[SPEC NOTE: This document is intended as a guide to develop specifications for products manufactured by WESTMAN STEEL INDUSTRIES. It is not be viewed as a complete source of information about all product(s). Please refer to product literature for additional recommendations. http://westmansteel.com/**]**

[SPEC NOTE: This section includes profiled single skin metal siding applied to structural framing system utilizing an internal metal liner panel and sub-girts. Profiles listed include exposed fastened and hidden/concealed fastened metal siding. Metal siding materials are manufactured in a variety of thicknesses and finishes and can be installed with or without insulation and metal liner. Insulation can be specified here or referenced to appropriate insulation section. **Part 1 General** to be edited for specific project requirements. This section includes performance, proprietary, and descriptive type specifications; edit text to avoid conflicting requirements. Delete all **SPEC NOTES** and brackets at final edit.**]**

Part 1 General

1.1 SECTION INCLUDES

.1 Formed metal wall panels.

[SPEC NOTE: Liner panels form a wall system utilizing; steel liner, Z-bars, insulation and exterior cladding. For other wall types, delete all references to liner panel and sub-girts.**]**

.2 [Liner panels.]

.3 [Soffit panels.]

.4 [Insulation.]

.5 Accessories.

1.2 RELATED REQUIREMENTS

[SPEC NOTE: Only include those sections below that are included in the body of this section.**]**

.1 Section 05 12 00 - Structural Steel: Structural steel building frame

.2 Section 05 41 00 - Structural Metal Lightweight Framing: Stud wall framing system

.3 Section 07 21 13 - Board Insulation: Rigid insulation

.4 Section 07 21 16 - Blanket Insulation: [Semi-rigid] [Blanket] insulation

.5 Section 07 26 00 - Vapour Retarders

.6 Section 07 27 00 - Air Barriers

.7 Section 07 62 00 - Sheet Metal Flashings and Trims

.8 Section 07 92 00 - Joint Sealants

.9 [Section 13 34 19 - Metal Building Systems]

.10 [Section 13 34 23 - Fabricated Structures: Building framing system]

1.3 REFERENCE STANDARDS

[SPEC NOTE: Only include reference standards below that are applicable to project.**]**

.1 American Society for Testing and Materials (ASTM):

.1 ASTM A653/A653M-23, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process

.2 ASTM A792/A792M-23, Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process

.3 ASTM A755/A755M-18(2024), Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products

.4 [ASTM C612-14(2019), Standard Specification for Mineral Fiber Block and Board Thermal Insulation]

.5 [ASTM C665-24, Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing]

.6 [ASTM C834-17(2023), Standard Specification for Latex Sealants]

.7 [ASTM C920-18(2024), Standard Specification for Elastomeric Joint Sealants]

.8 [ASTM E84-24, Standard Test Method for Surface Burning Characteristics of Building Materials]

.9 [ASTM D2244-23, Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates]

.10 [ASTM D4214-23, Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films]

.2 Canadian Standards Association (CSA):

.1 [CAN/ULC-S702-14, Standard for Mineral Fibre Thermal Insulation for Buildings]

.2 CSA-S136-16, North American Specification for the Design of Cold-Formed Steel Structural Members

.3 Canadian Sheet Steel Building Institute (CSSBI):

.1 CSSBI 20M-17, Standard for Sheet Steel Cladding for Architectural, Industrial and Commercial Building Applications

.2 CSSBI S8-18, Quality and Performance Specification for Prefinished Sheet Steel Used for Building Products

1.4 ADMINISTRATIVE REQUIREMENTS

.1 Coordination: Coordinate work in accordance with Section 01 31 00, and as follows:

.1 Coordinate with other Work having a direct bearing on Work of this section.

.2 Coordinate the Work for installation of [vapour retarder] [air barrier system].

.3 Coordinate the Work with installation of [louvres] [components] [doors] [windows] [and other materials penetrating metal wall panel system].

.2 Pre-Installation Meeting:

.1 Convene [1 week] [[____] weeks] before starting work of this section.

.2 Review construction schedule, material availability, personnel, equipment, facilities and other relevant issues to avoid unnecessary delays.

.3 Review methods and procedures related to panel installation, including manufacturer's written instructions.

1.5 SUBMITTALS

.1 Submit information in accordance with Section 01 33 00 – Submittal Procedures.

.2 Action Submittals:

.1 Shop Drawings:

.1 Indicate arrangement of cladding system, including dimensions, location of joints, profiles of [inner and outer] panels, types and locations of supports, fasteners, flashing, closures and all metal components related to cladding installation.

.2 Provide Shop Drawings stamped and signed by a Professional Engineer, registered or licenced in [Province] [Territory], Canada.

.2 Samples:

.1 [Samples for Initial Selection: Submit manufacturer's [colour chart] [prefinished metal samples] showing manufacturer's full range of standard colours for selection.]

.2 [Samples for Verification:

.1 Submit [duplicate] colour samples approximately [100mm x 100mm] in [each] selected colour, finish and texture.

.2 Submit sample, 300mm long x panel width, for [each specified profile] [cladding profile.]

.3 Informational Submittals:

[SPEC NOTE: When manufacturer's written instructions for specific installation requirements are referenced in **Part 3 Execution**, include the following request for submittal of those instructions. Edit Part 3 to avoid conflict with manufacturer's instructions.**]**

.1 Installation Data: Submit manufacturer's installation instructions, special handling criteria, installation sequence, and initial cleaning procedures.

.2 Certificates: Submit product certificates signed by manufacturer certifying materials meet specified performance characteristics, criteria and physical requirements.

.4 Design Submittals:

.1 Submit [documentation] [certification] indicating compliance to specified performance/design criteria, signed and sealed by professional responsible for their preparation.

.1 Design Data: Include material data, calculations and details.

.2 Letters of Assurance: Submit following documents as required by authorities having jurisdiction or as specified in Section [_____].

.1 [Letter] [Schedule] of [Assurance] [Compliance] [Commitment]: Submit [concurrently with Shop Drawings] [before start of Work].

.2 [Letter] [Schedule] of [Assurance] [Compliance] [Commitment]: Submit after completion of Work of this Section.

.5 Closeout Submittals: Submit in accordance with Section [01 78 00] [01 78 23]

.1 Maintenance Data: Submit maintenance data for cleaning and maintenance of panel finishes for incorporation into O & M manual.

[SPEC NOTE: Only include the following for a LEED project or similar environmental certification requirements.**]**

.2 [Sustainable Design Closeout Documentation: [CSSBI EPD-1] [_____].]

1.6 QUALITY ASSURANCE

.1 Structural design in accordance with CSA-S136.

.2 Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum 5 years documented experience.

.3 Installer Qualifications: Company specializing in performing the work of this section with minimum 5 years documented experience [and approved by the manufacturer].

1.7 MOCK-UPS

[SPEC NOTE: Only include the following if Mock-Ups are applicable to the project.**]**

.1 Section [01 43 00] [01 45 00]: General requirements for mock-ups

.2 Provide [_____] m long x [_____] m wide mock-up of siding [and soffit system], attachments to structural framing, associated vapour retarder and air membranes, weep drainage system, sealants, and related insulation.

.3 Locate [where directed by the Consultant].

.4 Approved mock-up [will] [will not] remain as part of the Work.

1.8 DELIVERY, STORAGE, AND HANDLING

.1 Section [01 61 00]: Transport, handle, store, and protect products

.2 Protect panels from weathering by removing or venting sheet plastic shipping wrap.

.3 Store prefinished materials off ground, protected from weather, to prevent twisting, bending, and abrasion, and to provide passive ventilation. Slope metal sheets to ensure drainage.

.4 Prevent contact with other materials which will cause discolouration, staining or corrosion.

1.9 WARRANTY

.1 Section [01 78 00]: Warranties

[SPEC NOTE: CCDC contacts use Substantial Performance. Revise term below to suit the definition in the Project's contract.**]**

.2 Provide manufacturer's 2-year warranty against manufacturer's defects and deficiencies from date of Substantial Performance of the Work.

[SPEC NOTE: CSSBI S8-18 - Quality and Performance Specification for Prefinished Sheet Steel Used for Building Products, provides paint qualification tests and weathering per ASTM standards, including 40-year film integrity and 30-year chalk and colour change.**]**

.3 Provide manufacturers panel finish warranty including degradation of paint finish under normal atmospheric conditions including colour fading caused by exposure to weather.

.1 [40-year film integrity and 30-year chalk and colour change in accordance with CSSBI S8-18]

Part 2 Products

2.1 MANUFACTURERS

.1 Westman Steel Industries; Product: [_____].

[SPEC NOTE: WESTMAN STEEL David Forsey Architectural Representative david.forsey@westmansteel.ca (800) 661-2823. Delete on final edit.**]**

.2 Other acceptable manufacturers offering functionally [and aesthetically] equivalent products.

.1 [_____]; Product: [_____].

.2 [_____]; Product: [_____].

.3 [_____]; Product: [_____].

.3 Substitutions: [Refer to Section 01 62 00] [Not permitted].

2.2 DESCRIPTION

.1 System Description:

[SPEC NOTE: WESTMAN STEEL Fireguard is available to meet ULC designated non-load bearing fire wall system for 1-hour W605 and 2-hour W606 rated assemblies. Contact WESTMAN STEEL for separate product specifications.**]**

.1 Wall System: Preformed [and prefinished] single skin metal siding panels with [vertical] [horizontal] profile; fastened to [steel] framing system [with sub-girt system] [with thermal spacer and sub-girt system]; [insulation] [and liner panels].

.2 [Soffit System: Preformed [and prefinished] single skin profiled metal panels; fastened to [steel] framing system with [concealed] [exposed] fastening system.]

2.3 PERFORMANCE / DESIGN CRITERIA

.1 Design: Design [wall panels and connections] by a licensed design professional using performance and design criteria as indicated.

.2 Loads: Design and size components to withstand dead and live loads caused by positive and negative wind pressure acting normal to plane of panel as calculated in accordance with [applicable] building code [to a design pressure of [_____] kPa].

[SPEC NOTE: Deflection for exterior wall panels: L/180. Interior partition walls: L/120. Roofs and ceilings: L/240. Ensure deflection limits meet project design.**]**

.3 Maximum Allowable Deflection of Steel Panel: [L/90] [L/180] [L/240] of span.

.4 Thermal Movement: Provide for expansion and contraction within system components caused by a cycling temperature range of [20 degrees C], ambient; [40 degrees C] over a [12-hour] hour period without overstressing components causing buckling, failure of connections, or other detrimental effects.

.5 [Design and provide expansion joints to accommodate movement in cladding and between cladding and structural framing to prevent permanent distortion or damage to cladding system.]

.6 [Seismic Loads: Design and size components to withstand seismic loads and sway displacement as calculated in accordance with [applicable] building code.]

.7 Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.

.8 [Thermal Barrier: Provide continuity of thermal barrier at building enclosure elements in conjunction with thermal insulating materials specified in Section [07 21 00].]

.9 [Vapour Retarder: Provide continuity of vapour retarder at building enclosure elements in conjunction with vapour retarders specified in Section [07 26 00].]

.10 [Air Seal: Provide continuity of air barrier at building enclosure elements in conjunction with air barrier materials specified in Section [07 27 00].]

2.4 STEEL SHEET MATERIALS

[SPEC NOTE: Grade 230 MPa is standard for rolled formed profiles with higher Grades available to meet design load requirements. Contact WESTMAN STEEL for additional information on steel Grades and design considerations.**]**

.1 Zinc-Coated (Galvanized) Steel Sheet: ASTM A653/A653M, [structural quality (SS)], minimum [Grade 230], [Z275] coating designation.

.2 Aluminum-Zinc Alloy-Coated (Galvalume) Steel Sheet: ASTM A792/A792M, [commercial steel (CS)] [structural quality (SS)], minimum [Grade 230], [AZM150] coating designation.

2.5 INSULATION

.1 Insulation: As specified in Section [07 21 13] [and] [Section 07 21 16].

2.6 ACCESSORIES

.1 Flashing and Trim: As specified in Section 07 62 00, of same material, colour and gloss as cladding in exposed locations; [galvanized] [aluminum] material in non-exposed locations; preformed corner pieces, double back exposed edges.

.2 Closures: Manufacturer's standard metal closures and trims, to suit cladding profile.

.3 Gaskets: Manufacturer's standard type, suitable for use with system, permanently resilient; ultraviolet and ozone resistant.

.4 Sealants: As specified in Section 07 92 00, and as follows:

.1 Concealed Sealant: Tape or compound, non-skinning, non-drying, butyl rubber.

.2 Exposed Sealant: [ASTM C920, silicone] [ASTM C834, acrylic co-polymer], single component, [colour matching cladding].

.5 Fasteners: Suitable for design loads and application, [manufacturer's standard] [colour matching panels where exposed to view].

.6 Site Touch-up Paint: Air-dry paint finish specifically designed for repainting of sheet steel.

.7 Bituminous Paint: Asphaltic base

.8 [Expansion Joints: Same material, thickness and finish as exterior sheets type, of profile to suit system.]

.9 Anchors: Galvanized steel

2.7 COMPONENTS

[SPEC NOTE: WESTMAN STEEL uses high quality Silicon Modified Polyester (SMP) coating systems for solid colours and Fluoropolymer (PVDF) for metallic paint colours. Contact WESTMAN STEEL for paint coating recommendations based on project's application and location. Delete Coating and Colour, if specifying unfinished Galvalume steel.**]**

.1 Cladding Panels: [Prefinished Galvalume steel] [Galvalume], interlocking edges with concealed (hidden) fasteners, panel joints.

.1 Panel Profile: [WS200, 204mm wide] [WS300, 305mm wide] [WS279, 279.4mm wide with 25.4mm edge reveal] [with centre V groove] [without centre V groove].

[SPEC NOTE: To minimize oil canning effect on WS panels for wall applications, WESTMAN STEEL recommends 0.76mm core steel thickness in lengths less than 3658mm for profiles with no V groove and less than 7315mm for profiles with V groove.**]**

.2 Thickness: 0.76mm core steel thickness.

.3 [Coating: Sheet steel coil coated to ASTM A755 [Silicon Modified Polyester] [Fluoropolymer] coating.]

[SPEC NOTE: Review WESTMAN STEEL Colour Chart or Steel Profile Sheet for Westman Steel's standard stocked colour range. Custom colours available with sufficient lead time and approval of colour match sample.**]**

.4 [Colour: [QC#____] [As selected from manufacturer's standard range].]

.5 Product: **WS Series**, manufactured by **Westman Steel Industries**.

.2 Cladding Panels: [Prefinished Galvalume steel] [Galvalume], lapped edges with exposed fasteners, panel joints.

[SPEC NOTE: Review WESTMAN STEEL Cladding & Roofing Profiles for panel profile dimensions and coverage**]**

.1 Panel Profile: [Indicate profile] [_____], [_____] mm] wide.

.2 Thickness: [0.46mm] [0.61mm] [0.76mm] core steel thickness.

.3 [Coating: Sheet steel coil coated to ASTM A755 [Silicon Modified Polyester] [Fluoropolymer] coating.]

.4 [Colour: [QC#____] [As selected from manufacturer's standard range].]

.5 Product: [_____], manufactured by **Westman Steel Industries**.

.3 [Liner Panels: [Prefinished, Galvalume steel] [Galvanized steel] [Galvalume steel], panel side-lap with site applied sealant.

.1 Panel Profile: AWR liner, 914mm wide.

.2 Thickness: [0.46mm Prefinished, Galvalume steel] [0.61mm Prefinished, Galvalume steel] [0.46mm galvanized steel] [0.61mm Galvalume steel] core steel thickness.

[SPEC NOTE: Prefinished Galvalume AWR Liner Panels are finished in Silicon Modified Polyester coatings. Barrier is a Polyvinyl Chloride (PVC) thick film coating intended for aggressive industrial environments. Refer to CSSBI B17-02 and contact WESTMAN STEEL for additional specification information.**]**

.3 Coating: Sheet steel coil coated to ASTM A755 [Silicon Modified Polyester] [Barrier – Polyvinyl Chloride (PVC) coating].

.4 Colour: [QC#____] [As selected from manufacturer's standard range].

.5 Product: **AWR Liner**, manufactured by **Westman Steel Industries**.]

.4 [Soffit Panels: Prefinished Galvalume steel, interlocking edges with concealed fasteners.

.1 Panel Profile: [WS200, 204mm wide] [WS300, 305mm wide] [WS279, 279.4mm wide with 25.4mm edge reveal] [with centre V groove] [without centre V groove]. [Vented] [Non-vented] [Vented and non-vented as shown on Drawings].

.2 Thickness: [0.61mm] [0.76mm] core steel thickness.

.3 Coating: Sheet steel coil coated to ASTM A755 [Silicon Modified Polyester] [Fluoropolymer] coating.

.4 Colour: [QC#____] [As selected from manufacturer's standard range].

.5 Product: **WS Series**, manufactured by **Westman Steel Industries**.]

[SPEC NOTE: Either sub-girts or thermal Spacers can be used. Review Thermal Spacer manufacturers technical information for spacing and design loads to meet projects' Performance/Design Criteria.**]**

.5 [Sub-girts: Minimum [1.21 mm] thick formed galvanized steel; full depth of wall system.]

.6 [Thermal Spacers: [Fibreglass] [Aluminum] [Galvanized], depth [to match insulation thickness] [____mm].

.1 Product: [_____], manufactured by [_____].]

2.8 FABRICATION

.1 Form steel sections true to shape, accurate in size, square, and free from distortion or defects.

.2 Factory fabricate components ready for site installation, in longest practicable lengths.

.3 Fabricate components to dimensions, profiles, gauges and details as shown on Shop Drawings, including all companion flashing.

Part 3 Execution

3.1 EXAMINATION

.1 Verify existing conditions before starting work.

.2 Verify dimensions, tolerances, and method of attachment with other work.

.3 Verify that site measurements [are as indicated on Drawings] [are as indicated on Shop Drawings] [meet manufacturer's minimum requirements].

.4 Report unsatisfactory conditions to [Consultant] in writing; Do not start work of this section until unsatisfactory conditions are rectified.

3.2 INSTALLATION

.1 Install components to CSSBI 20M and manufacturer's written instructions.

.2 [Liner Panel:

.1 Fasten liner sheet to steel framing. Ensure all fasteners are driven normal to plane of liner.

.2 Lap liner side joints and seal with butyl sealant. Lap ends minimum [100mm] over a support. [Liner to act as air/vapour barrier.]]

.3 [Thermal Spacers: Install thermal spacers at [spacing recommended by manufacturer] [[____]mm] with corrosion resistant fasteners]

.4 [Sub-girts: Install sub-girts [to thermal spacers] [through liner directly to steel structure]. Frame all openings in cladding.]

.5 Flashing: Install starter flashing, drip and other flashing, corners, edgings, and window and door flashings as shown on Drawings.

.6 Insulation: Install insulation to manufacturer's recommendations, positively fixed to liner to prevent sagging.

.7 Exterior Cladding:

.1 Install wall cladding [and soffit materials] to manufacturers standard installation procedures, providing proper laps true to line, and tight fitting to ensure a weather-tight face.

.2 Install finishing flashing, cap flashing, trims and closures.

.3 Attach components in manner not restricting thermal movement.

.4 [Orient soffit panels [[in direction as indicated on drawings] [perpendicular to face of wall] [with mitred corners]].

.8 Sealants: Install sealants at junctions with adjoining work as shown on Drawings, in accordance with Section 07 92 00.

3.3 ERECTION TOLERANCES

.1 [Section 01 73 00: Tolerances]

.2 Maximum Offset from True Alignment between Adjacent Members Butting or In Line: [1.6mm].

.3 Maximum Variation from Plane or Location Indicated on Drawings: [6mm].

3.4 CLEANING

.1 Section 01 74 00: Final Cleaning, and as follows:

.1 Remove site cuttings from finished surfaces, edges, trims and flashings.

.2 Clear weep hole obstructions.

.3 Remove temporary protective coverings and strippable films, if any, as soon as each panel is installed.

.4 [Clean and wash prefinished surfaces with mild soap and water; rinse with clean water.]

.2 Repair and touch up minor surface damage.

.3 Replace damaged panels and components that cannot be repaired.

END OF SECTION

[SPEC NOTE: Additional reference documents;

WESTMAN STEEL Cladding & Roofing Brochure
WESTMAN STEEL Colour Chart
WESTMAN STEEL Load Tables
WESTMAN STEEL Profile Sheets
WESTMAN STEEL Commercial Components, Flashings and Accessories
WESTMAN STEEL 40 Year Warranty Pre-Painted Galvanized & Galvalume Steel Roofing & Siding Panels
CSSBI Glossary of Commonly Used Terms for Structural Building Products**]**