CSP KIVA

PROJECT: 16235971
SITE ID: 616882217
MDG#: 5000159955
82 WIDEFIELD BOULEVARD
COLORADO SPRINGS, CO 80911
EL PASO COUNTY

NEW BUILD

FROM DENVER, COLORADO: HEAD TOWARD CLEVELAND PL (161 FT). TURN LEFT ONTO CLEVELAND PL (302 FT). TURN RIGHT ONTO 15TH ST (0.1 MI). TURN LEFT ONTO TREMONT PL (0.2 MI). TURN RIGHT ONTO W COLFAX AVE (0.9 MI). USE THE RIGHT LANE TO MERGE ONTO I-25 S VIA THE RAMP TO COLO SPGS (0.7 MI). MERGE ONTO I-25 S (74.4 MI). TAKE EXIT 135 TOWARD AIRPORT (0.2 MI). USE THE MIDDLE LANE TO TURN LEFT ONTO S ACADEMY BLVD (0.8 MI). TAKE THE EXIT TOWARD US-85/FOUNTAIN (0.2 MI). TURN RIGHT ONTO CO-85 (1.6 MI). CONTINUE ONTO US-85 (1.0 MI). USE THE 2ND FROM THE LEFT LANE TO TURN LEFT ONTO FONTAINE BLVD (486 FT). TURN RIGHT ONTO WIDEFIELD BLVD (0.2 MI). TURN LEFT (157 FT). TURN RIGHT (59 FT). DESTINATION WILL BE ON THE LEFT.

PROJECT SUMMARY

TOWER OWNER SITE

US-CO-5035
SITE ID: FOUNTAIN

VERIZON WIRELESS SITE

CSP KIVA
PROJECT #: 16235971
SITE ID #: 616882217
MDG #: 5000159955

SITE ADDRESS

82 WIDEFIELD BOULEVARD
COLORADO SPRINGS, CO 80911
EL PASO COUNTY

TOWER OWNER

VERTICAL BRIDGE
22 W ATLANTIC AVE #310
DELRAY BEACH, FL 33444
(561) 948-6367

POLICE

COLORADO SPRINGS POLICE DEPARTMENT
(950) ACADEMY PARK LOOP
COLORADO SPRINGS, CO 80910
PHONE: (719) 444-7270

FIRE

COLORADO SPRINGS FIRE STATION 11
3810 JET WING DR
COLORADO SPRINGS, CO 80916
PHONE: (719) 385-5950

GENERAL INFORMATION

LATITUDE 38.735542/ 38° 44' 07.95" N
LONGITUDE -104.726519/ 104° 43' 35.47" W
1983 (NAD83)

ELEVATION 5687.9' AMSL
1988 (NAVD88)

ALL CONSTRUCTION ITEMS ARE TO BE COMPLETED BY APPROVED VERIZON WIRELESS GENERAL CONTRACTOR

PROJECT DESCRIPTION

PROJECT DESCRIPTION

NOTES:

1. THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.
2. ALL CONSTRUCTION ITEMS ARE TO BE COMPLETED BY APPROVED VERIZON WIRELESS GENERAL CONTRACTOR.

TOWER SCOPE OF WORK (VZW GC):

- INSTALL (3) ERICSSON - AIR3283
- INSTALL (3) ERICSSON - AIR6419
- INSTALL (3) COMMSCOPE - NNSS-65B-HG-R2B
- INSTALL (3) ERICSSON - 4490 RRU
- INSTALL (1) RAYCAP - RVZDC-6627-PF-48
- INSTALL (2) 6X12 HYBRID CABLES. ± 90'
- INSTALL (3) STD 2" ANTENNA MOUNT PIPES

GROUND SCOPE OF WORK:

- INSTALL (1) ERICSSON - 6672 BBU
- INSTALL (1) RAYCAP - RVZDC-4520-RM-48
- INSTALL (1) CHARLES - LT-SS4C228BV1 CABINET
- INSTALL (1) CHARLES - 97-PLNTHSS8V1 PLINTH
- INSTALL (1) CHARLES - 97-SS8V1TOPHTCM TOPHAT
- INSTALL (1) REHLKO - 30KW 30REOZK OUTDOOR DIESEL GENERATOR
- INSTALL (1) VERIZON APPROVED ILC
- INSTALL (1) H-FRAME
- INSTALL (1) VERIZON APPROVED ICE BRIDGE. ± 10'
- INSTALL (1) 200A BREAKER IN (E) METER PAK FOR VZW SERVICE
- INSTALL (1) 10'X15' CONCRETE EQUIPMENT PAD
- INSTALL (1) PERFECT VISION PV-WC0808-B
- INSTALL (1) "VERIZON WIRELESS ONLY" SCH40 PVC CONDUIT WITH INNERDUCTS. ± 10'
- INSTALL (1) 24"X36" VEHICLE RATED HAND HOLE FOR "VERIZON WIRELESS ONLY" FIBER SERVICE
- INSTALL (1) 2" CONDUIT WITH (3) 3/0 AND (1) 6 AWG FROM ILC TO METER. ± 25'
- INSTALL (1) 1" CONDUIT WITH (4) 12 AWG & (1) 12 AWG FROM ILC TO GENERATOR. (GEN HEATER & BATTERY CHARGER). ± 10'
- INSTALL (1) ALARM CABLE FROM GENERATOR TO ILC. ± 10'

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

BUILDING CODE	2021 INTERNATIONAL BUILDING CODE (IBC)
STRUCTURAL CODE	TIA/EIA-222 - REVISION H
MECHANICAL CODE	2021 INTERNATIONAL MECHANICAL CODE (IMC)
PLUMBING CODE	2021 INTERNATIONAL PLUMBING CODE (IPC)
ELECTRICAL CODE	2023 NATIONAL ELECTRICAL CODE (NEC)
FIRE/LIFE SAFETY CODE	2021 INTERNATIONAL CODE (IFC)
ENERGY CODE	2021 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
GAS CODE	2021 INTERNATIONAL FUEL GAS CODE (IFGC)

ACCESSIBILITY REQUIREMENTS:

FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. ACCESSIBILITY REQUIREMENTS ARE NOT REQUIRED IN ACCORDANCE WITH THE 2021 IBC BUILDING CODE.

APPLICABLE CODES

CONSULTANT TEAM

ENGINEERING

HORROCKS.
JUSTIN WALL
2162 WEST GROVE PARKWAY, SUITE 100
PLEASANT GROVE, UT 84062
PHONE: (801) 626-2281
EMAIL: JUSTIN.WALL@HORROCKS.COM

SITE ACQUISITION

KAPPA CONSULTING
KELLY HARRISON
PHONE: (303) 748-0599
EMAIL: KHARRISON@YMAIL.COM

ELECTRICAL

POWER: COLORADO SPRINGS UTILITIES
ADDRESS: P.O. BOX 1103
COLORADO SPRINGS, CO
PHONE: (719) 448-4808

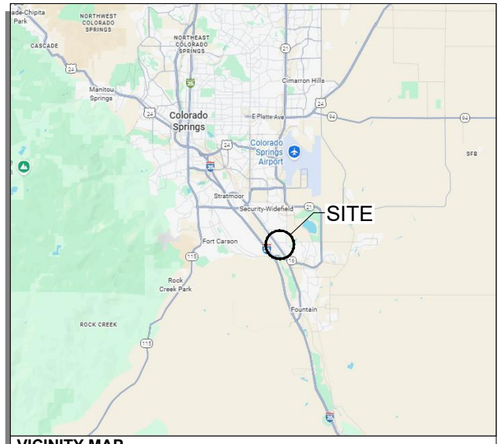
REAL ESTATE

PAIGE GARDINER
9656 PROSPERITY RD.
WEST JORDAN, UT 84088
PHONE: (801) 703-1554
EMAIL: PAIGE.GARDINER@VERIZONWIRELESS.COM

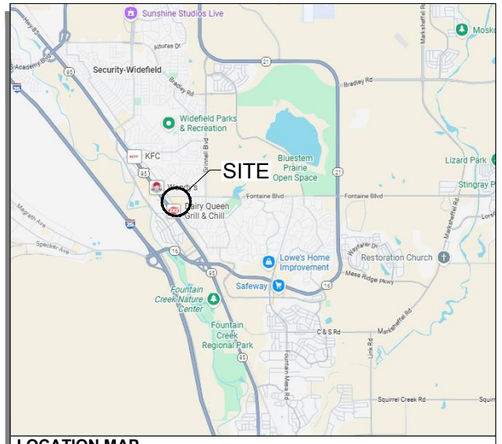
CONSTRUCTION

SHANE THORNWALL
10000 PARK MEADOWS DRIVE
LONE TREE, CO 80124
PHONE: (720) 595-8001

VERIZON CONTACTS



VICINITY MAP



LOCATION MAP

SHEET INDEX

SHEET NUMBER	DESCRIPTION
T-1	PROJECT INFORMATION, SITE MAPS, SHEET INDEX
R-1	REVISION LOG
GENERAL NOTES	
GN-1	GENERAL NOTES
GN-2	GENERAL NOTES
GN-3	GENERAL NOTES
CIVIL	
C-1	OVERALL SITE PLAN W/AERIAL OVERLAY
C-2	DETAILED SITE PLAN
C-3	DETAILED EQUIPMENT PLAN
C-4	TOWER ELEVATION
C-5	PROPOSED ANTENNA SUMMARY
C-6	RFDS
C-7	RFDS
C-8	RFDS
C-9	RFDS
DETAILS	
DT-1	DETAILS
DT-2	DETAILS
DT-3	DETAILS
DT-4	DETAILS
DT-5	DETAILS
DT-6	DETAILS
DT-7	DETAILS
DT-8	DETAILS
ELECTRICAL	
E-1	SITE UTILITY PLAN
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E-3	ONE LINE DIAGRAM
E-4	ELECTRICAL DETAILS
GROUNDING	
G-1	GROUNDING SITE PLAN
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS
G-4	GROUNDING DETAILS
SURVEY	
LS-1	SURVEY
1A	1A LETTER

verizon

PLANS PREPARED BY:

Horrocks.

2162 West Grove Parkway, Suite 400
Pleasant Grove, UT 84062
(801) 763-5100

SEAL:

PRELIMINARY NOT FOR CONSTRUCTION

REV.	DATE	DESCRIPTION
A	03/06/26	ISSUED FOR CLIENT REVIEW
B	03/18/26	CLIENT COMMENTS
C	04/06/26	CLIENT COMMENTS

CSP KIVA
VERIZON WIRELESS
82 WIDEFIELD BOULEVARD
COLORADO SPRINGS, CO 80911
EL PASO COUNTY

T-1

Q:\12025\UT-11734-25 Verizon Utah A&E 2025\Project Data\Design\COLORADO\CSP KIVA\CSP KIVA DESIGN.dwg - PROJECT INFORMATION SITE MAPS SHEET INDEX - 4/06/2026 04:27pm, dakota.wibert

REVISION LOG

REV	MM/DD/YY	SHEET NUMBER AND NAME	DESCRIPTION OF REVISION
A	03/06/26	ALL SHEETS	ISSUED FOR CLIENT REVIEW
B	03/18/26	T-1, C-2, C-3, C-4, C-5, C-6, C-7, C-8, C-9, DT-5, DT-6, DT-7, E-1, E-2, E-3	CLIENT COMMENTS
C	04/06/26	T-1, C-1, C-2, C-3, DT-8, E-1, E-3, G-1	CLIENT COMMENTS

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Horrocks.
2162 West Grove Parkway, Suite 400
Pleasant Grove, UT 84062
(801) 763-5100

SEAL:

REV.	DATE	DESCRIPTION
A	03/06/26	ISSUED FOR CLIENT REVIEW
B	03/18/26	CLIENT COMMENTS
C	04/06/26	CLIENT COMMENTS

CSP KIVA
VERIZON WIRELESS
82 WIDEFIELD BOULEVARD
COLORADO SPRINGS, CO 80911
EL PASO COUNTY

R-1

GENERAL NOTES

1.	ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF INTERNATIONAL BUILDING CODE (IBC). (IPC). (IMC) AND NEC.
2.	THE PROPOSED FACILITY WILL BE UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SEWER SERVICE.
3.	THE PROPOSED FACILITY IS UNMANNED AND IS NOT FOR HUMAN HABITAT. (NO HANDICAP ACCESS IS REQUIRED)
4.	OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION, APPROXIMATELY 2 TIMES PER MONTH.
5.	DETAILS AND SCHEMATICS ARE PROPOSED TO SHOW END RESULT OF THE DESIGN. MINOR MODIFICATIONS MAY DEEM TO BE NECESSARY TO SUIT JOB CONDITIONS AND DIMENSIONS. SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
6.	VERIFY ALL FINAL EQUIPMENT LOCATIONS WITH OWNERS REPRESENTATIVE. DIMENSIONS ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED.
7.	DRAWINGS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE DIAGRAMMATIC ONLY. THE WORK INDICATED ON THE DRAWINGS SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT AND APPURTENANCES, AND LABOR NECESSARY TO COMPLETE THE WORK. VERIFY ALL EQUIPMENT LOCATIONS WITH CONSTRUCTION MANAGER.
8.	THE DRAWING AND SPECIFICATIONS ARE GENERAL DIRECTIVES FOR THE SCOPE OF WORK. EXACT DIMENSIONS AND LOCATIONS MAY CHANGE IN THE FIELD. THE CONTRACTOR IS TO VERIFY THE DIMENSIONS AND LOCATIONS AND REPORT ANY AND ALL DISCREPANCIES TO CONSTRUCTION MANAGER PRIOR TO COMMENCING THE RELATED WORK. ANY MINOR ERRORS OR OMISSIONS IN THE DRAWINGS AND SPECIFICATIONS, DO NOT EXCUSE THE CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.
9.	PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL VISIT THE JOB SITE AND BECOME FAMILIAR WITH ALL CONDITIONS AFFECTING THE PROPOSED PROJECT, INCLUDING DEMOLITION, MECHANICAL AND ELECTRICAL INSTALLATIONS AND SHALL ADJUST BID ACCORDINGLY.
10.	CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND DIMENSIONS ON THE JOB SITE AND CONFIRM THAT WORK AS INDICATED ON THE CONSTRUCTION DOCUMENTS CAN BE ACCOMPLISHED AS SHOWN BEFORE PROCEEDING.
11.	NOTIFY CONSTRUCTION MANAGER OF ANY MAJOR DISCREPANCY REGARDING THE CONTRACT DOCUMENTS, EXISTING CONDITIONS, AND OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING CLARIFICATION PRIOR TO PROCEEDING WITH THE WORK OR RELATED WORK IN QUESTION.
12.	INSTALL ALL EQUIPMENT AND MATERIALS PER MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
13.	CONTRACTORS SHALL VISIT JOB SITE TO REVIEW SCOPE OF WORK AND EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, MECHANICAL SERVICE, ELECTRICAL SERVICE AND OVERALL COORDINATION.
14.	ALL TELEPHONE/RADIO EQUIPMENT LAYOUT, SPECIFICATIONS, PERFORMANCE, INSTALLATION AND THEIR FINAL LOCATION ARE TO BE APPROVED BY CONSTRUCTION MANAGER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THEIR WORK WITH THE WORK AND CLEARANCE REQUIRED BY OTHERS RELATED TO SAID EQUIPMENT.
15.	ALL WORK PERFORMED AND MATERIALS SHALL MEET THE HIGHEST TRADE STANDARDS. AS A MINIMUM STANDARD, CONFORM WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK.
16.	ELECTRICAL SYSTEMS SHALL BE INSTALLED PER NEC AND IN ACCORDANCE WITH ALL APPLICABLE UTILITY COMPANY SPECIFICATIONS, LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
17.	CONTRACTOR SHALL PROVIDE CONTINUOUS SUPERVISION WHILE ANY SUBCONTRACTORS OR WORKMEN ARE ON THE JOB SITE AND SHALL SUPERVISE AND DIRECT ALL WORK. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND WITH COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
18.	THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN THE PRESENT CONDITION OF ANY EXISTING BUILDINGS, LANDSCAPING, FENCING, EQUIPMENT, WALKS, DRIVES, AND ATTACHMENTS. IF ANY DAMAGE SHOULD OCCUR, THE CONTRACTOR IS RESPONSIBLE TO RESTORE THE DAMAGE TO A BETTER OR NEW CONDITION.
19.	THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REDLINING THE CONSTRUCTION PLANS TO ILLUSTRATE THE AS-BUILT CONDITION OF THE SITE. THIS WILL BE DONE AFTER THE SITE HAS BEEN AWARDED THE FINAL INSPECTION. TWO COPIES OF REDLINED DRAWINGS WILL BE PROVIDED TO CONSTRUCTION MANAGER.
20.	PHOTOS SHALL BE TAKEN OF THE SITE DAILY AT THE REQUEST OF THE CONSTRUCTION MANAGER. ALL WORK TO BE BURIED OR HIDDEN MUST BE PHOTOGRAPHED AND INSPECTED BY CONSTRUCTION MANAGER PRIOR TO BACK FILLING ETC. UNLESS OTHERWISE SPECIFIED BY CONSTRUCTION MANAGER.

SITE WORK

1.	RELATED WORK: CONSTRUCTION OF FOUNDATIONS, GROUNDING SYSTEM, AND UTILITY TRENCHES.
2.	DESCRIPTIONS OF ACCESS ROAD(S), TURNAROUND AREA(S), AND SITES ARE CONSTRUCTED TO PROVIDE A WELL DRAINED, EASILY MAINTAINED, EVEN SURFACE FOR MATERIAL AND EQUIPMENT DELIVERIES AND MAINTENANCE PERSONNEL ACCESS.
3.	QUALITY ASSURANCE: (A) GRASS SEEDS SHALL BE APPLIED AND MAINTAINED AS RECOMMENDED BY THE SEED PRODUCER (IF REQUIRED). (B) VEGETATION LANDSCAPING, IF INCLUDED WITHIN THE CONTRACT, WILL BE PLACED AND MAINTAINED AS RECOMMENDED BY NURSERY INDUSTRY STANDARDS.
4.	SEQUENCING: A) CONFIRM SURVEY STAKES AND SET ELEVATIONS PRIOR TO ANY CONSTRUCTION. B) THE COMPLETE ROAD AND SITE AREA WILL BE GRUBBED PRIOR TO FOUNDATION CONSTRUCTION OR PLACEMENT OF BACK FILL OR SUB-BASE MATERIAL. C) CONSTRUCT TEMPORARY CONSTRUCTION ZONE ACCESS DRIVE. D) THE SITE AREA WILL BE BROUGHT TO SUB-BASE COURSE ELEVATION AND THE ACCESS ROAD TO BASE COURSE ELEVATION PRIOR TO FORMING FOUNDATION. E) GRADE, SEED FERTILIZER AND MULCH DISTURBED AREAS IMMEDIATELY AFTER BRINGING SITE AND ACCESS ROAD TO BASE COURSE ELEVATION, WATER TO ENSURE GROWTH. F) REMOVE GRAVEL FROM TEMPORARY CONSTRUCTION ZONE TO AN AUTHORIZED AREA OR AS DIRECTED BY CONSTRUCTION MANAGER.
5.	SUBMITTALS, BEFORE CONSTRUCTION: ALL SUBMITTALS SHALL BE ROUTED TO PROJECT MANAGER.
6.	WARRANTY; A) IN ADDITION TO THE WARRANTY ON ALL CONSTRUCTION COVERED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REPAIR ALL DAMAGE AND REPAIR AREA BACK AS CLOSE TO ORIGINAL CONDITION AS POSSIBLE TO LEASE AREA PROPERTY OR SURROUNDING CAUSED BY CONSTRUCTION. B) SOIL STERILIZATION APPLICATION SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL INSPECTION. C) DISTURBED AREAS WILL REFLECT GROWTH OF NEW GRASS COVER PRIOR TO FINAL INSPECTION. D) LANDSCAPING SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL INSPECTION.
7.	ALL FILL DIRT SHALL BE CLEAN AND NATURAL, FREE FROM ANY DELETERIOUS MATERIALS, ROOTS, ICE, SNOW, AND RUBBISH. A COPY OF ALL DELIVERY TICKETS SHALL BE SUBMITTED TO THE OWNERS REPRESENTATIVE WITHIN 24-HOURS FROM THE DELIVERY.
8.	IN ALL ROCKY TERRAINS, TRENCHES SHALL HAVE A SIX-INCH BASE OF CLEAN SAND FILL TO ACCEPT THE CONDUITS AND THEN ANOTHER 12" OF CLEAN SAND FILL ON TOP OF THE CONDUITS. THE REMAINDER OF THE TRENCH SHALL HAVE A CLEAN COMPATIBLE FILL PLACED IN MAXIMUM LIFTS OF 8" AND MECHANICALLY COMPACTED TO A DENSITY OF 98% OF STANDARD PROCTOR MAXIMUM DENSITY. METALLIC WARNING TAPE SHALL BE PLACED AT 12" BELOW FINISHED GRADE ALONG THE ENTIRE TRENCH.
9.	ALL REQUIRED BACKFILL SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DENSITY OBTAINABLE BY THE A.S.T.M. DESIGNATION D1557.
10.	ALL FILL OR STONE WILL BE PLACED IN MAXIMUM 8" LIFTS PRIOR TO COMPACTING.
11.	THE CONTRACTOR IS RESPONSIBLE TO ENSURE GROWTH OF THE SEED AND LANDSCAPING AREAS BY WATERING, STRAW, MULCH NET ANY OTHER PROPER LANDSCAPING METHOD NECESSARY. ALL AREAS MUST HAVE SUSTAINED GROWTH BY THE TIME OF COMPLETION OF THE PROJECT.
12.	THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONTAINMENT OF SEDIMENT AND CONTROL OF EROSION ON SITE. ANY DAMAGE TO ADJACENT OR DOWNSTREAM PROPERTIES WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.
13.	THE CONTRACTOR IS TO MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES. DO NOT ALLOW WATER TO STAND OR POND. ANY DAMAGE TO STRUCTURES OR WORK ON THE SITE CAUSED BY INADEQUATE MAINTENANCE OF DRAINAGE PROVISIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND ANY COST ASSOCIATED WITH REPAIRS FOR SUCH DAMAGE WILL BE AT THE CONTRACTORS EXPENSE.
14.	THE CONTRACTOR SHALL BE RESPONSIBLE TO CORRECT ALL DAMAGE TO THE SITE SUBSEQUENT TO THE INSTALLATION OF THE POWER AND TELCO LINES.

PRODUCTS

1.	ALL ROADWORK AND MATERIALS SHALL CONFORM TO ALL STATE AND LOCAL CODES AND IN ACCORDANCE WITH THE JURISDICTIONS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
2.	SOIL STABILIZER FABRIC SHALL BE MIRAFI-500X.

DEMOLITION

1.	EXISTING WORK AND SITE CONDITIONS TO REMAIN SHALL BE PROTECTED FROM DAMAGE, WORK DAMAGED BY CONTRACTOR SHALL BE REPAIRED TO MATCH EXISTING WORK.
2.	AT THE END OF EACH WORK DAY AND DURING INCLEMENT WEATHER, CLOSE ALL EXTERIOR OPENINGS WITH WEATHERPROOF COVER.
3.	REMOVE DEBRIS AND RUBBISH FROM THE SITE DAILY. DO NOT ALLOW DEBRIS AND RUBBISH TO ACCUMULATE ON SITE.

EXECUTION

1.	INSPECTIONS: REQUIRED BUILDING INSPECTORS SHALL BE ARRANGED NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS. UNLESS OTHERWISE SPECIFIED BY OWNER OR LOCAL JURISDICTION.
2.	INSTALLATION: A) THE SITE AND TURNAROUND AREAS SHALL BE AT THE SUB-BASE COURSE ELEVATION PRIOR TO FORMING FOUNDATIONS. GRADE OR FILL THE SITE AND ACCESS ROAD REQUIRED IN ORDER THAT UPON EVEN DISTRIBUTION OF SPOILS RESULTING FROM FOUNDATION EXCAVATIONS. THE RESULTING GRADE WILL CORRESPOND WITH SAID SUB-BASE COURSE, ELEVATIONS ARE TO BE CONSTRUCTED TO HAVE A POSITIVE DRAINAGE SLOPE INDICATED. ALL SITES AND ACCESS ROADS ARE TO BE CONSTRUCTED TO HAVE A POSITIVE DRAINAGE AWAY FROM THE SITE AND EQUIPMENT. ANY DISCREPANCIES IN THE DRAWINGS OR SPECIFICATIONS MUST BE BROUGHT TO THE ATTENTION OF CONSTRUCTION MANAGER IMMEDIATELY. B) ALL EXCESS SPOILS SHALL BE CLEARED FROM JOB SITE AND NOT SPREAD BEYOND THE LIMITS OF THE LEASE PROPERTY UNLESS AUTHORIZED BY CONSTRUCTION MANAGER AS AGREEMENT BY LANDOWNER. C) AVOID CREATING DEPRESSIONS WHERE WATER MAY POND. D) THE CONTRACT SHALL INCLUDE GRADING, BANKING, DITCHING AND UNLESS OTHERWISE INDICATED, COVERING WITH TWO INCHES OF SURFACE COURSE. ALL ROADS OR ROUTES UTILIZED FOR ACCESS TO THE SITE COMMENCE AT THE POINT OF INTERSECTION WITH THE NEAREST PUBLIC THOROUGHFARE. E) PLACE FILL OR STONE IN EIGHT INCH MAXIMUM LIFTS AND COMPACT BEFORE PLACING NEXT LIFT. F) THE FINISH GRADE, INCLUDING TOP SURFACE COURSE, SHALL COVER THE AREA AS INDICATED.
3.	THE CONTRACTOR SHALL ORDER A FULL UTILITY LOCATE SERVICE PRIOR TO THE START OF CONSTRUCTION.
4.	ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, IRRIGATION, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK SHALL BE PROTECTED AT ALL TIMES, WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, UTILITIES SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES.
5.	CONTRACTOR AND SUB-CONTRACTORS SHALL VERIFY ALL UTILITY SERVICE CONNECTION LOCATIONS AND VERIFY ALL DIMENSIONS AND NOTES PRIOR TO PROCEEDING WITH WORK.
6.	IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
7.	ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, OWNER AND/OR LOCAL UTILITIES.
8.	THE CONTRACTOR SHALL COORDINATE LOCATION OF POLE AND EQUIPMENT WITH THE SURVEYOR OR RECORDED PRIOR TO COMMENCING WORK.
9.	THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE EQUIPMENT AND TOWER AREAS.
10.	NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND, NOR SHALL ANY FROZEN MATERIALS, SNOW OR ICE BE PLACED IN FILL OR EMBANKMENT.
11.	THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
12.	SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. ALL DISTURBED LANDSCAPING SHALL BE REPLACED, RESEED, AND REGROWN TO MATCH THE ORIGINAL CONDITION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
13.	ALL WORK IS BEING PERFORMED IN THE RIGHT-OF-WAY. VERIFY ALL R.O.W. LINES AND EQUIPMENT LOCATION/INSTALLATIONS WITH SURVEYED DATA. NO MATERIALS SHALL BE STORED ON PRIVATE PROPERTY.
14.	LANE CLOSURES OR OBSTRUCTIONS SHALL BE PROPERLY COORDINATED WITH JURISDICTION

****NOTE: ALL APPLICABLE LOCAL AND NATIONAL CODES SUPERSEDE ANY NOTES AND SPECIFICATIONS SHOWN IN THE CONSTRUCTION PACKAGE****

verizon

PLANS PREPARED BY:
Horrocks.
2162 West Grove Parkway, Suite 400
Pleasant Grove, UT 84062
(801) 763-5100

SEAL:

REV.	DATE	DESCRIPTION
A	03/06/26	ISSUED FOR CLIENT REVIEW
B	03/18/26	CLIENT COMMENTS
C	04/06/26	CLIENT COMMENTS

CSP KIVA
VERIZON WIRELESS
82 WIDEFIELD BOULEVARD
COLORADO SPRINGS, CO 80911
EL PASO COUNTY

GN-1

CODES

1.	ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2018 VERSIONS OF THE INTERNATIONAL BUILDING CODES: BUILDING (IBC), PLUMBING (IPC), MECHANICAL (IMC), AND ELECTRICAL (2017 NEC), ALONG WITH THE JURISDICTIONS DESIGN STANDARDS AND ALL APPLICABLE FEDERAL, STATE, COUNTY, AND MUNICIPAL BUILDING CODES, ORDINANCES, RULES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION OVER THE CONSTRUCTION OF THIS PROJECT, SHALL APPLY THROUGHOUT.
2.	ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST VERSION OF INTERNATIONAL BUILDING CODE (IBC). (IPC). (IMC) AND NEC.
3.	AMERICAN INSTITUTE OF STEEL CONSTRUCTION, THE CURRENT VERSION OF AISC CODE, MANUAL OF STEEL CONSTRUCTION.

GENERAL NOTES

1.	THESE STRUCTURAL NOTES SUPPLEMENT THE WRITTEN SPECIFICATIONS AND PROJECT DRAWINGS.
2.	NOTES AND DETAILS ARE TYPICAL AND APPLY TO ALL SIMILAR CONDITIONS UNLESS SPECIFICALLY NOTED OTHERWISE ON THE CONTRACT DOCUMENTS.
3.	ANY DISCREPANCY FOUND AMONG THE NOTES, WRITTEN SPECIFICATIONS AND PROJECT DRAWINGS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER/ENGINEER FOR CORRECTION AND/OR CLARIFICATION. IF CONSTRUCTION MANAGER/ENGINEER IS NOT AVAILABLE TO PROVIDE COMMENT, THE CONTRACTOR IS TO PROCEED WITH THE MOST STRINGENT REQUIREMENT AT NO ADDITIONAL COST TO THE OWNER.
4.	THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL EXISTING CONSTRUCTION MATERIAL TYPES, DIMENSIONS, ELEVATIONS AND CONDITIONS. HE SHALL VERIFY AND COORDINATE THE DIMENSIONS AMONG ALL DRAWINGS AND IN THE FIELD PRIOR TO PROCEEDING WITH ANY WORK OR FABRICATION, ANY DISCREPANCY SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER.
5.	THE CONTRACTOR IS RESPONSIBLE FOR ALL BRACING, TEMPORARY SHORING, WATER AND OTHER ENVIRONMENTAL CONTROLS REQUIRED DURING CONSTRUCTION TO INSURE THE STABILITY AND SAFETY OF ALL CONSTRUCTION UNTIL COMPLETE AND SELF-SUPPORTING.
6.	STRUCTURAL OBSERVATIONS MADE BY THE ENGINEER SHALL NOT BE CONSTRUED AS SPECIAL INSPECTIONS.

FOUNDATION

1.	REMOVE UNSATISFACTORY MATERIALS FROM EXCAVATION. UNSATISFACTORY MATERIALS MAY INCLUDE BUT ARE NOT LIMITED TO: VEGETATION, SOFT SPOTS, DELETERIOUS MATERIALS, FOREIGN MATERIALS, ETC.
2.	EXCAVATION IS TO BE MECHANICALLY COMPACTED PRIOR TO ANY CONSTRUCTION ON EXCAVATION, REPLACE UNSATISFACTORY AREAS WITH COMPACTED FILL (COMPACTED EXCAVATION TO 98% AS NOTED BELOW).
3.	ALL FOOTINGS TO BE PLACED ON FIRM UNDISTURBED, INORGANIC MATERIAL. PROOF ROLL SUB-GRADE PRIOR TO PLACING CONCRETE WHERE THE MATERIAL HAS BEEN DISTURBED BY THE EXCAVATING EQUIPMENT.
4.	LOCAL AREAS OF SOFT AND/OR UNACCEPTABLE MATERIAL ENCOUNTERED AT BOTTOM OF FOOTING ELEVATIONS INDICATED ON THE PLANS MUST BE OVER-EXCAVATED AND BROUGHT UP TO DESIGN GRADE COMPACTED "STRUCTURAL FILL" OR "LEAN CONCRETE FILL".
5.	IMPORTED FILL: WELL GRADED GRANULAR SOIL FREE OF ORGANICS AND DEBRIS. WELL GRADED SANDY GRAVEL. MAXIMUM LIFT HEIGHT FOR FILL MATERIAL SHALL BE 8" FOR MECHANICALLY COMPACTED LAYERS AND 4" FOR HAND COMPACTED LAYERS.
6.	COMPACTION: ALL FILL UNDER OR AROUND BUILDING INCLUDING FOOTINGS AND FOUNDATIONS SHALL BE COMPACTED TO NOT LESS THAN 98% MAXIMUM LABORATORY DRY UNIT WEIGHT AS DETERMINED BY ASTM D 1557 (MODIFIED PROCTOR).
7.	GRADING: SLOPE GRADE TO DIRECT WATER AWAY FROM BUILDINGS AND TO PREVENT PONDING.
8.	FOOTINGS ARE TO BE CENTERED UNDER WALLS UNLESS NOTED OTHERWISE.
9.	FOOTINGS ARE TO BE PLACED 18" MINIMUM BELOW FINAL FINISHED GRADE AND MUST BE BELOW FROST LEVEL, CONTRACTOR TO VERIFY FROST DEPTH WITH SOILS REPORT OR COUNTY OFFICES.
10.	ITEMS TO BE EMBEDDED INTO FOOTINGS OR FROM FOOTINGS TO FOUNDATION WALLS ARE TO BE SECURELY TIED IN PLACE PRIOR TO PLACING CONCRETE. REPOSITIONING OF EMBEDDED ITEMS AFTER CONCRETE HAS BEEN PLACED WILL NOT BE PERMITTED.
11.	THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
12.	REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL DIRECTIONS AND SPECIFICATIONS.

CONCRETE

1.	ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE 2018 VERSIONS OF THE INTERNATIONAL BUILDING CODES: BUILDING (IBC), PLUMBING (IPC), MECHANICAL (IMC), AND ELECTRICAL (2017 NEC), ALONG WITH THE JURISDICTION DESIGN STANDARDS AND ALL APPLICABLE FEDERAL, STATE, COUNTY, AND MUNICIPAL BUILDING CODES, ORDINANCES, RULES AND REGULATIONS OF AUTHORITIES HAVING JURISDICTION OVER THE CONSTRUCTION OF THIS PROJECT, SHALL APPLY THROUGHOUT.

LOCATION:	STRENGTH (MIN):	SLUMP (MAX)	AIR CONTENT (+/-1%):
FOOTINGS:	4000 PSI	4"	NO ENTRAINED AIR
SLABS:			
EXTERIOR:	4000 PSI	4"	6%
INTERIOR:	4000 PSI	4"	NO ENTRAINED AIR

2.	CONCRETE WORK SHALL CONFORM TO CHAPTER 19 OF THE INTERNATIONAL BUILDING CODE.
3.	ALL CONCRETE SURFACES SHALL BE CURED PER THE SPECIFICATIONS AND IN CONFORMANCE WITH ACI 308.1 (LATEST EDITION).
4.	MECHANICALLY VIBRATE ALL CONCRETE.
5.	NO ALUMINUM CONDUITS OR BOXES ARE TO BE EMBEDDED IN THE CONCRETE.
6.	CHAMFER ALL EXPOSED CORNERS AND FILLET ENTRANT ANGLES ¾"

FORM WORK

1.	FORM WORK FOR CONCRETE SHALL CONFORM TO ACI 347R (LATEST EDITION), GUIDE TO FORMWORK FOR CONCRETE. TOLERANCES FOR FINISHED CONCRETE SURFACES SHALL MEET THE FOLLOWING REQUIREMENTS, CLASS OF SURFACE IS PER TABLE 3.4: FOOTINGS: CLASS C FOUNDATION WALLS: CLASS B OTHER ABOVE-GRADE CONCRETE: CLASS A
2.	FORMS SHALL BE PROPERLY COATED.
3.	REINFORCEMENT SHALL BE CLEAN OF ICE OR OTHER DELETERIOUS COATINGS.
4.	IN NO CASE SHALL THE TOLERANCE FOR FINISHED CONCRETE SURFACES EXCEED THE FOLLOWING VALUES AS MEASURED FROM NEAT PLAN LINES AND FINISHED GRADES: FOOTINGS: +/- ¼ IN VERTICAL, +/- 1 IN HORIZONTAL FOUNDATION WALLS: +/- 3/8 IN VERTICAL, +/- ½ IN HORIZONTAL OTHER ABOVE-GRADE CONCRETE: +/- ¼ IN VERTICAL, +/- 3/8 IN HORIZONTAL

MIXING

1.	ALL DEBRIS AND ICE SHALL BE REMOVED FROM SPACES TO BE OCCUPIED BY CONCRETE.
2.	ITEMS TO BE EMBEDDED IN CONCRETE ARE TO BE SECURELY TIED IN PLACE PRIOR TO PLACING CONCRETE. REPOSITIONING OF EMBEDDED ITEMS AFTER CONCRETE HAS BEEN PLACED WILL NOT BE PERMITTED.
3.	DO NOT ADD WATER TO CONCRETE DURING DELIVERY, AT PROJECT SITE, OR DURING PLACEMENT WITHOUT PRIOR APPROVAL FROM ENGINEER.
4.	CONCRETE SHALL BE CONVEYED FROM MIXER TO PLACE OF FINAL DEPOSIT BY METHODS THAT WILL PREVENT SEPARATION OF LOSS OF MATERIALS. CONCRETE SHALL BE DEPOSITED AS NEARLY AS PRACTICAL IN ITS FINAL POSITION TO AVOID SEGREGATION DUE TO RE-HANDLING OR FLOWING.
5.	CONCRETE THAT HAS PARTIALLY HARDENED OR BEEN CONTAMINATED BY FOREIGN MATERIALS SHALL NOT BE DEPOSITED IN THE STRUCTURE.
6.	AFTER PLACEMENT HAS STARTED, IT SHALL BE CARRIED ON AS A CONTINUOUS OPERATION.
7.	ALL CONCRETE SHALL BE CONSOLIDATED BY A MECHANICAL VIBRATOR. VIBRATOR SHALL BE INSERTED VERTICALLY AT A MEDIUM PACE AND RETRACTED IMMEDIATELY. DO NOT USE VIBRATOR TO TRANSPORT CONCRETE.
8.	CONCRETE SHALL BE MAINTAINED ABOVE 50 DEGREES F AND IN A MOIST CONDITION FOR AT LEAST 7 DAYS AFTER PLACEMENT. ACCELERATED SCHEDULES ARE PERMISSIBLE PROVIDED AN ACCELERATED CURING PLAN IS PROVIDED TO AND APPROVED BY CONSTRUCTION MANAGER/ENGINEER.
9.	SHORING AND BRACING SHALL REMAIN IN PLACE UNTIL CONCRETE HAS OBTAINED FULL DESIGN STRENGTH.
10.	CONCRETE PROTECTION SHALL BE PROVIDED IF HOT/COLD WEATHER CONDITIONS ARE PRESENT DURING PLACEMENT OF CONCRETE.

REINFORCING STEEL

1.	CONCRETE BLOCKS OR PLASTIC-COATED BAR CHAIRS SHALL BE PROVIDE FOR SUPPORT OF ALL SLAB REINFORCING STEEL, SUFFICIENT IN NUMBER TO PREVENT SETTLEMENT OR SAGGING, BUT IN NO CASE SHALL SUCH SUPPORT BE CONTINUOUS. METAL CUPS OR SUPPORTS SHALL NOT BE PLACED IN CONTACT WITH THE FORMS OR THE SUB-GRADE.
2.	DOWELS AND ANCHOR BOLTS SHALL BE WIRED OR HELD IN CORRECT POSITION PRIOR TO PLACING CONCRETE. CARE SHALL BE TAKEN TO INSURE THAT DOWELS AND ANCHOR BOLTS REMAIN PLUMB AFTER CONCRETE IS POURED AND VIBRATED. IN NO CASE SHALL DOWELS OR ANCHOR BOLTS BE STABBED INTO FRESHLY POURED CONCRETE.
3.	PROVIDE DOWELS IN FOOTINGS AND AT CONSTRUCTION JOINTS TO MATCH VERTICAL REINFORCING BAR SIZE AND SPACING, UNLESS OTHERWISE NOTED ON THE DRAWINGS.
4.	COORDINATE PLACEMENT OF DOWELS INTO MASONRY OR BRICK WALLS WITH THE MASONRY SHOP DRAWINGS.
5.	ALL BAR BENDS, HOOKS, SPLICES AND OTHER REINFORCING STEEL DETAILS SHALL CONFORM TO THE REQUIREMENTS OF ACI 315.
6.	UNLESS OTHERWISE NOTED ON THE PLANS ALL BARS SHALL BE SPLICED WITH A MINIMUM LAP OF 32 BAR DIAMETERS; LAP SPLICES OF DEFORMED BARS AND DEFORMED WIRE IN TENSION ZONES SHALL BE CLASS B SPLICES.
7.	DEFORMED REINFORCING SHALL CONFORM TO ASTM 615 GRADE 60 UNLESS NOTED OTHERWISE.
8.	WELDED WIRE FABRIC REINFORCING SHALL CONFORM TO ASTM A 185 GRADE 60.
9.	AT THE TIME CONCRETE IS PLACED, REINFORCEMENT SHALL BE FREE FROM MUD, OIL, OR OTHER NONMETALLIC COATINGS THAT DECREASE BOND. A LIGHT COATING OF MILL SCALE OR RUST WILL BE PERMITTED.
10.	ANCHOR BOLTS SHALL BE ASTM A307, PLACEMENT OF ANCHOR BOLTS SHOULD BE VERIFIED BY TWO PERSONS TO ENSURE PROPER PLACEMENT.
11.	ALL W-SHAPES SHALL CONFORM TO ASTM A 992. ALL OTHER STEEL SHALL CONFORM TO ASTM A 36.

PROTECTION

CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE AS FOLLOWS:

	CONDITION:	**MIN. COVER**
1.	CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
2.	CONCRETE EXPOSED TO EARTH OR WEATHER: #6-#18 #5 BAR OR LESS AND W.W.F	2" 1 ½"
3.	CONCRETE EXPOSED TO EARTH OR WEATHER OR IN CONTACT WITH GROUND: SLABS, WALL, AND JOISTS: #14 - #18 #11 AND SMALLER BEAMS AND COLUMNS: PRIMARY BARS, TIES, STIRRUPS, AND SPIRAL SHELLS AND FOLDED PLATE MEMBERS: #6 AND LARGER #5 AND SMALLER	 1 ½" ¾" 1 ½" ¾" ½"

VALUES ARE FOR CONCRETE ONLY.

SPLICE AND LAP LENGTHS SHALL BE AS FOLLOWS:

4.	LAP WELDED WIRE FABRIC SHALL BE LAPPED ONE FULL MESH AT SIDE AND END. LAP LENGTH TABLE FOR CONCRETE #3 BAR, 18" LENGTH - #4 BAR, 24" LENGTH #5 BAR, 30" LENGTH - #6 BAR 36" LENGTH #7 BAR, 48" LENGTH - #8 BAR, 60" LENGTH
5.	IF EPOXY COATED REBAR IS USED, IN INCREASE VALUES BY 50%.
6.	REINFORCING SHALL BE FIELD BENT IN A MANNER THAT IS NOT INJURIOUS TO THE REINFORCEMENT OR THE CONCRETE. ALL FIELD BENDING SHALL BE PERFORMED WHEN REINFORCEMENT IS COLD.

FINISHING

1.	FLOOR SLABS; CONCRETE FLOOR SLABS SHALL BE FINISHED IN ACCORDANCE WITH ACI 302.1 CHAPTER B. PROVIDE CLASS 4 FINISH UNLESS NOTED OTHERWISE ON THE PLANS OR SPECIFICATIONS. PROVIDE NON-SLIP FINISH FOR EXTERIOR SURFACES AND AS NOTED ON THE PLANS.
2.	FORMED SURFACE FINISHING: ALL FORMED CONCRETE SURFACES SHALL BE FINISHED IN ACCORDANCE WITH ACI 301.99 SECTIONS 5.3, 6.3, AND 7.3. PROVIDE ROUGH FORMED SURFACE FOR ALL SURFACES NOT EXPOSED TO VIEW AND SMOOTH FORMED FINISH FOR ALL SURFACES EXPOSED TO VIEW, UNLESS NOTED OTHERWISE ON THE PLANS OR SPECIFICATIONS.

verizon

PLANS PREPARED BY:
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SEAL:

REV.	DATE	DESCRIPTION
A	03/06/26	ISSUED FOR CLIENT REVIEW
B	03/18/26	CLIENT COMMENTS
C	04/06/26	CLIENT COMMENTS

CSP KIVA
VERIZON WIRELESS
82 WIDEFIELD BOULEVARD
COLORADO SPRINGS, CO 80911
EL PASO COUNTY

GN-2

ELECTRICAL NOTES

1.	CONTRACTOR SHALL PERFORM ALL SITE SURVEY, AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL VERIFY THAT ALL ELECTRICAL PANELS, METERING EQUIPMENT, AND DISCONNECTS MEET THE LOCAL UTILITY'S REQUIREMENTS PRIOR TO ORDERING MATERIALS OR INSTALLING ELECTRICAL EQUIPMENT. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE DESIGN ENGINEER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
2.	THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.
3.	EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANEL BOARD, PULL BOX, J-BOX, SWITCH BOX, ETC. IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (O.S.H.A.).
4.	CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC. FOR A COMPLETE AND PROPERLY OPERATIVE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
5.	ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU.
6.	ALL CONDUIT INSTALLED SHALL BE SURFACE MOUNTED OR DIRECT BURIAL UNLESS OTHERWISE NOTED.
7.	CONTRACTOR SHALL CARRY OUT THEIR WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY AND LOCAL CODES AND O.S.H.A.
8.	CONTRACTOR RESPONSIBLE FOR ALL PERMITS AND PAY ALL REQUIRED FEES.
9.	COMPLETED JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
10.	ALL CONDUIT SHALL HAVE A PULL WIRE OR ROPE WITH MIN. 2500 LB RATING.
11.	PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS AND CIRCUITS.
12.	ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC., SHALL BE TURNED OVER TO THE OWNER AT JOB COMPLETION.
13.	ALL CONDUCTORS SHALL BE COPPER, UNLESS OTHERWISE NOTED.
14.	THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES.
15.	WIRE AND CABLE CONDUCTORS SHALL BE COPPER AND MINIMUM #12 UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS.
16.	GROUNDING CONDUCTORS SHALL BE SOLID TINNED COPPER UNLESS OTHERWISE NOTED.
17.	ALL MATERIALS SHALL BE U.L. LISTED.
18	CONDUIT: A) RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR UNLESS OTHERWISE NOTED. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3. B) ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL. FITTING SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS. C) FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAKE" OR "SQUEEZE" TYPE, SEAL TIGHT FLEXIBLE CONDUIT. ALL CONDUIT SHALL HAVE FULL SIZE EQUIPMENT GROUND WIRE. D) CONDUIT RUNS SHALL BE SURFACE MOUNTED IN CEILINGS OR WALLS UNLESS INDICATED OTHERWISE. CONDUIT INDICATED SHALL RUN PARALLEL OR AT RIGHT ANGLES TO CEILING, FLOOR OR BEAMS, VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH THE OWNER PRIOR TO INSTALLING. NO BX OR ROMEX CABLE IS PERMITTED. E)PARALLEL UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40 (UNLESS NOTED OTHERWISE) AT A MINIMUM DEPTH OF 30" BELOW GRADE - STACKED UNDERGROUND CONDUIT SHALL BE PVC SCHEDULE 40 (UNLESS NOTED OTHERWISE) AT A MINIMUM DEPTH OF 24" BELOW GRADE. F) ABOVE GROUND CONDUIT SHALL BE P.V.C. SCHEDULE 80 (UNLESS NOTED OTHERWISE).
19.	UPON COMPLETION OF WORK SUBMIT THE FOLLOWING TESTS RESULTS TO PROJECT MANAGER FOR APPROVAL: CONDUIT CONTINUITY, SHORT CIRCUIT, POTENTIAL GROUND TESTS. REMOVE CONSTRUCTION DEBRIS FROM PREMISES. LEAVE PREMISES CLEAN AND CLEAR IN UNDAMAGED PRE-CONSTRUCTION CONDITION.
20.	CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS TO BE PAID BY CONTRACTOR.
21.	ELECTRICAL CONDUIT SHALL HAVE NO MORE THAN 360° BENDING BETWEEN PULL LOCATIONS.

GROUNDING NOTES

1.	MATERIALS: A) #2 AWG, BARE SOLID TINNED COPPER WIRE, FOR ALL EXTERIOR CONDUCTORS AND TOWER GROUND BAR CONDUCTORS OR AS OTHERWISE SPECIFIED. GROUNDS TO THE LNAS SHALL BE NO. 6 STANDARD GREEN INSULATED JUMPERS. THE GROUND WIRE TO THE MGB SHALL BE GREEN JACKETED STRANDED #2 TINNED WIRE BURNDY CONNECTED TO THE BUSS BAR AND CONNECTED TO THE GROUND RING ON A GROUND ROD. B) #2 AWG, INSULATED STRANDED COPPER CABLE IS ACCEPTABLE FOR INTERIOR GROUND BAR CONDUCTORS ON TENANT IMPROVEMENT SITES. C) 3/4" X 10' GROUND RODS OF SOLID COPPER, STAINLESS STEEL OR COPPER CLAD HIGH STRENGTH STEEL. D) ABOVE GRADE CONNECTIONS SHALL BE BURNDY HYGROUND COMPRESSION. BELOW GRADE CONNECTIONS SHALL BE CADWELD OR OTHER APPROVED EXOTHERMIC WELDING SYSTEM FOR BONDING AS SPECIFIED. E) XIT OR ADVANCED GROUNDING ELECTRODE (AGE), ALL CHEMICAL GROUND RODS SHALL BE UL APPROVED. F) SOLID COPPER PLATES OF MINIMUM 3'X3'X1/4" SIZE AS SPECIFIED. G) NOALOX OR APPROVED EQUAL CONDUCTIVE MEDIUM MATERIAL SHALL BE USED IN ALL MECHANICAL CONNECTIONS. H) #6 AWG STRANDED INSULATED (GREEN) FOR ALL INTERNAL EQUIPMENT GROUNDING. I) MECHANICAL FASTENERS (I.E., DOUBLE BOLT LUGS, PARALLEL CONNECTORS) SHALL BE BRONZE, BRASS, COPPER OR STAINLESS STEEL AND HAVE NOALOX BETWEEN CONDUCTOR AND CONNECTION. J) BOLTS, NUTS AND SCREWS USED TO FASTEN MECHANICAL CONNECTORS SHALL BE STAINLESS STEEL WITH STAINLESS STEEL LOCK WASHERS.
2.	MASTER GROUND BAR (MGB): THE PURPOSE OF THE MASTER GROUND BAR IS TO GROUND THE BTS AND ANY OTHER METALLIC OBJECTS AROUND THE BTS. IF AN MGB IS NOT PROVIDED WITH THE BTS, THE MGB SHALL BE AS FOLLOWS: THE MGB IS A COPPER BAR MEASURING 4"W x 24"L x 1/4" LOCATED AS CLOSE TO THE BTS AS POSSIBLE. THE MGB SHALL HAVE A MINIMUM NUMBER OF 28 EACH 3/8" HOLES. GROUND BAR SHALL BE SUPPORTED BY MOUNTING BRACKETS WITH INSULATOR STANDOFFS. (2) #2 TINNED SHALL BE CADWELD ATTACHED TO THE MGB AND DOWN LEADS THEN TAKEN THROUGH CONDUIT TO THE GROUND RING. THIS CONDUCTOR SHALL BE KEPT SEPARATE AND ISOLATED UNTIL TERMINATING AT THE MAIN GROUNDING POINT, (I.E., EXTERIOR GROUND RING OR BUILDING STEEL).
3.	ANTENNA GROUND BAR (AGB): THE PURPOSE OF THE ANTENNA GROUND BAR IS PRIMARILY FOR LIGHTNING PROTECTION. HOWEVER IT IS ACCEPTABLE TO BOND EXTERIOR; CABLE TRAY, WAVE GUIDE PORTS AND CANTILEVERED WAVE GUIDE BRIDGES TO THE AGB. THE AGB IS A COPPER BAR MEASURING 4"W x 24"L x 1/4" ON WHICH THE COAXIAL CABLE FROM THE ANTENNAS ARE PRIMARILY GROUNDED. THERE SHALL BE TWO AGBS, ONE LOCATED AT THE TOP OF THE TOWER AT THE START OF THE VERTICAL RUN OF COAX, THE OTHER AT THE BOTTOM OF THE VERTICAL RUN OF COAX BEFORE IT MAKES ITS BEND. (IF THE TOWER IS OVER 200 FT THERE SHALL BE A THIRD AGB LOCATED AT THE MIDDLE OF THE TOWER.) THE AGB SHALL HAVE A MINIMUM OF 28 EACH 3/8" HOLES. GROUND BARS SHALL BE SUPPORTED BY MOUNTING BRACKETS WITH INSULATOR STANDOFFS. USE #2 AWG SOLID TINNED WIRE W/ 2-HOLE SHORT BARREL COMPRESSION LUGS 3/8" HOLES, 1" CENTER TO CENTER SPACING). THIS CONDUCTOR SHALL BE KEPT SEPARATE AND ISOLATED UNTIL TERMINATING AT THE MAIN GROUNDING POINT (I.E., EXTERIOR GROUND RING, OR BUILDING STEEL).
4.	SURGE ARRESTOR GROUND BAR: THE PURPOSE OF THE SURGE ERECTOR GROUND BAR IS FOR LIGHTNING PROTECTION. THE SURGE ARRESTOR GROUND BAR IS A BENT (3" X 3") X 1/4" X 24" COPPER BAR. IT IS LOCATED ON THE WAVE GUIDE BRIDGE SUPPORT CLOSEST TO THE EQUIPMENT, ONE FACE OF THE BAR SHALL HAVE A MINIMUM OF (28) 3/8" DIA. HOLES. HOLES SHALL BE IN PAIRS THAT ARE 1" CENTER TO CENTER. THE OTHER FACE SHALL HAVE 3/8" DIA. HOLES AS REQUIRED TO ATTACH AND GROUND COAXIAL SURGE ARRESTORS. THE GROUND BAR SHALL BE SUPPORTED BY MOUNTING BRACKETS WITH INSULATOR STANDOFFS.
5.	GROUND ROD AND GROUND RING PLACEMENT: THE OUTSIDE GROUND RING SHALL BE PLACED AROUND THE BTS AT A DISTANCE OF TWO (2) FEET FROM THE BTS AT A MINIMUM DEPTH OF 2' - 6". RODS SHALL BE DRIVEN TO A DEPTH SUCH THAT THE TOP OF THE RODS IS AT THE LEVEL OF THE GROUND RING CONDUCTOR. THE RODS SHALL BE PLACED MINIMALLY ALONG THE RING AT THE FOLLOWING LOCATIONS: A) BELOW THE AREA OF THE INTERNAL MASTER GROUND BAR (MGB) FOR CONNECTION TO THE MGB. B) BELOW THE MAIN POWER DISCONNECT. C) TWO RODS LOCATED ON OPPOSITE SIDES AT EACH POLE FOUNDATION. D) AS REQUIRED TO ACHIEVE A MAXIMUM SPACING OF EIGHT (8) FEET BETWEEN GROUND RODS ALONG THE RING PERIMETER. E) AS REQUIRED ALONG THE RING PERIMETER TO ACHIEVE 5 OHMS OR LESS RESISTANCE WHEN TESTED.
6.	ANTENNA GROUNDING: EACH ANTENNA COAXIAL CABLE SHALL TYPICALLY BE GROUNDED AT THREE POINTS USING A HARD-SHELL COAXIAL CABLE KIT FROM THE MANUFACTURER OF THE ANTENNA CABLE. A TYPICAL INSTALLATION SHALL BE AS FOLLOWS: A) THE FIRST GROUND CONNECTION SHALL OCCUR AS CLOSE TO THE ANTENNA AS POSSIBLE, BELOW THE FIRST POINT THE COAX CABLE BEGINS TO RUN VERTICAL DOWN THE TOWER. THIS GROUND SHALL TERMINATE DIRECT TO THE TOP AGB. ON A T/I, GROUND TO THE AGB AT THE ANTENNA MOUNTS. B) THE SECOND GROUND SHALL BE MADE AT THE BOTTOM OF THE VERTICAL RUN OF THE COAXIAL CABLE AS IT TURNS OUT AWAY FROM THE TOWER TOWARDS THE BTS. THIS GROUND SHALL BE TERMINATED AT THE AGB. THE AGB SHALL HAVE TWO (2) LEADS OF #2 AWG BARE TINNED SOLID COPPER WIRE, AND SHALL TERMINATE AT THE TOWER GROUND RING. THESE SHALL BE INCASED IN PVC PIPE. C) THE THIRD GROUND SHALL BE ON THE SURGE ARRESTOR. GROUND TO BE ATTACHED TO THE CABLE ON STRAIGHT RUNS (NOT WITHIN BENDS) AND BE WEATHER PROOFED PER THE MANUFACTURERS SPECIFICATIONS. THE SURGE ARRESTORS SHALL BE GROUNDED TO THE GROUND BAR. THE SAGB SHALL HAVE TWO (2) LEADS OF #2 AWG BARE TINNED SOLID COPPER WIRE, AND SHALL TERMINATE AT THE TOWER GROUND RING. THESE SHALL BE INCASED IN PVC PIPE.
7.	EQUIPMENT PAD GROUNDING: THE MASTER GROUND BAR (MGB) SERVES AS THE COLLECTION POINT FOR THE BTS AS WELL AS ALL INTERIOR NON-ELECTRICAL GROUNDED METAL MATERIALS; HVAC GRILLS, DOOR FRAMES/DOORS, TELCO BOARD, UNISTRUTS, CABLE TRAYS, ALARM JUNCTION BOX, ETC., SHALL BE GROUNDED WITH #6 AWG STRANDED (GREEN) GROUND WIRES WITH INDIVIDUAL RUNS BACK TO THE MGB. (THE CABLE TRAY, DOOR/FRAME AND UNISTRUT MAY BE JUMPERED TOGETHER AND HAVE A SINGLE GROUND WIRE CONNECTION TO THE MGB.)
8.	CADWELD & BURNDY CONNECTION: CADWELDS (EXOTHERMIC WELDS) AND BURNDY CONNECTIONS SHALL BOND ALL UNDERGROUND AND DAMP LOCATION CONNECTIONS. SHELTER SKID GROUNDS, TOWER OR MONOPOLE GROUNDS, FENCING CORNER AND GATE POSTS, ANTENNA GROUND BARS, (AGB) SURGE ARRESTER GROUND BAR, AND THE MASTER GROUND BAR (MGB), MECHANICAL CONNECTIONS SHALL BE TYPICALLY USED TO BOND ALL INTERIOR EQUIPMENT, COAX CABLE BRIDGES AND COAXIAL, CABLE GROUND KITS. ALL LUG TYPE MECHANICAL CONNECTORS TO THE MGB OR AGB SHALL BE TWO HOLE TYPE CONNECTED WITH STAINLESS STEEL BOLTS AND NUTS WITH STAINLESS STEEL LOCK WASHERS AND NOALOX ON EITHER SIDE OF THE BUSS BAR.
9.	CHEMICAL GROUND RODS: CHEMICAL GROUND RODS SHALL NOT BE INSTALLED ON GROUND RING INSTALLATIONS WITH NORMAL SOIL. CHEMICAL GROUND RODS SHALL BE INSTALLED ONLY FOR SPECIAL DESIGN APPLICATIONS THAT REQUIRE SINGLE POINT GROUNDING DUE TO SPECIFIC SITE CONDITIONS.
10.	LIMITS OF BEND RADIUS: IT IS IMPORTANT THAT THE GROUNDING CONDUCTOR CONNECTING THE INSIDE AND OUTSIDE GROUND SYSTEMS BE AS STRAIGHT AS POSSIBLE. WITH NO TURN OR BEND SHORTER THAN ONE FOOT RADIUS WITH A THREE FOOT RADIUS PREFERRED. NO RIGHT ANGLE OR SHARP BENDS SHALL BE ALLOWED.
11.	BONDING PREPARATION & FINISH: ALL SURFACES REQUIRE PREPARATION PRIOR TO BONDING OF EITHER CADWELD OR BURNDY FASTENERS. GALVANIZED SURFACES SHALL BE GROUND OR SANDED TO THE POINT OF EXPOSING THE STEEL SURFACE BELOW, PRIOR TO BONDING THE GROUND CONDUCTOR, FOR OTHER SURFACES INCLUDING COPPER BUSS BARS ALL PAINT, RUST TARNISH AND GREASE SHALL BE REMOVED PRIOR TO BONDING THE GROUND CONDUCTOR. CADWELD TYPE BONDS SHALL BE FINISHED WITH THE APPLICATION OF COLD GALVANIZATION AND WHEN APPLICABLE, FINISH PAINTED WITH AN APPROPRIATE COLOR AS REQUIRED. MECHANICAL TYPE BONDS ON BUSS BARS SHALL BE FINISHED WITH THE APPLICATION OF NOALOX OR OTHER APPROVED CONDUCTIVE MEDIUM MATERIAL BETWEEN CONNECTOR AND BUSS BAR. MECHANICAL TYPE BONDS ON ALL OTHER SURFACES SHALL BE FINISHED WITH THE APPLICATION OF COLD GALVANIZATION AND OR THE APPROPRIATE PAINT TO MATCH AS REQUIRED.
12.	TESTING: THE OUTSIDE GROUND RING SHALL BE TESTED AFTER INSTALLATION BUT PRIOR TO BACKFILLING THE GROUND RING TRENCH. THE GROUND FIELD RESISTANCE SHALL MEASURE 5 OHMS OR LESS TO GROUND. ANY DIFFICULTY IN ACHIEVING THIS LEVEL OF RESISTANCE MUST BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER. THE RESISTANCE TO GROUND SHALL BE MEASURED USING THE FALL OF POTENTIAL METHOD. TESTING SHALL BE PERFORMED BY AN OWNER PROVIDED INDEPENDENT TESTING LABORATORY FROM WHICH A WRITTEN REPORT SHALL BE PRODUCED FOR REVIEW BY THE PROJECT MANAGER.
13.	EXTERNAL GROUND RING: THE EXTERNAL GROUND RING SHALL EXTEND TO THE MAXIMUM ALLOWABLE DEPTH IN 95% COMPATIBLE SOIL IN ACCORDANCE WITH D1557. THE PURPOSE IS TO ACHIEVE THE LOWEST IMPEDANCE TO GROUND, IN ANY CASE, EQUAL TO OR LESS THAN 5 OHMS.

GROUNDING STANDARDS

DEFINITION:

AGB	ANTENNA GROUND BAR
AWG	AMERICAN WIRE GAUGE
CADWELDING	AN EXOTHERMIC WELDING PROCESS WHICH CREATES POSITIVE CONTACT OF GROUNDING CONDUCTORS
EMT	ELECTRICAL METAL TUBING (LIGHT GAUGE METAL CONDUIT) MGB MASTER GROUND BAR
PVC	POLY VINYL CHLORIDE CONDUIT
RFI	RADIO FREQUENCY INTERFERENCE
THW	LETTER TYPE DESIGNATION FOR CONDUCTOR INSULATION THAT IS A MOISTURE AND HEAT RESISTANT THERMOPLASTIC WITH A MAXIMUM OPERATING TEMPERATURE OF 75 DEGREES CELSIUS OR 167 DEGREES FAHRENHEIT.

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PLANS PREPARED BY:
Horrocks.
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Pleasant Grove, UT 84062
(801) 763-5100

SEAL:

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C	04/06/26	CLIENT COMMENTS

CSP KIVA
VERIZON WIRELESS
82 WIDEFIELD BOULEVARD
COLORADO SPRINGS, CO 80911
EL PASO COUNTY

GN-3

CALL COLORADO ONE CALL
(800) 922-1987
CALL 3 WORKING DAYS
BEFORE YOU DIG!

GRAPHIC SCALE
60 0 30 60 120

OVERALL SITE PLAN
w/ AERIAL OVERLAY

SCALE: 1" = 60'

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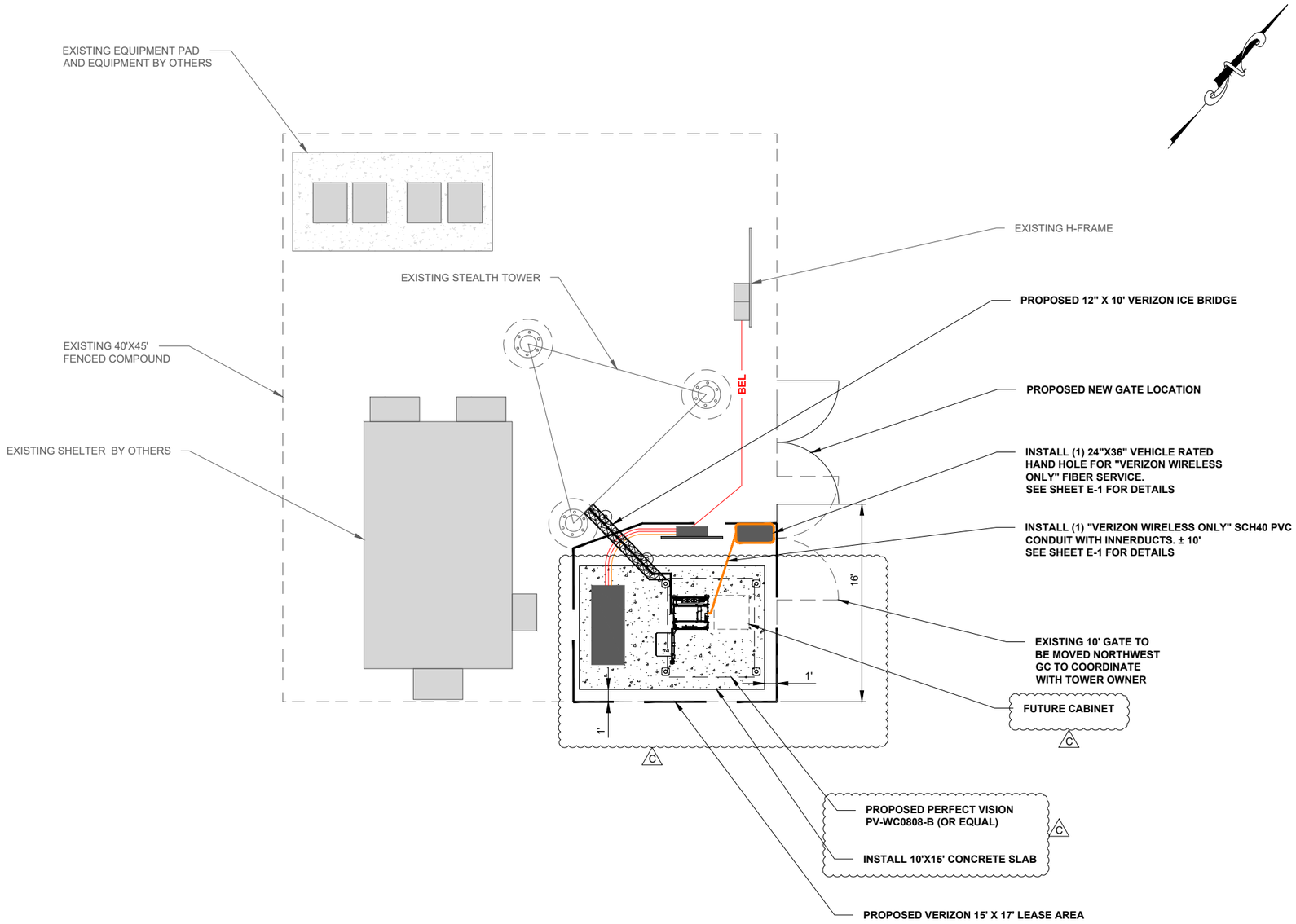
C-1

Q:\12025\UT-11734-25 Verizon Utah A&E 2025\Project Data\Design\COLORADO\CSP KIVA\CSP KIVA DESIGN.dwg - OVERALL SITE PLAN WITH AERIAL IMAGERY - 4/06/2026 04:27pm, dakota.wibert



CALL COLORADO ONE CALL
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BEFORE YOU DIG!

GRAPHIC SCALE
15 0 7.5 15 30

DETAILED
SITE PLAN

SCALE: 1" = 15'

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SEAL:

PRELIMINARY
NOT FOR
CONSTRUCTION

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C-2

EXISTING H-FRAME

INSTALL 200A BREAKER IN (E) METER PAK FOR VZW SERVICE

INSTALL VERIZON ELECTRICAL CONDUIT AND CONDUCTORS TO ILC
SEE SHEET E-1 FOR DETAILS

EXISTING 40'X45' FENCED COMPOUND

C

EXISTING TOWER

INSTALL (2) 6X12 HYBRID CABLE. ± 110'
SEE SHEET: 1 / DT-3

EXISTING SHELTER (BY OTHERS)

INSTALL (1) VERIZON APPROVED ILC
INSTALL (1) H-FRAME
SEE SHEET: 2 / DT-7

INSTALL (1) 1'X10' ICE BRIDGE AND FOUNDATIONS PROVIDED BY VERIZON AND FABRICATED AND INSTALLED BY G.C.
SEE SHEET: 1 / DT-7

BEL

INSTALL (1) 24"X36" VEHICLE RATED HAND HOLE FOR "VERIZON WIRELESS ONLY" FIBER SERVICE.
SEE SHEET E-1 FOR DETAILS

PROPOSED FIBER PATHWAY
SEE SHEET E-1 FOR DETAILS

INSTALL (4) TYP. GENERATOR ANCHORS
SEE DETAIL: 2 / DT-4

FUTURE CABINET

INSTALL KOHLER 30REOZK OUTDOOR DIESEL GENERATOR
SEE SHEET: 3 / DT-4, 1 / DT-5, 1 / DT-6

PROPOSED VERIZON 15' X 17' LEASE AREA

INSTALL 10'X15' CONCRETE SLAB
SEE SHEET: 3 / DT-7

INSTALL GENERATOR SIGNAGE
SEE DETAIL: 1 / DT-4

PROPOSED PERFECT VISION PV-WC0808-B (OR EQUAL)

1'

5'

1'

0.7'

1'

1'

INSTALL GPS ANTENNA ON SOUTH CANOPY POST

C

CHARLES LT-SS4C228BV1 CABINET:
-48V PDF W/ (6) 75A RECTIFIERS
(1) WESTELL RMX-4300
(1) IXR-e2 ROUTER
(1) 6672 BBU
(1) COMMSCOPE POWERSHIFT GEN. 2 UPCONVERTER
(1) 4520 OVP
(1) STRING OF DEKA HT200ET BATTERIES
SEE SHEET: 3 / DT-8

CHARLES PLINTH & TOPHAT.
SEE SHEET: 1 / DT-8, 2 / DT-8

CALL COLORADO ONE CALL
(800) 922-1987
CALL 3 WORKING DAYS
BEFORE YOU DIG!

GRAPHIC SCALE
5 0 2.5 5 10

DETAILED EQUIPMENT PLAN

SCALE: 1" = 5'

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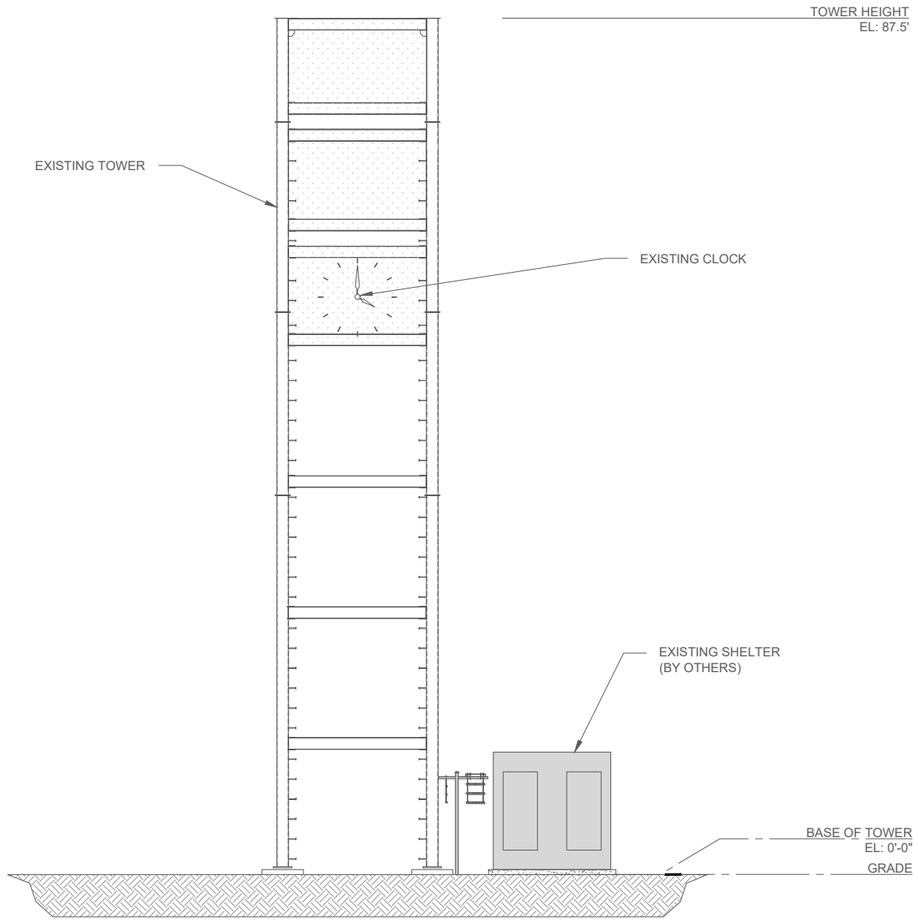
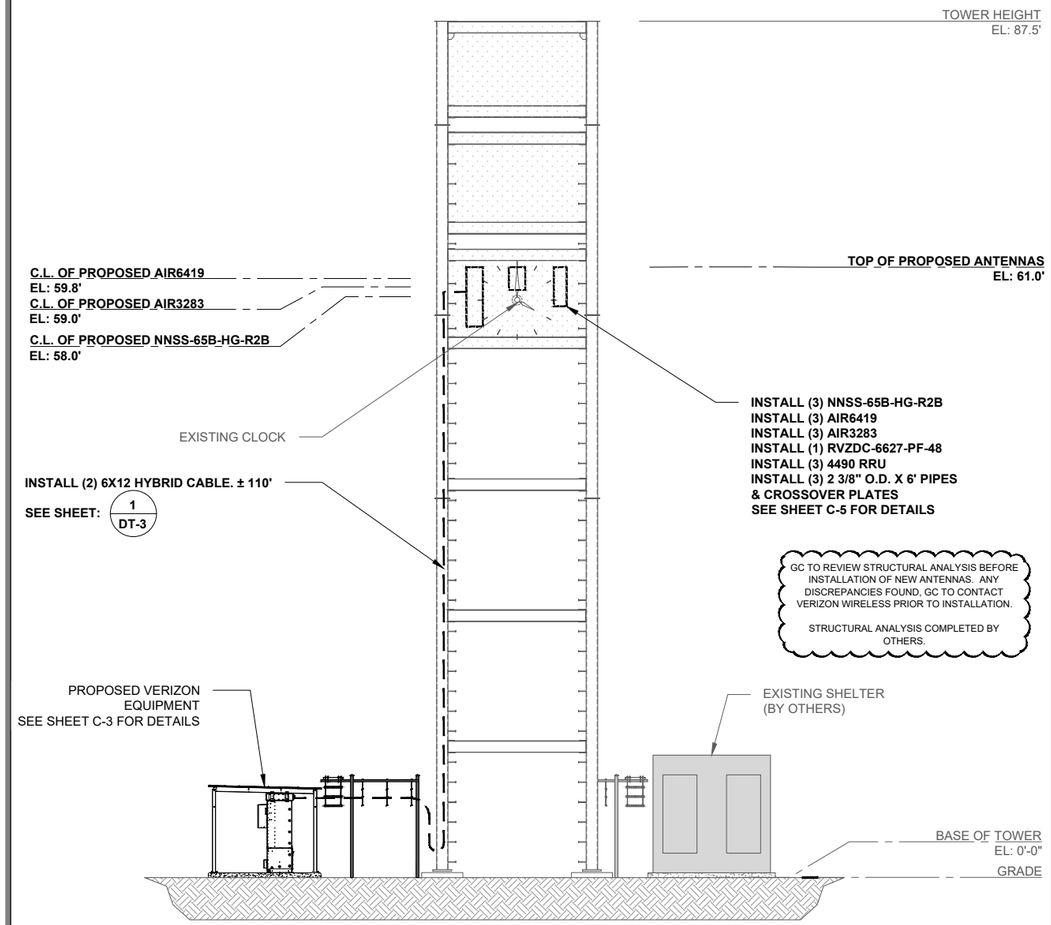
C-3



EXISTING TOWER EQUIPMENT
N.T.S



PROPOSED TOWER EQUIPMENT
N.T.S

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C-4

ALPHA ANTENNA SUMMARY

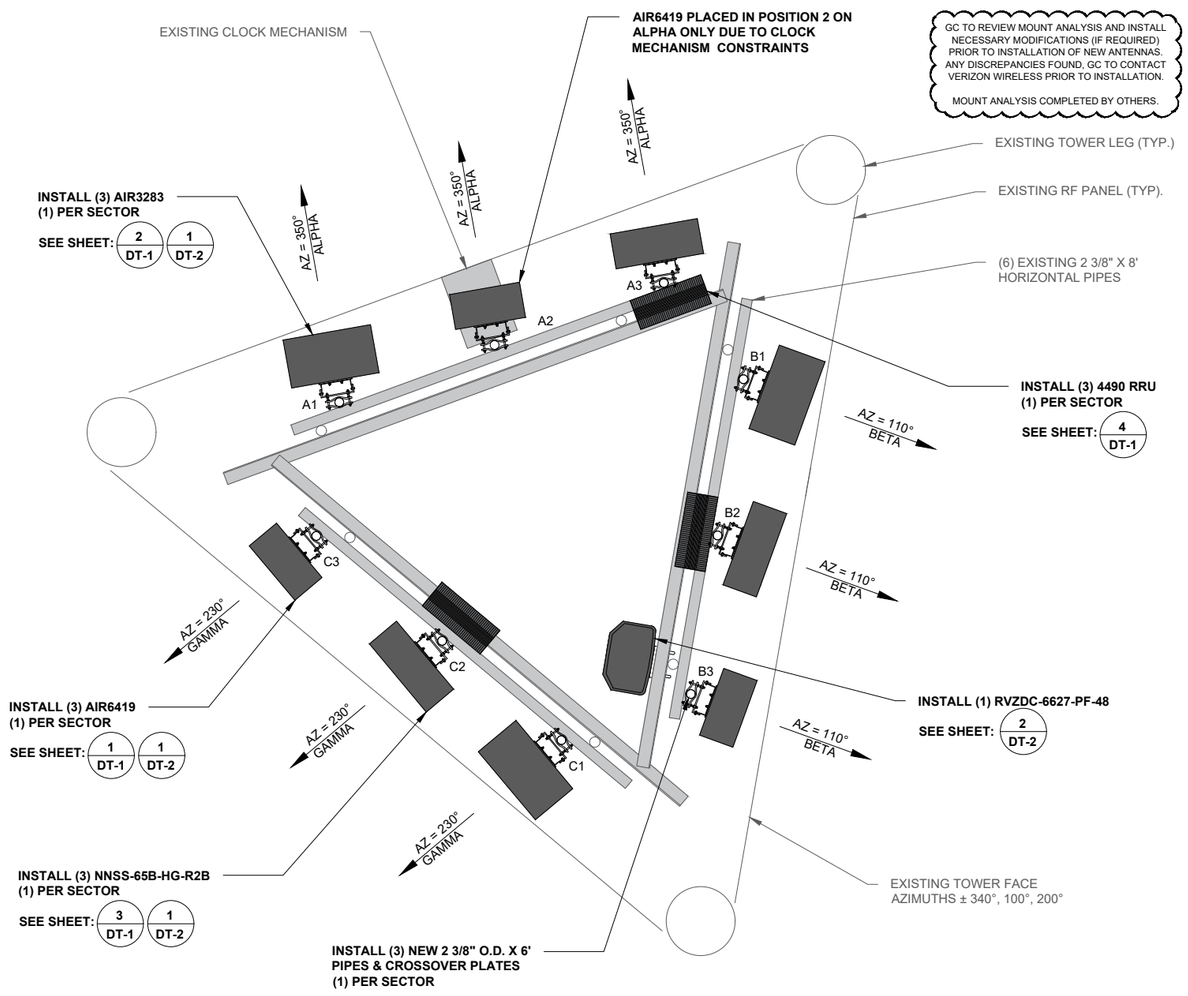
ANTENNA CENTERLINE (CL)	ANTENNA POSITION	ANTENNA TYPE	AZIMUTHS (DEG., TN)	ANTENNA QUANTITY	STATUS
59.0'	**A1**	**AIR3283**	**350°**	**1**	**ADD**
59.8'	**A2**	**AIR6419**	**350°**	1	**ADD**
58.0'	**A3**	**NNSS-65B-HG-R2B**	**350°**	**1**	**ADD**

BETA ANTENNA SUMMARY

ANTENNA CENTERLINE (CL)	ANTENNA POSITION	ANTENNA TYPE	AZIMUTHS (DEG., TN)	ANTENNA QUANTITY	STATUS
59.0'	**B1**	**AIR3283**	**110°**	**1**	**ADD**
58.0'	**B2**	**NNSS-65B-HG-R2B**	**110°**	1	**ADD**
59.8'	**B3**	**AIR6419**	**110°**	**1**	**ADD**

GAMMA ANTENNA SUMMARY

ANTENNA CENTERLINE (CL)	ANTENNA POSITION	ANTENNA TYPE	AZIMUTHS (DEG., TN)	ANTENNA QUANTITY	STATUS
59.0'	**C1**	**AIR3283**	**230°**	**1**	**ADD**
58.0'	**C2**	**NNSS-65B-HG-R2B**	**230°**	1	**ADD**
59.8'	**C3**	**AIR6419**	**230°**	**1**	**ADD**



PROPOSED ANTENNA SUMMARY

CABLE SCHEDULE

ITEM	6X12 HYBRID CABLE	HYBRID JUMPERS
(QTY)	2	9 (3) PER SECTOR
LENGTH	90'	ALPHA 30' BETA 30' GAMMA 30'

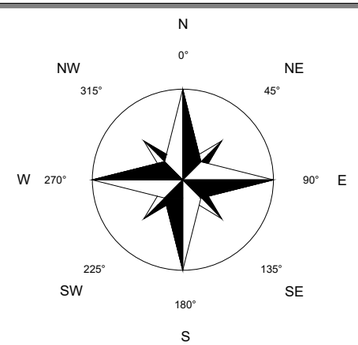
B

GENERAL NOTES

1.	REFER TO FINAL RF DESIGN FOR ADDITIONAL INFORMATION.
2.	CONTRACTOR TO FIELD VERIFY ACTUAL LENGTHS PRIOR TO INSTALLATION.
3.	RETAIN ALL EXISTING ANTENNAS AND RADIOS UNLESS OTHERWISE SPECIFIED.

GC TO REVIEW STRUCTURAL ANALYSIS BEFORE INSTALLATION OF NEW ANTENNAS. ANY DISCREPANCIES FOUND, GC TO CONTACT VERIZON WIRELESS PRIOR TO INSTALLATION.

STRUCTURAL ANALYSIS COMPLETED BY OTHERS.



NOTE: AZIMUTHS REFERENCE TRUE NORTH

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C-5

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NPP RFDS

WEST > Desert Mountain Plains > Mountain Plains > Aurora-2 > Kiva

Parsons, Travis - travis.parsons@verizonwireless.com - 20260306_110444

Project Details		Location Information	
Carrier Aggregation	N	Site Id	616882217
Ecip	N	Search Ring#	
Project Name	MACRO - CAPACITY	E-NodeB ID#	null
Project Alt Name	KIVA_NEW BUILD MACRO	PSLC#	672848
Project Id	16235971	Switch Name	Aurora-2
Designed Sector Carrier 4G	9	Tower Type	
Designed Sector Carrier 5G	9	Site Type	MACRO
Additional Sector Carrier 4G	0	Street Address	82 Widefield Blvd
Additional Sector Carrier 5G	0	City	Colorado Springs
Suffix		State	CO
FP Solution Type & Tech Type	MCR;4G_700;5G_850;4G_AWS;5G_AWS3;5G_L-Sub6;4G_PCS	Zip Code	80911
		County	El Paso
		Latitude	38.735536/ 38° 44' 7.930"
		Longitude	-104.726522/ 104° 43' 35.479"

Project Scope

3/6/2026 TMP: Updated to slide all antenna tips up to 61' and to swap Alpha panel and Air6419 positions to clear clock.

NEW BUILD with (3) Sectors - NOTE Alpha antenna positions are different than Beta/Gamma
Install (3) Six Foot Antennas, For 4G-LB
Install (3) AIR3283, For 4G-FD-MIMO
Install (3) AIR6419, For 5G
Install (3) 4490 RRH, For 4G-LB
(2) 6 x12 hybrid cables + (2) OVP12 will be needed for the site
Use ConcealFab low-PIM antenna and cable mounting hardware.
Add (1) 6672 BBU in Shelter

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C-6

Antenna Summary

Added Antenna

700	850	1900	AWS	AWS3	L-Sub6	Make	Model	Center line	Tip Height	Azimuth	Install Type	Quantit
		LTE	LTE	5G		Ericsson	AIR3283	59	61	350(A),110(B), 230(C)	PHYSICAL	3
					5G	Ericsson	AIR6419	59.8	61	350(A),110(B), 230(C)	PHYSICAL	3
LTE	5G					CommScope	NNSS-65B-HG-R2B	58	61	350(A),110(B), 230(C)	PHYSICAL	3

Removed Antenna

700	850	1900	AWS	AWS3	L-Sub6	Make	Model	Center line	Tip Height	Azimuth	Install Type	Quantit

Retained Antenna

700	850	1900	AWS	AWS3	L-Sub6	Make	Model	Center line	Tip Height	Azimuth	Install Type	Quantit

Added: 9	Removed: 0	Retained: 0

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C-7

Non Antenna Summary

Added Non Antenna

Equipment Type	Locatio	700	850	1900	AWS	AWS3	L-Sub6	Make	Model	Install Type	Quantity
OVP	Tower	LTE	5G	LTE	LTE	5G			12 OVP	PHYSICAL	1
OVP	Shelter	LTE	5G	LTE	LTE	5G			12 OVP	PHYSICAL	1
RRU	Tower	LTE	5G					Ericsson	4490	PHYSICAL	3
BBU	Shelter	LTE	5G	LTE	LTE	5G		Ericsson	6672	PHYSICAL	1
Hybrid Cable	Tower	LTE	5G	LTE	LTE	5G		N/A	6x12 Hybriflex	PHYSICAL	2
RRU	Tower			LTE	LTE	5G		Ericsson	AIR3283 B25+B66	PHYSICAL	0
RRU	Tower						5G	Ericsson	AIR6419_B77D	PHYSICAL	0

Removed Non Antenna

Equipment Type	Locatio	700	850	1900	AWS	AWS3	L-Sub6	Make	Model	Install Type	Quantity

Retained Non Antenna

Equipment Type	Locatio	700	850	1900	AWS	AWS3	L-Sub6	Make	Model	Install Type	Quantity

Added: 8	Removed: 0	Retained: 0

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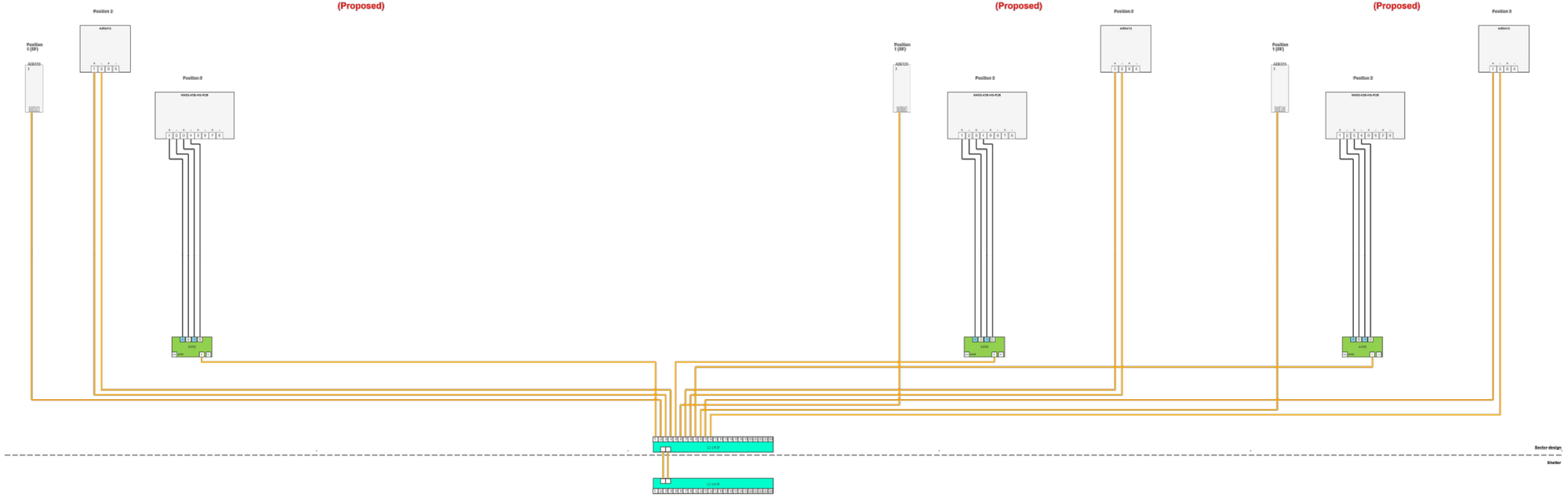
C-8

Alpha
(Proposed)



Beta
(Proposed)

Gamma
(Proposed)

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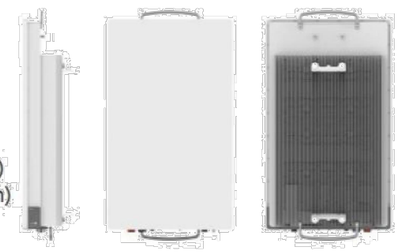
C-9

AIR 6419 B77G (320W) Candidate

Not to exceed figures

Target Release
- **Lab Entry May 2022**
- **PRA June 2022**

• Antenna Elements	192
• TRX Branches	64T64R
• Antenna configuration	(3x1)x(4x8)
• Operation band:	3450~3550 MHz
• IBW	100 MHz
• TCBW	100MHz
• Output Power	320W
• Peak EIRP	79dBm
• PSD	4W/MHz (Target 8W/MHz for rural)
• Size(HxWxD)	720x410x200mm (28.3x16.1x7.9 in)
• Weight	30kg (66.1 lbs)
• Type of cooling	Passive
• eCPRI link	2*25G
• Power Supply	-48V VDC 3-wires
• Multi-layer MU MIMO:	16/8 DL/UL layer



2021-05-25 | Commercial in Confidence | Page 2

Note Size/Weights are without handle/bracket

1 AIR6419 DETAIL
N.T.S.

HXWXD = 47.244" X 20" X 10.886"
(WEIGHT = 103.62 LBS)

AIR 3283 B25 + B66

SCALE : N.T.S.

2 AIR3283 DETAIL
N.T.S.

NNSS-65B-HG-R2B

8-port Next Generation PerforMax™ sector antenna, 4x 698–896 and 4x 3300-4000 MHz, 65° HPBW, 2x RETs

- Antenna optimized for higher gain with superior radiation efficiency
- Superior patterns for enhanced interference mitigation resulting in improved SINR, higher throughput, and more capacity
- Internal SBTs allow remote RET control from the radio over the RF jumper cable
- Powered by Andrew's SEED® technology (Sustainable Energy Efficient Design)
- Best in class PIM immunity
- Interleaved dipole technology results into an attractive, low wind load mechanical package
- Designed to reduce SUB 1 alarm triggers

General Specifications

Antenna Type	Sector with internal RET and bias tee
Band	Multiband
Color	Light Gray (RAL 7035)
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Performance Note	Outdoor usage
Radome Material	Fiberglass, UV resistant
Radiator Material	Aluminum | Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	4
RF Connector Quantity, total	8

Remote Electrical Tilt (RET) Information

RET Hardware	CommRET v2
RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	1 female | 1 male
Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1
Internal RET	High band (1) | Low band (1)

3 NNSS-65B-HG-R2B DETAIL
N.T.S.

Radio 4490HP 44B5 44B13 C

- 4 common RF ports (C)
- B5: 4x60W, B13: 4x60W
- 480W total RF output power
- L, NR, NB-IoT
- 2x 2.5/4.9/9.8/10.1/24.3 Gbps CPRI/eCPRI

Radio 4490HP 44B5 44B13 C	Height	Width	Depth	Weight
wo protruding items	17.5 In (444 mm)	15.2 In (384 mm)	6.8 In (172 mm)	~68.4 lbs (~31 kg)
w protruding items	20.6 In (522 mm)	15.7 In (397 mm)	7.0 In (178 mm)	

- Internal PIM-C
  - Addressing IM3 & IM5 in-branch, IM3 cross-branch & site-PIM
- -48 VDC 2-wire (one DC connector input)
- AISG v3.0 TMA & RET support via RS-485 or RF connectors
- Type 4.3-10 RF + connectors
- 2 external alarm
- Convectional cooling
  - Optional fan for increased site flexibility
- IP 65, -40 to +55°C

| 2023-01-12 | Commercial in Confidence | Page 1

Pending Commercial Agreements

B5 B13: 4 ports
Common antenna
Common tilt

Now confirmed
max measurements/ will not exceed

4 4490 RRU DETAIL
N.T.S.

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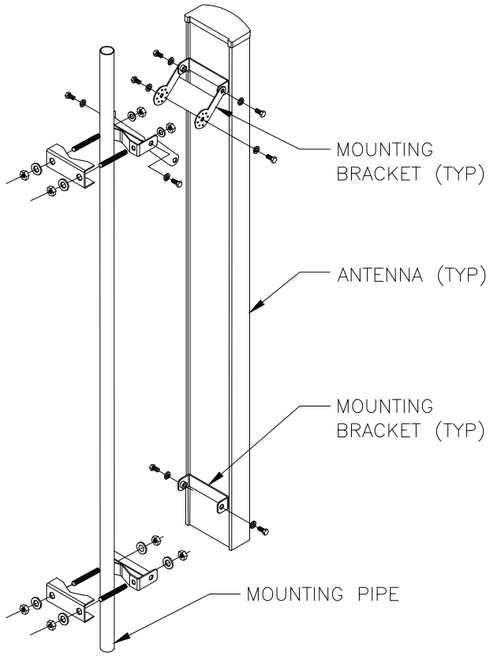
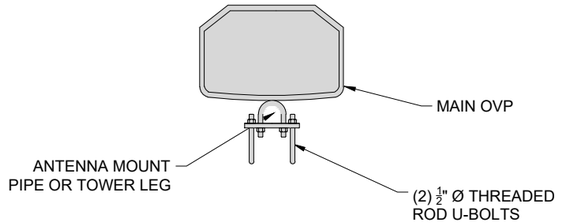
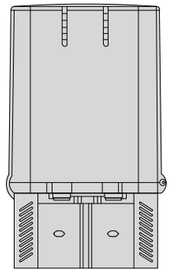
DT-1

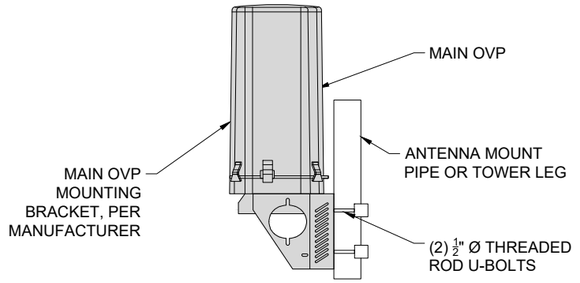


1 TYPICAL MOUNTING DETAIL
N.T.S.



MANUFACTURER	RAYCAP
MODEL	RVZDC-6627-PF-48
WEIGHT	32 LBS
DIMENSIONS WxDxL	15.73"x10.31"x28.93"





2 RVZDC-6627-PF-48 OVP & CONNECTION DETAIL
N.T.S.

Router 6672

Technical specification for Router 6672

Connectivity

Interfaces:	8x GE / 10GE SFP+ ports 8x GE SFP ports 4x 100 / 1000 Base-T RJ45 ports 1x 100 / 1000 Base-T Ethernet for Out-of-Band Management 1x RJ45 console port 1x RJ45 Alarm port for 3 input and 1 output alarm contacts 1x USB 2.0 port
Synchronization interfaces:	1x RJ45 port 1PPS+TOD (ITU-T G.703 Amd1) 1x RJ48C port for 2.048 MHz, E1/T1 (BITS) input/output

Mechanical

System weight:	6kg / 13.2lbs
Dimension (H x W x D):	1RU 43.6mm x 442.4mm x 250mm
Air flow:	Filter-less design, Front to Back with field swappable fan tray

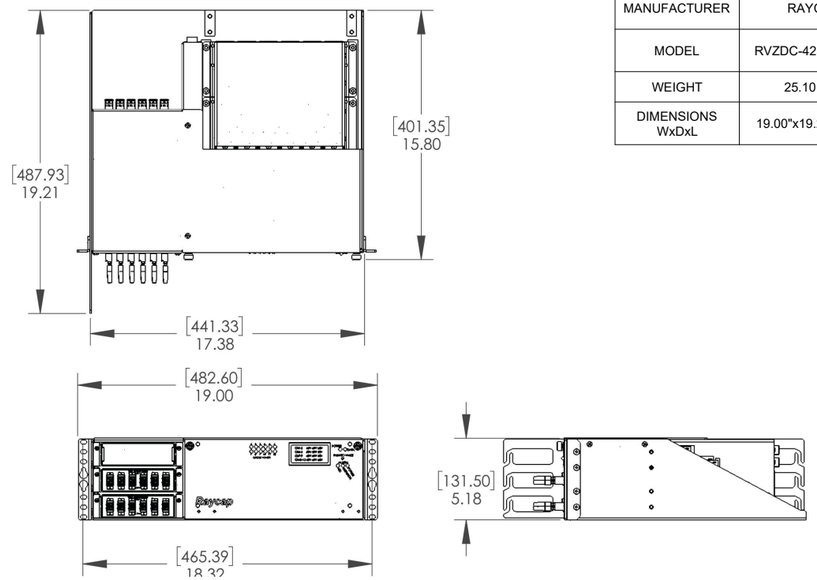
Electrical

Power supply DC:	-48 V, dual feed
Power supply AC:	100-240 V, single feed
Power consumption:	Typical 118 Watts, Max 165 Watts

Environmental

Operating Temperature:	-40°C to 65°C
Relative Humidity:	5 - 95% Non-condensing
GR-3108-CORE Class 1:	Controlled Protected Environments
GR-3108-CORE Class 2:	Protected Equipment in Outside Environments
EN 300 019-1-3 Class 3.3:	Not temperature-controlled locations

3 6672 BBU DETAIL
N.T.S.



MANUFACTURER	RAYCAP
MODEL	RVZDC-4250-RM-48
WEIGHT	25.10 LBS
DIMENSIONS WxDxL	19.00"x19.21"x5.18"

4 RVZDC-4520-RM-48 DETAIL
N.T.S.

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PLANS PREPARED BY:
Horrocks.
2162 West Grove Parkway, Suite 400
Pleasant Grove, UT 84062
(801) 763-5100

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A	03/06/26	ISSUED FOR CLIENT REVIEW
B	03/18/26	CLIENT COMMENTS
C	04/06/26	CLIENT COMMENTS

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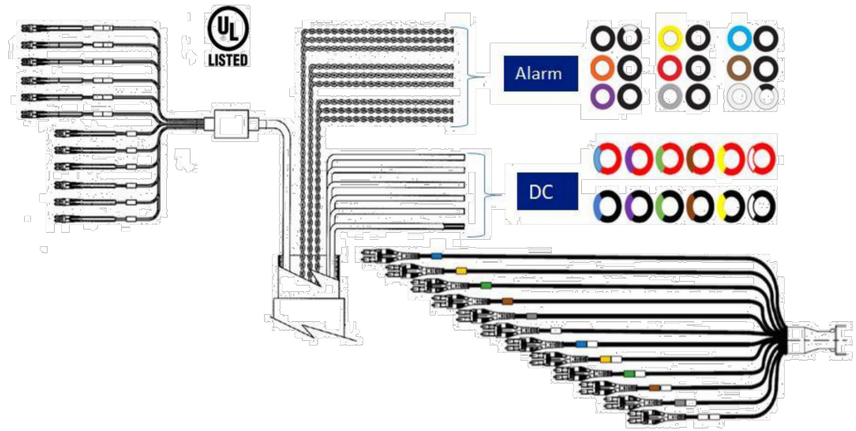
COLORADO SPRINGS, CO 80911
EL PASO COUNTY

DT-2

RFS INSTALLATION GUIDELINES

HYBRIFLEX 6x12 configuration/color coded scheme



Quick reference

Cable type	HB078-U2S4-xx-LI	HB114-U6S12-xx-LI
Cable Type	HYBRIFLEX Low Inductance	
Size	7/8”	1-1/4”
Conductor gauge	6AWG	6AWG
Number of DC Pairs	2 pairs	6
Number of fiber pairs	6 pairs	12 pairs
Hybrid armor type	Corrugated Aluminum	Corrugated aluminum
Hybrid fiber mode	Single	Single
Hybrid termination	Top: DLC | Bottom: DLC	Top: DLC | Bottom: DLC
Hybrid weight (kg/m (lb/ft))	1.04 | 0.7	2.52 |1.7
Max over jacket diameter	28.2mm | 1.11”	39mm | 1.54”
Breakout fiber length mm(in)	1371.6 +/-50.8 | 54 +/-2”	939.8 +/-50.8 | 37 +/-2”
Breakout power length, mm(in)	124mm | 5”	812mm | 8”
Hybrid minimum bend radius Sg	127mm | 5”	152mm | 6”
Alarm Wire	10 (5 standard pairs) @ 0.8 mm2 (18 AWG)	18 (9 standard pairs), 0.8 mm2 (18), 6 AWG

1 HYBRIFLEX 6X12 HYBRID CABLE DETAIL
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DT-3

DIESEL GENERATOR

	REQUIRED SIGNS:	LOCATIONS:
D1	• "DANGER DIESEL FUEL"	INSTALL ON GENERATOR (SEE FIGURE 6)
D2	• HAZARD DIAMOND	
D3	• NOTICE SIGN	
D4	• FUEL TANK CAPACITY	INSTALL ON FUEL TANK

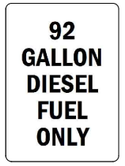
*SIGNS D1 AND D2 MAY BE COMBINED TO A SINGLE SIGN

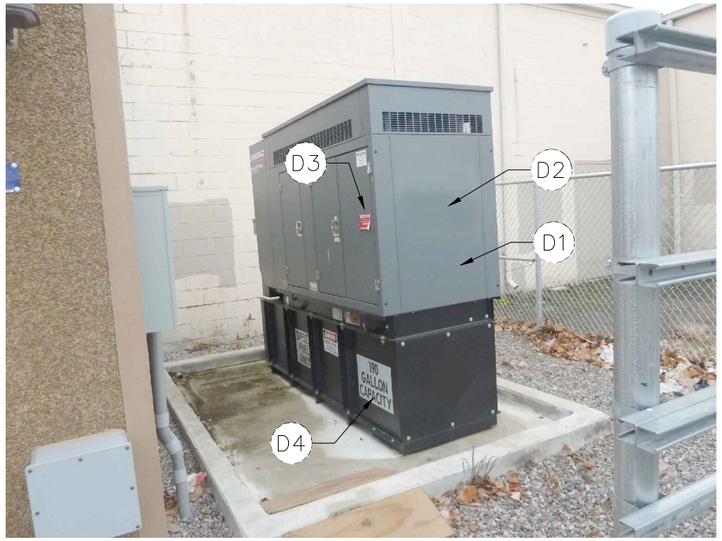
D1

D2

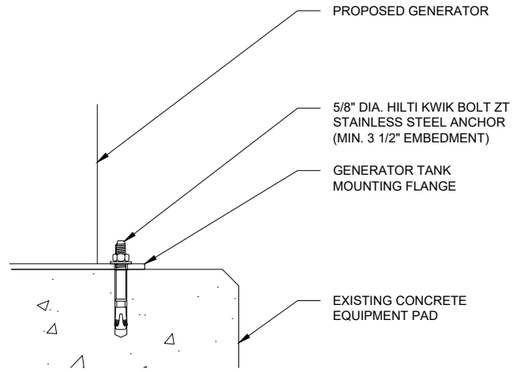
D3

D4





1 GENERATOR SIGNAGE DETAIL
N.T.S



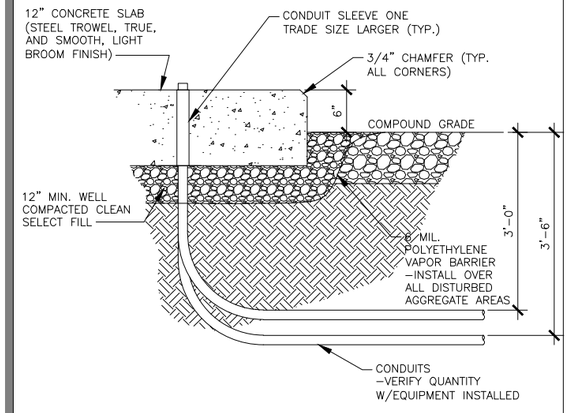
2 GENERATOR ANCHOR DETAIL
N.T.S

OUTDOOR GENERATOR INFORMATION

1.	GENSET TO BE KOHLER MODEL 30REOZK 30 KW 60HZ STANDBY GENERATOR.
2.	THE INTENDED USE OF THIS GENERATOR IS FOR BACK-UP POWER PURPOSES ONLY. THE GENERATOR WILL BE PERIODICALLY CYCLED AND EXCERCISED TO ENSURE CONTINUED RELIABILITY.
3.	THIS GENERATOR OPERATED AT AN AVERAGE SOUND LEVEL OF 65 DECIBELS AT A DISTANCE OF 23 FEET (7 METERS)
4.	THE DIESEL FUEL TANK FOR THE GENERATOR SHALL BE SUB-BASE TYPE DESIGNED FOR CONTAINMENT. MUST ALSO BE EQUIPPED WITH EMERGENCY PRESSURE RELIEF AND ATMOSPHERIC VENT CAPS. A FUEL GAUGE SHALL BE PROVIDED AND PLACED IN A FULLY VISIBLE LOCATION TO KEEP FUELING PERSONNEL FROM OVERFILLING THE TANK. FUEL GAUGE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
5.	ANY AND ALL DIESEL FUEL SPILLS, NO MATTER THE SIZE MUST BE REPORTED.
6.	PROPOSED DIESEL GENERATOR W/ BELLY MOUNTED 203 GALLON DIESEL FUEL TANK.
7.	GENERATOR BASE AND ANCHORAGE SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
8.	THE DOUBLE WALL FUEL TANK OF THE GENERATOR SET SHALL BE LISTED AND LABELED BY AN APPROVED TESTING LABORATORY.

GENSET	TANK HT (A) MM (IN)	DESCRIPTION	ASSY WEIGHT
KOHLER 30KW 30REOZK	41.0"	**SKID/, 203 GALLONS - SIZE**	2830 LBS

3 GENERATOR SUMMARY
N.T.S



4 CONDUIT PENETRATION DETAIL
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EL PASO COUNTY

DT-4

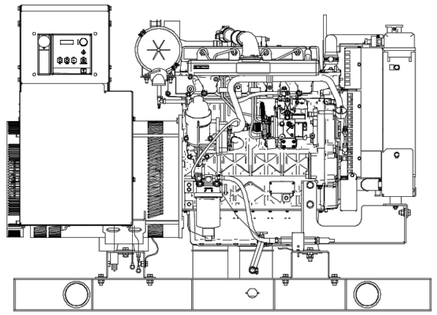
Q:\12025\UT-11734-25 Verizon Utah A&E 2025\Project Data\Design\Design\COLORADO\CSP KIVA\CSP KIVA DESIGN.dwg - DETAILS4 - 4/06/2026 04:27pm, dakota.wilbert

Industrial Generator Set - 30REOZK
208-600 V Diesel

EPA-Certified for Stationary Emergency Applications

Ratings Range

		60 Hz
Standby:	**kW**	23-31
	kVA	23-39
Prime:	**kW**	21-28
	kVA	21-35



Standard Features

- Rehlko provides one-source responsibility for the generating system and accessories.
- Approved for use with certified renewable Hydrotreated Vegetable Oil (HVO)/Renewable Diesel (RD) fuels compliant with EN15940/ASTM D975.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set offers a UL 2200 listing.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- The generator set engine is certified to meet the Environmental Protection Agency (EPA) emergency stationary emissions requirements.
- A one-year limited warranty covers all generator set systems and components. Two- and five-year extended limited warranties are also available.
- Alternator features:
  - Rehlko's wound field excitation system with its unique PowerBoost™ design delivers great voltage response and short-circuit capability.
  - The brushless, rotating-field alternator has broadrange reconnectability.
- Other features:
  - Rehlko designed controllers for one-source system integration and remote communication. See Controllers on page 3.
  - The low coolant level shutdown prevents overheating (standard on radiator models only).
  - Integral vibration isolation eliminates the need for under-unit vibration spring isolators.

Generator Set Ratings

Alternator	Voltage	Ph	Hz	130°C Rise Standby Rating kW/kVA	Amps	105°C Rise Prime Rating kW/kVA	Amps
4D5.6	120/208	3	60	29/36	101	26/33	90
	127/220	3	60	29/36	95	26/33	85
	120/240	3	60	29/36	87	26/33	78
	120/240	1	60	23/23	96	21/21	88
	139/240	3	60	29/36	87	26/33	78
	220/380	3	60	27/34	51	25/31	47
	277/480	3	60	29/36	44	26/33	39
	347/600	3	60	29/36	35	26/33	31
4D8.3	120/208	3	60	31/39	108	28/35	97
	127/220	3	60	31/39	102	28/35	92
	120/240	3	60	31/39	93	28/35	84
	120/240	1	60	29/29	121	26/26	108
	139/240	3	60	31/39	93	28/35	84
	220/380	3	60	31/39	59	28/35	53
	277/480	3	60	31/39	47	28/35	42
	347/600	3	60	31/39	37	28/35	34
4E5.6	120/240	1	60	29/29	121	26/26	108
4E8.3	120/240	1	60	31/31	129	27/27	113

RATINGS: All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor. *Standby Ratings:* Standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. *Prime Power Ratings*: At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory. Obtain the technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

Discovery Energy, LLC
200 Twin Oaks Road, Kohler, WI 53044 USA
For the nearest sales and service outlet in the US and Canada, phone 1-800-544-2444 - powersystems.rehlko.com

Industrial Generator Set - 30REOZK
208-600 V Diesel

Alternator Specifications

Specifications	Alternator
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Wound Field
Leads: quantity, type	12, Reconnectable 4, 110-120/220-240 V
Voltage regulator	Solid State, Volts/Hz
Insulation:	NEMA MG1
Material	Class H
Temperature rise	130°C, Standby
Bearing: quantity, type	1, Sealed
Coupling	Flexible Disc
Amortisseur windings	Full
Voltage regulation, no-load to full-load	Controller Dependent
One-step load acceptance	100% of Rating
Unbalanced load capability	100% of Rated Standby Current

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Capable of sustained line-to-neutral short-circuit current of up to 300% of the rated current for up to 2 seconds. (IEC 60092-301 short-circuit performance.)
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.
- Windings are vacuum-impregnated with epoxy varnish for dependability and long life.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.

Specifications		Alternator
Peak motor starting kVA:		(35% dip for voltages below)
480 V	4D5.6 (12 lead)	75
480 V	4D8.3 (12 lead)	120
240 V	4E5.6 (4 lead)	44
240 V	4E8.3 (4 lead)	74

Application Data

Engine

Engine Specifications	
Engine model	KDI2504TM/G18
Engine type	4-Cycle, Turbocharged,
Cylinder arrangement	4 Inline
Displacement, L (cu. in.)	2.5 (158)
Bore and stroke, mm (in.)	88 x 102 (3.46 x 4.02)
Compression ratio	18:1
Piston speed, m/min. (ft./min.)	367 (1206)
Main bearings: quantity, type	5, Sleeve
Rated rpm	1800
Max. power at rated rpm, kWm (BHP)	36.4 (48.8)
Cylinder head material	Cast Iron
Crankshaft material	Cast Iron
Valve material:	
Intake	Stainless Steel Stainless Steel
Exhaust	
Governor: type, make/model	Mechanical (or Electronic *)
Frequency regulation, no-load to full-load	Droop, 5% (or Isochr. *)
Frequency regulation, steady state	±0.5%
Frequency	Fixed
Air cleaner type, all models	Dry

* Requires available electronic governor option

Exhaust

Exhaust System	
Exhaust manifold type	Dry
Exhaust flow at rated kW, m^3/min. (cfm)	7.8 (275)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	543 (1009)
Maximum allowable back pressure, kPa (in. Hg)	8 (2.4)
Exhaust outlet size at engine hookup, mm (in.)	50.8 (2)

Engine Electrical

Engine Electrical System	
Battery charging alternator:	
Ground (negative/positive)	Negative
Volts (DC)	12
Ampere rating	50
Starter motor rated voltage (DC)	12
Battery, recommended cold cranking amps (CCA):	
Quantity, CCA rating	One, 650
Battery voltage (DC)	12

Fuel

Fuel System	
Fuel supply line, min. ID, mm (in.)	8.0 (0.31)
Fuel return line, min. ID, mm (in.)	6.0 (0.25)
Max. lift, electric fuel pump, m (ft.)	3.0 (10.0)
Max. fuel flow, Lph (gph)	46.0 (12.2)
Max. return line restriction, kPa (in. Hg)	20 (5.9)
Fuel filter	
Prefilter	74 Microns
Primary/Water Separator	5 Microns @ 98% Efficiency
Recommended fuel	#2 Ultra Low Sulfur Diesel/HVO/RD

Lubrication

Lubricating System	
Type	Full Pressure
Oil pan capacity, L (qt.) §	10.7 (11.3)
Oil pan capacity with filter, L (qt.) §	11 (11.6)
Oil filter: quantity, type §	1, Cartridge
Oil cooler	—

§ Rehlko recommends the use of Rehlko Genuine oil and filters.

Discovery Energy, LLC
200 Twin Oaks Road, Kohler, WI 53044 USA
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1 REHLKO 30KW OUTDOOR DIESEL DETAIL
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PLANS PREPARED BY:
Horrocks.
2162 West Grove Parkway, Suite 400
Pleasant Grove, UT 84062
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82 WIDEFIELD BOULEVARD
COLORADO SPRINGS, CO 80911
EL PASO COUNTY

DT-5

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Industrial Generator Set - 30REOZK
208-600 V Diesel

Application Data

Cooling

Radiator System	
Ambient temperature, °C (°F) *	50 (122)
Engine jacket water capacity, L (gal.)	4.4 (1.6)
Radiator system capacity, including engine, L (gal.)	11.4 (3)
Engine jacket water flow, Lpm (gpm)	59.0 (15.6)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	27.0 (1536)
Water pump type	Centrifugal
Fan diameter, including blades, mm (in.)	406 (16.0)
Fan, kWm (HP)	0.6 (0.8)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H_2O)	0.125 (0.5)

* Enclosure reduces ambient temperature capability by 5°C (9°F).

Operation Requirements

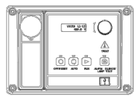
Air Requirements	
Radiator-cooled cooling air, m^3/min. (scfm) †	53.8 (1900)
Combustion air, m^3/min. (cfm)	2.7 (96.9)
Heat rejected to ambient air:	
Engine, kW (Btu/min.)	10.3 (587)
Alternator, kW (Btu/min.)	6.7 (381)
Max. air intake restriction, kPa (in. Hg)	3.0 (0.89)

† Air density = 1.20 kg/m^3 (0.075 lbm/ft^3)

Fuel Consumption**	
Diesel, Lph (gph) at % load	**Standby Rating**
100%	9.8 (2.6)
75%	7.9 (2.1)
50%	5.7 (1.5)
25%	3.4 (0.9)
Diesel, Lph (gph) at % load	**Prime Rating**
100%	9.1 (2.4)
75%	7.2 (1.9)
50%	5.3 (1.4)
25%	3.0 (0.8)

** Volumetric Fuel consumption is up to 4% higher when using HVO/RD than #2 ULSD.

Controller



APM402 Controller
Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.

- Digital display and menu control provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or serial configuration
- Controller supports Modbus® protocol
- Integrated hybrid voltage regulator with ±0.5% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-161 for additional controller features and accessories.

Modbus® is a registered trademark of Schneider Electric.

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Industrial Generator Set - 30REOZK
208-600 V Diesel

Additional Standard Features

- Air Cleaner, Heavy Duty with Air Cleaner Restriction Indicator
- Alternator Protection
- Battery Rack and Cables
- Closed Crankcase Ventilation
- Oil Drain and Coolant Drain with Hose Barb
- Oil Drain Extension (with enclosure models only)
- Operation and Installation Literature
- Stainless Steel Fasteners on Enclosure (with enclosure models only)
- Rodent Guards

Available Options

Approvals and Listings
- ❑ California OSHPD Pre-Approval
- ❑ CSA Certified
- ❑ IBC Seismic Certification
- ❑ UL2200 Listing

Enclosed Unit
- ❑ Sound Enclosure (with enclosed critical silencer)
- ❑ Stainless Steel Latches and Hinges
- ❑ Weather Enclosure (with enclosed critical silencer)

Open Unit
- ❑ Exhaust Silencer, Critical (kit: PA-352663)
- ❑ Flexible Exhaust Connector, Stainless Steel

Fuel System
- ❑ Flexible Fuel Lines
- ❑ Fuel Pressure Gauge
- ❑ Subbase Fuel Tanks

Controller
- ❑ Manual Speed Adjust (requires Electronic Governor)
- ❑ Remote Annunciator Panel
- ❑ Remote Emergency Stop
- ❑ Run Relay
- ❑ Two Input/Five Output Module

Cooling System
- ❑ Block Heater (600 W, 110-120 V)
  Required for ambient temperatures below 20°C (68°F).
- ❑ Radiator Duct Flange

Electrical System
- ❑ Alternator Strip Heater
- ❑ Battery
- ❑ Battery Charger, Equalize/Float Type
- ❑ Battery Heater
- ❑ Electronic Governor
- ❑ Line Circuit Breaker (NEMA type 1 enclosure)
- ❑ Line Circuit Breaker with Shunt Trip (NEMA type 1 enclosure)

Miscellaneous
- ❑ Engine Fluids Added
- ❑ Rated Power Factor Testing

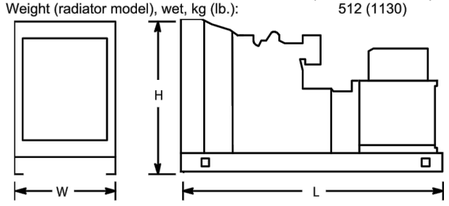
Literature
- ❑ General Maintenance
- ❑ NFPA 110
- ❑ Overhaul
  Production

Warranty
- ❑ 2-Year Basic Limited Warranty
- ❑ 5-Year Basic Limited Warranty
- ❑ 5-Year Comprehensive Limited Warranty

Other Options
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____
- ❑ _____

Dimensions and Weights

Overall Size, L x W x H, mm (in.):	
Open Unit Skid:	1438.2 x 810 x 1024.1 (56.6 x 31.9 x 40.3)
Enclosure Skid:	1969 x 882 x 1327 (77.5 x 34.7 x 52.3)
Weight (radiator model), wet, kg (lb.):	512 (1130)



NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

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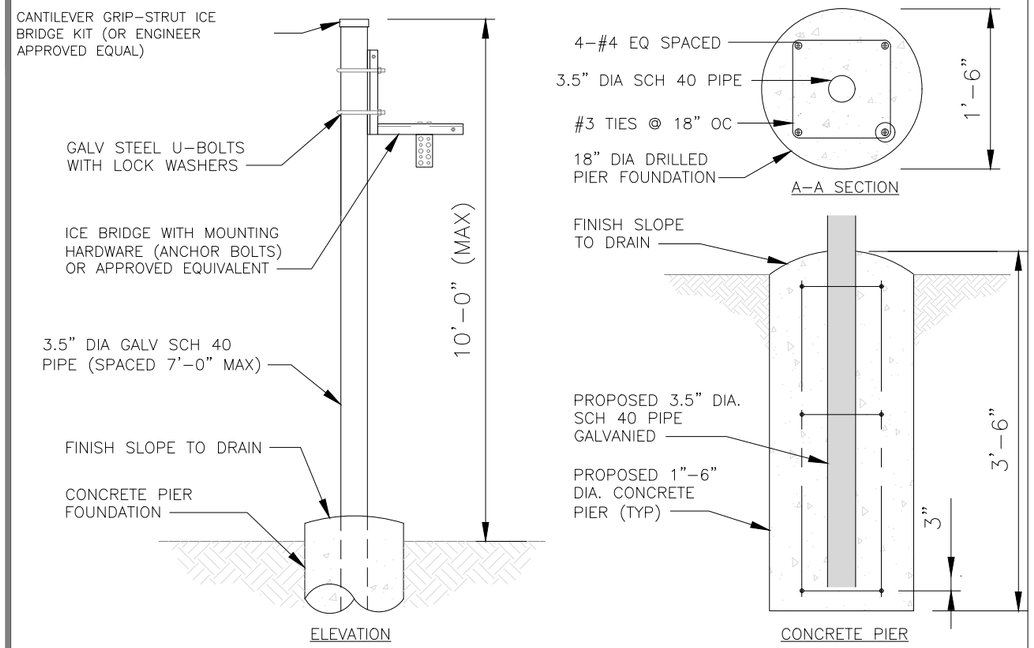
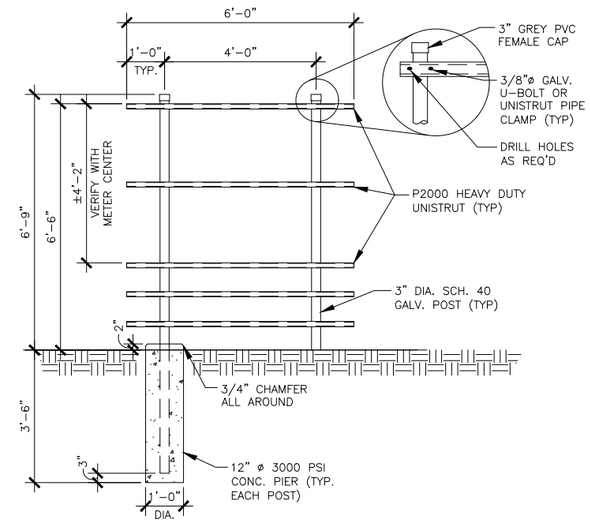


1 ICE BRIDGE AND CONCRETE PIER DETAIL
N.T.S.



2 H-FRAME AND PIER DETAIL
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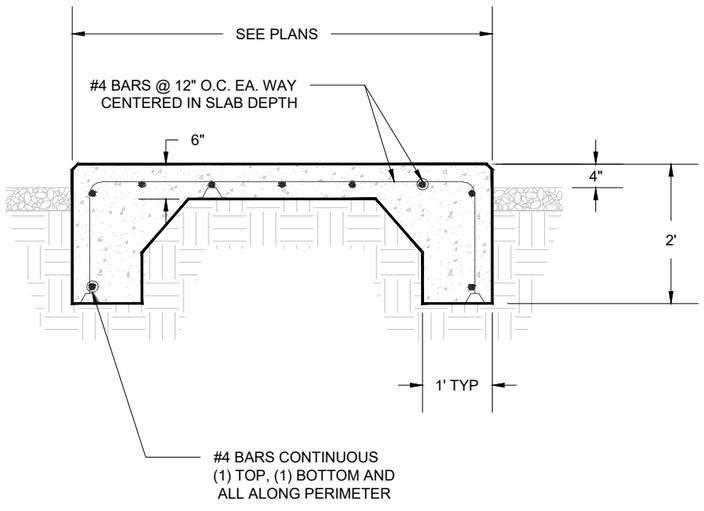

3 CONCRETE PAD DETAIL
N.T.S.

4 NOT USED

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(801) 763-5100

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B	03/18/26	CLIENT COMMENTS
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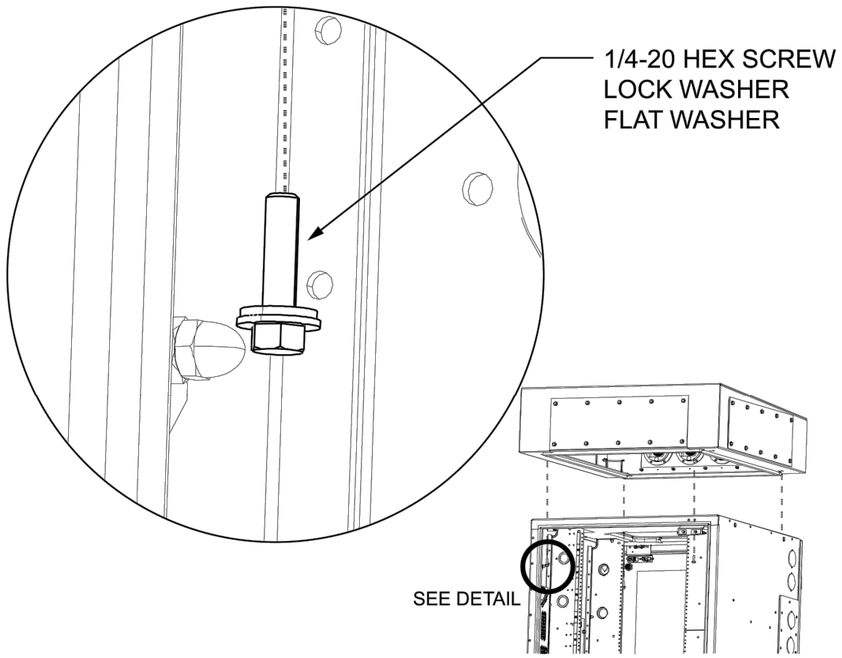
CSP KIVA
VERIZON WIRELESS
82 WIDEFIELD BOULEVARD
COLORADO SPRINGS, CO 80911
EL PASO COUNTY

DT-7



1 97-SS8V1TOPHTCM TOPHAT DETAIL
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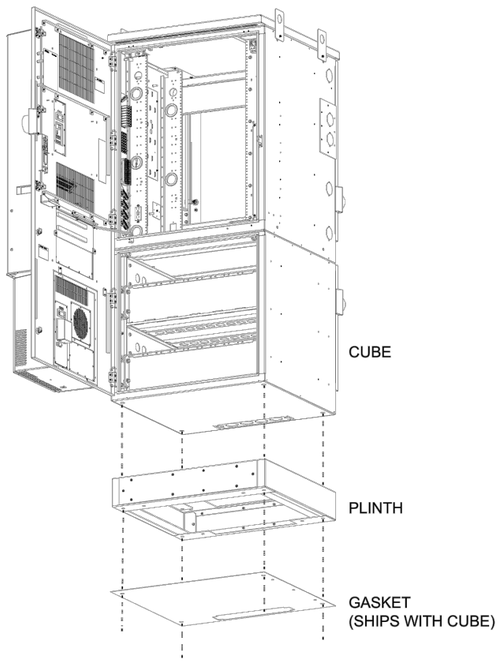

2 97-PLNTHSS8V1 PLINTH DETAIL
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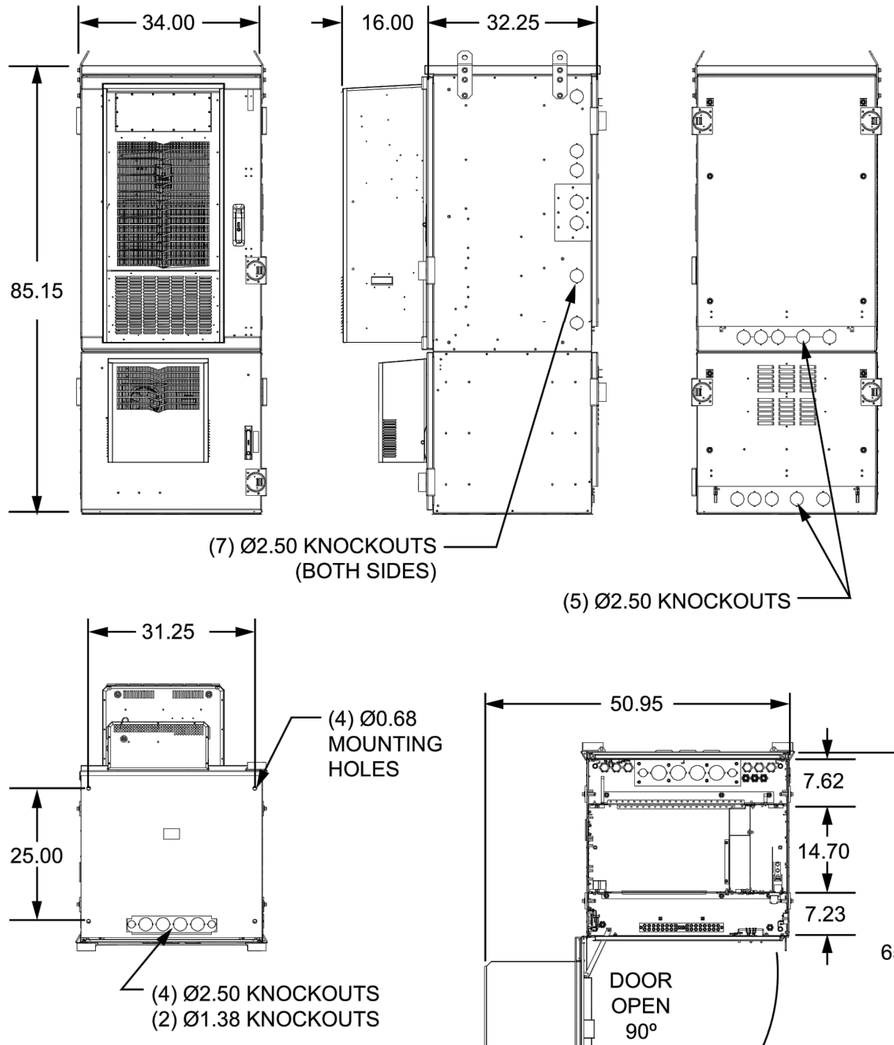

3 LT-SS4C228BV1 CABINET DETAIL
N.T.S.

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EL PASO COUNTY

DT-8

1.	ALL CONDUIT NOT SPECIFIED OTHERWISE SHALL BE SCH. 40 PVC BELOW GRADE, IMC ABOVE. EMT ACCEPTABLE INDOORS IN AREAS THAT ARE ACCESSIBLE ONLY TO LESSEE AUTHORIZED PERSONNEL.
2.	ALL WORK SHALL BE DONE IN ACCORDANCE WITH NEC, LOCAL AND STATE JURISDICTION.
3.	CONTRACTOR TO VERIFY GENERATOR MANUFACTURER INSTALLATION REQUIREMENTS.
4.	PROPOSED UNDERGROUND UTILITIES TO MAINTAIN A MINIMUM 2-FOOT SEPARATION BOTH HORIZONTAL AND VERTICAL FROM OTHER EXISTING UTILITIES.
5.	SELECTED CONTRACTOR TO LOCATE ALL PUBLIC AND PRIVATE UTILITIES BEFORE COMMENCING CONSTRUCTION.

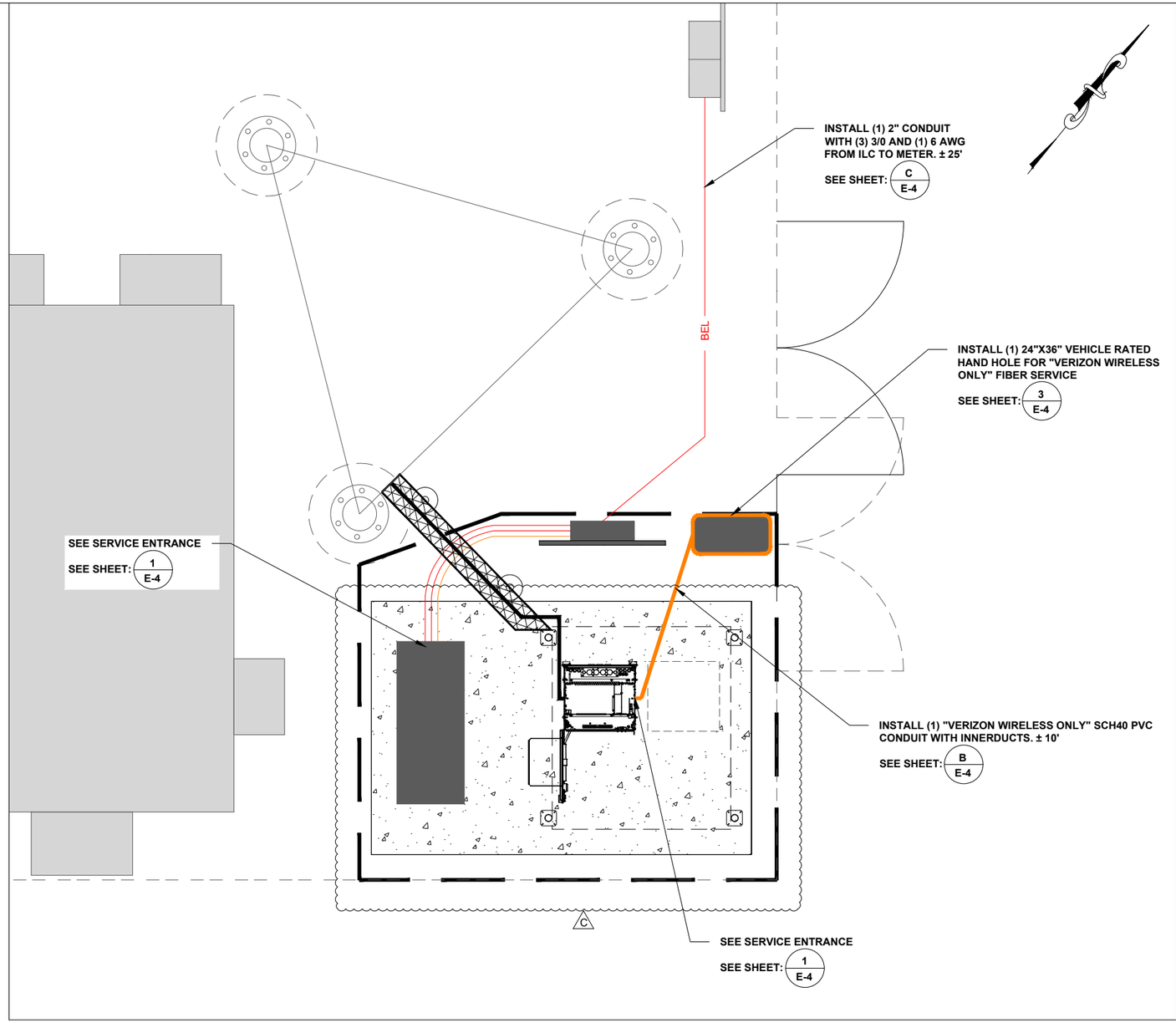
NOTES

FIBER PROVIDER	TBD
FIBER PROVIDER CONTACT	PHONE:
ADDRESS	TBD

FIBER COMPANY INFORMATION

POWER PROVIDER	COLORADO SPRINGS UTILITIES
POWER PROVIDER CONTACT	PHONE: (719) 448-4808
ADDRESS	P.O. BOX 1103 COLORADO SPRINGS, CO
SITE	CSP KIVA
WORK ORDER NUMBER	T.B.D.
ACCOUNT NUMBER	T.B.D.

POWER COMPANY INFORMATION



LEGEND:

- PARCEL
- EXISTING FENCE
- BEL — PROPOSED BURIED ELECTRICAL
- bel — EXISTING BURIED ELECTRICAL
- PROPOSED BURIED ALARM CABLE

CALL COLORADO ONE CALL
(800) 922-1987
CALL 3 WORKING DAYS
BEFORE YOU DIG!

GRAPHIC SCALE
5 0 2.5 5 10

UTILITY SITE PLAN
SCALE: 1" = 5'

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E-1

Q:\2025\UT-11734-25 Verizon Utah A&E 2025\Project Data\Design\COLORADO\CSP KIVA\CSP KIVA DESIGN.dwg - UTILITY SITE PLAN - 4/06/2026 04:27pm, dakota.wibert

1.	ALL CONDUIT NOT SPECIFIED OTHERWISE SHALL BE SCH. 40 PVC BELOW GRADE, IMC ABOVE. EMT ACCEPTABLE INDOORS IN AREAS THAT ARE ACCESSIBLE ONLY TO LESSEE AUTHORIZED PERSONNEL.
2.	ALL WORK SHALL BE DONE IN ACCORDANCE WITH NEC, LOCAL AND STATE JURISDICTION.
3.	CONTRACTOR TO VERIFY GENERATOR MANUFACTURER INSTALLATION REQUIREMENTS.

NOTES

(1)	NEW CONDUIT & CONDUCTORS BY CONTRACTOR. SHALL BE SIZED IN ACCORDANCE WITH NEC REQUIREMENTS.
(2)	(1) 2" CONDUIT WITH (3) 3/0 AWG & (1) 6 AWG G FROM ILC TO METER ± 25'
(3)	ALARM CABLE FROM GENERATOR TO ILC. ± 10'
(4)	(1) 1" CONDUIT WITH (4) 12 AWG & (1) 12 AWG FROM ILC TO GENERATOR. (GEN HEATER & BATTERY CHARGER). ± 10'
(5)	(1) 2" CONDUIT & CONDUCTORS FROM ILC TO GENERATOR

KEY NOTES

POWER PROVIDER	COLORADO SPRINGS UTILITIES
POWER PROVIDER CONTACT	PHONE: (719) 448-4808
ADDRESS	P.O. BOX 1103 COLORADO SPRINGS, CO
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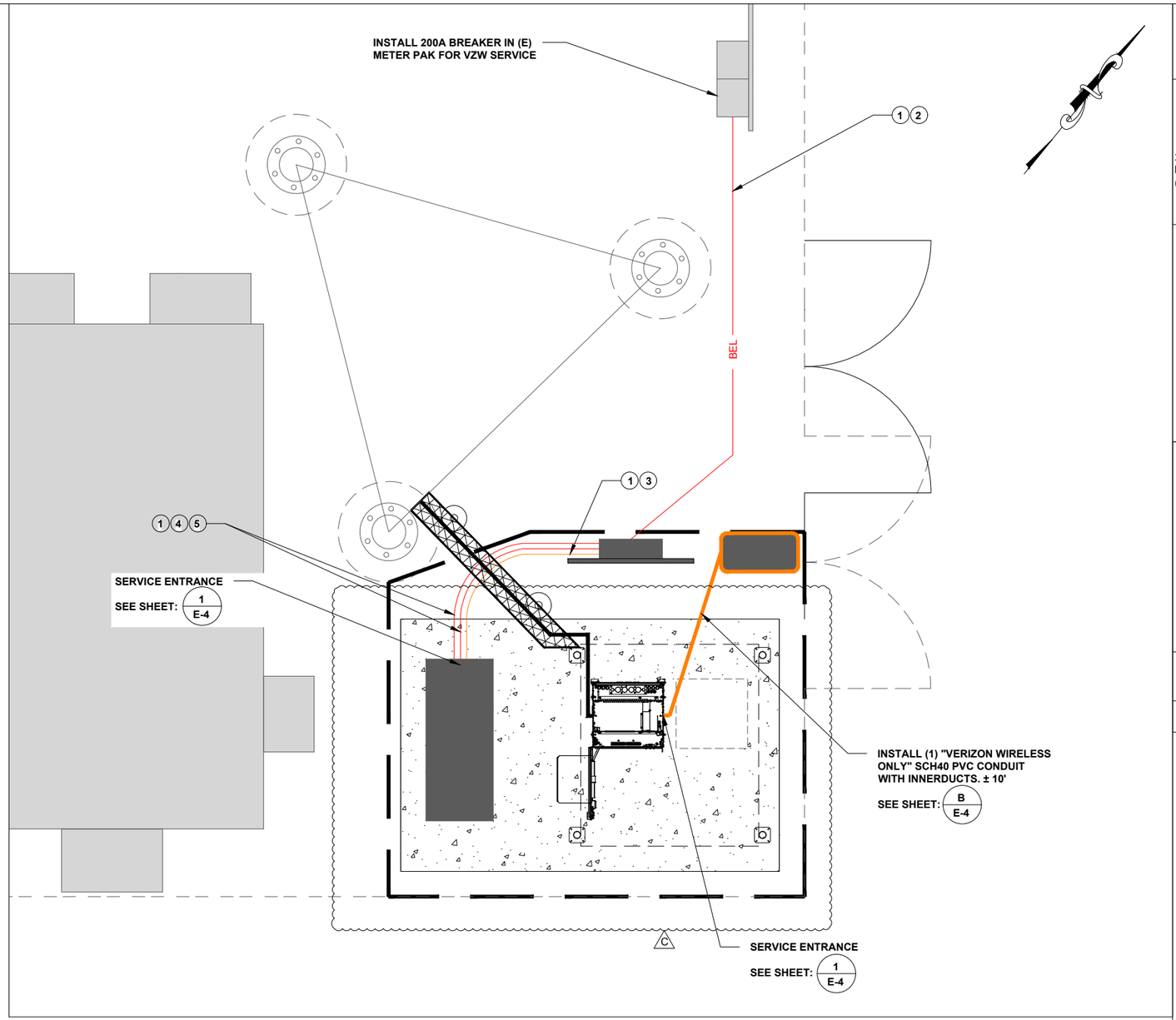
POWER COMPANY INFORMATION



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EQUIPMENT PAD
UTILITY PLAN
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E-2

GENERAL ELECTRICAL NOTES

1. UNLESS NOTED AS VERIZON WIRELESS GENERAL CONTRACTOR OR VZW GC, ALL WORK ITEMS ON ELECTRICAL "E" & GROUNDING "G" SHEETS SHALL BE PERFORMED BY THE GENERAL CONTRACTOR'S ELECTRICAL CONTRACTOR. ALL WORK SHOWN AS NEW UNLESS NOTED EXISTING.
2. THE GENERAL CONTRACTOR AND VERIZON WIRELESS ELECTRICAL CONTRACTORS SHALL BE LICENSED TO PERFORM WORK IN THE COUNTY OF THIS PROJECT AND SHALL BE RESPONSIBLE FOR OBTAINING AN ELECTRICAL PERMIT FROM THE COUNTY.
3. UNDERGROUND CONDUIT SHALL BE SCH. 40 (SCH. 80 UNDER ROADWAY) PVC PLASTIC DUCT WITH ALL BENDS MINIMUM 24" RADIUS 90° SWEEP SCH. 80 UNLESS OTHERWISE NOTED ON DRAWINGS. ELECTRICAL AND FIBER UTILITY LATERAL CONDUITS SHALL BE MINIMUM 36" RADIUS 90° SWEEP SCH. 80. ALL PVC SCH80 PIPING AND FITTINGS SHALL USE BELL END WHERE FEASIBLE.
4. ABOVE GRADE RISER CONDUIT SHALL BE RIGID SCH. 80 PVC WITH MATCHING FITTINGS UNLESS NOTED OTHERWISE.
5. ALL CONDUITS SHALL BE PLACED WITH 200 LB POLYETHYLENE PULL TAPES. PULL TAPES SHALL BE SECURELY FASTENED AT EACH END OF CONDUIT. (THIS SHALL ALSO APPLY FOR ALL FIBER CONDUITS).
6. PRIOR TO TRENCHING AND FOR COORDINATING OF THE FIBER AND ELECTRICAL SERVICES, SEE SHEET E-3 POWER COMPANY INFORMATION TABLE FOR UTILITY CONTACT NAMES & PHONE NUMBERS TO ALSO INCLUDE VERIZON WIRELESS CONSTRUCTION MANAGER.
7. ALL WORK SHALL BE IN ACCORDANCE WITH N.F.P.A. AND N.E.C. CODES, NEMA STANDARDS AND ALL LOCAL CODES.
8. ALL WIRE SHALL BE COPPER, 600V THHN-2/THWN-2 OR XHHW-2 90°C UNLESS NOTED OTHERWISE.
9. ALL ELECTRICAL CONTRACTORS SHALL ABIDE BY ALL GUIDELINES REQUIRED BY TOWER OWNER AND VERIZON WIRELESS, INCLUDING BUT NOT LIMITED TO, a) STAGE CONSTRUCTION AND REPORT WHEN ON AND OFF THE SITE. b) PROVIDE LOG BOOK RECORDS OF PERSONNEL ON TOWER. c) PROVIDE R.F. MONITORING DEVICES TO TOWER PERSONNEL. d) VERIZON WIRELESS TO INSPECT ALL TRENCHING BEFORE BACKFILLING.
10. THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL UNDERGROUND CONDUITS SHOWN ON PLANS UNLESS NOTED OTHERWISE. ALL UNDERGROUND CONDUIT SHALL BE STUBBED-UP AND CAPPED AT THE LOCATION INDICATED ON PLANS. VZW CONTRACTOR SHALL COMPLETE ALL CONDUIT TERMINATIONS TO VZW ENCLOSURES SHOWN ON PLANS AND ELECTRICAL PROVIDER DESIGN .
11. THE VZW ELECTRICAL CONTRACTOR SHALL VERIFY ELECTRICAL SERVICE REQUIRED – 120/240V, SINGLE PHASE, 200 AMP BEFORE ROUGH IN.
12. GENERAL CONTRACTOR AND VZW ELECTRICAL CONTRACTORS SHALL PROVIDE FIRE WATCH DURING ALL WELDING OPERATIONS. TWO (2) HAND HELD 30 LB. FIRE EXTINGUISHERS & ADEQUATE WATER SUPPLY SHALL BE APPROVED BY THE CLIENT AND THE TOWNSHIP WATER AUTHORITY.
13. SEAL ALL PENETRATIONS WITH SILICONE SEALANT.
14. ELECTRICAL WORK PRESENTS SPECIFIC THREATS TO THE HEALTH AND SAFETY OF WORKERS ON SITE. SPECIFICALLY ELECTROCUTIONS ARE THE FOURTH LEADING CAUSE OF DEATH ON CONSTRUCTION SITES. ALL ELECTRICAL WORKERS SHALL HAVE CURRENT CERTIFICATIONS WHICH SATISFY ALL TRAINING REQUIREMENTS FOR THE ELECTRICAL WORK THEY ARE PERFORMING PER OSHA STANDARDS. ALL ELECTRICAL WORKERS SHALL ADHERE TO ALL SAFETY RULES AND REGULATIONS FOR WORKER AND PUBLIC SAFETY. ALL WORK SHALL BE PERFORMED BY QUALIFIED ELECTRICIANS TRAINED FOR THE TYPE OF WORK AND THE VOLTAGES PRESENT FOR EACH TASK. THE CONTRACTOR SHALL REVIEW ALL LANDOWNER, PRIME CONTRACTOR, CARRIER, OSHA, NFPA 70E, AND LOCAL SAFETY GUIDELINES AND AT ALL TIMES SHALL CONFORM TO THE MOST RESTRICTIVE OF THESE STANDARDS TO ENSURE A SAFE WORKPLACE.
15. CONNECT NEUTRAL TERMINAL IN SERVICE DISCONNECTING DEVICE TO GROUNDING ELECTRODE. (2/0 AWG TINNED STRANDED COPPER GROUNDING ELECTRODE CONDUCTOR IN 1" PVC CONDUIT). CONNECT FIRST GROUNDING ELECTRODE TO SECOND GROUNDING ELECTRODE WITH 2/0 AWG TINNED STRANDED COPPER CONDUCTOR EXOTHERMICALLY WELDED TO ELECTRODES.
16. VZW E.C. SHALL VERIFY SUFFICIENT CAPACITY EXISTS AT EXISTING METER CENTER. NOTIFY ENGINEER IMMEDIATELY IF SERVICE IS NOT ADEQUATE.
17. REFER TO ELECTRICAL SITE PLAN FOR CONDUIT AND WIRE EQUIREMENTS.
18. ALL ELECTRICAL EQUIPMENT PLACARDS MUST BE ENGRAVED PLASTIC LABELS ONLY, NO P-TOUCH LABELS ARE TO BE USED. PLACARDS SHALL BE 1 1/2" x 5" IN SIZE AND PERMANENTLY AFFIXED TO THE ENCLOSURES EASILY VISIBLE LOCATIONS.
19. VERIZON WIRELESS ELECTRICAL PLACARD REQUIREMENTS:
    a) AVAILABLE FAULT CURRENT RATING FROM UTILITY PROVIDER WITH DATE.
    b) VERIZON WIRELESS SERVICE DISCONNECT AT METER BASE.
    c) VERIZON MAIN BREAKER AT INTEGRATED LOAD CENTER 'ILC'.
    d) GENERATOR NEUTRAL CONDUCTOR BONDED TO SERVICE GROUNDING ELECTRODE IN THIS ENCLOSURE AT METER CENTER AND AUTOMATIC TRANSFER SWITCH "ATS" NEUTRAL BAR.
    e) VERIZON WIRELESS GENERATOR
    f) 'ACCESS PROPERTY OF VERIZON WIRELESS' AT ALL VERIZON WIRELESS FIBER HAND HOLES FASTENED TO INSIDE WALL OF HAND HOLE.
20. ALL EQUIPMENT SHALL BE GROUNDED PER LATEST EDITION OF NEC AND AS INDICATED ON GROUNDING PLAN.
21. ELECTRICAL EQUIPMENT SHALL BE MIN 3'-0" FROM ANY STRUCTURE AND AS REQUIRED BY LOCAL UTILITY COMPANIES.
22. 2 AWG BARE SOLID TINNED COPPER WIRE LEADS FROM NEW H-FRAME STRUCTURE TO BE BONDED TO EXISTING GROUNDING SYSTEM (TYP)
23. ALL METALLIC CABINETS & ENCLOSURES MUST BE GROUNDED WITH 2 AWG TO GROUND RING.
24. ALL ABOVE GRADE GROUND VZW CONNECTIONS SHALL BE IN 1/2" FLEXIBLE PVC CONDUIT w/ANTI-THEFT COMPOUND. ALL OTHER LEADS SHALL BE IN 1/2" PVC CONDUIT.
25. ALL HARDWARE USED MUST BE GALVANIZED OR STAINLESS STEEL, NO ZINC OR OTHER MATERIAL IS TO BE USED.
26. VERIZON WIRELESS FURNISH & INSTALL ALL INNER CONNECTING CONDUITS BETWEEN CABINETS AND LAND ALL AC POWER TO VZW EQUIPMENT.
27. ALL CONDUIT RUNS SHALL HAVE A CONTINUOUS SLOPE DOWNWARD AND AWAY FROM THE METERBOARD SO THAT WATER WILL NOT FLOW FROM THE EQUIPMENT. TRENCHES SHALL BE EXCAVATED ALONG STRAIGHT LINES BEFORE CONDUIT ARE INSTALLED SO THE ELEVATION CAN BE ADJUSTED, IF NECESSARY, TO AVOID UNSEEN OBSTACLES.
28. PRIOR TO THE SUBMISSION OF BIDS, THE GENERAL CONTRACTOR AND HIS SUBCONTRACTORS SHALL VERIFY ALL DETAILS AND SCHEDULES ON THE DRAWINGS AND SPECIFICATIONS PROVIDED BY THE OWNER, FOR MEANING OF ABBREVIATIONS AND ADDITIONAL REQUIREMENTS AND INFORMATION, CHECK STRUCTURAL AND OTHER MECHANICAL AND ELECTRICAL DRAWINGS FOR SCALE, SPACE LIMITATIONS, DOOR SWINGS, ADJACENT CARRIER EQUIPMENT COORDINATION AND ADDITIONAL INFORMATION, ETC. REPORT ANY DISCREPANCIES, CONFLICTS, ETC. TO THE OWNER BEFORE SUBMITTING BIDS.

VERIZON PANEL "A" SCHEDULE

MAIN: 225/2 VOLTAGE: 120/240 PHASE: 1 WIRE: 3

TO AUTOMATIC TRANSFER SWITCH

225A

DESCRIPTION	BRKR.	WATTS	S/G	A	B	S/N	WATTS	BRKR.	DESCRIPTION
RECTIFIER #1	30/2	1800 / 1800	1 / 3			2 / 4	1800 / 1800	30/2	RECTIFIER #2
RECTIFIER #3	30/2	1800 / 1800	5 / 7			6 / 8	1800 / 1800	30/2	RECTIFIER #4
RECTIFIER #5	30/2	1800 / 1800	9 / 11			10 / 12	1800 / 1800	30/2	RECTIFIER #6
RECTIFIER #7	30/2	1800 / 1800	13 / 15			14 / 16	1800 / 1800	30/2	RECTIFIER #8
SPACE			17			18			SPACE
SPACE			19			20			SPACE
SPACE			21			22			SPACE
SPACE			23			24			SPACE
SPACE			25			26			SPACE
SPACE			27			28			SPACE
SPACE			29			30			SPACE
GFCI RECEPTACLE (RF CABINET)	15/1	180	31			32			SPACE
GEN. BLOCK HEATER	20/1	1500	33			34	180	15/1	GFCI RECEPTACLE
CANOPY LIGHTS	15/1	126	35			36	250	20/1	GEN. BATTERY CHARGER

SURGE ARRESTOR

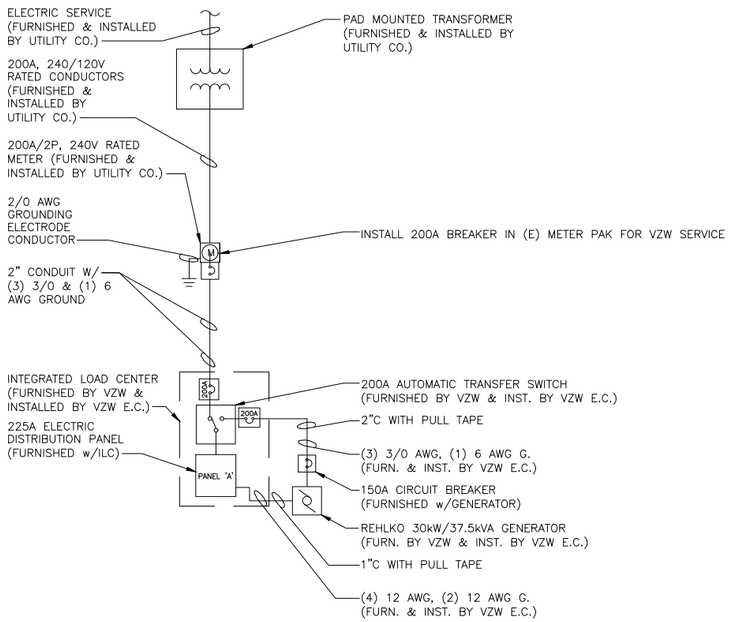
SURFACE MOUNTED NEMA 3R w/DOOR
22K AIC BREAKERS
(E.C. SHALL VERIFY AIC RATINGS W/LOCAL POWER CO.)

PANEL LOADING SUMMARY:

MAXIMUM LOADING ON 200A PANEL SHALL BE 160A CONTINUOUS. RECTIFIERS SHALL BE CONSIDERED A CONTINUOUS LOAD. MAXIMUM NUMBER OF RECTIFIERS SHALL NOT EXCEED 8. LOADING WILL VARY BASED ON QUANTITY OF RECTIFIERS/CABINETS AND WILL NOT BE DETERMINED UNTIL TIME OF BUILD BY VERIZON. VERIZON TO ENSURE THE MAXIMUM TOTAL PANEL LOAD DOES NOT EXCEED 160A CONTINUOUS LOAD. VERIZON SHALL ALSO VERIFY THAT THE GENERATORTOR IS CAPABLE OF TRANSFERING THE ENTIRE PLANNED LOAD. VERIZON SHALL LOAD SHED AS REQUIRED IN ORDER TO ENSURE GENERATOR RATING IS NOT EXCEEDED.

PANEL SCHEDULE "A"

SCALE: N.T.S.



1 / E-2 ONE LINE DIAGRAM

SCALE: N.T.S.

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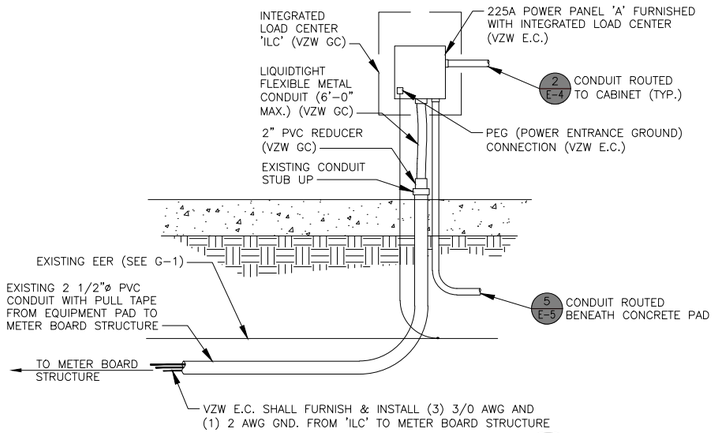
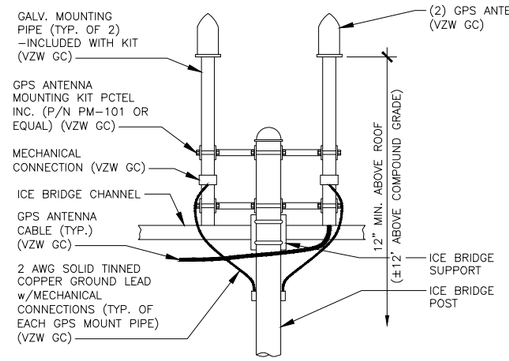
E-3



SERVICE ENTRANCE DETAIL 1 E-4

SCALE: N.T.S.



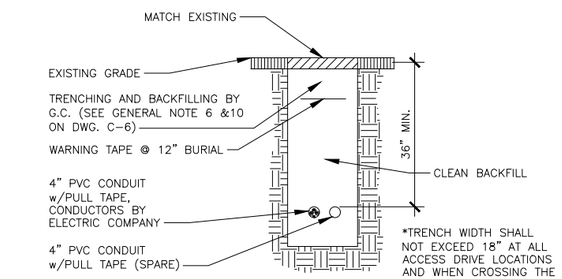
*ALL GPS ANTENNA INSTALLATION BY VZW GC

NOTE:

GPS ANTENNA MUST BE INSTALLED IN SUCH A MANNER AS TO PROVIDE A 360° CLEAR VIEW OF THE SKY AT ITS LOWEST MOUNTING POINT

GPS MOUNT DETAIL 3 E-4

SCALE: N.T.S. (BY VZW GC)



SERVICE LATERAL TRENCH SECTION DETAIL A E-4

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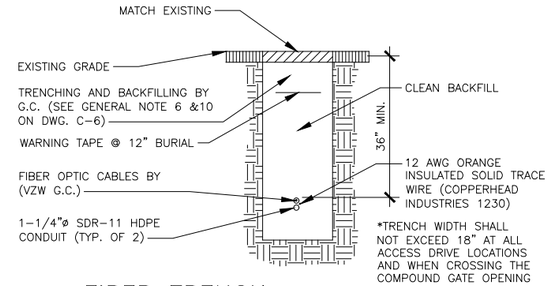
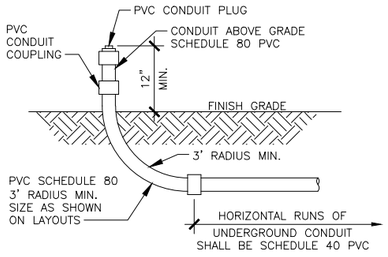


FIBER TRENCH SECTION DETAIL B E-4

SCALE: N.T.S.

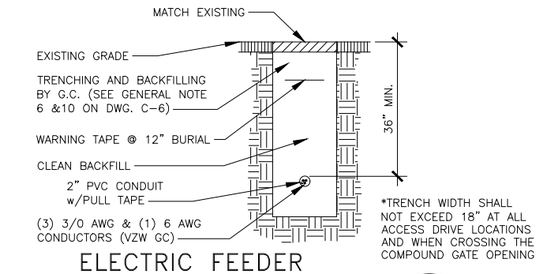


UNDERGROUND CONDUIT STUB-UP DETAIL 2 E-4

SCALE: N. T. S.

FIBER HAND HOLE PLACARD DETAIL 4 E-4

SCALE: N.T.S.



ELECTRIC FEEDER TRENCH SECTION DETAIL C E-4

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E-4

1	CONTRACTOR TO BOND ANY METALLIC ITEMS WITHIN 6' OF WIRELESS EQUIPMENT, SHELTER, OR GROUND RING IN ACCORDANCE WITH NEC REQUIREMENTS.
2	THE GROUNDING DIAGRAM SHOWN HERE IS SOMEWHAT SCHEMATIC IN NATURE AND MANY OF THE GROUNDING CONDUCTORS ARE SHOWN WITH A CURVE TO THEM. THIS IS SIMPLY TO INSURE THAT THEY STAND OUT FROM LEASE LINES, FENCE LINES, AND SHELTER LINES ECT. ALL GROUNDING AND BONDING CONDUCTORS SHOULD BE INSTALLED IN AS STRAIGHT A LINE AS POSSIBLE. ANY BENDS THAT ARE REQUIRED IN GROUNDING OR BONDING CONDUCTORS SHOULD HAVE A RADIUS OF NO LESS THAN 12".
3	BONDING JUMPERS FROM REBAR CAGE AND ANCHOR BOLT TO GROUND RING SHOULD ATTACH AT LOCATIONS ALLOWING JUMPERS TO BE CLOSE TO HORIZONTAL AS POSSIBLE.

GENERAL NOTES

(1)	BOND TO EQUIPMENT GROUND RING
(2)	EQUIPMENT GROUND RING, 30" BELOW GRADE OR 6" BELOW FROST LINE, WHICHEVER IS DEEPER

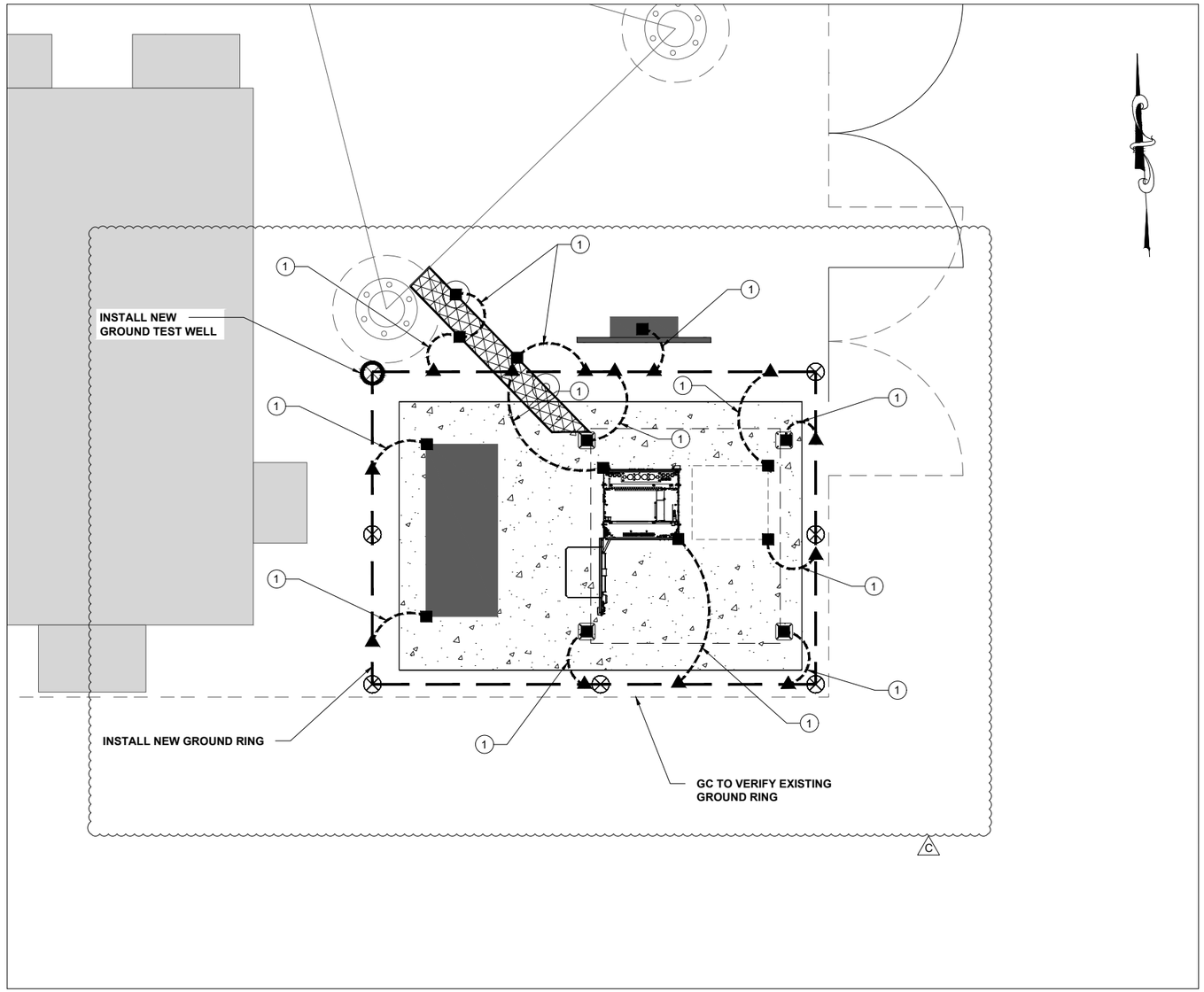
GROUNDING KEY NOTES

1.	CONTRACTOR SHALL NOT SUBMIT BIDS OR PERFORM CONSTRUCTION WORK ON THIS PROJECT WITHOUT ACCESS TO THE CURRENT COMPLETE SET OF DRAWINGS LISTED IN THE TITLE-SHEET INDEX.

NOTICE

▲	CADWELD CONNECTION
■	MECHANICAL CONNECTION
⊗	5/8"X10' CU CLAD STEEL GROUND ROD
⊗	GROUND ROD TEST WELL
— —	#2 SOLID, TINNED, BARE COPPER

GROUNDING KEY NOTES



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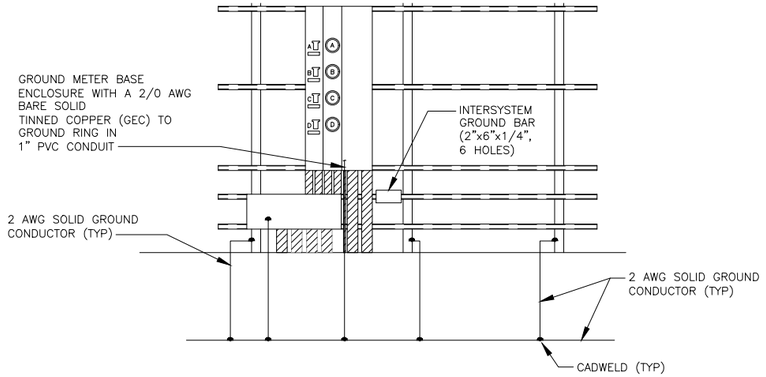
EL PASO COUNTY

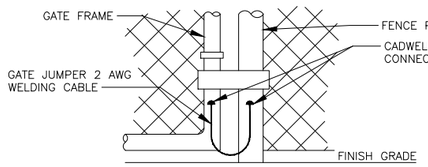
G-1



METER BOARD STRUCTURE GROUNDING

SCALE: 1/4" = 1'-0"

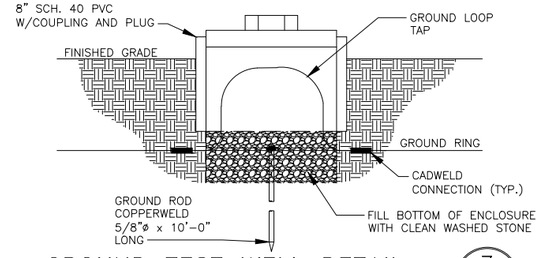
1 G-2



GATE GROUNDING DETAIL

SCALE: N.T.S.

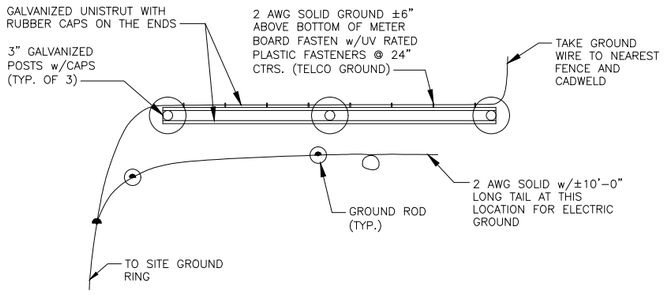
4 G-2



GROUND TEST WELL DETAIL

SCALE: N.T.S.

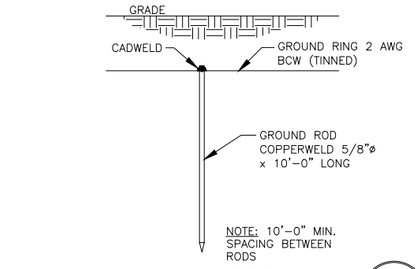
7 G-2



METER BOARD STRUCTURE GROUND PLAN

SCALE: N.T.S.

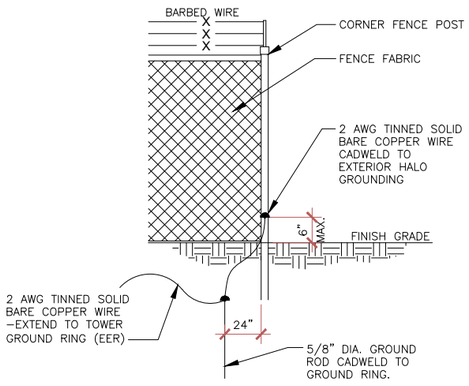
2 G-2



GROUND ROD DETAIL

SCALE: N.T.S.
(TYP. FOR CONTRACTOR AND VZW GC)

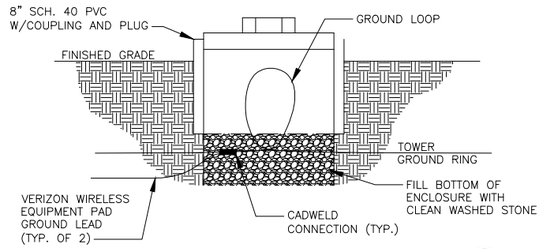
5 G-2



FENCE GROUNDING DETAIL

SCALE: N.T.S.

3 G-2



INSPECTION SLEEVE DETAIL

SCALE: N.T.S.

6 G-2

verizon

PLANS PREPARED BY:

Horrocks.

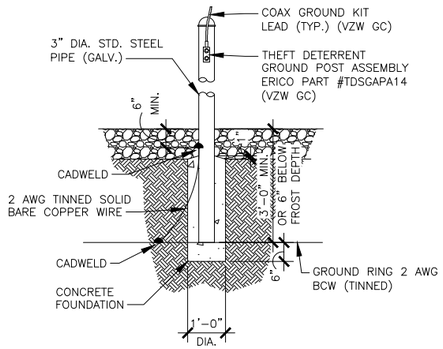
2162 West Grove Parkway, Suite 400
Pleasant Grove, UT 84062
(801) 763-5100

SEAL:

REV.	DATE	DESCRIPTION
A	03/06/26	ISSUED FOR CLIENT REVIEW
B	03/18/26	CLIENT COMMENTS
C	04/06/26	CLIENT COMMENTS

CSP KIVA
VERIZON WIRELESS
82 WIDEFIELD BOULEVARD
COLORADO SPRINGS, CO 80911
EL PASO COUNTY

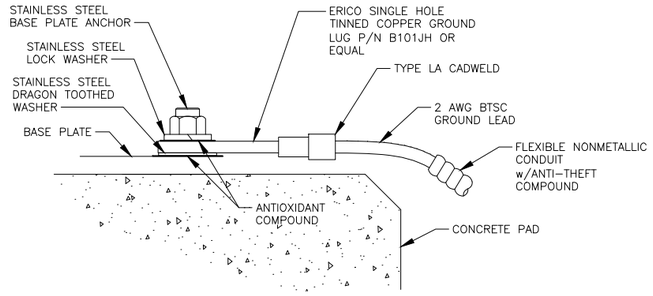
G-2



THEFT DETERRENT POST MOUNT GROUND DETAIL (CEPSG)

1 G-3

SCALE: N.T.S.
(BY VZW GC)

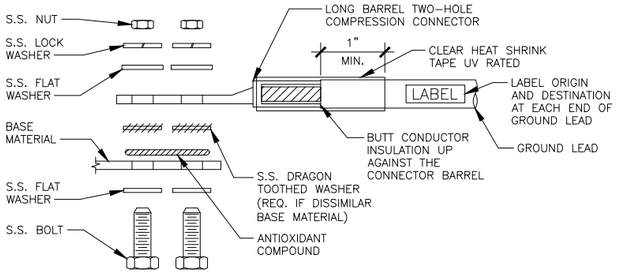


1. ALL HARDWARE SHALL BE 18-8 STAINLESS STEEL.
2. INSTALL ANCHOR LENGTH TO ALLOW EXPOSURE OF AT LEAST TWO THREADS.
3. AT CONNECTIONS MADE TO STEEL OR ANY OTHER DISSIMILAR METALS, A DRAGON TOOTH WASHER SHALL BE USED BETWEEN THE CONNECTOR AND METAL.
4. IF NO DRAGON TOOTH WASHER IS USED, THOROUGHLY REMOVE A SECTION OF THE COATING APPROXIMATELY THE SIZE OF THE CONNECTOR WITH AND ABRASIVE STYLE TOOL.
5. No-Ox-ID ANTI-OXIDATION COMPOUND (SANCHEM) SHALL BE USED AT ALL COPPER TO COPPER CONNECTIONS.
6. A ZINC BASED (GRAY COLORED) ANTI-OXIDATION COMPOUND SHALL BE USED AT ALL COPPER TO STEEL CONNECTIONS.
7. PENTROX OR EQUAL ANTI-OXIDATION COMPOUND SHALL BE USED AT ALL COPPER TO ALUMINUM CONNECTIONS.

GROUND LUG TO BASEPLATE INSTALLATION DETAIL

3 G-3

SCALE: N.T.S.

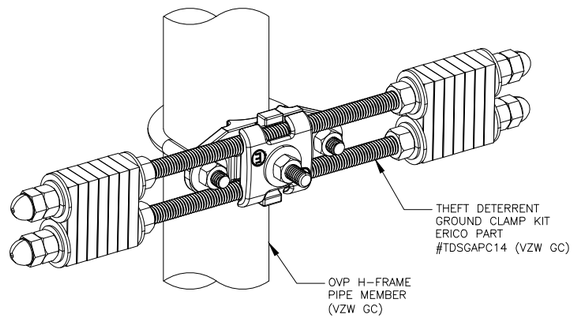


1. ALL HARDWARE SHALL BE 18-8 STAINLESS STEEL.
2. CHOOSE BOLT LENGTH TO ALLOW EXPOSURE OF AT LEAST TWO THREADS.
3. BACK TO BACK LUG CONNECTIONS ARE ACCEPTABLE WHEN BONDED TO A GROUND BAR OR STEEL OBJECT.
4. AT CONNECTIONS MADE TO STEEL OR ANY OTHER DISSIMILAR METALS, A DRAGON TOOTH WASHER SHALL BE USED BETWEEN THE CONNECTOR AND METAL.
5. IF NO DRAGON TOOTH WASHER IS USED, THOROUGHLY REMOVE A SECTION OF THE COATING APPROXIMATELY THE SIZE OF THE CONNECTOR WITH AND ABRASIVE STYLE TOOL.
6. No-Ox-ID ANTI-OXIDATION COMPOUND (SANCHEM) SHALL BE USED AT ALL COPPER TO COPPER CONNECTIONS.
7. A ZINC BASED (GRAY COLORED) ANTI-OXIDATION COMPOUND SHALL BE USED AT ALL COPPER TO STEEL CONNECTIONS.
8. PENTROX OR EQUAL ANTI-OXIDATION COMPOUND SHALL BE USED AT ALL COPPER TO ALUMINUM CONNECTIONS.

GROUND LUG INSTALLATION DETAIL

2 G-3

SCALE: N.T.S.



OVP GROUND ASSEMBLY (OGA)

4 G-3

SCALE: N.T.S.
(BY VZW GC)

verizon

PLANS PREPARED BY:

Horrocks.

2162 West Grove Parkway, Suite 400
Pleasant Grove, UT 84062
(801) 763-5100

SEAL:

REV.	DATE	DESCRIPTION
A	03/06/26	ISSUED FOR CLIENT REVIEW
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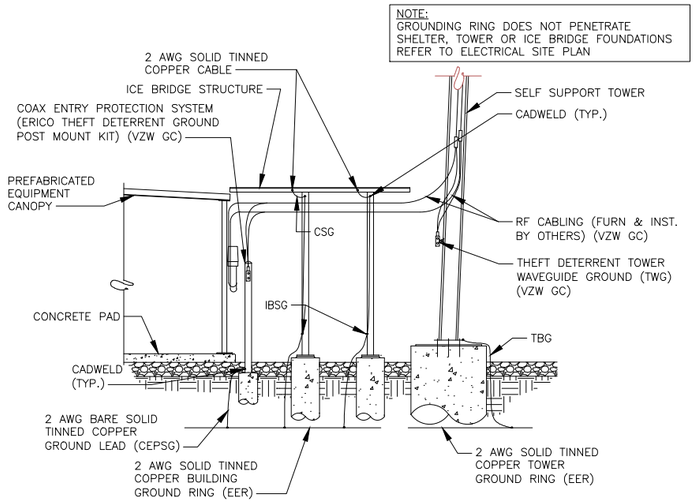
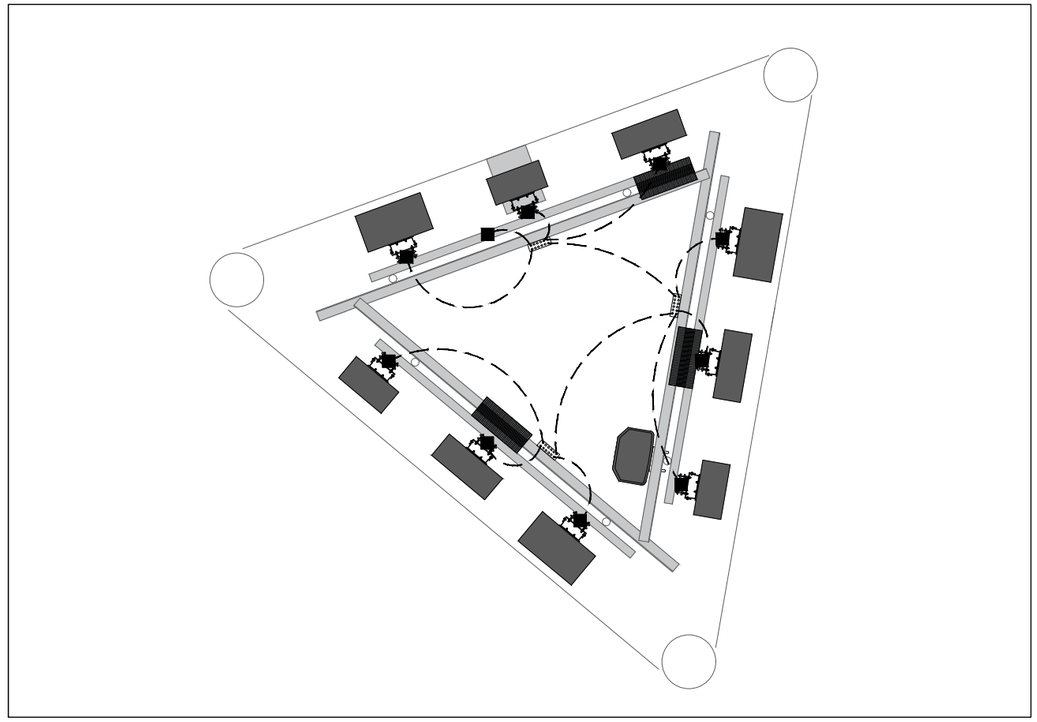
CSP KIVA
VERIZON WIRELESS
82 WIDEFIELD BOULEVARD
COLORADO SPRINGS, CO 80911
EL PASO COUNTY

G-3



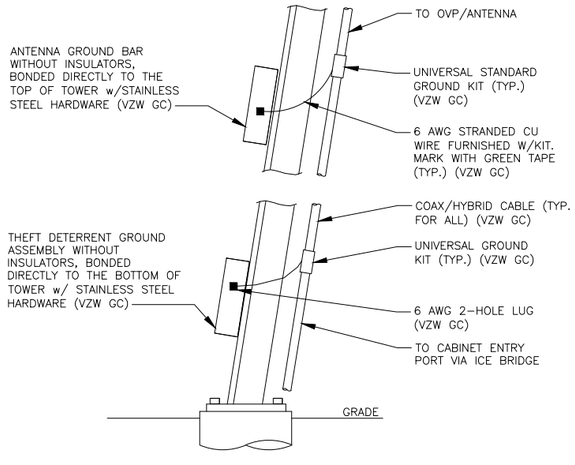
INTERIOR/EXTERIOR GROUNDING DETAIL 1 G-4

SCALE: N.T.S.



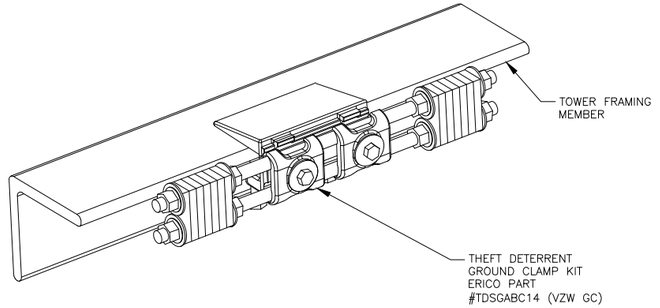
ANTENNA LEVEL GROUNDING PLAN 3 G-4

SCALE: N.T.S.

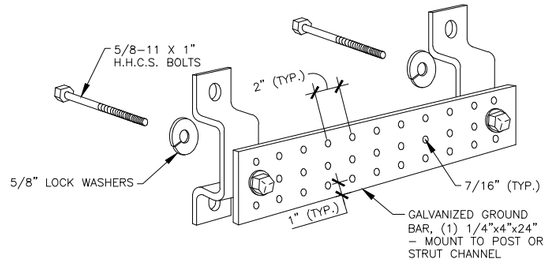


NOTE:
1. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATIONS AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED (VZW GC)
2. INSTALL UNIVERSAL GROUND KITS AT ALL GROUND BAR LOCATIONS. (VZW GC)

ANTENNA CABLE GROUNDING INSTALLATION DETAIL 2



TOWER BOTTOM GROUND ASSEMBLY 4



ANTENNA & TOWER TOP GROUND BAR 5

verizon

PLANS PREPARED BY:
Horrocks.
2162 West Grove Parkway, Suite 400
Pleasant Grove, UT 84062
(801) 763-5100

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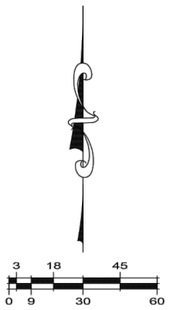
CSP KIVA
VERIZON WIRELESS
82 WIDEFIELD BOULEVARD
COLORADO SPRINGS, CO 80911
EL PASO COUNTY

G-4

SURVEY BY OTHERS



LEGEND

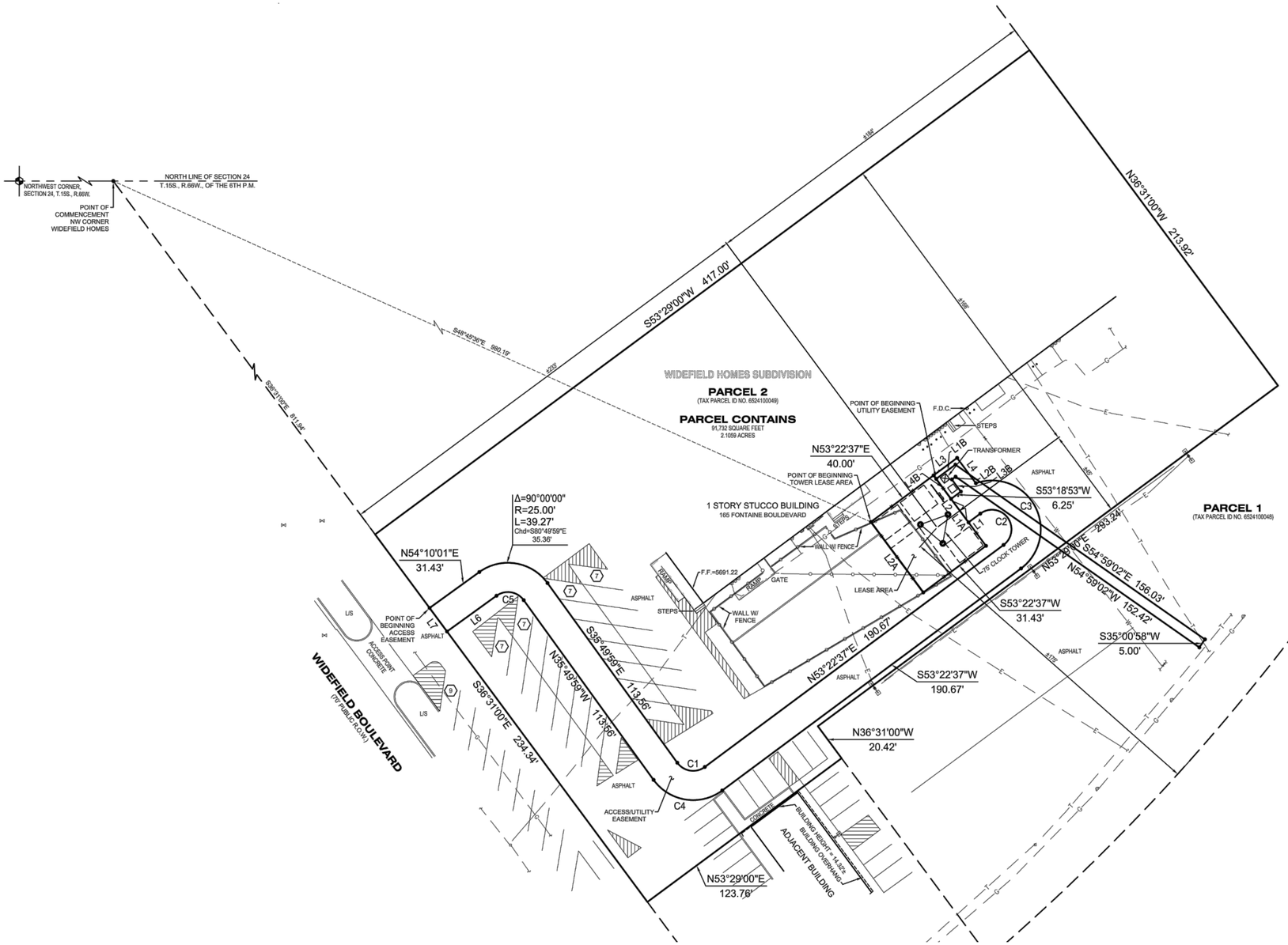
- ELECTRICAL LINE
- GAS LINE
- TELEPHONE LINE
- WATER LINE
- FENCE LINE
- RAILING
- BOLLARD
- ELECTRICAL BOX
- ELECTRICAL METER
- GAS METER
- LIGHT POLE (DIRECTIONAL)
- NUMBER OF PARKING STALLS
- TELEPHONE PEDESTAL
- WATER VALVE

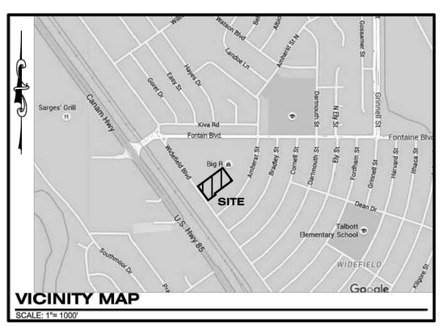
LINE DATA TABLE

COURSE	BEARING	LENGTH
L1	S53°22'37"W	7.50'
L2	S36°37'23"E	30.00'
L3	N53°22'37"E	15.00'
L4	S36°37'23"E	16.15'
L1A	S36°37'23"E	45.00'
L2A	N36°37'23"W	45.00'
L1B	N53°18'53"E	12.25'
L2B	S53°18'53"W	2.39'
L3B	S36°37'23"E	7.75'
L4B	N36°37'23"W	12.75'

CURVE DATA TABLE

COURSE	DELTA	RADIUS	LENGTH	Chd BEARING	Chd LENGTH
C1	90°47'24"	10.00'	15.85'	S81°13'41"E	14.24'
C2	180°00'00"	10.00'	31.42'	N36°37'23"W	20.00'
C3	162°32'33"	25.00'	70.92'	S27°53'39"E	49.42'
C4	90°47'24"	25.00'	39.61'	N81°13'41"W	35.60'
C5	90°00'00"	10.00'	15.71'	N80°49'59"W	14.14'





VICINITY MAP
SCALE: 1"= 1000'

ACCESS EASEMENT

A PARCEL OF LAND BEING A PART OF "WIDEFIELD HOMES", AS PLATTED AND RECORDED IN PLAT BOOK Z AT PAGE 23 OF THE RECORDS OF EL PASO COUNTY, COLORADO AND SITUATED IN THE N1/2 OF SECTION 24, T.15S., R.66W., OF THE 6TH P.M., COUNTY OF EL PASO , STATE OF COLORADO, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NW CORNER OF "WIDEFIELD HOMES";
THENCE S36°31'00"E ALONG THE SOUTHWESTERLY LINE OF SAID WIDEFIELD HOMES, A DISTANCE OF 858.82 FEET TO THE POINT OF BEGINNING;
THENCE N54°10'01"E A DISTANCE OF 31.43 FEET TO A POINT OF CURVE;
THENCE ALONG A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 90°00'00", A RADIUS OF 25.00 FEET, AN ARC LENGTH OF 39.27 FEET, A CHORD BEARING OF S80°49'59"E AND A CHORD DISTANCE OF 35.36 FEET;
THENCE S35°49'59"E A DISTANCE OF 113.56 FEET TO A POINT OF CURVE;
THENCE ALONG A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 90°47'24", A RADIUS OF 10.00 FEET, AN ARC LENGTH OF 15.85 FEET, A CHORD BEARING OF S81°13'41"E AND A CHORD DISTANCE OF 14.24 FEET;
THENCE N53°22'37"E A DISTANCE OF 190.76 FEET TO A POINT OF CURVE;
THENCE ALONG A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 180°00'00", A RADIUS OF 10.00 FEET, AN ARC LENGTH OF 31.42 FEET, A CHORD BEARING OF N36°37'23"W AND A CHORD DISTANCE OF 20.00 FEET;
THENCE S53°22'37"W A DISTANCE OF 7.50 FEET;
THENCE N36°37'23"W A DISTANCE OF 30.00 FEET;
THENCE N53°22'37"E A DISTANCE OF 15.00 FEET;
THENCE S36°37'23"E A DISTANCE OF 16.15 FEET TO A POINT OF CURVE;
THENCE ALONG A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 162°32'33", A RADIUS OF 25.00 FEET, AN ARC LENGTH OF 70.92 FEET, A CHORD BEARING OF S27°53'39"E AND A CHORD DISTANCE OF 49.42 FEET;
THENCE S53°22'37"W A DISTANCE OF 190.67 FEET TO A POINT OF CURVE;
THENCE ALONG A CURVE TO THE RIGHT HAVING A CENTRAL ANGLE OF 90°47'24", A RADIUS OF 25.00 FEET, AN ARC LENGTH OF 39.81 FEET, A CHORD BEARING OF N81°13'41"W AND A CHORD DISTANCE OF 35.60 FEET;
THENCE N35°49'59"W A DISTANCE OF 113.56 FEET TO A POINT OF CURVE;
THENCE ALONG A CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 90°00'00", A RADIUS OF 10.00 FEET, AN ARC LENGTH OF 15.71 FEET, A CHORD BEARING OF N80°49'59"W AND A CHORD DISTANCE OF 14.14 FEET;

THENCE S54°10'01"W A DISTANCE OF 31.25 FEET TO A POINT ON THE NORTHEASTERLY R.O.W. LINE OF WIDEFIELD BOULEVARD;
THENCE N36°31'00"W ALONG SAID NORTHEASTERLY R.O.W. LINE, A DISTANCE OF 15.00 FEET TO THE POINT OF BEGINNING.

PARCEL CONTAINS (7,027 SQUARE FEET) 0.1613 ACRES

TOWER LEASE AREA

A PARCEL OF LAND BEING A PART OF "WIDEFIELD HOMES", AS PLATTED AND RECORDED IN PLAT BOOK Z AT PAGE 23 OF THE RECORDS OF EL PASO COUNTY, COLORADO AND SITUATED IN THE N1/2 OF SECTION 24, T.15S., R.66W., OF THE 6TH P.M., COUNTY OF EL PASO, STATE OF COLORADO, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NW CORNER OF "WIDEFIELD HOMES";
THENCE S48°45'36"E A DISTANCE OF 980.19 FEET TO THE POINT OF BEGINNING;
THENCE N53°22'37"E A DISTANCE OF 40.00 FEET;
THENCE S36°37'23"E A DISTANCE OF 45.00 FEET;
THENCE S53°22'37"W A DISTANCE OF 40.00 FEET;
THENCE N36°37'23"W A DISTANCE OF 45.00 FEET TO THE POINT OF BEGINNING.

PARCEL CONTAINS (1,800 SQUARE FEET) 0.0413 ACRES

LEGAL DESCRIPTION: AS PROVIDED

A TRACT OF LAND IN THE NORTH ONE-HALF OF SECTION 24, TOWNSHIP 15 SOUTH, RANGE 66 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO, DESCRIBED AS FOLLOWS:

PARCEL 1:

COMMENCING AT THE NORTHWEST CORNER OF "WIDEFIELD HOMES", AS PLATTED AND RECORDED IN PLAT BOOK Z AT PAGE 23 OF THE RECORDS OF EL PASO COUNTY, COLORADO; THENCE EAST ALONG THE NORTH LINE OF SAID SECTION 24, 311.07 FEET; THENCE S 36°31'00" E, 54.91 FEET TO A POINT ON A LINE THAT IS 44.13 FEET SOUTH OF SAID NORTH LINE OF SECTION 24; THENCE EAST ALONG SAID LINE THAT IS 44.13 FEET SOUTH OF SAID NORTH LINE OF SECTION 24, 651.93 FEET TO THE POINT OF BEGINNING OF THE TRACT HEREIN DESCRIBED; THENCE S 36°31'00" E, 294.10 FEET; THENCE S 53°29'00" W, 38.90 FEET; THENCE S 36°31'00" E, 15.00 FEET; THENCE S 53°29'00" W, 68.00 FEET; THENCE S 36°31'00" E, 273.92 FEET; THENCE S 53°29'00" W, 293.24 FEET; THENCE S 36°31'00" E, 147.50 FEET TO A POINT ON THE WESTERLY BOUNDARY LINE OF BLOCK 1 IN SAID "WIDEFIELD HOMES"; THENCE ON A CURVE TO THE LEFT AND ALONG SAID WESTERLY BOUNDARY LINE OF BLOCK 1 IN SAID "WIDEFIELD HOMES", SAID CURVE HAVING A CENTRAL ANGLE OF 44°10'51", A RADIUS OF 1088.70 FEET, AN ARC LENGTH OF 839.50 FEET; THENCE N 81°22'07" W, 149.44 FEET; THENCE N 36°31'00" W, 92.71 FEET TO A POINT ON THE SAID LINE THAT IS 44.13 FEET SOUTH OF SAID NORTH LINE OF SECTION 24; THENCE WEST ALONG SAID LINE THAT IS 44.13 FEET SOUTH OF SAID NORTH LINE OF SECTION 24, 294.44 FEET TO THE POINT OF BEGINNING AND CONTAINING 191,220.6 SQUARE FEET IN AREA, MORE OR LESS.

PARCEL 2:

COMMENCING AT THE NORTHWEST CORNER OF "WIDEFIELD HOMES", AS PLATTED AND RECORDED IN PLAT BOOK Z AT PAGE 23 OF THE RECORDS OF EL PASO COUNTY, COLORADO; THENCE EAST ALONG THE NORTH LINE OF SAID SECTION 24, 311.07 FEET; THENCE S 36°31'00" E, 811.94 FEET TO THE POINT OF BEGINNING OF THE TRACT HEREIN DESCRIBED; THENCE CONTINUE S 36°31'00" E ALONG THE EASTERLY RIGHT-OF-WAY LINE OF WIDEFIELD BOULEVARD, 234.34 FEET; THENCE N 53°29'00" E, 123.76 FEET; THENCE N 36°31'00" W, 20.42 FEET; THENCE N 53°29'00" E, 293.24 FEET; THENCE N 36°31'00" W, 213.92 FEET; THENCE S 53°29'00" W, 417.00 FEET TO THE POINT OF BEGINNING AND CONTAINING 91,731.8 SQUARE FEET IN AREA, MORE OR LESS.

AND BEING A PORTION OF THE SAME PROPERTY CONVEYED TO WIDEFIELD MANAGEMENT AND INVESTMENT COMPANY, LLLP, A COLORADO REGISTERED LIMITED LIABILITY PARTNERSHIP FROM WIDEFIELD MANAGEMENT AND INVESTMENT COMPANY, A COLORADO GENERAL PARTNERSHIP BY BARGAIN AND SALE DEED DATED APRIL 11, 1996 AND RECORDED APRIL 12, 1996 IN DEED BOOK 6862, PAGE 329.

SURVEYOR'S CERTIFICATE:

I, CHARLES N. BECKSTROM, A REGISTERED PROFESSIONAL LAND SURVEYOR IN THE STATE OF COLORADO, DO HEREBY CERTIFY TO:

VERTICAL BRIDGE REIT, LLC, A DELAWARE LIMITED LIABILITY COMPANY, ITS SUBSIDIARIES, AND THEIR RESPECTIVE SUCCESSORS AND/OR ASSIGNS; TORONTO DOMINION (TEXAS) LLC, AS ADMINISTRATIVE AGENT, FOR ITSELF AND ON BEHALF OF THE LENDERS PARTIES FROM TIME TO TIME TO THAT CERTAIN AMENDED AND RESTATED LOAN AGREEMENT DATED SEPTEMBER 5, 2014 WITH VERTICAL BRIDGE HOLDCO, LLC, AS BORROWER, AND VERTICAL BRIDGE HOLDCO PARENT, LLC, AS PARENT, AS MAY BE AMENDED, RESTATED, MODIFIED OR RENEWED, THEIR SUCCESSORS AND ASSIGNS AS THEIR INTERESTS MAY APPEAR; AND FIDELITY NATIONAL TITLE INSURANCE COMPANY:

THAT ON MARCH 3, 2016, A SURVEY WAS CONDUCTED UNDER MY SUPERVISION AND THE MAP HEREOF ACCURATELY REPRESENTS SAID SURVEY, TO THE BEST OF MY KNOWLEDGE. NO TITLE SEARCH WAS MADE BY ME TO DETERMINE OWNERSHIP OR EASEMENTS RECORDED OR UNRECORDED.

THIS DRAWING DOES NOT REPRESENT A LAND SURVEY, LAND SURVEY PLAT, IMPROVEMENT LAND SURVEY PLAT AND ANY MONUMENTS OR BOUNDARY LINES SHOWN ARE FOR INFORMATION ONLY.

CHARLES N. BECKSTROM
PROFESSIONAL L.S. NO. 33202

Email: cbeckstrom@engineeringserviceco.com

COLORADO REGISTERED CHARLES N. BECKSTROM 33202 PROFESSIONAL LAND SURVEYOR

NOTES CORRESPONDING TO SCHEDULE B – SECTION 2 OF FIDELITY TITLE COMMITMENT #22372284 DATED APRIL 11, 2016:

(8) ACCESS EASEMENT IN FAVOR OF ADJACENT LANDOWNERS, THEIR SUCCESSORS AND ASSIGNS, SET FORTH IN INSTRUMENT RECORDED ON 10/02/1987 IN DEED BOOK 5429, PAGE 571. (DOES NOT APPLY TO THE SUBJECT PROPERTY.)

(9) JOINT ACCESS EASEMENT AND MAINTENANCE AGREEMENT DATED 11/09/2001, BY AND BETWEEN FOUNTAIN VALLEY INVESTMENT PARTNERS, LLC, A COLORADO LIMITED LIABILITY COMPANY, AND WIDEFIELD MANAGEMENT AND INVESTMENT, LLLP, A COLORADO LIMITED LIABILITY LIMITED PARTNERSHIP, RECORDED ON 11/16/2001 IN INSTRUMENT NO. 201168774. (DOES NOT APPLY TO THE SUBJECT PROPERTY.)

(10) EASEMENT AGREEMENT FOR TREATMENT FACILITIES IN FAVOR OF WIDEFIELD WATER AND SANITATION DISTRICT, A QUASI-MUNICIPAL CORPORATION, SET FORTH IN INSTRUMENT, DATED 06/11/2009 AND RECORDED ON 08/17/2009 IN INSTRUMENT NO. 209069056. (DOES NOT APPLY TO THE SUBJECT PROPERTY.)

(11) INTENTIONALLY DELETED.

(12) TERMS AND CONDITIONS OF REAL PROPERTY DONATION DATED 03/29/2016 AND RECORDED 04/04/2016 IN INSTRUMENT NO. 216033910. (DOES NOT APPLY TO THE SUBJECT PROPERTY.)

(13) TEMPORARY CONSTRUCTION EASEMENT AGREEMENT IN FAVOR OF EL PASO COUNTY BY AND THROUGH THE BOARD OF COUNTY COMMISSIONERS OF EL PASO COUNTY, COLORADO SET FORTH IN INSTRUMENT RECORDED ON 04/04/2016 IN INSTRUMENT NO. 216033911. (DOES NOT APPLY TO THE SUBJECT PROPERTY.)

GENERAL NOTES:

1. THIS SURVEY WAS BASED ON TITLE COMMITMENT NUMBER 22372284 PREPARED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY, WITH AN EFFECTIVE DATE OF APRIL 11, 2016 AT 8:00 A.M., AND DOES NOT CONSTITUTE A TITLE SEARCH BY THIS SURVEYOR FOR OTHER EASEMENTS AND/OR EXCEPTIONS OF RECORD.
2. BEARINGS ARE BASED ON THE NORTH LINE OF SECTION 24, T.15S., R.66W., OF THE 6TH P.M. BEARING N90°00'00"E.
3. ALL UTILITY INFORMATION WAS OBTAINED FROM FIELD SURFACE EVIDENCE AT THE TIME OF THIS SURVEY AND IS SHOWN IN AN APPROXIMATE LOCATION ONLY BASED ON SAID FIELD OBSERVATIONS. ALL UNDERGROUND UTILITIES SHOULD BE FIELD VERIFIED PRIOR TO ANY CONSTRUCTION.
4. BENCHMARK: FIMS SURVEY CONNTROL MONUMENT NO. F209
   3.5" ALUMINUM CAP MONUMENT IN RANGE BOX LOCATED IN THE WEST SIDE OF GRINNELL STREET, APPROX. 215 FEET NORTH OF THE NORTH CURB LINE OF FONTAIN BLVD.
   ELEVATION=5724.18 FEET (NGVD 1929 DATUM)
5. ALL UNITS ARE U.S. SURVEY FEET.
6. LIMITS OF TOPOGRAPHIC MAPPING AND IMPROVEMENTS SHOWN HEREON ARE PER THE REQUEST OF THE CLIENT.

NOTICE:

ACCORDING TO COLORADO LAW YOU MUST COMMENCE ANY LEGAL ACTION BASED UPON ANY DEFECT IN THIS SURVEY WITHIN THREE YEARS AFTER YOU FIRST DISCOVER SUCH DEFECT. IN NO EVENT, MAY ANY ACTION BASED UPON ANY DEFECT IN THIS SURVEY BE COMMENCED MORE THAN TEN YEARS FROM THE DATE OF THE CERTIFICATION SHOWN HEREON.

ANY PERSON WHO KNOWINGLY REMOVES, ALTERS, OR DEFACES ANY PUBLIC LAND SURVEY MONUMENT, LAND BOUNDARY MONUMENT, OR ACCESSORY COMMITS A CLASS TWO (2) MISDEMEANOR, PURSUANT TO STATE STATUTE 18-4-508 OF THE COLORADO REVISED STATUTES.

SITE SURVEY

PART OF WIDEFIELD HOMES SUBDIVISION
SITUATED IN THE NE 1/4 OF SECTION 24, T.15S., R.66W. OF THE 6TH P.M.
CITY OF COLORADO SPRINGS, COUNTY OF EL PASO, STATE OF COLORADO

82 WIDEFIELD BLVD. COLORADO SPRINGS, CO 80911

Prepared For:

INFINIGY
7301 FEDERAL BOULEVARD, SUITE 301
WESTMINSTER, COLORADO 80030

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T/F 1.877.273.0659

Designed By: CNB	Date: 03/25/2016	Revisions: 03/30/2016
Drawn By: DWW	Survey No.: 16053-S	04/20/2016
Checked By: CNB	Project No.: 1048.6	04/27/2016
Field Book No.: -	Scale: 1"= 30'	05/10/2016
Sheet No.: 1 OF 1		05/14/2016
		07/18/2016

ENGINEERING SERVICE COMPANY
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1A BY OTHERS

March 7, 2016

To whom it may concern:

On March 03, 2016 Engineering Service Company visited the 30 Widefield Boulevard, Colorado Springs, Colorado site and gathered the following information for an FAA 1-A SURVEY CERTIFICATION

Applicant:

Vertical Bridge Holdings, LLC
750 Park of Commerce Drive
Suite 200
Boca Raton, FL 33487

Site Name: 30 Widefield Boulevard, Colorado Springs, CO.

Horizontal Datum Source:
Direct Observation (Colorado S.P.C. Central Zone) (NAD83 2011)

Vertical Datum Source: NAVD 88

Structure Type: New Tower - Overall Structure Height = 5762.9'

CENTER OF PROPOSED LEASE AREA – marked with #5 rebar, 30" long flush to Surface:

Latitude:	N38°44'07.95" (NAD83 2011)
Longitude:	W104°43'35.47" (NAD83 2011)
Ground Elevation:	5687.9 (NAVD88)

CERTIFICATION:
I certify that the latitude N38°44'07.95" and the longitude of W104°43'35.47" are accurate to within ±0.1 feet horizontally, and that the site elevation of 5687.9' is accurate to within ±0.1 feet vertically. The horizontal datum (coordinates) of 1983 (NAD83 2011) and are expressed in degrees, minutes, seconds decimal seconds. The vertical datum (heights) are based on the North American Vertical Datum of 1988 (NAVD88) and are determined to the nearest tenth of a foot.

Printed Name:	Charles N. Beckstrom PLS
Professional Surveyor:	License 33202
Company:	Engineering Service Company
Phone:	303-337-1393
Date:	March 7, 2016

1300 South Potomac Street, Suite 126, Aurora, Colorado 80012 **(303) 337-1393** Fax (303) 337-7481