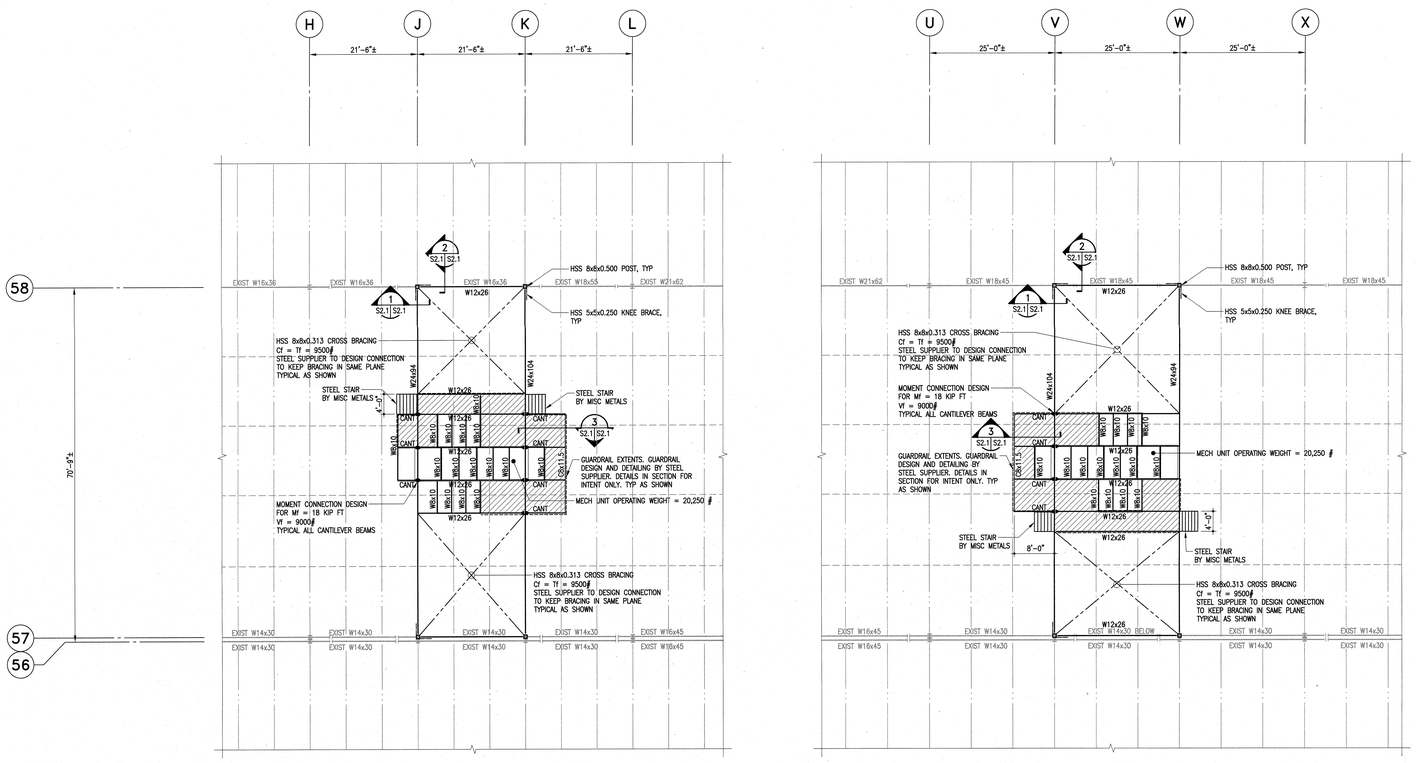


PARTIAL ROOF FRAMING PLAN

3/32" = 1'-0"

ROOF DESIGN LOADS:
SNOW LOAD: 36 PSF
PLATFORM LIVE LOAD = 50 PSF (SHOWN HATCHED)
DEAD LOAD: 15 PSF
NEW ROOF TOP UNITS: AS NOTED ON PLAN

- EXISTING COLUMN ALONG GRID 57 ARE W8x31 U/N.
- EXISTING COLUMN ALONG GRID 58 ARE W10x33 U/N.
- CONFIRM LOCATIONS OF BEAMS WITH MECH UNIT SHOP DRAWINGS AND EXISTING SITE CONDITIONS PRIOR TO FABRICATION.

GENERAL NOTES

1. STRUCTURAL DESIGN BASED ON THE NATIONAL BUILDING CODE OF CANADA 2010 EDITION AND THE 2011 MANITOBA AMENDMENTS.
   A) IMPORTANCE CATEGORY: NORMAL
   B) WIND LOAD: q50 = 9.4 P.S.F.
   C) GROUND SNOW LOAD: Ss = 39.6 P.S.F.
   D) ASSOCIATED RAIN LOAD: 4.2 P.S.F.
2. SEISMIC SITE CLASSIFICATION: NOT APPLICABLE
3. DO NOT SCALE DRAWINGS.
4. ALL DIMENSIONS ARE TO BE VERIFIED WITH THE PROJECT DRAWINGS AND EXISTING SITE CONDITIONS PRIOR TO CONSTRUCTION.
5. THESE STRUCTURAL DRAWINGS SHOW THE COMPLETED STRUCTURE AND DO NOT INDICATE ALL COMPONENTS NECESSARY FOR SAFETY DURING CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SAFETY ON AND AROUND THE WEBSITE DURING CONSTRUCTION.
6. THE EXISTING STRUCTURE INCLUDING FOUNDATIONS AFFECTED BY THE WORK INDICATED IN THIS DRAWING HAS BEEN CHECKED AND DETERMINED ADEQUATE FOR THE IMPOSED LOADING.

STRUCTURAL STEEL

1. THE STRUCTURAL STEEL FABRICATOR'S ENGINEER SHALL BE RESPONSIBLE FOR LOCATING AND DESIGNING PROVISIONS FOR ALL TEMPORARY FALL PROTECTION SYSTEMS REQUIRED DURING CONSTRUCTION TO MEET MANITOBA WORKPLACE HEALTH AND SAFETY REGULATIONS.
2. STRUCTURAL STEEL TO CONFORM TO CSA-G40.21, "STRUCTURAL QUALITY STEELS" AND CSA-G40.20 "GENERAL REQUIREMENTS FOR ROLLED OR WELDED STRUCTURAL QUALITY STEEL".
3. ALL ROLLED OR STEEL STRUCTURAL SECTIONS SHALL BE G40.21-50W. ALL HOLLOW STRUCTURAL SECTIONS TO BE G40.21-50W CLASS C OR ASTM A500-C. ALL ANGLES, CHANNELS AND PLATES SHALL BE G40.21-44W.
4. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE PERFORMED IN ACCORDANCE WITH CAN/CSA S16-09, "STEEL STRUCTURES FOR BUILDINGS".
5. ALL WELDING SHALL CONFORM TO THE LATEST EDITION OF CSA W59, "WELDED STEEL CONSTRUCTION". FABRICATORS SHALL BE PROPERLY CERTIFIED IN ACCORDANCE WITH CSA W47.1, "CERTIFICATION OF COMPANIES FOR FUSION WELDING OF STEEL STRUCTURES".
6. ALL BOLTED CONNECTIONS TO USE A325 HIGH STRENGTH BOLTS. MINIMUM CONNECTION SHALL CONSIST OF 2 BOLTS.
7. ALL STRUCTURAL STEEL IS TO RECEIVE ONE COAT OF OISC/CPMA 1-73c QUICK DRYING SHOP PRIMER. STEEL IN CRAWLSPACES SHALL RECEIVE 2 COATS. STEEL TO BE CLEANED IN CONFORMANCE WITH SSPC-SP2. STEEL RECEIVING FINISH PAINTING TO HAVE ONE COAT OF OISC/CPMA 2-75 QUICK DRYING SHOP PRIMER. STEEL TO BE CLEANED IN CONFORMANCE WITH SSPC-SP7.
8. NO HOLES PERMITTED IN TOP FLANGE OF BEAMS AT COLUMNS WHERE BEAMS ARE CONTINUOUS OVER COLUMNS.
9. ALL BEAMS CONTINUOUS OVER COLUMNS ARE TO HAVE WEB STIFFENERS THE SAME SIZE AND ORIENTATION AS THE COLUMN BELOW, UNLESS OTHERWISE NOTED.
10. FABRICATOR TO NOTIFY CONTRACT ADMINISTRATOR OF ANY PROPOSED MEMBER SUBSTITUTIONS AND CHANGED CONNECTION DETAILS.
11. THE STRUCTURAL STEEL SUPPLIER SHALL PROVIDE AND BE RESPONSIBLE FOR ALL HOLES IN STEEL SECTIONS REQUIRED BY OTHER TRADES. SECTION SHALL BE STRENGTHENED WHERE REQUIRED TO GUARANTEE THE ORIGINAL STRENGTH OF THE BEAM. ANY CUTTING OF STEEL AT THE JOB SITE SHALL BE DONE ONLY AS DIRECTED AND APPROVED BY THE CONTRACT ADMINISTRATOR.
12. THE STRUCTURAL STEEL ERECTOR SHALL BE RESPONSIBLE FOR SUPPLYING AND ERECTING ALL TEMPORARY GUYING AND BRACING OF THE STEEL FRAMING TO PROVIDE STABILITY FOR THE STRUCTURE AS A WHOLE. THESE SHALL REMAIN IN PLACE UNTIL ALL PERMANENT STEEL BRACING IS INSTALLED.
13. ALL DUCTS LARGER THAN 18 IN. X 18 IN. THROUGH ROOF DECK TO BE FRAMED WITH L4 x 4 x 5/16 ANGLES ALL AROUND, EXCEPT AS NOTED. SMALLER OPENINGS TO BE ADDRESSED ON A CASE BY CASE BASIS. CONTACT THE CONTRACT ADMINISTRATOR AS REQUIRED. WHERE STEEL DECK REVERSES ITS FRAMING DIRECTION, USE L 2 1/2 x 2 1/2 x 1/4 ANGLE TO SUPPORT EDGE.
14. STRUCTURAL STEEL SUPPLIER IS TO SUBMIT ENGINEERING DRAWINGS BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA CONTAINING THE DESIGN OF CONNECTIONS, TO THE DESIGNER OF RECORD FOR REVIEW PRIOR TO FABRICATION. CONNECTION DESIGN TO INCLUDE FOR ALL ADJUSTABLE CONNECTIONS REQUIRED TO SUITE FABRICATION AND ERECTION PROCEDURES AND TOLERANCES.

MISCELLANEOUS METAL – STEEL STAIR AND GUARDRAILS

1. STEEL STAIR AND GUARDRAIL SUPPLIER IS TO SUBMIT ENGINEERING DRAWINGS BEARING THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF MANITOBA FOR REVIEW BY THE PROJECT ENGINEER, PRIOR TO FABRICATION. ENGINEERED SHOP DRAWINGS SHALL INCLUDE DESIGN LOADS, LAYOUT PLAN, CONNECTION DETAILS, AND ALL OTHER PERTINENT INFORMATION.
2. STEEL STAIR AND GUARDRAIL SUPPLIER/DESIGNER SHALL PROVIDE A FINAL INSPECTION AND A LETTER SEALED BY THE ENGINEER RESPONSIBLE FOR THE STAIR AND GUARDRAIL DESIGN, CERTIFYING THAT STAIRS AND GUARDRAILS ARE CONSTRUCTED AND INSTALLED AS PER DESIGN ASSUMPTIONS AND INSTALLATION REQUIREMENTS.

ALL HOLES IN EXIST ROOF TO BE FILLED IN WITH 1 1/2" DEEP 18GA METAL ROOF DECK C/W 3/4"ø PUDDLE WELD @ 12" O/C AROUND PERIMETER. EXTEND MIN 6" BEYOND EDGE OF OPENING IN ALL DIRECTIONS.

THE EXIST ROOF HAS BEEN DESIGNED FOR 36 psf LIVE LOAD. THE CONTRACTOR IS TO DETERMINE AN APPROPRIATE METHOD OF TRANSPORTING MATERIALS & MECHANICAL UNITS TO THE FINAL LOCATION WITHOUT EXCEEDING THIS DESIGN LOAD. ANY TRANSPORTATION METHOD SHOULD ENSURE PROTECTION OF THE EXIST ROOF SURFACE & UNDERLYING INSULATION. CONTRACTOR TO SUBMIT SEALED SHOP DRAWINGS TO ADDRESS MEANS AND METHODS OF INSTALLATION.

INFILL EXIST OPENINGS IN MASONRY WALL WITH MATCHING WIDTH BLOCKS. MIN BLOCK STRENGTH 15 MPa. TYPE S MORTAR MUST BE USED. MASON TO REMOVE ANY PARTIAL BLOCKS FRAMING THE CURRENT OPENING PRIOR TO INFILLING.

NEW OPENINGS IN EXISTING WALLS

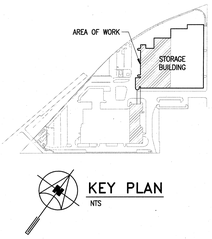
CONCRETE WALL ON GRIDLINES 59 / Y

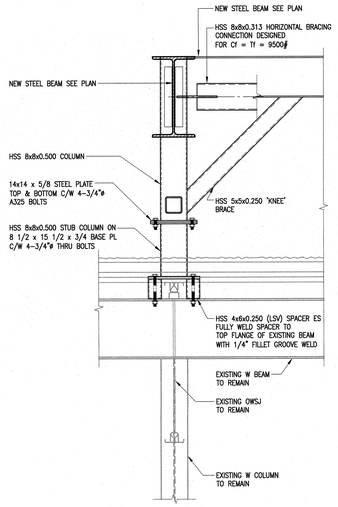
1. SCAN EACH SIDE OF WALL TO LOCATE REINFORCING.
2. LOCATE NEW OPENING SUCH THAT IT DOES NOT DAMAGE ANY EXIST REINFORCING.
3. MAINTAIN A MINIMUM OF 6" OF SOLID CONCRETE BETWEEN ADJACENT OPENINGS.
4. MAXIMUM HOLE DIAMETER 9".

MASONRY BLOCK WALLS ALONG GRIDLINES 52, 53 AND 54

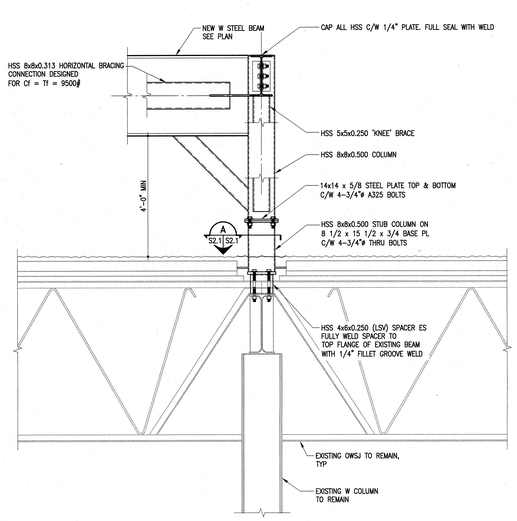
1. MAXIMUM HOLE DIAMETER 9".
2. TOP OF OPENING TO BE MINIMUM 2 COURSES DOWN FROM TOP OF WALL.
3. MAINTAIN MINIMUM 2 BLOCKS BETWEEN ADJACENT OPENINGS.
4. ALTERNATIVELY, IF BOTH PIPES CAN BE ACCOMMODATED IN A SINGLE BLOCK OPENING (7 1/2"x15 1/2"), NO REMEDIAL WORK IS REQUIRED. IF REMOVAL OF MORE THAN ONE BLOCK IS REQUIRED, AND CANNOT ABIDE BY NOTE 3 ABOVE, PROVIDE L3 1/2x3 1/2x3/8" LOOSE ANGLE LINTEL EACH SIDE EXTENDING MINIMUM 8" BEYOND OPENING FOR A MAXIMUM OPENING WIDTH OF 32"

* FOR ANY ADDITIONAL OPENINGS REQUIRED BEYOND THOSE NOTED ABOVE CONTACT CONTRACT ADMINISTRATOR.





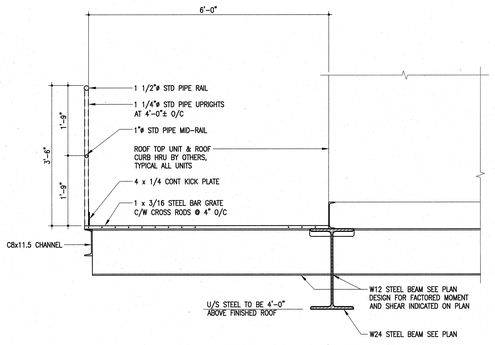
1 SECTION
S2.1 | S2.1 | 3/4" = 1'-0"



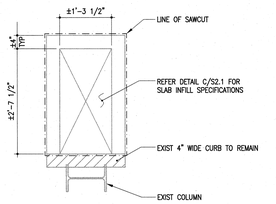
2 SECTION
S2.1 | S2.1 | 3/4" = 1'-0"

NOTE: CONTRACTOR IS TO CUT OUT EXISTING ROOFING, INSULATION & STEEL DECKING AT EACH NEW COLUMN LOCATION TO ALLOW FOR THE BASE PLATE TO BE INSTALLED DIRECTLY ON TOP OF THE NEW STEEL HSS SPACERS. ONCE THE COLUMNS ARE INSTALLED, THE CONTRACTOR IS RESPONSIBLE FOR RE-ROOFING AROUND EACH NEW COLUMN

STEEL SUPPLIER TO DESIGN ALL CONNECTIONS NOT SPECIFICALLY DETAILED ON THESE DRAWINGS.

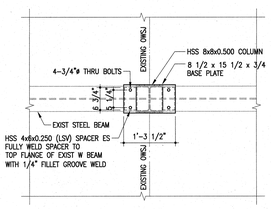


3 SECTION
S2.1 | S2.1 | 3/4" = 1'-0"

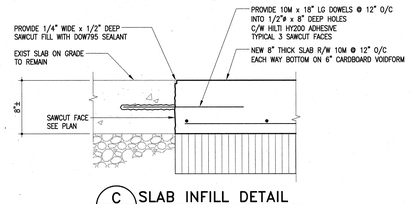


B SAWCUT PLAN DETAIL ON GRADE
S2.1 | S2.1 | 3/4" = 1'-0"

- CONCRETE TO BE 32 MPa TYPE C-1POSURE.
- PROVIDE 1 1/2" CLEAR COVER TO REINFORCING. ALL REINFORCING TO BE CSA G30.18 MIN Fy=400 MPa



A DETAIL
S2.1 | S2.1 | 3/4" = 1'-0"



C SLAB INFILL DETAIL
S2.1 | S2.1 | 1 1/2" = 1'-0"

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2018-0960

Crosier Kilgour & Partners Ltd.
CONSULTING STRUCTURAL ENGINEERS

NO.	Description	BY	DD/MM/YY
0	Issued for Construction	JAL	10/30/18

APEGM Certificate of Authorization
Crosier Kilgour & Partners Ltd.
No. 235 Date: 2018-10-30

PROVINCE OF MANITOBA
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REGISTERED PROFESSIONAL ENGINEER

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Project Title
CITY OF WINNIPEG FORT ROUGE TRANSIT BASE - STORAGE TRACK
13-24 - MECHANICAL UPGRADE

WINNIPEG MANITOBA

Drawing Title
PARTIAL ROOF FRAMING PLAN
SECTIONS & DETAIL
GENERAL NOTES

Drawn By	Checked By	Approved By
MS	JAL	JAL
Scale: AS NOTED	Date: OCTOBER 2018	Project No.: 18-240-01
Revision Number: 0	Drawing Number: S2.1	Sheet Order: 1 OF 1