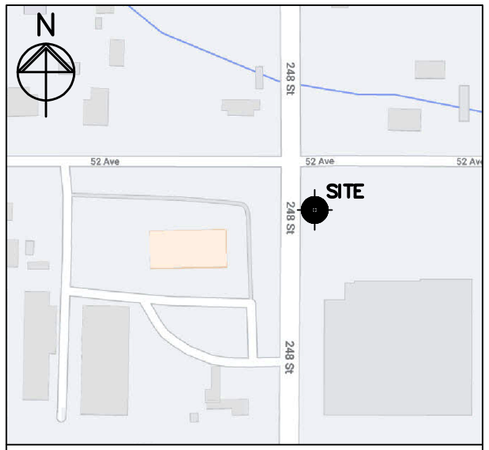



**GPS COORDINATES**
LATITUDE: 49.096350° N
LONGITUDE: 122.536901° W

KEY MAP

ROGERS™

# SITE NAME: TALL TIMBERS

**SITE ID:** W2889

**LOCATION:** NEAR 5190 248 STREET, LANGLEY, BC

**POLE NUMBER:** 040/487

**DRAWING LIST:**


| | |
|---|---|
| S101 | TITLE PAGE |
| S201 | GENERAL NOTES |
| S202 | ANTENNA TABLE AND DETAILS |
| S203 | EQUIPMENT DETAILS |
| S301 | SITE PLAN |
| S302 | ENLARGED POLE PLAN |
| S303 | ANTENNA LAYOUT |
| S401 | POLE ELEVATIONS AND ISOMETRIC |
| S402 | EQUIPMENT LAYOUT |
| S501 | RRU MOUNT ELEVATIONS |
| S502 | RRU MOUNT DETAILS I |
| S503 | RRU MOUNT DETAILS II |
| S601 | ANTENNA MOUNT DETAILS |
| E101 | ELECTRICAL SPECIFICATIONS |
| E102 | SINGLE LINE DIAGRAM |
| E103 | EQUIPMENT ELECTRICAL DETAILS |
| E201 | GROUNDING SCHEMATIC |


ALL DIMENSIONS IN MILLIMETERS
UNLESS NOTED OTHERWISE

| No.: | Date: | Description: |
|---|---|---|
| | 2025.06.13 | REVISED ADDRESS |
| | 2024.01.12 | RE-ISSUED FOR CONSTRUCTION |
| | 2023.09.15 | RE-ISSUED FOR CONSTRUCTION |
| | 2023.08.31 | REVISED MOUNT REFERENCE |
| | 2023.08.18 | ISSUED FOR CONSTRUCTION |
| | 2023.07.28 | ISSUED FOR 90% COORDINATION |


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Project: TALL TIMBERS
Site ID: W2889
NEAR 5190 248 STREET, LANGLEY, BC

ROGERS™

EGBC Permit To Practice: 1003171

Sheet Title: TITLE PAGE

Revisions:

| | |
|---|---|
| Date: | JUL 2023 |
| Scale: | NA |
| Drawn: | RS |
| Checked: | GF |
| Project: | 220228 |

Drawing: S101

Of

## GENERAL NOTES

NOTES, PLANS, DETAILS AND ROGERS AND BC HYDRO SPECIFICATIONS SHALL BE READ AS ONE DOCUMENT.

## APPLICABLE PROJECT CODES:

THIS SECTION INDICATES CODES APPLICABLE TO THE DESIGN OF THE NEW STRUCTURES AS PRESENTED IN THE DRAWINGS. THE GOVERNING BUILDING CODE SHALL BE:

- BC HYDRO DISTRIBUTION STANDARDS OVERHEAD ES43 SERIES
- ANTENNAS, TOWERS, AND ANTENNA SUPPORTING STRUCTURES CSA S37-18

**STANDARDS INCLUDE THE FOLLOWING :**

| | |
|---|---|
| CAN/CSA S16 - 14 | DESIGN OF STEEL STRUCTURES |
| CAN/CSA O86 - 14 | ENGINEERING DESIGN IN WOOD |
| CAN/CSA S136 - 16 | COLD-FORMED STEEL STRUCTURAL MEMBERS |

## GENERAL

1. GS-SAYERS DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ELECTRICAL, SURVEY AND OTHER DRAWINGS AND SPECIFICATIONS. SPECIFICATIONS SHALL CONTROL OVER THESE DRAWINGS AND GENERAL NOTES ONLY WHERE THE SPECIFICATION PROVIDES FOR MORE STRINGENT REQUIREMENT.
2. USE THESE DRAWINGS ONLY FOR THE PURPOSES SPECIFICALLY NOTED IN THE REVISION COLUMN. DO NOT CONSTRUCT BY THESE DRAWINGS UNLESS INDICATED: "FOR CONSTRUCTION". THE TERM "ISSUED FOR BUILDING PERMIT" INDICATES THAT THE DRAWINGS ARE COMPLETE FOR ALL KEY STRUCTURAL DESIGN ELEMENTS HOWEVER FINAL COORDINATION AND INSTRUCTIONS FOR CONSTRUCTION MAY NOT BE COMPLETE.
3. GS-SAYERS IS PRIME CONSULTANT AND REGISTERED COORDINATING PROFESSIONAL FOR THE PROJECT AND IS RESPONSIBLE FOR GENERAL COORDINATION OF THE DRAWINGS. DISCREPANCIES AND INCOMPATIBILITIES IN THE DRAWINGS SHALL BE REPORTED TO GS-SAYERS
4. THE CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS IN THE FIELD TO SUIT EXISTING CONDITIONS. HE SHALL SITE MEASURE AND CONTROL THE PRODUCTION OF WORK ON SITE AND ELSEWHERE TO FULFILL THE INTENT OF THE DRAWINGS. NOTIFY THE ENGINEER OF ANY DIMENSIONAL VARIATION FROM THE PLANS.
5. SITE CONDITIONS AND CHANGES: CONTRACTOR (S) SHALL RECORD AND REPORT ANY VARIATIONS IN EXISTING CONDITIONS WHICH MAY EFFECT THE STRUCTURE (BUILDINGS, BUILDING COMPONENTS, PROPERTY LINES, SOIL CONDITIONS, ETC.). THE GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN SITE CONDITIONS DICTATE A CHANGE FROM THE DESIGN DRAWINGS. ENGINEER IS TO PROVIDE WRITTEN APPROVAL OF ALL CHANGES. CONTRACTORS ARE ENCOURAGED TO SUBMIT REQUESTS FOR CHANGES WHERE SUCH CHANGE CAN RESULT IN MORE EFFICIENT CONSTRUCTION WITH THE SAME OR BETTER PRODUCT. EACH REQUEST SHOULD BE ACCOMPANIED BY A SKETCH INDICATING THE CHANGE TO THE DRAWINGS, WHICH MAY BE REVIEWED OR MODIFIED BY THE ENGINEER. CHARGES FOR EXTRAS TO THE CONTRACT MUST BE BROUGHT TO THE ENGINEERS ATTENTION BEFORE THE WORK PROCEEDS. ADEQUATE TIME MUST BE ALLOWED FOR REVIEW AND APPROVAL OF EXTRAS BY GS-SAYERS. WORK WHICH PROCEEDS PRIOR TO APPROVAL BY THE CONSULTANT MIGHT NOT BE GRANTED EXTRA PAYMENT.
6. DO NOT CUT OR DRILL INTO STRUCTURAL MEMBERS, OR CUT REBAR PROJECTIONS WITHOUT FIRST CONTACTING AND OBTAINING THE PERMISSION OF GS-SAYERS.
7. WHERE INDICATED: "CONFIRM" OR "CONFIRM ON SITE" - INDICATES THAT THE CONTRACTOR SHALL CONFIRM AND REPORT TO THE ENGINEER THE INFORMATION REQUESTED IN THE ASSOCIATED NOTE.
8. ALL CONSTRUCTION MUST CONFORM TO THE LATEST VERSION OF THE ROGERS MASTER SPECIFICATION.
9. FIELD REVIEW: THE CONTRACTOR(S) SHALL GIVE NOTICE THAT APPROPRIATE PORTIONS OF THE WORK ARE COMPLETE AND AVAILABLE FOR FIELD REVIEW. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE FIELD REVIEW INSPECTIONS IN A TIMELY MANNER SUITABLE TO THE METHODS AND SCHEDULE OF CONSTRUCTION. INSPECTIONS ARE TYPICALLY REQUIRED OF ALL CONCRETE POURS PRIOR TO PLACING, ALL STRUCTURAL FRAMING BEFORE COVERING UP AND ALL CONNECTIONS BEFORE COVERING UP. THE ENGINEER SHALL BE GIVEN AT LEAST 48 HR. ADVANCE NOTICE TO INSPECT. INSPECTIONS SHALL BE DURING NORMAL WORKING HOURS ONLY. INSPECTIONS REQUIRING SUBSTANTIAL TRAVEL TIME MUST BE GIVEN ADEQUATE NOTICE. SEE NOTE BELOW REGARDING SOIL INSPECTIONS.
10. A MATERIALS CONSULTANT MAY BE REQUIRED FOR THE REVIEW OF CONTRACTOR SUPPLIED MATERIALS SUCH AS CONCRETE OR ROCK ANCHORS. THIS CONSULTANT IS ENGAGED BY THE OWNER AS REQUESTED BY THE ENGINEER. ALL TEST RESULTS TO BE FORWARDED TO THE ENGINEER.
- **SHOP DRAWINGS**
  SUBMIT SIGNED AND SEALED SHOP DRAWINGS WHEN REQUESTED IN A CLEARLY LEGIBLE FORM TO THE ENGINEER. SOLE RESPONSIBILITY FOR CORRECT DESIGN, DETAILS AND DIMENSIONS SHALL REMAIN WITH THE PARTIES SUBMITTING THE DRAWING. NO SHOP DRAWINGS ARE TO HAVE GS*SAYERS NAME ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR ACCURACY AND COORDINATION OF ALL SHOP DRAWINGS - GS-SAYERS REVIEW IS FOR GENERAL CONFORMANCE TO DESIGN DRAWINGS ONLY.
11. THE CONTRACTOR ALONE IS RESPONSIBLE FOR SAFETY IN AND AROUND THE JOBSITE. PROPER AND SAFE METHODS OF CONSTRUCTION SHALL BE USED AT ALL TIMES INCLUDING GUYING AND BRACING OF INCOMPLETE STRUCTURES, FORMWORK, SHORING, RESHORING, FALSEWORK, PLATFORMS, SCAFFOLDING, BARRIERS, WALKWAYS, ETC. AND CONTROL THE INTENSITY, DURATION AND LOCATION OF CONSTRUCTION LOADS UPON THE STRUCTURE.
12. WHERE SAFETY IS CONCERNED DURING THE COURSE OF CONSTRUCTION, A SPECIALTY ENGINEER SHALL BE ENGAGED TO ASSURE THE SAFETY AND STABILITY OF THE STRUCTURE UNDER TEMPORARY CONDITIONS AND CONSTRUCTION LOADS UNTIL THE STRUCTURE OF THE BUILDING IS COMPLETE.

## WORKSAFE BC:

1. THE GENERAL CONTRACTOR AND SUBCONTRACTORS ARE RESPONSIBLE TO ADMINISTER AND PROVIDE FOR ALL MATTERS RELATED TO THE WORKERS SAFETY INCLUDING AUTHORITIES ADMINISTERING GOVERNMENTAL LAWS AND BYLAWS PERTAINING TO WORKER SAFETY INCLUDING BUT NOT LIMITED TO SITE SAFETY, TEMPORARY AND ANCILLARY WORKS, TRAINING, AND CONTROL OF THE WORK AND WORK PROCESSES. THE CONTRACTORS SHALL ENSURE COMPLIANCE WITH WORKERS HEALTH AND SAFETY REGULATIONS AND GOOD WORK PRACTICES AND WHERE NECESSARY OR PRUDENT SHALL PROVIDE ENGINEERING EXPERTISE TO CONFIRM SUCH COMPLIANCE.

## DESIGN PARAMETERS:

DESIGN SUPERIMPOSED LOADS:

**SPECIFIED LIVE LOADS (kPa):**

1.1 GROUND SNOW LOAD
0.2 RAIN LOAD

**SPECIFIED DEAD LOADS (kPa):**

REFER TO THE EQUIPMENT LAYOUT FOR SPECIFIC LOADING

**SEISMIC:** Sa(0.2)=1.29, Sa(0.5)=1.14 Sa(1.0)=0.662, Sa(2.0)=0.390, Sa(5.0)=0.121, Sa(10.0)=0.042 PGA=0.573, PGV=.824

**WIND PRESSURE:** $q(\frac{1}{10})$ = 0.44 kPa
$q(\frac{1}{50})$ = 0.57 kPa

ABOVE VALUES SHOWN ARE FOR DESIGN OF EQUIPMENT AND ANTENNA MOUNTS ONLY. REVIEW OF THE WOOD BC HYDRO POLE IS BY OTHERS

## STRUCTURAL STEEL

1. STEEL SHALL BE NEW AND G40.21W STRUCTURAL GRADE UNLESS NOTED OR OTHERWISE APPROVED PRIOR TO CONSTRUCTION. CLASSIFICATION OF SECTIONS TO BE AS FOLLOWS:

| | |
|---|---|
| HOLLOW STRUCTURAL STEEL TUBING | G40.21 W 350W |
| WIDE FLANGE SECTIONS | G40.21 W 350W |
| CHANNELS, ANGLES, PLATES, RODS, MISC | G40.21 W 300W |
| PIPE SECTIONS | ASTM A53 (241 MPa) |

2. STRUCTURAL STEEL FABRICATOR TO INCLUDE ALL STEEL ELEMENTS SHOWN ON THE STRUCTURAL DRAWINGS AND AS REQUIRED TO CONSTRUCT THE WORK TO THE INTENT OF THE STRUCTURAL DRAWINGS TO AND INCLUDING ANGLE SIZES OF 19mm, PLATE THICKNESS OF 3mm AND ROD SIZE OF 10mm DIA. UNLESS NOTED OTHERWISE.
3. **CONNECTIONS**:
- ALL CONNECTIONS SHALL BE SHOP WELDED AND FIELD BOLTED UNLESS OTHERWISE SHOWN OR APPROVED. ALL BOLTS SHALL BE A325 BOLTS, 19mm DIAMETER MINIMUM (UNO) AND SHALL BE BEARING BOLTS WITH THREADS EXCLUDED FROM THE SHEAR PLANE. PROVIDE TWO BOLTS MINIMUM (UNO).
- ALL ASPECTS OF CONNECTIONS BETWEEN STEEL MEMBERS ARE TO BE DESIGNED AND DETAILED BY THE STEEL FABRICATOR UNLESS SPECIFICALLY SPECIFIED ON THE DRAWINGS. ALL CONNECTIONS WHICH ARE NOT SPECIFICALLY CALLED UP ARE TO BE DESIGNED BY THE STEEL FABRICATOR FOR REVIEW AND APPROVAL BY THE ENGINEER.
- ALL WELDING SHALL BE IN ACCORDANCE WITH CSA STANDARD W59.1 AND SHALL BE UNDERTAKEN ONLY BY A COMPANY APPROVED BY THE CANADIAN WELDING BUREAU TO THE REQUIREMENTS OF CSA STANDARD W47.1. ALL WELDING SHALL BE SHIELDED METAL-ARC WELDING METHOD IN ACCORDANCE WITH CSA SPECIFICATIONS.
- THE FABRICATOR MANUFACTURER SHALL SUBMIT STRUCTURAL STEEL SHOP DRAWINGS AND ANCHOR BOLT LAYOUT FOR REVIEW TO THE ENGINEER SHOWING ALL REQUIRED STRUCTURAL STEEL DETAILS PRIOR TO THE COMMENCEMENT OF FABRICATION. SEE "SHOP DRAWING SUBMITTALS".

4. **ALL STEEL MEMBERS, ELEMENTS AND BOLTS EXPOSED PERMANENTLY TO THE ELEMENTS SHALL BE HOT DIPPED GALVANIZED. ALL FIELD DAMAGE OR FIELD WELDING IS TO BE TOUCHED UP WITH TWO LIBERAL COATS OF "GALVICON".**
5. STEEL IN EXTERIOR CONDITIONS SHALL BE SEAL WELDED ALL AROUND CONTACTING STEEL SURFACES UNLESS OTHER SUITABLE METHOD OF SEALING THE STEEL IS ACCEPTED BY THE MATERIALS CONSULTANT.
6. PROVIDE WEEP HOLES FOR RELIEF OF MOISTURE FROM HOLLOW STEEL MEMBERS WHICH MAY BE SUBJECT TO FREEZING. HOLES TO BE AT LOW POINT OF MEMBERS TO ALLOW DRAINING.
7. GROUT UNDER BASE PLATES OF COLUMNS WITH A NON-SHRINK FLOWABLE GROUT, TARGET MACHINE BASE OR SIMILAR, CAST UNDER HYDRAULIC HEAD. ENSURE FULL AREA IS GROUTED. PROVIDE 25mm UNLESS NOTED.

## BC HYDRO WOOD POLE

1. WOOD POLE HAS BEEN SELECTED BASED ON PROVISIONS IN BC HYDRO DISTRIBUTION STANDARDS FOR OVERHEAD ELECTRICAL SERVICES C3 SERIES, AND MUST BE REVIEWED AND ACCEPTED BY BC HYDRO.
2. CABINETS:
- A GROUP OF RADIOS (RRUs) ORIENTED SIDE-BY-SIDE IN A "BOOKSHELF" CONFIGURATION IS CONSIDERED EQUIVALENT TO A CABINET.
- THE WIDTH OF A CABINET OR A GROUPING OF RADIOS (RRUs) SHALL NOT EXCEED 760mm.
- CABINETS, OR A GROUPING OF RADIOS (RRUs) SHALL BE LOCATED ROADSIDE OR 90° COUNTER-CLOCKWISE TO ROADSIDE.

## ALUMINUM:

1. ALUMINUM SHALL BE NEW AND CONFORM TO CAN/CSA-5157.
2. ALUMINUM ALLOY SHALL BE 6061-T6 UNLESS NOTED.
3. ALUMINUM WELDING SHALL CONFORM TO S244 & W47.2.

| No.: | Date: | Description: |
|---|---|---|
| | 2025.06.13 | REVISED ADDRESS |
| | 2024.01.12 | RE-ISSUED FOR CONSTRUCTION |
| | 2023.09.15 | RE-ISSUED FOR CONSTRUCTION |
| | 2023.08.31 | REVISED MOUNT REFERENCE |
| | 2023.08.18 | ISSUED FOR CONSTRUCTION |
| | 2023.07.28 | ISSUED FOR 90% COORDINATION |

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Project: TALL TIMBERS
Site ID: W2889
NEAR 5190 248 STREET, LANGLEY, BC

ROGERS™

EGBC Permit To Practice: 1003171

Revisions:

Sheet Title: GENERAL NOTES

Date: JUL 2023
Scale: NA
Drawn: RS
Checked: GF
Project: 220228

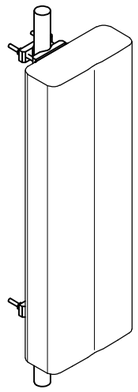
Drawing: S201

Of

# ANTENNA TABLE

| ANT. POS. No. | ANTENNA ID | | MOUNT HEIGHT AGL(m) | ANTENNA MOUNT (UP/DOWN) | ANTENNA TYPE | MDT (°) | MET (°) | | AZIMUTH (°) | JUMPER/ LINE TYPE | No. OF RRUs | No. OF INITAL RRUs | STATUS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | TECHNOLOGY | LABEL | | | | | 700/ 850 | 1900/ 2100/ 2600 | | | | | |
| 1 | LTE | LTE–1 | 15.05 | UP | FFV4Q4–65A–R7 | 0 | 2 | 2 | 40 | 3–MLOC5/ *MLOC4 | 3 | 3 | INITIAL |
| 2 | LTE | LTE–2 | 15.05 | UP | FFV4Q4–65A–R7 | 0 | 2 | 2 | 160 | 3–MLOC5/ *MLOC4 | 3 | 3 | INITIAL |
| 3 | LTE | LTE–3 | 15.05 | UP | FFV4Q4–65A–R7 | 0 | 2 | 2 | 280 | 3–MLOC5/ *MLOC4 | 3 | 3 | INITIAL |
| | | | | | | | | | | | | | |

NOTES:
1. TABLE CONTENTS TO BE CONFIRMED WITH ROGERS.
2. CABLE BEND RADIUS AS PER MANUFACTURER'S RECOMMENDATIONS.
3. ANTENNA HEIGHT TO TOP OF ANTENNA.
4. JUMPER/LINE QUANTITY AS SPECIFIED BY ROGERS. AVAILABLE SPACE IN CONDUIT MAY ALLOW FOR ADDITIONAL CABLES. CABLE QUANTITY IS TO BE REVIEWED ON SITE AND ADDITIONAL CABLES ARE TO BE COORDINATED WITH ROGERS. *MLOC4 LINE QUANTITY IS TO BE REVIEWED ON SITE AND COORDINATED WITH ROGERS.



ANT. TYPE: COMMSCOPE
MODEL: FFV4Q4–65A–R7
HEIGHT: 1499mm
WIDTH: 498mm
DEPTH: 197mm
WEIGHT: 36.4kg (W/O MOUNTING KIT)

## 1 - ANTENNA DETAILS

NTS

| No.: | Date: | Description: |
|---|---|---|
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EGBC Permit To Practice: 1003171

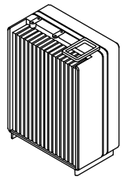
Revisions:

Sheet Title: ANTENNA TABLE AND DETAILS

Date: JUL 2023
Scale: NA
Drawn: RS
Checked: GF
Project: 220228

Drawing: S202

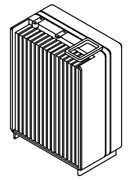
Of



MANUFACTURER: ERICSSON
MODEL: 4480 44B2/B25 44B66AC (RRU)
HEIGHT: 553mm
DEPTH: 151mm
WIDTH: 398mm
WEIGHT: 32.0kg



MANUFACTURER: ERICSSON
MODEL: 8863 (RRU)
HEIGHT: 478mm
DEPTH: 145mm
WIDTH: 375mm
WEIGHT: 22.6kg

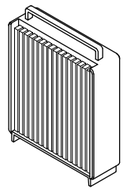


MANUFACTURER: ERICSSON
MODEL: 4480 44B71 44B85AC (RRU)
HEIGHT: 557mm
DEPTH: 190mm
WIDTH: 398mm
WEIGHT: 35.0kg

1
-

## RRU DETAILS

NTS



MANUFACTURER: ERICSSON
MODEL: 6308 (POWER)
HEIGHT: 385mm
DEPTH: 110mm
WIDTH: 343mm
WEIGHT: 15.0kg

2
-

## AC-DC CONVERTER DETAILS

NTS

| No.: | Date: | Description: |
|---|---|---|
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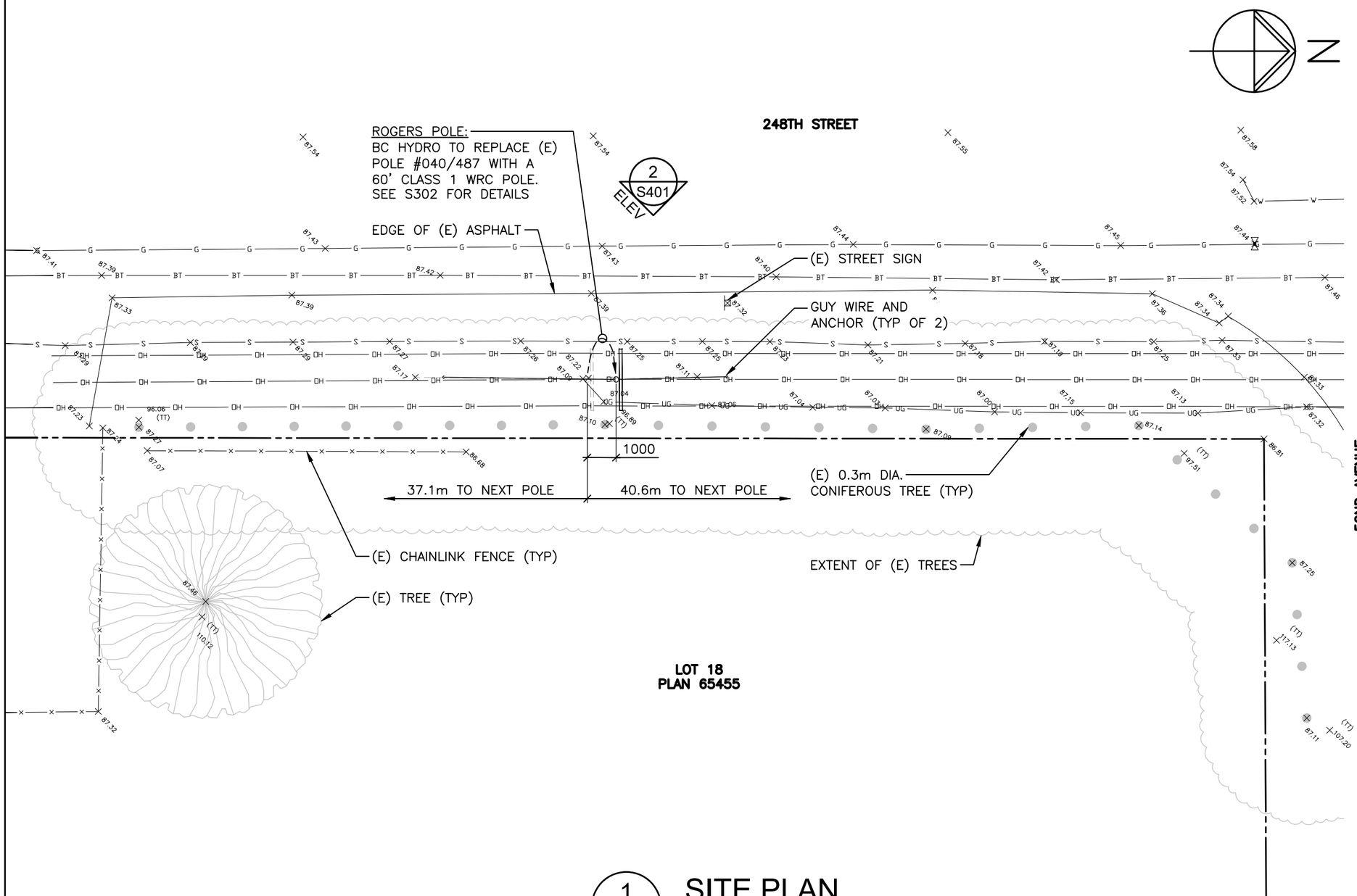
Revisions:

Sheet Title: EQUIPMENT DETAILS

Date: JUL 2023
Scale: NTS
Drawn: RS
Checked: GF
Project: 220228

Drawing: S203

Of




## NOTES:

1. SITE PLAN INFORMATION OBTAINED FROM A SURVEY PREPARED BY MATSON PECK AND TOPLISS, DATED 2023.05.25.

## LEGEND:

- ✸ – INDICATES PARTICULAR ATTENTION SHOULD BE GIVEN TO WHAT IS NOTED ON THE DRAWING
- (E) – DENOTES EXISTING
- (F) – DENOTES FUTURE
- (TYP) – DENOTES TYPICAL
- – – – – DENOTES PROPERTY LINE
- OH – DENOTES (E) OVERHEAD LINES
- W – DENOTES (E) BURIED WATER LINE
- S – DENOTES (E) BURIED SEWER LINE
- G – DENOTES (E) BURIED GAS LINE
- BT – DENOTES (E) BURIED COMM. LINE
- UG – DENOTES (E) BURIED TELUS LINE
- 87.22 × – DENOTES SPOT GRADE (m AMSL)

1 / - SITE PLAN
1:150

| No.: | Date: | Description: |
|---|---|---|
| | 2025.06.13 | REVISED ADDRESS |
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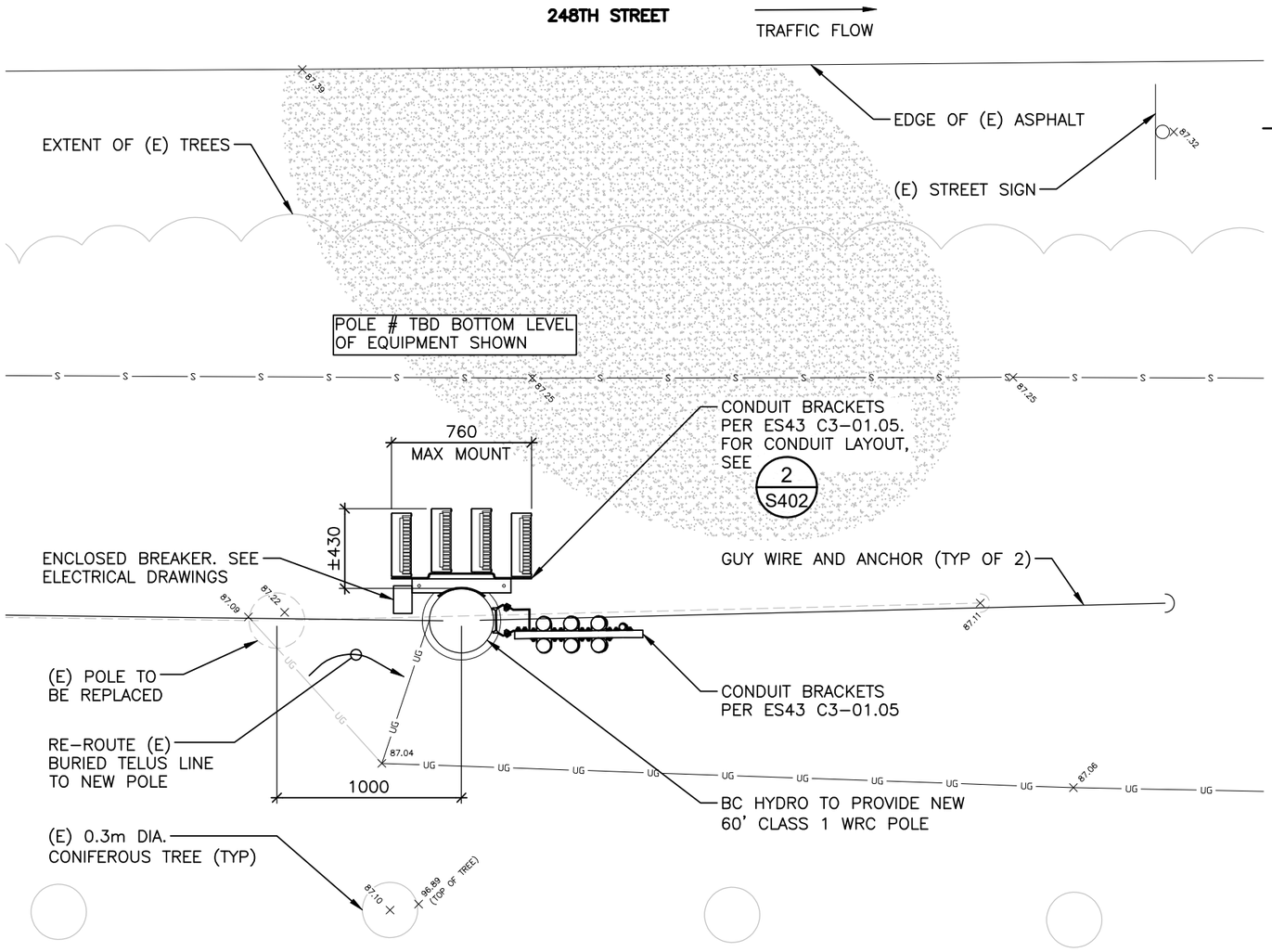
Sheet Title: SITE PLAN

Revisions:

| | |
|---|---|
| Date: | JUL 2023 |
| Scale: | 1:150 |
| Drawn: | RS |
| Checked: | GF |
| Project: | 220228 |

Drawing: S301

Of




LOT 18
PLAN 65455

1 / S301 ENLARGED POLE PLAN

1:30

## NOTES:

1. EXISTING UNDERGROUND SERVICES SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY AND ADDITIONAL UNDERGROUND SERVICES MAY EXIST THAT ARE NOT SHOWN. CONTRACTOR IS RESPONSIBLE TO LOCATE ANY AND ALL BURIED SERVICES IN THE VICINITY OF REQUIRED EXCAVATION PRIOR TO CONSTRUCTION. USE HAND DIGGING WHERE APPROPRIATE.

## LEGEND:

- ✸ – INDICATES PARTICULAR ATTENTION SHOULD BE GIVEN TO WHAT IS NOTED ON THE DRAWING
- (E) – DENOTES EXISTING
- (F) – DENOTES FUTURE
- (TYP) – DENOTES TYPICAL
- ——S—— – DENOTES (E) BURIED SEWER LINE
- ——UG—— – DENOTES (E) BURIED TELUS LINE
- 87.22 × – DENOTES SPOT GRADE (m AMSL)

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| | 2023.08.31 | REVISED MOUNT REFERENCE |
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Project: TALL TIMBERS Site ID: W2889
NEAR 5190 248 STREET, LANGLEY, BC

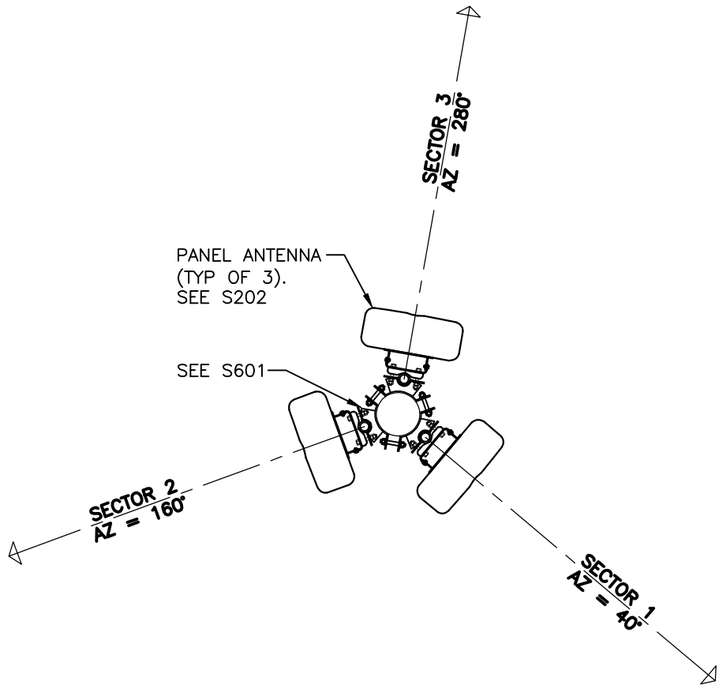
ROGERS™

Sheet Title: ENLARGED POLE PLAN

Date: JUL 2023
Scale: 1:30
Drawn: RS
Checked: GF
Project: 220228

Drawing: S302

Of




1 / - ANTENNA LAYOUT

1:30

N

| No.: | Date: | Description: |
|---|---|---|
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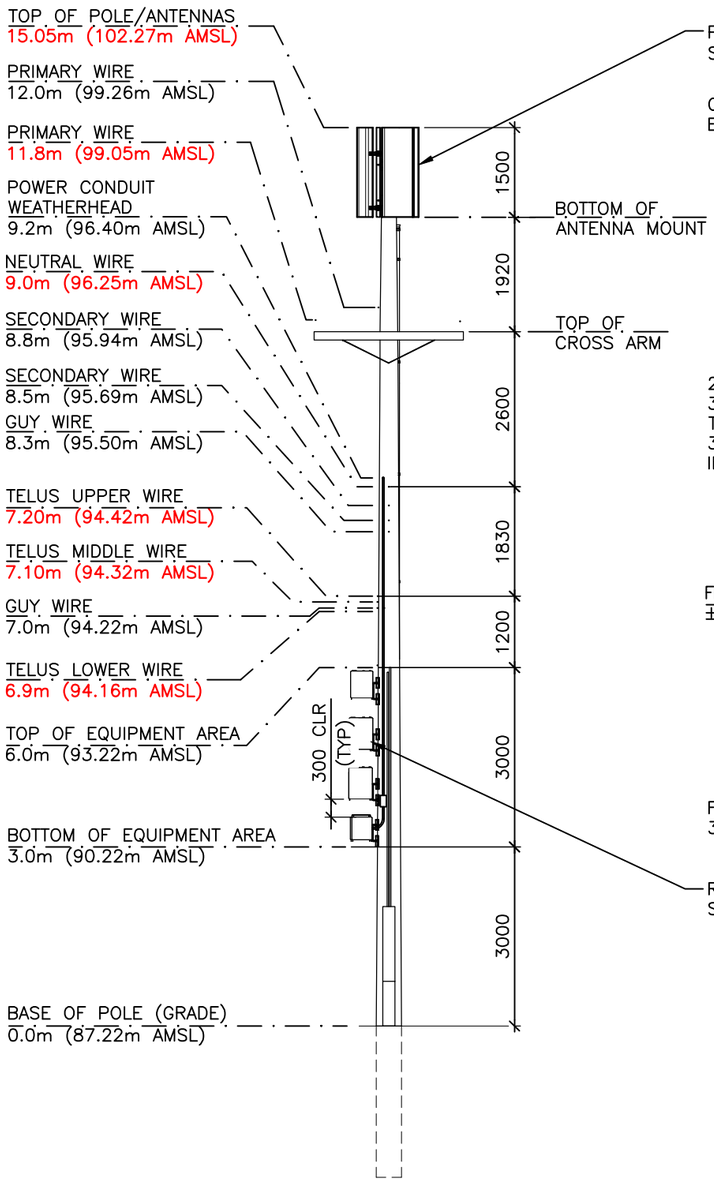
Sheet Title: ANTENNA LAYOUT

Revisions:

Date: JUL 2023
Scale: 1:30
Drawn: RS
Checked: GF
Project: 220228

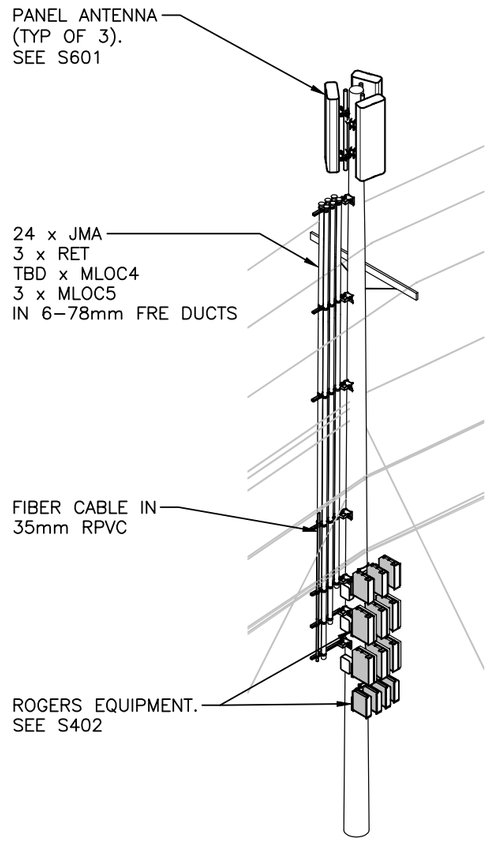
Drawing: S303

Of




1 - EAST ELEVATION
1:100 (TRAFFIC VIEW)

2 S301 SOUTH ELEVATION
1:100 (STREET VIEW)




3 - ISOMETRIC
NTS

## NOTES:

1. ELECTRICAL SERVICE CONDUIT TO EXTEND 150mm ABOVE TOP SECONDARY OR NEUTRAL CLEVIS WITH SUITABLE ENTRANCE FITTING AND CONDUIT PER CANADIAN ELECTRICAL CODE FOR WET LOCATIONS.
2. ALL EQUIPMENT MUST BE CLEARLY MARKED WITH ROGERS NAME, EQUIPMENT ID#, AND EMERGENCY CONTACT PHONE NUMBER.
3. MLOC4 LINE QUANTITY TO BE REVIEWED ON SITE AND COORDINATED WITH ROGERS. CONTRACTOR TO CONTACT ROGERS RADIO DESIGNER TO CONFIRM LINE QUANTITY AND CONNECTION OF MLOC4 JUMPERS TO THE APPROPRIATE ANTENNAS AND RRUs. LINES MUST FIT INSIDE THE 6-78mm FRE DUCTS SPECIFIED.
4. WIRE LINE ELEVATION AND CONDUCTOR SPACINGS SHALL BE CONSTRUCTED AS PER ES 43 C3-03 STANDARDS. BC HYDRO TO REVIEW. WIRES HAVE BEEN RAISED AS NOTED BELOW:
   - PRIMARY: 0.08m
   - NEUTRAL/SECONDARY: 0.1m
   - TELECOM: 0.9m

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Site ID: W2889
NEAR 5190 248 STREET, LANGLEY, BC

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Revisions:

Sheet Title: POLE ELEVATIONS AND ISOMETRIC

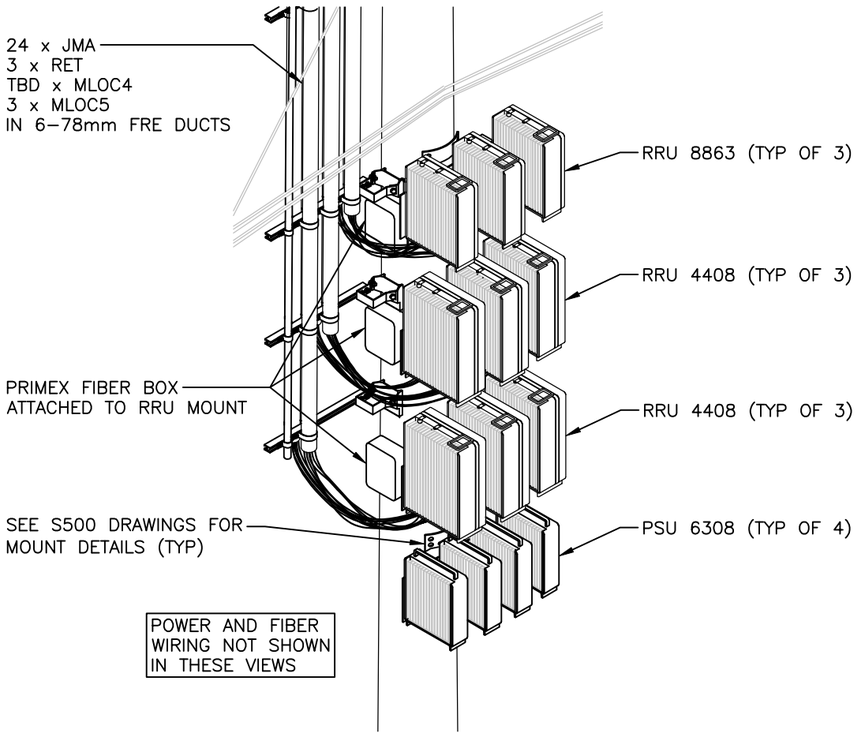
Date: JUL 2023
Scale: AS NOTED
Drawn: RS
Checked: GF
Project: 220228

Drawing: S401

Of

## NOTES:

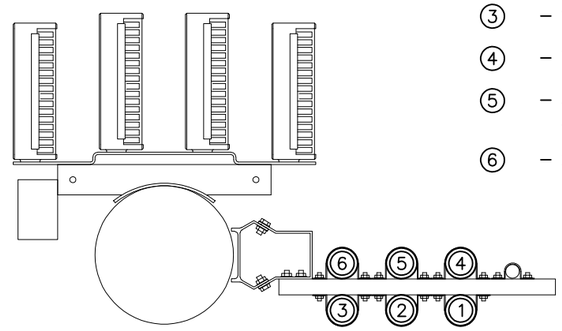
1. SEE NOTES ON S401.
2. JUMPER/LINE TYPE AND QUANTITY AS SPECIFIED BY ROGERS.




1 / S401 **EQUIPMENT LAYOUT**
NTS

## CONDUIT LEGEND:

① – 7x1/2" JUMPERS
② – 7x1/2" JUMPERS
③ – 1xMLOC5 CABLE, 1xMLOC4 CABLE
④ – 7x1/2" JUMPERS
⑤ – 3x1/2" JUMPERS, 3xRET CABLES AND ANY ADDITIONAL MLOC4 CABLES
⑥ – 2xMLOC5 CABLES




2 / S302 **CONDUIT LAYOUT**
NTS

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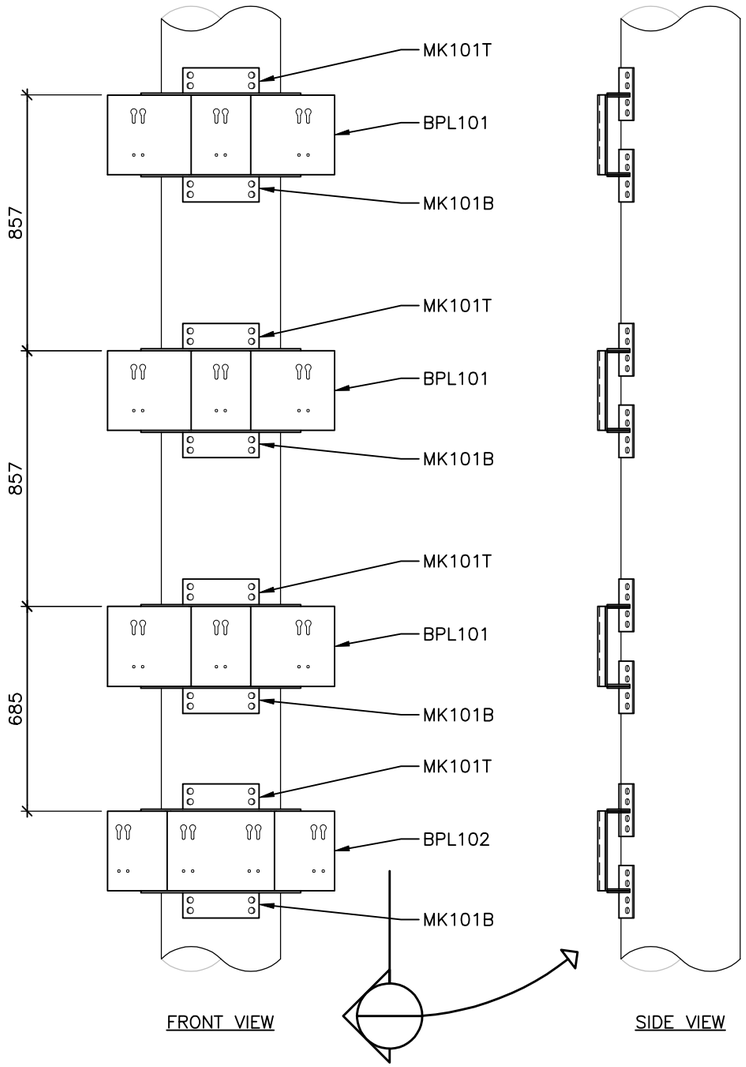
Revisions:

Sheet Title: RF EQUIPMENT LAYOUT

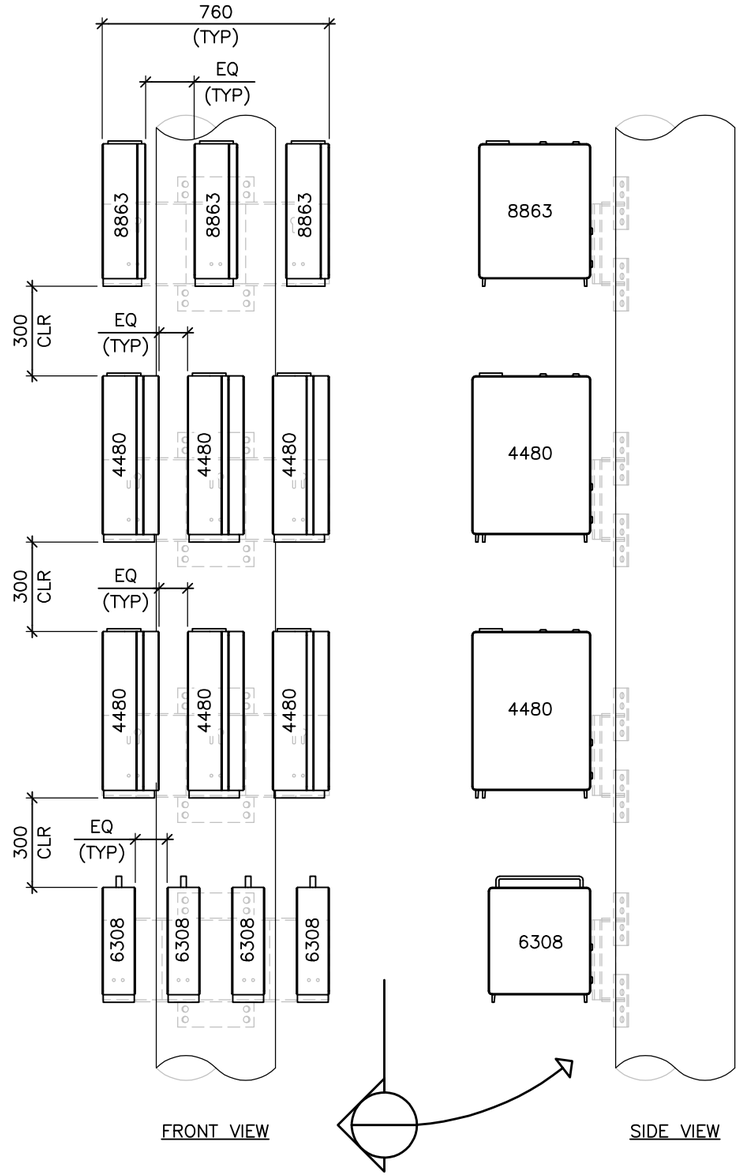
Date: JUL 2023
Scale: NTS
Drawn: RS
Checked: GF
Project: 220228

Drawing: S402

Of




1 - POLE ELEVATIONS
1:20 (BRACKETS SHOWN)




2 - POLE ELEVATIONS
1:20 (EQUIPMENT SHOWN)

## NOTES:

1. FOR GENERAL NOTES SEE S201.

## LEGEND:

✸ – INDICATES PARTICULAR ATTENTION SHOULD BE GIVEN TO WHAT IS NOTED ON THE DRAWING

(TYP) – DENOTES TYPICAL

MK101T – SEE S502 FOR DETAILS

MK101B – SEE S502 FOR DETAILS

BPL101 – SEE S503 FOR DETAILS

BPL102 – SEE S503 FOR DETAILS

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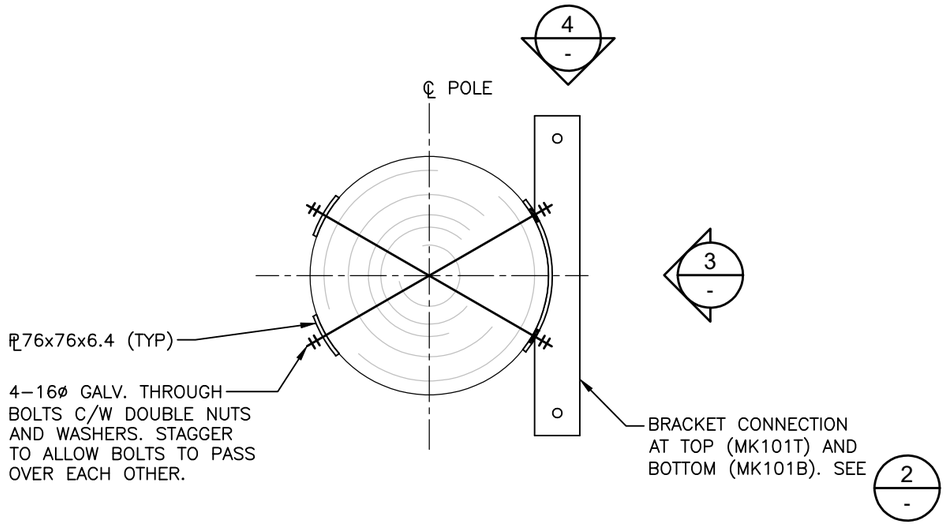
Revisions:

Sheet Title: RRU MOUNT ELEVATIONS

Date: JUL 2023
Scale: 1:20
Drawn: RS
Checked: GF
Project: 220228

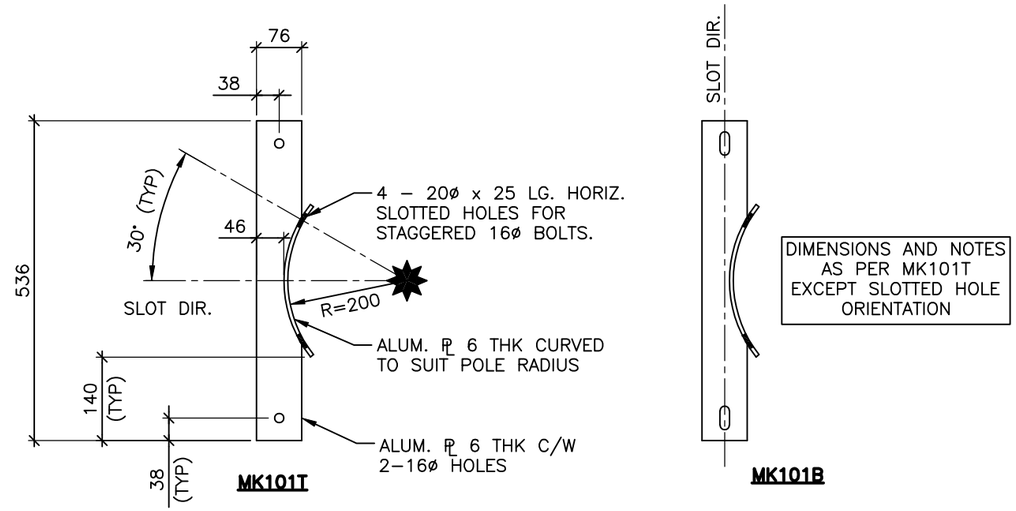
Drawing: S501

Of



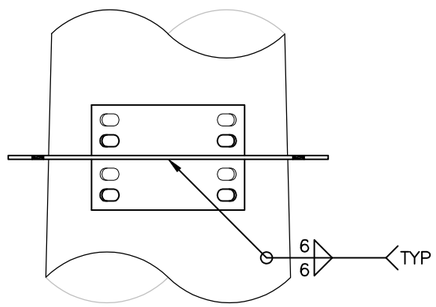

## 1 S501 PLAN DETAIL

1:10



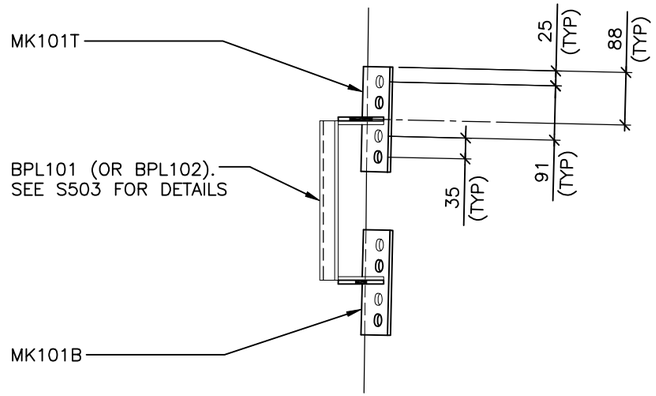

## 2 - DETAILS

1:10




## 3 - FRONT VIEW

1:10




## 4 - SIDE VIEW

1:10

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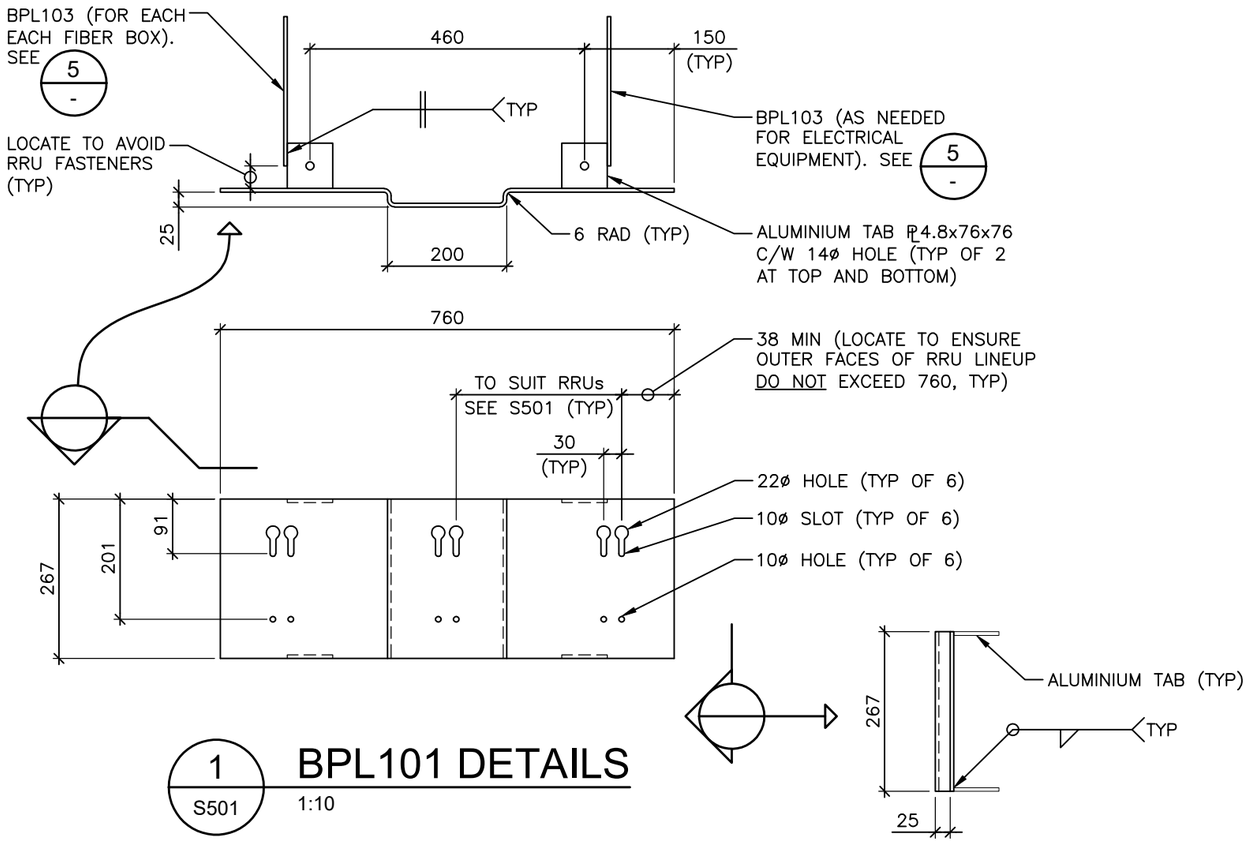
Revisions:

Sheet Title: RRU MOUNT DETAILS I

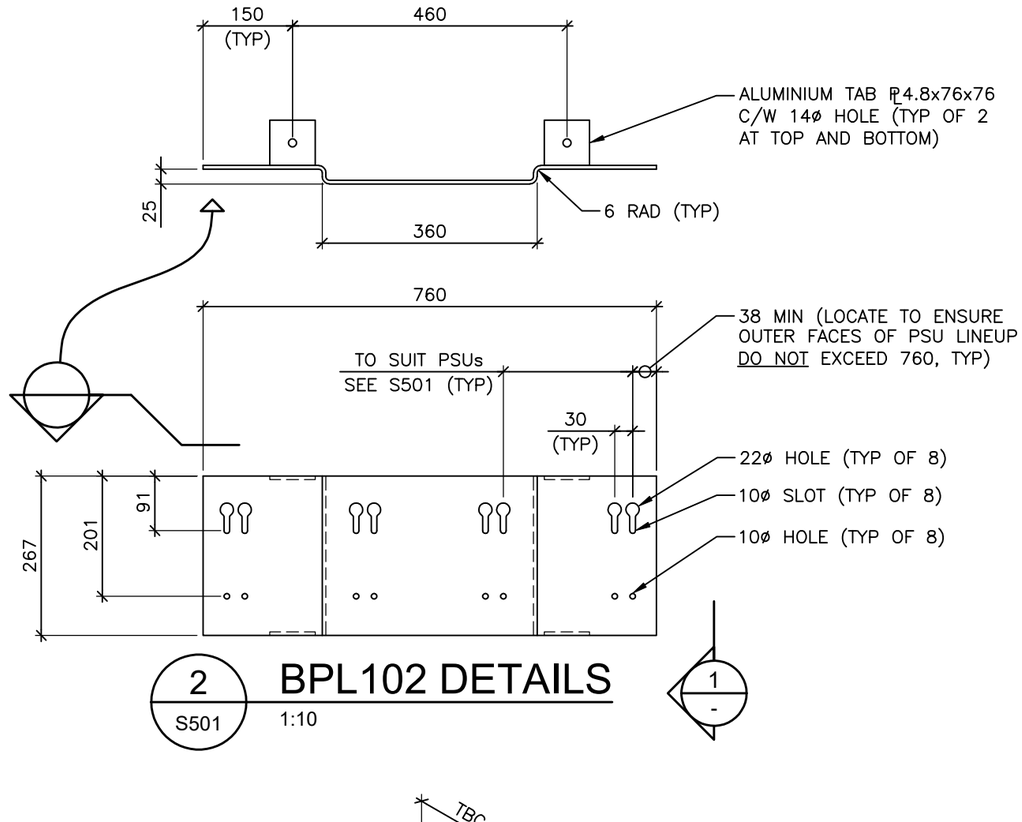
Date: JUL 2023
Scale: 1:10
Drawn: RS
Checked: GF
Project: 220228

Drawing: S502

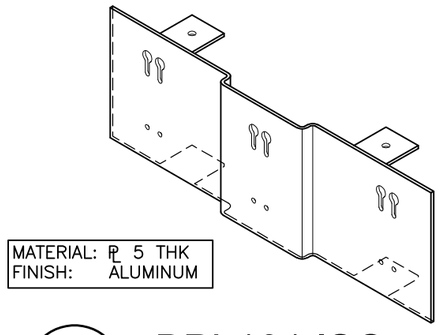
Of




1/S501 BPL101 DETAILS
1:10

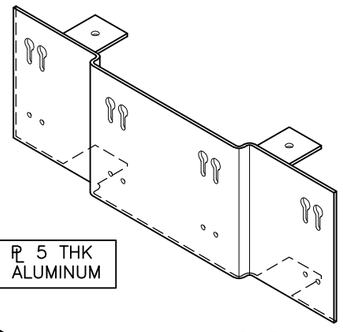



2/S501 BPL102 DETAILS
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FINISH: ALUMINUM

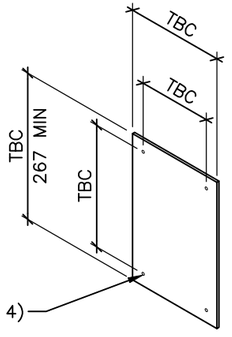
3/- BPL101 ISO
NTS



MATERIAL: PL 5 THK
FINISH: ALUMINUM

4/- BPL102 ISO
NTS

ALL DIMENSIONS NOTED AS TBC TO BE COORDINATED WITH FIBER PRIMEX BOX AND AC PANEL




MATERIAL: PL 5 THK
FINISH: ALUMINUM

5/- BPL103 ISO
NTS

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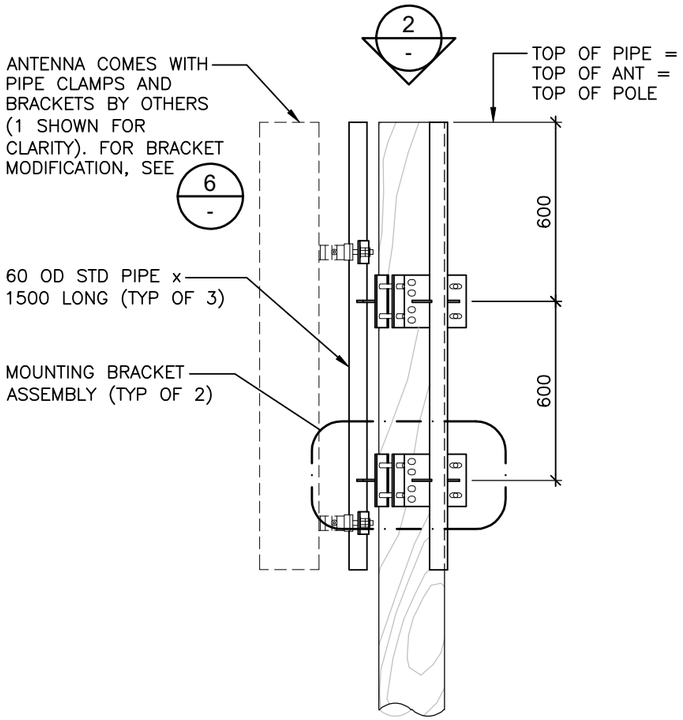
Revisions:

Sheet Title: RRU MOUNT DETAILS II

Date: JUL 2023
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Checked: GF
Project: 220228

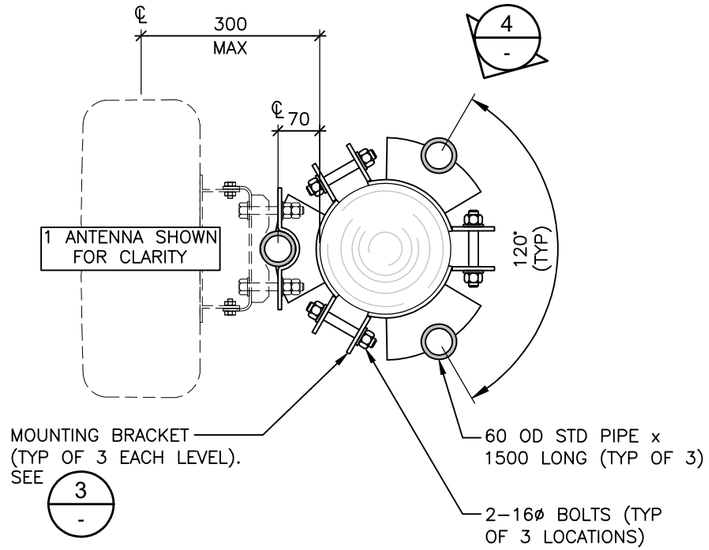
Drawing: S503

Of



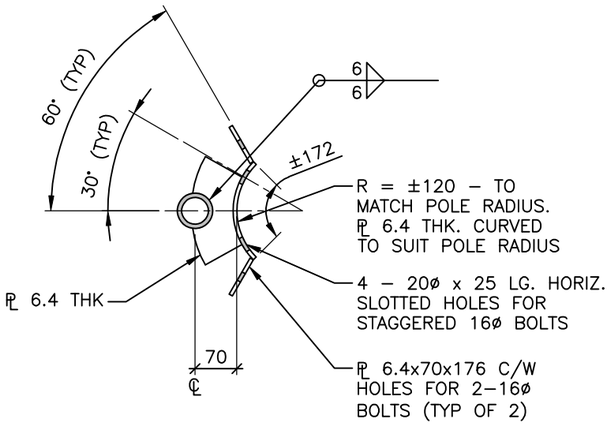

## 1 - ANTENNA MOUNT ELEVATION

1:20



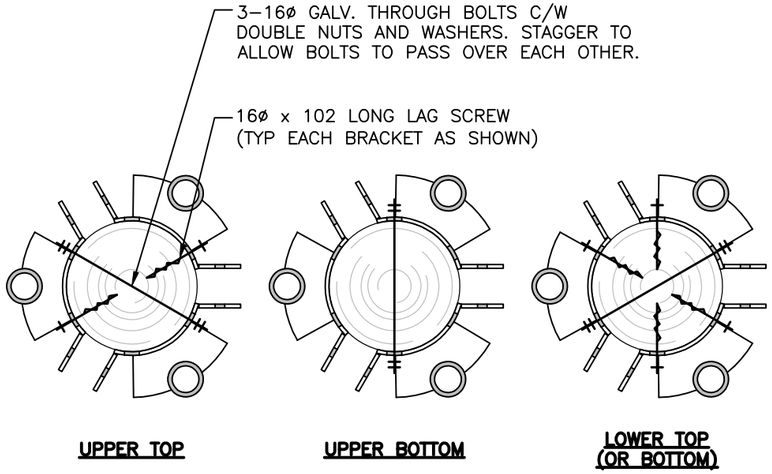

## 2 - BRACKET ASSEMBLY PLAN

1:10



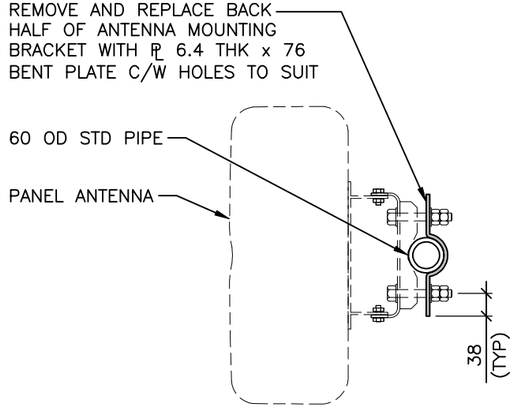

## 3 - BRACKET PLAN

1:10



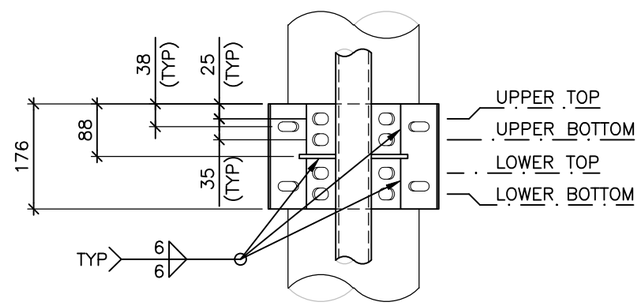

## 5 - BOLT LAYOUTS

1:10




## 6 - ANTENNA BRACKET MODIFICATION

1:10




## 4 - BRACKET ELEVATION

1:10

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Sheet Title: ANTENNA MOUNT DETAILS

| | |
|---|---|
| Date: | JUL 2023 |
| Scale: | AS NOTED |
| Drawn: | RS |
| Checked: | GF |
| Project: | 220228 |

Drawing: S601

Of

## GENERAL ELECTRICAL

1. ALL WORK TO COMPLY WITH THE LATEST ADOPTED PROVINCIAL BUILDING CODE, THE 2021 CANADIAN ELECTRICAL CODE (CEC) , ANY BULLETINS ISSUED BY THE LOCAL JURISDICTION, CARRIER SPECIFICATIONS AND APPLICABLE UTILITY GUIDELINES.
2. OBTAIN ALL NECESSARY ELECTRICAL PERMITS AND PAY ALL FEES AS REQUIRED TO COMPLETE THE ELECTRICAL WORK. UPON PROJECT COMPLETION AND PRIOR TO REQUESTING A FINAL INSPECTION, DELIVER A COPY OF THE FINAL ELECTRICAL INSPECTION CERTIFICATE TO THE ENGINEER.
3. REVIEW THE ELECTRICAL DRAWINGS IN CONJUNCTION WITH ALL OTHER DRAWINGS AND SPECIFICATIONS PROVIDED FOR THE PROJECT. PRIOR TO CONSTRUCTION, PERFORM ON-SITE VERIFICATION OF THE EXISTING SITE AND ELECTRICAL SYSTEM (AS APPLICABLE) AND REPORT ANY DISCREPANCIES TO THE ENGINEER. FIELD MEASUREMENTS AND EXACT RACEWAY ROUTING ARE THE RESPONSIBILITY OF THE CONTRACTOR (AND MUST BE CONSIDERED PRIOR TO SUBMITTING BID).
4. PROVIDE ALL LABOUR AND MATERIALS NECESSARY TO PROVIDE A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM.
5. OBTAIN LOCATES PRIOR TO ANY EXCAVATION AND PROTECT ALL BURIED UTILITIES. REINSTATE ALL DISTURBED SURFACES TO PRE-CONSTRUCTION CONDITIONS.
6. ENSURE ALL EXTERIOR WALL PENETRATIONS ARE WATERTIGHT.
7. PROVIDE A 3mm NYLON PULL CORD IN ALL CONDUITS.
8. PROVIDE A SEPARATE BONDING CONDUCTOR IN ALL POWER RACEWAYS.
9. PRIOR TO ORDERING EQUIPMENT, PROVIDE SHOP DRAWINGS (2 SETS) FOR ALL ELECTRICAL EQUIPMENT SPECIFIED FOR APPROVAL.
10. ALL ELECTRICAL EQUIPMENT TO BE CSA OR ULC MARKED.
11. ALL POWER WIRING TO BE 600V RW90 STRANDED COPPER UNLESS NOTED OTHERWISE.
12. ALL EQUIPMENT RATED 60A OR MORE TO BE LISTED FOR USE WITH 75°C CONDUCTORS MIN.
13. ALL ELECTRICAL DISTRIBUTION EQUIPMENT TO BE SUPPLIED WITH APPROPRIATE ENCLOSURES WHEN LOCATED WITHIN SPRINKLERED AREAS.
14. PROVIDE NAMEPLATES IN ACCORDANCE WITH NAMEPLATE SCHEDULE. NAMEPLATES TO BE PHENOLIC PLASTIC LAMINATE WITH MACHINE ENGRAVED LETTERS (BLACK PLATE AND WHITE LETTERS) U.N.O. ATTACH NAMEPLATES WITH SELF TAPPING SCREWS OR RIVETS.
15. LEAVE ALL AREAS IN A CLEAN STATE AT CONSTRUCTION COMPLETION. TOUCH UP PAINT ALL DISTURBED SURFACES.
16. PROVIDE A COMPLETE SET OF AS-BUILT REDLINES AT PROJECT COMPLETION.
17. REARRANGE CIRCUITING OF ALL PANELBOARDS INVOLVED WITH PROJECT TO ENSURE A BALANCED LOAD ACROSS ALL PHASES.
18. ALL NEW OVERCURRENT DEVICES AND ELECTRICAL EQUIPMENT TO HAVE AN A.I.C. RATING GREATER THAN THE AVAILABLE FAULT CURRENT THEY MAY BE SUBJECTED TO (10kA MIN).
19. VERTICAL CONDUCTORS TO BE SUPPORTED AT INTERVALS AS SPECIFIED IN CEC RULE 12-120 AND TABLE 21.
20. WHERE CONDUITS/DUCTS TRANSITION FROM BELOW GRADE TO VERTICAL, PROVIDE (ABOVE GRADE) EXPANSION JOINTS IN ACCORDANCE WITH CEC RULE 12-012 (12).
21. WHEN EQUIPMENT MODIFICATIONS ARE REQUIRED TO FACILITATE CONDUCTOR CONNECTIONS TO AN EXISTING SWITCHBOARD, BUS DUCT ETC, THE CONTRACTOR MUST OBTAIN WRITTEN APPROVAL (INCLUDING INSPECTION) FROM THE MANUFACTURER OR CSA ACCREDITED 3RD PARTY FOR THE REQUIRED MODIFICATIONS.
22. ALL RACEWAYS SUSPENDED BY MORE THAN 300mm FROM THE SUPPORTING STRUCTURE MUST BE SEISMICALLY RESTRAINED IN ACCORDANCE WITH THE SEISMIC RESTRAINT STANDARDS MANUAL – GUIDELINES FOR ELECTRICAL SYSTEMS (LATEST EDITION) AS PUBLISHED BY THE ELECTRICAL CONTRACTORS ASSOCIATION OF BC. SUBMIT SEISMIC RESTRAINT SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION.

## GROUNDING

1. COMPLY WITH CARRIER'S SPECIFIC SITE GROUNDING REQUIREMENTS.
2. ALL INSULATED GROUND CABLES TO HAVE TWH INSULATION.
3. ALL GROUNDING TO COMPLY WITH THE 2021 CEC, ANY BULLETINS ISSUED BY THE LOCAL JURISDICTION AND UTILITY GUIDELINES (WHEN APPLICABLE).
4. ENSURE ALL GROUNDING CONNECTIONS ARE CLEAN AND FREE OF PAINT AND DIRT AT THEIR MATING SURFACES. USE SUITABLE ANTIOXIDANT GREASE (PENETROX OR EQUAL) AT ALL MECHANICAL CONNECTIONS.
5. INSTALL ALL GROUNDING CONNECTIONS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. ENSURE CORRECT TORQUE IS ACHIEVED WHERE APPLICABLE.
6. ALL GROUND BAR CONNECTIONS TO BE TWO HOLE LUG LONG BARREL COMPRESSION TYPE. GROUND BARS ARE TO BE 6mm TINNED COPPER.
7. ALL UNDERGROUND GROUND CONNECTIONS TO BE CADWELD U.N.O.
8. MINIMUM BEND RADIUS FOR GROUND CABLES IS 200mm.

## LEGEND:

✸ – INDICATES PARTICULAR ATTENTION SHOULD BE GIVEN TO WHAT IS NOTED ON THE DRAWING

(E) – DENOTES EXISTING

(F) – DENOTES FUTURE

(TYP) – DENOTES TYPICAL

| No.: | Date: | Description: |
|---|---|---|
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| | 2024.01.12 | RE–ISSUED FOR CONSTRUCTION |
| | 2023.09.15 | RE–ISSUED FOR CONSTRUCTION |
| | 2023.08.31 | REVISED MOUNT REFERENCE |
| | 2023.08.18 | ISSUED FOR CONSTRUCTION |
| | 2023.07.28 | ISSUED FOR 90% COORDINATION |

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www.glotmansimpson.com

Project: Site ID: **W2889**
TALL TIMBERS
NEAR 5190 248 STREET, LANGLEY, BC

ROGERS™

EGBC Permit To Practice: 1003171

Revisions:

Sheet Title:
ELECTRICAL SPECIFICATIONS

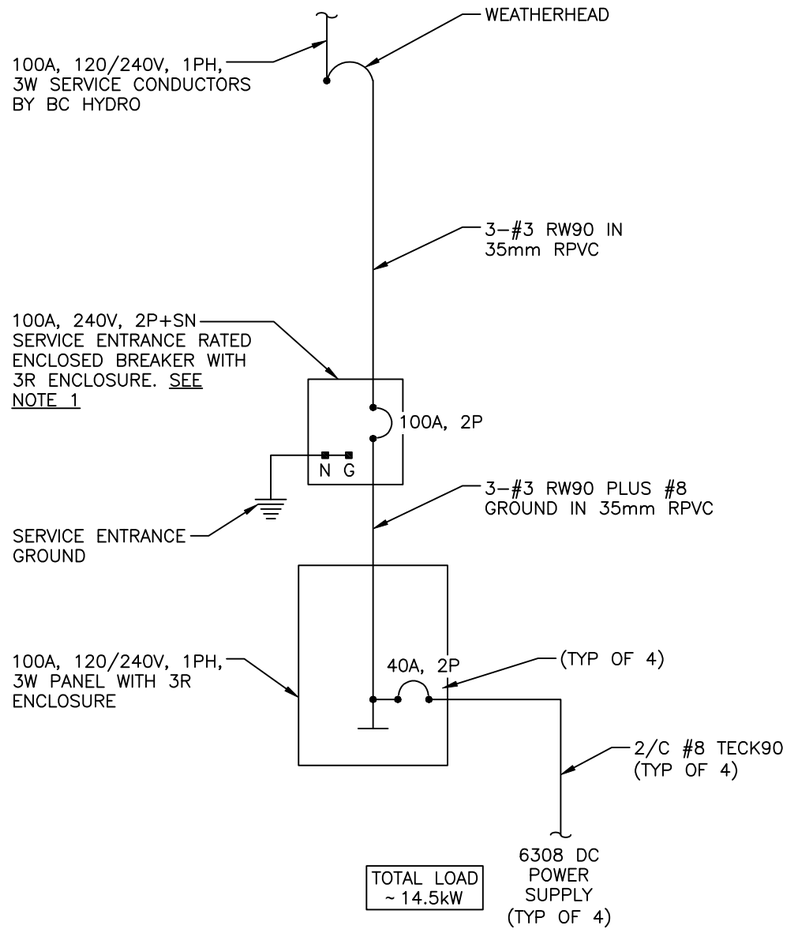
Date: JUL 2023
Scale: NA
Drawn: RS
Checked: CB
Project: 220228

Drawing:
E101

Of

## NOTES:

1. ON SERVICE BREAKER, PROVIDE NAMEPLATE WITH ROGERS SITE ID AND EMERGENCY CONTACT NUMBER.




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|---|---|---|
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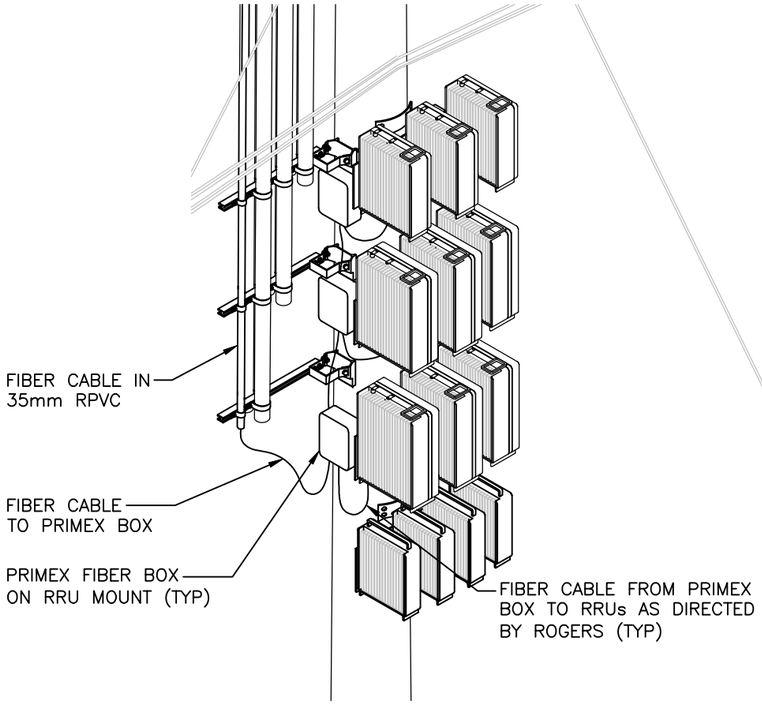
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Revisions:

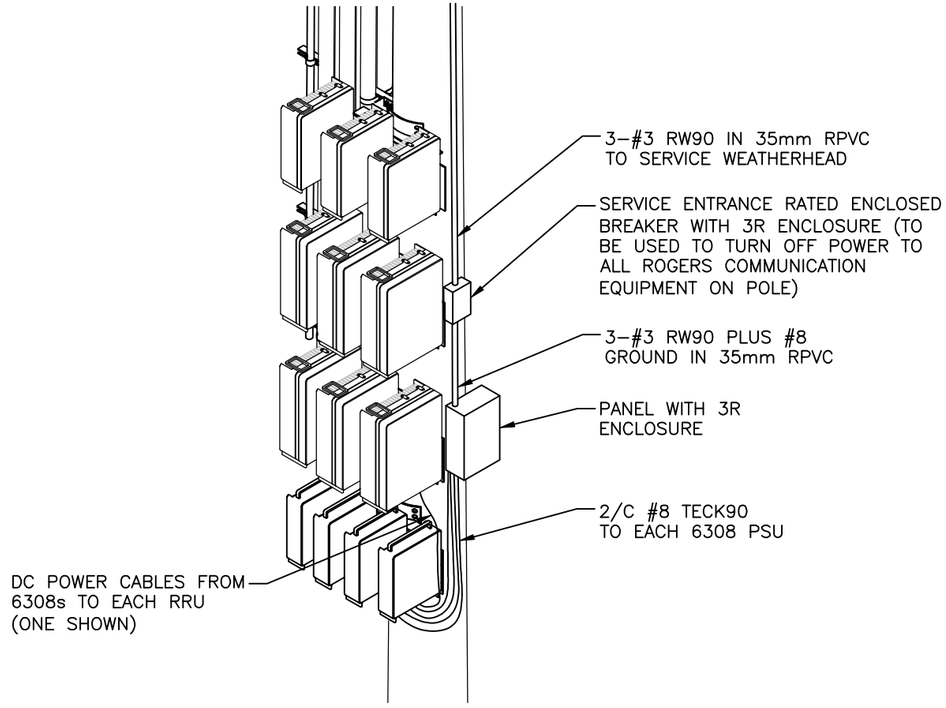
Date: JUL 2023
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Drawing: E102

Of




ANTENNA CABLES NOT SHOWN IN THESE VIEWS. SEE ELEVATIONS




1 / - FIBER DETAILS
NTS

2 / - POWER DETAILS
NTS

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Revisions:

Sheet Title: EQUIPMENT ELECTRICAL DETAILS

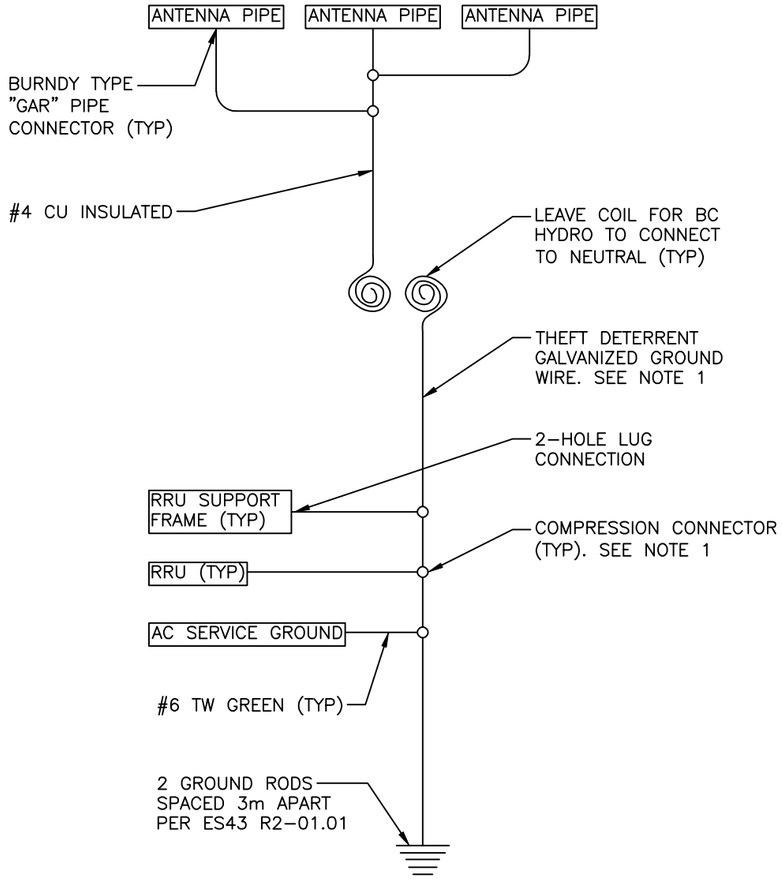
Date: JUL 2023
Scale: NTS
Drawn: RS
Checked: CB
Project: 220228

Drawing: E103

Of

## NOTES:

1. ALL MATERIALS AND WORK TO COMPLY WITH BC HYDRO STANDARD ES43 SECTION R.




1 - GROUNDING SCHEMATIC

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Revisions:

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Drawing: E201

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