SECTION 06 40 00

ARCHITECTURAL WOODWORK

(WOOD COMPOSITE PANELS)

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIERS \*\* Roseburg Forest Products Co.; medium density fiberboard and particleboard.  
This section is based on the products of Roseburg Forest Products Co., which is located at:  
3660 Gateway St.  
Springfield, OR 97477  
Toll Free: 800-245-1115  
Phone: 541-679-3311  
Fax: 541-679-2543  
Email: MarkN@rfpco.com  
Web: roseburg.com  
[Click Here] for additional information.  
Roseburg was founded in 1936, which means we've been around for more than 80 years. That may seem like plenty of time in human years, but at that age, a tree is just coming into its own. We like to think that as a company we're doing the same.  
Our company founder Kenneth Ford was a pioneer in the forest products industry. In 1946, he blazed a trail by purchasing 15,000 acres of timberland: Today, Roseburg owns over 600,000 acres of viable timberlands, ensuring consistent forest products for the future. We started designing a plywood facility in 1950, and soon began producing wood products as well as lumber.  
All of Roseburg's manufacturing is done in the U.S. What started as a single sawmill in 1946 has grown into the Roseburg of today: America's single broadest mix producer of sustainable wood building products, owner of the largest capacity sawmill in the country, and the greatest exporter of wood chips in the U.S. Roseburg's engineered wood products facility is also one of the largest facilities of its kind in the nation.  
At Roseburg, we offer custom industrial performance panels built to each customer's specifications, and the Roseburg mixed trucks and boxcar shipping solutions mean that we can customize both orders and shipping to suit each customer's needs.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete, add items below not required for project.

* + 1. Particleboard with ultra-low emitting formaldehyde resins (ULEF).
    2. Particleboard with (TSCA) - Title VI Formaldehyde Regulation.
    3. Medium density fiberboard panels with no added formaldehyde resins (NAF).
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIERS \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 06 20 00 - Finish Carpentry (06 20 00) - Finish Carpentry.
    2. Section 06 25 00 - Prefinished Paneling (06 25 00) - Prefinished Paneling.
    3. Section - (06 40 13) - Exterior Architectural Woodwork.
    4. Section 06 41 14 - Plastic Laminate Faced Architectural Cabinets (06 41 00) - Architectural Wood Casework
    5. Section - (06 41 13) - Wood Veneer Faced Architectural Cabinets
    6. Section - (06 41 16) - Plastic Laminate Clad Architectural Cabinets
    7. Section 06 42 19 - Plastic-Laminate-Faced Wood Paneling0 (06 42 00) - Wood Paneling
    8. Section - (06 42 16) - Flush Wood Paneling
    9. Section - (06 42 19) - Plastic-Laminate-Faced Wood Paneling.
    10. Section 08 91 13 - Motorized Wall Louvers (10 21 00) - Compartments and Cubicles.
    11. Section 10 51 10 - Locker Hardware\* (10 51 00) - Lockers.
    12. Section - (10 55 13) - Central Mail Delivery Boxes.
    13. Section 12 30 00 - Casework (12 30 00) - Casework.
    14. Section 12 35 17 - Bank Casework (12 35 00) - Specialty Casework
    15. Section - (12 35 30.13) - Kitchen Casework.
    16. Section 12 50 00 - Furniture (12 50 00) - Furniture.
    17. Section - (12 59 00) - Systems Furniture.
  1. REFERENCES

\*\* NOTE TO SPECIFIERS \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. American National Standards Institute (ANSI):
       1. ANSI A208.1 - Particleboard, Mat-Formed Wood.
       2. ANSI A208.2 - Medium Density Fiberboard for Interior Use.
       3. ANSI Z124.3 - Plastic Lavatories.
    2. ASTM International (ASTM):
       1. ASTM D 1037 - Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials.
       2. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
    3. Architectural Woodwork Institute (AWI):
       1. AWI Quality Standards; Sections 100, 200, 400, 500, 600, 700, 1500, and 1700.
    4. Composite Panel Association (CPA):
       1. CPA-4-19 - Eco-Certified Composite (ECC) Sustainability Standard.
    5. California Air Resources Board (CARB):
       1. CARB ATCM 93120 - California Formaldehyde Regulation (CARB rule).
    6. Environmental Protection Agency (EPA)
       1. Toxic Substance Control Act (TSCA) - Title VI Formaldehyde Regulation
    7. Forest Stewardship Certification (FSC):
       1. Scientific Certification System, Chain of Custody Number: SCS-COC- 000300, Roseburg Forest Products.
    8. International Organization for Standardization (ISO):
       1. ISO 14021 - Environmental Labels and Declarations - Self-Declared Environmental Claims (Type II Environmental Labelling).
       2. ISO 4586 - 2 - High Pressure Decorative Laminate Sheets based on Thermosetting Resins.
    9. MEA New York Standard for Fire-Rated Panel:
       1. MEA 244, Material and Equipment Acceptance by Department of Buildings, City of New York, NY.
    10. National Electrical Manufacturers Association (NEMA):
        1. NEMA LD3 - Laminate Testing.
    11. Scientific Certification Systems (SCS):
        1. Certification by independent evaluation of 82-92 percent pre-consumer recycled wood fiber content depending on product standard and contains no added formaldehyde (made without the use of phenol formaldehyde and shown in lab testing to be free of formaldehyde down to a detection limit of 0.05 ppm). Furnished by Scientific Certification Systems, Oakland, CA.
    12. Standards Council of Canada (CSA):
        1. Formaldehyde Emission Standards for Composite Wood Products - CAN/CSA 0160-16
    13. UL Environment: A business unit of Underwriters Laboratories.
    14. U.S. Green Building Council (USGBC)
        1. LEED - Leadership in Energy and Environmental Design
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. Product Data: Manufacturer's data sheets on each product to be used, including:
        1. Manufacturer's printed installation instructions, showing required preparation and installation procedures.
        2. Storage and handling requirements and recommendations.
        3. Installation methods.
        4. Cleaning and maintenance instructions.
     3. Verification Samples:
        1. Particleboard: two samples, 3-1/8 by 4-1/8 in (89 x 127 mm).
        2. Medium Density Fiberboard: Samples of 3-1/8 by 8-1/2 in (101 by 203 mm) samples of finished for casework, paneling, and trim.
           1. Submit 4 in (101 mm) minimum long color sample of vinyl edge banding for each MDF substrate.

\*\* NOTE TO SPECIFIER \*\* Delete paragraph if sustainability certifications are not required.

* + 1. Manufacturer's Certification: Materials comply with specified requirements and suitable for intended application.
       1. Third-Party Certification:
          1. USGBC Approved Certification thru (SCS) Scientific Certification Systems, Oakland, CA.
          2. Pre-consumer Recycled Wood Fiber Content: Third-party certification.
          3. FSC Mix Credit Certified: Third-party certification.

\*\* NOTE TO SPECIFIERS \*\* The quality assurance article applies to MDF. Delete if not required.

* 1. QUALITY ASSURANCE
     1. Manufacturer Qualifications:
        1. Panel manufacturer shall have 2 consecutive years of experience in manufacture of no-added formaldehyde medium density fiberboard panels and ULEF and TSCA - Title VI compliant Particleboard.
     2. Fabricator Qualifications:
        1. Woodwork fabricator shall have 5 consecutive years of experience in fabrication of casework, paneling, and trim.

\*\* NOTE TO SPECIFIER \*\* Mock up is for MDF panels only. Delete if not required.

* + 1. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship for each type MDF paneling and MDF sanding and running trim using manufacturer approved installation methods.
       1. Finish areas designated by Architect.
       2. Do not proceed with remaining work until workmanship and appearance are approved by Architect.
       3. Subject to approval by Architect, mock-up may be retained as part of finish work.
  1. DELIVERY, STORAGE, AND HANDLING
     1. Delivery: Deliver materials in manufacturer's original, unopened, undamaged pallets with identification labels intact.
     2. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions in strict compliance with manufacturer's instructions and industry standards.
        1. If unloaded outdoors, move and store under shelter as soon as possible. Avoid unloading in inclement weather.
        2. Inspect delivered products to verify products are not damaged, soiled or have been exposed to water.
     3. Handling: Protect materials during handling and installation to prevent damage.
  2. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  3. WARRANTY
     1. Manufacturer's Warranty: Manufacturer's standard limited warranty against defects in manufacturing.

1. PRODUCTS
   1. MANUFACTURER
      1. Acceptable Manufacturer: Roseburg, which is located at:3660 Gateway St.Springfield, OR 97477Toll Free Tel: 800-245-1115Tel: 541-679-3311 Fax: 541-679-2543Email: [request info (MarkN@rfpco.com)](https://arcat.com/rfi?action=email&company=Roseburg&message=RE%253A%2520Spec%2520Question%2520(06400ros)%253A%2520&coid=43520&spec=06400ros&rep=&fax=541-679-2543);Web: <http://www.roseburg.com>
   2. PARTICLEBOARD
      1. Basis of Design: SkyBlend particleboard as manufactured and supplied by Roseburg Forest Products Company.
         1. Type: Particleboard with ultra-low emitting formaldehyde resins (ULEF).
         2. Standards Compliance: ANSI A208.1 and ASTM D 1037.
         3. Grade: Industrial.

\*\* NOTE TO SPECIFIERS \*\* Delete panel thicknesses not required.

* + - 1. Panel Thickness: 3/8 in (9 mm).
      2. Panel Thickness: 1/2 in (13 mm).
      3. Panel Thickness: 5/8 in (16 mm).
      4. Panel Thickness: 11/16 in (17 mm).
      5. Panel Thickness: 3/4 in (19 mm).
      6. Panel Thickness: 1 in (25 mm).
      7. Panel Thickness: 1-1/8 in (29 mm).
      8. Panel Thickness: As indicated on Drawings.

\*\* NOTE TO SPECIFIERS \*\* Available primarily in 49 and 61 in (1245 and 1549 mm) widths. Many lengths are available. Some restrictions may apply depending on length and thickness. Custom cut sizes are available. Consult Roseburg Forest Products Co. for availability of custom panel sizes. Delete panel sizes not required.

* + - 1. Panel Size: 49 by 97 in (1245 by 2464 mm).
      2. Panel Size: 61 by 97 in (1245 by 2464 mm).
      3. Panel Size: 61 by 109 in (1549 by 2769 mm).
      4. Panel Size: 61 by 121 in (1549 by 3073 mm).
      5. Panel Size (in / mm): \_\_\_\_\_\_.
      6. Panel Size: As indicated on Drawings.
      7. Physical characteristics:

\*\* NOTE TO SPECIFIERS \*\* Physical characteristics vary from Plant to Plant, Reference Roseburg's website [www.roseburg.com/Product](http://www.roseburg.com/Product) Group/particleboard for Technical Data Sheets for each particleboard type. May contribute to LEED v2009 MRc4 Recycled Content or LEED v4 Building Product Disclosure and Optimization-Sourcing of Raw Materials (Recycled Content). Delete recycled wood fiber subparagraph is not applicable or required.

* + - 1. Recycled Wood Fiber: 100 percent.
         1. Certification: CPA 4-19 (ECC).
         2. Total panel basis weight is at least 90 percent pre-consumer recycled wood fiber.
         3. Third-party certified 100 percent recycled and/or recovered wood fiber in accordance with ISO 14021.

\*\* NOTE TO SPECIFIERS \*\* May contribute to LEED v2009 MRc7 Certified Wood or LEED v4 Building Product Disclosure and Optimization-Sourcing of Raw Materials (FSC Certified Wood Products) Delete FSC mix credit certified subparagraph id not applicable or not required.

* + - 1. FSC Mix Credit Certified: Product valued at 100 percent.
         1. Specify "FSC Certified SkyBlend" at time of order.
         2. SCS-COC-000300.

\*\* NOTE TO SPECIFIERS \*\* May contribute to LEED v2009 EQc4.4 Indoor Environmental Quality - Low Emitting Materials - Composite Wood and Agrifiber or LEED v4 Indoor Environmental Quality Credit - Low-Emitting Materials - Composite Wood. Delete low emitting materials subparagraph is not applicable or not required.

* + - 1. Low Emitting Materials:
         1. CARB Approved Ultra-Low Emitting Formaldehyde (ULEF) Resins.
         2. Complies with CARB ATCM 93120 ULEF Exemption for Formaldehyde Emission Limits.
         3. Complies with CAN / CSA 0160-16

\*\* NOTE TO SPECIFIERS \*\* May contribute to LEED v4 Building Product Disclosure and Optimization- Environmental Product Declarations based on Roseburg's participation in the industry-wide (generic) EPD for Particleboard. Delete EPD subparagraph if not applicable or not required.

* + - 1. Environmental Product Declaration (EPD):
         1. Manufacturer is recognized participant by UL Environment, the program operator, in a Type III Product Specific EPD for particleboard.
         2. Manufacturer is recognized participant by UL Environment, the program operator, in the industry-wide EPD for particleboard.
         3. Raw particleboard valued as 1/2 product (per unique application) from one manufacturer for the purposes of this LEED credit.

\*\* NOTE TO SPECIFIERS \*\* May contribute to LEED v2009 MRc5 Materials and Resources - Regional Materials based on proximity of the project. Delete the location subparagraph if not applicable or not required.

* + - 1. Location:

\*\* NOTE TO SPECIFIERS \*\* Delete manufacturing location not required.

* + - * 1. Manufacturing Location: (SkyBlend Particleboard) Dillard, OR: Taylorsville, MS; Missoula, MT.

Wood Fiber Extraction: Within 300-mile radius of each manufacturing location.

* + 1. Basis of Design: Ultrablend particleboard as manufactured and supplied by Roseburg Forest Products Company.
       1. Type: Particleboard made with CARB / TSCA Title VI compliant Resin:
       2. Standards Compliance: ANSI A208.1 and ASTM D 1037.
       3. Particleboard Grades:
          1. Industrial - MS, M2 and M3
          2. Door Core - LD1 and LD2
       4. Recycled Wood Fiber: 100 percent.
          1. Certification: CPA 4-19 (ECC).
          2. Total panel basis weight is at least 90 percent pre-consumer recycled wood fiber.
          3. Third-party certified 100 percent recycled and/or recovered wood fiber in accordance with ISO 14021.

\*\* NOTE TO SPECIFIERS \*\* May contribute to LEED v2009 MRc7 Certified Wood or LEED v4 Building Product Disclosure and Optimization-Sourcing of Raw Materials (FSC Certified Wood Products) Delete FSC mix credit certified subparagraph id not applicable or not required.

* + - 1. FSC Mix Credit Certified: Product valued at 100 percent.
         1. Specify "FSC Certified SkyBlend" at time of order.
         2. SCS-COC-000300.
      2. Formaldehyde Emissions Regulation:
         1. CARB / TSCA Title VI compliant Resin:
         2. CAN / CSA 0160-16
      3. Environmental Product Declaration (EPD):
         1. Manufacturer is recognized participant by UL Environment, the program operator, in a Type III Product Specific EPD for particleboard.
         2. Manufacturer is recognized participant by UL Environment, the program operator, in the industry-wide EPD for particleboard.
         3. Raw particleboard valued as 1/2 product (per unique application) from one manufacturer for the purposes of this LEED credit.

\*\* NOTE TO SPECIFIERS \*\* May contribute to LEED v2009 MRc5 Materials and Resources - Regional Materials based on proximity of the project. Delete the location subparagraph if not applicable or not required.

* + - 1. Location:

\*\* NOTE TO SPECIFIERS \*\* Delete manufacturing location not required.

* + - * 1. Manufacturing Location: (Ultrablend Particleboard) Dillard, OR: Taylorsville, MS; Simsboro, LA, Missoula, MT

Wood Fiber Extraction: Within 300-mile radius of each manufacturing location.

* 1. MEDIUM DENSITY FIBERBOARD PANELS

\*\* NOTE TO SPECIFIERS \*\* Delete paragraphs not required.

* + 1. Moisture Resistant Medium Density Fiberboard Panels made with NAF Resin:
       1. Basis of Design: Medex by Roseburg Forest Products Company.
          1. Standards Compliance:

ANSI A208.2 - Grade 155; MR50.

ASTM D1037: Passed the 6-Cycle Accelerated Aging Test.

* + - 1. Medium Density Fiberboard (Moisture Resistant) Sustainable, Moisture Resistant, medium density fiberboard panel manufactured from 100 percent post-industrial recycled wood fiber complying with ANSI A208.2, having a minimum 48 pcf density; minimum for screw holding capacity on face and edge of 350 pounds and 275 pounds respectively; an ASTM E84 Class C flame spread rating; fabricated with binder containing no urea formaldehyde.
    1. Interior Medium Density Fiberboard Panels made with NAF Resin:
       1. Basis of Design: Arreis by Roseburg Forest Products Company.
          1. Standards Compliance: ANSI A208.2 - Grade 130; MR10 for panels greater than or equal to 5/8 in (16 mm).
    2. Interior Medium Density Fiberboard Panels made with NAF Resin:
       1. Basis of Design: Arreis Ultra by Roseburg Forest Products Company.
          1. Standards Compliance: ANSI A208.2 - Grade 130; MR30 for panels greater than or equal to 5/8 in (16 mm).
       2. Medium Density Fiberboard - No Added Formaldehyde (NAF) Sustainable Design medium density fiberboard panel manufactured from 100 percent post-industrial recycled wood fiber complying with ANSI A208.2, having a minimum 50 pcf density; minimum for screw holding capacity on face and edge of 275 pounds and 275 pounds respectively; an ASTM E84 Class C flame spread rating; fabricated with binder containing no urea formaldehyde.
    3. Interior Medium Density Fiberboard Panels for Profile Machining made with CARB / TSCA Title VI compliant Resin:
       1. Basis of Design: Medite 3D by Roseburg Forest Products company.
          1. Standards Compliance: ANSI A208.2 - Grade 130;
       2. Medium Density Fiberboard - Product meets CARB ATCM 93120 Phase 2 emission requirements - medium density fiberboard panel manufactured from 100 percent post-industrial recycled wood fiber complying with ANSI A208.2, having a minimum 49 pcf density; minimum for screw holding capacity on face and edge of 300 pounds and 280 pounds respectively; an ASTM E84 Class C flame spread rating.
    4. Interior Medium Density Fiberboard Panels made with NAF Resin:
       1. Basis of Design: Medite II by Roseburg Forest Products Company.
          1. Standards Compliance: ANSI A208.2 - Grade 155; MR30 for panels greater than or equal to 5/8 in (16 mm).
       2. Medium Density Fiberboard - No Added Formaldehyde (NAF) Sustainable Design medium density fiberboard panel manufactured from 100 percent post-industrial recycled wood fiber complying with ANSI A208.2, having a minimum 47 pcf density; minimum for screw holding capacity on face and edge of 300 pounds and 250 pounds respectively; an ASTM E84 Class C flame spread rating; fabricated with binder containing no urea formaldehyde.
    5. Flame-Retardant Medium Density Fiberboard Panels made with NAF Resin:
       1. Basis of Design: Medite FR by Roseburg Forest Products Company with Class 1 (A) Fire Rating in accordance to ASTM E-84
          1. Standards Compliance:

ANSI208.2 - Grade 130.

ASTM E 84.

MEA 244,

* + - 1. Medium Density Fiberboard made from 100 percent post-industrial recycled softwood fibers complying with ANSI A208.2, synthetic resins, and fire-retardant chemicals mixed together at time of panel manufacture to achieve flame spread index of 25 or less and smoke developed index of 200 or less per ASTM E84. having a minimum 48 pcf density; minimum for screw holding capacity on face and edge of 350 pounds and 275 pounds respectively; fabricated with binder containing no urea formaldehyde.
    1. Interior Medium Density Fiberboard Panels for Molding Profile Machining made with CARB / TSCA Title VI compliant Resin:
       1. Basis of Design: Medite Profile by Roseburg Forest Products Company.
          1. Standards Compliance: ANSI A208.2 - Grade
       2. Medium Density Fiberboard - Product meets CARB ATCM 93120 Phase 2 / TSCA Title VI emission requirements - medium density fiberboard panel manufactured from 100 percent post-industrial recycled wood fiber complying with ANSI A208.2, having a minimum 41.2 pcf density; minimum for screw holding capacity on face and edge of 200 pounds and 175 pounds respectively; an ASTM E84 Class C flame spread rating.
    2. Interior Medium Density Fiberboard Panels for Door and Textured Wall Profile Machining made with CARB / TSCA Title VI compliant Resin:
       1. Basis of Design: Medite Premium by Roseburg Forest Products Company.
          1. Standards Compliance: ANSI A208.2 - Grade 130
       2. Medium Density Fiberboard - Product meets CARB ATCM 93120 Phase 2 / TSCA Title VI emission requirements - medium density fiberboard panel manufactured from 100 percent post-industrial recycled wood fiber complying with ANSI A208.2, having a minimum 45.3 pcf density; minimum for screw holding capacity on face and edge of 300 pounds and 250 pounds respectively; an ASTM E84 Class C flame spread rating.
    3. Interior Medium Density Fiberboard Panels for Door Profile Machining made with CARB / TSCA Title VI compliant Resin:
       1. Basis of Design: Medite Ultra by Roseburg Forest Products Company.
          1. Standards Compliance: ANSI A208.2 - Grade 155
       2. Medium Density Fiberboard - Product meets CARB ATCM 93120 Phase 2 / TSCA Title VI emission requirements - medium density fiberboard panel manufactured from 100 percent post-industrial recycled wood fiber complying with ANSI A208.2, having a minimum 49 pcf density; minimum for screw holding capacity on face and edge of 325 pounds and 325 pounds respectively; an ASTM E84 Class C flame spread rating.
    4. Hardwood Panel Facings with Particleboard- CARB ULEF Exempt Core or MDF-NAF Core:
       1. Basis of Design: SkyPly or MDF by Roseburg Forest Products Company.
          1. Face Sheet: Premium grade, plain sliced hardwood.
          2. Species: As indicated on Drawings.
          3. Minimum Face and Backing Sheet Thickness: 1/50 in (0.51 mm).
          4. Backing Sheet: Hardwood.
          5. Edge Trim: Premium grade solid hardwood in species and cut-to-match paneling face sheet.
          6. Primer: Prime painted panel finish. Shop primed with primer acceptable to panel manufacturer.
    5. Thermally Fused Laminate Panel Facings:
       1. Basis or Design: Duramine by Roseburg Forest Products Company.
       2. Standards Compliance: ISO 4586-2 / (NEMA LD 3).
       3. Core Type:
          1. Moisture resistance MDF-NAF core.
          2. Fire resistant MDF core.
          3. Standard MDF core material laminated with Melamine saturated decorative paper layers thermally fused to both core face surfaces with heat and pressure.
          4. \_\_\_\_\_\_ MDF core.
          5. SkyBlend CARB ULEF Exempt Core
          6. Ultrablend CARB/ TSCA Title VI - Particleboard Core.
    6. High Pressure Laminate Panel Facings:
       1. Standards Compliance:
          1. ISO 4586-2, NEMA LD 3 - General Purpose 50.
          2. ANSI Z124.3, Type 5 or 6.
       2. Facing Thickness; Square Edge Countertops: 0.050 in (1.27 mm).
       3. Facing Thickness; Post-Formed Edge Countertops: 0.040 in (1.02 mm).
       4. Facing Thickness; Vertical Surfaces: 0.030 in (0.76 mm).
       5. Backing Thickness: 0.020 in (0.51 mm).
       6. Low pressure laminate panel facings.
    7. Laminate Clad Countertops:
       1. Construct laminate countertop substrate of 19 mm (3/4 inch).
          1. Medium density fiberboard (MDF).
       2. Moisture-resistant where countertops receive sinks, lavatories, or are subjected to liquids.
       3. Sink cutout edges sealed with appropriate sealant against moisture.
       4. No joints to occur at cutouts.
       5. Balanced backer sheet.
    8. Fasteners:
       1. Panel Z-Clips: As furnished by panel fabricator.
       2. Plated Fasteners: Wood screws, finish nails, bolts, and nuts.

\*\* NOTE TO SPECIFIERS \*\* Force to withdraw screws varies with panel type and thickness, see manufacturer's technical data sheets for specific test results based on type and thickness of each panel.

* + - 1. Screw Withdrawal Force: For number 10 sheet metal screw.
         1. Panel Face: 225 lbs (102 kg).
         2. Panel Edge: 200 lbs (91 kg).
    1. General Requirements:
       1. Type: Medium density fiberboard panels with no added formaldehyde.
       2. Composition: Lignocellulosic fibers and no-added formaldehyde synthetic resin.

\*\* NOTE TO SPECIFIERS \*\* Delete density range not required.

* + - 1. Density Range: 44 to 49 lbs per cu ft (704.8 to 784.9 kg per cu m).

\*\* NOTE TO SPECIFIERS \*\* Available by special request for special applications.

* + - 1. Density Range: 39 to 55 lbs per cu ft (624.7 to 881 kg per cu m).

\*\* NOTE TO SPECIFIERS \*\* Minimum thickness for all panels is 1/4 inches.

* + - 1. Thickness: 1/4 to 1-1/2 in (6 to 38 mm), as indicated on Drawings.

\*\* NOTE TO SPECIFIERS \*\* Delete face paneling not required.

* + - 1. Faced-paneling: Hardwood, faced on both surfaces.
      2. Faced-paneling: Low-pressure laminate, faced on both surfaces.
      3. Faced-paneling: High-pressure laminate faced on both surfaces.

\*\* NOTE TO SPECIFIERS \*\* Delete paragraph if sustainability requirements are not required.

* + 1. Sustainable Design Certification:

\*\* NOTE TO SPECIFIERS \*\* Delete sustainability requirements not required.

* + - 1. Product to be third party certified in accordance with CPA 4.
      2. CARB Third Party Certifier TPC-1.
      3. SCS Scientific Certification Systems:
         1. No Added Formaldehyde Guidelines.
         2. Pre-Consumer Recycled Content.
      4. Certification should be performed annually and shall be current.

\*\* NOTE TO SPECIFIERS \*\* May contribute to LEED v4 Building Product Disclosure and Optimization- Environmental Product Declarations based on Roseburg's participation in the industry-wide (generic) EPD for Particleboard. Delete EPD subparagraph if not applicable or not required.

* + 1. Environmental Product Declaration (EPD):
       1. Manufacturer is recognized participant by UL Environment, the program operator, in a Type III Product Specific EPD's for MDF and Particleboard.
       2. Manufacturer is recognized participant by UL Environment, the program operator, in the industry-wide EPD for MDF.
       3. Raw MDF valued as 1/2 product (per unique application) from one manufacturer for the purposes of this LEED credit.
    2. Low Emitting Materials:

\*\* NOTE TO SPECIFIERS \*\* May contribute to LEED v2009 EQc4.4 Indoor Environmental Quality - Low Emitting Materials - Composite Wood and Agrifiber or LEED v4 Indoor Environmental Quality Credit - Low-Emitting Materials - Composite Wood. Delete low emitting materials subparagraph is not applicable or not required.

* + - 1. CARB NAF Exemption due to Synthetic Resin System
      2. CARB Approved Ultra-Low Emitting Formaldehyde (ULEF) Resins.
    1. Location:
       1. Manufacturing Location: Medford, OR. El Dorado, AR; Pembroke, ON, Canada (MDF - Medium Density Fiberboard)
          1. Wood Fiber Extraction: Within 300-mile radius of manufacturing location.
    2. Fabrication Requirements:
       1. Architectural Woodwork Quality Standards (AWI): Comply with sections 100, 200, 300, 400, 500, 700, 1500, and 1700.

\*\* NOTE TO SPECIFIERS \*\* Select custom or premium grade below unless both are required for the Project.

* + - * 1. Fabricate to AWI custom grade.
        2. Fabricate to AWI premium grade.
      1. Casework Panel Construction:
         1. Panel and Trim Thickness:

Standard Panels: Top, bottom, side, and interior panels: 3/4 in (19 mm) thick.

Cabinet Base: 3/4 in (19 mm) thick moisture resistant panels.

Shelves up to 30 in (762 mm) wide: 3/4 in (19 mm) thick.

Shelves 30 to 42 inch (762 to 1067 mm) wide: 1 in (25 mm) thick.

Upper Cabinet Backs: 1/2 in (13 mm) thick.

Lower Cabinet Backs: 1/4 in (6 mm) thick.

Cabinet Doors: 3/4 in (19 mm) thick.

Drawer Fronts: 3/4 in (19 mm) thick.

Drawer Sides: 1/2 in (13 mm) thick. (Fabricator may face top edges with PVC.)

Drawer Sub-Front and Back Panels: 3/4 in (19 mm) thick.

Drawer Bottoms: 1/4 in (6 mm) thick. (Fabricator may use 1/4 in (6 mm) thick tempered hardboard and set into sides and sub-front of drawers with continuous groove.)

Drawer Cabinet Dividers between each Drawer: 3/4 in (19 mm) thick.

Countertop Panels at Countertop Front Edge: 1-1/2 in (38 mm) thick, fabricated in two layers of no-added formaldehyde medium density fiberboard panels.

Moisture-resistant panels are required for countertops with sinks.

* + - * 1. Architectural Woodwork Shop Finishes:

\*\* NOTE TO SPECIFIERS \*\* Delete panel edge not required.

Panel Edges: 0.020 in (0.51 mm) thick polyvinyl chloride.

Panel Edges: 0.08 in (2 mm) thick impact resistant polyvinyl chloride.

Hardwood-Faced Panels: AWI premium grade.

\*\* NOTE TO SPECIFIERS \*\* Delete hardwood face finishes not required.

Clear catalyzed lacquer, AWI Finish number TR-2.

Clear polyurethane varnish, AWI Finish number TR-6.

Tinted catalyzed lacquer, AWI Finish number TR-2.

Tinted polyurethane varnish, AWI Finish number TR-6.

Opaque catalyzed lacquer, AWI Finish number OP-2.

Opaque polyurethane varnish, AWI Finish number OP-6.

Concealed Panel Surfaces: 0.020 in (0.51 mm) thick Cabinet Liner or low or high pressure laminate.

Laminate Finish:

\*\* NOTE TO SPECIFIERS \*\* Delete laminate finish not required, or keep both.

High-Pressure on Exposed Vertical Panel Surfaces: Nominal 0.030 in (0.8 mm) thick.

Low-Pressure on Exposed Panel Surfaces: ANSI Z124.3, type 5 or type 6, polyester or melamine laminate in color, pattern, and surface texture as selected by Architect from manufacturer's standard colors, patterns, and surface textures.

Abrasion-Resistant High-Pressure Laminate Surface for Countertops: ISO 4586-2 / NEMA LD-3, manufacturer's standard abrasion-resistant high-pressure laminate.

\*\* NOTE TO SPECIFIERS \*\* Delete thickness not required.

Thickness: 0.050 in (1.3 mm) for square-formed laminate.

Thickness: 0.043 in (1.1 mm) for post-formed laminate.

1. EXECUTION
   1. EXAMINATION
      1. Examine substrates and conditions to ensure that work can be completed with no adverse effects.
   2. PREPARATION
      1. Prepare substrates using methods recommended by the manufacturer to achieve the best results for the panels under proper conditions.
      2. Do not proceed with installation until substrates have been fabricated based on recommended methods from the manufacturer. Commencement of installation constitutes acceptance of conditions of substrate.
   3. INSTALLATION
      1. Comply with AWI AWS fabrication and installation standard as applicable to the project.
      2. Install fabricated TFL panels according to approved architectural drawings, shop drawings and manufacturer's published installation instructions, Shim as required for proper installation.
   4. CLEANING AND PROTECTION
      1. Clean panels in accordance to manufacturer's published care and maintenance instructions.
      2. Touch up, repair or replace damaged products before completing installation.

END OF SECTION