

PROJECT DESCRIPTION

INSTALLATION OF ANTENNAS, MICROWAVE DISHES, COAXIAL CABLE, AND ASSOCIATED MOUNTS ON A NEW 230' SELF-SUPPORT TOWER.
INSTALLATION OF A 11'-8"x30'-0" UNMANNED EQUIPMENT SHELTER ON CONCRETE FOUNDATION.
NEW ELECTRIC SERVICE TO SITE AND EQUIPMENT SHELTER. NO WATER SUPPLY OR SEWAGE TO/FROM THE SITE.

SITE NAME:

BROOKEVILLE

SITE ADDRESS:

4301 BROOKEVILLE ROAD
BROOKEVILLE, MD 20833

SITE COORDINATES AND ELEVATION

LATITUDE - 39° 11' 02.8328
LONGITUDE - 77° 04 54.0295
ELEVATION - 444.2'

SITE INFORMATION

LANDLORD

MALLER JANE C TRUSTEE
PO BOX 709
OLNEY, MD 20830

APPLICANT

JUDY MILLER
PSSM RADIO SYSTEM INFRASTRUCTURE PROJECT,
DEPARTMENT OF TECHNOLOGY SERVICES
MONTGOMERY COUNTY
PH: (240) 773-7214

CONTACT

RYAN GLOVER
MOTOROLA SOLUTIONS
PH: (443) 250-6085

PROJECT MANAGER

PYRAMID NETWORK SERVICES, LLC
RUSSELL BLACK
PH: (404) 394-4445
EMAIL: RBLACK@PYRAMIDNS.COM

ARCHITECTURAL AND ENGINEERING

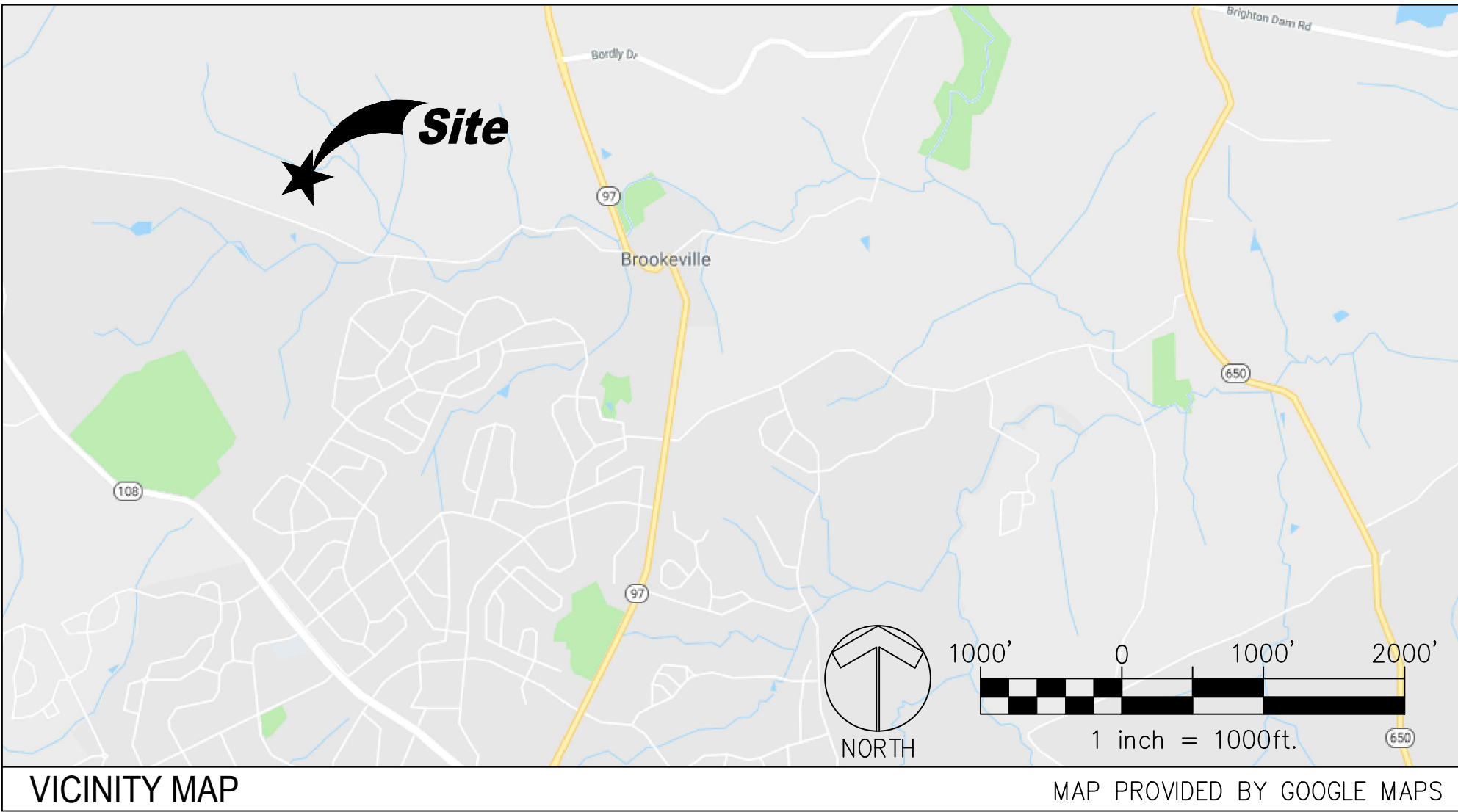
MISSION 1 COMMUNICATIONS
SCOTT HARTMAN
6202 CONSTITUTION DRIVE, SUITE C
FORT WAYNE, IN 46804
PH: (260) 410-0852
EMAIL: SHARTMAN@M1COMM.COM

CONSULTANT TEAM

MONTGOMERY COUNTY REPRESENTATIVE :	RECEIVED :
	ACCEPTED :
MOTOROLA :	RECEIVED :
	ACCEPTED :
PROPERTY OWNER:	RECEIVED :
	ACCEPTED :
RECEIVED AND ACCEPTED	

DIRECTIONS TO SITE

CODE CLASSIFICATION	OCCY	CONSTR	OVERALL AREA OF THIS BUILDING = 350 SQ. FT. OVERALL HEIGHT OF THIS BUILDING = 127 IN. ALL GLAZING TO MEET ANSI 97.1 WITH CPSC 16 CFR PART 1201 REQUIREMENTS. ALL DOORS MINIMUM 90 MINUTE FIRE RATING. THIS BUILDING DOES NOT CONTAIN PLUMBING FACILITIES. PLUMBING FACILITIES SHALL BE PROVIDED ON SITE SUBJECT TO THE LOCAL AUTHORITY HAVING JURISDICTION.
IBC- INTERNATIONAL BUILDING CODE	S2	11-B	
ALLOWABLE STRESSES			
UNIFORM FLOOR LIVE LOAD	300 PSF		
UNIFORM ROOF LIVE LOAD	150 PSF		
WIND LOAD (INCLUDING SLIDING AND OVERTURNING MOMENTS)	150 MPH		
ULTIMATE WIND SPEED (V-ULT)	150 MPH		
NOMINAL WIND SPEED (V-ASD)	116 MPH		
SEISMIC	CAT. 'D'		
ESTIMATED SHIPPING WEIGHT	74,500 LBS		
ROOF SLOPE	1/4" PER 1'-0"		
SHELTER CODE SPECIFICATIONS			



BROOKEVILLE

4301 BROOKEVILLE ROAD BROOKEVILLE, MD 20833 MONTGOMERY COUNTY

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GROUNDING DETAILS

1	11-08-19	CONSTRUCTION DRAWINGS	SAH	SAH	
I	11-05-19	100% REVIEW CDs - REVISED RF DATA	JRF	SAH	
H	10-22-19	100% REVIEW CDs	JRF	SAH	
O	09-13-19	REVISED ZONING DRAWINGS	JRF	SAH	
G	09-06-19	ZONING DRAWINGS REVISED REVIEW SET	JRF	SAH	
NO.	DATE	REVISIONS	BY	CHK	APP'D



PROJECT INFORMATION, LOCATION MAPS, AND DRAWING INDEX		T-1	PRINTED AT 24x36
BROOKEVILLE 4301 BROOKEVILLE ROAD BROOKEVILLE, MD 20833			

REGISTRATION EXPIRES: 03/14/2020

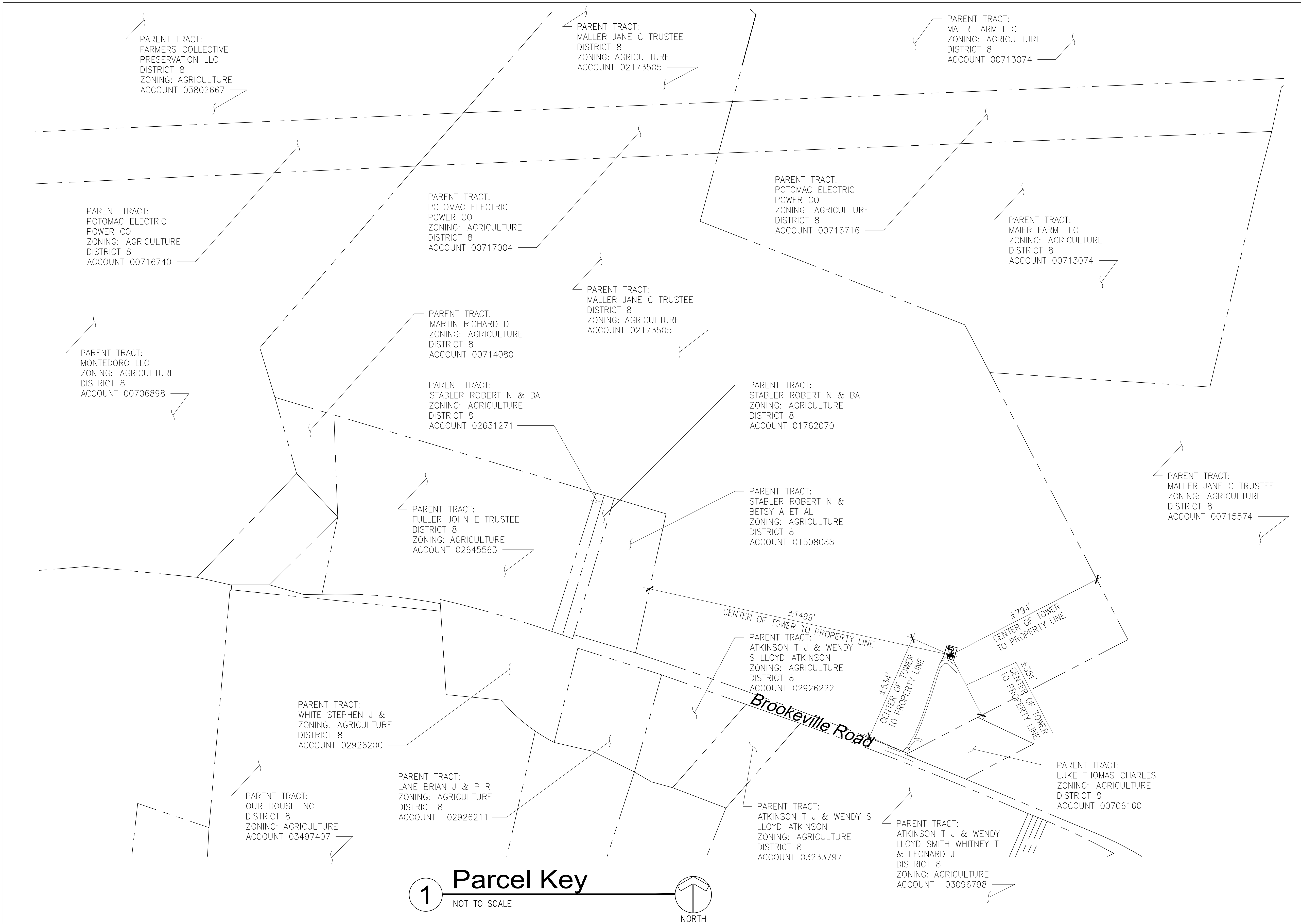
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11/08/2019

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- GENERAL NOTES:
1. PROPERTY OFFSETS ARE APPROXIMATE. FINAL LOCATION OF COMPOUND TO BE DEVELOPED FROM TOWER ☐
 2. THE LOCATION, SIZE & TYPE OF MATERIAL OF EXISTING UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING THE SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS & SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION & ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES & THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS & SERVICES SHALL BE RESORTED TO SERVICE AT ONCE & PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.
 3. ALL PROPOSED CONSTRUCTION ACTIVITIES & MODIFICATIONS SHALL COMPLY WITH MOTOROLA R-56 STANDARDS, MOST CURRENT REVISION.

ANY DISCREPANCIES BETWEEN THIS DRAWING PACKAGE AND EXISTING FIELD CONDITIONS MUST BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

1

Parcel Key

NOT TO SCALE

1	11-08-19	CONSTRUCTION DRAWINGS	SAH	SAH	
I	11-05-19	100% REVIEW CDs - REVISED RF DATA	JRF	SAH	
H	10-22-19	100% REVIEW CDs	JRF	SAH	
O	09-13-19	REVISED ZONING DRAWINGS	JRF	SAH	
G	09-06-19	ZONING DRAWINGS REVISED REVIEW SET	JRF	SAH	
NO.	DATE	REVISIONS	BY	CHK	APP'D

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6202 Constitution Drive, Suite C
Fort Wayne, IN 46804

PYRAMID
Network Services, LLC

MOTOROLA
SOLUTIONS



PARCEL KEY

BROOKEVILLE
4301 BROOKEVILLE ROAD
BROOKEVILLE, MD 20833

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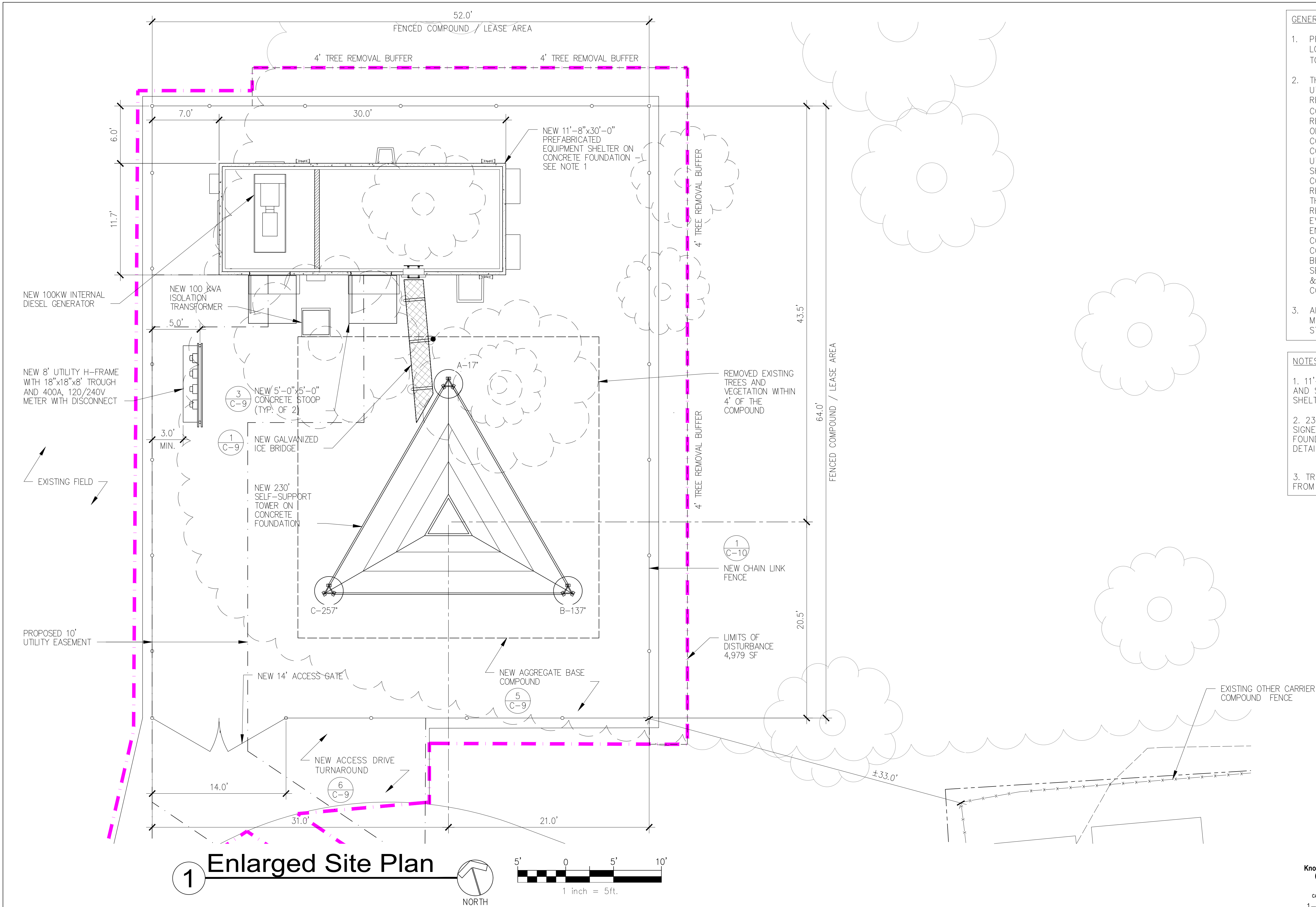
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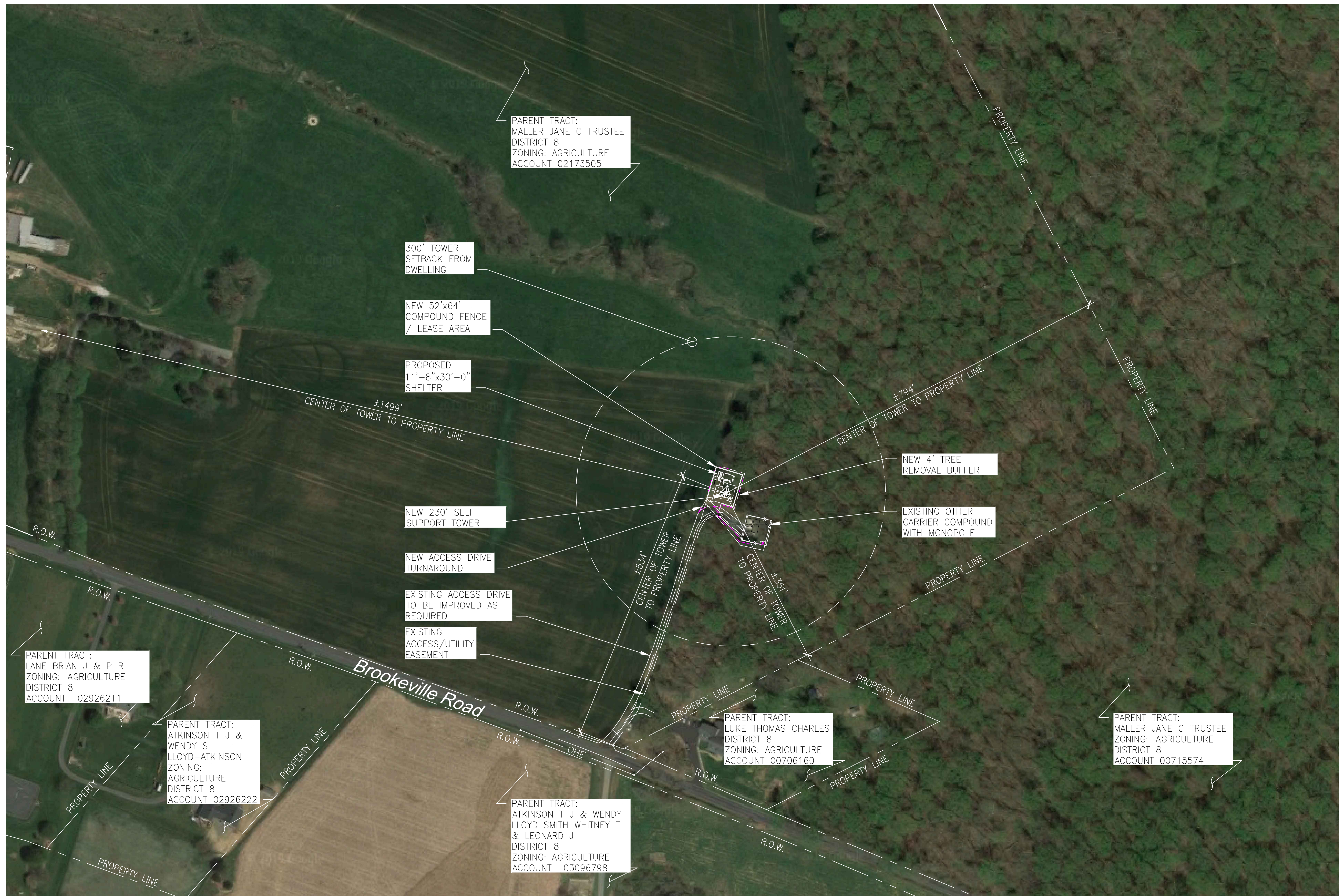


ENLARGED SITE PLAN

BROOKEVILLE
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1

Site Location Plan

NORTH

100'

0

100'

200'



1 inch = 100ft.

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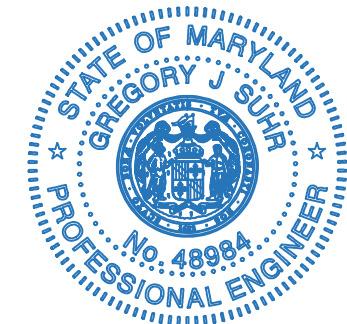
SITE LOCATION PLAN		C-2
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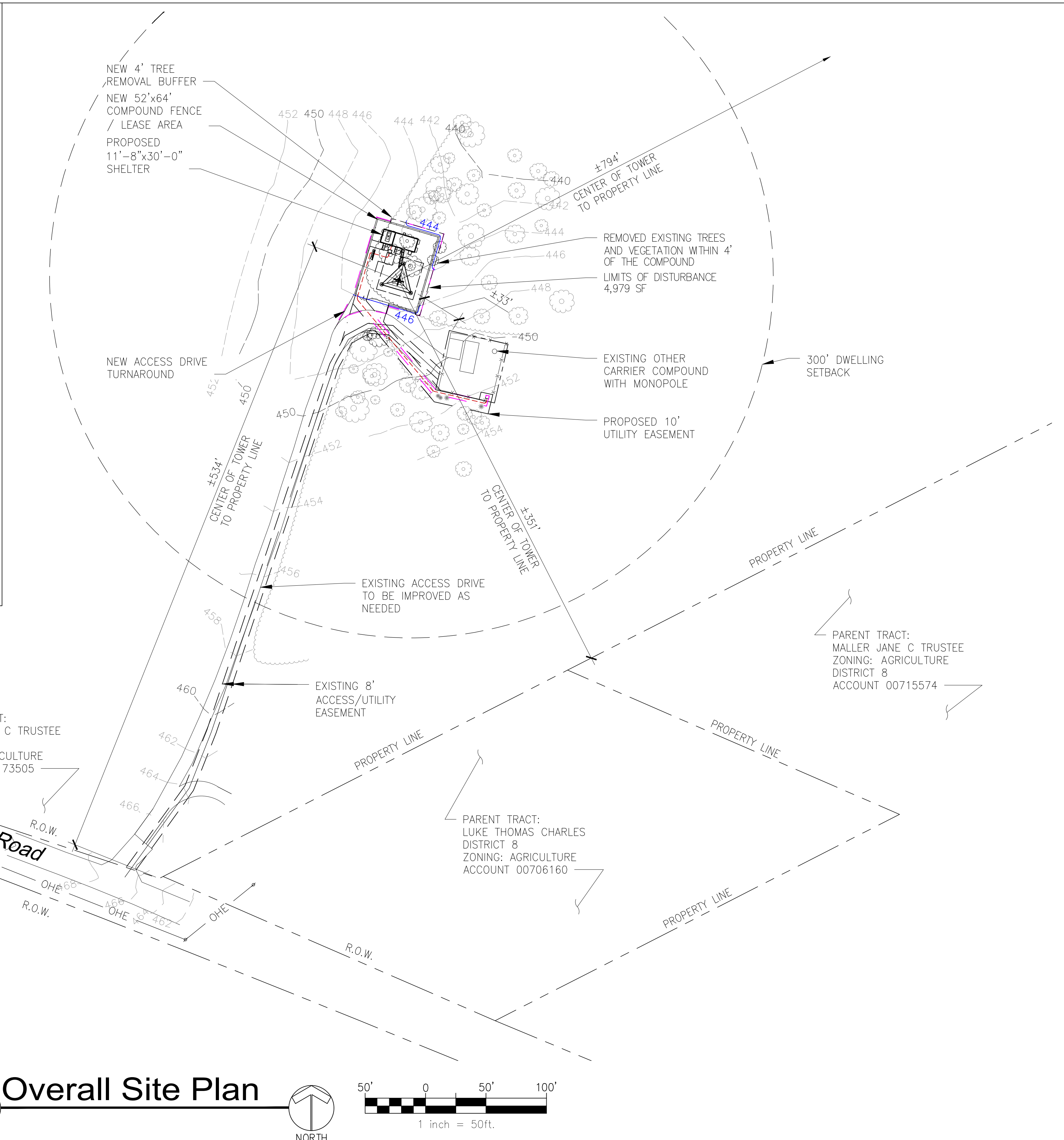
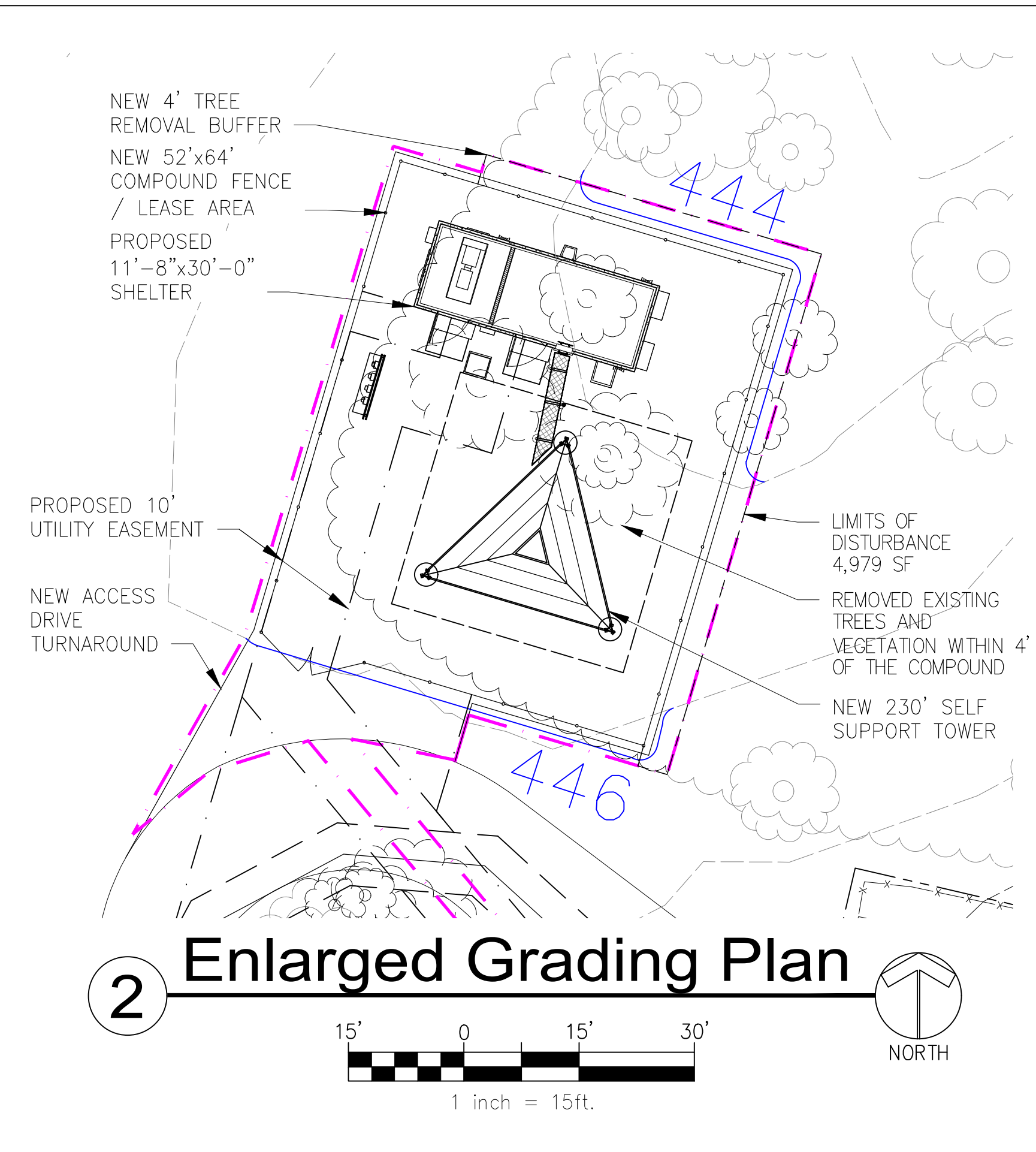


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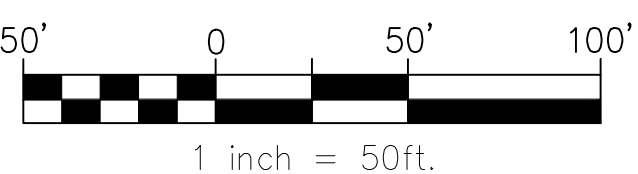
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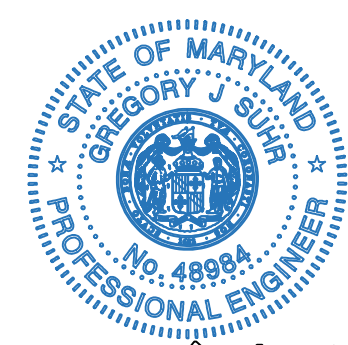
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+XXX.X SPOT ELEVATION - SUB-GRADE (FINISH GRADE OF SITE = 0.67' ABOVE SUB-GRADE)
EXIST. CONTOUR - MINOR
EXIST. CONTOUR - MAJOR
NEW CONTOUR
SILT FENCE

1 Overall Site Plan



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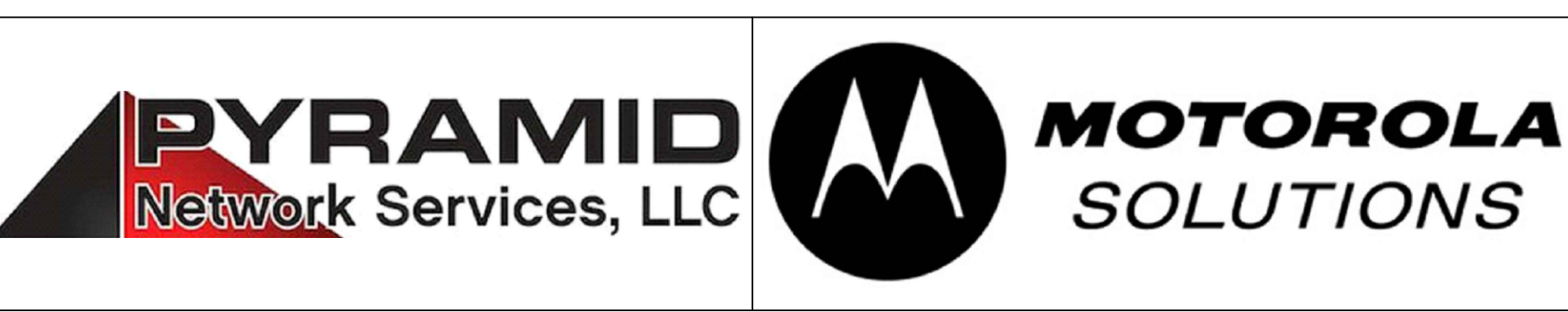
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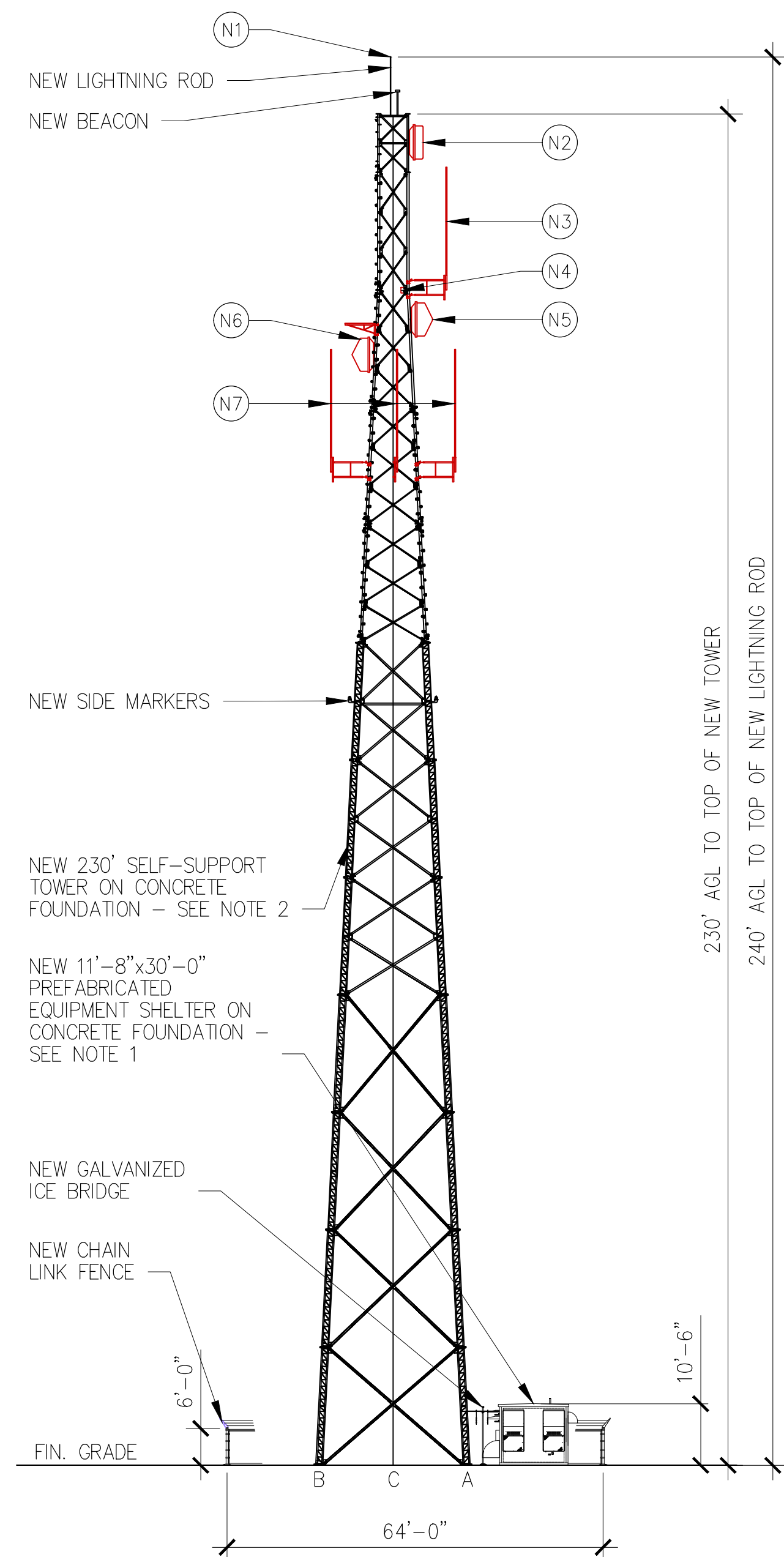


OVERALL SITE PLAN

BROOKEVILLE
4301 BROOKEVILLE ROAD
BROOKEVILLE, MD 20833

C-3

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1 Tower Elevation

Brookeville- 230' TOWER LAT: 39° 11' 02.8328" LONG: 77° 04' 54.0295"											Antenna/Appurtenance Location Chart				
											<div>E = EXISTING</div> <div>N = NEW</div> <div>F = FUTURE</div>				
ANTENNA INFORMATION											FEEDLINE INFORMATION				
ANTENNA ID	CARRIER	MANUFACTURER	MODEL	TYPE	LENGTH	BOTTOM ELEV	RAD CENTER	TOP ELEV.	AZIMUTH	QTY.	TYPE	MANUFACTURER	MODEL	SIZE	QTY.
N1	UNKNOWN	UNKNOW	LIGHTNING ROD	LR	10.0'	230.0'	235.0'	240.0'	N/A	1	N/A	N/A	N/A	N/A	1
N2	MONTGOMERY COUNTY	COMMSCOPE	HP6-59F	MW	6.0'	222.0'	225.0'	228.0'	331.56°	1	ELLIPTICAL	COMMSCOPE	EWP63	2"	1
N3	MONTGOMERY COUNTY	SINCLAIR	SC412-HF2LDF	RX	20.9'	200.0'	210.5'	220.9'	N/A	1	COAX	COMMSCOPE	AVA5-50	7/8"	1
N4	MONTGOMERY COUNTY	N/A	N/A	TTA	-	-	200.0'	-	N/A	1	COAX	COMMSCOPE	LDF4-50	1/2"	1
N5	MONTGOMERY COUNTY	COMMSCOPE	PAR6-59	MW	6.0'	192.0'	195.0'	198.0'	331.56°	1	ELLIPTICAL	COMMSCOPE	EWP63S	2"	1
N6	MONTGOMERY COUNTY	-	6' ICE SHIELD	ICE SHIELD	6.0'	194.0'	-	-	188.44°	1	ELLIPTICAL	COMMSCOPE	EWP63	2"	1
		COMMSCOPE	PAR6-59	MW	6.0'	186.0'	189.0'	192.0'		1					
N7	MONTGOMERY COUNTY	SINCLAIR	SC412-HF2LDF	TX	20.9'	169.0'	179.5'	189.9'	N/A	3	COAX	COMMSCOPE	AVA6-50	1-1/4"	3
NOTE: PER TOWER MAP V04 2019-09-09															
REFER TO TOWER MANUFACTURER DRAWINGS FOR BEACON AND OBSTRUCTION LIGHTING HEIGHTS															

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 - ALL VERTICAL TRANSMISSION LINE RUNS FROM THE ANTENNAS SHALL BE GROUNDED NEAR THE TOP & BOTTOM OF THE TOWER(BEFORE THE CABLE MAKES HORIZONTAL TRANSITION & NEAR ENTRY PORT ON THE SHELTER). ADDITIONAL TRANSMISSION LINE GROUND KITS SHALL BE INSTALLED AS NEEDED TO LIMIT THE DISTANCE BETWEEN GROUND KITS TO 75 FEET.
 - THE CONTRACTOR SHALL CONDUCT A TDR SWEEP TEST ON ALL THE NEWLY INSTALLED TRANSMISSION LINES TO DETERMINE THE CABLE CONDUCTOR RESISTANCE. CABLE INSERTION LOSS, REFLECTION & STIMULUS RESPONSE MEASUREMENTS. RESULTS TO BE SUBMITTED TO MOTOROLA.
 - DRIP LOOPS SHALL BE INCORPORATED IN CABLE RUNS TO PREVENT WATER FROM TRICKLING DOWN THE LINES INTO THE SHELTER.
 - ALL TRANSMISSION LINES SHALL BE MARKED WITH APPROPRIATE COLOR TAPE BANDS (ONE INCH WIDE COLOR TAPE) FOR IDENTIFICATION NEAR THE ANTENNA. JUST BEFORE ENTERING THE SHELTER AS WELL AS INSIDE THE SHELTER, BEFORE CONNECTING TO THE SURGE SUPPRESSORS. SEE EQUIPMENT & COAXIAL CABLE SCHEDULE FOR COLOR CODING SCHEME.

PRELIMINARY
NOT FOR
CONSTRUCTION

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Montgomery County Planning Department
Maryland-National Capital Park and Planning Commission

Re: Montgomery County Department of Technology Services
Radio Communications Services
Public Safety System Modernization Project
Site: Brookeville
4301 Brookeville Road
39°11'02.8328"N 77°04'54.0295"W

Please accept the enclosed application and materials in support of Montgomery County Radio Communications Services' proposal to construct a new tower facility at the location described above.

RCS, part of the Montgomery County Department of Technology Services, operates communications networks for the use of Montgomery County emergency services, including police, fire, and medical first responders. RCS is tasked with ensuring that these emergency responders have effective and reliable radio coverage throughout the County coverage area.

When the 800 MHz radio system was first deployed in Montgomery County, technical barriers limited the number of base stations that could be developed. The current system fails to provide adequate radio coverage in several areas in the County, particularly as the County continues to modernize and urbanize. New technologies currently being implemented, however, will allow the development of additional sites to expand radio coverage.

These new base stations are sited and designed to provide complete and effective coverage according to a "95/95" coverage mandate: 95% coverage reliability in 95% of the County service area. Coverage reliability is calculated according to expected loss "zones" throughout the County. The County service area includes all areas within the border of Montgomery County, Maryland, including waterways, and all areas within three miles of the County border. New base stations must be sited within the existing network framework to provide optimum coverage and reliability.

Effective public safety radio serves the public health, safety, and welfare of Montgomery County residents. Where no existing site can provide adequate radio coverage, there are significant consequences for emergency response personnel. A lack of radio service can increase response time, the number of personnel required to effectively respond to an emergency situation, and the amount of time it takes to resolve an incident.

RCS is proposing to construct a new tower at the location described above to fill coverage gaps left by the existing legacy system. The proposed site would consist of a 230' self support tower, designed to support RCS antennas and equipment, and an associated compound at the base of the tower.

If you have any questions or concerns, or need any further information regarding this application, please free to contact me.

Sincerely,

Tessia Knight
Network Building + Consulting

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Statements of Compliance

This submission complies with the requirements of the Montgomery County Mandatory Referral submission guidelines as follows.

- 1) The proposed facility is an unmanned communications facility. There will be no regular occupation of the compound or associated shelter. Routine maintenance will not exceed 2 visits per month. As such:
 - a. The facility operates 24 hours a day, 7 days a week, as a radio communications base station.
 - b. The facility conforms in all respects to the General Plan. As an unmanned radio site for county public safety use, it has no notable effect on long or short term land development. The build-out plan for the Montgomery County Public Safety Radio Communications System is designed to accommodate and support the Wedges and Corridors concept.
 - c. As an unmanned facility outside the right of way, the facility has no impact on pedestrian and bicycle traffic. The facility's use as a public safety radio base station will promote pedestrian and cyclist safety in the area.
 - d. No new roadway is proposed.
 - e. A Historic Work Permit will be acquired if the National Environmental Policy Act determines an effect on County-designated historic properties. No effect is expected.
 - f. There is no phasing plan; the construction will begin once all applicable approvals and permits are obtained.
 - g. The subject property is owned by Maller, Jane C Trustee in fee simple. The County will maintain a lease to the subject area of the property.
 - h. The project is funded by County funds specifically designated for the project.
 - i. No impact is expected on public parkland or lands owned by M-NCPPC, as the project is proposed on private property. The facility's use as a public safety radio base station will promote safe enjoyment of parkland in the area.
 - j. LEED certification is not applicable to this type of facility.
- 2) The general location map is included in the enclosed drawings.
- 3) The site plan is included in the enclosed drawings.
- 4) Utilities and affected rights of way are included in the enclosed drawings.
- 5) Site ingress and egress are shown in the enclosed drawings, including the proposed site access driveway.
- 6) A Natural Resource Inventory is included with this submission.
- 7) The subject property is not in a Special Protection Area.
- 8) The Forest Conservation Plan has been filed, the application number is TBD.
- 9) Topographic contours are shown in the enclosed drawings.
- 10) This project falls below the threshold of land disturbance that requires a stormwater concept plan.
- 11) Landscaping plans are shown on the enclosed drawings. No exterior lighting is proposed aside from that required by the Federal Aviation Administration, subject to an Air Hazard Navigation Report.
- 12) The proposed facility is part of the Public Safety System Modernization Project. An area map showing the location of all affected radio communications sites is included.
- 13) The proposed facility complies with the Montgomery County Noise Ordinance, Section 31(b) of the Montgomery County Code, and is consistent with the Montgomery County Department of Park

and Planning Noise Guidelines. The site will not produce noise in excess of that allowed by the ordinance or guidelines.

14) All relevant architectural diagrams are included in the enclosed drawings.

15) No traffic impact is expected. The facility is unmanned and unoccupied, and routine maintenance visits are expected to be limited to one visit twice per month.