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* This guide specification is written using terms (Owner, Consultant, etc.) found in CCDC contracts. For any other project contract type revise terms to suit.
* When specifying for a particular project, if the Sagiper Sagiwall products are for a non-exterior wall application, consider renaming this Section to one of the following MasterFormat titles/numbers:

Section 06 64 19 – Prefinished Plastic Paneling

Section 07 42 93.33 – Plastic Soffit Panels

Section 09 54 29 – Suspended Plastic Ceilings

Section 09 78 19 –Plastic Interior Wall Paneling

# General

## Summary

### \*\*\*\*\*This Section includes requirements for supply and installation of PVC [siding boards for exterior walls] [boards for interior walls] [boards for exterior soffits] [and] [boards for suspended interior ceilings] [boards for directly applied interior ceilings].

## Related Requirements

### \*\*\*\*\*Section 06 10 00 – Rough Carpentry: Plywood sheathing substrate

### \*\*\*\*\*Section [06 16 43] – [Gypsum Sheathing]: Sheathing substrate

### \*\*\*\*\*Section 07 21 13 – Board Insulation: Insulation as part of the exterior wall assembly

### \*\*\*\*\*Section 07 62 00 – Sheet Metal Flashing and Trims

### Section 07 92 00 – Joint Sealants: Installation of sealants at site cut aluminum trims

### \*\*\*\*\*Section 09 21 16 – Gypsum Board Assemblies

### \*\*\*\*\*Section [09 51 13] – [Acoustic Panel Ceilings]: Suspension system supporting work of this Section at interior ceiling locations.

### \*\*\*\*\*Division 21 – Fire Suppression: Coordination of sprinkler heads penetrating through panel materials.

### \*\*\*\*\*Division 26 – Electrical: Coordination of electrical [outlet cover plate colour] [lighting fixture bezels] to match boards.

### \*\*\*\*\*Drawing A [\_\_\_]: Details of plastic boards

## REFERENCE STANDARDS

### ASTM International:

#### ASTM D635-14, Standard Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position

#### ASTM E330/E330M-14, Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference

### Canadian General Standards Board: CAN/CGSB 41.24-95, Rigid Vinyl Siding, Soffits and Fascia

### Deutsches Institut für Normung (DIN): DIN 53495 – Testing of Plastics; Determination of Water Absorption

### \*\*\*\*\*Underwriters Laboratories Inc (UL): CAN/ULC S134-13, Standard Method of Fire Test of Exterior Wall Assemblies

### NFPA 285, Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies Containing Combustible Components

## Administrative Requirements

### Coordination:

#### \*\*\*\*\*Coordinate installation of electrical outlets in [exterior walls] [soffits] [interior partitions] [interior ceilings], and colour of cover plates to match [boards] [soffits]

#### Coordinate work of other Subcontractors with components penetrating plastic boards to arrange for appropriate board movement allowances and trims at the intersection.

#### \*\*\*\*\*Coordinate installation of flashing to provide drainage to exterior.

## SUBMITTALS

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

### Action Submittals: Before starting work of this Section, submit the following:

#### Product Data: Submit manufacturer’s product data and installation instructions for each type of Product specified.

#### \*\*\*\*\*Samples for Initial Selection: Submit colour samples for plastic boards and accessories visible in the final installed work.

#### \*\*\*\*\*Samples for Verification: Submit actual samples, full profile width x approximately 200 mm long, of materials proposed for use on the Project for each profile and colour/pattern of board required.

### Informational Submittals: During the course of the work, submit the following:

SPECNOTE: The following item isn’t required on all projects.

#### \*\*\*\*\*Source Quality Control Submittals: Submit test results for fire testing in accordance with building code.

#### Test and Evaluation Reports: Submit current CCMC evaluation report for plastic boards for exterior applications on combustible or non-combustible construction that comply with the \*\*\*\*\* [National] [applicable Provincial] Building Code.

### \*\*\*\*\*Sustainable Design Submittals: Coordinate project sustainable design requirements with Section [01 35 18 – LEED Requirements] [01 35 63 – Sustainability Certification Project Requirements].

### Project Closeout Submittals:

#### Operation and Maintenance Data: Submit manufacturers’ instructions for repair and cleaning procedures. Include name of original installer and contact information, in accordance with Section \*\*\*\*\* [01 78 23 – Operation and Maintenance Data].

#### Warranty Documentation: Submit manufacturer’s warranty documentation.

### Maintenance Material Submittals: Supply spare materials for the Owner’s maintenance use, in accordance with Section 01 78 43 – Spare Parts, and as follows:

#### Supply one (1) manufacturer’s touch-up pen for each colour on the Project.

#### \*\*\*\*\* [1%] of installed boards in manufacturer’s standard maximum board lengths

#### \*\*\*\*\* [One (1)] of each accessory and trim shape in manufacturer’s standard maximum lengths

#### Package materials with protective coverings and label with contents.

#### Locate at the Project site at a specific location as directed by Consultant or Owner.

## Quality Assurance

### Qualification Requirements: When requested by Consultant, submit proof of qualifications:

#### Installers: \*\*\*\*\* [Three (3) years] [One (1) year] successful experience installing specified Products or similar products, with similar scope to this Project.

### Certifications:

#### Compliance Certification: Submit certificates from manufacturer indicating tested performance requirements required by Authorities Having Jurisdiction.

###### \*\*\*\*\*Independent Testing Report indicating compliance with CAN/ULC S134 for exterior applications

###### NFPA 285 Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load Bearing Wall Assemblies Containing Combustible Components, 2012.

SPECNOTE: Mock-ups increase the construction cost. Only specify mock-ups where there are very uncommon details or other uncommon circumstance.

### \*\*\*\*\*Mock-Ups: Prepare mock-up[s] in accordance with Section [01 43 00 – Quality Assurance and Control] [01 45 00 – Quality Control], and as follows:

#### Prepare a full-size mock-up of plastic board at the Project site for Consultant’s review. Include each type of material and accessory, one outside corner, and an intersection with a door or window.

#### Once mock-up is accepted, maintain in an undisturbed condition throughout the construction period.

#### Mock-ups may remain as part of the final Work, if undamaged at time of \*\*\*\*\* [Substantial Completion].

## DELIVERY, STORAGE, AND HANDLING

### Storage and Handling Requirements: Avoid exposure to ketones, cyclic ethers, and aromatic hydrocarbons (such as benzene and toluene).

## SITE CONDITIONS

### Site Measurements: Verify dimensions by site measurements before fabrication and indicate measurements on shop drawings where plastic boards are indicated to fit between or around other construction. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

### Established Dimensions: Establish dimensions and proceed with ordering plastic boards without site measurements where site measurements cannot be made without delaying the Work. Coordinate construction to ensure that actual site dimensions correspond to established dimensions; allow for trimming and fitting.

### Ambient Conditions: Proceed with installation \*\*\*\*\* [at interior locations only after building envelope is complete and relative humidity typical of when building is in permanent operation] [and] [at exterior locations when ambient temperatures are not below -10 degrees Celsius]

## WARRANTY

### Manufacturer Warranty: \*\*\*\*\* [Interior locations, manufacturer’s limited lifetime warranty] [Exterior locations: Manufacturer’s limited Fifty (50) years against vinyl peeling, or vinyl fading/discolouration; and PVC core warping or splitting]

# Products

## MANUFACTURERS

### \*\*\*\*\*Basis-of-Design Materials: Products named in this Section were used as the basis-of-design for the Project. Additional manufacturers offering similar Products may be incorporated into the work of this Section if they meet the performance requirements established by the named Products, and when they submit substitution requests in accordance with Section 01 62 00.

### Basis-of-Design Materials: [Sagiper North America Inc](http://sagipernorthamerica.com/), SAGIWALL

### \*\*\*\*\*Substitutions: Consultant may accept additional manufacturers with similar Products to the Acceptable Materials listed in this Section if substitutions meet the performance requirements established by the named Products, and when substitution requests are in accordance with Section 01 25 00 – Substitution Procedures.

### \*\*\*\*\*OR\*\*\*\*\*

### \*\*\*\*\*Substitutions [will not be considered by request of the Owner] [will be considered during the bidding period when information is submitted to Consultant in accordance with Section 01 62 00]

### Proposed substitutions of single-wall (non-extruded) plastic boards will not be considered.

## Regulatory Requirements

SPECNOTE: The following item isn’t required on all projects.

### \*\*\*\*\*System in accordance with [CAN/ULC S134] [\_\_\_]

### \*\*\*\*\*System in accordance with [NFPA 285] [\_\_\_\_]

## Performance Criteria

### Boards tested in accordance with CAN/CGSB 41.24-95.

### Boards tested for rate of burn in accordance with ASTM D635-14.

### Boards tested in accordance with select sections of ASTM E330/E330M-14, Procedure B-Wind Load Resistance Test.

### Board materials meeting the following qualities:

#### UV Resistance: 97% UV reflected minimum

#### Water Absorption (to DIN 53495): 0.04% maximum

#### Impact Resistance (H Sphere Hardness): 120 N/mm2

#### Shear Strength: 5.5 KJ/m2

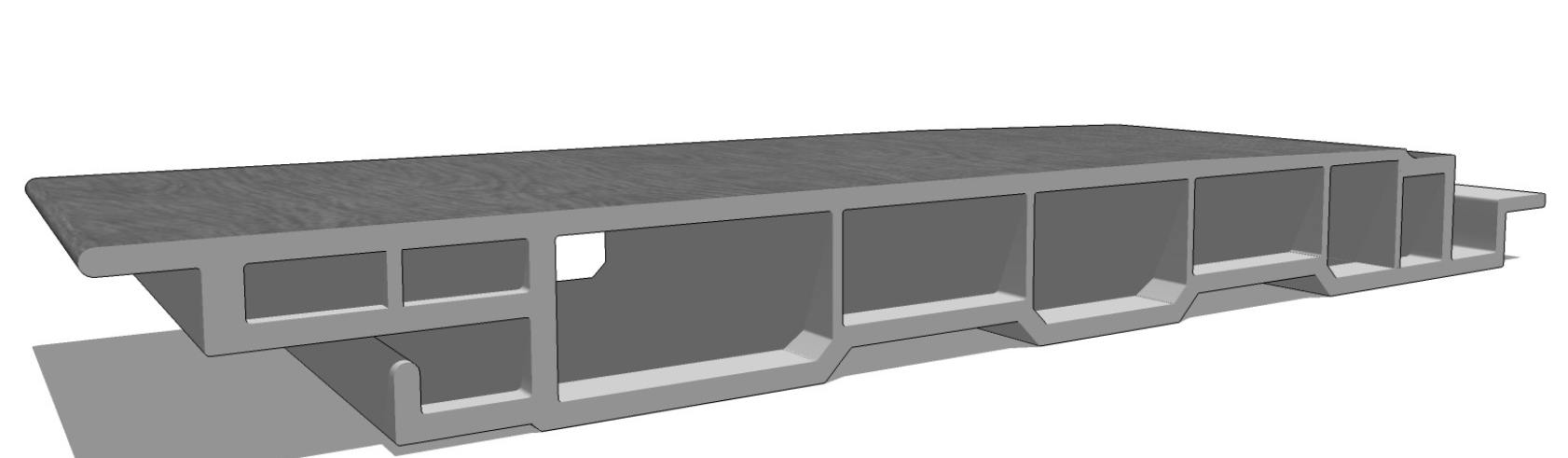
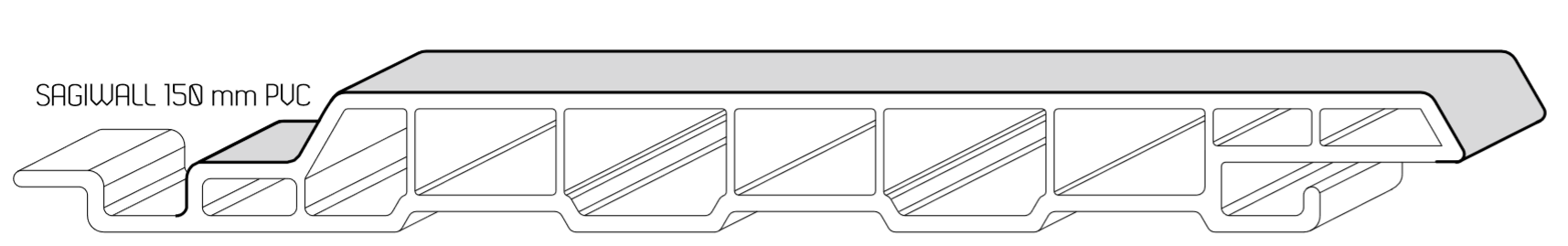
#### Coefficient of Expansion: 8x10-5K-1

### Accessory materials meeting the following qualities:

#### Aluminum Accessories Length: 6 m

#### WPC Accessory Length: 2.20 m

## Materials

SPECNOTE: Sagiper North America Inc, SAGIWALL sectional diagram follows (NTS): 

### Extruded rigid boards, with transparent PVDF layer over a protective transparent polymethylmethacrylate (PMMA) layer, over a decorative PMMA film with \*\*\*\*\* [wood] [metallic] appearance factory applied on extruded PVC board substrate]

### Board Profile: 6” (150 mm) channeled groove profile and 6” (150 mm) v-groove profile

SPECNOTE: Custom board lengths are more expensive than standard lengths. Consult manufacturer for further information.

### Board Length: \*\*\*\*\* [12 feet (3660 mm)] [19 feet (5790 mm)] [Manufacturer’s standard maximum lengths to minimize site joints] [Custom fabricated to \_\_\_ mm length]

## Finishes

### \*\*\*\*\*Finish with Wood Appearance:

#### \*\*\*\*\* [REF 1 Blonde Oak] [REF 2 Port Redwood] [REF 3 Chocolate Blackwood] [REF 4 Espresso Blackwood] [REF 5 White Oak] [REF 6 Hazel Oak] [REF 7 Brazilian Redwood] [REF 8 Caramel Cedar] [REF 9 Carmel Zebrawood] [REF 10 Cherry Zebrawood] [REF 11 Pine Zebrawood] [REF 12 Titanium Coalwood] [REF 13 Light Maple] [REF 14 Walnut Blackwood]

\*\*\*\*\*OR\*\*\*\*\*

### \*\*\*\*\*Finish with Solid and Wood Metallic Appearance:

#### [REF 50 Absolute Silver] [REF 60 Absolute White] [REF 70] [REF 71] [REF 72] [REF 73] [REF 74] [REF 75] [REF 76] [REF 77] [REF 78] [REF 79 Knotty Maple] [REF 80 Mocha Redwood] [REF 81 Chestnut Blackwood] [REF 82 Desert Oak] [REF 83 Mountain Oak] [REF 84 Monument Oak]

\*\*\*\*\*OR\*\*\*\*\*

### \*\*\*\*\*Solid Colour Finish:

#### \*\*\*\*\*RAL Colour Finishes: [RAL 9010 – Pure White] [RAL 9001 - Cream] [RAL 7035 – Light Grey] [RAL 7001 – Silver Grey] [RAL 7016 – Anthracite Grey] [RAL 3011 – Brown Red] [RAL 3005 – Wine Red] [RAL 6005 - Moss Green] [RAL 6009 – Fir Green] [RAL 5011 – Steel Blue]

### Texture: \*\*\*\*\* [Smooth for metallic finishes] [Embossed wood grain appearance]

## ACCESSORIES

### Manufacturer’s recommended factory coated accessories, \*\*\*\*\* [colour to match board finish] [contrasting colour as indicated on Drawings] [and as follows:]

#### \*\*\*\*\* [Aluminum Starter Strip] [Aluminum L-shape Corner 35 mm x 48 mm] [Aluminum L-shape Corner 35 mm x 90 mm] [Aluminum L-shape Corner 35 mm x 150 mm] [Aluminum J Mold] [Aluminum Terminating J Mold] [Aluminum Outer Corner 35 mm x 35 mm] [Aluminum H-Mold]

### Fasteners: \*\*\*\*\* [Galvanized] [Stainless steel] for exterior locations [and interior high humidity locations], pan head wafer screws, length to penetrate [framing] [structural sheathing] by 19 mm minimum.

### Sealant: Type as recommended by manufacturer, colour matching boards.

# Execution

## EXAMINATION

### Verification of Conditions:

#### Verify substrate walls are braced or sheathed to resist racking loads in accordance with the building code.

#### Verify \*\*\*\*\* [partition substrate] [wall sheathing] [soffit framing] has adequate fastener withdrawal resistance before beginning of installation of Products specified in this Section.

#### Verify \*\*\*\*\* [water-resistive barrier] [air/vapour membrane] is installed over [partition substrate] [wall sheathing] [soffit framing] before beginning of installation of Products specified in this Section.

#### Beginning installation of Products specified in this Section will denote acceptance of site conditions.

## PREPARATION

### \*\*\*\*\*Prior to installation, randomly mix board bundles to maximize [wood grain] variation appearance and minimize pattern repeats.

### Select boards of longest possible lengths.

SPECNOTE: Select one of the following installation types, or select multiple types when applicable to the project.

## INSTALLATION – \*\*\*\*\* [Exterior Wall Horizontal Siding] [Exterior Wall Vertical Siding] [Boards for exterior soffits] [Interior wall paneling] [Interior Ceiling Finish with Concealed Suspension System] [Interior Ceiling Finish with Visible Grid Suspension System]

### Install boards in accordance with manufacturer’s installation instructions, and as indicated in Contract Documents.

### Securely attach boards using methods and materials recommended by board manufacturer for wind load conditions at Project site.

### Scribe and cut as required to fit abutting walls and adjacent surfaces, and to accommodate other materials where penetrating through boards. Secure boards and accessories in place, rigid, plumb and square, and as follows:

#### Install work with joints concealed behind corner trims and other manufacturer’s trim accessories.

#### Locate fasteners in center of elongated slots without binding the board, to allow for thermal movement. Allow for board expansion/contraction gaps as recommended by manufacturer, with consideration given to the temperature at time of installation.

#### \*\*\*\*\*Select each board to avoid the appearance of a repeating [wood grain] pattern.

#### Install boards with end joints concealed by H-shaped trim or perimeter trims.

### Where aluminum trims are cut on site, apply sealant to edges. Install sealant in accordance with sealant manufacturer’s instructions.

### Interface with Adjacent or Other Work: Install door and window trim pieces in maximum lengths.

## SITE QUALITY CONTROL

### Non-Conforming Work:

#### Adhesive installation is not acceptable.

#### Fasteners exposed to view will only be accepted with prior approval of Consultant and board manufacturer.

## Adjusting

### Where minor surface damage has accidentally occurred, touch-up by methods recommended by board manufacturer. Replace damaged materials that cannot be satisfactorily repaired.

## Cleaning

### Cleaning: Where dirt or other foreign contaminants occur on board, perform cleaning of board in accordance with manufacturer’s instructions, and as indicated in Section 01 74 23 – Final Cleaning.

**END OF SECTION**