REGIONAL DISTRICT OF NANAIMO

REQUEST FOR TENDER No. 21-012

Church Road Transfer Station Residential Transfer Building Upgrade

Addendum 1
Issued: September 8, 2021

Closing Date & Time: on or before 3:00 PM Pacific Time on September 29, 2021

This addendum shall be read in conjunction with and considered as an integral part of the Request for Tender. Revisions supersede the information contained in the original Tender or previously issued Addendum. No consideration will be allowed for any extras due to any Vendor not being familiar with the contents of this Addendum. All other terms and conditions remain the same.

ADD:

Herold Engineering Ltd. Structural Drawings S01 and S04

End of Addendum 1

GENERAL

HEL-001

1. ALL DESIGN HAS BEEN COMPLETED IN ACCORDANCE WITH THE 2018 EDITION OF THE BRITISH COLUMBIA BUILDING CODE, INCLUDING ALL ADDENDA.
2. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH THE 2018 EDITION OF THE BRITISH COLUMBIA BUILDING CODE, INCLUDING ALL ADDENDA, ALL REFERENCED CODES AND ALL FEDERAL AND MUNICIPAL REGULATIONS AND BY-LAWS.
3. ALL REFERENCED CODES AND STANDARDS SHALL BE AS REFERENCED IN THE 2018 EDITION OF THE BRITISH COLUMBIA BUILDING CODE.
4. DESIGN CRITERIA: kPa (psf)

NANAIMO									
SNOW LOADS		WIND LOADS			SITE CLASS				
Ss	2.1 kPa (44.0 psf)	q10	0.39kPa (8.15 psf)		–	SEE GEOTECHNICAL REPORT			
Sr	0.4 kPa (8.40 psf)	q50	0.50kPa (10.44 psf)						
Is	ULS –/SLS 0.90	Iw	ULS –/SLS 0.75						
SEISMIC LOADS		SPECTRAL ACCELERATION							
Rd	3.0	Sa (0.2)	Sa (0.5)	Sa (1.0)	Sa (2.0)	Sa (5.0)	Sa (10.0)	PGA	PGV
Ro	1.7	1.02	0.942	0.542	0.328	0.104	0.037	0.446	0.684
Ie	ULS –								

SPECIFIED FLOOR LOADING		SPECIFIED ROOF LOADING	
SUITE DL	= ___kPa (___psf)	DEAD LOAD	= ___kPa (___psf)
SUITE LL	= ___kPa (___psf)	SNOW LOAD	= ___kPa (___psf)
CORRIDOR DL	= ___kPa (___psf)	PONDING LOAD	= ___kPa (___psf)
CORRIDOR LL	= ___kPa (___psf)	NET WIND UPLIFT	= ___kPa (___psf)
DECK DL	= ___kPa (___psf)		
DECK LL	= ___kPa (___psf)		
PARTITION LOADING	= ___kPa (___psf)		
DEFLECTION CRITERIA		DEFLECTION CRITERIA	
LIVE LOAD	= L/360	LIVE LOAD	= L/360
TOTAL LOAD	= L/240	TOTAL LOAD	= L/240

5. THESE DRAWINGS INCLUDING DIMENSIONS SHALL BE READ IN CONJUNCTION WITH ALL OTHER PROJECT DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL REPORT ANY DISCREPANCIES TO THE STRUCTURAL ENGINEER FOR CLARIFICATION PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL BE FAMILIAR WITH ALL PROJECT DRAWINGS INCLUDING THOSE OF OTHER DISCIPLINES AND SHALL MAKE ALLOWANCES FOR ALL ITEMS SHOWN ON OTHER DRAWINGS THAT AFFECT THIS CONTRACTOR'S WORK.
6. THESE DRAWINGS SHOW THE COMPLETED STRUCTURE ONLY. PROVIDE TEMPORARY BRACING AND SHORING FOR THE CONSTRUCTION LOADING CONDITIONS AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED DESIGN LOADS.
7. THE CONTRACTOR SHALL RETAIN A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA TO DESIGN AND TAKE RESPONSIBILITY FOR ANY TEMPORARY SHORING, BRACING OR OTHER DESIGNS REQUIRED TO COMPLETE CONSTRUCTION.
8. THE CONTRACTOR SHALL SUBMIT WRITTEN RECOMMENDATIONS FOR FLATWORK PERFORMED DURING COLD (BELOW +5'C) AND HOT (ABOVE +25'C) WEATHER. THE RECOMMENDATIONS SHALL BE PREPARED, SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA. A SCHEDULE 'S' SHALL ALSO BE SUBMITTED UPON REQUEST. FLATWORK INCLUDES SLABS ON GRADE, SUSPENDED SLABS, TILT-UP PANELS, MASONRY AND CONCRETE TOPPING.
9. UNDER NO CIRCUMSTANCES SHALL DRAWINGS BE SCALED.
10. CONTRACTOR AND ALL SUB-TRADES SHALL VERIFY ALL DIMENSIONS ON SITE PRIOR TO COMMENCING FABRICATION.

REFERENCE PUBLICATIONS

HEL-002

THESE DRAWINGS REFER TO THE FOLLOWING PUBLICATIONS, AND WHERE SUCH REFERENCE IS MADE, IT SHALL BE TO THE EDITION LISTED BELOW, INCLUDING ALL AMENDMENTS PUBLISHED THERETO.

ACI SP-4-2005
ACI 355.4-11

ANSI/APA PRG 320-2012
ANSI/NAAMM MBG 531-17

ASTM 653/A653M-11

ASTM A53/A53M-18
ASTM A123/A123M-13JAE J429-1999
ASTM A193/A193M-17
ASTM A252-10 (2018)
ASTM A307-12
ASTM A325-10e1
ASTM A416/A416M-12a
ASTM A421/A421M-05
ASTM A497/A497M-07
ASTM A615/A615M-18e1
ASTM A722/A722M-12
ASTM A992/A992M-11 (2015)
ASTM A1011/A1011M-12b
ASTM A1064/A1064M-13
ASTM C957/C957M-14
ASTM D1751-18
ASTM D5055-13e1
ASTM D5456-13a
ASTM F1136-11
ASTM F1554-07ae1
ASTM G109-07 (2013)
ASTM G180-13

ASME B18.6.1-1981 (R2016)

CGSB 1.181-99
CGSB 19.24-M90
CGSB 27.50-M89
CGSB 37.50-M89

CISC/CPMA 1-73a (1975)
CISC/CPMA 2-75 (1975)

CSA 112.10-08 (R2017)

CSA A23.1-14
CSA A23.2-14
CSA A23.4-09
CSA A165-14
CSA A179-14
CSA A370-14
CSA A371-14
CSA A3000-13

CSA B111-1974 (R2003)
CSA B167-16

CSA G30.14-M1983 (R1998)
CSA G30.18-09 (R2014)
CSA G40.20/G40.21-13
CSA G164-M92 (R2003)

CSA 056-10(R2015)
CSA 080-08 (R2012)
CSA 086-14
CSA O112-M1977 (R2006)
CSA O112.7-M1977
CSA O112.9-10 (R2014)
CSA O121-08 (R2013)
CSA O122-06 (R2011)
CSA O122.6-M1977

CSA O141-05 (R2014)
CSA O151-09 (R2014)
CSA O153-13 (R2017)
CSA O177-06 (R2015)
CSA O325-07 (R2012)
CSA O437.0-93

CSA S6-14
CSA S16-14
CSA S136-12
CSA S269.1-1975
CSA S269.3-M92 (R2013)
CSA S413-14

CSA W47.1-09 (R2014)
CSA W48-14
CSA W55.3-08 (R2018)
CSA W59-13
CSA W178.1-14
CSA W178.2-14
CSA W186-M1990 (R2016)

CSSBI 10M-18/12M-18
CSSBI 101M-84

ULC S701-11

SUBMITTALS

HEL-003

1. WHERE SHOP DRAWINGS ARE REQUESTED IN THE GENERAL NOTES THE CONTRACTOR SHALL PROVIDE THEM IN EITHER HARD COPY OR DIGITAL FORMAT TO THE FOLLOWING REQUIREMENTS FOR THE ENGINEER'S REVIEW PRIOR TO FABRICATION. THE SHOP DRAWINGS SHALL INDICATE DETAILS, DIMENSIONS, MATERIALS AND DESIGN LOADS.
2. IF HARD COPY FORMAT IS USED FIVE PAPER COPIES SHALL BE SUBMITTED. UNLESS NOTED OTHERWISE THEY SHALL BE SIGNED AND SEALED BY A SPECIALTY ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA.
3. DRAWINGS NOT SEALED BY THE SPECIALTY ENGINEER SHALL BE ACCOMPANIED BY A LETTER WITH A DRAWING LIST IDENTIFYING ALL DRAWING NUMBERS, TITLES, MOST RECENT REVISION NUMBERS AND DATES. THE LETTER AND DRAWING LIST ARE TO BE SIGNED AND SEALED BY THE SPECIALTY ENGINEER.
4. IF A DIGITAL SUBMISSION IS MADE THE FILES SHALL BE IN PDF FORMAT ON A DISC OR TRANSMITTED VIA E-MAIL. THE SUBMISSION SHALL CONTAIN A LETTER WITH A DRAWING LIST AS DESCRIBED ABOVE SIGNED AND SEALED BY THE SPECIALTY ENGINEER. THE FINAL SUBMISSION SHALL BE MADE AS A HARD COPY BEARING THE ORIGINAL SEAL AND SIGNATURE OF THE SPECIALTY ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA.
5. THE FOLLOWING SUBMISSIONS ARE REQUIRED FOR THIS PROJECT:
   - CONCRETE MIX DESIGNS
   - REINFORCING BAR MILL CERTIFICATES IF REQUESTED
   - WELDABLE REINFORCING BAR MILL CERTIFICATES IF REQUESTED
   - EPOXY REINFORCING BAR PERFORMANCE TEST CERTIFICATES IF REQUESTED
6. THE QUALITY ASSURANCE FOR MATERIALS, FABRICATION AND INSTALLATION IS THE RESPONSIBILITY OF THE CONTRACTOR AND HIS SPECIALTY ENGINEER.
7. THE SPECIALTY ENGINEER OR HIS REPRESENTATIVE SHALL VISIT THE SITE AND REVIEW THE COMPLETED WORK DESIGNED AND DETAILED ON HIS SHOP DRAWINGS TO SATISFY HIMSELF THAT THE FINISHED COMPONENTS AND ASSEMBLIES ARE IN COMPLIANCE WITH THE ENGINEERED DESIGN. THE SPECIALTY ENGINEER SHALL THEN PROVIDE THE PROJECT ENGINEER OF RECORD WITH A COMPLETED SCHEDULE 'S' FOR THIS WORK ALONG WITH ANY SKETCHES SHOWING FIELD MODIFICATIONS. THESE SKETCHES SHALL BEAR THE SEAL AND SIGNATURE OF THE SPECIALTY ENGINEER.

NON-STRUCTURAL ELEMENTS

HEL-004

1. THESE DRAWINGS DO NOT INCLUDE NON-STRUCTURAL ELEMENTS WHICH ARE TO BE DESIGNED, DETAILED AND FIELD REVIEWED BY A SPECIALTY ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA, WHO SHALL ALSO PROVIDE LETTERS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. THE SPECIALTY ENGINEER SHALL COORDINATE HIS WORK WITH THESE DOCUMENTS AND THOSE OF THE OTHER DISCIPLINES ON THE PROJECT.

   NON-STRUCTURAL ELEMENTS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

   - MASONRY VENEER AND GLASS BLOCK AND THEIR ATTACHMENT TO THE BUILDING STRUCTURE,
   - NON-LOADBEARING MASONRY,
   - ARCHITECTURAL PRECAST CONCRETE AND PRECAST CLADDING,
   - EXTERIOR AND INTERIOR STUD WALLS, GLAZING SYSTEMS, SIDING AND CLADDING,
   - TIMBER AND STEEL STAIRS,
   - HANDRAILS AND GUARDRAILS AND OTHER ARCHITECTURAL COMPONENTS SUCH AS CANOPIES, CEILINGS, MILLWORK, SKYLIGHTS AND FLAG POLES,
   - NON-STRUCTURAL CONCRETE TOPPINGS,
   - FALL RESTRAINT ANCHORS AND THEIR ATTACHMENT,
   - ELEVATORS, ESCALATORS AND CONVEYING SYSTEMS,
   - WINDOW WASHING EQUIPMENT,
   - MECHANICAL AND ELECTRICAL EQUIPMENT, THEIR ATTACHMENT TO THE BUILDING STRUCTURE AND SEISMIC RESTRAINT,
   - LANDSCAPING ELEMENTS SUCH AS LIGHT POLES, BENCHES AND FREE-STANDING PLANTERS.

2. SHOP DRAWINGS FOR NON-STRUCTURAL ELEMENTS SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR REVIEW OF THE ITEMS IMPACT ON THE BUILDING STRUCTURE ONLY.
3. THE FOLLOWING ARE THE DESIGN WIND LOADS TO BE USED FOR EXTERIOR STUDS, CLADDING AND GLAZING. LOADS SHOWN ARE UNFACTORED (SPECIFIED). NOTE THAT SEISMIC FORCES MAY GOVERN FOR MASONRY VENEER DESIGNS. THE Iw FACTORS FOR ULS/SLS HAVE NOT BEEN APPLIED IN THE TABLE.

HEIGHT ABOVE FINISHED GRADE (m)	INWARD PRESSURE (kN/m²)	OUTWARD PRESSURE (kN/m²)
0 TO 6.0	–	–
6.0 TO 12.0	–	–
12.0 TO 20.0	–	–

4. THE DEFLECTION OF THE EXTERIOR STUDS, CLADDING AND GLAZING UNDER THE LOADING SPECIFIED ABOVE SHALL MEET THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS, MANUFACTURERS SPECIFICATIONS AND RELEVANT BUILDING CODES BUT SHALL IN NO CASE EXCEED THE FOLLOWING;

ELEMENTS SUPPORTING	MAX. DEFLECTION
WOOD SIDING, METAL CLADDING, EXTERIOR INSULATION, OR GLAZING	L/180 OR 19mm (¾")
PRECAST PANELS, STUCCO, OR BRICK VENEER	L/360 OR 19mm (¾")

5. INTERIOR PARTITIONS ARE TO BE DESIGNED FOR A WIND LOAD OF 0.25 kN/m² (UNFACTORED)

FIELD REVIEWS

HEL-005

1. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A MINIMUM OF 24 HOURS (1 WORKING DAY) ADVANCE NOTICE FOR FIELD REVIEWS.
2. THE FOLLOWING FIELD REVIEWS ARE CONSIDERED TO BE THE MINIMUM NUMBER OF STRUCTURAL FIELD REVIEWS REQUIRED FOR THE PROJECT:

   CONCRETE: REINFORCING STEEL SHALL BE REVIEWED PRIOR TO PLACING CONCRETE. REINFORCING IN CONCRETE WALLS SHALL BE REVIEWED PRIOR TO "BUTTONING UP" WALL FORMS.

3. IF THE ENGINEER IS NOT PROVIDED WITH THE OPPORTUNITY TO PERFORM THE REQUIRED FIELD REVIEWS, FINAL CERTIFICATION OF THE PROJECT WILL NOT BE ISSUED.

FOUNDATIONS

HEL-006

1. ASSUMED DESIGN VALUES:

	FACTORED BEARING RESISTANCE	BEARING PRESSURE FOR SETTLEMENT
PAD FOOTINGS	100 kPa (2100 psf)	100 kPa (2100 psf)

   ALLOWABLE BEARING CAPACITY TO BE CONFIRMED BY GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.

2. CENTRE ALL FOOTINGS UNDER COLUMNS AND WALLS UNLESS NOTED OTHERWISE.
3. FOUNDATION BEARING MATERIAL SHALL BE PROTECTED FROM RAIN, FROST, SNOW AND WATER INFILTRATION.
4. FOOTING ELEVATIONS INDICATED ON THE DRAWINGS REPRESENT MINIMUM VALUES TO BE USED. VARIABLE SITE SOIL CONDITIONS, UNDERGROUND SERVICES AND EXISTING STRUCTURES MAY REQUIRE ADJUSTMENT OF FOOTING ELEVATIONS. THE CONTRACTOR SHALL MAKE ALLOWANCES FOR MINOR VARIATIONS IN FOOTING ELEVATIONS IN HIS BID. CONTACT STRUCTURAL ENGINEER FOR INSTRUCTIONS REGARDING SITE CONDITIONS THAT DIFFER FROM WHAT IS SHOWN ON DRAWINGS.
5. CONTRACTOR SHALL COORDINATE CONSTRUCTION OF FOUNDATIONS WITH UNDERGROUND SERVICES AS SHOWN ON CIVIL, MECHANICAL, ELECTRICAL, AND ARCHITECTURAL DRAWINGS. CONFLICTS SHALL BE REPORTED TO THE ARCHITECT FOR RESOLUTION.
6. UNLESS NOTED OTHERWISE, MINIMUM ASSUMED COMPACTION UNDER ALL FOOTINGS AND SLABS FOR COMPACTED GRANULAR FILLS IS 98% STANDARD CORRECTED PROCTOR DENSITY. GEOTECHNICAL ENGINEER OR TESTING AGENCY TO CONFIRM PRIOR TO PLACING CONCRETE.
7. THE BASE COURSE BELOW SLABS ON GRADE SHALL BE COMPOSED OF INERT, CLEAN, TOUGH, DURABLE CRUSHED AGGREGATE, UNIFORM IN QUALITY AND FREE FROM SOFT OR DISINTEGRATED PIECES. THE AGGREGATE PARTICLES SHALL BE UNIFORM IN QUALITY AND FREE FROM AN EXCESS OF FLAT OR ELONGATED PARTICLES. IN THE ABSENCE OF SATISFACTORY PERFORMANCE RECORDS OVER A 5 YEAR PERIOD OF THE PARTICLE SOURCE OF AGGREGATE, IT'S SOUNDNESS SHALL BE TESTED IN ACCORDANCE WITH ASTM C88 USING MAGNESIUM SULPHATE. MAXIMUM WEIGHTED AVERAGE LOSSES FOR COURSE AGGREGATE SHALL BE 20% AND FOR FINE AGGREGATE 25%. THE SAND EQUIVALENT VALUE WHEN TESTED IN ACCORDANCE WITH ASTM D2419 SHALL NOT BE LESS THAN 40. THE LOS ANGELES ABRASION VALUE WHEN TESTED IN ACCORDANCE WITH ASTM C131 SHALL HAVE A MAXIMUM LOSS BY MASS OF 25%. THE AGGREGATE GRADATION SHALL FALL WITHIN THE FOLLOWING LIMITS WHEN TESTED IN ACCORDANCE WITH ASTM C136;

SIEVE SIZE (US STD.)	25mm	19	9.5	4.75	2.36	1.18	0.3	0.075
% PASSING BY WEIGHT	100	80-100	50-100	35-70	25-50	15-35	5-20	0-5

   SUB-BASE BELOW THE BASE COURSE SHALL BE PIT RUN GRAVEL AS SPECIFIED BY THE GEOTECHNICAL ENGINEER.

REINFORCING STEEL

HEL-014

1. REINFORCING STEEL SHALL BE DEFORMED STEEL 400 GRADE AND SHALL CONFORM TO CAN/CSA-G30.18
2. WELDABLE LOW ALLOY DEFORMED STEEL REINFORCING BARS, GRADE 400W, SHALL CONFORM TO CAN/CSA-G30.18. MILL CERTIFICATES SHALL BE SUPPLIED TO THE STRUCTURAL ENGINEER FOR ALL WELDABLE REINFORCING STEEL USED IN THE PROJECT.
3. WELDED WIRE FABRIC, DEFORMED, SHALL CONFORM TO ASTM 1064/1064M OR ASTM A497/A497M.
4. WELDING OF REINFORCING STEEL SHALL CONFORM TO CSA W186-M "WELDING OF REINFORCING BARS IN REINFORCED CONCRETE CONSTRUCTION". WELDING OF REINFORCING SHALL BE ALLOWED ONLY AS NOTED ON PLANS. WHERE WELDING OF REINFORCING IS REQUIRED MILL CERTIFICATES FOR WELDABLE REINFORCING SHALL BE PROVIDED PRIOR TO WELDING. WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER IS REQUIRED FOR ANY ADDITIONAL WELDING.
5. ALL REINFORCING BARS SHALL BE TIED SECURELY TO PREVENT DISPLACEMENT.
6. UNLESS NOTED OTHERWISE ON PLANS, LAP LENGTHS FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

REINFORCING BAR LAP LENGTHS						
CONCRETE MPa	BAR SIZE					
	10M	15M	20M	25M	30M	35M
20	430 (17")	635 (25")	840 (33")	1320 (52")	1575 (62")	1855 (73")
25	380 (15")	560 (22")	760 (30")	1195 (47")	1370 (54")	1650 (65")
30	355 (14")	510 (20")	710 (28")	1065 (42")	1295 (51")	1500 (59")
35	330 (13")	480 (19")	660 (26")	990 (39")	1195 (47")	1395 (55")
40	305 (12")	455 (18")	610 (24")	940 (37")	1120 (44")	1320 (52")
45	280 (11")	430 (17")	560 (22")	890 (35")	1040 (41")	1245 (49")

   NOTES;
   1. MULTIPLY VALUES BY 1.3 FOR HORIZONTAL REINFORCEMENT PLACED IN SUCH A WAY THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE.
   2. MULTIPLY VALUES BY 1.5 FOR EPOXY COATED REINFORCEMENT WITH CLEAR COVER LESS THAN 3 BAR DIAMETERS OR BAR SPACING LESS THAN 7 BAR DIAMETERS.
   3. MULTIPLY VALUES BY 1.2 FOR ALL EPOXY COATED REINFORCEMENT OTHER THAN IN 2. ABOVE.

7. NO SPLICES OTHER THAN THOSE NOTED ON THE DRAWINGS ARE PERMITTED WITHOUT WRITTEN PERMISSION FROM THE STRUCTURAL ENGINEER.
8. WHERE CONCRETE SURFACES ARE TO BE EXPOSED ONLY NON-CORROSIVE TYPE REINFORCING CHAIRS SHALL BE USED TO SUPPORT THE REINFORCING STEEL.
9. DOWELS ARE TO BE TIED IN PLACE PRIOR TO POURING CONCRETE – "WET DOWELING" OF ANY REINFORCING STEEL IS NOT PERMITTED WITHOUT THE WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.
10. HOOKS ON ALL TIES SHALL BE BENT AT LEAST 135° AND HAVE A MINIMUM LEG OF 6 TIMES THE TIE BAR DIAMETER.
11. PROVIDE CORNER BARS TO MATCH HORIZONTAL WALL REINFORCEMENT.
12. ALL VERTICAL REINFORCING TO FOUNDATION WALLS AND PIERS SHALL HAVE A STANDARD HOOK AND BE EMBEDDED IN THE FOOTING.
13. ALL BARS SHALL BE BENT AT TEMPERATURES GREATER THAN 10'C.
14. NO BARS WHICH ARE PARTIALLY EMBEDDED IN CONCRETE SHALL BE FIELD BENT EXCEPT AS SHOWN ON THE DRAWINGS OR APPROVED IN WRITING BY THE PROJECT STRUCTURAL ENGINEER.

CAST-IN-PLACE CONCRETE

HEL-015

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF CAN/CSA A23.1 AND A23.2.
2. CONCRETE MIXES, AGGREGATES AND CEMENTITIOUS MATERIALS, INCLUDING PORTLAND CEMENT AND PORTLAND LIMESTONE CEMENT, SHALL CONFORM TO CAN/CSA A23.1 AND A23.2 AND CAN/CSA-A3000 AND SHALL HAVE THE FOLLOWING PROPERTIES BASED UPON PERFORMANCE CRITERIA PROPORTIONING:

CLASS	28 DAY STRENGTH	MAX. AGG. SIZE	SLUMP	AIR CONTENT	EXPOSURE	CEMENT TYPE
FOOTINGS	25MPa (3500 psi)	19 mm (¾")	80mm ±20	4-7%	F-2	GU
WALLS ABOVE GRADE	30 MPa (4000 psi)	19 mm (¾")	80mm ±20	4-7%	F-2	GU

3. PORTLAND LIMESTONE CEMENT (PLC) SHALL MEET THE REQUIREMENTS OF CSA A3000 FOR LIMESTONE CEMENTS.
4. CONCRETE TESTING SHALL BE CARRIED OUT BY THE CONTRACTOR AND PAID FOR BY THE OWNER AND SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1 AND A23.2. THE MINIMUM NUMBER OF TESTS PERFORMED SHALL BE AS PER CSA A23.2. ADDITIONAL TESTING SHALL BE PERFORMED AT THE DIRECTION OF THE STRUCTURAL ENGINEER. CONTRACTOR SHALL PROVIDE TESTING AGENCY WITH ADEQUATE NOTICE TO PROVIDE TESTING AS REQUIRED.
5. CHAMFER ALL EXPOSED EDGES OF CONCRETE WITH A 19mm (3/4") CHAMFER UNLESS NOTED OTHERWISE.
6. CONCRETE FINISHES SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1 AND AS FOLLOWS UNLESS NOTED OTHERWISE:

   WALLS (TYPICAL); FILL ALL DEFECTS LARGER THAN 25mm (1") DIAMETER AND GRIND RIDGES FLUSH WITH SURROUNDING SURFACES
   EXPOSED AGGREGATE; SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS

7. ALL CONCRETE CURING SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1. SPECIAL PRECAUTIONS SHALL BE TAKEN PER CSA A23.1 FOR PLACING AND CURING CONCRETE AT OR ABOVE 27° C AND AT OR BELOW 5° C.
8. UNLESS NOTED OTHERWISE, OR REQUIRED FOR FIRE RESISTANCE RATING, ALL REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER DISTANCES:

CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	75 mm (3")
EXTERIOR MEMBERS	40 mm (1.5")
INTERIOR SLABS, WALLS, JOISTS, SHELLS AND FOLDED PLATES	20 mm (0.75")

   * IN ADDITION, COVER MUST BE AT LEAST 1.0x THE BAR DIAMETER FOR INTERIOR EXPOSURE, AND 1.5x THE BAR DIAMETER FOR EXTERIOR EXPOSURE

9. MINIMUM CONCRETE COVER TO PRINCIPLE REINFORCING (EXCLUDING STIRRUPS AND TIES) FOR THE APPROPRIATE FIRE RATING SHALL BE:

FIRE RESISTANCE RATING	0-1 HOUR	2 HOURS	3 HOURS
WALLS	25 mm (1")	50 mm (2")	50 mm (2")

10. CONTROL JOINTS SHALL BE PROVIDED IN BOTH DIRECTIONS IN ALL SLABS-ON-GRADE AT A MAXIMUM SPACING OF 3660mm (12'-0") FOR UNREINFORCED SLABS AND 6100mm (20'-0") FOR REINFORCED SLABS, UNLESS NOTED OTHERWISE ON DRAWINGS.
11. JOINT FILLER SHALL BE INSTALLED IN ALL EXPANSION AND CONSTRUCTION JOINTS.

LIST OF ABBREVIATIONS

ALT	---	ALTERNATE	LVL	---	LAMINATED VENEER LUMBER
ARCH	---	ARCHITECTURAL	LV	---	LENGTH VARIES
BCE	---	BOTTOM CHORD EXTENSION	MAX	---	MAXIMUM
B/S	---	BOTH SIDES	MECH	---	MECHANICAL
BLL	---	BOTTOM LOWER LAYER	MIN	---	MINIMUM
BUL	---	BOTTOM UPPER LAYER	NIC	---	NOT IN CONTRACT
C/W	---	COMPLETE WITH	NF	---	NEAR FACE
℄	---	CENTRE LINE	No	---	NUMBER
CLR	---	CLEAR	NTS	---	NOT TO SCALE
CIP	---	CAST IN PLACE	O/A	---	OVERALL
CONC	---	CONCRETE	o/c	---	ON CENTRE
COL	---	COLUMN	O/F	---	OUTSIDE FACE
CONT	---	CONTINUOUS	OPP	---	OPPOSITE
CJ	---	CONTROL JOINT	OWSJ	---	OPEN WEB STEEL JOIST
CP	---	COMPLETE PENETRATION	PL	---	PLATE
DJ	---	DRAG JOIST	PP	---	PARTIAL PENETRATION
DP	---	DEEP	PT	---	PRESSURE TREATED (LUMBER)
DL	---	DEAD LOAD	PSL	---	PARALLEL STRAND LUMBER
DS	---	DRAG STRUT	RD	---	ROOF DRAIN
DT	---	DRAG TRUSS	REINF	---	REINFORCE(MENT)
DWG	---	DRAWING	R/W	---	REINFORCE WITH
E/E	---	EACH END	SCL	---	STRUCTURAL COMPOSITE LUMBER
E/F	---	EACH FACE	SDL	---	SUPERIMPOSED DEAD LOAD
E/S	---	EACH SIDE	STIR	---	STIRRUP
ELEC	---	ELECTRICAL	STL	---	STEEL
ELEV	---	ELEVATION	SIM	---	SIMILAR
EM	---	EMBEDDED PLATE	S/W	---	SHORT WAY
E/W	---	EACH WAY	SWL	---	SAFE WORKING LOAD
EXT	---	EXTERIOR	THK	---	THICK
(E)	---	EXISTING	T&B	---	TOP AND BOTTOM
FD	---	FLOOR DRAIN	T&C	---	TENSION AND COMPRESSION
FF	---	FAR FACE	T&G	---	TONGUE AND GROOVE
GALV	---	GALVANIZED	TJ	---	TIE JOIST
GT	---	GIRDER TRUSS	THK	---	THICK
H.I.E.	---	HOOKED ONE END	TLL	---	TOP LOWER LAYER
H.2.E.	---	HOOKED TWO ENDS	TUL	---	TOP UPPER LAYER
HORIZ	---	HORIZONTAL	T.O.	---	TOP OF
INT	---	INTERIOR	TYP	---	TYPICAL
LG	---	LONG	U/S	---	UNDERSIDE
LL	---	LIVE LOAD	UNO	---	UNLESS NOTED OTHERWISE
LLH	---	LONG LEG HORIZONTAL	VERT	---	VERTICAL
LLV	---	LONG LEG VERTICAL	VIF	---	VERIFY IN FIELD
L/W	---	LONG WAY	W/	---	WITH
			WP	---	WORK POINT

SYMBOLS LEGEND

- SF1 — NEW STRIP FOOTING
- PF1 — NEW PAD FOOTING
- NEW CONCRETE WALL
- CONCRETE BLOCK WALL
- LOAD BEARING STUD WALL
- NON-LOAD BEARING STUD WALL
- WALL BELOW
- SW1 — WOOD STUD SHEAR WALL
- SHEAR WALL HOLD-DOWN
- 2B3 — WOOD BEAM
- 2B1 — WOOD POST
- GT — WOOD GIRDER TRUSS
- W310x33 — STEEL BEAM
- W310x33 / C50 — STEEL BEAM WITH CAMBER
- M 46kN | M 46kN — STEEL MOMENT CONNECTION W/ LOADS SHOWN (ELEVATION)
- M 46kN — M 46kN — STEEL MOMENT CONNECTION W/ LOADS SHOWN (PLAN)
- 55kN — DRAG STRUT LOAD
- BEAM SPLICE LOCATION
- BR1 or BR1 — STEEL BRACE FRAME
- -100 — TOP OF BEAM ELEVATION (RELATIVE TO AN ESTABLISHED DATUM)
- WP — WORK POINT
- PL — POINT LOAD
- SECTION/ELEVATION SYMBOL
- 1 / S301 — SECTION/ELEVATION NUMBER / SHEET WHERE DRAWN
- PLAN DETAIL SYMBOL
- 1 / S402 — DETAIL NUMBER / SHEET WHERE DRAWN
- P1 — PILE TYPE
- PC1 — PILE CAP TYPE
- Z1 — ZONE TYPE
- CW1 — CONCRETE WALL TYPE
- CC1 — CONCRETE COLUMN TYPE
- CP1 — CONCRETE PIER TYPE
- CB1 — CONCRETE BEAM TYPE
- GB1 — GRADE BEAM TYPE
- ST1 — SLAB THICKENING
- WP1 — WALL PANEL (PRE-CAST OR TILT-UP)
- BP1 — BASE PLATE TYPE
- SC1 — STEEL COLUMN TYPE
- MF1 — MOMENT FRAME NUMBER
- MW1 — MASONRY WALL TYPE
- ML1 — MASONRY LINTEL TYPE
- SB#X — SLAB BAND NUMBER
- 7'-4"x20" — SLAB BAND SIZE
- X" — SUSPENDED SLAB THICKNESS
- T12 16' — SLAB BAND TOP STEEL
- B12 — SLAB BAND BOTTOM STEEL
- P? — PUNCHING SHEAR REINFORCING
- 10-S6 — STIRRUP DESIGNATION
- 1 — REVISION NUMBER
- 100.000 — TOP OF FOOTING ELEVATION (PLANS ONLY)
- 100.00 T.O. SLAB — ELEVATION MARKER

STRUCTURAL DRAWING LIST

S01	GENERAL NOTES
S02	GENERAL NOTES AND DETAILS
S03	NEW O/H DOORS NOTES, ELEVATION & DETAILS
S04	NEW SUPPORT FOR SUSPENDED MECH. UNITS

STRUCTURAL DRAWING ISSUE RECORD

ISSUE No.	ISSUE DATE (YYYY.MM.DD)	ISSUED FOR	S01	S02	S03	S04
01	2020.01	FOR INFORMATION ONLY	●	●		
02	2021.09.08	TENDER	●		●	

ISSUES

No.	DATE YYYY.MM.DD	ISSUED FOR
01	2020.01	REVIEW
02	2021.09.08	TENDER

SUB CONSULTANT

ISSUED FOR TENDER

CRTS - RESIDENTIAL TRANSFER BUILDING
6300 HAMMOND BAY ROAD NANAIMO
REGIONAL DISTRICT OF NANAIMO

HEROLD ENGINEERING
3701 Shenton Rd, Nanaimo, BC V9T 2H1
Tel: 250-751-8558 Fax: 250-751-8559
Email: mail@heroldengineering.com

GENERAL NOTES

DESIGNED LG	ENGINEER'S SEAL
DESIGN REVIEW	
DRAFTED YH	
DRAFTING REVIEW	
PROJECT No. 0837-068	CLIENT DRAWING No. n/a
SCALE AS SHOWN	PERMIT No. n/a
HEL DRAWING No. S01	REVISION 02

DESTROY ALL DRAWINGS SHOWING PREVIOUS REVISION

STRUCTURAL STEEL HEL-024

1. ALL STEEL WORK SHALL BE IN ACCORDANCE WITH CSA-S16 AND THE REVIEWED SHOP DRAWINGS.
2. THE STEEL FABRICATOR SHALL SUBMIT SHOP DRAWINGS AS SPECIFIED UNDER 'SUBMITTALS' TO THE PROJECT ENGINEER FOR REVIEW PRIOR TO FABRICATION. SHOP DRAWINGS SHALL INDICATE ALL DETAILS, FASTENERS, MATERIAL SPECIFICATIONS, FINISHES AND DESIGN LOADS.
3. A COPY OF THE FABRICATOR'S CANADIAN WELDING BUREAU CERTIFICATES SHALL BE INCLUDED WITH THE SHOP DRAWING SUBMISSION.
4. ALL WELDING SHALL BE IN ACCORDANCE WITH CSA W59 AND SHALL BE PERFORMED BY FABRICATORS "FULLY APPROVED" BY THE CANADIAN WELDING BUREAU UNDER CSA W55.3. FABRICATING SHOP TO HAVE A MINIMUM DIVISION 2.1 CERTIFICATION BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA W47.1 AND CSA W55.3 FOR RESISTANCE WELDING OF STRUCTURAL COMPONENTS. THE FABRICATOR SHALL SUBMIT PROOF OF CERTIFICATION PRIOR TO START OF WORK.
5. ALL WELDING ELECTRODES SHALL CONFORM TO CSA W48.
6. JOINTS THAT ARE TO BE WELDED SHALL BE KEPT FREE OF ALL FOREIGN MATTER INCLUDING PAINT, PRIMER OR OTHER COATINGS WHICH COULD BE DETRIMENTAL TO ACHIEVING A SOUND WELDMENT.
7. CONNECTIONS NOT DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED FOR THE LOADS INDICATED ON THE DRAWINGS. UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS CONNECTION DETAILS ARE SCHEMATIC ONLY AND FINAL CONNECTION CONFIGURATION IS THE RESPONSIBILITY OF THE FABRICATOR. USE A MINIMUM OF 2-M20 (3/4") A325 BOLTS PER CONNECTION. CONNECTIONS DESIGNED BY THE CONTRACTOR SHALL BE SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA. CONNECTIONS SHALL BE DESIGNED TO CSA-S16 TO RESIST FORCES, MOMENTS AND SHEARS INDICATED ON THE PLANS. IN INSTANCES OF NON-COMPLIANCE THE FABRICATOR SHALL BE RESPONSIBLE FOR ADDITIONAL COSTS ASSOCIATED WITH ACHIEVING COMPLIANCE WITH THE STANDARD.
8. CONNECTIONS DETAILED ON THESE STRUCTURAL DRAWINGS SHALL BE FABRICATED AND ERECTED AS SHOWN. ALTERNATIVES MAY BE CONSIDERED AT THE SOLE DISCRETION OF THE STRUCTURAL ENGINEER OF RECORD BUT MUST BE PRE-APPROVED BY SAME. WHERE AN ALTERNATIVE IS APPROVED IT SHALL BE AT NO ADDITIONAL COST TO THE OWNER AND SHALL NOT NEGATIVELY IMPACT THE CONSTRUCTION SCHEDULE.
9. FABRICATOR SHALL INCREASE WELD SIZES TO ACCOMMODATE SLOT WIDTHS SO THAT LEG SIZE AS SPECIFIED IS FULLY ON STEEL CONNECTION ELEMENT. FINAL WELD SIZE TO BE SHOWN ON THE SHOP DRAWINGS.
10. BOLTS AND ANCHOR RODS SHALL BE LONG ENOUGH THAT THE END OF THE BOLT OR ROD IS OUTSIDE THE FACE OF THE NUT.
11. ALL BOLTS WITH OVERSIZED BOLT HOLES SHALL BE SLIP CRITICAL.
12. SECONDARY STRUCTURAL ELEMENTS ARE TO BE DETAILED SUCH THAT THEY DO NOT IMPOSE DIRECT LOAD TRANSFER TO THE SFRS (SEISMIC FORCE RESISTING SYSTEM) WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
13. ALL WELDED, HEADED STUDS, AND WELDED DEFORMED BAR ANCHORS SHALL BE INSTALLED AS PER THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS IN ACCORDANCE WITH CSA W55.3.
14. DO NOT FIELD BURN BASE PLATE HOLES OR CONNECTION BOLT HOLES UNLESS APPROVED IN WRITING BY THE ENGINEER. NO FIELD CUTTING OR ALTERATION OF STRUCTURAL MEMBERS IS TO OCCUR WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER
15. IF ANCHOR BOLTS ARE MISPLACED OR BOLT HOLES MISALIGNED, INFORM THE ENGINEER.
16. EXCEPT PARTS OF MEMBERS TO BE EMBEDDED IN CONCRETE OR GALVANIZED OR UNLESS NOTED OTHERWISE ON THE DRAWINGS, ALL STEEL WORK SHALL BE SHOP PRIMED. PRIMING SHALL BE IN ACCORDANCE WITH CISC/CPMA-1-73a "QUICK DRYING PRIMER" WHEN NO TOP COAT IS REQUIRED AND IN ACCORDANCE WITH CISC/CPMA-2-75 WHEN A TOP COAT IS SPECIFIED. IF A TOP COAT IS SPECIFIED THE PRIMER SHALL BE SELECTED ENSURING COMPATIBILITY WITH THE SPECIFIED SYSTEM. ITEMS SPECIFIED TO BE GALVANIZED SHALL BE HOT DIPPED GALVANIZED TO ASTM A123/A123M, MINIMUM ZINC COATING OF 600g/sq.m. FIELD TOUCH-UP ALL ABRASIONS, SCRATCHES, WELDS OR BOLTS WITH GALVACON OR EQUIVALENT.
17. ALL EXTERIOR STEEL WORK AND STEEL PROTRUDING THROUGH THE BUILDING ENVELOPE SHALL BE HOT DIP GALVANIZED.
18. GROUT UNDER BASE PLATES TO BE NON-SHRINK 48 MPa (7000 psi) AT 28 DAYS.
19. PROVIDE STRUCTURAL STEEL TO CSA G40.20-04/G40.21-04 OR ASTM A992 WITH THE FOLLOWING GRADES:

PIPE RAILINGS	240W (35W) TO ASTM A53
WIDE FLANGE BEAMS AND COLUMNS	350W (50W) OR ASTM A992/A992M OR ASTM A913/A913M GRADE 50
CHANNELS AND ANGLES	300W (44W)
HSS SECTIONS	350W (50W) CLASS 'C' OR ASTM 1085
MISCELLANEOUS STEEL PLATES	300W (44W)

20. BOLT SIZING SHALL BE AS NOTED ON DRAWINGS AND DETAILS. PROVIDE BOLTS TO CSA G40.21-04 WITH THE FOLLOWING GRADES:

    ERECTION BOLTS TO ASTM A325
    FINAL BOLTED CONNECTIONS; ASTM A325 UNLESS NOTED OTHERWISE
    ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF ASTM F1554, GRADE 36 (36ksi YIELD STRENGTH)

21. WHEN ASTM 490/490M BOLTS ARE USED, THEY SHALL HAVE A ZINC/ALUMINUM COATING MEETING THE REQUIREMENTS OF ASTM F1136 GRADE 3. CORRESPONDING WASHERS SHALL BE COATED AS PER ASTM F1136 GRADE 3 DIP-SPIN, AND NUTS SHALL BE COATED AS PER ASTM F1136 GRADE 5 DIP-SPIN.
22. THREADED ROD SHALL BE TO ASTM F1554 GRADE 36 (36 ksi YIELD STRENGTH)
23. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING DURING CONSTRUCTION. THE BRACING SHALL BE DESIGNED, INSTALLED AND MAINTAINED BY THE CONTRACTOR. THE BRACING SHALL BE REMOVED ONLY AFTER PERMANENT ROOF AND FLOOR DIAPHRAGMS, SHEAR WALLS AND BRACING ARE COMPLETE.
24. THE CONTRACTOR SHALL PROVIDE SEAL WELDED CLOSURE PLATES AT ALL OPEN ENDS OF EXTERIOR HSS COLUMNS. PLATE THICKNESS SHALL BE A MINIMUM OF 6 mm (1/4") UNLESS NOTED OTHERWISE.
25. THE ARCHITECT IS RESPONSIBLE FOR ENSURING ADEQUATE FIRE PROTECTION FOR ALL STRUCTURAL STEEL IN ACCORDANCE WITH CAN/ULC-S101.

SUBMITTALS HEL-003

1. WHERE SHOP DRAWINGS ARE REQUESTED IN THE GENERAL NOTES THE CONTRACTOR SHALL PROVIDE THEM IN EITHER HARD COPY OR DIGITAL FORMAT TO THE FOLLOWING REQUIREMENTS FOR THE ENGINEER'S REVIEW PRIOR TO FABRICATION. THE SHOP DRAWINGS SHALL INDICATE DETAILS, DIMENSIONS, MATERIALS AND DESIGN LOADS.
2. IF HARD COPY FORMAT IS USED FIVE PAPER COPIES SHALL BE SUBMITTED. UNLESS NOTED OTHERWISE THEY SHALL BE SIGNED AND SEALED BY A SPECIALTY ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA.
3. DRAWINGS NOT SEALED BY THE SPECIALTY ENGINEER SHALL BE ACCOMPANIED BY A LETTER WITH A DRAWING LIST IDENTIFYING ALL DRAWING NUMBERS, TITLES, MOST RECENT REVISION NUMBERS AND DATES. THE LETTER AND DRAWING LIST ARE TO BE SIGNED AND SEALED BY THE SPECIALTY ENGINEER.
4. IF A DIGITAL SUBMISSION IS MADE THE FILES SHALL BE IN PDF FORMAT ON A DISC OR TRANSMITTED VIA E-MAIL. THE SUBMISSION SHALL CONTAIN A LETTER WITH A DRAWING LIST AS DESCRIBED ABOVE SIGNED AND SEALED BY THE SPECIALTY ENGINEER. THE FINAL SUBMISSION SHALL BE MADE AS A HARD COPY BEARING THE ORIGINAL SEAL AND SIGNATURE OF THE SPECIALTY ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA.
5. THE FOLLOWING SUBMISSIONS ARE REQUIRED FOR THIS PROJECT:

    - STRUCTURAL STEEL SHOP DRAWINGS*
    - STRUCTURAL STEEL CONNECTION DESIGN NOTES*

    * INDICATES THE REQUIREMENT THAT SUBMISSION BE SEALED BY A SPECIALTY ENGINEER REGISTERED IN THE PROVINCE OF BRITISH COLUMBIA AND PROVIDE A SCHEDULE 'S' UPON COMPLETION OF THE WORK.

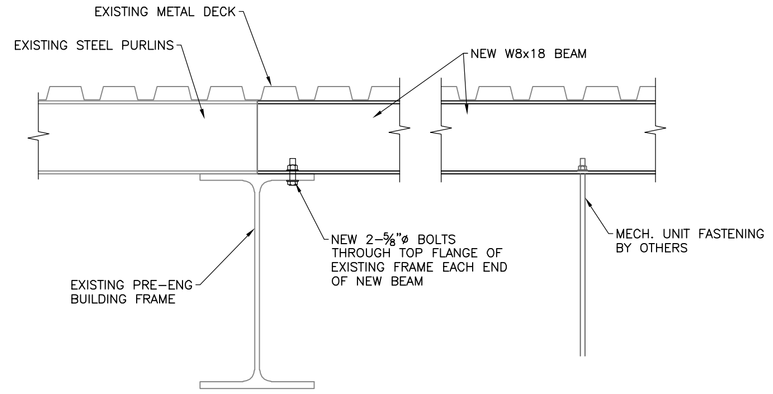
6. SHOP DRAWINGS WHICH ARE REQUIRED TO, BUT DO NOT HAVE THE APPROPRIATE ENGINEERS SEAL AND SIGNATURE WILL NOT BE REVIEWED.
7. SHOP DRAWINGS WILL BE REVIEWED ONLY FOR GENERAL CONFORMITY WITH THE PROJECT DRAWINGS AND SPECIFICATIONS. QUANTITIES AND DETAILED DIMENSIONS ARE THE CONTRACTORS RESPONSIBILITY. THE REVIEW SHALL NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS INCLUDING COORDINATION WITH OTHER TRADES AND DISCIPLINES. THE CONTRACTOR IS RESPONSIBLE FOR ERRORS AND OMISSIONS ON THE SHOP DRAWINGS.
8. SHOP DRAWING SUBMISSIONS FOR THE WORK OF SPECIALTY ENGINEERS SHALL BE AS SET OUT IN THIS SECTION.
9. THE QUALITY ASSURANCE FOR MATERIALS, FABRICATION AND INSTALLATION IS THE RESPONSIBILITY OF THE CONTRACTOR AND HIS SPECIALTY ENGINEER.
10. THE SPECIALTY ENGINEER OR HIS REPRESENTATIVE SHALL VISIT THE SITE AND REVIEW THE COMPLETED WORK DESIGNED AND DETAILED ON HIS SHOP DRAWINGS TO SATISFY HIMSELF THAT THE FINISHED COMPONENTS AND ASSEMBLIES ARE IN COMPLIANCE WITH THE ENGINEERED DESIGN. THE SPECIALTY ENGINEER SHALL THEN PROVIDE THE PROJECT ENGINEER OF RECORD WITH A COMPLETED SCHEDULE 'S' FOR THIS WORK ALONG WITH ANY SKETCHES SHOWING FIELD MODIFICATIONS. THESE SKETCHES SHALL BEAR THE SEAL AND SIGNATURE OF THE SPECIALTY ENGINEER.

FIELD REVIEWS HEL-005

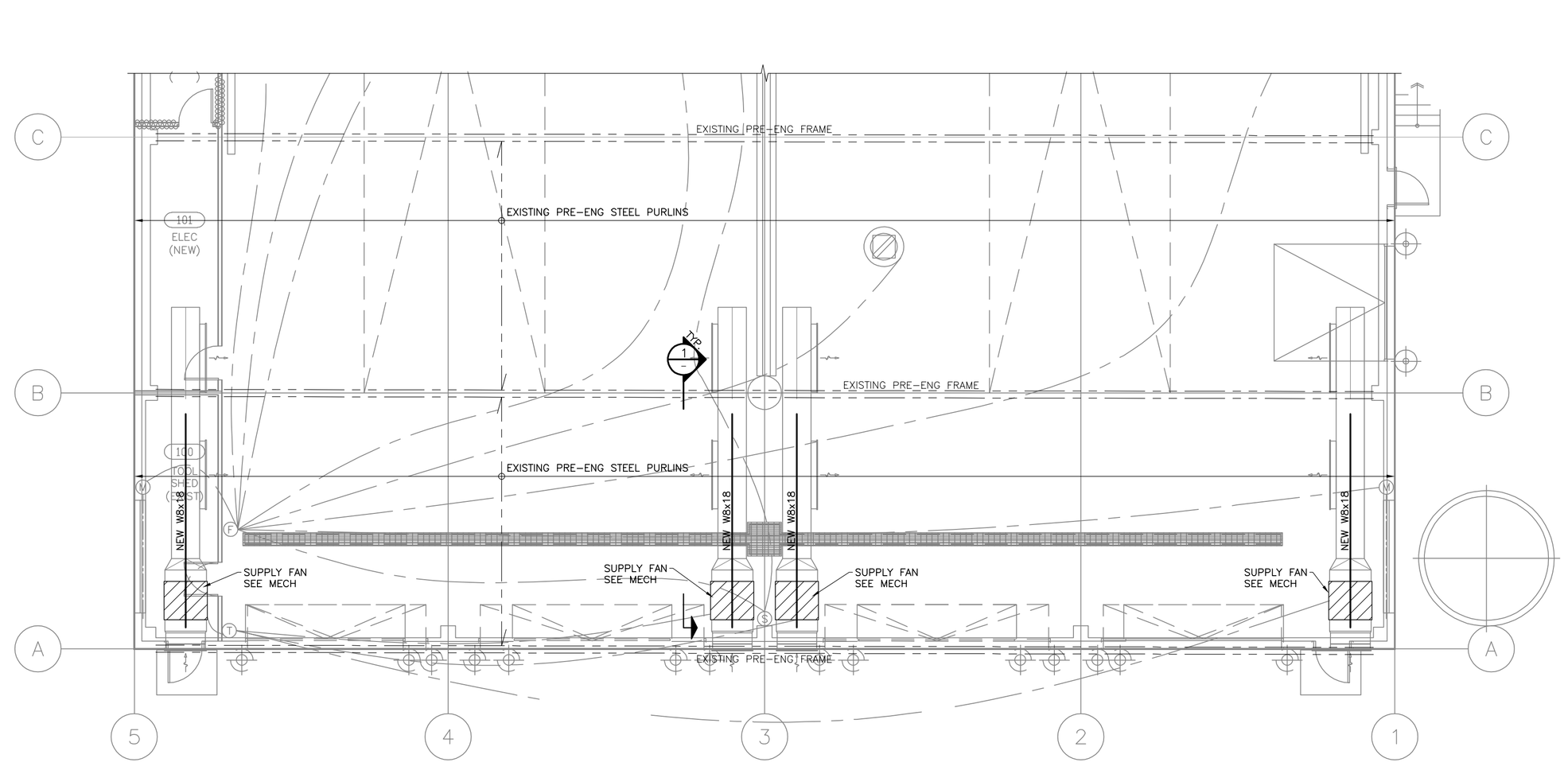
1. THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A MINIMUM OF 24 HOURS (1 WORKING DAY) ADVANCE NOTICE FOR FIELD REVIEWS.
2. THE FOLLOWING FIELD REVIEWS ARE CONSIDERED TO BE THE MINIMUM NUMBER OF STRUCTURAL FIELD REVIEWS REQUIRED FOR THE PROJECT:

    STEEL: STRUCTURAL STEEL SHALL BE REVIEWED AFTER THE MEMBERS HAVE BEEN FABRICATED AND ARE IN THEIR FINAL POSITION WITH ALL CONNECTIONS COMPLETE AND ALL BOLTS INSTALLED AND TIGHTENED.

3. IF THE ENGINEER IS NOT PROVIDED WITH THE OPPORTUNITY TO PERFORM THE REQUIRED FIELD REVIEWS, FINAL CERTIFICATION OF THE PROJECT WILL NOT BE ISSUED.



1 SECTION
1" = 1'-0"



MECH. PLAN UNDERLAY

PARTIAL ROOF KEY PLAN

NTS

ISSUES

No.	DATE YYYY.MM.DD	ISSUED FOR
02	2021.09.08	TENDER

SUB CONSULTANT

ISSUED FOR TENDER

CRTS - RESIDENTIAL TRANSFER BUILDING

6300 HAMMOND BAY ROAD NANAIMO

REGIONAL DISTRICT OF NANAIMO

HEROLD ENGINEERING
3701 Shenton Rd, Nanaimo, BC V9T 2H1
Tel: 250-751-8558 Fax: 250-751-8559
Email: mail@heroldengineering.com

NEW SUPPORT FOR SUSPENDED MECH. UNITS

DESIGNED LG	ENGINEER'S SEAL
DESIGN REVIEW	
DRAFTED EC	
DRAFTING REVIEW	
PROJECT No. 0837-068	CLIENT DRAWING No. n/a
SCALE AS SHOWN	PERMIT No. n/a
HEL DRAWING No. S04	REVISION 02

DESTROY ALL DRAWINGS SHOWING PREVIOUS REVISION