SECTION 06 10 00
ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Rough carpentry Work as indicated on the Drawings, as required for the completed Work of this Contract, and as specified herein, including, but not limited to, the following:
   1. Wood Grounds, nailing strips, blocking, furring, nailers, and framing.
   2. Curbs.
   3. Rough hardware, including nails, screws, anchors, brackets, braces, bolts, nuts, fittings, and other devices required for the proper fitting, connecting, and erecting of the Work.
   4. Rough frames for windows, grilles, louvers, loudspeakers, recesses for cabinets, and for other items, as indicated on the Drawings.
   5. Protection of Stonework. (See Section 04420 “Unit Masonry”).
   6. Framing for stepped floors and platforms.
   7. Preservative treatment for wood.
   8. Fire-retardant treatment for wood.
   9. Plywood decking, subflooring, and underlayment.
   10. Miscellaneous Lumber.

1.02 SUSTAINABILITY REQUIREMENTS

A. Sustainability requirements included in the Section are as follows:
   1. Restrictions on the use of urea-formaldehyde containing materials

B. The Contractor shall implement practices and procedures to meet the Project’s sustainable requirements. The Contractor shall ensure that the requirements related to these goals, as defined in Specification Section S01352, Sustainability Requirements, and as specified in this Section, are implemented to the fullest extent. Substitutions or other changes to the work shall not be proposed by the Contractor or their sub-contractors if such changes compromise the stated Sustainable Design Performance Criteria.

1.03 REFERENCE STANDARDS

A. References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.
   1. American Lumber Standards Committee (ALSC)
   2. APA Engineered Wood Guide Association
   3. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2009.
   4. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
   5. AWPA U1 - Use Category System: User Specification for Treated Wood; 2012.
   6. Commercial Item Descriptions (CIDS)
   7. Federal Specifications
   8. NFPA 255 - Standard Method of Test of Surface Burning Characteristics of Building Materials; 2006.
   9. PS 20 - American Softwood Lumber Standard; 2010.
   10. RIS (GR) - Standard Specifications for Grades of California Redwood Lumber; 2000.
   11. SPIB (GR) - Grading Rules; 2014.
   12. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.
   13. WCLIB (GR) - Standard Grading Rules for West Coast Lumber No. 17; 2004, and supplements.

14. ASTM A576 - Standard Specification for Steel Bars, Carbon, Hot-Wrought, Special Quality; 1990b (Reapproved 2012).
15. WWPA G-5 - Western Lumber Grading Rules; 2011.

1.04 SUBMITTALS

A. Quality Control Submittals
   1. Certificates: Certification for the following wood treatments:
      a. Dip Treatment: Certification by treating plant stating chemical solutions used, submersion period, and conformance with applicable standards.
      b. Pressure Treatment: Certification by treating plant stating chemicals and process used, net amount of chemical preservative retained, and conformance with specified standards.
      c. Waterborne Preservatives: Certified written statement that moisture content of treated materials was reduced to a maximum of 19 percent prior to shipment to Project site.
      d. Fire-Retardant Treatment: Certification by treating plant stating treated material complies with specified standards and treatment will not bleed through specified finishes. Submit BSA or MEA approval certification.

B. Low Emitting Materials Compliance Submittals
   1. Provide documentation for each adhesive to be used on site and within the weatherproofing/waterproof membrane (interior) of the building, indicating that the adhesives comply with V.O.C. requirements as stated in Specification Section G01600.

C. Sustainability Submittals
   1. Submit manufacturer's documentation that composite wood products, including plywood, that are used within the weatherproofing/waterproof membrane (interior) of the building are manufactured without the use of any added urea-formaldehyde. This requirement includes binders, and laminating adhesives used in the field or shop. Submit manufacturer's documentation of the resin(s).

1.05 QUALITY ASSURANCE

A. Mill and Producers Mark
   1. Each piece of lumber and plywood shall be grade stamped indicating type, grade, mill, and grading agency certified by the Board of Review of the American Lumber Standards Committee. Mark shall appear on unfinished surface, or ends of pieces with finished surfaces.
      a. Pressure Preservative Treated Material: Accredited agency quality mark on each piece of wood including treatment.
      b. Fire-Retardant Treated Material: Accredited testing agency mark on each piece of wood indicating compliance with the fire hazard classification.

B. Standards
   1. Comply with the following unless otherwise specified or indicated on the Drawings:
      a. Lumber: American Softwood Lumber Standard PS 20 by the U.S. Department of Commerce. Comply with applicable provisions by each indicated use.
      b. Plywood: Product Standard PS 1 for Softwood Plywood, Construction and Industrial by the U.S. Department of Commerce.
      c. Plywood Installation: APA Design/Construction Guide, by the American Plywood Association (APA), except as indicated otherwise.
      d. Grading Rules:
         1) Douglas Fir, Hem-Fir, Idaho White Pine, and other Western Woods: Western Wood Products Association (WWPA) or West Coast Lumber Inspection Bureau (WCLIB).
         2) Southern Pine: Southern Pine Inspection Bureau (SPIB).
         3) Redwood: Redwood Inspection Service (RIS).

e. Preservative Treatment: American Wood Preservers' Association (AWPA) Standards, quality control methods, and inspection requirements
f. Fire-Retardant Treatment: American Wood Preservers' Association (AWPA) Standards.

C. Regulatory Agencies
1. NYC Board of Standards and Appeals (BSA).
2. NYC Materials and Equipment Acceptance (MEA).

1.06 DELIVERY, STORAGE, AND HANDLING

A. Keep materials dry during delivery. Store materials 6" minimum above ground surface. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and plywood, and provide air circulation between stacks.

B. Cover stored materials until ready for use for protection from moisture. Place and anchor covering in a manner which will assure good ventilation under the covering.

1.07 PROJECT CONDITIONS

A. Correlate location of supporting members to allow proper attachment of other Work as specified in this Section.

PART 2 PRODUCTS

2.01 LUMBER

A. General
1. Furnish seasoned dimensional lumber dressed to nominal sizes indicated with 19 percent maximum moisture content at time of dressing, marked "S-DRY". Comply with dry size requirements of PS 20.
a. Dress: Surfaced 4 sides (S4S) unless otherwise indicated.

B. Framing Lumber
1. Species: Douglas Fir (WWPA or WCLIB), or Southern Pine (SPIB), unless otherwise indicated.
2. Refer to Drawings
a. Light Framing; 2" through 4" thick, less than 6" wide:
1) Stud Framing Grade: Construction Grade.
2) Other Light Framing Grade: No. 2.
3. Structural Framing; 2" through 4" thick, 6" and wider:
a. Grade: No. 1.

C. Board Lumber; less than 2" thick:
1. Exposed Board Lumber, for Paint Finish: Southern Pine No. 1 (SPIB), Douglas Fir 2 Common (WWPA) or Select Merchantable (WCLIB), or Redwood Construction Common (RIS).
2. Exposed Board Lumber, for Transparent Finish: Redwood Clear (RIS).
3. Concealed Board Lumber: Southern Pine No. 3 (SPIB), any species No. 4 (WWPA) or any species Standard (WCLIB), or Redwood Merchantable (RIS).

D. Miscellaneous Lumber
1. Standard grade, No. 3 grade, or better grade of the following species unless otherwise indicated:
a. Nailers and Blocking: Douglas Fir, Hem-Fir, Idaho White Pine or Southern Pine.
b. Furring: Douglas Fir or Southern Pine.
c. Plaster Grounds:
1) Interior Use: Douglas Fir or Southern Pine.
2) Exterior Use: Western Red Cedar or Redwood.
d. Floor Sleepers: Western Red Cedar or Redwood Construction Heart.
e. Door and window Bucks: Western Red Cedar or Redwood.

2.02 PLYWOOD

A. Roof and Wall Sheathing and Subflooring: APA RATED SHEATHING, EXPOSURE 1. Furnish APA PS 1 veneered panels, with span ratings for the required thicknesses as listed below unless otherwise indicated.

Thickness	Span Rating
3/8"	24/0
1/2"	32/16
5/8"	40/20
3/4"	48/24

B. Underlayment
   1. APA UNDERLAYMENT, EXPOSURE 1.
      a. For use under resilient tile flooring and resilient sheet flooring: Sanded face.
      b. For use under carpet and "liquid" flooring: Touch-sanded.

C. All plywood used within the weatherproofing/waterproof membrane (interior) of the building shall contain no added urea- formaldehyde. This requirement applies to plywood roof and wall sheathing.

2.03 MISCELLANEOUS MATERIALS

A. Underlayment Patching Compound

B. Hardsetting, quicksetting type with latex or polyvinyl acetate binder.

C. Asphalt Felt
   1. Asphalt-saturated felt, No. 15, without perforations, complying with ASTM D226.

D. Rosin Paper
   1. Commercial, rosin-sized building paper, 0.010" thick.

E. Hardboard
   1. PS 58, Class "Tempered, S1S, plainboard.

F. Adhesive
   1. APA Specification AFG-01. For adhesive used on site and within the weatherproofing/waterproof membrane (interior) of the building, comply with V.O.C. requirements specified in Section G01600.

2.04 PRESERVATIVE TREATMENT

A. Treat lumber and plywood where indicated and as specified. Comply with applicable AWPA Standards and quality control and inspection requirements.
   1. Fasteners and anchoring devices to be used with wood treated with waterborne preservatives shall be hot-dip galvanized or stainless steel if the wood will be exposed to moisture.

B. Complete fabrication of items to be treated to the greatest extent possible, prior to treatment. Where items must be cut after treatment, coat cut surfaces with heavy brush coat of the same chemical used for treatment or other solution recommended by AWPA Standards for the treatment.

C. Inspect wood after treating and drying. Discard warped or twisted items.

D. Pressure Treatment (Above Ground Use)
   1. Treat the following wood items with waterborne preservatives for above ground use, complying with . AWPA Standards T1-T10. Redry wood to a maximum moisture content of 19 percent after treatment.
      a. Nailers, blocking, cants, shim stock, and similar members used in conjunction with roofing (including related flashings, trim and vapor barrier), coping, and waterproofing.

b. Nailers, blocking, furring, stripping, and similar concealed members in contact with exterior masonry and concrete (including interior wythe of exterior walls), and all sills for framing.
c. Wood items indicated or scheduled on the Drawings to be preservative treated.

E. Pressure Treatment (Ground Contact Use)
1. Treat the following wood items with waterborne preservatives for below ground use, complying with AWPA Standards T1-T10.
a. Wood members placed in the ground.
b. Wood members immersed in fresh water.

2.05 FIRE-RETARDANT TREATMENT

A. Where lumber is indicated or required to be fire-retardant treated, provide "UCFA" lumber, complying with AWPA Standards for pressure impregnation with fire-retardant chemicals to achieve a flamespread rating of 25 or less, when tested in accordance with UL Test 723, ASTM E84 or NFPA Test 255.
1. Where treated items are indicated to receive a transparent or paint finish, use a fire-retardant treatment which will not bleed through or adversely affect bond of finish.
2. Provide UL label or identifying mark on each piece of fire-retardant lumber.
3. Redry treated items to a maximum moisture content of 19 percent after treatment.

B. Fire-retardant Treated Plywood
1. Comply with APA requirements.

2.06 FRAMING HARDWARE

A. Fasteners and Anchoring Devices
1. Provide items of type, size, style, grade, and class as required for secure installation of the Work. Items shall be galvanized for exterior use. Unless shown or specified otherwise, comply with the following:
a. Nails and Staples: ASTM F1667
b. Wood Screws: FS FF-S-111D.
c. Bolts and Studs: FS FF-B-575C.
d. Nuts: FS FF-N-836E.
e. Washers: FS FF-W-92B.
f. Lag Bolts or Lag Screws: ASME/ANSI B18.2.1
g. Masonry Anchoring Devices: Expansion shields, masonry nails and drive screws: CIDS A-A-1925A, A-A-55614, A-A-55615
h. Bar or Strap Anchors: ASTM A575 carbon steel bars.
i. Wall Plugs: Corrugated type, galvanized steel, 24 USS gauge min, not less than 2" wide x 2½" deep.
j. Cross Bridging: Nailable type, galvanized steel, 16 USS gauge min, by 3/4" wide.
k. Metal Hangers and Framing Anchors: Size and type for intended use, galvanized finish, manufacturer's recommended fasteners.
l. Buck Anchors: Corrugated type, galvanized steel not lighter than 12 USS gauge min, 4" wide (except where partitions are less than 4" thick) by 8" long, punched for two 5/16" carriage bolts at buck end.
m. Sleeper Anchors: Approved type, galvanized steel not lighter than 20 USS gauge min, not less than 1¼" wide, designed to anchor into concrete not less than 1½" and permit height adjustment of sleeper.

2.07 ROUGH HARDWARE

A. Furnish and install all rough hardware, such as nails, bolts, buck anchors, clips, (including expansion and carriage bolts for wall seats, wardrobe brackets, etc.), and all other rough hardware required to secure the carpentry work in place, unless otherwise specified.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of Conditions
   1. Examine substrate and supporting structure on which rough carpentry is to be installed for defects that will adversely affect the execution and quality of the Work. Do not proceed with installation until unsatisfactory conditions are corrected.

3.02 INSTALLATION - GENERAL

A. Do not use units of material with defects which impair the quality of the Work and units which are too small to fabricate the Work with minimum joints or with optimum joint arrangement.

B. Install Work accurately to required lines and levels with members plumb and true, accurately cut and fitted and securely fastened. Closely fit rough carpentry to other associated construction.

C. Securely attach carpentry Work to substrates by anchoring and fastening as indicated, or, if not indicated, as required by the referenced standards. Select fasteners of size that will not penetrate through members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; predrill as required. Set nail heads in exposed Work which is to be painted or stained and fill resulting holes.

D. Fire-retardant Treated Wood
   1. Do not rip or mill; only end cuts, drilling holes and joining cuts shall be permitted.
   2. Where material is cut to length, shaped or grooved after treatment, surfaces thereby exposed shall be protected by tightly butting them against noncombustible or fire-retardant treated material, in accordance with the NYC Building Code. Drilled holes shall be covered with tightly fitting noncombustible cover plates.

3.03 WOOD FRAMING

A. Install framing members of nominal sizes indicated or of units built-up to dimensions indicated, on spacings shown. Construct required openings for installation of related work. Do not splice structural members between supports.

B. Anchor and nail members as indicated. If not included, comply with recommendations of the NFPA.

C. Install miscellaneous blocking and framing indicated and as required for attachment and support of facing materials, fixtures, specialty items, and trim.

D. Stud Framing
   1. Install stud framing indicated. Unless otherwise shown, use 2" x 4" wood studs spaced 16" o.c with 4" face perpendicular to direction of wall or partition. Install single bottom plate and double tip plates 2" thick by width of studs; except single top plate may be used for non-load-bearing partitions. Nail or anchor plates to supporting construction.
      a. Construct corners and intersections with not less than 3 studs. Frame openings with multiple studs and headers. Install nailed header members of thickness equal to width of studs.
      b. Install diagonal bracing in exterior wall stud framing unless otherwise indicated. Brace both walls at each external corner, full story height, at 45 degree angle. Use either a let-in 1" x 4" board or 2" x 4" blocking.

E. Joist Framing
   1. Install framing of sizes and on spacings shown. Install with crown edge up and support ends of each member with not less than 1½" of bearing on wood or metal, or 3" on masonry. Attach to wood bearing members by toe nailing or metal connectors; frame to wood supporting members with wood ledgers or with metal connectors. Fire-cut members built into masonry (if any). Frame openings with headers and trimmers supported by metal joist hangers; double headers and trimmers where span of header exceed 4 feet. Do not

notch in middle third of joists; limit notches to 1/6-depth of joist, 1/4 at ends. Do not bore holes larger than 1/3-depth of joist or locate closer than 2" from top or bottom. Install solid blocking (2" thick by depth of joist) at ends of joists unless nailed to header or band member.

a. Lap members framing from opposite sides of beams, girders or partitions not less than 4" or securely tie opposing members together. Install solid blocking (2" thick by depth of joist) over supports.
b. Anchor masonry bearing members with 1/4" x 1¼" metal strap or "T" anchors with wall ends bent 4" at every second joist. Extend anchors not less than 1'-4" along bottom of joist end and nail.
c. Anchor members paralleling masonry with 1/4" x 1¼" metal strap anchors spaced not more than 8 feet o.c. Extend anchors at least 4" into masonry, turn up 4" and extend over and fasten to 3 joists.
d. Install solid blocking between joists under jamb studs at openings.
e. Under non-load-bearing partitions, install double joists separated by solid blocking equal to depth of studs above.
    1) Install triple-joists separated as above, under partitions receiving ceramic tile and similar heavy finishes or fixtures, unless otherwise shown.

F. Install bridging between joists where nominal depth-to-thickness ratio exceeds 4, at intervals of 8 feet.

3.04 BLOCKING, NAILERS, AND SUPPORTS

A. Install required items where indicated and where required for support, attachment or screeding of other Work. Form to shapes indicated or required. Coordinate locations and cut and shim as required to provide items at true and level planes to receive Work to be attached. Install closure strips to nailers at all edges.

1. Attach to substrates as indicated; if not indicated, size and space fasteners as required to support applied loading. Maximum spacing of fasteners shall not exceed 16". Unless otherwise shown on the Drawings, install and secure material to non-wood construction as follows:
    a. To Concrete: Attach material less than 1½" thick with screws and non-ferrous metal expansion shields. Attach materials 1½" and thicker with machine bolts and non-ferrous metal compound type anchors.
    b. To Concrete Unit Masonry: Attach material to new masonry with annular ring nails driven into wall plugs where fastening occurs at joints of masonry or with special hardened steel masonry nails where fastening occurs in the masonry units. Attach material to existing masonry with machine screws and non-ferrous metal expansion shields where fastening occurs in solid portions of masonry. If fastening occurs at cells of masonry, secure material in place with toggle bolts.
    c. To Brick Masonry: Attach material to new masonry with annular ring nails driven into wall plugs. Attach material to existing masonry with machine screws and non-ferrous metal expansion shields.
    d. To Steel: Attach material with galvanized bolts and nuts or stainless steel machine screws tapped into the metal, as required by conditions.
    e. To Non-Ferrous Metal: Attach material with stainless steel or other approved non-ferrous metal bolts and nuts or self-tapping screws, as required by conditions.
2. Counter-sink bolts and nuts flush with surfaces, unless otherwise shown. Build into masonry during installation of masonry Work. Where possible, anchor to formwork before concrete placement. Bevel both edges of members to be anchored in concrete. Shims shall be cedar shingles or redwood wedges.
3. Install permanent grounds of dressed, preservative treated, key beveled lumber not less than 1½" wide and of the thickness required to bring face of ground to exact thickness of finish material involved. Remove temporary grounds when no longer required.

4. The grounds for coat hook and bracket strips in wardrobe cabinets shall be attached to partitions with toggle bolts and to brick walls with expansion bolts before any plastering is done.

3.05 PLYWOOD SHEATHING, SUBFLOORING AND UNDERLAYMENT

A. Comply with printed installation requirements of the APA Design/Construction Guide, for plywood application required, unless otherwise indicated.

B. Plywood Underlayment
   1. Install underlayment just prior to installation of finish flooring. Stagger end joints between panels in relation to each other and stagger all joints in relation to substrate jointing. Allow 1/32" space between panel ends and edges for expansion. Fasten in accordance with APA recommendations. Prior to installation of finish flooring, patch damaged areas wider than 1/16". Set nails 1/16", but do not fill. Sand rough areas smooth, and uneven joints flush. Fasteners must be flush with the surface of the subfloor.

C. Roof Sheathing
   1. Install panels with face grain across supports. Provide supports at edges by use of clips, wood blocking, or T. & G. panels. Allow 1/16" spacing at panel ends; 1/8" spacing at edges.
   2. Nail 6" o.c along edges and 12" o.c at intermediate supports.

D. Wall Sheathing
   1. Allow 1/16" spacing at panel ends and 1/8" spacing at edges.
   2. Nail 6" o.c along panel edges and 12" o.c at intermediate supports.

E. Subfloor
   1. Install panels continuous over two or more spans, with face grain across supports. End joints shall occur over supports. Allow 1/16" spacing at panel ends and 1/8" at edges.
   2. Before placing panels, apply continuous line of adhesive on joists.

F. Nails
   1. Common.
   2. For plywood thickness to 1/2": 6d.
   3. For plywood thickness greater than 1/2": 8d.

3.06 WOOD FURRING

A. Install members plumb and level with closure strips at all edges. Shim with wood as required to achieve tolerance specified.
   1. Fastening: Attach to substrates as indicated; if not indicated, attach material as specified for nailers and blocking.
   2. Tolerance: Shim and level wood furring to a tolerance of 1/8" in 10'.
   3. Furring to Receive Plywood Paneling: Unless otherwise indicated, 1" x 3" furring at 2' o.c, horizontally and vertically.
   4. Furring to Receive Gypsum Drywall: Unless otherwise indicated, 1" x 2" furring at 16" oc, vertically.
   5. Option: In lieu of the grounds for hook and bracket strips, fasten the strips directly to the finished plastered walls provided toggle bolts are used, spaced not over 2' o.c. This option is given on condition that a power drill is used for drilling holes for toggle bolts through the plaster and terra cotta partitions.
   6. Where walls are furred out to receive wardrobes, lockers, and other casework, provide and set all required dressed studs, blockings, nailing pieces, and grounds. The studs shall be bolted to the iron frames with 3/8" diameter bolts, spaced as indicated on Drawings.

3.07 FLOOR SLEEPERS

A. Unless otherwise indicated, install 3" x 3" strips, 12" oc and across abutting walls and restricting features. Anchor to slab with sleeper anchors 16" o.c. Shim level to required height with redwood wedges 8" o.c. Fill space between sleepers and floor slab solid with 1 part Portland cement and 2½ parts sand mortar.

3.08 METAL WALL PLUGS

A. Furnish to mason all necessary information to enable him to lay out correctly the location for metal wall plugs. All grounds, furring and standing finish on plastered walls and partitions, except where otherwise specified, shall be secured to metal wall plugs.

3.09 BOARDS, STRIP

A. All Work necessitating the furnishing of boards, strips, casings, and other Work of this nature and the doing of all incidental Work required for the proper finishing and completion of the Work, to the entire satisfaction of the Authority, shall be done by the carpenter.

B. Where wall panels of tackboard or pegboard are indicated on walls, wall shall be furred out with wood furring strips, blocking, and furring, of sizes as required for the conditions, installed vertically approximately 16" O.C. to receive the tackboard and pegboard. Furring strips shall be toggle-bolted or expansion-bolted (flush head) to walls and partitions.

C. Provide fiberglass insulation back of pegboard on walls of kindergartens and rooms of instruction. Fiberglass shall be 1/2" thick, flexible duct insulation manufactured by Owens-Corning, secured to walls with an adhesive approved by the Manufacturer. See Drawing Details.

D. Furnish and set all wood blocking and nailing strips at coping coverings, canopy fascias, slag stops, fascia boards, base flashing pitch pockets, railing sleeves and similar locations, of No. 1 common southern pine, of sizes indicated on Details. All blocking and nailing strips shall be preservative treated by pressure method as specified in Art. 2.04.

E. Furnish and set all blockings required at skylight and ventilator curbs, and at all other places where indicated or required.

F. Provide wood curbs of sound, seasoned, dressed material of size indicated on Drawings, with corners mitered and securely nailed, and with top outer edges splayed off. Anchor Wood curbs in place at top of concrete curbs with 3/8" anchor bolts, 3 feet on centers and at brick curbs with 1/2" bolts extending through curb angles. Top nuts of all bolts shall be countersunk into curbs.

G. Where copper gutters, or other such copper covered Work is indicated on the Drawings, furnish and set all wood nailing strips, blocking, sheathing, rough framing and other members required for the securing and backing of the copper covered Work. For shapes, spacing and locations of the rough carpentry Work, see Detail Drawings.

H. Where batten seam copper roofing is indicated on Drawings, furnish and install all required wood battens and nailing sleepers together with all other required wood blocking, nailing strips, ridge strips, and other members, as indicated on the Details. The wood nailing sleepers, to receive the wood battens shall be nailed to sleeper clips which shall be embedded in the sloping concrete roof slab as shown on Detail, spaced as indicated.

   1. The sleeper clips shall be 9 gage galvanized wire floor sleeper clips and shall be spaced 16" o.c. The top surface of nailing sleepers shall be set level and true by using wood or metal leveling strips. Wood batten shall be secured to the nailing sleepers with proper size nails by toe nailing at each bearing or as will be directed.

I. Furnish and install all required wood nailing sleepers of the required size under all standing and transverse seams of copper roofing together with all wood blocking, nailing strips, ridge strips, and other to properly install and receive the copper roofs, gutters, eaves, and other items as indicated on the Drawings. Verify locations of nailing strips.

3.10 PROTECTION OF STONEWORK

A. The top surfaces, projections, door jambs, sills, steps, ornamental work, of exterior stonework, where liable to damage, shall be protected by temporary boxing. Furnish and set boxing, using only galvanized nails, as soon as the stonework is set and maintain the boxing until the stonework is cleaned down. No material shall be used which will stain or damage the stonework.

3.11 ROUGH HARDWARE

A. Furnish and install all rough hardware, such as nails, bolts, buck anchors, clips, (including expansion and carriage bolts for wall seats, wardrobe brackets, etc.), and all other rough hardware required to secure the carpentry work in place, unless otherwise specified.

END OF SECTION