

**COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

THE APPLICATION OF	)	
NEW CINGULAR WIRELESS PCS, LLC,	)	
A DELAWARE LIMITED LIABILITY COMPANY	)	
FOR ISSUANCE OF A CERTIFICATE OF PUBLIC	)	CASE NO.: 2025-00278
CONVENIENCE AND NECESSITY TO CONSTRUCT	)	
A WIRELESS COMMUNICATIONS FACILITY	)	
IN THE COMMONWEALTH OF KENTUCKY	)	
IN THE COUNTY OF WAYNE	)	

SITE NAME: MONTICELLO DT

* * * * *

AMENDMENT TO CPCN APPLICATION

New Cingular Wireless PCS, LLC (“Applicant”), by counsel, hereby submits amended exhibits attached hereto as **Exhibits B1, C1, E1, and F1** in support of its request for issuance of a Certificate of Public Convenience and Necessity (“CPCN”) from the Kentucky Public Service Commission (“PSC”) to construct, maintain, and operate a Wireless Communications Facility (“WCF”) to serve the customers of the Applicant with wireless communications services.

The amended tower height is a reduction of 9 feet from the original application, resulting from the FAA study (attached as **Exhibit E1**) that determined this reduction was necessary to grant a Determination of No Hazard to Air Navigation.

All references to **Exhibit B** in the original application should be understood to refer to the filed site survey (sheet B-1, B-1.1, and B-1.2) and the amended **Exhibit B1**. All references to **Exhibit C** should be understood to refer to the filed construction manager letter, list of qualified professionals, and the amended **Exhibit C1**. All references to

Exhibits E and F in the original application should be understood to refer to the amended **Exhibits E1 and F1**.

The tower height referenced in paragraph 7 of the original application is hereby amended as follows: “The proposed WCF will consist of a 151-foot tall tower, with an approximately 5-foot tall lightning arrestor attached at the top, for a total height of 156-feet.” This change in height has been reflected across the submitted amended exhibits and is the only alteration.

WHEREFORE, Applicant respectfully requests that the PSC accept the foregoing amended filing and grant the requested Certificate of Public Convenience and Necessity to construct and operate the WCF.

Respectfully submitted,



David A. Pike
And



F. Keith Brown
Pike Legal Group, PLLC
1578 Highway 44 East, Suite 6
P. O. Box 369
Shepherdsville, KY 40165-0369
Telephone: (502) 955-4400
Telefax: (502) 543-4410
Email: dpike@pikelegal.com
kbrown@pikelegal.com

LIST OF EXHIBITS

- B1 - Site Development Plan:
 - 500' Vicinity Map
 - Site Plan
 - Vertical Tower Profile
- C1 - Tower and Foundation Design
 - Tower and Foundation Drawings
- E1 - FAA
- F1 - Kentucky Airport Zoning Commission

EXHIBIT B1
SITE DEVELOPMENT PLAN

VICINITY MAP

The map displays a network of roads and highways. A red dot indicates the 'SITE' location, which is situated near the intersection of several roads. A line points from the word 'SITE' to this red dot. A north arrow is located in the upper right corner of the map.

DIRECTIONS
FROM AT&T MTSO: 3800 CORPORATE DR.,WINCHESTER, KY 40391 TAKE FORTUNE DR AND N MAPLE ST TO KY-627 S/BOONE AVE; FOLLOW KY-627 S AND I-75 S TO KY-461 S/LAKE CUMBERLAND RD IN MOUNT VERNON; GET ON KY-80 W IN PULASKI COUNTY FROM KY-461 S; CONTINUE ONTO KY-80 W; TAKE KY-90 W TO WORSHAM LN, MONTICELLO, KY 42633 TO 150 WORSHAM LN.
FROM COUNTY SEAT: 109 N MAIN ST, MONTICELLO, KY 42633 HEAD SOUTHWEST ON N MAIN ST TOWARD COURT ST, TURN RIGHT ONTO COLUMBIA AVE, TURN LEFT ONTO WORSHAM LN, TURN RIGHT ONTO GAYLE AVE, DESTINATION WILL BE ON THE RIGHT.

E911 ADDRESS:

PHYSICAL ADDRESS:

SHEET INDEX

[illegible]

GENERAL NOTES	
Know what's below. Call before you dig.	THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, THEREFORE HANDICAP ACCESS IS NOT REQUIRED. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED. NO WORK SHALL COMMENCE WITHOUT THE APPROVED TOWER/ANTENNA MOUNT STRUCTURAL ANALYSIS REPORT SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER UNDER SEPARATE COVER.

CODE COMPLIANCE	
ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING: • KENTUCKY BUILDING CODE • AMERICAN CONCRETE INSTITUTE 318 • AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL CONSTRUCTION • TELECOMMUNICATIONS INDUSTRY ASSOCIATION TIA-222-H • STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND SUPPORTING STRUCTURES TIA-601 • COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS • INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS IEEE-81, IEEE 1100, IEEE C62.41 • ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM, ENVIRONMENTAL PROTECTION • 2021 IBC • 2020 NEC	

LOCAL MAP

The map shows a street grid with a red dot indicating the project location. The red dot is located at the intersection of 1st Avenue and 1st Street. The word "SITE" is written in large, bold, black letters next to the red dot. A north arrow is located in the top right corner of the map.

SCOPE OF WORK: PROPOSED RAWLAND 60'X60' COMPOUND WITH PROPOSED 151' MONOPOLE, INSTALLING PROPOSED EQUIPMENT AT 146' RAD CENTER AND INSTALLATION OF A WUC ON A 10'x17' PAD WITH A GENERAC COMPACT 20KW DIESEL GENERATOR (SDC020)

CONTACT INFORMATION	
FIRE DEPARTMENT:	MONTICELLO FIRE DEPARTMENT PHONE: 606-348-5552
POLICE DEPARTMENT:	MONTICELLO POLICE DEPARTMENT PHONE: 606-348-9313

SITE SUMMARY	
SCOPE TYPE:	CO-LOCATION
OCCUPANCY TYPE:	TELECOMMUNICATIONS
STRUCTURE HEIGHT:	151' W/ 156' OVERALL HEIGHT
STRUCTURE TYPE:	MONOPOLE
LATITUDE:	36° 50' 14.970652" N (36.837492)
LONGITUDE:	084° 51' 51.138611" W (-84.864205)
SITE ELEVATION:	956± AMSL
JURISDICTION:	MONTICELLO
COUNTY:	WAYNE
POWER COMPANY:	SOUTH KENTUCKY RECC
TELCO COMPANY:	WINDSTREAM

PROJECT DIRECTORY	
APPLICANT:	NEW CINGULAR WIRELESS PCS, LLC A DELAWARE LIMITED LIABILITY COMPANY, 1025 LENOX PARK BLVD NE, 3RD FLOOR ATLANTA, GA 30319
PROPERTY OWNER:	STEPHEN JR & SHANYN STAPLES 290 HILLRISE DR MONTICELLO, KY 42633
PROJECT MANAGER:	MASTEC NETWORK SOLUTIONS 1975 JOE B JACKSON PARKWAY MURFREESBORO, TN 371127 JENNYE BROWN PHONE: (502) 554-1444
SITE DESIGN:	DELTA OAKS GROUP 2724 DISCOVERY DRIVE, SUITE 110 & 120 RALEIGH, NC 27216 RHETT BUTLER PHONE: (919) 342-8247



DATE	DESCRIPTION	REV	ISSUED BY
08/27/25	CONSTRUCTION	0	BM
09/11/25	CONSTRUCTION	1	BM
09/25/25	CONSTRUCTION	2	BM
09/26/25	CONSTRUCTION	3	GSB

THE INFORMATION CONTAINED IN THESE DOCUMENTS IS PROPRIETARY BY NATURE. REPRODUCTION OR CAUSING TO BE REPRODUCED THE WHOLE OR ANY PART OF THESE DRAWINGS WITHOUT THE PERMISSION OF MASTEC NETWORK SOLUTIONS IS PROHIBITED.



Y:



DELTA OAKS
GROUP

DELTA OAKS GROUP
DISCOVERY DRIVE STE 110-12
RALEIGH, NC 27216
PHONE: (919) 342-8247
www.deltaoaksgroup.com

E911 ADDRESS:

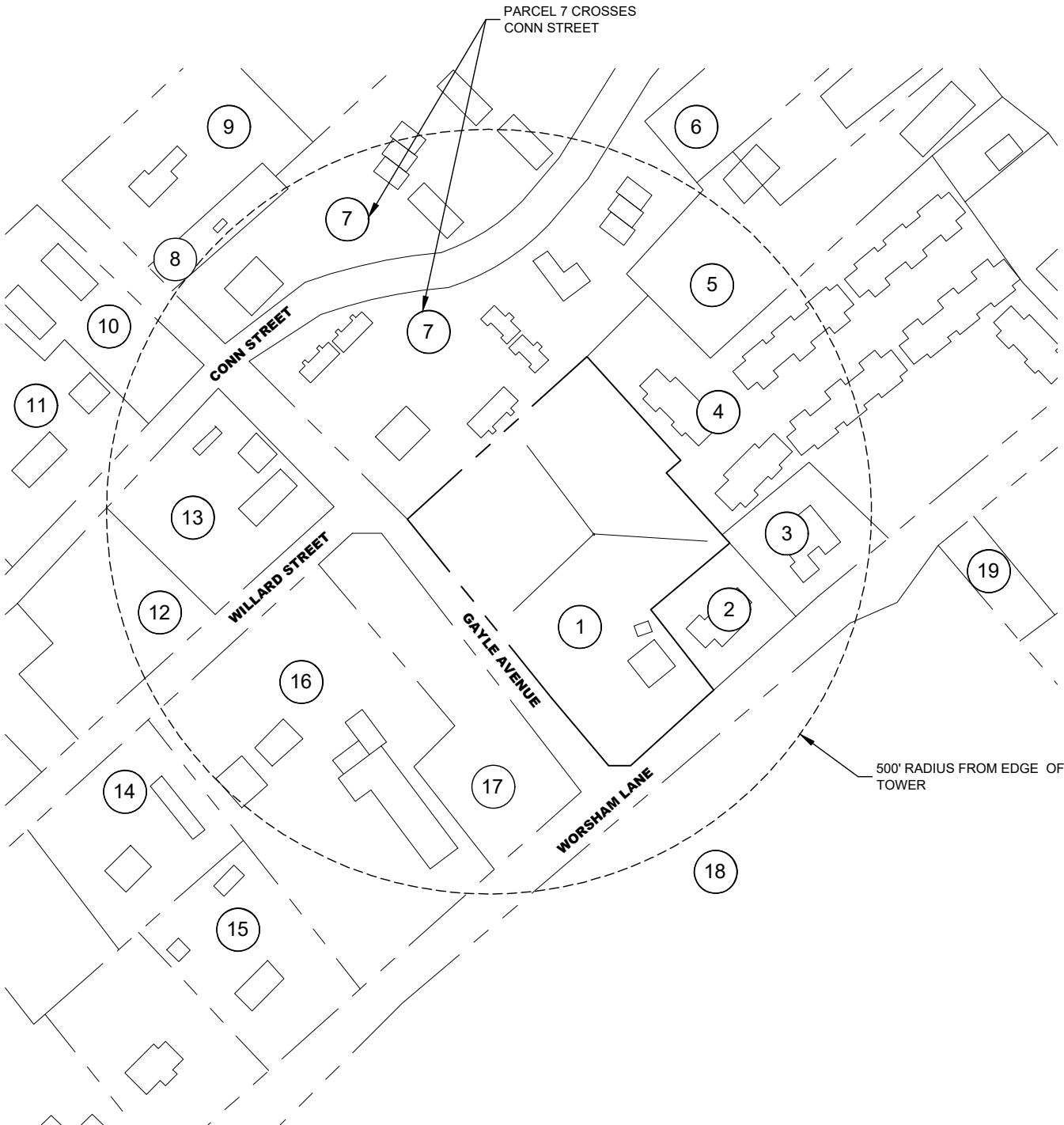
PHYSICAL ADDRESS:

FA LOCATION:

15850385

HEET NUMBER
T-1

1	PARCEL ID: M1-06-012.00 STAPLES STEPHEN JR & SHANYN 290 HILLRISE DR MONTICELLO, KY 42633
2	PARCEL ID: M1-06-011.00 STAPLES STEPHEN JR & SHANYN 290 HILLRISE DR MONTICELLO, KY 42633
3	PARCEL ID: M1-06-010.01 STAPLES DEBORAH 645 KENDRICK AVE MONTICELLO, KY 42633
4	PARCEL ID: M1-06-010.00 CUMBERLAND HORIZON VILLAGE LLLP PO BOX 1738 LONDON, KY 40742
5	PARCEL ID: M1-06-006.00 CITY OF MONTICELLO PO BOX 550 MONTICELLO, KY 42633
6	PARCEL ID: M1-06-005.00 LAIR HALENA & BRENT COLYER 182 CLUBHOUSE DR GEORGETOWN, KY 40324
7	PARCEL ID: M1-06-013.00 HOUSING AUTHORITY OF MONTICELO 444 HOMESTEAD LN MONTICELLO, KY 42633
8	PARCEL ID: M1-06-014.00 JONES DUSTIN & KRISINDA 169 WEBSTER DR MONTICELLO, KY 42633
9	PARCEL ID: M1-06-001.00 JONES DUSTIN & KRISINDA 169 WEBSTER DR MONTICELLO, KY 42633
10	PARCEL ID: M1-03-006.00 RICHARDSON FAMILY IRREVOCABLE TRUST 175 GAYLE AVE MONTICELLO, KY 42633
11	PARCEL ID: M1-03-005.00 WATSON LONNIE 236 CONN ST MONTICELLO, KY 42633
12	PARCEL ID: M1-04-004.00 GOFF EASTER CHRISTINE REV LIV TRUST C/O PATTY BURTON 427 HILLRISE DR MONTICELLO, KY 42633
13	PARCEL ID: M1-04-005.00 RIGNEY LORENE 105 GAYLE AVE MONTICELLO, KY 42633
14	PARCEL ID: M1-05-006.00 DUNCAN BILLIE 97 WILLARD ST MONTICELLO, KY 42633
15	PARCEL ID: M1-05-010.00 MEECE DARLENE J 274 WORSHAM LANE MONTICELLO, KY 42633
16	PARCEL ID: M1-05-009.00 34D INVESTMENTS LLC 2672 EAST MOUNTAIN PARKWAY SALYERSVILLE, KY 41465
17	PARCEL ID: M1-05-008.00 34D INVESTMENTS LLC 2672 EAST MOUNTAIN PARKWAY SALYERSVILLE, KY 41465
18	PARCEL ID: 052-00-00-051.02 MCKINLEY LARRY R & MARTHA E TRUST 2165 W HWY 92 MONTICELLO, KY 42633
19	PARCEL ID: M1-09-001.00 DISHMAN POWELL C & ELSA B 77 WORSHAM LN MONTICELLO, KY 42633



NOTE:
LANDOWNER NAMES, MAILING ADDRESS
AND PARCEL NUMBERS ARE BASED ON
THE WAYNE COUNTY PVA RECORDS AS
OF THE DATE ON WHICH THE RECORDS
ARE REVIEWED (7/28/2025)

STATE OF KENTUCKY

BRYAN D. MACLAREN
34988

PROFESSIONAL ENGINEER

BRYAN MACLAREN, P.E.
KENTUCKY LIC. NO. 34988

09/26/25

SUBMITTALS			
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09/25/25	CONSTRUCTION	2	BM
09/26/25	CONSTRUCTION	3	GSB
DRAWN BY:		JW	
CHECKED BY:		CB	
APPVD BY:		RM	
DOG PROJECT NO:		25-27452	

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PREPARED FOR:

PREPARED BY:

DELTA OAKS GROUP
2724 DISCOVERY DRIVE STE 110-120
RALEIGH, NC 27216
PHONE: (919) 342-8247
www.deltaoaksgroup.com

SITE NAME:
MONTICELLO DT

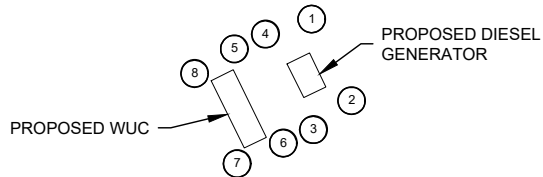
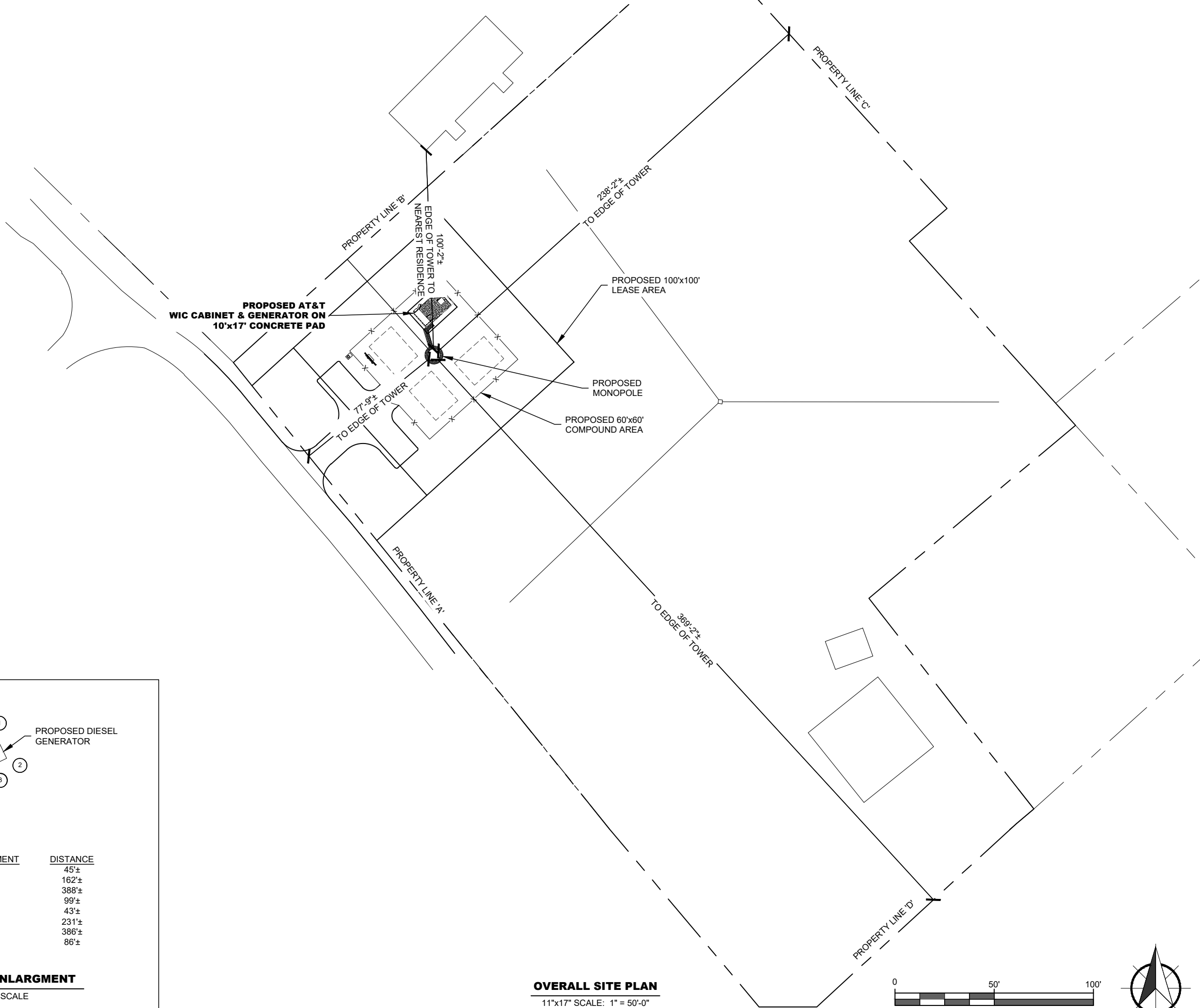
E911 ADDRESS:
**150 WORSHAM LANE
MONTICELLO, KY 42633**

PHYSICAL ADDRESS:
**GAYLE AVENUE
MONTICELLO, KY 42633**

FA LOCATION:
15850385

SHEET TITLE
ABUTTERS MAP

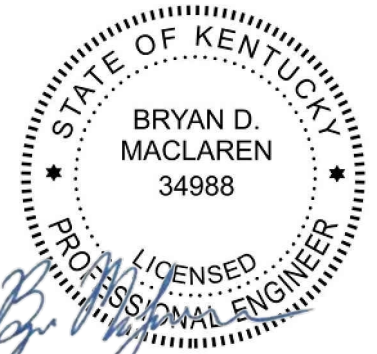
SHEET NUMBER
M-1



PROPERTY LINE	EQUIPMENT	DISTANCE
B	1	45'±
C	2	162'±
D	3	388'±
A	4	99'±
B	5	43'±
C	6	231'±
D	7	386'±
A	8	86'±

EQUIPMENT ENLARGMENT
NOT TO SCALE

OVERALL SITE PLAN
11"x17" SCALE: 1" = 50'-0"



BRYAN D. MACLAREN, P.E.
KENTUCKY LIC. NO. 34988
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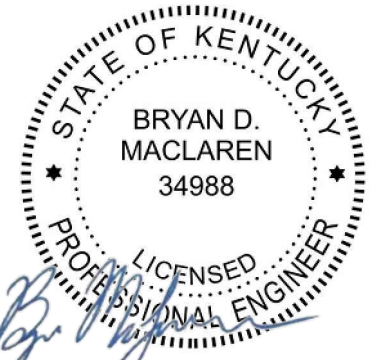
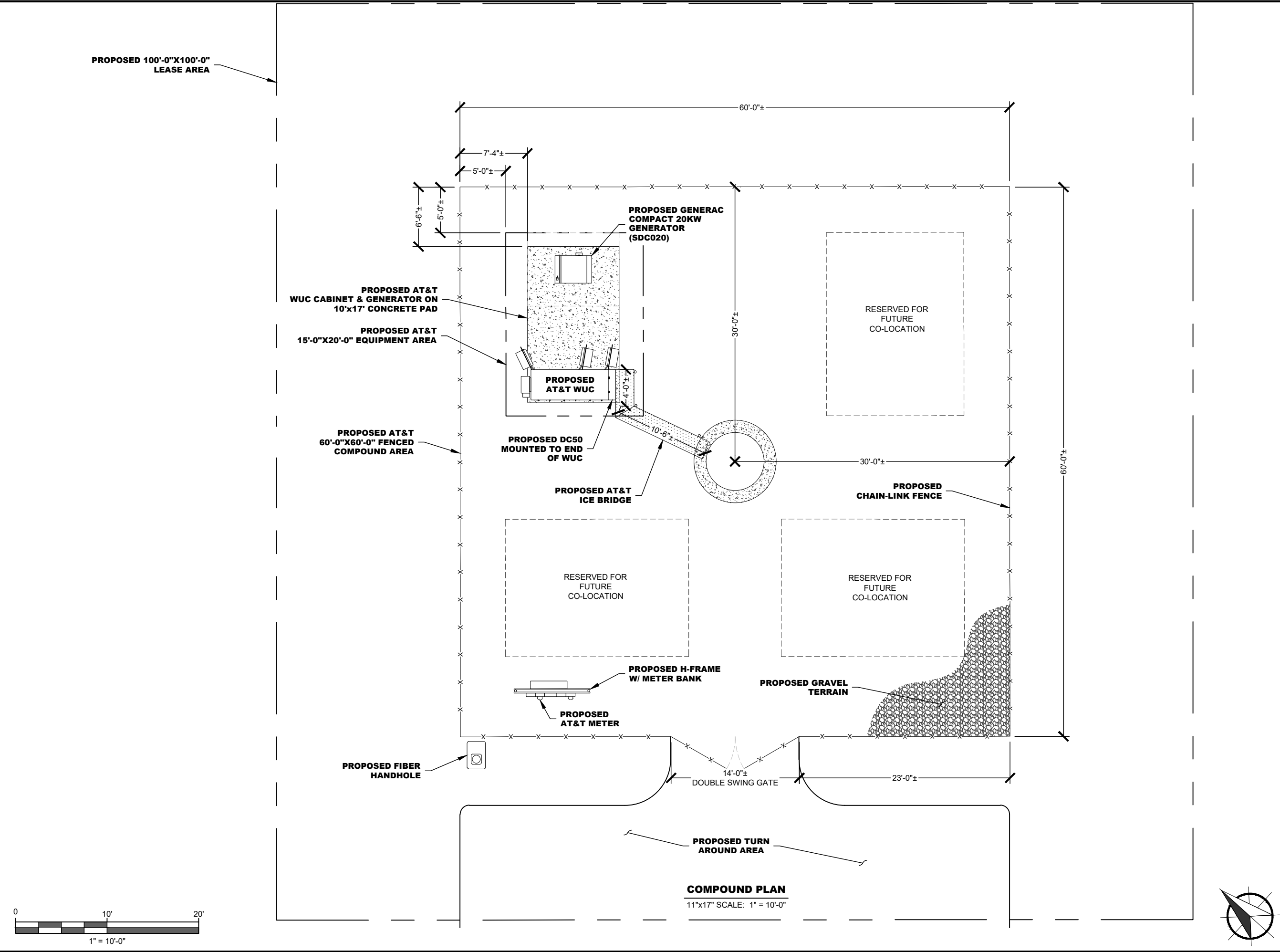
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SHEET TITLE

OVERALL SITE PLAN

SHEET NUMBER

C-1



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MONTICELLO, KY 42633**

FA LOCATION:
15850385

SHEET TITLE
COMPOUND PLAN

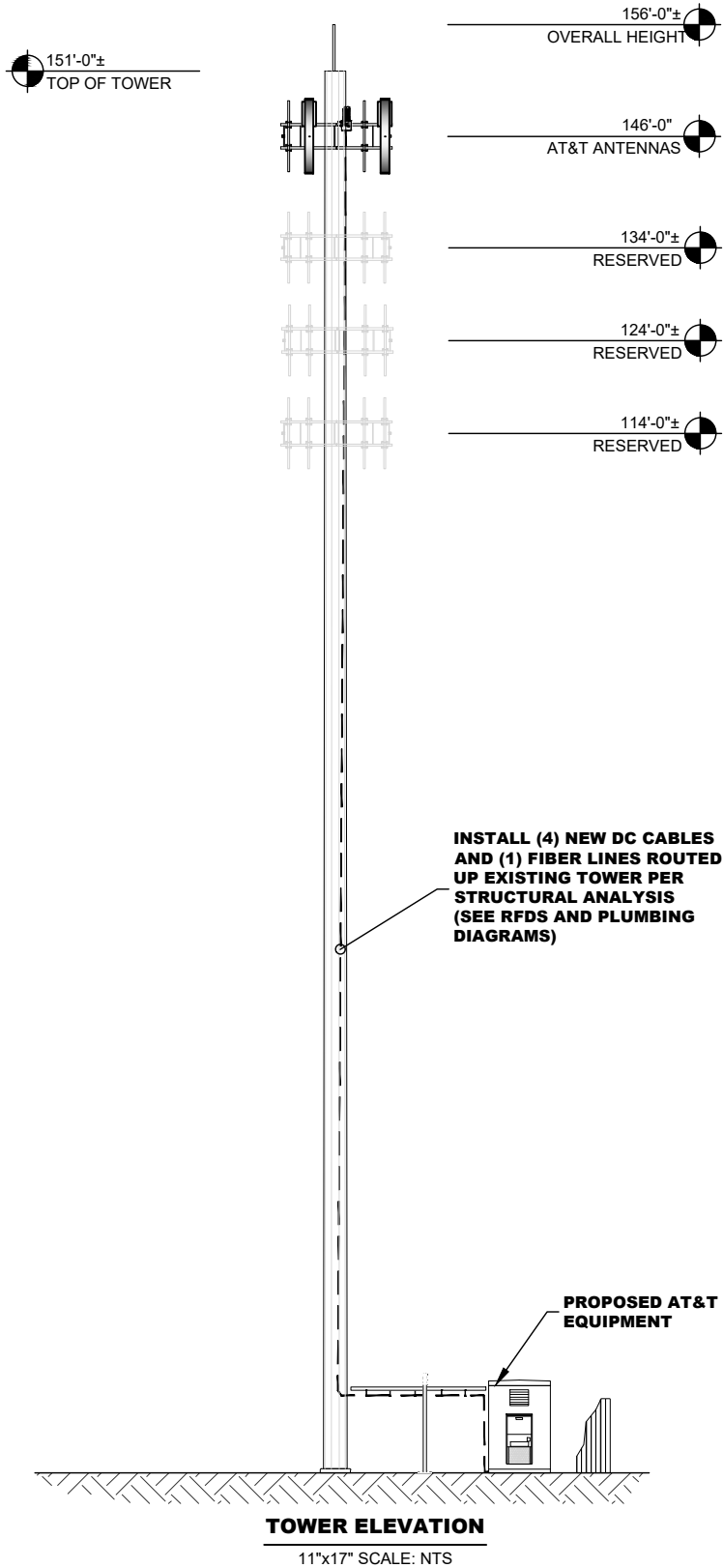
SHEET NUMBER
C-1.1

TOWER NOTES:

- 1. THE PROPOSED TOWER, FOUNDATION, ANTENNA MOUNTS, AND ANTENNAS WERE/ARE DESIGNED BY OTHERS.
- 2. THE TOWER ELEVATION SHOWN IS FOR REFERENCE ONLY.
- 3. SEE TOWER MANUFACTURE'S DRAWINGS FOR TOWER AND FOUNDATION DETAILS & SPECIFICATIONS.
- 4. MANUFACTURE'S DRAWINGS SUPERCEDE A&E DRAWINGS

NOTE:
ALL CONNECTIONS FOR HANGERS, SUPPORTS, BRACING, ETC SHALL BE INSTALLED PER TOWER MANUFACTURE'S STANDARD DETAILS.

NOTE:
LOCATIONS RESERVED FOR FUTURE CO-LOCATORS IN ADDITION TO AT&T'S ANTENNAS TO ENSURE CONSISTENCY WITH STRUCTURAL DESIGN REPORT.



STATE OF KENTUCKY

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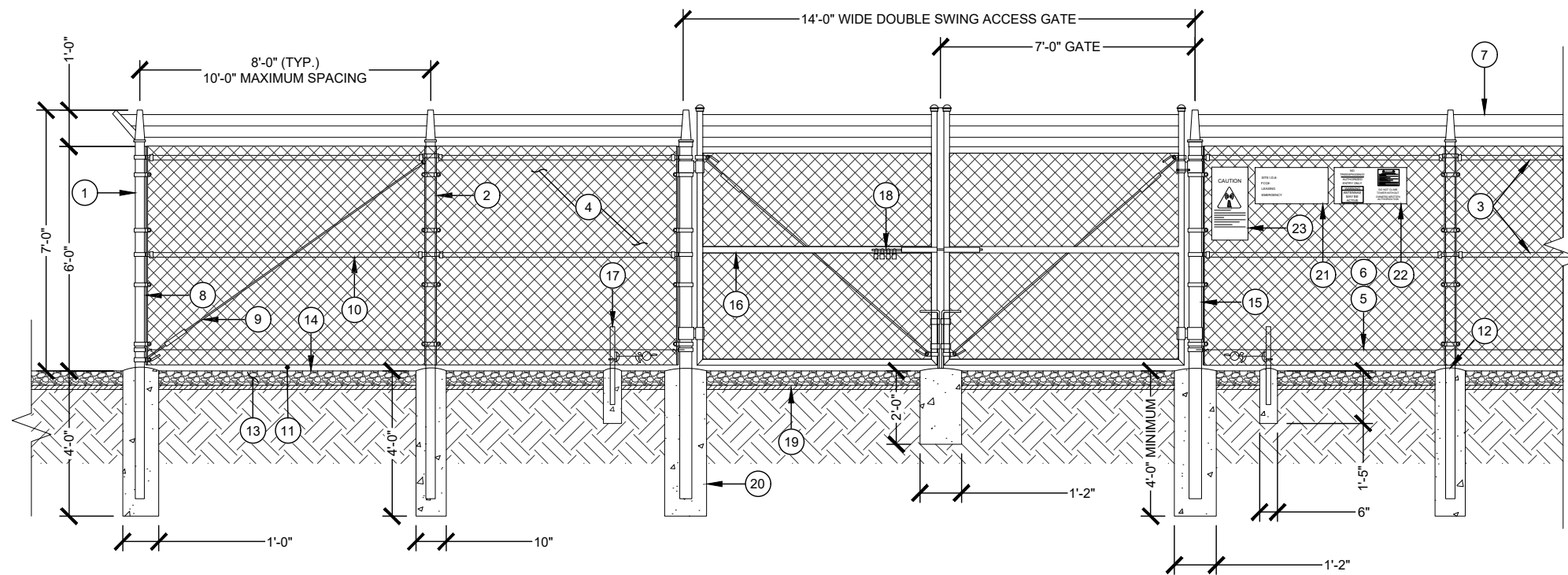
PHYSICAL ADDRESS:
**GAYLE AVENUE
MONTICELLO, KY 42633**

FA LOCATION:
15850385

SHEET TITLE
**ANTENNA LAYOUT &
TOWER ELEVATION**

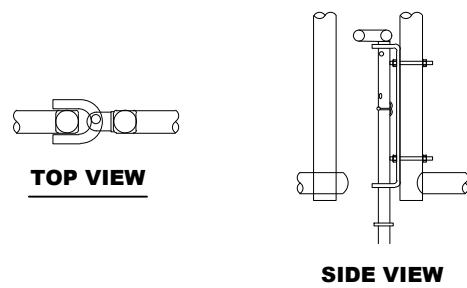
SHEET NUMBER
C-2

- (1) 3" O.D. GALVANIZED STEEL SCHEDULE 40 CORNER POSTS (PER ASTM-F1083).
- (2) 2-1/2" NOMINAL GALVANIZED STEEL, SCHEDULE 40 INTERMEDIARY LINE POSTS (PER ASTM-F1083). LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 10' O.C.
- (3) 1-5/8" O.D. ROUND TOP RAIL & BRACE PIPE RAIL (PER ASTM-F1083).
- (4) 9 GAUGE FABRIC CORE WIRE WITH 2" MESH (TO CONFORM TO ASTM-A392).
- (5) 9 GAUGE ALUMINUM TIE WIRE. PROVIDE HOG RING FABRIC TIES SPACED 12" O.C. FOR POSTS AND GATES AND 24" O.C. FOR RAILS AND WIRE.
- (6) 9 GAUGE ALUMINUM TENSION WIRE.
- (7) 3 STRANDS 14 GAUGE BARBED WIRE WITH 4 POINT BARBS. SPACE BARBS APPROXIMATELY 5" O.C.
- (8) 3/16"x3/4" STRETCHER BAR; TO EXTEND FULL HEIGHT OF FENCE.
- (9) 3/8" DIAGONAL ROD WITH GALVANIZED STEEL TURNBUCKLE OR DIAGONAL THREADED ROD.
- (10) 1-5/8" DIAMETER CORNER POST BRACE.
- (11) MAINTAIN A 1" MAXIMUM CLEARANCE FROM FINISHED GRADE.
- (12) PROVIDE CROWNED/PITCHED FINISH FOR FENCE POST PIER FOUNDATIONS; TO EXTEND 1" ABOVE GRADE.
- (13) 6" CRUSHED STONE (TYP.).
- (14) FINISHED GRADE SHALL BE UNIFORM AND LEVEL.
- (15) 4" O.D. GALVANIZED STEEL SCHEDULE 40 GATE POSTS (PER ASTM-F1083).
- (16) 1-1/2" NOMINAL PIPE FOR GATE FRAME BRACE RAIL (PER ASTM F-1083).
- (17) DUCK BILL OPEN GATE HOLDER. CONTRACTOR TO VERIFY EXACT LOCATION PRIOR TO INSTALLATION.
- (18) STYMIELOCK MULTI-TENTANT LOCKING DEVICE.
- (19) PROPOSED GEOTEXTILE FABRIC.
- (20) CONCRETE PIER FOUNDATION; TO ACHIEVE A MINIMUM STRENGTH OF 3000 PSI AT 28 DAYS. CONCRETE DEPTH TO BE A MINIMUM OF 6" BELOW FROST LINE (48" MINIMUM, TYP.).
- (21) 12"x24" SITE INFORMATION SIGN.
- (22) 12"x24" NO TRESPASSING SIGN.
- (23) 12"x24" RF CAUTION SIGN.

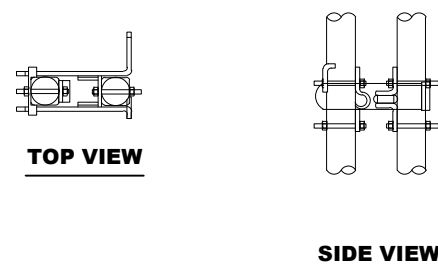


SCALE: N.T.S.

1. ALL FENCING TO BE INSTALLED PER ASTM F-567. ALL SWING GATES TO BE INSTALLED PER ASTM F-900.
2. BARBED WIRE PERMIT REQUIRED SHALL BE COMPLETED IF LOCAL ORDINANCE REQUIRES.
3. POST & GATE PIPE SIZES ARE INDUSTRY STANDARDS. ALL PIPE TO BE GALVANIZED (HOT DIP, ASTM A120 GRADE "A" STEEL). ALL GATE FRAMES SHALL BE WELDED. ALL WELDINGS SHALL BE COATED WITH (3) COATS OF GOLD GALV. (OR EQUAL). ALL OPEN POSTS SHALL HAVE END-CAPS.
4. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE FABRIC USING GALVANIZED HOG-RING WIRE.
5. MUSHROOM ANCHOR AND PLUNGER REQUIRED FOR GATE. GENERAL CONTRACTOR RESPONSIBLE FOR GATE LOCK.



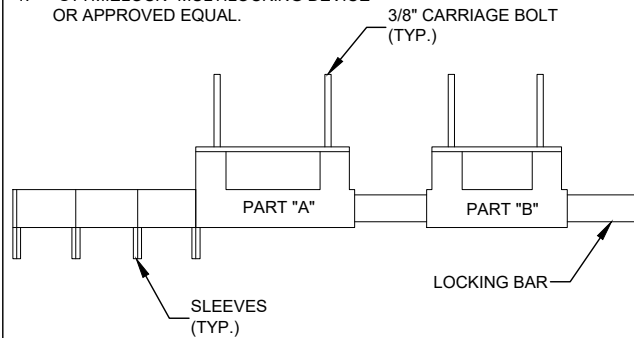
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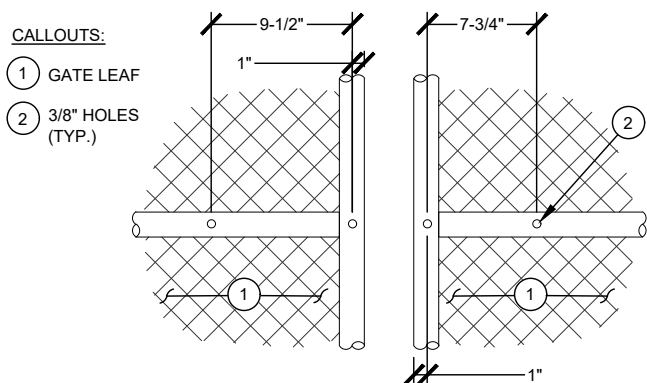
SCALE: N.T.S.

1. DRILL 3/8" HOLES IN THE GATE LEAF USING THE GATE DIMENSIONS PROVIDED.
2. SLIDE THE CARRIAGE BOLTS IN THE SLOTS ON THE BACK OF PART "B" AND PUSH THE BOLTS THROUGH THE HOLES DRILLED IN THE GATE FIGURE. PUT THE NUT AND THE LOCKNUT ON AND TIGHTEN AND CUT THE EXCESS BOLT OFF. DO THE SAME WITH PART "A".
3. ADD THE NUMBER OF SLEEVES NEEDED FOR THE NUMBER OF LOCKS AND SLIDE THE LOCKING BAR INTO PLACE THROUGH BOTH PART "A" AND PART "B". NOW INSTALL THE LOCKS.
4. IF THE GATE HAS NO CENTER BAR IN THE GATE LEAF YOU MAY NEED TO MOUNT THE STYMIELOCK VERTICALLY USING THE SAME DIMENSIONS GIVEN ON THE GATE FACE.
5. VERTICAL APPLICATION MAY ALSO BE USED ON SLIDING GATES WITH MULTIPLE LOCKS.

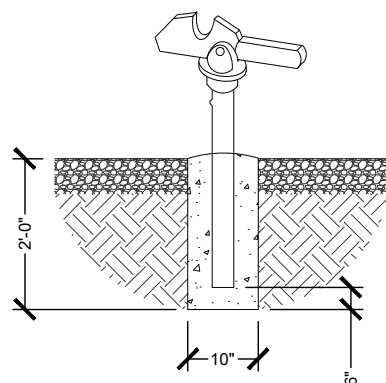
1. "STYMILOCK" MULTILOCKING DEVICE
OR APPROVED EQUAL. 3/8" CARRIAGE BOLT



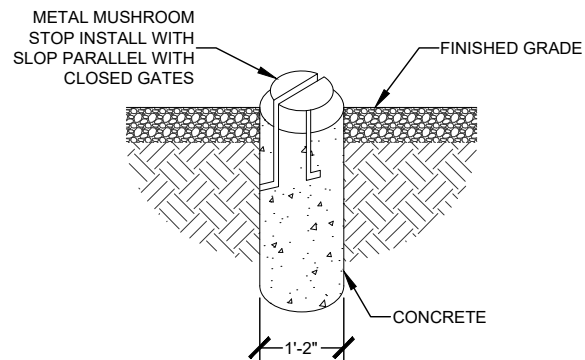
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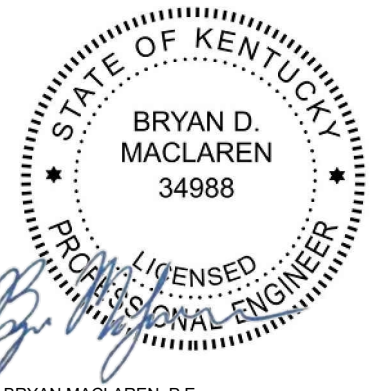
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BRYAN MACLAREN, P.E.
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DOG PROJECT NO: 25-27452

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MONTICELLO DT

**150 WORSHAM LANE
MONTICELLO, KY 42633**

**GAYLE AVENUE
MONTICELLO, KY 42633**

15850385

SHEET TITLE
FENCE DETAILS

C-3

EXHIBIT C1
TOWER AND FOUNDATION DESIGN

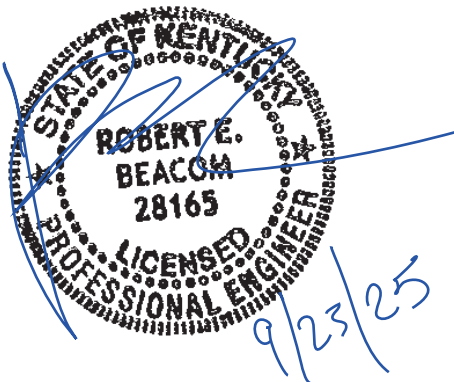


Structural Design Report
151' Monopole
Site: Monticello DT, KY
Site Number: FA# 15850385

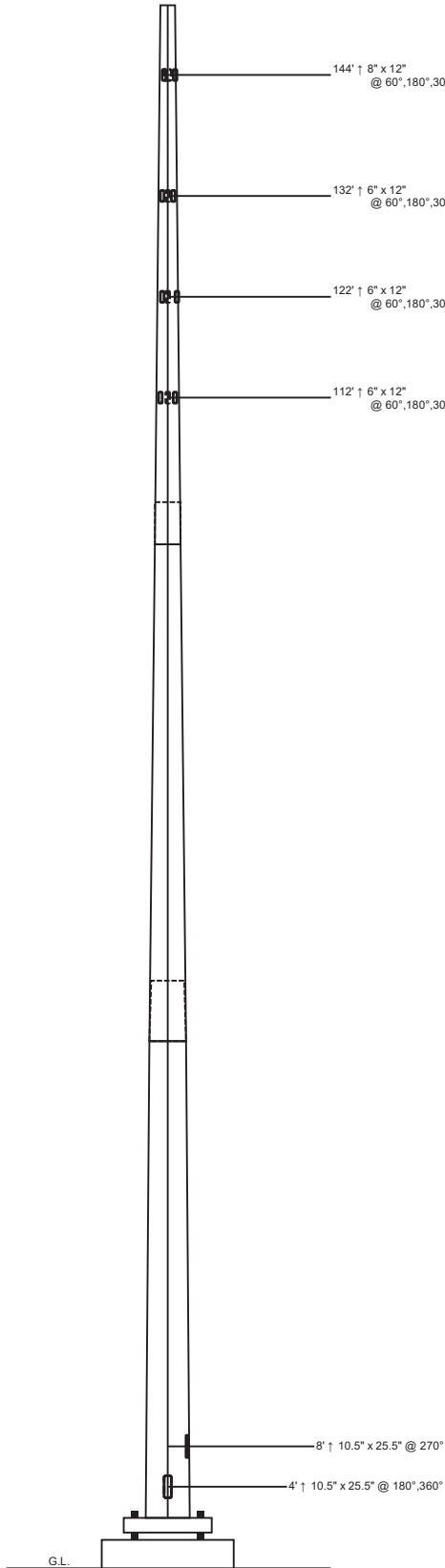
Prepared for: MASTEC NETWORK SOLUTIONS GROUP
by: Sabre IndustriesTM

Job Number: 565843
Revision A
September 23, 2025

Monopole Profile.....	1
Foundation Design Summary (Option 1).....	2
Foundation Design Summary (Option 2).....	3
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Foundation Calculations.....	19-27



Length (ft)	53'-3"	53'-6"	53'-6"
Number Of Sides	18	18	18
Thickness (in)	7/16"	3/8"	5/16"
Lap Splice (ft)	6' - 0"	4' - 3"	17"
Top Diameter (in)	40"	28.78"	30.48"
Bottom Diameter (in)	53.41"	42.26"	30.48"
Taper (in/ft)		0.2519	
Grade		A572-65	
Weight (lbs)	13943	8086	4842
Overall Steel Height (ft)			150



Designed Appurtenance Loading

Elev	Description	Tx-Line
146	(1) 40,000 Sq. Inches (10,000 lbs) (below top)	(18) 1 5/8"
134	(1) 30,000 Sq. Inches 8,000# (below top)	(12) 1 5/8"
124	(1) 30,000 Sq. Inches 8,000# (below top)	(12) 1 5/8"
114	(1) 30,000 Sq. Inches 8,000# (below top)	(12) 1 5/8"

Design Criteria - ANSI/TIA-222-H

Wind Speed (No Ice)	105 mph
Wind Speed (Ice)	30 mph
Design Ice Thickness	1.50 in
Risk Category	II
Exposure Category	C
Topographic Factor Procedure	Method 1 (Simplified)
Topographic Category	1
Ground Elevation	956 ft
Seismic Importance Factor, I _e	1.00
0.2-sec Spectral Response, S _s	0.202 g
1-sec Spectral Response, S ₁	0.095 g
Site Class	C
Seismic Design Category	B
Basic Seismic Force-Resisting System	Telecommunication Tower (Pole: Steel)

Limit State Load Combination Reactions

Load Combination	Axial (kips)	Shear (kips)	Moment (ft-k)	Deflection (ft)	Sway (deg)
1.2 D + 1.0 W _o	77.97	36.82	4774.21	13.54	10
0.9 D + 1.0 W _o	58.55	36.97	4625.48	12.94	9.5
1.2 D + 1.0 D _i + 1.0 W _i	147.34	5.43	846.08	2.65	1.97
1.2 D + 1.0 E _v + 1.0 E _h	80.2	1.95	286.19	0.87	0.65
0.9 D - 1.0 E _v + 1.0 E _h	56.17	1.94	272.3	0.82	0.6
1.0 D + 1.0 W _o (Service @ 60 mph)	65	10.8	1376.82	3.97	2.89

Base Plate Dimensions

Shape	Diameter	Thickness	Bolt Circle	Bolt Qty	Bolt Diameter
Round	66"	2.25"	60.25"	16	2.25"

Anchor Bolt Dimensions

Length	Diameter	Hole Diameter	Weight	Type	Finish
84"	2.25"	2.625"	1937.6	A615-75	Galv

Notes

- 1) Antenna Feed Lines Run Inside Pole
- 2) All dimensions are above ground level, unless otherwise specified.
- 3) Weights shown are estimates. Final weights may vary.
- 4) Full Height Step Bolts
- 5) This tower design and, if applicable, the foundation design(s) shown on the following page(s) also meet or exceed the requirements of the 2015 International Building Code.
- 6) Tower Rating: 99.9%



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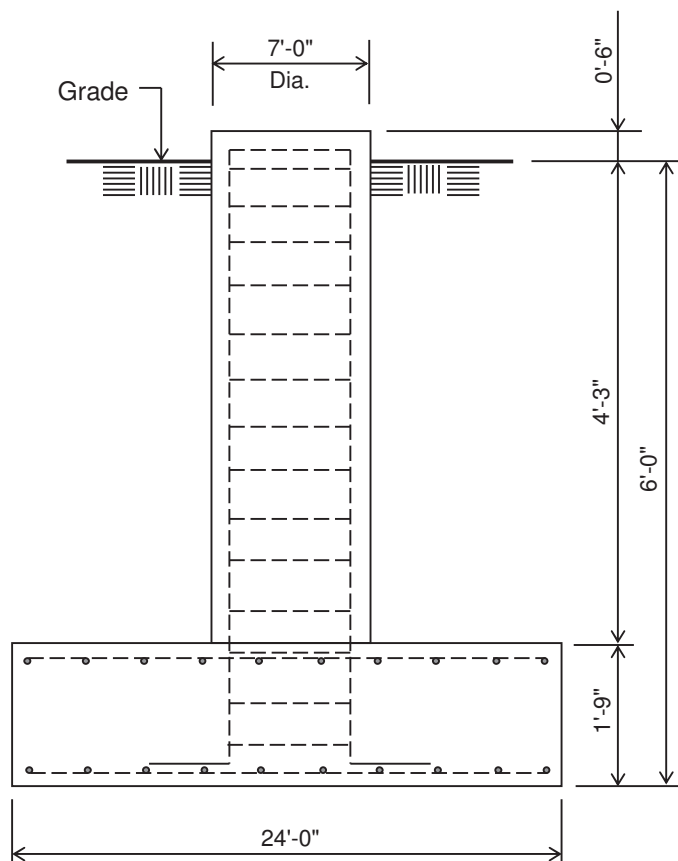
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Job: **565843A**
Customer: **MASTEC NETWORK SOLUTIONS GROUP**
Site Name: **Monticello DT, KY FA# 15850385**
Description: **151' Monopole**
Date: **9/23/2025** By: **REB**

Customer: MASTEC NETWORK SOLUTIONS GROUP

Site: Monticello DT, KY FA# 15850385

151' Monopole



ELEVATION VIEW

(44.10 Cu. Yds.)

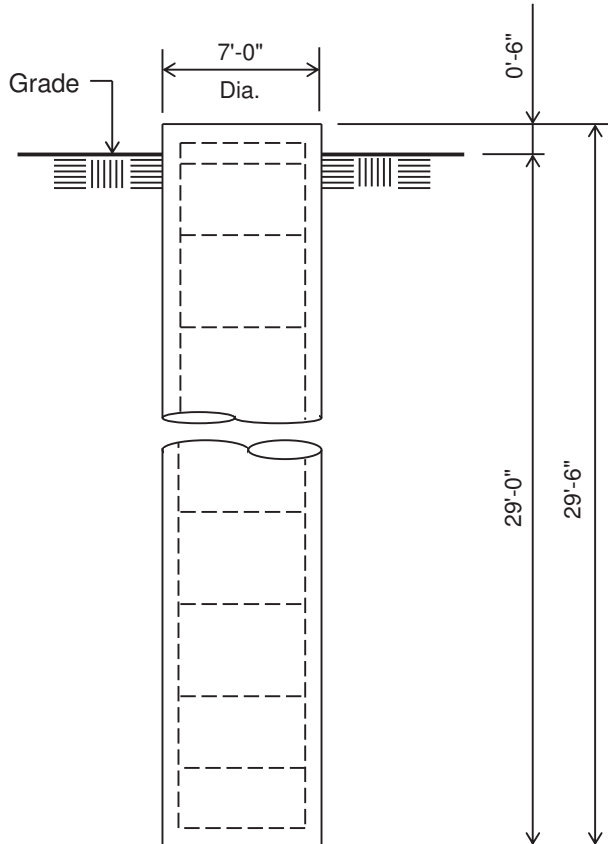
(1 REQUIRED; NOT TO SCALE)

Notes:

- 1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-14.
- 2) Rebar to conform to ASTM specification A615 Grade 60.
- 3) All rebar to have a minimum of 3" concrete cover.
- 4) All exposed concrete corners to be chamfered 3/4".
- 5) The foundation design is based on the geotechnical report by POD, Project No. 25-182855, dated August 6, 2025.
- 6) See the geotechnical report for compaction requirements, if specified.
- 7) 4.25 ft of soil cover is required over the entire area of the foundation slab.
- 8) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

Rebar Schedule for Pad and Pier	
Pier	(38) #8 vertical rebar w/ hooks at bottom w/ #5 ties, (2) within top 5" of pier, then 4" C/C
Pad	(33) #10 horizontal rebar evenly spaced each way top and bottom (132 total)

Customer: MASTEC NETWORK SOLUTIONS GROUP
Site: Monticello DT, KY FA# 15850385
151' Monopole



ELEVATION VIEW

(42.05 Cu. Yds.)

(1 REQUIRED; NOT TO SCALE)

Notes:

- 1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-14.
- 2) Rebar to conform to ASTM specification A615 Grade 60.
- 3) All rebar to have a minimum of 3" concrete cover.
- 4) All exposed concrete corners to be chamfered 3/4".
- 5) The foundation design is based on the geotechnical report by POD, Project No. 25-182855, dated August 6, 2025.
- 6) See the geotechnical report for drilled pier installation requirements, if specified.
- 7) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

Rebar Schedule for Pier

Pier	(36) #9 vertical rebar w/ #5 ties, (2) within top 5" of pier, then 8" C/C
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(USA 222-H) - Monopole Spatial Analysis (c)2017 Guymast Inc.

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151' Monopole / Monticello DT, KY

* All pole diameters shown on the following pages are across corners.
See profile drawing for widths across flats.

POLE GEOMETRY

=====

ELEV	SECTION	No.	OUTSIDE	THICK	RESISTANCES	SPLICE	...OVERLAP...	w/t
ft	NAME	SIDE	DIAM	-NESS	**Pn **Mn	TYPE	LENGTH RATIO	
			in	in	kip ft-kip		ft	
150.0								
	A	18	17.26	0.312	1229.7 417.7			8.5
			29.85	0.312	2143.2 1278.6			
100.7								
	A/B	18	29.85	0.312	2143.2 1278.6	SLIP	4.25 1.71	
			30.32	0.375	2607.5 1574.0			
96.5								
	B	18	30.32	0.375	2607.5 1574.0			13.1
			41.36	0.375	3457.8 2866.5			
53.2								
	B/C	18	41.36	0.375	3457.8 2866.5	SLIP	6.00 1.73	
			42.16	0.438	4238.3 3571.8			
47.2								
	C	18	42.16	0.438	4238.3 3571.8			15.9
			54.23	0.438	5103.5 5558.6			
0.0								

POLE ASSEMBLY

=====

SECTION	BASE	BOLTS AT BASE OF SECTION.....				CALC
NAME	ELEV	NUMBER	TYPE	DIAM	STRENGTH	BASE
	ft			in	ksi	ELEV
						ft
A	96.500	0	A325	0.00	92.0	96.500
B	47.250	0	A325	0.00	92.0	47.250
C	0.000	0	A325	0.00	92.0	0.000

POLE SECTIONS

=====

SECTION	No. of	LENGTH	OUTSIDE DIAMETER		BEND	MAT-	FLANGE ID		FLANGE WELD	
NAME	SIDES		BOT	TOP	RAD	ERIAL	BOT	TOP	..GROUP ID..	
		ft	* in	* in	in	ID			BOT TOP	
A	18	53.50	30.95	17.26	0.625	1	0	0	0	0
B	18	53.50	42.91	29.23	0.625	2	0	0	0	0
C	18	53.25	54.23	40.61	0.625	3	0	0	0	0

* - Diameter of circumscribed circle

MATERIAL TYPES

=====

TYPE OF	TYPE	NO OF	ORIENT	HEIGHT	WIDTH	.THICKNESS.	IRREGULARITY
SHAPE	NO	ELEM.				WEB FLANGE	.PROJECTION.
							% OF ORIENT
							AREA

			& deg	in	in	in	in		deg
PL	1	1	0.0	30.95	0.31	0.312	0.312	0.00	0.0
PL	2	1	0.0	42.91	0.38	0.375	0.375	0.00	0.0
PL	3	1	0.0	54.23	0.44	0.438	0.438	0.00	0.0

& - With respect to vertical

MATERIAL PROPERTIES

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MATERIAL TYPE NO.	ELASTIC MODULUS ksi	UNIT WEIGHT pcf	.. STRENGTH .. Fu ksi	Fy ksi	THERMAL COEFFICIENT /deg
1	29000.0	490.0	80.0	65.0	0.00001170
2	29000.0	490.0	80.0	65.0	0.00001170
3	29000.0	490.0	80.0	65.0	0.00001170

* Only 5 condition(s) shown in full

=====

LOADING CONDITION A

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105 mph wind with no ice. Wind Azimuth: 0* (1.2 D + 1.0 Wo)

LOADS ON POLE

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LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	..AT AZI	LOAD AZI	FORCES..... HORIZ kip	DOWN kip	MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	145.000	0.00	0.0	0.0	0.0000	3.2573	0.0000	0.0000
C	145.000	0.00	0.0	0.0	8.6774	12.0000	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0285	0.0168	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0280	0.0168	0.0000	0.0000
C	133.000	0.00	0.0	0.0	0.0000	1.9918	0.0000	0.0000
C	133.000	0.00	0.0	0.0	6.3918	9.6000	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0276	0.0168	0.0000	0.0000
C	123.000	0.00	0.0	0.0	0.0000	1.8420	0.0000	0.0000
C	123.000	0.00	0.0	0.0	6.2883	9.6000	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0271	0.0168	0.0000	0.0000
C	113.000	0.00	0.0	0.0	0.0000	1.6923	0.0000	0.0000
C	113.000	0.00	0.0	0.0	6.1780	9.6000	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0266	0.0168	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0260	0.0168	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0254	0.0168	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0248	0.0168	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0240	0.0168	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0232	0.0168	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0222	0.0168	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0211	0.0168	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0197	0.0168	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0177	0.0168	0.0000	0.0000
D	150.000	0.00	180.0	0.0	0.0375	0.0715	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0557	0.1140	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0575	0.2607	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0575	0.2607	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0586	0.1473	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0688	0.1922	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0693	0.4285	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0693	0.4285	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0699	0.2374	0.0000	0.0000
D	11.813	0.00	180.0	0.0	0.0658	0.2791	0.0000	0.0000
D	11.813	0.00	180.0	0.0	0.0661	0.2875	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0680	0.2959	0.0000	0.0000

=====

LOADING CONDITION M

=====

105 mph wind with no ice. Wind Azimuth: 0* (0.9 D + 1.0 Wo)

LOADS ON POLE

=====

LOAD TYPE	ELEV ft	APPLY. RADIUS ft	LOAD. AZI	AT AZI	LOAD AZI	FORCES.....		MOMENTS.....	
						HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	145.000	0.00	0.0	0.0	0.0	0.0000	2.4430	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0	8.6774	9.0000	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0	0.0285	0.0126	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0	0.0280	0.0126	0.0000	0.0000
C	133.000	0.00	0.0	0.0	0.0	0.0000	1.4939	0.0000	0.0000
C	133.000	0.00	0.0	0.0	0.0	6.3918	7.2000	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0	0.0276	0.0126	0.0000	0.0000
C	123.000	0.00	0.0	0.0	0.0	0.0000	1.3815	0.0000	0.0000
C	123.000	0.00	0.0	0.0	0.0	6.2883	7.2000	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0	0.0271	0.0126	0.0000	0.0000
C	113.000	0.00	0.0	0.0	0.0	0.0000	1.2692	0.0000	0.0000
C	113.000	0.00	0.0	0.0	0.0	6.1780	7.2000	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0	0.0266	0.0126	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0	0.0260	0.0126	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0	0.0254	0.0126	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0	0.0248	0.0126	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0	0.0240	0.0126	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0	0.0232	0.0126	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0	0.0222	0.0126	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0	0.0211	0.0126	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0	0.0197	0.0126	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0	0.0177	0.0126	0.0000	0.0000
D	150.000	0.00	180.0	0.0	0.0	0.0375	0.0536	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0	0.0557	0.0855	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0	0.0575	0.1955	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0	0.0575	0.1955	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0	0.0586	0.1105	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0	0.0688	0.1442	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0	0.0693	0.3214	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0	0.0693	0.3214	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0	0.0699	0.1780	0.0000	0.0000
D	11.813	0.00	180.0	0.0	0.0	0.0658	0.2094	0.0000	0.0000
D	11.813	0.00	180.0	0.0	0.0	0.0661	0.2156	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0	0.0680	0.2219	0.0000	0.0000

LOADING CONDITION Y

30 mph wind with 1.5 ice. Wind Azimuth: 0° (1.2 D + 1.0 Di + 1.0 Wi)

LOADS ON POLE

=====

LOAD TYPE	ELEV ft	APPLY. RADIUS ft	LOAD. AZI	AT AZI	LOAD AZI	FORCES.....		MOMENTS.....	
						HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	145.000	0.00	0.0	0.0	0.0	0.0000	3.2573	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0	1.2015	29.4050	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0	0.0183	0.0288	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0	0.0179	0.0288	0.0000	0.0000
C	133.000	0.00	0.0	0.0	0.0	0.0000	1.9918	0.0000	0.0000
C	133.000	0.00	0.0	0.0	0.0	0.8819	23.4051	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0	0.0175	0.0288	0.0000	0.0000
C	123.000	0.00	0.0	0.0	0.0	0.0000	1.8420	0.0000	0.0000
C	123.000	0.00	0.0	0.0	0.0	0.8649	23.2985	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0	0.0171	0.0288	0.0000	0.0000
C	113.000	0.00	0.0	0.0	0.0	0.0000	1.6923	0.0000	0.0000
C	113.000	0.00	0.0	0.0	0.0	0.8469	23.1838	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0	0.0166	0.0288	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0	0.0161	0.0288	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0	0.0156	0.0288	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0	0.0150	0.0288	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0	0.0144	0.0288	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0	0.0137	0.0288	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0	0.0129	0.0288	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0	0.0120	0.0288	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0	0.0108	0.0288	0.0000	0.0000

C	15.000	0.00	0.0	0.0	0.0093	0.0288	0.0000	0.0000
D	150.000	0.00	180.0	0.0	0.0063	0.1139	0.0000	0.0000
D	142.964	0.00	180.0	0.0	0.0063	0.1139	0.0000	0.0000
D	142.964	0.00	180.0	0.0	0.0068	0.1245	0.0000	0.0000
D	135.929	0.00	180.0	0.0	0.0068	0.1245	0.0000	0.0000
D	135.929	0.00	180.0	0.0	0.0072	0.1352	0.0000	0.0000
D	128.893	0.00	180.0	0.0	0.0072	0.1352	0.0000	0.0000
D	128.893	0.00	180.0	0.0	0.0077	0.1457	0.0000	0.0000
D	121.857	0.00	180.0	0.0	0.0077	0.1457	0.0000	0.0000
D	121.857	0.00	180.0	0.0	0.0081	0.1562	0.0000	0.0000
D	114.821	0.00	180.0	0.0	0.0081	0.1562	0.0000	0.0000
D	114.821	0.00	180.0	0.0	0.0084	0.1667	0.0000	0.0000
D	107.786	0.00	180.0	0.0	0.0084	0.1667	0.0000	0.0000
D	107.786	0.00	180.0	0.0	0.0088	0.1771	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0088	0.1771	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0091	0.3263	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0091	0.3263	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0092	0.2142	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0106	0.2742	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0106	0.5122	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0106	0.5122	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0107	0.3222	0.0000	0.0000
D	11.813	0.00	180.0	0.0	0.0099	0.3682	0.0000	0.0000
D	11.813	0.00	180.0	0.0	0.0099	0.3741	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0101	0.3769	0.0000	0.0000

=====

LOADING CONDITION AK

Seismic - Azimuth: 0° (1.2 D + 1.0 Ev + 1.0 Eh)

LOADS ON POLE

=====

LOAD TYPE	ELEV ft	APPLY. RADIUS ft	LOAD. AZI	AT AZI	FORCES.....		MOMENTS.....	
					HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	145.000	0.00	0.0	0.0	0.0007	0.0173	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.1359	3.3523	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.5007	12.3500	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0006	0.0173	0.0000	0.0000
C	133.000	0.00	0.0	0.0	0.0699	2.0499	0.0000	0.0000
C	133.000	0.00	0.0	0.0	0.3370	9.8800	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0005	0.0173	0.0000	0.0000
C	123.250	0.00	0.0	0.0	0.1526	5.2109	0.0000	0.0000
C	123.000	0.00	0.0	0.0	0.0553	1.8957	0.0000	0.0000
C	123.000	0.00	0.0	0.0	0.2882	9.8800	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0004	0.0173	0.0000	0.0000
C	113.000	0.00	0.0	0.0	0.0429	1.7416	0.0000	0.0000
C	113.000	0.00	0.0	0.0	0.2433	9.8800	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0004	0.0173	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0003	0.0173	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0002	0.0173	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0002	0.0173	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0991	9.3804	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0001	0.0173	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0001	0.0173	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0001	0.0173	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0000	0.0173	0.0000	0.0000
C	26.620	0.00	0.0	0.0	0.0196	14.3398	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0000	0.0173	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0000	0.0173	0.0000	0.0000
D	150.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000
D	0.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000

=====

LOADING CONDITION AL

Seismic - Azimuth: 0° (0.9 D - 1.0 Ev + 1.0 Eh)

LOADS ON POLE

=====

LOAD TYPE	ELEV ft	APPLY. RADIUS ft	LOAD. AT AZI	LOAD AZI	FORCES.....		MOMENTS.....	
					HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	145.000	0.00	0.0	0.0	0.0007	0.0121	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.1359	2.3480	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.5007	8.6500	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0006	0.0121	0.0000	0.0000
C	133.000	0.00	0.0	0.0	0.0699	1.4357	0.0000	0.0000
C	133.000	0.00	0.0	0.0	0.3370	6.9200	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0005	0.0121	0.0000	0.0000
C	123.250	0.00	0.0	0.0	0.1526	3.6497	0.0000	0.0000
C	123.000	0.00	0.0	0.0	0.0553	1.3278	0.0000	0.0000
C	123.000	0.00	0.0	0.0	0.2882	6.9200	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0004	0.0121	0.0000	0.0000
C	113.000	0.00	0.0	0.0	0.0429	1.2198	0.0000	0.0000
C	113.000	0.00	0.0	0.0	0.2433	6.9200	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0004	0.0121	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0003	0.0121	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0002	0.0121	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0002	0.0121	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0991	6.5702	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0001	0.0121	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0001	0.0121	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0001	0.0121	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0000	0.0121	0.0000	0.0000
C	26.620	0.00	0.0	0.0	0.0196	10.0437	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0000	0.0121	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0000	0.0121	0.0000	0.0000
D	150.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000
D	0.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000

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151' Monopole / Monticello DT, KY

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MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

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MAST ELEV ft	DEFLECTIONS (ft).....			ROTATIONS (deg).....		
	 HORIZONTAL ALONG	 ACROSS	DOWN	 TILT ALONG	 ACROSS	TWIST
150.0	13.54K	-0.030	1.73I	10.00K	-0.02E	0.00B
143.0	12.34K	-0.030	1.52I	9.99K	-0.02E	0.00B
135.9	11.16K	-0.020	1.32I	9.85K	-0.02E	0.00B
128.9	10.00K	-0.020	1.12I	9.60K	-0.02E	0.00B
121.9	8.87K	-0.020	0.94I	9.21K	-0.02E	0.00B
114.8	7.80K	-0.020	0.77I	8.71K	-0.020	0.00B
107.8	6.78K	-0.020	0.62I	8.13K	-0.020	0.00B
100.7	5.84K	-0.010	0.49I	7.46K	-0.020	0.00B
96.5	5.31K	-0.010	0.42I	7.11K	-0.020	0.00B
90.3	4.59K	0.01U	0.33I	6.55K	-0.010	0.00B
84.1	3.92K	0.01U	0.26I	5.98K	-0.010	0.00B

78.0	3.31K	0.01U	0.20I	5.42K	-0.01O	0.00B
71.8	2.76K	0.01U	0.15I	4.87K	-0.01O	0.00B
65.6	2.27D	0.01U	0.11I	4.33K	-0.01O	0.00B
59.4	1.83D	0.01U	0.08I	3.80K	-0.01O	0.00B
53.2	1.45D	0.00U	0.06I	3.30K	-0.01O	0.00B
47.2	1.13D	0.00U	0.04I	2.89D	0.01U	0.00B
41.3	0.85D	0.00U	0.03I	2.48D	0.01U	0.00B
35.4	0.62D	0.00U	0.02I	2.08D	0.01U	0.00B
29.5	0.42D	0.00U	0.01I	1.70D	0.01U	0.00B
23.6	0.27D	0.00U	0.00I	1.33D	0.00U	0.00B
17.7	0.15D	0.00U	0.00I	0.98D	0.00U	0.00B
11.8	0.07D	0.00U	0.00I	0.64D	0.00U	0.00B
5.9	0.02D	0.00U	0.00AF	0.31D	0.00U	0.00B
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t. ALONG kip	WIND.DIR ACROSS kip	MOMENT.w.r.t. ALONG ft-kip	WIND.DIR ACROSS ft-kip	TORSION ft-kip
150.0	-0.01 L	0.01 U	0.01 E	-0.03 K	0.02 E	0.00 E
143.0	33.49 AG	8.98 U	0.01 E	-23.69 A	-0.02 L	0.01 E
135.9	33.50 AG	9.00 T	0.01 H	-23.68 E	-0.03 L	0.01 E
128.9	34.37 AG	9.28 T	0.01 H	-104.99 B	0.14 E	0.04 B
121.9	34.37 AG	9.30 O	0.05 B	-105.06 B	0.15 E	0.04 B
114.8	60.75 AG	16.03 O	0.05 B	-222.33 B	0.44 E	0.13 B
107.8	60.75 AF	16.04 A	0.04 U	-222.34 B	0.46 E	0.12 B
100.7	86.94 AF	22.68 A	0.04 U	-374.71 A	0.77 E	0.18 B
96.5	86.94 AG	22.68 P	-0.04 W	-374.70 B	0.77 E	0.18 B
90.3	88.07 AG	23.05 P	-0.04 W	-575.42 A	1.11 E	0.26 B
84.1	88.07 AG	23.05 O	-0.05 E	-575.36 A	1.11 E	0.25 B
	114.12 AG	29.59 O	-0.05 E	-817.35 A	1.62 E	0.33 B
	114.12 AG	29.64 M	0.05 I	-817.42 A	1.62 E	0.34 B
	115.39 AG	30.05 M	0.05 I	-1073.36 A	1.99 E	0.44 B
	115.39 AG	30.07 C	0.13 T	-1073.25 A	1.98 E	0.44 B
	116.78 AG	30.31 C	0.13 T	-1228.25 L	2.07 E	0.51 B
	116.78 AG	30.40 O	-0.15 X	-1228.21 L	2.02 E	0.50 B
	118.16 AG	30.79 O	-0.15 X	-1454.40 B	2.34 E	0.65 B
	118.16 AG	30.78 K	0.12 U	-1454.39 B	2.26 E	0.66 B
	119.59 AG	31.18 K	0.12 U	-1680.64 A	2.84 E	0.77 B
	119.59 AG	31.21 K	-0.12 X	-1680.66 A	2.83 E	0.77 B
	121.05 AG	31.60 K	-0.12 X	-1907.04 A	3.02 E	0.88 B

78.0	121.05 AG	31.56 K	0.16 B	-1907.04 A	3.04 E	0.87 B
71.8	122.58 AG	31.97 K	0.16 B	-2133.46 A	3.60 O	1.00 B
	122.58 AG	32.09 O	-0.18 O	-2133.45 A	3.58 O	0.99 B
65.6	124.14 AG	32.49 O	-0.18 O	-2359.94 K	4.71 O	1.09 B
	124.14 AG	32.46 O	-0.17 X	-2359.95 K	4.70 O	1.08 B
59.4	125.79 AG	32.89 O	-0.17 X	-2586.49 K	5.69 O	1.17 B
	125.79 AG	32.86 O	-0.15 F	-2586.49 K	5.71 O	1.18 B
53.2	127.48 AG	33.30 O	-0.15 F	-2813.06 K	6.57 O	1.25 B
	127.48 AG	33.36 O	-0.16 O	-2813.02 K	6.57 O	1.26 B
47.2	130.56 AG	33.77 O	-0.16 O	-3033.57 K	7.57 O	1.33 B
	130.56 AG	33.73 O	0.22 U	-3033.52 K	7.54 O	1.33 B
41.3	132.51 AG	34.16 O	0.22 U	-3251.13 K	8.52 O	1.39 B
	132.51 AG	34.12 O	0.21 U	-3251.13 K	8.53 O	1.39 B
35.4	134.48 AG	34.52 O	0.21 U	-3468.45 K	9.36 O	1.44 B
	134.48 AG	34.55 O	0.23 U	-3468.43 K	9.37 O	1.44 B
29.5	136.53 AG	34.97 O	0.23 U	-3685.81 K	10.18 O	1.49 B
	136.53 AG	34.97 O	0.22 U	-3685.84 K	-10.20 U	1.49 B
23.6	138.62 AG	35.38 O	0.22 U	-3903.32 D	-11.50 U	1.52 B
	138.62 AG	35.39 O	0.22 U	-3903.33 D	-11.49 U	1.52 B
17.7	140.72 AG	35.78 O	0.22 U	-4121.11 D	-12.77 U	1.54 B
	140.72 AG	35.78 O	0.21 U	-4121.11 D	-12.76 U	1.54 B
11.8	142.90 AG	36.19 O	0.21 U	-4338.87 D	-13.99 U	1.56 B
	142.90 AG	36.19 O	0.21 U	-4338.87 D	-14.00 U	1.56 B
5.9	145.12 AG	36.58 O	0.21 U	-4556.66 D	-15.22 U	1.57 B
	145.12 AG	36.57 O	0.22 U	-4556.67 D	-15.22 U	1.57 B
	147.34 AG	36.97 O	0.22 U	-4774.21 D	-16.51 U	1.58 B

base	147.34 AG	-36.97 O	-0.22 U	4774.21 D	16.51 U	-1.58 B
reaction						

COMPLIANCE WITH 4.8.2 & 4.5.4

=====

ELEV	AXIAL	BENDING	SHEAR +	TOTAL	SATISFIED	D/t (w/t)	MAX
ft			TORSIONAL				ALLOWED
150.00	0.00L	0.00K	0.00U	0.00K	YES	8.53A	45.2
	0.02AG	0.05A	0.01U	0.06A	YES	9.53A	45.2
142.96	0.02AG	0.05E	0.01T	0.06E	YES	9.53A	45.2
	0.02AG	0.17B	0.01T	0.18B	YES	10.53A	45.2
135.93	0.02AG	0.17B	0.01O	0.18B	YES	10.53A	45.2
	0.04AG	0.30B	0.02O	0.32B	YES	11.53A	45.2
128.89	0.04AF	0.30B	0.02A	0.32B	YES	11.53A	45.2
	0.05AF	0.44A	0.03A	0.46A	YES	12.53A	45.2

121.86	0.05AG	0.44B	0.03P	0.46B	YES	12.53A	45.2
	0.05AG	0.58A	0.02P	0.61A	YES	13.53A	45.2
114.82	0.05AG	0.58A	0.02O	0.61A	YES	13.53A	45.2
	0.06AG	0.72A	0.03O	0.75A	YES	14.53A	45.2
107.79	0.06AG	0.72A	0.03M	0.75A	YES	14.53A	45.2
	0.05AG	0.84A	0.03M	0.86A	YES	15.53A	45.2
100.75	0.04AG	0.70A	0.02C	0.73A	YES	12.89A	45.2
	0.04AG	0.75L	0.02C	0.77L	YES	13.39A	45.2
96.50	0.04AG	0.78L	0.02O	0.80L	YES	13.10A	45.2
	0.04AG	0.83B	0.02O	0.85B	YES	13.83A	45.2
90.32	0.04AG	0.83B	0.02K	0.85B	YES	13.83A	45.2
	0.04AG	0.87A	0.02K	0.89A	YES	14.56A	45.2
84.14	0.04AG	0.87A	0.02K	0.89A	YES	14.56A	45.2
	0.04AG	0.90A	0.02K	0.92A	YES	15.29A	45.2
77.96	0.04AG	0.90A	0.02K	0.92A	YES	15.29A	45.2
	0.04AG	0.92A	0.02K	0.94A	YES	16.02A	45.2
71.79	0.04AG	0.92A	0.02O	0.94A	YES	16.02A	45.2
	0.04AG	0.95K	0.02O	0.97K	YES	16.76A	45.2
65.61	0.04AG	0.95K	0.02O	0.97K	YES	16.76A	45.2
	0.04AG	0.97K	0.02O	0.98K	YES	17.49A	45.2
59.43	0.04AG	0.97K	0.02O	0.98K	YES	17.49A	45.2
	0.04AG	0.98K	0.02O	1.00K	YES	18.22A	45.2
53.25	0.03AG	0.82K	0.02O	0.83K	YES	15.57A	45.2
	0.03AG	0.82K	0.02O	0.84K	YES	16.18A	45.2
47.25	0.03AG	0.85K	0.02O	0.87K	YES	15.87A	45.2
	0.03AG	0.85K	0.02O	0.87K	YES	16.47A	45.2
41.34	0.03AG	0.85K	0.02O	0.87K	YES	16.47A	45.2
	0.03AG	0.86K	0.02O	0.87K	YES	17.07A	45.2
35.44	0.03AG	0.86K	0.02O	0.87K	YES	17.07A	45.2
	0.03AG	0.86K	0.02O	0.87K	YES	17.67A	45.2
29.53	0.03AG	0.86K	0.02O	0.87K	YES	17.67A	45.2
	0.03AG	0.86D	0.02O	0.88D	YES	18.27A	45.2
23.62	0.03AG	0.86D	0.02O	0.88D	YES	18.27A	45.2
	0.03AG	0.86D	0.01O	0.88D	YES	18.87A	45.2
17.72	0.03AG	0.86D	0.01O	0.88D	YES	18.87A	45.2
	0.03AG	0.86D	0.01O	0.88D	YES	19.47A	45.2
11.81	0.03AG	0.86D	0.01O	0.88D	YES	19.47A	45.2
	0.03AG	0.86D	0.01O	0.88D	YES	20.07A	45.2
5.91	0.03AG	0.86D	0.01O	0.88D	YES	20.07A	45.2
	0.03AG	0.86D	0.01O	0.87D	YES	20.67A	45.2
0.00							

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)
=====

DOWN	SHEAR.w.r.t.WIND.DIR	MOMENT.w.r.t.WIND.DIR	TORSION
kip	ALONG kip	ACROSS kip	ft-kip
ft-kip	ft-kip	ft-kip	ft-kip
147.34	36.97	0.22	-4774.21
AG	O	U	D
			U
			B

=====

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151' Monopole / Monticello DT, KY

***** Service Load Condition *****

* Only 1 condition(s) shown in full

LOADING CONDITION A =====

60 mph wind with no ice. Wind Azimuth: 0° (1.0 D + 1.0 Wo)

LOADS ON POLE
=====

LOAD	ELEV	APPLY..LOAD..AT	LOAD	FORCES.....	MOMENTS.....			
TYPE	ft	RADIUS ft	AZI	AZI	HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	145.000	0.00	0.0	0.0	0.0000	2.7144	0.0000	0.0000
C	145.000	0.00	0.0	0.0	2.5352	10.0000	0.0000	0.0000
C	145.000	0.00	0.0	0.0	0.0083	0.0140	0.0000	0.0000
C	135.000	0.00	0.0	0.0	0.0082	0.0140	0.0000	0.0000
C	133.000	0.00	0.0	0.0	0.0000	1.6598	0.0000	0.0000
C	133.000	0.00	0.0	0.0	1.8674	8.0000	0.0000	0.0000
C	125.000	0.00	0.0	0.0	0.0081	0.0140	0.0000	0.0000
C	123.000	0.00	0.0	0.0	0.0000	1.5350	0.0000	0.0000
C	123.000	0.00	0.0	0.0	1.8372	8.0000	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0079	0.0140	0.0000	0.0000
C	113.000	0.00	0.0	0.0	0.0000	1.4102	0.0000	0.0000
C	113.000	0.00	0.0	0.0	1.8049	8.0000	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0078	0.0140	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0076	0.0140	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0074	0.0140	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0072	0.0140	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0070	0.0140	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0068	0.0140	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0065	0.0140	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0062	0.0140	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0057	0.0140	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0052	0.0140	0.0000	0.0000
D	150.000	0.00	180.0	0.0	0.0110	0.0596	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0163	0.0950	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0168	0.2172	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0168	0.2172	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0171	0.1228	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0201	0.1602	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0202	0.3571	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0202	0.3571	0.0000	0.0000

D	47.250	0.00	180.0	0.0	0.0204	0.1978	0.0000	0.0000
D	11.813	0.00	180.0	0.0	0.0192	0.2326	0.0000	0.0000
D	11.813	0.00	180.0	0.0	0.0193	0.2396	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0199	0.2466	0.0000	0.0000

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MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

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MAST ELEV ft	DEFLECTIONS (ft)			ROTATIONS (deg)		
	HORIZONTAL ALONG	ACROSS	DOWN	TILT ALONG	ACROSS	TWIST
150.0	3.97F	-0.01E	0.15F	2.89F	0.00E	0.00L
143.0	3.62F	-0.01E	0.13F	2.89F	0.00E	0.00L
135.9	3.26F	-0.01E	0.12F	2.85F	0.00E	0.00L
128.9	2.92F	-0.01E	0.10F	2.77F	0.00E	0.00L
121.9	2.59F	-0.01E	0.08F	2.66F	0.00E	0.00L
114.8	2.27F	0.00E	0.07F	2.52F	0.00E	0.00L
107.8	1.97F	0.00E	0.06F	2.34F	0.00E	0.00L
100.7	1.70F	0.00E	0.04F	2.15F	0.00E	0.00L
96.5	1.54F	0.00E	0.04F	2.05F	0.00E	0.00L
90.3	1.33F	0.00E	0.03F	1.89F	0.00E	0.00L
84.1	1.13F	0.00E	0.02F	1.72F	0.00E	0.00L
78.0	0.96F	0.00E	0.02F	1.56F	0.00E	0.00L
71.8	0.80F	0.00E	0.01F	1.40F	0.00E	0.00L
65.6	0.65F	0.00E	0.01F	1.25F	0.00E	0.00L
59.4	0.53F	0.00E	0.01F	1.09F	0.00E	0.00L
53.2	0.42F	0.00E	0.01F	0.95F	0.00E	0.00L
47.2	0.33F	0.00E	0.00F	0.83F	0.00E	0.00L
41.3	0.25F	0.00E	0.00F	0.71F	0.00E	0.00L
35.4	0.18F	0.00B	0.00F	0.60F	0.00E	0.00L
29.5	0.12F	0.00B	0.00F	0.49F	0.00E	0.00L
23.6	0.08F	0.00B	0.00F	0.38F	0.00B	0.00L
17.7	0.04F	0.00B	0.00F	0.28F	0.00B	0.00L
11.8	0.02F	0.00B	0.00F	0.18F	0.00B	0.00L
5.9	0.00F	0.00B	0.00B	0.09F	0.00B	0.00L
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

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MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

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MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR		MOMENT.w.r.t.WIND.DIR		TORSION ft-kip
		ALONG kip	ACROSS kip	ALONG ft-kip	ACROSS ft-kip	
150.0	0.00 L	0.00 E	0.00 I	-0.01 E	0.00 I	0.00 I
143.0	13.17 L	2.63 K	0.00 I	-6.82 C	0.00 I	0.00 L
	13.17 I	2.63 L	0.00 K	-6.83 C	0.00 C	0.00 I

135.9	13.64 I	2.72 L	0.00 K	-30.26 L	0.02 L	0.00 I
	13.64 I	2.72 F	-0.01 L	-30.25 L	0.03 K	0.00 L
128.9	23.82 I	4.68 F	-0.01 L	-64.05 L	0.07 L	0.00 I
	23.83 I	4.68 H	0.01 H	-64.06 L	0.08 L	0.00 I
121.9	33.92 I	6.63 H	0.01 H	-107.88 H	0.12 K	0.01 H
	33.92 D	6.63 F	-0.02 F	-107.89 F	-0.11 H	0.01 H
114.8	34.51 D	6.74 F	-0.02 F	-165.62 F	0.20 K	0.01 H
	34.51 D	6.74 F	-0.01 F	-165.62 F	0.20 K	0.01 H
107.8	44.53 D	8.65 F	-0.01 F	-235.17 F	0.29 F	0.02 H
	44.53 D	8.66 F	-0.01 F	-235.16 F	0.29 F	0.02 H
100.7	45.20 D	8.78 F	-0.01 F	-308.73 F	0.37 F	0.02 H
	45.20 D	8.77 A	-0.02 K	-308.76 F	0.36 F	0.02 H
96.5	46.12 D	8.84 A	-0.02 K	-353.17 F	0.38 F	0.02 H
	46.12 A	8.83 K	-0.05 E	-353.22 F	0.37 F	0.02 H
90.3	46.91 A	8.95 K	-0.05 E	-417.91 F	0.58 F	0.03 L
	46.91 A	8.99 F	-0.02 F	-417.88 F	0.59 E	0.03 L
84.1	47.73 A	9.11 F	-0.02 F	-482.89 F	0.73 E	0.04 L
	47.73 A	9.07 F	-0.03 E	-482.93 F	0.73 F	0.04 L
78.0	48.57 A	9.19 F	-0.03 E	-547.81 F	0.90 E	0.04 L
	48.57 A	9.20 F	-0.02 E	-547.80 F	0.89 E	0.04 L
71.8	49.46 A	9.32 F	-0.02 E	-612.77 F	1.01 E	0.05 L
	49.46 E	9.32 F	-0.05 E	-612.73 F	1.00 E	0.05 L
65.6	50.37 E	9.44 F	-0.05 E	-677.78 F	1.31 E	0.05 L
	50.37 A	9.45 F	0.04 B	-677.77 F	1.33 E	0.05 L
59.4	51.32 A	9.57 F	0.04 B	-742.90 F	1.51 E	0.05 L
	51.32 E	9.57 B	0.05 B	-742.89 F	1.53 E	0.05 L
53.2	52.31 E	9.70 B	0.05 B	-808.03 F	1.76 E	0.05 L
	52.31 E	9.69 B	0.04 I	-808.03 F	1.77 E	0.05 L
47.2	54.45 E	9.81 B	0.04 I	-871.45 F	1.96 E	0.06 L
	54.45 E	9.82 B	0.05 B	-871.45 F	1.96 E	0.06 L
41.3	55.65 E	9.94 B	0.05 B	-934.15 F	2.14 E	0.06 L
	55.65 A	9.94 B	0.05 B	-934.15 F	2.13 E	0.06 L
35.4	56.87 A	10.06 B	0.05 B	-996.91 F	2.34 E	0.06 L
	56.87 A	10.07 B	0.05 B	-996.91 F	2.34 E	0.06 L
29.5	58.14 A	10.20 B	0.05 B	-1059.89 F	2.53 E	0.06 L
	58.14 A	10.20 B	0.05 B	-1059.89 F	2.53 E	0.06 L
23.6	59.44 A	10.32 B	0.05 B	-1123.04 F	2.74 E	0.06 L
	59.44 A	10.32 B	0.05 B	-1123.04 F	2.74 E	0.06 L
17.7	60.76 A	10.44 B	0.05 B	-1186.30 F	2.97 E	0.07 L
	60.76 A	10.44 B	0.05 B	-1186.29 F	2.97 E	0.07 L
	62.13 A	10.56 B	0.05 B	-1249.70 F	-3.20 B	0.07 L

11.8	62.13 A	10.56 B	0.05 B	-1249.70 F	-3.20 B	0.07 L
5.9	63.56 A	10.67 B	0.05 B	-1313.21 F	-3.50 B	0.07 L
	63.56 A	10.68 B	0.05 B	-1313.21 F	-3.50 B	0.07 L
	65.00 A	10.80 B	0.05 B	-1376.82 F	-3.81 B	0.07 L
base reaction	65.00 A	-10.80 B	-0.05 B	1376.82 F	3.81 B	-0.07 L

COMPLIANCE WITH 4.8.2 & 4.5.4

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ELEV ft	AXIAL	BENDING	SHEAR + TORSIONAL	TOTAL	SATISFIED	D/t (w/t)	MAX ALLOWED
150.00	0.00L	0.00E	0.00E	0.00E	YES	8.53A	45.2
	0.01L	0.01C	0.00K	0.02C	YES	9.53A	45.2
142.96	0.01I	0.01C	0.00L	0.02C	YES	9.53A	45.2
	0.01I	0.05L	0.00L	0.06L	YES	10.53A	45.2
135.93	0.01I	0.05L	0.00F	0.06L	YES	10.53A	45.2
	0.01I	0.09L	0.01F	0.10L	YES	11.53A	45.2
128.89	0.01I	0.09L	0.01H	0.10L	YES	11.53A	45.2
	0.02I	0.13H	0.01H	0.15H	YES	12.53A	45.2
121.86	0.02D	0.13F	0.01F	0.15F	YES	12.53A	45.2
	0.02D	0.17F	0.01F	0.19F	YES	13.53A	45.2
114.82	0.02D	0.17F	0.01F	0.19F	YES	13.53A	45.2
	0.02D	0.21F	0.01F	0.23F	YES	14.53A	45.2
107.79	0.02D	0.21F	0.01F	0.23F	YES	14.53A	45.2
	0.02D	0.24F	0.01F	0.26F	YES	15.53A	45.2
100.75	0.02D	0.20F	0.01A	0.22F	YES	12.89A	45.2
	0.02D	0.22F	0.01A	0.23F	YES	13.39A	45.2
96.50	0.02A	0.22F	0.01K	0.24F	YES	13.10A	45.2
	0.02A	0.24F	0.01K	0.26F	YES	13.83A	45.2
90.32	0.02A	0.24F	0.01F	0.26F	YES	13.83A	45.2
	0.02A	0.25F	0.01F	0.27F	YES	14.56A	45.2
84.14	0.02A	0.25F	0.01F	0.27F	YES	14.56A	45.2
	0.02A	0.26F	0.01F	0.28F	YES	15.29A	45.2
77.96	0.02A	0.26F	0.01F	0.28F	YES	15.29A	45.2
	0.02A	0.26F	0.01F	0.28F	YES	16.02A	45.2
71.79	0.02E	0.26F	0.01F	0.28F	YES	16.02A	45.2
	0.02E	0.27F	0.01F	0.29F	YES	16.76A	45.2
65.61	0.02A	0.27F	0.01F	0.29F	YES	16.76A	45.2
	0.02A	0.28F	0.01F	0.29F	YES	17.49A	45.2
59.43	0.02E	0.28F	0.01B	0.29F	YES	17.49A	45.2
	0.02E	0.28F	0.01B	0.30F	YES	18.22A	45.2

53.25	0.01E	0.24F	0.00B	0.25F	YES	15.57A	45.2
	0.01E	0.24F	0.00B	0.25F	YES	16.18A	45.2
47.25	0.01E	0.24F	0.00B	0.26F	YES	15.87A	45.2
	0.01E	0.25F	0.00B	0.26F	YES	16.47A	45.2
41.34	0.01A	0.25F	0.00B	0.26F	YES	16.47A	45.2
	0.01A	0.25F	0.00B	0.26F	YES	17.07A	45.2
35.44	0.01A	0.25F	0.00B	0.26F	YES	17.07A	45.2
	0.01A	0.25F	0.00B	0.26F	YES	17.67A	45.2
29.53	0.01A	0.25F	0.00B	0.26F	YES	17.67A	45.2
	0.01A	0.25F	0.00B	0.26F	YES	18.27A	45.2
23.62	0.01A	0.25F	0.00B	0.26F	YES	18.27A	45.2
	0.01A	0.25F	0.00B	0.26F	YES	18.87A	45.2
17.72	0.01A	0.25F	0.00B	0.26F	YES	18.87A	45.2
	0.01A	0.25F	0.00B	0.26F	YES	19.47A	45.2
11.81	0.01A	0.25F	0.00B	0.26F	YES	19.47A	45.2
	0.01A	0.25F	0.00B	0.26F	YES	20.07A	45.2
5.91	0.01A	0.25F	0.00B	0.26F	YES	20.07A	45.2
	0.01A	0.25F	0.00B	0.26F	YES	20.67A	45.2
0.00							

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)

DOWN	SHEAR.w.r.t.WIND.DIR	MOMENT.w.r.t.WIND.DIR	TORSION
kip	ALONG kip	ALONG ft-kip	ft-kip
ACROSS kip	ACROSS ft-kip		
65.00	10.80	-1376.82	-3.81
A	B	F	B
			0.07
			L

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Seismic Load Effects
Equivalent Lateral Force Procedure
ANSI/TIA-222-H

Parameters	Description	h _i (ft.)	w _i (kips)	W _n (kips)	Vertical Distribution of Seismic Forces				1.2 D + 1.0 E _v (kips)	0.9 D - 1.0 E _v (kips)
					F _{se} or E _{sh} (kips)	w/h _i ^{k_e}	E _v (kips)			
Risk Category R	II									
	1.500	145.00	10.0000	10.0000		210,250.0000	0.5007	0.3500	12.3500	8.6500
S _s		145.00	2.7144	0.0000		57,070.2600	0.1359	0.0950	3.3523	2.3480
	0.202	145.00	0.0140	0.0000		294.3500	0.0007	0.0005	0.0173	0.0121
S ₁		135.00	0.0140	0.0000		255.1500	0.0006	0.0005	0.0173	0.0121
	0.095	133.00	8.0000	8.0000		141,512.0000	0.3370	0.2800	9.8800	6.9200
Site Class C		133.00	1.6598	0.0000		29,360.2022	0.0699	0.0581	2.0499	1.4357
	12.000	125.00	0.0140	0.0000		218.7500	0.0005	0.0005	0.0173	0.0121
F _a		123.25	4.2193	0.0000		64,093.5404	0.1526	0.1477	5.2109	3.6497
	1.300	123.00	8.0000	8.0000		121,032.0000	0.2882	0.2800	9.8800	6.9200
F _v		123.00	1.5350	0.0000		23,223.0150	0.0553	0.0537	1.8957	1.3278
	0.263	115.00	0.0140	0.0000		185.1500	0.0004	0.0005	0.0173	0.0121
S _{MS}		113.00	8.0000	8.0000		102,152.0000	0.2433	0.2800	9.8800	6.9200
	0.143	113.00	1.4102	0.0000		18,006.8438	0.0429	0.0494	1.7416	1.2198
S _{M1}		105.00	0.0140	0.0000		154.3500	0.0004	0.0005	0.0173	0.0121
	0.095	95.00	0.0140	0.0000		126.3500	0.0003	0.0005	0.0173	0.0121
S _{DS}		85.00	0.0140	0.0000		101.1500	0.0002	0.0005	0.0173	0.0121
	0.543	75.00	0.0140	0.0000		78.7500	0.0002	0.0005	0.0173	0.0121
T _s		74.00	7.5955	0.0000		41,592.9580	0.0991	0.2658	9.3804	6.5702
	1.000	65.00	0.0140	0.0000		59.1500	0.0001	0.0005	0.0173	0.0121
I _e		55.00	0.0140	0.0000		42.3500	0.0001	0.0005	0.0173	0.0121
	1.500	45.00	0.0140	0.0000		28.3500	0.0001	0.0005	0.0173	0.0121
Ω		35.00	0.0140	0.0000		17.1500	0.0000	0.0005	0.0173	0.0121
	0.030	26.62	11.6112	0.0000		8,227.9796	0.0196	0.4064	14.3398	10.0437
C _s	29,000	25.00	0.0140	0.0000		8.7500	0.0000	0.0005	0.0173	0.0121
E (ksi)		15.00	0.0140	0.0000		3.1500	0.0000	0.0005	0.0173	0.0121
I _{top} (in ⁴)	584	Σ	64.94	34.0000		818,093.70	1.95	2.27	80.20	56.17
I _{bot} (in ⁴)	26,140									
I _{avg} (in ⁴)	13,362									
g (in/s ²)	386.4									
W _t (kips)	64.941									
W _u (kips)	34.000									
W _L (kips)	30.941									
L _p (in)	1800									
f ₁ (Hertz)	0.217									
T (sec)	4.601									
k _e	2.0000									
V _s (kips)	1.948									
Seismic Design Category	B									

Round Base Plate and Anchor Rods, per ANSI/TIA 222-H

Pole Data

Diameter: 53.410 in (flat to flat)
Thickness: 0.4375 in
Yield (Fy): 65 ksi
of Sides: 18 "0" IF Round
Strength (Fu): 80 ksi

Reactions

Moment, Mu: 4774.21 ft-kips
Axial, Pu: 77.97 kips
Shear, Vu: 36.82 kips

Anchor Rod Data

Quantity: 16
Diameter: 2.25 in
Rod Material: A615
Strength (Fu): 100 ksi
Yield (Fy): 75 ksi
BC Diam. (in): 60.25 BC Override:

Anchor Rod Results

(per 4.9.9)

Maximum Put: 234.07 Kips
 Φt^*Rnt : 243.75 Kips
Vu: 2.30 Kips
 Φv^*Rnv : 149.10 Kips
Tension Interaction Ratio: 0.92
Maximum Puc: 242.59 Kips
 Φc^*Rnc : 268.39 Kips
Vu: 2.30 Kips
 Φc^*Rnvc : 120.77 Kips
Compression Interaction Ratio: 0.90
Maximum Interaction Ratio: **92.2% Pass**

Plate Data

Diameter (in): 66 Dia. Override:
Thickness: 2.25 in
Yield (Fy): 50 ksi
Eff Width/Rod: 10.59 in
Drain Hole: 2.625 in. diameter
Drain Location: 24.5 in. center of pole to center of drain hole
Center Hole: 41 in. diameter

Base Plate Results

Base Plate (Mu/Z): 38.3 ksi
Allowable Φ^*Fy : 45.0 ksi (per AISC)
Base Plate Interaction Ratio: **85.2% Pass**

MAT FOUNDATION DESIGN BY SABRE INDUSTRIES

151' Monopole MASTEC NETWORK SOLUTIONS GROUP Monticello DT, KY (565843) 09/23/25 REB

Overall Loads:

Factored Moment (ft-kips)	4774.21
Factored Axial (kips)	77.97
Factored Shear (kips)	36.82
Bearing Design Strength (ksf)	9
Water Table Below Grade (ft)	999
Width of Mat (ft)	24
Thickness of Mat (ft)	1.75
Depth to Bottom of Slab (ft)	6
Quantity of Bolts in Bolt Circle	16
Bolt Circle Diameter (in)	60.25
Effective Anchor	
Bolt Embedment (in)	66.5
Diameter of Pier (ft)	7
Ht. of Pier Above Ground (ft)	0.5
Ht. of Pier Below Ground (ft)	4.25
Quantity of Bars in Mat	33
Bar Diameter in Mat (in)	1.27
Area of Bars in Mat (in ²)	41.80
Spacing of Bars in Mat (in)	8.77
Quantity of Bars Pier	38
Bar Diameter in Pier (in)	1
Tie Bar Diameter in Pier (in)	0.625
Spacing of Ties (in)	4
Area of Bars in Pier (in ²)	29.85
Spacing of Bars in Pier (in)	6.26
f'c (ksi)	4.5
fy (ksi)	60
Unit Wt. of Soil (kcf)	0.115
Unit Wt. of Concrete (kcf)	0.15

Volume of Concrete (yd³) 44.10

Two-Way Shear Action:

Average d (in)	16.73
ϕv_c (ksi)	0.193
$\phi v_c = \phi(2 + 4/\beta_c)f_c^{1/2}$	0.302
$\phi v_c = \phi(\alpha_s d/b_o + 2)f_c^{1/2}$	0.193
$\phi v_c = \phi 4f_c^{1/2}$	0.201
Shear perimeter, b_o (in)	364.69
β_c	1

One-Way Shear:

ϕV_c (kips)	484.8
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Stability:

Overturning Design Strength (ft-k)	5468.1
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Max. Net Bearing Press. (ksf)	8.94
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Allowable Bearing Pressure (ksf)	6.00
Safety Factor	2.00
Ultimate Bearing Pressure (ksf)	12.00
Bearing Φ_s	0.75

Minimum Pier Diameter (ft)	7.00
Equivalent Square b (ft)	6.20
Square Pier? (Y/N)	N

Recommended Spacing (in)	5 to 12
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Minimum Pier A_s (in ²)	27.71
Recommended Spacing (in)	5 to 12

v_u (ksi)	0.140
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J (in ³)	8.524E+06
c + d (in)	91.17
0.40M _{sc} (ft-kips)	1979.6

V_u (kips)	368.5
--------------	-------

Total Applied M (ft-k)	5013.5
------------------------	--------

Pier-Slab Transfer by Flexure:

b_{slab} (ft)	12.25		
ϕM_n (ft-kips)	2994.1	$0.60M_{sc}$ (ft-kips)	2969.5

Pier Design:

ϕV_n (kips)	1035.9	V_u (kips)	36.8
$\phi V_c = \phi 2(1 + N_u / (2000 A_g)) f'_c{}^{1/2} b_w d$	572.0		
V_s (kips)	618.5	*** $V_s \max = 4 f'_c{}^{1/2} b_w d$ (kips)	1514.7
Maximum Spacing (in)	8.71	(Only if Shear Ties are Required)	
Actual Hook Development (in)	15.46	Req'd Hook Development l_{dh} (in) - Tension	12.52
		Req'd Hook Development l_{dc} (in) - Compression	13.50

Flexure in Slab:

ϕM_n (ft-kips)	2933.0	M_u (ft-kips)	2672.8
a (in)	2.28		
Steel Ratio	0.00868		
β_1	0.825		
Maximum Steel Ratio (ρ_t)	0.0197		
Minimum Steel Ratio	0.0018		
Rebar Development in Pad (in)	99.00	Required Development in Pad (in)	34.08

Condition	1 is OK, 0 Fails
Maximum Soil Bearing Pressure	1
Pier Area of Steel	1
Pier Shear	1
Interaction Diagram	1
Two-Way Shear Action	1
One-Way Shear Action	1
Overtaking	1
Flexure	1
Steel Ratio	1
Length of Development in Pad	1
Hook Development	1
Anchor Bolt Pullout	1
Anchor Bolt Punching Shear	1

=====

LFile for Windows, Version 2019-11.009

Analysis of Individual Files and Drilled Shafts
Subjected to Lateral Loading Using the p-y Method
© 1985-2019 by Ensoft, Inc.
All Rights Reserved

=====

This copy of LFile is being used by:

Sabre
Sioux City, IA

Serial Number of Security Device: 160777296

This copy of LFile is licensed for exclusive use by:

Sabre Communications Corporation

Use of this program by any entity other than Sabre Communications Corporation
is a violation of the software license agreement.

Files Used for Analysis

Path to file locations:
\Program Files (x86)\Ensoft\Lpile2019\files\

Name of input data file:
565843A.lp1ld

Name of output report file:
565843A.lp1lo

Name of plot output file:
565843A.lp1lp

Name of runtime message file:
565843A.lp1lr

Date and Time of Analysis

Date: September 23, 2025 Time: 14:27:32

Problem Title

Site : Monticello DT, KY

Tower : 151' Monopole

Prepared for : MASTEC NETWORK SOLUTIONS GROUP

Job Number : 565843 Revision A

Engineer : REB

Program Options and Settings

Computational Options:

- Conventional Analysis
- Engineering Units Used for Data Input and Computations:
- US Customary System Units (pounds, feet, inches)

Analysis Control Options:

- Maximum number of iterations allowed = 999
- Deflection tolerance for convergence = 1.0000E-05 in
- Maximum allowable deflection = 100.0000 in
- Number of pile increments = 100

Loading Type and Number of Cycles of Loading:

- Static loading specified
- Use of p-y modification factors for p-y curves not selected
- Analysis uses layering correction (Method of Georgiadis)
- No distributed lateral loads are entered
- Loading by lateral soil movements acting on pile not selected
- Input of shear resistance at the pile tip not selected
- Input of moment resistance at the pile tip not selected
- Input of side resistance moment along pile not selected
- Computation of pile-head foundation stiffness matrix not selected
- Push-over analysis of pile not selected
- Buckling analysis of pile not selected

Output Options:

- Output files use decimal points to denote decimal symbols.
- Report only summary tables of pile-head deflection, maximum bending moment, and maximum shear force in output report file.
- No p-y curves to be computed and reported for user-specified depths
- Print using wide report formats

Pile Structural Properties and Geometry

- Number of pile sections defined = 1
- Total length of pile = 29.500 ft
- Depth of ground surface below top of pile = 0.5000 ft

Pile diameters used for p-y curve computations are defined using 2 points.

p-y curves are computed using pile diameter values interpolated with depth over the length of the pile. A summary of values of pile diameter vs. depth follows.

Point No.	Depth Below Pile Head feet	Pile Diameter inches
1	0.000	84.0000
2	29.500	84.0000

Input Structural Properties for Pile Sections:

Pile Section No. 1:

- Section 1 is a round drilled shaft, bored pile, or CIDH pile
- Length of section = 29.500000 ft
- Shaft Diameter = 84.000000 in
- Shear capacity of section = 0.0000 lbs

Ground Slope and Pile Batter Angles

- Ground Slope Angle = 0.000 degrees
- = 0.000 radians
- Pile Batter Angle = 0.000 degrees
- = 0.000 radians

Soil and Rock Layering Information

The soil profile is modelled using 3 layers

Layer 1 is soft clay, p-y criteria by Matlock, 1970

Distance from top of pile to top of layer	=	0.500000	ft
Distance from top of pile to bottom of layer	=	2.500000	ft
Effective unit weight at top of layer	=	110.000000	pcf
Effective unit weight at bottom of layer	=	110.000000	pcf
Undrained cohesion at top of layer	=	14.400000	psf
Undrained cohesion at bottom of layer	=	14.400000	psf
Epsilon-50 at top of layer	=	0.100000	
Epsilon-50 at bottom of layer	=	0.100000	

Layer 2 is stiff clay without free water

Distance from top of pile to top of layer	=	2.500000	ft
Distance from top of pile to bottom of layer	=	25.500000	ft
Effective unit weight at top of layer	=	120.000000	pcf
Effective unit weight at bottom of layer	=	120.000000	pcf
Undrained cohesion at top of layer	=	2000.	psf
Undrained cohesion at bottom of layer	=	2000.	psf
Epsilon-50 at top of layer	=	0.007000	
Epsilon-50 at bottom of layer	=	0.007000	

Layer 3 is stiff clay without free water

Distance from top of pile to top of layer	=	25.500000	ft
Distance from top of pile to bottom of layer	=	38.500000	ft
Effective unit weight at top of layer	=	135.000000	pcf
Effective unit weight at bottom of layer	=	135.000000	pcf
Undrained cohesion at top of layer	=	4000.	psf
Undrained cohesion at bottom of layer	=	4000.	psf
Epsilon-50 at top of layer	=	0.005000	
Epsilon-50 at bottom of layer	=	0.005000	

(Depth of the lowest soil layer extends 9.000 ft below the pile tip)

Summary of Input Soil Properties

Layer Num.	Soil Type Name (p-y Curve Type)	Layer Depth ft	Effective Unit Wt. pcf	Cohesion psf	E50 or krm
1	Soft Clay	0.5000 2.5000	110.0000 110.0000	14.4000 14.4000	0.10000 0.10000
2	Stiff Clay w/o Free Water	2.5000 25.5000	120.0000 120.0000	2000. 2000.	0.00700 0.00700
3	Stiff Clay w/o Free Water	25.5000 38.5000	135.0000 135.0000	4000. 4000.	0.00500 0.00500

Static Loading Type

Static loading criteria were used when computing p-y curves for all analyses.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 2

Load Analysis No.	Load Type	Condition 1	Condition 2	Axial Thrust Force, lbs	Compute Top y vs. Pile Length	Run
1	1	V = 49093. lbs	M = 76387360. in-lbs	103960.	No	
Yes						

2 1 V = 10800. lbs M = 16521840. in-lbs 65000. No
Yes

V = shear force applied normal to pile axis
M = bending moment applied to pile head
y = lateral deflection normal to pile axis
S = pile slope relative to original pile batter angle
R = rotational stiffness applied to pile head
Values of top y vs. pile lengths can be computed only for load types with
specified shear loading (Load Types 1, 2, and 3).
Thrust force is assumed to be acting axially for all pile batter angles.

Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

Axial thrust force values were determined from pile-head loading conditions

Number of Pile Sections Analyzed = 1

Pile Section No. 1:

Dimensions and Properties of Drilled Shaft (Bored Pile):

Length of Section	=	29.500000 ft
Shaft Diameter	=	84.000000 in
Concrete Cover Thickness (to edge of long. rebar)	=	3.625000 in
Number of Reinforcing Bars	=	36 bars
Yield Stress of Reinforcing Bars	=	60000. psi
Modulus of Elasticity of Reinforcing Bars	=	29000000. psi
Gross Area of Shaft	=	5542. sq. in.
Total Area of Reinforcing Steel	=	35.975810 sq. in.
Area Ratio of Steel Reinforcement	=	0.65 percent
Edge-to-Edge Bar Spacing	=	5.462892 in
Maximum Concrete Aggregate Size	=	0.750000 in
Ratio of Bar Spacing to Aggregate Size	=	7.28
Offset of Center of Rebar Cage from Center of Pile	=	0.0000 in

Axial Structural Capacities:

Nom. Axial Structural Capacity = $0.85 F_c A_c + F_y A_s$	=	23218.209 kips
Tensile Load for Cracking of Concrete	=	-2544.453 kips
Nominal Axial Tensile Capacity	=	-2158.549 kips

Reinforcing Bar Dimensions and Positions Used in Computations:

Bar Number	Bar Diam. inches	Bar Area sq. in.	X inches	Y inches
1	1.128000	0.999328	37.811000	0.00000
2	1.128000	0.999328	37.236566	6.565811
3	1.128000	0.999328	35.530718	12.932124
4	1.128000	0.999328	32.745287	18.905500
5	1.128000	0.999328	28.964906	24.304442
6	1.128000	0.999328	24.304442	28.964906
7	1.128000	0.999328	18.905500	32.745287
8	1.128000	0.999328	12.932124	35.530718
9	1.128000	0.999328	6.565811	37.236566
10	1.128000	0.999328	0.00000	37.811000
11	1.128000	0.999328	-6.565811	37.236566
12	1.128000	0.999328	-12.932124	35.530718
13	1.128000	0.999328	-18.905500	32.745287
14	1.128000	0.999328	-24.304442	28.964906
15	1.128000	0.999328	-28.964906	24.304442
16	1.128000	0.999328	-32.745287	18.905500
17	1.128000	0.999328	-35.530718	12.932124
18	1.128000	0.999328	-37.236566	6.565811
19	1.128000	0.999328	-37.811000	0.00000
20	1.128000	0.999328	-37.236566	-6.565811
21	1.128000	0.999328	-35.530718	-12.932124
22	1.128000	0.999328	-32.745287	-18.905500
23	1.128000	0.999328	-28.964906	-24.304442
24	1.128000	0.999328	-24.304442	-28.964906
25	1.128000	0.999328	-18.905500	-32.745287
26	1.128000	0.999328	-12.932124	-35.530718

27	1.128000	0.999328	-6.565811	-37.236566
28	1.128000	0.999328	0.000000	-37.811000
29	1.128000	0.999328	6.565811	-37.236566
30	1.128000	0.999328	12.932124	-35.530718
31	1.128000	0.999328	18.905500	-32.745287
32	1.128000	0.999328	24.304442	-28.964906
33	1.128000	0.999328	28.964906	-24.304442
34	1.128000	0.999328	32.745287	-18.905500
35	1.128000	0.999328	35.530718	-12.932124
36	1.128000	0.999328	37.236566	-6.565811

NOTE: The positions of the above rebars were computed by LFile

Minimum spacing between any two bars not equal to zero = 5.463 inches
between bars 22 and 23.

Ratio of bar spacing to maximum aggregate size = 7.28

Concrete Properties:

Compressive Strength of Concrete	=	4500. psi
Modulus of Elasticity of Concrete	=	3823676. psi
Modulus of Rupture of Concrete	=	-503.115295 psi
Compression Strain at Peak Stress	=	0.002001
Tensile Strain at Fracture of Concrete	=	-0.0001152
Maximum Coarse Aggregate Size	=	0.750000 in

Number of Axial Thrust Force Values Determined from Pile-head Loadings = 2

Number	Axial Thrust Force kips
1	65.000
2	103.960

Summary of Results for Nominal Moment Capacity for Section 1

Moment values interpolated at maximum compressive strain = 0.003
or maximum developed moment if pile fails at smaller strains.

Load No.	Axial Thrust kips	Nominal Mom. Cap. in-kip	Max. Comp. Strain
1	65.000	79377.092	0.00300000
2	103.960	80610.789	0.00300000

Note that the values of moment capacity in the table above are not factored by a strength reduction factor (phi-factor).

In ACI 318, the value of the strength reduction factor depends on whether the transverse reinforcing steel bars are tied hoops (0.65) or spirals (0.75).

The above values should be multiplied by the appropriate strength reduction factor to compute ultimate moment capacity according to ACI 318, or the value required by the design standard being followed.

The following table presents factored moment capacities and corresponding bending stiffnesses computed for common resistance factor values used for reinforced concrete sections.

Axial Load No.	Resist. Factor	Nominal Ax. Thrust kips	Nominal Moment Cap in-kips	Ult. (Fac) Ax. Thrust kips	Ult. (Fac) Moment Cap in-kips	Bend. Stiff. at Ult Mom kip-in^2
1	0.65	65.000000	79377.	42.250000	51595.	1.6640E+09
2	0.65	103.960000	80611.	67.574000	52397.	1.6940E+09
1	0.75	65.000000	79377.	48.750000	59533.	1.6055E+09
2	0.75	103.960000	80611.	77.970000	60458.	1.6351E+09
1	0.90	65.000000	79377.	58.500000	71439.	1.0414E+09
2	0.90	103.960000	80611.	93.564000	72550.	1.0636E+09

Layering Correction Equivalent Depths of Soil & Rock Layers

Layer No.	Top of Layer Below Pile Head ft	Equivalent Top Depth Below Grnd Surf ft	Same Layer Type As Layer Above	Layer is Rock or is Below Rock Layer	F0 Integral for Layer lbs	F1 Integral for Layer lbs
1	0.5000	0.00	N.A.	No	0.00	1731.
2	2.5000	0.04118	No	No	1731.	1452788.
3	25.5000	14.0060	Yes	No	1454520.	N.A.

Notes: The F0 integral of Layer n+1 equals the sum of the F0 and F1 integrals for Layer n. Layering correction equivalent depths are computed only for soil types with both shallow-depth and deep-depth expressions for peak lateral load transfer. These soil types are soft and stiff clays, non-liquefied sands, and cemented c-phi soil.

Summary of Pile-head Responses for Conventional Analyses

Definitions of Pile-head Loading Conditions:

Load Type 1: Load 1 = Shear, V, lbs, and Load 2 = Moment, M, in-lbs
Load Type 2: Load 1 = Shear, V, lbs, and Load 2 = Slope, S, radians
Load Type 3: Load 1 = Shear, V, lbs, and Load 2 = Rot. Stiffness, R, in-lbs/rad.
Load Type 4: Load 1 = Top Deflection, y, inches, and Load 2 = Moment, M, in-lbs
Load Type 5: Load 1 = Top Deflection, y, inches, and Load 2 = Slope, S, radians

Load Case No.	Load Type 1	Pile-head Load 1	Load Type 2	Pile-head Load 2	Axial Loading lbs	Pile-head Deflection inches	Pile-head Rotation radians	Max Shear in Pile lbs	Max Moment in Pile in-lbs
1	V, lb	49093.	M, in-lb	7.64E+07	103960.	6.0867	-0.03726	-462992.	7.85E+07
2	V, lb	10800.	M, in-lb	1.65E+07	65000.	0.03475	-3.11E-04	-90216.	1.69E+07

Maximum pile-head deflection = 6.0866600273 inches
Maximum pile-head rotation = -0.0372629278 radians = -2.135008 deg.

The analysis ended normally.

IBC 1807.3.2.1

Moment (ft·k)	4,774.21	
Shear (k)	36.82	
Caisson diameter (ft)	7	
Caisson height above ground (ft)	0.5	
Caisson height below ground (ft)	29	
Lateral soil pressure (lb/ft ²)	279.31	
Ground to application of force, h (ft)	130.16	
Applied lateral force, P (lb)	36,820	
Lateral soil bearing pressure, S ₁ (lb/ft)	2,700.00	
Diameter, b (ft)	7	
A	4.56	$= (2.34P)/(S_1 b)$
Minimum depth of embedment, d (ft)	27.81	$= 0.5A[1 + (1 + (4.36h / A))^{1/2}]$

EXHIBIT E1
FAA DOCUMENTATION



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2025-ASO-10377-OE

Issued Date: 09/18/2025

AT&T (RP)
ROBIN PAGE
11930 Airline Dr.
Houston, TX 77037

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Monopole 15850385-TN/KY-MONTICELLO
County, State: Wayne, Kentucky

Collected Point(s):

Label	Latitude	Longitude	SE	DET AGL	AMSL
15850385-TN/KY-MONTICELLO	36-50-14.97N	84-51-51.13W	956 Ft	156 Ft	1112 Ft

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

 At least 10 days prior to start of construction (7460-2, Part 1)
 X Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M Change 1.

This determination expires on 03/18/2027 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at 1-817-222-5928, or chris.smith@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2025-ASO-10377-OE.

Signature Control No: 659370490-678043082

(DNE)

chris.smith@faa.gov

Specialist

Attachment(s)

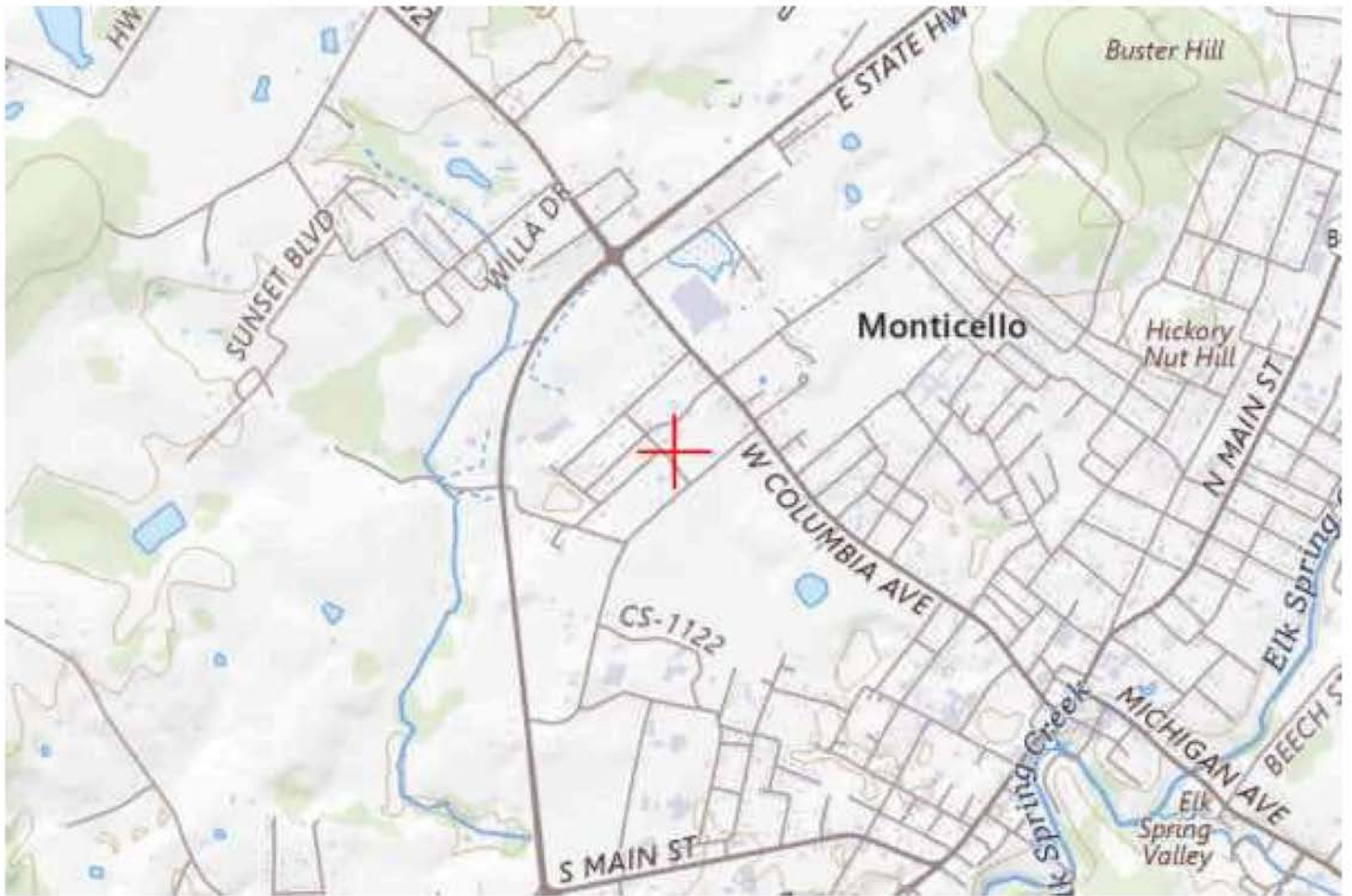
Frequency Data

Map(s)

cc: FCC

Frequency Data for ASN 2025-ASO-10377-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	42	dBW
6	7	GHz	55	dBW
10	11.7	GHz	42	dBW
10	11.7	GHz	55	dBW
17.7	19.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
21.2	23.6	GHz	42	dBW
21.2	23.6	GHz	55	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	824	MHz	500	W
806	901	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2310	MHz	2000	W
2305	2360	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W



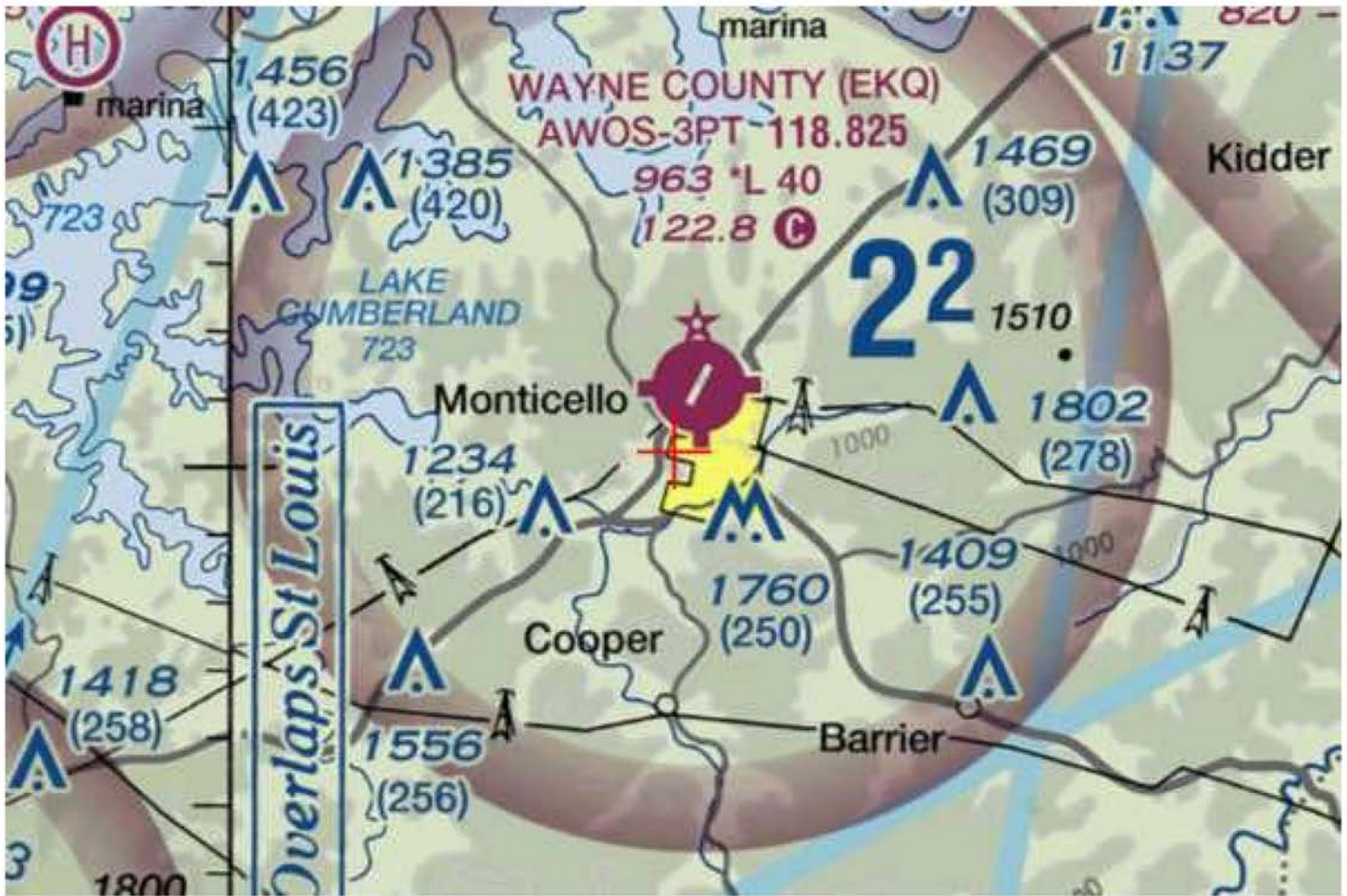


EXHIBIT F1
KAZC DOCUMENTATION



KENTUCKY AIRPORT ZONING COMMISSION

ANDY BESHEAR
Governor

Department of Aviation, 90 Airport Road
Frankfort, KY 40601
www.transportation.ky.gov
502-564-0151

JIM GRAY
Secretary

APPROVAL OF APPLICATION

Thursday, October 9, 2025

AT&T
150 Worsham Lane
Monticello, KY 42633

AS-2025-078-EKQ **Wayne County Airport**
APPLICANTS NAME: AT&T
NEAREST CITY: Monticello, KY
LATITUDE/LONGITUDE: 36°50'14.97" N, 84°51'51.14" W
HEIGHT (In Feet): 156' AGL/1,112' AMSL
CONSTRUCTION PROPOSED: Communication Tower

NOTES: The tower is located approx 4,100 ft S of EKQ, exceeds the 100:1 Slope Surface by 111+ ft, and the Horizontal Surface by 2+ ft. There is an existing 185 ft tower adjacent to the proposed tower location.

FAA DETERMINATION: 2025-ASO-10377-OE. No Hazard to Air Navigation. Marking and lighting not required.

This letter is to notify you that the Kentucky Airport Zoning Commission approved your permit application for the construction of Structures at the Location, Coordinates, and Height as indicated above. Construction must comply with requirements, if any, listed in the FAA Determination.

This permit is valid for a period of 18 Month(s) from its date of issuance. If construction is not completed within said 18-Month period, this permit shall lapse and be void, and no work shall be performed without the issuance of a new permit.

An email of this letter was also sent to your representative, Jennye Brown, at jennye.brown@mastec.com. If you have any questions, please contact us.

Respectfully,

Anthony Adams

Airport Zoning Administrator
Department of Aviation
502-564-0151 office
AirportZoning@ky.gov

