This guide spec is intended to be used with *North American* *Architectural Woodwork Standards* (NAAWS), the quality standard published by the Woodwork Institute and the Architectural Woodwork Manufacturer’s Association of Canada.

This is a broad scope section incorporating wood casework, plastic laminate casework and countertops. Narrow scope sections are also available for each of these products.

We have not attempted to specify for LEED. While careful material selections may contribute to several LEED credits, we are not qualified to provide the right specification language. Please consult a qualified LEED authority if LEED certification is a goal.

Where materials or grades need to be selected possible choices are in brackets and in **[Bold].** In some cases, we may not have been able to list all available choices. We have tried to provide ample annotation. Notes and comments are in gray shaded text boxes such as this one.

Woodwork Institute offers two quality assurance programs and a Certified Seismic Installation Program. Items associated with those programs are in BLUE.

This section incorporates the Woodwork Institute Quality Assurance Programs. Users are asked to choose between the Certified Compliance and Monitored Compliance programs. The Certified Compliance program allows Woodwork Institute Accredited Millwork Companies (AMC) to inspect and certify its own work. (Woodwork Institute inspectors will re-inspect an AMCs work only if requested). Certification is, however, open to all bidders regardless of Woodwork Institute affiliation. The Monitored Compliance Program requires all work to be inspected at various stages of fabrication and installation by Woodwork Institute inspectors, (no AMC self-certification is allowed) with inspection reports issued to all parties after each inspection. Costs for these programs are borne by the millwork sub-contractor. Go to <http://woodworkinstitute.com> for details.

The Woodwork Institute Certified Seismic Installation Program (CSIP) is incorporated into this specification. By specifying CSIP the architect incorporates Woodwork Institute’s preapproved casework attachment system, eliminating the need to provide attachment details and engineering within the plans and specifications. CSIP provides an inspection of the installed work confirming that all casework is properly fastened. A Woodwork Institute Certificate of Compliance will be issued indicating that the work meets the seismic installation requirements. All inspections are done by WI staff. All costs of the program are borne by the casework installer. CSIP attachments are adequate for installation at any height in the building where the SDS is not greater than 2.00. There are some limitations on cabinet size. More information is available at <http://woodworkinstitute.com>.

This guide specification covers the materials and methods you would want to specify for wood and plastic laminate casework. It is recommended that you read the “Cabinet Section” of *North American* *Architectural Woodwork Standards* before using this guide specification. Many of the items you would ordinarily specify are governed by your choice of Grade.

1. **GENERAL**
   1. **SUMMARY**
      1. Section Includes:
         1. **[Wood Casework] [Plastic Laminate Casework].**
         2. **[Plastic Laminate] [Solid Surface] [Wood]** countertops.
         3. Hardware typically furnished by the casework manufacturer.
         4. Shelving.
         5. **[Decorative metalwork incorporated into wood casework.]**
         6. Structural supports incorporated into wood casework.
         7. **[Factory finishing.]**

Factory finishing is strongly recommended. It is extremely difficult to get a quality finish under job site conditions.

* + 1. Excluding:
       1. Metal support brackets and fittings that are part of the building structure.
       2. Plumbing, electrical fixtures, and telephone equipment.
    2. Related Sections:
       1. Rough Carpentry: Wood blocking or grounds inside finished walls or above finished ceilings.
       2. Metal Framing: Metal backing inside finished walls or above finished ceilings
       3. Plumbing: Fixtures and fittings installed in countertops.
       4. Wood Doors.
       5. Finish Carpentry: Standing and running trim and wall paneling
  1. **REFERENCES**
     1. Minimum standards for work in this Section shall be in conformity with *North American* *Architectural Woodwork Standards* *(NAAWS).*

All the other standards are referenced within the NAAWS.

* 1. **SUBMITTALS**
     1. Product Data: Manufacturer’s specifications, data, and installation instructions for each manufactured product specified.
     2. Shop Drawings:
        1. Submit shop drawings in conformance with the requirements of the *North American Architectural Woodwork Standards*.
        2. **[Furnish a Woodwork Institute Certified Compliance Shop Drawing Label on the first page of the shop drawings].**

This is a requirement if you specify Certified Compliance, Monitored Compliance, or Certified Seismic Installation.

* + - 1. On casework and countertop elevations show the location of backing required for attachment within walls.
      2. Submit two copies, one of which will be returned with reviewed notations. Make corrections noted (if any) and distribute required copies prior to the start of work.
    1. [**Fire-Test-Response Characteristics:  Where fire-retardant materials or products are indicated, provide materials and products with specified fire-test-response characteristics as determined by testing identical products per test method indicated by UL, ITS, or another testing and inspecting agency acceptable to OSHPD.**
       1. **Identify with appropriate markings of applicable testing and inspecting agency in the form of separable paper label or, where required by authorities having jurisdiction, imprint on surfaces of materials that will be concealed from view after installation.]**

Casework is generally considered to be furnishings, and thus exempt from flame spread and smoke development requirements. There may be some exceptions to this, particularly in medical applications if the casework is in a hall. The paragraphs below may be necessary in those circumstances.

* + 1. Samples:
       1. Submit four finished samples of each species and cut of wood to be used. Lumber samples to be minimum 6 inches by 12 inches, and plywood samples to be a minimum of 12 inches by 12 inches. Samples shall represent the range of color and grain expected to be provided.
       2. Submit four unfinished samples of each product to be provided for jobsite painting or finishing. Lumber samples to be minimum 6 inches by 12 inches, and plywood samples to be 12 inches square.

Include Item 1 if there is any factory finished wood or veneer included in this Section. Include Item 2 if any wood is to be provided for job site finishing.

* + - 1. Submit a sample in the specified finish of each hardware item that will be visible at exposed surfaces when the job is complete.
    1. **[Mockups:**

Mockups should not be necessary for most projects. Include this item if full sized samples are desired.

* + - 1. **Provide mockups of one base cabinet, one wall hung cabinet, and one countertop. Base cabinet shall have at least one drawer. Mockup shall be of the material and finish to be provided. The Approved Mockup may be incorporated in the project.]**
  1. **QUALITY ASSURANCE**
     1. Work shall be in accordance with the Grade or Grades specified of the *North American* *Architectural Woodwork Standards* *(NAAWS).*

Please select either Certified Compliance or Monitored Compliance, not both. The Certified Seismic Installation Program (CSIP) can be combined with either Certified or Monitored Compliance. If CSIP is intended, it must be clearly specified.

* + 1. **[Certified Compliance**

The Certified Compliance Program provides an additional level of assurance that the work will comply with the requirements of the North American Architectural Woodwork Standards and the specifications. It is open to all bidders regardless of Woodwork Institute affiliation. Woodwork Institute Licensees have been tested, and their work has been inspected by the Institute. Woodwork Institute inspectors will re-inspect Certified Compliance projects at no charge if there are any questions as to compliance.

* + - 1. **Before delivery to the jobsite provide a Woodwork Institute Certified Compliance Certificate indicating the millwork products being supplied and certifying that these products fully meet the requirements of the Grade or Grades specified.**
      2. **At completion of installation the woodwork installer shall provide a Woodwork Institute Certified Compliance Certificate indicating the products installed, and certifying that the installation of these products, fully meets the requirements of the Grade or Grades specified.**
      3. **All fees charged by the Woodwork Institute for their Certified Compliance program are the responsibility of the millwork manufacturer and/or installer and shall be included in their bid.]**
    1. **[Monitored Compliance**

The Monitored Compliance Program requires that work be inspected by Woodwork Institute inspectors at each phase of manufacturing and installation. Reports are issued after each inspection itemizing any non-compliant findings.

* + - 1. **All millwork and the installation thereof for this project shall be monitored for compliance to the contract documents by a Woodwork Institute Architectural Services Representative**
         1. **Full details of the Woodwork Institute Monitored Compliance Program may be found at the Institute website at www.woodworkinstitute.com or by calling the administrative office at (916) 372-9943.**
      2. **Millwork and/or installation found to be non-compliant (and not corrected) will be rejected.**
      3. **Issuance of a Monitored Compliance Certificate is a prerequisite of acceptance.**
      4. **All fees charged by the Woodwork Institute for their Certified Compliance program are the responsibility of the millwork manufacturer and/or installer and shall be included in their bid.]**
    1. **[Certified Seismic Installation Program:**

The Certified Seismic Installation Program provides for the use of Woodwork Institute’s California DSA and HCAI pre-approved seismic attachment details, relieving the architect of the responsibility for designing and engineering casework attachment for each project. If CSIP is to be used, please be sure to include paragraph 3.02 A. If you delete this item, delete 3.02 A too.

* + - 1. **Before walls are closed up provide a written Woodwork Institute Certified Seismic Installation Program report confirming that backing is provided in all locations required for casework installation or identifying those locations where backing is missing or improperly located.**
      2. **On completion of installation provide a Woodwork Institute Certified Seismic Installation Program Certificate, identifying the work covered and certifying that installation meets the requirements of the WI CSIP attachment details and schedules.**
      3. **All fees charged by the Woodwork Institute for their Certified Seismic Installation Program are the responsibility of the millwork installer and shall be included in their bid.]**
    1. Qualification:

Include the Certified Compliance Program and/or Certified Seismic Installation Program if you are using those programs. If you are not using either one you may wish to delete the whole item.

* + - 1. **[A Woodwork Institute Accredited Millwork Company.]**

Millwork subcontractors do not need to be Woodwork Institute Accredited Millwork Companies (AMC) to participate in the certification programs. AMCs are, however, pre-qualified through a licensing program that includes testing of NAAWS requirements and inspection of their work by Woodwork Institute staff.

* + - 1. Firm (woodwork manufacturer) with no less than 5 years of production experience similar to a specific project, whose qualifications indicate the ability to comply with the requirements of this section.
      2. The woodwork manufacturer must have at least one project in the past 5 years where the value of the woodwork was within 20 percent of the cost of woodwork for this project.
    1. Single Source Responsibility: A single manufacturer shall provide and install the work of described in this Section.
  1. **PRE-INSTALLATION MEETING**
     1. Before framing is completed hold a meeting of the contractor, the casework manufacturer, casework installer, and the framing contractor.
        1. Review the locations of backing required for casework installation as shown on the casework shop drawings.
        2. Review the method of attachment of the backing to the wall system as shown on the architectural drawings.
  2. **DELIVERY STORAGE AND HANDLING**
     1. Deliver materials only when the project is ready for installation and the general contractor has provided a clean storage area.
        1. Delivery of architectural millwork shall be made only when the area of operation is enclosed, all plaster and concrete work is dry, and the area broom clean.
        2. During and after installation of millwork, maintain temperature and relative humidity conditions in the same range as to be expected after occupancy.
  3. **SCHEDULING**
     1. Coordinate fabrication, delivery, and installation with the general contractor and other applicable trades.

1. **PRODUCTS**
   1. **COMPONENTS**
      1. Lumber: In accordance with the *North American Architectural Woodwork Standard* Grade specified for the product being fabricated. Moisture Content: 6% to 12% for boards up to 2-inch (50.8 mm) nominal thickness and shall not exceed 19% for thicker pieces.
      2. Veneers: In accordance with the *NAAWS* requirements for its use and the Grades specified.
      3. Core shall be **[MDF] [particleboard] [combination core]** meeting the requirements of the *NAAWS.*
         1. **[Made with no added Urea Formaldehyde.][CARB compliant.]**
         2. Moisture resistant core, where required: MDF meeting the requirements of ANSI A208.2 Grade 155 MR-50.
      4. Veneer core plywood: hardwood with a non-telegraphing grain manufactured with exterior glue.
      5. Plastic Laminate:
         1. Of the ISO 4586-3 Grade required by North American Architectural Woodwork Standards for its use.
         2. **[Cabinet Liner: ISO 4586 Grade CLS.]**

Include this Item if you intend to use cabinet liner at semi-exposed surfaces.

* + 1. Edgeband
       1. For wood veneer casework, veneer of the same species and cut as the exposed surfaces.
       2. For plastic laminate casework, **[PVC] [ABS] [high pressure decorative laminate].**

PVC and ABS edgeband are available to match many laminate patterns. PVC is more durable than laminate and it is less subject to glue failure. PVC is available in several thicknesses. 0.5mm is generally used at case bodies, and 3mm may be used at doors, drawer fronts, and false fronts. ABS claims to have the positive qualities of PVC without the environmental downside.

* + 1. Adhesives: **[Type I] [Type II].**

Type I glue is waterproof; Type II is water resistant. Type II is satisfactory except for sink tops, and possibly sink cabinets.

* + 1. Hardware:
       1. Unless otherwise specified, meeting the requirements of the *NAAWS* for the grade specified.
          1. Products meeting *NAAWS* requirements can be found at <https://woodworkinstitute.com/product-listing/>
       2. Finish:
          1. Exposed hardware: **[\_\_\_\_\_\_\_\_\_]**
          2. Semi-exposed hardware: manufacturer’s standard finish
       3. Pulls: **[\_\_\_\_\_\_\_\_\_ ].**
       4. Drawer Guides: **[Full extension] [¾ extension]**.

If you specify brand and model of drawer guides, specify for pencil drawers, box drawers, file drawers, and lateral file drawers, as applicable.

* + - * 1. Meeting the requirements of the *NAAWS* for the type and size of drawer.
        2. File Drawers: Full extension. Minimum 100-pound capacity except 150-pound capacity for lateral files.
      1. Hinges: **[Five knuckle Grade 1 hinges] [Concealed European style Grade II hinges minimum 120º opening]** **[Brand, Model].**

The *NAAWS* requires Grade I hinges for schools, hospitals and recommends them for police and fire facilities. If you select Euro style hinges (which are grade 2 or grade 3) you need to choose the maximum opening angle. 120-degree hinges are more robust than 170s and require less frequent adjustment. All Euro hinges tend to get out of adjustment over time.

* + - 1. Door Catches: **[ \_\_\_\_\_\_\_\_\_ ].**

If self-closing hinges are selected, catches will not be required. Self closing Grade I hinges are not available.

* + - 1. Shelf Supports: **[Brand, Catalog #.]** **[Bored hole system with metal supports.] [Recessed metal shelf standard with compatible supports.]**

Bored hole shelf support systems and metal shelf ladders have both been determined to provide satisfactory support.

* + - 1. **[Locks**
         1. **Door locks: [\_\_\_\_\_\_\_\_\_\_ ].**
         2. **Drawer locks: [\_\_\_\_\_\_\_\_\_\_ ].**
         3. **Glass door locks: [\_\_\_\_\_\_\_\_\_ ].**
         4. **Keying: [Keyed alike.][Each room keyed alike.][Keyed per schedule.]**

**Provide [ \_\_\_\_\_\_\_\_\_\_ ] keys per lock.**

**Provide [\_\_\_] master keys.]**

Locks will not be provided unless they are either shown on the drawing or specified for all locations

* + - 1. Elbow Catches: [\_\_\_\_\_\_\_\_\_\_ ].

Elbow catches will only be necessary at the inactive leaf of locking pairs of doors. If no door locks are required, elbow catches will not be necessary.

* + - 1. Sliding glass door hardware: [ \_\_\_\_\_\_\_\_\_ ].

Sliding glass doors that are more than 1 ½ times as tall as they are wide should be installed using top hung hardware. Tall, thin glass doors on bottom roller systems will tip and bind.

* + - 1. Etc.

Other hardware items may include wire grommets, keyboard trays, and other specialty items.

* 1. **FABRICATION**
     1. General:
        1. All materials and methods of construction are to meet the requirements of *North American* Architectural Woodwork Standards for the grade or grades specified.
           1. If there is a conflict between plans and/or specifications and the NAAWS, plans and specifications shall govern.
        2. Provide dust panels above and below all locking drawers.
     2. Wood Casework
        1. Grade: *NAAWS* **[Premium Grade] [Custom Grade] [Grades shown on plans].**

Custom grade is typically specified for, and adequately covers, most high-quality architectural woodwork. Premium Grade is typically specified for the most visible and high-profile areas such as reception counters, boardrooms, and executive areas.

* + - 1. Construction Type: **[A, frameless] [B, face frame].**

Select one. Frameless goes with flush overlay while lipped and flush inset go with face frame construction.

* + - 1. Cabinet and door Interface Style: **[Flush overlay] [Reveal overlay] [Lipped] [Flush inset].**

Flush overlay doors cover the face of the cabinet, with 1/8 inch gaps between doors, drawer fronts, and false fronts. Reveal overlay and lipped doors leave a margin around each door that exposes the cabinet front. Depending on the size of the reveal desired, face frames may be necessary. Flush Inset doors require face frames. See Section 10 of the *NAAWS* for more information.

* + - 1. Exposed Surfaces: **[[species], [cut]], [[book][slip] matched] [material suitable for opaque finish]]** meeting the requirements of the *NAAWS* for the grade specified.

Exposed surfaces are those that show when cabinet doors and drawers are closed, but not the interiors of open cabinets or cabinets with glass doors.

The species is the species of tree, such as Oak or Maple. The cut is the angle of the face of the board to the growth rings. Flat sawn or plain sliced is the most common cut. Quarter sawn or Rift cut lumber is cut with the face at right angles to the growth rings, giving a vertical grain appearance. Match refers to the way veneer leaves are matched within a panel. Book match is the most common. See Section 4 of the *NAAWS* for more information.

* + - * 1. **[Blueprint Match: blueprint match veneers on casework, wall paneling, and doors at room(s) [\_\_\_\_\_].**

Blueprint Match is very uncommon and is only necessary if there is an area where veneers need to be sequence matched on wall paneling, doors, and casework. Similar language must be inserted in the Sections specifying wood paneling, wood trim, and wood doors.

**All work in this/these area(s) shall be *NAAWS* Premium Grade.**

**Casework, paneling, doors and wood trim shall be provided by the same manufacturer.**

**Veneers shall be taken from the same flitch, to be selected by the architect.**

**Faces at cabinet doors, drawer fronts and false fronts shall be sequence matched, shall run and match vertically, and shall be sequence matched with adjacent wall paneling and/or doors.**

**Faces at exposed ends of cabinets shall be selected from the same flitch and shall be well matched to the adjacent paneling and to the cabinet fronts.**

**All components including casework, paneling, doors, and trim shall be factory finished at the same time in the same facility.]**

* + - 1. Exposed interior surfaces shall be **[per the requirements of the *NAAWS*] [veneer of the same species and cut as the exposed faces] [low pressure melamine overlay].**

Exposed interior surfaces are the interiors of open cabinets, and cabinets with glass doors.

*NAAWS* Custom Grade allows veneer of the same species, but not the same cut, as the Exposed Exterior Surfaces here. Requiring the same cut will make for a better match.

* + - 1. Semi-exposed surfaces shall be **[Per the requirements of the *NAAWS*] [Veneer of the same species as the exposed faces] [Low pressure melamine overlay].**

Semi-exposed surfaces are the surfaces that show only when cabinet doors or drawers are open.

The *NAAWS* allows melamine or veneer of the manufacturer’s choice for Custom Grade.

* + - 1. Edgeband: **[Veneer matching exposed surfaces.][One eighth inch thick solid hardwood or the same species and cut as the exposed surfaces.]**

Eighth inch hardwood is more durable, but the edge will show on doors and drawer fronts.

* + - 1. Drawers:
         1. Sides: **[Solid Hardwood.] [Seven or nine ply plywood with no interior voids.][Particle board with melamine surfacing.]**
         2. Bottoms: [**Hardwood plywood of the same species as the drawer sides.][MDF with melamine surfacing.]** Bottoms shall be fully housed into drawer sides, backs, and sub fronts, and securely glued.
         3. Joinery: [**Dovetails.] [Dowels.][Glued and nailed Lock Joints.]**

In each case the choices go from highest quality and most expensive to lower quality and least expensive. Any of these choices makes an acceptable door. A solid hardwood drawer with dovetail construction is a thing of beauty, and will probably outlast the cabinet, if not the building. A particle board and melamine drawer with lock joints is serviceable and will stand up for a long time if not abused.

* + 1. Plastic Laminate Casework:
       1. Grade: *NAAWS* **[Custom] [Premium]** Grade.

Custom grade is intended for almost all high-quality architectural woodwork. Premium Grade is typically specified for the most visible and high-profile areas such as reception counters, boardrooms, and executive areas.

* + - 1. Construction Type: *North American* *Architectural Woodwork Standards* construction type A, Frameless.

Face frame construction is not recommended for LP Casework. It is more difficult and more expensive than the same type construction for wood casework.

* + - 1. Cabinet and door interface: **[flush overlay] [reveal overlay].**

Flush overlay is the most common door interface style for LP Casework. Overlay doors cover the face of the cabinet, with 1/8 inch gaps between the doors, drawer fronts, and false fronts. Reveal overlay doors have a larger gap between doors, except the meeting edges of pairs.

* + - 1. Exposed Exterior Surfaces: High Pressure Decorative Laminate. Color and pattern as selected by the architect.
      2. Exposed interior surfaces: [**High pressure laminate matching exposed surfaces.] [Low pressure melamine overlay of a color and pattern compatible with exposed surfaces.] [Low pressure melamine overlay.]**

The *NAAWS* allows either matching high pressure laminate or melamine of a “compatible” color and pattern for Custom Grade. It requires matching high-pressure laminate for Premium Grade. You may wish to delete this item rather than choose. If you choose compatible melamine, be sure that such a pattern is available. Most standard LP colors and patterns are available in melamine, but many are special order. If you select matching melamine and it is not available, you will probably see a request for an up charge for PLAM. If you leave it at the manufacturer’s option whichever they use will be included in the bid.

* + - 1. Semi-exposed surfaces: [**Low-pressure melamine overlay.] [Cabinet liner Grade CLS.] [Laminate matching exposed surfaces.]**

Melamine is a single sheet of paper which is saturated with melamine resin, then applied to the core under heat at low pressure. It is the least durable of these choices, and the least expensive. Cabinet liner is high pressure laminate, 0.020 inches thick, which is manufactured with high heat and pressure. It is a little thinner than exposed grades of laminate, a lot cheaper, and only comes in a few colors. Cabinet liner is more durable than melamine, but more expensive. Laminate matching the exposed is about as durable as cabinet liner, and more expensive, but may be preferred for aesthetic reasons. Melamine is the industry standard and is permitted by *NAAWS* at all grades.

* + - 1. Edgeband: [**PVC, matching the color and pattern of the exposed laminate.] [ABS, matching the color and pattern of the exposed laminate.] [High Pressure Laminate of the same color and pattern as the exposed surfaces.]**

PVC edgeband is less likely to chip than Laminate, and it is less susceptible to glue failure. Most laminate colors and patterns are available in PVC. ABS has the same advantages as PVC and is arguably more environmentally friendly. PVC is widely available.

* + - * 1. **[Edgeband at doors, drawer fronts, and false fronts: 3mm [PVC] [ABS].]**

PVC and ABS edgeband are available from .0.5mm to 3mm thicknesses. 3mm edgeband on doors and drawer fronts is more durable, but the thicker edge will be more noticeable if the laminate is a wood grain or other pattern rather than a solid color.

* + - 1. Drawers:
         1. 1. Sides: **[Solid Hardwood.][Seven or nine ply hardwood plywood with no internal voids.][Particle board with melamine surfacing.]**
         2. Bottoms: **[Hardwood plywood of the same species and cut as the drawer sides.][MDF with melamine faces.]** Bottoms shall be fully housed into drawer sides, backs, and sub-fronts, and securely glued.
         3. Joinery: **[Dovetails.][Dowels.][Nailed and glued lock joints.]**

In each case the highest quality/most expensive option is listed first, and the least expensive last. A solid hardwood drawer with dovetail construction is a thing of beauty, and will probably out last the cabinet, if not the building. A particle board and melamine drawer with lock joints is serviceable and will last a long time if not abused.

* + 1. Laminated Plastic Countertops:
       1. Laminate: **[Manufacturer, Pattern.] [As indicated on drawings.] [As selected by the architect.]**
       2. Core material: **[particleboard] [MDF] [exterior grade hardwood plywood with a non-telegraphing grain].**
          1. Core for sink tops: [**Moisture Resistant [particle board] [MDF] meeting the requirements of ANSI A-208.1 or ANSI A208.2 Grade MR-50] [Exterior grade hardwood plywood with a non-telegraphing grain.]**

Particleboard and MDF are satisfactory in most environments. The *NAAWS* requires moisture resistant Particleboard or MDF at tops with sinks. Plywood is recommended only in the most abusive wet environments. Do specify MR-50 grade particle board or MDF; there are ‘water resistant’ grades that are less so.

* + - 1. Back splashes: ASSEMBLY 2-Deck mount, manufacturer assembled.

The NAAWS requires deck mounted splashes. If the splash is fastened to the wall, rather than the countertop, a gap between the bottom of the splash and the deck will develop over time.

* + - 1. Back splash Detail: **[butt joint.] [cove.] [per drawings.]**  **[\_\_\_\_ ]** inches (millimeters) high.

If several backsplash details are used, label “per drawing”, and be sure all tops are clearly detailed in the plans.

* + - 1. Front edge: **[Self edge.] [No drip bullnose edge.] [Waterfall edge.] [No drip tilt edge.] [Three-millimeter PVC edge.] [Wood edge.] [As indicated on Drawings.]**

As mentioned above, if several details are to be used, make sure they are clearly shown and labeled on the plans.

* + 1. Solid Surface Countertops:
       1. Solid surface: **[Brand, pattern, color].**
       2. Back splashes: **[Butt joint.] [Cove.] [Per drawings.]** **[\_\_\_\_ ]** inches (millimeters) high.

If several backsplash details are used call out “per drawings,’ and be sure all tops are clearly detailed and labeled in the plans.

* + - 1. Front edges: **[Self edge.] [No drip bullnose edge.] [Waterfall edge.] [No drip tilt edge.][As indicated on the drawings.]**

As above, if several details are to be used make sure they are clearly shown and labeled on the plans.

* + 1. Wood Counter Tops:
       1. Exposed surfaces: [**Species, Cut, Match.] [Species, Butcher Block.]**
       2. Core: [**Solid lumber construction, no core.] [Hardwood veneer.] [Particle Board.] [MDF.]**
       3. Splash: [**Thickness, height.]**
       4. Front Edge: **[Thickness,] [square edge.] [bullnose edge.][waterfall edge.]**
       5. Adhesive: [**Type 1, fully waterproof.] [Type 2, water resistant.]**
    2. Factory Finishing
       1. Finish all exposed and semi exposed wood surfaces before delivery to the job site.
       2. *North American* *Architectural Woodwork Standards* finish system **[\_\_\_\_ ].**
       3. Grade: *NAAWS* **[Premium] [Custom]** Grade.

Factory Finishing is strongly recommended. In addition to getting a better finish, you are moving the air quality problems off site where a proper spray booth will protect the environment and the health of the finishers. It is still worthwhile to select a low VOC finishing system, as some touch up will be required at the job site.

Commonly used *NAAWS* finish systems are: 2. Pre-catalyzed lacquer. 3. Post catalyzed lacquer. 5. Conversion Varnish. 11. Catalyzed Polyurethane. 12. Water based polyurethane. See Section 5 of the *NAAWS* for the advantages and disadvantages of each system.

1. **EXECUTION**
   1. **EXAMINATION**
      1. Verify the adequacy and proper location of any required backing or support framing.
      2. Verify that mechanical, electrical, plumbing, and other building components affecting work in this Section are in place and ready.
   2. **[FIELD QUALITY CONTROL**
      1. **Provide Woodwork Institute Certified Seismic Installation System inspection reports and certificates as specified in part 1 of this section.]**

Include this article if you are using the Woodwork Institute CSIP program.

* 1. **INSTALLATION**
     1. Install all work in conformance with the *North American* *Architectural Woodwork Standards*, latest edition.
        1. Installation shall conform to the *NAAWS* Grade of the items being installed.
     2. All work shall be secured in place, square, plumb, and level.
     3. All work abutting other building components shall be properly scribed.
     4. Mechanical fasteners used at exposed and semi-exposed surfaces, excluding installation attachment screws and those securing cabinets end to end, shall be countersunk.
     5. Equipment cutouts shown on plans shall be cut by the installer.
  2. **ADJUSTING & TOUCH UP**
     1. Before completion of the installation, the installer shall adjust all moving and operating parts to function smoothly and correctly.
     2. Fill and retouch all nicks, chips, and scratches. Replace damaged items that cannot be repaired.
  3. **CLEANUP**
     1. Upon completion of installation, the installer shall clean all installed items of pencil and ink marks and broom clean the area of operation, depositing debris in containers provided by the general contractor.

END OF SECTION