DeKalb County
GEORGIA

DeKalb County Department of Planning & Sustainability

Hon. Michael Thurmond
Chief Executive Officer

Andrew Baker, AICP,
Director

ZONING BOARD OF APPEALS APPLICATION FOR PUBLIC HEARING (VARIANCES, SPECIAL EXCEPTIONS, APPEALS OF ADMINISTRATIVE DECISIONS)

BOA No._____

Applicant and/or Authorized Representative: GLOBAL SIGNAL ACQUISITIONS IV LLC c/o ELLEN W. SMITH, ESQ.

Mailing Address: 100 GALLERIA PARKWAY, SUITE 1800

City/State/Zip Code: ATLANTA, GEORGIA 30339

Email: esmith@hnzw.com

Telephone ~~Home~~ CELL 678-458-8491 Business: 770-661-1216 Fax No.: 770-956-1490

OWNER OF RECORD OF SUBJECT PROPERTY

Owner: GLOBAL SIGNAL ACQUISITIONS IV LLC

Address (Mailing): 2000 Corporate Drive

City/State/Zip Code: Canonsburg, PA 15317

Email: fred.raposo@crowncastle.com

Telephone ~~Home~~ (678) 409-8582 Business: — Fax No.: —

ADDRESS/LOCATION OF SUBJECT PROPERTY

Address: 583 FAYETTEVILLE ROAD City: ATLANTA State: GA Zip: 30316

District(s): 15TH Land Lot(s): 173 Block: _____ Parcel: _____

District(s): _____ Land Lot(s): _____ Block: _____ Parcel: _____

District(s): _____ Land Lot(s): _____ Block: _____ Parcel: _____

Zoning Classification: C-1 Commission District & Super District: 3/6

CIRCLE TYPE OF HEARING REQUESTED

- VARIANCE (From Development Standards causing undue hardship upon owners of property.)
- ~~SPECIAL EXCEPTIONS (To reduce or waive off-street parking or loading space requirements.)~~
- ~~OFFICIAL'S APPEALS OF ADMINISTRATIVE DECISIONS~~

TO BE COMPLETED BY PLANNING AND SUSTAINABILITY DEPARTMENT

Date Received: _____ Fee Paid: _____

DeKalb County
GEORGIA

2

ZONING BOARD OF APPEALS APPLICATION

AUTHORIZATION OF THE PROPERTY OWNER

I hereby authorize the staff and members of the Zoning Board of Appeals
To inspect the premises of the Subject Property

I hereby certify that the information provided in the application is true and correct.

I hereby certify that I am the owner of the property subject to the application.

GLOBAL SIGNAL ACQUISITIONS IV LLC

DATE: 12/6/17

OWNER ~~Applicant~~ Signature By: _____

Title: DISTRICT MANAGER-GEORGIA

DATE: 2/8/18

~~Agent~~ Applicant Signature _____

DeKalb County
GEORGIA

3

ZONING BOARD OF APPEALS APPLICATION

AUTHORIZATION TO REPRESENT THE PROPERTY OWNER

I hereby authorize the staff and members of the Zoning Board of Appeals to inspect the premises of the Subject Property

I hereby certify that the information provided in the application is true and correct.

I hereby certify that I am the owner of the property and that I authorize the applicant/agent to apply for a hearing to the Zoning Board of Appeals for the requests as shown in this application

DATE: 1.31.18

Applicant/Agent Signature: Ellen W. Smith, Agent for Applicant

TO WHOM IT MAY CONCERN:

(I)/ (WE) GLOBAL SIGNAL ACQUISITIONS IV LLC
(Name of Owners)

being (owner/owners) of the property described below or attached hereby delegate authority to:

ELLEN W. SMITH, HOLT NEY ZATCOFF & WASSERMAN, LLC, ON BEHALF OF APPLICANT
(Name of Applicant or Representative)

To file an application on (my) / (our) behalf

OWNER:
GLOBAL SIGNAL ACQUISITIONS IV LLC

BY:

Notary Public

Owner Name: PAUL REHM
Title: DISTRICT MANAGER-GEORGIA

Notary Public

Owner

Notary Public

Owner

ALYSON COLLINS
NOTARY
My Comm. Expires
August 30th 2019
PUBLIC
DEKALB COUNTY, GEORGIA

HOLT NEY ZATCOFF & WASSERMAN, LLP
ATTORNEYS AT LAW
100 GALLERIA PARKWAY, SUITE 1800
ATLANTA, GEORGIA 30339-5960
TELEPHONE 770-956-9600 FACSIMILE 770-956-1490

Ellen W. Smith
e-mail esmith@hnzw.com

February 8, 2018

BY HAND DELIVERY
DeKalb County Department of Planning & Sustainability
c/o Ms. Betsy Berns Stark
330 W. Ponce de Leon Avenue
Third Floor
Decatur, Georgia 30030

Re: Zoning Board of Appeals Application for Variance (the "***Application***")
Applicant & Owner: Global Signal Acquisitions IV, LLC d/b/a Crown Castle
Property: 583 Fayetteville Road

LETTER OF INTENT

Ladies and Gentlemen:

Owner seeks two variances in connection with its proposal to relocate a cell tower from its existing location at 1839 Second Avenue, Atlanta, Georgia to the Property.

Background

Applicant is an industry leader in the ownership and operation of infrastructure that facilitates wireless and broadband communications. Applicant owns an existing 153-foot tall wireless tower (the "***Existing Tower***") located at 1839 Second Avenue (the "***Existing Site***"). The Existing Tower supports Verizon, Sprint (Clearwire), T-Mobile and AT&T Mobility. The Existing Site is being targeted for redevelopment by Cousins Properties and, as a result, Cousins Properties has asked Applicant to look for alternative locations for its wireless facilities.

To comply with all of the carriers' requirements to be in a position to continue to maintain and provide service to their customer, the relocation site must be within three-tenths (3/10) of a mile of the Existing Tower. As a result, relocation opportunities for a new wireless tower in close proximity to the Existing Site that complies with the provisions of the Zoning Ordinance of DeKalb County (the "***Zoning Ordinance***") requirements are extremely difficult. Specifically, as shown on the attached zoning map, there are very few properties in the area that are zoned C-1 or which allow a tower (either by special use permit or by right with certain limitations) under the Zoning Ordinance. Additionally, a number of parcels (not only the Existing Site) are owned by Cousins and are being assembled and targeted for redevelopment and, therefore, are unavailable for the tower relocation.

The Property is an approximately 0.14 miles (850 feet) from the Existing Site, and therefore meets the carriers' requirements. The Property is an unimproved parcel zoned C-1 and approval of a monopole tower on the Property is administrative pursuant to Zoning Ordinance § 4.2.57.F.1.b.

Variance Requests

The Zoning Ordinance empowers the Zoning Board of Appeals ("***ZBA***") of the County with express authority to waive any required setback upon the Applicant's request if:

(i) The Applicant provides a letter stamped by a certified structural engineer licensed in the State of Georgia documenting that the proposed structure's fall zone is less than the requested setback; and

(ii) The proposed Telecommunications Facility, Steath or New Support Structure is consistent with the purposes and intent of this Ordinance.

In other words, the Applicant does not have to meet the hardship tests applicable to other variance requests.[1]

Applicant seeks the following variances:

(1) A variance from the tower setback of the "fall zone plus twenty (20) feet" (see *Zoning Ordinance, § 4.2.1.H.2.a.)* to reduce the tower setback to just the "fall zone".

(2) A variance from the C-1 property lines (see *Zoning Ordinance, § 4.2.1.H.2.c*) to allow Accessory Equipment to be located in the areas as shown on the site plan, five (5) feet from the western and southern property lines.

In support of its request, Applicant encloses the requisite structural engineer's letter and analysis. Applicant also confirms that its requests are consistent with the purposes of the Zoning Ordinance specifically to ensure that residents, public safety operations and business in the County have reliable access to wireless communications networks. *See Zoning Ordinance Section 4.2.1.A.* Approving these variance requests will allow the relocation of the Existing Tower and ensure that 4 wireless carrier providers' customers have uninterrupted wireless

[1] Although Applicant is not obligated to comply with typical hardship requirements, Applicant notes that the width of the Property is only 100 feet wide at the greatest, so the shape as well as the topography of the Property impacts the location of the proposed new tower and Applicant's ability comply with setback requirements. Similarly, Applicant notes that the need for the new tower supports redevelopment of other parcels including the Existing Site in the area and not as a result of its own actions.

service in this area of the County. Additional goals that the granting of these variances meet include, without limitation:

*providing access to reliable wireless telecommunication services by residents, businesses and visitors to this area of the County;
*minimize the total number of support structures within the county because once the new tower is installed, the Existing Tower will be removed;
*promoting and encouraging the joint use of new wireless support structures among wireless service providers because this new tower will ensure 4 carriers are collocated on it;
*encourage the location of wireless support structures where impacts on the community will be minimized and since this is in C-1 and one of the only available C-1 properties, it is consistent with the ordinance; and
*enhance the ability of providers of wireless communications services to deliver such services to the community effectively and efficiently.

See Zoning Ordinance § 4.2.1.A., subsections 2, 3, 4, 9, and 10.

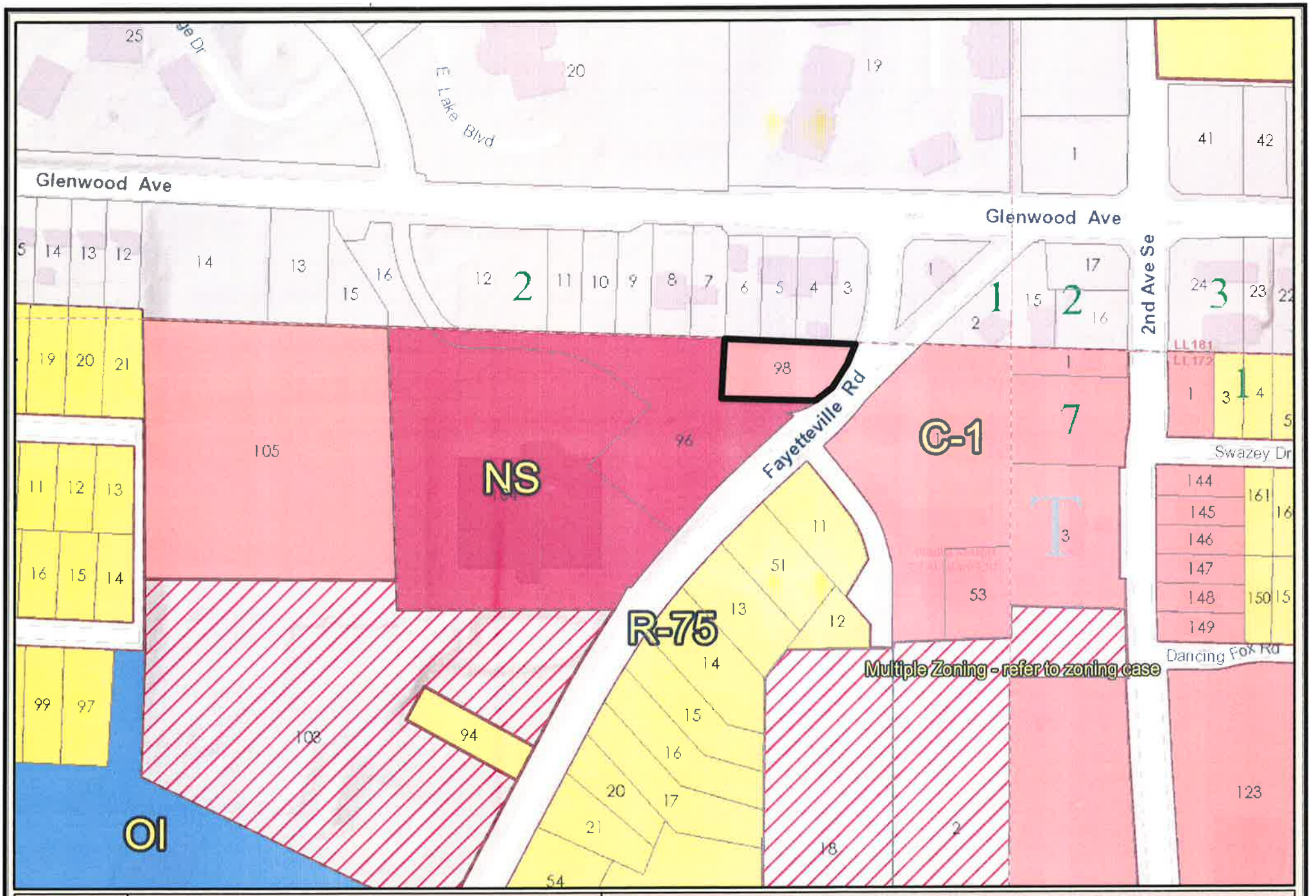
The Application, this Letter of Intent and accompanying documents support Owner's variance requests and Owner respectfully requests the Department recommend approval of the Applications to the ZBOA. Applicant is happy to answer questions or provide any additional information that the Department may have with regard to this Application.

Thank you for your consideration.

Sincerely,
HOLT NEY ZATCOFF & WASSERMAN, LLP

Ellen W. Smith

EWS/ews

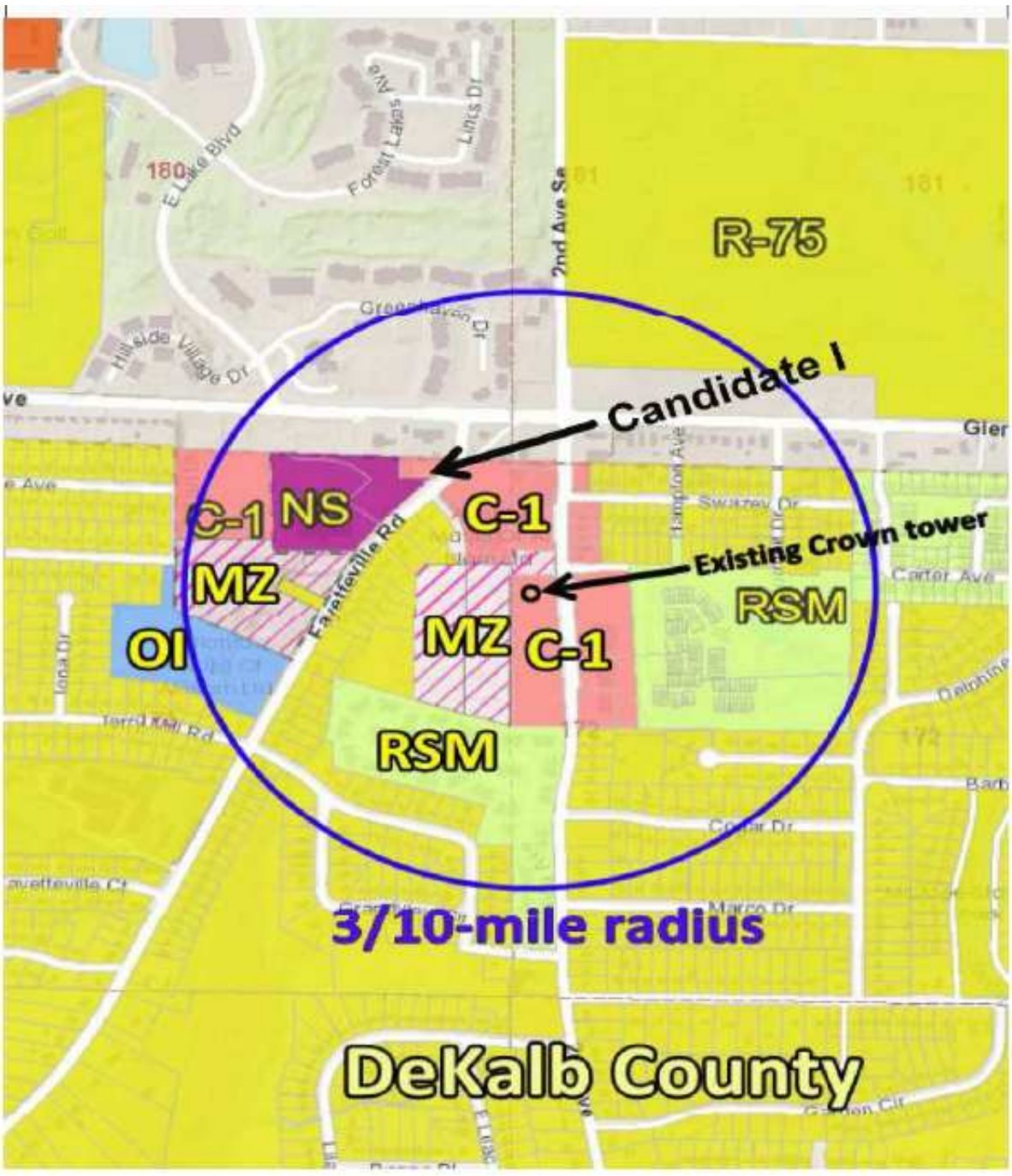


583 Fayetteville Rd

0 55 110 220 330 440 Feet

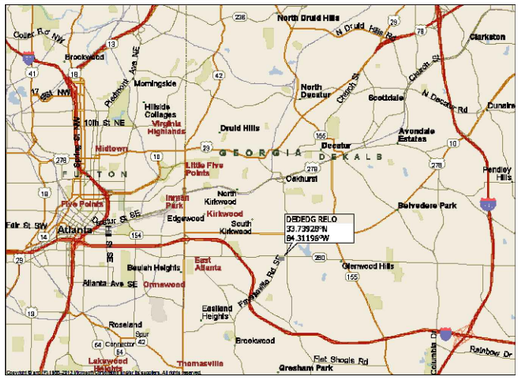
Date Printed: 11/3/2017

N

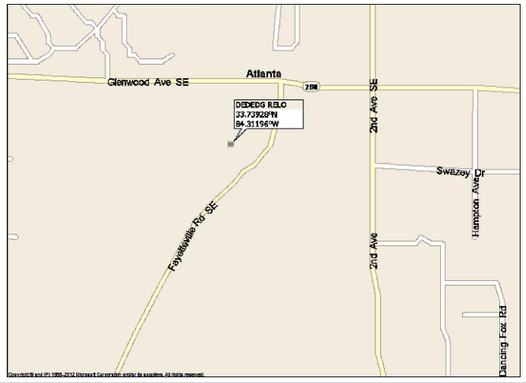

R-75
Candidate I
Existing Crown tower
C-1
NS
C-1
MZ
OI
MZ
C-1
RSM
RSM
3/10-mile radius
DeKalb County
E Lake Blvd
Forest Lakes Dr
Links Dr
2nd Ave
Hillside Village Dr
Fayetteville Rd
Swaney Dr
Carter Ave
Carter Dr
Marco Dr
Garden Cir

North at top.

LOCATION MAP



VICINITY MAP



BUILDING CODES:

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES:

- 2014 IBC W/ (2015) AMENDMENTS BUILDING CODE
- 2014 IFC
- 2014 UMC W/ (2015) AMENDMENTS BUILDING CODE
- 2014 UPC W/ (2015) AMENDMENTS BUILDING CODE
- 2014 NEC
- 2014 IECC W/ (2015) AMENDMENTS BUILDING CODE
- TIA-222-G
  - WIND LOAD DESIGN: ULTIMATE=116 MPH
  - WIND LOAD DESIGN: 3 SEC.=90 MPH

OCCUPANCY: U
ZONING: CI
CONSTRUCTION TYPE: I-A NON-COMBUSTIBLE (IBC)

ABBREVIATION KEY

Ø	DIAMETER
&	AND
BTM.	BOTTOM
℄	CENTER LINE
CONC.	CONCRETE
CONT.	CONTINUOUS
C.J.	CONTROL JOINT
DIA.	DIAMETER
EL.	ELEVATION
E.S.	EACH SIDE
E.W.	EACH WAY
FFI	FLANGE FACING INSIDE
FFO	FLANGE FACING OUTSIDE
FT.	FEET
F.V.	FIELD VERIFY
GALV.	GALVANIZED
HORIZ.	HORIZONTAL
IN.	INCH
LFO	LEG FACING OUTSIDE
LLVD	LONG LEG VERTICAL DOWN
LLVU	LONG LEG VERTICAL UP
MAX.	MAXIMUM
MFR.	MANUFACTURER
MIN.	MINIMUM
MPH	MILES PER HOUR
O.C.	ON CENTER
PL	PLATE
REINF.	REINFORCE
REQ'D	REQUIRED
SIM.	SIMILAR
STD.	STANDARD
STL.	STEEL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
VLD	VERTICAL LEG DOWN
VLU	VERTICAL LEG UP
W/	WITH

APPLICANT/OWNER:

CROWN CASTLE

SITE NUMBER:

812034

SITE NAME:

DEDEDG RELO

PROJECT DESCRIPTION:

PROPOSED 170 FT. MONOPOLE

PREPARED BY:

P. MARSHALL & ASSOCIATES

1000 HOLCOMB WOODS PKWY
SUITE 210
ROSWELL, GA 30076
678-280-2325

PROJECT INFORMATION

SITE ADDRESS:	583 FAYETTEVILLE ROAD ATLANTA, GA 30316
PROPOSED TOWER	
LATITUDE:	33° 44' 21.42"
LONGITUDE:	-84° 18' 43.04"
GROUND ELEV.:	110.0' AMSL (NAVD 88)
PARCEL ID:	15 173 08 098
ZONING:	CI
JURISDICTION:	DEKALB COUNTY
PROPERTY OWNER:	GLOBAL SIGNAL ACQUISITION IV, LLC d/ b/ a CROWN CASTLE
APPLICANT/OWNER:	CROWN CASTLE 8000 AVALON BLVD., SUITE 700 ALPHARETTA, GA 30009 FRED RAPOSO 678.409.8582
ENGINEER:	P. MARSHALL & ASSOCIATES 1000 HOLCOMB WOODS PKWY, SUITE 210 ROSWELL, GA 30076 PATRICK W MARSHALL, P.E. 678-280-2325
POWER:	N/A
TELCO:	N/A

DRAWING INDEX

CALL BEFORE YOU DIG
GEORGIA ONE-CALL
811

GEORGIA REGISTERED No. 23000 PROFESSIONAL ENGINEER PATRICK W MARSHALL
2/8/18

P. MARSHALL & ASSOCIATES

CROWN CASTLE

NUM	DATE	DESCRIPTION:
A	10.23.17	PRELIMS
B	10.25.17	PRELIMS-TOWER HEIGHTS- LEASE AREA- CARRIER AREA
C	11.7.17	PRELIMS-COMPOUND LOCATION
D	02.08.18	ZONING

SITE I.D.: 812034-DEDEDG RELO

TITLE SHEET & PROJECT INFORMATION

DESIGNED: LF
DRAWN: LF
CHECKED: PWM

JOB #: CC038

T-1

FLOOD NOTE: THIS PROPERTY IS NOT LOCATED IN A 100-YR. FLOOD PLAIN ACCORDING TO FEMA MAP NO. 13089C0131J, DATED 05/16/2013.

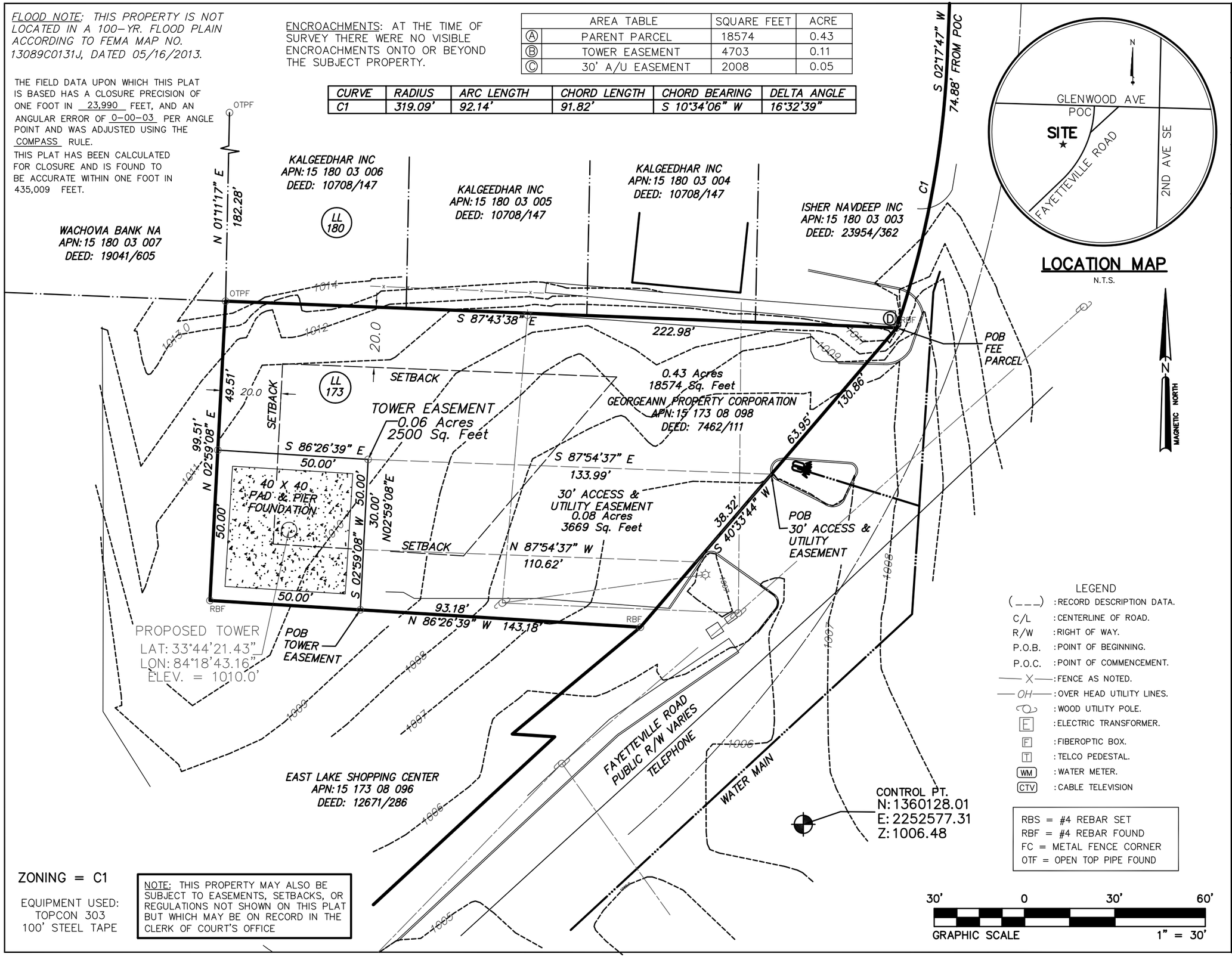
THE FIELD DATA UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 23,990 FEET, AND AN ANGULAR ERROR OF 0-00-03 PER ANGLE POINT AND WAS ADJUSTED USING THE COMPASS RULE.

THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 435,009 FEET.

ENCROACHMENTS: AT THE TIME OF SURVEY THERE WERE NO VISIBLE ENCROACHMENTS ONTO OR BEYOND THE SUBJECT PROPERTY.

	AREA TABLE	SQUARE FEET	ACRE
Ⓐ	PARENT PARCEL	18574	0.43
Ⓑ	TOWER EASEMENT	4703	0.11
Ⓒ	30' A/U EASEMENT	2008	0.05

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	319.09'	92.14'	91.82'	S 10°34'06" W	16°32'39"



LOCATION MAP
N.T.S.

ZONING = C1

EQUIPMENT USED:
TOPCON 303
100' STEEL TAPE

NOTE: THIS PROPERTY MAY ALSO BE SUBJECT TO EASEMENTS, SETBACKS, OR REGULATIONS NOT SHOWN ON THIS PLAT BUT WHICH MAY BE ON RECORD IN THE CLERK OF COURT'S OFFICE

LEGEND

(___)	: RECORD DESCRIPTION DATA.
C/L	: CENTERLINE OF ROAD.
R/W	: RIGHT OF WAY.
P.O.B.	: POINT OF BEGINNING.
P.O.C.	: POINT OF COMMENCEMENT.
—— X ——	: FENCE AS NOTED.
—— OH ——	: OVER HEAD UTILITY LINES.
	: WOOD UTILITY POLE.
E	: ELECTRIC TRANSFORMER.
F	: FIBEROPTIC BOX.
T	: TELCO PEDESTAL.
WM	: WATER METER.
CTV	: CABLE TELEVISION

RBS = #4 REBAR SET
RBF = #4 REBAR FOUND
FC = METAL FENCE CORNER
OTF = OPEN TOP PIPE FOUND

GRAPHIC SCALE
30' 0 30' 60'
1" = 30'

AS-BUILT SURVEY

LAND LOT 173
15th DISTRICT

FOR: CROWN CASTLE

SITE: TDB55 LLC
BUN: 812034
ADDRESS: 583 FAYETTVILLE HIGHWAY
ATLANTA, GA 30316
DEKALB COUNTY

CROWN CASTLE
1220 AUGUSTA DRIVE, SUITE 500 HOUSTON TEXAS 77057

NATIONAL SURVEY SERVICES COORDINATION BY:

GEOLINE SURVEYING, INC.
13430 NW 104th Terrace, Suite A, Alachua, FL 32615
Office:(386) 418-0500 Fax:(386) 462-9986
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:

William R. Gore
PROFESSIONAL LAND SURVEYORS, INC.
1804 CENTRAL AVE AUGUSTA, GEORGIA 30904
TEL: (706) 738-8771 FAX: (706) 736-6249

DRAWN BY: WRG | CHECKED BY: WRG | JOB #:

SURVEYOR'S NOTES

1. BASIS OF BEARING GEODETIC NORTH
2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.
3. THIS SURVEY DOES REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.
4. ALL SYMBOLS DEPICTED ARE NOT TO SCALE.

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY TO CROWN CASTLE AND FIDELITY NATIONAL TITLE INSURANCE COMPANY

WILLIAM R. GORE PROFESSIONAL LAND SURVEYING

William R Gore

WILLIAM R. GORE
LAND SURVEYOR – GA. 2502

Date: 7/24/2017

GEORGIA
REGISTERED
No. 2502
William R Gore
LAND SURVEYOR
WILLIAM R. GORE

SITE: TDB55 LLC
BUN 812034
FEE PARCEL
CREATED BY THIS OFFICE

ALL THAT TRACT OF LAND LYING, SITUATE AND BEING IN LAND LOT 173, 15TH DISTRICT, DEKALB COUNTY, STATE OF GEORGIA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS.
BEGINNING AT A #4 REBAR FOUND, SAID REBAR BEING S02°17'47"W 74.88', S10°34'06"W 91.82'(CHORD BEARING & DISTANCE) FROM THE MITERED INTERSECTION OF THE SOUTHERN RIGHT-OF-WAY OF GLENWOOD AVENUE AND THE WESTERN RIGHT-OF-WAY OF OF FAYETTEVILLE ROAD, SAID REBAR BEING THE POINT OF BEGINNING.
THENCE ALONG SAID RIGHT-OF-WAY OF FAYETEVILLE ROAD S40°33'44"W 130.86' TO A #4 REBAR FOUND;
THENCE LEAVING SAID RIGHT-OF-WAY N86°26'39"W 143.18' TO A #4 REBAR FOUND;
THENCE N02°59'08"E 99.51' TO AN OPEN TOP PIPE FOUND;
THENCE S87°43'38"E 222.98' TO THE POINT OF BEGINNING.
SAID PARCEL CONTAINS 0.43 ACRES (18,574 S.F.)

GEORGEANN PROPERTY CORPORATION
TM 15 173 08 098
DEED BOOK 7462, PG 111
583 FAYETTVILLE HIGHWAY
ATLANTA, GEORGIA 30316
DEKALB COUNTY

SITE: TDB55 LLC
BUN 812034
TOWER EASEMENT
CREATED BY THIS OFFICE

ALL THAT TRACT OF LAND LYING, SITUATE AND BEING IN LAND LOT 173, 15TH DISTRICT, DEKALB COUNTY, STATE OF GEORGIA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS.
BEGINNING AT A POINT, SAID POINT BEING S02°17'47"W 74.88', S10°34'06"W 91.82' (CHORD BEARING & DISTANCE), S40°33'44"W 130.86', N86°26'39"W 93.18' FROM THE MITERED INTERSECTION OF THE SOUTHERN RIGHT-OF-WAY OF GLENWOOD AVENUE AND THE WESTERN RIGHT-OF-WAY OF OF FAYETTEVILLE ROAD, SAID POINT BEING THE POINT OF BEGINNING.
THENCE N86°26'39"W 50.00' TO A POINT;
THENCE N02°59'08"E 50.00' TO A POINT;
THENCE S86°26'39"E 50.00' TO A POINT;
THENCE S02°59'08"W 50.00' TO THE POINT OF BEGINNING.
SAID PARCEL CONTAINS 0.06 ACRES (2,500 S.F.)

GEORGEANN PROPERTY CORPORATION
TM 15 173 08 098
DEED BOOK 7462, PG 111
583 FAYETTVILLE HIGHWAY
ATLANTA, GEORGIA 30316
DEKALB COUNTY

SITE: TDB55 LLC
BUN 812034
30' ACCESS & UTILITY EASEMENT
CREATED BY THIS OFFICE

ALL THAT TRACT OF LAND LYING, SITUATE AND BEING IN LAND LOT 173, 15TH DISTRICT, DEKALB COUNTY, STATE OF GEORGIA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS.
BEGINNING AT A POINT ON THE WESTERN RIGHT-OF-WAY OF FAYETTEVILLE ROAD, SAID POINT BEING S02°17'47"W 74.88', S10°34'06"W 91.82' (CHORD BEARING & DISTANCE), S40°33'44'W 63.95' FROM THE MITERED INTERSECTION OF THE SOUTHERN RIGHT-OF-WAY OF GLENWOOD AVENUE AND THE WESTERN RIGHT-OF-WAY OF OF FAYETTEVILLE ROAD, SAID POINT BEING THE POINT OF BEGINNING.
THENCE ALONG SAID RIGHT-OF-WAY OF FAYETEVILLE ROAD S40°33'44"W 38.32' TO A POINT;
THENCE LEAVING SAID RIGHT-OF-WAY N87°54'37"W 110.62' TO A POINT;
THENCE N02°59'08"E 30.00' TO A POINT;
THENCE S87°54'37"E 133.99' TO THE POINT OF BEGINNING.
SAID PARCEL CONTAINS 0.08 ACRES (3,669 S.F.)

GEORGEANN PROPERTY CORPORATION
TM 15 173 08 098
DEED BOOK 7462, PG 111
583 FAYETTVILLE HIGHWAY
ATLANTA, GEORGIA 30316
DEKALB COUNTY

Proposed
FAA 1-A CERTIFICATION

Date: October 13, 2017

Re: TBD55 LLC, 812034
583 Fayettville Highway, Atlanta
Dekalb County, Georgia 30316

I hereby certify to Crown Castle that the following Latitude and Longitude values for the center of the above-referenced self support tower are accurate to within +/- 15 feet horizontally; and that the following tower site elevation is accurate to within +/- 3 feet vertically.

NAD 83
Latitude: 33°44' 21.43" N.
Longitude: 84°18' 43.16" W.

Elevation at Ground: 1010.0' Feet NAVD 88

AS-BUILT SURVEY

LAND LOT 173
15th DISTRICT

FOR: CROWN CASTLE

SITE: TDB55 LLC
BUN: 812034
ADDRESS: 583 FAYETTVILLE HIGHWAY
ATLANTA, GA 30316
DEKALB COUNTY

CROWN CASTLE
1220 AUGUSTA DRIVE, SUITE 500 HOUSTON TEXAS 77057

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TEL: (706) 738-8771 FAX: (706) 736-6249

DRAWN BY: WRG | CHECKED BY: WRG | JOB #:

SURVEYOR'S NOTES
1. BASIS OF BEARING GEODETIC NORTH

2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.

3. THIS SURVEY DOES REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.

4. ALL SYMBOLS DEPICTED ARE NOT TO SCALE.

SURVEYOR'S CERTIFICATION
I HEREBY CERTIFY TO CROWN CASTLE AND FIDELITY NATIONAL TITLE INSURANCE COMPANY

WILLIAM R. GORE PROFESSIONAL LAND SURVEYING

WILLIAM R. GORE
LAND SURVEYOR - GA. 2502

Date: 7/24/2017

GEORGIA REGISTERED No. 2502 LAND SURVEYOR WILLIAM R. GORE

GENERAL NOTES:

1. THE GENERAL CONTRACTOR MUST VERIFY ALL EXISTING & PROPOSED DIMENSIONS, CONDITIONS, AND ELEVATIONS BEFORE STARTING WORK. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES.

2. IT IS THE INTENTION OF THESE DRAWINGS TO SHOW THE COMPLETED INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, TIES, FORM WORK, ETC., IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL ORDINANCES, TO SAFELY EXECUTE ALL WORK AND SHALL BE RESPONSIBLE FOR SAME. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES.

3. THE CONTRACTOR SHALL USE ADEQUATE NUMBER OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.

4. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND PRIME CONTRACTOR FURTHER AGREES TO INDEMNIFY AND HOLD DESIGN ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT.

5. SITE GROUNDING SHALL COMPLY WITH ENERGY GROUNDING STANDARDS, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT, THEY SHALL GOVERN. GROUNDING SHALL BE COMPLETED BEFORE ERECTION OF A NEW TOWER.

6. ALL WORK SHALL COMPLY WITH OSHA AND STATE SAFETY REQUIREMENTS. PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION, AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION. IF TEMPORARY LIGHTING AND MARKING IS REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION (FAA), IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE NECESSARY LIGHTS AND NOTIFY THE PROPER AUTHORITIES IN THE EVENT OF A PROBLEM.

7. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES OR ORDINANCES. THE MOST STRINGENT CODE WILL APPLY IN THE CASE OF DISCREPANCIES OR DIFFERENCES IN THE CODE REQUIREMENTS.

8. THE CONTRACTOR SHALL RESTORE ALL PROPERTY TO IT'S PRE-CONSTRUCTION CONDITIONS TO THE OWNER'S SATISFACTION. ANY DAMAGE TO ADJACENT PROPERTIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS TO PROTECT ALL EXISTING PROPERTY LINE MONUMENTATION, STRUCTURES, UTILITIES. ANY DAMAGE SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A REGISTERED SURVEYOR OR ENGINEER.

9. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AMPLE NOTICE TO THE BUILDING INSPECTION DEPARTMENT TO SCHEDULE THE REQUIRED INSPECTIONS. A MINIMUM OF 24 HOURS OF NOTICE SHOULD BE GIVEN THE BUILDING INSPECTION DEPARTMENTS HAVE REQUESTED THAT GROUPS OF TWO OR THREE SITES BE SCHEDULED AT ONE TIME IF POSSIBLE.

10. THE COMPLETE BID PACKAGE INCLUDES THESE CONSTRUCTION DRAWINGS ALONG WITH THE SPECIFICATIONS AND TOWER DRAWINGS/ANALYSIS. CONTRACTOR IS RESPONSIBLE FOR REVIEW OF THE TOTAL BID PACKAGE PRIOR TO BID SUBMITTAL. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL DRAWGINS & SPECIFICATIONS AND TO COORDINATE HIS WORK WITH THE WORK OF ALL OTHER TO ENSURE THAT WORK PROGRESSION IS INTERRUPTED AND DOES NOT INTERRUPT THE PROPERTY OWNER'S OPERATIONS AT ANY TIME.

11. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING UTILITIES WITHIN THE CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION. ALL CONNECTIONS TO EXISTING SYSTEMS SHALL BE COORDINATED WITH THE OWNER OR OWNER'S REPRESENTATIVE AND THE UTILITY COMPANY PRIOR TO EACH CONNECTION.

12. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON THE SITE AT ALL TIMES. SILT AND EROSION CONTROL SHALL BE MAINTAINED ON THE DOWNSTREAM SIDE OF THE SITE AT ALL TIMES. ANY DAMAGE TO ADJACENT PROPERTIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.

13. CLEARING OF TREES AND VEGETATION ON THE SITE SHOULD BE KEPT TO A MINIMUM. ONLY THE TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED. ANY DAMAGE TO PROPERTY OUTSIDE THE LEASED PROPERTY SHALL BE REPAIRED BY THE CONTRACTOR.

14. ALL SUITABLE BORROW MATERIAL FOR BACKFILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES PRIOR TO DISPOSAL.

15. SEEDING AND MULCHING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE SITE DEVELOPMENT. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING AN ADEQUATE COVER OF VEGETATION OVER THE SITE FOR A ONE YEAR PERIOD.

16. RECORD DRAWINGS: MAINTAIN A RECORD OF ALL CHANGES, SUBSTITUTIONS, ETC., BETWEEN THE WORK AS SPECIFIED AND INSTALLED. RECORD CHANGES ON A CLEAN SET OF CONTRACT DRAWINGS WHICH SHALL BE TURNED OVER TO THE CONSTRUCTION MANAGER UPON COMPLETION OF THE PROJECT.

17. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED LICENSES, FEES, INSPECTIONS, ETC. BUILDING PERMITS WILL BE OBTAINED BY CONTRACTOR & PAID FOR BY THE COUNTY.

18. CONSTRACTOR SHALL KEEP THE PROJECT SITE FREE FROM ACCUMULATION OF WASTE MATERIALS & RUBBISH AT ALL TIMES DURING CONSTRUCTION PERIOD; & SHALL REMOVE ALL WASTE MATERIALS & RUBBISH FROM PROJECT SITE AT THE COMPLETION OF WORK, EXCEPT THOSE SPECIFICALLY REQUIRED BY THE CONTRACT DOCUMENTS TO BE LEFT FOR THE OWNER'S MAINTENANCE. CONSTRUCTION WASTE MAY NEITHER BE BURNED NOR BURIED AND MUST BE TAKEN TO AN APPROVED LANDFILL AT CONTRACTOR EXPENSE.

19. SECURITY TO THE SITE SHALL BE MAINTAINED AT ALL TIMES.

20. CONTRACTOR IS RESPONSIBLE FOR THE CONDITION OF THE ALL CABINETS AND /OR SHELTER DURING AND AFTER CONSTRUCTION. CABINETS AND /OR SHELTERS SHALL NOT BE USED FOR STORAGE OF TOOLS, CONSTRUCTION MATERIAL OR EQUIPMENT. CONTRACTOR SHALL ENSURE THE CABINETS AND /OR SHELTERS IS CLEANED AT THE CONCLUSION OF CONSTRUCTION. SHELTER FLOORS SHALL BE CLEANED, WAXED AND BUFFED TO SHINE.

FOUNDATION EXCAVATION AND GRADING NOTES:

1. ALL CUT AND FILL SLOPES SHALL BE 2 : 1 MAXIMUM.

2. ALL EXCAVATIONS ON WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIALLY HORIZONTAL ON UNDISTURBED AND UNFROZEN SOIL AND BE FREE FROM LOOSE MATERIAL AND EXCESS GROUND WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED IF REQUIRED.

3. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC MATERIAL. IF SOUND SOIL IS NOT REACHED AT THE DESIGNATED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION SHALL BE FILLED WITH CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION.

4. ANY EXCAVATION OVER THE REQUIRED DEPTH SHALL BE FILLED WITH EITHER MECHANICALLY COMPACTED GRANULAR MATERIAL OR CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS.

5. AFTER COMPLETION OF THE FOUNDATION AND OTHER CONSTRUCTION BELOW GRADE, AND BEFORE BACK FILLING, ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH.

6. ALL BACKFILLING SHALL (1) USE APPROVED MATERIALS CONSISTING OF EARTH, LOAM, SANDY CLAYS, SAND AND GRAVEL, OR SOFT SHALE, (2) BE FREE FROM CLODS OR STONES OVER 2 1/2" MAXIMUM DIMENSIONS, AND (3) BE PLACED IN LAYERS AND COMPACTED.

7. SITE FILL MATERIAL AND FOUNDATION BACK FILL SHALL BE PLACED IN LAYERS, MAXIMUM 6" DEEP BEFORE COMPACTION. EACH LAYER SHALL BE SPRINKLED IF REQUIRED AND COMPACTED BY HAND OR MACHINE TAMPERS TO 95% OF MAXIMUM DENSITY, AT THE OPTIMUM MOISTURE CONTENT OF ±2% AS DETERMINED BY ASTM DESIGNATION D-698, UNLESS OTHERWISE APPROVED. SUCH BACK FILL SHALL NOT BE PLACED BEFORE 3 DAYS AFTER PLACEMENT OF CONCRETE.

8. THE FOUNDATION AREA SHALL BE GRADED TO PROVIDE WATER RUNOFF AND PREVENT WATER FROM STANDING. THE FINAL GRADE SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE FOUNDATION AREA (UP TO 1 FOOT OUTSIDE THE FENCE OR GROUND SYSTEM PERIMETER) AND SHALL BE COVERED WITH A GEOTEXTILE FABRIC MIRAFI 500X OR APPROVED EQUAL TO PREVENT REOCCURRENCE OF VEGETATIVE GROWTH, AN THEN SHALL BE COVERED WITH 4" DEEP COMPACTED STONE OR GRAVEL.

9. THE CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, CITY, COUNTY, AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS FROM LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.

10. FILL PREPARATION: REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIAL FROM GROUND SURFACE PRIOR TO PLACING FILLS. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SO FILL MATERIAL WILL BOND WITH EXISTING SURFACE. WHEN SUBGRADE OR EXISTING GROUND SURFACE TO RECEIVE FILL HAS A DENSITY LESS THAN THAT REQUIRED FOR FILL, BREAK UP GROUND SURFACE TO REQUIRED DEPTH, PULVERIZE, MOISTURE CONDITION OR AERATE SOIL, AND RECOMPACT TO REQUIRED DENSITY.

11. REPLACE EXISTING GRAVEL SURFACING ON AREAS FROM WHICH GRAVEL SURFACING IS REMOVED DURING CONSTRUCTION OPERATIONS. GRAVEL SURFACING SHALL BE REPLACED TO MATCH EXISTING ADJACENT GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS. SURFACES AND GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED IF INJURIOUS AMOUNTS OF EARTH, ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ALL ADDITIONAL GRAVEL RESURFACING MATERIAL AS REQUIRED. BEFORE GRAVEL SURFACING IS REPLACED, SUBGRADE SHALL BE GRADED TO CONFORM TO REQUIRED SUBGRADE ELEVATIONS, AND LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED. DEPRESSIONS IN THE SUBGRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL SHALL NO BE USED FOR FILLING DEPRESSIONS IN THE SUBGRADE.

12. PROTECT EXISTING GRAVEL SURFACING AND SUBGRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING OR OTHER SUITABLE MATERIALS DESIGNED TO SPREAD EQUIPMENT LOADS. REPAIR ANY DAMAGE TO EXISTING GRAVEL SURFACING OR SUBGRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTOR'S OPERATIONS.

13. ENSURE POSITIVE DRAINAGE DURING AND AFTER COMPLETION OF CONSTRUCTION.

14. RIPRAP SHALL BE CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY, AND FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCE.

15. REMOVE ALL ORGANICS, ROCKS GREATER THAN 3", UNUSED FILL AND OTHER DEBRIS TO AN AREA OFF SITE IN A LEGAL MANNER

GENERAL EROSION & SEDIMENT CONTROL NOTES:

1. PROJECT SITE IS NOT LOCATED WITHIN 100-YR FLOODPLAIN.

2. COMPOUND SHALL BE RELATIVELY FLAT. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE.

3. DISTURBED AREAS LEFT IDLE SHALL BE STABILIZED WITH TEMPORARY VEGETATION AFTER 14 DAYS; AFTER 30 DAYS PERMANENT VEGETATION SHALL BE ESTABLISHED.

4. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITIES, THE LIMITS OF THE DISTURBANCE SHALL BE CLEARLY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS.

5. THE CONSTRUCTION OF THE SITE WILL INITIATE WITH THE INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION. CONTRACTOR SHALL CALL APPROPRIATE COUNTY FOR AN INSPECTION OF SOIL EROSION CONTROL MEASURES PRIOR TO BEGIN GRADING ACTIVITY. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL UPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED.

6. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE SYSTEMS. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

7. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR ELEGTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

8. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS WITHIN 12" OF THE TOP OF THE SILT FENCE.

9. FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED.

10. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED WITH SEEDING.

11. CONTRACTOR SHALL REMOVE ALL EROSION CONTROL MEASURES AFTER COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER.

12. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-SIDTURBING ACTIVITIES.

13. ALL CUT AND FILL SLOPES MUST BE SURFACED ROUGHENED AND VEGETATED WITHIN SEVEN (7) DAYS OF THEIR CONSTRUCTION.

14. ALL FILL SLOPES WILL HAVE SILT FENCES AT THE TOE OF THE SLOPE.

15. ALL SEDIMENT AND EROSION CONTROL MEASURES WILL BE CHECKED DAILY AND ANY DEFICIENCIES NOTED WILL BE CORRECTED BY THE END OF EACH DAY. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY AFTER ON-SITE INSPECTION BY THE ISSUING AUTHORITY.

16. THE ONLY MATERIAL TO BE BURIED ON SITE IS VEGETATED MATERIAL.

17. A 25' MIN. UNDISTURBED VEGETATION BUFFER ADJ. TO ALL RUNNING STREAMS AND CREEKS WILL BE LEFT AND MAINTAINED.

18. MAINTENANCE STATEMENT: EROSION CONTROL MEASURES WILL BE INSPECTED AT LEAST WEEKLY, AFTER EACH RAIN AND REPAIRED BY THE GENERAL CONTRACTOR.

19. ADDITIONAL EROSION CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTIONS.

20. CONSTRUCTION EXIT - TO REDUCE OR ELIMINATE THE TRANSPORT OF MUD FROM THE CONSTRUCTION AREA ONTO PUBLIC RIGHT-OF-WAYS, STREETS, ALLEYS, SIDEWALKS, OR PARKING AREAS. IMMEDIATELY REMOVE MUD AND DEBRIS TRACKED OR SPILLED ONTO ROADWAYS.

21. TYPE C SEDIMENT BARRIER - TO PREVENT ANY SEDIMENT CARRIED BY SHEET FLOW FROM LEAVING THE SITE AND ENTERING NATURAL DRAINAGE WAYS OR STORM DRAINAGE SYSTEMS.

22. DISTURBED AREA STABILIZATION (TEMPORARY) - TO ESTABLISH A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS ON DISTURBED AREAS.

23. DISTURBED AREA STABILIZATION (PERMANENT) - TO ESTABLISH A PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, VINES, GRASSES, SOD, OR LEGUMES ON DISTURBED AREAS.

24. DISTURBED AREA DUST CONTROL- TO CONTROL THE SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADWAYS, AND SIMILAR SITES.

GEORGIA REGISTERED No 23000 PROFESSIONAL ENGINEER PATRICK W MARSHALL 2/8/18

P. MARSHALL & ASSOCIATES

CROWN CASTLE

NUM	DATE	DESCRIPTION:
A	10.23.17	PRELIMS
B	10.25.17	PRELIMS-TOWER HEIGHTS- LEASE AREA- CARRIER AREA
C	11.7.17	PRELIMS-COMPOUND LOCATION
D	02.08.18	ZONING

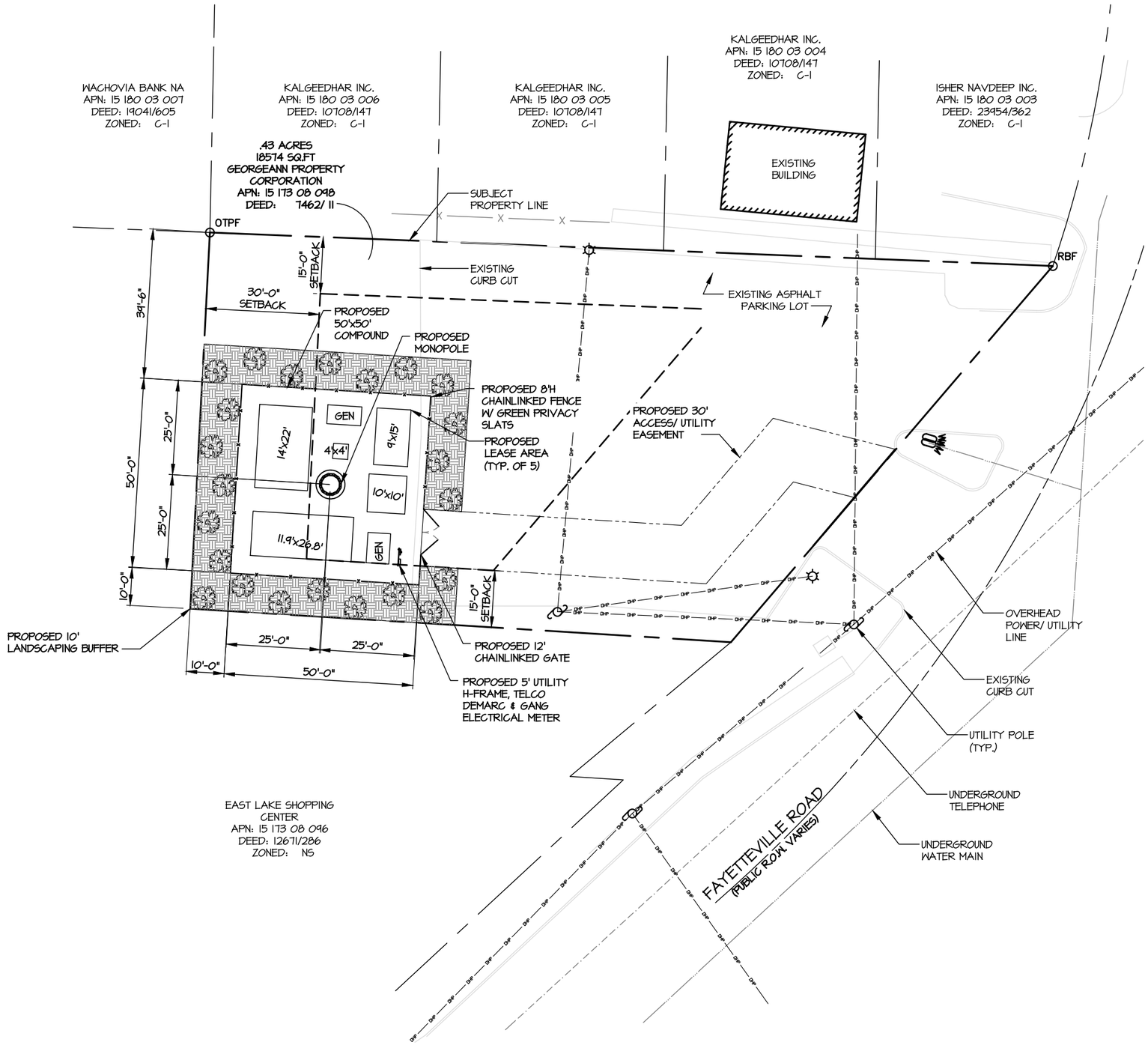
SITE I.D.: 812034-DEDEDG RELO

GENERAL NOTES

DESIGNED: LF
DRAWN: LF
CHECKED: PWM

JOB #: CC038

C-1



PROPERTY LINES & SITE PLAN SHOWN FOR REFERENCE. CONTENTS OF SURVEY PROVIDED BY GEOLINE

COMPOUND PLAN

SCALE: 1"=300'

GRAPHIC SCALES

300 0 300

SCALE: 1" = 300'

NORTH ARROW

N W E S

GEORGIA REGISTERED No. 23000 PROFESSIONAL ENGINEER PATRICK W MARSHALL 2/8/18

P. MARSHALL & ASSOCIATES

CROWN CASTLE

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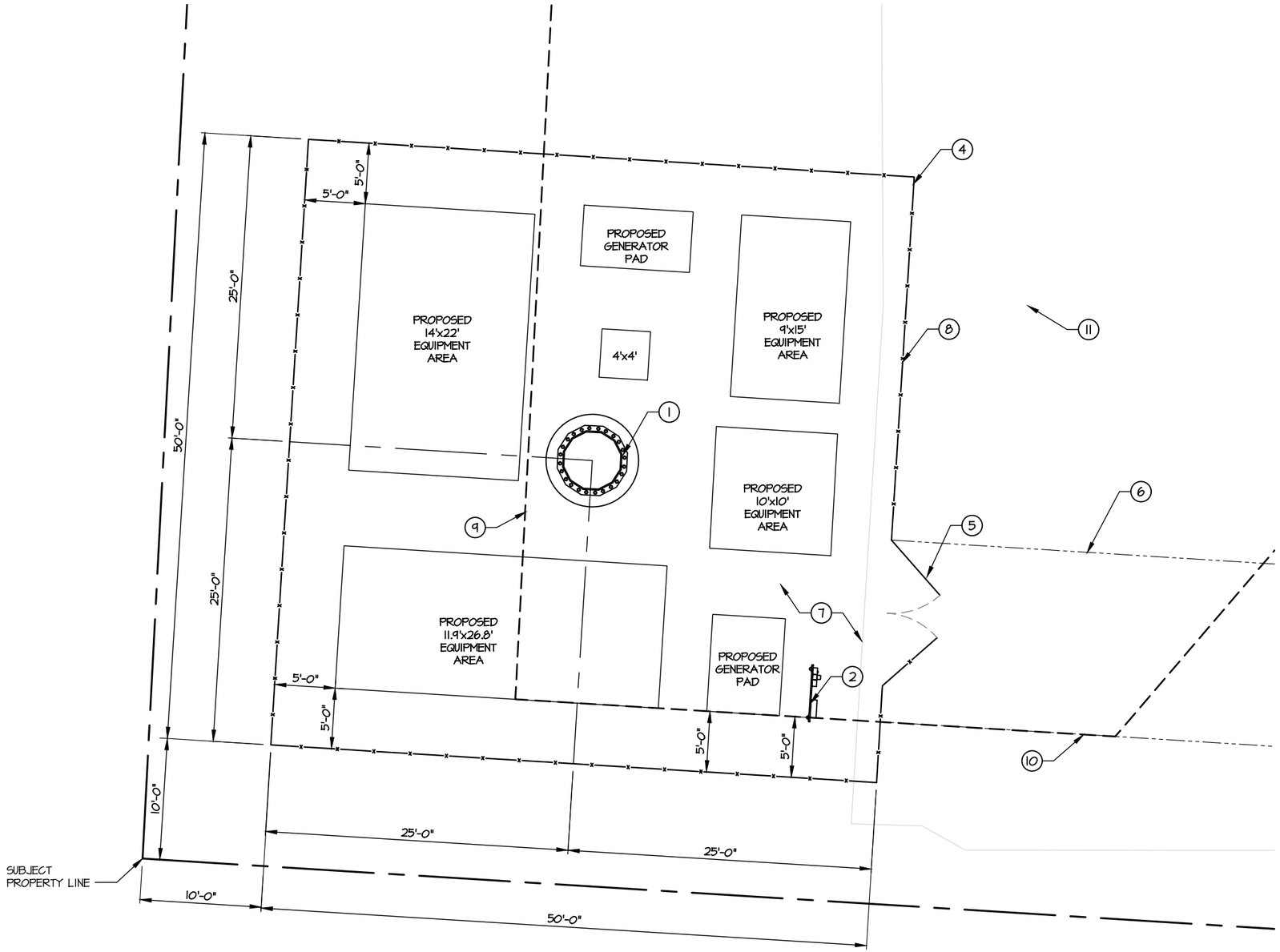
SITE I.D.: 812034-DEDEDG RELO

OVERALL SITE PLAN

DESIGNED: LF
DRAWN: LF
CHECKED: PWM

JOB #: CC038

C-2



DETAILED SITE PLAN

SCALE: 1"=10'

KEY NOTES: (X)

1. PROPOSED MONOPOLE.
2. PROPOSED UTILITY H-FRAME W/ 3-GANG METER & 36"x36"TELCO BOX DEMARC.
3. PROPOSED CARRIER LEASE AREA (TYP OF 5)
4. PROPOSED 50' X 50' COMPOUND.
5. PROPOSED 12'-0" CHAINLINK GATE.
6. PROPOSED 30' ACCESS/ UTILITY EASEMENT.
7. PROPOSED GRAVEL COMPOUND SURFACE.
8. PROPOSED CHAIN LINK FENCE WITH GREEN PRIVACY SLATS
9. 30'-0" SETBACK.
10. 15'-0" SETBACK.
11. ROPOSED 10' LANDSCAPE BUFFER

GRAPHIC SCALES

10 0 10

SCALE: 1" = 10'

NORTH ARROW

N W E S

GEORGIA REGISTERED No. 23000 PROFESSIONAL ENGINEER PATRICK W MARSHALL 2/8/18

PM&A
P. MARSHALL & ASSOCIATES

CROWN CASTLE

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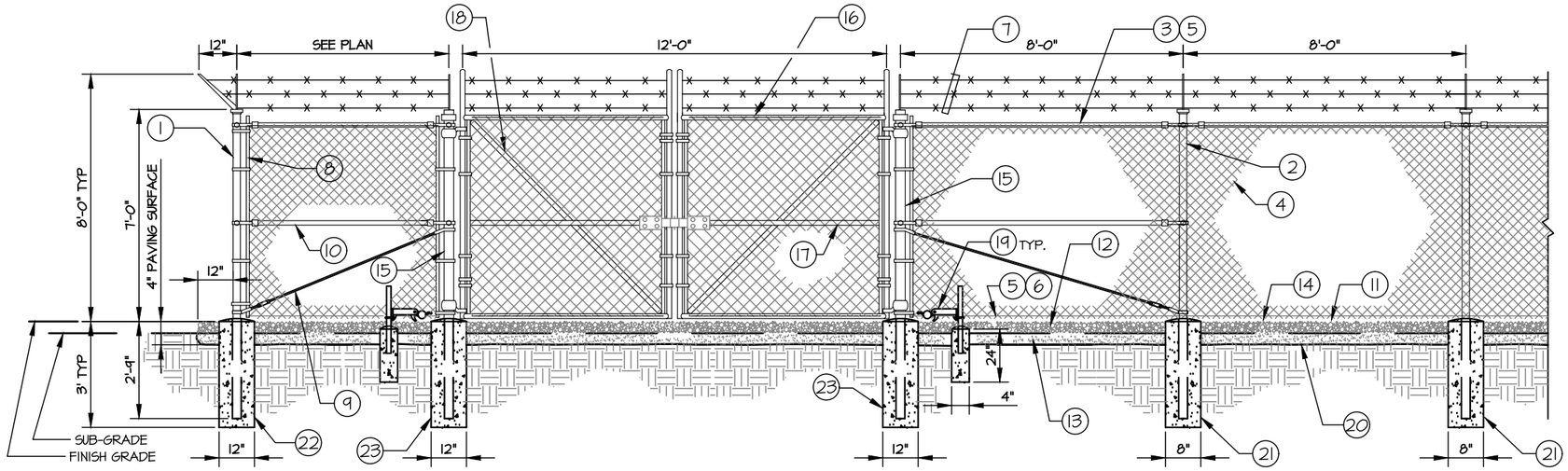
SITE I.D.: 812034-DEDEDG RELO

DETAILED SITE PLAN

DESIGNED: LF
DRAWN: LF
CHECKED: PWM

JOB #: CC038

C-3



STANDARD FENCE ELEVATION DETAILS

NOT TO SCALE

SITE FENCING

INSTALL GREEN PRIVACY SLATS IN PROPOSED CHAIN-LINKED FENCE

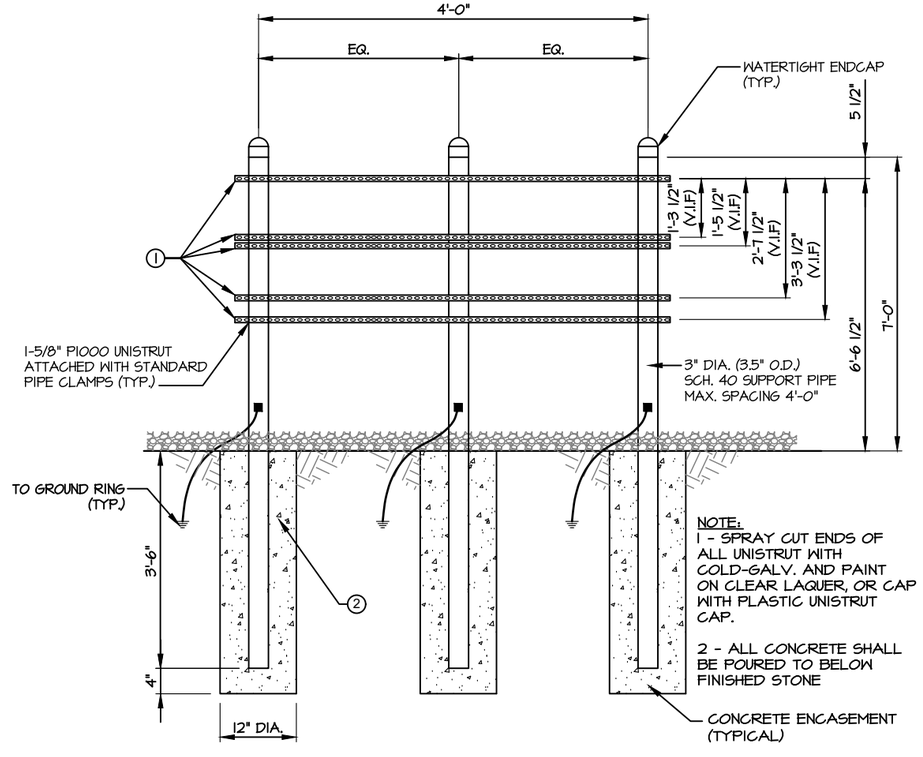
SITE SIGNAGE NOTE

INSTALL (1) ON ALL SIDES OF SITE FENCE

RED/ WHITE BACKGROUND WITH CONTRASTING LETTERING.

STE SIGNAGE

NOT TO SCALE



H-FRAME ELEVATION

NOT TO SCALE

KEY NOTES:

1. CORNER, END OR PULL POST 3" NOMINAL SCHEDULE 40 PIPE.
2. LINE POST: 2-1 /2" SCHEDULED 40 PIPE, PER ASTM-F1083. LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 8'-0" O.C.
3. TOP RAIL & BRACE RAIL: 1-1 /2" PIPE PER ASTM-F1083.
4. FABRIC: 9 GA CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392. ALL PIES TO BE GALVANIZED.
5. TIE WIRE: MINIMUM 11 GA. GALVANIZED STEEL AT POSTS AND RAILS A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAXIMUM 24" INTERVALS.
6. TENSION WIRE: 9 GA. GALVANIZED STEEL
7. BARBED WIRE: DOUBLE STRAND 12-1 /2" O.D. TWISTED WIRE TO MATCH WITH FABRIC 14 GA., 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.
8. STRETCHER BAR
9. 3 /8" DIAGONAL ROD WITH GALVANIZED STEEL TURNBUCKLE OR DIAGONAL THREADED ROD.
10. FENCE CORNER POST BRACE: 1-5 /8" DIAMETER EACH CORNER EACH WAY.
11. 1-1 /2" MAXIMUM CLEARANCE FROM GRADE.
12. FINISHED GRADE
13. MATERIAL SUB-GRADE
14. FINISHED GRADE SHALL BE UNIFORM AND LEVEL.
15. GATE POST 4" SCHEDULE 40 PIPE (FOR GATE WIDTHS UP THRU 7' OR 14' FOR DOUBLE SWING GATES) PER ASTM-F1083.
16. GATE FRAME: 1-1 /2' PIPE, PER ASTM-F1083.
17. GATE FRAME: 1-5 /8" DIAMETER PIPE, PER ASTM-F1083.
18. GATE DIAGONAL GALVANIZED STEEL 1-1 /2" PIPE.
19. DUCK BILL OPEN GATE HOLDER. VERIFY LOCATION IN FIELD PRIOR TO INSTALLATION.
20. GEOTEXTILE FABRIC
21. LINE POST: CONCRETE FOUNDATION (2000 PSI)
22. CORNER POST: CONCRETE FOUNDATION (2000 PSI)
23. GATE POST: CONCRETE FOUNDATION (2000 PSI)

GENERAL NOTES:

A. INSTALL FENCE PER ASTM F-567

B. INSTALL SWING GATE PER ASTM F-900

C. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED IF REQUIRED.

D. POST & GATE PIPE SIZES ARE INDUSTRY STANDARDS.
- D.A. ALL PIPES TO BE 1-1/ 2" GALVANIZED (HOT DIP, ASTM A120 GRADE "A" STEEL).
- D.B. ALL GATE FRAMES SHALL BE WELDED.
- D.C. ALL WELDING SHALL BE COATED WITH (3) COATS OF COLD GALVANIZED STEEL (OR EQUAL).

E. ALL OPEN POSTS SHALL HAVE END-CAPS

F. USE GALVANIZED HOG-RING WIRE TO MOUNT ALL SIGNS.

G. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE FABRIC.

H. CONTRACTOR SHALL PROVIDE AND INSTALL STYMIE-LOCK LOCKING MECHANISM ON 12'-0" GATE. COORDINATE W/ PM FOR FINAL COMBINATION CODE

GEORGIA
REGISTERED
No. 23000
PROFESSIONAL
ENGINEER
PATRICK W MARSHALL
7/18/18

P. MARSHALL & ASSOCIATES

CROWN CASTLE

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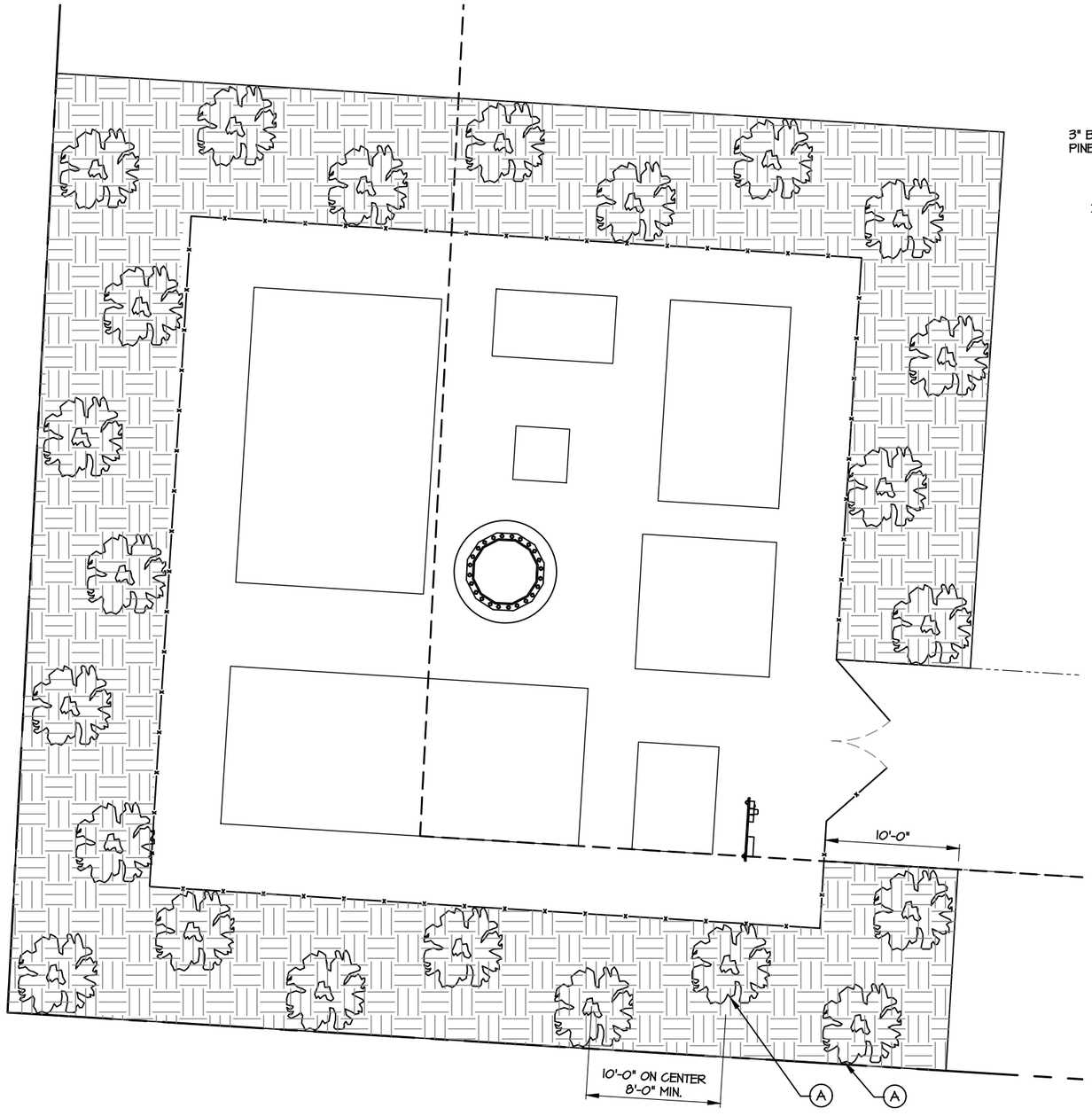
SITE I.D. 812034-DEDEDG RELO

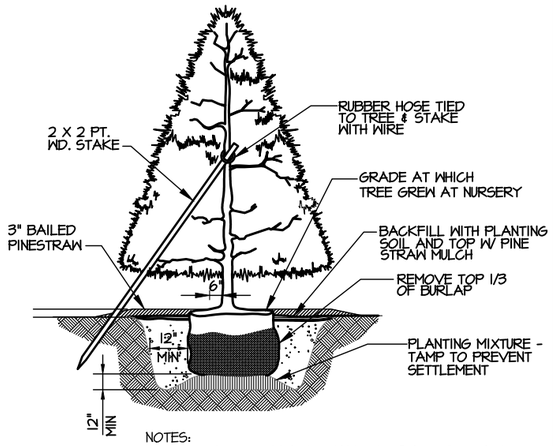
CONSTRUCTION DETAILS

DESIGNED: LF
DRAWN: LF
CHECKED: PWM

JOB #: CC038

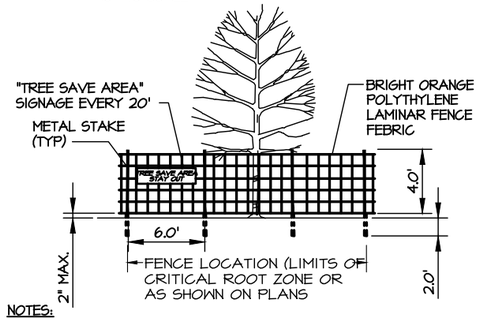
C-4





NOTES:
1. TOP OF ROOT FLARE SHALL BE 2" ABOVE GRADE.
2. NO MULCH SHOULD BE WITHIN 6" OF THE BASE OF THE TRUNK.

TREE PLANTING DETAIL
NOT TO SCALE



NOTES:
1) ALL PARKING WILL OCCUR ON EXISTING DRIVE.
2) THERE WILL BE NO BURNING OR BURIAL OF DEBRIS ON SITE.
3) ALL BUFFERS AND TREE SAVE AREAS ARE TO BE CLEARLY IDENTIFIED WITH FLAGGING AND/OR FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.

TREE PROTECTION DETAIL
NOT TO SCALE

GENERAL NOTES:

1. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE.
2. ALL PLANTS MUST BE CONTAINER-GROWN OR BALLED AND BURLAPPED AS SPECIFIED.
3. ALL TREES MUST BE STRAIGHT TRUNKED, FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
4. ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER'S REPRESENTATIVE BEFORE, DURING, AND AFTER INSTALLATION.
5. ALL TREES MUST BE GUYED OR STAKED AS SHOWN.
6. ALL PLANTS AND PLANTING AREAS MUST BE COMPLETELY MULCHED AS SPECIFIED.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING COURSE OF THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE LANDSCAPE CONSTRUCTION.
8. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.
9. THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING (INCLUDING, BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZATION, ETC.) OF PLANTING AREAS UNTIL THE WORK IS ACCEPTED IN TOTAL BY THE ENGINEER'S REPRESENTATIVE.
10. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT (1) YEAR BEGINNING AT THE DATE OF TOTAL ACCEPTANCE. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD.
11. THE ENGINEER'S REPRESENTATIVE WILL APPROVE THE STAKED LOCATION OF ALL PLANT MATERIAL PRIOR TO INSTALLATION.
12. AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
13. ANY PLANT MATERIAL THAT DIES, TURNS BROWN OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, SIZE AND MEETING ALL SPECIFICATIONS.
14. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK", LATEST EDITION, REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.

ARBORIST NOTES:

1. NO SPECIMEN TREES EXISTING ON THE SITE.
2. NO PLANTING MATERIAL WILL BE STORED ON SITE.
3. PLANTS AND ALL SUBSTITUTION MUST BE SELECTED FROM APPROVED LIST BY METROPOLITAN PLANNING COMMISSION GUIDELINES, TREE CONSERVATION & PLATING PLAN
4. AN AVERAGE AT LEAST TWO (2) ROWS OF EVERGREEN TREES OR SHRUBS CAPABLE OF FORMING A CONTINUOUS HEDGE WITHIN 2 YEARS AT LEAST SIX (6) FEET IN HEIGHT AND SCREENING THE BASE OF THE TOWER FROM PUBLIC VIEW SHALL BE PLANTED AND MAINTAINED IN HEALTHY CONDITION. A BREAK IN THE HEDGE, NOT TO EXCEED TWELVE (12) FEET IN WIDTH, SHALL BE ALLOWED FOR ACCESS FOR MAINTENANCE PERSONNEL AND VEHICLES.
5. NO TREE SHALL BE PLACED CLOSER THAN 8' APART. PLAN SHOW 10' ON CENTER.

PLANT LIST:

MARK	QTY.	COMMON NAME	BOTANICAL NAME	SIZE/REMARKS
(A)	23	LEYLAND CYPRESS	CUPRESSUS LEYLANDII	6' TALL AT PLANTING W/ A 3" CALIPER

TOTAL AREA OF LANDSCAPE BUFFER: 2256.3 SF

GRAPHIC SCALES
10 0 10
SCALE: 1" = 10'

NORTH ARROW


GEORGIA
REGISTERED
No. 23000
PROFESSIONAL
ENGINEER
PATRICK W MARSHALL
2/8/18

PM&A
P. MARSHALL & ASSOCIATES

CROWN CASTLE

NUM	DATE	DESCRIPTION:
A	10.23.17	PRELIMS
B	10.25.17	PRELIMS-TOWER HEIGHTS- LEASE AREA- CARRIER AREA
C	11.7.17	PRELIMS-COMPOUND LOCATION
D	02.08.18	ZONING

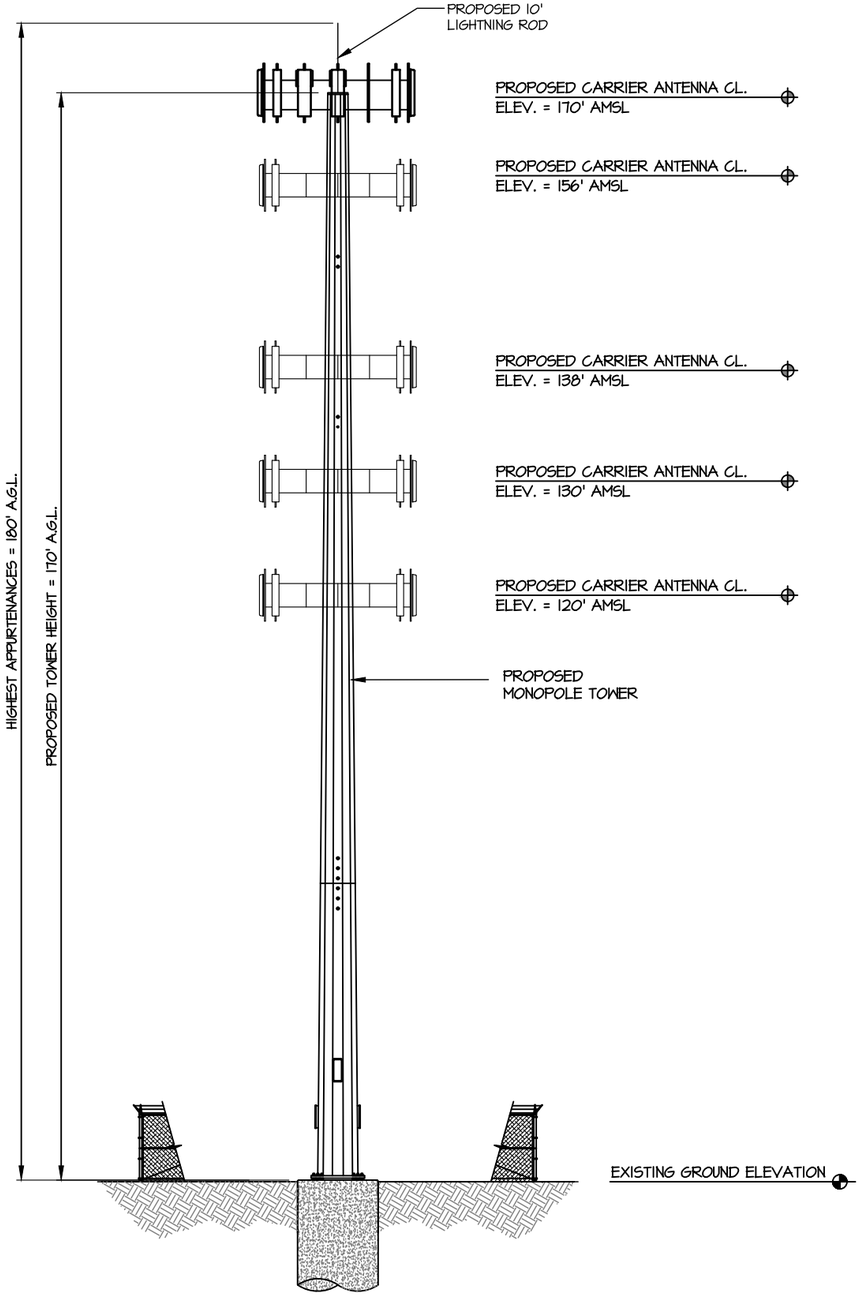
SITE I.D.: 812034-DEDEDG RELO

LANDSCAPING PLAN

DESIGNED: LF
DRAWN: LF
CHECKED: PWM

JOB #: CC038

C-5



TOWER ELEVATION
SCALE: NTS

P. MARSHALL & ASSOCIATES

CROWN CASTLE

NUM	DATE	DESCRIPTION:
A	10.23.17	PRELIMS
B	10.25.17	PRELIMS–TOWER HEIGHTS– LEASE AREA– CARRIER AREA
C	11.7.17	PRELIMS–COMPOUND LOCATION
D	02.08.18	ZONING

SITE I.D.: 812034-DEDEDG RELO

TOWER ELEVATION

DESIGNED: LF
DRAWN: LF
CHECKED: PWM

JOB #: CC038

C-6

GEORGIA REGISTERED No. 23000 PROFESSIONAL ENGINEER PATRICK W MARSHALL

2/8/18

William R. Gore Professional Land Surveyors, Inc.
1804 Central Avenue
Augusta, Georgia 30904

Telephone: 706.738.8771 **FAX: 706.736.6249** ***rgore@goresurveyinc.com***

SITE: TDB55 LLC
BUN 812034
FEE PARCEL
CREATED BY THIS OFFICE

ALL THAT TRACT OF LAND LYING, SITUATE AND BEING IN LAND LOT 173, 15TH DISTRICT, DEKALB COUNTY, STATE OF GEORGIA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS.
BEGINNING AT A #4 REBAR FOUND, SAID REBAR BEING S02°17'47"W 74.88', S10°34'06"W 91.82'(CHORD BEARING & DISTANCE) FROM THE MITERED INTERSECTION OF THE SOUTHERN RIGHT-OF-WAY OF GLENWOOD AVENUE AND THE WESTERN RIGHT-OF-WAY OF OF FAYETTEVILLE ROAD, SAID REBAR BEING THE POINT OF BEGINNING.
THENCE ALONG SAID RIGHT-OF-WAY OF FAYETTEVILLE ROAD S40°33'44"W 130.86' TO A #4 REBAR FOUND;
THENCE LEAVING SAID RIGHT-OF-WAY N86°26'39"W 143.18' TO A #4 REBAR FOUND;
THENCE N02°59'08"E 99.51' TO AN OPEN TOP PIPE FOUND;
THENCE S87°43'38"E 222.98' TO THE POINT OF BEGINNING.
SAID PARCEL CONTAINS 0.43 ACRES (18,574 S.F.)

GEORGEANN PROPERTY CORPORATION
TM 15 173 08 098
DEED BOOK 7462, PG 111
583 FAYETTEVILLE ROAD
ATLANTA, GEORGIA 30316
DEKALB COUNTY

DeKalb County
GEORGIA

404.371.2155 (o)
404.371.4556 (f)
DeKalbCountyGa.gov

Clark Harrison Building
330 W. Ponce de Leon Ave
Decatur, GA 30030

DEPARTMENT OF PLANNING & SUSTAINABILITY

****

I HAVE READ CHAPTER 27, SECTION 4.2.1 OF THE DEKALB COUNTY ORDINANCE AND AFFIRM THAT THE PROPOSED

170' tower (~~XXX~~ 180' including antenna) located at 583 FAYETTEVILLE ROAD
(Cell Tower/Antenna/Equipment) (Location Address)

will comply with all requirements of this ordinance.

Name (printed): ELLEN W. SMITH, ESQ.

Company/Contractor: HOLT NEY ZATCOFF & WASSERMAN, LLP
ON BEHALF OF
GLOBAL SIGNAL ACQUISITIONS IV, LLC D/B/A CROWN CASTLE

Address: 100 GALLERIA PARKWAY, SUITE 1800, ATLANTA, GEORGIA 30339

Telephone #: (770) 661-1216

Name of Property Owner: GLOBAL SIGNAL ACQUISITIONS IV, LLC C/O FRED RAPOSO

Address: 800 AVALON BLVD., SUITE 700, ALPHARETTA, GEORGIA 30009

Telephone #: (678) 409-8582

****

District _____ Land Lot _____ Block _____ Parcel _____ Zoning District _____

Building Permit Application#: _____

Height of Monopole/Equipment: _____

Approved/Denied: _____ Date: _____
Zoning Officer/Zoning Plans Reviewer

1/2017

HOLT NEY ZATCOFF & WASSERMAN, LLP
ATTORNEYS AT LAW
100 GALLERIA PARKWAY, SUITE 1800
ATLANTA, GEORGIA 30339-5960
TELEPHONE 770-956-9600 FACSIMILE 770-956-1490

Ellen W. Smith
e-mail esmith@hnzw.com

February 8, 2018

BY HAND DELIVERY
DeKalb County Department of Planning & Sustainability
c/o Ms. Betsy Berns Stark
330 W. Ponce de Leon Avenue
Third Floor
Decatur, Georgia 30030

Re: **Application**: Special Administrative Permit ("***SAP***") and Administrative Variance Request
Applicant & Owner: Global Signal Acquisitions IV, LLC d/b/a Crown Castle
Property: 583 Fayetteville Road

LETTER OF INTENT

Ladies and Gentlemen:

Owner seeks the following in connection with its proposal to relocate a cell tower from its existing location at 1839 Second Avenue, Atlanta, Georgia to the Property:

(i) a Special Administrative Permit in accordance with Chapter 27, Section 4.2.1.F.5 of the DeKalb County Zoning Ordinance (the "Ordinance");
(ii) an administrative reduction in the size of the compound area surrounding the tower in accordance with Ordinance Section 4.2.1.H.a.ii from 80' x 80' to 50' x 50'.

Background

Applicant is an industry leader in the ownership and operation of infrastructure that facilitates wireless and broadband communications. Applicant owns an existing wireless tower (the "***Existing Tower***") at 1839 Second Avenue, Atlanta, Georgia 30032 (the "***Existing Site***"). The Existing Tower supports Verizon, Sprint (Clearwire), T-Mobile and AT&T Mobility. Cousins Properties owns the Existing Site and has asked Applicant to relocate the Existing Tower to allow Cousins Properties to redevelop the Existing Site and surrounding properties.

To comply with all of the carriers' requirements to be in a position to continue to maintain and provide service to their customer, the relocation site must be within three-tenths (3/10) of a mile of the Existing Tower. As a result, relocation opportunities for a new wireless tower in close proximity to the Existing Site that complies with the provisions of the Zoning

Ordinance of DeKalb County (the "***Zoning Ordinance***") requirements are extremely difficult. There are very few properties in the area that are zoned C-1 or which allow a tower (either by special use permit or by right with certain limitations) under the Zoning Ordinance. Additionally, a number of parcels (not only the Existing Site) are owned by Cousins and are being assembled and targeted for redevelopment and, therefore, are unavailable for the tower relocation.

The Property is an approximately 0.14 miles (850 feet) from the Existing Site, and meets the carriers' requirements. More importantly to the County, the Property is zoned C-1 and approval of a monopole tower on the Property is administrative pursuant to Zoning Ordinance § 4.2.57.F.1.b so long as Applicant obtains the variance that it requests herein for the reduction of the compound size and a variance from certain setbacks (which is has applied for concurrently with this application from the ZBA).

SAP Documentation

In support of this SAP Application, Applicant hereby includes the following documents in accordance with Zoning Ordinance Section 4.2.1.F.5:

(1) SAP Application form;
(2) Copy of Limited Warranty Deed evidencing Applicant's ownership of the Property;
(3) Zoning Drawings;
(4) Inventory of existing towers in DeKalb County (subsection 5.(d)(iv))[1] and closest tower proximity map (demonstrating no tower available for collocation within 3/10 of a mile needed for carrier services); and
(5) Structural Integrity Analysis.

In short, this proposed relocation tower meets all of the general standards and design requirements set forth in the Zoning Ordinance except for the variances identified above.

Reduction of Compound

Zoning Ordinance Section 4.2.1.H.1.a.ii requires that the compound area surrounding the proposed tower be at least 80' x 80' to accommodate accessory equipment for requisite collocations. Because the proposed tower height is 170 feet, the Zoning Ordinance requires that it be designed to support 4 carriers (and that is the number of replacement carriers proposed to be collocated on this tower from the Existing Tower). As shown on page 2 of the enclosed structural analysis, the tower is designed to support 5 carriers. And, as shown on sheet C-3 of the zoning drawings enclosed, there is sufficient ground space within the proposed 50' x 50' compound for the four carriers to be relocated and another should there be a fifth. Accordingly,

[1] Because Applicant's proposed tower is a replacement of an existing tower serving 4 carriers, Applicant is not supplying coverage maps. If the Existing Tower is removed, all four carriers will lose all service they currently provide. There is no alternative existing tower for collocation within the search area required for service.

Applicant requests that the Director waive the additional 30 square feet of compound area requirement as the proposed site is of sufficient size to accommodate the proposed collocations. This request is supported by the fact that the Property is only 100 feet wide from north to south.

Applicant respectfully requests the issuance of an SAP and administrative approval of its request to reduce the compound to 50' x 50'. The Application, this Letter of Intent and accompanying documents support these requests. Applicant is happy to answer questions or provide any additional information that the Department may have with regard to this Application.

Thank you for your consideration.

Sincerely,
HOLT NEY ZATCOFF & WASSERMAN, LLP

Ellen W. Smith

EWS/ews

2017175378 DEED BOOK 26640 Pg 374
Real Estate Transfer Tax $365.00
Filed and Recorded:
12/8/2017 5:00:02 PM
Debra DeBerry
Clerk of Superior Court
DeKalb County, Georgia

STATE OF GEORGIA
COUNTY OF DeKalb

Linear Settlement Services
ATTN: Commercial Recording
127 John Clarke Road
Middletown, RI 02842

The document was prepared by and after recording return to:

DYKEMA GOSSETT PLLC
Milo R. Madole, Esq.
39577 Woodward Ave.
Suite 300
Bloomfield Hills, MI 48304

LIMITED WARRANTY DEED

This indenture, made as of the 30th day of November, 2017, by and between **GEORGEANN PROPERTY CORPORATION**, a Georgia corporation, with an address of 4051 Ridgehurst Drive SE, Smyrna, Georgia 30080, as party of the first part, hereinafter called **Grantor**, and **GLOBAL SIGNAL ACQUISITIONS IV LLC**, a Delaware limited liability company, with an address of 2000 Corporate Drive, Canonsburg, Pennsylvania 15317, as party of the second part, hereinafter called **Grantee** (the words "**Grantor**" and "**Grantee**" to include their respective heirs, successors and assigns where the context requires or permits).

WITNESSETH:

Grantor, for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable considerations in hand paid, the receipt of which are hereby acknowledged, has granted, bargained, sold, aliened, conveyed and confirmed, and by these presents does grant, bargain, sell, alien, convey and confirm unto the said Grantee, all that tract or parcel of real property which is more specifically described on the attached **EXHIBIT "A"** attached hereto and made a part hereof ("Property").

To have and to hold the said tract or parcel of land, with all and singular the rights, members and appurtenances thereof, to the same being, belonging, or in anywise appertaining, to the only proper use, benefit and behoof of the said Grantee and the successors and assigns of Grantee forever in fee simple.

The Property is conveyed subject to the matters set forth on **EXHIBIT "B"** attached hereto and by this reference made a part hereof.

BUN: 830619
4848-8006-0245.2
101460\002952

And the said Grantor will warrant and forever defend the right and title to the Property unto the said Grantee against the lawful claims of all persons claiming by, through or under Grantor.

IN WITNESS WHEREOF, the Grantor has signed and sealed this deed, the day and year above written.

Grantor:

Signed, sealed and delivered
in the presence of:

Unofficial Witness

Notary Public

GEORGEANN PROPERTY CORPORATION,
a Georgia corporation

By: _____
Name: Georgeann Hanjaras
Its: President

[CORPORATE SEAL]

BETTY J. ROBERTS NOTARY PUBLIC COBB COUNTY, GEORGIA MY COMMISSION EXPIRES JANUARY 19, 2020

ACKNOWLEDGEMENT

STATE OF Georgia)
) SS
COUNTY OF Cobb)

Before me, the undersigned, a Notary Public in and for said County and State, personally appeared Georgeann Hanjaras, the President of Georgeann Property Corporation, a Georgia corporation, and acknowledged the execution of the foregoing Limited Warranty Deed for and on behalf of Grantor, and who, having been duly sworn, stated that the representations therein contained are true.

Witness my hand and Notarial Seal this 30th day of November, 2017.

Notary Public
My Commission expires:

[SEAL]

BETTY J. ROBERTS NOTARY PUBLIC COBB COUNTY, GEORGIA MY COMMISSION EXPIRES JANUARY 19, 2020

BUN: 830619
4848-8006-0245.2
101460\002952

EXHIBIT "A"

LEGAL DESCRIPTION

All that lot, tract or parcel of land, with improvements thereon, situate lying and being in Land Lot 173 of the 15th District of DeKalb County, Georgia, and being more particularly described as follows:

Beginning at a point on the West side of Fayetteville Road where the North line of Land Lot 173 and the West side of Fayetteville Road intersect; running thence West along the North boundary of Land Lot 173, which is also the city limits of the City of Atlanta, 204 feet to a point; running thence South at an interior angle of 90 degrees, 100 feet to a point; thence running East at an interior angle of 90 degrees, 150 feet, more or less, to a point on the West side of Fayetteville Road; running thence Northeast along the West side of Fayetteville Road, 120 feet, more or less, to the point of beginning.

Parcel ID No.: 15-173-08-098

Common Address: 583 Fayetteville Road

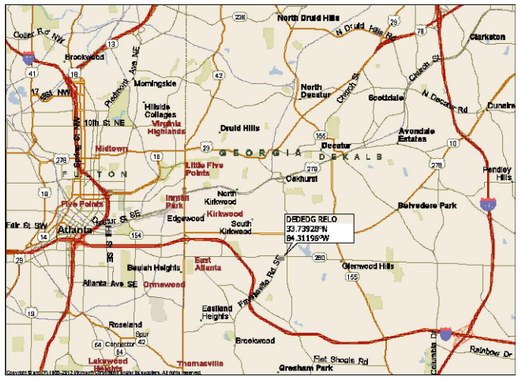
EXHIBIT "B"

PERMITTED EXCEPTIONS

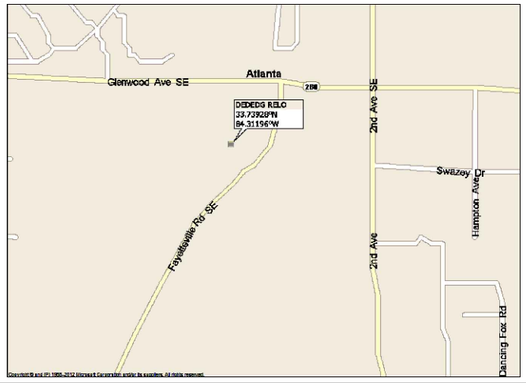
1. 2018 Real Estate Taxes and Assessments, and thereafter, a lien not yet due and payable.

2. Right of Way Easement between The Forsyth Corporation and Georgia Power Company dated September 12, 1972 recorded October 19, 1972, in Book 2899, Page 619, in Dekalb County, Georgia.

LOCATION MAP



VICINITY MAP



BUILDING CODES:

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES:

- 2014 IBC W/ (2015) AMENDMENTS BUILDING CODE
- 2014 IFC
- 2014 UMC W/ (2015) AMENDMENTS BUILDING CODE
- 2014 UPC W/ (2015) AMENDMENTS BUILDING CODE
- 2014 NEC
- 2014 IECC W/ (2015) AMENDMENTS BUILDING CODE
- TIA-222-G
  - WIND LOAD DESIGN: ULTIMATE=116 MPH
  - WIND LOAD DESIGN: 3 SEC.=90 MPH

OCCUPANCY: U
ZONING: CI
CONSTRUCTION TYPE: I-A NON-COMBUSTIBLE (IBC)

ABBREVIATION KEY

Ø	DIAMETER
&	AND
BTM.	BOTTOM
℄	CENTER LINE
CONC.	CONCRETE
CONT.	CONTINUOUS
C.J.	CONTROL JOINT
DIA.	DIAMETER
EL.	ELEVATION
E.S.	EACH SIDE
E.W.	EACH WAY
FFI	FLANGE FACING INSIDE
FFO	FLANGE FACING OUTSIDE
FT.	FEET
F.V.	FIELD VERIFY
GALV.	GALVANIZED
HORIZ.	HORIZONTAL
IN.	INCH
LFO	LEG FACING OUTSIDE
LLVD	LONG LEG VERTICAL DOWN
LLVU	LONG LEG VERTICAL UP
MAX.	MAXIMUM
MFR.	MANUFACTURER
MIN.	MINIMUM
MPH	MILES PER HOUR
O.C.	ON CENTER
PL	PLATE
REINF.	REINFORCE
REQ'D	REQUIRED
SIM.	SIMILAR
STD.	STANDARD
STL.	STEEL
TYP.	TYPICAL
U.N.O.	UNLESS NOTED OTHERWISE
VERT.	VERTICAL
VLD	VERTICAL LEG DOWN
VLU	VERTICAL LEG UP
W/	WITH

APPLICANT/OWNER:

CROWN CASTLE

SITE NUMBER:

812034

SITE NAME:

DEDEDG RELO

PROJECT DESCRIPTION:

PROPOSED 170 FT. MONOPOLE

PREPARED BY:

P. MARSHALL & ASSOCIATES

1000 HOLCOMB WOODS PKWY
SUITE 210
ROSWELL, GA 30076
678-280-2325

PROJECT INFORMATION

SITE ADDRESS:	583 FAYETTEVILLE ROAD ATLANTA, GA 30316
PROPOSED TOWER	
LATITUDE:	33° 44' 21.42"
LONGITUDE:	-84° 18' 43.04"
GROUND ELEV.:	110.0' AMSL (NAVD 88)
PARCEL ID:	15 173 08 098
ZONING:	CI
JURISDICTION:	DEKALB COUNTY
PROPERTY OWNER:	GLOBAL SIGNAL ACQUISITION IV, LLC d/ b/ a CROWN CASTLE
APPLICANT/OWNER:	CROWN CASTLE 8000 AVALON BLVD., SUITE 700 ALPHARETTA, GA 30009 FRED RAPOSO 678.409.8582
ENGINEER:	P. MARSHALL & ASSOCIATES 1000 HOLCOMB WOODS PKWY, SUITE 210 ROSWELL, GA 30076 PATRICK W MARSHALL, P.E. 678-280-2325
POWER:	N/A
TELCO:	N/A

DRAWING INDEX

CALL BEFORE YOU DIG
GEORGIA ONE-CALL
811

GEORGIA REGISTERED No. 23000 PROFESSIONAL ENGINEER PATRICK W MARSHALL
2/8/18

P. MARSHALL & ASSOCIATES

CROWN CASTLE

NUM	DATE	DESCRIPTION:
A	10.23.17	PRELIMS
B	10.25.17	PRELIMS-TOWER HEIGHTS- LEASE AREA- CARRIER AREA
C	11.7.17	PRELIMS-COMPOUND LOCATION
D	02.08.18	ZONING

SITE I.D.: 812034-DEDEDG RELO

TITLE SHEET & PROJECT INFORMATION

DESIGNED: LF
DRAWN: LF
CHECKED: PWM

JOB #: CC038

T-1

FLOOD NOTE: THIS PROPERTY IS NOT LOCATED IN A 100-YR. FLOOD PLAIN ACCORDING TO FEMA MAP NO. 13089C0131J, DATED 05/16/2013.

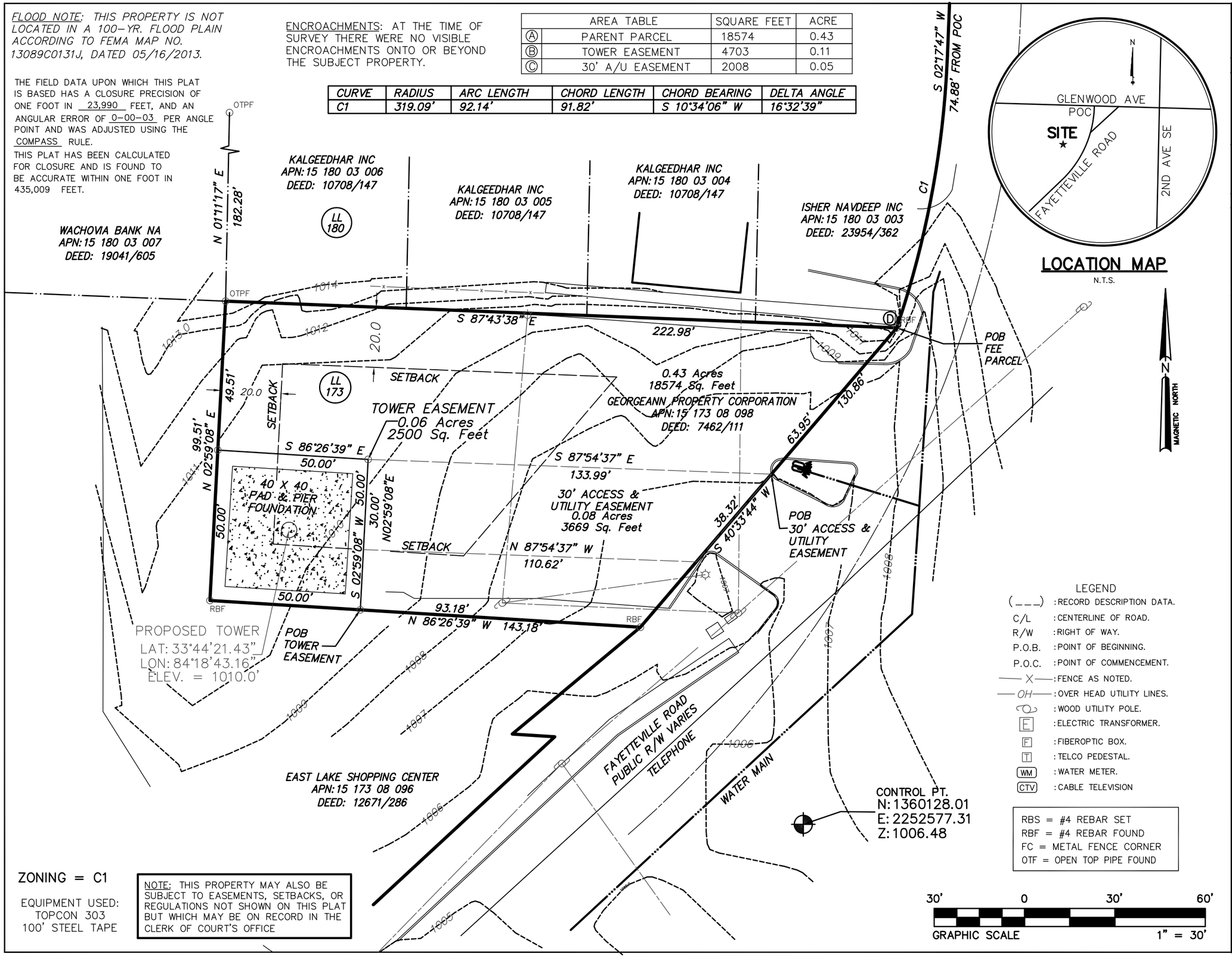
THE FIELD DATA UPON WHICH THIS PLAT IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 23,990 FEET, AND AN ANGULAR ERROR OF 0-00-03 PER ANGLE POINT AND WAS ADJUSTED USING THE COMPASS RULE.

THIS PLAT HAS BEEN CALCULATED FOR CLOSURE AND IS FOUND TO BE ACCURATE WITHIN ONE FOOT IN 435,009 FEET.

ENCROACHMENTS: AT THE TIME OF SURVEY THERE WERE NO VISIBLE ENCROACHMENTS ONTO OR BEYOND THE SUBJECT PROPERTY.

	AREA TABLE	SQUARE FEET	ACRE
Ⓐ	PARENT PARCEL	18574	0.43
Ⓑ	TOWER EASEMENT	4703	0.11
Ⓒ	30' A/U EASEMENT	2008	0.05

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	319.09'	92.14'	91.82'	S 10°34'06" W	16°32'39"



LOCATION MAP
N.T.S.

ZONING = C1

EQUIPMENT USED:
TOPCON 303
100' STEEL TAPE

NOTE: THIS PROPERTY MAY ALSO BE SUBJECT TO EASEMENTS, SETBACKS, OR REGULATIONS NOT SHOWN ON THIS PLAT BUT WHICH MAY BE ON RECORD IN THE CLERK OF COURT'S OFFICE

LEGEND

(___)	: RECORD DESCRIPTION DATA.
C/L	: CENTERLINE OF ROAD.
R/W	: RIGHT OF WAY.
P.O.B.	: POINT OF BEGINNING.
P.O.C.	: POINT OF COMMENCEMENT.
—— X ——	: FENCE AS NOTED.
—— OH ——	: OVER HEAD UTILITY LINES.
	: WOOD UTILITY POLE.
E	: ELECTRIC TRANSFORMER.
F	: FIBEROPTIC BOX.
T	: TELCO PEDESTAL.
WM	: WATER METER.
CTV	: CABLE TELEVISION

RBS = #4 REBAR SET
RBF = #4 REBAR FOUND
FC = METAL FENCE CORNER
OTF = OPEN TOP PIPE FOUND

GRAPHIC SCALE
30' 0 30' 60'
1" = 30'

AS-BUILT SURVEY

LAND LOT 173
15th DISTRICT

FOR: CROWN CASTLE

SITE: TDB55 LLC
BUN: 812034
ADDRESS: 583 FAYETTVILLE HIGHWAY
ATLANTA, GA 30316
DEKALB COUNTY

CROWN CASTLE
1220 AUGUSTA DRIVE, SUITE 500 HOUSTON TEXAS 77057

NATIONAL SURVEY SERVICES COORDINATION BY:

GEOLINE SURVEYING, INC.
13430 NW 104th Terrace, Suite A, Alachua, FL 32615
Office:(386) 418-0500 Fax:(386) 462-9986
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:

William R. Gore
PROFESSIONAL LAND SURVEYORS, INC.
1804 CENTRAL AVE AUGUSTA, GEORGIA 30904
TEL: (706) 738-8771 FAX: (706) 736-6249

DRAWN BY: WRG | CHECKED BY: WRG | JOB #:

SURVEYOR'S NOTES

1. BASIS OF BEARING GEODETIC NORTH
2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.
3. THIS SURVEY DOES REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.
4. ALL SYMBOLS DEPICTED ARE NOT TO SCALE.

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY TO CROWN CASTLE AND FIDELITY NATIONAL TITLE INSURANCE COMPANY

WILLIAM R. GORE PROFESSIONAL LAND SURVEYING

William R Gore

WILLIAM R. GORE
LAND SURVEYOR – GA. 2502

Date: 7/24/2017

GEORGIA
REGISTERED
No. 2502
William R Gore
LAND SURVEYOR
WILLIAM R. GORE

SITE: TDB55 LLC
BUN 812034
FEE PARCEL
CREATED BY THIS OFFICE

ALL THAT TRACT OF LAND LYING, SITUATE AND BEING IN LAND LOT 173, 15TH DISTRICT, DEKALB COUNTY, STATE OF GEORGIA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS.
BEGINNING AT A #4 REBAR FOUND, SAID REBAR BEING S02°17'47"W 74.88', S10°34'06"W 91.82'(CHORD BEARING & DISTANCE) FROM THE MITERED INTERSECTION OF THE SOUTHERN RIGHT-OF-WAY OF GLENWOOD AVENUE AND THE WESTERN RIGHT-OF-WAY OF OF FAYETTEVILLE ROAD, SAID REBAR BEING THE POINT OF BEGINNING.
THENCE ALONG SAID RIGHT-OF-WAY OF FAYETEVILLE ROAD S40°33'44"W 130.86' TO A #4 REBAR FOUND;
THENCE LEAVING SAID RIGHT-OF-WAY N86°26'39"W 143.18' TO A #4 REBAR FOUND;
THENCE N02°59'08"E 99.51' TO AN OPEN TOP PIPE FOUND;
THENCE S87°43'38"E 222.98' TO THE POINT OF BEGINNING.
SAID PARCEL CONTAINS 0.43 ACRES (18,574 S.F.)

GEORGEANN PROPERTY CORPORATION
TM 15 173 08 098
DEED BOOK 7462, PG 111
583 FAYETTVILLE HIGHWAY
ATLANTA, GEORGIA 30316
DEKALB COUNTY

SITE: TDB55 LLC
BUN 812034
TOWER EASEMENT
CREATED BY THIS OFFICE

ALL THAT TRACT OF LAND LYING, SITUATE AND BEING IN LAND LOT 173, 15TH DISTRICT, DEKALB COUNTY, STATE OF GEORGIA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS.
BEGINNING AT A POINT, SAID POINT BEING S02°17'47"W 74.88', S10°34'06"W 91.82' (CHORD BEARING & DISTANCE), S40°33'44"W 130.86', N86°26'39"W 93.18' FROM THE MITERED INTERSECTION OF THE SOUTHERN RIGHT-OF-WAY OF GLENWOOD AVENUE AND THE WESTERN RIGHT-OF-WAY OF OF FAYETTEVILLE ROAD, SAID POINT BEING THE POINT OF BEGINNING.
THENCE N86°26'39"W 50.00' TO A POINT;
THENCE N02°59'08"E 50.00' TO A POINT;
THENCE S86°26'39"E 50.00' TO A POINT;
THENCE S02°59'08"W 50.00' TO THE POINT OF BEGINNING.
SAID PARCEL CONTAINS 0.06 ACRES (2,500 S.F.)

GEORGEANN PROPERTY CORPORATION
TM 15 173 08 098
DEED BOOK 7462, PG 111
583 FAYETTVILLE HIGHWAY
ATLANTA, GEORGIA 30316
DEKALB COUNTY

SITE: TDB55 LLC
BUN 812034
30' ACCESS & UTILITY EASEMENT
CREATED BY THIS OFFICE

ALL THAT TRACT OF LAND LYING, SITUATE AND BEING IN LAND LOT 173, 15TH DISTRICT, DEKALB COUNTY, STATE OF GEORGIA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS.
BEGINNING AT A POINT ON THE WESTERN RIGHT-OF-WAY OF FAYETTEVILLE ROAD, SAID POINT BEING S02°17'47"W 74.88', S10°34'06"W 91.82' (CHORD BEARING & DISTANCE), S40°33'44'W 63.95' FROM THE MITERED INTERSECTION OF THE SOUTHERN RIGHT-OF-WAY OF GLENWOOD AVENUE AND THE WESTERN RIGHT-OF-WAY OF OF FAYETTEVILLE ROAD, SAID POINT BEING THE POINT OF BEGINNING.
THENCE ALONG SAID RIGHT-OF-WAY OF FAYETEVILLE ROAD S40°33'44"W 38.32' TO A POINT;
THENCE LEAVING SAID RIGHT-OF-WAY N87°54'37"W 110.62' TO A POINT;
THENCE N02°59'08"E 30.00' TO A POINT;
THENCE S87°54'37"E 133.99' TO THE POINT OF BEGINNING.
SAID PARCEL CONTAINS 0.08 ACRES (3,669 S.F.)

GEORGEANN PROPERTY CORPORATION
TM 15 173 08 098
DEED BOOK 7462, PG 111
583 FAYETTVILLE HIGHWAY
ATLANTA, GEORGIA 30316
DEKALB COUNTY

Proposed
FAA 1-A CERTIFICATION

Date: October 13, 2017

Re: TBD55 LLC, 812034
583 Fayettville Highway, Atlanta
Dekalb County, Georgia 30316

I hereby certify to Crown Castle that the following Latitude and Longitude values for the center of the above-referenced self support tower are accurate to within +/- 15 feet horizontally; and that the following tower site elevation is accurate to within +/- 3 feet vertically.

NAD 83
Latitude: 33°44' 21.43" N.
Longitude: 84°18' 43.16" W.

Elevation at Ground: 1010.0' Feet NAVD 88

AS-BUILT SURVEY

LAND LOT 173
15th DISTRICT

FOR: CROWN CASTLE

SITE: TDB55 LLC
BUN: 812034
ADDRESS: 583 FAYETTVILLE HIGHWAY
ATLANTA, GA 30316
DEKALB COUNTY

CROWN CASTLE
1220 AUGUSTA DRIVE, SUITE 500 HOUSTON TEXAS 77057

NATIONAL SURVEY SERVICES COORDINATION BY:

GEOLINE SURVEYING, INC.
13430 NW 104th Terrace, Suite A, Alachua, FL 32615
Office:(386) 418-0500 Fax:(386) 462-9986
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:

William R. Gore
PROFESSIONAL LAND SURVEYORS, INC.
1804 CENTRAL AVE AUGUSTA, GEORGIA 30904
TEL: (706) 738-8771 FAX: (706) 736-6249

DRAWN BY: WRG | CHECKED BY: WRG | JOB #:

SURVEYOR'S NOTES
1. BASIS OF BEARING GEODETIC NORTH

2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.

3. THIS SURVEY DOES REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.

4. ALL SYMBOLS DEPICTED ARE NOT TO SCALE.

SURVEYOR'S CERTIFICATION
I HEREBY CERTIFY TO CROWN CASTLE AND FIDELITY NATIONAL TITLE INSURANCE COMPANY

WILLIAM R. GORE PROFESSIONAL LAND SURVEYING

WILLIAM R. GORE
LAND SURVEYOR - GA. 2502

Date: 7/24/2017

GEORGIA REGISTERED No. 2502 LAND SURVEYOR WILLIAM R. GORE

GENERAL NOTES:

1. THE GENERAL CONTRACTOR MUST VERIFY ALL EXISTING & PROPOSED DIMENSIONS, CONDITIONS, AND ELEVATIONS BEFORE STARTING WORK. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES.

2. IT IS THE INTENTION OF THESE DRAWINGS TO SHOW THE COMPLETED INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, TIES, FORM WORK, ETC., IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL ORDINANCES, TO SAFELY EXECUTE ALL WORK AND SHALL BE RESPONSIBLE FOR SAME. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES.

3. THE CONTRACTOR SHALL USE ADEQUATE NUMBER OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.

4. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY. THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND PRIME CONTRACTOR FURTHER AGREES TO INDEMNIFY AND HOLD DESIGN ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT.

5. SITE GROUNDING SHALL COMPLY WITH ENERGY GROUNDING STANDARDS, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT, THEY SHALL GOVERN. GROUNDING SHALL BE COMPLETED BEFORE ERECTION OF A NEW TOWER.

6. ALL WORK SHALL COMPLY WITH OSHA AND STATE SAFETY REQUIREMENTS. PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION, AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION. IF TEMPORARY LIGHTING AND MARKING IS REQUIRED BY THE FEDERAL AVIATION ADMINISTRATION (FAA), IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE NECESSARY LIGHTS AND NOTIFY THE PROPER AUTHORITIES IN THE EVENT OF A PROBLEM.

7. ALL WORK SHALL BE ACCOMPLISHED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL CODES OR ORDINANCES. THE MOST STRINGENT CODE WILL APPLY IN THE CASE OF DISCREPANCIES OR DIFFERENCES IN THE CODE REQUIREMENTS.

8. THE CONTRACTOR SHALL RESTORE ALL PROPERTY TO IT'S PRE-CONSTRUCTION CONDITIONS TO THE OWNER'S SATISFACTION. ANY DAMAGE TO ADJACENT PROPERTIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR IS TO PROTECT ALL EXISTING PROPERTY LINE MONUMENTATION, STRUCTURES, UTILITIES. ANY DAMAGE SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A REGISTERED SURVEYOR OR ENGINEER.

9. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AMPLE NOTICE TO THE BUILDING INSPECTION DEPARTMENT TO SCHEDULE THE REQUIRED INSPECTIONS. A MINIMUM OF 24 HOURS OF NOTICE SHOULD BE GIVEN THE BUILDING INSPECTION DEPARTMENTS HAVE REQUESTED THAT GROUPS OF TWO OR THREE SITES BE SCHEDULED AT ONE TIME IF POSSIBLE.

10. THE COMPLETE BID PACKAGE INCLUDES THESE CONSTRUCTION DRAWINGS ALONG WITH THE SPECIFICATIONS AND TOWER DRAWINGS/ANALYSIS. CONTRACTOR IS RESPONSIBLE FOR REVIEW OF THE TOTAL BID PACKAGE PRIOR TO BID SUBMITTAL. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL DRAWGINS & SPECIFICATIONS AND TO COORDINATE HIS WORK WITH THE WORK OF ALL OTHER TO ENSURE THAT WORK PROGRESSION IS INTERRUPTED AND DOES NOT INTERRUPT THE PROPERTY OWNER'S OPERATIONS AT ANY TIME.

11. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL EXISTING UTILITIES WITHIN THE CONSTRUCTION LIMITS PRIOR TO CONSTRUCTION. ALL CONNECTIONS TO EXISTING SYSTEMS SHALL BE COORDINATED WITH THE OWNER OR OWNER'S REPRESENTATIVE AND THE UTILITY COMPANY PRIOR TO EACH CONNECTION.

12. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON THE SITE AT ALL TIMES. SILT AND EROSION CONTROL SHALL BE MAINTAINED ON THE DOWNSTREAM SIDE OF THE SITE AT ALL TIMES. ANY DAMAGE TO ADJACENT PROPERTIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.

13. CLEARING OF TREES AND VEGETATION ON THE SITE SHOULD BE KEPT TO A MINIMUM. ONLY THE TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED. ANY DAMAGE TO PROPERTY OUTSIDE THE LEASED PROPERTY SHALL BE REPAIRED BY THE CONTRACTOR.

14. ALL SUITABLE BORROW MATERIAL FOR BACKFILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES PRIOR TO DISPOSAL.

15. SEEDING AND MULCHING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE SITE DEVELOPMENT. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING AN ADEQUATE COVER OF VEGETATION OVER THE SITE FOR A ONE YEAR PERIOD.

16. RECORD DRAWINGS: MAINTAIN A RECORD OF ALL CHANGES, SUBSTITUTIONS, ETC., BETWEEN THE WORK AS SPECIFIED AND INSTALLED. RECORD CHANGES ON A CLEAN SET OF CONTRACT DRAWINGS WHICH SHALL BE TURNED OVER TO THE CONSTRUCTION MANAGER UPON COMPLETION OF THE PROJECT.

17. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED LICENSES, FEES, INSPECTIONS, ETC. BUILDING PERMITS WILL BE OBTAINED BY CONTRACTOR & PAID FOR BY THE COUNTY.

18. CONSTRACTOR SHALL KEEP THE PROJECT SITE FREE FROM ACCUMULATION OF WASTE MATERIALS & RUBBISH AT ALL TIMES DURING CONSTRUCTION PERIOD; & SHALL REMOVE ALL WASTE MATERIALS & RUBBISH FROM PROJECT SITE AT THE COMPLETION OF WORK, EXCEPT THOSE SPECIFICALLY REQUIRED BY THE CONTRACT DOCUMENTS TO BE LEFT FOR THE OWNER'S MAINTENANCE. CONSTRUCTION WASTE MAY NEITHER BE BURNED NOR BURIED AND MUST BE TAKEN TO AN APPROVED LANDFILL AT CONTRACTOR EXPENSE.

19. SECURITY TO THE SITE SHALL BE MAINTAINED AT ALL TIMES.

20. CONTRACTOR IS RESPONSIBLE FOR THE CONDITION OF THE ALL CABINETS AND /OR SHELTER DURING AND AFTER CONSTRUCTION. CABINETS AND /OR SHELTERS SHALL NOT BE USED FOR STORAGE OF TOOLS, CONSTRUCTION MATERIAL OR EQUIPMENT. CONTRACTOR SHALL ENSURE THE CABINETS AND /OR SHELTERS IS CLEANED AT THE CONCLUSION OF CONSTRUCTION. SHELTER FLOORS SHALL BE CLEANED, WAXED AND BUFFED TO SHINE.

FOUNDATION EXCAVATION AND GRADING NOTES:

1. ALL CUT AND FILL SLOPES SHALL BE 2 : 1 MAXIMUM.

2. ALL EXCAVATIONS ON WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIALLY HORIZONTAL ON UNDISTURBED AND UNFROZEN SOIL AND BE FREE FROM LOOSE MATERIAL AND EXCESS GROUND WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED IF REQUIRED.

3. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC MATERIAL. IF SOUND SOIL IS NOT REACHED AT THE DESIGNATED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION SHALL BE FILLED WITH CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION.

4. ANY EXCAVATION OVER THE REQUIRED DEPTH SHALL BE FILLED WITH EITHER MECHANICALLY COMPACTED GRANULAR MATERIAL OR CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS.

5. AFTER COMPLETION OF THE FOUNDATION AND OTHER CONSTRUCTION BELOW GRADE, AND BEFORE BACK FILLING, ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH.

6. ALL BACKFILLING SHALL (1) USE APPROVED MATERIALS CONSISTING OF EARTH, LOAM, SANDY CLAYS, SAND AND GRAVEL, OR SOFT SHALE, (2) BE FREE FROM CLODS OR STONES OVER 2 1/2" MAXIMUM DIMENSIONS, AND (3) BE PLACED IN LAYERS AND COMPACTED.

7. SITE FILL MATERIAL AND FOUNDATION BACK FILL SHALL BE PLACED IN LAYERS, MAXIMUM 6" DEEP BEFORE COMPACTION. EACH LAYER SHALL BE SPRINKLED IF REQUIRED AND COMPACTED BY HAND OR MACHINE TAMPERS TO 95% OF MAXIMUM DENSITY, AT THE OPTIMUM MOISTURE CONTENT OF ±2% AS DETERMINED BY ASTM DESIGNATION D-698, UNLESS OTHERWISE APPROVED. SUCH BACK FILL SHALL NOT BE PLACED BEFORE 3 DAYS AFTER PLACEMENT OF CONCRETE.

8. THE FOUNDATION AREA SHALL BE GRADED TO PROVIDE WATER RUNOFF AND PREVENT WATER FROM STANDING. THE FINAL GRADE SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE FOUNDATION AREA (UP TO 1 FOOT OUTSIDE THE FENCE OR GROUND SYSTEM PERIMETER) AND SHALL BE COVERED WITH A GEOTEXTILE FABRIC MIRAFI 500X OR APPROVED EQUAL TO PREVENT REOCCURRENCE OF VEGETATIVE GROWTH, AN THEN SHALL BE COVERED WITH 4" DEEP COMPACTED STONE OR GRAVEL.

9. THE CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, CITY, COUNTY, AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS FROM LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.

10. FILL PREPARATION: REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIAL FROM GROUND SURFACE PRIOR TO PLACING FILLS. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SO FILL MATERIAL WILL BOND WITH EXISTING SURFACE. WHEN SUBGRADE OR EXISTING GROUND SURFACE TO RECEIVE FILL HAS A DENSITY LESS THAN THAT REQUIRED FOR FILL, BREAK UP GROUND SURFACE TO REQUIRED DEPTH, PULVERIZE, MOISTURE CONDITION OR AERATE SOIL, AND RECOMPACT TO REQUIRED DENSITY.

11. REPLACE EXISTING GRAVEL SURFACING ON AREAS FROM WHICH GRAVEL SURFACING IS REMOVED DURING CONSTRUCTION OPERATIONS. GRAVEL SURFACING SHALL BE REPLACED TO MATCH EXISTING ADJACENT GRAVEL SURFACING AND SHALL BE OF THE SAME THICKNESS. SURFACES AND GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES. EXISTING GRAVEL SURFACING MAY BE EXCAVATED SEPARATELY AND REUSED IF INJURIOUS AMOUNTS OF EARTH, ORGANIC MATTER, OR OTHER DELETERIOUS MATERIALS ARE REMOVED PRIOR TO REUSE. FURNISH ALL ADDITIONAL GRAVEL RESURFACING MATERIAL AS REQUIRED. BEFORE GRAVEL SURFACING IS REPLACED, SUBGRADE SHALL BE GRADED TO CONFORM TO REQUIRED SUBGRADE ELEVATIONS, AND LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED. DEPRESSIONS IN THE SUBGRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL SHALL NO BE USED FOR FILLING DEPRESSIONS IN THE SUBGRADE.

12. PROTECT EXISTING GRAVEL SURFACING AND SUBGRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING OR OTHER SUITABLE MATERIALS DESIGNED TO SPREAD EQUIPMENT LOADS. REPAIR ANY DAMAGE TO EXISTING GRAVEL SURFACING OR SUBGRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTOR'S OPERATIONS.

13. ENSURE POSITIVE DRAINAGE DURING AND AFTER COMPLETION OF CONSTRUCTION.

14. RIPRAP SHALL BE CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY, AND FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCE.

15. REMOVE ALL ORGANICS, ROCKS GREATER THAN 3", UNUSED FILL AND OTHER DEBRIS TO AN AREA OFF SITE IN A LEGAL MANNER

GENERAL EROSION & SEDIMENT CONTROL NOTES:

1. PROJECT SITE IS NOT LOCATED WITHIN 100-YR FLOODPLAIN.

2. COMPOUND SHALL BE RELATIVELY FLAT. CONTRACTOR TO PROVIDE POSITIVE DRAINAGE.

3. DISTURBED AREAS LEFT IDLE SHALL BE STABILIZED WITH TEMPORARY VEGETATION AFTER 14 DAYS; AFTER 30 DAYS PERMANENT VEGETATION SHALL BE ESTABLISHED.

4. PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITIES, THE LIMITS OF THE DISTURBANCE SHALL BE CLEARLY DEMARCATED WITH STAKES, RIBBONS, OR OTHER APPROPRIATE MEANS.

5. THE CONSTRUCTION OF THE SITE WILL INITIATE WITH THE INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION. CONTRACTOR SHALL CALL APPROPRIATE COUNTY FOR AN INSPECTION OF SOIL EROSION CONTROL MEASURES PRIOR TO BEGIN GRADING ACTIVITY. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL UPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED.

6. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE SYSTEMS. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

7. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR ELEGTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

8. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS WITHIN 12" OF THE TOP OF THE SILT FENCE.

9. FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED.

10. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 7 DAYS SHALL BE STABILIZED WITH SEEDING.

11. CONTRACTOR SHALL REMOVE ALL EROSION CONTROL MEASURES AFTER COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER.

12. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-SIDTURBING ACTIVITIES.

13. ALL CUT AND FILL SLOPES MUST BE SURFACED ROUGHENED AND VEGETATED WITHIN SEVEN (7) DAYS OF THEIR CONSTRUCTION.

14. ALL FILL SLOPES WILL HAVE SILT FENCES AT THE TOE OF THE SLOPE.

15. ALL SEDIMENT AND EROSION CONTROL MEASURES WILL BE CHECKED DAILY AND ANY DEFICIENCIES NOTED WILL BE CORRECTED BY THE END OF EACH DAY. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY AFTER ON-SITE INSPECTION BY THE ISSUING AUTHORITY.

16. THE ONLY MATERIAL TO BE BURIED ON SITE IS VEGETATED MATERIAL.

17. A 25' MIN. UNDISTURBED VEGETATION BUFFER ADJ. TO ALL RUNNING STREAMS AND CREEKS WILL BE LEFT AND MAINTAINED.

18. MAINTENANCE STATEMENT: EROSION CONTROL MEASURES WILL BE INSPECTED AT LEAST WEEKLY, AFTER EACH RAIN AND REPAIRED BY THE GENERAL CONTRACTOR.

19. ADDITIONAL EROSION CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON-SITE INSPECTIONS.

20. CONSTRUCTION EXIT - TO REDUCE OR ELIMINATE THE TRANSPORT OF MUD FROM THE CONSTRUCTION AREA ONTO PUBLIC RIGHT-OF-WAYS, STREETS, ALLEYS, SIDEWALKS, OR PARKING AREAS. IMMEDIATELY REMOVE MUD AND DEBRIS TRACKED OR SPILLED ONTO ROADWAYS.

21. TYPE C SEDIMENT BARRIER - TO PREVENT ANY SEDIMENT CARRIED BY SHEET FLOW FROM LEAVING THE SITE AND ENTERING NATURAL DRAINAGE WAYS OR STORM DRAINAGE SYSTEMS.

22. DISTURBED AREA STABILIZATION (TEMPORARY) - TO ESTABLISH A TEMPORARY VEGETATIVE COVER WITH FAST GROWING SEEDINGS ON DISTURBED AREAS.

23. DISTURBED AREA STABILIZATION (PERMANENT) - TO ESTABLISH A PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, VINES, GRASSES, SOD, OR LEGUMES ON DISTURBED AREAS.

24. DISTURBED AREA DUST CONTROL- TO CONTROL THE SURFACE AND AIR MOVEMENT OF DUST ON CONSTRUCTION SITES, ROADWAYS, AND SIMILAR SITES.

GEORGIA REGISTERED No 23000 PROFESSIONAL ENGINEER PATRICK W MARSHALL 2/8/18

P. MARSHALL & ASSOCIATES

CROWN CASTLE

NUM	DATE	DESCRIPTION:
A	10.23.17	PRELIMS
B	10.25.17	PRELIMS-TOWER HEIGHTS- LEASE AREA- CARRIER AREA
C	11.7.17	PRELIMS-COMPOUND LOCATION
D	02.08.18	ZONING

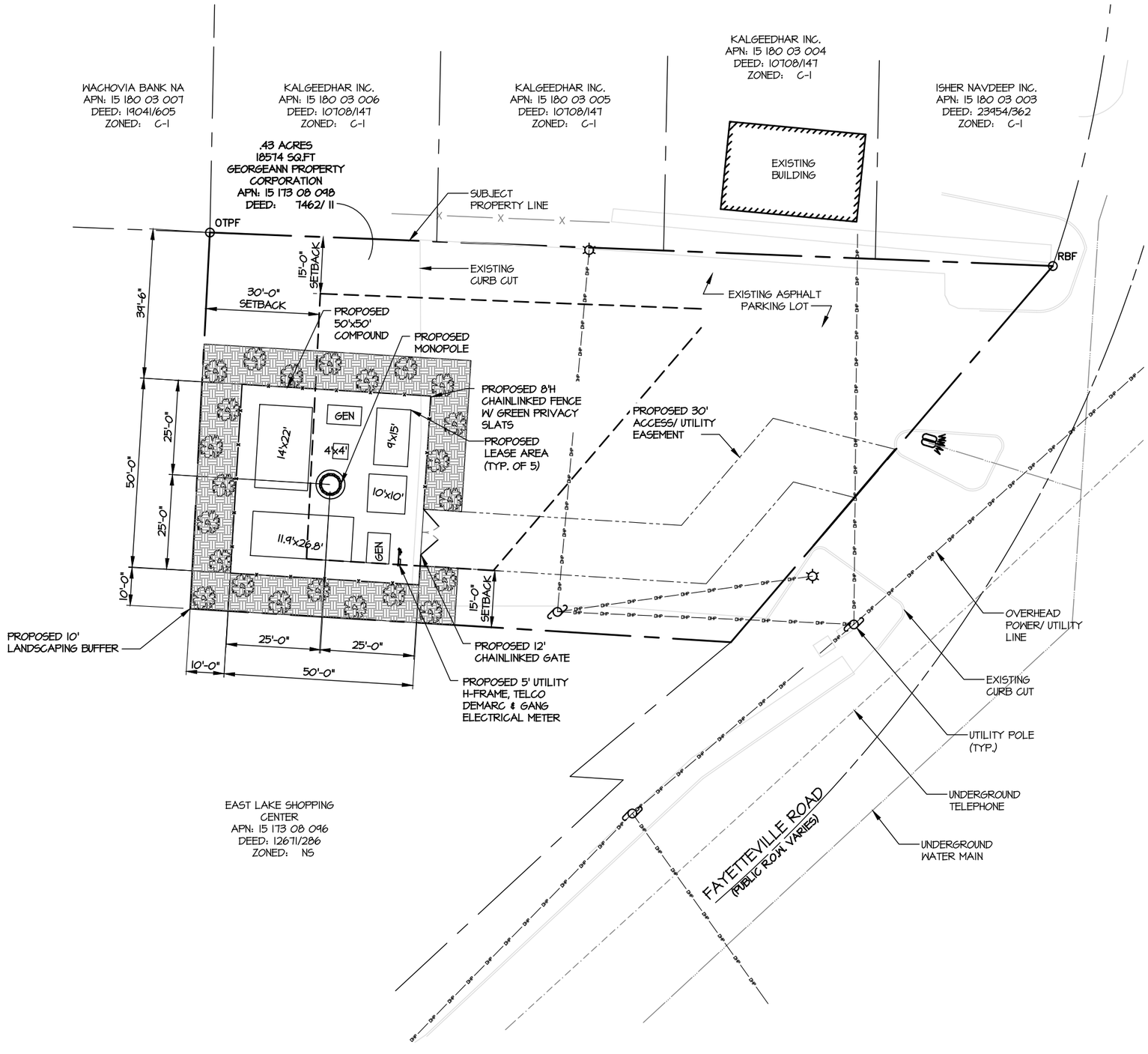
SITE I.D.: 812034-DEDEDG RELO

GENERAL NOTES

DESIGNED: LF
DRAWN: LF
CHECKED: PWM

JOB #: CC038

C-1



PROPERTY LINES & SITE PLAN SHOWN FOR REFERENCE. CONTENTS OF SURVEY PROVIDED BY GEOLINE

COMPOUND PLAN

SCALE: 1"=300'

GRAPHIC SCALES

300 0 300

SCALE: 1" = 300'

NORTH ARROW

N W E S

GEORGIA REGISTERED No. 23000 PROFESSIONAL ENGINEER PATRICK W MARSHALL 2/8/18

P. MARSHALL & ASSOCIATES

CROWN CASTLE

NUM	DATE	DESCRIPTION:
A	10.23.17	PRELIMS
B	10.25.17	PRELIMS–TOWER HEIGHTS– LEASE AREA– CARRIER AREA
C	11.7.17	PRELIMS–COMPOUND LOCATION
D	02.08.18	ZONING

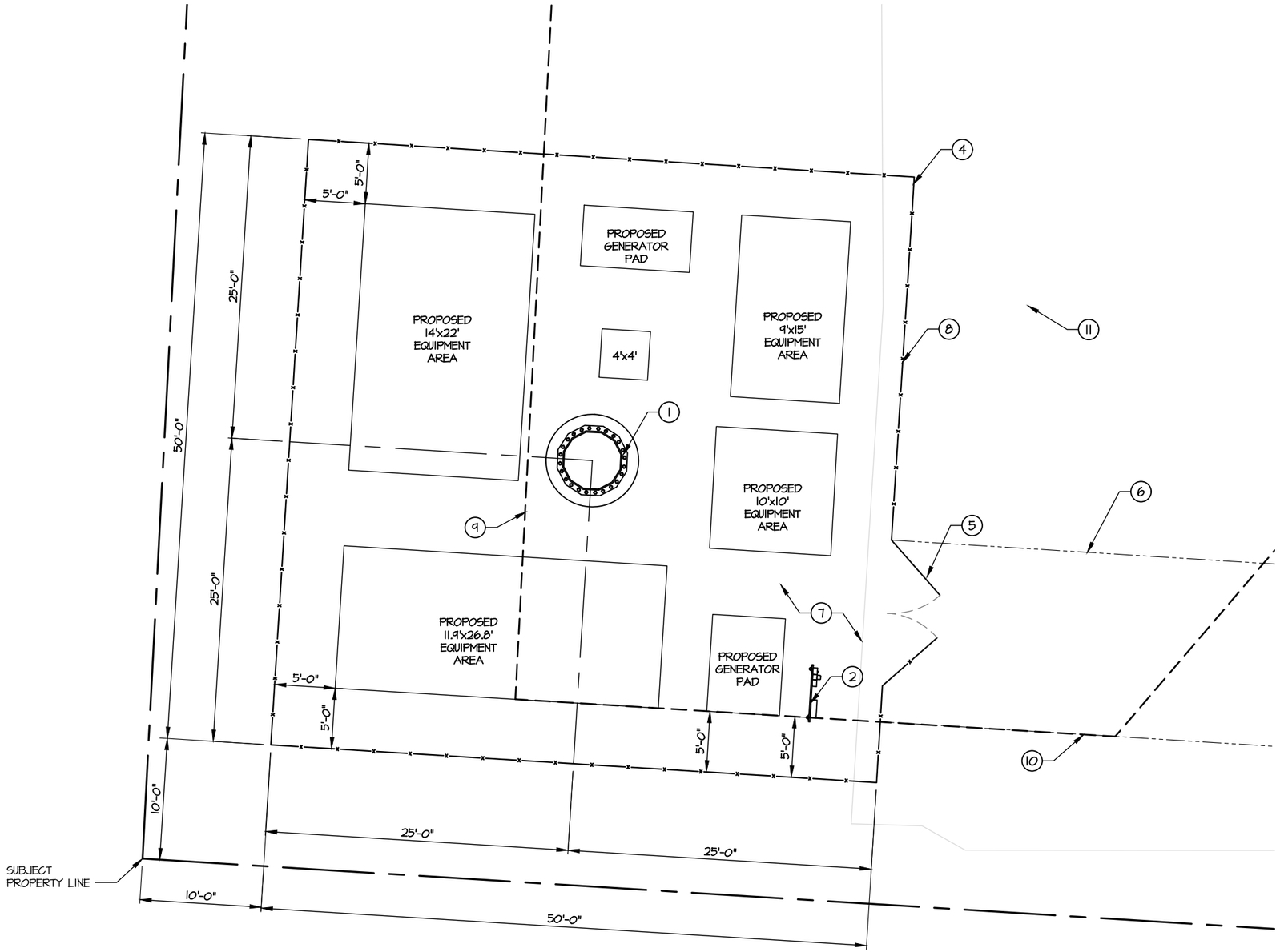
SITE I.D.: 812034-DEDEDG RELO

OVERALL SITE PLAN

DESIGNED: LF
DRAWN: LF
CHECKED: PWM

JOB #: CC038

C-2



DETAILED SITE PLAN

SCALE: 1"=10'

KEY NOTES: (X)

1. PROPOSED MONOPOLE.
2. PROPOSED UTILITY H-FRAME W/ 3-GANG METER & 36"x36"TELCO BOX DEMARC.
3. PROPOSED CARRIER LEASE AREA (TYP OF 5)
4. PROPOSED 50' X 50' COMPOUND.
5. PROPOSED 12'-0" CHAINLINK GATE.
6. PROPOSED 30' ACCESS/ UTILITY EASEMENT.
7. PROPOSED GRAVEL COMPOUND SURFACE.
8. PROPOSED CHAIN LINK FENCE WITH GREEN PRIVACY SLATS
9. 30'-0" SETBACK.
10. 15'-0" SETBACK.
11. ROPOSED 10' LANDSCAPE BUFFER

GRAPHIC SCALES

10 0 10

SCALE: 1" = 10'

NORTH ARROW

N W E S

GEORGIA REGISTERED No. 23000 PROFESSIONAL ENGINEER PATRICK W MARSHALL 2/8/18

PM&A
P. MARSHALL & ASSOCIATES

CROWN CASTLE

NUM	DATE	DESCRIPTION:
A	10.23.17	PRELIMS
B	10.25.17	PRELIMS-TOWER HEIGHTS- LEASE AREA- CARRIER AREA
C	11.7.17	PRELIMS-COMPOUND LOCATION
D	02.08.18	ZONING

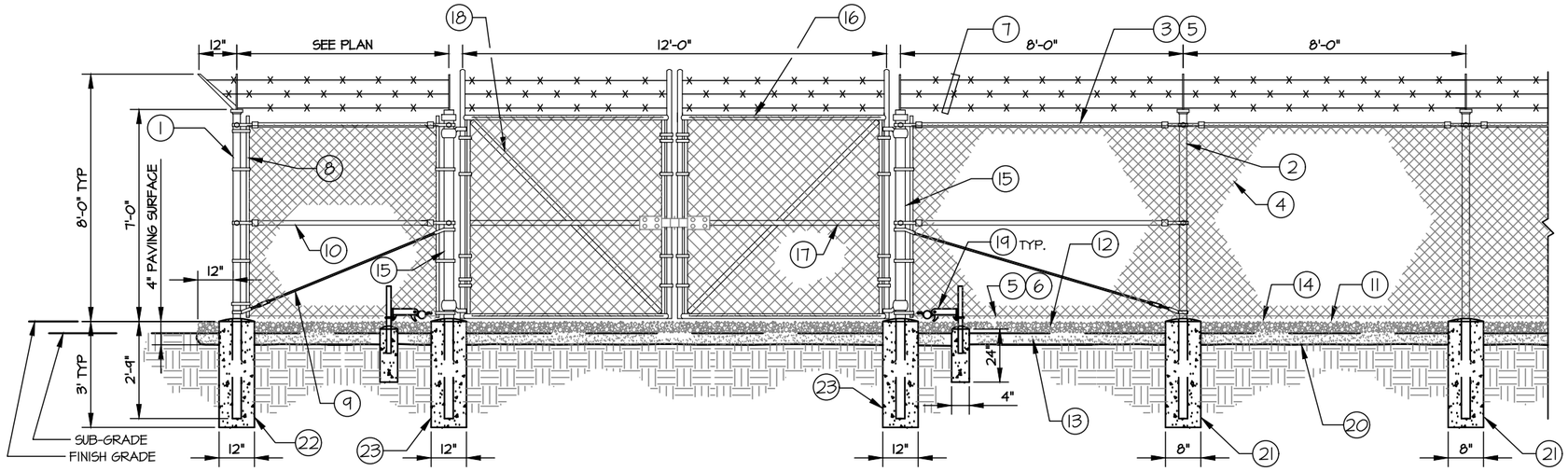
SITE I.D.: 812034-DEDEDG RELO

DETAILED SITE PLAN

DESIGNED: LF
DRAWN: LF
CHECKED: PWM

JOB #: CC038

C-3



STANDARD FENCE ELEVATION DETAILS

NOT TO SCALE

SITE FENCING

INSTALL GREEN PRIVACY SLATS IN PROPOSED CHAIN-LINKED FENCE

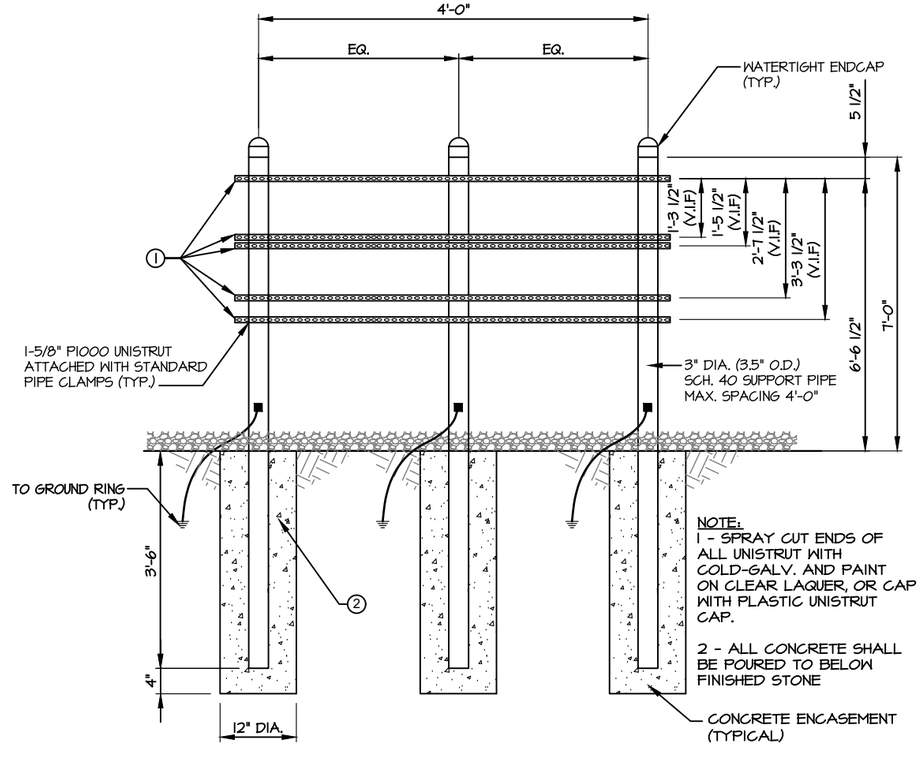
SITE SIGNAGE NOTE

INSTALL (1) ON ALL SIDES OF SITE FENCE

RED/ WHITE BACKGROUND WITH CONTRASTING LETTERING.

STE SIGNAGE

NOT TO SCALE



H-FRAME ELEVATION

NOT TO SCALE

KEY NOTES:

1. CORNER, END OR PULL POST 3" NOMINAL SCHEDULE 40 PIPE.
2. LINE POST: 2-1 /2" SCHEDULED 40 PIPE, PER ASTM-F1083. LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 8'-0" O.C.
3. TOP RAIL & BRACE RAIL: 1-1 /2" PIPE PER ASTM-F1083.
4. FABRIC: 9 GA CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392. ALL PIES TO BE GALVANIZED.
5. TIE WIRE: MINIMUM 11 GA. GALVANIZED STEEL AT POSTS AND RAILS A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAXIMUM 24" INTERVALS.
6. TENSION WIRE: 9 GA. GALVANIZED STEEL
7. BARBED WIRE: DOUBLE STRAND 12-1 /2" O.D. TWISTED WIRE TO MATCH WITH FABRIC 14 GA., 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.
8. STRETCHER BAR
9. 3 /8" DIAGONAL ROD WITH GALVANIZED STEEL TURNBUCKLE OR DIAGONAL THREADED ROD.
10. FENCE CORNER POST BRACE: 1-5 /8" DIAMETER EACH CORNER EACH WAY.
11. 1-1 /2" MAXIMUM CLEARANCE FROM GRADE.
12. FINISHED GRADE
13. MATERIAL SUB-GRADE
14. FINISHED GRADE SHALL BE UNIFORM AND LEVEL.
15. GATE POST 4" SCHEDULE 40 PIPE (FOR GATE WIDTHS UP THRU 7' OR 14' FOR DOUBLE SWING GATES) PER ASTM-F1083.
16. GATE FRAME: 1-1 /2' PIPE, PER ASTM-F1083.
17. GATE FRAME: 1-5 /8" DIAMETER PIPE, PER ASTM-F1083.
18. GATE DIAGONAL GALVANIZED STEEL 1-1 /2" PIPE.
19. DUCK BILL OPEN GATE HOLDER. VERIFY LOCATION IN FIELD PRIOR TO INSTALLATION.
20. GEOTEXTILE FABRIC
21. LINE POST: CONCRETE FOUNDATION (2000 PSI)
22. CORNER POST: CONCRETE FOUNDATION (2000 PSI)
23. GATE POST: CONCRETE FOUNDATION (2000 PSI)

GENERAL NOTES:

A. INSTALL FENCE PER ASTM F-567

B. INSTALL SWING GATE PER ASTM F-900

C. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED IF REQUIRED.

D. POST & GATE PIPE SIZES ARE INDUSTRY STANDARDS.
- D.A. ALL PIPES TO BE 1-1/ 2" GALVANIZED (HOT DIP, ASTM A120 GRADE "A" STEEL).
- D.B. ALL GATE FRAMES SHALL BE WELDED.
- D.C. ALL WELDING SHALL BE COATED WITH (3) COATS OF COLD GALVANIZED STEEL (OR EQUAL).

E. ALL OPEN POSTS SHALL HAVE END-CAPS

F. USE GALVANIZED HOG-RING WIRE TO MOUNT ALL SIGNS.

G. ALL SIGNS MUST BE MOUNTED ON INSIDE OF FENCE FABRIC.

H. CONTRACTOR SHALL PROVIDE AND INSTALL STYMIE-LOCK LOCKING MECHANISM ON 12'-0" GATE. COORDINATE W/ PM FOR FINAL COMBINATION CODE

GEORGIA
REGISTERED
No. 23000
PROFESSIONAL
ENGINEER
PATRICK W MARSHALL
7/18/18

P. MARSHALL & ASSOCIATES

CROWN CASTLE

NUM	DATE	DESCRIPTION:
A	10.23.17	PRELIMS
B	10.25.17	PRELIMS-TOWER HEIGHTS- LEASE AREA- CARRIER AREA
C	11.7.17	PRELIMS-COMPOUND LOCATION
D	02.08.18	ZONING

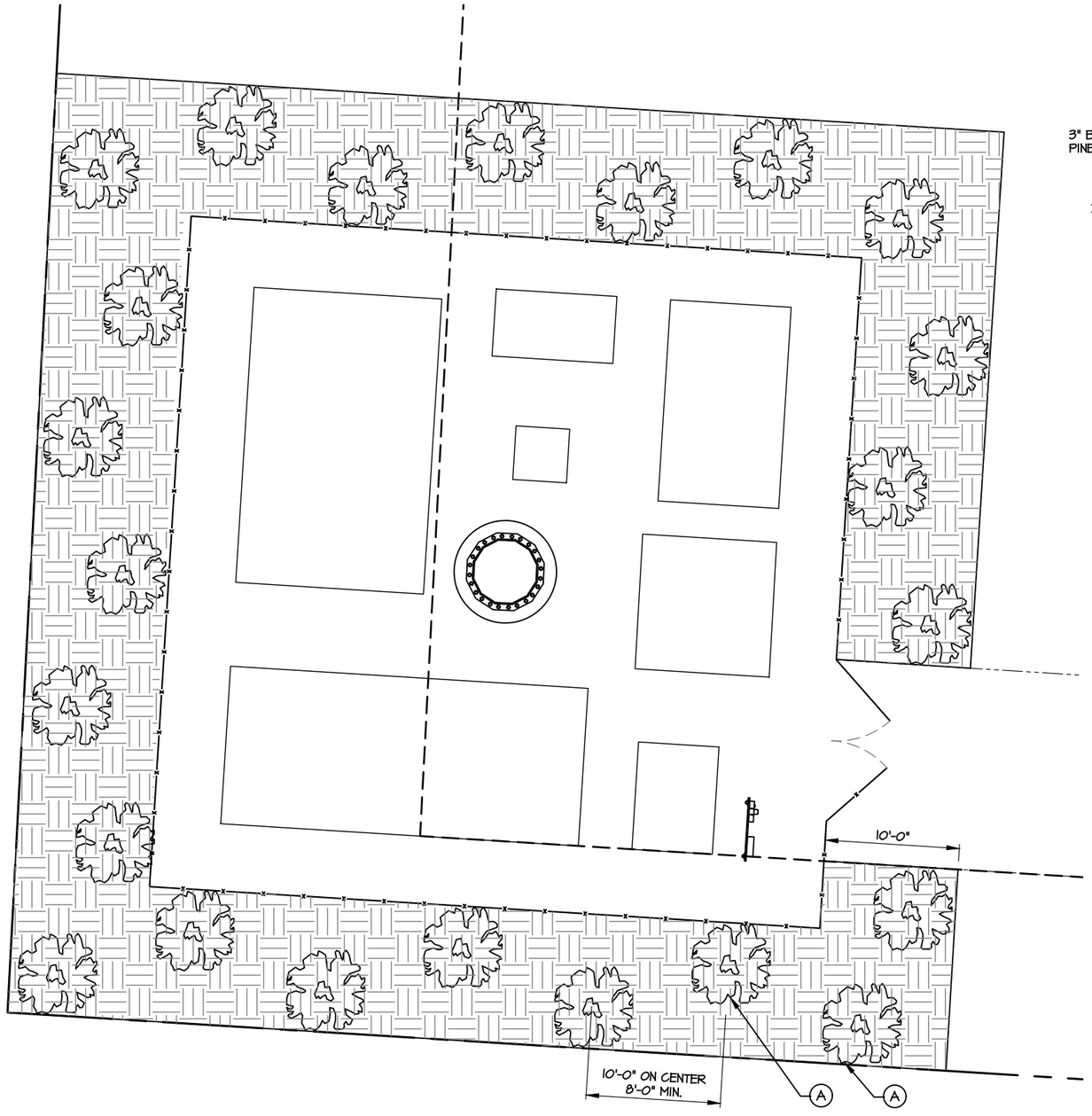
SITE I.D. 812034-DEDEDG RELO

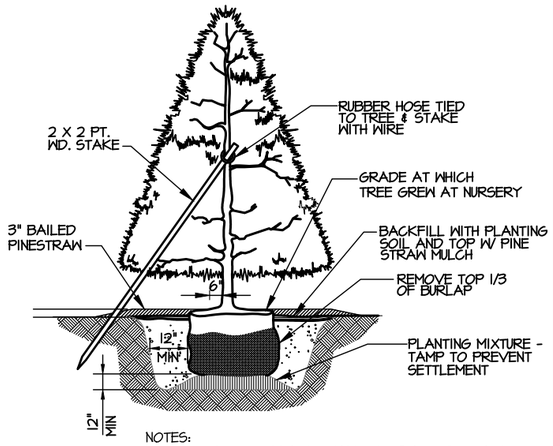
CONSTRUCTION DETAILS

DESIGNED: LF
DRAWN: LF
CHECKED: PWM

JOB #: CC038

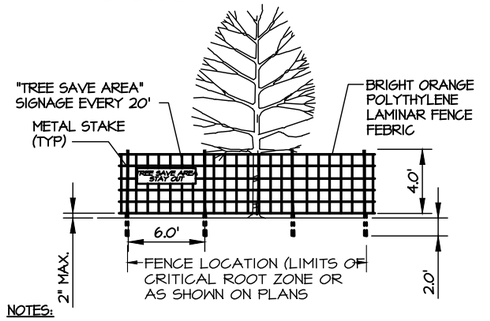
C-4





NOTES:
1. TOP OF ROOT FLARE SHALL BE 2" ABOVE GRADE.
2. NO MULCH SHOULD BE WITHIN 6" OF THE BASE OF THE TRUNK.

TREE PLANTING DETAIL
NOT TO SCALE



NOTES:
1) ALL PARKING WILL OCCUR ON EXISTING DRIVE.
2) THERE WILL BE NO BURNING OR BURIAL OF DEBRIS ON SITE.
3) ALL BUFFERS AND TREE SAVE AREAS ARE TO BE CLEARLY IDENTIFIED WITH FLAGGING AND/OR FENCING PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE.

TREE PROTECTION DETAIL
NOT TO SCALE

GENERAL NOTES:

1. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PESTS AND DISEASE.
2. ALL PLANTS MUST BE CONTAINER-GROWN OR BALLED AND BURLAPPED AS SPECIFIED.
3. ALL TREES MUST BE STRAIGHT TRUNKED, FULL HEADED AND MEET ALL REQUIREMENTS SPECIFIED.
4. ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE ENGINEER'S REPRESENTATIVE BEFORE, DURING, AND AFTER INSTALLATION.
5. ALL TREES MUST BE GUYED OR STAKED AS SHOWN.
6. ALL PLANTS AND PLANTING AREAS MUST BE COMPLETELY MULCHED AS SPECIFIED.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING COURSE OF THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE LANDSCAPE CONSTRUCTION.
8. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.
9. THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PLANTING (INCLUDING, BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZATION, ETC.) OF PLANTING AREAS UNTIL THE WORK IS ACCEPTED IN TOTAL BY THE ENGINEER'S REPRESENTATIVE.
10. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT (1) YEAR BEGINNING AT THE DATE OF TOTAL ACCEPTANCE. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD.
11. THE ENGINEER'S REPRESENTATIVE WILL APPROVE THE STAKED LOCATION OF ALL PLANT MATERIAL PRIOR TO INSTALLATION.
12. AFTER BEING DUG AT THE NURSERY SOURCE, ALL TREES IN LEAF SHALL BE ACCLIMATED FOR TWO (2) WEEKS UNDER A MIST SYSTEM PRIOR TO INSTALLATION.
13. ANY PLANT MATERIAL THAT DIES, TURNS BROWN OR DEFOLIATES (PRIOR TO TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, SIZE AND MEETING ALL SPECIFICATIONS.
14. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK", LATEST EDITION, REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.

ARBORIST NOTES:

1. NO SPECIMEN TREES EXISTING ON THE SITE.
2. NO PLANTING MATERIAL WILL BE STORED ON SITE.
3. PLANTS AND ALL SUBSTITUTION MUST BE SELECTED FROM APPROVED LIST BY METROPOLITAN PLANNING COMMISSION GUIDELINES, TREE CONSERVATION & PLATING PLAN
4. AN AVERAGE AT LEAST TWO (2) ROWS OF EVERGREEN TREES OR SHRUBS CAPABLE OF FORMING A CONTINUOUS HEDGE WITHIN 2 YEARS AT LEAST SIX (6) FEET IN HEIGHT AND SCREENING THE BASE OF THE TOWER FROM PUBLIC VIEW SHALL BE PLANTED AND MAINTAINED IN HEALTHY CONDITION. A BREAK IN THE HEDGE, NOT TO EXCEED TWELVE (12) FEET IN WIDTH, SHALL BE ALLOWED FOR ACCESS FOR MAINTENANCE PERSONNEL AND VEHICLES.
5. NO TREE SHALL BE PLACED CLOSER THAN 8' APART. PLAN SHOW 10' ON CENTER.

PLANT LIST:

MARK	QTY.	COMMON NAME	BOTANICAL NAME	SIZE/REMARKS
(A)	23	LEYLAND CYPRESS	CUPRESSUS LEYLANDII	6' TALL AT PLANTING W/ A 3" CALIPER

TOTAL AREA OF LANDSCAPE BUFFER: 2256.3 SF

GRAPHIC SCALES
10 0 10
SCALE: 1" = 10'

NORTH ARROW


GEORGIA
REGISTERED
No. 23000
PROFESSIONAL
ENGINEER
PATRICK W MARSHALL
2/8/18

PM&A
P. MARSHALL & ASSOCIATES

CROWN CASTLE

NUM	DATE	DESCRIPTION:
A	10.23.17	PRELIMS
B	10.25.17	PRELIMS-TOWER HEIGHTS- LEASE AREA- CARRIER AREA
C	11.7.17	PRELIMS-COMPOUND LOCATION
D	02.08.18	ZONING

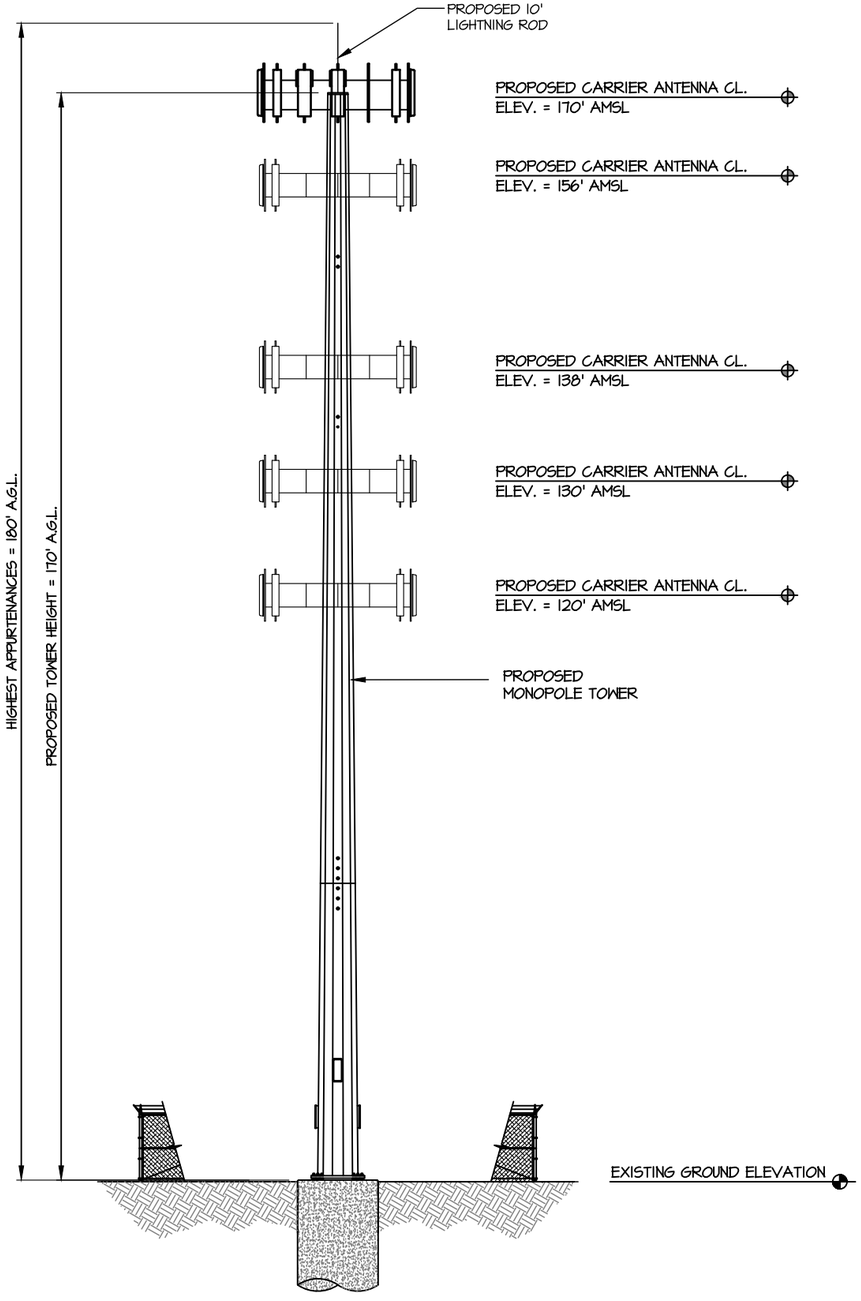
SITE I.D.: 812034-DEDEDG RELO

LANDSCAPING PLAN

DESIGNED: LF
DRAWN: LF
CHECKED: PWM

JOB #: CC038

C-5



TOWER ELEVATION
SCALE: NTS

P. MARSHALL & ASSOCIATES

CROWN CASTLE

NUM	DATE	DESCRIPTION:
A	10.23.17	PRELIMS
B	10.25.17	PRELIMS–TOWER HEIGHTS– LEASE AREA– CARRIER AREA
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SITE I.D.: 812034-DEDEDG RELO

TOWER ELEVATION

DESIGNED: LF
DRAWN: LF
CHECKED: PWM

JOB #: CC038

C-6

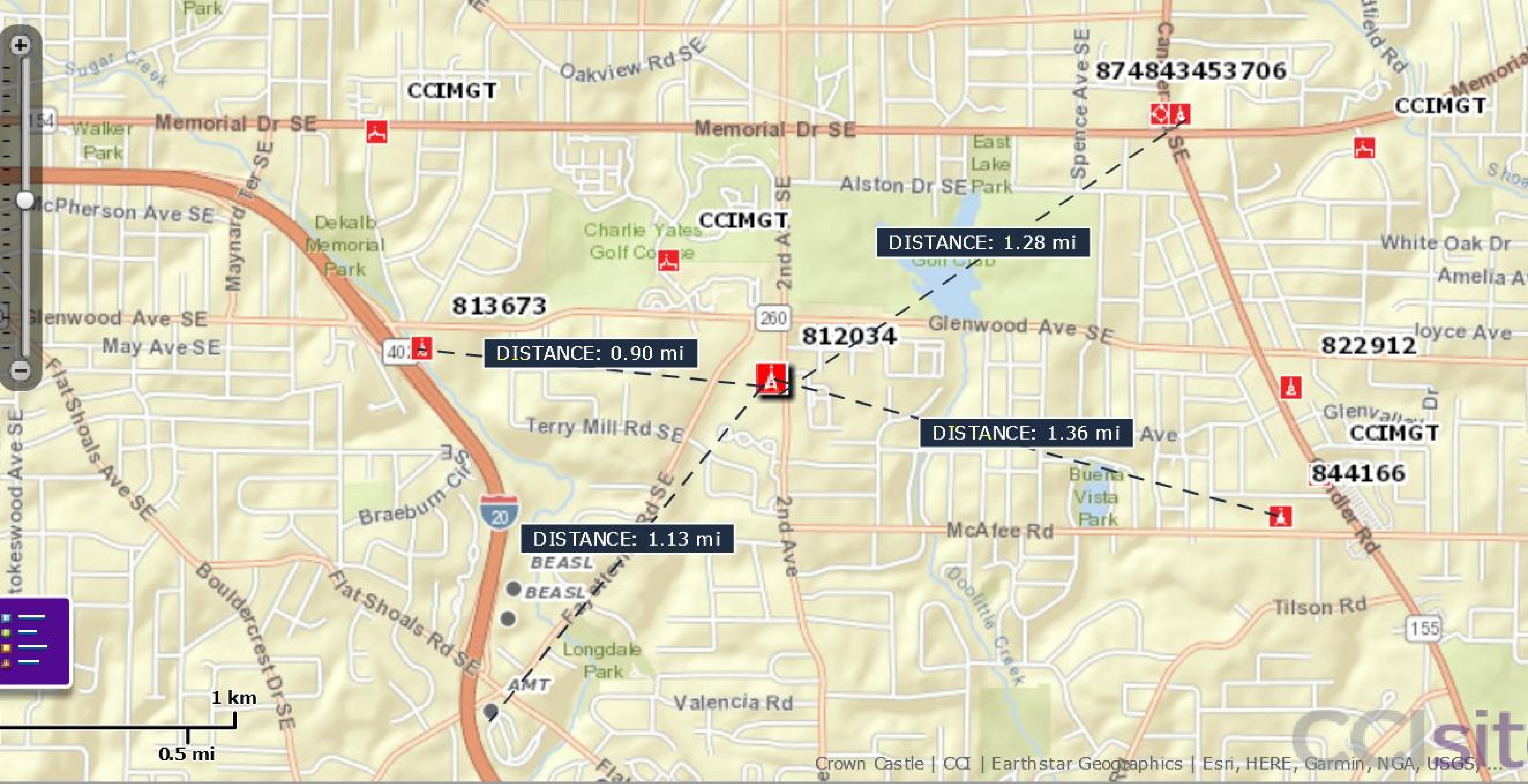
GEORGIA REGISTERED No. 23000 PROFESSIONAL ENGINEER PATRICK W MARSHALL

2/8/18

Address	City	County	Zip Code	Structure Typ	Ground Elev	Height with Appurt	Latitude	Longitude
3434 Montreal Industrial Way	Tucker	DeKalb	30084	MONOPOLE	1038	128	33.84108	-84.2508
2210 Perimeter Park Rd	Atlanta	DeKalb	30340	MONOPOLE	933	106	33.91835	-84.2964
4422 Northeast Expressway	Doraville	DeKalb	30340	MONOPOLE	945	157	33.90239	-84.2468
2574 Lawrenceville Hwy	Decatur	DeKalb	30033	MONOPOLE	1048	155.8	33.82194	-84.2642
2791 KELLY LAKE RD	DECATUR	DEKALB	30032	MONOPOLE	914	154	33.71647	-84.2767
2113 Lawrenceville Hwy	Decatur	DeKalb	30033	MONOPOLE	966	159	33.80865	-84.2731
1827 Auger Drive	Tucker	DeKalb	30087	SELF SUPPORT	1023	262	33.83556	-84.1956
3368 Clifton Church RD.	Atlanta	DeKalb	30316	MONOPOLE	743	160	33.68625	-84.3096
5991 Hillandale Drive	Lithonia	DeKalb	30058	MONOPOLE	834	188	33.70381	-84.1454
5375 Chamblee-Dunwoody Road	Atlanta	DeKalb	30338	MONOPOLE	1122	156	33.94554	-84.3323
5716 Rockbridge Rd	Stone Mou	DeKalb	30087	SELF SUPPORT	1046	151.17	33.78854	-84.1614
2294 Henderson Mill	Decatur	DeKalb	30345	MONOPOLE	1083	125	33.85183	-84.2601
3820 Stewart Road	Doraville	DEKALB	30340	MONOPOLE	1043	101	33.9025	-84.2768
2443 Mt Vernon Rd	Dunwoody	DeKalb	30338	SELF SUPPORT	1103	133	33.95667	-84.3019
3542 Clarkston Ind	Clarkston	DeKalb	30021	SELF SUPPORT	1001	261	33.81861	-84.2444
1839 Second Ave	Atlanta	DeKalb	30032	MONOPOLE	1002	155.166	33.73775	-84.3102
4842 Covington Hwy	Decatur	DEKALB	30035	SELF SUPPORT	974	183	33.73668	-84.215
3048 Lumby Dr	Decatur	DeKalb	30034	MONOPOLE	848	180	33.70194	-84.265
3140 Moreland Avenue	Conley	DeKalb	30288	MONOPOLE	1003	153.17	33.66624	-84.3381
5075 Minola Dr	Lithonia	DeKalb	30038	SELF SUPPORT	841	256.5	33.70055	-84.181
4419 Sentry Drive	ST Mounta	DeKalb	30084	MONOPOLE	1035	152	33.83539	-84.2066
5365 Memorial Drive	Stone Mou	DeKalb	30083	MONOPOLE	960	102	33.79806	-84.2186
3575 McCall Place	Doraville	DeKalb	30340	MONOPOLE	969	104	33.89611	-84.2589
1649 Tullie Circle Suite 108	Atlanta	DeKalb	30329	MONOPOLE	913	84	33.82871	-84.33
2198 Northlake Pkwy	Atlanta	DEKALB	30084	MONOPOLE	1060	129.08	33.84889	-84.2464
2744 Caldwell Rd	Chamblee	DEKALB	30319	MONOPOLE	982	156	33.86764	-84.3337
3655 Chamblee-Dunwoody	Chamblee	DeKalb	30341	MONOPOLE	1028	155	33.89781	-84.3045
2962 Buford Highway	Atlanta	DeKalb	30329	MONOPOLE	1038	152	33.83512	-84.3398
3542 Lantern View Lane	Scottdale	DeKalb	30079	MONOPOLE	981	138.8333	33.79556	-84.2494
2431 Flat Shoals Road	Decatur	DeKalb	30032	MONOPOLE	985	153.2	33.7175	-84.3086
3041 NE Expressway	Chamblee	DEKALB	30341	MONOPOLE	897	157	33.86714	-84.2851
1256 Richardson St	Tucker	DeKalb	30083	MONOPOLE	1045	121	33.81667	-84.1792

3391 N Druid Hills Rd	Decatur	DEKALB	30033	SELF SUPPORT	938	196	33.81083	-84.295
4091 Carver Drive	Doraville	DEKALB	30303	MONOPOLE	1044	82	33.914	-84.2883
6498 Covington Hwy	Lithonia	DeKalb	30058	MONOPOLE	895	184	33.72	-84.1525
3256 Marjan Drive	Doraville	DeKalb	30340	SELF SUPPORT	893.2	260.08	33.88373	-84.2648
2791 Mountain Industrial Blvd.	Tucker	DeKalb	30084	SELF SUPPORT	1072	150	33.86025	-84.187
2185 Coffee Road	Lithonia	DeKalb	30058	SELF SUPPORT	983	167	33.73806	-84.1175
1879 Glenwood Ave	Atlanta	DeKalb	30316	MONOPOLE	936	160.41	33.73889	-84.3261
202 Perimeter Center Pkwy	Atlanta	DeKalb	30346	MONOPOLE	977	61	33.92539	-84.3443
1583 Lavista Road	Atlanta	DeKalb	30329	MONOPOLE	947	135	33.81398	-84.3364
1577 Key Road SE	Atlanta	DeKalb	30316	SELF SUPPORT	892	259	33.70239	-84.3298
3509 Clairmont Road NE	Atlanta	DeKalb	30319	MONOPOLE	983	84.5	33.86133	-84.3094
4721 Ashford Dunwoody Rd.	Atlanta	DeKalb	30346	MONOPOLE	1003	80.17	33.93274	-84.3359
1363 Stephenson Rd.	Lithonia	Dekalb	30058	MONOPOLE	857	155.42	33.76747	-84.1004
1960 Austin Dr.	Decatur	Dekalb	30032	MONOPOLE	923	155.17	33.73289	-84.2324
3015 Wells St.	Avondale E	Dekalb	30002	MONOPOLE	1060	134	33.77968	-84.2672
1201 Clarendon Av	Avondale E	Dekalb	30002	MONOPOLE		154	33.7599	-84.2689
3851 Briarcliff Rd. NE	Atlanta	Dekalb	30325	MONOPOLE	915	55.666	33.84724	-84.2838
1830 Candler Rd	Decatur	Dekalb	30032	MONOPOLE	1027	160.3	33.73739	-84.2865
4034 Buford Hwy. NE	Atlanta	Dekalb	30345	MONOPOLE	984	100	33.86122	-84.3092
8175 Covington Hwy.	Lithonia	Dekalb	30058	MONOPOLE	920	107	33.70169	-84.09
3253 Mercer University Dr	Chamblee	Dekalb	30341	MONOPOLE	978	126	33.87541	-84.2571
4255 Railroad Ave.	Tucker	Dekalb	30084	MONOPOLE	1098	160	33.85196	-84.2161
2310 Southern Grove Rd	Lithonia	Dekalb	30058	MONOPOLE	803	182	33.72016	-84.0613
2001 Clearview Av	Doraville	Dekalb	30340	MONOPOLE	1006.2	144.58	33.89998	-84.2706
2903 Woodwin Rd (911)	Doraville	Dekalb	30360	MONOPOLE	1048	125	33.91525	-84.2712
3951 SNAPFINGER PARKWAY	DECATUR	DEKALB	30035	MONOPOLE	866	153	33.71413	-84.2311
4099 ADRIAN STREET	TUCKER	DEKALB	30084	MONOPOLE	1097	86.2	33.85306	-84.2207
4588 BARCLAY DRIVE	Dunwoody	DEKALB	30338	MONOPOLE	1013	137.9	33.93038	-84.2985
1795 CONSTITUTION ROAD SOUTH	ATLANTA	DEKALB	30316	MONOPOLE	831	159.083	33.68807	-84.3169
2522 McAfee Rd	DECATUR	DEKALB	30032	MONOPOLE	1026	181	33.7325	-84.2869
2750 WESLEY CHAPEL ROAD	DECATUR	DEKALB	30034	MONOPOLE	919	181	33.70761	-84.2154
1543 LILBURN STONE MOUNTAIN R	STONE MO	DEKALB	30087	MONOPOLE	886	184	33.82722	-84.1539
4917 NEW PEACHTREE ROAD	Chamblee	DEKALB	30341	MONOPOLE	1015	144.25	33.88132	-84.316

2396 MORELAND AVENUE	ATLANTA	DEKALB	30315	MONOPOLE	844	153.25	33.68916	-84.3484
3430 COVINGTON DRIVE	DECATUR	DEKALB	30032	MONOPOLE	1027	181	33.76194	-84.2494
2790 WARD LAKE ROAD	ELLENWOC	DEKALB	30294	MONOPOLE	828	184	33.65778	-84.2756
4034 BUFORD HIGHWAY NE	ATLANTA	DEKALB	30345	MONOPOLE	985	78.17	33.86111	-84.3089
979 SHEPPARD ROAD	STONE MO	DEKALB	30083	MONOPOLE	1022	181.25	33.80222	-84.1706
1671 Roadhaven Drive	STONE MO	DEKALB	30086	SELF SUPPORT	1057	255	33.83063	-84.2028
3279 Columbia Woods Drive	DECATUR	DEKALB	30032	MONOPOLE	940	193	33.71775	-84.255
2755 APPLE VALLEY RD NE	ATLANTA	DEKALB	30319	MONOPOLE	983	133	33.86672	-84.3347
4034 BUFORD HWY NE	ATLANTA	DEKALB	30345	MONOPOLE	983	41	33.86108	-84.3093
1771 BRIARWOOD RD NE	BROOKHA\	DEKALB	30329	MONOPOLE	882	149	33.84302	-84.3238
2155 N DECATUR RD	DECATUR	DEKALB	30033	MONOPOLE	989	111	33.78983	-84.3059
3314 CLIFTON CHURCH RD SE	ATLANTA	DEKALB	30316	MONOPOLE	822	134	33.6882	-84.3059
1504 AUSTIN DR	DECATUR	DEKALB	30032	MONOPOLE	891	104	33.74844	-84.2318
2183 COFFEE RD	LITHONIA	DEKALB	30058	MONOPOLE	989	154	33.73966	-84.1177
4966 REDAN RD	STONE MO	DEKALB	30088	MONOPOLE	924.8	155.5	33.76125	-84.1931
4779 ROCKBRIDGE RD	STONE MO	DEKALB	30083	MONOPOLE	1001	95	33.78618	-84.1986
4286 CHAMBLEE TUCKER RD	DORAVILLE	DEKALB	30340	MONOPOLE	1070	128	33.88223	-84.2201
4601 WINTERS CHAPEL RD	DORAVILLE	DEKALB	30360	MONOPOLE	1065	122	33.9284	-84.2639
4578 LEWIS RD	STONE MO	DEKALB	30083	MONOPOLE	1058	108	33.82968	-84.2011
3774 Central Ave	Doraville	DEKALB	30340	MONOPOLE	1062	126	33.90208	-84.2791
1353 Brockett Rd	Clarkston	DEKALB	30021	MONOPOLE	997.9	150.25	33.82369	-84.2317
7650 Rock Mountain Road	Lithonia	DEKALB	30058	SELF SUPPORT	848	270.67	33.75414	-84.0724
172 Candler Road	ATLANTA	DEKALB	30317	MONOPOLE	1009	152	33.74778	-84.2915



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813673
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822912
844166
BEASL
BEASL
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DISTANCE: 1.28 mi
DISTANCE: 0.90 mi
DISTANCE: 1.36 mi
DISTANCE: 1.13 mi
Memorial Dr SE
Oakview Rd SE
Glenwood Ave SE
McPherson Ave SE
May Ave SE
Terry Mill Rd SE
McAfee Rd
Tilson Rd
Valencia Rd
Alston Dr SE
2nd Ave SE
Spence Ave SE
White Oak Dr
Joyce Ave
Flat Shoals Rd SE
Bouldercrest Dr SE
Braeburn Cir SE
Charlie Yates Golf Course
Dekalb Memorial Park
East Lake Park
Buena Vista Park
Longdale Park
Walker Park
1 km
0.5 mi
Crown Castle | CCI | Earthstar Geographics | Esri, HERE, Garmin, NGA, USGS, ...

Michael F. Plahovinsak, P.E.

18301 State Route 161, Plain City, Ohio 43064
(614) 398-6250 • mike@mfpeng.com

January 3, 2018

Crown Castle

Re: Proposed 170-ft Monopole
Located in DeKalb Co., GA: Site #812034 Dededg Relo
MFP #23517-717 r2 / TAPP #TP-15812

I understand that there may be some concern on the part of local building officials regarding the potential for failure of the proposed communication monopole. Communication structures are designed in accordance with the Telecommunications Industry Association ANSI/TIA-222-G, "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures". This structure is to be fabricated by TransAmerican Power Products.

I have designed this monopole to withstand a 3-second gusted wind speed of 90 mph (V_{asd}) as recommended by ANSI/TIA-222-G for DeKalb County. *The design also conforms to the requirements of the 2006-2015 International Building Code for an equivalent ultimate wind speed of 116 mph (V_{ult}).*

This monopole has been intentionally designed to accommodate a theoretical fall radius. The upper **20**' of the pole has been designed to meet the wind loads of the design, however, the lower portion of the pole has been designed with a minimum 10% extra capacity. Assuming the pole has been fabricated according to my design and well maintained, in the event of a failure due to extreme wind and a comparable appurtenance antenna load (winds in excess of the design wind load), it would yield/buckle at the 150' elevation. The yielded section would result in a maximum **20**' fall radius, but would most likely remain connected and hang from the standing section.

The structure has been designed with all of the applicable factors as required by the code. A properly designed, constructed and maintained pole has never collapsed; monopoles are safe structures with a long history of reliable operation.

I hope this review of the monopole design has given you a greater degree of comfort regarding the design capacity inherent in pole structures. If you have any additional questions please call me at 614-398-6250 or email *mike@mfpeng.com*.

Sincerely,

Michael F. Plahovinsak, P.E.

TransAmerican
Power Products, Inc.
2427 Kelly Lane
Houston, Texas 77066
PH: 281-444-8277 / FX: 281-444-7270

Page 1 of 1		Job Number:	23517-717
Eng: MFP		Customer Ref:	TP-15812
		Date:	1/3/2018
Structure:	170-FT MONOPOLE		
Site:	812034 DEDEDG RELO		
Location:	DEKALB CO., GA / 33°44'21.42", -84°18'43.04"		
Owner:	CROWN CASTLE		
Revision No.:	Revision Date:		

DESIGN

Building Code:	2012 IBC W/ 2015 AMENDMENTS		
Design Standard:	ANSI/TIA-222-G-2		
Wind Speed Load Cases:	3-SEC. GUSTED WIND SPEED		
Load Case #1:	90 MPH Design Wind Speed - V_{ASD} (V_{ULT} = 116 MPH)		
Load Case #2:	30 MPH Wind with 0.75" Ice Accumulation		
Load Case #3	60 MPH Service Wind Speed		
Structure Class	Exposure Cat.	Topography Cat.	Crest Height
II	C	1	

EQUIPMENT LIST

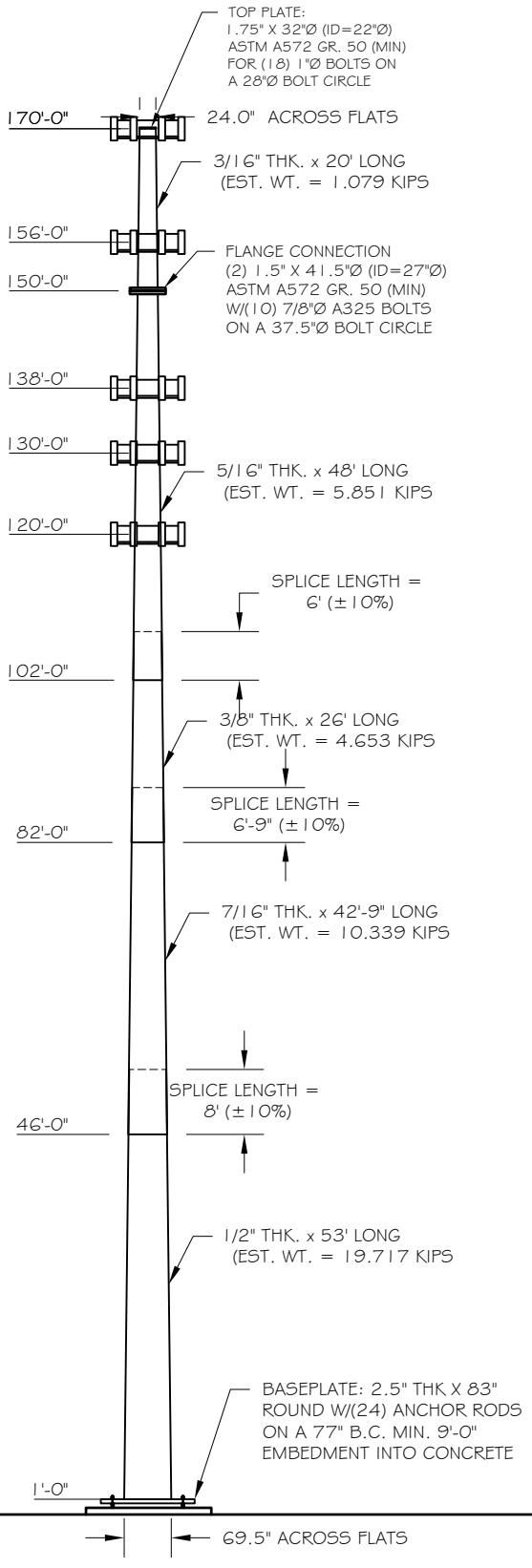
Elev.	Description
170	(12) ANTENNA + MOUNTING (EPA 225 FT2)
170	GENERIC ANTENNA MOUNT
156	(12) ANTENNA + MOUNTING (EPA 225 FT2)
156	GENERIC ANTENNA MOUNT
138	(12) ANTENNA + MOUNTING (EPA 200 FT2)
138	GENERIC ANTENNA MOUNT
130	(12) ANTENNA + MOUNTING (EPA 200 FT2)
130	GENERIC ANTENNA MOUNT
120	(12) ANTENNA + MOUNTING (EPA 150 FT2)
120	GENERIC ANTENNA MOUNT

ANTENNA FEED LINES ROUTED ON THE INSIDE OF THE POLE
POLE DESIGNED FOR A MAX 20-FT FALL RADIUS

STRUCTURE PROPERTIES

Cross-Section: 18-Sided	Taper: 0.28254 in/ft
Shaft Steel: ASTM A572 GR 65	Baseplate Steel: ASTM A572 GR 50
Anchor Rods: 2.25 in. A615 GR. 75 X 10'-0" LONG	

Sect.	Length (ft)	Thickness (in)	Splice (ft)	Top Dia. (in)	Bot Dia. (in)
1	20.00	0.1875	0.00	24.00	29.65
2	48.00	0.3125	6.00	29.65	43.21
3	26.00	0.3750	6.75	40.89	48.24
4	42.75	0.4375	8.00	45.58	57.66
5	53.00	0.5000	0.00	54.53	69.50



GEORGIA REGISTERED No. PE 035528 PROFESSIONAL ENGINEER MICHAEL F. PLAHOVINSAK
1.3.2018

MICHAEL F. PLAHOVINSAK, P.E. #35528
Sole Proprietor - Independent Engineer
18301 S.R. 161, Plain City, OH 43064
614-398-6250 / mike@mfpeng.com

BASE REACTIONS FOR FOUNDATION DESIGN

Moment:	9536 ft-kip
Shear:	73 kip
Axial:	85 kip

Tower Input Data

This tower is designed using the TIA-222-G standard.
The following design criteria apply:

Tower is located in Dekalb County, Georgia.
Basic wind speed of 90 mph.
Structure Class II.
Exposure Category C.
Topographic Category 1.
Crest Height 0.00 ft.
Nominal ice thickness of 0.7500 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 30 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
ANSI/TIA-222-G wind speeds are Vasd winds. Refer to IBC Table 1609.3.1 for Vult wind speed conversions..
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	170.00-150.00	20.00	0.00	18	24.0000	29.6500	0.1875	0.7500	A572-65 (65 ksi)
L2	150.00-102.00	48.00	6.00	18	29.6500	43.2100	0.3125	1.2500	A572-65 (65 ksi)
L3	102.00-82.00	26.00	6.75	18	40.8900	48.2400	0.3750	1.5000	A572-65 (65 ksi)
L4	82.00-46.00	42.75	8.00	18	45.5818	57.6600	0.4375	1.7500	A572-65 (65 ksi)
L5	46.00-1.00	53.00		18	54.5248	69.5000	0.5000	2.0000	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	24.3702	14.1714	1015.2211	8.4534	12.1920	83.2694	2031.7780	7.0871	3.8940	20.768
	30.1074	17.5339	1922.8900	10.4592	15.0622	127.6633	3848.3101	8.7686	4.8884	26.071
L2	30.1074	29.0991	3164.1984	10.4148	15.0622	210.0754	6332.5603	14.5523	4.6684	14.939
	43.8766	42.5490	9892.1420	15.2286	21.9507	450.6531	19797.3004	21.2785	7.0550	22.576
L3	43.2431	48.2230	10000.5335	14.3828	20.7721	481.4402	20014.2260	24.1161	6.5366	17.431
	48.9842	56.9713	16490.3484	16.9921	24.5059	672.9128	33002.3951	28.4911	7.8302	20.881
L4	48.2215	62.6885	16141.0573	16.0262	23.1556	697.0702	32303.3534	31.3502	7.2524	16.577
	58.5495	79.4606	32871.7567	20.3140	29.2913	1122.2369	65786.7668	39.7378	9.3782	21.436
L5	57.6612	85.7373	31614.9750	19.1788	27.6986	1141.3935	63271.5499	42.8768	8.7164	17.433
	70.5721	109.5030	65866.0545	24.4950	35.3060	1865.5768	131818.777 3	54.7619	11.3520	22.704

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
1 5/8"	C	No	Inside Pole	170.00 - 1.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	156.00 - 1.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	138.00 - 1.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	130.00 - 1.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
1 5/8"	C	No	Inside Pole	120.00 - 1.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Antenna + Mounting (EPA 225 ft2)	C	None		0.0000	170.00	No Ice	225.00	225.00	4.00
						1/2" Ice	240.00	240.00	4.20
						1" Ice	255.00	255.00	4.40
Antenna + Mounting (EPA 225 ft2)	C	None		0.0000	156.00	No Ice	225.00	225.00	4.00
						1/2" Ice	240.00	240.00	4.20
						1" Ice	255.00	255.00	4.40
Antenna + Mounting (EPA 200 ft2)	C	None		0.0000	138.00	No Ice	200.00	200.00	4.00
						1/2" Ice	220.00	220.00	4.20
						1" Ice	240.00	240.00	4.40
Antenna + Mounting (EPA 200 ft2)	C	None		0.0000	130.00	No Ice	200.00	200.00	4.00
						1/2" Ice	220.00	220.00	4.20
						1" Ice	240.00	240.00	4.40
Antenna + Mounting (EPA 150 ft2)	C	None		0.0000	120.00	No Ice	150.00	150.00	4.00
						1/2" Ice	170.00	170.00	4.20
						1" Ice	190.00	190.00	4.40

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 90 deg - No Ice
5	0.9 Dead+1.6 Wind 90 deg - No Ice
6	1.2 Dead+1.6 Wind 180 deg - No Ice
7	0.9 Dead+1.6 Wind 180 deg - No Ice
8	1.2 Dead+1.0 Ice+1.0 Temp
9	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp

Comb. No.	Description
10	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
11	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
12	Dead+Wind 0 deg - Service
13	Dead+Wind 90 deg - Service
14	Dead+Wind 180 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	170 - 150	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-14.06	0.00	0.00
			Max. Mx	4	-8.59	-314.70	0.00
			Max. My	2	-8.59	0.00	314.70
			Max. Vy	4	24.49	-314.70	0.00
			Max. Vx	2	-24.49	0.00	314.70
L2	150 - 102	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-42.99	0.00	0.00
			Max. Mx	4	-30.42	-2024.40	0.00
			Max. My	2	-30.42	0.00	2024.40
			Max. Vy	4	55.31	-2024.40	0.00
			Max. Vx	2	-55.31	0.00	2024.40
L3	102 - 82	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-52.15	0.00	0.00
			Max. Mx	4	-38.08	-3108.19	0.00
			Max. My	2	-38.08	0.00	3108.19
			Max. Vy	4	57.22	-3108.19	0.00
			Max. Vx	2	-57.22	0.00	3108.19
L4	82 - 46	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-71.37	0.00	0.00
			Max. Mx	4	-54.41	-5157.85	0.00
			Max. My	2	-54.41	0.00	5157.85
			Max. Vy	4	60.57	-5157.85	0.00
			Max. Vx	2	-60.57	0.00	5157.85
L5	46 - 1	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-107.28	0.00	0.00
			Max. Mx	4	-85.43	-8486.83	0.00
			Max. My	2	-85.43	0.00	8486.83
			Max. Vy	4	64.61	-8486.83	0.00
			Max. Vx	2	-64.61	0.00	8486.83

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	170 - 150	32.312	13	1.7803	0.0000
L2	150 - 102	25.026	13	1.6630	0.0000
L3	108 - 82	12.337	13	1.1559	0.0000
L4	88.75 - 46	8.107	13	0.9124	0.0000
L5	54 - 1	2.863	13	0.5001	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
170.00	Antenna + Mounting (EPA 225 ft2)	13	32.312	1.7803	0.0000	24034
156.00	Antenna + Mounting (EPA 225 ft2)	13	27.164	1.7061	0.0000	8583
138.00	Antenna + Mounting (EPA 200 ft2)	13	20.966	1.5455	0.0000	5273
130.00	Antenna + Mounting (EPA 200 ft2)	13	18.439	1.4492	0.0000	4876
120.00	Antenna + Mounting (EPA 150 ft2)	13	15.503	1.3175	0.0000	4456

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	170 - 150	130.487	2	7.1969	0.0000
L2	150 - 102	101.104	2	6.7239	0.0000
L3	108 - 82	49.877	2	4.6756	0.0000
L4	88.75 - 46	32.779	2	3.6908	0.0000
L5	54 - 1	11.576	2	2.0228	0.0000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
170.00	Antenna + Mounting (EPA 225 ft2)	2	130.487	7.1969	0.0000	6130
156.00	Antenna + Mounting (EPA 225 ft2)	2	109.729	6.8975	0.0000	2187
138.00	Antenna + Mounting (EPA 200 ft2)	2	84.720	6.2494	0.0000	1336
130.00	Antenna + Mounting (EPA 200 ft2)	2	74.518	5.8606	0.0000	1231
120.00	Antenna + Mounting (EPA 150 ft2)	2	62.663	5.3287	0.0000	1121

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	170 - 150 (1)	TP29.65x24x0.1875	20.00	0.00	0.0	17.5339	-8.59	1116.25	0.008
L2	150 - 102 (2)	TP43.21x29.65x0.3125	48.00	0.00	0.0	40.8677	-30.42	2794.26	0.011
L3	102 - 82 (3)	TP48.24x40.89x0.375	26.00	0.00	0.0	54.7001	-38.08	3834.76	0.010
L4	82 - 46 (4)	TP57.66x45.5818x0.4375	42.75	0.00	0.0	76.3220	-54.41	5306.82	0.010
L5	46 - 1 (5)	TP69.5x54.5248x0.5	53.00	0.00	0.0	109.503 0	-85.43	7361.57	0.012

Michael F. Plahovinsak, P.E.
18301 State Route 161
Plain City, OH 43064
Phone: 614-398-6250
FAX: mike@mfpeng.com

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	170 - 150 (1)	TP29.65x24x0.1875	314.70	677.28	0.465	0.00	677.28	0.000
L2	150 - 102 (2)	TP43.21x29.65x0.3125	2024.41	2368.11	0.855	0.00	2368.11	0.000
L3	102 - 82 (3)	TP48.24x40.89x0.375	3108.18	3622.86	0.858	0.00	3622.86	0.000
L4	82 - 46 (4)	TP57.66x45.5818x0.4375	5157.85	5997.19	0.860	0.00	5997.19	0.000
L5	46 - 1 (5)	TP69.5x54.5248x0.5	8486.83	10451.42	0.812	0.00	10451.42	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	170 - 150 (1)	TP29.65x24x0.1875	24.49	558.13	0.044	0.00	1356.22	0.000
L2	150 - 102 (2)	TP43.21x29.65x0.3125	55.31	1397.13	0.040	0.00	4742.00	0.000
L3	102 - 82 (3)	TP48.24x40.89x0.375	57.22	1917.38	0.030	0.00	7254.57	0.000
L4	82 - 46 (4)	TP57.66x45.5818x0.4375	60.57	2653.41	0.023	0.00	12009.08	0.000
L5	46 - 1 (5)	TP69.5x54.5248x0.5	64.61	3680.78	0.018	0.00	20928.42	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	170 - 150 (1)	0.008	0.465	0.000	0.044	0.000	0.474 ✔	1.000	4.8.2 ✔
L2	150 - 102 (2)	0.011	0.855	0.000	0.040	0.000	0.867 ✔	1.000	4.8.2 ✔
L3	102 - 82 (3)	0.010	0.858	0.000	0.030	0.000	0.869 ✔	1.000	4.8.2 ✔
L4	82 - 46 (4)	0.010	0.860	0.000	0.023	0.000	0.871 ✔	1.000	4.8.2 ✔
L5	46 - 1 (5)	0.012	0.812	0.000	0.018	0.000	0.824 ✔	1.000	4.8.2 ✔

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	170 - 150	Pole	TP29.65x24x0.1875	1	-8.59	1116.25	47.4	Pass
L2	150 - 102	Pole	TP43.21x29.65x0.3125	2	-30.42	2794.26	86.7	Pass
L3	102 - 82	Pole	TP48.24x40.89x0.375	3	-38.08	3834.76	86.9	Pass
L4	82 - 46	Pole	TP57.66x45.5818x0.4375	4	-54.41	5306.82	87.1	Pass
L5	46 - 1	Pole	TP69.5x54.5248x0.5	5	-85.43	7361.57	82.4	Pass
							Summary	
						Pole (L4)	87.1	Pass
						RATING =	**87.1**	**Pass**

Monopole Flange Connection Calculation

ANSI/TIA-222-G-2

Flange @ 150'

Factored Connection Reactions:		**Pole Shape:**	**Bolts:**	**Flange Plate:**
Moment:	314.7 ft-kips	18-Sided	(10) 0.875 dia. A325 Bolts	1.5 in. x 41.5 in. Round
Shear:	24.5 kips	**Pole Dia. (D_f):**	On a 37.5 in Bolt Circle	fy = 50 ksi
Axial:	8.6 kips	29.65 in		Inner Dia = 27 in

Bolt Calculation TIA 4.9.6.4 (Combined Shear and Tension)

ϕ =	0.75	TIA 4.9.9	
I_{bolts} =	1757.81	in^2	Momet of Inertia
T_u =	40.28	kips	Tension Force
P_u =	41.14	kips	Compressive Force
V_u =	2.45	kips	Shear Force
ϕR_{nv} =	21.60	kips	From AISC 7-1
ϕR_{nt} =	40.80	kips	From AISC 7-2

The following Interation Equation Shall Be Satisfied:

$$\left(\frac{V_{ub}}{\phi R_{nv}}\right)^2 + \left(\frac{T_{ub}}{\phi R_{nt}}\right)^2 \leq 1.0$$

0.988 <1.0 --> OK

Base Plate Calculation According to TIA-222-G

ϕ =	0.90	TIA 4.7	
M_{PL} =	161.46	in-kip	Plate Moment
L =	9.32	in	Section Length
Z =	5.24		Plastic Section Modulus
M_P =	261.99	in-kip	Plastic Moment
ϕM_n =	235.7883	in-kip	Factored Resistance

Calculated Moment vs Factored Resistance

161.4625 in-kip $\leq$ 236 in-kip

Bolts Are Adequate	**98.8%**	***Fail Point***
Plate is Adequate	**68.5%**	

Stiffened or Unstiffened, Ungrouted, Circular Base Plate - Any Rod Material

TIA Rev G Assumption: Clear space between bottom of leveling nut and top of concrete **not** exceeding (1)*(Rod Diameter)

Site Data

Job # *23517-717*
Site Name: *812034 DEDEDG RELO*
DEKALB CO., GA

Pole Manufacturer:	*Other*

Reactions		
Mu:	8487	ft-kips
Axial, Pu:	85	kips
Shear, Vu:	65	kips
Eta Factor, η	0.5	TIA G (Fig. 4-4)

If No stiffeners, Criteria:	AISC LRFD	<-Only Applcable to Unstiffened Cases

Anchor Rod Data		
Qty:	24	
Diam:	2.25	in
Rod Material:	A615-J	
Strength (Fu):	100	ksi
Yield (Fy):	75	ksi
Bolt Circle:	77	in

Anchor Rod Results

Max Rod (Cu+ Vu/ή):	229.4	Kips
Allowable Axial, Φ*Fu*Anet:	260.0	Kips
Anchor Rod Stress Ratio:	88.2%	**Pass**

Rigid
AISC LRFD
φ*Tn

Plate Data		
Diam:	83	in
Thick:	2.5	in
Grade:	50	ksi
Single-Rod B-eff:	9.19	in

Base Plate Results Flexural Check

Base Plate Stress:	36.6	ksi
Allowable Plate Stress:	45.0	ksi
Base Plate Stress Ratio:	81.3%	**Pass**

Rigid
AISC LRFD
φ*Fy
Y.L. Length: 33.15

Stiffener Data (Welding at both sides)		
Config:	0	*
Weld Type:	Fillet	
Groove Depth:	0.25	<-- Disregard
Groove Angle:	45	<-- Disregard
Fillet H. Weld:	0.25	in
Fillet V. Weld:	0.3125	in
Width:	5	in
Height:	18	in
Thick:	0.75	in
Notch:	0.5	in
Grade:	36	ksi
Weld str.:	70	ksi

n/a

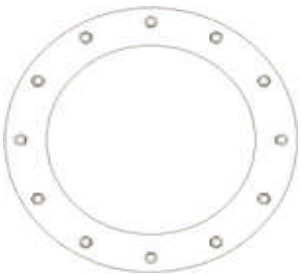
Stiffener Results

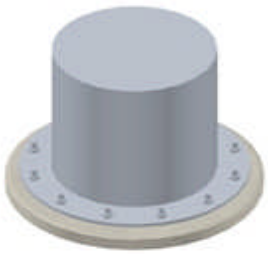
Horizontal Weld :	n/a
Vertical Weld:	n/a
Plate Flex+Shear, fb/Fb+(fv/Fv)^2:	n/a
Plate Tension+Shear, ft/Ft+(fv/Fv)^2:	n/a
Plate Comp. (AISC Bracket):	n/a

Pole Results

Pole Punching Shear Check: n/a

Pole Data		
Diam:	69.5	in
Thick:	0.5	in
Grade:	65	ksi
# of Sides:	18	"0" IF Round
Fu	80	ksi
Reinf. Fillet Weld	0	"0" if None





* 0 = none, 1 = every bolt, 2 = every 2 bolts, 3 = 2 per bolt

** Note: for complete joint penetration groove welds the groove depth must be exactly 1/2 the stiffener thickness for calculation purposes