

1.0 - GENERAL

- 1.1 Scope  
The work under this section consists of all rough carpentry work.
- 1.2 General
- A. Rough carpentry shall generally include all rough framing, furring, grounds, bucks, blocking and such other wood work as required.
  - B. Carpentry shall also include all temporary bracing, shoring and centering as required for the support or protection of the work.
- 1.3 Cooperation With Other Trades  
The work under this section includes the necessary cutting and patching required for the proper installation of work of other trades. Work which is to be built in by others shall be accurately positioned and properly built in to secure the work of this section. Temporary centering, bracing and shoring shall be provided as required for the support and protection of masonry work during construction.
- 1.4 Delivery and Storage  
Lumber and other materials specified herein shall be delivered, handled and stored in order to prevent damage and absorption of excess moisture. Lumber shall be stored in such a manner as to insure proper ventilation and protection from the weather.

2.0 - PRODUCTS

- 2.1 Lumber
- A. All dimensional lumber used under this section shall be thoroughly dried No. 2 Southern Yellow Pine or No. 2 Douglas Fir of sizes, shapes and lengths required. Moisture content shall not exceed 19% at time of installation.
  - B. All wood shall be sound, flat, straight, well seasoned, thoroughly dry and free from structural defects. Warped or twisted wood shall not be used.
  - C. Lumber grades shall conform to the grading rules of the manufacturer's association under whose rules the lumber is produced. All lumber shall be grade-marked.
- 2.2 Plywood
- A. Each panel of softwood plywood shall be identified with the DFPA grade trademark of the American Plywood Association, and shall meet the requirements of Product Standard PS 1-66 for Softwood Plywood Construction and Industrial. All plywood which has any edge or surface permanently exposed to the weather shall be of the exterior type.
  - B. Plywood sheathing and/or decking shall be DFPA Standard with exterior glue, thickness as shown on the drawings or required for the intended use. Square edge or tongue and groove as approved.
  - C. Plywood for roof decking shall be 3/4" minimum CDX with C grade up. Provide "H" clips at mid-span of edge joints.

2.3 Wood Treatment

- A. Lumber in contact with concrete or masonry, including roof blocking, cants and nailers and/or as indicated, shall be pressure preservative treated in accordance with American Wood Preservers Institute Standard No. LP-2. Creosote, oil or similar materials which bleed shall not be used.
- B. Lumber for blocking and furring, located within interior concealed spaces shall be non-combustible. Treatment shall be equal to "Flame-Proof" by Osmose Wood Preservative; "Non-Con" by Koppers, or approved equal. Lumber shall be UL certification marked.
- C. Pressure Treated wood associated with roof and roof edge construction which will be in contact with steel or galvanized steel components shall be wrapped or covered with Ice & Water Shield to prevent direct contact between pressure treated wood and steel.

2.4 Fastening Devices

Nails, screws, bolts, anchors, washers, clips, shields, power actuated devices and other rough hardware shall be of the sizes and types indicated on the drawings or as required to adequately anchor all members. Anchors for nailing strips and blocking shall have nuts and washers countersunk and bolts cut off flush with the top of the wood nailer. All fasteners in contact with pressured treated wood shall be galvanized.

2.5 Temporary Closures

Provide batten doors with locks at all exterior openings. Appropriate protection against weather and life safety shall be maintained throughout the job.

2.6 Blocking

Provide solid blocking at all grab bars, millwork cabinets and wall mounted units. Coordinate with Installer and/or Manufacturer.

2.7 Building Wrap - Provide building wrap over exterior surface of all exterior walls as recommended by manufacturer. Building Wrap shall be approved equal to Tyvek.

3.0 - EXECUTION

3.1 Installation

- A. All work shall be installed plumb and true, and secured in place with proper fastenings so as to make rigid and firm.
- B. The work of this section shall be performed in the best practice relating to the trade so as to carry out the intent of the drawings and to properly accommodate the work of all trades.
- C. Cut ends or faces of all treated wood shall be brushed treated with preservative.
- D. Wood Studs shall not exceed 16" o.c.. Provide stud framing for walls to receive ceramic tile at 12" o.c..
- E. Plywood Roof Decking shall be installed with a 1/8" expansion gap between abutting sheets, all sides.
- F. All Roof Deck fasteners shall be 100% within roof framing. Nails missing or by-passing structural rafter members shall be subject to correction.

END OF SECTION

METAL-PLATE-CONNECTED WOOD TRUSSES – SECTION 06176

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes wood roof and roof girder trusses and truss accessories.

1.3 DEFINITIONS

- A. Metal-Plate-Connected Wood Trusses: Planar structural units consisting of metal-plate-connected members fabricated from dimension lumber and cut and assembled before delivery to Project site.
- B. Lumber grading agencies, and the abbreviations used to reference them, include the following:
  - 1. SPIB - Southern Pine Inspection Bureau.

1.4 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide metal-plate-connected wood trusses capable of withstanding design loads within limits and under conditions indicated.
  - 1. Design Loads: As indicated on the drawings.
  - 2. Maximum Deflection Under Design Loads:
    - a. Roof Trusses: Vertical deflection of 1/240 of span for total load.

1.5 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
  - 1. Submit all shop drawings on three reproducible prints only. One reproducible print will be returned. Additional prints required by the contractor are the responsibility of the Contractor and shall be made after the reproducible is returned.
- B. Product Data: For metal-plate connectors, metal framing anchors, bolts, and fasteners.
  - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used, net amount of preservative retained, and chemical treatment manufacturer's written instructions for handling, storing, installing, and finishing treated material.

- C. Shop Drawings: Show location, pitch, span, camber, configuration, and spacing for each type of truss required; species, sizes, and stress grades of lumber; splice details; type, size, material, finish, design values, orientation, and location of metal connector plates; and bearing details.
  - 1. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- D. Product Certificates: For metal-plate-connected wood trusses, signed by officer of truss fabricating firm.

## 1.6 QUALITY ASSURANCE

- A. Metal Connector-Plate Manufacturer Qualifications: A manufacturer that is a member of TPI and that complies with TPI quality-control procedures for manufacture of connector plates published in TPI 1.
  - 1. Manufacturer's responsibilities include providing professional engineering services needed to assume engineering responsibility.
  - 2. Engineering Responsibility: Preparation of Shop Drawings and comprehensive engineering analysis by a qualified professional engineer. Calculations shall be signed and sealed by a professional engineer registered in the state where the project is located. Individual truss member bracing and their corresponding connections are the responsibility of the truss design engineer. The truss erection plan and individual truss member bracing details shall be coordinated with the calculations.
- B. Fabricator Qualifications: Shop that participates in a recognized quality-assurance program that involves inspection by SPIB, Timber Products Inspection, TPI, or other independent testing and inspecting agency acceptable to Architect and authorities having jurisdiction.
- C. Source Limitations for Connector Plates: Obtain metal connector plates through one source from a single manufacturer.
- D. Comply with applicable requirements and recommendations of the following publications:
  - 1. TP1 1, "National Design Standard for Metal Plate Connected Wood Truss Construction."
  - 2. TPI DSB, "Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses."
  - 3. TPI HIB, "Commentary and Recommendations for Handling, Installing & Bracing Metal Plate Connected Wood Trusses."
- E. Wood Structural Design Standard: Comply with applicable requirements in AFPA's "National Design Specifications for Wood Construction" and its "Supplement."

## 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Comply with TPI recommendations to avoid damage and lateral bending. Provide for air circulation around stacks and under coverings.
- B. Inspect trusses showing discoloration, corrosion, or other evidence of deterioration. Discard and replace trusses that are damaged or defective.

1.8 COORDINATION

- A. Time delivery and erection of trusses to avoid extended on-site storage and to avoid delaying progress of other trades whose work must follow erection of trusses.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Metal Connector Plates:
    - a. Alpine Engineered Products, Inc.
    - b. CompuTrus, Inc.
    - c. Eagle Metal Products.
    - d. Jager Industries, Inc.
    - e. Mitek Industries, Inc.
    - f. Robbins Engineering, Inc.
    - g. TEE-LOK Corporation.
    - h. Truswal Systems Corporation.
  2. Truss to Truss Metal Framing Anchors:
    - a. Alpine Engineered Products, Inc.
    - b. Cleveland Steel Specialty Co.
    - c. Harlen Metal Products, Inc.
    - d. KC Metals Products, Inc.
    - e. Silver Metal Products, Inc.
    - f. Simpson Strong-Tie Company, Inc.
    - g. Southeastern Metals Manufacturing Co., Inc.
    - h. United Steel Products Company, Inc.

2.2 DIMENSION LUMBER

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
1. Factory mark each piece of lumber with grade stamp of grading agency.
  2. For exposed lumber indicated to receive natural or stained finish, omit grade stamp and provide certificates of grade compliance issued by grading agency.
  3. Provide dressed lumber, S4S, manufactured to actual sizes required by DOC PS 20 for moisture content specified.
  4. Provide dry lumber with 15 percent maximum moisture content at time of dressing.
  5. Provide dry lumber with 15 percent maximum moisture content at time of dressing.
- B. Grade and Species: Provide dimension lumber of Southern Pine, SPIB, for truss chord and web members, graded visually or mechanically, and capable of supporting required loads

without exceeding allowable design values according to AFPA's "National Design Specifications for Wood Construction" and its "Supplement."

### 2.3 METAL CONNECTOR PLATES

- A. General: Fabricate connector plates to comply with TPI 1 from metal complying with one of the requirements indicated below:
1. Hot-Dip Galvanized Steel Sheet: ASTM A 653/A 653M, G60 coating designation; Designation SS, Grade 33, and not less than 0.036 inch thick.
  2. Electrolytic Zinc-Coated Steel Sheet: ASTM A 591/A 591M, 80Z coating designation; ASTM A 570/A 570M, Structural Steel (SS), Grade 33, and not less than 0.047 inch thick.
  3. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, AZ50 coating designation; Structural Steel (SS), Grade 33, and not less than 0.036 inch thick.
  4. Stainless-Steel Sheet: ASTM A 666, Type 304, and not less than 0.035 inch thick.

### 2.4 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
- B. Nails, Wire, Brads, and Staples: FS FF-N-105.
- C. Wood Screws: ASME B18.6.1.
- D. Lag Bolts: ASME B18.2.1.
- E. Bolts: Steel bolts complying with ASTM A 307, Grade A with ASTM A 563 hex nuts and, where indicated, flat washers.

### 2.5 METAL FRAMING ANCHORS

- A. General: Provide framing anchors made from metal indicated, of structural capacity, type, and size indicated, and as follows:
1. Research/Evaluation Reports: Provide products acceptable to authorities having jurisdiction and for which model code research/evaluation reports exist that show compliance of metal framing anchors, for application indicated, with building code in effect for Project.
  2. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.
- B. Galvanized Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 coating designation.
- C. Stainless-Steel Sheet: ASTM A 666, Type 304.
1. Use for exterior locations and where indicated.
- D. Truss Tie-Downs: As shown on drawings.

- E. Roof Truss-to-Truss Hangers: As designed by Truss Fabricator.

## 2.6 MISCELLANEOUS MATERIALS

- A. Galvanizing Repair Paint: SSPC-Paint 20 or DOD-P-21035, with dry film containing a minimum of 94 percent zinc dust by weight.

## 2.7 FABRICATION

- A. Cut truss members to accurate lengths, angles, and sizes to produce close-fitting joints.
- B. Fabricate metal connector plates to sizes, configurations, thicknesses, and anchorage details required to withstand design loads for types of joint designs indicated.
- C. Assemble truss members in design configuration indicated; use jigs or other means to ensure uniformity and accuracy of assembly with joints closely fitted to comply with tolerances in TPI 1. Position members to produce design camber indicated.
  - 1. Fabricate wood trusses within manufacturing tolerances in TPI 1.
- D. Connect truss members by metal connector plates located and securely embedded simultaneously in both sides of wood members by air or hydraulic press.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Install wood trusses only after supporting construction is in place and is braced and secured.
- B. Before installing, splice trusses delivered to Project site in more than one piece.
- C. Hoist trusses in place by lifting equipment suited to sizes and types of trusses required, exercising care not to damage truss members or joints by out-of-plane bending or other causes.
- D. Install and brace trusses according to TPI recommendations and as indicated.
- E. Install trusses plumb, square, and true to line and securely fasten to supporting construction.
- F. Space trusses as indicated on drawings; adjust and align trusses in location before permanently fastening.
- G. Anchor trusses securely at bearing points; use metal framing anchors. Install fasteners through each fastener hole in metal framing anchor according to manufacturer's fastening schedules and written instructions.
- H. Securely connect each truss ply required for forming built-up girder trusses.
  - 1. Anchor trusses to girder trusses as indicated.

- I. Install and fasten truss member permanent bracing during truss erection and before construction loads are applied. Anchor ends of permanent bracing where terminating at walls or beams.
- J. Install wood trusses within installation tolerances in TPI 1.
- K. Do not cut or remove truss members.
- L. Replace wood trusses that are damaged or do not meet requirements.
  - 1. Do not alter trusses in field.

3.2 REPAIRS AND PROTECTION

- A. Repair damaged galvanized coatings on exposed surfaces with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

END OF SECTION



1.0 - GENERAL

1.1 Scope

- A. The work under this section consists of all finish carpentry, millwork and related items.
- B. Millwork shall be defined as follows: "All exterior and interior woodwork exposed to view in the finished building, except lumber yard or specialty items. All exposed wood, plywood, hard plastic and wood doors are included."
- C. All millwork shall be produced by the same source of supply to coordinate matching of materials.

1.2 Submittals

- A. Shop drawings shall be furnished on all millwork.
- B. All shop drawings shall show species of woods and the manufacturer's name for all manufactured items.

1.3 Applicable Standards

- A. The Quality Standards of the American Woodwork Institute (AWI) shall apply and, by reference, are made a part of this specification.
- B. Millwork materials and workmanship not shown, specified, or normally furnished to a higher degree of quality shall conform to custom grade requirements of the AWI Quality Standards.

1.4 Delivery and Storage

- A. When all millwork items are ready for shipment to the job site, the architect shall be notified through the contractor so that either may inspect the work in the mill prior to shipment.
- B. All materials shall be inspected by the contractor's superintendent upon receipt at the job site. No faulty or damaged materials shall be received. It shall be the contractor's responsibility to produce finished items of work in first class condition.
- C. No interior millwork shall be delivered until the building has been dried out. Heat shall be required in cold or humid weather.
- D. No trim shall be delivered or placed until the areas of the building in which the trim is to be placed are thoroughly dry and ready for the installation. The building shall be enclosed and heated.

2.0 - PRODUCTS

2.1 General

- A. All materials shall be of the best of their respective kinds. All materials used in finished work shall be clear, free from cracks, checks, knots and other imperfections that may interfere with the proper completion of the work and any warped or otherwise imperfect work shall be removed and replaced.
- B. All plywood shall have a grade-trademark which shall identify each panel of plywood as to type, grade and conformance to CS45 or CS122 (current issues). If use is

exposed to weather or excessive moisture, plywood shall be of the exterior type. Exposed faces and faces to receive plastic laminates shall be "A" grade. Panels used for concealed cabinet parts may be C-D grade. Thickness and application details shall be as shown on drawings or required for the intended use.

2.2 Interior Woodwork

- A. Lumber used for painted interior woodwork, unless otherwise indicated, shall be one of the following:  
Fir - Coast or Inland Douglas White  
  
Pine - Ponderosa, Southern  
  
Redwood  
  
Cypress  
  
Yellow Poplar  
  
Grade of lumber used shall be second grade for paint finish, except cypress may be third grade.
- B. Hardwood: All references to hardwood shall imply stain grade oak.
- C. All interior plywood to be painted shall be Natural Birch.
- D. All interior wood work and plywood to be stained or finished natural shall be Premium Grade Select White Birch or as specified on drawings. Veneer shall be rotary cut or as indicated on drawings or related specification sections. Semi-exposed parts, as defined by AWI, of natural or stained casework shall be Natural Birch.
- E. Lumber shall be kiln dried with an average moisture content of 6% to 11%.
- F. Particle board shall be U. S. Plywood Corp. "Novoply" Weyerhaeuser Company "Timblend", or approved equal of thickness shown. Factory sanded or sealed or filled, 2 sides.

2.3 Plastic Laminate

- A. Plastic laminate shall be Nevamar, Wilson-Art, Formica, Pionite, Arbonite, or Lami-Art, 1/16" thick. Manufacturer, color and pattern shall be as selected and indicated on Finish Legend and Schedule..
- B. Backing sheet shall be high pressure laminate, .020" minimum thickness. Plastic laminate to be used on all interior open shelves. Melamine is not acceptable unless it matches the selected plastic laminate.
- C. The adhesive shall be that recommended by the manufacturer of the laminated plastic used.

2.4 Solid Polymer Countertop

- A. Solid polymer countertop to be DuPont "Corian"; Color: price group "E" or better; with a matte finish, or pre-approved equal. Provide as indicated on drawings.
- B. Fabrication - Countertops with sinks to be 19 mm thick; edge detail as indicated on Architectural drawings, complete with holes and cutouts for plumbing and bath accessories as indicated on drawings. Provide counter complete with back and side

splashes of size shown on Architectural drawings. Fabrications to be performed by a certified Corian fabricator/installer. Components to be fabricated to greatest extent practical to sizes and shapes indicated. Form joints between components using manufacturer's standard joint adhesive. Joints to be inconspicuous in appearance and without voids. Attach 2" wide reinforcing strip of Corian under each joint. Rout and finish component edges to a smooth, uniform finish. Rout all cutouts and then sand all edges smooth.

- C. Installation - Install components plumb and level. Adhere plumbing and bath accessories to countertops using manufacturer's recommended adhesives and color matched silicone sealant. Adhere back and side splashes to countertop using color matched silicone sealant.

2.5 Quartz Countertop

- A. Quartz countertop to be Cesarstone; Color to be selected by Architect from manufacturer's 42 stocked colors with polished finish or pre-approved equal. Provide as indicated on drawings.
- B. Fabrication and Installation:  
Countertops to be 30mm thickness unless otherwise noted. Edge detail as indicated on architectural drawings. Countertops to be installed in accordance with manufacturer's recommendations. Apply sealants according to manufacturer.

2.6 Rough Hardware

All exposed bolts or other anchors shall be chrome-plated brass.

2.7 Finish Hardware

1. Furnish and install all finish hardware for millwork items including, but not necessarily limited to, cabinet door and drawer pulls and latches, adjustable shelf standards and brackets, and hardware for doors less than 1-3/8" thick. Hardware finish shall match room door hardware finish.
2. Shelf Standards and Brackets for open shelving shall be heavy duty and double cleated equal to Knapp and Vogt 185. Provide brackets compatible with indicated shelf width indicated. Standards shall be prepared for attachment and fully attached accordingly, and spaced 16" o.c. Provide with feature to secure shelf to standard.
3. Countertop, work surface and knee space brackets shall be equal to A & M Steel Brackets as manufactured by A & M Hardware, Inc. Provide brackets 1/8" maximum size as compatible with indicated countertop width. Brackets shall be prepared for attachment and fully attached accordingly and spaced 32" o.c. Black in color unless otherwise selected.

2.8 Thickness of Members

All thicknesses shall be in accordance with the maximum possible dressed size from standard lumber. If widths or thicknesses are not available in hardwood, gluing may be used on widths over 5-1/4" or thicknesses over 1-1/6".

2.9 Workmanship

- A. All exposed surfaces and edges shall be finished smooth and be free of saw cuts, marks or defacement. All joints shall be accurately and neatly made and fit.
- B. End grain shall be concealed. Exposed edges of plywood shall present a finish the same as the finished sides.

- C. Work shall be scribed and fit to other finished surfaces in a careful manner. Should other work be damaged or disturbed, it shall be made good at the expense of this contractor.
- D. Work shall be assembled at the mill insofar as is practicable and delivered ready for erection. When necessary to cut and fit on job, the material shall be made up with ample allowance for cutting.
- E. This contractor shall verify all measurements at the building and shall examine all adjoining work on which his work is dependent.
- F. Millwork shall be executed in accordance with the approved shop drawings, the workmanship shall be of first quality and the construction of all parts shall be of the best current practice. The work shall be assembled so as to hold together with close joints, fastenings shall be concealed and all work shall be properly and firmly backed and blocked as required. Provision shall be made for expansion and shrinkage.
- G. Exposed surfaces shall be machine-sanded to an even, smooth surface, nails set, ready for finishing or pre-finishing when noted. All woodwork shall be dry, clean, and smooth before any finishing materials are applied. All nail holes, cuts, cracks and other defects shall be treated so as to be unnoticeable.
- H. All wood surfaces to be set against masonry and/or concealed after erection shall be given a heavy coat of sealer. All woodwork to have paint finish shall be primed under the PAINTING SECTION.
- I. All transparent finished (i.e., stained) woodwork shall be shop finished by Millwork Contractor.
- J. All caulking to match laminate or stain color.
- K. All millwork/casework cabinets in contact with finish floor shall receive scheduled base.

2.10 Carpentry and Millwork Items

- A. The following millwork items are intended to guide such work in this project and do not necessarily limit the scope of this section.
- B. Where not otherwise specified, shelving, cabinet work and millwork of all types shall conform with requirements of Premium Grade of "Quality Standards of the Architectural Woodwork Industry" (Architectural Woodwork Institute).
- C. Wood Base and Shoe Mould - Shall be as detailed on drawings. Base shoe mould lengths to be maximized wherever possible. Wood scraps and remnants used for base material is NOT acceptable.

2.12 Materials and Construction

- A. MDF (Medium Density Fiberboard)  
Shall be equal to Premier7 MDF, Plus Grade. MDF is to be shop finished by Millwork Contractor with a transparent stain. The actual surface of the MDF is to be visible through the stain color. Stain colors are to match paint selections indicated on drawings. Millwork Contractor to provide stain samples to Architect for approval

prior to fabrication.

- B. Panels - End panels, shelves, bottoms and partitions of 3/4" Birch plywood, "Good" grade on all surfaces or plastic laminate covered particle board as approved. All other surfaces may be A grade fir plywood. All edges exposed to sight shall be self edged and sanded smooth and flush.
- C. Doors - Construction of 3/4" Birch plywood, "Good" grade or plastic laminate covered particle board as approved. All edges shall be self edge.
- D. Drawers - Front identical to doors above. Back minimum of 1/2" A-A Grade fir plywood. Sides of solid hardwood of sound grade. Bottoms of 1/4" plywood or 1/4" brown welded fiber board. Front and back connection shall be rigid type. Bottoms shall be let into front, back and sides approximately 1/4 of an inch. Drawer interiors to be Melamine. Exposed interiors to be plastic laminate.
- E. Backs - Backs shall be a minimum of 1/4" plywood or 1/4" brown welded fiber board. Open to view 1/4" Birch plywood. All open-to-view backs are to receive plastic laminate.
- F. Adjustable Shelves - 3/4" thick for maximum spans of 30". 1-1/8" thick for maximum spans of 42". All open-to-view shelves are to receive plastic laminate.
- G. Finishes - Tops, edges and backsplashes and any other areas noted shall be plastic laminate covered.
- H. Cabinet Hardware - Contractor shall furnish hardware equal to that as manufactured by Stanley, as hereinafter specified. All hardware to be Brushed Chrome, unless indicated otherwise on drawings.
  - Pull Handles - 4" wire pull, brushed chrome finish.
  - Drawer Glides - 1284 KV Euroglides; 22"; 75 lbs.; 3/4 extension.
  - Door Hinges - Grass 3803 -120 degree concealed. Hinge center 78.5 mm. - typical.
- I. Tote Trays:
  - 1. Heavy-duty vacuum-formed polypropylene plastic with full top rim and pull. Trays are ivory color, equipped with label holder.
  - 2. Tote tray/supply cabinets equipped with injection molded polycarbonate; continuous side rail support glide. Each side rail support glide is adjustable with integral support pins to interface 32mm pre-drilled holes.
- J. Computer Keyboard  
Equal to HumanScale Model Number: 6G90090F22 with Tilt adjustment range: 0o to -15o. Exceeds BIFMA standards. Made primarily of powder-coated steel 15-year warranty. Keyboard Platform Made of 1/4" phenolic resin Available with Technogel or foam palm supports.

### 3.0 - EXECUTION

#### 3.1 Shop Assembly

When it is possible, all items of millwork which can be carried into the building through

doorways or windows shall be shop assembled. When it is impractical to shop assemble the entire item in one piece, it shall be shop assembled in sections and perfectly fitted in place on the job by thoroughly experienced and competent mechanics. Where job joining requires gluing, it shall be done by the same method used in the Shop.

3.2 Installation

- A. All finish carpentry and millwork of every sort shall be put up plumb or level, and straight and true. Trim put up with proper grounds and firmly secured. All work fitted and scribed to other work in a careful manner as not to injure the surface in any way. All nailing shall be blind wherever possible, but where not possible, the nailing driven and set so as to be not visible in the finish.
- B. All trim to be free from defects impairing durability or fitness for receiving finish. All trim properly sanded at mill and hand sanded at the job.
- C. Finished surfaces of interior millwork, detailed or scheduled to be painted, shall be left ready for treatment by the painter. The jointing and framing of all members of the finished millwork shall be executed in accordance with the best and latest recognized mill practice.
- D. This contractor shall cooperate with contractors for other trades with which his work comes in contact.

3.3 Finish Hardware

- A. Install items of hardware furnished under FINISH HARDWARE SECTION.
- B. Hardware shall be accurately fitted and securely attached, without damage to metal or woodwork, and care shall be taken to not mar or injure any work.
- C. Hardware shall be protected as approved or removed for painting.
- D. Upon completion of the work, hardware shall be demonstrated to work freely, keys shall be fitted into their respective locks and upon acceptance of the work, all keys shall be tagged and delivered to the Owner.
- E. Countertop and worksurface/knee space brackets shall be attached as recommended by the manufacturer (with fasteners to color match finish) for maximum strength. Brackets uniformly at 32" o.c. maximum.
- F. All open shelves are to receive heavy duty, double cleated adjustable standard hardware at 16" o.c. with uniform spacing and uniform level attachment.

3.4 Finish Louvers and Grilles

Door louvers not indicated as wood and grilles shall be of metal furnished under Mechanical Section and installed under this Section.

END OF SECTION