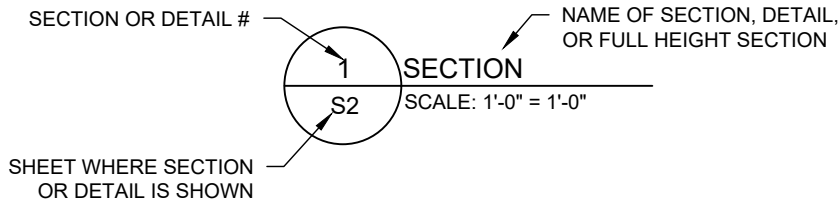


DRAWING LIST
S1 GENERAL NOTES, BASEPLATE PLAN AND DETAILS
S2 SECOND FLOOR, CEILING FRAMING PLAN AND DETAILS
S3 ROOF FRAMING PLAN AND ELEVATIONS
S4 ELEVATIONS AND DETAILS

**SECTION SYMBOL**



**DESIGN LOADING**

THE BUILDING IS DESIGNED IN ACCORDANCE WITH THE 2011 EDITION OF THE MANITOBA BUILDING CODE.  
 - SNOW (ROOF) =  $C_b(S_s) + S_r = 26$  psf (MBC 2011 PART 9 SNOW LOADING)  
 - WIND  $q(1/50) = 0.45$  kPa (9.4 psf)  
 -  $I_s / I_w = 1.0$  (NORMAL IMPORTANCE)

**GENERAL NOTES**

- ALL RELEVANT CSA CODES, PROVINCIAL BUILDING CODE, WORKMAN'S COMPENSATION BOARD, WORKPLACE HEALTH & SAFETY BOARD, AND LOCAL BY-LAWS SHALL APPLY TO ALL WORK ON THIS PROJECT.
- DESIGN LIVE LOADS SHOULD NOT BE EXCEEDED AT ANY TIME DURING CONSTRUCTION. FOR CONCRETE STRUCTURES, DESIGN LIVE LOADS MAY ONLY BE APPLIED AFTER CONCRETE REACHES ITS DESIGN STRENGTH.
- THE CONTRACTOR IS TO VERIFY DIMENSIONS, ELEVATIONS, SLOPES, AND DETAILS NOTED ON THE STRUCTURAL DRAWINGS WITH CONDITIONS ON SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY DISCREPANCY. DO NOT SCALE DRAWINGS.
- MODIFICATIONS, ALTERATIONS OR SUBSTITUTIONS MUST BE AUTHORIZED IN WRITING BY THE DESIGN ENGINEER. DO NOT CUT OR DRILL ANY OPENINGS INTO STRUCTURAL MEMBERS WITHOUT OBTAINING WRITTEN PERMISSION FROM THE STRUCTURAL CONSULTANT.
- THE GENERAL CONTRACTOR SHALL LOCATE ALL EXISTING SITE SERVICES PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND SAFETY OF ALL NECESSARY SHORING, BRACING, FORMWORK, AND SCAFFOLDING DURING WORK IN THIS PROJECT.
- THE STRUCTURE AND FOUNDATION SHALL BE BRACED IN ALL DIRECTIONS TO SAFELY WITHSTAND ALL LATERAL FORCES WHICH MAY BE ENCOUNTERED DURING ERECTION. THE BRACING SHALL REMAIN IN PLACE UNTIL ALL PERMANENT BRACING, FRAMING, CLADDING AND BACKFILL ARE IN PLACE.
- THE CONTRACTOR SHALL VERIFY AND PAY SPECIAL ATTENTION TO THE VERTICAL ALIGNMENT AND CONCRETE TOLERANCES OF FLOOR ELEVATIONS.
- THE CONTRACTOR SHALL ENSURE ALL MATERIALS ARE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS' SPECIFICATIONS.
- DRAWING SET DETAILS SUPERSTRUCTURE ONLY. THE FOUNDATION DESIGN, INCLUDING SPECIFICATION OF ANCHOR BOLTS & RELATED ANCHORAGE, TO BE SPECIFIED & DETAILED BY OTHERS TO SUIT LOCAL SOIL CONDITIONS & FACTORED LOADING SPECIFIED ON DRAWING SHEET 'S1'.

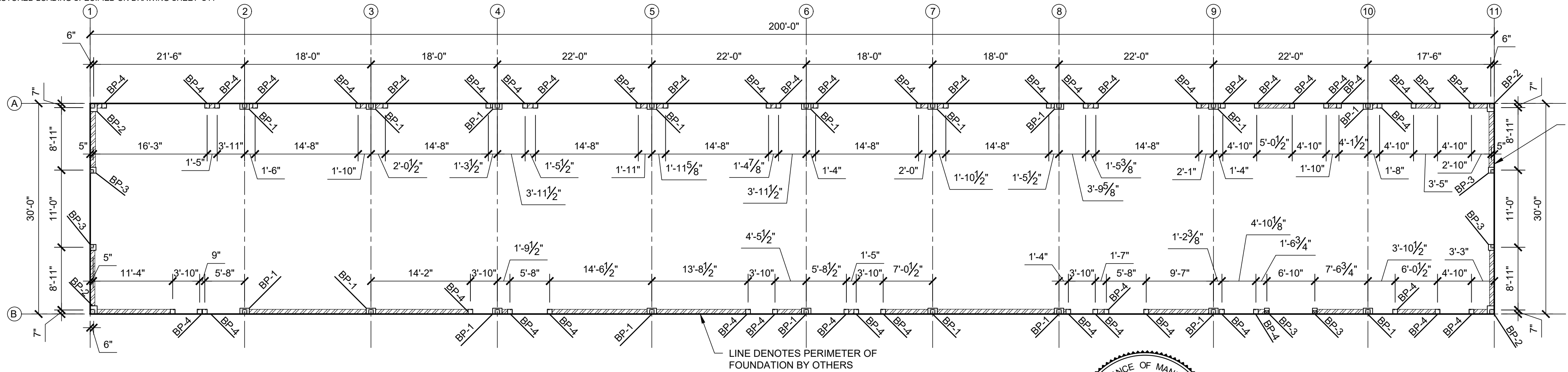
**STRUCTURAL STEEL**

- FABRICATE & ERECT STRUCTURAL STEEL IN ACCORDANCE WITH CSA-S16.1 (LATEST EDITION).
- STRUCTURAL STEEL SHALL CONFORM TO ASTM A500 (HOLLOW STRUCTURAL STEEL) & CSA G40.21; GRADE 350W (W SHAPES). STEEL PLATES SHALL CONFORM TO CSA-G40.21; GRADE 300W.
- ALL WELDING OF STRUCTURAL STEEL SHALL CONFORM TO W59. THE STEEL FABRICATOR IS TO BE CERTIFIED IN ACCORDANCE WITH W47.1. PROVIDE WRITTEN PROOF OF WELDER'S CERTIFICATION UPON REQUEST.
- SPLICING OF MEMBERS NOT PERMITTED UNLESS OTHERWISE NOTED.
- BOLTS, NUTS, AND WASHERS TO ASTM A325.
- ANCHOR BOLTS TO ASTM A307 U/N.
- PRIMER TO CONFORM TO THE REQUIREMENTS OF CGSB OR CISC/CPMA STANDARDS. ALL STEEL SHALL RECEIVE A SHOP COAT OF PRIMER EXCEPT SURFACES TO BE CONCRETED, WELDED, LIGHT ZINC COATED OR GALVANIZED. CLEAN ALL FIELD WELDS AFTER ERECTION AND TOUCH UP ALL UNPAINTED SURFACES WITH ONE COAT OF PRIMER PAINT TO MATCH SHOP COAT.
- GROUT BED UNDER BASE PLATES TO BE 35 MPa NON SHRINK GROUT.
- THE STEEL SUPPLIER SHALL BE RESPONSIBLE FOR THE DESIGN AND DETAILING OF ALL STRUCTURAL STEEL CONNECTIONS NOT EXPLICITLY SHOWN ON THE DRAWINGS.
- THERE SHALL BE NO CUTTING OF THE STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL CONSULTANT.
- ALL EXPOSED STEEL TO BE GALVANIZED UNLESS NOTED.
- STRUCTURAL STEEL SUPPLIER SHALL SUBMIT SHOP DRAWINGS BEARING THE SEAL OF A PROFESSIONAL ENGINEER IN THE PROJECT PROVINCE SHOWING ALL DESIGN AND FABRICATION DETAILS OF CONNECTIONS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.

**COLD FORMED STEEL**

- LIGHT GAUGE STEEL MEMBERS INCLUDING STEEL STUDS, JOISTS AND PURLINS TO BE SELECTED AND INSTALLED IN ACCORDANCE WITH CSA-S136.
- LIGHT GAUGE STEEL FRAMING SYSTEM COMPONENTS SHALL CONFORM TO THE REQUIREMENTS OF CAN/CGSB-7.1.
- LIGHT GAUGE STEEL FRAMING SHALL BE ERECTED TRUE AND PLUM WITHIN INDUSTRY TOLERANCES. TEMPORARY BRACING SHALL BE EMPLOYED WHEREVER NECESSARY TO WITHSTAND ALL LOADS TO WHICH THE STRUCTURE MAY BE SUBJECT DURING ERECTION AND SUBSEQUENT CONSTRUCTION. TEMPORARY BRACING SHALL BE LEFT IN PLACE AS LONG AS REQUIRED FOR THE SAFETY AND INTEGRITY OF THE STRUCTURE. THE ERECTOR SHALL ENSURE THAT DURING ERECTION A MARGIN OF SAFETY CONSISTENT WITH THE REQUIREMENTS OF THE MANITOBA BUILDING CODE AND CSA-S136 EXISTS IN THE UNCOMPLETED STRUCTURE.
- PROVIDE HEAD, SILL AND JAMB MEMBERS AND CONNECTIONS TO FRAME ALL OPENINGS.
- CONNECTION BETWEEN LIGHT GAUGE STEEL FRAMING MEMBERS SHALL BE BY BOLTS, WELDING OR SELF-DRILLING SCREWS.
- BOLTS AND NUTS TO ASTM A325.
- SELF-DRILLING SCREWS SHALL HAVE A MINIMUM COATING THICKNESS OF 0.008 MM OF ZINC.
- LIGHT GAUGE STEEL FRAMING MEMBERS SHALL HAVE A MINIMUM GALVANIZING COATING OF Z275(G-90).
- STEEL SHALL HAVE A METALLIC COATING THAT CONFORMS TO ASTM A653.
- WELDING SHALL CONFORM TO CSA S136, CSA W59 AND SHALL BE COMPLETED BY A WELDER CERTIFIED BY THE CANADIAN WELDING BUREAU TO CSA W47.1.
- ZINC RICH PAINT FOR TOUCHING UP WELDS AND DAMAGED METALLIC COATINGS SHALL CONFORM TO CAN/CGSB-1.181.
- CO-ORDINATE CONSTRUCTION AND PLACEMENT OF ALL LIGHT GAUGE STEEL FRAMING WITH ALL OTHER TRADES INCLUDING MECHANICAL, ELECTRICAL AND DOOR AND WINDOW PLACEMENT.
- STEEL ERECTOR SHALL SUPPLY AND INSTALL ALL TEMPORARY GUYING AND BRACING NECESSARY TO PROVIDE STABILITY FOR THE STRUCTURE AS A WHOLE. THESE SHALL REMAIN IN PLACE UNTIL FLOOR SLABS ARE WELL CURED, STEEL ROOF DECK IS FULLY WELDED AND/OR PERMANENT BRACING IS INSTALLED.

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HATCH DENOTES EXTENT OF 8" STEEL STUD WALL TRACK (800T200-43). (SEE DETAIL '5/S1') STOP TRACK AT BASEPLATE LOCATIONS WHERE REQUIRED. (SITE CONFIRM)

**BASEPLATE PLAN**

SCALE:  $\frac{3}{32}$ " = 1'-0"

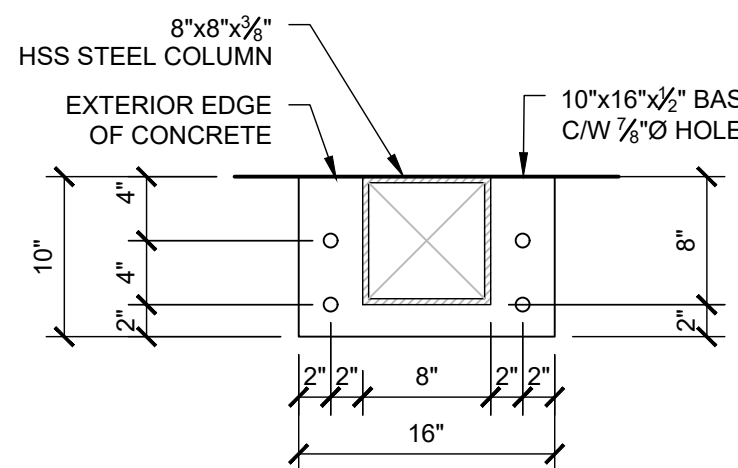
**PLAN NOTES:**

- ALL DIMENSIONS ARE TO BUILDING PERIMETER OR CENTER OF STEEL BASEPLATE U/N.

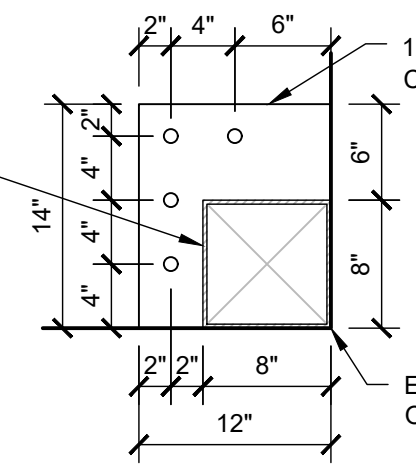
**NOTE:** FOUNDATION DESIGN, INCLUDING SPECIFICATION OF ANCHOR BOLTS & RELATED ANCHORAGE, TO BE SPECIFIED & DETAILED BY OTHERS TO SUIT LOCAL SOIL CONDITIONS & FACTORED LOADING.



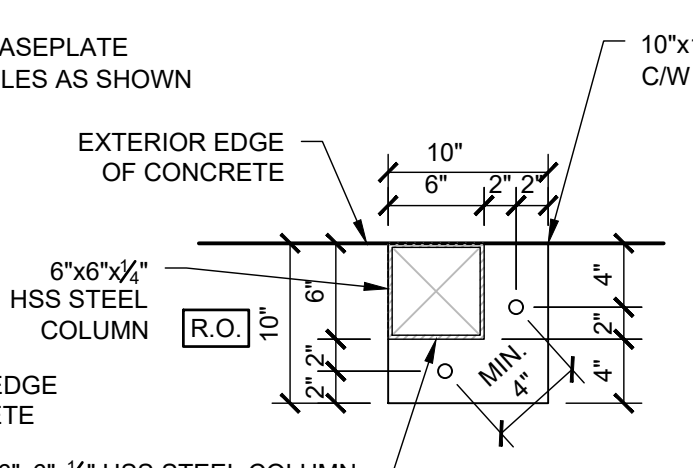
**APEGM**  
 Certificate of Authorization  
 KNH Sawatzky & Associates Ltd.  
 No. 1193 Date: July 07, 2021



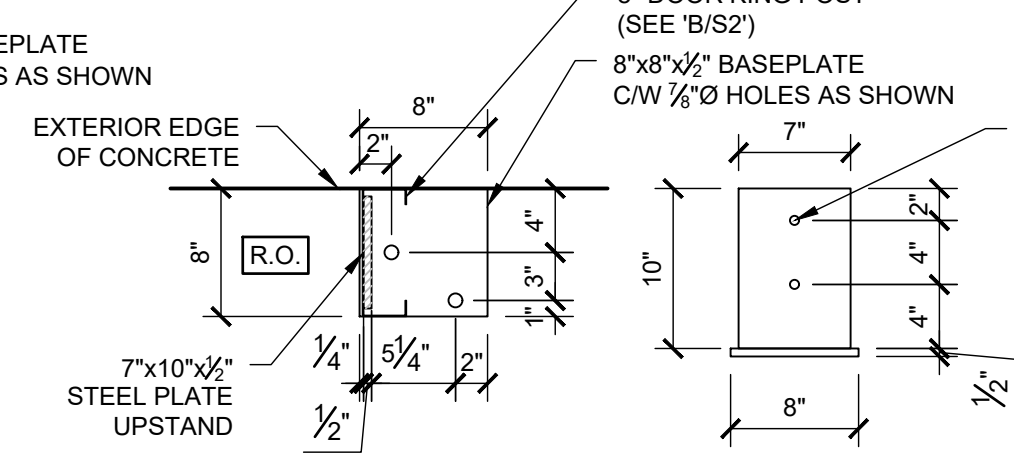
**1**  
S1  
**BASEPLATE DETAIL (BP-1)**  
SCALE: 1" = 1'-0"  
FACTORED VERTICAL LOAD = 40,000 LBS  
FACTORED HORIZONTAL LOAD = 5,000 LBS



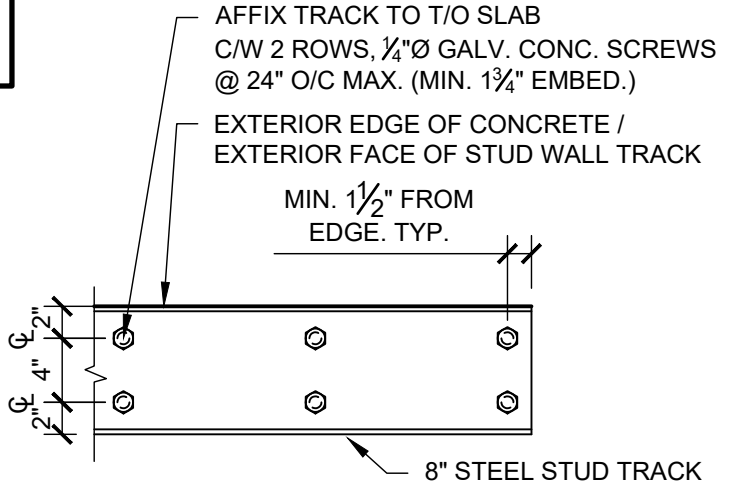
**2**  
S1  
**BASEPLATE DETAIL (BP-2)**  
SCALE: 1" = 1'-0"  
FACTORED VERTICAL LOAD = 32,000 LBS  
FACTORED HORIZONTAL LOAD = 4,000 LBS



**3**  
S1  
**BASEPLATE DETAIL (BP-3)**  
SCALE: 1" = 1'-0"  
FACTORED VERTICAL LOAD = 15,000 LBS  
FACTORED HORIZONTAL LOAD = 2,000 LBS



**4**  
S1  
**BASEPLATE DETAIL (BP-4)**  
SCALE: 1" = 1'-0"  
FACTORED VERTICAL LOAD = 9,000 LBS  
FACTORED HORIZONTAL LOAD = 2,000 LBS



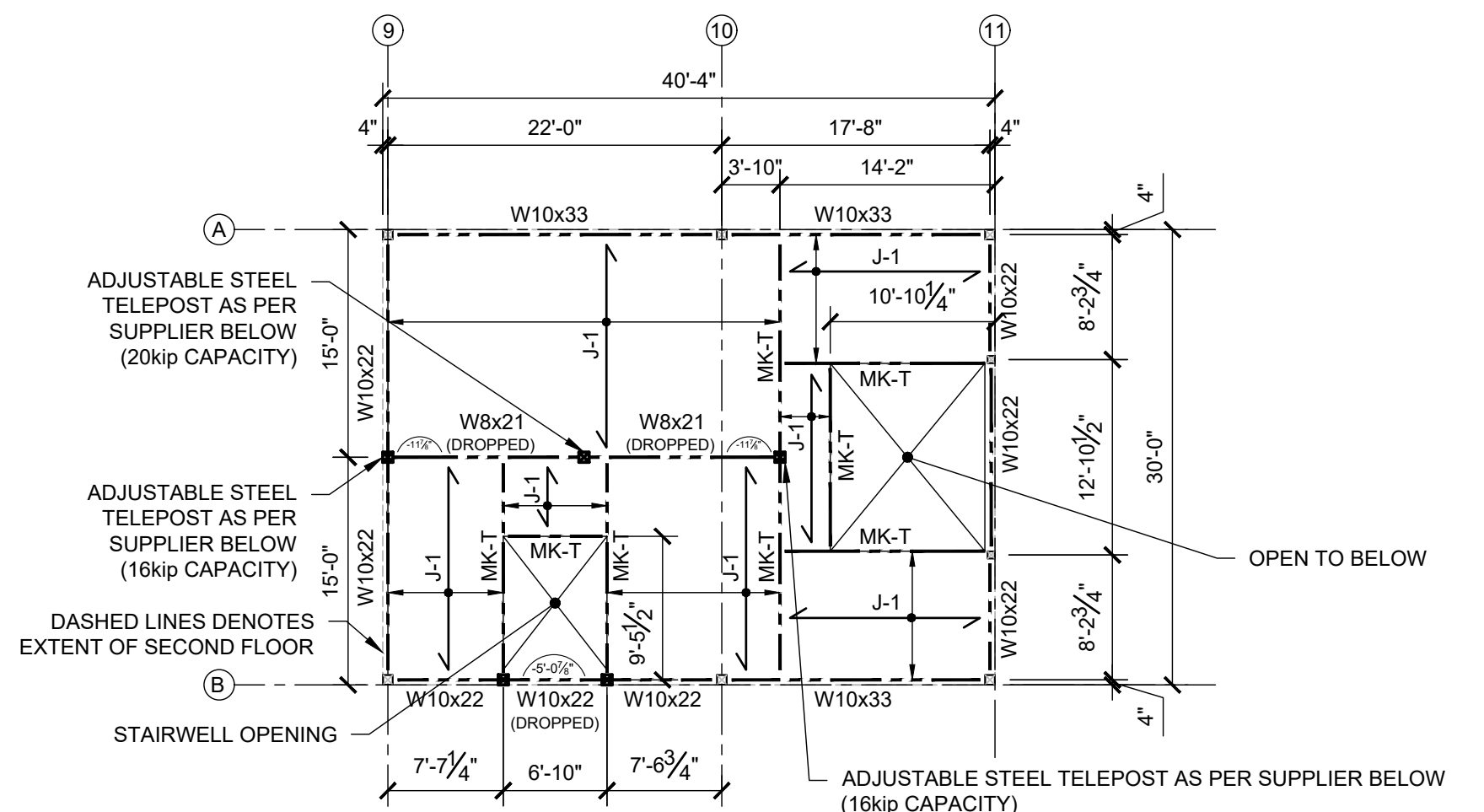
**5**  
S1  
**PERIMETER STUD WALL TRACK DETAIL**  
SCALE: 1" = 1'-0"

BUILDING 'A' - 110 INDUSTRIAL RD., STEINBACH, MANITOBA

**KNH**  
 K.N.H. SAWATZKY & ASSOCIATES  
 STRUCTURAL ENGINEERING CONSULTANTS  
 100-101 AMBER DRIVE  
 WISSEMAN, MANITOBA R0M 0A0  
 (204) 734-8888

project	PRE-ENGINEERED SUPERSTRUCTURE (SHOP BUILDING 'A')		
drawing title	GENERAL NOTES, BASEPLATE PLAN AND DETAILS		
approved by	AJG	drawn by	BJC
date	JULY 2021	project no.	21.201
designed by	AJG		
sheet	S1		

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**SHOP BUILDING 'A' - PARTIAL SECOND FLOOR FRAMING PLAN**

SCALE: 3/32" = 1'-0"

DESIGN LOADS:  
LIVE LOAD: 50 PSF  
DEAD LOAD: 20 PSF

**PLAN NOTES:**

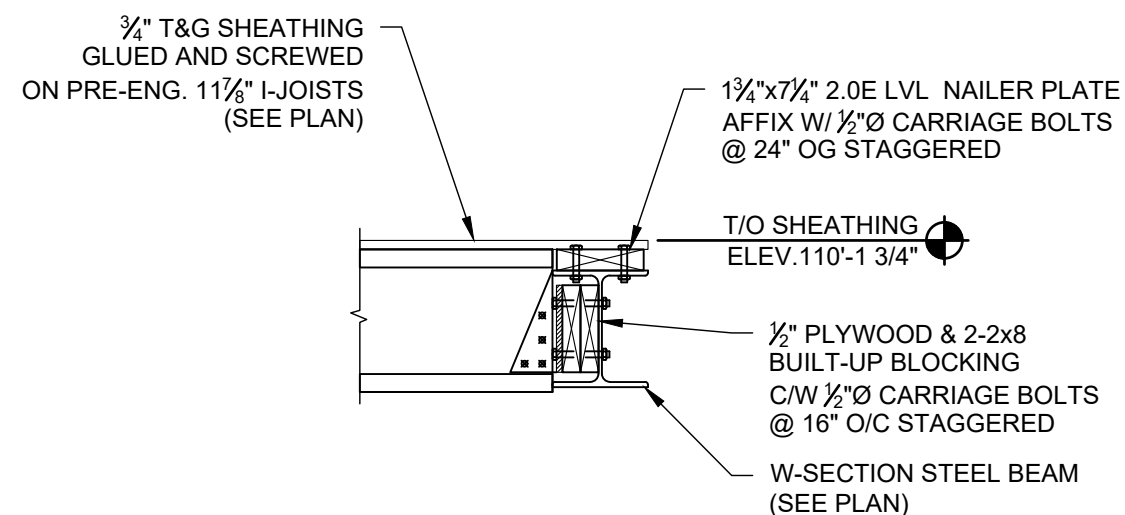
- ALL DIMENSIONS ARE TO BUILDING PERIMETER OR CENTER OF STEEL U/N.
- TOP OF STEEL BEAMS TO BE AT ELEVATION 109'-11 1/2" TYPICAL UNLESS NOTED (±0) ON PLAN (SITE CONFIRM).

**TYPICAL MARK 'J-1':**

- 3/4" T&G SHEATHING GLUED AND SCREWED ON PRE-ENG 11 1/8" WOOD I-JOISTS @ 16" O/C.
- I-JOIST SPACING, SERIES AND FRAMING AROUND FLOOR & STAIRWELL OPENINGS AS PER JOIST SUPPLIER SHOP DRAWINGS.

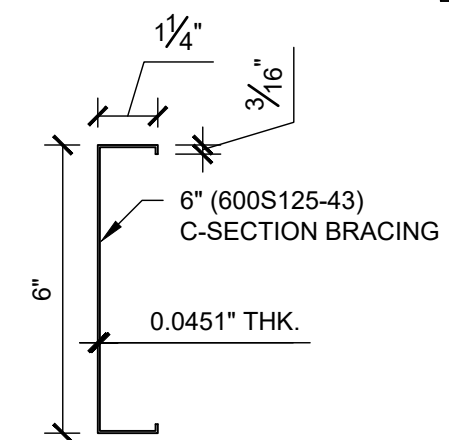
**TYPICAL MARK 'MK-T':**

- LVL TRIMMER BEAM AS PER FLOOR JOIST SUPPLIER.



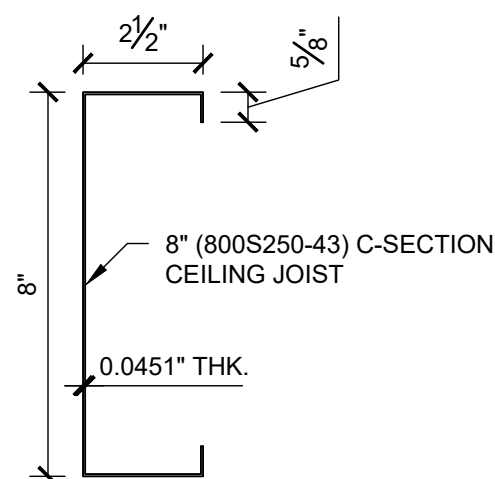
**TYPICAL SECOND FLOOR SECTION AT PERIMETER WALL**

A  
S2  
SCALE: 3" = 1'-0"



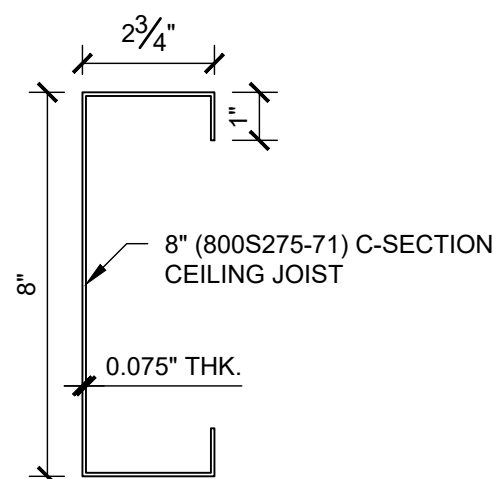
**TYPICAL CEILING BRACING SECTION**

B  
S2  
SCALE: 3" = 1'-0"



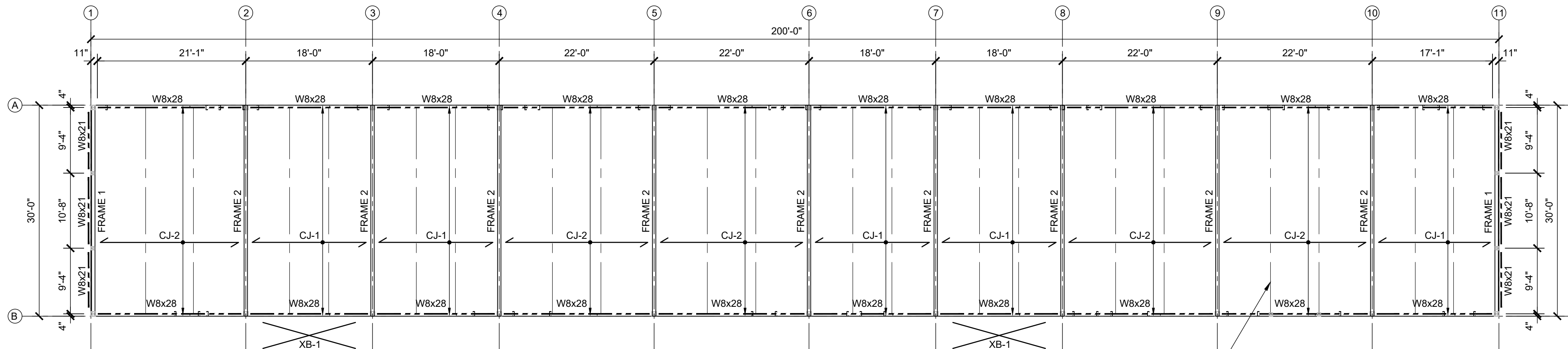
**TYPICAL CEILING JOIST SECTION (CJ-1)**

C  
S2  
SCALE: 3" = 1'-0"



**TYPICAL CEILING JOIST SECTION (CJ-2)**

D  
S2  
SCALE: 3" = 1'-0"



**SHOP BUILDING 'A' - CEILING FRAMING PLAN**

SCALE: 3/32" = 1'-0"

DESIGN LOADS:  
LIVE LOAD: 10 PSF  
DEAD LOAD: 20 PSF

**PLAN NOTES:**

- ALL DIMENSIONS ARE TO BUILDING PERIMETER OR CENTER OF STEEL U/N.
- TOP OF STEEL BEAMS TO BE AT ELEVATION 118'-1 1/2" TYPICAL UNLESS NOTED (±0) ON PLAN.

**TYPICAL MARK 'CJ-1':**

- 8" C-SECTION CEILING JOIST @ 24" O/C MAX (SEE 'C/S2')

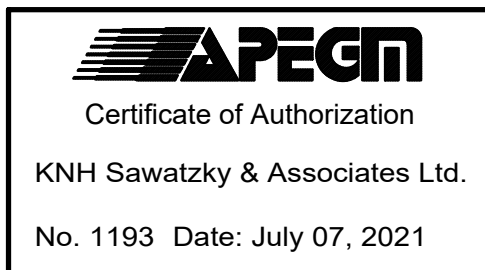
**TYPICAL MARK 'CJ-2':**

- 8" C-SECTION CEILING JOIST @ 24" O/C MAX (SEE 'D/S2')

**TYPICAL MARK 'XB-1':**

- 7"x7"x1/4" HSS X-BRACING
- DESIGN CONNECTIONS TO RESIST 12 kip FACTORED TENSION LOAD.

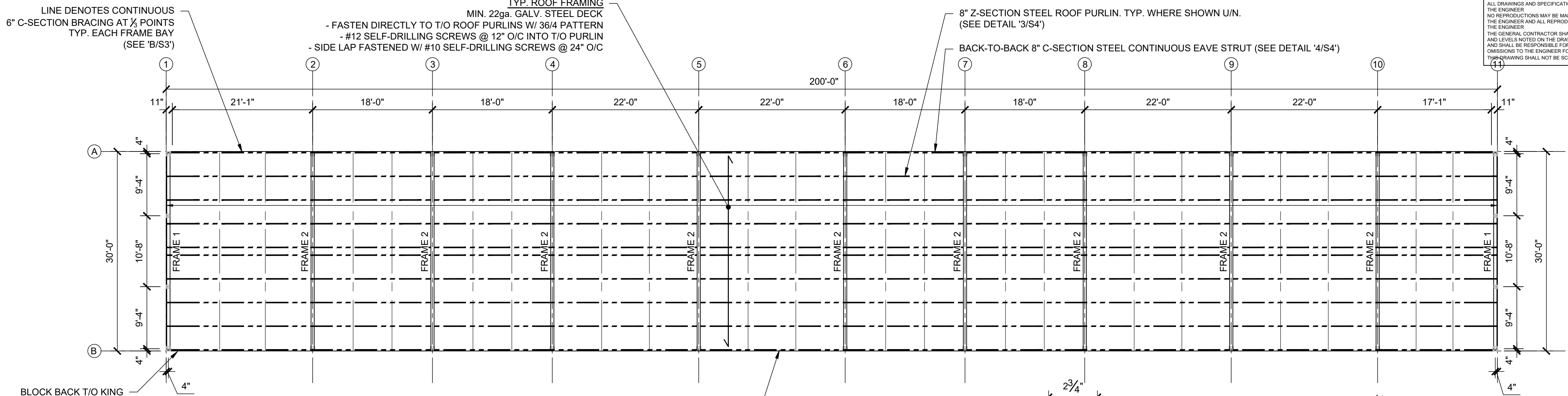
LINE DENOTES CONTINUOUS  
6" C-SECTION BRACING AT 1/2 POINTS  
TYP. EACH FRAME BAY  
(SEE 'B/S2')



BUILDING 'A' - 110 INDUSTRIAL RD., STEINBACH, MANITOBA

project	PRE-ENGINEERED SUPERSTRUCTURE (SHOP BUILDING 'A')		
drawing title	SECOND FLOOR, CEILING FRAMING PLAN AND SECTIONS		
approved by	AJG	drawn by	BJC
date	JULY 2021	project no.	21.201
designed by	AJG		
sheet	S2		

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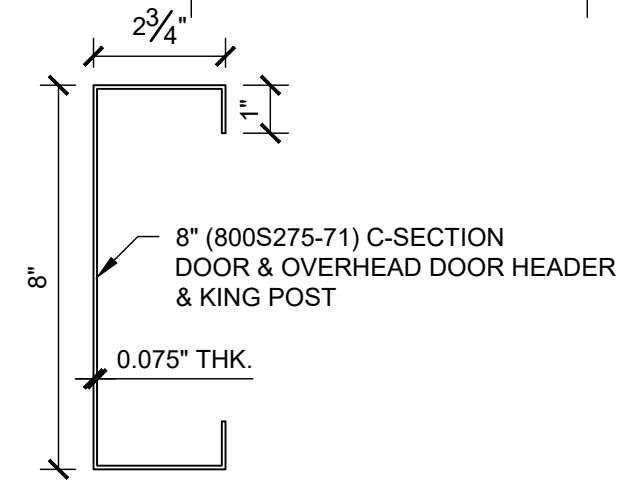


**SHOP BUILDING 'A' - ROOF FRAMING PLAN**  
SCALE: 3/32" = 1'-0"

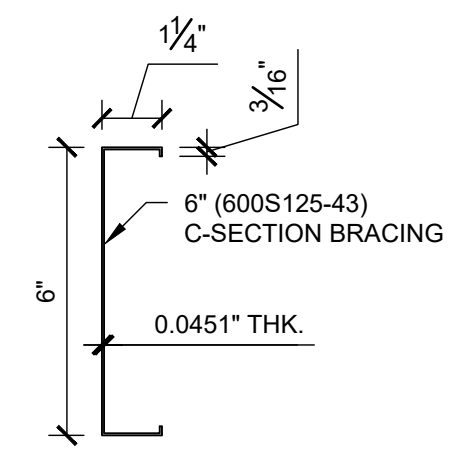
DESIGN LOADS:  
SNOW LOAD: 26 PSF  
DEAD LOAD: 15 PSF

PLAN NOTES:  
- ALL DIMENSIONS ARE TO BUILDING PERIMETER OR CENTER OF STEEL U/N.

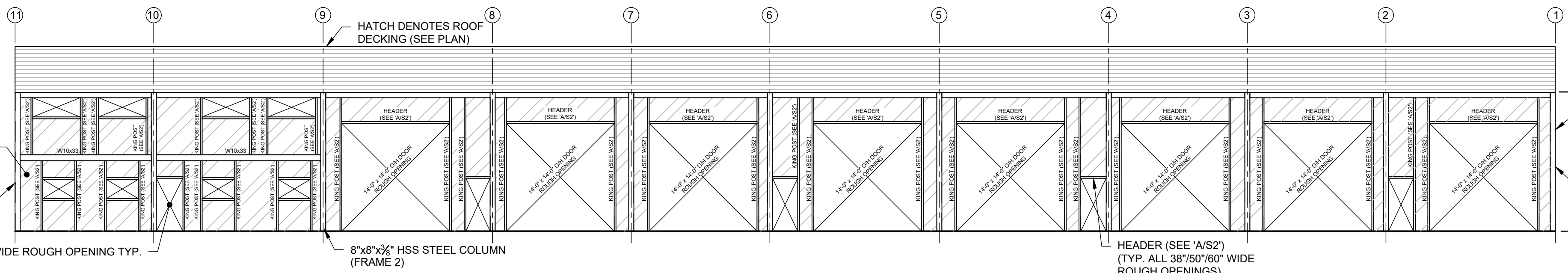
TYPICAL MARK 'XB-1':  
- 7"x7"x3/4" HSS X-BRACING  
- DESIGN CONNECTIONS TO RESIST 12 kip FACTORED TENSION LOAD.



**A**  
TYPICAL DOOR KING POST & HEADER SECTION  
SCALE: 3" = 1'-0"

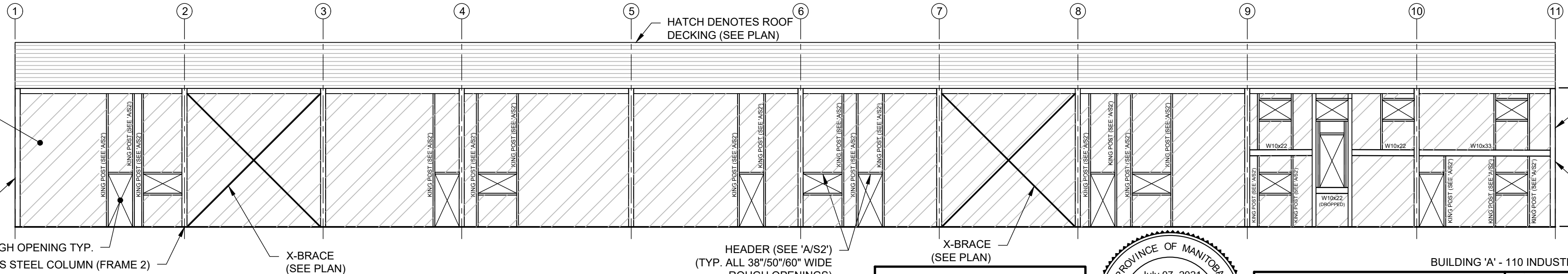


**B**  
TYPICAL ROOF BRACING SECTION  
SCALE: 3" = 1'-0"



**EXTERIOR STEEL FRAME FRONT ELEVATION**  
SCALE: 3/32" = 1'-0"

NOTE: CONTRACTOR TO CONFIRM AND ADJUST DOOR R/O DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION.



**EXTERIOR STEEL FRAME REAR ELEVATION**  
SCALE: 3/32" = 1'-0"

NOTE: CONTRACTOR TO CONFIRM AND ADJUST DOOR R/O DIMENSIONS PRIOR TO COMMENCING CONSTRUCTION.

**APEGM**  
Certificate of Authorization  
KNH Sawatzky & Associates Ltd.  
No. 1193 Date: July 07, 2021

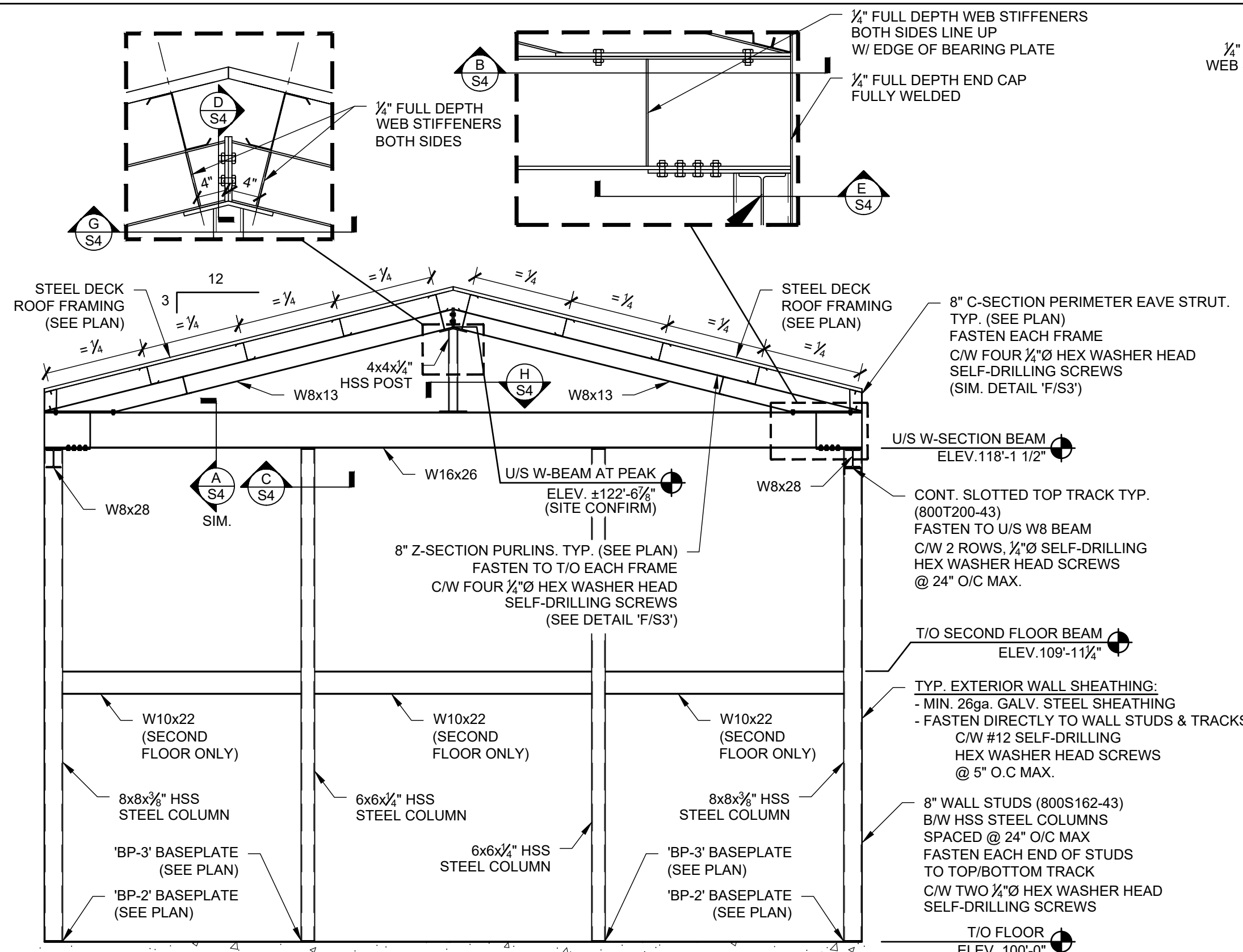


**KNH**  
K.N.H. SAWATZKY & ASSOCIATES  
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100-101 ARBERRY AVENUE  
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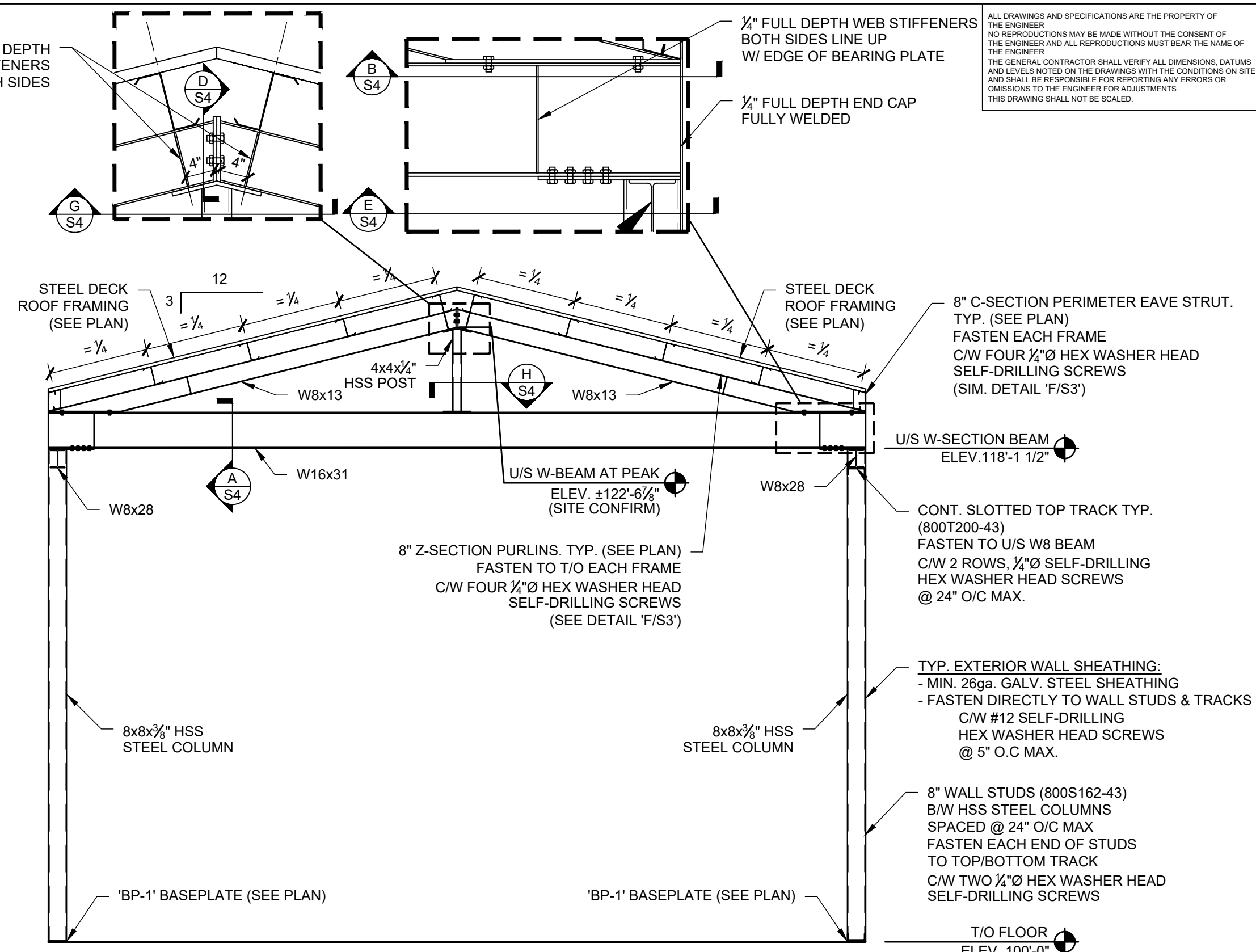
BUILDING 'A' - 110 INDUSTRIAL RD., STEINBACH, MANITOBA

project	PRE-ENGINEERED SUPERSTRUCTURE (SHOP BUILDING 'A')		
drawing title	ROOF FRAMING PLAN AND ELEVATIONS		
approved by	AJG	drawn by	BJC
date	JULY 2021	project no.	21.201
designed by	AJG		
sheet	S3		

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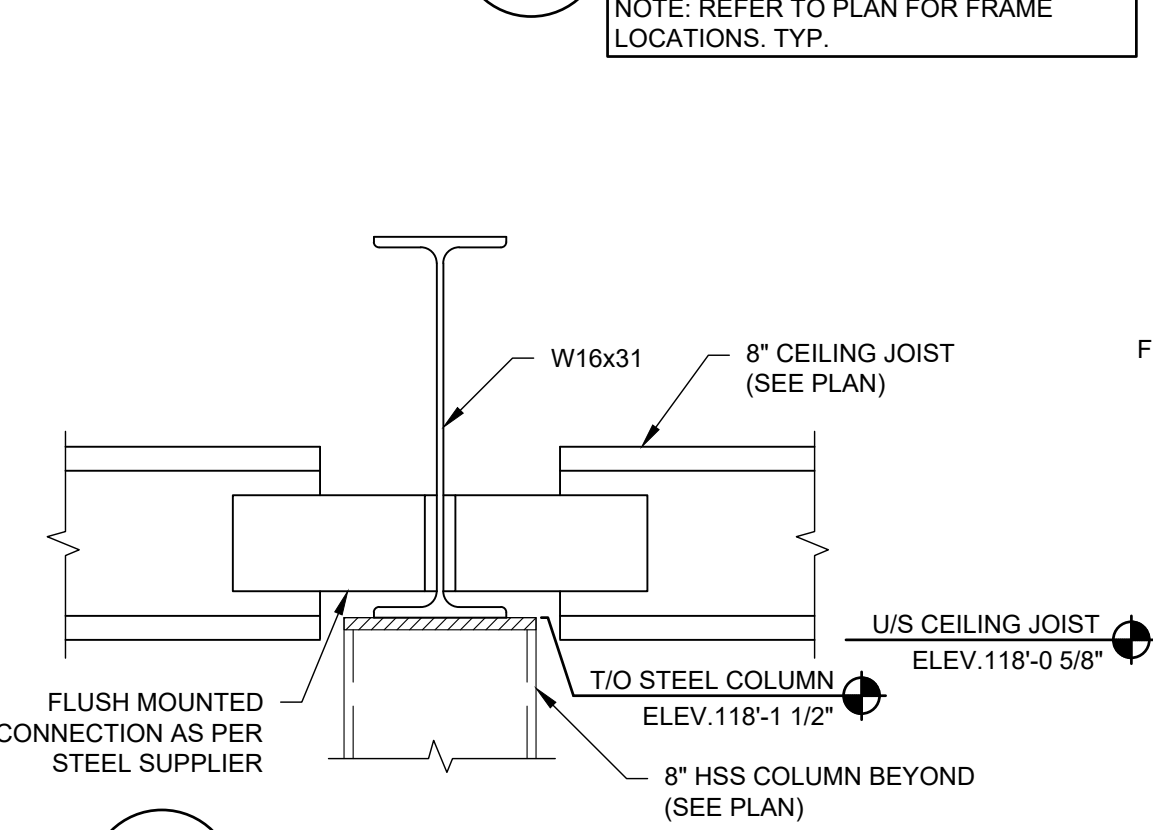
**1**  
TYPICAL END WALL FRAME ELEVATION (FRAME 1)  
SCALE: 3/16" = 1'-0"  
NOTE: REFER TO PLAN FOR FRAME LOCATIONS, TYP.



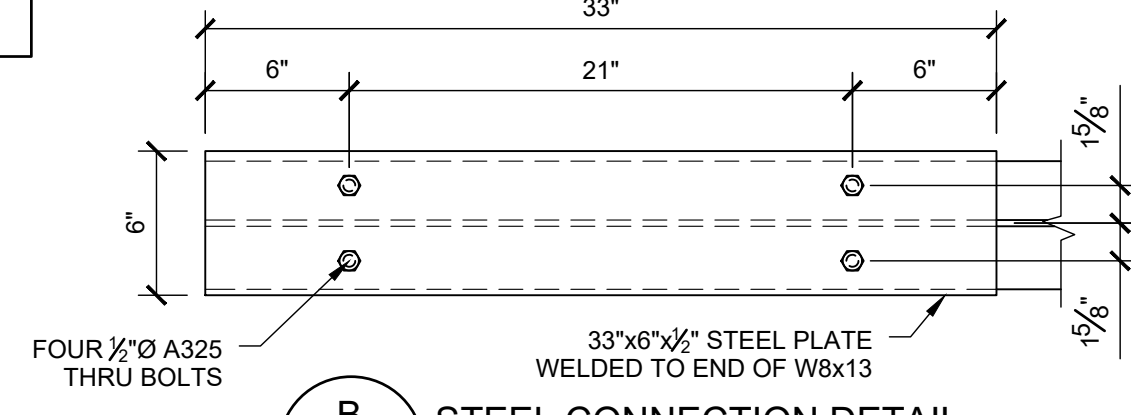
**2**  
TYPICAL INTERIOR FRAME ELEVATION (FRAME 2)  
SCALE: 3/16" = 1'-0"  
NOTE: REFER TO PLAN FOR FRAME LOCATIONS, TYP.

HATCH DENOTES CONCRETE FOUNDATION BY OTHERS

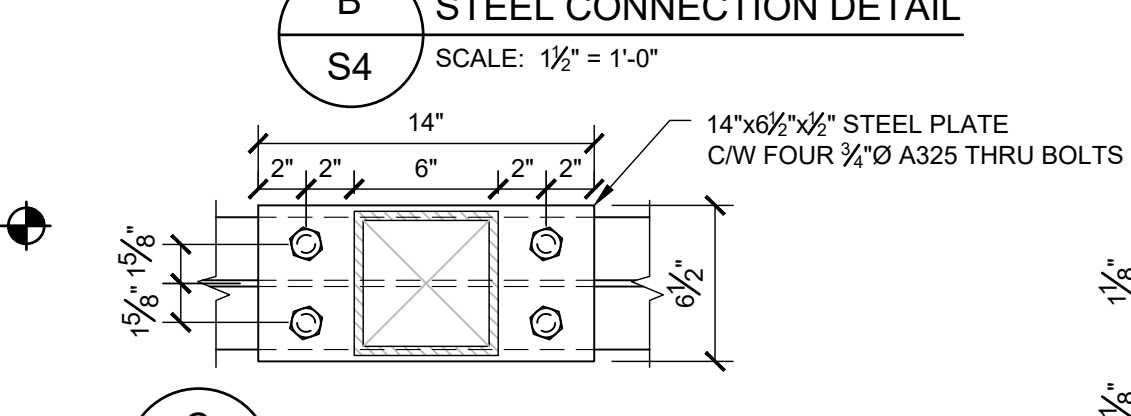
HATCH DENOTES CONCRETE FOUNDATION BY OTHERS



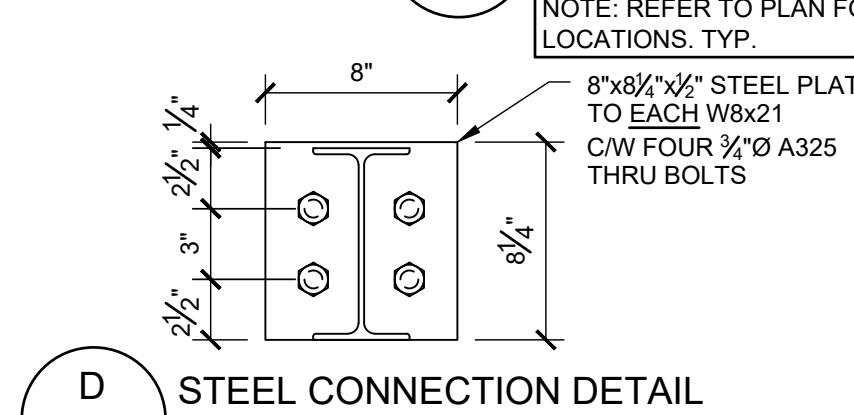
**A**  
STEEL CONNECTION DETAIL  
SCALE: 1/2" = 1'-0"



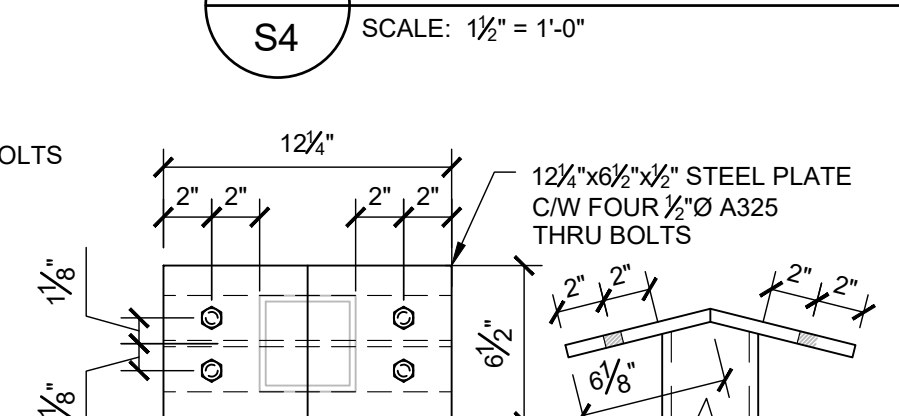
**B**  
STEEL CONNECTION DETAIL  
SCALE: 1/2" = 1'-0"



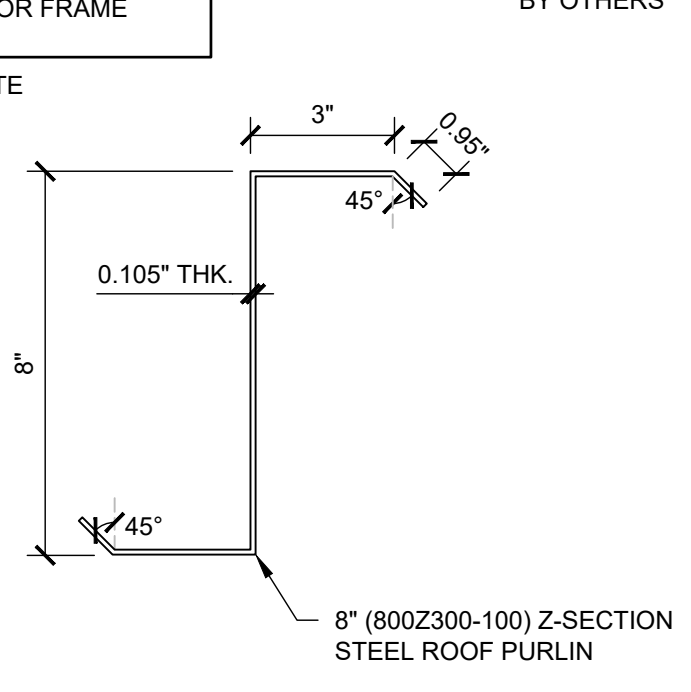
**C**  
STEEL CONNECTION DETAIL  
SCALE: 1/2" = 1'-0"



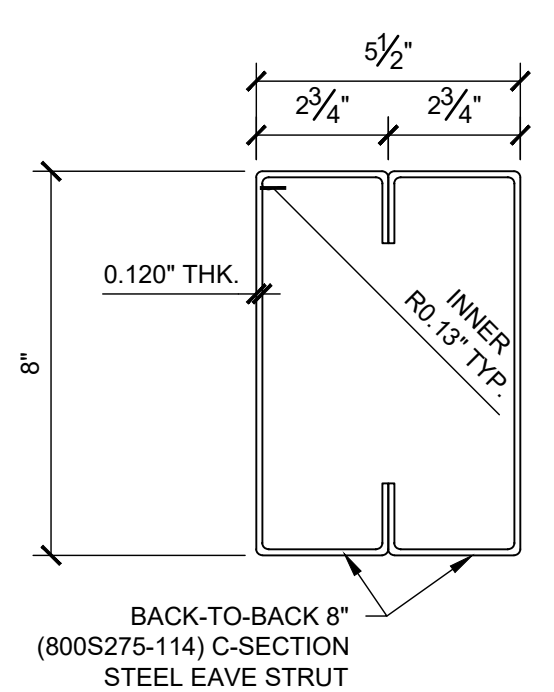
**D**  
STEEL CONNECTION DETAIL  
SCALE: 1/2" = 1'-0"



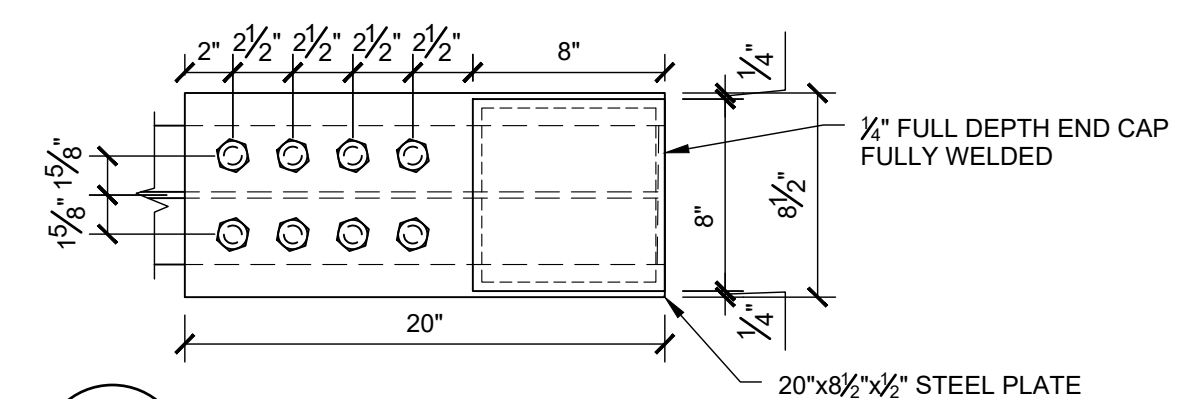
**G**  
STEEL CONNECTION DETAIL  
SCALE: 1/2" = 1'-0"



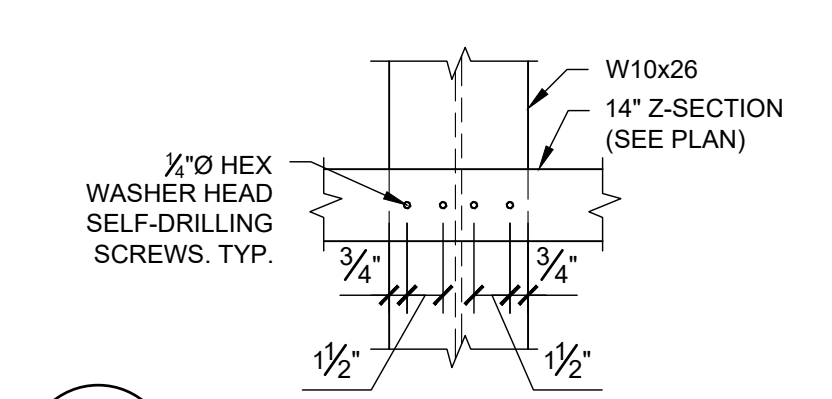
**3**  
TYPICAL ROOF PURLIN SECTION  
SCALE: 3" = 1'-0"



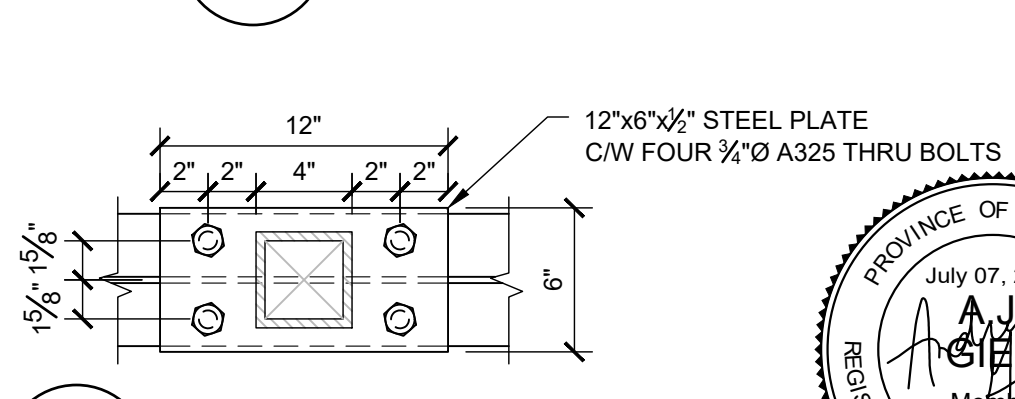
**4**  
TYPICAL ROOF PURLIN EAVE STRUT SECTION  
SCALE: 3" = 1'-0"



**E**  
STEEL CONNECTION DETAIL  
SCALE: 1/2" = 1'-0"



**F**  
ROOF PURLIN CONNECTION DETAIL  
SCALE: 1/2" = 1'-0"



**H**  
STEEL CONNECTION DETAIL  
SCALE: 1/2" = 1'-0"

**APEGM**  
Certificate of Authorization  
KNH Sawatzky & Associates Ltd.  
No. 1193 Date: July 07, 2021



**KNH**  
K.N.H. SAWATZKY & ASSOCIATES  
STRUCTURAL ENGINEERING  
CONSULTANTS

BUILDING 'A' - 110 INDUSTRIAL RD., STEINBACH, MANITOBA

project	PRE-ENGINEERED SUPERSTRUCTURE (SHOP BUILDING 'A')		
drawing title	ELEVATIONS AND DETAILS		
approved by	AJG	drawn by	BJC
date	JULY 2021	project no.	21.201
designed by	AJG		
sheet	S4		