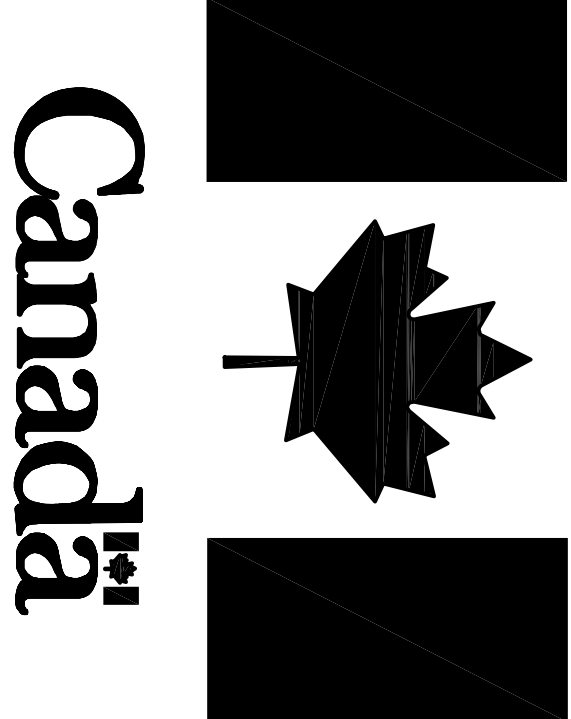


FISHERIES AND OCEANS



EMERGENCY GENERATOR SYSTEM FOR
SEARCH AND RESCUE STATION
BURGEO, NL

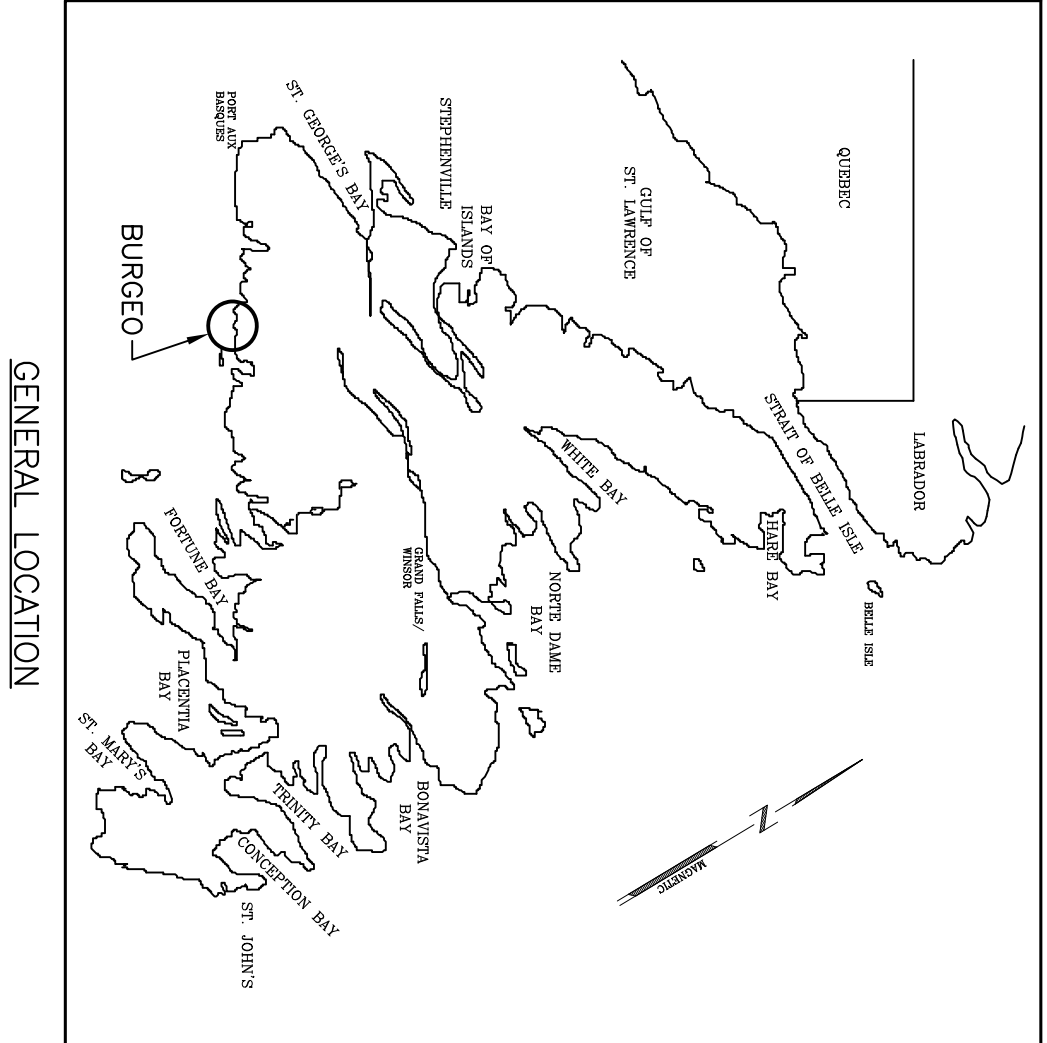
ISSUED FOR TENDER

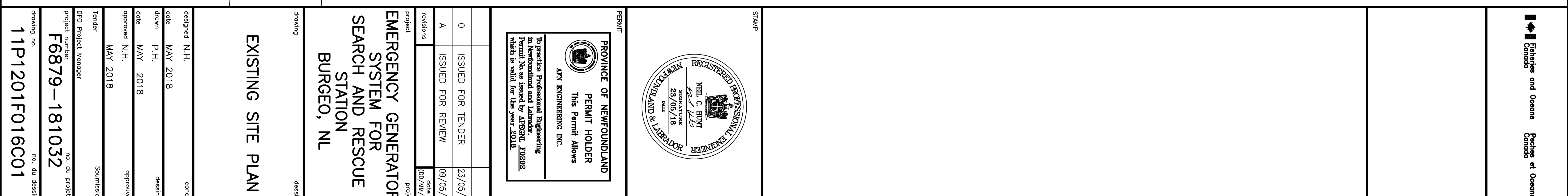
PROJECT #: F6879-181032

DATE: MAY 23, 2018

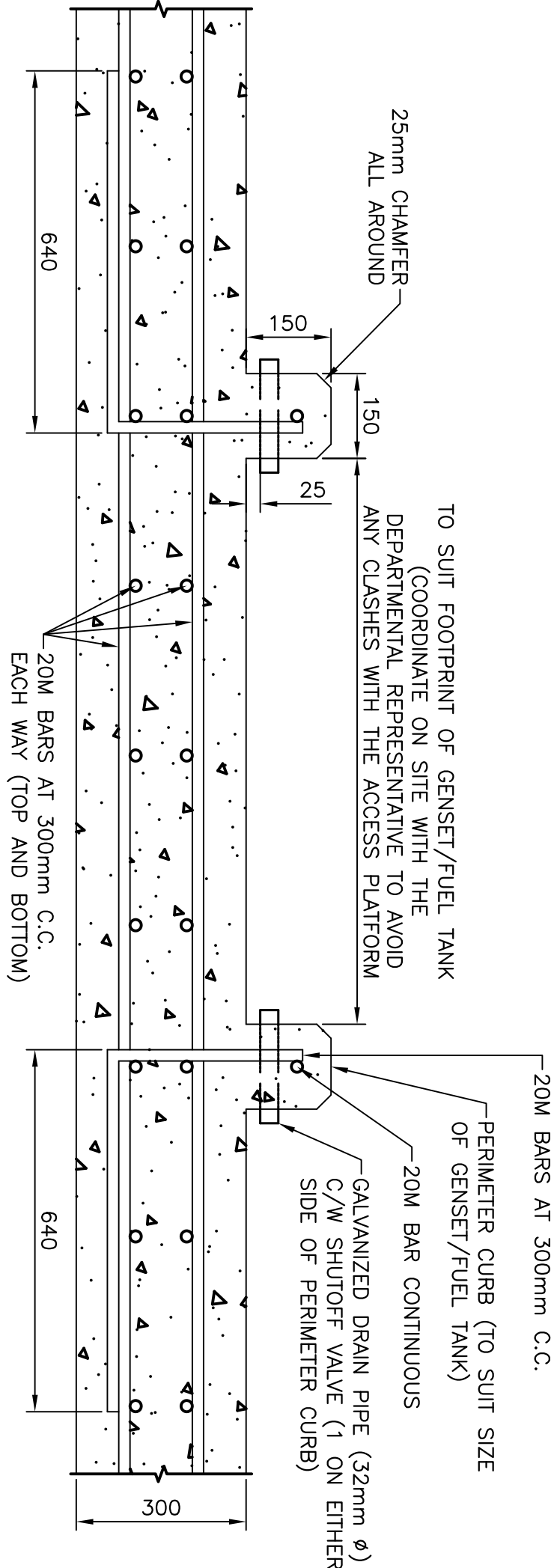
CLIENT/OWNER:
DEPARTMENT OF FISHERIES & OCEANS,
REAL PROPERTY, SAFETY & SECURITY

PRIME CONSULTANT:
AFN ENGINEERING INC. IN ASSOCIATION WITH MADERRA ENGINEERING INC.





- NOTE:
- FOR ALL DETAILS AND LAYOUTS RELATED TO THE MAIN PAD AND ACCESS PLATFORM, REFER TO STRUCTURAL DRAWINGS.

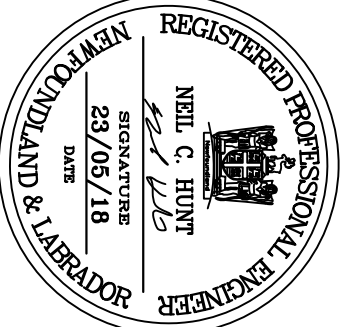


CONTAINMENT CURB

SCALE : 1:10

0mm 100 200 300 400 500 600 700 800 900 1000mm

1
2



PROVINCE OF NEWFOUNDLAND
 PERMIT HOLDER
 This Permit Allows
 ANY ENGINEERING INC.
 To practice Professional Engineering
 in Newfoundland and Labrador.
 Issued Pursuant to Section 10, RSO982,
 which is valid for the year 2018.

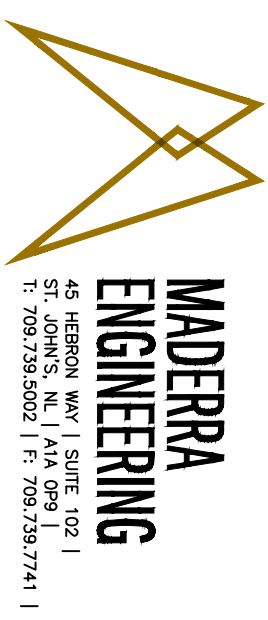
0	ISSUED FOR TENDER	23/05/18
A	ISSUED FOR REVIEW	09/05/18
revisions		date
project		date

EMERGENCY GENERATOR
 SYSTEM FOR
 SEARCH AND RESCUE
 STATION
 BURGEO, NL

drawing no. design

designed N.H.	checked
date MAY 2018	
drawn P.H.	designed
date MAY 2018	
approved N.H.	approved
MAY 2018	

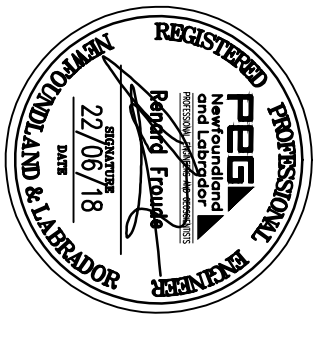
tender	submission
UFO Project Manager	
Project Number	no. du projet
F6879-181032	
drawing no.	no. du dessin
11P1201F016C02	



NOTES

- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
- BREAKERS C/W LOCK ON DEVICES, IN EXISTING PANEL 'D', AND MAKE CONNECTIONS TO RECEPTACLES TO ACCOMMODATE NEW GENERATOR ENCLOSURE USING 2-#8 R/W90, PER CIRCUIT, & 1-#10 TW BOND, RUN BOTH CIRCUITS IN 1-35mm PVC CONDUIT TO NEW GENERATOR. SEE SITE PLAN FOR LOCATION OF RECEPTACLE TO EACH CIRCUIT.
- DISCONNECT AND REMOVE EXISTING DISTRIBUTION PANEL 'DPA'. PROVIDE NEW SUPPLIED LUGS IN EXISTING PANEL 'DPA' TO ACCOMMODATE NEW UTILITY FEEDER RUNNING TO NEW PROVIDE JUNCTION BOXES FOR EXISTING BRANCH CIRCUIT WIRING AND EXTEND TO NEW DISTRIBUTION PANEL 'DPA'. PROVIDE APPROVED BREAKER OPENINGS IN FRONT OF EXISTING PANEL 'DPA'. COORDINATE ALL WORK ON EXISTING SWITCHBOARD WITH MANUFACTURER'S REP.
- CONTRACTOR TO PROVIDE NEW LAMICODS MATCHING THE SAME CHARACTERISTICS AS EXISTING AND CIRCUIT VOLTAGE RATINGS AS THE PANEL FEEDING DEVICES HAS CHANGED.
- PROVIDE TWO NEW 20 AMP, 1 POLE BREAKERS C/W LOCK ON DEVICES IN EXISTING PANEL 'D', AND MAKE CONNECTIONS FOR HEATERS AND BATTERY CHARGER IN GENERATOR.

SWMP



PROFESSIONAL ENGINEER
REGISTERED IN THE PROVINCE OF ONTARIO
MADERA ENGINEERING
To provide Professional Engineering Services
This permit is valid for the year 2025
Permit No. 11P1201F06E02
Expiry Date: 2025

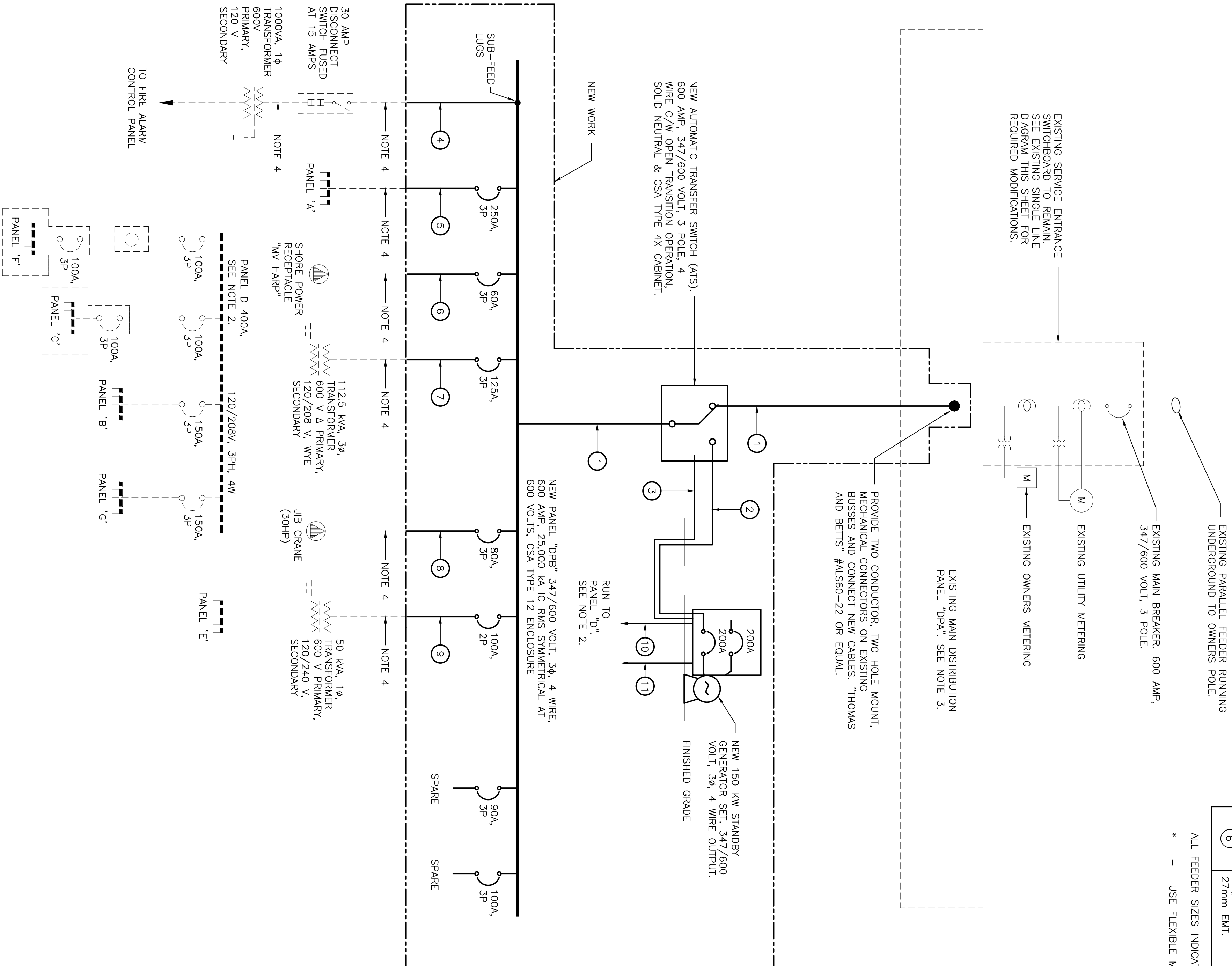
0	ISSUED FOR TENDER	22/06/18
A	ISSUED FOR REVIEW	11/05/18
revisions		
project	EMERGENCY GENERATOR SYSTEM FOR SEARCH AND RESCUE STATION	project
client	BURGOO, NL	client

drawing
ELECTRICAL SINGLE LINE DIAGRAM

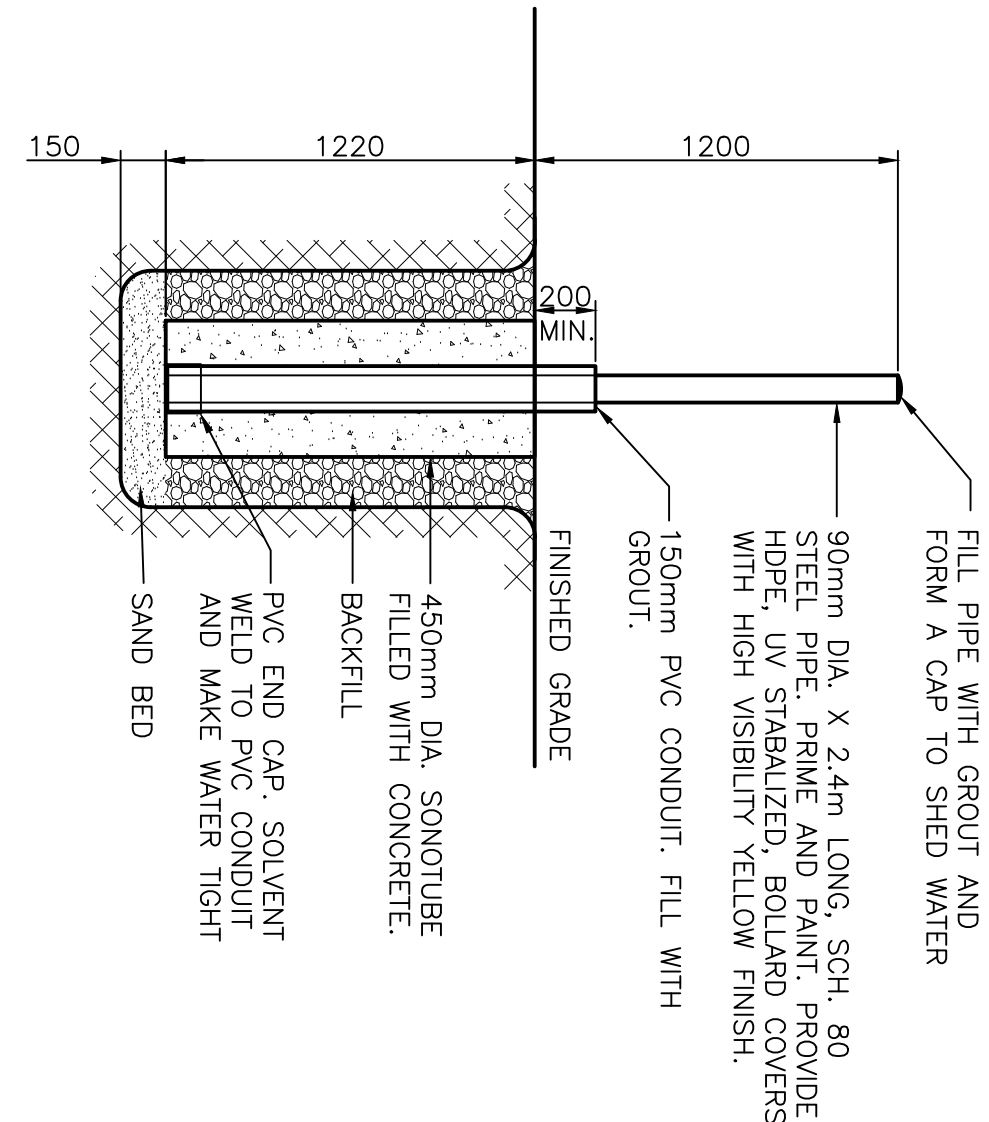
designed	CN	control
date	JANUARY 2018	
drawn	CN	designed
date	JANUARY 2018	
approved	RF	approved
date	JANUARY 2018	
revision		
no. du projet	F6879-181032	
no. du dessin	11P1201F06E02	

FEEDER SCHEDULE			
1	TWO PARALLEL RINGS OF 4-#30 MCW R/W90 & 1-#3 TW BOND IN 76mm EMT. CONVERT TO RGS ON EXTERIOR OF BUILDING.	7	3-#1 R/W90 & 1-#6 TW BOND IN 47mm EMT. *
2	4-#3/0 R/W90 & 1-#4 TW BOND IN 63mm PVC.	8	3-#3 R/W90 & 1-#6 TW BOND IN 35mm EMT.
3	53mm PVC CONTROL AND COMMUNICATIONS CONDUIT.	9	2-#3 R/W90 & 1-#6 TW BOND IN 27mm EMT. *
4	2-#12 R/W90 & 1-#12 TW BOND IN 21mm EMT.	10	4-#8 R/W90 & 1-#10 TW BOND IN 35mm PVC. CONVERT TO EMT INSIDE BUILDING.
5	4-#250 MCW R/W90 & 1-#4 TW BOND IN 76mm EMT.	11	4-#10 R/W90 & 1-#12 TW BOND IN 35mm PVC. CONVERT TO EMT INSIDE BUILDING.
6	4-#6 R/W90 & 1-#6 TW BOND IN 27mm EMT.		

ALL FEEDER SIZES INDICATED ARE BASED ON COPPER CONDUCTORS.
* - USE FLEXIBLE METAL CONDUIT FOR FINAL CONNECTIONS TO TRANSFORMERS.



REVISD ELECTRICAL SINGLE LINE DIAGRAM



PROTECTIVE BOLLARD

- CONCRETE NOTES
1. CONCRETE MATERIALS, METHODS OF CONCRETE CONSTRUCTION, INCLUDING PLACING, CURING AND FINISHING SHALL BE IN ACCORDANCE WITH CAN/CSA A23.1-14.
 2. CONCRETE COMPRESSIVE STRENGTH TO BE MIN. 30MPa AT 28 DAYS FOR ALL CONCRETE.
 3. REPAIR TO CONFORM TO CSA G30.18 FV=400 MPa.
 4. ALL BAR BENDING DETAILING AND PLACING TO AG DETAILING MANUAL.
 5. ALL REINFORCING BARS 36 BAR DIAMETERS AND PROVIDE CORNER BARS AND VERTICAL DOWELS TO MATCH HORIZONTAL AND VERTICAL STEEL.
 6. UNLESS NOTED OTHERWISE.
 7. CONCRETE COVER TO BE 75mm UNO. COVER IS TO BE ACHIEVED BY USING 10mm SPACERS.
 8. COLD REQUIREMENTS FOR CASTING IN-PLACE CONCRETE SHOULD BE FOLLOWED.
 9. REACH THEIR SPECIFIED COMPRESSIVE DESIGN STRENGTH OR AFTER 28 DAYS, CONCRETE PAD IS DESIGNED FOR A TOTAL MASS OF 15,192 LBS.

STRUCTURAL SLAB CAST ON GRADE NOTES

1. PROOF ROLL AND COMPACT SUBGRADE TO 98% SPAND.
2. ANY OPENING IN SLABS NOT SHOWN WILL NOT BE PERMITTED UNLESS APPROVED BY STRUCTURAL CONSULTANT.
3. SEE CONCRETE NOTES, STRUCTURAL PLANS AND DETAILS FOR PLACEMENT DETAILS.

STRUCTURAL STEEL NOTES

1. ALL STRUCTURAL STEEL MATERIALS, FABRICATION, ERECTION, INSPECTION AND TESTING SHALL CONFORM TO THE FOLLOWING STANDARDS:
CAN/CSA-S16.1-14 LIMIT STATES DESIGN OF STEEL STRUCTURES
CAN/CSA-S136.1-14 WELDED CONNECTIONS OF STEEL STRUCTURES
CAN/CSA-S16.1-14 WELDED CONNECTIONS OF STEEL STRUCTURES
CAN/CSA-S16.1-14 WELDED CONNECTIONS OF STEEL STRUCTURES
2. HSS SECTIONS TO CAN/CSA G40.21-M-350W, CLASS "C" UNLESS NOTED OTHERWISE.
3. ALL BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325M, BEARING TYPE, EXCEPT AS NOTED.
4. ALL WELDING SHALL BE METAL-ARC WELDING TO CSA W59 AND SHALL BE UNDERTAKEN ONLY BY FABRICATORS AND ERECTORS APPROVED BY THE CANADIAN WELDING INSTITUTE (CWI) AND SHALL BE WITNESSED BY A QUALIFIED WELDER AS PER CSA W47.1 AND W59. INSPECTIONS ARE TO BE AS FOLLOWS:
 - FILLET WELDS: 100% VISUAL, 20% MPI.
 - BUTT WELDS: 100% VISUAL, 20% MPI.
5. SHAPES UNDER BASE PLATES TO BE 35 MPa NON SHRINK GROUT.
6. CAP HOLLOW STEEL SECTIONS (HSS) WHERE REQUIRED TO PREVENT WATER BUILD-UP AND POSSIBLE FROST DAMAGE.
7. ALL BOLTED CONNECTIONS SHALL HAVE A MINIMUM OF TWO BOLTS IN EACH LINE AND BE DESIGNED WITH BUSINESS NOTED CONNECTIONS.
8. ALL STEEL SHALL RECEIVE A SHOP COAT OF PRIMER EXCEPT SURFACES TO BE CONCRETE, WELDED, LIGHT ZINC COATED OR GALVANIZED.
9. CLEAN ALL FIELD WELDS AFTER ERECTION AND TOUCH UP ALL UNPAINTED SURFACES WITH PRIMER.
10. THERE SHALL BE NO CUTTING OF THE STRUCTURAL STEEL MEMBERS FOR THE WORK OF OTHER TRADES WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL CONSULTANT.

CALCULATION CRITERION (PER NBCC, 2010)

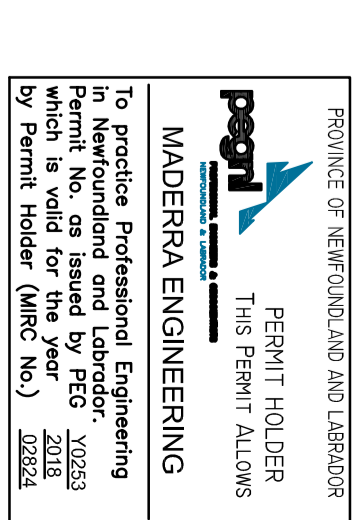
* NOTE: ALL LOADS SPECIFIED BELOW ARE UNFACTORED.

DEAD LOADS:
STEEL GRATING AND FRAMING SELF WEIGHT

LIVE LOAD: 4.8 kPa
- SLABFORM: 4.8 kPa
- SLAB: 3.88 kPa

GRATING NOTES

1. USE FISHER & LUDLOW SERRATED TRU-WELD SURFACE GRATING FOR BETTER GRIP SURFACE (TOP).
2. GRATING TO BE HOT DIPPED GALVANIZED.
3. GRATING TO BE COPED AS NECESSARY TO ACCOMMODATE CAP PLATES AND OTHER STRUCTURAL STEEL SECTIONS
4. BEARING BAR SIZE 32 x 32 (mm).
5. FRAMING MEMBER BE SPECIFIED BY FABRICATOR TO SUIT @ STEEL
6. EACH GRATING PANEL TO FASTEN TO STEEL FRAME USING MINIMUM 4 TYPE D SADDLE CLIP AT EACH CORNER.
7. DO NOT PLACE LOADS ON THE GRATING AND STEEL SUPPORTS FRAME THAT IS LARGER THAN THE DESIGN LIVE LOAD NOTED ABOVE.



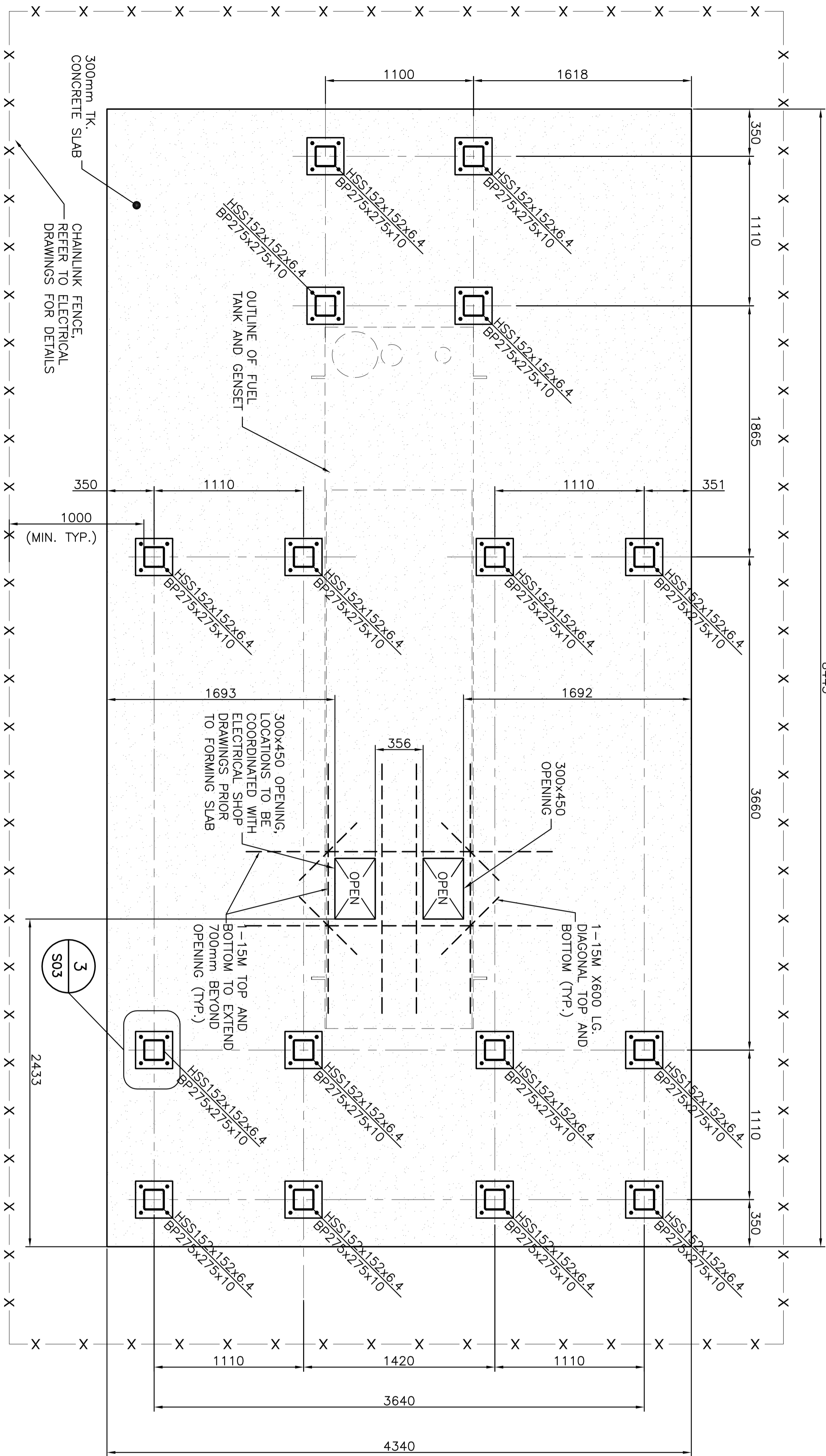
0	ISSUED FOR TENDER	25/05/18
A	ISSUED FOR REVIEW	11/05/18
revisions	date	10/04/17

EMERGENCY GENERATOR
SYSTEM FOR
SEARCH AND RESCUE
STATION
BURGO, NL

drawing
design
designed MS
date MAY 2018
drawn SB
date MAY 2018
approved MS
date MAY 2018

PROJECT MANAGER
F6879-181032
no. du projet
11P1201F016S01

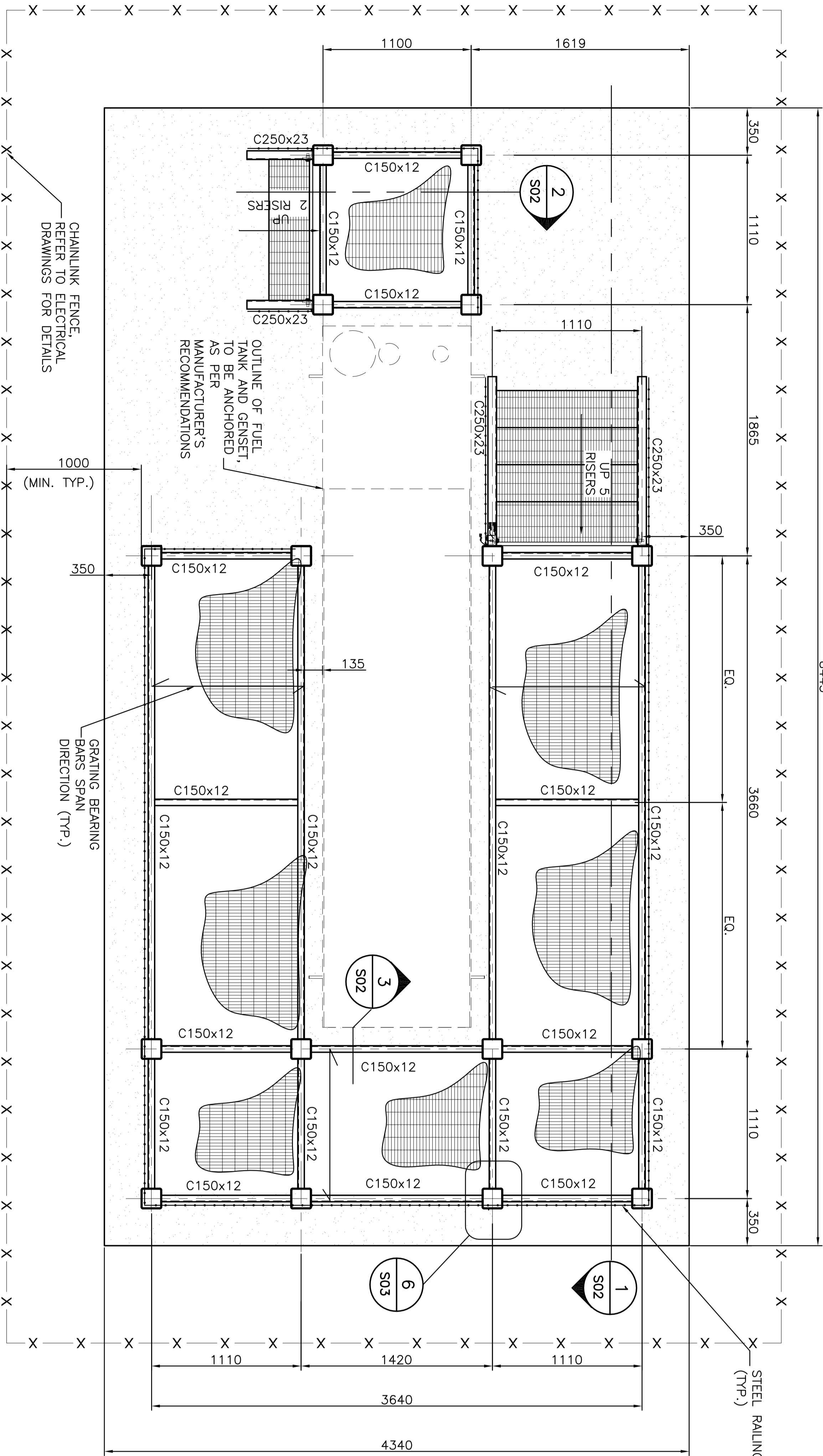
8445



EMERGENCY GENERATOR AND FUEL TANK ACCESS PLATFORM
COLUMN, BASEPLATE AND CONCRETE PAD PLAN

SCALE: N.T.S.

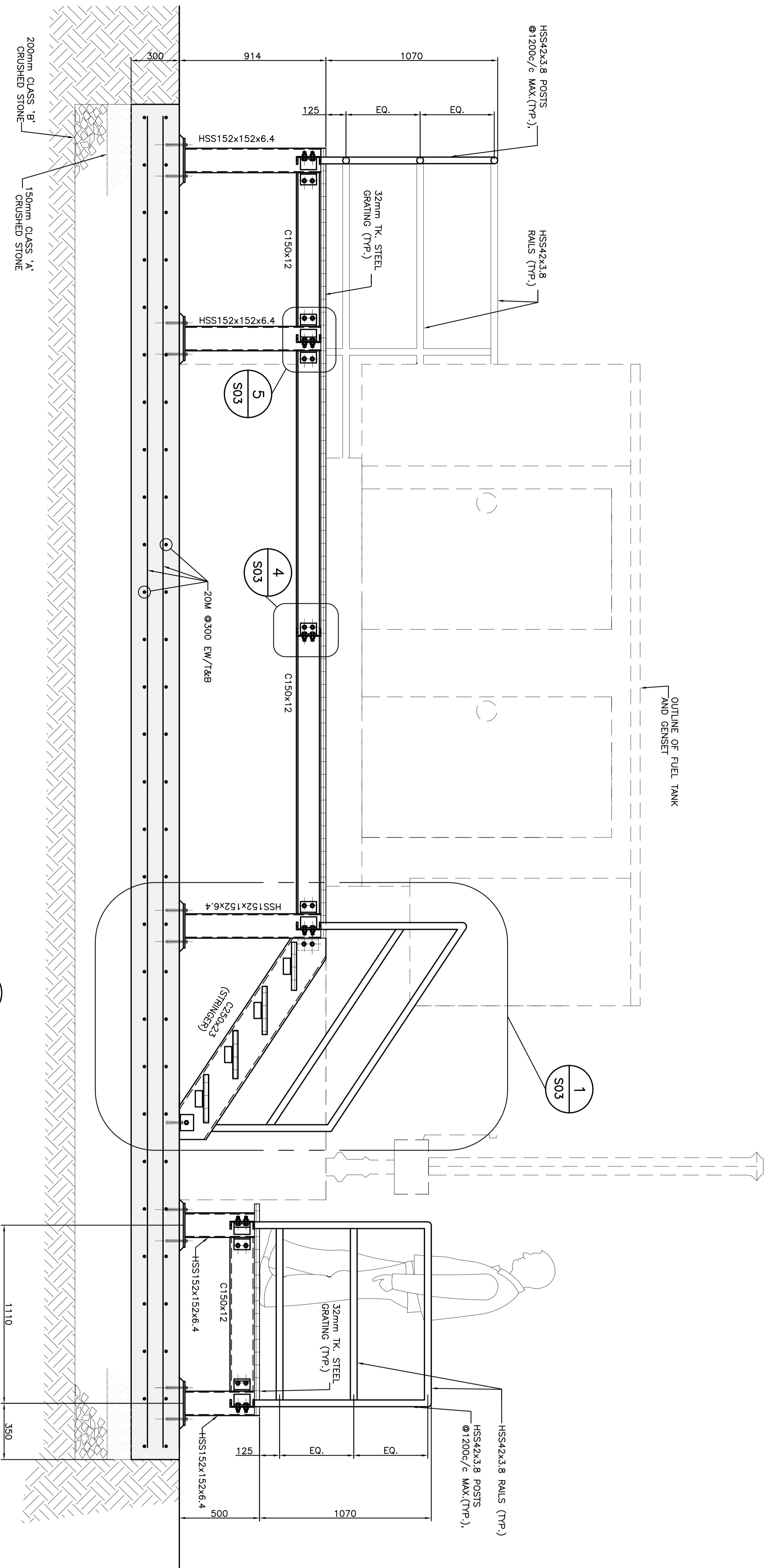
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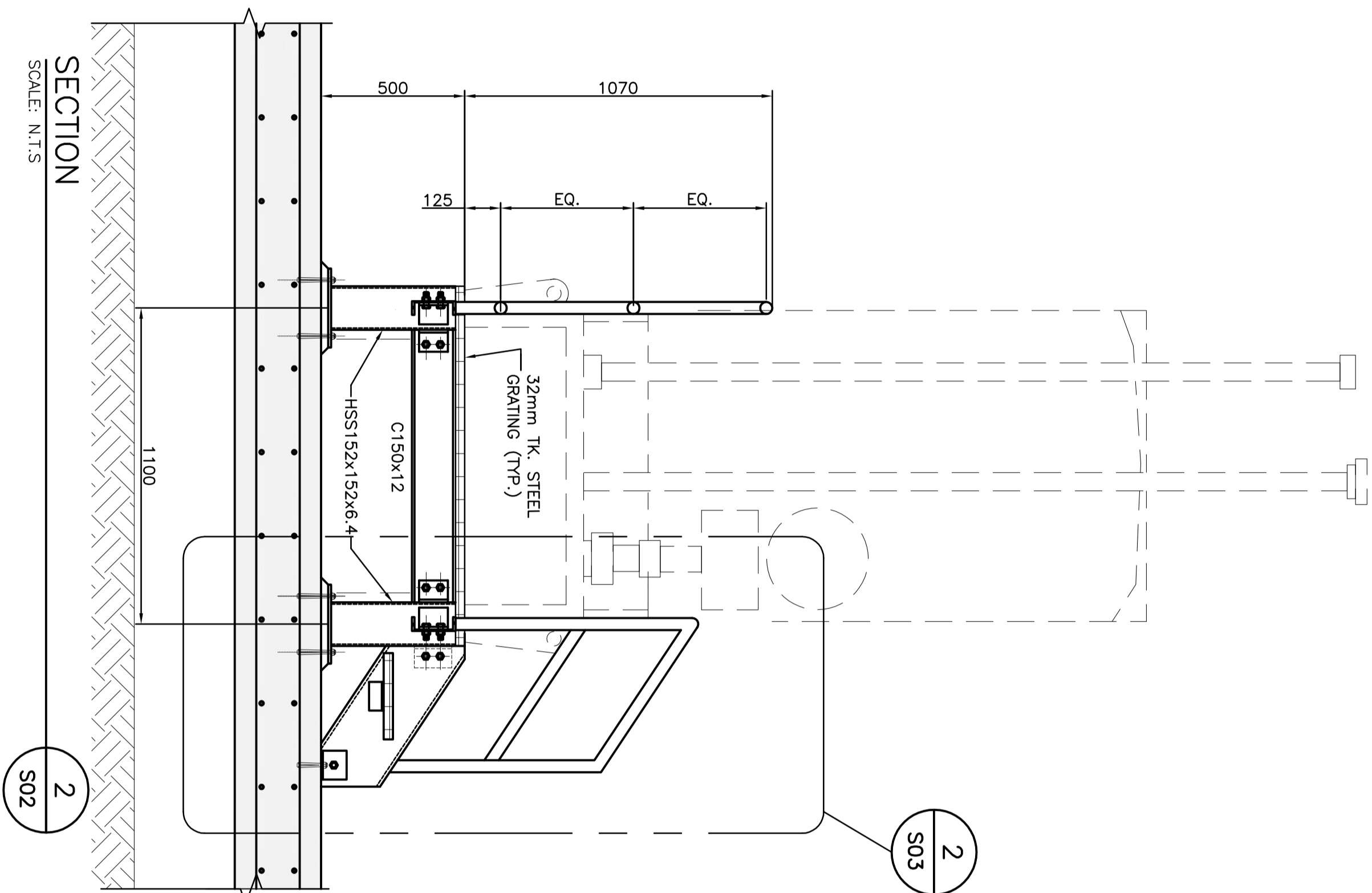
EMERGENCY GENERATOR AND FUEL TANK ACCESS PLATFORM FRAMING PLAN

SCALE: N.T.S.

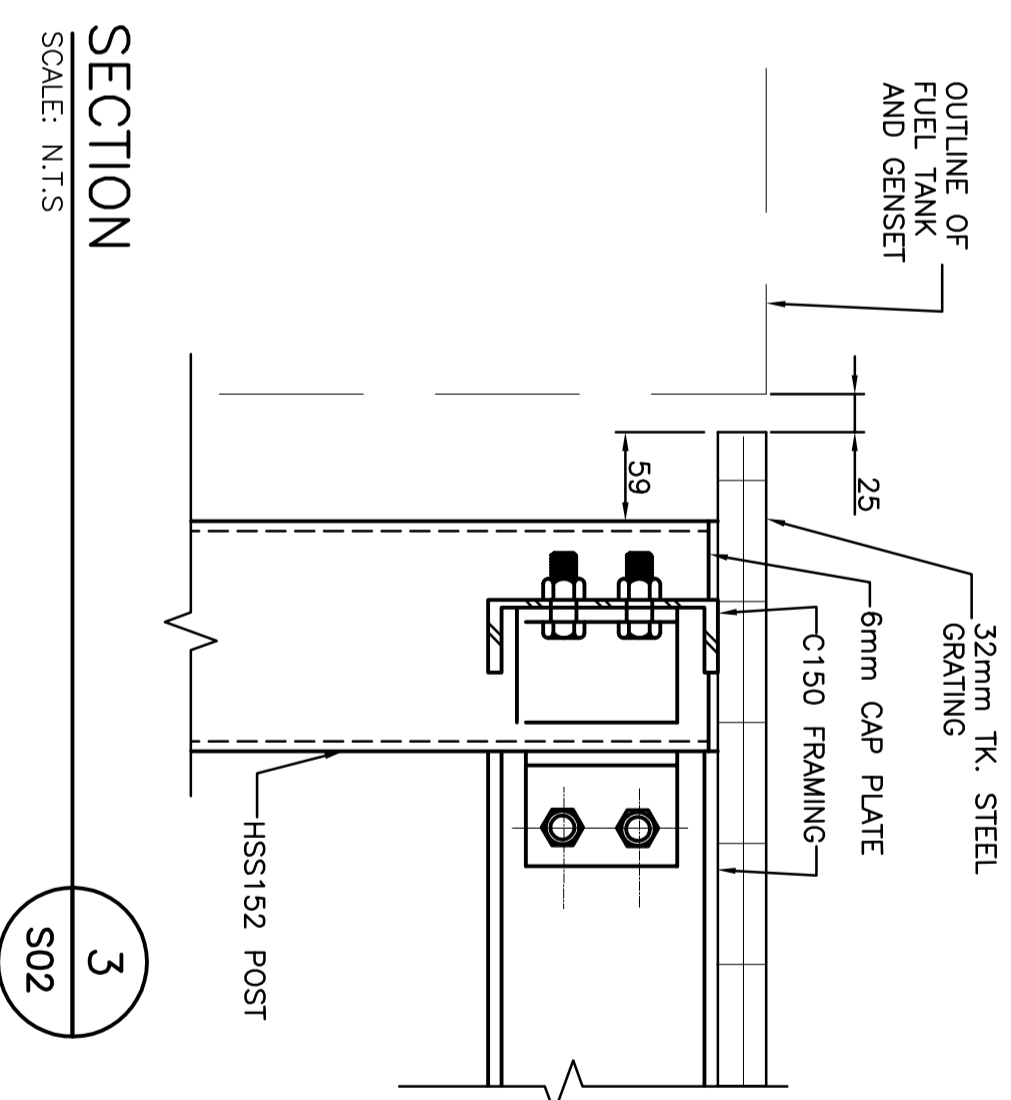
1. ALL MEASUREMENTS TO BE IN MILLIMETERS UNLESS OTHERWISE NOTED.
2. DO NOT SCALE DRAWINGS.
3. VERIFY ALL DIMENSIONS, CONDITIONS, AND LIMITATIONS ON SITE BEFORE SUBMITTING TENDER. NOTIFY ENGINEER OF ALL DISCREPANCIES FOUND THAT MAY IMPACT CONSTRUCTION.



SECTION 1
SCALE: N.T.S.



SECTION 2
SCALE: N.T.S. S02



SECTION 3
SCALE: N.T.S.

0	ISSUED FOR TENDER	25/05/
A	ISSUED FOR REVIEW	11/05/
revisions		date (DD/MM/)

EMERGENCY GENERATOR
SYSTEM FOR
SEARCH AND RESCUE
STATION
BURGEO, NL

growing: **deesse:**
**GENERATOR SYSTEM
 CONCRETE PAD &
 ACCESS PLATFORM
 SECTIONS**

designed	MS	conc'd
date	MAY 2018	
d/ram	SB	des/line
date	MAY 2018	
approved	MS	approve
	MAY 2018	
lander		Sounstatio

DF0 Project Manager	no. du projet
project number F6879-181032	
drawing no. 11P1201F016S02	no. du dessin

- ## NOTES
1. ALL MEASUREMENTS TO BE IN MILLIMETERS UNLESS OTHERWISE NOTED.
 2. DO NOT SCALE DRAWINGS.
 3. VERIFY ALL DIMENSIONS, CONDITIONS AND LIMITATIONS ON SITE BEFORE SUBMITTING TENDER. NOTIFY ENGINEER OF ALL DISCREPANCIES FOUND THAT MAY IMPACT CONSTRUCTION.

The image is a composite of two documents. The top document is a circular patent stamp. It features the word "REGISTERED" at the top, a large "PENG" logo in the center, and the name "MATHIEWA SHEPARD" below it. The bottom document is a "PROVISIONAL PATENT APPLICATION" for "METHODS AND APPARATUS FOR PROVIDING A PERSONALIZED USER INTERFACE" by "MATHIEWA SHEPARD". It includes a "PENG" logo, a title, an abstract, and a list of references.

growing	design
GENERATOR SYSTEM ACCESS PLATFORM DETAILS	
designed	MS
date	MAY 2018
drawn	SB
date	MAY 2018
approved	LTC
approved	DATE