



APPLICANT SITE NAME:     LONGVIEW FARM TANK  
APPLICANT SITE NUMBER:   A5C0335A (KC13XC327)  
DRAWING DESCRIPTION:     FINAL CD

APPROVAL SIGNATURE BLOCK  
THE FOLLOWING PARTIES HAVE REVIEWED THESE DOCUMENTS:

SITE ACQUISITION SPECIALIST:	APPROVED: <input type="checkbox"/>  REJECTED: <input type="checkbox"/>	DATE:
RF ENGINEER:	APPROVED: <input type="checkbox"/>  REJECTED: <input type="checkbox"/>	DATE:
CONSTRUCTION MANAGER:	APPROVED: <input type="checkbox"/>  REJECTED: <input type="checkbox"/>	DATE:
OPERATIONS:	APPROVED: <input type="checkbox"/>  REJECTED: <input type="checkbox"/>	DATE:
PROJECT MANAGER:	APPROVED: <input type="checkbox"/>  REJECTED: <input type="checkbox"/>	DATE:



SITE NUMBER: A5C0335A (KC13XC327)  
SITE NAME: LONGVIEW FARM TANK  
PROJECT TYPE: SPRINT RETAIN

STRUCTURE TYPE: WATER TANK

CERTIFICATION AND SEAL:  
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR  
REPORT WAS PREPARED BY ME OR UNDER MY DIRECT  
SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL  
ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI

04/16/2021

(SIGNATURE)

DATE

M.H. CATALINA MARTINEZ PE-2016011696

RENEWAL DATE: 12/31/2022

STATE OF MISSOURI

M.H. CATALINA MARTINEZ

PE-2016011696

PROFESSIONAL ENGINEER

MISSOURI CERTIFICATE OF AUTHORIZATION FOR  
KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022



KGI WIRELESS, INC.  
ENGINEERING  
805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:

LONGVIEW FARM TANK

SITE NUMBER:

A5C0335A (KC13XC327)

SITE ADDRESS:  
499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

SHEET TITLE:

TITLE SHEET

SHEET NUMBER:

T1

NOTE: DRAWING SCALES ARE FOR 11"x17" SHEETS UNLESS OTHERWISE NOTED.

PROJECT SUMMARY		CONTACTS	AREA MAP	DRAWING INDEX	
<div>SITE NAME: LONGVIEW FARM TANK</div> <div>SITE NUMBER: A5C0335A (KC13XC327)</div> <div>SITE ADDRESS: 499 SOUTHWEST TOWER PARK DRIVE, LEES SUMMIT, MO 64081 JACKSON COUNTY</div> <div>LATITUDE: 38° 54' 33" N</div> <div>LONGITUDE: 94° 26' 54" W</div> <div>GROUND ELEVATION: ± 1010' AMSL (NAVD88)</div> <div>APPLICANT CL: 63'-6" AGL</div> <div>RFDS DATE: REFERENCE CONSTRUCTION NTP PACKAGE</div> <div>JURISDICTION: CITY OF LEES SUMMIT</div>		<div>APPLICANT:</div> <div>T-MOBILE</div> <div>12980 S FOSTER ST., SUITE 200</div> <div>OVERLAND PARK, KS 66213</div> <div>PM CONTACT: LISA SELF</div> <div>PHONE: 913-486-4703</div> <div>ENGINEER:</div> <div>KGI WIRELESS INC.</div> <div>BUILDING THREE, SUITE 370</div> <div>805 LAS CIMAS PKWY.</div> <div>AUSTIN, TX 78746</div> <div>CONTACT: TYLER BOLINGER, PRINCIPAL ENGINEER</div> <div>PHONE: 512.334.3256</div> <div>STRUCTURE OWNER:</div> <div>OWNER:</div> <div>GALE COMMUNITIES, INC.</div> <div>400 SW LONGVIEW BLVD., SUITE 210</div> <div>LEE'S SUMMIT, MO 64081</div> <div>CONTACT: CUTTER GALE</div> <div>PHONE: 816.805.5308</div> <div>POWER PROVIDER:</div> <div>EVERGY</div> <div>TELCO/FIBER PROVIDER:</div> <div>AT&amp;T</div>			

SCOPE OF WORK	AERIAL MAP	ATTACHMENTS:
<div><div>THIS WIRELESS COMMUNICATIONS FACILITY IS NOT INTENDED FOR HUMAN OCCUPANCY</div><div>THIS FACILITY DOES NOT REQUIRE POTABLE WATER AND WILL NOT PRODUCE ANY SEWAGE.</div><div>THE SCOPE OF WORK CONSISTS OF MODIFYING THE EXISTING WIRELESS INSTALLATION:</div><div><div>REMOVE (6) EXISTING ANTENNAS AND RELATED JUMPERS</div><div>REMOVE (3) EXISTING RRU'S</div><div>REMOVE (3) EXISTING HYBRID CABLES</div><div>INSTALL (3) FFV4-65C-R3-V1 ANTENNAS</div><div>INSTALL (3) AEHC MIMO ANTENNAS</div><div>INSTALL (3) AHLOA RRU'S</div><div>INSTALL (3) AHFIG RRU'S</div><div>INSTALL (2) HCS 2.0 HYBRID TRUNK CABLES</div><div>INSTALL (2) HCS 2.0 JUNCTION BOX</div><div>INSTALL (9) HCS 2.0 LONG JUMPER CABLES</div><div>INSTALL (36) 1/2" JUMPER CABLES</div><div>INSTALL (1) HLP3 600A DC POWER CABINET</div><div>INSTALL (1) LB3 BATTERY CABINET</div></div></div>		<div>STRUCTURAL COMPANY: EFI GLOBAL</div> <div>STRUCTURAL DATE: 03/01/2021</div> <div>MOUNT ANALYSIS COMPANY: EFI GLOBAL</div> <div>MOUNT ANALYSIS DATE: 03/03/2021</div>



Know what's below.  
Call before you dig.

THE UTILITIES SHOWN ON THIS SET OF DRAWINGS  
WERE DEVELOPED FROM THE INFORMATION AVAILABLE.  
THE INFORMATION PROVIDED IS NOT INTENDED TO BE  
A COMPLETE INVENTORY OF UTILITIES IN THIS AREA.  
IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY  
THE LOCATION OF ALL UTILITIES AND PROTECT ALL  
UTILITIES FROM ANY DAMAGE CAUSED BY  
CONTRACTOR'S ACTIVITIES.

GENERAL NOTES

1. THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK USING HIS BEST SKILL AND ATTENTION. HE SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT.
2. THE CONTRACTOR SHALL VISIT THE JOB SITE TO REVIEW THE SCOPE OF WORK AND EXISTING JOB SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, MECHANICAL, ELECTRICAL SERVICE, AND OVERALL CONDITION.
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO SUBMITTING HIS BID. ANY DISCREPANCIES, CONFLICTS OR OMISSIONS, ETC. SHALL BE REPORTED TO CUSTOMER BEFORE PROCEEDING WITH THE WORK.
4. THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING CONSTRUCTION, STRUCTURE, OR EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE TENANT OR BUILDING OWNER, OR OWNER'S REPRESENTATIVE AT THE EXPENSE OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR, AND SHALL REPLACE OR REMEDY ANY FAULTY, IMPROPER, OR INFERIOR MATERIALS OR WORKMANSHIP OR ANY DAMAGE WHICH SHALL APPEAR WITHIN ONE YEAR AFTER THE COMPLETION AND ACCEPTANCE OF THE WORK UNDER THIS CONTRACT.
6. THE CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIALS ON A REGULAR BASIS, AND SHALL EXERCISE STRICT CONTROL OVER JOB CLEANING THROUGHOUT CONSTRUCTION, INCLUDING FINAL CLEAN–UP UPON COMPLETION OF WORK. ALL AREAS ARE TO BE LEFT IN A BROOM CLEAN CONDITION AT THE END OF EACH DAY.
7. THE CONTRACTOR SHALL SAFEGUARD THE OWNER’S PROPERTY DURING CONSTRUCTION AND SHALL REPLACE ANY DAMAGED PROPERTY OF THE OWNER TO ORIGINAL CONDITION OR BETTER.
8. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, WHETHER SHOWN HEREON OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSES FOR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE THE JOB IS IN PROGRESS AND UNTIL THE JOB IS COMPLETED PER CHAPTER 44 OF THE U.B.C.
10. THE CONTRACTOR DURING CONSTRUCTION SHALL PROVIDE TEMPORARY WATER, POWER, AND TOILET FACILITIES AS REQUIRED BY THE CITY OR GOVERNING AGENCY.
11. ALL CONSTRUCTION WORK SHALL CONFORM TO THE U.B.C. AND ALL OTHER GOVERNING CODES, ALONG WITH THE GOVERNING RESTRICTIVE CODES.
12. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH ALL LOCAL CODE REGULATIONS AND STATE DEPARTMENT OF INDUSTRIAL REGULATIONS AND DIVISION OF INDUSTRIAL SAFETY (OSHA) REQUIREMENTS.
13. THE CONTRACTOR SHALL OBTAIN AND PAY FOR PERMITS, LICENSES, AND INSPECTIONS NECESSARY FOR PERFORMANCE OF THE WORK AND INCLUDE THOSE IN THE COST OF THE WORK TO THE OWNER.
14. FIGURED DIMENSIONS HAVE PRECEDENCE OVER DRAWINGS SCALE AND DETAIL DRAWINGS HAVE PRECEDENCE OVER SMALL SCALE DRAWINGS. CHECK ACCURACY OF ALL DIMENSIONS IN THE FIELD. UNLESS SPECIFICALLY NOTED, DO NOT FABRICATE ANY MATERIALS OFF–SITE, OR DO ANY CONSTRUCTION UNTIL THE ACCURACY OF DRAWINGS DIMENSIONS HAS BEEN VERIFIED AGAINST ACTUAL FIELD DIMENSIONS.
15. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ANY CONFLICTS OR DISCREPANCIES WITHIN THE CONTRACT DOCUMENTS WITH THE CONTRACT DOCUMENTS AND THE FIELD CONDITIONS PRIOR TO EXECUTING THE WORK IN QUESTION.
16. CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IF DETAILS ARE CONSIDERED UNSOUND, UNSAFE, NOT WATERPROOF, OR NOT WITHIN THE CUSTOMARY TRADE PRACTICE. IF WORK IS PERFORMED, IT WILL BE ASSUMED THAT THERE IS NO OBJECTION TO THE DETAIL. DETAILS ARE INTENDED TO SHOW THE END RESULT OF THE DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS, AND SHALL BE INCLUDED AS PAR OF THE WORK.
17. EXISTING ELEVATIONS AND LOCATIONS TO BE JOINED SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION. IF THE DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER SO THAT MODIFICATIONS CAN BE MADE BEFORE PROCEEDING WITH THE WORK.
18. ALL SYMBOLS AND ABBREVIATIONS USED IN THE DRAWINGS ARE CONSIDERED CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING THEIR EXACT MEANING, THE ARCHITECT/ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK.
19. CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS OR OTHER SUPPORT FOR ALL OTHER ITEMS REQUIRING THE SAME.
20. CITY APPROVED PLANS SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY WORKMEN. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN, IN GOOD CONDITION, ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA AND OTHER CHANGE ORDERS ON THE PREMISE AT ALL TIMES. THESE ARE TO BE UNDER THE CARE OF THE JOB SUPERINTENDENT.
21. ALL CONDUITS AND CABLE RUNS ARE DRAWN DIAGRAMMATICALLY. CONTRACTOR SHALL RUN CONDUITS AND CABLES IN COMPLIANCE WITH THE NATIONAL ELECTRIC CODE ALONG THE BEST POSSIBLE ROUTE. THE INSTALLATION OF CONDUITS AND CABLES WILL FOLLOW THE DRAWINGS AS TO SUPPORT AND EQUIPMENT.

22. KGI’S SCOPE OF WORK DOES NOT INCLUDE A STRUCTURAL EVALUATION OF THE SITE. THUS, APPURTENANCE, EQUIPMENT, AND TRANSMISSION CABLES SHOWN ON THESE DRAWINGS ARE SCHEMATIC AND FOR REFERENCE ONLY. A STRUCTURAL EVALUATION OF THE SITE STRUCTURE, ANTENNA MOUNTINGS AND HARDWARE SHOULD BE PERFORMED AND RECOMMENDATIONS IMPLEMENTED PRIOR TO THE INSTALLATION OF THIS SCOPE OF WORK. THENCE, INFORMATION INDICATED IN THE STRUCTURAL ANALYSIS REGARDING FINAL APPURTENANCE/EQUIPMENT/CABLE ARRANGEMENT AND DETAILS SUPERCEDES THESE DRAWINGS.

EQUIPMENT NOTES

1. ALL RADIO EQUIPMENT PLACEMENT AND INSTALLATION IS BY AN EQUIPMENT SUPPLIER WHO IS RESPONSIBLE FOR COORDINATING HIS WORK WITH THE WORK OF OTHERS AS IT RELATES TO THE RADIO EQUIPMENT.

STEEL FRAMING NOTES

1. ALL STEEL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AS SPECIFIED BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND AMERICAN SOCIETY OF CIVIL ENGINEERS. REFER TO TITLE PAGE FOR SPECIFIC CODE REFERENCES.
2. MATERIALS:

ANGLES AND PLATES

STEEL PIPE

MACHINE BOLTS

ASTM A36

ASTM A53, GRADE B

ASTM 307
3. TEMPORARY BRACING OF STRUCTURAL STEEL ELEMENTS IS THE RESPONSIBILITY OF THE CONTRACTOR. STRUCTURAL STABILITY SHALL BE MAINTAINED AT ALL TIMES DURING THE ERECTION PROCESS.
4. ALL EXTERIOR ELEMENTS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A123.

TENANT IMPROVEMENT NOTES

1. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2A OR 2A:10B:C WITHIN 75 FEET OF TRAVEL DISTANCE TO ALL POTIONS OF THE BUILD OUT AREA DURING CONSTRUCTION.
2. ANY ALTERATION TO EXISTING FIRE PROTECTION FACILITIES WILL REQUIRE CLEARANCE AND PERMITS FROM THE GOVERNING FIRE DEPARTMENT AND OTHER AGENCIES BY A LICENSED FIRE PROTECTION CONTRACTOR.

ANTENNA NOTES

1. ANTENNA CONTRACTOR SHALL ENSURE THAT ALL ANTENNA MOUNTING PIPES ARE PLUMB.
2. COAXIAL FEEDER AND FIBER LENGTHS INDICATED ARE APPROXIMATE.
3. ANTENNA COAXIAL FEEDERS AND ANTENNA JUMPERS SHALL BE COLOR CODED PER CUSTOMER REQUIREMENTS.
4. MULT–PORT ANTENNAS: TERMINATE UNUSED ANTENNA PORTS WITH CONNECTOR CAP AND WEATHERPROOF THOROUGHLY.
5. CONTRACTOR MUST FOLLOW ALL MANUFACTURER’S RECOMMENDATIONS REGARDING THE INSTALLATION OF COAXIAL CABLES, CONNECTORS, AND ANTENNAS.
6. CONTRACTOR SHALL RECORD THE SERIAL#, SECTOR, AND POSITION OF EACH ANTENNA AND ACTUATOR INSTALLED AT THE ANTENNAS AND FURNISH THE INFORMATION TO CUSTOMER.
7. ANTENNA CONTRACTOR SHALL PERFORM A "TAPE DROP" MEASUREMENT TO CONFIRM/VALIDATE ANTENNA CENTERLINE (ACL) HEIGHT. CONTRACTOR SHALL SUBMIT A COMPLETED HEIGHT VERIFICATION FORM TO THE CONSTRUCTION MANAGER.
8. WEATHERPROOF UNUSED TMA AND RADIO UNIT PORTS.
9. ALL ANTENNA AZIMUTHS TO BE FROM TRUE NORTH.

CERTIFICATION AND SEAL:  
I HEREBY CERTIFY THAT THE PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI

(SIGNATURE) DATE  
M.H. CATALINA MARTINEZ PE-2016011696  
RENEWAL DATE: 12/31/2022



MISSOURI CERTIFICATE OF AUTHORIZATION FOR  
KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022



KGI WIRELESS, INC.  
ENGINEERING  
  
805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

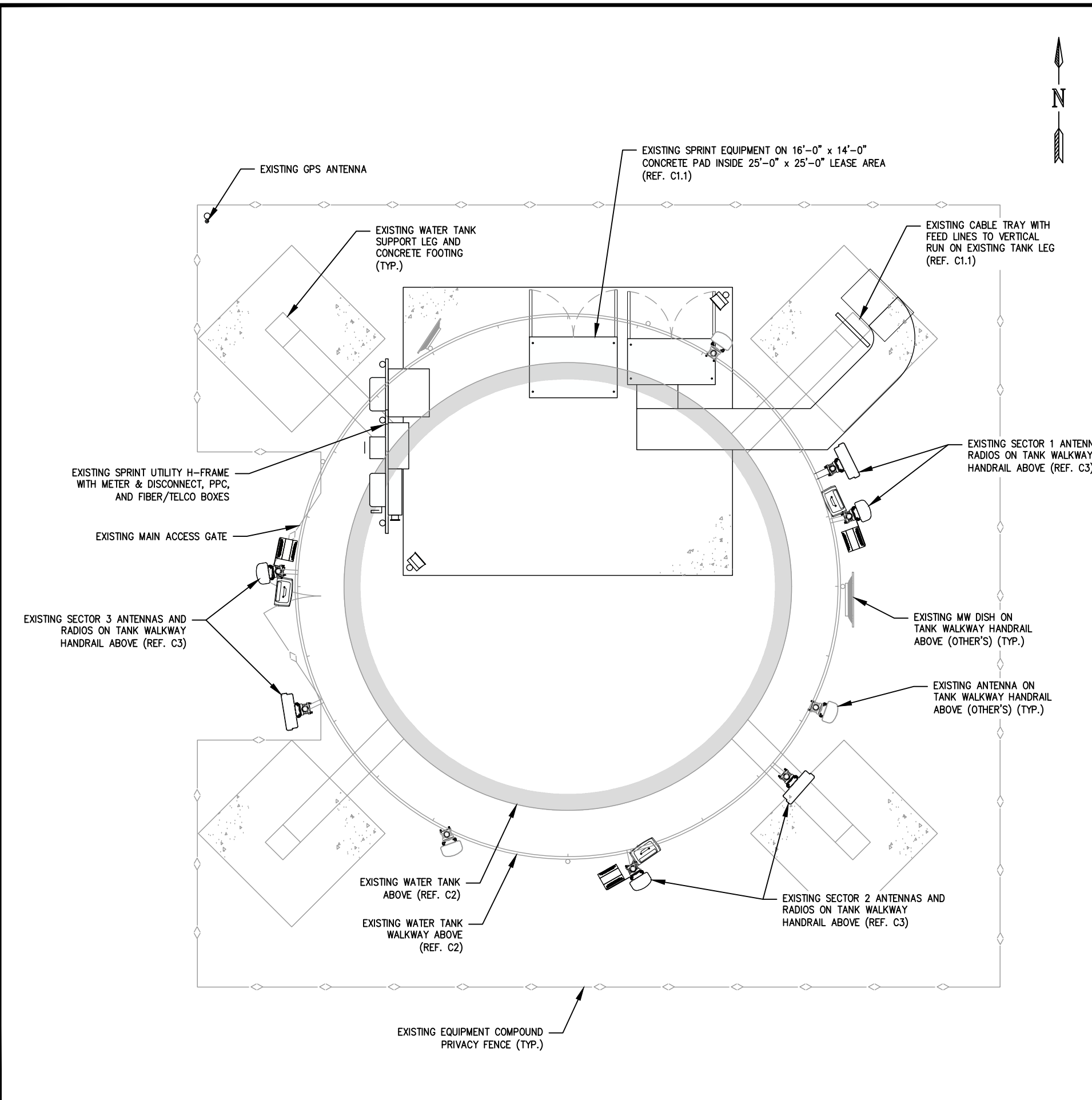
SITE NAME:  
**LONGVIEW FARM TANK**  
  
SITE NUMBER:  
**A5C0335A (KC13XC327)**  
  
SITE ADDRESS:  
499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

SHEET TITLE:  
**GENERAL NOTES**

SHEET NUMBER:  
**GN1**





**SITE PHOTO** N.T.S.

- NOTES:
1. THIS SITE PLAN WAS DRAWN WITHOUT THE BENEFIT OF A CIVIL SURVEY. THEREFORE, THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, QUANTITIES AND DIMENSIONS BEFORE STARTING ANY WORK. NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES OR INCONSISTENCIES BEFORE PROCEEDING WITH CONSTRUCTION.
  2. CLEARING OF VEGETATION MAY BE REQUIRED AT TIME OF INSTALLATION. COORDINATE WITH LAND LORD BEFORE ANY CHEMICAL TREATMENT IS APPLIED.

CERTIFICATION AND SEAL: I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI

04/16/2021

(SIGNATURE) DATE  
M.H. CATALINA MARTINEZ PE-2016011696  
RENEWAL DATE: 12/31/2022

STATE OF MISSOURI  
M.H. CATALINA MARTINEZ  
PE-2016011696  
PROFESSIONAL ENGINEER

MISSOURI CERTIFICATE OF AUTHORIZATION FOR KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022

**T-Mobile**

**KGI**

KGI WIRELESS, INC.  
ENGINEERING

805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:  
**LONGVIEW FARM TANK**

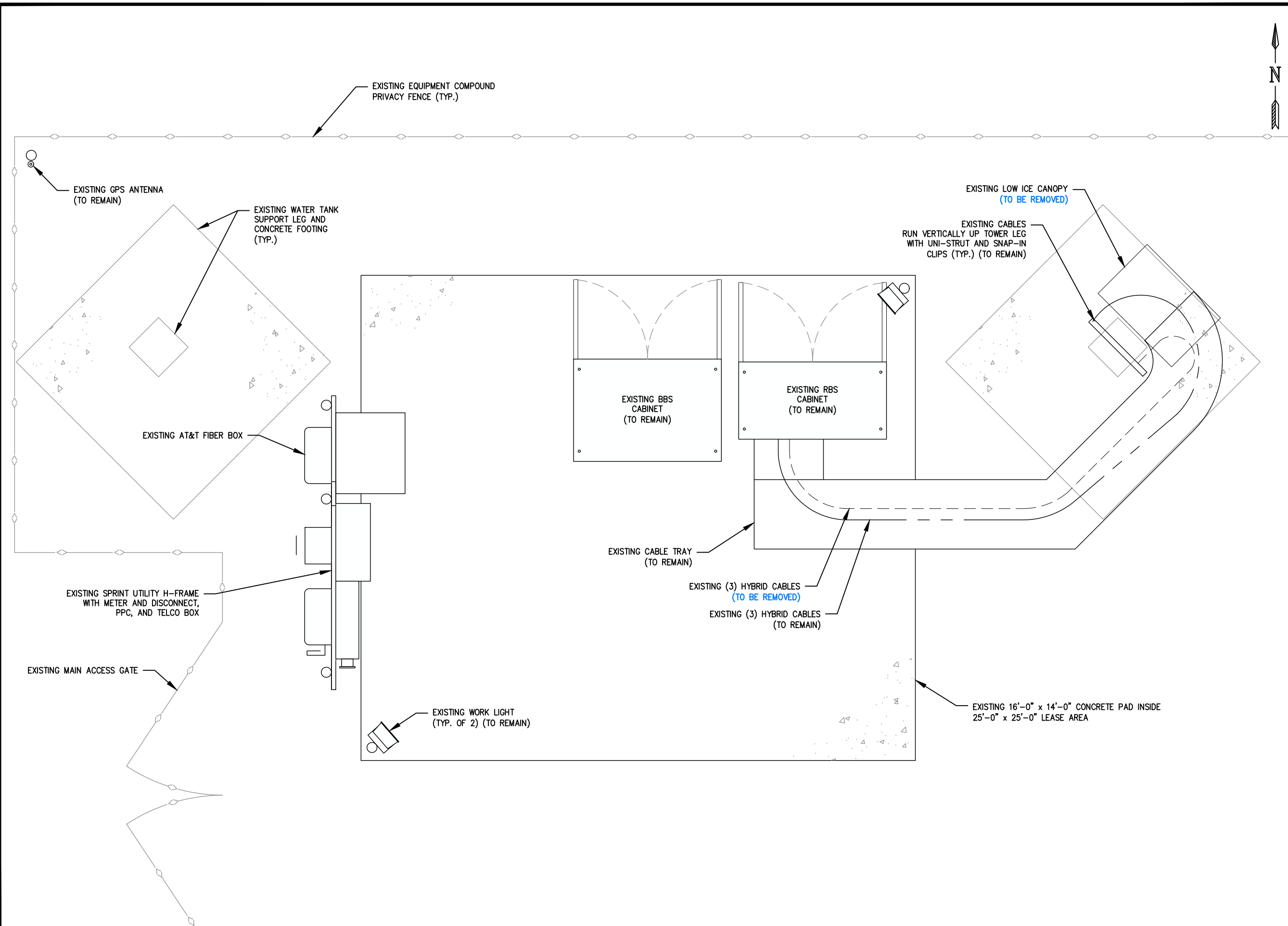
SITE NUMBER:  
**A5C0335A (KC13XC327)**

SITE ADDRESS:  
499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

SHEET TITLE:  
**EXISTING OVERALL COMPOUND PLAN**

SHEET NUMBER:  
**C1**



CERTIFICATION AND SEAL: I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI

*[Signature]* 04/16/2021  
(SIGNATURE) DATE  
M.H. CATALINA MARTINEZ PE-2016011696  
RENEWAL DATE: 12/31/2022

STATE OF MISSOURI  
M.H. CATALINA MARTINEZ  
PE-2016011696  
PROFESSIONAL ENGINEER

MISSOURI CERTIFICATE OF AUTHORIZATION FOR KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022

**T-Mobile**

**KGI**

KGI WIRELESS, INC.  
ENGINEERING  
805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:  
**LONGVIEW FARM TANK**

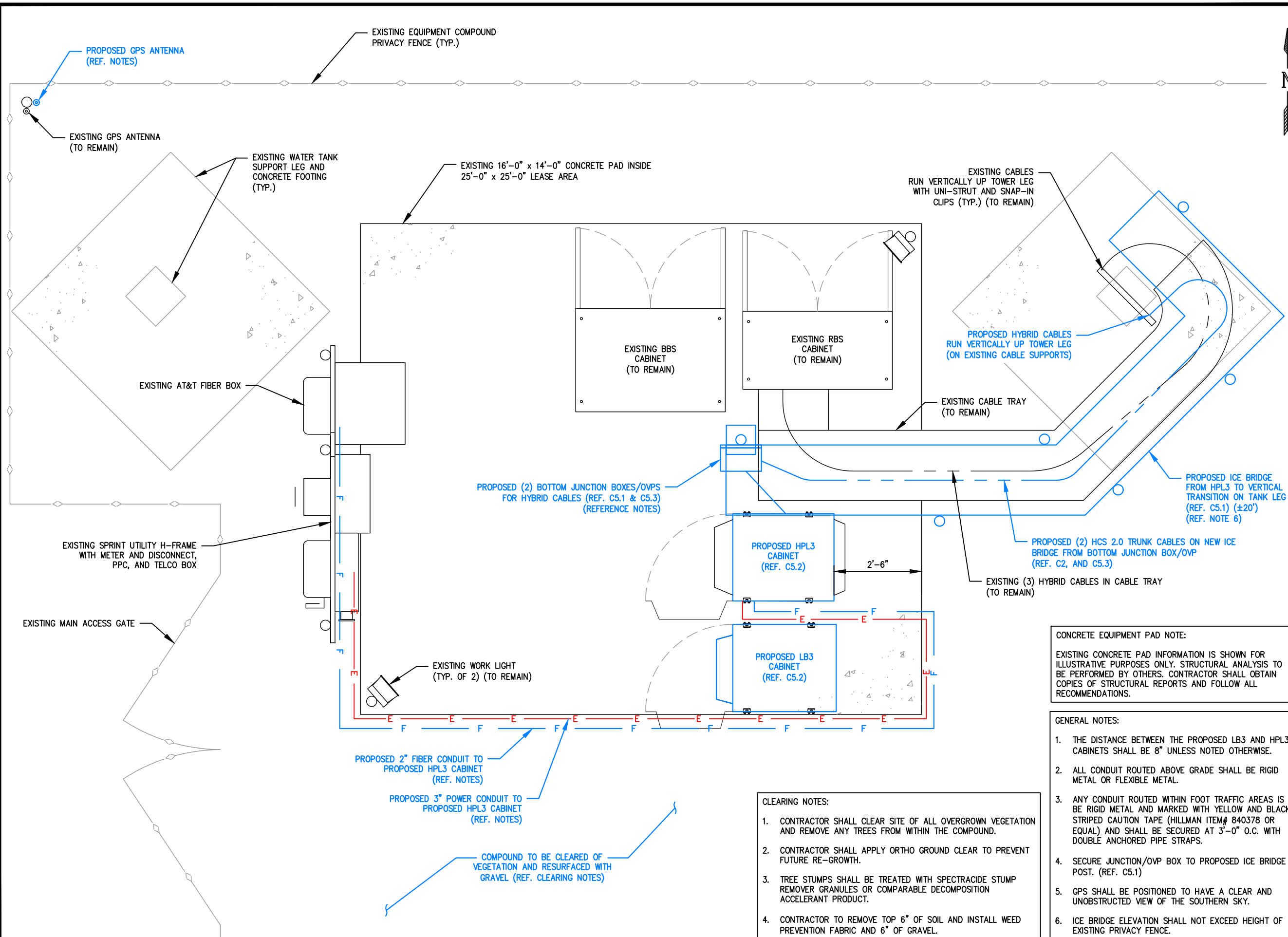
SITE NUMBER:  
**A5C0335A (KC13XC327)**

SITE ADDRESS:  
499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

SHEET TITLE:  
**EXISTING EQUIPMENT PLAN**

SHEET NUMBER:  
**C1.1**



CERTIFICATION AND SEAL:  
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI

04/16/2021  
DATE

M.H. CATALINA MARTINEZ PE-2016011696  
RENEWAL DATE: 12/31/2022

STATE OF MISSOURI  
M.H. CATALINA MARTINEZ  
PE-2016011696  
PROFESSIONAL ENGINEER

MISSOURI CERTIFICATE OF AUTHORIZATION FOR  
KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022

**T-Mobile**

**KGI**

KGI WIRELESS, INC.  
ENGINEERING

805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:  
**LONGVIEW FARM TANK**

SITE NUMBER:  
**A5C0335A (KC13XC327)**

SITE ADDRESS:  
499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

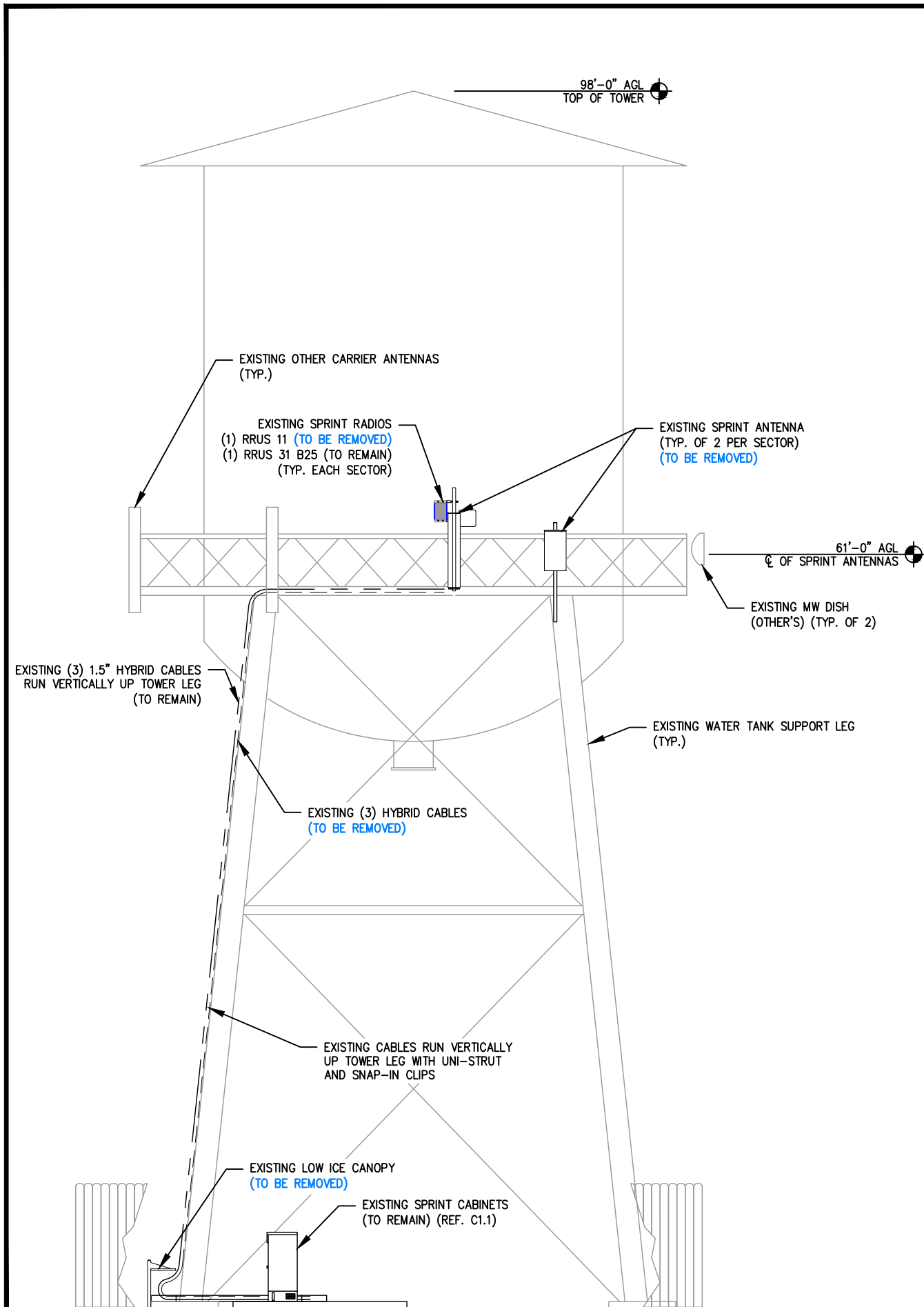
SHEET TITLE:  
**PROPOSED EQUIPMENT PLAN**

SHEET NUMBER:  
**C1.2**

CONCRETE EQUIPMENT PAD NOTE:  
EXISTING CONCRETE PAD INFORMATION IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. STRUCTURAL ANALYSIS TO BE PERFORMED BY OTHERS. CONTRACTOR SHALL OBTAIN COPIES OF STRUCTURAL REPORTS AND FOLLOW ALL RECOMMENDATIONS.

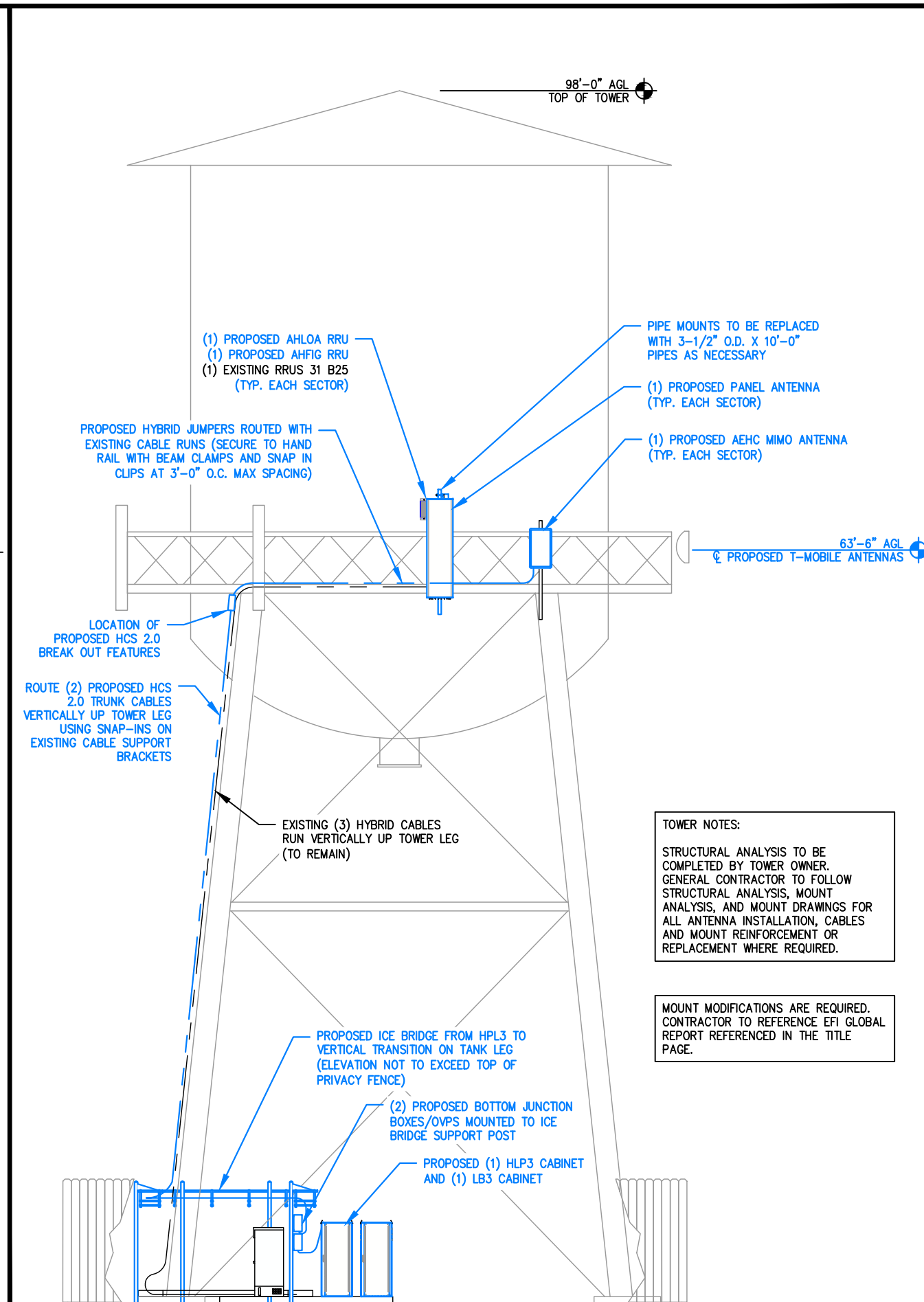
- GENERAL NOTES:
- THE DISTANCE BETWEEN THE PROPOSED LB3 AND HPL3 CABINETS SHALL BE 8" UNLESS NOTED OTHERWISE.
  - ALL CONDUIT ROUTED ABOVE GRADE SHALL BE RIGID METAL OR FLEXIBLE METAL.
  - ANY CONDUIT ROUTED WITHIN FOOT TRAFFIC AREAS IS TO BE RIGID METAL AND MARKED WITH YELLOW AND BLACK STRIPED CAUTION TAPE (HILLMAN ITEM# 840378 OR EQUAL) AND SHALL BE SECURED AT 3'-0" O.C. WITH DOUBLE ANCHORED PIPE STRAPS.
  - SECURE JUNCTION/OVP BOX TO PROPOSED ICE BRIDGE POST. (REF. C5.1)
  - GPS SHALL BE POSITIONED TO HAVE A CLEAR AND UNOBSTRUCTED VIEW OF THE SOUTHERN SKY.
  - ICE BRIDGE ELEVATION SHALL NOT EXCEED HEIGHT OF EXISTING PRIVACY FENCE.

- CLEARING NOTES:
- CONTRACTOR SHALL CLEAR SITE OF ALL OVERGROWN VEGETATION AND REMOVE ANY TREES FROM WITHIN THE COMPOUND.
  - CONTRACTOR SHALL APPLY ORTHO GROUND CLEAR TO PREVENT FUTURE RE-GROWTH.
  - TREE STUMPS SHALL BE TREATED WITH SPECTRACIDE STUMP REMOVER GRANULES OR COMPARABLE DECOMPOSITION ACCELERANT PRODUCT.
  - CONTRACTOR TO REMOVE TOP 6" OF SOIL AND INSTALL WEED PREVENTION FABRIC AND 6" OF GRAVEL.



1 EXISTING TOWER ELEVATION

N.T.S.



2 PROPOSED TOWER ELEVATION

N.T.S.

CERTIFICATION AND SEAL:  
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI

DATE: 04/16/2021

(SIGNATURE)  
M.H. CATALINA MARTINEZ PE-2016011696  
RENEWAL DATE: 12/31/2022



MISSOURI CERTIFICATE OF AUTHORIZATION FOR KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022

**T-Mobile**

**KGI**

KGI WIRELESS, INC.  
ENGINEERING

805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:

**LONGVIEW FARM TANK**

SITE NUMBER:

**A5C0335A (KC13XC327)**

SITE ADDRESS:

499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

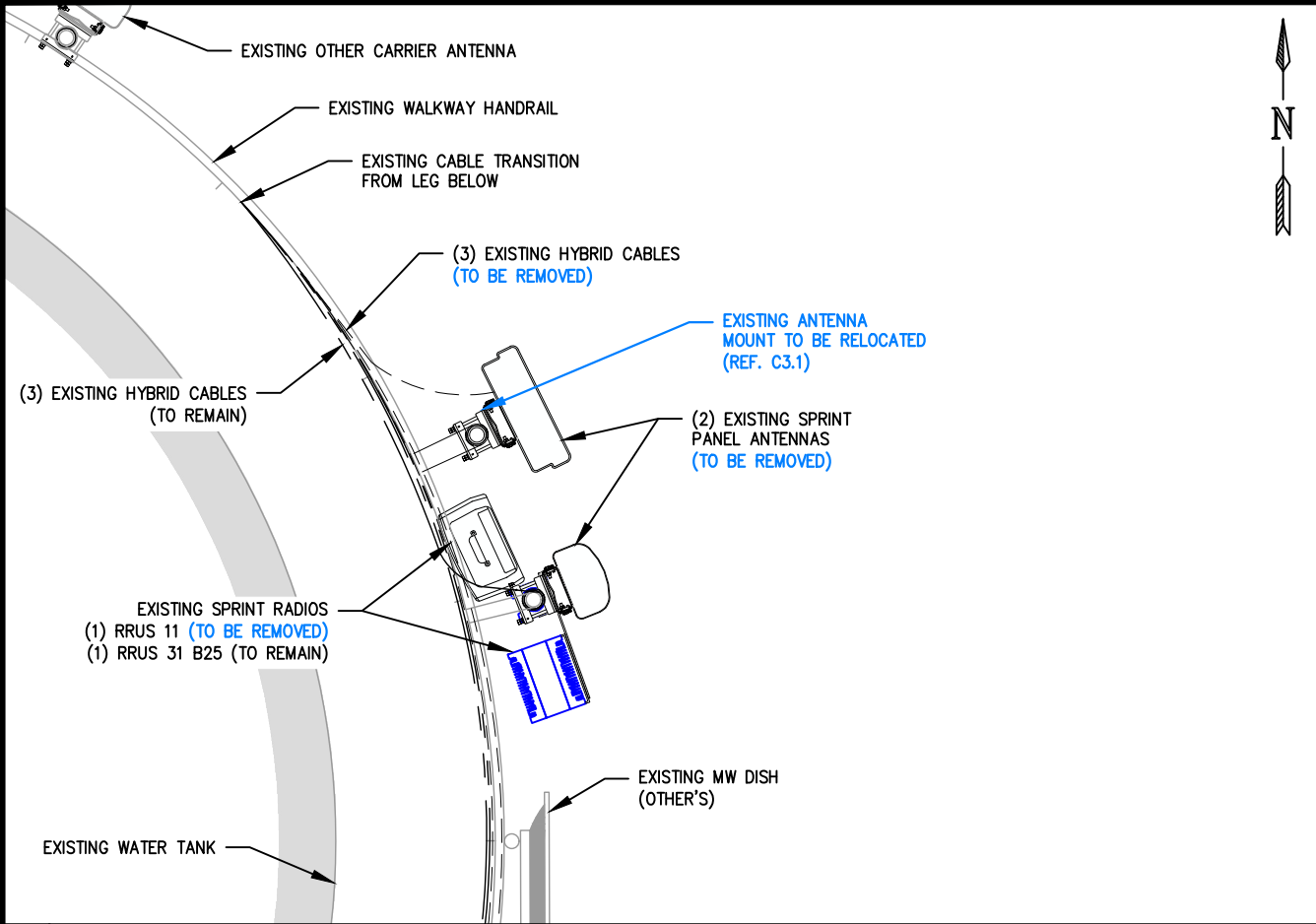
SHEET TITLE:

**TOWER ELEVATIONS**

SHEET NUMBER:

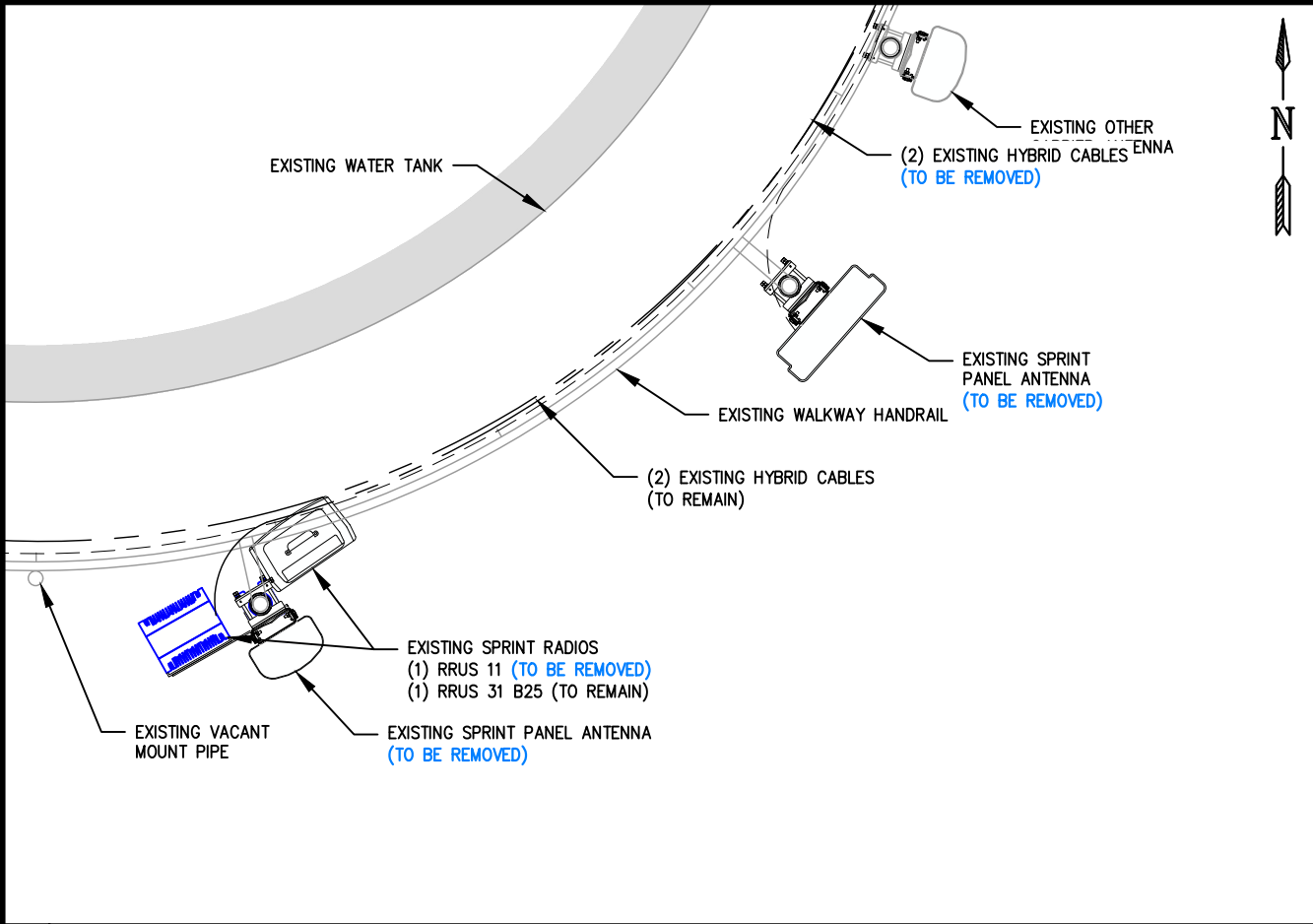
**C2**





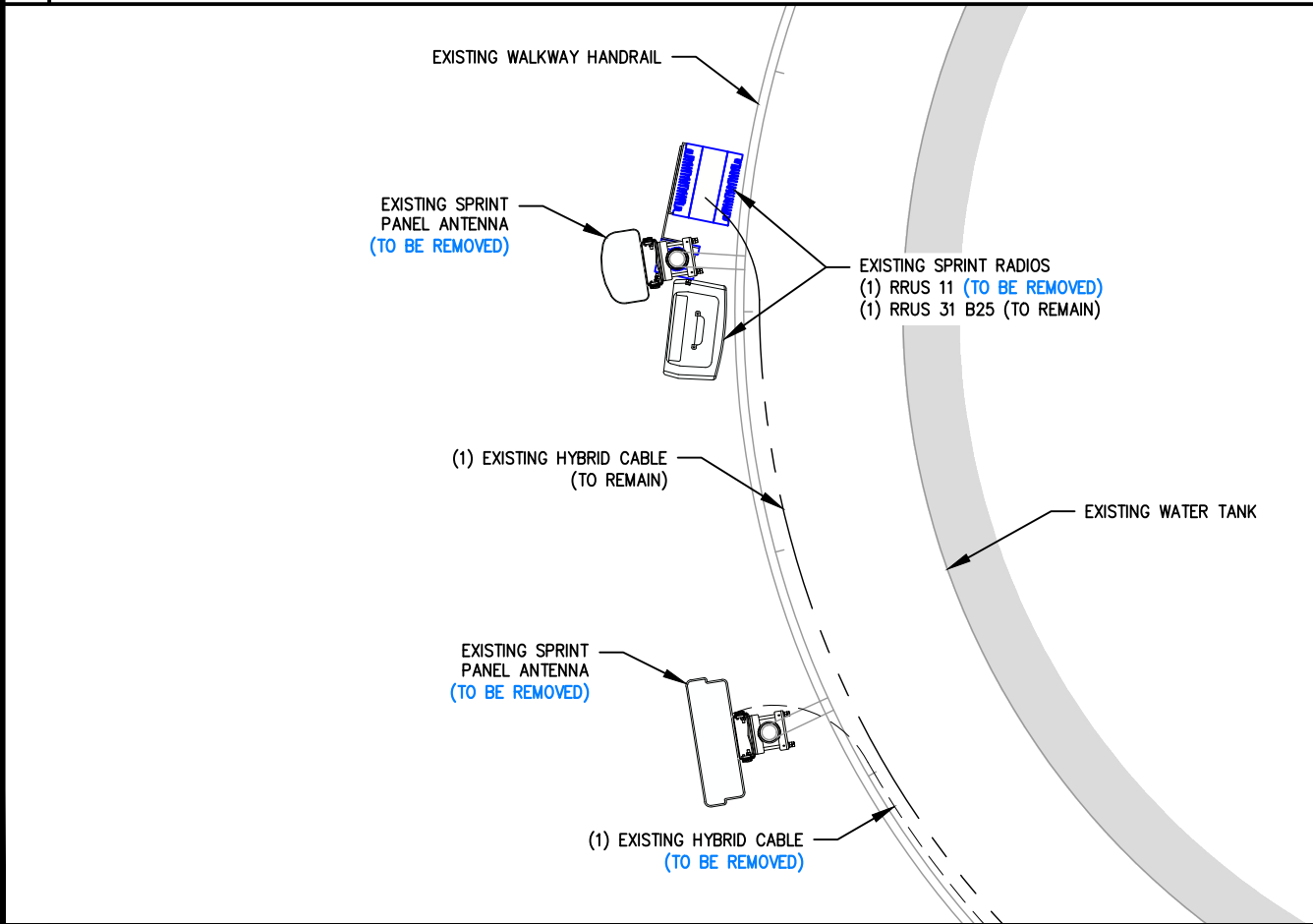
1 EXISTING SECTOR 1 PLAN

N.T.S.



2 EXISTING SECTOR 2 PLAN

N.T.S.



3 EXISTING SECTOR 3 PLAN

N.T.S.



4 NOT USED

N.T.S.

CERTIFICATION AND SEAL:  
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI.  
(SIGNATURE) M.H. CATALINA MARTINEZ PE-2016011696 DATE 04/16/2021  
RENEWAL DATE: 12/31/2022



MISSOURI CERTIFICATE OF AUTHORIZATION FOR KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022

T-Mobile

KGI

KGI WIRELESS, INC.  
ENGINEERING

805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:

LONGVIEW FARM TANK

SITE NUMBER:

A5C0335A (KC13XC327)

SITE ADDRESS:

499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

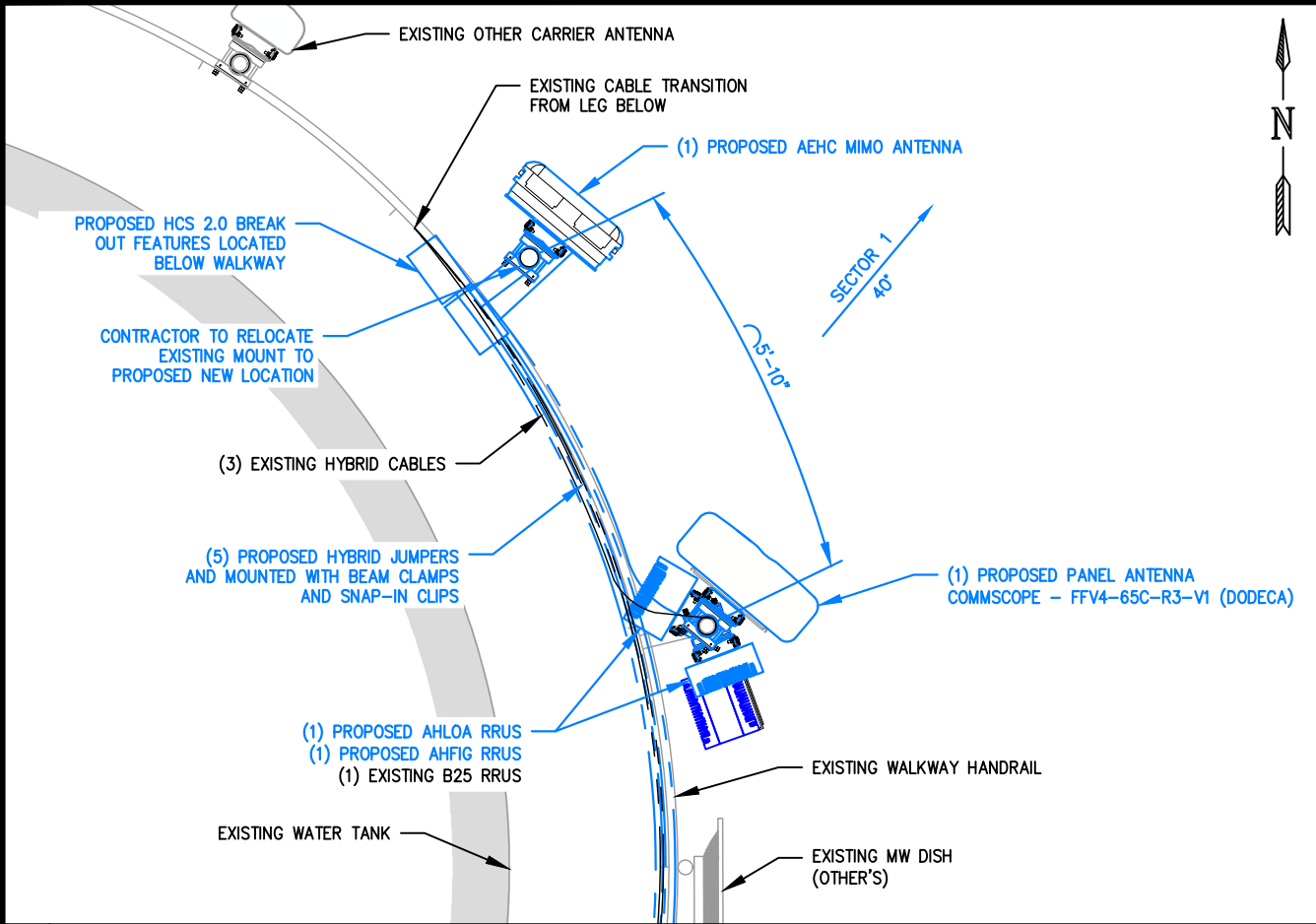

SHEET TITLE:

ANTENNA PLANS

SHEET NUMBER:

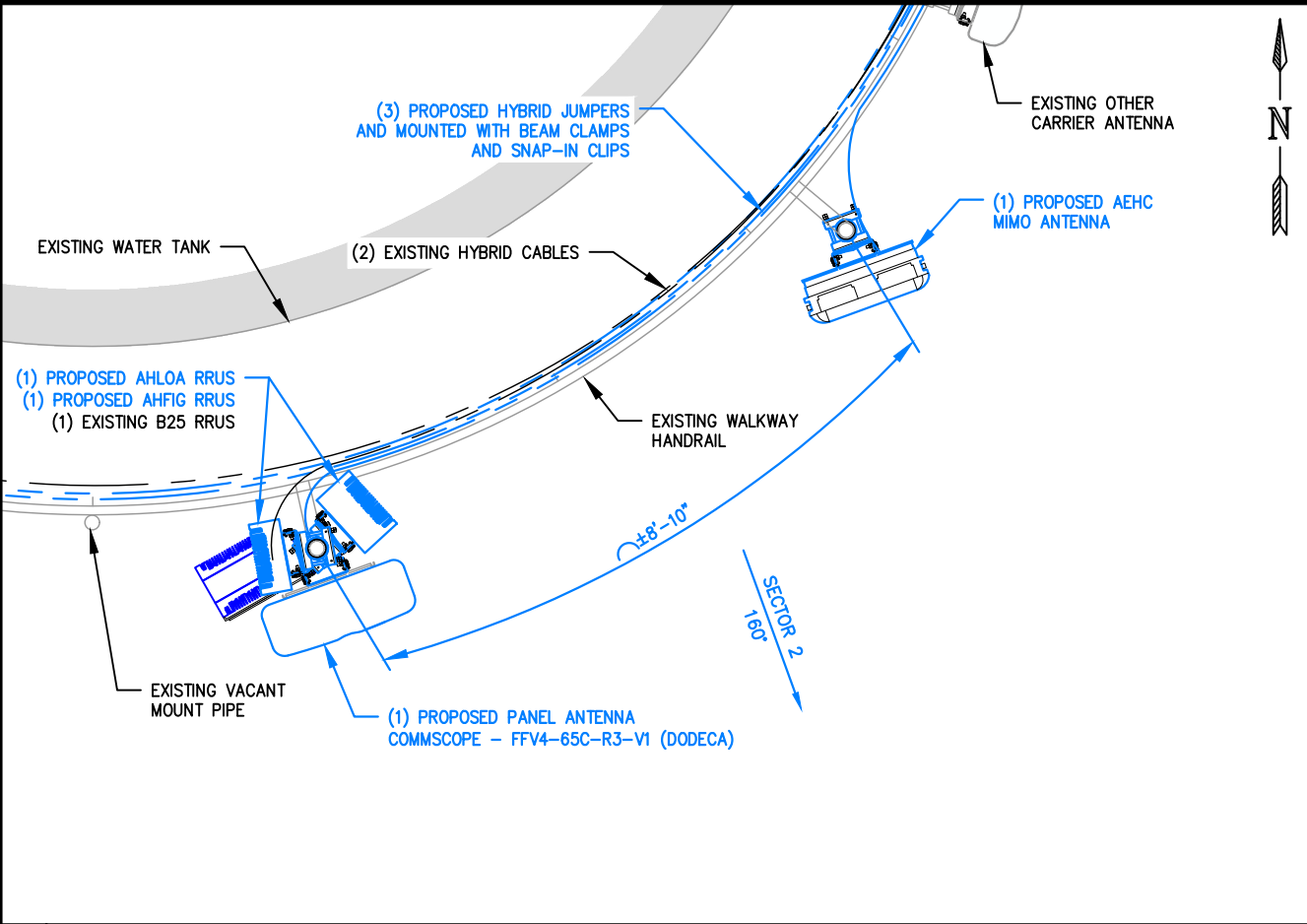
C3





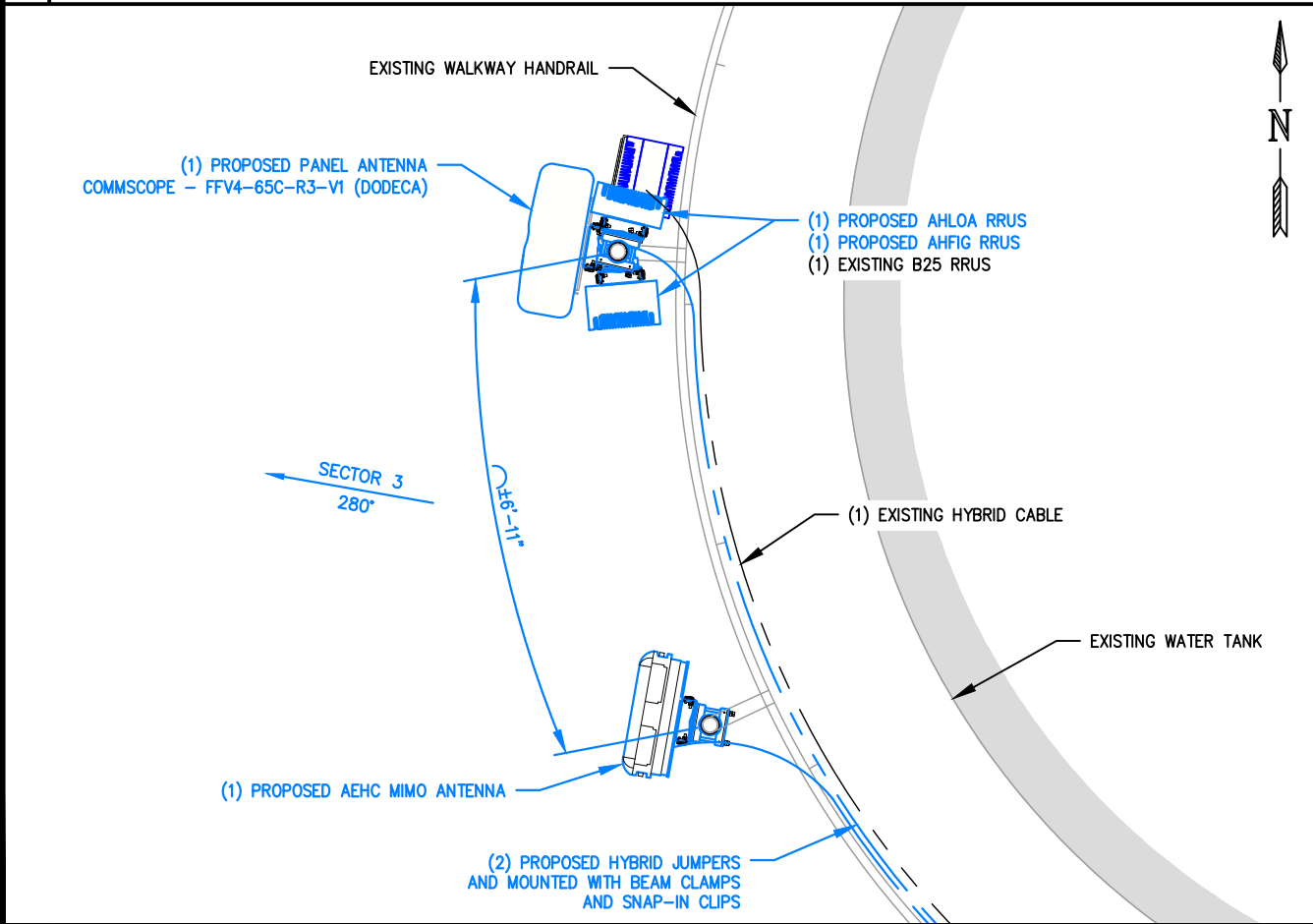
1 PROPOSED ANTENNA PLAN - SECTOR 1

N.T.S.



2 PROPOSED ANTENNA PLAN - SECTOR 2

N.T.S.



3 PROPOSED ANTENNA PLAN - SECTOR 3

N.T.S.

NOTES:

1. REFERENCE FEEDER KEY ON SHEET C4 FOR JUMPER CABLE SIZE AND LENGTHS.
2. PROPOSED EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS AND MOUNT ANALYSIS AS REFERENCED IN THE TITLE PAGE HEREIN.
3. NEW SECTOR LEVEL EQUIPMENT TO BE INSTALLED IN ACCORDANCE WITH THE STRUCTURAL ANALYSIS.

INSTALL PER MOST CURRENT RFDS.  
CONFIRM WITH T-MOBILE CONSTRUCTION  
MANAGER PRIOR TO BEGINNING WORK.

4 NOTES

N.T.S.

CERTIFICATION AND SEAL: I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI.  
DATE 04/16/2021  
(SIGNATURE) M.H. CATALINA MARTINEZ PE-2016011696  
RENEWAL DATE: 12/31/2022



MISSOURI CERTIFICATE OF AUTHORIZATION FOR KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022

T-Mobile

KGI

KGI WIRELESS, INC.  
ENGINEERING

805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:

LONGVIEW FARM TANK

SITE NUMBER:

A5C0335A (KC13XC327)

SITE ADDRESS:

499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

SHEET TITLE:

ANTENNA PLANS

SHEET NUMBER:

C3.1

ANTENNA NOTES:

1. ALL FEEDLINE LENGTHS INDICATED ON RFDS ARE APPROXIMATE
2. ANTENNA COAXIAL FEEDERS AND ANTENNA JUMPERS SHALL BE COLOR CODED PER T-MOBILE REQUIREMENTS. THE FOLLOWING CHECKER STRIPE WHALL BE ADDED TO EACH ANTENNA FEEDLINE AND JUMPER
- LTE 600 – SOLID WHITE
- LTE 700 – RED-BLACK CHECKER STRIPE
- LTE PCS – GREEN-BLACK CHECKER STRIPE
- LTE AWS – YELLOW-BLACK CHECKER STRIPE
- UMTS PCS – RED-WHITE CHECKER STRIPE
- UMTS AWS – GREEN WHITE CHECKER STRIPE
- GSM PCS – BLACK-WHITE CHECKER STRIPE
- 1900 – PCS
- 2100 – AWS
- L – LTE
- U – UMTS
- G – GSM

EXAMPLE:

- L1900 – LTE PCS – GREEN BLACK
- L2100 – LTE AWS – YELLOW BLACK
- U1900 – UMTS PCS – RED WHITE
- G1900 – GSM PCS – BLACK WHITE
3. IN ADDITION TO THE COLOR CODE, THE FOLLOWING ANTENNA SECTOR COLOR STRIPE SHALL BE ADDED TO EACH ANTENNA SECTOR FEEDLINE AND JUMPER
- ALPHA – RED STRIPE
- BETA – YELLOW STRIPE
- GAMMA – BLUE STRIPE
- DELTA – GREEN STRIPE
- EPSILON – WHITE STRIPE
- ZETA – PURPLE STRIPE
- HYBRID – GRAY STRIPE
4. ALL COAXIAL FEEDERS SHALL BE TAGGED WITH COLOR CODING IN (2) PLACES, AS CLOSE TO THE END AS POSSIBLE WITHOUT INTERFERING WITH WATERPROOFING
- #1 – AT ANTENNA CONNECTION
- #2 – AT ENTRY TO EQUIPMENT CABINET OR SHELTER
5. TERMINATE UNUSED ANTENNA PORTS AT MULTI-PORT ANTENNAS WITH CONNECTOR CAP AND WEATHERPROOF THOROUGHLY. JUMPERS FROM TMA’S MUST TERMINATE TO OPPOSITE POLARIZATIONS IN EACH SECTOR.
6. MINIMUM BEND RADIUS
- LDF4-50 (1/2” HARD LINE) – 5”
- FSJ4-50B (1/2” SUPERFLEX) – 1-1/4”
- AVA5-50A (7/8” HARD LINE) – 10”
- AVA7-50A (1-5/8” HARD LINE) – 15”
- LDF7-50 (1-5/8” HARD LINE) – 20”
7. ALL ANTENNA CONNECTORS TO BE WEATHERPROOFED WITH SELF-AMALGAMATING TAPE. PROVIDE HEAT-SHRINK IN PLACE OF TAPE FOR QUAD POLES AND TMA’S.
8. VERTICAL CONNECTORS SHALL BE TAPED FROM THE BOTTOM SO OVERLAP MOVES WATER AWAY FROM THE CONNECTION.
9. ALL COAXIAL FEEDLINES REQUIRE CABLE SUPPORT EVERY 3’-0” ON CENTER. CONTRACTOR TO SUPPLY SUPPORTS AS NECESSARY TO MEET THIS REQUIREMENT.
10. CONTRACTOR TO FURNISH AND INSTALL A MINIMUM OF (3) GROUND KITS PER COAXIAL CABLE. CONTRACTOR TO VERIFY NUMBER OF ANTENNAS, CABLES AND CABLE DIAMETERS WITH T-MOBILE CONSTRUCTION MANAGER.
11. CONTRACTOR TO INSURE THAT ALL MOUNTING PIPES FOR PROPOSED ANTENNAS ARE PLUMB
12. CONTRACTOR SHALL PERFORM A TAPE DROP MEASUREMENT TO CONFIRM/VALIDATE ANTENNA CENTERLINE (AGL) HEIGHT. CONTRACTOR SHALL SUBMIT A COMPLETED HEIGHT VERIFICATION FORM TO THE CONSTRUCTION MANAGER
13. CONTRACTOR TO FOLLOW ALL MANUFACTURER’S RECCOMENDATIONS REGARDING THE INSTALLATION OF FEEDLINES, CONNECTORS AND ANTENNAS

EXISTING ANTENNA KEY													
SECTOR	STATUS	POSITION	TECH.	ANTENNA VENDOR	Antenna Model	Azimuth (°)	E. DOWNTILT	M. DOWNTILT	CENTERLINE	COAX FEEDLINE		HYBRID FEEDLINE	
										QTY (SIZE)	LENGTH	(QTY) SIZE	COLOR CODE
SECTOR 1	TO BE REMOVED	A-1	-	RFS	APXVSPP18	60	-	-	61		-	(1) 1.5" HYBRID	-
		A-2	-	ERICSSON	IP 65					(1) 7/8" HYBRID	-		
SECTOR 2	TO BE REMOVED	B-1	-	RFS	APXVSPP18	60	-	-	61		-	(1) 1.5" HYBRID	-
		B-2		ERICSSON	IP 65					(1) 7/8" HYBRID	-		
SECTOR 3	TO BE REMOVED	C-1	-	RFS	APXVSPP18	60	-	-	61		-	(1) 1.5" HYBRID	-
		C-2		ERICSSON	IP 65					(1) 7/8" HYBRID	-		
Notes:													
(3) 7/8" HYBRID CABLES TO BE REMOVED													
(3) 1.5" HYBRID CABLES TO REMAIN													

PROPOSED ANTENNA KEY													
SECTOR	STATUS	POSITION	TECH.	ANTENNA VENDOR	Antenna Model	Azimuth (°)	E. DOWNTILT	M. DOWNTILT	CENTERLINE	COAX FEEDLINE		HYBRID FEEDLINE	
										QTY (SIZE)	LENGTH	(QTY) SIZE	COLOR CODE
SECTOR 1	PROPOSED	A-1	L1900, C1900 N600, L600, L700, L2100, L1900, LAWS3, G1900	COMMSCOPE	FFV4-65C-R3-V1	40	REFERENCE RFDS	0	63'-6"	-	-	(1) HCS 2.0 HYBRID TRUNK CABLE	GRAY 1
	PROPOSED	A-2	LTE+5G	NOKIA	AEHC	40	REFERENCE RFDS	0	63'-6"			(1) HCS 2.0 HYBRID TRUNK CABLE	GRAY 2
												(1) 1.5" HYBRID	GRAY 3
SECTOR 2	PROPOSED	B-1	L1900, C1900 N600, L600, L700, L2100, L1900, LAWS3, G1900	COMMSCOPE	FFV4-65C-R3-V1	160	REFERENCE RFDS	0	63'-6"	-	-	SHARED GRAY 1	-
	PROPOSED	B-2	LTE+5G	NOKIA	AEHC	160	REFERENCE RFDS	0	63'-6"			SHARED GRAY 2	
												(1) 1.5" HYBRID	GRAY 4
SECTOR 3	PROPOSED	C-1	L1900, C1900 N600, L600, L700, L2100, L1900, LAWS3, G1900	COMMSCOPE	FFV4-65C-R3-V1	280	REFERENCE RFDS	0	63'-6"	-	-	SHARED GRAY 1	-
	PROPOSED	C-2	LTE+5G	NOKIA	AEHC	280	REFERENCE RFDS	0	63'-6"			SHARED GRAY 2	
												(1) 1.5" HYBRID	GRAY 5
Notes: <div>(2) Proposed HCS 2.0 Hybrid trunk cables with breakout feature.</div> <div>(2) Proposed HCS 2.0 Junction box, Raycap RTMDC-5634-PF-48.</div> <div>Retained RRUS 31 B25 to connect to Sprint legacy ground radio using existing hybrid cable (7/16" DIN RF JUMPER CONNECTORS)</div>													

EQUIPMENT KEY - SECTOR LEVEL						
LOCATION	VENDOR	EQUIP. TYPE	EQUIP. MODEL	TECH.	QTY	STATUS
	ERICSSON	RRU	RRUS 11	-	3	TO BE REMOVED
	ERICSSON	RRU	RRUS 31	-	3	TO REMAIN
	NOKIA	RRU	AHFIG	LTE/AWS/GSM PCS	3	PROPOSED
	NOKIA	RRU	AHLOA	L700/L600/N600	3	PROPOSED

FEEDER KEY - SECTOR LEVEL						
LOCATION	VENDOR	EQUIPMENT	MODEL NUMBER	LENGTH	QTY	STATUS
TOWER LEG	-	TRUNK CABLE	HCS 2.0	90'	2	PROPOSED
TOWER LEG	-	1.5" HYBRID CABLE	-	EXISTING	3	TO REMAIN
TOWER LEG	-	HYBRID CABLE	-	EXISTING	3	TO BE REMOVED
TO SECTOR 1	AIRSCALE	LONG HYBRID JUMPER CABLE	AMPHENOL C10-748591-Z2S POWER & RADIALL R2CT FIBER CONNECTORS	15'	3	PROPOSED
TO SECTOR 2	AIRSCALE	LONG HYBRID JUMPER CABLE		1 @ 35' 1 @ 44'	3	PROPOSED
TO SECTOR 3	AIRSCALE	LONG HYBRID JUMPER CABLE		1 @ 57' 1 @ 64'	3	PROPOSED
SECTOR 1 RRU TO ANTENNA	-	1/2" JUMPER CABLE		10'	12	PROPOSED
SECTOR 2 RRU TO ANTENNA	-	1/2" JUMPER CABLE	-	10'	12	PROPOSED
SECTOR 3 RRU TO ANTENNA	-	1/2" JUMPER CABLE	-	10'	12	PROPOSED

EQUIPMENT KEY - GROUND LEVEL						
LOCATION	VENDOR	EQUIP. TYPE	EQUIP. MODEL	TECH	QTY	STATUS
CABINET	NOKIA	SYSTEM MODULE	ASIB	L600/L700/LAWS3/L1900/L2100	1	PROPOSED
		SYSTEM MODULE	ASIK	N2500	1	PROPOSED
		SYSTEM MODULE	ASIK	N600	1	PROPOSED
		SYSTEM MODULE	ASIB	L2500	1	PROPOSED
		SYSTEM MODULE	FSMF	G1900	1	PROPOSED
		SYSTEM MODULE	ABIA	LAWS3/L1900/L2100	2	PROPOSED
		SYSTEM MODULE	ABIA	L600/L700	1	PROPOSED
		SYSTEM MODULE	ABIL	N2500	3	PROPOSED
		SYSTEM MODULE	ABIL	N600	1	PROPOSED
		SYSTEM MODULE	ABIC	L2500	3	PROPOSED
		SYSTEM MODULE	AMIA	-	2	PROPOSED
GROUND	-	BBS CABINET	LEGACY SPRINT BATTERIES	BATTERIES	1	TO REMAIN
GROUND	-	RBS CABINET	LEGACY SPRINT BB FOR B25	CDMA	1	TO REMAIN
GROUND	RAYCAP	COVP	RTMDC-5634-PF-48	-	2	PROPOSED

CERTIFICATION AND SEAL OF THIS PLAN, SPECIFICATION, OR I HEREBY CERTIFY THAT THIS REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI

04/16/2021  
(SIGNATURE) DATE  
M.H. CATALINA MARTINEZ PE-2016011696  
RENEWAL DATE: 12/31/2022



MISSOURI CERTIFICATE OF AUTHORIZATION FOR KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022



KGI WIRELESS, INC.  
ENGINEERING  
  
805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:

LONGVIEW FARM TANK

SITE NUMBER:

A5C0335A (KC13XC327)

SITE ADDRESS:  
499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021


SHEET TITLE:

EQUIPMENT KEYS

SHEET NUMBER:

C4

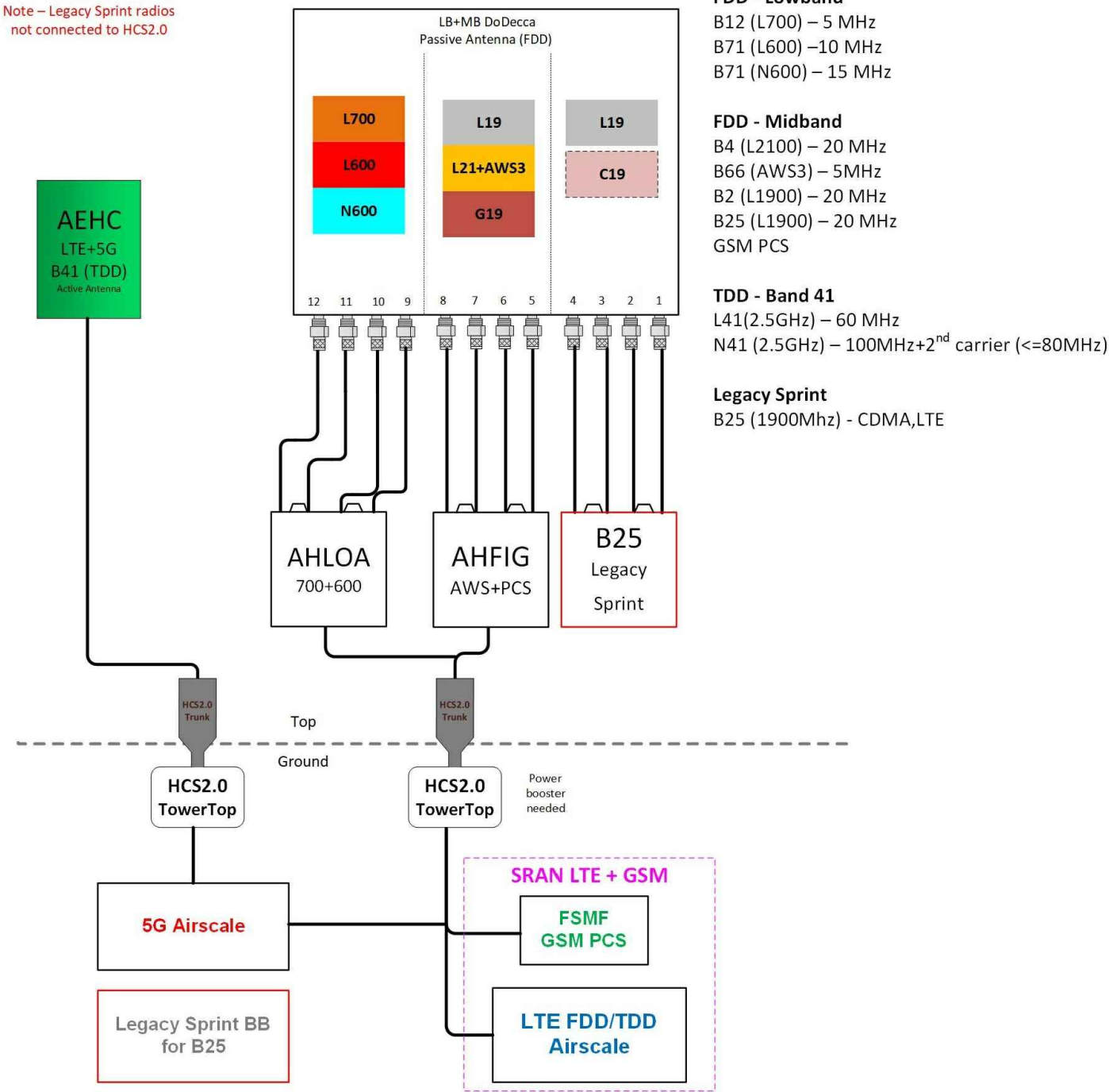
Configuration 56791EC\_SR\_no B26

\* For 5G and LTE Airscale BB dimensioning refer to Fiber Port matrices.

(Alpha , Beta & Gamma)

(\*Only Alpha sector is shown in the drawing)

Note – Legacy Sprint radios  
not connected to HCS2.0



FDD - Lowband

B12 (L700) – 5 MHz  
B71 (L600) –10 MHz  
B71 (N600) – 15 MHz

FDD - Midband

B4 (L2100) – 20 MHz  
B66 (AWS3) – 5MHz  
B2 (L1900) – 20 MHz  
B25 (L1900) – 20 MHz  
GSM PCS

TDD - Band 41

L41(2.5GHz) – 60 MHz  
N41 (2.5GHz) – 100MHz+2<sup>nd</sup> carrier (<=80MHz)

Legacy Sprint

B25 (1900Mhz) - CDMA,LTE

Proposed RAN Equipment				
Template: 56791EC_SR_no B26				
Enclosure	1	2	3	4
Enclosure Type	Delta HPL3 600A DC plant	Tower Top Mount (Nokia)	Ancillary Equipment (Nokia)	Delta LB3 Battery Cabinet (4 strings)
Baseband	ASIB (L700, L600, LAWS3, L2100, L1900) ASIK (N2500, N600) ASIB (L2500, G1900)			
Baseband Submodule	ABIA (x 2) (LAWS3, L2100, L1900) ABIA (L700, L600) ABIL (x 3) (N2500, N600) ABIC (x 3) (L2500)			
Baseband Subrack	AMIA (x 2)			
Hybrid Cable System	Voltage Booster needed if hybrid under 250' Extra Booster Amplifier needed if hybrid under 250'		Nokia HCS 2.0 Trunk *Select Length* (x 2)	
Junction Box			Nokia HCS 2.0 Tower Junction Box (x 2)	
Power subsystem	Rectifier Shelf *Select size* Breakers *Select size*			Batteries *Select size*
Radio		AHLOA (x 3) (L700, L600, N600) AHFIG (x 3) (LAWS3, L2100, G1900, L1900) (Sprint) Ericsson RRUS31 B25 4T4R RRU with 7-16 (x 3) (L1900, C1900)		
Transport System	CSR IXRe V1 (Gen1)			
RAN Scope of Work:				
Keep Site - (L1900/C1900) N2500, L2500, N600, L600, L700, LAWS3, L2100, L1900, GSM				
Retaining Legacy Sprint RRU's (3) Ericsson RRUS31 B25 4T4R RRU with 7-16				
Install (3) AEHC Install (3) AHLOA Install (3) AHFIG Install (3) Commscope - FFV4-65C-R3-V1				
Install (2) HCS 2.0 Hybrid Trunk Cables with Breakout Feature Install (2) HCS 2.0 Junction Boxes at the BTS, Raycap RTMDC-5634-PF-48				

CONTRACTOR TO VERIFY RFDS INFORMATION IN CONSTRUCTION DRAWINGS WITH RFDS FOUND IN CONSTRUCTION NTP PACKAGE. CONTRACTOR TO CONTACT T-MOBILE CONSTRUCTION MANAGER FOR CLARIFICATION IF ANY DISCREPANCIES ARE FOUND.

CERTIFICATION AND SEAL  
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI

04/16/2021  
DATE  
M.H. CATALINA MARTINEZ PE-2016011696  
RENEWAL DATE: 12/31/2022



MISSOURI CERTIFICATE OF AUTHORIZATION FOR  
KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022

T-Mobile

KGI

KGI WIRELESS, INC.  
ENGINEERING

805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:

LONGVIEW FARM TANK

SITE NUMBER:

A5C0335A (KC13XC327)

SITE ADDRESS:

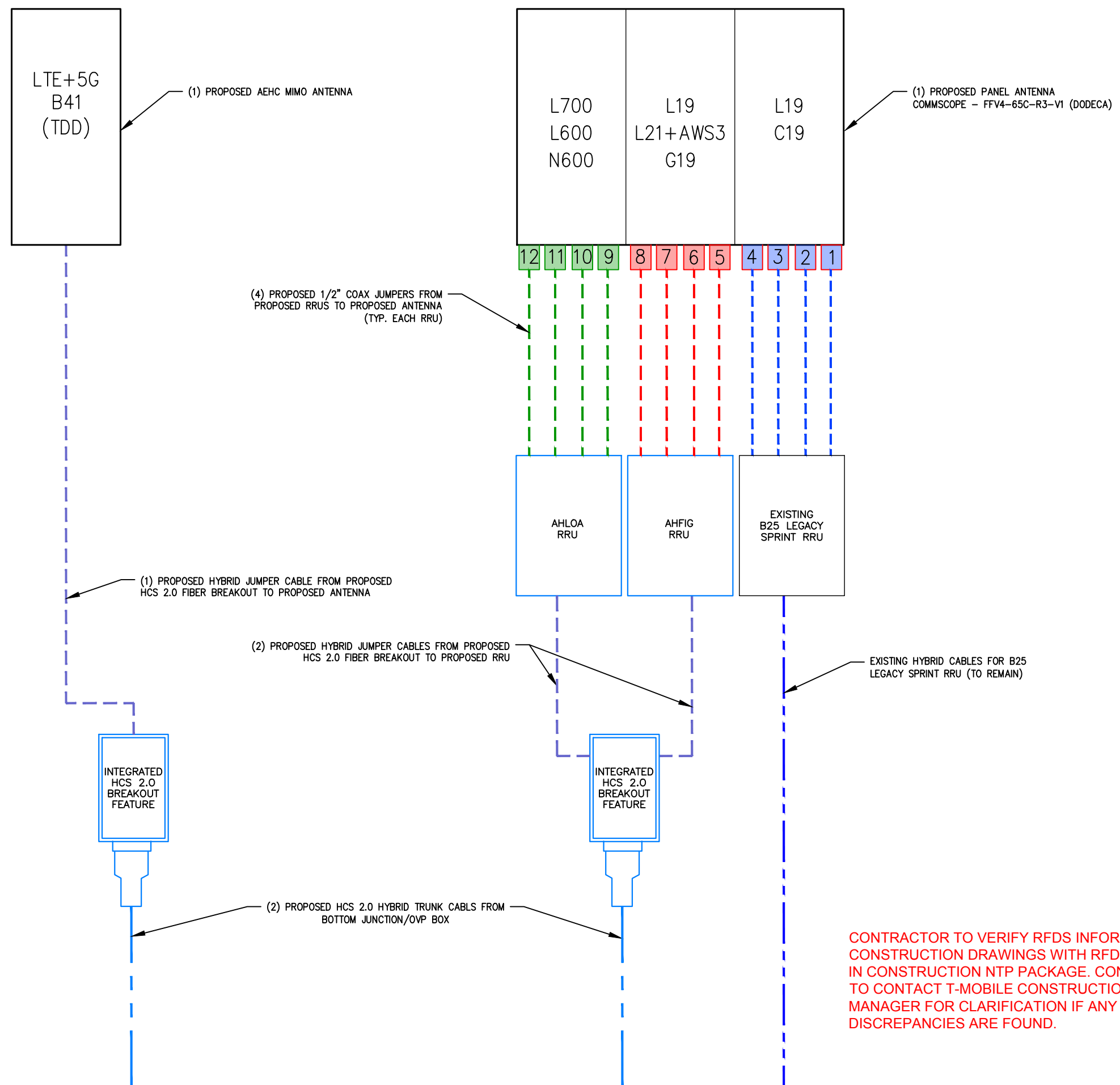
499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

SHEET TITLE:  
RF DATA AND  
PLUMBING DIAGRAM

SHEET NUMBER:  
C4.1





CERTIFICATION AND SEAL: I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI.  
DATE: 04/16/2021  
SIGNATURE: M.H. CATALINA MARTINEZ PE-2016011696  
RENEWAL DATE: 12/31/2022



MISSOURI CERTIFICATE OF AUTHORIZATION FOR KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022



KGI WIRELESS, INC.  
ENGINEERING  
805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:

LONGVIEW FARM TANK

SITE NUMBER:

A5C0335A (KC13XC327)

SITE ADDRESS:

499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

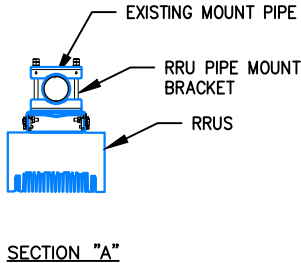
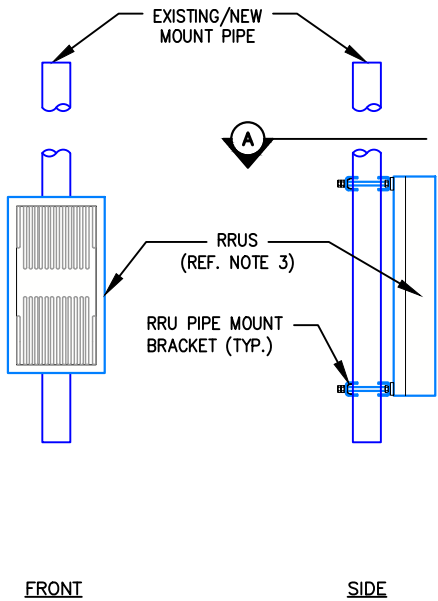
SHEET TITLE:  
ANTENNA ONE-LINE  
DIAGRAM

SHEET NUMBER:  
C4.2

CONTRACTOR TO VERIFY RFDS INFORMATION IN CONSTRUCTION DRAWINGS WITH RFDS FOUND IN CONSTRUCTION NTP PACKAGE. CONTRACTOR TO CONTACT T-MOBILE CONSTRUCTION MANAGER FOR CLARIFICATION IF ANY DISCREPANCIES ARE FOUND.



- NOTES:
1. CONTRACTOR SHALL MAKE ANY AND ALL CHANGES OR MODIFICATIONS AS SPECIFIED IN THE MOUNT ANALYSIS PRIOR TO INSTALLING ANY NEW EQUIPMENT.
  2. ANY EQUIPMENT PLACEMENT, POSITIONS, INSTALLATION PROCEDURES, OR HARDWARE REQUIREMENTS SPECIFIED IN THE MOUNT ANALYSIS SHALL TAKE PRECEDENCE OVER THIS DETAIL.
  3. EXISTING RRUS 31 MAY REQUIRE NEW ADDITIONAL ERICSSON MOUNTING KIT SXX1250244/1.
  4. REFERENCE THE "EQUIPMENT KEY – SECTOR LEVEL" TABLE FOR SITE SPECIFIC RRU COUNTS AND MODEL INFORMATION.
  5. EQUIPMENT ORIENTATION SHOWN IS FOR ILLUSTRATIVE PURPOSES. REFERENCE PLANS AND ELEVATIONS FOR EQUIPMENT PLACEMENT.
  6. CARE SHALL BE TAKEN NOT TO VIOLATE THE MINIMUM BENDING RADIUS OF ALL JUMPERS. (NOT SHOWN)



1 TYPICAL RRU MOUNTING DETAIL N.T.S.

CONTRACTOR TO  
REFERENCE PORT  
MATRIX FOUND IN  
CONSTRUCTION NTP  
PACKAGE FOR RET  
ACTUATOR NAMING

2 RET ACTUATOR NAMING CONVENTION

BSAMNT-4



Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

General Specifications

Application	Outdoor
Color	Silver
Dimensions	
Compatible Diameter, maximum	115 mm   4.528 in
Compatible Diameter, minimum	60 mm   2.362 in
Material Specifications	
Material Type	Galvanized steel

BSAMNT-M4



Middle Downtilt Mounting Kit for Long Antennas for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor bracket set.

General Specifications

Application	Outdoor
Color	Silver
Dimensions	
Compatible Diameter, maximum	114.3 mm   4.5 in
Compatible Diameter, minimum	61 mm   2.402 in
Material Specifications	
Material Type	Galvanized steel

3 ANTENNA MOUNTING BRACKETS

CERTIFICATION AND SEAL:  
I HEREBY CERTIFY THAT THE PLAN, SPECIFICATION, OR  
REPORT WAS PREPARED BY ME OR UNDER MY DIRECT  
SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL  
ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI

(SIGNATURE) DATE  
M.H. CATALINA MARTINEZ PE-2016011696  
RENEWAL DATE: 12/31/2022



MISSOURI CERTIFICATE OF AUTHORIZATION FOR  
KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022

T-Mobile

KGI

KGI WIRELESS, INC.  
ENGINEERING

805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:

LONGVIEW FARM TANK

SITE NUMBER:

A5C0335A (KC13XC327)

SITE ADDRESS:

499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

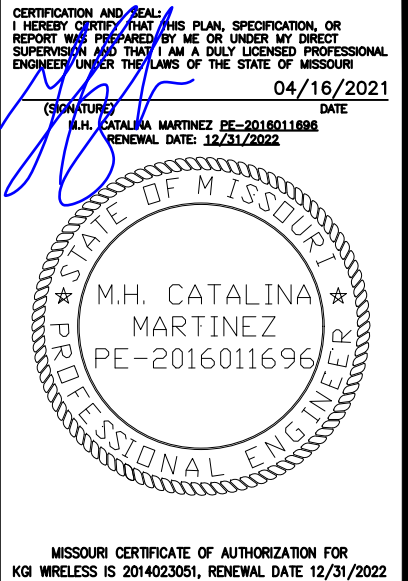
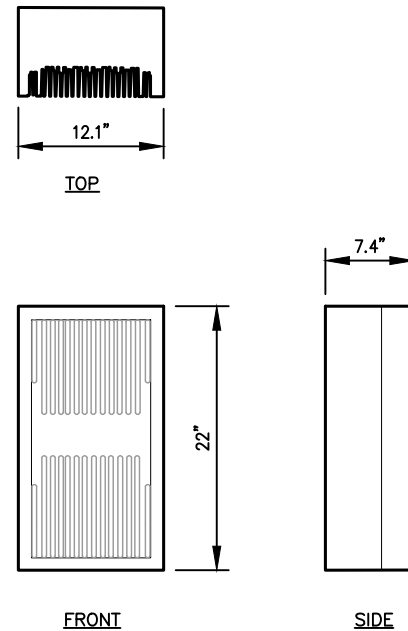
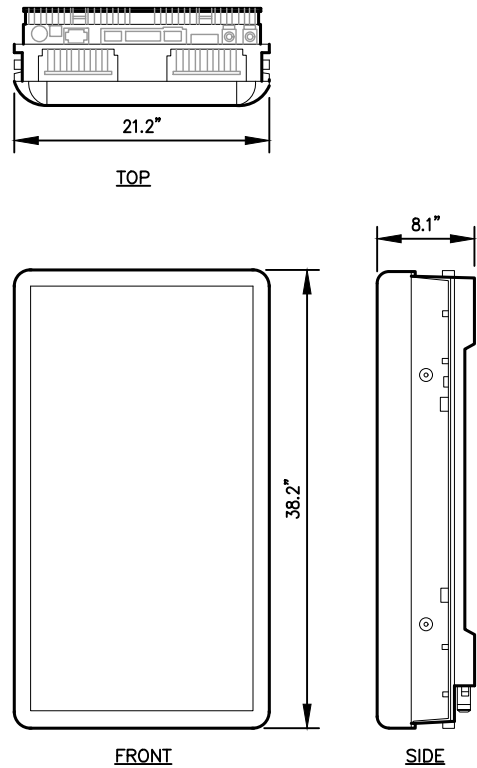
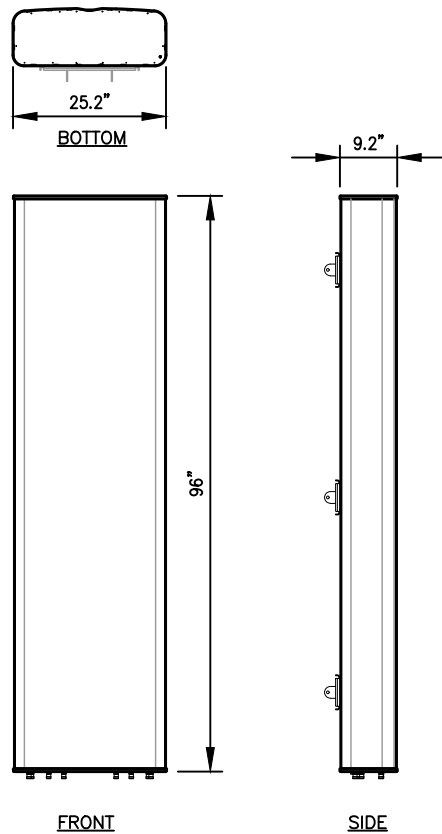
REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

SHEET TITLE:

INSTALLATION DETAILS

SHEET NUMBER:

C5



KGI WIRELESS, INC.  
ENGINEERING  
805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:  
**LONGVIEW FARM TANK**  
SITE NUMBER:  
**A5C0335A (KC13XC327)**  
SITE ADDRESS:  
499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

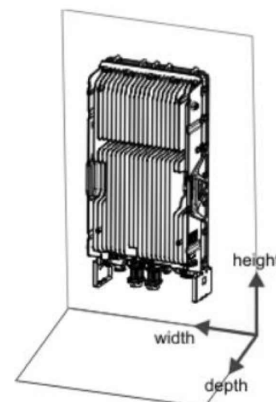
SHEET TITLE:  
**INSTALLATION DETAILS**

SHEET NUMBER:  
**C5.1**

#### 1 PROPOSED FFV4-65C-R3-V1 ANTENNA

N.T.S.

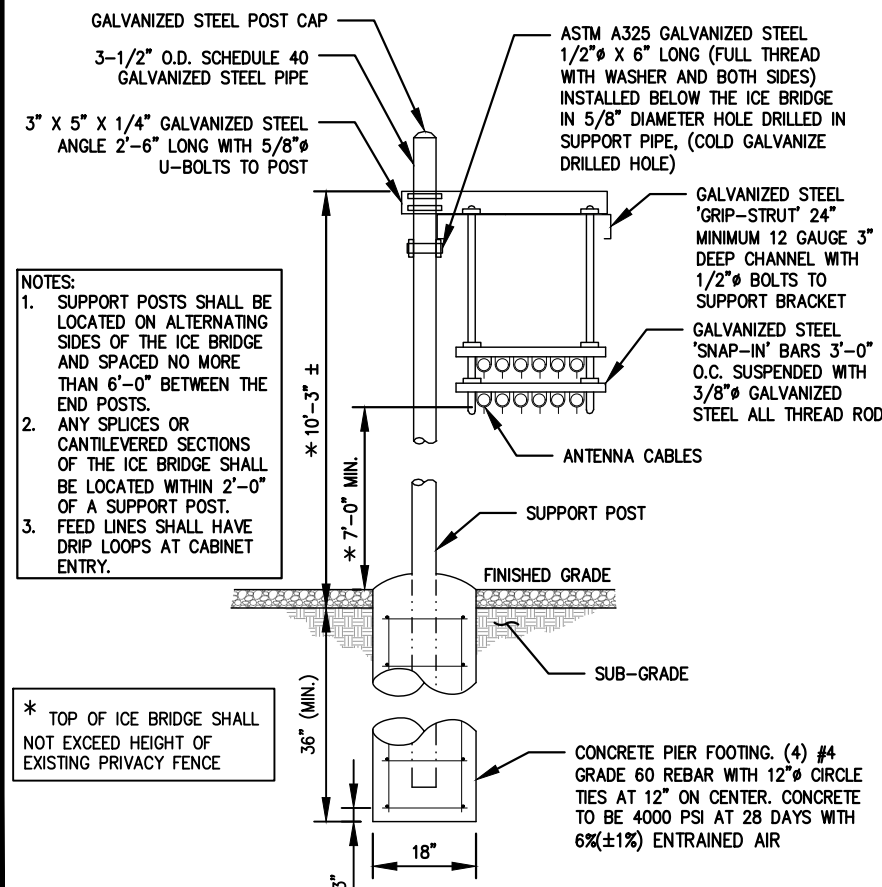
Band	B25 + B66
Instantaneous BW (DL/UL)	65MHz on Band 25, 80MHz on Band 66
Supported Modulation schemes	up to 64QAM (UL) and up to 256QAM (DL)
Supported bandwidths	LTE 1.4,3,5,10,15,20 MHz
No. of ports	4T4R
Output Power	80 W for Band 25 and 40 W for Band 66 (Total Power is 480W)
Fiber Ports	2 x 9.8Gbps CPRI
RF Connector	4.3-10+
AISG	AISG on all ports, DC on ANT1 and ANT3
Dimensions (H x W x D) in	27.4 x 12.1 x 5.2
Weight lbs	79.3 without cover
HW/SW Availability	Sept'19 – SRAN19A
5G NR Support	YES



#### 4 PROPOSED AHFIG RRU DETAIL

#### 2 PROPOSED AEHC MIMO ANTENNA

N.T.S.



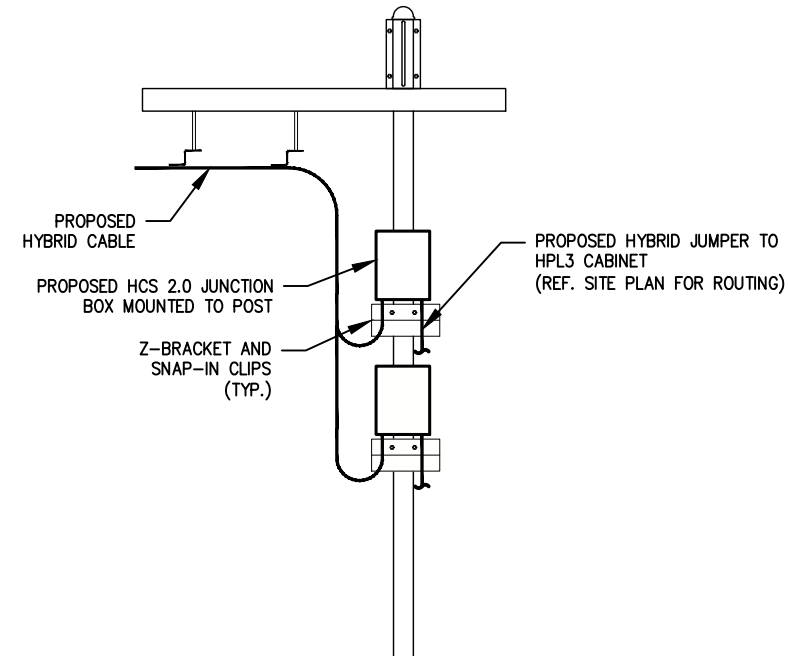
#### 5 ICE BRIDGE DETAIL

N.T.S.

#### 3 PROPOSED AHLOA RRU DETAIL

N.T.S.

- NOTES:
- CONTRACTOR TO ENSURE JUNCTION BOX IS INSTALLED A MINIMUM 2'-0" BELOW LOWEST HORIZONTAL HCS 2.0 HYBRID CABLE RUN ON ICE BRIDGE.
  - EXISTING HYBRID CABLES NOT SHOWN.
  - REFERENCE FINAL RFDS FOR QUANTITY OF PROPOSED HCS 2.0 JUNCTION BOXES AND TRUNK CABLES.
  - MOUNT J-BOX TO POST WITH (2) SECTIONS OF UNISTRUT AND STAINLESS STEEL HARDWARE. INSTALL END CAPS ON UNISTRUT



#### 6 TYPICAL J-BOX ON ICE BRIDGE DETAIL

N.T.S.



## Specifications

### Model HPL3 (HP-Large 3 Power Cabinet)

1. General		
Construction	Aluminum enclosure	
Dimensions	30 x 72 x 34.6 in. (762 x 1829x 879mm), Depth with Door/Hatch: 44.7 in. (1136mm)	
Weight	~595 lbs (~270kg) (without customer equipment or batteries) Total Equipment space 30RU:	
Internal rack dimension	Horizontal rack:	19" x 27RU
	Vertical rack:	19" x 3RU
	Power System space:	23" x 12RU
Mounting options	Pad-mount, plinth option	
Finish	Polyester Power Paint (Tan)	
Safety	UL Listed , IEC / EN 60950	
2. Environment		
Operating temperature	-40°C to +50°C (-40°F to +122°F) with solar load. IP 55	
Protection class	designed to GR-487	
Acoustics	65dBA @5000W heat load , 70dBA @ 6000W	
Humidity (relative)	95%, non-condensing (Max.)	
3. Thermal Management		
Cooling Equipment:	Direct Air Cooling, 6000W capacity, 5°C delta T	
Heating Equipment:	Forced air heating (2) 1000W AC heaters	
4. Equipment		
Cable entry	Knock-out plate on each upper side wall / Additional knockouts each side (1) 3" conduit hole with hole plug	
Door latch	3 point latching, 5/16 nut driver tool, pad-locking capability	
Primary ground	10 double-hole ¼"-20 threaded holes on 5/8" center ground bar	
Lifting Ears	4 Lifting Tabs	
Plinth	Optional 6" plinth available AC Load Center: 240V split phase, dual feed / (1) 200A + (1)100A 208V 3-phase, single feed / (1) 200A AC Surge Protection for each breaker feed GFCI Receptacle 120V Temp Probes	
Standard equipment	(6 form-C) Alarm Termination block 605A/ 54V (336kW) redundant Power System with DIN rail distribution: 12 rectifier positions (3x55A DPR3000 rectifiers included) 48 poles for load (2x10A, 3x50A, and 6x100A load breakers included) 16 poles for battery (2) SB350 / (2) SB175 Battery connections (3) SB350 Generator connections	
Front Door:	(6) DC powered centrifugal fans with (3) MERV-13 filters, (GORE option) Clogged Filter alarm pressure switch Door intrusion alarm (2) 1000W AC powered heaters LED interior cabinet light	
Rear Hatch:	Exhaust vent with (3) MERV-13 filters, (GORE option)	
5. Ordering information		
Cabinet	ESOA600-HCU01	HP-Large 3 600A Power / Equipment Cabinet
Rectifier	ESR-48/60A A-T	48V / 56A 3000W, 96.4%, CAN communication
Controller (Spare)	TPS1020028AU17	Orion TOUCH Controller
Plinth, 6"	37993318816900-S	Plinth for V1/V2, HPL2, HPL3, LB2 and LB3

\*All specifications are subject to change without prior notice.

Delta Group Website:  
[www.deltaww.com](http://www.deltaww.com)

Product Website:  
[www.deltapowersolutions.com](http://www.deltapowersolutions.com)

United States of America & Canada:  
Delta Electronics (USA) Inc.  
2925 E. Plano Parkway  
Plano, TX (Texas) 75074

Sales and Orders:  
[DEUSTPS.Sales@deltaww.com](mailto:DEUSTPS.Sales@deltaww.com)  
[DEUSTPS.Orders@deltaww.com](mailto:DEUSTPS.Orders@deltaww.com)

Field Support:  
1-877-DELTA-08 option 3  
(877-335-8208 option 3)  
[DEUSTPS.Support@deltaww.com](mailto:DEUSTPS.Support@deltaww.com)

Installation Services:  
[DEUSTPS.Services@deltaww.com](mailto:DEUSTPS.Services@deltaww.com)

RMA:  
[DEUSTPS.RMA@deltaww.com](mailto:DEUSTPS.RMA@deltaww.com)



## ESOF015-ECV Series



GOASAI-00-ZL

### AC INPUT

Voltage (nominal)	Single phase; 200 – 240V <sub>AC</sub> ; 4W (L1, L2, N, PE)
Voltage (range)	200 – 240V <sub>AC</sub>
Frequency	50 / 60Hz

### DC INPUT

Voltage (nominal)	-54V <sub>DC</sub>
Voltage (default)	-54V <sub>DC</sub>
Voltage (adjustable range)	-43 to -58V <sub>DC</sub>
Maximum Power @ nominal Input	Single phase: 8A (Max.)

### MECHANICAL

Dimensions (W x H x D)	762 x 1829 x 1041mm (30 x 72 x 41in)
Weight	approx. 258kg (568.7lb) (battery excluded)

### ENVIRONMENTAL

Operating Temperature	-20 to +50 °C (-4 to +122 °F)
Storage Temperature	-40 to +70 °C (-40 to +158 °F)
Altitude	0 to +3000m
Related Humidity	95%, non-condensing (Max.)
Acoustic Noise	≤ 65dBA
Cooling	Fan for power and equipment (6000W heat loss with ΔT ≤ 5 °C)

### STANDARDS

Environment	RoHS
-------------	------

\* All specifications are subject to change without prior notice.

Delta Electronics Inc.  
3 Tungyuan Road, Chungli Industrial Zone,  
Taoyuan City 32063, Taiwan.  
T +886 3 452 6107 / F +886 3 452 7314  
[www.deltaww.com](http://www.deltaww.com)



CERTIFICATION AND SEAL  
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR  
REPORT WAS PREPARED BY ME OR UNDER MY DIRECT  
SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL  
ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI  
04/16/2021  
DATE  
M.H. CATALINA MARTINEZ PE-2016011696  
RENEWAL DATE: 12/31/2022



MISSOURI CERTIFICATE OF AUTHORIZATION FOR  
KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022

T-Mobile

KGI

KGI WIRELESS, INC.  
ENGINEERING

805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:

LONGVIEW FARM TANK

SITE NUMBER:

A5C0335A (KC13XC327)

SITE ADDRESS:

499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

SHEET TITLE:

INSTALLATION DETAILS

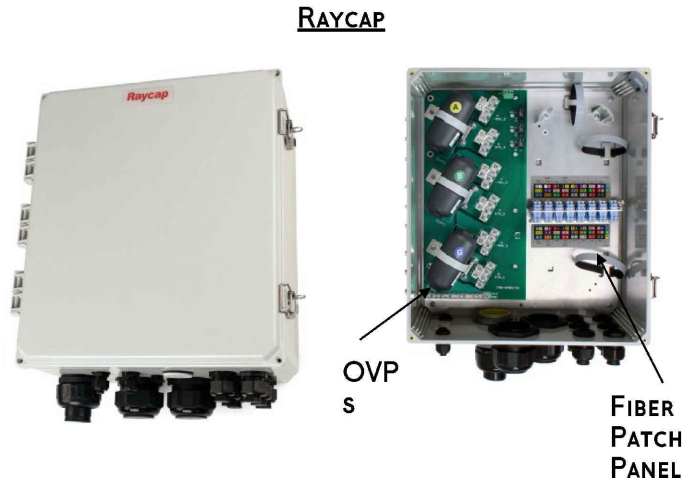
SHEET NUMBER:

C5.2



## BOTTOM JUNCTION BOX GENERAL SPECIFICATIONS

CHARACTERISTICS	RAYCAP
DIMENSIONS	14"x16"x8"
WEIGHT	21.9 LB
OVP, IEC 61643-1	CLASS I SPD (3)
UL RATING	1449, 4 <sup>TH</sup> Ed.
OVP MONITORING	DRY CONTACT
FIBER PATCH PANEL	24 LC PAIRS
ENVIRONMENTAL RATING	IP66
OPERATING TEMPERATURE	-40 °C TO +80 °C



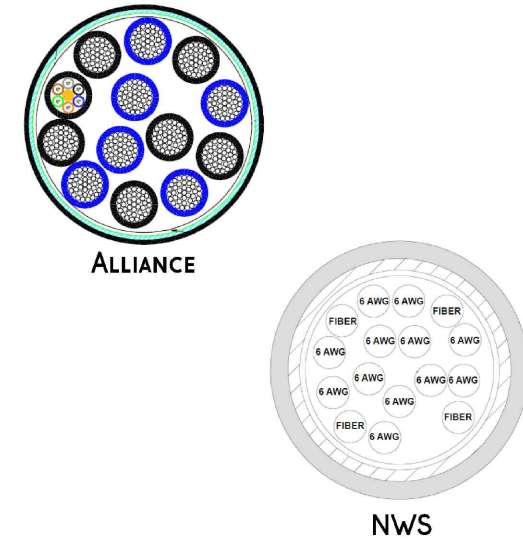
SLIDE / 4

T-MOBILE INTERNAL

T-MOBILE

## TRUNK CABLE GENERAL SPECIFICATIONS (6AWG) <250'

CHARACTERISTICS	ALLIANCE	NWS
OUTER DIAM.	1.46"	1.48"
WEIGHT	1.61 LB/FT	1.61 LB/FT
MIN. BEND RAD	14.6"	21.5"
DC CONDUCTORS	12 x 6AWG	12 x 6AWG
ARMOR	CORRUGATED Cu	Cu TAPE, PVC
CONDUCTOR TERMINATION	NONE	NONE
SINGLE-MODE FIBERS	48	48
FIBER TERMINATION	LC PAIR	LC PAIR



SLIDE / 1

T-MOBILE INTERNAL

T-MOBILE

CERTIFICATION AND SEAL:  
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI

04/16/2021

(SIGNATURE) DATE  
M.H. CATALINA MARTINEZ PE-2016011696  
RENEWAL DATE: 12/31/2022



MISSOURI CERTIFICATE OF AUTHORIZATION FOR  
KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022

T-Mobile

KGI

KGI WIRELESS, INC.  
ENGINEERING

805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:

LONGVIEW FARM TANK

SITE NUMBER:

A5C0335A (KC13XC327)

SITE ADDRESS:

499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

SHEET TITLE:

INSTALLATION DETAILS

SHEET NUMBER:

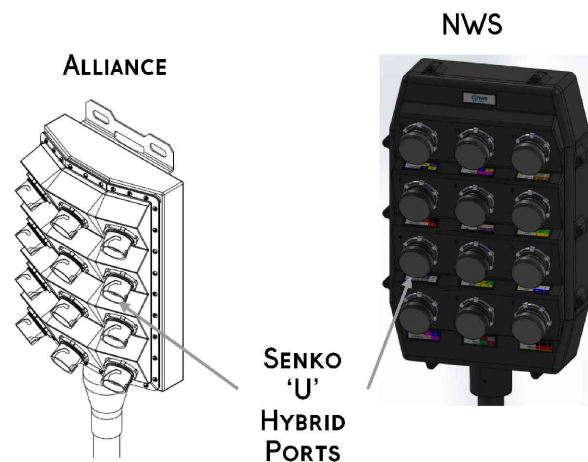
C5.3

## 1 HC 2.0 BOTTOM JUNCTION BOX SPECIFICATIONS

N.T.S.

## BREAKOUT FEATURE GENERAL SPECIFICATIONS

CHARACTERISTICS	ALLIANCE	NWS
DIMENSIONS, IN.	9.3x14.9x5.8	10.2x16.0x3.2
WEIGHT	1.61 LB/FT	1.61 LB/FT
PORT INTERFACE	SENKO U	SENKO U
HYBRID PORTS	12	12
CONDUCTOR TERMINATION	NONE	NONE
SINGLE MODE FIBERS	48	48
FIBER TERMINATION	LC PAIR	LC PAIR
MAX RRU	12	12



NOTE: PERMANENTLY ATTACHED TO TRUNK CABLE, NOT FIELD REMOVABLE/REPLACEABLE.  
NOTE: NO INTERNAL OVP.

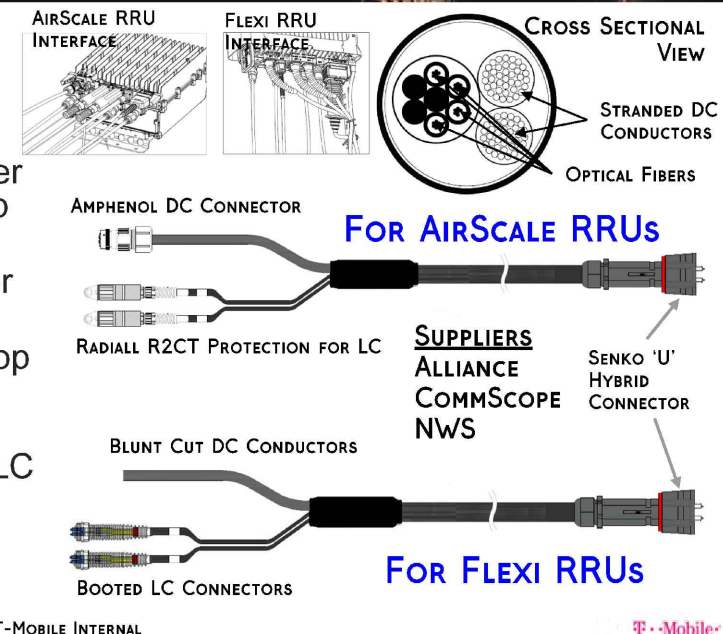
SLIDE / 3

T-MOBILE INTERNAL

T-MOBILE

## HYBRID JUMPER CABLE GENERAL SPECIFICATIONS

- Outer diameter: 0.72"
- Weight: 0.34 lb/ft
- Operating Temp: -40 °C to +75 °C
- Connectorized for mating with tower top trunk cable breakout or roof top box
- DC and fiber interfaces versions for Nokia Airscale and Flexi RRUs
- Short (tower top 15') & long (roof top 20' - 150') AirScale versions available
- Also available with legacy booted LC connectors and blunt cut DC conductors for Flexi RRU applications



SLIDE / 6

T-MOBILE INTERNAL

T-MOBILE

## 3 HC 2.0 BREAK OUT SPECIFICATIONS

N.T.S.

## 4 HC 2.0 JUMPER CABLE SPECIFICATIONS

N.T.S.



GENERAL:

1. CONTRACTOR TO VERIFY THAT PPC HAS A SOLID NEUTRAL TO GROUND BOND.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE WIRING FROM THE BREAKER PANEL TO THE RADIO EQUIPMENT.
3. THE CONTRACTOR SHALL INSPECT THE SITE WHERE THIS WORK IS TO BE PERFORMED AND FULLY FAMILIARIZE THEMSELVES WITH ALL CONDITIONS RELATED TO THIS PROJECT.
4. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND LICENSES AND SHALL MAKE ALL DEPOSITS AND PAY ALL FEES REQUIRED FOR THE PERFORMANCE OF WORK UNDER THIS SECTION.
5. DRAWINGS SHOW TYPICAL RELATIONSHIP OF ALL SYSTEMS AND COMPONENTS COVERED UNDER THIS SECTION. DRAWINGS SHALL NOT BE SCALED TO DETERMINE DIMENSIONS.
6. WORK UNDER THIS SECTION SHALL CONSIST OF FURNISHING ALL LABOR, MATERIAL AN ASSOCIATED SERVICES REQUIRED TO COMPLETELY CONSTRUCT AND LEAVE READY FOR OPERATION SYSTEMS AS SHOWN ON THE DRAWINGS AND HEREIN DESCRIBED.
7. ALL ELECTRICAL EQUIPMENT UNDER THIS CONTRACT SHALL BE PROPERLY TESTED, ADJUSTED, AND ALIGNED BY THE CONTRACTOR.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATING, DRAINING, TRENCHES, BACKFILLING, AND REMOVAL OF EXCESS DIRT.
9. THE CONTRACTOR SHALL FURNISH TO THE OWNER CERTIFICATES OF FINAL INSPECTION AND APPROVAL FROM THE INSPECTION AUTHORITIES HAVING JURISDICTION.

PRODUCTS:

1. ALL ITEMS OF MATERIALS AND EQUIPMENT SHALL BE NEW, FREE FROM DEFECTS, AND OF THE BEST QUALITY NORMALLY USED FOR THE PURPOSE IN GOOD COMMERCIAL PRACTICE.
2. ALL MATERIALS AND EQUIPMENT SHALL BE ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION AS SUITABLE FOR THE USE INTENDED.
3. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL AND SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODED.
4. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING RATING EQUAL TO OR GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 10,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT.

DISCONNECT SWITCHES:

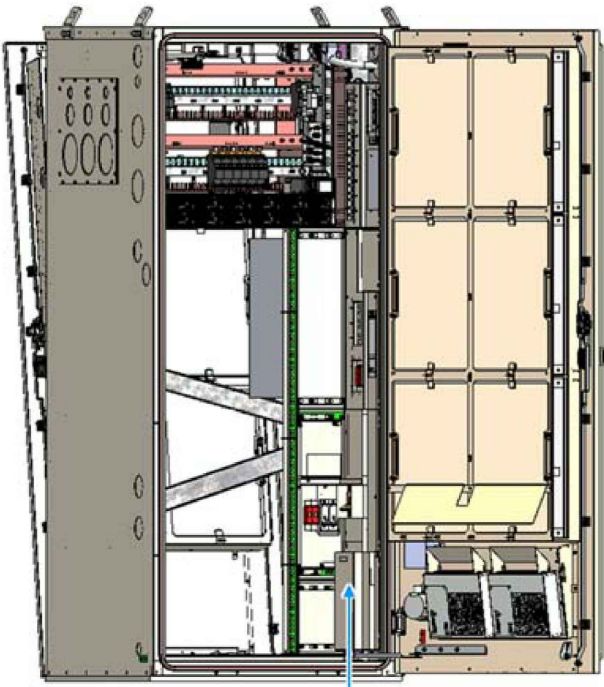
1. DISCONNECT SWITCHES SHALL BE HEAVY DUTY, DEAD-FRONT, QUICK-MAKE, QUICK-BREAK, EXTERNALLY OPERABLE, HANDLE LOCKABLE AND INTERLOCKED WITH COVER IN CLOSED POSITION, RATING AS INDICATED, UL LABELED FURNISHED IN NEMA 3R ENCLOSURE, SQUARE-D CLASS 3110, OR APPROVED EQUAL.

WIRING:

1. WIRE AND CABLE SHALL BE FLAME-RETARDANT, MOISTURE AND HEAT RESISTANT THERMOPLASTIC, SINGLE CONDUCTOR, COPPER, TYPE THHN/THWN, 600 VOLT, SIZES AS INDICATED, #12 AWG MINIMUM.
2. #10 AWG AND SMALLER CONDUCTORS SHALL BE SOLID AND #8 AWG AND LARGER CONDUCTORS SHALL BE STRANDED.
3. SOLDERLESS, PRESSURE TYPE CONNECTOS CONSTRUCTED OF HIGH STRENGTH, NON-CORRODIBLE, TIN-PLATED COPPER DESIGNED TO FURNISH HIGH PULLOUT STRENGTH AND HIGH CONDUCTIVITY JOINS SHALL BE USED.
4. SUPPORT GRIPS SHALL BE SINGLE WEAVE, CLOSED MESH, HIGH GRADE, NON-MAGNETIC, TIN-COATED BRONZEE CAPB ABLE OF SUPPORTING TEN TIMES THE CABLE DEAD WEIGHT, HUBBELL KELLEMS OR APPROVED EQUAL.
5. INSTALL CONDUCTORS IN CLEAN, DRY CONDUITS. USE UL APPROVED PULLING LUBRICANT WHERE REQUIRED.
6. ALL CONTROL WIRES SHALL BE STRANDED AND TERMINATED WITH CRIMPED-ON LUGS.
7. MAKE CONNECTION, SPLICES AND TAPS ONLY IN APPROVED BOXES AND FITTINGS. FOR SMALL BRANCH CIRCUIT CONDUCTORS, FIRST TWIST CONDUCTORS TOGETHER. THEN INSTALL A "SCOTCHLOK" OR EQUAL SPRING CONNECTOR OF PROPER SIZE. FOR LARGE CONDUCTORS USE SPLIT-BOLT OR HYDRAULICALLY COMPRESSED CONNECTIONS, THEN APPLY ENOUGH LAYERS OF VINYL ELECTRICAL TAPE TO EQUAL THE INSULATION VALUE OF THE CONDUCTOR INSULATION.
8. WHERE FACTORY COLOR CODED CONDUCTORS ARE NOT AVAILABLE, INSTALL BANDS OF COLORED VINYL PLASTIC TAPE AT EACH END OF EACH CONDUCTOR.

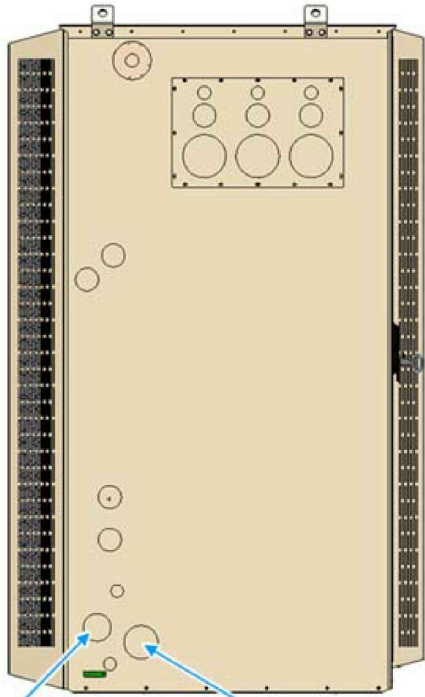
CONDUIT:

1. ALL CONDUIT WILL BE LONG SWEEP TYPE. CONDUIT BURIED BELOW DRIVEWAYS OR SUBJECT TO VEHICLE TRAFFIC WILL BE SCHEDULE 80. CONDUIT BELOW GRADE WILL BE SCHEDULE 40 PVC. CONDUIT LOCATED OUTSIDE ABOVE GRADE WILL BE GALVANIZED RMC. ALL INDOOR CONDUIT FITTINGS WILL BE COMPRESSION TYPE.
2. FITTINGS SHALL BE DESIGNED AND APPROVED FOR THE SPECIFIC USE INTENDED. PROVIDE INSULATED THROATS OR BUSHINGS FOR ALL CONDUITS. GROUNDING BUSHINGS SHALL ALSO HAVE INSULATED THROATS.
3. RIGID STEEL CONDUIT SHALL BE HEAVY-WALL STEEL TUBE WITH METALLIC CORROSION-RESISTANT COATING ON INTERIOR AND EXTERIOR, HOT-DIPPED GALVANIZED, FREE FROM DEFECTS, MANUFACTURED IN ACCORDANCE TO ANSI STANDARDS, AND UL LISTED. USE THREADED COUPLINGS. USE RIGID GALVANIZED STEEL CONDUIT IN ALL LOCATIONS UNLESS NOTED OTHERWISE.
4. FLEXIBLE METAL CONDUIT SHALL BE GALVANIZED, ZINC-COTED STEEL, PVC COATED FRO OUTDOOR APPLICATIONS.
5. CONDUIT CLAMPS, STRAPS, AND SUPPORTS, SHALL BE STEEL OR MALLEABLE IRON. ALL FITTINGS SHALL BE COMPRESSION TYPE AND WATERTIGHT.
6. AS A MINIMUM, CONDUIT SIZES SHALL BE IN ACCORDANCE WITH NEC CONDUIT FILL REQUIREMENTS, REGARDLESS OF SIZE SCHEDULE OR INDICATED. IF LARGER SIZE IS SCHEDULED OR INDICATED, THE LARGER SIZE SHALL BE USED.



AC Input Terminal

SIDE



2.5\"/>

3\"/>

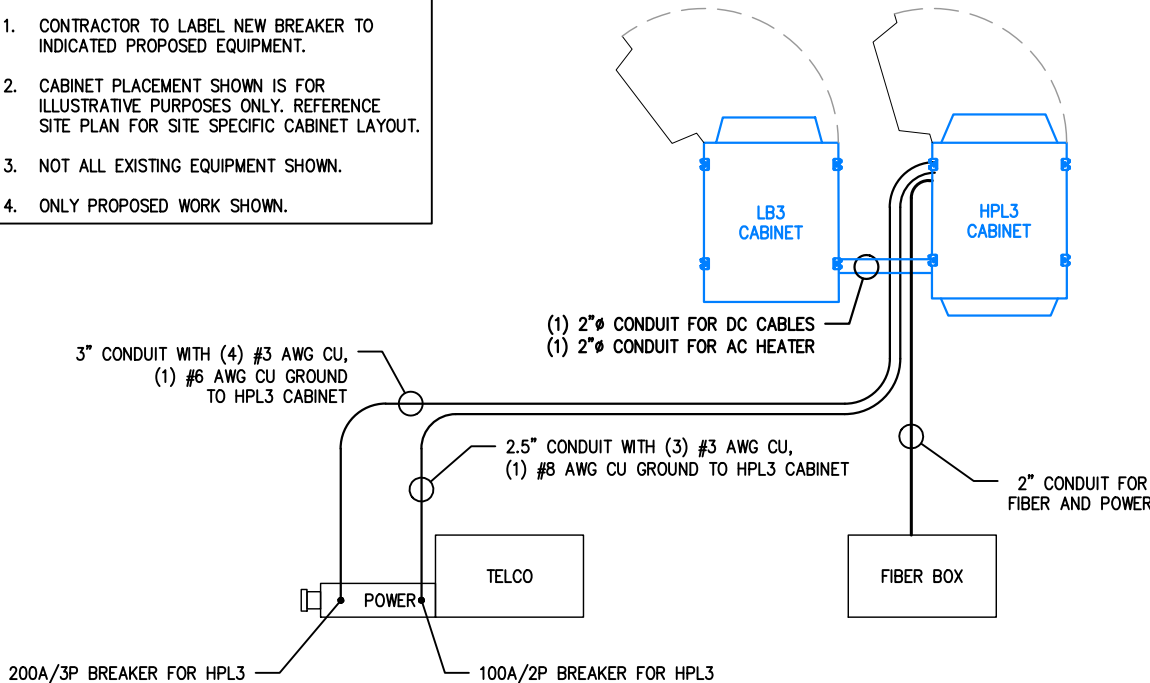
RIGHT

2 HPL3 CABINET ENTRY PORTS

N.T.S.

NOTES:

1. CONTRACTOR TO LABEL NEW BREAKER TO INDICATED PROPOSED EQUIPMENT.
2. CABINET PLACEMENT SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY. REFERENCE SITE PLAN FOR SITE SPECIFIC CABINET LAYOUT.
3. NOT ALL EXISTING EQUIPMENT SHOWN.
4. ONLY PROPOSED WORK SHOWN.



N.T.S.

CERTIFICATION AND SEAL:  
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI

04/16/2021

(SIGNATURE) DATE  
M.H. CATALINA MARTINEZ PE-2016011696  
RENEWAL DATE: 12/31/2022



MISSOURI CERTIFICATE OF AUTHORIZATION FOR  
KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022



KGI WIRELESS, INC.  
ENGINEERING

805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:

LONGVIEW FARM TANK

SITE NUMBER:

A5C0335A (KC13XC327)

SITE ADDRESS:

499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

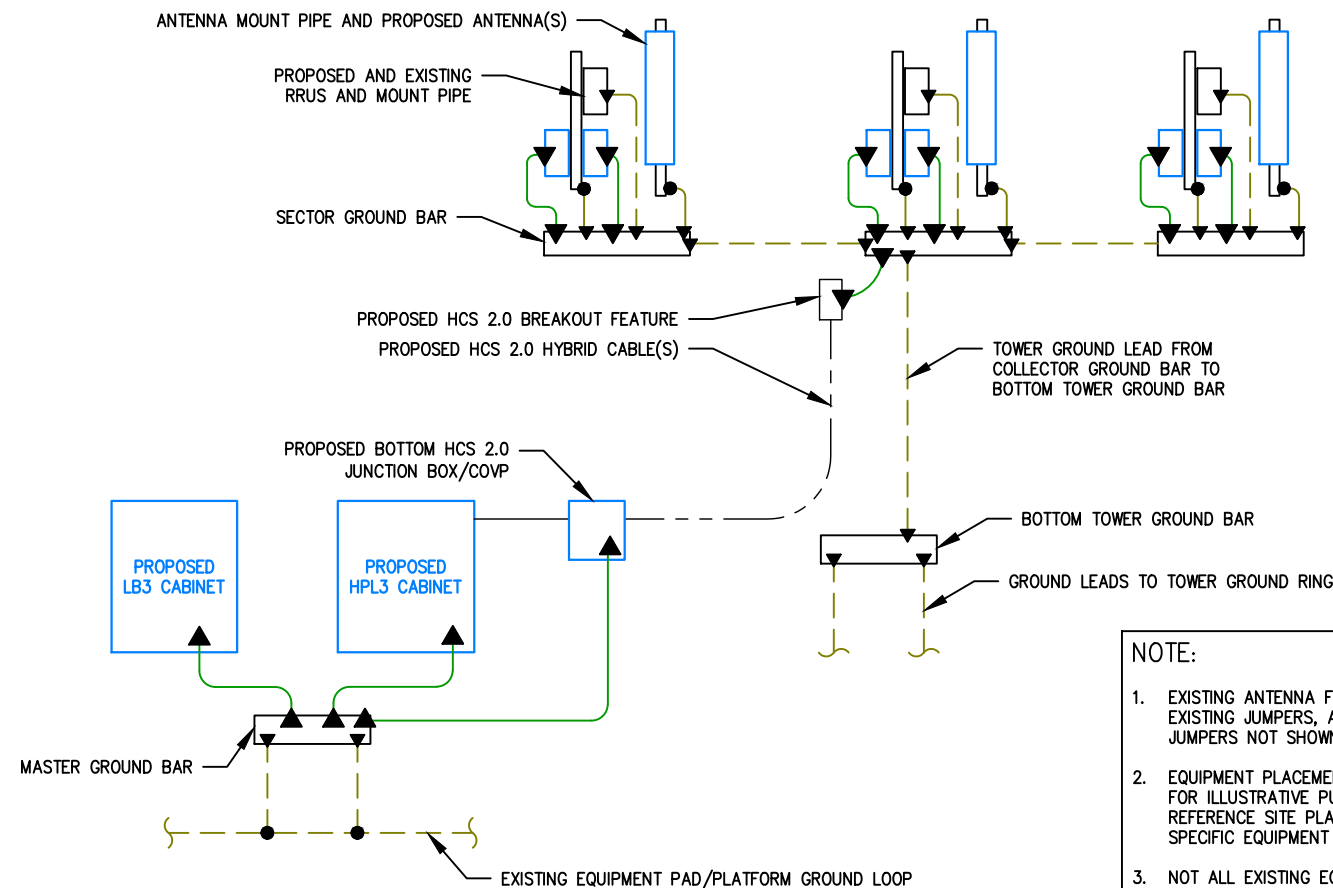
REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

SHEET TITLE:

ELECTRICAL  
DETAILS

SHEET NUMBER:

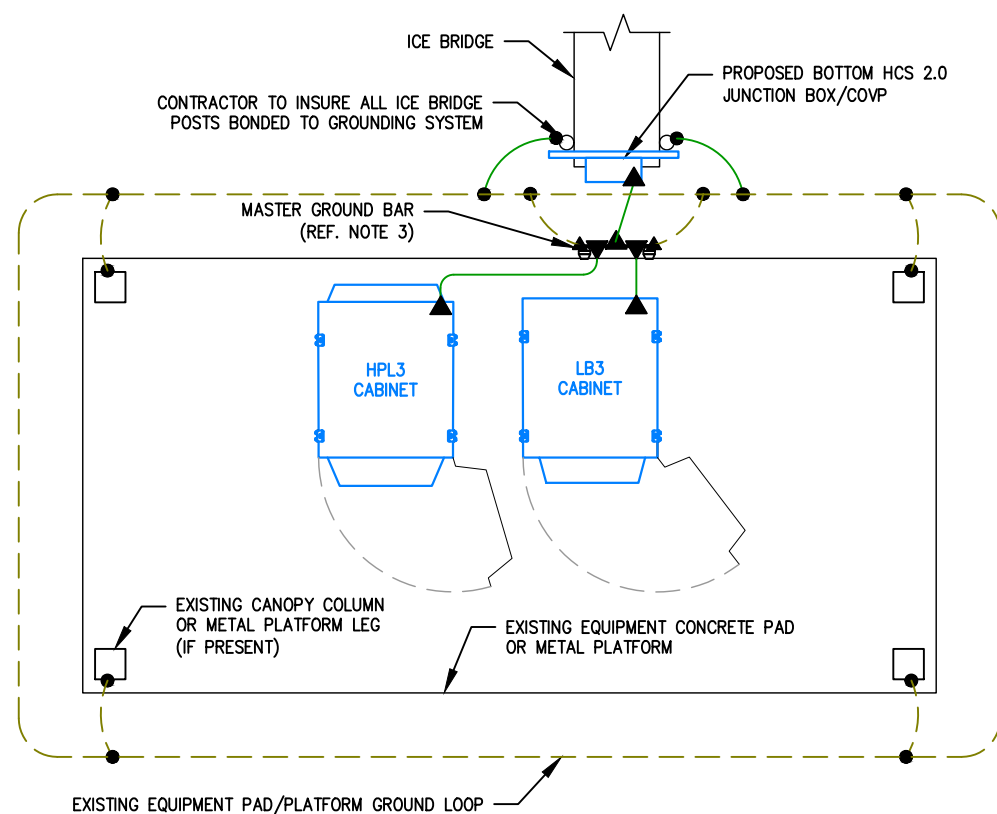
E1



- NOTE:
- EXISTING ANTENNA FEED LINES, EXISTING JUMPERS, AND PROPOSED JUMPERS NOT SHOWN FOR CLARITY.
  - EQUIPMENT PLACEMENT SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY. REFERENCE SITE PLANS FOR SITE SPECIFIC EQUIPMENT LAYOUT.
  - NOT ALL EXISTING EQUIPMENT SHOWN

1 TYPICAL GROUNDING RISER DIAGRAM

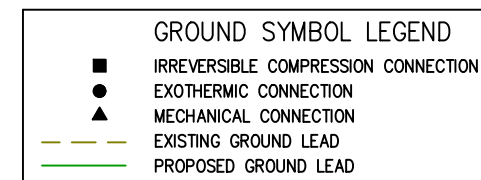
N.T.S.



- NOTES:
- ANTENNA FEED LINES NOT SHOWN FOR CLARITY.
  - EQUIPMENT PLACEMENT SHOWN IS FOR ILLUSTRATIVE PURPOSES ONLY. REFERENCE SITE PLAN FOR SITE SPECIFIC EQUIPMENT LAYOUT.
  - NOT ALL EXISTING EQUIPMENT SHOWN

3 TYPICAL BOTTOM EQUIPMENT GROUNDING DIAGRAM

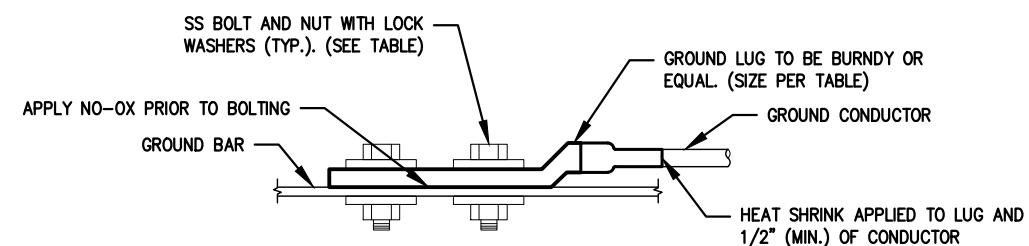
N.T.S.



GROUNDING NOTES:

- CONTRACTOR SHALL VISIBLY INSPECT ALL EXISTING GROUND LEADS AND CONNECTIONS FOR DAMAGE OR LOOSE CONNECTIONS AND REPAIR AS NECESSARY TO RESTORE GROUND SYSTEM INTEGRITY.
- ALL GROUND LEADS ENTIRELY ABOVE GRADE SHALL BE #2 AWG GREEN STRANDED UNLESS NOTED OTHERWISE.
- ALL GROUND LEADS THAT ARE FULLY OR PARTIALLY BELOW GRADE SHALL BE #2 AWG TINNED SOLID COPPER UNLESS NOTED OTHERWISE.
- CONTRACTOR SHALL INSTALL ANY MISSING OR DAMAGED ITEMS AS NECESSARY TO BRING EXISTING SITE GROUNDING SYSTEM UP TO CURRENT T-MOBILE STANDARDS..
- GROUND BUSSES SHALL BE GALVANIZED STEEL BARS OF RECTANGULAR CROSS SECTION.
- ANY NEW EQUIPMENT FRAMES, PIPES OR UNISTRUT THAT ISN'T DIRECTLY CONNECTED TO AN EXISTING GROUNDED STRUCTURE WITH CONDUCTIVE HARDWARE SHALL BE BONDED TO EITHER THE NEAREST GROUND BAR OR TO THE EQUIPMENT GROUND RING.
- CONNECTORS SHALL BE HIGH-CONDUCTIVITY, HEAVY DUTY, LISTED, AND LABELED AS GROUNDING CONNECTORS FOR THE MATERIALS USED.
- ALL CONNECTIONS TO GROUND BARS SHALL BE WITH 2-HOLE LUGS. NO BACK TO BACK CONNECTIONS ALLOWED.
- REMOVE ALL PAINT BENEATH THE SURFACE OF GROUND LUGS.
- EXOTHERMIC WELDED CONNECTIONS SHALL BE PROVIDED IN KIT FORM AND SELECTED FOR THE SPECIFIC TYPES, SIZES, AND COMBINATION OF CONDUCTORS AND OTHER ITEMS TO BE CONNECTED.
- GROUND RODS SHALL BE COPPER-CLAD STEEL WITH HIGH-STRENGTH STEEL CORE AND ELECTROLYTIC-GRADE COPPER OUTER SHEATH, MOLTEN WELLED TO CORE, 3/4"Ø x 10-0" LONG.
- NO GROUND LEAD BENDS SHALL HAVE A RADIUS SMALLER THAN 8".
- NO 90° BENDS ARE ALLOWED IN GROUND LEADS.
- GROUND KITS SHALL BE INSTALLED ON HCS 2.0 TRUNK LINES PER MANUFACTURERS REQUIREMENTS OR RECOMMENDATIONS.

2 GROUNDING NOTES



WIRE SIZE	LUG #	BOLT DIA.
#6 AWG	YA6C2TC14E2	1/4"
#2 AWG	YA2CL-2TC14	1/4"
#2 AWG SOLID	YA3C2TC38	3/8"
#2/0 AWG	YA262LN	1/2"
#4/0 AWG	YA282LN	1/2"

4 TYPICAL 2-HOLE LUG DETAIL

N.T.S.

CERTIFICATION AND SEAL:  
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MISSOURI.  
(SIGNATURE) DATE  
M.H. CATALINA MARTINEZ PE-2016011696  
RENEWAL DATE: 12/31/2022



MISSOURI CERTIFICATE OF AUTHORIZATION FOR  
KGI WIRELESS IS 2014023051, RENEWAL DATE 12/31/2022

T-Mobile

KGI

KGI WIRELESS, INC.  
ENGINEERING

805 LAS CIMAS PKWY  
BUILDING THREE, SUITE 370  
AUSTIN, TX 78746  
512.345.9595

SITE NAME:

LONGVIEW FARM TANK

SITE NUMBER:

A5C0335A (KC13XC327)

SITE ADDRESS:

499 SOUTHWEST TOWER PARK DRIVE  
LEES SUMMIT, MO 64081

REVISION	ISSUED FOR:	DATE
PCD 0	REVIEW	02/22/2021
PCD 1	REVIEW	03/25/2021
FCD 0	CONSTRUCTION	04/16/2021

SHEET TITLE:

GROUNDING  
DETAILS

SHEET NUMBER:

G1