

Fire Station #44  
City of North Lauderdale  
Technical Specifications



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**FIRE STATION #44 – CITY OF NORTH LAUDERDALE**

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## SECTION 024119 SELECTIVE DEMOLITION

### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

##### A. Selective Site Demolition:

1. Demolition of designated site improvements including paving, curbing, site walls, and utility structures.
2. Demolition of below-grade foundations and site improvements to depth to avoid conflict with new construction or site work.
3. Removal of hollow items or items which could collapse.
4. Salvage of designated items.
5. Protection of site work and adjacent structures.
6. Disconnection, capping, and removal of utilities.
7. Pollution control during building demolition, including noise control.
8. Removal and legal disposal of materials.
9. Designated site improvements and adjacent construction.
10. Interruption, capping or removal of utilities as applicable.

##### B. Selective Building Demolition:

1. Selective demolition of interior partitions, systems, and building components designated to be removed.
2. Selective demolition of exterior facade, structures, and components designated to be removed.
3. Protection of portions of building adjacent to or affected by selective demolition.
4. Removal of abandoned utilities and wiring systems.
5. Notification to Owner of schedule of shut-off of utilities which serve occupied spaces.
6. Pollution control during selective demolition, including noise control.
7. Removal and legal disposal of materials.
8. Protection of designated site improvements and adjacent construction.
9. Salvage of designated items.
10. Interruption, capping or removal of utilities as applicable.

## SECTION 024119 SELECTIVE DEMOLITION

### C. Hazardous Materials:

1. Not present.
2. Removed under separate prior contract.
3. Removed as a part of this contract.

### 1.2 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Schedule: Submit for approval selective demolition schedule, including schedule and methods for capping utilities to be abandoned and maintaining existing utility service.

### 1.3 QUALITY ASSURANCE

- A. Codes and Regulations: Comply with governing codes and regulations. Use experienced workers.

### 1.4 PRE-INSTALLATION MEETINGS

- A. Convene minimum two weeks prior to starting work of this section.

### 1.5 SEQUENCING

- A. Immediate areas of work will not be occupied during selective demolition. The public, including children, may occupy adjacent areas.
- B. No responsibility for buildings and structures to be demolished will be assumed by the Owner.
- C. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS - Not applicable to this Section.

## PART 3 EXECUTION

### 3.1 SELECTIVE DEMOLITION

- A. Demolition Operations: Do not damage building elements and improvements indicated to remain. Items of salvage value, not included on schedule of salvage items to be returned to Owner, shall be removed from structure. Storage or sale of items at project site is prohibited.

## SECTION 024119 SELECTIVE DEMOLITION

- B. Utilities: Locate, identify, disconnect, and seal or cap off utilities in buildings to be demolished.
- C. Shoring and Bracing: Provide and maintain interior and exterior shoring and bracing.
- D. Occupied Spaces: Do not close or obstruct streets, walks, drives or other occupied or used spaces or facilities without the written permission of the Owner and the authorities having jurisdiction. Do not interrupt utilities serving occupied or used facilities without the written permission of the Owner and authorities having jurisdiction. If necessary, provide temporary utilities.
- E. Operations: Cease operations if public safety or remaining structures are endangered. Perform temporary corrective measures until operations can be continued properly.
- F. Security: Provide adequate protection against accidental trespassing. Secure project after work hours.
- G. Restoration: Restore finishes of patched areas

- END OF SECTION -

## SECTION 048100 – UNIT MASONRY ASSEMBLIES

### PART 1 - GENERAL

#### 1.1 SECTION REQUIREMENTS

- A. See Division 5 Section "Metal Fabrications" for furnishing steel lintels and embeds for unit masonry.
- B. Submittals:
  - 1. Material Certificates: For each type of product indicated. Include statements of material properties indicating compliance with requirements.
- C. Comply with ACI 530.1/ASCE 6/TMS 602.

### PART 2 - PRODUCTS

#### 2.1 MASONRY UNITS

- A. Concrete Masonry Units: ASTM C 90; Weight Classification, Normal Weight.
  - 1. Integral Water Repellent: Additive, Incorporated; Block Plus W-10, Grace Construction Products, a unit of W. R. Grace & Co. - Conn.; Dry-Block] or Master Builders, Inc.; Rheopel.
  - 2. Special shapes for lintels, corners, jambs, sash, control joints, and other special conditions.
- B. Concrete Lintels: Precast units matching concrete masonry units and with reinforcing bars indicated or required to support loads indicated.

#### 2.2 MORTAR AND GROUT

- A. Mortar: ASTM C 270, proportion specification.
  - 1. Masonry Cement: Do not use masonry cement or plastic cement.
  - 2. Do not use calcium chloride in mortar.
  - 3. For masonry below grade or in contact with earth, use Type S.
  - 4. For reinforced masonry, use Type S.
- B. Water-Repellent Additive: For mortar used with concrete masonry units made with integral water repellent, use product recommended by manufacturer of units.
- C. Grout: ASTM C 476 with a slump of 8 to 11 inches.

#### 2.3 REINFORCEMENT, TIES, AND ANCHORS

- A. Steel Reinforcing Bars: ASTM A 615, Grade 60.
- B. Joint Reinforcement: ASTM A 951.
  - 1. Coating: Hot-dip galvanized.
  - 2. Wire Diameter for Side Rods: W2.8 or 0.188 inch.

## SECTION 048100 – UNIT MASONRY ASSEMBLIES

3. Wire Diameter for Cross Rods: W2.8 or 0.188 inch.
4. Provide either ladder design or truss design.

### 2.4 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Premolded strips complying with ASTM D 1056, Grade 2A1.
- B. Preformed Control-Joint Gaskets: Designed to fit standard sash block and to maintain lateral stability in masonry wall; made from styrene-butadiene rubber or PVC.
- C. Weep Holes: Round polyethylene tubing, 3/8-inch

## OD. PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Cut masonry units with saw. Install with cut surfaces and, where possible, cut edges concealed.
- B. Matching Existing Masonry: Match coursing and bonding of existing masonry.
- C. Stopping and Resuming Work: Rack back units; do not tooth.
- D. Fill cores in hollow concrete masonry units with grout full height under bearing plates, lintels, and similar items, unless otherwise indicated.
- E. Tool exposed joints slightly concave when thumbprint hard, unless otherwise indicated.
- F. Keep cavities clean of mortar droppings and other materials during construction.

### 3.2 LINTELS

- A. Install lintels where indicated.
- B. Minimum bearing of 8 inches at each jamb, unless otherwise indicated.

### 3.3 FLASHING AND WEEP HOLES

- A. Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to the downward flow of water in the wall, and where indicated.
- B. Place through-wall flashing on sloping bed of mortar and cover with mortar. Seal penetrations in flashing before covering with mortar.

1. Extend flashing 4 inches into masonry at each end and turn up 2 inches to form



## SECTION 048100 – UNIT MASONRY ASSEMBLIES

a pan.

- C. Trim wicking material used in weep holes flush with outside face of wall after mortar has set.

### 3.4 PARGING

- A. Parge masonry walls, where indicated, in two uniform coats with a steel-trowel finish. Form a wash at top of parging and a cove at bottom. Damp cure parging for at least 24 hours.

### 3.5 CLEANING

- A. Clean masonry as work progresses. Remove mortar fins and smears before tooling joints.
- B. Final Cleaning: After mortar is thoroughly cured, clean exposed masonry.
  - 1. Wet wall surfaces with water before applying acidic cleaner, then remove cleaner promptly by rinsing thoroughly with clear water.
  - 2. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.

- END OF SECTION -

## SECTION 055000 METAL FABRICATIONS

### PART 1 GENERAL

#### 1.1 SECTION INCLUDES

- A. Steel sections, tubing, sheets, bolts, nuts, washers, welding materials, & primer.

#### 1.2 RELATED SECTIONS

- A. Section 01572-Construction Waste Management
- B. Section 03300-Cast In Place Concrete.
- C. Section 03415-Precast, Prestressed Sections.
- D. Section 04200-Concrete Unit Masonry.
- E. Section 05120-Structural Steel.
- F. Section 05210-Steel Joists.
- G. Section 05511-Metal Stairs.
- H. Section 05520-Metal Handrails and Railings.
- I. Section 09900-Paints and Coatings: Field applied paint finish.
- J. Section 05551-Stair Nosing.

#### 1.3 REFERENCES

- A. Aluminum Association:
  - 1. AA DAF-45-Designation System for Aluminum Finishes.
- B. American Architectural Manufacturers Association:
  - 1. AAMA 611-Voluntary Specification for Anodized Architectural Aluminum.
- C. ASTM International (ASTM):
  - 1. ASTM A36/A36M-Standard Specification for Carbon Structural Steel.
  - 2. ASTM A53/A53M-Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.
  - 3. ASTM A123/A123M-Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
  - 4. ASTM A153/A153M-Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
  - 5. ASTM A167-Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
  - 6. ASTM A307-Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength.
  - 7. ASTM A312/A312M-Standard Specification for Seamless and Welded Austenitic Stainless-Steel Pipes.

## SECTION 055000 METAL FABRICATIONS

8. ASTM A325-Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength.
  9. ASTM A354-Standard Specification for Quenched and Tempered Alloy Steel Bolts, Studs, and Other Externally Threaded Fasteners.
  10. ASTM A479/A479M-Standard Specification for Stainless Steel Bars and Shapes for Use in Boilers and Other Pressure Vessels.
  11. ASTM A500-Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
  12. ASTM A501-Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
  13. ASTM A554-Standard Specification for Welded Stainless Steel Mechanical Tubing.
  14. ASTM A563-Standard Specification for Carbon and Alloy Steel Nuts.
  15. ASTM A572/A572M-Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel.
  16. ASTM B26/B26M-Standard Specification for Aluminum-Alloy Sand Castings.
  17. ASTM B85-Standard Specification for Aluminum-Alloy Die Castings.
  18. ASTM B209/B209M-Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
  19. ASTM B210/B210M-Standard Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes.
  20. ASTM B211/B211M-Standard Specification for Aluminum and Aluminum-Alloy Bar, Rod, and Wire.
  21. ASTM B221/B221M-Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.
  22. ASTM B695-Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel.
  23. ASTM F1554-Standard Specification for Anchor Bolts, Steel, 36, 55, and 105-ksi Yield Strength.
- D. American Welding Society:
1. AWS A2.4-Standard Symbols for Welding, Brazing, and Nondestructive Examination.
  2. AWS D1.1-Structural Welding Code - Steel.
  3. AWS D1.2-Structural Welding Code – Aluminum.
  4. AWS D1.6-Structural Welding Code - Stainless Steel.
- E. International Organization for Standardization (ISO) 14021–1999; Environmental Labels and Declarations
- F. National Ornamental & Miscellaneous Metals Association:
1. NOMMA Guideline 1-Joint Finishes.
- G. OSHA (Occupational Safety and Health Standards):
1. Safety and Health Regulations for Construction, Part 1926 Subpart X, 1926.1053 - Ladders.
- H. SSPC: The Society for Protective Coatings:
1. SSPC-Steel Structures Painting Manual.
  2. SSPC Paint 15-Steel Joist Shop Paint.

## SECTION 055000 METAL FABRICATIONS

3. SSPC Paint 20-Zinc-Rich Primers (Type I - Inorganic and Type II - Organic).

### 1.4 SUBMITTALS

#### A. Product Data:

##### 1. Recycled Content:

- (a) Indicate recycled content; indicate percentage of pre-consumer and post-consumer recycled content per unit of product.
- (b) Indicate relative dollar value of recycled content product to total dollar value of product included in project.
- (c) If recycled content product is part of an assembly, indicate the percentage of recycled content product in the assembly by weight.
- (d) If recycled content product is part of an assembly, indicate relative dollar value of recycled content product to total dollar value of assembly.

- #### B. Shop Drawings:
- Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.

- #### C. Welders Certificates:
- Certify welders employed on the Work, verifying AWS qualification within previous 12 months.

### 1.5 QUALITY ASSURANCE

- #### A. Finish joints in accordance with NOMMA Guideline 1.

### 1.6 QUALIFICATIONS

- #### A. Design fabrications under direct supervision of Professional Engineer experienced in design of this Work and licensed in State of Florida.

### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Section 01600-Product Requirements: Product storage and handling requirements.
- B. Accept metal fabrications on site in labeled shipments. Inspect for damage.
- C. Protect metal fabrications from damage by exposure to weather.

### 1.8 FIELD MEASUREMENTS

## SECTION 055000 METAL FABRICATIONS

- A. Verify field measurements are as indicated.

### PART 2 PRODUCTS

#### 2.1 MATERIALS – METAL FABRICATIONS

- A. All metal fabrication products are to contain recycled content.
- B. Steel Sections: [ASTM A36/A36M.] and/or [ASTM A572/A572M; Grade 50.]
- C. Steel Plate: [ASTM A36/A36M.] and/or [ASTM A572/A572M; Grade 50.]
- D. Hollow Structural Sections: [ASTM A500, Grade B.] and/or [ASTM A501.]
- E. Steel Pipe: ASTM A53/A53M, Grade B Schedule 40.
- F. Sheet Steel: ASTM A653/A653M, Grade 33 Structural Quality with galvanized coating.
- G. Bolts: ASTM A307; Grade A or B and/or ASTM A325; Type 1
  - 1. Finish: Unfinished or Hot dipped galvanized.
- H. Nuts: ASTM A563 heavy hex type.
  - 1. Finish: Unfinished and/or Hot dipped galvanized as noted
- I. Washers: ASTM F436; Type 1.
  - 1. Finish: Unfinished, and/or Hot dipped galvanized as noted
- J. Welding Materials: AWS D1.1; type required for materials being welded, Class E60 or E70 for manual welds.
- K. Shop and Touch-Up Primer: SSPC Paint 15, Type 1, red oxide.
- L. Touch-Up Primer for Galvanized Surfaces: SSPC Paint 20 Type I Inorganic.

#### 2.2 MATERIALS - STAINLESS STEEL

- A. Bars and Shapes: ASTM A479/A479M, Type 304
- B. Tubing: ASTM A269 or ASTM A554; Type 304
- C. Pipe: ASTM A312/A312M, seamless, Type 304.
- D. Plate, Sheet and Strip: ASTM A167; Type 304.
- E. Bolts, Nuts, and Washers: ASTM A354.
- F. Welding Materials: AWS D1.6; type required for materials being welded.

#### 2.3 MATERIALS - ALUMINUM

## SECTION 055000 METAL FABRICATIONS

- A. Extruded Aluminum: ASTM B221/B221M, Alloy 6063], Temper T5 or T6.
- B. Sheet Aluminum: ASTM B209/B209M, Alloy 5050-H-32, or temper best suited to application.
- C. Aluminum-Alloy Drawn Seamless Tubes: ASTM B210/B210M, Alloy 6063, Temper T6.
- D. Aluminum-Alloy Bars: ASTM B211/B211M, Alloy 6063, Temper T6.
- E. Aluminum-Alloy Sand Castings: ASTM B26/B26M.
- F. Aluminum-Alloy Die Castings: ASTM B85.
- G. Bolts, Nuts, and Washers: Stainless steel.
- H. Welding Materials: AWS D1.2; type required for materials being welded.

### 2.4 LINTELS

- A. Lintels: Steel sections, size and configuration as indicated on Drawings, length to allow 8 inches minimum bearing on both sides of opening.
  - 1. Exterior Locations: Galvanized.
  - 2. Interior Locations: Prime paint, one coat.

### 2.5 LEDGE AND SHELF ANGLES

- A. Ledge and Shelf Angles, Not Attached to Structural Framing: For support of metal decking or joists; prime paint, one coat.

### 2.6 ELEVATOR SILL ANGLES AND HOIST AND DIVIDER BEAMS

- A. Sill Angles: Steel sections as indicated on Drawings for support of elevator sills; galvanized.
- B. Hoist and Divider Beams: Steel wide flange sections, shape and size required to support applied loads with maximum deflection of 1/240 of the span; prime paint, one coat.

### 2.7 DOOR FRAMES

- A. Door Frames: Steel Channel sections, size indicated on Drawings, with jamb anchors suitable for building into masonry or attachment to concrete or steel framing, minimum 4 anchors per jamb; prime paint, one coat.

### 2.8 WALL PROTECTION PLATES AND CORNER GUARDS

- A. Wall Protection Plates: Stainless steel plate, 1/8-inch-thick, counter sunk fasteners, beveled exposed edges, size as indicated on Drawings.
- B. Corner Guards: Stainless steel angle, 3 x 3 x 1/8 inch, counter sunk fasteners, beveled exposed edges, size as indicated on Drawings.]

## SECTION 055000 METAL FABRICATIONS

### 2.9 ANCHOR BOLTS

- A. Anchor Rods: [ASTM F1554; Grade 55, weldable. or ASTM A307; Grade A.
  - 1. Shape: Hooked.
  - 2. Furnish with nut and washer; unfinished.
- B. Drilled In Expansion Anchors.
  - 1. HILTI Corporation, Tulsa, OK
  - 2. Powers Fasteners, Brewster, NY.
  - 3. ITW Redhead, Woodsdale IL

### 2.10 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.
- C. Continuously seal joined members by continuous welds.
- D. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- E. Exposed Welded Joints: NOMMA Guideline 1 Joint Finish 2.
- F. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
- G. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

### 2.11 FACTORY APPLIED FINISHES - STEEL

- A. Prepare surfaces to be primed in accordance with SSPC SP 2.
- B. Do not prime surfaces in direct contact with concrete or where field welding is required.
- C. Prime paint items with one coat except where galvanizing is specified.
- D. Galvanizing: ASTM A123/A123M; [minimum 1.2oz/sq ft coating thickness; galvanize after fabrication.
- E. Galvanizing for Fasteners, Connectors, and Anchors:
  - 1. Hot-Dipped Galvanizing: ASTM A153/A153M.
  - 2. Mechanical Galvanizing: ASTM B695; Class 50 minimum.

### 2.12 FACTORY APPLIED FINISHES - STAINLESS STEEL

## SECTION 055000 METAL FABRICATIONS

- A. Satin Polished Finish: Number 4, satin directional polish parallel with long dimension of finished face.

### 2.13 FACTORY APPLIED FINISHES - ALUMINUM

- A. Finish coatings to conform to AAMA 611. Comply with AA DAF-45.
- B. Interior/Exterior Aluminum Surfaces: AAMA A41 anodized, Class I, clear color.
- C. Interior/Exterior Aluminum Surfaces: AAMA A43 anodized, Class I, to selected color.

### 2.14 FABRICATION TOLERANCES

- A. Squareness: 1/8 inch maximum difference in diagonal measurements.
- B. Maximum Offset Between Faces: 1/16 inch.
- C. Maximum Misalignment of Adjacent Members: 1/16 inch.
- D. Maximum Bow: 1/8 inch in 48 inches.
- E. Maximum Deviation From Plane: 1/16 inch in 48 inches .

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Section 01300-Administrative Requirements: Coordination and project conditions.
- B. Verify field conditions are acceptable and are ready to receive Work.

### 3.2 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required.
- B. Supply steel items required to be cast into concrete or embedded in masonry with setting templates to appropriate sections.

### 3.3 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Make provisions for erection stresses. Install temporary bracing to maintain alignment, until permanent bracing and attachments are installed.
- C. Field weld components indicated on Drawings.



## SECTION 055000 METAL FABRICATIONS

- D. Perform field welding in accordance with the applicable AWS structural welded code (for the materials being welded).
- E. Obtain approval of Architect/Engineer prior to site cutting or making adjustments not scheduled.
- F. After erection, touch up welds, abrasions, and damaged finishes with prime paint or galvanizing repair paint to match shop finishes.

### 3.4 ERECTION TOLERANCE

- A. Section 01400-Quality Requirements: Tolerances.
- B. Maximum Variation From Plumb: 1/4 inch per story or for every 12 ft in height whichever is greater, non-cumulative.
- C. Maximum Offset From Alignment: 1/4 inch.
- D. Maximum Out-of-Position: 1/4 inch.

- END OF SECTION -

## SECTION 06100 - ROUGH CARPENTRY

### PART 1 GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish and install all items of rough carpentry work, necessary for a complete installation, as shown on the Drawings and as specified herein.

#### 1.02 STANDARDS AND REGULATIONS

##### A. Standards:

1. Lumber to conform to American Lumber Standards' Product Standard PS 20-70. Graded by rules of manufacture's association under whose rules lumber is produced. Evidence of grade and mill marked on each piece.
2. National Design Specification for Wood Construction - 1991 (National Forest Products Association).
3. Southern Pine Association.
4. Western Wood Products Association.
5. American Plywood Association.

- B. Moisture Content: Moisture content of lumber shall be maintained within the requirements of the association under whose grading rules it is produced.

- C. Comply with the requirements of the Florida Building Code 2017, 6<sup>th</sup> Edition.

#### 1.03 SHIPPING, HANDLING AND STORAGE

- A. Materials shall be kept dry during delivery and storage. The CONTRACTOR shall protect materials against exposure from weather and contact with damp or wet surfaces. Lumber shall be stacked with provisions for air circulation within stacks.

### PART 2 PRODUCTS

#### 2.01 MATERIALS

- A. Lumber: Lumber for headers, rafters, wood grounds, nailers and blocking shall be No. 2 common yellow pine or standard grade Douglas Fir. Moisture content shall not exceed 19%.

- B. Fire Retardant Lumber and Plywood:

1. Sizes shown or noted on the Drawings shall be used for all wood members except rot protected pressure treated lumber herein specified.

## SECTION 06100 - ROUGH CARPENTRY

2. Each piece shall be treated with Koppers Co., "Dricon" process, Hoover Exterior Fire-X Blue, or equal, meeting the U.L. FR-S classification for flame spread and smoke contribution.

### C. Pressure Treated Lumber:

1. Lumber that is required to be pressure treated shall be impregnated with Chromated Copper Arsenate (CCA) conforming to American Wood Preservers Association Standard (P5 in a closed cylinder by vacuum process in accordance with AWPA Standard C2. Retention of CCA dry salts shall be 0.35 pound per cubic foot for above ground use and .40 pound per cubic foot for ground contact.

2. Each piece of the pressure-treated lumber shall be treated in accordance with the proper requirements, of the standard specifications of the American Wood Preservers Association and shall bear the brand conforming to the standard of AWPA.

3. Lumber in contact with concrete, including roof nailers, shall be pressure preservative treated in accordance with AWPA Standard C9.

4. Cut or sawed surfaces in preservative treated member shall receive two coats of the same preservative used in the original treatment.

D. Rough Hardware: Rough hardware shall be the most suitable for project requirements. Expansion shields or bolts and toggle bolts shall be provided as required. All bolts, nails, screws, anchors, straps, clips, etc., shall be galvanized.

### E. Connecting Hardware:

1. Nails shall be stainless steel common wire for exterior work.

2. Screws shall be standard domestic manufacture, stainless steel for exterior use and of brass, bronze, aluminum or stainless steel when used to attach items made of those materials.

3. Bolts shall be machine bolts (or carriage bolts if called for on Drawings) of Series 300 stainless steel with hexagon nuts, of sizes noted on Drawings. Wood fascia fasteners shall be galvanized steel and conform to the requirements of ASTM Designation A 307.

4. Steel plates and angles shall be carbon steel, ASTM A 36, galvanized after fabrication for temporary items and stainless steel for permanent items as shown on the Drawings.

5. Lag screws, shear plates and split ring connectors shall conform to the requirements of the "National Design Specifications for Wood Construction from the National Forest Products Association and shall be stainless steel.

## SECTION 06100 - ROUGH CARPENTRY

6. Power actuated fasteners shall conform to Federal Specification GGG-D-777a, and shall be installed as per manufacturer's printed directions. Power charge shall be powerful enough to prevent spalling of concrete.

### PART 3 EXECUTION

#### 3.01 JOB CONDITIONS

- A. Protection: Installed carpentry Work shall be protected from damage by Work of other trades until final acceptance of work. Wood surfaces to be finished shall be protected from moisture and dirt until prime coat has been applied.
- B. Coordination: Fit carpentry Work to other work; scribe and cope as required for accurate fit. Correlate location of during, nailers, blockings, grounds and similar supports to allow proper attachment of other work.
- C. Inspection: The CONTRACTOR shall examine the substrates, supporting structure and the condition under which carpentry will be installed. Work shall not be started until unsatisfactory conditions are corrected.

#### 3.02 INSTALLATION

- A. General: The CONTRACTOR shall provide and install all rough hardware for proper installation of carpentry, nails, spikes, screws, machine bolts and similar items shall be of types and sizes sufficient to draw and rigidly secure members into place. All rough hardware shall be hot dipped galvanized on both interior and exterior work.
- B. Quality: Units of material with defects which might impair the quality of work, and units which are too small to fabricate the Work with minimum joints or the optimum joint arrangement shall be discarded.
- C. Carpentry Work shall be set accurately to required levels and lines, with members plumb and true and accurately cut and fitted.
- D. Fastening: Carpentry Work shall be securely attached to substrates by anchoring and fastening shown and as required by recognized standards. All connections between members shall be tight. Fasteners shall be installed without splitting of wood; predrill as required.
- E. Fasteners shall be of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Bolts and nuts shall be countersunk flush with surfaces, unless otherwise shown.
- F. All work shall be erected level, and plumb and shall meet required heights, layout and details. All work shall be well nailed or bolted and adequately braced. All work shall be executed in accordance with the best practices of the trade by men skilled in the craft. Nailing shall be in accordance with the provisions of the Florida Building Code 2017, 6<sup>th</sup> Edition.

SECTION 06100 - ROUGH CARPENTRY

- G. Furring: Furring shall be 1 ½ -inch x 2-inch strips, 12-inches o.c., or 1 ½ -inch x 3-inch strips, 16-inches o.c., securely attached to masonry and concrete with case hardened nails.

- END OF SECTION -

## SECTION 061063 – FINISH CARPENTRY

### PART 1: GENERAL

#### 1.01 WORK INCLUDED

- A. Finish carpentry, and cabinet work.

#### 1.02 REFERENCES

- A. MIL-L-1914-C Lumber and Plywood
- B. MIL-V-13518C(1) Wood Preservative: Tetrachlorophenol and Pentachlorophenol, Surface Sealing Compound
- C. PS 1 - Construction and Industrial Plywood
- D. PS 20 - American Softwood Lumber Standard
- E. PS 51 - Hardwood and Decorative Plywood
- F. PS 58 - Basic Hardwood
- G. NFPA - National Design Specification for Wood Construction.

#### 1.03 QUALITY ASSURANCE

- A. When applicable, fabricate cabinetwork and site made finish cabinetry items in accordance with recommendations of Quality Standards of Architectural Woodwork Institute (A.W.I.).

#### 1.04 SUBMITTAL

- A. Submit shop drawings.
- B. Submit samples of standard colors and patterns of plastic laminate for Architect selection.

#### 1.05 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver shop fabricated carpentry items until site conditions are adequate to receive the work. Protect items from weather while in transit.
- B. Store indoors, in ventilated areas with a constant, minimum temperature of 60 degrees F, maximum relative humidity of 25 to 55 percent.

#### 1.06 CODE

- A. Comply with the requirements of the Florida Building Code 2001.

## SECTION 061063 – FINISH CARPENTRY

### PART 2 : PRODUCTS

#### 2.01 FINISH CARPENTRY

1. Softwood Lumber: PS 20; graded in accordance with the requirements of AWI; maximum moisture content of 6 percent for interior work and 10 percent for exterior work.
2. Hardwood Lumber: Graded in accordance with AWI; maximum moisture content of 6 percent.
3. Southwood Plywood: PS 1; graded in accordance with AWI.
4. Douglas Fir Plywood: Graded in accordance with AWI:
5. Plastic Laminate: General purpose type; minimum 1/16 inches thick. Acceptable manufacturers: Formica, Pionite or Wilson Art – solid colors.
6. Plastic Laminate Backing: High pressure paper base laminate without a decorative finish; minimum 1/32 inches thick.
7. Adhesive: Contact type. For shop fabricated work, adhesive: of type recommended by millwork manufacturer to suit application.
8. Nails: Size and type to suit application.
9. Bolts, Nuts, Washers, Lags, Pins and Screws: Size and type to suit application; plain finish in concealed location and galvanized finish in exposed locations.
- A. WOOD TREATMENT: All wood in contact with masonry or concrete shall be pressure treated.
- B. FABRICATION
  1. Fabricate finish carpentry items in accordance with recommendations of AWI and to extent indicated in Schedule located at the end of this Section. Shop fabricate items where possible.
  2. Fit shelves, doors and exposed edges to match. Use full length pieces only.
  3. Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Corners and joints to be hairline. Slightly bevel arises. Locate counter butt joints at least 2 feet from sink cut\_outs. Finish all six sides of all shelves. Finish all exposed sides of cabinets with selected colors.

## SECTION 061063 – FINISH CARPENTRY

4. Cap exposed plastic laminate edges with material of same finish and pattern.
5. Apply laminate backing sheet to reverse side of all plastic laminate finished surfaces.
6. Use exposed fastening devices or nails only when unavoidable.

### PART 3 : EXECUTION

#### A. STRIPPING

1. Erect wood stripping and nailing members true to lines and levels. Do not deviate from true from true alignment more than 1/4 inch.
2. Space members at 16 inches on center.
3. Construct members of continuous pieces of longest possible lengths.

#### B. INSTALLATION OF FINISH CARPENTRY ITEMS

1. Set and secure cabinetwork and finish carpentry items in place rigid, plumb, and square.
2. Use purpose designed fixture attachments for mounted components.
3. Use threaded steel concealed joint fasteners to align and secure adjoining cabinet units, counter tops and other cabinetry items.
4. When necessary to cut and fit on site, make material with ample allowance for cutting. Provide trim for scribing and site cutting.
5. Counter-sink semi-concealed anchorage devices used to wall mount components and conceal with solid plugs of species to match surrounding wood. Place flush with surrounding surfaces.
6. Install hardware fixtures and accessories supplied under other Sections for installation. Install items in accordance with manufacturer's instructions.
7. Ensure that mechanical and electrical items affecting this Section of work are properly placed, complete, and have been inspected by the Architect/Engineer prior to commencement of installation.

-END OF SECTION-



## SECTION 061053 - WOOD BLOCKING AND CURBING

### PART 1 -- GENERAL

#### 1.01 WORK INCLUDED

- A. Roof curbs.
- B. Blocking in wall and roof openings.
- C. Wood furring and grounds.
- D. Concealed wood blocking for support of washroom accessories and wall cabinets.
- E. Wood treatment.

#### 1.02 REFERENCES

- A. ALSC \_ American Lumber Standards Committee: Softwood Lumber Standard.
- B. APA \_ American Plywood Association: Grades and Standards.
- C. FS TT\_W\_571 \_ Wood Preservation: Treating Practices.
- D. NFPA \_ National Forest Products Association.
- E. RIS \_ Redwood Inspection Service: Standard Specifications for Grades of California Redwood Lumber.
- F. SFPA \_ Southern Forest Products Association.
- G. WCLIB \_ West Coast Lumber Inspection Bureau: Standard Grading Rules for West Coast Lumber.
- H. WWPA \_ Western Wood Products Association.

#### 1.03 QUALITY ASSURANCE

- A. Lumber Grading Agency: Certified by ALSC.
- B. Plywood Grading Agency: Certified by APA.

#### 1.04 SUBMITTALS

- A. Submit product data.
- B. Provide technical data on wood preservative materials and application instructions.

#### 1.05 CODE

- A. Comply with the requirements of the Florida Building Code 2017, 6<sup>TH</sup> Edition.

### PART 2 -- PRODUCTS

## SECTION 061053 - WOOD BLOCKING AND CURBING

### 2.01 MATERIALS

- A. Lumber Grading Rules: NFPA.
- B. Softwood Lumber: Douglas Fir, Southern Pine, Larch or Western Hemlock species, construction grade, 19 percent maximum moisture content.
- C. Plywood: APA Grade C\_D, with waterproof glue, sanded.
- D. Fasteners: Galvanized steel for exterior, high humidity, and treated wood locations; plain finish elsewhere; size and type to suit condition.
- E. Anchors: Toggle bolt type for anchorage to hollow masonry. Expansion shield and lag bolt type for anchorage to solid masonry or concrete. Bolts or ballistic fasteners for anchorages to steel.

### 2.02 WOOD TREATMENT

- A. Wood Preservative (Pressure Treatment): FS TT\_W\_571 or AWPA Treatment C2 using water borne preservative with 0.30 percent retainage.

## PART 3 – EXECUTION

### 3.01 SITE APPLIED WOOD TREATMENT

- A. Brush apply two coats of preservative treatment on wood in contact with cementitious materials roofing and related metal flashings.
- B. Apply preservative treatment in accordance with manufacturer's instructions.
- C. Treat site sawn ends.
- D. Allow preservative to cure prior to erecting members.

### 3.02 INSTALLATION

- A. Erect wood framing members level and plumb.
- B. Space framing and furring 16 inches oc.
- C. Curb all roof openings except where prefabricated curbs are provided. Form corners by lapping side members alternatively.
- D. Coordinate work with installation of decking and support of decking at openings.

- END OF SECTION -

## SECTION 07210 - BUILDING INSULATION

### PART 1 GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish and install all building insulation work complete, all in accordance with the requirements of the Contract Documents.

#### 1.02 REFERENCE SPECIFICATIONS, CODES, AND STANDARDS

- A. Codes: Comply with the requirements of the Florida Building Code 2017, 6<sup>th</sup> Edition.

- B. Federal Specifications:

HH-I-524C Insulation Board, Thermal (Polystyrene)

HH-I-526C Insulation Board, Thermal (Mineral Fiber).

HH-1-521E Type II, Insulation, Blanket (Fiberglass)

HH-I-1972/1 Insulation Board, Thermal, Polyurethane or Polyisocyanurate, Faced with Aluminum Foil on both sides of the foam.

L-P-375C(3) Plastic Film, Flexible, Vinyl Chloride.

TT-S-001657 Sealing Compound, single Component, Butyl Rubber Based, Solvent Release Type (for buildings and other types of construction).

- C. Commercial Standards:

ASTM C 665 Specification for Mineral Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.

ASTM D 312 Specification for Asphalt Used in Roofing.

ASTM D 2178 Specification for Asphalt Glass (Felt) Used in Roofing and Waterproofing.

ASTM D 2626 Specification for Asphalt-Saturated and Coated Organic Gelt Base Sheet Used in Roofing.

ASTM E 84 Test Method for Surface Burning Characteristics of Building Materials.

ANSI/  
ASTM A 525 Specification for General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process.

ANSI/  
ASTM D 41 Specification for Asphalt Primer Used in Roofing and Waterproofing.

## SECTION 07210 - BUILDING INSULATION

- D. Manufacturer's Standards: In addition to the standards listed above, the insulation products and their installation shall be in accordance with the manufacturer's published recommendations and specifications.

### 1.03 SUBMITTALS

- A. Samples: The CONTRACTOR shall submit to the Architect for review, samples of all materials and fabricated items proposed for use on the work. The samples shall be clearly marked to show the manufacturer's name and product identification. All sample submittals shall conform to the requirements for "Samples" in Section entitled "Submittals."
- B. Manufacturer's Information: Manufacturer's literature, specifications, installation instructions, technical data, and general recommendations for the vapor retarder materials shall be submitted to the Architect.
- C. Manufacturer's certification or other data substantiating that the proposed materials comply with the Specifications shall be submitted to the Architect.

### 1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Delivery of Materials: Manufactured materials shall be delivered in original, unbroken packages, containers, or bundles bearing the name of the manufacturer.
- B. Storage: All materials shall be carefully stored in an area which is protected from the elements in a manner recommended by the material manufacturer, to prevent damage to the material and marring of its finish.

## PART 2 -- PRODUCTS

### 2.01 GENERAL

- A. The materials and application of building insulation shall conform to the applicable requirement of the Underwriters Laboratories "Fire Resistance Index", Factory Mutual requirements, manufacturer's printed recommendations and Specifications, and Federal specifications.
- B. Thermal and acoustical insulation shall have a flame-spread rating of 25 or less and a smoke density not exceeding 450 when tested in accordance with ASTM E 84.

### 2.02 FURRED WALL INSULATION

- A. Styrene foam board insulation shall be 1½" -inch thick, conforming to Federal Specification HH-I-524C, Type 1, Class A with minimum R-7 Value. Furring channels for styrene foam board system shall be "Z" channels, 1-inch wide. Furring channels shall be not less than 25-gage galvanized steel channels. See plans for R-value.

### 2.03 BATT INSULATION

## SECTION 07210 - BUILDING INSULATION

- A. Batt insulation shall be not less than 3-1/2-inch thick kraft paperfaced mineral fiber batts, conforming to ASTM C-665 Type I, Class A. See plans for R-value.

### PART 3 -- EXECUTION

#### 3.01 PREPARATION

- A. The CONTRACTOR shall verify site conditions affecting work of this Section and shall obtain accurate dimensions of all openings, levels, and location and arrangements of embedded anchorage.
- B. Any discrepancies between the Drawings and field dimensions and other irregularities or improper conditions which effect the work shall be reported to the Architect for correction prior to commencing work. Commencement of work shall indicated CONTRACTOR's acceptance of conditions and surfaces underlying or adjacent to work of this Section.

#### 3.02 INSTALLATION OF INSULATION

- A. Insulation shall be installed in accordance with the manufacturer's printed installation instructions.
- B. Blocking for wall-mounted items and items installed within furring and walls shall be securely installed prior to installation of insulation.
- C. Expanded polystyrene foam board insulation shall be secured by furring channels, at 16 inches o.c. (max). Channels shall be secured to wall by pneumatically-driven fasteners spaced at not more than 16 inches o.c.
- D. Insulation shall be installed to provide maximum sound and thermal benefits for material specified. The insulation shall be installed to completely fill or cover voids between furring studs, providing a continuous blanket of insulation. Insulation shall be cut neatly to snugly fit angles, corners and irregular areas and carefully wrapped around pipes, conduits, outlets, switches, beams, etc., to maintain continuity of insulation. Gaps or bridges shall be avoided. Insulation shall be tight fitting batts and shall be secured as recommended by the Building Code and the material manufacturers for job conditions.

#### 3.03 ADJUSTMENT AND CLEANING

- A. Protection: The CONTRACTOR shall adequately protect all work from damage resulting from subsequent construction operations. Damaged or soiled work shall be replaced by the CONTRACTOR, at no additional cost to the OWNER.
- B. Clean-up: The CONTRACTOR shall at all times keep the premises free from accumulation of waste materials and rubbish caused by his employees, in accordance with the requirements of Section entitled "Project Closeout".
- C. Upon completion of work, rubbish and excess materials shall be removed from the site, leaving the areas acceptably clean.

SECTION 07210 - BUILDING INSULATION

\_ END OF SECTION \_

## SECTION 078413 - PENETRATION FIRESTOPPING

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. Work included: Furnishing and installation of firestopping material, or combination of materials, at openings and voids in, or at periphery of fire-rated construction, in locations as follows:
1. Penetrations through fire-rated floor slabs, both empty holes and holes accommodating items such as cables, pipes, ducts, conduits, etc.
  2. Penetrations through fire-rated walls and partitions.
  3. Openings between tops of walls and floor or roof slabs.
  4. Penetrations of vertical service shafts.
  5. Expansion joints in walls, floors, and wall and floor assemblies.
  6. Openings and/or penetrations through smoke barriers, or special compartmentalized areas.

#### 1.02 QUALITY ASSURANCE:

- A. General: Provide firestopping materials that expand to fill cavities or provide adhesion to substrates, and that will maintain seal under normal expected movements of substrate.
- B. U.L. Classification: Provide firestopping materials that are currently classified with U.L. as "Fill, Void, or Cavity Materials" and Through-Penetration Firestop Systems".
- C. Fire Tests: Provide firestopping materials that have been tested in accordance with ASTM E814 "Methods for Fire tests of Through-Penetration Firestops".

#### 1.03 SUBMITTALS

- A. Submit manufacturer's product data for all materials and prefabricated devices; provide description sufficient for identification at the job site. Include manufacturer's installation instructions.
- B. Submit shop drawings showing proposed material, reinforcement, anchorage, fastenings, and method of installation. Construction details shall accurately reflect actual job conditions.

#### 1.04 CODE

## SECTION 078413 - PENETRATION FIRESTOPPING

- A. Comply with the requirements of the Florida Building Code 6<sup>th</sup> Edition (2017).

### PART 2 -- PRODUCTS

#### 2.01 ACCEPTABLE MANUFACTURERS

- A. Firestopping materials shall be products as produced by the following manufacturers, or equal:
1. Dow Corning Corporation, Midland, Michigan 48686.
  2. Electrical Products Division / 3M, St. Paul, Minnesota 55144

#### 2.02 MATERIALS

- A. Firestopping materials / constructions shall constitute one or more of the following products or an approved equal, and shall be compatible with the material to which it is applied.
1. Dow Corning:
    - a. Fire Stop Foam (2-part silicone elastomer).
    - b. Fire Stop Sealant (1-part silicone elastomer).
  2. 3M
    - a. CP-25 Caulk.
    - b. 303 Putty.
    - c. FS-195 Wrap / Strip.
    - d. CS-195 Composite Strip.
    - e. 7900 Series Penetration Sealing Systems.
  3. Damming Materials: Products compatible with the above materials as certified by the manufacturer.
- B. Firestopping materials shall be asbestos-free and capable of maintaining an effective barrier against flame, smoke, and gasses in compliance with the requirements of ASTM E814 and UL 1479.
- C. On insulated pipe, the fire-rating classification must not require removal of the insulation.



## SECTION 078413 - PENETRATION FIRESTOPPING

- D. The rating of the firestops shall be in no case less than the rating of the time-rated floor or wall assembly.

### 2.03 MIXING

- A. Mix silicon components in accordance with manufacturer's instructions.

## PART 3 -- EXECUTION

### 3.01 PREPARATION

- A. Clean surfaces to in be in contact with firestopping materials of dirt, grease, oil, loose materials, rust, or other substances that may affect proper fitting or the required fire resistance.
- B. Exposed seals: Use masking tape to protect adjacent finished substrate.

### 3.02 INSTALLATION

- A. Install firestopping materials in accordance with manufacturer's instructions.
- B. Seal all holes or voids made by penetrations to ensure an effective smoke barrier.
- C. Unless protected from possible loading or traffic, install firestopping materials in floors having void openings of four (4) inches or more to support the same floor load requirements.

### 3.03 FIELD QUALITY CONTROL

- A. Examine fire stopped areas to ensure proper installation prior to concealing or enclosing fire stopped areas.
- B. Areas of work shall remain accessible until inspection and approval by the applicable code authorities.

### 3.04 ADJUSTING AND CLEANING

- A. Clean excess cured sealant, spills, etc. Remove debris.

- END OF SECTION -

## SECTION 079200 - SEALANTS AND CAULKING

### PART 1 – GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish and install all sealant and caulking work required for a complete installation as is indicated on the Drawings and specified herein. The required applications of sealants and caulking include the following general locations:
1. Masonry joints, exterior and interior.
  2. Joints at penetrations of walls, decks by piping and other services and equipment.
  3. Joints between items of equipment and other construction.

#### 1.02 MANUFACTURERS

- A. The following list of company's manufacturer products that are acceptable for this section, subject to conformance with the specified requirements: Tremco, Thiokol, Dymoric or approved equal.

#### 1.03 SUBMITTALS

- A. Submit shop drawings and color samples of sealant for review by Architect.
- B. Submit to the ARCHITECT, in accordance with the Section entitled "Submittals", a two year guarantee on sealant type caulking work against joint failure. Joint failure is defined as leaks of air or water; evidence of loss of cohesion; fading of sealant material; migration of sealant; evidence of loss of adhesion between sealant and joint edge.

#### 1.04 CODE

- A. Comply with the requirements of Florida Building Code - Latest Edition.

### PART 2 – PRODUCTS

#### 2.01 MATERIALS

- A. Primer
1. Where required by sealant manufacturer, the primer shall be a compound designed to insure the adhesion of sealant. Material shall be provided by the sealant manufacturer and shall be selected for compatibility with substrate.
- B. Sealant
1. Sealant for vertical joints shall be two-component polyurethane sealant meeting FS TT-S-00227E. Colors shall be selected by the Architect.

## SECTION 079200 - SEALANTS AND CAULKING

2. Sealant for horizontal joints (non-contaminated) shall be a single component, pour grade, polyurethane sealant meeting FS TT-S-230A, Type 1. Materials shall attain Shore A Hardness of 40-45.
  3. Sealant for horizontal joints (contaminated) shall be a single component, pour grade, coaltar edition, with amendments. Material shall attain Shore A Hardness of 25-30.
- C. Caulking Compound
1. Caulking Compound for setting thresholds and for other interior caulking shall be oleo-resinous, gun grade, non-staining plastic compound conforming to FS TT-C-598-b. Material shall have shrinkage factor not exceeding 15%.
- D. Joint Backing
1. Joint backing shall be closed cell foam. Material shall be non-reactive with caulking materials and non-oily. Minimum density shall be 3.24 pcf. Use no asphalt or bitumen-impregnated fiber with sealants.
- E. Joint Cleaner
1. Joint cleaner shall be as recommended by sealant or caulking compound manufacturer.
- F. Joint Primer
1. Joint primer shall be as recommended by sealant manufacturer.
- G. Bond Breaker
1. Bond breaker tape shall be either polyethylene or plastic as recommended by the sealant manufacturer.

### PART 3 – EXECUTION

#### 3.01 GENERAL

- A. Comply with sealant manufacturer's printed instructions except where more stringent requirements are shown or specified and except where manufacturer's technical representative directs otherwise.

#### 3.02 SHIPPING, HANDLING AND STORAGE

- A. Store and handle materials so as to prevent the inclusion of foreign matter or the damage of materials by water or breakage. Procure and store in original containers until ready for use. Material showing evidence of damage will be rejected.

## SECTION 079200 - SEALANTS AND CAULKING

- B. Store and handle materials so as to prevent the inclusion of foreign matter or the damage of materials by water or breakage. Procure and store in original containers until ready for use. Material showing evidence of damage shall be rejected.

### 3.03 INSTALLATION

- A. Employ only proven installation techniques, which will insure that sealants will be deposited in uniform, continuous ribbons without gaps or air pockets, with complete "wetting" of the joint bond surface equally on opposite sides. Except as otherwise indicated, fill sealant rabbet to a slightly concave surface, slightly below adjoining surfaces. Where horizontal joints are between a horizontal surface and a vertical surface, fill joint to form a slight cove, so that joint will not trap moisture and dirt.
- B. Install sealants to depths as specified, or if not, as recommended by the sealant manufacturer and as follows:
- C. Moving Joints
  - 1. For normal moving joints sealed with elastomeric sealants but not subject to traffic, fill joints to a depth equal to 50% of joint width, but not more than 1/2" deep or less than 1/4" deep.
- D. Sealed Joints
  - 1. For joints sealed with non-elastomeric sealants and caulking compounds, fill joints to a depth in the range of 75% to 125% of joint width.
- E. Thresholds
  - 1. Set thresholds in full bed of caulking compound; remove excess materials.

### 3.04 PROTECTION OF ADJOINING SURFACES

- A. Prime or seal the joint surfaces wherever shown or recommended by the sealant manufacturer. Do not allow primer/sealer to spill or migrate onto adjoining surfaces.

### 3.05 SEALANT BACKER ROD

- A. Install sealant backer rod for liquid elastomeric sealants, except where shown to be omitted or recommended to be omitted by sealant manufacturer for the application shown.

### 3.06 BOND BREAKER

- A. Install bond breaker tape wherever shown and wherever required by manufacturer's recommendations to insure that elastomeric sealants will perform properly.

## SECTION 079200 - SEALANTS AND CAULKING

### 3.07 SPILLAGE

- A. Sealants or compounds shall not overflow or spill onto adjoining surfaces, or to migrate into the voids of adjoining surfaces. Masking tape or other precautionary devices shall be used to prevent staining of adjoining surfaces.

### 3.08 CURING

- A. Sealants and caulking compounds shall be cured in compliance with manufacturer's instructions and recommendations, to obtain high early bond strength, internal cohesive strength, and surface durability.

### 3.09 CLEANING

- A. Excess and spillage of compounds shall be promptly removed as the work progresses. Adjoining surfaces shall be cleaned by whatever means may be necessary to eliminate evidence of spillage. Do not damage the adjoining surfaces or finishes.

- END OF SECTION -

## SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

The Contractor shall furnish and install hollow metal doors and frames as specified herein and as required for a complete installation.

#### 1.02 MANUFACTURERS

The hollow metal doors and frames shall be as manufactured by Curries, Amweld, Ceco, Steelcraft, Stratford Industries, or equal.

#### 1.03 SHIPPING, HANDLING, AND STORAGE

The Contractor shall deliver, store, and handle doors and frames in a manner to prevent damage and deformation; store on pallets at the job site and undercover to form weather tight enclosure. Spacers shall be provided between doors and frames to prevent metal to metal contact. Damaged doors or doors with rust shall not be accepted.

#### 1.04 SUBMITTALS

- A. Submit detailed shop drawings, signed and sealed by an Engineer registered in the State of Florida, showing the following:
1. Impact Resistance Product Approval Certification notice as required by the Florida Building Code 6<sup>TH</sup> Edition (2017).
  2. Dimensioned elevation of the profiles of the framing system over the specified masonry/rough opening with panel arrangement.
  3. Installation details, edge distances, material, size, and spacing of anchorage.
  4. Locking arrangement.
  5. Sealants.
  6. Hardware.
  7. Certification that the assembly has been designed for the minimum wind loads indicated on the Contract Drawings.
- B. Submit simultaneously with the shop drawings, copies of the Impact Resistance Product Control Notice of Approval conforming with the requirements of the Florida Building Code 6<sup>th</sup> Edition (2017).

#### 1.05 CODE

- A. Comply with the requirements of the Florida Building Code 6<sup>th</sup> Edition (2017).

## SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

### PART 2 -- PRODUCTS

#### 2.01 HOLLOW METAL DOORS

- A. General: The Contractor shall provide doors and frames from the same manufacturer.
- B. Flush Doors: Flush doors shall be constructed of two outer sheets of steel over resin impregnated kraft honeycomb core or welded steel stiffeners filled with glass fiber. Top and bottom of doors shall be finished flush and be sealed against water penetration.
- C. Gauges: All doors shall be fabricated in accordance with Steel Door Institute (SDI) Publication 107. The minimum gauges of steel shall be listed as follows:
- |                    |          |
|--------------------|----------|
| 1. Exterior Doors: | 16 Gauge |
| 2. Interior Doors: | 18 Gauge |

#### 2.02 HOLLOW METAL DOOR FRAMES

- A. Hollow metal door frames shall be fabricated of 16 gauge cold rolled steel in accordance with ASTM A366. After fabrication frames shall be primed with light gray rust inhibitive primer. Paint color finish shall be as selected by Architect.
- B. Standard floor knee shall be provided for anchorage to floor.
- C. Three sided frames shall have angle spreaders secured to bottom of frame for rigidity during shipment.
- D. Frame corners shall be mitered and internally reinforced, welded, and ground smooth. Adequate reinforcement shall be provided for all hardware, drilled and tapped for field application. Dust clogging of tapped holes by mortar or plaster. Reinforcement shall also be provided for surface applied hardware for which drilling and tapping is done in the field. After fabrication, frame shall be degraded and then prime coated.
- E. Punch single leaf frames to receive three (3) silencers on lock jamb. Punch double leaf frames to receive one (1) silencer at each leaf in head members.

#### 2.03 ANCHORS

- A. Jamb anchors shall be 14 gauge galvanized flat "T" anchors to suit frame size with legs not less than 3" x 10". Set anchors at every three (3) masonry courses, a minimum of three (3) per jamb at doors.
- B. For cast-in-place concrete, anchor frame jambs with 6" minimum counter-sunk bolts into expansion shield or inserts, with crush-proof sleeves. Provide a minimum of three (3) per jamb at doors and windows.
- C. Floor anchors at doors shall be 16 gauge galvanized sheet steel at each jamb.

## SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

Clip type anchors with two (2) holes to receive fasteners shall be welded to bottom jambs.

### 2.04 LOUVERS

Slats shall be 16 gauge, galvanized steel. Louver slats shall be as indicated on the Drawings. For exterior doors, slats shall be of the storm-proof type with insert screen.

### 2.05 SHOP PAINTING

Doors shall be cleaned, filled and bonderized prior to painting. Doors shall receive one (1) coat of rust inhibiting primer compatible with the coating system specified in the Section entitled "Painting". Fill materials shall be compatible with the referenced coating system. The Contractor shall verify, in writing, that this requirement has been met.

## PART 3 -- EXECUTION

### 3.01 FRAME INSTALLATION

Frames shall be installed plumb, level, and true to line, rigidly secured in openings. Frames in masonry walls shall be set prior to beginning masonry work. Frames shall be filled with cement grout as masonry work progresses. Anchors shall be provided in accordance with SDI Standards.

### 3.02 DOOR INSTALLATION

- A. Doors shall be installed plumb, level, and true to line. Hardware shall be applied and adjusted to achieve quiet and smooth operation. Installation shall be in accordance with the manufacturer's recommendations.
- B. Doors shall fit snugly and close without forcing or binding. Door clearances shall not exceed 1/8" at jambs and heads and meeting stiles at pairs of doors. Clearance between bottom of door and finished floor material or threshold shall not exceed 1/4". Frames shall be manufactured and machined to within 1/32" for all dimensions.

### 3.03 PROTECTION

The Contractor shall protect installation from damage and touch up scratched areas with same paint used for shop coats. Damaged work shall be replaced.

- END OF SECTION -



## SECTION 08520 - ALUMINUM WINDOWS

### PART 1 - GENERAL

#### 1.1 SECTION INCLUDES

- A. HR-710 WinGuard aluminum outside mount horizontal roller window or approved equal.

#### 1.2 RELATED SECTIONS

- B. Section 07920 - Joint Sealants

#### 1.3 REFERENCES

##### A. AAMA - American Architectural Manufacturers Association

1. AAMA 103.3-93 "Procedural Guide for Aluminum and Vinyl Prime Windows and Glass Doors, Insulating Storm Products for Windows and Glass Doors and Thermal Performance of Windows and Glass Doors"
2. AAMA 1302.5-76, paragraph 3.1.1 Test A through 3.1.3 Test G "Voluntary Specifications for Forced-Entry Resistant Aluminum Prime Windows"

##### B. ANSI - American National Standards Institute

1. ANSI/AAMA/NWWDA 101/I.S.2-97 "Voluntary Specification for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors"

##### C. ASTM - American Society for Testing and Materials

1. ASTM C 1036-91 "Standard Specification for Flat Glass"
2. ASTM E 283-96 "Standard Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors"
3. ASTM E 330-96 "Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference"
4. ASTM E 331-96 "Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference"
5. ASTM E 547-96 "Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Differential"
6. ASTM F 588-85 "Standard Test Methods for Resistance of Window Assemblies to Forced Entry Excluding Glazing"

##### D. Florida Building Code 2017, 6<sup>th</sup> Edition

1. Protocol TAS-201 "Impact Test"
2. Protocol TAS -202 "Air, Water, Structural Test"

## SECTION 08520 - ALUMINUM WINDOWS

### 3. Protocol TAS -203 "Cyclic Wind Load Test"

#### 1.4 SYSTEM DESCRIPTION

- A. Configuration: outside mount flange construction aluminum horizontal roller, fixed-vent (OX) or vent-fixed (XO) or vent-fixed-vent (XOX) configuration only.
- B. Frame: 2.784" frame depth.
- C. Glazing: exterior glazed, with aluminum glazing bead and 5/16" laminated or 7/16" laminated as required to meet impact test and code requirements
- D. Performance Requirements
  - 1. When tested according to Miami-Dade County test protocols, meets the design pressures stated in the Miami-Dade County Notice(s) of Acceptance for this product.
  - 2. Air Infiltration: 0.3 (ft<sup>3</sup>)/min/(ft<sup>2</sup>) maximum when tested per ASTM E 283 at a 1.57 psf static air pressure difference.
  - 3. Water Resistance: no water leakage when tested per ASTM E 547 at a static air pressure difference of 15% of the positive design pressure.
  - 4. Uniform Load Structural: after testing per ASTM E 330 with a load equal to 150% of the positive design pressure, the unit must be operable, with a maximum permanent deformation in any member of 0.4% of the member's length.

#### 1.5 SUBMITTALS

- A. Submit according to provisions of Section 01300.
- B. Product Data: provide manufacturer's standard details, specifications and catalog information, recommendations, and installation instructions.
- C. Shop Drawings: include unit elevations, details of all aluminum window sections, typical anchorage and installation details, type of glazing and window finish, and interface with other products.
- D. Finish Samples: manufacturer's available colors.

#### 1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: minimum five (5) years documented experience in the manufacture of aluminum windows as required for this project.
- B. Installer Qualifications: workmen properly trained and skilled in the installation and handling of aluminum windows as required for this project.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

## SECTION 08520 - ALUMINUM WINDOWS

- A. Store and handle windows and accessories in accordance with the manufacturer's instructions.
- B. Protect the products from damage due to the elements, construction traffic, or other hazards, from the time of arrival through the completion of the project.

### 1.8 WARRANTY

- A. Manufacturer's Warranty: Furnish manufacturer's Limited Lifetime Warranty on aluminum windows and doors.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. PGT Industries, Inc. Series HS-710 WinGuard outside mount horizontal roller aluminum window or approved equal.

### 2.2 MATERIALS

- A. Main frame members: extruded from 6063-T6 alloy, nominal 0.062" wall thickness.
- B. Sash members: extruded from 6063-T5 aluminum alloy, nominal 0.062" wall thickness.
- C. Hardware: Four brass rollers in two roller housings. Two steel and tin-lead-zinc alloy cam lever sash locks on the vent (one sash lock if window height is less than 42") locking behind a groove in the meeting rail. Stainless steel assembly screws.
- D. Weatherstripping: weatherstripped with compressed vinyl bulbs on jambs, and two fin seal weatherstrips on top and bottom of sash.
- E. Glazing attachment with silicone adhesive.
- F. Screens: tubular aluminum frame with fiberglass screen cloth, vinyl spline, two plastic screen pull tabs and two compression retention springs per screen.

### 2.3 ACCESSORIES

- A. Mullions: 1x4 tube mull heavy duty wall and associated mull clips.

### 2.4 FABRICATION

- A. Main frame and sash joints constructed with butt-fit, assembled with phillips pan head screws, and factory sealed with Parbond or Schnee Moorehead sealer.
- B. All hardware factory installed.
- C. Bug screens constructed and installed in unit prior to shipment.

### 2.5 FINISHES

Colors: Selected by Architect/Owner from the following:  
1. Standard coating color charts.

## SECTION 08520 - ALUMINUM WINDOWS

- A. AAMA 2603 finish: Pretreatment plus thermosetting polyester powder coating.

### **PART 3 - EXECUTION**

#### 3.1 EXAMINATION

- A. Verify that openings provide an acceptable anchoring surface, being clean, level, plumb, and dimensionally within the manufacturer's tolerance of clearance spacing.
- B. Correct unacceptable openings as required prior to installation.

#### 3.2 INSTALLATION

- A. Install windows and accessories in accordance with approved shop drawings and manufacturer's recommendations.
- B. Securely fasten frames, and set units level, plumb, and square with respect to the surrounding structure, without twist or bow.
- C. Place insulation materials around shim spaces as required to ensure continuity of the thermal barrier of the structure.
- D. Apply caulk all around between the aluminum frame and the structure, ensuring that a continuous airtight and watertight perimeter seal results. Leave exposed surfaces clean and free of caulk.

#### 3.3 ADJUSTING AND CLEANING

- A. Ensure that units freely operate in a normal fashion, and that vents make proper contact with weatherstripping perimeter seal. Adjust frame, vent, or hardware as needed.
- B. Leave units thoroughly clean and free of dirt or other construction residue.

END OF SECTION

## SECTION 087100 - DOOR HARDWARE

### PART 1 GENERAL

#### 1.1 SUMMARY

- A. Section includes hardware for doors.
- B. Related Sections:
  - 1. Section 081113 - Standard Steel Doors.
  - 2. Section 081113 - Standard Steel Frames: Silencers integral with steel frames.
  - 3. Division 26 – Electrical.

#### 1.2 REFERENCES

- A. American National Standards Institute:
  - 1. ANSI A156.1 - Butts and Hinges.
  - 2. ANSI A156.2 - Bored and Preassembled Locks and Latches.
  - 3. ANSI A156.4 - Door Controls - Closures.
  - 4. ANSI A156.7 - Template Hinge Dimensions.
  - 5. ANSI A156.8 - Door Controls - Overhead Holders.
  - 6. ANSI A156.12 - Interconnected Locks and Latches.
  - 7. ANSI A156.13 - Mortise Locks and Latches.
  - 8. ANSI A156.18 - Materials and Finishes
- B. National Fire Protection Association:
  - 1. NFPA 80 - Standard for Fire Doors, Fire Windows.
  - 2. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies.
- C. Underwriters Laboratories Inc.:
  - 1. UL 10B - Fire Tests of Door Assemblies.
  - 2. UL - Building Materials Directory.
- D. Warnock Hersey:
  - 1. WH - Certification Listings.

#### 1.3 PERFORMANCE REQUIREMENTS

- A. Fire Rated Openings: Provide door hardware listed by UL or other testing laboratory approved by applicable authorities.
  - 1. Hardware: Tested in accordance with NFPA Pamphlet #80, NFPA Standard No. 101 and UL 10C.

#### 1.4 SUBMITTALS

- A. Section 013300 – Shop Drawings, Product Data and Samples: Submittal procedures.
- B. Shop Drawings:
  - 1. Indicate locations and mounting heights of each type of hardware, schedules, catalog cuts, electrical characteristics and connection requirements.

## SECTION 087100 - DOOR HARDWARE

- C. Manufacturer's Installation Instructions: Submit special procedures, and perimeter conditions requiring special attention.

### 1.5 CLOSEOUT SUBMITTALS

- A. Division 1 – General Requirements: Closeout procedures, as coordinated with Owner/City of North Lauderdale.
- B. Project Record Documents: Record actual locations of installed cylinders and their master key code.
- C. Operation and Maintenance Data: Submit data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
- D. Keys: Deliver with identifying tags to Owner by security shipment direct from hardware supplier.

### 1.6 QUALITY ASSURANCE

- A. Perform Work in accordance with the following requirements:
  - 1. ANSI A156 series.
  - 2. NFPA 80.
  - 3. UL 305.

### 1.7 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Hardware Supplier: Company specializing in supplying commercial or institutional door hardware with minimum three years documented experience approved by primary hardware manufacturers.
- C. Products Requiring Electrical Connection: Listed and classified by Underwriters' Laboratories, Inc., as suitable for purpose specified and indicated.

### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Division 1 – General Requirements: Product storage and handling requirements, as coordinated with Owner/City of North Lauderdale.
- B. Package hardware items individually with necessary fasteners, instructions, and installation templates, when necessary; label and identify each package with door opening code to match hardware schedule.
- C. Wrap, protect finishing hardware items for shipment. Deliver to manufacturing contractor's hardware items required by them for their application; deliver balance of hardware to job; store in designated location. Each item shall be clearly marked with its intended location.

## SECTION 087100 - DOOR HARDWARE

### 1.9 COORDINATION

- A. Division 1 – General Requirements: Coordination and project conditions, as coordinated with Owner/City of North Lauderdale.
- B. Coordinate Work with other directly affected sections involving manufacture or fabrication of internal reinforcement for door hardware and recessed items.
  - 1. Provide templates or actual hardware as required to ensure proper preparation of doors and frames.
- C. Sequence installation to accommodate required utility connections.
- D. Coordinate Owner's keying requirements during course of Work.

### 1.10 WARRANTY

- A. Division 1 – General Requirements: Product warranties and product bonds, as coordinated with Owner/City of North Lauderdale.
- B. Furnish two-year manufacturer warranty for locksets and door closers.

### 1.11 MAINTENANCE MATERIALS

- A. Division 1 – General Requirements: Maintenance materials, as coordinated with Owner/City of North Lauderdale.
- B. Furnish special wrenches and tools applicable for each different and for each special hardware component.
- C. Furnish maintenance tools and accessories supplied by hardware component manufacturer.

## PART 2 PRODUCTS

### 2.1 ACCEPTABLE MANUFACTURERS

- A. To the greatest extent possible, obtain each kind of hardware from only one manufacturer.
- B. All numbers and symbols used herein have been taken from the current catalogues of the following manufacturers.

PRODUCT	SPECIFIED MANUFACTURER (OR APPROVED EQUAL)
1) Hinges	Hager
2) Locks & Latches	Schlage
3) Cylinders, Keys, Keying	Schlage
4) Door Closers	Corbin-Russwin
5) OH Stops/holders	Glynn Johnson

## SECTION 087100 - DOOR HARDWARE

- 6) Kick Plates Ives
- 7) Silencers Ives
- 8) Push Pull Plates Ives

### 2.2 FINISH OF HARDWARE

- A. Hinges to be Stainless Steel (32D), Door Closers to be Aluminum. Locks to be Satin Chrome (26D). Overhead Holders to be Satin Chrome (26D), Flat Goods to be Satin Chrome (26D) or Stainless Steel (32D).

### 2.3 HINGES AND PIVOTS

- A. Exterior butts shall be Stainless Steel. Butts on all out swinging doors shall be furnished with non-removable pins (NRP).
- B. Doors 5' or less in height shall have two (2) butts. Furnish one (1) additional butt for each 2'6" in height or fraction thereof.

### 2.4 KEYING

- A. All cylinders shall be coordinated with Owner/City of Pompano Beach.

### 2.5 LOCKS, LATCHES AND BOLTS

- A. Mortise Locks – ANSI A156.13, 1994, Grade 1 Operational, Grade 1 Security, ANSI/ASTM F476-76 Grade 30, UL listed. Levers shall be forged brass, bronze, or cast stainless steel, 07 lever design extruded brass, bronze or stainless steel. Meets A117.1 Accessibility Codes. Steel Case with ¾" throw stainless steel anti-friction latchbolt and a 1" throw stainless steel deadbolt. Lock case shall be field reversible, without opening the lock chasis and universal chasis to accept both knob and lever functions. Lock trim shall incorporate individual lever support springs in each rose or escutcheon. Lever connection by attaching threaded bushings tightened by a spanner wrench. Threaded set screws will not be accepted. Lock spindles shall be two independent inside and outside spindles to prevent manipulation of lock. Strikes: Provide manufacturer's standard wrought box strike for each latch or lock bolt, with curved lip extended to protect frame.
- B. Schlage L9000 series.
- C. Comply with UL requirements for throw of bolts and latch bolts on rated fire openings.
- D. Lock Manufacturers: Subject to compliance with requirements, provide lockset products of the following approved manufacturers:
- E. Or approved equal.

### 2.6 DOOR CLOSERS

- A. All closers shall be Corbin-Russwin DC6200 series having non-ferrous covers, forged steel arms separate valves for adjusting backcheck, closing and latching



## SECTION 087100 - DOOR HARDWARE

cycles and adjustable spring to provide up to 50% increase in spring power. Closers shall be furnished with parallel arm mounted on all doors opening into corridors or other public spaces and shall be mounted to permit 180 degrees door swing wherever wall conditions permit. Furnish with non-hold open arms unless otherwise indicated.

- B. Door closer cylinders shall be of high strength cast iron construction to provide low wear operating capabilities of internal parts throughout the life of the installation. All door closers shall be tested to ANSI/BHMA A156.4 test requirements by a BHMA certified testing laboratory. A written certification showing successful completion of a minimum of 10,000,000 cycles must be provided.
- C. Door closers shall utilize temperature stable fluid capable of withstanding temperature ranges of 120 degrees Fahrenheit to -30 degrees Fahrenheit, without requiring seasonal adjustment of closer speed to properly close the door. Closers for fire-rated doors shall be provided with temperature stabilizing fluid that complies with the standards UBC 7-2 (1997) and UL 10C.
- D. Door closers shall incorporate tamper resistant non-critical screw valves of V-slot design to reduce possible clogging from particles within the closer. Closers shall have separate and independent screw valve adjustments for latch speed, general speed, and hydraulic backcheck. Backcheck shall be properly located so as to effectively slow the swing of the door at a minimum of 10 degrees in advance of the dead stop location to protect the door frame and hardware from damage. Pressure relief valves (PRV) are not acceptable.
- E. Door closers shall be mounted with closed head through bolts (sex bolts).
- F. Or approved equal.

### 2.7 TRIM AND PLATES

- A. Kick plates, mop plates, and armor plates, shall be .050 gauge with 32D finish. Kick plates to be 10" high, mop plates to be 4" high. All plates shall be two (2) inches less full width of door.
- B. Push plates, pull plates, door pulls, and miscellaneous door trim shall be shown in the hardware schedule.

### 2.8 PUSH AND PULL PLATES

- A. Push and Pull plates shall be 4-inch by 16-inch by 0.050 thick, Quality #40; BBW #47; Rockwood #70; or equal.

## SECTION 087100 - DOOR HARDWARE

### 2.9 DOOR SILENCERS

- A. Furnish rubber door silencers equal to Ives SR64 for all new interior hollow metal frames, (2) per pair and (3) per single door frame.

### 2.10 COMPONENTS

- A. General Hardware Requirements: Where not specifically indicated, comply with applicable ANSI A156 standard for type of hardware required. Furnish each type of hardware with accessories as required for applications indicated and for complete, finished, operational doors.
  - 1. Templates: Furnish templates or physical hardware items to door and frame manufacturers sufficiently in advance to avoid delay in Work.
  - 2. Reinforcing Units: Furnished by door and frame manufacturers; coordinated by hardware supplier or hardware manufacturer.
  - 3. Fasteners: Furnish as recommended by hardware manufacturer and as required to secure hardware.
    - a. Finish: Match hardware item being fastened.
  - 4. Fire Ratings: Provide hardware with UL or Warnock Hersey listings for type of application involved.
  - 5. Electrical Devices: Make provisions and coordinate requirements for electrical devices and connections for hardware.

### 2.11 ACCESSORIES

- A. Lock Trim: Furnish levers with escutcheon plate as indicated in Schedule as selected from manufacturer's full range of levers and roses.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Division 1 – General Requirements: Coordination and project conditions.
- B. Verify doors and frames are ready to receive door hardware and dimensions are as indicated on shop drawings and as instructed by manufacturer.

### 3.2 INSTALLATION

- A. Coordinate mounting heights with door and frame manufacturers. Use templates provided by hardware item manufacturer.
- B. Mounting Heights From Finished Floor to Center Line of Hardware Item: Comply with manufacturer recommendations and applicable codes where not otherwise indicated.
  - 1. Locksets: 38 inch.
  - 2. Push/Pulls: 42 inch.
  - 3. Dead Locks: 48 inch.
  - 4. Top Hinge: Jamb manufacturer's standard, but not greater than 10 inches from head of frame to center line of hinge.

## SECTION 087100 - DOOR HARDWARE

5. Bottom Hinge: Jamb manufacturer's standard, but not greater than 12-1/2 inches from floor to center line of hinge.
6. Intermediate Hinges: Equally spaced between top and bottom hinges and from each other.
7. Hinge Mortise on Door Leaf: 1/4 inch to 5/16 inch from stop side of door.

### 3.3 FIELD QUALITY CONTROL

- A. Section 014001 - Quality Control Services: Testing and Inspection Services and Division 1 – General Requirements: Testing, adjusting, and balancing.
- B. Supplier to inspect installation and certify hardware and installation has been furnished and installed in accordance with manufacturer's instructions and as specified.

### 3.4 QUALITY ASSURANCE

- A. The hardware manufactures are to supply both a pre-installation class as well as a post-installation walk-thru. This is to insure proper installation and provide for any adjustments or replacements of hardware as required.

### 3.5 ADJUSTING

- A. Division 1 – General Requirements: Testing, adjusting, and balancing, as coordinated with owner/City of North Lauderdale.
- B. Adjust hardware for smooth operation.

### 3.6 PROTECTION OF INSTALLED CONSTRUCTION

- A. Section 017700 – Project Closeout: Protecting installed construction.

- END OF SECTION -

## SECTION 09111 – METAL STUD FRAMING SYSTEM

### PART 1 -- GENERAL

#### 1.01 SECTION INCLUDES

- A. Formed metal stud framing at interior locations.
- B. Framing accessories.

#### 1.02 REFERENCES

- A. ASTM A525 \_ General Requirements for Steel Sheet, Zinc-Coated (Galvanized) by the Hot\_Dip Process.
- B. ANSI/ASTM A591 \_ Steel Sheet, Cold\_Rolled, Electrolytic Zinc\_Coated.
- C. ASTM C645 \_ Non\_Load (Axial) Bearing Steel Studs, Runners (Track) and Rigid Furring Channels for Screw Application of Gypsum Board.
- D. ASTM C 754 \_ Installation of Steel Framing Members to Receive Screw\_Attached Gypsum Wallboard, Backing Board, or Water\_Resistant Backing Board.
- E. FS TT\_P\_645 \_ Primer, Paint, Zinc\_Chromate, Alkyd Type.
- F. GA 203 \_ Installation of Screw\_Type Steel Framing Members to Receive Gypsum Board.

#### 1.03 SYSTEM DESCRIPTION

- A. Metal stud framing system for interior walls, consisting of top and bottom tracks, studs and supports to structure.
- B. Maximum Allowable Deflection: 1/360 span.
- C. Design system to accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.

#### 1.04 SUBMITTALS

- A. Submit shop drawings indicating component details, framed openings, anchorage to structure, type and location of fasteners, and accessories or items required of other related work.
- B. Describe method for securing studs to tracks, splicing, and for blocking and reinforcement to framing connections.
- C. Submit product data.
- D. Submit product data describing standard framing member materials and finish, product criteria, load charts and limitations.
- E. Submit manufacturer's installation instructions.

## SECTION 09111 – METAL STUD FRAMING SYSTEM

### 1.05 QUALITY ASSURANCE

- A. Perform work in accordance with GA 203 and ASTM C754.
- B. Maintain one copy of each document on site.

### 1.06 SEQUENCING AND SCHEDULING

- A. Sequence work with other work directly affected by this Section.
- B. Coordinate the work of related Sections.

### 1.07 CODE

- A. Comply with the requirements of the Florida Building Code 2017, 6<sup>th</sup> Edition

## PART 2 -- PRODUCTS

### 2.01 STUD FRAMING MATERIALS

- A. Studs: ASTM A525, galvanized to G90 coating class, ANSI/ASTM A591, electrogalvanized, non\_load bearing rolled steel, channel shaped, punched for utility access, as scheduled. Minimum 22 GA in corridors ;not less than 25 GA all others except as shown on plans. See UL fire rating assembly as shown on plans for minimum gauge at fire rated walls. See plans for minimum gauge of selected framing members.
- B. Runners: Of same material and finish as studs, bent leg retainer notched to receive studs. Ceiling runners with extended legs.
- C. Furring and Bracing Members: Of same material and finish as studs, thickness to suit purpose.
- D. Fasteners: GA 203. Self\_drilling, self\_tapping screws.
- E. Metal Backing: 20 gage galvanized steel.
- F. Anchorage Devices: Power driven. Powder actuated or Drilled expansion bolts. Comply with GA-203.
- G. Primer: FSTT\_P\_645, for touch\_up of galvanized surfaces.

## PART 3 -- EXECUTION

### 3.01 EXAMINATION

## SECTION 09111 – METAL STUD FRAMING SYSTEM

- A. Verify that conditions are ready to receive work.
- B. Verify field measurements are as shown on Drawings.
- C. Verify that rough\_in utilities are in proper location.
- D. Beginning of installation means installer accepts existing conditions.

### 3.02 ERECTION

- A. Align and secure top and bottom runners at 16” inches O.C.. Place two beads of sealant between runners and substrate. Achieve air seal between runners and substrate.
- B. Fit runners under and above openings; secure intermediate studs at spacing of wall studs.
- C. Install studs vertically at 16 inches O.C.. Achieve air seal between studs and adjacent vertical surfaces.
- D. Connect studs to tracks using fastener method.
- E. Stud splicing not permissible. Except if approved in writing by Architect prior to bid.
- F. Construct corners using minimum three studs.
- G. Double studs at wall openings, door and window jambs, at connection to 1 hr Rated enclosed columns, not more than 2 inches each side of openings, start of all partitions and as shown on plans.
- H. Brace stud framing system and make rigid.
- I. Coordinate erection of studs with requirements of door and window frame supports and attachments.
- J. Align stud web openings.
- K. Coordinate installation of bucks, anchors, and blocking with electrical and mechanical work to be placed in or behind stud framing.
- L. Blocking: Secure wood blocking to studs. Install blocking for support of plumbing fixtures, toilet partitions, wall cabinets, toilet accessories, hardware, and cabinetry.
- M. Refer to Drawings for indication of partitions extending through ceiling to structure above. Maintain clearance under structural building members to avoid deflection transfer to studs. Provide extended leg ceiling runners.
- N. Coordinate placement of insulation in multiple stud spaces made inaccessible after stud framing erection.

## SECTION 09111 – METAL STUD FRAMING SYSTEM

### 3.04 TOLERANCES

- A. Maximum Variation From True Position: 1/4 inch.
- B. Maximum Variation of any Member from Plane: 1/8 inch.

- END OF SECTION -

## SECTION 092400 – STUCCO

### PART 1 -- GENERAL

#### 1.01 THE REQUIREMENT

- A. The Contractor shall furnish and install the stucco exterior finish of all wall and overhang surfaces where shown on the drawings and specified herein.
- B. Stucco is a final architectural treatment prior to painting and therefore it shall provide a decorative, durable, consistent, even finish with no imperfections of the substrate telegraphing through the stucco.

#### 1.02 REFERENCES

- A. Except as modified by governing local codes and by this specification, conforms to provisions and recommendations of the following standards.
  - 1. ASTM C 926-98.
  - 2. Portland Cement Plaster Manual (Stucco) for reference.

#### 1.03 SUBMITTALS

- A. Manufacturer's Data: Submit eight copies of manufacturer's specifications and installation instructions for each material required, including other data as may be required to show compliance with these specifications.
- B. Sample: For final review of each texture, complete one wall area on job site 5 working days minimum before proceeding with the work.

#### 1.04 DELIVERY, STORAGE AND HANDLING

- A. Source of supply: Do not change brands or source of supply for materials during course of work.
- B. Protection: Deliver materials except for sand and water in manufacturer's unopened containers fully identified with name, brand, type and grade. Protect stucco materials from contamination and dampness until used. Store in a dry ventilated space off the ground. Protect lime putty from sun exposure and prevent excessive evaporation when stored.

#### 1.05 CODES

- A. Comply with the requirements of the Florida Building Code 2017, 6<sup>th</sup> Edition.

### PART 2 – PRODUCTS

#### 2.01 PRODUCTS

- A. Aggregates:
  - 1. Portland Cement stucco base aggregates shall be ASTM C 897



## SECTION 092400 – STUCCO

Specifications Aggregates for Job-Mixed Portland Cement-Based Plaster.

2. Portland Cement stucco finish shall be graded silica sand passing a 30 mesh screen.
- B. Fiber Reinforcement: Fiber reinforcement shall be fiberglass "fibermesh", or equal, 1/2 inch long, free from grease, oil dirt and other impurities. Separate before use.
- C. Metal Lath: Shall be FS-UU-B-790A grade D, style 2, metal lath (stucco) reinforcement with asphalt impregnated paperback.
- D. Portland Cement: ASTM C 150 Type I or Type II.
- E. Lime: Shall be hydrated, ASTM C 207, Type S.
- F. Accessories: Corner beads, casing beads and expansion joints; Polyvinyl PVC.
- G. Bonding Compounds:
  1. Exterior Applications:
    - a. Acryl 60 by Thoro.
    - b. Bonsal 118 Primer by Bonsal
    - c. STO Bonding Agent CR245 by STO
- H. Bonding Admixtures:
  1. Exterior Applications:
    - a. Acryl 60 by Thoro.
    - b. Bonsal 118 Admixture manufactured by Bonsal.
    - c. STO Admixture CR245 by STO

### 2.02 MIXES

- A. General:
  1. All mixes are by volume unless otherwise specified. All mix proportions are suggestive only, variations to meet local conditions to achieve desired finish are permitted within limits specified in ASTM C 926-98.
  2. Make lime putty from hydrated lime; machine-mix with bonding admixture to putty form; allow to stand at least 15 minutes before using.
  3. Water shall be potable and free from deleterious materials which would impair the work and from a source approved by Architect.
- B. Stucco: Install in four coats as follows:
  1. Prep Coat at Concrete Surfaces only: mix bonding agent and Portland cement to create a slurry mixture. Do not add water.

## SECTION 092400 – STUCCO

2. Scratch and Brown Coats (2 coats)
  - a. Low absorption bases
    - i) 1 part Portland Cement.
    - ii)  $\frac{3}{4}$  to  $1\frac{1}{2}$  parts lime.
    - iii)  $2\frac{1}{2}$  to 4 parts aggregate.
    - iv) 1 lb. fiber per sack of cement (on metal lath).
  - b. High absorption Base
    - i) 1 part Portland Cement
    - ii)  $\frac{3}{4}$  to 2 parts lime
    - iii)  $2\frac{1}{2}$  to 5 parts aggregate
    - iv) 1 lb. fiber per sack of cement
3. Finish Coat:
  - a. Finish coat shall bring total stucco application to full thickness ( $\frac{5}{8}$ " or thickness to match existing adjacent stucco) and provide a pattern as approved by the Architect. Finish texture shall be smooth to match existing adjacent stucco.
  - b. Horizontal reveals as shown on the plans shall be  $\frac{1}{8}$ " deep and straight.

## PART 3 – EXECUTION

### 3.01 EXAMINATION OF SUBSTRATES

- A. Examine substrates and the conditions under which the stucco work is to be installed. Do not proceed until unsatisfactory conditions detrimental to the proper and timely completion of the work have been corrected.
- B. Concrete Surfaces: Sand blast all concrete to receive stucco, clean off dust, loose particles, form oils and other foreign matter including previously applied bonding agent. Apply prep coat immediately prior to applying scratch coat.

### 3.02 INSTALLATION

- A. General: Apply 3-coat work on all substrates indicated to receive Stucco on plan for total of  $\frac{5}{8}$  inch or thickness to match existing adjacent stucco. Apply finish coat with a reasonable uniform thickness over entire surface, with vertical surfaces flat, straight and plumb. Make interior angles square, and make corners square but slightly rounded. Where casing beads do not occur at the juncture of stucco and hollow metal frames, cut a groove in the base coat and later in the finish coat to minimize the appearance of cracks at these joints.
- B. Mixing:
  1. Use mechanical mixers for mixing stucco only. Do not use caked or lumped material. Clean mechanical mixers, mixing boxes and tools after mixing each batch; keep free of stucco from previous mixes. Thoroughly

## SECTION 092400 – STUCCO

mix stucco with proper amount of water until uniform in color and consistency. Tempering of stucco will not be permitted; discard stucco which has begun to stiffen. Provide waterproof protection under mixer.

2. Machine Applied Stucco: Determine proper consistency by slump test as follows: Take slump test samples from nozzle of stucco cone. Take samples as often as may be required or as directed by Architect. Maximum slump shall be 2 1/2 inches.

### C. Application:

1. Application shall be by hand or machine. Limit machine application to base coats, except where machine texture finish is specified.

## 3.03 FIELD QUALITY CONTROL

### A. Patching:

1. Work containing cracks, blisters, pits, checks, or discoloration will not be accepted. Remove such work including rejected work, and replace with new. Patching of defective work permitted only after notification of Architect.
2. Perform cutting, patching, repairing and pointing-up operations neatly and thoroughly. Repair the cracks and indented surfaces by moistening the stucco and filling with new material, troweled or tamped flush with adjoining surfaces. Point-up and finish surfaces around fixtures, outlet boxes, piping, fittings, tile and other work installed more than 48 hours, cut existing stucco at an angle of approximately 45 degrees with the surface before installing new stucco.

## 3.04 CLEANING AND PROTECTION

- A. Make provisions to minimize spattering of stucco on other work. Promptly clean windows and other surfaces which have been soiled.
- B. Protect stucco from the weather, premature drying ASTM C 926-98 xi.4.2, dirt, dust, marring or other damage throughout the construction period so it will be without any indication of damage at time of acceptance by Owner.

- END OF SECTION -

## SECTION 09260 - GYPSUM BOARD SYSTEM

### PART 1 - GENERAL

#### 1.01 THE REQUIREMENT

- A. The CONTRACTOR shall furnish and install the gypsum drywall system required for a complete installation as shown on the Drawings.

#### 1.02 MANUFACTURERS

- A. The following list of companies manufacture products that are acceptable for this section, subject to conformance with the specified requirements: National Gypsum Company, U.S. Gypsum Company, Flintkote Company, Celotes Corporation, Manville, or an acceptable equal.
- B. Gypsum boards, veneer plaster products, trim accessories, studs, adhesives and joint treatment shall be the products of a single manufacturer, or from manufacturers recommended by the prime manufacturer of the gypsum board products.

#### 1.03 SUBMITTALS

- A. The CONTRACTOR shall submit shop drawings and other information as required to the Architect for review. Shop drawings shall include details of construction and erection, including materials, type, thickness or gauge, tape, joint compound, and accessories.

#### 1.04 QUALITY CONTROL

- A. Gypsum wallboard sustaining damage due to weather, handling or improper storage methods shall be removed from the site and replaced at the CONTRACTOR's expense.

#### 1.05 SHIPPING, HANDLING AND STORAGE

- A. All materials shall be kept dry, preferably by being stored inside roofed buildings. If necessary to store wallboard outside, it shall be stacked off the ground, properly supported on a level platform and fully protected from the elements.
- B. Gypsum wallboard shall be neatly stacked flat with sufficient support underneath to avoid sagging and care taken to avoid damage to edge, corners and surfaces.

#### 1.06 CODE

- A. Comply with the requirements of the Florida Building Code 2017, 6<sup>th</sup> Edition.

### PART 2 PRODUCTS

#### 2.01 GENERAL

- A. All components shall be Gold Bond products as manufactured by National Gypsum Company, or an acceptable equal.

## SECTION 09260 - GYPSUM BOARD SYSTEM

### 2.02 STANDARD GYPSUM WALLBOARD

- A. Gypsum wallboard shall be 5/8\_inch thick or as noted on drawings, and 48\_inches wide conforming to ASTM C 36, with tapered and rounded edges for top layers. Use for facing layers of all partitions, soffit and ceiling board is required.

### 2.03 FURRING CHANNELS

- A. Furring channels shall be 25 gauge galvanized steel, as per plans, designed for screw application of wallboard.

### 2.04 METAL STUDS

- A. See section 09111 Metal Stud Framing System.

### 2.05 JOINT REINFORCING TAPE AND JOINT COMPOUND

- A. Joint compound and reinforcing tape shall be specifically prepared for finishing gypsum wallboard shall be in conformance with ASTM C 474 and be of the highest quality. Tape and compound shall be manufactured by the wallboard manufacturer.

### 2.06 CORNER BEADS

- A. Corner beads shall be 26 gauge galvanized steel with perforated flanges, 1\_1/4\_inch x 1\_1/4\_inch.

### 2.07 SCREWS AND ACCESSORIES

- A. Screws and miscellaneous accessories required, including casing beads and expansion joint assemblies shall be galvanized. Where gypsum terminates and is not closed off, provide Gold Bond No. 200 casing beads, equal by U.S. Gypsum, or equal. Screws and other fastening devices shall be of the size and type required by the manufacturer and as acceptable to the Architect. Expansion joint assemblies shall be 20 gauge plate and slot type as detailed.

## PART 3 EXECUTION

### 3.01 JOB CONDITIONS

- A. The CONTRACTOR shall repair, prior to gypsum board insulation, any defects in adjacent or underlying Work which will affect the satisfactory execution and stability of the drywall construction.

### 3.02 GENERAL INSTALLATION

- A. All installation shall be performed by workmen experienced in drywall installation in strict accordance with the details shown on the Drawings, the shop drawings and the manufacturer's recommendations.

## SECTION 09260 - GYPSUM BOARD SYSTEM

- B. The Work of this Section shall be carefully coordinated with the Work of all other related trades including materials to be built into or applied on wallboard and items requiring additional supports within partitions.
- C. The CONTRACTOR shall maintain a minimum room temperature of 55 degrees F, during application of wallboard and joint treatment, and until completely dry or occupied. The CONTRACTOR shall provide adequate ventilation as acceptable to the Architect.

### 3.03 FRAMING AND FURRING

- A. Runner tracks shall be aligned to the partition layout at both floors and ceilings. Tracks to floor and ceiling construction shall be secured, 16-inch O.C. maximum. Fasteners shall be provided at all corners and ends of runner tracks.
- B. Full length studs between runner tracks shall be used wherever possible. When necessary, studs shall be provided by nesting with a minimum lap of 8\_inches and fasten laps with 2 screws through each flange. Studs shall be friction fit to runner tracks by positioning and rotating into place. Positive attachment shall be provided to runner tracks for studs using 3/8\_inch self\_drilling screws or stud clinching tool on both flanges or studs. Except where otherwise shown, studs shall be spaced at 16-inches O.C. maximum.
- C. Additional studs shall be provided to support inside corners at partition intersections and corners, and to support outside corners, terminations of partitions and both sides of control joints. Any additional bracing and reinforcing members shall be provided as recommended by the system manufacturer to assume complete rigidity at partitions or as shown on plans.
- D. Framing of all partitions shall be as shown on plans.
- E. At pressed metal door frames, the CONTRACTOR shall install 2 full height studs at all jambs. The first stud shall be fastened at each jamb with 2 self\_drilling screws to all frame joint anchors. The second stud shall be placed in tandem with and against the first stud.
- F. Above heads of pressed metal frames a cut\_to\_length section of track shall be installed. Flanges to overlap jamb studs and shall be securely attached to jamb studs.
- G. Between frames and ceiling, cut\_to\_length jack studs shall be installed extending from door frame header track to ceiling track. Where control joint is called for at jamb line above frame, jack stud shall be installed approximately 1\_inch from first jamb stud. At all other locations, jack studs shall be kept at least 5\_inches from jambs to avoid wallboard joints at jamb line.
- H. At masonry walls to receive wallboard finish, the CONTRACTOR shall install to receive the wallboard, horizontal furring members at the tops and bottoms of the wall board installation and intermediate vertical members spread at 16\_inches O.C. Masonry anchors shall be installed.

## SECTION 09260 - GYPSUM BOARD SYSTEM

- I. Supplementary framing, runners, furring, blocking and bracing shall be installed at openings and terminations in the Work and at locations required to support fixtures, equipment, services, heavy trim, furnishings and similar Work which cannot be adequately supported directly on gypsum board alone. Attention is directed to electrical equipment and to toilet partitions and accessories requiring additional support. The CONTRACTOR shall coordinate these requirements with the respective trade sections for exact locations.

### 3.04 WALLBOARD

- A. Boards shall be of such length so as to eliminate end joints and installed with vertical joints only. Boards shall be brought into contact with each other but shall not be forced into place. Joints on opposite sides of a partition shall not occur on the same stud. Boards shall be applied using screws specified. Expansion joints shall be provided as recommended, and as directed.
- B. Wallboard shall be held in firm contact with framing member while fastenings are being driven. Fastening shall proceed from center portion of the wallboard toward the edges and ends. Fasteners shall be set with heads slightly below the surface of the wallboard in the dimple formed by the power screwdriver. Care shall be taken to avoid the breaking of the face paper of the wallboard. Improperly driven screws shall be removed.
- C. Install sound control insulation where required in conjunction with wallboard installation as shown and indicated.
- D. Corner beads on external corners, joint treatment at re\_entrant angles and wallboard trim where wallboard butts other materials shall be provided.
- E. Screws shall be spaced not to exceed 12\_inches O.C. except at vertical butting edges of the fire\_rated partitions where they shall be 8\_inches O.C.
- F. Corner beads shall be nailed with gypsum wallboard nails spaced no greater than 8\_inches apart on each flange of the bead with the nails opposite. Similar nailing for wallboard trim shall be provided.
- G. Where wallboard butts other materials, such as masonry walls and structural frame and decking, the wallboard shall be held back so as to form a joint, which shall be sealed with an acceptable synthetic rubber base perimeter sealant.

### 3.05 JOINT TREATMENT

- A. Joint compound shall be mixed in accordance with manufacturer's instructions. A uniform layer of compound shall be applied over the joint approximately 4\_inches wide and filling the groove. The tape shall be centered over the joint and embedded into the compound leaving sufficient compound under tape to provide proper bond.
- B. A second and third coat of joint compound or joint finishing compound shall be applied after each preceding coat has been allowed to thoroughly dry. Coats shall be spread over tape and the tapered portion of edge and feathered out at the edge.

## SECTION 09260 - GYPSUM BOARD SYSTEM

- C. All inside corners shall be coated with at least one coat of joint compound over perforated tape with the edges feathered out.
- D. All screw head dimples shall receive at least 3 coats of compound.
- E. Flanges of corner and casing beads shall be concealed by at least two coats of compound feathered out approximately 9\_inches on one or both sides of the exposed metal as applicable.
- F. Each application of compound to joints and fastener heads shall be allowed to dry, then be sanded as required. Roughing of the wallboard paper surfaces shall not be permitted.
- G. All wallboard and treated areas shall be sanded smooth and ready for application of paint as acceptable to the Architect.

### 3.06 PROTECTION

- A. The CONTRACTOR shall provide all necessary protective measures to prevent soiling or damage to the finished drywall construction from subsequent building operations. Work stained, damaged or defective shall be cleaned, repaired or replaced as may be required to completely satisfy the Architect, and at no cost to the OWNER. This shall include continuous Work dislocated or damaged as a result of the corrective Work.

### 3.07 CLEANING

- A. At completion, the CONTRACTOR shall remove all excessive materials and all debris resultant from operations of Work of this Section. The CONTRACTOR shall leave entire Work in neat, clean condition satisfactory for receipt of other related items of Work which are to be installed or applied as part of Work of other Sections of these Specifications and the Drawings.

\_ END OF SECTION \_



## SECTION 09310 - CERAMIC TILE

### PART 1 GENERAL

#### 1.01 THE REQUIREMENT

A. The CONTRACTOR shall furnish and install thin set ceramic tile.

A. Commercial Standards:

ANSI A108.1 Ceramic Tile Installed with Portland Cement Mortar.

ANSI A108.5 Ceramic Tile Installed with Dry\_Set Portland Cement Mortar.

ANSI A118.1 Dry\_Set Portland Cement Mortar.

ANSI A136.1 Organic Adhesives for Installation of Ceramic Tile.

ANSI TCA 137.1 Recommended Standard Specifications for Ceramic Tile.

B. Trade Standards:

Tile Council of America (TCA)

#### 1.03 QUALITY ASSURANCE

A. Work shall conform to American National Standard Specifications for the Installation of Ceramic Tile.

#### 1.04 SUBMITTALS

A. The CONTRACTOR shall submit shop drawings, samples and other information for Architect's review:

1. Sample board of the ceramic tiles and grout for color selection by the Architect.

2. Product data specifications and instructions for using adhesives and grouts.

3. Manufacturer's certification that tile materials supplied conform to TCA 137.1.

4. Submit maintenance data.

5. Cleaning methods, cleaning solutions recommended, stain removal methods, and polishes and waxes recommended, and

6. Tile equal to 2% of each size and color provided on project for the OWNER.

#### 1.05 DELIVERY, STORAGE, AND HANDLING

A. Maintain tile in protective packaging whenever possible.

B. Adhesives shall be protected from freezing or overheating in accordance with manufacturer's instructions.

## SECTION 09310 - CERAMIC TILE

### 1.06 CODE

- A. Comply with the requirements of the Florida Building Code 2017, 6<sup>th</sup> Edition.

### PART 2 PRODUCTS

#### 2.01 ACCEPTABLE TILE MANUFACTURERS, OR EQUAL

- A. Mid\_State Tile Company.
- B. American Olean Company.
- C. Dal Tile Company.
- D. Forms and Surfaces, (Niro Ceramic).
- E. Metropolitan Ironrock Ceramics

#### 2.02 TILE MATERIALS

- A. Ceramic Wall Tile: Ceramic wall tile shall be quality type 2, glazed finish size, style, pattern and color to be selected by the Architect with cove base,

#### 2.03 SETTING MATERIALS

- A. Mortar materials shall conform to ANSI Ceramic Tile Standard A\_2.
- B. Mortar bed shall conform to the following:
  - 1. ANSI A118.1, thinset bond coat, dry\_set cementitious mortar.
- C. Organic adhesive shall conform to ANSI A136.1, thinset bond type.

#### 2.04 GROUT TYPE

- A. Grout shall be of the cementitious type, resistant to shrinking, and manufactured by Jamo, Southern Grouts and Mortars, Inc., American Olean, or equal. Color will be selected by the Architect.
- B. Grout shall contain a latex additive, for wet areas, and manufactured as above.

#### 2.05 ACCESSORIES

- A. Metal edge strips shall be zinc alloy or stainless steel.
- B. Reinforcing mesh shall be welded fabric 2\_inch x 2\_inch size weave of 16/16 galvanized wire.

### PART 3 EXECUTION

## SECTION 09310 - CERAMIC TILE

### 3.01 INSTALLATION, GENERAL

- A. Comply with TCA recommended procedures.
- B. Conventional setting bed shall be mixed with one part Portland Cement to six parts damp sand by volume.
- C. Setting bed shrinkage mesh shall be placed in fit areas and lapped a minimum of two mesh openings. Mesh shall Extend to within two inches of all enclosing wall surfaces.

### 3.02 CERAMIC TILE INSTALLATION

- A. Ceramic tile shall be installed in accordance with ANSI A108.1.
- B. Tile shall be layed to pattern indicated, verifying pattern is uninterrupted through openings.
- C. Thresholds shall be provided at wall or frame openings to other building areas not receiving ceramic tile floor finish. Thresholds shall comply with all Federal and State handicap accessibility requirements.
- D. Tile shall be cut and fit tight to protrusions and vertical interruptions. Corners and bases shall be formed neatly.
- E. Internal angles shall be formed coved and external angles bullnosed.
- F. Work tile joints uniform in width, subject to variance in tolerance allowed in tile size. Joints shall be watertight, without voids, cracks, excess mortar, or grout.
- G. Tile shall be sounded after setting. Hollow sounding units shall be replaced.
- H. Tile shall be allowed to set for a minimum of 48 hours prior to grouting.
- I. Install base cove surface to be even and continuous with floor tile.

### 3.03 PROTECTION

- A. Cover exposed ceramic tile spandrels, stools and sills with polyethylene film for a minimum period of 48 hours for curing and protection.
- B. Activities near wall finish shall be prohibited for 48 hours after installation. Tile shall be covered as necessary, to maintain curing moisture until grout cures properly.
- C. If construction foot traffic must use the floor areas, they shall be covered with heavy\_duty non\_staining construction paper taped in place.

\_ END OF SECTION \_

## SECTION 099113 - PAINTING

### PART 1 -- GENERAL

#### 1.01 WORK INCLUDED

- A. Surface preparation.
- B. Surface finish schedule.

#### 1.02 REFERENCES

- A. ANSI/ASTM D16 \_ Definitions of Terms Relating to Paint, Varnish, Laquer, and Related Products.
- B. ASTM D2016 \_ Test Method for Moisture Content of Wood.
- C. Comply with Florida Building Code 2017, 6<sup>th</sup> Edition.

#### 1.03 DEFINITIONS

- A. Conform to ANSI/ASTM D16 for interpretation of terms used in this Section.

#### 1.04 QUALITY ASSURANCE

- A. Applicator: Company specializing in commercial painting and finishing with 5 years documented experience.
- B. Products: manufacturer's best quality.
- C. All field applied paints finishes shall comply with Green Seal Zero VOC or Low VOC standards. Maximum allowable VOC content for finishes is as follows:
  - a. Interior flat finish: 50 g/l
  - b. Interior non-flat finish: 150 g/l
  - c. Exterior flat finish: 100 g/l
  - d. Exterior non-flat finish: 200 g/l
- D. All field applied transparent or semi-transparent wood finishes shall comply with Green Seal Zero VOC or Low VOC standards. Maximum allowable VOC content for finishes is as follows:
  - e. Varnish: 350 g/l
  - f. Stains: 250 g/l
  - g. Sealer: 200 g/l
  - h. Waterproof Sealers: 250 g/l
  - i. Low Solids Coating 120 g/l

#### 1.05 REGULATORY REQUIREMENTS

- A. Conform to applicable code for flame/fuel/smoke rating requirements for finishes.

#### 1.06 TESTS

- A. Provide analysis and testing of coating or finish.

## SECTION 099113 - PAINTING

### 1.07 SUBMITTALS

- A. Submit product data for Architect Review.
- B. Submit samples for Architect Review.
- C. Submit two samples 6 x 6 inch in size illustrating range of colors and textures available for each surface finishing product scheduled, including paint finish for selection by Architect..
- D. Submit manufacturer's application instructions.
- E. Added stock: provide a minimum of 1 gallon of each color and finish utilized.

### 1.08 FIELD SAMPLES

- A. Provide samples.
- B. Provide field sample panel, a 4 foot wide interior panel or 10' x 10' exterior panel, illustrating special coating color, texture, and finish.
- C. Locate where directed.
- D. Accepted sample may remain as part of the Work.

### 1.09 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site.
- B. Store and protect products.
- C. Deliver products to site in sealed and labeled containers; inspect to verify acceptance.
- C. Container labeling to include manufacturer's name, type of paint, brand name, brand code, coverage, surface preparation, drying time, cleanup, color designation, and instructions for mixing and reducing.
- D. Store paint materials at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in well ventilated area, unless required otherwise by manufacturer's instructions.
- E. Take precautionary measures to prevent fire hazards and spontaneous combustion.

### 1.10 ENVIRONMENTAL REQUIREMENTS

- A. Provide continuous ventilation and heating facilities to maintain surface and ambient temperatures above 45 degrees F for 24 hours before, during, and 48 hours after application of finishes, unless required otherwise by manufacturer's instructions.

## SECTION 099113 - PAINTING

- B. Do not apply exterior coatings during rain or when relative humidity is above 70 percent, unless required otherwise by manufacturer's instructions.
- C. Minimum Application Temperatures for Latex Paints: 45 degrees F for interiors; 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.
- D. Minimum Application Temperature for Varnish and Finishes: 65 degrees F for interior or exterior, unless required otherwise by manufacturer's instructions.

### PART 2 -- PRODUCTS

#### 2.01 MATERIALS

- A. Acceptable manufacturers: Sherwin Williams, Benjamin Moore or M.A.B.
- B. Coatings: Ready mixed, except field catalysed coatings. Process pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.
- C. Coatings: Good flow and brushing properties; capable of drying or curing free of streaks or sags.
- D. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.

#### 2.02 FINISHES

- A. Refer to schedule at end of Section.
- B. All colors and textures as selected by Architect, see construction drawings for color schedule.

### PART 3 -- EXECUTION

#### 3.01 INSPECTION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
  - 1. Plaster and Gypsum Wallboard: 12 percent.
  - 2. Masonry, Concrete, and tilt-up concrete: 12 percent.

## SECTION 099113 - PAINTING

3. Interior Located Wood: 15 percent, measured in accordance with ASTM D2016.
  4. Exterior Located Wood: 19 percent, measured in accordance with ASTM D2016.
  5. Concrete Floors: 19 percent.
- D. Beginning of installation means acceptance of existing surfaces.

### 3.02 PREPARATION

- A. Remove electrical plates, hardware, light fixture trim, and fittings prior to preparing surfaces or finishing.
- B. Correct minor defects and clean surfaces which affect work of this Section.
- C. Shellac and seal marks which may bleed through surface finishes.
- D. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- E. Aluminum Surfaces Scheduled for Paint Finish: Remove surface contamination by steam or high pressure water. Remove oxidation with acid etch and solvent washing. Apply etching primer immediately following cleaning.
- F. Asphalt or Bituminous Surfaces Scheduled for Paint Finish: Remove foreign particles to permit adhesion of finishing materials. Apply compatible sealer or primer.
- G. Insulated Coverings: Remove dirt, grease, and oil from canvas and cotton.
- H. Concrete Floors: Remove contamination, acid etch, and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow to dry.
- I. Copper Surfaces Natural Oxidized Finish: Remove contamination by applying oxidizing solution of copper acetate and ammonium chloride in acetic acid. Rub on repeatedly for required effect. Once attained, rinse surfaces with clear water and allow to dry.
- J. Gypsum Board Surfaces: Latex fill minor defects. Spot prime defects after repair.
- K. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.
- L. Concrete masonry Scheduled to Receive Paint: Remove dirt, loose mortar, scale, salt or alkali powder, and other foreign matter. Remove oil and grease with a solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with a solution of sodium metasilicate after thoroughly wetting with water. Allow to dry.

## SECTION 099113 - PAINTING

- M. Stucco and Plaster Surfaces: Fill hairline cracks, small holes, and imperfections. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.
- N. Uncoated Steel and Iron Surfaces: Remove grease, scale, dirt, and rust. Where heavy coatings of scale are evident, remove by wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Spot prime paint after repairs.
- O. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.
- P. Interior Wood Items Scheduled to Receive Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats.
- Q. Exterior Wood Scheduled to Receive Paint Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior caulking compound after prime coat has been applied.
- R. Wood and metal doors scheduled for painting: seal top and bottom edges with primer.

### 3.03 PROTECTION

- A. Protect elements surrounding the work of this Section from damage or disfiguration.
- B. Repair damage to other surfaces caused by work of this Section.
- C. Furnish drop cloths, shields, and protective methods to prevent spray or droppings from disfiguring other surfaces.
- D. Remove empty paint containers from site.

### 3.04 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Do not apply finishes to surfaces that are not dry.
- C. Apply each coat to uniform finish.
- D. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.
- E. Sand lightly between coats to achieve required finish.
- F. Allow applied coat to dry before next coat is applied.



## SECTION 099113 - PAINTING

- G. Where clear finishes are required, tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
- H. Prime back surfaces of interior and exterior woodwork with primer paint.
- I. Prime back surfaces of interior woodwork scheduled to receive stain or varnish finish with gloss varnish reduced 25 percent with mineral spirits.

### 3.05 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

- A. Refer to Mechanical and Electrical for schedule of color coding and identification banding of equipment, ductwork, piping, and conduit.
- B. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
- C. Prime and paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, and except where items are prefinished.
- D. Replace identification markings on mechanical or electrical equipment when painted accidentally.
- E. Paint interior surfaces of air ducts, and convector and baseboard heating cabinets that are visible through grilles and louvers with one coat of flat black paint, to limit of sight line. Paint dampers exposed behind louvers, grilles, and convector and baseboard cabinets to match face panels.
- F. Paint exposed conduit and electrical equipment occurring in finished areas.
- G. Paint both sides and edges of plywood backboards for electrical and telephone equipment before installing equipment.
- H. Color code equipment, piping, conduit, and exposed ductwork in accordance with color schedule. Color band and identify with flow arrows, names, and numbering.
- I. Replace electrical plates, hardware, light fixture trim, and fittings removed prior to finishing.

### 3.06 CLEANING

- A. As Work proceeds, promptly remove paint where spilled, splashed, or spattered.
- B. During progress of Work maintain premises free of unnecessary accumulation of tools, equipment, surplus materials, and debris.
- C. Collect cotton waste, cloths, and material which may constitute a fire hazard, place in closed metal containers and remove daily from site.

## SECTION 099113 - PAINTING

### 3.07 SCHEDULE – EXTERIOR SURFACES

- A. Wood – Painted
  - 1. One coat alkyd primer sealer.
  - 2. Two coats alkyd enamel, gloss.
- B. Stucco.
  - 1. One coat primer/sealer.
  - 2. Two coats latex house paint; Flat.
- C. Metal Shop Primed
  - 1. Touch up with Zinc Molyboate primer.
  - 2. Two coats of Alkyd Primer, gloss.
- D. Metal Unprimed
  - 1. One coat Zinc Chromate primer.
  - 2. Two coats Alkyd enamel, gloss.
- E. Metal – Galvanized
  - 1. One coat Latex/Acrylic Galvanized primer.
  - 2. Two coats Acrylic enamel, gloss.
- F. Wood – Stained
  - 1. One coat Semi-transparent preservative wood finish
- G. Concrete Floor/Walkway
  - 1. One coat Low Lustre clear silicone/acrylic blend sealer

### 3.08 SCHEDULE \_ INTERIOR SURFACES

- A. Wood \_ Painted
  - 1. One coat alkyd primer sealer.
  - 2. Two coats alkyd enamel, semi-gloss.
- B. Concrete Walls:
  - 1. One coat block filler.
  - 2. Two coats acrylic epoxy, semi-gloss.
- C. Gypsum Board
  - 1. One coat latex primer sealer.
  - 2. Two coats latex egg shell.
- D. Metal Shop Primed
  - 1. Touch-up with Zinc Chromate primer.
  - 2. Two coats of Alkyd Enamel, gloss.
- E. Metal-Galvanized
  - 1. One coat Zinc Chromate primer.
  - 2. Two coats Alkyd Enamel, gloss.

SECTION 099113 - PAINTING

- F. Metal-Galvanized
  - 1. One coat latex/acrylic Galvanized primer.
  - 2. Two coats Acrylic enamel, gloss.
  
- G. Concrete Floor
  - 1. Epoxy flooring. See Specification Section.

- END OF SECTION -

## SECTION 101423 - IDENTIFYING DEVICES

### PART 1 – GENERAL

#### 1.01 CONDITIONS AND REQUIREMENTS

- A. All provisions of the conditions of the contract apply to this section.
- B. Description: Provide the following:
  - 1. Room name signs.
  - 2. Storage sign.
  - 3. Fire Extinguishing Signs
  - 4. Temporary Sign.

#### 1.02 QUALITY ASSURANCE

- A. Reference Codes and Specifications: Florida Building Code – 2017 6<sup>th</sup> Edition.
- B. American with Disability Act.

#### 1.03 SUBMITTALS

- A. Shop Drawings: Submit shop drawings for all items in this Section including all accessories.
- B. Samples: Submit samples illustrating for size sample sign of type, style and color and method of attachment.
- C. Manufacturer's installation instructions.

#### 1.04 DELIVERIES, STORAGE AND HANDLING

- A. Deliver; store and protect products from damage.
- B. Package sign, labeled in name groups.

### PART 2 – PRODUCTS

#### 2.01 INTERIOR ROOM NAME AND NUMBER SIGNS

- A. Comply with the American With Disabilities Act. All signs shall be acrylic plastic and have raised letters, braille, and numbers. See Signage Plans and details on drawings.
- B. Mounting: Flat surface mounted with two-sided foam adhesive tape and silicone adhesive sealant as recommended by manufacturer.

## SECTION 101423 - IDENTIFYING DEVICES

- C. Number of signs required: All signs listed in Signage Schedule plus required regulatory signs noted below.
- D. Sign Type: Signature Series, Plaque Module 4.0, 7" x 7" or Module 8.0 11 ¾" x 11 ¾" with square corners by InnerFace Sign Systems or approved equal. Sign Color shall be Green Color 12 with a Black Color 8 stripe. Provide black letters and numbers.

### 2.02 FIRE EXTINGUISHER SIGNS:

- A. Furnish and install sign on exterior side of rooms having fire extinguishers in the room. Sign shall have white raised letters chemically fused to 18" red acrylic plastic background. Signs shall be 1 ½" high x length required reading "FIRE EXTINGUISHER INSIDE". Doors with these signs shall remain unlocked at all times the Facility is occupied including night time uses.

### 2.03 COMBUSTIBLE STORAGE SIGNS:

- A. Comply with the American With Disabilities Act. Provide and install at all Air-conditioning, Mechanical and Electrical Rooms a sign mounted on the door to read as follows.

"COMBUSTIBLE STORAGE NOT PERMITTED"

- B. Signs shall be acrylic plastic, red background with white letters 1 ½" high x width needed for copy.
- C. Mount on doors with non-removable oval-head screws.

### 2.04 TEMPORARY SIGNS

- A. Install sign around entire perimeter of the temporary chain-link construction fencing. Sign shall consist of 4 ½" high red letters on yellow background. Sign shall read

"DANGER

CONSTRUCTION AREA

DO NOT ENTER"

- B. Sign shall be placed not more than 25'-0" from center to center.

### 2.05 AMERICAN WITH DISABILITIES ACT COMPLIANCE

- A. All exterior room name signs, interior room name signs, storage signs and

## SECTION 101423 - IDENTIFYING DEVICES

temporary signs shall comply with the American with Disabilities Act, including but not limited to the character proportion, height, finish, contrast, mounting height and location, symbols, braille, pictograms and raised characters.

### PART 3 – EXECUTION

#### 3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work.
- B. Beginning of installation means installer accepts existing surfaces.

#### 3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions and in compliance with the Americans Disabilities Act.
- B. Install signs after doors and surfaces are finished, at locations indicated.
- C. Clean sign and polish all signs.

- END OF SECTION -

## SECTION 102800 - TOILET ACCESSORIES

### PART 1 GENERAL

#### 1.1 SUMMARY

- A. Section includes toilet accessories for restrooms.
- B. Related Sections:
  - 1. Section 061053 – Wood Blocking and Curbing: Placement of backing plate reinforcement.
  - 2. Section 093013 – Tile.

#### 1.2 REFERENCES

- A. ASTM International:
  - 1. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
  - 2. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
  - 3. ASTM A269 - Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service.
  - 4. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
  - 5. ASTM A666 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.
  - 6. ASTM B456 - Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium.
  - 7. ASTM C1036 - Standard Specification for Flat Glass.
- B. Federal Specification Unit:
  - 1. FS A-A-3002 - Mirrors, Glass.

#### 1.3 SUBMITTALS

- A. Section 013300 – Shop Drawings, Product Data and Samples.
- B. Product Data: Submit data on accessories describing size, finish, details of function, attachment methods.
- C. Manufacturer's Installation Instructions: Submit special procedures and conditions requiring special attention.

#### 1.4 QUALITY ASSURANCE

- A. Maintain one copy of each document on site.

#### 1.5 COORDINATION

- A. Section 013100 – Project Management and Coordination: Coordination and project conditions.

## SECTION 102800 - TOILET ACCESSORIES

- B. Coordinate the Work with placement of internal wall reinforcement and reinforcement of toilet partitions to receive anchor attachments.

### PART 2 PRODUCTS

#### 2.1 TOILET AND BATH ACCESSORIES

- A. Manufacturers:
  - 1. A & J Washroom Accessories.
  - 2. American Specialties, Inc.
  - 3. Bobrick Washroom Accessories.
  - 4. Bradley Corp.
  - 5. Builders Brass Works.
  - 6. Franklin Brass Manufacturing Co.
  - 7. Koala Corp.
  - 8. Sloan Valve Company
  - 9. Truebro Inc.
  - 10. World Dryer Corp.
  - 11. Substitutions: Section 012500 - Product Requirements.

#### 2.2 COMPONENTS

- A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with anchors and fittings, steel anchor plates, adapters, and anchor components for installation.
  - 1. Grind welded joints smooth.
  - 2. Fabricate units made of metal sheet of seamless sheets, with flat surfaces.
- B. Keys: Furnish two keys for each accessory to Owner; master key all accessories.
- C. Stainless Steel Sheet: ASTM A666, Type 304.
- D. Stainless Steel Tubing: ASTM A269, stainless steel.
- E. Galvanized Sheet Steel: ASTM A653, G90 (Z275) zinc coating.
- F. Mirror Glass: Float glass, Type I, Class 1, Quality q2 (ASTM C 1036), with silvering, copper coating, and suitable protective organic coating to copper backing in accordance with FS A-A-3002.
- G. Adhesive: Contact type, waterproof.
- H. Fasteners, Screws, and Bolts: Hot dip galvanized, tamper-proof.
- I. Expansion Shields: Fiber, lead, or rubber as recommended by accessory manufacturer for component and substrate.
- J. Primer.



## SECTION 102800 - TOILET ACCESSORIES

### 2.3 TOILET ROOM ACCESSORIES

- A. Refer to Schedule on Drawings.

### 2.4 FACTORY FINISHING

- A. Stainless Steel: No. 4 satin brushed finish, unless otherwise noted.
- B. Chrome/Nickel Plating: ASTM B456, Type SC 2, satin, unless otherwise noted.
- C. Baked Enamel: Pretreat to clean condition, apply one coat primer and minimum two coats epoxy baked enamel.
- D. Galvanizing for Items Other than Sheet: ASTM A123/A123M; minimum 1.2 oz/sq ft coating thickness; galvanize after fabrication.
- E. Galvanizing for Nuts, Bolts and Washers: ASTM A153/A153M.
- F. Shop Primed Ferrous Metals: Pretreat and clean, spray apply one coat primer and bake.
- G. Back paint components where contact is made with building finishes to prevent electrolysis.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Section 013100 – Project Coordination: Coordination and project conditions.
- B. Verify exact location of accessories for installation.
- C. Verify field measurements are as indicated on product data.

### 3.2 PREPARATION

- A. Deliver inserts and rough-in frames to site for timely installation.
- B. Provide templates and rough-in measurements as required.

### 3.3 INSTALLATION

- A. Install plumb and level, securely and rigidly anchored to substrate.
- B. Mounting Heights and Locations: As required by accessibility regulations and as indicated on Drawings.

- END OF SECTION -

## SECTION 10522 – FIRE EXTINGUISHERS, CABINETS, AND ACCESSORIES

### PART 1 -- GENERAL

#### 1.01 WORK INCLUDED

- A. Fire extinguishers.
- B. Cabinets.
- C. Accessories.

#### 1.02 REFERENCES

- A. NFPA 10 \_ Portable Fire Extinguishers.

#### 1.03 QUALITY ASSURANCE

- A. Conform to NFPA 10 requirements for extinguishers.

#### 1.04 SUBMITTALS

- A. Submit product data.
- B. Include physical dimensions, operational features, color and finish, wall mounting brackets with mounted measurements, anchorage details, rough\_in measurements, location, and details.
- C. Submit manufacturer's installation instructions.

#### 1.05 OPERATION AND MAINTENANCE DATA

- A. Submit manufacturer's operation and maintenance data.
- B. Include test, refill or recharge schedules, procedures, and re\_certification requirements. Extinguishers shall be certified within 30 days of occupancy.

### PART 2 -- PRODUCTS

#### 2.01 FIRE EXTINGUISHERS

- A. Dry Chemical Type: Stainless steel tank, with pressure gage. U.L. Rating 2A-10BC, 5 lbs. Provide surface mounted supports, brackets and anchoring devices for surfaces where shown on plans.

#### 2.02 FIRE EXTINGUISHER CABINETS

- A. Cabinet: Formed sheet steel, 18 gage, primed, fully recessed type to fit inside 6" partitions, see plans for location.

## SECTION 10522 – FIRE EXTINGUISHERS, CABINETS, AND ACCESSORIES

- B. Trim: Flat.
- C. Door: 18 gage thick stainless steel , reinforced for flatness and rigidity; full glass access. No Break to Use.
- D. Mounting Hardware: Appropriate to cabinet.
- E. Graphic Identification: Fire Extinguisher.
- F. Fire Extinguisher: stainless steel tank with pressure gauge UL rating 2A-10BC, 5 Lbs.

### 2.03 ACCESSORIES

- A. Fire Extinguisher Brackets: As required for extinguishers hung on wall or mounted in cabinet.

### 2.04 FABRICATION

- A. Form body of cabinet with tight inside corners and seams.
- B. Pre-drill holes for anchorage.
- C. Form perimeter trim and door stiles by welding, filling, and grinding smooth.
- D. Hinge doors for 180 degree opening with continuous piano hinge. Provide roller type catch.
- E. Glaze doors with resilient channel gasket glazing.

### 2.05 FINISHES

- A. Extinguisher: Red Enamel.
- B. Cabinet Trim and Door: stainless steel
- C. Cabinet Interior: White Enamel.

### 2.06 ACCEPTABLE MANUFACTURER

- A. Larsen MFG. Co. or acceptable equal.

## PART 3 -- EXECUTION

### 3.01 INSPECTION

## SECTION 10522 – FIRE EXTINGUISHERS, CABINETS, AND ACCESSORIES

- A. Verify rough openings for cabinet are correctly sized and located.
- B. Beginning of installation means acceptance of existing conditions.

### 3.02 INSTALLATION

- A. Install cabinets plumb and level in wall openings at a height to comply with the American Disabilities Act.
- B. Secure rigidly in place in accordance with manufacturer's instructions.

- END OF SECTION -