

Table with 2 columns: REV./DATE, DESCRIPTION. Includes PERMIT SET, DRAWN BY LAJ, CHECKED BY KRB, DATE 6/22/2017.

The Construction Documents shall consist of all drawings, specifications, surveys, site reports, addenda and other documents... This information or drawing sheets shall be taken separately or "taken apart" from the remainder of the documents to determine their particular scope of work.

- 2. Color Selection (Match Existing)
3. Installation:
a. General: The manufacturer's recommended methods of installation shall be the basis for inspection and accepting or rejecting actual installation procedures used on the work.
b. Anchor all panels according to manufacturer's details. Use full length panels with no horizontal lap joints. Apply butyl caulk for vapor seal on top and bottom panel support.
c. Damage, dented or scratched panels will not be accepted.

- 4. Roof Accessories: Sno Gem Snow Guard - 888-766-4367 - Model: SNO-GEM JR Installation: According to manufacture instruction
A) Apply sealant bead across bottom of SNO-GEM surface and spread sealant evenly.
B) Press Snow GEM on the roof with light even pressure.
C) Install screws with neoprene gasket washers through pilot holes.
D) Apply bead of sealant around perimeter.

SECTION 07620 - SHEET METAL FLASHING AND TRIM

- 1. Zinc-Coated Steel: Commercial quality with 95 percent copper, ASTM A526, except ASTM A527 for lock-forming. Galvanized, mill phosphatized for painting; 24 gauge, except as otherwise indicated.
2. Solder: For use with steel, provide 50-50 tin-lead solder, ASTM B32 with rosin flux.
Fasteners: Same metal as flashing sheet metal or other non-corrosive metal as recommended by sheet manufacturer. Match finish of exposed heads with material being fastened.
Bituminous Coating: Slick-7-Paint 42, solvent type bituminous mastic, nominally free of sulfur, compounded for a 1/16" dry film thickness per coat.
5. Roofing Cement: ASTM D2822, asphaltic.

- 6. General Metal Fabrication: Shop-fabricate work to greatest extent possible. Comply with details shown, and with applicable requirements of SMACNA "Architectural Sheet Metal Manual" and other recognized industry practices. Fabricate for waterproof and weather resistant performance, with expansion provisions for running work, sufficient to permanently prevent leakage, damage, or deterioration of the work. Form work to fit substrates. Comply with material manufacturer instructions and recommendations for forming material. Form exposed sheet metal work without excessive oil-canning, buckling, and tool marks, true to line and levels indicated, with exposed edges folded back to form hems.

- a. Fabricate non-moving seams in sheet metal with flat-lock seams. For metal other than aluminum, tin edges to be seamed, joint seams and solder. Form aluminum seams with epoxy seam sealer, rivet joints for additional strength where required.
b. Where lapped or bayonet-type expansion provisions in work cannot be used, or would not be sufficiently water-weatherproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).
c. Where movable, no-expansion type joints are indicated or required for proper performance of work, form metal to provide for proper installation of elastomeric sealant, in compliance with SMACNA standards.

- 7. Comply with installation instructions and recommendations of SMACNA "Architectural Sheet Metal Manual". Anchor units of work securely in place, providing for thermal expansion of metal units: conceal fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams which will be permanently watertight and weatherproof.
8. Clean exposed metal surface, removing substances which might cause corrosion of metal or deterioration of finishes.

SECTION 07920 - SEALANTS AND CAULKING

- 1. Sealant Type 1: One component, acrylic latex, for interior non-moving joints.
a. Sonneborn "Sonolac" or equal.
2. Sealant Type 2: One component urethan, gun-grade, non-sag, for interior or exterior concealed moving joints, thresholds and architectural sheet metal.
a. Sonneborn "NP1" or equal.
3. Sealant Type 3: Multi-component, urethane, gun-grade, non-sag, for interior and exterior exposed moving joints (other than pavements), door and window frames, and other weathertight locations.
s. Sonneborn "NP2" or equal.
4. Sealant Type 4: One component, urethan, gun-grades or pourable, self-leveling for interior or exterior horizontal joints.
a. Sonneborn "Sonolastic SL1" or equal.

- 5. Primer: Non-staining type, recommended by sealant manufacturer to suit application. Unpainted, porous surfaces shall be primed.
6. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer, compatible with joint filling materials.
7. Joint Filler: ASTM D1056, round, closed cell polyethylene foam rod; oversized 30 to 50 percent. Polystyrene is unacceptable.
8. Bond Breaker Tape: Pressure sensitive polyethylene tape recommended by sealant manufacturer to suit application.

- 9. Clean, prepare and size joints in accordance with manufacturer's instructions. Remove any loose materials and other foreign matter which might impair adhesion of sealant. Metal surfaces shall be free of corrosion.
10. Install joint filler rod to proper depth by rolling material into joint without lengthwise stretching or twisting. Do not puncture or prime filler rod.
11. Sealant applications shall be performed in strict accordance with manufacturer's written specifications by tradesmen skilled in the work. Use masking tape to protect adjacent surfaces as necessary.
12. All sealing shall be done with neat, smooth tooled beads, free of air pockets, foreign embedded matter, ridges and sags, in firm full contact with interfaces.
13. Work adjacent to joints shall be cleaned free of smears of sealant, compound as work progresses.

DIVISION 8 - DOORS AND WINDOWS

SECTION 08110 - STEEL DOORS AND FRAMES

- 1. All hollow metal doors and frames will be furnished by Contractor. Refer to Door Schedule on drawings.
2. Install doors and frames in accordance with SDI-100 and SDI-105 except as amended in this Section. Comply with NFPA-80 for fire rated assemblies.
3. Install steel doors and frames plumb and square in correct locations indicated on drawings and with a maximum diagonal distortion of 1/16" inch. Ensure that frames are securely and rigidly anchored to adjacent construction.
4. Hang door to fit frames closely without binding. Door to come in full contact with stops when closed. Doors shall swing quietly and easily and not strike floors at any point of swing. Doors not equipped with closers shall remain stationary in any intermediate position in which they are left.

- b. Paneling: "D" grade or better Southern Yellow Pine, 1 x 6 T&G, "V" groove.
c. Plywood: Rough sawn cedar or douglas fir plywood.
Vertical: 1" x 8" Western Red Cedar Rough Sawn
Pattern 122 select tight knot (Klin Dried)
(Install over 1 x 4 wood furring on exterior masonry walls).
Installation and finishing per manufacturer's specifications.
e. Trim: Rough-sawn red cedar

- 8. Fabricate finish carpentry and cabinetwork items in accordance with AWI Quality Standards "Custom Grade", and Section 400 of the AWI Guide. Shop fabricate items where possible.
9. Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Corners and joints to be hairline.
10. Cap exposed plastic laminate edges with material of same finish and pattern.
11. Use exposed fastening devices or nails only when unavoidable.

- 12. Sand work smooth and set exposed nails and screws. Eliminate hammer marks and other defects. Apply wood filler in exposed nail and screw indentations and leave ready to receive site applied finishes.
13. Set and secure finish carpentry and cabinetwork items in place, rigid, plumb, and square.
14. Install and adjust cabinet hardware to correct operation.
15. Finish woodwork shall be set straight, plumb or level, closely fitted and rigidly fastened. Nail heads of exposed work shall be set for putty and other fastenings shall be concealed.
16. Joints shall be tight and formed to conceal shrinkage. All trim shall be mitered; no butt joints permitted. Interior corners shall be coped.
17. Install doors plumb, true and fitted properly. Leave in perfect working order. Warped doors will be rejected and shall be replaced. Neatly mortise, drill, and anchor all hardware.
18. Conceal fasteners wherever possible. Where not possible, locate them in an inconspicuous place. Where nails or screw attachment occur in woodwork face, countersink, putty and sand smooth.

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

SECTION 07210 - BUILDING INSULATION

- 1. Batt insulation: Pre-formed glass fiber batt; blankets with foil membrane covering; per ASTM C865, Type II; densities of not less than 0.5 lb. per cu. ft. Glass fiber units, K-value of 0.27; flame spread of 25 or less, ASTM E84 (Class A), (R-19) or less otherwise noted.
a. Certainteed Corp.
b. Mansville Building Materials Corp.
c. Owens-Corning Fiberglass Corp.
d. United State Gypsum Co.
e. Knauf Fiberglass
2. Below Grade Perimeter Insulation: Rigid cellular thermal insulation with closed-cells and integral high density skin, formed by expansion of polyurethane base resin in an extrusion process to comply with ASTM C578 (as indicated); when per aged R-values per IECC schedule on cover 2" thickness unless otherwise indicated.
a. Dow Chemical Co. - Styrofoam
b. C. Industries - Foamular 250
c. Celvolan Products - Certifoam S5
d. Chem-Foam Products - Amfofoam CM
Source: thermal insulation: USG "SAFB", 2.5 pound/cu. ft. density, no substitution.

- 4. Penetration accessories and adhesives shall be as recommended by insulation manufacturer for type of application and condition of substrate.
5. Install batt insulation in accordance with manufacturer's instructions.
a. Place batt insulation in partitions tight within spaces, around cut openings, behind and around electrical and mechanical items within or behind partitions and tight to items passing through partitions.
b. Trim insulation neatly to fit spaces. Fill gaps or voids with insulation.
c. Install insulation with factory applied membrane facing warm side of building spaces.
6. Secure rigid insulation to substrate surfaces. Stagger joints 6" where multi-layered. Cut and shape to substrate conditions.

SECTION 07530 - ELASTOMERIC SHEET ROOFING

- 1. The roofing system approved for bid are as follows: DuroLast.
2. Roof insulation shall be 4" thick Manville (Ultraquard) Polyisocyanurate Roof Insulation (R-20), or approved equal and acceptable to roof membrane manufacturer.
3. All roofing accessories, fasteners, caulking, etc., shall be furnished or approved by manufacturer.
4. The successful roofing contractor will be required to submit to the Owner for approval the following drawings and documents.
a. Roof Plan at 1"=20' showing seams, drains and all other roof protrusions.
b. Details of all flashing and coping conditions and other installation details.
c. Caulking specifications.
d. Complete specifications of all materials and the installation of same.
e. Work progress schedule.

- 5. The complete roofing system and installation procedure must be approved by the Architect before beginning the work.
6. The approved roof system shall be installed in strict accordance with the manufacturer's printed instructions by Mfg. authorized installers. The installer must be certified and must have at least 2 years experience in new commercial membrane roofing with Mfg. Verification of credentials mandatory.
7. At all times and at the completion of the work, remove all unused material and debris resulting from the work of this section, from the building and site. Roofing and flashing specified herein shall be complete in every respect, and shall be watertight and weathertight.
8. The Roofing Contractor shall furnish to the Owner the manufacturer's standard ten (10) year warranty, plus an additional five (5) year warranty for a total of fifteen (15) year warranty to be fully paid for by the Roofing Contractor.
a. This guarantee shall cover both labor and materials necessary to restore watertightness.

SECTION 07550 - METAL ROOFING

- 1. Metal Panels: Five Rib V-Groove: Galvalume (26 gauge)

- Erection: Comply with AISC Code and Specifications and maintain work in safe and stable condition during erection. Provide temporary bracing and shoring as required; remove when final connections placed.
a. Set base plates on cleaned bearing surfaces, using wedges or other adjustments as required. Solidly pack open spaces with commercial no-shrink grout.
b. Splice members only where shown on final shop drawings.
c. Touchup prime paint after erection. Clean field welds, bolted connections and abraded areas, and apply same type paint as used in shop.

SECTION 05400 - METAL FRAMING

- 1. Work includes light gauge metal framing units of size and gauge indicated, including manufacturer's standard tracks, blocking, clips, fasteners and accessories.
2. Delivery and Storage: Protect metal framing units from rusting and damage. Store above ground in dry, ventilated space, or protect with waterproof coverings.
3. Exterior studs to be galvanized finish complying with ASTM A-525 for minimum G60 coating.

SECTION 05500 - METAL FABRICATIONS

- 1. Work includes miscellaneous shop fabricated ferrous metal items, including but not limited to:
a. Loose steel lintels.
b. Ladders.
c. Grilles.
d. Miscellaneous framing, supports and trim.
2. Materials:
a. Steel Sections: ASTM A36.
b. Steel Tubing: ASTM A500 or ASTM A501.
c. Steel Pipe: ASTM A53, Grade B, standard weight (Schedule 40).
d. Malleable Iron Castings: ASTM A47.
e. Bolts, Nuts, and Washers: ASTM A307.
f. Welding Materials: ASW D1.1; type required for materials being welded.
g. Primer: SSPC-Paint 2, for shop application and field touchup.

Fabrication:

- a. Verify dimensions in field prior to shop fabrication.
b. Fabricate items with joints tightly fitted and secured.
c. Fit and shop assemble in largest practical sections, for delivery to site.
d. Prime paint items schedule to provide a uniform dry film thickness of 2.0 mils.

DIVISION 6 - WOOD & PLASTICS

SECTION 06100 - ROUGH CARPENTRY

- 1. Framing Lumber: American Softwood Lumber Standards PS20,S4S, 19% maximum moisture content, with the following minimum working stresses:
Bending (fb) = 1500 psi
Horizontal Shear (fv) = 95 psi
Compression Perpendicular to Grain (fc) = 390 psi
Modulus of Elasticity (E) = 1,500,000
a. Members in contact with concrete, masonry, or roof shall be preservative treated AWPB LP-2.
b. Fire retardant treated lumber: AWPB C20.
2. Plywood: PS1, factory marked with appropriate APA trademark. Wafer or particle board is not acceptable. Protect oil plywood from moisture by use of all required waterproof covering until the plywood has in turn been covered with the next succeeding component of finish.
a. Roof sheathing: APA rated sheathing, 40/20 S58 nominal, Exposure 1.
c. Building felt: 15 lb. asphalt saturated felt.

- 3. Nails, Spikes, and Staples: Galvanized for exterior locations and treated wood; grain finish for other interior locations; size and type to suit application.
4. Bolts, Nuts, Washer, Lags, Pins, and Screws: medium carbon steel; sized to suit application; galvanized for exterior locations and treated wood; plain finish for other interior locations.
5. Fasteners: Use bolt type for anchorage to hollow masonry; Expansion shield and lag bolt type for anchorage to solid masonry or concrete. Bolts or power activated type for anchorage to steel.
6. Erect wall framing, blocking, sheathing, plywood backing and nailing members true to lines and levels and not deviate from true alignment more than .1" inch.
7. Comply with AIA National Design Specification for Wood Construction recommendations for size and spacings of members, nailing schedule, and for framing openings if sizes, spacings, blocking framing are not indicated.
8. Provide blocking for support of wall mounted tables, cabinetwork, hardware, toilet partitions, central screens, kitchen and bar bulkhead, moose bulkhead, signs, toilet accessories, and plumbing fixtures unless other means of support is indicated.
9. Do not splice structural members between supports.

SECTION 06200 - FINISH CARPENTRY

- 1. Softwood Lumber: Graded in accordance with the requirements of AWI Quality Standards; maximum moisture content of 6 percent for interior work and 10 percent for exterior work.
2. Softwood Plywood: Graded in accordance with AWI Quality Standards; core material of veneer; of Red Oak Veneer, paint grade veneer, or plastic laminate as indicated.
3. Plastic Laminate: NEMA LD-3; GP-50 for horizontal and vertical surfaces over marine plywood CL-20 for backing and unexposed surfaces.
4. Nails: Size and type to suit application.
5. Bolts, Nuts, Washer, Lags, Pins, and Screws: Size and type to suit application.
6. Interior Wood Trim:
a. Solid wood: Beveled cedar siding - Flame Spread 69 (Class 2), Corrosion resistant nails.
b. Paneling: "D" grade or better Southern Yellow Pine, 1 x 6 T&G, "V" groove.
c. Plywood: 3/4" AB Grade fir plywood exposed edges bonded.
7. Exterior Wood Trim:
a. Solid wood: For opaque or satin finish, "C" select grade yellow pine, white pine,

- c. When concrete unit masonry units are removed from the manufacturer's storage area, each cube or block shall be covered on top and all sides with a waterproof protective material. Protective covering shall be applied prior to the blocks being exposed to the weather.
2. Mortar: ASTM C476, Type S; 1800 psi at 28 days.
a. Portland Cement: ASTM C150, Type 1
b. Aggregate: ASTM C144, standard masonry type; clean, dry and protected against dampness, freezing and foreign matter.
c. Hydrated Lime: ASTM C207, Type S.
d. Water: Clean and free from injurious amounts of oil, alkali, organic matter or other deleterious material.
e. Use no admixtures unless written approval in obtained from Owner.

- 3. Grout: Masonry mortar; consistency which will completely fill all spaces intended to receive grout.
4. Reinforcing Bars: 60 psi yield grade; deformed billet steel bars, ASTM A615.
5. Horizontal reinforcement: Truss type ASTM A92 hot dip galvanized steel wire after fabrication ASTM A153 Class B2 with not less than #9 side rods with #9 cross rods.
a. Dur-O-Wal, AA Wire Products, Heckman, or equal.

- 6. Maintain materials and surrounding air temperature to minimum 50 degree F. prior to, during and 48 hours after completion of masonry work or until complete hydration of the mortar is achieved whichever is greater.
7. During freezing or near freezing weather, provide adequate equipment or cover to maintain a minimum temperature of 50 degree F. and to protect masonry work completed or in progress.
8. Establish lines, levels, and coursing. Protect from disturbances.
9. Thoroughly mix mortar ingredients, in quantities needed for immediate use.
a. If necessary, re-temper mortar to replace water lost by evaporation, but do not re-temper or use mortar after two (2) hours from the initial mixing time.

- 10. Place masonry true, level and plumb in accordance with required lines and levels. Do not wet concrete masonry units. Align all vertical cells to maintain a clear, unobstructed system for grouting.
11. full bond external and internal corners and intersections.
a. Buttering corners of joints and deep or excessive furrowing of mortar joints will not be permitted.

- 12. Do not shift or tap masonry after mortar has taken initial set. Where adjustment must be made, remove mortar and replace.
13. Lay out masonry so not less than one-third (1/3) of the face of a unit is exposed on the face of the wall at openings, corner or offsets.
14. Perform job site cutting of masonry with proper power tools to provide straight and true, unchipped edges. Masonry shall not be cut with wet saw blade.
15. Ensure masonry courses are of uniform height. Make vertical and horizontal joints equal and of uniform thickness. Lay in full bed of mortar, properly jointed with other work.
16. Remove excess mortar and projections. Take care to prevent breaking masonry corners.
17. Lay all masonry units in running bond course 1 block unit and 1 mortar joint to equal 8 inches. Form concave mortar joints, where exposed; strike flush where concealed.

- 18. Provide temporary bracing during masonry erection. Maintain in place until building structure provides permanent bracing.
19. Place masonry reinforcing and anchorages for concrete unit masonry as follows:
a. Provide single wythe walls with horizontal masonry reinforcing in every second mortar joint.
b. Place horizontal masonry reinforcing in first and second joint above and below openings. Place continuous in first and second joint below top of walls.
c. Fully reinforce corners and intersections, using prefabricated corner and "T" reinforcement sections.
d. Lap masonry reinforcing splices minimum 6 inches.
e. Place vertical reinforcing at indicated centers. Grout cores solid in 4'-0" maximum lifts.

- 20. As work progresses, build-in anchor bolts, and other items embedded in masonry.
21. Remove excess mortar and smears upon completion of masonry work.
a. Clean soiled surfaces of all masonry work exposed to view using sand and water, fiber brushes and soap as required. Remove all dirt, mortar, stains and other defacements.

- 22. Clean and remove all mortar droppings from floor.
23. Cover tops of walls when work is not in progress.
DIVISION 5 - METALS
SECTION 05120 - STRUCTURAL STEEL
1. Code and Standards: AISC "Code of Standard Practice for Steel Buildings and Bridges"; AISC "Specifications for the Design, Fabrication, and Erection of Structural Steel for Buildings" including "Commentary"; AWS "Structural Welding Code"; comply with applicable provisions except as otherwise indicated.
2. Shop Drawings: Show complete details and schedules (if required) for fabrication, assembly and erection. Furnish anchor bolts required for installation in other work; furnish templates for bolt installation.
3. Steel Plates, Shapes, Bars; ASTM A36.
4. Cold-Formed Steel Tubing: ASTM A500, Grade B.
5. Steel Pipe: ASTM A53, Type E or S, Grade B, schedule 40 unless otherwise indicated.
6. Fasteners: High-strength bolts and nuts, ASTM A325 or A307; unfinished bolts and nuts, ASTM A307, Grade A; rivets, ASTM A502, Grade 2.
7. Shop Paint: FS TT-P-86, Type II, SSPC-Paint 14.
8. Fabricate and erect in strict accordance with the "Specifications" and final shop drawings. Mark and match-up units for erection.
9. Connections: As shown on final shop drawings. Use high-strength bolts for field connections, except as otherwise indicated.
Comply with AWS code for procedures, appearance and quality of welds.
10. Penetrations for Other Work: Fabricate structural steel members to provide holes for securing other work and for passage of other work through steel framing as indicated.
11. Shop Priming: Paint structural steel work, except members or partitions of members embedded in concrete or mortar, and contact areas to be welded or riveted. Clean steel free of loose mill scale, rust, oil, and grease. Apply prime paint to provide a minimum dry film thickness of 2.0 mils.

SLAB THICKNESS, SNOW GUARDS, EGRESS, BLDG CODES, ADA, QUALITY CONTROL CHECK

