

TURKEY CREEK
 2945 LITTLE TURKEY CREEK RD
 COLORADO SPRINGS, CO 80926
 MDG CODE: 5000266093
 PROJECT ID: 17408855



verizon
 10000 PARK MEADOWS DR
 LONE TREE, CO 80124

TOTAL
 SITE SERVICES
 1065 POPLAR STREET
 JOHNSTOWN, CO 80534

SITE NAME:
 TURKEY CREEK

SITE ADDRESS:
 2945 LITTLE TURKEY CREEK RD
 COLORADO SPRINGS, CO 80926
 MDG CODE:
 5000266093

PROJECT ID:
 17408855

SITE INFORMATION	
PROPERTY OWNER:	AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801
SITE ADDRESS:	2945 TURKEY CREEK RD COLORADO SPRINGS, CO 80926
SITE NAME:	TURKEY CREEK
MDG CODE:	5000266093
PROJECT ID:	17408855
APN #:	881908201067
LATITUDE/LONGITUDE:	38.653658°, -104.8708° 38° 39' 13.1688" N, 104° 52' 14.88" W
GROUND ELEVATION:	6717' AMSL
COUNTY:	EL PASO COUNTY
JURISDICTION:	COLORADO SPRINGS
CURRENT USE:	UNMANNED TELECOMMUNICATIONS FACILITY
CONSTRUCTION TYPE:	V-B
ZONING:	R-E

Add a new line that identifies Verizon's Site Address: 2424 Little Turkey Creek Road Colo Spgs, CO 80926.

NOTE: LEAVE OVERALL SITE ADDRESS. BOTH 2945 & 2424 SHOULD BE PRESENT.

Pikes Peak Regional Building Department
 2945 Little Turkey Creek Road is the address to the home on site. A cell site address would not be listed on the El Paso County Assessor's database unless the property is owned by the cell tower owner.
 The address to Verizon Wireless is 2424 Little Turkey Creek Road. See prior permit history with Regional Building Department. Change all pages of the plan to this address prior to submitting plans to RBD.
 No further comment.

PROJECT DESCRIPTION

MODIFICATION OF EXISTING VERIZON WIRELESS (VZW) TELECOMMUNICATIONS SITE CONSISTS OF:

SCOPE OF WORK AT SHELTER:

- INSTALL (X4) RADIO LINK, ERICSSON MINI-LINK 6651
- INSTALL (X1) REMOTE RADIO UNIT, ERICSSON RMU
- INSTALL (X1) TEMPERATURE SENSOR

SCOPE OF WORK AT ROOF:

- INSTALL (X4) MICROWAVE ANTENNAS, ERICSSON BFZ62251/3309H
- INSTALL (X4) RADIOS, ERICSSON MINI-LINK 6366
- INSTALL (X4) ANTENNA MOUNTS, ERICSSON NTK 301 1205/1
- INSTALL (N) CONDUIT AND (N) NON-PENETRATING CONDUIT MOUNTS

THIS SITE IS A SPOKE.

- HEAD EAST ON MILTON E PROBY PKWY 1.0 MILES
- KEEP LEFT ONTO MILTON E PROBY PKWY
- AIRPORT EXIT TOWARD LONG TERM PARKING EXIT 0.5 MILES
- CONTINUE ON MILTON E PROBY FOR 515 FT
- KEEP RIGHT ONTO MILTON E PROBY PKWY
- TOWARD AIRPORT EXIT. CONTINUE 3.1 MILES
- TAKE LEFT RAMP ONTO S ACADEMY BLVD (CO-83 S)
- TOWARD ACADEMY BLVD SOUTH. CONTINUE 4.1 MILES
- TURN RIGHT ONTO LITTLE TURKEY CREEK RD. GO 0.5 MILES

DRAWING INDEX	
SHEET #	SHEET DESCRIPTION
1	TITLE SHEET
-1	GENERAL NOTES
1	OVERALL SITE PLAN
2	ENLARGED SITE PLAN
A-3	ENLARGED EQUIPMENT SHELTER PLAN
A-4	SITE ELEVATIONS
D-1 - D-5	DETAILS
G-1	GROUNDING DETAILS

PROJECT TEAM	
APPLICANT:	VERIZON WIRELESS 10000 PARK MEADOWS DR, SUITE 300 LONE TREE, CO 80124
A&E CONTACT:	TOTAL SITE SERVICES, INC. 1065 POPLAR STREET JOHNSTOWN, CO 80534 CONTACT: BRIAN HORTON PHONE: (303) 842-4263 EMAIL: BHORTON@TOTALSITESERVICESINC.COM
ENGINEER OF RECORD CONTACT:	MATTHEW J. CHASE, P.E. MCHASE@TOTALSITESERVICESINC.COM
SITE ACQUISITION CONTACT:	SMARTLINK, LLC CONTACT: ANDREW MOYLE EMAIL: ANDREW.MOYLE@SMARTLINKGROUP.COM
REAL ESTATE:	VERIZON WIRELESS 10000 PARK MEADOWS DR, SUITE 300 LONE TREE, CO 80124 CONTACT: KENNETH ZWICK EMAIL: KENNETH.ZWICK@VERIZONWIRELESS.COM
CONSTRUCTION ENGINEER:	VERIZON WIRELESS 9656 PROSPERITY RD WEST JORDAN, UT 84088 CONTACT: ABIGAIL MCFADDEN EMAIL: ABIGAIL.MCFADDEN@VERIZONWIRELESS.COM

REFERENCE DOCUMENTS

THE CONSTRUCTION DRAWINGS FOR REFERENCE SITE ARE ONLY VALID WITH A PASSING MOUNT ANALYSIS AND A PASSING STRUCTURAL ANALYSIS REPORT.

Remove "Preliminary/Not for Construction" watermark

APPLICABLE CODES

ALL WORK SHALL BE PERFORMED AND MATERIALS 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 CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

2018 INTERNATIONAL BUILDING CODE
 2018 INTERNATIONAL MECHANICAL CODE
 2018 INTERNATIONAL FIRE CODE
 2017 NATIONAL ELECTRICAL CODE
 2018 INTERNATIONAL ENERGY CONSERVATION CODE
 CITY/COUNTY ORDINANCES

A.D.A COMPLIANCE
 THIS FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION

UTILITY INFORMATION

811

TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN COLORADO, CALL COLORADO 811

TOLL FREE: 1-800-922-1987 OR
 www.co811.org

COLORADO STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE

Know what's below.
 Call before you dig.

SCALE NOTE

DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR HALF SIZE. CONTRACTOR SHALL VERIFY PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE EOR IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME

COLOR LEGEND																	
	HYBRID CABLES & COAX CABLES		RRH/BBU		POWER/GROUNDING		FIBER		ANTENNAS		PENETRATIONS		LEASE AREA		ACCESS/UTILITY EASEMENT		UTILITY EASEMENT

ISSUED FOR:

REV	DESCRIPTION	DRN BY:	REV BY:	APP BY:
△	90% COMPLETE CDs	OAM	KH	XXX

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NAME:
 TITLE SHEET

SHEET NUMBER:
 T-1

GENERAL NOTES

- THESE NOTES SHALL BE CONSIDERED A PART OF THE WRITTEN SPECIFICATIONS.
- THE CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES AS THEY MAY BE DISCOVERED IN THE PLANS, SPECIFICATIONS, AND NOTES PRIOR TO STARTING CONSTRUCTION. INCLUDING BUT NOT LIMITED BY DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY ERRORS, OMISSION, OR INCONSISTENCY AFTER THE START OF CONSTRUCTION WHICH HAS NOT BEEN BROUGHT TO THE ATTENTION OF THE ARCHITECT /ENGINEER AND SHALL INCUR ANY EXPENSES TO RECTIFY THE SITUATION. THE METHOD OF CORRECTION SHALL BE APPROVED BY THE ARCHITECT/ENGINEER.
- PRIOR TO STARTING CONSTRUCTION THE CONTRACTOR HAS THE RESPONSIBILITY TO LOCATE ALL EXISTING UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR OR SUBCONTRACTOR SHALL BEAR THE EXPENSE OF REPAIRING OR REPLACING ANY DAMAGE TO THE UTILITIES CAUSED DURING THE EXECUTION OF THE WORK.
- A COPY OF THE APPROVED PLANS SHALL BE KEPT IN A PLACE SPECIFIED BY THE GOVERNING AGENCY, AND BY LAW SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE ALL CONSTRUCTION SETS REFLECT THE SAME INFORMATION AS THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF PLANS AT THE SITE FOR THE PURPOSE OF DOCUMENTING ALL AS-BUILT CHANGES, REVISIONS, ADDENDUM'S, OR CHANGE ORDERS. THE CONTRACTOR SHALL FORWARD THE AS-BUILT DRAWINGS TO THE ARCHITECT/ENGINEER AT THE CONCLUSION OF THE PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE FROM START OF PROJECT TO COMPLETION OF PROJECT.
- THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER, AND TOILET FACILITIES.
- ALL CONSTRUCTION THROUGH THE PROJECT SHALL CONFORM TO THE INTERNATIONAL BUILDING CODE AND ALL THE OTHER LATEST GOVERNING CODES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS CURING THE WORK. THE ENGINEER WILL NOT ADVISE ON NOR PROVIDE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS.
- THE CONTRACTOR SHALL SUPERVISE AND COORDINATE ALL WORK, USING HIS PROFESSIONAL KNOWLEDGE AND SKILLS. HE IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCING AND COORDINATING ALL PORTIONS OF THE WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTIONS WITH RESPECT TO THE WORK TO COMPLETE THE PROJECT. BUILDING PERMIT APPLICATIONS SHALL BE FILED BY THE OWNER OR HIS REPRESENTATIVE. CONTRACTOR SHALL OBTAIN THE PERMIT AND MAKE FINAL PAYMENT OF SAID DOCUMENT.
- ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE UNLESS NOTED OTHERWISE.
- THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS OR SUPPORTS FOR INSTALLATION OF ITEMS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL PROVIDE THE FIRE MARSHALL APPROVED MATERIALS TO FILL/SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.
- NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TEXTURE, MATERIAL AND PAINT COLOR UNLESS NOTED OTHERWISE IN THE PLANS.
- WHERE SPECIFIED, MATERIALS TESTING SHALL BE TO THE LATEST STANDARDS AVAILABLE AS REQUIRED BY THE LOCAL GOVERNING AGENCY RESPONSIBLE FOR RECORDING THE RESULTS.
- ALL GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENTS TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.
- ALL DEBRIS AND REFUGE IS TO BE REMOVED FROM THE PROJECT DAILY. PREMISES SHALL BE LEFT IN A CLEAN BROOM FINISHED CONDITION AT ALL TIMES.
- ALL SYMBOLS AND ABBREVIATIONS ARE CONSIDERED CONSTRUCTION INDUSTRY STANDARDS. IF A CONTRACTOR HAS A QUESTION REGARDING THEIR EXACT MEANING THE ARCHITECT/ENGINEER SHALL BE NOTIFIED FOR CLARIFICATIONS.
- THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE METHODS, TECHNIQUES AND SEQUENCES OF PROCEDURES TO PERFORM THE WORK. THE SUPERVISION OF THE WORK IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTORS SHALL VISIT THE SITE PRIOR TO BID TO ASCERTAIN CONDITIONS WHICH MAY ADVERSELY AFFECT THE WORK OR COST THEREOF.
- THE CONTRACTOR SHALL FIELD VERIFY THE DIMENSION, ELEVATION, ETC. NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTION OF THE WORK TO THE EXISTING WORK. THE CONTRACTOR SHALL MAKE ALL MEASUREMENTS NECESSARY FOR FABRICATION AND ERECTION OF STRUCTURAL MEMBERS. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT /ENGINEER.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND SHALL BE CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF THE ENGINEER.
- NO CHANGES ARE TO BE MADE TO THESE PLANS WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THE ARCHITECT/ENGINEER. UNAUTHORIZED CHANGES RENDER THESE DRAWINGS VOID.
- ANY REFERENCE TO THE WORDS APPROVED, OR APPROVAL IN THESE DOCUMENTS SHALL BE HERE DEFINED TO MEAN GENERAL ACCEPTANCE OR REVIEW AND SHALL NOT RELIEVE THE CONTRACTOR AND/OR HIS SUB-CONTRACTORS OF ANY LIABILITY IN FURNISHING THE REQUIRED MATERIALS OR LABOR SPECIFIED.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE EXECUTION OF THIS WORK. GENERAL CONTRACTOR SHALL NOTIFY THE ENGINEER/ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES FOUND WITHIN THE CONTRACT DOCUMENTS, PRIOR TO STARTING WORK.

ELECTRICAL NOTES

- ALL ELECTRICAL WORK SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AS WELL AS WITH ALL LOCAL, STATE, AND NATIONAL CODES, LAWS, AND ORDINANCES APPLICABLE TO ELECTRICAL WORK.
- THE ELECTRICAL CONTRACTOR SHALL VISIT THE JOBSITE AND VERIFY EXISTING CONDITIONS BEFORE BIDDING AND SHALL INCLUDE IN HIS/HER BID, THE NECESSARY COSTS TO CONSTRUCT THIS PROJECT IN ACCORDANCE WITH THE INTENT OF THE ELECTRICAL DRAWINGS, SPECIFICATIONS, AND ALL APPLICABLE CODES.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).

- ALL WORK SHALL BE EXECUTED IN A WORKMANLIKE MANNER, AND SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED.
- EACH END OF EVERY POWER, GROUNDING, CONTROL AND ALARM CONDUCTOR AND CABLE SHALL BE LABELED OR IDENTIFIED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA, AND MATCH EXISTING INSTALLATION REQUIREMENTS.
- ALL ELECTRICAL MATERIALS AND EQUIPMENT SHALL BE LISTED BY UNDERWRITER'S LABORATORIES.
- THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING RELATED TO ELECTRICAL WORK, UNLESS OTHERWISE NOTED AND COORDINATED WITH THE GENERAL CONTRACTOR.
- POWER AND EQUIPMENT GROUND WIRING SHALL BE 12 AWG OR LARGER, 600 V, OIL RESISTANT THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- CONTROL AND ALARM WIRING SHALL BE COPPER, 300V OR 600V LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
- UPON COMPLETION OF THE ELECTRICAL WORK, THE INSTALLATION SHALL BE FREE FROM GROUNDS AND SHORT CIRCUITS.
- ELECTRICAL CONTRACTOR SHALL FURNISH AS-BUILT DRAWINGS TO THE ARCHITECT/ENGINEER UPON COMPLETION OF THE JOB.
- ALL POWER AND EQUIPMENT GROUND WIRE CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS OR WIRENUTS. LUGS AND WIRENUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C IF AVAILABLE).
- CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
- ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- THE NOTE, SPECIFICATION OR CODE WHICH PRESCRIBES AND ESTABLISHES THE HIGHEST STANDARD OF PERFORMANCE SHALL PREVAIL IN THE EVENT OF ANY CONFLICT OR INCONSISTENCY BETWEEN ITEMS SHOWN ON THE PLANS AND/OR SPECIFICATIONS.
- ELECTRICAL METALLIC TUBING (EMT), ELECTRICAL NONMETALLIC TUBING (ENT), OR RIGID NONMETALLIC CONDUIT (RIGID PVC, SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- PENETRATIONS OF ALL WALLS OR CEILINGS SHALL BE SEALED AND FIRE RATING MAINTAINED IN ACCORDANCE WITH ALL LOCAL AND NATIONAL CODES.
- SCHEDULE 80 PVC CONDUIT SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE.
- RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.
- ALL DETAILS/SCHEMATICS SHOWN ARE IN GENERAL TERMS, AND INSTALLATION MAY VARY DUE TO SPECIFIC SITE CONDITIONS.
- LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- METALLIC CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE, GALVANIZED AND APPROVED FOR THE LOCATION USED. SETSCREW FITTINGS ARE NOT ACCEPTABLE. MYERS HUBS OR APPROVED LOCKNUTS SHALL BE FITTED AT ALL BOX CONNECTIONS TO MAINTAIN NEC.
- CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
- THE CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY, AND HOLD OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
- WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
- RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE PVC OR GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
- THE SUBCONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.
- ALL ENTRIES TO EQUIPMENT ASSOCIATED WITH THE FIXED GENERATOR PROJECT SHALL BE SEALED TO KEEP WATER OUT.

SUBMITTALS

SUBMITTALS FOR SHOP DRAWINGS, MILL TESTS, PRODUCT DATA, ECT. FOR ITEMS DESIGNED BY THE ARCHITECT /ENGINEER OF RECORD SHALL BE MADE TO THE ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REVIEW THE SUBMITTAL BEFORE FORWARDING TO THE ARCHITECT, SUBMITTALS SHALL BE MADE IN ADVANCED TO ARCHITECT/ENGINEER. SUBMITTALS REQUIRED FOR EACH SECTION OF THESE NOTES ARE SPECIFIED IN THAT SECTION.

SHOP DRAWING REVIEW

REVIEW BY THE ARCHITECT/ENGINEER IS FOR GENERAL COMPLIANCE WITH THE DESIGN CONCEPT AND THE CONTRACT DOCUMENTS. MARKINGS OR COMMENTS SHALL NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, NOR DEPARTURES THEREFROM. THE CONTRACTOR REMAINS RESPONSIBLE FOR DETAILS AND ACCURACY, FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FOR SELECTION FABRICATION PROCESSES.

COLOR LEGEND

- HYBRID CABLES & COAX CABLES
- RRRHBBU
- POWER/GROUNDING
- FIBER
- ANTENNAS
- PENETRATIONS
- LEASE AREA
- ACCESS/UTILITY EASEMENT
- UTILITY EASEMENT



10000 PARK MEADOWS DR
LONE TREE, CO 80124



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SHEET NAME:
GENERAL NOTES

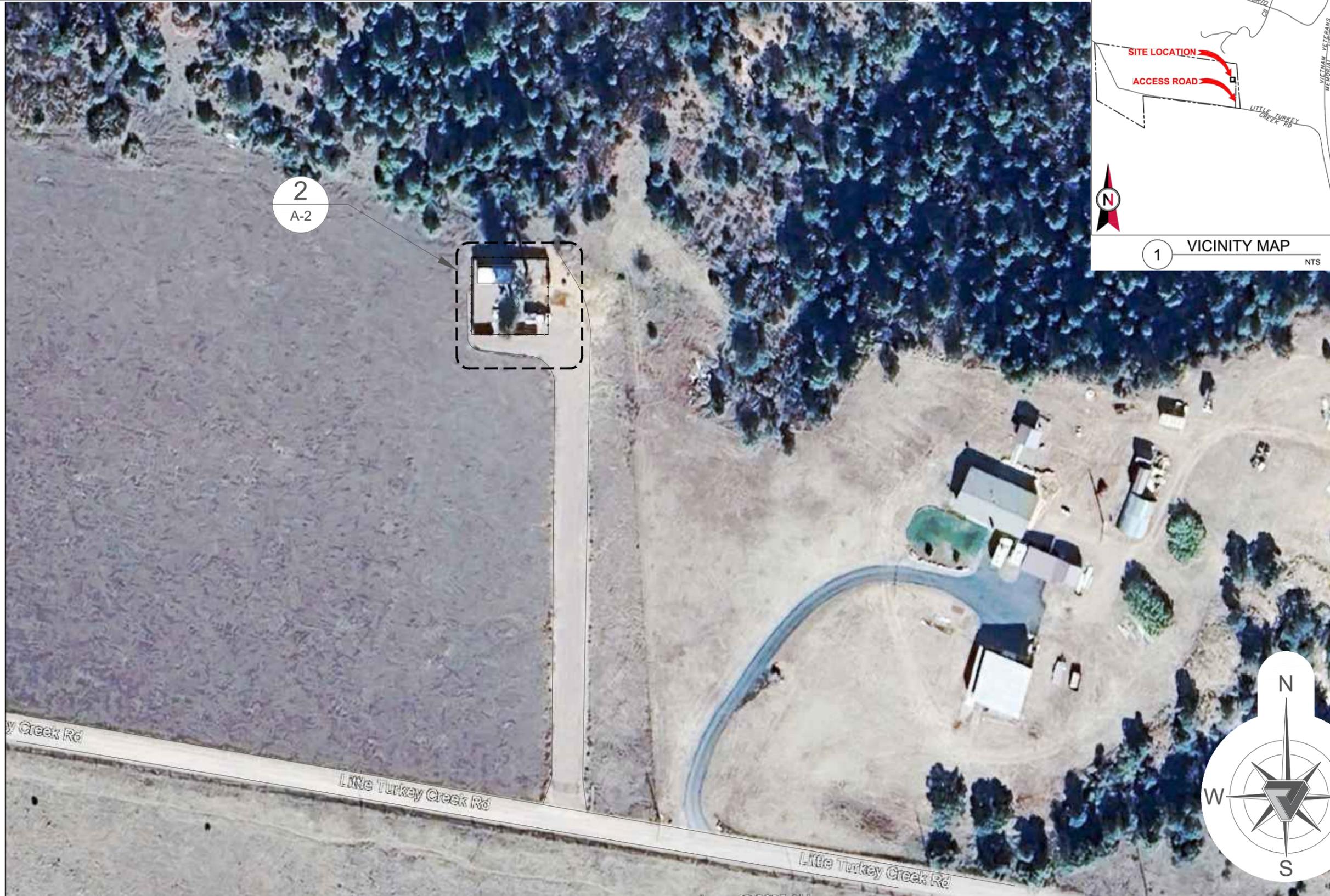
SHEET NUMBER:
GN-1

NOTES:

- THESE DRAWINGS HAVE BEEN CREATED BY INFORMATION GATHERED AT THE SITE, EXISTING AS-BUILTS PROVIDED BY VERIZON AND WITHOUT A SURVEY. PLEASE VERIFY ALL DIMENSIONS, LENGTHS, PROPERTY LINES AND CONDUIT RUNS
- TOTAL SITE SERVICES MAKES NO CLAIM AS TO THE CORRECTNESS OF THE ORIGINAL DESIGN OR THE CURRENT CONDITION OF THE STRUCTURE, WHICH IS ASSUMED TO BE IN GOOD CONDITION, FREE OF DAMAGE AND DETERIORATION
- CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING EQUIPMENT PRIOR TO CONSTRUCTION



1 VICINITY MAP NTS



verizon

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SHEET NAME:
OVERALL SITE PLAN

SHEET NUMBER:
A-1

1 PLAN: OVERALL SITE, EXPANDED
PAGE A-1 SCALE: 1/64" = 1'-0"

COLOR LEGEND

HYBRID CABLES & COAX CABLES	RRH/BBU	POWER/GROUNDING	FIBER	ANTENNAS	PENETRATIONS	LEASE AREA	ACCESS/UTILITY EASEMENT	UTILITY EASEMENT
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1	90% COMPLETE CDs	OAM	KH	XXX



2 PLAN: EXISTING LEASE AREA, ENLARGED
PAGE A-2 SCALE: 3/8" = 1'-0"

COLOR LEGEND

HYBRID CABLES & COAX CABLES	RR/HBBU	POWER/GROUNDING	FIBER	ANTENNAS	PENETRATIONS	LEASE AREA	ACCESS/UTILITY EASEMENT	UTILITY EASEMENT
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SHEET NAME:
ENLARGED SITE PLAN

SHEET NUMBER:
A-2

SITE NAME:
TURKEY CREEK

SITE ADDRESS:
2945 LITTLE TURKEY CREEK RD
COLORADO SPRINGS, CO 80926
MDG CODE:
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PROJECT ID:
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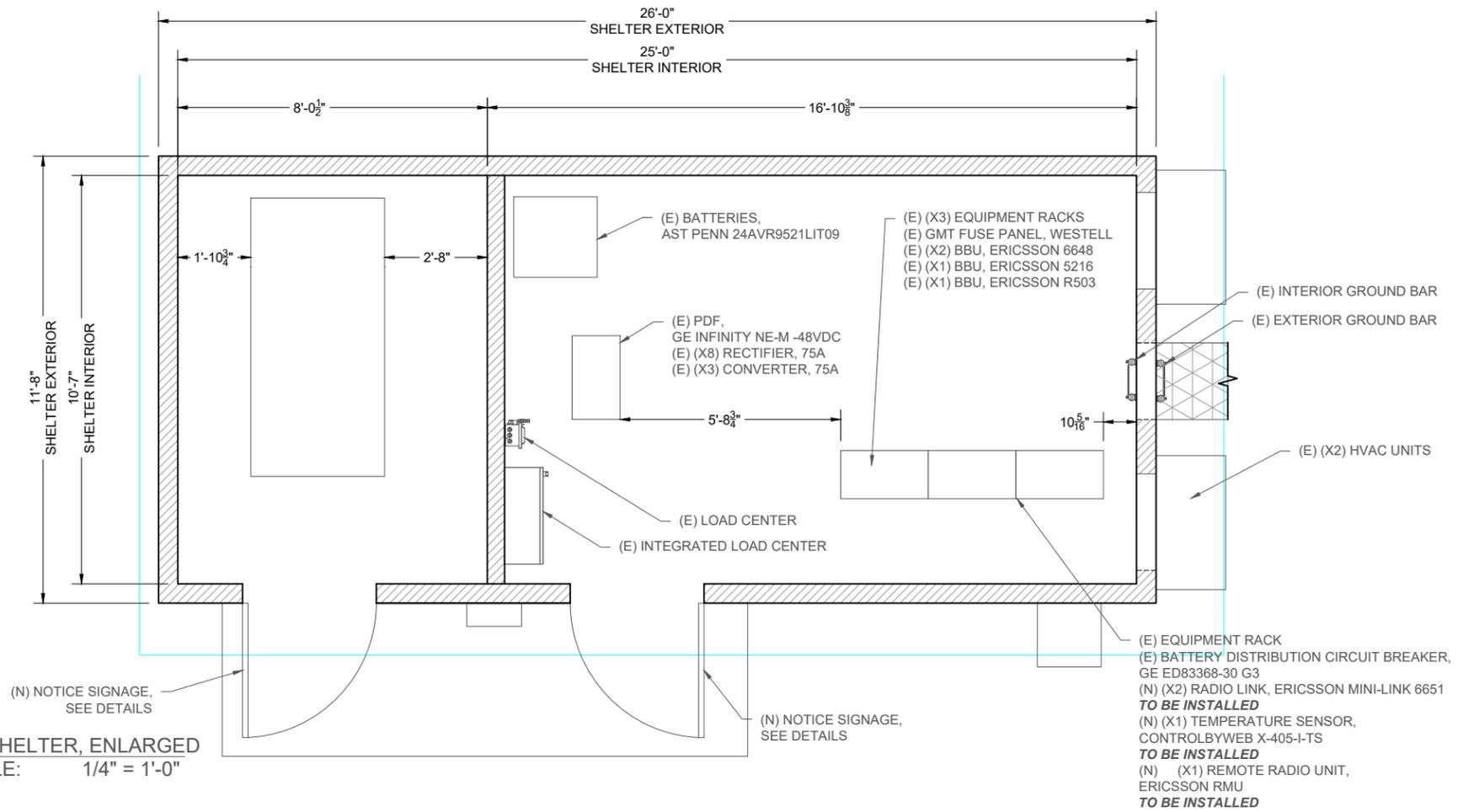
ISSUED FOR:

REV	DESCRIPTION	DRN BY:	REV BY:	APP BY:
△	90% COMPLETE CDs	OAM	KH	XXX

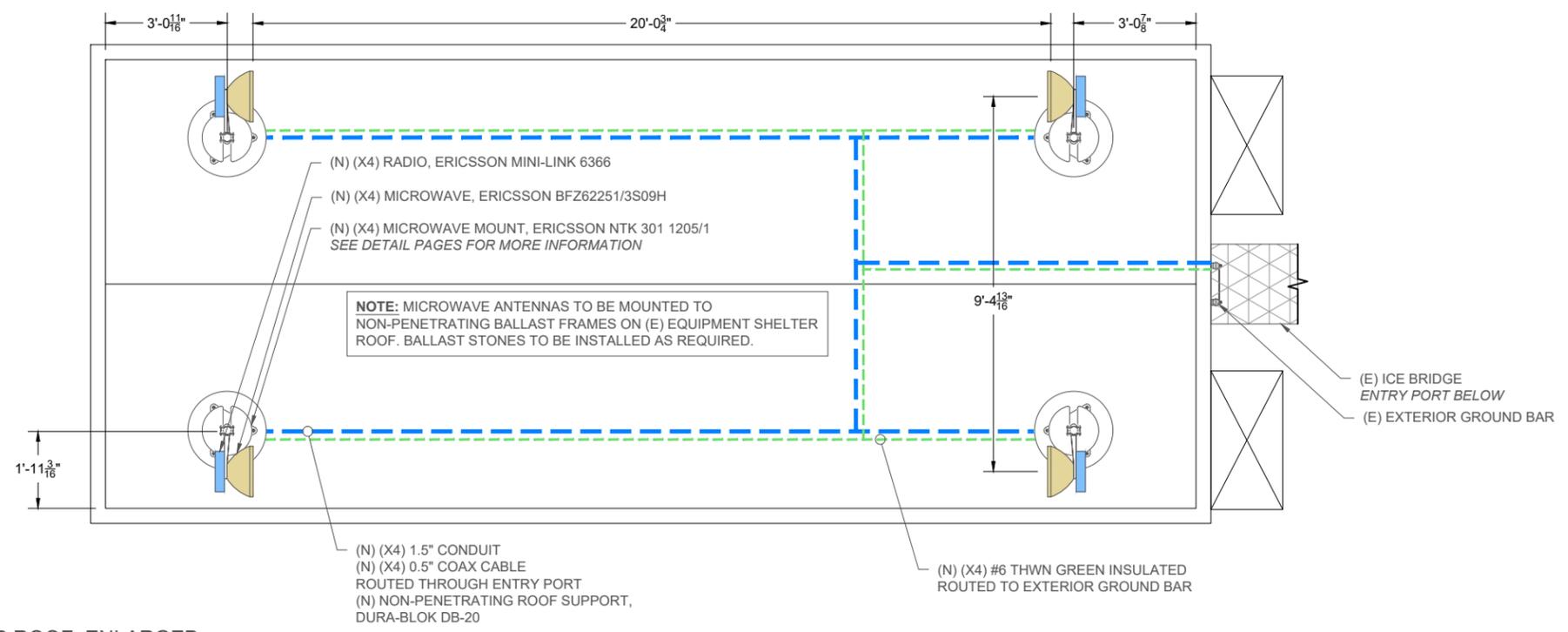
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SHEET NAME:
ENLARGED EQUIPMENT
SHELTER PLAN

SHEET NUMBER:
A-3



3 PLAN: PROPOSED EQUIPMENT SHELTER, ENLARGED
PAGE A-3 SCALE: 1/4" = 1'-0"



4 PLAN: PROPOSED EQUIPMENT SHELTER ROOF, ENLARGED
PAGE A-3 SCALE: 1/4" = 1'-0"

COLOR LEGEND

■ HYBRID CABLES & COAX CABLES	■ RR/HBBU	■ POWER/GROUNDING	■ FIBER	■ ANTENNAS	■ PENETRATIONS	■ LEASE AREA	■ ACCESS/UTILITY EASEMENT	■ UTILITY EASEMENT
---	--	--	---	--	---	--	---	--

SITE NAME:
TURKEY CREEK

SITE ADDRESS:
2945 LITTLE TURKEY CREEK RD
COLORADO SPRINGS, CO 80926
MDG CODE:
5000266093

PROJECT ID:
17408855

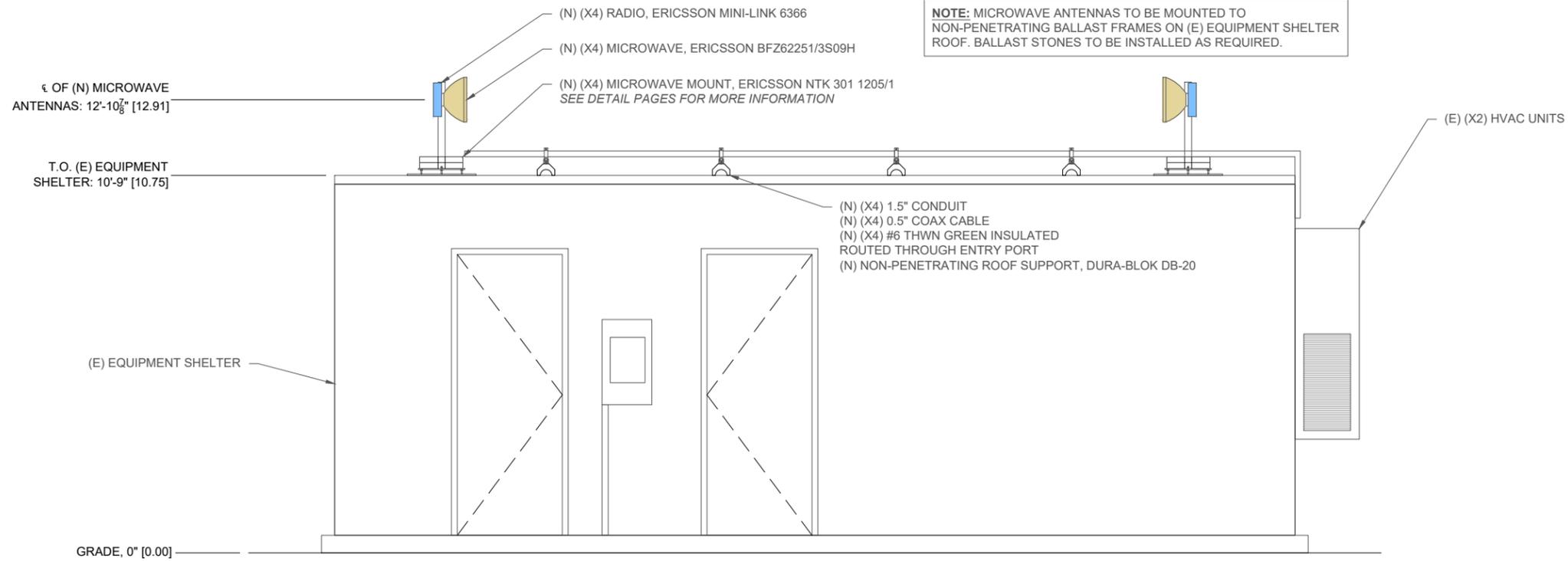
ISSUED FOR:

REV	DESCRIPTION	DRN BY:	REV BY:	APP BY:
△	90% COMPLETE CDs	OAM	KH	XXX

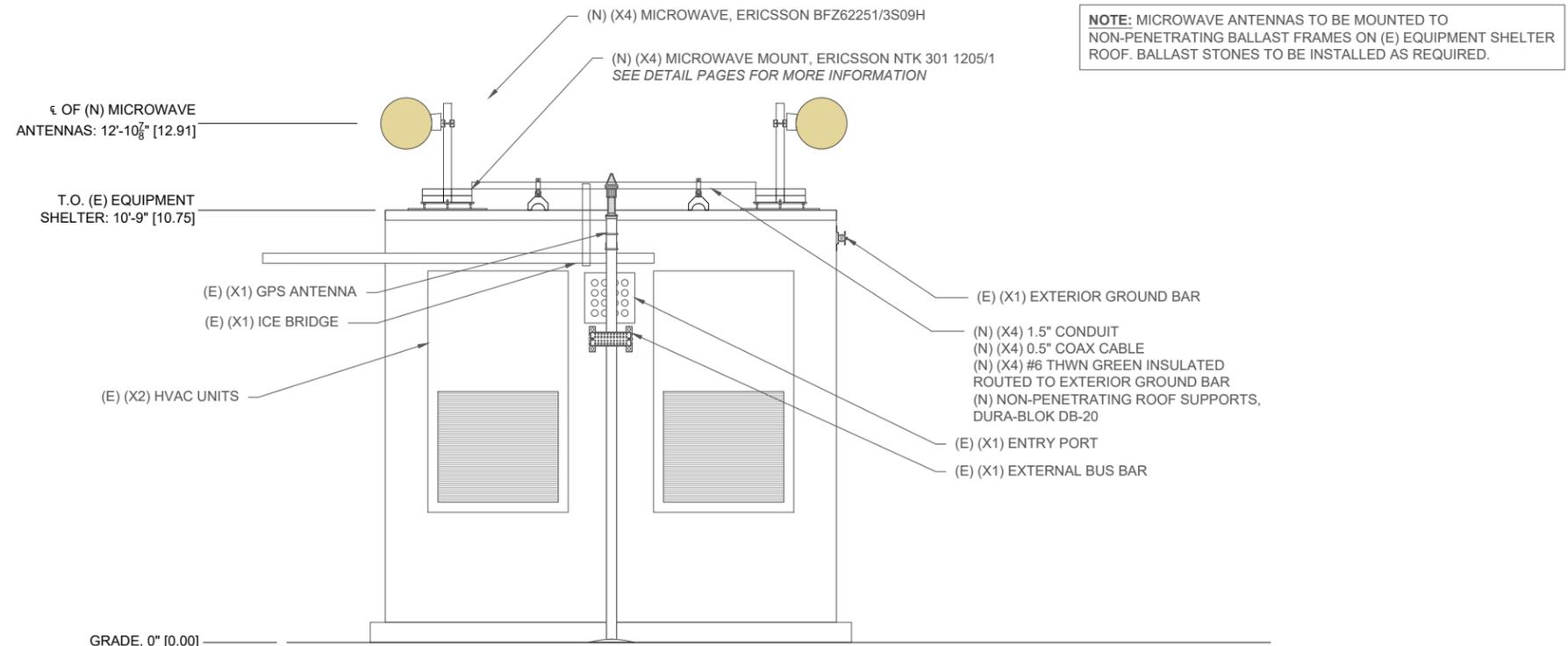
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SHEET NAME:
SITE ELEVATIONS

SHEET NUMBER:
A-4



5 ELEVATION: PROPOSED EQUIPMENT SHELTER, NORTH
PAGE A-4 SCALE: 1/4" = 1'-0"



6 ELEVATION: PROPOSED EQUIPMENT SHELTER, WEST
PAGE A-4 SCALE: 1/4" = 1'-0"

COLOR LEGEND

 HYBRID CABLES & COAX CABLES	 RR/HBBU	 POWER/GROUNDING	 FIBER	 ANTENNAS	 PENETRATIONS	 LEASE AREA	 ACCESS/UTILITY EASEMENT	 UTILITY EASEMENT
--	--	--	--	---	---	---	--	---

ANT3 B 0.3 28 HP

BFZ62251/3S09H

0.3 m 28 GHz, high performance, single polarized antenna.

Integrated antenna for MINI-LINK 6363.

This is a complete modular antenna delivered in a single box containing both the antenna module and the interface module. The two modules are easily assembled at site. The interface module is replaceable, enabling easy field upgrades. Major benefits include:

- Easy upgrade from single polarized to dual polarized
- No antenna re-alignment
- Reduced traffic disturbance

Technical Specifications for ANT3 B 0.3 28 HP

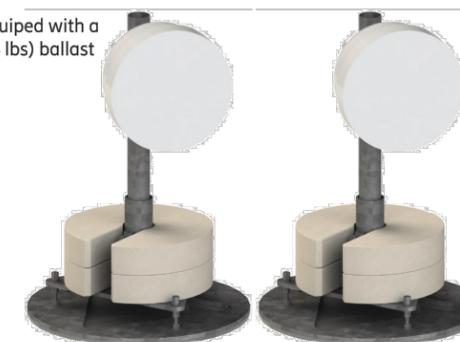
MECHANICAL SPECIFICATIONS	Weight	5 kg
	Dimensions	387 mm (Product Height) 387 mm (Product Width) 220 mm (Product Depth)
	Mounting options	Pole/Mast
	Volume	33 l
CERTIFICATIONS	Encapsulation class	IP65
INTERFACES	Input connector	154 IEC-UBR 260
ANTENNA	Antenna type	HP
	Antenna diameter	0.3 m
	Antenna polarization	Single polarization - Vertical or Horizontal
RADIO SPECIFICATIONS	Antenna frequency band	27500 MHz (Frequency Min) 29500 MHz (Frequency Max)
	Antenna gain	38.2 dBi (Low Band Gain) 38.4 dBi (Mid Band Gain) 38.8 dBi (High Band Gain)
	Antenna half power beam width	2.2 °
	Antenna cross polar discrimination (XPD)	30 dB
	Return loss, minimum	14 dB
	Minimum front to back ratio (F/B)	64 dB
RADIO SPECIFICATIONS	Frequency	27.5-29.5 GHz
ADDITIONAL INFORMATION	Frequency	28 GHz
	Integration interface	ANT3



Technical specification

Function Description NTK 301 1205/1

Two ballast supported structures for light equipment. Each equipped with a 0.75m (29,5 in) long Ø60,3mm (2,4 in) tube and two 20kg (44 lbs) ballast stones. Maximum overturning capacity; 210Nm.



Product	LIGHT FREESTANDER PAIR				
Product number	NTK 301 1205/1	Light Freestander Pair			
Dimensions	Parent tube size	750 mm (29,5 ")	Ø60,3 mm (2,4 ")		
	Footprint	Ø600 mm (23,6 ")			
Mechanical specification	Sheet profiles	Steel, HDG			
	Fasteners	8.8 HDG or equivalent			
Recommended tools	M12 ISO, 18 mm block key and torque wrench (20 - 80 Nm).				
Performance	Maximum overturning	210 Nm			
	Maximum EPA @ 0,6m height	0,09 m² @ 67 m/s			
Package dimensions NTK 301 1205/1	Length	Width	Height	Weight	Packed Weight
	1200 mm (47.3 in)	800 mm (31.5 in)	530 mm (20.9 in)	143.0 kg (314.0 lb)	192.0 kg (422.0 lb)

The verification is carried out in accordance to relevant parts of
 • EN 1991-1-4:2005 Eurocode 1: Actions on structures - Part 1-4: General actions - Wind actions.
 • Compliance to RoHS 2 directives 2011/65/EU

verizon

10000 PARK MEADOWS DR
LONE TREE, CO 80124

TOTAL
SITE SERVICES

1065 POPLAR STREET
JOHNSTOWN, CO 80534

SITE NAME:
TURKEY CREEK

SITE ADDRESS:
2945 LITTLE TURKEY CREEK RD
COLORADO SPRINGS, CO 80926
MDG CODE:
5000266093

PROJECT ID:
17408855

ISSUED FOR:

REV	DESCRIPTION	DRN BY:	REV BY:	APP BY:
△	90% COMPLETE CDs	OAM	KH	XXX

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SHEET NAME:
DETAILS

SHEET NUMBER:
D-1

1 DETAIL: MICROWAVE, ERICSSON BFZ62251/3S09H
PAGE D-1 SCALE: NOT TO SCALE

2 DETAIL: MICROWAVE MOUNT, ERICSSON NTK 301 1205/1
PAGE D-1 SCALE: NOT TO SCALE

SITE NAME:
TURKEY CREEK

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SHEET NAME:
DETAILS

SHEET NUMBER:
D-2



Flexible and modular building practice
MINI-LINK 6366 is a product for all-outdoor deployments together with one or two MINI-LINK 6363 radio(-s). MINI-LINK 6366 also offers a flexibility to handle different site characteristics. Mount everything direct to the antenna or use a split-mount deployment where MINI-LINK 6366 is placed closer to ground while MINI-LINK 6363 radio(-s) are mounted to the antenna. Build 1+0, 1+1 and 2+0 configurations with the same building blocks for 6 to 80 GHz or combine two different frequency bands for a Multi-Band Booster configuration.

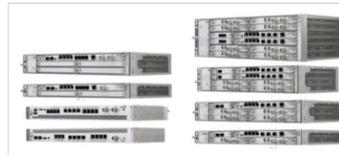


Network scenarios
MINI-LINK 6366 is a packet only all-outdoor node for hops or thanks to its hop compatibility an all-outdoor end node to MINI-LINK TN or MINI-LINK 6600 nodes.

Advanced packet handling
A microwave network node needs to have integrated Ethernet Switching functionality, reducing the cost and complexity by not needing external equipment. Hierarchical QoS enables sharing of networks between several operators with multiple technologies. The node supports L3 VPN using IP/MPLS.

Technical specification
MINI-LINK 6366

RADIO LINK 6-42 GHZ	1.4 Gbps 1+0 in 112 MHz (ETSI) 2.5 Gbps 2+0 RLB in 112 MHz (ETSI) 1.0 Gbps 1+0 in 80 MHz (ANSI) 2.0 Gbps 2+0 RLB in 80 MHz (ANSI) using 4096 QAM
RADIO LINK 70/80 GHZ	1.1 Gbps 1+0 in 125 MHz (ETSI) 2.2 Gbps 2+0 RLB in 125 MHz (ETSI) using 1024QAM
RADIO LINK	ATPC, Radio Link Bonding, XPIC, Adaptive Coding Modulation, Multi-band Booster
PROTECTION AND CONFIGURATION	1+1 Radio equipment protection 1+1 Hot standby and Space Diversity 2+0 Radio Link Bonding ERP, RSTP
WEIGHT	MINI-LINK 6366 1+0: 4.0kg (8.8 lbs)
DIMENSION (H X W X D):	MINI-LINK 6366: 291x310x70 mm, 11.5x12.2x2.8 inch
POWER SUPPLY	-48 V DC
POWER CONSUMPTION	Typ. 54-65 W for 1+0 configuration Typ. 70-96 W for 2+0 configuration
ENVIRONMENTAL SPECIFICATION	-33°C to +55°C / -27F to +131°F IP 66
ENERGY EFFICIENCY	Traffic Aware Power Save
TRAFFIC INTERFACES	2x100/1000 BASE-T IEEE802.3 2xOptical GbE via 1000/2500 BASE-SX/LX/ZX IEEE802.3
SWITCHING & ROUTING	IEEE 802.1Q-2011 Customer and Provider Bridge, LAG/LACP, RSTP, ERP, H-QoS, BNM, VRF, OSPF, eBGP, IS-IS, RSVP-TE FRR, IP/MPLS L3 VPN, LDP, BFD, BGP FRR, MP-BGP
OAM	Link OAM, Service OAM FM/PM, Y.1731, TWAMP Reflector Light
SYNCHRONIZATION	Sync E, 1588v2 (Telecom profile G.8275.1), NTP transparent
DATA COMMUNICATION NETWORK	DCN over VLAN, Routed DCN (OSPF)
NETWORK MANAGEMENT	Supported by ENM, IP transport NMS, ServiceOn, Node GUI and CLI SNMP v3, SSH, RADIUS, TACACS
STANDARDS AND RECOMMENDATIONS	CEN/CENELEC, ETSI, ITU, IEC, IEEE, IETF



traditional frequencies (6-42 GHz), V-band 60 GHz, E-band 70/80 GHz, single and dual carrier, Coax and Ethernet interface.

Efficient network migration
MINI-LINK 6600 support any network migration from one generation of Radio technology to next on the Road to 5G. There is a topology flexibility in MINI-LINK 6600 to build hop based, tree, stars or ring based topologies to best support the network need.

For cost efficient migration MINI-LINK 6600 is hop compatible with MINI-LINK TN. Upgrading to MINI-LINK 6600, the radio units, antennas, and cabling can be reused.

Technical specification
MINI-LINK 6600

RADIO LINK 5-80 GHZ*	Using MINI-LINK 6363 up to 4096QAM: -1.4 Gbps 1+0 in 112 MHz (ETSI) -2.5 Gbps using 2+0 RLB in 112 MHz (ETSI) -1 Gbps 1+0 in 80 MHz (ANSI) -2 Gbps using 2+0 RLB in 80 MHz (ANSI) Using MINI-LINK 6363 80GHz up to 1024QAM -1.1 Gbps 1+0 in 125 MHz (ETSI) -2.2 Gbps 2+0 RLB in 125 MHz (ETSI)
RADIO LINK 60/70/80 GHZ*	1 Gbps over 200 MHz using MINI-LINK 6351 10 Gbps over 2000 MHz using MINI-LINK 6352
RADIO LINK	ATPC, Radio Link Bonding, XPIC, Adaptive Coding Modulation, Multi-layer Header Compression, Multi-band Booster, AES encryption over the hop, 4x4 MIMO
PROTECTION & CONFIGURATION	Up to 2+2 Hot standby and Space Diversity Up to 4+0 Radio Link Bonding (RLB) Up to 4+0 RLB using different CS combinations ERP, RSTP, SNCP Network protection MSP 1+1 Equipment protection
DIMENSIONS (H X W X D)	6651/3: 44x448x172 mm, 1.7x17.6x6.8 inch 6651: 44x448x239 mm, 1.7x17.6x9.4 inch 6654: 44x448x240 mm, 1.7x17.6x9.4 inch 6655: 66x446x238 mm, 2.6x17.6x9.4 inch 6691: 44x448x240 mm, 1.7x17.6x9.4 inch 6693: 66x446x238 mm, 2.6x17.2x9.4 inch 6694: 89x448x239 mm, 3.6x17.6x9.4 inch 6692: 133x446x240 mm, 5.2x17.5x9.4 inch
POWER SUPPLY	-48 V DC, Power redundancy
ENERGY EFFICIENCY	Traffic Aware Power Save
POWER CONSUMPTION (EXCLUDING RADIO)	6651/3: 30W 1+0 configuration 6651: 46W 1+0 configuration 6654: 49W 1+0 configuration 6655: 57W 1+0 configuration 6691: 57W 1+0 configuration 6693: 52W 1+0 configuration 6694: 79W 1+0 configuration 6692: 84W 1+0 configuration
OPERATIONAL TEMPERATURE	-25°C to +65°C / -13F to +140F -25°C to +80°C / -13F to +131F (6651/3)
TRAFFIC INTERFACES	E1, CES SAtoP, 10/100/1000 BASE-T IEEE802.3, Optical 1000BASE-SX/LX/ZX/BX, GE CWDM 10G BASE-LR/ER/ZR, 10GE DWDM
SYNCHRONIZATION	Sync E, 1588v2 (Telecom profile G.8275.1), NTP transparent, E1 and 2MHz, Frequency (G.8265.1)
SWITCHING/ROUTING	IEEE 802.1Q-2011 Customer & Provider Bridge, Bridge Virtual Interface, LAG/LACP, ERP, H-QoS, BNM, MAC Swap loopback, VRF, OSPF, eBGP, IS-IS, RSVP-TE FRR, RSVP-TE Path Protection, IP/MPLS L3 VPN, LDP, BFD, BGP FRR, MP-BGP, IPv4 ACL
OAM	Link OAM, Service OAM FM/PM, Y.1731, TWAMP reflector Light
DCN	DCN over VLAN, Routed DCN (OSPF) DCN over VLAN for L1 connection
NETWORK MANAGEMENT	Supported by ENM, IP transport NMS, ServiceON, Node GUI and CLI SNMP v3, SSH, RADIUS, TACACS+
STANDARDS & RECOMMENDATIONS	CEN/CENELEC, ETSI, ITU, IEC, IEEE, IETF

* For antennas and frequency bands, please see MINI-LINK outdoor datasheets

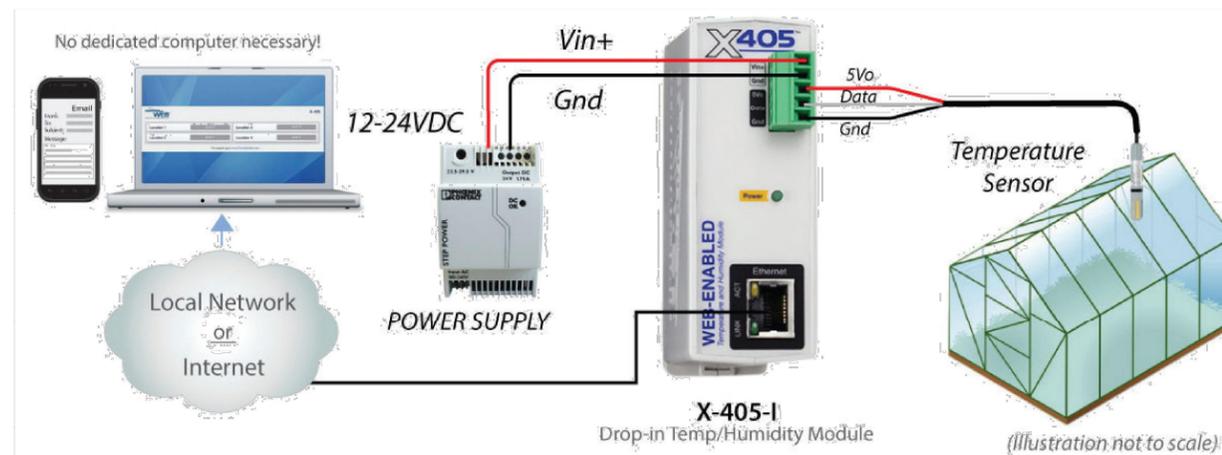
X-405™

Web-Enabled Temperature and Humidity Module

Monitor up to 16, 1-Wire temperature/humidity sensors

APPLICATIONS & SPECS

Greenhouse Temperature & Humidity Monitoring



Power Requirements

- **Voltage:**
 - X-405-I: 9-28 VDC
 - X-405-E: POE and/or 9-28VDC
- **Max Current:** 240mA

Temperature Sensors

- **Maximum Number of Sensors:** 16
- **Type:** Dallas Semiconductor DS18B20
- **Temperature Range:** -67°F to 257°F (-55°C to +125°C)
- **Accuracy:** ±0.5°C (from -10°C to +85°C)
- **Sensor Functions:** Monitor Temperature, Log Temperature, Email Alerts, SNMP Traps
- **Humidity Type:** Xytronix Model X-DTHS-P sensor
- **Humidity Range:** 0-100% RH
- **Accuracy:** ±2%
- **Max Cable Length:** 600 feet (180m) maximum combined cable length

Real-Time Clock

- Manual or NTP(Network Time Protocol) setup
- **NTP Sync Period:** Once, Daily, Weekly, On Power-up
- Auto Daylight Savings Adjustment

Capacitor Power Backup

- **Backup Functions:** Retain Real-Time Clock, External Variables, Relay State, and Counters
- **Backup Duration:** 24 hours

Network

- **Type:** 10/100 Base-T Ethernet Port
- **Setup:** Static IP address assignment. TCP port selectable

Connectors

- **Power/Input/Relays:** 14-Position, 3.81mm, Removable
- **Network:** 8-pin RJ-45

LED Indicators

- **Number of LEDs:** 3
 - Power on
 - Network linked
 - Network activity

Physical

- **Operating Temperature:** -40°F to 150°F (-40°C to 65.5°C)
- **Size:**
 - 1.41in (35.7mm) wide
 - 3.88in (98.5mm) tall
 - 3.1in (78mm) deep (not including connector)
- **Weight:** 5 oz (142 grams)
- **Enclosure Material:** Lexan 940 Polycarbonate Plastic
- **Enclosure Flame Rating:** UL94 V0

Protocols

- HTTP, HTTPS, SSL, XML, Modbus TCP/IP, SNMP, SMTP, Remote Services

Logging

- **Log File Size:** 512K (up to 8,448 logs)
- **Storage:** Nonvolatile Flash
- **Buffer Architecture:** Circular Buffer
- *Log data can be periodically read and stored on a computer*

Advanced Features

- Task Builder
- BASIC interpreter
- Remote services

Password Settings

- **Password protection on setup page:** Yes
- **Password protection on control page:** Optional
- **Password Encoding:** Base 64
- **Max Password Length:** 18 Characters

Electromagnetic Compliance

- IEC CISPR 22, CISPR 24
- EU EN55024, EN55022
- X-405-I: FCC 47CFR15 (Class B)
- X-405-E: FCC 47CFR15 (Class A)



verizon

10000 PARK MEADOWS DR
LONE TREE, CO 80124

TOTAL
SITE SERVICES

1065 POPLAR STREET
JOHNSTOWN, CO 80534

SITE NAME:
TURKEY CREEK

SITE ADDRESS:
2945 LITTLE TURKEY CREEK RD
COLORADO SPRINGS, CO 80926
MDG CODE:
5000266093

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ISSUED FOR:

REV	DESCRIPTION	DRN BY:	REV BY:	APP BY:
△	90% COMPLETE CDs	OAM	KH	XXX

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SHEET NAME:
DETAILS

SHEET NUMBER:
D-3

DURA-BLOK rooftop supports

Support Bases Only

- Base only - see chart for height, width and length.
- 100% recycled rubber, UV resistant.
- Load Rating - Ultimate Uniform Load (See Chart Below)*
- DURA-BLOK channel support is designed as an economical support for piping systems, cable tray, HVAC equipment and many other applications. The DURA-BLOK is UV resistant and suitable for any type of roofing material or other flat surfaces. Material effectively accepts screw fasteners for securing accessories.



Part No.	Height x Width x Length In. mm	Wt./Each Lbs. kg	Load Rating Lbs. kN
DBM	4" x 6" x 4.8" (101.6 x 152.4 x 121.9)	2.35 (1.07)	200 (0.89)
DBP	4" x 6" x 9.6" (101.6 x 152.4 x 243.8)	4.48 (2.03)	500 (2.22)



DB Series - Support Bases with Channel

- Base with 1" (25.4mm) tall galvanized channel - see chart for overall height, width and length.
- 100% recycled rubber, UV resistant.
- Load Rating - Ultimate Uniform Load (See Chart Below)*
- DURA-BLOK DB-Series channel support is designed for superior support of piping systems, cable tray, HVAC equipment, walkway systems and many other applications. The DURA-BLOK is UV resistant and suitable for installation on any type of roofing material or other flat surfaces. (For pipe straps/clamps, rollers and roller supports that can be used with these DURA-BLOK supports, see page 202)
- For sloped roofs use B634 adjustable hinge fittings (see page 118).



Part No.	Height x Width x Length In. mm	Wt./Each Lbs. kg	Load Rating Lbs. kN
DB5	5" x 6" x 4.8" (127.0 x 152.4 x 121.9)	2.75 (1.25)	200 (0.89)
DB10	5" x 6" x 9.6" (127.0 x 152.4 x 243.8)	5.28 (2.39)	500 (2.22)
DB20	5" x 6" x 20.2" (127.0 x 152.4 x 513.1)	10.63 (4.82)	1000 (4.45)
DB30	5" x 6" x 30.8" (127.0 x 152.4 x 782.3)	15.99 (7.25)	1500 (6.67)
DB40	5" x 6" x 41.4" (127.0 x 152.4 x 1051.5)	21.34 (9.68)	2000 (8.89)
DB48	5" x 6" x 52.0" (127.0 x 152.4 x 1320.8)	26.70 (12.40)	2500 (11.12)



DB6 Series - Support Base with B12 Channel

- Base with 12 ga. (2.6mm) galvanized channel 27/16" (61.9mm) tall - see chart for overall height, width and length.
- 100% recycled rubber, UV resistant.
- Load Rating - Ultimate Uniform Load (See Chart Below)*
- DURA-BLOK DB-Series channel support is designed for superior support of piping systems, cable tray, HVAC equipment, walkway systems and many other applications. The DURA-BLOK is UV resistant and suitable for installation on any type of roofing material or other flat surfaces. (For pipe straps/clamps, rollers and roller supports that can be used with these DURA-BLOK supports, see page 202)
- For sloped roofs use B634 adjustable hinge fittings (see page 118).



Part No.	Height x Width x Length In. mm	Wt./Each Lbs. kg	Load Rating Lbs. kN
DB610	6 7/16" x 6" x 9.6" (163.5 x 152.4 x 243.8)	6.36 (2.88)	500 (2.22)
DB620	6 7/16" x 6" x 20.2" (163.5 x 152.4 x 513.1)	12.90 (5.85)	1000 (4.45)
DB630	6 7/16" x 6" x 30.8" (163.5 x 152.4 x 782.3)	19.45 (8.82)	1500 (6.67)
DB640	6 7/16" x 6" x 41.4" (163.5 x 152.4 x 1051.5)	26.00 (11.79)	2000 (8.89)
DB648	6 7/16" x 6" x 52.0" (163.5 x 152.4 x 1320.8)	32.55 (14.76)	2500 (11.12)



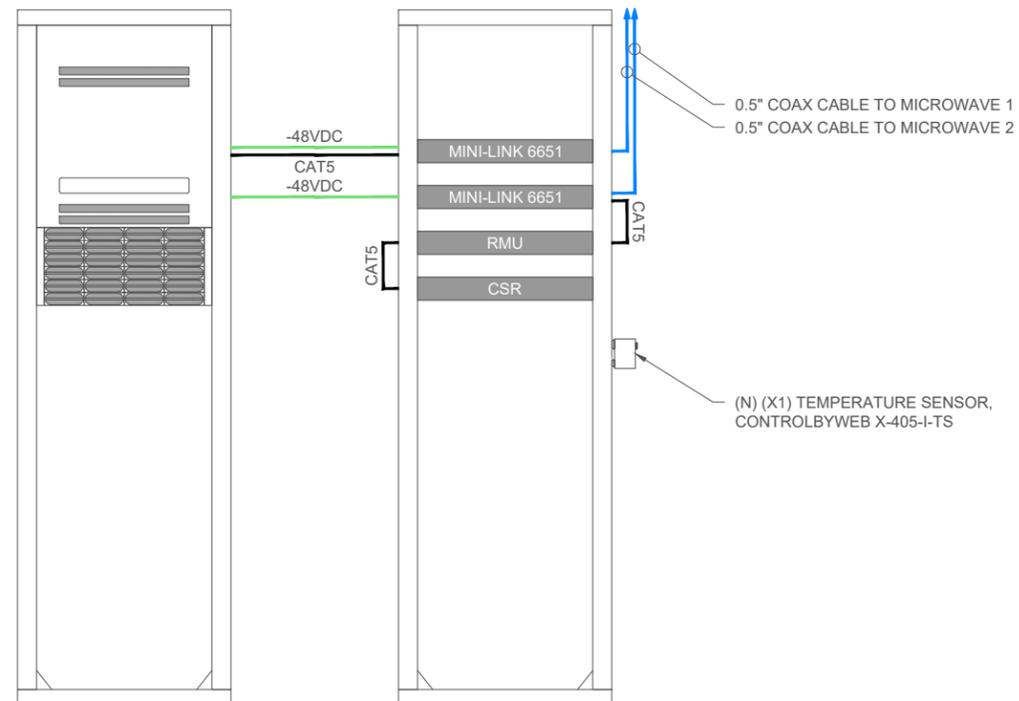
* General Note: Consult roofing manufacturer or engineer for roof load capacity. The weakest point may be the insulation board beneath the rubber membrane.

Reference page 196 for general fitting and standard finish specifications.

B-Line series strut systems

197

DURA-BLOK Supports



verizon

10000 PARK MEADOWS DR
LONE TREE, CO 80124

TOTAL
SITE SERVICES

1065 POPLAR STREET
JOHNSTOWN, CO 80534

SITE NAME:
TURKEY CREEK

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SHEET NAME:
DETAILS

SHEET NUMBER:
D-4

7 DETAIL: ROOFTOP SUPPORT, DURA-BLOK DB-20
PAGE D-4 SCALE: NOT TO SCALE

8 DETAIL: PROPOSED WIRE ROUTING DIAGRAM
PAGE D-4 SCALE: 1/2" = 1'-0"

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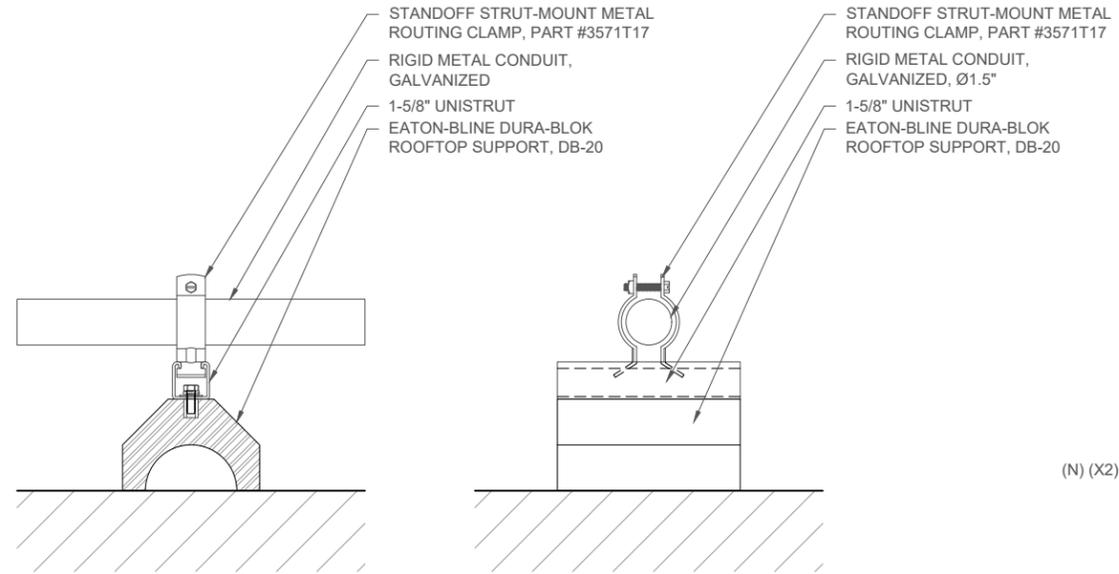
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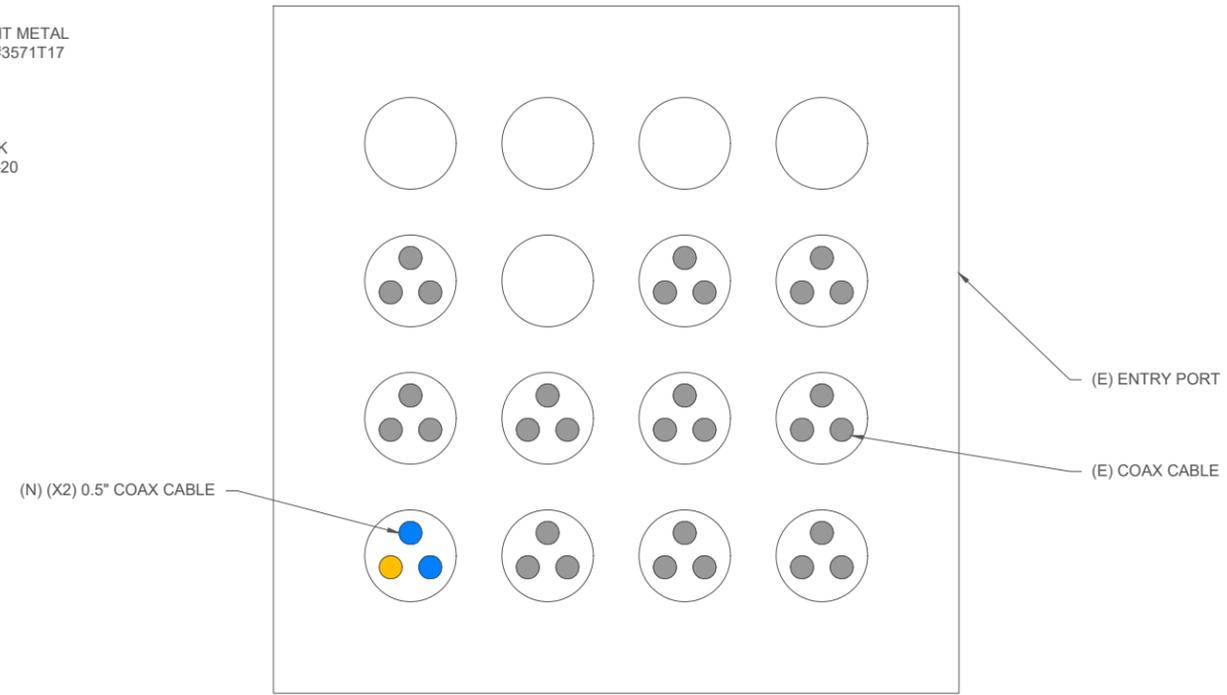
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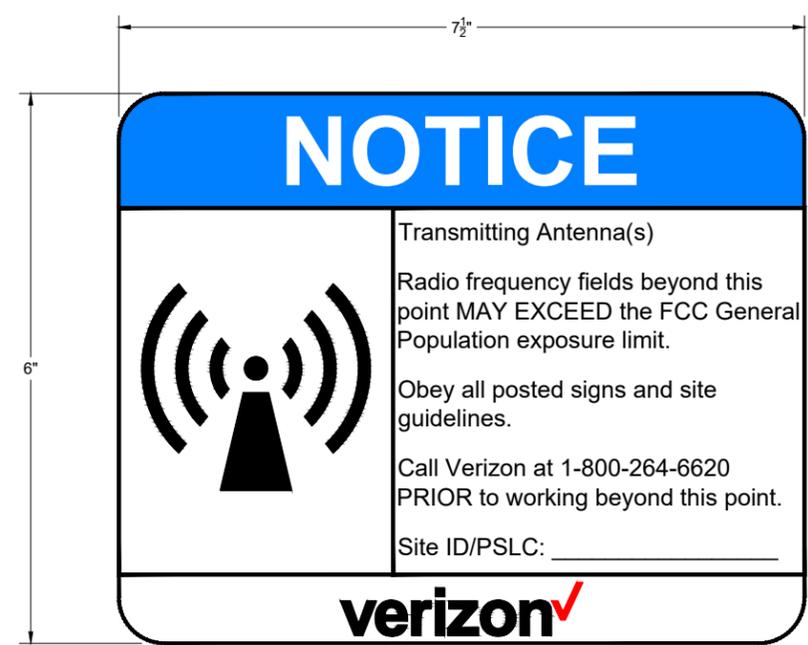
SHEET NUMBER:
D-5



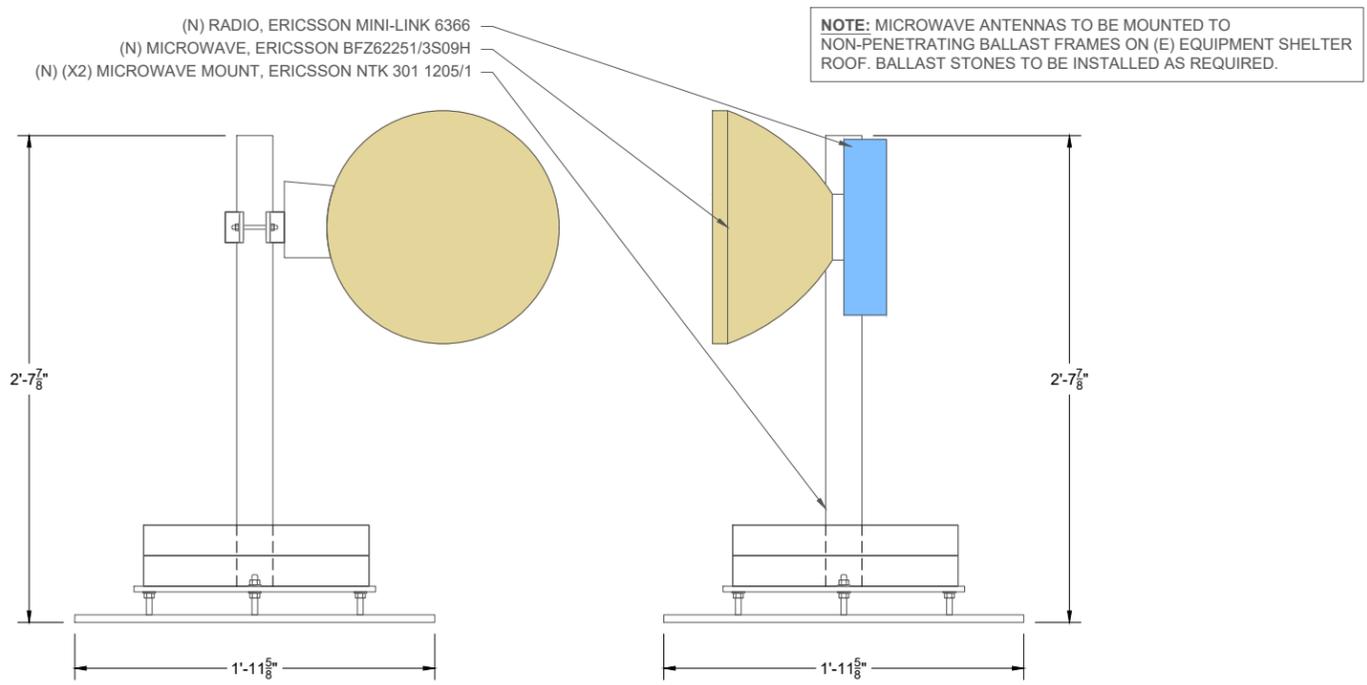
9 **DETAIL: ROOF CONDUIT ROUTING**
PAGE D-5 SCALE: 1-1/2" = 1'-0"



10 **DETAIL: PROPOSED COAX CABLE ROUTING DIAGRAM**
PAGE D-5 SCALE: 3" = 1'-0"



11 **DETAIL: VERIZON NOTICE SIGNAGE**
PAGE D-5 SCALE: 6" = 1'-0"

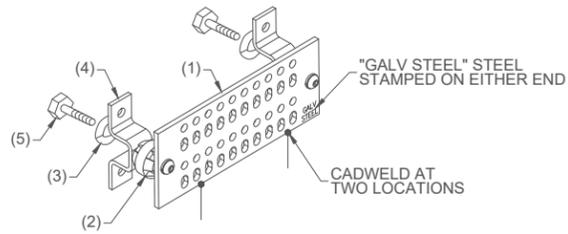


NOTE: NON-PENETRATING BALLAST FRAMES TO BE INSTALLED ON (E) EQUIPMENT SHELTER ROOF WITH 1/4" THICK RUBBER MATS

12 **DETAIL: MICROWAVE MOUNT ASSEMBLY, ENLARGED**
PAGE D-5 SCALE: 1" = 1'-0"

GROUNDING NOTES:

- REFER TO VERIZON WIRELESS GROUNDING SPECIFICATIONS FOR ALL GROUNDING REQUIREMENTS.
- BOND AND GROUND ANY PROPOSED STRUCTURAL STEEL, CONCRETE REINFORCING AND OTHER METALLIC BUILDING ELEMENTS, REFER TO VERIZON WIRELESS SPECIFICATIONS FOR EXACT MEASUREMENTS.
- THE ELECTRICAL CONTRACTOR SHALL PERFORM ALL BONDING AND GROUNDING TO THE SITE'S OUTER GROUNDING SYSTEM DURING THE CONSTRUCTION PHASE OF THE BUILDING.
- CONTRACTOR IS TO CONDUCT FREQUENT INSPECTIONS DURING THE CONSTRUCTION PHASE TO ENSURE ALL GROUNDING ARRANGEMENTS ARE MADE ACCORDING TO THE GROUNDING DESIGN SPECIFICATIONS.
- DO NOT RETROFIT NOR UPGRADE ESTABLISHED SITES THAT DO NOT MEET ALL THE REQUIREMENTS OF VERIZON WIRELESS GROUNDING STANDARD UNLESS THERE ARE DOCUMENTED OCCURRENCES OF EQUIPMENT DAMAGES AND/OR SERVICE AFFECTING CONDITIONS.
- USE ONLY VERIZON WIRELESS-APPROVED MATERIALS, SUCH AS: COPPER FOR MOST ELECTRICAL WORK AND ALUMINUM FOR CERTAIN APPLICATIONS FOR SITE GROUNDING SYSTEM.
- USE SAME METAL THROUGHOUT THE GROUNDING SYSTEM WHEN POSSIBLE.
- IF DIFFERENT METALS MUST BE CONNECTED, BOND THEM BY EXOTHERMICALLY WELDING THEM TOGETHER.
- USE TINNED COPPER WHEN CONNECTING TO GALVANIZED STEEL.
- DO NOT BOND COPPER AND ALUMINUM TOGETHER UNLESS USING SPECIFICALLY DESIGNED EXOTHERMIC MATERIALS DESIGNED FOR THIS APPLICATION OR A BIMETALLIC TRANSITIONAL CONNECTION IS UTILIZED.
- MAKE ALL BONDING ATTACHMENTS TO CLEAN, UNPAINTED METAL SURFACES OR USE APPROVED PAINT-PIERCING WASHERS.
- PAINTED SURFACES MUST BE SCRAPPED, CLEANED AND LIGHTLY COATED WITH APPLICABLE COMPOUND.
- ALL INDOOR OR OUTDOOR POWER OR GROUNDING CONNECTIONS SHALL BE PROTECTED AGAINST CORROSION BY USE OF A THIN COATING OF ANTI-OXIDATION COMPOUND. A COPPER COSMOLINE GREASE-BASED COMPOUND (NO OX-ID) SHALL BE USED ON ALL COPPER-TO-COPPER CONNECTIONS. A ZINC-BASED (GRAY COLORED) COMPOUND SHALL BE USED ON ALL COPPER-TO-STEEL CONNECTIONS. WHERE OTHER COMPOUNDS, SUCH AS KOPPER-SHIELD, ETC. EXIST, THEY MAY BE "GRANDFATHERED" IN PLACE. PENTROX GREASE OR AND APPROVED EQUAL SHALL BE USED ON ALUMINUM CONNECTIONS.
- DO NOT WELD GROUND CONDUCTORS TO THE STRUCTURAL MEMBERS OF TOWERS, INCLUDING DOWN GUYS AND ANCHOR RODS.
- BOND ALL METALLIC OBJECTS, SUCH AS: WATER PIPES, CONDUITS, METAL FUEL TANKS WITHOUT CATHODIC PROTECTION, METAL FENCES, HVAC, ETC., THAT ARE WITHIN 6 FEET (1.8 METERS) OF THE GROUND RING, OR FROM ANY OTHER GROUNDED CONDUCTOR, TO GROUND RING OR TO THE GROUNDED CONDUCTOR HARDWARE.
- ALL OUTDOOR HARDWARE (BOLTS, SCREWS, NUTS, WASHERS) SHALL BE 18-8 STAINLESS STEEL TYPE GRADE. INDOORS, GRADE 5 STEEL HARDWARE MAY BE USED. CHOOSE BOLT LENGTH TO ALLOW THE EXPOSURE OF AT LEAST 2 THREADS.
- WHEN BONDING TO A METALLIC OBJECT WHERE ACCESS IS LIMITED TO ONLY ONE SURFACE, USE DRILLING AND TAPPING OR SELF-DRILLING SCREWS. DO NOT USE SHEET METAL SCREWS.
- ALL GROUNDING CONDUCTORS SHOULD PRESERVE A DOWNWARD TO HORIZONTAL COURSE AND BE AS STRAIGHT AS POSSIBLE AND AVOID SHARP TURNS.
- DO NOT USE U-SHAPED GROUNDING CONDUCTOR RUNS (U-TURNS IN WIRING) OR BONDING LAYOUTS TO REDUCE ARC-OVERS.
- ALL GROUNDING CONDUCTS MUST BE RUN IN NONMETALLIC CONDUIT. ROUTE ALL CONDUCTORS THROUGH NONMETALLIC SLEEVES WHEN PENETRATING FLOORS, CEILINGS, AND WALLS.
- IF THE USE OF METALLIC CONDUIT CANNOT BE AVOIDED, BOND BOTH ENDS OF THE CONDUIT TO THE GROUNDING CONDUCTOR BEING ROUTING THROUGH THE CONDUIT.
- USE LENGTHS OF CONDUCTORS TO A MINIMUM.
- USE MULTIPLE CONDUCTING PATHS. PARALLEL PATHS ARE ONLY DESIRABLE WHEN SENSITIVE ELECTRONIC EQUIPMENT IS NOT PART OF THE CONDUCTOR PATH.
- KEEP BENDS IN CONDUCTORS TO A MINIMUM.
- MINIMUM INSIDE BENDING RADIUSES:
 - 6" (0.15M) FOR CONDUCTORS UP TO #6GA
 - 12" (0.30M) FOR CONDUCTORS #6GA TO 4/0GA.
 - 24" (0.60M) FOR CONDUCTORS #4/0GA AND LARGER.
- GROUND CONDUCTORS MUST NEVER BE ENCIRCLED WITH FERROUS METAL CLAMPS, PLACED THROUGH METAL WALLS, METAL PLATES, OR SHORT SECTIONS OF METAL CONDUIT, AND MUST NEVER BE PLACED IN THE SAME CABLE RACK AS DC POWER CABLES, HIGH FREQUENCY CABLES, ETC.
- WHEN ATTACHING PVC CONDUITS TO ANY SURFACE UTILIZE NONCONDUCTIVE FASTENERS OR NONFERROUS FASTENERS ONLY.
- IF CONNECTIONS BETWEEN ALUMINUM CONDUCTORS AND STEEL OBJECTS MUST BE MADE, TINNED LUGS AND PENTROX SHALL BE USED. WHERE THERE ARE CONCERNS THAT THE PENTROX MAY NOT PROVIDE ADEQUATE INTERFACING, THEN A BIMETAL SPLICE BETWEEN THE ALUMINUM CONDUCTOR AND A SHORT LENGTH OF COPPER CONDUCTOR MAY BE USED.
- ALL OF THE BONDING AND GROUNDING CONDUCTORS SPECIFIED FOR ROOFTOP CELL AND MICROWAVE SYSTEMS IS BARE WIRE. INSULATED WIRE SHALL NOT BE SPECIFIED OR SUBSTITUTED FOR BONDING AND GROUNDING CONDUCTORS OF ROOFTOP INSTALLATIONS.

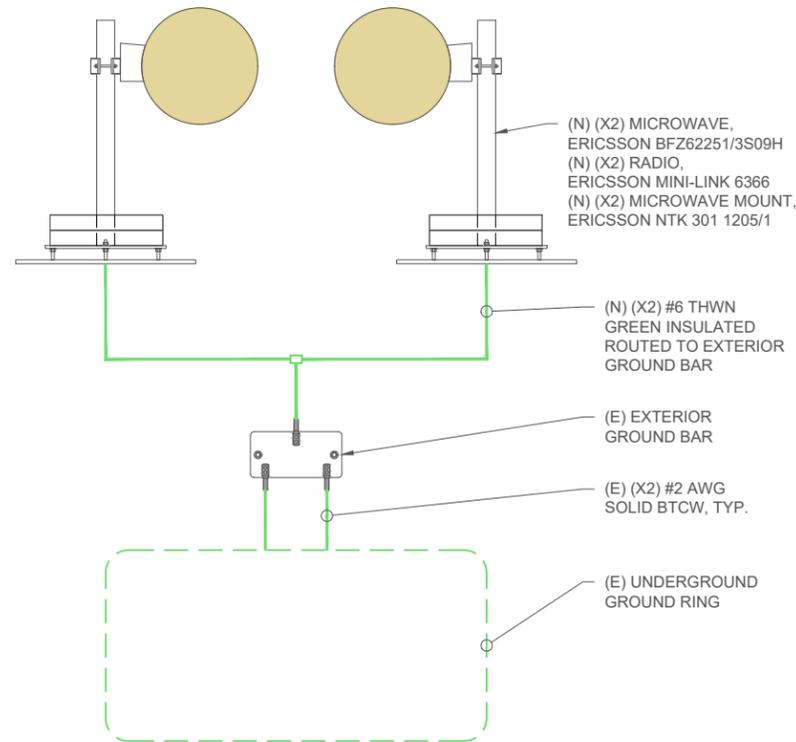


LEGEND

- GALVANIZED STEEL GROUND BAR, BY ELECTRIC MOTION COMPANY (SEE SCHEDULE BELOW).
- INSULATORS, BY HARGER CAT. #5263-A5.
- 5/8" LOCKWASHERS, STAINLESS STEEL.
- WALL MOUNTING BRACKET, HARGER CAT. #WBKT-2.
- 5/8-11x3" H.H.C.S. BOLTS, STAINLESS STEEL.

GROUND BAR SCHEDULE				
TYPE	QTY.	MANUFACTURER	CAT. NO.	REMARKS
CGB	3	ELECTRIC MOTION COMPANY	EM SGC412-VZW	OR EQUAL
MGB	2	ELECTRIC MOTION COMPANY	EM SGC424-VZW	OR EQUAL

2 DETAIL: TYPICAL GROUNDING BAR
PAGE G-1 SCALE: NOT TO SCALE



NOTE: GROUNDING SCHEMATIC IS DIAGRAMMATIC AND DOES NOT REFLECT ACTUAL EQUIPMENT LAYOUT ORIENTATION. REFER TO PLANS FOR DIRECTION.

3 DETAIL: EQUIPMENT GROUNDING DIAGRAM
PAGE G-1 SCALE: 1/2" = 1'-0"

1 GROUNDING NOTES
PAGE G-1 SCALE: NOT TO SCALE

COLOR LEGEND

- HYBRID CABLES & COAX CABLES
- RRH/BBU
- POWER/GROUNDING
- FIBER
- ANTENNAS
- PENETRATIONS
- LEASE AREA
- ACCESS/UTILITY EASEMENT
- UTILITY EASEMENT

verizon

10000 PARK MEADOWS DR
LONE TREE, CO 80124

TOTAL
SITE SERVICES

1065 POPLAR STREET
JOHNSTOWN, CO 80534

SITE NAME:
TURKEY CREEK

SITE ADDRESS:
2945 LITTLE TURKEY CREEK RD
COLORADO SPRINGS, CO 80926
MDG CODE:
5000266093

PROJECT ID:
17408855

ISSUED FOR:

REV	DESCRIPTION	DRN BY:	REV BY:	APP BY:
△	90% COMPLETE CDs	OAM	KH	XXX

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NAME:
GROUNDING DETAILS

SHEET NUMBER:
G-1