery, wet cell, pocket plate type. Batteries shall be of suitable rating and capacity to supply and maintain at not less than 87½% of the nominal battery voltage for the total lamp load associated with the unit for a period of at least 1½ hours. Batteries shall deliver full ampere-hour capacity at 0 degrees F ambient temperature.
(b) Electronic or sealed dust-tight transfer relay.
(c) Six volt, 12-watt, integral tungsten halogen lighting heads.
(d) Input circuit suitable for operation on 120 volts 60 Hz. Circuit.
(e) Mounting shelf or bracket.
(f) Time delay device for units installed in areas illuminated with high-density discharge lighting fixtures. Emergency lighting units shall remain illuminated 15 minutes after normal power is restored.
(g) Wire guard to cover unit.

C. SUGGESTED MANUFACTURERS:
1. Dual-Lite Co.'s EZ-2 Series
2. Mule Lighting's EM-800 Series LED; SQ-80-LED or EM-80 LED Series

End of Section

SECTION 265213.16 - EXIT SIGNS

A. PRODUCT
1. ***LED (non-radioactive), 5 Watts or less, Energy Star Compliant which will illuminate on normal source and battery source.***
2. Compliant with standards of the Life Safety Code and National Electric Code.
3. Input circuit suitable for operation on 120 VAC circuit or 277 VAC circuit, as appropriate.
4. Red lettering for signs shall be at least 6" high with not less than 3/4" wide strokes.
5. Downlight panel
6. Mounting designed for:
(a) Wall surface
(b) Wall, end mount, single face
(c) Ceiling, single face
(d) Stem, single face
(e) Wall, end mount, double face
(f) Ceiling, double face
(g) Stem, double face
7. Directional arrows, as needed.
8. Manufacturers: Lithonia LE Series (LED models), Meridian Series or NYMD Series, by Mule Lighting.

End of Section

SECTION 272627 - WIRING DEVICES

A. Products: All devices and or device boxes must be UL listed (including all requirements of the National Electric Code).
1. Boxes: where located on exterior walls, boxes must be airtight.
2. In floor tele/data/power. Provide flush mounted devices with Cast aluminum w/ brass powder-coat finish metal cover. Hubbell System One metal floor box w/flush mounted 180 degree hinged covers w/fire rating where applicable or equal.

End of Section

END OF DOCUMENT