



10740 NALL AVENUE
SUITE 400
OVERLAND PARK, KS 66211
PHONE: 913-344-2800

SITE NAME: KCYC SUMMIT WOODS 04SC
SITE ADDRESS: 1010 NW WARD RD
LEE'S SUMMIT, MO, 64086

verizon
10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

SHEET TITLE
TITLE SHEET

SHEET NUMBER

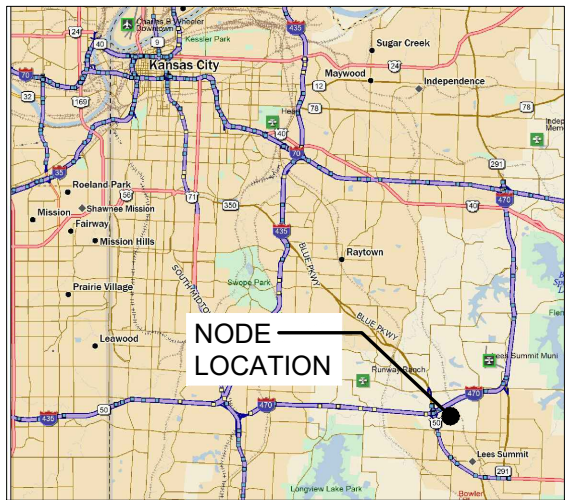
T-1

PROJECT TYPE

EXISTING MUNICIPAL POLE TO BE REMOVED. PROPOSED VERIZON WIRELESS SMALL CELL EQUIPMENT ON REPLACEMENT MUNICIPAL POLE. POWER TO BE DELIVERED VIA UNDERGROUND. FIBER TO BE DELIVERED VIA UNDERGROUND (BY OTHERS).

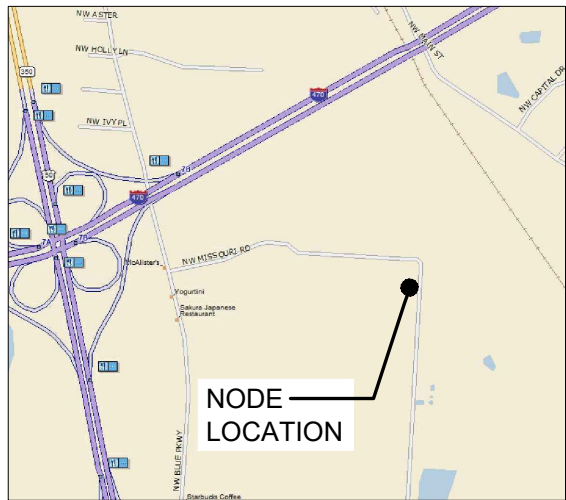
REGIONAL MAP

N.T.S.



AREA MAP

N.T.S.



CONSULTANT TEAM

PROJECT CONSULTANT: TERRA CONSULTING GROUP, LTD.
600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
(847) 698-6400

SURVEYOR: LOVELACE & ASSOCIATES
929 SE 3RD STREET
LEE'S SUMMIT, MO 64063
PHONE: (816) 347-9997
FAX: (816) 347-9979

POLE MANUFACTURER: VALMONT INDUSTRIES, INC.
20805 EATON AVE.
FARMINGTON, MI 55024
(651) 463-8990

VZW REAL ESTATE: BRENDA CLEMONS (brenda.clemons@verizonwireless.com)
VZW CONSTRUCTION: CHRIS BROCK (chris.brock@verizonwireless.com)
VZW RF ENGINEER: JEFF NOVOTNY (jeff.novotny@verizonwireless.com)

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 JURISDICTION:

- INTERNATIONAL BUILDING CODE
- INTERNATIONAL MECHANICAL CODE
- NATIONAL ELECTRIC CODE
- INTERNATIONAL FIRE CODE
- NATIONAL ELECTRIC SAFETY CODE (NESC)
- NATIONAL FIRE PROTECTION AGENCY (NFPA) 70
- AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO), STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS, 6TH EDITION.
- AMERICAN PUBLIC WORKS ASSOCIATION (APWA) AND ANY SUPPLEMENTAL CHANGES.
- AMERICAN WITH DISABILITIES ACT (ADA) OF 1990.
- AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES STANDARD.
- EVERGY, ELECTRICAL SERVICE STANDARD (LATEST EDITION)
- OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) OF 1970
- NATIONAL FIRE PROTECTION AGENCY (NFPA) 70E, STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE (LATEST EDITION)
- SECTION 9.5 - INTERSECTION SIGHT DISTANCE, IN THE AASHTO GREEN BOOK, 6TH EDITION

DRAWING NOTICE

THESE SITE PLANS ADHERE TO ALL OF THE REQUIREMENTS CALLED OUT IN THE JURISDICTION PLANNING AND ZONING FOR ANTENNAS AND SUPPORT STRUCTURES WHERE SITE IS LOCATED

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS / CONDITIONS ON SITE, IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO PERFORMING ANY WORK OR BE RESPONSIBLE FOR THE SAME

SHEET	DRAWING INDEX	REVISION
T-1	TITLE SHEET	B
R-1	REVISION LOG	B
EX-1	EXHIBIT PHOTOS	A
C-1	SITE SURVEY	-
C-2	ENGINEERING SITE PLAN	A
ANT-1	EXISTING SITE ELEVATIONS	A
ANT-2	PROPOSED SITE ELEVATIONS	B
ANT-3, -3A	ANTENNA CONFIGURATION & PLUMBING DIAGRAM	B
ANT-4	ANTENNA SPECIFICATIONS	A
ANT-5	CHARLES CABINED DETAILS	A
ANT-6	EQUIPMENT DETAILS	B
E-1	UTILITY ROUTE DETAILS	A
E-1A	UTILITY ROUTE DETAILS	A
E-2	UTILITY DETAILS	A
E-3	STREET LIGHT CIRCUIT PLAN	A
E-4	ELECTRICAL DETAILS	A
E-5, -6	ELECTRICAL DETAILS	A
E-7	GROUNDING DETAILS	A
S-1	STRUCTURAL DETAILS	A
SP-1	SPECIFICATIONS	A
TC-1, -2, -3	TRAFFIC CONTROL DETAILS & PLAN	B

FULL SCALE PRINT IS ON 22"x34" MEDIA

ATTACHMENTS

1	POLE SPEC	-
2	FOUNDATION DESIGN	-
3	LUMINAIRE SPEC	-



PROJECT DESCRIPTION

REMOVAL:

EXISTING STREET LIGHT POLE & FOUNDATION

VERIZON WIRELESS

- INSTALL LESSEE EQUIPMENT ON REPLACEMENT METAL POLE IN PUBLIC R.O.W.
- INSTALL TYPE 2 JUNCTION BOX OVER EXISTING LIGHT POLE LOCATION FOR CIRCUIT LIGHTING INTERCEPT.
- INSTALL LESSEE GROUND EQUIPMENT CABINET IN PUBLIC R.O.W.
- INSTALL LESSEE FIBER BOX IN PUBLIC R.O.W.
- INSTALL LESSEE POWER CONDUITS, CONDUCTORS, AND PULL BOXES IN PUBLIC R.O.W.

EVERGY

- SUPPLY AND INSTALL NEW ELECTRICAL SERVICE AT PROPOSED POWER SOURCE LOCATION

SITE INFORMATION

JURISDICTION: CITY OF LEE'S SUMMIT
OCCUPANCY: UNINHABITED
UTILITY COMPANY: POWER: EVERGY
4400 E FRONT ST.
KANSAS CITY, MO 64120
PHONE: (816)732-4160

CONSTRUCTION TYPE: CO-LOCATION ON MUNICIPAL LIGHT POLE

APPLICANT / LESSEE: VERIZON WIRELESS
10740 NALL AVENUE
OVERLAND PARK, KS 66211
PHONE: (913) 344-2800

PROPERTY LOCATION: PUBLIC RIGHT-OF-WAY

POLE OWNER: LEE'S SUMMIT

POLE I.D#: 4G13 / 1-5
POLE PART #: N/A
(E) OVERALL STRUCTURE HT: 40'-7"
(P) OVERALL STRUCTURE HT: 43'-10"

SITE COORDINATES:
LATITUDE: 38° 55' 59.91" N (1A CERTIFICATION)
LONGITUDE: 94° 23' 41.77" W (1A CERTIFICATION)
ELEVATION: ±976.8' (1A CERTIFICATION)

REVISION LOG			
NO.	BY	DATE	DESCRIPTION
A	TB	07/18/2025	ISSUED FOR REVIEW
B	MD	09/11/25	ISSUED FOR PERMITTING

REVISION NOTES
REV A DESCRIPTION: PRELIM DRAWINGS ISSUED FOR CLIENT REVIEW
REV B DESCRIPTION: ISSUED WITH CONCRETE FOUNDATION DESIGN, TRAFFIC PLANS, REVISED 6672 BASEBAND UNIT, EME SIGNAGE & POLE SPEC.



10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



TERRA
CONSULTING GROUP
has joined Colliers Engineering & Design

COLOR CODE LEGEND	
DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS			
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

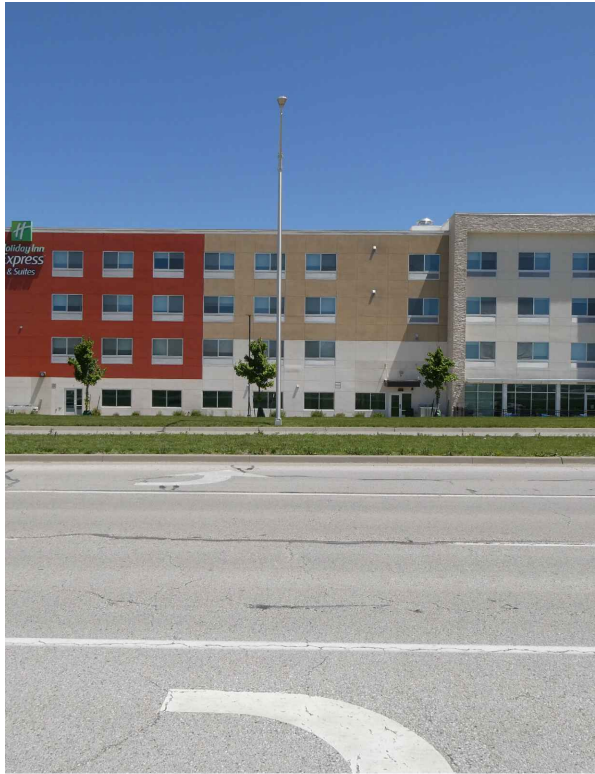
KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

SHEET TITLE
REVISION LOG

SHEET NUMBER
R-1



LOOKING NORTH



LOOKING EAST



LOOKING SOUTH



LOOKING WEST

1 DIRECTIONAL VIEWS FROM POLE



NORTH FACE



EAST FACE



SOUTH FACE



WEST FACE

2 EXISTING POLE ELEVATION VIEWS

verizon
10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND	
DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS			
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

SHEET TITLE
EXHIBIT PHOTOS

SHEET NUMBER
EX-1



MISSOURI

ONE CALL SYSTEM



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY: TSE

CHECKED BY: MP

DATE: 07/15/25

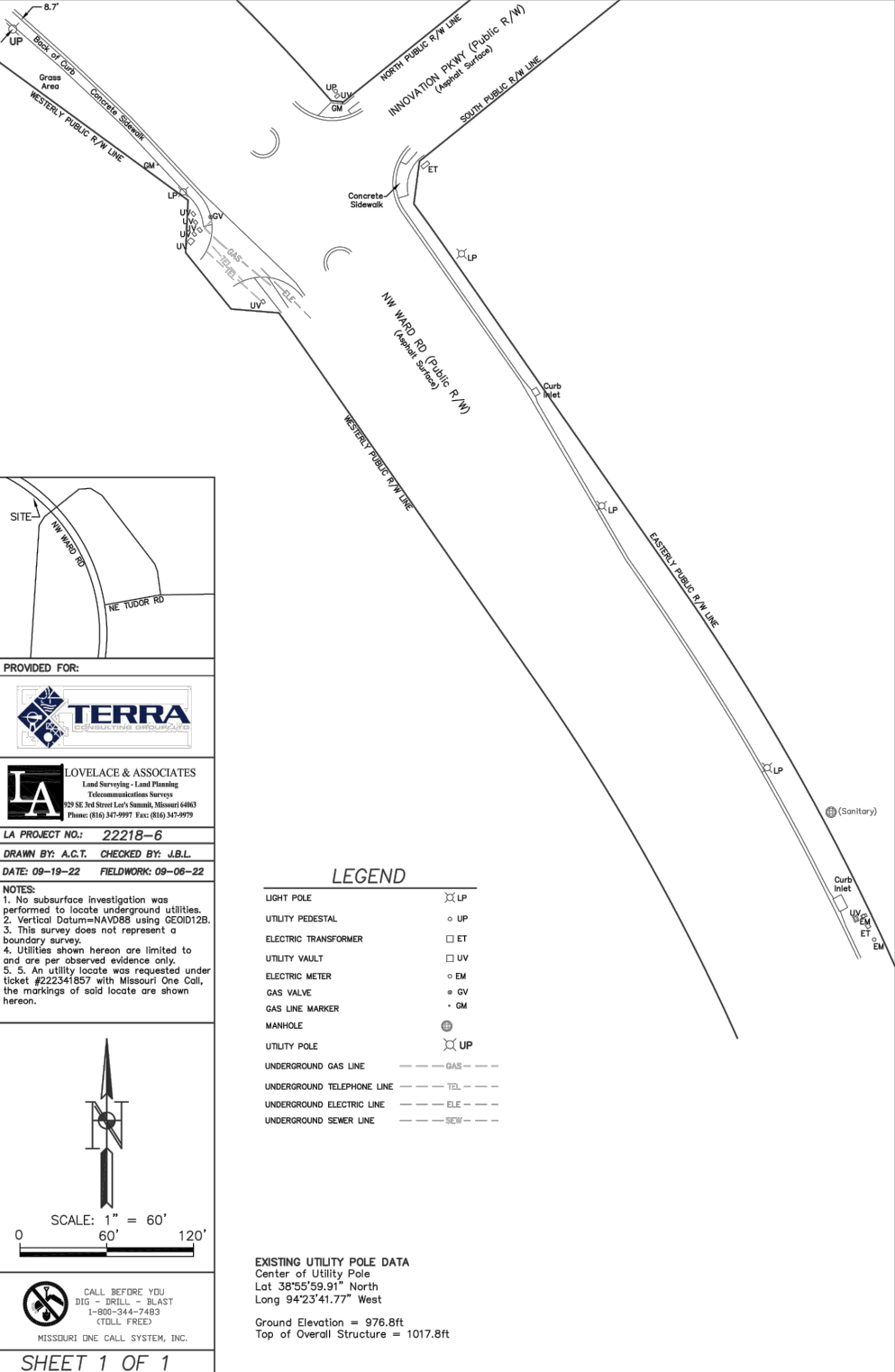
PROJECT #: 132-359

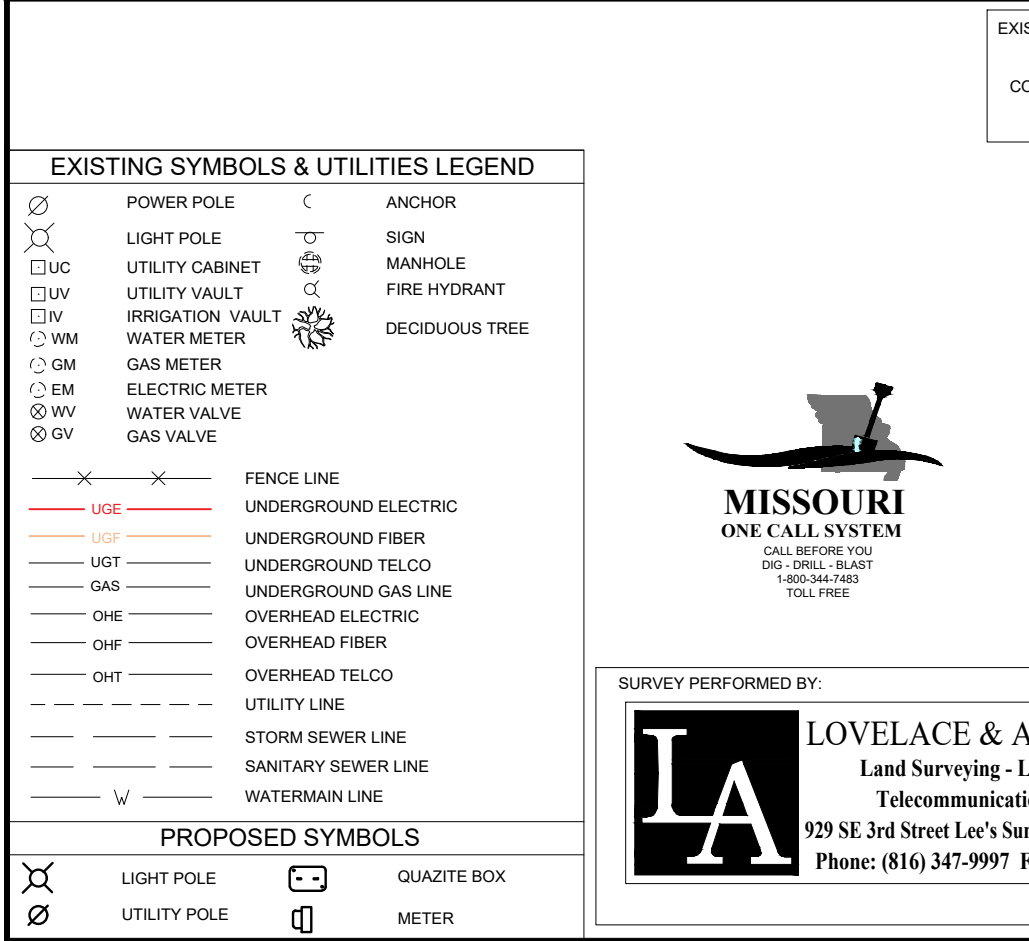
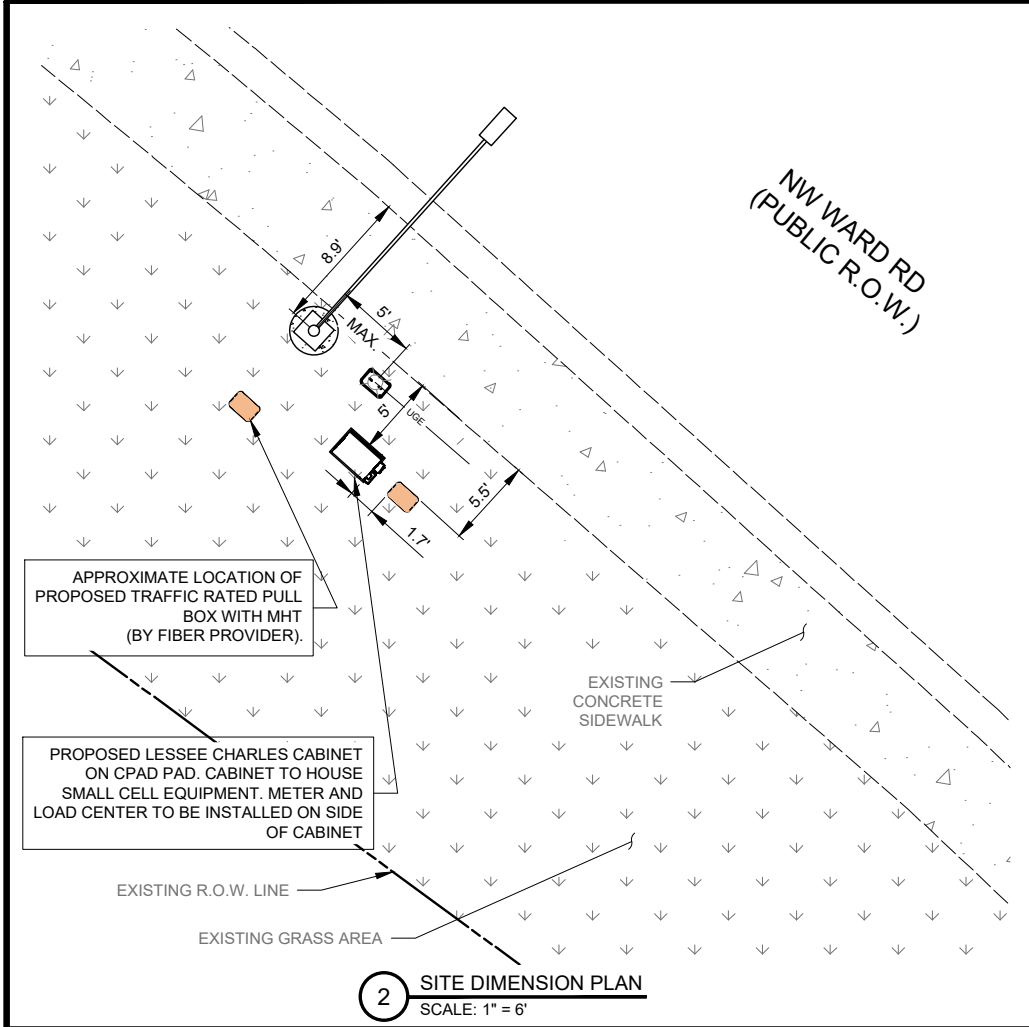
SHEET TITLE

SITE SURVEY

SHEET NUMBER

C-1





EXISTING SYMBOLS & UTILITIES LEGEND			
	POWER POLE		ANCHOR
	LIGHT POLE		SIGN
	UTILITY CABINET		MANHOLE
	UTILITY VAULT		FIRE HYDRANT
	IRRIGATION VAULT		DECIDUOUS TREE
	WATER METER		
	GAS METER		
	ELECTRIC METER		
	WATER VALVE		
	GAS VALVE		
	FENCE LINE		
	UNDERGROUND ELECTRIC		
	UNDERGROUND FIBER		
	UNDERGROUND TELCO		
	GAS		
	UNDERGROUND GAS LINE		
	OVERHEAD ELECTRIC		
	OVERHEAD FIBER		
	OVERHEAD TELCO		
	UTILITY LINE		
	STORM SEWER LINE		
	SANITARY SEWER LINE		
	WATERMAIN LINE		
PROPOSED SYMBOLS			
	LIGHT POLE		QUAZITE BOX
	UTILITY POLE		METER

SURVEY PERFORMED BY:

LOVELACE & ASSOCIATES
Land Surveying - Land Planning
Telecommunications Surveys
929 SE 3rd Street Lee's Summit, Missouri 64063
Phone: (816) 347-9997 Fax: (816) 347-9979

10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211

has joined Colliers Engineering & Design

COLOR CODE LEGEND	
DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS			
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

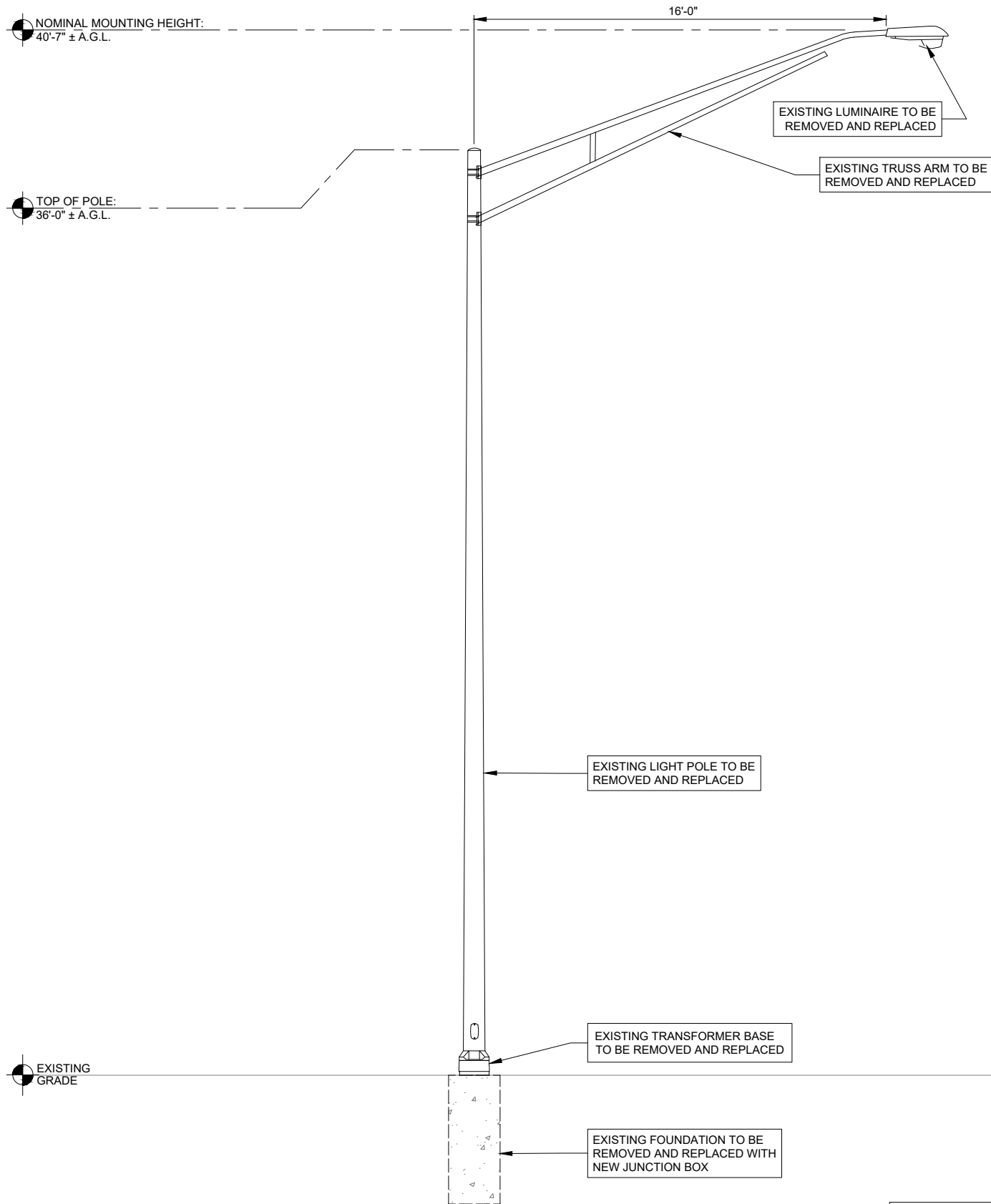
DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

SHEET TITLE

SITE PLAN

SHEET NUMBER

C-2

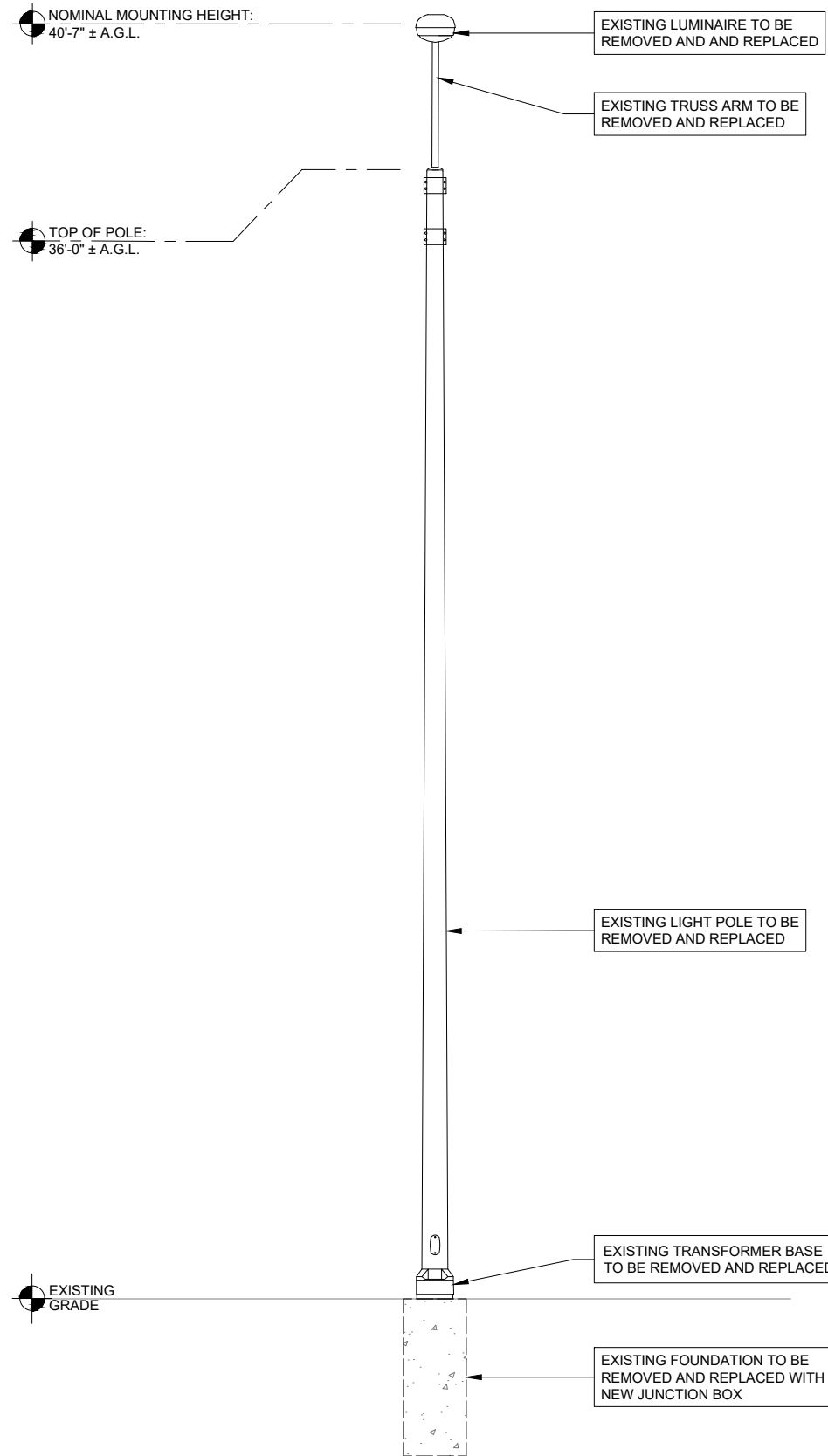


1 EXISTING SOUTHEAST ELEVATION
SCALE: 3/8" = 1'-0" ±

NOTE:
EXISTING LIGHT POLE TO BE REMOVED AND
RETURNED TO THE CITY.

NOTE:
THIS DRAWING IS FOR EXHIBIT
AND LAYOUT PURPOSES ONLY.

ELEVATIONS WERE CREATED
OFF OF FIELD MEASUREMENTS
BY THE ENGINEER.



2 EXISTING SOUTHWEST ELEVATION
SCALE: 3/8" = 1'-0" ±

22" x 34" PRINT IS THE FULL SCALE
FORMAT. ANY SIZE OTHER THAN
THAT IS AT REDUCED SCALE.

verizon

10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

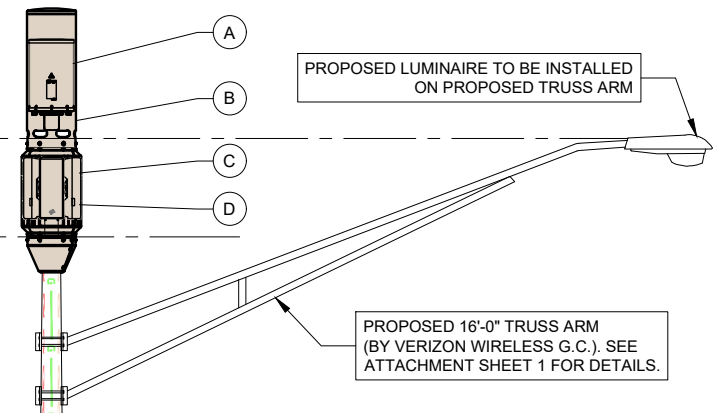
SHEET TITLE

EXISTING SITE
ELEVATIONS

SHEET NUMBER

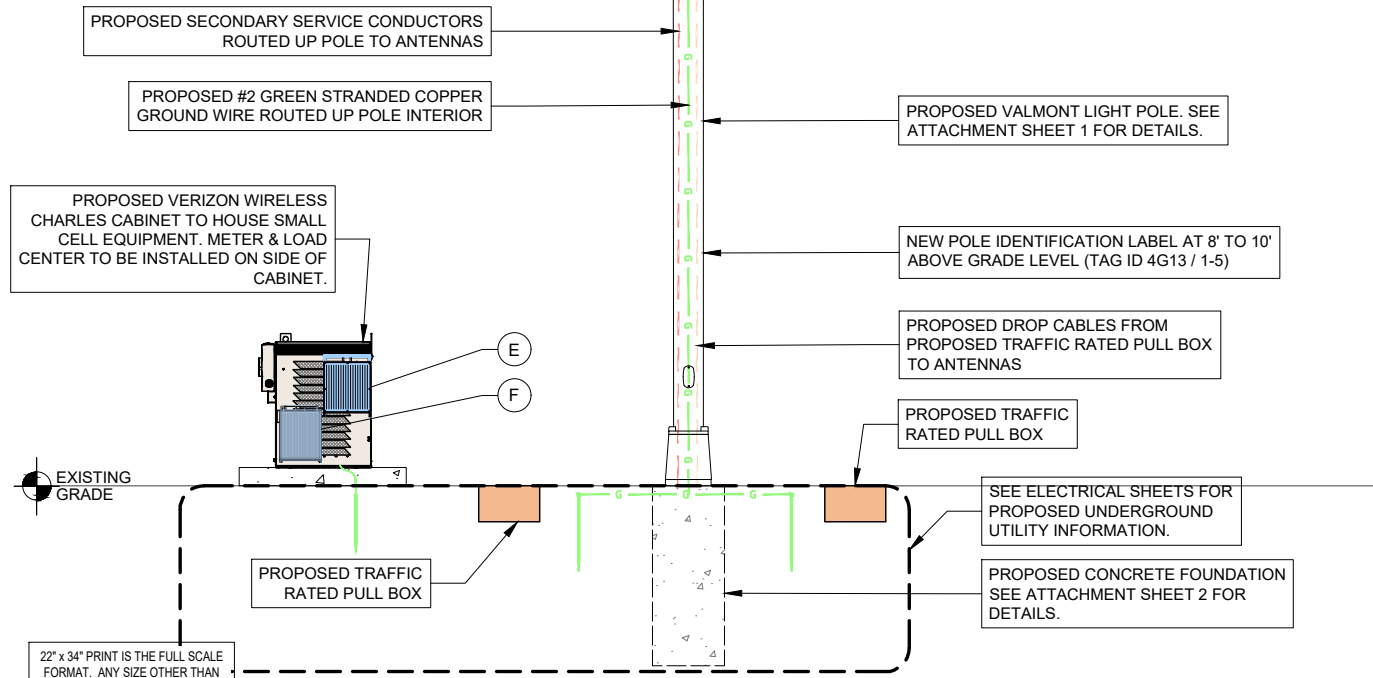
ANT-1

- OVERALL STRUCTURE HEIGHT:
43'-10" A.G.L.
- ANTENNA RAD CENTER:
42'-0" A.G.L.
- NOMINAL MOUNTING HEIGHT
40'-0"± A.G.L.
- ε OF CBAND ANTENNA (AIR1672):
38'-10" A.G.L.
- TOP OF POLE:
37'-5" ± A.G.L.



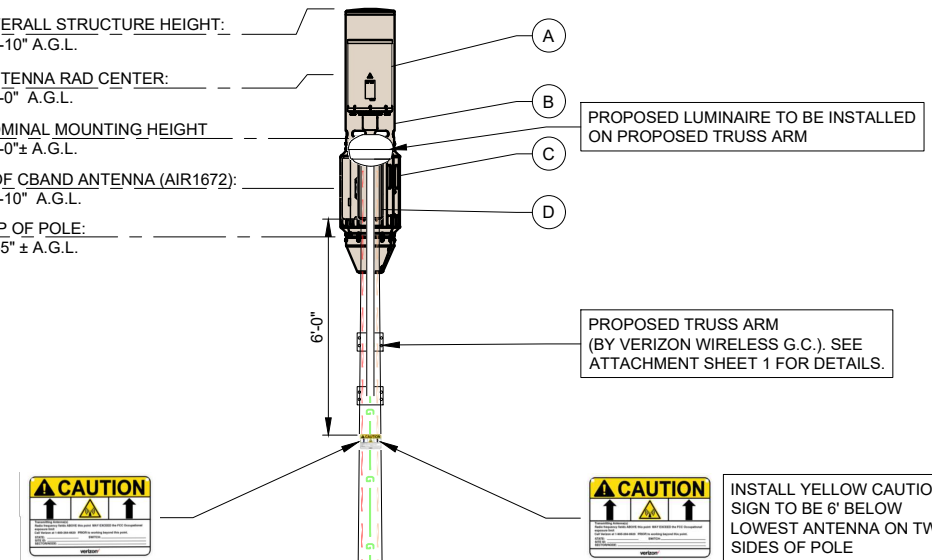
NOTE:
GENERAL CONTRACTOR TO PAINT
PROPOSED EQUIPMENT DUNN EDWARDS
CRESTLINE (DE 6325), OR EQUIVALENT.

- CONTRACTOR NOTES:
1. NEW BREAKER BOX TO BE USED FOR EQUIPMENT SHUT OFF.
 2. EXACT EQUIPMENT LOCATION MAY BE ADJUSTED TO MEET SYSTEM REQUIREMENTS.
 3. CONTRACTOR TO FIELD VERIFY EXACT HAND HOLE LOCATION.
 4. ALL WIRES AND CABLES FROM BASE OF POLE TO THE ANTENNA SHALL BE ROUTED IN NON-METALLIC FLEX CONDUIT. (MINIMUM SIZE 1")
 5. ALL EQUIPMENT TO MATCH EXISTING POLE FINISH. NOTE SHOULD INDICATE DUNN EDWARDS CRESTLINE (DE 6325) COLOR OR EQUIVALENT FOR REFERENCE TO MATCH EXISTING POLE FINISH AND UNPAINTED GALVANIZED PARTS, MATERIALS AND COMPONENTS SHALL REMAIN UNPAINTED TO MATCH EXISTING POLE FINISH.
 6. THE EXISTING POLE FOUNDATION SHALL BE COMPLETELY REMOVED AND BACKFILLED PER CITY STANDARDS AND SPECIFICATIONS, SECTION 7000.7.F.2.A.
 7. ALL CABLES AND WIRES SHALL BE IDENTIFIED. IDENTIFICATION/TAGS SHALL BE PROVIDED IN COMPLIANCE WITH CITY STANDARDS AND SPECIFICATIONS, SECTION 7000.7.I.7.G.
 8. ALL WIRELESS PROVIDER CONDUITS SHALL BE MARKED (WITH VZN IDENTIFICATION) SIMILAR TO OR IN REFERENCE TO SHEET E-5 PER CITY STANDARDS AND SPECIFICATIONS, SECTION 7000.7.I.7.F



1 PROPOSED SOUTHEAST ELEVATION
SCALE: 3/8" = 1'-0" ±

- OVERALL STRUCTURE HEIGHT:
43'-10" A.G.L.
- ANTENNA RAD CENTER:
42'-0" A.G.L.
- NOMINAL MOUNTING HEIGHT
40'-0"± A.G.L.
- ε OF CBAND ANTENNA (AIR1672):
38'-10" A.G.L.
- TOP OF POLE:
37'-5" ± A.G.L.

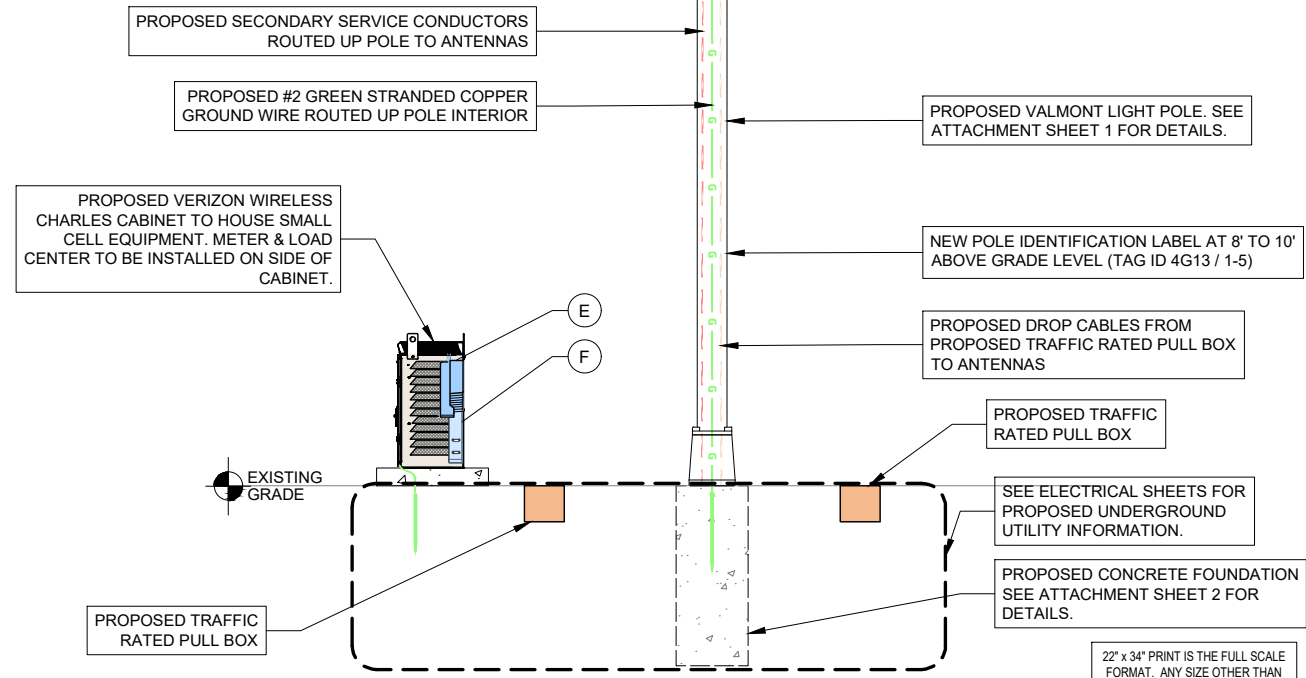


INSTALL YELLOW CAUTION
SIGN TO BE 6' BELOW
LOWEST ANTENNA ON TWO
SIDES OF POLE

KEYED NOTES:

TAG	MAKE/MODEL	DESCRIPTION	QUANTITY	VOLUME (ft³)
(A)	COMMSCOPE V4S4P-360S-F2	18-PORT SMALL CELL ANTENNA	1	*2.32
(B)	CONCEALFAB 901171_461N	CONCEALMENT SHROUD	1	5.4
TOTAL VOLUME FOR TOP 4G SHROUD ON THE POLE				5.4
(C)	CONCEALFAB 901216_T	CONCEALMENT SHROUD	1	6.08
(D)	ERICSSON AIR 1672 (B77D)	5G ANTENNA	3	*0.57 EACH
TOTAL VOLUME FOR 5G ANTENNA SHROUD ON THE POLE				6.08
(E)	ERICSSON 4890	RRU	1	*1.32
(F)	ERICSSON 6308	AC/DC POWER CONVERTER	1	*0.64
TOTAL VOLUME FOR GROUND CABINET				17.11

* ASTERISK DENOTES EQUIPMENT NOT INCLUDED IN TOTAL EQUIPMENT VOLUME CALCULATIONS DUE TO BEING IN ENCLOSURE OR CHARLES CABINET.



2 PROPOSED SOUTHWEST ELEVATION
SCALE: 3/8" = 1'-0" ±

verizon
10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

SHEET TITLE
PROPOSED SITE
ELEVATIONS

SHEET NUMBER
ANT-2



WEST > Desert Mountain Plains > Mountain Plains > Kansas City > KCYC SUMMIT WOODS 04SC
Ringor, Benedict - benedict.ringor@verizonwireless.com - 20250826_164218

Project Details				Location Information			
Carrier Aggregation	N			Site Id	616774282		
Ecip	N			Search Ring#			
Project Name	KCYC SUMMIT WOODS 04SC - CANDIDATE ANALYSIS			E-NodeB ID#	null		
Project Alt Name	KCYC SUMMIT WOODS 04SC			PSLC#	438335		
Project Id	2469569			Switch Name	Kansas City		
Designed Sector Carrier 4G	1			Tower Type			
Designed Sector Carrier 5G	4			Site Type	SMALL-CELL		
Additional Sector Carrier 4G	0			Street Address	1010 NW WARD RD		
Additional Sector Carrier 5G	0			City	Lees Summit		
Suffix				State	MO		
FP Solution Type & Tech Type	SC;4G_AWS;5G_L-Sub6;5G_PCS			Zip Code	64086		
				County	Jackson		
				Latitude	38.933239/ 38° 55' 59.660"		
				Longitude	-94.394925/ 94° 23' 41.730"		

Project Scope									
- Rev 3 (Benny update 8/26/25) - Updated the RFDS centerlines to match with the latest prelim CD - Rev 2 (Benny update 7/24/25) - Updated the RFDS centerlines to match with the prelim CD. - Rev 1 (Benny update 11/21/24) - Changed C-band AIR1652 to AIR1672 and removed CBRs. Changed BBU 6648 to 6651. Removed top concealment. - New small cell. C-band, AWS 1 and PCS LTE - (3) Ericsson 5G AIR1672 AC for C-band - (1) DB-4890 radio for AWS 1 and PCS LTE - (1) 6651 - (1) Commscope canister antenna V4S4P-360S-F2 - (8) 1/2" coax for the DB-4890 - Fiber, power cables, top concealment and ancillary parts to be specified by EE/CE									

Antenna Summary									
Added Antenna									
1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity
		5G	Ericsson	AIR1672	38.33	39.3	0(A),120(B),240(C)	PHYSICAL	3
5G	LTE		COMMSCOPE	V4S4P-360S-F2	42	43	0(A)	PHYSICAL	1

Removed Antenna									
1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity

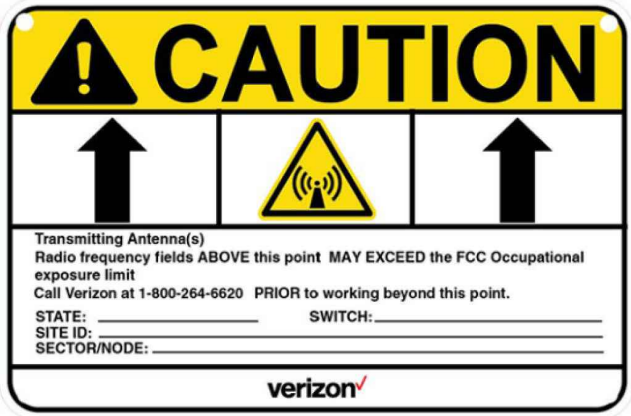
Retained Antenna									
1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	Install Type	Quantity

Non Antenna Summary									
Added Non Antenna									
Equipment Type	Location	1900	AWS	L-Sub6	Make	Model	Install Type	Quantity	
Coaxial Cables	Tower				Coax	1/4" Coax	PHYSICAL	8	
RRU	Tower	5G	LTE		Ericsson	4890	PHYSICAL	1	
BBU	Shelter				Ericsson	6672	PHYSICAL	1	
RRU	Tower			5G	Ericsson	AIR1672	PHYSICAL	0	

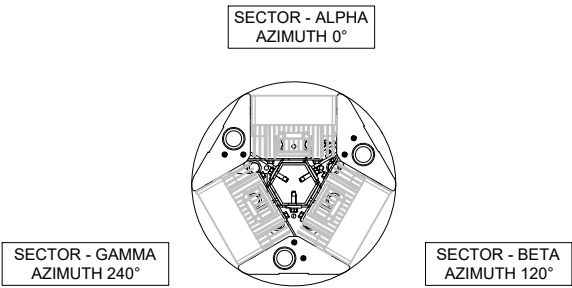
Removed Non Antenna									
Equipment Type	Location	1900	AWS	L-Sub6	Make	Model	Install Type	Quantity	

Retained Non Antenna									
Equipment Type	Location	1900	AWS	L-Sub6	Make	Model	Install Type	Quantity	

1 PROPOSED ANTENNA CONFIGURATION
N.T.S.



2 RF CAUTION SIGNAGE
N.T.S.



3 ANTENNA AZIMUTH
SCALE: N.T.S.



10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND	
DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS			
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

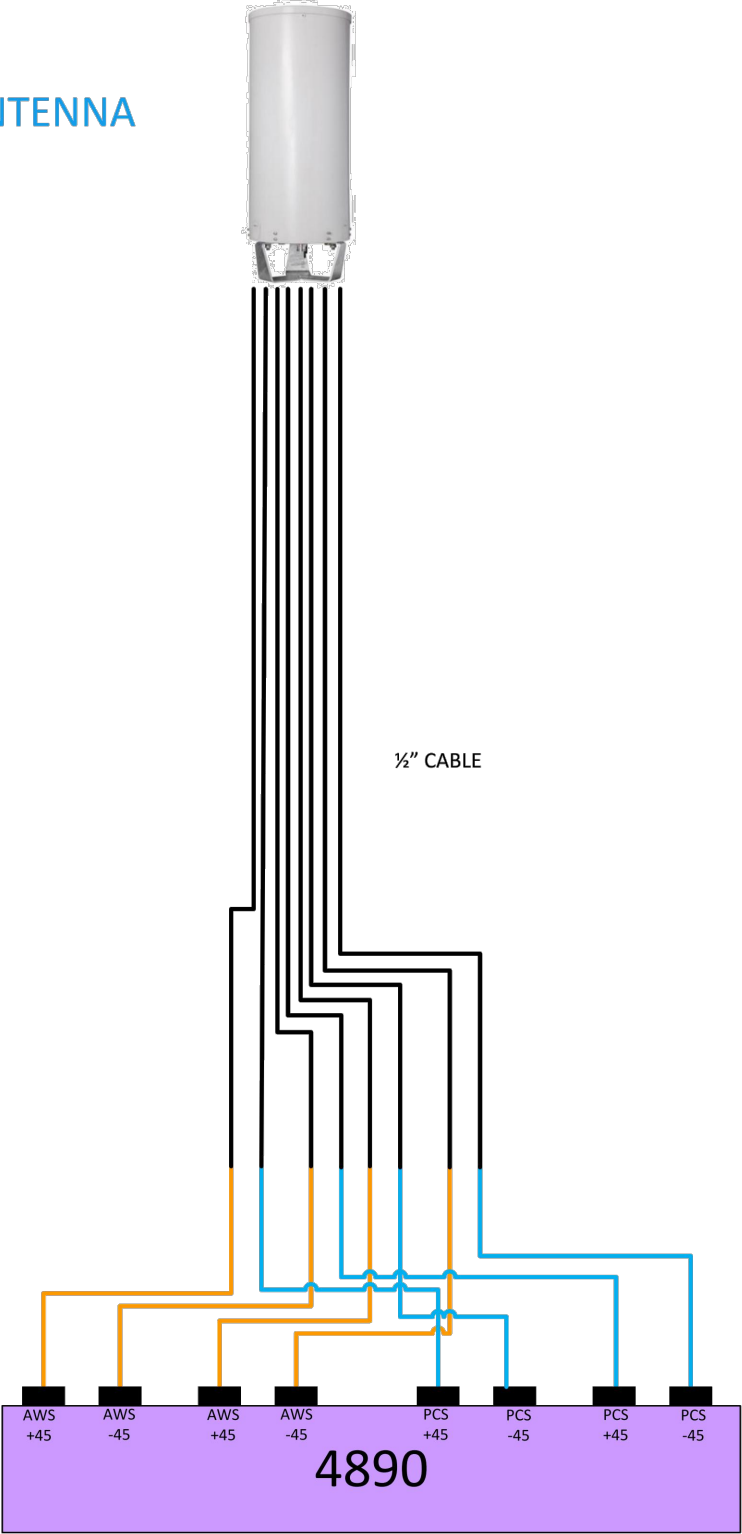
1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

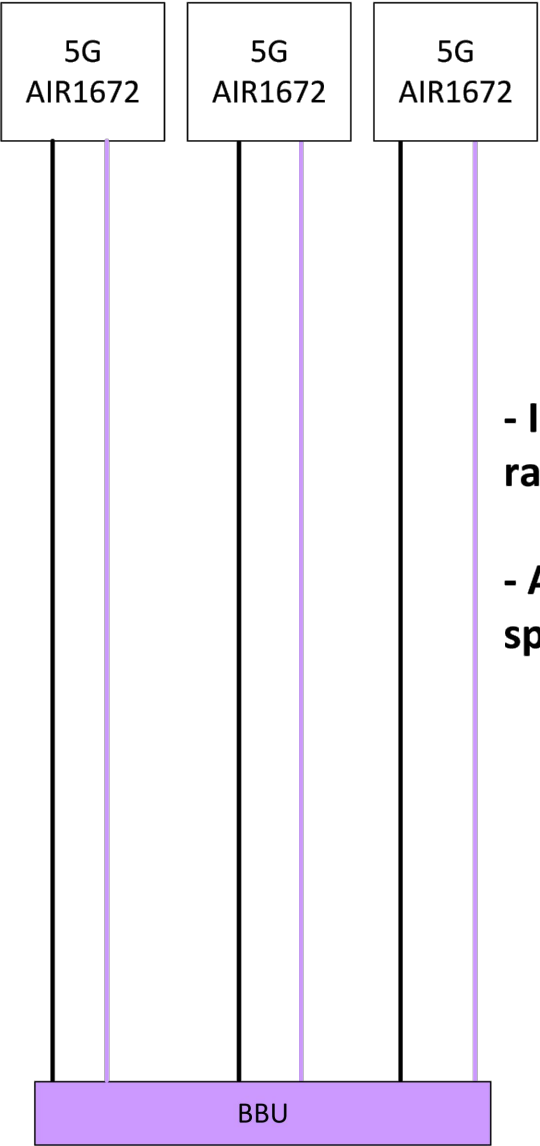
SHEET TITLE
PROPOSED ANTENNA
CONFIGURATION

SHEET NUMBER
ANT-3

CANISTER ANTENNA



C-BAND



- Integrated antenna and radio
- AC & fibers cables to be specified by EE/CE

- (1) 4890 to be installed 10-15 ft above the ground up on the pole
- (3) 5G radios to be installed below the canister antenna, they come with integrated antenna

10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211

has joined Colliers Engineering & Design

COLOR CODE LEGEND	
DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS			
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

SHEET TITLE
PROPOSED ANTENNA
CONFIGURATION

SHEET NUMBER
ANT-3A

18-port small cell antenna, 8x 1675-2690, 8x 3100- 4200, 2x 5150-5925 MHz, 360° Horizontal Beamwidth, fixed tilt.

- Broadband Mid Band arrays (AWS/PCS/WCS/Band 41) with 4T4R (4x MIMO) capability
- Broadband performance – optimized for CBRS and C-bands
- 8 high gain ports for the 3G-Hz band

Antenna Type	Small Cell
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	ASA, UV stabilized
Radiator Material	Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	18
RF Connector Quantity, low band	0
RF Connector Quantity, total	18

DIMENSIONS & WEIGHT	
LENGTH	24.016 in
DIAMETER	14.567 in
VOLUME	2.32 ft³

DIMENSIONS & WEIGHT	
LENGTH	24.016 in
DIAMETER	14.567 in
VOLUME	2.32 ft³
WEIGHT	35.274 lbs

Length	610 mm 24.016 in	WEIGHT	35.274 lbs
Net Weight, without mounting kit	16 kg 35.274 lb		
Outer Diameter	370 mm 14.567 in		

©2023 CommScope, Inc. All rights reserved. CommScope and the CommScope logo are registered trademarks of CommScope and/or its affiliates in the U.S. and other countries. For additional trademark information see <https://www.commscope.com/trademarks>. All product names, trademarks and registered trademarks are property of their respective owners. Revised: May 25, 2023

Beam Tilt, degrees	2	2	2	2	2	2	2
Isolation, Cross Polarization, dB	25	25	25	25	25	25	25
Isolation, Inter-band, dB	28	28	28	28	28	28	28
VSWR / Return loss, dB	1.5/140	1.5/140	1.5/140	1.5/140	1.5/140	1.5/140	1.5/140
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-145	-145	-145	
Input Power per Port, maximum, watts	200	200	200	150	150	150	10
Input Power per Port at 50°C, maximum, watts	150	150	150	100	100	100	5

Frequency Band, MHz	1695–1920	1920–2200	2300–2690	3100–3550	3550–3700	3700–4200	5150–5925
Gain by all Beam Tilts, average, dBi	7.4	8.3	8	9.1	9.5	9.4	2.8
Gain by all Beam Tilts Tolerance, dB	±0.8	±1.2	±1.1	±0.7	±0.7	±0.6	±1.6
Beamwidth, Vertical Tolerance, degrees	±2.5	±2	±1.7	±1.9	±0.9	±1.1	±4.9

Wind Loading @ Velocity, frontal	129.0 N @ 150 km/h (29.0 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	129.0 N @ 150 km/h (29.0 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	129.0 N @ 150 km/h (29.0 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	129.0 N @ 150 km/h (29.0 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h 149.75 mph

Width, packed	478 mm 18.819 in
Depth, packed	464 mm 18.268 in
Length, packed	894 mm 35.197 in
Weight, gross	20.4 kg 44.974 lb

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

©2023 CommScope, Inc. All rights reserved. CommScope and the CommScope logo are registered trademarks of CommScope and/or its affiliates in the U.S. and other countries. For additional trademark information see <https://www.commscope.com/trademarks>. All product names, trademarks and registered trademarks are property of their respective owners. Revised: May 25, 2023

Impedance	50 ohm
Operating Frequency Band	1695 – 2690 MHz 3100 – 4200 MHz 5150 – 5925 MHz
Polarization	±45°
Total Input Power, maximum	1,000 W

Frequency Band, MHz	1695-1920	1920-2200	2300-2690	3100-3550	3550-3700	3700-4200	6150-5925
Gain, dBi	8	9.3	8.7	9.5	10.4	10	3.9
Beamwidth, Horizontal, degrees	360	360	360	360	360	360	360
Beamwidth, Vertical, degrees	21.9	19.5	16	10.2	9.2	8.1	23.6

©2023 CommScope, Inc. All rights reserved. CommScope and the CommScope logo are registered trademarks of CommScope and/or its affiliates in the U.S. and other countries. For additional trademark information see <https://www.commscope.com/trademarks>. All product names, trademarks and registered trademarks are property of their respective owners. Revised: May 25, 2023

5 GHz FCC Power Requirements				
U-NII Band	U-NII 1	U-NII 2A	U-NII 2C	U-NII 3
Frequency (MHz)	5150 - 5250	5250 - 5350	5470 - 5725	5725 - 5850
Max Input power per port to align with FCC Title 47 Part 15 (Watts)	0.5	0.125	0.125	0.5

©2023 CommScope, Inc. All rights reserved. CommScope and the CommScope logo are registered trademarks of CommScope and/or its affiliates in the U.S. and other countries. For additional trademark information see <https://www.commscope.com/trademarks>. All product names, trademarks and registered trademarks are property of their respective owners. Revised: May 25, 2023

SIZE AND WEIGHT:				
AIR1672 B77D	HEIGHT	WIDTH	DEPTH	WEIGHT
WO PROTRUDING ITEMS	20.5"	7.9"	5.7"	26.5 LBS
W/ PROTRUDING ITEMS	21.0"	8.0"	5.9"	

ERICSSON AIR1672

NOTE:
G.C. TO APPLY 3M FILM
TO NR ANTENNAS TO
MATCH COLOR OF POLE.



AIR1672 INFORMATION
N.T.S.



10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

[illegible]

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

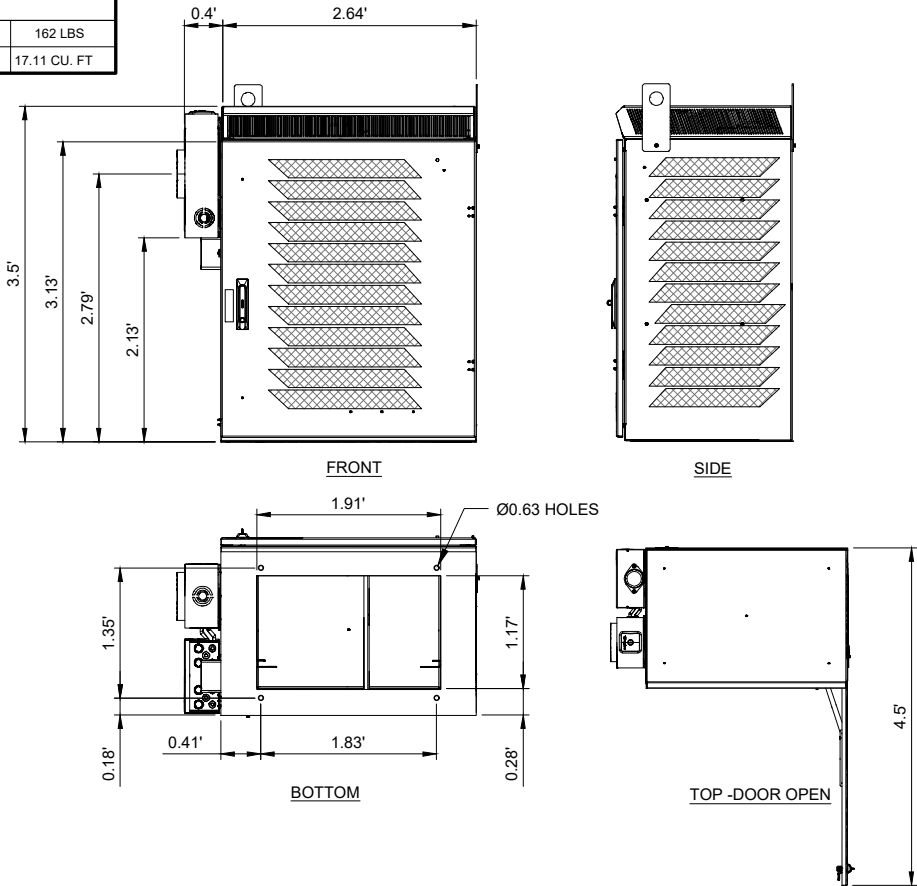
SHEET TITLE

ANTENNA SPECIFICATIONS

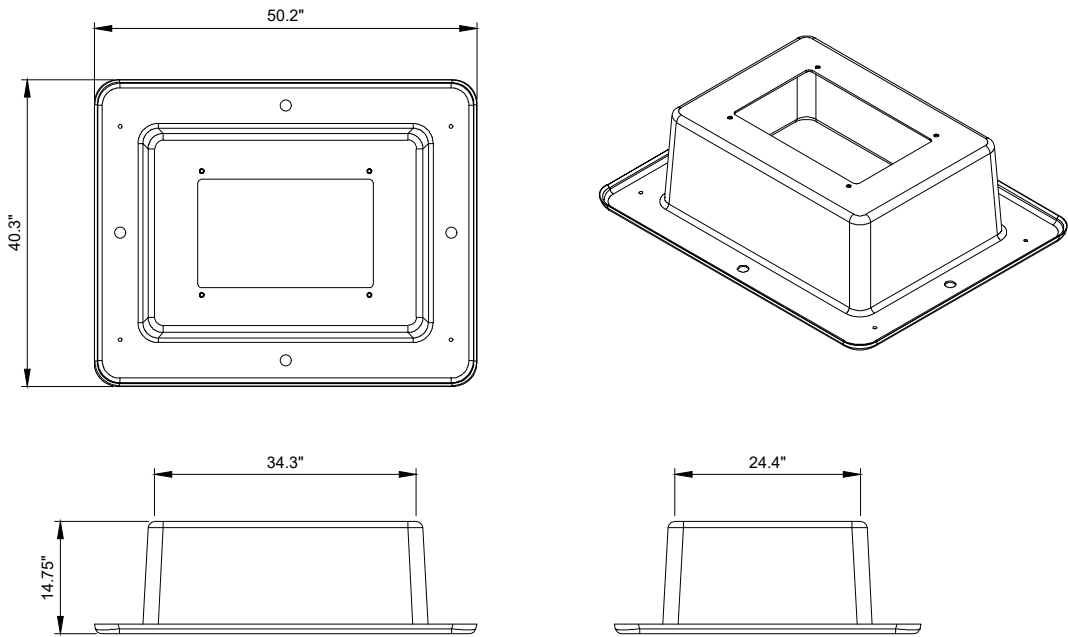
SHEET NUMBER

ANT-4

WEIGHT & VOLUME:	
WEIGHT EMPTY:	162 LBS
VOLUME:	17.11 CU. FT

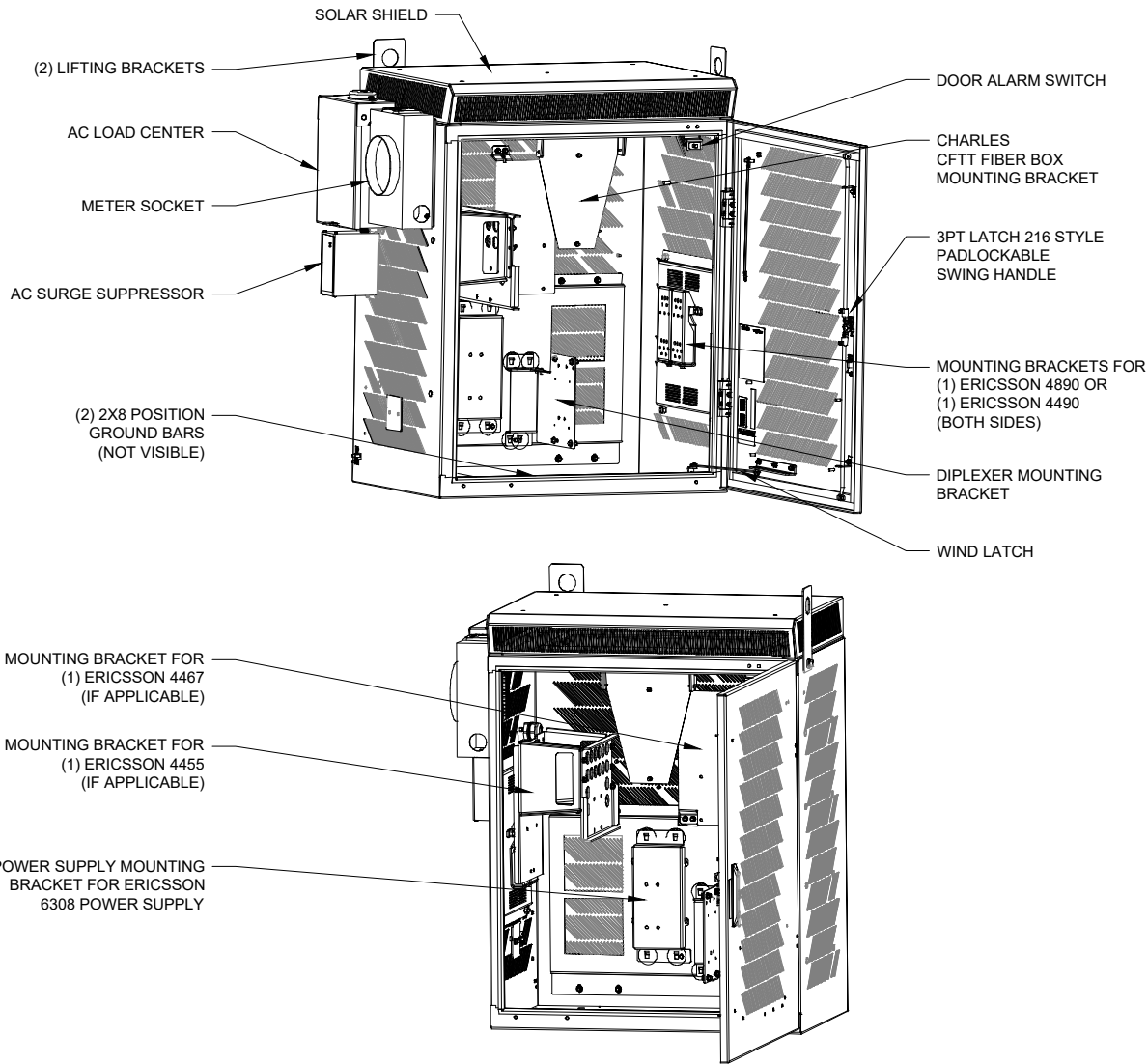


1 CHARLES CABINET SHRD56-601AFGB1
N.T.S.

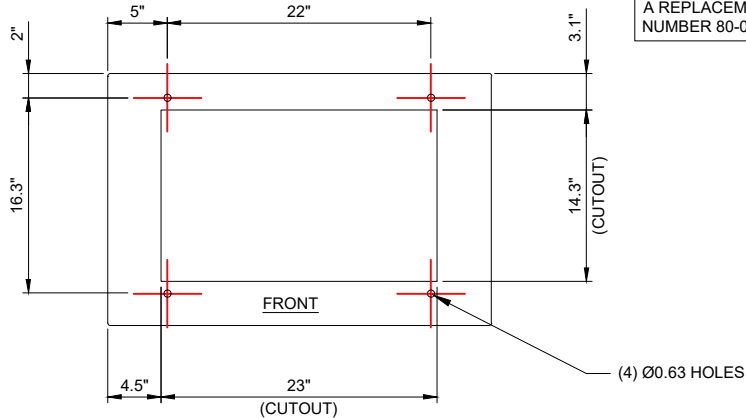


50" X 40" X 15", 1 BAY, HOLDS CSH56 SHROUD, 42 LBS

3 CPAD -CHARLES COMPOSITE PAD FOR SHRD56
(#CPAD15EXCSH56)
N.T.S.



2 ISOMETRIC INSTALLATION
N.T.S.



4 MOUNTING PATTERN DIMENSIONS
N.T.S.

NOTE:
A LOOSE GASKET IS PROVIDED INSIDE
SHRD56 FOR PLACING THE SHRD56 ON A
CONCRETE PAD. IF THE GASKET BECOMES
DAMAGED DURING INSTALLATION, ORDER
A REPLACEMENT UNDER PART
NUMBER 80-005172-A

verizon

10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND	
DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS			
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

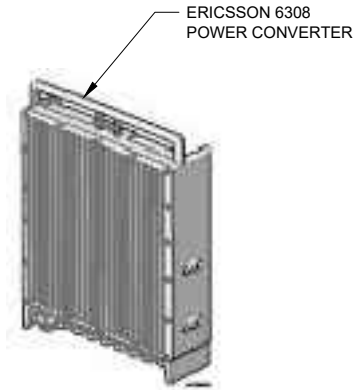
KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

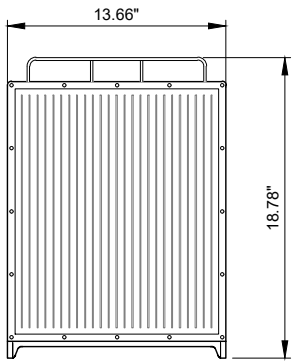
SHEET TITLE
CHARLES CABINET AND CPAD
DETAILS

SHEET NUMBER
ANT-5

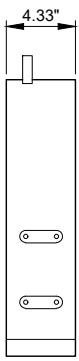


ERICSSON 6308
POWER CONVERTER

DESCRIPTION	VALUE
POWER INPUT	10-127 V AC OR 200-240 V AC (LINE-NEUTRAL OR LINE- LINE)
TOTAL POWER OUTPUT	100-127 V AC 3000 W 200-240 V AC 6000 W
MAXIMUM POWER ON ONE OUTPUT PORT	2000 W
HEIGHT	13.66"
WIDTH	18.78"
DEPTH	4.33"
WEIGHT	30.9 LBS
COLOR	NCS S 1002-B



FRONT VIEW



SIDE VIEW

1 ERICSSON 6308 POWER CONVERTER INFORMATION
N.T.S.



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 RJ45C port for 2.048 MHz, E1/T1 (BITS) input/output

VOLUME : 0.166 FT³
WEIGHT: 13.2 lbs

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 110 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

2 BASEBAND 6672 INFORMATION
N.T.S.

Radio 4890HP 48B2 48B66 S

- 8 RF ports, 4T8R per band (S for TX)
- B2: 4x60W, B66: 4x60W
- Up to 480W in total RF power
- L, NR, NB-IoT
- 2x 2.5/4.9/9.8/18.1/24.3 Gbps CPRI/eCPRI

Radio 4890HP 48B2 48B66 S	Height	Width	Depth	Weight
no protruding items	17.5 in (444 mm)	15.2 in (384 mm)	7.0 in (178 mm)	~67.5 lbs (~30.5 kg)
w/ protruding items	20.8 in (523 mm)	15.7 in (398 mm)	7.05 in (179 mm)	

- -48 VDC 2-wire (single DC-connector),
- AISG v3.0 TMA & RET support via RS-485 or RF connectors
- Type 4.3-10 RF + connectors
- 2 external alarm
- Convectioanal cooling
 - Optional fan for increased site flexibility
- Power consumption with 100% Load @ 25C
 - Output Power 480W: 1370W
 - Output Power 320W: 970W
- 1P 65, -40 to +55°C

VOLUME : 1.32 FT³
WEIGHT: 67.5 lbs



3 ERICSSON 4890 RADIO INFORMATION
N.T.S.

verizon

10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

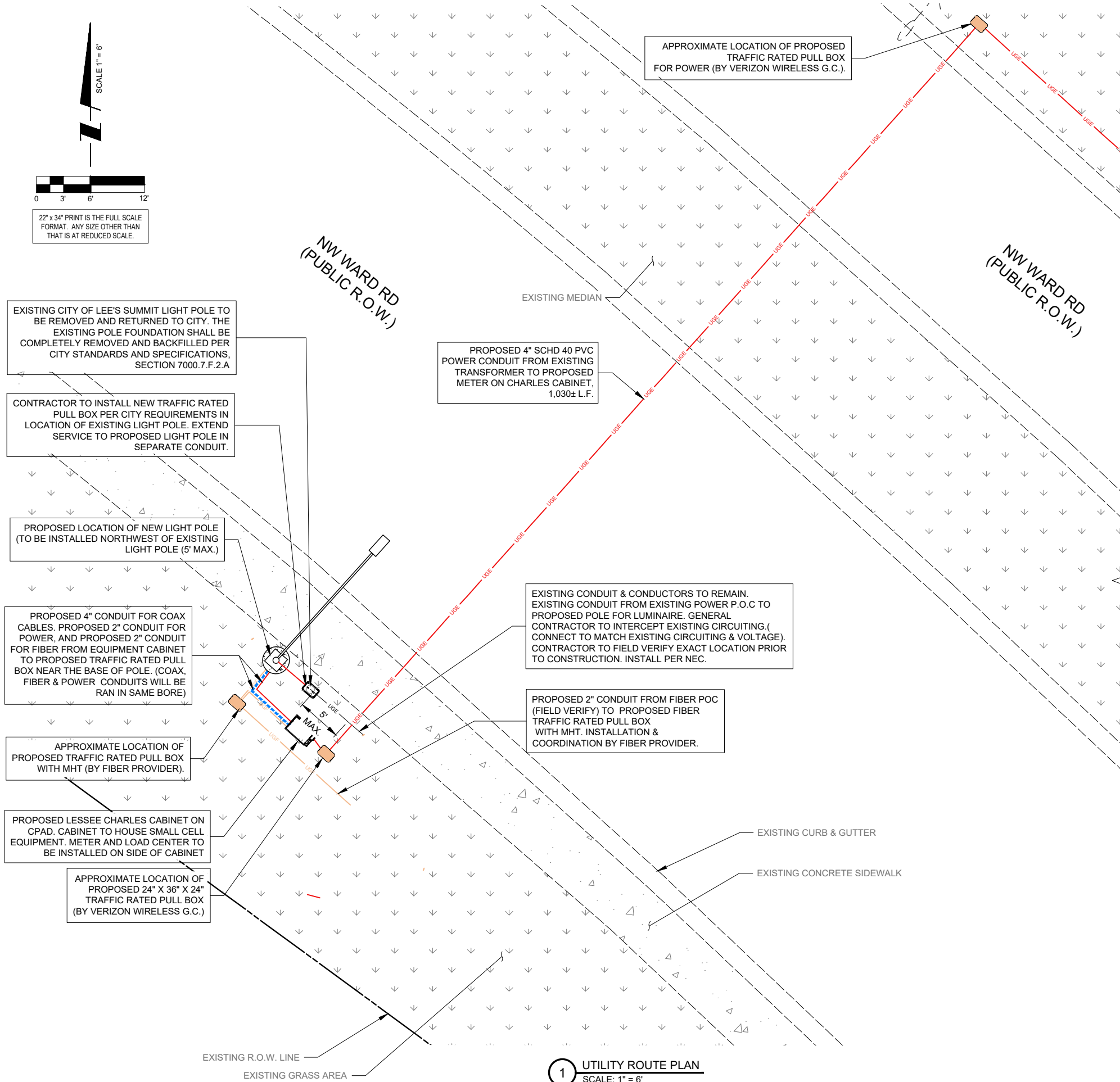
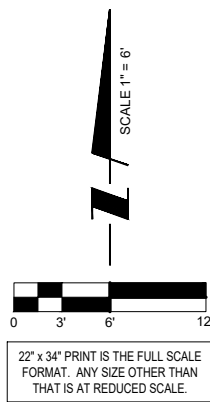
1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

SHEET TITLE
EQUIPMENT
DETAILS

SHEET NUMBER

ANT-6



- CONTRACTOR NOTES:
1. SITE PLAN MAY NOT CONTAIN ALL SUBSURFACE UTILITIES. VERIZON WIRELESS G.C. TO FIELD LOCATE ALL SUBSURFACE UTILITIES PRIOR TO CONSTRUCTION.
 2. G.C. SHALL RESTORE ALL AREAS OF THE RIGHT-OF-WAY IMPACTED BY THE SMALL CELL FACILITIES AND/OR WIRELESS SUPPORT STRUCTURE INSTALLATION AND/OR REMOVAL TO EQUAL OR BETTER CONDITION WITH LANDLORD.
 3. CONTRACTOR SHALL COORDINATE SITE ACCESS AND STAGING LOCATIONS WITH LANDLORD.
 4. ALL STREET LIGHT POLES WILL REQUIRE A NEW FOUNDATION. REFERENCE TO STRUCTURAL PLANS PROVIDED BY OTHERS.
 5. CONTRACTOR TO FIELD VERIFY EXACT LOCATION OF ALL EQUIPMENT TO MEET SYSTEM REQUIREMENTS.

SURVEY PERFORMED BY:

LOVELACE & ASSOCIATES
Land Surveying - Land Planning
Telecommunications Surveys
929 SE 3rd Street Lee's Summit, Missouri 64063
Phone: (816) 347-9997 Fax: (816) 347-9979



MATCH LINE "A"
SEE SHEET-E1A FOR CONTINUATION

EXISTING SYMBOLS & UTILITIES LEGEND

	POWER POLE		ANCHOR
	LIGHT POLE		SIGN
	UTILITY CABINET		MANHOLE
	UTILITY VAULT		FIRE HYDRANT
	IRRIGATION VAULT		DECIDUOUS TREE
	WATER METER		
	GAS METER		
	ELECTRIC METER		
	WATER VALVE		
	GAS VALVE		
	FENCE LINE		
	UNDERGROUND ELECTRIC		
	UNDERGROUND FIBER		
	UNDERGROUND TELCO		
	UNDERGROUND GAS LINE		
	OVERHEAD ELECTRIC		
	OVERHEAD FIBER		
	OVERHEAD TELCO		
	UTILITY LINE		
	STORM SEWER LINE		
	SANITARY SEWER LINE		
	WATERMAIN LINE		

PROPOSED SYMBOLS

	LIGHT POLE		QUAZITE BOX
	UTILITY POLE		METER

verizon
10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY: TSB
CHECKED BY: MP
DATE: 07/15/25
PROJECT #: 132-359

SHEET TITLE
ELECTRICAL DETAILS

SHEET NUMBER

E-1

UTILITY NOTES:

WORK INCLUDES:

THESE NOTES AND ACCOMPANYING DRAWINGS COMPLEMENT THE PROVISIONS AND INSTALLATIONS BY THE ELECTRICAL CONTRACTOR, OF ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL THE ELECTRICAL WORK COMPLETE IN CONNECTION WITH THIS VERIZON WIRELESS SITE AND SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

1. THE PROVISIONS, INSTALLATION, AND CONNECTION OF A GROUNDING ELECTRODE SYSTEM COMPLETE WITH SECONDARY GROUNDING, AND CONNECTIONS TO THE INCOMING ELECTRICAL DISTRIBUTION EQUIPMENT.
2. THE PROVISION AND INSTALLATION OF AN OVERHEAD ELECTRICAL SERVICE OR UNDERGROUND ELECTRICAL SERVICE AND ALL ASSOCIATED WIRE AND CONDUIT AS REQUIRED AND/OR INDICATED ON PLANS.
3. THE PROVISION, INSTALLATION OF CONDUIT AND CONNECTIONS FOR LOCAL FIBER SERVICE.
4. THE FURNISHING AND INSTALLATION OF THE ELECTRICAL SERVICE ENTRANCE CONDUCTORS, CONDUITS, METER SOCKET, AND CONNECTIONS TO THE SERVICE EQUIPMENT.
5. TWO INCH (2") AND THREE INCH (3") DIAMETER PVC CONDUITS SCHEDULE 40.
6. ALL PVC CONDUITS SHOULD BE LEFT WITH NYLON PULL CORD FOR FUTURE USE.
7. EXCAVATION, TRENCHING, AND BACKFILLING FOR CONDUIT(S), CABLE(S), AND EXTERNAL GROUNDING SYSTEM.

CODES, PERMITS, AND FEES:

1. ALL REQUIRED PERMITS, LICENSES, INSPECTIONS AND APPROVALS SHALL BE SECURED AND ALL FEES FOR SAME PAID BY CONTRACTOR.
2. THE INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES: STATE, LOCAL AND NATIONAL, AND THE DESIGN, PERFORMANCE CHARACTERISTICS AND METHODS OF CONSTRUCTION OF ALL ITEMS AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE VARIOUS APPLICABLE STANDARD SPECIFICATIONS OF THE FOLLOWING AUTHORITIES:

N.E.C.	NATIONAL ELECTRIC CODE
A.N.S.I.	AMERICAN NATIONAL STANDARDS INSTITUTE
I.E.E.E.	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
A.S.T.M.	AMERICAN SOCIETY FOR TESTING MATERIALS
N.E.M.A.	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
U.L.	UNDERWRITERS LABORATORIES, INC.
N.F.P.A.	NATIONAL FIRE PROTECTION ASSOCIATION

RACEWAYS AND WIRING:

1. WIRING OF EVERY KIND MUST BE INSTALLED IN CONDUIT, UNLESS NOTED OTHERWISE, OR AS APPROVED BY THE ENGINEER.
2. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE COPPER (CU) TYPE THWN, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
3. RACEWAYS SHALL BE GALVANIZED STEEL, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, UNLESS OTHERWISE NOTED. ALL RACEWAYS SHALL BE APPROVED FOR THE INSTALLATION.
4. PULL OR JUNCTION BOXES SHALL BE PROVIDED AS REQUIRED TO FACILITATE INSTALLATION OF RACEWAYS AND WIRING. PROVIDE JUNCTION AND PULLBOXES FOR CONDUIT RUNS WITH MORE THAN (360) DEGREES OF BENDS.
5. PROVIDE A COMPLETE RACEWAY AND WIRING INSTALLATION, PERMANENTLY AND EFFECTIVELY GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE AND LOCAL CODES.
6. ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING.

GENERAL NOTES:

SEE DETAILS AND SCHEDULES ON DRAWINGS AND SPECIFICATIONS FOR MEANING OF ABBREVIATIONS AND ADDITIONAL REQUIREMENTS AND INFORMATION. CHECK ARCHITECTURAL, STRUCTURAL AND OTHER MECHANICAL AND ELECTRICAL DRAWINGS FOR SCALE, SPACE LIMITATIONS, COORDINATION, AND ADDITIONAL INFORMATION, ETC. REPORT ANY DISCREPANCIES, CONFLICTS, ETC. TO ENGINEER BEFORE SUBMITTING BID. ALL EQUIPMENT FURNISHED BY OTHERS (FBO) SHALL BE PROVIDED WITH PROPER MOTOR STARTERS, DISCONNECTS, CONTROLS, ETC. BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE. THE ELECTRICAL CONTRACTOR SHALL INSTALL AND COMPLETELY WIRE ALL ASSOCIATED EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WIRE DIAGRAM AND AS REQUIRED FOR A COMPLETE OPERATING INSTALLATION. ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF (FBO) EQUIPMENT PRIOR TO ROUGH-IN OF CONDUIT AND WIRING TO AVOID CONFLICTS.

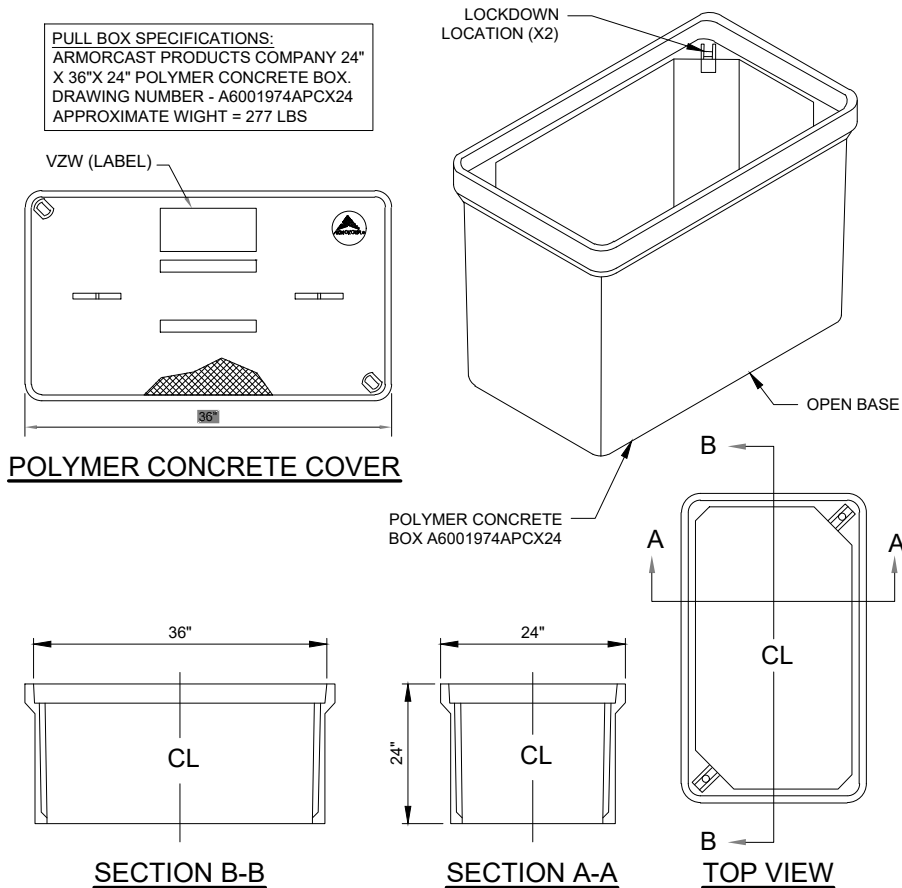
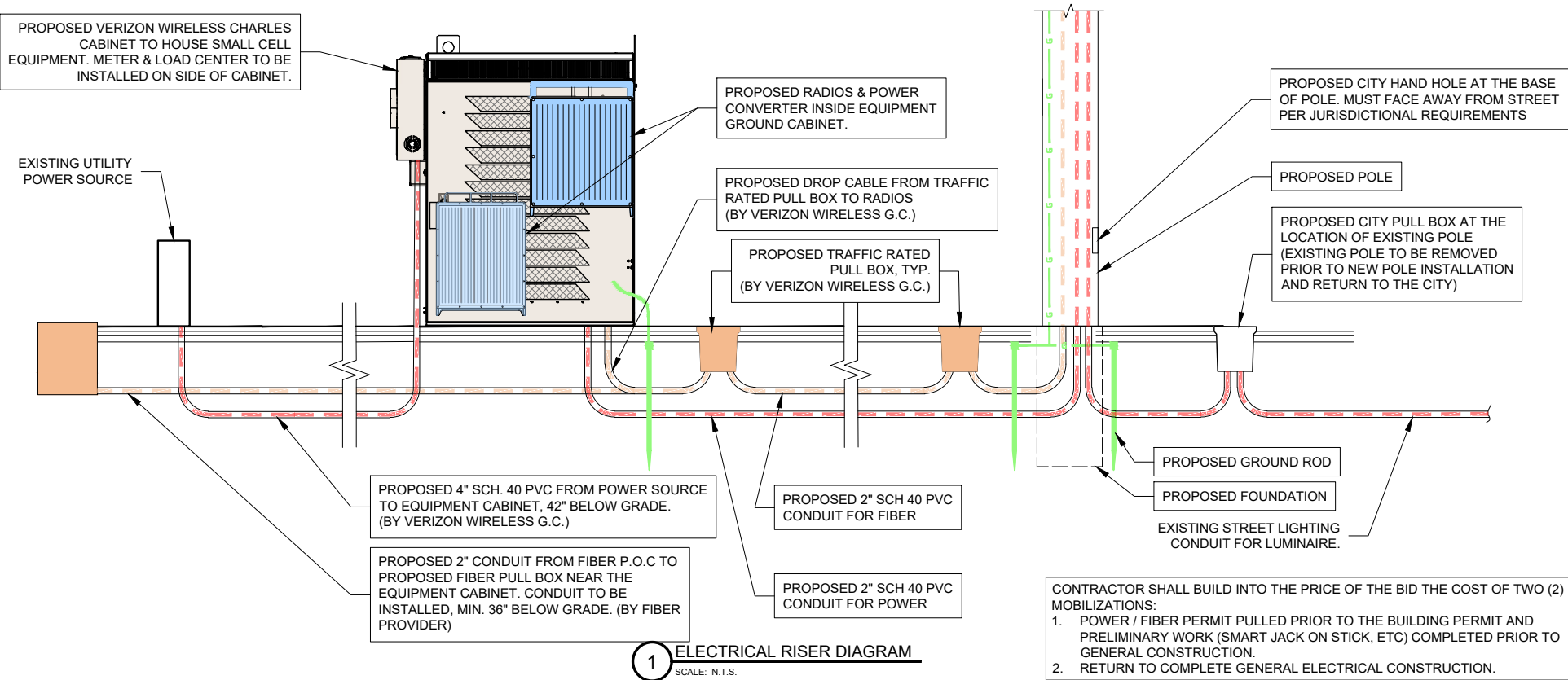
COORDINATION WITH UTILITY COMPANY:

THE ELECTRICAL CONTRACTOR SHALL COORDINATE COMPLETE ELECTRICAL SERVICE WITH LOCAL UTILITY COMPANY FOR A COMPLETE OPERATIONS SYSTEM, INCLUDING TRANSFORMER CONNECTIONS, CONCRETE TRANSFORMER PADS, IF REQUIRED, METER SOCKETS, PRIMARY CABLE RACEWAY REQUIREMENTS, SECONDARY SERVICE, ETC. PRIOR TO SUBMITTING BID TO INCLUDE ALL LABOR AND MATERIALS. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE BID ANY OPTIONAL OR EXCESS FACILITY CHARGES ASSOCIATED WITH PROVIDING ELECTRICAL SERVICE FROM LOCAL UTILITY COMPANY. VERIFY BEFORE BIDDING TO INCLUDE ALL COSTS. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT WITH THE LOCAL UTILITY COMPANY PRIOR TO SUBMITTING BID. ADJUST A.I.C. RATINGS OF ALL OVER CURRENT PROTECTION DEVICES IN DISTRIBUTION EQUIPMENT AS REQUIRED TO COORDINATE WITH AVAILABLE FAULT CURRENT FROM LOCAL UTILITY COMPANY. ALL GROUNDING RODS PROVIDED BY THE POWER OR TELEPHONE UTILITY COMPANIES MUST BE TIED INTO THE MAIN EXTERNAL GROUND RING.

UTILITY CONTACTS:

EVERGY
PHILLIP INGRAM
EMAIL: PHILLIP.INGRAM@EVERGY.COM
PREMISE #: 0438302479

FIBER: NOT COORDINATED
BY TERRA CONSULTING GROUP

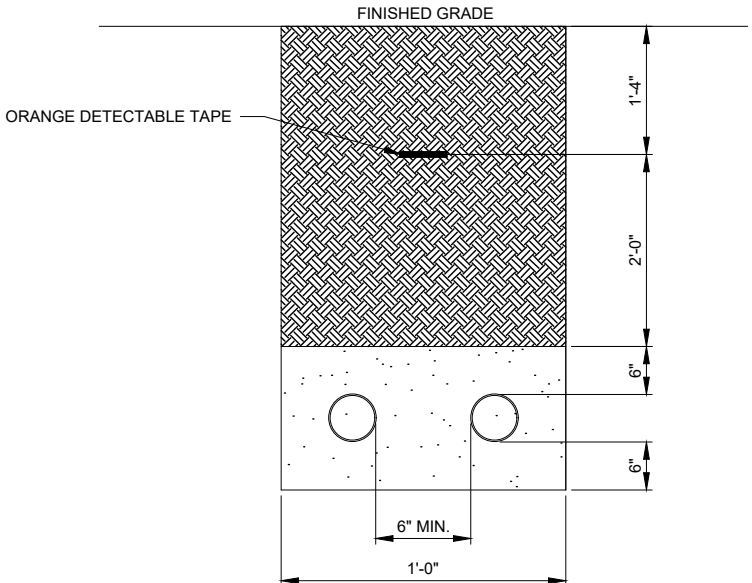


NOTES:

1. CONTRACTOR TO REFER TO PLAN FOR CONDUIT SIZE

NOTES:

1. EXCAVATE TO REQUIRED DEPTH.
2. VERIFY ALL TRENCHING REQUIREMENTS WITH SERVING UTILITIES.
3. CALL BEFORE YOU DIG. CONTACT SERVING UTILITIES.
4. FIBER AND POWER CONDUITS MAY BE RUN IN SEPARATE TRENCHES. CONDUITS SHALL MAINTAIN 6" MINIMUM SEPARATION.



verizon

10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

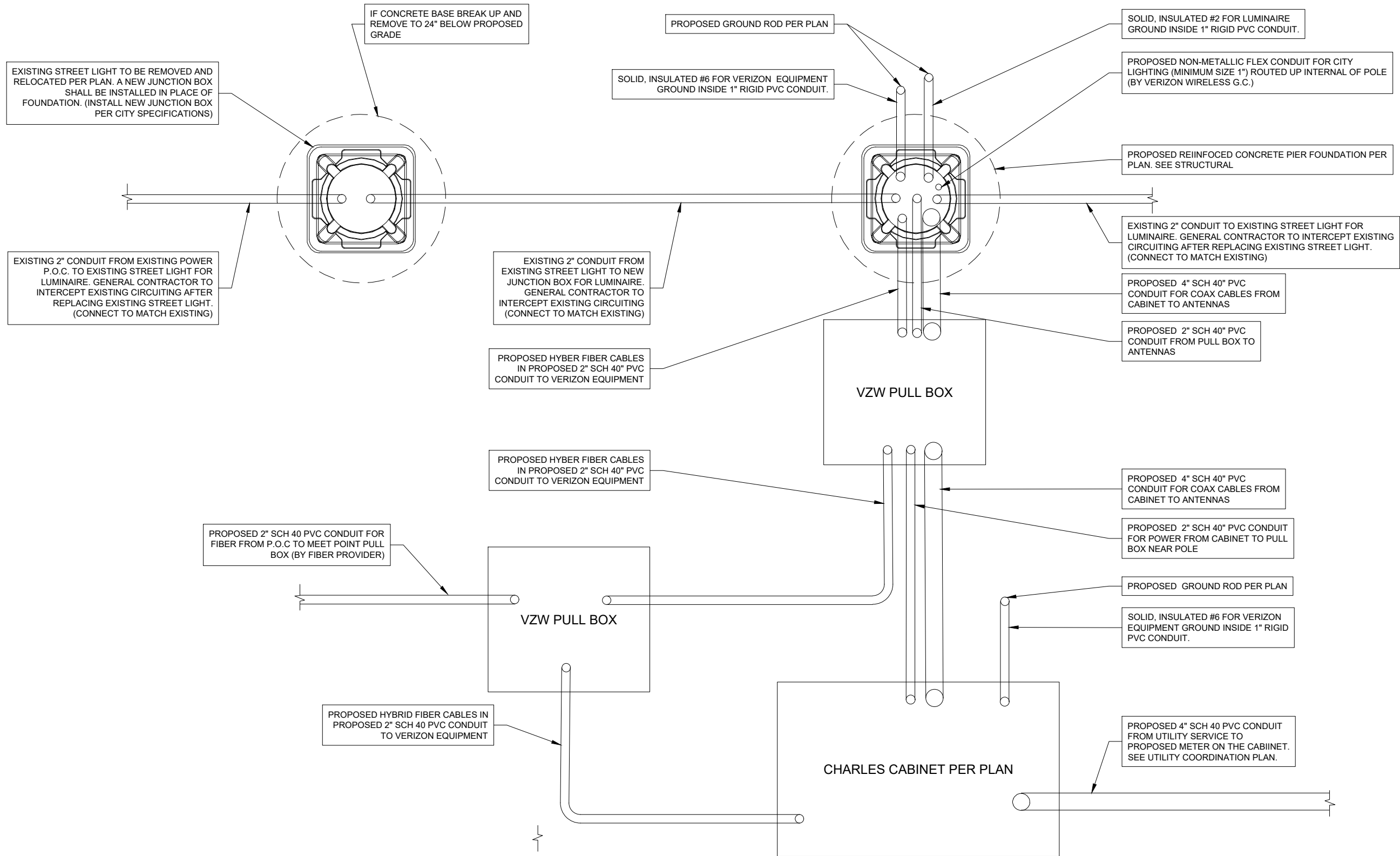
1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

SHEET TITLE
UTILITY DETAILS

SHEET NUMBER

E-2



verizon

10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY: TSB

CHECKED BY: MP

DATE: 07/15/25

PROJECT #: 132-359

SHEET TITLE
STREET LIGHT
CIRCUIT PLAN

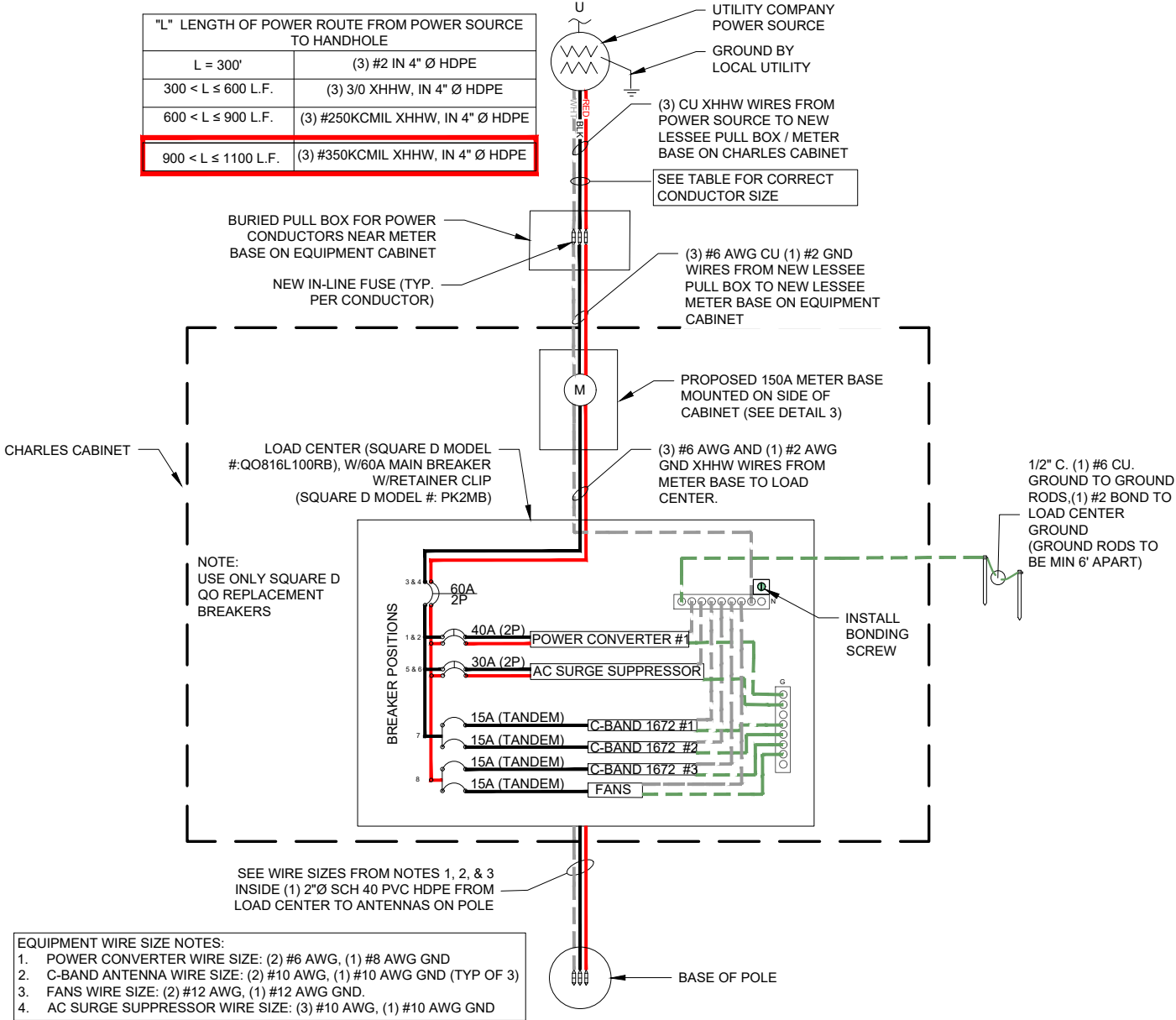
SHEET NUMBER

E-3

LEGEND	
GRN	GROUNDING WIRE
BLK	AC POWER CONDUCTORS
RED	NEUTRAL CONDUCTOR
WHT	NEUTRAL CONDUCTOR

NOTE:
SERVICE FEEDER BASIS OF DESIGN:
SERVICE ENTRANCE CONDUCTORS ARE
BASED ON DESIGN LOAD OF 60A AND
ARE SIZED TO PREVENT VOLTAGE DROP
EXCEEDING 4%. CONTRACTOR SHALL
VERIFY ALL LUG SIZES AND COORDINATE
REQUIREMENTS WITH UTILITY PROVIDER.

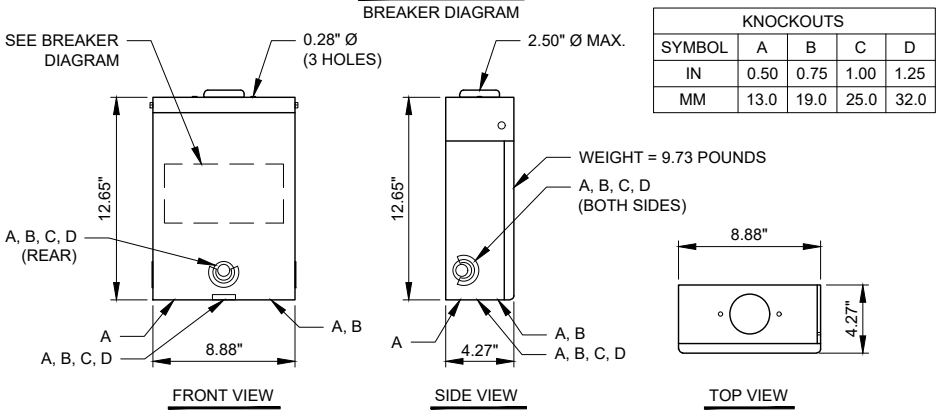
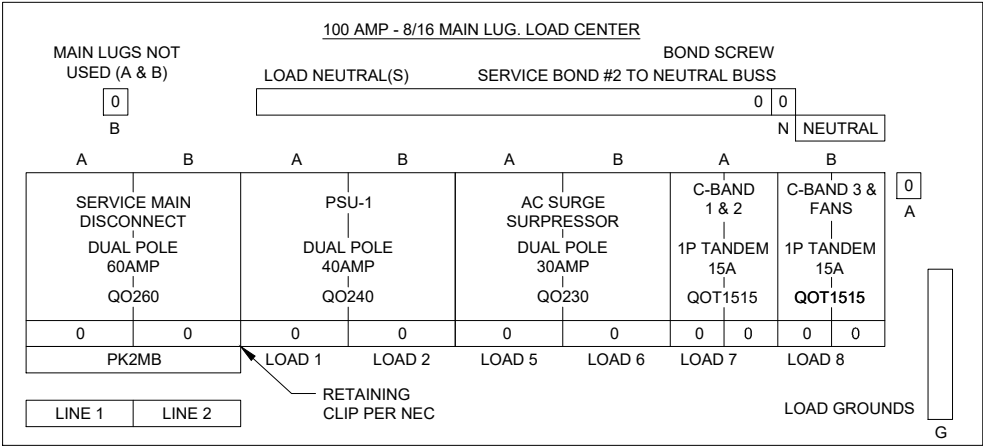
"L" LENGTH OF POWER ROUTE FROM POWER SOURCE TO HANDHOLE	
L = 300'	(3) #2 IN 4" Ø HDPE
300 < L ≤ 600 L.F.	(3) 3/0 XHHW, IN 4" Ø HDPE
600 < L ≤ 900 L.F.	(3) #250KCMIL XHHW, IN 4" Ø HDPE
900 < L ≤ 1100 L.F.	(3) #350KCMIL XHHW, IN 4" Ø HDPE



- EQUIPMENT WIRE SIZE NOTES:
- POWER CONVERTER WIRE SIZE: (2) #6 AWG, (1) #8 AWG GND
 - C-BAND ANTENNA WIRE SIZE: (2) #10 AWG, (1) #10 AWG GND (TYP OF 3)
 - FANS WIRE SIZE: (2) #12 AWG, (1) #12 AWG GND.
 - AC SURGE SUPPRESSOR WIRE SIZE: (3) #10 AWG, (1) #10 AWG GND

- NOTE FOR POWERING FANS:
- G.C. TO SPLICE AND CAP COOLING FANS WIRES TO CONDUCTOR WIRE FROM LOAD CENTER.

1 SINGLE LINE DIAGRAM
N.T.S.



2 Q08-16L100RB LOAD CENTER SPECS
N.T.S.



3 MILLBANK U7262-RL-TG METER

SPECIFICATIONS	
BRAND NAME	MILLBANK
HEIGHT	15 1/2 IN.
LENGTH	4 1/8 IN.
TYPE	RINGLESS
APPLICATION	METER SOCKET
WIDTH	8 IN.
STANDARD	UL LISTED; 3R
VOLTAGE RATING	600 VOLTS; A.C.
AMPERAGE RATING	150 CONTINUOUS AMPERE
PHASE	1 PHASE
FREQUENCY RATING	60 HERTZ
# OF MAIN BREAKERS	0
MAIN BREAKER SIZE	NO MAIN BREAKER
CABLE ENTRY	OH
TERMINAL	LAY IN
INSULATION	GLASS POLYESTER
MOUNTING	SURFACE MOUNT
MATERIAL	G90 GALV. STEEL W/ POWDER COAT FINISH
# OF JAWS	5 TERMINAL
BYPASS PROVISION	LEVER BYPASS
# OF METERED POS.	1 POSITION
EQUIPMENT GROUND	GROUNDING LUG
HUB/CLOSING PLATE	LARGE HUB OPENING ADAPTED TO SMALL CLOSING PLATE
LINE SIDE WIRE RANGE	6 AWG - 350 KCMIL
# OF RECEPTACLES	0

verizon

10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND	
DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS			
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

SHEET TITLE
ELECTRICAL DETAILS

SHEET NUMBER

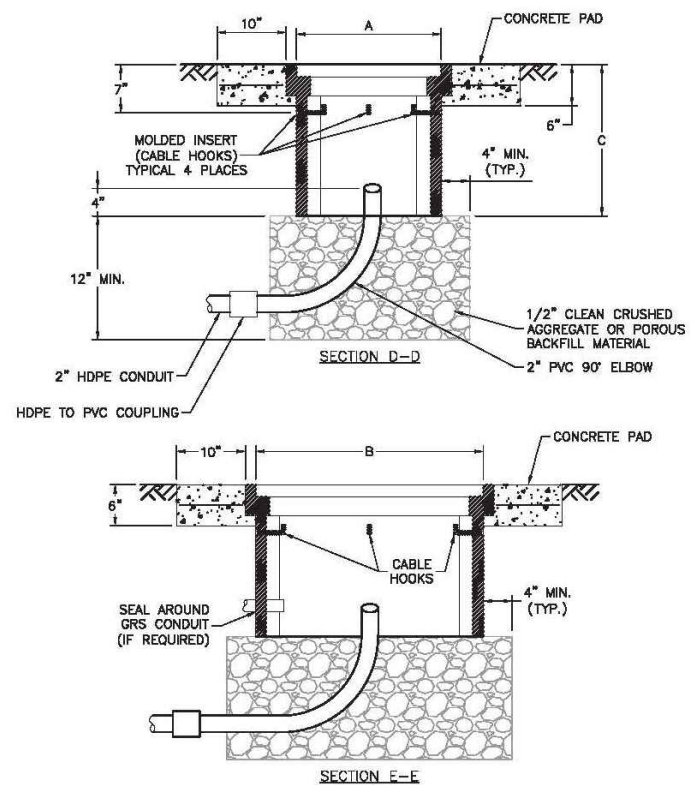
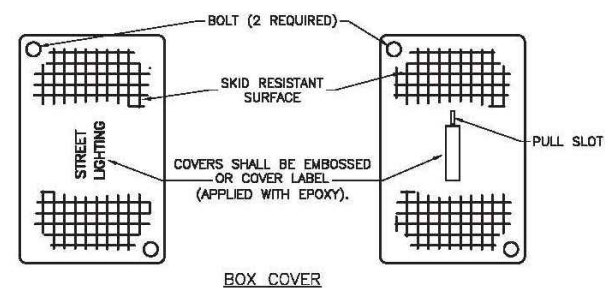
E-4



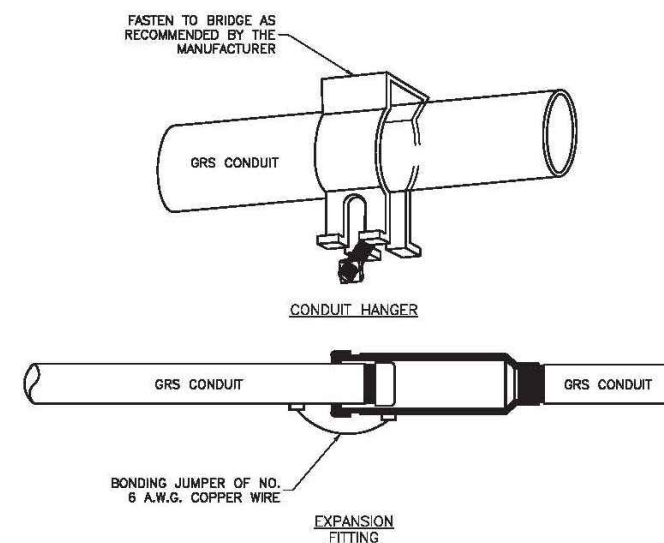
1. AN ALUMINUM MARKER SHALL BE PLACED IN THE TOP OF THE CURB DIRECTLY OVER THE CONDUIT.
2. MARKERS SHALL BE INSTALLED BY DRILLING THE CURB AND EXPOXYING THE MARKER IN PLACE. IF INSTALLED IN A SIDEWALK OR CURB RAMP, THE TOP OF THE MARKER SHALL BE FLUSH WITH THE CONCRETE SURFACE.
3. NO DIRECT PAYMENT SHALL BE MADE FOR CONDUIT MARKERS; THEY ARE SUBSIDIARY TO THE INSTALLATION OF CONDUIT.



1. BACKFILL UNDER PAVED SURFACES SHALL BE FLOWABLE FILL.
2. THE CONDUIT SHALL NOT BE COVERED UNLESS INSPECTED AND APPROVED BY THE CITY ENGINEER, SO AS TO ENSURE PROPER DEPTH, CORRECT CONDUIT MATERIAL, AND PROPER CONDUIT END TREATMENT.



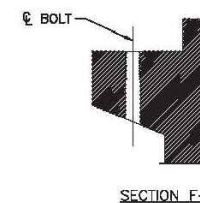
PULL OR JUNCTION BOX DETAILS



GRS CONDUIT DETAILS

1. ALL CONDUITS INSTALLED ABOVE GROUND SHALL BE GRS.
2. CONDUIT ATTACHED TO BRIDGES SHALL HAVE EXPANSION FITTINGS INSTALLED AT EACH END OF THE BRIDGE AND AT EACH EXPANSION JOINT ON THE BRIDGE.
3. ALL GRS CONDUITS SHALL BE ELECTRICALLY BONDED BY A GROUNDING BUSHING AND GROUND WIRE AS DETAILED.
4. INSTALL THE CONDUIT AND CONNECTOR ASSEMBLY TO PERMIT A 1/2" MINIMUM LONGITUDINAL TRAVEL IN EITHER DIRECTION.

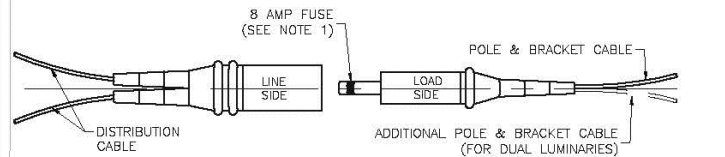
ALL DIMENSIONS SHOWN ARE NOMINAL



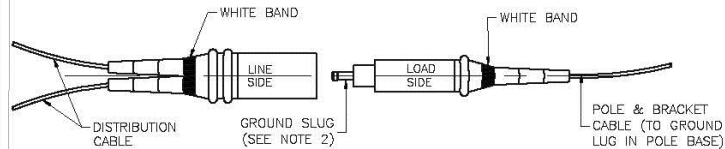
1. LIFT OPENING REQUIRED ON ALL COVERS.
2. PREFORMED BOX WALLS MAY BE EITHER FLARED OR VERTICAL. THE BOTTOM OF BOXES SHALL BE OPEN TO BELOW.
3. IF AN EXTENSION IS USED WITH A PREFORMED BOX, THE LIP OF THE EXTENSION MAY BE INTERIOR OR EXTERIOR. THE EXTENSION SHALL BE COMPATIBLE AND FROM THE SAME MANUFACTURER.
4. CABLE HOOKS ARE TO BE INCLUDED WITH CLASS 1 PULL BOXES ONLY.
5. A CLASS 1 PULL BOX SHALL BE INSTALLED ADJACENT TO EACH 4-CIRCUIT POWER SUPPLY.

E-5

SL-3



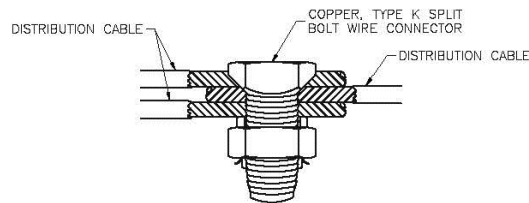
BREAK-AWAY FUSED ELECTRICAL CONNECTORS



BREAK-AWAY NON FUSED ELECTRICAL CONNECTOR

NOTES:

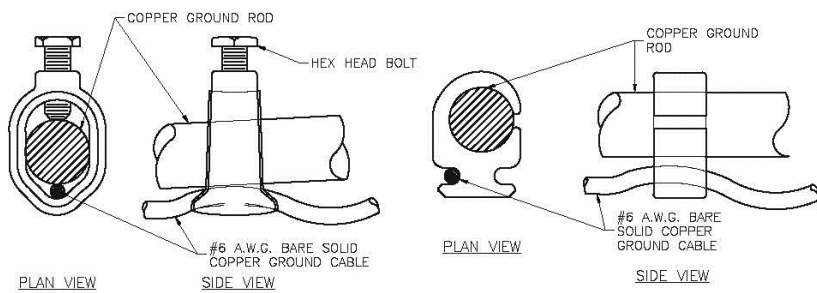
1. FUSE REMAINS IN "LOAD SIDE" AFTER BREAK-AWAY.
2. GROUND "SLUG" REMAINS IN "LOAD SIDE" AFTER BREAK-AWAY.
3. CONNECTORS SHALL HAVE SET SCREW TYPE TERMINALS TO ATTACH CABLES.



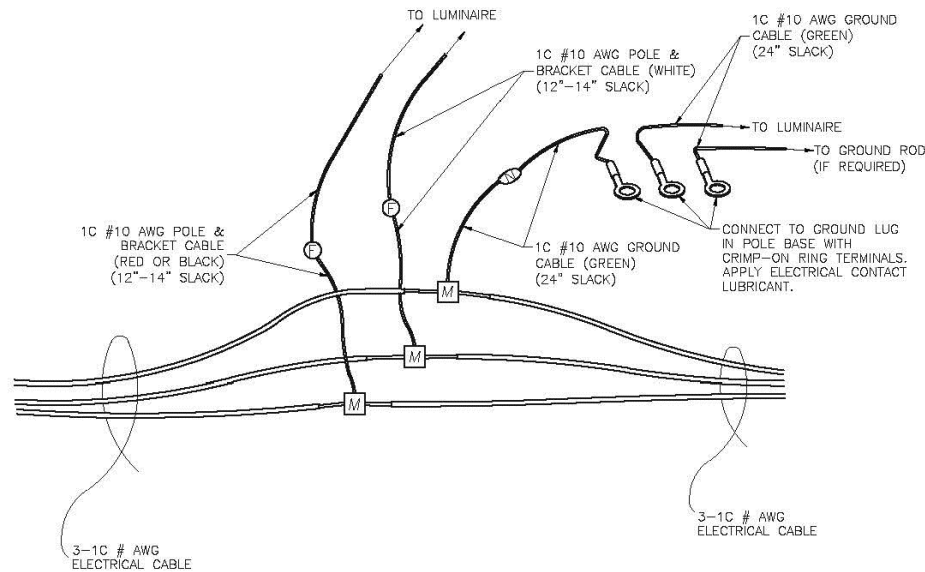
SPLICE KIT DETAILS

NOTES:

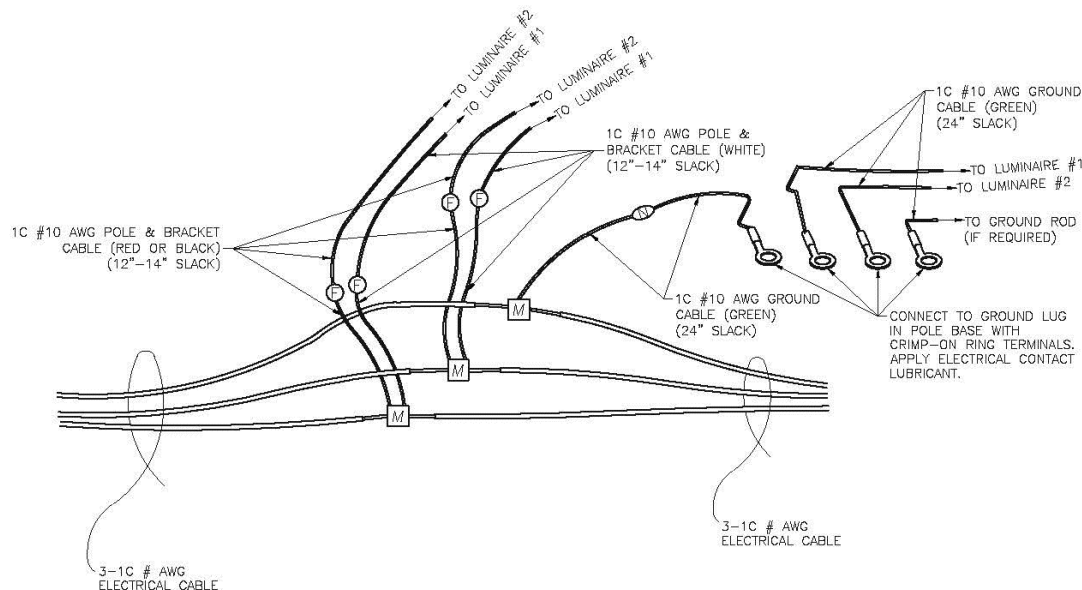
1. TO BE USED ONLY IN JUNCTION OR PULL BOXES WHERE CIRCUITS BRANCH OR "TEE".
2. ALL SPLICES SHALL BE PROTECTED WITH A RESIN SPLICE KIT (NOT SHOWN) INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.



GROUND ROD CONNECTION DETAILS



ELECTRICAL CONNECTOR KIT SCHEMATIC
(SINGLE LUMINAIRE)



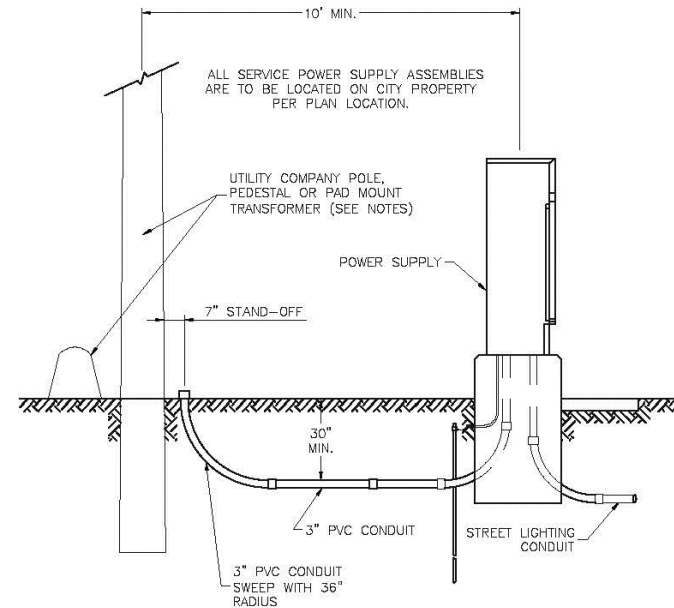
ELECTRICAL CONNECTOR KIT SCHEMATIC
(TWIN LUMINAIRES)

LEGEND

- M MULTI-TAP ELECTRICAL CONNECTOR
- F BREAK-AWAY FUSED ELECTRICAL CONNECTOR WITH 8 AMP FUSE
- N BREAK-AWAY NON-FUSED ELECTRICAL CONNECTOR WITH GROUND "SLUG"
- A SPLICE KIT

NOTES:

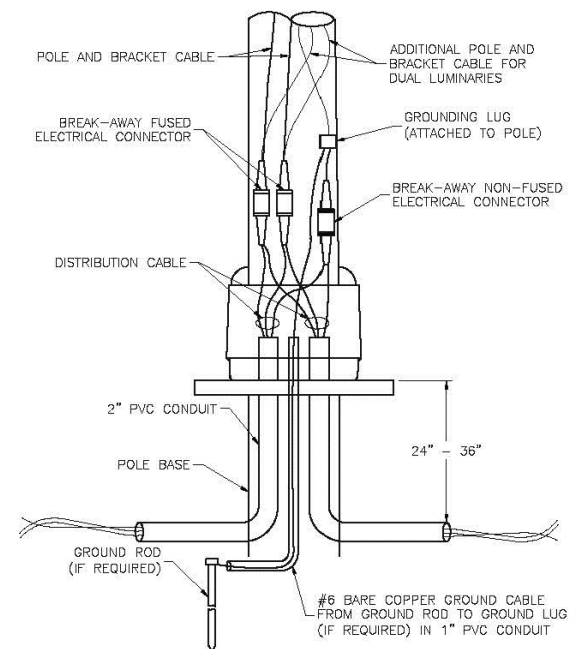
1. RED CABLES SHALL BE CONNECTED TO WEST OR NORTH ORIENTED LUMINAIRE. BLACK CABLES SHALL BE CONNECTED TO EAST OR SOUTH ORIENTED LUMINAIRE.
2. THE SPECIFIED CABLE SLACK SHALL BE PROVIDED ON EACH SIDE OF THE FUSED AND UN-FUSED CONNECTORS.
3. ADDITIONAL SLACK SHALL BE PROVIDED FOR THE #4 AWG CABLE SUCH THAT WHEN EXTENDED UPWARD, THE TOP OF THE MULTI-TAP CONNECTORS ARE NO LESS THAN 1" AND NO MORE THAN 3" ABOVE THE TOP OF THE HAND HOLE OPENING.



SECONDARY SERVICE CONNECTION DETAILS

NOTES:

1. CONTRACTOR SHALL INSTALL A CONDUIT STUB 24" TO 6" ABOVE GROUND AT UTILITY POLES. CONDUIT SHALL BE STUBBED TO THE SIDE OF THE POLE THAT WILL ALLOW A DIRECT RUN UP THE POLE TO THE TRANSFORMER WITHOUT CROSSING OTHER UTILITY LINES OR CABLES. THE END OF THE CONDUIT SHALL BE CAPPED.
2. CONTRACTOR SHALL INSTALL CONDUIT IN A TRENCH TO WITHIN 24" OF PEDESTALS OR PAD MOUNT TRANSFORMERS AND LEAVE A 36" X 36" X 36" ACCESS HOLE IN THE GROUND. CONTRACTOR SHALL KEEP OPEN TRENCH COVERED AND PROMPTLY BACKFILL ACCESS HOLE WHEN SERVICE IS COMPLETED.



POLE WIRING DETAILS

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

POLE AND LUMINAIRE DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

ELECTRICAL DETAILS

Drawn By: BWC
Checked By: MP
Date: 01/2020
Proj. #:

SL-5

verizon

10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

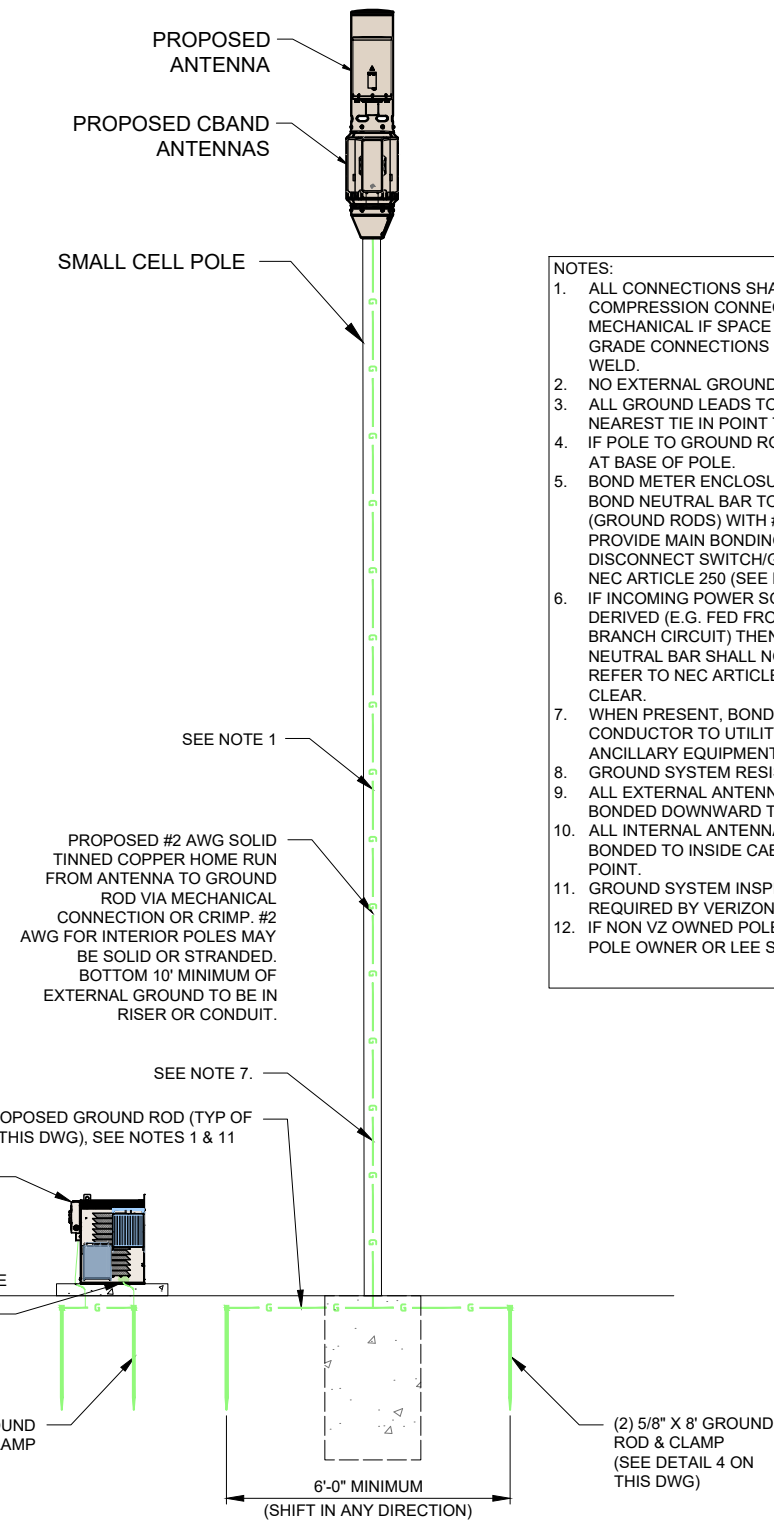
1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

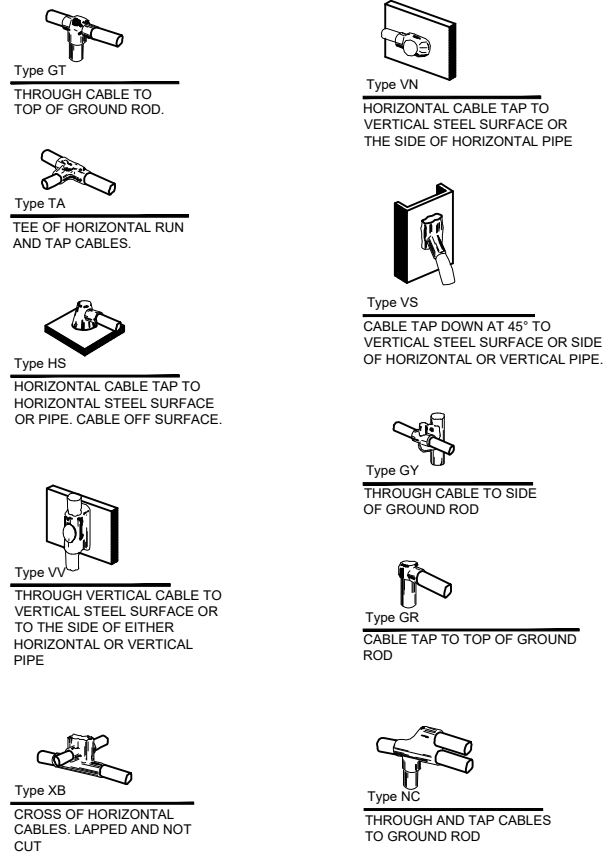
SHEET TITLE
CITY ELECTRICAL DETAILS

SHEET NUMBER

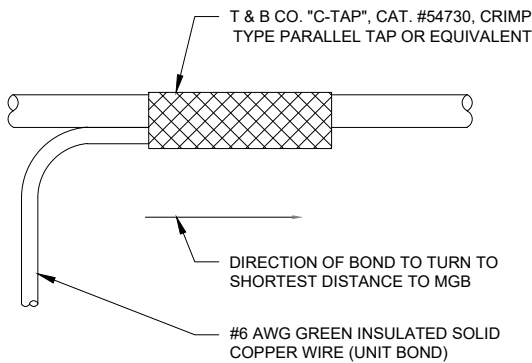
E-6



- NOTES:
1. ALL CONNECTIONS SHALL BE MADE USING UL RATED COMPRESSION CONNECTIONS AS FIRST PREFERRED OR MECHANICAL IF SPACE CONSTRAINTS EXIST. BELOW GRADE CONNECTIONS MAY BE COMPRESSION OR CAD WELD.
 2. NO EXTERNAL GROUND BARS.
 3. ALL GROUND LEADS TO BE ROUTED DOWNWARDS TO NEAREST TIE IN POINT TO MAIN HOME RUN GROUND.
 4. IF POLE TO GROUND ROD IS >6' ADD 3RD GROUND ROD AT BASE OF POLE.
 5. BOND METER ENCLOSURE PER UTILITY REQUIREMENTS. BOND NEUTRAL BAR TO GROUNDING ELECTRODES (GROUND RODS) WITH #2 AWG PER NEC ARTICLE 250. PROVIDE MAIN BONDING JUMPER BETWEEN SERVICE DISCONNECT SWITCH/GROUND BAR AND NEUTRAL PER NEC ARTICLE 250 (SEE NOTE 6).
 6. IF INCOMING POWER SOURCE IS NON-SEPARATELY DERIVED (E.G. FED FROM ANOTHER BUILDING OR A BRANCH CIRCUIT) THEN DISCONNECT / PANELBOARD NEUTRAL BAR SHALL NOT BE BONDED TO GROUND. REFER TO NEC ARTICLE 250 IF APPLICATION IS NOT CLEAR.
 7. WHEN PRESENT, BOND VERIZON GROUND DOWN CONDUCTOR TO UTILITY POLE GROUND BELOW ANY ANCILLARY EQUIPMENT BOND.
 8. GROUND SYSTEM RESISTANCE 25 OHMS OR LESS.
 9. ALL EXTERNAL ANTENNA AND EQUIPMENT SHALL BE BONDED DOWNWARD TO HOME RUN GROUND WIRE.
 10. ALL INTERNAL ANTENNA AND EQUIPMENT SHALL BE BONDED TO INSIDE CABINET OR SHROUD GROUND POINT.
 11. GROUND SYSTEM INSPECTION/TEST WELLS NOT REQUIRED BY VERIZON.
 12. IF NON VZ OWNED POLE MAY MODIFY GROUNDING PER POLE OWNER OR LEE SUMMIT REQUIREMENTS.



2 EXOTHERMIC WELD DETAILS
EXOTHERMIC AND HARGER ULTRAWELD OR APPROVED EQUAL



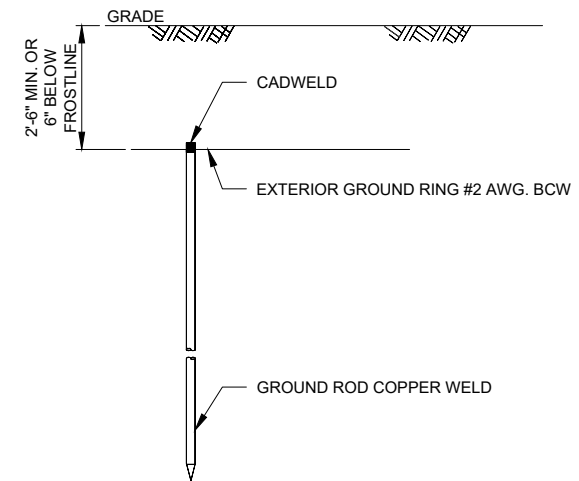
3 GROUNDING WIRE CONNECTION

GROUNDING ELECTRODE SYSTEM NOTES:

1. ALL GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC PROCESS CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE, SPLICES, ETC. ALL CABLE TO GROUND RODS, GROUND RODS SPLICES AND LIGHTNING PROTECTION SYSTEM AS INDICATED. GROUND FOUNDATION ONLY AS INDICATED BY PM. ALL MATERIALS USED (MOLDS, WELDING, METAL, TOOLS, ETC.) SHALL BE BY EXOTHERMIC PROCESS AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND PROCEDURES. GROUND CONDUCTOR SHALL HAVE A MINIMUM 24" BENDING RADIUS.
2. ALL EXOTHERMIC CONNECTIONS ON GALVANIZED SURFACES SHALL BE CLEANED THOROUGHLY AND COLORED TO MATCH SURFACE WITH (2) TWO COATS OF SHERWIN-WILLIAMS GALVITE (WHITE) PAINT B50W3 (OR EQUAL) OR SHERWIN- WILLIAMS SILVERBRITE (ALUMINUM) B59S11 (OR EQUAL).
3. ALL ELECTRICAL & MECHANICAL GROUND CONNECTIONS SHALL HAVE ANTI-OXIDANT COMPOUND APPLIED TO CONNECTION

LEGEND:	
— UGE —	UNDERGROUND POWER LINE
— UGF —	UNDERGROUND FIBER LINE
— OHE —	OVERHEAD POWER LINE
— OHT —	OVERHEAD TELCO LINE
— GAS —	GAS LINE
⊗	5/8" DIAMETER x 8'-0" LONG COPPER CLAD GROUND ROD (HARGER-5810)
⊙	5/8" DIAMETER x 8'-0" LONG COPPER CLAD GROUND ROD WITH INSPECTION WELL
---	#2 AWG TNND SOLID BARE COPPER WIRE MINIMUM 42" BELOW GRADE (HARGER-L2)
●	EXOTHERMIC WELD
■	MECHANICAL CONNECTION

6. UTILITY COMPANY COORDINATION: ELECTRICAL CONTRACTOR SHALL CONFIRM THAT ALL WORK IS IN ACCORDANCE WITH THE RULES OF THE LOCAL UTILITY COMPANY BEFORE SUBMITTING THE BID, THE CONTRACTOR SHALL CHECK WITH THE UTILITY COMPANIES SUPPLYING SERVICE TO THIS PROJECT AND SHALL DETERMINE FROM THEM ALL EQUIPMENT AND CHARGES WHICH THEY WILL REQUIRE AND SHALL INCLUDE THE COST IN THE BID.
7. GROUND TEST: GROUND TESTS SHALL BE PERFORMED AS REQUIRED BY LESSEE STANDARD PROCEDURES. GROUND GRID RESISTANCE SHALL NOT EXCEED 5 OHMS.
8. CONTRACTOR SHALL SUBMIT THE GROUND RESISTANCE TEST REPORT AS FOLLOWS:
 1. ONE (1) COPY TO OWNER REPRESENTATIVE
 2. ONE (1) COPY TO ENGINEER
 3. ONE (1) COPY TO KEEP INSIDE EQUIPMENT ENCLOSURE



4 GROUND ROD DETAIL

verizon
10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

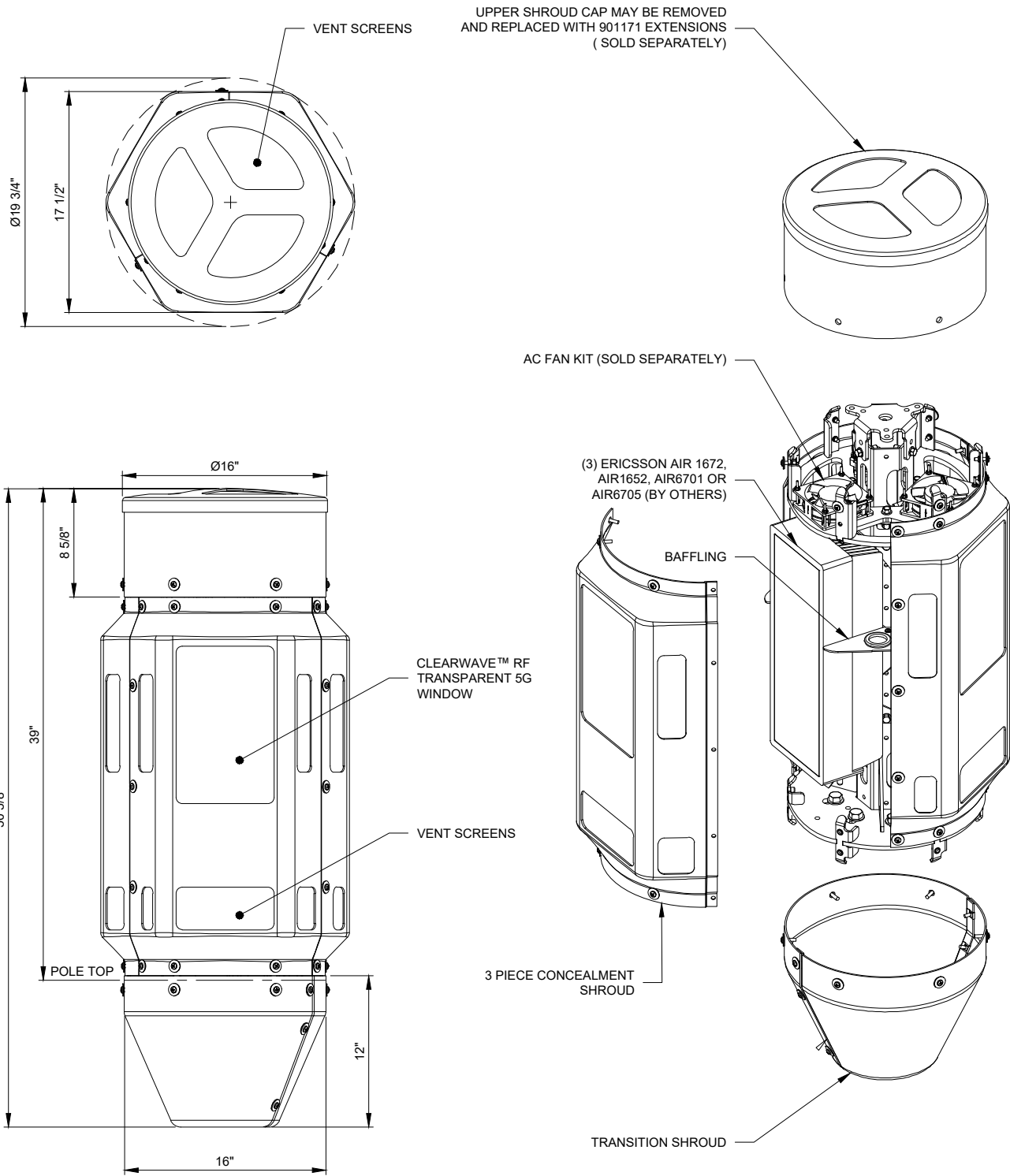
DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER

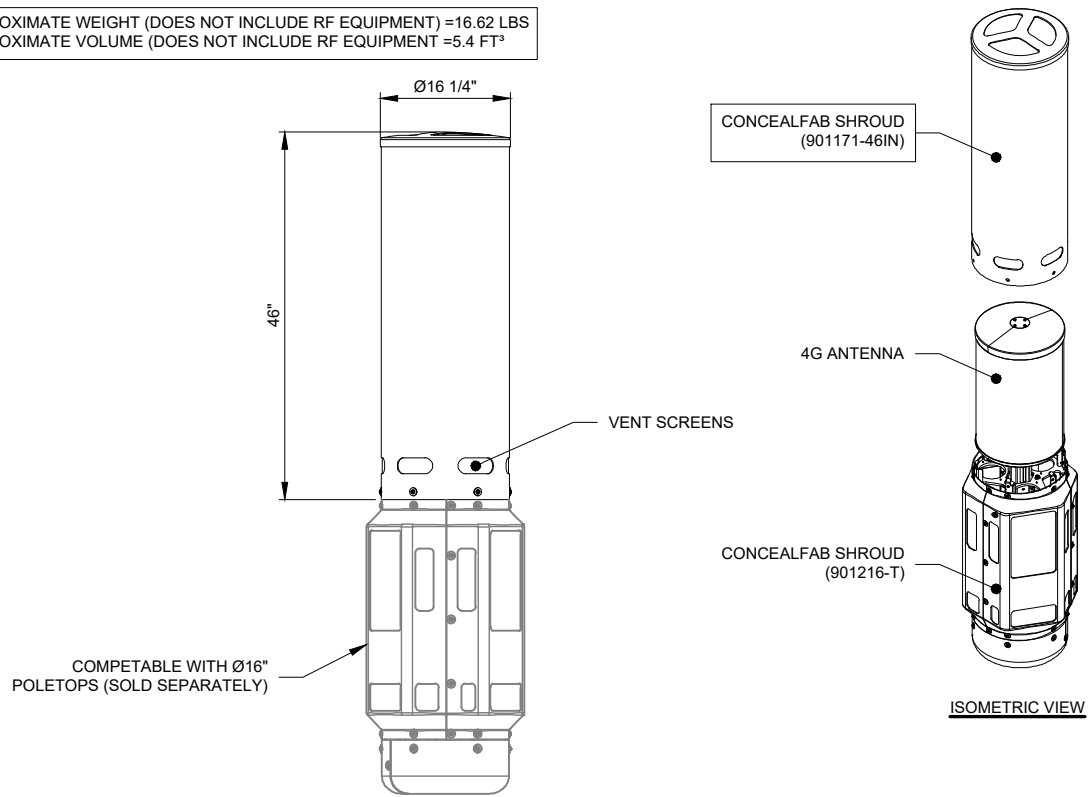
E-7

APPROXIMATE WEIGHT (DOES NOT INCLUDE RF EQUIPMENT) =166 LBS
APPROXIMATE VOLUME (DOES NOT INCLUDE RF EQUIPMENT) = 6.08 FT³

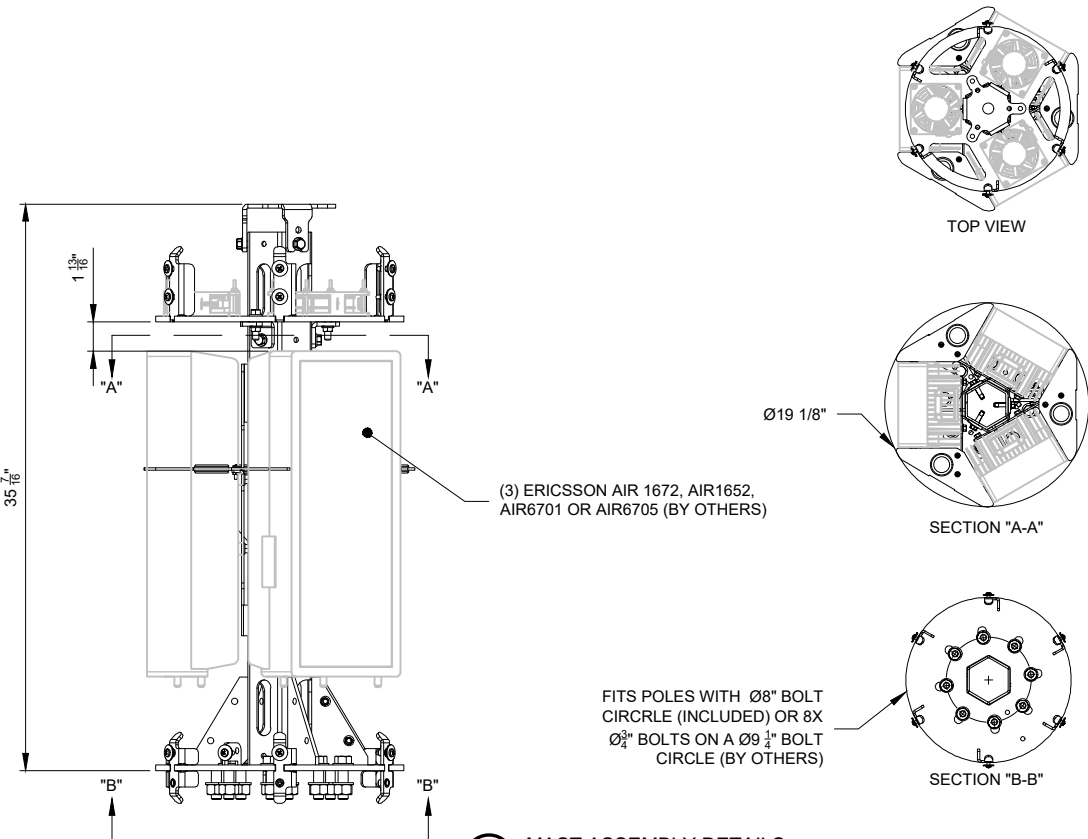


1 CONCEALFAB SHROUD (901216-T)
N.T.S.

APPROXIMATE WEIGHT (DOES NOT INCLUDE RF EQUIPMENT) =16.62 LBS
APPROXIMATE VOLUME (DOES NOT INCLUDE RF EQUIPMENT) =5.4 FT³



2 CONCEALFAB SHROUD (901171-46IN)
N.T.S.



3 MAST ASSEMBLY DETAILS
N.T.S.

verizon

10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

SHEET TITLE
STRUCTURAL DETAILS

SHEET NUMBER

S-1

GENERAL

THE CONSTRUCTION DOCUMENT DRAWINGS ARE INTERRELATED. WHEN PERFORMING THE WORK, EACH CONTRACTOR MUST REFER TO ALL DRAWINGS. COORDINATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

DIVISION 1: GENERAL REQUIRMENTS
SECTION 01700 – PROJECT CLOSEOUT

PART 1 – GENERAL

- A. OBTAIN AND SUBMIT RELEASES ENABLING THE OWNER UNRESTRICTED USE OF THE WORK AND ACCESS TO SERVICES AND UTILITIES; INCLUDE OCCUPANCY PERMITS, OPERATING CERTIFICATES AND SIMILAR RELEASES.
- B. SUBMIT RECORD DRAWINGS, DAMAGE OR SETTLEMENT SURVEY, PROPERTY SURVEY, AND SIMILAR FINAL RECORD INFORMATION.
- C. COMPLETE FINAL CLEAN UP REQUIREMENTS, INCLUDING TOUCH-UP PAINTING. TOUCH UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES.

PART 2 – FINAL CLEANING

- 1. COMPLETE THE FOLLOWING CLEANING OPERATIONS BEFORE REQUESTING INSPECTION FOR CERTIFICATION OF COMPLETION.
 - A. CLEAN THE PROJECT SITE, YARD AND GROUNDS, IN AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, INCLUDING LANDSCAPE DEVELOPMENT AREAS, OF RUBBISH, WASTE MATERIALS, LITTER AND FOREIGN SUBSTANCES. SWEEP PAVED AREAS BROOM CLEAN. REMOVE PETRO-CHEMICAL SPILLS, STAINS AND OTHER FOREIGN DEPOSITS. RAKE GROUNDS THAT ARE NEITHER PLANTED NOR PAVED, TO A SMOOTH EVEN-TEXTURED SURFACE.
 - B. REMOVE TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY AND SURPLUS MATERIAL FROM THE SITE.
 - C. REMOVE SNOW AND ICE TO PROVIDE SAFE ACCESS TO THE SITE AND EQUIPMENT ENCLOSURE.
 - D. CLEAN EXPOSED EXTERIOR AND INTERIOR HARD-SURFACED FINISHES TO A DIRT-FREE CONDITION, FREE OF STAINS, FILMS AND SIMILAR FOREIGN SUBSTANCES. AVOID DISTURBING NATURAL WEATHERING OF EXTERIOR SURFACES.
 - E. REMOVE DEBRIS FROM LIMITED ACCESS SPACES, INCLUDING ROOFS, EQUIPMENT ENCLOSURE, MANHOLES, AND SIMILAR SPACES.
 - F. REMOVE LABELS THAT ARE NOT PERMANENT LABELS.
 - G. TOUCH-UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES AND SURFACES. REPLACE FINISHES AND SURFACES THAT CAN NOT BE SATISFACTORILY REPAIRED OR RESTORED, OR THAT SHOW EVIDENCE OF REPAIR OR RESTORATION. DO NOT PAINT OVER "UL" AND SIMILAR LABELS, INCLUDING ELECTRICAL NAME PLATES.
 - H. LEAVE THE PROJECT CLEAN AND READY FOR OCCUPANCY.
 - I. DUST-OFF ALL EQUIPMENT, INCLUDING BATTERY PACKS, WITHIN EQUIPMENT ENCLOSURE.
 - J. WASH AND WAX FLOOR WITHIN EQUIPMENT ENCLOSURE.
- 2. REMOVAL OF PROTECTION: REMOVE TEMPORARY PROTECTION AND FACILITIES INSTALLED DURING CONSTRUCTION TO PROTECT PREVIOUSLY COMPLETED INSTALLATIONS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD.

DIVISION 2: SITE WORK
SECTION 02200 – EARTHWORK AND DRAINAGE

PART 1 – GENERAL

- 1. WORK INCLUDED: SEE SITE PLAN.
- 2. DESCRIPTIONS
 - A. ACCESS DRIVE W/ TURNAROUND AREA, LEASE AREA, AND IF APPLICABLE UNDERGROUND UTILITY EASEMENTS ARE TO BE CONSTRUCTED, PROVIDE A WELL DRAINED, EASILY MAINTAINED, EVEN SURFACE FOR MATERIAL AND EQUIPMENT DELIVERIES AND MAINTENANCE PERSONNEL ACCESS.
- 3. QUALITY ASSURANCE
 - A. APPLY SOIL STERILIZER IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS (AS NEEDED).
 - B. APPLY AND MAINTAIN GRASS SEED AS RECOMMENDED BY THE SEED PRODUCER (IF REQUIRED).
 - C. PLACE AND MAINTAIN VEGETATION LANDSCAPING, IF INCLUDED WITHIN THE CONTRACT, AS RECOMMENDED BY NURSERY INDUSTRY STANDARDS.
- 4. SEQUENCING
 - A. CONFIRM SURVEY STAKES AND SET ELEVATION STAKES PRIOR TO ANY CONSTRUCTION.
 - B. COMPLETELY GRUB THE ACCESS DRIVE W/ TURNAROUND, UNDERGROUND UTILITY EASEMENTS, (IF APPLICABLE) AND LEASE AREA PRIOR TO FOUNDATION CONSTRUCTION, PLACEMENT OF BACKFILL AND SUB-BASE MATERIAL.
 - C. CONSTRUCT TEMPORARY CONSTRUCTION AREA ALONG ACCESS DRIVE.
 - D. BRING THE LEASE AREA AND ACCESS DRIVE W/ TURNAROUND TO BASE COURSE ELEVATION PRIOR TO INSTALLING FOUNDATION.
 - E. APPLY SOIL STERILIZER PRIOR TO PLACING BASE MATERIALS.
 - F. GRADE, SEED, FERTILIZE, AND MULCH ALL AREAS DISTURBED BY CONSTRUCTION (INCLUDING UNDERGROUND UTILITY EASEMENTS) IMMEDIATELY AFTER BRINGING LEASE AREA AND ACCESS DRIVE W/ TURNAROUND TO BASE COURSE ELEVATION, WATER TO ENSURE GROWTH.
 - G. REMOVE GRAVEL FROM TEMPORARY CONSTRUCTION ZONE TO AN AUTHORIZED AREA OR AS DIRECTED BY PROJECT MANAGER.
 - H. AFTER APPLICATIONS OF FINAL SURFACES, APPLY SOIL STERILIZER TO STONE SURFACES.
- 5. SUBMITTALS
 - A. BEFORE CONSTRUCTION
 - IF LANDSCAPING IS APPLICABLE TO THE CONTRACT, SUBMIT TWO COPIES OF THE LANDSCAPE PLAN UNDER NURSERY LETTERHEAD. IF A LANDSCAPE ALLOWANCE WAS INCLUDED IN THE CONTRACT, PROVIDE AN ITEMIZED LISTING OF PROPOSED COSTS ON NURSERY LETTERHEAD (REFER TO PLANS FOR LANDSCAPING REQUIREMENTS).
 - B. AFTER CONSTRUCTION
 - 1. MANUFACTURER'S DESCRIPTION OF PRODUCT AND WARRANTY STATEMENT ON SOIL STERILIZED.
 - 2. MANUFACTURER'S DESCRIPTION OF PRODUCT ON GRASS SEED AND FERTILIZER
 - 3. LANDSCAPING WARRANTY STATEMENT.
- 6. WARRANTY
 - A. IN ADDITION TO THE WARRANTY ON ALL CONSTRUCTION COVERED IN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL REPAIR ALL DAMAGE AND RESTORE AREA AS CLOSE TO ORIGINAL CONDITION AS POSSIBLE AT SITE AND SURROUNDINGS.
 - B. SOIL STERILIZATION APPLICATION TO GUARANTEE VEGETATION FREE ROAD AND SITE AREAS FOR ONE YEAR FROM DATE OF FINAL INSPECTION.
 - C. DISTURBED AREAS WILL REFLECT GROWTH OF NEW GRASS COVER PRIOR TO FINAL INSPECTION.
 - D. LANDSCAPING, IF INCLUDED WITHIN THE SCOPE OF THE CONTRACT, WILL BE GUARANTEED FOR ONE YEAR FROM DATE OF FINAL INSPECTION.

PART 2 – PRODUCTS

- 1. MATERIALS
 - A. SOIL STERILIZER SHALL BE EPA-REGISTERED, PRE-EMERGENCE LIQUID:

TOTAL KILL PRODUCT 910 EPA 10292-7	PHASAR CORPORATION P.O. BOX 5123 DEARBORN, MI 48128 (313) 563-8000
AMBUSH HERBICIDE EPA REGISTERED	FRAMAR INDUSTRIAL PRODUCTS 1435 MORRIS AVE. UNION, NJ 07083 (800) 526-4924

PART 3 – EXECUTION

- 1. INSPECTIONS
 - LOCAL BUILDING INSPECTORS SHALL BE NOTIFIED NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS, UNLESS OTHERWISE SPECIFIED BY JURISDICTION.
- 2. PREPARATION
 - A. CLEAR TREES, BRUSH AND DEBRIS FROM LEASE AREA, ACCESS DRIVE W/ TURN-AROUND AND UNDER GROUND UTILITY EASEMENTS AS REQUIRED FOR CONSTRUCTION.
 - B. PRIOR TO OTHER EXCAVATION AND CONSTRUCTION, GRUB ORGANIC MATERIAL TO A MINIMUM OF SIX INCHES (6") BELOW GRADE.
 - C. UNLESS OTHERWISE INSTRUCTED BY LESSEE, TRANSPORT ALL REMOVED TREES, BRUSH AND DEBRIS FROM THE PROPERTY TO AN AUTHORIZED LANDFILL.
 - D. PRIOR TO PLACEMENT OF FILL OR BASE MATERIALS, ROLL THE SOIL.
 - E. WHERE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, LINE THE AREAS WITH STABILIZER MAT PRIOR TO PLACEMENT OF FILL OR BASE MATERIAL.
- 3. INSTALLATION
 - A. GRADE OR FILL THE LEASE AREA AND ACCESS DRIVE W/ TURNAROUND AS REQUIRED IN ORDER THAT UPON DISTRIBUTION OF SPOILS, RESULTING FROM EXCAVATIONS, THE RESULTING GRADE WILL CORRESPOND WITH SAID SUB-BASE COURSE. ELEVATIONS ARE TO BE CALCULATED FROM BENCHMARK, FINISHED GRADES, OR INDICATED SLOPES.
 - B. CLEAR EXCESS SPOILS, IF ANY, FROM JOB SITE AND DO NOT SPREAD BEYOND THE LIMITS OF PROJECT AREA UNLESS AUTHORIZED BY PROJECT MANAGER AND AGREED TO BY LANDOWNER.
 - C. BRING THE ACCESS DRIVE W/ TURNAROUND TO BASE COURSE ELEVATION TO FACILITATE CONSTRUCTION AND OBSERVATION DURING CONSTRUCTION OF THE SITE.
 - D. AVOID CREATING DEPRESSIONS WHERE WATER MAY POND.
 - E. THE CONTRACT SHALL INCLUDE GRADING, BANKING, AND DITCHING, UNLESS OTHERWISE INDICATED.
 - F. WHEN IMPROVING AN EXISTING ACCESS DRIVE, GRADE THE EXISTING DRIVE TO REMOVE ANY ORGANIC MATTER AND SMOOTH THE SURFACE BEFORE PLACING FILL OR STONE.
 - G. PLACE FILL OR STONE IN SIX INCH (6") MAXIMUM LIFTS, AND COMPACT BEFORE PLACING NEXT LIFT.
 - H. THE TOP SURFACE COURSE, SHALL EXTEND A MINIMUM OF ONE FOOT (1') BEYOND THE SITE FENCE (UNLESS OTHERWISE NOTED) AND SHALL COVER THE AREA AS INDICATED.
 - I. APPLY RIPRAP TO THE SIDE SLOPES OF ALL FENCED SITE AREAS, PARKING AREAS, AND ALL OTHER SLOPES GREATER THAN 2:1.
 - J. APPLY RIPRAP TO THE SIDES OF DITCHES OR DRAINAGE SWALES.
 - K. RIPRAP ENTIRE DITCH FOR SIX FEET (6') IN ALL DIRECTIONS AT CULVERT OPENINGS.
 - L. APPLY SEED, FERTILIZER, AND STRAW COVER TO ALL OTHER DISTURBED AREAS, DITCHES, AND DRAINAGE SWALES, NOT OTHERWISE RIPRAPPED.
 - M. UNDER NO CIRCUMSTANCES WILL DITCHES, SWALES, OR CULVERTS BE PLACED SO THAT THEY DIRECT WATER TOWARDS, OR PERMIT STANDING WATER IMMEDIATELY ADJACENT TO SHELTER OR EQUIPMENT. IF DESIGNS OR ELEVATIONS ARE IN CONFLICT WITH THIS, ADVISE CONSTRUCTION MANAGER IMMEDIATELY.
 - N. IN DITCHES WITH SLOPES GREATER THAN 10R, MOUND DIVERSIONARY HEADWALLS IN THE DITCH AT CULVERT ENTRANCES. POSITION THE HEADWALL AT AN ANGLE NO GREATER THAN 60° OFF THE DITCH LINE. RIPRAP THE UPSTREAM SIDE OF THE HEADWALL AS WELL AS THE DITCH FOR SIX FEET (6') ABOVE THE CULVERT ENTRANCE.
 - O. APPLY SEED AND FERTILIZER TO SURFACE CONDITIONS WHICH WILL ENCOURAGE ROOTING. RAKE AREAS TO BE SEEDED TO EVEN THE SURFACE AND LOOSEN THE SOIL.
 - P. SOW SEED IN TWO DIRECTIONS IN TWICE THE QUANTITY RECOMMENDED BY THE SEED PRODUCER.
 - Q. ENSURE GROWTH OF SEEDED AND LANDSCAPED AREAS, BY WATERING, UP TO THE POINT OF RELEASE FROM THE CONTRACT. CONTINUE TO REWORK THE BARE AREAS UNTIL COMPLETE COVERAGE IS OBTAINED.
- 4. FIELD QUALITY CONTROL
 - COMPACT SOILS TO MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557. AREAS OF SETTLEMENT WILL BE EXCAVATED AND REFILLED AT CONTRACTOR'S EXPENSE. INDICATE PERCENTAGE OF COMPACTION ACHIEVED ON AS-BUILT DRAWINGS.
- 5. PROTECTION
 - A. PROTECT SEEDED AREAS FROM EROSION BY SPREADING STRAW TO A UNIFORM LOOSE DEPTH OF 1-2 INCHES, STAKE AND TIE DOWN AS REQUIRED. USE OF EROSION CONTROL MESH OR MULCH NET WILL BE AN ACCEPTABLE ALTERNATE.
 - B. ALL TREES PLACED IN CONJUNCTION WITH A LANDSCAPE CONTRACT WILL BE WRAPPED, TIED WITH HOSE PROTECTED WIRE, AND SECURED TO 2" X 2" X 4'-0" WOODEN STAKES EXTENDING TWO-FEET INTO THE GROUND ON FOUR SIDES OF THE TREE.
 - C. PROTECT ALL EXPOSED AREAS AGAINST WASHOUTS AND SOIL EROSION. PLACE STRAW BALES AT THE INLET APPROACH TO ALL NEW OR EXISTING CULVERTS. WHERE THE SITE OR ROAD AREAS HAVE BEEN ELEVATED IMMEDIATELY ADJACENT TO THE RAIL LINE, STAKE EROSION CONTROL FABRIC FULL LENGTH IN THE SWALE TO PREVENT CONTAMINATION OF THE RAIL BALLAST. ALL EROSION CONTROL METHODS SHALL CONFORM TO APPLICABLE BUILDING CODE REQUIREMENTS.

SECTION 02830 – FENCING AND GATE(S)

PART 1 – GENERAL

- 1. WORK INCLUDED
 - SEE PLAN FOR SITE AND LOCATION OF FENCE AND GATE(S).
- 2. QUALITY ASSURANCE
 - ALL STEEL MATERIALS UTILIZED IN CONJUNCTION WITH THIS SPECIFICATION WILL BE GALVANIZED OR STAINLESS STEEL. WEIGHT OF ZINC COATING ON THE FABRIC SHALL NOT BE LESS THAN 12 OUNCES PER SQUARE FOOT OF MATERIAL COVERED. POSTS SHALL BE HOT-DIPPED IN GRADE 'E' ZINC, 18 OUNCES PER SQUARE FOOT.
- 3. SEQUENCING
 - IF THE SITE AREA HAS BEEN BROUGHT UP TO SURFACE COURSE ELEVATION (PRIOR TO THE FENCE CONSTRUCTION), FENCE POST EXCAVATION SPOILS MUST BE CONTROLLED TO PRECLUDE CONTAMINATION OF SAID SURFACE COURSE.

4. SUBMITTALS

- A. MANUFACTURER'S DESCRIPTIVE LITERATURE.
- B. CERTIFICATE OR STATEMENT OF COMPLIANCE WITH THE SPECIFICATIONS.

PART 2 – PRODUCTS

- 1. FENCE MATERIAL
 - A. ALL FABRIC WIRE, RAILS, HARDWARE, AND OTHER STEEL MATERIALS SHALL BE HOT-DIPPED GALVANIZED.
 - B. FABRIC SHALL BE SEVEN-FOOT (7') HIGH OR TO MATCH EXISTING FENCE TWO-INCH CHAIN LINK MESH OF NO. 9 GAUGE (0.148") WIRE. THE FABRIC SHALL HAVE A KNUCKLED FINISH FOR THE TOP SELVAGES. FABRIC SHALL CONFORM TO THE SPECIFICATIONS OF ASTM A-392 CLASS 1.
 - C. BARBED WIRE SHALL BE DOUBLE-STRAND, 12-1/2 GAUGE TWISTED WIRE, WITH 14-GAUGE, 4-POINT ROUND BARBS SPACED ON FIVE-INCH CENTERS.
 - D. ALL POSTS SHALL BE SCHEDULE – 40 MECHANICAL SERVICE PIPE AND SHALL BE TYPE 1 ASTM A-128 AND OF THE FOLLOWING DIAMETER
 - LINE 2" SCHEDULE 40 (2 3/8" O.D.)
 - CORNER 3" SCHEDULE 40 (3 1/2" O.D.)
 - GATE 3" SCHEDULE 40 (3 1/2" O.D.)
 - E. GATE POSTS SHALL BE EXTENDED 12 INCHES, INCLUDING DOME CAP, TO PROVIDE FOR ATTACHMENT OF BARBED WIRE.
 - F. ALL TOP AND BRACE RAILS SHALL BE 1| DIAMETER SCHEDULE – 40 MECHANICAL-SERVICE PIPE.
 - G. GATE FRAMES AND BRACES SHALL BE 1.90 INCH DIAMETER SCHEDULE 40 MECHANICAL-SERVICE PIPE. FRAMES SHALL HAVE WELDED CORNERS.
 - H. GATE FRAMES SHALL HAVE A FULL-HEIGHT VERTICAL BRACE, AND A FULL-WIDTH HORIZONTAL BRACE, SECURED IN PLACE BY USE OF GATE BRACE CLAMPS.
 - I. GATE HINGES SHALL BE MERCHANTS METAL MODEL 64386 HINGE ADAPTER WITH MODEL 6409, 188-DEGREE ATTACHMENT.
 - J. THE GUIDE (LATCH ASSEMBLY) SHALL BE HEAVY INDUSTRIAL DOUBLE GATE LATCH. SEE DETAIL.
 - K. LATCHES AND STOPS SHALL BE PROVIDED FOR ALL GATES.
 - L. PLUNGER ROD COMPLETE WITH RECEPTOR TO BE PROVIDED AT THE INACTIVE LEAF OF ALL DOUBLE GATE INSTALLATIONS.
 - M. ALL STOPS SHALL HAVE KEEPERS CAPABLE OF HOLDING THE GATE LEAF IN THE OPEN POSITION
 - N. A NO. 7 GAUGE ZINC COATED TENSION WIRE SHALL BE USED AT THE BOTTOM OF THE FABRIC, TERMINATED WITH BAND CLIPS AT CORNER AND GATE POSTS.
 - O. A SIX-INCH BY 1/2-INCH DIAMETER EYEBOLT TO HOLD TENSION WIRE SHALL BE PLACED AT LINE POSTS.
 - P. STRETCHER BARS SHALL BE 3/16-INCH BY 3/4-INCH OR HAVE EQUIVALENT CROSS-SECTIONAL AREA.
 - Q. ALL CORNER GATE AND PANELS SHALL HAVE A 3/8-INCH TRUSS ROD WITH TURNBUCKLES.
 - R. ALL POSTS EXCEPT GATE POSTS SHALL HAVE A COMBINATION CAP AND BARBED WIRE SUPPORTING ARM. GATE POSTS SHALL HAVE A DOME CAP.
 - S. OTHER HARDWARE INCLUDES BUT MAY NOT BE LIMITED TO TIE CLIPS, BAND CLIPS AND TENSION BAND CLIPS.
 - T. BARBED WIRE GATE GUARDS SHALL BE FITTED WITH DOME CAPS.
 - U. BARBED WIRE SUPPORT ARMS SHALL BE PRESSED STEEL COMPLETE WITH SET BOLT AND LOCK WIRE IN THE ARM.
 - V. ALL CAPS SHALL BE MALLEABLE IRON, DOME OR ACORN SHAPED AS REQUIRED BY PIPE SIZE.
 - W. WHERE THE USE OF CONCERTINA HAS BEEN SPECIFIED, 24-INCH DIAMETERS COIL BARBED TAPE, STAINLESS STEEL, CYCLONE FENCE MODEL G8P TO TYPE III SHALL BE FURNISHED. IT SHALL BE SUPPORTED ABOVE THE TOP RAIL BY USE OF SIX(6) WIRE BARBED WIRE ARMS POSITIONED ATOP EACH LINE/CORNER POST.

PART 3 – EXECUTION

- 1. INSPECTION
 - TO CONFIRM PROPER DEPTH AND DIAMETER OF POST HOLE EXCAVATIONS. ALL POST HOLES WILL BE EXCAVATED AS PER CONSTRUCTION DOCUMENTS.
 - 2. INSTALLATION
 - A. FOUNDATIONS SHALL HAVE A MINIMUM SIX INCH (6") CONCRETE COVER UNDER POST.
 - B. ALL FENCE POSTS SHALL BE VERTICALLY PLUMB ; ONE QUARTER INCH (1/4")
 - C. AT CORNER POSTS, GATE POSTS, AND SIDES OF GATE FRAME, FABRIC SHALL BE ATTACHED WITH STRETCHER AND TENSION BAND-CLIPS AT FIFTEEN(15) INCH INTERVALS.
 - D. AT LINE POSTS, FABRIC SHALL BE ATTACHED WITH BAND-CLIPS AT FIFTEEN INCH (15") INTERVALS.
 - E. FABRIC SHALL BE ATTACHED TO BRACE RAILS, TENSION WIRE AND TRUSS RODS WITH TIE-CLIPS AT TWO FOOT (2') INTERVALS.
 - F. A MAXIMUM GAP OF ONE INCH WILL BE PERMITTED BETWEEN TIE CHAIN LINE FABRIC AND THE FINAL GRADE.
 - G. GATE SHALL BE INSTALLED SO LOCKS ARE ACCESSIBLE FROM BOTH SIDES.
 - H. GATE HINGE BOLTS SHALL HAVE THEIR THREADS PEENED OR WELDED TO PREVENT UNAUTHORIZED REMOVAL.
 - I. CONCRETE TO BE A MINIMUM OF 4,000 PSI AT 7 DAYS. CEMENT SHALL EXCEED ASTM C150, TYPE IIIA.
 - 3. PROTECTION
 - UPON COMPLETION OF ERECTION, INSPECT FENCE MATERIAL AND PAINT FIELD CUTS OR GALVANIZING BREAKS WITH ZINC-BASED PAINT, COLOR TO MATCH THE GALVANIZED METAL.
- APPLICABLE STANDARDS
- | | |
|-----------|---|
| ASTM-A120 | SPECIFICATION FOR PIPE, STEEL BLACK AND HOT-DIPPED ZINC COATED (GALVANIZED) WELDED AND SEAMLESS, FOR ORDINARY USES. |
| ASTM-A123 | ZINC (HOT-DIP GALVANIZED) COATING ON IRON AND STEEL PRODUCTS. |
| ASTM-A153 | STANDARD SPECIFICATION FOR ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE. |
| ASTM-A392 | SPECIFICATION FOR ZINC-COATED STEEL CHAIN LINK FENCE FABRIC. |
| ASTM-A491 | SPECIFICATION FOR ALUMINUM-COATED STEEL CHAIN LINK FENCE FABRIC |
| ASTM-A525 | STANDARD SPECIFICATION FOR STEEL SHEET ZINC COATED (GALVANIZED) BY THE HOT-DIPPED PROCESS. |

ASTM-A570	SPECIFICATION FOR HOT-ROLLED CARBON STEEL SHEET AND STRIP, STRUCTURAL QUALITY.
ASTM-A535	SPECIFICATION FOR ALUMINUM COATED STEEL BARBED WIRE.
FEDERAL SPECIFICATION	RR-F-191- FENCING, WIRE AND POST METAL (AND GATES, CHAIN LINK FENCE FABRIC, AND ACCESSORIES)

DIVISION 3: CONCRETE

SECTION 03000 – BASIC CONCRETE MATERIALS AND METHODS

PART 1 – GENERAL

- 1. WORK INCLUDED
 - FORMWORK, REINFORCEMENT, ACCESSORIES, CAST-IN-PLACE CONCRETE, FINISHING, AND CURING.
- 2. INSPECTIONS
 - A. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING BUILDING DEPARTMENT INSPECTIONS REQUIRED FOR HIS SCOPE OF WORK.
 - B. ALL REINFORCING STEEL SHALL BE INSPECTED AND APPROVED BY THE LESSEE'S CONSTRUCTION MANAGER PRIOR TO PLACEMENT OF CONCRETE.
 - C. THE LESSEE'S CONSTRUCTION MANAGER SHALL BE NOTIFIED NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS.
- 3. QUALITY ASSURANCE
 - A. CONSTRUCT AND ERECT CONCRETE FORMWORK IN ACCORDANCE WITH ACI 301 AND ACI 318.
 - B. PERFORM CONCRETE REINFORCING WORK IN ACCORDANCE WITH ACI 301, ACI 318, AND ASTM A184.
 - C. PERFORM CAST-IN-PLACE CONCRETE WORK IN ACCORDANCE WITH ACI 301, ACI 318, AND ACI 117-90.
 - D. OPEN FOUNDATION TRENCHES SHALL BE INSPECTED BY MES PRIOR TO CONCRETE INSTALLATION.
- 4. SUBMITTALS
 - SUBMIT CONCRETE MIX AND REINFORCING STEEL SHOP DRAWINGS FOR APPROVAL BY LESSEE CONSTRUCTION MANAGER/ENGINEER. THE SHOP DRAWINGS SHALL BE SUBMITTED IN THE FORM OF TWO (2) CONCRETE MIX DESIGN INFORMATION SHEETS AND TWO (2) BLUELINE DRAWINGS FOR REINFORCING STEEL.

PART 2 – PRODUCTS

- 1. REINFORCEMENT MATERIALS
 - A. REINFORCEMENT STEEL ASTM A615, 60 ksi YIELD GRADE, DEFORMED BILLET STEEL BARS, PLAIN FINISH.
 - B. WELDED STEEL WIRE FABRIC ASTM A185 PLAIN TYPE, IN FLAT SHEETS, PLAIN FINISH.
 - C. CHAIRS, BOLSTERS, BAR SUPPORTS, SPACERS. SIZED AND SHAPED FOR SUPPORTS OF REINFORCING.
 - D. FABRICATE CONCRETE REINFORCING IN ACCORDANCE WITH ACI 315, ACI 318, ASTM A184
- 2. CONCRETE MATERIALS
 - A. CEMENT: ASTM C150, PORTLAND TYPE
 - B. FINE AND COURSE AGGREGATES: ASTM C33 – MAXIMUM SIZE OF CONCRETE AGGREGATE SHALL NOT EXCEED ; ONE INCH (1") SIZE SUITABLE FOR INSTALLATION METHOD UTILIZED OR ONE-THIRD (1/3) CLEAR DISTANCE BEHIND OR BETWEEN REINFORCING.
 - C. WATER: CLEAN AND NOT DETRIMENTAL TO CONCRETE
 - D. AIR ENTRAINING ADMIXTURE: ASTM C260
 - E. BONDING AGENT: LATEX EMULSION FOR BONDING NEW TO OLD CONCRETE AS MANUFACTURED BY DAYTON SUPERIOR.
 - F. NON-SHRINK GROUT: PREMIXED COMPOUND CONSISTING OF NONMETALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTICISING AGENTS.
- 3. CONCRETE MIX
 - A. CONCRETE MATERIALS SHALL CONFORM TO THE APPROPRIATE A.C.I. REQUIREMENTS FOR EXPOSED STRUCTURAL CONCRETE.
 - B. MIX AND DELIVER CONCRETE IN ACCORDANCE WITH ASTM C94, ALT. 3.
 - C. PROPORTIONS OF CONCRETE MATERIALS SHALL BE SUITABLE FOR THE INSTALLATION METHOD UTILIZED AND SHALL RESULT IN DURABLE CONCRETE FOR LOCAL ANTICIPATED AGGRESSIVE ACTIONS. THE DURABILITY REQUIREMENTS OF ACI 318 CHAPTER 4 SHALL BE SATISFIED BASED ON THE CONDITIONS EXPECTED AT THE SITE. PROVIDE CONCRETE AS FOLLOWS:
 - 1. COMPRESSIVE STRENGTH: 4000 psi AT 28 DAYS. SEE SHEET S-1 FOR CAISSON CONCRETE COMPRESSIVE STRENGTH
 - 2. SLUMP: 3 INCHES
- PART 3 – EXECUTION
 - 1. INSERTS, EMBEDDED COMPONENTS AND OPENINGS
 - A. THE CONTRACTOR SHALL COORDINATE AND CROSS-CHECK ARCHITECTURAL, BUILDING & ELECTRICAL DRAWINGS FOR OPENINGS, SLEEVES, ANCHORS, HANGERS, AND OTHER ITEMS RELATED TO CONCRETE WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THE PROPER LOCATION BEFORE PLACING CONCRETE.
 - B. PROVIDE FORMED OPENINGS WHERE REQUIRED FOR WORK TO BE EMBEDDED IN AND PASSING THROUGH CONCRETE MEMBERS.
 - C. COORDINATE WORK OF OTHER SECTIONS IN FORMING AND SETTING OPENING, SLOTS, RECESSES, CHASES, SLEEVES, BOLTS, ANCHORS, AND OTHER INSERTS.
 - D. INSTALL CONCRETE ACCESSORIES STRAIGHT, LEVEL AND PLUMB.
 - 2. REINFORCEMENT PLACEMENT
 - A. PLACE REINFORCEMENT, SUPPORTED AND SECURED AGAINST DISPLACEMENT.
 - B. ENSURE REINFORCING IS CLEAN, FREE OF LOOSE SCALE, DIRT, OR OTHER FOREIGN COATINGS.
 - C. WELDING IS PROHIBITED ON REINFORCING STEEL AND EMBEDMENTS.
 - D. MINIMUM CONCRETE COVER FOR REINFORCING SHALL BE THREE INCHES (3") UNLESS OTHERWISE NOTED.
 - E. CONCRETE COVER FROM TOP OF FOUNDATION TO ENDS OF VERTICAL REINFORCEMENT SHALL NOT EXCEED THREE INCHES (3") NOR BE LESS THAN TWO INCHES (2").
 - 3. PLACING CONCRETE
 - A. VIBRATE ALL CONCRETE.
 - B. ALL CONCRETE WORK SHALL ADHERE TO THE LATEST A.C.I. STANDARDS FOR WINTER POURING AND CURING PROCEDURES IF SEASONAL CONDITIONS APPLY
 - 4. CURING
 - A. AFTER PLACEMENT, PROTECT CONCRETE FROM PREMATURE DRYING.
 - B. MAINTAIN CONCRETE WITH MINIMAL MOISTURE LOSS AT RELATIVELY CONSTANT TEMPERATURE FOR A PERIOD NECESSARY FOR HYDRATION OF CEMENT AND HARDENING OF CONCRETE.
 - 5. PROVIDE HAND RUBBED SMOOTH FINISH TO ALL EXPOSED VERTICAL FORMED CONCRETE SURFACES.
 - 6. FIELD QUALITY CONTROL
 - A. SUBMIT THREE (3) CONCRETE TEST CYLINDERS – TAKEN FOR EVERY 15 CUBIC YARD OR LESS. SUBMIT CONCRETE TESTS TO THE PROJECT MANAGER IN ACCORDANCE WITH ASTM C 31 AND C-39.
 - B. SUBMIT ONE (1) ADDITIONAL TEST CYLINDER – TAKEN DURING COLD WEATHER POURS, AND CURED ON JOB SITE UNDER SAME CONDITIONS AS CONCRETE IT REPRESENTS.
 - C. SUBMIT ONE (1) SLUMP TEST – TAKEN FOR EACH SET OF TEST CYLINDERS TAKEN.
 - 7. DEFECTIVE CONCRETE
 - MODIFY OR REPLACE CONCRETE NOT CONFORMING TO REQUIRED LINES, DETAILS OR ELEVATIONS AT COST OF GC, AS DIRECTED BY ARCHITECT/ENGINEER.



10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

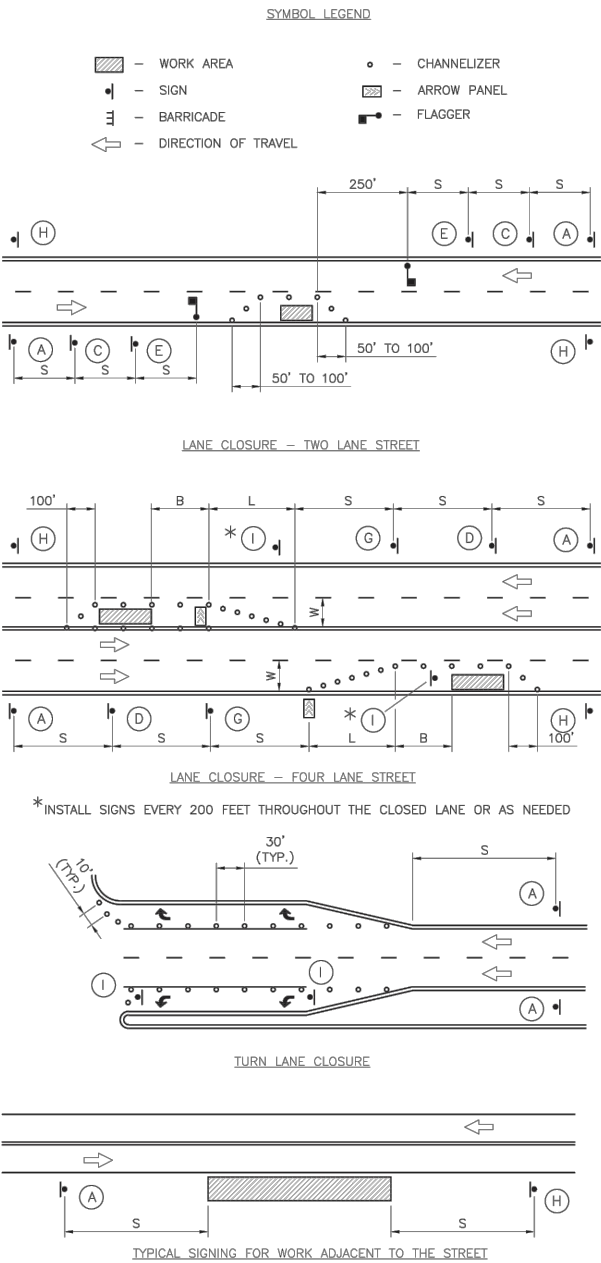
DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

SHEET TITLE

SPECIFICATIONS

SHEET NUMBER

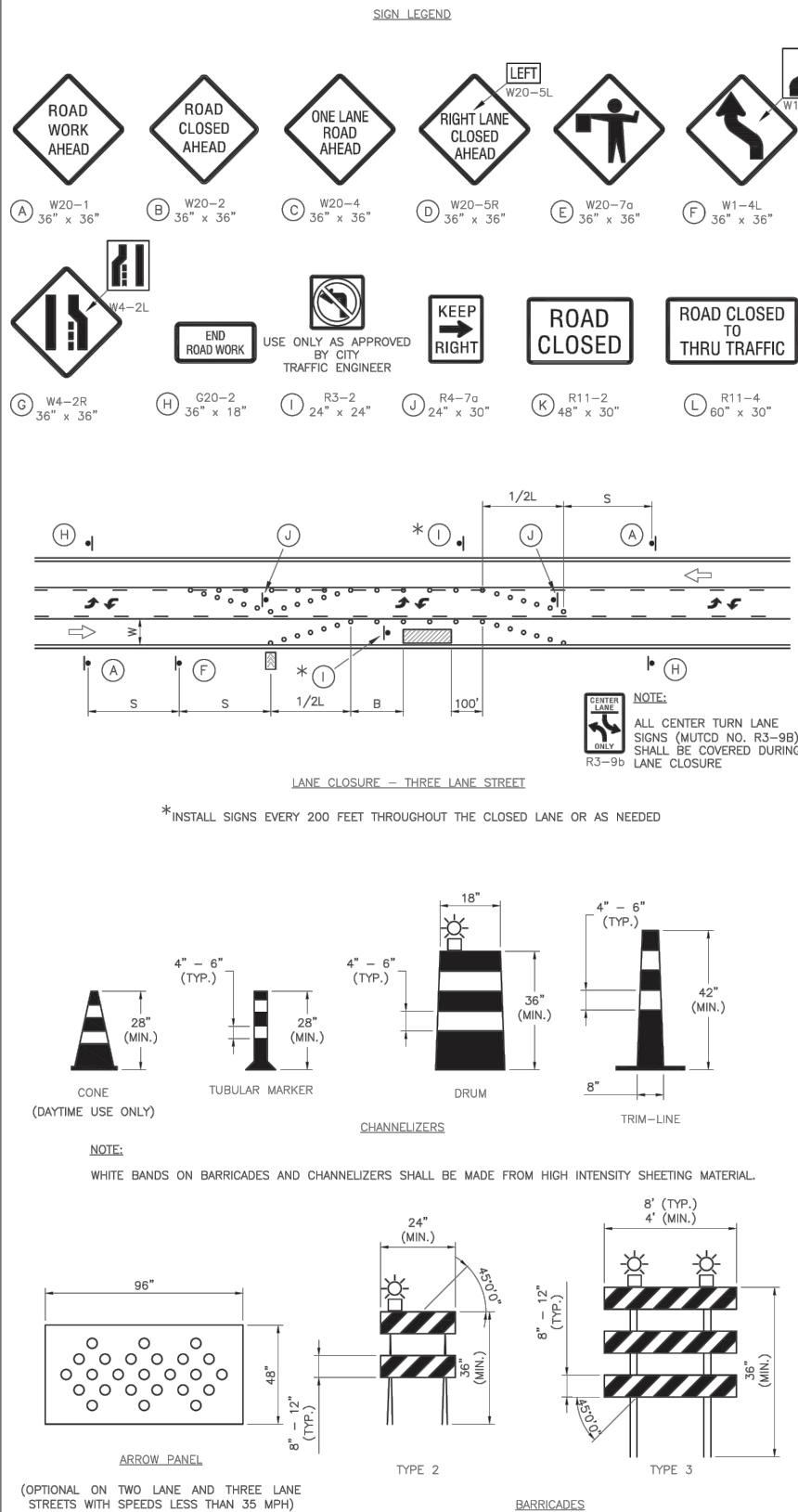
SP-1



GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE "B"		MAXIMUM CHANNELIZER SPACING		
SPEED LIMIT (MPH)	LENGTH (FEET)	SPEED LIMIT (MPH)	WITHIN TAPER (FEET)	OUTSIDE TAPER (FEET)
25	35	25	25	50
30	55	30	30	60
35	85	35	35	70
40	120	40	40	80
45	170	45	45	90

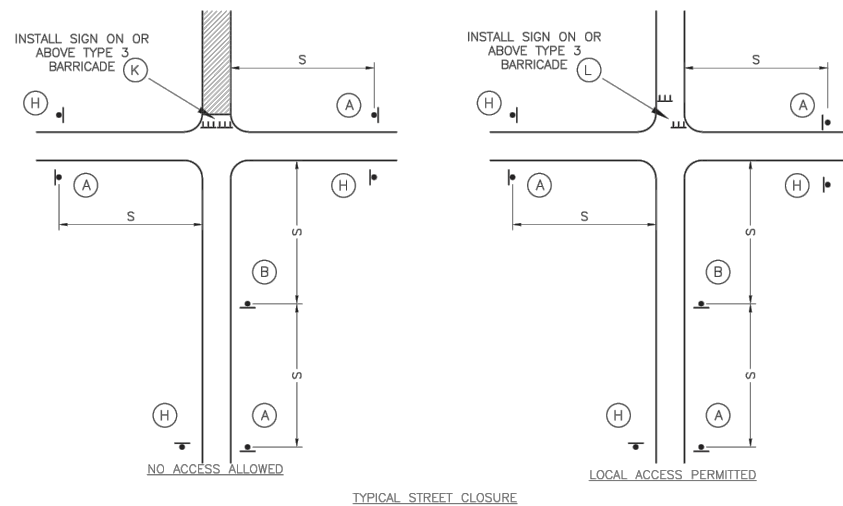
TAPER DIMENSIONS (FEET)				
SPEED LIMIT (MPH)	MINIMUM TAPER LENGTH "L", PER LANE WIDTH "W"			MINIMUM NUMBER OF CHANNELIZERS
	10	11	12	
25	105	115	125	6
30	150	165	180	7
35	205	225	245	8
40	270	295	320	9
45	450	495	540	13

SIGN SPACING "S"	
SPEED LIMIT (MPH)	SPACING (FEET)
25	100
30-35	250
•• 40	350



GENERAL NOTES:

- ALL SIGNS, BARRICADES, CHANNELIZERS, MARKINGS AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL TRAFFIC CONTROL DEVICES SHALL BE STANDARD IN SIZE, SHAPE, COLOR, AND MESSAGE, IN GOOD CONDITION, AND RETRO-REFLECTORIZED. ALL SIGNS SHALL BE SECURELY MOUNTED WITH HEIGHT AND LATERAL LOCATION AS DESCRIBED IN THE MUTCD.
- WARNING LIGHTS SHALL BE USED ON BARRICADES IN PLACE AT NIGHT AND ON WARNING SIGNS WHICH ALERT DRIVERS ABOUT A CHANGE IN ALIGNMENT, TRAFFIC CONTROL, LANE CLOSURE, OR ROAD CLOSURE.
- FLAGGERS SHALL BE USED WHERE INDICATED ON THE PLANS, WHERE CONSTRUCTION VEHICLES INTERACT WITH NORMAL TRAFFIC, OR WHERE CONSTRUCTION ACTIVITIES IMPOSE A RESTRICTION ON TRAFFIC, AS DIRECTED BY THE CITY TRAFFIC ENGINEER. WHERE FLAGGERS ARE USED, ADVANCE SIGNING SHALL BE ERCTED AS SHOWN IN THE DETAILS OR AS SPECIFIED IN THE MUTCD. FLAGGERS SHALL MEET THE REQUIREMENTS IN THE MUTCD IN REGARD TO CHARACTER, TRAINING, ATTIRE, AND BEHAVIOR.
- TRIM-LINES ARE THE CITY'S PREFERRED CHANNELIZING DEVICE. CONES MAY NOT BE USED AT NIGHTTIME.
- TRAFFIC CONTROL DEVICES NOT IN USE OR NOT APPLICABLE SHALL BE EITHER COVERED OR REMOVED FROM THE WORK AREA.
- THE CONTRACTOR SHALL USE BARRICADES, STREET PLATES, OR FENCING AS NEEDED TO EFFECTIVELY SHIELD PEDESTRIAN AND VEHICULAR TRAFFIC FROM EXPOSED OBJECTS, EXCAVATIONS, AND CONSTRUCTION ACTIVITIES.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND SIDE STREETS UNLESS NOTED OTHERWISE ON THE PLANS.
- NO STREET SHALL BE CLOSED WITHOUT THE APPROVAL OF THE CITY TRAFFIC ENGINEER. THE CONTRACTOR SHALL NOTIFY THE CITY TRAFFIC ENGINEER AT LEAST 7 DAYS IN ADVANCE OF ANY STREET CLOSURE. IF A DETOUR ROUTE AROUND THE CLOSURE IS TO BE PROVIDED, ALL DETOUR SIGNING SHALL BE AS SHOWN ON A PLAN APPROVED BY THE CITY TRAFFIC ENGINEER.
- CONSTRUCTION VEHICLES PARKED ALONG STREETS SHALL BE LOCATED WITHIN THE WORK AREA (TRAFFIC CONTROL) OR WHERE OTHERWISE NORMALLY PERMITTED. CONSTRUCTION MATERIALS, INCLUDING TRAFFIC CONTROL AND VEHICLES SHALL NOT RESTRICT SIGHT DISTANCE FOR VEHICLES EXITING AT STREETS OR DRIVES.
- CONSTRUCTION MATERIALS SHALL BE KEPT OFF OF SIDEWALKS, CONSOLIDATED IN ONE LOCATION WITHIN CITY RIGHT-OF-WAY, AND REMOVED DAILY UNLESS OTHERWISE APPROVED BY THE INSPECTOR. DIRT, MUD, AND OTHER CONSTRUCTION DEBRIS ON STREETS AND SIDEWALKS SHALL BE REMOVED IMMEDIATELY.
- THE CONTRACTOR SHALL NOT PERFORM ANY WORK THAT WILL RESTRICT VEHICULAR TRAFFIC IN ANY WAY BETWEEN THE HOURS OF 7:00 A.M. AND 9:00 A.M. OR 4:00 P.M. AND 6:00 P.M. MONDAY THROUGH FRIDAY UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS.
- ALL TRAVEL LANES SHOULD BE AT LEAST 11 FEET WIDE UNLESS OTHERWISE AUTHORIZED BY THE CITY TRAFFIC ENGINEER. A "NARROW LANES" SIGN SHALL BE INSTALLED IN ADVANCE OF A LANE WIDTH REDUCTION TO LESS THAN 11 FEET.
- ALL EDGE DROP-OFFS OF MORE THAN 2 INCHES AND LESS THAN 4 INCHES SHOULD BE PROTECTED BY A WEDGE OR BARRIER AND ALL EDGE DROP-OFFS GREATER THAN 4 INCHES SHALL HAVE EDGE PROTECTION (SEE TRAFFIC CONTROL SPECIFICATIONS FOR EDGE TREATMENT REQUIREMENTS).
- THE "WORKERS" SYMBOLIC SIGN (MUTCD NO. W21-1A) MAY BE USED INSTEAD OF THE "ROAD WORK AHEAD" SIGN FOR WORK WITH A DURATION OF 12 HOURS OR LESS. THE "END ROAD WORK" SIGN IS NOT REQUIRED TO BE INSTALLED AFTER THE "WORKERS" SIGN.
- NO TRAFFIC SIGNAL SHALL BE ALTERED OR MODIFIED IN ANY WAY WITHOUT A PLAN APPROVED BY THE CITY TRAFFIC ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES ON AN AROUND-THE-CLOCK BASIS, WHETHER OR NOT WORK IS ACTIVELY BEING PURSUED AND ANY DEFICIENCIES NOTED SHALL BE CORRECTED IMMEDIATELY.
- THE TRAFFIC CONTROL REQUIREMENTS SHOWN ON THESE PLANS ARE MINIMUM REQUIREMENTS ONLY AND DO NOT ATTEMPT TO ADDRESS IN DEPTH THE VARIETY OF SITUATIONS THAT MAY OCCUR ONCE CONSTRUCTION HAS STARTED. IN NO WAY DO THE REQUIREMENTS SHOWN ON THESE PLANS RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR SELECTING THE PROPER TRAFFIC CONTROL DEVICES AND IMPLEMENTATION PROCEDURES THAT WILL ASSURE THE SAFETY OF DRIVERS, PEDESTRIANS, AND WORKERS AT ALL TIMES.
- SHOULD THE CONTRACTOR FAIL TO ENFORCE THE TRAFFIC CONTROL PLAN OR FAIL TO CLEAN, REPLACE OR OTHERWISE MAINTAIN THE TRAFFIC CONTROL DEVICES WHEN DIRECTED TO DO SO BY THE CITY TRAFFIC ENGINEER OR REPRESENTATIVE, THE CITY MAY TAKE ONE OR MORE OF THE FOLLOWING ACTIONS:
 - EMPLOY ANOTHER AGENCY TO CORRECT DEFICIENCIES IN TRAFFIC CONTROL DEVICES AND DEDUCT THE COST FROM THE CONTRACTOR'S PAY ESTIMATE.
 - STOP THE WORK UNTIL DEFICIENCIES ARE CORRECTED.
 - SUSPEND ALL PAY ESTIMATES UNTIL DEFICIENCIES ARE CORRECTED, OR
 - PLACE THE CONTRACTOR IN DEFAULT.



LEE'S SUMMIT
MISSOURI

POLE AND LUMINAIRE DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

TRAFFIC CONTROL DETAILS

Drawn By: BWC
Checked By: MP
Date: 01/2020
Proj. #:

TC-1

verizon
10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

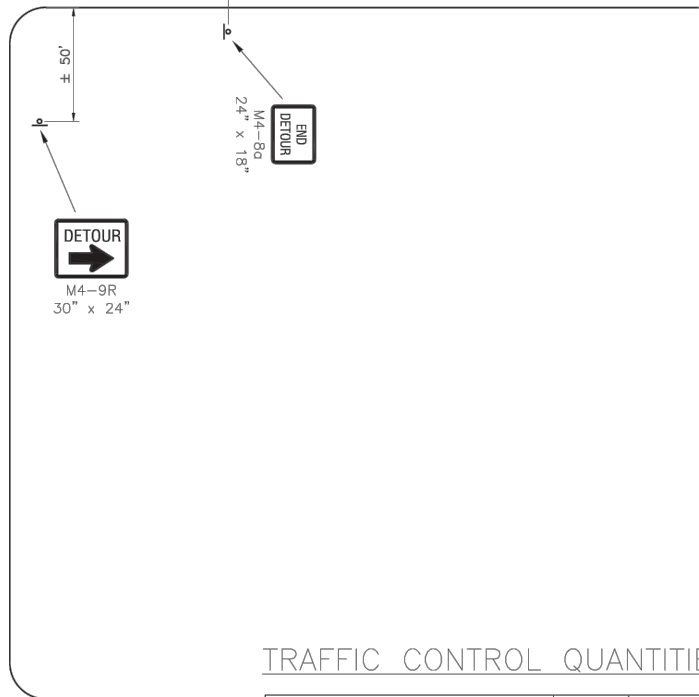
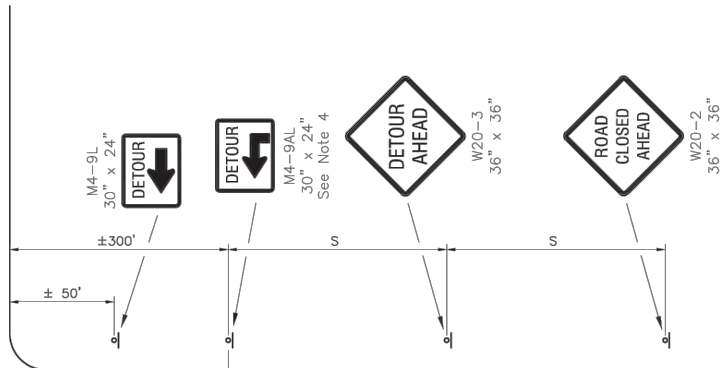
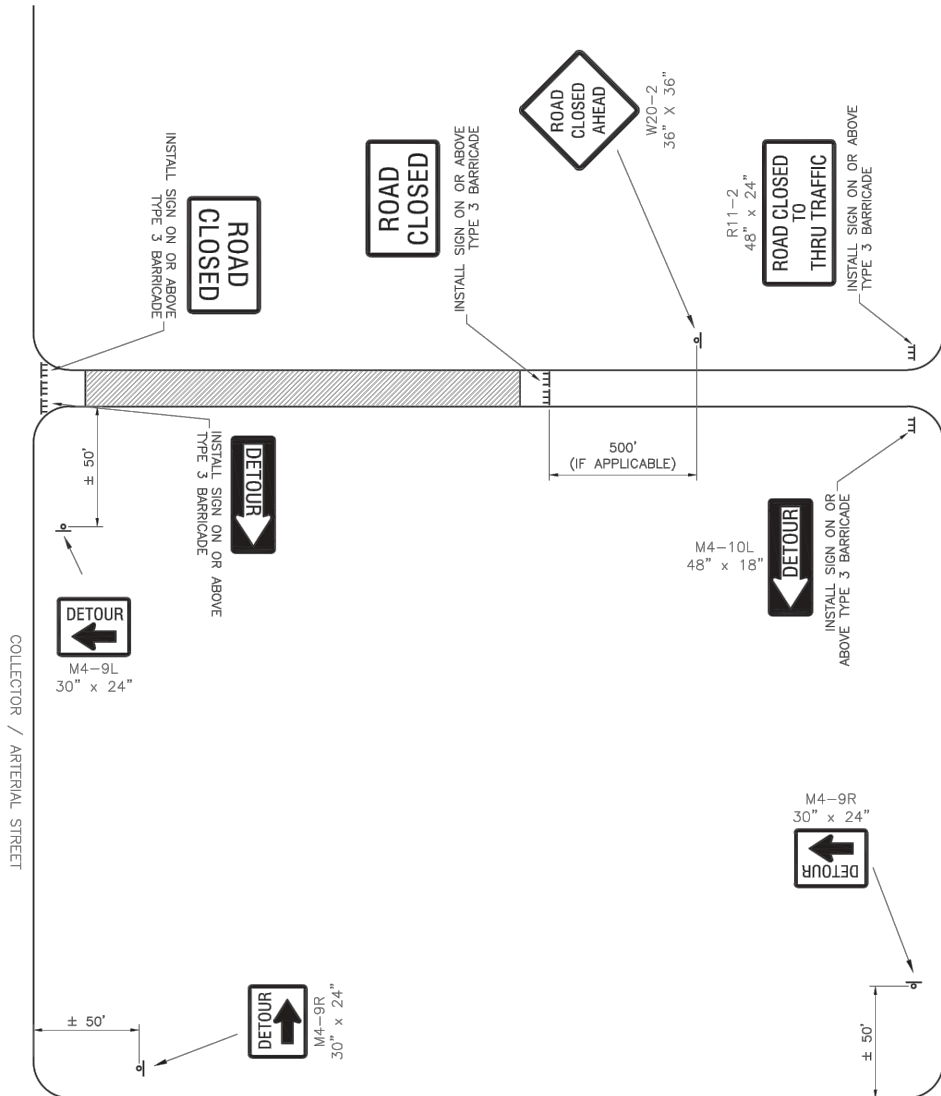
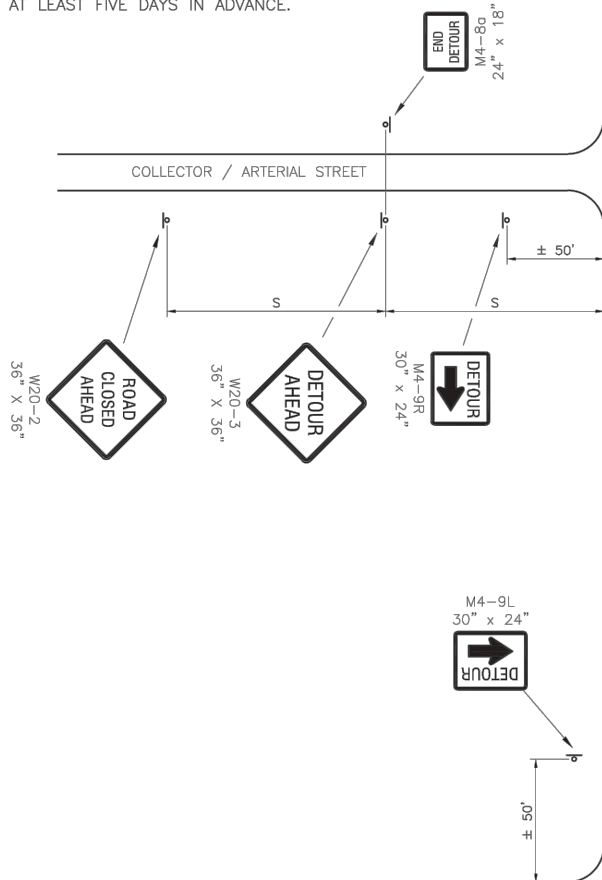
SHEET TITLE
TRAFFIC CONTROL DETAILS

SHEET NUMBER

TC-1

NOTES:

1. ALL SIGNS, BARRICADES, CHANNELIZERS, MARKINGS AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. DETOUR ROUTES ARE NOT REQUIRED TO BE POSTED FOR THE CLOSURE OF A LOCAL STREET.
3. TRAFFIC SHALL ONLY BE DETOURED VIA ARTERIAL AND/OR COLLECTOR STREETS UNLESS OTHERWISE APPROVED BY THE CITY TRAFFIC ENGINEER.
4. WHEN A DETOUR ROUTE REQUIRES VEHICLES TO MAKE A TURN AT AN INTERSECTION WITH MORE THAN ONE APPROACH LANE, DETOUR SIGNS WITH ADVANCE ARROWS WILL BE REQUIRED AT LEAST 300 FEET IN ADVANCE OF THE INTERSECTION.
5. ADDITIONAL DETOUR SIGNAGE MAY BE REQUIRED BY THE CITY TRAFFIC ENGINEER.
6. REQUESTS TO USE THE CITY'S PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE MADE TO THE PUBLIC WORKS OPERATIONS DIVISION AND THE CITY TRAFFIC ENGINEER AT LEAST FIVE DAYS IN ADVANCE.



TRAFFIC CONTROL QUANTITIES

BID ITEM	UNITS	QUANTITY
ARROW PANELS	EA	X
TYPE 2 BARRICADES	EA	X
TYPE 3 BARRICADES	EA	X
CHANNELIZERS	EA	X
CONSTRUCTION SIGNS	SF	X
TEMPORARY CONCRETE TRAFFIC BARRIER	LF	X
TEMPORARY PAVEMENT MARKINGS		
4" WHITE LINE	LF	X
4" YELLOW LINE	LF	X
24" WHITE LINE	LF	X
WARNING LIGHTS	EA	X

NOTES:

THESE APPROXIMATE QUANTITIES ARE PROVIDED SOLELY FOR THE CONTRACTOR'S CONVENIENCE, AND ARE NOT GUARANTEED TO BE A COMPLETE LIST OF MATERIALS NECESSARY FOR TEMPORARY TRAFFIC CONTROL DURING ALL CONSTRUCTION ACTIVITIES.

LEE'S SUMMIT
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

POLE AND LUMINAIRE DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

TYPICAL DETOUR DETAILS

Drawn By: BWC
Checked By: MP
Date: 01/2020
Proj. #:

TC-2

verizon
10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

SHEET TITLE
TRAFFIC CONTROL DETAILS

SHEET NUMBER

TC-2

verizon

10740 NALL AVE, SUITE 400
OVERLAND PARK, KS 66211



COLOR CODE LEGEND

DESCRIPTION	COLOR
ACCESS / UTILITY EASEMENT	
ANTENNAS	
DC POWER & GROUNDING	
EXISTING	
EXISTING EASEMENT	
FIBER	
HYBRID CABLES / COAX	
LEASE AREA	
NEW WORK / UTILITY	
PENETRATIONS / POWER	
RRHS	
WALL HATCH	

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	07/18/25	TB
B	ISSUED FOR PERMITTING	09/11/25	MD

FUZE #
2469569

MDG# 5000203551

KCYC SUMMIT
WOODS 04SC

1010 NW WARD RD
LEE'S SUMMIT, MO 64086

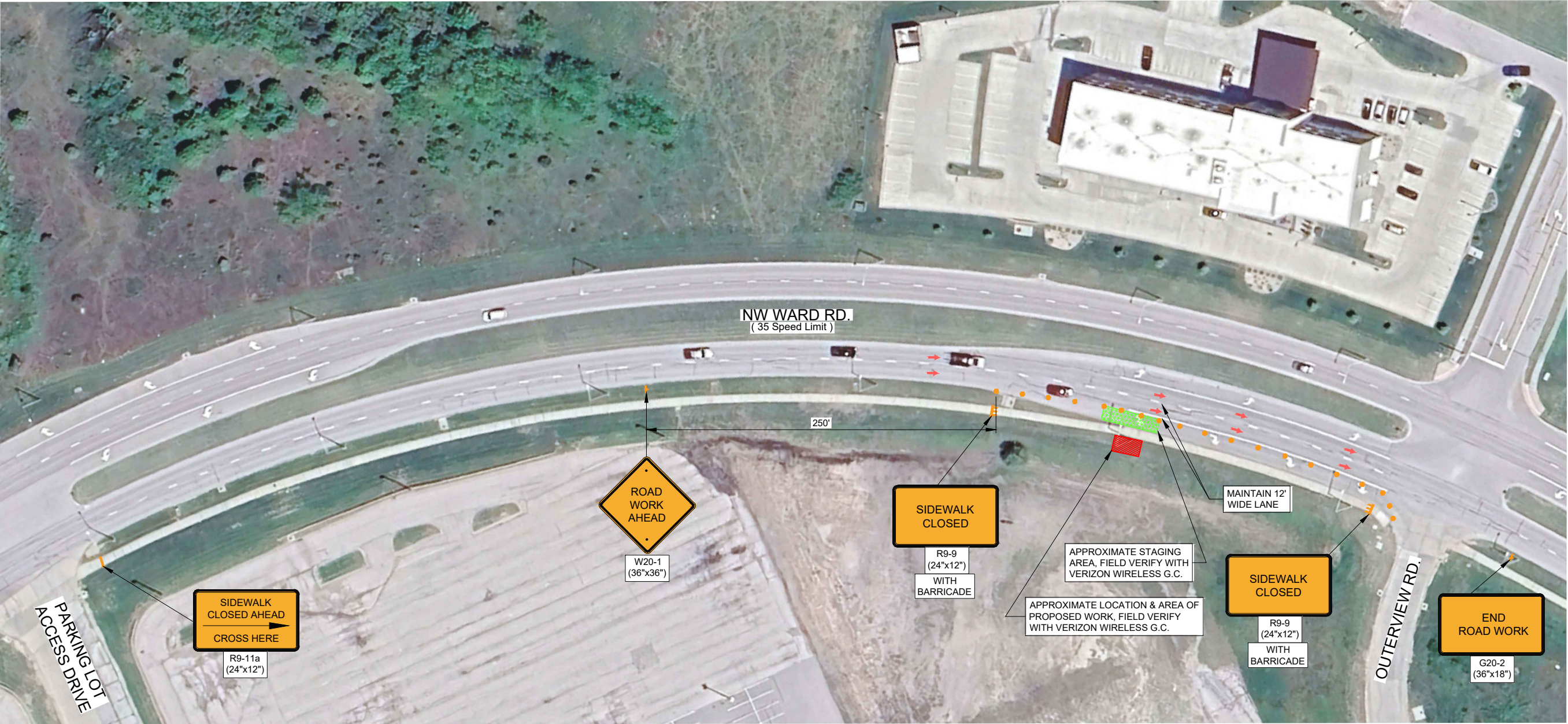
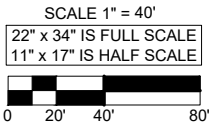
DRAWN BY:	TSB
CHECKED BY:	MP
DATE:	07/15/25
PROJECT #:	132-359

SHEET TITLE

TRAFFIC CONTROL PLAN

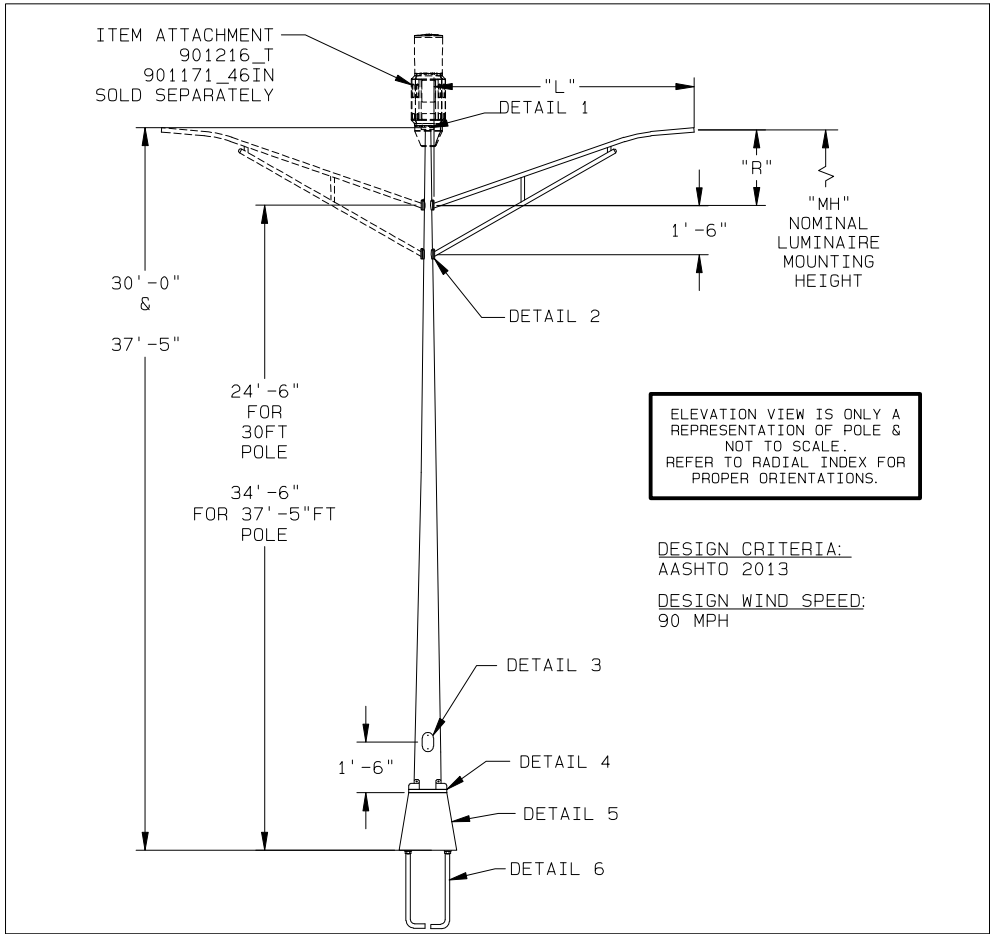
SHEET NUMBER

TC-3

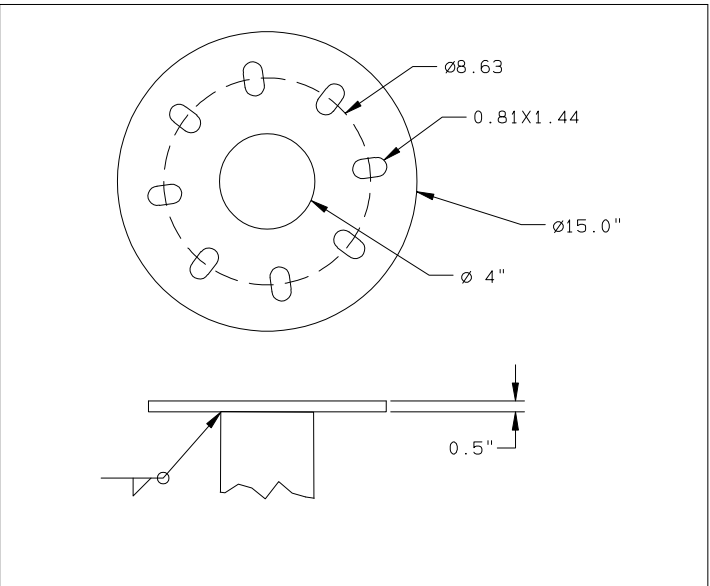


- NOTES:
- PLAN PROVIDED IS FOR REFERENCE ONLY. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LEE'S SUMMIT MISSOURI TRAFFIC CONTROL DETAILS & NOTES ON SHEETS TC-1 & TC-2.
 - VERIZON WIRELESS G.C. IS RESPONSIBLE FOR MEANS AND METHODS IN MAINTAINING ADEQUATE SIGNS, BARRICADES, FENCING, TRAFFIC CONTROL MEASURES AND ALL OTHER MEASURES THAT ARE NECESSARY TO PROTECT THE SAFETY OF THE SITE AT ALL TIMES.

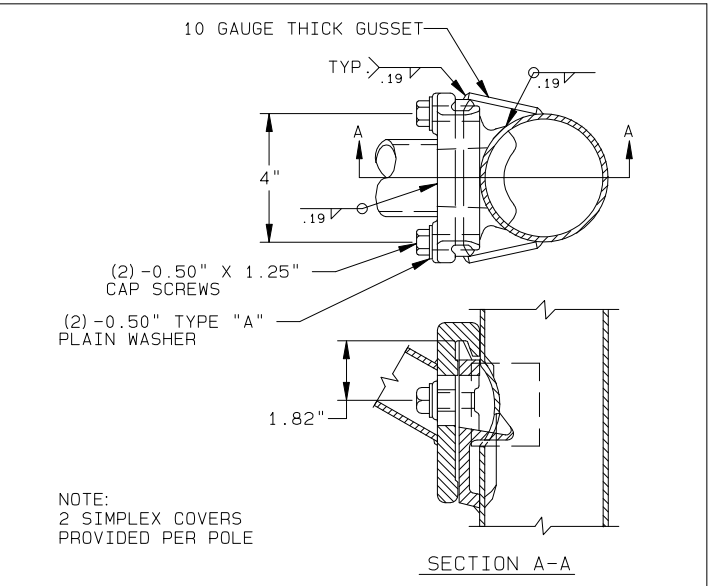
BLOCKING PERMIT INFO:
CITY OF LEE SUMMIT
DEPARTMENT OF STREETS



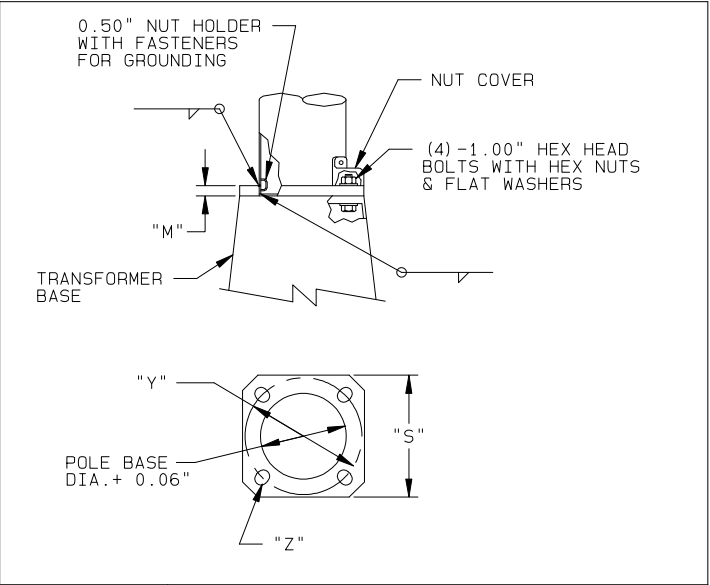
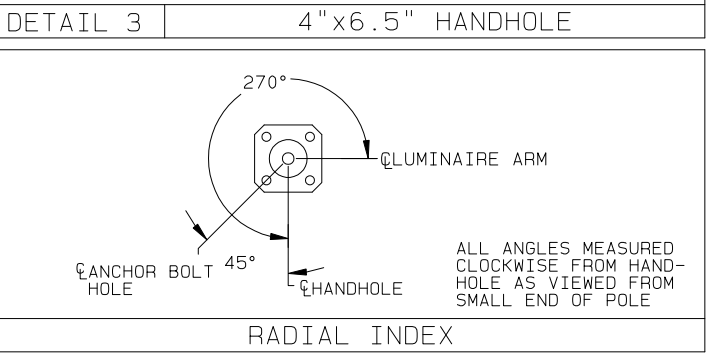
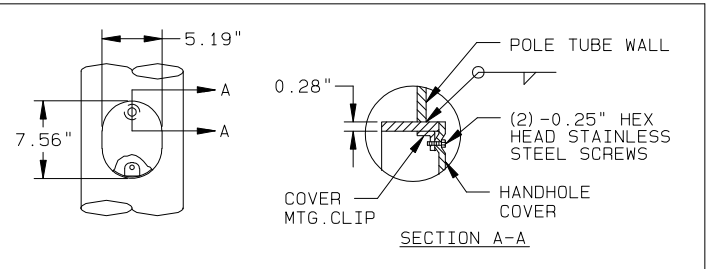
MATERIAL DATA			FINISH DATA	
COMPONENT	ASTM DESIGNATION	MIN. YIELD (KSI)	SYSTEM:	FINISH PAINT/GALVANIZED (FPGV)
POLE TUBE	A595 GR.A	55	BASE COAT:	HOT-DIP GALVANIZED TO ASTM A123
BASE PLATE	A36	36	PRIME COAT:	NONE
LUMINAIRE PIPE ARM	A500,A501, 513,618	36	FINISH COAT:	TGIC OR URETHANE POLYESTER POWDER
LUMINAIRE ATTACHMENT	A27 GR.70-36	36	COLOR:	LIGHT GRAY RAL 7035
LUMINAIRE CONN. BOLTS	SAE GR. 5	--	SPEC:	F-283DY
ANCHOR BOLTS	F1554 GR.55	55		
GALVANIZING-HARDWARE	HOT DIP ZINC	--		



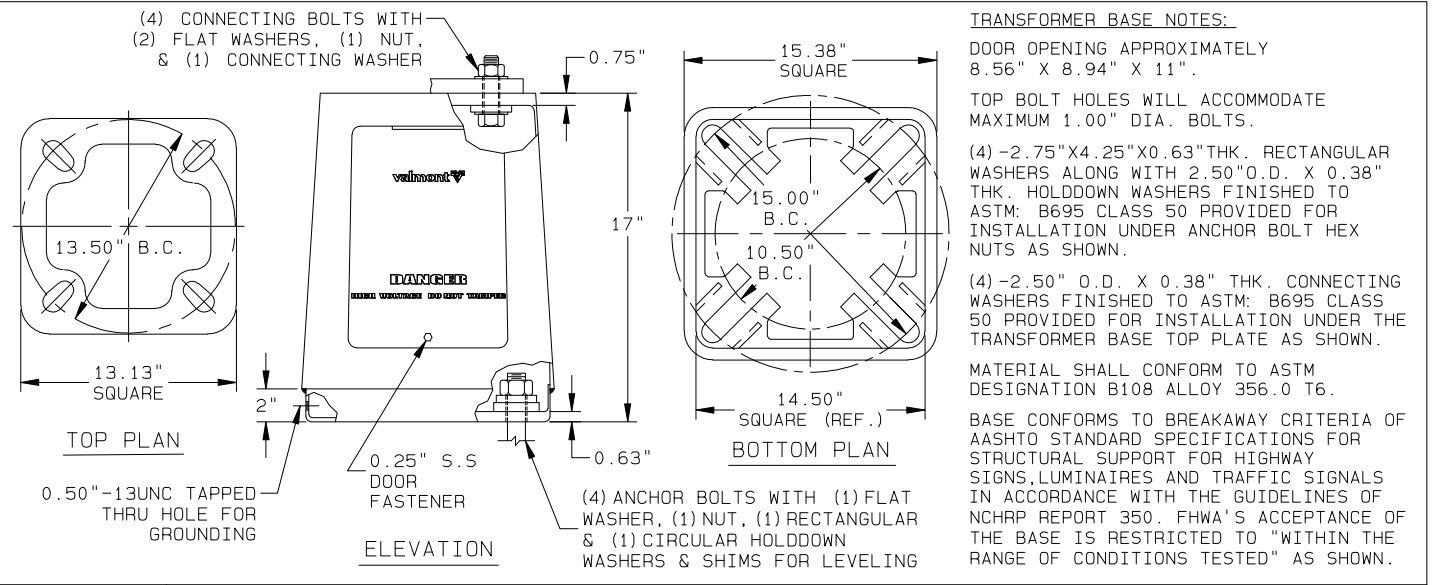
DETAIL 1 POLE TOP PLATE



DETAIL 2 LUMINAIRE ARM ATTACHMENT



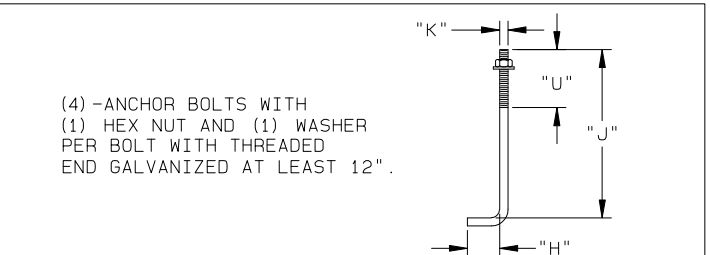
DETAIL 4 POLE BASE



DETAIL 5 M107 T-BASE (TB1-17 MOD)

POLE DATA														
ITEM	POLE TUBE				POLE BASE				ANCHOR BOLT					FIXTURE MOUNTING HEIGHT "MH" (FT)
	BASE DIA. (IN)	TOP DIA. (IN)	LENGTH (FT)	GAUGE OR THK. (IN)	SQUARE "S" (IN)	BOLT CIRCLE "Y" (IN)	THK. "M" (IN)	HOLE "Z" (IN)	DIA. "K" (IN)	LENGTH "J" (IN)	HOOK "H" (IN)	THREAD LENGTH "U" (IN)	Foundation Bolt Circle (IN)	
902149_40FT	10.00	4.96	36.00	11	13.13	13.50	1.25	1.25	1.25	42.00	6.00	6.00	15.00	40
902149_30FT	9.00	5.00	28.58	11	13.13	13.50	1.25	1.25	1.25	42.00	6.00	6.00	15.00	30

LUMINAIRE ARM DATA					
ITEM	BASE DIA. (IN)	END DIA. (IN)	SPAN "L" (FT)	THK.	RISE HEIGHT "R"
902149_06FT	2.38	2.38	8.00	0.154	5'-6"
902149_08FT	2.38	2.38	8.00	0.154	5'-6"
902149_10FT	2.38	2.38	10.00	0.154	5'-6"
902149_12FT	2.38	2.38	12.00	0.154	5'-6"
902149_15FT	2.38	2.38	15.00	0.154	5'-6"
902149_16FT	2.38	2.38	16.00	0.154	5'-6"

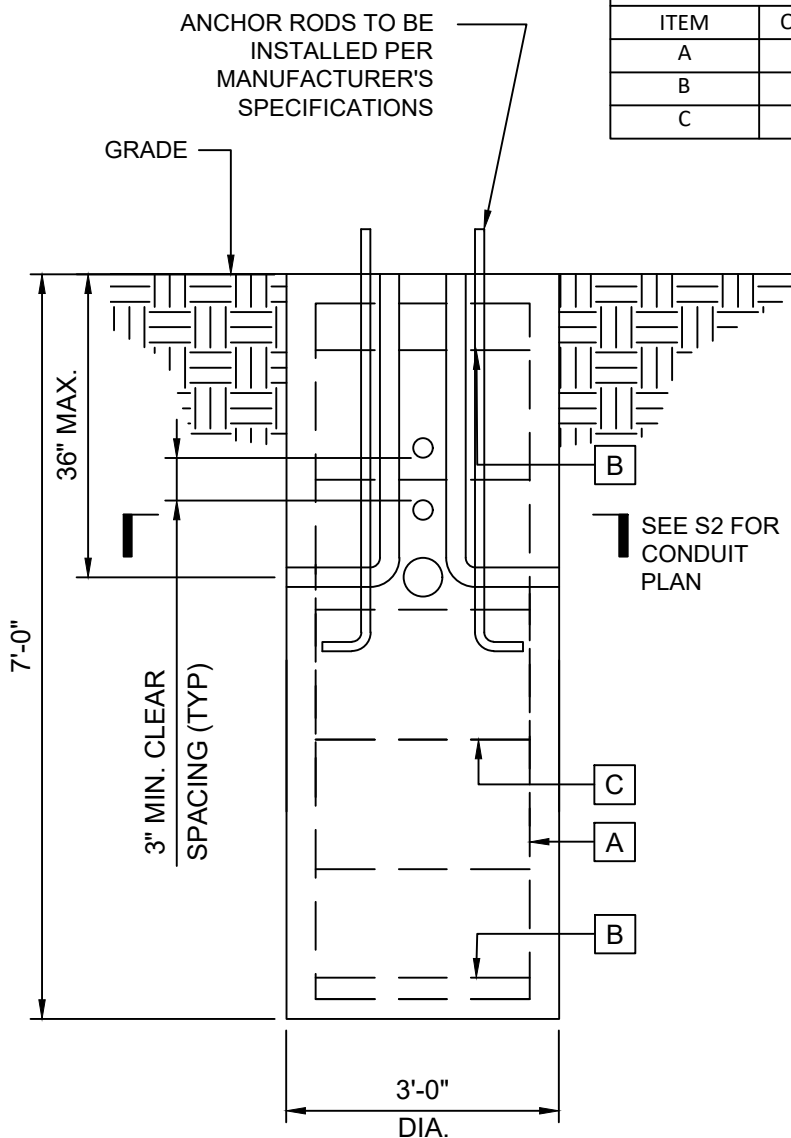


DETAIL 6 ANCHOR BOLT

ALTHOUGH RARE, VIBRATIONS SEVERE ENOUGH TO CAUSE DAMAGE CAN OCCASIONALLY OCCUR IN STRUCTURES OF ALL TYPES. BECAUSE THEY ARE INFLUENCED BY MANY INTERACTING VARIABLES, VIBRATIONS ARE GENERALLY UNPREDICTABLE. THE USER'S MAINTENANCE PROGRAM SHOULD INCLUDE OBSERVATION FOR EXCESSIVE VIBRATION AND EXAMINATION FOR ANY STRUCTURAL DAMAGE OR BOLT LOOSENING. THE VALMONT WARRANTY SPECIFICALLY EXCLUDES FATIGUE FAILURE OR SIMILAR PHENOMENA RESULTING FROM INDUCED VIBRATION, HARMONIC OSCILLATION OR RESONANCE ASSOCIATED WITH MOVEMENT OF AIR CURRENTS AROUND THE PRODUCT.

VIBRATION DISCLAIMER

CM1 08/12/25	GGL 08/13/25	— — — — —	SOLD TO:	JOB	VALMONT INDUSTRIES, INC. RESERVES THE RIGHT TO INSTALL VARIOUS, ENGINEER APPROVED, MATERIAL HANGING ACCOMMODATIONS TO FACILITATE THE MANUFACTURING PROCESS.	ORDER NUMBER: 902149
DRAWN BY-DATE	CHECK BY-DATE	DESCRIPTION	SHIP TO:	LEES SUMMIT		PAGE NUMBER: 1 OF 1
			P.O. #:	SMALL CELL PORTFOLIO		DRAWING NUMBER
			AGENT:	SMALL CELLS STRUCTURES		902149
						REV



ELEVATION VIEW

REINFORCING BAR SCHEDULE

ITEM	QUANTITY	SIZE	SPACING
A	8	#6	EQUALLY
B	2	#3	(2) BARS WITHIN TOP/BOTTOM 5"
C	9 +/-	#3	9" O.C.

FOUNDATION NOTES:

1. TOWER AND FOUNDATION DESIGN HAS BEEN COMPLETED IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE AND THE TIA-222-H STANDARD.
2. CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI, IN ACCORDANCE WITH ACI 318-11.
3. REBAR TO CONFORM TO ASTM A615 GRADE 60.
4. ALL REBAR TO HAVE A MINIMUM OF 3" CONCRETE COVER.
5. ALL EXPOSED CONCRETE CORNERS TO BE CHAMFERED 3/4".
6. THE FOUNDATION DESIGN IS BASED ON THE FOLLOWING FACTORED LOADS:

MOMENT = 41.0 K-FT

AXIAL = 1.0 K

SHEAR = 1.0 K

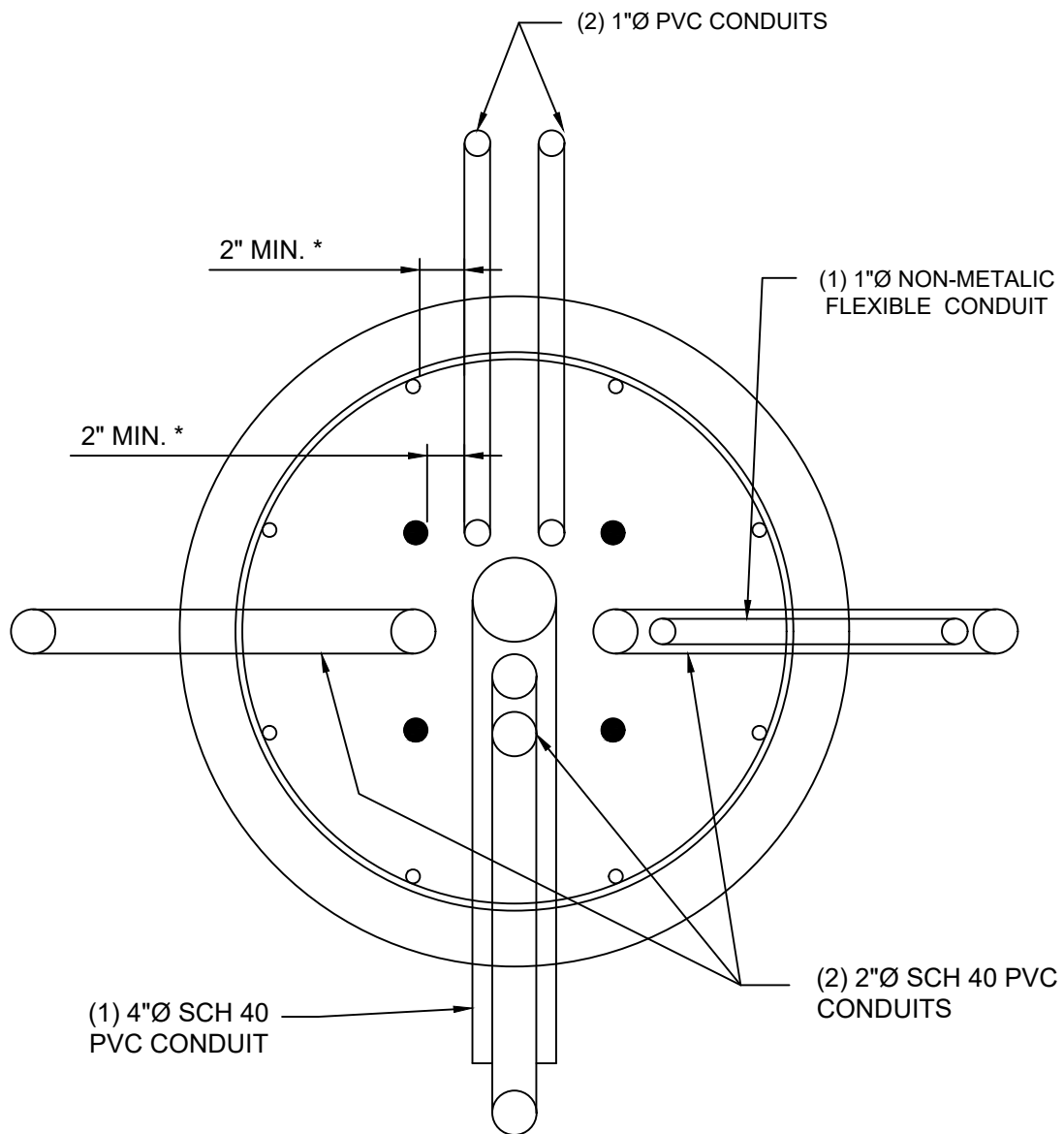
7. TOTAL CONCRETE VOLUME: 2.0 CUBIC YARDS
8. FOUNDATION HAS BEEN DESIGNED USING THE FOLLOWING PRESUMPTIVE SOIL PROPERTIES PROVIDED IN ANNEX F OF TIA-222 H STANDARD:

UNIT SOIL WEIGHT: 110 PCF

FRICTION ANGLE: 30 DEGREES

ULTIMATE SKIN FRICTION: 500 PSF

ULTIMATE NET BEARING CAPACITY:
4000 PSF



CONDUIT PLAN

* MINIMUM CLEAR SPACING BETWEEN CONDUITS AND ANCHOR RODS/ REBAR /CONDUITS SHALL BE 2".

Project		Catalog #		Type	
Prepared by		Notes		Date	



Streetworks

Archeon Medium

Roadway Luminaire

Product Features



Product Certifications



Interactive Menu

- Ordering Information page 2
- Product Specifications page 3
- Energy and Performance Data page 3

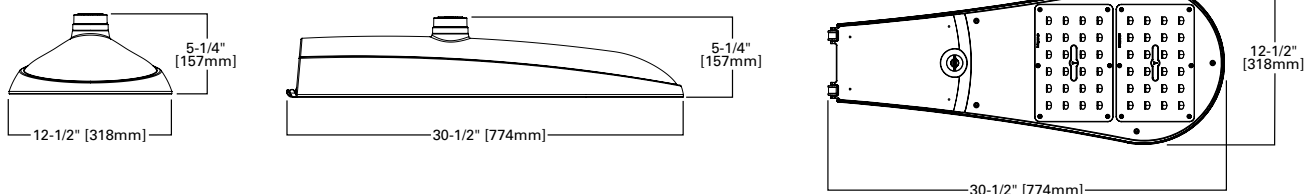
Quick Facts

- Die-cast aluminum construction; Single latch tool-less entry
- Replaces up to 400W equivalent HID; -40°C to 40°C operating range
- Pole-mounted; Optional arm and offset adjustable arm mounting
- 120-277V, 347V, or 480V 50/50Hz operation; IP66 rated

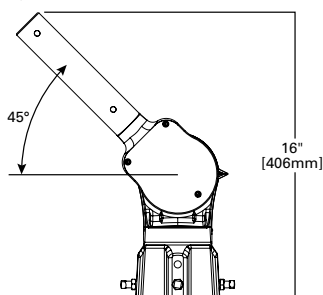
Connected Systems

- WaveLinX
- Telensa

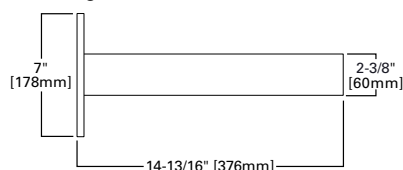
Dimensional Details



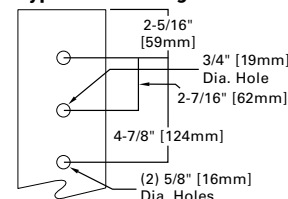
Adjustable Slipfitter Offset Arm



15" Straight Arm



Type "M" - Drilling Pattern



Ordering Information

SAMPLE ORDER NUMBER: ARCH-M-PA2-40-740-U-T2R-A15-AP-10K-PR

Product Family ^{1, 2}	Light Engine	Wattage Bucket	Color Temperature	Voltage	Distribution	Mounting	Finish
ARCH-M=Archeon Medium BAA-ARCH-M=Archeon Medium Buy American Act Compliant ²⁹ TAA-ARCH-M=Archeon Medium Trade Agreements Act Compliant ²⁹	PA2=(2) Direct Mount Rectangle (48 LED)	40 50 60 70 80 90 100 110 120 130 140 150 160	722=70CRI, 2200K 727=70CRI, 2700K 730=70CRI, 3000K 735=70CRI, 3500K 740=70CRI, 4000K 750=70CRI, 5000K 827=80CRI, 2700K ⁶ AMB=Amber, 590nm ^{18, 25}	U=Universal (120-277V) 8=480V ^{4, 5} 9=347V ⁴ DV=277-480V DuraVolt Drivers ^{4, 5, 31}	T2R=Type II Roadway T2U=Type II Urban T3=Type III T4W=Type IV Wide 5WQ=Type V Square Wide	[Blank]=None A15=15" Straight Mast Arm ¹⁴ ASJS15=Adjustable Slipfitter (Factory set at 15° degrees) ASJS25=Adjustable Slipfitter (Factory set at 25° degrees) ASJS45=Adjustable Slipfitter (Factory set at 45° degrees)	AP=Grey BZ=Bronze BK=Black DP=Dark Platinum WH=White
Options (Add as Suffix)				Controls			
10K=Series 10kV UL 1449 Surge Protective Device 20K=Series 20kV UL 1449 Surge Protective Device 20KI=Series 20kV UL 1449 Surge Protective Device with light indicator 10MSP=Parallel 10kV MOV Surge Protective Device 20MSP=Parallel 20kV MOV Surge Protective Device K=Level Indicator HA=50°C High Ambient Temperature HSS=Factory Install House Side Shield ¹³ PSC=Photocontrol Shorting Cap NPC=NEMA Photocontrol - Multi-Tap LLPC=Longlife Photocontrol Included IP66=IP66 Rated Housing FADC=Field Adjustable Dimming Controller ²⁶ CC=Coastal Construction ²⁷ DXXXX=Department of Transportation - Customer specific details ³² UXXXX=Utility - Customer specific details ³²				PR=NEMA 3-PIN Twistlock Photocontrol Receptacle ⁷ PR7=NEMA 7-PIN Twistlock Photocontrol Receptacle SPB1=Dimming Occupancy Sensor with Bluetooth Interface, <8' Mounting ²⁸ SPB2=Dimming Occupancy Sensor with Bluetooth Interface, 8'-20' Mounting ²⁸ SPB4=Dimming Occupancy Sensor with Bluetooth Interface, 21'-40' Mounting ²⁸ MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height ^{8, 9} MS/DIM-L20=Motion Sensor for Dimming Operation, Maximum 9' - 20' Mounting Height ^{8, 9} MS/DIM-L40=Motion Sensor for Dimming Operation, Maximum 21' - 40' Mounting Height ^{8, 9} LWR-LW=Enlighted Wireless Sensor, Wide Lens for 8' - 16' Mounting Heights ^{8, 10, 11} LWR-LN=Enlighted Wireless Sensor, Narrow Lens for 16' - 40' Mounting Heights ^{8, 10, 11} 5LTD=DALI ³ ZD=DALI-enabled 4-PIN Twistlock Receptacle ^{18, 20} ZW=WaveLinX-enabled 4-PIN Twistlock Receptacle ^{18, 20} SWPD4XX=WaveLinX Wireless Sensor, 7' - 15' Mounting Height ^{21, 22, 23, 24} SWPD5XX=WaveLinX Wireless Sensor, 15' - 40' Mounting Height ^{21, 22, 23, 24}			
Accessories (Order Separately) ^{17, 30}							
OA / RA1013=Photocontrol Shorting Cap OA1223=10kV Surge Module Replacement OA/RA1014=NEMA Photocontrol - 120V OA/RA1016=NEMA Photocontrol - Multi-Tap OA/RA1027=NEMA Photocontrol - 480V OA/RA1201=NEMA Photocontrol - 347V OA1223=10kV Surge Module Replacement A15-XX=Arm (15" Straight Arm) ^{14, 15} ASJS15-XX=Adjustable slipfitter (Factory set at 15 degrees) ¹⁶				ASJS25-XX=Adjustable slipfitter (Factory set at 25 degrees) ¹⁶ ASJS45-XX=Adjustable slipfitter (Factory set at 45 degrees) ¹⁶ FSIR-100=Wireless Configuration Tool for Occupancy Sensor ¹⁷ HS-ARCH=Field Install ARCH House Side Shield ^{13, 15} SWPD4XX=WaveLinX Wireless Sensor, 7' - 15' Mounting Height ^{21, 22, 23, 24} SWPD5XX=WaveLinX Wireless Sensor, 15' - 40' Mounting Height ^{21, 22, 23, 24} VGS-ARCH=Short Vertical Drop Shield VGL-ARCH=Long Vertical Drop Shield			
NOTES: 1. Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information. 2. Nominal wattage values will be labeled on fixture as per ANSI C136.15. For specific fixture wattage, refer to Power and Lumens table. 3. Only available in universal voltage. 4. Not available at 40W or 50W. 5. 480V not to be used with ungrounded or impedance grounded systems. 6. Extended lead times may apply. 7. If "PR" selected, dimming functionality not available. Dimming leads will be capped. 8. Only available in Universal voltage. 9. The FSIR-100 accessory is required to adjust parameters. 10. Enlighted wireless system is not available with photocontrol receptacle (not required) 11. Enlighted wireless sensors are factory installed and require network components LWP-EM-1, LWP-GW-1, and LWP-PoE in appropriate quantities. See website for Enlighted application information. 12. HA option not available with the following configurations, 347/480V 150W and 160W if paired with HS-ARCH or 5LTD 140 160W. 13. HSS not available with 5WQ distribution. 14. Round pole adapter and mounting hardware included. "M" drill pattern. 15. Archeon Medium requires two house side shields. 16. Replace XX with color designation. 17. This tool enables adjustment of parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Cooper Lighting Solutions for more information.				18. Amber 590nm +/- 5nm for wildlife and observatory use. Supplied in PA2-60 wattage bucket only. 19. Utilizes internal step-down transformer when 347V or 480V is selected. 20. Controls system is not available with photocontrol (BPC), photocontrol receptacle (PR or PR7), or other controls systems (MS, ZD, ZW, LWR, DALI, or DIM). 21. Requires 4-PIN twistlock receptacle (ZD or ZW) option. 22. Replace XX with sensor color (WH, BZ or BK). 23. Sensor passive infrared (PIR) may be overly sensitive with operating below -20°C (-4°F). 24. For this device to be field-configurable, requires WAC Gateway components WAC-PoE and WPOE-120 in appropriate quantities. Only compatible with WaveLinX system and software and requires system components to be installed for operation. See website for more WaveLinX application information. 25. Not available with HA option. 26. Cannot be used with PR7 or other motion response control options. 27. Coastal construction finish salt spray tested to over 5,000-hours per ASTM B117, with a scribe rating of 9 per ASTM D1654. 28. Smart device with Sensor Configuration mobile application by Wattstopper required to change system defaults. 29. Only product configurations with these designated prefixes are built to be compliant with the Buy American Act of 1933 (BAA) or Trade Agreements Act of 1979 (TAA), respectively. Please refer to DOMESTIC PREFERENCES website for more information. Components shipped separately may be separately analyzed under domestic preference requirements. 30. Accessories sold separately will be separately analyzed under domestic preference requirements. Consult factory for further information. 31. DuraVolt drivers feature added protection from power quality issues such as loss of neutral, transients and voltage fluctuations. Visit www.signify.com/duravolt for more information. Not available in 70W or below. Not available with any control option except SPB. 32. Customer specific specifications utilizes standard products with small adjustments to meet unique requirements such as packaging, labels, wattage adjustments, etc.			

Product Specifications

Construction

- Heavy-duty die-cast aluminum housing and door
- Tool-less entry, hinged removable door for easy maintenance
- 3G vibration rated

Optics

- Choice of four patented, high efficiency AccuLED Optics
- Available in Type IIR, IIU, III, IV wide and V square wide the optics are precisely designed to shape the distribution maximizing efficiency and application spacing
- Offered standard in 4000K (+/- 275K) CCT and minimum 70 CRI. Optional 2200K, 2700K, 3000K, and 5000K CCT
- For the ultimate level of spill light control, an optional house side shield accessory is available and can be field or factory installed
- Optics are IP66 enclosure rated
- IDA Certified for 3000K CCT and warmer only.

Electrical

- 120-277V, 347V, or 480V 50/50Hz operation
- Standard 0-10V dimming
- 10kV/10kA common- and differential- mode surge protection available
- Ambient operating temperature from -40°C to 40°C; 50°C HA, high ambient, capability available
- Standard with three position tunnel type compression terminal block
- Greater than 98% lumen maintenance expected at 60,000 hours
- Replaces 150W to 400W HID
- Luminaire available with the field adjustable dimming controller (FADC) to manually adjust wattage and reduce the total lumen output and light levels. Comes pre-set to the highest position at the lumen output selected.

Mounting

- Four-bolt / two-bracket slipfitter with cast-in pipe stop and 2.5" leveling steps
- Fixed-in-place bird guard seals around 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) mounting arms)

- Optional 15" pole mount arm available with round pole adapter and mounting hardware included

Finish

- Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear
- Consult your lighting representative at Cooper Lighting Solutions for a complete selection of standard colors

Shipping Data

- Approximate Net Weight: 18 lbs. (8.16 kgs.)
- Effective Projected Area: 0.71 (Sq. Ft.)

Warranty

- Five year limited warranty, consult website for details. www.cooperlighting.com/legal
- Optional ten-year warranty, please see your CLS Streetworks sales representative for more information

Energy and Performance Data

Power and Lumens (PA2 Light Engine)

 Supplemental Performance Guide

Light Engine - PA2*		PA2-40	PA2-50	PA2-60	PA2-70	PA2-80	PA2-90	PA2-100	PA2-110	PA2-120	PA2-130	PA2-140	PA2-150	PA2-160
Power (Watts)		38	48	63	73	83	92	101	111	122	131	141	151	161
Wattage Label		40	50	60	70	80	90	100	110	120	130	140	150	160
Input Current @ 120V (A)		0.318	0.399	0.527	0.609	0.693	0.768	0.846	0.925	1.020	1.100	1.180	1.260	1.340
Input Current @ 277V (A)		0.145	0.178	0.243	0.275	0.309	0.342	0.374	0.407	0.453	0.486	0.518	0.553	0.586
Input Current @ 347V (A)		--	--	0.188	0.216	0.245	0.271	0.298	0.325	0.371	0.400	0.428	0.458	0.487
Input Current @ 480V (A)		--	--	0.146	0.165	0.185	0.203	0.222	0.240	0.286	0.304	0.323	0.344	0.363
Optics														
T2R	4000K/5000K Lumens	6,489	8,063	10,434	11,891	13,299	14,714	15,925	17,033	18,278	19,311	20,317	21,323	22,189
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3
	3000K Lumens	5,911	7,342	9,502	10,829	12,111	13,400	14,501	15,512	16,646	17,586	18,502	19,418	20,206
	Bug Rating	B1-U0-G1	B1-U0-G2	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3
T2U	4000K/5000K Lumens	6,411	7,965	10,306	11,747	13,138	14,535	15,731	16,826	18,056	19,076	20,070	21,064	21,918
	Bug Rating	B2-U0-G2	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
	3000K Lumens	5,838	7,253	9,385	10,698	11,963	13,238	14,325	15,323	16,443	17,373	18,277	19,182	19,961
	Bug Rating	B2-U0-G1	B3-U0-G1	B3-U0-G1	B3-U0-G2	B3-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2
T3	4000K/5000K Lumens	6,649	8,013	10,367	11,816	13,216	14,621	15,825	16,926	18,164	19,190	20,190	21,189	22,050
	Bug Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
	3000K Lumens	5,873	7,297	9,441	10,761	12,036	13,317	14,410	15,415	16,542	17,476	18,388	19,297	20,081
	Bug Rating	B1-U0-G2	B1-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3
T4W	4000K/5000K Lumens	6,416	7,971	10,313	11,756	13,147	14,547	15,742	16,839	18,070	19,091	20,085	21,080	21,936
	Bug Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4
	3000K Lumens	5,843	7,259	9,392	10,706	11,973	13,247	14,336	15,334	16,455	17,385	18,292	19,197	19,977
	Bug Rating	B1-U0-G2	B1-U0-G2	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B2-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3
5WQ	4000K/5000K Lumens	6,619	8,223	10,640	12,127	13,563	15,007	16,241	17,372	18,642	19,694	20,721	21,747	22,629
	Bug Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G3
	3000K Lumens	6,029	7,489	9,690	11,043	12,353	13,666	14,789	15,820	16,977	17,935	18,870	19,804	20,609
	Bug Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G2	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B4-U0-G3	B5-U0-G3	B5-U0-G3

Energy and Performance Data

Lumen Maintenance

Light Engine	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Theoretical L70 (Hours)
PA2	Up to 40°C	> 98%	> 800,000

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

FADC Settings

FADC Position	Percent of Typical Lumen Output
1	25%
2	48%
3	56%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

Note: +/-5% typical value

 [View Archeon Medium IES files](#)