## 2020 06 16

Prime Site Solutions Inc. (Vendor to FREEDOM MOBILE) 1499 W Pender Street Suite 702 Vancouver, BC V6G 0A7

**Re: CIVIC ADDRESS**: 3778 Konrath Road, Prince George

**LEGAL:** LT 1 DL 1600 PL 9649

**DESCRIPTION:** New Antenna System (29.5m Monopole Tower)

Please be advised that FREEDOM MOBILE INC. (FREEDOM) has completed the public consultation process, following Innovation, Science and Economic Development Canada (ISED), formerly Industry Canada's, Default Public Consultation Process, CPC-2-0-03. FREEDOM is respectfully requesting, from the City of Prince George, concurrence for the proposal to construct a new antenna system, in the form of a 29.5m monople tower, at 3778 Konrath Road in an effort to provide wireless services to Prince George. Enclosed please find evidence of the FREEDOM's efforts as per the Default Public Consultation Process.

**AUGUST 22**<sup>nd</sup>, **2018** - Information Package submitted to the City of Prince George formalizing the initiation of the consultation process with the City.

**DECEMBER 5<sup>th</sup>, 2018** - Notification packages mailed to property owners within a radius of three times the tower height **88.5m** to advise them of the proposal.

JANUARY 7th, 2019 - Consultation period closed.

**SUMMARY OF COMMENTS RECEIVED -** No comments received.

## SUPPORTING DOCUMENTATION ATTACHED-

- 1. Copy of Public Notice Package
- 2. Public Notice Report (including Radius Map, list of mail-outs)
- 3. Engineer Drawings

# Invitation for Community Feedback Proposed Freedom Mobile 29.5 Meter Monopole Wireless Communications Facility Located at <u>3778 Konrath Rd, Prince George, BC</u>

Dear Neighbour,

Freedom Mobile is actively planning its network build for the launch of wireless services in the Prince George area in BC. In order to launch its network, Freedom Mobile requires the installation of new wireless communication facilities. One of the new sites required, is proposed to be installed near Highway 16 (Yellowhead Highway) and Westgate Ave; located in the south-west region of Prince George, BC, at the coordinates N 53.860534 and W -122.804529. Freedom Mobile has commenced consultation in accordance with the City of Prince George land use regulations.

#### PROPOSAL DETAILS:

Freedom Mobile is proposing to install a 29.5 metre monopole wireless communication facility. The installation will include a total of four (4) wireless antennae and one (1) microwave dish on a City owned property located at 3778 Konrath Rd, Prince George, BC (PID:012.855.898). The ancillary equipment necessary to operate this facility will be enclosed by a fence at the base of the tower. The monopole is required to support Freedom's antennae in order to provide wireless communication network service within a few kilometres of the proposed location.

## **REGULATORY AUTHORITY**

Telecommunication providers are required by Innovation, Science, and Economic Development Canada (ISED), formerly Industry Canada, to consult with the local municipality and the general public regarding new installations. Freedom is committed to meaningful consultation with the City of Prince George and the public. The City of Prince George does not currently have a specific policy towards Telecommunication Tower Siting and Consultation and therefore the ISED default consultation process is adopted for the proposed installation.

This letter provides written notification to adjacent landowners and stakeholders with an opportunity to engage in reasonable, relevant, and timely communication regarding this proposal. You have received a copy of this notification package because your property, or a property you have an interest in, is located within 88.5 metres or less from the proposed installation. The closing period for written comments regarding the proposal is **December 28th, 2018.** Any inquiries that are received as a result of this notification will be logged and submitted to the City of Prince George as part of our application process.



## Purpose

The purpose of the proposed facility is to provide wireless coverage to portions of the City of Prince George. Currently, there are no existing antenna support structures or other feasible infrastructure that can be utilized in this area; as a result, this new antenna support structure is required. An aerial photo of the proposed location and a photo-simulation of the proposed pole are included as part of this notification package.

#### Location

The facility is proposed to be located at the coordinates N 53.86053 and W -122.804529, 3778 Konrath Rd, Prince George, BC. This is subject property is located west of Highway 16 (Yellowhead Highway) and Westgate Ave.

## Health & Safety of Wireless Facilities

ISED manages the radio communications spectrum in Canada and requires cellular telecommunications facilities to comply within the guidelines set by Health Canada in order to protect people who live or work near these facilities. Health Canada safety guidelines are outlined in their 'Safety Code 6' document. All Freedom Mobile facilities adhere to and are generally well within these standards. Freedom Mobile attests that the radio installation described in this notification package will be installed and operated on an ongoing basis to comply with Health Canada's Safety Code 6 for the protection of the general public including any combined effects of nearby installations within the local radio environment. If you have questions about this proposal, you are welcome to contact us.

#### Site Access

Access is via the existing access driveway. Construction is anticipated to take 30 to 45 days. Once complete, the site will only be accessed for routine maintenance visits which typically occur once or twice a month. To safeguard the site from the general public, the tower base and equipment shelter will be enclosed by a secure fence.

## Environment

Freedom Mobile confirms that the installation is excluded from environmental assessment under the Canadian Environmental Assessment Act.

## Design

The proposal consists of a 29.5 metre monopole structure, with an equipment compound. Freedom Mobile plans to install four (4) panel antennae and one (1) microwave dish at the top of the pole and two (2) accessory equipment cabinets securely fenced within a 5.0 metre x 5.0 metre compound area at the base. A preliminary design of the site plan, compound layout and pole profile are included in this notification for your reference.

## Transport Canada

The tower will be marked in accordance with the Transport Canada and NAV Canada requirements. No marking or lighting is required.



## Structural Considerations

Freedom Mobile confirms that the antenna structure described in this notification package will apply good engineering practices including, structural adequacy during construction. The facility will be built to the National Building Code as well as the BC Building Code.

## Local Municipality

The City of Prince George Staff have reviewed this proposal as per existing land use regulations, and Council will provide concurrence or non-concurrence at Regular Council Meeting.

## General Information

General information relating to antenna systems is available on ISED's Spectrum Management and Telecommunications website: http://www.ic.gc.ca/eic/site/ic-gc.nsf/eng/07422.html

## Contacts

## Freedom Mobile:

c/o Jason Niles of Prime Site Solutions Inc. Agents for Freedom Mobile Suite 702 – 1499 W Pender Street Suite Vancouver, BC, V6G 0A7 P: 250-858-4574 Email: jason@primesitesolutions.ca

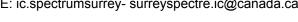
## City of Prince George:

c/o Kali Holahan, Planner Planning and Development 1100 Patricia Blvd. Prince George, BC, V2L 3V9 P: 250.561-7791 E: kali.holahan@princegeorge.ca

## ISED:

c/o Lower Mainland Office 13401 – 108 Avenue, Suite 1700 Surrey, BC V3T 5V6 P: 604-586-2521 Fax: 604-586-2528

E: ic.spectrumsurrey- surreyspectre.ic@canada.ca





## **Aerial Photo**







## **Photo Simulation**

## **BEFORE**



## **AFTER**



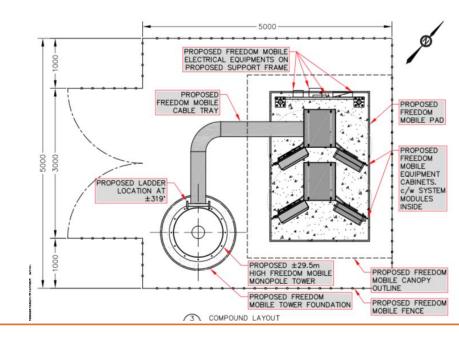
Rendering of proposed facility, looking West from Konrath Rd. Note: Photo-simulation is for conceptual purposes only.



## Site Plan



## **Compound Layout**







## **Tower Profile** MUBILE TUNER FOUNDATION MOBILE FENCE COMPOUND LAYOUT PROPOSED FREEDOM MOBILE RF ELEV. ±29.5.0m ELEV. ±29.0m ANTENNA (TYP.) PROPOSED FREEDOM MOBILE EQUIPMENT LOCATION (TYP.) ELEV. ±27.0m PROPOSED FREEDOM MOBILE M/W ELEV. ±26.0m (TYP.) ELEV. ±24.0m. ELEV. ±23.0m. FUTURE FREEDOM MOBILE RF ANTENNA LOCATION (TYP.) FUTURE FREEDOM MOBILE EQUIPMENT LOCATION (TYP.) PROPOSED ±29.5m-HIGH FREEDOM MOBILE MONOPOLE TOWER PROPOSED LADDER LOCATION AT ±319" ELEV. 0.00m TOWER PROFILE



November 29, 2018 Freedom Mobile Site: BPG0010B

## COMMENT SHEET PROPOSED RADIOCOMMUNICATIONS TOWER

## 3778 Konrath Rd, Prince George, BC FREEDOM MOBILE SITE: BPG0010B

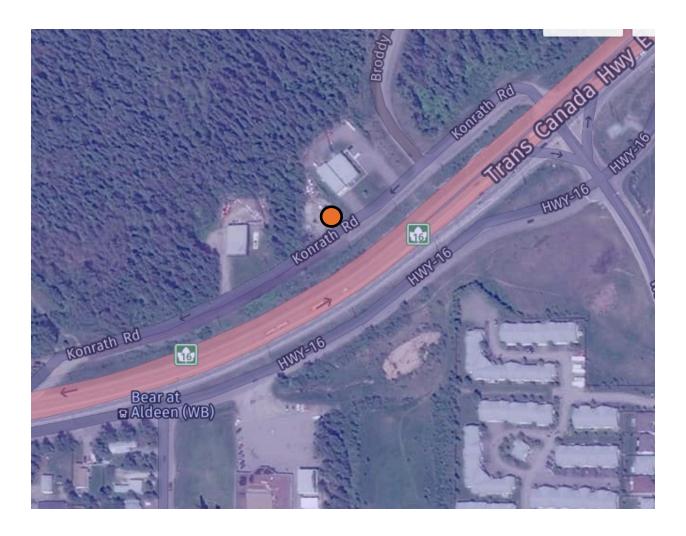
1. Do you feel this is an appropriate location for the proposed facility?
□ Yes □ No
Comments
2. Are you satisfied with the appearance / design of the proposed facility? If not, what changes would you suggest?
□ Yes □ No
Comments
3. Additional Comments
Please provide your name and full mailing address if you would like to be informed about the status of this proposal. This information will not be used for marketing purposes; however, your comments will only be used by Freedom Mobile in satisfying the City of Prince George's consultation records.
Name:
Email Address: Mailing Address:
maining / tags 555.
Freedom Mobile c/o Prime Site Solutions Inc. Suite 702 – 1499 W Pender Street Suite

Suite 702 – 1499 W Pender Street Suite
Vancouver, BC, V6G 0A7
Attention: Jason Niles, Land Use Agent
Thank you for your input.



Legal Description: LT 1 DL 1600 PL 9649 (012.855.898)

## **Context Map**



# BPG0010B\_ FREEDOM MOBILE\_29.5m Monopole 3778 Konrath Rd, Prince George, BC

Public Notification Radius Map 3 x structure height (29.5m x 3 = 90m)

Mailing Date: December 05, 2018 30-day Closing Date: Jan 1st, (full cut-off Jan. 7th, 2019)



# BPG0010B\_ FREEDOM MOBILE\_29.5m Monopole 3778 Konrath Rd, Prince George, BC

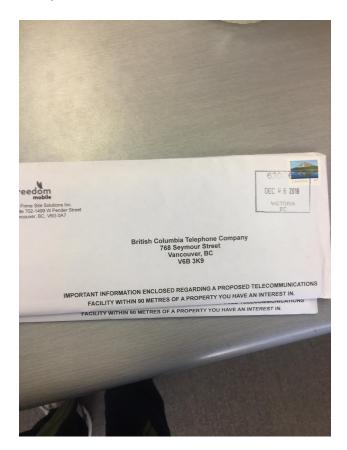
## **Public Notice Address List**

## 5 mail-outs

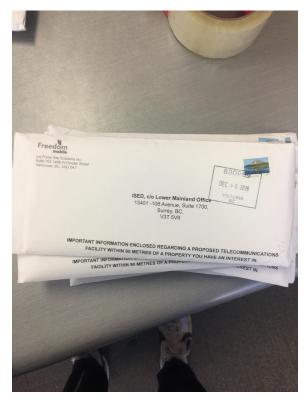
BPG0010B	City of Prince George	3778 Konrath Rd	1100 Patricia Blvd, Prince George, BC V2L 3V9	PID: 12855898
	British Columbia Telephone Company	3792 Konrath Rd	768 Seymour Street, Vancouver, BC, V6B 3K9	PID: 13019872
	Freedom Mobile, Attention: Erica Rigik, Real Estate and Municipal Affairs		Suite 209-221, West Esplanade, North Vancouver, BC,	V7M 3J3
	City of Prince George, Attention: Kali Holahan, Planning and Development		1100 Patricia Blvd, Prince George, BC V2L 3V9	
	ISED, c/o Lower Mainland Office		13401 -108 Avenue, Suite 1700, Surrey, BC, V3T 5V6	

# BPG0010B\_ FREEDOM MOBILE\_29.5m Monopole 3778 Konrath Rd, Prince George, BC

## Sample Photos









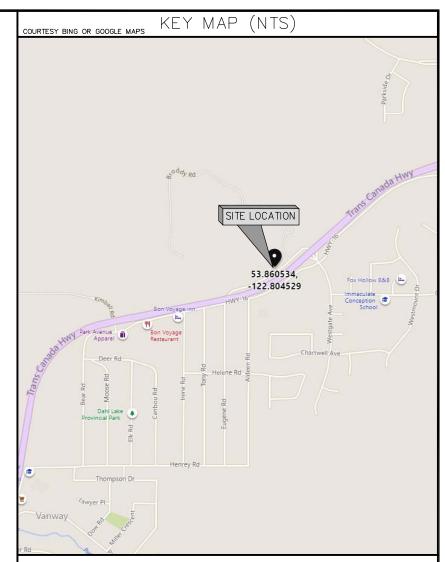
PROJECT NAME:	NEW SITE — GREENFIELD
PROJECT TYPE:	29.5m MONOPOLE & EQUIPMENT INSTALLATION
PROJECT SITE No.:	BPG0010B
TOWER OWNER:	FREEDOM MOBILE
ADDRESS:	3778 KONRATH RD., PRINCE GEORGE, B.C.

DRAWING INDEX						
SHEET	DRAWING DESCRIPTION	NO.	DATE			
COV.	TITLE SHEET & SITE KEY PLAN	0	03 DEC 18			
A01	TOWER PROFILE	0	03 DEC 18			
A02	SITE PLAN	0	03 DEC 18			
A03	COMPOUND LAYOUT	0	03 DEC 18			
A04	PARTIAL SOUTH WEST ELEVATION VIEW	0	03 DEC 18			
S01	EQUIPMENT FOUNDATION	0	03 DEC 18			
S02	EQUIPMENT LAYOUT	0	03 DEC 18			
S03	EQUIPMENT CANOPY	0	03 DEC 18			
S04	CANOPY DETAILS	0	03 DEC 18			
S05	CABLE TRAY DETAILS	0	03 DEC 18			
S06	FENCING DETAILS	0	03 DEC 18			
E01	LEGEND	0	03 DEC 18			
E02	SINGLE LINE DIAGRAM	0	03 DEC 18			
E03	ELECTRICAL ROUTE	0	03 DEC 18			
E04	ELECTRICAL FEED ELEVATION	0	03 DEC 18			
E05	GROUNDING DIAGRAM	0	03 DEC 18			
E06	COMPOUND GROUNDING	0	03 DEC 18			
E07	EQUIPMENT DETAILS	0	03 DEC 18			
E08	ELECTRICAL NOTES	0	03 DEC 18			
N01	GENERAL NOTES	0	03 DEC 18			
N02	EQUIPMENT DETAILS	0	03 DEC 18			

	ISSUE	
0	ISSUED FOR CONSTRUCTION	03 DEC 18



SITE PHOTO



## GEOGRAPHIC COORDINATES

LATITUDE: N 53.860534° LONGITUDE: W 122.804529°

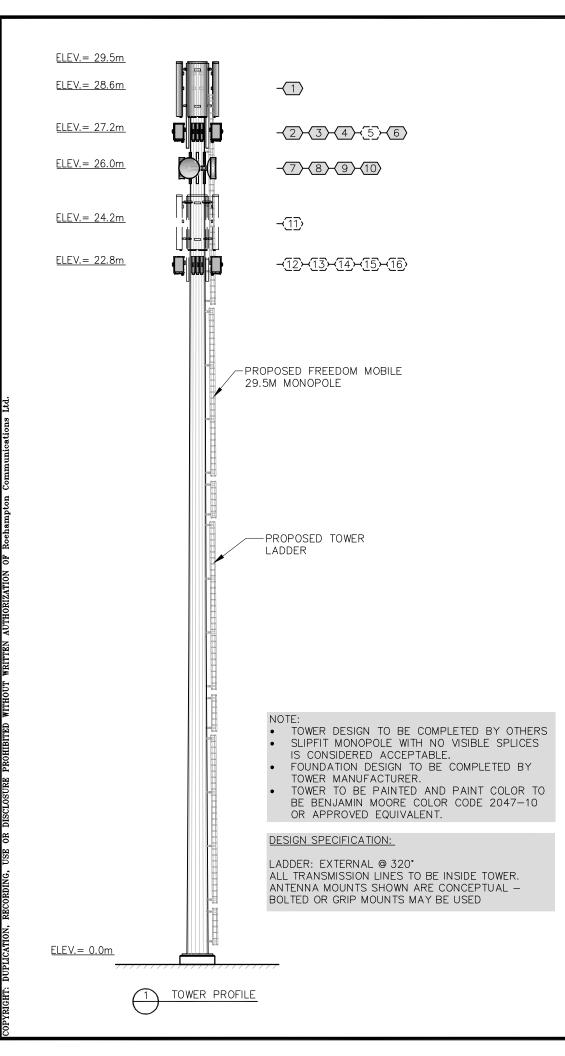
## UTILITY - CONTACT

BRITISH COLUMBIA ONE CALL: (BEFORE YOU DIG) 1-800-474-6886

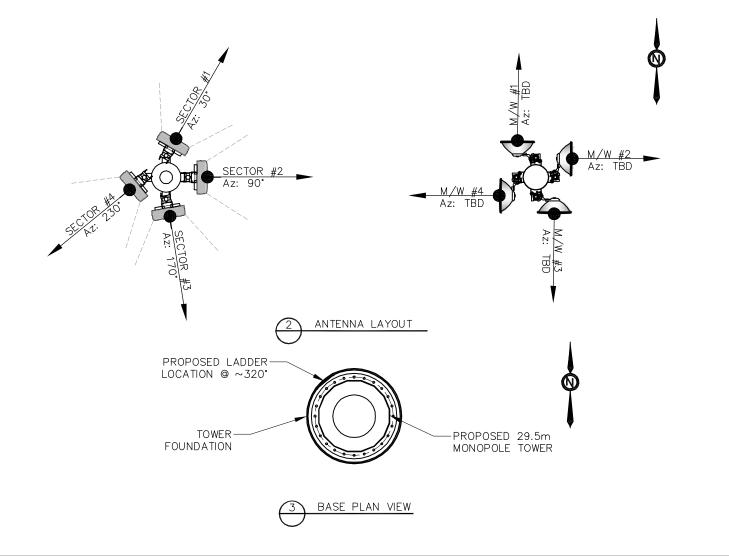
## NOTES:

- ENSURE ALL ASPECTS OF WORK CONFORM TO FREEDOM MOBILE
- SPECIFICATIONS.
  2. CONTRACTOR TO VERIFY NORTH DIRECTION AND REPORT ANY DISCREPANCIES.
- 3. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
  4. READ THESE DRAWINGS IN CONJUNCTION WITH ALL OTHER CONTRACT
- 5. CONTRACTOR TO VERIFY EXISTING CONDITIONS ON SITE PRIOR TO FABRICATION FOR EXACT FIT. NOTIFY CONSULTANT/ENGINEER REGARDING ANY DISCREPANCIES.
- 6. DO NOT SCALE DRAWINGS.





RADIO ANTENNA SCHEDULE									
#	ELEV.		ANTENNA/EQUIPMENT TX LINE OWNER STAT			STATUS			
"	(m)	QTY.	MODEL	AZIMUTH(DEG.)	QTY.	MODEL	LENGTH	OWNER	31/(100
1	28.6	4	CCI TPA65R-GE6A	30/90/170/230	48	JUMPERS	±3.0m	FREEDOM	PROPOSED
2	27.2	4	FRIJ	_	4/4	DC/FIBRE JUMPERS	±3.0m	FREEDOM	PROPOSED
3	27.2	4	AHFIB	_	4/4	DC/FIBRE JUMPERS	±3.0m	FREEDOM	PROPOSED
4	27.2	4	AHBCC	_	4/4	DC/FIBRE JUMPERS	±3.0m	FREEDOM	PROPOSED
5	27.2	4	RRU	_	4/4	DC/FIBRE JUMPERS	±3.0m	FREEDOM	FUTURE
6	27.2	1/1	DC SPLITTER & FIBRE SPLITTER	_	1/1	DC & FIBRE TRUNK	±35m	FREEDOM	PROPOSED
7	26.0	1	2' M/W	TBD	1	CAT 5E	±33m	FREEDOM	PROPOSED
8	26.0	1	2' M/W	TBD	1	CAT 5E	±33m	FREEDOM	PROPOSED
9	26.0	1	2' M/W	TBD	1	CAT 5E	±33m	FREEDOM	PROPOSED
10	27.0	2	2' M/W	TBD	1	CAT 5E	±33m	FREEDOM	PROPOSED
11	24.2	4	CCI TPA65R-GE6A	30/90/170/230	TBD	TBD	TBD	FREEDOM	FUTURE
12	22.8	4	FRIJ	-	TBD	TBD	TBD	FREEDOM	FUTURE
13	22.8	4	AHFIB	-	TBD	TBD	TBD	FREEDOM	FUTURE
14	22.8	4	AHBCC	_	TBD	TBD	TBD	FREEDOM	FUTURE
15	22.8	4	RRU	_	TBD	TBD	TBD	FREEDOM	FUTURE
16	22.8	1/1	DC SPLITTER & FIBRE SPLITTER	_	TBD	TBD	TBD	FREEDOM	FUTURE
JUM	PERS =	LDF4	DC=1/2-3/4" FIBRE = 3,	/8"-1/2"					



── NOTES:

- TOWER DESIGN IS CONCEPTUAL FOR TENDER PURPOSES AND IS NOT FOR CONSTRUCTION, OBTAIN SITE SPECIFIC WIND FOR FINAL DESIGN.
- 2. ALL WORK TO CONFORM TO LATEST FREEDOM MOBILE SPECIFICATIONS.
- VERIFY ALL DIMENSIONS DURING INSTALLATION AND REPORT ANY DISCREPANCIES TO ENGINEER.
- 4. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
- 5. DRAWINGS ARE NOT TO BE SCALED.

CLIENT:

Freedom mobile

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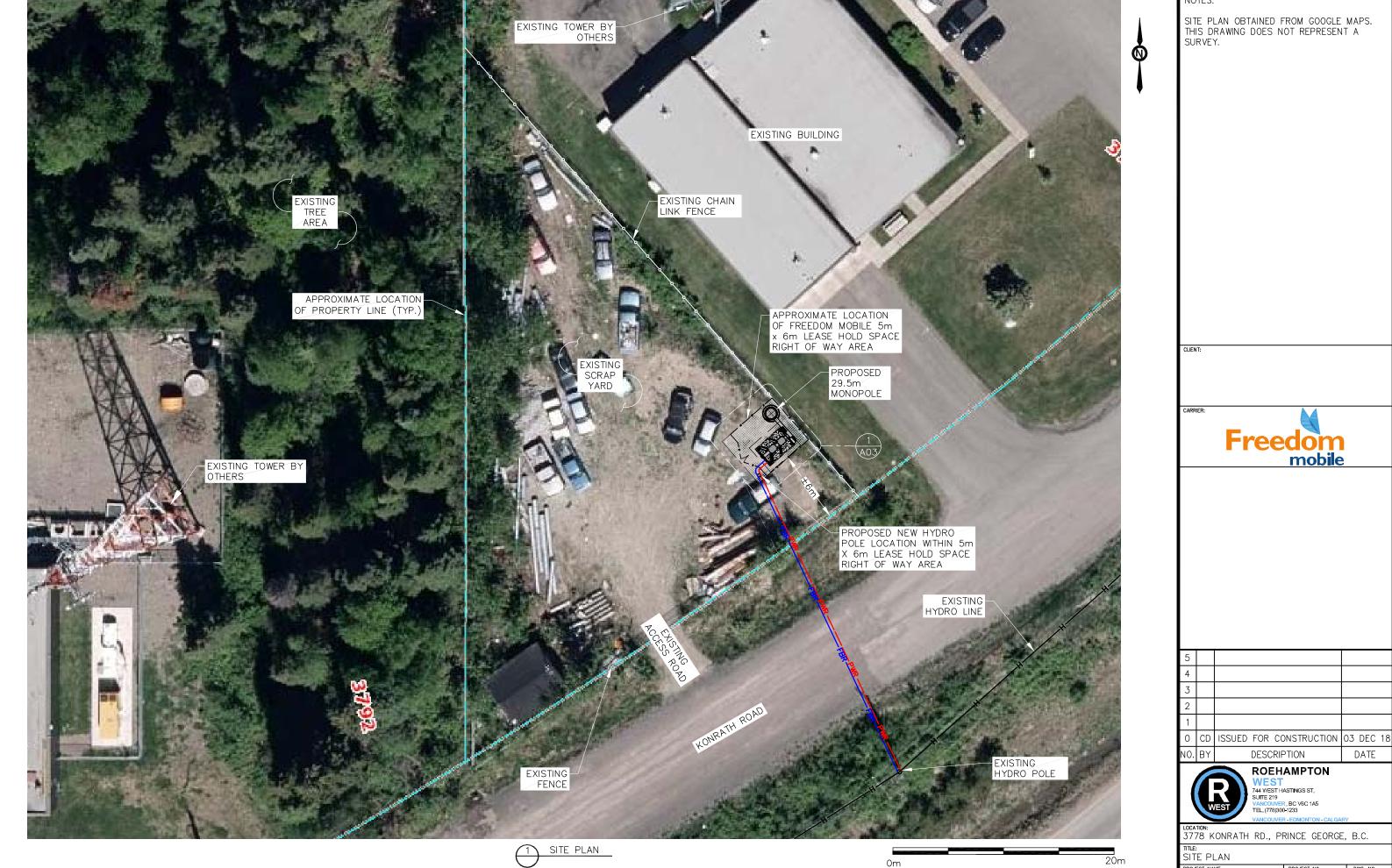
SUITE 219
VANCOUVER, BC V6C 1A5
TEL.(778)300-1233
VANCOUVER - EDMONTON - CALGARY

3778 KONRATH RD., PRINCE GEORGE, B.C.

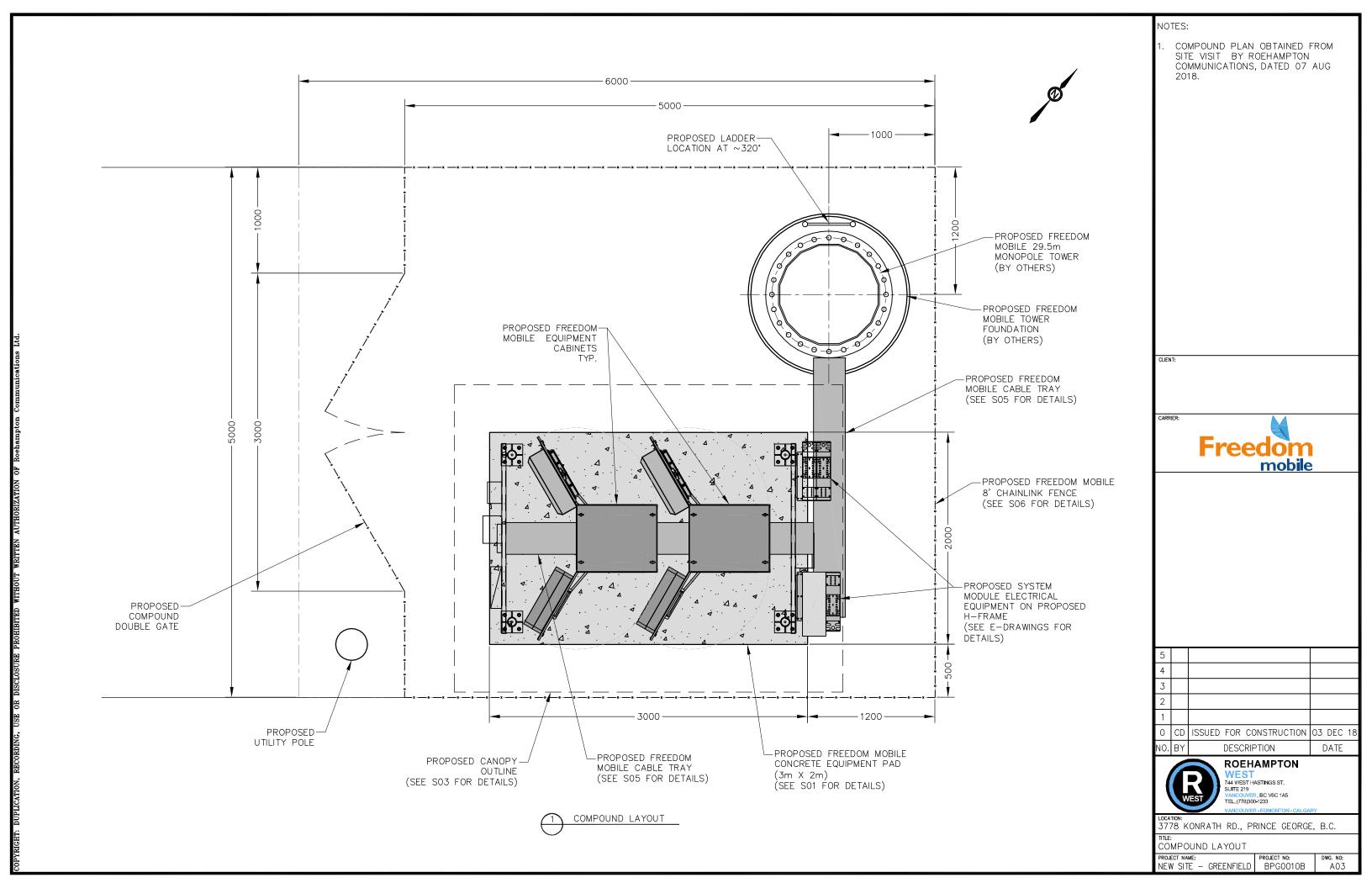
TOWER PROFILE

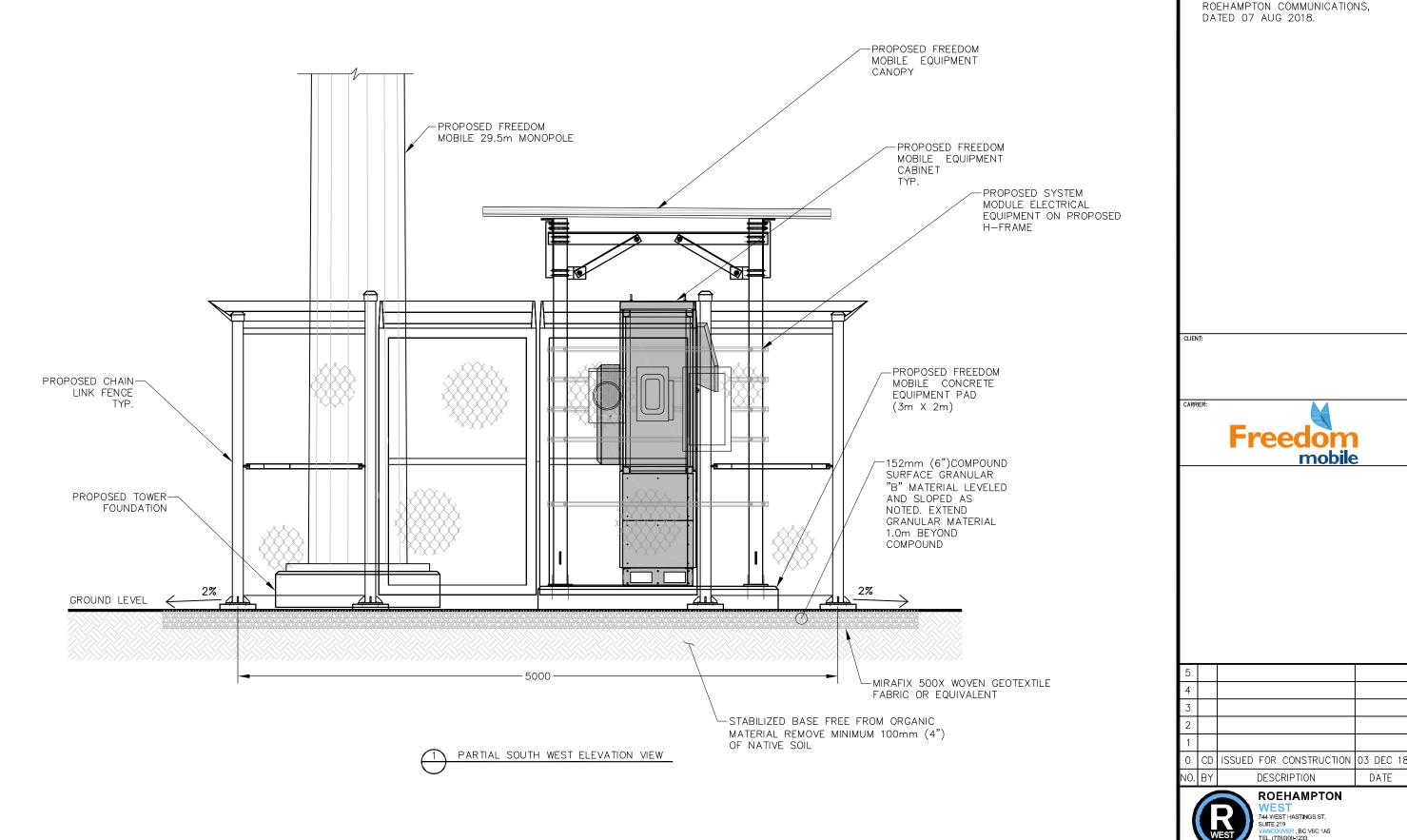
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PROJECT NO: DWG. NO: BPG0010B A01



PROJECT NAME: PROJECT NO: NEW SITE - GREENFIELD BPG0010B





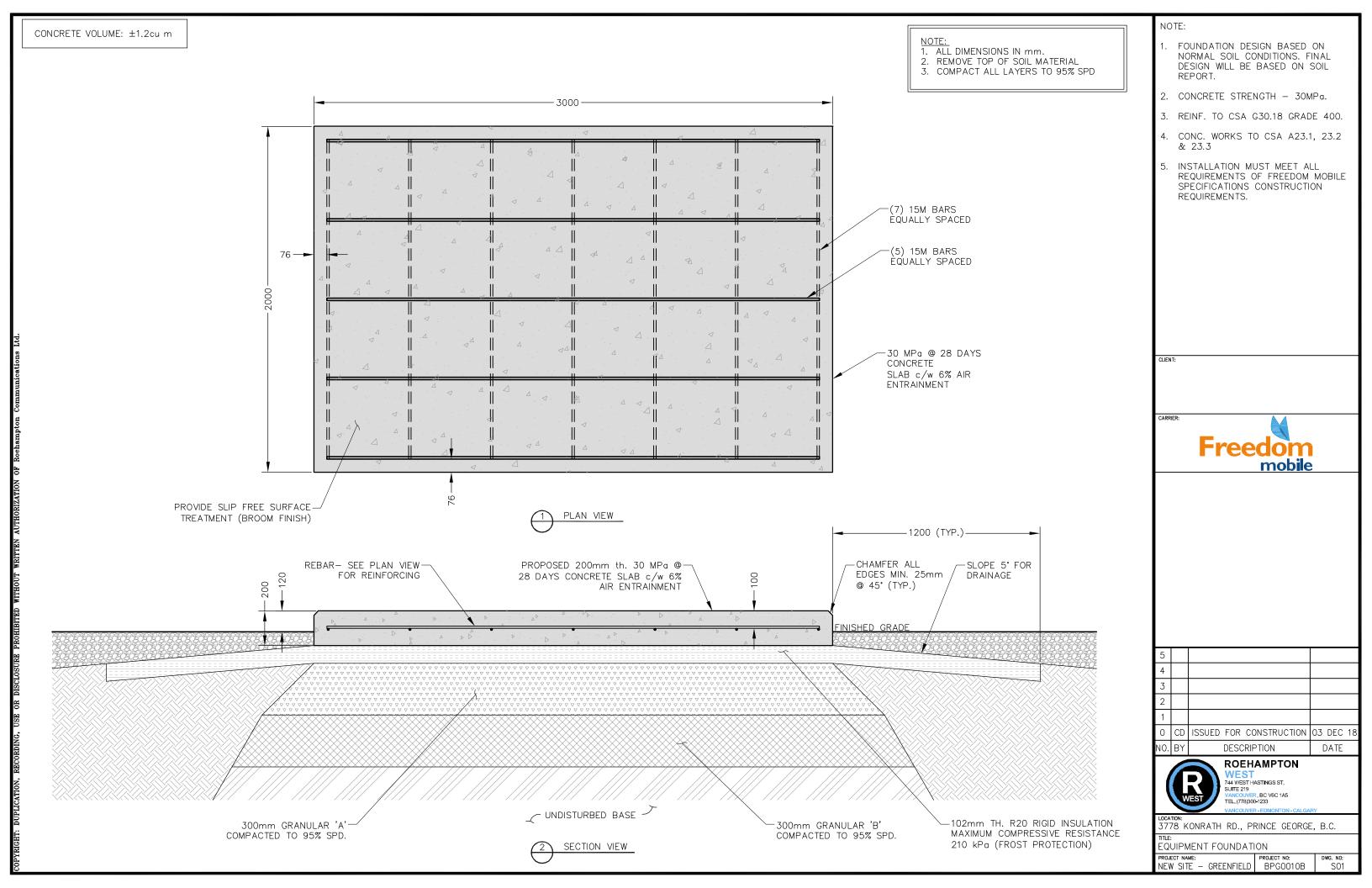
NOTES:

COMPOUND PLAN OBTAINED FROM SITE VISIT BY ROEHAMPTON COMMUNICATIONS,



3778 KONRATH RD., PRINCE GEORGE, B.C. PARTIAL SOUTH WEST ELEVATION VIEW

PROJECT NAME: NEW SITE — GREENFIELD PROJECT NO: BPG0010B





NOTES:

- DO NOT SCALE DRAWINGS. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
  2. ALL WORK TO CONFORM TO LATEST
- FREEDOM MOBILE SPEC.
- 3. CONTRACTOR TO VERIFY ALL DIMENSIONS.
- 4. ALL U-BOLTS 1/20 ASSY (4N,2W) UNLESS NOTED.
- 5. ALL BOLTS 5/80 A325 BOLT ASSY'S UNLESS NOTÉD.
- 6. ALL STRUCTURAL BOLTS TO BE GRADE A325 WITH FLAT WASHER UNLESS NOTED.
- . ALL OTHER BOLT AND THREADED ROD CONNECTIONS ARE TO USE FLAT WASHERS WITH EITHER DOUBLE NUT OR SINGLE NUT WITH LOCK WASHER.

  ALL U-BOLTS TO BE AISI C1018, COLD
- ROLLED, GALVANIZED TENSILE STRENGTH TO BE 63 KSI

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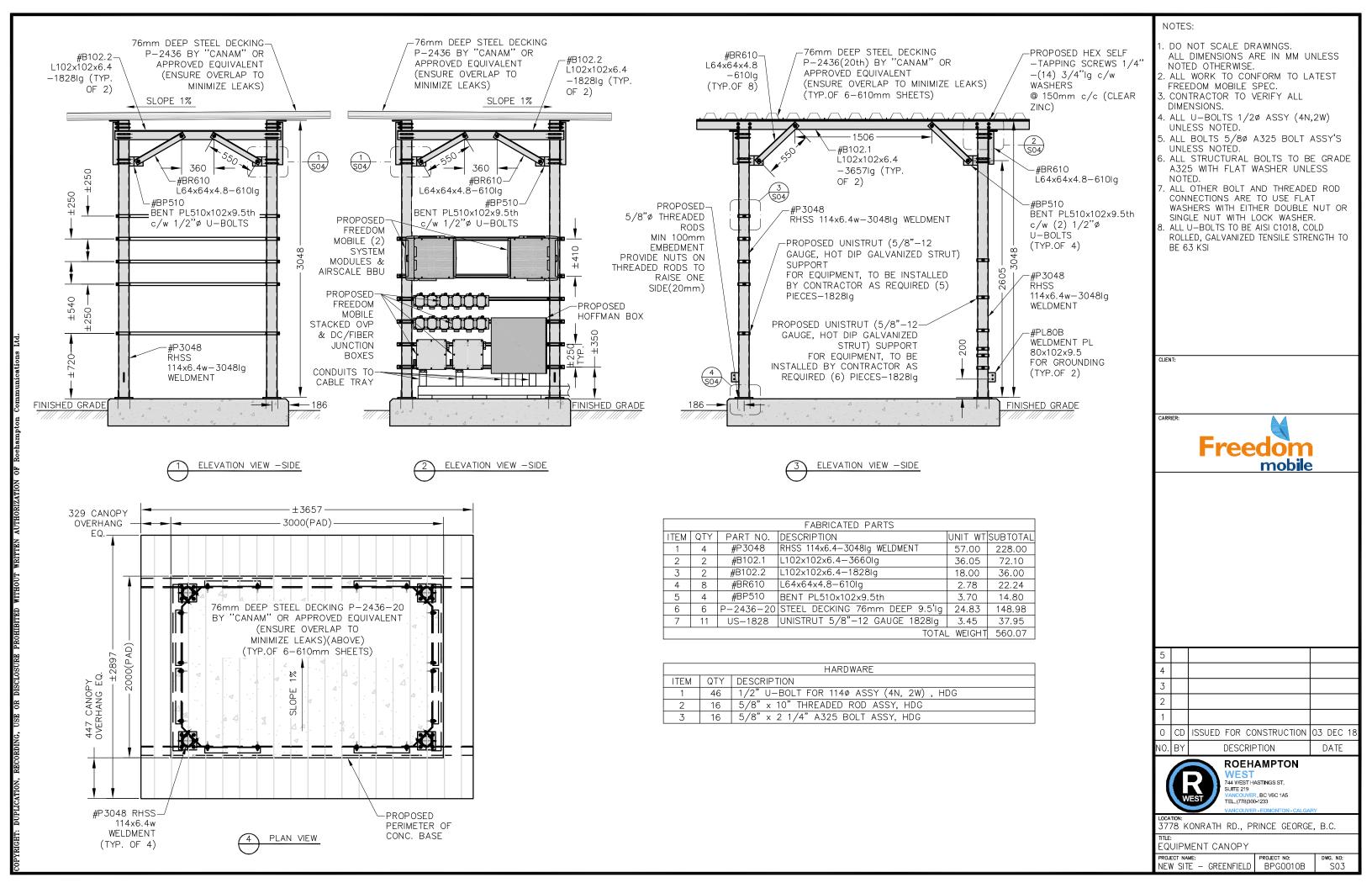
744 WEST HASTINGS ST, SUITE 219 VANCOUVER , BC V6C 1A5 TEL. (778)300-1233

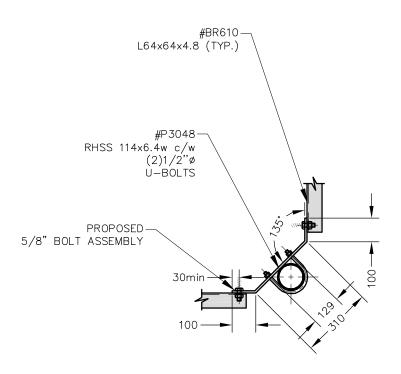
3778 KONRATH RD., PRINCE GEORGE, B.C.

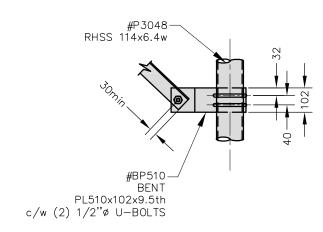
TITLE: EQUIPMENT LAYOUT

PROJECT NAME: NEW SITE — GREENFIELD PROJECT NO: BPG0010B

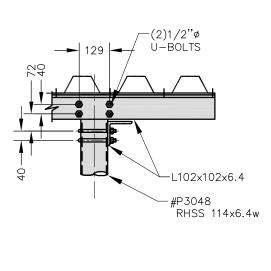
DWG. NO: SO2



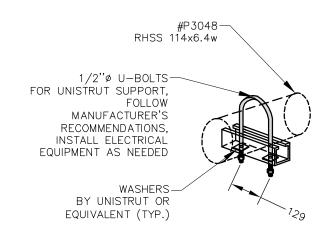




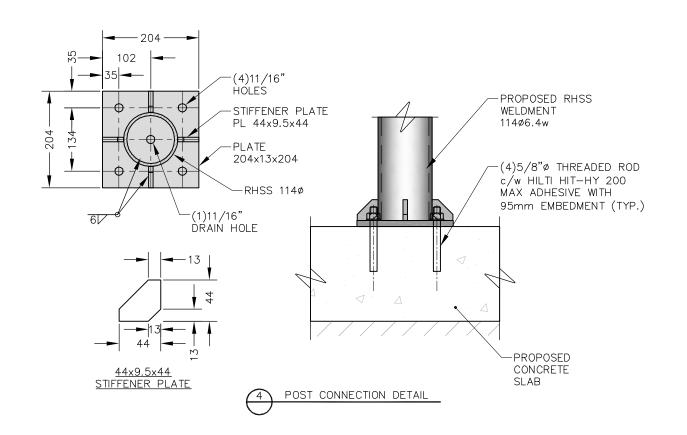
1 BRACE CONNECTION DETAIL











NOTES:

- DO NOT SCALE DRAWINGS.
   ALL DIMENSIONS ARE IN MM UNLESS
   NOTED OTHERWISE.
- 2. ALL WORK TO CONFORM TO LATEST FREEDOM MOBILE SPEC.
- 3. CONTRACTOR TO VERIFY ALL DIMENSIONS.
- 4. ALL U-BOLTS 1/20 ASSY (4N,2W) UNLESS NOTED.
- 5. ALL BOLTS 5/80 A325 BOLT ASSY'S UNLESS NOTED.
- 6. ALL STRUCTURAL BOLTS TO BE GRADE A325 WITH FLAT WASHER UNLESS NOTED.
- 7. ALL OTHER BOLT AND THREADED ROD CONNECTIONS ARE TO USE FLAT WASHERS WITH EITHER DOUBLE NUT OR SINGLE NUT WITH LOCK WASHER.
- 8. ALL U-BOLTS TO BE AISI C1018, COLD ROLLED, GALVANIZED TENSILE STRENGTH TO BE 63 KSI

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TEL. (778)300-1233

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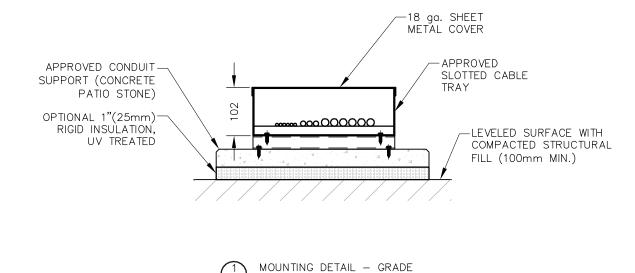
3778 KONRATH RD., PRINCE GEORGE, B.C.

TITLE:
CANOPY DETAILS

PROJECT NAME: PROJECT NO:
NEW SITE — GREENFIELD BPG0010B

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DWG. NO: SO4



## NOTES:

- 1. CABLE TRAY IS HOT DIP GALVANIZED SLOTTED STEEL LADDER TYPE-C (18 ga.) APOLLO SHEET METAL (WESTRAY) OR EQUIVALENT
- 2. CABLE TRAY WIDTHS ARE: MINIMUM 300mm AND SHALL BE SPACED MAX .: 2400mm, 1500mm, 1000mm APART RESPECTIVELY
- 3. CONTRACTOR TO PROVIDE ALL ELBOWS, TEES AND OTHER FITTINGS AS REQUIRED TO COMPLETE THE CABLE TRAY ROUTE
- 4. CABLE TRAY TO BE PAINTED TO MATCH BUILDING AS REQUIRED
- 5. FOR MOUNTING TO CONCRETE & MASONRY WALL USE HILTI KWIK-CON II 3/16"ø ⊚ 1-3/4" EMBED.
- 6. CABLE TRAY COVER TO BE FASTENED WITH (1) STAINLESS STEEL SCREW AT EACH CORNER & ADDITIONAL SET OF SCREWS CENTERED IN TRAY SECTIONS 1000mm OR LARGER
- 7. ANY OPENING TO BE SEALED WITH WIRE MESH TO PREVENT RODENT ENTRY.

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744 WEST HASTINGS ST. SUITE 219
VANCOUVER, BC V6C 1A5

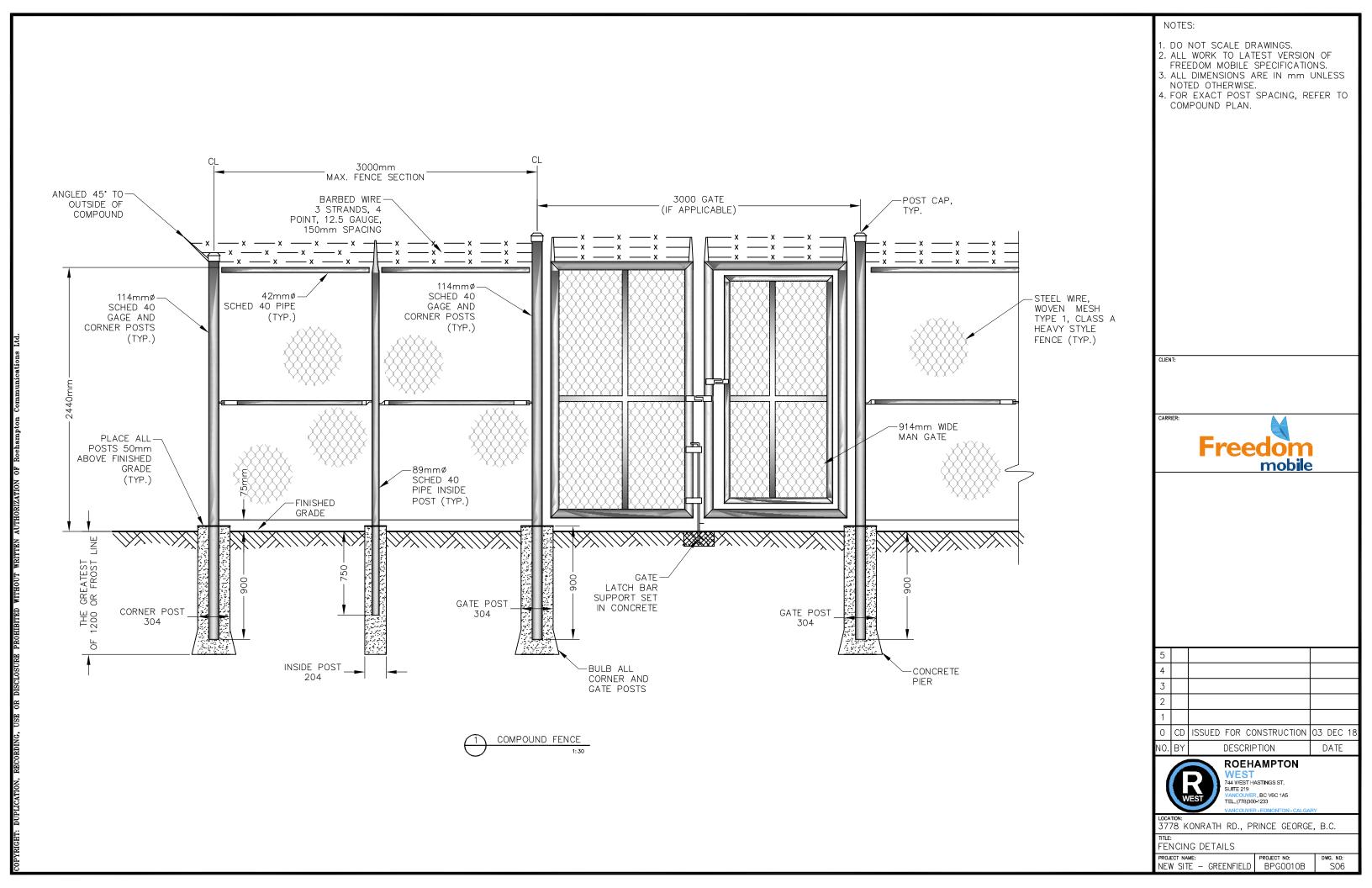
3778 KONRATH RD., PRINCE GEORGE, B.C.

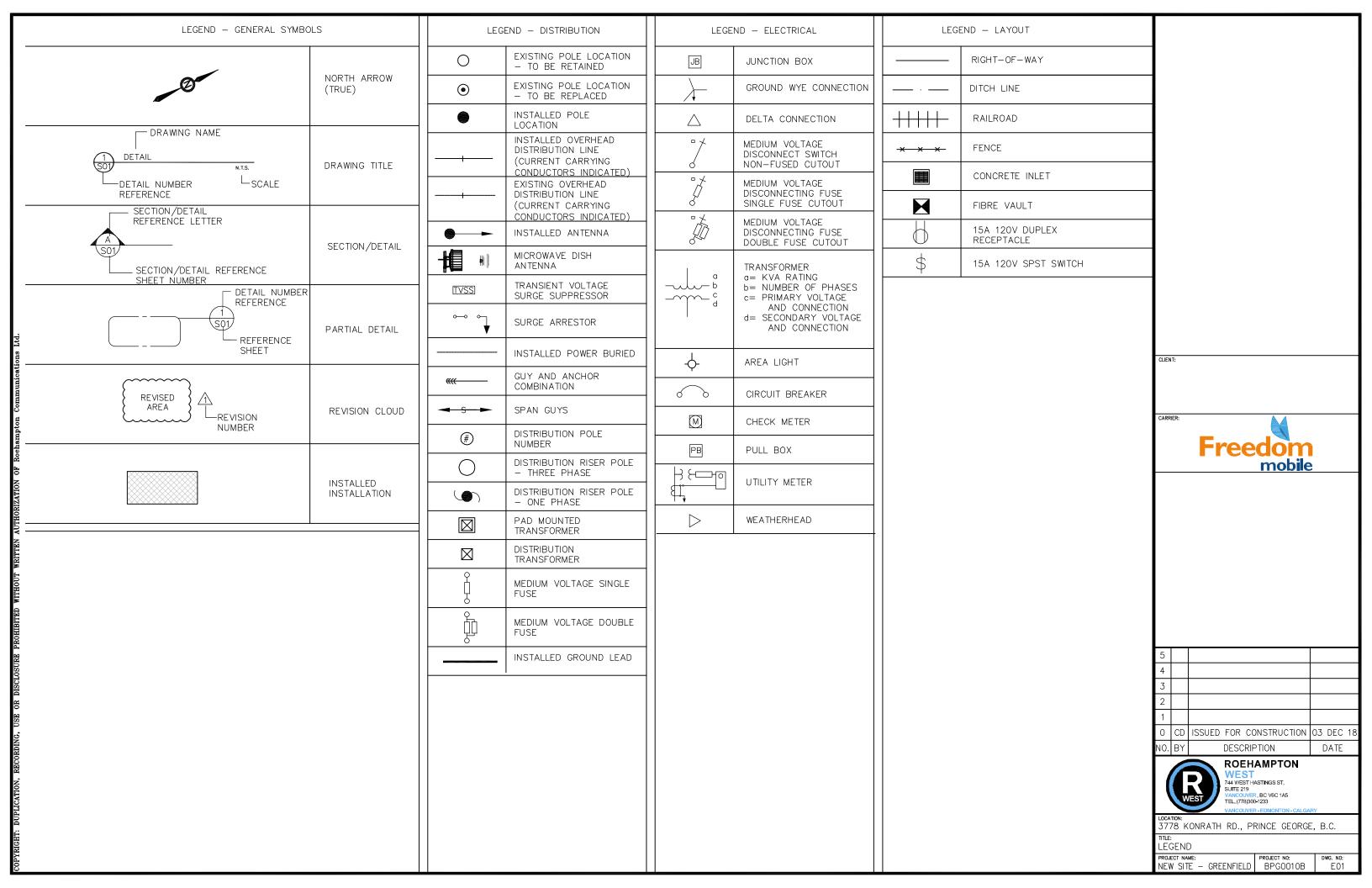
CABLE TRAY DETAILS

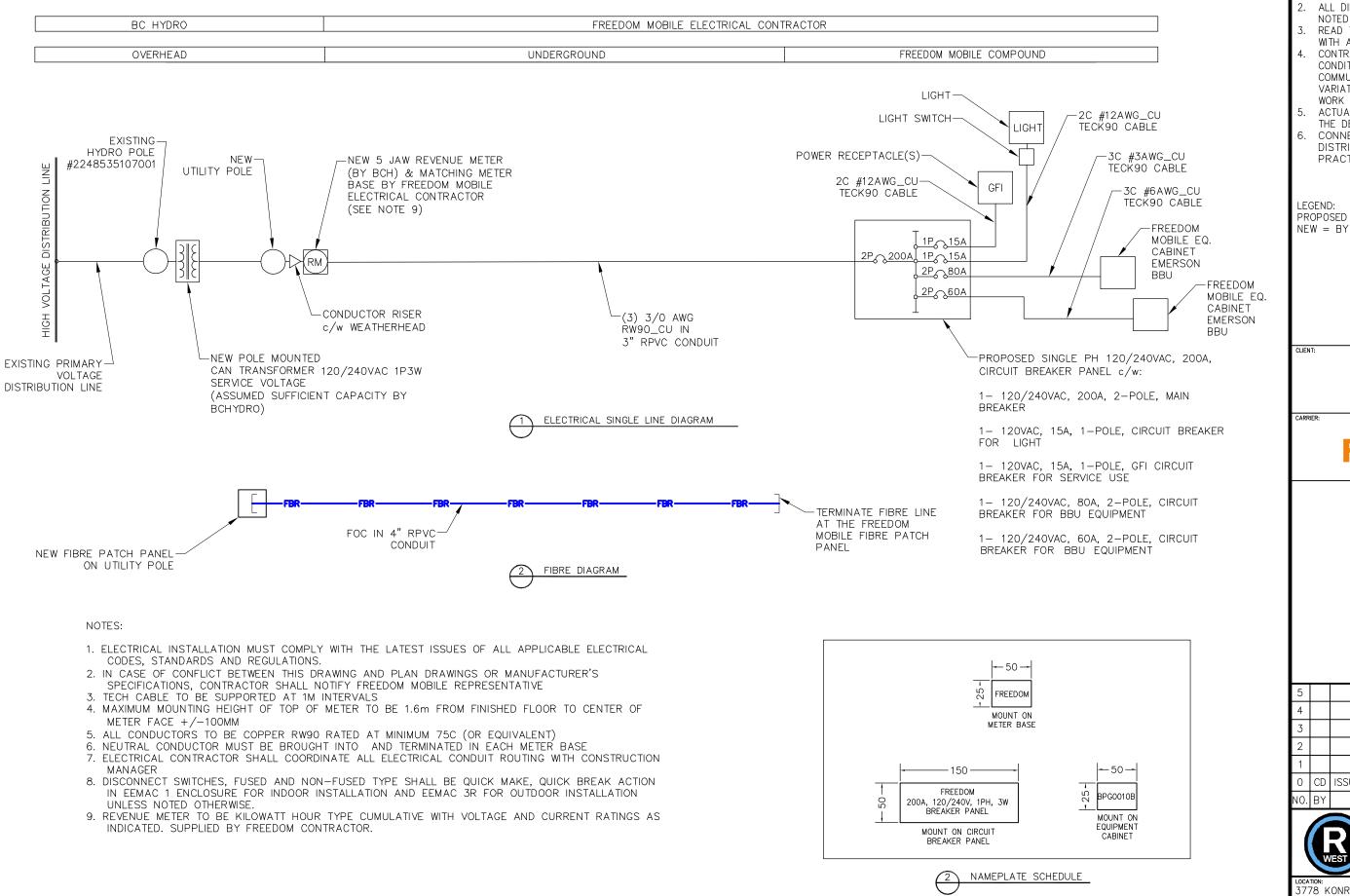
PROJECT NAME: NEW SITE — GREENFIELD

PROJECT NO: BPG0010B

DWG. NO: S05







- ENSURE ALL ASPECTS OF WORK CONFORM TO FREEDOM MOBILE SPECIFICATION.
- ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
- READ THESE DRAWINGS IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS.
- CONTRACTOR TO VERIFY EXISTING CONDITIONS AND NOTIFY ROEHAMPTON COMMUNICATIONS LTD. ON ANY VARIATION WHICH HAVE IMPACT ON WORK TO BE CARRIED OUT.
- ACTUAL ROUTE WILL BE DETERMINED AT THE DETAIL DESIGN PHASE.
- CONNECTED LOAD SHOULD BE DISTRIBUTED AS EVENLY AS PRACTICAL.

PROPOSED = BY FREEDOM MOBILE NEW = BY OTHERS



O CD ISSUED FOR CONSTRUCTION 03 DEC 1 DESCRIPTION DATE



**ROEHAMPTON** 

744 WEST HASTINGS ST. SUITE 219 R BC V6C 1A5

3778 KONRATH RD., PRINCE GEORGE, B.C. SINGLE LINE DIAGRAM

PROJECT NAME: PROJECT NO: BPG0010B NEW SITE - GREENFIELD

DWG. NO: EO2

NOTES:

SITE PLAN OBTAINED FROM SITE
VISIT BY ROEHAMPTON
COMMUNICATIONS, DATED 07 AUG
2010

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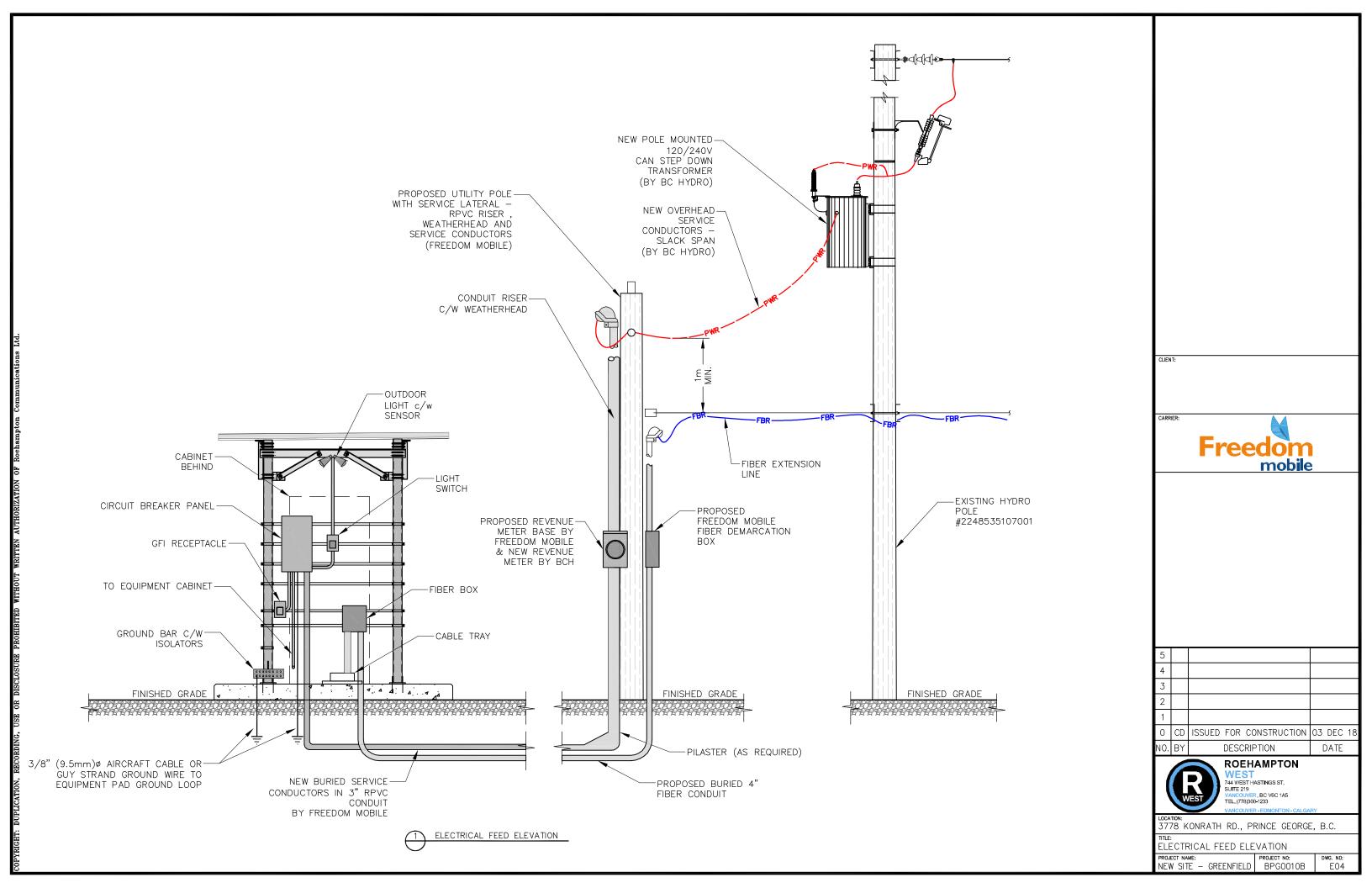
WEST 744 WEST HASTINGS ST, SUITE 219 VANCOUVER, BC V6C 1A5 TEL. (778)300-1233

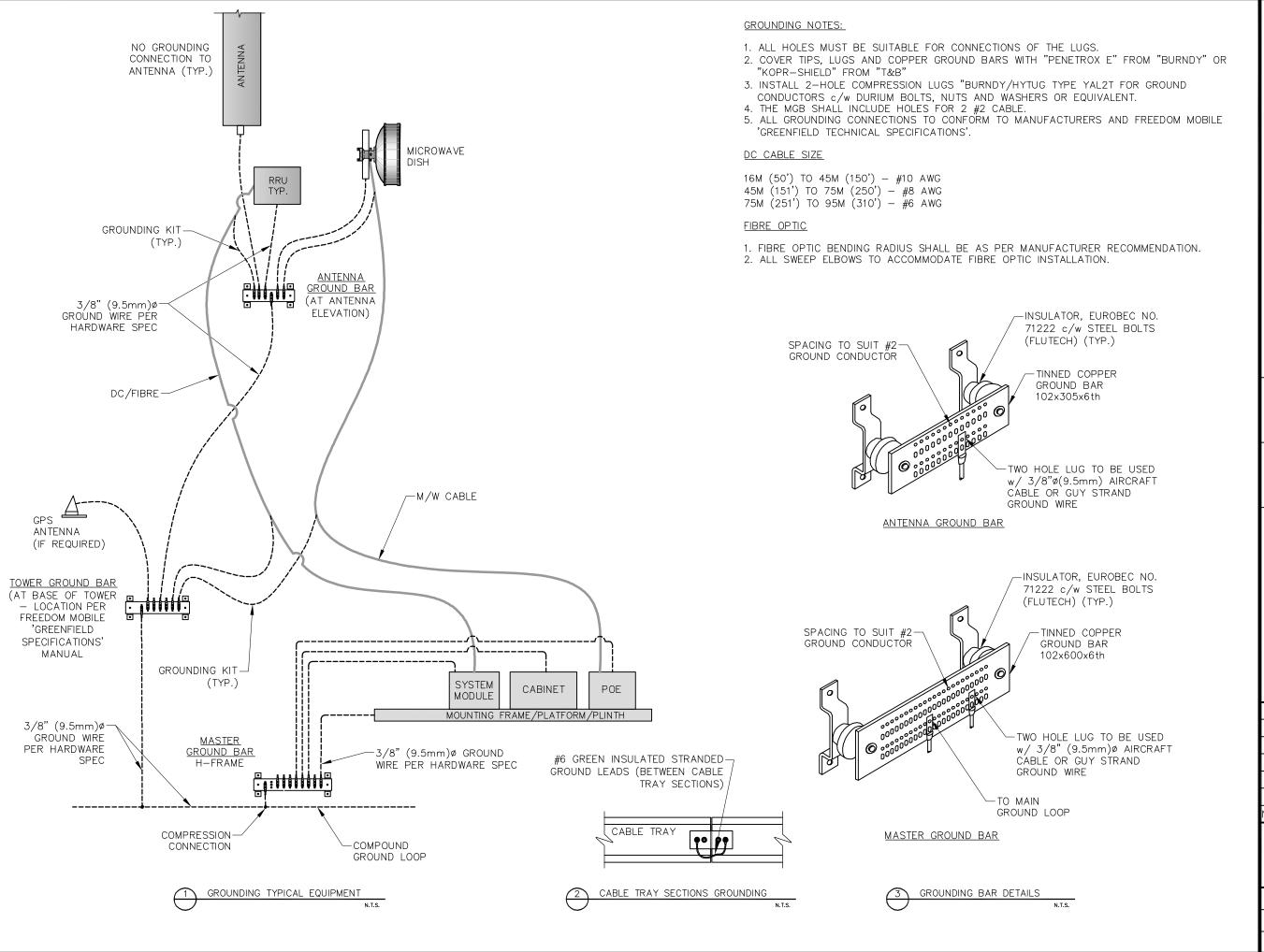
3778 KONRATH RD., PRINCE GEORGE, B.C.

TITLE: ELECTRICAL ROUTE

PROJECT NAME: PROJECT NO:
NEW SITE — GREENFIELD BPG0010B

DWG. NO: EO3





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**ROEHAMPTON** 

744 WEST HASTINGS ST. SUITE 219 ER, BC V6C 1A5

3778 KONRATH RD., PRINCE GEORGE, B.C.

GROUNDING DIAGRAM

PROJECT NAME: NEW SITE — GREENFIELD PROJECT NO: BPG0010B

DWG. NO: E05

## COMPOUND GROUNDING NOTES:

**GENERAL** 

- THE GROUND PERFORMANCE REQUIREMENT FOR A SITE IS 5 OHMS OR LESS.
- 2. FOLLOWING INSTALLATION, THE CONTRACTOR MUST SUBMIT THE TEST RESULTS OF THE GROUND SYSTEM PERFORMANCE.
- REFER TO FREEDOM MOBILE SPECIFICATIONS MANUAL FOR ALL GROUNDING INSTALLATIONS.

BURIED GROUND RING

- THE RING GROUND SHALL BE INSTALLED AT AN APPROXIMATE DISTANCE OF 2 FEET (610 mm) FROM THE EDGE OF A FOUNDATION AND BURIED TO FREEDOM MOBILE 'GREENFIELD TECHNICAL SPECIFICATIONS' MANUAL.
- ALL BELOW GRADE INSTALLATIONS SHALL BE DOCUMENTED AND PHOTOGRAPHED BEFORE BACK-FILLING. THE PHOTOGRAPHS ARE TO BE KEPT AS PART OF SITE'S RECORD.

**GROUNDING CONNECTIONS** 

- 6. ALL UNDERGROUND CONNECTIONS SHALL BE MADE USING COMPRESSION GROUNDING CONNECTORS (EZGROUND CTP2020TP C-TAP/THOMAS & BETTS OR EQUIVALENT).
- 7. THE BACK-FILL MATERIAL SHALL BE NON-CORROSIVE, LOW RESISTIVE, FREE OF STONES, DEBRIS, ETC., AND COMPACTED THOROUGHLY IN LAYERS NOT EXCEEDING 6 INCHES (150 MM) IN DEPTH, TO AT LEAST 95% OF ORIGINAL DENSITY BEFORE EXCAVATION.
- THE GROUNDING AND BONDING CONNECTIONS ABOVE GRADE OR INTERIOR TO A BUILDING MAY BE MADE USING TINNED STRANDED COPPER, TWO-HOLE COMPRESSION TYPE LUGS.
- ALL HARDWARE (E.G., NUTS, BOLTS, WASHERS, ETC.) SHALL BE STAINLESS STEEL.

ANTENNA SUPPORT GROUNDING

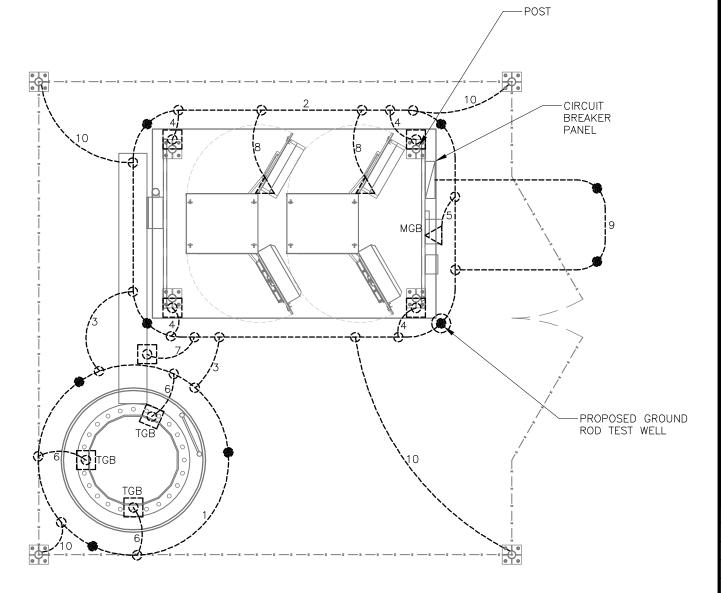
10. THE EQUIPMENT OR STRUCTURES THAT ARE LIKELY TO BE DAMAGED BY DIRECT LIGHTNING STRIKES SHALL BE EQUIPPED WITH AIR

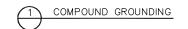
TERMINALS.	
GROUND CABLE  GROUND ROD  GROUND ROD CONNECTION	
GROUND CABLE  GROUND LOOP  GROUND LOOP TIE IN DETAIL	\d
GROUND ROD———————————————————————————————————	
4 CROSS OF HORIZONTAL CABLES	
5 VERTICAL CONNECTION TO PLATE	
GRADE CADWELL GROUND ROD GROUND ROD TEST WELL	

HARDWARE SPECIFICATION			
MIN. #2/0 TIN	NED STRANDED	COPPER WIRE (B/C)	
3/8" GALV. A	IRCRAFT CABLE	OR GUY STRAND WIRE (G/S)	
SOLID COPPER	, COPPER CLAD	STEEL OR STAINLESS STEEL	

GROUND RODS: MIN. Ø 15mm, MIN. 2440mm LONG (5/8", 8 ft)

RUN#	TYPE	DESCRIPTION
1	#2/0 - B/C	TOWER LOOP
2	#2/0 - B/C	H-FRAME LOOP
3	#2/0 - B/C	LINK BETWEEN GROUND LOOPS
4	3/8" - G/S	LEAD TO ICE GUARD POST
5	3/8" - G/S	LEAD TO MAIN GROUND BAR
6	3/8" - G/S	LEAD TO TGB
7	3/8" - G/S	LEAD TO WAVEGUIDE BRIDGE OR CABLE TRAY
8	3/8" - G/S	LEAD TO THE CABINET
9	#2/0 - B/C	SERVICE ENTRANCE GROUND LOOP
10	3/8" - G/S	LEAD TO FENCE POST





LEGEND-EQUIPMENT SYMBOLS

- GROUND ROD

 $\circ$ 

- CAD-WELDED CONNECTION

Δ

- COMPRESSION CONNECTION

-ABOVE GRADE GROUNDING CONNECTION

- 2/0 GROUND WIRE PER HARDWARE SPEC



- 3/8" GROUND WIRE PER HARDWARE SPEC



- GROUND ROD TEST WELL

- MAIN GROUND BAR TOWER BASE GROUND

- TOWER GROUND BAR

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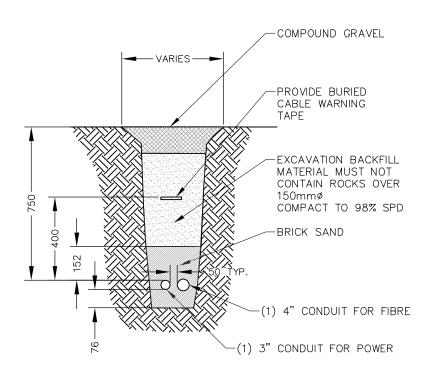
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COMPOUND GROUNDING

PROJECT NAME: NEW SITE — GREENFIELD

PROJECT NO: BPG0010B

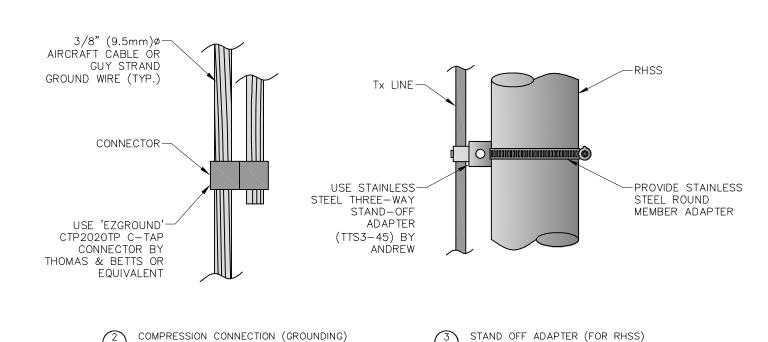
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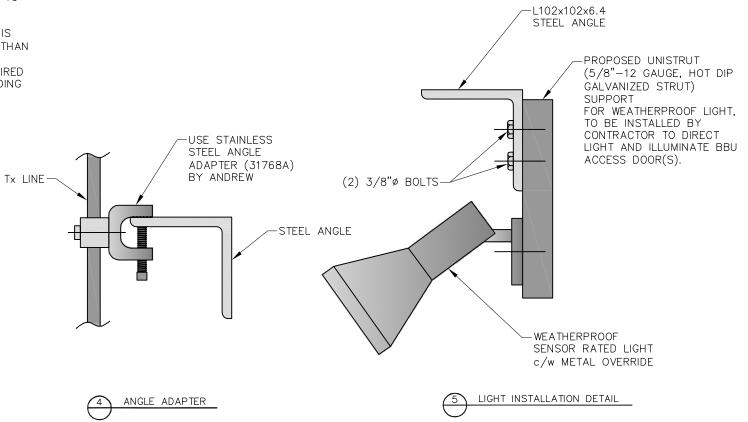


. BACKFILL MUST BE CLEAN AND FREE OF DEBRIS TO PROPERLY PROTECT THE DUCT AND TO PREVENT CRUSHING.

FREEDOM MOBILE TRENCHING DETAIL

- FISH LINE A 1/4" POLYPROPYLENE (OR EQUIVALENT) FISH LINE MUST BE INSTALLED THROUGH THE ENTIRE LENGTH OF THE DUCT. THIS LINE IS USED TO INSTALL THE CABLE-PULLING ROPE THROUGH THE DUCT. YOUR CABLE INSTALLER MUST PROVIDE THE PULLING ROPE AND ANY OTHER ACCESSORIES (PULLING COMPOUNDS, ETC.) NEEDED TO INSTALL THE CABLE.
- ENDS OF TRENCH: THE CABLE INSTALLER MUST ENSURE THAT THE SERVICE CABLE IS FORMED INTO A SEMICIRCULAR LOOP BELOW THE PIPE (BENDING RADIUS NOT LESS THAN TEN TIMES CABLE DIAMETER) AT THE METER BASE AND POLE END. THIS LOOP WILL PREVENT DAMAGES DUE TO FROST MOVEMENT. THE ENDS OF THE CABLE ARE REQUIRED TO BE PROTECTED BY SAND PADDING ABOVE AND BELOW THE CABLING. SAND PADDING IS TO BE PROVIDED BY THE CIVIL CONTRACTOR.





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3778 KONRATH RD., PRINCE GEORGE, B.C. **EQUIPMENT DETAILS** 

PROJECT NAME: NEW SITE — GREENFIELD PROJECT NO: BPG0010B

DWG. NO: EO7

#### GENERAL NOTES:

- 1. PROVIDE ALL LABOUR AND MATERIAL AS SHOWN AND AS REQUIRED TO COMPLETE THIS PROJECT AND PRESENT IT AS FULLY OPERATIONAL TO THE SATISFACTION OF THE OWNER.
- COMPLY WITH THE LATEST ISSUES OF ALL APPLICABLE ELECTRICAL CODES. STANDARDS AND REGULATIONS.
- OBTAIN ALL PERMITS. PAY ASSOCIATED FEES AND SCHEDULE INSPECTION.
- ALL MATERIALS SHOWN ON DRAWINGS ARE NEW CSA APPROVED AND CSA LABELED.
- INSTALL ALL THE REQUIRED GROUNDING SYSTEMS AS OUTLINED, INCLUDING INSTALLATION TESTING AND RECORD ALL RESULTS.
- CONTRACTOR MAY PROPOSE MATERIALS AND METHODS OTHER THAN THE ONES SPECIFIED. APPROVAL OF THE ENGINEER AND OWNER MUST BE OBTAINED BEFORE SUCH MATERIALS AND METHODS ARE UTILIZED.
- 7. WORK REQUIRING FULL OR PARTIAL SHUTDOWN OF THE SITE ELECTRICAL SYSTEM TO MODIFY OR CONNECT EQUIPMENT IS PERMITTED ONLY DURING PERIODS SPECIFIED IN A WRITTEN AGREEMENT WITH THE OWNER OR BUILDING REPRESENTATIVE.
- THE CONTRACTOR SHALL OBTAIN OWNERS APPROVAL FOR VARIOUS ELECTRICAL SERVICES CONDUITS ROUTING BEFORE PROCEEDING WITH WORK. VARIOUS RUNS TO BE RELOCATED AS PER OWNERS OR BUILDING REPRESENTATIVE SPECIFIC REQUIREMENTS AT NO ADDITIONAL COST.
- ALL EQUIPMENTS SHALL BE LABELED WITH LAMACOID LABELS
- 10. BIDDERS FINDING DISCREPANCIES IN, OR OMISSIONS FROM DRAWINGS, SPECIFICATIONS OR OTHER DOCUMENTS, OR HAVING ANY DOUBTS AS TO THE MEANING OR INTENT OF ANY PART THEREOF. SHOULD AT ONCE NOTIFY THE ENGINEER WHO WILL SEND WRITTEN INSTRUCTIONS OR EXPLANATIONS TO ALL BIDDERS. NO ALLOWANCE WILL SUBSEQUENTLY BE MADE FOR FAILURE TO NOTIFY ENGINEER.
- 11. PROVIDE AS-BUILT DRAWINGS MARKED UP WITH INSTALLATION DETAILS IF DIFFER FROM PROPOSAL.
- 12. THE CONTRACTOR SHALL GUARANTEE IN WRITING ALL MATERIAL AND EQUIPMENT SUPPLIED BY HIM AGAINST DEFECTS IN WORKMANSHIP AND MATERIAL FOR A PERIOD OF TWELVE MONTHS AFTER FINAL ACCEPTANCE OF THE WORK. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY MATERIALS AND EQUIPMENT DEVELOPING SUCH DEFECTS WITHIN THAT TIME PROMPTLY ON DUE NOTICE GIVEN TO HIM BY THE OWNER, OR OWNER'S REPRESENTATIVE, AT NO ADDITIONAL EXPENSE TO THE OWNER.

#### WIRES AND CABLES

- 1. ALL SIZES SHOWN ARE AWG FOR COPPER CONDUCTORS AND CABLES.
- 2. FOR EARTHING AND BONDING USE COPPER CONDUCTORS ONLY.
- 3. TECK 90 OR COREFLEX CABLES MAY BE USED WHERE COST EFFECTIVE.
- 4. INSULATION SHALL BE TYPE RW90.
- 5. CONDUCTORS INSTALLED UNDER EARTHING SHALL HAVE RWU75 OR RWU90 INSULATION.

## PANELBOARDS AND CIRCUIT BREAKERS

- 1. UNLESS NOTED OTHERWISE BREAKERS SHALL BE RATED FOR 10.000A SYMMETRICAL INTERRUPTING CAPACITY OR MATCH EXISTING STANDARDS.
- 2. BREAKERS SHALL BE MOLDED CASE AUTOMATIC THERMAL MAGNETIC TRIPPING TYPE UNLESS NOTED OTHERWISE.

## DISCONNECT SWITCHES AND FUSES

- 1. DISCONNECT SWITCHES SHALL CONFORM TO CSA C22.2 NO. 4.
- 2. FUSE HOLDERS SHALL BE IN ACCORDANCE WITH CSA C22.2 NO. 39.
- 3. FUSES SHALL CONFORM TO CSA C22.2 NO. 106-M1985
- 4. DISCONNECT SWITCHES, FUSED AND NON-FUSED TYPE SHALL BE QUICK MAKE, QUICK BREAK ACTION IN EEMAC 1 ENCLOSURE FOR INDOOR INSTALLATION AND EEMAC 3 FOR OUTDOOR INSTALLATION UNLESS NOTED OTHERWISE.

## EARTHING

- 1. PROVIDE EARTHING AND BONDING OF EQUIPMENT AS SHOWN AND AS REQUIRED BY CSA C22.2 NO.41-M1987, COMBINED WITH IEC 601024-1, IEEE 142 AND IEC 364 SERIES.
- ALL CONDUCTORS USED ARE FOR EARTHING AND BONDING SHALL BE COPPER WITH GREEN INSULATION.
- ALL LUGS FOR CONDUCTOR SIZES LARGER THAN #10 AWG SHALL BE TWO HOLE LONG BARREL COMPRESSION TYPE TIN PLATED COPPER.
- EARTHING BARS SHALL BE MADE OF COPPER ALLOY 110, SIZED AND DRILLED FOR LUG CONNECTIONS.
- IN ORDER TO MITIGATE HIGH FREQUENCY NOISE ALL EARTHING AND BONDING CONDUCTORS SHALL BE RUN AS STRAIGHT AS POSSIBLE WITH MINIMUM NUMBER OF BENDS. AVOID SHARP (90°) BENDS. MINIMUM BENDING RADIUS TO BE 300mm. LOOPING OF EARTHING AND BONDING WIRES SHALL BE AVOIDED.
- 6. ANTI-OXIDENT COMPOUND (NO-OX-ID) SHALL BE APPLIED TO ALL CONNECTIONS WHERE DISSIMILAR METALS COME IN CONTACT AND TO ALL CONDUCTOR ENDS BEEN LUGGED.

## ELECTRICAL INSTALLATION NOTES:

- PULL BOXES REQUIRED FOR RUNS OVER 150ft.
- ELECTRICAL CONTRACTOR TO SUPPLY & INSTALL OUTDOOR MOTION-DETECTOR WORK LIGHT AND ELECTRICAL OUTLET AT EQUIPMENT LOCATION FOR USE BY CUSTOMER TECHNICIAN.
- 3. CONTRACTOR SHALL PROVIDE AND INSTALL ONE (1) #2 RW90 STRANDED, GREEN JACKETED, TINNED GROUND WIRE FROM THE EXISTING MAIN GROUND TO THE EQUIPMENT BUS BAR (MGB).
- 4. CONTRACTOR SHALL PROVIDE & INSTALL ONE (1) #2 STRANDED, GREEN JACKETED, TINNED GROUND WIRE FROM EACH SECTOR BUS BAR (AGB) AND THE MICROWAVE BUS BAR TO THE MGB.
- GROUND ROD: COPPER CLAD STEEL GROUND ROD.
- GROUND WIRE: GREEN JACKETED. THE BEND RADIUS SHALL BE NOT LESS THAN 8 INCHES.
- NO-OX IS TO BE USED BETWEEN THE GROUND LUG AND BUS BAR. INSTALL LUGS ON FRONT OF BUS BAR. OVAL HOLES ARE NOT PERMITTED. BOLTS, WASHERS AND NUTS TO BE STAINLESS STEEL. PROPER SIZE 3/8" Ø STAINLESS STEEL HARDWARE.
- ALL HORIZONTAL MUST BE UV RESISTANT SCHEDULE 80 PVC; VERTICAL CONDUIT CAN BE SCHEDULE 40.
- 9. MEGGAR ALL FEEDERS AND PROVIDE WRITTEN RECORD OF ALL READINGS.

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3778 KONRATH RD., PRINCE GEORGE, B.C.

**ELECTRICAL NOTES** 

PROJECT NAME: NEW SITE - GREENFIELD

BPG0010B

DWG. NO: E08

## **GENERAL NOTES:**

- 1. THE MOST RECENT ISSUES OF ANY STANDARDS, CODES OR REGULATIONS MENTIONED IN THE DRAWINGS PROVIDED MUST BE USED, UNLESS INDICATED OTHERWISE IN THE SPECIFICATIONS.
- 2. ALL WORKMANSHIP MUST CONFORM TO THE REQUIREMENTS OF THE FREEDOM MOBILE SPECIFICATION, PROVINCIAL BUILDING CODE, APPLICABLE LOCAL BUILDING CODES, AND CSA STANDARDS.
- 3. THE CONTRACTOR'S RESPONSIBILITY INCLUDES:
- a. OBTAINING APPROVALS FROM ALL REQUIRED LOCAL AUTHORITIES.
- b. SAFEGUARD ALL EXIST. STRUCTURES AFFECTED BY THIS CONSTRUCTION.
- c. OBTAINING ALL FIELD MEASUREMENTS REQUIRED FOR FABRICATION.
- 4. PRESERVE FIRE RATING WHEN PENETRATING, CEILINGS, FLOORS AND WALLS.
- 5. DRAWINGS ARE NOT TO BE SCALED.
- 6. ADEQUATE PROTECTION (PLYWOOD SHEETS) MUST BE PROVIDED BY THE CONTRACTOR ON THE EXISTING ROOF FOR THE ENTIRE DURATION OF CONSTRUCTION. TO AVOID DAMAGE TO THE EXISTING ROOFING. CONSTRUCTION LOADS MUST NOT EXCEED A CONCENTRATED LOAD OF 1.3kN OR UNIFORM DISTRIBUTED LOAD OF 1.0 kPa.
- 7. ALL SHOP AND INSTALLATION DRAWINGS MUST BE SUBMITTED TO ROEHAMPTON COMMUNICATIONS LTD. BY THE CONTRACTOR, FOR REVIEW PRIOR TO FABRICATION OF THE MATERIALS.
- 8. CORE DRILLING IN AREAS OCCUPIED BY TENANTS SHALL BE COORDINATED WITH THE BUILDINGS OWNER/MANAGER, AND MAY BE REQUIRED TO BE COMPLETED OUTSIDE OF NORMAL WORKING HOURS. SERVICES DAMAGED MUST BE REPAIRED BY THE CONTRACTOR, AT HIS OWN EXPENSE.
- CORE DRILLING MUST NOT BE DONE UNTIL AN X-RAY INSPECTION PAID FOR BY THE CONTRACTOR, HAS BEEN COMPLETED TO DETERMINE THE PROPER LOCATION FOR THE PENETRATION. CORE DRILLING IS NOT ALLOWED IN COLUMN CAP AREAS.
- 10. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND DETAILS ON THE STRUCTURAL DRAWINGS FOR COMPATIBILITY WITH ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS BEFORE COMMENCING WITH THE WORK.
- 11. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING DURING THE BIDDING PERIOD OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS OR IN SPECIFICATIONS, UPON RECEIPT OF SUCH INFORMATION THE ENGINEER WILL PROVIDE ADDITIONAL INSTRUCTIONS, ANY SUCH DISCREPANCY, OMISSION OR VARIATION NOT REPORTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND CORRECTIVE WORK SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER.
- 12. ALL DIMENSIONS TO TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS.
- 13. ENGINEERING SERVICES PRESENTED ON THESE DRAWINGS ARE FOR PERMANENT STRUCTURE ONLY, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING REQUIRED FOR STRUCTURE STABILITY AND FOR CONSTRUCTION LOADING UNTIL THE PROJECT IS COMPLETED.

#### CONCRETE NOTES:

- 1. ALL WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FREEDOM MOBILE SPECIFICATION, AND APPLICABLE STANDARDS.
- 2. REINFORCING STEEL MUST BE GRADE 400 DEFORMED BARS TO CAN/CSA G30.18, UNLESS NOTED OTHERWISE. CONCRETE COVER TO BE 3" (MIN.)
- 3. WELDED STEEL WIRE FABRIC MUST HAVE A MINIMUM YIELD STRENGTH OF 450 MPa AND CONFORM TO CSA G30.5. (PROVIDE IN FLAT SHEETS ONLY)
- BEND AND DETAIL REINFORCING STEEL AS INDICATED IN THE REINFORCING STEEL MANUAL OF STANDARD PRACTICE BY THE REINFORCING STEEL INSTITUTE
- CAST IN PLACE CONCRETE TO HAVE A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 30 MPa UNLESS NOTED OTHERWISE.
- SLUMP AT POINT OF DISCHARGE TO BE 75mm.
- ALL CONCRETE EXPOSED TO FREEZING AND THAWNG OR DE-ICING CHEMICALS MUST CONTAIN ENTRAINED AIR.
- 8. ALL CONCRETE EXPOSED CORNER EDGES SHALL BE CHAMFERED 1" x 1".
- ALL GROUT USED SHALL BE NON-SHRINKING, INSTALLED TO MANUFACTURES INSTRUCTIONS, UNLESS SPECIFIED OTHERWISE.
- 10. NO MORE THAN 120 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY THE TESTING AGENCY AND THE STRUCTURAL ENGINEER, CONTRACTOR'S SUPERINTENDENT TO MONITOR THIS PERIOD, TESTING AGENCY HAS THE AUTHORITY TO REJECT CONCRETE IF NOT IN ACCORDANCE WITH SPECIFICATIONS.

#### STEEL STUDS AND JOISTS NOTES:

- 1. ALL WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE PROVINCIAL BUILDING CODES, APPLICABLE BY-LAWS AND LOCAL CODES.
- 2. MATERIAL TO CONFORM TO ASTM A446 STANDARD SPECIFICATION FOR STEEL SHEET, HOT DIP GALVANIZED.
- 3. BRIDGING TO BE PROVIDED AT 5ft c/c FOR STUDS, UNLESS INDICATED OTHERWISE.
- BRIDGING TO BE PROVIDED @ 7ft c/c FOR JOISTS, UNLESS INDICATED OTHERWISE.
- INSTALLATION MUST MEET THE REQUIREMENTS SET OUT IN THE MANUFACTURERS SPECIFICATIONS AND REQUIREMENTS.

## STRUCTURAL STEEL NOTES:

- ALL WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FREEDOM MOBILE SPECIFICATION, AND APPLICABLE STANDARDS AS LISTED IN CORRESPONDING SECTION
- 2. ALL STRUCTURAL STEEL TO CONFORM TO CAN3-G40.21, GRADE 300W, RHSS TO MEET REQUIREMENTS OF G40.21, CLASS H, GRADE 350W.
- ALL WELDING SHALL BE COMPLETED IN ACCORDANCE WITH APPLICABLE CSA STANDARDS AND PERFORMED BY A FABRICATOR CERTIFIED TO CSA W47.1 TO DIVISION 1 OR 2.1.
- ALL BOLTS TO CONFORM TO ASTM SPECIFICATION A325, PROPERLY SIZED FOR THE APPLICATION. AND THE THREADS TO BE EXCLUDED FROM THE SHEAR
- HOLES ADDITIONAL TO THOSE SHOWN ON STRUCTURAL DRAWINGS ARE NOT PERMITTED IN ANY STRUCTURAL MEMBER.
- 6. ALL STRUCTURAL STEEL TO BE HOT DIP GALVANIZED.
- APPLY (3) COATS OF ZINC RICH PAINT TO ALL DAMAGED GALVANIZED SURFACES.
- 8. FIELD MODIFICATIONS SUCH AS DRILLING OF HOLES AND WELDING TO BE AVOIDED, UNLESS SPECIFIED OTHERWISE.
- 9. MINIMUM DISTANCE FROM HOLE CENTER TO EDGE SHALL BE:

BOLT DIAM.	SHEARED EDGE	ROLLED EDGE	HOLE
1/2"ø	25 mm	19 mm	14.3ø mm
5/8"ø	30 mm	22 mm	17.5ø mm
3/4"ø	35 mm	26 mm	20.6ø mm

#### NUT ROTATION FROM SNUG-TIGHT CONDITION\* (TURN-OF-NUT- PRETENSION) DISPOSITION OF OUTER FACE OF BOLTED PARTS BOTH FACES NORMAL TO BOLT BOTH FACES SLOPED 1:20 AXIS OR ONE FACE NORMAL TO BOLT LENGTH\*\* MAX. FROM NORMAL TO AXIS AND OTHER FACE SLOPED BOLT AXIS (BEVELED 1:20 MAX. (BEVELED WASHERS WASHERS NOT USED)\*\*\* NOT USED)\*\*\* 1/3 TURN <= 4x BOLT DIA > 4x BOLT DIA. <= 8x BOLT DIA 1/2 TURN 3/4 TURN OR 200mm > 8x BOLT DIA. 2/3 TURN OR 200mm

\* TABLE 8 OF CAN/CSA-S16-14

NUT ROTATION IS RELATIVE TO BOLT REGARDLESS OF WHETHER THE NUT OR BOLT IS TURNED.

TOLERANCE OF ROTATION ±30°. THIS TABLE APPLIES TO COARSE-THREADED HEAVY-HEX STRUCTURAL BOLTS OF ALL SIZES AND LENGTHS USED WITH HEAVY-HEX SEMI-FINISHED NUTS.

- \*\* BOLT LENGTH IS MEASURED FROM THE UNDERSIDE OF THE HEAD TO THE EXTREME END OF POINT.
- \*\*\* BEVELLED WASHERS ARE NECESSARY WHEN A490M OR A490 BOLTS ARE USED.

## FIRE STOPPING & SEALING NOTES:

ALL EXISTING AND NEW OPENINGS LOCATED IN THE EQUIPMENT ROOM AND ALONG CABLE ROUTINGS. MUST BE SEALED AND FIRE STOPPED WITH TWO HOUR FIRE RATING AS REQUIRED USING TREMCO FIRESTOP SYSTEM.

## ANTENNA AND WAVEGUIDE NOTES:

- 1. ALL WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FREEDOM MOBILE SPECIFICATION.
- 2. INSTALL WAVEGUIDE TO MANUFACTURERS INSTRUCTIONS. (SUPPORT INTERVALS TO BE 1 METER MAXIMUM).
- 3. ALL AREAS AFFECTED BY ROUTING OF WAVE-GUIDE OR CONDUITS MUST BE REHABILITATED TO ORIGINAL CONDITION UPON COMPLETION.

## ROOFING NOTES:

- 1. BEFORE STARTING WORK ON ROOF, CONTRACTOR IS TO COMPLETE A "CUT TEST", TO DETERMINE THE CONDITION AND TYPE OF THE EXISTING ROOFING.
- REMOVE EXISTING ROOFING AS REQUIRED TO ALLOW FOR THE INSTALLATION OF RHSS AND BASE PLATE, KEEP OPENING TO A MINIMUM.
- ONCE INSTALLATION IS COMPLETE, MAKE GOOD THE EXISTING ROOFING & INSULATION.
- 4. PROVIDE SUFFICIENT TEMPORARY PROTECTION OF ROOF PENETRATIONS. PRIOR TO ROOFING REINSTATEMENT, TO PREVENT WATER FROM ENTERING THE EXISTING BUILDING.
- ALL WORK SHALL CONFORM TO ALL AUTHORITIES HAVING JURISDICTION AND TO THE FREEDOM MOBILE SPECIFICATION. WORKMANSHIP TO PROVIDE A CLEAN APPEARANCE OF THE FINISHED WORK

#### INVERTED ROOF

1. WHERE EXISTING ROOFING IS BITUMEN OR ASPHALTIC BASED, SUPPLY A NEW 3FT x 3FT RUBBERIZED MEMBRANE. TORCH DOWN TO EXISTING. AT UNDERSIDE OF BASE PLATE PROVIDE RUBBERIZED PLASTIC CEMENT, COMPATIBLE WITH MEMBRANE. WATERPROOF ANCHOR BOLT AREAS.

## STANDARD BUILT UP ROOF

2. CUT OPENING IN ROOF ADEQUATE TO ALLOW FOR THE INSTALLATION OF THE RHSS AND BASE PLATE. FOLLOWING INSTALLATION, PROVIDE 22 Ga. GALVANIZED SHEET METAL, PITCH POCKET, 18" SQUARE x 5" HIGH. FILL AFTER ASSEMBLY IS COMPLETE. FLASH INTO EXISTING WATERPROOFING ON ROOF.

## WOOD FRAMING & STRUCTURAL TIMBER NOTES:

- ALL WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FREEDOM MOBILE SPECIFICATION, PROVINCIAL BUILDING CODES AND APPLICABLE STANDARDS.
- 2. PLYWOOD SHALL BE DOUGLAS FIR CONFIRMING TO CAN/CSA-0121.
- 3. ALL FRAMING MEMBERS SHALL BE DOUGLAS FIR-LARCH NO.1 / NO.2 GRADE.
- 4. STEEL HARDWARE SHALL BE ASTM A36 OR BETTER. BOLTS SHALL BE ASTM
- 5. NAILS TO CONFORM TO CSA B111-1974. GALVANIZED FOR EXTERIOR LOCATIONS AND TREATED LUMBER. NAILING OF FRAMING PER PROVINCIAL BUILDING CODES AND APPLICABLE STANDARDS.

#### MASONRY NOTES:

- ALL WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FREEDOM MOBILE SPECIFICATION, PROVINCIAL BUILDING CODES
- UTILIZE TYPE 'S' MORTAR FOR ALL INTERIOR AND EXTERIOR LOAD BEARING WALLS, CONFORM TO CSA STANDARD A179.
- 3. ALL METAL MATERIALS USED IN MASONRY TO BE HOT DIP GALVANIZED.
- 4. VERTICAL MASONRY CONTROL JOINTS TO BE INSTALLED AT INTERVALS LESS THAN 3 TIMES THE WALL HEIGHT WITH MAXIMUM SPACING OF 39'-4".
- 5. PROVIDE ALL REQUIRED TEMPORARY SHORING TO EXISTING MASONRY WALLS WHEN CUTTING NEW OPENINGS.

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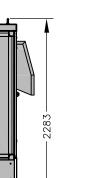
GENERAL NOTES PROJECT NAME:

NEW SITE - GREENFIELD

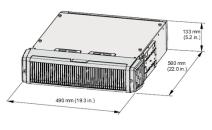
N01

PROJECT NO: BPG0010B

EMERSON CABINET WITH BATTERY RISER Height/Width/Depth: 2283x635x759mm



Weight: ±800kg (C/W 8 BATTERIES)



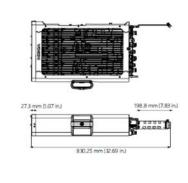
FRU/4T4R

SYSTEM MODULE Height/Width/Depth: 490x133x560mm Weight: 25kg

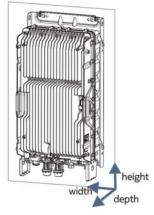




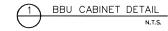
<u>AHBCC</u> Height/Width/Depth: 675x327x205mm Weight: 38kg

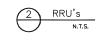


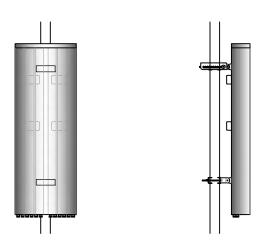
FRIJ Height/Width/Depth: 603x126x409mm Weight: 24.5kg



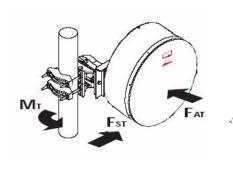
<u>AHFIB</u> Height/Width/Depth: 675x327x165mm Weight: 30kg

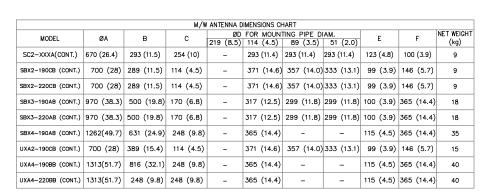






CCI TPA65R-GE6A Height/Width/Depth: 1807x648x194mm Weight: 44.8kg









4 M/W ANTENNA DIMENSIONS CHART

CLIENT:

CARRIER:

Freedom mobile

O CD ISSUED FOR CONSTRUCTION 03 DEC 18 DESCRIPTION



**ROEHAMPTON** 744 WEST HASTINGS ST, SUITE 219 VANCOUVER, BC V6C 1A5 TEL. (778)300-1233

3778 KONRATH RD., PRINCE GEORGE, B.C.

EQUIPMENT DETAILS PROJECT NAME: NEW SITE — GREENFIELD

PROJECT NO: BPG0010B

DWG. NO: NO2