Select Seam® Guide Specifications

MANUFACTURER – AEP SPAN
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10905 Beech Avenue, Fontana, CA 92337

This Guide Specification is to be used to develop an office master specification or specifications for a project. In either case, this Guide Specification must be edited to fit the conditions of use. Particular attention should be given to the deletion of inapplicable provisions. Include necessary items related to a particular project. Include appropriate requirements where blank spaces have been provided.

> Note to Designer: This product is suitable for slopes as low as 3:12. Please consult an AEP Span representative for slope design restrictions.

SECTION 07411 – Preformed (Manufactured) Roof Panels

PART 1 – GENERAL

1.01 SECTION INCLUDES

The work includes, but is not necessarily limited to, furnishing and installation of all preformed metal roofing, and accessories as indicated on the drawings and specified herein.

1.02 RELATED SECTIONS

Edit for project conditions. Section Numbers indicated are those recommended by CSI Masterformat; revise if numbers differ from those used in project manual.

A. Structural Steel Supports: Section 05100
B. Structural Metal Roof and Floor Decking: Section 05300
C. Miscellaneous Fabricated Steel: Section 05500
D. Structural Lumber Supports: Section 06100
E. Structural Glue Laminated Lumber Supports: Section 06181
F. Thermal Insulation: Section 07200
G. Fireproofing: Section 07250
H. Sheetmetal Gutters and Downspouts: Section 07600
I. Joint Sealants not specified herein: Section 07900
J. Finish Painting not specified herein: Section 09900

1.03 PERFORMANCE REQUIREMENTS

A. TESTING AND CERTIFICATION
    1. Wind Uplift: UL 580 test, Class 90 rated per [select applicable construction]:
        a. [Construction #397, minimum 24 gauge panels, when installed over minimum 5/8” plywood decking, with roof panel fastener clips spaced 18” on center maximum (wide batten only)], [or Construction #397A with clips at 24” on center maximum (narrow batten only).]
        b. [Construction #398, minimum 24 gauge panels when installed over minimum 22 gauge 1-1/2” steel decking, with up to 9” rigid insulation. Roof panel fastener clips spaced 18” on center maximum (wide batten only)], [or Construction 398A with clips at 24” on center maximum (narrow batten only).]

1.04 SUBMITTALS

A. PRODUCT DATA

1. Submit manufacturer's technical product data, installation instructions and recommendations for each type of roofing required. Include data substantiating that materials comply with requirements.

B. SAMPLES
   1. Prior to ordering products, submit Manufacturer's standard color Samples for Architect's/Engineer's selections.
   2. Prior to starting work, submit (quantity) 12" long panel Samples showing shape, and a representative color chip for Architect's/Engineer's acceptance.

C. SHOP DRAWINGS
   1. Submit complete shop drawings detailing all perimeter flashings and joints in accordance with the manufacturer's standard recommendations.
   2. Describe all proposed details that deviate from what is shown on the plans.
   3. Details must allow for expansion and contraction.

D. SITE CONDITIONS
   1. Provide completed site condition form for environmental conditions excluded in the standard warranty.

1.05 QUALITY ASSURANCE

A. INSTALLER'S QUALIFICATIONS
   1. Installer must be approved by the Panel Manufacturer in writing prior to work commencing.
   2. Installer shall meet the following:
      a. Successfully applied five metal roofs of comparable size and complexity which reflect a quality weathertight installation in the region where the work will be performed.
      b. Have been in business for a minimum period of five years in the region where the work will be performed.

B. MANUFACTURER'S QUALIFICATIONS
   1. Manufacturer shall have a minimum of 10 years experience supplying metal roofing to the region where the work is to be done.
   2. Comply with current independent testing and certification as specified.
   3. Manufacturer shall provide proof of $2,000,000 liability insurance for their metal roof system.
   4. The roof panel manufacturer must also subscribe to Underwriters Laboratories" "Follow Up Service" assuring continuing product compliance with UL requirements. Shipment packaging of panels and attachment clips must bear UL classification markings.
   5. Panel manufacturers without full supporting product literature, Flashing & Details Guides, Guide Specifications, and Technical Support shall not be considered equal to the specified product.

C. REGULATORY AGENCY REQUIREMENTS
   1. Comply with UBC and local Building Code requirements if more restrictive than those specified herein.
   2. Compliance with certification must be submitted with bid.

D. DESIGN CRITERIA
   1. Wind Uplift: The roof system manufacturer shall provide an attachment schedule or supporting calculations to demonstrate adequate attachment for the following uplift loads:
      a. Uplift loads as calculated using the _____ Edition of the UBC with a _____ MPH basic wind speed, Exposure Factor _____, and importance Factor _____.

On more complex roofs, a roof plan showing the areas of discontinuity (perimeter & corner zones) should be provided by the Engineer of Record. Item 2 below is for snow load applications only.

   2. Drag Loading: The roof panel manufacturer shall provide an attachment schedule or calculations to resist drag loads induced by a snow load of _____ psf.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Protect against damage and discoloration.
B. Handle panels with non-marring slings.
C. Do not bend panels.
D. Store panels above ground, with one end elevated for drainage.
E. Protect panels against standing water and condensation between adjacent surfaces.
F. If panels become wet, immediately separate sheets, wipe dry with clean cloth, and allow to air dry.
G. Painted panels shall be shipped with a protective plastic sheeting or a strippable film coating between all panels.

[Remove any strippable film coating prior to installation and in any case, do not allow the strippable film coating to remain on the panels in extreme heat, cold or in direct sunlight or other UV source.]

1.07 PROJECT CONDITIONS

A. Examine the conditions and substrates in which metal roofing work is to be installed. Substrate shall be installed level, flat and true to avoid panel stresses and distortion.
[For field-curved roofing panels, delete "flat" for the above sentence.]
B. Field measurements shall be taken prior to fabrication of panels.
C. Proceed with roofing installation only after satisfactory conditions are met.

1.08 WARRANTY

A. MANUFACTURER'S PRODUCT WARRANTY

1. Manufacturer's standard coating performance warranty, as available for specified installation and environmental conditions. (Contact an AEP Span representative to determine actual warranty criteria.)

B. CONTRACTOR'S WARRANTY

Warrant panels, flashings, sealants, fasteners and accessories against defective materials and/or workmanship, to remain watertight and weatherproof with normal usage for two (2) years following Project Substantial Completion date.

C. MANUFACTURER'S WEATHERTIGHTNESS WARRANTY

1. Contact AEP Span sales department for watertightness warranty information.

PART 2 – PRODUCTS

2.01 ACCEPTABLE MANUFACTURER

A. AEP Span, A Division of ASC Profiles Inc., 2110 Enterprise Boulevard, West Sacramento, CA 95691
800-733-4955
Fontana: 10905 Beech Avenue, Fontana, California 92337
Tacoma 2141 Milwaukee Way, Tacoma, Washington 98421

B. Panel Designation: [Choose One]
1. Select Seam® Narrow Batten
2. Select Seam® Narrow Batten Curved
3. Select Seam® Wide Batten

ALTERNATES: Approval of substitute systems is required prior to bid. The Architect will be the sole judge of what qualifies as an "equal" system. To be approved as an equal system, submit or respond to all items in "Quality Assurance", "Performance Requirements" and "Submittal " sections of this specification. All submittals must be received in the Architect's office a minimum of ten (10) working days prior to bid

2.02 MATERIALS

A. PANELS

1. Base Metal:
    a. Material:
        (1) Steel conforming to ASTM-A792 Zincalume®/Galvalume®, minimum yield 50,000 psi, thickness [choose one] 24 gauge (standard), 22 gauge (standard in selected colors).
        (2) [For primers thicker than 0.5 mil] Steel conforming to ASTM A924 (formerly ASTM A446). G-90 Galvanized, minimum yield 50,000 psi, thickness [choose one] 24 gauge (standard), 22 gauge (standard in selected colors).
        (3) Copper conforming to ASTM B370, [choose one] 16 oz. (standard), 20 oz. (non-standard).
    b. Protective Coating:
        (1) Conform to ASTM-A792 AZ50 (Zincalume/Galvalume).
        (2) [For primers thicker than 0.5 mil] Conform to ASTM A924 (formerly ASTM A525) G-90 Galvanized.
2. Finish: [choose one]
    a. DuraTech® 5000 (Polyvinylidene Flouride), full 70% Kynar® 500/Hylar 5000® consisting of a baked-on 0.15-0.20 mil corrosion resistant primer and a baked-on 0.70-0.80 mil finish coat with a specular gloss of 10-30% when tested in accordance with ASTM D-523- 89 at 60°.
    b. DuraTech® mx metallic finish, consisting of a baked-on acrylic primer (0.15-0.2 mil.) and a baked-on Polyvinylidine Fluoride finish coat (0.7-0.8 mil.) with a specular gloss of 20-35% when tested in accordance with ASTD D-523-89 at 60°.
3. Color: [choose one]
    a. Manufacturer's standard selection of not less than 22 colors.
    b. Custom color as selected by Architect to be _____.
4. Interior Finish:
    a. Primer Coat Material: Corrosion-resistant primer; primer coat dry film thickness: 0.15 mils; finish coat material: polyester paint, finish coat dry film thickness: 0.35 mils.
    b. Total Interior Dry Film Thickness: 0.50 mils.
    c. Color: Off-White.

Custom Colors are available on orders of 3,000 lft. or larger. Consult an AEP Span representative for additional information.

5. Configuration: [choose one]
    a. Wide Batten: Roof panels shall consist of snap-on batten caps 1-7/8" wide and 1-7/8" high spaced (choose one) [17-1/4" or 22-1/2"] on center and a nominal panel width of the same. Panels shall be factory correctively leveled.
    b. Narrow Batten: Roof panels shall consist of snap-on batten caps 3/8" wide and 1" high spaced (choose one) [16" or 21-1/4"] on center and a nominal panel width of the same. Panels shall be factory correctively leveled.

NOTE: Flat metal surfaces will display waviness commonly referred to as "oil canning". This is caused by steel mill tolerances and is a characteristic, not a defect, of panels manufactured from light gauge metal. Panels are factory correctively-leveled to minimize the occurrence of "oil canning". As such, "oil canning" will not be accepted as cause for rejection.

B. ACCESSORIES

1. Fastener Clip
    a. UL-90 assembly rated clip: 24 gauge coated with minimum AZ-50 Zinc-Aluminum coating per ASTM A792.
2. Fasteners

Per manufacturer's recommendation including attachment schedule.

3. Sealant
    a. Gunnable Grade Caulking: Single component Urethane Caulk.
    b. Tape Sealant: Butyl.

C. FLASHING
1. Protective metallic coating, material, gauge and finish to match panels. Do not use lead or copper. Remove any strippable film prior to installation.

D. FABRICATION
1. Unless otherwise shown on drawings or specified herein, panels shall be full length. Fabricate flashings and accessories in longest practical lengths.
2. Roofing panels shall be factory formed. Field formed panels are not acceptable.
3. Roofing panels and/or battens shall be field curved, as required, to dimensions shown on drawings. [Applicable for curved roof applications only.]

PART 3 – EXECUTION

3.01 EXAMINATION

A. EXISTING CONDITIONS
4. Verify that members and/or substrate to receive panels are complete, accurately sized and located, in true plane, secure and otherwise properly prepared.
5. Prior to starting work, notify General Contractor about defects requiring correction.
6. Do not start work until conditions are satisfactory.

3.02 PREPARATION

A. FIELD MEASUREMENTS
1. Verify prior to fabrication.
2. If field measurements differ from drawing dimensions, notify Architect/Engineer prior to fabrication.

B. PROTECTION
1. Treat, or isolate with protective material, and contacting surfaces of dissimilar materials to prevent electrolytic corrosion.
2. Require workmen who will be walking on Roofing panels to wear clean, soft-soled work shoes that will not pick up stones or other abrasive material which could cause damage or discoloration.
3. Protect Work of other Trades against damage and discoloration.

C. SURFACE PREPARATION
1. Clean and dry surfaces prior to applying sealant

3.03 INSTALLATION

A. PANELS
1. Follow roof panel manufacturer's directions.
2. Install panel seams vertically.
3. Secure panels without warp or deflection.
4. Fully engage battens.
5. Remove strippable protective film, if used, immediately preceding panel installation.

B. ALLOWABLE ERECTION TOLERANCE
1. Maximum Alignment Variation: 1/4 inch in 40 feet.

C. FLASHING
7. Follow manufacturer's directions and architect approved Shop Drawings.

Install flashings to allow for thermal movement.

C. CUTTING AND FITTING
1. Neat, square and true. Torch cutting is prohibited.

3.04 CLEAN UP AND CLOSE OUT

A. PANEL DAMAGE AND FINISH SCRATCHES
1. Do not apply touch-up paint to damaged paint areas that involve minor scratches.
2. Panels or flashings that have severe paint and/or substrate damage shall be replaced as directed by the Architect's or Owner's representative.

Note: AEP Span does not recommend touch-up painting of damaged surfaces (minor scratches, etc.) due to fading and weathering differences of the touch-up paints in comparison to factory applied paint systems.

B. CLEANING AND REPAIRING
1. At completion of each day's work and at work completion, sweep Panels, Flashings and Gutters clean. Do not allow fasteners, cuttings, filings or scraps to accumulate.
2. Remove debris from Project Site upon work completion or sooner, if directed.

END OF SECTION