



# SUPPLEMENTAL INSTRUCTION

CONTRACTOR:  
**Tal-co Building Innovations**  
Address:  
Suite 2, 1341 Coker Street  
Greely, Ontario, K4P 1A1

PROJ.: **Boys and Girls Club Prince of Wales**  
PROJ. No.: **1716**  
DATE: Jan 22, 2018  
S.I. No. **S.I. - 006**

Supplemental Instructions are issued to the Construction Manager to record a clarification or revision to the previously issued Contract Documentation as reflected by the attached Information Bulletin prepared by the identified Consultant.

The Construction Manager shall review the Supplemental Instruction and the attached Information Bulletin and issue to the effected Trade Contractors identifying the following course of action by the trade contractor:

- Proceed with Instruction. Issued for general information, no change to Contract price or schedule. (Site Instruction)
- Proceed with Instruction and provide a quotation within 10 days, identifying change to Contract price and schedule (Change Directive)
- Do not proceed. Provide quotation identifying change to Contract price and schedule within 10 days. (CCO)

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**1.1 TITLE**  
Additional and updated Specifications for Fibre Cement Panel and Metal Siding

**1.2 DESCRIPTION OF THE WORK**  
.1 Provision of additional information

**1.3 ATTACHMENTS**  
BGCO-PW-IB-A003

**1.4 REASON**  
To provide additional information for the fibre cement panel siding and metal siding.

### Hobin Architecture Incorporated

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# INFORMATION BULLETIN

CONSTRUCTION MANAGER:

**Tal-co Building Innovations**

Address:

Sutie 2, 1341 Coker Street  
Greely, Ontario, K4P 1A1

PROJ.:

**Boys and Girls Club Prince  
of Wales**

PROJ. No.:

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DATE:

Jan 22, 2018

I.B. No.

**IB-A003**

*The following Information Bulletin is issued to the Construction Manager to describe additional information, or a revision to, previously issued documentation.*

## Partners

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## 1.1 TITLE

Additional Specifications for Fibre Cement Panel Siding and Preformed Metal Siding

## 1.2 REFERENCE

Architectural Specifications sections 07 44 56, 07 46 13

## 1.3 DESCRIPTION OF WORK

- .1 Update to specification for Preformed Metal Siding
- .2 Addition of specification for Fibre Cement Panels

## 1.4 ATTACHMENTS

Updated Architectural Specifications:

- BG-07 44 56 Fibre Cement Panels
- BG-07 46 13 Preformed Metal Siding

## 1.5 REASON

Additional information as requested by contractor

## Hobin Architecture Incorporated

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Issued by:

Doug van den Ham

## PART 1 - GENERAL

<u>1.1 SECTION INCLUDES</u>	.1	Materials and installation for wall systems comprising fibre reinforced cementitious facing panels indicated as FCP on drawings c/w all trims, fasteners, closure panels, and sub-grit framing and thermal clips to substructure.
<u>1.2 RELATED SECTIONS</u>	.1	Section 07 21 13 - Board Insulation
	.2	Section 07 27 00 – Air Barriers
	.3	Section 07 42 43 – Aluminum Plate Wall Panels
	.4	Section 07 62 00 – Metal Flashing and Trim
	.5	Section 07 92 00 – Joint Sealants
<u>1.3 REFERENCES</u>	.1	Aluminum Association (AA). .1 AA-DAF-45-R03, Designation System for Aluminum Finishes.
	.2	American Society for Testing and Materials International, (ASTM). .1 ASTM A 653/A 653M-02a, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process. .2 ASTM E 96-00e1, Standard Test Methods for Water Vapor Transmission of Materials.
	.3	Canadian General Standards Board (CGSB). .1 CAN/CGSB-1.40-97, Anticorrosive Structural Steel Alkyd Primer. .2 CAN/CGSB 1-GP-71 Amendment 13-1995, Methods of Testing Paints and Pigments (including Amendments 1 to 12 and Supplement No. 1). .3 CGSB 41-GP-6M-83, Sheets, Thermosetting Polyester Plastics, Glass Fibre Reinforced.
	.4	Health Canada/Workplace Hazardous Materials Information System (WHMIS). .1 Material Safety Data Sheets (MSDS).
	.5	The Master Painters Institute (MPI). .1 Architectural Painting Specification Manual - March 1998 (R2002).
	.6	National Research Council (NRC).
<u>1.4 DESIGN</u>	.1	Design composite building panel wall to provide for thermal

## REQUIREMENTS

movement of component materials caused by ambient temperature range of -30 to +40 degrees C without causing buckling, failure of joint seals, undue stress on fasteners or other detrimental effects.

- .2 Include expansion joints to accommodate movement in wall system and between wall system and building structure, caused by structural movements, without permanent distortion, damage to infills, racking of joints, breakage of seals, or water penetration.
- .3 Design members to withstand dead load and wind loads as calculated in accordance with NBC and applicable Municipal/Territorial regulations, to maximum allowable deflection of 1/180 of span.
- .4 Provide for positive drainage of condensation occurring within wall construction and water entering at joints, to exterior face of wall in accordance with NRC "Rain Screen Principles".
- .5 Design wall system to accommodate specified erection tolerances of structure.
- .6 Maintain following installation tolerances:
  - .1 Maximum variation from plane or location shown on approved shop drawings: 5 mm/m of length and up to 20 mm/100 m maximum.
  - .2 Maximum offset from true alignment between two adjacent members abutting end to end, in line: 0.75 mm.
- .7 Panels shall be installed by contractors trained by the panel manufacturer and have experience in the installation of the specified projects of similar size and complexity.

## 1.5 QUALITY ASSURANCE

- .1 Manufacture's Qualifications: 20 years minimum experience in manufacturing glass fibre reinforced concrete panels.
- .2 Installation Contractors Qualifications: 5 years minimum experience in installation of manufacture's product and certified by the manufacturer as an approved installer.
- .3 Site Meetings: as part of Manufacturer's Services described in PART 3 - FIELD QUALITY CONTROL, schedule site visits, to review Work, at stages listed.
  - .1 After delivery and storage of products, and when preparatory Work is complete, but before installation begins.
  - .2 Twice during progress of Work at 25% and 60%

complete.

.3 Upon completion of Work, after cleaning is carried out.

#### 1.6 SUBMITTALS

- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Indicate dimensions, wall openings, head, jamb, sill and mullion detail, materials and finish, anchor details, compliance with design criteria and requirements of related work.
- .3 Shop drawings shall be stamped and signed by a Professional Engineer licensed in the Province of Ontario.
- .4 Product Data:
  - .1 Submit manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.

#### 1.7 SAMPLES

- .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit duplicate 600 x 600 mm samples of wall system, representative of materials, finishes, colours and fasteners.

#### 1.8 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 19 - Construction/Demolition Waste Management And Disposal.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper plastic polystyrene corrugated cardboard packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan.
- .4 Separate for reuse and recycling and place in designated containers Steel Metal Plastic waste in accordance with Waste Management Plan.
- .5 Place materials defined as hazardous or toxic in designated

containers.

- .6 Ensure emptied containers are sealed and stored safely.
- .7 Dispose of unused sealant material at official hazardous material collections site approved by Consultant.
- .8 Unused sealant material must not be disposed of into sewer system, into streams, lakes, onto ground or in other location where it will pose health or environmental hazard.
- .9 Fold up metal banding, flatten and place in designated area for recycling.

1.9 ENVIRONMENTAL  
REQUIREMENTS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets (MSDS) acceptable to Labour Canada.

1.10 POST INSTALLATION  
CERTIFICATION

- .1 After installation, submit written certification, signed by the structural engineer responsible for the design indicated on the shop drawings, that all items have been installed in accordance with the stamped shop drawings.

1.11 WARRANTY

- .1 Provide warranty in accordance with General Condition, but for a period of five (5) years.
- .2 Warranty shall specifically guarantee against defects and malfunction under normal usage. Warrant against defects in material and labour of the work of this Section. Warrant that the wall panel system will remain structurally sound, free from distortion and deformation under load and that finishes will be free from cracking, chipping or adjacent deformations, panel deformation, buckling, spalling, or deterioration of surface.

**PART 2 - PRODUCTS**

2.1 MATERIALS

- .1 The following specified products and materials form the complete building panel system required for this Project. Ensure

that only compatible products and materials are used. Alternates may only be used if approved, in writing, by the Consultant.

- .2 Cement Composite Panels (noted on drawings as FCP): Cemfort-NG large format fibre-cement panels:
  - .1 Thickness: 10mm
  - .2 Panel Size: As indicated on the drawings  
Manufacture panels available in 3040mm x 1220mm, and 2500mm x 1220 panels, edges must be trimmed as per manufacturer's recommendations.
  - .3 Colour: Prefinished factory applied, Grey – to match Pratt and Lambert Gun Powder 33-15 as selected by Consultant, 30% luster. To be confirmed by consultant.
  - .4 Fire Rating: NFPA Class A according to ASTM E84, ULC-S134 non-combustible.
  - .5 Fasteners: Stainless Steel to panel manufacture's standard
  - .6 Trims: Cemfort "Press-Trim" assembly for all horizontal, vertical, sill, head and corner conditions. Colour match trims to panel colour.
- .5 Support Framing: 18 Gauge and 16 Gauge galvanized brake shapes conforms to ASTM A653. Coating designation: Metric Z275-275grams/m<sup>2</sup> both sides. Hat channels and "Z" girts as required from exterior sheathing to back of panel as required and detailed.
- .6 Thermal Clip: Provide thermal clip anchor from sub-girts through insulation back to steel stud exterior wall framing or structural steel members. The following options are acceptable:
  - a) Cascadia fiberglass thermal spacer – size to suit wall assembly.
  - b) Northern Facades Ltd, ISO Clip - size to suit wall assembly.
  - c) T-clip by Engineered Assemblies - size to suit wall assembly
  - d) Custom fabricated galvanized structural quality steel clips formed to suit wall assembly c/w thermal spacer at junction with exterior sheathing.

### PART 3 - EXECUTION

#### 3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

#### 3.2 PREPARATION

- .1 Protect metal surfaces in contact with concrete, masonry mortar, plaster or other cementitious surface with isolation coating.
- .2 Sub-girts to be in contact with spray foam insulation shall be primed with isolation coating as recommended by spray foam insulation manufacturer.

#### 3.1 FCP CEMFORT PANEL "PRESS-FIT" INSTALLATION

- .1 FCP panels shall be installed by product manufacturer's trained contractors. Install panels and sub-framing as per reviewed shop drawings and in accordance with Manufacturer's guidelines and requirements.
- .2 FCP panels shall have all 4 sides trimmed with "Press-Fit" assembly trims. Panels trimmed at the factory to the finished panel size requirements shall receive factory impregnated sealer. Panels cut on site shall be treated with impregnation liquid by hand painted application.
- .3 Design and install sub-framing as per panel manufacturer's engineered shop drawings. Fully support panel edges and provide intermediate sub-framing as required.
- .4 Erect panels as per layouts indicated on drawings. Support vertical joints directly over galv. vertical sub-framing.
- .5 Install window trim profiles at junction between panels and window openings as detailed.
- .6 Install perimeter edge trim behind panels at junction with adjacent materials as per details.
- .7 Do not seal panel joints, system shall be constructed as a "rain-

screen" wall. Provide drainage at the base of the wall and vent openings at the top of walls.

- .8 Mechanically fasten panels to metal sub-framing with stainless steel rivets purpose made for FCP panels. Space fasteners equally per panel with maximum spacing of 722 vertically and 570mm horizontally. Drill panels with 9.5mm dia hole for fastener. Fixing points to be provided with fixed point sleeves. Rivets must be set centered and perpendicular with the head flat on panel surface.
- .9 Install all panels oriented alike. Arrows on back of panels to point in same direction.

### 3.2 FIELD QUALITY CONTROL

- .1 Have manufacturer of products supplied under this Section review Work involved in handling, installation/application, protection and cleaning of its products, and submit written reports in acceptable format to verify compliance of Work with Contract.
- .2 Manufacturer's field services: Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.
- .3 Schedule site visits to review Work at stages listed:
  - .1 After delivery and storage of products, and when preparatory Work on which Work of this Section depends is complete, but before installation begins.
  - .2 Twice during progress of Work at 25% and 60% complete.
  - .3 Upon completion of Work, after cleaning is carried out.
- .4 Obtain reports within three days of review and submit.

### 3.3 CLEANING

- .1 Wash down exposed exterior surfaces using solution of mild domestic detergent in warm water, applied with soft clean wiping cloths.
- .2 Perform cleaning operations as per manufacturer's recommendations.

**END OF SECTION**

## PART 1 - GENERAL

- 1.1 RELATED SECTIONS
- .1 Section 05 50 00 - Metal Fabrications.
  - .2 Section 07 21 13 - Board Insulation.
  - .3 Section 07 62 00 - Sheet Metal Flashing and Trim
  - .4 Section 07 92 00 - Sealants
- 1.2 REFERENCES
- .1 American Society for Testing and Materials International, (ASTM)
    - .1 ASTM A 653/A 653M-02a, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
    - .2 ASTM A 792/A 792M-02, Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
    - .3 ASTM D 523-89(1999), Test Method for Specular Gloss.
    - .4 ASTM D 822-01, Standard Practice, For Conducting Test on Paint and Related Coatings and Materials Using Filtered Open-Flame Carbon-Arc Light and Water Exposure Apparatus.
    - .5 ASTM D 2832-92 (1999), Guide for Determining Volatile and Nonvolatile Content of Paint and Related Coatings.
  - .2 Canadian General Standards Board (CGSB)
    - .1 CAN/CGSB-93.1-M85, Sheet, Aluminum Alloy, Prefinished, Residential.
  - .3 Canadian Standards Association (CSA International)
    - .1 CSA S136-01, North American Specification for the Design of Cold-Formed Steel Structural Members.
    - .2 CSA S136.1-01, Commentary on North American Specification for the Design of Cold-Formed Steel Structural Members.

1.3 SYSTEM  
DESCRIPTION

- .1 Design Requirements
  - .1 Design metal panel wall system in accordance with CSA S136.
  - .2 Design metal panel wall to provide for thermal movement of component materials caused by ambient temperature range of -35 to +70 degrees C without causing buckling, failure of joint seals, undue stress on fasteners or other detrimental effects.
  - .3 Include expansion joints to accommodate movement in wall system and between wall system and building structure, caused by structural movements, without permanent distortion, damage to infills, racking of joints, breakage of seals, or water penetration.
  - .4 Design members to withstand dead load and wind loads calculated in accordance with NBC and applicable local regulations, to maximum allowable deflection of 1/180th of span.
  - .5 Provide for positive drainage of condensation occurring within wall construction and water entering at joints, to exterior face of wall in accordance with NRC "Rain Screen Principles".
  - .6 Design wall system to accommodate specified erection tolerances of structure.
  - .7 Design wall system to allow for movement of air between exterior and interior side of metal cladding.

1.4 SUBMITTALS

- .1 Product Data:
  - .1 Submit manufacturer's printed product literature, specifications and datasheet in accordance with Section 01 33 00 - Submittal Procedures.
  - .2 Submit two copies of WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00 - Submittal Procedures. Indicate VOC's:
    - .1 Caulking and sealant materials during application and curing.
    - .2 Finishing materials.
    - .3 Isolation coatings.
- .2 Shop Drawings:
  - .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
  - .2 Indicate dimensions, wall openings, head, jamb, sill and mullion detail, materials and finish, anchor details, compliance with design criteria and requirements of related work.
  - .3 Ensure each shop drawing submitted has been stamped by licensed professional engineer registered in Ontario.

- .3 Samples:
    - .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
    - .2 Submit duplicate 600 x 600 mm samples of wall system, representative of materials, finishes and colours.
  - .4 Manufacturer's Instructions:
    - .1 Submit manufacturer's installation instructions.
  - .5 Manufacturers' Field Reports: Submit copies of manufacturers field reports.
- 1.5 QUALITY ASSURANCE**
- .1 Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
  - .2 Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
  - .3 Pre-installation Meetings: Conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.
- 1.6 WASTE MANAGEMENT AND DISPOSAL**
- .1 Separate and recycle waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.
  - .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
  - .3 Collect and separate for disposal paper plastic polystyrene corrugated cardboard packaging material in appropriate on-site for recycling in accordance with Waste Management Plan.
  - .4 Divert unused metal materials from landfill to metal recycling facility approved by Consultant.
  - .5 Divert unused paint and joint sealer material from landfill to official hazardous material collections site approved by Consultant.
  - .6 Do not dispose of unused paint and joint sealer materials into sewer systems, into lakes, streams, onto ground or in locations where it will pose health or environmental hazard.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

The following manufacturers of metal siding are approved:

- .1 **SSM** (Standing Seam Metal)
  - .1 The Garland Company 3800 East 91st Street  
Cleveland, Ohio 44105 Telephone: (800) 762-8225
  - .2 Agway Metals 170 Delta Park Blvd. Brampton, Ontario.  
L6T 5T6
- .2 **MS** (Metal Siding)
  - .1 The Garland Company 3800 East 91st Street  
Cleveland, Ohio 44105
  - .2 Agway Metals 170 Delta Park Blvd. Brampton, Ontario.  
L6T 5T6
  - .3 Vicwest 362 Lorne Avenue East  
Stratford, ON N5A 6S4

### 2.2 SHEET METAL SIDING PANEL MATERIALS

- .1 **SSM** (Standing Seam Metal):
  - .1 Prefinished steel with factory applied polyvinyl chloride.
  - .2 Panel material: 22 ga., Galvalume steel, type AZ-55,  
smooth as per ASTM A792-96.
  - .3 Provide standing seam panels incorporating  
mechanically interlocked, concealed anchor clips  
allowing unlimited thermal movement, and of  
configuration which will prevent entrance or passage of  
water.
  - .4 Panel/Cap configuration must have a total of four (4)  
layers of steel surrounding anchor clip for prevention of  
water infiltration and increased system strength  
designed to limit potential for panel blow-off.
  - .5 Profile of panel shall have mesa's every two (2) inches  
on center continuous throughout panel which are a  
minimum of one and one-half (1-1/2) inches wide.
  - .6 Exposed fasteners, screws and/or roof mastic are  
unacceptable and will be rejected. System configuration  
only allows for exposed fasteners at panel overlap (if  
required) and trim details (as per manufacturer's  
guidelines).
  - .7 Provide panels in continuous lengths from base of wall  
to ridge to eave to base of wall with no overlaps unless  
approved by manufacturer, in writing.
  - .8 Panels lengths which exceed maximum shipping lengths  
shall be field rolled on equipment owned by the panel  
manufacturer. Seam sealant must be factory applied.

- .9 Seam caps shall be manufactured in the factory and may be installed with end laps. Seam sealant must be factory applied.
  - .10 Seam must be two and three-eighths (2-3/8) inches minimum height for added upward pressures and aesthetic appeal. Seam shall have continuous anchor reveals to allow anchor clips to resist positive and negative loading and allow unlimited expansion and contraction of panels due to thermal changes. Integral (not mechanically sealed) seams are unacceptable.
  - .11 Panels shall be 15.75" wide (400mm) with a minimum vertical standing leg height of 2 ½" (50-65mm).
  - .12 Two coat coil applied, baked-on full-strength (70% resin) fluorocarbon coating system (polyvinylidene fluoride, PVF2), applied by manufacturer's approved applicator. Coating system shall provide nominal 1.0 mil dry film thickness, consisting of primer and color coat.
  - .13 Colour: To match Garland Standard Colour 'Pewter'
  - .14 Acceptable Standing Seam System:
    - .1 Garland R-Mer Span System - Steel
    - .2 Agway Metals AR Panel - Steel
- .2 **MS** (Metal Siding) Exterior wall metal siding (Gym North and East):  
factory preformed 22mm deep profile, 915mm wide coverage, .76mm minimum base metal thickness.  
Standard of acceptance: to match Garland R-panel.  
Colour: to match Garland Standard Colour 'Pewter'

## 2.2 ACCESSORIES

- .1 Accessories: cap flashings, drip flashings, internal corner flashings, copings and closures for head, jamb, sill and corners, of same material, 0.5mm thickness and finished to match exterior cladding, brake formed to shape.
- .2 Sub-girts: of 1.3mm minimum base metal thickness, structural quality steel to ASTM A 653, with Z275 zinc coating, profile as indicated to accept exterior sheet with structural attachment by thermal clip to building frame.
- .3 Fasteners: Purpose made prefinished to match siding colour, #14 x 25mm Prisma sheet metal screws.
- .4 Semi-Rigid insulation: as per Section 07 21 13.
- .5 Sealants: as per Section 07 92 00.
- .6 Gaskets: closed cell polyurethane foam, adhesive on two sides, release paper protected.

- .7 Touch-up paint: as recommended by panel manufacturer.
- .8 Isolation coating: alkali resistant bituminous paint.
- .9 Provide manufacturer's standard accessories and other items essential to completeness of standing seam roof installation. Provide all components required per the approved shop drawings for a complete metal roof system to include panels, clips, gable clips, fasteners, trims/flashings, closures, fillers, sealants and any other required items.

### PART 3 - EXECUTION

#### 3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

#### 3.2 PREPARATION

- .1 Protect metal surfaces in contact with concrete, masonry mortar, plaster or other cementitious surface with isolation coating.
- .2 Sub-girts to be in contact with spray foam insulation shall be primed with isolation coating as recommended by spray foam insulation manufacturer.

#### 3.3 INSTALLATION (FIELD ASSEMBLED)

- .1 Install sub-girts over external sheathing and secure to metal studs using self tapping screws. Install horizontally at spacing to suit metal siding sub-framing layout .
- .2 Install sub-girts over concrete block surfaces using self tapping concrete screws and anchors. Install horizontally at spacing to suit metal siding sub-framing layout.
- .3 Install vertical galv. metal furring over sub-girts and insulation at spacing to suit cladding fastener spacing and panel layout/
- .4 Install exterior finish cladding to internal sub-girts with fasteners.
- .5 Ensure continuity of "pressure equalization" of rain screen principle.

- 
- .6 Provide alignment bars, brackets, clips, inserts, shims as required to securely and permanently fasten wall system to building structure.
- 3.4 TRIMS & PANEL JOINTS**
- .1 Construct trims and panel joints as indicated.
- .2 Use cover sheets, of brake formed profile, of same material and finish as adjacent material.
- .3 Use mechanical fasteners to secure sheet materials.
- .4 Assemble and secure wall system to structural frame so stresses on sealants are within manufacturers' recommended limits.
- 3.5 CONSTRUCTION**
- .1 Site Tolerances:
- .1.1 Maintain following installation tolerances:
- .1.1.1 Maximum variation from plane or location shown on approved shop drawings: 10 mm/m of length and up to 20 mm/100 m maximum.
- .1.1.2 Maximum offset from true alignment between two adjacent members abutting end to end, in line: 0.75 mm.
- 3.6 FIELD QUALITY CONTROL**
- .1 Have manufacturer of products supplied under this Section review Work involved in handling, installation/application, protection and cleaning of its products, and submit written reports in acceptable format to verify compliance of Work with Contract.
- .2 Manufacturer's field services: Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.
- .3 Schedule site visits to review Work at stages listed:
- .3.1 After delivery and storage of products, and when preparatory Work on which Work of this Section depends is complete, but before installation begins.
- .3.2 Twice during progress of Work at 25% and 60% complete.
- .3.3 Upon completion of Work, after cleaning is carried out.

.4 Obtain reports within three days of review and submit.

### 3.7 CLEANING

- .1 Perform cleaning after installation to remove construction and accumulated environmental dirt.
- .2 Wash down exposed interior and exterior surfaces using solution of mild domestic detergent in warm water, applied with soft clean wiping cloths. Wipe interior surfaces clean as part of final clean-up.
- .3 Remove excess sealant with recommended solvent.
- .4 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

**END OF SECTION**