1 ADDENDUM #2

ALL CLAUSES SET FORTH IN THE BIDDING DOCUMENTS, CONTRACT DOCUMENTS AND GENERAL REQUIREMENTS OF THE ORIGINAL CONTRACT DOCUMENTS SHALL APPLY TO AND GOVERN THIS WORK. THE ADDENDUM REFERS TO CHANGES AND ADDITIONS TO THE ORIGINAL CONTRACT DOCUMENTS AND IS TO BE READ IN CONJUNCTION WITH THE SAME. ALL OTHER PARTS OF THE ORIGINAL CONTRACT DOCUMENTS ARE TO BE CONSIDERED AS APPLYING TO THE WORK OF THIS CONTRACT WITH THE EXCEPTIONS AND CHANGES AS NOTED BELOW.

1.1 ADDENDA

.1 Reference Addendum #1, Drawings Item 1.3.1.1.2:
Drawing C1-102 New Site Plan
- .1 Delete Drawing C1-102 as originally issued via Addendum #1, and replace with revised version dated November 16, 2021, attached and forming part of this addendum.

.2 Reference Addendum #1, Drawings Item 1.3.2.1.1
Reference Drawing E1-101 Electrical Site Plan, Legend & Details
- .1 Reference Detail 1/E1-101:
  - .1 ***CLARIFICATION***: The relocated fuel tank will be installed rotated 180° from how it is currently shown, with the diesel end north and gas end south.
- .2 Reference Detail 2/E1-101:
  - .1 Contractor to supply and install one (1) run of Category 6 communications cable within the 53mm communications conduit shown in trench Detail ‘C’ between the DEF Electrical Closet and the LAN Room (reference Note 4) for future connection to DEF Building access control panel.

.3 Reference Addendum #1, Drawings Item 1.3.2.1.2
Drawing E1-102 Electrical Room Layout, Enlargement Plan & Fuel Management Riser
- .1 Reference Detail 2/E1-102:
  - .1 Provide all material and labour as required to rough in one (1) new single gang outlet box withing the exterior façade of the DEF build, at 1200mm AFF adjacent to the latch side of the door for future proximity card reader. Install ½” from outlets box, through the DEF building back to the DEF Building Electrical Closet to facilitate future wiring of proximity card reader to a local access control panel.
  - .2 Install one (1) set of magnetic door contacts (GE #1078 or approved equal) in frame of DEF building exterior door and connect with 2c#18 in ½”C back to DEF Building Electrical Closet to location of future access control panel.
  - .3 Install one (1) set of low voltage adjustable roller lever action style DPDT door contact (#ME-8108 or approved equal) at 450mm AFF adjacent to track of DEF Building Overhead door and connect with 2c#18 in ½”C back to DEF Building Electrical Closet to location of future access control panel.
  - .4 Install one (1) dedicated surface mounted CSA 5-15R duplex receptacle adjacent to OPW Module in Electrical Closet in DEF Building and connect with 2#12, 1#14 bond in ½”C to dedicated 15A/1P circuit breaker within adjacent panelboard. Coordinate exact location of receptacle onsite with Fuel System installer prior to rough-in.

.2 Reference Detail 3/E1-102:
.1 ***CLARIFICATIONS:***
.1 **OPW Petro-Net Cable (ITEM 3)** - twisted pair (10/ft) RS-485 maximum length 5,000 feet, connect all runs in parallel and maintain polarity
.2 **OPW Data Wire (ITEM 2)** – Belden #88760 shielded 2-wire twisted pair, no splices. Maximum runs between the 924B probes and sensors are 1000 ft when using #88760 and 500 ft when using #88761
.3 All electrical associated with fuel management system to comply with NFPA 30A and NFPA 70
.4 All fuel management electronic equipment must be on individual 120V, 15A circuits [C6000, Integra and vSmart]
.5 All OPW equipment must be on the same phase

1.2 SPECIFICATIONS

.1 Reference New Specification Sections:
The following new sections are attached and forming part of this addendum.
.1 Section 04 05 00 - Common Work Results For Masonry (Addendum #2)
.2 Section 04 05 13 - Masonry Mortaring (Addendum #2)
.3 Section 04 05 19 - Masonry Anchorage and Reinforcing (Addendum #2)
.4 Section 04 05 23 - Masonry Accessories (Addendum #2)
.5 Section 04 22 00 - Concrete Unit Masonry (Addendum #2)
.6 Section 05 12 23 - Structural Steel for Buildings (Addendum #2)
.7 Section 05 31 00 - Steel Decking (Addendum #2)
.8 Section 05 50 00 - Metal Fabrications (Addendum #2)

.2 Reference Section 00 21 13 - Instructions to Bidders:
.1 Reference Paragraph 1.1.1:
.1 Delete as written and replace with the following:
".1 The project involves the construction of concrete foundation for the addition to the existing Maintenance Building and Warehouse (located in Bridgetown,PE), clearing & grubbing for parking lot, select site work and site services as indicated.".

.3 Reference Section 00 01 15 - List of Drawing Sheets
.1 Delete Section 00 01 15 as originally issued and replaced with attached Section 00 01 15.01 - List of Drawing Sheets (Addendum #2), dated November 16, 2021.

.4 Reference Section 00 41 13 - Bid Form:
.1 Delete Section 00 41 13 as originally issued and replaced with attached Section 00 41 13.01 - Bid Form (Addendum #2), dated November 16, 2021.

1.3 DRAWINGS

.1 Reference Drawing S1-101A - Foundation Plan
.1 Delete Drawing S1-101A as originally issued and replace with revised version S1-101A R1, dated November 16, 2021, attached and forming part of this addendum.

.2 Reference Drawing S1-101B - Foundation Plan, Sections, Details & Notes:
.1 Delete Drawing S1-101B as originally issued and replace with revised version S1-101B R1, dated November 16, 2021, attached and forming part of this addendum.

.3 Reference Drawing S1-102A - Sections & Details:
.1 Delete Drawing S1-102A as originally issued and replace with revised version S1-102A R1, dated November 16, 2021, attached and forming part of this addendum.

.4 Reference Drawing S1-103A - Details & Notes:
.1 Delete Drawing S1-103A as originally issued and replace with revised version S1-103A R1, dated November 16, 2021, attached and forming part of this addendum.

.5 Reference New Structural & Architectural Drawings:
.1 The following new Drawings, attached and dated November 16, 2021 are now part of the Tender Drawing Set.
.1 Drawing S1-104A - Second Level Framing Plan
.2 Drawing S1-105A - Roof Framing Plan
.3 Drawing S1-106A - Framing Elevation
.4 Drawing S1-107A - Sections & Details
.5 Drawing S1-108A - Sections & Details & Notes
.6 Drawing S1-102B - Framing Plan, Sections & Details & Notes
.7 Drawing S1-103B - Sections & Details
.8 Drawing S1-101C - Foundation Plan, Framing Plan, Sections & Details & Notes
.9 Drawing A1-003B - Notes & Assemblies
.10 Drawing A1-100B - Floor Plan
.11 Drawing A1-200B - Exterior Elevations & Building Section
.12 Drawing A1-100C - Floor Plan

END OF SECTION

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1 General

1.1 CONTRACT #1 - LIST OF DRAWINGS

CIVIL DRAWINGS

.1	C1-101	EXISTING SITE PLAN
.2	C1-102	NEW SITE PLAN
.3	C1-103	DETAILS AND NOTES
.4	C1-104	SITE DETAILS

STRUCTURAL DRAWINGS

.5	S1-101A R1	FOUNDATION PLAN
.6	S1-102A R1	SECTIONS & DETAILS
.7	S1-103A R1	DETAILS & NOTES
.8	S1-104A	SECOND LEVEL FRAMING PLAN
.9	S1-105A	ROOF FRAMING PLAN
.10	S1-106A	FRAMING ELEVATION
.11	S1-107A	SECTIONS & DETAILS
.12	S1-108A	SECTIONS & DETAILS & NOTES
.13	S1-101B R1	FOUNDATION PLAN, SECTIONS, DETAILS & NOTES
.14	S1-102B	FRAMING PLAN, SECTIONS, DETAILS & NOTES
.15	S1-103B	SECTIONS & DETAILS
.16	S1-101C	FOUNDATION PLAN, FRAMING PLAN, SECTIONS, DETAILS & NOTES

ARCHITECURAL DRAWINGS

.17	A1-003B	NOTES & ASSEMBLIES
.18	A1-100B	FLOOR PLAN
.19	A1-200B	EXTERIOR ELEVATIONS & BUILDING SECTION
.20	A1-100C	FLOOR PLAN

MECHANICAL DRAWINGS

.21	M1-100	MECHANICAL SITE PLAN
.22	M1-101	MECHANICAL FUEL TANK RELOCATION & DETAILS
.23	M1-102	MECHANICAL DETAILS

ELECTRICAL DRAWINGS

.24	E1-101	ELECTRICAL SITE PLAN, LEGEND & DETAILS
.25	E1-102	ELECTRICAL ROOM LAYOUT, ENLARGEMENT PLAN & FUEL MANAGEMENT RISER

END OF SECTION

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1 General

1.1 TENDER

.1 SUBMITTED BY:

_____(Name)

_____(Address)

_____(Contact)

DATE: _____

FOR:	PROJECT NAME:	Kings County Highway Depot Contract #1 - Sitework & Foundation
	LOCATION:	Bridgetown, PE
TO:	PROJECT OWNER:	Goverment of Prince Edward Island, as represented by the Minister of Transportation & Infrastructure
	LOCATION:	11 Kent Street, Charlottetown, PE

Having examined ALL the drawings and specifications for this project, as well as any addenda issued, as prepared by Coles Associates Ltd. and/or their consultants; WE HEREBY OFFER to furnish all materials, plant and labour necessary for the full and proper completion of the Contract work for:

PROJECT NAME:	Kings County Highway Depot Contract #1 - Sitework & Foundation
LOCATION:	Bridgetown, PE

INCLUDING all prime cost allowances and Government sales or other taxes in force at this date, EXCLUDING Harmonized Sales Tax (HST) but not any other additional or deductible allowances or taxes which may be applicable subsequent to this date, and which shall be payable by or to the Owner, in accordance with the above mentioned Documents, for the bid amount of:

_____(Dollars)
($)

in lawful money of Canada.

In submitting this Tender we recognize the necessity to complete the information requested by any appendices, as well as, the right of the Owner to reject all Tenders or to accept any Tender at the price submitted, on the condition that revised Tenders will not be called for if minor changes are made.

In the event of this Tender being accepted within thirty (30) days of the time stated for the closing of Tenders, and our failing or declining to enter into a Contract, then our Bid Guarantee, submitted with our Tender shall be forfeited to the Owner in lieu of any damages which the Owner may suffer by reason of our failure or refusal to enter into such Contract.

In the event of our Tender not being accepted with thirty (30) days of the time stated for the closing of Tenders, our Bid Guarantee, submitted with our Tender will be returned to us forthwith, unless a satisfactory arrangement is made with us covering its retention for a further stated period.

If we are notified of the acceptance of this Tender within the above specified time, we will:

.1 Enter into a formal Contract Agreement with the Owner.
.2 Furnish the Performance Bond and Labour and Materials Payment Bonds, or other form of Contract Security, when specifically permitted, as Contract Security in accordance with the requirements of the specifications.
.3 Furnish a cost breakdown of the Contract sum, the total aggregating the amount of our Tender, in accordance with the requirements of the specifications.
.4 Furnish a certified copy of all insurance policies.
.5 Furnish a certified copy of all insurance policies carried by the named subtrades.
.6 Complete the entire work on or before the dates stated.
.7 Provide and update as required a Construction Schedule which clearly shows the state of progress required to complete the work on the date specified.
.8 Enter into subcontract agreements where applicable.

1.2 ACKNOWLEDGEMENT OF RECEIPT OF ADDENDA

.1 Addendum No. _____ Issued: _____ _____ initial

Addendum No. _____ Issued: _____ _____ initial

Addendum No. _____ Issued: _____ _____ initial

Addendum No. _____ Issued: _____ _____ initial

Addendum No. _____ Issued: _____ _____ initial

1.3 FORM OF TENDER APPENDICES

.1 Appendix 'A' must be completed by bidders.
.2 Appendix 'B' (only the items indicated) may be completed by bidders, any other items are at the bidder's discretion.

1.4 DOCUMENTS ACCOMPANYING BID FORM

.1 As per Section 00 21 13, Par 1.8.16
One (1) copy of Bid Guarantee, together with Surety's letter of consent. _____intital
One (1) copy of preliminary schedule. _____intital
One (1) copy of letter from Bidders Insurance Provider identifying list of claims made against Bidder within last five (5) years. _____intital

1.5 SUPERINTENDENT

.1 Name of Superintendent _____.

.2 Years of Experience with Contractor _____.

1.6 CONFLICT OF INTEREST

.1 The Contractor warrants that as at the date of this Agreement, no conflict of interest, or any circumstance that might interfere with independent and objective exercise of judgment, exists or is likely to arise in relation to execution of this Agreement or its subject matter. The Contractor shall immediately notify Government, in writing, if any such actual or potential

conflict of interest should arise at any time during the Term. In the event Government discovers or is notified by the Contractor of an actual or potential conflict of interest, Government, in its sole discretion, may either:

.1 Allow the Contractor to resolve the actual or potential conflict to the satisfaction of Government;
OR

.2 Terminate the Agreement in accordance with the Termination section of this Agreement.

1.7 CONTRACTOR'S SIGNATURE

.1 Signed sealed and submitted for and on behalf of:

_____
(Company Name)

_____

_____
(Address)

_____ _____
(Authorized Signature) (Witness)

_____ _____
(Name and Title) (Name and Title)

_____
(Date)

1.8 APPENDIX 'A'

.1 Herewith are identified the Subcontractors we propose to use on this project. Carrying Sub-Contractor options next to identified work, is not acceptable and may be cause for rejection of the Tender by the Owner.

Clearing & Grubbing: _____

Site Demolition: _____

Building Foundation: _____

Excavation & Backfilling Work: _____

Concrete Pads _____

Concrete Masony _____

Structural Steel _____

Metal Decking _____

Miscellaneous Steel _____

Site Services (Water, Sanitary & Storm Sewer) _____

Plumbing: _____

Controls: _____

Electrical: _____

COMPANY: _____

AUTHORIZED SIGNATURE: _____

1.9 APPENDIX 'B'

.1 ALTERNATIVE PRICES

We herewith submit for consideration by the Owner the following systems or products as Alternatives to the Base Bid items indicated below and identify the increase or decrease, as applicable, in our tender price, for each item should it be selected by the Owner for installation in lieu of the Base Bid item. The change in tender price includes for all necessary modifications to the base bid systems.

Alternative prices shall include all fees, taxes and markups.

SECTION ITEM BASE BID ALTERNATIVE:	TENDER PRICE INCREASED BY:	TENDER PRICE DECREASED BY:
_____	$_____	$_____
_____	$_____	$_____
_____	$_____	$_____
_____	$_____	$_____
_____	$_____	$_____
_____	$_____	$_____
_____	$_____	$_____
_____	$_____	$_____
_____	$_____	$_____
_____	$_____	$_____

COMPANY: _____

AUTHORIZED SIGNATURE: _____

1.10 APPENDIX 'C'

.1 UNIT PRICE COMPONENT

We submit herewith our Unit Prices for the additions or deletions to the work listed below. The Unit Prices listed apply to performing the Units of Work, in accordance with the requirements of the appropriate specifications herein, only during the time scheduled for such work in the project work schedule.

Unit prices shall include all fees, taxes and markups.

	UNIT OF WORK	ONE (1) UNIT PRICE ONLY FOR EITHER ADDITION OR DELETION
.1	Clear & Grub (SM)	$_____
.2	Excavation, Backfilling with Select Borrow & Compaction (CM)	$_____
.3	Class 'A' Gravel Compacted (CM)	$_____
.4	Concrete Pads including reinforcing (CM)	$_____

COMPANY: _____

AUTHORIZED SIGNATURE: _____

END OF SECTION

1 General

1.1 RELATED REQUIREMENTS

.1 Section 04 05 13 - Masonry Mortaring.
.2 Section 04 05 19 - Masonry Anchorage and Reinforcing.
.3 Section 04 05 23 - Masonry Accessories.
.4 Section 04 22 00 - Concrete Unit Masonry.
.5 Section 05 50 00 - Metal Fabrications.

1.2 REFERENCES

.1 Canadian Standards Association (CSA International).
.2 CAN/CSA A165 Series-14 (2019), Standards on Concrete Masonry Units.
.3 CAN/CSA A179-14 (2019), Mortar and Grout for Unit Masonry.
.4 CAN/CSA A371-14 (2019), Masonry Construction for Buildings.

1.3 SUBMITTALS

.1 Make submittals in accordance with Division 01 - General Requirements.
.2 Product Data.
    .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Division 01 - General Requirements.
.3 Samples.
    .1 Submit:
        .1 Two of each type of masonry unit specified.
        .2 Two of each type of masonry accessory specified.
        .3 One of each type of masonry reinforcement, tie and connector proposed for use.
        .4 A minimum of six for testing purposes if requested.
        .5 Submit samples tested to laboratories employing technicians certified/trained in procedures for testing masonry units.
.4 Manufacturer's Instructions.
    .1 Submit manufacturer's installation instructions.

1.4 QUALITY ASSURANCE

.1 Test Reports.
    .1 Certified test reports showing compliance with specified performance characteristics and physical properties.
    .2 Submit laboratory test reports in accordance Division 01 - General Requirements.
    .3 Submit laboratory test reports certifying compliance of masonry units and mortar ingredients with specification requirements.
.2 Certificates:
    .1 Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
.3 Mock-ups.
    .1 Construct mock-up panel of exterior masonry wall and exposed interior masonry walls construction 1200 x 1800 mm showing masonry colors and textures, use of reinforcement, ties, through-wall flashing, weep holes, jointing, coursing, mortar and workmanship.
    .2 Mock-up will be used:
        .1 To judge workmanship, substrate preparation, operation of equipment and material application.
    .3 Construct mock-up where directed.
    .4 Allow 24 hours for inspection of mock-up by Consultant before proceeding with work.

.5 When accepted by Consultant, mock-up will demonstrate minimum standard for this work. If accepted, mock-up may remain as part of finished work.

1.5 DELIVERY, STORAGE, AND HANDLING

.1 Deliver, store, handle and protect materials in accordance with Division 01 - General Requirements.
.2 Deliver materials to job site in dry condition.
.3 Storage and Protection.
  .1 Keep materials dry until use except where wetting of bricks is specified.
  .2 Store under waterproof cover on pallets or plank platforms held off ground by means of plank or timber skids.

1.6 SITE CONDITIONS

.1 Site Environmental Requirements.
.2 Cold weather requirements:
  .1 Supplement Clause 5.15.2 of CSA-A371 with following requirements.
    .1 Maintain temperature of mortar between 5 degrees C and 20 degrees C until batch is used or becomes stable.
    .2 Maintain ambient temperature between 5 degrees C and 20 degrees C and protect site from wind chill.
.3 Hot weather requirements.
  .1 Protect freshly laid masonry from drying too rapidly, by means of waterproof, non-staining coverings.
  .2 Keep masonry dry using waterproof, non-staining coverings that extend over walls and down sides sufficient to protect walls from wind driven rain, until masonry work is completed and protected by flashings or other permanent construction.

2 Products

2.1 MATERIALS

.1 Masonry materials are specified in Related Sections.

3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

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

3.2 PREPARATION

.1 Provide temporary bracing of masonry work during and after erection until permanent lateral support is in place.

3.3 INSTALLATION

.1 Do masonry work in accordance with CSA-A371 except where specified otherwise.
.2 Build masonry plumb, level, and true to line, with vertical joints in alignment.
.3 Layout coursing and bond to achieve correct coursing heights, and continuity of bond above and below openings, with minimum of cutting.

3.4 CONSTRUCTION

.1 Exposed masonry.

.1 Remove chipped, cracked, and otherwise damaged units, in exposed masonry and replace with undamaged units in accordance with CSA A-165, Clause 82.

.2 Jointing.
- .1 Allow joints to set just enough to remove excess water, then tool with round jointer to provide smooth, joints true to line, compressed, uniformly concave joints where concave joints are indicated.
- .2 Allow joints to set just enough to remove excess water, then rake joints uniformly to 6 mm depth and compress with square tool to provide smooth, compressed, raked joints of uniform depth where raked joints are indicated.
- .3 Strike flush joints concealed in walls and joints in walls to receive plaster, tile, insulation, or other applied material except paint or similar thin finish coating.
- .4 Exposed joints: Concave.

.3 Cutting.
- .1 Cut out for electrical switches, outlet boxes, and other recessed or built-in objects.
- .2 Make cuts straight, clean, and free from uneven edges.

.4 Building-In.
- .1 Build in items required to be built into masonry.
- .2 Prevent displacement of built-in items during construction. Check plumb, location and alignment frequently, as work progresses.
- .3 Brace door jambs to maintain plumb. Fill spaces between jambs and masonry with mortar.

.5 Wetting of bricks.
- .1 Except in cold weather, wet bricks having an initial rate of absorption exceeding 1 g/minute/1000 mm²: wet to uniform degree of saturation, 3 to 24 hours before laying, and do not lay until surface dry.
- .2 Wet tops of walls built of bricks qualifying for wetting, when recommencing work on such walls.

.6 Support of loads.
- .1 Use 20 MPa concrete to Section 03 30 00 - Cast-in-Place Concrete, where concrete fill is used in lieu of solid units.
- .2 Use grout to CSA A179 where grout is used in lieu of solid units.
- .3 Install building paper below voids to be filled with concrete; keep paper 25 mm back from faces of units.

.7 Provision for movement.
- .1 Leave 3 mm space below shelf angles.
- .2 Leave 40 mm space between top of non-load bearing walls and partitions and structural elements. Do not use wedges.
- .3 Built masonry to tie in with stabilizers, with provision for vertical movement.

.8 Loose steel lintels.
- .1 Install loose steel lintels. Centre over opening width.

.9 Control joints.
- .1 Construct continuous control joints as indicated.

.10 Expansion joints.
- .1 Build-in continuous expansion joints as indicated.

.11 Interface with other work.
- .1 Cut openings in existing work as indicated.
- .2 Openings in walls: approved by Consultant.
- .3 Make good existing work. Use materials to match existing.

3.5 LATERAL SUPPORT

.1 Install all interior masonry lateral support angles supplied under the work of this contract.

3.6 SITE TOLERANCES

.1 Tolerances in notes to Clause 5.3 of CSA-A371 apply.

3.7 FIELD QUALITY CONTROL

.1 Damaged masonry and/or masonry not meeting the quality established by the accepted mock up WILL be removed at Contractor's expense.

3.8 CLEANING

.1 Perform cleaning after installation to remove construction and accumulated environmental dirt.

.2 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

3.9 PROTECTION

.1 Protect masonry and other work from marking and other damage. Protect completed work from mortar droppings. Use non-staining coverings.

END OF SECTION

1 General

1.1 RELATED REQUIREMENTS

.1 Section 04 05 00 - Common Work Results for Masonry.
.2 Section 04 22 00 - Concrete Unit Masonry.

1.2 REFERENCES

.1 Canadian Standards Association (CSA International).
  .1 CAN/CSA A179-14 (2019), Mortar and Grout for Unit Masonry.

1.3 SUBMITTALS

1.4 PRODUCT DATA.

  .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Divsion 01 - General Requirements.
  .2 Submit two copies of WHMIS MSDS - Material Safety Data Sheets in accordance with Divsion 01 - General Requirements. Indicate VOC's mortar, grout, parging, color additives and admixtures.
.2 Samples.
  .1 Submit samples in accordance with Divsion 01 - General Requirements.
  .2 Submit two samples of mortar.
.3 Manufacturer's Instructions.
  .1 Submit manufacturer's installation instructions.

1.5 QUALITY ASSURANCE

.1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
  .1 Submit laboratory test reports in accordance Divsion 01 - General Requirements.
  .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

1.6 WASTE MANAGEMENT AND DISPOSAL

.1 Collect and separate for disposal waste material generated by this Section.
.2 Place in appropriate on-site bins in accordance with Waste Management Plan.
.3 A clean worksite is mandatory at all times. Failure to maintain the site in a clean, safe condition shall result in the Owner initiating a clean-up and related costs being deducted from progress claims.

2 Products

2.1 MATERIALS

.1 Use same brands of materials and source of aggregate for entire project.
.2 Mortar and grout: CSA A179.
.3 Use aggregate passing 1.18 mm sieve where 6 mm thick joints are indicated.
.4 Color: ground colored natural aggregates or metallic oxide pigments.
.5 Mortar for exterior masonry above grade:
  .1 Load bearing: type S based on property specifications.
  .2 Non-Load bearing: type N based on property specifications.
  .3 Parapet walls, unprotected walls: type N based on property specifications.
  .4 All other applications: type N
.6 Mortar for foundation walls, manholes, sewers, pavements, walks, patios and other exterior masonry at or below grade: type M based on property specifications.

.7 Mortar for interior masonry.
  .1 Load bearing: type N based on property specifications.
  .2 Non-Load bearing: type N based on property specifications.
.8 Following applies regardless of mortar types and uses specified above:
  .1 Mortar for calcium silicate brick and concrete brick: type O based on Proportion specifications.
  .2 Mortar for stonework: type N based on proportion specifications.
  .3 Mortar for grouted reinforced masonry: type S based on property specifications.
.9 White mortar: use white Portland cement, and lime to produce mortar type specified.
.10 Colored mortar: use coloring admixture not exceeding 10% of cement content by mass, or integrally colored masonry cement, to produce colored mortar to match approved sample.
.11 Non-Staining mortar: use non-staining masonry cement for cementitious portion of specified mortar type.
.12 Grout: to CSA A179, Table 3, minimum 25MPa.

2.2 MIXES

.1 Color and mix grout to semi-fluid consistency.
.2 Colored mortars: incorporate color into mixes in accordance with manufacturer's instructions.
  .1 Use clean mixer for colored mortar.

3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

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

3.2 CONSTRUCTION

.1 Do masonry mortar and grout work in accordance with CSA A179 except where specified otherwise.
.2 Grout the following masonry components:
  .1 All cores of block for full height of vertical reinforcement.
  .2 All cores of block for full height of dowels.
  .3 All lintel blocks and continuous bond beams.
  .4 All cores in which both horizontal and vertical anchor bolts and similar devices are embedded.
  .5 Top two courses of block at locations where concrete block forms back up for exterior walls.
  .6 Reinforce and fully grout every core of block walls, as well as door frames and other spaces, as detailed.
  .7 Top two courses where block walls terminate below structure.
  .8 All cores at block courses supporting stair landing bearing end/supports.
  .9 All other locations as indicated on drawings.

3.3 CLEANING

.1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

END OF SECTION

1 General

1.1 RELATED REQUIREMENTS

.1 Section 04 05 00 - Common Work Results for Masonry.
.2 Section 04 05 13 - Masonry Mortaring.
.3 Section 04 22 00 - Concrete Unit Masonry.

1.2 REFERENCES

.1 Canadian Standards Association (CSA International).
  .1 CAN/CSA A23.1-2014/A23.2-2014, Concrete Materials and Methods of Concrete Construction/ Methods of Test for Concrete.
  .2 CAN/CSA A370-14 (R2018), Connectors for Masonry.
  .3 CAN/CSA A371-14 (R2019), Masonry Construction for Buildings.
  .4 CSA G30.14-M1983(R1998), Deformed Steel Wire For Concrete Reinforcement.
  .5 CSA G30.18-09 (R2019), Carbon Steel Bars for Concrete Reinforcement.
  .6 CSA S304.1-04 (R2010), Design of Masonry Structures.
  .7 CSA W186-M1990 (R2016), Welding of Reinforcing Bars in Reinforced Concrete Construction.
  .8 CAN/CSA A179-14 (R2019), Mortar and Grout For Unit Masonry.

1.3 SUBMITTALS

.1 Product Data:
  .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Division 01 - General Requirements.
  .2 Submit two copies of WHMIS MSDS - Material Safety Data Sheets in accordance with Division 01 - General Requirements. Indicate VOC's for epoxy coatings and galvanized protective coatings and touch-up products.
.2 Shop Drawings :
  .1 Submit shop drawings in accordance with Division 01 - General Requirements
  .2 Shop drawings consist of bar bending details, lists and placing drawings.
  .3 On placing drawings, indicate sizes, spacing, location and quantities of reinforcement and connectors.
.3 Manufacturer's Instructions:
  .1 Submit manufacturer's installation instructions.

1.4 QUALITY ASSURANCE

.1 Pre-Installation Meetings: attend pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.

1.5 WASTE MANAGEMENT AND DISPOSAL

.1 Collect and separate for disposal waste material generated by this Section.
.2 Place in appropriate on-site bins in accordance with Waste Management Plan.
.3 A clean worksite is mandatory at all times. Failure to maintain the site in a clean, safe condition shall result in the Owner initiating a clean-up and related costs being deducted from progress claims.

2 Products

2.1 MATERIALS

.1 Use 2-rod continuous ladder type reinforcement with adjustable hook type box ties with side rods minimum 4.76mm and box tie rods minimum 4.76mm at all masonry cavity walls.
.2 Reinforcement sized to suit wall thickness and width of cavity.

.3 Finish, hot-dipped galvanized to ATM A153, Class B2, 457 g/m².
.4 Connectors and wire reinforcement to CSA-A370 and as follows:
  .1 Use truss type reinforcement sized to suit wall thickness at all single wythe masonry walls. Finish, hot-dipped galvanized to ASTM A153 Class B2, 457 g/m².
  .2 Load bearing walls: use reinforcement with two 4.76mm side rods and 4.76mm cross rods.
  .3 Non-load bearing walls: use reinforcement with two 4.76mm side rods and 4.76mm cross rods.
  .4 Acceptable Material:
    .1 Blok-Lok adjustable Econo-Cavity Lok II, BL 42.
    .2 Dur-O-Wall, adjustable DA 310 Truss.
    .3 Wire Bond, 2 wire Series 200.
    .4 Wire Bond, 2 wire Series 300.
.5 Use adjustable, triangular galvanized steel ties with clip type anchors with 4.76mm x length required galvanized steel ties, for securing all new masonry where ends of new masonry walls abut concrete walls.
  .1 Acceptable Material:
    .1 Blok-Lok, Type "C".
    .2 Dur-O-Wall DA801.
    .3 Wire Bond Type 1, 1000 and 1100 R tie.
.6 Use flexible rectangular ties with flat/hump plate anchors between structural steel and masonry, with 4.76 mm galvanized tie, overall length 300 mm, width of tie sized to suite wall.
  .1 Acceptable Material:
    .1 Blok-Lok, Adjustable Flex O Lock - Type "C" w/BLT 9.
    .2 Dur-O-Wall D/A 210 w/triangle ties 700.
.7 Anchorage to existing concrete or concrete block:
  .1 Acceptable Material:
    .1 Blok-Lok BL-5407

2.2 BAR TYPE REINFORCEMENT:

  .1 To CSA-A371 and CAN/CSA G30.18, Grade 400, deformed bars.
.2 Bolts and anchors:
  .1 To CSA-A370.
.3 Corrosion protection:
  .1 To CSA-S304 and as specified for horizontal reinforcing in interior walls.

2.3 FABRICATION

.1 Fabricate reinforcing in accordance with CAN/CSA-A23.1 and Reinforcing Steel Manual of Standard Practice by the Reinforcing Steel Institute of Ontario.
.2 Fabricate connectors in accordance with CSA-A370.
.3 Obtain Consultant's approval for locations of reinforcement splices other than shown on placing drawings.
.4 Upon approval of Consultant, weld reinforcement in accordance with CSA W186.
.5 Ship reinforcement and connectors, clearly identified in accordance with drawings.

2.4 SOURCE QUALITY CONTROL

.1 Upon request, provide Consultant with certified copy of mill test report of reinforcement steel and connectors, showing physical and chemical analysis, minimum 5 weeks prior to commencing reinforcement work.
.2 Upon request inform Consultant of proposed source of material to be supplied.

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 GENERAL

.1 Supply and install masonry connectors and reinforcement in accordance with CSA- A370, CSA-A371, CAN/CSA-A23.1 and CSA-S304.1 unless indicated otherwise.
.2 Prior to placing concrete, obtain Consultant's approval of placement of reinforcement and connectors.
.3 Supply and install additional reinforcement to masonry as indicated.

3.3 BONDING AND TYING

.1 Bond walls of two or more wythes using metal connectors in accordance with CSA- S304, CSA-A371 and as indicated.
.2 Tie masonry veneer to backing in accordance with NBC, CSA-S304.1, CSA-A371 and as indicated.
.3 Bond masonry cavity walls using metal ties spaced at 400mm o.c. vertically and in accordance with CSA-A370.
.4 Tie ends of all new concrete unit masonry walls with adjustable triangular ties spaced at 400mm o.c. vertically, anchored securely to existing wall.
.5 Tie masonry to steel columns using connectors.
.6 Attach ties to continuous hump-type anchor straps welded to structural steel at 400 mm spacing.
.7 Embed ties solidly in mortar to develop maximum resistance to design forces.
.8 Interconnect concrete block at column enclosures and elsewhere as indicated using flat plate anchors.

3.4 HORIZONTAL REINFORCING

.1 Install truss type reinforcing as follows:
  .1 Interior walls:
    .1 Load-bearing walls: at vertical intervals of 400mm.
    .2 Non-load bearing walls: at vertical intervals of 400mm.
  .2 In addition:
    .1 Install reinforcing in the first and second courses immediately above and below all wall openings and at the top course immediately below roof and floor levels.
    .2 Reinforcement in the second bed joint above or below openings shall extend 600mm beyond the jambs.
    .3 All other reinforcement shall be continuous except that it shall not pass through vertical masonry control joints.
    .4 Lap side rods minimum 150 mm at splices.
    .5 Use prefabricated corner and tee sections to form continuous reinforcement around corners and for anchoring abutting walls and partitions.
    .6 Material in corner and tee sections shall correspond to the type and design of reinforcement used.

3.5 VERTICAL REINFORCING

.1 For load bearing masonry walls, install vertical No. 20 rebar reinforcement in cavities of hollow concrete masonry at minimum 600 mm spacing, and at spacings as indicated on the Drawings.
.2 Fill cores solid with grout to requirement of Section 04 05 13 - Masonry Mortar and Grout.
.3 Refer to Drawings for wall types, grouting and vertical rebar size and spacing.

3.6 REINFORCED LINTELS AND BOND BEAMS

.1 Reinforce masonry lintels and bond beams as indicated.
.2 Make joints in lintels/bond beams to match adjacent walls.
  .1 Place and grout reinforcement in accordance with CSA-S304.1, CSA-A371, and CSA-A179. Use concrete of 20 MPa strength.
  .2 Provide 200mm deep masonry bond beam at all floors and roof levels filled solid with grout reinforced with two 20M rebar.
  .3 Provide one 20M vertical rebar each side of all openings in masonry walls. Extend rebar minimum 800mm beyond opening.

3.7 GROUTING

.1 Grout masonry in accordance with CSA-S304.1, CSA-A371 and CSA-A179 and as indicated.

3.8 ANCHORS

.1 Supply and install metal anchors as indicated.

3.9 LATERAL SUPPORT AND ANCHORAGE

.1 Supply and install lateral support and anchorage in accordance with CSA-S304.1 and as indicated.

3.10 MOVEMENT JOINTS

.1 Reinforcement will not be continuous across movement joints unless otherwise indicated.

3.11 FIELD BENDING

.1 Do not field bend reinforcement and connectors except where indicated or authorized by Consultant.
.2 When field bending is authorized, bend without heat, applying a slow and steady pressure.
.3 Replace bars and connectors which develop cracks or splits.

3.12 FIELD TOUCH-UP

.1 Touch up damaged and cut ends of epoxy coated or galvanized reinforcement steel and connectors with compatible finish to provide continuous coating.

3.13 CLEANING

.1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

END OF SECTION

1 General

1.1 RELATED REQUIREMENTS

.1 Section 04 05 00 - Common Work Results For Masonry.
.2 Section 04 22 00 - Concrete Unit Masonry.

1.2 SYSTEM DESCRIPTION

.1 System Description: Use the trapezoidal shaped Mortar Net with Insect Barrier technology adhered to the face of the Mortar Net.

1.3 SUBMITTALS

.1 General:
  .1 Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
.2 Product Data:
  .1 Submit product data, including manufacturer's product sheet, for specified products.
.3 Samples:
  .1 Submit selection and verification samples.
.4 Quality Assurance Submittals: Submit the following:
  .1 Certifications: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria.
  .2 Manufacturer's Instructions: Manufacturer's Installation Instructions.

1.4 QUALITY ASSURANCE

.1 Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

1.5 DELIVERY, STORAGE AND HANDLING

.1 General: Comply with Division 1 Product Requirements Sections.
.2 Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid constructions delays.
.3 Packing, Shipping, Handling and Unloading:
.4 Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
.5 Store materials protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.

1.6 SEQUENCING

.1 General: Install trapezoidal shaped Mortar Net with Insect Barrier product after flashing has been installed, the first 1 or 2 courses of brick have been laid, and weep holes have been created. Install product before third or higher courses of brick have been laid.

1.7 WARRANTY

.1 Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
.2 Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

1.8 WASTE MANAGEMENT AND DISPOSAL

.1 Collect and separate for disposal waste material generated by this Section.
.2 Place in appropriate on-site bins in accordance with Waste Management Plan.

.3 A clean worksite is mandatory at all times. Failure to maintain the site in a clean, safe condition shall result in the Owner initiating a clean-up and related costs being deducted from progress claims.

2 Products

2.1 MATERIALS

.1 Control joint filler:
- .1 Refer to Section 07 92 00 - Joint Sealants.

.2 Weep hole vents:
- .1 Acceptable Material:
  - .1 Rid-O-Mice, Stainless Steel weep cover.

.3 Masonry flashing:
- .1 Minimum 40 mil thick specially compounded, plasticized polyvinyl chloride permanently bonded to 10 x 10 woven glass fiber mesh.
- .2 Acceptable Material:
  - .1 Lexsuco FR-40.
- .3 At walls with air/vapor barrier membrane use through-wall flashing supplied by air vapor barrier manufacturer specifically for this purpose.

.4 Nailing Inserts:
- .1 0.6mm thick purpose made galvanized steel inserts for setting in mortar joints.

.5 Cavity Wall Drainage System:
- .1 The Mortar Net accessory.
  - .1 Trapezoidal shaped Mortar Net/Insect Barrier MN 10-1: 254 mm high x 25.4 mm thick material.
  - .2 Trapezoidal shaped Mortar Net/Insect Barrier MN 10-0.4: 254 mm high x 10.2mm thick material.
  - .3 Trapezoidal shaped Mortar Net/Insect Barrier MN 10-2: 254 mm high x 51 mm thick material.
- .2 Materials: Manufacturer's standard trapezoidal shaped Mortar Net material with Insect Barrier for specified product.
  - .1 All dimensions are nominal. Measurements are inclusive of the continuous bottom strip and the trapezoidal shape.
  - .2 Continuous bottom strip on all sizes of material is 76.2 mm high, regardless of material thickness or overall material height.
  - .3 10.2 mm and 25.4 mm thick material is partial recycled nylon, and 51 mm thick material is partial recycled polyester.
  - .4 Product is a 90% open weave mesh in a trapezoidal configuration connected by a continuous bottom strip.
  - .5 The insect barrier fabric is made of nylon and polyester woven material and is attached to the face of the trapezoidal Mortar Net material.
- .3 Source Quality: Obtain the trapezoidal shaped Mortar Net materials with Insect Barrier from a single manufacturer.
  - .1 Acceptable Materials:
    - .1 Mortar Net USA, Ltd.

3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.

3.2 EXAMINATION

.1 Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions.
.2 Match product size to cavity size.
.3 Cavity should be no more than 6.4 mm wider than 25.4 mm thick material and 51 mm thick material, and 10.2 mm thick material should touch both the outer wythe and the inner wall.
.4 For cavities larger than 51 mm, place rigid insulation of sufficient height to extend at least 152 mm above the top of the Mortar Net® with Insect Barrier against the outside of the inner wythe and of appropriate thickness to reduce the cavity to the appropriate size or add additional layers of Mortar Net to fill width of cavity.
.5 Inspect for and repair holes in flashing immediately prior to installing Mortar Net with Insect Barrier.

3.3 PREPARATION

.1 Preparation:
  .1 Clean flashing and weep holes so they are free of mortar droppings and debris immediately prior to installing Mortar Net with Insect Barrier.
  .2 Washing flashing with water or chemicals prior to installation is not necessary.
  .3 Mortar Net with Insect Barrier should fit snugly in cavity, so if cavity is greater than 51 mm wide, either use several thicknesses of the Mortar Net with Insect Barrier or use appropriately sized Styrofoam board not less than 406 mm high as a spacer to fill excess space.
  .4 Place spacer against the outside of the interior wall so the Mortar Net with Insect Barrier is against the inside of the exterior wythe or apply additional rows of Mortar Net with Insect Barrier to fill width of cavity.
  .5 If no spacer is used, flashing should extend not less than 152 mm above the top of the Mortar Net with Insect Barrier to avoid the possibility of mortar bridging between the exterior wythe and interior wall.
  .6 Adhesives, fasteners, specials skills or tools are not required.

3.4 INSTALLATION

.1 Mortar Net with Insect Barrier Installation:
  .1 Install one continuous row of trapezoidal shaped Mortar Net with Insect Barrier at base of wall and over all wall openings directly on flashing.
  .2 To prevent mortar bridging between the outer wythe and inner wall, install flashing extending from the bottom of the Mortar Net with Insect Barrier to at least 152 mm above the top of the Mortar Net with Insect Barrier.
  .3 Multiple thicknesses of The Mortar Net with Insect Barrier may be installed to match cavity widths and if excessive droppings are expected.
  .4 Inspection, preparation and installation procedure for multiple thicknesses is the same as for single thickness.
  .5 When installing multiple thicknesses, align the trapezoidal shaped sections with each other.
  .6 To match cavity width to product thickness without using multiple thicknesses of the Mortar Net with Insect Barrier, place rigid insulation of appropriate thickness against outside face of inner wall.
  .7 Lay the first 1 or 2 courses of brick at flashing level, then install Mortar Net with Insect Barrier continuously by placing it against the inside of the openings. Install Mortar Net with Insect Barrier with fabric facing to the exterior of the wall.
  .8 No fasteners or adhesives are required, and mortar need not have set.

.9 The Mortar Net with Insect Barrier shall not come in contact with wall ties standard wall tile installations, but if it does, it may be cut or torn to accommodate wall ties, conduit, plumbing or other materials that bridge or intrude into cavity between inner and outer walls.

.10 Compress the Mortar Net with Insect Barrier horizontally so it can be forced into cavities slightly smaller than its nominal thickness without affecting Mortar Net with Insect Barrier or wall performance.

.11 When forcing the Mortar Net with Insect Barrier into a cavity, be sure mortar has set sufficiently to resist outward pressure from product.

3.5 PROTECTION

.1 Protection: Protect installed product from damage during construction.

END OF SECTION

1 General

1.1 RELATED REQUIREMENTS

.1 Section 04 05 00 - Common Work Results for Masonry.
.2 Section 04 05 13 - Masonry Mortaring.
.3 Section 04 05 19 - Masonry Anchorage and Reinforcing.
.4 Section 04 05 23 - Masonry Accessories.
.5 Section 07 21 13 - Board Insulation.

1.2 REFERENCES

.1 Canadian Standards Association (CSA International)
  .1 CAN/CSA A165 SERIES-04 (R2014), CSA Standards on Concrete Masonry Units.

1.3 QUALITY ASSURANCE

.1 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
.2 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.
.3 Units having a required fire resistance rating shall be identified by the manufacturer by marking each pallet or cube, or by other means.

1.4 WASTE MANAGEMENT AND DISPOSAL

.1 Collect and separate for disposal waste material generated by this Section.
.2 Place in appropriate on-site bins in accordance with Waste Management Plan.
.3 A clean worksite is mandatory at all times. Failure to maintain the site in a clean, safe condition shall result in the Owner initiating a clean-up and related costs being deducted from progress claims.

2 Products

2.1 MATERIALS

.1 Standard hollow concrete masonry units to CSA-A165.
  .1 Classification: H/15/A/M
  .2 Size: modular
  .3 Special shapes: provide as follows:
    .1 Bull-nosed units for all exposed corners.
    .2 Square sash-block units at all control joint locations.
    .3 Purpose-made shapes for lintels and bond beams.
    .4 Solid units at wall caps where wall terminates below ceiling.
    .5 Additional shapes as indicated.
  .4 Acceptable Materials:
    .1 J. Casey Concrete Limited
    .2 E. Shaw Limited
    .3 South Shore Ready Mix Limited
    .4 J. Rice Concrete Limited

3 Execution

3.1 INSTALLATION

.1 Concrete block units.
  .1 Bond: running.

.2 Coursing height: 200 mm for one block and one joint.
.3 Jointing:
.1 Concave where exposed or where paint or other similar finish coating is specified
.2 Tile or similar applied finish.
.3 Flush at exterior face to receive air/vapor barrier membrane.
.4 Maintain cavity at masonry walls free from mortar droppings.

.2 Concrete block lintels.
.1 Install reinforced concrete block lintels over openings in masonry where steel or reinforced concrete lintels are not indicated.
.2 End bearing: not less than 200 mm as indicated on drawings.

3.2 QUALITY CONTROL

.1 Notwithstanding visual inspection requirements of CSA Standards, masonry units shall be free of surface indentations, surface cracks due to manufacture, or chipping.
.2 THE REQUIREMENTS OF CLAUSE .1 ABOVE WILL BE **STRICTLY ENFORCED** AND CONTRACTOR WILL BE REQUIRED TO EITHER REPLACE UNACCEPTABLE UNITS, OR AT THE CONSULTANT'S DISCRETION, DEMOLISH PART OF ALL OR A WALL DEEMED BY THE CONSULTANT, AS NOT MEETING THOSE REQUIREMENTS.

3.3 HEATING PIPING IN CONCRETE UNIT MASONRY WALLS

.1 Where heating piping supply and return lines travel vertically in concrete block walls cores of block to be aligned and/or webs cut, and masonry work coordinated with work of Mechanical Sections to permit installation of heating lines.

3.4 CONCRETE MASONRY LINTELS

.1 Install reinforced concrete block lintels over openings in masonry where steel or reinforced concrete lintels are not indicated.
.2 End bearing: not less than 200mm.

3.5 GROUTING-IN OF DOOR FRAMES

.1 Fill all door & window frames solid with mortar.

3.6 CLEANING

.1 Standard block: Allow mortar droppings on masonry to partially dry then remove by means of trowel, followed by rubbing lightly with small piece of block and finally by brushing.

END OF SECTION

1 General

1.1 RELATED REQUIREMENTS

.1 Section 04 05 00 - Common Work Results for Masonry.

1.2 REFERENCES

.1 American Society for Testing and Materials International, (ASTM)
- .1 ASTM A36/A36M-08, Specification for Carbon Structural Steel.
- .2 ASTM F3125M, Specification for High-Strength Bolts for Structural Steel Joints Metric.
- .3 ASTM A490M-09a, Specification for High-Strength Steel Bolts, Classes 10.9 and 10.9.3, for Structural Steel Joints (Metric).

.2 Canadian General Standards Board (CGSB)
- .1 CAN/CGSB 85.10-99, Protective Coatings for Metals.

.3 Canadian Institute of Steel Construction (CISC)/Canadian Paint Manufacturer's Association (CPMA).
- .1 CISC/CPMA 1-73b, Quick-Drying, One-Coat Paint for Use on Structural Steel.
- .2 CISC/CPMA 2-75, Quick-Drying, Primer for use on Structural Steel.

.4 Canadian Standards Association (CSA International)
- .1 CSA G40.20-13 (R2018)/G40.21-13 (R2018), General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
- .2 CAN/CSA G164-M92(R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.
- .3 CSA S16-16 (R2019), Design of Steel Structures.
- .4 CSA S136-16, North American Specification for the Design of Cold Formed Steel Structural Members, Includes Update No. 1 (2009), Update No. 2 (2010).
- .5 CSA-S136.1-16, Commentary on CSA Standard S136.
- .6 CSA W47.1-09 (R2019), Certification of Companies for Fusion Welding of Steel.
- .7 CSA W48-18, Filler Metals and Allied Materials for Metal Arc Welding.
- .8 CSA W55.3-08 (R2018), Certification of Companies for Resistance Welding of Steel and Aluminum.
- .9 CSA W59-18, Welded Steel Construction (Metal Arc Welding).

.5 Master Painters Institute
- .1 MPI-INT 5.1-98, Structural Steel and Metal Fabrications.
- .2 MPI-EXT 5.1-98, Structural Steel and Metal Fabrications.

1.3 QUALITY CONTROL

.1 When requested, at least 4 weeks prior to fabrication of structural steel, submit eight (8) copies of mill test reports showing chemical and physical properties and other details of steel to be incorporated into work. Such mill test reports shall be certified by qualified metallurgists confirming that tests conform to requirements of CAN/CSA G40.20 and CAN/CSA G40.21.

.2 Minimum four (4) weeks before bolts, nuts and washers are required on site, the Contractor must provide the Consultant with the following:
- .1 Name of manufacturer of bolts, nuts and washers.
- .2 Certificate of Compliance issued by manufacturer stating that nuts, bolts and washers meet the standard(s) required by this specification.

.3 All structural steel and bolts, nuts and washers used on this project to be manufactured and supplied by Canadian Mills.

1.4 DESIGN REQUIREMENTS

.1 Design details and connections in accordance with requirements of CAN/CSA-S16 to resist forces, moments, shears and allow for movements indicated.

.2 Shear connections:

.1 Select framed beam shear connections from an industry accepted publication such as "Handbook of the Canadian Institute of Steel Construction" when connection for shear only (standard connection) is required.
.2 If shears are not indicated, select or design connections to support reaction from maximum uniformly distributed load that can be safely supported by beam in bending, provided no point loads act on beam.

1.5 FOR CONNECTIONS, SUBMIT SKETCHES AND DESIGN CALCULATIONS.

1.6 SHOP DRAWINGS

.1 Submit shop drawings including fabrication and erection documents and materials list in accordance with Division 01 - General Requirements.
.2 Erection drawings: indicate details and information necessary for assembly and erection purposes including:
  .1 Description of methods.
  .2 Sequence of erection.
  .3 Type of equipment used in erection.
  .4 Temporary bracings.
.3 Each shop drawing submitted shall bear stamp and signature of qualified professional engineer registered or licensed to practice in the Province of Prince Edward Island, Canada.
.4 The Consultant may provide an electronic set of documents for the Contractor's preparation of shop drawings.

1.7 WASTE MANAGEMENT AND DISPOSAL

.1 Collect and separate for disposal waste material generated by this Section.
.2 Place in appropriate on-site bins in accordance with Waste Management Plan.
.3 A clean worksite is mandatory at all times. Failure to maintain the site in a clean, safe condition shall result in the Owner initiating a clean-up and related costs being deducted from progress claims.
.4 Divert unused metal materials from landfill to metal recycling facility.
.5 Divert unused paint material from landfill to official hazardous material collections site.

2 Products

2.1 MATERIALS

.1 Structural steel: to CAN/CSA-G40.20/G40.21 Grade 350W
.2 HSS Sections: Class C, Grade 350W.
.3 Structural steel cast-in-place anchor bolts: to CAN/CSA-G40.20/G40.21.
.4 Cold-rolled sections: to CSA S136-94 and ASTM A607, Grade 50.
.5 Bolts, nuts and washers: to ASTM A307.
.6 Welding materials: to CSA W48 Series and certified by Canadian Welding Bureau.
.7 Shop paint primer: to CISC/CPMA1.
.8 Hot dip galvanizing: galvanize steel, where indicated, to CAN/CSA-G164, minimum zinc coating of 300 g/m².
.9 Anchor bolts: fabricated from material conforming to CSA -G40.21, Grade 300W, with yield strength 300 MPa; nuts and washers to be of equal or greater strength than bolts.

2.2 SHOP PAINTING

.1 Clean, prepare surfaces and shop prime structural steel in accordance with CAN/CSA- S16.
.2 Clean members, remove loose mill scale, rust, oil, dirt and other foreign matter. Prepare surface according to SSPC-SP-6.
.3 Apply one coat of primer in shop to steel surfaces, except:
  .1 Surfaces to be encased in concrete.

.2 Surfaces and edges to be field welded.
.3 Contact surfaces of friction-type connections.
.4 Below grade surfaces in contact with soil.

.4 Maintain dry condition and 5 degrees C minimum temperature until paint is thoroughly dry.
.5 Strip paint from bolts, nuts, sharp edges and corners before prime coat is dry.

3 Execution

3.1 GENERAL

.1 Structural steel work: in accordance with CAN/CSA-S16.
.2 Welding: in accordance with CSA W59.
.3 Companies to be certified under Division 1 or 2.1 of CSA W47.1 for fusion welding of steel structures and/or CSA W55.3 for resistance welding of structural components.
.4 Steel fabrication companies to be Canadian Institute of Steel Construction (CISC) certified.

3.2 CONNECTION TO EXISTING WORK

.1 Verify dimensions and condition of existing work, report discrepancies and potential problem areas to Consultant for direction before commencing fabrication.

3.3 FABRICATION

.1 Fabricate structural steel in accordance with CAN/CSA-S16 and in accordance with reviewed shop drawings.
.2 Continuously seal members by continuous welds. Grind smooth.
.3 Provide punched holes for 11 to 27mm in diameter for attachment of other work.
.4 Reinforce openings to maintain required design strength.
.5 Fabricate all closure angles at edge of deck and at all openings as indicated on drawings.
.6 Fabricate all masonry lateral support angles to lengths and in quantities required.

3.4 MARKING

.1 Mark materials in accordance with CAN/CSA G40.20/G40.21. Do not use die stamping. If steel is to be left in unpainted condition, place marking at locations not visible from exterior after erection.
.2 Match marking: shop mark bearing assemblies and splices for fit and match.

3.5 ERECTION

.1 Erect structural steel, as indicated and in accordance with CAN/CSA-S16 and in accordance with reviewed shop drawings.
.2 Install all miscellaneous steel sections, plates, etc., indicated on the structural drawings.
.3 Field cutting or altering structural members: to approval of Consultant.
.4 Clean with mechanical brush and touch up shop primer to bolts, rivets, welds and burned or scratched surfaces at completion of erection.
.5 Continuously seal members by continuous welds where indicated. Grind smooth.

3.6 FIELD QUALITY CONTROL

.1 Inspection and testing of materials and workmanship if required will be carried out by testing laboratory designated by the Owner and paid for by the Owner except as follows:
.2 At the Contractor's discretion, either one of the following two (2) options may be used to confirm that the bolted connections have been properly torqued.
.1 The use of tension control bolts (TCB) in accordance with CAN/CSA S-16.1.

.2 Engage and pay for the services of a testing laboratory, acceptable to the Consultant, to carry our random torque tests on bolted connections, at locations and in numbers determined by the testing laboratory to be sufficient provide a written report confirming that from their tests, it is their opinion that all bolted connections have been torqued in accordance with the specified requirements.

.3 Provide safe access and working areas for testing on site, as required by testing agency and as authorized by Consultant.

.4 Submit test reports to Consultant within 3 weeks of completion of inspection.

3.7 FIELD PAINTING

.1 Touch up damaged surfaces and surfaces without shop coat with primer to SSPC-SP-6 except as specified otherwise. Apply in accordance with CAN/CGSB 85.10.

END OF SECTION

1 General

1.1 RELATED REQUIREMENTS

.1 Section 05 12 23 - Structural Steel for Buildings.
.2 Section 09 91 00 - Painting.

1.2 REFERENCES

.1 American Society for Testing and Materials International, (ASTM)
  .1 ASTM A653/A653M-09a, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
  .2 ASTM A792/A792M-09a, Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.
.2 Canadian General Standards Board (CGSB)
  .1 CAN/CGSB 1.181-99, Ready-Mixed Organic Zinc-Rich Coating.
.3 Canadian Standards Association (CSA International)
  .1 CSA C22.2 No.79-1978(R2008), Cellular Metal and Cellular Concrete Floor Raceways and Fittings.
  .2 CSA S16-18, Design of Steel Structures.
  .3 CSA S136-16Cold Formed Steel Structural Members.
  .4 CSA W47.1-16, Certification of Companies for Fusion Welding of Steel.
  .5 CSA W55.3-08 (R2018), Certification of Companies for Resistance Welding of Steel and Aluminum.
  .6 CSA W59-18, Welded Steel Construction, (Metal Arc Welding).
.4 Canadian Sheet Steel Building Institute (CSSBI)
  .1 CSSBI 10M-08, Standard for Steel Roof Deck.
  .2 CSSBI 12M-08, Standard for Composite Steel Deck.

1.3 DESIGN REQUIREMENTS

.1 Design steel deck using working stress design, in accordance with CSSB1 10M and CSSB1 12M as applicable.
.2 Steel deck and connections to steel framing to carry dead, live and other loads including lateral loads, diaphragm action, composite deck action, and uplift as indicated.
.3 Deflection under specified live load not to exceed 1/240 of span, except that when plaster ceilings are hung directly from deck, live load deflection not to exceed 1/360 of span.
.4 Where vibration effects are to be controlled as indicated, dynamic characteristics of decking system to be designed to be in accordance with CAN/CSA-S16.1, Appendix 'G'.
.5 All steel decking used on this project to be fabricated in Canada, from steel manufactured in Canada by Canadian Mills.

1.4 SHOP DRAWINGS

.1 Submit shop drawings erection and shoring drawings in accordance with Division 01 - General Requirements..
.2 Each shop drawing submitted shall bear stamp and signature of qualified professional engineer registered or licensed to practice in the Province of Prince Edward Island, Canada.
.3 Submit design calculations if requested by Consultant.
.4 Indicate deck plan, profile, dimensions, base steel thickness, metallic coating designation, connections to supports and spacings, projections, openings, reinforcement details and accessories.
.5 Indicate details of temporary shoring of steel deck, such as location, time and duration of placement and removal of shoring for concrete fill decks.

1.5 WASTE MANAGEMENT AND DISPOSAL

.1 Collect and separate for disposal waste material generated by this Section.
.2 Place in appropriate on-site bins in accordance with Waste Management Plan.
.3 A clean worksite is mandatory at all times. Failure to maintain the site in a clean, safe condition shall result in the Owner initiating a clean-up and related costs being deducted from progress claims.
.4 Divert unused metal from landfill to metal recycling facility.
.5 Dispose of unused paint material at official hazardous material collections site.
.6 Do not dispose of unused paint material into sewer system, into streams, lakes, onto ground or in other location where it will pose health or environmental hazard.
.7 Dispose of unused caulking material at official hazardous material collections site.

2 Products

2.1 MATERIALS

.1 Closures: as approved in accordance with manufacturer's recommendations.
.2 Cover plates, cell closures and flashings: steel sheet with minimum base steel thickness of 0.76 mm. Metallic coating same as deck material.
.3 Primer: zinc rich, ready mix to CAN/CGSB-1.181.
.4 Hilti steel deck fasteners purpose designed for the application or 20mm diameter puddle welds complete with washers.
.5 #10 Tek screws or side lap button punching.
.6 Acoustical Insulation:
  .1 Acceptable material: Rockwool, Sound-absorbing trough fillers for perforated steel decks, mineral wool, trapezoidal shapes to suit width and depth of flutes.

2.2 TYPES OF DECKING

.1 Roof deck: single fluted element, with minimum nominal base steel thickness of 0.76 mm (22 ga.) with interlocking side laps.
  .1 Acceptable Material:
    .1 Canam P-3615.
    .2 Canadian Metal Rolling Mills S-15.
.2 Roof deck (Acoustical): single fluted element, with minimum nominal base thickness of 0.76 mm (22 ga.) with interlocking side laps, complete with acoustical insulation material.
  .1 Acceptable Material:
    .1 Canam P-3615 and AF-110.
    .2 Canadian Metal Rolling Mills S-15
.3 Floor deck: composite single fluted element, with minimum nominal base steel thickness of 0.76 mm (22 ga.) with interlocking side laps.
  .1 Acceptable Material:
    .1 Canam P-3615 composite.
    .2 Canadian Metal Rolling Mills S-15-K composite.
.4 To the requirements of Paragraph 1.3 - Design Requirements of this Section.

3 Execution

3.1 GENERAL

.1 Structural steel work: in accordance with CAN/CSA-S136 and CSSB1 10M and CSSB1 **12M as applicable.**
.2 Welding: in accordance with CSA W59 and with CSA W59S1, except where specified otherwise.

.3 Companies to be certified under Division 1 or 2.1 of CSA W47.1 for fusion welding of steel and/or CSA W55.3 for resistance welding.
.4 Steel fabrication companies to be Canadian Institute of Steel Construction (CISC) certified.

3.2 ERECTION

.1 Erect steel deck as indicated and in accordance with CSA S136 and CSSB1-10M and CCSB1-12M as applicable and manufacturer's instructions and in accordance with approved erection drawings.
.2 Fastening uplift resistance to CSA S136.F04, 2.09kN.
.3 Weld decking to steel joists and steel beams strictly in accordance with requirements indicated on drawings.
.4 Where underside of steel decking will be exposed in the final assembly. Exercise care during handling and installation to ensure that exposed face will be free from dents, scratches, excessive weld burns and other unsightly blemishes. Use chalk line to locate joists. Hammer marks or dents alongside of top chords not acceptable.
.5 Butt ends: to 1.5 to 3 mm gap. Install steel cover plates over gaps wider than 3 mm.
.6 Lap ends: to 50 mm minimum.
.7 Weld and test stud shear connectors through steel deck to steel joists/beams below in accordance with CSA W59.
.8 Immediately after deck is permanently secured in place, touch up metallic coated top surface with compatible primer where burned by welding.
.9 Prior to concrete placement, steel deck to be free of soil, debris, standing water, loose mil scale and other foreign matter.
.10 Temporary shoring, if required, to be designed to support construction loads, wet concrete and other construction equipment. Do not remove temporary shoring until concrete attains 75% of its specified 28 day compression strength.
.11 Place and support reinforcing steel as indicated.
.12 Deck to span minimum of 3 joist spans generally.

3.3 CLOSURES

.1 Install closures in accordance with approved details. Refer to Paragraph 2.1.2.

3.4 OPENINGS AND AREAS OF CONCENTRATED LOADS

.1 No reinforcement required for openings cut in deck which are smaller than 150 mm square.
.2 Frame deck openings with any one dimension between 150 to 300 mm as recommended by manufacturer, except as otherwise indicated.
.3 For deck openings with any one dimension greater than 300 mm and for areas of concentrated load, reinforce in accordance with structural framing details, except as otherwise indicated.

3.5 CONNECTIONS

.1 Install connections in accordance with CSSBI Steel Roof Deck, 10M-86 and Composite Steel Deck. 12M-84 as applicable and in accordance with design requirements for diaphragm action.

END OF SECTION

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1 General

1.1 SUMMARY

.1 Work included: Provide metal fabrications including but not limited to following:
- .1 Bollards.
- .2 Miscellaneous masonry angles, lintels & brackets.

1.2 RELATED REQUIREMENTS

.1 Following description of work is included for reference only and shall not be presumed to be complete:
- .1 Section 03 30 00 - Cast-in-Place Concrete.
- .2 Section 04 05 00 - Common Work Results for Masonry.
- .3 Section 04 05 19 - Masonry Anchorage and Reinforcing.
- .4 Section 05 12 23 - Structural Steel For Buildings.
- .5 Section 05 31 00 - Steel Deck.
- .6 Division 10 - Specialties.

1.3 REFERENCES

.1 American Society for Testing and Materials International, (ASTM)
- .1 ASTM A53/A53M-07, Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
- .2 ASTM A269-10, Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service.
- .3 ASTM A307-07b, Specification for Carbon Steel Bolts and Studs, 60,000 PSI Tensile Strength.
- .4 ASTM A123/A123M-09, Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
- .5 ASTM A153/A153M-09, Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
- .6 ASTM A325M-07a, Specification for High-Strength Bolts for Structural Steel joints.
- .7 ASTM A653M-09a, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- .8 ASTM B117-09, Practice for Operating Salt Spray (Fog) Apparatus.
- .9 ASTM E119-09c, Test Methods for Fire Tests of Building Construction and Materials.
- .10 ASTM E736-00 (2006), Test Method for Cohesion/Adhesion of Sprayed Fire-Resistive Materials Applied to Structural Members.
- .11 ASTM F436M-10, Specification for Hardened Steel Washers.
- .12 ASTM F738M-02 (2008), Specification for Stainless Steel Metric Bolts, Screws, and Studs.
- .13 ASTM F836M-02, Specification for Style 1 Stainless Steel Metric Nuts.
- .14 ASTM F844-07a, Specification for Washers, Steel, Plain (Flat), Unhardened for General Use.

.2 Canadian General Standards Board (CGSB)
- .1 CAN/CGSB 1.40-97, Anti-corrosive Structural Steel Alkyd Primer.
- .2 CAN/CGSB 1.181-99, Ready Mixed Organic Zinc-Rich Coating
- .3 CAN/CGSB 85.10-99, Protective Coatings for Metals

.3 Canadian Standards Association (CSA International)
- .1 CAN/CSA G40.20-04/G40.21-04, General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel.
- .2 CAN/CSA G164-2018, Hot Dip Galvanizing of Irregularly Shaped Articles.
- .3 CAN/CSA S16-1, Design of Steel Structures.
- .4 CSA W48-18, Filler Metals and Allied Materials for Metal Arc Welding.
- .5 CSA W59-18, Welded Steel Construction (Metal Arc Welding).

.6 CSA S136-16 - North American Specification for the Design of Cold Formed Steel Structural Members (Using Appendix B provisions applicable to Canada).
.7 CSA W47.1-2019 - Certification of Companies for Fusion Welding of Steel.
.8 CSA W47.2-11 (R2020) - Certification of Companies for Fusion Welding of Aluminum.
.9 CSA W48.1 (R2006) - Carbon Steel Covered Electrodes for Shielded Metal Arc Welding.
.10 CSA W48-06 (2011) - Filler Metals and Allied Materials for Metal Arc Welding.
.11 CSA W59-2018 - Welded Steel Construction (Metal Arc Welding).
.12 CSA W117.2-19 - Safety in Welding, Cutting, and Allied Processes.
.13 SSPC - Steel Structures Painting Council, "Steel Structures Painting Manual, Vol. 2".

1.4 SYSTEM DESCRIPTION

.1 Design Requirements:
- .1 Drawings and details are diagrammatic and are intended to show design concept, configuration, components and arrangements; they are not intended to identify nor solve completely problems of thermal and structural movements, assembly framing, fixings and anchorages.
- .2 Design work to withstand within acceptable deflection limitations, variations from plumb in vertical and horizontal lines, its own weight, forces applied by movements of building structure and attached adjacent components and maximum design loads due to pressure and suction of wind, snow, ice, rain and hail.
- .3 Design load bearing structures to NBC (2015) requirements and provide miscellaneous steel supports and anchors to suit design. Conform to CAN/CSA-S16.1 and CAN/CSA-S136.

1.5 SUBMITTALS

.1 Product Data:
- .1 Submit manufacturer's literature, data sheets for each type of material provided under this Section for Project. Data sheets shall provide all required information. Submit 3 copies of detailed instructions for maintaining, preserving and keeping materials in clean and safe conditions and give adequate warning of maintenance practices of materials detrimental to specified materials. Submit manufacturer's installation instructions.

.2 Material Safety Data Sheets:
- .1 Submit MSDS for inclusion in Operation and Maintenance Manual without limitations for adhesives, sealants, patching and leveling compound, solid polymer and as designed by Consultant.

.3 Shop Drawings
- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .2 In addition to minimum requirements indicated following:
  - .1 Large scale details of members, materials and connections.
  - .2 Joint details.
  - .3 Methods of setting, sealing, securing, anchorage.
  - .4 Field connections.
- .3 Each shop drawing submitted shall bear stamp and signature of qualified professional engineer registered or licensed to practice in the Province of Prince Edward Island, Canada.

.4 Samples:
- .1 Extruded and formed metals: minimum 300 mm long.
- .2 Metal sheet: minimum 300 mm square and of specified thickness.

1.6 QUALITY ASSURANCE

.1 Test Reports: Submit 6 copies of certified test reports showing compliance with specified performance characteristics and physical properties.

.2 Certificates: Submit 6 copies of product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
.3 Welding: Provide welding in accordance with CSA W59-m performed by a fabricator and mechanics fully approved by the Canadian Welding Bureau as specified herein.
.4 Structural Design and Inspection:
  .1 Employ a professional structural engineer carrying a minimum $3,000,000.00 professional liability insurance and is registered in the province of Prince Edward Island to:
    .1 Design components of the work of this Section requiring structural performance.
    .2 Be responsible for full assemblies and connections
    .3 Be responsible for determining sizes, joint spacing to allow thermal movement and loading of components in accordance with applicable codes and regulations.
    .4 Be responsible for production and review of Shop Drawings.
    .5 Inspect work of this Section during fabrication and erection.
    .6 Stamp and sign each shop drawing.
    .7 Provide site administration and inspection of this part of the Work.
  .2 Certification:
    .1 Submit certification from registered professional structural Engineering registered in province of Prince Edward Island, who shall affix his/her seal and signature to certificate, stating structure is capable of supporting its own weight and specified live loads.
    .2 Welders employed on this project may be asked by Consultant at any time for their welding certificate.

1.7 DELIVERY, STORAGE, AND HANDLING

.1 Coordinate deliveries to comply with construction schedule and arrange ahead for strategic off-the-ground, undercover storage locations. Do not load areas beyond the designed limits.
.2 Handle and store metal materials at job site in such a manner to prevent damage to other materials, (to existing buildings) or property.
.3 Handle components with care, and Provide protection for surfaces against marring or other damage. Ship and store members with cardboard or other resilient spacers between surfaces. Use lifting chokers of material which will not damage surface of steel members.

1.8 WASTE MANAGEMENT AND DISPOSAL

.1 Collect and separate for disposal waste material generated by this Section.
.2 Place in appropriate on-site bins in accordance with Waste Management Plan.
.3 A clean worksite is mandatory at all times. Failure to maintain the site in a clean, safe condition shall result in the Owner initiating a clean-up and related costs being deducted from progress claims.

2 Products

2.1 MATERIALS

.1 Steel sections and plates: New Material Conforming to CAN/CSA-G40.20/G40.21, Grade 350W.
.2 Hollow Structural Sections: New material conforming to CSA G40.20 and CSA G40.21, Grade 350W, Class H.
.3 Steel Pipe: ASTM A53, Type E or S, Grade A or B, Standard weight, Schedule 40.
.4 Welding Materials: Conforming to CSA W48.1-M and CSA W59-M.
.5 High Strength Bolts: Supply bolts, nuts and washers conforming with ASTM A 325M. Supply each type and size of bolt and nut of same manufacture and of same lot.

.1 Bolts: Heavy, hexagon head high strength structural bolts, of standard size, of lengths required for thickness of members joined and for type of connection.
.2 Nuts: Heavy hexagon semi-finished nuts.
.3 Washers: For general use bolt, nut and stud application to provide increased bearing surfaces, spacing and to prevent galling. Flat and smooth hardened washers, quenched and tempered to suit applications and conforms to ASTM F844. Provide AISI Type 304 stainless steel washers at exterior locations.
.4 Hardened Steel Washers: To suit applications and conforms to ASTM F436M.
.5 Stainless Steel Bolts: To suit applications and conforms to ASTM F738M.
.6 Stainless Steel Nuts: To suit applications and conforms to ASTM F836M.
.7 Lock Washers: Helical spring type steel "lock" washers to suit applications and conforms to federal specification FF-W-84. Provide AISI Type 304 stainless steel lock washers at exterior locations.
.8 Security Fasteners: Button head Torx® Plus R screw tamper resistant # 10, 25 mm long 2 per glass stop minimum stainless steel machine screws.

.6 Common or Ordinary Bolts and Anchor Bolts: Unfinished bolts conforming with ASTM A307, Grade A, with hexagon heads and nuts where exposed in the finish work. Supply common bolts of lengths required to suit thickness of material being joined, but not projecting more than 6 mm beyond nut, without the use of washers. Supply anchor bolts of lengths noted, but projecting not less than 13 mm beyond nut unless otherwise noted.
.7 Galvanized Primer Paint: Zinc rich conforming to CAN/CGSB-1.181 for new galvanized metal.
.8 High Performance Corrosion Protection for Perimeter Steel: 1 component, moisture cured, micaceous iron oxide/zinc filled primer, UL Classified in accordance with UL 263 (ASTM E119), corrosion protection in accordance with ASTM B117, meeting Class B Slip Certification in accordance with American Institute of Steel Construction (AISC) requirements for slip critical bolted connections, tested in accordance with ASTM E736 for its suitability for application of primer over steel to receive sprayed fireproofing "Series394, Perime Prime" by Tnemec Company Incorporated; www.tnemec.com.
.9 Steel Pipe Handrails: Conforming to ASTM A53M, Type "S", Schedule 40, Grade A steel pipe of sizes down.
.10 Steel Pipe Bollards: Conforming to ASTM A53M, Schedule 80 steel pipe of sizes shown.
.11 Galvanized: Hot dipped galvanized with minimum zinc coating of 600 g/m2 to CAN/CSA-G164-M.
.12 Handrail Wall Brackets: In accordance with OBC requirements and to meet design requirements indicated on Drawings.
.13 Grout:
.1 Cementitious, non shrinking, non expanding grout: 'Sika Grout 212' by Sika Canada Inc., or 'Non Shrink Structural Grout - Dry Pack Grout' by Euclid Chemical Company or 'Sealtight CG 86 Construction Grout' by W.R. Meadows.
.2 Epoxy, non-shrinking, non expanding grout: Acceptable material:
.1 Sika Anchor Fix.
.2 Master Flow 100.
.3 Master Emaco ADH 1420.

2.2 FABRICATION

.1 Fabricate each item of work of this Section in accordance with following general requirements:
.1 Members square and straight.
.2 Members plumb and true.
.3 Joints accurately and tightly fitted.
.4 Intersecting members in true, finish planes.
.5 Fasteners concealed.
.2 Fabricate, fit and assemble work in shop where possible. Where shop fabrication is not possible, make trial assembly in shop.

.3 Provide hangers, rods, bars, bolts, anchors, brackets, rivets, bearing plate and bracing, fitting, drilling, stopping, soldering, as required for a complete assembly.
.4 Isolate dissimilar metals to prevent galvanic corrosion.
.5 Weld connections unless otherwise indicated.
.6 Shop Welding:
.1 Execute welding to avoid damage or distortion to work. Should there be, in the opinion of Consultant or Inspection Company, doubts as to adequacy of welds, they shall be tested for efficiency and any work not meeting Standards be removed and replaced with new work satisfactory to Consultant. Carry out welding in accordance with following standards:
.1 Fabricator shall be fully certified by Canadian Welding Bureau for fusion welding of steel structures to CSA W47.1 and for fusion welding of aluminum to CSA W47.2.
.2 CSA W48-M - for Electrodes (if rods are used, only coated rods are allowed).
.3 CSA W59-M - for design of connections and workmanship.
.4 CSA W117.2 - for safety.
.7 Thoroughly clean welded joints and steel exposed for a sufficient space to properly perform welding operation. Neatly finish welds. Ensure welds exposed to view and finish painted are continuous and ground smooth.
.8 Provide exposed metal fastenings and accessories of same material, texture, color and finish as base metal to which they are applied or fastened.

2.3 FINISHES

.1 Cleaning and Shop Painting:
.1 Clean steel to SSPC SP6 and remove loose mill scale, weld flux and splatter.
.2 Shop prime steel with 1 coat of primer paint to dry film thickness of 0.025 mm (1 mil). Paint on dry surfaces free from rust, scale, grease. Do not paint when temperature is lower than 7 deg C. Paint items under cover and leave under cover until primer is dry. Follow paint manufacturer's recommendations regarding application methods, equipment, temperature, and humidity conditions.
.3 Shop prime non galvanized perimeter steel members and structural steel members to receive sprayed fire resistive materials with 1 coat of high performance corrosion protection primer to dry film thickness of 0.025 mm (1 mil). Paint on dry surfaces, free from rust, scale, grease. Do not paint when temperature is lower than 7 deg C. Paint items under cover and leave under cover until primer is dry. Follow paint manufacturer's recommendations regarding application methods, equipment, temperature, and humidity conditions.
.4 Shop prime galvanized steel in accordance with CAN/CGSB-85.10.
.5 Clean but do not paint surfaces being welded in the field and surfaces in contact after assembly.
.2 Hot Dip Galvanizing:
.1 After fabrication, hot dip galvanize specific miscellaneous steel items noted on Drawings and/or called for herein. Plug relief vents air tight. After galvanizing, remove plugs, ream holes to proper size and re-tap threads. Straighten shapes and assemblies true to line and plane after galvanizing. Repair damaged galvanized surfaces with "Galvafroid" by W.R. Meadows in accordance with manufacturer's printed directions.
.2 Galvanized members exposed to elements when in final location; members embedded in concrete; members specified in this Section or noted on Drawings.
.3 Hot-dip galvanize members, in accordance with CAN/CSA-G164-M and the requirements of following ASTM standards, with minimum coating weights or thickness as specified:

.1 Rolled, Pressed and Forged Steel Shapes, Plates, Bars and Strips: ASTM A123M; average weight of zinc coating per sq/ft of actual surface, for 4.8 mm and less thickness members 2 ounces, for 6 mm and heavier members 2.3 ounces.
.2 Iron and Steel Hardware: ASTM A153M; minimum weight of zinc coating, in ounces per sq ft of surface shall be in accordance with Table 1 of ASTM A153M, for the various classes of materials used on the Project.
.3 Steel Sheet: ASTM A653M; weight of zinc coating, per sq ft on both sides of sheet. Coating designation Z275 (G90), minimized spangle and chemically treated.

.3 Color: to be selected by Consultant.
.4 Zinc-rich primer: Ready, mixed, zinc-rich primer conforming to CAN/CGSB-1.181.
.1 Acceptable material:
.1 Sealtight Galvafroid Zinc-Rich Coating by W.R. Meadows of Canada Limited.
.2 Zinc Clad No. 7 Organic Zinc Rich Primer by Sherwin Williams Company of Canada Ltd.
.5 Isolation Coating: Bituminous paint, alkali-resistant bituminous paint or epoxy resin solution to provide dielectric separation which will dry to be tack-free and withstand high temperatures. Cold-applied asphalt mastic complying with SSPC-Paint 12, except containing no asbestos fibers. Carboline Bitumastic 50 by Carboline Canada, or Copper Creek Top Service 760 Black by Sherwin Williams Company, 410-02 by Bakor Inc. or other Product and manufacturer acceptable to Consultant.

2.4 ANGLE LINTELS

.1 Steel angles: hot-dip galvanized, sizes indicated for masonry openings. Provide 200 mm minimum bearing at ends.
.2 Weld or bolt back-to-back angles to profiles as indicated.
.3 All exterior lintels are to be galvanized.
.4 Finish: shop painted.
.5 Leave ready for painting by Section 09 91 00 - Painting.

2.5 CONCRETE BLOCK LATERAL SUPPORT ANGLES

.1 Location: top of concrete block walls.
.2 Refer to drawings.

2.6 ROOF UNITS FRAMING

.1 Fabricate steel sections at roof and wall units as detailed, to provide continuous framinge at all four (4) sides of louvers.

2.7 PIT FRAME & COVER

.1 Where applicable, provide:
.1 75 x 75 x 6mm angle cover support.
.2 6mm checker plate cover.
.3 50 x 50 x 6mm angle, 3 sides floor opening.
.4 6mm square edge bar, 3 sides.
.5 All steel to be hot dipped galvanized.

2.8 MISCELLANEOUS SECTIONS AND FRAMING

.1 Provide miscellaneous steel sections which are not shown or identified on Structural Drawings, or specified under another Section of Specifications.

2.9 PIPE BOLLARDS

.1 Fabricate from hot-diped galvanized, Grade 350 W to size 203mm nominal or as indicated, complete with anchor lugs all steel to be hot dipped galvanized.
.2 Supply to Section 03 30 00 - Cast-In-Place Concrete for installation in concrete bases.
.3 Provide post guards of 1/8" high density polyethylene (HDPE) with guaranteed fade resistance for six (6) years, complete with cap.
.4 Post Guard color: Yellow.
.5 Acceptable Material:
  .1 Post Guard by Sure Guard.
  .2 Global Industries.
  .3 Uline.
  .4 Idealshield.
  .5 Innoplast.

3 Execution

3.1 ERECTION

.1 Do welding work in accordance with CSA W59 unless specified otherwise.
.2 Erect metalwork square, plumb, straight, and true, accurately fitted, with tight joints and intersections.
.3 Provide suitable means of anchorage acceptable to Consultant such as dowels, anchor clips, bar anchors, expansion bolts and shields, and toggles.
.4 Exposed fastening devices to match finish and be compatible with material through which they pass.
.5 Provide components for building by other sections in accordance with shop drawings and schedule.
.6 Make field connections with bolts to CAN/CSA-S16.1, or weld.
.7 Hand items over for casting into concrete or building into masonry to appropriate trades together with setting templates.
.8 Touch-up rivets, field welds, bolts and burnt or scratched surfaces after completion of erection with primer.
.9 Touch-up galvanized surfaces with zinc rich primer where burned by field welding.

3.2 INSTALLATION

.1 Verify dimensions at the Place of the Work to ensure work of this Section fits to that of other parts of the Work.
.2 Erect the work of this Section plumb, square, true and level.
.3 Securely anchor work of this Section and rivet, weld or bolt to structural framing of the building. Where secured to concrete, Provide bolts for setting in concrete. Provide expansion bolt supports to masonry.
.4 Provide necessary fitting, setting and cutting required in connection with the fitting of work of this Section to other parts of the Work.
.5 Field Painting: Paint bolt heads, washers, nuts, field welds and previously unpainted items. Touch up with matching paint, shop primer damaged during transit and installation.

3.3 CLEANING

.1 Perform cleaning after installation to remove construction and accumulated environmental dirt.
.2 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

.3 On completion of installation, carefully clean metal work.

END OF SECTION

COLES
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PROFESSIONAL ENGINEER — Province of Prince Edward Island — Kevin T. Lewis — 514 — 16 March 2021 — Date

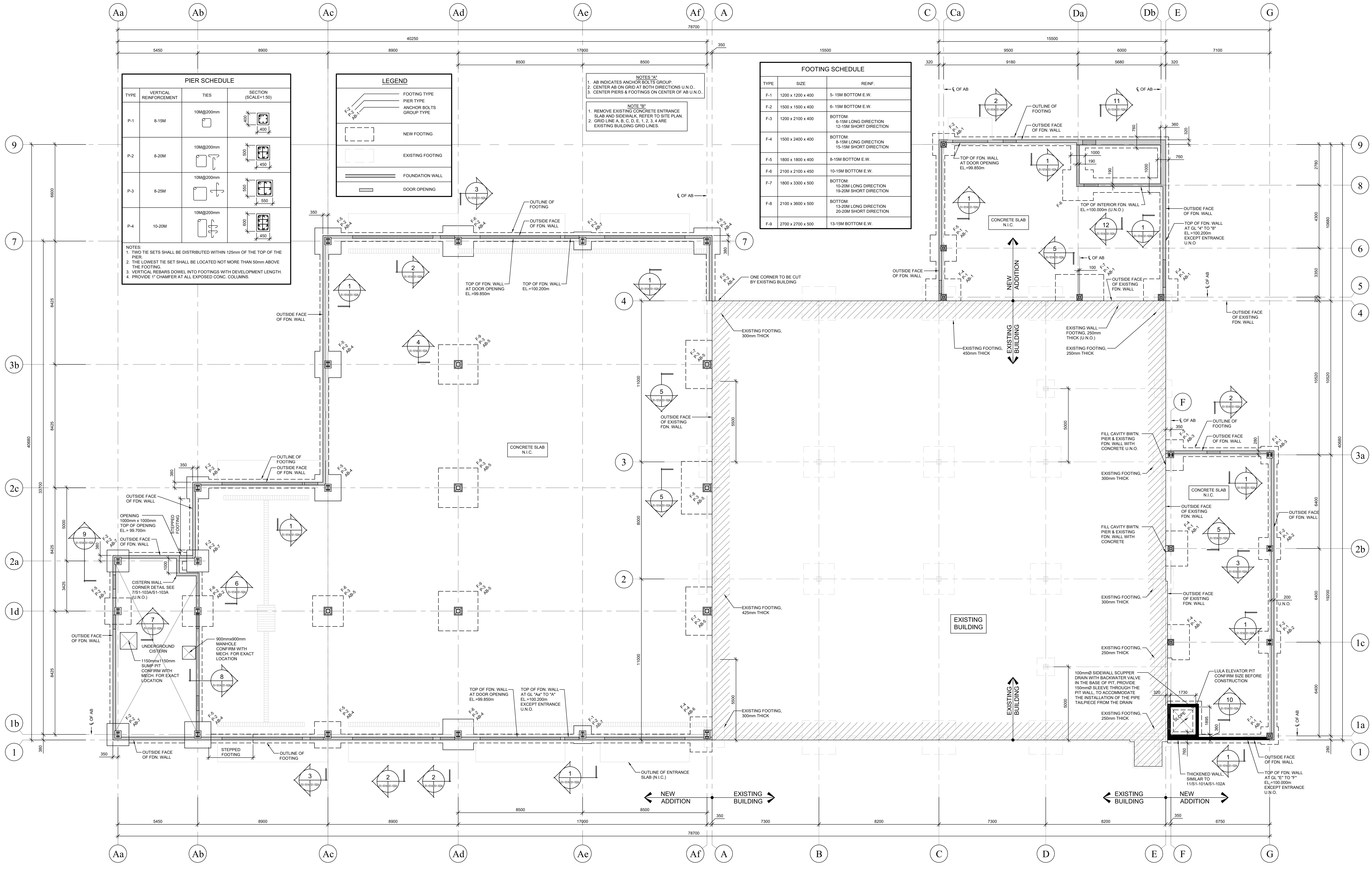
Client: PEI Department of Transportation & Infrastructure

Project Title: Bridgetown Depot Building Addition

Sheet Title: New Site Plan

No.	Description	Date
0	Issued for Tender	2021-10-07
1	Issued for Addenda	2021-11-16

Date: October 2021
Drn By: SPM, EIT
Chk By: NL, P.Eng
Revision: 1
Project Number: 211120
Drawing Number: C1-102



PIER SCHEDULE

TYPE	VERTICAL REINFORCEMENT	TIES	SECTION (SCALE=1:50)
P-1	8-15M	10M@200mm	400 x 400
P-2	8-20M	10M@200mm	500 x 450
P-3	8-25M	10M@200mm	550 x 550
P-4	10-20M	10M@200mm	600 x 450

NOTES:
1. TWO TIE SETS SHALL BE DISTRIBUTED WITHIN 125mm OF THE TOP OF THE PIER.
2. THE LOWEST TIE SET SHALL BE LOCATED NOT MORE THAN 50mm ABOVE THE FOOTING.
3. VERTICAL REBARS DOWEL INTO FOOTINGS WITH DEVELOPMENT LENGTH.
4. PROVIDE 1" CHAMFER AT ALL EXPOSED CONC. COLUMNS.

LEGEND

F-2 / P-2 / AB-1	FOOTING TYPE / PIER TYPE / ANCHOR BOLTS GROUP TYPE
(dashed box)	NEW FOOTING
(light dashed box)	EXISTING FOOTING
(double line)	FOUNDATION WALL
(hatched)	DOOR OPENING

NOTES "A"
1. AB INDICATES ANCHOR BOLTS GROUP.
2. CENTER AB ON GRID AT BOTH DIRECTIONS U.N.O..
3. CENTER PIERS & FOOTINGS ON CENTER OF AB U.N.O..

NOTE "B"
1. REMOVE EXISTING CONCRETE ENTRANCE SLAB AND SIDEWALK, REFER TO SITE PLAN.
2. GRID LINE A, B, C, D, E, 1, 2, 3, 4 ARE EXISTING BUILDING GRID LINES.

FOOTING SCHEDULE

TYPE	SIZE	REINF.
F-1	1200 x 1200 x 400	5- 15M BOTTOM E.W.
F-2	1500 x 1500 x 400	6- 15M BOTTOM E.W.
F-3	1200 x 2100 x 400	BOTTOM: 6-15M LONG DIRECTION 12-15M SHORT DIRECTION
F-4	1500 x 2400 x 400	BOTTOM: 8-15M LONG DIRECTION 15-15M SHORT DIRECTION
F-5	1800 x 1800 x 400	8-15M BOTTOM E.W.
F-6	2100 x 2100 x 450	10-15M BOTTOM E.W.
F-7	1800 x 3300 x 500	BOTTOM: 10-20M LONG DIRECTION 19-20M SHORT DIRECTION
F-8	2100 x 3600 x 500	BOTTOM: 13-20M LONG DIRECTION 20-20M SHORT DIRECTION
F-9	2700 x 2700 x 500	13-15M BOTTOM E.W.

1 PLAN - FOUNDATION
1:100

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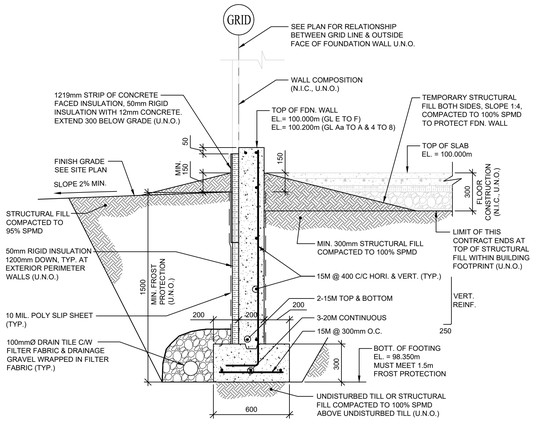
Client
PEI Department of Transportation & Infrastructure

Project Title
KCHD Bridgetown Upgrades
Depot Building
Bridgetown, Kings County
Prince Edward Island

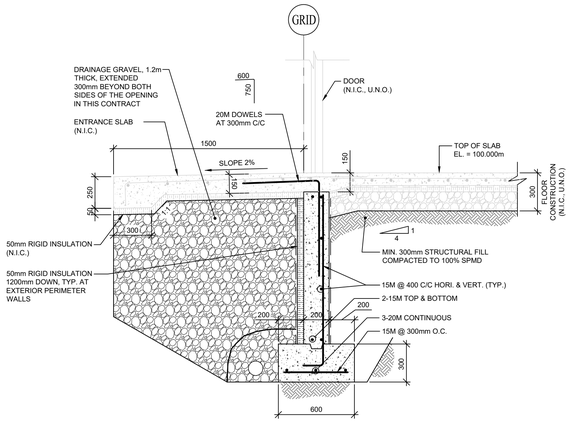
Sheet Title
Foundation Plan

No.	Description	Date
0	Issued for Tender	2021-Oct-07
1	Issued for Addendum #2	2021-Nov-16

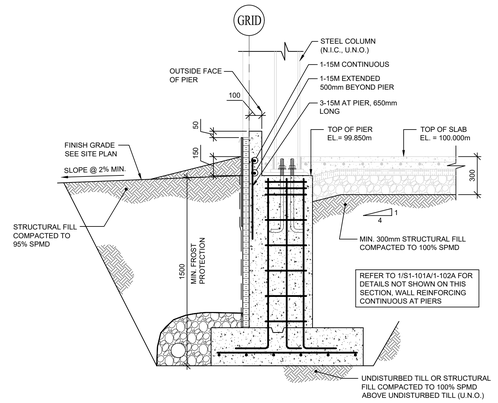
Date: November 16, 2021
Drn By: K.C.
Chk By: N.L.P. Eng.
Project Number: 211120
Drawing Number: S1-101A R1
Revision 1



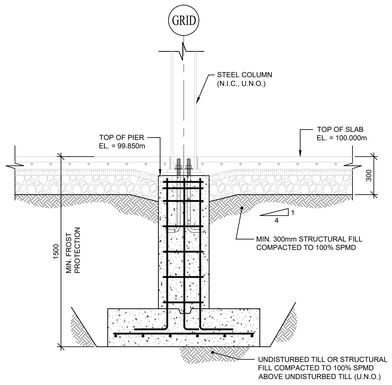
1 SECTION - EXTERIOR FOUNDATION WALL
1:20



2 SECTION - ENTRANCE SLAB
1:20



3 SECTION - EXTERIOR PIER
1:20

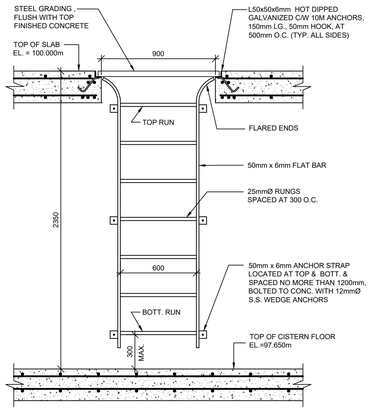


4 SECTION - INTERIOR PIER
1:20

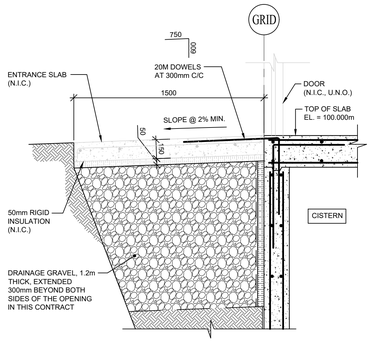
5 SECTION - NEW & EXISTING FOOTING (TYPICAL)
1:20

6 SECTION - CISTERN
1:20

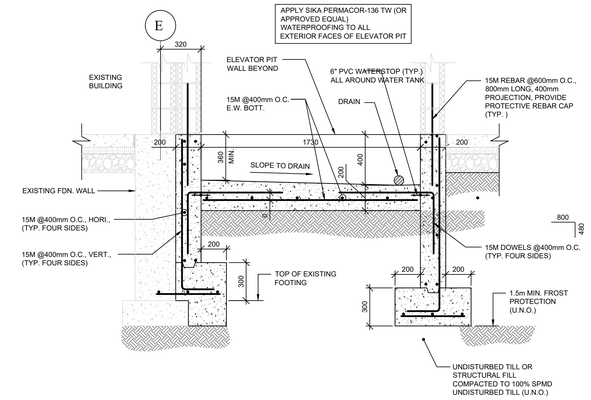
7 SECTION - CISTERN AT FIRE PUMP PIT
1:20



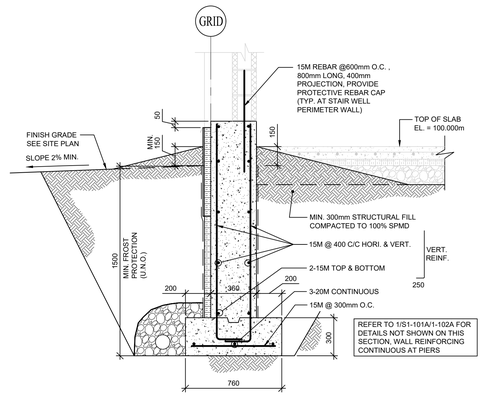
8 SECTION - CISTERN LADDER AT MANHOLE
1:20



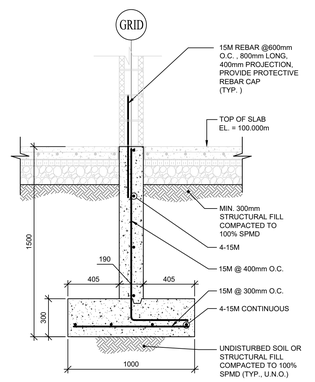
9 SECTION - ENTRANCE SLAB AT CISTERN
1:20



10 SECTION - ELEVATOR PIT
1:20



11 SECTION - EXTERIOR FOUNDATION WALL
1:20



12 SECTION - FOOTING AT INTERIOR LOAD-BEARING WALL
1:20

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PROFESSIONAL ENGINEER
PROVINCE OF PRINCE EDWARD ISLAND
314
16 April 2021

Client
PEI Department of Transportation & Infrastructure

Project Title
KCHD Bridgetown Upgrades
Depot Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title
Sections & Details

No.	Description	Date
0	Issued for Tender	2021-Oct-07
1	Issued for Addendum #2	2021-Nov-16

Revision 1
Date: November 16, 2021
Drn By: K.C.
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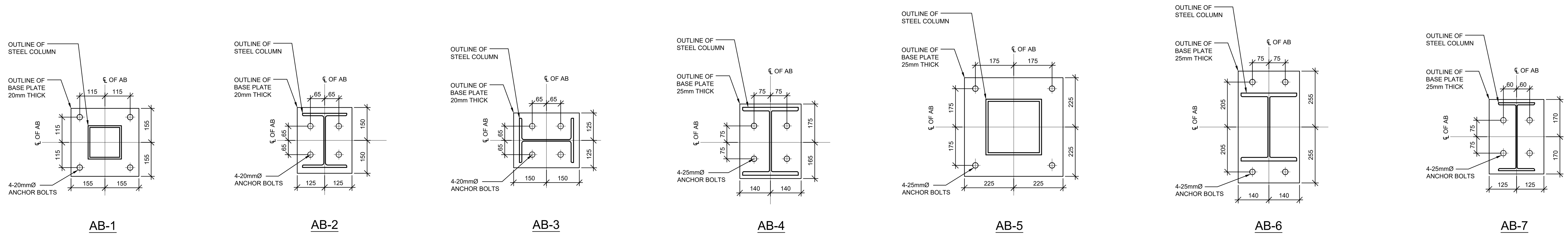
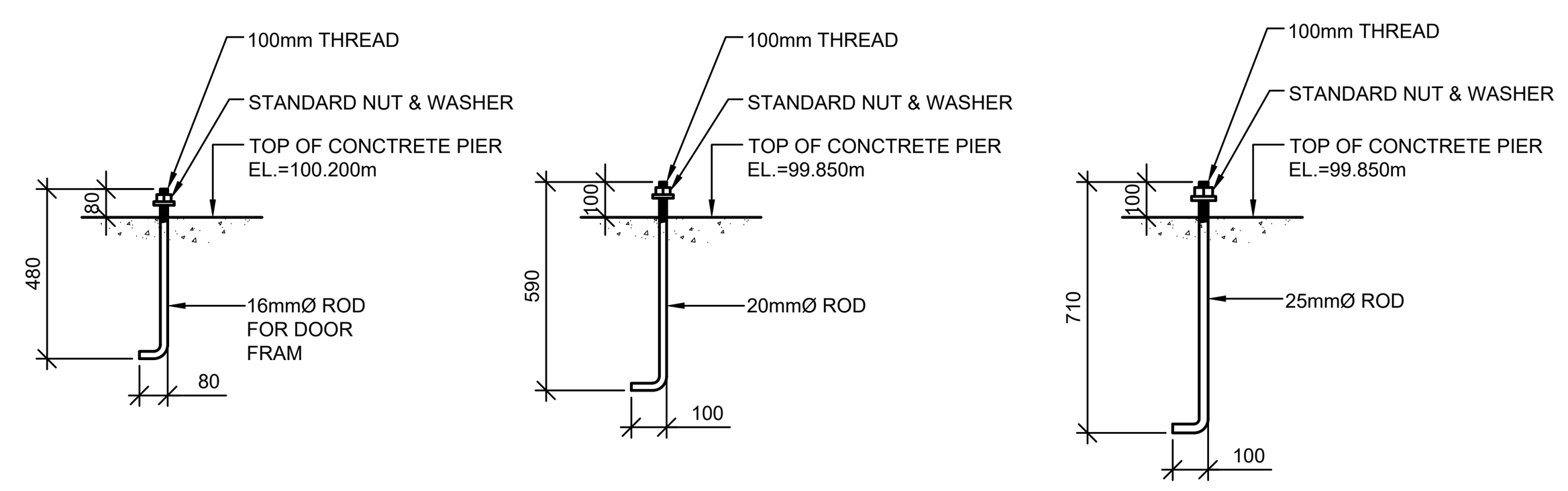


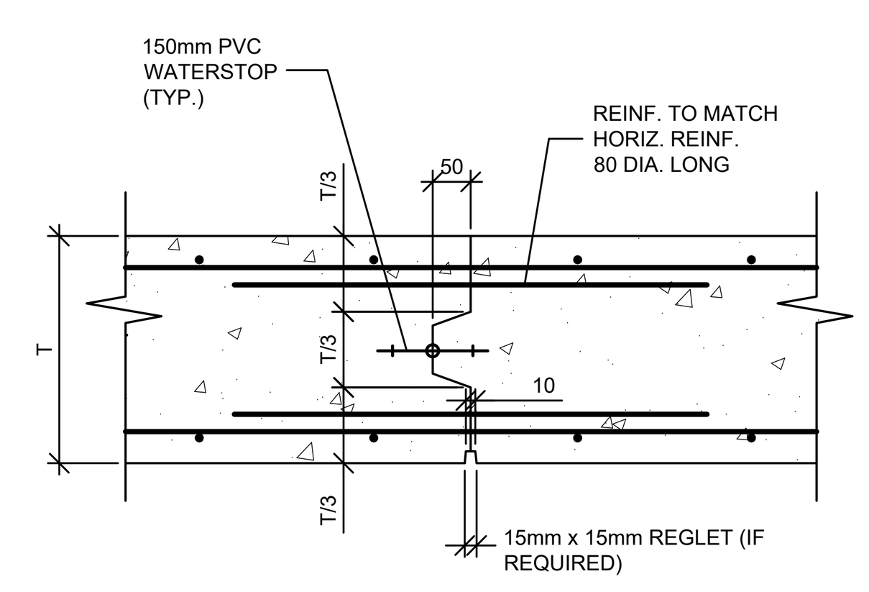
1 DETAIL - BASE PLATES & ANCHOR BOLTS
1:10



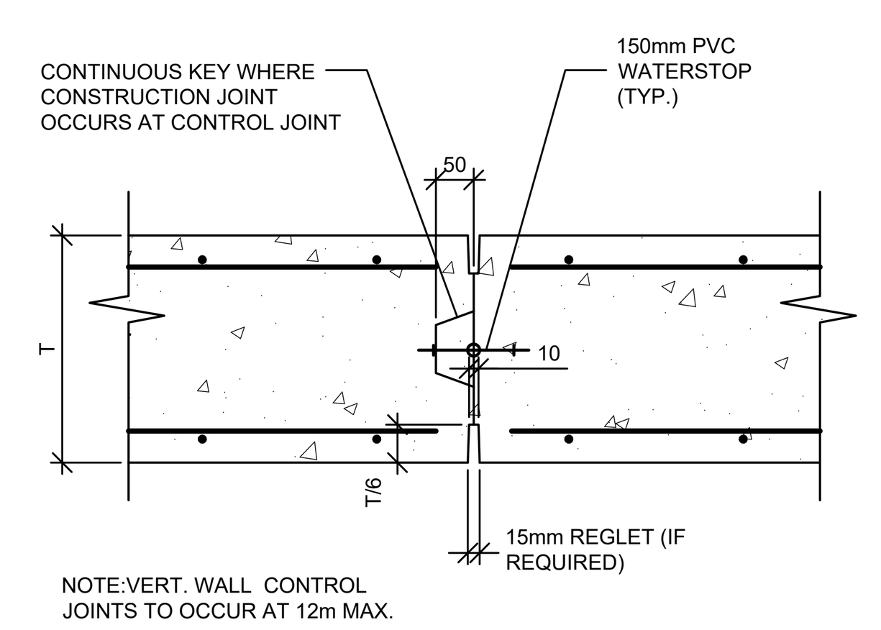
NOTES:

1. ALL ANCHOR BOLTS ARE TO BE G40.21 350W AND ASTM A307 OR EQUAL.
2. PLATE WASHERS TO BE SAW CUT OR GAS CUT.
3. ANCHOR PLACEMENT TOLERANCES MUST MEET CSA S16 AND CISC'S CODE OF STANDARD PRACTICE FOR STRUCTURAL STEEL.

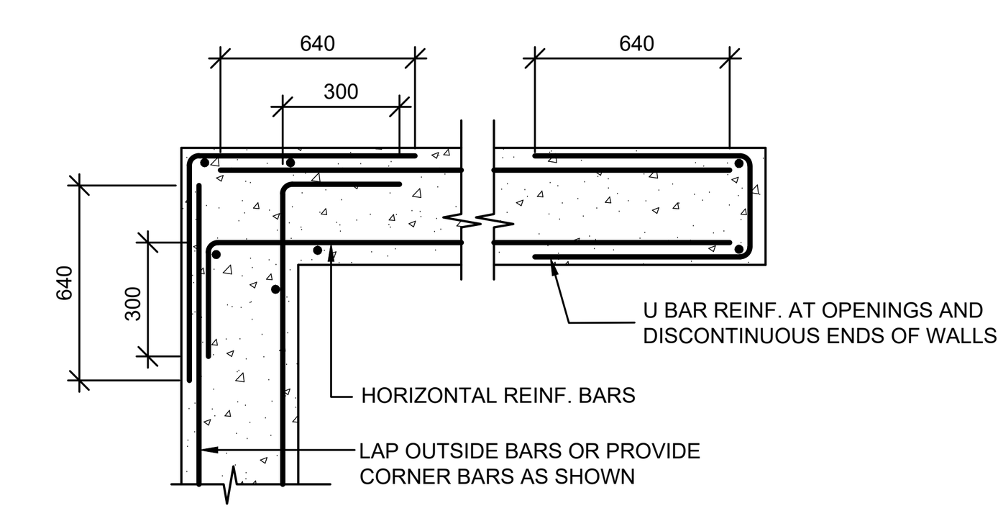
2 DETAIL - ANCHOR ROD
1:20



3 DETAIL - TYPICAL VERTICAL WALL CONSTRUCTION JOINT
N.T.S.

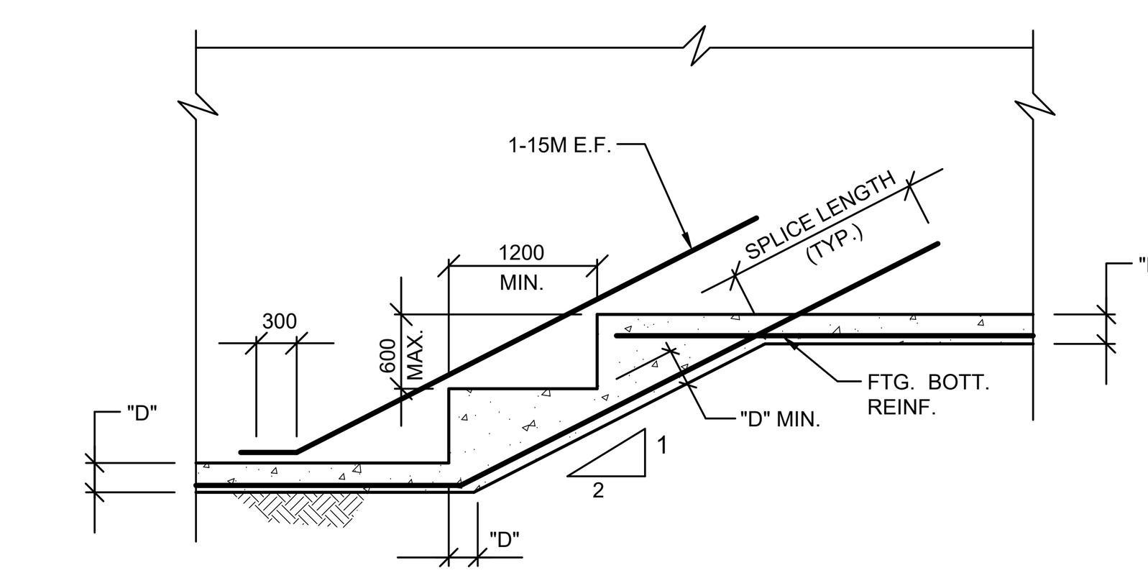


4 DETAIL - TYPICAL VERTICAL WALL CONTROL JOINT
N.T.S.

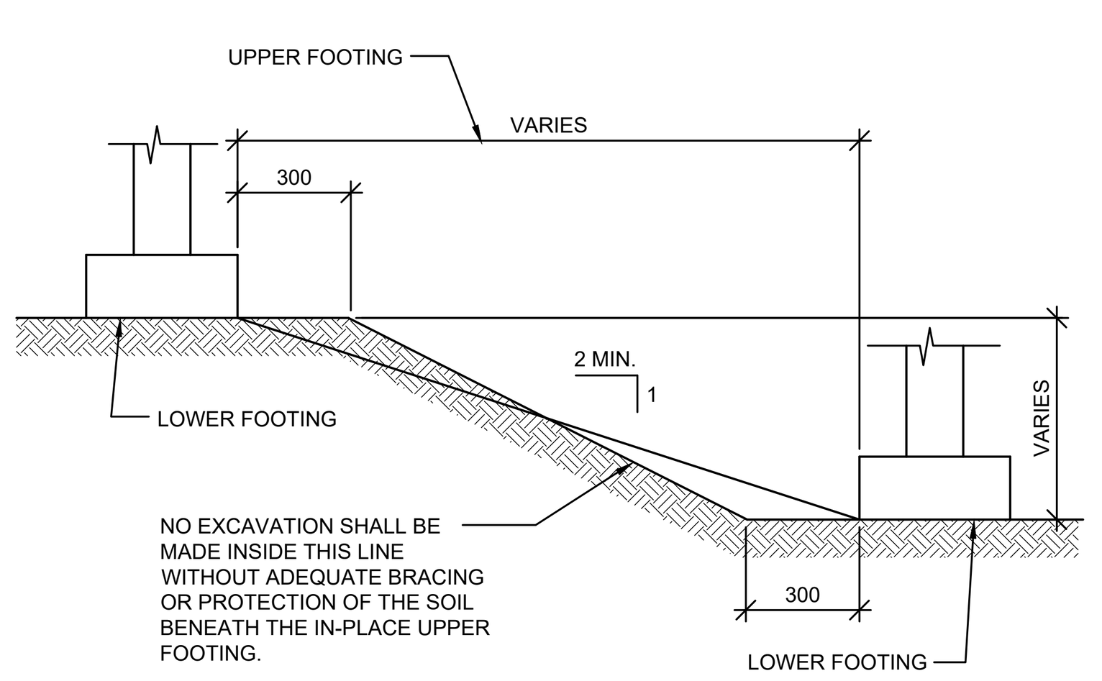


ALL WALLS INCLUDING FOUNDATION WALL, CISTERN WALL, PIT WALL, ETC., SHALL CONFORM TO THIS DETAIL.

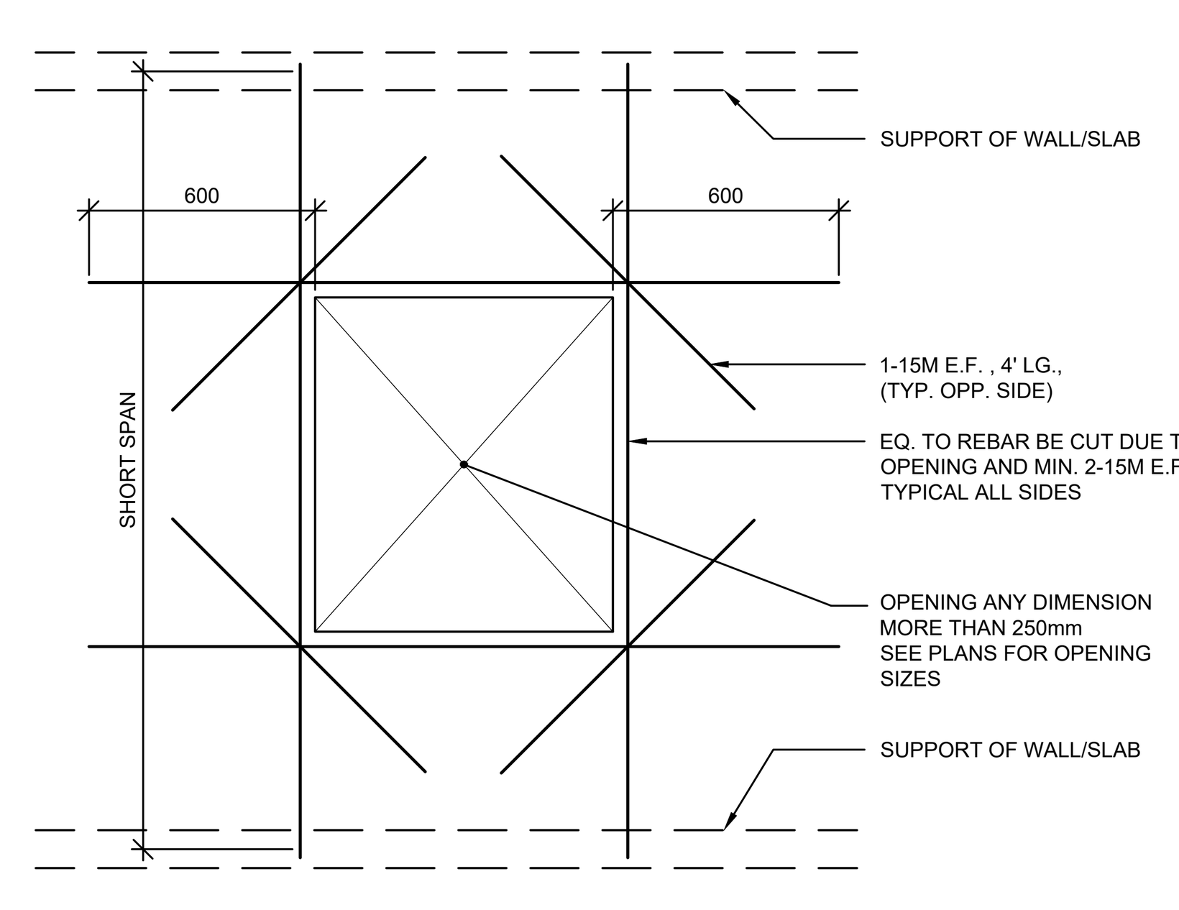
5 DETAIL - WALL CORNER & END
N.T.S.



6 DETAIL - STEPPED STRIP FOOTING
N.T.S.



7 DETAIL - SLOPE BETWEEN FOOTING AND ADJACENT CONSTRUCTION
N.T.S.



8 DETAIL - OPENING AT CONC. WALL/SLAB
N.T.S.

GENERAL NOTES:

1. THE WORK SHALL BE IN ACCORDANCE WITH NATIONAL BUILDING CODE OF CANADA (NBCC), 2015 REVISION, TO THE SATISFACTION OF THE ENGINEER UNLESS NOTED OTHERWISE ON THE DRAWING OR IN THE SPECIFICATIONS.
2. COMPLY WITH ALL LOCAL, MUNICIPAL, AND PROVINCIAL BY-LAWS AND REGULATIONS.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH PEI OCCUPATIONAL HEALTH & SAFETY ACT, WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM AND APPLICABLE LABOR CODES.
4. CONTRACTOR MUST VISIT THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS, VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES AND SERVICES WITHIN THE CONTRACT LIMIT.
5. CONTRACTOR SHALL COORDINATE WORK AND COOPERATE WITH OWNER AND AGENCIES HAVING JURISDICTION.
6. REPORT ANY DOUBTFUL CONDITIONS REQUIRING DECISIONS AND SECURE DIRECTIONS FROM THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
7. CONTRACTOR TO EXERCISE EXTREME CAUTION. DESIGN AND PROVIDE ADEQUATE SUPPORT AND CONNECTIONS TO EXISTING STRUCTURES, UTILITIES AND SERVICES. MOVE, ADJUST AND RECONNECT ALL VISIBLE AND CONCEALED ITEMS AFFECTED BY THE SCOPE OF WORK.
8. VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
9. ALL DIMENSIONS AND ELEVATIONS ARE IN METRIC UNITS UNLESS NOTED OTHERWISE.
10. THE CONTRACTOR TO INCLUDE IN THE CONTRACT PRICE COSTS ASSOCIATED WITH OVER EXCAVATION, BACKFILLING AND REINSTATEMENT.
11. PROPERLY DISPOSE AND REMOVE OFFSITE ALL DEBRIS AND MATERIALS TO BE REMOVED.
12. N.I.C. INDICATES NOT IN THIS CONTRACT.

FOUNDATION NOTES:

1. FOOTINGS SHALL NOT BE PLACED ON SOIL SOFTENED BY WATER.
2. ALL FOOTINGS SHALL BE PLACED ON SOIL HAVING A MINIMUM BEARING CAPACITY OF 150 kN/SQ.m.
3. ALL FOOTINGS SHALL HAVE A MINIMUM OF 1500mm (5'-0") FROST PROTECTION.
4. ALL FOOTINGS SHALL BE REVIEWED BY THE ENGINEER BEFORE CONCRETE IS PLACED. NOTIFY 24 HRS BEFORE PLACING CONCRETE.
5. VERIFY ALL CONCRETE FORMWORK LINES ARE LEVEL, PLUMB, SQUARE AND TRUE.
6. CONCRETE FORMWORK PLYWOOD SHEETS TO THE REQUIREMENTS OF CSA 0121. USE NEW MATERIAL, CLEAN, SOUND, FREE FROM DEFECTS DETRIMENTAL TO THE QUALITY OF FINISHED CONCRETE SURFACES. ARRANGE PLYWOOD SHEETS TO A UNIFORM JOINT PATTERN. CONSTRUCT FORMWORK TO RESIST FLUID PRESSURE FROM WET CONCRETE AND ALL OTHER CONSTRUCTION LOADINGS WITHOUT BULGING, MOVEMENT OR DISTORTION. REUSE OF FORMWORK SUBJECT TO THE REQUIREMENTS OF CSA A23.1.
7. OPENINGS IN FOUNDATION & BUILDING WALLS SHALL BE PROVIDED AS SHOWN ON ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS. ANY ADDITIONAL OPENINGS MUST BE APPROVED BY ENGINEER. OPENINGS SHALL BE SLEEVED.
8. ALL WALL AND SLAB OPENINGS AND ENDS SHALL HAVE MINIMUM (2)-15M ALL SIDES.
9. LOCATION OF CONSTRUCTION JOINTS TO BE APPROVED BY ENGINEER BEFORE CONCRETE IS PLACED.
10. ANCHOR RODS AND EMBEDDED STEEL ITEMS WILL BE INSTALLED BY THE FOUNDATION CONTRACTOR. SET ANCHOR RODS, INSERT PLATES, SLEEVES AND OTHER MISCELLANEOUS ITEMS EMBEDDED IN CONCRETE ACCURATELY, USING TEMPLATES, TO EXACT GRADE AND LOCATION SHOWN ON PROJECT DRAWINGS OR AS DIRECTED BY ENGINEER. SECURE TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. DO NOT CUT OR RELOCATE REINFORCING STEEL FOR PLACEMENT OF EMBEDDED PARTS. IF INSERTS CANNOT BE LOCATED AS SPECIFIED, OBTAIN APPROVAL OF ALL MODIFICATIONS FROM ENGINEER BEFORE PLACING.
11. ALL BASE AND BEARING PLATES TO BE GROUTED USING 50 MPa (7,200psi) NON-SHRINK GROUT. CURE NON-SHRINK GROUT AND PROTECT FROM FREEZING TEMPERATURES IN ACCORDANCE WITH CSA U.N.O.
12. THE FILL SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF THE FOUNDATION WALL. PROVIDE LATERAL SUPPORT TO WALLS PRIOR TO BACKFILLING.

CONCRETE NOTES:

1. ALL CONCRETE WORK AND MATERIAL SHALL BE CARRIED OUT IN ACCORDANCE WITH LATEST CSA A23.1 AND NBCC 2015.
2. MIX DESIGN: TYPE 10 PORTLAND CEMENT.
3. FOOTINGS, PIERS AND FOUNDATION WALLS:
   a. COMPRESSIVE STRENGTH (28D): 25MPa (3600psi)
   b. CLASS OF EXPOSURE: F-2
   c. NOMINAL AGGREGATE SIZE: 20mm (3/4")
   d. SLUMP: 80mm (3-1/4") ±20mm (3/4")
   e. AIR CONTENT: 4-7%
   f. WATER CEMENT RATIO: 0.5 MAX
4. INTERIOR SLABS:
   a. COMPRESSIVE STRENGTH (28D): 25MPa (3600psi)
   b. CLASS OF EXPOSURE: N
   c. NOMINAL AGGREGATE SIZE: 20mm (3/4")
   d. SLUMP: 80mm (3-1/4") ±20mm (3/4")
   e. AIR CONTENT: NONE
   f. WATER CEMENT RATIO: 0.45 MAX
5. EXTERIOR SLABS:
   a. COMPRESSIVE STRENGTH (28D): 35MPa (5000psi)
   b. CLASS OF EXPOSURE: C-2
   c. NOMINAL AGGREGATE SIZE: 20mm (3/4")
   d. SLUMP: 80mm (3-1/4") ±20mm (3/4")
   e. AIR CONTENT: 5-8%
   f. WATER CEMENT RATIO: 0.40 MAX
6. CONCRETE MIX DESIGN SHALL BE SUBMITTED FOR REVIEW BY THE ENGINEER MINIMUM 48 HRS PRIOR TO CASTING.
7. USE OF CALCIUM CHLORIDE IS NOT PERMITTED.
8. NO CONCRETE SHALL BE POURED WITHOUT THE PRIOR KNOWLEDGE AND APPROVAL OF ENGINEER.
9. ALL CONCRETE SHALL BE TESTED, TESTING SHALL CONFORM TO CSA A23.2. RECORD TESTS FOR SLUMP, AIR CONTENT AND COMPRESSIVE STRENGTH.
10. ALL CONCRETE SHALL BE VIBRATED USING HIGH FREQUENCY VIBRATORS. VIBRATION PRACTICES TO BE IN ACCORDANCE WITH ACI 309R.
11. COLD WEATHER CONCRETE SHALL BE PLACED AND PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF CSA A23.1 AND TO THE REQUIREMENTS OF ACI-306R. PROVIDE HEATED ENCLOSURES AND/OR INSULATED TARPS AS REQUIRED TO MAINTAIN MINIMUM 10°C CONCRETE SURFACE TEMPERATURE FOR A PERIOD OF 5 DAYS FOLLOWING CONCRETE PLACEMENT. PROVIDE CONTROLLED COOL DOWN PERIOD TO PREVENT SURFACE CRACKING AT END OF PROTECTION PERIOD. ENSURE THAT NO CONCRETE IS PLACED ON OR AGAINST FROZEN SUBGRADE, FORMWORK, OR REINFORCING STEEL.
12. LEAVE FORMWORK IN PLACE FOR THE FOLLOWING MINIMUM PERIODS OF TIME AFTER PLACING CONCRETE:
   a. 72 HR. FOR WALLS
   b. 72 HR. FOR FOOTINGS
13. APPLY CURING COMPOUND TO WALLS AND PILASTERS IF EXPOSED TO DRYING CONDITIONS PRIOR TO COMPLETION OF FULL 7 DAY MOIST CURING PERIOD. USE LIQUID MEMBRANE CONCRETE CURING COMPOUND.

REINFORCING STEEL NOTES:

1. ALL REINFORCING STEEL SHALL BE NEW BILLET TO CSA G30.18, WWM REINFORCING TO CSA G30.5.
2. MINIMUM REINFORCING STEEL YIELD STRENGTH SHALL BE 400 MPa.
3. REINFORCING STEEL SHALL BE DETAILED, CUT, BENT, FABRICATED AND PLACED IN ACCORDANCE WITH REINFORCING MANUAL OF STANDARD PRACTICE (REINFORCING STEEL INSTITUTE OF CANADA); CAN3-A23.3 AND CSA-A23.1.
4. THE GENERAL CONTRACTOR SHALL INSPECT ALL THE REINFORCING STEEL BEFORE PLACEMENT OF THE CONCRETE.
5. THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS PRIOR TO THE PLACEMENT OF THE CONCRETE.
6. THE POSITION OF ALL REINFORCING STEEL SHALL BE MAINTAINED DURING THE POURING OPERATION BY DIRECT SUPERVISION OF THE REINFORCING STEEL CONTRACTOR.
7. SUBMIT SHOP DRAWINGS STAMPED BY AN ENGINEER LICENSED TO PRACTICE IN PEI FOR REVIEW PRIOR TO FABRICATING REINFORCING STEEL. CLEARLY INDICATE BAR SIZES, SPACING, LOCATION, QUANTITY, CHAIRS, SPACERS, ETC WITH IDENTIFYING CODE MARKS TO PERMIT PLACEMENT.
8. ALL FOOTING REINFORCING SHALL CONTINUE THROUGH COLUMN FOOTINGS AND SHALL CONTINUE TO THE ENDS OF THE FOOTINGS WHERE FOOTINGS CHANGE DIRECTION OR STOP.
9. ALL WALL REINFORCING SHALL CONTINUE THROUGH PIER/COLUMN REINFORCING.
10. CONCRETE COVER (UNLESS NOTED OTHERWISE):
   a. POURED AGAINST THE GROUND: 75mm (3")
   b. FORMED SURFACE AGAINST GROUND: 50mm (2")
   c. FORMED SURFACE EXPOSED TO WEATHER:50mm (2")
   d. FORMED SURFACE PROTECTED:
   - BEAMS: 40mm (1-1/2")
   - COLUMNS: 40mm (1-1/2")
   - WALLS: 25mm (1")
11. USE SPACERS, CHAIRS, TEMPLATES AND DIRECT SUPERVISION OF THE REINFORCING STEEL CONTRACTOR TO ACCURATELY LOCATE & SUPPORT REINFORCING STEEL & SECURE IN POSITION TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT.

MISCELLANEOUS

1. THE WORK SHALL BE IN ACCORDANCE WITH NATIONAL BUILDING CODE OF CANADA (2015) TO THE SATISFACTION OF THE ENGINEER UNLESS NOTES OTHERWISE ON THE DRAWING OR IN THE SPECIFICATIONS.
2. COMPLY WITH ALL LOCAL, MUNICIPAL, AND PROVINCIAL BY-LAWS AND REGULATIONS.
3. VERIFY ALL DIMENSIONS ON THE JOB AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
4. REPORT ANY DOUBTFUL CONDITIONS REQUIRING DECISIONS AND SECURE DIRECTIONS FROM THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
5. THE GENERAL CONTRACTOR SHALL COORDINATE THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS WITH THE FOUNDATION DRAWINGS.

ABBREVIATION

AB	= ANCHOR BOLTS GROUP
ARCH.	= ARCHITECTURAL
BLDG.	= BUILDING
BOTT.	= BOTTOM
BTWN.	= BETWEEN
C.C.	= CENTER TO CENTER
CMU	= CONCRETE MASONRY UNIT
CONC.	= CONCRETE
CONT.	= CONTINUOUS
CR.	= CENTER
C/W	= COMPLETED WITH
DIA.	= DIAMETER
DWGS	= DRAWINGS
E.F.	= EACH FACE
EL.	= ELEVATION
ELEC.	= ELECTRICAL
E.W.	= EACH WAY
EQ	= EQUAL
FDN.	= FOUNDATION
FTG.	= FOOTING
GALV.	= GALVANIZED
HORI.	= HORIZONTAL
H.P.	= HIGH POINT
LG	= LONG
L.L.H.	= LONG LEG HORIZONTAL
L.L.V.	= LONG LEG VERTICAL
L.P.	= LOW POINT
MAX.	= MAXIMUM
M.C.	= MOMENT CONNECTION
MECH.	= MECHANICAL
MIN.	= MINIMUM
N.I.C.	= NOT IN CONTRACT
N.T.S.	= NOT TO SCALE
O.C.	= ON CENTER
OWSJ	= OPEN WEB STEEL JOIST
QTY.	= QUANTITY
REIN.	= REINFORCING
R/W	= REINFORCED WITH
S..J.	= SAW CUT JOINT
SPMD	= STANDARD PROCTOR MAXIMUM DRY DENSITY
T.J.	= TIE JOIST
T.O.S.	= TOP OF STEEL
TYP.	= TYPICAL
U.N.O.	= UNLESS NOTED OTHERWISE
U/S	= UNDERSIDE
VERT.	= VERTICAL
WWM	= WELDED WIRE MESH
W/	= WITH
℄	= CENTER LINE

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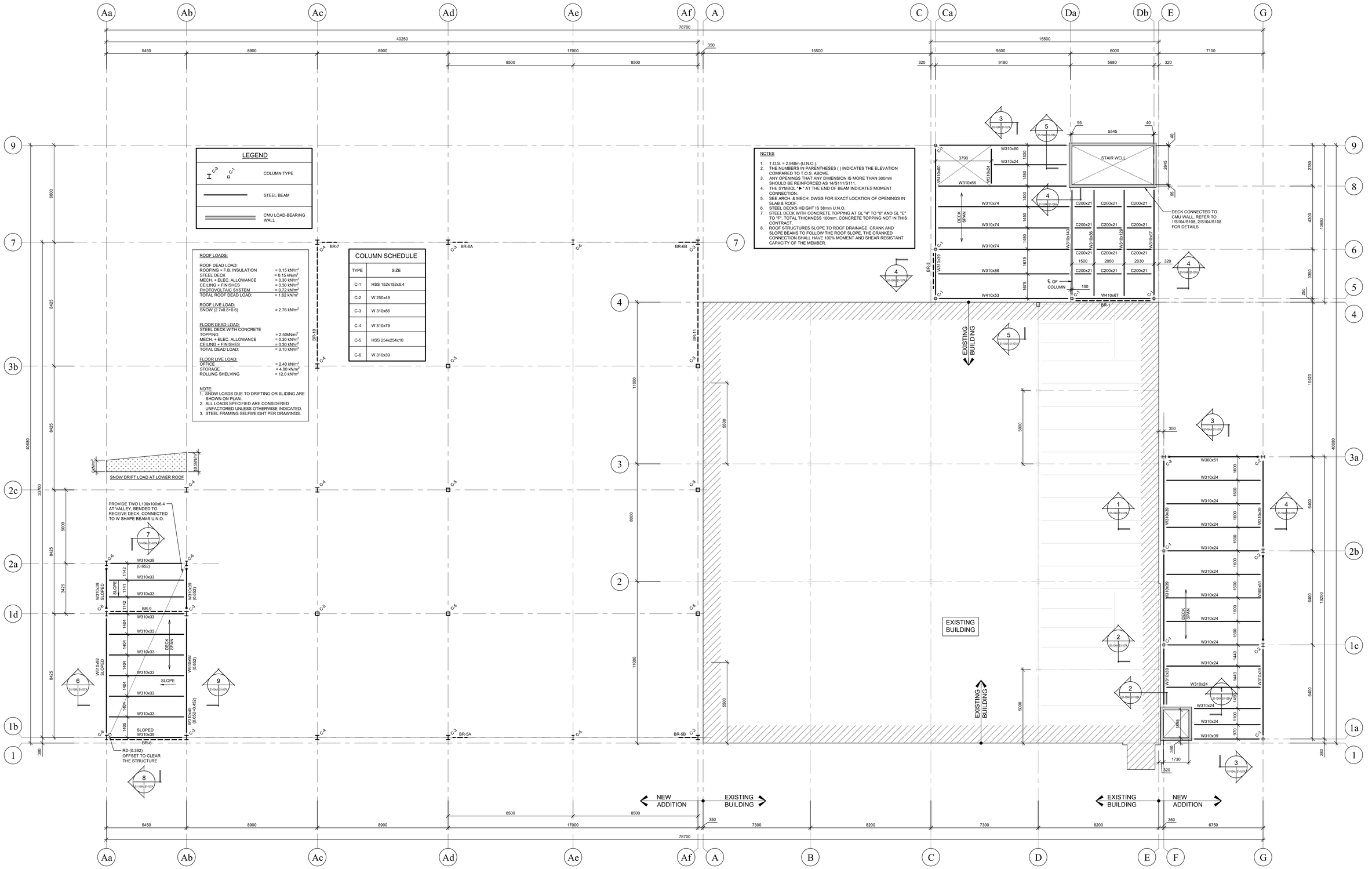
Client: PEI Department of Transportation & Infrastructure

Project Title: KCHD Bridgetown Upgrades
Depot Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title: Details & Notes

No.	Description	Date
0	Issued for Tender	2021-Oct-07
1	Issued for Addendum #2	2021-Nov-16

Date: November 16, 2021
Drn By: K.C.
Chk By: N.L. P. Eng.
Project Number: 211120
Drawing Number: S1-103A R1
Revision: 1



1 (S1/S04) (S1/S05) PLAN - SECOND LEVEL FRAMING
1:100

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PROFESSIONAL ENGINEER — Kevin Toman — 314 — 16 April 2021 — PROVINCE OF PRINCE EDWARD ISLAND

Client
PEI Department of Transportation & Infrastructure

Project Title
KCHD Bridgetown Upgrades
Depot Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title
Second Level Framing Plan

No.	Description	Date
0	Issued for Addendum #2	2021-Nov-16

Date: November 16, 2021
Dm By: K.C.
Chk By: N.L. P. Eng.
Revision: 0
Project Number: 211120
Drawing Number: S1-104A

LEGEND

C-3 / C-1	COLUMN TYPE
	STEEL BEAM
	CMU LOAD-BEARING WALL

COLUMN SCHEDULE

TYPE	SIZE
C-1	HSS 152x152x6.4
C-2	W 250x49
C-3	W 310x86
C-4	W 310x79
C-5	HSS 254x254x10
C-6	W 310x39

ROOF LOADS:

ROOF DEAD LOAD:	
ROOFING + F.B. INSULATION	= 0.15 kN/m^2
STEEL DECK	= 0.15 kN/m^2
MECH. + ELEC. ALLOWANCE	= 0.30 kN/m^2
CEILING + FINISHES	= 0.30 kN/m^2
PHOTOVOLTAIC SYSTEM	= 0.72 kN/m^2
TOTAL ROOF DEAD LOAD:	= 1.62 kN/m^2
ROOF LIVE LOAD:	
SNOW (2.7x0.8+0.6)	= 2.76 kN/m^2

FLOOR DEAD LOAD:

STEEL DECK WITH CONCRETE TOPPING	= 2.50kN/m^2
MECH. + ELEC. ALLOWANCE	= 0.30 kN/m^2
CEILING + FINISHES	= 0.30 kN/m^2
TOTAL DEAD LOAD:	= 3.10 kN/m^2
FLOOR LIVE LOAD:	
OFFICE	= 2.40 kN/m^2
STORAGE	= 4.80 kN/m^2
ROLLING SHELVING	= 12.0 kN/m^2

NOTE:
1. SNOW LOADS DUE TO DRIFTING OR SLIDING ARE SHOWN ON PLAN.
2. ALL LOADS SPECIFIED ARE CONSIDERED UNFACTORED UNLESS OTHERWISE INDICATED.
3. STEEL FRAMING SELFWEIGHT PER DRAWINGS.

NOTES
1. T.O.S. = 107.350m (U.N.O.).
2. THE NUMBERS IN PARENTHESES ( ) INDICATES THE ELEVATION COMPARED TO T.O.S. ABOVE.
3. ANY OPENINGS THAT ANY DIMENSION IS MORE THAN 300mm SHOULD BE REINFORCED AS 14/S111/S111.
4. THE SYMBOL '▶' AT THE END OF BEAM INDICATES MOMENT CONNECTION.
5. SEE ARCH. & MECH. DWGS FOR EXACT LOCATION OF OPENINGS IN SLAB & ROOF.
6. ROOF STRUCTURES SLOPE TO ROOF DRAINAGE. CRANK AND SLOPE BEAMS TO FOLLOW THE ROOF SLOPE. THE CRANKED CONNECTION SHALL HAVE 100% MOMENT AND SHEAR RESISTANT CAPACITY OF THE MEMBER.

PROVIDE TWO L100x100x6.4 AT VALLEY, BENDED TO RECEIVE DECK, CONNECTED TO W SHAPE BEAMS U.N.O.

BEAM CONTINUOUS, C-6 CONNECTED U/S OF BEAM

RD (-0.410) OFFSET TO CLEAR THE STRUCTURE

RTU-1 RTU-2 RTU-3 RTU-4

BEAM FLANGE ALIGN ROOF SLOPE U.N.O.

TOP OF WALL TO ALIGN ROOF SLOPE

DECK CONNECTED TO CMU WALL, REFER TO 5/S105/S108, 6/S105/S108 FOR DETAILS

DECK CONNECTED TO CMU WALL, REFER TO S/S105/S108, 6/S105/S108 FOR DETAILS

NEW ADDITION

EXISTING BUILDING

SLOPED & CRANKED

1 PLAN - ROOF FRAMING
1:100

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PROFESSIONAL ENGINEER — PROVINCE OF PRINCE EDWARD ISLAND

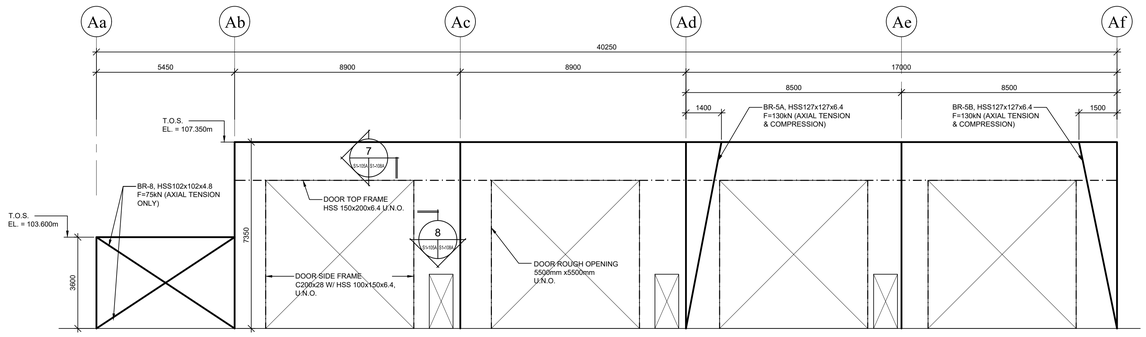
Client: PEI Department of Transportation & Infrastructure

Project Title: KCHD Bridgetown Upgrades
Depot Building
Bridgetown, Kings County
Prince Edward Island

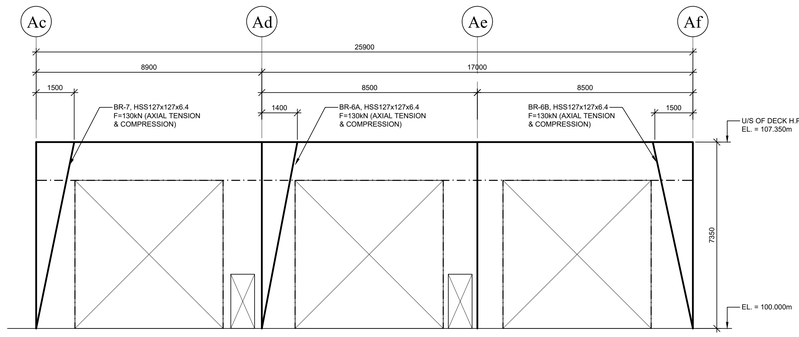
Sheet Title: Roof Framing Plan

No.	Description	Date
0	Issued for Addendum #2	2021-Nov-16

Date: November 16, 2021
Drn By: K.C.
Chk By: N.L. P. Eng.
Revision: 0
Project Number: 211120
Drawing Number: S1-105A



1 ELEVATION - GL 1b
15x15B 15x15C
1:100



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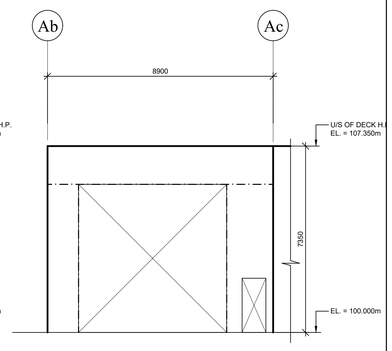

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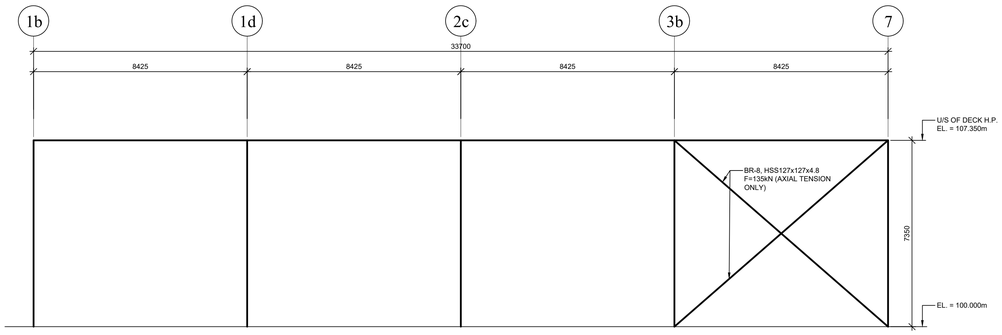
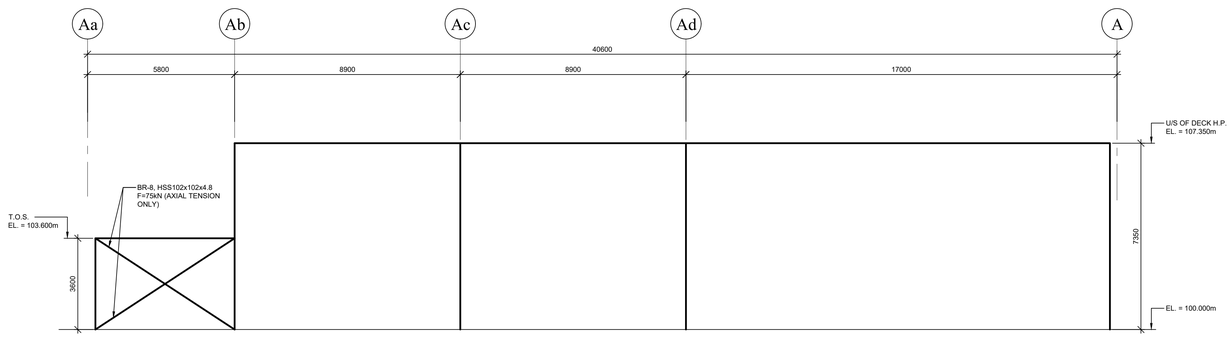
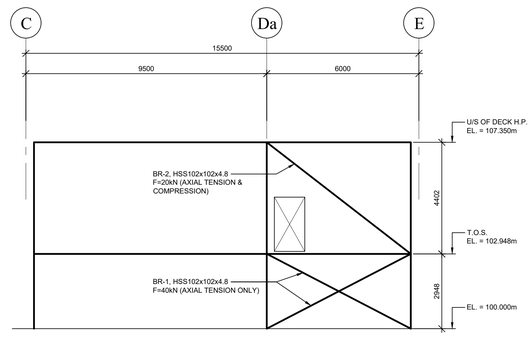
15x15B 15x15C
1:100



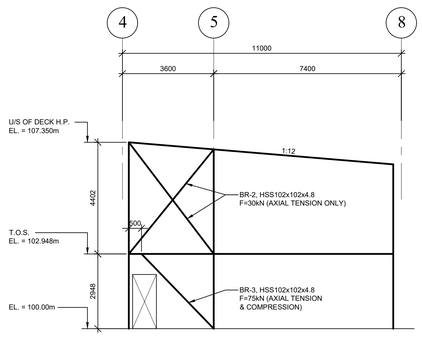
4 ELEVATION - GL Ac & Af
15x15B 15x15A
1:100



6 ELEVATION - GL 1d
15x15B 15x15C
1:100



7 ELEVATION - GL 4
15x15C 15x15A
1:100



8 ELEVATION - GL C
15x15B 15x15C
1:100

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PROFESSIONAL ENGINEER
Nathan T. Lynch
344
PROVINCE OF PRINCE EDWARD ISLAND

Client
PEI Department of Transportation & Infrastructure

Project Title
KCHD Bridgetown Upgrades
Depot Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title
Framing Elevation

No.	Description	Date
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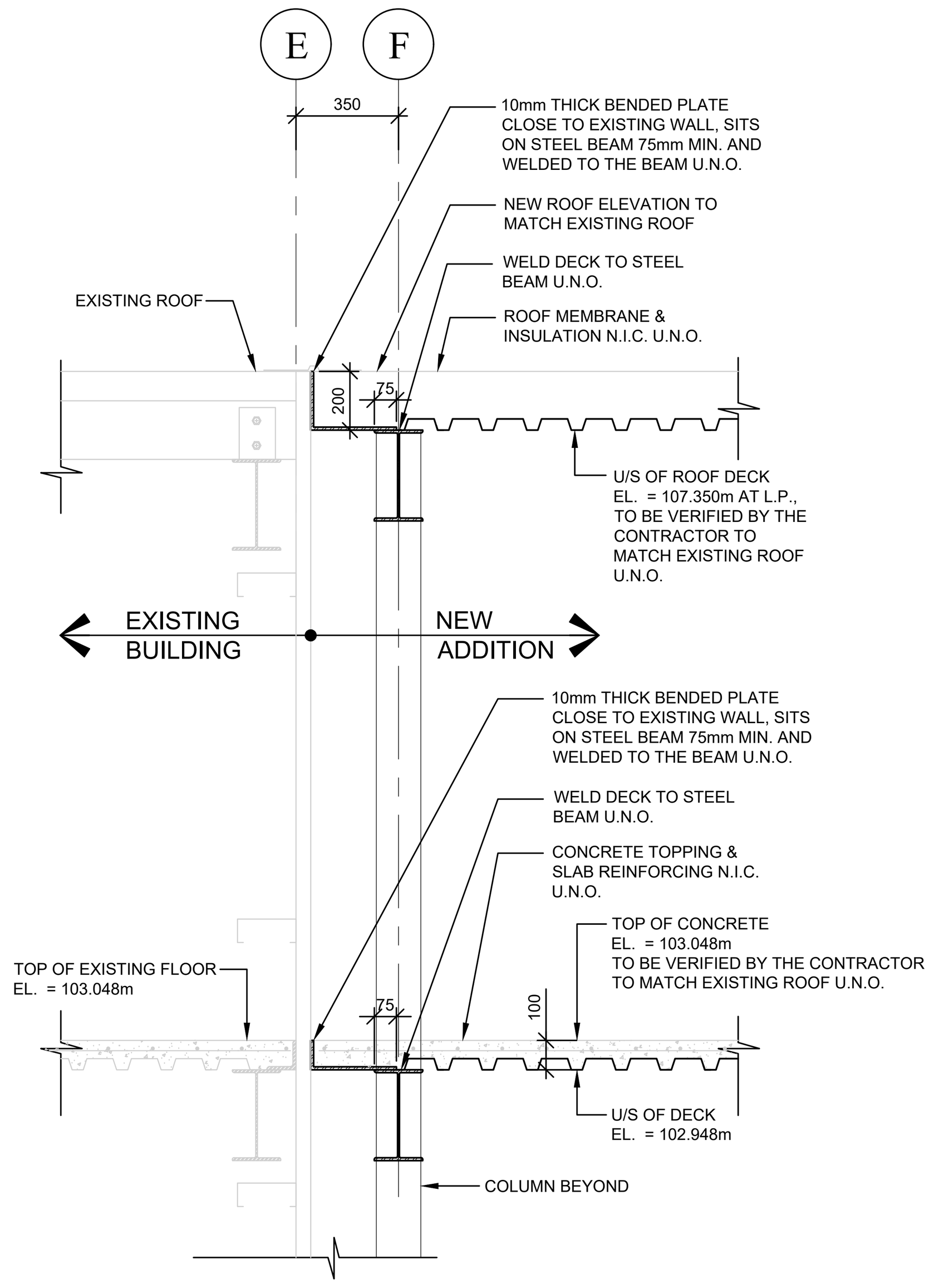
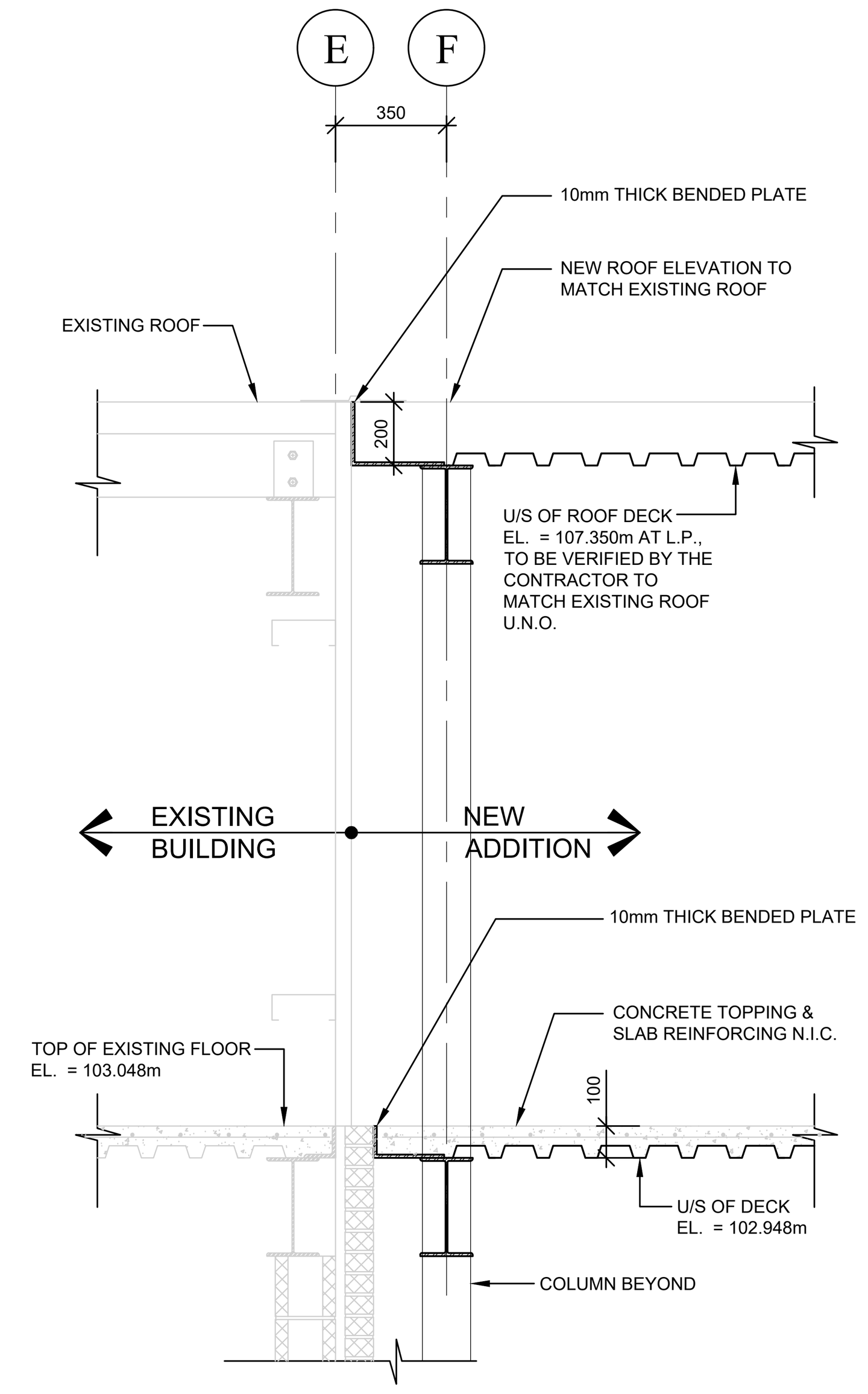


1 SECTION - EDGE OF STEEL AT EXISTING 1:20



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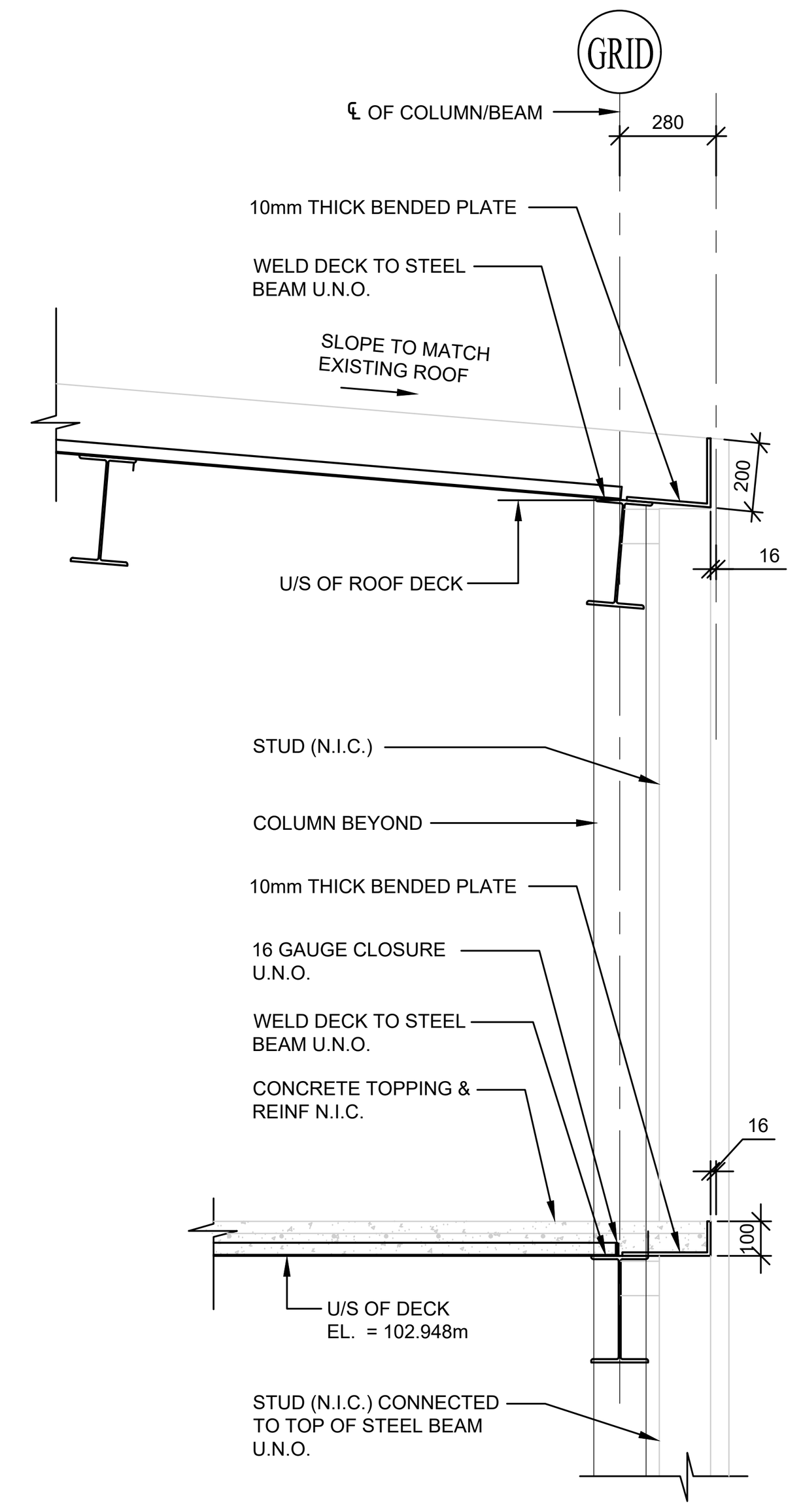

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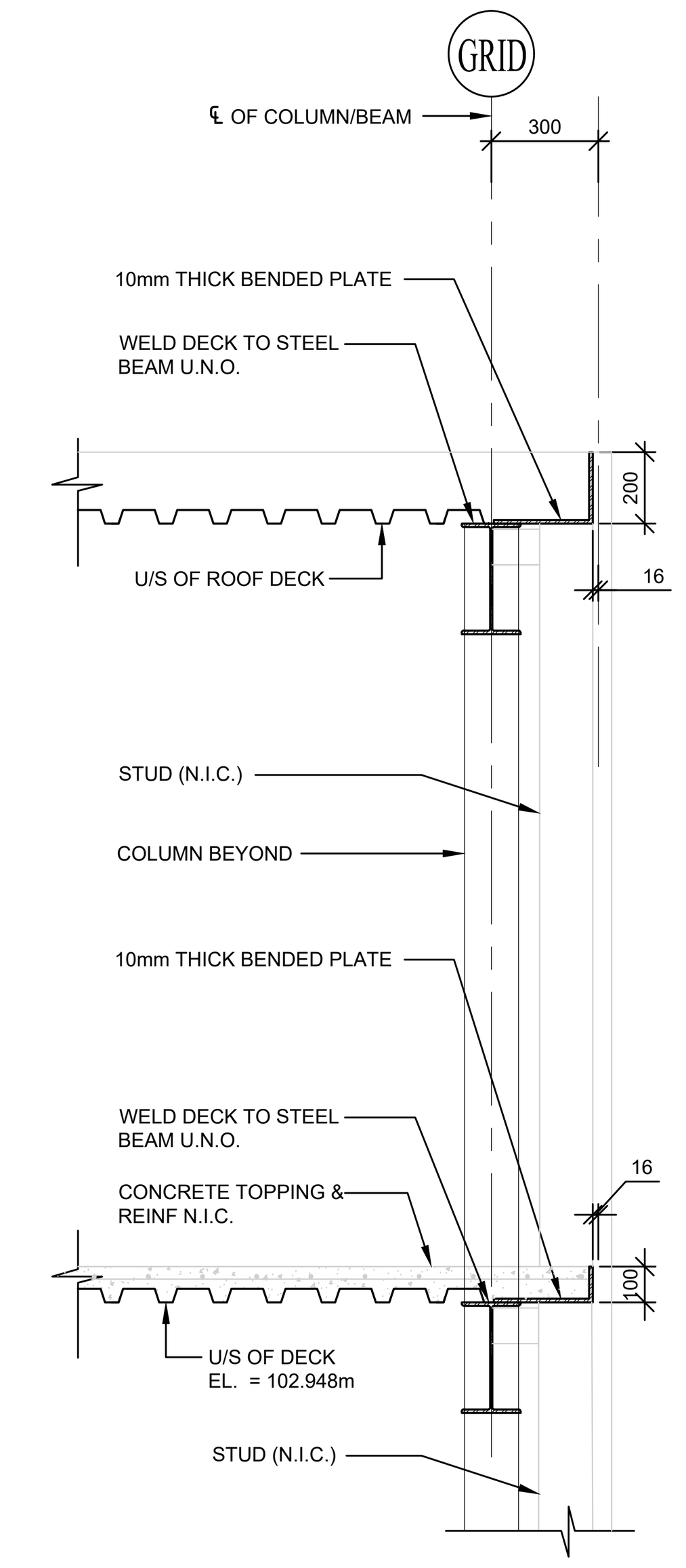

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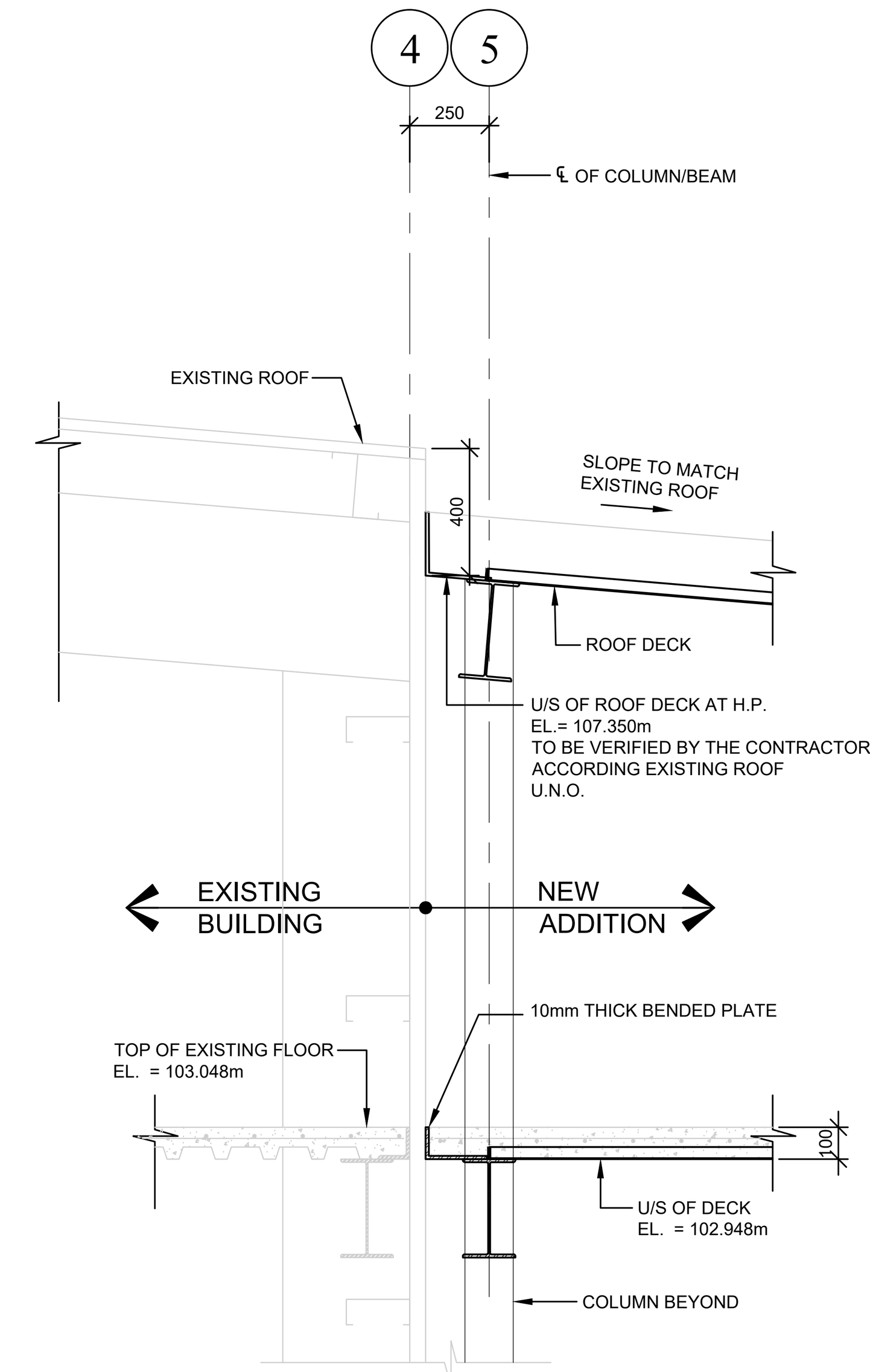
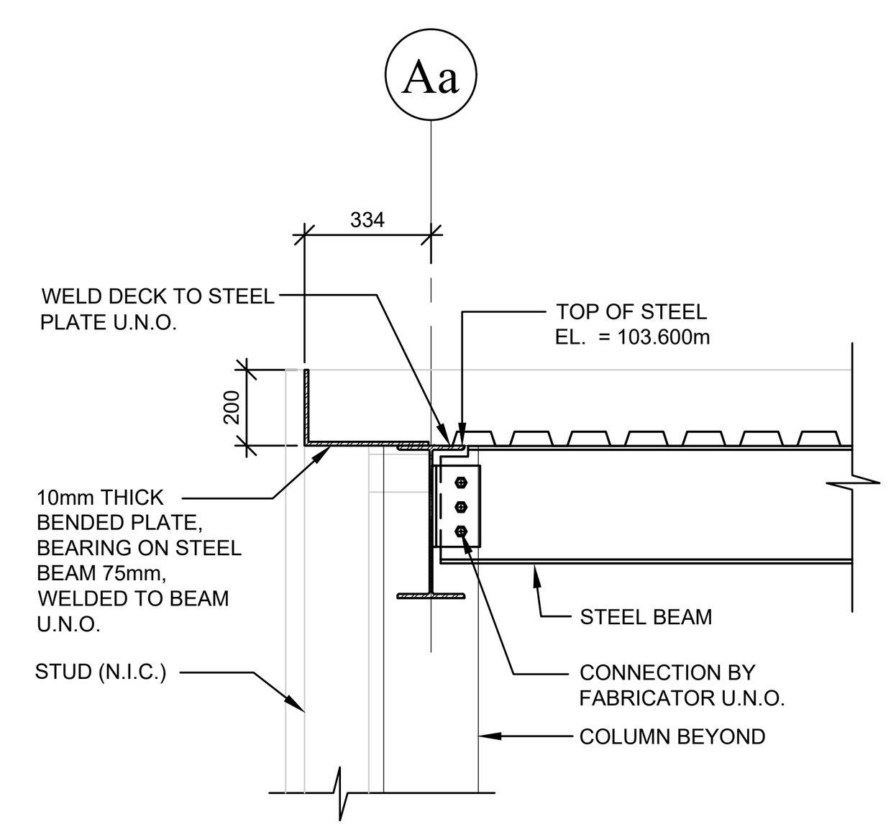
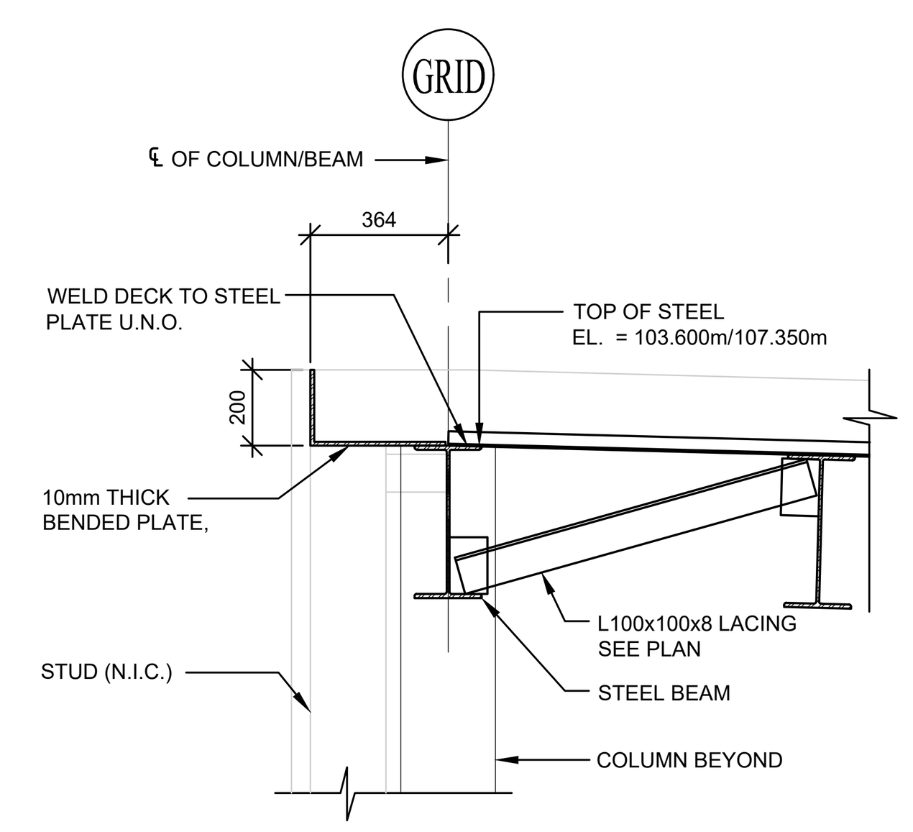


5 SECTION - EDGE OF STEEL AT EXISTING 1:20



6 SECTION - EDGE OF STEEL 1:20



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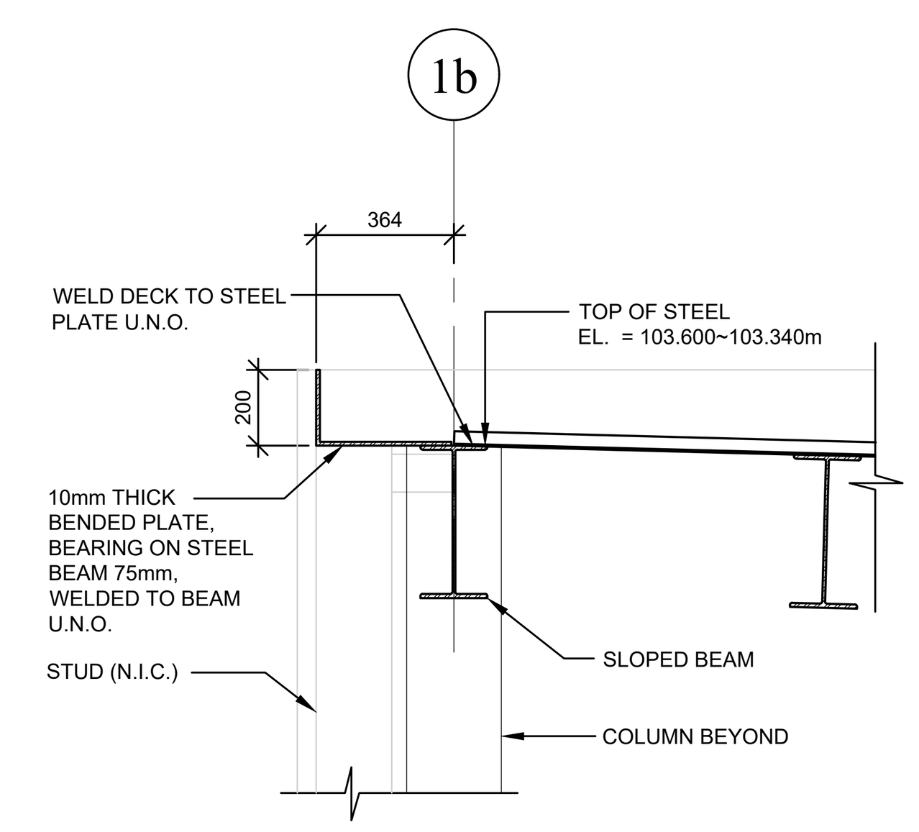
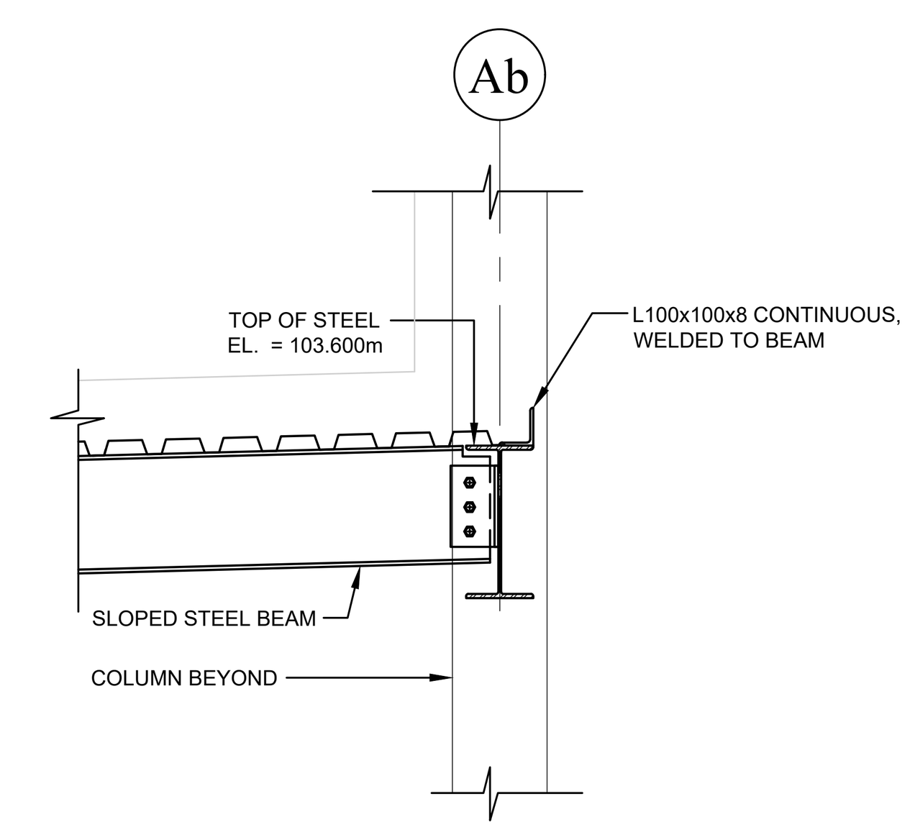
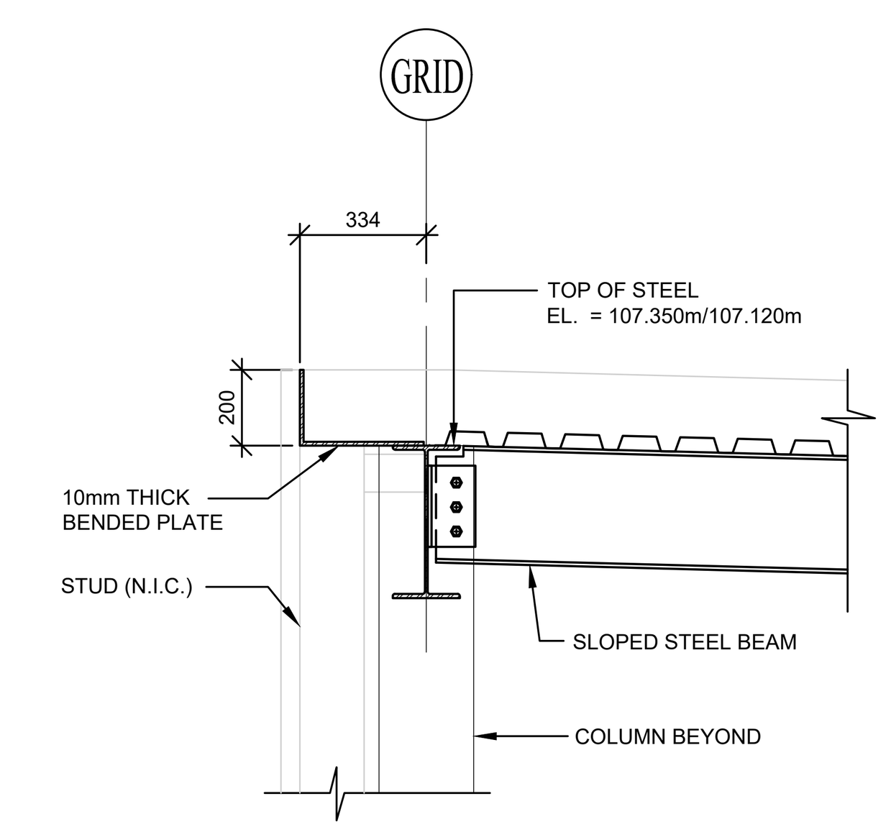


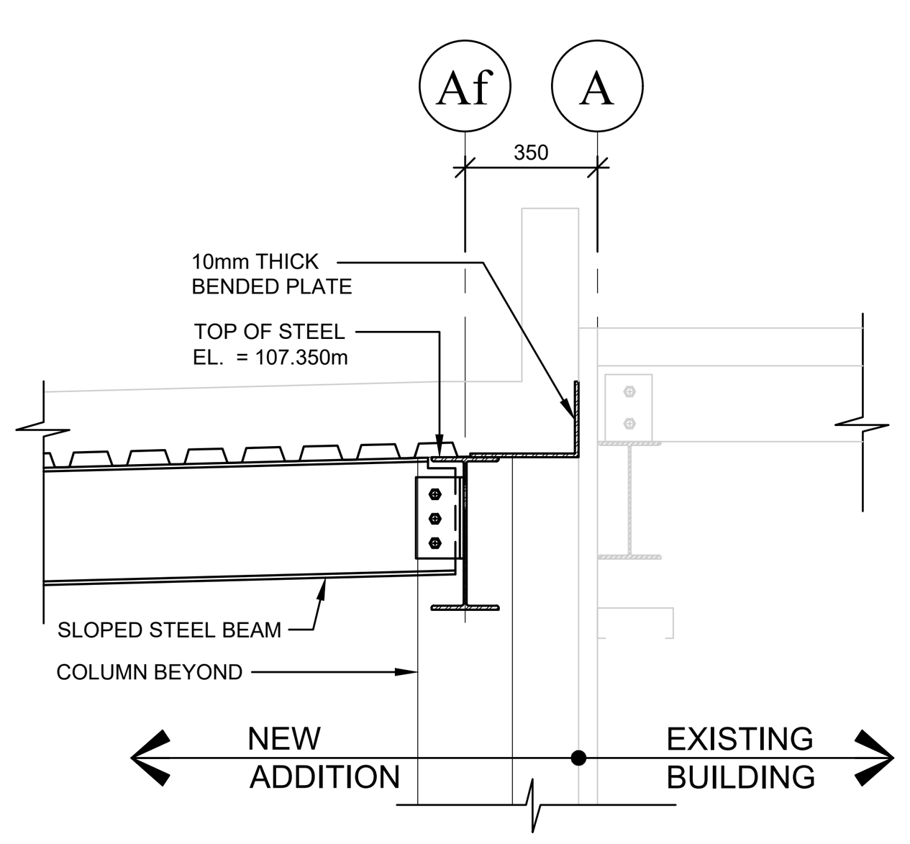
8 SECTION - EDGE OF STEEL 1:20



9 SECTION - EDGE OF STEEL 1:20



10 SECTION - EDGE OF STEEL 1:20



11 SECTION - EDGE OF STEEL AT EXISTING 1:20

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Client: PEI Department of Transportation & Infrastructure

Project Title: KCHD Bridgetown Upgrades
Depot Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title: Sections & Details

No.	Description	Date
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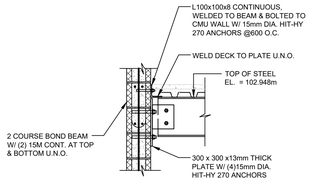
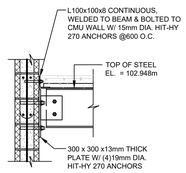


1 S1-108A / S1-108A 1:20 SECTION - STEEL BEAM AT CMU WALL



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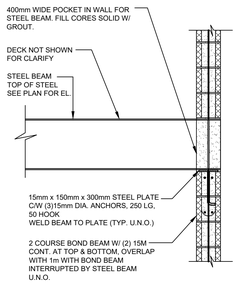
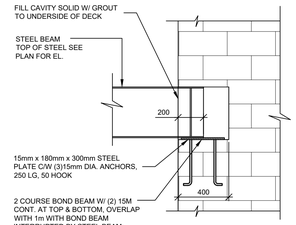
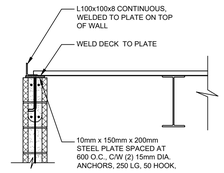


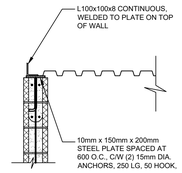
3 3 S1-108A / S1-108A 1:20 SECTION - STEEL BEAM AT CMU WALL



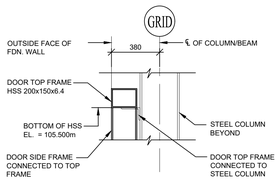
4 4 S1-108A / S1-108A 1:20 SECTION - STEEL BEAM AT CMU WALL



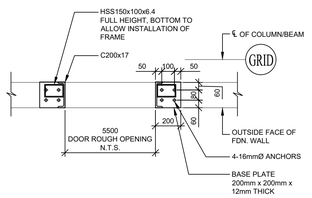
5 S1-108A / S1-108A 1:20 DETAIL - STEEL DECK AT CMU WALL



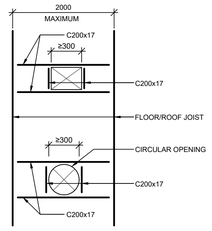
6 S1-108A / S1-108A 1:20 DETAIL - STEEL DECK AT CMU WALL



7 S1-108A / S1-108A 1:20 SECTION - DOOR FRAME



8 S1-108A / S1-108A 1:20 SECTION - DOOR FRAME



9 S1-108A / S1-108A 1:20 DETAIL - OPENING FRAME

STRUCTURAL STEEL

1. ALL BEAMS, CHANNELS, COLUMNS, ANGLES SHALL CONFORM TO CSA-S16 & CSA-G40.20/G40.21 WITH A YIELD STRENGTH OF 350 MPa.
2. ALL STEEL SECTIONS SHALL BE CUT FROM FULL LENGTH STOCK OR ORDERED CUT TO LENGTH. UNSPECIFIED SPLICES WILL NOT BE TOLERATED AND SHALL BE CAUSE FOR REJECTION. ALL SUBSTITUTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
3. THE STEEL ERECTOR SHALL BE RESPONSIBLE FOR SUPPLYING, ERECTING AND REMOVING ALL TEMPORARY WIND BRACING, AS REQUIRED.
4. ALL ROOF AND FLOOR OPENINGS SHALL BE COORDINATED WITH ARCH. & MECH. DRAWINGS EVEN THOUGH REQUIRED OPENINGS ARE NOT SHOWN ON STRUCTURAL DRAWINGS.
5. STEEL ERECTIONS DRAWINGS, JOISTS DESIGN AND SHOP DRAWINGS AND DECK DRAWINGS SHALL BE SUBMITTED FOR APPROVAL SHOWING THE ADDITIONAL DETAILS, WELDINGS, ETC., AND SHALL BE STAMPED BY A REGISTERED PROFESSIONAL ENGINEER.
6. PROVIDE (2) 10mm THICK STIFFNER PLATES WHERE BEAM IS CONTINUOUS OVER COLUMN AND WHERE COLUMN IS SUPPORTED ON BEAM (BOTH SIDES).
7. SNOW LOAD ON ROOF ADJACENT TO HIGHER ROOF OR OBSTRUCTION SHALL BE INCREASED FOR DRIFT AND BUILD UP LOADS AS PER THE LATEST NBCC REVISION.
8. FORCES INDICATED FOR BRACING AND RIGID FRAME ARE FACTORED.
9. MOMENT CONNECTION SHALL HAVE 85% RESISTANT MOMENT CAPACITY OF COLUMN.

STEEL DECK NOTES

1. STEEL DECKS HEIGHT IS 38mm UNLESS NOTED OTHERWISE.
2. 38mm HIGH STEEL DECK: 0.76mm THICK MINIMUM AND AS REQUIRED FOR ROOF AND FLOOR LOADINGS.
3. ALL WELDS THROUGH WASHERS.
4. ALL STEEL DECKS TO BE CONTINUOUS OVER 3 SPANS (U.N.O.).
5. WELD DECK TO SUPPORTING STEEL WITH 20mm DIA. PUDDLE WELDS SPACED AS FOLLOWS:
   1) TRANSVERSE WELDS EVERY SECOND FLUTE AT ALL SUPPORTS.
   2) LONGITUDINAL WELDS SPACED AT 900mm CTS.
   3) SIDE LAPS BUTTON PUNCHED AT 300mm CTS.
6. OPENING WITH ANY SIZE NO LESS THAN 300mm SHALL BE REINFORCED PER 9/S1-108B/S1-108B.
7. REINFORCE ALL STEEL DECK CONCRETE TOPPING WITH 152x152xMW18.7xMW18.7 WWM.

MASONRY NOTES:

1. PLAIN AND REINFORCED MASONRY SHALL CONFORM TO CSA S304, "DESIGN OF MASONRY STRUCTURES."
2. ALL MASONRY SHALL CONFORM TO CAN/CSA-A165 SERIES, MORTAR & GROUT SHALL CONFORM TO CAN/CSA A179.
3. MINIMUM STRENGTH REQUIREMENTS FOR HOLLOW BLOCKS:
   a. BLOCKS (8") 200mm & OVER NOMINAL WIDTH 7.5 MPa (GROSS AREA) & 15.0 MPa (NET AREA);
   b. BLOCKS LESS THAN (8") 200mm NOMINAL WIDTH 5 MPa (GROSS AREA).
   c. GROUT 20 MPa.
4. METAL TIES & WIRE REINFORCEMENT TO CAN/CSA-S304.
4. PROVIDE TEMPORARY SUPPORT TO BLOCK WALLS BEFORE LATERAL SUPPORT ELEMENTS ARE COMPLETED.
5. VERTICAL REINFORCING & GROUTING SCHEDULE:
   a. (2)-15M BARS AT ALL CORNERS, INTERSECTIONS, OPENINGS AND WALL END CONDITIONS UNLESS NOTED OTHERWISE. 10M BARS SPACED AT 24" (600mm) C/C FOR LOAD-BEARING MASONRY WALLS UNLESS NOTED OTHERWISE. 15M BARS SPACED AT 48" (1200mm) C/C FOR NON-LOAD-BEARING MASONRY WALLS UNLESS NOTED OTHERWISE.,
   b. VERTICAL REINFORCING SHALL BE CONTINUOUS FROM FOUNDATION TO TOP OF WALL, MINIMUM LAP FOR VERTICAL REINFORCING TO BE (16") 400mm, MINIMUM EMBEDMENT INTO FOUNDATION (12") 300mm.
   c. VERTICAL REINFORCING SHALL BE PLACED IN THE CENTER OF THE WALL. BARS SHALL BE PLACED BEFORE GROUTING & HELD IN PLACE WITH #9 GAUGE WIRE CAGES. ALL GROUTING AS PER CAN/CSA-A371.
   d. LOAD-BEARING WALL SHALL BE FULLY GROUTED.
6. HORIZONTAL REINFORCING IN MASONRY WALLS:
   a. USE TRUSS TYPE REINFORCEMENT TO ASTM A1064/A1064M, CSA-A370 SIZED TO SUIT WALL THICKNESS.
   b. FINISH, HOT-DIPPED GALVANIZED TO ASTM A153/A153M CLASS B2, 550g/SQ. m.
   c. REINFORCEMENT WITH (2) TWO 4.76mm (0.144") SIDE RODS AND 4.76mm (0.144") CROSS RODS. INSTALL TRUSS TYPE REINFORCEMENT AT VERTICAL INTERVALS OF 400mm (16") ON CENTRE.`
7. BOND BEAMS:
   a. PROVIDE & REINFORCE BOND BEAMS AT TOP OF WALLS AND WHERE THE WALL IS CONNECTED TO ROOF AND FLOOR ASSEMBLIES.
      BOND BEAM 400mm DEEP WITH (2)-15M TOP AND BOTTOM FOR LOAD-BEARING WALL (U.N.O.).
      BOND BEAM 200mm DEEP WITH (2)-15M FOR NON-LOAD-BEARING WALL (U.N.O).
   b. PROVIDE & REINFORCE LINTELS AT ALL OPENINGS. LINTELS TO EXTEND MINIMUM ONE FULL CORE BEYOND OPENING EACH SIDE.
      - LINTELS FOR OPENINGS SPANNING UP TO 1800mm : 200mm DEEP WITH (2)-15M BOTTOM (U.N.O.)
      - LINTELS FOR OPENINGS SPANNING MORE THAN 1800mm & NOT MORE THAN 3000mm: 400mm DEEP WITH (2)-20M TOP AND BOTTOM (U.N.O.).
8. WALLS EXTEND TO UNDERSIDE OF DECK AND GROUT SOLID.

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PROFESSIONAL ENGINEER — PROVINCE OF PRINCE EDWARD ISLAND — 16 Nov 2021

Client: PEI Department of Transportation & Infrastructure

Project Title: KCHD Bridgetown Upgrades
Depot Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title: Sections & Details & Notes

No.	Description	Date
0	Issued for Addendum #2	2021-Nov-16

Date: November 16, 2021
Dm By: K.C.
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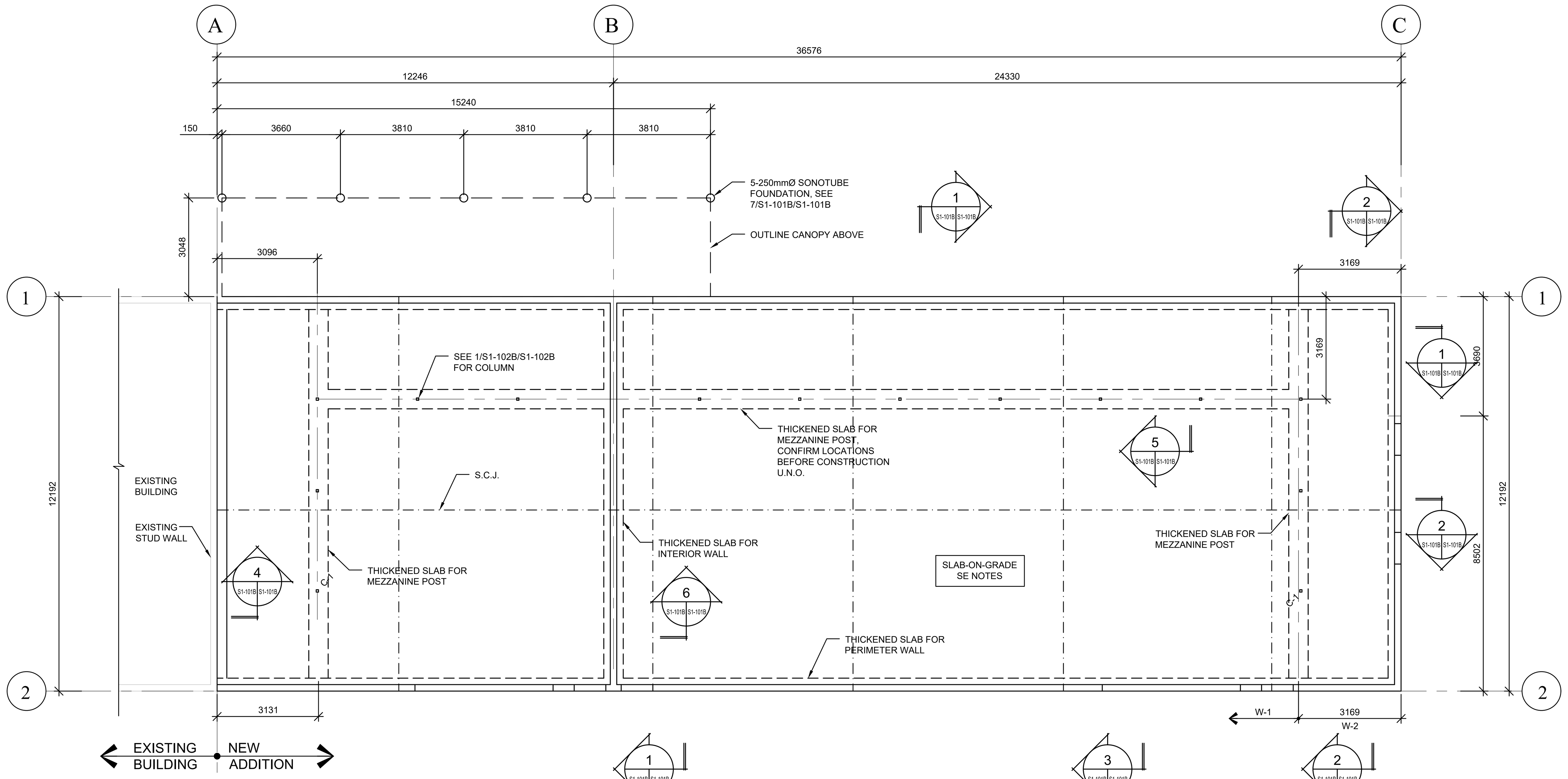
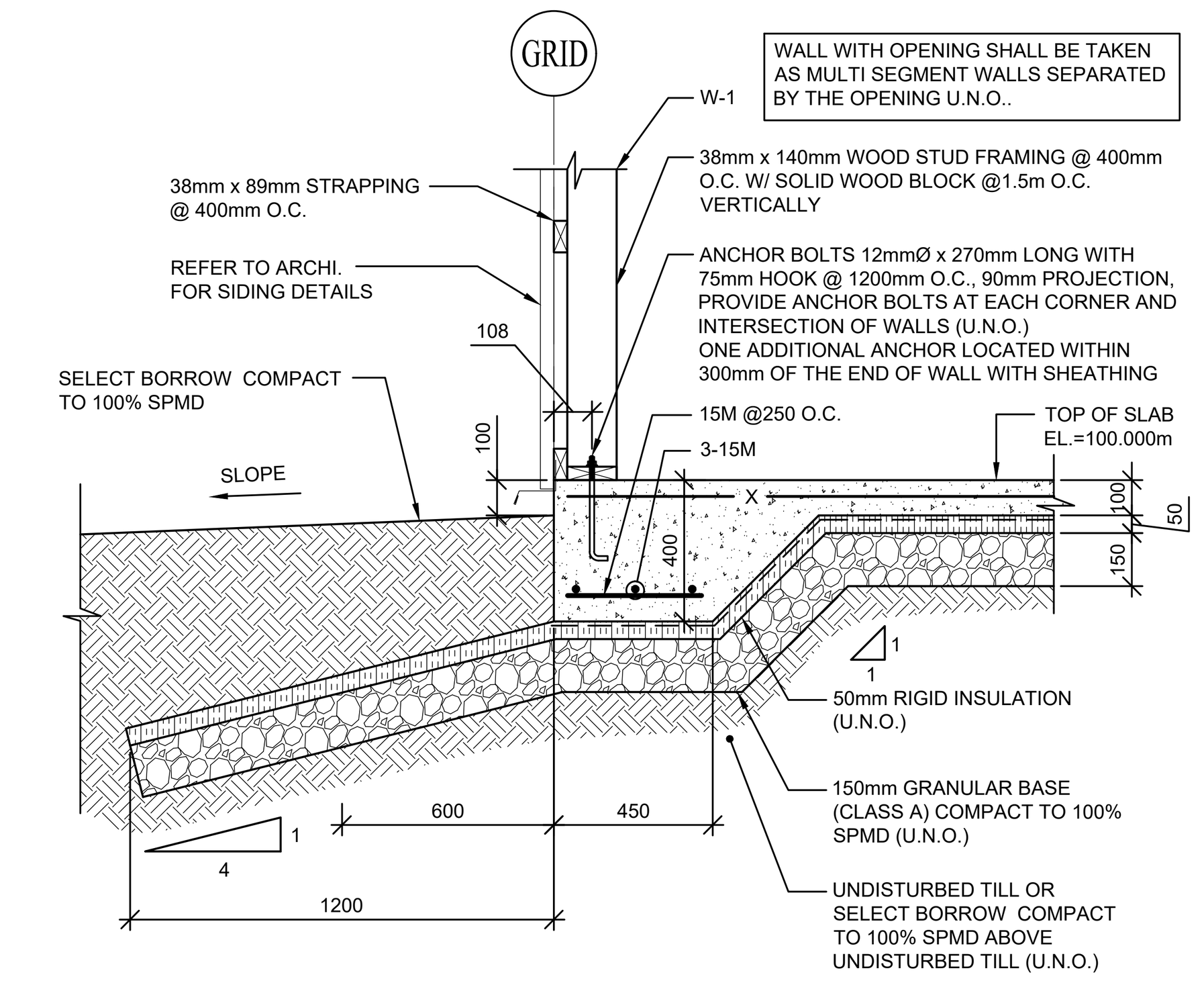
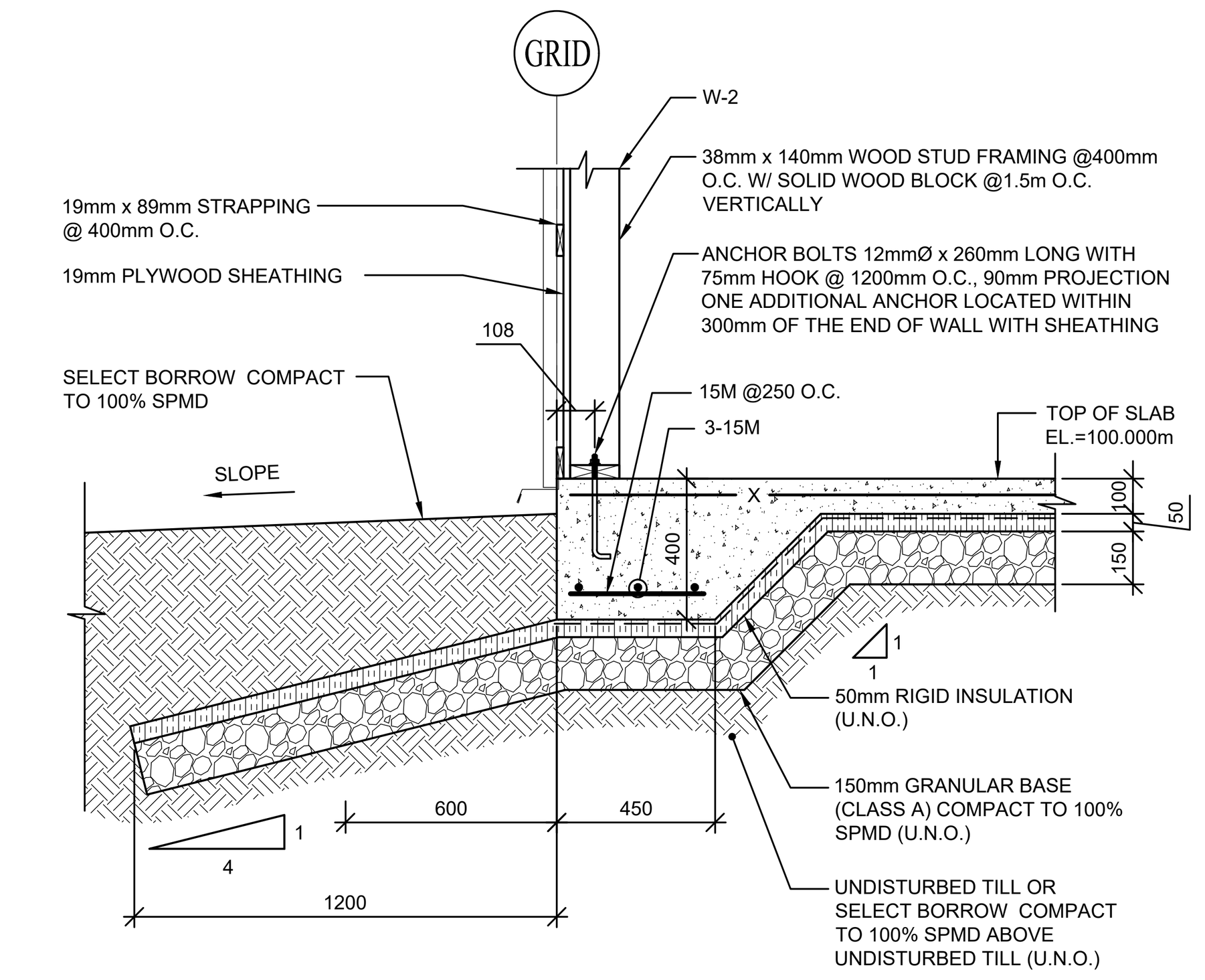
Drawing Number: S1-108A



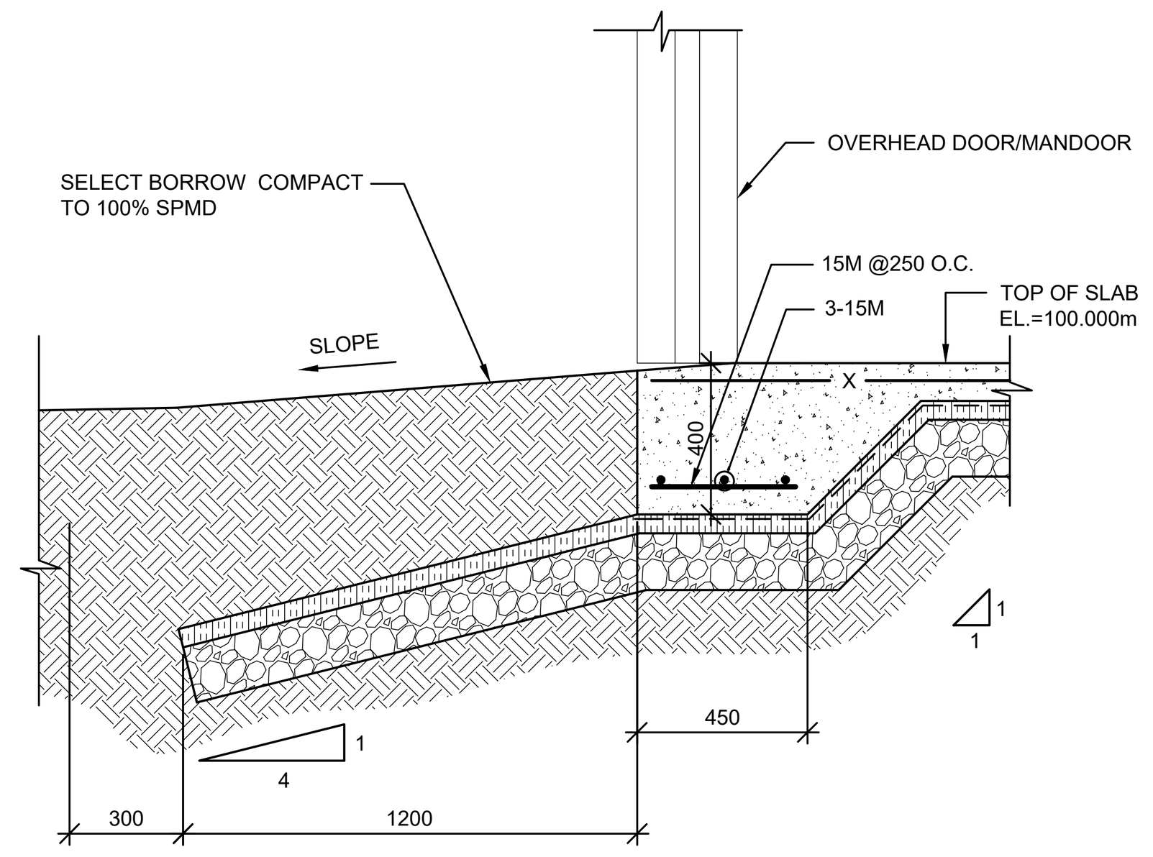
1 PLAN - FOUNDATION
1:100



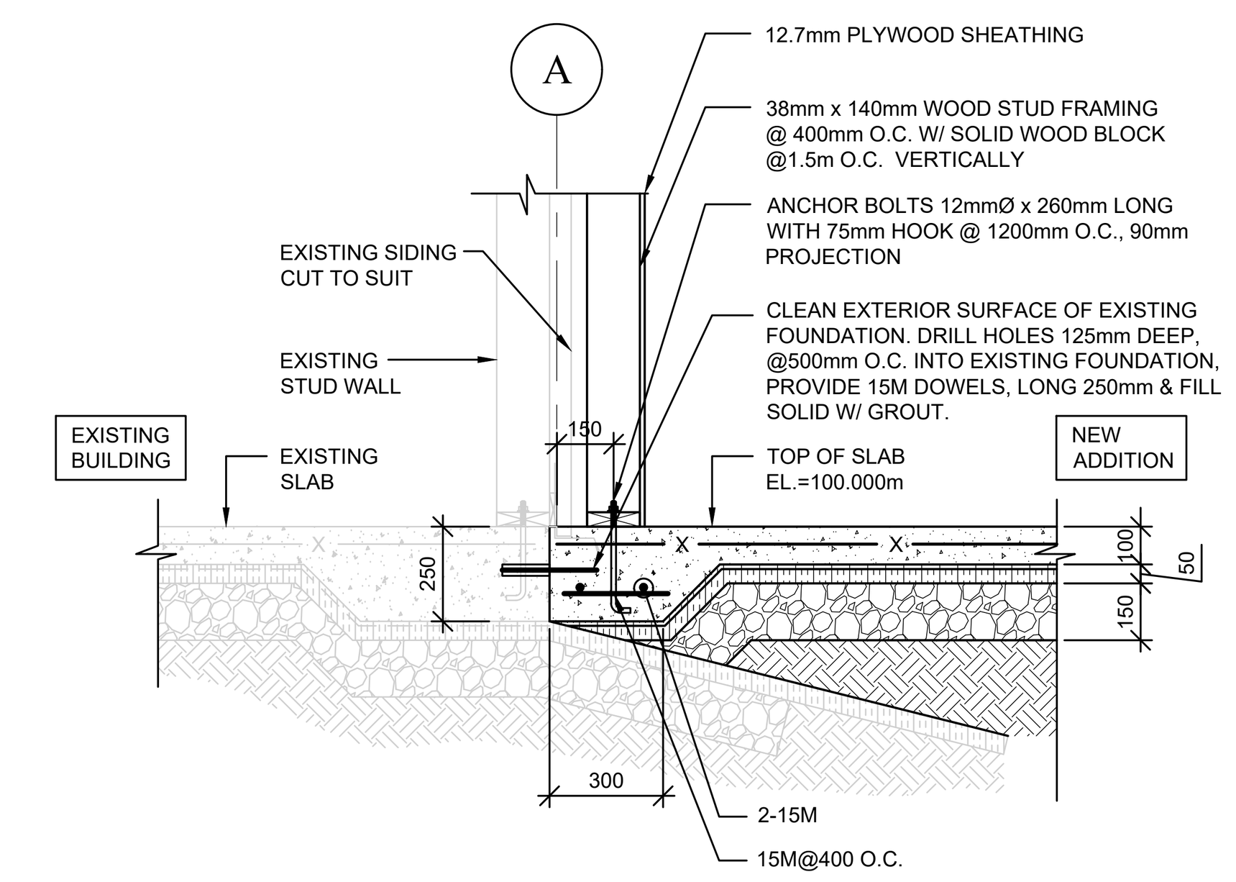
1 SECTION - PERIMETER THICKENED SLAB
1:20



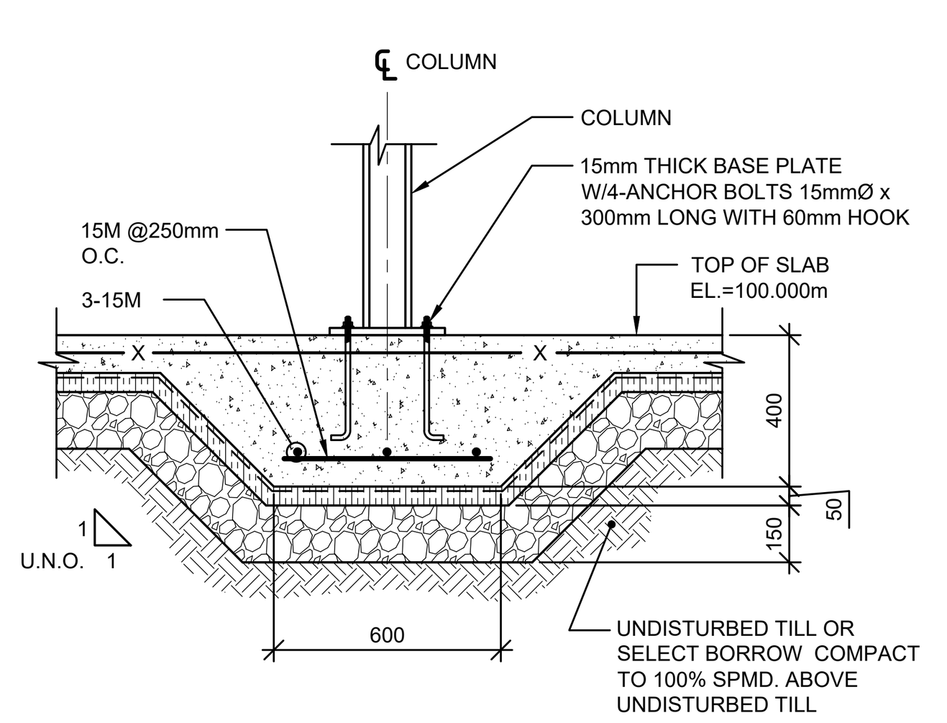
2 SECTION - PERIMETER THICKENED SLAB AT MECHANICAL ROOM
1:20



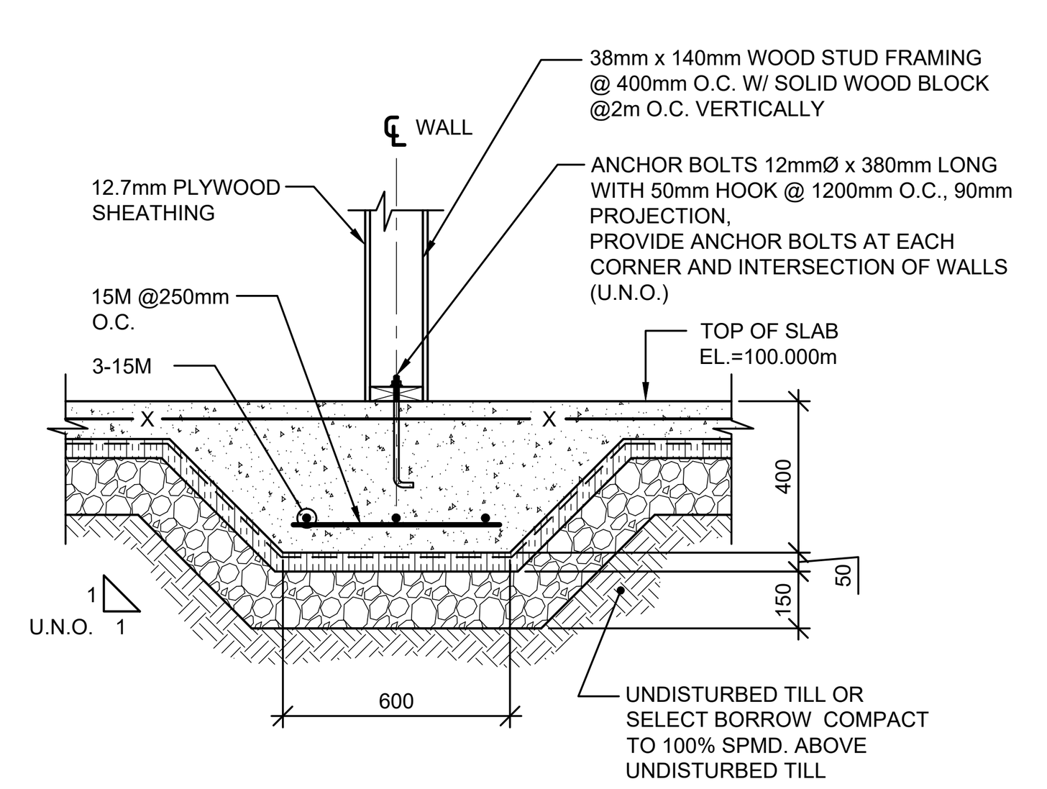
3 SECTION - PERIMETER THICKENED SLAB AT OVERHEAD DOOR
1:20



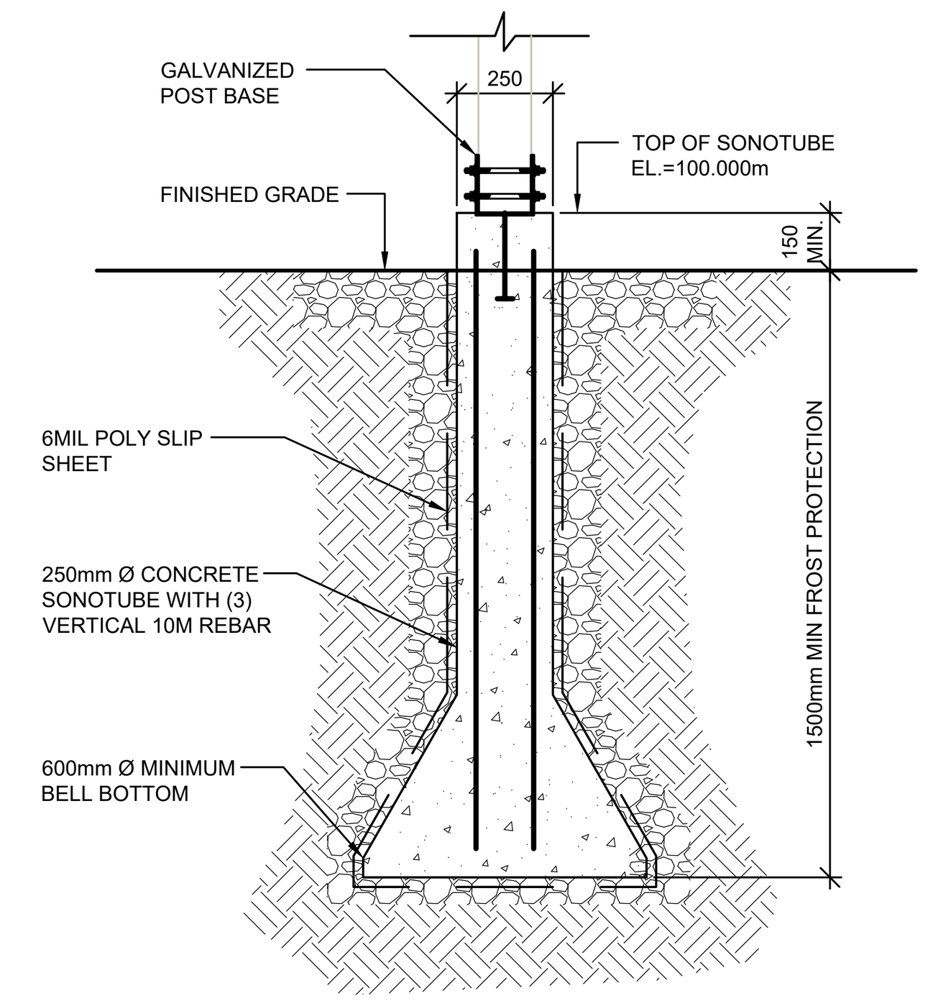
4 SECTION - NEW SLAB AT EXISTING
1:20



5 SECTION - THICKENED SLAB UNDER COLUMN
1:20



6 SECTION - THICKENED SLAB UNDER INTERIOR LOAD-BEARING STUD WALL
1:20



7 DETAIL - SONOTUBE FOUNDATION & CANOPY POST BASE
1:20

GENERAL NOTES:

1. THE WORK SHALL BE IN ACCORDANCE WITH NATIONAL BUILDING CODE OF CANADA (NBCC), 2015 REVISION, TO THE SATISFACTION OF THE ENGINEER UNLESS NOTED OTHERWISE ON THE DRAWING OR IN THE SPECIFICATIONS.
2. COMPLY WITH ALL LOCAL, MUNICIPAL, AND PROVINCIAL BY-LAWS AND REGULATIONS.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH PEI OCCUPATIONAL HEALTH & SAFETY ACT, WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM AND APPLICABLE LABOR CODES.
4. CONTRACTOR MUST VISIT THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS, VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES AND SERVICES WITHIN THE CONTRACT LIMIT.
5. CONTRACTOR SHALL COORDINATE WORK AND COOPERATE WITH OWNER AND AGENCIES HAVING JURISDICTION.
6. REPORT ANY DOUBTFUL CONDITIONS REQUIRING DECISIONS AND SECURE DIRECTIONS FROM THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
7. CONTRACTOR TO EXERCISE EXTREME CAUTION. DESIGN AND PROVIDE ADEQUATE SUPPORT AND CONNECTIONS TO EXISTING STRUCTURES, UTILITIES AND SERVICES. MOVE, ADJUST AND RECONNECT ALL VISIBLE AND CONCEALED ITEMS AFFECTED BY THE SCOPE OF WORK.
8. VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
9. ALL DIMENSIONS AND ELEVATIONS ARE IN METRIC UNITS UNLESS NOTED OTHERWISE.
10. THE CONTRACTOR TO INCLUDE IN THE CONTRACT PRICE COSTS ASSOCIATED WITH OVER EXCAVATION, BACKFILLING AND REINSTATEMENT.
11. PROPERLY DISPOSE AND REMOVE OFFSITE ALL DEBRIS AND MATERIALS TO BE REMOVED.
12. N.I.C. INDICATES NOT IN THIS CONTRACT.

FOUNDATION NOTES:

1. FOOTINGS SHALL NOT BE PLACED ON SOIL SOFTENED BY WATER.
2. ALL FOOTINGS SHALL BE PLACED ON SOIL HAVING A MINIMUM BEARING CAPACITY OF 150 kN/SQ.m.
3. THICKENED SLABS ARE PROVIDED AS FOOTING.
4. ALL FOOTINGS SHALL BE REVIEWED BY THE ENGINEER BEFORE CONCRETE IS PLACED. NOTIFY 24 HRS BEFORE PLACING CONCRETE.
5. VERIFY ALL CONCRETE FORMWORK LINES ARE LEVEL, PLUMB, SQUARE AND TRUE.
6. CONCRETE FORMWORK PLYWOOD SHEETS TO THE REQUIREMENTS OF CSA 0121. USE NEW MATERIAL, CLEAN, SOUND, FREE FROM DEFECTS DETRIMENTAL TO THE QUALITY OF FINISHED CONCRETE SURFACES. ARRANGE PLYWOOD SHEETS TO A UNIFORM JOINT PATTERN. CONSTRUCT FORMWORK TO RESIST FLUID PRESSURE FROM WET CONCRETE AND ALL OTHER CONSTRUCTION LOADINGS WITHOUT BULGING, MOVEMENT OR DISTORTION. REUSE OF FORMWORK SUBJECT TO THE REQUIREMENTS OF CSA A23.1.
7. OPENINGS IN FOUNDATION & BUILDING WALLS SHALL BE PROVIDED AS SHOWN ON ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS. ANY ADDITIONAL OPENINGS MUST BE APPROVED BY ENGINEER. OPENINGS SHALL BE SLEEVED.
8. ALL WALL AND SLAB OPENINGS AND ENDS SHALL HAVE MINIMUM (2)-15M ALL SIDES.
9. LOCATION OF CONSTRUCTION JOINTS TO BE APPROVED BY ENGINEER BEFORE CONCRETE IS PLACED.
10. ANCHOR RODS AND EMBEDDED STEEL ITEMS WILL BE INSTALLED BY THE FOUNDATION CONTRACTOR. SET ANCHOR RODS, INSERT PLATES, SLEEVES AND OTHER MISCELLANEOUS ITEMS EMBEDDED IN CONCRETE ACCURATELY, USING TEMPLATES, TO EXACT GRADE AND LOCATION SHOWN ON PROJECT DRAWINGS OR AS DIRECTED BY ENGINEER. SECURE TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. DO NOT CUT OR RELOCATE REINFORCING STEEL FOR PLACEMENT OF EMBEDDED PARTS. IF INSERTS CANNOT BE LOCATED AS SPECIFIED, OBTAIN APPROVAL OF ALL MODIFICATIONS FROM ENGINEER BEFORE PLACING.
11. ALL BASE AND BEARING PLATES TO BE GROUTED USING 50 MPa (7,200psi) NON-SHRINK GROUT. CURE NON-SHRINK GROUT AND PROTECT FROM FREEZING TEMPERATURES IN ACCORDANCE WITH CSA U.N.O.
12. THE FILL SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF THE FOUNDATION WALL. PROVIDE LATERAL SUPPORT TO WALLS PRIOR TO BACKFILLING.

CONCRETE NOTES:

1. ALL CONCRETE WORK AND MATERIAL SHALL BE CARRIED OUT IN ACCORDANCE WITH LATEST CSA A23.1 AND NBCC 2015.
2. MIX DESIGN: TYPE 10 PORTLAND CEMENT.
3. EXTERIOR SLABS:
   a. COMPRESSIVE STRENGTH (28D): 35MPa (5000psi)
   b. CLASS OF EXPOSURE: C-2
   c. NOMINAL AGGREGATE SIZE: 20mm (3/4")
   d. SLUMP: 80mm (3-1/4") ±20mm (3/4")
   e. AIR CONTENT: 5-8%
   f. WATER CEMENT RATIO: 0.40 MAX
4. CONCRETE MIX DESIGN SHALL BE SUBMITTED FOR REVIEW BY THE ENGINEER MINIMUM 48 HRS PRIOR TO CASTING.
5. USE OF CALCIUM CHLORIDE IS NOT PERMITTED.
6. NO CONCRETE SHALL BE POURED WITHOUT THE PRIOR KNOWLEDGE AND APPROVAL OF ENGINEER.
7. ALL CONCRETE SHALL BE TESTED, TESTING SHALL CONFORM TO CSA A23.2. RECORD TESTS FOR SLUMP, AIR CONTENT AND COMPRESSIVE STRENGTH.
8. ALL CONCRETE SHALL BE VIBRATED USING HIGH FREQUENCY VIBRATORS. VIBRATION PRACTICES TO BE IN ACCORDANCE WITH ACI 309R.
9. COLD WEATHER CONCRETE SHALL BE PLACED AND PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF CSA A23.1 AND TO THE REQUIREMENTS OF ACI-306R. PROVIDE HEATED ENCLOSURES AND/OR INSULATED TARPS AS REQUIRED TO MAINTAIN MINIMUM 10°C CONCRETE SURFACE TEMPERATURE FOR A PERIOD OF 5 DAYS FOLLOWING CONCRETE PLACEMENT. PROVIDE CONTROLLED COOL DOWN PERIOD TO PREVENT SURFACE CRACKING AT END OF PROTECTION PERIOD. ENSURE THAT NO CONCRETE IS PLACED ON OR AGAINST FROZEN SUBGRADE, FORMWORK, OR REINFORCING STEEL.
10. LEAVE FORMWORK IN PLACE FOR THE FOLLOWING MINIMUM PERIODS OF TIME AFTER PLACING CONCRETE:
   a. 72 HR. FOR WALLS
   b. 72 HR. FOR FOOTINGS
11. APPLY CURING COMPOUND TO WALLS AND PILASTERS IF EXPOSED TO DRYING CONDITIONS PRIOR TO COMPLETION OF FULL 7 DAY MOIST CURING PERIOD. USE LIQUID MEMBRANE CONCRETE CURING COMPOUND.

REINFORCING STEEL NOTES:

1. ALL REINFORCING STEEL SHALL BE NEW BILLET TO CSA G30.18, WWM REINFORCING TO CSA G30.5.
2. MINIMUM REINFORCING STEEL YIELD STRENGTH SHALL BE 400 MPa.
3. REINFORCING STEEL SHALL BE DETAILED, CUT, BENT, FABRICATED AND PLACED IN ACCORDANCE WITH REINFORCING MANUAL OF STANDARD PRACTICE (REINFORCING STEEL INSTITUTE OF CANADA); CAN3-A23.3 AND CSA-A23.1.
4. THE GENERAL CONTRACTOR SHALL INSPECT ALL THE REINFORCING STEEL BEFORE PLACEMENT OF THE CONCRETE.
5. THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS PRIOR TO THE PLACEMENT OF THE CONCRETE.
6. THE POSITION OF ALL REINFORCING STEEL SHALL BE MAINTAINED DURING THE POURING OPERATION BY DIRECT SUPERVISION OF THE REINFORCING STEEL CONTRACTOR.
7. SUBMIT SHOP DRAWINGS STAMPED BY AN ENGINEER LICENSED TO PRACTICE IN PEI FOR REVIEW PRIOR TO FABRICATING REINFORCING STEEL. CLEARLY INDICATE BAR SIZES, SPACING, LOCATION, QUANTITY, CHAIRS, SPACERS, ETC WITH IDENTIFYING CODE MARKS TO PERMIT PLACEMENT.
8. ALL FOOTING REINFORCING SHALL CONTINUE THROUGH COLUMN FOOTINGS AND SHALL CONTINUE TO THE ENDS OF THE FOOTINGS WHERE FOOTINGS CHANGE DIRECTION OR STOP.
9. ALL WALL REINFORCING SHALL CONTINUE THROUGH PIER/COLUMN REINFORCING.
10. CONCRETE COVER (UNLESS NOTED OTHERWISE):
   a. POURED AGAINST THE GROUND: 75mm (3")
   b. FORMED SURFACE AGAINST GROUND: 50mm (2")
   c. FORMED SURFACE EXPOSED TO WEATHER: 50mm (2")
   d. FORMED SURFACE PROTECTED:
   - BEAMS: 40mm (1-1/2")
   - COLUMNS: 40mm (1-1/2")
   - WALLS: 25mm (1")
11. USE SPACERS, CHAIRS, TEMPLATES AND DIRECT SUPERVISION OF THE REINFORCING STEEL CONTRACTOR TO ACCURATELY LOCATE & SUPPORT REINFORCING STEEL & SECURE IN POSITION TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT.

MISCELLANEOUS

1. THE WORK SHALL BE IN ACCORDANCE WITH NATIONAL BUILDING CODE OF CANADA (2015) TO THE SATISFACTION OF THE ENGINEER UNLESS NOTES OTHERWISE ON THE DRAWING OR IN THE SPECIFICATIONS.
2. COMPLY WITH ALL LOCAL, MUNICIPAL, AND PROVINCIAL BY-LAWS AND REGULATIONS.
3. VERIFY ALL DIMENSIONS ON THE JOB AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
4. REPORT ANY DOUBTFUL CONDITIONS REQUIRING DECISIONS AND SECURE DIRECTIONS FROM THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
5. THE GENERAL CONTRACTOR SHALL COORDINATE THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS WITH THE FOUNDATION DRAWINGS.

ABBREVIATION

AB	= ANCHOR BOLTS GROUP
ARCH.	= ARCHITECTURAL
BLDG.	= BUILDING
BOTT.	= BOTTOM
BTWN.	= BETWEEN
C.C.	= CENTER TO CENTER
CMU	= CONCRETE MASONRY UNIT
CONC.	= CONCRETE
CONT.	= CONTINUOUS
CR.	= CENTER
C/W	= COMPLETED WITH
DIA.	= DIAMETER
DWGS	= DRAWINGS
E.F.	= EACH FACE
EL.	= ELEVATION
ELEC.	= ELECTRICAL
E.W.	= EACH WAY
EQ	= EQUAL
FDN.	= FOUNDATION
FTG.	= FOOTING
GALV.	= GALVANIZED
HORI.	= HORIZONTAL
H.P.	= HIGH POINT
LG	= LONG
L.L.H.	= LONG LEG HORIZONTAL
L.L.V.	= LONG LEG VERTICAL
L.P.	= LOW POINT
MAX.	= MAXIMUM
M.C.	= MOMENT CONNECTION
MECH.	= MECHANICAL
MIN.	= MINIMUM
N.I.C.	= NOT IN CONTRACT
O.C.	= ON CENTER
OWSJ	= OPEN WEB STEEL JOIST
QTY.	= QUANTITY
REIN.	= REINFORCING
R/W	= REINFORCED WITH
S.C.J.	= SAW CUT JOINT
SPMD	= STANDARD PROCTOR MAXIMUM DRY DENSITY
T.J.	= TIE JOIST
T.O.S.	= TOP OF STEEL
TYP.	= TYPICAL
U.N.O.	= UNLESS NOTED OTHERWISE
U/S	= UNDERSIDE
VERT.	= VERTICAL
WWM	= WELDED WIRE MESH
W/	= WITH
℄	= CENTER LINE
@	= SPACING AT

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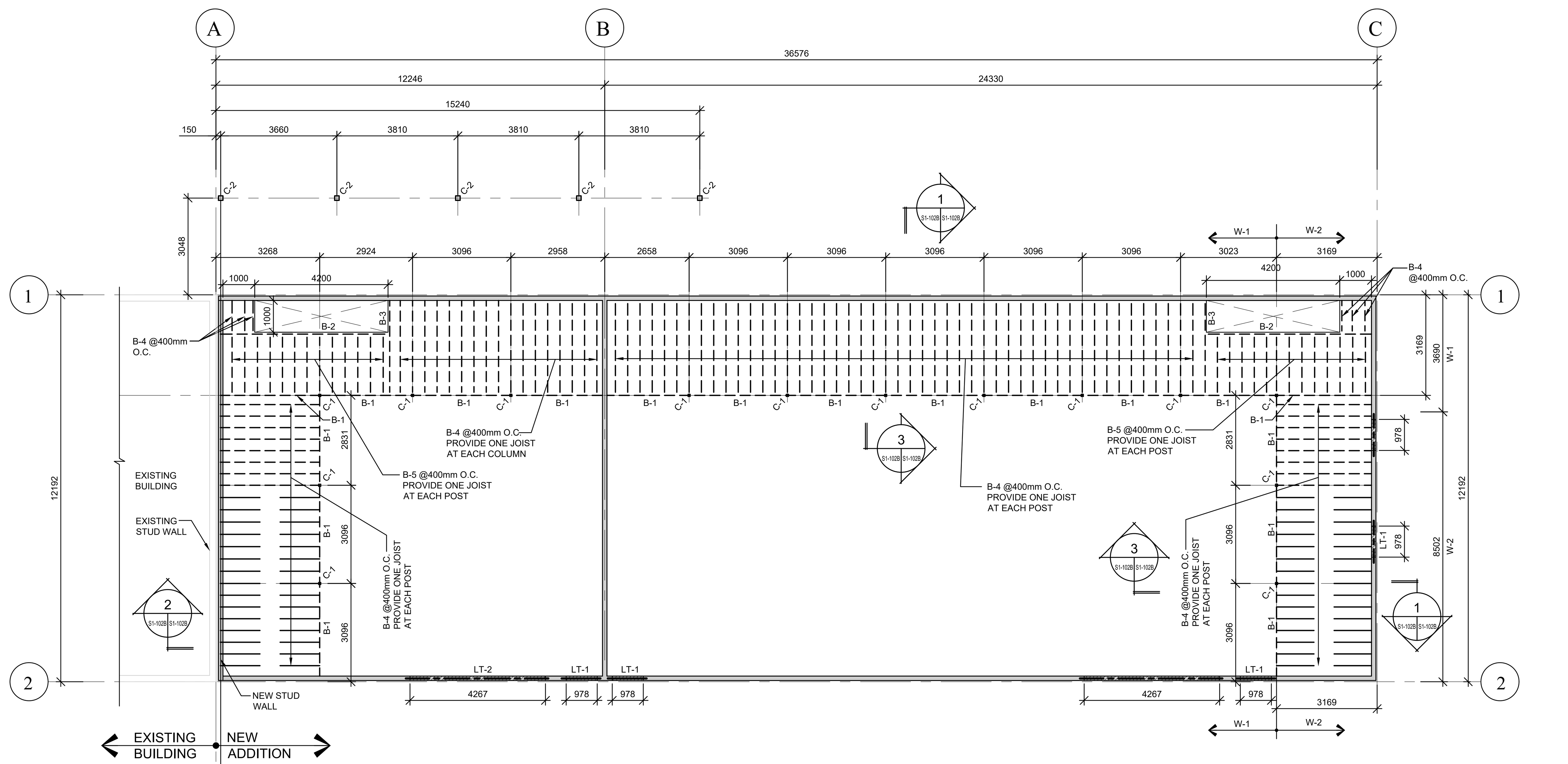
Client: PEI Department of Transportation & Infrastructure

Project Title: KCHD Bridgetown Upgrades Warehouse Building Bridgetown, Kings County Prince Edward Island

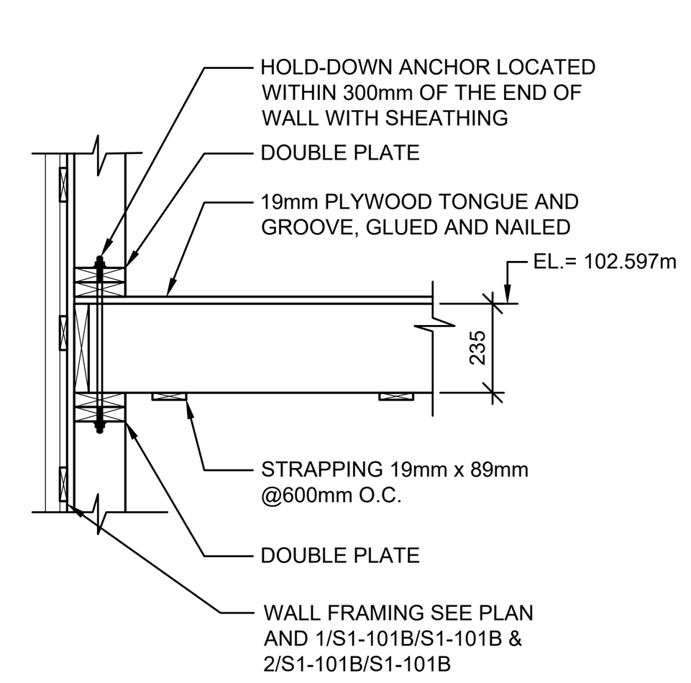
Sheet Title: Foundation Plan Sections, Details & Notes

No.	Description	Date
0	Issued for Tender	2021-Oct-07
1	Issued for Addendum #2	2021-Nov-16

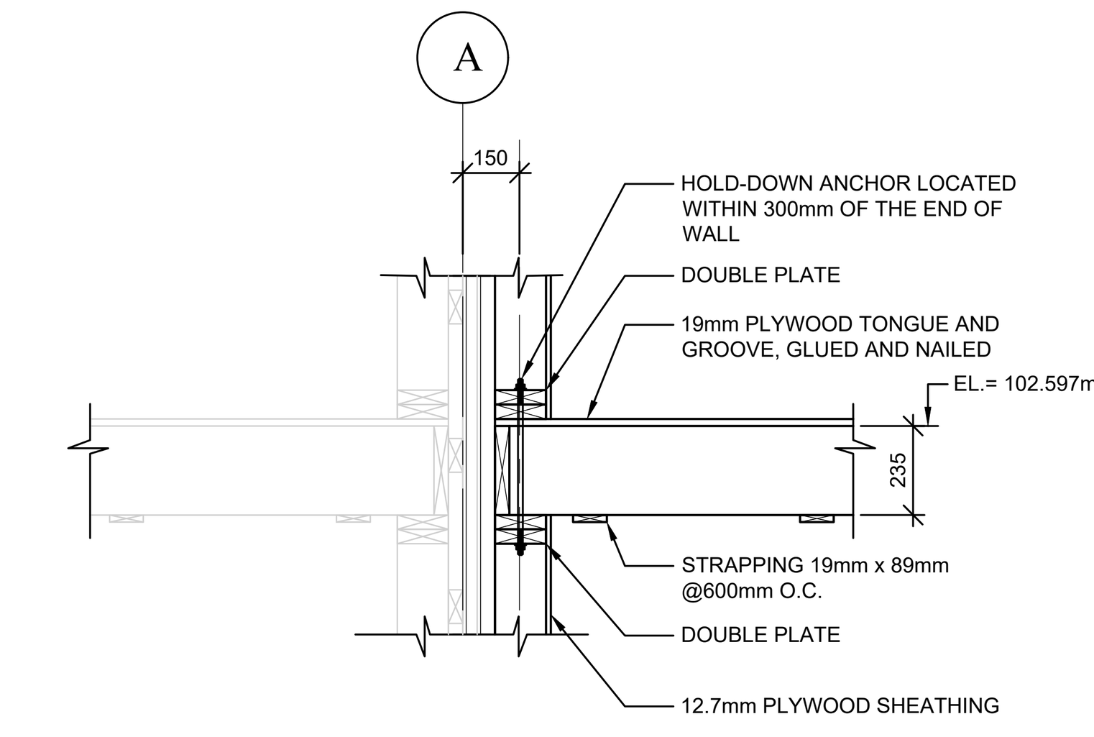
Date: November 16, 2021
Drn By: K.C.
Chk By: N.L. P. Eng.
Project Number: 211120
Drawing Number: S1-101B R1
Revision: 1



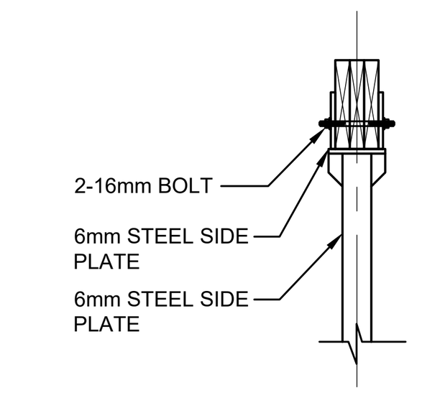
1 PLAN - MEZZANINE FRAMING
1:100



1 SECTION - MEZZANINE BEAM AT STUD WALL
1:20



2 SECTION - MEZZANINE BEAM AT STUD WALL
1:20



3 SECTION - MEZZANINE BEAM AT STEEL COLUMN
1:20

LEGEND

	LOAD-BEARING STUD WALL 38x140mm STUD SPACED AT 400mm O.C. W/ SOLID WOOD BLOCK AT MID-HEIGHT
	NON-LOAD-BEARING WALL SEE ARCHI. DWGS. FOR DETAILS
	DOOR OPENING
	LINTEL
	JOIST
	LUMBER

BEAM SCHEDULE

TYPE	SIZE	LOAD AT THE END FOR BEAM HANGER (kN)
B-1	3-PLY 38 x 235mm (DEEP) S-P-F	24kN
B-2	133mm x406mm (DEEP) LVL	36kN
B-3	133mm x241mm (DEEP) LVL	36kN
B-4	38mm x235mm (DEEP) S-P-F	6kN
B-4	38mm x184mm (DEEP) S-P-F	4kN
B-6	3-PLY 38 x 235mm (DEEP) S-P-F	17kN

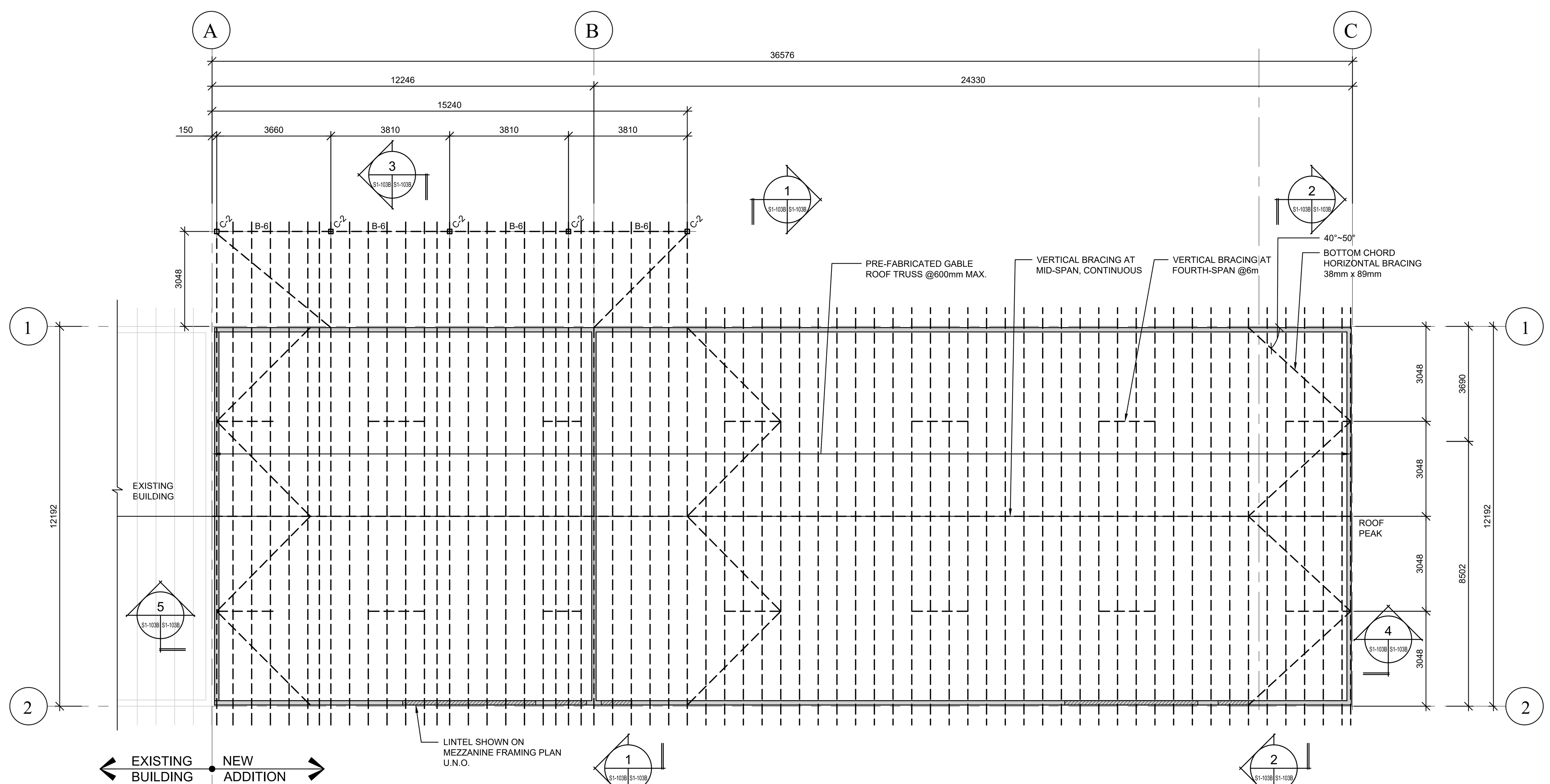
NOTE:
LVL BASED ON THE FOLLOWING TYPICAL VALUES OF SPECIFIED STRENGTH:
f_b= 37Mpa
f_v= 3.7Mpa
E= 13800Mpa
f_{cp}= 9.4Mpa
SIZE FACTOR IN BENDING $K_{zb}=(305/d)^{1/9}$.

LINTEL SCHEDULE

TYPE	OPENING SPAN	SIZE	BEARING JACK STUDS
LT-1	0.978m	3-PLY 38x140mm S-P-F	2 EACH END MIN.
LT-2	4.267m	133mm x406mm (DEEP) LVL	5 EACH END MIN.

COLUMN SCHEDULE

TYPE	SIZE
C-1	HSS 76x76x6.4
C-2	140mm x 140mm S-P-F



2 PLAN - ROOF FRAMING
1:100

ROOF LOADS:

ROOF DEAD LOAD:

ROOF SYSTEM	= 0.45 kN/m^2
MECH. + ELEC. ALLOWANCE	= 0.45 kN/m^2
CEILING + FINISHES	= 0.10 kN/m^2
TOTAL ROOF DEAD LOAD:	= 1.00 kN/m^2

ROOF LIVE LOAD:
SNOW (2.7x0.8+0.6) = 2.76 kN/m^2

FLOOR DEAD LOAD:

FLOOR SYSTEM	= 0.45 kN/m^2
MECH. + ELEC. ALLOWANCE	= 0.45 kN/m^2
CEILING + FINISHES	= 0.10 kN/m^2
TOTAL FLOOR DEAD LOAD:	= 1.00 kN/m^2

FLOOR LIVE LOAD: = 4.80 kN/m^2

WIND PRESSURE (1/50): = 0.56 kN/m^2

NOTE:

1. ROOF TRUSS TO BE DESIGNED FOR NET UPLIFT OF 1.0kN/m^2. CANOPY ROOF TRUSS TO BE DESIGNED FOR NET UPLIFT OF 1.5kN/m^2.

ROUGH CARPENTRY NOTES:

1. ALL WOOD STRUCTURAL MEMBERS, ASSEMBLIES AND FASTENERS SHALL CONFORM TO THE REQUIREMENTS OF CSA STANDARD O86 (LATEST EDITION).
2. ALL LUMBER SHALL BE IDENTIFIED BY THE GRADE MARK IN ACCORDANCE WITH THE MARKING PROVISIONS OF CSA STANDARD O141.
3. ALL LUMBER SHALL BE STRUCTURAL GRADE DRY, S-P-F NO. 2 MINIMUM, MOISTURE CONTENT NOT GREATER THAN 19% AT INSTALLATION.
4. ALL PLYWOOD SHALL BE EXTERIOR GRADE DOUGLAS FIR PLYWOOD TO CSA O121 AND MANUFACTURED WITH WATERPROOF GLUE.
5. ALL FASTENERS AND METAL IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED OR APPROVED EQUAL.
6. ALL BEARING SHALL BE CONTINUOUS TO FOUNDATION UNLESS NOTED OTHERWISE.
7. SHEATHING SHALL BE FASTENED AT 150mm (6") ON CENTER AT EDGES AND END SUPPORTS AND AT 300mm (12") CENTERS AT INTERMEDIATE SUPPORTS.
8. REQUIRED TRUSS/JOIST ANCHORS, CLIPS, HANGERS, ETC. SHALL BE DESIGNED AND SUPPLIED BY TRUSS/JOIST MANUFACTURER TO ACCOMMODATE ALL LOADS, INCLUDING UPLIFT.
9. VENTILATE AND FIRE STOP ALL SPACES TO NBCC REQUIREMENTS.
10. PROVIDE TEMPORARY ROOF AND WALL BRACINGS TO SUPPORT LOADS AND KEEP STRUCTURE STABLE DURING INSTALLATION.
11. COORDINATE WITH MECHA. FOR ROOF MOUNTED MECHANICAL EQUIPMENT.

SLAB ON GRADE NOTES

1. SLAB-ON-GRADE CONSTRUCTION:
   - SEALER
   - 100mm THICK 25MPa CONCRETE SLAB REINF. W/ 152x152 MW34.9/MW34.9 WELDED WIRE MESH W/ CHAIR
   - 10 mil. POLY. VAPOR BARRIER
   - 50mm RIGID INSULATION
   - 150mm GRANULAR BASE (CLASS A) COMPACT TO 100% SPMD
   - UNDISTURBED TILL OR SELECT BORROW COMPACT TO 100% SPMD ABOVE UNDISTURBED TILL
2. LOCATION OF SLAB CONSTRUCTION JOINTS TO BE APPROVED BY ENGINEER BEFORE CONCRETE IS PLACED.
3. PROVIDE VAPOUR BARRIER UNDER ALL INTERIOR SLAB ON GRADES U.N.O..
4. INTERIOR CONCRETE FLOOR SLAB TO HAVE A SMOOTH STEEL TROWELLED FINISH (TO A FLAT TOLERANCE CLASSIFICATION 5mm (3/16") IN 3m (9'-0")) AS PER ENGINEER'S REQUIREMENT.
5. WET CURE SLAB-ON-GRADE FOR A MINIMUM 7 DAYS AFTER PLACEMENT OR APPLY CURING COMPOUND IMMEDIATELY AFTER COMPLETION OF SLAB FINISHING. USE MASTERCURE OR BY MASTER BUILDERS, STERNSON FLORSEAL, OR EQUIVALENT LIQUID MEMBRANE CONCRETE CURING COMPOUND.

11. PROVIDE WEATHER PROTECTION TO CONCRETE SLAB AND ALL CONCRETE WORK IN CONFORMANCE WITH REQUIREMENTS OF A23.1
12. COORDINATE APPLICATION OF SEALING, CURING AND HARDENING COMPOUND WITH FLOOR FINISH USING COMPATIBLE PRODUCTS. VERIFY FLOOR FINISH BEFORE APPLYING CURING/SEALING/HARDNER TO FLOOR SURFACES.
13. FILL SAWCUT JOINT WITH MASTERFILL 300I, OR APPROVED EQUAL.

STRUCTURAL STEEL

1. ALL BEAMS, CHANNELS, COLUMNS, ANGLES SHALL CONFORM TO CSA-S16 & CSA-G40.20/G40.21 WITH A YIELD STRENGTH OF 350 MPa.
2. ALL STEEL SECTIONS SHALL BE CUT FROM FULL LENGTH STOCK OR ORDERED CUT TO LENGTH. UNSPECIFIED SPLICES WILL NOT BE TOLERATED AND SHALL BE CAUSE FOR REJECTION. ALL SUBSTITUTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
3. THE STEEL ERECTOR SHALL BE RESPONSIBLE FOR SUPPLYING, ERECTING AND REMOVING ALL TEMPORARY WIND BRACING, AS REQUIRED.
4. STEEL ERECTIONS DRAWINGS, JOISTS DESIGN AND SHOP DRAWINGS AND DECK DRAWINGS SHALL BE SUBMITTED FOR APPROVAL SHOWING THE ADDITIONAL DETAILS, WELDINGS, ETC., AND SHALL BE STAMPED BY A REGISTERED PROFESSIONAL ENGINEER.

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Client: PEI Department of Transportation & Infrastructure

Project Title: KCHD Bridgetown Upgrades Warehouse Building Bridgetown, Kings County Prince Edward Island

Sheet Title: Framing Plan Sections, Details & Notes

No.	Description	Date
0	Issued for Addendum #2	2021-Nov-16

Date: November 16, 2021
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Chk By: N.L. P. Eng.
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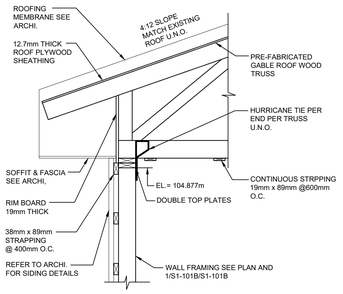
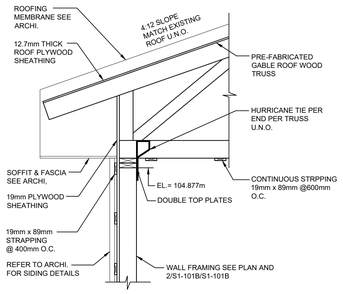
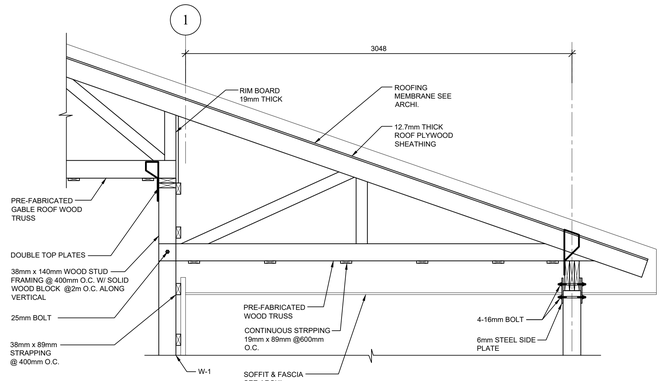
Drawing Number: S1-102B
Revision: 0



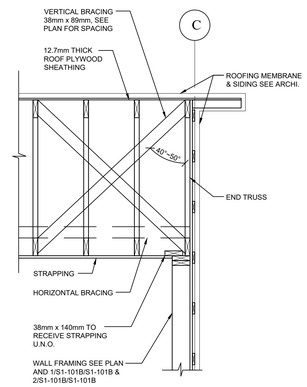
1 SECTION - ROOF TRUSS AT STUD WALL
1:20



2 SECTION - ROOF TRUSS AT STUD WALL
1:20



3 SECTION - CANOPY TRUSS AT STUD WALL & COLUMN
1:20



4 SECTION - END WALL TRUSS
1:20

5 SECTION - END WALL TRUSS
1:20

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Client
PEI Department of Transportation & Infrastructure

Project Title
KCHD Bridgetown Upgrades
Warehouse Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title
Sections & Details

No.	Description	Date
0	Issued for Addendum #2	2021-Nov-16

Date: November 16, 2021
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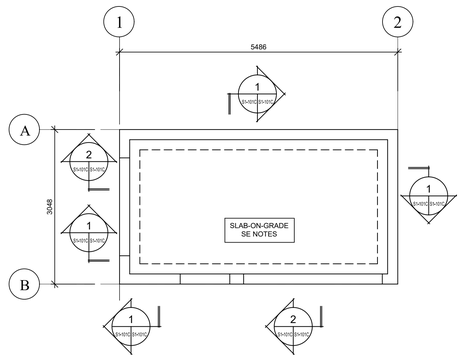
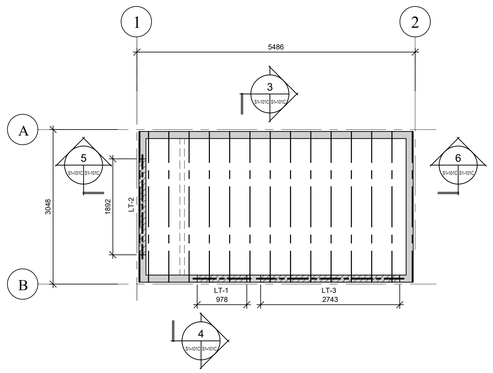


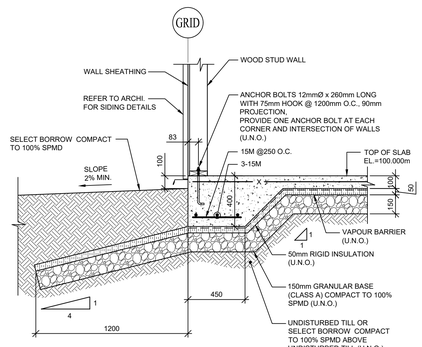
1 PLAN - FOUNDATION
1: 50



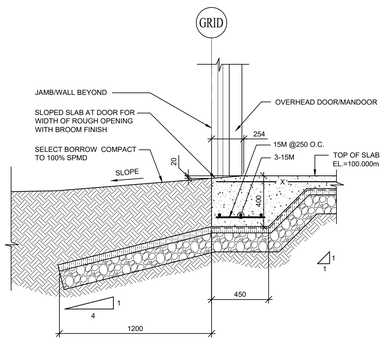
2 PLAN - ROOF FRAMING
1: 50

	LEGEND
	LOAD-BEARING STUD WALL 38x140mm STUD SPACED AT 400mm O.C. W/ SOLID WOOD BLOCK AT MID-HEIGHT
	NON-LOAD-BEARING WALL SEE ARCHI. DWGS. FOR DETAILS
	DOOR OPENING
	LINTEL
	JOIST
	LUMBER

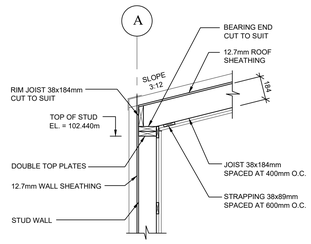
LINTEL SCHEDULE			
TYPE	OPENING SPAN	SIZE	BEARING JACK STUDS
LT-1	0.978m	2-PLY 38x140mm S-P-F	2 EACH END MIN.
LT-2	1.892m	3-PLY 38x140mm S-P-F	2 EACH END MIN.
LT-3	2.743m	3-PLY 38x184mm S-P-F	2 EACH END MIN.



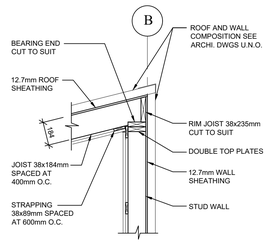
1 SECTION - PERIMETER THICKENED SLAB
1:20



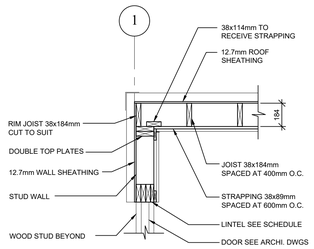
2 SECTION - PERIMETER THICKENED SLAB AT DOOR
1:20



3 SECTION - JOIST
1:20



4 SECTION - JOIST
1:20



5 SECTION - JOIST
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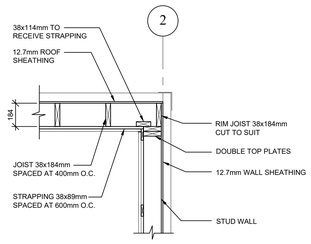

6 SECTION - JOIST
1:20

GENERAL NOTES:

1. THE WORK SHALL BE IN ACCORDANCE WITH NATIONAL BUILDING CODE OF CANADA (NBCC), 2015 REVISION, TO THE SATISFACTION OF THE ENGINEER UNLESS NOTED OTHERWISE ON THE DRAWING OR IN THE SPECIFICATIONS.
2. COMPLY WITH ALL LOCAL, MUNICIPAL, AND PROVINCIAL BY-LAWS AND REGULATIONS.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH PEI OCCUPATIONAL HEALTH & SAFETY ACT, WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM AND APPLICABLE LABOR CODES.
4. CONTRACTOR MUST VISIT THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS, VERIFY EXACT LOCATION OF ALL EXISTING UTILITIES AND SERVICES WITHIN THE CONTRACT LIMIT.
5. CONTRACTOR SHALL COORDINATE WORK AND COOPERATE WITH OWNER AND AGENCIES HAVING JURISDICTION.
6. REPORT ANY DOUBTFUL CONDITIONS REQUIRING DECISIONS AND SECURE DIRECTIONS FROM THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
7. CONTRACTOR TO EXERCISE EXTREME CAUTION. DESIGN AND PROVIDE ADEQUATE SUPPORT AND CONNECTIONS TO EXISTING STRUCTURES, UTILITIES AND SERVICES. MOVE, ADJUST AND RECONNECT ALL VISIBLE AND CONCEALED ITEMS AFFECTED BY THE SCOPE OF WORK.
8. VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
9. ALL DIMENSIONS AND ELEVATIONS ARE IN METRIC UNITS UNLESS NOTED OTHERWISE.
10. THE CONTRACTOR TO INCLUDE IN THE CONTRACT PRICE COSTS ASSOCIATED WITH OVER EXCAVATION, BACKFILLING AND REINSTATEMENT.
11. PROPERLY DISPOSE AND REMOVE OFFSITE ALL DEBRIS AND MATERIALS TO BE REMOVED.
12. N.I.C. INDICATES NOT IN THIS CONTRACT.

FOUNDATION NOTES:

1. FOOTINGS SHALL NOT BE PLACED ON SOIL SOFTENED BY WATER.
2. ALL FOOTINGS SHALL BE PLACED ON SOIL HAVING A MINIMUM BEARING CAPACITY OF 150 kN/SQ.m.
3. THICKENED SLABS ARE PROVIDED AS FOOTING.
4. ALL FOOTINGS SHALL BE REVIEWED BY THE ENGINEER BEFORE CONCRETE IS PLACED. NOTIFY 24 HRS BEFORE PLACING CONCRETE.
5. VERIFY ALL CONCRETE FORMWORK LINES ARE LEVEL, PLUMB, SQUARE AND TRUE.
6. CONCRETE FORMWORK PLYWOOD SHEETS TO THE REQUIREMENTS OF CSA 0121. USE NEW MATERIAL, CLEAN, SOUND, FREE FROM DEFECTS DETRIMENTAL TO THE QUALITY OF FINISHED CONCRETE SURFACES. ARRANGE PLYWOOD SHEETS TO A UNIFORM JOINT PATTERN. CONSTRUCT FORMWORK TO RESIST FLUID PRESSURE FROM WET CONCRETE AND ALL OTHER CONSTRUCTION LOADINGS WITHOUT BULGING, MOVEMENT OR DISTORTION. REUSE OF FORMWORK SUBJECT TO THE REQUIREMENTS OF CSA A23.1.
7. OPENINGS IN FOUNDATION & BUILDING WALLS SHALL BE PROVIDED AS SHOWN ON ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS. ANY ADDITIONAL OPENINGS MUST BE APPROVED BY ENGINEER. OPENINGS SHALL BE SLEEVED.
8. ALL WALL AND SLAB OPENINGS AND ENDS SHALL HAVE MINIMUM (2)-15M ALL SIDES.
9. LOCATION OF CONSTRUCTION JOINTS TO BE APPROVED BY ENGINEER BEFORE CONCRETE IS PLACED.
10. ANCHOR RODS AND EMBEDDED STEEL ITEMS WILL BE INSTALLED BY THE FOUNDATION CONTRACTOR. SET ANCHOR RODS, INSERT PLATES, SLEEVES AND OTHER MISCELLANEOUS ITEMS EMBEDDED IN CONCRETE ACCURATELY, USING TEMPLATES, TO EXACT GRADE AND LOCATION SHOWN ON PROJECT DRAWINGS OR AS DIRECTED BY ENGINEER. SECURE TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT. DO NOT CUT OR RELOCATE REINFORCING STEEL FOR PLACEMENT OF EMBEDDED PARTS. IF INSERTS CANNOT BE LOCATED AS SPECIFIED, OBTAIN APPROVAL OF ALL MODIFICATIONS FROM ENGINEER BEFORE PLACING.
11. ALL BASE AND BEARING PLATES TO BE GROUTED USING 50 MPa (7,200psi) NON-SHRINK GROUT. CURE NON-SHRINK GROUT AND PROTECT FROM FREEZING TEMPERATURES IN ACCORDANCE WITH CSA U.N.O.
12. THE FILL SHALL BE PLACED SIMULTANEOUSLY ON BOTH SIDES OF THE FOUNDATION WALL. PROVIDE LATERAL SUPPORT TO WALLS PRIOR TO BACKFILLING.

CONCRETE NOTES:

1. ALL CONCRETE WORK AND MATERIAL SHALL BE CARRIED OUT IN ACCORDANCE WITH LATEST CSA A23.1 AND NBCC 2015.
2. MIX DESIGN: TYPE 10 PORTLAND CEMENT.
3. EXTERIOR SLABS:
   a. COMPRESSIVE STRENGTH (28D): 35MPa (5000psi)
   b. CLASS OF EXPOSURE: C-2
   c. NOMINAL AGGREGATE SIZE: 20mm (3/4")
   d. SLUMP: 80mm (3-1/4") ±20mm (3/4")
   e. AIR CONTENT: 5-8%
   f. WATER CEMENT RATIO: 0.40 MAX
4. CONCRETE MIX DESIGN SHALL BE SUBMITTED FOR REVIEW BY THE ENGINEER MINIMUM 48 HRS PRIOR TO CASTING.
5. USE OF CALCIUM CHLORIDE IS NOT PERMITTED.
6. NO CONCRETE SHALL BE POURED WITHOUT THE PRIOR KNOWLEDGE AND APPROVAL OF ENGINEER.
7. ALL CONCRETE SHALL BE TESTED, TESTING SHALL CONFORM TO CSA A23.2. RECORD TESTS FOR SLUMP, AIR CONTENT AND COMPRESSIVE STRENGTH.
8. ALL CONCRETE SHALL BE VIBRATED USING HIGH FREQUENCY VIBRATORS. VIBRATION PRACTICES TO BE IN ACCORDANCE WITH ACI 309R.
9. COLD WEATHER CONCRETE SHALL BE PLACED AND PROTECTED IN ACCORDANCE WITH THE REQUIREMENTS OF CSA A23.1 AND TO THE REQUIREMENTS OF ACI-306R. PROVIDE HEATED ENCLOSURES AND/OR INSULATED TARPS AS REQUIRED TO MAINTAIN MINIMUM 10°C CONCRETE SURFACE TEMPERATURE FOR A PERIOD OF 5 DAYS FOLLOWING CONCRETE PLACEMENT. PROVIDE CONTROLLED COOL DOWN PERIOD TO PREVENT SURFACE CRACKING AT END OF PROTECTION PERIOD. ENSURE THAT NO CONCRETE IS PLACED ON OR AGAINST FROZEN SUBGRADE, FORMWORK, OR REINFORCING STEEL.
10. LEAVE FORMWORK IN PLACE FOR THE FOLLOWING MINIMUM PERIODS OF TIME AFTER PLACING CONCRETE:
    a. 72 HR. FOR WALLS
    b. 72 HR. FOR FOOTINGS
11. APPLY CURING COMPOUND TO WALLS AND PILASTERS IF EXPOSED TO DRYING CONDITIONS PRIOR TO COMPLETION OF FULL 7 DAY MOIST CURING PERIOD. USE LIQUID MEMBRANE CONCRETE CURING COMPOUND.

REINFORCING STEEL NOTES:

1. ALL REINFORCING STEEL SHALL BE NEW BILLET TO CSA G30.18, WWM REINFORCING TO CSA G30.5.
2. MINIMUM REINFORCING STEEL YIELD STRENGTH SHALL BE 400 MPa.
3. REINFORCING STEEL SHALL BE DETAILED, CUT, BENT, FABRICATED AND PLACED IN ACCORDANCE WITH REINFORCING MANUAL OF STANDARD PRACTICE (REINFORCING STEEL INSTITUTE OF CANADA); CAN3-A23.3 AND CSA-A23.1.
4. THE GENERAL CONTRACTOR SHALL INSPECT ALL THE REINFORCING STEEL BEFORE PLACEMENT OF THE CONCRETE.
5. THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS PRIOR TO THE PLACEMENT OF THE CONCRETE.
6. THE POSITION OF ALL REINFORCING STEEL SHALL BE MAINTAINED DURING THE POURING OPERATION BY DIRECT SUPERVISION OF THE REINFORCING STEEL CONTRACTOR.
7. SUBMIT SHOP DRAWINGS STAMPED BY AN ENGINEER LICENSED TO PRACTICE IN PEI FOR REVIEW PRIOR TO FABRICATING REINFORCING STEEL. CLEARLY INDICATE BAR SIZES, SPACING, LOCATION, QUANTITY, CHAIRS, SPACERS, ETC WITH IDENTIFYING CODE MARKS TO PERMIT PLACEMENT.
8. ALL FOOTING REINFORCING SHALL CONTINUE THROUGH COLUMN FOOTINGS AND SHALL CONTINUE TO THE ENDS OF THE FOOTINGS WHERE FOOTINGS CHANGE DIRECTION OR STOP.
9. ALL WALL REINFORCING SHALL CONTINUE THROUGH PIER/COLUMN REINFORCING.
10. CONCRETE COVER (UNLESS NOTED OTHERWISE):
    a. POURED AGAINST THE GROUND: 75mm (3")
    b. FORMED SURFACE AGAINST GROUND: 50mm (2")
    c. FORMED SURFACE EXPOSED TO WEATHER:50mm (2")
    d. FORMED SURFACE PROTECTED:
    - BEAMS: 40mm (1-1/2")
    - COLUMNS: 40mm (1-1/2")
    - WALLS: 25mm (1")
11. USE SPACERS, CHAIRS, TEMPLATES AND DIRECT SUPERVISION OF THE REINFORCING STEEL CONTRACTOR TO ACCURATELY LOCATE & SUPPORT REINFORCING STEEL & SECURE IN POSITION TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT.

MISCELLANEOUS

1. THE WORK SHALL BE IN ACCORDANCE WITH NATIONAL BUILDING CODE OF CANADA (2015) TO THE SATISFACTION OF THE ENGINEER UNLESS NOTES OTHERWISE ON THE DRAWING OR IN THE SPECIFICATIONS.
2. COMPLY WITH ALL LOCAL, MUNICIPAL, AND PROVINCIAL BY-LAWS AND REGULATIONS.
3. VERIFY ALL DIMENSIONS ON THE JOB AND REPORT ANY DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
4. REPORT ANY DOUBTFUL CONDITIONS REQUIRING DECISIONS AND SECURE DIRECTIONS FROM THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
5. THE GENERAL CONTRACTOR SHALL COORDINATE THE ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS WITH THE FOUNDATION DRAWINGS.

ROUGH CARPENTRY NOTES:

1. ALL WOOD STRUCTURAL MEMBERS, ASSEMBLIES AND FASTENERS SHALL CONFORM TO THE REQUIREMENTS OF CSA STANDARD O86 (LATEST EDITION).
2. ALL LUMBER SHALL BE IDENTIFIED BY THE GRADE MARK IN ACCORDANCE WITH THE MARKING PROVISIONS OF CSA STANDARD O141.
3. ALL LUMBER SHALL BE STRUCTURAL GRADE DRY, S-P-F NO. 2 MINIMUM. MOISTURE CONTENT NOT GREATER THAN 19% AT INSTALLATION.
4. ALL PLYWOOD SHALL BE EXTERIOR GRADE DOUGLAS FIR PLYWOOD TO CSA O121 AND MANUFACTURED WITH WATERPROOF GLUE.
5. ALL FASTENERS AND METAL IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED OR APPROVED EQUAL.
6. ALL BEARING SHALL BE CONTINUOUS TO FOUNDATION UNLESS NOTED OTHERWISE.
7. SHEATHING SHALL BE FASTENED AT 150mm (6") ON CENTER AT EDGES AND END SUPPORTS AND AT 300mm (12") CENTERS AT INTERMEDIATE SUPPORTS.
8. REQUIRED TRUSS/JOIST ANCHORS, CLIPS, HANGERS, ETC. SHALL BE DESIGNED AND SUPPLIED BY TRUSS/JOIST MANUFACTURER TO ACCOMMODATE ALL LOADS, INCLUDING UPLIFT.
9. VENTILATE AND FIRE STOP ALL SPACES TO NBCC REQUIREMENTS.
10. PROVIDE TEMPORARY ROOF AND WALL BRACINGS TO SUPPORT LOADS AND KEEP STRUCTURE STABLE DURING INSTALLATION.
11. COORDINATE WITH MECHA. FOR ROOF MOUNTED MECHANICAL EQUIPMENT.

SLAB ON GRADE NOTES

1. SLAB-ON-GRADE CONSTRUCTION:
   - SEALER
   - 100mm THICK 25MPa CONCRETE SLAB REINF. W/ 152x152 MW34.9/MW34.9 WELDED WIRE MESH W/ CHAIR
   - 10 mil. POLY. VAPOR BARRIER
   - 50mm RIGID INSULATION
   - 150mm GRANULAR BASE (CLASS A) COMPACT TO 100% SPMD
   - UNDISTURBED TILL OR SELECT BORROW COMPACT TO 100% SPMD ABOVE UNDISTURBED TILL
2. LOCATION OF SLAB CONSTRUCTION JOINTS TO BE APPROVED BY ENGINEER BEFORE CONCRETE IS PLACED.
3. PROVIDE VAPOUR BARRIER UNDER ALL INTERIOR SLAB ON GRADES U.N.O..
4. INTERIOR CONCRETE FLOOR SLAB TO HAVE A SMOOTH STEEL TROWELLED FINISH (TO A FLAT TOLERANCE CLASSIFICATION 5mm (3/16") IN 3m (9'-0")) AS PER ENGINEER'S REQUIREMENT.
5. WET CURE SLAB-ON-GRADE FOR A MINIMUM 7 DAYS AFTER PLACEMENT OR APPLY CURING COMPOUND IMMEDIATELY AFTER COMPLETION OF SLAB FINISHING. USE MASTERCURE OR BY MASTER BUILDERS, STERNSON FLORSEAL, OR EQUIVALENT LIQUID MEMBRANE CONCRETE CURING COMPOUND.
11. PROVIDE WEATHER PROTECTION TO CONCRETE SLAB AND ALL CONCRETE WORK IN CONFORMANCE WITH REQUIREMENTS OF A23.1
12. COORDINATE APPLICATION OF SEALING, CURING AND HARDENING COMPOUND WITH FLOOR FINISH USING COMPATIBLE PRODUCTS. VERIFY FLOOR FINISH BEFORE APPLYING CURING/SEALING/HARDNER TO FLOOR SURFACES.
13. FILL SAWCUT JOINT WITH MASTERFILL 300I, OR APPROVED EQUAL.

ABBREVIATION

AB	= ANCHOR BOLTS GROUP
ARCH.	= ARCHITECTURAL
BLDG.	= BUILDING
BOTT.	= BOTTOM
BTWN.	= BETWEEN
C.C.	= CENTER TO CENTER
CMU	= CONCRETE MASONRY UNIT
CONC.	= CONCRETE
CONT.	= CONTINUOUS
CR.	= CENTER
C/W	= COMPLETED WITH
DIA.	= DIAMETER
DWGS	= DRAWINGS
E.F.	= EACH FACE
EL.	= ELEVATION
ELEC.	= ELECTRICAL
E.W.	= EACH WAY
EQ	= EQUAL
FDN.	= FOUNDATION
FTG.	= FOOTING
GALV.	= GALVANIZED
HORI.	= HORIZONTAL
H.P.	= HIGH POINT
LG	= LONG
L.L.H.	= LONG LEG HORIZONTAL
L.L.V.	= LONG LEG VERTICAL
L.P.	= LOW POINT
MAX.	= MAXIMUM
M.C.	= MOMENT CONNECTION
MECH.	= MECHANICAL
MIN.	= MINIMUM
N.I.C.	= NOT IN CONTRACT
O.C.	= ON CENTER
OWSJ	= OPEN WEB STEEL JOIST
QTY.	= QUANTITY
REIN.	= REINFORCING
R/W	= REINFORCED WITH
S.C.J.	= SAW CUT JOINT
SPMD	= STANDARD PROCTOR MAXIMUM DRY DENSITY
T.J.	= TIE JOIST
T.O.S.	= TOP OF STEEL
TYP.	= TYPICAL
U.N.O.	= UNLESS NOTED OTHERWISE
U/S	= UNDERSIDE
VERT.	= VERTICAL
WWM	= WELDED WIRE MESH
W/	= WITH
℄	= CENTER LINE
@	= SPACING AT

ROOF LOADS:

ROOF DEAD LOAD:	
ROOF SYSTEM	= 0.45 kN/m²
MECH. + ELEC. ALLOWANCE	= 0.45 kN/m²
CEILING + FINISHES	= 0.10 kN/m²
TOTAL ROOF DEAD LOAD:	= 1.00 kN/m²
ROOF LIVE LOAD:	
SNOW (2.7x0.8+0.6)	= 2.76 kN/m²
WIND PRESSURE (1/50):	= 0.56 kN/m²

NOTE:

1. ROOF TRUSS TO BE DESIGNED FOR NET UPLIFT OF 1.0kN/m².

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PROFESSIONAL ENGINEER
PROVINCE OF PRINCE EDWARD ISLAND
16 Nov 2021

Client
PEI Department of Transportation & Infrastructure

Project Title
KCHD Bridgetown Upgrades
DEF Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title
Foundation Plan, Framing Plan
Sections, Details & Notes

No.	Description	Date
0	Issued for Addendum #2	2021-Nov-16

Date: November 16, 2021
Drn By: K.C.
Chk By: N.L. P. Eng.
Revision: 0
Project Number: 211120
Drawing Number: S1-101C

DOOR SCHEDULE AND FRAME SCHEDULE

			DOOR						FRAME																					
DOOR NO.	ROOM NAME	FIRE RATING	WIDTH (mm)	HEIGHT(mm)	THICKNESS (mm)	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH	CYLINDRICAL LOCKSET LEVER HANDLE	STORE ROOM	ENTRANCE	BATH/BEDROOM	PANIC HARDWARE	ASTRAGAL	CLOSER	DOOR STOP - OVERHEAD	FLUSH BOLTS	HOLD OPEN DEVICE - MAGNETIC	KICK PLATE - BOTH SIDES	BUTT HINGES	THRESHOLD	DOOR SWEEP	WEATHER STRIPPING	MOTORIZED DOOR OPERATOR	ELECTRICAL STRIKE	ACCESS CONTROL - CARD READER	PULL HANDLES	HARDWARE GROUP	COMMENTS
100.1	MECH BRANCH		4267	3658	38	D-3	SPEC	MT-3	SPEC	SPEC	SEE ELEV															X						MANUAL OPERATION WITH LOCKING PIN ON INSIDE
100.2	MECH BRANCH		914	2134	44	D-2	HM	P-3	F-1	PS	P-1	X		X				X	X			X	X	X	X	X						
101.1	HIGHWAY MAINTENANCE		914	2134	44	D-2	HM	P-3	F-1	PS	P-1	X		X				X	X			X	X	X	X	X						
101.2	HIGHWAY MAINTENANCE		4267	3658	38	D-3	SPEC	MT-3	SPEC	SPEC	SEE ELEV															X						MANUAL OPERATION WITH LOCKING PIN ON INSIDE
101.3	HIGHWAY MAINTENANCE		914	2134	44	D-2	HM	P-3	F-1	PS	P-1	X		X				X	X			X	X	X	X	X						
102.1	ELEC		914	2134	44	D-1	HM	P-3	F-1	PS	P-1	X		X				X	X			X	X	X	X	X						
103.1	LAN		914	2134	44	D-1	HM	P-3	F-1	PS	P-1	X		X				X	X			X	X	X	X	X						

DOOR SCHEDULE ABBREVIATIONS:

HM HOLLOW METAL
PS PRESSED STEEL

ROOM FINISH SCHEDULE

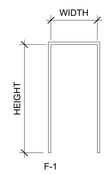
ROOM NO	ROOM NAME	FLOOR		WALLS			
		FINISH	BASE	NORTH	EAST	SOUTH	WEST
				FIN.	FIN.	FIN.	FIN.
100	MECH BRANCH	P-2					
101	HIGHWAY MAINTENANCE	P-2					
102	ELEC	P-2	RB-1	P-3	P-3	P-3	P-3
103	LAN	P-2	RB-1	P-3	P-3	P-3	P-3

MATERIAL FINISH SCHEDULE:

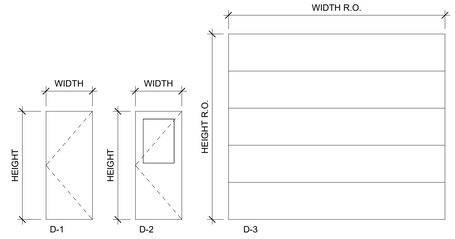
MT-1 PRE-FINISHED METAL, GREEN (MATCH EXISTING)
MT-2 PRE-FINISHED METAL, ANTIQUE LINEN (MATCH EXISTING)
MT-3 PRE-FINISHED METAL, WHITE
MT-4 PRE-FINISHED METAL, GALVANIZED/GALVALUME
P-1 PAINT (MATCH GREEN PRE-FINISHED METAL)
P-2 CLEAR CONCRETE SEALER
P-3 PAINT, WHITE
RB-1 RUBBER BASE, JOHNSONITE, HEIGHT: 102mm WITH TOE, MEDIUM GREY #28
VN-1 VINYL, WHITE

DOOR SCHEDULE NOTES

1. ALL INTERIOR DOOR FRAMES TO BE INSTALLED 150mm FROM ADJACENT WALL UNLESS NOTED OTHERWISE, MEASURED FROM CENTER LINE OF HINGE PIN.
2. REFER TO SPECIFICATION FOR DOOR HARDWARE.
3. ALL EXTERIOR DOOR FRAMES AND THRESHOLDS TO BE THERMALLY BROKEN.
4. ALL EXTERIOR DOOR AND FRAMES TO BE INSULATED.
5. REFER TO MATERIAL/FINISH SCHEDULE FOR ALL MATERIAL TAGS.
6. ALL GLAZING IN EXTERIOR DOORS AND FRAMES TO BE INSULATED GLASS UNITS.
7. ALL OVERHEAD/ROLLING SERVICE DOORS ARE DIMENSIONED TO THE ROUGH OPENINGS. DOORS TO OVERLAP HEAD AND JAMB OPENINGS BY 25mm.



FRAME TYPES
1 : 50



Door Types
1 : 50

GENERAL NOTES

1. VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.
2. THE WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA (NBCC 2015) UNLESS OTHERWISE NOTED ON THE DRAWINGS.
3. COMPLY WITH ALL LOCAL MUNICIPAL AND PROVINCIAL BY-LAWS AND REGULATIONS.
4. CONTRACTOR TO VERIFY LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION.
5. BENCH MARKS TO BE ESTABLISHED BY CONTRACTOR.
6. ALL PENETRATIONS IN RATED PARTITIONS AND/OR FLOOR ASSEMBLIES FOR PLUMBING, DUCTING OR ELECTRICAL ARE TO BE SEALED. FIRE STOP IN ACCORDANCE WITH WALL AND/OR FLOOR TYPES. SUBMIT ULC DETAILS AND MATERIALS DURING SHOP DRAWING PROCESS FOR REVIEW PRIOR TO INSTALLATION..
7. ALL OTHER DISCIPLINES SHOWN FOR GENERAL INTENT ONLY. REFER TO CORRESPONDING DRAWINGS.
8. REFER TO MATERIAL/FINISH SCHEDULE IN THE SPECIFICATION FOR INTO ON MATERIAL TAGS.
9. STAIR CONSTRUCTION:
   - RUN (MIN. NOSING TO NOSING): 280mm
   - RISE: MAX. 180mm, MIN. 125mm
   - GUARDRAIL: GUARD TO BE MIN. 1070mm HIGH ABOVE NOSING OF STAIR TREAD AND LANDING.
   - HANDRAIL: 915mm HIGH ABOVE NOSING OF STAIR TREAD. EXTEND HANDRAIL ONE TREAD DEPTH + MIN. 300mm HORIZONTAL AT BOTTOM OF STAIRS. HANDRAIL AT TOP OF STAIRS TO BE MIN. 300mm HORIZONTAL. HANDRAIL DIAMETER TO BE MAX. 33mm.

Building Code Review

1. Building Definition
   a. Governing Code: National Building Code 2015 (NBC 2015)
   b. Building Height: 1 storey
   c. *Building Area:*
      i. Existing: 3370 sqft / 316 m2
      ii. New: 4759 sqft / 446m2
      iii. Total: 8129 sqft / 762 m2
   d. Streets: 3.2.2.10. The building faces three streets. (Street must be 9m wide or more in width)
      i. A building faces one street when not less than 25% of its perimeter is within 15m of the street or access route.
      ii. A building faces two streets when not less than 50% of its perimeter is within 15m of the street or access route.
      iii. A building faces three streets when not less than 75% of its perimeter is within 15m of the street or access route.
   e. Major Occupancies: Group F, Division 2
   f. Subsidiary Occupancies: n/a
   g. Article of Construction: 3.2.2.78. Group F, Division 2, up to 2 storeys, Not Sprinklered
      i. Max. Building area: 1500m2 if 1 storey, facing three streets
      ii. Construction Type:
         1. Code: Shall be of combustible or non-combustible construction used singly or in combination
         2. Provided: combustible and non-combustible
      iii. Floor Assemblies:
         1. Code: Shall be fire separations and, if of combustible construction, shall have a fire resistance rating (FRR) not less than 45min.
         2. Provided: n/a
      iv. Load Bearing Walls, Columns supporting an assembly required to have a FRR:
         1. Code: Shall have a FRR not less than 45 minutes, or be of non-combustible construction.
         2. Provided: n/a
      v. Mezzanine.
         1. Code: No requirements.
         2. Provided: n/a
      vi. Roof Assembly:
         1. Code: No requirements.
         2. Provided: n/a
   h. Fire Walls: n/a
   i. Interconnected floor space: n/a
2. Exits
   a. Criteria for one exit: 3.4.2.1.A.
      i. Code: If a floor area that is Not sprinklered throughout and the floor area is not more than 150m2 with a max. travel distance of 10m, one exit can be provided.
      ii. Provided: More than one exit is required.
   b. Travel Distance: 3.4.2.5
      i. Code: The travel distance to at least one exit shall be not more than:
         1. 30m
3. Building Life Safety Systems
   a. Standpipe: 3.2.5.8
      i. Code: shall be installed if more than 3 storeys in building height, more than 14m high, not more than 14m high but has a building area exceeding table 3.2.5.8. unless the building is sprinklered.
      ii. Provided: n/a
4. Access Routes
   a. 3.2.5.4. A building which is more than 3 storeys in building height or more than 600m2 in building area shall be provide with access routes for fire department vehicles.
   b. 3.2.5.5. Access routes shall be located not less than 3m and not more than 15m from the closest portion of the access route.
   c. 3.2.5.6 Have a clear width not less than 6m, centre line radius not less than 12m, overhead clearance not less than 5m and provide a turn around facility for an access route more than 90m long.
5. Fire Separations

a. Major Occupancy Separation			
i. Adjoining Group F-2/F-2	3.1.3.1 Table	n/a, No major occupancy separation.	
b. Fire walls	3.1.10.	n/a	
c. Separation of Suites	3.3.1.1.	n/a	
d. Public Corridors	3.3.1.4.	n/a	
e. Janitor rooms	3.3.1.21.	n/a	
f . Contained use area	3.3.3.7.	n/a	
g. Storage rooms	3.3.4.3(3)	n/a	
h. Repair Garage	3.3.5.5.	n/a	
i. Storage Garage	3.3.5.6	n/a	
j. Exits	3.4.4.1	n/a	
k. Elevator shaft and machine room	3.5.3.	n/a	
l. Service rooms	3.6.2.1.	1 hour	
m. Service shafts	3.6.3.	n/a	

6. Sound Transmission
   a. Not applicable, no dwelling units
7. Power door operators 3.8.2.7
   a. Not required for Group F2 major occupancy

Outline Specifications

Section 05 50 00 Metal Fabrications
- Steel pipe handrails and guard posts shall be as detailed, and shall be of standard weight (Schedule 40) steel pipe conforming to ASTM A53, Type E or S, Grade B.

Section 07 21 13 - Board Insulation
- Standard of Acceptance: Extruded polystyrene
- Location: Under concrete slabs and foundation walls
- Thickness & R-Value per assemblies
- Compressive Strength: 30 PSI min

Section 07 21 16 - Blanket Insulation
- Standard of acceptance: Owens Corning, Fiberglass
- Thickness & R-Value per assemblies

Section 07 26 00 - Vapour Retarders
- Polyethylene sheet 10 mil under concrete slabs
- Polyethylene sheet 6 mil to be used on all walls and ceilings.
- Locate on warm side of insulation in all cases.

Section 07 27 00 - Air Barriers
- Standard of Acceptance: Spun bonded olefin sheet, Tyvek, stapled.

Section 07 46 33 - Plastic Siding
- Standard of Acceptance: Kaycan
- Colour: Refer to drawings
- See elevation drawings for specified areas

Section 07 62 00 - Sheet Metal Flashing and Trim
- Prefinished metal, 28 gauge
- Gutters: pre-finished sheet steel, preformed by seamless process c/w all accessories.
- Rainwater leaders: pre-finished sheet steel, preformed by seamless process c/w all accessories
- Colour: Refer to drawings

Section 07 84 00 - Firestopping
- Provide shop drawings for all fire caulking materials and ULC approved details for all penetrations made prior to installation, as required by NBC 2015 requirements.
- Refer to drawings for locations of all fire separations.

Section 07 92 00 - Joint Sealants
- Standard of Acceptance: Purpose made for specific application
- Provide submittal to consultant for review

Section 08 11 13 - Hollow Metal Doors and Frames
- Door Construction: A40 Galvanneal, Form each face sheet for doors from 18 gauge, lock seam welded.
- Frames: A40 Galvanneal, Welded type, thermally broken, 16 gauge
- Insulation: Styrene core
-

Section 08 36 13 - Sectional Doors
- Standard of Acceptance: Garex
- Insulated (R16)
- Thickness: 1.75" / 44mm
- Pre-finished metal, 20 gauge
- Texture: smooth
- Manual
- Weatherstripping on all four sides.
- Tracks: 12-gauge
- Cross Bars: Provide for doors over 12' / 3660mm wide

Section 08 71 00 - Door Hardware
- Standard of acceptance:
- Cylindrical Locksets: ND53GD SPA 626 SCH, Lever Handles, see schedule for function,
- Exit Devices / Panic Hardware: Sargent 8710 US26D & Sargent 21 VK-8746 ETL US26D, surface rods
- Astragal: KN Crowder W-25 (Interior and exterior of door)
- Closer: Sargent 351 P3
- Door Stop - Overhead: Sargent 590H US26D
- Door Stop – Wall: Standard Metal S120 US26D
- Flush Bolts: FB458 US26D IVE
- Hold Open Device – Magnetic: xx
- Kick Plate: 8400 10" X 1 1/2" LDW 630 IVE
- Butt Hinges: McKinney TA314 4&1/2" x 4" NRP US26D
- Threshold: CT-10 x by door width 627 KNC
- Door Sweep: W-24S x by door width 628 KNC
- Weatherstripping: KN Crowder W-20S x 20.4`
- Motorized Door Operator: 9542 MS ANCL LCN
- Electrical Strike: 6211 FSE CON 630 VON
- Access Corntrol: Refer to electrical drawings.
  - Commercial quality hardware
- Refer to door schedule for locations

Section 08 80 00 – Glazing
- Standard of Acceptance (Sealed Insulating Glass): Solar Control Low-E glass, VLT 70, SHGC 0.39

Section 09 21 16 - Gypsum Board Assemblies
- Standard of Acceptance: CGC
- Thickness: As scheduled on drawings. All 5/8" / 16mm GWB to be Type X.
- Include all screws, corner beads, casing beads, J molds

Section 09 91 00 – Painting
- Latex Eggshell for walls
- Latex Flat for ceilings
- Latex Semi-gloss for doors, door frames, handrails, guardrails
- Colour: Refer to drawings

INTERIOR WALL SCHEDULE

TYPE	NBCC	DESCRIPTION	FIRE RATING	STC	REMARKS
W1	N/A	- 12mm PLYWOOD - 38mm x 140mm WOOD STUD FRAMING @ 400mm O.C. (VOID CAVITY) - 12mm PLYWOOD	N/A	N/A	
W2	NBC 2015, W1A	- 16mm GYPSUM WALL BOARD TYPE X (1 LAYER) - 38mm x 140mm WOOD STUD FRAMING @ 400mm O.C. C/W MINERAL WOOD INSULATION (FILL CAVITY) - 16mm GYPSUM WALL BOARD TYPE X (1 LAYER)	1 HOUR	36	
W3	NBC 2015, W1A	- 12mm GYPSUM WALL BOARD TYPE X (1 LAYER) - CONTINUOUS AIR BARRIER (STAPLED) - 38mm x 140mm WOOD STUD FRAMING @ 400mm O.C. C/W MINERAL WOOL INSULATION (FILL CAVITY) - 6MIL POLY VAPOUR BARRIER - 16mm GYPSUM WALL BOARD TYPE X (1 LAYER) - NOTE: INSTALL VAPOUR BARRIER ON WARM SIDE OF WALL	1 HOUR	36	

EXTERIOR WALL SCHEDULE

TYPE	DESCRIPTION	REMARKS
EW1	- METAL CLADDING VERTICAL (EXPOSED FASTENERS). CP-1. - CONTINUOUS AIR BARRIER (STAPLED) - 38mm x 89mm WOOD PURLINS @ 610mm O.C. - 38mm x 140mm WOOD STUD FRAMING @ 400mm O.C	
EW2	- METAL CLADDING VERTICAL (EXPOSED FASTENERS). CP-1. - 19mm x 89mm WOOD STRAPPING @ 400mm O.C. HORIZONTAL - CONTINUOUS AIR BARRIER (STAPLED) - 19mm EXTERIOR PLYWOOD SHEATHING - 38mm x 140mm WOOD STUD FRAMING @ 400mm O.C. C/W BATT INSULATION (R24) - 6MIL POLY VAPOUR BARRIER - 16mm GYPSUM WALL BOARD	

FLOOR TYPE SCHEDULE

TYPE	DESCRIPTION	REMARKS
F1	- FLOOR FINISH AS SCHEDULED - CONCRETE FLOOR (REFER TO STRUCTURAL FOR THICKNESS) - 10MIL POLY VAPOUR BARRIER - 50mm RIGID INSULATION (R10) - COMPACTED MATERIAL (REFER TO STRUCTURAL AND GEOTECHNICAL)	
F2	- FLOOR FINISH AS SCHEDULED - 19mm T&G PLYWOOD - CONTINUOUS AIR BARRIER (STAPLED) - WOOD JOISTS OR WOOD I-JOISTS @ 400mm (REFER TO STRUCTURAL FOR SPACING AND DEPTH) C/W BATT INSULATION (R-24 - - 6MIL POLY VAPOUR BARRIER - 16mm GYPSUM WALL BOARD TYPE X (2 LAYERS) - DESIGN NO.: NBC 2015, F4a - FRR: 1 HOUR - STC: 33 - IIC: 31	
F3	- FLOOR FINISH AS SCHEDULED - 19mm T&G PLYWOOD - WOOD JOISTS OR WOOD I-JOISTS @ 400mm (REFER TO STRUCTURAL FOR SPACING AND DEPTH) - DESIGN NO.: N/A - FRR: N/A - STC: N/A - IIC: N/A	

ROOF TYPE SCHEDULE

TYPE	DESCRIPTION	REMARKS
R1	- 19mm METAL ROOFING, 230mm FLUTE CENTERS (EXPOSED FASTENERS) STANDARD OF ACCEPTANCE VICWEST ULTRAVIC - 38mm x 89mm WOOD STRAPPING @ 400mm O.C. - PRE-ENGINEERED WOOD TRUSSES @ 610mm O.C. - 19mm x 89mm WOOD STRAPPING @ 400mm O.C.	

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ARCHITECTS ASSOCIATION 19-12 CERTIFICATE of PRACTICE Scott Daniel MacNeill Coles Associates Ltd. AAPEI OF PRINCE EDWARD ISLAND
Nov. 16/21.
#211120.

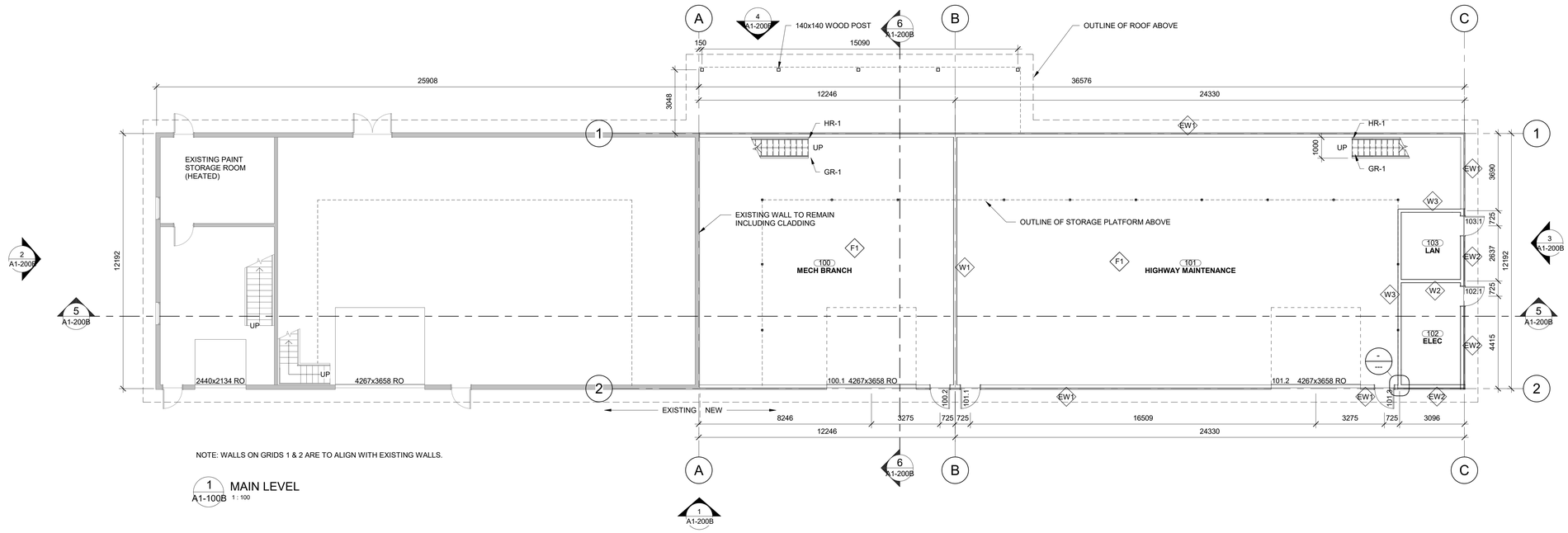
Client
PEI Department of Transportation & Infrastructure

Project Title
KCHD Bridgetown Upgrades
Warehouse Building
Bridgetown, Kings County
Prince Edward Island

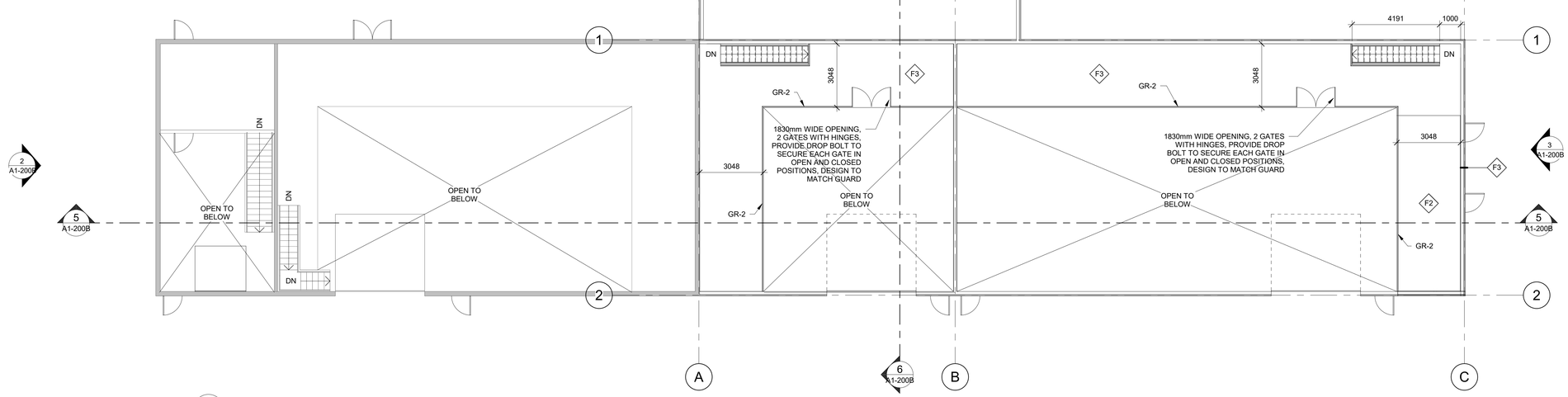
Sheet Title
Notes & Assemblies

No.	Description	Date
0	Issued for Addendum #2	2021-11-16

Date: November 2021
Dm By: JDA
Chk By: SDM
Revision: 0
Project Number: 211120
Drawing Number: A1-003B



1 MAIN LEVEL
A1-100B 1 : 100



2 PLATFORM LEVEL
A1-100B 1 : 100

LEGEND

	EXISTING WALL
	NEW PARTITION (REFER TO FLOOR PLAN FOR WALL TYPE)
101 ROOM NAME	UNIT TAG AND NUMBER
100.1	DOOR TAG
EW1	WALL TAG
	1 HR FIRE RESISTANCE RATING (REFER TO WALL SCHEDULE)
HR-1	HANDRAIL, WALL MOUNTED
GR-1	GUARDRAIL, ATTACHED TO TOP OF STRINGER
GR-2	GUARDRAIL, BASEPLATE MOUNTED TO FLOOR

TRUE NORTH
PROJECT NORTH

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NOV. 16/21.
ARCHITECTS ASSOCIATION 19-12 CERTIFICATE of PRACTICE
Scott Daniel MacNeill
Coles Associates Ltd.
AAPEI OF PRINCE EDWARD ISLAND
#211120.

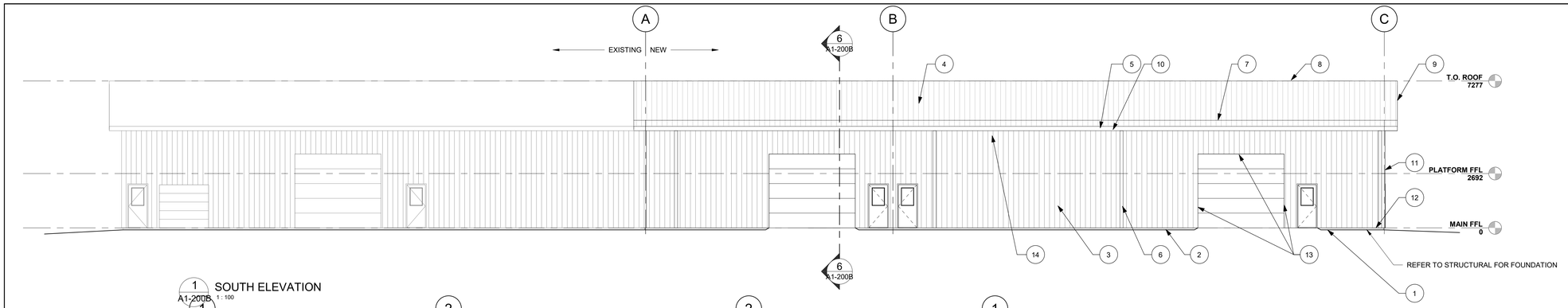
Client
PEI Department of Transportation & Infrastructure

Project Title
KCHD Bridgetown Upgrades
Warehouse Building
Bridgetown, Kings County
Prince Edward Island

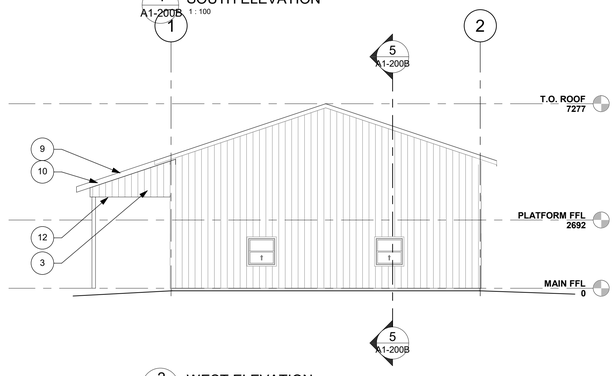
Sheet Title
Floor Plan

No.	Description	Date
0	Issued for Addendum #2	2021-11-16

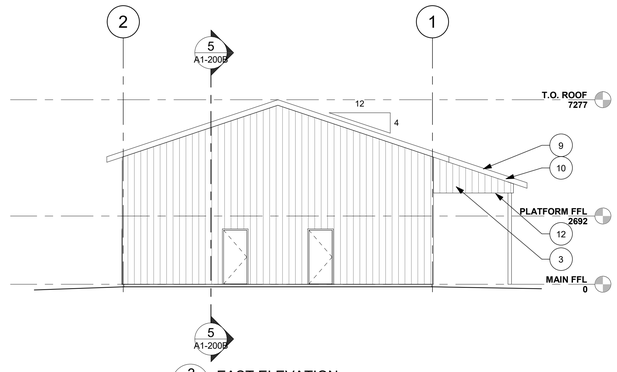
Date: November 2021
Dm By: JDA
Chk By: SDM
Revision: 0
Project Number: 211120
Drawing Number: A1-100B



1 SOUTH ELEVATION
A1-200B 1 : 100



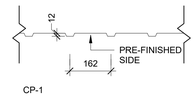
2 WEST ELEVATION
A1-200B 1 : 100



3 EAST ELEVATION
A1-200B 1 : 100

LEGEND:

PRE-FINISHED METAL, VERTICAL, EXPOSED SCREWS. CP-1

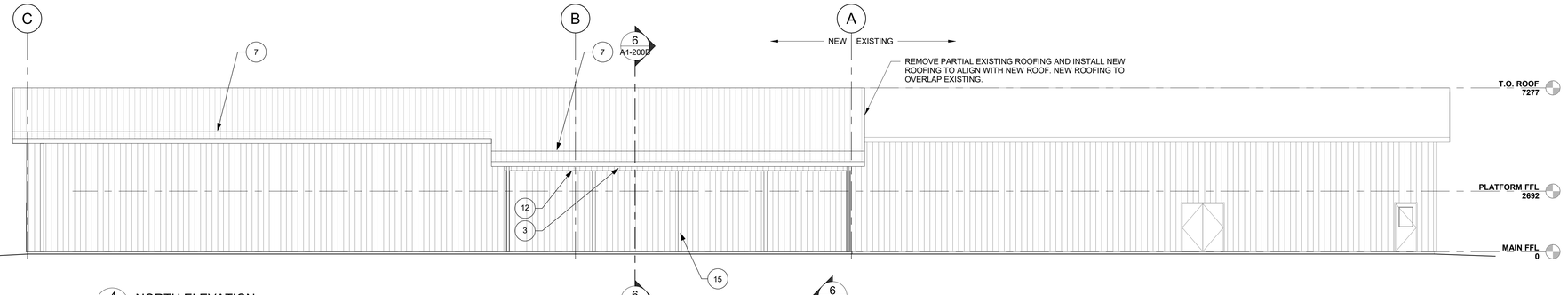


CP-1

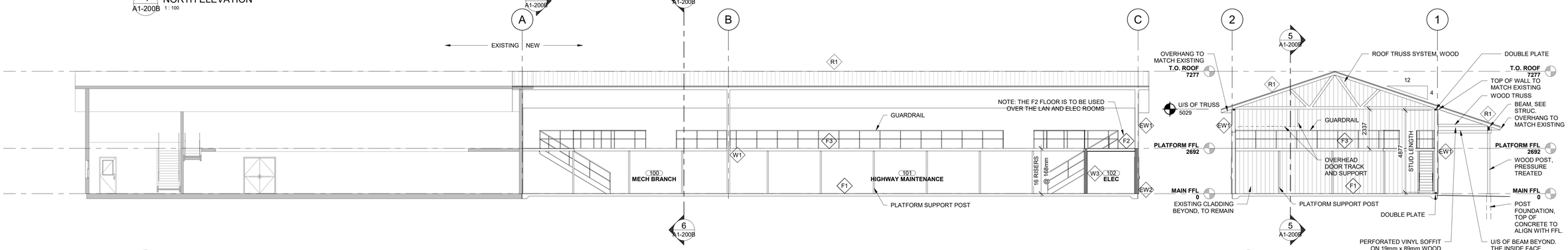
REFER TO MATERIAL/FINISH SCHEDULE FOR INFO ON ALL MATERIAL TAGS.

CLADDING PROFILES
1 : 10

ELEVATION NOTES	
1	FINISH GRADE, MIN. 100mm BELOW CLADDING, FLUSH AT DOORS, REFER TO CIVIL FOR MATERIAL
2	EXPOSED CONCRETE, POURED IN PLACE.
3	PRE-FINISHED METAL CLADDING
4	PRE-FINISHED METAL ROOFING, MT-4
5	PRE-FINISHED METAL GUTTER, MT-1
6	PRE-FINISHED METAL DOWNSPOUT, MT-1
7	PRE-FINISHED METAL SNOW GUARD, MATCH ROOFING COLOUR
8	PRE-FINISHED METAL VENTED RIDGE CAP, MATCH ROOFING COLOUR
9	PRE-FINISHED METAL RAKE TRIM, 64mm VERTICAL, NO F-TRIMS, MATCH ROOFING COLOUR
10	PRE-FINISHED METAL FASCIA, MT-1
11	PRE-FINISHED METAL CORNER TRIM, 100mm x 100mm, MT-2
12	PRE-FINISHED METAL FLASHING, MT-2
13	PRE-FINISHED METAL TRIM, 100mm x AS REQ'D, MT-1
14	PERFORATED VINYL SOFFIT, VN-1
15	PRESSURE TREATED WOOD, UN-FINISHED



4 NORTH ELEVATION
A1-200B 1 : 100



5 BUILDING SECTION
A1-200B 1 : 100

6 BUILDING SECTION
A1-200B 1 : 100

NOTE: THE NEW BUILDING IS TO BE A STRAIGHT EXTRUSION OF THE EXISTING. ALL CLADDING MATERIALS AND TRIMS ARE TO BLEND WITH EXISTING.

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Nov. 16/21.
E211120.

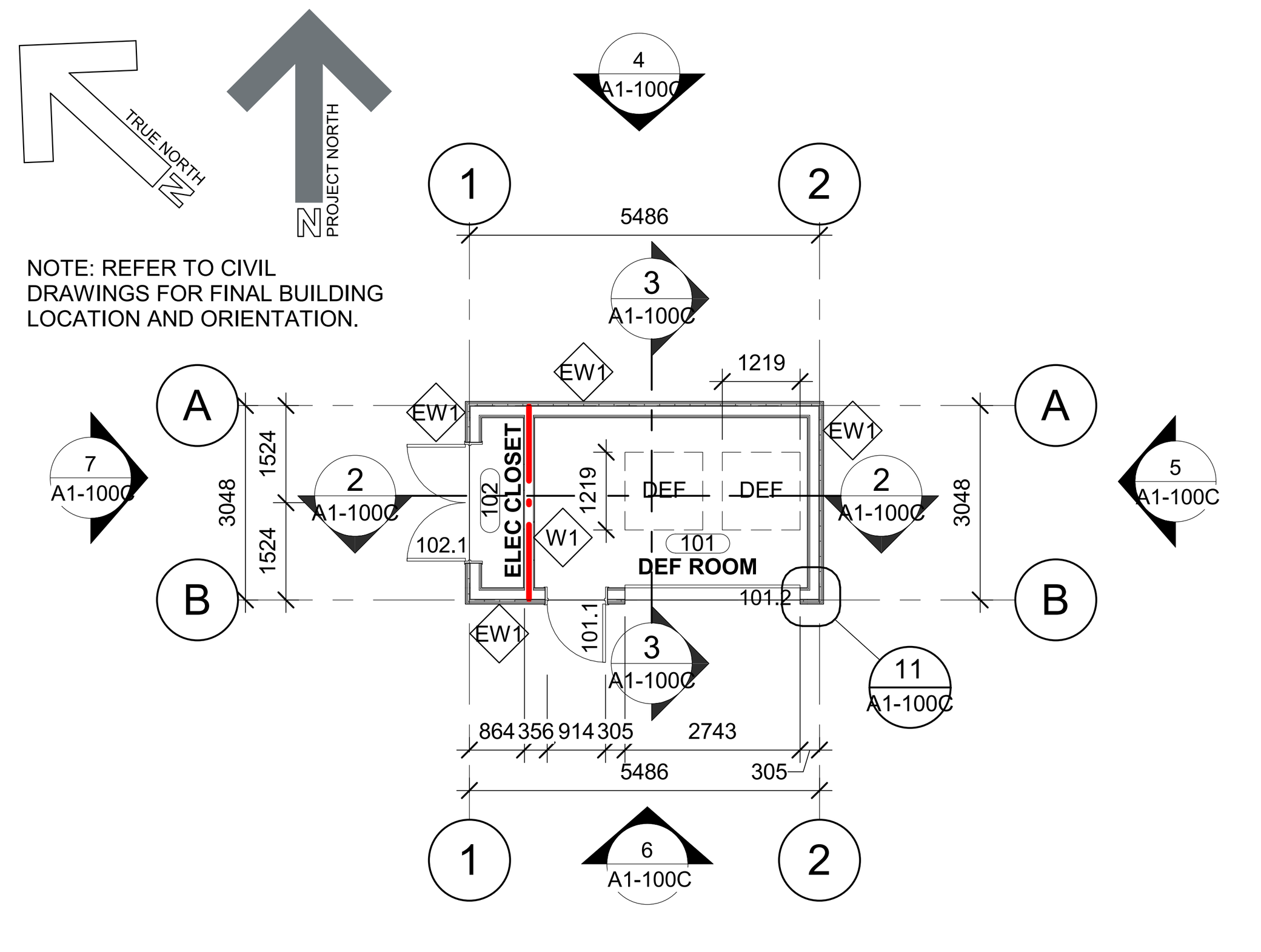
Client
PEI Department of Transportation & Infrastructure

Project Title
KCHD Bridgetown Upgrades
Warehouse Building
Bridgetown, Kings County
Prince Edward Island

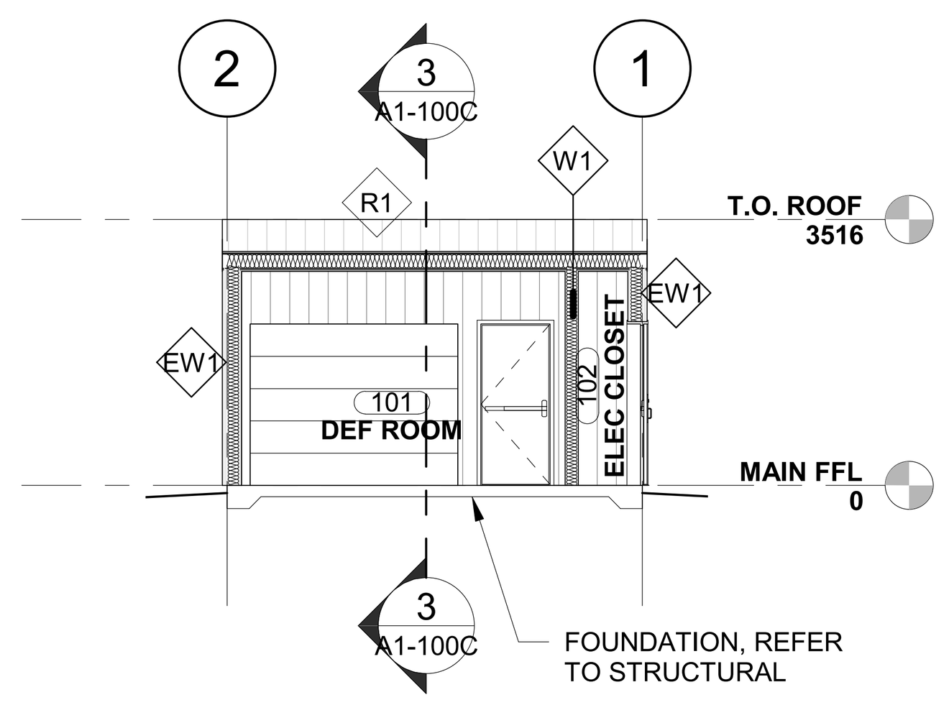
Sheet Title
Exterior Elevations & Building Section

No.	Description	Date
0	Issued for Addendum #2	2021-11-16

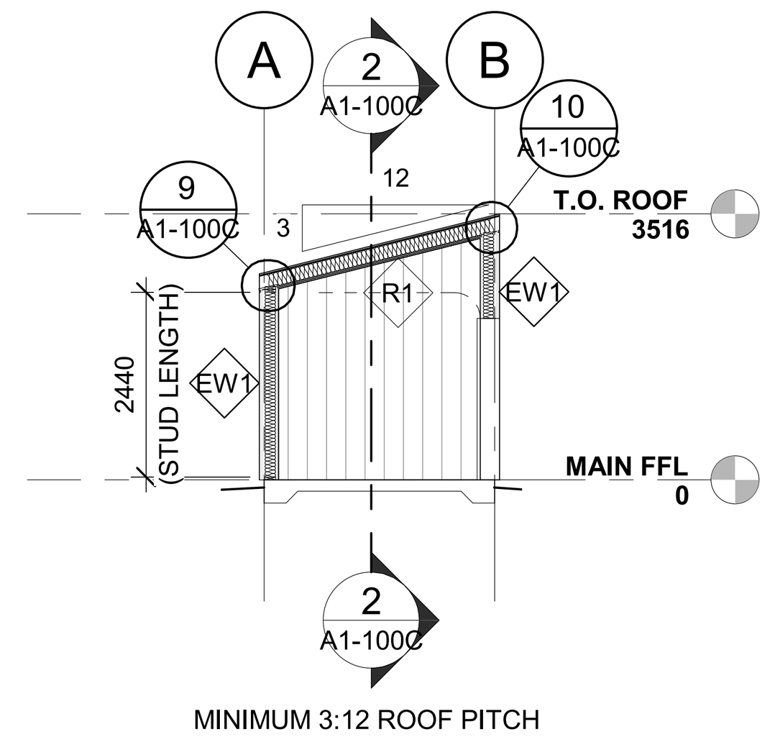
Date: November 2021
Drn By: JDA
Chk By: SDM
Revision 0
Project Number: 211120
Drawing Number: A1-200B



1 FLOOR PLAN A1-100C 1 : 100



2 SECTION A1-100C 1 : 100



3 SECTION A1-100C 1 : 100

GENERAL NOTES

1. VERIFY ALL DIMENSIONS AND REPORT ANY DISCREPANCIES TO THE CONSULTANT BEFORE PROCEEDING WITH THE WORK.
2. THE WORK SHALL BE IN ACCORDANCE WITH THE NATIONAL BUILDING CODE OF CANADA (NBCC 2015) & CSA 2018 B651-18 UNLESS OTHERWISE NOTED ON THE DRAWINGS.
3. COMPLY WITH ALL LOCAL MUNICIPAL AND PROVINCIAL BY-LAWS AND REGULATIONS.
4. CONTRACTOR TO VERIFY LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION.
5. BENCH MARKS TO BE ESTABLISHED BY CONTRACTOR.
6. ALL PENETRATIONS IN RATED PARTITIONS AND/OR FLOOR ASSEMBLIES FOR PLUMBING, DUCTING OR ELECTRICAL ARE TO BE SEALED. FIRE STOP IN ACCORDANCE WITH WALL AND/OR FLOOR TYPES. SUBMIT ULC DETAILS AND MATERIALS DURING SHOP DRAWING PROCESS FOR REVIEW PRIOR TO INSTALLATION.
7. ALL WOOD FRAMING TO BE CONSTRUCTED OF APPROVED MATERIALS AND LATERALLY STRAPPED AND SUPPORTED AS PER NBCC 2015 STRUCTURAL REQUIREMENTS.
8. ALL OTHER DISCIPLINES SHOWN FOR GENERAL INTENT ONLY. REFER TO CORRESPONDING DRAWINGS.
9. PERIMETER GRID LINES ARE TO FACE OF FOUNDATION. UNLESS NOTED OTHERWISE.
10. STUD SPACING ON STRUCTURAL DRAWINGS OVERRIDES THE ARCHITECTURAL STUD SPACING.
11. REFER TO MATERIAL/FINISH SCHEDULE FOR INFO ON ALL MATERIAL TAGS.

MATERIAL FINISH SCHEDULE:

MT-1 PRE-FINISHED METAL, GREEN (MATCH EXISTING)
MT-2 PRE-FINISHED METAL, ANTIQUE LINEN (MATCH EXISTING)
MT-3 PRE-FINISHED METAL, WHITE
P-1 PAINT (MATCH GREEN PRE-FINISHED METAL)
P-2 CLEAR CONCRETE SEALER

ROOM FINISH SCHEDULE							
ROOM NO	ROOM NAME	FLOOR		WALLS			
		FINISH	BASE	NORTH FIN.	EAST FIN.	SOUTH FIN.	WEST FIN.
101	DEF ROOM	P-2	MT-3	MT-3	MT-3	MT-3	MT-3
102	ELEC CLOSET	P-2	MT-3	MT-3	MT-3	MT-3	MT-3

EXTERIOR WALL SCHEDULE

TYPE	DESCRIPTION	REMARKS
EW1	- METAL CLADDING VERTICAL (EXPOSED FASTENERS) CP-1 - 19mm x 89mm WOOD STRAPPING @ 610mm O.C. (HORIZONTAL) - 25.4mm RIGID INSULATION (R5) - CONTINUOUS AIR BARRIER (STAPLED) - 12mm EXTERIOR PLYWOOD SHEATHING - 38mm x 140mm WOOD STUD FRAMING @ 400mm O.C. C/W BATT INSULATION (R24) - POLY VAPOUR BARRIER - 19mm x 89mm WOOD STRAPPING @ 610mm O.C. - METAL CLADDING VERTICAL (EXPOSED FASTENERS). CP-1.	

INTERIOR WALL SCHEDULE

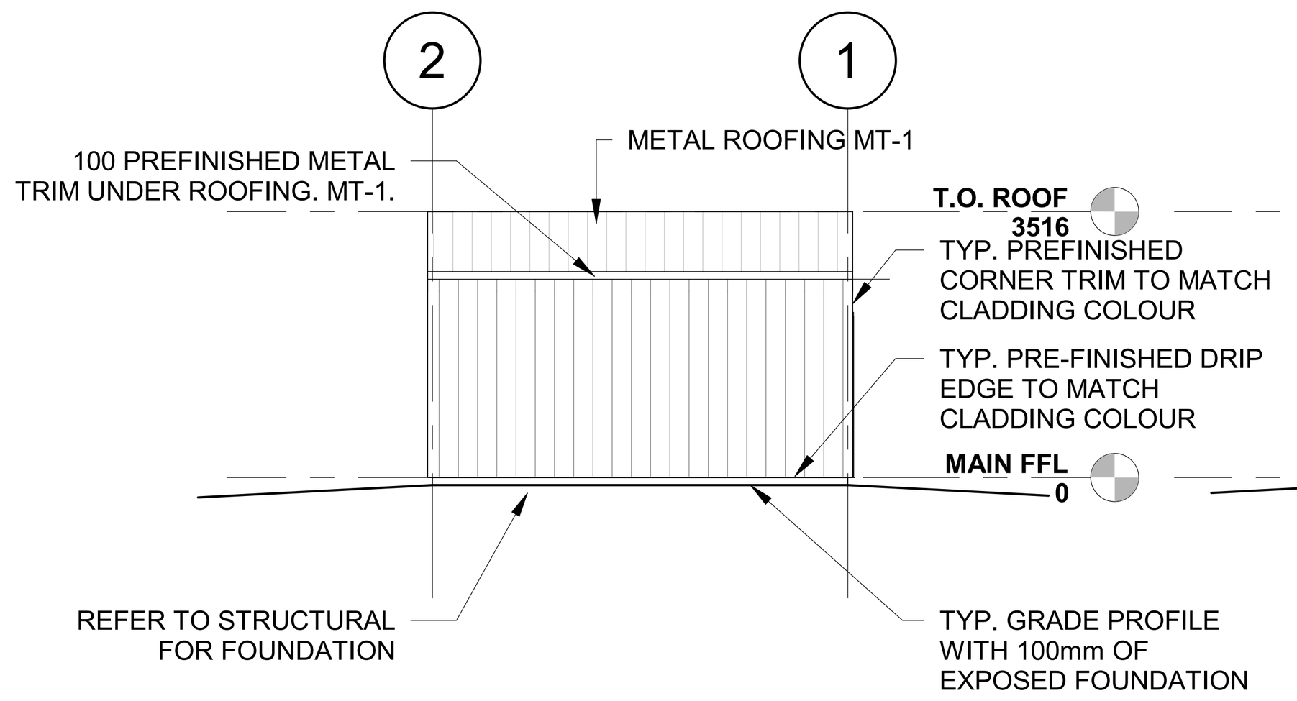
TYPE	DESCRIPTION	REMARKS
W1	- METAL CLADDING VERTICAL (EXPOSED FASTENERS). CP-1. - 16mm GYPSUM WALL BOARD TYPE X (1 LAYER) - 38mm x 140mm WOOD STUD FRAMING @ 400mm O.C. C/W MINERAL WOOL INSULATION (FILL CAVITY) - 16mm GYPSUM WALL BOARD TYPE X (1 LAYER) - METAL CLADDING VERTICAL (EXPOSED FASTENERS). CP-1. - DESIGN NO.: NBC 2015, W1A - FRR: 1 HOUR - STC: 36	

ROOF TYPE SCHEDULE

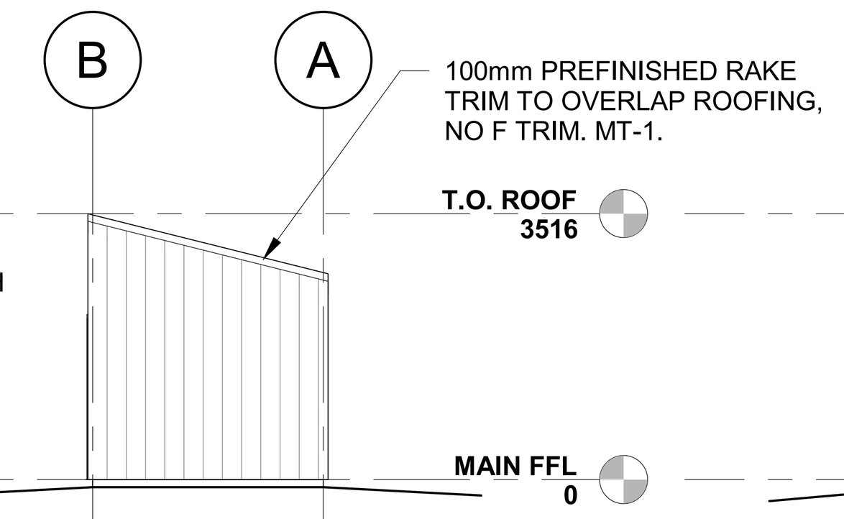
TYPE	DESCRIPTION	REMARKS
R1	- 19mm METAL ROOFING, 230mm FLUTE CENTERS (EXPOSED FASTENERS) STANDARD OF ACCEPTANCE: VICWEST ULTRAVIC - CONTINUOUS HIGH TEMPERATURE MEMBRANE (SELF ADHESIVE) - 12mm EXTERIOR PLYWOOD SHEATHING - 38mm x 184mm WOOD RAFTERS @ 400mm O.C. C/W BATT INSULATION (FILL CAVITY) - POLY VAPOUR BARRIER - 19mm x 89mm WOOD STRAPPING @ 610mm O.C. - METAL CLADDING PERPENDICULAR TO STRAPPING AND SLOPED TO MATCH ROOF (EXPOSED FASTENERS) CP-1.	

FLOOR TYPE SCHEDULE

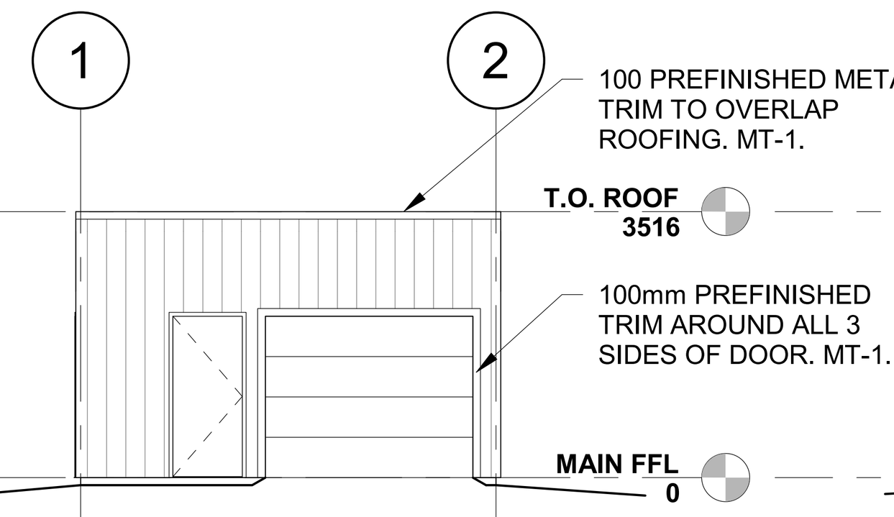
TYPE	DESCRIPTION	REMARKS
F1	- FLOOR FINISH AS SCHEDULED - CONCRETE FLOOR (REFER TO STRUCTURAL FOR THICKNESS) - 10MIL POLY VAPOUR BARRIER - 50mm RIGID INSULATION - COMPACTED MATERIAL (REFER TO STRUCTURAL AND GEOTECHNICAL) - DESIGN NO.: N/A - FRR: N/A - STC: N/A - IIC: N/A	



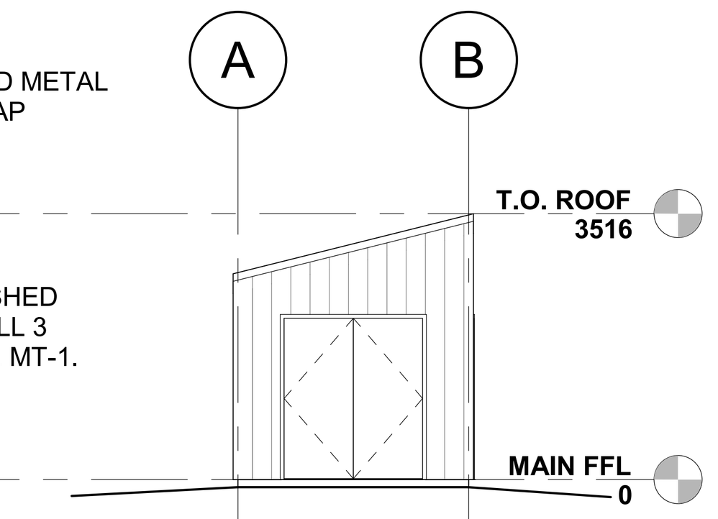
4 NORTH ELEVATION A1-100C 1 : 100



5 EAST ELEVATION A1-100C 1 : 100

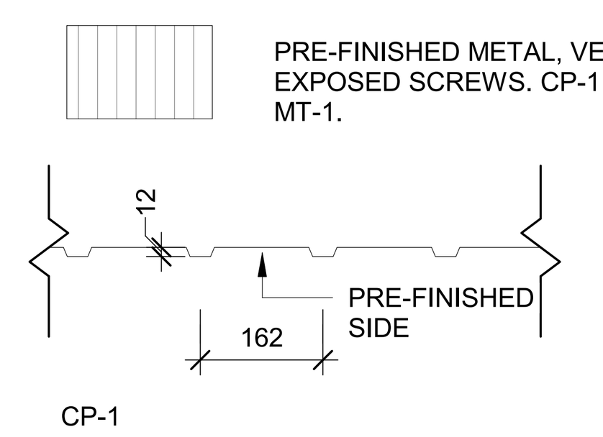


6 SOUTH ELEVATION A1-100C 1 : 100



7 WEST ELEVATION A1-100C 1 : 100

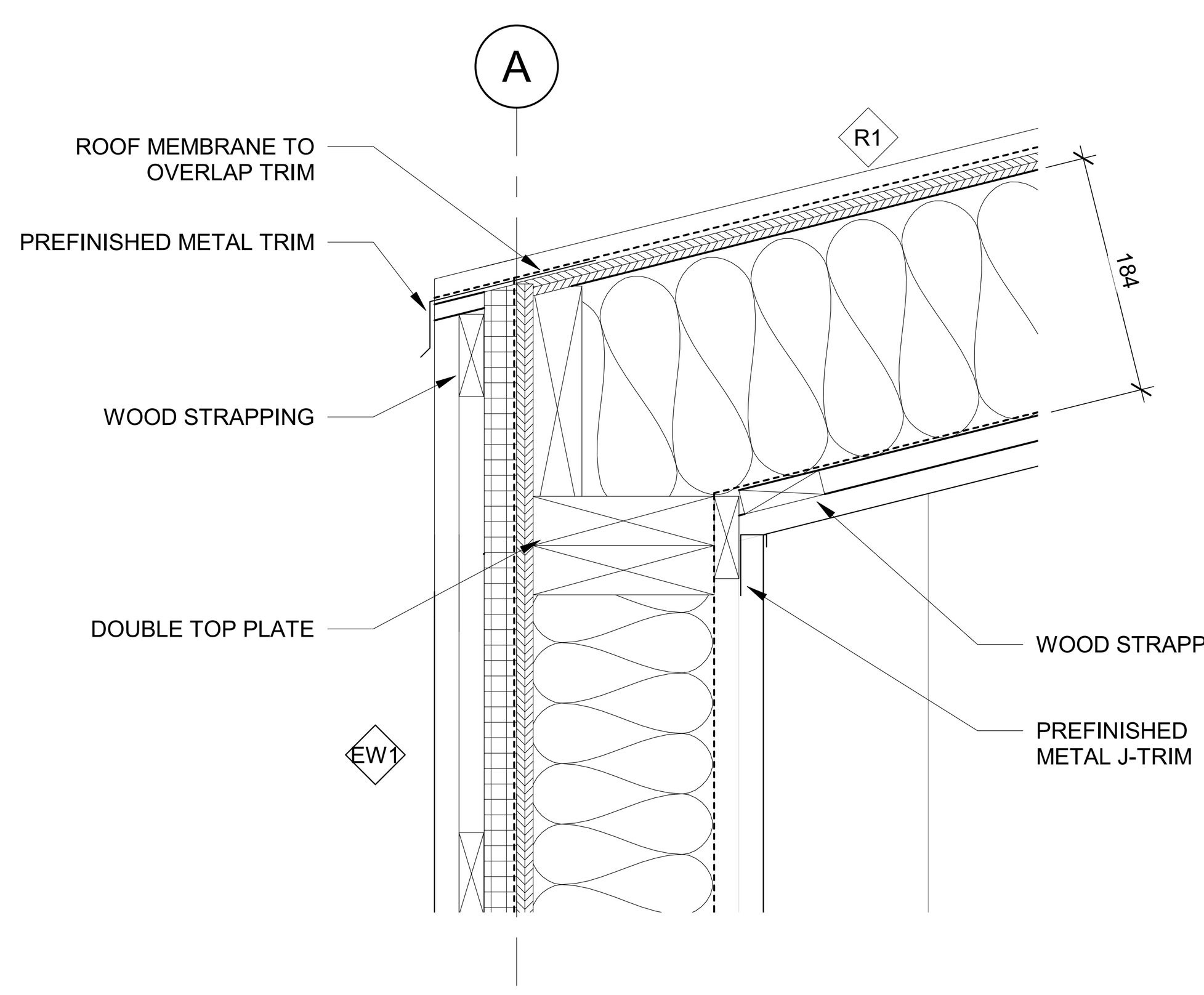
LEGEND:



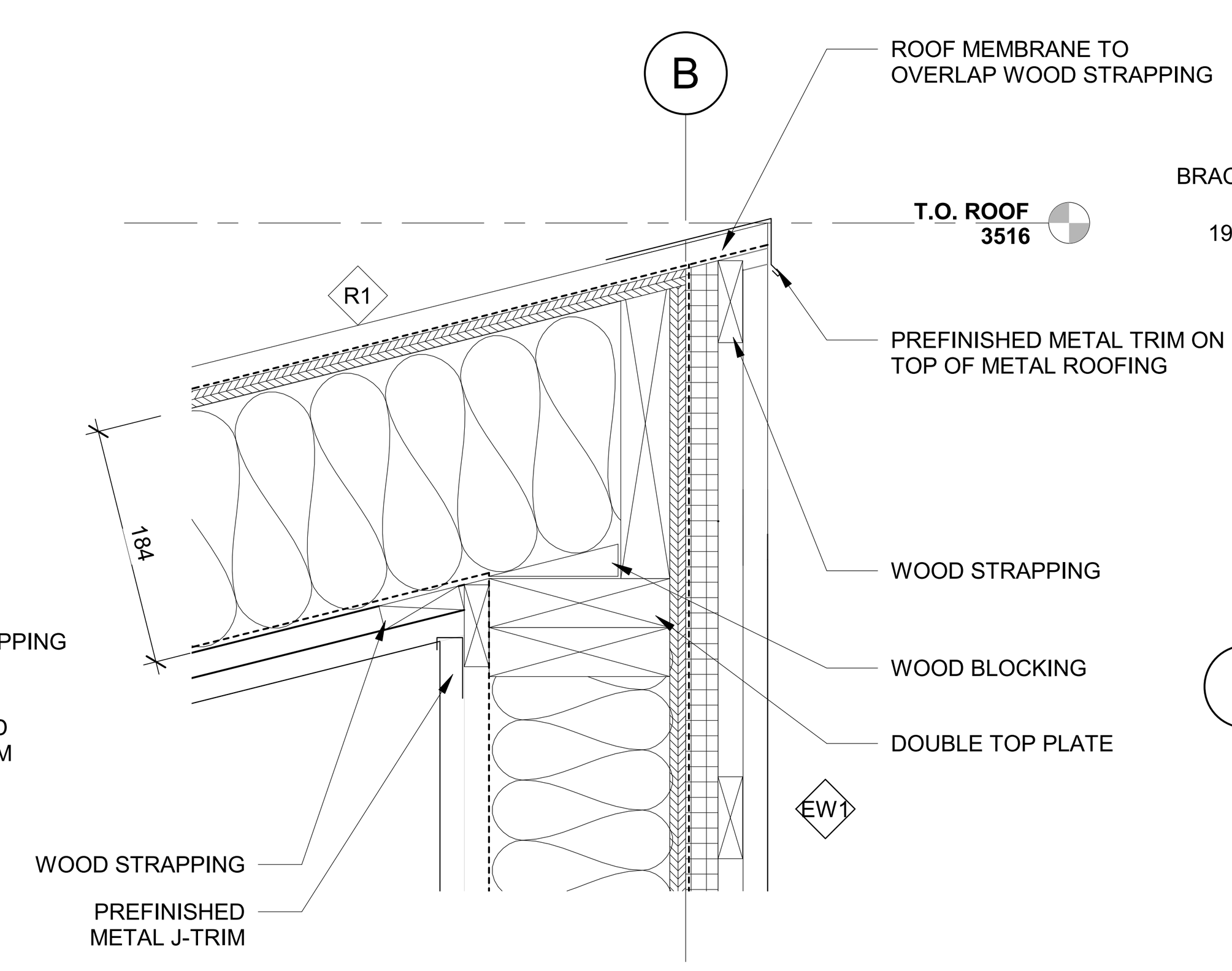
8 CLADDING PROFILES A1-100C 1 : 10

LEGEND:

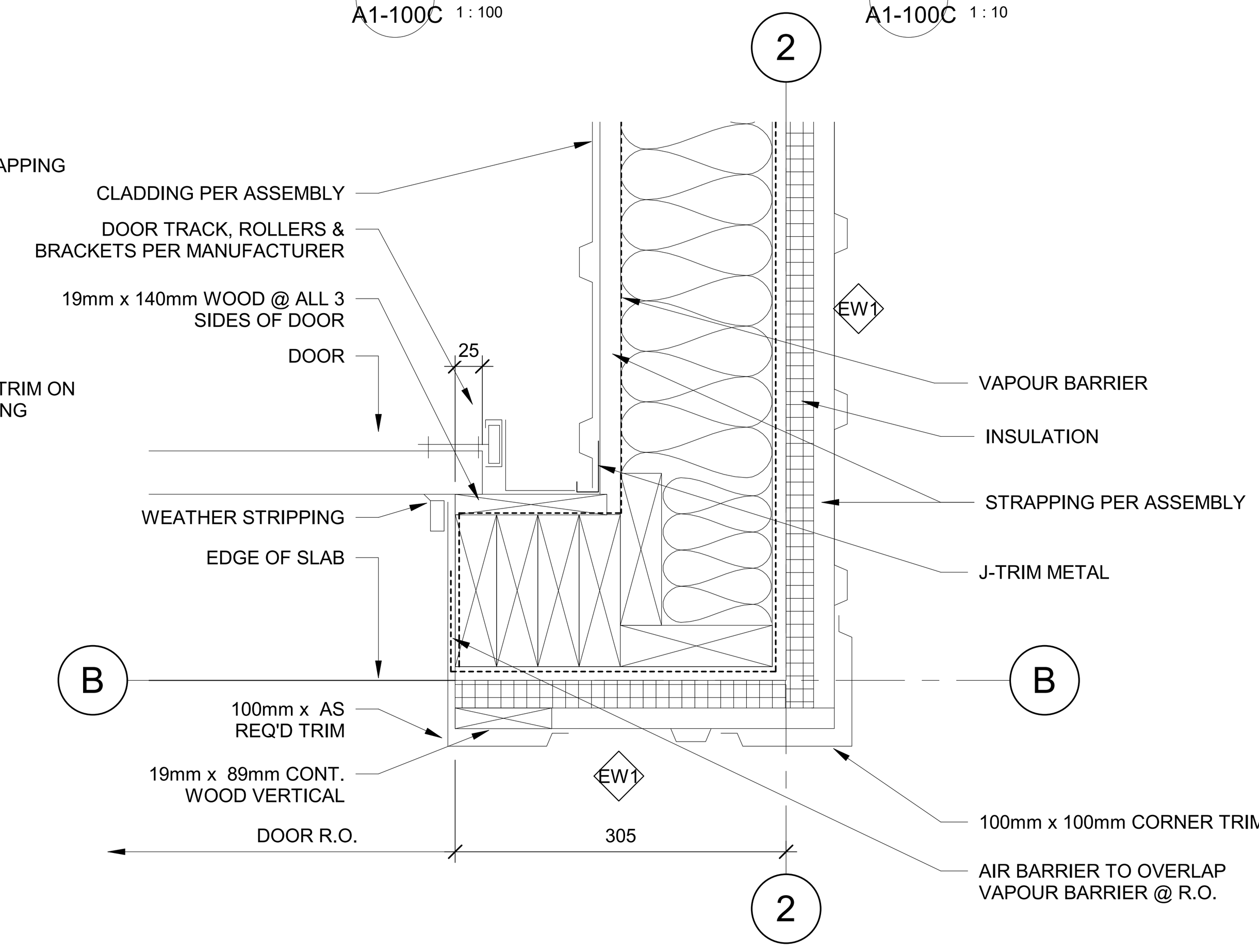
NEW PARTITION (REFER TO FLOOR PLAN FOR WALL TYPE)
101 ROOM NAME — UNIT TAG AND NUMBER
100.1 — DOOR TAG
EW1 — WALL TAG
1 HR FIRE RESISTANCE RATING (REFER TO WALL SCHEDULE)



9 SECTION @ EAVE A1-100C 1 : 5



10 SECTION @ EAVE A1-100C 1 : 5



11 JAMB @ SECTIONAL DOOR A1-100C 1 : 5

Outline Specifications

Section 07 21 13 - Board Insulation
- Standard of Acceptance: IKO Ener-Air, Polyisocyanurate
- Location: Exterior walls
- Thickness & R-Value per assemblies
- Compressive Strength: 16 PSI min

Section 07 21 16 - Blanket Insulation
- Standard of acceptance: Owens Corning, Fiberglass

Section 07 26 00 - Vapour Retarders
- Polyethylene sheet 10 mil under concrete slabs
- Polyethylene sheet 6 mil to be used on all walls and ceilings.
- Locate on warm side of insulation in all cases.

Section 07 27 00 - Air Barriers
- Standard of Acceptance: Spun bonded olefin sheet, Tyvek.

Section 07 62 00 - Sheet Metal Flashing and Trim
- Prefinished metal, 28 gauge
- Colour: Refer to drawings

Section 07 84 00 - Firestopping
- Provide shop drawings for all fire caulking materials and ULC approved details for all penetrations made prior to installation, as required by NBC 2015 requirements.
- Refer to drawings for locations of all fire separations.

Section 07 92 00 - Joint Sealants
- Standard of Acceptance: Purpose made for specific application
- Provide submittal to consultant for review

Section 08 11 13 - Hollow Metal Doors and Frames
- Door Construction: A40 Galvanneal, Form each face sheet for doors from 18 gauge, lock seam welded.
- Frames: A40 Galvanneal, Welded type, thermally broken, 16 gauge
- Insulation: Styrene core

Section 08 36 13 - Sectional Doors
- Standard of Acceptance: Garex
- Insulated (R16), 44mm
- Pre-finished metal, 20 gauge
- Manual
- Weatherstripping on all four sides.

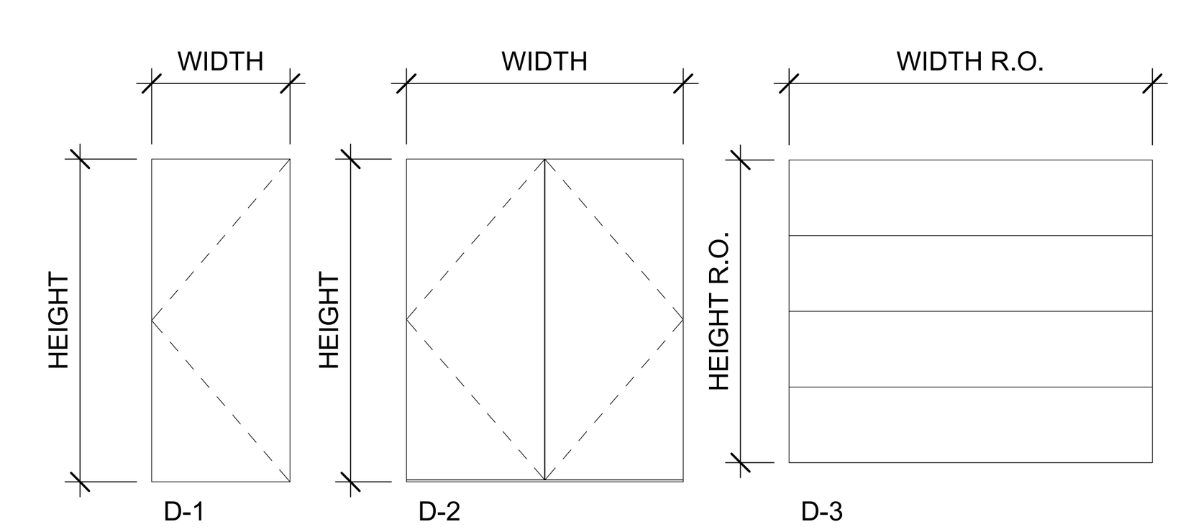
Section 08 71 00 - Door Hardware
- Standard of acceptance:
- Cylindrical Locksets: ND53GD SPA 626 SCH, Lever Handles, see schedule for function,
- Astragal: KN Crowder W-25 (Interior and exterior of door)
- Closer: Sargent 351 P3
- Door Stop - Overhead: Sargent 590H US26D
- Flush Bolts: FB458 US26D IVE
- Kick Plate: 8400 10" X 1 1/2" LDW 630 IVE
- Butt Hinges: McKinney TA314 4&1/2" x 4" NRP US26D
- Threshold: CT-10 x by door width 627 KNC
- Door Sweep: W-24S x by door width 628 KNC
- Weatherstripping: KN Crowder W-20S x 20.4'
- Electrical Strike: 6211 FSE CON 630 VON
- Access Control: Refer to electrical drawings.
  - Commercial quality hardware
  - Refer to door schedule for locations

Section 09 21 16 - Gypsum Board Assemblies
- Standard of Acceptance: CGC
- Thickness: As scheduled on drawings. All 16mm / 5/8" GWB to be Type X.
- Include all screws, corner beads, casing beads, J molds

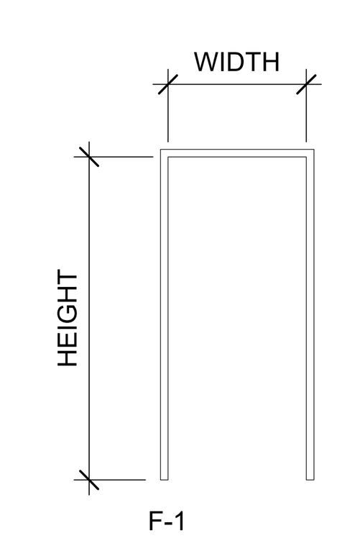
DOOR SCHEDULE AND FRAME SCHEDULE

DOOR NO.	ROOM NAME	FIRE RATING	DOOR: WIDTH (mm)	DOOR: HEIGHT(mm)	DOOR: THICKNESS (mm)	DOOR: TYPE	DOOR: MATERIAL	DOOR: FINISH	FRAME: TYPE	FRAME: MATERIAL	FRAME: FINISH	CYLINDRICAL LOCKSET LEVER HANDLE	STORE ROOM	ENTRANCE	BATH/BEDROOM	PANIC HARDWARE	ASTRAGAL	CLOSER	DOOR STOP - OVERHEAD	FLUSH BOLTS	HOLD OPEN DEVICE - MAGNETIC	KICK PLATE BOTH SIDES	BUTT HINGES	THRESHOLD	DOOR SWEEP	WEATHER STRIPPING	MOTORIZED DOOR OPERATOR	ELECTRICAL STRIKE	ACCESS CONTROL - CARD READER	PULL HANDLES	HARDWARE GROUP	COMMENTS
101.1	DEF ROOM		914	2134	44	D-1	HM	P-1	F-1	PS	P-1	X		X				X	X			X	X	X	X	X		X	X			
101.2	DEF ROOM		2743	2134	44	D-3	SPEC	MT-1	SPEC	SPEC	MT-1															X						MANUAL OPERATION WITH LOCKING PIN ON INSIDE
102.1	ELEC CLOSET		1829	2134	44	D-2	HM	P-1	F-1	PS	P-1	X		X			X	X	X	X			X	X	X	X						

DOOR SCHEDULE ABBREVIATIONS:
HM HOLLOW METAL
PS PRESSED STEEL



DOOR TYPES 1 : 50



FRAME TYPES 1 : 50

DOOR SCHEDULE NOTES

1. ALL INTERIOR DOOR FRAMES TO BE INSTALLED 150mm FROM ADJACENT WALL UNLESS NOTED OTHERWISE, MEASURED FROM CENTER LINE OF THE HINGE PIN.
2. ALL EXTERIOR DOOR FRAMES AND THRESHOLDS TO BE THERMALLY BROKEN.
3. ALL EXTERIOR DOOR AND FRAMES TO BE INSULATED.
4. ALL DOORS ARE HOLLOW METAL UNLESS NOTED OTHERWISE.
5. ALL FRAMES ARE PRESSED STEEL UNLESS NOTED OTHERWISE.
6. ALL FRAMES F-1 UNLESS NOTED OTHERWISE.
7. ALL OVERHEAD/ROLLING SERVICE DOORS ARE DIMENSIONED TO THE ROUGH OPENINGS. DOORS TO OVERLAP HEAD AND JAMB ROUGH OPENINGS BY 1".

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211120.

Client: PEI Department of Transportation & Infrastructure

Project Title: KCHD Bridgetown Upgrades
DEF Building
Bridgetown, Kings County
Prince Edward Island

Sheet Title: Floor Plan

No.	Description	Date
0	Issued for Addendum #2	2021-11-16

Date: November 2021
Drn By: JDA
Chk By: SDM
Project Number: 211120
Drawing Number: A1-100C
Revision: 0