HOUSTON TOWER COMMISSION

To download the full agenda package visit:

https://www.houstontx.gov/planning/Commissions/commiss tower.html

Members

Rob Todd, Chair John R. Melcher Kerrick Henny Yulanda Campbell Linda Smith Asim Tufail Bobby De La Rosa

Secretary
Jennifer Ostlind

Agenda

Monday, February 26th, 2024 3:30 p.m.

In-Person Meeting Location: Council Chamber, City Hall Annex

Join Microsoft Teams Meeting or via web at: https://bit.ly/49BZHmq

Phone: <u>+1 936-755-1521,</u> Conference ID: 565 512 445#

Submit Written Comments to: planning.tower@houstontx.gov

Make comments by phone to: 832-393-6624

SPEAKERS GUIDELINES

WELCOME to a meeting of the City's Planning and Development Department. Your input is valued. Board members act according to established standards; see rules or policies for details. Staff is available to help orient you on meeting procedures. For the City's I SPEAK language line, including traducción en español, call 832-393-3000

The public is encouraged to take an active interest in matters that come before the **Tower Commission**. Anyone wishing to speak before the Commission may do so. The Commission has adopted the following procedural rules on public participation for virtual meetings:

- 1. Anyone wishing to speak before the Commission should sign up to speak via phone **832-393-6624** or email **planning.tower@houstontx.gov**, 24 hours in advance preferred.
- 2. Please note what item you wish to speak on, or if it is for general public comments.
- 3. You may also sign up to speak in the chat feature of Microsoft Teams, and either ask to speak, or write your comments there, which will be read into the record by staff.
- All comments submitted in writing or by phone will be read into the record by staff.
- 5. If participating virtually, keep your phone or computer on "MUTE" unless identified by the Chair to speak. When your name is called, unmute your phone by pressing your mute button or *6, or unmute your computer. State your name, spell your last name, and make your comments. When you are done, please mute yourself.
- 6. If the speaker wishes to discuss any subject not otherwise on the agenda, time will be allocated or allotted after all agenda items have been processed and "public comments" are taken.
- 7. Applicants will be allowed to speak first and are allowed **five** minutes for an opening presentation. The applicant is also permitted a two-minute rebuttal after all speakers have been heard. If there are no speakers other than the applicant, there is no rebuttal period.
- 8. All other speakers will be permitted two minutes to address the Commission.
- 9. No speaker is permitted to accumulate speaking time from another person.
- 10. Time devoted to answering any questions from the Commission is not charged against allotted speaking time. The Commission may extend any speaker's speaking time if it is the Commission's judgment that additional time is needed to sufficiently discuss an item.
- 11. The Commission reserves the right to limit speakers if it is the Commission's judgment that an issue has been sufficiently discussed and additional speakers are repetitive.
- 12. The Commission reserves the right to stop speakers who are unruly or abusive.

NOTE: The Tower Commission may only act to approve or disapprove the placement of a tower under Chapter 28, Article XVI, City of Houston Code of Ordinances.

HOUSTON TOWER COMMISSION

AGENDA

Monday, February 26th, 2024 3:30 p.m.

The Houston Tower Commission will conduct this meeting both in-person and virtual via Microsoft Teams. The Commission will have the option of participating by videoconference using Microsoft Teams in accordance with the provision of Section 551.127 of the Texas Government Code that have not been suspended by order of the Governor. This platform will allow for two-way video/audio communication with the members of the Houston Tower Commission who choose to attend virtually.

To join this Commission meeting, please see the following options:

- Attend in person at City Hall Annex, Council Chamber, City Hall Annex
- Join via Web Browser https://bit.ly/49BZHmq; or
- Join via Phone: +1 936-755-1521, Conference ID: 565 512 445#

Please visit https://www.houstontx.gov/planning/Commissions/commiss_tower.html to download the full agenda package.

Call to Order

Secretary's Report

- I. Consideration of the December 18, 2023 Tower Commission Meeting Minutes
- II. Public hearing and consideration of waiver requests:

A. 23-T-0761 23705 2/3 Fairlake Lane

28-524(g) Allow construction of a tower in a residential setback area "Fallzone".

- III. Public Comment
- IV. Adjournment

The Tower Commission reserves the right to convene in Executive Session as authorized by the Texas Open Meetings Act, Texas Gov't Code Chapter 551, under any applicable exception thereto, including but not limited to Sec. 551.071, Consultation with Attorney.

HOUSTON TOWER COMMISSION MINUTES

MONDAY, 18 DECEMBER 2023

CITY HALL ANNEX, COUNCIL CHAMBER, PUBLIC LEVEL MICROSOFT TEAMS HTTPS://SHORTURL.AT/LWSV9
PHONE 1 936-755-1521 • CONFERENCE ID: 375 167 033#

Call to Order at **3:43 PM** by Yulanda Campbell, Acting Chair

Commissioners	Quorum – Present / Absent / Remote
Rob Todd, Chair	Present Remotely
John R. Melcher, Vice Chair	Present Remotely
Yulanda Campbell	Present
Bobbie De La Rosa	Present Remotely
Linda Smith	Absent
Asim Tufail	Absent
Jennifer Ostlind, Acting Secretary	Present

Secretary's Report – None Chair's Report – None

I. Consideration of the September 25th, 2023 Tower Commission Meeting Minutes

Commission action: Motion was made to approve the September 25, 2023, Tower Commission Meeting minutes.

Motion: Todd Vote: Unanimous Second: Melcher Abstaining: None

II. PUBLIC HEARING AND CONSIDERATION OF WAIVER REQUESTS:

A. 23-T-0761 23705 2/3 FAIRLAKE LANE

Staff recommendation: 28-524(g) Allow construction of a tower in a residential setback area "Fallzone".

Commission action: Defer to the next Tower meeting, February 26, 2024.

Speaker(s): Roger Randall, Russell Ross, Mel Sojay – opposed, Ryan Sheahan – applicant

Motion: Melcher Vote: Unanimous Second: Todd Abstaining: None

III. PUBLIC COMMENT

IV. ADJOURNMENT

There being no further business before the Commission, Chair Rob Todd adjourned the meeting at **3:56 PM**.

Rob Todd, Chair	Jennifer Ostlind, Acting Secretary

Houston Tower Commission

Planning and Development Department

Meeting Date: 02/26/2024



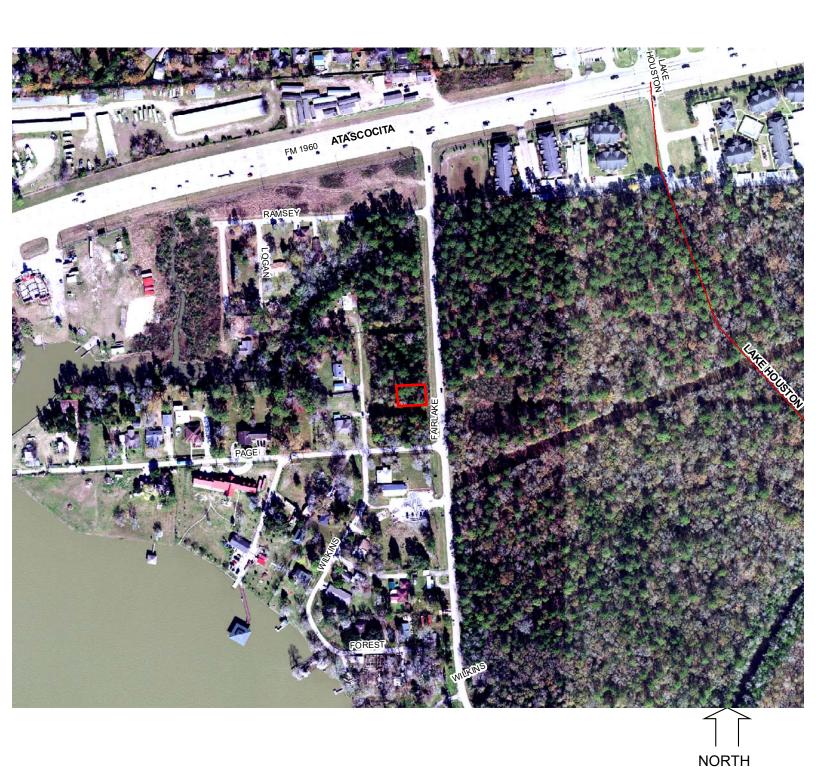
NORTH

Site Location II-A

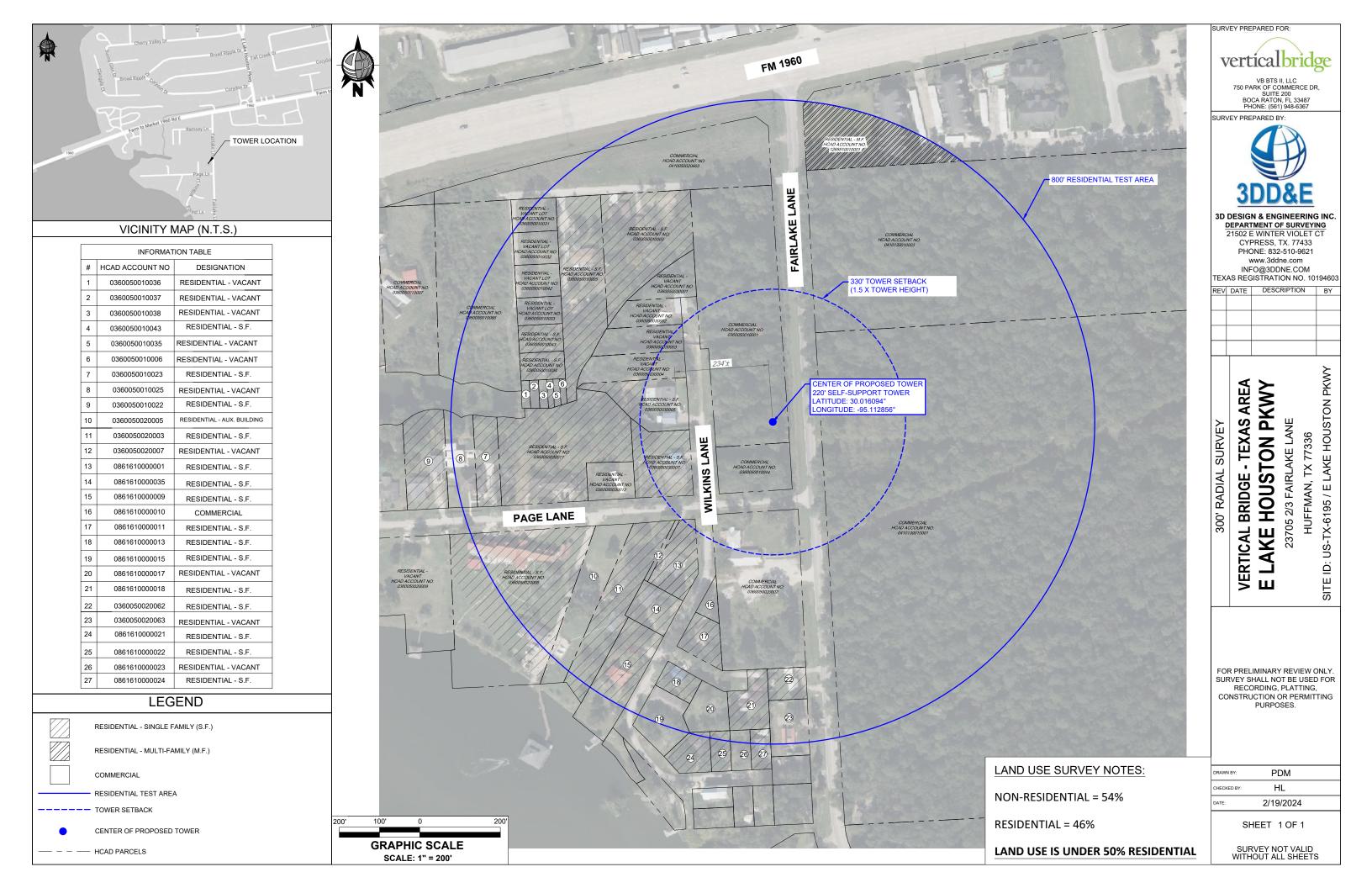
Houston Tower Commission

Planning and Development Department

Meeting Date 02/26/2024



Site Location II-A



SITE LAYOUT NOTES:

VERTICAL BRIDGE LEASE AREA = 5,625 SQ.FT.

VERIZON LEASE AREA = 330 SQ.FT.

VERITCAL BRIDGE FENCED AREA = 284' INCLUDING 12' GATE.

VERITCAL BRIDGE PAVED AREA = 6372 SQ. FT. TOTAL 1347 SQ. FT. SQ. FT. ACCESS DRIVE 5025 SQ. FT. SITE

UNDERGROUND POWER = 50'± (25'± EA. RUN) FROM POWER SOURCE TO VERTICAL BRIDGE UTILITY RACK.80'± FROM UTILITY RACK TO VERIZON ILC.

UNDERGROUND FIBER = 50'± FOR VERTICAL BRIDGE FIBER CONDUIT FROM RACK TO ROW STUB UP; 110'± FROM ROW TO VERIZON FIBER DEMARC (55'± PER RUN)

VERITCAL BRIDGE TOWER = NEW 220' SELF-SUPPORT TOWER (221' A.G.L. WITH 1' FOR TOWER FOUNDATION)

PROPOSED VERIZON ANTENNA RAD CENTER = 215'

PROPOSED VERIZON EQUIPMENT = OUTDOOR EQUIPMENT CABINETS & OUTDOOR DIESEL FUELED GENERATOR ON A CONCRETE PAD.

FLOOD NOTE:

NOTE:

THIS PLAN IS SHOWN TO CLARIFY THE RELATIONSHIP OF

REFER TO SURVEY BY: 3D DESIGN & ENGINEERING FOR

PROPOSED LESSEE WORK TO OVERALL SITE ONLY.

OVERALL SITE PLAN

COMPLETE SITE INFORMATION

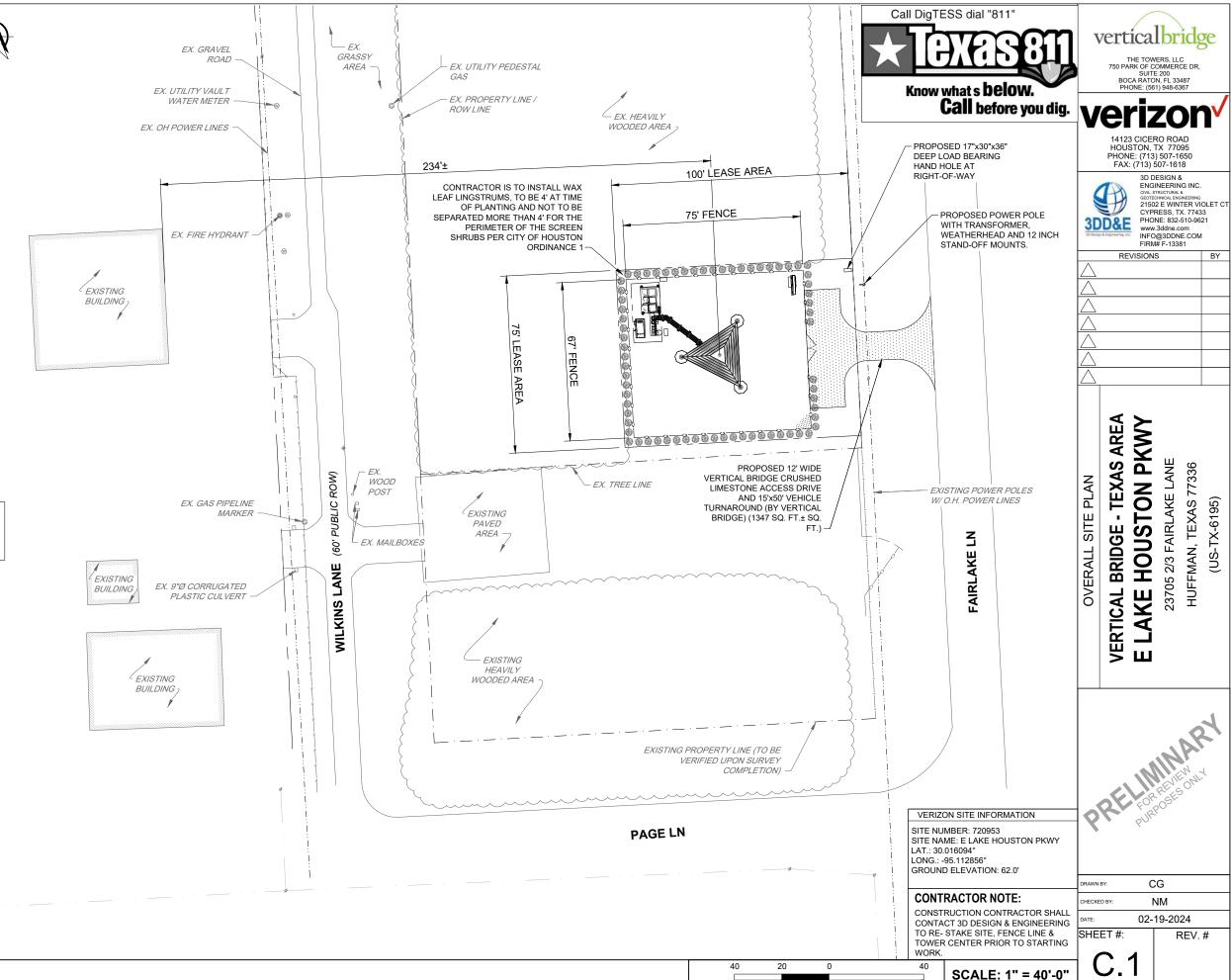
ACCORDING TO MAP NO. 48201C0340L OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S FLOOD INSURANCE RATE MAPS FOR MONTGOMERY COUNTY, TEXAS, EFFECTIVE DATE JUNE 18, 2007 THE SUBJECT TRACT IS SITUATED WITHIN: UN-SHADED ZONE "X"; DEFINED AS AREAS OUTSIDE THE 500-YEAR FLOOD;

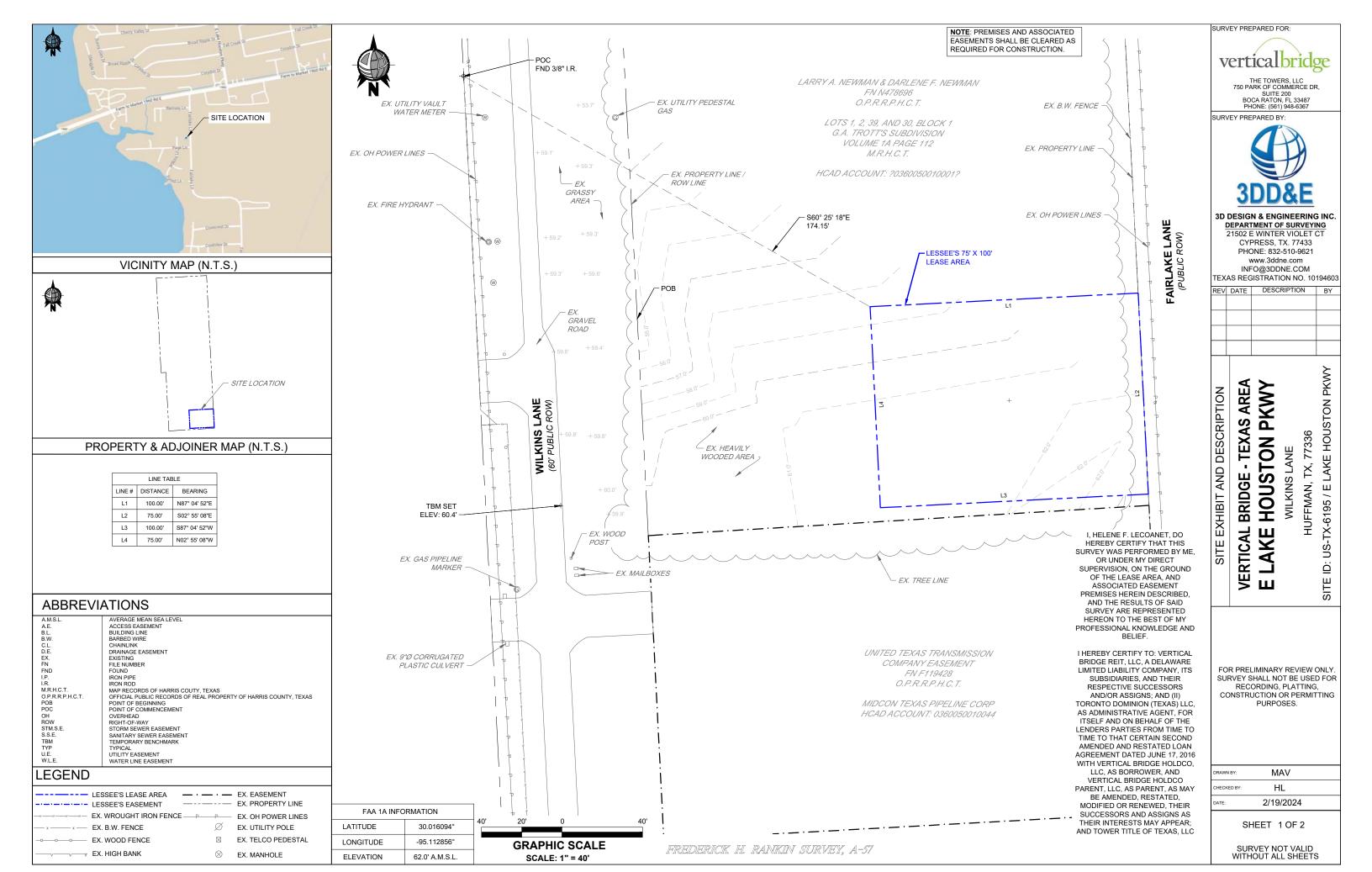
50KW GENERATOR PROVIDES 200 AMPS AT 120/240V.

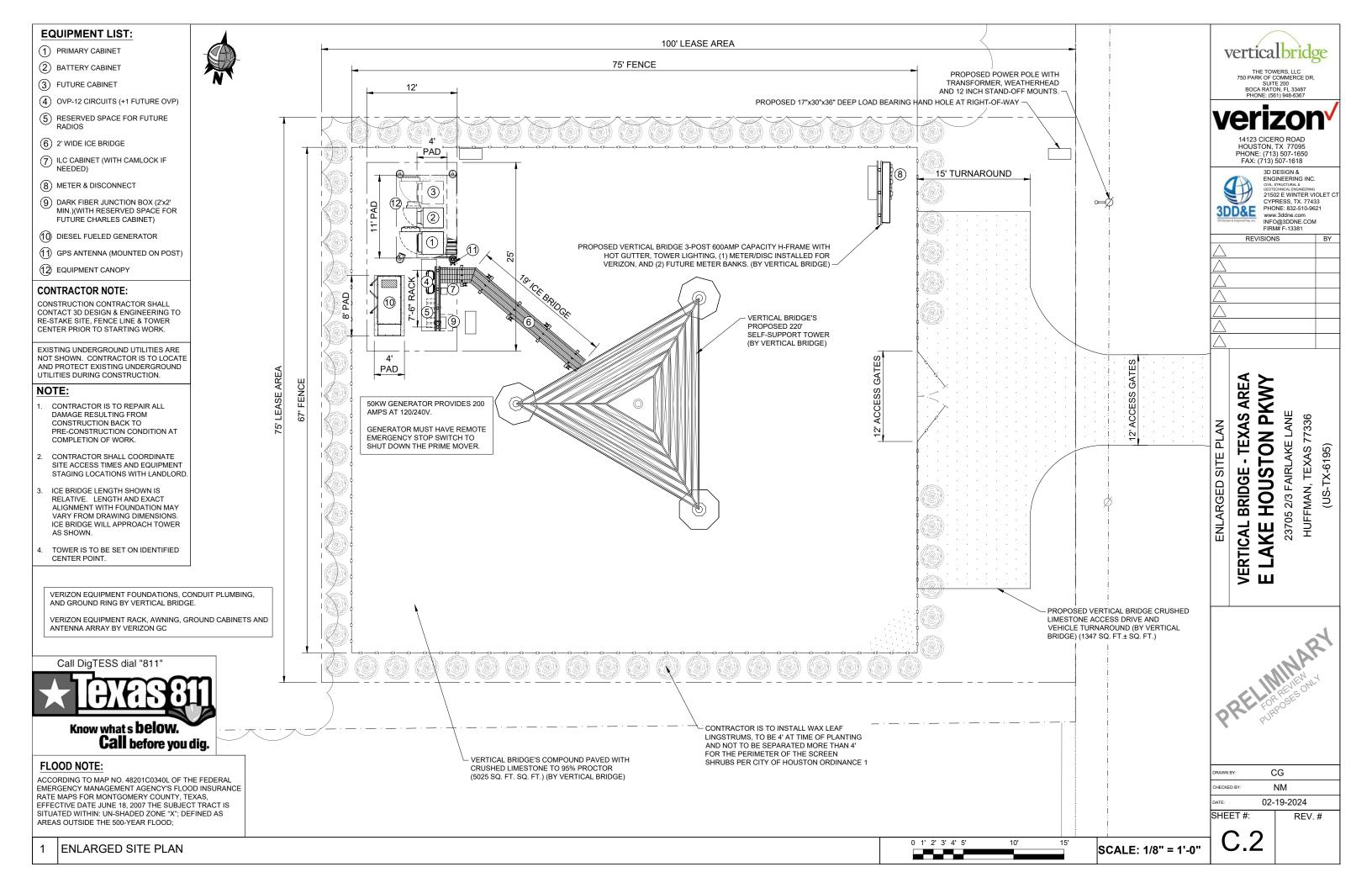
GENERATOR MUST HAVE REMOTE EMERGENCY STOP SWITCH TO SHUT DOWN THE PRIME MOVER.

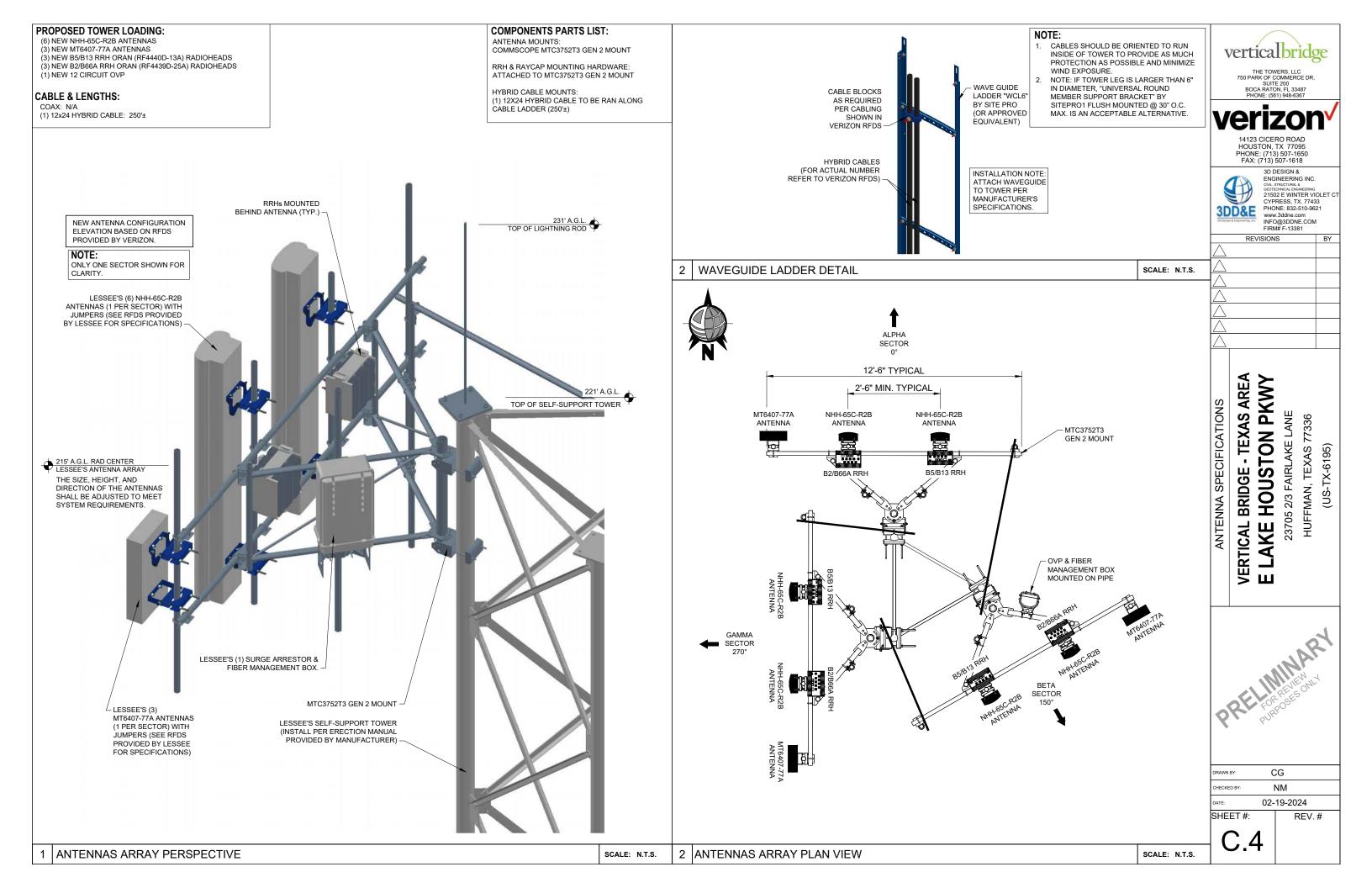
VERIZON EQUIPMENT FOUNDATIONS, CONDUIT PLUMBING, AND GROUND RING BY VERTICAL BRIDGE

VERIZON EQUIPMENT RACK, AWNING, GROUND CABINETS AND ANTENNA ARRAY BY VERIZON GC









NOTES:

- CONTRACTOR IS TO REPAIR ALL DAMAGE RESULTING FROM CONSTRUCTION BACK TO PRE CONSTRUCTION CONDITION AT COMPLETION OF WORK.
- 2. CONTRACTOR SHALL COORDINATE SITE ACCESS TIMES AND EQUIPMENT STAGING LOCATIONS WITH LANDLORD
- 3. CONTRACTOR SHALL VERIFY ALL WORK WITH LESSEE PRIOR TO STARTING PROJECT.
- CONTRACTOR TO VERIFY ALL EXISTING EQUIPMENT, COAX & ANTENNAS THAT ARE INSTALLED PRIOR TO START OF CONSTRUCTION. NOTIFY RF IF SCOPE OF WORK DIFFERS FROM VERIZON

PROPOSED TOWER LOADING:

- (6) NEW NHH-65C-R2B ANTENNAS
- (3) NEW MT6407-77A ANTENNAS
- (3) NEW B5/B13 RRH ORAN (RF4440D-13A) RADIOHEADS
- (3) NEW B2/B66A RRH ORAN (RF4439D-25A) RADIOHEADS
- (1) NEW 12 CIRCUIT OVP

CABLE & LENGTHS:

(1) 12x24 HYBRID CABLE: 250'±

ANTENNA INSTALLATION NOTES:

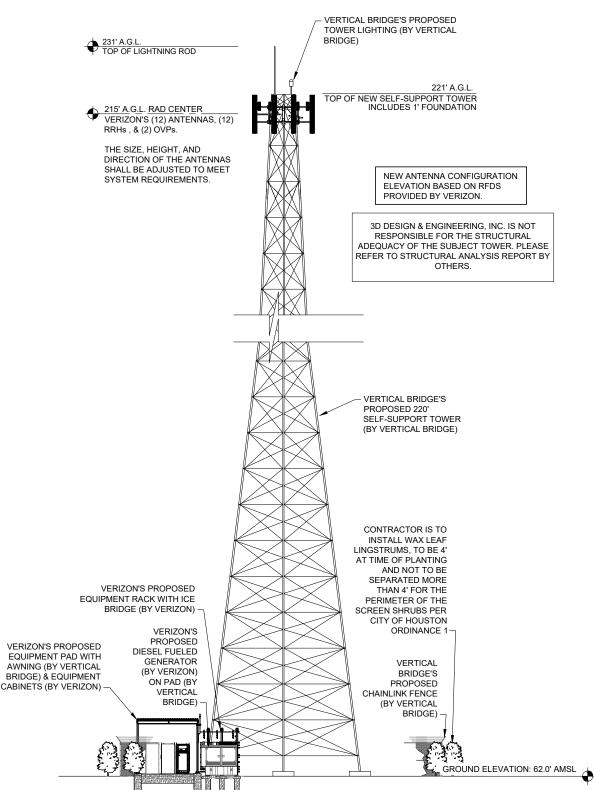
- FOR TYPICAL ANTENNA AZIMUTHS SEE ANTENNA CHART, BUT CONTRACTOR IS TO VERIFY RF INFORMATION WITH VERIZON WIRELESS BEFORE INSTALLATION.
- CABLES ARE TO BE MARKED WITH VINYL TAPE CORESPONDING TO THE COLOR CODING CHART. CABLES SHALL BE MARKED AT BOTH ENDS AND MARKS SHALL BE VISIBLE FROM THE GROUND. MARKING BANDS AT THE TOP SHALL BE 2" WIDE AND SHALL BE 1" WIDE AT THE BOTTOM.
- CONTRACTOR SHALL VERIFY THE NUMBER AND SPACING REQUIRED FOR THE ANTENNAS IN EACH SECTOR WITH VERIZON WIRELESS AND SHALL ALLOW FUTURE SPACING AS DIRECTED.
- GPS ANTENNA CABLE SHALL ENTER THE SHELTER THROUGH AN INDEPENDENT PORT

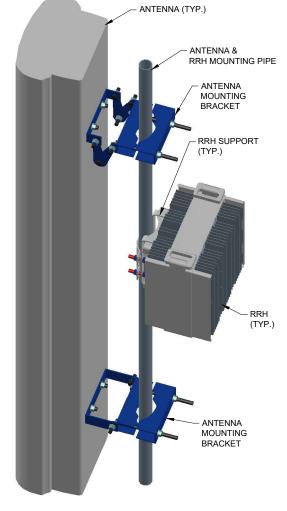
COAX JUMPER NOTES:

- 1. MAXIMUM RF JUMPER LENGTH SHALL NOT EXCEED 15' FOR EITHER 700 LTE OR 1900 AWS.
- 2. IF EXISTING JUMPERS ARE USED, CONTRACTOR SHALL ENSURE COMPLIANCE WITH NOTE 1.
- 3. CONSULT WITH VERIZON PERSONNEL TO VERIFY IF CSRF IS TO BE USED.
- THE MAXIMUM DIFFERENCE IN JUMPER LENGTH FROM ANTENNA TO RRH SHALL BE 9'. I.E., IF THE SHORTEST JUMPER USED IS 6' IN LENGTH THAN THE LONGEST JUMPER MUST BE 15' OR LESS IN LENGTH. CONTRACTOR SHALL ASSESS FIELD CONDITIONS AND ADJUST JUMPER LENGTH
- ALL RF JUMPERS SHALL BE PRE-MADE WITH PRE-INSTALLED CONNECTORS ON BOTH ENDS. NO FIELD ADJUSTMENTS IN LENGTH ARE TO BE MADE.
- 6. ALL RF JUMPERS SHALL BE EITHER LDF OR LCF12 JUMPERS FROM AN APPROVED JUMPER MANUFACTURER
- ALL JUMPER CONNECTIONS SHALL HAVE THE PROPER TORQUE AND BE FULLY WEATHERPROOFED
- 8. CONTRACTOR SHALL PERFORM RF SWEEP ON ALL JUMPERS.
- ALL FIBER JUMPERS FROM THE RAYCAP BOX TO THE RRH SHALL BE THE SAME LENGTH. ANY EXCESS FIBER TO BE COILED INSIDE THE RAYCAP BOX USING PROPER RADIUS RESTRICTIONS.
- 10. ALL JUMPERS SHALL BE ROUTED SUCH THAT THESE WILL BE SUPPORTED AT INTERVALS NOT TO
- 11. LOCATION DETAILS IN THESE DRAWINGS ARE DIAGRAMMATIC. CONTRACTOR SHALL LOCATE ALL ITEMS SUCH AS TO SATISFY ALL NOTES AND THE DIRECTION OF VERIZON.

VERIZON EQUIPMENT FOUNDATIONS, CONDUIT PLUMBING. AND GROUND RING BY VERTICAL BRIDGE.

VERIZON EQUIPMENT RACK, AWNING, GROUND CABINETS AND ANTENNA ARRAY BY VERIZON GC





ANTENNA & RRH MOUNTING

OVP BOX

SCALE: N.T.S.

TEXAS AREA ELEVATION BRIDGE SITE VERTICAL

ш

CG NM 02-19-2024

REV.#

NOTES

SITE ELEVATION

SCALE: N.T.S.

OVP MOUNTING

MOUNTING

BRACKET

SCALE: N.T.S.

OVP MOUNTING

PIPE (TYP.)

THE TOWERS, LLC 750 PARK OF COMMERCE DR, SUITE 200 BOCA RATON, FL 33487 PHONE: (561) 948-6367 HOUSTON TX 77095 PHONE: (713) 507-1650 FAX: (713) 507-1618

verticalbridge

ENGINEERING INC. 21502 E WINTER VIOLET CT CYPRESS, TX. 77433 PHONE: 832-510-9621 3DD&E www.3ddne.com INFO@3DDNE.COM FIRM# F-13381 REVISIONS

HOUSTON PKWY 23705 2/3 FAIRLAKE LANE TEXAS 77336

LAKE

SHEET #:

Houston Tower Commission

Tower Permit Waiver Application

File No.:	23-T-0761	

Date:	11	/ 13	/ 23

APPLICANT INFORMATION:								
Site addre	Site address: 23705 2/3 Fairlake Lane							
Tower Co	ower Company: Vertical Bridge							
Contact p	erson:	Becky Capt/J	M Hodges	Hodges Title: Site Acquisition Specialist				
Phone:	817	/528-7875	FAX:	1	• 10	Email:	becky@jmhodges.com	

The waiver application request must be completed in full and include the appropriate studies, investigations, and colored coded maps. Applicants must provide 12 copies minimum of supporting documentation with the waiver application. A separate application is required for <u>each</u> waiver. Attach no more than 2 pages of waiver request details.

WAIVER REQUEST:

Specify City Code reference and standard subject to waiver: Article XV1. Sec 28-524 G

Reason for waiver: Fall radius.

WAIVER JUSTIFICATION:

Following a public hearing, the Tower Commission is authorized to consider and grant a waiver according to the five provisions delineated in Chapter 41, Article III, Section 41-59. Provide an attachment to this form repeating the following conditions with a response for justification of the waiver for <u>each</u> of the by showing that:

- 1. a literal application of this article will result in undue and unnecessary hardship to the applicant, taking into account any federal or state licenses the applicant may have received to conduct its business because...;
- 2. the waiver, if granted, will not be contrary to the public interest as implemented in this article because...;
- 3. consistent with the city's police power authority over towers, the waiver, if granted, will not be detrimental to the public health, safety, or welfare because...;
- 4. the waiver, if granted, will not result in a violation of any other applicable ordinance, regulation or statue enforceable by the city because...; and
- 5. the waiver, if granted, will not result in the violation of any applicable deed restriction or zoning regulation or the location of a tower in a park because....

Tower permit applications that do not comply with Section 41-53(h) regarding the 1,000-foot tower separation standard must also complete **Tower Permit Waiver Application – Page 2**.

WAIVER APPLICATION CERTIFICATION

I certify that all the information on this application is true and correct.

Signature of applicant or agent: Becky Capt

Print Name: Becky Capt - JM Hodges, Inc.

Houston Tower Commission - Tower Permit Waiver Application - Page 2

File No.:23-T-0761 Date:11/13/23

- 1. a literal application of this article will result in undue and unnecessary hardship to the applicant, taking into account any federal or state licenses the applicant may have received to conduct its business because...; we have confirmation from the tower manufacturer that the tower will not fall on the adjacent residential property. We are asking for a waiver due to the fall zone on the adjacent residential property, but the fall zone certification confirms in the rare event the tower fails that it will collapse within the parent commercial tract. Therefore, a literal application of the fall zone should not apply.
- 2. the waiver, if granted, will not be contrary to the public interest as implemented in this article because...; the fall zone requirement should be waived due to the Fall zone certification letter from the tower manufacturer that the tower will not fall on the adjacent property.
- 3. consistent with the city's police power authority over towers, the waiver, if granted, will not be detrimental to the public health, safety, or welfare because...;the tower will not pose any risks to public and will in fact be beneficial to the public by improving the coverage and capacity for any emergency calls, first responders, visitors, and residents in the area and over a large portion of Lake Houston.
- 4. the waiver, if granted, will not result in a violation of any other applicable ordinance, regulation or statue enforceable by the city because...; all other requirements have been met and the waiver request for the fall zone has been addressed by the Fall Certification Letter provided as part of the application from the tower manufacturer.
- 5. the waiver, if granted, will not result in the violation of any applicable deed restriction or zoning regulation or the location of a tower in a park because.... There is no park in the vicinity or in the residential test area and is not in violation of any restrictions or regulations.

September 12, 2023

Christopher Molloy
The Towers, LLC
750 Park of Commerce Drive, Suite 200
Boca Raton, Florida 33487



B+T Group 1717 S. Boulder, Suite 300 Tulsa, OK 74119 (918) 587-4630 btwo@btgrp.com

Subject: Fall Certification Letter
Arcosa Designation: Arcosa Project Number

Arcosa Project Number: A432 Arcosa Site Name: E Lake Houston Pkwy (US-TX-6195)

Engineering Firm Designation: B+T Group Project Number: 168943.001.01.0001

Site Data: E Lake Houston Pkwy (US-TX-6195)

220' Self Support Tower

To Whom it May Concern:

As Requested by Arcosa Telecom Structures on behalf of The Towers, LLC, B+T Group is pleased to submit this "Fall Certification Letter" for the 220' Self Support Tower to be constructed at the **E Lake Houston Pkwy (US-TX-6195)** site.

This tower will be designed in accordance with the TIA 222-G standard for Harris County, TX. The tower will be designed to support antennas and transmission lines for three wireless carriers. The design criteria are more particularly described as follows:

Design Wind Speed: 133 mph 3-sec gust (no ice), 30mph 3-sec gust (0.5" ice)

Structure Class: II Exposure Category: C Topographic Category: 1

215'—Wireless Carrier 1 (CaAa= 42,000 sq in w/ (18) 1 5/8" transmission lines 204'—Wireless Carrier 2 (CaAa= 30,000 sq in w/ (12) 1 5/8" transmission lines 194'—Wireless Carrier 3 (CaAa= 30,000 sq in w/ (12) 1 5/8" transmission lines

It is our understanding that this Self Support Tower structure will be designed such that, if a failure were to occur due to a significant storm or other event, the tower would fall within a radius of 100' from the base of the structure with the top portion of the tower buckling over on the tower. Although the tower would not be designed to fail, stronger sections that required by analysis would be provided in the lower sections of the tower, resulting in an increased safety factor in the lower sections. In the highly unlikely event that this tower were to experience operational failure due to catastrophic wind loading, the design would enable the tower to fail through compression buckling. Failure in this manner would result in the upper portion of the tower buckling and folding over the lower portion, resulting in a fall radius of 100' from the base of the tower.

It should be understood that this opinion does not consider unpredictable extreme catastrophic events for which the structure is not designed. However, any damage to surrounding property caused by the tower failing during such an event would be relatively insignificant when compared to the damage caused to the surrounding property by the event itself.

Please contact us should you have any questions concerning the safety and design of the self support tower.

Fall Letter prepared by: Angela Ashwood Respectfully submitted by B+T Engineering, Inc. Chad Tuttle, P.E.

B&T Engineering, Inc.

CHAD E TUTT

AGENDA ITEM: II - A

TOWER APPLICATION AND WAIVER REQUEST - STAFF REPORT

Location:	File No.	Zip	Lamb. No.	Key Map	
23705 2/3 Fairlake Lane	23-T-0761	77336	5968B	388R	

Applicant: Jody Kriloff

Application Date: 12/18/2023

Location: South of Atascocita Drive, north of page & east along Fairlake lane

Existing Use: Vacant

Proposed Use: 220' Lattice Tower

Proposed Tower Users: Vertical Bridges

Waivers Request: 28-524 (g): Fall zone, of the Code of Ordinances of the City of

Houston, Texas.

Relevant Tower Ordinance Waiver Provisions:

28-524 (b): In a residential area, a tower permit shall not be approved for the construction or alteration of a tower structure.

28-524 (g): A tower permit shall not be approved for the construction or alteration of a tower structure unless the distance between the center of the base of a tower and the nearest residential lot is at least one and one-half times the height of the tower or tower structure.

28-524 (h): A tower permit shall not be approved for the construction or alteration of a tower structure within 1,000 feet of an approved tower structure, other than a tower structure for which a permit would not be required under this article. For purposes of this requirement, a tower is considered to be "approved" when a tower permit has been issued pursuant to this article and the tower structure has been constructed or any building permit issued thereunder remains in effect. The director shall promulgate rules and procedures for establishing precedent to the extent of conflict between two or more tower structures.

28-527 (a) The base of a tower, including all mechanical equipment and accessory structures, shall be screened from view of residential lots by a wooden, substantially opaque screening fence designed and built to provide privacy with a minimum height of eight feet.

STAFF COMMENTS:

Approval Criteria Staff Findings

Tower is not prohibited by deed restrictions	The applicant has provided a deed restriction affidavit stating this tower proposal will not violate deed restrictions.
Tower is located in a residential area Residential test area is a 800' radius measured from the base of the tower.	Tower is not located in a residential area
More than 50% of the tracts or parcels are used or restricted for residential purposes	
Tower is not within a scenic area, in a park or on a tract of land surrounded by a park	The tower is not within a scenic area, park or in a tract of land surrounded by a park as defined by the ordinance.
Tower must setback 1-1/2 times the height of the tower from a residential lot.	Nearest residential tract allowed by the ordinance is 330'. The nearest residential structure is approximately 234' from the proposed tower.
Must not be within 1,000' of an approved tower structure	There is not an approved tower structure within 1000'

House District 127

RECEIVED

February 7, 2024

City of Houston – Tower Commssion Planning & Development Department 611 Walker Street, 6th Floor Houston, TX 77002 FEB 1 2 2024

PLANNING AND DEVELOPMENT DIRECTOR'S OFFICE

Dear Commissioner Todd, Chair:

I have recently been made aware of a proposed construction of a communications tower in my district. The site location is 23705 Fairlake Lane, Huffman, TX 77336, and the tower application is #23-T-0761.

I am writing to you today to voice my opposition to that proposed communications tower and the tower permit waiver application. I have many worries, along with my constituents that have reached out to me, including the height of the proposed tower, public safety concerns, and general blight.

The City of Houston owns land across the street from the proposed location, and vacant land exists up and down the street that is away from my constituents that would be impacted by the communications tower. I would urge you, the Tower Commission, the tower applicant, and the tower owner to reconsider the proposed site location during your next meeting scheduled for February 26, 2024.

If you have any questions, you may reach me at charles.cunningham@house.texas.gov. Thank you for your consideration on this important matter.

Sincerely,

Charles Cunningham
State Representative
House District 127

cc: Commissioner Bobby De La Rosa

Commissioner Yulanda Campbell

Commissioner Kerrick Henny

Commissioner John Melcher

Commissioner Linda Smith

Commissioner Asim Tufail

Secretary Margaret Wallace Brown