

**DIVISION 10**  
**SPECIALITIES**

**BUILDING WORK**

**DIVISION 10**

**SPECIALITIES**

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**SECTION 10162**  
**LAMINATED TOILET COMPARTMENTS & PARTITIONS**

**PART 1 GENERAL****1.01 Work Included**

- A. Floor mounted headrail braced laminated toilet partitions.
- B. Attachment hardware.

**1.02 Related Work**

- A. Section 06100      Rough Carpentry
- B. Section 09310      Ceramic floor tiles.
- C. Section 10800      Toilet accessories.
- D. Fixing Materials.

**1.03 References**

- A. ASTM B209 - Anodized aluminum fittings.
- B. Laminated toilet panels

**1.04 Shop Drawings And Product Data**

- A. Submit shop drawings and product data in accordance with Section 01340.
- B. Indicate cladding panels layouts, swing, elevations, anchorage and mounting details, components, hardware, finishes, and relevant dimensions.

**1.05 Samples**

- A. Submit samples in accordance with Section 01340.
- B. Provide sample of panel colors in 75 x 150cm size sample.
- C. Provide a sample of each type of hardware and fixing of materials

**PART 2 PRODUCTS****2.01 Acceptable Manufacturers**

- A. The Contractor shall submit to the Engineer the names of three manufacturers and their products which will be acceptable under this Section. Approval of the manufacturer or product must be obtained before proceeding with associated work.
- B. Substitutions: Items of same function and performance are acceptable in conformance with Section 01630.

**2.02 Materials**

- A. Composite chip board panel
- B. 1mm thick rough matt melamine resin facing.
- C. Anodized aluminum 'U' sections and galvanized fixings.

**PART 3 EXECUTION****3.01 Inspection**

- A. Examine site conditions.
- B. Verify correct location of built-in framing, anchorage and bracing, where required.
- C. Beginning of installation means acceptance of existing conditions.

**3.02 Installation**

- A. Install cladding panels secure, plumb, square.
- B. Provide space between wall and panels wall and end pilasters as shown on the details and , or as Manufacturers standard conditions.
- C. Attach panel brackets securely to walls using appropriate anchor devices.
- D. Attach panels and pilasters to bracket with through bolts and nuts with tamperproof heads. Locate headrail joints at pilaster center lines.
- E. Provide for adjustment of floor variations with screw jack with pilaster. Conceal floor fastenings with stainless steel shoes.

**3.03 Cleaning**

- A. Remove protective maskings.
- B. Clean surfaces.

**END OF SECTION**

**SECTION 10270  
RAISED FLOORING****PART 1 GENERAL****1.01 Work Included**

- A. Support System.
- B. Removable Floor Panels with anti static P.V.C. floor tiles.
- C. Removable Floor Panels with carpet floor tiles.
- D. Fascia Panels, Plenum Dividers, Grilles, Ramps Stairs and Railings, as applicable.
- E. Grounding of System.

**1.02 System Description**

- A. System: Elevated pedestal and frame grid with rigid floor panels, complete with accessories.
- B. Elevated Floor: Nominal height above subfloor all as shown on the drawings.
- C. Pedestals: Maximum axial load of 5,000 lb. ( 2 268 kg) without permanent deformation. Ultimate strength: Not less than twice design.
- D. Floor Panels: Size 600 x 600 mm; live load of maximum deflection of 1.0 mm; concentrated load of 500 kg on 710 sq. mm at any location with maximum deflection of 2 mm. Permanent deformation: Maximum 0.05 mm at design load. Ultimate strength: Not less than twice design.
- E. Lateral Stability: Make system laterally stable in all direction with or without panels in place.
- F. Surface electrical resistance not to exceed one ohm per panel.

**1.03 Shop Drawings And Product Data**

- A. Submit shop drawings and product data in accordance with Section 01340.
- B. Indicated flooring layout, interruptions to grid, special sized panels required, panels drilled or cut-out for services, appurtenances or interruptions, edge details, elevation differences, stairs ramps, grilles, and registers.
- C. Submit manufacturer's installation in accordance with Section 1600

**1.04 Samples**

- A. Submit samples in accordance with Section 01340.
- B. Submit one floor panel of color and finish required.

**1.05 Certificates**

- A. Submit manufacturer's certificate that system meets specified design strengths and electrical resistance.

**1.06 Warranty / Guarantee**

All warranties / guarantees to be issued by the Supplier, Manufacturers and Sub-contractors shall be counter-signed by Main Contractor and Both of them will be liable for repair / replace the items / works, etc., during the warrantee / guarantee period.

**PART 2 PRODUCTS****2.01 Acceptable Manufacturer And Type**

- A. The Contractor shall submit to the Engineer the names of three Manufacturers and their products, approval of the manufacturer or product must be obtained before proceeding with associated works.
- B. Type: Snap - loc, support system, panel model 75, with anti static PVC floor tiles or carpet floor tiles as per manufacturer's specific recommendations, color as approved by the Engineer.
- C. Substitutions: Items of same function and performance are acceptable in accordance with Section 01630.

**2.02 Materials**

- A. Pedestals:  
All steel construction with flat bottom base plate, threaded supporting rod, vibration-proof lock nut to permit 38 mm adjustment. The pedestal assemblies shall have an electro - zinc corrosion resistant finish.
- B. Frame Grid Stringers:  
Continuous type, consisting of steel channels, box, or T sections.
- C. Floor Panels:  
Die formed galvanized sheet formed to top and bottom plates and reinforcing stiffeners.

**2.02 Materials (Cont'd)**

- D. Floor Finish Panel Inlay:  
PVC, anti static tiles, color as selected by the Supervising Engineer\ Employer's Representative.
- E. Floor Finish Adhesive:  
Moisture resistant and waterproof type recommended by floor finish manufacturer; electrically conductive type.
- F. Finish of Exposed Metal Surface:  
Baked enamel finish selected from manufacturer's standard color range.
- G. Ramps and stairs:  
same materials, structural strength, and construction as floor panels, flush cover plates.
- H. Fascia Panels:  
Closure panels of 3 mm extruded aluminum. Include corner pieces, trim, reinforcing, and clip angles.
- I. Railings:  
Posts and rails of tubular extruded aluminum assembled with sleeved connections. Include cast metal end caps, floor sockets and collars, brackets, and fittings.
- J. Panel Lifting Devices:  
one per room of manufacturer's standard type recommended for each panel type.
- K. Perforated Floor Panels:  
Same material, size, and construction as floor panels with slide dampers.
- L. Air Grilles:  
At room perimeter with deflecting vanes and shut-off damper. Fabricated in extruded aluminum.
- M. Grounding Connectors: Solid copper.
- N. Cable Cutout Protection:  
Extruded polyvinyl chloride or neoprene edging 9 mm thick, self extinguishing.
- O. Plenum Dividers: Aluminum Plates.

**2.03 Fabrication**

- A. Allowable Tolerances: Floor panel flatness plus or minus 0.5 mm in any direction; floor panel length plus or minim 0.5 mm; floor panel squareness plus or minus 0.8 mm in diagonal dimension.

**PART 3 EXECUTION****3.01 Installation**

- A. Install components in accordance with manufacturer's instructions.
- B. Secure pedestal base late to subfloor with metal fasteners.
- C. Install additional pedestals where grid pattern is interrupted by room appurtenances and at cutouts.
- D. Install stringers and floor panels solidly on pedestals. Maximum out-of-level tolerance 1.6 mm in 3 m/.
- E. Install perforated panels.
- F. Seal field cuts of floor panels with plastic angles or channels.
- G. Allow for cutting holes in floor panels for installation of Employer's equipment. Include cable cutout protection.
- H. Provide floor, complete with edge trim and end closures. Provide lateral braces at stair edges and other locations where a pedestal is not braced.
- I. Provide positive electrical earth grounding of entire access floor assembly.
- J. Install plenum dividers to provide a positive air seal between subfloor and elevated floor. Include sponge rubber plugs to insure airtight seal where holes are cut in elevated floor for passing of cable.

**3.02 Extra Stock**

- A. Provide 6 Nos. floor panels, 6 Nos. spare pedestals, stringers, and components.
- B. Floor finish materials to be from same production run as installed materials.

**END OF SECTION**

**SECTION 10501**  
**WARDROBE & SUNDRY ITEMS****PART 1 GENERAL****1.01 Work Included**

- A. Wardrobe, Desk and Counters.
- B. Hooks, Latches, and Hardware.
- C. Attachment hardware.

**1.02 Description**

- A. Hardwood wardrobe, reception desk, bar counter and towel counter.

**1.03 Samples**

- A. Submit samples in accordance with Section 01340.
- B. Provide one sample as described in 1.02 and as specified in the Specifications. Pay shipping costs for supply and return of sample locker. Locker, if approved, may be incorporated into the finish work.

**1.04 Shop Drawings**

- A. Submit shop drawings in accordance with Section 01340.
- B. Indicate wardrobe types, sizes, configurations, installation details, layout of groups of lockers, accessories, color and finish, and numbering.

**1.05 Protection**

- A. Protect wardrobe and sundry items finishes and adjacent surfaces and materials from damage or marring from damage or marring during installation.

**PART 2 PRODUCTS****2.01 Acceptable Manufacturers**

- A. The Contractor shall submit to the Engineer the names of three manufacturers and their products which will be acceptable under this Section. Approval of the manufacturer or product must be obtained before proceeding with associated work.
- B. Substitutions: Items of same function and performance are acceptable in conformance with Section 01630.
- C. Provide and install all items as indicated on drawings, and as described in this Section complete in all respects.

**2.02 Materials**

- A. Wardrobe: Hardwood painted with paint color to be selected by the Engineer .
- B. Fittings: As shown on drawings.

**2.03 Fabrication**

- A. As per manufacturers instruction.

**2.04 Finishing**

- A. Colors to be selected by Engineer from manufacturer's standard range.

**PART 3 EXECUTION****3.01 Preparation**

- A. Take site dimensions affecting this work.
- B. Ensure that bases are properly sized and located.

**END OF SECTION**

**SECTION 10800**  
**TOILET AND BATH ACCESSORIES****PART 1 GENERAL****1.01 Work Included**

- A. Toilet and bath accessories.
- B. Rough-in frames supplied to other sections.
- C. Attachment hardware.

**1.02 Related Work**

- A. Section 09310 Ceramic tiles.

**1.03 Reference Standards**

- A. Jordan General Specifications.

**1.04 Samples**

- A. Submit samples in accordance with the Engineer's instructions.
- B. Provide one sample of each type of fixture specified herein.

**1.05 Product Data**

- A. Submit manufacturers product data in accordance with the Engineer's instructions.
- B. Data to illustrate each accessory at large scale and show installation method.

**1.06 Delivery, Storage And Handling**

- A. Do not deliver accessories to site until rooms in which they are to be installed are ready to receive them.
- B. Pack accessories individually in a manner to protect accessory and its finish.

**1.07 Protection**

- A. Protect adjacent or adjoining finished surfaces and work from damage during installation of work of this section.

**PART 2 PRODUCTS****2.01 Acceptable Manufacturers**

- A. The Contractor shall submit to the Engineer the names of three manufacturers and their products which will be acceptable under this Section. Approval of the manufacturer or product must be obtained before proceeding with associated work.
- B. Substitutions Items of same function and performance are acceptable in conformance with the Conditions of Contract and as per Engineer's instructions.

**2.02 Materials**

- A. Liquid Soap Dispenser  
Basin type stainless steel, capacity 1 liter, spout length 15cm maximum mounting thickness 10cm, similar to (B-8226), Bobrick Catalogue(or approved equal).
- 2nd. Soap Dish and Holder  
Chrome, similar to (7155), Hotel Collection, Geeza Catalogue, (or approved equal).
- 3rd. Soap Dish and Holder  
Chrome and gold, similar to (40633-09), Axor Allegroh Novo Collection, Hansgrohe(or approved equal).
- D. Recessed Multi – roll toilet tissue dispenser  
Stainless steel dispensing toilet mechanism. Holds two rools up to 13cm dia. 1800 sheets. Extra roll automatically drops in place when bottom roll is depleted. Rought wall opening 16 w. x 28.5 x 8.3 min d.). cm.
- E. Roll Holder with cover  
Chrome, Similar to (40638-09), Axor Allegroh Novo Collection, Hansgrohe (or approved equal).
- F. Spare Roll Holder  
Chrome, similar to (40628-09), Axor Allegrohe Novo Collection Hansgrohe (or approved equal).
- G. Paper Towel Dispenser and Waste Receptacle  
Dispenses 600c-fold or 800 multi fold towels. Waste receptacle has 60.6 L capacity, extends 13cm from wall. Rough Wall opening (40.5W x 13.9 H x 10.2D)cm. Similar to B-43949, Bobrick catalogue (or approved equal)
- H. Hand Dryer  
Wall mounted, No touch, electronic infrared proximity switch. Similar to Starmix T500E 'Superstar' (or approved equal).
- I. Hand Shower  
Including wall bar 65cm, flexible hose 150cm. Chrome. Similar to (27733) cromas set. Metris collection, Hansgrohe (or approved equal).

**2.02 Materials (Cont'd)**

- J. Hand Shower  
With wall bar 90cm, and flexible hose 160cm. Chrome and gold, similar to (27955-09)Axor Allegrohe Novo Collection, Hansgrohe (or approved equal).
- K. Single Towel Hook  
Chrome, similar to (5293) Hotel Collection, Geeza Catalogue (or approved equal).
- L. Double Hook  
Chrome and gold, Similar to 40531-09, Axor Allegrohe Novo Collection, Hansgrohe (or approved equal).
- M. Hand-Held Hair Dryer  
With 4 settings, safety wall bracket. Two air velocities, impact-resistant ABS housing, hair styling nozzle, 80 cm coiled cable extendable to 250 cm moulded power plug, safety temperature limiter, 1.200 watt
- N. Pedal Trash Bin  
Chrome, 5L, similar to 626 Hotel; Collection, Geeza Catalogue (or approved equal).
- O. Towel Shelf  
Chrome and Gold, similar to 40571-09 Polis Collection, Hansgrohe (or approved equal).
- P. Towel Rack  
Chrome, similar to 40475, Polis collection, Hansgrohe (or approved equal).
- Q. Hand Towel Ring  
Chrome and gold, similar to 41221-09 , Axor Allegro Novo, Hansgrohe (or approved equal).
- R. Glass Tooth brush tumbler and support,  
Chrome and Gold, similar to 40634-09, Axor Allegroh Novo Collection, Hansgrohe (or approved equal).
- S. Grab Bar  
Outside length 368 mm, chrome and gold, similar to 40630-09, Axor Allegroh Novo Collection, Hansgrohe, (or approve equal).
- R. Tissue Box,  
Recessed, Chrome, similar to 123, Hotel Collection, Geeza Catalogue (or approved equal).
- T. Clothes Line  
Chrome and gold, max 285 cm, similar to 40479-09, polis collection Hasngrohe (or approved equal).

**2.02 Materials (Cont'd)**

- U. Bottle Opener  
Chrome, similar to (40482), Polis Collection, Hansgrohe (or approve equal).
- V. Shower Curtain(Rail and curtain)  
Chrome, similar to (5226), Hotel Collection, Geeza Catalogue (or approved equal).
- X. Shower Door  
White with real safety glass panels, similar to comforta 750, Huppe Catalogue (or approved equal).
- Y. Adhesive Epoxy type contact cement.
- Z. Fasteners, Screws, and Bolts Hot dip galvanized. Expansion Shields Fiber, lead or rubber as recommended by accessory manufacturer for component and substrate.

**2.03 Fabrication**

- A. Weld and grind smooth joints of fabricated components.
- B. Form exposed surfaces from one sheet of stock, free of joints.
- C. Provide steel anchor plates and anchor components for installation on building finishes.
- D. Form surfaces flat without distortion. Maintain flat surfaces without scratches or dents.
- E. Back paint components where contact is made with building finishes to prevent electrolysis.
- F. Hot dip galvanized ferrous metal anchors and fastening devices.
- G. Shop assemble components and package complete with anchors and fittings.

**2.04 Electrical Connections**

- A. Items requiring connection to electric supply shall have characteristics in accordance with the Electrical Drawings and shall be installed in accordance with appropriate paragraphs of Section 16.

**PART 3 EXECUTION****3.01 Preparation**

- A. Deliver inserts and rough-in frames to job site at appropriate time for building-in. Provide templates and rough-in measurements as required.
- B. Before starting work notify the Engineer in writing of any conflicts detrimental to installation or operation of units.
- C. Verify with the Engineer exact location of accessories.

**3.02 Installation**

- A. Install fixtures, accessories and items in accordance with manufacturer's printed instructions.
- B. Install true, plumb and level, securely and rigidly anchored to substrate.
- C. Use tamper-proof security type fasteners.

**END OF SECTION**

**DIVISION 11**

**EQUIPMENT**

**BUILDING WORK**

**DIVISION 11**

**EQUIPMENT**

**INDEX**

SECTION 11165 : Loading Dock Equipment  
SECTION 11460 : Kitchen Unit

**SECTION 11165  
LOADING DOCK EQUIPMENT****PART 1 GENERAL****1.01 Submittal**

- A. General: In compliance with Section 01330 and as specified here in.
- B. Product Data: Manufacturer's installation and maintenance instructions.
- C. Shop Drawings:
  - 1. Dock Bumpers: Indicate unit dimensions, method of anchorage, and details of construction.
  - 2. Dock Levelers: Indicate perimeter conditions of construction, materials and finish, installation details, roughing - in measurements, and operation of unit.
  - 3. Scissors Lift: Indicate materials and finish, installation details and operation of unit.

**PART 2 PRODUCTS****2.01 Acceptable Products**

- A. Dock Bumper: Kelley Company, Inc. "Model 412-24", 305 mm x 610 mm 1 ammoniated rubber pads, two per bay without dock levelers.
- B. Dock Levelers: Kelley Company, Inc. "Hydraulic 'K' Series, Duty Range 1" dock levelers; two each "Model H606K" and two each "Model H608K" with following characteristics.
  - 1. Hydraulic ramp and lip positioning. Lip to project 305mm beyond bumpers.
  - 2. Automatic return to stored position.
  - 3. Adjustable hydraulic load sensing safety system.
  - 4. Shielded, heavy - duty controls.
  - 5. Full operating range yellow toe guards.
  - 6. Integral adjustable maintenance strut.
  - 7. Pre-wired plug-in electrical hook-up.

**2.01 Acceptable Products**

8. Automatic cross traffic legs for full unrestricted float. No manual leg release required for low trucks when lip is extended.
  9. Molded rubber "L" shaped bumpers.
- C. Other Acceptable Manufacturers:
1. McGuire.
  2. Overhead Door Corporation.
  3. Pioneer Manufacturing, Inc.
  4. Serco Engineering Corp.
  5. Rite-Hite Corporation.
  6. Frommelt Industries, Inc.

**PART 3 EXECUTION****3.01 Installation**

- A. Install dock bumpers and dock levelers in compliance with manufacturers instructions.
- B. Weld dock bumper angle and frames to steel channel dock frame. Touch up weld with primer.
- C. Set dock levelers square and level; anchor securely flush to dock; weld back of leveling dock to pit frame. Touch up weld with primer.
- D. Adjust levelers for smooth and balanced operation.

**END OF SECTION**

**SECTION 11460  
KITCHEN UNIT****PART 1 GENERAL****1.01 Work Included**

- A. This section covers the supply and installation of floor and wall mounted kitchen units where indicated, including sinks.
- B. Electrical Kitchen Equipment and other appliances are covered under section 11400, and do not form part of this section.

**1.02 Related Work**

- A. Section 01340 Shop Drawing, Product Data and Samples
- B. Section 01600 Materials and Equipment.
- C. Section 01630 Substitutions and Product Options.
- D. Section 01710 Cleaning
- E. Section 01730 Operating & Maintenance Data

**1.03 Reference Standards**

- A. All appliances provided should be manufactured and tested in accordance with the appropriate standards published by the following organizations.

B.S.I.	British Standards Institute.
N.E.C.	National Electric Codes.
U.L.	Underwriters Laboratories.
N.S.F.	National Sanitation Foundation.

**1.04 Product Data and Samples**

- A. Submit Product Data and Samples in accordance with Section 01340 Shop Drawings, Product Data and Samples.
- B. Product Data shall include dimensions drawing, Performance Data, illustrated brochures and detailed description of all features.
- C. Requirement for Samples will be waived if sample of each item being provided are readily available for viewing and inspection in the suppliers showroom.

**1.04 Product Data and Samples (Contd.)**

- D. The Contractor shall arrange for viewing and inspection of appliances, in the supplier's showroom at the Employer's convenience, or his representative.
- E. Colour samples of finish shall be provided.

**1.05 Suitability**

- A. All Units provided shall be suitable for operation under the ambient conditions applying.
- B. Sinks shall be complete with all piping, controls, safety devices and accessories necessary for proper, efficient and safe operation.

**1.06 Delivery, Storage and Handling**

- A. Deliver all items in Manufacturer's original container.
- B. Store and protect all items until installation.

**1.07 Documentation**

- A. Data and Manuals covering service and major overhaul spare parts lists ...etc. shall be provided as laid down in Section 01730, "Operating and Maintenance Data".
- B. Complete user, O&M instructions shall be provided for each individual kitchen unit.
- C. User O&M data for all appliances in a single accommodation unit shall be placed together in a plastic covered binder, one binder being provided for each accommodation unit.
- D. Five (5) additional copies of users O&M data for each appliance shall also be provided.

**1.08 Utility Conditions**

- A. Electrical Supply: (Disposal Grinder in Main Kitchen only)
- B. Water Pressure:       Max 1 bar  
                              Min 0.3 bar
- C. Water Temperature:  
                              Cold - 15°C.  
                              Hot - 55°C - 71°C

**1.09 Guarantee, Warranty**

- A. Provide written warranties in the name of the Employer.
- B. Warranties shall be provided for promptly making good or replacing, at no cost to the Employer, any defective item or part should a fault or defect occur within a period of one year (1) from date of hand over to the Employer.

**1.10 Submittals**

- A. Submit Product Data and Shop Drawings in accordance with Section 01340.
- B. Submit colors and finishes samples of manufacturer's standard range for all items.
- C. Submit all O&M data and warranties at least 6 weeks prior to proposed hand over the facilities.

**PART 2 PRODUCTS****2.01 General**

- A. All items provided shall be new, prime quality; free from defects impairing strength, durability, or appearance; and with structural properties to sustain safety or withstand strains and stresses to which normally subjected.
- B. Standard Catalogue Items: All standard factory constructed equipment/unit shall be complete with all-standard features and standard accessories as described and shown in the manufacturer's catalogue, unless exceptions are specifically mentioned in the specifications. All equipment items furnished are to be manufacturer's latest model.
- C. Codes, Ordinances, and Patents: Kitchen units and skinks furnished under these specifications shall be manufactured and installed in strict conformity with applicable regulation and requirements of all applicable national, state and local codes as well as comply with the provisions of the references standards and to the complete satisfaction of the Employer.
- D. Nameplates: Each Sink shall bear a corrosion-resisting nameplate located in a conspicuous position, and permanently fastened to the equipment, using rivets whenever practical. The nameplate shall bear the name of the manufacturer.
- E. Electrical Equipment: All equipment provided under this section shall be suitable for the electrical supply conditions indicated. Motors shall be of sufficient size for the duty to be performed and shall not exceed the full rated load when the driven equipment is operating at specified capacity under the most severe conditions likely to be encountered.

**2.02 Colours and Finishes**

- A. Colours and finishes of all items will be selected from the manufacturer's range of standard colours and finishes.
- B. The Engineer will select colours and finishes from samples provided.

**2.03 Acceptable Manufacturers**

- A. The Contractor shall submit to the Engineer the names of three manufacturers and their products, which will be acceptable under this Section. Approval of the manufacturer or product must be obtained before proceeding with associated work.
- B. Substitutions: Items of the same function and performance are acceptable in conformance with Section 01630.

**2.04 Kitchen Unit**

- A. The Kitchen Unit called for in the bill of quantities shall be provided.
- B. The quantities per facility shall be as indicated in the Bill of Quantities.

**PART 3 EXECUTION****3.01 Inspection**

- A. Installer shall examine the areas and conditions under which items of this section will be installed, and will not proceed until satisfactory conditions exist.

**3.02 Installation**

- A. Installer shall install all items in strict accordance with the printed recommendations of the manufacturer installing each item firmly in position, square, level, plumb and properly connected.

**3.03 Cleaning Up**

- A. Upon completion of installation, the installer shall remove all loose labels and packing material; thoroughly clean each item of equipment and remove all finger marks, soil and all traces of foreign matter; and completely remove from the job site all packing material resulting from work of this Section, in accordance with Section 01710, "Cleaning".

**3.04 Utility Hook Up**

- A. Electrical connections shall be made in accordance with the requirements of Division 16, "Electrical Works".
- B. Plumbing connections shall be made in accordance with the requirements of Division 15, Mechanical Work.
- C. Flexible utility connections shall be reinforced and/or protected such as to prevent accidental damage or rupture.
- D. Water connection to sinks shall be provided with an isolating valve.
- E. Electrical connection to permanently wired units shall be fitted with disconnect switches.

**3.05 Demonstrating and Testing**

- A. Test and adjust equipment prior to hand over, to ensure proper operation.
- B. Demonstrate equipment to user.

**END OF SECTION**

**DIVISION 12**

**FURNISHING**

**BUILDING WORK**

**DIVISION 12**

**FURNISHING**

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SECTION 12502	: Drapery, Draw Curtains and Equipment
SECTION 12605	: Furniture and Fixtures
SECTION 12690	: Door Mats and Frames

**SECTION 12502**  
**DRAPERY, DRAW CURTAINS AND EQUIPMENT**

**PART 1 GENERAL**

**1.01 Work Included**

- A. All curtains, drapes and tracks as indicated on the drawings.
- B. All supporting devices, fixings and associated hardware.
- C. Installation of curtains, drapes and tracks.

**1.02 Samples**

- A. Submit samples in accordance with Section 01340.

**1.03 Reference Standards**

- A. Jordanian General Specifications.
- B. Federal Specifications:
  - CCC-C-525C Cloth, Curtain, Modacrylic Warp and Sarar Filling.
  - CCC-C-001703A Cloth, Drapery, Glass Fiber.
- C. Underwriters' Laboratories, Inc. (UL) Publication:
  - UL 214 Tests for Flame-Propagation of Fabrics and Films
- D. National Fire Protection Association (NFPA) Publication

**PART 2 PRODUCTS**

**2.01 General**

- A. Lined draperies and draw curtains hung on stationary and cord operated traverse heavy duty tracks and rods shall be provided as listed in the FF&E List, specified in the Specification/Data Sheets and as described in this Section complete in all respects. The Contractor shall take all measurements at the building and shall be responsible for the proper fitting and hanging of the items.

**2.01 General (Contd.)**

- B. Fabric Samples: Submit in duplicate samples of the manufacturers complete range of patterns and colours for each material specified for selection. Prior to delivery of material to the site, samples shall be labeled for identification. The identification and approval marks shall remain undisturbed until final acceptance. Approval shall be by the Contracting Officer.
- C. Manufacturers' instructions shall be approved before work is started.
- D. Two copies of the fabric manufacturer's printed instructions for fabrication of draw curtains shall be provided for approval. Approval shall be by the Architect/Engineer.

**2.02 Delivery And Storage**

- A. When conditions require draperies or draw curtains and the tracks or rods to be delivered and stored at the site, the materials shall be delivered in unopened containers. The containers shall be clearly labeled providing the manufacturer's name and container contents. All materials shall be stored in a safe, dry, and clean location. Containers shall not be opened until needed for installation. Handling and installation of all materials shall be in a manner that will protect them from damage.

**2.03 Materials And Fabrication**

- A. Draperies and draw curtains shall be provided in the locations indicated or specified and shall be fabricated from material conforming to CCC-C-525, CCC-C-001703. All fabrics shall be inherently flame retardant or permanently flame retardant treated to conform to the requirements of UL 214 or NFPA (Publication)
- B. All draperies and draw curtains shall be table-sized with a plus or minus tolerance of 6mm and accurately laid-out before cutting. Patterned fabrics shall be perfectly matched to provide identical designs horizontally and vertically on each window within each room. Where variations in length or placement of window occur in a room all patterns shall match horizontally. Raw edges or selvage shall not be exposed. Headings shall be pleated evenly to required widths. Outside ends shall return to the walls. Returns at ceiling tracks shall be anchored by tender or cup hooks. Traverse draperies shall overlap 75mm at the center.
- C. All draperies and draw curtains shall be made from full or half widths of fabric to give a minimum of 100 percent fullness, including returns. Draperies shall be floor length or sill length.
- D. Headings shall be 100mm high, double fold with permanent buckram-finish crinoline or pella interfacing continuous across the heading. Paper buckram is not acceptable. Pleats shall be machine stitched for a depth of at least 95mm. Horizontal stitching shall not be used across the width of the heading.

**2.03 Materials And Fabrication (cont'd)**

- E. Hems and weights: Side hems shall be double fold, 38mm wide. Bottom hems shall be double fold, 100mm deep with weights sewn 38mm above bottom of the hem. Hems shall be blind stitched so as not to show on the face of the panel. Standard covered curtain weights shall be used at all corners and at each vertical seam.
- F. Seams: All joining of widths shall be by serging, overlocked and safety stitched. All selvages are to be retained where practical.
- G. Lining material shall be cotton sateen. Colour of lining shall match the drapes. Panels and lining shall be hemmed separately at the bottom. Lining shall be properly lock stitched to the back.
- H. Sewing thread:

The thread shall be the best quality, pre-shrunk mercerized cotton. A firm interlocking stitch shall be used at a stitch rate per inch appropriate to the fabric being sewn, with enough slack present so that thread shrinkage in laundering shall not pucker the hems of seams.

- I. Heading hooks shall be of slip-in type, bright zinc-plated, chromium-plated, or nickel-plated steel, and of a size adequate to hold the heading upright. The hooks shall be placed one at each pleat and shall be easily installed and removed.
- J. Maintenance and identification labels:

Three copies of laundering and dry cleaning instructions shall be furnished for fabrics requiring special care. A separate instruction sheet shall be furnished for each material (one for fiberglass, one for verel, etc.) and shall be headed with the name and number of the room or rooms in which each material is hung. In lieu of instruction sheets, small, permanent labels (either iron-on type or sewn-on) shall be affixed to the back of the heading of each panel.

- K. Rods and tracks:

Wall-mounted rods and ceiling mounted tracks shall be traverse of the heavy-duty type for permanent installation. Traverse rods or tracks shall be manually operated, center close two-way. Rods and tracks shall be of materials and finish specified below. Manufacturer's assemblies are not necessarily interchangeable; therefore, one manufacturer's design shall be used throughout for ease of maintenance and replacement. More than one design "job lot set" shall not be used. All components shall be specifically designed to make a complete assembly which will result in a strong, smooth operating unit.

**2.03 Materials And Fabrication (cont'd)**

- L. Rods, tracks, and brackets shall of cold-rolled coil, commercial steel, finished in accordance with subparagraph: Finish. Rods and tracks shall have a minimum thickness of 2 mm and shall be oval or "C" shaped with dimensions of 25mm by 12mm.
- M. Finish: Steel components specified in subparagraph: Rods, tracks, and brackets shall be cleaned, zinc-coated, and have a phosphoric etch prior to painting. Finish shall be a heat-cured, plastic-base paint applied to complete hiding by the electrostatic or roll-on method. Finish colour shall be white or off-white.
- N. Track sets shall consist of ceiling track, plastic slides, and end caps for stationary installations; ceiling track, plastic slides, master slides, ball bearing type end pulleys, and traverse cord for draw curtains. Track sets for draw curtains shall be provided with cord tension pulleys.
- O. Rod sets shall consist of wall-hung rod, plastic slides, brackets, and intermediate supports with 63mm to 95mm projection for stationary installations; wall-hung rod, plastic slides, master slides, ball bearing type end pulleys, brackets, intermediate supports with 63mm to 95mm projection, and traverse cord for draw curtains. Rod sets for draw curtains shall be provided with cord tension pulley.
- P. Traverse cord:  
  
Cord: The traverse cord shall be Size No. 4 with fiberglass center. The cord finish shall be white or off-white.
- Q. Drapery and draw curtains shall be provided for all window openings in the rooms indicated in the FF&E Lists.

**PART 3 EXECUTION****3.01 Installation**

- A. Installation shall be performed by mechanics skilled in handing draperies and draw curtains, in accordance with the manufacturer's installation instructions. Painting and finishing operations shall be completed prior to installation of items.
- B. Hardware: Tracks and rods shall not be installed until painting and finishing operations are complete. Ceiling tracks shall be installed parallel with wall and window; fastened at each end as well as 16 inches (40 cm) from each end; and with intermediate supports in accordance with the manufacturer's instructions, but not more than 32- inch (80-cm) spacing between brackets.

**3.01 Installation (cont'd)****B. Hardware: (Contd.)**

Wall tracks shall have intermediate supports in accordance with the manufacturer's instructions. Fasteners for installation shall be zinc or cadmium plated and shall be as follows:

Fastener Structural Material

Wood screw or sheet metal screw Wood

Tapping screw Metal

Case hardened, self-tapping sheet metal screw Sheet metal

Screw or bolt in expansion shield Solid masonry

Toggle bolt or molly bolt Hollow masonry, wallboard and plaster.

- C. Draperies and draw curtains, except fiberglass, shall be well pressed before hanging. Draperies and draw curtains shall not be hung until all other trades have completed their work. Headings shall conceal wall-mounted rods and ceiling-mounted tracks but shall allow 1/4-inch (6mm) clearance between the top of heading and ceiling for proper operation. Floor-length draperies and draw curtains shall hang to the finished floors; sill-length draperies and draw curtains shall hang to the window sills and heating-air conditioning units. Hooks shall be inserted at the rear of the draperies to draw curtains and placed to obtain the clearance specified. Hung draperies and draw curtains shall be even and level on tracks or rods, dressed down and adjusted for form and appearance. Draw curtains shall operate smoothly and easily over the full range of travel. Damaged, spotted, or otherwise defective fabric shall be removed and replaced with new material or repaired to the original state.

**END OF SECTION**

**SECTION 12605  
FURNITURE AND FIXTURES****PART 1 GENERAL****1.01 Work Included**

- A. Supply and delivery of furniture, furnishing, fixtures and fittings indicated in the Furniture Specifications and Catalogue Cuts.
- B. Assembly of knocked down items.
- C. Installation of fixed items
- D. Placing in position of furniture and accessories.

**1.02 Related Work**

- A. Section 01340 Shop Drawing, Product Data and Samples
- B. Section 01630 Substitution and Product Options
- C. Section 01710 Cleaning
- D. Section 01730 Operating & Maintenance Data

**1.03 Production Data and Samples**

- A. Submit product data, mock-up, swatches/material samples, Shop drawings in accordance with Section 01340.
- B. Product Data shall include dimensioned drawings, illustrated brochures and detailed description of all features.
- C. Samples of furnishings material and furniture covering fabrics Samples shall illustrate material quality/type and color.

**1.04 Suitability**

- A. All items provided shall be suitable for operation under the ambient conditions.
- B. All items shall be complete in all respect and fully assembled ready for immediate use.

**1.05 Delivery, Storage and Handling**

- A. Deliver all items in manufacturer's original container.

**1.05 Delivery, Storage and Handling (Contd.)**

- B. Store and protect all items until installation.
- C. Furniture, Furnishings and Fixture shall be delivered to the site in the manufacturer's substantial commercial shipping container, properly marked or labeled so as to be readily identified with the Schedule. Packing of labels shall not be removed until immediately prior to installation or placing in position.

**1.06 Environmental Requirements**

- A. Before installation and/or placing in position of items ensure that all building and finishing activities have been completed.
- B. Maintain room temperature within the range 18 to 25 degrees before during and continuously after installation and/or placing in position.

**1.07 Protection after Installation/Placing**

- A. Provide suitable protection to all items in the event of any minor remedial building works being required.
- B. Remove to safe storage all items other than fixed items, in the event of any major remedial building works being required.
- C. Keep room or areas, where furniture furnishing and fitting have been installed or placed, locked and limit access to properly authorized personnel.

**1.08 Guarantee, Warranty**

- A. Provide written warranties in the name of the Employer.
- B. Warranties shall be provided for promptly making good or replacing, at no cost to the Employer, any defective item or part should a fault occur within a period of one (1) year from date of hand over to the Employer.

**1.09 Extent, Arrangements And Clearances**

- A. The drawings indicate the extent and general arrangement of the items to be provided. All items shall be suitable for installation in the space assigned on the Drawings, with adequate clearances.

**1.10 Operation And Maintenance Data**

- A. Submit operation and maintenance data in accordance with Section 01730.

**1.11 Furniture fittings and equipment Lists**

- A. All item provided under this section are listed in the Furniture Specification and catalogue cuts.

**PART 2 PRODUCT****2.01 General**

- A. All furniture furnishing and fixture items shall be the manufacturer's latest model or type.
- B. Unless detailed or indicated as special design items, furniture furnishing and fixtures shall be standard catalog products of manufactures regularly engaged in the manufacture of such products, and shall essentially duplicate products that have been in satisfactory use for at least two years.
- C. Where two or more units of the same item are scheduled, these units shall be the same product of the same manufacturer.
- D. Description/specification of each item is contained in the Furniture Specification and catalogue cuts.

**2.02 Acceptable Manufacturers**

- A. The Contractor shall submit to the Supervising Engineer\ Employer's Representative the names of three manufacturers and their products which will be acceptable under this Section. Approval of the manufacturer or product must be obtained before proceeding with associated work.
- B. Substitutions: Items of the same function and performance are acceptable in conformance with Section 01630.

**2.03 Colors And Finishes**

- A. Colors and finishes of all items will be selected from the manufacturer's range of standard colors and finishes unless specifically indicated otherwise..
- B. The Supervising Engineer\ Employer's Representative will select colors and finishes from samples provided.

**2.04 Electrical Connections**

- A. Item requiring connection to electric supply shall have characteristic in accordance with the Electrical Drawings and shall be installed in accordance with appropriate paragraph of Division 16.

**2.05 Mechanical Connections**

- A. Item requiring connection to mechanical supply shall have characteristics in accordance with the Mechanical Drawings and shall be installed in accordance with appropriate paragraph of Division 15.

**PART 3 EXECUTION****3.01 Inspection**

- A. Installer shall examine the areas and conditions under which items are to be installed and shall ensure that they are satisfactory.
- B. Installer shall confirm to the Supervising Engineer that conditions are satisfactory before proceeding with installation.

**3.02 Assembly**

- A. Items shipped in a knocked down condition shall be assembled in accordance with the manufacturers written instructions using tools and/or fixing devices supplied or recommended by the manufacturer.

**3.03 Installation**

- A. Items shall be installed by workmen skilled in the type of work to be performed in accordance with the manufacturers' instructions at the locations indicated.
- B. Items requiring permanent or fixed mounting to various substrates shall be provided with appropriate anchoring devices and shall be installed in accordance with manufacturers' written instructions.

**3.04 Cleaning Up**

- A. Upon completion of installation, the installer shall remove all loose labels and covering and packing and clean each fitting item using suitable cleaning devices and materials.
- B. All packing material and rubbish shall be disposed of and the areas thoroughly vacuumed and cleaned as specified in Section 01710 after completion of installation.

**END OF SECTION**

**SECTION 12690**  
**DOOR MATS AND FRAMES****PART 1 GENERAL****1.01 Work Included**

- A. Floor mats.
- B. Aluminum alloy framing

**1.02 Samples**

- A. Submit samples in accordance with conditions of contract.

**1.03 Shop Drawings**

- A. Submit shop drawings in accordance with conditions of contract.

**PART 2 PRODUCTS****2.01 Acceptable Manufacturers And Type**

- A. The Contractor shall submit to the Engineer the names of three manufacturers and their products which will be acceptable under this Section. Approval of the manufacturer or product must be obtained before proceeding with associated work.
- B. Type : Recessed  
  
Model: as selected by the Engineer.  
Color: as selected by the Engineer.
- C. Substitutions: Items of the same function and performance are acceptable in conformance with conditions of contract.

**2.02 Materials**

- A. Furnish and install in sizes and quantities indicated on drawings floor mat complete with and including standard medium aluminum frame.

**PART 3 EXECUTION**

**3.01 Installation**

- A. Verify size of floor recess before fabricating mats.
- B. Place mats in floor recess after final cleaning of finish flooring.

**END OF SECTION**