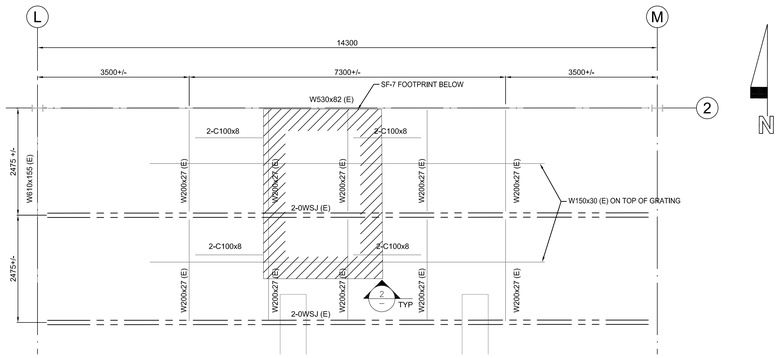
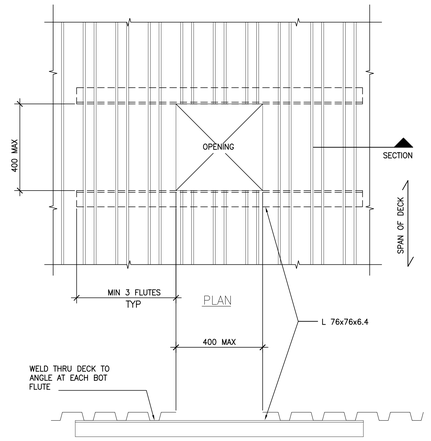


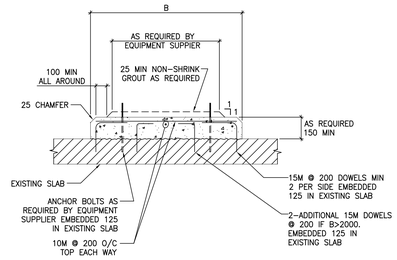
1 / S101 FAN LOFT LEVEL SUPPORT FRAMING PLAN (SF-7)
1:50

NOTE:
LOCATIONS OF ALL FRAMING MEMBERS TO BE CONFIRMED ON SITE
BASED ON AHU DESIGN



SECTION

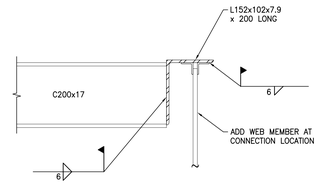
2 / S101 TYPICAL OPENING THRU METAL DECK (MAX SIZE 400x400)
N.T.S



NOTES:

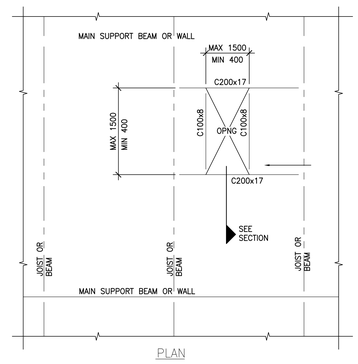
1. PAD SIZE SHALL BE MINIMUM INDICATED OR AS SHOWN ON THE PLANS OR AS DETERMINED BY THE EQUIPMENT MANUFACTURER AND APPROVED BY THE ENGINEER.
2. THE SIZE, NUMBER, TYPE, LOCATION, AND THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER, AND SHALL BE AS APPROVED BY THE ENGINEER. ANCHOR BOLTS SHALL BE HELD IN POSITION WITH A TEMPLATE WHILE PAD IS BEING PLACED.
3. EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS SPECIFIED OTHERWISE.
4. WEDGES OR SHIMS SHALL BE USED TO SUPPORT THE BASE WHILE THE NON-SHRINK GROUT IS PLACED. TEMPORARY LEVELING NUTS SHALL BE BACKED OFF. IF LEFT IN, THE WEDGES OR SHIMS SHALL NOT BE EXPOSED TO VIEW.
5. USE HILTI HIT HY 150 SYSTEM FOR ALL REBAR AND ANCHOR BOLTS FASTENING TO EXISTING CONCRETE SLAB

3 / S101 TYPICAL HOUSEKEEPING PAD FOR EQUIPMENT ON EXISTING FLOOR SLABS
N.T.S

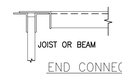


SECTION

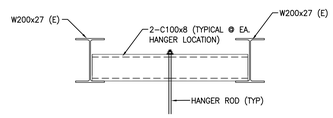
4 / STD TYPICAL FRAMING CHANNEL CONNNECTION TO OPEN WEB STEEL JOIST
N.T.S



PLAN



END CONNECTION DETAILS



5 / S101 TYPICAL SUPPORT FRAMING @ HANGER LOCATION
N.T.S

6 / S101 TYPICAL OPENING THRU METAL DECK MAX SIZE 1500x1500, MIN 400x400
N.T.S

DESIGN NOTES

GENERAL

1. ALL CODES REFERENCED ARE TO BE THE LATEST VERSION AT THE DATE OF ISSUE.
2. DESIGN IS BASED ON THE NATIONAL BUILDING CODE OF CANADA - 2019 ALBERTA EDITION.
3. READ THESE DESIGN NOTES IN CONJUNCTION WITH THE CONTRACT SPECIFICATIONS AND ALL OTHER CONTRACT DOCUMENTS.
4. OBTAIN ENGINEER'S APPROVAL BEFORE CUTTING, BORING, OR SLEEVING LOAD-BEARING MEMBERS UNLESS NOTED OTHERWISE.
5. REFER TO ARCHITECTURAL, MECHANICAL, AND ELECTRICAL DRAWINGS FOR SMALL OPENINGS, SLEEVES, RECESSES, DEPRESSIONS, SUMPS, TRENCHES, CURBS, HOUSEKEEPING PADS, EQUIPMENT BASES, AND SLOPES NOT INDICATED ON THE STRUCTURAL DRAWINGS.
6. OPENINGS AND SLEEVES INDICATED ON THE STRUCTURAL DRAWINGS ARE FOR REFERENCE ONLY. COORDINATE ALL OPENING LOCATIONS AND DIMENSIONS WITH THE APPROPRIATE CONSULTANT AND THE SUB-CONTRACTOR PRIOR TO CONSTRUCTION.
7. REVIEW ALL DRAWINGS AND CHECK DIMENSIONS PRIOR TO IMPLEMENTING THE WORK. REPORT ANY DISCREPANCIES TO THE CONSULTANT FOR CLARIFICATION BEFORE PROCEEDING.
8. COORDINATE PLACEMENT AND LOCATION OF ITEMS BY SUBSEQUENT TRADES. RELEVANT TRADES SHALL REVIEW PRIOR TO ERECTION AND/OR INSTALLATION.10.NOTIFY THE ENGINEER A MINIMUM OF 24 HOURS PRIOR TO ANY REQUIRED SITE REVIEWS.

EXISTING STRUCTURES

1. THE STRUCTURAL DESIGN IS BASED ON INFORMATION GATHERED FROM THE RECORD DRAWINGS AND FROM LIMITED VISUAL OBSERVATIONS ON SITE.
2. VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS ON SITE PRIOR TO IMPLEMENTING AFFECTED WORK.
3. NOTIFY THE CONSULTANT OF ANY SITE CONDITIONS THAT DIFFER FROM THE CONTRACT DOCUMENTS OR THE RECORD DRAWINGS.

DELEGATED DESIGN

1. PORTIONS OF THE DETAILED DESIGN ARE DELEGATED TO THE CONTRACTOR AND/OR TRADE CONTRACTOR. RETAIN A PROFESSIONAL ENGINEER TO COMPLETE THE DESIGN WHO IS REGISTERED IN THE PROVINCE OF ALBERTA.
2. THE ENGINEER RESPONSIBLE FOR COMPLETING THE WORK SHALL SUBMIT LETTERS OF COMMITMENT, ADDRESSED TO THE CONSULTANT, PRIOR TO STARTING WORK. THE LETTERS OF COMMITMENT SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA.
3. THE ENGINEER RESPONSIBLE FOR DESIGN AND FIELD REVIEW SHALL CONFIRM IN WRITING IF THEIR RESPONSIBILITY IS TERMINATED AT ANYTIME DURING THE COURSE OF DESIGN OR CONSTRUCTION.
4. SUBMIT SHOP DRAWINGS FOR COMPONENTS REQUIRING DELEGATED DESIGN UNDER THE SEAL AND SIGNATURE OF THE ENGINEER RESPONSIBLE FOR THE DESIGN.
5. THE FOLLOWING COMPONENTS REQUIRE DELEGATED DESIGN:
   - 5.1 STRUCTURAL STEEL CONNECTIONS
   - 5.2 MORTAR, GROUT, AND CONCRETE MIX DESIGNS
   - 5.3 SUPPORTING FRAMING/HANGERS FOR MECHANICAL UNITS
6. THE ENGINEER RESPONSIBLE FOR THE DESIGN IS ALSO RESPONSIBLE FOR REVIEW OF FABRICATION AND INSTALLATION OF THE COMPONENTS. UPON COMPLETION OF THE WORK, CERTIFY IN WRITING TO THE CONSULTANT THAT SUCH REVIEW HAS BEEN COMPLETED.
7. REFER TO SPECIFICATIONS FOR FURTHER REQUIREMENTS.

STRUCTURAL STEEL

1. DESIGN, FABRICATION, ERECTION, AND OTHER CONSTRUCTION PRACTICES TO CONFORM TO CSA-S16 AND THE CISC CODE OF STANDARD PRACTICE FOR STRUCTURAL STEEL.
2. STEEL TO BE FABRICATED AND ERECTED BY A SHOP CERTIFIED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA-W47.1, DIVISION 1 OR 2.1 ONLY.
3. SUBMIT SHOP DRAWINGS SHOWING ALL STRUCTURAL STEEL MEMBERS FOR REVIEW PRIOR TO FABRICATION. WELDING TO CONFORM TO CSA-W59.
4. WELDING TO REINFORCEMENT STEEL ONLY BY A SHOP CERTIFIED TO CSA-W186 WITH REINFORCEMENT CONFORMING TO CSA-G30.18, GRADE 400W.
5. SHOP GALVANIZING TO CONFORM TO CAN/CSA-G164.
6. ALL EXPOSED WELDS TO BE CONTINUOUS, GRIND ALL EXPOSED WELDS SMOOTH, INCLUDING PAINTED STEEL.
7. SUPPLY STEEL WITH PROPERTIES NOTED IN STEEL GRADES TABLE.
8. CONNECTIONS NOT DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED AND DETAILED BY A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE PROVINCE OF ALBERTA AT THE STEEL FABRICATOR'S EXPENSE.
9. UNLESS NOTED OTHERWISE, DESIGN CONNECTIONS FOR NON-COMPOSITE BEAMS FOR A FACTORED SHEAR FORCE EQUAL TO 50% OF THE TOTAL BEAM LOAD TABULATED IN THE CISC HANDBOOK OF STEEL CONSTRUCTION.
10. PROVIDED A MINIMUM OF 2 BOLTS IN BOLTED CONNECTIONS.
11. ALL BOLTED CONNECTIONS TO USE SNUG-TIGHTENED HIGH-STRENGTH BOLTS UNLESS OTHERWISE NOTED ON THE DRAWINGS.
12. PROVIDE 10 mm PLATE STIFFENERS EACH SIDE OF BEAM WHERE AT ALL BEARING CONNECTIONS UNLESS OTHERWISE NOTED ON THE DRAWINGS.
13. DO NOT SPLICE MATERIAL WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. WHERE GRANTED, A COMPLETE NON-DESTRUCTIVE EXAMINATION WILL BE MANDATORY AND PAID FOR BY THE SUB- CONTRACTOR.
14. CLEAN, PREPARE AND PRIME ALL STRUCTURAL STEEL AND ANCHOR PLATES. DO NOT PRIME ANCHOR BOLTS OR SURFACES IN CONTACT WITH CONCRETE.
15. CLEAN ALL INTERIOR STRUCTURAL STEEL NOT TO BE FINISH PAINTED BY WIRE BRUSHING. REMOVE ALL RUST, DIRT, MILL SCALE, WELD SPATTER AND ALL OTHER EXTRANEOUS MATERIAL IN ACCORDANCE WITH SSPC SPECIFICATIONS SP2 BEFORE APPLYING ONE-COAT PAINT TO ALL SURFACES EXCEPT THOSE TO BE IN CONTACT WITH CONCRETE OR TO BE FIRE-SPRAY PROTECTED. REFER TO ARCHITECTURAL ROOM FINISH SCHEDULES FOR EXTENT.
16. CLEAN ALL INTERIOR STRUCTURAL STEEL THAT IS TO BE FINISH PAINTED BY COMMERCIAL BLAST IN ACCORDANCE WITH SSPC SPECIFICATIONS SP6 TO ENSURE BASE STEEL IS THOROUGHLY CLEANED OF ALL RUST, DIRT, MILL SPATTER AND ALL OTHER EXTRANEOUS MATERIAL FOLLOWED BY SOLVENT CLEANING BEFORE APPLYING PRIMER. REFER TO ARCHITECTURAL ROOM FINISH SCHEDULE FOR EXTENT. CONFIRM COMPATIBILITY BETWEEN PAINT AND PRIMER.
17. TOUCH-UP FIELD WELDS, CONNECTIONS AND ABRASIONS TO MATCH THE SHOP PRIMER.
18. SHOP AND FIELD INSPECTION OF STEEL FABRICATION AND ERECTION TO BE COMPLETED BY A THIRD PARTY TESTING AND INSPECTION AGENCY APPROVED BY AND RESPONSIBLE TO THE ENGINEER. TESTING AGENCY SHALL BE CERTIFIED TO CSA-W178. TESTING PAID FOR BY OWNER.

STEEL GRADES

TO BE READ IN CONJUNCTION WITH STRUCTURAL STEEL DESIGN NOTES	
MEMBER TYPE	GRADE
OTHER STRUCTURAL SHAPES AND PLATES	CSA G40.21 300W
ANCHOR RODS	ASTM F1554 GRADE 36
BOLTS	ASTM A325
THREADED ROD	ASTM A36

STRUCTURAL NOTES (CAST-IN-PLACE CONCRETE)

1. MATERIAL AND METHODS OF CONSTRUCTION TO CONFORM TO CSA-A23.4.
2. SUPPLY CONCRETE IN ACCORDANCE WITH CSA-23.1.
3. REINFORCEMENT STEEL TO CONFORM TO CSA-G30.18 GRADE 400.
4. USE TYPE GU CEMENT FOR ALL CONCRETE.
5. CLASS OF EXPOSURE TO BE N.
   MINIMUM SPECIFIED COMPRESSIVE STRENGTH = 25 MPa WITHIN 28 DAYS. AIR CONTENT RATIO = 5% - 8%.
6. CONCRETE COVER 20mm.

AHU STRUCTURAL SUPPORT SCHEDULE

AHU MARK	LENGTH (mm)	WIDTH (mm)	STRUCTURAL MODIFICATIONS
SF-1	7633	3994	MODIFY HOUSEKEEPING PAD TO TO SUIT NEW AHU
SF-2	6061	2597	MODIFY HOUSEKEEPING PAD TO TO SUIT NEW AHU
SF-3	7074	4147	MODIFY HOUSEKEEPING PAD TO TO SUIT NEW AHU
SF-4	7353	4096	MODIFY HOUSEKEEPING PAD TO TO SUIT NEW AHU
SF-5	4728	1692	MODIFY HOUSEKEEPING PAD TO TO SUIT NEW AHU
SF-6	7182	4172	MODIFY HOUSEKEEPING PAD TO TO SUIT NEW AHU
SF-7	3981	2737	NEW HANGERS ATTACHED TO EXISTING STRUCTURAL STEEL FRAMING (DELEGATED DESIGN)
SF-8	3715	2089	NEW HANGERS ATTACHED TO EXISTING CONCRETE SLAB (DELEGATED DESIGN)
SF-9	2848	1276	NEW HANGERS ATTACHED TO EXISTING CONCRETE SLAB (DELEGATED DESIGN)
SF-10	2600	1353	NEW HANGERS ATTACHED TO EXISTING CONCRETE SLAB (DELEGATED DESIGN)
SF-15	5328	2121	MODIFY HOUSEKEEPING PAD TO TO SUIT NEW AHU
SF-16	5328	2121	MODIFY HOUSEKEEPING PAD TO TO SUIT NEW AHU
SF-17	2505	1353	MODIFY HOUSEKEEPING PAD TO TO SUIT NEW AHU

Public Works and Government Services Canada / Travaux publics et Services gouvernementaux Canada

REAL PROPERTY SERVICES
Western Region
SERVICES IMMOBILIERS
Région de l'ouest

Stantec

PROFESSIONAL ENGINEER DOUG WANG ALBERTA
2020-07-07

PERMIT TO PRACTICE
STANTEC CONSULTING LTD.
Signature
Date 7/July/2020
PERMIT NUMBER: P 0250
The Association of Professional Engineers and Geoscientists of Alberta

Revision	Description	Date
5		
4		
3		
2		
1		
0	ISSUED FOR TENDER	2020.07.07

Client / client
Public Services and Procurement Canada

Project / Projet
LETHBRIDGE, AB
TOWNSHIP ROAD 9-1, T1J 3Z4

NATIONAL CENTRE FOR ANIMAL DISEASES AHU REPLACEMENT

Designed by / Conçu par: **QW**
Drawn by / Dessiné par: **DJO**
Approved by / Approuvé par: **CL**
PWGSC Project Manager / Administrateur de Projets TPSGC

Drawing title / Titre du dessin
STRUCTURAL
UNIT SF-7 SUPPORT FRAMING
DESIGN NOTES & TABLES
TYPICAL DETAILS

Project no./No. du projet
Drawing no./No. du dessin: **S101** 1 OF 1
Revision no.: **0**

PWGSC – A0 – 1189X841
0 10 20 30 40 50 60 70 80 90 100mm
S101