

FISHERIES AND OCEANS

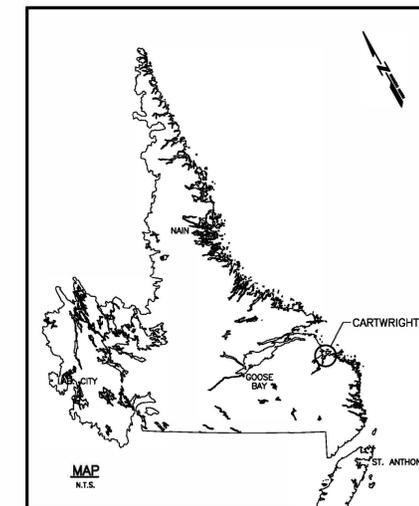


NEW BOAT STORAGE BUILDING

CARTWRIGHT, NL

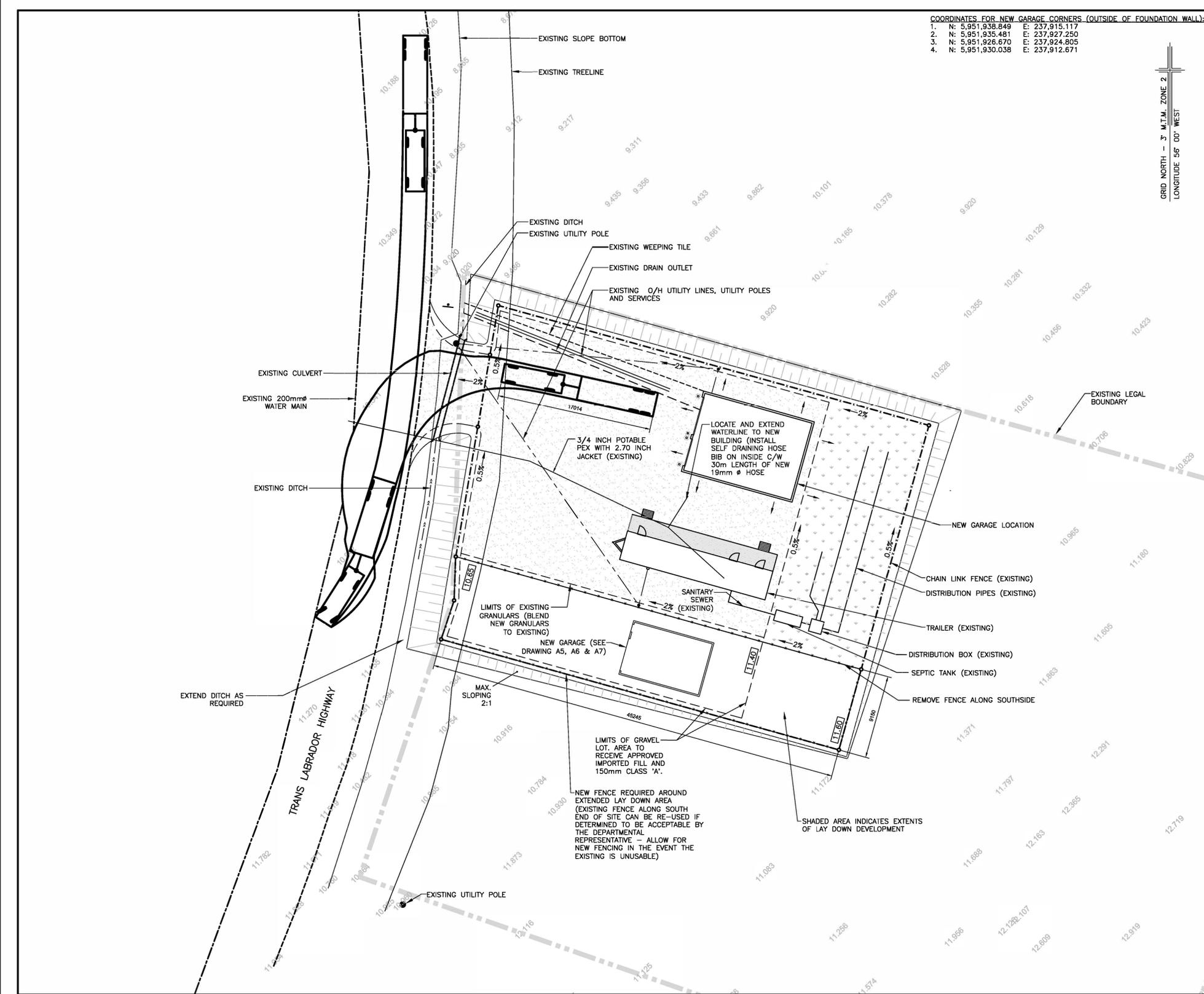
ISSUED FOR TENDER
PROJECT #: F6879-209225

DATE: MAY 21, 2020



CLIENT/OWNER:
DEPARTMENT OF FISHERIES & OCEANS,
REAL PROPERTY, SAFETY & SECURITY

PRIME CONSULTANT:
AFN ENGINEERING INC.



COORDINATES FOR NEW GARAGE CORNERS (OUTSIDE OF FOUNDATION WALL):
 1. N: 5,951,938.849 E: 237,915.117
 2. N: 5,951,935.481 E: 237,927.250
 3. N: 5,951,926.670 E: 237,924.805
 4. N: 5,951,930.038 E: 237,912.671

GRID NORTH - 3° M.T.M. ZONE 2
 LONGITUDE 56° 00' WEST

NEW SITE PLAN - CARTWRIGHT
 0 5 10m

Fisheries and Oceans / Pêches et Océans
 Real Property, Safety & Security / Biens immobiliers, protection et sécurité

PROVINCE OF NEWFOUNDLAND
PERMIT HOLDER
 This Permit Allows
 APN ENGINEERING INC.

REGISTERED PROFESSIONAL ENGINEER
 NEIL C. HUNT
 9/21/20
 NEWFOUNDLAND & LABRADOR

To practice Professional Engineering in Newfoundland and Labrador, Permit No. as issued by APFOPL 23222, which is valid for the year 2020.

- NOTES:
- CONTRACTOR MUST VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE BEFORE PROCEEDING WITH ANY PORTION OF THIS WORK.
 - CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE PLACEMENT OF THE WORK OF ALL TRADES. IF ANY CONFLICTS OCCUR, NOTIFY OWNER PRIOR TO INSTALLATION.
 - DO NOT SCALE FROM DRAWINGS.

SYMBOL	DESCRIPTION
▲	MONUMENT
—○—	EXISTING SANITARY SEWER MAIN
—○—	EXISTING MANHOLE
—○—	EXISTING STORM SEWER MAIN
—○—	EXISTING WATERMAIN
*	POLE
—=—=—	EXISTING CULVERT
—/—/—	SLOPED EMBANKMENT
—>>—	DITCH
—T—	ROAD SIGNS
100.00	EXISTING ELEVATION

0	ISSUED FOR TENDER	5/21/20	P.H.	N.H.
no.	revision	date	by	approved
no.	revision	date	par	approuvé

Project - projet
NEW BOAT STORAGE BUILDING
CARTWRIGHT, NL

Drawing - dessin
NEW SITE PLAN

drawn - dessiné	P.H.	designed - dessiné par	N.H.
date - date	MAY 21, 2020	checked - vérifié	N.H.
scale - échelle	AS SHOWN	approved for tender - approuvé pour l'offre	
project no. - projet no.	F6879-209225	drawing no. - no du dessin	13H1101D001C1
		sheet - feuille	C1

CONCRETE AND FOUNDATION NOTES

- All concrete work to conform to the latest edition of CSA Standards A23.1, A23.2 and A23.3.
- Concrete Requirements:

Location	Strength	Class	Slump	Air Content	W/C Ratio	Max Aggregate
Footings	25 MPa	F2	100mm	4 - 7%	.55	20
Covered Slab on Grade	25 Mpa	N	75mm	-	For Design	20
- Concrete cover to reinforcing:
 - footings bearing on soil - 75 mm
 - walls in contact with soil - 50 mm
- Wire mesh in floor slab shall be placed at centre of slab unless otherwise shown on the drawings. Fiber Reinforced Concrete may be used in lieu of W/M for concrete slab on grade - submit Concrete Mix Design for review. Wire mesh to be lapped a minimum of 150mm.
- Construction joints shall be located so as to least impair the strength of the structure and to the approval of the Engineer. Construction joints shall be keyed and 15mm Ø smooth round bar x 900mm long at 600mm o.c. added. Sawcut control joints in concrete Slab on Grade to be located to least impair the performance of the slab. Provide sawcuts in slab on grade generally as indicated on structural drawings; note the sawcut spacing cannot exceed 36 times the slab thickness in each direction for exposed slab in Industrial Building. All sawcuts must be completed within 24hrs of pour.
- No concrete shall be poured without prior approval of reinforcing by the Owners Representative/Engineer. For openings in slabs and walls see Mechanical and Architectural drawings.
- All reinforcing shall have a minimum yield of 400 MPa.
- All reinforcing steel shall be detailed, fabricated, placed and supported in accordance with ACI 315 (latest edition).
- All reinforcing lap splices shall conform to the latest edition of CSA Standard A23.3 and all bars splices shall be Class 'B' Tension Splices, unless noted otherwise.
 - No bar splice shall be less than listed in table below
 - Increase horizontal splice lengths in the table by 1.3 where more than 300mm of fresh concrete is cast below the splice

Concrete Strength	Tension Splice			Compression Splice
	25MPa	30MPa	35MPa	F2
Rebar Size				F2
10M	400	400	400	450
15M	600	600	600	450
20M	800	800	800	600
25M	1200	1100	1000	750
30M	1400	1300	1200	900
35M	1650	1500	1400	1050

- Note: All dims in table are in mm
- Pier footing dowels size and arrangement to match vertical in pier details. Lap splice all footing dowels to vertical bars as Tension Splice noted in table above.
 - Provide corner bars to match horizontal reinforcing bars at all wall intersections.
 - Chamfer all exposed corners of columns, beams and walls 25mm.
 - All footings are to rest on undisturbed soil or compacted rock fill having a minimum bearing capacity of 150 kPa - unless noted otherwise.
 - For subsurface investigation and recommendations see soils report by Soils Consultant. If no subsurface investigation has been completed contractor to arrange to have a qualified Soils Consultant confirm soil conditions including design bearing capacity and depth of frost prior to pouring concrete. Soils Certification letter to be copied to DBA for records.
 - Protect foundations including any slab on grade from frost action during construction.
 - Remove all loose fill under slab down to undisturbed fill material.
 - All footing elevations are to be confirmed by a Geotechnical Engineer before pouring.
 - Do not place footings on frozen ground.
 - Backfill Materials - See also GeoTech Report. Where discrepancies exist between the Foundation Notes and the recommendations found in the GeoTech Report, the later governs.

Sieve Designation	Type 1	Type 2
	% Passing	% Passing
50.8mm	-	100
25.4mm	-	50-100
19mm	100	-
15.9mm	-	-
9.5mm	50-80	-
4.75mm	35-60	20-55
1.20mm	15-35	10-35
.30mm	5-20	5-20
0.075mm	2-8	2-8

- Type 3 fill: well graded granular material from excavation or other sources or well graded blasted rockfill. Maximum particle size for structural fill to be 200 mm and fines content should not exceed 8%. Material to be free from cinders, ashes, sods, refuse or other deleterious materials.
- Fill Types and Compaction - See also GeoTech Report. Where discrepancies exist between the Foundation Notes and the recommendations found in the GeoTech Report, the later governs. Use fill of types as indicated or specified below. Compaction densities are percentages of maximum densities obtained from ASTM D698.
 - Exterior side of perimeter walls: use Type 3 fill to subgrade level. Compact to 95%.
 - Within building area: use Type 3 to underside of base course for floor slabs. Compact to 98%.
 - Under concrete slabs: provide 125 mm compacted thickness base course of Type 1 fill to underside of slab. Compact base course to 100%.
 - Retaining walls and perimeter walls exceed 2.4m high: use Type 2 fill to subgrade level on high side for minimum 500 mm from wall and compact to 95%. For remaining portion, use Type 3 fill compacted to 95%.
- Test Pits

All test pits inside the perimeter of the building to be excavated to the full depth of the test pit and backfilled with suitable structural fill placed and compacted to 98% Standard Proctor Density.
- Concrete slab to have finish as per Arch. recommendations.
- Fill control joints in concrete slab with Loadflex by Sika or an equivalent owner approved joint sealant.
- For Compressive Strength testing of concrete a minimum of 3 cylinders are required for each of the following:
 - each days pour
 - each type or grade of concrete
 - each change in supplier of concrete
 - each 50m³ or fraction thereof of footings, foundation walls and slabs
 - or additional test specimens shall be taken whenever requested by the Engineer or the Supervisor to verify the concrete quality.

GENERAL NOTES

- Read structural drawings in conjunction with architectural drawings and other contract documents.
- Refer to Architectural, Mechanical and Electrical drawings for exact location of pits, depressions, trenches and roof mounted or suspended units.
- Do not impose construction loads on the structure in excess of the design load.
- Do not cut holes in bearing walls without consultant approval.
- Comply with National Building Codes, local by-laws, Canadian Construction Safety Code and all regulations set by authorities having jurisdiction in case of conflict or discrepancy, the more stringent requirements shall apply.
- Provide all adequate shoring for the safe completion of the work. Assume responsibility to design as well as to erect, maintain and eventually remove all the temporary works necessary for carrying out this contract.
- Make adequate provisions for construction stresses and for sufficient temporary bracing to keep the structure plumb and in true alignment at all phases of work until completion (including masonry walls, floor and roof deck, etc.) Any bracing members shown on plans are those required for the finished structure and may not be sufficient for erection purposes.
- Trucks, cranes, hoists, or any heavy equipment or materials are not allowed to enter any structural floor or roof area unless specifically indicated on structural drawings.
- The contractor shall have the sole responsibility for the design, erection, operation, maintenance and removal of temporary supports, temporary bracing, shoring system, and facilities and the design and execution of construction methods required in their use.
- The contractor shall engage and pay for registered professional engineering personnel skilled in the appropriate disciplines to perform those functions referred to in paragraph above or in all cases where such temporary supports, structures, and facilities and their methods of construction are of such a nature that professional engineering skill is required to produce safe and satisfactory results.
- Submit Shop Drawings for all structural work and any work affecting the structure to consultant. Obtain consultant approval before proceeding with fabrication.
- Each of the following shop drawings must bear the signature and stamp of qualified Professional Engineer registered in the province of project location.
 - Drawings for any temporary work.
 - Drawings for any structural parts designed by the contractor.
- These Design Documents are prepared for solely for use by the party with whom the Design Professional has entered into a Contract and there are no representations of any kind made by the Design Professional to any Party with whom the Design Professional has not entered into a contract.
- The use of this drawings is limited to that identified in the Revision column of the titleblock. Do not construct from these drawings unless drawings are marked 'Issued for Construction' by DBA.
- DBA will provide general review of construction in accordance with the performance standards of PEGNL by means of a rational sampling procedure to determine whether the construction of that work shown on the DBA drawings is in general compliance with the Contract Documents. The Contractor is solely responsible for quality control and the performance of the work in accordance with the Contract Documents. DBA shall not be responsible for the acts or omissions of the Contractor, Sub-Contractor or any other person performing any of the work or for the failure of any of them to carry out the work in accordance with the Contract Documents.
- It is the responsibility of the Owner and the Contractor to notify the Engineer of the construction progress so the engineer may complete general compliance inspections. The Contractor should provide the Engineer with an accurate construction schedule prior to the start of work. In general the following inspections are required; review of rebar prior to placement of concrete, review of footings and foundations prior to backfill and review of structural steel prior to placement of insulation and interior finishes.

STRUCTURAL WOOD NOTES

- Roof trusses to be designed in accordance with CAN3-086 for the loads as indicated on the drawings.
- Submit shop drawings for review and approval.
- Provide truss plates where bearing width of wood plates is less than design width.
- Provide metal truss connectors for connection of roof trusses to wood plates. Connector to have factored uplift capacity equal to 1/2 x truss span x truss spacing x (1.4 wind uplift - 0.9 dead load).
- Plywood Nailing Schedule
 - Roof and ceiling sheathing
 - 64mm nails @ 150 o.c. at plywood edges.
 - 64mm nails @ 300 o.c. at interior of sheet.
 - Wall Sheathing
 - 64mm nails @ 150 o.c. at plywood edges.
 - 64mm nails @ 300 o.c. at interior of sheet.
- Wood joists and beams to be SPF No. 1/2 Grade. LVL beams to be minimum 2.0E - 2900Fb Grade.
- Wood studs to be SPF No. 1/2 Grade unless noted otherwise.
- Unless noted otherwise multiple SPF and LVL beams to be connected as follows:
 - 2 and 3 ply with 3 rows of 3 1/2" common wire nails at 200 o.c.. For 3 ply the nailing pattern is from each side (i.e. 3 rows of nails at 200 o.c. from each outer ply to the inner ply).
 - 4 ply with 2 rows of 13mm bolts at 200 o.c.
- When compression webs of trusses that require bracing do not align use T-Bracing.
- For all wood lintels install top and bottom plate above lintel as noted in typical lintel detail.

TESTING AND INSPECTION

The following items require testing or inspection by a certified independent testing or inspection agency. Unless otherwise noted the Agency shall send copies of all Structural testing or inspections to DBA for review and records.

ITEM	REQUIRED	COMMENTS
Soil Bearing Capacity	Yes	By Soils Engineer
Soil Bearing Test	Yes	By Soils Engineer
Reinforcing Steel Placement	Yes	By DBA
Concrete Compressive Tests	Yes	Per Spec's
Concrete Slump & Air	Yes	Per Spec's

Project Design Data Table		
Building Importance Category		Normal
Specified Wind Loads		
Hourly Wind Pressure		0.6 kPa
Wind Design Category (Internal)		Category 2
Terrain Exposure		Open
Specified Live and Dead Loads		
Dead Load		See Plans
Live Load		See Plans
Specified Snow Load		
Basic Ground Snow Load (1/50)	S	6.30 kPa
Rain Load (1/50)	Sr	0.60 kPa
Additional snow accumulation around mechanical units, projections and adjacent to high/low roof is calculated based on NBC 2015 and noted on the roof framing or snow load diagrams		
Specified Earthquake Data		
Seismic Loading Design Data	Sa(0.2)	0.125
	Sa(0.5)	0.087
	Sa(1.0)	0.052
	Sa(2.0)	0.028
	Sa(5.0)	0.0071
	Sa(10.0)	0.0031
PGA		0.074
	PGV	0.068
Site Class to be confirmed by Geotechnical Engineer	Site Class	D
Seismic Force Modifications Factors	Rd	3.0
	Ro	1.7
Seismic Force Resisting System	NBC 2015	Wood Shear Walls
Seismic Hazard Index	IeFaSa (0.2)	0.155

- Notes:**
- All Loading and Analysis conforms to NBC 2015 Division B Part 4 and the User's Guide NBC 2015 Structural Commentaries
 - All Design Load Data is from NBC 2015 Table C-3
 - Wind Load is based on Static Procedure
 - Seismic Loading is based on the Static Procedure
 - Structure has not been designed to accommodate any future expansion
 - Foundation system has been designed assuming no hydrostatic pressure. Ensure provisions have been made to accommodate appropriate drainage of groundwater and adequate frost protection is provided during and after construction.

ABBREVIATIONS

L	ANGLE	LG	LONG
(E)	EXISTING	LLH	LONG LEG HORIZONTAL
⊙	SPACED AT	LLV	LONG LEG VERTICAL
A.B.	ANCHOR BOLT	m	METER
ALT	ALTERNATE	MAX	MAXIMUM
APPROX	APPROXIMATELY	Mc	MOMENT CONNECTION
ARCH	ARCHITECTURAL	MECH	MECHANICAL
A.P.	BASEPLATES	MIN.	MINIMUM
B/F	BOTTOM FACE	MISC	MISCELLANEOUS
BLK	BLOCK	mm	MILLIMETERS
BM	BEAM	Mpa	MEGA PASCAL
BOTT	BOTTOM	NIC	NOT IN CONTRACT
BP	BASEPLATE	NTS	NOT TO SCALE
C.J.	CONTROL JOINT	O.H.	OVERHEAD DOOR
C/W	COMPLETE WITH	OPP.	OPPOSITE
cf	FACTORED COMPRESSION FORCE	o.c.	ON CENTER
COL	COLUMN	OWSJ	OPEN WEB STEEL JOIST
CONC	CONCRETE	P#	PIER DETAIL NUMBER (SEE DET)
CONN	CONNECTION	PL	PLATE
CONT	CONTINUOUS	RB	ROOF BEAM
DEMO	DEMOLITION	RC	REINFORCED CONCRETE
DET	DETAIL	D	ROOF DRAIN
DIA	DIAMETER	REF	REFERENCE
DIM	DIMENSION	REINF	REINFORCEMENT
DP	DEEP	REQ'D	REQUIRED
DWGS	DRAWINGS	SC	SAWCUT
DWL	DOWEL	SCH	SCHEDULE
EA	EACH	SECT	SECTION
EJ	EACH FACE	SLS	SERVICEABILITY LIMIT STATE
EJ	EXPANSION JOINT	SOG	SLAB ON GRADE
ELEV	ELEVATION	SPEC	SPECIFICATION
EOD	EDGE OF DECK	SS	STAINLESS STEEL
EQ	EQUAL	STIFF	STIFFENER
ES	EACH SIDE	STL	STEEL
EW	EACH WAY	STRUCT	STRUCTURAL
F#	FOOTING DETAIL NUMBER (SEE SCH)	T.O.	TOP OF
FB	FLOOR BEAM	Tf	FACTORED TENSIONS FORCE
FF	FACE TO FACE	TOP	TOP
Fin	FINISHED	TYP	TYPICAL
FLR	FLOOR	U/S	UNDERSIDE
FND	FOUNDATION	ULS	ULTIMATE LIMIT STATE
FTG	FOOTING	VEF	VERTICAL EACH FACE
GA	GAUGE	VERT	VERTICAL
Galv	GALVANIZED	VIF	VERTICAL INSIDE FACE
GC	GENERAL CONTRACTOR	VOF	VERTICAL OUTSIDE FACE
HSS	HOLLOW STRUCTURAL SECTION	W/	WITH
KN	KILO NEWTON	W/I	WITHIN
KPa	KILOPASCAL	W/O	WITHOUT
		W/W	WELDED WIRE MESH

	Fisheries and Oceans Real Property, Safety & Security		Pêches et Océans Biens immobiliers, protection et sécurité

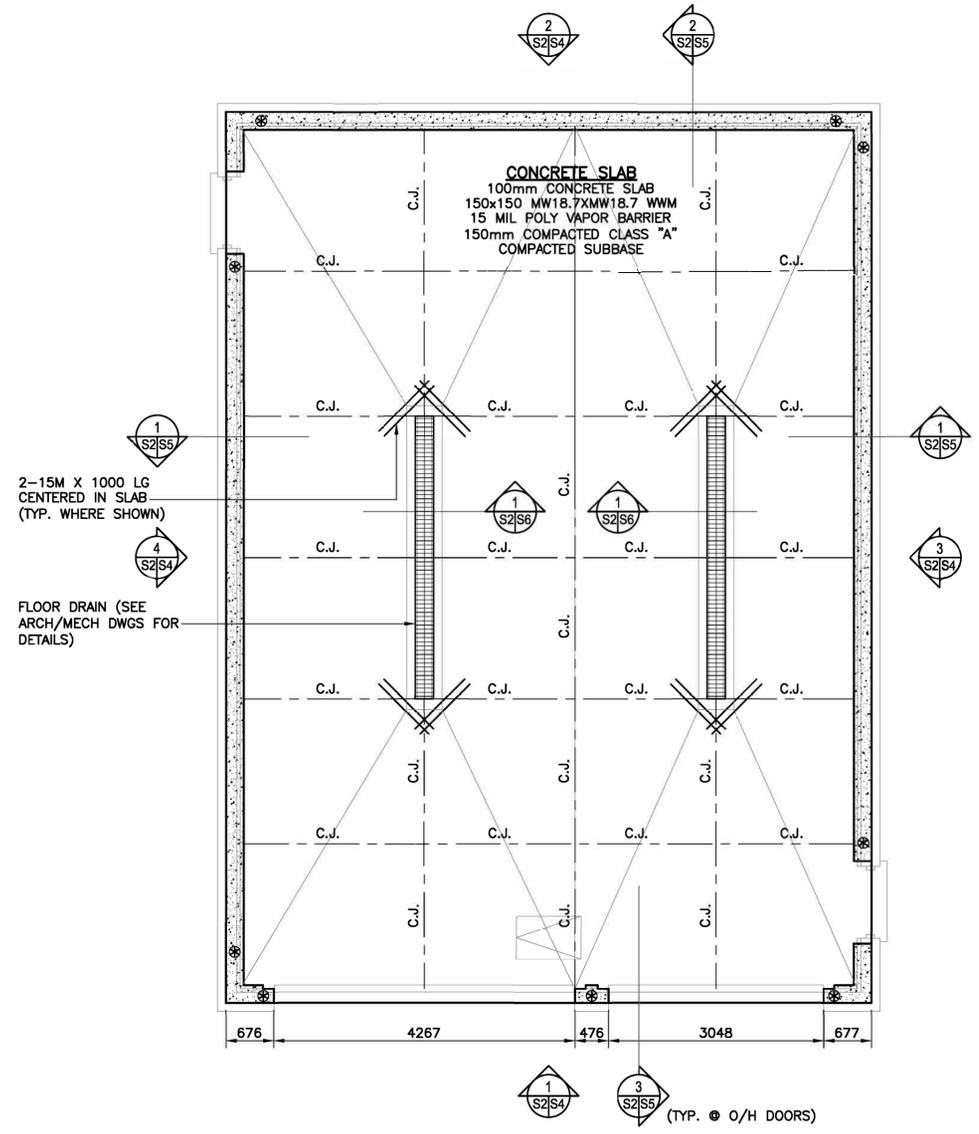
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Project - projet				
NEW BOAT STORAGE BUILDING CARTWRIGHT, NL				
Drawing - dessin				
GENERAL NOTES				
drawn - dessine	C.D.	designed - dessiné par	M.M.	
date - date	AUGUST, 2016	checked - vérifié	M.M.	
scale - échelle	NTS	approved for tender - approuvé pour l'offre		
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				S1



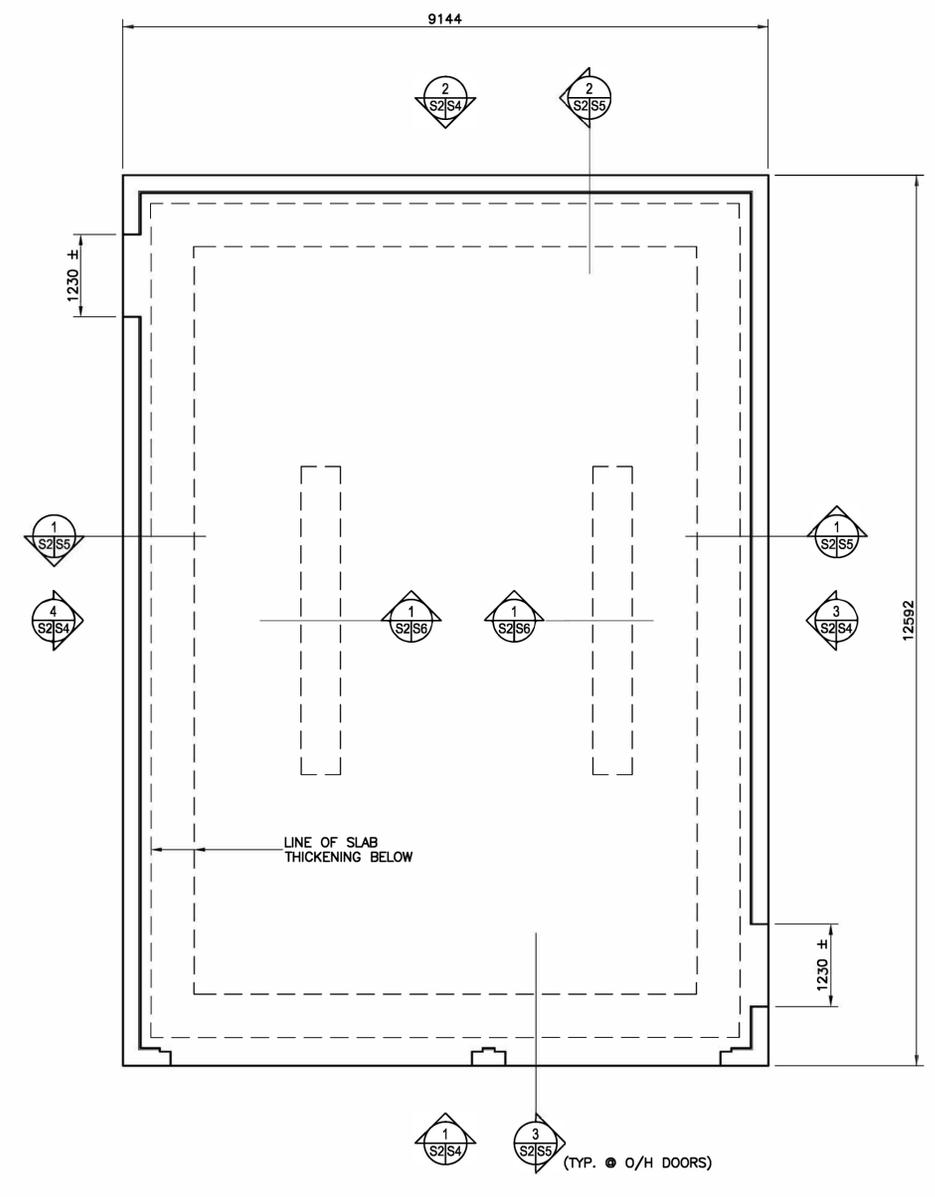
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5. REFERS TO SHEAR WALL HOLD-DOWN LOCATIONS (SEE 2,3,4 AND 5 ON S6) U.N.O.
6. REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL DIMENSIONS, FLOOR SLOPES AND FLOOR DRAINS.
7. C.J. - PROPOSED LOCATION FOR CONTROL JOINTS (SEE 6/S6)



FOR SLAB ELEVATION, REFER TO ARCH. DRAWINGS

SLAB PLAN
 SCALE - 1:50
 SCALE: 1:50



FOUNDATION PLAN
 SCALE - 1:50
 SCALE: 1:50

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Project - projet
 NEW BOAT STORAGE BUILDING
 CARTWRIGHT, NL

Drawing - dessin
 FOUNDATION PLAN & SLAB PLAN

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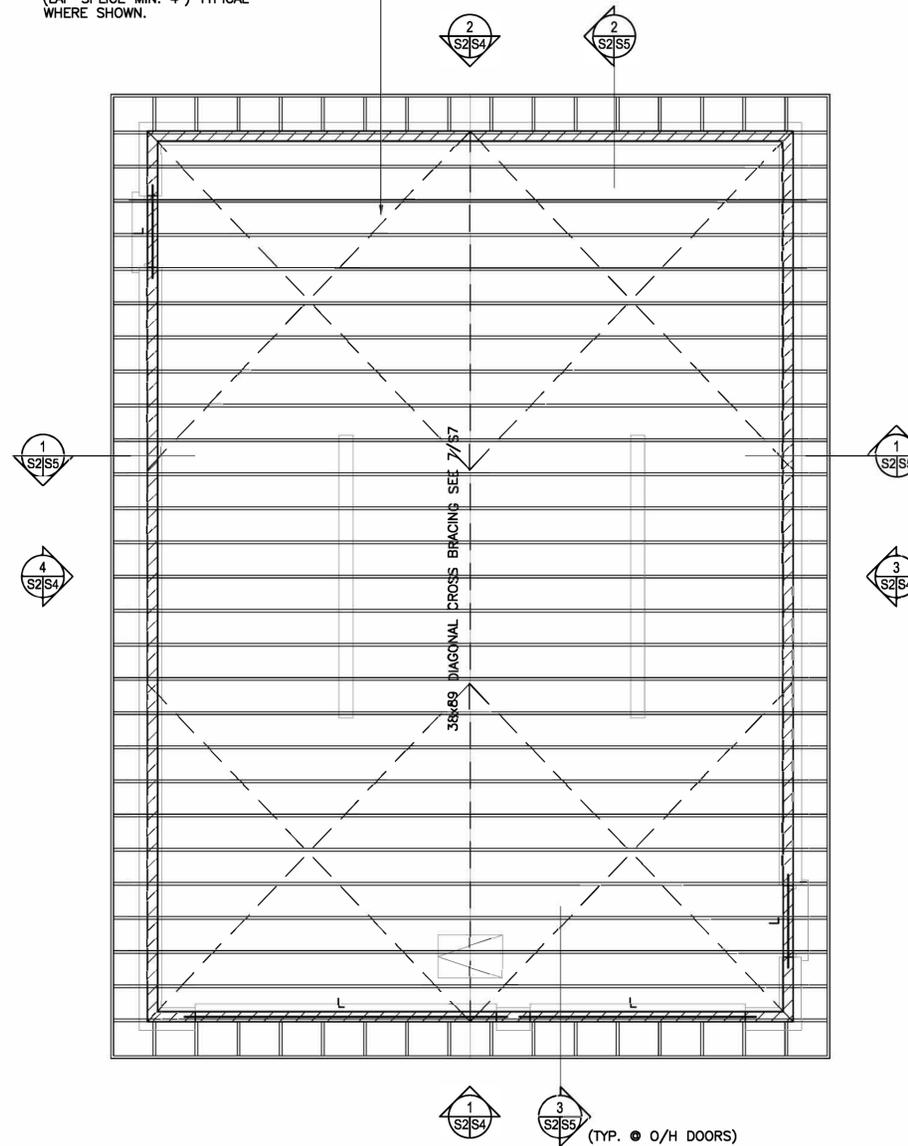


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5. ALL LINTELS (L) TO BE 3-38x286 SPF c/w 2-JACK + 2 KING STUDS
6. HATCH DENOTES 38x184 @ 400mm o.c. LOAD BEARING STUD WALLS WITH 13mm THICK T & G PLYWOOD SHEATHING (BOTH SIDES)

38x89 CONT. HORIZ. BRACING FASTENED TO TOP OF BOTTOM CHORD WITH 2-3" LONG NAILS (LAP SPLICE MIN. 4") TYPICAL WHERE SHOWN.



UNFACTORED ROOF DESIGN LOADS :

DEAD LOAD - 0.75 kPa
 GROSS WIND UPLIFT LOAD - 1.25 kPa x l_w
 BASIC WIND LOAD - 0.60 kPa (PROB. 1/50)
 ATTIC LIVE LOAD - 0.50 kPa

SNOW LOAD

CASE 1 SL = [l_s x 5.1] kPa
 CASE 2 SL = [l_s x 5.8] kPa



SNOW LOAD DEFLECTION LIMIT = L/360

BLDG. IMPORTANCE CATEGORY = NORMAL

ROOF SYSTEM:

35mm METAL ROOFING
 ROOF UNDERLAY
 19mm PLYWOOD c/w H-CLIPS
 PRE-FABRICATED WOOD ROOF TRUSSES @ 488mm o.c.
 RSI 10.5 INSULATION
 19x64 WOOD STRAPPING @ 488mm o.c.
 0.25 POLY AIR VAPOUR BARRIER
 13mm T & G PLYWOOD CEILING SHEATHING

ROOF FRAMING PLAN

SCALE - 1:50



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Drawing - dessin

ROOF FRAMING PLAN

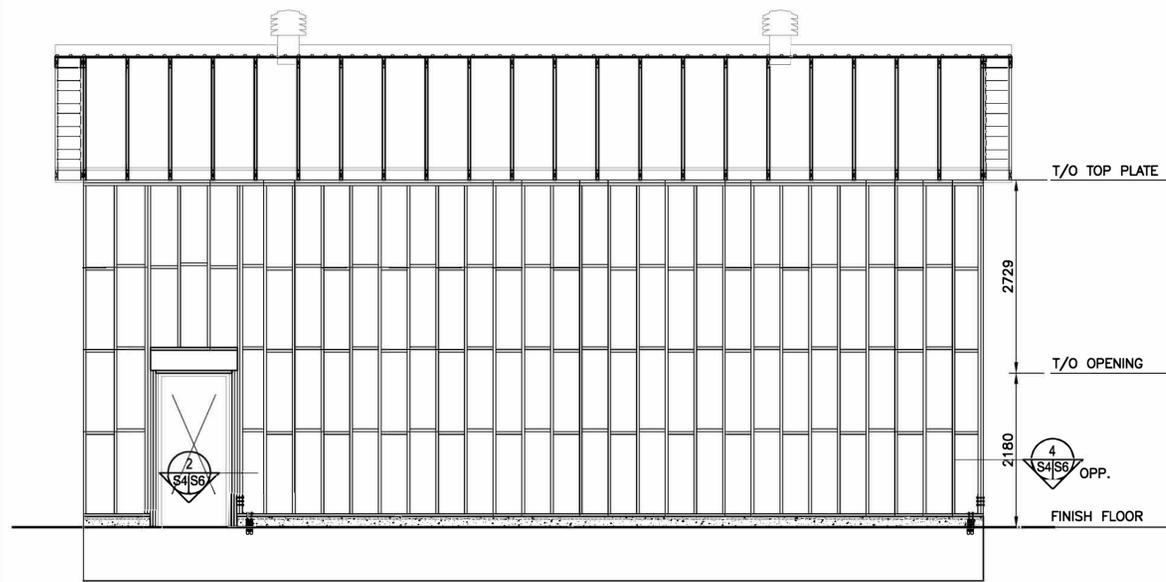
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		sheet - feuille	S3



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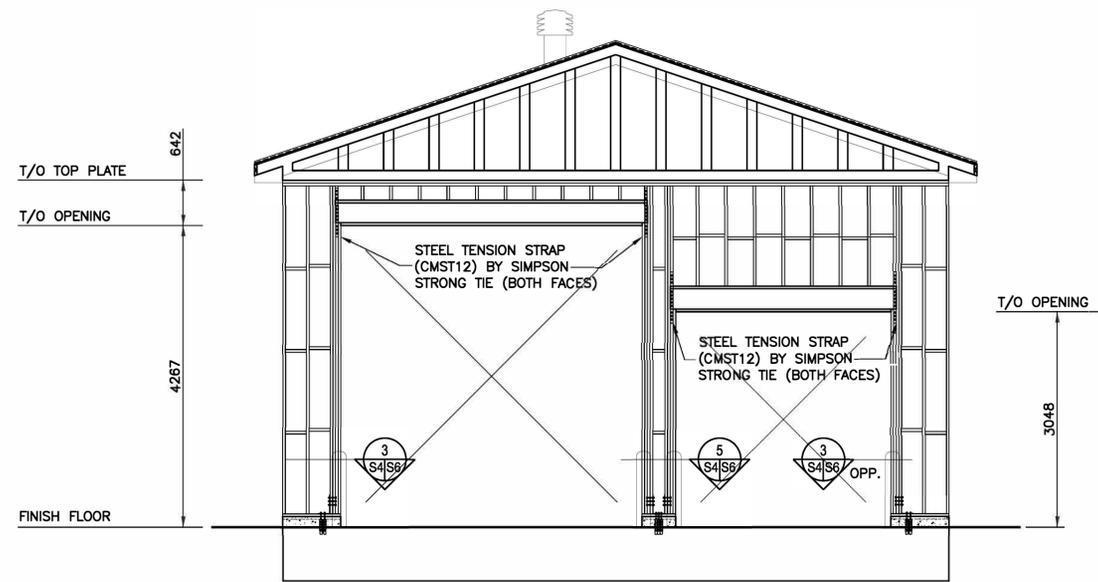
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RIGHT SIDE ELEVATION

SCALE - 1:50

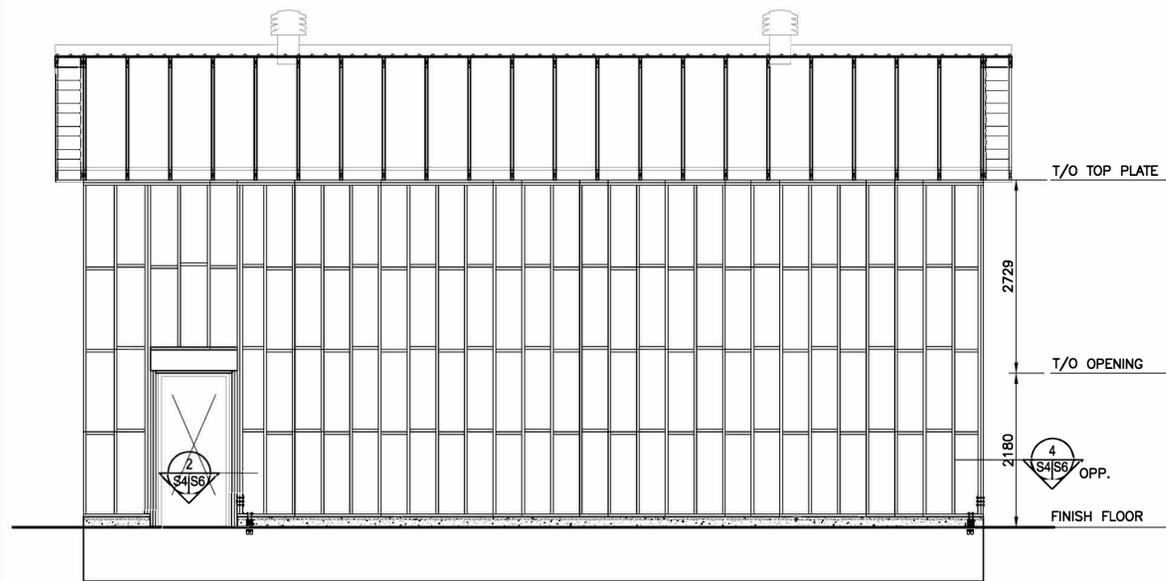
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FRONT ELEVATION

SCALE - 1:50

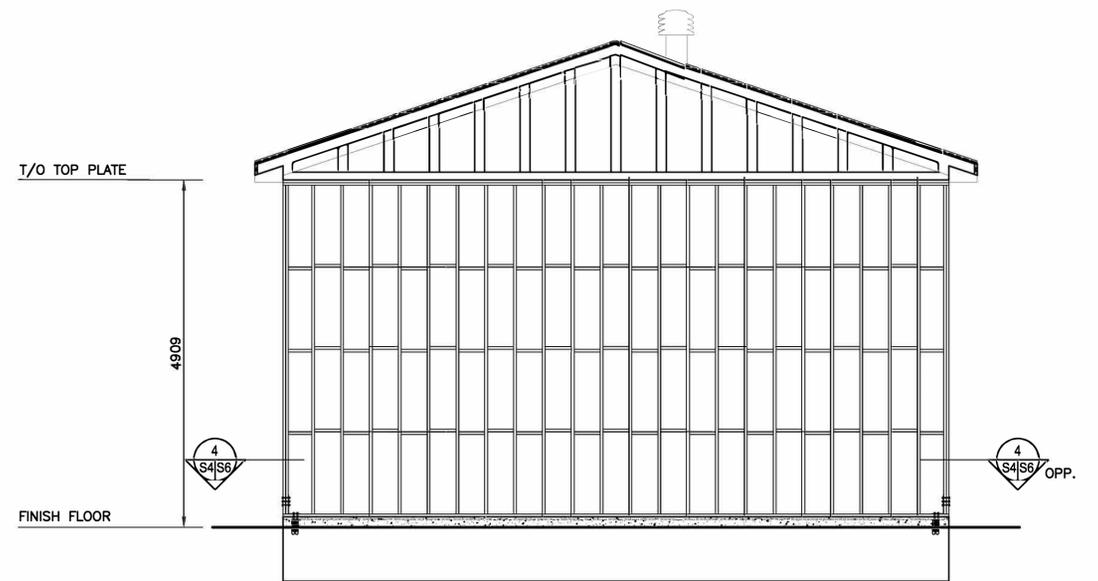
SCALE: 1:50



LEFT SIDE ELEVATION

SCALE - 1:50

SCALE: 1:50



BACK ELEVATION

SCALE - 1:50

SCALE: 1:50



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CARTWRIGHT, NL

Drawing - dessin

STRUCTURAL ELEVATIONS

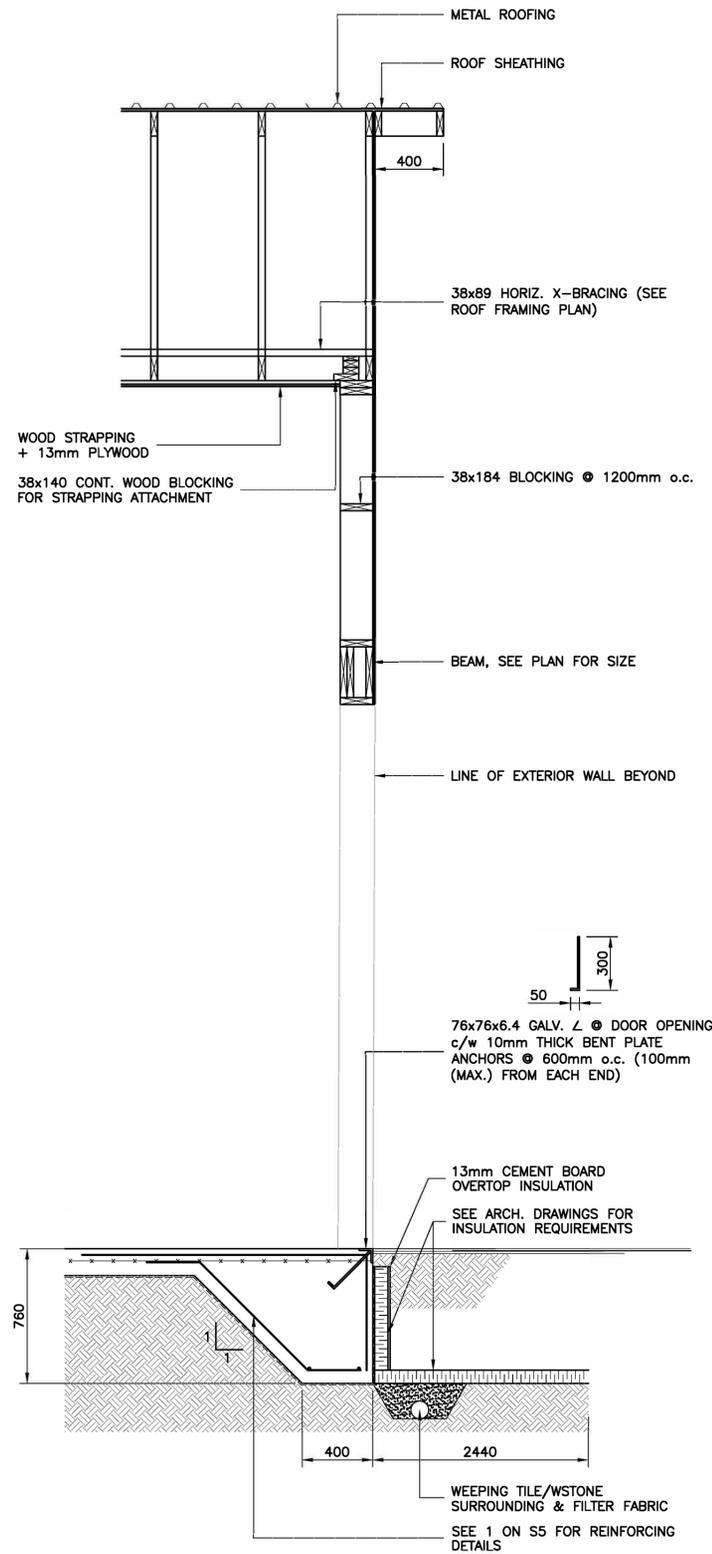
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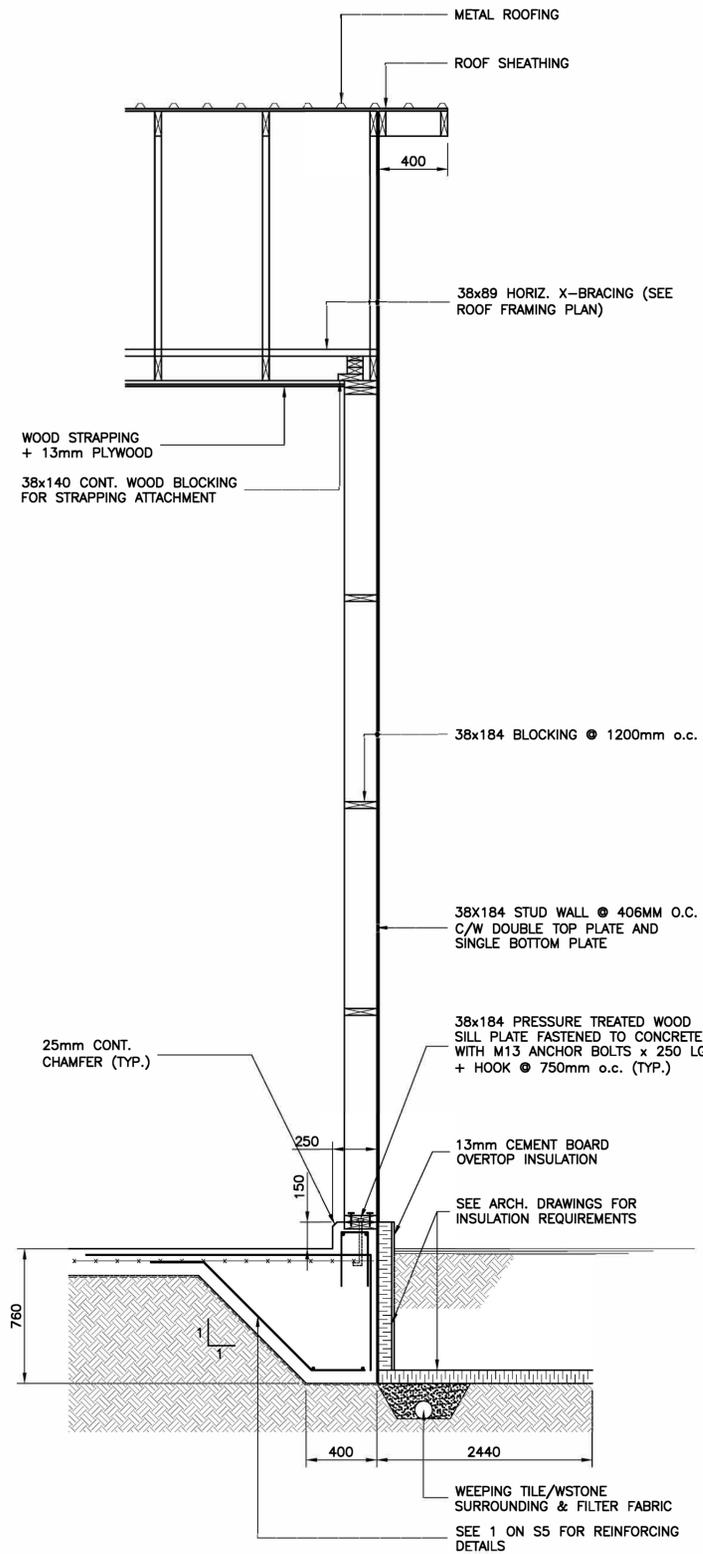
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NOTES:

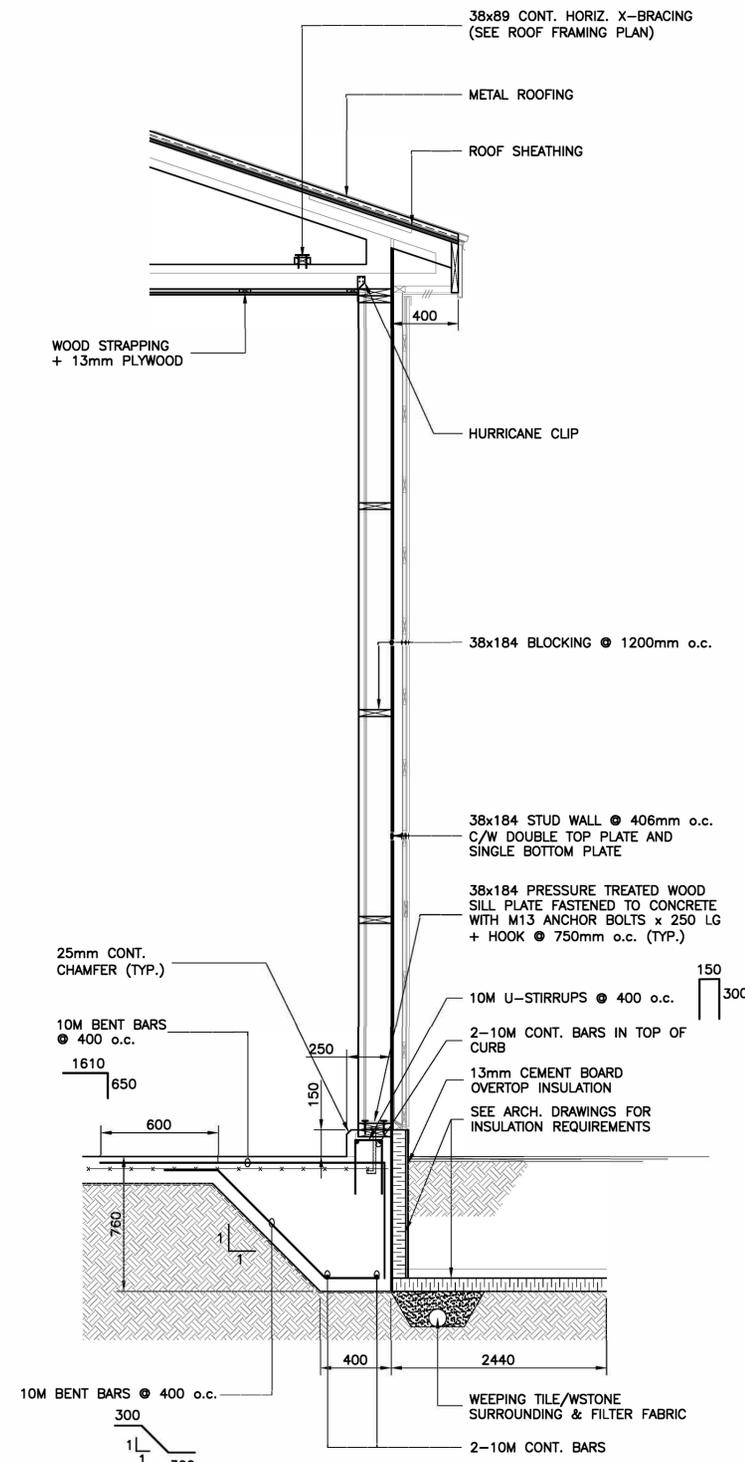
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SECTION @ O/H DOOR
 SCALE - 1:20
 SCALE : 1:20
 3
 S2 S5



SECTION
 SCALE - 1:20
 SCALE : 1:20
 2
 S2 S5



SECTION
 SCALE - 1:20
 SCALE : 1:20
 1
 S2 S5

0	RE-ISSUED FOR TENDER	05/11/20	C.D.	M.M.
no.	revision	date	by	approved
no.	revision	date	par	approve

Project - projet
 NEW BOAT STORAGE BUILDING
 CARTWRIGHT, NL

Drawing - dessin
 WALL SECTIONS

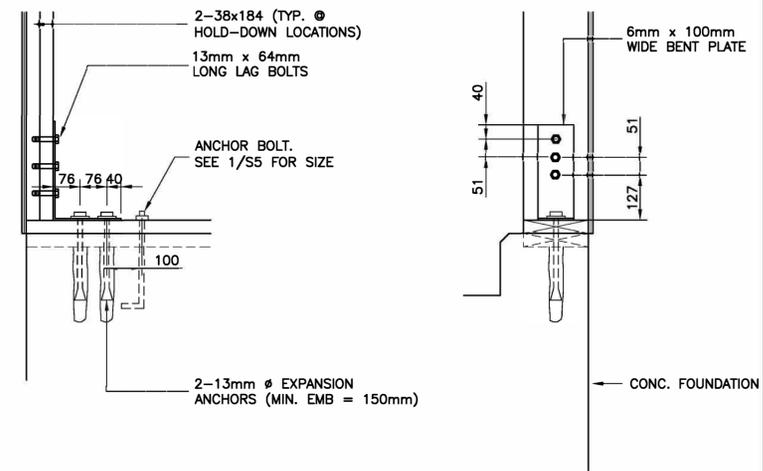
drawn - dessine	C.D.	designed - dessinée par	M.M.
date - date	AUGUST, 2016	checked - vérifié	M.M.
scale - échelle	1:20	approved for tender - approuvé pour l'offre	
project no. - projet no.	F6879-20922s	drawing no. - no du dessin	13H1101D001S5
		sheet - feuille	S5



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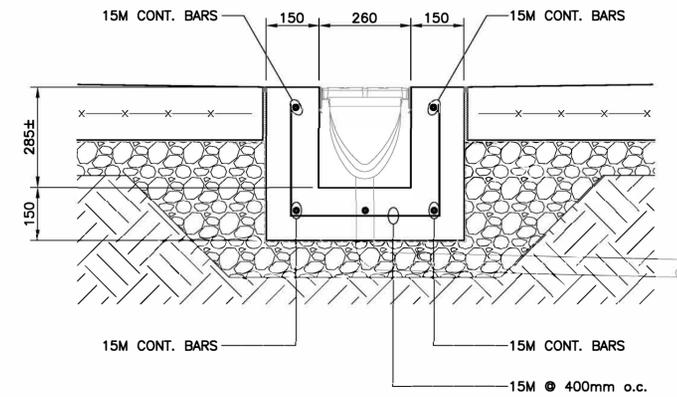


SECTION @ SHEAR WALL HOLD-DOWN

SCALE - 1:10



SCALE: 1:10
 0mm 20mm 40mm 60mm 80mm 100mm

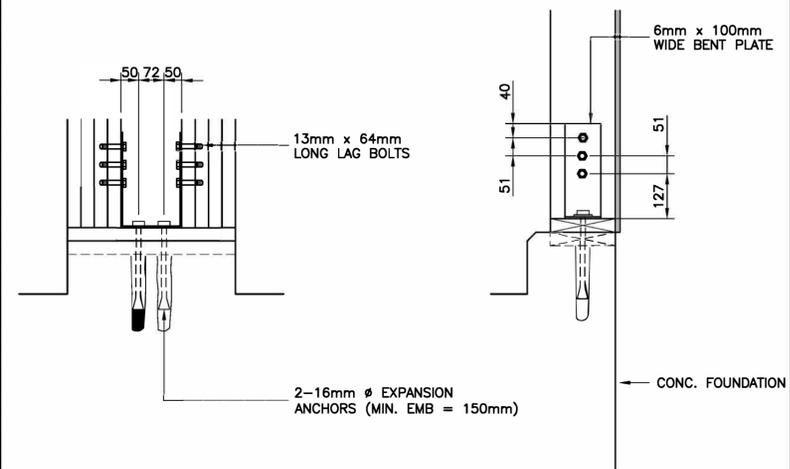


SECTION @ FLOOR TRENCH DRAIN

SCALE - 1:10



SCALE: 1:10
 0mm 20mm 40mm 60mm 80mm 100mm

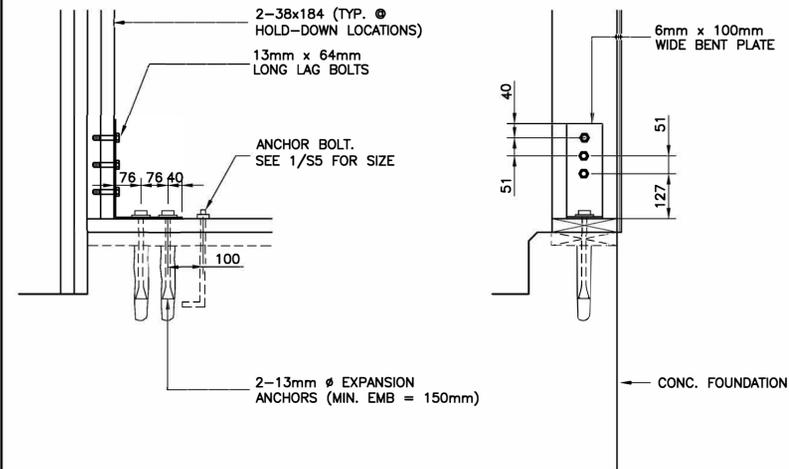


SECTION @ SHEAR WALL HOLD-DOWN

SCALE - 1:10



SCALE: 1:10
 0mm 20mm 40mm 60mm 80mm 100mm

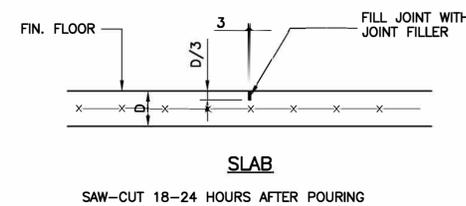


SECTION @ SHEAR WALL HOLD-DOWN

SCALE - 1:10



SCALE: 1:10
 0mm 20mm 40mm 60mm 80mm 100mm

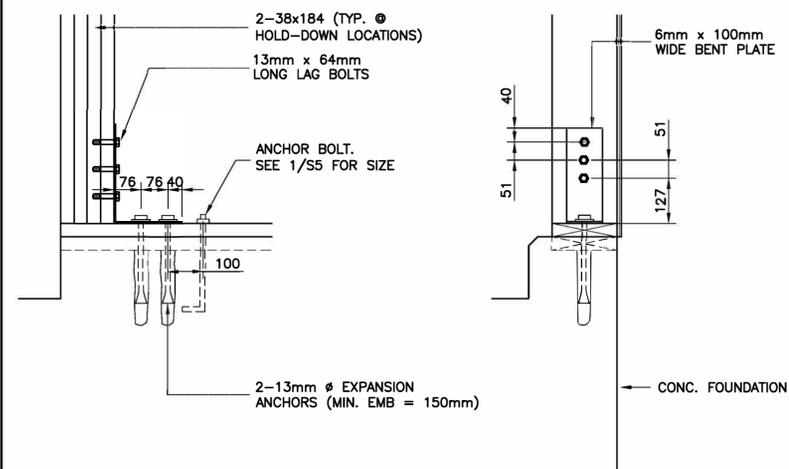


CONTROL JOINT DETAILS

SCALE - 1:10



SCALE: 1:10
 0mm 20mm 40mm 60mm 80mm 100mm



SECTION @ SHEAR WALL HOLD-DOWN

SCALE - 1:10



SCALE: 1:10
 0mm 20mm 40mm 60mm 80mm 100mm

0	RE-ISSUED FOR TENDER	05/11/20	C.D.	M.M.
no.	revision	date	by	approved
no.	revision	date	par	approve

Project - projet

NEW BOAT STORAGE BUILDING
 CARTWRIGHT, NL

Drawing - dessin

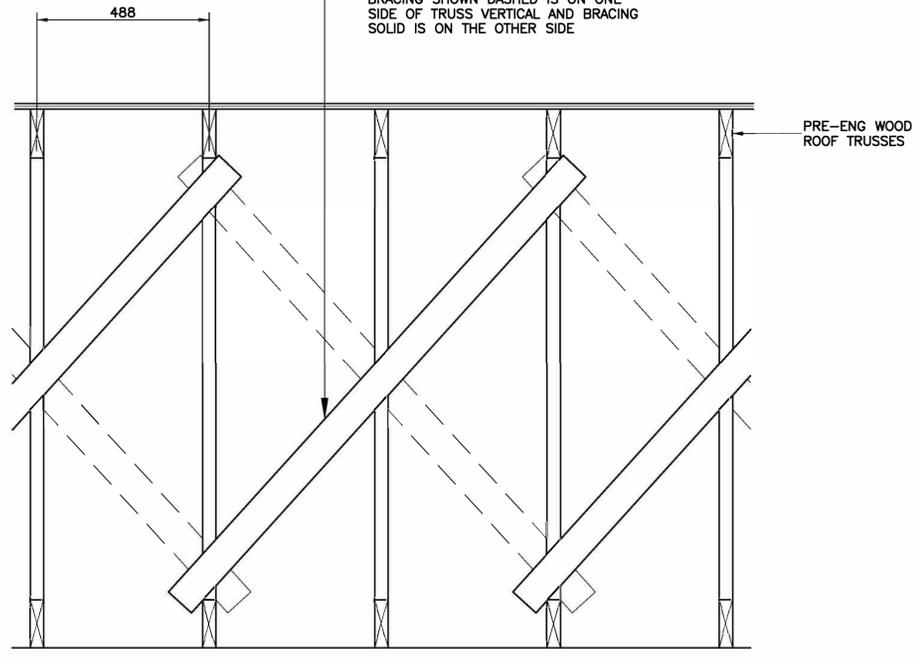
SECTIONS & DETAILS

drawn - dessine	C.D.	designed - dessine par	M.M.
date - date	AUGUST, 2016	checked - verifie	M.M.
scale - echelle	AS STATED	approved for tender - approuve pour l'offre	
project no. - projet no.	F6879-209225	drawing no. - no du dessin	13H1101D001S6
		sheet - feuille	S6



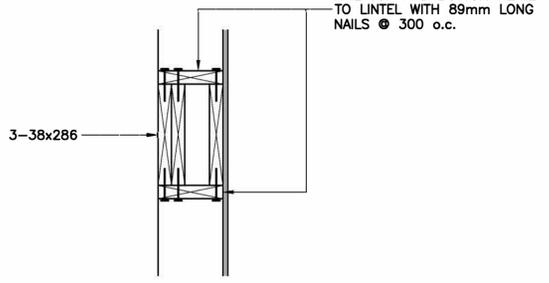
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38x89 CROSS BRACING NAIL TO EACH TRUSS WITH 2-89mm LONG NAILS. BRACING SHOWN DASHED IS ON ONE SIDE OF TRUSS VERTICAL AND BRACING SOLID IS ON THE OTHER SIDE



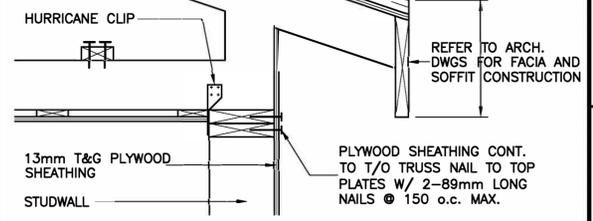
CROSS BRACING DETAIL
 SCALE - 1:10
 SCALE: 1:10
 7
 S3 S7

NAIL TOP AND BOTTOM PLATE TO LINTEL WITH 89mm LONG NAILS @ 300 o.c.

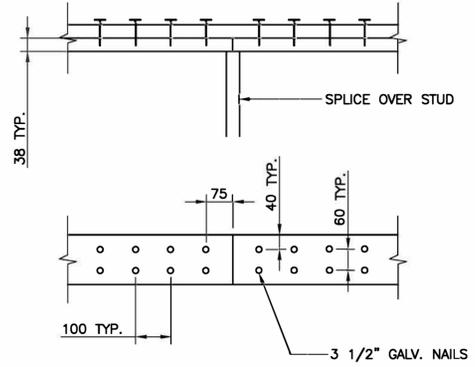


SECTION
 SCALE - 1:10
 SCALE: 1:10
 4
 S3 S7

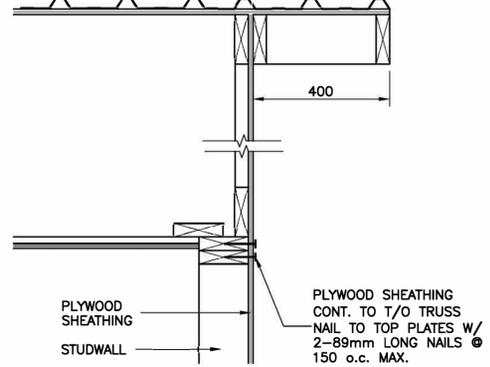
300 ± (CO-ORDINATE TRUSS HEEL HEIGHT WITH ARCH. DWGS.)
 HURRICANE CLIP
 13mm T&G PLYWOOD SHEATHING
 STUDWALL
 REFER TO ARCH. DWGS FOR FACIA AND SOFFIT CONSTRUCTION
 PLYWOOD SHEATHING CONT. TO T/O TRUSS NAIL TO TOP PLATES W/ 2-89mm LONG NAILS @ 150 o.c. MAX.



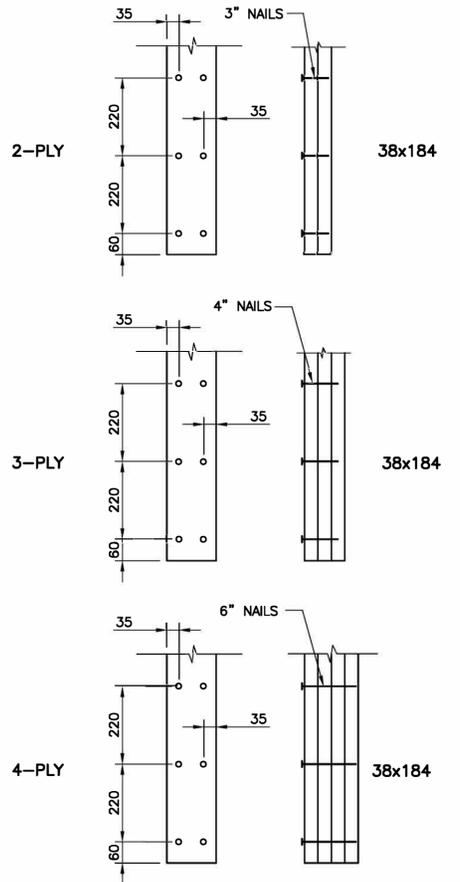
SECTION
 SCALE - 1:10
 SCALE: 1:10
 1
 S3 S7



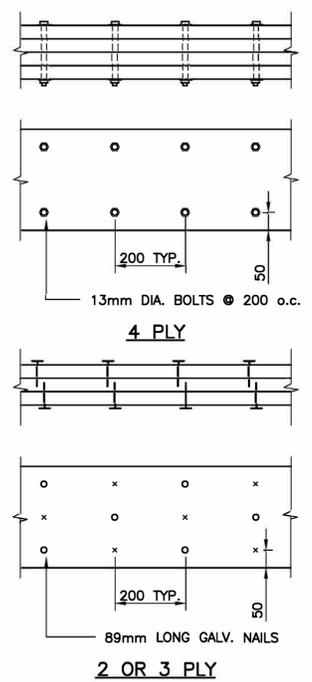
TOP PLATE SPLICE DETAIL
 SCALE - 1:10
 SCALE: 1:10
 5
 S3 S7



SECTION
 SCALE - 1:10
 SCALE: 1:10
 2
 S3 S7



BUILT-UP POST DETAIL
 SCALE - 1:10
 SCALE: 1:10
 6
 S3 S7



NOTE :
 2 OR 3 PLY BUILT-UP SPF WOOD OR LVL BEAMS.
 FOR 3 PLY THE NAILING PATTERN IS FROM EACH SIDE.
 TYPICAL UNLESS NOTED OTHERWISE ON FRAMING PLANS

BUILT-UP WOOD BEAM NAILING PATTERN
 SCALE - 1:10
 SCALE: 1:10
 3
 S3 S7

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0	RE-ISSUED FOR TENDER	05/11/20	C.D.	M.M.
no.	revision	date	by	approved
no.	revision	date	par	approve

Project - projet
 NEW BOAT STORAGE BUILDING
 CARTWRIGHT, NL

Drawing - dessin
 SECTIONS & DETAILS

drawn - dessine	C.D.	designed - dessine par	M.M.
date - date	AUGUST, 2016	checked - verifie	M.M.
scale - echelle	AS STATED	approved for tender - approuve pour l'offre	
project no. - projet no.	F6879-209225	drawing no. - no du dessin	13H1101D001S7
		sheet - feuille	S7



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WORKING DRAWING
Robert D. Buit
 PROFESSIONAL ENGINEER
 License No. 12020
 AUGUST 31, 2016

ISSUED FOR TENDER
 31/08/16
 date
 1:50
 scale

Project - project
 NEW BOAT STORAGE BUILDING
 CARTWRIGHT, NL

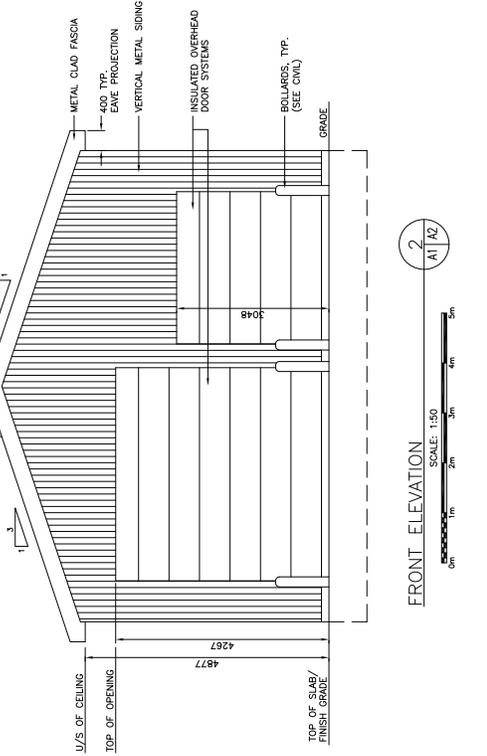
Drawn - design
 Checked - verify
 Date - date
 Scale - scale
 Project no. - no. du dessin
 Drawing no. - no. du dessin

13H1101D001A2

sheet - feuille
 A2

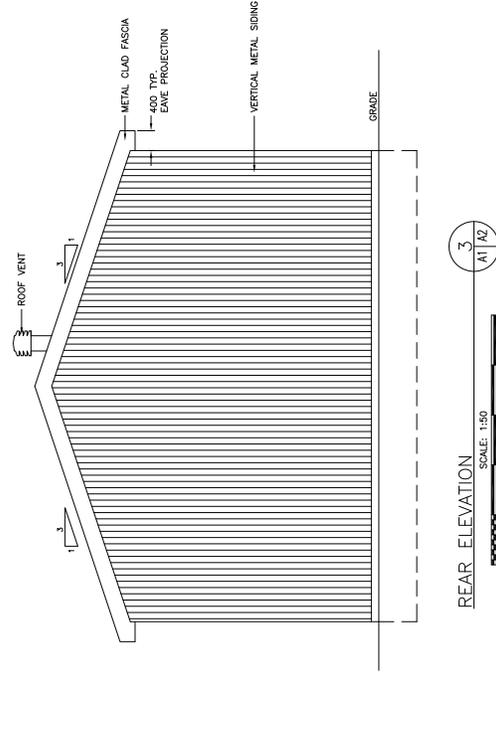
approved for tender-opposé pour l'offre

approved by approved by



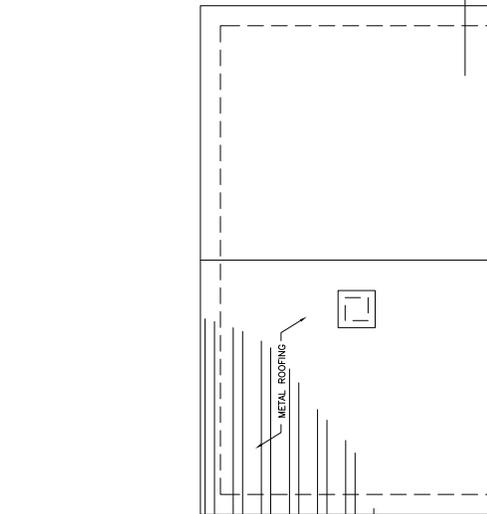
2
A1 A2

FRONT ELEVATION
 SCALE: 1:50
 0m 1m 2m 3m 4m 5m



3
A1 A2

REAR ELEVATION
 SCALE: 1:50
 0m 1m 2m 3m 4m 5m



1
A2 A2

ROOF PLAN
 SCALE: 1:50
 0m 1m 2m 3m 4m 5m



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no.	ISSUED FOR	revision	reason	date	by	approved
0	PROJECT					

no.	ISSUED FOR	revision	reason	date	by	approved
0	PROJECT					

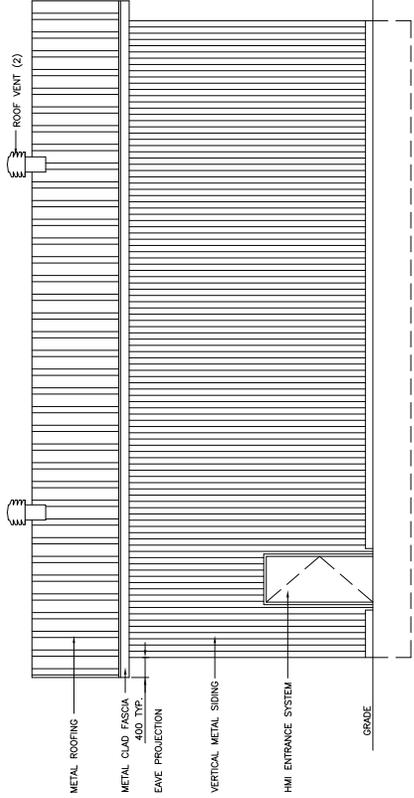
Project - project

NEW BOAT STORAGE BUILDING
CARTWRIGHT, NL

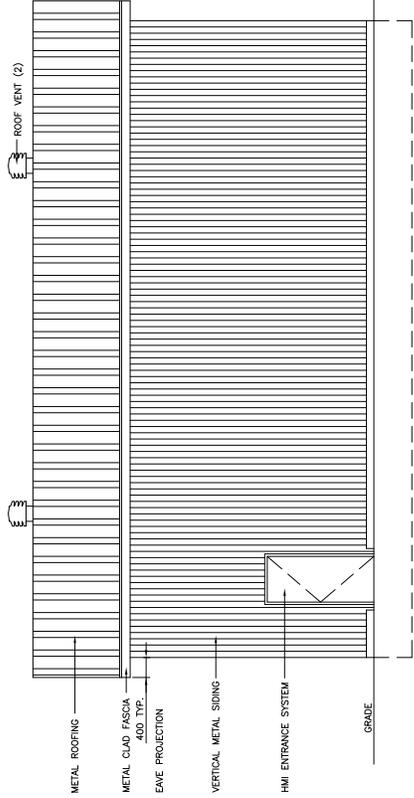
Drawing - lesson

ELEVATIONS AND WALL SECTION

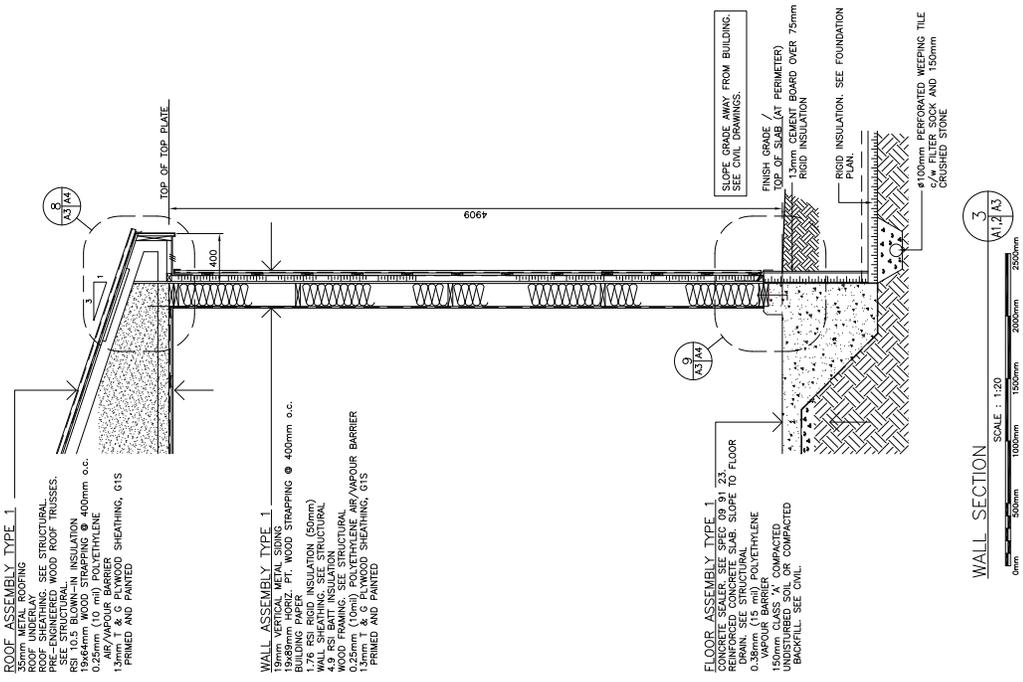
Drawn - design	designed - design	checked - design	C.H.
Date - date	AUGUST, 2016	checked - verify	R.B.
Scale - scale	AS SHOWN	approved for tender-opportune pour l'offre	
Project no. - projet no.	13H1101D001A3	sheet - feuille	A3



RIGHT SIDE ELEVATION
SCALE: 1:50



LEFT SIDE ELEVATION
SCALE: 1:50



WALL SECTION
SCALE: 1:20

ROOF ASSEMBLY TYPE 1

- 35mm METAL ROOFING
- ROOF SHEATHING, SEE STRUCTURAL
- WOOD ROOF TRUSSES, SEE STRUCTURAL
- INSULATION, SEE STRUCTURAL
- RSI 1.0-2 BLOW-IN INSULATION
- 19x64mm WOOD STRAPPING @ 400mm o.c.
- 0.15mm AIR/VAPOUR BARRIER
- 13mm T & G PLYWOOD SHEATHING, G15 PRIMED AND PAINTED

WALL ASSEMBLY TYPE 1

- 19mm VERTICAL METAL SIDING
- 19mm FT. WOOD STRIPPING @ 400mm o.c.
- BUILDING PAPER
- 1.76 RSI RIGID INSULATION (50mm)
- 4.9 RSI BATT INSULATION
- WOOD FRAMING, SEE STRUCTURAL
- 13mm T & G PLYWOOD SHEATHING, G15 PRIMED AND PAINTED

FLOOR ASSEMBLY TYPE 1

- CONCRETE SLAB, SEE SPEC 09 91 23
- FINISH, SEE SPEC 09 91 23
- DRAIN, SEE STRUCTURAL
- 0.39mm (15 mil) POLYETHYLENE
- 150mm CLASS 'A' COMPACTED UNDISTURBED SOIL OR COMPACTED BACKFILL, SEE CIVIL.

SLOPE GRADE AWAY FROM BUILDING, SEE CIVIL DRAWINGS.

FINISH GRADE (AT PERIMETER) TOP OF SLAB (AT PERIMETER)

13mm CEMENT BOARD OVER 75mm RIGID INSULATION

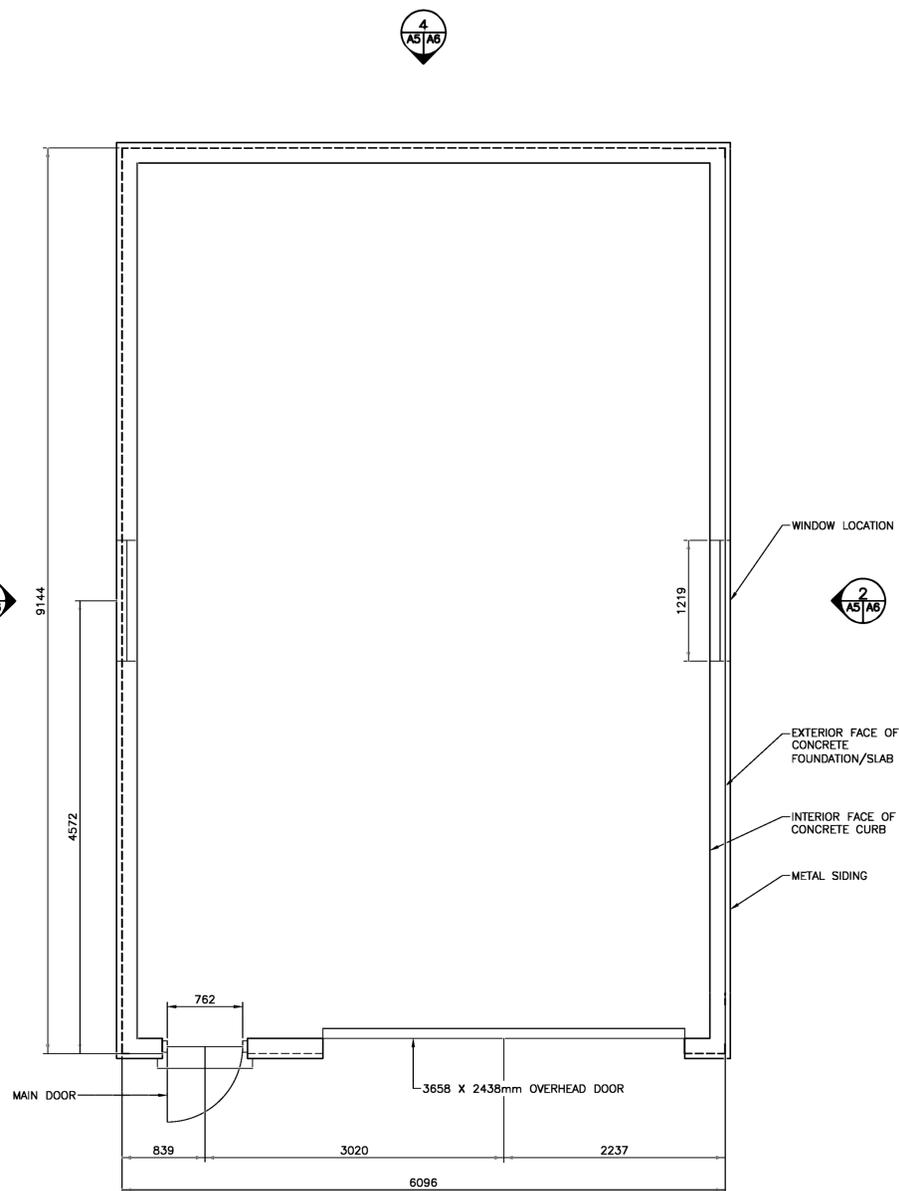
RIGID INSULATION, SEE FOUNDATION PLAN.

#100mm PERFORATED WEEPING TILE 5/A FILTER SOCK AND 150mm CRUSHED STONE

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 Permit No. as issued by APFNOL: 22222.
 which is valid for the year 2020.

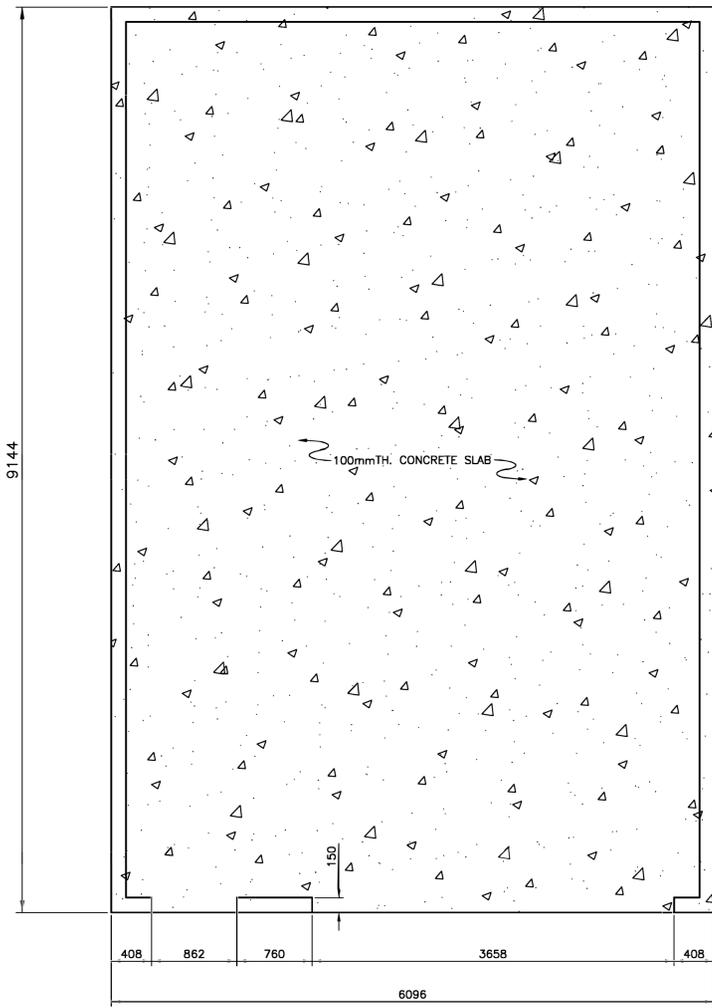


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FLOOR PLAN

SCALE : 1:30



FOUNDATION PLAN

SCALE : 1:30



0	ISSUED FOR TENDER	5/21/20	P.H.	N.H.
no.	revision	date	by	approved
no.	revision	date	par	approuvé

Project - projet
NEW BOAT STORAGE BUILDING
CARTWRIGHT, NL

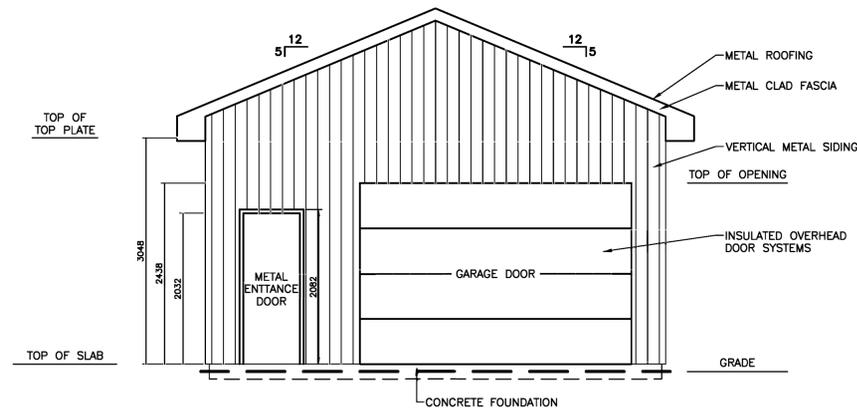
Drawing - dessin
FLOORING AND FOUNDATION PLANS - GARAGE

drawn - dessiné	P.H.	designed - dessiné par	N.H.
date - date	MAY 21, 2020	checked - vérifié	N.H.
scale - échelle	AS SHOWN	approved for tender - approuvé pour l'offre	
project no. - projet no.	F6879-209225	drawing no. - no du dessin	13H1101D001A5
		sheet - feuille	A5

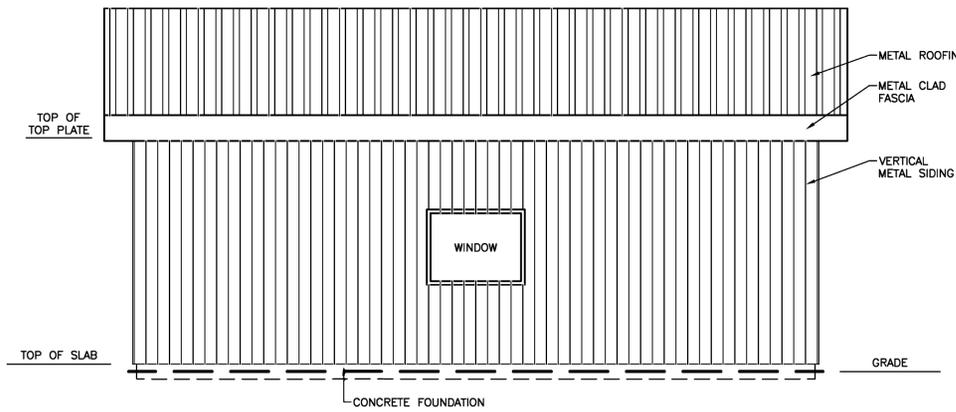
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 Permit No. as issued by APFOPL, F2299,
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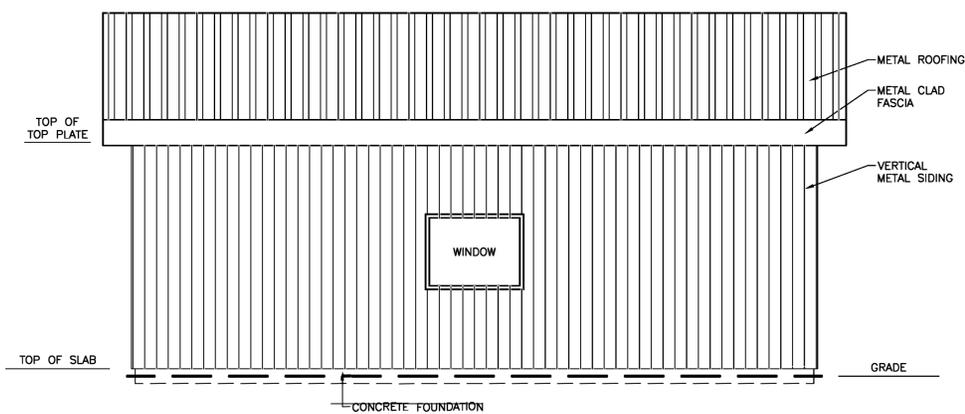
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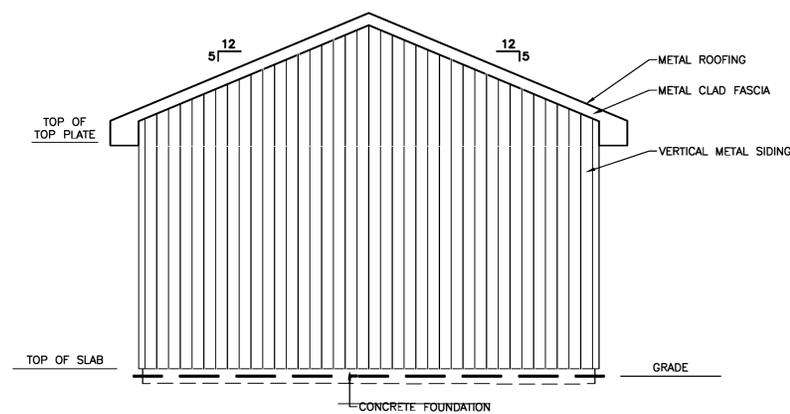
ELEVATION 1
 SCALE : 1:40
 0mm 1mm 2mm 3mm 4mm 5mm



ELEVATION 2
 SCALE : 1:40
 0mm 1mm 2mm 3mm 4mm 5mm



ELEVATION 3
 SCALE : 1:40
 0mm 1mm 2mm 3mm 4mm 5mm



ELEVATION 4
 SCALE : 1:40
 0mm 1mm 2mm 3mm 4mm 5mm

0	ISSUED FOR TENDER	5/21/20	P.H.	N.H.
no.	revision	date	by	approved
no.	revision	date	par	approuvé

Project - projet
NEW BOAT STORAGE BUILDING
CARTWRIGHT, NL

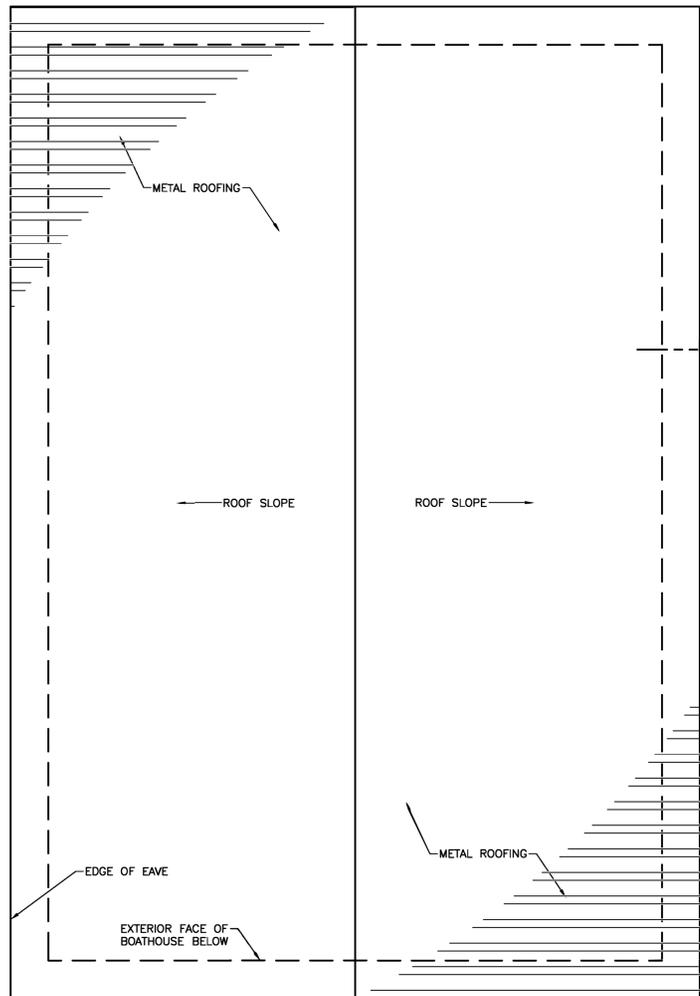
Drawing - dessin
ELEVATIONS - GARAGE

drawn - dessiné	P.H.	designed - dessiné par	N.H.
date - date	MAY 21, 2020	checked - vérifié	N.H.
scale - échelle	AS SHOWN	approved for tender - approuvé pour l'offre	
project no. - projet no.	F6879-209225	drawing no. - no du dessin	13H1101D001A6
		sheet - feuille	A6

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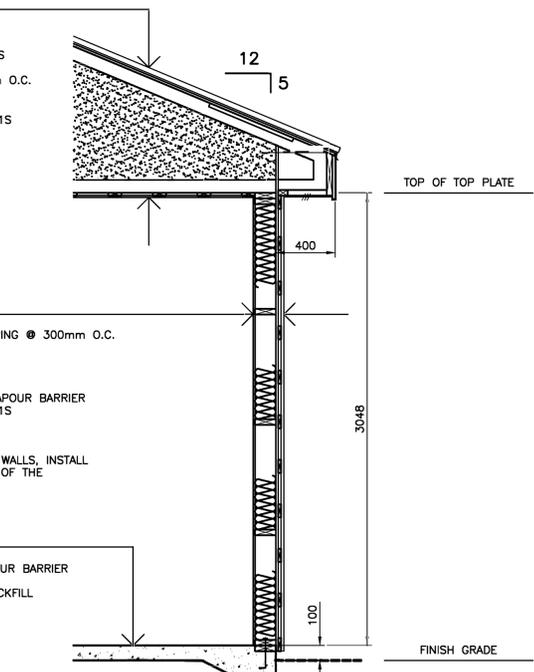
ROOF PLAN
 SCALE : 1:30
 0mm 500mm 1000mm 1500mm 2000mm 2500mm 3000mm

ROOF ASSEMBLY TYPE 1
 35mm METAL ROOFING
 ROOF UNDERLAY
 ROOF SHEATHING
 PRE-ENGINEERED WOOD ROOF TRUSSES
 RSI 10.5 BLOWN-IN INSULATION
 19x89mm WOOD STRAPPING @ 300mm O.C.
 0.25mm (10 mil) POLYETHYLENE
 AIR/VAPOUR BARRIER
 13mm T & G PLYWOOD SHEATHING, G1S
 PRIMED AND PAINTED

WALL ASSEMBLY TYPE 1
 19mm VERTICAL METAL SIDING
 19 X 89mm HORIZ. PT. WOOD STRAPPING @ 300mm O.C.
 BUILDING PAPER
 WALL SHEATHING
 3.5 RSI BATT INSULATION
 WOOD FRAMING
 0.25mm (10mil) POLYETHYLENE AIR/VAPOUR BARRIER
 13mm T & G PLYWOOD SHEATHING, G1S
 PRIMED AND PAINTED

NOTE:
 IN EACH OF THE 4 CORNERS ON THE WALLS, INSTALL PLYWOOD ON FIRST 1200mm INSTEAD OF THE 19 X 89mm IN EACH DIRECTION

FLOOR ASSEMBLY TYPE 1
 REINFORCED CONCRETE SLAB
 0.38mm (15 mil) POLYETHYLENE VAPOUR BARRIER
 150mm CLASS 'A' COMPACTED
 UNDISTURBED SOIL OR COMPACTED BACKFILL



WALL SECTION
 SCALE : 1:20
 0mm 500mm 1000mm 1500mm 2000mm 2500mm

0	ISSUED FOR TENDER	5/21/20	P.H.	N.H.
no.	revision	date	by	approved
no.	revision	date	par	approve

Project - projet
NEW BOAT STORAGE BUILDING
CARTWRIGHT, NL

Drawing - dessin
ROOF PLAN AND WALL SECTION - GARAGE

drawn - dessine	P.H.	designed - dessine par	N.H.
date - date	MAY 21, 2020	checked - verifie	N.H.
scale - echelle	AS SHOWN	approved for tender - approuve pour l'offre	
project no. - projet no.	F6879-209225	drawing no. - no du dessin	13H1101D001A7
		sheet - feuille	A7

LEGEND

LIGHTING

- (A)** LED LIGHTING FIXTURE, WALL MOUNTED. LETTER DENOTES TYPE. SEE LIGHTING FIXTURE SCHEDULE & SPECIFICATIONS FOR DESCRIPTION.
- (A)** LED LIGHTING FIXTURE. LETTER DENOTES TYPE. SEE LIGHTING FIXTURE SCHEDULE & SPECIFICATIONS FOR DESCRIPTION.
- S_{a,b}** SINGLE POLE TOGGLE SWITCH. 15 AMP, SPECIFICATION GRADE, WHITE C/W STAINLESS STEEL COVERPLATE. SEE SPEC. FOR MORE INFORMATION. MOUNT 1200mm ABOVE FINISHED FLOOR.
 - "a" OR "b" INDICATES CIRCUIT TO BE CONTROLLED.
 - "p" INDICATES PILOT LIGHT
 - "k" INDICATES KEY OPERATED
- S₃** "3" INDICATES THREE WAY SWITCH, SIMILAR TO ABOVE.
- S₄** "4" INDICATES FOUR WAY SWITCH, SIMILAR TO ABOVE.

EMERGENCY & EXIT LIGHTING

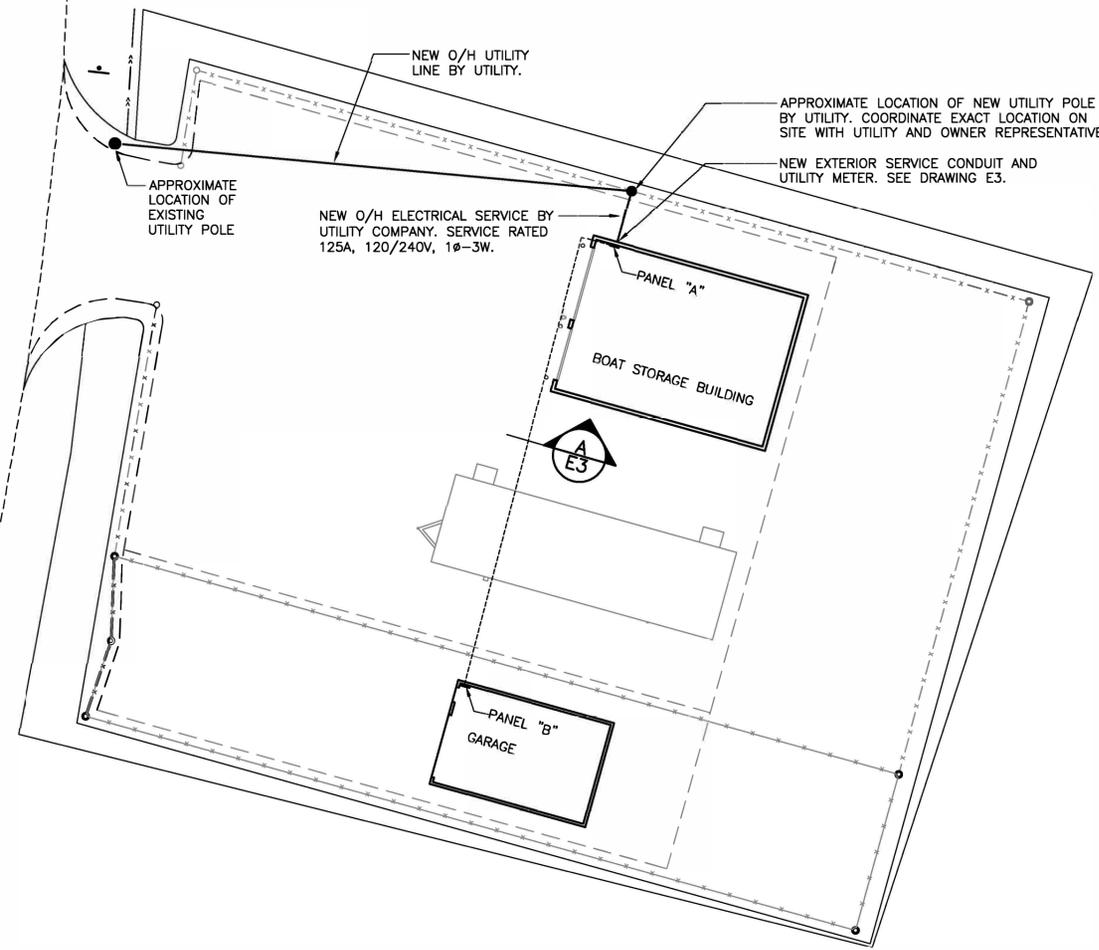
- (X1)** SELF-POWERED COMBINATION EXIT SIGN/EMERGENCY LIGHT COMPLETE WITH TWO HEADS EQUAL TO READY-LITE CAT.# RAC-1-W-1250-2-LD7 NRCAN/CSA COMPLIANT. UNIVERSAL MOUNT 120 VOLT AC & 12 VOLT DC, C/W EXIT SIGN (RUNNING MAN) AND TWO 4 WATT, MR16, 25 YEAR LED TYPE LAMPS.

WIRING DEVICES

- (WP)** DUPLEX U-GROUND RECEPTACLE. 120 VOLT, 15 AMP, SPECIFICATION GRADE. WHITE & C/W STAINLESS STEEL COVERPLATE. WALL MOUNT 400mm ABOVE FINISHED FLOOR. "WP" INDICATES WEATHERPROOF COVERPLATE. "c" INDICATES CEILING MOUNTED, COORDINATE EXACT LOCATION ON SITE. "hrv" INDICATES FOR HRV UNIT, COORDINATE EXACT LOCATION ON SITE WITH MECHANICAL PRIOR TO ROUGH-IN.

ELECTRIC HEATING

- (H)** ELECTRIC HORIZONTAL UNIT HEATER. SEE HEATER FIXTURE SCHEDULE AND/OR SPECIFICATION FOR DESCRIPTION.
- (T)** LOW VOLTAGE ELECTRONIC THERMOSTAT. MOUNT 1200mm ABOVE FINISH FLOOR.



SITE PLAN

SCALE: 1:200



GRID NORTH - 3' M.T.M. ZONE 2
LONGITUDE 56° 00' WEST

PROVINCE OF NEWFOUNDLAND
 PERMIT HOLDER
 Class "A"
 This Permit Allows
CROSBIE ENGINEERING LIMITED
To practice Professional Engineering in Newfoundland and Labrador Permit No. as issued by PEG-NL D0123 which is valid for the year 2020.

REGISTERED PROFESSIONAL ENGINEER
 KENNETH R.P. NEIL
 SIGNATURE
 MAY 14 2020
 DATE
 NEWFOUNDLAND & LABRADOR

- NOTES:**
1. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE BEFORE PROCEEDING WITH ANY PORTION OF THIS WORK.
 2. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE PLACEMENT OF THE WORK OF ALL TRADES. IF ANY CONFLICTS OCCUR, NOTIFY OWNER PRIOR TO INSTALLATION.
 3. DO NOT SCALE FROM DRAWINGS.

0	ISSUED FOR TENDER	MAY.14.2020	D.R.	K.N.
no.	revision	date	by	approved
no.	revision	date	par	approuve

Project - projet
NEW BOAT STORAGE BUILDING
CARTWRIGHT, NL

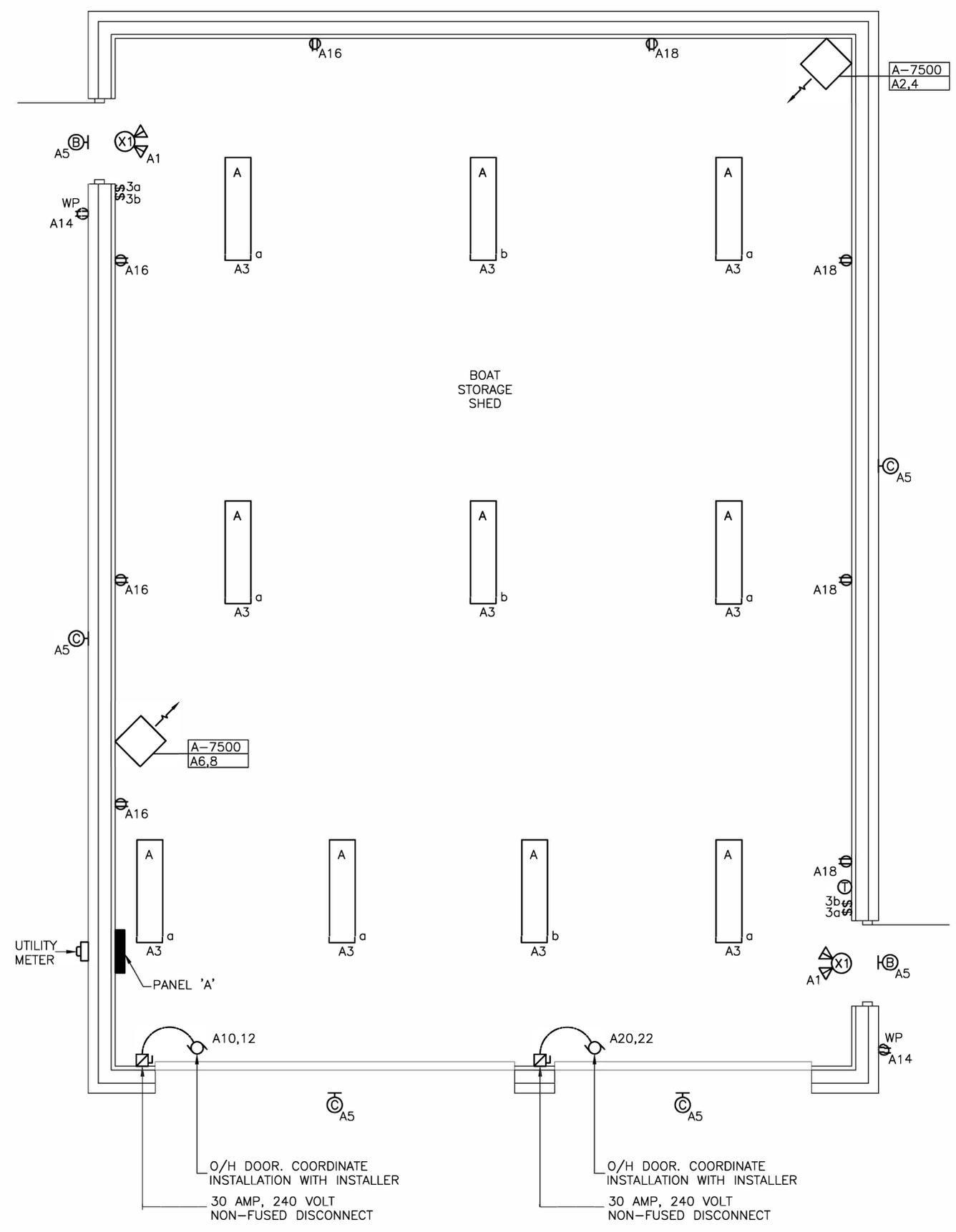
Drawing - dessin
SITE PLAN AND LEGEND

drawn - dessiné	designed - dessiné par	
D.R.	K.N.	
date - date	checked - vérifié	
MAY 2020	K.N.	
scale - échelle	approved for tender - approuvé pour l'offre	
AS SHOWN		
project no. - projet no.	drawing no. - no du dessin	sheet - feuille
F6879-209225	13H1101D001E1	E1

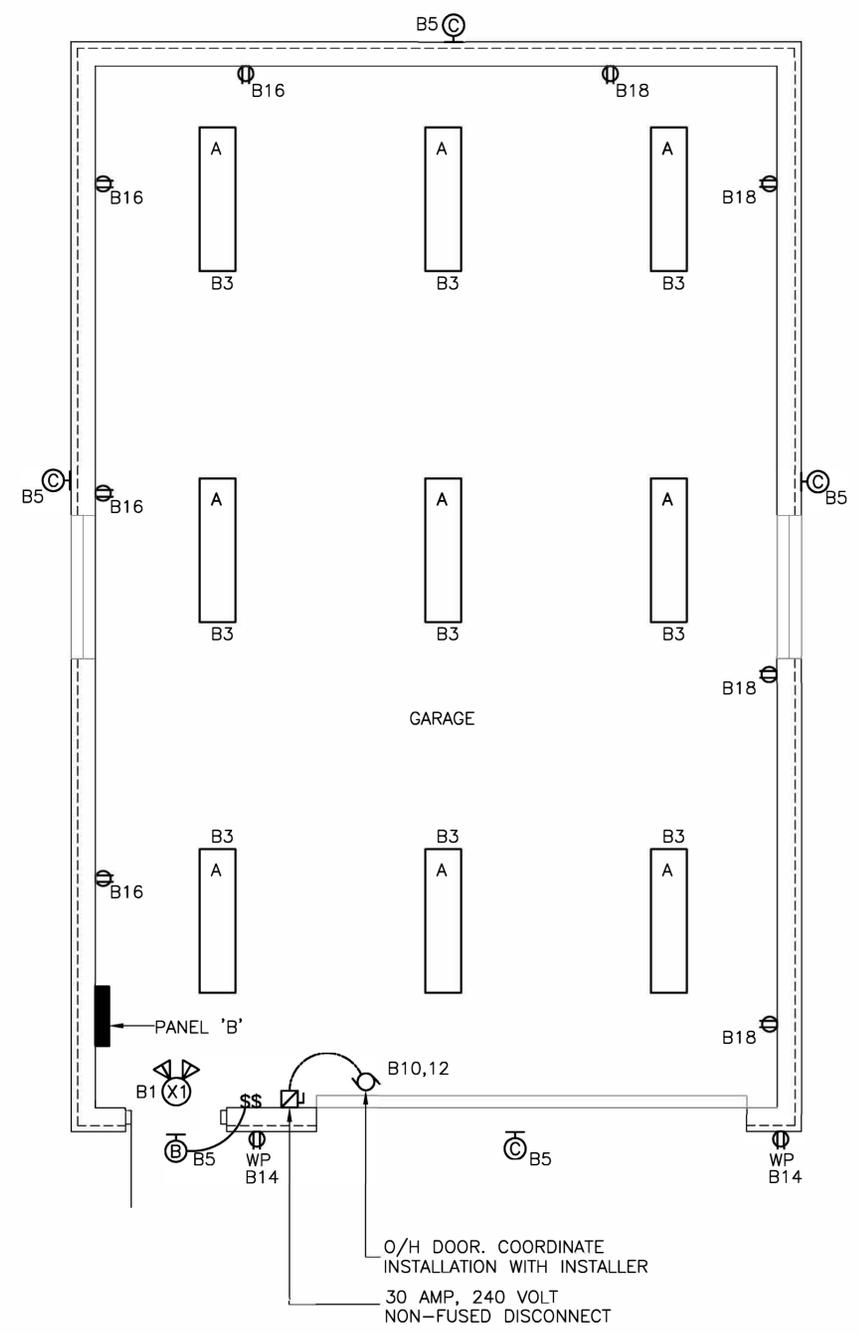
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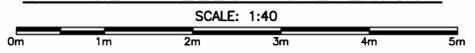
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BOAT STORAGE BUILDING — ELECTRICAL LAYOUT



GARAGE — ELECTRICAL LAYOUT

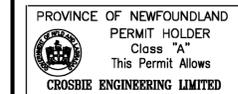


0	ISSUED FOR TENDER	MAY.14.2020	D.R.	K.N.
no.	revision	date	by	approved
	revision	date	par	approve

Project — projet
NEW BOAT STORAGE BUILDING
CARTWRIGHT, NL

Drawing — dessin
FLOOR PLAN — ELECTRICAL LAYOUT

drawn — dessiné	D.R.	designed — dessiné par	K.N.
date — date	MAY 2020	checked — vérifié	K.N.
scale — échelle	AS SHOWN	approved for tender — approuvé pour l'offre	
project no. — projet no.	F6879-209225	drawing no. — no du dessin	13H1101D001E2
		sheet — feuille	E2



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 - DO NOT SCALE FROM DRAWINGS.

VOLTS	120/240	PANEL NAME	"A"	MAINS RATED	125 AMP
PHASE	1	LOCATION	BOAT STORAGE SHED	MOUNTING SURFACE	
WIRE	3	FED FROM	METER SOCKET	ENTER AT	T.B.D.
				CIRCUITS	30

DESIGNATION	WATTAGE		WIRE	BKR	CCT	A	B	CCT	BKR	WIRE	WATTAGE		DESIGNATION
	φ A	φ B									φ A	φ B	
* EXIT & EMERGENCY LIGHTING	100		12	15	1			2	40	8	3750	3750	HEAT-GARAGE
LIGHT-INTERIOR		459	12	15	3			4	2				
LIGHT-EXTERIOR	195		12	15	5			6	40	8	3750	3750	HEAT-GARAGE
					7			8	2				
PANEL "B" (GARAGE)	1388		8	40	9			10	15	12	373	373	O/H DOOR
** SPARE		1412			11			12	2				
SPARE					13			14	15	12	240		REC-EXTERIOR
SPARE					15			16	15	12	480		REC-GARAGE
SPARE					17			18	15	12	480		REC-GARAGE
SPARE					19			20	15	12	373		O/H DOOR
SPARE					21			22	2		373		O/H DOOR
SPARE					23			24	15				SPARE
SPARE					25			26	15				SPARE
SPARE					27			28	20				SPARE
SPARE					29			30	20				SPARE

φ A TOTAL: 10649
 φ B TOTAL: 10597

TOTAL DEMAND 21.25 KW 88.5 AMP

* - INDICATES LOCK-ON DEVICE
 ** - INDICATES GROUND FAULT CIRCUIT BREAKER
 SERVICE ENTRANCE RATED COMBINATION PANEL C/W 125 AMP, 2 POLE MAIN BREAKER.

VOLTS	120/240	PANEL NAME	"B"	MAINS RATED	40 AMP
PHASE	1	LOCATION	GARAGE	MOUNTING SURFACE	
WIRE	3	FED FROM	PANEL "A"	ENTER AT	T.B.D.
				CIRCUITS	30

DESIGNATION	WATTAGE		WIRE	BKR	CCT	A	B	CCT	BKR	WIRE	WATTAGE		DESIGNATION
	φ A	φ B									φ A	φ B	
* EXIT & EMERGENCY LIGHTING	100		12	15	1			2	15				SPARE
LIGHT-INTERIOR		459	12	15	3			4	15				SPARE
LIGHT-EXTERIOR	195		12	15	5			6	15				SPARE
SPARE					7			8	15				SPARE
SPARE					9			10	15	12	373		O/H DOOR
** SPARE					11			12	2		373		O/H DOOR
SPARE					13			14	15	12	240		REC-EXTERIOR
SPARE					15			16	15	12	480		REC-GARAGE
SPARE					17			18	15	12	480		REC-GARAGE
SPARE					19			20					SPARE
SPARE					21			22					SPARE
SPARE					23			24					SPARE
SPARE					25			26					SPARE
SPARE					27			28					SPARE
SPARE					29			30					SPARE

φ A TOTAL: 1388
 φ B TOTAL: 1412

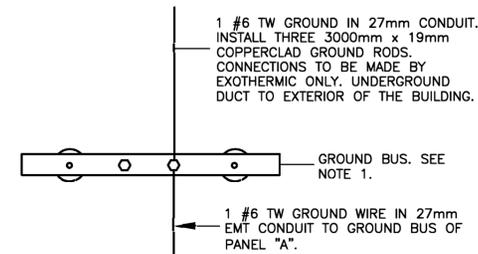
TOTAL DEMAND 2.80 KW 11.67 AMP

* - INDICATES LOCK-ON DEVICE
 ** - INDICATES GROUND FAULT CIRCUIT BREAKER
 SERVICE ENTRANCE RATED COMBINATION PANEL C/W 40 AMP, 2 POLE MAIN BREAKER.

SYMBOL	LIGHT SOURCE	MOUNTING	LAMPS	VOLTS	MANUFACTURER	CAT. NO.	REMARKS
A	LED	CEILING SURFACE	9000LM LED	120	LITHONIA	FHE 9000LM ACL MD 40K 80CRI	
B	LED	WALL SURFACE	2100LM LED	120	LITHONIA	TWR1 LED 1 50K MVOLT	C/W PHOTOCELL
C	LED	WALL SURFACE	3500LM LED	120	LITHONIA	TWR1 LED 2 50K MVOLT	C/W PHOTOCELL

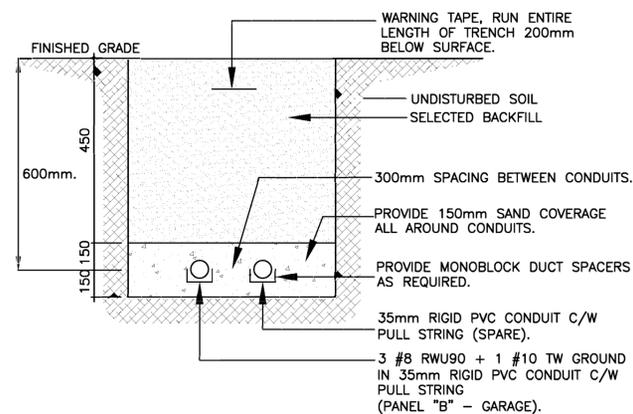
TYPE	DESCRIPTION	VOLTS	WATTS	MANUFACTURER	CAT. NO.	MOUNTING	REMARKS
A	UNIT HEATER	240, 1φ	7500	OUELLET	OAS07500	WALL SURFACE	SEE NOTE 1 & 2

- NOTES (ELECTRIC HEATER SCHEDULE):**
- ALL HEATERS TO BE WHITE IN COLOR.
 - HEATER C/W BUILT-IN 24VAC RELAY AND TRANSFORMER KIT.



- NOTES:**
- GROUND BUS TO BE 600mm x 50mm x 6mm COPPER. WALL MOUNT 450mm A.F.F. ON PORCELAIN STAND-OFF TYPE INSULATORS. MOUNT NEAR SERVICE ENTRANCE BOARD.
 - RESISTANCE TO GROUND SHALL NOT EXCEED 10 OHMS. TEST AND PROVIDE ENGINEER WITH RESULTS.

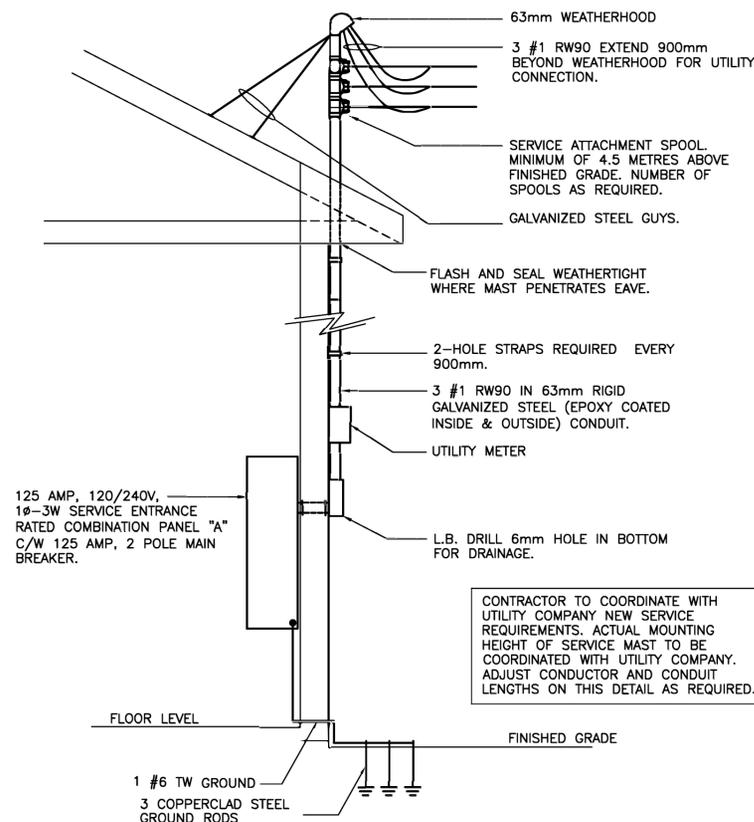
GROUND BUS DETAIL
N.T.S.



TRENCHING NOTES:

- ALL TRENCHES SHALL BE BACKFILLED WITH SELECTED BACKFILL AND TAMPED IN 300mm LAYERS. EXCEPT AT ROAD CROSSINGS WHERE THE BACKFILL SHALL BE THE SAME MATERIAL AS THE ROAD BED AND TAMPED IN 150mm LAYERS. EXCESS FILL SHALL BE PLACED ON TOP TO ALLOW FOR SETTLING.
- THE DUCTS SHALL BE SUPPORTED BY APPROVED SPACERS. NO WIRE OR METAL TIES TO BE USED.
- COPPER FISH WIRE MINIMUM #8 MUST BE INSTALLED IN ALL DUCTS.
- ELECTRICAL DUCT MUST BE RIGID PVC OR APPROVED EQUIVALENT.
- ALL DUCTS AND FITTINGS MUST BE CSA APPROVED.
- ALL DUCTS ARE TO BE SECURELY CAPPED AT BOTH ENDS.
- ALL FITTINGS, COUPLINGS AND ADAPTERS ARE TO BE SOLVENT WELD

TRENCH DETAIL
SCALE : N.T.S.



CONTRACTOR TO COORDINATE WITH UTILITY COMPANY NEW SERVICE REQUIREMENTS. ACTUAL MOUNTING HEIGHT OF SERVICE MAST TO BE COORDINATED WITH UTILITY COMPANY. ADJUST CONDUCTOR AND CONDUIT LENGTHS ON THIS DETAIL AS REQUIRED.

SERVICE ELEVATION DETAIL- BOAT STORAGE SHED
N.T.S.

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NEW BOAT STORAGE BUILDING				
CARTWRIGHT, NL				
Drawing - dessin				
ELECTRICAL SCHEDULES AND DETAILS				
drawn - dessine	D.R.	designed - dessine par	K.N.	
date - date	MAY 2020	checked - verifie	K.N.	
scale - echelle	AS SHOWN	approved for tender - approuve pour l'offre		
project no. - projet no.	F6879-209225	drawing no. - no du dessin	13H1101D001E3	sheet - feuille
				E3

ELECTRICAL SPECIFICATION

GENERAL REQUIREMENTS

1. PROVIDE ALL MATERIALS, LABOUR, SCAFFOLDS, TOOLS & EQUIPMENT NECESSARY TO COMPLETE THE ELECTRICAL INSTALLATION & LEAVE ALL SYSTEMS READY FOR OPERATION.
2. DO THE COMPLETE INSTALLATION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CANADIAN ELECTRICAL CODE C22.1-2018 & ALL LOCAL & PROVINCIAL CODES.
3. CLEAN ALL ELECTRICAL EQUIPMENT AFTER CONSTRUCTION INCLUDING LIGHTING, HEATING, RECEPTACLES, PANELS AND SWITCHES.
4. ALL MATERIALS SHALL BE NEW & CSA APPROVED. ANY PRODUCTS NOT CSA APPROVED TO BE PASSED BY INSPECTION AUTHORITY PRIOR TO ACCEPTANCE.
5. ALL ELECTRICAL INSTALLATIONS AND MATERIALS SHALL CONFORM TO CEC CODE JURISDICTION.
6. PROVIDE DEDICATED GROUNDING CONDUCTOR TO ALL ELECTRICAL INSTALLATIONS.
7. MAKE SPLICES IN LIGHTING & BRANCH CIRCUITS USING PRESSURE TYPE WIRE CONNECTORS.
8. THE CONTRACTOR SHALL GUARANTEE ALL NEW MATERIAL & WORKMANSHIP FOR A PERIOD OF 1 YEAR FROM DATE OF FINAL ACCEPTANCE BY OWNER.
9. SUBMIT TO ELECTRICAL INSPECTION AUTHORITY, A COPY OF PLANS FOR EXAMINATION AND APPROVAL. MAKE CHANGES AND ALTERATIONS AS REQUIRED BY THE INSPECTION AUTHORITY.
10. OBTAIN & PAY FOR ALL FEES & PERMITS REQUIRED BY ANY AUTHORITY HAVING JURISDICTION. SUBMIT DRAWINGS AND SPECIFICATION TO INSPECTION AUTHORITIES FOR EXAMINATION AND APPROVAL PRIOR TO COMMENCEMENT OF WORK.
11. CONDUCT AND PAY FOR TEST OF POWER DISTRIBUTION SYSTEMS, CONTROL SYSTEMS AND LIGHTING.
12. QUALIFIED TRADES PEOPLE SHALL BE USED FOR ALL DISCIPLINES OF THE ELECTRICAL WORK REQUIRED FOR THIS PROJECT.
13. PROTECT EXPOSED LIVE EQUIPMENT DURING CONSTRUCTION FOR PERSONNEL SAFETY. SHIELD AND MARK ALL LIVE PARTS "LIVE 120 VOLTS", OR WITH APPROPRIATE VOLTAGE. PROVIDE FOR INSTALLATION OF TEMPORARY DOORS FOR ROOMS CONTAINING EXPOSED ELECTRICAL EQUIPMENT IF REQUIRED BY ENGINEER OR INSPECTION AUTHORITY.
14. THE ENGINEER WILL PROVIDE THE CONTRACTOR WITH TWO EXTRA SETS OF WHITE PRINTS ON WHICH HE SHALL CLEARLY MARK IN RED INK, AS THE JOB PROGRESSES, ALL CHANGES AND DEVIATIONS FROM THAT SHOWN ON CONTRACT DRAWINGS. ON COMPLETION FORWARD TO THE ENGINEER THE TWO SETS OF DRAWINGS INDICATING ALL SUCH CHANGES AND DEVIATIONS.
15. CONTRACTOR TO SUBMIT TO ENGINEER TWO COMPLETE SETS OF MANUFACTURER'S OPERATING AND MAINTENANCE INSTRUCTIONS FOR ALL MAJOR ELECTRICAL EQUIPMENT. SUBMIT IN HARD COVER BINDERS. INCLUDE COMPLETE SET OF SHOP DRAWINGS.
16. CLEAN AND TOUCH UP SURFACES OF SHOP EQUIPMENT SCRATCHED OR MARRED DURING SHIPMENT OR INSTALLATION, TO MATCH ORIGINAL PAINT.
17. LUGS, TERMINALS, SCREWS USED FOR TERMINATION OF WIRING TO BE SUITABLE FOR COPPER CONDUCTORS.
18. PROVIDE WARNING SIGNS TO MEET REQUIREMENTS OF INSPECTION DEPARTMENT AND ENGINEER.
19. DISCONNECT SWITCHES SHALL BE HEAVY DUTY INDUSTRIAL GRADE.
20. MOUNTING HEIGHTS OF DEVICES ARE AS INDICATED IN LEGEND. IF MOUNTING HEIGHTS ARE NOT GIVEN, CONTACT ENGINEER PRIOR TO PROCEEDING WITH INSTALLATION.
21. SERVICE TO BUILDING SHALL BE AERIAL 125 AMP, 120/240 VOLT, SINGLE PHASE, 3 WIRE, 60 HZ.
22. SUBMIT SHOP DRAWINGS FOR:

A) LIGHTING FIXTURES	D) DISCONNECT SWITCHES
B) RECEPTACLES & SWITCHES	E) ELECTRIC HEATERS
C) PANELBOARDS	
23. SUBSTITUTION OF PRODUCTS AS EQUALS WILL BE CONSIDERED ONCE 3 COPIES OF MANUFACTURER'S DATA AND WORKING DRAWINGS HAVE BEEN SUBMITTED TO ENGINEER A MINIMUM OF 10 DAYS PRIOR TO TENDER CLOSING.

IDENTIFICATION AND LABELS

1. INSTALL LAMICOID NAMEPLATES ON ALL PANELBOARDS, JUNCTION BOXES, DISCONNECTS SPLITTERS AND TERMINAL CABINETS. INDICATE EQUIPMENT DESIGNATION, VOLTAGE, AND PHASE CHARACTERISTICS.
2. IDENTIFY ELECTRICAL EQUIPMENT WITH LAMACOID NAMEPLATES.

NAMEPLATE SIZES	
SIZE 1	10 X 50 MM 1 LINE 3 MM HIGH LETTERS
SIZE 2	12 X 70 MM 1 LINE 5 MM HIGH LETTERS
SIZE 3	12 X 70 MM 2 LINES 3 MM HIGH LETTERS
SIZE 4	20 X 90 MM 1 LINE 8 MM HIGH LETTERS
SIZE 5	20 X 90 MM 2 LINES 5 MM HIGH LETTERS
SIZE 6	25 X 100 MM 1 LINE 12 MM HIGH LETTERS
SIZE 7	25 X 100 MM 2 LINES 6 MM HIGH LETTERS
3. LAMACOID TO BE 3MM THICK, BLACK WITH WHITE LETTERING AND A MATT FINISH, MECHANICALLY ATTACHED WITH MACHINE SCREWS OR RIVETS.

EXISTING CONDITIONS

1. BEFORE SUBMITTING A TENDER, EXAMINE THE SITE AND THE LOCAL CONDITIONS AFFECTING THE WORK UNDER THIS DIVISION AND VERIFY THAT THE WORK CAN BE SATISFACTORILY CARRIED OUT AS SHOWN ON THE PLANS WITHOUT CHANGES.
2. ADVISE THE ENGINEER AT LEAST SEVEN DAYS BEFORE TENDERS CLOSE OF ANY CONFLICT OR INTERFERENCE FAILURE TO DO SO IMPLIES ACCEPTANCE OF EXISTING CONDITIONS AND THAT ALL ALLOWANCES AS MAY BE NECESSARY TO COMPLETE THE WORK ARE INCLUDED IN THE TENDER.

CUTTING, PATCHING, SLEEVES AND HOLES

1. PERFORM ALL CUTTING REQUIRED, PATCHING AND PAINTING IN AREAS TO BE FINISHED TO BE PERFORMED BY OTHER TRADES, PROVIDED CUTTING IS PERFORMED IN ADVANCE OF FINISHING. COSTS FOR CUTTING PERFORMED AFTER COMPLETION OF FINISHING WORK TO BE THE RESPONSIBILITY OF THIS TRADE.
2. PENETRATIONS OF FIRE WALLS OR SEPARATIONS ARE TO BE SEALED WITH AN APPROVED SYSTEM. ACCEPTABLE SYSTEMS ARE HILTI OR APPROVED ALTERNATIVE.
3. PRIOR TO CUTTING OR DRILLING INTO STRUCTURAL MEMBERS OBTAIN CONSULTANT APPROVAL.

PANELBOARDS

1. PANELBOARDS TO BE AS FOLLOWS:
 - IC RATING FOR 240 VOLT PANELS SHALL BE 14 KA.
 - ALUMINUM BUS WITH NEUTRAL.
 - MAINS SUITABLE FOR BOLT-ON BREAKERS.
 - TRIM WITH CONCEALED FRONT BOLTS, HINGES AND FLAT STYLE DOOR. TWO KEYS.
 - TRIM AND DOOR
 - BAKED GREY ENAMEL OF ONE MANUFACTURER.
 - NAMEPLATE, LAMICOID LABEL, SCREWED TO DOOR.
 - TYPE WRITTEN, REMOVABLE, CIRCUIT DIRECTORY. DIRECTORY TO INDICATE TYPE OF LOAD AND ASSOCIATED ROOM LOAD.
 - EQUAL TO CUTLER HAMMER POW-R-LINE1
 - C/W MAIN BREAKER AS INDICATED.
2. CIRCUIT BREAKERS TO BE AS FOLLOWS:
 - MOLDED CASE
 - BOLT-ON.
 - THERMAL AND MAGNETIC TRIPPING.
 - LOCK-ON DEVICES AS INDICATED.
3. BALANCE PANELBOARD ELECTRICAL LOAD AFTER COMPLETION OF PROJECT.

CONDUIT, WIRE AND CABLE

1. ALL POWER WIRING TO BE COPPER RW90 XLPE CONDUCTORS, MINIMUM 600V RATING #12 AWG MINIMUM, #14 AWG FOR CONTROL ONLY. NO ALUMINUM CONDUCTORS ARE TO BE USED.
2. ALL CONCEALED WIRING IS TO BE INSTALLED IN EMT CONDUIT ABOVE GRADE AND PVC OUTSIDE OR BELOW GRADE OR AREAS LIMITED BY THE ELECTRICAL CODE.
3. PROVIDE MIN #12 ARMORED CABLE (BX) ONLY FOR FINAL CONNECTIONS TO LIGHT FIXTURES OR DEVICES. (LIMIT 2.0 METER LENGTH).
4. ARMORED (BX) CABLE IS AN ACCEPTABLE WIRING METHOD FOR BRANCH CIRCUITS. HOWEVER, ALL WIRING FROM THE PANELBOARD TO ACCESSIBLE CEILING SPACE SHALL BE IN EMT CONDUIT. SURFACE MOUNTED BX WILL NOT BE ACCEPTED.
5. INSTALL NEW CONDUIT FOR ALL NEW OR RELOCATED INSTALLATIONS.
6. ALL CONDUITS ARE TO BE CONCEALED INSIDE WALLS OR IN THE CEILING SPACE EXCEPT FOR IN MECHANICAL AND ELECTRICAL ROOMS.
7. INSTALL CONDUIT PARALLEL TO BUILDING LINES. SECURELY FASTEN TO WALLS, UNDERSIDE OF FLOOR ABOVE OR OTHER STRUCTURAL MEMBERS. DO NOT SUPPORT FROM OTHER EQUIPMENT OR CEILING SUPPORT SYSTEMS.
8. MINIMUM CONDUIT SIZE 21MM (3/4" TRADE SIZE).
9. INSTALL A 5MM POLYPROPYLENE PULL ROPE IN ALL EMPTY CONDUITS.
10. PROVIDE PULL AND JUNCTION BOXES AT A MAXIMUM 30 METER SPACING.
11. WHERE CONDUITS ARE INSTALLED IN CONCRETE SLABS AND ACROSS STRUCTURAL EXPANSION JOINTS AN APPROVED EXPANSION FITTING COMPLETE WITH BONDING JUMPER AND CLAMPS SHALL BE INSTALLED.
12. SEAL ALL PIPING WHERE CONDENSATION MAY BUILD UP FROM TEMPERATURE CHANGE. SEAL SHALL BE COMPATIBLE WITH THE PIPING AND WIRING AND MAY BE REQUIRED TO MEET FIRE STANDARDS WHEN PASSING THROUGH FIRE SEPARATIONS OR WALLS.
13. CONDUITS, CABLES, RACEWAYS OR WIRES ARE NOT TO BE USED AS A SUPPORT FOR OTHER ELECTRICAL OR NON ELECTRICAL EQUIPMENT.
14. CONDUITS TO BE PROVIDED WITH INSULATED THROAT CONNECTORS
15. COLOUR CODING OF NON-PHASE WIRES SHALL BE AS FOLLOWS:
 - BONDING AND GROUND WIRES: GREEN
 - SWITCH RETURNS ON LIGHTING CIRCUITS: ORANGE
 - TRAVELLERS ON 3-WAY AND 4-WAY LIGHTING CIRCUITS: YELLOW

LIGHTING

1. PROVIDE ALL LIGHTING FIXTURES AS SCHEDULED.

GROUNDING

1. PROVIDE A GROUNDING BUSHING FOR METALLIC FEEDER CONDUITS AND CABLES SERVING PANEL BOARDS AND SERVICE EQUIPMENT. CONNECT THE GROUNDING BUSHING TO THE GROUND BUS WITH A COPPER CONDUCTOR SIZED ACCORDING TO THE LATEST EDITION OF THE CANADIAN ELECTRICAL CODE.
2. ALL METAL PARTS OF NON ELECTRICAL EQUIPMENT OR SYSTEMS ARE TO BE BONDED TO GROUND WITH A COPPER CONDUCTOR.
3. PROVIDE COPPER INSULATED GREEN BONDING CONDUCTORS, IN ALL POWER CONDUITS, SIZED TO TABLE 16 OF THE LATEST EDITION OF THE CANADIAN ELECTRICAL CODE, UNLESS INDICATED OTHERWISE, #12 AWG MINIMUM.

LOCATION OF OUTLETS

1. CHANGE LOCATION OF OUTLETS AT NO EXTRA COST OR CREDIT, PROVIDING DISTANCE DOES NOT EXCEED 3 METERS, AND INFORMATION IS GIVEN BEFORE INSTALLATION.
2. VERIFY MILLWORK OR FURNITURE DIMENSIONS AND LOCATIONS PRIOR TO INSTALLING OUTLETS. DO NOT INSTALL OUTLETS BEHIND FIXED OR NOT READILY MOVABLE FURNITURE.
3. LOCATE LIGHT SWITCHES ON LATCH SIDE OF DOORS.
4. MOUNTING HEIGHT OF EQUIPMENT IS FROM FINISHED FLOOR TO CENTERLINE OF EQUIPMENT UNLESS SPECIFIED OR INDICATED OTHERWISE. VERIFY BEFORE PROCEEDING WITH INSTALLATION.
5. USE ESTABLISHED DEVICE HEIGHTS AND ORIENTATION IN EXISTING BUILDINGS. MOUNT DEVICES VERTICALLY WHERE PRACTICAL. INSTALL ELECTRICAL EQUIPMENT AT FOLLOWING HEIGHTS UNLESS INDICATED OTHERWISE.
 - LOCAL SWITCHES: 1200 MM.
 - WALL RECEPTACLES, TELEPHONE AND DATA:
 - GENERAL: 400 MM.
 - ABOVE TOP OF CONTINUOUS BASEBOARD HEATERS 200MM.
 - ABOVE TOP OF COUNTERS OR COUNTER SPLASH BACKS: 175MM OR 1000MM FROM FLOOR.
 - IN MECHANICAL ROOMS: 1200MM.
 - ALL DEVICES AFTER INSTALLED SHALL HAVE A MIN 50MM OF CLEAR SPACE FROM TRIMS, FRAMES, COUNTERS AND SPLASHES.
 - CONFIRM PRIOR TO INSTALLATION ANY ELEVATIONS WHICH MAY CONFLICT WITH OTHER BUILDING SYSTEMS, I.E. CONCRETE BLOCK DIMENSION.
6. OUTLET AND CONDUIT BOXES GENERAL
 - SIZE BOXES IN ACCORDANCE WITH CSA C22.1-2018.
 - 102 MM SQUARE OR LARGER OUTLET BOXES AS REQUIRED FOR SPECIAL DEVICES.

TESTING, ACCEPTANCE AND GUARANTEE

THE WORK OF THIS CONTRACTOR SHALL BE TESTED AND INSTALLED AND ANY DEVICES NOT OPERATIONAL SHALL BE REMEDIED IMMEDIATELY. TESTS REQUIRED BY LOCAL AUTHORITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WHEN THE WORK IS COMPLETED, IT SHALL BE TESTED IN ITS ENTIRETY, AND SHALL BE IN GOOD WORKING ORDER BEFORE THE OWNER'S CERTIFICATE OF ACCEPTANCE SHALL BE ISSUED.

A WRITTEN GUARANTEE SHALL BE SUPPLIED TO THE OWNER BY THE CONTRACTOR COVERING THE PROMPT MAKING GOOD OF ANY AND ALL DEFECTS IN MATERIAL AND WORKMANSHIP FOR THE PERIOD OF ONE (1) YEAR FROM THE DATE OF ACCEPTANCE AND THE MAKING GOOD OF ANY SUCH DEFECTS SHALL BE COMPLETELY THE RESPONSIBILITY OF THE CONTRACTOR.

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE SUPPLY OF SUFFICIENT POWER ON A TEMPORARY BASIS TO ALLOW TESTING OF ALL EQUIPMENT AND SYSTEMS. THESE WILL BE TESTED IN THE PRESENCE OF THE ENGINEER.

FURNISH MANUFACTURER'S CERTIFICATE OR LETTER CONFIRMING THAT ENTIRE INSTALLATION AS IT PERTAINS TO EACH SYSTEM HAS BEEN INSTALLED TO MANUFACTURER'S INSTRUCTIONS.

2. INSULATION RESISTANCE TESTING.
 - MEGGER CIRCUITS, FEEDERS AND EQUIPMENT UP TO 350 V WITH A 500 V INSTRUMENT.
 - MEGGER 350-600 V CIRCUITS, FEEDERS AND EQUIPMENT WITH A 1000 V INSTRUMENT.
 - CHECK RESISTANCE TO GROUND BEFORE ENERGIZING.
 - CARRY OUT TESTS IN PRESENCE OF ENGINEER.
 - PROVIDE INSTRUMENTS, METERS, EQUIPMENT AND PERSONNEL REQUIRED TO CONDUCT TESTS DURING AND AT CONCLUSION OF PROJECT.
 - SUBMIT TEST RESULTS FOR ENGINEER'S REVIEW.

ANCHORS, SUPPORTS AND BACKING

1. OUTLET BOXES AND CONDUIT STRAPS
 - #10 SHEET METAL SCREW WHEN ATTACHING TO METAL STUDS.
 - #10 WOOD SCREW FOR ATTACHMENT TO WOOD SURFACES, SCREW TO EXTEND AT LEAST 1 1/4" INTO SOLID WOOD.
 - EZ ANCHORS MAY BE USED ON FINISHED DRYWALL WALL SURFACES.
 - 1.5" LEAD WALL ANCHORS WITH MIN #10 X 1.5 SCREW MAY BE USED IN CONCRETE OR MASONRY SURFACES.
2. EPOXY INJECTED ANCHORING SYSTEM, HILTI HIT OR APPROVED EQUAL FOR SECURING EQUIPMENT. TAPCON SCREWS ARE NOT ACCEPTABLE.
3. SURFACE LED LIGHT FIXTURES ARE TO BE INSTALLED WITH MIN 4-#10 SCREWS 1.25" INTO SOLID WOOD OR METAL. ANCHOR IN ALL 4 CORNERS OF THE FIXTURE.
4. FIXTURES AND BACKING INSTALLED IN T-BAR CEILING SYSTEM SHALL ALLOW FOR TILE REPLACEMENT WITHOUT REMOVAL OF THE FIXTURE.
5. SOLID BACKING TO BE INSTALLED TO SUPPORT ELECTRICAL EQUIPMENT BEING MOUNTED.
6. ALTERNATE ANCHOR SYSTEMS MUST BE PREAPPROVED BY CONSULTANT PRIOR TO USE.

DEVICES AND PLATES

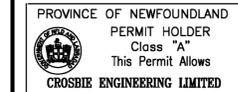
1. ALL DEVICES TO BE OF ONE MANUFACTURER THROUGHOUT. SPECIFICATION GRADE, DECORA SERIES. COLOR WHITE.
2. COVER PLATES TO BE STAINLESS STEEL. COORDINATE ON SITE.
3. COORDINATE THE ROUGH-IN LOCATION OF ALL OUTLETS WITH ARCHITECTURAL, STRUCTURAL AND MECHANICAL DRAWINGS. ENSURE COMPATIBILITY WITH FINISHED ACCESSORIES AND DEVICES BY OTHERS.
4. EXTENDING RINGS ARE TO HAVE SQUARE CORNERS WHERE INSTALLED IN WALL BOARD OR DRYWALL. PLASTER EXTENSION RINGS ARE TO BE USED WHEN INSTALLED WHEN MASONRY OR PLASTER FINISHES ARE USED.
5. PLASTIC OR PVC COVER PLATES MAY ONLY BE USED WHERE EXPOSED TO WEATHER OR IN AREAS WHERE THE ELEMENTS WARRANT NON METALLIC.
6. OUTLETS MOUNTED ON 4" OR 4 11/16" SURFACE BOXES SHALL HAVE RAISED COVER PLATES.
7. NO DEVICES TO BE INSTALLED IN OCTAGON BOXES COVER PLATES.
8. WIRE ATTACHMENT TO DEVICES SHALL BE TERMINATED ON A SCREW TERMINAL. PUSH IN CONNECTION TO DEVICES IS NOT ACCEPTABLE.

MATERIAL SPECIFIED

1. MANUFACTURER'S NAME WITH CLAUSE "OR APPROVED EQUAL". THE TENDER PRICE SHALL BE BASED ON THE NAMED MATERIAL. WHERE SUBSTITUTIONS ARE TO BE PROPOSED FOR MATERIALS BEARING THE CLAUSE "OR APPROVED EQUAL", APPROVAL OF THE SUBSTITUTE ITEM MUST BE OBTAINED FROM THE ENGINEER AT LEAST SEVEN DAYS PRIOR TO THE CLOSING DATE OF THE TENDER. THE PROPOSED SUBSTITUTION SHALL SHOW PRODUCT NAME AND COMPLETE SPECIFICATION AND BE EQUAL TO, OR BETTER THAN THE NAMED ITEM. NO INCREASE IN THE TENDER PRICE SHALL BE MADE FOR SUCH A SUBSTITUTION SHOULD IT BE ACCEPTED. ACCEPTED EQUALS WILL BE LISTED IN AN ADDENDUM FIVE DAYS PRIOR TO THE TRADE CLOSING DATE.

WHERE ADDITIONAL MANUFACTURERS ARE NAMED UNDER ARTICLES ENTITLED "APPROVED MANUFACTURERS", THE CHOICE OF WHICH OF THE MANUFACTURERS NAMED IN REFERENCE TO A PARTICULAR ARTICLE IS TO BE USED, SHALL BE THE CONTRACTORS.

WHERE APPROVALS ARE GRANTED FOR THE USE OF OTHER EQUIPMENT ANY AND ALL CHANGES OR ADDITIONS REQUIRED FOR THE INSTALLATION OR OPERATION OF THE APPROVED EQUIPMENT WILL BE MADE BY THE CONTRACTOR AT HIS OWN EXPENSE AND NO CLAIMS WILL BE APPROVED FOR ANY SUCH CHANGES, NOTWITHSTANDING APPROVAL OF SHOP DRAWINGS. EQUIPMENT THAT IS ACCEPTED AND INSTALLED AND THEN DOES NOT PERFORM AS REPRESENTED BY ORIGINAL SUBMITTED DATA SHALL BE REPLACED BY THE CONTRACTOR WITH EQUIPMENT AS SPECIFIED, AT NO CHARGE TO THE OWNER.



To practice Professional Engineering in Newfoundland and Labrador Permit No. as issued by PEG-NL 00123 which is valid for the year 2020.

NOTES:

1. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND CONDITIONS ON SITE BEFORE PROCEEDING WITH ANY PORTION OF THIS WORK.
2. CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE PLACEMENT OF THE WORK OF ALL TRADES. IF ANY CONFLICTS OCCUR, NOTIFY OWNER PRIOR TO INSTALLATION.
3. DO NOT SCALE FROM DRAWINGS.

0	ISSUED FOR TENDER	MAY.14.2020	D.R.	K.N.
no.	revision	date	by	approved
	revision	date	par	approve
Project - projet				
NEW BOAT STORAGE BUILDING				
CARTWRIGHT, NL				
Drawing - dessin				
ELECTRICAL SPECIFICATION				
drawn - dessine	D.R.	designed - dessinée par	K.N.	
date - date	MAY 2020	checked - vérifié	K.N.	
scale - échelle	AS SHOWN	approved for tender - approuvé pour l'offre		
project no. - projet no.	F6879-209225	drawing no. - no du dessin	13H1101D001E4	sheet - feuille
				E4