VERIZON SITE NUMBER: 228809

VERIZON SITE NAME: LAKE CITY NORTH

PROJECT DESCRIPTION: RFDS 5G L-SUB6

TOWER TYPE: 400' GUYED

SITE ADDRESS: **279 NORTHWEST OSTEEN**

COURT, LAKE CITY, FL 32055

(COLUMBIA COUNTY)

JURISDICTION: **COLUMBIA COUNTY**

PRESENT **TELECOMMUNICATIONS**

OCCUPANCY TYPE: **FACILITY**

CURRENT ZONING: INDUSTRIAL

PARCEL ID #: 19-3S-17-05070-004

PROJECT INFORMATION

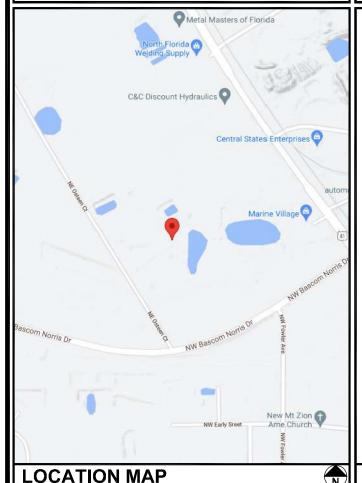
LATITUDE: N 30° 12' 24.83" * LONGITUDE: W 82° 39' 08.45" *

GROUND ELEVATION: 171± (AMSL) **

*INFORMATION PROVIDED BY RFDS

**INFORMATION PROVIDED BY GOOGLE EARTH

SITE COORDINATES





4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

VZW SITE #: 228809 VZW SITE NAME: LAKE CITY NORTH

278 NORTHWEST OSTEEN COURT LAKE CITY, FL 32055



ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED **VERIZON WIRELESS** CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES ADDRESS: 4700 EXCHANGE COURT, SUITE 100
CITY, STATE, ZIP: BOCA RATON, FL 33431
CONTACT: MARTHA GINTIS

- - 2020 FLORIDA BUILDING 4. 2017 NATIONAL ELECTRIC CODE
- CODE, 7TH EDITION LOCAL BUILDING CODE
- CITY/COUNTY ORDINANCES

NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING

CODE COMPLIANCE

ULTIMATE WIND SPEED: 119 MPH SERVICE WIND SPEED: 60 MPH RISK CATEGORY: II EXPOSURE CATEGORY: C TOPOGRAPHIC CATEGORY: 1.0

INFORMATION PROVIDED BY PASSING STRUCTURAL ANALYSIS BY TOWER ENGINEERING PROFESSIONALS DATED 06/23/21

DESIGN CRITERIA

UTILITIES:

POWER COMPANY: PHONE METER # NEAR SITE:

FLORIDA POWER & LIGHT **CUSTOMER SERVICE** 1 (800) 226-3545 520 174 472

TELEPHONE COMPANY: BELL SOUTH CUSTOMER SERVICE PHONE # NEAR SITE:

PEDESTAL # NEAR SITE: UNKNOWN

INDEX OF SHEETS

THE PURPOSE OF THIS PROJECT IS AS FOLLOWS

TOWER SCOPE OF WORK

 REMOVE (3) CSS X7CAP-865-42-IP ANTENNAS INSTALL (3) ERICSSON AIR6449 ANTENNAS

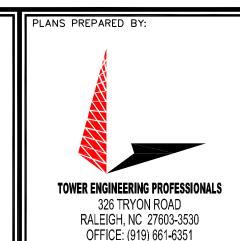
GROUND SCOPE OF WORKS

- REMOVE (1) 6201 CABINET REMOVE (2) 4.0 BTS CDMA CABINETS
- REPLACE EXISTING BATTERIES.

FOR MOUNT MODS: SEE MOUNT MOD DESIGN DWGS BY TECTONIC DATED 05/07/21

SCOPE OF WORK

SHEET	DESCRIPTION	REV
T-1	TITLE SHEET	1
N-1	PROJECT NOTES	1
C-1	SITE PLAN	1
C-1A	EXISTING EQUIPMENT ROOM LAYOUT	1
C-1B	PROPOSED EQUIPMENT ROOM LAYOUT	1
C-2	TOWER ELEVATION	1
C-3A	EXISTING ANTENNA LAYOUT	1
C-3B	PROPOSED ANTENNA LAYOUT	1
C-3C	EXISTING ANTENNA & COAX SCHEDULE	1
C-3D	PROPOSED ANTENNA & COAX SCHEDULE	1
E-1	ELECTRICAL NOTES	1
E-2	POWER PANEL SCHEDULE	1
G-1	GROUNDING DETAILS	1
	EV OF CHEETC	



FL COA # 31011

www.tepgroup.net

_	08-16-21	CONSTRUCTION
0	08-03-21	PRELIMINARY
REV	DATE	ISSUED FOR:

CHECKED BY: JHJ DRAWN BY: JGC

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SHEET NUMBER:

REVISION:

TEP#: 241157.48545

CONTACT INFORMATION

CITY, STATE, ZIP: ADDISON, TX 75001

(561) 995-5539

VERIZON WIRELESS

BOCA RATON, FL 33431 MARTHA GINTIS (561) 995-5539

326 TRYON ROAD

326 TRYON ROAD

(919) 661-6351

CITY, STATE, ZIP: RALEIGH, NC 27603-3530
CONTACT: MARK S. QUAKENBUSH, P.E.

(919) 661-6351

JOSHUA H. CARDEN, P.E.

CITY, STATE, ZIP: RALEIGH, NC 27603-3530 CONTACT: JOSHUA H. CARDEN, P.E

4700 EXCHANGE COURT, SUITE 100

TOWER ENGINEERING PROFESSIONALS

TOWER ENGINEERING PROFESSIONALS

ALLTEL COMMUNICATIONS INC.

P.O. BOX #501-9-245711

CUSTOMÉR SERVICE

NAME:

NAME:

NAME:

NAME:

ADDRESS.

CONTACT:

ADDRESS:

ADDRESS:

NAME:

ADDRESS.

TOWER OWNER:

CITY, STATE, ZIP: CONTACT: PHONE:

CITY, STATE, ZIP: N/A

CIVIL ENGINEER:

ELECTRICAL ENGINEER:

PROPERTY OWNER:

SURVEYOR:

PROJECT NOTES:

- 1. ALL REFERENCES TO THE OWNER AND/OR LESSEE IN THESE DOCUMENTS SHALL BE CONSIDERED VERIZON OR ITS DESIGNATED REPRESENTATIVE.
- 2. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE 2020 FLORIDA BUILDING CODE, 7TH EDITION.
- 3. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
- 4. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
- 5. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATIONS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.
- 6. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.
- 8. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE RESIDENT LEASING AGENT FOR APPROVAL.
- 9. ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
- 10. IF APPLICABLE, ALL CONCRETE WORK SHALL COMPLY TO LOCAL CODES AND THE ACI 318-11, "BUILDING REQUIREMENTS FOR STRUCTURAL CONCRETE".
- 11. ALL TOWER DIMENSIONS SHALL BE VERIFIED WITH THE PLANS (LATEST REVISION) PRIOR TO COMMENCING CONSTRUCTION. NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.
- 12. ALL TOWER MODIFICATION WORK SHALL BE IN ACCORDANCE WITH TIA-1019-A STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

PLANS PREPARED FOR:



4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

VZW SITE #: 228809 VZW SITE NAME: LAKE CITY NORTH

279 NORTHWEST OSTEEN COURT LAKE CITY, FL 32055 (COLUMBIA COUNTY)

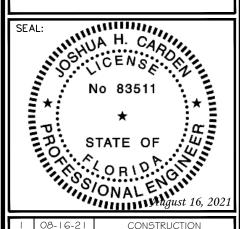
PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS 326 TRYON ROAD RALEIGH, NC 27603-3530 OFFICE: (919) 661-6351

www.tepgroup.net FL COA # 31011

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0	08-04-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: LLS CHECKED BY: JHJ

SHEET TITLE:

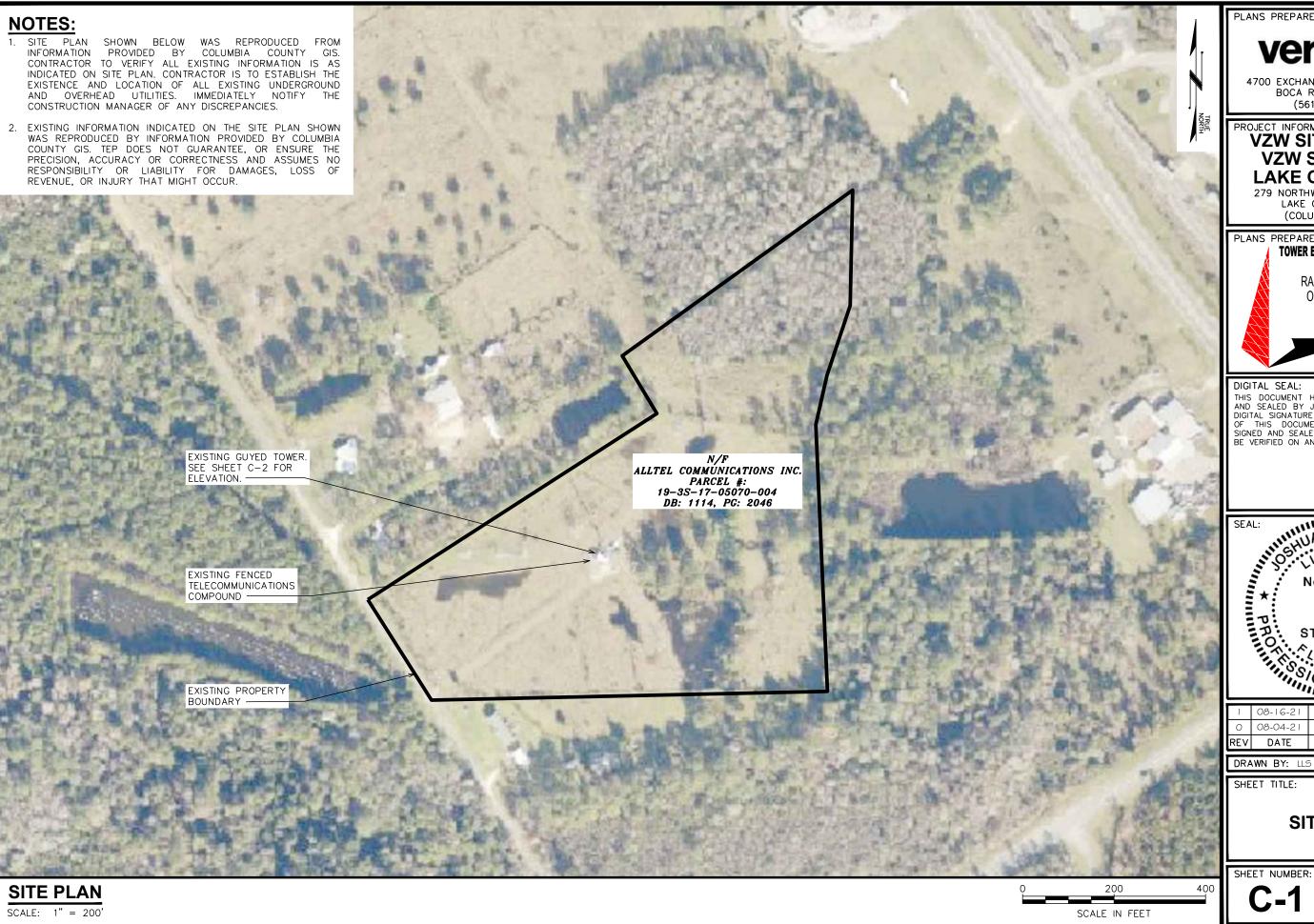
PROJECT NOTES

REVISION:

SHEET NUMBER:

N-1

TEP#: 241157.485453



PLANS PREPARED FOR:



4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

VZW SITE #: 228809 VZW SITE NAME: LAKE CITY NORTH

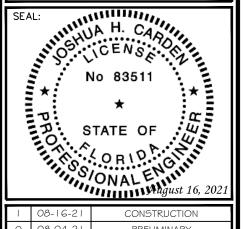
279 NORTHWEST OSTEEN COURT LAKE CITY, FL 32055 (COLUMBIA COUNTY)

PLANS PREPARED BY: TOWER ENGINEERING PROFESSIONALS

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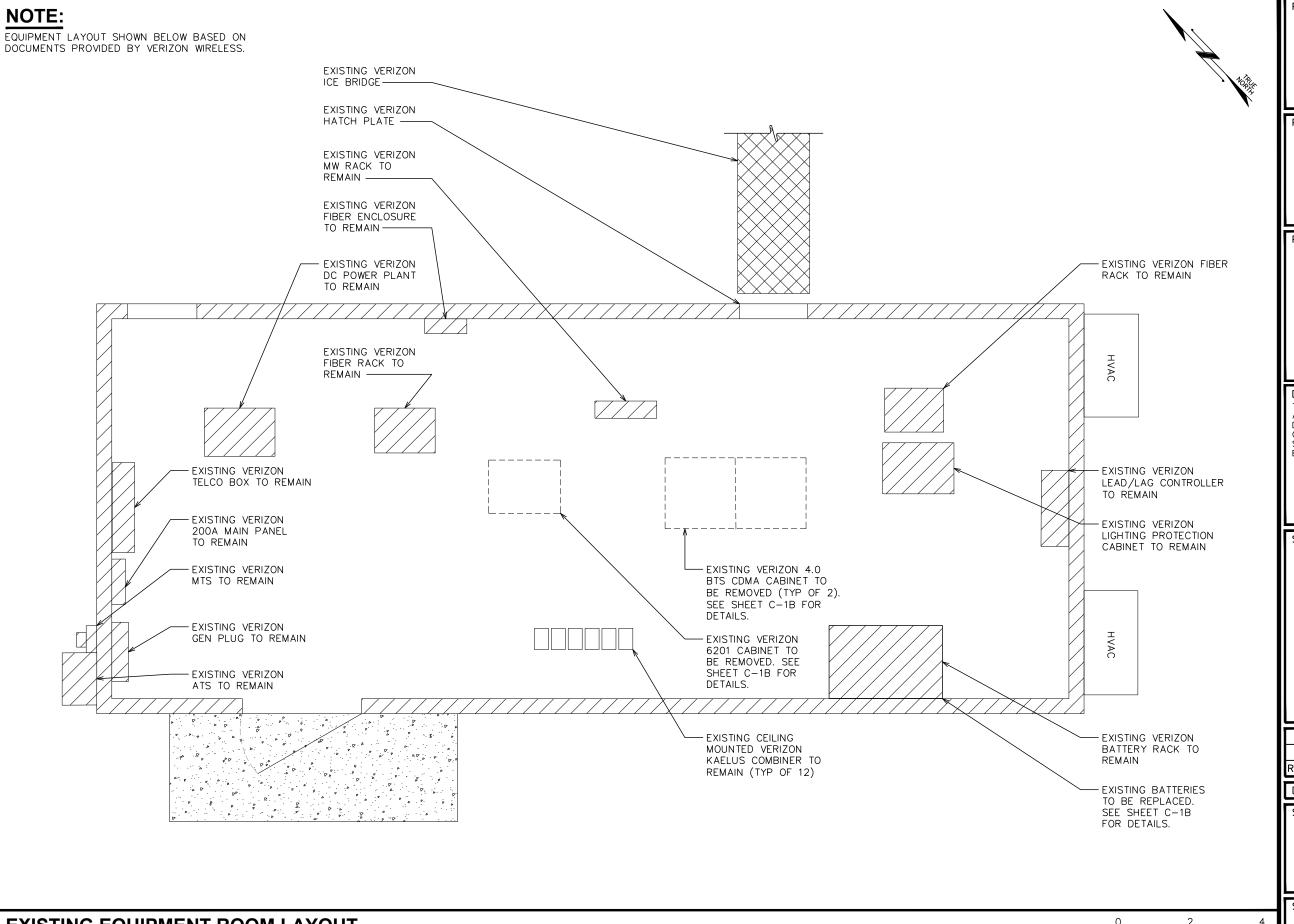
DRAWN BY: LLS CHECKED BY: JHJ

SHEET TITLE:

SITE PLAN

REVISION:

TEP#: 24 | 157.48545



PLANS PREPARED FOR:



4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

VZW SITE #: 228809 VZW SITE NAME: LAKE CITY NORTH

279 NORTHWEST OSTEEN COURT LAKE CITY, FL 32055 (COLUMBIA COUNTY)

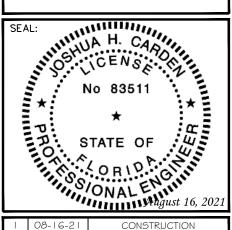
PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS

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REV	DATE	ISSUED FOR:
0	08-04-21	PRELIMINARY
- 1	08-16-21	CONSTRUCTION

DRAWN BY: LLS CHECKED BY: JHJ

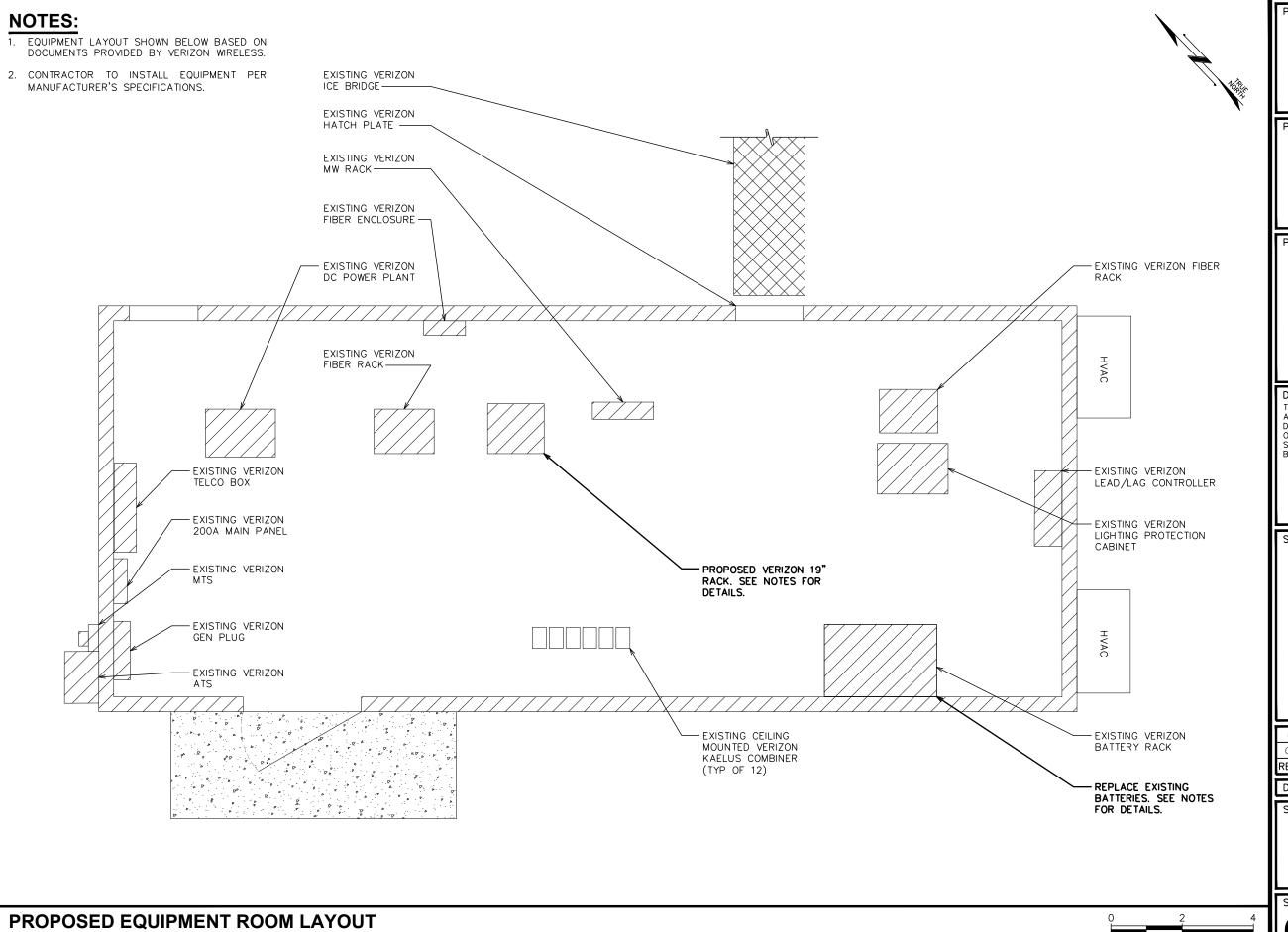
SHEET TITLE:

EXISTING EQUIPMENT ROOM LAYOUT

SHEET NUMBER:

REVISION:

1 TEP#: 24 | | 57.48545



PLANS PREPARED FOR:

4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

VZW SITE #: 228809 VZW SITE NAME: LAKE CITY NORTH

279 NORTHWEST OSTEEN COURT LAKE CITY, FL 32055 (COLUMBIA COUNTY)

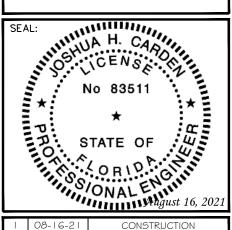
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- 1	08-16-21	CONSTRUCTION

CHECKED BY: JHJ DRAWN BY: LLS

SHEET TITLE:

PROPOSED EQUIPMENT ROOM LAYOUT

SHEET NUMBER:

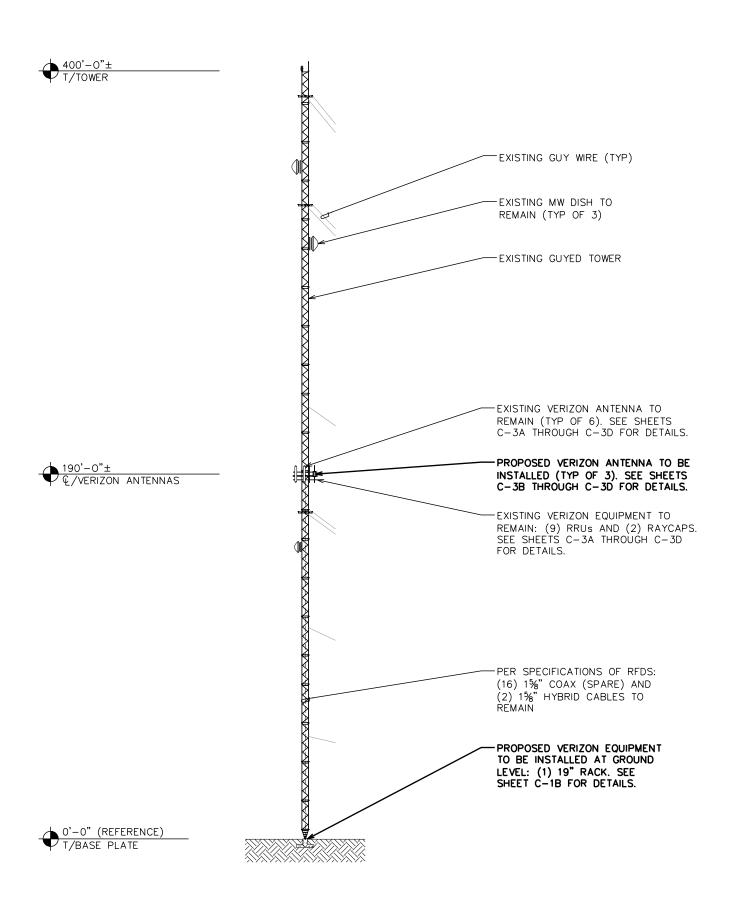
REVISION:

TEP#: 24 | 157.48545

SCALE: $\frac{3}{8}$ " = 1'-0"

NOTES:

- CONTRACTOR TO VERIFY LOADING WITH PASSING STRUCTURAL ANALYSIS REPORT BY TOWER ENGINEERING PROFESSIONALS DATED JUNE 23, 2021 PRIOR TO CONSTRUCTION.
- 2. THE DRAWING IS ONLY A GRAPHIC REPRESENTATION OF THE STRUCTURE. CONDITIONS IN THE FIELD MAY VARY.
- 3. CONTRACTOR TO INSTALL ALL EQUIPMENT PER MANUFACTURER'S SPECIFICATIONS.
- 4. FAA APPROVED OVERALL HEIGHT = 420'-0".



PLANS PREPARED FOR:

4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

VZW SITE #: 228809 VZW SITE NAME: LAKE CITY NORTH

279 NORTHWEST OSTEEN COURT LAKE CITY, FL 32055 (COLUMBIA COUNTY)

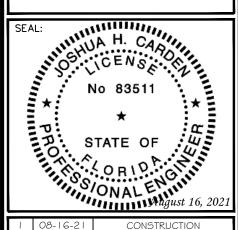
PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS

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REV	DATE	ISSUED FOR:
0	08-04-21	PRELIMINARY
-	08-16-21	CONSTRUCTION

CHECKED BY: JHJ DRAWN BY: LLS

SHEET TITLE:

TOWER ELEVATION

SHEET NUMBER:

REVISION:

TEP#: 24 | 157.48545

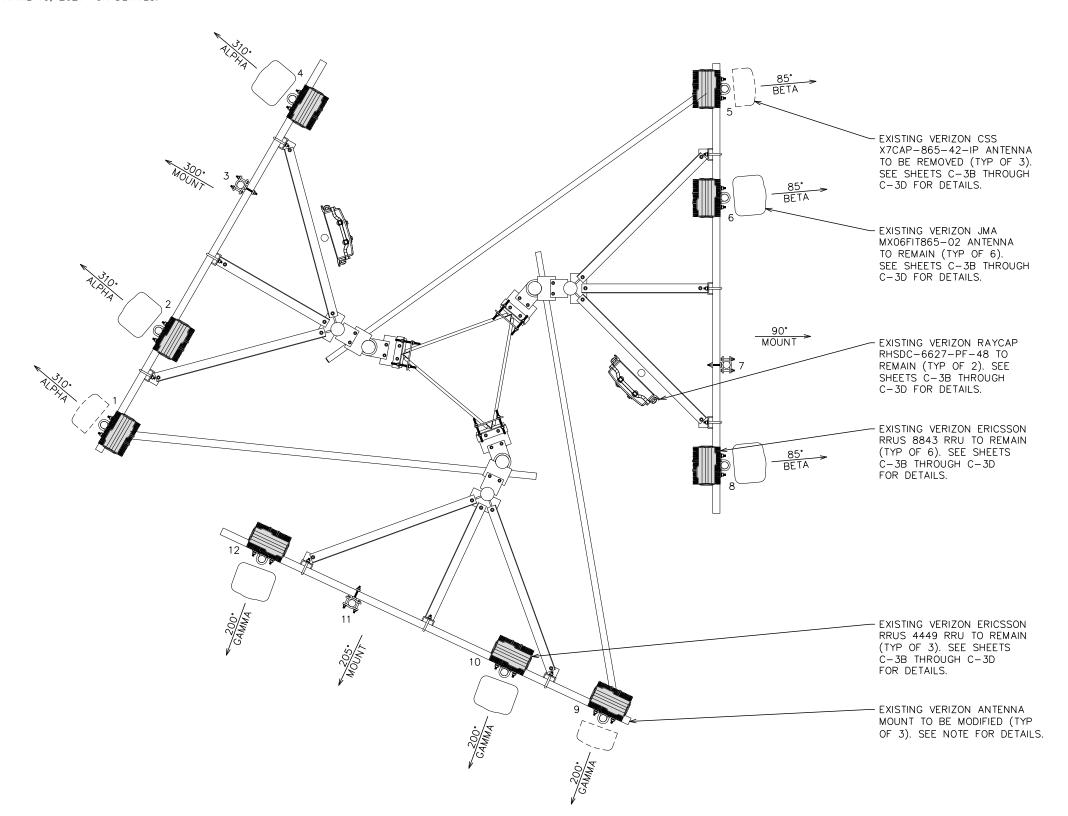
PROPOSED TOWER ELEVATION

SCALE: 1" = 50'

50 100

NOTE:

EXISTING MOUNTS DO NOT HAVE SUFFICIENT CAPACITY TO HOLD PROPOSED LOADING. SEE ANTENNA MOUNT ANALYSIS REPORT BY TECTONIC DATED APRIL 15, 2021 FOR DETAILS.



PLANS PREPARED FOR:

verizon

4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

VZW SITE #: 228809 VZW SITE NAME: LAKE CITY NORTH

279 NORTHWEST OSTEEN COURT LAKE CITY, FL 32055 (COLUMBIA COUNTY)

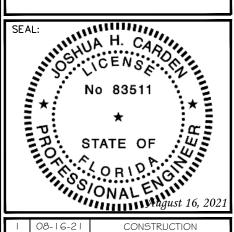
PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS

326 TRYON ROAD RALEIGH, NC 27603-3530 OFFICE: (919) 661-6351 www.tepgroup.net FL COA # 31011

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- 1	08-16-21	CONSTRUCTION				
0	08-04-21	PRELIMINARY				
REV	DATE	ISSUED FOR:				

DRAWN BY: LLS CHECKED BY: JHJ

SHEET TITLE:

EXISTING ANTENNA LAYOUT

SHEET NUMBER:

REVISION:

TEP#: 241157.48545

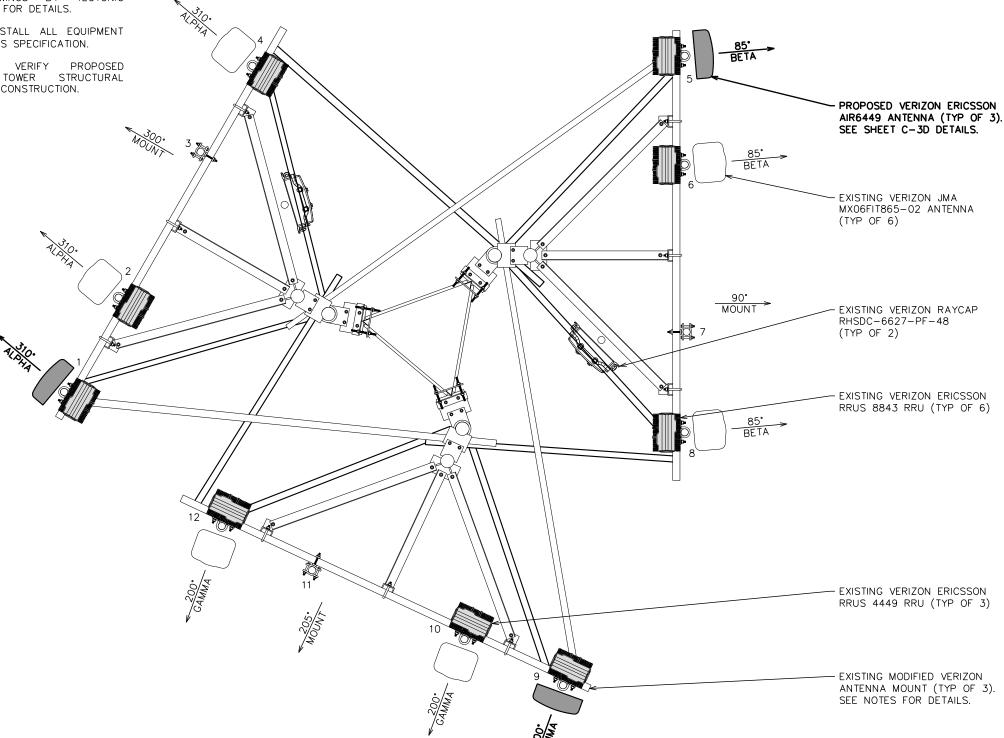
EXISTING ANTENNA LAYOUT @ 190'-0" SCALE: $\frac{3}{8}$ " = 1'-0"

NOTES:

EXISTING MODIFIED MOUNTS SUFFICIENT CAPACITY TO HOLD PROPOSED LOADING AND REQUIRES MODIFICATION. SEE POST-MOD ANTENNA MOUNT ANALYSIS REPORT AND PMI REQUIREMENTS BY TECTONIC DATED MAY 7, 2021, AND MOUNT MODIFICATION DRAWINGS BY TECTONIC DATED MAY 7, 2021 FOR DETAILS.

2. CONTRACTOR TO INSTALL ALL EQUIPMENT PER MANUFACTURER'S SPECIFICATION.

CONTRACTOR TO VERIFY PROPOSED LOADING WITH TOWER STRUCTURAL ANALYSIS PRIOR TO CONSTRUCTION.



PLANS PREPARED FOR:



4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

VZW SITE #: 228809 VZW SITE NAME: LAKE CITY NORTH

279 NORTHWEST OSTEEN COURT LAKE CITY, FL 32055 (COLUMBIA COUNTY)

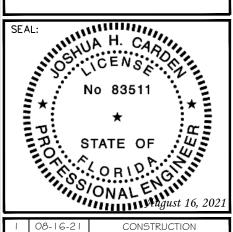
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- 1	08-16-21	CONSTRUCTION					
0	08-04-21	PRELIMINARY					
REV	DATE	ISSUED FOR:					

DRAWN BY: LLS CHECKED BY: JHJ

SHEET TITLE:

PROPOSED ANTENNA LAYOUT

SHEET NUMBER:

REVISION:

TEP#: 241157.48545

PROPOSED ANTENNA LAYOUT @ 190'-0"

SCALE: $\frac{3}{8}$ " = 1'-0"

	EXISTING ANTENNA & COAX SCHEDULE										
POS.	SECTOR	USE	MANUFACTURER (MODEL #)	RAD CENTER	CABLE SIZE	AZIMUTH (TN)	CABLE LENGTH			EQUIPMENT [MODEL #]	J-BOX (TOWER)
1	ALPHA		*CSS X7CAP-865-42-IP	€ @ 190'-0"±		310°		0,	4°		
2	ALPHA	AWS3 700 LTE 850 CDMA	JMA MX06F1T865-02	€ @ 190'-0"±		310°		0,	2°/0°	(1) ERICSSON RRU [RRUS 4449]	
3	ALPHA	850 LTE 1900 LTE 2100 LTE	-	-		_		_	_	(2) ERICSSON RRUs [RRUS 8843]	
4	ALPHA	2100 ETE	JMA MX06F1T865-02	€ @ 190'-0"±		310°		0,	2°/0°		
5	ВЕТА		*CSS X7CAP-865-42-IP	Ç @ 190'−0"±	(85°		0,	4°		
6	ВЕТА	AWS3 700 LTE 850 CDMA	JMA MX06F1T865-02	Ç @ 190'−0"±	(16) 1¾"ø COAX (SPARE)	85°	0.707	0,	2°/0°	(1) ERICSSON RRU [RRUS 4449]	(2) RAYCAPS [RHSDC-6627-PF-48]
7	ВЕТА	850 LTE 1900 LTE 2100 LTE	-	-	(2) 1%"ø HYBRIDS	_	230'±	_	-	(2) ERICSSON RRUs [RRUS 8843]	**(2) RAYCAPS [RHSDC-6627-PF-48]
8	ВЕТА	2100 ETE	JMA MX06F1T865-02	Ç @ 190'−0"±	HIBRIUS	85°		0,	2°/0°	-	
9	GAMMA		*CSS X7CAP-865-42-IP	€ @ 190'-0"±		200°		0,	4°		
10	GAMMA	AWS3 700 LTE 850 CDMA	JMA MX06F1T865-02	Ç @ 190'−0"±		200°		0.	2°/0°	(1) ERICSSON RRU [RRUS 4449]	
11	GAMMA	850 LTE 1900 LTE 2100 LTE	-	-		_		_	-	(2) ERICSSON RRUs [RRUS 8843]	
12	GAMMA	2100 LIL	JMA MX06F1T865-02	€ @ 190'-0"±		200°		0.	2°/0°	-	

GROUND WORK:

EXISTING ANTENNA & COAX SCHEDULE @ 190'-0"

CONTRACTOR TO REMOVE: (1) 6201 CABINET AND (2) 4.0 BTS CDMA CABINETS. CONTRACTOR TO REPLACE: EXISTING BATTERIES.

PLANS PREPARED FOR:



4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

VZW SITE #: 228809 VZW SITE NAME: LAKE CITY NORTH

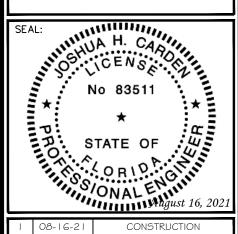
279 NORTHWEST OSTEEN COURT LAKE CITY, FL 32055 (COLUMBIA COUNTY)

PLANS PREPARED BY: TOWER ENGINEERING PROFESSIONALS 326 TRYON ROAD RALEIGH, NC 27603-3530

OFFICE: (919) 661-6351 www.tepgroup.net FL COA # 31011

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0	08-04-21	PRELIMINARY
- 1	08-16-21	CONSTRUCTION

DRAWN BY: LLS CHECKED BY: JHJ

SHEET TITLE:

EXISTING ANTENNA & COAX SCHEDULE

SHEET NUMBER:

REVISION:

TEP#: 241157.485453

^{*}NOTE-EXISTING ANTENNA/EQUIPMENT TO BE REMOVED
**NOTE-EQUIPMENT MOUNTED IN EQUIPMENT ROOM AT GROUND LEVEL

PROPOSED EQUIPMENT IN BOLD

	PROPOSED ANTENNA & COAX SCHEDULE										
POS.	SECTOR	USE	MANUFACTURER (MODEL #)	RAD CENTER	CABLE SIZE	AZIMUTH (TN)	CABLE LENGTH	MECH. D-TILT		EQUIPMENT [MODEL#]	J-BOX (TOWER)
1	ALPHA	AWS3	ERICSSON AIR6449	€ @ 190'-0"±		310°		**	**		
2	ALPHA	700 LTE 850 LTE 1900 LTE	JMA MX06FIT865-02	© 0 190'−0"±		310°		••	••	(1) ERICSSON RRU [RRUS 4449]	
3	ALPHA	2100 LTE 850 5GNR	-	_		_		_	_	(2) ERICSSON RRUs [RRUS 8843]	
4	ALPHA	NL-SUB6	JMA MX06FIT865-02	€ @ 190'-0"±		310°		**	••		
5	BETA	AWS3	ERICSSON AIR6449	€ @ 190'-0"±	(1.5) (5.1)	85*		**	••		
6	BETA	700 LTE 850 LTE 1900 LTE	JMA MX06FIT865-02	© 0 190'−0"±	(16) 1%"ø COAX (SPARE)	85°	*0.70'.	**	••	(1) ERICSSON RRU [RRUS 4449]	(2) RAYCAPS [RHSDC-6627-PF-48]
7	BETA	2100 LTE 850 5GNR	-	-	(2) 1%"ø HYBRIDS	_	*230'±	_	_	(2) ERICSSON RRUs [RRUS 8843]	***(2) RAYCAPS [RHSDC-6627-PF-48]
8	BETA	NL-SUB6	JMA MX06FIT865-02	© 190'−0"±	н твкірз	85°		**	**		
9	GAMMA	AWS3	ERICSSON AIR6449	€ @ 190'-0"±		200°		**	••		
10	GAMMA	700 LTE 850 LTE 1900 LTE	JMA MX06FIT865-02	© 190'−0"±		200°		**	**	(1) ERICSSON RRU [RRUS 4449]	
11	GAMMA	2100 LTE 850 5GNR	-	_		_		_	_	(2) ERICSSON RRUs [RRUS 8843]	
12	GAMMA	NL-SUB6	JMA MX06FIT865-02	© 0 190'−0"±		200°		**	**		

^{*}NOTE-CONTRACTOR TO VERIFY COAX/CABLE LENGTHS PRIOR TO CONSTRUCTION. CONTRACTOR TO REFERENCE VERIZON ISSUED RFDS PRIOR TO CONSTRUCTION.

GROUND WORK:

CONTRACTOR TO INSTALL: (1) 19" RACK.

PROPOSED ANTENNA & COAX SCHEDULE @ 190'-0"

PLANS PREPARED FOR:



4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

VZW SITE #: 228809 VZW SITE NAME: LAKE CITY NORTH

279 NORTHWEST OSTEEN COURT LAKE CITY, FL 32055 (COLUMBIA COUNTY)

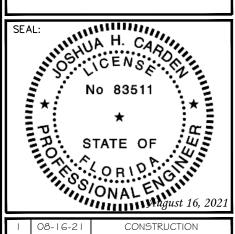
PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS 326 TRYON ROAD

RALEIGH, NC 27603-3530 OFFICE: (919) 661-6351 www.tepgroup.net FL COA # 31011

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REV DATE ISSUED FO	
O 08-04-21 PRELIMINA	RY.
I 08-16-21 CONSTRUCT	ION

DRAWN BY: LLS CHECKED BY: JHJ

SHEET TITLE:

PROPOSED ANTENNA & COAX SCHEDULE

SHEET NUMBER:

REVISION:

TEP#: 241157.48545

^{**}NOTE-CONTRACTOR TO REFERENCE VERIZON ISSUED RFDS FOR MECH./ELEC. D-TILTS

^{***}NOTE-EQUIPMENT MOUNTED IN EQUIPMENT ROOM AT GROUND LEVEL

ELECTRICAL NOTES:

SCOPF:

PROVIDE LABOR, MATERIALS, INSPECTION, AND TESTING TO PROVIDE CODE COMPLIANCE FOR ELECTRIC, TELEPHONE, AND GROUNDING/LIGHTNING SYSTEMS.

- THE INSTALLATION SHALL COMPLY WITH APPLICABLE LAWS AND CODES. THESE INCLUDE BUT ARE NOT LIMITED TO THE LATEST ADOPTED EDITIONS OF:
 - A. THE NATIONAL ELECTRICAL SAFETY CODE B. THE NATIONAL ELECTRIC CODE - NFPA-70 C. REGULATIONS OF THE SERVING UTILITY COMPANY
- D. LOCAL AND STATE AMENDMENTS E. THE INTERNATIONAL ELECTRIC CODE -IEC (WHERE APPLICABLE)
- 2. PERMITS REQUIRED SHALL BE OBTAINED BY THE CONTRACTOR
- 3. AFTER COMPLETION AND FINAL INSPECTION OF THE WORK, THE OWNER SHALL BE FURNISHED A CERTIFICATE OF COMPLETION AND APPROVAL.

1. UPON COMPLETION OF THE INSTALLATION, OPERATE AND ADJUST THE EQUIPMENT AND SYSTEMS TO MEET SPECIFIED PERFORMANCE REQUIREMENTS. THE TESTING SHALL BE DONE BY QUALIFIED PERSONNEL.

GUARANTEE:

- 1. IN ADDITION TO THE GUARANTEE OF THE EQUIPMENT BY THE MANUFACTURER, EACH PIECE OF EQUIPMENT SPECIFIED HEREIN SHALL ALSO BE GUARANTEED FOR DEFECTS OF MATERIAL OR WORKMANSHIP OCCURRING DURING A PERIOD OF ONE (1) YEAR FROM FINAL ACCEPTANCE OF THE WORK BY THE OWNER AND WITHOUT EXPENSE TO THE OWNER.
- 2. THE WARRANTEE CERTIFICATES & GUARANTEES FURNISHED BY THE MANUFACTURERS SHALL BE TURNED OVER TO THE OWNER.

UTILITY CO-ORDINATION:

1. CONTRACTOR SHALL COORDINATE WORK WITH THE POWER AND TELEPHONE COMPANIES AND SHALL COMPLY WITH THE SERVICE REQUIREMENTS OF EACH UTILITY COMPANY.

EXAMINATION OF SITE:

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL VISIT THE SITE OF THE JOB AND SHALL FAMILIARIZE HIMSELF WITH THE CONDITIONS AFFECTING THE PROPOSED ELECTRICAL INSTALLATION AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. FAILURE TO COMPLY WITH THE INTENT OF THIS SECTION WILL IN NO WAY RELIEVE THE CONTRACTOR OF PERFORMING THE WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM OR SYSTEMS.

CUTTING, PATCHING AND EXCAVATION:

- COORDINATION OF SLEEVES, CHASES, ETC., BETWEEN SUBCONTRACTORS WILL BE REQUIRED PRIOR TO THE CONSTRUCTION OF ANY PORTION OF THE WORK. CUTTING AND PATCHING OF WALLS, PARTITIONS, FLOORS, AND CHASES IN CONCRETE, WOOD, STEEL OR MASONRY SHALL BE DONE AS PROVIDED ON THE DRAWINGS.
- 2. NECESSARY EXCAVATIONS AND BACKFILLING INCIDENTAL TO THE ELECTRICAL WORK SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWING.
- 3. SEAL PENETRATIONS THROUGH RATED WALLS, FLOORS, ETC., WITH APPROVED METHOD AS LISTED BY UL.

RACEWAYS / CONDUITS GENERAL:

- CONDUCTORS SHALL BE INSTALLED IN LISTED RACEWAYS. CONDUIT SHALL BE RIGID STEEL, EMT, SCH40 PVC, OR SCH80PVC AS INDICATED ON THE DRAWINGS. THE RACEWAY SYSTEM SHALL BE COMPLETE COMPLETE BEFORE INSTALLING CONDUCTORS.
- 2. EXTERIOR RACEWAYS AND GROUNDING SLEEVES SHALL BE SEALED AT POINTS OF ENTRANCE AND EXIT. THE RACEWAY SYSTEM SHALL BE BONDED PER NEC.

EXTERIOR CONDUIT:

- 1. EXPOSED CONDUIT SHALL BE NEATLY INSTALLED AND RUN PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS. SUPPORTS AND MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED STEEL.
- 2. THE CONDUIT SHALL BE RIGID STEEL AT GRADE TRANSITIONS OR WHERE EXPOSED TO DAMAGE.
- 3. UNDERGROUND CONDUITS SHALL BE RIGID STEEL, SCH40 PVC, OR SCH80 PVC AS INDICATED ON THE DRAWINGS.
- 4. BURIAL DEPTH OF CONDUITS SHALL BE AS REQUIRED BY CODE FOR EACH SPECIFIC CONDUIT TYPE AND APPLICATION, BUT SHALL NOT BE LESS THAN THE FROST DEPTH AT THE SITE.
- 5. CONDUIT ROUTES ARE SCHEMATIC. CONTRACTOR SHALL FIELD VERIFY ROUTES BEFORE BID. COORDINATE ROUTE WITH WIRELESS CARRIER AND/OR BUILDING OWNER

INTERIOR CONDUIT:

- 1. CONCEALED CONDUIT IN WALLS OR INTERIOR SPACES ABOVE GRADE MAY BE EMT OR PVC.
- 2. CONDUIT RUNS SHALL USE APPROVED COUPLINGS AND CONNECTORS. PROVIDE INSULATED BUSHING FOR ALL CONDUIT TERMINATIONS. CONDUIT RUNS IN A WET LOCATION SHALL HAVE WATERPROOF FITTINGS.
- 3. PROVIDE SUPPORTS FOR CONDUITS IN ACCORDANCE WITH NEC REQUIREMENTS. CONDUITS SHALL BE SIZED AS REQUIRED BY NEC.

EQUIPMENT:

- 1. DISCONNECT SWITCHES SHALL BE SERVICE ENTRANCE RATED, HEAVY DUTY TYPE.
- 2. CONTRACTOR SHALL VERIFY MAXIMUM AVAILABLE FAULT CURRENT AND COORDINATE INSTALLATION WITH THE LOCAL UTILITY BEFORE STARTING WORK. CONTRACTOR WILL VERIFY THAT EXISTING CIRCUIT BREAKERS ARE RATED FOR MORE THAN AVAILABLE FAULT CURRENT AND REPLACE AS NECESSARY.
- 3. NEW CIRCUIT BREAKERS SHALL BE RATED TO WITHSTAND THE MAXIMUM AVAILABLE FAULT CURRENT AS DETERMINED BY THE LOCAL UTILITY.

CONDUCTORS:

- 1. FURNISH AND INSTALL CONDUCTORS SPECIFIED IN THE DRAWINGS. CONDUCTORS SHALL BE COPPER AND SHALL HAVE TYPE THWN (MIN) (75° C) INSULATION, RATED FOR 600 VOLTS.
- 2. THE USE OF ALUMINUM CONDUCTORS SHALL BE LIMITED TO THE SERVICE FEEDERS INSTALLED BY THE UTILITY.
- 3. CONDUCTORS SHALL BE PROVIDED AND INSTALLED AS FOLLOWS:
 - A. MINIMUM WIRE SIZE SHALL BE #12 AWG.
 - CONDUCTORS SIZE #8 AND LARGER SHALL BE STRANDED. CONDUCTORS SIZED #10 AND #12 MAY BE SOLID OR STRANDED.
 - CONNECTION FOR #10 AWG #12 AWG SHALL BE BY TWISTING TIGHT AND INSTALLING INSULATED PRESSURE OR WIRE NUT CONNECTIONS.
 - CONNECTION FOR #8 AWG AND LARGER SHALL BE BY USE OF STEEL CRIMP-ON SLEEVES WITH NYLON INSULATOR.
- 3. CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NEC STANDARDS.

UL COMPLIANCE:

1. ELECTRICAL MATERIALS, DEVICES, CONDUCTORS, APPLIANCES, AND EQUIPMENT SHALL BE LABELED/LISTED BY UL OR ACCEPTED BY JURISDICTION (I.E., LOCAL COUNTY OR STATE) APPROVED THIRD PARTY TESTING AGENCY.

- 1. ELECTRICAL NEUTRALS, RACEWAYS AND NON-CURRENT CARRYING PARTS OF ELECTRICAL EQUIPMENT AND ASSOCIATED ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH NEC ARTICLE 250. THIS SHALL INCLUDE NEUTRAL CONDUCTORS, CONDUITS, SUPPORTS, CABINETS, BOXES, GROUND BUSSES, ETC. THE NEUTRAL CONDUCTOR FOR EACH SYSTEM SHALL BE GROUNDED AT A SINGLE POINT.
- 2. PROVIDE GROUND CONDUCTOR IN RACEWAYS PER NEC.

GENERATOR

KILOWATTS

GROUND

PHASE

PANEL

GRD

IGB

IGR

ΚW

NEC

PCS

PН

PNL

GLOBAL POSITIONING SYSTEM

INTERIOR GROUND RING (HALO)

PERSONAL COMMUNICATION SYSTEM

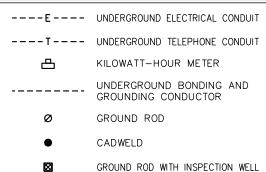
ISOLATED GROUND BAR

NATIONAL ELECTRIC CODE

- 3. PROVIDE BONDING AND GROUND TO MEET NFPA 780 "LIGHTNING PROTECTION" AS A MINIMUM.
- 4. PROVIDE GROUNDING SYSTEM AS INDICATED ON THE DRAWINGS, AS REQUIRED BY THE NATIONAL ELECTRIC CODE, RADIO EQUIPMENT MANUFACTURERS, AND MOTOROLA R56 (AS APPLICABLE).

ABBREVIATIONS AND LEGEND

I	Α	_	AMPERE	PNLBD	_	PANELBOARD
I	AFG	_	ABOVE FINISHED GRADE	PVC	_	RIGID NON-METALLIC CONDUIT
I	ATS	_	AUTOMATIC TRANSFER SWITCH	RGS	_	RIGID GALVANIZED STEEL CONDUIT
I	AWG	_	AMERICAN WIRE GAUGE	SW	_	SWITCH
I	BCW	_	BARE COPPER WIRE	TGB	_	TOWER GROUND BAR
I	BFG	_	BELOW FINISHED GRADE	UL	_	UNDERWRITERS LABORATORIES
I	BKR	_	BREAKER	V	_	VOLTAGE
I	С	_	CONDUIT	W	_	WATTS
I	CKT	_	CIRCUIT	XFMR	_	TRANSFORMER
I	DISC	_	DISCONNECT	XMTR	_	TRANSMITTER
I	EGR	_	EXTERNAL GROUND RING			
I	EMT	_	ELECTRIC METALLIC TUBING		- E - ·	UNDERGROUND ELECTRICAL CONDUIT
١	FSC	_	FLEXIBLE STEEL CONDUIT			



PLANS PREPARED FOR:

4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

VZW SITE #: 228809 VZW SITE NAME: LAKE CITY NORTH

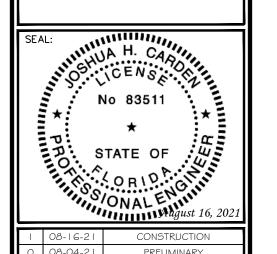
279 NORTHWEST OSTEEN COURT LAKE CITY, FL 32055 (COLUMBIA COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS 326 TRYON ROAD RALEIGH, NC 27603-3530 OFFICE: (919) 661-6351 www.tepgroup.net FL COA # 31011

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D REV	08-04-21	ISSUED FOR:
	08-04-21	PRELIMINARY
- 1	08-16-21	CONSTRUCTION

DRAWN BY: LLS CHECKED BY: JHJ

SHEET TITLE:

ELECTRICAL NOTES

SHEET NUMBER:

REVISION:

TEP#: 24 | 157.48545

NOTES:

- 1. ALL CONDUCTORS ARE TYPE THWN (75°C) COPPER.
- 2. MAXIMUM LENGTH OF RUN FOR RECTIFIER CIRCUITS IS 50-FT.
- 3. INTERSECT/GENERAC INTEGRATED LOAD CENTER INCLUDES 200A MAIN DISCONNECT AND TRANSFER SWITCH FOR PORTABLE OR PERMANENT GENERATOR.
- 4. RECTIFIER LOADS ARE CONSIDERED TO BE NON-CONTINUOUS.
- 5. IF ADDITIONAL FUTURE LOADS ARE ADDED WHICH CAUSE TOTAL DEMAND TO EXCEED GENERATOR BREAKER SIZE, BACKUP POWER SYSTEM SHALL BE EVALUATED AND UPGRADED AS NECESSARY.
- THE RECTIFIER QUANTITY AND LOADING ARE BASED ON CALCULATIONS PROVIDED BY VERIZON DATED 02/11/21. CHANGES TO THE DC LOADING MAY REQUIRE UPDATES TO THE AC POWER DESIGN OR OTHER EQUIPMENT CHANGES.
- 7. EXISTING LOADING ON THE PANEL IS TAKEN FROM UTILITY BILLS.

PROPOSED BREAKER/LOAD SHOWN IN BOLD

PA	PANEL SCHEDULE - 200A MCB 120/240V										
LOAD SERVED		MPERES TTS) L2	TRIP	CKT #	Ρ	HASE	CKT #	TRIP		MPERES TTS) L2	LOAD SERVED
HVAC #1	1600	1600	60A	3	\uparrow	A B	2	20A	_	_	***LTE CABINET
HVAC #2	1600	1600	60A	5 7	\bigwedge	A B	6 8	40A	*1137	*1137	RECTIFIERS 1.1 & 1.2
EMERG. LIGHTS	140		20A	9	\setminus	A	10	40A	*1137		RECTIFIERS 2.1 & 2.2
RECEPTACLES		50	20A	11	$] \triangle$	\mathbb{B}	12	40A		*1137	RECTIFIERS 2.1 & 2.2
RECEPTACLES HALON PANEL	50	540	20A 20A	13 15	\setminus	A B	14 16	40A	*1137	•1137	RECTIFIERS 3.1 & 3.2
EQUIP PWR OUTLET #1 EQUIP PWR OUTLET #2	540	5040	20A 20A	17 19	$\overline{}$	A B	18 20	40A	*1137	*1137	RECTIFIERS 4.1 & 4.2
EQUIP PWR OUTLET #3	540	540	20A 20A	21 23	$\overline{}$	A B	22	40A	*1137	*11.37	RECTIFIERS 1.3 & 1.4
***850 CDMA CABINET	-	-	30A	25 27	\bigwedge	A B	26 28	40A	•1137	*1137	RECTIFIERS 2.3 & 2.3
***850 CDMA CABINET	-	_	30A	29 31	igwedge	A O	30	20A	540	800	TOWER LIGHTING
***LTE CABINET	-	_	20A	33	\mathcal{L}	A	32 34	30A	800	800	hua wei
***LTE CABINET	-	-	20A	35 37	\wedge	B A	36 38	30A	_	-	***LTE CABINET
THE CABINET		-	ZUA	39	$] \bot$	B	40	30A		800	UNKNOWN
PRUE TOWER	540		20A	41	لحرا	_A	42	30A	800		ONNINOWIN
VOLT AMPS	5010	4870							8962	8422	VOLT AMPS
L1 VOLT AMPERES				13972 13292 139272			L2 VOLT AMPERES MAX L1/L2 VOLT AMPERES				
					116.43			MAX AMPS			
					145.54 MAX AMPS x125%						
OADING DASED ON VALUES EDOM OTHER TOOK CALCULATED											

PLANS PREPARED FOR:

4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

PROJECT INFORMATION:

VZW SITE #: 228809 VZW SITE NAME: LAKE CITY NORTH

279 NORTHWEST OSTEEN COURT LAKE CITY, FL 32055 (COLUMBIA COUNTY)

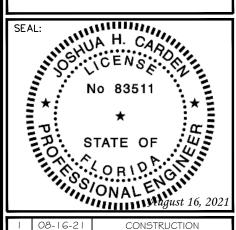
PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS 326 TRYON ROAD RALEIGH. NC 27603-3530 OFFICE: (919) 661-6351

www.tepgroup.net FL COA # 31011

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RE V	DATE	ISSUED FOR:
0	08-04-21	PRELIMINARY
I	08-16-21	CONSTRUCTION

CHECKED BY: JHJ DRAWN BY: LLS

SHEET TITLE:

POWER PANEL SCHEDULE

SHEET NUMBER:

REVISION:

TEP#: 241157.48545

POWER PANEL SCHEDULE

SCALE: N.T.S.

^{*}LOADING BASED ON VALUES FROM OTHR3000 CALCULATOR
**GENERATOR BATTERY CHARGER LOAD IS 0 VA DURING GENERATOR OPERATION
***BREAKERS IN OFF POSITION

^{*****}BREAKER IS NOT LABELED IN CIRCUIT DIRECTORY

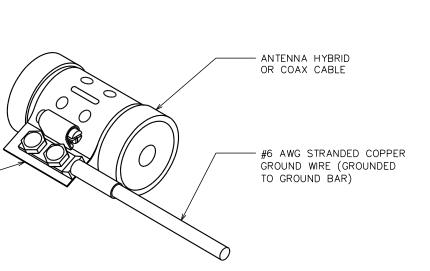


UNIVERSAL GROUND KIT

EQUIVALENT

BY HARGER OR APPROVED

GROUNDING DETAILS



NOTE: DRAWING SHOWN BELOW FOR SCHEMATIC PURPOSES ONLY. (1) GROUND BAR PER SECTOR. SEE THIS SHEET FOR DETAILS. EACH SECTOR GROUND BAR BONDED TO MOUNT WITH #2 STC AND APPROVED CLAMP 2-HOLE MECHANICAL LUG CONNECTION (TYP) **EXISTING** -EQUIPMENT, HYBRIDS, FEEDLINE AND COAX GROUNDED (TYP)— TO SECTOR GROUND **EXISTING** MOUNT ANTENNA

PLANS PREPARED FOR: Verizon

4700 EXCHANGE COURT, SUITE 100 BOCA RATON, FL 33431 (561) 995-5539

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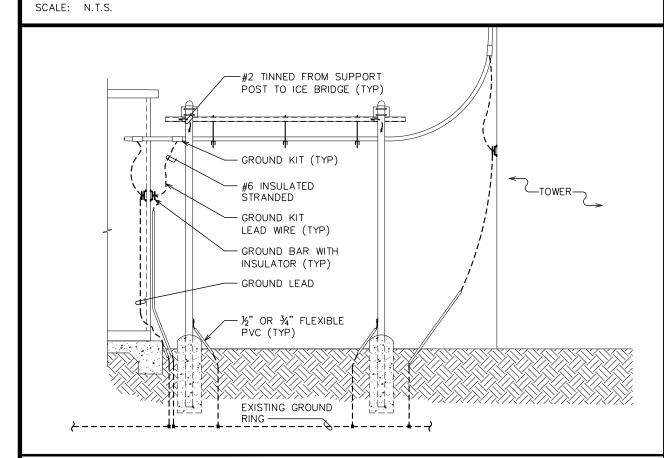
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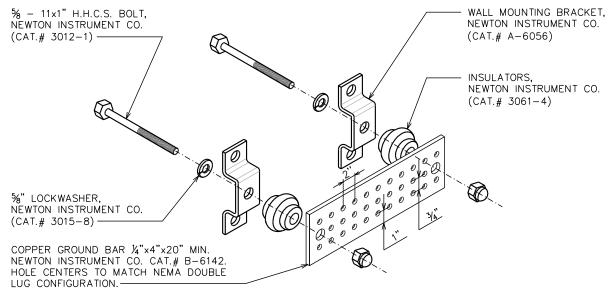
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ANTENNA & EQUIPMENT GROUNDING DETAIL

SCALE: N.T.S.





NOTES:

- GROUND BAR SHALL BE SIZED TO ACCOMMODATE ALL GROUNDING CONNECTIONS REQUIRED AS WELL AS PROVIDE 50% SPARE CAPACITY.
- 2. ALL RACKS AND EQUIPMENT CABINETS ARE TO HAVE TWO GROUNDING LEADS. ALL EQUIPMENT INSTALLED IN RACKS MUST HAVE A CHASSIS GROUND ATTACHED TO A COMMON BUS BAR ON THE RACK. COMMON BUS BAR MUST BE GROUNDED TO MAIN GROUND BAR.

SEAL: NO 83511 NO 83511 STATE OF ORID ONAL August 16, 2021

REV	DATE	ISSUED FOR:
0	08-04-21	PRELIMINARY
- 1	08-16-21	CONSTRUCTION

DRAWN BY: LLS CHECKED BY: JHJ

SHEET TITLE:

GROUNDING DETAILS

SHEET NUMBER:

(5-'

REVISION:

TEP#: 241157.48545

ICE BRIDGE/HYBRID/COAX/GROUNDING BAR ELEVATION

SCALE: N.T.S

STANDARD GROUND BAR DETAILS

CALE: N.T.S.