

SECTION 10155

TOILET COMPARTMENTS AND SCREENS

PART1 - GENERAL

1.01 DESCRIPTION:

- A. This section specifies providing metal toilet compartments, urinal screens and metal screens for portable eye wash and body spray.
- B. Related Work Specified Elsewhere:
 - 1. Toilet Accessories: Section 10810.

1.02 SUBMITTALS:

- A. Submit the following for approval in accordance with the General Requirements and with the additional requirements as specified for each:
 - 1. Product Data: For each type and style of toilet compartment and screen specified include details of construction relative to materials, fabrication, and installation. Include details of anchors, hardware, and fastenings.
 - 2. Shop Drawings: For fabrication and installation of toilet compartment and screen assemblies. Include plans, elevations, sections, details, and attachments to other work. Submit prior to ordering materials or beginning fabrication.
 - a. Show locations of reinforcement and cutouts for compartment-mounted toilet accessories.
 - b. Samples for Verification:
 - 1) Three of each type of the following products used in the Work:
 - a) Hardware.
 - b) Sheet metal: Three inches by five inches.
 - 2) Approved full-size samples will be returned and may be used in the Work.

1.03 QUALITY ASSURANCE:

- A. Codes, Regulations, Reference Standards and Specifications:
 - 1. Comply with codes and regulations of the jurisdictional authorities.
 - 2. ADA: Americans with Disabilities Act.
 - 3. ASTM: A666.
 - 4. NAAMM: Metal Finishes Manual for Architectural and Metal Products.
- B. Manufacturer Qualifications: Provide products of an established manufacturer regularly engaged in the production of toilet accessories.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING:

- A. Deliver the products to the job site in original unopened containers clearly labeled with the manufacturer's name, brand designation and type as applicable.
- B. Store products in an approved dry area, protect from contact with soil and from exposure to the elements. Keep products dry.
- C. Handle products so as to prevent breakage of containers and damage to products.

1.05 PROJECT CONDITIONS:

- A. Field Measurements: Verify dimensions in areas of installation by field measurements before fabrication and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work
 - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating units without field measurements. Coordinate supports, adjacent construction, and fixture locations to ensure actual dimensions correspond to established dimensions.

PART 2- PRODUCTS

2.01 MANUFACTURERS:

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
- B. Ampco Products, Inc.
- C. General Partitions Mfg. Corp.
- D. Global Steel Products Corp.
- E. Knickerbocker Partition Corporation.
- F. Sanymetal
- G. Or equal.

2.02 MATERIALS:

- A. General: Provide materials that have been selected for surface flatness and smoothness. Exposed surfaces that exhibit pitting, seam marks, roller marks, stains, discolorations, telegraphing of core material, or other imperfections on finished units are unacceptable.
- B. Stainless-Steel Sheet: ASTM A666, Type 302 or 304, that is leveled to stretcher-leveled flatness, finished on exposed faces as indicated in the "Stainless-Steel Sheet Finishes" Article, and of the following minimum thicknesses:
 - 1. Pilasters (Overhead Braced): 0.0375 inch.
 - 2. Pilasters (Unbraced): 0.0500 inch.
 - 3. Panels and Screens: 0.0312 inch.
 - 4. Doors: 0.0312 inch.
 - 5. Tapping Reinforcement: 0.0781 inch.
- C. Core Material for Metal-Faced Units: Manufacturer's standard sound-deadening honeycomb of resin-impregnated kraft paper in thickness required to provide finished thickness of 1 inch minimum for doors, panels, and screens and 1-1/4 inches minimum for pilasters.
- D. Pilaster Shoes and Sleeves (Caps): ASTM A666, Type 302 or 304 stainless steel, not less than 0.0312 inch thick and 3 inches high, finished to match hardware.
- E. Stirrup Brackets: Manufacturer's standard ear or U-brackets for attaching panels and screens to walls and pilasters of the following material:
 - 1. Material: Stainless steel.
 - 2. Material: Chrome-plated brass.

- F. Full-Height (Continuous) Brackets: Manufacturer's standard design for attaching panels and screens to walls and pilasters of the following material:
 - 1. Material: Stainless steel.
 - 2. Material: Chrome-plated brass.
- G. Hardware and Accessories: Manufacturer's standard design, heavy-duty operating hardware and accessories of the following material:
 - 1. Material: Stainless steel.
 - 2. Material: Chrome-plated brass.
- H. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with antigrip profile in manufacturer's standard finish.
- I. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel or chrome-plated steel or brass, finished to match hardware, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use hot-dip galvanized or other rust-resistant, protective-coated steel.

2.03 COMPARTMENT AND SCREEN FABRICATION:

- A. General: Provide standard doors, panels, screens, and pilasters fabricated for compartment system. Provide units with cutouts and drilled holes to receive compartment-mounted hardware, accessories, and grab bars, as indicated.
 - 1. Provide internal reinforcement in metal units for compartment-mounted hardware, accessories, and grab bars.
- B. Metal-Faced Toilet Compartments and Screens: Pressure laminate seamless face sheets to core material and provide continuous, interlocking molding strip or lapped and formed edges. Seal corners by welding or clips. Grind exposed welds smooth.
- C. Overhead-Braced-and-Floor-Anchored Compartments: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, fasteners, and anchors at pilasters to suit floor conditions. Make provisions for setting and securing continuous head rail at top of each pilaster. Provide shoes at pilasters to conceal supports and leveling mechanism.
- D. Floor-Anchored Compartments: Provide manufacturer's standard corrosion-resistant anchoring assemblies complete with threaded rods, lock washers, and leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.
- E. Ceiling-Hung Compartments: Provide manufacturer's standard corrosion-resistant anchoring assemblies complete with threaded rods, lock washers, and leveling adjustment nuts at pilasters for connection to structural support above finished ceiling. Provide assemblies that support pilasters from structure without transmitting load to finished ceiling. Provide sleeves (caps) at tops of pilasters to conceal anchorage.
 - 1. Provide manufacturer's standard 4-inch-high, overhead cross bracing.
- F. Floor-and-Ceiling-Anchored Compartments: Provide manufacturer's standard corrosion-resistant anchoring assemblies complete with leveling adjustment at tops and bottoms of pilasters. Provide shoes and sleeves (caps) at pilasters to conceal anchorage.
- G. Wall-Hung Urinal Screens and Eyewash Screens: Provide units 18 inches wide by 42 inches high, nominal, or of size as indicated of same construction and finish as compartment panels, unless otherwise indicated.

1. Provide metal-faced screens with integral full-height flanges for attachment to wall.
- H. Floor-Anchored Screens: Provide pilasters and panels of same construction and finish as toilet compartments. Provide manufacturer's standard corrosion-resistant anchoring assemblies complete with threaded rods, lock washers, and leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.
- I. Ceiling-Hung Screens: Provide pilasters and panels of same construction and finish as toilet compartments. Provide manufacturer's standard corrosion-resistant anchoring assemblies complete with threaded rods, lock washers, and leveling adjustment nuts at pilasters for connection to structural support above finished ceiling. Provide assemblies that support pilasters from structure without transmitting load to finished ceiling. Provide sleeves (caps) at tops of pilasters to conceal anchorage.
- J. Floor-and-Ceiling-Anchored Screens: Provide pilasters and panels of same construction and finish as toilet compartments. Provide manufacturer's standard corrosion-resistant anchoring assemblies complete with leveling adjustment at tops and bottoms of pilasters. Provide shoes and sleeves (caps) at pilasters to conceal anchorage.

2.04 DOOR FABRICATION:

- A. General: Unless otherwise indicated, provide 24-inch-wide in-swinging doors for standard toilet compartments and 36-inch-wide out-swinging doors with a minimum 32-inch-wide clear opening for compartments indicated to be handicapped accessible.
- B. Hardware: Provide doors with the following:
1. Hinges: Manufacturer's standard self-closing type that can be adjusted to hold door open at any angle up to 90 degrees.
 2. Latch: Concealed latch unit designed for emergency access. Provide units that comply with accessibility requirements of authorities having jurisdiction at compartments indicated to be handicapped accessible.
 3. Combination Stop/Keeper.
 4. Coat Hook: Manufacturer's standard combination hook and rubber-tipped bumper, sized to prevent door from hitting compartment-mounted accessories.
 5. Door Pull: Manufacturer's standard unit that complies with accessibility requirements of authorities having jurisdiction at out-swinging doors. Provide units on both sides of doors at compartments indicated to be handicapped accessible.

2.05 STAINLESS-STEEL SHEET FINISHES:

- A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations relative to applying and designating finishes.
1. Remove or blend tool and die marks and stretch lines into finish.
 2. Grind and polish surfaces to produce uniform, directional textured, polished finish indicated, free of cross scratches. Run grain with long dimension of each piece.
- B. Finish: Manufacturer's standard No. 4 directional polish.
- C. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
- D. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipment.

PART 3 - EXECUTION

3.01 PREPARATION:

- A. Verify dimensions before proceeding and obtain measurements at the structure for work to be accurately fitted to other construction, including wall-to-wall dimensions, floor-to-ceiling dimensions and those controlled by other trades.
- B. Examine surfaces and parts of structure to which work is to be applied. Notify the Engineer of defects or conditions detrimental to proper installation so that remedial measures may be accomplished by trades involved.
- C. Remove foreign substances from surfaces to receive specified work.

3.02 INSTALLATION:

- A. General: Install units to the adjoining construction as shown on Contract Drawings and approved shop drawings.
- B. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, plumb, and level. Provide clearances of not more than 1/2inch between pilasters and panels and not more than 1 inch between panels and walls. Secure units in position with manufacturer's recommended anchoring devices.
 - 1. Secure panels to walls and panels with not less than 2 stirrup brackets attached near top and bottom of panel. Locate wall brackets so holes for wall anchors occur in masonry or tile joints. Align brackets at pilasters with brackets at walls.
- C. Overhead-Braced-and-Floor-Anchored Compartments: Secure pilasters to floor and level, plumb, and tighten. Secure continuous head rail to each pilaster with not less than 2 fasteners. Hang doors level and plumb without twist or warp and adjust so tops of doors are parallel with overhead brace when doors are in closed position and with maximum clearance of 3/16-inch at vertical edges.
- D. Floor-Anchored Compartments: Set pilaster units with anchors penetrating not less than 2 inches into structural floor, unless otherwise indicated in manufacturer's written instructions. Level, plumb, and tighten pilasters. Hang doors level and plumb without twist or warp and adjust so tops of doors are parallel with overhead brace when doors are in closed position and with maximum clearance of 3/16-inch at vertical edges.
- E. Ceiling-Hung Compartments: Secure pilasters to supporting structure and level, plumb, and tighten. Hang doors level and plumb without twist or warp and adjust so tops of doors are parallel with overhead brace when doors are in closed position and with maximum clearance of 3/16-inch at vertical edges.
- F. Floor-and-Ceiling-Anchored Compartments: Secure pilasters to supporting construction and level, plumb, and tighten. Hang doors level and plumb without twist or warp and adjust so tops of doors are parallel with overhead brace when doors are in closed position and with maximum clearance of 3/16-inch at vertical edges.
- G. Screens: Attach with anchoring devices according to manufacturer's written instructions and to suit supporting structure. Set units level and plumb and to resist lateral impact.
- H. Clean finished surfaces according to manufacturer's written instructions and leave them free from imperfections. Touch up marred painted surfaces with matching materials furnished by manufacturer.

- I. After installation, Provide final protection and maintain conditions that ensure toilet compartments and screens are without damage or deterioration at the time of Substantial Completion.

3.03 TESTING AND ADJUSTING OF COMPLETED WORK:

- A. Hardware:
 - 1. Test proper operation of hardware by opening and closed each door through ten cycles.
 - 2. Adjust and lubricate hardware according to manufacturer's written instructions for proper operation.
 - 3. Set hinges on in-swinging doors to hold open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors and swing doors in entrance screens to return to fully closed position.
 - 4. Adjust, repair or replace malfunctioning hardware.

3.04 CLEANING:

- A. Leave areas surrounding the work in broom-clean condition.

END OF SECTION

SECTION 10180

STONE TOILET COMPARTMENTS AND SCREENS

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. This section specifies providing floor-anchored stone toilet compartments, urinal screens and accessories.
- B. Related Work Specified Elsewhere:
 - 1. Seals and Sealants: Section 07900.
 - 2. Toilet Compartments & Shields: Section 10155.
 - 3. Toilet Accessories: Section 10810.

1.02 SUBMITTALS:

- A. Submit the following for approval in accordance with the General Requirements and with the additional requirements as specified for each:
 - 1. Product Data: For each variety of stone, stone accessory, door, hardware, fitting, and other manufactured product specified.
 - a. For stone varieties, include data on physical properties required by referenced ASTM standards.
 - b. For doors, hardware, and fittings, include details of construction relative to materials, dimensions of individual components, profiles, and finishes.
 - 2. Shop Drawings: Show details of fabrication and installation of compartments and screens, including plans; elevations; sections; details of anchorages and attachments to other work; dimensions of stone units; and locations of fittings, doors, hardware, and compartment-mounted accessories.
 - 3. Door Samples for Initial Selection: Manufacturer's color charts consisting of sections of actual units showing the full range of colors, textures, and patterns available for each type of compartment door indicated.
 - 4. Sealant Samples for Initial Selection: Manufacturer's standard bead samples of actual products showing the full range of colors available for sealant.
 - 5. Samples for Verification: Three of each type of the following products used in the Work, in sizes indicated:
 - a. Stone: Sets for each color, grade, finish, and variety of stone required; not less than 12 inches square. Include two or more samples in each set showing the full range of variations in appearance characteristics expected in the completed Work.
 - b. Hardware and Fittings: Full-size samples of each hardware and fitting item required.
 - c. Sealant: Manufacturer's standard size sample for each type and color of joint sealant required.
 - 6. Maintenance Data: For stone to include precautions for cleaning materials and methods that could be detrimental to finishes and performance.

1.03 QUALITY ASSURANCE:

- A. Codes, Regulations, Reference Standards and Specifications:
 - 1. Codes and regulations of the jurisdictional authorities.
 - 2. ADA: Americans with Disabilities Act.
 - 3. ASTM: A666, C503.
 - 4. MIA: Dimension Stone-Design Manual IV.

- B. Installer Qualifications: Engage an experienced installer who has completed stone toilet compartments similar in material, design, and extent to those indicated for this Project and with a record of successful in-service performance.
- C. Fabricator Qualifications: Engage an experienced fabricator who has fabricated stone for toilet compartments similar in material, design, and extent to those indicated for this Project and with a record of successful in-service performance.
- D. Source Limitations for Stone: Obtain each variety of stone from a single quarry with resources to provide materials of consistent quality in appearance and physical properties and to cut and finish material without delaying the Work.

1.04 DELIVERY, STORAGE, AND HANDLING:

- A. Deliver materials to Project site in undamaged condition.
- B. Store and handle stone and related materials to prevent deterioration or damage due to moisture, temperature changes, contaminants, corrosion, breakage, chipping, or other causes.
- C. Stack or brace stone on edge on leveled and adequate A-frames in a manner that prevents undue stresses in stone, chipping, cracking, and breaking. If exposed to moisture, cover stone with nonstaining, waterproof membrane.

1.05 PROJECT CONDITIONS:

- A. Field Measurements: Verify dimensions in areas of installation by field measurements before stone fabrication and indicate measurements on Shop Drawings. Coordinate stone fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating stone units without field measurements. Coordinate supports, adjacent construction, and fixture locations to ensure actual dimensions correspond to established dimensions.

PART 2 - PRODUCTS

2.01 MANUFACTURERS:

- A. Available Product: Subject to compliance with requirements, a product that may be incorporated into the Work includes, but is not limited to, "Marblstal" by Georgia Marble Company.

2.02 MATERIALS:

- A. Stone, General: Provide stone free of cracks, defects, geological flaws, and voids. Provide material that has been selected for surface flatness, smoothness, and uniform visual quality.
- B. Marble: ASTM C503, MIA Group A soundness classification. Polished with a hardness of Ha16 and absorption of 0.09 percent.
 - 1. Color: As selected by Engineer from manufacturer's full range of colors.
- C. Dowels: Provide 1/4-inch-diameter dowels fabricated from stainless steel, ASTM A666, Type 304. Furnish templates for positioning anchoring holes in structural supporting members.

- D. Brackets: Chrome-plated forged brass 1-3/4 by 1-3/4 inch by 1-1/4-long angle brackets capable of supporting stone units in bracket configuration indicated.
- E. Hardware: Manufacturer's standard design, stainless steel or chrome plated brass, heavy-duty operating hardware and accessories. Smooth and finished wherever visible; theft-resistant, permitting removal only by special tool. Furnish two such tools.
- F. Exposed Anchorages and Fasteners: Manufacturer's standard design, stainless steel or chrome-plated brass fasteners, finished to match hardware, with theft-resistant-type heads. Provide sex-type through bolts with theft-resistant spanner heads and threaded brass rods for attachments to stone.
- G. Doors: Manufacturer's standard polyurethane varnished one-inch thick solid hardwood or solid core hardwood flush doors with 3/4-inch particle board core and hardwood edge bands bonded on all four edges.
- H. Stone Sealer: Sealer recommended by fabricator and sealer manufacturer for protecting stone from surface staining and suitable for stone finish indicated.
- I. Sealant: Nonstaining, compatible sealant recommended by stone fabricator for stone varieties and joints indicated.

2.03 STONE FABRICATION:

- A. General: Provide manufacturer's standard sizes and shapes of panels, screens, and stiles.
 - 1. For marble, comply with recommendations of MIA's "Dimension Stone--Design Manual IV."
- B. Cut stone to produce sizes and shapes indicated with surfaces not varying more than 1/32-inch from true plane. Provide even (gaged) thicknesses indicated, but not less than the following actual thicknesses:
 - 1. Panels and Screens: 7/8 inch.
 - a. Stiles: 1-1/4 inches.
- C. Cut stone so that, when installed, veining will be approximately vertical.
- D. Cut and drill sinkages and holes in stone for anchors and fasteners as indicated or needed to set stone securely in place. Drill holes for compartment-mounted accessories.
- E. Finish exposed faces and edges of stone to comply with requirements indicated for finish under each type of stone required and to match approved samples. Provide stone with eased, exposed edges.
- F. Urinal Screens: Provide units 18 inches wide by 42 inches high, nominal, or of size as indicated of same construction and finish as compartment panels with floor cutout as approved from manufacturer's standard option.

2.04 DOOR FABRICATION:

- A. General: Unless otherwise indicated, provide 24-inch-wide in-swinging doors for standard toilet compartments and 36-inch-wide out-swinging doors with a minimum 32-inch-wide clear opening for compartments indicated to be handicapped accessible.
- B. Hardware: Provide doors with the following:
 - 1. Hinges: Manufacturer's standard spring or gravity-type top and bottom hinges.

2. Latch: Concealed latch unit designed for emergency access. Provide units that comply with accessibility requirements of authorities having jurisdiction at compartments indicated to be handicapped accessible.
3. Combination Stop/Keeper.
4. Coat Hook: Manufacturer's standard combination hook and rubber-tipped bumper, sized to prevent door from hitting compartment-mounted accessories.
5. Door Pull: Manufacturer's standard unit that complies with accessibility requirements of authorities having jurisdiction at out-swinging doors. Provide units on both sides of doors at compartments indicated to be handicapped accessible.

PART 3 - EXECUTION

3.01 EXAMINATION:

- A. Examine substrates, areas, and conditions under which stone toilet compartments and screens will be installed, with Installer present, for compliance with requirements. Do not proceed with installation until unsatisfactory conditions have been corrected.
- B. Coordinate layout and installation of supports, inserts, and anchors built into other units of work for stone toilet compartment and screen anchorage.

3.02 INSTALLATION:

- A. Set stone to comply with requirements indicated. Install anchors, fasteners, and other attachments indicated or necessary to secure stone in place. Shim and adjust anchors and supports to set stone accurately in locations indicated with uniform joints of widths indicated and with edges and faces aligned.
- B. Secure stone panels to walls and stiles with no fewer than 3 brackets. Provide back-to-back brackets at stile connections to walls and intermediate panels and at panel and screen connections to walls. Use through-bolt fasteners to attach brackets to stone. At wall connections, provide fasteners suitable for supporting construction.
- C. Do not allow stone to come in contact with plumbing sealant or putty.
- D. Floor-Anchored Units: Anchor units to floor rigid, level, and plumb. Hang doors and adjust so tops of doors are level with tops of stiles when doors are in closed position.
 1. Floor Anchorage: Set units into finished floor as indicated. Secure units with dowels epoxied into unit and structural floor in locations indicated, but not less than 2 dowels per unit. Provide minimum 1-inch dowel penetration of structural floor.
- E. Prepare joints and apply sealants at locations indicated to comply with applicable requirements of Section 07900.

3.03 ADJUSTING AND CLEANING:

- A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors and swing doors in entrance screens to return to fully closed position.
- B. Clean stone using clean water and methods recommended by MIA. Do not use wire brushes, acid-type cleaning agents, cleaning compounds with caustic or harsh fillers, or other materials or methods that could damage stone.

- C. Seal stone surfaces according to sealer manufacturer's written instructions.

3.04 PROTECTION:

- A. Provide final protection and maintain conditions, in a manner acceptable to fabricator and Installer, that ensure stone toilet compartments and screens are without damage or deterioration at the time of Substantial Completion..

END OF SECTION

SECTION 10505

METAL LOCKERS

PART 1 -GENERAL

1.01 DESCRIPTION:

- A. This section specifies providing metal wardrobe lockers and wood benches.
- B. Related Work Specified Elsewhere:
 - 1. Cast-in-Place Structural Concrete: Section 03300.
 - 2. Concrete Unit Masonry: Section 04220.
 - 3. Rough Carpentry: Section 06100.
 - 4. Seals and Sealants: Section 07900.
 - 5. Tile: Section 09320.

1.02 SUBMITTALS:

- A. Submit the following for approval in accordance with the General Requirements and with the additional requirements as specified for each:
 - 1. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of locker and bench.
 - 2. Shop Drawings: Include plans, elevations, sections, details, and attachments to other Work.
 - a. Show locker fillers, trim, base, sloping tops, and accessories. Include locker-numbering sequence.
 - 3. Samples for Initial Selection: Manufacturer's color charts showing the full range of colors available for units with factory-applied color finishes.
 - 4. Samples for Verification: For the following products, in manufacturer's standard sizes, showing the full range of color, texture, and pattern variations expected. Prepare Samples from the same material to be used for the Work.
 - a. Lockers: Three samples, on metal, of each color and finish to be provided on lockers.
 - b. Locker benches: Three samples of finished wood.

1.03 QUALITY ASSURANCE:

- A. Codes, Regulations, Reference Standards and Specifications:
 - 1. Comply with codes and regulations of the jurisdictional authorities.
 - 2. ADA: Americans with Disabilities Act.
 - 3. ASTM: A366.
 - 4. NAAMM: Metal Finishes for Architectural and Metal Products.
- B. Source Limitations: Where practical, obtain locker units and accessories through one source from a single manufacturer.

1.04 DELIVERY, STORAGE, AND HANDLING:

- A. Do not deliver lockers until spaces to receive them are clean, dry, and ready for locker installation
- B. Ship lockers assembled with number plates attached.
- C. Protect lockers from damage during delivery, handling, storage, and installation.

- D. Deliver master keys, control keys, and combination control charts to the Engineer.

1.05 COORDINATION:

- A. If applicable, coordinate size and location of concrete bases. Concrete, reinforcement, and formwork requirements are specified in Section 03300 "Cast-in-Place Concrete."

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Cold-Rolled Steel Sheet: ASTM A366/A366M, matte finish, suitable for exposed applications, and stretcher leveled or roller leveled to stretcher-leveled flatness.
- B. Fasteners: Zinc- or nickel-plated steel, slotless-type exposed bolt heads, and self-locking nuts or lock washers for nuts on moving parts.

2.02 LOCKERS:

- A. Body: Form backs, tops, bottoms, sides and intermediate partitions from steel sheet; flanged for double thickness at back vertical corners. Comply with the following:
 - 1. Back-Material Sheet Thickness: 0.0478-inch-thick minimum.
 - 2. Side-Material Sheet Thickness: 0.0598-inch-thick minimum.
- B. Frames: Form channel frames from minimum 0.0598-inch-thick steel sheet; lapped and welded at corners. Form continuous integral door strike on vertical frame members. Provide resilient bumpers to cushion door closing.
 - 1. Latch Hooks: Form from minimum 0.1046-inch-thick steel; welded or riveted to door frames.
 - 2. Cross Frames: Form intermediate channel cross frames between tiers from minimum 0.0598-inch-thick steel sheet. Weld to vertical frame members.
- C. Solid Steel Doors: One-piece steel sheet, formed into channel shape at vertical edges and flanged at right angles at top and bottom edges. Fabricate to prevent springing when opening or closing, and to swing 180 degrees. Comply with the following:
 - 1. Sheet Thickness: 0.0598 inch minimum.
 - 2. Reinforcement: Brace or reinforce inner face of doors more than 15 inches wide.
 - 3. Louvered Vents: Stamped, louvered vents in door face, as follows:
 - a. Single-Tier Lockers: No fewer than six louver openings at top and bottom.
 - b. Double-Tier Lockers: No fewer than three louver openings at top and bottom.
- D. Shelves: Provide hat shelf in single-tier units, fabricated from minimum 0.0598-inch-thick formed-steel sheet; flanged on all edges.
- E. Hinges: Steel, full loop, five or seven knuckle; tight pin; minimum 2 inches high. Weld to inside of door frame and attach to door with at least two factory-installed fasteners that are completely concealed and tamper resistant when door is closed.
 - 1. Provide at least three hinges for each door more than 42 inches high and at least two hinges for each door 42 inches high or less.
- F. Continuous Hinges: Manufacturer's standard, steel continuous hinge mounted to door and frame.

- G. Recessed Handle and Latch: Manufacturer's standard housing, formed from 0.0359-inch-thick nickel-plated steel or stainless steel, with integral door pull, recessed for latch lifter and locking devices; nonprotruding latch lifter; and automatic, prelocking, pry-resistant latch, as follows:
 - 1. Provide minimum three-point latching for each door more than 42 inches high; minimum two-point latching for each door 42 inches high or less.
 - a. Provide strike and eye for padlock.

2.03 LOCKER ACCESSORIES:

- A. Interior Equipment: Furnish each locker with the following items, unless otherwise indicated:
 - 1. Hooks: Manufacturer's standard zinc-plated, ball-pointed steel. Provide one double-prong ceiling hook, and not fewer than two single-prong wall hooks for single-, double-, and triple-tier units. Attach hooks with at least two fasteners.
 - 2. Coat Rods: Manufacturer's standard galvanized steel. Provide rod in lieu of ceiling hook for lockers 18 inches deep or greater.
- B. Number Plates: Manufacturer's standard etched, embossed, or stamped, aluminum number plates with numerals at least 3/8 inch high. Number lockers in sequence as directed by Engineer. Attach plates to each locker door, near top, centered, with at least two aluminum rivets.
- C. Continuous Metal Base: Minimum 0.0598-inch-thick steel sheet, 4 inches high or as indicated on approved shop drawings, channel or zee profiled for stiffness, fabricated in lengths as long as practicable to enclose base and base ends of lockers, and finished to match lockers.
- D. Individually Sloping Tops: Manufacturer's standard, fabricated from minimum 0.0239-inch-thick steel sheet, for installation in place of flat locker tops. Fabricate tops in width to fit one locker frame, with integral back, finished to match lockers. Provide fasteners, filler plates, supports, and wedge-shaped divider panels for each locker upright.
- E. Recess Trim: Manufacturer's standard; fabricated from minimum 0.0478-inch-thick steel sheet, minimum 2-1/2-inch face width, and finished to match lockers. Fabricate trim in lengths as long as practicable.
- F. Filler Panels: Manufacturer's standard; fabricated from minimum 0.0478-inch-thick steel sheet in an unequal leg angle shape, and finished to match lockers. Provide slip joint filler angle formed to receive filler panel.
- G. Finished End Panels: Manufacturer's standard; fabricated from minimum 0.0239-inch-thick steel sheet, finished to match lockers, and designed for concealing exposed ends of nonrecessed lockers.
 - 1. Provide one-piece panels for double-row (back-to-back) locker ends.

2.04 LOCKER BENCHES:

- A. Bench Tops: Provide manufacturer's standard one-piece units, of the following material, minimum 9-1/2 inches wide by 1-1/4 inches thick, with rounded corners and edges:
 - 1. Laminated maple with one coat of clear sealer on all surfaces, and one coat of clear lacquer on top and sides.
- B. Pedestals: Provide manufacturer's standard pedestal supports, with predrilled fastener holes, complete with fasteners and anchors, and as follows:

1. Type: Tubular steel, minimum 1-1/2-inch diameter, threaded on both ends, with standard pipe flange at top and bell-shaped cast base; baked-enamel finish; floor anchored with concealed fasteners.
 - a. Color: As selected by the Engineer from manufacturer's full range.
- C. Furnish a minimum of two pedestals for each bench, with pedestal spacing not more than 72 inches o.c.

2.05 FABRICATION:

- A. Unit Principle: Fabricate each locker with an individual door and frame, individual top, bottom, back, and shelves, and common intermediate uprights separating compartments.
- B. All-Welded Construction: Preassemble lockers by welding all joints, seams, and connections, with no bolts, screws, or rivets used in assembly. Grind exposed welds flush.
- C. Fabricate lockers square, rigid, and without warp, with metal faces flat and free of dents or distortion. Make exposed metal edges free of sharp edges and burrs, and safe to touch. Weld frame members together to form a rigid, one-piece assembly.
 1. Form locker-body panels, doors, shelves and accessories from one-piece steel sheet, unless otherwise indicated.

2.06 FINISHES, GENERAL:

- A. Finish all steel surfaces and accessories, except prefinished stainless-steel and chrome-plated surfaces.
- B. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- D. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.07 STEEL SHEET FINISHES:

- A. Surface Preparation: Clean surfaces of dirt, oil, grease, mill scale, rust, and other contaminants that could impair paint bond. Use manufacturer's standard methods.
- B. Baked-Enamel Finish: Immediately after cleaning and pretreating, apply manufacturer's standard baked-enamel finish consisting of a thermosetting topcoat. Comply with paint manufacturer's written instructions for applying and baking to achieve a minimum dry film thickness of 1.4 mils on doors, frames, and legs, and 1.1 mils elsewhere.
 1. Color and Gloss: As selected by the Engineer from manufacturer's full range.

PART 3 - EXECUTION

3.01 EXAMINATION:

- A. Examine concrete bases for suitable conditions where metal lockers are to be installed.

1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION:

- A. Install metal lockers and accessories level, plumb, rigid, and flush according to manufacturer's written instructions.
- B. Connect groups of all-welded lockers together with standard fasteners, with no exposed fasteners on face frames.
- C. Anchor lockers to floors and walls at intervals recommended by manufacturer, but not more than 36 inches o.c. Install anchors through backup reinforcing plates where necessary to avoid metal distortion, using concealed fasteners.
- D. Fit exposed connections of trim, fillers, and closures accurately together to form tight, hairline joints, with concealed fasteners and splice plates.
 1. Attach recess trim to recessed lockers with concealed clips.
 2. Attach sloping top units to lockers, with closures at exposed ends.
- E. Attach finished end panels with fasteners only at perimeter to conceal exposed ends of nonrecessed lockers.
- F. Anchor locker benches to floors Uniformly space pedestals not more than 72 inches apart, and securely fasten to bench top and anchor to floor.

3.03 ADJUSTING, CLEANING, AND PROTECTION:

- A. Adjust doors and latches to operate easily without binding. Verify that integral locking devices operate properly.
- B. Clean interior and exposed exterior surfaces and polish stainless-steel and nonferrous-metal surfaces.
- C. Protect lockers from damage, abuse, dust, dirt, stain, or paint. Do not permit locker use during construction.
- D. Touch up marred finishes, or replace locker units that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by locker manufacturer.

END OF SECTION

SECTION 10605

WIRE MESH PARTITIONS

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. This section specifies providing woven wire mesh panels for the following:
 - 1. Wire mesh partitions.
 - 2. Wire mesh window guards.
 - 3. Wire mesh railing insert panels.
- B. Related Work Specified Elsewhere
 - 1. Handrails and Railings: Section 05521.
 - 2. Aluminum Entrances and Storefronts: Section 08410 for lock cylinders.

1.02 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Engage a firm experienced in manufacturing wire mesh partitions similar to those indicated for this Project and that have a record of successful in-service performance.
- B. Structural Performance: As specified in Section 05521 for railing insert panels.
- C. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of wire mesh partitions and wire mesh insert panels that are similar to those indicated for this Project in material, design, and extent.

1.03 DEFINITIONS

- A. The types of weaves for the wire mesh specified in this Section and defined in ASTM E 437 and its Appendix X4.2:
 - 1. Plain Weave: Wires pass over one and under the next adjacent wire in both directions.
 - 2. Lock Crimped: Deep crimps at points of intersection to lock the wires securely in place.
 - 3. Intercrimped: Similar to plain weave with extra crimps between the intersections.

1.04 SUBMITTALS:

- A. Submit the following for approval in accordance with the Special Conditions and with the additional requirements as specified for each:
 - 1. Product Data for each type of product specified, consisting of manufacturer's specification, technical data, and installation instructions.
 - 2. Shop Drawings showing fabrication and installation of wire mesh partitions, window guards, railing insert panel and access panels, including plans, elevations, and large-scale details showing anchorage and accessory items. Provide location template drawings for items supported or anchored to permanent construction.
 - a) For steel channel and tube framing of wire mesh partitions and railing insert guards, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

3. Samples of a 12-by-12-inch 300-by-300-mm wire mesh panel constructed of specified frame members, wire mesh, and color charts.

1.05 JOB CONDITIONS

- A. Field Measurements: Check actual locations for wire mesh products by accurate field measurements before fabrication and show recorded measurements on Shop Drawings. Coordinate fabrication and delivery schedules with construction progress to avoid delaying the Work.
 1. Where field measurements cannot be made without delaying the Work, guarantee location dimensions and proceed with fabricating wire mesh products without field measurements. Coordinate wall, column, floor, and ceiling construction to ensure that actual location dimensions correspond to guaranteed dimensions.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Woven wire partitions, Window Guards and Insert Panels: Manufactured by the G - S Company, or provide systems, as approved by the Engineer, of similar quality and appearance to match construction quality and appearance of the specified manufacturer.

2.02 MATERIALS

- A. Steel Channels, Angles, Plates, and Bars: ASTM A 36 ASTM A 36M.
- B. Steel Sheet: ASTM A 568 ASTM A 568M.
- C. Cold-Rolled Steel Channels: Formed from steel sheet.
- D. Square Steel Tubing: Cold-formed structural steel tubing, ASTM A 500.
- E. Galvanized Steel Wire: ASTM A 641 ASTM A 641M.
- F. Galvanized Steel Sheet: Commercial-quality, hot-dip-coated steel sheet, ASTM A 653, with G60 or A60 ASTM A 653M, with Z180 or ZF180 coating.
- G. Bent Plate Channel: Formed from galvanized steel sheet.

2.03 WIRE MESH PARTITIONS:

- A. Mesh: 0.135-inch-3.4-mm- diameter, plain-weave, galvanized steel wire woven into 3 inch 38-mm square pattern, insert through frame members, and welded into frame square pattern, inserted through.
- B. Frames: Provide galvanized steel fasteners and other items shown or necessary for partition installation.
 1. Vertical Members: 1-1/4-by-5/8-by-0.108-inch hot dipped galvanized steel C-Section channels with 1/4-inch- diameter bolt holes approximately 18 inches 450 mm o.c.
 2. Horizontal Members: 1-by-1/2-by-1/8-inch hot dipped galvanized steel channels, mortised and tenoned to vertical members.
 3. Horizontal Reinforcing Members: 1-by-1/2-by-1/8-inch hot dipped galvanized steel channels with wire woven through or two 1-by-1/2-inch galvanized steel channels bolted or riveted toe-to-toe through mesh, and secured to vertical members. Provide number of horizontal reinforcing members to suit panel height as recommended by

partition manufacturer.

- C. Top Capping Bars: 2-1/4-by-1-inch hot dipped galvanized steel channels, secured to top framing channels with 1/4-inch- diameter, galvanized "U" bolts spaced not more than 28 inches o.c.
- D. Corner Posts: 1-1/4-by-1-1/4-by-1/8-inch hot dipped galvanized steel angles with floor shoe galvanized per ASTM A 123 and 1/4-inch- diameter bolt holes to align with bolt holes in vertical frame members.
- E. Floor Shoes: Cast aluminum or steel galvanized per ASTM A 123, sized to suit vertical framing and to provide approximately 3 inches 75 mm of clear space between finished floor and bottom horizontal frame members. Furnish units with set screws for leveling adjustment.

2.04 DOORS:

- A. Hinged Door: Door frame of 1-1/4-by-1/2-by-1/8-inch hot dipped galvanized steel c-section channels with 1-1/4-by-1/8-inch flat steel bar cover plates on 3 sides, and 1/8-inch- thick angle strike bar and cover on lock side. Provide 1-1/2 pairs of 3-by-3-inch butt hinges riveted or welded to door and frame, and mortise-type cylinder lock operated by key outside with recessed knob inside. Align bottom of door with bottom of adjacent panels.
- B. Provide manufacturer's standard cylinders for lock.

2.05 WINDOW GUARDS

- A. Mesh: 0.135-inch-diameter, lock-crimped galvanized steel wire woven into a 4-inch , 45 degree pattern, inserted through frame holes and welded into frame.
- B. Frames:
 - 1. Frames 1 1/4-by-1/2-by-1/8-inch hot dipped galvanized, cold-rolled steel channels.
 - 2. Frames at Window Guards: Hot dipped galvanized bent plate channel, sized to fit adjacent to curtainwall framing.
- C. Anchorage Devices: Furnish appropriate types and quantities of anchorage devices to provide adequate anchorage to adjacent structures.
- D. Access Panels: Provide the following at bridge walkway guards where shown:
 - 1. Jambs: Provide 1-1/4-by-1-1/4-by-1/8-inch steel angle jamb bars with bolt holes for anchorage spaced a maximum of 24 inches o.c.
 - 2. Hinging: Furnish 1 pair of 3-by-3-inch butt hinges.
 - 3. Locking Device: mortise l- type cylinder lock as specified in Section 08410.

2.06 STAIRWAY PARTITIONS RAILING INSERT PANELS:

- A. Mesh: 0.135-inch-diameter, plain-weave galvanized steel wire woven into a 3-inch square pattern, inserted through frame holes and welded into frame. Vertical wires are plumb. Horizontal wires are perpendicular to vertical wires.
- B. Frames: 1 1/4 -by-1/2-by-1/8-inch hot dipped galvanized cold-rolled steel channels.

2.07 FABRICATION:

- A. Do not use components less than sizes indicated. Use larger-size components as recommended by partition component manufacturer.

- B. Provide bolts, hardware, and accessories for complete installation.

2.08 FINISHES:

- A. Wire Mesh Partitions and Doors: Manufacturer's standard shop - applied enamel finishes.
- B. Stairway Partitions and Railing insert panels:
 - 1. Manufacturer's standard shop - applied enamel finish.
- C. Window Guards:
 - 1. Manufacturer's standard polyester powder coat finish.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Coordinate and furnish anchorages, setting drawings, diagrams, templates, instructions, and directions for installing anchorages, including concrete inserts, sleeves, anchor bolts, and miscellaneous items having integral anchors embedded in concrete or masonry construction. Coordinate delivery of such items to Project site.

3.02 INSTALLATION

- A. Erect partitions plumb, rigid, properly aligned, and securely fastened in place, complying with Drawings and manufacturer's recommendations.
- B. Provide additional field bracing as shown on approved shop drawings or necessary for rigid, secure installation. Installer to provide additional clips and bracing as required.
- C. Attach window guards to inside face of aluminum curtain wall as shown on approved shop drawings. Fasten screws into pre-drilled holes with vinyl insert to prevent contact between dissimilar metals. Provide fasteners spaced evenly to screw to curtain wall system as shown on the approved shop drawings.

3.03 ADJUSTING AND CLEANING

- A. Adjust moving components for smooth operation without binding.
- B. Touch up damaged finish after completing installation using field-applied paint to match color of shop-applied finish.

END OF SECTION

SECTION 10810

TOILET ACCESSORIES

PART 1 -GENERAL

1.01 DESCRIPTION:

- A. This section specifies providing toilet accessories, including:
 - 1. Sanitary napkin vendors.
 - 2. Sanitary napkin disposal units.
 - 3. Framed mirrors with shelves.
 - 4. Framed mirrors without shelves.
 - 5. Liquid soap dispensers.
 - 6. Toilet paper dispensers.
 - 7. Clothes hook and bumpers.
 - 8. Paper towel dispensers.
 - 9. Waste receptacles.
 - 10. Grab bars.

- B. Related Work Specified Elsewhere:
 - 1. Tile: Section 09320.
 - 2. Toilet Compartments: Section 10155.
 - 3. Stone Toilet Compartments: Section 10180.

1.02 SUBMITTALS:

- A. Submit the following for approval in accordance with the General Requirements and with the additional requirements as specified for each:
 - 1. Shop drawings: Detailed shop drawings, including fastenings, manufacturer's installation instructions and other information. Submit prior to ordering materials or beginning installation.

 - 2. Samples:
 - a. For each accessory item to verify design, operation, and finish requirements. One each
 - b. Special anchors, plates or embedded items required because of the conditions in this project. One each. Submit with the related accessory samples. Delete subparagraph below if not applicable.

 - 3. Setting Drawings: For cutouts required in other work; include templates, substrate preparation instructions, and directions for preparing cutouts and installing anchoring devices.. Retain paragraph below for large, complicated projects. Revise to suit Project.

1.03 QUALITY ASSURANCE:

- A. Codes, Regulations, Reference Standards and Specifications:
 - 1. Comply with codes and regulations of the jurisdictional authorities.
 - 2. ADA (Americans with Disabilities Act).
 - 3. ASTM: A666, C1036, F446.
 - 4. FS: DD-M-411.

- B. Manufacturer Qualifications: Provide products of an established manufacturer regularly engaged in the production of toilet accessories.

- C. Source Limitations: Provide products of same manufacturer for each type of accessory unit and for units exposed to view in same areas, unless otherwise approved by the Engineer. Retain paragraph below if products are listed in schedule at the end of Part 3. See Evaluations. Retain one of three subparagraphs below, depending on Specification method selected. Correlate with Part 2 "Manufacturers" Article and schedule at the end of Part 3. See descriptions of specifying methods and examples of completed schedules in the Evaluations.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING:

- A. Deliver products to the job site in original unopened containers clearly labeled with the manufacturer's name, brand designation and type as applicable.
- B. Store products in an approved dry area, protect from contact with soil and from exposure to the elements. Keep products dry.
- C. Handle products so as to prevent breakage of containers and damage to products.

1.05 COORDINATION:

- A. Coordinate accessory locations with other work to prevent interference with clearances required for access by disabled persons, proper installation, adjustment, operation, cleaning, and servicing of accessories.
- B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work..

PART 2 -PRODUCTS

2.01 MATERIALS, GENERAL:

- A. Provide toilet accessories of an approved manufacturer; provided complete with fasteners appropriate for surface which applied. Satin-finish stainless steel unless otherwise noted.
- B. Exposed fastenings finished to match accessories.
- C. Labels, decals and cast-in or embossed identification in conspicuous places on accessories is prohibited.
- D. Use only products which comply with barrier-free accessibility guidelines of ADA.
- E. Quantity and location are as shown.

2.02 MATERIALS:

- A. Stainless Steel: ASTM A666, Type 304, with No. 4 finish (satin), in 0.0312-inch minimum nominal thickness, unless otherwise indicated.
- B. Mirror Glass: ASTM C1036, Type I, Class 1, Quality q2, nominal 6.0 mm thick, with silvering, electroplated copper coating, and protective organic coating complying with FS DD-M-411.
- C. Fasteners: Screws, bolts, and other devices of same material as accessory unit, tamper and theft resistant when exposed, and of galvanized steel when concealed.

2.03 PRODUCTS:

- A. Sanitary Napkin Vendor: Provide stainless-steel sanitary napkin vendor complying with the following:
1. Products: Bobrick B-2800, or equal.
 2. General: Fabricate cabinet of all-welded construction. Provide seamless door with returned edges and secured by tumbler lockset. Provide identification reading "Napkins" and "Tampons"; brand-name advertising is not allowed. Capacity not less than 15 napkins and 20 tampons.
 3. Mounting: Surface-mounted type.
 4. Operation: Single-coin operation, 10 cents.
- B. Sanitary Napkin Disposal Unit: Provide stainless-steel sanitary napkin disposal unit complying with the following:
1. Products: Bobrick 270, or equal.
 2. Surface-Mounted Type: With seamless exposed walls; self-closing top cover; locking bottom panel with stainless-steel, continuous hinge; and removable, reusable receptacle.
- C. Framed Mirror with Shelf: Provide framed mirror with shelf complying with the following:
1. Products: Bobrick B-166-1836, or equal.
 2. Glass: 1/4-inch float/plate glass, No. 1 quality.
 3. Stainless-Steel, Channel-Framed Mirror: Fabricate frame from stainless-steel channels in manufacturer's standard satin finish with square corners mitered to hairline joints and mechanically interlocked. Provide concealed wall mounting bracket for theft-proof installation.
 - a. Integral Shelf: Stainless steel in thickness recommended by manufacturer, but not less than thickness of mirror frame, approximately 5 inches deep by width of mirror, with edges turned down and returned for rigidity; secure shelf to bottom of mirror frame.
- D. Framed Mirror without Shelf: Provide framed mirror without shelf complying with the following:
1. Products: Bobrick B-165-1836, or equal.
 2. Glass: 1/4-inch float/plate glass, No. 1 quality.
 3. Stainless-Steel, Channel-Framed Mirror: Fabricate frame from stainless-steel channels in manufacturer's standard satin finish with square corners mitered to hairline joints and mechanically interlocked. Provide concealed wall mounting bracket for theft-proof installation.
- E. Liquid Soap Dispenser: Provide liquid soap dispenser complying with the following:
1. Products: Bobrick B-2112, or equal.
 2. Liquid Soap Dispenser, Horizontal-Tank Type: Surface-mounted type, minimum 40-oz. capacity tank with stainless-steel piston, springs, and internal parts designed to dispense soap in measured quantity by pump action; and stainless-steel cover with unbreakable window-type refill indicator. Vandal resistant.
 - a. Soap Valve: Designed for dispensing soap in liquid form.
- F. Toilet Tissue Dispenser: Provide toilet tissue dispenser complying with the following:
1. Products: Bobrick B-274, or equal.
 2. Type: Double-roll dispenser.
 3. Mounting: Surface mounted with concealed anchorage.
 4. Material: Satin-finish aluminum bracket with plastic spindle.
 5. Operation: Eccentric-shaped, molded-plastic spindle revolves one-half revolution per dispensing operation for controlled delivery; core cannot be removed until roll is empty.
 6. Capacity: Designed for tissue rolls up to 6-inch-diameter.
- G. Clothes Hook and Bumper: Provide clothes hook and bumper complying with the following:

1. Products: Bobrick B-212, or equal.
 2. Material: Solid aluminum casting with matte finish. Rubber bumper protects wall or partition surfaces.
- H. Paper Towel Dispenser: Provide stainless-steel paper towel dispenser complying with the following:
1. Products: Bobrick B-262, or equal.
 2. Surface-Mounted Type: Sized for minimum of 400 C-fold or 525 multifold paper towels without using special adapters; with hinged front equipped with tumbler lockset; and with refill indicators that are pierced slots at sides or front.
- I. Waste Receptacle: Provide stainless-steel waste receptacle complying with the following:
1. Products: Bobrick B-275, or equal.
 2. Surface-Mounted Type: With seamless exposed walls; continuously welded bottom pan; and minimum 20-gal. capacity, reusable, vinyl liner secured at not less than four points with grommets and hooks.
- J. Grab Bar: Provide stainless-steel grab bar complying with the following:
1. Products: Bobrick B-6106, or equal. Comply with ADA.
 2. Material: Bar 18-gauge wall Type 304 stainless steel.
 3. Mounting: Exposed with manufacturer's standard flanges and anchors.
 4. Gripping Surfaces: Smooth, satin finish, unless otherwise noted.
 5. Outside Diameter: 1-1/2 inches for heavy-duty applications.
 6. At water closets for the handicapped, provide the following unless otherwise shown:
 - a. Back wall: 36-inch minimum length grab bar behind the water closet.
 - b. Side wall: 42-inch minimum length grab bar to the side of the water closet.

2.04 FABRICATION:

- A. General: Names or labels are not permitted on exposed face of accessories. On interior surface not exposed to view or back surface of each accessory, provide printed, waterproof label or stamped nameplate indicating manufacturer's name and product model number.
- B. Surface-Mounted Toilet Accessories: Unless otherwise indicated, fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with continuous stainless-steel hinge. Provide concealed anchorage where possible.
- C. Framed Glass-Mirror Units: Fabricate frames for glass-mirror units to accommodate glass edge protection material. Provide mirror backing and support system that permits rigid, tamper-resistant glass installation and prevents moisture accumulation.
1. Provide galvanized steel backing sheet, not less than 0.034 inch and full mirror size, with nonabsorptive filler material. Corrugated cardboard is not an acceptable filler material.
- D. Mirror-Unit Hangers: Provide mirror-unit mounting system that permits rigid, tamper- and theft-resistant installation, as follows:
1. Heavy-duty wall brackets of galvanized steel, equipped with concealed locking devices requiring a special tool to remove
- E. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of six keys to the Engineer.

PART 3 - EXECUTION

3.01 INSTALLATION:

- A. Coordinate with other trades for concealed back plates, blocking and anchoring devices embedded or built into work of other trades.
- B. After mounting surfaces have been painted, install accessories in accordance with manufacturer's recommendations.
- C. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights recommended by the manufacturer unless otherwise shown or required by regulations. Comply with ADA.
 - 1. At water closets for the handicapped, mount grab bars as follows unless otherwise shown:
 - a. Back wall: Mount grab bar at a height between 33 and 36 inches above finish floor and to extend a minimum of 12 inches beyond the center of the water closet toward the side wall and a minimum of 24 inches toward the open side for either a left or right side approach.
 - b. Side wall: Mount grab bar at a height between 33 and 36 inches above finish floor and spaced 12 inches maximum from the back wall and extending a minimum of 54 inches from the back wall.
 - 2. At water closets for the handicapped, mount toilet paper dispenser at a minimum height of 19 inches above finish floor.
- D. Secure mirrors to walls in concealed, tamper-resistant manner with special hangers, toggle bolts, or screws. Set units level, plumb, and square at locations indicated, according to manufacturer's written instructions for substrate indicated.
- E. Install grab bars to withstand a downward load of at least 250 lbf, when tested according to method in ASTM F446.
- F. After installation, protect the toilet accessories from damage and soiling.

3.02 TESTING AND ADJUSTING OF COMPLETED WORK:

- A. Test accessories for unencumbered, smooth operation and verify that mechanisms function properly.
- B. Replace damaged or defective items.
- C. Test for required strength and for pull-out and pull-off of grab bars. Remove and reattach as needed.

3.02 CLEANING:

- A. Remove temporary labels and protective coatings.
- B. Before final acceptance, clean and polish exposed surfaces according to manufacturer's written recommendations.
- C. Leave areas surrounding the work in broom-clean condition.

END OF SECTION